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FIG I.



FIG IV.



FIG II.



(?)CANCER

FIG V.



CANCER

FIG III.



FIG VI.

British Medical Journal.

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An Address

ON

THE RESULTS OF OPERATIONS FOR CARCINOMA OF THE TONGUE,

WITH AN ANALYSIS OF 197 CASES.

DELIVERED BEFORE THE INTERNATIONAL SURGICAL SOCIETY
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[WITH COLOURED PLATE.]

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DESCRIPTION OF COLOURED PLATE.

Fig. 1.—From a doctor, aged 30 (Dr. H. D.). Old areas of leucoplakin on the fore-part of the border of the tongue. Excoriated, very slightly raised area further back, red and glossy, looking just as if it had been rubbed sore by a rough tooth. Has had ulceration here for some time, but the place only became a little harder a fortnight before I saw it. Examined by the Imperial Cancer Research. (March, 1905.)

Fig. 2.—From a man, 70 years of age. Old leucoplakin, with a slightly raised, glazed, and granular epithelioma of short duration. Examined by the Imperial Cancer Research. Mr. F. (July, 1907.)

Fig. 3.—From a man, 60 years of age. Leucoplakin, with a red, smooth, circumscribed plaque, with a slight depression in the centre. It felt quite thin, like a little piece of parchment in the mucous membrane. It had only been noticed four or five weeks. On removal it was found to be almost $\frac{1}{16}$ in. thick, much more than had been suspected. And, on microscopical examination, it had infiltrated the muscles far below its apparent limit. Examined by the Imperial Cancer Research. Mr. A. (December, 1905.)

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I.

I BELIEVE that the following cases comprise all those in which I have operated for carcinoma of the tongue. The first operation was performed in 1881, and the last a few months ago (June, 1908).

In the year 1895 I first performed a planned operation for the removal of the contents of the anterior triangle of the neck, which was founded on the experience which I had gained from observation of the places in the neck in which the glands are most liable to be diseased. Since that time 70 patients have submitted to that operation. In 44 other patients it has not been performed for various reasons, chiefly on account of the difficulty of inducing the patients to submit to it.

The operations on the tongue have been performed almost entirely through the mouth, and the lower jaw has never been divided, although portions of it have been removed in a number of cases. The object of the operation has been to remove the disease together with, if possible, about three-quarters of an inch of surrounding healthy tissues.

At the commencement of the year 1900, I began to perform a preliminary laryngotomy before proceeding to the removal of the disease of the tongue. This operation has been performed in all cases since that time, amounting in number to between sixty and seventy. It is highly to be recommended, for it has all the advantages of tracheotomy without the disadvantages. It can be performed in less than one minute. It enables the operator to deal much more deliberately and effectually with the disease of the tongue, however extensive this may be, and it enables the anaesthetist to pursue his duties without interruption.

The patients have been traced with great care, but the information which has been obtained respecting the further history of some of them is naturally defective. Thus, it has not always been possible to determine whether recurrence took place in the tongue or in the glands, or the exact relation which the recurrence bore to the disease which was removed. Even with these defects the results are very interesting, and I have tried to answer a number of questions by a careful analysis of them. The answers to some of the questions must not be regarded as final. Further experience may prove that they require

Fig. 4.—From a man, 60 years of age (Colonel L.). A white granular area of leucoplakin of many years' duration, which has recently become malignant. There is no ulceration or excoriation, but the plaque is harder than usual. Examined by the Imperial Cancer Research. The cancer cells were already beginning to pass down between the muscular fibres. (June, 1906.)

Fig. 5.—From a man, aged 49 (Mr. C.). Old thin leucoplakin and chronic superficial glossitis, with one slightly raised spot, red like a pimple. This was suspected to be epithelioma, and was examined by the Imperial Cancer Research. Dr. Bashford could not be sure whether it was or was not an epithelioma. (February, 1907.)

Fig. 6.—From a man, aged 40 (Mr. F.). Small raised, very firm tumour, very fixed in the surface of the tongue. The surface of the tongue was otherwise perfectly natural everywhere. Of about three months' duration. Not red, glazed, excoriated or ulcerated. Very slightly rounded on the surface, otherwise like the top of an almost flat button. Not granular or warty. About the same colour as the surface of the tongue, so that I did not at first notice it. On section, dense white, cutting like gristle, not looking like epithelioma, but more like fibrous tissue. Very circumscribed against the muscle beneath. Examined by the Imperial Cancer Research and by Dr. Goldmann of Freiburg. (February, 1908.)

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modification. But, for the present, they may be taken as representing very truthfully my own views of the surgery of carcinoma of the tongue.

With regard to the cases themselves, it must be understood that there has been no selection. Operation has been performed during the entire period of twenty-seven years on every patient who was deemed likely to be relieved by it, whether in hospital or private practice. Thus, while it has been my good fortune to operate on some very favourable cases, it has also been my misfortune to be called on to operate on a number of cases which proved to be quite hopeless. On the whole my cases were probably no better and no worse than those which fall to the lot of every surgeon who is engaged pretty largely in this kind of practice. Although, naturally, most of the very bad cases have been failures, a sufficient number of them have been successes to encourage operators not to decline to operate on them. I have been astonished at the success which has attended resolute surgery in some of those in which the result seemed to be hopeless.

But the future of the operative surgery of carcinoma of the tongue undoubtedly lies in *early diagnosis* of the disease and in the *routine removal of the glands* before they are obviously enlarged.

II.

Results of 197 Cases of Cancer of the Tongue operated on by Mr. Butlin in Private and Hospital Practice between the Year 1881 and the present Year (June, 1905).

Year of operation ...	20
Lost sight of after operation ...	1
Died of recurrence in the mouth ...	26
Died of affection of glands without recurrence in the mouth ...	29
Died of recurrence in the glands without recurrence in the mouth ...	10
Died of recurrence in mouth and glands ...	7
Died of recurrence, uncertain whether in mouth or neck or both ...	10
Died of affection of the glands, uncertain whether recurrence in the mouth ...	5
Died of recurrence in the glands, uncertain whether recurrence in the mouth ...	1
Died of affection of glands on other side of neck ...	2
Died of secondary disease of lungs ...	2
Died of cancer of the opposite border of tongue	2
Palliative operations (glands too advanced for removal; cancer of tongue only removed) ...	3
Operation on tongue abandoned ...	4
Operation on glands abandoned ...	1
Cases not countable (operations performed within three years; the patients either died of other diseases within three years or are still alive and well within three years) ...	22
Successful (all these patients lived for from three to twenty-two years free from recurrence; most of them are still alive and well) ...	55

Total ... 197

III.

Causes of Death from Operation.

Died suddenly during the operation ...	7
Sepsis of wound ...	1
Septic pneumonia ...	10
Subsequent hæmorrhage ...	2
Shock ...	2
Asphyxiation (sudden, a week after operation)	1
Heart-failure (some days after light operation in feeble patient, aged 77 years) ...	1
Acute mania (wound doing well) ...	1

Total ... 20

One of the patients who died of hæmorrhage was "a bleeder," and was acquainted with the fact, but concealed it as he wished to have the operation performed.

IV.

Successful Cases: Fifty-five Persons, whose Cases were traced for more than Three Years after the last Operation on Tongue or Glands.

Cause.	Years after Operation.
Aplexy, more than ...	5
Influenza ...	4
Acute bronchitis ...	6
Intra-thoracic disease (? cancer) ...	10
Old age ...	11
Old age ...	12
Old age ...	12
Epistaxis ...	15

Total, 8 cases.

Traced for the following Periods after Operation.

No. of Patients.	Years after Operation.
4 ...	4
3 ...	7
4 ...	8
1 ...	9

8 cases.

Alive and Well up to Date (1905).

No. of Patients.	Years after Operation.
4 ...	3
4 ...	4
3 ...	5
4 ...	6
4 ...	7
4 ...	8
1 ...	10
1 ...	11
2 ...	12
2 ...	13
2 ...	14
2 ...	16
1 ...	17
1 ...	19
1 ...	22

59 cases.

In addition to the above cases, 4 persons died of other disease than cancer of the tongue and glands between one and three years after the last operation, and 6 patients are still alive and well between one and three years after the last operation.

V.

Comparison of Results between the first Ninety-eight Cases and the second Ninety-nine Cases.

PATIENTS.	First 98.	Second 99.
11 ...	Died of operation ...	9
0 ...	Lost sight of after operation ...	1
16 ...	Died of recurrence in mouth ...	10
21 ...	Died of affection of glands without recurrence in mouth ...	3
6 ...	Died of recurrence in glands without recurrence in mouth ...	4
4 ...	Died of recurrence in mouth and glands ...	5
6 ...	Died of recurrence, uncertain whether in mouth or neck, or both ...	4
0 ...	Died of affection of glands, uncertain whether recurrence in mouth ...	5
1 ...	Died of recurrence in glands, uncertain whether recurrence in mouth ...	0
0 ...	Died of affection of glands on other side of neck ...	0
1 ...	Died of secondary disease of lungs ...	0
0 ...	Died of cancer of other border of tongue ...	2
0 ...	Palliative operations ...	2
2 ...	Operation on tongue abandoned ...	2
0 ...	Operation on glands abandoned ...	1
7 ...	Cases not countable ...	15
23 ...	Successful ...	32
98 ...	Total ...	99

VI.

In the year 1895 I began the routine removal of the contents of the anterior triangle. Out of 114 cases since that time, I removed the contents of the anterior triangle in 70, and did not remove them in 44 cases.

Analysis of the Forty-four Cases in which the Contents of the Anterior Triangle were not removed.

(To these should be added 8 cases in which the patients returned at a later period for removal of enlarged glands, which were not intended to be removed when the tongue was treated, making a total of 52 cases.)

Died of operation ...	6
Died of recurrence in the mouth (in 3 of these the operation was abandoned) ...	7
Died of affection of glands (in 5 of these the glands were enlarged at the time of operation on the tongue, but were not removed for various reasons) ...	15
Died of cancer of opposite border of tongue ...	1
Cases not countable ...	3
Successful cases ...	12

Total ... 44

Eight Cases in which the Glands were Removed at a Later Period because they became Enlarged.

(These cases are also included in the 70 cases of removal of the anterior triangle.)

Recurrence, uncertain where	...	...	2
Recurrence in the glands	...	...	1
Lost sight of after operation	...	...	1
Died of other disease within three years	...	...	1
Successful	...	...	3
Total	...	...	8

Six patients who died of the operation must be deducted from the total of 52 patients, leaving 46 patients. The glands are known to have become enlarged at a later period in 10 + 8 = 18. In addition, they were enlarged at the time of operation on the tongue in 5 other cases, but were not removed. And there are 3 cases (not countable) in which they may still become enlarged.

The percentage of successful cases out of the 44 patients for whom the glands were not removed is as 12 to 41 (for the three not-countable cases must be deducted from the total of 44) = 29.26 per cent.

The causes of death from the operation were:

Acute mania	...	...	1
Haemorrhage (in one old man occurred on the night of the operation and proved fatal; in the other case proved fatal nine days after a very severe operation on the floor of the mouth and posterior part of the tongue)	...	...	2
Heart failure (when the wound was nearly healed, in a very feeble, gouty subject, 71 years old)	...	...	1
Sepsis and anterior mediastinitis	...	...	1
Septic pneumonia	...	...	1
Total	...	...	6

Analysis of the Seventy Cases in which the Contents of the Anterior Triangle were Removed.

Died of the operation	...	...	6
Lost sight of after operation	...	...	1
Died of recurrence in the mouth	...	...	9
Died of recurrence, uncertain where (in one of these the glands could not be entirely removed; operation abandoned)	...	...	7
Died of recurrence in the glands (in one of these the submaxillary salivary gland was left and the disease recurred beneath it; in the other 7 cases the glands were enlarged at the time of their removal, and in 5 of these they were demonstrably cancerous)	...	...	8
Died of cancer on the opposite side of the tongue	...	...	1
Died of affection of glands on opposite side of neck	...	...	2
Died of other disease within three years	...	...	1
Cases not countable	...	...	11
Successful cases	...	...	24
Total	...	...	70

The successful cases are calculated on the 70 cases, after deducting cases not countable (11), the patient who died within three years of another disease (1), and the patient who was not traced after the operation (1), leaving 57 cases, with 24 successful cases = 42.01 per cent.

The age of the patients operated on showed that 10 of them were over 65 years of age, and 1 over 70 years (77).

The causes of death from the operation were:

Haemorrhage, etc. (both from mouth and neck in a badly alcoholic patient)	...	...	1
Suffocation from the sudden falling back of the root of the tongue some days after operation	...	...	1
Septic pneumonia	...	...	4
Total	...	...	6

VII.

Should the Operation on the Tongue and the Removal of the Glands be Performed at a Single Sitting?

The 70 cases in which the contents of the anterior triangle were removed may be tabulated as follows:

Single sitting:			
Glands enlarged	...	...	12
Glands not enlarged	...	...	10
Total	...	...	22
with 4 deaths due to the operation			

Separate sitting (shortly before or after operation on the tongue):

Glands enlarged	...	...	15
Glands not enlarged	...	...	22
At a later period:			
Glands enlarged	...	...	8
Glands not enlarged	...	...	2
Total	...	...	43

with 2 deaths due to the operation.

Total of the last two groups 48, with 2 deaths due to the operation. In one of these cases the operation on the glands was undertaken twelve days after the operation on the tongue, and a further portion of the tongue was cut out because I feared I had not removed sufficient at the first operation. This further portion was in the floor of the mouth, and the entire wound in the neck became septic.

It will be noticed that the glands were already enlarged in 12 of the 22 cases in which the two operations were performed at a single sitting, and this was one of the reasons why the operation on the glands was not deferred.

It will also be noticed that in 8 of the 10 cases in which the glands were removed at a later period they were enlarged. Indeed, the patients would not have submitted to the operation had the glands not been enlarged. In spite of this, all these 8 patients recovered from the operation, and in 3 out of the 8 the operation was followed by complete success. The following paper, however, shows that such success must be regarded as exceptional.

VIII.

Is there any Advantage in Postponing the Operation on the Glands until they are Enlarged?

For the consideration of this question, 56 cases, in which the results are known, may be used.

Glands enlarged at the time of operation, 34:

Died of recurrence in the neck	...	...	7
Successful	...	...	11
Glands not enlarged at the time of operation, 22:			
Died of recurrence in the neck	...	...	1
Successful	...	...	15

It will be seen that the evidence is largely in favour of not deferring the operation until the glands are enlarged.

In the single case of recurrence in the neck in the second series, the submaxillary salivary gland was not removed, but was raised up for the removal of the glands beneath it. Recurrence took place in the lower part of the salivary gland, presumably due to affection of a lymphatic gland which had been overlooked.

In the first series of 34 cases the glands were not obviously cancerous in the large majority of the cases, but they were so in some of the cases. Nevertheless, some of these patients were cured by removal of the cancerous glands, and remained well after many years. One case is especially worth recording in this respect. On June 8th, 1903, the right half of the tongue was removed from a gentleman, aged 56. At the same time the contents of the anterior triangle were dissected out. But a mass of glands beneath the great vessels was so fixed and the patient was so exhausted by the operation, that it was deemed inexpedient to persist in the attempt to remove them. On June 18th I summoned up my courage and again attacked the fixed glands, which were removed with considerable difficulty. The family doctor wrote me in April of this year (1908) to say that his patient is in perfect health, and has not had recurrence either in the tongue or in the glands.

If the operation were restricted, as it used to be, to the removal of glands which are obviously enlarged, the suggestion to defer the operation until the glands are enlarged would have some weight. But as the methodical removal of the contents of the anterior triangle is not restricted to the removal of the glands, but is extended to the removal of the tissues in which the glands are known to lie, the suggestion should not be accepted.

* This suggestion is made in a well-known English work on *Surgical Treatment*, dated 1902.

IX.

Is the Removal of the Contents of the Anterior Triangle sufficient as a Routine Procedure? Or, ought the Contents of the Posterior Triangle on the Same Side also to be Removed?

In my 70 cases there were very few in which the dissection was carried to the extent of removing the contents of the posterior triangle or of dividing the sterno-cleido-mastoides. Yet there were only 8 cases in which the disease was noted to have recurred only in the neck.

In one of these the recurrence took place owing to the omission to remove the submaxillary salivary gland. And in the other 7 cases the glands were enlarged at the time of the operation; in 5 of the 7 they were macroscopically and microscopically cancerous.

I would recommend that the dissection should be carried into the posterior triangle in those cases in which the primary disease is seated far back on the border of the tongue; and in those cases in which the glands are badly affected in the parotid (upper carotid) region.

I would further advise that the dissection should always be carried well up to remove the glands in the parotid region. For this purpose it is necessary to remove the lower part of the parotid salivary gland. In one of my early cases of removal of the anterior triangle the patient died of the operation. At the autopsy an enlarged gland was found in this situation, which had not been removed at the operation.

X.

Is it Necessary to Remove the Glands on Both Sides of the Neck?

The cases of which I have notes are not sufficient in number for the decision of this question. There may have been other cases, among those of which the further history is imperfect, in which the glands were affected on both sides of the neck. So far as the records go, they do not favour the view of the necessity of subjecting every patient to the removal of the glands on both sides of the neck. They are as follows:

Cases in which the glands were affected on both sides of the neck ... 9

In 6 of these 9 cases both sides of the tongue were affected by the primary disease.

In the other 3 cases the primary disease was of one border of the tongue, and, in 1 of the 3, was some distance from the tip.

Cases in which the glands were affected only on the side opposite to the disease ... 5

In 1 of the 3 the primary disease was near the tip, and in another of the 3 it was about 1 in. from the tip. In both those cases the glands were removed from the opposite side of the neck only, and those 2 patients are alive and well many years after the operation.

Cases in which the glands on the opposite side of the neck became diseased after successful removal of the primary disease and the glands on the same side... 2

In both these cases the primary disease was situated on the border of the tongue, and was of rather small extent. It was some distance back on the border in both cases. It showed microscopic signs of excessive malignancy in one of the cases.

XI.

If it is not Necessary to Remove the Glands on Both Sides of the Neck in every Instance, are there Cases in which this Procedure is Desirable?

The following conditions appear to me to call for wider removal of glands:

(i) Those cases in which the glands on both sides of the neck are enlarged.

(ii) Those cases in which the glands are affected only on the side of the neck opposite to the disease.

(iii) Those cases in which the disease is seated on both sides of the tongue, or in which it reaches to the middle line of the tongue.

(iv) Probably it ought to be done in those cases in which microscopical examination gives reason to believe that, although the primary disease is apparently only of

small extent and depth, it is much more malignant than usual; when, for instance, columns of cancer cells are found running deeply down between the muscular fibres.

XII.

Is it Necessary in all Cases to Remove the Muscles to their Attachments?

(During the last two or three years researches on the spread of cancer of the tongue have been made by Mr. Lenthal Cheate, C.B. He has found, in microscopic sections of the muscles at a considerable distance from the primary disease, columns of cancer cells lying between the fibres of muscles, which look quite healthy to the naked eye. He therefore recommends that, according to the seat of the primary disease, the genio-hyoglossus and inferior lingualis or the hyoglossus or the stylo-glossus muscle should be removed back to its attachment to the bone. In cases of cancer of the anterior part of the tongue and the tip, the genio-hyoid muscle and the fascia covering it should be removed. If the primary disease is so situated as to extend into both halves of the tongue, some or all of these muscles should be removed on both sides. As the result of his researches Mr. Cheate is of opinion that the hyoglossus and genio-hyoglossus and inferior lingualis muscles should be removed in every case of cancer of one half of the tongue, even if the primary disease is quite small and in an early stage of its existence.)

Out of the 197 cases there were 99 in which there was no recurrence in the tongue. They are classified as follows:

Died of affection of the glands	...	...	39
Died of affection of the glands on the other side of the neck	...	...	2
Died of cancer of the lungs	...	...	1
Died of cancer of the other border of the tongue	...	...	2
Successful	...	...	55
Total	...	...	99

In addition to these 99 cases there are a number of other cases which cannot be counted because less than three years have elapsed since the operation. But as from two to three years have elapsed in many of them there is now no reason to apprehend recurrence *in situ*.

On the other hand there were 33 cases in which the disease is known to have recurred in the mouth. Most of them are noted as bad or extensive cases; in seven of them the floor of the mouth was affected to a greater or less extent; and in only three of them was the disease of such small extent that I felt afterwards that it would not have recurred in the mouth if it had been more widely removed.

Although these figures do not support Mr. Cheate's suggestion, I think it will be desirable to carry it into effect in the more advanced cases, especially in those in which the disease lies beneath the border of the tongue and passes into the floor of the mouth.

The objections to it in addition to the larger operation which it involves, are that the mobility of the tongue has been, in those few cases in which I have practised it, seriously impaired, and in consequence speech and mastication have not been nearly so good as in those cases in which the disease has been merely cut out without reference to the complete removal of individual muscles.

XIII.

Is it Necessary to Remove the Tissues between the Primary Disease and the Glands?

Although I cannot answer this question decidedly in the negative, the evidence in favour of this course is not, in my opinion, strong enough to justify the extra risk involved. For, in order to carry it out methodically and completely, it would be necessary to remove the primary disease and the glands in one continuous mass. In all but a few cases, the large wound in the neck, in which the great vessels and nerves are exposed, would suppurate, in most cases badly. The risk to life would therefore be very largely increased, and should not be incurred unless a very decided advantage can be claimed for the procedure.

Out of 70 cases in which the anterior triangle was completely cleared out, and a number of other cases in which glands were simply dissected out because they

were enlarged, I have very rarely removed the primary disease and the glands in one continuous mass. Yet 29 of these cases proved to be successful. And out of a large number of the unsuccessful cases, in which recurrence took place either in the mouth alone or in the mouth and neck, and in which the seat of the recurrence was noted, there are only two in which it could reasonably have been attributed to affection of the tissues which were left behind between the primary disease and the glands.

XIV.

Is there any Part of the Tongue from which the Glands are less liable to become Affected?

In 23 cases out of the entire series of 197 only the primary disease was removed, but the patients remained free from recurrence *in situ* and from affection of the glands (successful cases).

The seat of the disease, roughly noted, was as follows:

Dorsum:					
Anterior	...	...	...	...	8
Further back	...	...	...	...	2
Border:					
Near the tip	...	...	...	...	1
At various points	...	...	...	...	4
Beneath the border	...	...	...	...	7
Tip:					
Under surface	...	...	...	...	1
Total	...	...	...	...	23

For comparison with these cases, I have taken 23 cases (between the 87th and the 197th) in which the glands were not removed, but became affected at a later period:

Dorsum:					
Anterior	...	...	...	...	4
Border:					
Near the tip	...	...	...	...	5
At various points	...	...	...	...	9
Beneath the border	...	...	...	...	2
Prænum	...	...	...	...	2
Extensive disease	...	...	...	...	1
Total	...	...	...	...	23

In addition to the case which is classed as extensive, because its point of origin was not ascertained, there were several cases in both series in which the disease of the tongue was extensive, but it was possible to determine the point at which it had first appeared.

Perhaps the anterior part of the dorsum is the least dangerous seat of cancer, *quæ* affection of glands. But the results of the second series of cases show that it would not be safe to rely on a special immunity of that part in practice. In one of the cases the primary disease was of quite small size, and had only been noticed a short time.

XV.

Does Early Diagnosis render the Prognosis of Operation more Favourable?

Very small and, presumably, recent cancers were removed in 18 of my cases. They were seated in different parts of the tongue, so that no conclusion can be drawn with reference to the seat of the disease. The results were as follows:

Recurrence <i>in situ</i>	...	...	...	...	2
Died some years later of cancer of the opposite border of the tongue	...	...	...	...	2
Died of affection of glands without recurrence <i>in situ</i>	...	...	...	...	6
Successful (glands removed)	...	...	...	...	2
Successful (glands not removed)	...	...	...	...	6
Total	...	...	...	...	18

It will be seen that the percentage of successes, 8 in 18, was 43.33. And, in 6 of these cases, the operation was restricted to removal of the primary disease.

On the other hand, no fewer than 6 of the patients died at a later period of affection of the glands without recurrence in the tongue. This furnishes very strong evidence of the necessity of removing the glands even in cases of quite small and recent cancer of the tongue.

With regard to the 2 cases of recurrence *in situ*, 1 of them occurred many years ago, and the operation was not as wide as I have been in the habit of practising since that time (largely on account of the failure which followed this particular operation). In the other case there is reason to

believe the cancer was much more virulent than usual, for the operation which was practised would have sufficed for any but a virulent case.

XVI.

Cancer of the Floor of the Mouth.

An impression generally prevails among surgeons that cancer which originates in the floor of the mouth is peculiarly dangerous to life.

The following facts may serve to correct this impression, which I formerly held in common with my surgical colleagues:

No. of cases occurring in my practice, 9:

Died of recurrence in the mouth	...	...	...	4
Died of affection of the glands without recurrence in the mouth	...	...	...	1
Successful	...	...	...	4
Total	...	...	...	9

In all the 5 unsuccessful cases the disease was seated at or close to the frænum linguæ, and in 3 of them had invaded the bone, so that a portion of the jaw had to be removed. These cases were, therefore, peculiarly unfavourable for operation.

In 3 of the 4 successful cases the disease was also situated at the frænum, but it was not adherent to the bone. In 2 of these cases the glands were removed shortly after the operation on the floor of the mouth. These 2 patients are both well at the present time, three years after the operation. In the third case the glands were not removed, and the patient remains well ten years after the operation. In the fourth case the cancer was of very small size, seated beneath the front of the tongue, where it joins the floor of the mouth. It was freely removed, but the glands were not dissected out. That patient is still alive and well, at the age of 79, twenty-two years after the operation.

From these facts it may fairly be assumed that cancer originating in the floor of the mouth can be removed with a good prospect of success, provided it is not very extensive and has not involved the bone. But the two cases in which the operation was successful, although it was limited to the removal of the disease in the mouth, must not be taken to encourage operators to refrain from removing the glands. In most of the cases they were either affected at the time of the operation or became affected with the recurrence of the disease in the mouth.

XVII.

Operations for Recurrent Disease.

Tongue.—Only in five instances has there been an operation for recurrence of the disease in the tongue, and in one of these the disease was not truly recurrent. In 1890 the right border of the tongue was removed for epithelioma. The patient was a very free liver, drank and smoked a great deal. In 1900 some white plaques were removed from the same border of the tongue, but no cancer was found in them. In 1905 (fifteen years after the first operation), he had an epithelioma of the same border, with enlargement of the glands. An attempt was made to remove the disease by one of my colleagues, but the operation was not successful and the patient died in June, 1906.

All these operations for recurrent disease in the tongue were performed in the first 70 cases, 4 of them in the first 30 cases. The disease was not as thoroughly removed as in the cases during the last fifteen or more years. Not one of these lives was saved by the second operation. Two of the 4 patients died of recurrence in the tongue; the other 2 died of affection of the glands, which had been imperfectly removed in both cases.

Glands.—Eight patients were operated on for recurrence in the glands. Again, it is noticeable that 7 of these cases occurred in the first 90 cases, and only 1 in the remaining 107; in that case the submaxillary salivary gland was left for cosmetic purposes, with disastrous result.

The lives of 2 of these 8 patients were saved. The first was an old man, from whom the anterior part of the tongue and some enlarged glands were removed in September, 1893. In May, 1894, two glands were enlarged at the angle of the jaw, and were removed. He came to see me

in 1902—eight years after the second operation—very well, but very feeble from old age.

The second of these patients was a woman from whom one side of the tongue was removed in October, 1894. In December of the same year two or three enlarged glands were removed, and in the following February (1895) some more glands. She remains quite well up to the present time—a period of more than thirteen years.

The results of operations for the removal of recurrent disease, whether of the tongue or glands, have been so bad that operators are counselled to make the first operation as complete as possible, in the belief that the only hope of the patient lies in the thorough manner in which this operation is performed.

THE OPERATIVE TREATMENT OF INTRAORAL CANCER:

WITH SPECIAL REFERENCE TO THE CHOICE OF
OPERATION, ORDER OF OPERATION, AND
LIGATURE OF THE LINGUAL AND
FACIAL ARTERIES.

FROM AN EXPERIENCE OF THIRTY-NINE CASES.

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Few surgical diseases offer a wider choice of operative procedure for their cure or relief than carcinoma within the oral cavity. There are those surgeons, for instance, who strongly advocate a preliminary laryngotomy or even tracheotomy, others who have never found any necessity for their performance; those who favour preliminary ligature of the linguals, others who never practise it and speak disparagingly of it; those who recommend the operation on the tongue and neck at one sitting, others who usually do it in two; those who remove first the tongue and later the glands, others who remove first the glands and later the tongue; those who perform Kocher's operation, which entails a communication between a septic wound in the mouth and an extensive recent wound in the neck, others who see grave objections to it on these grounds; those who frequently divide the lower jaw, others who consider it seldom necessary; and so on. The purport of the present communication is to consider the modern surgical treatment of intraoral cancer, in conjunction and in comparison with my own experience in dealing with it, with the view, if possible, of indicating what appear to me to be the most rational and practical methods to adopt. I assume that the following general statements and principles will be subscribed to by all modern surgeons.

1. *The Necessity of a Wide Local Removal.*—This will usually mean the sacrifice of not less than half the tongue, frequently of the whole tongue, sometimes of a considerable portion of the floor of the mouth, part of the lower jaw, even exceptionally of the upper jaw, side wall of the pharynx, etc., according to the position and extent of the growth. Wherever the disease is situated, to be considered at all hopelessly operable, it must be capable of a wide local removal, and I mean by this an excision which ensues a wide margin of apparently healthy tissue attached all round the growth. This is an important point, because cancer, distressing enough in any situation, is so peculiarly distressing in the mouth that, even as a palliative measure, to secure a non-recurrence *in situ* must be a particular aim of the surgeon. In carrying out this principle we are hampered considerably by the limitation of the cavity of the mouth: there is not the same scope for cutting wide of the tumour as in the breast for instance. If the disease, therefore, is so advanced, or so situated, or so fixed as to be incapable of a wide local removal, then in my opinion it is inoperable, because though a patient, after the dangers have been explained to him, is quite justified in risking his life in an attempt to be rid of such a terrible disease as cancer in the mouth; and though the surgeon, who knows the full extent of the misery which is in store for him, is quite justified in urging him to undergo this

risk, yet if the disease is to return *in situ* within a few weeks or months and his misery is to begin all over again, it is better to let him die once than twice, and not subject him to the trial of a serious operation into the bargain. Of course, the surgeon cannot guarantee against local recurrence, for apparently healthy tissue may contain cancer cells, but he should have this prospect particularly in view in recommending or discountenancing operation, and in whatever operative procedures he adopts. If, on the other hand, recurrence takes place in the neck, even within a short time, the case is different. The disease here, distressing enough, is so much less so than in the mouth that the intraoral operation will have been worth the doing, though if it has taken place in an early stage the patient, who will be ignorant of the misery he has escaped, will not fully appreciate the surgeon's effort.

2. *The necessity of a wide glandular dissection in all cases* in accordance with the modern principle of treating cancer surgically. This entails the removal of the fascia, fat and lymphatics from the submaxillary triangle (including in all cases the submaxillary salivary gland), and from the anterior triangle, down to the sheath of the great vessels, as well as the deep chain of lymphatic glands beneath the sterno-mastoid, from the clavicle to the atlas. The necessity of performing this extensive operation on both sides in all cases has not been finally determined. If the disease crosses or even approaches the mid-line in the tongue or floor of the mouth it is demanded: it is also demanded if the disease, though unilateral, is situated towards the base of the tongue, because there is a free communication across the mid-line between the lymphatics of that part. If the disease is situated anteriorly and is strictly unilateral the general opinion is that a dissection of one side is enough. Sufficient evidence to settle this question is not at present forthcoming, and surgeons and pathologists should direct their attention to it. Da Costa has recently recorded a case in which, the primary disease being strictly unilateral, the glands on both sides of the neck were secondarily affected. The matter is an important one for decision, because a bilateral neck dissection adds considerably to the severity of the operation.

3. Consequent on (1) and (2), the operation is very severe and serious. But there are other well-recognized circumstances which make it especially dangerous. Patients with cancer in the mouth are usually getting on in life: they are frequently quite old; they are often the subjects of past syphilis, over-indulgence in tobacco and alcohol, as well as of the bronchial troubles that attend advancing years. They are not, therefore, the best subjects for major operation. In addition, there are special dangers attending the operative procedure itself. There is during the operation the danger of hæmorrhage and of asphyxia owing to the entry of blood into the air passages. Subsequently, there is the danger of shock, of inhalation pneumonia, and of septic cellulitis owing to communication in some of the operations—Kocher's, for instance—of a septic wound in the mouth with a large recent wound in the neck. Lastly, excision of the tongue is an operation in which the psychic element is an unfavourable factor. The idea of losing his tongue, even in a successful operation, is depressing to the patient, and probably influences the result in some cases. The causes of a high primary mortality, therefore, are not far to seek, and the importance of avoiding those that are avoidable must be kept in view in determining the choice and scope of operation.

4. *The desirability of performing this operation as of all operations at one sitting if possible.* A patient will sometimes be able to screw his courage up to face a single operation who cannot be brought to face a second. This object nevertheless, however desirable, is frequently unattainable in cases of mouth cancer.

5. *The desirability of avoiding a communication between a wound in the mouth which is necessarily septic and a large wound in the neck which otherwise there is no difficulty in keeping aseptic.*

6. *The desirability of not introducing any unnecessary procedures into an operation which of itself is quite complicated enough.* Assuming that these statements and principles are correct, the practical question is how best to conform to them in the operative treatment of intraoral cancer.

LIGATURE OF ARTERIES.

I shall first state my proposition, and subsequently give the reasons for its advocacy. The proposition is:

That in every case of intraoral cancer the neck should be attacked first, one or both linguals and facials tied, and the primary growth in the mouth should be removed subsequently, either at the same or a future sitting.

As one of the chief objects of this paper is to advocate ligature of the lingual and facial arteries, which, in my opinion, is the key to the operation for intraoral cancer, I shall consider this question first. It is strange that with such powerful supporters behind it as the late Professor Billroth and Sir Frederick Treves ligature of the lingual artery should have found so little favour generally among surgeons. I think the reason is that it was advocated under quite different circumstances from those existing at the present day. Extensive gland dissections were not then in vogue. Either gland dissections were not done at all or were limited to the perfunctory removal of an enlarged gland or two beneath the jaw or in the anterior triangle. Hence ligature of the lingual introduced an additional preliminary operation; it involved a complication, was not necessary in the hands of a surgeon of skill and experience who felt confident he could deal with the hæmorrhage without it, and perhaps was not always easy. But other surgical procedures may come up again for consideration under altered circumstances, and this question of ligature of the lingual artery is, I think, one. In the procedure advocated here—namely, attacking the neck in all cases first, ligature of the lingual assumes a different aspect. It is done as part of the dissection of the neck. Sometimes in dissecting the anterior triangle the lingual comes into view at its origin and may be ligated there. I have on a few occasions so performed it. The ligature is, however, almost always placed upon it immediately after the dissection of the neck, beneath the hyoglossus muscle. The submaxillary triangle has been dissected, the bellies of the digastrics are in full view, and the hyoglossus with the hypoglossal nerve and usually the ramine vein lying upon it. Ligature of the lingual becomes the simplest of proceedings; the anterior belly of the digastric is hooked downwards and forwards, the posterior downwards and backwards. The great cornu of the hyoid bone is felt, and just above it the fibres of the hyoglossus are divided by a few light touches of the scalpel. No director is used. With the aid of a pair of dissecting forceps and a blunt dissector or blunt end of the ligature forceps the lingual artery is invariably picked up just beneath the hyoglossus. I have never failed to find it with the greatest ease, and the operation for its ligature occupies less than two minutes. The only precaution necessary is to work gently and avoid wounding the ramine or any other veins in the neighbourhood. The ramine vein is usually seen running with the hypoglossal nerve upon the hyoglossus muscle, and is kept out of the way together with the nerve with a squirt look. The facial artery is always ligated and divided during the dissection of the neck when the submaxillary gland is lifted from its bed. It comes into view during this proceeding, and requires no looking for.

In April, 1904, almost a year before the publication of Mr. Butler's paper, I commenced extensive glandular dissections of the neck in malignant disease within the month. On April 4th, 1904, I performed the following operation at the Royal Portsmouth Hospital:

The patient had an epithelioma involving the whole of the right side of the tongue and dorsum to opposite the faucial pillar, and extending into the substance of the tongue on the left side. Enlarged glands were felt in the right submaxillary and anterior triangles—none in the left. The following account of the operation is taken from my notes: The left submaxillary region was dissected out, including the submaxillary salivary gland, and the left lingual and facial arteries were tied. An incision was then carried from the mastoid process on the right side along the sterno-mastoid muscle to 2 in. above the clavicle, and one to join it was carried up to the symphysis menti opposite the hyoid bone. Skin flaps, including playisma, were reflected. The glands, fascia, and fat were cleared out of the anterior and submaxillary triangles (including the submaxillary salivary gland), as well as the deep chain beneath the sterno-mastoid muscle. The right lingual and facial were tied. The tongue was then split and the right half was brought out through an incision in the mucous membrane of the mouth beneath the jaw and removed (Kocher's method). The left half was excised intraorally, as an attempt to pull it out through the wound stopped breathing. The operation was performed at one sitting,

and the patient made an excellent recovery. He subsequently died of recurrence in the neck.

At the operation the glands were found infiltrating and breaking down, and the prognosis was consequently very unfavourable. When I began these extensive glandular dissections of the neck for intraoral cancer, I began to practise at the same time ligature of the lingual and facial arteries in all cases, and I shall state now the advantages that have appeared to me to attend this practice. My experience extends to ligature of these arteries on 39 occasions.

1. *It reduces the excision of the tongue to a practically bloodless operation.* Mr. Jacobson, in his remarks on ligature of the lingual artery in excision of the tongue, makes the following criticisms:

(a) "In 3 cases in which I know of this precaution having been taken, the hæmorrhage was as free as in the usual operation with scissors, performed without any such preliminary," and in a footnote he gives as the reason that the lingual was probably tied in front of a large dorsalis lingue.

The only answer one can give to this is that Mr. Jacobson's experience must have been singularly unlucky, and likely enough to prejudice him against the procedure. In the 39 cases of ligature of the lingual in my own experience, this has never occurred. I always pull the lingual well up and place the proximal ligature as far back as possible to avoid this contingency, though I have never seen the dorsalis lingue, and I always divide the artery between two ligatures to make quite certain that I have ligated it. In all of my cases it has reduced the excision of the primary growth to a bloodless operation, very much as it would be in the deadhouse. With few exceptions, these patients have been operated upon at the Portsmouth Hospital, where I have over and over again demonstrated to those who have done me the honour of being present the simplicity to which it reduces the subsequent excision of the growth in the mouth. Hardly ever any artery spurts at all. The facial has already been tied in removing the submaxillary gland. By these manœuvres not only has the blood supply of the tongue but of the gums and floor of the mouth been cut off, this being furnished almost entirely by the sublingual branch of the lingual and the submental branch of the facial. With regard to venous bleeding, this, as a rule, is quite trivial, as might be expected. The tongue and floor of the mouth are terminal circulatory organs. No large venous trunks are present in them, and the venous bleeding is consequently slight. The only cases in which I have found it at all troublesome are when the disease is in the tonsil and its neighbourhood, from the pharyngeal plexus and inferior palatine veins. Mr. Jacobson's second objection to ligature of the linguals is

(b) "I think that an experience derived from operations in over 50 cases justifies me in saying that if the operation with scissors be performed with attention to the details given above, the hæmorrhage is not so difficult to deal with as to require this precaution." And in a footnote he adds: "In writing this I am taking it for granted that the surgeon will be aided by help as apt and ready as I have been fortunate enough to find."

This in some cases may be taking a good deal for granted, but with this "if" the statement is no doubt correct. It is admitted that to those experienced in excision of the tongue, and who have skilled assistance at their disposal, the control of hæmorrhage is not a very difficult matter. But I think it will be equally admitted that the less blood these patients, often old and broken down with suffering, lose the better. In the hands of surgeons even of experience I have more than once seen a patient lose a considerable quantity, and even a large quantity, of blood before the completion of the operation, and I have been told by ex-house-surgeons of other hospitals that in the usual operation, without ligature of the linguals, post-operative hæmorrhage is not a very uncommon event for them to have to deal with. Mr. Jacobson says: "That the hæmorrhage is free with the scissors alone, none will deny." Why have hæmorrhage at all? For the safe, easy, and rapid removal of the uterus we tie, as a preliminary measure, the ovarian and uterine arteries; for the safe, easy, and rapid removal of the thyroid we tie the thyroid arteries; for the safe, easy, and rapid removal of the tongue we should tie the lingual. Whether the patient lose a large or small quantity of blood; whether hæmorrhage be difficult or easy to control, ligation of the lingual

and facial eliminates it, and must surely, therefore, be an advantage. As stated above, I have ligatured the lingual and facial arteries on thirty-nine occasions, on one or both sides, previous to excision of cancer in the tongue or floor of the mouth, in all possible situations, at one sitting or more. In almost every case in the latter operation no vessel whatever has required a ligature; in the remaining bleeding has been of the most trivial character. In not a single instance has there been any post-operative hæmorrhage, either reactionary or secondary. Mr. Jacobson's third line of criticism against ligature of the lingual is (c) that it is not an easy operation, and cannot always be done quickly. I do not think the difficulty of an operation alone should deter a surgeon, though the time occupied in performing it, perhaps a natural sequence of the difficulty, would undoubtedly in these cases be an argument against it. But this criticism applies to ligature of the lingual artery independently of the dissection in the neck, and therefore is not relevant to the operation I am discussing here. As I have stated above, ligature of the lingual after dissection of the neck is a simple and easy procedure, and adds practically nothing to the duration of the operation.

2. Owing to the elimination of the one and only troublesome complication of the operation within the mouth—namely, hæmorrhage—it greatly enhances its rapidity and simplicity. It reduces the actual excision of the tongue to a minor operation, which it never is without it. It consequently frequently enables the surgeon to perform an operation at one sitting which he would otherwise consider it prudent to divide into two. If, for instance, the disease is confined to the tongue and at the termination of the gland dissection the patient is in good condition, and the surgeon's judgement prompts him to remove the tongue or half the tongue at the same sitting, he knows that he has quite a trivial and bloodless operation in front of him: whereas if the tongue is excised first, and the operation has been troublesome and the patient has lost a good deal of blood, the surgeon will hesitate to submit him to a long dissection of the neck immediately afterwards. After ligature of the feeding arteries the mouth operation (unless the jaw has to be divided) becomes quite insignificant; the gland dissection is the only major operation.

3. Owing to the elimination of hæmorrhage, it enables the surgeon to excise the growth in the mouth with greater precision and deliberation. This is, perhaps, its greatest advantage. The surgeon can see exactly what he is doing and where he is cutting—a matter of great importance in dealing with this disease in a confined, and not always easily accessible, cavity.

4. If, as in many cases of extensive disease, it is considered prudent to divide the operation into more than one sitting, it cuts off the blood supply to the growth meanwhile. As Sir Walter Cheyne has pointed out, the growth in the glands is frequently more rapid than in the mouth. On this ground alone it would in many cases be wise to remove the glands first. If we can put a brake on the blood supply to the primary growth at the same time it is an additional reason for attacking the glands first, for if the tongue operation is performed first we cannot in the interval cut off the blood supply to the glands.

5. Ligature of the lingual and facial arteries may starve any cancer cells in the neighbourhood which have been left behind after the completion of the operation, and in this way possibly prevent or retard recurrence. It is impossible to prove this, but it is not an unreasonable supposition, or one unsupported by experience. The ideal modern operation for cancer is to remove the entire disease—and I mean by this the primary growth and every cancer cell which has sprung from it—in one piece. This is best exemplified in the case of the breast. The ideal is to remove the breast, a wide margin round it, the lymphatics running to the axillary glands and the axillary glands themselves, all in one piece inclusive, with the object of having in the removed portion every cancer cell. That is the objective, possibly seldom attained. In the tongue this is impossible. It is impossible to remove the tongue and glands of the neck in one piece. Tissues remain between the primary focus in the mouth and the removed portions in the neck, which may and probably do contain cancer cells. Also, notwithstanding the most careful dissection, cancer cells may be left—indeed, certainly often are left—in the neck. By cutting off the blood supply to

these as far as possible, we may succeed in retarding their growth or even in starving them out altogether. This is further aided by the cicatricial contraction of the large wound in the neck and in the mouth. Mott was the first to suggest ligature of the feeding arteries to inoperable malignant tumours. The same principle may be extended as an additional aid to those that are operable. We have a hint in this direction from the natural history of such tumours. The rapid and luxuriant growth of malignant tumours containing little formed fibrous tissue, and in a soil composed of young and vascular elements, the comparatively slow growth of tumours containing abundance of well-formed fibrous tissue, and in a soil composed of less vascular and atrophied elements, would suggest that cutting off the blood supply and producing abundance of cicatricial tissue in the neighbourhood of cancer cells is likely to destroy them or retard their growth. In the mouth and neck by the cicatrization of the large wounds there, after the extensive modern operation for cancer, and by greatly diminishing the blood supply to these parts by ligature of the lingual and facial arteries, especially if it be done on both sides, we are in a position to produce conditions which we know to be unfavourable to the growth of cancer naturally.

6. It does away with any necessity for preliminary laryngotomy or tracheotomy. Now opening the air passages and plugging the fauces, however simple a proceeding, introduces an additional complication, makes a wound which, owing to its communication with the air passages, is necessarily a septic wound, and should be avoided if possible. In fact its advocacy is an admission of the anxieties of hæmorrhage and its consequences in excision of the tongue. After ligature of the lingual and facial arteries it has in my experience never been necessary. In no single instance has the entry of blood into the air passages been a source of anxiety. It is admitted that with a skilled operator, skilled assistants, and a skilled anaesthetist, this operation may not be required, even if the lingual and facial arteries are not tied, but the latter operation greatly reduces the anxiety of blood entering the air passages, and renders preliminary laryngotomy or tracheotomy quite unnecessary.

I have stated the advantages that have appeared to me to follow an attack upon the neck first, with ligature of the lingual and facial arteries, from the experience of a considerable number of cases. Another argument for attacking the neck first is this—it is a contingency that may not often occur, but it is not without the bounds of possibility: If the tongue is removed first the patient may subsequently decline the operation upon the neck. All that is troubling him at this time is the disease in his mouth. Although he may have had it clearly explained to him that a second operation will be necessary, and although he may have made up his mind to submit to this, after he has gone through the experience of the first, and has got rid of all appreciable evidence of his disease, he may be unreasonable or his courage may forsake him, and he may refuse the second; whereas if the glands are removed first he is not likely to refuse the subsequent removal of the disease in his mouth. Patients, especially hospital patients, are occasionally very unreasonable, and no amount of argument will persuade them to follow the surgeon's advice.

The last point which I wish to emphasize, in the choice and scope of operation for intraoral cancer, is the advisability of avoiding a communication between the wound in the mouth, which is necessarily septic, and the large recent wound in the neck left after a glandular dissection. This can always be done, except, I believe, the growth be in the tonsil and its neighbourhood, and requires excision from without. Provided the disease be confined to the tongue, this can always be excised intraorally; and if the disease is in the floor of the mouth, any communication with a large recent wound in the neck can always be avoided by dividing up the operation into two stages.

Typical positions of intraoral cancer may be conveniently taken, with the view of indicating the *modus operandi* in carrying out the principles advocated in this article.

1. *The growth is confined to one side of the tongue, in a median or anterior position (with or without a slight adjacent involvement of the floor of the mouth).* This is the simplest case. The surgeon proposes to clear the anterior and submaxillary triangles on one side, tie the

facial and lingual arteries, and then remove half the tongue. Butlin's skin incision is made. There is no necessity to describe minutely the dissection. Commencing from below, and carrying the dissection upwards as far as the parotid gland, and forward to beyond the mid-line, the whole contents of the triangles down to the great vessels (including the submaxillary salivary gland) are removed in one piece. When the submaxillary gland is lifted from its bed the facial artery comes into view, is ligated and divided. The internal jugular vein may require removal. The carotid vessels are next pulled forward, the sterno-mastoid muscle backward, and the deep chain of glands posterior to the vessels are next dissected out in one piece from the clavicle to the transverse process of the atlas. As the final step in the operation on the neck the hyoglossus is divided and the lingual artery tied and cut between the ligatures.

The wound is now closed, a rubber tube being brought out at the lower end, and no gauze packing being used. Gauze packing, which I used in my earlier cases, frequently sticks to the edges of the skin and acts as a retainer of discharges instead of a drain. The best plan, in my opinion, is to insert one rubber tube at the lower end of the incision and place a sponge or two in the dressing to ensure elastic compression of the large wound and thus prevent oozing. The wound in the neck, having been closed, is covered temporarily with a towel soaked in 1 in 40 carbolic acid to protect it from contamination during the excision of the tongue. This can now be usually performed straight away, being quite a minor and bloodless operation, and occupying only a very few minutes. After the excision of the tongue the gloves are changed, and the dressing is applied to the wound in the neck. If for any reason it be considered prudent to defer the excision of the tongue—though if the operation is performed in this order and in this way it will not often be necessary—it can be done in a fortnight, the blood supply to the primary growth having been cut off in the interval. At this second operation there will likewise be no bleeding, notwithstanding any theoretical considerations about the establishment of collateral circulation.

2. *The growth is confined to the tongue, but crosses or approaches the mid-line (with or without a slight adjacent involvement of the floor of the mouth).* Both anterior and submaxillary triangles will require dissection, and the whole tongue must be excised intraorally. This is a very severe operation, and the surgeon can proceed in two, or exceptionally even three, stages, according to the circumstances and condition of the patient. I have more than once successfully dissected out both anterior and submaxillary triangles, tied both linguals and facials, and subsequently excised the whole tongue intraorally at one sitting. Still, further experience convinces me that the operation is too severe, and as a rule two sittings will be required. I think they are best arranged as follows: At the first operation the triangles upon one side are dissected with ligature of the lingual and facial. A fortnight later a similar operation is performed on the other side and the tongue then excised. Alternatively the neck dissection might be done on both sides at the first sitting, with ligature of both linguals and facials. In one case, however, in which this operation was performed, sloughing of the anterior portion of the tongue followed, though this *contretemps* did not interfere with the patient's recovery. This is the only single accident that has happened in my series of cases of ligature of the lingual. The first plan, therefore, seems the best. If the patient's age or condition involves great anxiety as to how much he will be able to stand, the operation can even be performed in three sittings, a neck dissection on each side separately and a subsequent excision of the tongue.

3. *The floor of the mouth is extensively involved either laterally or in front.* The operation here, I think, requires a median division of the jaw, and should always be done in two stages, exceptionally in three. The first operation, as a rule, will consist in a dissection of both anterior and submaxillary triangles, with ligature of both lingual and facial arteries. In a fortnight, when the wound in the neck is healed (the blood supply to the growth having been cut off in the interval), the lower jaw is divided in the mid-line, and the disease, wherever situated, is widely and bloodlessly excised. The jaw should always be wired, because, though it frequently does not unite by bone, yet

the wiring ensures a good position for it subsequently, and in my experience its non-union causes very little inconvenience. A portion of the lower jaw may require removal. Finally a drain tube is carried from the mouth to the lower angle of the wound in the neck and kept in position for about a week. The large wound in the neck caused by the dissection of the triangles a fortnight earlier having healed, there is now no danger of cellulitis in the neck. Three sittings may occasionally be required for excision of the disease in this situation, as exemplified in my last case at the Portsmouth Hospital.

The patient was a feeble old man, said to be 65—he looked 75. The disease occupied the left side of the floor of the mouth and both halves of the tongue. On June 22nd, 1908, the left neck dissection was performed with ligature of the lingual and facial on that side. The patient's condition did not allow of more; the wound healed by first intention. On July 6th the right side was similarly treated, and with the same result. The blood supply to the growth had been cut off. He was not fit for the final operation till July 31st. The lower jaw was divided and the whole tongue and floor of the mouth were excised. No vessel required a ligature. One or two small vessels alone spurted in reflecting the lower lip (inferior dental). He made an uninterrupted recovery.

I am confident the operation could only have been safely done in this piecemeal and bloodless manner.

4. *The disease occupies the tonsil and its neighbourhood—for example, fauces, palate, pharynx, etc.* The consideration of these cases will be very brief, as the present article is not intended to cover them. They will usually have to be dealt with by one or other of the operations of pharyngotomy, and the operation will, I think, have to be performed in one stage, for if the neck dissection is done first anatomical landmarks will be obliterated during the cicatrization of the neck wound, which will make the excision of the primary tumour from without exceedingly difficult and dangerous. I have operated upon three such cases during the past two or three years.

In two of them, in which the disease involved the tonsil and its immediate neighbourhood, the glands of the neck were dissected out and the lingual and facial arteries were ligated close to their origins from the carotid. An incision was then carried up to the angle of the mouth, and the lower jaw was divided opposite the masseter. This gave very good access to the disease, and there was during its removal practically no arterial bleeding and no necessity for laryngotomy or tracheotomy.

In the third case the disease involved the tonsil, soft palate, and the alveolus of both upper and lower jaws, being very extensive within the mouth. As is not very infrequently seen in cases of extensive primary growth, the disease seemed to be extending itself locally, and there was very little glandular enlargement. An attempt was therefore made, at the patient's earnest insistence, to eradicate it. The neck dissection was first performed and the external carotid tied. To lessen the danger of secondary hæmorrhage the lingual, facial, and superior thyroid were next ligatured. The growth was exposed in the same way as in the two preceding cases. After median division, the lower jaw on the side of the growth, being involved, was disarticulated, and a large section was also removed of the neighbouring alveolus of the upper jaw, to which the disease had extended. There was no arterial hæmorrhage, though the bleeding from the inferior palatine and pharyngeal veins caused a little trouble. This patient made an excellent recovery, and followed his employment as a cabdriver for a year, when he had recurrence *in situ*. There was never any sign of disease in the neck.

In all these cases the disease was removed with scissors, and in all of them the advantage of preliminary ligature of the feeding arteries was manifest. In none of them was laryngotomy or tracheotomy required. In none of them was it possible to close the wound in the pharynx. The same principles as advocated in this article for dealing with cancer of the tongue and floor of the mouth were extended to these cases, except that the operation was in each instance performed at one sitting, involving a communication between the mouth and the large wound in the neck, and thereby greatly increasing its risks. But if a clean dissection of the contents of the triangles is carried out I do not see how this is to be avoided.

CONCLUSIONS.

To sum up, the following are the two main principles advocated in the present communication in the operative treatment of cancer of the tongue and floor of the mouth:

The neck should always be attacked first, with ligature of the lingual and facial arteries on one or both sides. This manœuvre reduces the excision of the primary growth, provided that it can be extirpated without division

of the jaw, to an insignificant and bloodless operation, which can consequently be frequently performed without danger immediately after the neck operation. It enables the primary growth to be removed with greater precision. It does away with all necessity for preliminary laryngotomy or tracheotomy. It cuts off the blood supply to the tumour in the interval, if the operation has to be divided into two stages. It will possibly starve cancer cells which may be left behind after attempted extirpation of the disease. In my experience it is the key to the operation.

The second principle is that a communication between the mouth and a large wound in the neck should always be effected where possible. Unless the disease be situated in the tonsil or its neighbourhood, and except the patient insist on a single operation, this can always be accomplished by dividing the operation into two stages in those cases in which for the satisfactory removal of the disease the lower jaw requires division. The neck, as before, is attacked first, and the lingual and facial arteries are tied. When, in a fortnight, the large wound in the neck is healed, the jaw is divided and the primary growth is excised, as before, bloodlessly. In conclusion, as regards final results, early diagnosis is the only hope. With this view, the therapeutic test of cancer, iodide of potassium, should be relegated to the limbo of dangerous playthings. Immediate microscopic examination of a piece of the growth should be the only test, and the therapeutic test should never be employed unless the microscopic report is doubtful. It should then be pushed rapidly, and its effects not watched too long.

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THE SURGERY OF COLITIS.

By F. C. WALLIS, F.R.C.S.

SURGEON TO CHARING CROSS, ST. MARK'S, AND GROSVEGOR HOSPITALS.

BEFORE discussing the present position of the surgery of colitis, it is necessary to have a clear idea as to what the word "colitis" is meant to convey. For the purposes of these remarks, it is intended to include acute and chronic affections of the colon, sigmoid, and rectum produced by catarrh, inflammation, infection, or intestinal irritation.

It is not too much to say that now practically every morbid condition of the large bowel and rectum has been relieved by surgery at one time or another, and although there is not yet, and cannot well be, any decided line drawn as to which cases should receive one or the other treatment, it becomes a daily increasing necessity for the surgeon to be familiar with the causation and pathology of these conditions as well as to have an intimate knowledge of their treatment.

Colitis must be divided first into two large groups, Acute and Chronic, the subacute being merged into the chronic, far the larger group of the two.

ACUTE COLITIS.

For practical purposes it may be said that all cases of acute colitis are infective in origin, which does not mean that all infective cases of colitis are acute.

Mention must be made of those cases which are brought about by exposure to cold, etc. Such hardly come within the scope of this paper, as when uncomplicated they usually get well with ordinary medical measures. But when there is in addition a well-marked condition of oral sepsis which has probably been present for years, a very different state of affairs may supervene.

The large bowel swarms with micro-organisms which in the ordinary way do no harm, but when the membrane is inflamed the resisting power is much diminished, and the streptococci make active use of it, with the result that serious and wholesale destruction of the mucous membrane occurs, and at the same time considerable toxic absorption takes place, producing grave constitutional disturbances.

SYMPTOMS.

These are acute abdominal pain associated with tympanites, diarrhoea, haemorrhage, and the passage of much blood-stained mucus and foul discharge, and in advanced cases sloughs may come away. A marked condition of toxæmia is always present in acute cases.

Treatment.

The surgical treatment in these acute cases does not differ from that which is done in the subacute cases, and the details will be given with the description of the subacute cases. The only point to emphasize here is that the condition is one of great emergency, and as such must be considered in undertaking any operation for its relief.

CHRONIC COLITIS.

The far larger group of chronic cases may be classified as follows:

1. Mucous colitis.
2. Membranous colitis.
3. Ulcerative colitis.
4. Haemorrhagic colitis.

Mucous and membranous colitis are practically the same, as both are due to excessive secretion of mucus.

The excessive secretion is caused by inflammatory irritation of the secreting glands, and when the inflammation is recent and subacute the discharge is entirely mucous, but in the acute cases the mucus is bloodstained.

When the inflammatory area is situated in the rectum or sigmoid the discharge consists of mucus only, but if the affected area is higher up in the colon it will be mixed with the intestinal contents. When the inflammation is of a chronic character, the mucus is secreted more slowly and becomes laminated, forming in some cases a complete cast of the bowel. This is the condition which is known as membranous colitis.

Ulcerative Colitis.

Ulcerative colitis (chronic) is a further stage of the inflammatory process, in which a destruction of tissue has taken place. Four varieties may be considered here, namely:

1. Follicular ulceration.
2. Ulceration due to sepsis.
3. Ulceration due to traumatism.
4. Dysenteric.

Follicular ulceration occurs mainly in the sigmoid and upper part of the rectum, as it is in this part of the intestinal canal that the majority of the solitary follicles exist. They are situated in the mucous membrane itself and the base of the follicle extends to the submucous tissue. The sigmoidoscopic examination shows a number of sharply-cut-out ulcers extending down to the submucous coat, and the mucous membrane around the ulcer is inflamed.

The symptoms mainly consist of a discharge of blood or blood-stained mucus; there is little or no pain associated with it, and the patients are otherwise quite healthy.

This form of ulcerative colitis is not of any serious importance as to the suffering it entails, but it is probably quite as difficult to cure as any of the different forms of colitis.

Ulceration due to sepsis when originally in the colon is due to a microbic infection of an already inflamed mucous membrane, and in ulcerative colitis associated with haemorrhage the organism present is usually a streptococcus. The contents of the large bowel, as has already been said, swarm with micro-organisms which in the ordinary way do not affect the mucous membrane; but when this is inflamed the micro-organisms not only have a destructive action on the inflamed membrane, but, in addition, the absorption of toxins causes constitutional symptoms of more or less gravity.

Traumatic ulcerations apart from ulceration due to post-operative sepsis are almost restricted to women in whom the pressure of the fetal head in a protracted labour has caused absolute destruction of a part of the mucous membrane, which sloughs away, leaving an ulcerated area behind it.

Dysenteric ulceration, as far as symptoms and surgical treatment go, does not differ from the other forms mentioned, except for the fact that the patients have usually resided in tropical countries where dysentery is endemic, and that whilst in these parts they have suffered from symptoms associated with dysentery.

It is rather necessary to put it in this way, because it is only too commonly the custom in tropical countries to class all forms of subacute and chronic diarrhoea as dysenteric, and in military hospitals when the ulceration is discovered as well, it is nearly always diagnosed and treated as syphilitic. With regard to this latter form of ulceration as a cause of colitis, I purposely have not

considered it, as after nearly twenty years of general hospital work and twelve at a special hospital, in addition to general surgery, I am quite ignorant of the existence of this form of ulceration, as I have never seen any single case of it.

Haemorrhagic Colitis.

Haemorrhagic colitis is no doubt another form of the ulcerative type, and the organism responsible is nearly always a streptococcus, but the main symptom—namely, haemorrhage—is so prominent and so urgent that the condition must be treated as an acute one with regard to the immediate treatment required.

In addition to the haemorrhage there is usually a raised temperature, the pulse is running and weak, the patient is markedly anaemic, the abdomen is tender and tympanitic, and the frequent action of the bowels, consisting mostly of blood, are accompanied with much pain and distress to the patient.

When the bowel is examined with the sigmoidoscope the mucous membrane of the rectum and of part of the sigmoid is seen to be intensely injected, and when this condition occurs in a young adult it may be easily mistaken for a malignant growth until examined with the sigmoidoscope.

There is one other condition which may give rise to similar symptoms—namely, when an inflamed appendix situated in the pelvis involves the rectum in its inflammatory process. Here, again, short of opening the abdomen it is almost impossible to make a diagnosis without the sigmoidoscope.

Treatment.

The whole aim of the surgical treatment is to clear out the large bowel as thoroughly, and render the contents as aseptic, as possible. When this has been done for some days, and at the same time oral sepsis has been thoroughly carried out, the inflammatory condition of the colon gradually subsides, and in recent cases the mucous membrane becomes normal, the symptoms disappear, and the patient is cured, but it is most necessary that for some time after every care should be taken in the way of diet, and also over-exertion should be carefully avoided; otherwise the symptoms are sure, in some measure, to return.

The point of paramount importance is to settle as exactly as can be, first, when surgery should come in, and, secondly, what particular thing should be done for each particular case. At present only those cases come to the surgeon which, so to speak, are driven to a surgical port by stress of circumstances. These, as a matter of fact and speaking from experience, do very well in the end, although the period of convalescence may be a matter of months, which, however, is passed without pain and, indeed, in comparative comfort.

The question as to the amount of time which should be spent in medical and expectant treatment in chronic cases is not easy to answer, but it will depend upon the amount of pain which is being endured, the individuality of the patient, and the conservative bias of the medical man.

The disadvantage of this is that no one medical man has, except in quite rare instances, a sufficient number of cases the treatment of which would constitute an experience of any real value. The decision, therefore, of the vast majority of men will be one arrived at through the medium of some one more or less expert. It is a comfort to reflect that the majority of such in this metropolis, at all events, are absolutely broad-minded as to the matter of what is called "surgical interference."

As to when this shall take place in this or that case it must be a matter of evolution, and in accordance to the results which can be shown by those of us who have the surgical treatment of these cases, and so gradually with the spread of knowledge and increase of experience one foresees a vast improvement in the future treatment of these cases of colitis, when the years which are now spent in hopeless treatment will be a thing of the past.

Dealing with acute cases, it must be apparent that such a grave condition requires urgent treatment in some thorough and practical form. Half-measures are useless; and, although those about to be advocated may in bad cases be hazardous, it is the only chance and must be

taken. The aim of the treatment must be, first, to thoroughly irrigate the large bowel, that the infective material it contains may be reduced to a minimum. It is quite impossible to do this by the ordinary methods of rectal irrigation. It is much too painful, and the patient is much too ill to stand it.

An appendicostomy, when possible, should be undertaken; or if for any reason, such as adhesions, etc., this is not feasible, then caecostomy must be performed, preferably according to the method of Gibson if circumstances permit.

OPERATIVE TREATMENT.

The various kinds of surgical treatment at present carried out are as follows:

1. Appendicostomy.
2. Caecostomy.
3. Colostomy.
4. Proctotomy (median posterior).

To these must be added, either separately or in conjunction with the above, the more recent treatment by means of

5. Cataphoresis.

Appendicostomy.

Appendicostomy is probably, taking it all round, the best operation for those chronic cases of membranous or ulcerative colitis which are at present submitted to the surgeon for operation.

The operation itself presents no difficulties unless there has been much inflammation in the caecal region, when the adhesions may be troublesome. The operation has been frequently described of late, but one or two descriptions which have been published have been so obviously written on insufficient experience that it may be as well to briefly describe the essential details.

The appendix is reached through as small an incision as is compatible with the amount of abdominal fat present, and the appendix is freed of all adhesions and brought outside the abdominal cavity, as much of the meso-appendix being divided as is necessary for the absolute free handling of the appendix; in fact, it is best to free the appendix down to the caecum.

When this has been done and all haemorrhage stopped, the incision of the peritoneum is closed, and in this process the base of the appendix is included.

These patients are mostly thin and there is not much depth of abdominal wall to close. The split muscles are united either side of the pulled out appendix, but the skin is for the moment left. The appendix is packed round with gauze, and a point chosen to amputate which would leave not more than a quarter of an inch of the appendix outside the skin; the appendix is crushed at this point in the ordinary way to avoid any haemorrhage, and after removal the cut edge is either treated with pure carbolic or with the actual cautery.

The great point of practical importance is to leave as little of the appendix as possible.

The cut edge of the appendix is seized with fine forceps and held apart whilst a catheter—rubber—of sufficient size to be tightly gripped by the stump of the appendix is passed into the caecum, a thread ligature is tied round this, and the skin is closed with interrupted stitches, which again include the appendix.

The catheter is now connected with an irrigation apparatus and a solution of warm bicarbonate of soda (100° F.) is allowed to slowly run into the colon. There is no possibility of any leakage occurring if the simple points mentioned already are carried out. To get the solution to pass out freely, and to avoid any over-distension of an attenuated colon, a small Kelly's tube is passed into the rectum; this is a most useful point in the washing out. After from 1 to 3 pints have been passed into the colon the fluid will commence to flow readily through the rectal tube, and the irrigation is carried on on the operation table until the fluid passes out quite clear and odorless. The catheter is then tied up to prevent any back leakage, the wound is dressed, and the patient put to bed.

After-treatment.

If the patient is not too ill from the anaesthetic, the irrigation should be carried on next day, and in any case

no time should be wasted in continuing the irrigation which should be carried out daily. This can be done without any disturbance of dressings. The wound is looked at on the third or fourth day, when it may be found that the exposed part of the appendix can be removed. The skin suture on either side is divided, and the appendix stump is cleaned with a solution of peroxide.

The irrigation is continued for from three to six weeks, and after the first few days it has been my custom to finish up with some permanganate of potash solution—very weak—which I have found most beneficial. Due care must be paid to the diet, and some intestinal antiseptic should be given.

If the patient is constipated—and they mostly are—some aperient in addition to the irrigation must be given. By this simple method cases of colitis which have been going on for years and have been during that period treated with all varieties of expectant treatment, show in a very short time marked improvement; hæmorrhage and pain soon cease, the patients put on flesh, and the pyrexia disappears. At the end of three to six weeks the irrigation is discontinued, but a careful diet is maintained and rest in the horizontal position is insisted on as much as possible. But very gradually the patient is allowed to resume ordinary diet and increased exercise is allowed. A careful watch must be kept over the patients, especially with regard to what is passed from the bowel. During this time and until the colon is normal when viewed with the sigmoidoscope the appendix must be kept open by keeping a plug in during the night. It can be left out during the day, and some simple dressing applied. There is practically no leakage. It may be that it is desirable to prevent the opening from closing for even a year, and if there are any indications of a "set-back" the irrigation must be resumed until these have disappeared. The best results of this treatment are seen in those bad cases of hæmorrhagic colitis where the patients are in a most desperate condition from a combination of hæmorrhage and toxæmia together. In a few days the hæmorrhage ceases, the temperature falls, and the patients lose their blanched colour and gain in weight, and in a short time the action of the bowels is normal.

But in this as in other forms of colitis it is necessary for some time to keep a careful watch over the patient both as to diet, exercise, and exposure to cold.

When it is thought safe to let the opening close, it is usually only necessary to leave out the tube, and if this is not sufficient the edges may be touched with the actual cautery, but it is rarely necessary to do this and most rarely necessary to do any form of plastic operation.

Cæcostomy.

This may be termed a bad substitute for appendicostomy, and should never be resorted to if in any way the appendix can be made use of. The details of this operation as performed by Gibson will be found in Tittle's book; the aim of the operation being to avoid any leakage from the cæcum, a result which is highly disastrous to the neighbouring skin as well as most painful to the patient.

Colostomy.

There are many ways described in which this operation may be performed, and the one advocated in my book, *Surgery of the Rectum*, is, I think, on the whole the best. The points about it are that the operation can be done through a small incision, and the great gain is that the bowel can be opened *at once*, and, as in the appendicostomy, irrigation can be proceeded with *at once*.

This operation is of the greatest benefit in cases of dysenteric ulceration, where usually the ulceration is limited to the sigmoid and rectum. The affected bowel can be kept quite clean and free from all contact with the intestinal contents, and the ulcerated areas can be treated by the direct application of any lotion which it may be thought will do good. Personally I have not much faith in the curative powers of any of these applications beyond their effect in keeping the colon clean, and as far as possible preventing reinfection. This is probably all that is necessary in those cases in which the ulceration is limited to the surface, and there is no submucous infiltration. When once the ulcerated surface has healed it is well to close the colostomy forthwith that the rectum may resume its natural functions. This will

materially help in the prevention of any contraction, any tendency to which must be overcome by the careful passage of bougies.

Posterior Median Proctotomy.

This is of great use in those cases in which the ulceration is low down in the rectum, and the pain is so great that there is much spasm of the sphincters. A posterior incision through both sphincters and extending back to the coccyx relieves the spasm and ensures free drainage, and after a day or two the rectum and sigmoid can be thoroughly irrigated with very little discomfort to the patient. This, associated with warm boric acid sitz baths, soon relieves the patient of the painful and acute symptoms, and the ulcerated surface can after a week or ten days be submitted to the treatment of zinc cataphoresis.

This combination of treatment is of the greatest value in those cases in which the ulceration is limited to the lower part of the sigmoid and the rectum.

Cataphoresis.

This form of treatment was advocated by Dr. Ironside Bruce and myself in a paper read at the Royal Medical Society in June, 1908. For the details of this treatment I would refer my readers to that paper. I have nothing but good to report of the further experience of it, and certainly in recent cases the effect is most satisfactory. The effect of a continuance of the treatment in those intractable forms of ulcerative proctitis of some years' standing with submucous infiltration is that the spreading of the ulceration is checked, and in those cases where after years of ulceration the membrane has been damaged beyond repair, a non-infective granular surface is left which can be dealt with by means of excision or some other surgical measure, which when embarked on in the ordinary way is in many cases futile, or even worse, on account of the infective character of the ulceration, and the consequent difficulty of preventing reinfection.

CONCLUSIONS.

To sum up the present position of surgery in the treatment of colitis, it may be said that the sooner all forms of ulcerative and hæmorrhagic colitis are submitted to surgical treatment the better. There can be no doubt but that irrigation of the bowel through a surgical hole made in it is the best—one would almost say the only—chance there is of recovery from this condition. Mention has already been made as to the serious condition which exists in acute cases, and the one chance they have, however great the risk, is the free irrigation of the large bowel by one of the surgical measures already suggested.

In either acute or chronic cases the whole aim and object of both medical and surgical treatment is to get the colon free of the infective contents, and thus, by keeping the bowel clean, give it the best chance of recovery.

Any application of a chemical nature, whether stimulant or astringent, must be used with caution, as most such applications are irritant, whatever other properties they possess.

The best treatment for these ulcerated areas is cataphoresis, but so far we are only able satisfactorily to treat those cases limited to the lower 7 or 8 in. of the bowel.

As to the efficacy of vaccines in either acute or chronic cases, my experience is quite small and limited to chronic cases, in which it seems to have some beneficial effect, although so far it in no way seems curative. From inquiries made, I gather that the present state of our knowledge in this matter is insufficient to make any definite statement either one way or the other.

The form of colitis about which any definite conclusion as to surgical procedure cannot yet be arrived at is membranous colitis. This form is usually met with in women between the ages of 25 and 50; they are nearly always of the neurotic type, imaginative and constipated from habit, and generally before they come for treatment for colitis they have either been treated or have treated themselves for years for constipation, usually by wrong methods, which have had the effect of exaggerating the inflammatory condition of the mucous membrane and increasing the mucous discharge.

Muco-membranous colitis of this type has often been said to be caused by the neurasthenic condition. As to

how far this statement is one of fact is a question which it is not proposed to examine further than to suggest that it may be possible that, owing to the constant absorption of toxic products, the various neurasthenic features may be due to the direct effect of these absorbed toxins on the central cerebro-spinal system, and if this is so it would seem obvious that any measure which quickly and thoroughly cleans the colon of its harmful products must be the most desirable.

Without discussing the various treatments by means of lavage, diet, waters, exercises, and intestinal antiseptics which are carried out in this country, at Plombières, and elsewhere, with marked success in many cases, there remain a large number of cases which, either from neglect or in spite of treatment, are in a miserable condition of chronic ill-health, which no amount of treatment can do much to alleviate. It is for such cases that I would suggest a much earlier resort to surgery. It does not appear to be possible to clear the colon of its contents by the ordinary methods of lavage; besides which the process, if carried out effectively, is distinctly an exhausting affair, especially having regard to the enfeebled state of the individual concerned. When once the operation of appendicostomy has been performed the process of washing out the colon is one which is easily carried out with the smallest amount of discomfort to the patient, and with a rapid disappearance of the amount of membrane and great amelioration of the symptoms, such as pain, flatulence, etc. The constipation is not so easily overcome, but there is distinct improvement in this respect, and the appetite is greatly improved, the weight increases, and with the improved physique the recuperative powers are increased, and with a continuance of the treatment, with due regard to diet, and with as perfect hygienic surroundings as possible, there is no reason why these people should not get well; but the treatment may take many months—even a year—before the patient is able to discontinue it and allow the opening to close.

In some—nay, in most—cases the patients bear the treatment with equanimity because of the greatly increased comfort they derive from it.

There is not any necessity for these people to stay in hospitals or nursing homes longer than two or three weeks, as for the purpose of carrying out the treatment the patient can soon learn to do this with any slight help from some member of the family or a servant.

Perhaps the most important thing in diagnosis in reference to treatment is the early examination by the sigmoidoscope.

There is no doubt that much may be learned from such an examination and a great deal of time saved, and I would strongly urge that this should be done quite early. The state of the bowel wall can be made out and specimens of pus or secretion can be obtained for microscopical examination or for bacterial investigation; the extent and depth of any ulceration can be made out and the question of any growth can be settled. With the sigmoidoscope for diagnosis and the various surgical methods which have been described much can now be done to relieve the various forms of colitis. The important question is whether these surgical measures should not be resorted to much earlier and more frequently than is now the custom.

THE University of Leipzig will celebrate the 500th anniversary of its foundation in August, 1909.

THE will of the late Dame Frances Russell Reynolds directs that a sum of £1,000 shall be paid to the National Hospital for the Paralyzed and Epileptic for the maintenance of a bed in memory of her husband, the late Sir Russell Reynolds.

It is apparent from a paper read by Mr. Berry at the Scottish Institute of Brewing on "The Condition and Head on Beer," that the public demand for a beer with an attractive "head" is more exacting than it was some years ago. In consequence, many brewers now resorted to carbonating beers. In the days of the East India pale ale, when much higher alcoholic beers were in vogue, the production of an attractive and lasting "head" did not present the same difficulties as the present day. Science has now come to the aid of the brewer, and by careful and judicious malting, methods could be employed that would produce, even on low alcoholic beers, a head and conditions of surpassing attractiveness.

THE TREATMENT OF CHRONIC RHEUMATIC AND RHEUMATOID ARTHRITIS BY RADIANT HEAT AND CATAPHORESIS.

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It appears reasonable in the present state of knowledge of the pathology of the conditions included under the terms "chronic rheumatic arthritis" and "rheumatoid arthritis" to accept, for purposes of treatment, the view that they are inflammatory affections of a progressive character, probably caused by toxins elaborated by micro organisms; also, that the micro-organisms or micro-organism in question may have their habitat in the joints affected, or may dwell elsewhere (perhaps in the naso-pharynx, perhaps in some portion of the alimentary tract); also, that circumstances which depress the general or local circulation, allowing the blood to more or less stagnate in the structures which form the joints (and the circulation is normally comparatively slow in these structures), act as strong predisposing causes; that, of these depressing circumstances, one of the most important is continued exposure to cold and wet, or both combined, others are insufficient nutrition and mental shock; and that another predisposing cause may be repeated slight traumas, for it always appears from the history that the joints which have been exposed to the greatest wear and tear are usually the first to succumb.

Unless we start with some such definite, although perhaps hypothetical, view of the pathology of the affections, treatment tends to be empirical. Assuming, therefore, that the above microbic theory is correct, the value of improving nutrition by generous diet, cod-liver oil, and fats is manifest; as also the prescription of drugs empirically found to produce a good effect—and all being more or less antibacterial, such as iodides, arsenic, quinine, and guaiacol—and more especially the removal of our patient from the influence of the predisposing causes.

The comparative want of success in one portion of our treatment lies in the fact that, although we may give drugs as remedies in large doses and for long periods, yet the actual amount at any time of any drug circulating slowly in the joint tissues is in reality quite small, and, therefore, the beneficial effect is proportionate. To increase the latter the treatment by radiant heat and cataphoresis may assist us materially.

The action of heat in relieving pain and exerting some control in checking these diseases has always been recognized in chronic rheumatic and rheumatoid arthritis; local treatment has comprised hot poultices, compresses, volcanic-mud and moor-mud baths, vapour and hot sand baths, and so on, but the most efficacious of all heat applications is dry radiant heat. Until recently the radiant heat appliances supplied have usually been box-like, the distance of the radiant surface from the joint could not be regulated, and they were often covered in with asbestos sheeting, and thus imperfectly ventilated. In consequence we may have, combined with radiant heat, a condition to be avoided, namely, "moist air heat." They have a more important defect in that, as the radiant surfaces are made of ordinary low candle-power electric carbon filament lamps, they give out rays consisting almost solely of the yellow and yellow-orange. Now the ideal type of radiant heat should be as nearly as possible like sunlight and should give a spectrum ranging from the ultra-red to the ultra-violet. This type of spectrum can apparently be only obtained from lamps of very high candle-power. I am quite convinced that an absence of the violet and ultra-violet rays in the ordinary apparatus is largely responsible for the weakness of sedative effect and slow relief of pain, whereas absence of yellow-green rays may be responsible for only slight stimulation of metabolism.

I find a type of radiant heat apparatus, manufactured and largely used in America,* very satisfactory. It consists of a single large lamp in a funnel-shaped projector lined with a reflecting surface. The projector may be raised or lowered by a system of counter-weights, or

turned in any direction with one hand; the rays can be directed easily and rapidly on any part, and the maximum amount of heat the patient can bear can be adjusted to a nicety. The lamp is very large, with a thick filament, requiring and using up as much current as twenty-four 32-c.p. ordinary lamps. Twenty-four 32-c.p. lamps give out altogether a light equal to 768 candles, consisting almost entirely of yellow and orange rays; the large lamp has a luminosity of only 500 candles; the remaining electric energy, equal to 268 candles, is used up in producing heat rays and the other rays of the spectrum, which, as I have said, are of the greatest value in therapeutic effect. With this apparatus a temperature of 400° F. is obtained, and, as it is a perfectly dry heat, can be endured with fair comfort and without damage to the skin. By the use of coloured glass screens, only red, yellow, or violet rays can, if desired, be used.

The general result of radiant heat exposure for any length of time is that the cutaneous and deeper vessels are dilated, the lymphatics are filled, the local arterial pressure is diminished, and local metabolic processes are increased.

The effects do not pass off at once, and after repeated exposures they become more or less permanent. Besides their influence on the tissues, the rays also exert an effect on micro-organisms, and in addition increase leucocytosis. Thus the condition of circulation and tissue-metabolism in a joint, during and after twenty minutes' exposure to intense radiant heat, is pathologically altogether different from its state before that exposure. The most noticeable result, to the patient, of this altered condition, as a rule, is a rapid total removal or extreme alleviation of pain; probably, the ultra-violet rays, by their anaesthetic action, may be to some extent responsible for this change.

The recent adoption of local ionization as a means of treatment of various diseases has suggested the immediate following up of radiant heat treatment by ionization or cataphoresis with an iodide or salicylate solution. It is an accepted fact that, when a constant current passes through any portion of the body from electrodes soaked with a 2 per cent. solution of any salt (such as lithium iodide or sodium salicylate, for instance), the basic radicle of the salt travels into the tissues from the positive electrode in a more or less direct line towards the negative electrode, whilst the acid radicle leaves the negative pole, enters the tissues, and travels towards the positive electrode in the same direct manner. The quantity of the basic or acid radicle entering is proportional to the current passing, and although the amount flowing in at any period may be comparatively small, yet, if a current of 2 milliamperes per square centimetre is continued for 20 minutes, using large electrodes or a bath of solution, the amount of lithium or iodine entering the tissues in a "nascent" and so very active state, is appreciable. It is probable also that the general migration of all kinds of ions, which takes place along the course of the current, may produce an effect of commotion in and stimulation of the tissues, which is beneficial.

The joints I have treated, as a rule, undergo twenty minutes' exposure to the radiant heat projector at such a distance (the patient often regulating this) that as much heat is applied as can be tolerated. During the sitting the patient moves the joint into different positions, turns it from side to side, and gently rubs the skin with the hand to allay the burning sensation, which passes off fairly rapidly, and is followed, as the heat penetrates the joint, by a sense of comfort and relief from pain, if previously present. When, at the end of twenty minutes, the lamp is switched off, the joint feels burning hot to the touch, and the surface is red and "mottled" from vascular dilatation.

Directly the radiant heat sitting terminates, cataphoresis with iodine "ions" immediately follows; in some cases, however, lithium "ions" seem more efficacious and are used instead. If a wrist is to be treated, it is immersed in an arm-bath containing 2 per cent. lithium iodide solution, and either a large indifferent pad is placed on the back or the other hand is immersed in another arm-bath, ammonium chloride or common salt solution being used for the indifferent pad or bath. If both wrists are affected, I generally ionize one wrist with iodine ions and the other with lithium ions, two arm-baths containing lithium iodide solutions being used, a wrist placed in each and the current

driven from one bath to the other. Where the knee is treated it is packed round with four thicknesses of lint soaked in lithium iodide solution; the lint is in turn surrounded with flexible copper gauze electrodes or by a copper chain-armour electrode; the foot is placed in a bath of sodium chloride solution, for the indifferent electrode. Where one uses baths for feet and hands, large carbon electrodes which are not acted upon by ions are the best, but for knees and elbows one has to use copper electrodes. Any other joint can be treated in a similar manner, but, naturally, the deeper the affected structure from the surface the less is the treatment applicable.

It is necessary to work with large currents; a battery is not suitable to maintain the constant current; one cannot obtain 30 to 70 milliamperes from a battery for long enough even when it is very large and cumbersome. A switch-board, worked from the town electric supply, is perfectly satisfactory, as it enables one to obtain and to regulate to a nicety the amount of current one requires and the patient can bear without pain.

I attach extreme importance to the continuance of drugs by the mouth during the combined treatment, and believe that much less benefit is derived if they are stopped. In my opinion, one great value of cataphoresis is that it causes acid or basic radicles, in a so-called "nascent" state, to be formed in the path of the flow of the constant electric current. Drugs such as iodine preparations or soluble guaiacal salts lying in or circulating through the joint tissues—should the patient have been taking them for some time and in fair quantities—are broken up by the current and locked up in the joint tissues temporarily, instead of being carried through the blood vessels and excreted. Besides, "nascent" ions generally are in all probability much more actively bactericidal and much more energetic than when they combine into soluble non-ionized salts.

I give two examples of cases treated with good results. The number of patients I have had under treatment is naturally small, but all considered themselves improved, and where the pain was a prominent feature relief was well marked. Whether any cases are permanently cured is a matter that only time can show.

CASE I.

Mr. B., aged 48. No family history of gout or rheumatism. Has led a steady life, always athletic, has played much tennis and golf; always in comfortable circumstances, no business or other worries. Has lived in a tropical moist climate for the most part of thirty years, and developed his rheumatic attacks there; they are always very bad of late during the "monsoons," and he has been confined to bed or only able to hobble about during these attacks. Is much better directly he gets home to England. Condition diagnosed as "rheumatoid arthritis" by doctors abroad, as "chronic rheumatoid arthritis" by the London physician who sent him to me.

Present Condition.

Pain and difficulty in moving about, especially in getting downstairs, in both knees and both ankles. Other joints not painful. Cannot walk for any distance without considerable pain. Grating and creaking very marked in both knees and ankles on passive movement; thickening and puffiness of theseoints. Heart and other organs normal.

Treatment.

Radiant heat ten minutes to knee, ten minutes to ankle, followed by cataphoresis for twenty minutes with lithium iodide 2 per cent. solution, 70 milliamperes run between knee and ankle. The right leg had the first treatment; the next day he awoke with "right cold" felt fit for anything, while the left was, of course, the same, and that there was a marked difference between the two, whereas both had been pretty equally bad before." The second treatment was to the left leg, and this made both legs equally comfortable. He continued alternate treatments to right and left legs, and after the tenth was playing golf without ill effect. The grating of the joints has disappeared; he has no pain whatever.

CASE II.

Mrs. A., aged about 35, married, always in excellent circumstances. Family history of gout. The patient had had no rheumatism before present illness, no sore throats. Health always robust, fond of games, played golf until onset of this attack. Has spent much time gardening, her hands being frequently wet and cold. Has lived in a low-lying town which has a very damp subsoil. Rheumatoid arthritis commenced twelve months ago in the proximal interphalangeal joint of the left ring finger; during the first six months it attacked the carpal, carpo-metacarpal, and radio-carpal joints of the right hand, and eventually the left wrist in a similar manner. She was advised to come to Brighton, and forbidden by her London physician to return to her former dwelling. She was placed on

iodides, arsenic, guaiacol, aspirin at various times without much benefit. One feature of her case was the severe paroxysmal pain that came on in the wrists about 3 a.m. and continued till 6 a.m. Radiant heat to the wrists for twenty minutes, followed by twenty minutes lithium iodide 2 per cent. cataphoresis. After the second treatment she had no more night attacks, after suffering from them for three months. She gradually improved very considerably. The pain left her absolutely; the puffiness and swelling of the wrists diminished greatly; she regained power of using her hands for ordinary purposes, but they are still weak.

THE RESTORATION OF VISION IN THE SQUINTING EYE.

By A. ALISON BRADBURN, F.R.C.S.Ed.

OPHTHALMIC SURGEON, ORMSKIRK HOSPITAL AND DISPENSARY, ORKNEY,
SOUTHPORT EDUCATION BOARD.

DURING the past ten years the treatment of squint has made great strides. Formerly glasses alone were prescribed; then supervened the period of promiscuous tenotomies which by their untoward results produced the natural effect of setting back the operative clock until the time had passed for obtaining the best results.

Thanks to the able and painstaking researches of Worth, a scientific line of treatment was evolved out of the chaotic conditions into which matters had got. He showed that a defective cerebral function—named by him the fusion faculty—had a great deal to do with the development of a squint, and that to cure it this faculty required cultivation. Thus it has come to be generally recognized that the presence of a squint is but one sign of other defects, and that the restoration of the normal alignment of the eyes is but a portion of the treatment which a squint requires.

The presence of a squint, in addition to its outward manifestation, nearly always indicates (1) some error of refraction, (2) a defect in the fusion sense, (3) a defect in the vision of the squinting eye, which varies with the age of onset and duration. Therefore the scientific rectification of strabismus includes measures to correct the above. Glasses correct the refractive error, orthoptic exercises or operation remedy the faulty position, training with the amblyoscope overcomes the cerebral defect, and at the same time certain measures can be adopted in some early cases for restoring the defective vision.

Up to the present time we can only completely cure a squint if we get it quite early in life, before a habit of using only the straight eye has resulted in blindness from non-use—amblyopia ex anopsia—in the squinting eye. The limit of age at which such restoration can be accomplished is held to be six years. That such is the fact in the majority there is unfortunately very little doubt, yet that there are exceptions and that such exceptions may perhaps some day prove to be commoner than is at present thought to be the case I think the circumstance I have to report will prove. Excepting congenital cases of blindness in one eye, what right have we to assume that restoration of useful vision cannot be obtained in an organ which as far as we know once performed its full share of duties? If we fail to obtain its restoration of function surely it is more logical to attribute the non-success to the methods adopted than to the materials on which we have to work.

Holding such views, I have for a long time been seeking a method for obtaining what up to the present has been considered impossible of accomplishment, and though at present one cannot produce any very great results, what one has obtained more than justify one in persevering along the same lines.

Worth's amblyoscope was invented by him to overcome the defect in the fusion faculty, by training the brain to recognize the presence of the two pictures which the possession of two eyes affords. Briefly, the method consists in putting before the eyes two pictures, and by increasing the illumination in front of the eye with the defective vision and decreasing that in front of the better (or more used) eye a simultaneous recognition of both is obtained on the brain. Eventually both pictures are recognized under equal illumination and by mechanical means they are superimposed until by degrees they are blended by the brain into one true picture appreciative of depth and perspective. This amounts to the restoration

of what for want of a better term I call "landscape vision," and can be accomplished in a fair number of cases in which amblyopia ex anopsia blindness from non-use has supervened in one eye.

But of what practical use is this "landscape vision" to the patient who in after-life will desire to read, write, or sew with the amblyopic eye? If injury, or operation, or disease supervene in the straight or seeing eye the value of the originally squinting eye will be very little if it cannot be of use in such pursuits. Hence it is obvious that before we can assert we can cure a squint in the fullest sense of the word we must be able to restore to the eye and brain the power to recognize letters and figures. Up to 6 years of age this can be accomplished by the methods so ably laid down by Worth; after this age we must seek other methods. How far this restoration can be accomplished and in what percentage of cases, it is impossible just at present to say, but of this fact there is no doubt that there are a large number of patients with a squint in whom the amblyopia is only latent, and in whom the full, or a very great, restoration of useful vision can be obtained. It has been clearly proved that to leave a squint to be grown out of or until the child is old enough to be operated on is unjust and unscientific, also that the proper course is to adopt amblyoscopic and training exercises as promptly as possible. So now it is just as unscientific to put on one side all attempts to teach the eye to read simply because up to the present no success has attended the efforts made to restore vision in an amblyopic eye. There are cases which are not successful and others which yield gratifying results, and it is impossible, without investigation, to distinguish the two.

The investigation of any case of squint should always include an examination as to presence of the fusion faculty, and in those cases in which it cannot be developed we should not conclude that the monocular visual perceptive centre is incapable of being awakened. If we cannot obtain a blending of the two images, we ought to endeavour to obtain recognition of either picture and then proceed to smaller and smaller objects until printed type can be recognized; in fact, it is not necessary in every case to obtain fusion, it frequently being advisable to use a prism base up before one eye so as to obtain diplopia, and by this means cultivate each visual centre in the brain. We can go further with the use of prisms, and cultivate those other inert portions of the retina in cases where a false macula has become developed, the indications for such developing as the case proceeds.

The case I have to report is as follows:

A youth, aged 11 years, began when about 2 years of age to squint with the right eye, which turned in. Teething was supposed to be the cause. There was no history of any relation having squinted. He was seen by an ophthalmic surgeon at 4 years of age, was given in the right eye $+ .05$ D. sph. and in the left $+ 1$ D. sph. Apparently no attempt was made to test him as to the presence of the fusion sense. He wore the glasses constantly, and was told that the case was proceeding so satisfactorily that in a few years' time he would be able to do without them. The patient was an exceptionally brilliant boy, and at school had taken all his class prizes and had not missed a single day's attendance.

He was brought to me in November, 1907. His right eye turned in about 8° , fixation was possible but slow; the left eye was used in both near and far vision. He was wearing the glasses mentioned, and with them the vision in the left eye was 8 , whilst in the right it was only 4 , with or without glasses. Tests with the amblyoscope showed the vision was distinct in the right eye, but after half an hour's graduation of the illumination recognition of both pictures was obtained, and this was quickly followed by blending.

When seen on December 11th the vision in the right eye was two letters of 5 , and with the amblyoscope true fusion was elicited. In place of the amblyoscopic pictures a set of type-printed letters on transparent sheets of celluloid was inserted. These sheets of printed letters contained two-sized type, larger being equal to letters readable at 3 feet, and the smaller equal to Jaeger No. IV.; these sizes alternated with each other. It was found he could slowly make out the larger letters, but skipped the intervening smaller ones. He was instructed to cover his left eye with his hand when doing his lessons and endeavour to teach his blind eye its letters. At the same time his parents—who most ably co-operated in my endeavours—at my suggestion bought him an alphabet set of letters on pieces of card, with which he built up words with his left eye and then endeavoured to interpret them with the right eye.

December 19th. Fusion exercises of both pictures and type were carried out, and it was found that as the tube in front of the right eye was moved in the direction which brought the letters over the outer portion of the retina they became

suppressed; by therefore adjusting the tube this portion of the retina was exercised.

December 24th. On this date the vision in the right eye had improved to $\frac{2}{5}$, and the ability to take up and maintain fixation was greatly improved.

He was seen once a week, and at each visit exercises were carried out with the pictures and the letters, and by degrees the ability to maintain fusion was cultivated, until he could read type equal to J. 8 and J. 4. For nearly two months very little progress beyond this stage was obtained, and during the time atropine had been used in the fixing eye—the left: this was supplemented by a total-exclusion pad, whilst at the same time he did all his school work with the right eye.

March 20th. Vision in the right eye equal $\frac{2}{5}$ without glasses, and $\frac{3}{5}$ partly with the glasses, but by the end of April he got four letters of $\frac{3}{5}$ vision. During the last six weeks of this period exercises with a 6' prism, base down, had been instituted, and after painstaking efforts we obtained double vision, this being aided by dark glasses at first in front of the left eye.

At the beginning of May the vision in the right eye had risen to four letters of $\frac{3}{5}$ and the shade was removed from the right eye. The removal of the shade, it was feared, would cause the left eye to take up the work of seeing again, but instead the vision of the right eye continued to improve, and when seen last the patient read without his glasses $\frac{3}{5}$ and Jaeger L.

The convergence of the right eye is now all that remains to be removed, and when this is done the condition will be such that he can put his glasses on one side and the vision in both eyes will be equal, his ability to read or write normal, his fusion sense fully developed; in fact, a complete cure will have been accomplished.

This patient, in that he was exceptionally bright mentally, in that there was not much refractive error or any great difference in the refraction of the two eyes, was a particularly suitable subject and justified one in the hope expressed that the lost vision could be restored. But judging by others, far less suitable cases, which have



proved as far as they have gone capable of great improvement, there seems good reasons for hoping that after all we may be able to remove the last stumbling-block which remains in the treatment of squint.

During the course of exercises with the printed type a very interesting feature showed itself. By some authorities it is held that a certain portion of the brain controls a horizontal section of the centre of the visual field. Now, as this case improved it was noted that the lines of letters running across the centre of the visual field were the earliest to become recognized, the lines in the upper and lower parts of the field of the same size type developing later. In the stages of development it was noted that the intermediate letters were not seen, every alternate letter, no matter its size, being recognized. As improvement took place this skipping of letters became less and less in the horizontal line in the visual field, whilst it still remained in the upper and lower fields. This interesting feature, I think, confirms the theory of the function of the cerebral visual centre, and, moreover, tends to show that these cases of acquired amblyopia are due to a cerebral and only partly a retinal defect.

The accompanying illustration is that of an instrument which Messrs. Armstrong, of Deansgate, Manchester, and Bold Street, Liverpool, have brought out for me. It consists of a series of cards and a holder, and is intended to be used at home by the patient. On each card are printed letters in two sizes, so arranged that a small and large letter alternate. Each card has progressively a smaller size of type, the smallest being composed of 5-point type. When the instrument is held by the handle in front of the face, the two prisms opposite the eyes produce a vertical separation of the image of the card held at the far end of the instrument. Thus, in normal eyes an image of the card is presented to each eye. In the case of a patient

who has by non-use forgotten how to use one eye the card belonging to the amblyopic eye will only show the large letters; the intervening smaller letter will be unrecognized. To elucidate this feature the normal eye must be covered and the patient asked to read the letters he sees. When the correct card is in position the patient will "stutter" over the smaller type. Under such circumstances the other should be momentarily uncovered, by which means he will recognize the letter correctly. Then on re-covering this eye the patient should endeavour to see the letter by his amblyopic eye. Such recognition will not be instantaneous nor for some time permanent. The patient has to teach his receptive perception centre to remember the letter just as he teaches and cultivates his "memory" for pictures, poetry, prose, history, dates, etc. As soon as one card is mastered the next smaller is similarly dealt with until they all are mastered. When one endeavours to train an amblyopic eye by means of a single picture of letters any mistakes in naming of letters has to be corrected by word of mouth, that is, the patient learns the nature of the image presented to his brain by means of the auditory channels. With my instrument he learns by means of the optic nerves and visual centres, which seems a sounder and more rational method. The use of this instrument, in addition to enabling the patient to practise at home, enables the trainer when the patient comes for the other lessons to examine by means of the card for evidence of progress and for proofs of attendance to one's injunctions regarding the carrying out of the exercises at home.

PERSISTENT THYMUS AND SUDDEN DEATH.

By SIDNEY HERBERT DAUKES, M.B., B.C. CANTAB.,

BECREHAM

THERE is no greater check to the progress of therapeutic knowledge than that which comes from a too ready acceptance of the value of a remedy because in an isolated instance that remedy has seemed to be successful. Remembering that this applies also to many other instances of cause and effect, I submit this case, which I consider of interest not only to the medical but also to the legal mind, with a full realization of the possibility that I have overestimated the importance of the local condition.

At midnight on July 25th I was called to a case of supposed murder. The history I will relate as nearly as possible from the evidence placed before the magistrates, and subsequently before Mr. Justice Ridley at the Maidstone Assizes.

Late on the evening of July 25th a man named H. entered the room where his children slept. Finding that his wife was out he was heard by a neighbour living in an adjoining room to mutter threats against the absent woman. Subsequently the latter entered the house and a scuffle occurred in the passage, but no sounds were heard betokening blows or in any way significant of extreme violence. A few seconds later Mrs. H. rushed out in a state of extreme terror. She tried to get into a house opposite, but failed as the door was shut. She then ran down the road with her husband in pursuit, about four yards behind. Suddenly she seemed to collapse; her legs gave way, and she fell to the ground "like a dead thing." All witnesses are agreed upon this point—it was not a stumble, she was not touched by anybody, she fell, as another witness put it—"all of a heap," and never moved or uttered a sound again. Her husband, who had been drinking heavily, rushed up and, using a violent threat, told her to get up. As she did not move he is said to have kicked her "in the left side." Three women bear witness to this fact, whilst a fourth witness denies that any kick was given. A point which seems to have struck many who heard the evidence, and one which fixed itself in my mind with overwhelming force, was that the woman was dead when she fell, and that, if her husband did kick, he kicked her dead body. The body was then carried indoors, and it was there that I first saw it.

A careful external examination of the body revealed only one mark of any importance—namely, a bruise on the extensor surface of the left forearm. It might have been caused by the fall or it might have been the result of the

kick; in either case I consider that it was inflicted after death. There was no bleeding from ears, nose, or mouth, and no orbital haemorrhage. The necropsy took place eighteen hours after death, and, needless to say, was done with extreme care.

Necropsy.

The body is that of a well-nourished and apparently healthy woman. Rigor mortis well marked. Recent bruise on extensor surface of the left forearm; old burn on dorsum of right hand; old scratch on dorsum of left hand; small bruise on ulnar surface of right forearm; old scar over right breast. Hypostasis well marked. Signs of incipient putrefaction in right iliac region and round umbilicus. No injury to scalp or face. No blood in ears, mouth, or nose. Mouth and throat normal. No glandular enlargement.

Skull.—No sign of fracture. Meninges normal. No meningeal haemorrhage. Cerebrum, cerebellum, pons, and medulla normal. No signs of concussion.

Thorax.—On removing sternum the great vessels and upper part of pericardium were found to be covered by a thymus gland $2\frac{1}{2}$ in. long, 2 in. wide, and weighing 1½ oz. Pericardial and pleural cavities normal; no adhesions and no haemorrhage. Heart—muscle healthy, valves healthy; weight, 8½ oz. Aorta and great vessels, normal. Lungs, normal.

Abdomen.—Peritoneal cavity, normal; no haemorrhage. Liver, normal, 64 oz. Spleen, normal, no rupture, 6½ oz. Pancreas, normal. Kidneys, normal; capsules strip readily. Suprarenals, normal. Uterus and appendages, normal; not menstruating. Bladder, normal. Stomach, no disease; contained half-digested food. Intestines, lymphoid tissue seemed to be rather prominent, otherwise normal.

This autopsy well agreed with the past history of the woman, who seems to have been exceptionally healthy. She had two children, both healthy.

The only conclusion which I could come to, having heard all the evidence, was that the woman died from excitement, mental and physical, causing heart failure; the persistent thymus being in some way a predisposing factor.

The thymus gland seems to reach its maximum size at two years, at which time its weight is about 200 grains (400 grains would be an exceptional weight). The gland generally maintains its size from the second to the eighth year, from which time it gradually atrophies, becoming practically non-existent by the time adult life is reached.

For some time the association between an abnormal persistence of this gland and sudden death, induced by trivial causes, has been recognized. Cases are reported by Fowler of death during the administration of a hypodermic injection, death during an examination with the aid of a spatula death during light anaesthesia, death during bathing, and death from a superficial burn by a hot-water bottle. In all of the cases mentioned a persistent thymus was found.

In the case which I report an emotion—namely, fear, together with some physical exertion—seems to have determined the fatal result, without any actual violence.

How the gland can have such an adverse influence upon an otherwise healthy body is difficult to conceive.

It is easy to theorize upon the subject; to give an anatomical explanation and say that the close relationship of the gland to the trachea, vagi, and great vessels, affords a clue to the situation; or, again, to give a physiological explanation and say that an internal secretion, which produces a sudden fall of blood pressure, is the determining factor.

A mechanical explanation seems totally inadequate in such a case as I have recorded; and should the persistence of the gland be a danger to those who are its unfortunate possessors, I am inclined to think that the explanation is more likely to be found in the physiology, than in the anatomy, of the gland.

I have been told by an eminent authority on anatomy that the condition of persistent thymus is not altogether uncommon in the female sex. It does not seem to me, however, that this fact in any way negatives the possibility of its malign action in certain cases. In one way it lends support to the idea, as these rather obscure cases of sudden death are far more common in women than in men. Mitral stenosis is a common defect, but it is only in a small proportion of cases that it leads to sudden death.

In conclusion, whatever cause may be allotted to the case in question, I think that the subject of sudden death associated with persistence of the thymus gland—quite apart from the condition known as status lymphaticus—is worthy of the attention of those skilled in medical jurisprudence.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

TRAUMATIC RUPTURE OF SPLEEN.

E. V., aged 11, was admitted into the South Devon and East Cornwall Hospital, Plymouth, at 10 p.m. on June 22nd, with a history of having jumped from a low wall ten hours previously, missed his footing, and fallen with his belly on a large stone placed across the gutter in a country road.

He appeared in considerable pain, and his abdomen was very hard and rigid, so that nothing could be made out by palpation. There was a superficial abrasion over the left hypochondrium. The pulse was 120, rapid and running; temperature 98°. There was slight dullness in the left flank.

Twelve hours after the accident I opened the abdomen in the middle line above the umbilicus, when some dark liquid blood escaped, and on exploring with the fingers in the splenic region blood could be felt flowing. The left rectus was divided transversely half-way across, to give more room, and the spleen was brought up without much difficulty. It was torn nearly across, its whole surface lacerated, so that suturing or plugging appeared equally futile; it was bleeding freely. The pedicle was clamped, the organ cut away, and the stump transfixed and ligatured. The effused blood was rapidly removed, as far as possible, and the wound closed. No injury to other organs was apparent.

The boy recovered satisfactorily and went out in a month. A blood count by Dr. Pethybridge on his departure showed: Reds 5,200,000, whites 7,400, haemoglobin 70 per cent. I saw him a week or so ago—quite well, to all appearance.

The point of interest was the very little on which to base a diagnosis—practically only the skin abrasion and the slight dullness. He complained of general abdominal pain, and, though the spleen was thought to have been ruptured, the abdominal rigidity only permitted some "catastrophe" to be inferred with absolute certainty. Delay in operation might have been followed by a different result, as the haemorrhage must have gone on steadily.

C. E. RUSSEL RENDLE, F.R.C.S. Edin.,

Assistant Surgeon, South Devon and East Cornwall Hospital.

EUCAIN AND ADRENALIN AS AN ADJUNCT TO GENERAL ANAESTHESIA IN OPERATIONS FOR HAEMORRHOIDS.

THE necessity for complete relaxation of the sphincter in these cases requires the administration of general anaesthetics to a dangerous degree, and demands very constant watchfulness on the part of the anaesthetist, in order to maintain this condition during the whole period of the operation. To paralyse the sphincter without rupturing some of its fibres entails a good deal of force and some judgement. Without an anaesthetist who has had a good deal of experience in this variety of operation, much embarrassment to the operator may occur, owing to the contraction of the sphincter preventing a clear exposure of the area of operation, especially if the requisite dilatation of this muscle has not been procured.

In doing some operations for interno-external piles under eucain I noticed the great ease with which the sphincter could be dilated, and that it remained quite painless during the operation. It occurred to me that the use of this drug would be of great assistance if combined with general anaesthesia, and I have lately tried it; 10 c.cm. of Barker's solution is injected into the external sphincter on each side of the median raphe, the needle being inserted in the middle line and pushed into the muscle in an outward direction. This is done fifteen minutes before the general anaesthetic is commenced, and by the time the patient is under, the sphincter will be found quite paralysed. It has been found possible to complete the operation under very light anaesthesia—such a degree, in fact, as would be quite useless without previous injection of eucain and adrenalin.

I have been much struck by the comparative absence of pain after the operation—due, I presume, to absence of bruising and tearing of the sphincter. The lessened amount of anaesthetic which is inhaled by the patient

must also contribute to a more rapid return to his normal condition and lessen the anxiety which must occur to both operator and anaesthetist, especially when dealing with private patients.

F. J. W. PORTER, Major, R.A.M.C.

Colchester.

POISONING BY CYLLIN IN AN INFANT.

On August 21st, 1908, an infant of 13 months was admitted into Wrexham Infirmary, having drunk, about twenty minutes before admission, a certain quantity of cyllin. The exact amount taken is unknown, but, according to the infant's mother, it was not much. The mother had been using it for disinfecting some articles used by her husband, who had just been removed from the house with typhoid fever, and, having left the bottle of cyllin on the chair, the child had got hold of it when her back was turned.

On admission the infant was quite unconscious, both conjunctival reflexes absent, the pupils equal, but slightly dilated. There was a strong odour of cyllin in the breath and slight corrosion of the lips. The face was very pallid. Voluntary movements were absent. Apomorphine $\frac{1}{2}$ grain was injected hypodermically, and the stomach tube introduced. The stomach was washed out with warm water. The tube being withdrawn, the infant vomited; the vomited matter looked like undigested food, but smelling strongly of cyllin. The respirations became very slow, cyanosis became very marked, both lips and ears being quite livid. Simultaneously the pulse was becoming feebler and more irregular, till almost impalpable. The respirations had almost ceased, and the heart's action was almost arrested; $\frac{1}{2}$ grain of strychnine was given hypodermically, and artificial respiration applied. After five minutes the respirations improved, the lips became redder, and the pulse stronger. Vomiting recurred. The stomach tube was again introduced, and the organ washed out with warm albumen water. The cyanosis, dyspnoea, cardiac irregularity reappeared, so that the tube was withdrawn, and artificial respiration again started. In a short time the heart recovered, and the respirations improved, but artificial respiration had to be kept up for three hours to prevent relapse, by which time the infant began to open its eyes, make voluntary movements, and show signs of consciousness. For the next three days the pulse was rapid, the temperature 100.6°, and the infant was kept on milk and soup. After this it regained its normal state.

ADAM N. ROBERTSON,

Junior House-Surgeon, Albert Dock Hospital.

ADHESION OF SOFT PALATE TO NASOPHARYNX.

Two children, aged 6 and 11 respectively, were sent to me by the medical inspector of schools, with a note stating that they were suffering from "adenoids." From the appearance of the children I quite agreed with the diagnosis. Neither of them could breathe through the nostrils, and both had every sign of the "adenoid face."

I had them up for operation next morning. On examination under anaesthesia not a trace of adenoids was found. There was not even thickening over the pterygoids. What I did find was a complete adhesion between the naso-pharynx and the soft palate. I tried to get a Gotstein curette up behind the soft palate, but could not force a passage. Ultimately I broke down the adhesions with my finger and made a clean sweep. The haemorrhage was considerable, but the result was eminently satisfactory. The sensation conveyed to the finger was very similar to that by an adherent placenta. Neither of the children had any enlargement of the tonsils. I have had many "nose and throat" cases, but have never before met with any condition such as I have described.

I have looked up all my textbooks, and not one of them mentions a case of the soft palate and posterior nares being adherent. The cause of the condition is not clear, but it occurred to me that it was probably congenital.

Birmingham.

F. J. VINCENT HALL, M.B., Ch.B., etc.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

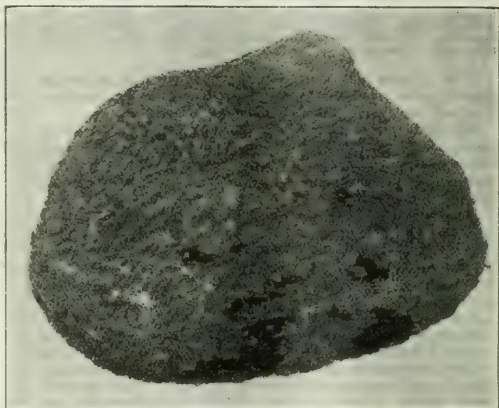
ROYAL VICTORIA INFIRMARY, NEWCASTLE-ON-TYNE.

REMOVAL OF LARGE RENAL CALCULUS: RECOVERY.

(By H. BRUNTON ANGUS, M.S., F.R.C.S., Honorary Surgeon.)
J. T., aged 56, a miner, was admitted under my care on July 14th, 1908, complaining of pain in the right loin.

History and Diagnosis.

For six years on several occasions he had had pains in the "small of the back," not confined to either side. A year before admission the pain became localized in the right loin, radiating into the right iliac region, and sometimes shooting down to the right testicle. It was so bad that it doubled him up, and sweat stood in drops on



his forehead; vomiting occurred during two attacks. For twelve months also there had been frequency of micturition, but he had never noticed blood in the urine. Twenty-six years ago he passed a piece of gravel the size of a pea. A radiograph showed the presence of a large calculus in the right loin.

Operation.

On July 17th, 1908, the ordinary oblique incision between the last rib and the iliac crest was made and the right kidney exposed. The pelvis of the kidney was seen to be distended, and a hard body could be felt through the wall. The pelvis was incised in the direction of the ureter and the calculus removed. The pelvis of the kidney was greatly hypertrophied to accommodate the stone; the kidney was little enlarged and seemed quite healthy. A purse-string of medium catgut was passed round the opening in the pelvis, keeping outside the cavity, and tied tightly. The wound was drained with rubber tube and the parietes united with interrupted catgut sutures, silk-worm gut being used for the skin.

Subsequent Progress.

The wound healed without any leakage of urine, and the man got quite well.

Specimen.

The stone, reddish-brown and rough, is suggestive of oxalate of lime, but as it has not been sectioned I cannot give the composition. It weighs 6½ oz., is rounded, and comes to a conical point where it projected into the ureter. As the size is unusual, I should like to hear if there is any calculus of larger size removed from the same situation in the museums of our British hospitals. It is interesting to notice that the kidney was not disorganized, but the pelvis had evidently grown with the stone which it accommodated, and urine must have passed all the time.

Reports of Societies.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE.

Friday, December 18th, 1908.

Sir PATRICK MANSON in the Chair.

The Rat-flea Theory of Plague.

DR. HOSSACK, of Calcutta, in a paper on the rat-flea theory of plague, said the position he was about to take up was diametrically opposed to generally accepted ideas, but his theory, though somewhat revolutionary, was based upon practice and observation, which alone could give the information that was wanted. The investigation of disease was generally futile when observers started with preconceived ideas as to its pathology, and much of the work that had been done on plague was open to this criticism. Since Patton's well-known experiments the rat flea theory had held the field, but it had now advanced far beyond the limit which these experiments or any others justified. If one began with the fixed idea that the rat flea was the principal agent in the transmission of plague, it was astonishing how many circumstances would be found to corroborate that view. Thus, the prevalence of plague was often found to correspond to the rat population, to the numbers of rat fleas, to the breeding seasons, to alleged preferential species of rats, and to many other things. But if one tested experimentally those statements it would be found that practically the whole of them were contrary to facts. It had, for instance, been said that the difference in the ratio of infection in Bombay and Calcutta corresponded to the relative differences in numbers of *Mus rattus* and *Mus decumanus*. As a matter of fact a recent rat census had shown that statement to be quite incorrect. Again, as to seasonal prevalence, both species of rats bred all the year round. Besides this there was no preferential species; *decumanus* was as susceptible to plague as *rattus*. In the Punjab, there were no *Mus rattus* at all, and they knew what had been the experience there with regard to plague. The theory advanced in the third report of the Commission that *Mus rattus* was ten days later in developing the disease was also unsupported by facts; and if the figures were looked into it would be seen that the illustrative charts do not correspond with the experimental data on which they are constructed. The Commission had also endeavoured to establish a "climatic plague temperature." The limit they gave was wide enough, namely, 85° F. to 50° F.; but even that appeared to be insufficient, for 100 per cent. of their own transmission experiments had been successful at 40°, and 70 per cent. at 90°. Clinical experience, indeed, was that plague has no preferential temperature. It was also the case that Calcutta was characterized by remarkable freedom from human fleas (*Pulex irritans*). On the other hand, dog fleas were abundant; rat fleas, again, were seldom or never found in Calcutta. Experiment and observation showed that most of the received ideas on the habits and life-history of rat and other fleas were wrong, for they were based on the assumption that fleas were evenly distributed. On the contrary, there was an extraordinary variation in the prevalence of different species of fleas in different parts of India. Statements, for instance, that light caused fleas to leave their hosts, or that they preferentially bit at night, were also incorrect. As to the important question, Does the rat flea bite man? the evidence that the rat flea had a strong distaste for the skin of man was conclusive. In conditions which were natural—more so than those of the Commission's experiments—only 1 in 6 attempts to induce rat fleas to bite the human skin was successful. Another point was that in acutely infected houses—say, houses in which 15 or 20 cases of plague had occurred—instead of swarms of rat fleas being found, none were seen, although they were carefully searched for. His conclusions were, first, that the rat flea, when starved, will not bite man at all; and, secondly, that when starved he does so very unwillingly. On the whole, the facts he had adduced as to the flea population rendered any idea of its active agency absolutely impossible. He could not conclude without

acknowledging the courtesy and kindness which he had received from many fellow-workers, who took an entirely different view of the etiology of plague.

Sir PATRICK MANSON confessed that on reading the reports of the Commission he had been convinced of the truth of the rat-flea theory; but after hearing Dr. Hossack's paper most of them would make up their minds to doubt.

Dr. G. FORD PETRIE said that he had the honour to take part in the work of the Indian Plague Commission, and as they knew, that body took an entirely different view to that of Dr. Hossack. Their position was that, although they did not deny the possibility of other methods of infection, the thing that mattered was the agency of the rat flea. There were abundant statistics to show the exact route of infection both in rats and in man. Of 5,000 dead rats picked up in plague houses, 72 per cent. had buboes in the neck, but no mesenteric buboes; of rats fed by infected material, only 36 per cent. had neck buboes. He thought that the experiments of the Commission, if carefully considered, fully proved that intestinal infection, as between rats, very rarely occurs. Rats, for instance, did not eat the dead bodies of their comrades. On the whole, he considered that the evidence that rat fleas were the essential method of transmission from rat to rat was conclusive. There was abundant proof, also, that in a man the route of infection was essentially the same. Skin abrasions in guinea-pigs—and they were about the most susceptible animals—rubbed by human secretions in which plague bacilli were swarming, hardly ever admitted the pathogenic organism. The facts that attendants in plague hospitals did not get plague, and that guinea-pigs placed in infected bedding were also immune, were highly significant. The experiments of the Austrian Commission had made it clear that infection takes place in the great majority of cases through the punctured skin, and at the Mabratta Plague Hospital in Bombay Dr. Choksy had shown that human infection is very rarely effected by the alimentary tract. The intestinal contents of the rat flea contained millions of plague bacilli, while in the excreta of the rat they were comparatively few in number. Again, the prevalence of plague at different places corresponded accurately with the rat-flea census; and still more was this true of the seasonal prevalence. Thus at Poona and Belgium, where plague annually broke out badly in July and August, and at Bombay, where it did so in January, it had been found that the numbers of rat fleas closely corresponded to the case incidence at those seasons.

Sir HAVELOCK CHARLES said that the statistics which had been brought forward on both sides of the question were quite convincing, and the ordinary man was in consequence much puzzled as to what was the actual position. It was, however, the case that the association between rats and plague was invariable in India; nobody disputed that; and, taking everything into consideration, fleas presumably had a good deal to do with transmission. It had struck him that perhaps this was not a new theory; and that the plague which was conveyed by the Ark of the Covenant to Ashdod, Gath and Ekron was possibly transmitted by the fleas in the badgers' skins with which, they were informed, the Ark was covered.

Dr. G. C. LOW asked why Dr. Petrie laid so much stress on the position of the buboes. Why should one expect mesenteric buboes in feeding experiments? Was infection not possible through the mucous membrane of the neck or throat? He would also like to know the method which was employed in making these accurate counts of fleas.

Mr. CANTLIE said that the possibility of transmission from man to man direct had been neglected. Experience on the Gold Coast, in Glasgow, and in other places, showed that pneumonic cases of plague might be very common and that there might be no rat infection at all.

Dr. HOSSACK, in reply, said that the proportion of pneumonic plague in Bombay was only about 1 per cent., but that in other districts it was sometimes very prevalent, and might indeed form the whole epidemic. No doubt that was mostly direct infection. They counted fleas by chloroforming the animals on which they were living. The fleas were affected by the anaesthetic, and could be easily combed out and counted.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Friday, December 4th, 1908.

W. G. SMITH, M.D., President, in the Chair.

Lupus Mutilans.

THE PRESIDENT showed a case of lupus mutilans, pointing out some unusual features: (a) Two symmetrical patches of ordinary lupus on the face, one on either cheek. Nodular lupus was rarely symmetrical on the face. (b) Lupus on the conjunctiva of upper and lower eyelids of both eyes. This had not spread from the adjacent skin or up the nasal duct. (c) Notable involvement of the soft parts of the fingers with deformity. (d) Changes in the bones of the digital phalanges, as shown by the x-ray photographs.

Habit Spasm.

Dr. COLEMAN exhibited a young girl who, two months before, on going to drill in an institution of which she was an inmate, noticed her right arm moving. The movement had continued ever since, except when she was asleep. It was regular, and at 160 to 180 to the minute. There was some loss of power, and the movement was intensified by resistance, and overflowed slightly into the right leg. There was nothing special in her family history, but he had found that the patient had been in the habit of using a sweeping brush, and the spasm was not unlike that movement. Similar cases had been recorded in which the movement had persisted for some time, and he took it to be hysterical in origin.

Persistent Ductus Arteriosus.

Dr. COLEMAN exhibited a girl, aged 15, who had never suffered from any special symptoms except dyspnoea on the slightest exertion. She had always been fragile, but had no special sickness in reference to her heart. She was admitted to hospital about a fortnight previously, complaining for the first time of pain in the region of the heart, which passed off in two or three days, leaving her as well as usual. On physical examination it was found that the impulse beat was in the mammary line in the fifth space and somewhat diffuse, and on palpation a remarkable thrill was noticed in the second and third left intercostal spaces. Another more abrupt impulse was felt opposite the third left space at the edge of the sternum, which coincided with the second sound. There was a very remarkable thrill along the left border of the sternum, which began immediately after systole, and extended almost up to the next systole. On auscultation a very loud murmur was heard, the maximum intensity being in the second intercostal space about an inch to the left of the margin of the sternum. The time of this murmur was late systolic. It persisted for a considerable time into diastole, and was heard as a practically continuous murmur up to the next first sound. There was no cyanosis, but the state of the blood was as in congenital heart disease. Some cases identified as persistent ductus arteriosus by Dr. Gibson, of Edinburgh, were identical with the signs in the present case. The intensified pulmonary second sound heard low down was very remarkable. It was not heard during every heart beat; it was generally present, but sometimes it was absent for a few beats. There was no clubbing of the fingers.

A Case of Cretinism.

Dr. MOORHEAD exhibited a case of cretinism—a girl, aged 7½ years. She had weighed 4 st., and under thyroid treatment went down in about three weeks to 2 st. 8½ lb. The weight had been almost steady since. On diminishing the dose the child became irritable, and apparently was going back. The actual dose now being given was 10 grains of thyroid extract daily. That was above the dose generally recommended, but he had found an immediate improvement in the mental symptoms on 6 grains a day. The actual improvement for the last three months had been remarkably slow. The PRESIDENT said the condition had become extremely rare in the British Isles, and they were not very well able to fix its pathological boundaries. It was associated at one time with enormously large thyroids and at another time with atrophied thyroids. Dr. COLEMAN was inclined to think that sporadic cretinism was not so very uncommon, as he had seen four cases during the past twelve or fifteen years.

ROYAL SOCIETY OF MEDICINE.

SECTION OF ANAESTHETICS.

At a meeting on December 9th, 1908, Mr. RICHARD GILL, President, in the chair, Dr. N. H. ALCOCK read a paper on fifty cases anaesthetized with known percentages of chloroform. The chloroform-laden air was supplied to the patient on the plenum system by the special apparatus devised by him, and described in our issue for August 15th, 1908. Dr. BLUMFELD considered the apparatus of special value for teaching purposes, and thought that every hospital should have an inhaler of this pattern, in order that students might learn something about the percentage of chloroform vapour required to produce the different stages of anaesthesia in varying types of patients. Mr. COLLIER referred in detail to some of the cases that he had anaesthetized by this method, which he considered most interesting and scientific, but he complained that in its present form it was too bulky and noisy to become popular. The instrument, moreover, required the assistance of a second person to pump the bellows, unless an electric motor were used. The latter was expensive and very heavy to carry about. He agreed with Dr. Alcock as to the remarkably large percentage of chloroform vapour usually required to satisfactorily anaesthetize fat patients, and mentioned one case in particular to emphasize this point. Dr. BEAUMONT said that he had noticed more after-sickness with this apparatus than when the open method was employed; and he ascribed the difficulty in the case of obese subjects to emphysema. In his reply, Dr. ALCOCK said he was at present endeavouring to remedy the faults pointed out by Mr. COLLIER. The increased after-sickness he thought must be a mere coincidence. The absolute accuracy of the apparatus could be depended upon, and oxygen could be used instead of air if desired. This was of great service in certain cases. Specimens of the inhaler, of various sizes and patterns, were shown. One was fitted with a foot-bellows, one with an electric motor to drive the air through the chloroform chamber, and one with an oxygen cylinder. The apparatus was also shown in section, so that the inner working of the instrument could be more thoroughly understood.

SECTION OF DISEASES OF CHILDREN.

At a meeting on December 18th, 1909, Dr. PORTER PARKINSON, in opening a discussion on *Whooping-cough*, pointed out that in England the death-rate per million from this disease had diminished of late years, from 527 per million in the years 1861-70 to 450 in the years 1881-90, and in 1895 to 316. It is more fatal in Scotland than in England; less so in Ireland. The contagion must be a specific organism, but had not yet been isolated with any certainty. The infection is conveyed by the sputum, which was said to be most virulent during the catarrhal and early paroxysmal stages. The virus remained active after drying for at least several weeks, as had been proved by epidemics arising on board ship where no other source was probable. It was easy to overlook the primary disease when bronchitis or pneumonia supervened, as the characteristic whoop then frequently disappeared. In respect of treatment, bromoform was recommended, with the warning that it should be dispensed in solution one drop to an ounce of water with a few drops of alcohol, 1 to 6 drachms being given in a dose. Dr. L. GUTHRIE, in referring to the history of whooping-cough, mentioned the term "chin-cough" as being still used in some parts of the country. It was derived from the name "la quintana," or "tussis quintana," by which the disease was known in Paris in 1578. The paroxysms being believed to occur every five hours. Bromide and belladonna were his favourite drugs for relieving the symptoms. Dr. WALTER CARR said that as regards prognosis, early manifestations were no guide to the subsequent severity of the disease. In treatment he regarded pure fresh air, at a temperature of about 60° F., as very important. If the child's temperature was 100° F. or over it should be kept in bed. He had tried various vapours and fumes, but was doubtful of their efficacy. He believed that bromide of potassium had a value, and in rubbing the child with a liniment. There was danger of upsetting the intestinal canal with over-drugging. When vomiting was pronounced, hyd. cum creta and bicarbonate of soda and rhubarb often did good.

When a child was vomiting constantly it was well to give a little food to bring on a paroxysm, and then after the vomiting to give more food, which would frequently be retained. Dr. J. D. ROLLESTON said that from 1899 to 1907 131,830 cases were admitted to the Metropolitan Asylums Board Hospitals, and of these 756, or 0.5 per cent., were suffering from whooping-cough. Another 855, or 0.6 per cent., subsequently developed whooping-cough as a complication. Of 55,557 cases of diphtheria, 340, that is, 0.5 per cent., were suffering from whooping-cough, and another 0.4 per cent. developed it as a complication. Whooping-cough had not any very unfavourable influence on the acute cases of infectious disease with which it was associated. Troussseau had remarked that the paroxysms of whooping-cough disappeared during scarlet fever, but his own experience did not confirm this. Dr. EWART pointed out the serious effects which frequently follow whooping-cough in children. He had often seen relief follow the instillation of oil into the nostrils. Patients should be placed in the best conditions for resistance, and should live in fresh warmed, but not over-dry, air. Iodide of potassium was of value, and he believed in the inhalation of terebene and its use in a liniment. A respiratory belt, as advocated by Kilner, was also good. Dr. MILNER BURGESS pointed out that only two papers on whooping-cough were included in the reports of the Society for the Study of Disease in Children. Very little had been added to the subject during the last eight years. In an experience of thirty years he only remembered one case of meningeal hæmorrhage, and he asked why it was so infrequent. In respect to treatment he laid stress on very careful dieting with liquid food in small quantities, given immediately after a paroxysm. Dr. J. H. FRANCIS NUNN said that many children died from cerebral conditions due to the fits of coughing. He agreed that the diagnosis from the paroxysmal cough of influenza was sometimes very difficult. He reminded members of the old fashioned method of sending patients to the gasworks to inhale the vapour, and recommended that the child should be placed in a room with the gas jet turned on for a quarter of an hour. Dr. RUSSELL WELLS said that some French observers said that cases were only infectious during the catarrhal stage, and he was in favour of this view. Whooping-cough presented a characteristic symptom complex, which had led the speaker some years ago to think that the part affected must be different from that occurring in the ordinary cold. He thought that the symptoms were due to an effect on the nerves produced by a toxin secreted by the microbe. He regarded the symptoms of whooping-cough as due to an increased excitability of that part of the nervous system concerned with the vagi, and with this view had administered cocaine by the mouth, the dose being on the basis of a grain three times a day for an adult. He had never seen evil effects follow, and in children there was little danger of forming a habit. The results were often remarkable, the disease being greatly diminished and then abolished. Dr. J. BRENNACKI spoke with some favour of the plan of taking children to the gas-works, but wondered whether the benefit was due to the waste products there or to the gas. Dr. LEOPOLD GOFFE advocated syringing the ears twice or thrice daily with boric lotion and then painting the external auditory meatus and membrana tympani with a strong solution of cocaine. The formula was: Cocaine hydrochlor. 23 grains, liquor hydrarg. perchlor. 20 minims, glycerine 5 drachms, water 4 drachms. Dr. E. I. SPRIGGS, in answer to the question raised by Dr. Milner Burgess as to why meningeal hæmorrhage was so rare, pointed out that experiment during muscular exertion had shown how well healthy vessels could sustain a sudden rise of pressure without giving way. Dr. BERNARD BAILEY said that experience in the Children's Hospital, Shadwell, showed that the disease was not infective after six weeks' whooping. Dr. MEREDITH RICHARDS thought that the major amount of infection was in the early catarrhal stage. His practice was to exclude children from elementary schools for five weeks, and to exclude contacts for one month. Dr. GEORGE CARPENTER referred to 466 cases seen as out-patients, the majority of which were below the elementary school age. It was important to cleanse the naso-pharynx, and if necessary to operate on it. Four of his cases developed the whooping habit, which persisted for many years after the disease. Mr. R. CLEMENT LUCAS showed a young man who presented

deformity of the chest and dwarfing in stature, as a sequence of whooping-cough at the age of 4 years. He was 21 years of age, only 5 ft. in height, and weighed 6 st. 10 lb. The thorax below the level of the nipples on both sides was deeply depressed as the result of the collapse of the lung in childhood, whilst above that level the chest was fairly developed. He had enjoyed good health up to the time of the attack of whooping-cough. Owing to the diminished lung capacity, he suffered from dyspnoea on exertion and found a difficulty in mounting stairs.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—At a meeting on December 9th, 1908, Dr. MICHELL CLARKE, President, in the chair, Mr. A. L. FLEMMING, in a paper on *Post-anaesthetic vomiting*, recorded conclusions based on observation of 500 consecutive cases anaesthetized at the Bristol Royal Infirmary. The proportion of cases in which vomiting occurred as the immediate result of the anaesthetic could be materially reduced by allowing only milk to be taken prior to the operation and entirely avoiding beef-tea; also by guarding against movement of the patient during the induction and in the course of anaesthesia. Rolling of the patient from side to side during operation or subsequent bandaging was a frequent cause of vomiting. For inducing anaesthesia he recommended the use of gas and ether combined during the first twenty minutes, followed by the administration of chloroform and ether from separate bottles if prolonged anaesthesia were required. Post-operative bronchitis and pneumonia were usually due to inhalation of vomited matter by the unconscious patient. The methods he described had reduced the percentage of patients vomiting after recovering consciousness to 5 per cent. Dr. J. SWAN agreed that movement should be avoided; pneumonia due to inhalation of vomited material was, as a rule, not the fault of the anaesthetist. It might often be prevented by washing out the stomach before the operation. Mr. S. V. SROCK said he endorsed the value of substituting milk feeds for beef-tea before operation. Prolonged fasting was bad. A sister at a children's ward had remarked to him that occasionally children preparing for operation refused to take the milk feed during the morning before operation, and such children nearly all vomited; only a small proportion vomited of those who took the milk. Lavage of the stomach would not always prevent vomiting if the operation were protracted; he would always wash out the stomach before, rather than after, the patient was anaesthetized. Mr. HEY GROVES said that movement of the patient could not always be avoided, the "fear of the table" made it necessary in some cases to administer the anaesthetic elsewhere than on the operating table. Patients did not vomit until the anaesthetic was stopped, so they should be kept fully anaesthetized until the bandaging was finished and the patient returned to bed. Mr. PAUL BRUSH suggested that the patient should be anaesthetized in an adjoining room upon the actual operating table, which could then be wheeled into the theatre. Dr. SYMES maintained that the duration of the operation influenced the frequency of vomiting, which was the result not only of the drug administered, but also of the nervous shock. This shock was proportional in some measure to the length of the operation; moreover, nervous people often experienced nausea and even vomiting after administration of nitrous oxide. Two drugs—morphine and atropine—administered in water before the operation appeared each to lessen vomiting. Dr. BERTRAM ROGERS inquired whether the various commercial methods of preparing chloroform or ether could be said to affect vomiting. Dr. OGILVY drew attention to the proneness of ophthalmic cases to vomit during the course of operation. Dr. FORTESCUE-BURCKDALE remarked that beef-tea stimulated gastric secretion, and would on that account be more likely to contribute to vomiting than milk. Mr. LACE quoted the experience of a colleague who had found that the administration of nothing but peptonized milk for twenty-four hours before operation diminished the chances of anaesthetic vomiting; and on inquiry he had found a consensus of opinion among nurses to the same effect. Mr. FLEMMING, in reply, said that preliminary lavage of the stomach sometimes gave the anaesthetist a false sense of security; in faecal vomiting it was useless, for during a long operation regurgitation into the stomach provided

fresh material to be vomited. The suggestion of anaesthetizing patients on the operating table would only affect the vomiting during induction of anaesthesia. He objected to the preliminary use of morphine and atropine on account of the difficulties they introduced during anaesthesia. As to the use of acetone chloroform, he thought that, with the addition of sufficient ethyl chloride to render the evaporation point stable, it was a safe anaesthetic, but he preferred to administer a preparation about which there was no doubt. Mr. HEY GROVES read a paper on *Three cases of ileo-colostomy*. From the success in these cases he was persuaded that the operation was at times of great value, although occasionally the antiperistaltic wave which normally occurred in the ascending and transverse colon gave rise to painful distension in the occluded portion of bowel. The other communications included a paper on *Barley itch*, in which Dr. W. KENNETH WILLS described a pruriginous eruption seen in dock-workers engaged in the unloading of certain varieties of barley; it was due probably to the presence of "Cowhage" (*Mucuna pruriens*) among the barley, although he had also found an acarus, not the *Sarcoptes hominis*, present in some samples.

LIVERPOOL MEDICAL INSTITUTION.—At a pathological meeting on December 10th, 1908, Mr. T. H. BICKERTON, President, in the chair, the following were among the exhibits:—Mr. NEWBOLT: (1) Carcinoma of transverse colon in a woman aged 40; perforation had taken place. Excision of the growth with pelvic drainage and secondary end-to-end suture resulted in recovery. (2) Volvulus of caecum causing intestinal obstruction in a male aged 60; the caecum was excised and the bowel drained. The patient died on the fourth day. (3) Two specimens of sloughing intestine excised in cases of strangulated herniae: immediate end-to-end suture was done in both cases successfully. (4) Malignant growth of the sigmoid causing intestinal obstruction in a male aged 32. The growth was brought outside the abdomen and colotomy performed; secondary resection and end-to-end suture was done later. Mr. FRANK JEANS: A gall stone which had caused gangrene of the bowel 1 in. from the ileo-caecal valve. Peritonitis was present; the history resembled that of a perforated appendix. Mr. R. W. MURRAY: A case of Paget's disease of the nipple of three years' duration. Dr. BLAIR BELL: (1) A hypernephroma. (2) Uterus didelphys from a patient aged 21. Each uterine body lay in an inguinal sac. Radical cure was done on each side, the right tube and ovary being returned to the abdomen. Mr. THELWALL THOMAS and Dr. MURRAY BLYTH: (1) A neuro-fibroma of the posterior tibial nerve from a female aged 51; it was of slow growth, and full of soft myxomatous tissue. (2) A lobulated tumour removed from beneath the gluteus maximus of a female aged 56. The patient gave a history of three months' duration. (3) A "mole" from the face of a farmer aged 75. It had existed for twelve months but had rapidly increased in size recently. Dr. W. B. WARRINGTON read a note on the more recent physiological experiments upon the cerebellum. He stated the views of Herbert Spencer, Hughlings Jackson, and others, and demonstrated the connexion between the physiology of this organ and symptomatology. He illustrated his paper with numerous diagrams showing the anatomical connexions of the cerebellum.

MIDLAND MEDICAL SOCIETY.—At a meeting held on December 16th, 1908, Professor GILBERT EARLING, President, in the chair, Mr. NUTHALL showed a man who had sustained a *Penetrating wound of the heart*. Whilst pulling a barge nearer the canal side the heavy boathook he was using slipped and came into violent contact with his chest as he was leaning forward. A large splinter penetrated into and broke off in his chest. He seized the protruding portion and wrenched out a piece some 6 in. in length, but feeling acute pain he came to the hospital. Seen half an hour after the accident he evinced acute dyspnoea. A foreign body could be seen and felt projecting under the skin over the third left intercostal space. The entry puncture was situated 1½ in. below the centre of the left clavicle. On cutting on to the splinter it was found to have entered the chest through the third left

space; and to have passed into the pericardial sac. The track was enlarged and the splinter followed into the pericardial sac. The splinter was drawn out. Three and a half inches had entered the pericardium, the whole piece being 5½ in. long. There was no pneumothorax. A condition of pleuropneumonia without effusion complicated the after-progress to recovery. The man was now, six months after the accident, about to resume work. Mr. J. FUNEAUX JORDAN showed two specimens of *Ovarian tumour*. The patient in the first case, aged 38, had on August 9th a six months miscarriage, after which her doctor found a small tumour in the lower left part of the abdomen. In four weeks this small tumour had grown rapidly, rising well above the umbilicus and filling up the left side of the abdomen and partly the right. In the second case, a doctor found a small tumour in the pelvis of a woman aged 53. A month later it had grown to a large median tumour, rising as high as an inch above the umbilicus, and was removed. The first specimen proved to be microscopically a most malignant carcinoma, the second a multilocular cyst, the cavities lined by a regular layer of large goblet cells, and filled with mucinoid material. The first patient already showed signs of a recurrence of the growth in the peritoneum; the second one was in perfect health. Dr. O. J. KAUFFMANN showed specimens from a case of *Acetonaemia*. The patient was a woman aged 20. She had suffered for five years from symptoms closely resembling those of gastric ulcer, including haematemesis. Shortly after admission into hospital diacuturia and acetonuria were discovered. The patient then had sudden severe symptoms suggesting perforation of the ulcer, and under chloroform an emergency laparotomy was at once done, but no perforation was found, nor was any evidence of gastric ulcer to be seen. Ninety hours after the laparotomy the patient died, having vomited frequently, blood once, and having gradually become comatose. The urine subsequent to the operation had become scanty, and the last few specimens had been devoid alike of aceto-acetic acid and acetone. The liver weighed only 36 oz., and showed intense fatty infiltration; the kidneys showed scarring, but no trace of interstitial or subcapsular nephritis. There was also some fatty infiltration of the tubular epithelium. The heart showed only some fibrosis, no fatty change. There had been no ulcer either in the stomach or duodenum. Death was attributed to the acetonaemia, due, in the first place, to some indefinite digestive disturbance, and intensified by the chloroform; in other words, delayed chloroform poisoning in an acetonaemic individual.

HARVEIAN SOCIETY OF LONDON.—At a meeting on December 10th, Dr. CHARLES BUTTAR, Vice-President, in the chair, Dr. VICTOR BONNEY, in a paper on the bearings of pathology on the prevention, diagnosis, and treatment of carcinoma of the cervix, said that out of 1,876 cases investigated at the Middlesex Hospital Cancer Research Laboratories no less than 1,796 were in women who had been married, and only 9 per cent. had not borne children. Clinically a case in an undoubted virgin was almost unknown. Every case of carcinoma of the cervix appeared to be founded on a chronic cervicitis plus some unknown additional factor. The incidence of the disease might, perhaps, be lessened by greater attention to the hygiene of the cervix and vagina in married life, in which connexion habitual vaginal douching was to be commended. From the pathological point of view the surgery of the disease was quite hopeful. No less than 55 per cent. of persons dying of carcinoma of the cervix exhibited no metastatic growths whatever, whilst in the case of the breast only 65 per cent. so escaped. The track of lymphatic permeation was very simple, straight out through the parametrium to the external iliac glands. The bladder and rectum were involved by the much slower process of infiltration. The operation popularized by Wertheim satisfied the demands of pathology, and was destined to become the only operation performed for the cure of the disease. Improved technique had greatly reduced its mortality. It was especially suitable for early cases. The speaker and Dr. Comyns Berkeley had now performed twenty of these operations, mostly in advanced cases, with four deaths.

Rebivus.

PROBLEMS OF THE NOSE.

"If you see a head, hit it," was the Irishman's injunction at Donnybrook Fair. The modern textbook on rhinology is more helpful; it tells you in how many different ways this injunction—so far as the nasal septum is concerned—may be carried out. Dr. GLEASON, in his *Manual of Diseases of the Nose, Throat, and Ear*,¹ mentions nine operations which have been devised for the correction of deviation of the nasal septum. With a pardonable patriotism, the operations which he has mentioned are for the most part those devised by American surgeons, and naturally include the one devised by himself, a description of which we are glad to read in the author's own words. In addition to these, he gives Dr. Ballenger's own description of his technique of performing the so-called "window resection" operation of the deviated area, which Dr. Gleason tells us "was advocated first by Ingals, and later by Krieg," adding that "Killian removes the cartilage and bone of the entire deviated area, preserving the mucous membrane of both sides of the septum." This list of ten could easily be increased to a dozen or even two dozen operations which have been devised for the same purpose. We are reminded of an apt remark made by Dr. Gleason's compatriot, Dr. John N. Mackenzie of Baltimore, in an address at a meeting of the American Laryngological Association in 1904: "Even a partial list of the operations performed on the septum would rival in length the catalogue of the ships in the Iliad, or the genealogical records of Deukemon." Be that as it may—again to quote Dr. Mackenzie—"no single method is applicable to all cases, and it will sometimes be necessary to resort to several different procedures in individual cases before the deformity is overcome." In the present day it is commonly conceded that abnormal conditions of the nose and of the naso-pharynx are important factors in causing deafness and disease of the ears. Dr. Gleason has devoted to this important subject a chapter which is evidently the outcome of experience. It is carefully written, and illustrates very well how only those who are actually engaged in the practice of otology are in a position to express a useful opinion on what has been at times a debatable subject. In this, as in every other textbook of the kind, there are points open to criticism, but taken as a whole the author has undoubtedly achieved his object, which was to supply to students and general practitioners a manual with the essential facts of rhinology, laryngology, and otology in as concise a form as possible. The book is compactly printed and well bound, and with its limp leather cover and red edges presents outside the appearance of what it is inside—a concise concordance of the subjects it deals with.

The appearance of Dr. LEO KATZ's monograph on the diseases of the nasal septum and their treatment² is further evidence of the fact that the nose is receiving in the present day that prominence which nature intended it should always enjoy. Dr. Katz treats of his subject in twelve chapters. The first six are concerned with anatomical considerations, methods of examination and the production of anaesthesia of the nasal septum, as well as the deformities of that structure and their correction; the last part of the book deals with the diseases and new growths met with in this region. The entire monograph occupies 170 royal octavo pages, and a proper sense of proportion is observed in the amount of space allotted to the several chapters. In discussing the treatment of deviation of the septum he gives preference to the submucous resection operation as performed by Professor Killian. Brief mention is also made of methods devised by other authorities—amongst them that by Asch, one of the pioneers in this work, whose name we note throughout is incorrectly spelt. In an age unparalleled for wealth and variety of instruments designed to attack the nasal

septum, it is a pleasure to read Dr. Katz's observation ancient this point that "In der Beschränkung zeigt sich erst der Meister."

Dr. DE HAVILLAND HALL's textbook on *Diseases of the Nose and Throat* has during the past fifteen years introduced so many students and practitioners to the study of rhinology and laryngology, that it is quite unnecessary for us to dwell upon its general merits and utility. Mr. HERBERT TILLEY, who assisted Dr. Hall in writing the second edition, tells us in the preface that when the time arrived to consider the question of this, the third edition,³ Dr. Hall desired to be relieved of all responsibility in the work, and with reluctance Mr. Tilley finally consented. That the old order is changing and yielding place to new, and calling for new editions of books on rhinology, is borne in upon us by the "passing" of Bellocq's cannula. It seems but yesterday that students were led to believe that the whole range of nasal surgery was comprised within a knowledge of the use of the polypus forceps, and of an instrument which bore the name of Bellocq, and that a lack of knowledge of how to manipulate the latter upon the day of reckoning might be materially to their disadvantage. Even if Bellocq's cannula still survives as a test of knowledge for examination purposes, it is disappearing from the practical textbooks. In the last edition of the book before us its doom was foretold, and no mention is made of it in the present edition. Mr. Tilley reminds us that the book is "intended to form one of a *Practical Series*, and consequently symptoms, diagnosis, and treatment are more fully discussed than debatable matters relating to the etiology and pathology of the various diseases of the nose and throat." Here we are disposed to join issue with Mr. Tilley. The discussions held from time to time, and more recently those in the Odontological and Laryngological Sections during the meeting of the British Medical Association at Sheffield, would lead us to believe that the treatment of at least one of the diseases of the nose—namely, suppurative within the antrum of Highmore—is a very debatable subject indeed, and that the pathology of that disease has been really more neglected than debated. In a textbook intended for the use of students attention to the etiology and pathology as conducive to a better understanding of the treatment of disease might have been more insisted upon. Dr. Charles Bolton has considerably added to the value of the work from the standpoint of the medical practitioner by his article on diphtheria and the throat affections of the acute specific fevers. A new feature of this edition is a chapter dealing with certain practical points in the anatomy and physiology of the nasal cavities. Additional space is given to a description and treatment of the diseases of the accessory sinuses. Photographs and diagrams of these regions undoubtedly lend themselves to book-making, and many new plates have been introduced. By the insertion of some of these illustrations into the text and by a compression of the type the book might have been kept more nearly to its original dimensions and at the same time made more portable and more readable without detracting from its practical value. Mr. Tilley has made it quite clear to his readers that operations undertaken for diseases of the frontal sinus may be attended with complications of a very serious nature, and with commendable courage he has introduced a plate illustrating osteomyelitis of the skull resulting from septic infection of the diploe after operation on the frontal sinus from one of his own cases. One cannot close the book without the reflection that, at least in the matter of the frontal sinus, operations are not to be undertaken lightly, and in the less severe cases perhaps after all it would be better to use an extra pocket-handkerchief a day than be a dead man for the rest of one's life.

Of the many bony cells and cavities from which otologists and rhinologists have to evacuate pus, there is not one which causes them more anxious thought than the frontal sinus. The complications of inflammation within the frontal sinus, which may occur not only before but after the sinus has been opened by an external operation, form the subject of a monograph by Professor P. H. GERBER of

¹ *A Manual of Diseases of the Nose, Throat, and Ear*. By E. B. Gleason, M.D., LL.D. Philadelphia and London: W. B. Saunders and Co. 1907. (Post 8vo, pp. 556. Illustrated. 12s.)

² *Die Krankheiten der Nasensecheidewand und ihre Behandlung*. Von Dr. Leo Katz. Mit 8 Tafeln und 34 Abbildungen im Text. Würzburg: Curt Kabitzsch (A. Stuber's Verlag). 1908. (8vo, roy. 8vo, pp. 180. M. 6.80.)

³ *Diseases of the Nose and Throat*. By Herbert Tilley, B.S. London: F. & S. Eng. London: H. K. Lewis. 1908. (Demy 8vo, pp. 552. 12 illustrations. 14s.)

Königsberg.⁴ These complications are a *bête noire* well known to every rhinologist, and yet textbooks on diseases of the nose barely touch the fringe of this subject. When it has been stated that Professor Gerber's monograph covers 450 royal octavo pages of closely-printed matter in which the author strictly adheres to the title of his subject, and in which space is nowhere trespassed upon by descriptions of operations with their accompanying illustrations, it becomes unnecessary to enlarge upon the importance of the subject, or to emphasize the serious consideration which it deserves. From the standpoint of the surgeon the complications and their treatment completely overshadow the disease itself, and from the standpoint of the practitioner who has to weigh the *pros* and *cons*, and bear some responsibility in advising his patient either against an operation or to incur the risks of an external operation on the sinus, a knowledge of the complications is of more value than a textbook description of the operation itself. The descriptions of these operations, together with the figures and plates illustrative of the instruments and the technique which bulk so largely in textbooks on rhinology, might usefully be suppressed or curtailed to make room for information more useful, if not so alluring, to the practitioner. Professor Gerber's monograph has taken over five years to produce, and he is to be warmly congratulated upon its completion. It is not possible here to do more than give the general scope and scheme of the work. The osseous changes, both pathological and developmental, naturally occupy a large amount of space, in fact, about one-fourth of the book, and chapters on the anatomy and morbid histology follow. The paths of infection and the bacteriology of the disease receive careful consideration. In the next 200 pages the intracranial complications are treated. The book concludes with a chapter on the prophylaxis of the complications, the indications, the dangers of the operations, and a critique on the fatal operation cases. At the end of each chapter there is a very full bibliography, and the points raised in the chapters are illustrated by cases. By no means the least valuable part of the book is the tabular matter of typical cases collected from the literature, they make Dr. Gerber's work a complete compendium of our knowledge of the subject, and our sense of gratitude is only intensified by the thought of the amount of time and of patient literary research the work has called for. Dr. Gerber has rendered a considerable service, it is to be hoped, in more ways than one by the publication of this monograph. It will not deter experienced rhinologists from opening the frontal sinus when circumstances render such a procedure imperative. Moreover, it is not intended to do so; "mein Thema," writes the author, "sind die komplizierten Stirnhöhleuentzündungen, die operiert werden müssen." A careful perusal of the work cannot fail to raise for serious consideration the all-important question when the frontal sinus should be opened. "How often has the frontal sinus been opened to find little or nothing pathological in its interior is a question," says Dr. John N. Mackenzie in the address from which we have already quoted, "that never will be answered." It is not uncommon while still in his apprenticeship days, and even before he has completed the manuscript of that textbook on the subject which he has chosen for his special department of practice, that the young man's fancy lightly turns to thoughts of opening the frontal sinus. Should his eyes happen to fall upon one of the sentences on the last page of Professor Gerber's book—perhaps it would be as well not to translate it—"Zum mindesten sollen wir die probatorische Eröffnung der Stirnhöhle nicht scheuen"—it is to be hoped that he will also read the subsequent lines: "Nein! Ich habe nicht zu viel operiert! Auch hier Zahlen für Worte! Ich habe etwa 500 Stirnhöhleentzündungen gesehen und davon 80 operiert, d. i. 16 Prozent. Ich habe gegen 80 Prozent Heilungen. Ich habe keinen Todesfall." It is to be hoped further that he will have the courage to publish his fatal cases; a glance at the last table in Dr. Gerber's book will at once convince him that in so doing he will be in the most excellent company.

The basis of Dr. BRADEN KYLE'S *Textbook of Diseases of the Nose and Throat*,⁵ which has now reached its fourth edition, is pathology. This in itself constitutes a sufficient claim to recognition. The author tells us in his preface that it has been his "aim to give in full the etiology and pathology of the various diseases, so that by this detailed description treatment is indicated and easily directed." The book will do this and more. It will check an empiricism which begets recruits for that "fraternity of carpenters," for whose higher education Dr. Braden Kyle's compatriot, Dr. John N. Mackenzie, so earnestly pleaded before the American Medical Association. In a word, Dr. Braden Kyle credits his readers with some power for deductive reasoning, and appeals to it. The natural laryngologist of to-day, impatient for results, only too ready to accept rather than to investigate, with a desire to please or a desire to cloak, is apt to sledge his powers for deductive reasoning, and to fall back upon the Herr-Professor hat gesagt line of argument. Whilst readily conceding that in the matter of experience age brings with it a certain something that nothing else can bring, it is as well to remember that even a Herr Professor who has not paid attention to pathology may arrive at erroneous conclusions drawn from his own clinical impressions—pure empiricism. The appearance of a textbook on diseases of the nose and throat in which so much attention is drawn to the etiology and pathology of the diseases is a sign of the times, and a most welcome sign. In Dr. Braden Kyle's work those seductive diagrams of surgical achievements of which we are all so weary have been left on one side to make room for some excellent plates and figures illustrating the morbid anatomy and histology of the diseases. Whilst the general plan and arrangement of previous editions have been adhered to, the book has been thoroughly revised, and many entirely new articles have been added. The book is well printed, well bound, and well illustrated; moreover, it has an index which is remarkably complete. For the experienced it will be a work for ready reference, while on the inexperienced it will create a good impression and cause the subject to be viewed from a scientific standpoint.

PREGNANCY AND APPENDICITIS.

RENNALL'S work on appendicitis during pregnancy and labour⁶ is one of a long series of monographs of high scientific value, inspired by the teaching of Professor Otto Engström. They stamp the University of Helsingfors as one of the best centres of medical teaching in the world, in spite of its disadvantages. These disadvantages are, first, the use of a language unintelligible to most civilized people; Dr. Engström's pupils get over this by writing in German. Secondly, the liability to interference by stupid military officials. We hope that the Russian Government may gradually come to see that the best thing for Finland is to leave it alone, and let it govern itself, as it was doing so well in 1897, when some of the English members of the International Medical Congress visited that enlightened country—the intellectual jewel of the Russian Empire.

The book before us is one of the best monographs on its subject that has yet appeared. The author has been laborious in his search after material, and comes to sane and wise conclusions. It has been stated that appendicitis in pregnancy is commoner than is generally supposed, and the inference follows that pregnancy in some way favours appendicitis. Our author points out that the months during which a woman is carrying a child within her form only a small part of her life, and that therefore if her appendix is so constructed as to give trouble, the chances are in favour of the trouble coming when she is not pregnant. That appendicitis with pregnancy has been more frequently reported in recent years is accounted for by the spreading of knowledge as to the diagnosis and treatment of that disease. It has been said that pregnancy favours the occurrence of appendicitis, and increases its dangers, by the pressure of the enlarging uterus, the lifting up of the pelvic peritoneum, and dragging upon adhesions. Rennall points out that if this were so appendicitis should be

⁴ A *Textbook of Diseases of the Nose and Throat*. By Dr. Braden Kyle, A.M., M.D. Fourth edition. Philadelphia and London: W. B. Saunders Company, 1907. (Med. 8vo, pp. 725, 215 illustrations. 18s.)

⁵ *Über Appendicitis während Schwangerschaft und Geburt*. Von Gerhard Rennall. Aus der Gynäkologischen Klinik von Professor Dr. Otto Engström in Helsingfors. Berlin: S. Karger, 1903. (Sup. Roy. 8vo, pp. 119. M. 4.)

⁶ *Die Komplikationen der Stirnhöhleuentzündungen. Beiträge zur Anatomie, Pathologie und Klinik der Stirnhöhle*. Von Dr. P. H. Gopfer. Berlin: S. Karger, 1903. (Sup. roy. 8vo, pp. 466. 36 Abbildungen. M. 15.)

especially frequent in the later months, when these effects are at their height. He gives an analysis of over 160 cases, and shows that appendicitis is as common before the uterus has risen out of the pelvis as it is later. When the appendix has been inflamed it is not in every case adherent to the uterus. Such pressure or pulling as the enlarging gravid uterus may exert is very gradual and gentle. Renvall's general conclusion is that pregnancy neither favours nor hinders the occurrence of appendicitis, either primary or recurrent; nor, if such illness occurs, does pregnancy appreciably affect the severity or duration of the disease. But it cannot be denied that if localized suppuration round the appendix is present at the time of labour, the sudden diminution in the size of the uterus after delivery (as well as other influences acting at that time) may lead to the breaking down of adhesions, and to a local peritonitis becoming general.

The diagnosis of appendicitis is a little more difficult during pregnancy than in ordinary conditions, because the lifting up of the pelvic peritoneum and the tension of the abdominal wall make palpation less certain; a patient who is near the end of pregnancy is apt to take for the beginning of labour pain which is really due to a different cause.

There is difference of opinion as to the treatment of appendicitis in pregnancy. Some French surgeons have expressed what many will think extravagant views; and urged operation in every case and as early as possible. Dr. Renvall seems to us here very sensible. He says acute appendicitis in pregnancy is to be treated according to the accepted principles of surgery: a careful consideration of all the features of the case, and intervention when the symptoms become threatening. The only difference that he would make is that in a recurrent attack during pregnancy he would operate sooner than in the case of a patient not pregnant, so as to prevent possible complications in childbirth. Some persons have urged that whenever acute appendicitis requiring operation occurs during pregnancy the uterus ought to be at once emptied. Dr. Renvall holds that cases must be differentiated. The surgeon may have to do with (1) an encapsuled abscess, or (2) diffuse peritonitis. (1) If an encapsuled abscess is present there is now abundant evidence that it can be successfully treated without interfering with the pregnancy. Forced delivery is in such cases injurious rather than beneficial; it robs the patient of her prospect of a living child, and even if there is reason to think that a child is dead, it inflicts on her two operations instead of one. (2) If diffuse peritonitis is present the treatment indicated is to drain the peritoneum, and this can be more efficiently done if the uterus has been emptied. Here, therefore, speedy delivery is called for. If there is much meteorism it is impossible to drain the peritoneum without it. But, he adds, individual cases may call for exceptional treatment.

After laying down the very sane and temperate propositions that we have quoted, the author reports 25 hitherto unpublished cases, 23 of which were observed in the clinic of Professor Engström and reported by the author. The other two were under the care of Professor Krogius, and have been communicated to the author by friends. Then follow abstracts of 253 published cases, and after that a large but not complete list of literary references.

We regard this monograph as one of the best contributions to our knowledge of a difficult subject that has yet appeared. It does its author the greatest credit. We congratulate Professor Engström on having a pupil and follower so intelligent, industrious, and sensible.

TEXTBOOKS OF HYGIENE.

The Manual of Hygiene, which was brought out by the late Dr. Edmund A. Parkes forty years ago, always held its own, not only as a textbook for students, but also as a book for reference; and successive editors, including Professor de Chaumont and Colonel Lane Nutter, kept up its reputation in these respects. In 1896 Colonel Nutter and Colonel R. H. Firth, while retaining the general scheme adopted by Parkes, to a great extent rewrote the work, and altered the title to *The Theory and Practice of Hygiene*. The third edition of this book has now been very extensively revised by Colonel Firth, the revisions being so

extensive as to render the work almost a new one.⁷ A rearrangement of the section dealing with sanitary law has added very much to the value of the book for purposes of reference. At the end of each section the law relating to the subject of the particular section is given in some detail. For example, the law relating to bakehouses is given in the chapter upon food, and in the chapter on water there is a summary of the Acts of Parliament relating to water supplies. The chapter upon sanitary administration is for the most part reliable, though one or two slips have been made. The statistical tables given on pages 17 and 18, which, it is stated, are those required to be appended to the annual reports of medical officers of health, have not been in use since 1900, and no mention is made of the excellent Table V, relating to infantile mortality, which has been in use since 1905. It is a pity, too, that the copy of the annual memorandum issued by the Medical Officer of the Local Government Board, with respect to the annual reports of medical officers of health, should not have been of more recent date. That given on page 13 was issued in 1904, and does not contain any reference to the need of inspecting and reporting upon public elementary schools, to which special reference was made by the Board's medical officer in 1906 and 1907. When discussing the utility of isolation hospitals, Colonel Firth admits that it is very difficult to demonstrate the precise effect of isolation hospitals, either upon scarlet fever or any other kindred disease, by means of statistics, which require a large amount of qualification before they can be of any value for comparative purposes. He points out that if an attempt is to be made to express in figures the effect of the isolation of scarlet fever or any other disease in special hospitals, the attack-rate should be expressed not in the terms of the entire population but of those exposed to infection. He expresses the opinion that so far as mere statistics are concerned the case is not proven that isolation hospitals have brought about no reduction in the incidence of scarlet fever, and he very properly asks whether it is wise to apply statistics to a problem of which none of the factors are constant, and where there is a varying host, a varying parasite, and, in some instances a varying age-grouping of the population. The views of the author upon the much-debated question as to whether isolation hospitals should be permanent or temporary buildings will meet with the approval of most of those who hold that isolation is necessary. He considers that all administrative arrangements and a certain limited accommodation for the sick should be in permanent buildings, which can be quickly supplemented if need be in times of epidemic. The various methods of disinfection are dealt with in an exhaustive manner. The different types of steam disinfectors are accurately described and their capabilities are very fairly estimated. No mention is made, however, of the method of disinfecting books suggested by Dr. Symons, of Bath, in which they are placed in a steam disinfectant fitted with a vacuum apparatus; at a point in the oven most distant from this apparatus formalin is placed in a vaporizer, and formic aldehyde and steam are liberated at about 80° C. as the pressure inside the machine is reduced. A clear and concise account is given of the Rideal-Walker method of testing the strength of disinfectants, and although the drop method is criticized, the opinion is expressed that with modifications it may constitute the simplest procedure in standardizing disinfectants. With the establishment of a special sanitary service both in the regular army and in the Territorial Forces, much more regard will have to be given to military hygiene than has hitherto been the case. Colonel Firth devotes one of the longest chapters in the book to this subject, which he treats in a practical and masterly manner. The section upon the hygiene of camps should be studied by all those who are likely to be called upon to advise the military authorities as to the provision of sites for camps or as to their conduct when established.

It is just eighteen years since Dr. B. A. WHITELEGGE brought out his textbook on *Hygiene and Public Health*, of which there were subsequently issued nine editions. In 1905 Dr. GEORGE NEWMAN assisted in the compilation of

⁷ *The Theory and Practice of Hygiene*. (Nutter and Firth.) Revised by R. H. Firth. Third Edition. London: J. and A. Churchill, 1908 (Roy. 8vo, pp. 1002. 21s.)

the tenth edition, and an eleventh edition by the same authors is now before us.⁸ The general arrangement is the same as in former editions. One noticeable feature of this manual is the inclusion in its pages of the text of important regulations and instructions from the Local Government Board and other Government departments. The majority of medical officers of health are in private practice and are not provided with an office in which official documents can be properly indexed and produced at a moment's notice, so that it is of the greatest service to them to be able to find copies of such documents gathered together in one book. At the present time, when the duties of the district medical officer of health and those of the newly-appointed school medical officer are not too well defined, the former will find an advantage to refer to the latest memorandum of the Local Government Board concerning his duties with respect to schools and infectious disease, and he will receive a great deal of assistance from the perusal of the regulations laid down by the Education Committee of the London County Council with respect to infectious diseases in elementary schools. The authors have set out both these documents at length and have commented on some of their provisions. The carefulness with which the revision for this edition has been carried out is apparent on every page, so that it is all the more surprising to find even a qualified approval given to the privy-midden system of excreta removal. It ought to be clearly pointed out on p. 249 that ashes are sterile, and that a privy midden without any structural alteration may be made into an inoffensive earth closet by throwing on to the excreta a sufficient supply of dry earth, "ordinary mould being the best owing to its richness in nitrifying organisms."

NOTES ON BOOKS.

EVERY fresh edition of *The Medical Directory*⁹ inevitably contains a certain amount of additional matter, but in spite of this its publishers, Messrs. J. and A. Churchill, usually contrive to avoid material increase of weight. This is of some importance to those who have to handle this invaluable volume frequently, and in the edition for 1903 they have been completely successful in this respect. The total number of names in the directory is now nearly 40,000—in precise figures 39,992—exclusive of those in the list of graduates and licentiates in dental surgery. This is an increase of 289 over last year, but a smaller increase than usual. Indeed, for the past five years the number of additional entries has been steadily falling. In most respects the distribution of the contained names is much the same as in former years, but there are one or two interesting differences. Thus the London list, in spite of the growth in the general total of names, shows a falling off, only 6,420 names appearing in it, as against 6,550 last year. Similarly, the list for Ireland shows 2,656 names, which is 4 less than in the edition for 1908. In each of the other lists, however, there is a greater or smaller growth: nevertheless the provincial list for England still overtops the total of the lists for Wales, Scotland, Ireland, practitioners resident abroad, and the Naval, Military, and Indian Medical Services, all put together. Only in course of time can errors in a work of this description be discovered: but from an experience of many years' daily use it is safe to conclude that if any errors exist they are few and unimportant. We notice that the abstract of the principal laws affecting the medical profession, which is the work of Mr. R. G. Glenn, LL.B., has this year been revised by Mr. W. Oliver Hodges, and that it is well up to date.

The volume recording the Transactions of the American Proctologic Society at its tenth annual meeting is not very bulky, but contains several communications of considerable interest. In this respect the palm should, perhaps, be awarded to the discussion on the choice of an anaesthetic for use during operations on the rectum, small and great, which was introduced by Dr. J. M. Lynch, of New York. From the address of the President, Dr. A. Bennett Cooke, it would appear that rectal surgery claims in America the position of a speciality and that it is held in increasing esteem.

Those familiar with French but not with German and desirous of studying Schmidt's work on morbid conditions

of the gastro-intestinal tract,¹⁰ both functional and organic, may be glad to know that a translation by Dr. R. S. Kolbe is now available. It appears to be an accurate version of the original, and the methods recommended by Schmidt for the determination of the extent to which digestion and absorption are complete are all clearly described. The translation is adorned by some twenty woodcuts and three coloured plates.

The second volume of the *Archives of the Pathological Institute of the London Hospital*¹¹ contains ten articles on cases of special interest to the morbid anatomist and histologist. Drs. Turnbull and Worthington discuss regeneration of the liver and describe three cases illustrating the transition from regeneration to carcinoma in cirrhosis of this organ. They find that there are two elements in the liver capable of independent regeneration, namely, the cells of the lobules and the interlobular bile ducts. In two of these cases a typical regeneration of the liver cells led to the formation of cancer, and in the third, cancer was due to an aberration of the regenerative process in the bile ducts. Amongst other articles of special interest may be noted one by Dr. Turnbull on the formation of bone and marrow in the suprarenal capsule, a discussion of mesoarteritis and aneurysm by Dr. Aitchison, and the description by Dr. C. H. Miller of a case of general lymphatic hyperplasia.

As an addition to the ordinary guide-books, but not in any way replacing them, a little work, *Six Weeks and the Mediterranean*,¹² may prove exceedingly useful. There are many persons of limited leisure intending a trip to the Mediterranean who would wish to spend the time at their disposal to the best advantage. As a help in this direction the present work can be recommended. How well planned was the trip described will be gathered from the fact that in addition to calling at Gibraltar and Algiers, it allowed of one day being spent at Genoa, four days at Naples, seven hours at Messina, eighteen hours at the Piræus, eleven hours at Smyrna, and a day at Constantinople. The fortnight spent in Egypt was sufficient to afford several days in Cairo and a trip up the Nile as far as Luxor. On the return journey time allowed of several hours being spent at both Naples and Marseilles. It would seem difficult to improve upon the scheme of this trip as regards the variety and interest of the places visited in the short space of six weeks. The author writes clearly and well, and his book is profusely illustrated with excellent photographs: these last, indeed, are worth considerably more than the modest sum charged for the little work.

¹⁰ *L'examen fonctionnel de l'intestin par le régime d'épreuve*. Par le Dr. A. Schmidt. Traduit par le Dr. R. S. Kolbe, Paris, 1908. Pp. 821.

¹¹ *Archives of the Pathological Institute of the London Hospital*. Vol. II. London: Adlard and Son, 1908. (Box. 8vo. pp. 187, 22 plates.)

¹² *Six Weeks and the Mediterranean*. By "Passenger." London: George Philip and Son, Limited, 1908. (With illustrations and charts pp. 186. Price 1s.)

MEDICAL AND SURGICAL APPLIANCES.

A Syringe for Intramuscular Injections.

DR. HENRY FITZGIBBON, M.D., sends the following description of an all-glass syringe with stopper: I have now been for upwards of thirty years Visiting Surgeon to the Government Westmoreland Lock Hospital in Dublin, and during that extended period I have resorted, both in hospital and private practice, to all of the various recognized methods of treating syphilis, and of late years in all suitable cases I select to treat uncomplicated cases by intermuscular injections of mercurial cream prepared according to the formula given by Colonel F. J. Lambkin at page 26 in his book on the treatment of syphilis, published in 1905. I have now treated a very large number of cases by this method, with most satisfactory results as to apparent complete and rapid cure, and with absolute immunity from any local or constitutional disturbance whatever beyond the rare occurrence of a temporary painful nodule at the point of injection: when this has happened it was due to either a portion of the cream leaking back into the subcutaneous tissue between the nozzle and the skin, or to my having omitted to massage the part sufficiently at the time of the injection. The cream I use is especially prepared by Mr. J. I. Bernard, 26, Clare Street, Dublin. He dispenses the drug in glass tubes, each of which contains about 40 minims, equivalent to eight doses of 5 drops each. These tubes are a complete safeguard against precipitation of the mercury, as they are hermetically corked and absolutely full: their contents are easily transferred into an all-glass syringe without any

⁸ *Hygiene and Public Health*. By B. A. Whitelegge, C.B., M.D. F.R.C.P., and George Newman, F.R.S.E. New and revised edition. London: Cassell and Company, (Fears), 8vo. pp. 650, 7s. 6d.

⁹ *The Medical Directory for 1903*. London: J. and A. Churchill, 12s. net.

loss by means of a glass piston-rod supplied with each box for the purpose. I have designed an improvement upon the all-glass syringes hitherto in use, which, when only one or more injections have been made from it, enables it to be converted into a perfectly air-tight reservoir for the preservation of what remains in it free from atmospheric deterioration or pollution of any kind until it is required again for use. This is accomplished by replacing the

ment to those parts as I instructed them. Mr. Beaton, 14, England's Lane, Belsize Park, N.W., has kindly made the instrument for me.

BRITISH MEDICAL BENEVOLENT FUND.

At the December (1908) meeting of the committee twenty-three applications were received, and sums amounting to £205 voted in relief, six cases being passed over. Appended is an abstract of the cases assisted:

1. Daughters, aged 50 and 34, of late M.R.C.S., L.S.A. For the last ten years have been compelled to nurse their invalid father, an annuitant of this Fund and of Epson College; are now endeavouring to obtain employment. Voted £20.
2. Daughter, aged 29, of late M.R.C.S., L.S.A. Is unfitted for anything but housework, and is one of several sisters just left quite unprovided for. Voted £10.
3. Widow, aged 68, of M.D. Quite unprovided for at husband's death, and unable to any longer obtain post as a housekeeper or companion. No children. Voted £12.
4. M.D. Aberd., aged 76. No income, and nearly blind. No children; has been suddenly deprived of help from relations. Voted £18.
5. Widow, aged 58, of M.R.C.S., L.S.A. Husband has recently died, and furniture has been sold to meet pressing liabilities, which proceeds of the death vacancy if sold will not cover. Six children, but only able to give very slight help. Voted £12.
6. Widow, aged 60, of L.F.P.S. Glas. Left without provision at husband's death several years ago, and has hitherto supported herself by acting as nurse companion or housekeeper. No children. Voted £12.
7. Daughter, aged 61, of late M.D. Edin. No means. Used to maintain herself as a governess, but for the last few years has been compelled to devote all her time to an invalid sister. Slight help from friends. Relieved three times, £36. Voted £12.
8. Widow, aged 34, of M.B., C.M. Glasg. Income £18 a year. Is acting as nurse at a provincial hospital, but only receives £5 as salary for the first year. Two children, aged 12 and 11, both at an institution, but obliged to be removed before the holidays on account of an outbreak of diphtheria. Relieved three times, £20. Voted £10.
9. Widow, aged 49, of L.S.A. Since husband's death has endeavoured to support herself by giving music lessons and letting rooms, but has been obliged to use a small legacy left by an aunt a few years ago and now exhausted. Two daughters, aged 15 and 14. Relieved twice, £20. Voted £10.
10. Wife, aged 39, of M.R.C.S., L.R.C.P., who is confined in a county asylum. No income; receives £1 a week as a district nurse, but has to pay her rent and other unavoidable expenses. Three children, the youngest only 3. Relieved once, £12. Voted £12.
11. Daughter, aged 49, of late M.R.C.S., L.S.A. Is a trained nurse but has been in bad health for the last few years and for some months past has been quite incapacitated. No income. Relieved once, £5. Voted £10.
12. M.R.C.S., L.S.A., aged 63. For the last few years has endeavoured to support himself by locumtenencies, but has recently been incapacitated by ill health for some months and is now only able to undertake quite light work. Two sons only earning a small weekly wage; wife is endeavouring to establish a boarding house. Relieved once, £10. Voted £10.
13. M.R.C.S., aged 65. For the last two years has been incapacitated by serious heart disease. No income; only very slight help from children; wife receives paying guests. Relieved twice, £30. Voted £18.
14. Widow, aged 64, of M.R.C.S. Eng., L.R.C.P. Edin. Only income £20 a year from a house, the lease of which expires in a few years' time, and to which expensive repairs have been necessary. Relieved nine times, £102. Voted £12.
15. Daughter, aged 64, of late M.D. Lond. Has supported herself for several years by work of different kinds, but finds it increasingly difficult to get. Relieved once, £5. Voted £5.
16. Daughter, aged 62, of late M.D. Edin. Has maintained herself for many years; but now unable to do so on account of defective eyesight. Receives a little help from a fund for poor ladies. Relieved four times, £46. Voted £12.
17. Widow, aged 50, of L.R.C.S. Edin. Quite unprovided for at husband's death. Maintains herself by letting lodgings, with slight help from a son and daughter, but has had her rooms unoccupied for some months during the summer. Relieved three times, £25. Voted £10.

A Urethral Ointment Introducer.

Dr. N. WALMISLEY (London, W.C.) writes: For the last five months I have been using an instrument for applying ointment to inflamed patches of the urethra with much success. I designed the instrument; it consists of a flexible catheter about 4 in. to 5 in. long, with an acorn-shaped tip. There is a hole at the tip only. The catheter, by means of an intermediate piece, is screwed on to a collapsible tube which contains ointment, and the ointment enters the urethra by pressing on the tube. After use the whole catheter is screwed into a firm cover, which keeps it clean and prevents the ointment coming out. I found it useful in the case of patients who could only attend occasionally, the inflamed parts being located by the urethroscope, and the patients only applied the oint-

LYNN THOMAS AND SKYRME FUND.

TWENTY-FIRST LIST OF SUBSCRIPTIONS.

MR. WILLIAM SHEEN, M.S., F.R.C.S., 2, St. Andrew's Crescent, Cardiff, honorary secretary of this fund, desires to acknowledge the following subscriptions:

Subscriptions to December 22nd, 1908.

	£	s.	d.
D. C. Muir, Cwmillery, Mon. ...	5	5	0
Newport (Mon.) Medical Society, per V. A. Cricks ...	1	0	0
W. B. Hunt, Newport Abbot ...	0	10	6
W. B. Felton, St. Newlyn East, Cornwall ...	0	10	6
R. G. Murray, London ...	0	10	0
"Ewyllysgar" ...	0	5	0
James Blaney, Penryn, Cornwall ...	0	5	0

COMPENSATION FOR INDUSTRIAL DISEASES.

THE recommendation contained in the *Second Report of the Departmental Committee on Compensation for Industrial Diseases*¹—that cataract in glassworkers, telegraphists' cramp, and a wider application of the term "eczema," should be included in the schedule of industrial diseases for which compensation may be claimed—is a most interesting contribution to the subject of diseases of occupation.

GLASSWORKERS' CATARACT.

Glassworkers' cataract has been discussed at meetings of the British Medical Association, and has received very careful consideration in our columns on various occasions. We would mention specially the valuable contributions of Mr. Simeon Snell and Dr. William Robinson. Mr. Snell's investigation led him to the belief that while cataract occurred in glassworkers as in other trades, there was not sufficient evidence, at the time he concluded his inquiries, to warrant the opinion that the disease was unduly prevalent among them. Dr. Robinson, on the other hand, came to the conclusion that the disease was more liable to appear in glassworkers (particularly bottle-finishers) than in the rest of the population. Continental experts, such as Meyhofer, Rohlinger, J. Hirschberg, and E. Cramer, favour the view that cataract in glassworkers is in excess of the normal. Dr. Legge reports that all glassworkers who are exposed to incandescent molten glass suffer, and that changes in the lens are about five times as frequent in glassworkers between 30 and 40, twice as frequent in those between 41 and 50, and over three times as frequent in those over 50, as in other persons.

Of the different grades of glassworkers it is worth noting that "gatherers" in sheet glass are apparently least affected. A "gatherer" is an apprentice, or at any rate a young man; his duty is to dip the pipe into the molten metal to take up the required amount; he looks into the tank each time he "gathers," and his face frequently becomes blistered by the heat. His youth and the fact that he is compelled to shield his face from the intense heat may explain his comparative freedom.

As to the form of the cataract, Dr. Robinson states that it begins as a posterior cortical cataract, and that it differs from the ordinary posterior cortical cataract in that at its commencement it is cobweb-like and saucer-shaped. It is best seen by direct examination with a +10 or +12 lens; the outline is irregular, neither radial nor rosette-shaped. When removed, sight is good, but the workman is rarely able to resume work as a "finisher" on account of loss of accommodation.

In regard to the etiology of the condition, there does not appear to be, as yet, sufficient data to permit the formation of any positive opinion as to whether heat rays or light rays, or both, are to be set down as the cause.

We look forward to an authoritative verdict on this matter from the Committee of the Royal Society, which is considering the question of causation and its corollary, prevention.

A most noteworthy point in the recommendation is that which compels the workman to undergo an operation in order to receive compensation, the wording being that "cataract in glassworkers" be added to the first column of the schedule, and "processes in the manufacture of glass, involving exposure to the glare of molten glass" be added to the second column, and that compensation should be payable only in cases in which an operation is undergone, and for a period not exceeding six months. This compulsion to have an operation is an entirely new departure in the business of compensating the industrial wounded. It is one which will in all probability be extended in the near future. Judicial tribunals have mostly felt themselves unable to take the responsibility of ordering an operation to be carried out, and the experiment of including such a stipulation in an Act of Parliament will be watched with the very greatest attention.

TELEGRAPHISTS' CRAMP.

The addition of telegraphists' cramp to the schedule is a measure of justice to a hard-worked body of public

servants. The symptoms of pain, discomfort at work, and the signs of spasm, tremor and weakness make their appearance just when the officer has reached the stage of perfection in manipulation of the Morse key instrument; it does not develop during the period of learning, when the muscular effort and attention are greatest.

The disorder is to be distinguished from such conditions as local muscular weakness, neuritis, rheumatism, nervous diseases. The most pathognomonic sign is recorded on the Morse signalling slip; this shows jerkiness and illegibility. It appears that about 2.75 per cent. of the total staff employed in telegraphy is affected with the disease, and it is more than doubtful if it is curable. Once it is established, the operator will be compelled to find other employment, for he becomes unreliable and may cause disastrous mistakes in his messages.

In view of the fact that the postal medical officer has the advantage of knowledge of telegraphists' work, he is substituted for the certifying factory surgeon as the person by whom, in the first instance, the disease is to be certified.

Cases which occur in other employments than that of the Postmaster-General are left to the ordinary procedure provided by the Acts.

DERMATITIS FROM IRRITANTS.

The widening of the definition of eczematous ulceration in the schedule is intended to settle the question whether laundry women, who suffer by the irritation produced on their hands and arms by the alkaline solution with which they work, are included in the terms of the definition. There can be no doubt now that these are included, and it is certain that cases will arise due to working with liquids in other employments, it being necessary to establish the fact that the conditions of employment are the exciting cause of the eczematous ulceration. The description of the disease or injury will now read:

Eczematous ulceration of the skin produced by dust or liquids, or ulceration of the mucous membrane of the nose or mouth produced by dust.

By an order dated December 2nd, the Home Secretary has added cataract in glassworkers and telegraphists' cramp to the list of diseases in respect of which compensation is payable.

AUSTRALASIAN MEDICAL CONGRESS.

(Continued from p. 1760.)

WORK IN THE SECTIONS.

Medical Section.

DR. TAIT SUTHERLAND stated that chloroform was specially dangerous in any form of anaemia, and advised that in all such cases requiring a general anaesthetic the ethyl-chloride-ether sequence should be followed. Dr. ZWAR, in a paper on spinal anaesthesia, noted that unpleasant sequelae were far more frequent than was generally supposed to be the case. In a discussion on syphilis which arose in the Medical Section, it was observed that many conditions which were claimed by the pathologists to be syphilitic had not been found to be so. It was clinical evidence that established syphilis as the basis of ascending degeneration of the cord, and not pathological evidence, and the dictum of the pathologists that all arterial degeneration was syphilitic could not be accepted. Dr. J. F. WILKINSON read a very interesting paper on modern methods in the diagnosis of gastric disorders, demonstrating the simplicity with which the general practitioner could ascertain himself the character of the gastric contents, particularly as to the presence or otherwise of free hydrochloric acid. He favoured the dimethylamidoazobenzol, the sodiumlazarinsulphonate, and the phenolphthalein tests. Dr. J. W. SPRINGTHORPE, in a paper on blood pressure in disease, stated that the record given by Martin's haemodynamometer represented simply the amount of pressure required to prevent the brachial pulse wave from reaching the corresponding radial artery. It did not represent the mean systolic pressure, the arterial expansion, or the local condition of blood vessels, or circulation. It was no certain index of cardiac muscularity, arterial elasticity, nervous control, or peripheral resistance. It was simply a numerical record of what the fingers should observe, educationally suggestive, but not conclusive. It had no direct diagnostic value nor was it pure prognostic. People

¹ London: Wyman and Sons; Edinburgh: Oliver and Boyd; Dublin: E. Ponsonby, 1908. 73d.

died with a lower blood pressure than normal and live with perhaps one that used to be called dangerous. It did not vary in any definite ratio with temperature pulse, or nervous stimulation. It might vary considerably with meals and show its maximum when a failing heart was fighting against extensive peripheral resistance. It appeared unusually low in pneumonia, typhoid, and influenza, but cases with a blood pressure never above 70 had gone through severe attacks successfully without any special treatment. It had not been found to be of definite value in the selection of an anaesthetic. It ranked thus with the sphygmograph and similar instruments of precise record. Like them it required expert interpretation and experience before basing action upon it. Dr. JULIAN SMITH, in a paper on tuberculo-opsonins, emphasized their value. The general opinion of the section was that vaccine therapy could be quite as efficiently carried out without resorting to such a cumbersome and time-absorbing process as taking the opsonic index was. It was admitted, however, that opsonin work had taught much as to the value of vaccines, and the consensus of opinion was that vaccine treatment with steadily increasing dosage was of immense value in surgical and genito-urinary tuberculosis, but that its position in pulmonary tuberculosis had yet to be ascertained. Sanatorium treatment was shown to be very effective under the climatic conditions of Australia.

Physiology and Pharmacology.

Two meetings of the Subsection of Physiology and Pharmacology were held, and a number of papers of varied interest were read and discussed. Dr. H. G. CHAPMAN (Sydney) gave the results of his investigations on the pharmacology of strychnine, and showed that in animals of the genus *Hyla*, this drug had a curare action as well as the normal action on the cord. A second paper by the same author dealt with the acid reaction of fresh milk. It was due not to lactic acid but to acid phosphates and caseinogen. Dr. KILVINGTON (Melbourne) communicated the results of his recent work on nerve regeneration, and showed how important such considerations were in the surgical treatment of certain paralyses. Miss KINCAID, B.Sc. (Melbourne), gave the results of her analyses, chemical and calorimetric, of the flesh of the rabbit and crayfish. From the standpoint of caloric value and percentage of protein, carbohydrates, and fat, rabbits' flesh had a high nutritive value, but the small amount of extractives present probably prevented this foodstuff from entirely replacing meat. Mr. SYME JOHNSON (Melbourne) found in two samples of 24-hour urine from a case of myasthenia gravis that the kreatinin and phosphate content was abnormally low. Dr. ROTHERA (Melbourne) demonstrated a delicate and reliable test for acetone in urine, which depended on the colour developed on addition of nitro-prusside of sodium, ammonia and ammonium sulphate. Papers of mere technical interest were the existence of a lumen in chemical stimulation, by Dr. MARGARET JAMIESON (Melbourne), and the elasticity of rubber balloons and hollow viscera, by Professor OSBORNE (Melbourne).

Section of Surgery.

At the first meeting of the Section of Surgery a discussion on the surgical diseases of the bile passages and pancreas was opened by Dr. ANSTAY GILES (Adelaide), who dealt chiefly with technique. Dr. CRITCHLEY HINDER (Sydney) followed with remarks on the diagnosis of the different conditions calling for operation, and the cause of some of the symptoms, particularly the pain of so-called biliary colic, which he regarded as due mainly to distension of the gall bladder, or occasionally to adhesive peritonitis. The symptoms of so-called "biliousness" were due, he said, to toxic absorption, partly cholaemic, partly of toxins formed by organisms. The absence of jaundice was of no value in diagnosis. In the discussion Drs. FIASCHI, MATTLAND, BOWKER (all of Sydney), DUNCAN (Kyneton), COOKE, BIRD, MOORE, SYME (all of Melbourne), JACKSON (Brisbane), and RAMSAY (Launceston) spoke; and chiefly differed as to the advisability of performing cholecystectomy.

In the afternoon a combined meeting of the Sections of Surgery and Gynaecology was held to discuss the surgical treatment of septic peritonitis, opened by a paper by Dr.

CHISHOLM (Sydney), and followed by Drs. DUNCAN, HINDER, FIASCHI, BOWKER, MATTLAND, WORRELL, J. A. G. HAMILTON, SYME, MOORE, and THRING. The chief points discussed were the value of flushing the cavity and of saline rectal infusions by Murphy's plan. All agreed as to the necessity of early diagnosis and drainage, but great diversity of opinion existed on all other points.

On the second day a discussion was held on the surgery of non-malignant diseases of the stomach, opened by Dr. W. H. BROWN (Colac), who strongly advocated excision of ulcers rather than gastro-enterostomy, in cases where there was no obstruction, and detailed his method of technique. He also advocated gastro-enterostomy in acute dilatation. He was followed by Dr. FIASCHI, who summarized the results of all his cases, giving a tabulated statement. Dr. RAMSAY discussed the various methods of technique and the cases requiring operation. Dr. BIRD questioned the value of gastro-enterostomy in cases of very greatly dilated stomach. He did not approve of gastro-enterostomy in cases of perforated gastric ulcer. Dr. HINDER still used anterior gastro-enterostomy, and found it satisfactory. He frequently used the Murphy button. He did not approve of operation in acute dilatation of the stomach. He had done gastro-enterostomy in cases of perforated gastric ulcer, with good results. Dr. BOWKER also used the anterior method, and found Harrington's rings a valuable aid. Dr. MATTLAND had formerly done anterior, but now performed the posterior, no-loop gastro-enterostomy, and his results were equally good with each. Excision of ulcers was good in theory, but disappointing in practice. He would operate for acute haemorrhage. Dr. JACKSON referred to the diagnosis of neurasthenic conditions, and found if cases were not improved by rest and simple treatment, they were neurasthenic. He had given up Murphy's button. Dr. MOORE thought it necessary to suture the opening in the mesocolon, and had two cases of intestinal obstruction from small intestine passing through the opening. Dr. SYME discussed the treatment of hour-glass stomach. In greatly-thickened ulceration he had seen haemorrhage a considerable time after gastro-enterostomy, and advocated a partial gastrectomy for such cases. He had operated for acute haemorrhage, but it was exceptional to do so.

On Thursday afternoon Dr. MATTLAND read a paper on the use of the cystoscope in obscure renal disease; illustrated by cases. Dr. DUXHILL gave his experiences in the surgical treatment of exophthalmic goitre, based on 47 thyroidectomies for this condition. He is an enthusiastic advocate of the operation, and objects to crushing the gland, which, he says, can be cut with impunity. Dr. HINRICKSEN read a paper on Bier's hyperaemia in acute inflammation, which he had found very satisfactory. At the last meeting a discussion on the surgery of nerves and paralysis was opened by Dr. BASIL KILVINGTON, who very modestly related the results of his original investigations, and discussed the cases of infantile paralysis most suitable for treatment by operation on nerves, and those most suitable for tendon transplanting. Dr. H. S. NEWLAND followed on much the same lines, giving, however, greater credit to Dr. Kilvington's work. Dr. DUNCAN contributed a paper on the treatment of facial neuralgia, especially with reference to the removal of the Gasserian ganglion; and Dr. O'HARA demonstrated a new method of approaching and removing the Gasserian ganglion. Dr. E. S. JACKSON read a paper on the association between dental caries and appendicitis, maintaining that dental caries favoured the occurrence of appendicitis, and appealing for more care in preventing teeth troubles. Mr. R. HAMILTON RUSSELL exhibited a series of surgical cases possessing unique interest at the Alfred Hospital. Among these were two cases of bone implantation. In the first case, a severe compound fracture of the skull, a portion of the frontal bone was replaced nine days after its removal; in the second case a portion of the ulna affected with myeloid tumour had been removed, and a portion of an ulna removed from a corpse substituted. In both cases the result attained was perfect. He also showed the result of an operation devised for deformities of the arm resulting from removal of a portion of the radius some years previously; and a series of cases of tuberculosis of the knee-joint operated upon by his method of anterior longitudinal incision through the patella.

Diseases of Children.

A Section for Diseases of Children was included in the programme of the session held in Melbourne eighteen years ago, but the attendance of members was so small that the section was omitted from all subsequent sessions until the present one. On this occasion it proved to be one of the most attractive sections in the Congress. The members of the honorary medical and surgical staff gave demonstrations each morning and exhibited a large number of cases. The President was Dr. A. JEFFERIS TURNER (Brisbane), and the Secretary Dr. A. JEFFREYS WOOD. The first morning was devoted chiefly to the exhibition of cases of congenital and acquired syphilis in children, and the proneness to the ravages of tubercle in congenital syphilitis was well illustrated. A number of cases of obstetrical brachial palsy were also shown, and the good results following operative treatment were shown by several cases. An interesting group of 4 cases from one family suffering from this form of paralysis was also shown. Clinical demonstrations were given on cases of syringomyelia, pseudo-hypertrophic paralysis, congenital malformity of the heart, chorea, and bronchopneumonia. Papers were read on congenital syphilis by Drs. ATKINSON WOOD and P. B. BENNIE, and a discussion followed. A most instructive paper on lead poisoning in childhood was read by the President, Dr. JEFFERIS TURNER of Brisbane. After lunch the Section met in conjunction with the Section for Neurology and Psychiatry at the Children's Hospital, and a large number of cases of mental deficiency in childhood were shown. Children with spastic paraplegia the result of meningeal hæmorrhage and of encephalitis were demonstrated. A large number of Mongolian imbeciles were included amongst the cases, and one little girl of 8 months with the characteristic signs of this form of imbecility was shown side by side with her twin brother, who was absolutely normal in every way. The sporadic cretins formed a very interesting group, as they included some cases that had been under treatment as long as ten years, and were still taking thyroid. The best of these was a girl of 12 years old, who was in the fourth class of a State school, and was beginning to show signs of commencing puberty. No one talking to this child would have imagined that she had been a marked case of sporadic cretinism unable to walk at the age of 4 years, when she first came under treatment. Dr. A. W. CAMPBELL of Sydney concluded the demonstration with a masterly and instructive lantern demonstration of the brain in amentia.

On Wednesday, October 21st, Dr. W. KENT HUGHES commenced the demonstration by reducing a case of congenital dislocation of the hip. Numerous cases of successful reductions of these hips were on exhibition, and the skiagrams shown left no room for doubt as to the perfect results obtained by the bloodless reductions. A lantern demonstration by Dr. HUGHES on the anatomy and treatment of talipes equino-varus, and another by Dr. H. M. HEWLETT of some interesting medical and surgical cases, were much appreciated by members. Dr. A. JEFFREYS WOOD read a paper on the treatment of congenital dislocation of the hip.

On Thursday morning, October 22nd, a large number of cases of spinal caries and morbus coxae were shown by the members of the honorary medical staff. Some of the older cases shown illustrated the subsequent shortening of the whole limb that frequently results from tuberculous disease of the hip-joint. Lovett's method of forcible correction in scoliosis was demonstrated by Dr. H. DOUGLAS STEPHENS, and the plaster-of-Paris jacket applied to a patient with marked rotation. Dr. P. B. BENNIE gave a most instructive demonstration of the method he adopts in measuring a patient for a single Thomas's hip splint. A discussion on the treatment of tuberculous disease of the hip-joint was opened by Dr. CLUNIE (Sydney), who said that the treatment of this affection by Thomas's splint was confined to the Children's Hospital, Melbourne. All the members who had watched the results following the treatment of hip cases by well-fitting Thomas's splints were emphatic in declaring that as a method it was simpler and more effective than any other kind of treatment, and was especially useful in allowing the patient to be carried out into the open air. A discussion on the prevention of the introduction of infectious diseases

into children's hospitals was opened by papers from Drs. W. E. SCIMMONS and R. D. McMASTER (Sydney).

Friday, October 23rd, was the last day on which the Section met, and numerous cases of infantile paralysis were shown by members of the staff. An epidemic of this disease commenced in April, 1908, and an account of it was given by Dr. H. DOUGLAS STEPHENS. The disease, he said, had been endemic in Victoria, especially in some of the suburbs of Melbourne, for some time, certainly during the last decade, and notably amongst the more densely populated portions of the metropolitan area. During the recent epidemic no relationship could be traced between it and the undue prevalence or absence of other diseases, nor was there any similar affection noticeable amongst animals. Sanitary conditions were good as a rule, but overcrowding in small houses was a common feature. The outbreak occurred in the autumn, after an exceptionally dry, warm summer—a dearth of water in the catchment area—such as had not been experienced for many years. In his opinion the disease was mildly contagious. The incubation period would seem to be somewhere between three and sixteen days, and the average duration of the invasive or preparalytic stage something under seven days, commonly twenty-four to seventy-two hours. Lumbar puncture was performed in 26 early cases and the fluid examined by the bacteriological department of the Melbourne University. In 7 cases a coccus not unlike in many features the diplococcus isolated by Geiswold in the Norwegian epidemics was demonstrated, but up to the present time its causal relationship had not been proven. *Post-mortem* examinations were made in several cases, and, although showing very little macroscopically, demonstrated clearly under the microscope the widespread inflammatory lesions described by Harbitz and Scheele. The extreme rapidity with which the anterior cornual cells disappeared was a remarkable feature. Although the great majority of cases exhibited the usual paralysis characteristic of poliomyelitis of the strictly spinal type, the epidemic produced other variations of the disease, aptly described by Batten under the terms polio-encephalitis, superior and inferior, including variations suggestive of acute cerebellar ataxia and Landry's paralysis. Of the preparalytic manifestations the commonest were fever, vomiting, irritability, restlessness, delirium, twitching, pain—sometimes severe and widespread, and occasional rigidity of spine and neck. Constipation, often very obstinate, and retention of urine of transient nature were very frequently noted. The epidemic included over 130 cases, and gave a mortality-rate of approximately 4.5 per cent. Dr. W. C. MACKENZIE read a paper on the treatment of infantile paralysis, and laid special emphasis on the usefulness of early splinting of the affected limbs with a view to prevent the overstretching of the affected muscles. Dr. R. B. WADE (Sydney) also sent a paper, which was read by the SECRETARY, dealing with a similar epidemic that occurred in New South Wales in 1903-4, and also with the treatment. The numerous forms of splints and apparatus used in helping the children to walk were exhibited. Thomas's caliper knee splint, Crabbe's splints, and the various braces all excited the keen interest of members. A few cases of tendon transplantation were shown.

UNDER the will of the late Miss Isabella Gregson, of Bournemouth, a sum of £5,000 is directed to be paid to the Children's Infirmary, Myrtle Street, Liverpool, for the endowment of five beds.

THE position of Livingstone College, as shown by the report published on December 8th, seems more satisfactory than at any time since the institution was founded some fifteen years ago. The number of new entrances during the year 1907-8 was much larger than any hitherto recorded, being an average of 30 in each of the three terms. Rather more than half the students entered for the full session and others for one or two terms. The details given as to the students show that the college remains as heretofore thoroughly undenominational. The financial statement shows that a deficiency of over £400 existing at the beginning of the year has now been wiped out, and that the working expenses of the year were practically met by the fees of the students. Nevertheless, there still remains a mortgage on the property amounting to some £3,500. Particulars of the training in medical matters afforded to missionaries can be obtained on application to Dr. C. F. Harford, Livingstone College, Leyton.

THE COMPOSITION OF CERTAIN SECRET REMEDIES.*

XXII.—MEDICINES FOR GENERAL USE.

By far the greater number of the proprietary medicines which have been described in this series of articles are recommended for a wide range of ailments, but usually there is some one disease for the treatment of which they are particularly recommended, so that it has been possible to classify them according to their alleged purposes. In very many other cases, however, the claims made are so wide that the article is put forward as a sort of cure-all. A selection of such preparations is here dealt with; they are not sharply marked off from more special preparations, for many of them are recommended for some one disease, of which nearly all others are asserted to be variations.

DR. MARTIN'S MIRACLETTS.

Supplied by Dr. Martin's Medicine Co., 6, Pantion Street, Haymarket, London, S.W.

Price 1s. 1½d., 2s. 9d., 4s. 6d., and 11s. per bottle. A 2s. 9d. bottle contained sixty tablets.

These are described on the package as:

A real Elixir of Life in solid form. The world's greatest remedy.

Cures Constipation, Indigestion, Headache, Neuralgia, Anæmia, Nervous Disorders, Liver Troubles, Rheumatism, Sciatica, Gout, St. Vitus's Dance, Hysteria, Rickets, Heart Disease, Kidney Complaints.

Cures Melancholia, Loss of Appetite, Sleeplessness, Lassitude, Mental Depression, Brain Fag, Palpitation, Stomach Disorders, Women's Special Ailments and Irregularity of Health, etc., etc.

A little booklet entitled "A Fortune for All" was enclosed in the package; the following are extracts from this:

Dr. Martin has been studying this question of Perfect Health for the last nine years, and after continuous experiments which have cost a small fortune, he has succeeded in discovering a remedy which he claims to be the most WONDERFUL in the WORLD. Having found the remedy Dr. MARTIN has for the last six months given away a large quantity to various people in all conditions of life, with the result that the most astounding and marvellous cures have been effected.

Dr. Martin's Miracletts are a REAL ELIXIR OF LIFE in solid form. They arrest decay of nature, act upon the blood and tissues of the body, giving one a continually youthful appearance, with every attribute of health, strength, and beauty.

Whatever you may be suffering from do not worry or fear, as Dr. MARTIN'S MIRACLETTS will be certain to cure you!

Dr. Martin's Miracletts make the weak and sickly become strong and healthy, and the aged become youthful and full of energy; the tired worn out look being replaced by an appearance of cheerfulness and vivid health. The pale and wrinkled face with bad complexion gives way to rosy cheeks and a clear skin; the thin gain flesh, and the stout lose superfluous fat; indigestion quickly disappears, the appetite returns, and a new life is open to all.

A separate small slip enclosed in the package is worded as follows:

GUARANTEE.

Dr. Martin's Medicine Company being absolutely confident of the marvellous curative properties of their Miracletts, will willingly refund the money to any purchaser who has taken eighteen Miracletts according to directions, and is not satisfied with the results.

Much less conspicuously, on another slip chiefly devoted to the relative quantities in the packages of different size, it is stated:

Those whose ailments have been of long standing must not expect immediate perceptible results, but with a little patience and perseverance the result is SURE.

The directions are:

For Adults.—In ordinary cases one Miraclett should be taken after each meal three times a day. For obstinate and extreme cases of constipation two Miracletts may be required three times a day.

For Children.—For children over ten years one Miraclett only should be taken after the last meal at night.

The "Miracletts" consisted of sugar-coated tablets, the coating being coloured brown with ferric oxide (so-called chocolate coating). After removal of the coating they had

an average weight of 4.3 grains; this includes the weight of a strong coating of varnish, which was not removed with the sugar coating. Analysis showed them to contain valerianates of quinine and zinc, ferric oxide, menthol, kaolin in considerable quantity, and a little talc. A substance of extract nature was also present to the extent of about 5 per cent.; it possessed no characteristic taste or other property by which it could be identified; a resinous substance which was found in small quantity appeared to be merely the varnish with which the tablets were covered. The quantities of the different ingredients were determined as nearly as possible, and the results indicated the following amounts:

Quinine valerianate	...	...	0.4 grain
Zinc valerianate	...	...	0.1 "
Ferric oxide	...	...	0.3 "
Menthol	...	...	0.03 "
Kaolin and talc	...	...	2.3 grains

In one tablet.

Estimated cost of ingredients of tablets, 4d. per hundred.

THERAPION No. 3.

Prepared by the Le Clerc Medicine Company, London, England.

Price 2s. 9d. per package, containing 1½ oz.

The following is a sample of the advertisements of this preparation:

A Broken Down System.

This is a condition (or disease) to which doctors give many names, but which few of them really understand. It is simply weakness—a breakdown as it were of the vital forces that sustain the system. No matter what may be its causes (for they are almost numberless) its symptoms are much the same, the more prominent being sleeplessness, sense of prostration or weariness, depression of spirits, and want of energy for all the ordinary affairs of life. Now what alone is absolutely essential in all such cases is increased vitality—vigour—

Vital Strength and Energy,

to throw off these morbid feelings, and as night succeeds the day this may be more certainly secured by a course of

The New French Remedy,

Therapion No. 3.

than by any other known combination. So surely as it is taken in accordance with the directions will the shattered health be restored,

The Expiring Lamp of Life Lighted Up Afresh,

and a new existence imparted in place of what had so lately seemed worn, "used up," and valueless. This wonderful medicine is suitable for all ages, constitutions, and conditions, in either sex, and it is difficult to imagine a case of disease or derangement, whose main features are those of debility, that will not be speedily and permanently benefited by this never-failing recuperative essence, which is destined to cast into oblivion everything that had preceded it, for this widespread and numerous class of human ailments.

In a pamphlet which is enclosed in the package similar statements to the above are made, together with others which indicate that the medicine is primarily intended for loss of sexual power, and followed by a dissertation on "Venereal Excesses and their Consequences." "Therapion No. 1" and "Therapion No. 2" are also described, the former as

the most efficacious remedy ever discovered for the removal of all discharges in either sex,

and the latter as

the great remedy for impurity of the blood, scurv, pimples, spots, blotches, pains and swellings of the joints, gout, rheumatism, syphilis, etc.

The directions are:

For either No. of Therapion a piece about the size of a small marble, as indicated herewith, should be taken three or four times a day—an hour or less after meals.

The contents of the 2s. 9d. package are referred to as twenty ordinary adult doses; at this rate one dose would be 30 grains. The substance consisted of a dark stiff paste smelling strongly of camphor. Analysis showed it to contain, in addition to camphor, glycerine, powdered liquorice, a bitter extract agreeing in all respects with extract of gentian, calcium glycerophosphate, and a trace of alkaloid; there also appeared to be a second extract present. The alkaloid, which amounted to 0.06 per cent. only, could not be identified with any of the ordinary medicinal alkaloids. There was some evidence that the second extract was that of damiana, and a paste made up

* Previous articles of this series were published in the following issues of the BRITISH MEDICAL JOURNAL:—1904, vol. ii, p. 1532; 1905, vol. ii, pp. 27, 1645; 1907, vol. i, p. 215; vol. ii, pp. 24, 160, 209, 335, 530, 653; 1908, vol. i, pp. 833, 912, 1373; vol. ii, pp. 86, 505, 1022, 1110, 1193, 1285, 1566, 1697, 1875.

with this and the other ingredients agreed well with the original; but extract of damiana possesses no distinctive characters by which it can be identified in a mixture. Quantitative determinations were made of those ingredients capable of it, and the proportions of the others estimated by comparison. The results indicated the following formula:

Camphor	...	...	2.5 parts
Glycerine	...	...	24 "
Powdered liquorice	...	...	40 "
Calcium glycerophosphate	...	...	1.8 "
Extract of gentian	...	...	5.0 "
Extract of damiana (?)	...	...	1.0 "
Alkaloid	...	...	0.06 "
Water to	...	...	100 "

In addition, there appeared to be present a slight trace of the oil of one of the umbelliferous fruits, probably anise or fennel. Disregarding the trace of alkaloid, the estimated cost of ingredients for $1\frac{1}{2}$ oz. is 2d.

DR. WILLIAMS' PINK PILLS FOR PALE PEOPLE.

Sold by the Dr. Williams Medicine Company, 46, Holborn Viaduct, London, E.C. Manufactured in the United States of America. Price 2s. 9d. per box, containing 30 pills.

These pills are advertised for a great variety of diseases, prominence being usually given to one disease in each advertisement; thus four long advertisements appearing simultaneously in different papers are respectively headed:

Afraid of being touched. So sore with Rheumatism. A once-crippled victim tells how Dr. Williams' Pink Pills cleared his system of Rheumatism.

Eczema expelled. Mr. John Chamberlain tells how his sufferings from Skin Disease were cured by Dr. Williams' Pink Pills.

Sciatica's Swift Pains rendered this Lady helpless. Her case had defied treatment, but Dr. Williams' Pink Pills succeeded by curing the cause of Sciatica.

The Dark Days of Dyspepsia. . . . Dr. Williams' Pink Pills go to the very cause of the mischief.

Each includes a long description of a "case," usually with a picture. The following is from the concluding paragraph of the first of these advertisements, and the others end in a similar way:

THE DR. WILLIAMS' WAY.

When the muscles and nerves are tortured by poisons in the Blood, be the result Rheumatism, Sciatica, or Lumbago, the only way to a cure is to Enrich and Purify the Blood. Dr. Williams' Pink Pills, in this way alone, have cured not only Rheumatism, but Anaemia, Indigestion, Palpitations, Influenza's After-Effects, Eczema, Sciatica, St. Vitus' Dance, Spinal Weakness, the many forms of Nervous Disorders dreaded by men; also the special ailments of women.

In a circular enclosed in the package it is stated that

The success of this remedy lies in the recognition of the controlling influence of the blood over the health of the body. It is the root of disease that must be attacked, and the most important development of modern medical science has been in discovering that, in most diseases, this lies in the condition of the blood. If the blood is thin and poor, the nerves cannot receive their proper nourishment, the system becomes run-down, and in a condition to invite disease. Build up the blood, restore the worn-out nerves and you remove the cause. Dr. Williams' Pink Pills for Pale People contain elements necessary to give new life and richness to the blood.

General Directions.—Before beginning to take these Pills, *ease the bowels as they may be opened by laxative or purgative medicines.* It is best to begin with one of Dr. Williams' Pink Pills after each meal, commencing the use of the medicine after a mid-day meal. Being stimulating, it is best not to take them on an empty stomach. After taking for a few days the number may be increased to two Pills at a dose, while in severe cases three may be taken at a time.

The pills were ovoid in shape and coated with sugar, coloured pink; after removal of the coating they had an average weight of 3 grains. Analysis showed them to contain ferrous sulphate, potassium carbonate (these two having reacted more or less completely, and about one-third of the iron having become oxidized to the ferric state), magnesia, powdered liquorice, and sugar. Since it has been stated that these pills contain arsenic, careful search was made for it, but it was not found. The pill is thus merely one of the many variations of Bland's pill. The quantities of the different ingredients found indicated the following formula:

Exsiccated sulphate of iron	...	0.75 grain
Potassium carbonate, anhydrous	...	0.66 "
Magnesia	...	0.09 "
Powdered liquorice	...	1.4 "
Sugar	...	0.2 "

In one pill.

Estimated cost of ingredients for 30 pills, one-tenth of a penny.

BEECHAM'S PILLS.

Prepared by Thos. Beecham, St. Helens, Lancs.

Price 1s. 1½d. per box, containing 56 pills.

These pills are very widely advertised in a variety of ways. The following is a specimen of the statements made:

Ordinary medicines begin at the wrong end, only correct symptoms. People take headache powders for headaches, blood medicines for the blood, and nerve remedies for nervousness, when they only need Beecham's Pills to tone up the digestive organs, the liver and the kidneys, and so keep the whole system in a healthy condition.

In a circular wrapped round the box it is stated that:

These renowned pills are composed entirely of MEDICINAL HERBS, and are warranted free from mercury or other poisonous substance. . . . Persons of a strong or average constitution, but who may temporarily be suffering from any of the complaints herein mentioned, will usually find the dose to suit them to be three or four pills once a day: sometimes, however, it is necessary to repeat this dose morning and night, according to the condition of the system at the time. No harm can be done by increasing the dose where it is found insufficient, as the Pills can never act injuriously. Others, who may be frequently subject to one or more of the specified ailments, should take smaller doses of the pills occasionally, one, two, or three generally being the ordinary dose, which may be increased at discretion by the patient.

The "complaints herein mentioned" include Constipation, Headache, Dizziness or Swimming in the Head, Wind, Pain, and Spasms at the Stomach, Pains in the Back, Restlessness, Insomnia, Indigestion, Want of Appetite, Fussiness after Meals, Vomiting, Sickness of the Stomach, Bilious or Liver Complaints, Sick Headaches, Cold Chills, Flushings of Heat, Lowness of Spirits, and all Nervous Affections, Scurvy and Scorbutic Affections, Pimples and Blotches on the Skin, Bad Legs, Ulcers, Wounds, Maladies of Indiscretion, Kidney and Urinary Disorders, and Menstrual Derangements.

The pills had an average weight of 1½ grains. Analysis showed them to consist of aloes, ginger, and soap; no other medicinal ingredient was found. The quantities were approximately as follows:

Aloes	...	...	0.5 grain
Powdered ginger	...	...	0.65 "
Powdered soap	...	...	0.18 "

In one pill.

Estimated cost of ingredients for 56 pills, one-eighth of a penny.

COLEMAN'S NERVELETES.

Proprietors, J. Chapman and Co., Limited, Norwich.

Price 1s. 1½d. per bottle, containing 27 pills.

A circular enclosed in the package is headed:

Coleman's Nerveletes or Nerve Pills generate brain and nerve-force.

A further extract is as follows:

The busy brainy man has nothing to guide him as to his power of endurance; he works at high pressure, regardless of consequences, until overwork and anxiety produce the inevitable—nervous exhaustion. A little rest and he recovers, rushes head-long again into hard work, increasing the pressure until suddenly one of the small blood vessels on the brain bursts—what is commonly called a stroke—result, Paralysis. How often do we observe commercial and literary men of brilliant attainments gradually become impotent, through the fearful reckless waste incurred by overwork? If we use up more energy and force than we can naturally supply, we require something to assist nature. The man or woman who suffers from Brain Fog, Nervous Debility, Want of Stamina, Physical Weakness, Nervous Dependancy, Sleeplessness, has in Coleman's Nerveletes a most powerful restorative and Nerve Tonic which will prevent wear and tear of nerves, will invigorate the brain, build, brace and buoy you up, enable you to safely tide over great tests of endurance, and if you should unhappily be half or almost completely worn out, quickly restore you so that you can naturally sleep well, eat well, think well, and work well.

Dose: Two Nerveletes daily after dinner.

The pills were coated with talc; after removal of the coating they had an average weight of about 1½ grains. Analysis showed them to contain fer phosphorus, quinine sulphate, a little powdered liquorice, and about 20 per cent. of a powdered vegetable tissue, which could not be identified: the remainder of the pill appeared to be of the nature of excipient only. The amounts of phosphorus and

quinine were determined, and indicated the following formula:

Phosphorus	0.005 grain
Quinine sulphate	0.07 "
Vegetable powder	0.3 "
In one pill.	

MOTHER SEIGEL'S CURATIVE SYRUP.

Proprietors, A. J. White, Ltd., New York and London.
Price 2s. 6d. per bottle, containing 3 fluid ounces.

Although this is described on the wrapper as "for dyspepsia" so many disorders are stated to be due to this cause, and amenable to treatment with this preparation, that it may fairly be included here. On the other side of the wrapper it is called "A cure for impurities of the blood," and "A cure for dyspepsia and liver complaints." In a circular enclosed with the bottle it is stated—

The symptoms mentioned above are the smoke of the fire of indigestion—a fire that will eat out your very vitals and sap your strength and vitality. For it can't be too often repeated that indigestion is the root of a great deal of evil: the origin of a great many disorders which no man quite understands how it came by. And why this is can easily be explained. Disease is poison; its symptoms are the manifestation of the poison. Indigestion creates many dangerous poisons, and is therefore the cause of many diseases.

So let us get rid of the smoke by putting out the fire, and purify our blood and system with Mother Seigel's Syrup, which will sweep away the poisons and make us healthy and strong.

Mother Seigel's Syrup is a highly concentrated, purely vegetable compound, having a specific action on the stomach, liver, and kidneys.

The directions on the label are:

Shake the bottle so as to mix the sediment. Commence by taking ten or fifteen drops three times a day, in a little water. If this does not give relief, the dose may be increased to thirty drops.

Analysis showed the presence of free hydrochloric acid, tincture of capsicum, a bitter substance agreeing in its properties with aloes, and sugar (partly as invert sugar); the colouring and flavouring substances also present indicated that the sugar had been added in the form of treacle. Quantitative determination of those ingredients capable of it, and estimation of the others by comparison with known mixtures, indicated the following formula:

Dilute hydrochloric acid B.P.	10 parts by measure
Tincture of capsicum	17 " "
Aloes	2 parts
Treacle	60 "
Water to	100 parts by measure

Estimated cost of ingredients for three fluid ounces, one-third of a penny.

MOTOR CARS FOR MEDICAL MEN.

(From a Correspondent.)

THE COST OF MOTORING.

IN the course of the past eighteen months we have published a considerable number of communications in which correspondents have given figures as to the cost incurred in using motors for the purposes of medical practice. We have recently received some further communications, and it may, therefore, be useful to analyse the data available to hand with a view of arriving at some sort of average. The material is the more useful in that all shades of opinion are represented, from those who are enthusiastic in praise of the services of their motors to those who are thoroughly dissatisfied, and to the data presented by these particular attention has been given in order to discern if possible the reason for their poor results.

The analysis of the figures and the comparison with the expense of keeping horses, where this is given, is not easy to make, as the various correspondents have included different sets of items, so that the figures have to be dissected out, in order to bring them into comparison; and it has seemed best for the present purpose to separate out what may be called running costs—namely, petrol, oil, tyres, and repairs—and to deal with them by themselves, leaving out of consideration for the moment the cost of a driver and cleaner, garage accommodation, insurance, and especially depreciation. With regard to the item of depreciation there is a good deal to be said, and the subject will be dealt with separately; but it may be at once stated that if the owner will take the trouble to master the mechanism of his car—and it will immensely add to the interest of using it if he does—there

is no need to employ a chauffeur at high wages. It is quite true that a trained mechanic can do more in the way of minor repairs than an ordinary driver, but in the absence of a fully-equipped workshop he cannot by any means do all repairs, and now that repair shops with fairly competent repairers exist in abundance almost everywhere, it is far cheaper to send the car to them when necessary than to pay large wages every week. It is not difficult to teach any intelligent man how to do most of the current adjustments. The writer has two cars, and yet during the five years that he has had two, has never had a "chauffeur," but has taught his coachman to drive, and has also educated him into being a fair mechanic. There is, therefore, really no occasion to pay more than £52 to £64 a year for a driver who will keep the car. If the practitioner is so driven with work that he can never devote half an hour to his car, it may possibly be worth his while to pay more and get a more skilled mechanic, but then presumably his income will be proportionately larger, and the added expense will not matter much. Garage most people possess in the form of a coach house, and with the modern types of motors the great majority of adjustments can be made from above, so that a motor pit is rarely required.

Insurance.

The item of insurance may seem heavy; reasonable protection against all risks may be obtained for a small car for from £9 to £12 a year, but it may be remarked that this carries an insurance against certain risks which one has been in the habit of bearing uninsured with horse-drawn vehicles, such as damage to third persons, cyclists, pedestrians, etc. Still, in the present state of public feeling, when, if an accident occurs, the blame is almost always, whether rightly or wrongly, put upon the motorist, it is desirable to be fully insured.

This brings the total expense up to from £61 to £76 a year, the greater part of which would be incurred even with a single horse.

Depreciation.

Next comes the question of depreciation. There is an immediate and heavy drop in price the moment a car becomes "second-hand," and this drop is out of all proportion to any actual deterioration. Hence if we are to write down as depreciation the full extent of the drop in selling value it becomes a very serious item in the expenditure. Moreover, if a car is to be sold second-hand to the best advantage, it should be sold within a year and a half, and those rich motorists who are not satisfied unless they have the very latest of everything rarely keep their cars more than a year.

But, if the car is kept as a money earner, this frequent buying and selling is not to be thought of, for as a worker the car, if a good one, will not have depreciated in a couple of years, though its selling value would have dropped heavily. To give a concrete example, the writer has one car which cost £550 five years ago, and if sold now would very likely not fetch £120. But it has been completely overhauled, and in almost every particular is as good as new. It has cost in the five years £24 in repairs, many of these being replacements of parts when it was overhauled, parts which would have gone on for years to come, but which the owner as a counsel of perfection thought it better to replace when it was dismantled. Although cars have gone down a little in price, it could not be replaced by a similar new one for less than £450 or £500, and it would therefore be folly to sell it so long as the owner has use for it, as it has in all probability many years of useful life before it. What, then, should be set down as its depreciation? Evidently, so long as it remains a good servant, not the difference between its price when new and what it would now fetch. There are plenty of small cars still in excellent condition which have run their 15,000 miles, while the de Dion Company claim that some of their small cars have run 100,000 miles, and are still useful. Hence it would appear that the most economical way to use a car is to buy a good one, and then work it to the death—that is to say, until its bill for repairs becomes excessive.

Taking these points into consideration it will be seen that the amount to be set down as depreciation becomes a fancy estimate, about which no two people will agree, and so it is better to leave it out, always remembering that it does exist. If it is desired to give a liberal estimate, it

may be put probably at about 10 per cent. of the value of the car while retained and used by the owner. If the car is to be sold again it will be much more.

Actual Running Cost.

An analysis of the actual running costs furnished by our correspondents gives an average cost of nearly 3d. a mile, but this average is vitiated by including some which were as high as 7d. a mile, or even a little more; these will have to be referred to later, as such high costs are susceptible of explanation and are not to be regarded as fair averages.

That an estimate of 3d. a mile should be more than ample is curiously confirmed by a statement in the *Autocar* for December 19th, that a responsible motor agency has contracted with a medical man to garage, wash, adjust and repair, furnish petrol and tyres, completely overhaul once a year, and insure against fire, accident, third party risks and theft, for an inclusive charge of 3d. a mile indicated on the milometer, the car being a 6-h.p. de Dion. The average mileage has been 8,000, so that the owner will have to pay about £100, while, be it remembered, the agency has named a price at which no doubt it expects to make a profit. He, of course, provides his own driver, if he does not drive it himself.

Something under 3d. a mile—indeed, not more than 2d.—is what a small car should cost for what we have included in the running expenses, though few can hope to make it as low as 1d. a mile, the figure given by one correspondent, who uses solid tyres.

A closer examination of the higher figures given at once brings to light as the most salient fact that the repairs and replacements have been altogether excessive. Thus we read of big ends having to be adjusted after a too short mileage, of broken parts, damaged parts, renewals, and all sorts of repairs which in the aggregate ought not to have occurred if the car was a good one to begin with and was well treated.

By a really good car is meant one well designed, well constructed, of good material, of different materials appropriate to its several parts, and well tested before delivery, till—to borrow an expression from Rudyard Kipling—the machinery had "found itself." To the experienced motorist, the record of repeated repairs and replacements for certain cars which proved themselves very expensive plainly spells either an indifferent car or bad treatment. As confirmatory of this, in one case at all events the petrol consumption was about double what it should have been for the mileage. This tells us almost with certainty that for the largest part of the time the engine must have been running very badly.

Of course it is not meant to be implied that even on the best of cars, by bad luck, something may not go wrong early; thus, on the writer's car, which has such an excellent record as to repairs, one of the cones of the ball-bearing of a driving wheel wore badly, and had to be renewed within a few months; but the new one and all the others are still there and practically unworn. It is the occurrence of one thing after another that condemns either the car or its treatment, and the result cannot be taken as an average to be expected and accepted as in the day's work.

To summarize what has been arrived at by a study of the material before us, we may give the following estimate for an 8-h.p. car, two-seated, and of good make:

Running costs at 2d. per mile for 5,000 miles	£ s.
Man and insurance	41 14
	70 0
	111 14

This works out at about 5d. a mile run; as the man and insurance, which have been put not at the lowest but at the medium figure, are fixed charges, a larger mileage would work out at less cost per mile, and similarly with a smaller mileage the figures would be less favourable. These would be out-of-pocket expenses, and if to them we add £20 per annum depreciation on a £200 car we shall get a total cost of about 6d. a mile for 5,000 miles.

This estimate is intended to cover a series of years. In the first year repairs should be negligible, much less than in the estimate, and they should not rise to its level until several years have passed. Further, in forming the estimate in order that it should not be misleading, the allowance for expenses has been somewhat liberal.

In order to secure economy there are certain things to

be observed. A really good car should be purchased, and that car should be kept contentedly for many years. It is essential not to purchase a car of higher horse power than the nature of the country and the work requires, for with increased horse power expenses of all sorts rise rapidly, and the carrying of extra weight, such as a four-seated body or extra passengers, is not to be done for nothing.

If the owner drives himself for the most part and gives a little attention to the car, he can probably secure the services of a suitable man for less than the £60 which is the amount in the estimate, and so reduce his mileage costs. It may be pointed out also that the man's wages alone (in the estimate) amount to nearly 3d. a mile, an amount equally incurred with horseflesh, so that really in instituting any comparison the question must be put whether the cost of horses and carriages can be as little as 2d. to 3d. per mile covered.

COST OF SMALL CAR.

DR. S. T. CROPPER (Chepstow), whose letter has been accidentally delayed, writes to speak well of his experience of an Adams car, 10-12 h.p. He finds it quite easy to manage in traffic and capable of taking the steepest hills in his neighbourhood. His car has run for 5,000 miles, and he finds that it does at least 30 miles to the gallon, and that the total cost per mile, including tyres and petrol, works out at between 2d. and 3d., varying according to the cost of a man to look after the machine.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the weeks ended October 24th and 31st and November 7th and 14th the deaths from plague in India numbered 2,046, 2,140, 1,993, and 1,943. The principal returns were: Bombay Presidency, 1,174, 1,143, 1,008, and 881; Bengal, 24, 52, 73, and 94; United Provinces, 12, 9, 17, and 22; Punjab, 110, 295, 304, and 322; Central Provinces, 263, 256, 178, and 142; Rajputana, 8, 25, 82, and 122; Hyderabad State, 171, 32, 44, and 26; Central India, 56, 73, 80, and 83; Mysore State, 173, 186, 171, and 164; Burma, 41, 27, 23, and 22.

MAURITIUS.

During the weeks ended November 12th, 19th, 26th and December 3rd and 10th the fresh cases of plague in Mauritius numbered 18, 18, 12, 4, and 7; the deaths from the disease amounted to 11, 15, 7, 1, and 5.

AUSTRIA.

At Trieste, 2 cases of plague reported on September 18th, 1 of which proved fatal.

TURKEY.

At Adalia, September 5th to 23rd, 2 cases of plague reported; at Bagdad, in September, 1 case, 1 death; at Beirut, 1 case on September 23rd.

EGYPT.

From September 4th to October 9th, 23 fresh cases of plague, and 15 deaths from the disease.

BRITISH EAST AFRICA.

At Kisumu cases of plague were reported late in August.

GERMAN EAST AFRICA.

At Muansa on August 19th one death from plague on board a steamer in the port.

CHINA.

At Tongshan, near Tientsin, in the first week of September a serious outbreak of plague occurred. At Wuchang an outbreak of the disease occurred during the first week of September.

JAPAN.

At Hiogo-Ken, between August 15th and September 14th, 35 fresh cases of plague were reported with 22 deaths from the disease. In Japan from January 1st to September 14th the cases of plague were returned as 645 and the deaths from the disease as 574.

SOUTH AMERICA.

Venezuela.—From August 10th to September 6th 7 fresh cases of plague were reported from Caracas.

Brazil.—At Rio de Janeiro 6 cases of plague and 1 death from the disease were reported between June 22nd and August 23rd.

Chile.—In August several cases of plague reported from Iquique and Autopagasta.

Peru.—Between August 5th and 31st 109 cases of plague occurred with 40 deaths from the disease.

Ecuador.—Two cases and 2 deaths from plague were reported from Guayaquil between July 26th and August 29th.

TRINIDAD.

One fatal case of plague reported on September 30th.

THE BELGIAN ANTITUBERCULOSIS LEAGUE.

The eighth annual report of the Ligue Nationale Belge Contre la Tuberculose contains reports from the provincial branches of the league, as well as the report of the secretary-general.

Antwerp.—The energies of the Antwerp branch were concentrated chiefly on a work of prophylaxis with regard to children, and the Villa Maritime at Wenduyn-sur-Mer was established to receive debilitated children born of tuberculous parents, rickety, strumous, lymphatic, and pretuberculous children, and those with closed tuberculosis. Some pay and others are treated gratuitously, but children from all over Belgium are treated, only provided they have a doctor's certificate recommending change of air; all, however, are charged for their keep. In 1907 the number of children treated was 235. Owing to the generosity of M. le Sénateur Van den Nest a new dispensary was opened, which, when completed, will have a special department for laryngology and radiology, a clinical laboratory for the examination of sputum, etc., with a complete equipment for the analysis of milk, douche baths, and a large lecture hall. During the year five conferences were held, and a committee of ladies collected money to equip the dispensary and the maritime hospital with linen. The ladies are now studying the question of the provision of a special open air sanatorium for the women of Belgium, for whom up to the present little has been done. At the dispensary 3,493 attendances were made; 517 new cases were seen, and of these 72 men, 40 women, and 41 children were recognized as tuberculous. The home conditions of 133 of the 153 new cases of tuberculosis were inquired into. In the majority there was overcrowding, and in one-third the conditions under which they lived were found to be insanitary. Some interesting tables are given. Of the 153 cases, 123, in addition to 230 old cases, received assistance. The following were distributed:

Milk and kefir	...	...	47,210 litres.
Bacon	...	...	1,260 kilog.
Peas	...	...	1,400 "
Rice	...	...	1,400 "
Emulsion of cod-liver oil	...	...	400 litres.

Also mixtures, dentifrices, toothbrushes, spittoons, and clothing.

In the laboratory 125 analyses of milk and 459 of urine were made, and 421 specimens of sputum were examined bacteriologically. At the Villa Maritime of Wenduyn-sur-Mer 235 children were treated during the year.

Malines.—The Dispensary Hector Leblus was visited in 1907 by 102 fresh patients, 70 of whom were suffering from diseases of the respiratory organs, and of these 23 were definite cases of tuberculosis. Practical assistance was given in the shape of: Milk, 1 882 litres; eggs, 7,224; bacon, 945 kilog.; smoked meat, 24 fillets; cod-liver oil, 8 bottles; rice, 6 kilog.; blankets, 7; beds, 7; lysol, 42 litres; spittoons, 35. Two patients in the Sanatorium of La Hulpe-Waterloo received a monthly sum of 20 francs, and an outfit of 2 flannel shirts, 2 vests, 2 pairs of drawers, 2 pairs of stockings, 1 pair of goshes. The committee has drawn up a plan for the control of farms in order to ensure clean milk. The dispensary has done excellent work in seeing patients and educating them hygienically, and by supplying them with beds in order to isolate them in houses where they shared beds with others.

Brabant.—At the Dispensaire Albert-Elizabéth et Leopold 1,018 patients suffering from tuberculosis were seen. The following help was given: 66,782 litres of milk; 4,065 kilograms of bacon; 2,457 litres of cod liver oil and emulsion; 37,960 kilograms of coal, and 2,697 fr. 50 c. in kind. Entertainments, conferences and lectures with lantern slides were given.

East Flanders.—The figures for disinfection carried on at Gand are illuminating as showing the progress of hygienic ideas:

1897	...	...	41 disinfections for tuberculosis.
1898	...	...	75 "
1899	...	...	82 "
1900	...	...	60 "
1901	...	...	154 "
1902	...	...	208 "
1903	...	...	276 "
1904	...	...	302 "
1905	...	...	292 "
1906	...	...	277 "
1907	...	...	310 "

The Gand dispensary only diagnoses cases, warns patients of the danger to themselves and to their surroundings and the means of avoiding them, but does not treat. The patients attend periodically, and the accessions are recommended to philanthropic societies for assistance and are given milk by the dispensary. Of the 300 new cases examined in 1907 66 were tuberculous. A disinfecting-room for the linen of tuberculous patients is about to be added to the dispensary, as towns where these exist show striking figures.

Hainaut.—During 1907 over 500 tuberculous subjects have been seen 5,000 times by the two doctors in charge of the dispensary. Seventy-five have been taken in at the Galerie de cure d'air au Bois-d'Havré, and of these 45 per cent. came out cured and able to work as hard as usual.

Limbourg.—Here was held an exhibition of placards, instructive pictures, and leaflets. Here indifference is found among the public and the doctors; nevertheless the propaganda continues and does good, particularly among school teachers, thanks to the zeal of the inspectors. Only three doctors sent patients to the dispensary, where they receive not medical treatment but tickets for milk, eggs, pocket spittoons, leaflets, and the examination of sputa—all gratis. Here the State assists the Bureau de Bienfaisance and the town gives land.

Luxembourg.—Here are held conferences (announced in the newspapers) and lectures, and there is a system of disinfection. The Minister of Agriculture undertakes to train in theory and practice the superintendents and staff in charge of disinfecting centres and to pay half the cost for the equipment of these, while the Conseil Provincial votes 500 francs per annum. They propose next to educate the masses in prophylaxis.

Namur.—Lectures are given, leaflets distributed, and, through the exertions of the local section, the subject was discussed in sixty-five local newspapers. The dispensaries of Namur, Dinant, and Zaminé continue to receive and instruct a large number of patients and to disinfect their houses and otherwise assist them.

Liège.—At Liège the number of tuberculous patients under the prophylactic supervision of the Dispensaire Hortense Montefiore on January 1st, 1907, was 1,143. All degrees of the disease are seen, but it is noteworthy that those in the early stages are far in excess of the more advanced. Of the 286 new cases there were:

213	in first stage, or 74.5 per cent.
44	in second stage, or 15.4 per cent.
29	in third stage, or 7.0 per cent.
9	pretuberculous, or 3.1 per cent.

Of these, 147 were sent by their own doctors, 30 by the patrons of the Oeuvre Liégeoise des Tuberculeux, 34 by other patients, 27 by polyclinics and hospitals, 8 by mutual help societies, and 12 by charitable societies, while 28 attended on their own initiative. Of these patients, 214 were men, 66 women, and 6 children. These 286 cases belonged to households containing a total of 1,080 persons, of whom 347 were children. Of these, there slept in the same room:

85	with 1 other person
57	" 2 other persons
41	" 3 "
16	" 4 "
8	" 5 "
6	" 6 "

154 slept in the same bed with others.

Of these 286 cases, 117 were sent to the sanatorium of Borgoumont, the expenses being borne by:

Mutual aid societies	...	44 patients
Civil hospitals of Liège	...	35 "
Municipal administration	...	26 "
The patients themselves	...	9 "
The employers of sick workmen	...	9 "

After the patients leave the sanatorium they are watched by the dispensary. The experience of eight years proves that the sanatorium and dispensary are complementary, and work harmoniously: 190 old patients from Borgoumont have been under observation. Of these, 177 were in the first stage, 39 in the second, and 4 in the third. Three years after their discharge 65.2 per cent., or two-thirds, appeared to be cured and at work as usual. In 11 per cent. the tuberculosis continues its evolution; the others are dead. In 1908 30,119 litres of milk and 24,297 eggs were distributed, and there were 98

disinfections in 1907. An endeavour is made to isolate infectious cases in the homes; they remain under the supervision of the dispensary, but are treated by their own doctor, the municipality paying; 49 cases were thus isolated in 1907. They were supplied with bed and bedding and the necessary accessories, and the rent of the extra rooms was paid by the Oeuvre. There will shortly be opened, owing in great measure to the liberality of M. Georges Montefiore, a sanatorium for women in the Province of Liège—the first in Belgium.

Verviers.—In 1907, of 173 dispensary cases, 60 had tuberculosis; 15 of these died during the year; 28 were sent to Borgoumont; pocket spittoons were given to all patients belonging to mutual assistance societies, and they also received milk, eggs, and assistance in paying their rent and the disinfection of their houses.

Huy.—In 1907, of 26 new patients, 11 men were sent to Borgoumont and 1 girl to the sanatorium Sainte-Marie at Bornemville; disinfection was carried out, and pocket spittoons, bedding, travelling expenses, rent, clothing, etc., supplied by the dispensary; 76,248 litres of milk, 12,000 eggs, and 1,461 kilos of meat were distributed.

Waremmé.—The antituberculosis dispensary of Waremmé was established in 1907 by the University Extension of Waremmé. The committee, after opening a dispensary, circulated 10,000 leaflets and caused them to be read out in elementary and secondary schools. In 1908, 52 patients were in attendance, showing the importance of the work.

LITERARY NOTES.

IN a note on the art of healing among the Druids, which appeared in the BRITISH MEDICAL JOURNAL of December 26th, 1908, it was stated that among the plants used for their supposed magical attributes was ivy. This should of course have been the mistletoe, which, as every school-boy knows and many schoolgirls learn about this season, was looked upon as having a peculiarly sacred character by the Druids.

Minerva Medica is the title of a new medical review, the first number of which has just appeared in Rome. We are gratified to learn that several of the abstracts, not only of original articles but of some of the lighter notes, are taken from the BRITISH MEDICAL JOURNAL.

Pathologia is the title of a new fortnightly journal published at Genoa, under the direction of Professors Golgi of Pavia, A. Lustig of Florence, A. Bonino of Padua, B. Morpurgo of Turin, G. Tizzoni of Bologna, and a number of other well-known Italian pathologists. The editor is Professor M. Segale. As its name imports, the new periodical is devoted to pathology, and the names of those under whose auspices it appears are sufficient guarantees of the scientific value of its contents.

The *Edinburgh Medical Journal* for November publishes the introductory address of Professor F. M. Caird on his taking possession of the chair of clinical surgery as Regius Professor in the University of Edinburgh. It is entitled *Some Points in the Evolution of Surgery*, and is in fact a very interesting sketch of the history of medicine in Scotland. The Edinburgh School of Medicine dates from 1505, when that "Rycht Potent Prince" King James IV granted a Charter of Incorporation to the Civic Guild of Chirurgians and Barbers, which was the precursor of the Royal College of Surgeons. For a long time, however, there were no men of mark in medicine in Scotland such as the Linacres, the Wisemans, and the Sydenhams who flourished south of the Tweed. "Surgery was rude in a rude age; medical skill and treatment generally beneath contempt," Professor Caird quotes Dunbar's lines on a friar, who was a peripatetic practitioner:

In Scotland than, the nearest way,
He came, his cunning till essay,
To some men there it was no play,
The proving of his science.

He had some notions of anatomy, for we are told "Vein organs he full cleanly carrit." He dispensed his own drugs, and made experiments therewith on the bodies of his patients, for it is said that "In pottingyrie he wrocht great tyme; he murderit into medicine." His handy-work as a surgeon is described as follows:

His trowns were rude as any ranchter,
Where he let bluid it was no lauchter,
Full many instruments for slaughter
Were in his gortyians.

He bled his patients figuratively as well as physically:

In leechcraft he was homicide
He would have, for a nicht to bide,
Ane hackney and the hurt man's hide,
So meckle he was of myans.

After the Reformation Scots flocked to Holland for medical education which could not be had at home. So scanty was the supply of bodies for dissection in Edinburgh that the "resurrection" of corpses caused riots as far back as 1711. The College of Physicians was founded in 1681, but there was no really systematic teaching till 1726, when the City Fathers appointed four professors of medicine, among them the celebrated anatomist, *Monro primus*. Next came into being the infirmary, which was founded in 1736. In addition to medical and surgical wards, with a spacious and well-lit operating theatre, a ward was set aside for lying-in women. There were twelve cells for the insane, and there were beds for unfortunates and a separate ward for married women "sufferers not by any fault of their own." This latter done by petition of the physicians to keep them from the odium of the common Lock. In 1828 the infirmary was enlarged, and in 1879 the famous building, in which such men as Benjamin Bell, Liston, Syme, Simpson, and Lister had done their work, gave place to the new palatial infirmary. Professor Caird gives extracts from old case-books illustrating the practice of John Bell, "the first and, perhaps, the greatest teacher of clinical surgery Edinburgh ever produced." Coming down to a later day, Professor Caird says that in 1853 so great was the mortality from blood poisoning that certain of the most unhealthy hospital wards had to be cleared out and the patients treated in tents on the green. He goes on:

When Mr. Lister began work in Glasgow, hospital gangrene was rampant. It is now unknown. In 1873 that most charming and able of surgeons, Nussbaum of Munich, was afraid to operate, since every wound became infected, and the mortality rose to 80 per cent. Mr. Spence, in his lectures, 1871, "suspects pyæmia is not so infrequent in private practice as is often stated." And now so great is the change that the advance to the seniors among us the old typical pyæmia, with its hay-scented breath, is little more than a memory. This astounding improvement, it must ever be remembered, took place in the selfsame wards where disaster and calamity formerly prevailed. It is to Lister we owe this transformation and incalculable boon. He established definite principles. We can look back on the unrest which characterized his methods, on the manner in which each change led to another advance in his endeavour to treat the surroundings of the wound rather than the wound itself. We admire the beauty and ingenuity with which he defended his wounds from microbes, and yet screened the defensive power of the tissues of the body, on which he so sagely relied, from the agents he employed in combating the microbes. The principles laid down by Lister remain unchanged. The endless striving after perfection which characterized all his methods will never cease.

We commend this passage to the special attention of those who are striving to make believe that Listerism died with the spray which was a passing phase in the evolution of the doctrine. Another passage in Professor Caird's address is worthy of note. He says:

Huxley, whom we were fortunate enough as students to hail as interim teacher when Wyville Thompson was away on the *Challenger* Expedition—Huxley felt himself compelled to renew his student days and to join the zealous throng which daily followed Lister. He summed up his impressions as he said, "What amazes me, Mr. Lister, is the painlessness of your wounds. You have not only banished those awful scourges which used to afflict our wards, but you have abolished the pain and suffering associated with wounds and surgery."

We submit this testimony of Huxley to the consideration of those antivivisectionists who argue from their own preconceived notions that a wound must be painful.

A SOCIETY of medical jurists and prison medical officers has been formed in Hungary. The President is Dr. Ajtai, Professor of Forensic Medicine.

IN connexion with the public library of Grand Rapids, Michigan, a course of eight lectures has been arranged to be given by representatives of the various municipal boards and departments, showing the work they do and the money they receive and spend for the city. Education, public health, public works, and the work of the mayor and common council are among the subjects to be dealt with, and the example is one which might well be followed in other municipalities.

SEVENTY-SEVENTH ANNUAL MEETING
OF THE
British Medical Association,
AT BELFAST, JULY, 1909.

BELFAST—THE COLLEGE AND HOSPITALS.
QUEEN'S COLLEGE.

QUEEN'S COLLEGE, Belfast, in which the Association will hold its meeting next July, has had a remarkable career. Not yet sixty years old it has been affiliated with two universities, has seen both abolished by Act of Parliament, and before these words are in print it will itself have ceased to exist as "Queen's College," and will have blossomed into an autonomous university.

History.

The college was founded by Act of Parliament in 1845, on the initiative of Sir Robert Peel. It, and the Queen's Colleges of Cork and Galway, were affiliated to the Queen's University, established in 1850.

The college having been founded on parchment, a site for it was chosen on the Malone Road, at the south side of the town, and the plans were entrusted to Sir Charles Lanyon, who succeeded in producing a building which has been a constant pleasure to the eye for sixty years. It would be hard to point out a better example of the successful use of red brick for a large building. Belfast brick has none of the anaemic appearance that characterizes so much English brick; but is a good strong red, toning with time to a very rich colour, which when lit up by the afternoon sun, is really beautiful.

The college opened its doors to students in 1849, and among its first professors were several distinguished men. Thomas Andrews, the professor of chemistry, will always be remembered for his researches in the liquefaction of gases and his study of their critical temperatures. Alexander Gordon, the professor of surgery, was the inventor of the well-known splint for Colles's fracture, and an authority on fractures of the head of the femur. For nearly forty years he inspired generations of students with something of his own wonderful enthusiasm in the use of the senses, and specially the sense of touch, in the diagnosis of surgical ailments. Portraits of both these teachers are to be seen in the Great Hall of the college.

Ever since its doors opened the college has grown and prospered, but in its university relations matters have not always gone smoothly. The Queen's University examined and granted degrees to the students of the three Queen's Colleges, and to them alone, and the examiners were the teachers in the colleges. But for various reasons these colleges were not acceptable to the Roman Catholic

majority in the country, and so in 1879 Parliament abolished the Queen's University and set up the Royal University of Ireland, an examining body like London University, which drew its candidates and examiners from all sources, though mainly from the three Queen's Colleges and the Roman Catholic College in Dublin. But time has proved that such a university is not suited to the tastes of the country, and when the Irish Universities Act of 1908 was passed, the ending of the "Royal" did not evoke any deep grief in the country.

Under the Act two new universities take the place of the one old one, but both are to be teaching universities, and not merely examining bodies. One will be in Dublin, with

a new college there, and the Queen's Colleges of Cork and Galway, now called University Colleges, affiliated with it, and the other in Belfast. At the present time a Commission is sitting, appointed by Parliament to draw up the statutes of the new Belfast University, and till these are published it is not possible to give particulars of the courses of



Queen's College, Belfast, where the Association meetings will be held.

study. But from the public utterances of various members of the Commission, and those who are bound to have influence with them, it is clear that the intention is to establish a real centre of learning and culture, and not merely a science and technical school. The Arts side is sure of a considerable number of students, as it will no longer be possible to take an Arts degree without attending classes, as was the case in the Royal University. The candidates for the ministry of the Presbyterian Church in Ireland pass through an Arts course before proceeding to their theological studies at the Presbyterian College, which is just beside Queen's.

As already said, apart from its university difficulties, Queen's College has always prospered, and never more so than during the twenty-five years that have elapsed since the British Medical Association last met in it. The present head of the college (now Vice-Chancellor of the Queen's University of Belfast), the Rev. Thomas Hamilton, D.D., was appointed President in 1889, and under him a forward movement was soon started. One of the first steps was the throwing open of all classes, medical as well as arts, to women, and experience has fully justified the step. There are this session 87 women students; all prizes and scholarships are open to them, and, indeed, are frequently gained by them.

Recent Extensions.

In 1894 new chemical laboratories were opened, followed

in 1897 by the Students' Union and new physiological and pathological laboratories. In 1901 the President initiated the Better Equipment Fund, which resulted in raising of the sum of £70,000, of which Sir Donald Currie, a Belfast man, generously contributed £20,000. Old students of the college and Ulstermen in all parts of the world sent subscriptions, and the movement was of immense benefit to the college, not only materially, but also from the interest it raised. Before the days of the fund the majority of the inhabitants of Belfast and the neighbourhood looked on the college as a Government institution, with whose support or improvement they had no more to do than they would have in the case of police barracks or post office. Another indirect benefit of the fund was the claim which it established on the Treasury, ready, like Providence, to help those who help themselves. The net result is that in the last three or four years large new laboratories have been thrown open to the students of chemistry, engineering, natural history, physiology, pathology, and pharmacology, while improvements in the existing accommodation have been made in all directions, and are still going on. The teaching staff also has been greatly increased. Since 1890 lecturers have been appointed in ophthalmology, sanitary

This hall has a fine lofty roof and mullioned windows, and its walls are hung with portraits, most of them of past teachers. Here may be seen Dr. Andrews, with his simple gas-compressing plant; Dr. Gordon, with a fractured femur in his hand; Dr. James Cuming, the President of the Association when it met here in 1884; Sir William MacCormac, an old teacher at the Royal Hospital, though not at the college; and Dr. Redfern, who is happily still with us, though retired from active work. He was Professor of Anatomy and Physiology from 1860 to 1893, and during all those years his strong personality dominated the medical school. Whatever else "Queensmen" of those days knew or did not know, they were thoroughly grounded in anatomy, and many a grey-haired man shivers yet as he thinks of the heckling he got from "Peter" when he was found consulting the pages of Gray or Ellis on the insertion of a muscle, instead of dissecting it out!

A side door opens from the hall on to the cloisters, from which the science and medical buildings are easily reached. The Latin class-room, at the end of the cloisters, will be temporarily raised to the dignity of a smoking-room. The junior biological laboratory, reached by a stair from the entrance hall, will be fitted up as a writing-room, and



Queen's College, Belfast: New Science Laboratories, from north-east.

science, and vaccination, and demonstrators, assistants, or readers in practically every subject.

As a result of the opening of the new laboratories, there has developed a vigorous school of research workers in different departments, but specially in the pathological. There a number of young medical men have been engaged for several years past in research work, which has at times been aided by British Medical Association grants and scholarships. The epidemics of typhoid and cerebro-spinal fever from which Belfast has suffered have been carefully studied, especially as regards the effect of the micro-organisms of these fevers on the blood, and it is on the suggestion of these workers that the new Section of Haematology and Vaccine Therapy is to be inaugurated at the Belfast meeting.

In the current session there are about 400 students attending college classes, of whom just about half are medical. There are, of course, many more medical students attending the various hospitals, and not at classes in the college at present.

The Buildings.

On entering the main door of the college the Great Hall is found immediately on the right, and here during the Association meeting will be the general reception-room, post office, etc., with plenty of room and seats for those wishing to look over their letters or chat with friends.

On the same stair will be found the local secretaries' and other offices. In the various lecture rooms and laboratories there will be accommodation for all the sections.

The library is a detached building on the north side of the college, close to the University Square gate. It contains a collection of about 80,000 volumes, which is being rapidly increased now that more prosperous days have dawned, and the building itself will shortly be enlarged by the addition of two new bays. In the library the meetings of Council will be held, and the addresses in medicine, surgery, and obstetrics delivered.

The Students' Union is another detached building at the north-east corner of the grounds, and in it will be the refreshment department, where luncheons and teas will be provided.

In the main block of medical buildings three of the sections will meet, and there the pathological museum will be housed, the medical museum and dissecting room affording ample space for it. In the medical museum will be found the unique collection of fractures which the college owes to the energy and enthusiasm of the late Professor Gordon. The collection is probably without a rival in the world, and will be one of the main points of interest to members of the Surgical Section.

The trades museum will be found in the exhibition hall of the Botanic Gardens at the south-east corner of the college grounds close to the medical buildings.

The Medical School.

From the opening of the college till within the last few years the general clinical teaching of medical students was confined to the General Hospital, afterwards the Royal, and now the Royal Victoria Hospital. But recently the Union Infirmary and the Mater Infirmorum Hospital have been thrown open to students, and certificates from them are accepted by the university authorities. Besides the general clinical instruction, special instruction is given in the two children's hospitals and in the various special hospitals mentioned below.

THE ROYAL VICTORIA HOSPITAL.

Apart from the Union Infirmary, the Royal Victoria Hospital is much the largest hospital in Belfast, containing, as it does, 300 beds.

It originated as a dispensary in 1792, which developed into a fever hospital in 1797 and a general hospital in 1799. In 1817 the old General Hospital in Frederick Street was built, and gradually increased by the addition of new wings to 180 beds. In 1875 it became by Royal Charter the Royal Hospital. As the city grew the accommodation at the hospital became far too small, as well as out of date, and it was resolved to build a new hospital. This resolve in due time took shape, and the new hospital was opened by the King in 1903, being called the Royal Victoria Hospital in commemoration of the Diamond Jubilee.

The hospital is built on a site granted by the corporation, consisting of six acres of the old asylum grounds in Grosvenor Street. The position is not a central one, and it was only after much discussion that it was decided upon, but it was finally concluded that the healthy site on open and elevated ground was sufficient compensation for the long distance from the docks and shipbuilding yards.

The plans were drawn by Messrs. Henman and Cooper of Birmingham, and are of a strikingly original character. The two guiding principles were that all patients should be on one floor, and that the whole building should be heated and ventilated by the plenum system. Consequently all the wards are on the same level, a series

of seventeen running out side by side from the main corridor, the lighting being, with the exception of the two end wards, by lantern lights in the roof, and one large French casement in each ward, at the south end, looking out on the garden and tennis grounds. The wards are on the unit system, arranged in pairs for male and female patients, each unit having 32 beds, and its own ward kitchen, clinical room, or theatre, etc. Each physician or surgeon has his own unit, and his work is thus almost as much separated from that of his colleagues as if he were in a separate hospital.

The only wards not included in the foregoing are the

ophthalmic wards, which are in a small block to the north of the main corridor, and the septic and infectious wards, in two small isolated blocks at the west end. The administrative buildings are on the north side of the main corridor, consisting of a low central hall flanked by two large four-story buildings, as seen in the illustration. The out-patient department is also on the north side, between the administrative block and the ophthalmic wards. There is a large central waiting hall, with eighteen rooms round it for the use of the various departments of work,

and in the basement below is ample accommodation for students.

The pathological block is also on the north side of the main corridor, with a separate entrance, and every accommodation for work. On the west side of the hospital, and entirely detached from it, is a house for the medical superintendent.

The air for ventilation is taken in through a large shaft which rises on the east side of the hospital, and, bifurcating, leads down to two fans, each over 10 ft. in diameter and capable of driving

10,000,000 cubic feet of air per hour. One fan only is needed at a time, the other being in reserve for emergencies. As the air goes to the fans it is washed by passing through wet curtains, and warmed by steam pipes if necessary, and after passing the fans it is carried through a large tunnel under the main corridor, with branches to all parts of the hospital. Provision is made for altering the temperature in any ward by steam pipes at the intake of air for each ward.

After five years' experience the general results of the working of the plenum system are favourable, and neither medical staff nor board of management regret what was looked on by many as an experiment.

THE THRONE CONVALESCENT

HOME AND HOSPITAL is situated on the slopes of the hills to the north of Belfast Lough, about 4 miles from the city. It is under the same board as the Royal Victoria Hospital, but has separate funds. It is a composite institution, and includes a hospital for children—chiefly chronic hip and spine cases—with 33 beds, a consumption sanatorium with 10 beds,

and the convalescent home for patients from the Royal Victoria with 22 beds.

THE MATER INFERMORUM HOSPITAL.

This hospital, situated on the Crumlin Road, on a good elevated site, was founded in 1833, when a house on the present site was bought by the late Dr. Dorrian, Roman Catholic Bishop of Down. In a few years the house was demolished and a handsome new hospital, erected from plans by Mr. W. J. Fennell, M.R.I.A., was completed in 1904.

The hospital is built on the pavilion system, and is



Queen's College, Belfast: Students' Union.



Royal Victoria Hospital: North front showing administration blocks.

planned for 165 beds. The east pavilion has six large female wards on three floors. The west pavilion accommodates the extern department on the ground floor and four large male wards on the first and second floors, while the central pavilion is administrative, and between the pavilions are several smaller wards for children and special cases. At the back of the administrative pavilion is a handsome chapel, and behind it are two large and well-lighted operation theatres. The total cost was about

ample room in the grounds round it for rebuilding and extending it. There is an extern maternity department, and by mutual agreement the County Down side of the city is left to this hospital, while the needs of the County Antrim side are looked after by the next named.

THE MATERNITY HOSPITAL.

This is one of our oldest charities, having been founded in 1794. The present fine hospital in Townsend Street was



Royal Victoria Hospital, Belfast: South-west corner, showing wards, sanitary towers, and large single windows.



Royal Victoria Hospital, Belfast: South front.

£50,000. The nursing is under the supervision of the Sisters of Mercy, but persons of all creeds are freely admitted as patients. Ground has lately been acquired on the east side of the hospital, and a new block is to be erected for the extern department, which has quite outgrown its present quarters. During the present session clinical teaching has been begun, and arrangements have been made for resident pupils.

St. Colman's Sanatorium, near Carrickfergus, is worked in connexion with the hospital for convalescent patients.

HOSPITAL FOR SICK CHILDREN.

This charity was founded in 1873, and the present hospital in Queen Street was built in 1879. On the ground floor are the board room, dispensary, etc., and on the first and second floors the surgical and medical wards, with 20 beds in each.

Good use has been made of the rather cramped city quarters, and as the hospital is on the edge of the poorest and most crowded district of the city it has ample scope for work. Much larger quarters could easily be occupied if available.

ULSTER HOSPITAL FOR CHILDREN AND WOMEN.

This hospital, originally near the other children's hospital, was moved to Templemore Avenue, Mountpottinger, on the County Down side of the river, some eighteen years ago. As it is the only hospital in that enormous working-class district it is always full to overflowing. There are at present 8 beds for women and 20 for children, but a movement for rebuilding the hospital is in progress, and, no doubt, when that materializes the accommodation will be greatly increased. More than half of the necessary sum, £10,000, has been promised, but it has been arranged that no building shall be started till every penny is contributed. The present premises are simply an old house, once a suburban villa, converted to hospital use, but there is

opened in 1905 and gives accommodation to 24 women. The general arrangements for work are excellent, and the hospital is well worthy of a visit from all who are interested in obstetrical work. About 500 to 600 women are delivered annually in the hospital, and a larger number attended in their own homes.

OPHTHALMIC HOSPITALS.

There are two special hospitals for the treatment of eye,



Royal Victoria Hospital, Belfast: A surgical ward showing roof light and single south window.

and throat cases—the Belfast Ophthalmic Hospital, in Great Victoria Street, founded in 1867, and the Ulster Eye, Ear, and Throat Hospital in Clifton Street, founded in 1874. Both have crowded externs on most mornings of the week, and wards generally full, so that there seems to be ample work for both, as well as for the special departments of the general and children's hospitals.

THE SKIN HOSPITAL

will be found in Glenravel Street, off Clifton Street, close by the last mentioned ophthalmic hospital, having been founded by the same generous family—the Bennis. In accordance

with the original plan of the founders, accommodation is provided for a number of private patients in both hospitals. The extern department of the Skin Hospital has lately been remodelled and equipped with all modern apparatus.

THE SAMARITAN HOSPITAL.

This hospital, situated on the Lisburn Road, not far from the college, was, like the two last-named, built by the Benn family. It was opened in 1874, and in 1897 two cancer wards were added through the generosity of the late Mr. Forster Green. There are 25 beds, and about 1,000 outpatients are seen annually.

FORSTER GREEN HOSPITAL FOR CONSUMPTION.

In 1873 several medical men in Belfast started a special

dispensary for diseases of the chest. This developed into a small hospital with 6 beds in 1890. It was in an old city house, most unsuitable for the purpose, but it served to show the necessity for such an institution, and when efforts were being made to improve matters, the late Mr. Forster Green came to the rescue, and bought a beautiful house and forty-five acres of ground at Fortbrida, about ten minutes' walk from the end of the Ormeau Road tramline. After extensive alterations this was opened with 40 beds, and every arrangement for open-air treatment. The Belfast Corporation has lately arranged to endow 30 additional beds for a period of ten years at least, and new wards containing these beds were opened in 1903. All arrangements are on the most approved modern principles. The grounds, which are well wooded, with beautiful views of the Antrim Hills, give ample space for exercise to those patients who are allowed it. There is a resident physician, and a small but very practical little laboratory is provided, where he or the visiting staff can examine sputa, etc. In connexion with the hospital is a city dispensary open on three days a week, and a nurse who visits patients in their own homes and acts as a fresh air missionary.

THE ABBEY SANATORIUM.

Some two or three years ago the Belfast Board of Guardians found the consumptive wards in the Union Infirmary so crowded that they decided to open a special hospital and sanatorium to relieve them. A fine old country house with good grounds was then on the market



Forster Green Hospital for Consumption.

—the Abbey, at Whiteabbey, on the north shore of the Lough, about five miles from the city. This was purchased, and the house was fitted up as the administrative block and hospital for more advanced cases, while accommodation was provided in pavilions in the grounds for cases which were suitable for sanatorium treatment. In all 265 cases are at present under treatment, the full number for which there is room, and the results have been such as to thoroughly justify the guardians' enterprise. The provision of two new pavilions is under consideration, as numbers of applications for beds in the sanatorium have to be refused. All the arrangements are excellent, and the insti-

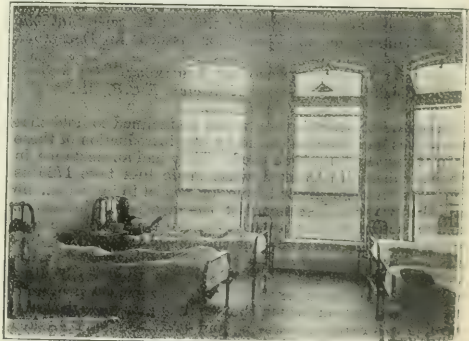
tution well merits a visit. Though much remains to be done to combat the scourge of tuberculosis, it must be admitted that, compared with other cities of its size, Belfast has some reason to be pleased with the fact that it has in the Forster Green, Abbey, and Throne Sanatoriums about 350 beds devoted to the treatment of this disease on modern lines.

THE FEVER HOSPITAL.

The Fever Hospital, with 168 beds in six pavilions, and the District Lunatic Asylum are at Purdysburn, about six miles from the city, and two from the tram terminus. The villa system has been adopted with great success at the asylum, and both institutions should be visited by those interested in the lines of work carried on in them.

THE MEDICAL INSTITUTE.

The Ulster Medical Society, which began its existence by the amalgamation of two older medical societies in 1862, and which includes in its membership most of the medical men of Belfast and the neighbourhood, is proud and happy in the possession of a home of its own. For years the society had met in the Royal Hospital, the Natural History Museum, and various other places, and every now and then there was a talk of starting some scheme for providing it with a permanent meeting-place with proper room for its library, but the financial and other difficulties seemed insuperable. The difficulties, however, were overcome as completely as unexpectedly. At the annual dinner of the society in 1901 the President, Sir William Whitla, offered to build and furnish the desired home, provided the society paid the ground rent and



A Ward in Forster Green Hospital.

undertook the upkeep of the premises. The scheme was unfolded in detail, accepted enthusiastically by the society, and a central site was secured in College Square North. The foundation-stone was laid in April, 1902, by Professor Redfern, and the building opened by the Lord Lieutenant of Ireland in November of the same year.

The building has a frontage of 50 ft., and is three stories high, of rough-hewn white stone, with doors and windows relieved by red sandstone worked in Gothic moulding. Over the top gable stands the serpent coiled round the rod of Esculapius.

On the ground floor are two large rooms separated by

glass doors; the smaller is the entrance hall and smoking-room, and the larger the library. When desired, the doors can be removed and the two rooms thrown into one. Over the fireplace in the entrance hall is a marble bust of Sir William Whitla, subscribed for by the members of the Society. Over the library fireplace is one of the features of the institute—a large window, whose sill forms part of the stonework of the chimney-piece. It contains a beautiful stained-glass memorial to the late Dr. William Smyth, of Burton Port, co. Donegal, and was unveiled by Her Excellency the Countess of Dudley on the afternoon of the day on which the Lord Lieutenant opened the institute. In a very touching speech she paid her tribute of admiration to the man who, when all others refused to help, carried food and medicine to the people of the typhus-stricken island of Arranmore, off the coast of Donegal, and who finally lost his life from the same fever, contracted by carrying some of the patients, with the help of Dr. Brendan MacCarthy, to an old boat, and rowing them to the mainland. Lady Dudley well described him as an everyday hero, wholly unconscious of having performed any unusual act of heroism. The panels of the window show two scenes of the story—one of Dr. Smyth kneeling by the bedside of an Arran fisherman, and the other of him and Dr. MacCarthy with a sick

girl and her father in the boat. Across the base of the two panels are the words, "Inasmuch as ye did it unto these." Behind the entrance hall and library



Medical Institute, Belfast. Built and presented to the Ulster Medical Society by Sir William Whitla.

are cloak-rooms and a small committee-room. On the first floor is the large hall for society meetings, 45 ft. long, 33 ft. wide, and 17 ft. high, with a musicians' gallery near one end. This hall will seat nearly 200 and will dine about 120. It is fitted with double windows to deaden outside noises, and has facilities for various methods of illustrating lectures. Two portraits have already been presented to it, and no doubt in time others will be added.

Behind the hall is the steward's kitchen and pantry, with facilities for serving dinner. By express wish of the donor no alcoholic liquors may be brought into the institute for the use of members except at the annual dinner or similar official gathering. On the second floor is a large billiard-room and the steward's apartments. The whole was built and equipped at a cost of about £8,000, and handed over by the donor to seven medical men to hold in trust for the Society. No rivalry exists between the Ulster Medical Society and the Ulster Branch of the

British Medical Association or its Divisions, and every facility is given to them for holding their meetings in the institute.

ROYAL COMMISSION ON VIVISECTION.

FOURTH REPORT.

(Continued from vol. 41, 1908, page 1870.)

We continue our abstracts from the evidence of which the minutes are contained in the fourth report of the Royal Commission on Vivisection, issued in December, 1907.²

ANTIVIVISECTIONIST TESTIMONY.

Evidence of Sir George Kekewich, K.C.B., M.P.
(continued).

In regard to serums, they would be inclined to hold that more lives had been sacrificed by the introduction of these than if they had not been used. They had an instance in Koch's tuberculin. Asked what made him take 1729 as the year that he started from in regard to influenza, he said that was the first record of the invasion of influenza. He did not know that a particular bacillus had been discovered, but he was aware of the theory that the bacillus was not the *causa causans* of zymotic diseases generally. As he understood the theories, one was that the bacillus was the cause, the other that there was a poison surrounding the bacillus on which the bacillus fed, and that the bacillus was really a cleansing and curative agent. Asked by Sir William Church in regard to antipyrin and sulphonal, he said he was informed that antipyrin was very seldom prescribed now because of its effect on the heart, and that sulphonal was also not prescribed generally because of its cumulative effects. He got the information from a member of the medical profession. Asked if his informant told him that he did not use them, but that he probably used bodies closely

resembling them which had also been introduced of late years, he said that he did not know. Asked as to his statement in regard to mice with tumours ("We are not told of means taken to restrict the growth"), whether he had ever made any inquiries as to what was done with mice when the tumours became large, he said he did not know that his association had ever either written or asked the Cancer Research Fund anything about the mice, or ever asked to be allowed to see them. Asked what led him to state that "there must necessarily, upon waking up from anaesthesia" (that was after operations on man), "be very severe and prolonged pain until the severed tissues heal," he said that was in the extensive cutting operations, with excision of organs. He should have thought that any ordinary layman would know that. Proceeding, he said the *précis* put in by him was prepared by the Parliamentary Association generally and their executive, and there were on it several members of the medical profession. He did not wish to mention their names. Mr. Stephen Smith was not one. Miss Arabella Kenealy was one and Dr. Bouchier, and he thought some others. In reply to further questions, the witness said he understood that the sanitary method of combating the disease was not taken to a very large extent in India—not to the extent, at all events, that it had been taken in Egypt. He took it that it was a great deal more difficult to effect complete sanitation in India than in a country like Egypt, which was more closely governed. He thought the people of India, whatever the Government might think, were gradually becoming converted to the view that he held, that the inoculation was actually causing plague amongst them. He had not heard that it was the attempt to put the rules of sanitation in force that had caused the unrest. He was not arguing merely that if they had taken measures of sanitation in India to the same extent that they had in Alexandria they would have stamped out the plague. He was rather arguing that if they had left things

² London: Printed for His Majesty's Stationery Office, by Wyman and Sons, Limited, 109, Fetter Lane, E.C. And to be purchased, either directly or through any bookseller, from Wyman and Sons, 109, Fetter Lane, Fleet Street, E.C.; and 32, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Edinburgh; or E. Ponsonby, 115, Grafton Street, Dublin. (1908.)

alone without the introduction of Haffkine's serum, the plague would have burnt itself out. Asked if other serums acted in the same way, he said he presumed that they produced disease in a modified form, otherwise no immunity would be conferred. Asked if his association had taken any trouble to inform themselves on that question, he said he had no doubt they had, but he could not possibly tell everything that the association had done. It was put to him that he had brought forward the plague in India as an instance without having any personal knowledge of the subject, and apparently without the association having taken very great pains or labour to investigate the subject. The witness replied that he did not admit that at all. He admitted that he had not had any experience from the point of view of a medical expert. Asked by Sir Mackenzie Chalmers if he had read the evidence of Dr. Martin, who had inoculated himself twice or three times, he said, No. Asked by Sir John McFadyean to what extent he had exercised his power of observation in judging as to the possibility of anaesthetizing animals sufficiently, Sir G. Kekewich said he did not mean observation in the sense that he had witnessed experiments on animals, for he had not. He was rather referring to observations that one had of pain in animals. It was then put to him by Sir John McFadyean that the Commission had had before it the President of the Royal College of Surgeons and the President of the Royal College of Physicians, and representatives of most of the universities, and a great many other medical men, and that they had been almost unanimous in their opinion that great advances had been made in medicine and surgery within the last fifty-five years, and most of them held that a great deal of that advance was due to experimentation on animals. The Commission had to weigh against that the evidence of the witness and that of a smaller number of persons, most of them non-medical, and he asked if the witness thought they would be violating the principles of common sense if they accepted the opinion of the majority in this case. The witness replied that one distinguished surgeon who was examined said he had rejected remedy after remedy until his remedies had been reduced to a number that he could count on the fingers of his two hands. That was Dr. Bantock. He had no doubt that he was one of the minority. Another answer he might make was that the fact that the majority was in favour of a thing was absolutely no proof that their opinion was right. That had been shown in medicine more than in almost any other line—more even than in politics. There was just as much common consensus of opinion in the medical profession years ago in favour of Lord Lister's antiseptic treatment of wounds; and as he understood at the present day Lord Lister himself had given up his antiseptic treatment. Sir John McFadyean said they had had evidence from distinguished surgeons who had scouted the view that the witness had just put before them, and they had really had no respectable evidence to show that what he had said was true. The witness said he could give other instances. In former days the medical profession was uniformly in favour of blood-letting and strong purgative treatment by calomel. All that was gone. Inoculation for small-pox was another instance, and that was gone, and yet it was supported by the great majority of the medical profession. His only point was that the majority were not always right, neither were they often right. Asked if he suggested that it was possible under the existing law and under the Act to experiment on animals for the purpose of instructing students without the use of anaesthetics, throughout the whole course of the experiment, and without killing the animal at the end of the experiment, the witness said, "Without killing the animal at the end of the experiment? I do not see in this Act any provision of this kind." Asked if he would take it that the Commission was satisfied that that was the state of the law, Sir G. Kekewich said he was not satisfied himself. He thought that any body of young men witnessing a series of experiments involving horrible cuttings of animals and practices of that kind would become degraded. In reply to another question, he said he had very great doubts whether man had the right to kill one of the lower animals. He knew perfectly well that it was possible to anaesthetize an animal under experiment. What he was in doubt about was whether as a uniform practice complete anaesthesia was obtained. There was a

great deal of evidence that one had read in different places to the effect that complete anaesthesia was not obtained in these cases. He remembered seeing a series of lectures by Professor Crile, in the course of which it was shown by his own admissions that the animal did wake up and move its legs and its body. There was also evidence in a very considerable number of cases that the animals were not fully anaesthetized, and that the anaesthetizing was left to very incompetent hands. Asked if that meant that there was some difficulty in causing continuous efficient anaesthesia to animals like dogs, or if it was that there was a deliberate evasion of the Act, the witness replied that he took it that there were cases of both kinds. Asked to cite a case in point, or half a dozen, he said he could not carry these cases in his mind, but he certainly had read of a good many cases in which the anaesthesia was not complete. Miss Lind-af Hageby affirmed that "the most unsatisfactory and obviously unreliable methods of anaesthetizing are in vogue in the vivisectional laboratories." That was the kind of evidence.

The following cases were subsequently forwarded:

1. In the *BRITISH MEDICAL JOURNAL* for November 10th, 1906, Dr. W. G. McCullum, recalling previous experiments, writes: "It will suffice to recall to your memory the fact that in dogs, cats, rabbits, monkeys, and many other animals complete parathyroidectomy is followed within a few days by the condition commonly described as tetany, in which convulsive spasms and rigidity of the muscles of all parts of the body render the animal almost helpless. Respiration becomes exceedingly rapid and laboured, profuse sweating occurs, and death supervenes in the attack, although occasionally the violent symptoms gradually give place to a stuporous condition which may last several days, terminating in death."

2. In Kirkes's *Halliburton's Physiology*, fifteenth edition, p. 287, it is stated: "Another experiment, originally performed by Salathe, can be demonstrated on a 'hutch rabbit.' If the animal is held by its ears with its legs hanging down it soon becomes unconscious; and, if left in that position for about half an hour, it will die."

3. In Dr. Crile's experiments upon "shock" the foot of a fox terrier was crushed under "incomplete anaesthesia." Dr. Crile states also in his book that when he applied flame to a dog's paw "the animal struggled on the application of the flame."

4. Professor Schafer experimented in drowning and resuscitating 36 dogs (2 without anaesthetics at all).

5. In a paper read at a meeting of the British Medical Association, at Toronto, Professor Cushny described a number of severe abdominal sections which he had performed upon dogs, cats, and rabbits to which no anaesthetic, but merely morphine, urethane, and paraldehyde had been given.

6. In the *Journal of Physiology* for August, 1906, in a paper on the Functions of the Thyroid and Parathyroid Glands, Professor Svede Vincent and Mr. W. A. Jolly, Assistant to the Professor of Physiology in the University of Edinburgh, record a number of experiments on monkeys, cats, dogs, prairie wolves, badgers, and rats from which the thyroid and parathyroid glands had been completely removed. They state: "Dogs, cats, foxes, and prairie wolves frequently suffer severely and die."

In reply to questions as to the evidence given by Mr. Hobday with regard to the case with which animals might be anaesthetized and kept under anaesthetics for a long period, the witness said he was bound to believe what he said. He had always understood that morphine was used to deaden pain, but that it did not act as an absolute anaesthetic or stop pain, unless, indeed, it was given in an excessive dose so as to induce insensibility. Asked if he knew of any instances in which hideous torture had been caused under the Act, the witness said surely where experiments were performed without any anaesthesia there must be hideous torture. Asked if he knew of any case in which hideous torture had been caused by any experimenter in this country under the Act, he answered that it was impossible, under the conditions specified, that hideous torture should not be caused. It was very difficult to give any case of hideous torture, because, after all, the only fair witness as to hideous torture was the animal itself, and one could not examine the animal. With regard to influenza, what he said was that in 150 years the medical profession had not discovered either the cause of influenza or how to cure it. Asked if that was a failure to discover something by experimentation, or if he wanted to prove that it was impossible to learn anything by observation either, he said he thought they could learn more by observation—that, in fact, it was the only reliable source of information. Asked to explain how it was that this fact discredited experimentation but did not discredit observation, he said the medical profession

had discovered nothing about influenza, as to either its cause or its cure, by observation; but since they adopted experimental methods they had not succeeded in discovering anything more. Asked if he had ever heard of human influenza affecting any animal other than man, he said he never had, but he should have thought it could be communicated to animals. Asked by Sir Mackenzie Chalmers if he had inquired into it, he said he had no knowledge that influenza had been communicated to animals. In reply to further questions, he said that if influenza could not be communicated to the lower animals, and therefore could not be made the subject of experiments, he admitted that under those circumstances one might be wrong in saying or implying that the failure to discover the cause or the cure of influenza was in any way due to the failure of experiments on animals. Asked by Sir Mackenzie Chalmers if, when he said his association was anxious to abolish vivisection, he meant cutting operations on any animal experiments, he said the difficulty as to experiments was that there might be experiments in feeding or other innocuous experiments. They wished to abolish all experiments involving cutting or inoculation with any disease. That would include the use of animals used for the preparation of vaccine and the use of animals used for preparing antitoxin. Asked if he objected personally to using calves for the preparation of vaccine, he said he objected to vaccination altogether and also to antitoxin for diphtheria. Asked if his association would wish to prohibit mutilations of animals for commercial purposes, he said that gelding a horse was not an experiment. It was a matter of long custom. He would not, for instance, put down circumcision among the Jews. Asked if he would require it to be done under an anaesthetic, he said he really did not know that it was a sufficiently serious operation. He was afraid Moses did not use anaesthetics. Spaying cows would be on the same footing as gelding horses. In reply to further questions, he said he did not deny for a moment that inoculation might give a mild attack of plague and give immunity for a certain time. All that he desired to enforce was that these people who were inoculated might give the plague to others. Asked if he had considered how far plague was infectious or contagious, he said he had never observed cases of plague, but so far as one's reading went, one was in very great doubt as to what the means of communication of plague were. What between rats and fleas, and all the rest of it, one did not know any more than one did with many other diseases. Asked how he accounted for the fact that all the heads of the medical profession were unanimous in favour of the necessity of animal experimentation, he said they looked at it through medically coloured spectacles. He did not mean to say that they were not honestly biased by considerations of so-called humanity. He agreed that they were the people who were in daily personal contact with disease, and therefore had more means of judging than others. Mr. Ram asked if the witness could suggest any reason why the heads of the profession and those who represented the universities and royal bodies, should wear glasses of one colour, and those who wore glasses of another colour should be few and not distinguished, the witness said he was not drawing a distinction as regards glasses between those medical men who were in favour of experiments upon animals and those medical men who were not. He was drawing a distinction between the medical profession generally and the general public. On Mr. Ram pressing the question how he accounted for the fact that all who were eminent were on one side and those that were not eminent and few in number were on the other side, the witness said they were not undistinguished on the other side. Surely Dr. Bantock was a very distinguished and very successful surgeon. Mr. Ram pointed out that Dr. Bantock gave evidence in favour of the necessity of vivisection, and again asked why it was that all the most eminent men advocated the necessity of experiments, if it was a fact; as the association thought, that experiments were useless. The witness replied that he really could not say why they all did. He imagined that they were perfectly honest in their view, but he imagined that the general public and the parliamentary feeling which they represented very largely had a right to their opinion. They looked round them; and they did not see

any great advantage having been gained by these experiments, and they did not see that disease was less or that the population was becoming less degenerate. In reply to further questions, he said he did not think that medical science had much advanced since the time when he was a boy. Sanitary science had improved enormously. He thought great advances had been made in surgery, but he believed those advances to have been made by operating on the dead body and observation of the dead body, not on animals. Asked how operations on the dead body differed now from what they were fifty years ago, witness said he meant that our knowledge had come from operations on the dead bodies of human creatures rather than upon the living bodies of animals. He admitted that a great advance had been made in the treatment of wounds afterwards. Asked why it was more demoralizing to examine an animal under an anaesthetic from which it never could recover than to examine an animal which was dead, he said because to a layman the cutting and wounding and mutilation of living animals was the most sickening process one could possibly imagine. He felt it would be most demoralizing to him. Asked if he had any instance he could give of any person who to his knowledge had been demoralized or adversely affected morally after having performed experiments on living animals under anaesthetics, he said he did not think he could give any specific instance of any man who by indulging in experiments on animals had become a thief or a murderer, or even in other senses immoral. Asked if he could cite an instance of man becoming callous or inhumane, he said he could not imagine that any man could go through all those experiments without becoming demoralized. Pressed whether if he could tell of any man who, to his knowledge, had been adversely affected, he said of course he could not. If he did know of a man he would not be able to tell of him. Mr. Ram said he took that the answer was that he did not know any concrete case of that kind. The witness replied, Certainly. Asked by Dr. Gaskell if his association or himself during the whole of that year (since Professor Starling gave evidence on December 12th, 1906) had made any attempt whatsoever to accept Dr. Starling's invitation to visit his laboratory, he said, No, because they would be of no use. It was put to him that he had said that a man of common sense and intelligence, as he considered himself, would be able to judge on the subject as to whether a dog was properly anaesthetized or not. The witness replied, Yes, but in order to do that, what he would like to do would be to be able to see through a hole in the door without its being known that he was there. He did not say that there would be anything underhand or wrong about it, but he did say that if an observer was present special care would be taken. If they could get admission for a doctor whose views were in accordance with their own to see these experiments they would be very glad. For instance, there was a Dr. Hadwen who was very prominent in anti-vivisection societies. If they could get admission for him they would be very glad. If they could get admission for Miss Lind-a-Hageby he dared say it would be very useful to them, but for a mere member of Parliament or layman to go and witness experiments would be of uncommonly little use. In reply to Dr. Wilson, he said that on ethical grounds alone he would press for the total abolition of vivisection.

THE annual dinner of the West London Medico-Chirurgical Society is to take place at the Wharfedale Rooms on February 12th.

UNDER the will of the late Miss Sarah Elizabeth Grumbridge of Brighton, the Brighton Eye Hospital and the Sussex County Hospital each receives a sum of £500.

THE twelfth International Congress on Alcoholism is to be held at the Imperial Institute, South Kensington, from July 18th to 24th, 1909. The Duke of Connaught has accepted the office of honorary president, and there is a distinguished list of vice-presidents. There will be general meetings each morning, as well as sectional meetings in the afternoon or evening, and an exhibition of publications and apparatus will be arranged. Further information can be obtained on application to the Honorary Secretaries, 34, Paternoster Row, London, E.C.

PROPOSED LEGISLATION ON ANAESTHESIA.

The attention not only of the profession but of the public has during the past year or two been drawn to the subject of the administration of anaesthetics by the number of deaths which have occurred under their influence. A report of an important debate on the subject will be found in the *Transactions* of the Medico-Legal Society for 1907-8.¹ Dr. Hewitt moved that the two following motions should be forwarded in the name of the Medico-Legal Society to the General Medical Council and to the Privy Council respectively:

1. That in view of the importance of the administration of anaesthetics, this Society is of opinion that it is highly desirable, in the public interest, that every member of the medical profession, before he is registered, shall have received instruction in the administration of anaesthetics. It therefore earnestly begs the General Medical Council to consider whether they can see their way to include a course of instruction in anaesthetics amongst their requirements in regard to professional education.
2. That as the administration of any drug or drugs with the object of producing generalized insensibility to pain or actual unconsciousness for any medical and surgical purpose, or during childbirth, cannot be safely undertaken without medical knowledge and skill, your petitioners humbly pray that legislation be granted whereby the administration of any drug or drugs with either of the aforesaid objects by any person other than a duly-registered medical practitioner or someone acting immediately under his supervision, direction, and instruction be made a penal offence.

He said that it appeared that any person, qualified or unqualified, experienced or inexperienced, might administer an anaesthetic; and provided he did so to the best of his ability and with no unlawful motive, he was not likely to be punished or even blamed if death occurred. The General Medical Council did not make a course of instruction in anaesthetics one of its requirements, though it recommended that some instruction should be given. Dr. Hewitt said he had written recently to the twenty-two examining bodies of England, Scotland, and Ireland, and he found that only eight made it compulsory for candidates to have received any instruction in anaesthetics. The Society of Anaesthetists had, he believed, approached the General Medical Council, and had been told there was no room for another subject. Dr. F. J. Smith said that he thought the second motion contained a pious opinion which, he was afraid, would go the way which good intentions were said to go. He could not imagine the Legislature passing anything like an Act based on those lines, or interfering with quackery, of which perhaps nineteen-twentieths of its members availed themselves. He contended that if a man did his level best he was not responsible for any particular catastrophe. He protested against coroners holding inquiries in such cases. Professor Glaister of Glasgow said that during the last ten years he had made *post-mortem* examinations of the bodies of sixty-one persons who had died during the administration of anaesthetics, and he believed the number was greater than that. He was afraid the Legislature would be slow to give effect to the resolution before the meeting. He was inclined to believe that chloroform, instead of being a safe drug, was one of the most uncertain in its influence on an individual, because the factor which was not constant in the equation was the person to whom it was being administered. The statement that a large proportion of deaths under chloroform might be prevented must be received with caution. Dr. C. Templeman of Dundee said that at St. Andrews no student was allowed to graduate without having had several opportunities under skilled supervision of the administration of chloroform, but no certificate was required. All cases of death under anaesthetics in Scotland were inquired into by the Procurator-Fiscal. Dr. Waldo, Coroner for the City of London, and for Southwark, said that the reports of the Registrar-General of England and Wales for the five years 1902-6 gave a total of 786 deaths under anaesthetics used for operations, being an annual average of 157 deaths. In about a quarter of this number the anaesthetic given was not indicated. The sources of the Registrar-General's statistics were said to be (1) the coroner's certificate of the finding of the jury and (2) death certificates by

medical practitioners. As regards the coroners' returns, Dr. Waldo said the practice of individual coroners differed. Some held inquests in all cases reported, whilst others selected particular cases for inquiry, notwithstanding the recommendation of the Coroners' Society in 1903 that "inquests should be held on all deaths occurring whilst under the influence of an anaesthetic, irrespective of whether the friends or of those specially concerned in the administration of the anaesthetic and the operation were satisfied or not." He added that, as regards the notification of deaths under anaesthesia by medical practitioners, these appeared to be almost entirely connected with deaths in public hospitals. The medical man, he said, was not compelled by any statutory obligation to report deaths under anaesthesia to the coroner, although, it would seem, he was bound by common law to report all deaths of a violent or unnatural character. The result was that the statistics of deaths under anaesthesia were practically of no scientific value. Among other suggestions made by Dr. Waldo was the appointment of a Royal Commission, with advisory powers, to inquire into the present facts of death under anaesthesia, together with all the official machinery for registration. Mr. Hubert Sweeney, Barrister at Law, held that, even when the medical man did his best, he should not be entirely exonerated from responsibility. As regards the suspicion which resulted from inquiries, he said suspicion would be ten thousand times greater if there were no coroners' inquests. The President, Mr. Justice Walton, agreed with Mr. Sweeney. In regard to inquests, the law was perfectly simple and plain. The difficulty arose from the facts. The law said that a coroner must hold an inquest if he thought the death was an unnatural death. The coroner was the judge, and if he had reason to think it an unnatural death, he must hold an inquest. That involved various questions. To apply it to death from anaesthetics, in the first place there must be reason to think that the death was caused by the anaesthetic; then the coroner had to consider whether death by the anaesthetic administered in the ordinary and proper course of medical and surgical practice was an unnatural death within the meaning of the statute. It seemed to him that it was really difficult to say what was an unnatural death. If death by chloroform was an unnatural death—and, therefore, if the coroner had reason to think that the death was a death by chloroform, he must hold an inquest—it seemed to the President to follow that, if the death was caused by an operation, that plainly would be an unnatural death, and there would be an inquest in every case in which a man died from an operation. The two things seemed to be on the same footing. The resolutions proposed by Dr. Hewitt were carried.

A Bill to regulate the administration of general anaesthetics, the text of which was published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of December 5th, p. 302, was submitted by the Privy Council to the General Medical Council. Its two chief provisions may be summarized as follows:—(1) That no one but a registered medical practitioner should administer, or cause to be administered, any drug or substance with the object of producing unconsciousness during any medical or surgical operation, act or procedure, or during childbirth under a penalty not exceeding £10, and, in the case of a second or subsequent conviction, to a penalty not exceeding £20, unless the person was acting under the immediate direction and supervision of a legally-qualified medical practitioner, or if he had reasonable grounds for believing that delay in obtaining the services of a qualified medical practitioner would have endangered life. (2) That all examining bodies recognized by the General Medical Council should require that all candidates for final examinations should have received thorough instruction in anaesthetics, and should have personally administered anaesthetics under the supervision of their teachers.

The General Medical Council at its meeting last November approved the principle embodied in the first clause, but objection was expressed to the second on the grounds that it would override the functions of the Council, that the existing machinery was more effective, and that absence of a penalty would render the clause practically valueless. It was resolved that the Council should communicate with all the licensing bodies asking what steps

¹ Vol. v. Baillière, Tindall, and Cox, London, 1908. See also BRITISH MEDICAL JOURNAL, 1908, vol. i, p. 747.

they had taken to give effect to the recommendation of the Council of May 30th, 1907, that students should be required to produce evidence of having received practical instruction in the administration of anaesthetics. The reply of the Royal College of Surgeons of England to this circular was published in the *BRITISH MEDICAL JOURNAL* of December 26th, 1908, p. 1901. It was to the effect that the desirability of making instruction in the administration of anaesthetics a compulsory part of the medical curriculum was recognized by the Council of the College in 1901, and that in December of that year, in conjunction with the Royal College of Physicians, a regulation was adopted requiring any candidate before admission to the final examination to produce a certificate "of having received, at a recognized medical school and hospital, instruction in the administration of anaesthetics to the satisfaction of his teachers." It was added that questions on the subject are from time to time put to candidates by the examiners of the College.

In reply to a question by Mr. Bramsdon, the Home Secretary stated on December 14th that the General Medical Council did not see its way to support legislation to make practical training in the use of anaesthetics a compulsory part of medical education, but it was communicating with the various licensing bodies as to how far they have given effect to the Council's recommendations on the subject. On December 17th Mr. Bramsdon further asked the Home Secretary whether he would endeavour to obtain by means of an additional column in the next Coroners' Annual Return, the number of cases of death from anaesthesia upon which inquests have been held throughout the country, and whether he would further endeavour to obtain the number of deaths from the same cause reported to coroners in respect of which no inquests had been held. Mr. Gladstone replied that the forms for the next return had already been issued, but he said he would consider whether a special return can be called for. There the matter remains at present. We think, however, that a case has been made out for a comprehensive inquiry into the whole subject by a body competent to deal with it from every aspect, and trained to sift facts and weigh evidence. For this purpose it should include anaesthetists, general physicians and surgeons, coroners and lawyers.

Medical News.

UNDER the will of the late Mr. John Hodgson of Blackpool, the Victoria Hospital in that town and the Foxton Dispensary receive respectively £1,000 and £200.

AT a meeting of the Society for the Study of Inebriety to be held at 11, Chandos Street, London, W., on Tuesday, January 12th, at 4 p.m., Professor Arthur R. Cushman, F.R.S., will open a discussion on the action of alcohol.

THE King has been pleased to approve the appointment of Mr. H. H. Clutton, F.R.C.S., to the consulting staff of the Convalescent Home for Officers of His Majesty's Navy and Army, Osborne, Isle of Wight, as from Dec. 23rd, 1908.

AT the meeting of the Society of Chemical Industry at Burlington House, Piccadilly, W., on Monday next, at 8 p.m., Drs. S. B. Schryver and R. Lessing will read a paper on a physico-chemical method for comparing the antiseptic value of disinfectants.

DR. DUNDAS GRANT was recently presented by the amateur orchestra, which now numbers upwards of sixty members, including many members of the medical profession, of which he is the founder, with a conductor's desk. At the same time a silver rose-bowl was presented to Mrs. Dundas Grant.

AT a meeting of the Nottingham Medico-Chirurgical Society in December a resolution was passed expressive of its appreciation of the public services rendered by Dr. F. R. Mutch, who has long been an Alderman of the city of Nottingham, and recently laid down the office of Chairman of the Health Committee, after filling it with marked success for some eight or nine years. At one time Dr. Mutch was President of the Midland Branch of the British Medical Association.

THE St. Pancras School for Mothers, after a brief closure, reopened its doors on December 16th, 1908, at 37, Charlton Street, Somers Town. Little more than eighteen months have passed since this enterprise, with the assistance of Dr. Sykes, was started as a kind of *goutte de lait*, but the rapid success of the work and its growth in hardly anticipated directions necessitated the provision of roomier

quarters. It is now a centre for health work of all characters, but the prenatal and postnatal care of the child is still its main object.

SOME important additions to the Macclesfield Isolation Hospital were declared open on December 9th, 1908, a feature of the proceedings being a distribution to those present of an account of all the work in connexion with isolation at Macclesfield since the year 1873. This had been drawn up by the present medical officer of health, Dr. J. H. Marsh, and in a series of paragraphs, each covering a period of two or three years, recorded everything done in this connexion by Dr. Marsh's predecessors in office and himself. As it stands the account throws an interesting light on the work which active medical officers of health have to perform, and the difficulties with which they may have to contend. The end of the story is that the locality now has at its command a building capable of accommodating fifty beds (including twelve for patients suffering from small-pox) and thoroughly equipped for its work in every respect. Dr. Marsh is to be congratulated on his successful completion of the task, and on the fact that the value alike of the possession of adequate means for dealing with infectious diseases, and of his own services, seems to be freely recognized in the area in which he works.

THE yearly report of the National Sanitary Department of the Cuban Republic is practically a summary of the monthly *Informe Mensual*, but it is a model of what such a publication should be, and indeed there can be few documents of this nature with a greater elaboration of statistics. The past year is of importance in the annals of the island as the first in which all the sanitary services passed into the exclusive control of the National Board of Health instead of being in large part under local management, and consequently inadequately equipped and trained. Had the National organization been in force at the time of the outbreak of yellow fever in Cienfuegos in August last, it is probable that the disease would have been more quickly mastered. Altogether, during the year, there were 168 cases of yellow fever in the island, of which 56 proved fatal, but only 6 cases occurred in Havana. For the statistician there are some points of interest in the report. Both in the case of white and coloured parents there is always, curiously enough, a marked preponderance of male over female children among legitimate births, while in illegitimate births there is a preponderance of female over male in the coloured people, persistent throughout the years apparently, and in the whites, though not an actual preponderance of females, a much lessened proportion of males, the numbers being nearly equal—34,810 males to 33,927 females. But it is noteworthy that in the statistics of the sex of stillborn children (it is to be regretted that no record of this nature is kept in England) there is a large preponderance of males—337, as against 240 females. The total mortality has increased during the past year, rising from slightly over 30,000 to 34,000; the annual death-rate being 16.99, which cannot be said to be high. The least healthy months were June and July, with 3,620 and 3,920 deaths respectively; the most healthy November and December, with 2,142 and 2,228.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on December 18th, 1908; Dr. de Havilland Hall in the chair. The accounts presented showed that the growth of the society was still satisfactory, the number of new entrants during the year being exceptionally large. The question of the investment of the large funds of the society once more occupied the attention of the committee, and it was resolved that the plan hitherto adopted of keeping one-half on liquid—that is, Stock Exchange—securities, and the other half in advances to local bodies and other similar more permanent forms of investment, should be continued. The forthcoming valuation of the business was discussed, and it was resolved that the calculations should be made upon the same tables of mortality and sickness experience and at the same rates of interest as on previous occasions. The sickness experienced during the autumn of 1908 has been exceptionally light; but several additions have been made to the list of chronic cases—that is, of members who are not likely ever to be able to resume professional work, and will accordingly in all probability draw the society's half pay, usually 104 guineas a year, until the limiting age of 65. This is a risk almost peculiar to the business of this society, and at each valuation a substantial special reserve is made in respect of it. Prospectuses and all further particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, W.C.

British Medical Journal.

SATURDAY, JANUARY 2ND, 1909.

THE MEDICAL ASPECTS OF THE PARLIAMENTARY SESSION.

THE session of 1908 was a long and a broken one. It was interrupted early in its course by the death of the Prime Minister, Sir Henry Campbell-Bannerman, and afterwards by the adjournment in August for the holidays before an autumn session, which lasted from the middle of October till Christmas week. The first period witnessed the announcement of eleven measures in the King's speech, of which four have been passed, two have been killed in the Upper House, three have been withdrawn (two of which will be introduced again next session), one has been dropped, while only one of the eleven failed to see the light.

But this record by no means accurately expresses the work of what, after all, was a very strenuous and productive session. Altogether seventy-three Acts of Parliament have been passed, and of these fifty-four were Government measures, sixteen were enacted on the motion of private members, and three were Departmental Acts, for which the Government was responsible. No mere array of figures can, however, give any idea of the real importance of the Parliamentary proceedings of the last twelve months. Social issues of the most far-reaching importance have been raised, and in some instances settled for the time on satisfactory lines.

The second period, which saw the accession of Mr. Asquith to power, was remarkable, and always will be remarkable, for the passing of the Old Age Pensions Act as part of the Budget. The third period of the session will be remembered for the rejection of the Licensing Bill by the Lords and the enactment of the Children Act and the Coal Mines (Eight Hours) Act, two measures of wide social and economic significance. The medical aspects of this kind of legislation do not obtrude themselves on the surface, but are nevertheless important. Old age pensions, which were first prominently advocated on political platforms by a medical member of Parliament, naturally commend themselves to a humane profession, as affording honourable support for the deserving poor in extreme old age. It was with this object they were first suggested, and in spite of the defects of the Act as passed, this object will be largely attained. But, as has been previously pointed out in the *BRITISH MEDICAL JOURNAL*, the grant of these pensions to some half a million old people will have a direct bearing on medical practice by throwing a considerable amount of work on Poor-law medical officers. Many thousands of aged persons who are now treated in workhouse hospitals, will in future require medical attention in their own homes, and as medical relief will not disqualify for the receipt of the pension, the parochial medical officer, in whatever form the Poor-law Commission may leave him in existence, will find plenty of work among the State pensioners of the future. We dwell on this point in no spirit of complaint, but rather to show how closely

and inextricably nearly all social reforms are woven into the woof of medical work. A year or two back we were discussing and legislating for the feeding of half-starved children in elementary schools. It was only vaguely recognized as a medical question; but now we see all over England medical inspection of the children at school and a new class of medical appointments created, of great sanitary and scientific promise. Many similar illustrations might be given to show how even more and more closely social reforms must affect the profession of medicine.

The Children Act, which consolidates and extends State control as respects the life and health of children, will always honourably distinguish the Parliamentary output of 1908. Under it baby farming, which years ago this *JOURNAL* did much to reform, will be regulated, checked, and more adequately supervised. Vagrancy in its most pernicious forms as regards child life will be reformed, and the establishment of Children's Courts will rescue youthful offenders from association with criminals. The Prevention of Crime Act will also help in this direction by extending the reformatory system. Under the Children Act, too, the juvenile smoker will be frightened, if not suppressed, and a habit specially injurious to the young frowned on with State authority. We hope for much good from this Act as regards the humane, moral, and hygienic management of child life, and much from its educational influence in forming public opinion. Infant mortality and national degeneracy have long demanded such legislation.

The Act which restricts the labour of coal miners to eight hours' work underground is one which has always appealed to some medical thinkers on the general grounds which seek to limit long hours of physical toil, especially as regards the young and growing lads employed in the pits. It is the good of this latter class of coal workers which has always afforded the strongest argument for the measure.

The Irish Universities Act, which is one of the principal measures of the session, will, we hope, promote higher education in Ireland. There are some fears that it may adversely affect an existing medical school in Dublin, but we hope these fears will prove groundless. Should they not do so, it will certainly be the duty of the Government (and we think they admit this) to protect the interests of the College of Surgeons in its school out of common gratitude for the excellent work it has done for so many years.

In the Tuberculosis Prevention (Ireland) Act we have an experiment in legislation which may, if carefully and sympathetically administered, help to check the ravages of tubercle among the Irish people. There is a large field for useful work, there is lofty enthusiasm in high quarters for the crusade, and we hope every local authority will rise to the occasion and co-operate to work an Act that promises much to lessen human suffering and to save thousands of lives in a dwindling population. A recent Local Government Board order in England shows that the notification of tuberculosis is on the way to become law here, too, and that the State, if somewhat tardily and vaguely, is beginning to recognize its duty in stamping out preventable diseases.

The Act which forbids after next year the use of white phosphorus in the manufacture of matches, is another example of action of this kind, and is creditable to the Home Office. We may now look forward to the extinction of phossy jaw, and congratulate this country on at last placing itself in line with the other

nations which have prohibited since 1906 by the Berne Convention the manufacture and sale of matches made of this substance.

Lastly must be mentioned two great measures which failed to pass. The Licensing Bill had naturally a host of enemies, for it touched the most sacred of all political interests—property. This was fatal to it. All medical men are agreed that the repression of intemperance is an urgent problem, but there may be legitimate differences of opinion as to the manner in which the Government proposed to deal with it. The other measure that did not become law is the Housing and Town Planning Bill. In Committee, after many weeks of hard work it had been much improved, and would have made a workable, if not an ideal, Act. We are promised that it shall be brought up again next year, and we hope to welcome it then even in a better form than it left the Committee this last session. We trust that the improved position of medical officers of health will be still further extended and secured, and we think if the town-planning clauses were made into a separate bill that both housing and town planning would be more effectually promoted.

This cursory glance at the last session cannot close without the reflection that medical men as a class are deeply interested in watching legislation. They are the only men in daily touch with the health of the people, and know more than any other class how closely morality and well-being are bound up with the physical surroundings that influence health. Experience teaches daily how legislation, apparently remote, affects the doctor in his daily work and often touches his interests. As the progress of social reform advances this must become increasingly true, and Parliament, however unwilling, will have more and more to listen to medical counsel and guidance.

THE CAMPAIGN AGAINST TUBERCULOSIS IN BELGIUM.

THE annual report of the Belgian National League against Tuberculosis presents, in the evidence it affords of the organized enthusiasm displayed and the work actually accomplished, a striking contrast to the indifference shown by the public generally in this country. The Ligue Nationale Belge contre la Tuberculose was instituted in 1897 under the patronage and with the co-operation of the Société Royale de Médecine Publique et de Topographie Médicale de Belgique. Its object is to combat human tuberculosis by every means, but especially by disseminating information through the press and by lectures, by studying the preventive measures which should be adopted by public bodies, philanthropic associations, and private persons, and by the establishment of sanatoriums for the poorer classes.

The league is composed of persons of any rank or profession who are willing to join it, and of members of the Société Royale de Médecine Publique. It has as many sections as there are provinces. There is a general committee of thirty-seven members, upon which each province is represented, and an executive committee of eleven chosen from the general committee. The funds are derived from annual subscriptions, private donations, and grants from public bodies. The sections contribute in proportion to their receipts. The central office is maintained partly by an annual grant from the Société Royale de Médecine Publique and partly by a percentage paid by branches,

and partly by gifts, subsidies, and other money contributed for the general purposes of the scheme.

The principal feature is the dispensary, which, where possible, works with the sanatorium or hospital, but at present there are more dispensaries than sanatoriums. The dispensary is careful not to trench upon the practitioners' domain, and it is made clear that patients are merely examined from time to time, given general advice, and, when necessary, practical assistance. It seems strange to read that, in spite of this, few doctors take advantage of the opportunities afforded by these institutions, at once scientific and charitable, where, besides valuable hygienic advice and literature, material assistance is given to deserving cases. Thus, milk, eggs, meat, and pocket spittoons are distributed, while suitable cases are sent to sanatoriums, the cost being defrayed by the mutual societies or by philanthropic individuals. When the enormous loss to the family of the working man thrown out of work is taken into consideration, the practical value of such assistance is obvious. The doctor of the dispensary visits from time to time the patient he sends to the sanatorium, notes the progress made, and endeavours to keep in touch with him after he leaves. Many, after a few months, resume their ordinary work, and appear to keep well. There is a tendency, however, on the part of the tuberculous to neglect themselves until the disease is far advanced and recovery improbable. Great difficulties are encountered in inducing them to realize the danger they are to other people, and it is found that patients in the most highly infectious state share rooms and even beds with their families, never dreaming that they are doing wrong. It is difficult to persuade them to move into a separate room, even though the dispensary pays for the rent and furnishing. There is not the same reluctance to go to a sanatorium.

One of the most interesting aspects of the work is to be noted in Antwerp, where the energies of the section are chiefly devoted to prophylaxis in childhood. The Villa Maritime pour Enfants Débiles at Wenduine was established five years ago for delicate children born of tuberculous parents, for rickety, strumous, and lymphatic children, and for those suffering from internal tuberculosis. Here children are received from all over Belgium, and the results are admirable. The Hainaut section reports that, of 75 cases received during 1907 at the Galerie de Cure d'Air de Bois d'Havré, maintained by the four dispensaries of Mons, Tournai, Charleroi, and Ath, 45 per cent. were discharged cured and able to work whole time after an average stay of five months.

The movement, taken broadly, has three aims: Prophylaxis in childhood, the most vitally important of all; the education and possible cure of grown-up patients by means of the dispensary and the sanatorium; the isolation, in their own homes, of far advanced cases, who in the ordinary course of events may do much harm in spreading the disease. These last go probably in the first instance to the dispensary, and because, owing to the advanced stage of the disease, the dispensary cannot conscientiously send them, with any hope of recovery, to a sanatorium, they resent and grow tired of advice, and become enemies of the movement. They are not reasonable enough to blame themselves for coming too late. Up to the present nothing practical has been done for women, but as a sanatorium for them is about to be opened, they also will have their chance. More might be done for children, but, seeing that we in this country have done little or nothing for them,

we are not in a position to criticize a nation which has at any rate made a beginning.

Dr. Lentz, director of the Hainaut dispensaries, gives some interesting information as to the class of patients visiting these institutions: the rule was that no patient should under any circumstances be received at the dispensaries unless he could produce a certificate of his indigence. After careful observation, Dr. Lentz thinks this a mistake, inasmuch as it shuts out a large class of the population fairly comfortably off, but quite as much in need of advice and hygienic education as the poorer classes. The dispensary is unable, for financial reasons, to distribute relief continuously, and many of those patients who are assisted only attend during the months when such relief is being given; the most constant and conscientious are to be found amongst those who do not receive help, because they go voluntarily to the dispensary for advice and not from any ulterior motive. The material help given was greatly reduced with the unexpected result that after a few months a special class of patients began to attend. At first, owing to the rules of the dispensary, they were sent away, only to return armed with letters from their doctors, and begging for instruction in prophylaxis. These patients included the better-class workman, shopkeepers, and even the middle classes, who so long as the dispensary was limited to the necessitous poor considered it a loss of dignity to attend. In this accidental way was brought to light a class usually neglected because neither rich enough nor poor enough to receive special notice.

Perhaps in the present stage of ignorance of the subject by the general public the most far-reaching good is done through the press. In the Namur section alone Dr. Lefèvre has secured the co-operation of sixty-five papers, in which he deals from time to time with the history of the disease and the league's plan of campaign.

This great work might well be imitated in England where unfortunately we seem to have no general plan of campaign; hence the majority of our population are painfully ignorant of the theory and history of a disease which might be wiped out if each of us co-operated intelligently and conscientiously.

THE ANTHROPOLOGY OF SCOTLAND.

In an article published in these columns in 1907,¹ attention was directed to Mr. J. F. Tocher's valuable work on the anthropometric characters of the Scottish insane. The same worker has recently completed an important study of the pigmentation characters exhibited by the normal school children of Scotland.²

The survey was organized by a committee consisting of Sir William Turner, Professor R. W. Reid, Mr. J. Gray, and Mr. J. F. Tocher, and the expenses of the work were partly defrayed by grants from the Royal Society and the Carnegie Trust. Thanks to the care with which the details of the investigation were planned and the loyal co-operation of teachers, complete returns were furnished from 2,288 schools, containing the records of ages, sex, fraternal and cousin relationships, and colour characters of 257,766 boys and 244,389 girls.

Taking first the question of hair colour, it appears that about one-fourth of the children are fair haired, one-fourth dark haired, and the rest fall into two intermediate classes comprising the various shades of brown or medium and red hair. About 5 per cent. of the population have red hair. The distribution is markedly different from that of certain foreign countries in which a similar survey has been effected. In Prussia 72 per cent. of the children are fair haired, in Saxony 69 per cent. Even in South Germany the proportion is larger than in Scotland, Baden giving 58 per cent., Württemberg 62, and Bavaria 54. In Scotland 22 per cent. of the children have dark brown or dark eyes, and over three-fourths blue, light, or medium. About 15 per cent. possess pure blue eyes, 30 per cent. light eyes, and 32 per cent. the varieties classed as medium. Germany as a whole has significantly more dark eyes than Scotland—32 against 22 per cent.

The pigmentary distribution is by no means uniform; thus, excess of fair hair and blue eyes occurs for the most part in North Scotland, including Orkney, Shetland, the Isle of Lewis, Ross, Cromarty, Elgin, Nairn, and Perth, with parts of Stirling, Forfar, and Fife.

It was found that regions of excess of dark haired, jet black haired, and blue-eyed classes are associated with regions of excess in Gaelic-speaking population. The correlation coefficients for dark hair and blue eyes with the percentage of Gaelic-speaking persons are 0.8126 and 0.8563 each, being more than three times the size of its "probable error" (for the particular case $r=0$). Although the effect of foreign immigration upon the characters of densely populated areas is demonstrated, it is pointed out that "neither the Highland, Irish, English, nor foreign elements in the population account for the high proportion of medium hair found in all densely populated regions. These elements, however (excepting the English), where present, tend to increase the proportion of dark and jet black hair." Mr. Tocher holds that the excess of medium hair in populous districts is probably due to the blending of colour in the offspring of fair and dark haired persons, a hypothesis which finds further support in the fact that, as a rule, medium hair is not associated geographically with any other tint.

It is shown that definitely more cases of imbecility, blindness, and deafness occur in Gaelic-speaking districts than throughout the rest of Scotland, which may be due to a greater rate of emigration from and relatively little immigration to the Highlands on the part of fitter stocks.

The special characters of the Glasgow population are discussed in detail and many factors are seen to be involved.

The degree of association between eye and hair colour deduced from these results agrees well with values already obtained from other British and foreign data. In a summary of some of the more interesting features, it is impossible to do justice to the admirable patience and accuracy which have been brought to bear by Mr. Tocher on the completion of his laborious task. It would not be true to say either that the memoir is very simple to read or that it is easy to avoid being confused by the wealth of details. We doubt, however, whether the reader's path could have been made smoother, and we congratulate both Mr. Tocher and his committee on an important contribution to anthropological literature.

¹ BRITISH MEDICAL JOURNAL, 1907, vol. i, p. 1204.

² *Biometrika*, vol. vi (1908), pp. 150-235. (The complete data are published as an appendix to this part of *Biometrika*.) An account of Mr. John Gray's *Memoir on the Pigmentation Survey of Scotland*, published by the Royal Institute of Great Britain and Ireland, was given in the *JOURNAL* of July 25th, 1908, p. 212.

SHOCK AND ANAESTHESIA.

MR. STEPHEN COLERIDGE has for once done a useful thing. He sent a circular letter to the Vice-Presidents of the Research Defence Society misrepresenting in the manner familiar to our readers the evidence given by Dr. Dudley Buxton before the Royal Commission on Vivisection in regard to Dr. Crile's experiments on surgical shock, and insinuating that anaesthetics are not adequately given to the animals upon which experiments involving surgical operations are performed. He rings the changes on the expressions "light anaesthesia," "incomplete anaesthesia," etc., as used by experimenters, with the view of leading people ignorant of the subject to believe that they imply a condition of partial sensibility to pain on the part of the animal. We have given a full abstract of Mr. Coleridge's evidence before the Royal Commission on Vivisection.¹ In that evidence he furnished ample proof that the technical meaning of "incomplete anaesthesia" had been fully explained to him, and he admitted he had been told that the Home Secretary had caused investigation to be made into these experiments, and that the information received from competent persons, who either witnessed most of the experiments or had read the account of them, was to the effect that in no instance had the animals experimented upon been subjected to pain. Mr. Coleridge refused to accept the statement, amiably remarking that his point was that when experimenters said that "slight anaesthesia" covered absence of pain, they said it to cover themselves from the Act of Parliament. In other words, his point is that all experimenters lie and break the law in the same light-hearted manner in which he gave the Commissioners the impression that he himself habitually violates the Motor Car Act. Mr. Coleridge's circular has had the effect of drawing a letter from Sir Victor Horsley, published in the *Times* of December 30th, which contains a statement on the subject of Dr. Crile's experiments, divested of all technicalities, which places the matter in a light that the most tortuous sophistry cannot obscure. After explaining that, as the experimental researches of Pasteur and Lister had removed the commonest cause of suffering and death after operations—namely, blood poisoning—there remained practically only one equally serious and general risk—that of shock—Sir Victor points out that it has become a paramount duty on the part of those to whom human lives are entrusted to endeavour to understand the causes underlying that risk. For the utility of any experiment designed for this purpose it is obviously necessary that a reproduction of the methods employed in ordinary surgical operations on human beings should be secured. He accordingly arranged in 1895 with Dr. Crile that he, following the usual operation routine in the administration of the anaesthetic, the nature of the incisions, the dividing or crushing of bone, the exposing and handling of the nerves or organs of the body, should begin by investigating the effect of such procedures on the circulation and respiration of the animals experimented upon. In pursuance of this scheme, each of the animals was anaesthetized throughout, just as in a regular operation, commencing with a massive dose, producing absolute unconsciousness, with an almost complete abolition of reflexes, followed by a diminution of the anaesthetic, which, while securing a continuance of the insensibility to

pain, permits a return of certain reflexes. This is the condition which Dr. Crile termed "incomplete anaesthesia" and Dr. Buxton "light anaesthesia." The wording of these terms is nothing, the technical meaning being the same, namely, that the person, or in this case the animal, operated upon was insensible to pain. Sir Victor Horsley adds that on the completion of each experiment and before recovery from the anaesthetic the animal was killed by an overdose, and thus, from the first moment of the operation to the last was unconscious. Had, he goes on to say, Dr. Crile performed the experiments in the way Mr. Coleridge suggests, the whole purpose of the research would have been frustrated, and not only would the law have been broken, but the experimenter would have also shown himself incapable of performing his task. Sir Victor Horsley concludes as follows: "In view of all these facts, which have been perfectly well known to Mr. Coleridge for about ten years, and have often been published in the press, as well as during the past year before the Royal Commission, it appears to me unnecessary to say more." We cannot help congratulating Mr. Coleridge on having been the means, however involuntary, of bringing before the public this clear exposition of a subject as to which there has been much misconception.

PROPRIETARY CURE-ALLS.

IN the report on the composition of some secret remedies which we publish this week particulars are given of the results of the analysis of a few of those nostrums for which the most general and varied curative powers are claimed. The exposures of quack medicines which we have already made have shown that the most extravagant and ridiculous pretensions are advertised by the proprietors of some of these preparations belonging to practically every one of the classes dealt with; it is natural, therefore, to expect that among those for which the most general claims are made such pretensions will not be lacking. The particulars quoted show that the expectation will be fulfilled. Thus, one of the articles described is stated to cure such different disorders as constipation, rheumatism, St. Vitus's dance, heart disease, rickets, sleeplessness, kidney complaints, and women's special ailments, among many others, and is said to be "a real elixir of life in solid form"; the facts as to its composition, ascertained by analysis, show what the possibility of its being a "cure" for heart disease, for instance—is. Another of the nostrums dealt with this week is the "Pink Pills," advertisements of which are to be found in almost every daily and weekly paper. The method followed appears to be to recommend them for different diseases in different advertisements; personal testimony, or what is put forward as such, from sufferers who have been "cured" is made the basis of most of these, and illustrations are employed to catch the eye of the casual reader. Our analyst's report shows that these pills are practically the ordinary Bland's pill, though of lower strength than usually prescribed, and to judge by the proportion of iron that was found to be in the higher state of oxidation, very carelessly prepared. They differ vastly, however, from other Bland's pills in the price charged for them. Thus the proprietary Pink Pills are sold at a little over a penny each, while coated Bland's pills can be bought retail at a few pence a gross, and wholesale in large quantities at a little over a penny a gross. Other analyses show the same disparity between the price of the drug supplied and the price charged to the person who is beguiled into purchasing; thus thirteence-halfpenny, two shillings and sixpence, and two shillings

¹ BRITISH MEDICAL JOURNAL, January 4th, 1908, p. 31; January 11th, p. 90; January 18th, p. 155; January 25th, p. 209; February 1st, p. 266; February 8th, p. 333; February 15th, p. 335; February 22nd, p. 455.

and ninepence are the selling prices of nostrums the ingredients of which are estimated to cost respectively one-eighth, one-third, and one-tenth of a penny.

THE CANCER PROBLEM.

SEVERAL times during the last few years proposals have been made from various quarters that an international congress should be held to discuss the cancer question. When the inaugural meeting of the International Cancer Research Association was held in Berlin in the spring of 1903 a proposal was made—*officiusement*, to speak the language of diplomacy—that the first meeting of the congress should be held in London. The same proposal was again brought forward in a more definite form at the International Congress of Surgery held at Brussels last September, the year 1910 being suggested as the date. We understand that the matter was discussed at a recent meeting of the Executive Committee of the Imperial Cancer Research Fund, but the committee did not see its way to agree to the proposal, as it was felt that the time was not yet ripe for such a congress. We think this feeling will be shared by many of those who have been working hard at the cancer problem in recent years. The question is still in too inchoate a state to justify the assembly of an international congress for its discussion. This is shown by the fact that congresses on cancer held elsewhere have not been particularly fruitful of results. What is wanted at present is a concentration of effort and a co-ordination of research. Our own workers do all in their power to encourage international collaboration and give freely both of the knowledge they gain and of the materials on which it is based. But it is too plain that there is division of energies elsewhere. Quite recently, we learn from the *Berliner Tageblatt*, a meeting was held in Berlin to discuss a proposal made by Professor von Leyden to raise funds to establish a cancer hospital. Among those present were Herr von Moltke, the Minister of the Interior, Professor Kirchner, representing the Cultusminister, Professor Orth, Professor Reuvers, the Kaiser's Chamberlain, the President of the Berlin Red Cross Society, Professors Hansemann, Georg Meyer, and Lazarus, the Treasurer of the German Central Cancer Research Committee, and several well-known financiers. Professor von Leyden having pointed out that other countries had already large hospitals for cancer, and that Berlin was behind in this respect, went on to state that within certain limits cancer could be cured by medicinal treatment. He himself had obtained good results in a few cases, though the lapse of several years was required to establish proof of cure. He dwelt also on the danger of infection, which made isolation necessary, and urged the formation of a committee. Professor Kirchner, speaking in the name of the Cultusminister, said the proposal needed serious consideration; to be frank, he said, research has at present not gone very far. Professor Orth was still more sceptical; the formation of a new committee, he said, would look like a vote of a want of confidence in the old. It would be possible only in the form of a subcommittee. He was also opposed to the whole idea of building a hospital for the internal treatment of cancer. So far, the only effective treatment was the knife. It would be better to continue the work of research. In reply, Professor von Leyden said that in his small cancer institution, where he treated from ten to fifteen patients, there were at least a few cases of improvement. He remembered the time when the possibility of a cure for tuberculosis was denied. Professor Lazarus said that

there had been an enormous increase of cancer; in Prussia 1 out of every 1,500 persons fell a victim to the disease; in Berlin the number had risen in ten years by 4 per cent.; at present only 10 per cent. were cured, and that was by operation. If a cancer hospital was to be founded in Berlin, it should be for the treatment of the disease by operation as well as by medicinal substances. The Minister of the Interior opposed the establishment of a new independent committee; he agreed with Professor Orth that it should be connected with the existing committee. Professor v. Hansemann, speaking of the increase of cancer, said that it could now be recognized whereas formerly it could not. He disapproved of the establishment of a special hospital on the ground of humanity; every sufferer from cancer would think himself doomed when taken to the hospital. He affirmed that hitherto a cure had not been obtained by medicinal methods. In a second speech Professor Orth proposed that an institute for the investigation and treatment of cancer should be founded. This proposal was agreed to. It was also decided to form a committee in connexion with the Central Cancer Research Committee for the purpose of raising funds for existing cancer institutes and establishing others. This, we suppose, was by way of making a bridge for Professor von Leyden to get out of an untenable position. By all means let treatment of any kind that offers a reasonable hope of success be tried, so long as the patient's prospects of recovery by the aid of surgery are not imperilled. But let all co-operate to the attainment of a common end, that is, the discovery of a means of preventing or curing the disease which is most dreaded by the majority of mankind and which hitherto has defied all endeavours to find a certain remedy. Division of effort is obstructive to progress and confusing to the public, which would contribute more abundantly if the goal was more plainly in view.

THE RETURNS OF THE GERMAN SICKNESS INSURANCES.

IN discussing the returns of the German sickness insurance for the year 1906, Dr. A. Fischer¹ makes some extremely interesting observations. The total population of Germany is somewhere about 61 millions. Of this number, 11,700,000—that is, 19 per cent.—are insured against sickness. This percentage is the highest existing. In Austria only 10 per cent. of the population is so insured. The German sickness insurances are worked on several systems. Of these the most important are (1) the Municipal (*Gemeinde*), (2) the Local (*Orts*-), and (3) the Works (*Betriebs-Krankenkassen*) insurance societies. The last named are the most active. The municipal insurances do the least for the insured; the works societies do the most for the workmen, but objection is taken to these organizations at times, as the employers are largely responsible for the management. The local societies do not support their insured quite so well. In 1906 the municipal clubs paid out as sick pay per member M. 11.28; the local clubs paid out M. 20.50; while the works clubs paid out M. 26.30. It may be pointed out that the law has fixed a minimum in respect to the sick pay which the insured has a right to claim.² Not infrequently the societies pay in excess of this minimum. The contributions for the insurance against sickness vary between 1 and 1½ per cent. of the daily wages of the labourers in the municipal societies, and between 2 and 3 per cent. of the average daily wages of the special class of workman in the works' societies. The local societies fix their contributions according to the benefits allowed, but the scales com-

¹ *Muench. med. Woch.*, November 10th, 1908.

² *BRITISH MEDICAL JOURNAL*, June 20th, 1908, pp. 1523-1524.

pare well with the other two. The first-named societies do not pay for funeral expenses, for confinements, or for the support of the families of sick workmen. After discussing the comparative membership of the three classes in the various parts of the German Empire, he turns his attention to the question of confinement allowances. During the year the expenditure under this head was nearly 5 million marks. The total amount expended by the sickness insurances was 104 million marks. Dr. Fischer compares the sums with those paid by the Hearts of Oak in England, which he puts at £360,000 for sickness and £44,000 for confinement allowances. The municipal societies have no provision for confinements, although this class of sickness insurance caters for a larger percentage of women as compared to men than either of the two other classes. In 1905, to every 100 men insured against sickness, 33.9 women were so insured. In the municipal insurances there were 51.5, in the local insurances there were 39.7, and in the works' societies there were 25.7 women to each 100 men. Dr. Fischer considers that, in view of this state of things, private enterprise should come to the assistance of women and a private "young mothers'" insurance should be instituted. A similar movement exists in France under the name of the *mutualité maternelle*.

DISTURBANCES IN THE PARIS MEDICAL SCHOOL.

OUR Paris correspondent gives an account of certain disturbances which have recently taken place in the Paris Medical School, partly by way of demonstration against an unpopular professor, and partly by way of protest against a new examination which has lately been instituted. Professor Bouchard, President of the Board of Examiners, called in the police, and the Chief of Police in turn called in the Republican Guard. A good many heads were broken, but the examination was reduced to a farce, and the Faculty has closed its dissecting-rooms to first and second year students till March 1st. Professor Osler, who was an eye-witness, gives a clear account of the last and most serious of the disturbances. This occurred on December 21st. Those who took part in it, he says, were not students, "but men comparable in years and repute with the assistant physicians of the London hospitals or with the younger Oxford tutors—men of from 30 to 35 years of age, many of them with European reputations. The examination was the *concours* for *agrégation*, that is, for the *agrégé* professorships "for twenty places in all the branches in all the medical schools of France. There were 128 candidates. A new regulation had come into force by which this was to be a preliminary *concours* of admissibility, an examination in elementary subjects—"anatomy and physiology." This has been most unpopular because, we may say parenthetically, it virtually amounts to the exclusion of all but men who can afford to leave their practices or their scientific work in distant places for some months in order to revise their early studies. Professor Osler says the senior men protested energetically against the invasion of the school precincts by the police. When the jury, or board of examiners, walked in headed by Professor Bouchard, they were greeted by a storm of protests. The examination was adjourned till December 24th and then only a small fraction of the candidates took any part in it. It was then adjourned *sine die*, but the incident is not yet closed. A deputation waited on M. Clemenceau, who gave it a sympathetic reception and expressed disapproval of the action of the police. The original *casus belli*, the new preliminary examination, is to be

considered by the Government. While regretting that the disturbances should have occurred, we feel bound to protest against some remarks in which the *Times* has thought fit to indulge on the subject. It says: "For some reason that seems to invite pathological inquiry, the medical man in his larval stage is peculiarly addicted to rowdiness. Students in other faculties, though exhibiting some youthful exuberance, give, upon the whole, satisfactory indications of the grave demeanour they are to assume in 'after-life.'" It goes on to ask if there is some subtle connexion between study of physiological disorders and sympathy with disorder in the body politic, and if the course of study inoculates a naturally mild and peaceable youth with the virus of insubordination? Our esteemed contemporary is half a century behind the times. Medical students of the present day are no more rowdy than other young men of high animal spirits; indeed, they compare favourably in this respect with the "men" of Oxford and Cambridge who find amusement in the senseless smashing of property and other diversions which bring them in contact with the vulgar policemen, of whose coarseness an Honourable and Reverend gentleman has recently so pathetically complained. They compare still more favourably with the young officers who find an outlet for their exuberant vitality in foolish and often cowardly "ragging." We are speaking for the British student. Professor Osler, who also protests against the charge of special rowdiness made against medical students by the *Times*, has a good word to say for those of Paris. He says that, as he has seen him during the past three months at work in the hospitals, the Paris medical student is a very hard-working fellow, keenly alive to the importance of scientific and practical medicine, and with a charming touch of human sympathy with the patients entrusted to his care. *Pace* his belated traducers in the *Times* and elsewhere, exactly the same thing may be said of the medical student of London and other schools in the United Kingdom.

COMPULSORY OPERATIONS AND THE COMPENSATION ACT.

THE vexed question whether a workman can be compelled to undergo an operation which will tend to increase his powers of working has recently been decided by the Court of Appeal. In the case which came before that tribunal it appeared that the claimant's foot was injured on February 18th, 1907. The foot was treated at a hospital, with the result that, after two or three small operations, the second toe and part of the big toe were removed. As the applicant still suffered some pain, a skiagram was taken which showed that a piece of bone, detached at the time of the accident, was loose in the stump of the big toe. Compensation had been paid at the rate of 14s. 10d. down to May 4th, 1908, when the applicant agreed to submit himself to an examination by his own doctor and the employer's doctor, and to do what they advised him. They advised a simple operation, but he refused to undergo it. The employers then went to the county court judge to have the compensation reduced. The judge found that the operation was simple and without risk; that the applicant had good health; and that it was doubtful if the applicant's toe would ever recover without an operation. He also found that the operation was one to which any man of ordinary nerve would submit in his own interest. As he felt bound by a previous decision of the English Court of Appeal, he felt that he could not reduce the compensation. The Court of Appeal, however, pointed out that in the case to which

the county court judge referred it had been expressly found that the operation which it was sought to make the workman undergo was attended with very considerable risk. After stating that the finding in the present case was quite different, the Master of the Rolls said: "Without saying that a man can be compelled to undergo an operation, I say that, in my opinion, if an operation is not performed, the continuance of the incapacity will be due, not to the original accident, but to the unreasonable conduct of the workman in refusing to submit to an operation." Lord Justice Moulton said: "If the respondent's case is right a man may have a wound, however small, and by refusing to have it dressed he may get a sloughing sore which will totally incapacitate him. It is not possible to draw the line between dressing and operation; the distinction to be drawn is between reasonableness and unreasonableness." In the event the case was sent back to the county court judge in order that he might review the compensation allowed to the workman. This is the first case in which the English Court of Appeal has virtually declared that a workman must undergo an operation. The Court of Session in Scotland had reduced an applicant's compensation where he had refused to undergo a simple operation, and the fact that the Court of Appeal has adopted the same principle ought to have a good effect. It would be difficult to imagine anything more prejudicial than the adoption by the courts of a hard and fast rule to the effect that partial disablement which might be cured by an operation should entitle an injured workman to compensation for the rest of his natural life.

THE ORGANIZATION OF CONGRESSES.

THE demand for reform in the organization of congresses is not new. Defects in organization lead to defects in working, and result in failure and dissatisfaction. For some years it has generally been recognized that this work should be in the hands of a central permanent committee. This is the only way in which the perpetuation of mistakes can be avoided, and to ensure that future congresses will be arranged on a workmanlike basis. The essential object of a congress is, of course, the furtherance of knowledge by discussion. To achieve this end competent persons should exercise a wise discretion as to what should be discussed and by whom the discussions should be opened. That this is by no means always done appears from the programmes. No useful purpose can be served by crowding the day with an unmanageable number of papers on various subjects. No furtherance of knowledge is gained by allowing a man to get up and to repeat what he said last year and the year before last. No benefit can be derived by personal controversies on the question of priority or by personal attacks on professional brethren. And yet such things are not uncommon at congresses. It is necessary on various grounds to make a selection among the communications offered. All this can only be done by careful consideration of experienced men, well versed in the subjects of the special congress. The modern congress is apt to miss the mark in another respect. It is often stated that one of the chief advantages of a congress is that it gives opportunities of making personal acquaintance with fellow workers who live at a considerable distance. It is therefore well to supply opportunities for the members of a congress to come together in private as well as in public. But this end is scarcely attained by the arranging of great and lavish feasts, by the securing of a gala performance at the opera or theatre, by organizing a bull fight or by other similar means. Dr. Mamlock¹ takes

a sensible view of this part of congress arrangements and shows in figures the cost of a variety of congresses. Within the last twenty-five years, the city of Berlin has spent nearly £14,000 on congresses. The highest figure mentioned is that of £3,555 for the meeting of the German scientists and physicians in 1886. Without going into minutiae with regard to the amounts spent in entertainment, *Festschriften*, and other forms of literature supplied gratuitously, it may be interesting to quote this author again with regard to the multiplication of congresses within recent years. He finds that in 1883 only seven were advertised in the *Deutsche medizinische Wochenschrift*, whereas last year the number had increased to forty-one. He maintains that the increase in number does not mean a corresponding increase in scientific importance, and quotes v. Graefe, who is said to have summarized a congress as follows: "I had a veritable 'next morning' feeling in my whole body: learned nothing, talked big, and only enjoyed room atmosphere and poisonous restaurant dinners." The remedy is not to be sought in the doing away with all social functions, which must be among the attractions of a congress. To limit the expense of the entertainments; to arrange for the publication of the proceedings on sound business lines; to make the members pay for their theatre tickets—all this does not mean to exclude all social intercourse, and admits of ample private exchange of views on science and other matters. The disclosure of this wanton extravagance, however, drives us to the conclusion that the ideal congress is still a long way off.

COWS AND TOOTHBRUSHES.

WE have often had to comment unfavourably on the nature of the announcements on medical subjects appearing in the lay press. As a rule, they are either calculated to make the "flesh creep," or to raise hopes that are impossible of fulfilment. In justice to the latest of such announcements it can be fairly claimed that, in spite of its title and theme, it is not likely to cause undue alarm in the public mind. In the chief page of the Christmas Day issue of the *Daily Telegraph*—no doubt inserted as a seasonable novelty for its readers—is a paragraph entitled "dangers of milk." It would seem that Dr. Tanner, of fasting fame, is now "preaching a health campaign at Los Angeles." We learn that "Dr. Tanner is convinced that bovine teeth harbour many germs hitherto unsuspected, and that these frequently contaminate children's milk, producing all kinds of complaints which his fellow practitioners have talked wisely about but do not in the least understand. He recommends that the teeth of all dairy cows should be cleaned twice daily, and says that this law should be compulsory." It is well that this important pronouncement should receive prominent notice and not be lost to the world. The doctor, who is evidently learned above his fellow practitioners, might have gone a step further and given some directions as to the method of carrying out this bovine dental toilet. Of a well-known character in Chaucer it is recorded, "He scrubbed his mouth with sope and eke with sand." But both soap and sand might possibly be objected to by the learned doctor on the ground that they might travel by the same route as the malevolent germ, and find their way into the milk. We would suggest in place of either of them the employment of the toothbrush. As in the case of the Scot with the ample nose regarding the use of snuff, the cows with their dental development would afford "gran' accommodation" for the implement proposed.

¹ *Deut. med. Woch.*, November 25th, 1908.

Again, as the germs are not likely to be restricted to the regions of the teeth, but would probably find a location in other parts of the mouth and pharynx, we would further suggest that each cow should be supplied with an antiseptic gargle as an addition to the toothbrush. Thus fully equipped for the encounter with the germs, we might feel regarding the cows, in the words of Mrs. Bangham on the arrival of Dr. Haggage at the impending accouchement of Mrs. Dorrie, "Now we are complete."

CAMBRIDGE WATER SUPPLY.

EXCEPT in a very few instances, where the supply is derived from wells, the inhabitants of the town of Cambridge obtain their water supply from the mains of the Cambridge University and Town Waterworks Company. The company's sources of supply are from a spring and from wells sunk in the Lower Chalk and through the Chalk and the Gault into the Lower Greensand. A considerable population resides in the neighbourhood of the sources of supply in Cherry Hinton and Fulbourn, where there are about 150 and 310 houses respectively. These two villages are about a mile and a half apart, and nearly midway between them is situated the county lunatic asylum. For several years past attention has been directed to the possibility of the pollution of the water supply, and more especially since the occurrence at the asylum of an outbreak of typhoid fever in 1905, concerning which a special report was made by Dr. Bushell Anningson and Professor Sims Woodhead. Subsequent reports were made to the Cambridge Town Council by the medical officer of health (Dr. Duncan Forbes), and at the request of the Senate of the university and the town council an inquiry into the question was held in February last, on behalf of the Local Government Board, by Dr. Theodore Thomson and Mr. P. M. Crosthwaite. In the report upon this inquiry, which has just been issued, the inspectors state that they do not consider there is risk of dangerous pollution of the water supply from the asylum sewage, for the field in which it is treated is nearly a mile distant from the sources of supply, and experiments with fluorescein made by Dr. Monckton Copeman in 1905 demonstrated that the flow of the underground water was very slow. The report points out that careful and competent observers have shown recently that the period of vitality of the bacillus of typhoid fever in water is of short duration. With regard to the possibility of pollution from the villages of Cherry Hinton and Fulbourn a very different opinion is expressed. In both places there are inadequate and imperfect sewers, and many of the houses have connected with them cesspits which leak into the surrounding ground. The inspectors therefore express the opinion that in order to secure from contamination the whole of the water to the town of Cambridge the whole of the supply which is derived from the Lower Chalk should be abandoned and only that should be utilized which is obtained from the Greensand, although they are careful to point out that supplies from the Chalk may be resorted to if these can be obtained from districts not open to the risk of dangerous pollution.

A HEREDITARY barony has been conferred on Professor von Koranyi on the occasion of his retirement. This is said to be the first time such a distinction has been conferred on a Hungarian physician.

THE *London Gazette* of December 25th, 1908, announces that the King has been pleased to

appoint Harold Robert Dacre Spitta, M.D., B.S., D.P.H.Camb., to be Bacteriologist to His Majesty's Household.

KING EDWARD'S Hospital Fund, the Metropolitan Hospital Sunday Fund, and the Hospital Saturday Fund have issued a fresh circular upon the revised uniform system of accounts. The circular, which has been drafted with the advice and approval of Mr. John G. Griffiths, F.C.A., takes the form of supplementary notes dealing with questions which have arisen out of the first year's experience of the revised system, and includes amended forms of income and expenditure account, balance-sheet and statistical tables of expenditure upon in-patients and out-patients. The amended regulations are binding upon institutions applying for grants from either of the Funds.

At a special general meeting of the Metropolitan Counties Branch on December 30th, 1908, under the chairmanship of Sir Victor Horsley, President of the Branch, a motion was made to instruct the Branch Council to petition the Privy Council with a view to securing such amendments in the Charter as will provide (1) that a Referendum be taken on the decision of the Council, and (2) that it be taken by means of a letter to every member of the Association. Subsequently the following amendment, moved by Dr. Lauriston Shaw, seconded by Dr. Hugh Ker, was adopted by a large majority: "That this meeting of 'the Metropolitan Counties Branch, recognizing that 'the provisions of the Charter as finally drafted are 'the outcome of exhaustive discussion and of ultimate agreement by the properly constituted authorities of the Association, and being confident that any 'reasonable changes subsequently asked for by the 'Association will not be refused by the Privy Council, 'is of opinion that the best interests of the Association demand that every member should loyally 'support the application now being made, and should 'postpone all attempts to obtain amendments of 'the Ordinances until the Charter has been formally 'granted.'"

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Parliamentary Session.

THE record of the session of 1908 presents many features of interest. In the first place it was very prolonged, for, beginning in January it ended only on December 21st, and Parliament sat in eleven months out of the twelve, although only one day was so occupied in August. In spite of notable failures to pass Government measures it was a productive year as regards legislation; out of 308 bills introduced 73 became law, and private members succeeded in passing 16 out of the 230 measures proposed by them. The 57 Acts which the Government have added to the Statute Book out of 78 introduced comprise several of first class importance. Those dealing with Old Age Pensions, Irish Universities, the Port of London, the Hours of Coal Miners, the Prevention of Crime, Scottish Education, and Children, make a total which would distinguish any session of recent years. The failure of the Licensing Bill in the Lords and the rejection of two Scottish Land Bills by the same House, added to the withdrawal of the Housing and Town Planning and Education Bills, must be counted on the other side as disappointments, some of which may be remedied next year.

The Commons indeed were promised an early re-introduction of the Housing Bill, and as this measure contains many proposals calculated to improve public health, and proposes to require the appointment of county medical officers of health in every county with security of tenure and wide powers of supervision, the profession will anxiously look forward to its early reappearance. In the interests of housing and public health, which are inseparably connected, it is the duty of the Cabinet to see that the weeks of patient labour spent on this Bill in the Grand Committee should not be lost.

The Children Act, which is likely to prove a valuable addition to the Statute Book, also occupied a Grand Committee for many weeks. In this case prolonged labour has met its reward in the enactment of provisions calculated to safeguard infant and juvenile life and add to the well-being of future generations.

In the provision of old age pensions for persons of 70 years and upwards the Government have in the same spirit of State beneficence dealt with the other extreme of human existence. These two Acts are alone sufficient to make the Session of 1908 memorable.

In their list of successes the Government have to be credited with the Tuberculosis Prevention (Ireland), the Lunacy, the Poisons and Pharmacy, the Public Health (Markets), and the White Phosphorus Matches Prohibition Acts. All these will prove useful, and the first-named will be watched with special attention as an experiment made to stamp out the scourge of tuberculosis in Ireland, where the death-toll is greatest. Phosphorus necrosis will also disappear under the provisions of the Act prohibiting the use of white phosphorus.

The enactments about markets and lunacy, however, deal with administrative details less directly touching on medical interests.

The Poisons and Pharmacy Act settles a long-standing dispute as to the position of companies trading as chemists and druggists. The compromise arrived at requires the drug stores to have a qualified chemist in charge of each dispensing department, and also a qualified chemist as the general manager. This company trading in connexion with callings that are founded on special and expert knowledge is not to the advantage of the public, and any extension of it in the direction of medical practice will have to be jealously watched and prevented.

The sixteen Acts passed by private members have little or no relation to public health; and only two—the Coroners (Ireland) Act and the Housing (Ireland) Act—are remotely connected with medical work. In the list of 230 bills introduced by private members, there are, however, many of much importance to the profession. For instance, there were no less than six bills brought in to suppress experiments on animals, and late one night in February Sir F. Banbury got an opportunity of moving the second reading of the Dogs Protection Bill. An Irish member, Mr. Mooney, opposed the motion, and in spite of an attempt to invoke the closure, the bill was talked out. This incident enforces the lesson of constant vigilance, for the question will have to be debated and decided at no distant date.

There were three bills for the registration of nurses before Parliament this session, and one of them passed the House of Lords, but came down to the Commons too late to make progress. Next year this bill may have more success.

There were some half-dozen proposals dealing with public health, one dealing with water rights, one with sewers and drains, and one, the Public Health Officers Bill, which seeks to give security of tenure to medical officers of health and sanitary inspectors. This measure, which has been introduced for many years, has at all events educated opinion to some extent, as its principle has been partially adopted in the Housing Bill of the Government. The question of death registration and certification seems likely to attract attention in an early session, for two bills on this subject were introduced in 1908. A bill which dealt with coroners' inquests and proposed to abolish, as far as jurors were concerned, the viewing of the body, had an unusually hard fate, as it passed all its stages in the Commons fairly early, but could never get a third reading. Sir John Tuke again introduced his measure to prohibit medical practice by companies, and Mr. Cathcart Wason

the Parochial Medical Officers (Scotland) Bill, but neither obtained a second reading.

Infant Life Protection interested several members, and so did the Purity of Milk Supply, for which Mr. Watt introduced proposals to apply to Scotland. We cannot help thinking that in this matter the Local Government Board have been remiss. Early in the session a bill was promised by Lord Carrington in the Lords; Mr. Burns, repeatedly questioned on the subject, led the House to expect at least the introduction of a bill, but nothing was done. It is a question of great urgency in connexion with public health and the prevention of tuberculosis, and ought to be dealt with at the earliest date next session. As far back as last March there was a debate of much value on the clauses dealing with milk supply in the London County Council (General Powers) Bill, and the President of the Local Government Board then gave pledges of legislation which urgently need to be fulfilled.

As in other years, questions were the means by which attention was called to many medical topics, and in this way very useful work was done by many members. These inquiries took a very wide range, as will be seen from the following list of some of the subjects on which Ministers were interrogated: Sleeping sickness, British and German death-rates, lead poisoning, tuberculous meat, anthrax, vivisection, Malta fever, the Inebriate Acts, milk supply, the College of Surgeons and its members, first-aid certificates, industrial accidents, glanders, nurses and medical certificates, the death-rate on the Rand, factory inspection, beer and lunacy, vaccination prosecutions, beri-beri, pensions and out-relief, rabies, ventilation in the House of Commons, infantile ophthalmia, vaccination fees and Poor-law salaries, female medical officers at the Post Office, London ambulances, the Notification of Births Act, the new buildings of the British Medical Association, London University, the telephone and disease, tuberculosis in the army, medical referees, training of nurses, standards for food preservatives, medical inspection, medical fees under the Midwives Act, deaths under anaesthetics, vaccination officers' fees, plague, Belfast Health Commission, Poor-law children, cancer research, etc. Questions are becoming more and more important in the Commons as a means of directing attention to specified subjects and as an effective method of educating opinion both in the House and outside. Medical men would do well to communicate from time to time with their representatives in Parliament with a view to having questions put on matters affecting the profession.

The much greater use of grand committees for the committee stage of bills has deprived the proceedings, as published, of many interesting debates on some special topics. When the new regulations for reporting day by day the proceedings of Parliament come into operation this will be to some extent remedied. In 1908 there were certainly many discussions in committee on the Children Bill, the Housing Bill, and the Tuberculosis Prevention Bill which were of medical importance. In the general debates in the two Chambers there were not as many references to medical questions as in some sessions. We miss the old-fashioned controversy over the Army Medical Department, which was not adequately replaced this year by the short but interesting criticism of the Naval Medical Establishment. There was, as already said, a good discussion on milk supply on one occasion which we trust will bear fruit hereafter, and on the Local Government Board Vote there was a good deal of comment made on the Tuberculosis Commission and its work and expenditure. The Home Office Vote also called forth from its perennial critic, Sir Charles Dilke, some very interesting remarks on child labour in factories, and the baneful effect of the employment of married women in factories on infantile mortality. There was also, before the Whitsuntide recess, an interesting conversation on the increase of accidents under the Factory and Workshops Act, and a committee was promised to investigate and report.

Looking at the work of the Session as a whole, it may be regarded as affording plenty of evidence of the vitality of medical questions in both Chambers. If topics for larger treatment have been lacking, all the points bearing on the profession and on public health have found their advocates and critics, who have efficiently safeguarded the general weal.

England and Wales.

FROM OUR SPECIAL CORRESPONDENTS.

MANCHESTER AND SALFORD

THE MANCHESTER UNIVERSITY UNION.

THE officials of the Manchester University Union must be congratulated on the success of the annual soiree held at the university. The guests were received by the Vice-Chancellor, Dr. A. Hopkinson, and Mrs. Hertz, and by the Chairman of the Union, Mr. A. Haworth, and also the Chairman of the Women's Union, Miss M. McNicol. There was the usual comprehensive list of entertainments going on in almost every part of the college, though, perhaps, the scientific exhibits were not so numerous as formerly. Exhibitions of fancy glass blowing and demonstrations by a potter of the use of the potter's wheel, and numerous biological and chemical exhibits, served to fill up the intervals between other entertainments of a less scientific character. The University Dramatic Society gave an excellent rendering of a costume play—*Hal, the Highwayman*—while in another place Mr. Hamilton Irving gave delight with his lightning sketches. It is expected that the union will take up its abode in its new home by the end of the next session. The new premises will cost about £9,850, exclusive of furnishing, and the committee, of which Sir William Mather is chairman, has collected about £8,400. It is calculated that about £2,700 more will be needed to open the new building properly furnished and free of debt. As the Chairman of the Union, Mr. Haworth, said: "In a non-residential university like that of Manchester, where only 12 per cent. of the student live together, a large and well-equipped union is of first importance. A common ground, where men of different schools may meet together within the university, is not merely socially desirable, but is an indispensable feature of true academic life."

INFECTIOUS DISEASE CERTIFICATES.

It is only fair to the sanitary officials of the Swinton Urban District Council to suppose that they can hardly have realized the full import of a certificate which they are asking medical men to sign who have been attending infectious diseases. The request that the certificate should be signed comes from the inspector of nuisances at the District Council offices at Swinton, and the certificate is in something like the following terms: "I hereby certify that I have this day examined ———, residing at ———, and find him *entirely free from infection*, and in my opinion the room or rooms may now be disinfected. Signed ———, medical practitioner in attendance." It is to be hoped that no medical man will in a thoughtless moment append his signature to any document stating in such definite terms that any patient is "entirely free from infection." It is unfortunately the fact that there is still great uncertainty about the duration of infection in certain diseases, and it is practically impossible to tell when a patient is quite free from infection after either scarlet fever or enteric fever. The discovery of so-called "carriers" of these diseases, who, when they are apparently quite well themselves, remain capable of carrying and conveying to others the infection for an almost indefinite period should warn medical men against too dogmatic statements not justified by the present state of knowledge. Another consideration should also weigh, for such a certificate might well afford grounds for an action at law if another case should occur in a house where a previous patient had been unequivocally declared to be entirely free from infection. The number of return cases that occur after dismissal from fever hospitals should be a warning that with the greatest care and the utmost skill it is as yet not possible to say when a patient is free from infection. Return cases of scarlet fever are the greatest bugbear of the hospitals, and reduce the medical staff almost to despair at times, and the medical superintendent of at any rate the Salford Sanatorium has for a long time very wisely refused to sign any such definite certificate as that which the Swinton sanitary officials ask for.

AMBULANCE ARRANGEMENTS IN TIME OF WAR.

The annual prize giving in connexion with the East Lancashire Territorial Division of the Field Ambulance took place on December 19th, 1908, at the Manchester head quarters. Lieutenant-Colonel J. Bently Mann presided, and said that under the Territorial scheme three field ambulances were being organized, commanded by Colonel Fairclough, Colonel J. W. Smith, and himself. Each of these ambulances had a strength of 230 officers and men, including transport sections. Two of the sections were trained at the Manchester head quarters, and each field ambulance had one outlying section stationed respectively at Bolton, Burnley, and Bury. The general hospital for the use of the division in time of war consisted of 500 beds; it was under the superintendence of Professor Wright. In addition sanitary squads for field work, both in peace and war, were being organized, but so far the names of 26 men only had been received, whereas a detachment should consist of 98 men. Their duties were to prevent disease in the training camps by supervising the water supply and general arrangements. The nursing staff was being organized by the matron of the Manchester Royal Infirmary, and a large number of physicians and surgeons of Manchester and the surrounding district had volunteered for service in the general hospital in case of emergency. Colonel Coates, C.B., the Administrative Medical Officer, in distributing the prizes, said there was a great need of nurses who, when war broke out, would undertake nursing in the general hospital. There was a good deal of misapprehension regarding this hospital. There was no intention of using the new infirmary or even the old infirmary, but in time of war any buildings might be commandeered, even the Cathedral or the Town Hall, or the Free Trade Hall, in fact any building that would be suitable for a hospital, but as a matter of fact the general hospital would consist of tents pitched on some suitable site such as the Plattfields. The equipment was already arranged for and negotiations were about to be made with certain firms to supply anything requisite on the shortest notice. Colonel Fry complimented the corps on its efficiency and, with the previous speakers, recognized the soundness of the Territorial scheme. To-day, he said, the defence force was really organized, whereas formerly it was all disorganized. He emphasized the great importance of the medical units on the field of action and mentioned the prospect of divisional training next year on Salisbury Plain.

LEEDS.

ANNUAL DINNER OF PAST AND PRESENT STUDENTS.

The weather on the occasion of the thirtieth annual dinner of the past and present students of the Leeds School of Medicine was most unpropitious, for Leeds, like many other places in the country, was at that time enshrouded in a dense fog of a peculiarly penetrating character. Happily there was some lessening of its intensity in the latter hours of the afternoon, but it says much for the loyalty and enthusiasm of the men that there was such a good attendance, and every one regarded the gathering, at which Mr. Moynihan took the chair, as one of the most successful that had ever been held. Among the guests was the Lord Mayor, Mr. F. J. Kitson, who is a member of the Board of the Infirmary, and students representative of the sister universities of Manchester and Liverpool.

THE POST-GRADUATE COURSE.

The second term of the post graduate course at the Leeds Public Dispensary commences on January 19th, when the first of the weekly clinical demonstrations will be given. Of these there will be ten. Of the special short courses announced, there were held during the last term one on diseases of the larynx, and a practical course on clinical pathology, dealing especially with bacteriology. Two special courses will be begun at the opening of the term, namely, on ophthalmology, and the histological and chemical part of the course on clinical pathology. As soon as a sufficient number of applications for admission to the other courses are obtained, these will also be commenced. The special courses announced deal with diseases of the heart, fractures and dislocations, gall stones, methods of physical examination of the abdomen, organic nervous

diseases, and chronic renal disease. Full particulars may be obtained from the Honorary Secretary, Post graduate Course, Leeds Public Dispensary.

THE LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

A special general meeting of this society will be held on the evening of January 22nd to consider a recommendation of the committee that one of the rules should be altered. The rule as at present framed is, "Any duly qualified medical practitioner desirous of becoming a member of the society shall be proposed and seconded at a general or ordinary meeting," etc., and it is recommended that the rule should read, "*Duly qualified medical practitioners, including women*, desirous of becoming members," etc. It might, of course, be argued that the term "qualified medical practitioners" includes women, and, indeed, the action of the association on former occasions would seem to imply that the officials read the rules in this sense, for on two occasions—twenty-three years and some five years ago respectively—women were duly proposed, seconded, and balloted for. At the time, however, when the society was formed and the rules drawn up this question did not arise, and therefore the committee is wise in desiring that the rule should be quite definite. The hope must be expressed that the recommendation of the committee will be ratified by the members, for there does not seem any reason why women, who are now admitted to the ranks of the profession, should be debarred from the advantages of membership of such a society.

LIVERPOOL.

THE COUNTRY HOSPITAL FOR CHILDREN.

The Country Hospital for Children at Heswall has now been in existence for nine years, and so far as the means at the disposal of the committee have allowed has been doing a highly beneficent work on children who have been the subjects of chronic disease. At an early date a new building, which is nearly completed, will be opened for the reception of patients. It stands on ten acres of land, and consists of an administrative block, containing a committee-room, accommodation for the resident medical officers and the matron, and rooms for a staff of twenty-seven nurses. When the hospital is finished there will be three blocks for patients, but at present only the central block is completed. This block consists of three floors and a basement, each having a corridor measuring 279 ft. by 11 ft., and from it access is gained to the large dining and play rooms, which for the present are fitted as wards. There is a fine operating theatre on the second floor. The hospital is well provided with lifts, all worked by electric power. There is a bed lift, communicating with the first and second floors, and with the theatre; on the ground floor its entrance is so situated that the children from any wards can be immediately taken into the hospital grounds. There are service lifts for food, coal, and stores, the latter extending from the stores receiving room on the ground floor to the store-rooms, which are on the top floor adjacent to the kitchen. The electricity for power and lighting purposes is produced in a special outbuilding near to the laundry, which it supplies. It is proposed to proceed at once with the building of the remaining two blocks. The leading principles kept in view in the foundation and development of the country hospital have been that the institution should be in the country; that it should be conducted on the lines of a hospital in which active medical and surgical treatment could be carried out; and that there should be no time limit, all the patients being retained until recovery or permanent benefit has been established.

NEW DENTAL HOSPITAL.

The Royal Infirmary Medical School, many years before its expansion into the University College, recognized the importance of systematic teaching in dentistry, and as long ago as 1867 appointed the late Mr. Snape lecturer on dental surgery. This was eleven years before the passing of the Dental Act, which made systematic teaching compulsory. The foundation of the present dental hospital in Mount Pleasant was still earlier, its first official year being 1861; its origin, however, was still further back, as it arose before that date through the agency of a dental surgeon, Mr. W. J. Newman, who gave gratuitous dental

aid to the poor in his house in Russell Street. In the first year of the existence of the Dental Hospital 696 patients were treated, and in 1907 the number was 25,727. The work is steadily increasing, and the dental school has in recent years come much to the front in the University; it is not surprising, therefore, that the old buildings in Mount Pleasant have for some time been found altogether inadequate.

An admirable site for a new hospital has been found at the corner of Pembroke Place and Boundary Place, on a frequented tram route, and adjacent to the university and the Royal Infirmary. When completed the hospital will be equipped with all the most modern appliances. The cost of this important work is fixed at the modest sum of £10,000 for building and equipment, and of this over £7,500 have already been given or promised. Hospital physicians and all medical practitioners concerned with the health of the working classes will take more than a friendly interest in the progress of this undertaking. Much praise is due to Mr. W. H. Gilmour, the warden of the hospital and the representative of the dental school on the Medical Faculty, for his enthusiastic labour in promoting the scheme which is now about to be taken in hand. Great credit and thanks are also due to Professor Paterson, the Professor of Anatomy, the treasurer of the Dental Hospital, who has cordially supported the movement for a new building, and has worked hard to raise the necessary funds. The Earl of Derby, president of the hospital, has consented to lay the foundation stone of the new building on January 16th. The architect is Mr. G. de C. Fraser.

WALES.

AMBULANCE ASSOCIATION.

THE annual report of the Glamorgan County Centre of the St. John Ambulance Association, just issued by the honorary secretary, Mr. Herbert Lewis of Cardiff, gives some interesting details of the local growth of an excellent movement. In 1907-8, 75 ambulance classes were held in Glamorgan, attended by 2,702 students. These were conducted under the Glamorgan County Council Education Committee, and Government grants were paid on the results. In addition, there were 50 private classes, with 1,200 students, and 1,627 obtained certificates, 326 vouchers, 185 medallions, and 60 secured labels. Since April, 1908, no fewer than 112 candidates have been instructed and examined by this centre. The report concludes:

The appeal for funds to enable the centre to purchase a motor ambulance car for use in Cardiff and the South Wales coalfield, as far west as Bridgend, has been generously responded to, and a sum of £425 14s. has been promised in donations towards the purchase of the car, and a sum of £102 12s. subscribed towards the maintenance and upkeep, to which Mr. John Cory has contributed £200.

The Cardiff City Council has promised to house and work this car, free of cost, for the first twelve months. The president is Sir W. T. Lewis, the patrons are the Marquis of Bute and the Earl of Plymouth, and the list of vice-presidents and members of the committee, of which the Lord Mayor of Cardiff is chairman, includes a large number of the prominent people connected with the coal, shipping, and other industries. The honorary treasurer is Dr. Thomas Wallace, Newport Road, Cardiff.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE INEBRIATES ACTS.

DR. C. DUNLOP, Inspector for Scotland under the Inebriates Acts, has recently issued his report for 1907.

The numbers admitted into licensed retreats, certified reformatories, and the State reformatory, were each smaller in 1907 than in 1906. This diminution was, it is stated, largely due to a resolution passed early in the year by the managers of the Girgenti Reformatory that they would not admit any fresh cases. The managers of that reformatory, the Town Council of Glasgow, for some years past had been pressing for certain amendments of the Inebriates Acts, and partly because the Government had taken no action on

their recommendations, and partly because they received notice that the Treasury contribution towards the cost of maintenance in their reformatory was to be reduced from 10s. 6d. a week to 7s. a week, they decided to close the institution. The number of direct admissions to the State reformatory was only 8, against 20 in 1906. The total available accommodation for the treatment of the habitual inebriate in Scotland at the commencement of the year in institutions under inspection amounted to 214 beds, there being three licensed retreats with accommodation for 34 men and 32 women, five certified reformatories with accommodation for 10 men and 105 women, and one State reformatory for 9 men and 23 women. At the commencement of the year the total number of patients and inmates was 157, of whom 36 were in retreats, 75 in certified reformatories, 28 in the State reformatory, and 18 temporarily absent from reformatories. During the year 110 were received into licensed retreats, 34 (4 men and 30 women) into certified reformatories, and 8—all women—into the State reformatory. The admissions to retreats were 10 fewer than in the previous year. Admissions to certified reformatories were also 10 fewer, and direct admissions to the State reformatory 12 fewer than in that year. The men admitted to licensed retreats were 21 fewer than in 1906, and those admitted into the State reformatory 7 fewer. The number of women admitted to certified reformatories was the same as in 1906, while those admitted to retreats were 11 more than in that year. Discharges numbered 88; of these 57 were from retreats, 24 from certified reformatories, and 7 from the State reformatory. At the end of the year the retreat patients and reformatory inmates numbered 179; of these 47—39 men and 8 women—were in retreats; 3 men and 71 women in certified reformatories, 10 men and 25 women in the State reformatory, and 23 temporarily absent. The net cost of detention of inmates—extraordinary expenditure excluded—varied from 7s. per inmate per week in Aberdeen Reformatory, to 30s. 8d. in the Lanarkshire Reformatory. In Greenock Reformatory it was 9s. 1d., and in Girgenti Reformatory 20s. 6d. The average net cost of all inmates in these four certified reformatories amounted to 15s. 5d. The inmates' labour produced in Aberdeen Reformatory an average sum of 10s. 4d. per inmate a week, and in Greenock Reformatory 3s. 9d.

Dr. Dunlop states that the result of treatment in the inebriate reformatories in the certified as well as in the State reformatory continued to show about the same amount of success as formerly. In the majority of cases the inmates soon after their discharge relapsed into drunken habits, and as curative or reformatory institutions the value of the reformatories had been found to be limited.

HOMOEOPATHY IN GLASGOW.

Homoeopathy seems to have a struggle for existence in Glasgow. A public meeting was held recently to endeavour to promote the re-establishment of a homoeopathic dispensary. The chairman said that the object of the meeting was to try and extend the benefits of homoeopathic treatment to a much wider circle. Dr. R. Gibson Miller moved a resolution approving the suggestion to establish the dispensary. He remarked that about ten or fifteen years ago there was such an institution, which made out about 54,000 prescriptions annually, but there were not enough doctors to carry on the work. Now, he was glad to say, they had in Glasgow and vicinity five or six homoeopathic doctors willing to go on with the work.

EXAMINATION OF NURSES BY THE LOCAL GOVERNMENT BOARD.

The second examination for the certificates of the Local Government Board of Scotland was held recently in Glasgow. Nineteen candidates presented themselves for the final surgical and medical examination. The examiners were Dr. George Gibson, Edinburgh; Dr. D. J. Macintosh, Western Infirmary, Glasgow; and Dr. Johnston, Superintendent of the Eastern and Western Districts Hospitals, Glasgow. The practical part of the examination was conducted by the matrons of the Western Infirmary and Eastern District Hospital, Glasgow. This is a new departure on the part of the Local Government Board, and is intended for the nurses employed in parochial infirmaries and poorhouses, thereby insuring that the inmates of these institutions will get the benefit of thoroughly trained nurses.

THE LATE PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

There has been placed in the Church of St. John the Evangelist at Edinburgh a memorial brass bearing the simple legend: "In loving memory of Charles E. Underhill, M.B., P.R.C.P.E., born March 8, 1845, departed this life April 24, 1908."

Ireland.

[FROM OUR SPECIAL CORRESPONDENT.]

IRISH IN THE NATIONAL UNIVERSITY.

The senate of the new National University has not yet settled the question of compulsory Irish at the matriculation and at other examinations up to the point of specialization. The new Chancellor, Archbishop Walsh, is said to be opposed to the proposal, but it is believed that the senate is rather evenly divided. The correspondence which has appeared in the local newspapers shows by its language how very angrily the dispute is being carried on, for, while some see in the proposals another proof of a regenerating nation, others see only a proof of inexcusable blundering. The Roman Catholic bishops have not as a body expressed their views in public, but one of them, Dr. Clancy, enters a protest against the tone of the correspondence.

The idea, he says, of branding the senate, of which His Grace the Archbishop of Dublin is president, as "West British," and the university of which he is Chancellor as "a replica of Trinity College," is too absurd for even patient people to bear. Neither is it calculated to win sympathy for the policy of the Gaelic League that a man of Dr. Delany's pre-eminence in every educational work for the last fifty years should be made the victim of vituperative attacks from men whose services in the cause of education of any kind are in inverse ratio to the tone of self-sufficiency with which they write and speak. I fear the correspondence that has been published in connexion with this matter during the last few weeks will not raise the reputation of our people for deliberative discussion.

He holds that to insist on a knowledge of Irish in the case of all candidates from the inception of university work would inflict a serious injustice on a large number of colleges, and would practically exclude from university education, for four or five years, or otherwise drive into Trinity College, many of their best, most brilliant, and most promising young men and young women. He therefore advocated that, should a knowledge of Irish be made essential for matriculation, as he hoped it would, the colleges of the country should be allowed reasonable time to prepare for such an ordeal; and he suggested a period of four or five years as a minimum for this purpose.

And since, after the lapse of this period, it would set a premium on national apostasy, if Catholics, who are unwilling to face the drudgery of studying Irish, could gain easier admission to Trinity College than to the National University, I would advocate, in the second place, that the Gaelic League should bring all its influence during the next four or five years to bear upon the authorities of Trinity College with a view to have them adopt a similar rule in reference to the Dublin University.

The Gaelic League will have a hard task to convert the board of Trinity College to such action; but the fact that a suggestion of this sort should be made by a man who knows conditions as they are in Ireland shows how serious the question is.

THE HEALTH OF BELFAST.

The Belfast Health Commission appointed by the Local Government Board gave in its report about the middle of 1908. A joint report drawn up by three committees of the City Council in answer to the Commission's report was issued a few months later; in it the Citizens' Health Committee was pilloried as asking for and procuring an investigation which was expensive and did no good. The Citizens' Health Committee has now issued a rejoinder to the combined committees' report. The various questions which were submitted to Mr. Bryce, the ex-Chief Secretary for Ireland, and given as a basis and reason for inquiry, are taken in order, and in a parallel column are given the answers of the Commission. Every one has thus an opportunity of seeing at a glance the problems which appealed to the Citizens' Health Committee and the answers or solutions of the Commission. The important questions of typhoid fever, tuberculosis, the death-rate and

the population of Belfast, the measures taken by the health authorities to localize disease, the report of a previous inquiry, are also considered pretty fully. Finally, the conclusion is arrived at that the demand for an inquiry was perfectly legitimate, and that considerably more energy has been thrown into the working of the Health Department since the Commission sat, and that if the Department will seriously grapple with these questions it will find no more cordial supporters than the Citizens' Health Committee; the unwritten but evidently suggested inference is that if no serious attempt be made the vigorous attack will be continued till Belfast takes her place with other large towns in the advance of public hygiene.

Natal.

[FROM OUR SPECIAL CORRESPONDENT.]

COOLIE IMMIGRANTS.

A GOVERNMENT commission of inquiry has been appointed to examine into the question of indentured coolie labour in the Colony. The terms of reference amongst other clauses include the inquiring into, and advising upon, the medical supervision of indentured immigrants and the control by Government of medical officers employed in this work. The seven members of the Commission include five members of the Natal Legislature.

ANKYLOSTOMIASIS.

Ankylostomiasis, which is rife on several of the sugar estates, is attracting considerable attention and causing some alarm. The latrine system is being perfected in all places employing Indians, and in all infected centres of industry regular hospital treatment has been instituted, examination of new arrivals being carefully conducted. Precautions are also being taken to guard against overseas infection. Ankylostomiasis has now attacked Europeans, and the disease threatens to be a serious matter for the Colony.

Canada.

[FROM OUR SPECIAL CORRESPONDENT.]

TUBERCULOSIS EXHIBITION AND LECTURES.

The Montreal League for the Prevention of Tuberculosis, which was practically organized by Professor Adami some five years ago, has been doing quiet but steady work and gaining strength day by day; but the most important step in its history was taken when it was determined to educate the public by means of an exhibition, which was held in Montreal from November 17th to November 28th, 1908.

A special effort was made to reach the children, and lectures and demonstrations were arranged for their benefit. The school authorities co-operated with the committee, with the result that in one morning alone fifteen hundred were present.

It is estimated that between 4,000 and 5,000 citizens of Montreal daily availed themselves of the opportunity of becoming acquainted with the progress made in the fight against tuberculosis, as 55,000 attended in all. Speakers from Paris, New York, and Toronto, as well as from Montreal itself, delivered lectures in French, English, and Yiddish; and a large staff of nurses from the various city hospitals gave demonstrations in cooking, care of infants, care of milk, etc. The exhibition was formally opened on November 18th by His Excellency Earl Grey.

Dr. Herman Biggs (head of the Board of Health, New York) gave a most interesting history of the fight against tuberculosis in New York. In 1887 Dr. Biggs brought before the New York Board of Health a proposal for the scientific treatment of consumption. It was referred by the board to a committee of medical men, who reported that the time was not ripe for the introduction of such a measure. Again in 1893 Dr. Biggs brought up the matter, and finally a resolution was passed by the board declaring tuberculosis to be an infectious disease, and instituting certain measures for its prevention.

There were, in the first place, education of the poor; secondly, registration of cases, especially those in institutions; thirdly, visiting cases into the homes; fourthly, inspection of buildings vacated by tuberculous patients; and, lastly, the condemnation of buildings under order of the board in special cases. Registration of private patients was not at first made compulsory, as it was realized that there was a strong feeling against such registration. A few years later, however, the requirement of notification was extended to all physicians; and then trouble began. The doctors as a whole were opposed to the innovation, and fought the board even to the Legislature, but at the present time they were working in harmony with the Board of Health in reporting these cases. New York was an exceptionally difficult city to govern, as it contained sections more densely populated than any other place in the world; there were parts of the city where the population was 800 to 1,000 to the acre. What this meant might be realized when it was remembered that Whitechapel contained but 350 to 400 to the acre. However, their inhabitants were almost always foreigners and of the lowest classes, each speaking its own language—Greek, Slav, Czech, or Chinese—so that many of the circulars were printed in nine different tongues. One publication in the educational crusade was a catechism for school children; of this 700,000 copies were distributed this autumn. Lectures were given before social settlements and labour organizations, illustrated with stereopticon views. Literature of all kinds was widely disseminated, and the press was freely used for the purpose of popularizing knowledge of the subject. The second main feature of the campaign in New York was the notification of cases. This had been opposed on the ground that the patients were branded as lepers and placed outside of all society. This argument he considered to be nonsense. The notification was not public; it was for the Board of Health only, and if the case was in charge of a qualified physician who would direct proper precautions to be taken, the board left the case in his hands, and limited inquiries to every six months, to see how the patient was progressing, and whether the physician was prepared to continue his oversight. At the present time it was estimated that 95 per cent. of the cases were reported, or about 40,000 cases, of which some 30,000 were in the tenement district. Free examination of sputum was another feature, and whereas when this was first introduced but 500 specimens were examined, last year there were 27,000. House to house visitation by trained nurses was a means of keeping track of the spread of the disease. Eleven clinics were carried on in different parts of the city, and these were used for the distribution of eggs and milk, as well as medicines. Dr. Biggs thought that the construction of hospitals for advanced cases was the most important part of the work of the Board of Health, and that insubordinate cases should be detained by force. He thought that a few examples would soon put an end to the necessity of forcible removal. When a building was vacated by a tuberculous patient it was placarded until its owner had disinfected it and had done the necessary painting or kalsomining. Dr. Biggs closed his address by wishing every success to the movement in Montreal.

Dr. Dagenais, in moving a vote of thanks to Dr. Biggs, drew attention to the work that was being done in Montreal, and stated that it was hampered by lack of funds.

Dr. Hodgetts, of the Ontario Provincial Board of Health, in seconding the resolution, declared the need of Federal action to meet the evil, and gave a brief outline of a plan for the division of the expense.

Sir George Drummond, Dr. Yates, Dr. Adami, and Dr. Lachapelle spoke during the afternoon session.

The exhibition was well advertised, the press devoting several columns daily to a report of the proceedings, and the results were well shown in the numbers which attended. The exhibition itself was of the most practical nature, illustrating open tents, ventilation of rooms of all kinds, methods of sanitation and disinfection, the physiology of breathing, and many other similar matters. One thing, however, was noticeable, which is so often absent under such conditions—namely, adequate instruction. There was always a splendid staff of trained and efficient men and women in attendance who could and would explain things. Nothing was left undone to demonstrate the meaning of every article and point out the value of

every exhibit. Nothing was left to chance. The gospel of fresh air, sunshine, cleanliness, and good food was preached from every side, and it is impossible to think that an impression was not made.

The lantern lectures were not only scientific and accurate, but they were popular and most interesting. The children listened with attention, than which no better test could have been given of the value of these addresses. The demonstrations were carried out in detail before an appreciative audience every day, and talks, such as were given by Miss McNaughton and Mrs. Newcombe, were received with great enthusiasm.

The work was carried on in English and French, so that the whole of the city was interested in the exhibition at the same time, while one of the last lectures was in Yiddish, thus including one of the most important and populous sections of the city.

It need hardly be said that the committee has been delighted with the outcome of the venture and with the support they have had, not only from the medical profession but from the general public.

The results cannot be over-estimated, for although they may not be seen for some time to come, yet the educational value, more especially to the children, will be evident in the homes of those who as yet have not been impressed by the brilliant prospects for success from following methods thus popularized.

The results of the prize competition for the essays on tuberculosis by a scholar in any school in Montreal have not yet been published, but the fact that hundreds of papers have been received goes to show that the aim of the committee has not been amiss.

It is to be hoped that a similar exhibition will be attempted in other cities of the Dominion and that a like success may follow.

Special Correspondence.

PARIS.

Disturbances in the Latin Quarter.—Professor Osler.

Very serious disturbances occurred last week in the Quartier Latin, beginning on Monday morning, when the examining board, under the presidency of Professor Bouchard, assembled to hold the first examination of candidates for the certificate of admissibility to the competition for the posts of *professeur agrégé* in the different medical faculties in France. This new certificate of higher medical studies met with great opposition, as it tended to create a grade of qualified men above the ordinary doctor of medicine. At present all qualified men in France hold the State diploma of doctor of medicine, and the teaching staff in the faculties of medicine is selected as vacancies occur by competitive examination. The new certificate was intended to be given to qualified men who should pass a higher qualifying examination, the successful candidates being able to present themselves for the post of *professeur agrégé* as vacancies occurred in the subjects in which they might have specialized. Protests against this proposed creation of a higher class of practitioners had been presented by the two last *Congrès des Praticiens*, the petition being signed by no less than 12,000 medical men. The Medical Students' Association had also presented a petition, but both had remained without effect. Though 123 candidates presented themselves for examination, the majority as a protest did not sign the paper as being present. In the meanwhile an angry crowd collected outside the Faculty of Medicine, a large majority of those present being practitioners of 30 or 40 years of age. After hissing and booing, the crowd burst into the Faculty, and after doing much damage the examination was postponed till Thursday morning at 7.45 a.m. Meetings of protest were held on Tuesday and Wednesday, and each day the Faculty was guarded by police. On Thursday morning, in anticipation of fresh disturbances, strong bodies of police and a company of Republican Guards were posted as early as 6 a.m. in and around the Faculty of Medicine. At 8 a.m. the paper was set, but at 11.30 out of 123 candidates only 18 sent in any papers. Of the remainder some went away, but the majority stayed in the examination

room, sat on the tables, lit cigarettes, or played cards. Before 11 a.m. the crowd had reached sufficient proportions to attempt to tackle the cordons of police across the streets which barred all access to the Faculty of Medicine, and soon after there was a pitched battle, the students throwing eggs, potatoes, ink-pots, etc.; the windows of the Faculty were broken, but the police were reinforced and standing six deep withstood the charge of the students. In the afternoon, however, matters became much more serious, the crowd had grown much larger and the Director of the Police summoned the mounted Republican Guards, who charged several times on the Boulevard St. Germain. Though driven away from the neighbourhood of the Faculty of Medicine a band of students managed to penetrate into the Senate. A great number of students and police were injured. On Christmas Day M. Clemenceau, the Premier, who is a medical man, received M. Julien, the President of the Students' Association, and in the presence of M. Lepine, Prefect of Police, heard the accounts of the rioting. M. Julien protested also against the presence of detectives and police within the precincts of the Faculty of Medicine. M. Lepine said they had been sent on the written application of Professor Bouchard. M. Clemenceau disapproved of this, and gave a written order to M. Lepine that this should never occur again. M. Clemenceau received a written statement of the objections to the new system of examinations, and the question will be considered at a Cabinet Council. In the meanwhile the examinations are postponed. The Faculty has, however, closed the dissecting-rooms to first and second year students till March 1st, which means a loss of three months to all concerned. The Latin Quarter is now again quiet.

Professor William Osler, who read a paper on endocarditis before the society, has been made a corresponding member of the *Société Médicale des Hôpitaux de Paris*.

EGYPT.

The Cairo School of Medicine.

THE Cairo School of Medicine makes steady progress in popularity amongst the rising generation of natives. At the commencement of the winter session in October, 1908, an unusually large number of young men applied for permission to enter the school: 50 were admitted, that number being all that the school can accommodate, although many more applied; there were now 240 students enrolled. With a view to training some past students to become efficient teachers in the school two of the laboratory assistants have recently been sent to England for further post-graduate study, and two more will shortly follow, their places being temporarily filled by young men recently qualified, who will in time also be sent to England for further study. The examinations for first and second years men commenced on December 19th, 1908, and the final will be held on January 9th. Dr. Norman Moore of St. Bartholomew's Hospital has been appointed by the Conjoint Board in England to represent it this year as its delegate and supervisor of these examinations.

Correspondence.

THE CHARTER AND THE REFERENDUM.

SIR,—I see from the announcement in the *JOURNAL* of last week that a petition for a Charter has been lodged at the Privy Council. I think it well, therefore, to say that such petition has not received the signatures of the President, Past-President, or President-elect.

For my part I was anxious that the Branches should follow the example of the South-Western Branch and take a postal Referendum of the members, so that their wishes should be clearly expressed.

I am still desirous that other Branches should take the matter up.—I am, etc.,

SIMEON SNELL,
President, British Medical Association.

Sheffield, Dec. 30th, 1908.

SIR,—The following letter, with an accompanying post-card, was sent to every member of the Branch, and we now append the replies received to date:

British Medical Association,
Glasgow and West of Scotland Branch,
Glasgow, December 19th, 1908.

Dear Sir,—At a meeting of the Branch on the 16th inst., specially convened on a requisition from the North-Western Division, to consider the restrictions upon the use of the Referendum in the Charter as it now stands, the Secretaries were instructed to take a postal vote of the members of the Branch to ascertain whether it was their opinion that a Referendum should be taken (1) on the requisition of half the members of the Central Council present and voting at the meeting at which the question came up, and (2) that it should then be by letter addressed to every member of the Association.

We were instructed to add a few words of explanation. To members who have perused the numbers of the JOURNAL for October 31st, November 14th, 21st, 28th, December 5th and 12th, or who can refer to them, no explanation is necessary, as the questions at issue are fully discussed from every point of view in the correspondence columns of all these issues.

The position is, shortly, as follows:—
Under the Charter as finally amended at the Sheffield meeting, a two-thirds majority of the Council will be required to put the Referendum (or appeal to the membership of the Association) into operation. It has been pointed out that this means that, as one-third of the Council is to be elected by the Representative Body, all the other members of the Council would have to be unanimous, and all present, in order to carry a Referendum to the membership of the Association. Further, in the event of a Referendum being taken, all the members unable to attend a Divisional meeting would be disfranchised, no postal vote being provided for. It appears to be admitted that, as matters at present stand, about 90 per cent. of the members would be disfranchised under this arrangement.

We enclose herewith a post-card upon which we have respectfully to request that you will register your vote by a simple "Yes" or "No" in reply to each of the two questions submitted. We have also to urge that you will be so good as to return the post-card not later than Wednesday, 23rd cur.

Yours faithfully,

JAS. GRANT ANDREW,
WM. D. MACFARLANE, JR., Hon. Secs.

On the post-card:

1. Are you of opinion that a Referendum should be taken on a requisition of half the members of the Central Council present and voting at the meeting at which the question comes up?
2. Are you of opinion that the Referendum should be taken by letter addressed to every member of the Association?

An affirmative reply was given to both questions in 180 instances.

A negative reply to the first question and an affirmative to the second were given in 72 instances.

An affirmative answer to the first question and a negative to the second were given in 2 instances.

An affirmative reply to the second question alone was given in 19 instances.

A negative reply to both questions was given in 7 instances.

To the first question, therefore, there replied:

In the negative 73
In the affirmative... .. 182

So that there was, of those voting, a majority of 103 in favour of a Referendum being taken on the requisition of half the members of the Central Council present and voting at the meeting at which the question comes up; and to the second question there replied:

In the negative 9
In the affirmative... .. 271

—a majority of 262 in favour of the opinion that a Referendum should be by letter addressed to every member of the Association. There is membership in the Branch of 687; 290 members voted, or 40.7 per cent.—We are, etc.

JAS. GRANT ANDREW,
WM. D. MACFARLANE, JR.,

December 26th, 1908.

Hon. Secs.

SIR,—The members of the Midland Branch have had a circular sent to them somewhat similar to that forwarded to the members of the South-Western Branch, and have been asked to reply to the question:

Do you approve of the Branch Council taking, in conjunction with other Branches, the necessary steps to lay before the Privy Council their view that a Referendum should be taken on the requisition of half the Council, and then by letter addressed to every member of Association?

There are 535 members of the Branch. The result of the voting is as follows:

Approvals... .. 219
Disapprovals 7
Undecided 1
Away 1

—I am, etc.,

ROBERT SEVESTRE,

Leicester, Dec. 21st, 1908. Honorary Secretary, Midland Branch.

SIR,—The postal vote which has been taken of the Midland Branch I have had the opportunity of examining in detail, and, as it is desirable to throw all possible light on the various methods of taking a Referendum, I have studied the answers to this experimental vote carefully.

To begin with, there are 535 members of the Branch, and this list has been dissected to ascertain how many members live in county towns (where Divisional meetings are held) and how many live in country places. I find that 228 live in county towns, and these could register their vote personally, without any difficulty whatever, provided the time to do so was somewhat elastic. Against this number I find there are 307 members living in country districts, and to these it is a matter of sacrificing considerable time (to say nothing of some expense) in order to have their desires made known to the Association.

The recent poll only included 227 replies in all—that is, about 40 per cent. of the membership; but it must be granted that this is a great increase on the percentage who recorded the vote personally and under the stimulating influence of a Referendum!

Of these 227, county town members were 93, while the number from country places was 134. This demonstrates clearly, I take it, that the men are willing to take a share in responsible decisions provided they have the opportunity. It would be interesting to have the figures of other Branch votes worked out on similar lines.

I feel very strongly that the policy of the Association should be to get the men to become members, and, once having got them, to educate them to take an active interest in its affairs; but this must be a gradual process, for many of the questions are exceedingly difficult of solution, and the busy medical man has not much time to devote to the study of highly contentious issues.

I trust sincerely that no harm may result from the openly advocated policy of "shedding the leaves," and I should like to remind the author of the botanical simile that the leaves perform a vital function in the life-history of the tree—not more vital, however, than does a large and increasing membership of our Association.—I am, etc.,

Leicester, Dec. 23rd, 1908.

ASTLEY V. CLARKE.

SIR,—I beg to hand you a summary of the returns of the voting up to this date, which I have received from the six Branches that have taken postal Referenda:

	Approving Resolution of S.W. Branch.	Disapprov- ing Resolu- tion of S.W. Branch.	Neutral.	Strength of Branch.
Yorkshire	373	9	2	884
South-Western	346	3	4	457
Midland	218	7	1	535
Edinburgh	214	—	—	413
Oxford	180	3	1	285
Dorset and West Hants	116	2	1	215
	1,452	26	9	2,789

These are not to be regarded as final, since in some cases I am informed that votes are still coming in. It will, however, be observed that over 50 per cent. of members of these Branches have signified their approval of our procedure; whilst less than 1 per cent. have signified disapproval.—I am, etc.,

RUSSELL COOMBE,
Hon. Sec. South-Western Branch.

Exeter, Dec. 23th, 1908.

SIR.—After several years of hard work by many of our members; after innumerable meetings of committees, Divisions, Branches, councils, and Representatives; after endless discussions on the subject and much correspondence, often too acrimonious and too personal, in our JOURNAL, we have at last, with the kind help of the authorities, arrived at a form of Charter which, in the main, satisfies all of us, and which, we are told, is acceptable to the officers of the Crown. This draft Charter has been definitely passed by our Representative Meeting, and subsequently twice confirmed by our Council. And yet now, at the eleventh hour, when, I believe, the application for the Charter has actually been sent in, an attempt is being made from within our Association itself to wreck the scheme, to throw away all this work in the past, and to squander our money on a contest for a Charter which ought to have been unopposed.

And for what is this urgent opposition raised? The only objection put forward is in connexion with the Referendum. The two points in dispute are: (a) As to the majority required in the Council, before a Referendum can be taken, and (b) as to the manner in which this Referendum shall be taken. Now, it is really worth while, for the sake of these two simple points, to make ourselves a laughing-stock, as an Association that will not abide by the rules of its own making?

It stands to reason that in an association with many thousands of members, it is impossible that every individual should be satisfied with every detail of a complicated document like the draft Charter. There may be many who think that a bare majority of even a small meeting of the Council should be sufficient to call for a Referendum. But we must remember that this Referendum will be attended by considerable expense and delay, and that the Ordinance as it now stands only lays upon the Council the same limitation as is placed on the Representative Meeting when voting on matters of importance. There may also be many who feel that a Referendum is not satisfactory where only those votes are counted which are recorded at a Divisional meeting, and that something in the form of a "postal" vote would be better. But this method of taking a Referendum by votes at a Divisional meeting is not an innovation: it is the existing method under which the work of the Association has been done for years, the object being that no vote should be taken without the question having been fairly discussed. The need for the alteration of this cannot, therefore, be a matter of pressing urgency.

Whatever views we may hold on these disputed points, one thing is certain, the time for making alterations is not now. In accordance with the Articles of our Association at present in force, they might have been revised at any time up to the meeting of the Council following the Representative Meeting at Sheffield, or they may be amended at or after the next Representative Meeting. But any attempt to do so now is not in accordance with our Articles, and is therefore truly unconstitutional.

I believe that this unbusinesslike resistance to the legitimate acts of our governing bodies has arisen from the misconception that these points can never be altered if the Charter is granted now. This is quite untrue. Our Charter will consist of three sections

1. The Charter proper, which, when once granted, can only be altered by act of the King or Parliament.
2. The Ordinances, which can be altered at any time with the consent of the Privy Council, and we are advised that the Privy Council never make any difficulty when applied to by the constituted authority.
3. The By-laws, which may be altered by ourselves without application to any outside authority.

Now, the disputed points come in the Ordinances, so there would be no difficulty in their amendment at any future time.

Do let us sink our differences for the time, and appear to the world as a sane and united body—at any rate, till the Charter has been granted. After that let us fight out the question amongst ourselves, without inviting the world to watch us squabble.—I am, etc.,

Harrow, Dec. 18th, 1908.

ALFRED H. WILLIAMS.

SIR.—Under the Charter all power is given to the Representative Body, and the resolutions adopted unanimously at Dr. Davy's conference would, if carried out,

have taken away any cause for complaint that the Representatives do not represent the views of the great body of members.

1. *On the Point of New Departures of Policy.*—That a decision of the Representative Body to adopt for the furtherance of the objects of the Association any of the means specified in Clause 2 (2) of the Charter not previously adopted shall require confirmation by another Representative Meeting. If so confirmed the proposal will then come before the Council, which may take a Referendum. This would prevent "the promotion of the candidature of any member of the Association for Parliament or for any British (not colonial) legislative assembly" being adopted without full consideration. (The recent decision in the High Court will doubtless prevent this being included in the objects of our trades union.)

2. *On the Taking of a Referendum.*—That a Referendum shall be taken on the requisition of half the Council, and shall be by means of voting papers sent to every individual member of the Association. This would remedy the present unsatisfactory state of things, and would give every member a chance of recording his vote without the loss of time and expense incurred in attending Divisional meetings.

It is of course quite possible that even then a large number of Dr. Fothergill's "leaves" would not take the trouble to return the post-cards, but recent experience shows that a clear majority would record their votes, and those who did not take the trouble could not complain, as every one would have an equal chance.

3. *On the Election of Representatives of Divisions.*—That nominations should be received by a certain date, and, in case of a contest, that the election shall be by voting papers sent to each member of the Division. This, to my mind, is the most important of all, and would make the Representatives truly representative. Nomination would lead to competition. At a meeting when one man is proposed it is very invidious to get up and propose another, however much one felt the first man unsuitable; but no one would mind sending in a nomination, and by means of voting papers every one would get an equal chance, and it would be the fault of the members if they did not choose the best man.

It is true that this is to be optional under the Charter, but it should be compulsory, and reference to the SUPPLEMENT of August 2nd, 1908, will show that the very men who threw out this amendment were afraid to trust themselves to the suffrages of their constituents, and will take care the present system is continued at any rate in their Divisions. The members present at Dr. Davy's conference fully recognized the unsatisfactory condition now existing, and instances were given.

One gentleman stated that a meeting of the Division was called to elect a Representative. He attended and no one turned up, and he had to go out and get a couple of men to come in and form a meeting, one to propose and the other to second his re-election; and it is whispered that even in that model Division of all Divisions, Wandsworth Common, the attendance is not very great, except at feeding times, and that our great lawgiver does not represent many voters.

It is an undoubted fact that very few Divisions take the trouble to instruct their Representatives, and such a flood of matter has been poured out at head quarters that it has been impossible to go through half of the questions referred, and the custom, even in active Divisions, has been to consider one or two matters and then leave the rest to the discretion of the Representative, although few, I hope, adopt the methods of the Channel Islands Division which the Representative finds so satisfactory.

Now the Medical Secretary's office is fully staffed it is to be hoped that matters referred to the Divisions may come down more frequently and not all in a batch as heretofore.

I fear very few read the SUPPLEMENT of August 1st, 1908, and would advise every one to read it and compare with the letters in the JOURNAL: it will then be seen that the very men who now state it will be easy to amend the Ordinances as desired after the Charter is granted, resisted at Sheffield the introduction of the resolutions into the Ordinances on the ground that once introduced it would be almost impossible to vary or alter if desired.

In conclusion, I would state that in my opinion the peace of the Association depends greatly on the adoption of

nomination and election by voting papers of all Representatives compulsorily, and then there will be no reason to fear that the twelve Representatives on the Council elected by the Representatives will act as a body hostile to the members of Council elected by the Branches, because these twelve men are to be elected by single-member constituencies, consisting of one or more Branches grouped for that special purpose, by the Representatives of the Divisions included in the area thereof, and not by the Representatives as a body, so that if the Representatives themselves are chosen as the members of the Council elected by the Branch are now, they will be equally to be relied on as voicing the wishes of the members.

I hope steps may be taken to hold a conference in London, and that the South-Western Branch will see this is carried out shortly.—I am, etc.,

Wimborne, Dec. 21st, 1908.

C. H. W. PARKINSON.

MINISTRIES OF HEALING.

SIR,—Your carefully considered leading article in the JOURNAL of November 28th, 1908, on the above remarkable extension of medical practice suggests that the question of the systematic application of psychic force as a remedial agent is at least worthy of careful consideration. For several years while Physician to the Glasgow Royal Infirmary I made use of it in the wards under my charge. This was before I heard of the existence of Mrs. Eddy and her ways. I have recorded the results of my experience in the volume of the *Glasgow Hospital Reports* for 1889, and I had previously brought the subject before the International Medical Congress in Moscow.

I think I may best indicate the class of cases in which this method of treatment was employed, the procedure followed, and the results of the practice, by a quotation from the former of these papers:

The method of procedure is as follows: Sitting down opposite the patient, if in bed, or standing opposite her—for in most, but by no means all, cases it is a woman—if on foot, I require her to look steadily at my eyes. This frequently causes a difficulty at first, as there is a strong disposition in such cases for the patient to look down or aside, but on asking her resolutely she eventually complies with my request. Then continuing in a firm tone of voice and decided manner, I address her somewhat in the following terms: "You understand that these seizures, if subject to spasmodic or other form of attack, must stop." This I repeat, often modifying the remark, till I get the patient to say, "Yes, sir." Daily or every second day, at gradually increasing intervals, this formula is gone over, and even after the patients have left the infirmary I have required them to return once a week for several weeks, so as to maintain the controlling and fortifying influence on the mind and brain.

The results in most cases have been immediately successful, and have been observed by medical practitioners as well as students. It is not, however, sufficiently powerful in its action to cope with the more severe forms of neurotic disorder, such as those recorded in the early part of this paper. Its proper sphere of usefulness is in the slighter forms of derangement of the nervous system.

In another part of the same paper I mention that in one case of chronic melancholia the daily practice of psychic impressions by myself in the way described, so far as I could judge, clearly assisted ordinary general treatment in inducing recovery. I also state that as far back as 1871 I tried the effect of strong mental impression in insanity, and recorded my experience in the BRITISH MEDICAL JOURNAL for that year.

It is to be observed that throughout this letter I have used the words "psychic impression" or "psychic force" to designate this therapeutic measure. The first of these terms is preferable as it raises no question as to the nature of the action. Suggestion is much too mild in its significance; it seems to leave a choice to the patient. On the contrary, he or she is subjected to a dominating, compelling force, that of the operator's will, which produces a profound impression on the mind of the recipient. Doubtless, too, there is a corresponding cerebral change, probably a partial or even complete restoration to the normal condition.

I close these remarks by stating my conviction that both in hospital and private practice this psychic agent should be employed in suitable cases as an addition to ordinary medicinal and hygienic treatment. But besides, as you have said in the article referred to, the help which religious faith and spiritual teaching can give should be cordially welcomed.—I am, etc.,

Glasgow, Dec. 7th.

ALEXANDER ROBERTSON.

LACTIC ACID BACILLI.

SIR,—Dr. R. W. Allen's paper on lactic acid bacilli appeared in the BRITISH MEDICAL JOURNAL of November 28th at the moment when Major G. Dansey Browning and I were completing an inquiry into certain other aspects of the lactic acid bacillus treatment.

Our work leads us to believe that the liquid commercial preparations alone contain pure cultures of Bulgarian lactic acid bacilli, and that these are temporarily in a state of low vitality—the so-called *vie valente*—when grown at atmospheric temperature. Solid preparations, on the contrary, are invariably contaminated with spore-bearing and other organisms, which more or less rapidly overgrow the Bulgarian bacillus when cultivated at 37° C. We fully realize the danger of incubating possibly contaminated milk, despite the presence of added living lactic acid bacilli; and we think that this danger is necessarily much greater when non-vigorous bacterial growths are made use of.

We offer the following suggestion for administering lactic acid bacilli as a possible solution of this difficult question:

Obtain the Bulgarian bacillus in pure cultivation on a liquid medium (that is, a liquid commercial preparation).¹ Incubate this preparation for twenty-four hours, and then add it to the vehicle selected for administration. Of these, milk which has been boiled on water bath for an hour, sterilized whey, or malt extract solution appear to be the most suitable.

In the absence of an incubator, the unopened liquid preparation may be kept in a Thermos flask filled with water at 40°–57° C.

Unfortunately the liquid preparations remain active only for a short time, and young cultures can only be employed. In older cultures the amount of acid production is so considerable that the Bulgarian bacilli themselves are killed off. If, however, particles of solid calcium carbonate be added to the cultures containing the young bacilli no excessive acidity is developed, and the culture will remain active for a considerable period.—I am, etc.,

F. G. BUSHNELL, M.D.,

December 26th, 1908.

Sussex County Hospital, Brighton.

THE USE AND ABUSE OF THE CURETTE.

SIR,—Dr. Donald is right in his conjecture as to why I did not mention his name. I did not wish to attack him, but only what I conceive to be his erroneous opinions. And I did not criticize his treatment of individual cases. I am quite willing to believe that among the group of cases that he calls "endometritis in virgins," there may have been some of genuine dysmenorrhoea which were cured by the dilatation which went with the scraping and the packing; and also that in some of them there may have been adenomatous growths which it was good treatment to scrape away.

But as to the main issue, I am impenitent. Dr. Donald describes what he terms a "clinical type": young women with pain, worse when they menstruate, and leucorrhoea. In about half, he says, menstruation is increased. A symptom which is absent in half the cases can hardly be called typical. This clinical type he thinks is due to endometritis. The late Dr. Graily Hewitt used to take young women suffering from similar symptoms into a hospital or nursing home: he gave them rest, food, and sleep; he put a contorted bit of vulcanite into the vagina, and sent them home greatly improved in health. He thought that the illness was from antelexion, and that the improvement resulted from the bit of vulcanite in the vagina. A more recent eminent gynaecologist used to bewilder certain candidates at the examination hall by asking them questions about "chronic ovaritis." Many of them had never seen the disease diagnosed; and they were told by the examiner that it was the commonest disease to which women were subject. For this same clinical type ovaries have been removed because they were thought to be "sclero-cystic," or "cirrhotic." On this question I expressed my views at the meeting of the

¹ The liquid preparations examined by us were obtained from Messrs. Oppenheimer and Son, London, and from Messrs. Millet et Veillard, Paris.

British Medical Association at Oxford in 1904. I grant that in a few cases of this clinical type there may be some local disease requiring local treatment; but most cases of chronic pelvic pain in virgins are due to neurasthenia, and do not want either curetting, or pessaries, or removal of the ovaries.

Dr. Donald says that the leucorrhoea is uterine and not vaginal, because "the discharge was seen to be coming from the cervical canal." No doubt the cervical glands secrete; but does *all* the discharge come from the uterus? I think every general practitioner of experience knows that an astringent vaginal douche will almost always lessen or abolish leucorrhoea in a virgin, which is to me evidence that the bulk of leucorrhoeal discharge comes from the vagina and not from the uterus.

Dr. Donald regards as physical signs of, or causes of, disease, smallness of the cervix and antelexion. I suggest that he should ask the pathologist of the Manchester Royal Infirmary to look for specimens of disease produced by smallness of the cervix or acute antelexion. Acute antelexion is present in many nulliparae, and there are specimens in many museums. In all the specimens the canal is a gentle curve, with no more obstruction than there is in a bend of a river. Dr. Donald might also direct the attention of the pathologist to Dr. Bossi's "cochleate uterus," and ask him to find one.

Dr. Donald objects to the comparison of the cervix uteri with the lobule of the ear, because one is an unnecessary appendage, and the other the orifice of a secreting organ. The point of the comparison is that one is visible to everybody, while the other is only looked at in order to find some disease. But since he is not satisfied I will give him another. Tennyson describes one of his heroines as having a nose "tip-tilted like the petal of a flower." Between this and the aquiline beak of the "Iron Duke" there is a difference greater than is commonly seen between the cervixes of different virgins, but I have never heard rhinologists point out either shape as evidence of disease. I do not attach importance to slight changes in the size of the uterus. My own senses are not acute enough to make me certain of small changes in size felt through so thick an intermediate structure as the abdominal wall. It was by signs such as these that Apostoli persuaded himself that by electricity he produced absorption of fibroids, a thing that nowadays scarcely any one credits.

The remark about retroversion which Dr. Donald notices was only incidental, and not the main subject of my lecture. Retroversion is associated with prolapse, and therefore with pain, in much more than one case in ten, but in most of these it matters not how the uterus is lying. I have by numerical analysis of cases come to the conclusion that in about one case in ten a patient with retroversion of the uterus has pain that she would not have had if the uterus had not been retroverted. My statement as to the obstruction of the return of blood from the uterus by pressure of sharp utero-sacral ligaments rests on *post-mortem* evidence; a uterus has been seen with the marks of this pressure on it. The details on which these general statements are founded are given in papers published in the *Transactions of the Obstetrical Society of London*, vols. xxiv and xxxi.

Dr. Donald thinks there is a steady turn in the practice of gynaecologists, and a growing disinclination to treat "these patients" with pessaries. Since I began this letter I have been into two of the principal surgical instrument makers' shops in the West End of London and asked if there was any diminution in the sale of pessaries. Both said there was not; and one thought the tendency was in the opposite direction. The request that I should lecture on the use and abuse of the curette does not suggest a trend in favour of more frequent scraping.

I say nothing about dysmenorrhoea at present. I may at a future time do so.

Dr. Donald says that his views "have suffered considerable misrepresentation." If I am in any way responsible for this, I am sorry. But I am still unconvinced that endometritis exists in virgins, apart from new growths or accidental infection. I think that scraping the uterus to relieve pelvic pain in virgins is a mistake, and that the repetition of scraping which has failed to do good deserves to be called an "abuse."—I am, etc.,

London, W., Dec. 23rd, 1908.

G. E. HERMAN.

THE APPLICATION OF MENDELIAN RULES TO HUMAN INHERITANCE.

SIR,—I agree entirely with several statements made by Professor Karl Pearson in his criticism in your issue of December 5th, 1908, p. 1720, of my address on "Heredity," but there are some statements from which I dissent.

He says: "It seems to me very dangerous in the present state of our knowledge to accept any sweeping application of Mendelism." Some may infer from this that I have been guilty of such a fault; but, on the same page which contains the remark to which the professor specially objects, it will be found that I said: "We must, however, acknowledge that Mendelian laws seem to be inapplicable in certain cases of inherited disease and abnormalities"; therefore, I plead "not guilty."

As to Nettleship's chart of the night-blind family, it will be well to examine it further. The figures I gave were quoted from Nettleship's paper (page 8). I cannot quite see how Mr. Nettleship gets the 255. I find there are 274 individuals in the disease-bearing branches if we stop at, and include, the last abnormal (+ the brothers and sisters) in each line of descent. These "last abnormals" are conspicuously numerous in this family tree, and one would like to know the reason for this. Possibly it is analogous to some such coupling of factors as seems to cause the 9.3.1. ratio to be modified to 9.3.4. or 9.7.; or may it be that, just as a yellow pea is dominant to green, and a maple dominant to yellow, so in the human subject one normal may be recessive, whilst another normal is dominant to the abnormal? If this does happen, it may be that these "last abnormals" were recessive to the normals whom they married. Now, if each line of descent had stopped short at the last abnormal, the result would have been that 134 out of 274 descendants of Jean Nougaret were abnormal, and this gives a percentage of 48.9, a remarkably close approximation to the theoretical 50 per cent., so that "we must pause before we accept" Professor Pearson's statement that "Nettleship's pedigree goes a long way to prove that they (Mendel's rules) do not hold for night blindness."

The facts (1) that all Nougaret's three children were night blind, and (2) that the disease has only been transmitted by affected individuals are also in accord with Mendel's results.

Professor Pearson adds: "Similar criticism may be applied to more than one other case cited by Dr. Drinkwater." I will only refer to the cases of tylosis mentioned in Dr. Gessage's paper.¹ There are three charts given. The first shows 6 abnormals out of 10 individuals; the second, 15 out of 27. The third chart is particularly suggestive. Here the disease originated in a woman, who was a pure dominant, and transmitted the disease to every one of her twelve children; a married daughter, being heterozygous, transmitted it to exactly 50 per cent. of her children (3 out of 6). These facts are *perfectly* Mendelian, and agree with the rules $D \times R = D(R)$, and $D(R) \times R = D(R)$ and R in equal numbers.

In conclusion, I think that all who have studied the subject will agree with Professor Pearson in emphasizing "the urgency for collecting far more material." What we wish to arrive at is the truth.—I am, etc.,

Wrexham, Dec. 8th.

H. DRINKWATER.

THE HEART-INDEX INTERVAL IN AORTIC REGURGITATION.

SIR,—I read with much interest Dr. Broadbent's communication on this subject in the *Journal* of December 19th, 1908, as it recalls an old controversy which I thought was long since settled. I furnished complete proofs of the position maintained by Dr. Broadbent in an article published in the *British Medical Journal* in 1901, February 16th.

As Dr. Broadbent has not referred to my article in any way, I should like to point out that the *plus* or *minus* variations in the heart radial interval are in that article not only discussed but explained. I showed that the *plus* variation was not to be wholly explained by "the collapsed and empty state of the arteries between the beats, and partly to their large size and loss of tone," since these conditions do not invariably prevail in aortic regurgitation. I also showed that when these conditions did not prevail the absence of the prophymic interval in aortic regurgitation could give rise to a *minus* variation.

¹ *Quarterly Journal of Medicine*, April, 1908.

The chief interest of my article lay not only in the proof of these facts, but that I offered an additional explanation of the phenomenon of heart radial delay in these cases, one which had not been noticed before. This I may be permitted to state again.

In a normal heart the blood pressure in the ventricle at the beginning of systole is about 20 mm. Hg; in less than one-tenth of a second the intraventricular pressure is raised to 150 or 200 mm. Hg; the effect is a sudden impulse or "slap" against the ventricular surface of the aortic valves, and the wave created thereby is sudden and of great velocity—28 ft. per second (Von Frey).

In aortic regurgitation, when the intraventricular pressure at the onset of systole is already 150 mm. Hg or upwards, the contraction is more of the nature of a steady push against a weight, and the resulting wave, not being created by impact, is a slowly propagated wave—that is, one of very much less velocity.

The elucidation of this point is the main object of this paper.

I also point out that the propagation of nervous impulse through a hypertrophied heart is more slow, and the large mass would for physiological reasons contract more slowly.

Apart from this, the tracings I gave were complete and conclusive as to the matter of fact then in debate.—I am, etc.,

PAUL M. CHAPMAN, M.D., F.R.C.P.

Hereford, Dec. 21st, 1908.

THE NEW PROVIDENT DISPENSARY SCHEME AT BIRMINGHAM.

SIR,—With the exception of the last paragraph of his letter in the JOURNAL of December 26th, 1908, I think the majority of the general practitioners in Birmingham will agree with Dr. R. R. Giddings on the above subject. This scheme has not yet, thank God, received the sanction of any general meeting of the local doctors. It is the old "public medical service" scheme, which a year ago we thought had been decently interred by a decisive majority of the profession, which has been galvanized into life by Mr. Neville Chamberlain, with the assistance of some few members of the General Practitioners' Union, who seem determined to "cut prices" to make a fortune (?). The ostensible reason for reviving this scheme is to relieve the hospitals from trifling cases which should never go to them. These cases almost invariably belong to the thriftless and wholly improvident classes, hence the new institution—under the derivation, "Lucus a non lucendo"—is to be called the "Birmingham and District Provident Dispensary." Mr. Arthur Chamberlain kindly suggested that we should educate these people into coming to the new dispensary, and Dr. Abbott of Aston shrewdly asked whether this was to form part of the curriculum of the future medical student. The majority of us have enough to do without trying to educate the baser fellows of the working class in sobriety or thrift. These men tell you they "pay a penny a week to the hospitals and are entitled to go there," but if their employers were to ask them to work overtime for the same wages they would strike.

The thing that appeals to those members who have not given it the consideration it deserves is the 70 per cent. of the subscription which is to come to their pockets. This is the bunch of carrots held on a stick before the donkey's nose that makes him pick up his ears and gallop when he is not at all sure of getting it for his pains. You must catch your hare before you cook it, and I venture to prophesy that the number of improvident people who will be enticed to join this provident dispensary will be infinitesimally small when divided amongst even fifty practitioners. I consider the printing of the rules and sending forms applying for appointment as medical officer to this scheme, before it has been submitted to the vote of the local practitioners, smacks very much of the impertinence which prompted another Chamberlain to start the "Consultative Institute" without even sounding the members of the profession in this district.

This has, doubtless, been a famine year for the general practitioner, and the shortage of work has alarmed some men. In nearly forty years I never remember anything like it. But the work will not be always so, and I hope my fellow members will prefer fighting with adversity—a sight said to be fit for the gods—than that they should

drag their profession through the mire, and work for wages that an errand boy would despise.—I am, etc.,
Birmingham, Dec. 28th, 1908.
E. T. BULTON.

SIR,—As one who must bear some portion of the responsibility for starting the new provident dispensary in Birmingham, may I crave your indulgence to explain a few points in connexion with the scheme, on which Dr. R. R. Giddings comments so severely in your issue of December 26th, 1908?

This new provident dispensary arose out of an endeavour to curtail the steadily increasing pressure on the out-patient departments at the general hospitals, a pressure which it is thought may be relieved by referring trivial cases to other and more suitable sources of medical treatment; and, secondly, by educating the public to understand that in all their minor difficulties they should not necessarily at once go to a hospital, but that they could obtain efficient relief for most of their smaller medical and surgical ills elsewhere, thus leaving the hospitals to their more proper function of relieving graver ailments. The committees of hospitals, whilst quite willing to refer trivial cases elsewhere—for instance, to the existing dispensaries, to private clubs, or to private practitioners—felt that a hiatus existed in that many of the poorer people have hitherto made no provision for, and would not know where to seek, medical relief within their small means. It was to meet this class of case especially that a provident dispensary was initiated.

The payment per member per annum is fixed at 5s., of which 70 per cent. is to go to members of the staff, the remainder being reserved for the provision of medicines, dressings, etc., the payment of the dispensers, and for secretarial expenses. Members of the medical staff are thus relieved of all burdensome details. This plan was adopted by the committee, which is constituted as explained below, and a provision was inserted that if at the end of a year this arrangement is not found to be equitable it should then be reconsidered.

In the initial stage of the scheme, before any regular committee had come into existence, I pointed out to those who were discussing the matter that if any scheme was to succeed it must give an adequate representation of the medical profession on its governing body as the great guarantee against abuse. To show that this security has been obtained I may point to the constitution of the governing committee of the dispensary, which consists of 29 elected representatives, together with a chairman and an honorary secretary elected by the committee, thus making a total of 31. No less than 14 of these must invariably be medical men and others may be; at the present moment there are 2 additional medical representatives elected by general hospitals, thus giving medical men a majority on the governing body.

No wage limit has been adopted, because whatever rules were laid down they would frequently prove unworkable, but a guarantee against abuse of the scheme lies in

Rule 8 (b) "It shall be open to any medical officer to decline to accept any individual patient," and in Rule 11, "Admission.—Application for admission shall be made in the first instance through one of the medical staff, who shall deal with the case provisionally. He shall then report as to the advisability of the applicant being accepted or rejected, to the District Committee, who shall consider and decide upon the case at their next meeting."

I may explain that each District Committee consists of nine members of whom four must be members of the medical staff. If the members of the staff work loyally together no abuse should arise owing to persons, whose means make them unsuitable, taking advantage of this provident scheme.

Despite what Dr. Giddings regards as Gilbertian humour I am glad to say that the success of the scheme as far as the staff is concerned is already assured, and that it consists of registered medical men of good repute.

May I, in conclusion, express the opinion I have long held that each great centre of the community must find its own remedy for hospital abuse and similar medical ills, and that what may be suitable and applicable in one great city may not be so in another, owing to the variations in hospital, dispensary, and other arrange-

ments? We in Birmingham are now endeavouring to work out our own salvation.—I am, etc.,

Birmingham, Dec. 29th, 1908.

GILBERT BARLING.

THE STATE REGISTRATION OF NURSES.

SIR.—In the JOURNAL of December 26th, 1908, Dr. Shuttleworth, speaking on behalf of the Asylum Workers' Association, states that the feeling on this question among those who are connected with institutions for the insane is pre-eminently one of strong objection to being left out of any scheme that may be proposed. For the Medico-Psychological Association, I can say positively that this was, and as far as I know, is now, the case. It was a threat of such an injustice that drove into action the Parliamentary Committee of the latter association more than ten years ago, when I happened to be its chairman. The steps then taken averted the danger, but apparently did not remove it entirely. In 1905 there arose the same risk of exclusion, for, in spite of the evidence tendered by Dr. Shuttleworth and Dr. White to the Select Committee, it was stated at almost the last moment, on excellent authority, that admission to the register would only be accorded to those mental nurses who had added a minimum of one year's training in a general hospital to the requisite training in the asylum. In the emergency, Dr. Outterson Wood, the then President of the Medico-Psychological Association, took energetic and successful action. He showed to those with whom the responsibility for such a decision rested that this proviso would debar, as well in *future* as in *presenti*, almost the whole female wing and the whole male wing of the large army of mental nurses. The result of this strong protest was that the proposed arrangement of having a separate portion of the register reserved for them was at once introduced.

An estimated number of 50,000 general nurses is mentioned in a former number of the JOURNAL as ready for entrance to the new register. At the present moment there are 15,000 men and women engaged in nursing the inmates of the institutions for the insane, which are regularly visited by the Lunacy Commissioners. This total does not include those who are employed in work-house wards, or who are engaged in nursing the insane in private houses. Numbers alone will forbid the injustice that will attach to exclusion from a register. This being so, the arrangement provided appears to accord with common sense, and it will have the further merit of obviating somewhat Pharisaical argument on respective rights to inclusion.—I am, etc.,

Ticehurst, Dec. 26th, 1908.

H. HAYES NEWINGTON.

SIR.—Other ladies than Mrs. Hadfield have been good enough to suggest that the reason of my opposition to the State registration of nurses is owing to the supposed (by them) result which they think would follow, that there would be a considerable drop in the funds of the London Hospital, because they imagine we should no longer be able to send out nurses to do private nursing at the end of two years.

Mrs. Hadfield is quite wrong. There is nothing in the bill which fixes any "time limit" to training, and it is almost too obvious for words that opportunity and teaching, and not time, is the essence of training. Thirty years at some hospitals would not train a nurse, never mind how good an examination she passed. We are quite content with the opinion of the hundreds of physicians and surgeons who employ our nurses every year. A two years' London Hospital trained nurse was good enough to be chosen to nurse His Majesty. We are quite satisfied, from experience, that our nurses are properly trained to undertake any work in two years, and the thousands of confidential reports we have at the hospital on this work establish this beyond dispute.

Even if this Registration Bill ever passes the House of Commons, which I do not believe it ever will, as opposition to it grows every day, and even if the Council were to decide that they would not admit on to the register any nurse who had not had, say three years' training, that would not affect the London Hospital in the smallest degree, as our nurses would not register. All the bill provides is that no nurse can call herself a "registered

nurse" who is not on the register of this Council. Does Mrs. Hadfield seriously suggest, in face of the reputation which the London Hospital has gained for turning out good nurses, that if our nurses wished to register the Council would say that the London Hospital was "not approved of as a training school" (see Section 12)? Registration may possibly help indifferent nurses to pose as good nurses, guaranteed by people who know nothing about them; but, in my opinion, for what it is worth (and Mrs. Hadfield and her friends will say, "Very little"), few of the best nurses will register.

Lord Crewe, speaking on the Registration Bill in the House of Lords, said: "If I were ill and required the services of a nurse, I should get one from a hospital or institution of standing, and should not inquire whether or not her name was on the register," and so would most thinking people. I cannot at the moment think of a better advertisement for the private nurses of the London Hospital than that there should be two sorts of nurses—"registered" and "London Hospital nurses"—the one guaranteed by people who know nothing about them, the other by those who know all about them, and can guarantee their skill, and, what is equally important, their suitability for the special service they may be called on to perform.

Mrs. Hadfield asks why matrons and nurses who are opposed to registration do not lift up their voices. She can hardly be aware of the deputation which went to Lord Crewe on the subject, nor of the memorandum against registration signed by 163 matrons of London and provincial hospitals, by 484 nurses (without any canvassing), and by a great number of the leading members of the medical profession.

We, who are opposed, do not ignore the bill, but these engaged in work are too busy to agitate, and it is not easy to agitate against something which is non-existent. It is, for instance, only quite recently that an anti-suffrage agitation has commenced. There will be plenty of time to make ourselves effectually heard when the bill gets within the region of possible passing. I see that all the Scottish training schools have met and seem opposed to the present bill, and that one society, which Lord Amthill (of course inadvertently) quoted as being in favour of it, have written by its secretary to say it is opposed.—I am, etc.,

SYDNEY HOLLAND,

Chairman, London Hospital.

December 22nd, 1908.

A HOSPITAL FOR MENTAL DISEASES.

SIR.—In a leading article in the JOURNAL of December 19th, 1908, dealing with Dr. Henry Maudsley's munificent gift to the London County Council, the following words appear:

"These, that is, individual attention and close personal treatment, which are all-important in the early stage of mental disorder, are impossible in the wards of large asylums, where patients in every stage are perforce herded together, with the result that those whose disease is of the acute form sooner or later take the colour of their surroundings."

Surely the writer of this article cannot be aware of the modern management of asylums, in which hospital wards are provided for the new cases; and to write of such as being "herded" with the chronic cases is, to say the least of it, inaccurate, though a stronger word might not be out of place.

There are other matters touched upon in the article which might easily form material for discussion; but these I pass aside, as my main object in writing this letter is to express the regret that the advocacy of so excellent a cause as the Maudsley Hospital should be marred by unnecessary and erroneous statements.—I am, etc.,

R. H. STEEN,

Medical Superintendent, City of London
Mental Hospital.

Dartford, Kent, Dec. 21st, 1908.

* * * We may remind our correspondent that Dr. Maudsley in the letter conveying his offer to the London County Council, which was published in the BRITISH MEDICAL JOURNAL of February 22nd, 1908, page 457, said, in enumerating the advantages of a hospital for mental diseases:

"It is hoped that in a small institution, with several medical and other attendants, the patient and apt application of individual treatment, mental and medical, would bring about

recoveries which might not take place in large asylums in which multitudes are congregated and such individual treatment is almost impracticable.

In the report of the Asylums Committee as to the London County Asylums on which we commented in the article referred to by Dr. Steen, the following passage occurs:

The most forcible argument for the provision of the hospital, from the point of view of the patient, lies, as it seems to us, in the fact that it will provide opportunity for individual treatment and close personal attention, which are all-important in the early stages of mental disorder. At the present time, in connexion with the more modern of the London County Council asylums, there are detached buildings which afford facilities for the classification of the patients and for the separate housing as far as the villa accommodation will permit, of those who are amenable to treatment. But apart from this, the only means of classification are found in the ordinary wards of the asylums.

The report further refers to the fact that "there will be in the hospital an entirely different atmosphere to that of the ordinary asylum, an atmosphere, as Dr. Maudsley has expressed it, of sanity as opposed to one of insanity." Our article, like the report of the Committee, dealt with the London County Council asylums. We do not know the exact atmosphere of the City of London Mental Hospital, near Dartford, but Dr. Steen would seem to have strangely misunderstood our article, or not to have read the documents on which it was founded.

Universities and Colleges.

UNIVERSITY OF OXFORD.

THE following candidates have been approved at the examinations indicated:

PRELIMINARY SCIENCES: Mathematics and Physics.—H. Ball, Brasenose; R. R. Baxter, St. John's; R. Bonmure, Christ Church; A. W. Clements, Magdalen; R. H. Crane, Keble; H. C. Doynce, Trinity; V. T. Ellwood, Pembroke; D. M. Ely, Exeter; H. T. Evans, Jesus; C. G. Fanning, Exeter; A. G. Harper, Magdalen; S. J. Head, Lincoln; W. H. Jones, non-collegiate; W. V. A. Jones, non-collegiate; D. H. Jones, Jesus; O. P. Jones, Jesus; E. H. Kennard, Exeter; T. S. Nelson, University; R. W. Poulton, Balliol; L. K. Underhill, Jesus; C. A. Vileland, Balliol; J. West, Jesus; B. H. Wildon, Lincoln.

Chemistry.—W. Agar, Oriel; F. C. Baker, Balliol; H. Ball, Brasenose; R. R. Baxter, St. John's; W. G. V. Bloag, Keble; H. A. Boldero, Trinity; R. Bourmure, Christ Church; E. A. Bull, Jesus; F. E. Chavasse, Balliol; A. W. Clements, Magdalen; W. T. Collier, Balliol; R. H. Crane, Keble; K. M. Dyott, non-collegiate; V. T. Ellwood, Pembroke; H. T. Evans, Jesus; R. A. Fawcett, Oriel; A. E. Fisher, Balliol; J. F. M. Floyd, Queens; F. W. Haefliger, New; G. Harney, Magdalen; S. J. Essold, Lincoln; S. Jalland, Lincoln; O. P. Jones, Jesus; R. O. Langdon, Oriel; J. A. Liddell, Balliol; R. H. Lucas, Christ Church; T. S. Nelson, University; A. Nicholson, Worcester; Sir W. L. Parker, Bart., New; G. D. Pidgeon, Christ Church; E. W. P. Selby, New; O. B. Pratt, Christ Church; N. D. Pringle, Lincoln; E. Scott, St. John's; F. G. L. Scott, Merton; G. P. Selby, New; C. P. Sells, Merton; L. K. Underhill, Jesus; C. A. Vileland, Balliol; F. J. West, Christ Church; B. H. Wildon, Lincoln.

Zoology.—V. T. Ellwood, Pembroke; E. Scott, St. John's.

Botany.—W. H. Bleddyn, Brasenose; J. C. Davies, New; C. Dean, Trinity; V. T. Ellwood, Pembroke; D. P. McDonald, Oriel; G. A. Maling, Exeter; Hon. P. A. Methuen, New; T. L. Price, Keble; G. S. Robinson, Exeter; E. R. Speyer, New; A. B. Thompson, New; B. E. Wall, Lincoln; D. A. W. Ward, Trinity; J. F. West, Christ Church.

Physics.—P. G. Doynce, Trinity; O. H. Gotch, New; J. L. Kathin, Exeter; O. G. Parry-Jones, Magdalen; G. D. Pidgeon, Christ Church; H. M. Pope, Lincoln; O. B. Pratt, Christ Church; S. K. Ray, Exeter; C. P. Sells, Merton; H. E. Gibson, St. George's, Lincoln; J. W. Steell, Trinity; D. A. Ward, Trinity.

FIRST B.M.: Organic Chemistry.—R. G. Barnes, Christ Church; J. D. Batt, Trinity; A. Booth, B.A., Keble; E. W. Carrington, Keble; G. W. Carte, B.A., New; J. C. Davies, New; C. Dean, Trinity; P. G. Doynce, B.A., Trinity; S. Furness, Wadham; R. St. A. Heathcote, New; E. V. N. Holthouse, New; H. S. Knowlton, Keble; D. P. McDonald, Oriel; W. W. Waller, New.

Mineral Medicine.—C. W. Armstrong, B.A., Jesus; C. H. Budd, B.A., Oriel; A. W. Dennis, Keble.

Anatomy and Physiology.—G. E. Beaumont, University; A. W. Donaldson, Hertford; N. F. Hallows, Keble; W. F. Harvey, B.A., Balliol; N. S. Lucas, B.A., New; E. O'Connor, M.A., Lincoln.

FINAL B.M.: Pathology.—R. E. Bridges, B.A., University; O. L. V. S. de Wesselow, B.A., Corpus Christi; F. C. Fowell, B.A., St. John's; N. Glover, B.A., Trinity; J. G. Z. Jessel, B.A., University; J. P. Penson, B.A., non-collegiate; E. W. M. H. Phillips, B.A., Jesus; E. P. Poulton, B.A., Balliol.

Forensic Medicine and Public Health.—C. N. Binney, B.A., Corpus Christi; P. N. Cave, B.A., University; C. D. H. Corbett, B.A., University; O. L. V. S. de Wesselow, Corpus Christi; C. Gouldsbrough, M.A., Christ Church; A. H. Savage, B.A., New; T. S. Wright, M.A., Brasenose.

Medicine, Surgery, and Midwifery.—G. D. H. Carpenter, B.A., non-collegiate; M. Davidson, B.A., Trinity; O. L. V. S. de Wesselow, B.A., Corpus Christi; H. E. Gibson, St. George's, Lincoln; H. M. C. Green, B.A., Wadham; J. F. Horsey, B.A., Wadham; G. E. Thornton, B.A., Oriel; D. B. Tood, B.A., Lincoln.

UNIVERSITY OF CAMBRIDGE.

THE following degrees were conferred on December 10th, 1908:

M.B.—B. C. Ghosh, Joh.; J. H. Board, Pemb.
B.C.—H. J. Gavnain, Joh.; B. C. Ghosh, Joh.

Candidates have been approved at the examination indicated

FIRST M.B. (Part I).—E. D. Adrian, Trin.; E. H. R. Altounyan, Emm.; A. L. Anthony, Joh.; J. J. O. Heyen, Christ's; E. J. Bradley, Jes.; G. D. R. Carr, Cai.; G. F. Clifton, Down; G. M. Cowper, Trin.; D. Crellin, Joh.; H. L. Crook, Jes.; E. C. Cunningham, Corp. Cai.; E. D. D. Davies, Christ's; E. G. N. Davies, Pemb.; A. T. Edwards, Joh.; J. M. Evans, Cai.; G. L. T. Franks, Cai.; L. S. Fry, King's; C. L. Gimblett, Cai.; C. H. M. Gimblett, Cai.; W. B. Gordon, Cai.; W. T. Hare, Christ's; D. J. Hare, Trin.; A. D. Kinner, Emu.; A. A. Lees, Emu.; M. L. Lovless, Pemb.; W. M. Lupton, Cai.; J. B. Matthews, Cai.; E. S. Mawe, King's; R. F. S. Morton, Trin.; D. M. Muir, Trin.; C. C. O'Neil, Joh.; A. E. Panter, Cai.; V. C. Pemb., Trin.; J. S. Pooley, Trin.; R. N. Porritt, Cai.; W. B. Purchase, Sid. Suss.; J. R. Rees, King's; A. St. Johnston, Trin.; L. E. S. Sharp, Trin.; A. C. S. Smith, Trin.; A. G. G. Thompson, Pemb.; J. B. Thompson, Trin.; E. W. Todd, Trin.; H. N. Atkinson, Joh.; H. J. Bower, Emm.; I. M. Brown, Down; S. Butt, Joh.; J. S. Clarke, Magd.; V. H. Coates, Cai.; J. A. C. Croft, Trin.; H. J. M. Cursey, Cai.; W. H. Edgar, Trin.; G. L. E. Edwards, Trin.; G. T. L. Franks, Cai.; J. H. Getty, Cai.; C. H. M. Gimblett, Cai.; W. B. Gordon, Cai.; E. T. Hahn, Trin.; H. G. Hooper, Emu.; B. L. Hutcheson, Cai.; B. J. Jareja, Trin.; F. C. Lapage, King's; E. S. Mawe, King's; F. C. L. Lewis, Pemb.; W. B. Purchase, Sid. Suss.; L. E. S. Sharp, Trin.; A. G. S. Shera, Emm.; A. C. S. Smith, Trin.; J. R. Stoddart, Joh.; A. G. G. Thompson, Pemb.; A. W. Todd, Pemb.; A. G. Williams, Cai.; F. A. W. Wignall, Queens.

SECOND M.B.—G. W. M. Andrew, B.A., Emm.; H. C. Attwood, B.A., Cai.; H. W. Barnes, B.A., Jes.; A. H. Birks, B.A., Cai.; H. B. Brown, B.A., Cai.; E. Calvert, Joh.; L. M. S. Cane, B.A., Trin.; J. W. H. Conn, Trin.; H. P. Conyn, B.A., King's; H. J. Conchan, B.A., Cai.; J. Deighton, Trin.; J. W. Dew, Cai.; E. L. Dobson, King's; G. W. B. Garrett, B.A., Cai.; E. M. Grace, B.A., Christ's; E. F. G. Grellier, Down; S. M. Hargreaves, Trin.; J. B. Heath, B.A., Trin.; R. Hooton, B.A., Christ's; A. E. Herman, B.A., King's; D. D. B. Jay, B.A., H. Selw.; H. G. G. Jeffreys, B.A., Trin.; W. L. Johnson, B.A., Pemb.; I. W. Joynt, B.A., Emm.; A. Kennedy, B.A., Cai.; G. L. Keyner, B.A., Trin.; J. Peck, Trin.; Emu.; G. M. M. Emm.; H. H. Matthews, King's; G. O. Maw, Pemb.; G. W. Mitchell, B.A., Cai.; R. S. Morshead, B.A., Trin.; M. N. Perrin, Pemb.; C. H. G. Philip, B.A., Joh.; E. G. T. Poynder, Cai.; E. C. Rayner, B.A., Cai.; L. C. Rivett, Trin.; F. H. Robbins, Fawc.; F. G. Rose, B.A., Joh.; H. W. Scott, B.A., Cai.; A. S. Seabrooke, B.A., Christ's; F. T. Shackell, B.A., Pemb.; R. A. Sherman, Cai.; T. H. G. Shore, Joh.; G. Sparrow, B.A., Cai.; W. A. Stokes, B.A., Emm.; J. L. M. S. Cane, B.A., Trin.; J. F. Taylor, B.A., H. Selw.; G. S. Thomas, Down; F. S. Tinker, B.A., Pemb.; J. R. Waddy, Pemb.; C. B. Wainwright, B.A., Cai.; L. C. Walker, B.A., Christ's; F. W. Watkinson, Trin.; A. J. Wauze, B.A., Pemb.; L. M. W. Wauze, B.A., Pemb.; S. M. Wilcox, Trin.; R. W. Wilcox, B.A., Cai.; B. H. C. Wilson, Trin.; J. Winterbottom, King's.

THIRD M.B. (Part I).—W. B. Alcock, Trin. H.; L. A. P. Anderson, Emm.; V. A. Anderson, B.A., Cai.; F. A. P. Ayres, B.A., Trin.; E. B. Booth, B.A., King's; A. A. Cane, B.A., Trin.; E. G. S. Cane, B.A., Jes.; F. G. Chandler, B.A., Jes.; A. F. Conyn, B.A., Pemb.; K. Conyn, B.A., H. Selw.; R. F. P. Cory, B.A., Cai.; H. L. Duke, B.A., Cai.; H. G. Earle, B.A., Trin.; L. C. Rivett, Trin.; J. T. Frost, B.A., Sid. Suss.; G. G. Greaves, B.A., Emm.; A. C. Johnson, B.A., Down; F. I. M. Jupe, M.A., Down; T. H. Just, B.A., Trin.; W. Ledlie, M.A., Christ's; C. Mackenzie, Trin.; Emm.; W. G. Marsden, B.A., Emm.; E. H. Moore, B.A., Trin.; H. Moore, B.A., Trin.; B. Oliver, B.A., Trin.; W. P. Pigion, B.A., Christ's; H. B. Pope, B.A., Cai.; L. Powell, King's; J. E. Pulling, B.A., Christ's; R. A. Ransau, B.A., Cai.; E. A. Rayner, B.A., Cai.; W. F. Rhodes, B.A., H. Selw.; F. E. W. Rogers, B.A., Emm.; W. D. Ross, B.A., King's; S. H. Ronquette, B.A., King's; H. B. G. Russell, B.A., Sid. Suss.; I. V. Russell, B.A., Emm.; A. Sandison, B.A., Trin.; F. J. Thorne, B.A., Jes.; W. B. Topley, B.A., Joh.; J. B. A. Wignall, B.A., Cai.; N. S. Williams, B.A., Cai.; C. R. Wright, B.A., Christ's.

THIRD M.B. (Part II).—A. G. Atkinson, B.A., Trin.; G. G. Butler, B.A., Emm.; H. Chapelle, B.A., Joh.; J. F. Clennish, M.A., Cai.; A. H. Crook, B.A., Christ's; L. E. Dudgeon, B.A., Sid. Suss.; H. B. Elton, B.A., Cai.; A. G. D. Firth, B.A., Trin.; C. L. Forde, B.A., Cai.; G. A. F. Heyworth, B.A., Trin.; W. H. Hodkinson, B.A., Christ's; B. Hughes, M.A., H. Selw.; W. M. Jeffreys, B.A., Trin.; J. L. Joyce, B.A., King's; H. Lee, B.A., Cai.; J. B. Jole, B.A., Emm.; R. M. Moore, P. A., Joh.; F. Parsons, B.A., Cai.; R. F. Priestley, B.A., Cai.; C. Raymond, B.A., Cai.; E. N. Russell, B.A., Trin.; O. R. Smale, B.A., Cai.; A. E. Stangfield, B.A., Joh.; A. C. Sturdy, B.A., Pemb.; R. S. Suss., B.A., Sid. Suss.; B. A. Suss., B.A., Sid. Suss.; W. W. Treves, B.A., Cai.; R. M. Vick, B.A., Jes.; A. C. Warren, M.A., Emm.; T. N. Wood, B.A., Pemb.; A. E. M. Woolf, B.A., Emm.

An examination for the diploma in Tropical Medicine and Hygiene will commence on Wednesday, January 15th.

UNIVERSITY OF LONDON.

THE following candidates have been approved at the examinations indicated:

M.D. in Medicine.—H. H. Bashford, London Hospital; Dorothy C. Hare, London (Royal Free Hospital); S. H. Hare, London (Royal Free Hospital); St. Thomas's Hospital; J. M. O'Meara, University College Hospital; W. M. Sadler (University Medical); University College Hospital; W. O. Sankey, St. Thomas's Hospital; W. L. Scott, University College Hospital; A. St. John, St. Bartholomew's Hospital; T. M. Tibbets, University of Birmingham; Ivy E. Woodward, London (Royal Free Hospital) School of Medicine for Women.

* Obtained the number of marks qualifying for the University Medal.

M.D. in Pathology.—O. C. Gruner (University Medical), University of Leeds.

M.D. in Midwifery and Diseases of Women.—F. Alcock, Guy's Hospital; D. H. de Souza, D.Sc., University College Hospital; R. A. Hendry, (University Medical, University of Liverpool); Ethel F. Iredell, B.A., London (Royal Free Hospital) School of Medicine for Women; C. A. L. Mayer, Guy's Hospital; A. Bandle, University College Hospital.

M.D. in State Medicine.—Barbara Tcharkovsky, B.Sc., London (Royal Free Hospital) School of Medicine for Women and University College.

M.D. in Tropical Medicine.—H. R. Nutt, St. Mary's Hospital and London School of Tropical Medicine; O. Marriott, Guy's Hospital and London School of Tropical Medicine.

M.S.—W. R. Battye, B.Sc., University College Hospital and St. Bartholomew's Hospital; A. J. Bixland, University College Hospital; C. A. Moore, University College Bristol and London Hospital; H. J. Nightingale (University Medical) St. Thomas's Hospital; H. B. Whitehouse, St. Thomas's Hospital and University of Birmingham.

* Obtained the number of marks qualifying for the University Medal.

UNIVERSITY OF LEEDS. FACULTY OF MEDICINE.

THE following candidates have been approved at the examination indicated:

FINAL M.B., Ch.B. Part I.—W. T. Hessel, A. Riley, C. G. K. Sharpe, and A. E. Taylor.

Part II.—H. Vallow.

The degree of M.B., Ch.B. has been conferred on Mr. Vallow, and the diploma in Public Health awarded to Captain H. C. R. Hime, M.B., Ch.B. Victoria.

THE NEW IRISH NATIONAL UNIVERSITY.

At the first meeting of the Senate of the National University held last week, the Right Rev. William Walsh, D.D., Roman Catholic Archbishop of Dublin, was unanimously elected Chancellor.

UNIVERSITY OF DUBLIN.

At the close of the Michaelmas term on Saturday, December 19th, 1908, the Senate of Dublin University met at the Examination Hall, Trinity College, and duly installed the Right Hon. Viscount Iveagh, K.P., as Chancellor, in succession to the late Earl of Rosse.

The following degrees were conferred at the same meeting:

M.B., Ch.B., B.A.O.—R. J. Attridge, J. C. Baker, J. F. Clarke, G. Halpin, G. A. Jackson, N. P. Jewell, G. Knapp, G. McCreedy, G. A. Nicholson, T. Ryan, F. N. Smartt, H. V. Stanley, H. S. Sugars, A. S. Winder.

M.D.—J. J. Abraham, R. Bailey, H. English, G. Halpin, D. F. Hunter, G. F. W. Leech.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.

Dr. F. W. Mott, F.R.S., senior physician to Charing Cross Hospital, presided at the prize distribution on December 18th, 1908. The report presented by the Dean, Mr. F. C. Wallis, F.R.C.S., referred with regret to Lord Knorr's resignation of the chairmanship of the hospital and to the death of Dr. Montague Murray. Dr. William Hunter had succeeded to the post of physician, and Dr. R. C. Jevesbury had been appointed assistant physician. Dr. Routh had been succeeded as Chairman of the School Committee by Dr. F. W. Mott. Owing to the able management of the secretaries of the Students' Club, particularly Mr. D. P. Williams, the long-wanted alterations in the club-room had been carried out. The prizes were presented by Mr. J. H. Morgan, consulting surgeon to the hospital. The Epsom Scholarship was won by Mr. A. M. Jones, the Huxley Scholarship by Mr. E. A. Sutton, the Governors' Clinical Gold Medal by Mr. T. W. Jones, and the Universities Scholarships by Mr. C. W. Shepherd and Mr. W. R. Thomas.

Mr. Morgan afterwards delivered an address to the students and their friends, expressing his congratulations on the successes which had been won in the examinations during the year and on the success of the Students' Club. He discussed the value of a small hospital as compared with a large hospital from the point of view of medical training. He said that he was not infrequently asked by parents to what school they should send their sons, and he found that it was the general impression that the larger the hospital the better the opportunity for learning. That he ventured to doubt. Six cases well studied and carefully noted were of more instructive value than fifty of which the student could have only a cursory knowledge. It was not the rare and obscure cases that they would have to deal with in private practice; what would serve them best was an intimate acquaintance with the more common types of disease. Once students had entered the wards or out-patient rooms as clerks or dressers they would largely have to instruct themselves. Careful note-taking was valuable, because it not only induced the habit of accurate observation, but it also impressed a case upon the mind in a way that nothing else could. It was not his fortune to gain a prize for a series of notes of cases, and though it was many years ago, every case was vividly recalled to his mind when he read the notes. If they had any facility for drawing, they should cultivate and make use of it in their notes—there was nothing which gave a better power of estimating size and proportion so useful alike to the physician and the surgeon. It used to be thought necessary for any one who sought to follow the higher lines of medical work to attend at a German university or school, but so good and so practical was the teaching, and so great the experience to be gained at home, that in general it was better not to go abroad, except, perhaps, for special work.

LONDON SCHOOL OF TROPICAL MEDICINE.

The following gentlemen have been approved at the twenty-eighth sessional examination:

* Captain R. R. Dutton, I.M.S., * Captain R. E. Stanger Leathes, I.M.S., * J. Macgregor Smith, * W. H. Thrasher, * H. B. Kent, * Captain H. C. Brown, I.M.S., * T. H. Sufter, * H. S. Coghill, A. Copland, * S. R. Shrivastkar, * J. G. Copland, A. G. Payne, P. Stallard, S. A. McClintock, * P. F. Foran, * S. C. G. Fox, * O. G. F. Luhn, * T. H. Drayton, Miss E. Shepherd, * W. C. Hossack, * Captain A. Spittler, I.M.S., A. Tröndle, * S. MacLaine, * A. Browne, O. Marriott, * E. Slack.

* With distinction.

† Colonial Service.

SOCIETY OF APOTHECARIES OF LONDON.

The following candidates have been approved in the subjects indicated:

Surgery.—* D. F. Dobson, J. M. Fiske, * W. N. Pickles, * A. F. Reardon.
Medicine.—H. W. B. Dauner, * D. F. Dobson, * J. M. Fiske, * J. S. R. Lewis, * H. A. Parker, * W. N. Pickles, S. H. Watton, * R. P. Wylie.
Forensic Medicine.—A. H. C. Dawes, D. F. Dobson, J. M. Fiske, W. N. Pickles, H. T. Roberts.
Midwifery.—D. F. Dobson, J. M. Fiske, J. B. Moore, W. N. Pickles, G. G. Rigby, J. W. Williams.

Section I.

† Section II.

The diploma of the Society has been granted to Messrs. D. F. Dobson, H. A. Parker, and A. F. Reardon.

Contract Practice.

FRIENDLY SOCIETIES AND MEDICAL CONTRACT RATES.

SIR.—Letters appear periodically in your columns referring to the remuneration received by club doctors, but nothing is done to remedy the grievance.

Perhaps the following facts about the financial position of the leading Friendly Societies may interest those who are paid by the same societies 4s. per annum for adults and 2s. per annum for juveniles.

	Capital.	£	s.	d.
Manchester Unity of Oddfellows	...	13,822,043	6	11
Ancient Order of Foresters	...	7,636,269	11	5
National Deposit Friendly Society	...	874,820	17	4
Rational Associated Friendly Society	...	600,000	0	0
Grand United Order of Oddfellows	...	1,446,063	17	0
Independent Order of Rechabites	...	2,018,635	0	0
Loyal Order of Ancient Shepherds, Ashton	...	1,024,827	0	0
Unity	...	310,000	0	0
United Ancient Order of Druids	...	400,000	0	0
National United Order of Oddfellows	...	188,350	0	0
Order of Druids

These figures refer to 1908, and show that ten societies have between them a total capital of over twenty-eight million pounds. From the paper in which this statement appeared I quote the following:

The registered friendly society usually provides a medical benefit, by which skilled medical attendance and medicine is secured to the members at the same cost as in a collecting (insurance) company is paid for the collection of the contributions.

From this it seems that our skilled services are valued at the same rate as the unskilled work of a collector of pence.

Some years ago, when I held an appointment as colliery surgeon, my assistant was once invited to "have a drink" with a club patient. Upon his declining the offer, this was what the collier said: "Ah! you're too proud to drink with me, but you're nowt but my servant, my b. servant"; and that, I think, exactly describes the position of affairs.

We, who have spent much time and money in getting qualified, are practically in a degrading bondage to the very men who themselves are always insisting on a fair wage, and we tamely submit, instead of taking a leaf out of their book, and by united action forcing them to come to our terms.

Is it not possible to get every medical man to promise not to accept club work excepting upon such terms as may be agreed to by a central committee? Surely those who do not hold club appointments could be brought to see that indirectly they would also benefit by supporting such a resolution, even if no higher motive would influence them.

So far as I can ascertain, the only reason why all club doctors do not strike for adequate pay is that they fear their colleagues or opponents would step in and take their appointments, which implies that our standard of conduct is considerably lower than that of the working man.

Is this really so? I doubt it, and believe that the majority of our members would be loyal.

Could not the experiment be tried—say in one Division—of sending circulars or postcards to every medical man in the district to ascertain how many would give their support?—I am, etc.,

South Brent.

F. W. STYLE.

The Services.

PAY OF LIEUTENANT-COLONELS IN THE R.A.M.C. (TERRITORIAL FORCE).

WE are informed that the action of the War Office expressed in the letter of Sir E. W. D. Ward of November 17th, 1908, published in this column last week (p. 1898), is to be accounted for by the fact that in the Regular Army a medical officer above the rank of major never holds a regimental appointment. It was promised that a volunteer transferring to the Territorial Force should not lose his rank, a Lieutenant-colonel R.A.M.C.(T.F.) consequently retains that rank in the service, but, as long as he serves regimentally, is held to be entitled to receive only the pay and allowances of a major.

HIGHLAND DIVISION NURSING SERVICE.

A MEETING of the Highland Division Nursing Service Committee of the Territorial Force was held in Aberdeen last week to consider details regarding the establishment of a nursing service in the North of Scotland, with a centre in Aberdeen. Matrons, Sisters, and nurses were enrolled, so that the service for the Highland Division is now complete. Miss MacNaughton, Aberdeen, is Organising Matron.

Medico-Legal.

UNIDENTIFIED BODIES.

IN each of two cases which occupied the time of the jury in the City of London on December 12th the identity of the deceased was a matter of some doubt. In the one case it was not determined at all; in the other it was eventually settled by the clothing. This case was one of drowning; when the body was removed from the water the features of the deceased could have been identified by any one familiar with them, but by the time the body was claimed they were unrecognizable. As a result the jury suggested to the coroner that he should communicate with the authorities and urge the provision of a proper refrigerating apparatus, so that bodies might be preserved unchanged for any period necessary. This suggestion is clearly to the point, because there must be numerous cases in which identification of a dead body is of immense importance not only to individuals but to the public. It is somewhat curious, however, that there should be need for such advocacy at the present date, for the value of refrigerators in connexion with public mortuaries was recognized not only by medical men but by the Legislature nearly twenty years ago. A clause on the subject may be found in the Public Health Act (London) of 1891, Section 93, providing for the fitting up of one or more suitable buildings to which dead bodies found in London and not identified, together with any clothing and other articles found with or on them, might be removed and preserved with a view to their ultimate identification. Furthermore, the point is one to which, we believe, Dr. Wallo and other coroners have repeatedly drawn attention. The delay, therefore, on the part of the authorities to take advantage of the power conferred upon them by the Act is not readily comprehensible. Another arrangement, the drawbacks of which are evident on the surface, is that by which mortuaries and coroners' courts are sometimes placed at a considerable distance apart; Southwark is an instance in point. The necessity to attend an inquest either as a jurymen or as a witness is a sufficient infliction in itself without the addition of unnecessary waste of time, such as that which is inevitable when juries have to walk considerable distances to view bodies.

THE PECULIAR PEOPLE.

A VERDICT of manslaughter was returned at a coroner's inquest at Canning Town on December 19th, 1908, against the father and mother of a child which had died of measles and pneumonia. The medical evidence showed that death had been accelerated by neglect to obtain medical assistance. The parents belonged to the sect known as the "Peculiar People," and in conformity with their beliefs sought no medical assistance. The mother testified that she had belonged to the sect for nearly thirty years. Of her eleven children, nine were living. Both parents were committed for trial on the coroner's warrant.

VALUE OF A PRACTICE.

JUNIOR.—The value of a practice under such circumstances as those stated would be very considerably depreciated, but to give on such data even an approximate value would be quite impossible.

PARTNERSHIP ACCOUNTS.

ACCOUNT asks if it is usual for the incoming partner of a firm to have access to the ledger used before his time. He also wishes to know whether, in the case of a patient paying

money to the new firm, it should be applied to the settlement of their account, or whether the old firm has a prior claim to it for an old account still unsettled.

* * It is usual for an incoming partner to have access to the ledger used before his time, when necessary for the purpose of carrying on the common business. In the case of patients running long accounts, it might often be necessary to look up their financial record. He has no claim to have access for any other purpose. The payment of bills should be in the order in which they were contracted. When patients of an old firm continue to employ the new, the accounts of the old should be paid before those of the new, unless the former have become irrecoverable under the Statutes of Limitation.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

RELATIONS OF MEDICAL MEN TO PATENT MEDICINES.

OUR opinion is asked on the following matter: X, has a patient who, when living in another town, was given by Dr. Z, a mixture also is still taking. As it appears to suit her, X wishes her to continue it if its ingredients are compatible with his other treatment. He has therefore asked Z, what it contains, but has been told by Z, that, while willing to supply the medicine to the patient whenever she requires it, he cannot disclose its contents because the formula was given him a year or two ago by an American who is about to bring out the mixture as a patent medicine.

* * We assume that X, has no interest whatever in the proposed patent medicine, but only considers himself in some way bound in honour not to disclose the formula he received from the American. Nevertheless, it is to be regretted that he should have used in his practice a remedy which is subject to such restrictions. It is a recognized rule that medical practitioners should not use secret remedies, and should not refuse to disclose the nature of any treatment they employ, therefore Z, cannot consistently with this rule continue to supply this medicine to his patients.

RIVAL CLAIMS TO A PATIENT.

B. AND H. are neighbouring practitioners in a small town, and are on friendly terms. M. is assistant to H. In the temporary absence of H., M. asked B. to see a boy with a crushed hand, and it was agreed that the boy should be sent to the hospital; and M. also asked B. to operate, he giving the anæsthetic. B. did so, but afterwards "claimed the case." M. is chagrined at this, and asks whether it is customary, or what was the proper procedure on the part of B. and M.

* * We are not quite clear what "claiming the case" means, but we should think it usual for the surgeon who performed the operation to continue the after-treatment. The notion that the surgeon's concern with the case ends with stitching up the wound seems out of date, as ultimate success so often depends upon subsequent attention to details.

THE TITLE OF "SENIOR."

ANTIPODES asks which of two practitioners has the right to call himself the senior—D., who practised for a short time in a time, but went away for a time; or T., who started practice two years before D. returned. The interval between D.'s going and returning is stated to have been some years.

* * We are not aware that it is customary in this country for practitioners to adopt the title or to style themselves "Senior Practitioner" in the town or village in which they live, and we should certainly deprecate its introduction as being invidious and exceedingly difficult to define. If, for example, it were taken to mean the man longest in practice in the place, it might so happen that he would be junior in age and in the date of his professional qualifications to his colleagues; but we do not think any other basis for the classification would be more satisfactory, although it is possible that a better solution has occurred to our antipodean colleagues. As D. seems to have practised in the town long before T., and on the whole for a longer period, he would seem to have most claim to call himself "senior."

Obituary.

GRIFFITH GRIFFITHS. L.R.C.P.EDIN.,
M.R.C.S.ENG., J.P.,
PONTARDAW.

We regret to announce the death of Dr. Griffith Griffiths, J.P., of Pontardawe, which occurred at his residence on December 17th, 1908, after a long illness. Dr. Griffiths was born in January, 1840, at Alltven, Swansea Valley, the son of an independent minister—the Rev. Philip Griffiths, a man of marked individuality and the possessor of great influence in his sphere and time. After several years spent at the village school he went to the Normal College, Swansea, at that time the most noted secondary school in Wales, whose head master, Dr. Evan Davies, admittedly, apart from the success of the school, did more towards educational reform in Wales than any other man of his time. From school, as was then the custom, Griffiths was apprenticed to the late Mr. John Paddon, M.B.Lond., at Swansea, who at the time was Surgeon to Vivian's copper works, and conducted also a large private practice. In 1859 Griffiths entered at University College Hospital, and whilst there obtained the gold medal in *materia medica* in 1861, and the first silver medal in midwifery in 1862. In 1864 he became M.R.C.S.Eng. and shortly afterwards L.R.C.P.EDIN. At University College he had as fellow student Sir John Williams, and the strong friendship which then sprang up was known to have lasted throughout subsequent years. Before leaving London Griffiths served for a short time as house-physician to the Brompton Hospital for Consumption; he returned to Wales and settled in practice in Pontardawe, and soon after through a death vacancy succeeded to all the district public appointments as well as to an extensive private practice. He was a neat and pains-taking surgeon and was much in request as an accoucheur. From his early manhood he was troubled more or less with winter cough; latterly this became aggravated and the usual complications supervened. From these he died on December 17th, leaving a widow and an only child, now married to Dr. O. Evans, who for some years had done much of his professional work.

A few years ago Dr. Griffiths was made a Magistrate for Glamorganshire, and until his health failed took a keen interest in petty sessional work. He was always very good company, and had a memory well stored with folklore and Welsh literature. In his younger days he was very fond of music, and devoted much time and labour to Welsh choir singing; it was the pride of his life to talk of the gold watch and chain presented to him by his father's congregation for his successful efforts with the chapel choir. At the Pontardawe Board of Guardians on December 17th, 1908, Mr. Herbert Lloyd feelingly referred to the death of Dr. Griffiths, and moved a vote of condolence with the family; the vote was adopted in silence.

We regret to have to record the death, at Beyrout, on November 22nd, 1908, of JOHN WORTABET, M.D., in the 82nd year of his age. He was for many years Professor of Anatomy at the Medical College and Physician to the Hospital of the Knights of St. John in that city. He published some years ago an Arabic version of *Gray's Anatomy* for medical students in Syria and Egypt. He was also the author of several medical works in that language and the writer of a number of articles on plague, leprosy, and allied subjects in the British medical magazines. Dr. Wortabet was the recipient of the Order of the Medjidieh and of the Knights of St. John in recognition of his professional services. His death is mourned by three daughters and three sons, who survive him, two of the latter being members of the profession. His loss will be felt also by a large circle of friends, amongst whom are many of his former pupils.

Dr. JUSTIN LEMAISTRE, who died recently, was for many years Professor of Anatomy in the Medical School of Limoges, and a leading practitioner of that town. He was *interne* of the Paris hospitals, and took the degree of Doctor of Medicine in 1875. He was the author of writings on external oesophagotomy in children, peritonitis abscess, and on the air of Limoges and its porcelain factories. He was the first to describe *periliche*, a con-

tagious disease of the mouth occurring in children caused by the *Streptococcus plicatilis*, which lives in wells, and is transmitted to the lips by unclean drinking vessels. This discovery was published in 1886.

DEPUTY INSPECTOR-GENERAL WILLIAM SPENCER LIGHT-FOOT, R.N. (retired), died on December 14th, 1908. His commissions were thus dated: Surgeon, March 31st, 1880; Staff Surgeon, March 31st, 1892; Fleet Surgeon, March 31st, 1896; and Deputy-Inspector-General of Hospitals and Fleets on retirement from the service, June 9th, 1904. He was surgeon of the *Decoy* at the bombardment of the Alexandria Forts in 1882, receiving a medal with clasp and the Khedive's bronze star; he was also in the operations near Suakin, in the Eastern Soudan, in 1884, receiving an additional clasp.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Bela Weiss, of Vienna, sometime editor of the *Wiener medizinische Presse*, who had earned a high reputation by his writings on general subjects, aged 70; Dr. Elloi Dudon, Deputy Professor of Anatomy in the Medical Faculty of Bordeaux, and a surgeon of considerable reputation; Dr. Felizet, Surgeon to the Paris Hospitals and General Secretary of the Paris Surgical Society; Dr. Joffroy, Professor of Clinical Mental Pathology and Diseases of the Encephalon at the Paris Medical Faculty; Dr. Benjamin Anger, formerly Surgeon to the Paris Hospitals and *professeur agrégé* of the Faculty of Medicine; Dr. Alejandro San Martín y Satrustegui, Professor of Clinical Surgery in the Central University, Madrid; Dr. Vincenzo Brigidi, formerly Professor of Morbid Anatomy in the University of Genoa, and author of numerous monographs on pathological subjects, aged 70; Dr. Theodore Jules Ernest Hamy, Professor of Anthropology at the Paris Museum of National History, Member of the Paris Academy of Medicine, and author of a treatise on human pathology and of numerous works on anthropology, aged 66; Dr. Georg von Rindfleisch, Professor of Pathology in the University of Wurzburg, author of a *Textbook of Morbid Histology*, *Elements of Pathology*, and smaller works on tuberculosis and scrofulosis, in his 72nd year; Dr. Ferdinand Jouvénel, Director of the Sanatorium at Montigny en Ostrevant, founded a few years ago under the auspices of the *Ligue du Nord contre la Tuberculose*, a post for which he was selected by Professor Calmette; Dr. Andrew J. McCosh, a prominent surgeon of New York, aged 50; and Professor J. Schnadel, Director of the First Ophthalmological Clinic of the University of Vienna, aged 66.

Public Health

AND

POOR-LAW MEDICAL SERVICES.

EXAMINATION OF FOREIGN MEAT.

REGULATIONS made by the Local Government Board under the Public Health (Regulations as to Food) Act, 1907, subjecting certain kinds of imported meat intended for consumption in this country to more stringent examination, came into force on January 1st. The Board, being very properly desirous of securing uniformity in the administration of the regulations at the various ports of entry, has issued a circular to all the port sanitary authorities and certain borough and district councils containing advice as to the manner of procedure to be adopted under particular circumstances. Imported pork in portions less than the entire carcass may now be detained by the Customs officer for examination by the medical officer of health unless the package containing the consignments is accompanied by a certificate from a competent authority in the place of origin that the pig at the time of slaughter was free from disease, and that the dressing, preparing, and packing of the carcass has been carried out properly and with a view to the prevention of danger to the public health if the meat is used as an article of food. A schedule of official certificates which will be accepted by the Board is in course of preparation. Where the presence of tuberculosis is discovered in pigs imported whole the medical officer of health is advised to condemn the whole carcass as unfit for human consumption in accordance with the recommendation of the Royal Commission on Tuberculosis, 1896. It is very certain that the work of the sanitary officials concerned in the administration of these regulations will be very great, so that it is not at all surprising to find that the Local Government Board anticipate the necessity for appointing assistant officers, who, it is needless to say, should be specially trained for the work they will be required to perform.

Hospitals and Asylums.

JAMES MURRAY'S ROYAL ASYLUM, PERTH.

The annual report of the committee and the medical superintendent, Dr. A. R. Ure, of this private asylum, contains the medical superintendent's report for the year ending March 31st, 1908, and the statistical tables for the year 1907. These latter show that, excluding voluntary boarders, there were 123 patients in the asylum on January 1st, 1907, and 122 on the last day of the year. The total cases under treatment during the year numbered 158, and the average number daily resident 124.09. These numbers show slight falls on those of the two previous years. During the year 35 were admitted, of whom 28 were first and 7 not-first admissions. Of the total admissions, in 3 the attacks were first attacks within three, and in 9 more within twelve months of admission; in 9 not-first attacks within twelve months of admission; in 13, whether first attacks or not, of more than twelve months' duration on admission; and in 1 case of congenital origin. The admissions were classified according to the forms of mental disorder into: Mania of all kinds, 13; melancholia of all kinds, 12; dementia, 2; delusional insanity, 1; confusional insanity, 2; and circular insanity and congenital mental defect, 1 each. The probable etiological factors were assigned in the following numbers: Alcohol in 5, syphilis in 2, the climacteric in 6, previous attacks in 13, and mental strain and worry in 5. An insane heredity was ascertained in 18, a neurotic heredity in 12, and an alcoholic heredity in 9. During the year 11 were discharged as recovered, giving a recovery rate in the admissions of 31.43 per cent., as compared with the average for the decade of 34.03 per cent.; 14 as relieved, and 1 as not improved. During the year 10 died, giving a death-rate on the average numbers resident of 8.01 per cent., as compared with the average of 6.08 per cent. for the decade. The deaths are returned as being due in 3 to influenza, and the remainder in single numbers to general paralysis, valvular heart disease, chronic alcoholism, pneumonia, pulmonary consumption, greyness of lung, and cold on admission. In the last-mentioned case the patient was suffering from iodine poisoning on admission. The admirable condition and management of this asylum is commented upon in highly favourable terms in the report of the Lunacy Commissioners for Scotland.

INVERNESS DISTRICT ASYLUM.

From the annual report of Dr. R. B. Campbell, the medical superintendent of the Inverness District Asylum, for the twelve months ending May 15th, 1908, we see that on May 16th, 1907, there were 572 patients on the register, and that on May 15th, 1908, there were 652. The total cases under treatment during the year numbered 835, and the average number daily resident 662. During the year 163 were admitted, of whom 116 were first and 47 not-first admissions. The readmissions formed 28 per cent. of the admissions, but this apparently high readmission-rate was partly accountable to the fact that constant effort is made to board with suitable guardians quiet and chronic cases, and that though the majority of these do well outside the asylum, some break down and have to be readmitted, thus factitiously swelling the readmission-rate. Of the total admissions 42, or 25 per cent., were in average bodily health and condition, the remainder being either in indifferent or weak and exhausted condition. In 73 the attacks were first attacks within three and in 22 more within twelve months of admission; in 47 not-first attacks within twelve months of admission; in 9 whether first attacks or not, of more than twelve months' duration on admission; and the remaining 12 were congenital cases. They were classified according to the forms of mental disorder into: Mania of all kinds, 75; melancholia of all kinds, 56; secondary dementia, 18; general paralysis and acquired epilepsy, 1 each; and cases of congenital or infantile defect, 12. As to the principal probable etiological factors in the admissions, alcohol was assigned in 16, or 9 per cent., syphilis in 1, dementia in 44, and "heredity" cases in 51. Hereditary influences were ascertained in 38, or 23.3 per cent., and, as already stated, congenital defect existed in 12. During the year 62 were discharged as recovered, giving a recovery rate on the admissions of 38 per cent.; 17 as relieved and 19 as not improved. The 17 discharged as relieved were harmless patients, incapable of further improvement in the asylum, and were handed over to their relatives to be boarded out with suitable guardians, and the 19 not improved 31 cases sent to the lunatic wards in the Long Island poorhouse, licensed by the Commissioners in the autumn of 1907 for the reception of chronic insane patients who did not require asylum treatment, but who were unsuitable for family care. During the year also 55 died, giving a death-rate on the average numbers resident of 8.3 per cent. The deaths were due in 15 to cerebro-spinal diseases, with only 3 from general paralysis; in 31 to chest diseases, including 11 deaths from pulmonary consumption; or 20 per cent. of the total deaths—and 14 from acute lobar pneumonia; in 7 to abdominal diseases; in 1 to sarcoma of skull and in 1 to asphyxia, the patient, not previously suspected of being suicidal and convalescent at the time, drowning himself in Beaulieu Firth. The asylum was visited by influenza, which was followed by pneumonia in many cases, but no other zymotic diseases appear to have attacked the patients.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL CHANGE OF ADDRESS.

THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL have been removed to 429, Strand.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, London, W.C.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Articulate, London*. The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

TELEPHONE (National):—

EDITOR,

2631, Gerrard.

GENERAL SECRETARY AND MANAGER,

2630, Gerrard.

MEDICAL SECRETARY, 2634, Gerrard.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents in the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

ENDEMIC MALARIA?

ANOPHELINE writes: With a view to ascertaining the existence or otherwise of endemic malaria in a locality, 246 native children under 10 years of age were examined in November for enlargement of the spleen, and in 18 instances (roughly 7 per cent.) it was found to be appreciably enlarged. The vast majority of the children were resident in the locality for from four to six years, but were born elsewhere in places which were probably malarious. Mosquitoes exist in the locality in question, but the classes have not been differentiated. The entire European population do not spend more than a year in the locality and come from places where malaria is endemic. Attacks of malarial fever are very common amongst them in the proportion of 500 cases per 1,000 of population annually for the last seven years. The diagnosis has been verified microscopically in about 25 per cent. of these cases, one smear of blood only being, as a rule, examined before the administration of quinine. The climate favours the occurrence of chill; the thermometer being generally about 80° F. in the shade with an annual range of from 72° F. to 96° F., so that slight physical exertion causes free diaphoresis. High winds are common and these acting on the sweating skin cause chill. The question at issue is—Is malaria endemic in the locality and, if so, what would best describe its degree of prevalence—slightly, distinctly, very?

ANSWERS.

TREATMENT OF TAPEWORM IN CHILDHOOD.

MR. FREDERICK POWELL, Director, The Wellcome Chemical Research Laboratories writes: In the issue of the BRITISH MEDICAL JOURNAL of December 19th, 1908, p. 1948, I have observed a paragraph respecting the "treatment of tapeworm in childhood." We have recently been interested in an investigation of the constituents of pumpkin seeds, which, as you may know, are recognized by the United States Pharmacopœia under the title of "Pepo," and have long been regarded as one of the safest and most efficient vermifuges. Although this action has been attributed to the fatty oil expressed from the seeds, it has not yet been definitely established. It would be of considerable interest from a scientific as well as a practical point of view, to obtain some confirmation of the activity of this oil for the purpose indicated, and if your correspondent would like to try it, I should be very glad to supply him with the requisite quantity without cost. The oil is bland, not unpleasant to the taste, and if it should not prove effective it can do no harm to the patient.

TREATMENT OF FOLLICULAR STOMATITIS.

W. G. writes: If "M. W." will try touching each spot as soon as the slightest soreness is noticed with a small crystal of copper sulphate, and repeating once or twice (during the next day, I think he will find the ulcers arrested. The patient should avoid all uncooked vegetables and fruit whenever there is the least tendency to stomatitis, and a course of soda and rhubarb is about the best preventive.

RINGWORM OF THE SCALP.

H. H. writes: If "H. S. B." (December 26th, 1908) will paint the infected areas with tincture or liniment of iodine daily, after shaving the head, he will get rid of the trouble in a few weeks.

DR. WALTER GRIPPER (Wallington) writes: I have unfortunately had a long experience in an institution. Of course, where strong remedies such as croton oil have been used recently, or any irritation remains, it is somewhat risky to expose to the π rays, but I have on occasion had the patches themselves protected and the rest of the scalp depilated, so as to obviate any spreading, and then attacked each patch by careful needling with croton oil or epilating by electrolysis; the latter is somewhat painful for the moment, and should not be tried on large patches where a possible permanent alopecia would be much noticed. On the detection of a new case I now never attempt any remedies, but have the whole or such part of the scalp as is necessary exposed to the π rays, and find the time occupied in a cure lessened by one quarter at the least.

ADMINISTRATION OF DIPHTHERIA ANTITOXIN BY THE MOUTH.

R. G. H. writes: In answer to your correspondent's inquiries about the administration of diphtheria antitoxin by the mouth, I would strongly advise them to give the method a trial. With the exception of cases in which repeated vomiting is a prominent symptom, and which would make the retention of the antitoxin doubtful, I almost invariably give it in that way. In my experience it acts just as rapidly and certainly; it causes no gastric symptoms, it can be given at any time by the friends, and it avoids the disagreeable necessity of performing a painful little operation on a sickly child.

W. M. writes: I have always administered antitoxins by the mouth with satisfactory results. In diphtheria the improvement seems more rapid than in other cases where serum is given. The fact that the serum comes in contact with the direct seat of the infection seems to aid in the elimination of the virus from its stronghold. Quite recently I used the serum in two cases of diphtheria. The effect was marvellous. In one case the membrane dissolved rapidly, and in two days had disappeared; in the other not so quickly, but each day the membrane became thinner and less defined, until, in a week's time, it was gone, leaving the surrounding area clean and healthy. I had similar good results in septicaemia (puerperal), the temperature declining after the first administration. Although other measures were used and continued when giving the serum, the results obtained were directly noticeable after giving the serum by the mouth. I am convinced that this method is quite as satisfactory and, of course, much less troublesome and objectionable to the patient than the hypodermic method, and therefore my intention is to continue it. Some may contend that this method is not scientific, that the active properties of the serum may become destroyed in alimentary canal; possibly there may be some truth in this, but it is not all true, as the results attending its oral administration are sufficiently convincing to me.

M.O.H. (Hants) writes: "For the last few years" I have made it my practice always to administer antitoxin by the mouth, excepting in very urgent cases with unqualified success. Two years ago I had an epidemic to treat, and on this occasion administered over three hundred 2,000-unit doses without a failure.

LETTERS, NOTES, ETC.

NOTIFICATION OF BIRTHS ACT.

ALDERMAN J. C. MCWALTER, M.D. (Dux), F.F.P. and S.G. (19, North Earl Street, Dublin), writes: In the Corporation of Dublin are just now considering the adoption of the Notification of Births Act, any practitioner who may object should at once lay his views before that body.

A DISCLAIMER.

DR. A. E. NAISH (Sheffield) writes: My attention has been called to an advertisement by the West Surrey Central Dairy Company stating that I have demonstrated the superiority of English dried milk over fresh cow's milk for the feeding of infants. This statement is not only unauthorized but wholly incorrect and misleading.

MEDICAL INSPECTION OF SCHOOLS.

ISOLATED writes: In the distribution of these appointments I am sure there must be many medical men who, like myself, think they have been treated very unfairly. Within three miles of my house are no less than seven village schools, three of them within a mile, in order to reach which the medical men appointed have to travel over between five and eight miles of bleak and uninhabited country. I am the senior medical practitioner in the district, and my claims have been entirely ignored. Their intrinsic value at a shilling a head is not worth considering, but there are likely to be more serious and far-reaching consequences.

A "PERNICIOUS" ENEMA.

THE *St. Mary's Hospital Gazette* tells a story of some one who had made a complaint against the hospital that a relative had been killed by a "pernicious" enema. This was the interpretation of the diagnosis "pernicious anaemia" on the board by the patient's bedside.

TOOTHBRUSH BRISTLES AND APPENDICITIS.

MR. CORNELIUS A. GRIFFITHS, F.R.C.S. (Cardiff), writes: Three years ago I found a toothbrush bristle in the appendix of a girl aged 10 years, which I removed for recurrent attacks of pain. With the exception of numberless faecal "concretions" of varying degrees of density, this is the only "foreign body" I have found in an appendix, although I once found a living threadworm in the appendix of a man, which was amongst the contents of a hernial sac. I was operating in this case, however, for hernia and not appendicitis.

"THE BONE MARROW."

DR. W. E. CARNEGIE (Edinburgh) writes: In connexion with your kind review of my book on the bone marrow (*JOURNAL*, November 28th, 1908, p. 1616), may I venture to point out the following typographical error which occurs in it? In the sentence, "Dr. Dickson affirms that phagocytic cells are produced from the proliferating epithelium of the capillary wall," for "epithelium," read "endothelium." The review also states that "in Plate XII are given some excellent schematic representations of the development of the small lymphocyte into the adult polymorphonuclear cells and of the megakaryoblast into the erythrocytes, etc." Unfortunately this statement, as it stands, gives an erroneous impression of the views expressed with regard to the development of these cells, as some of the schemes in this plate, to which reference is thus made, were drawn up to represent the views of other writers; and from these my own deductions, given in the accompanying text, differ very materially in certain points.

THE MARRIAGE OF FIRST COUSINS.

DR. ARTHUR TOWN WHITE (Leightonstone) writes: Your interesting article on the above subject reminds me that some years ago a young man—now holding a high colonial appointment—consulted me as to whether it would be advisable for him to marry his first cousin. My answer was, No; given on the following grounds: (1) Every family has some slight defect in some one or other direction—it may be a slight defect in sight or hearing or mental capacity, so slight that it does not show, but it is there; in the event of cousins marrying the children would get a double dose, and then what in the parents would not be noticed becomes in the offspring a serious defect. (2) I have never in my life come across a family of five or six children whose parents were first cousins where all the children were good specimens of the race. The most common defect in my experience is blindness. It may be unusual, but I have never come across a person born blind whose parents were not cousins. If cousins marry they may have one or two healthy children, but I am absolutely convinced they will not go on to five or six without some very serious defect appearing in one or other of the children. The most common causes of defective children are, first and most important, taking drugs to procure abortion in the early months of pregnancy; secondly, alcoholism; thirdly, consanguineous marriages; fourthly, syphilis. Starvation, tuberculosis, etc., do not in my experience produce physical defects in children. With regard to consanguineous marriages amongst savage races, we cannot compare them in any way with European; mental and physical defects are less common amongst natives, who lead healthy lives, and when the law of the "survival of the fittest" has not been interfered with; there are therefore in them no family defects to be reproduced, and a marriage between cousins has no bad influence on their children. What I maintain is, that, eliminate the four above causes of defect in children, even if the parents are tuberculous, starved, overworked, etc., if the children are brought up with care and properly treated, there is no reason why they should show any defect at any time; with regard to the offspring of tuberculous parents, unusual care would be necessary. But whatever care you take of the children whose parents come under the four headings above mentioned, a very great percentage of them will be defective mentally or physically; I should say quite 40 per cent.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

A Clinical Lecture

ABDOMINAL EMERGENCIES.

DELIVERED AT THE ROYAL INFIRMARY,
SHEFFIELD.

By SINCLAIR WHITE, M.Ch., F.R.C.S.,

SENIOR SURGEON TO THE INFIRMARY; LECTURER ON SURGERY,
SHEFFIELD UNIVERSITY.

It would be impossible in a single lecture to review, however briefly, the entire field of abdominal emergencies, and I shall therefore confine my remarks to the more important lesions which demand early recognition, and, as a rule, prompt surgical intervention.

The majority of acute abdominal cases may be referred to one or other of the following groups:

1. Acute intestinal obstruction.
2. Gastric and intestinal ulcers that have perforated.
3. Acute inflammatory lesions of septic origin.

Ruptured tubal gestation, twisted ovarian pedicle, and traumatic lesions of the abdominal viscera do not come within this classification, and will be referred to separately.

ACUTE INTESTINAL OBSTRUCTION.

Acute intestinal obstruction, as a primary affection, is most often due to strangulated hernia, external or internal; intussusception comes second in the order of frequency, while impacted gall stones and volvulus are less common causes. Not infrequently acute obstruction is grafted on to the chronic type. This is seen most often in cancerous stricture of the large intestine, the contracted lumen of the bowel being blocked by a mass of hard faeces.

Whatever the cause the symptoms are sudden in onset and progressive in character. The abdominal pain is diffuse and, while never quite in abeyance, is subject to periodic exacerbations caused by spasmodic contractions of the intestinal muscles in their endeavour to overcome the obstruction. The exhibition of opium may more or less completely mask the intestinal peristalsis, and it ceases entirely on the advent of peritonitis, but it is incorrect and misleading to assert, as is asserted by the authors of a well-known book on surgery, that "in acute cases intestinal paralysis dominates the picture."¹

Vomiting of a reflex character is frequently associated with the onset of the attack, but inasmuch as it is one of the initial symptoms of nearly all abdominal storms, it has no special significance.

The typical vomiting of acute obstruction sets in later, sometimes within a few hours, sometimes not until one or more days afterwards. Once it begins it continues with ever-increasing frequency, while the character of the vomited matter degenerates from bile-stained mucus to a brownish faecal-smelling fluid. Except in the rarely seen Richter's hernia, where only a portion of the circumference of the bowel is involved, there is complete obstruction to the passage of faeces and flatus. The abdomen gradually becomes distended, but until the onset of peritonitis it is neither tender nor rigid. The temperature and even the pulse may not show any marked departure from the normal for a day or two.

Strangulated External Hernia.

Strangulated external hernia requires little comment, but, as it is by far the most common cause of acute obstruction, it should always be thought of, and sought for, in the first instance.

Internal Strangulation.

Internal strangulation is most often caused by bands, the products of antecedent local peritonitis, a history of which may be obtained in many cases. They extend between the omentum, appendix, or Fallopian tubes and other parts of the abdomen. They give rise to hyperacute symptoms, with early vomiting. The patients are usually under 40 years of age. Strangulation by Meckel's diverticulum, and through chinks in the omentum, or broad ligaments, or in retroperitoneal pouches, are all rare, and cause symptoms similar to those produced by bands.

Post-operative Obstruction.

Post-operative intestinal obstruction requires a brief notice. It is nearly always due to kinking of the small intestine consequent on adhesions, and at first the mesenteric vessels are not implicated. It is seen most often after operations for acute appendicitis, the symptoms appearing about the end of the first week, and after the patient has apparently reached "smooth water." At first there are merely sharp attacks of colicky pain, and occasionally the intestinal peristalsis is sufficiently powerful to stretch the adhesions and effect relief; but, if not, the typical symptoms of obstruction gradually supervene. As the patients are under trained observers from the onset, operative measures for the relief of this form of obstruction are usually resorted to in good time.

Acute Intussusception.

Acute intussusception is the most common form of obstruction in children, and the clinical picture it presents is seldom obscure. The intermittent character of the pain is very pronounced, indeed the little sufferer may fall asleep between the attacks, which recur at intervals of a few minutes. A curved sausage-shaped tumour, which hardens at the onset of each paroxysm of pain, can almost always be detected somewhere along the course of the colon, while the right iliac fossa appears unduly empty. After a few hours there will be an escape of blood-stained mucus from the anus, and later still the intussuscepted bowel may sometimes be felt in the rectum. Obstructive vomiting is later in making its appearance. In young children there may be severe shock from the first.

Volvulus.

Volvulus occurs after middle life in patients who have suffered from chronic constipation. It concerns most often the sigmoid flexure, but occasionally the caecum is involved. Its most characteristic sign is the rapid onset of abdominal meteorism. The enormously-distended bowel can usually be outlined through the abdominal wall. Vomiting is a late symptom.

Obstruction from Gall Stones.

Obstruction from large gall stones that have ulcerated into the duodenum from the gall bladder is almost limited to elderly women. There will be a history of biliary trouble, and the impacted calculus may occasionally be felt through the abdominal wall. The symptoms are not usually very acute, and relief frequently comes by the stone passing onwards into the large bowel. I have, however, on two occasions seen hyperacute symptoms from this cause.

When acute obstruction supervenes in malignant stricture of the colon the symptoms appear gradually, and abdominal distension is always an early and pronounced factor. Owing to the muscular hypertrophy and accompanying dilatation of the colon on the proximal side of the stricture the peristaltic movements are remarkably powerful. There will be a history of increasing difficulty in getting the bowels to act, and long periods of absolute constipation may alternate with attacks of diarrhoea.

Contrary to what one might expect, the growth may for a long time produce little or no effect on the patient's general health. Indeed, in the last two cases I have seen there had been a distinct gain in weight during the preceding few months with, apart from constipation, no evidence of failing health or strength. The patient will frequently be able to locate the site of obstruction by noting where the peristaltic wave is arrested, and confirmation is afforded by ascertaining the amount of water that can be introduced per anum when the hips are raised on a pillow.

GASTRIC AND INTESTINAL ULCERS.

Perforating ulcers are found in the stomach, the duodenum, the lower end of the ileum, and in the large intestine. In the latter situation they are usually secondary to malignant disease. In the lower ileum they form one of the complications of typhoid fever, appearing during the third week or later.

Gastric ulcers are conveniently divided into the acute and the chronic varieties. The former are often multiple, and occur in young anaemic women. They are especially prone to perforate when situated on the anterior wall.

The chronic ulcer is usually single, of large size, and situated on one or other side of the pylorus. It occurs most often in men between the ages of 30 and 60 years.

The acute ulcer may run a latent course until it perforates, but in most cases there will be a definite history of pain on taking food. The pain is relieved by vomiting, and the vomited matter often contains dark blood.

There is usually a well-defined tender spot to the left of the middle line. When perforation is threatening the pain becomes continuous and the left rectus muscle rigid.

Duodenal ulcer gives rise to pain, which comes on one or more hours after meals, and is relieved by taking fresh food, the entrance of which into the stomach, by causing pyloric contraction, arrests for the time being the flow of the irritating gastric juice.

The symptoms of perforation are rarely ambiguous. The patient is suddenly seized with agonizing pain, which, in the case of gastric and duodenal ulcers, is situated in the upper abdomen. The pale, anxious countenance, the small, rapid pulse, and the subnormal temperature, attest to the presence of shock, which may, however, vary greatly both in respect of its intensity and duration. Locally, the most constant and characteristic sign is board-like rigidity of the recti muscles, with total cessation of abdominal respiratory movements. In a minority of cases the area of hepatic dullness is diminished or lost, owing to the escape of gases into the peritoneal space.

ACUTE INFLAMMATORY LESIONS OF SEPTIC ORIGIN.

Of the acute inflammatory lesions I shall refer only to cholecystitis, salpingitis, and appendicitis. (Septic peritonitis is always a sequel to some other disease. It will be dealt with in connexion with appendicitis.)

They have the following symptoms in common: Abdominal pain, more or less continuous; abdominal tenderness, at first diffuse, then becoming localized; rigidity of the overlying muscles; and, with the advent of suppuration, rigors.

The constitutional disturbances will show themselves in pyrexia, always greatest in the evening; increased pulse rate; a coated tongue with anorexia, thirst, constipation; and scanty high-coloured urine loaded with urates. Vomiting is usual, but it is not of a progressive character.

Cholecystitis is seldom seen apart from gall stones, a history of which will be forthcoming. The patients are nearly all elderly, and often fat, women. Palpation will in most cases reveal a distended gall bladder, which should not be mistaken for anything else.

Acute salpingitis is an ascending infection. A vaginal examination will define the swollen and exquisitely tender tubes, and the diagnosis will be strengthened by a history of antecedent or coexisting vaginal or uterine catarrh. In very acute cases the constitutional disturbances are apt to be alarming, and marked tympanites is nearly always present. In most cases, however, under expectant treatment, the storm becomes localized to the pelvis in a day or two.

Appendicitis.

Appendicitis has been so often discussed, that one is almost tempted to apologize for alluding to it. Its relatively great frequency, however, and the importance of duly appreciating its manifold phases, give it easily the first place among the lesions we are considering.

Of 427 abdominal emergency operations performed in the Sheffield Royal Infirmary during the last three years, 264 were for acute appendicitis, while during the same period the appendix was removed 110 times after the subsidence of one or more attacks.

We are still in the dark regarding the precise causation of the disease and of its alleged greater frequency during the last two decades; but when we consider its richness in lymphoid tissue, its low vascularity, and its dependant position, which militates against the easy escape of its contents into the caecum, we cannot feel surprised that it should be so vulnerable to attacks of inflammation. Its resemblance to the tonsils, both as to its structure and liability to septic infection, seems to justify the title "abdominal tonsil" which has been applied to it.

There are many grades in the severity of appendicular inflammation, and it will make for clearness if I begin with the mildest departure from the normal and ascend step by step to the most severe.

Following this plan, appendicular colic due to concretions or to mucus retained by kinking or constriction of

the lumen, claims brief attention. It causes fairly sharp, colicky pains in the region of the appendix, but has no other untoward symptoms.

The next grade in severity is a simple catarrhal inflammation of the mucous lining, with mild constitutional disturbances and slight local pain and tenderness. Under suitable expectant treatment the symptoms subside in two or three days.

Next we have suppurative catarrh with more or less ulceration, or even gangrene of patches of the mucous membrane. The appendix is swollen, and flakes of lymph may be found on its peritoneal surface, but as yet there is no perforation.

This grade gives rise to severe symptoms. The temperature may run up to 103° or 104° F. in the evening, and the pulse to 120 per minute. The localized pain, tenderness, and rigidity are all pronounced, and a definite lump can usually be detected.

The progress of these cases may be either towards resolution or to perforation. If in the first-named direction, amelioration of the symptoms will set in on the second or third day. Perforation is revealed by a sharp increase in the pain, perhaps after it had begun to subside, by an increase in the pulse-rate, and by rigors.

If the appendix has been walled off by lymph before perforation actually takes place, the temperature will rise in ratio with the pulse, which will be full and bounding, and the iliac lump will become larger and more tender. After the storm caused by perforation has abated, the patient may look and feel better, and the symptoms of an acute abdomen may give place to those of a localized abscess.

In the less fortunate cases, where perforation is not preceded by lymph formation, or where the amount is inadequate to exclude the diseased appendix from the general peritoneum, we have grafted on the train of symptoms seen in the worst grade of the disease, the fulminating variety, in which the entire appendix is the seat of acute gangrene.

These symptoms, which are those of acute diffuse peritonitis, should be graven on our memories, because early diagnosis of the condition, followed by immediate operation, is necessary to the rescue of the unfortunate patient from what would otherwise be a certain and speedy death.

The patient may have been ill for a few days from what appeared to be an ordinary attack of appendicitis, or, more commonly, he is seized without previous warning. There will be intense pain in the right iliac region, rapidly extending to the rest of the abdomen. The face will be pale and anxious; the pulse rapid, small, and hard; and the temperature erratic—in the worst cases subnormal. The abdomen ceases to participate in the respiratory movements, becomes rigid and tender all over, and later distended and tympanic. The legs are drawn up to relax the abdominal muscles and protect the body from the weight of the bedclothes. There is intense thirst with incessant vomiting, the vomited matter welling up apparently without effort on the part of the patient. The distended intestines become paralysed and their contents motionless. The heart beats ever faster and weaker, and the failing circulation manifests itself in the blue and cold lips and extremities. Towards the end mild delirium supervenes, and with its advent the patient ceases to complain of pain or even of tenderness.

Ruptured Tubal Gestation.

Ruptured tubal gestation should be suspected when during the second or third month of a supposed pregnancy the patient is seized with acute pain in the lower abdomen. There may have been nothing aberrant in the previous history of the case, but colicky pelvic pains and irregular uterine haemorrhages are not uncommon. The rapid outpouring of blood from the torn vessels is indicated by blanched lips, a fast soft pulse, great restlessness, and an incessant cry for more air. A bimanual examination will reveal a lump in one or other broad ligament, and possibly fluctuation in the pelvis behind the uterus.

Twisted Ovarian Pedicle.

Twisted ovarian pedicle is indicated by a sudden increase in the size of the tumour conjoined with the signs of subacute peritonitis in the lower half of the abdomen. Ascitic

fluid is rapidly poured out, and in the absence of a definite history may mask the true condition.

INJURIES.

Injuries to the abdominal viscera may result in acute infective peritonitis from the escape of the contents of the stomach, intestines, or bladder, or in severe loss of blood from rupture of the liver, spleen or kidneys. When the mesentery is torn, in addition to internal hæmorrhage there is the danger of the corresponding section of the bowel becoming gangrenous.

Severe shock is apt to be produced by abdominal contusions, even in the absence of gross visceral lesions, and we must in many instances be satisfied at first to wait and watch the progress of the case. The nature of the agent concerned in the injury, and the locality of its impact, may afford assistance in diagnosis, as may also an examination of the urine. Should the shock persist or deepen after an hour or more of watching, or should there be clear evidence of progressive internal hæmorrhage, or of commencing peritonitis, the abdomen must be opened forthwith, and the condition dealt with according to its necessities.

DIFFERENTIAL DIAGNOSIS.

The chief difficulties in abdominal diagnoses are a fat abdomen, inability to elicit an exact history of the symptoms, and the order in which they appeared, the advent of peritonitis which overshadows the primary mischief, and the highly reprehensible habit which is still occasionally seen of giving opiates before the nature of the abdominal lesion has been revealed. By masking the symptoms, particularly the pain, it deludes the patient, and sometimes the doctor, into the belief that all is going well when such is not the case, and may be instrumental in delaying urgently necessary operative help. Moreover, opium inhibits peristalsis and diminishes leucocytosis, thereby seriously handicapping the patient's progress.

While in some cases it may be impossible to predict the nature of the catastrophe previous to exploration, one cannot too strongly deprecate the indiscriminate resort to abdominal section as a short cut to diagnosis.

A careful investigation of the history of the case, and of the order of onset of the symptoms, conjoined with the physical signs present, will seldom fail to indicate the nature of the lesion we are called on to deal with, and will permit of orderly preparation being made for whatever surgical measures may be necessary. The advantage of a thought-out plan over a haphazard operation is too obvious to need emphasizing.

When called on to investigate an acute abdominal case, we should keep in mind the threefold classification I have outlined.

In acute obstruction the remittent character of the pain, each exacerbation of which is accompanied by intestinal movements; the complete block to the passage of faeces and flatus; the progressive vomiting; the increasing abdominal distension; and the absence of pyrexia and of abdominal muscular rigidity, make up a picture easily read.

The sudden onset of agonizing pain in the upper abdomen of a young anaemic female, especially if there have been previous symptoms of stomach troubles, is highly suggestive of ruptured gastric ulcer, and, if accompanied by shock, abdominal tenderness, board-like rigidity of the recti muscles, and absence of abdominal respiratory movements, the suggestion becomes almost a certainty.

An antecedent history of pain coming on one or more hours after meals and relieved by taking fresh food will direct attention to the first part of the duodenum as the probable site of perforation.

The diagnosis of acute appendicitis is rarely difficult. Along with the general symptoms of inflammatory fever there will be in the right iliac region localized pain, localized tenderness, and localized muscular rigidity. In a large proportion of the severe cases there will also be a localized swelling, but it must not be forgotten that in the very worst cases this sign may be absent. An inflamed appendix, if directed upwards behind the caecum, may simulate renal trouble, and, when it lies wholly or in part in the pelvis, it may give rise to bladder or rectal irritation. In obscure cases leucocytosis, particularly if it increases from day to day, is suggestive of appendicular abscess.

TREATMENT.

Strangulated hernia, if seen early, should be reduced by gentle taxis, but, if there is the least doubt respecting the integrity of the bowel, taxis should give place to operation. If the patient's condition is good, and the bowel is not seriously damaged, a radical cure should be effected forthwith. It is not only a safeguard against recurrence, but is also a barrier against peritoneal infection from without. When the bowel is found to be gangrenous, wide resection with end-to-end anastomosis may be attempted in young and vigorous patients who do not show signs of profound toxæmia, but the majority of gangrenous cases are too ill to justify this procedure.

It is well to remember that unoperated-on cases have recovered, with, of course, an artificial anus, and that in very bad cases of gangrene the best treatment may be to make a simple incision into the sac without disturbing the exuded lymph, which has probably sealed off the peritoneum.

Obstruction from bands and other similar causes should be sought for systematically. The condition of the caecum is first ascertained. If it is empty, the obstruction will be found by following the small intestine upwards. The possibility of more than one point of obstruction being present must be borne in mind.

After freeing the obstruction, the condition of the bowel must be carefully investigated. If the portion above the constriction is much distended, and does not speedily discharge itself into the lower part, it should be withdrawn outside the abdomen, securely packed off with gauze, and opened on its antimesenteric border. After its contents have escaped, the opening is closed with a continuous suture. Advantage may be taken of the opening to introduce a saline aperient into the bowel. The establishment of an artificial anus in the small intestine is fraught with so many disadvantages and dangers that it should, if possible, be avoided.

Intussusception should, as a rule, be dealt with by operation. If seen early, an opening long enough to admit two fingers is sufficient. The procedure of reduction is of the simplest character, and need occupy only a few minutes. If for any reason operative measures are ruled out of court hydrostatic pressure may be tried. In quite early cases it will often be effectual; but the drawback to its use is that we cannot always tell whether the reduction is complete or not, and so valuable time may be lost. Should reduction be impossible resection of the involved segment of bowel must be performed, but it is nearly always unavailing in young children. A Paul's tube should be tied into each end of the cut bowel and the restoration of the intestinal canal left until a subsequent date.

To prevent recurrence after reduction the bowel should be anchored by a suture and an opiate given.

Gall stones become impacted in the small intestine, usually near its termination. After causing obstruction for a day or more they may be forced on into the caecum. They do not produce strangulation of the mesenteric vessels, and unless the symptoms are very acute, medical measures, such as the administration of belladonna, with hot fomentations to the abdomen, should be tried before having recourse to surgery. The treatment of volvulus is far from being satisfactory. It is usually quite impossible to reduce the twisted bowel, even after its contents have been allowed to escape. The best immediate treatment is to create an artificial anus. Later, the involved segment will require either excision or exclusion by short circuiting.

Acute obstruction secondary to a cancerous growth in the colon should be relieved by a proximal colostomy, the cancer being dealt with after the acute symptoms have passed away. Resection with immediate anastomosis of the colon in the presence of acute obstruction, is hardly ever successful and should not be attempted.

Where the patient is obviously too ill to stand much operative interference a short abdominal incision may be made under local anaesthesia, and a Paul's tube tied into the first coil of distended bowel encountered. Lives have occasionally been prolonged by this simple expedient; but it is unavailing in the presence of gangrene of the bowel.

In advanced cases of acute obstruction the stomach should be washed out preliminary to operation, in order to avoid the grave danger of vomited matter being drawn into the lungs during anaesthesia.

Ruptured gastric and duodenal ulcers should be closed by a double row of continuous sutures inserted well away from the friable edges of the perforation. Additional security is afforded by covering the line of suture with a piece of omentum. Should it be impossible to close the opening it must be drawn up to the surface, and, after anchoring the stomach walls to the parietal peritoneum, surrounded with gauze packing. Where the rupture has occurred soon after a meal, or a long interval has elapsed before operation, there will be extensive peritoneal fouling, and the abdomen will require thorough and systematic flushing. Towards the finish the shoulders should be raised to allow the saline solution to gravitate towards the pelvis.

If the rupture is a recent one, and particularly if the stomach was empty at the time, the soiling may be strictly local, when it is best dealt with by dry mopping. In all cases a pelvic drain tube should be introduced through a median suprapubic puncture, and the patient placed on a sloping bed.

Should gastro-enterostomy be indicated it is better to postpone its performance till a later date.

The treatment of appendicitis is a subject around which much controversy has taken place, and is still far from being settled.

In common with the majority of surgeons I believe that if all cases of acute appendicitis were operated on within the first few hours from the onset of symptoms we should have fewer deaths from the disease and a reduction in the average period of incapacity from work caused by it. At this very early stage the operation is easily performed and has hardly any risk as to life. During the three years 1905-8 there was not a single fatality among 57 patients operated on in the Sheffield Royal Infirmary for acute appendicitis uncomplicated with extra-appendicular abscess. In many of these cases the appendicular canal was full of pus and the mucous membrane gangrenous.

The objection, however, on the part of a large section of the public to operations that may not be absolutely necessary to life, and the hope in each particular case that, after all, non-operative measures may suffice, have hitherto, and will I fear always constitute difficulties in the way of very early interference.

If the case has not been seen, or if the question of operative interference has not arisen until after the lapse of twenty-four hours, it is probably better to postpone operation unless the symptoms are both acute and progressive. Mild cases usually begin to subside on the second day, and if carefully watched may be safely left until the storm has passed.

Immediate operation is called for during any stage of the disease by (1) a rapidly increasing pulse rate, particularly if unaccompanied by a corresponding rise in the temperature; (2) the recrudescence of acute pain in the appendicular region after it had subsided, or a sudden increase in the severity of the pain; (3) extension of the pain, tenderness, and muscular rigidity to other parts of the abdomen; (4) commencing abdominal distension with or without vomiting; (5) rigors; (6) an increase in the size of the appendicular swelling after the third day; and (7) a change for the worse in the patient's expression.

If there is irritability of the rectum with, perhaps, an abundant escape of mucus, we should suspect and examine for a pelvic abscess.

Operative Details.

As to operative details, I shall only allude to abscess cases and to those grave and, until quite recently, commonly fatal, cases in which septic infection has spread from the appendix to the general peritoneum. The former may be dealt with by direct incision into the abscess cavity in cases in which the abscess is large and well encysted; or, if there is any doubt on the latter point, by opening the peritoneum to the inner side of the swelling, and, after waling off the intestines and pelvis with gauze, raising up the caecum from the outer side, when the abscess will be exposed. The diseased appendix should be removed when it can be easily reached, but we are not justified in running the risk of peritoneal infection by vigorous or prolonged efforts to remove it if deeply placed. In upwards of 90 per cent. of abscess cases treated by drainage alone there is no further appendicular trouble, while in the small minority of

cases where a fistulous track will not close the offending appendix can be safely removed on a subsequent occasion.

Owing largely to the work of American surgeons, the treatment of acute diffuse peritonitis, whether secondary to perforative appendicitis or other abdominal lesions, has been entirely revolutionized; and, although Murphy's experience of 35 recoveries out of 36 consecutive cases of acute general peritonitis will probably long remain a record, there can be no doubt that a great reduction has been effected in the mortality-rate of this dread disease. The improved method of treatment is in some respects a reversion to the elementary principles of surgery long known and practised in dealing with acute inflammations elsewhere in the body. In other respects it utilizes recent additions to our knowledge of the physiology and pathology of the peritoneum.

It recognizes that the patient's first and most important line of defence against the ravages of peritoneal infection lies in the undamaged endothelial cells which clothe the abdominal walls and viscera, and that it is worse than useless to try to remove, or to destroy by chemical means, the invading bacteria, because not only is it impossible to do so, but the attempt involves grievous damage to the peritoneal surface and opens up fresh channels through which the septic toxins can gain access to the circulation. It substitutes for the heroic scrubbing, flushing, and evisceration of former times the simple treatment applicable to an acute abscess that has formed around an infected substance elsewhere in the body. It consists in—

1. Removal of the primary cause of infection with the least possible interference with the surrounding tissues. No attempt is made to wash away pus or to remove exuded lymph. (In very bad cases, as I shall show presently, removal of the appendix may be omitted.)

2. The provision of free abdominal drainage so as to relieve tension with all its accompanying evils. A Keith's tube inserted into the pelvis is usually sufficient, but it may be supplemented by others of india-rubber leading down to the site of the appendix and elsewhere.

3. Placing the patient on a sloping couch so that the shoulders shall be on a considerably higher level than the pelvis. Sufficient elevation is secured by placing the head castors of the bed on two kitchen chairs. The primary object of this posture is to permit of the descent of septic material towards the pelvic basin, where the rate of absorption by the lymphatic vessels is much slower than in the upper abdomen. It likewise enables the patient to breathe better and to more easily get rid of accumulations of gases in the stomach.

4. Giving large quantities of saline solution by the bowel. The large intestine, particularly the caecum, readily absorbs water, which is badly needed by the poisoned tissues, but which cannot be retained by the stomach. By introducing a large amount of water into the system it is contended that peritoneal absorption is not only arrested, but that, by a reversal of the stream, the poisons already taken up are eliminated.

The saline solution may be given continuously by means of a rectal tube with several terminal openings connected with a reservoir, which should be placed a few inches higher than the level of the rectum. The flow should be so adjusted that from one to two drops escape each second. Where the continuous method is inapplicable, or is irksome to the patient, it may be replaced by the intermittent plan, half a pint being very slowly introduced every two hours or so through a funnel and tube. In very bad cases anti-streptococcal serum may be given.

Secondary abscesses should be promptly evacuated and drained, and threatening intestinal obstruction met by immediate intervention.

Nothing should be given by the mouth for twenty-four hours or longer, and vomiting should be dealt with by washing out the stomach. Distension is relieved by turpentine enemata. Purgatives are unnecessary, the bowels acting naturally on the second or third day.

Murphy stipulated that in all cases of general peritonitis the source of infection, whether it be a ruptured gastric ulcer or a gangrenous appendix, must be dealt with.

In hospital practice one meets with not a few cases of neglected appendicitis, with wide peritoneal infection, where the patient is so very ill that even the minimum interference advocated by Murphy would almost certainly

hasten rather than retard the impending dissolution; and yet some of these cases may be rescued by the very simple procedure of making a suprapubic puncture, under local anaesthesia, and passing a Keith's tube down into the pelvic basin. Recovery is, of course, slow on account of the prolonged suppuration which necessarily accompanies Nature's method of shedding the gangrenous appendix; but I am firmly persuaded that several of my patients owe their lives to the restriction of operative measures to the extent I have indicated, combined with the other adjuncts to treatment that I have already mentioned.

The procedure can be carried out at once, without moving the patient to hospital or wasting valuable time in elaborate preparations.

The prospect of success in ruptured gastric and duodenal ulcers is less hopeful, but even in these cases it should be tried if more ambitious measures are out of court. Upwards of a year ago I saw with Dr. Buckley, of Chesterfield, a man who had a ruptured duodenal ulcer of forty-six hours' duration. There were all the evidences of diffuse peritonitis; the pulse was barely discernible, and the extremities were blue and cold.

Our surgical armament was, I think, a record in simplicity. It consisted of a razor in lieu of a scalpel, a piece of gas rubber tubing, a few forceps, and a sauceman. The patient, although he ultimately died, made a splendid rally, and seemed to justify for a time the hope that he might recover.

REFERENCE.

¹ Rose and Carless, seventh edition, p. 1124.

APPENDICOSTOMY IN DIFFUSE SEPTIC PERITONITIS.*

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In the *Annals of Surgery* (February, 1906) Murphy of Chicago published an account of his now well-known method of treatment of diffuse septic peritonitis. In brief, this consists in rapid elimination of the cause of the peritonitis—for example, the removal of a gangrenous appendix; free drainage of the peritoneum by means of rubber tubes passed through the operation wound and into the bottom of Douglas's pouch through a suprapubic puncture; the assumption by the patient of the semi-sitting position after operation; the prevention of peristalsis by withholding all food and fluids by the mouth; and the introduction into the circulation of large quantities of fluid by absorption from the rectum. He claims that in this way the current in the lymphatics of the peritoneum is reversed, that membrane becoming a secreting instead of an absorbing surface, with the result that septic matter is washed away in the free flow that takes place through the drainage tubes. Further, toxins already in the blood are diluted and their elimination facilitated by the free diuresis that is induced. Murphy states that only one death occurred amongst the last 29 cases treated by him in this way.

Of the value of this method of treatment there can be no doubt. Success, however, largely depends upon the quantity of fluid that the rectum can be made to absorb. Murphy introduces a nozzle with three or four openings into the rectum, and attaches it by means of rubber tubing to a bag containing warm water. The bag is slung 3 or 4 in. above the plane of the rectum, so that the water runs in at very low pressure, and all distension of the bowel is avoided. I have attempted to carry out this treatment on many occasions, but have never succeeded in getting the rectum to absorb the large quantities of fluid that Murphy mentions. With the patient sitting in a nearly upright position it is almost impossible to prevent leakage through the anus. This not only nullifies the procedure but causes the patient a good deal of annoyance. In many cases also the rectum becomes very intolerant of the prolonged presence of the tube, and straining occurs. Many other surgeons whom I have specifically questioned upon this point appear to have experienced the same difficulty.

* This paper was written before Mr. Keetley read his paper on the utility of the appendix before the Surgical Section of the Royal Society of Medicine. I believe no better example of the value of appendicostomy can be given than in the treatment of desperate cases of diffuse septic peritonitis.

It occurred to me that the appendix might with advantage be utilized for the purpose of introducing fluid into the large bowel, and on several occasions I have done so with marked success. When the appendix is healthy—for example, in peritonitis following perforation of a gastric ulcer—an incision is first made over the lesion, which is rapidly treated in such a way as to prevent further contamination. No attempt is made to cleanse the peritoneum by irrigation or mopping, but adequate drainage is provided for, preferably by means of rubber tubes passed through the wound. Then, instead of making a suprapubic puncture to allow of the introduction of a rubber tube into Douglas's pouch, the abdominal cavity is again opened by a small vertical incision over the lower part of the right rectus, the fibres of which are separated. The appendix is pulled up into the wound, and the distal portion cut off. The stump is then fixed in the upper angle of the wound by one or two silk sutures passing through all its coats and the skin. The open mouth of the stump is thus practically flush with the skin, and through it a small rubber catheter is passed into the caecum. A large rubber drainage tube is finally passed to the bottom of Douglas's pouch through the lower part of the wound. The patient is then put back to bed, with the rubber catheter projecting through the dressings, care being taken to prevent it being accidentally pulled out. Finally, the patient is placed in the Fowler position, and the catheter connected by rubber tubing to a tank in which is warm normal salt solution. The tank stands on a table at the bedside, and should not be more than 3 in. above the plane of the caecum. The flow of water is regulated by a clamp on the rubber tubing.

If the peritonitis is secondary to disease of the appendix, the above procedure must be modified somewhat. An incision is then made over the appendix and its condition ascertained. If, as is often the case, the part nearest the caecum is comparatively healthy, the distal portion is cut off and the stump sutured to the skin, as already described. If this is impracticable, the appendix is extirpated in the usual way and a small portion of the caecal wall nearest the surface sutured to the skin. A puncture sufficient to admit the rubber catheter is then made in it. It is advisable in these cases to introduce a large rubber tube into the pelvis through a separate suprapubic puncture.

I use normal salt solution in preference to plain water, believing it to be less irritating to the mucous membrane of the bowel. Not more than 1 pint per hour is admitted in order to avoid distension, and care must be taken not to place the supply tank at too high a level. When absorption ceases, as much fluid is evacuated from the rectum as is introduced into the caecum, and the supply is then cut off. It is not necessary to leave in the catheter for more than forty-eight hours. At the end of that time it is withdrawn, the mucous membrane of the stump of the appendix is removed for a little distance down, and the opening closed by uniting the sero-muscular coats with a catgut stitch. Finally, any adhesions between the skin and the stump are gently broken down and the latter allowed to retract. In this way the risk of a faecal fistula is minimized.

In practice this procedure has many advantages over that employed by Murphy. It does not prolong the initial operation by more than two or three minutes. I have removed a gangrenous appendix, sutured the stump in the wound, and provided for drainage, with the patient on the operating table for only twelve minutes. The quantity of fluid admitted to the bowel can be regulated exactly, while the whole length of the large intestine takes part in its absorption. The patient suffers practically no discomfort, as no disturbance of bedclothes is necessary, and there is no leakage from the anus until absorption is at an end. Further, stimulants and nutrients can be easily and rapidly administered, if desired, by simply disconnecting the tank and connecting the catheter to a glass funnel into which they are poured.

Illustrative Case.

Mrs. A., aged 35, was admitted into the Queen's Hospital on August 4th, 1903. Three weeks prior to admission she had aborted, and two weeks later was seized with severe hypogastric pain, which had become much worse lately. When seen she presented the typical appearance of advancing peritonitis. The temperature was 103°, and the pulse 140, small, and thready.

The whole abdomen was rigid and tender, and the lower half tumid.

The abdomen was opened in the middle line, when a considerable quantity of brownish-yellow free pus escaped. The pus was not faeculent. On examining the pelvis an opening leading into an abscess cavity in the neighbourhood of the left Fallopian tube was found. Evidently the abscess had ruptured into the peritoneal cavity, and excited a generalizing peritonitis. The appendix, which was healthy, was cut across about 1½ in. from the caecum, and the stump fixed in the upper angle of the wound. A No. 6 rubber catheter was passed through the stump into the caecum. Two large rubber tubes were placed in Douglas's pouch, and brought out through the lower part of the incision, and the patient put back to bed. No attempt was made to cleanse the peritoneum.

The patient was propped up in the Fowler position, and a pint of warm saline solution passed into the colon every hour. Twelve hours later the pulse had fallen to 90, and was of good volume; the temperature was normal; the cheeks had filled out, and the patient looked and expressed herself as feeling very comfortable. The irrigation was kept up for twenty-four hours, during which time 34 pints of saline solution passed into the bowel. Of this only about 5 pints escaped from the rectum. There was a copious discharge from the tubes, and a large amount of urine excreted. The catheter was withdrawn from the appendix, and on the second day the silk stitches connecting it to the skin were cut, and the stump allowed to retract. No escape of faecal matter occurred, then or later. Subsequent progress was uneventful, and the patient was discharged at the end of three weeks, with a single tube from which there was very little discharge.

APPENDICOSTOMY: WITH NOTES ON THE SURGICAL ASPECT OF COLITIS.*

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The appendix vermiformis, which has occasioned a literature probably unequalled by that of any other part of the human system, seems of late to have, in some measure, justified its existence. Instead of being regarded as an unnecessary and dangerous possession, there have been found for it uses. The operation of appendicostomy, whereby the appendix is used to establish a temporary or permanent communication with the exterior, was first proposed in 1894¹ by Keetley, who suggested that by bringing the appendix through the abdominal wall and amputating the apex it might be used as a spout to relieve the distension of a case of obstruction occurring at a point below the caecum. He put this suggestion to the test during 1906. The credit of first performing the operation seems to be due to Weir, of New York, who in 1902² reported a case of ulcerative colitis upon which he performed the operation with marked success.

THE OPERATION.

The surgical procedure is simplicity itself. Nevertheless, although, as in Weir's original case, the appendix may conveniently present itself, yet if adhesions be present, if the organ is kinked, or if it passes behind the caecum, the operation may be long and difficult, rarely, however, should it be found impossible to liberate a sufficient length of well-nourished appendix to extend through the thickness of the abdominal wall. A small oblique incision, large enough to admit two fingers, is made through the abdominal wall in the region of McBurney's point. If the split flap method is used, the muscular fibres should be notched at right angles to their direction. Otherwise the vessels in the meso-appendix may be so constricted as to cause sloughing of the organ. If the appendix is free it can at once be brought out through the wound; if, however, there are adhesions, or the appendix is for some reason inaccessible, the incision must be enlarged. The appendix should be pulled out until the caecum is flush with the parietal peritoneum, care being taken that there is no twist in its mesentery. Two fine silk sutures are inserted to secure the meso-appendix and the free border of the appendix to the edges of the incision in the peritoneum. The muscles are allowed to fall back, and if necessary brought into apposition with a loosely tied catgut suture. The skin incision is sutured, the last suture taking in the sero-muscular coats of the appendix protruding through one angle of the wound. A dressing of gauze and collodion is applied, covered by wool and bandage, and the patient returned to bed.

Two or three days later the tip of the appendix is severed within ½ in. of the skin and the appendical artery secured. The exposed mucous membrane is caught with fine catch forceps, dragged out a little and secured by one or two sutures to the edge of the skin. A rubber catheter is introduced into the caecum, and, if desirable, irrigation or other treatment can be at once proceeded with. If difficulty is experienced in passing the catheter, one designed by Mr. Keetley, having a tapering solid end extending beyond the eye of the instrument, can be used. Beyond a slight risk of infecting the wound, there is no reason why the appendix should not be opened and a catheter introduced at the time of the operation, if immediate entry is required. Should the lumen be small, it is very easy to dilate it gradually to admit a No. 10 or 12 English. It is desirable to leave the catheter in continuously during the first ten days to overcome any tendency to contraction on the part of the wound producing stenosis of the appendical lumen. Later it is sufficient to pass the catheter once daily.

There are several difficulties which may arise in the operation:

1. In the first appendicostomy I saw performed the surgeon, accustomed to appendicectomy, inadvertently tied part of the meso-appendix. Subsequently the distal end of the appendix sloughed below the level of the skin, but, fortunately, not below the level of the muscular layers. The only consequence was a great tendency of the opening to close.
2. A similar condition occurred in another case, in which the appendix was kinked upon itself in such a manner that only sufficient was obtained to just reach the skin margin.
3. When the tip is amputated, unless the mucous membrane is secured to the skin edge at once, it retracts within the sero-muscular coats, and a tendency to stenosis arises.

THE POSSIBILITY OF THE OPERATION.

The question naturally arises whether there may not be a percentage of cases in which the appendix is so situated as to render appendicostomy impossible; in 100 autopsies at St. George's Hospital the appendix was a fibrous cord without a lumen in 2; in 2 the lumen admitted a bristle only; in 96 appendicostomy would have been possible.

INDICATIONS FOR APPENDICOSTOMY.

The following classification is modified from that of Jacobson and Rowlands.³

Appendicostomy may be performed:

1. For irrigation and medication of the colon.
2. For obstinate and protracted constipation.
3. For drainage of the caecum and relief of abdominal distension.
4. For nutritive purposes.
5. For irrigation and medication of the lower ileum.

THE SURGICAL TREATMENT OF COLITIS.

The terms, colitis or enteritis membranacea, pseudo-membranacea, pellicularis, tubularis, muco-membranacea, crouposa, fibrinosa, pseudo-enteritis, catarrhus desquamativus, diarrhoea membranacea, tubularis, etc., have been invented, but by my mind the condition is one simply of a mucous secreting epithelium covered membrane subject to inflammatory reaction of various degrees. There are, however, rare forms of colitis dependent upon definite and well recognized general constitutional disorders which do not come within the scope of this paper. Such are the colitis due to injury, pyaemia, diabetes, Bright's disease, purpura, scurvy, amyloid degeneration, venous or arterial stasis, and spinal cord lesions.

In dealing with colitis due to local lesions the question of some form of classification arises. The following is simple, and I think sufficient:

- Simple acute.
- Simple chronic.
- Ulcerative acute.
- Ulcerative chronic.

Whilst there are distinct cases both of simple and ulcerative colitis, yet the demarcation between these two varieties is by no means well defined. A simple inflammatory condition of the colonic mucosa may or may not proceed with greater or less rapidly to definite destruction of the mucous epithelium. Cases brought under notice in

* Read before the York Medical Society.

this intermediate stage have received names, some describing the macroscopic appearance, such as "follicular colitis," "granular colitis," "colitis punctata," and some suggesting an underlying nervous origin, such as "colica mucosa" and "nervous colitis."

I have avoided the use of the word "membranous," since the shreds and casts which, in some cases, are passed, have been conclusively shown to be inspissated mucus, containing a few epithelial cells and no leucocytes.

Acute simple colitis is a condition similar pathologically to acute pharyngitis. It may react to treatment or pass on to acute ulcerative colitis, or subside into chronic simple colitis.

Chronic simple colitis may be a sequela of acute simple colitis, or may arise without any apparent acute stage. It is similar pathologically to hypertrophic rhinitis, and has been called "colitis hypertrophica." It is justifiable to use the term "chronic simple colitis" when on examination with the sigmoidoscope the mucous membrane of the sigmoid is seen to be thickened, oedematous, and discharging copious mucus without ulceration. There may, of course, be some ulcers higher up which will account for the condition; but since it has been shown that in colitis the most marked destruction and damage occurs at the sigmoid, the absence of evidence there is sufficient for clinical purposes.

Acute ulcerative colitis is theoretically a sequela of acute simple colitis, but the inflammation may be so intense as to produce ulceration practically from the onset. Dysentery, due either to Shiga's bacillus or to the amoeba, is the commonest form of acute ulcerative colitis, but the condition may occur without either of the above organisms being present.

Chronic Ulcerative Colitis.—The ulceration may be superficial and punctate, consisting of erosions, or it may be extensive, serpiniginous, and progressive, passing on to pericolicitis, abscess, or to perforation. This form of colitis resembles the various forms of gastritis and gastric ulcer.

Mucous Colitis with Casts.—The so-called mucous-membranous colitis of nervous origin has been attributed to various causes by different authorities.

(a) Einhorn ascribes it to enteroptosis, and considers it a common associate of achylia gastrica.⁴

(b) Glenard considers it due to enteroptosis, which, by dragging on the bile passages, produces an alteration in bile tension and flow, causing a diminished secretion of mucus, which favours precipitation of mucus by acids in the intestine.⁵

(c) Geoffroy regards enterospasm as the chief underlying cause.⁶

(d) Letcheff and Akerlund give disease of pelvic organs a prominent place in the etiology.⁷

(e) Vanni, Mannaberg, and others adhere to the view that coprostasis is the predecessor of the condition.⁸

(f) Von Noorden regards constipation as the exciting cause, but only in neuroathenic and hysterical subjects.⁹

(g) Nothnagel prefers to consider the phenomena as due to hypersecretion of mucus from anatomically sound mucosa.¹⁰ Nothnagel quotes a case of a boy of 16 who in the course of acute endocarditis had a spinal embolism; in addition to the paraplegia, retention of urine, etc., which resulted, for several days he passed $\frac{1}{2}$ litre of clear thin mucus through his paralysed sphincter ani. No one who has appreciated the full distress of waiting to be called to a dreaded viva voce examination will deny the existence of nervous control over the movements and secretion of the colonic mucous membrane; but it is another thing to ascribe colitis of this type to a nervous origin. Since this is not a fatal disease *post-mortem* information is scanty, but that which Nothnagel himself presents is not at all conclusive.

Jagic and Weigert¹¹ describe a case of a woman, aged 43, who had had symptoms of colitis with passage of casts, and who died from diabetic coma. *Post mortem* the pancreas was atrophic; the kidneys, one atrophic and the other hypertrophic; the stomach and small intestine were normal; the large intestine contained faecal masses, and the mucous membrane was striated with adherent white viscous material, which on staining was shown to be mucus. There were no macroscopic signs of inflammation. Lieberkühn's crypts were distended, and the goblet cells swollen and broken off; but on microscopical examination the tissue round the crypts was found infiltrated with round cells in greater quantity than normal. Especially was this the case where the secretion of mucus was most abundant.

Pye-Smith¹² quotes the case of a woman of 50, who passed mucous casts for two years. Casts were found *in situ* after death, and could be washed off, showing a normal mucosa underneath. There was, however, a carcinomatous stricture in the sigmoid.

Rothmann's¹³ case had passed mucous casts for some time, and had been treated with rectal irrigation without improvement. The woman died of carcinoma of the base of the skull. *Post mortem*, the large intestine was found to contain some

faecal masses and thickened viscous mucus adherent to an obviously reddened and inflamed mucous membrane. An interesting point in this case was that the mucosa of the ileum was also inflamed, but without adherent mucus, thus tending to show that the inflammation was the primary condition.

Edwards¹⁴ describes a case of a man aged 71 who passed casts in his stools. He died of meningitis. No macroscopic change could be found in the mucosa, but a microscopic examination was not made.

Thus we find that of four cases of colitis with casts, in which a *post-mortem* examination was made, two showed inflammatory phenomena in the mucous membrane, in one there was a carcinomatous growth in the sigmoid, and one showed no change in the mucous membrane when examined macroscopically.

In a recent paper Lockhart Mummery¹⁵ gives particulars of 9 cases of colitis with passage of casts which he had under his care. The analysis of these cases provides the following figures:

Total number of cases 9 —

Female 7. Average age 41.7 years.

Male 2. Average age 46 years.

Careful sigmoidoscopic examination revealed the following conditions:

No case found	1 case
Chronic inflammatory condition of mucosa resembling that of granular pharyngitis	3 cases
Similar condition, but in addition shallow ulcers scattered over mucous membrane of rectum and sigmoid	1 case
Adhesions binding down sigmoid flexure	1 case
Cancer of sigmoid flexure	2 cases
Retroflected uterus pressing on rectum	1 case

It is such evidence as this that makes the position taken up by Nothnagel untenable. Apart from those cases showing a definite organic change, such as adhesions or new growth, the sequence of events seems to have been as follows:

1. Obstinate and protracted constipation almost always.
2. Possibly ingestion of drastic and irritating purgatives.
3. A catarrhal inflammatory condition of the mucosa.
4. Chronic ulceration of the colon of varying extent and depth, in some cases.

The influence of enteroptosis may be a primary one, producing or helping to produce the constipation, or the displacement of the viscera may be in part due to the retention of faecal matter. The average age of women, 41.7, is one at which a relaxed abdominal wall is common, for want of tone in the abdominal muscles is given an important place in the etiology of enteroptosis by Keith in his *Hunterian Oration*¹⁶ upon this disease.

The theory of nervous influences as a cause of mucous colitis seems to depend to no small extent upon the fact that it is a disease commonly associated with other neuroathenic symptoms. When the profound nervous phenomena which may accompany haemorrhoids are remembered, it is not surprising to find a similar condition in patients, usually women, suffering from obstinate constipation followed by diarrhoea and the passage of much mucus, possibly with severe pain.

TREATMENT.

A.—Of *Acute Simple Colitis*.

There are two points to which I should like to draw attention.

1. *The Diet.*—It is usual to put patients upon what is either strictly or approximately a pure milk diet. Whether this is satisfactory is very doubtful. The object of dieting in colitis is to produce faeces which shall be the least irritating to the inflamed mucosa. A milk diet, whilst leaving a small residue, produces faecal masses which are small, globular, very fine, and undoubtedly irritating to the colon, which has to undergo prolonged and strong contractions to pass along such small masses. Since they do not produce an efficient distension of the bowel they are apt to remain too long in contact with the mucous membrane. As a remedy for this von Noorden recommends a liberal diet of food which leaves a bulky residue of cellulose, articles such as brown bread and vegetables being freely given, together with a daily allowance of cream or other highly fatty material, producing motions which, being bulky, soft, well lubricated, and unirritating, are easily voided from the colon. I have seen a patient who, when upon a milk diet, passed small hard faeces with pain and distress, able under von Noorden's diet to empty his colon of bulky masses without trouble.

2. *Intestinal Antisepsis*.—The value of so-called intestinal antiseptics has always been a matter of argument. I have had bismuth, salol, beta-naphthol, cyllin, turpentine, and calomel, and of these calomel given in fractional doses continuously is the only one which has had apparent effect. The work of Metchnikoff upon the fauna and flora of the large intestine is well known, and he contends that by the introduction of milk curdled by a fresh culture of the lactic acid bacillus, an organism antagonistic to those inhabiting the great intestine is brought into the alimentary canal. I have had the opportunity of trying this method in 3 cases. In 2, two women, aged about 35, both suffering from mild colitis, with some abdominal pain and regular passage of mucus four or five times a day, the results were most satisfactory. Nothing definite could be seen with the sigmoidoscope. They were given half a pint daily of milk curdled by a pure culture of *Bacillus lactis*, and were placed upon von Noorden's diet. At the end of fourteen or fifteen days both patients were relieved of their symptoms. The third patient was an almost hopeless case of ulcerative sigmoiditis, who refused appendicostomy. A transient improvement in temperature and pulse were the only results of the treatment.

B.—Acute Ulcerative Colitis.

The treatment of these cases along purely medical lines seems to me unscientific and unsatisfactory. The ideal treatment would be to keep the colon empty and at rest. That, unfortunately, is impossible, for to stop all food by the mouth is to starve the patient and reduce his power of resistance. To feed him by the rectum is to irritate and stimulate the diseased part. It is impossible to prevent the entry of gastric, hepatic, and pancreatic secretions, and the constant evacuation of mucus and blood precludes the possibility of resting the colon. By the operation of appendicostomy, however, the large intestine can be completely emptied once or twice daily, and mild medicinal lotions can be introduced into the whole length of the great gut. Moreover, by the removal of the toxic secretions of the diseased mucosa auto-intoxication is in no small measure prevented.

Dr. W. Murrell,¹⁸ in the *Lancet* of March 12th, 1904, reported 5 cases of acute ulcerative colitis at the Westminster Hospital as follows:

- Males 3. Average age 25.6 years.
- Females 2. Average age 35.5 years.
- Deaths 4. Average length of illness six months.
- Recovery 1. Length of illness ten months.

These patients were treated upon medicinal lines, and they one and all showed similar symptoms: Temperature 100° to 102° F., pulse 120 to 140, and ten to thirty motions a day, with abdominal pain and tenderness, accompanied by progressive weakness. In the course of treatment the following drugs were used: Opium and morphine in all forms, bismuth carbonate, lead acetate, perchloride of iron, beta-naphthol, salol, perchloride of mercury, ipecacuanha, and formaldehyde by mouth, and rectal injections of silver nitrate. In one case an appendicostomy was attempted and found impossible owing to adhesions, so that an enterostomy was done. This was, however, only undertaken after an illness of eleven months, when the patient was extremely weak.

On the other hand, Mr. Holton C. Curl¹⁹ reported 11 cases of dysenteric colitis in which either an appendicostomy or a caecostomy had been performed early, with 8 recoveries and 3 deaths; 2 of the fatal cases had extensive ulceration associated with nephritis, whilst the third was moribund when the operation was performed.

I should like to mention a fatal case which I had under my care at St. Mary's Hospital last year, because I now feel that, had appendicostomy been performed early, the result would have been different:

A woman, aged 60, was admitted with typical symptoms of acute ulcerative colitis. The temperature was intermittent, with an excursion of 3 to 4 degrees. The pulse remained above 100 continuously. She passed blood and mucus mixed with faecal material ten to twelve times a day. Intestinal antiseptics of various kinds were tried by the mouth, and rectal irrigation with various lotions. There was little or no improvement, and after an illness of two to three months the patient suddenly developed symptoms of general peritonitis and died within forty-eight hours. *Post mortem* the peritoneum was found bathed in pus, and a perforation discovered just below the hepatic flexure of the colon. There was deep extensive ulceration of the colon, which had perforated at the point mentioned.

C.—Chronic Ulcerative Colitis.

It is for this condition that the operation of appendicostomy is most useful, whether a sequela to acute ulcerative

colitis, or to chronic constipation coupled with the ingestion of irritating drugs, matters not. The symptoms may be severe or slight, being those of excessive mucus secretion from the large gut, the mucoid evacuations being possibly stained with blood, progressive but slow loss of weight, and pain and tenderness in the region of the great intestine, especially over the sigmoid flexure. Sigmoidoscopic examination usually shows one of the following conditions:

1. Superficial ulceration without destruction of the submucous tissue.
2. Discrete punctate ulcers in which the submucous tissue is involved.
3. Large irregular serpiginous ulceration with destruction of submucous coats.

The frequent calls to stool, the abdominal discomfort, the passage of blood by the rectum, the failure of medicinal treatment, all tend to reduce the patient to a state of neurasthenia and chronic invalidism. Appendicostomy by completely clearing the great gut daily, removing the excess of mucus, and leaving a medicated lotion in the colon, tends to that rest and cleanliness which is essential for healing.

I have been able to find records of 10 cases of chronic ulcerative colitis for which the operation of appendicostomy has been performed, including two which came under my own personal observation.

CASE I.

A fish hawk, aged 25, who had been a soldier, and had had two attacks of acute dysentery—in Africa in 1900, and in India in 1906—complained of six to eight motions of blood and slime daily, without pain, and no marked emaciation. His general condition was excellent: the sigmoidoscope showed considerable oedema of the submucous tissue, with chronic inflammation of the mucous membrane and superficial ulceration, especially marked on places exposed to friction, such as the edges of the rectal folds.

Appendicostomy was performed on July 23rd, 1907, by Mr. Swinford Edwards. Four days later irrigation was started, 6 pints of weak boracic lotion being slowly allowed to flow through the catheter into the caecum. A moderate-sized vulcanite tube was passed through the sphincter for about 3 in. The inflow was regulated so as not to allow of too great distension, and abdominal massage along the course of the great gut employed. After about six minutes the lotion began to flow from the rectum, bringing with it fragments of faeces. Before the outflow began and when the patient's abdomen was distended and tense the catheter was removed from the appendix, and, though no protection against backflow was taken, there was no trace of leakage, the muscular coat and the valve of Gerlach proving competent to prevent any escape of the lotion. After four days the lotion was changed to one of sodium bicarbonate, gr. x ad 5j, and this was changed after two days more to one of protargol, gr. iv ad 1 pint. The patient remained in hospital one month, and was taught to conduct the irrigation himself. It was found that after a few days the rectal tube was unnecessary, the patient evacuating the lotion as soon as the colon became moderately distended. He was sent home with an abdominal belt fitted with a flat, thin pad—a contrivance found to be unnecessary in subsequent cases.

After two months' self-irrigation daily with 6 pints of protargol lotion, he was again examined with the sigmoidoscope on October 29th, 1907. The mucous membrane was found to be slightly inflamed, and there was still some oedema of the submucous tissue, but no sign of ulceration. The patient himself stated that he was perfectly comfortable and at work; he occupied himself for half an hour every morning with the irrigation, and after that had no further trouble during the day. Throughout his diet was his usual one, and the only other treatment was the administration of gr. ʒ of calomel three times daily while in hospital.

CASE II.

A man aged 42, under the care of Mr. Rawlings, of St. Bartholomew's Hospital, to whom I am indebted for permission to quote the case, presented similar symptoms, except that the diarrhoea was more marked, there being about nineteen or twenty evacuations daily, and that the emaciation and weakness were severe.

Appendicostomy was performed, and the colon irrigated daily with astringent lotions. After two months the patient was free from trouble, continuing the irrigations himself, and being free from any evacuation after the washing was completed. He was delighted with the result, and had put on weight rapidly.

CASE III.

Dr. Robert F. Weir²⁰ performed appendicostomy for ulcerative colitis in 1902. This is the first reported case of this operation.

CASE IV.

Mr. Stretton,²¹ of Kidderminster, reported a case in 1906.

CASE V.

Mr. H. M. W. Gray,²² of Aberdeen, reported one case in 1904, with satisfactory result.

CASE VI.

Dr. Robert H. W. Dawbarn²² reported one case, resulting in cure, in 1905. The lotions used for irrigation were 10 pints of 1:1000 solution of potassium permanganate, alternating with a similar quantity of normal saline solution.

CASE VII.

Mr. Hutchinson,²³ of London, reported a case resulting in cure in 1905.

CASE VIII.

Sir William Bennett²⁴ recorded a satisfactory case in 1905.

CASE IX.

Mr. Stanmore Bishop,²⁵ of Manchester, reported a satisfactory case in 1905.

CASE X.

A man, aged 42, under the care of Dr. Foxwell at the Queen's Hospital, Birmingham, who had been ill for three months, complained of pain, diarrhoea of blood-stained mucus. His serum clumped a culture of Shiga's bacillus in a dilution of 1 in 40, but not 1 in 100.

He was operated upon on March 16th, 1908, and washing out was commenced ten days later. Within a week his condition was improving, the pain was absent, and the diarrhoea less. A month later he was well and having a single well-formed motion daily.

D.—Chronic Simple Colitis.

Under this heading I place those cases in which there is a passage of mucus with the faeces and independently, but in which no sign of ulceration can be seen with the sigmoidoscope. I include also those cases of colitis with casts in which I can find no record of sigmoidoscopy. I do not consider the passage of casts a sign of simple chronic colitis, for I am convinced that casts may occur in all forms of colitis, and it is only by the use of the sigmoidoscope that a definite statement as to the condition of the mucosa can be made. There seems to be no satisfactory explanation why casts should form in some cases any more than there is any reason given for the fact that in some patients the mucus secreted by an inflamed pharynx should take on a membranous appearance. A hypertrophic form of colitis with abundant mucus can be recognized by the sigmoidoscope, and I very tentatively suggest that colitis with casts may be of the nature of an atrophic form.

I have collected the following cases, the first two coming under my own care when house-surgeon at St. Mark's Hospital:

CASE XI.

A woman, aged 38, married, two children. Abdominal examination revealed some tenderness over the sigmoid, and possibility of palpating both kidneys. The sigmoidoscope showed an inflamed mucosa with abundant secretion of mucus. Mucous evacuations nine to ten daily. No blood passed per rectum. Loss of weight.

Appendicostomy was decided upon because the patient had received some months' treatment by drugs and rectal injections without avail. The operation was performed on June 18th, 1907, by Mr. Swinford Edwards. The treatment and irrigations used were similar to those in Case I. The patient was discharged on July 15th, 1907, and self-irrigation conducted until October 29th, when she was again examined with the sigmoidoscope. The bowel was found healthy, with no inflammation or excess of mucus. She stated that she was quite well, had increased in weight, and found no inconvenience either from the daily wash-out or the presence of the fistula.

CASE XII.

A man, aged 35, was admitted for perianal papillomata, which were removed. For two previous years he had been treated with rectal injections, for mucous diarrhoea, with four to five evacuations daily, associated with some pruritus ani and the growth of the papillomata. There had been some blood with the mucus at times. Sigmoidoscopy showed chronic inflammation of mucosa with granular patches.

Appendicostomy was performed by Mr. L. Mummery on September 10th, 1907. Treatment was similar to that of the previous case. After one month the patient had lost the slight abdominal pain present before operation, and after his daily wash-out had no further trouble throughout the day. I have no record of a sigmoidoscopic examination after the operation.

CASE XIII.

Gray²⁶ of Aberdeen in 1904 reported a case of a woman with frequent evacuations and passage of casts. Appendicostomy produced a cure in four weeks. There was a slight tendency to relapse twenty months later.

CASE XIV.

Morley Willis²⁷ in 1906 reported a case of colitis with mucus but no casts in a woman aged 32. Appendicostomy produced much improvement in one month.

CASE XV.

Donald Armour²⁸ reported in 1908 a case of colitis with casts satisfactorily treated by appendicostomy.

CASE XVI.

Moynihan²⁹ recorded a case of colitis with casts cured by appendicostomy in 1905.

I would make an urgent plea for the more general and regular use of the electric sigmoidoscope. I am convinced, not only of its utility, but also of the necessity and advantage of its use in all cases presenting the symptoms of colitis in however slight a form. Apart from the accurate diagnosis of the cause of the mucous discharge, it has been the means of obtaining information of great value both to the patient and surgeon. It is well known that certain forms of carcinoma recti produce no symptoms beyond a mucous discharge, possibly blood-stained, and a vague sense of uneasiness in the lower abdomen—an aggregation of signs common to several forms of colitis. Should the growth be situated near the junction of sigmoid and rectum or opposite the third piece of the sacrum, it cannot be felt either with a finger in the rectum or by abdominal examination. Cantlie³⁰ has recently shown that the point of junction of the pelvic colon with the rectum is marked by a narrowing of the lumen of the gut, and by a thickening of the muscular coat approximating to a sphincter, to which he has given the name "sigmo-rectal pylorus." This constriction, and the increased friction and trauma produced thereby, may be an explanation for the occurrence of carcinomata at this site.

I can call to mind 3 such cases admitted to St. Mark's Hospital last year—cases which presented symptoms suggestive of ulcerative colitis, discharge of blood and mucus, and slight abdominal discomfort attended with little or no difficulty of defaecation. In all these cases the sigmoidoscopic examination revealed the presence of a malignant growth at the position mentioned, although the carcinomata could not be reached by bimanual examination. These 3 cases had been under medicinal treatment for colitis for some time.

The discharge of excessive mucus, with or without blood, from the rectum, is not a disease but a symptom, and it is only in accordance with modern surgical exactness to endeavour in all cases to diagnose accurately the pathological condition producing such symptoms.

Mr. L. Mummery,³¹ in a recent paper, published 36 cases, all of which had symptoms of colitis; mucus being present in the stools in all, blood in 22 cases, casts in 8 cases, intestinal sand in 2, and enterospasm in 1 case. The use of the sigmoidoscope in all 36 cases revealed the following conditions:

- 11 cases showed inflammation of the mucosa without ulceration;
- 7 cases showed ulceration;
- 7 cases showed malignant disease;
- 3 cases showed inflammation with constriction due to peritoneal adhesions;
- 1 case showed inflammation due to the pressure of a retroverted uterus;
- 1 case showed inflammation with presence of a polypus high up;
- 6 showed nothing to account for symptoms.

Beck³² in 500 cases of chronic colitis, found inflammatory lesions in the colon in 394, or 78.8 per cent.

APPENDICOSTOMY FOR CHRONIC CONSTIPATION.

The question of surgical interference in cases of protracted constipation is one which crops up periodically, mainly on account of the work of Mr. Arbuthnot Lane. So much depends upon what degree of derangement of function is understood by the words "chronic" or "protracted." Mr. Lane does not lay down any clear definition of what he considers sufficient indication for operation. He talks of the auto-intoxication due to coprostasis, which surely is an elastic term, including the headache following a day's irregularity or the profound toxæmia seen in patients who allow weeks to elapse without relieving their abused colon.

Ordinary chronic constipation which necessitates the regular use of aperients, enemata or suppositories, is amenable to medical and hygienic treatment, but there are some few protracted cases in which perhaps fourteen days to three weeks may elapse between the acts of defaecation, in which the usual medicinal remedies produce no other result than abdominal distension and discomfort, and in which the early signs of irritation to the mucosa are manifest, where surgical interference is fully justified.

If the surgeon decides to operate, he may perform (1) ileo-sigmoidostomy, (2) ileo-sigmoidostomy with colectomy,

(3) appendicectomy with liberation of adhesions, (4) appendicostomy, (5) valvotomy.

The first two procedures are associated with the name of Mr. Lane, who has, however, practically abandoned ileo-sigmoidostomy alone for the more formidable operation of removing the great gut as far as the lower portion of the sigmoid flexure.

An analysis of Mr. Lane's recently published results³⁰ shows the following:

Total number of cases	...	...	...	...	...
Total number of operations	...	...	...	...	...
Average number of operation	...	...	...	...	...
One patient underwent	...	...	...	9 operations	...
One	...	...	...	5	...
One	...	...	...	5	...
Three patients	...	...	...	4	...
Six	...	...	...	3	...
Two	...	...	...	2	...

All these operations were not performed by Mr. Lane himself, some having been done prior to Mr. Lane's treatment. Most, however, were for adhesions or some manifestation of enteropneumosis.

Results.

Number of cases	...	39
Satisfactory recoveries	...	19, or 50 per cent.
Imperfect recoveries, patients still having intestinal symptoms or needing enemata, etc.	...	9, or 23 per cent.
Bad results	...	2, or 4 per cent.
Deaths (total, 9, or 23 per cent.):	...	...
Immediate	...	7, or 17.9 per cent.
Remote	...	2, or 5 per cent.

Immediate Results.

Immediate, 7—death occurring at an average of 8.7 days after operation:

1. Suppuration in wound with perforation of intestine.
2. Shock and vomiting.
3. Shock.
4. Bronchitis.
5. General peritonitis.
6. Intestinal obstruction.
7. Perforation of gastric ulcer.

Remote, 2:

1. Complete relapse and death after one year.
2. Acute obstruction (no autopsy) after seven months.

The question to decide is whether a palliative operation, which in such skilled hands yields a total death rate of 23 per cent. of which 18 per cent. is accounted for by the immediate results of surgical interference, is justifiable, especially when only 50 per cent. of cases so treated are given satisfactory relief.

To amputate the appendix and sever adhesions in a case of protracted constipation is too much of a shot in the dark. The appendix may be, and commonly is, the seat of extensive adhesions, the division of which with any other similar constricting bands may relieve the patient completely, but there can be no certainty that such will be the case. On the other hand, by utilizing the appendix to make a path whereby the large intestine can be reached for lavage or direct medication is surgically sound.

This method renders it possible to destroy any adhesions present, whilst at the same time the appendix ceases to be a dangerous possession, and is put to a valuable use. The procedure after the operation is to empty the colon by douches, preceded if necessary by small injections of olive oil to soften the faecal masses. I can only quote one case in which this method has been tried, but with a most satisfactory result.

Murray³¹ in 1905 first suggested appendicostomy for protracted constipation, and later in the same year Keetley³² performed the operation. His case was that of a young girl aged 15, who was subject to most obstinate coprostasis, which medicinal treatment failed to relieve. When seen by Mr. Keetley the bowels had not been emptied for fourteen days, and the patient showed signs of considerable toxæmia. Appendicostomy was done; the transverse colon, loaded with faecal masses, was found to descend below the umbilicus. After the introduction of warm olive oil, followed by a large injection through the appendix of a warm solution of magnesium sulphate, the patient passed with considerable pain and difficulty a great quantity of faecal material by the rectum. After this initial evacuation the daily introduction into the caecum of about 5x of warm magnesium sulphate solution, and later of warm water alone, enabled the patient to have an easy and normal motion. The appendical opening gave no trouble, and the transverse colon became gradually less pendulous. The patient would not, up to the time the case was reported, allow the opening to be closed, so that it is not possible to say if the daily lavage of the colon had a curative effect.

Inasmuch as the ptosis of the transverse colon tended to remedy itself, and as the regular distension and evacuation of the colon would constitute a sort of physical exercise for the gut, there are grounds for the opinion that the operation may have had a curative effect upon the lethargic intestinal muscles.

Valvotomy.

The procedure of incising the valves of Houston for chronic constipation comes to us from America. It has not been proven how far these plications produce arrest of faeces. The fact that they do not exist in quadrupeds seems to suggest that they have some function associated with the erect posture. It is possible that in a few cases one or more of the valves may be hypertrophied, so that good results may follow division.

Given, therefore, a case of protracted and obstinate constipation, for which surgical measures are indicated, we have the choice of two methods—one, ileo-sigmoidostomy, which in skilled hands gives a death-rate of 23 per cent., or appendicostomy, which our knowledge of appendicectomy leads us to believe would yield a death-rate of under 1 per cent.

APPENDICOSTOMY FOR DRAINAGE OF THE CAECUM AND RELIEF OF ABDOMINAL DISTENSION.

The use of this operation in cases of distension depends so much upon the exigencies of the moment that it is not possible to lay down any rules or indications. I have collected 3 cases, however, which indicate its scope in various abdominal conditions.

The suggestion that the appendix might be used as a spout for the relief of intestinal obstruction was first made by Keetley in 1894,³³ and put to the test by that surgeon in 1906.³⁴

The case was one of carcinoma of the greater curvature of the stomach, involving the transverse colon and causing obstruction therein. Appendicostomy was performed, and a few days later the lumen was gradually and successfully dilated until it admitted a No. 4 rectal tube. Through this the intestinal contents drained well, the colon below the obstruction being emptied by enemata. Later the gastric carcinoma produced obstruction of the pylorus with the usual signs of stenosis and dilatation of the stomach. Jejunostomy was then performed, through which the patient lived for three and a half months, being fed directly into the jejunum and having the bowels evacuated through the appendix. Death was due to the progressive malignant cachexia, but was unaccompanied by the distress of either gastric dilatation or intestinal obstruction.

Jacobson and Rowlands³⁵ mention a case of volvulus of the caecum operated on by Mr. Mansell, in which after unfolding the volvulus he performed appendicostomy, the result being that he effectually anchored the caecum and so prevented a recurrence, and also was able to clear the large intestine of faeces for the introduction of hot saline to combat shock.

Mr. Keetley³⁶ in 1905 operated upon a child aged a year and ten months for intussusception of the ileo-caecal variety. After reduction he performed appendicostomy, the advantages he claimed for the procedure being: (1) Evacuation of bowels. (2) Prevention of recurrence, (3) rest given to caecum, (4) facility of giving saline fluid.

APPENDICOSTOMY FOR NUTRITIVE PURPOSES.

It has been suggested that this operation might be performed and the opening utilized for feeding. The unsatisfactory results of prolonged rectal feeding are so well known that the suggestion seems worthy of consideration. The operation *per se* is practically free from danger, and allows nourishing fluids to be passed into the colon, whence there is considerable absorption. It can at least be safely assumed that the amount of nutriment taken into the circulation would be greater than in the case of rectal enemata. This is borne out by the experiments of Goodard,³⁷ who showed that 10 per cent. of fat ingested is absorbed in the great intestine. The cases for which such treatment would be suitable are mainly those of ulceration or new growth of the stomach in which rest to that viscus is indicated. Since the patient has to undergo an operation, it would seem more reasonable at once to perform a gastro-enterostomy and not attempt the purely palliative measure.

It is possible, however, that there are cases in which appendicostomy for purely nutritive purposes would be useful, such as those in which, either through perigastric adhesions or previous operative measures, gastro-enterostomy is not possible, and those of profuse haematemesis, in which surgical interference with the stomach itself is dangerous.

APPENDICOSTOMY TO PERMIT DIRECT MEDICATION OF THE LOWER ILEUM.

It has been suggested by Ewart¹ that use might be made of this operation to reach the lower portion of the ileum. He proposes it for the surgical treatment of typhoid fever. He was able, both in the cadaver and in the living subject, to pass a catheter through the ileo-caecal valve for some 6 to 8 in., and so to irrigate the bowel. He used a Jacques catheter mounted on a stilette of soft pliable copper, bent at a suitable angle.

I can find no record of this suggestion being put into practice, and how far it is justifiable I do not know. Since the typhoid bacillus is, during the course of enteric fever, present in the mesenteric glands, the spleen and other viscera, it seems unlikely that the most thorough irrigation of the ileum would do much to lessen the toxæmia. Possibly healing of the ulcers might be hastened, and any tendency to perforation diminished.

CONCLUSION.

The foregoing are the uses to which this operation has been or it has been suggested might be put.

The use of appendicostomy for colitis was preceded by the operations of right inguinal colostomy and caecostomy. Right inguinal colostomy is not easy to perform; it is difficult to close satisfactorily, and places the patient in a most unenviable position. The constant flow of fluid, irritating faeces over the surface of the wound and surrounding skin, soon to become excoriated and sore, is most distressing, requires the constant attention of a nurse, and prolonged sojourn in bed. It is true that by this operation the faecal stream is entirely directed away from the colon, which is thereby given greater rest; but the complete daily evacuation and irrigation possible with appendicostomy seems to be sufficient for the purpose. Cases of colitis have a well-known tendency to relapse, and it is not easy to decide when to close the colostomy wound, for, having once closed it, the opening is not readily re-established. Thus, Hale White and Golding-Bird reported a case of colitis treated by this operation, which relapsed two years after the closure of the colostomy opening. With appendicostomy, however, if, after treatment has been stopped, the opening be allowed to stenose naturally, which it will readily do, it gives no trouble, and can be dilated at a later date with suitable bougies, presence of the mucous membrane preventing complete closure of the fistulous tract. For very similar reasons the operation of caecostomy has, in my opinion, been superseded by appendicostomy. Caecostomy is more difficult to perform and more difficult to close. There is practically always some leakage of faeces, and the result for the patient is unsatisfactory. When done to divert the intestinal contents from the colon the result is imperfect, since the diversion is incomplete.

It is interesting to note that the first use of the appendix for irrigation purposes was the result of an unlooked-for incident. Weir was about to perform a caecostomy, but in opening the abdomen the appendix presented itself so opportunely that he utilized it in the way stated.

I have quoted 20 cases in which the operation of appendicostomy has been performed, 4 of which have come under my personal notice and supervision. Summarized, they are as follows:

For ulcerative chronic colitis	10
For simple chronic colitis	6
For protracted constipation	1
For other abdominal conditions	3

This does not take into account the cases reported by Curl, for I was unable to determine in how many he performed appendicostomy and in how many caecostomy.

In all the cases the operation was successfully performed, and was of marked benefit to the patient. In the cases of colitis the following results were obtained:

For ulcerative colitis:	
Total cases	10
Cures obtained	9
For simple chronic colitis with and without passage of casts:	
Total cases	6
Cures obtained	3
Much improvement after one month	1
Apparent cure in four weeks with slight tendency to relapse twenty months later	1
Cure after six weeks, no subsequent history	1

Of untoward events following operation I have found no report. In my own experience of the procedure I met with three small misadventures which may be of interest:

1. Stitch suppuration in those cases in which the appendix was opened on the table.
2. Through the carelessness of a nurse a catheter was allowed to slip into the caecum. It was passed per rectum without any discomfort within twelve hours.
3. One patient, whose colon was washed out daily with six pints of boric acid lotion for seven days, developed signs of poisoning. She complained of severe frontal headache, vomiting, a slow pulse of about 58, and an eruption over the trunk and limbs. The rash consisted of small discrete papules of a light pink tint. On discontinuing the boric acid lotion and washing out the colon with sterilized water the symptoms abated, and disappeared in twenty-four hours.

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LEUCOCYTOSIS IN APPENDICITIS.

By GEORGE MITCHELL, M.B., Ch.B., L.M.,

LATE HOUSE-SURGEON, ABERDEEN ROYAL INFIRMARY.

WHILE acting as house-surgeon in Mr. Riddell's wards in the Aberdeen Royal Infirmary I had the opportunity of examining the blood of a large number of patients suffering from appendicitis. The results of my early observations seemed so valuable that I continued the examinations during the whole year of office.

The behaviour of the leucocytes in most cases gives a sure index both of the intensity of the morbid irritant and of the individual's powers of resistance. Regarded in this light, and considered along with other clinical data, it is of great practical value in many cases. If taken by itself as a pathognomonic sign it would frequently be found to be as misleading as any other individual symptom.

The great drawback to such a method of clinical investigation in urgent cases is the fact that an apparatus and time are necessary; hence it is not so applicable to cases outside hospital practice. Reliable results can, however, be got after a short experience, provided a reasonable amount of care is exercised. On several occasions I have seen the blood of a patient examined by several different men, and the results in most cases were found to be practically similar.

This statement does not apply so accurately to the absolute count as to the differential count. Variations in the result of the absolute count are much more frequently encountered, but I am quite prepared to believe that probably such discrepancies are due to faulty technique.

ABSOLUTE COUNT.

Accurate information is got from studying both the absolute and the differential counts. In practically all cases of appendicitis and of acute abdominal or pelvic inflammation going on to pus formation or necrosis there is an increase in the number of leucocytes; and, speaking generally, it may be laid down that the greater the increase the more severe the nature of the lesion and the graver the prognosis. The great exception to this is to be found in severe cases of very sudden onset, especially in an individual whose powers of resistance are very slight. The reaction of the leucocytes depends mostly on the severity of the morbid condition and on the resisting powers of the individual.

In gangrenous and suppurative appendicitis, and in other acute suppurative abdominal conditions, the absolute

count is generally over 20,000, but cases in urgent need of operation with an absolute count of considerably under 20,000 are so numerous that one feels rather sceptical of the old rule to regard cases with a leucocyte count above 20,000 as indicative of pus formation or necrosis, and those under 20,000 as catarrhal.

It is of more service to know the rate at which the leucocytosis is increasing than to know the actual number of leucocytes per cubic millimetre in a given case. An increasing leucocytosis means that the individual is attempting to battle with the toxins eliminated from the morbid area, while if the leucocyte count rises above that indicating pus formation or gangrene, and keeps on rising rapidly, it shows that virulent poison is being freely circulated in the system, which may gain the upper hand at any moment if operation is not resorted to. Cases of acute appendicular abscess are quite common with a leucocytosis of 15,000 to 17,000. As a rule, one meets with a higher leucocytosis in gangrenous appendicitis than in abscess formation.

Most cases of gangrenous appendicitis ending in recovery have as a rule a high absolute count, many of them from 30,000 to 40,000, but, on the other hand, the leucocyte count may be as low as 15,000.

I think it is generally accepted that cases in which the general symptoms are severe and the absolute count low frequently die. I can recall two cases of perforated gangrenous appendicitis with diffuse general peritonitis, both of which had a leucocyte count of 12,000. The symptoms were extreme in both, and the patients died within twelve hours after operation.

In cases with very sudden onset, accompanied by a severe amount of shock, there may be little or no increase in the number of leucocytes; but if the individual reacts from the shock the leucocytes become increased and rise above normal, while if the reaction fails the leucocytes do not rise.

The variation in the leucocyte count is of great service in forming a correct opinion as to when operation should be performed in cases of appendicular abscess or pelvic abscess from other cause.

It would appear that if the leucocytosis is not increasing to any appreciable extent in cases in which there are clinical signs of abscess formation, it is safe to conclude that the abscess is becoming "walled off" by adhesions, and so operation can be safely postponed till the abscess has been thoroughly shut off from the general peritoneal cavity. The size of the leucocytes varies very much in different cases and in the same case at different times, but such variation is said to be of comparatively little significance. A low count means one of three conditions:

1. A mild case.
2. A very severe case.
3. An abscess thoroughly walled off (Cabot).

DIFFERENTIAL COUNT.

While very valuable information can be obtained from the absolute count, that obtained from the differential count is even more reliable. The most important changes in the differential count are the great increase in the percentage of polymuclear cells and the diminution in the percentage of lymphocytes and eosinophiles.

Most authorities agree that the average percentage of polymuclear cells in the healthy subject varies from 65 to 72 per cent. (62 to 70 per cent., Cabot). In acute inflammation the percentage of polymuclear cells is always found to be increased.

In the cases of acute appendicitis going on to gangrene or pus formation that came under my observation the percentage of polymuclear cells varied from 79 to 90 per cent., and was generally higher in cases of gangrene than in those of abscess formation. It was also found to be higher in those presenting evidences of severe toxæmia. The highest count was 90.5 per cent. in a case of gangrenous appendicitis with general peritonitis, followed by death.

The ratio between the increase in the absolute number of leucocytes and the increased percentage of polymuclear cells in the greater number of my counts was about 1,000 to 1.5 per cent.—that is to say, taking the normal number of leucocytes to be 10,000 per c.mm. and the percentage of polymuclear cells as 72 per cent., then for every 1,000 of increase in the absolute count there was a corresponding increase of 1.5 per cent. in the polymuclear cells. All cases

that ended in recovery after operation had shown a marked increase both in the total number of leucocytes and in the percentage of polymuclear cells (before operation), while the two cases suffering from perforated gangrenous appendicitis with general peritonitis, already referred to, had 88 per cent. and 90.5 per cent. of polymuclear cells respectively, with only 12,000 of an absolute count in both cases. I had the opportunity of examining the blood only in these two fatal cases, but the results of these point to the fact that in severe cases a low absolute count is frequently got, while the percentage of polymuclear cells is generally high.

TEMPERATURE AND LEUCOCYTOSIS.

The relation of temperature to leucocytosis does not seem to give reliable information, as cases are seen with grave clinical symptoms and high blood counts with little or no temperature; but, on the other hand, there are many cases showing an increase in the number of white cells, accompanied by pyrexia, which, like the number of leucocytes, varies very rapidly, according to conditions existing at the site of the pathological lesion. An illustration of this is afforded by the following case of appendicular abscess with retention after operation. The blood was examined immediately before operation and daily after operation:

On admission:			
Absolute count ...	...	...	19,500.
Differential:			
Polynuclears ...	...	...	84.5 per cent.
Lymphocytes ...	...	...	13.4 "
Eosinophiles ...	...	...	0.3 "
Mast cells ...	...	...	—
Large hyaline ...	...	...	1.5 "
Temperature 102.6°.			
First day after operation:			
Absolute count ...	...	...	19,000
Polynuclears ...	...	...	78 per cent.
Lymphocytes ...	...	...	20.5 "
Eosinophiles ...	...	...	0.5 "
Mast cells ...	...	...	—
Large hyaline ...	...	...	1 "
Temperature, 100.4°.			
Free discharge of pus.			
Second day after operation:			
Absolute count ...	...	...	17,000
Polynuclears ...	...	...	62.3 per cent.
Lymphocytes ...	...	...	36.3 "
Eosinophiles ...	...	...	0.3 "
Mast cells ...	...	...	—
Large hyaline ...	...	...	1 "
Temperature, 99.8°.			
Free discharge of pus.			
Third day after operation:			
Absolute count ...	...	...	20,000
Differential:			
Polynuclears ...	...	...	76 per cent.
Lymphocytes ...	...	...	22.5 "
Eosinophiles ...	...	...	—
Mast cells ...	...	...	—
Large hyaline ...	...	...	1 "
Temperature, 102.5°			
Discharge of pus much less.			
Fourth day after operation:			
Absolute count ...	...	...	16,000
Differential:			
Polynuclears ...	...	...	82 per cent.
Lymphocytes ...	...	...	16.5 "
Eosinophiles ...	...	...	0.5 "
Mast cells ...	...	...	—
Large hyaline ...	...	...	1 "
Temperature, 103°.			
Discharge almost ceased.			
Fifth day after operation.			
Absolute count ...	...	...	16,200
Differential:			
Polynuclears ...	...	...	77.3 per cent.
Lymphocytes ...	...	...	20.3 "
Eosinophiles ...	...	...	1.0 "
Mast cells ...	...	...	—
Large hyaline ...	...	...	1 "
Temperature 99°.			
A few hours after the taking of the previous count a large quantity of pus was evacuated from the wound.			
Sixth day after operation.			
Absolute count ...	...	...	10,800
Differential:			
Polynuclears ...	...	...	75.5 per cent.
Lymphocytes ...	...	...	21 "
Eosinophiles ...	...	...	0.5 "
Mast cells ...	...	...	—
Large hyaline ...	...	...	2.5 "
Temperature 98.6°.			
Free discharge of pus, and no subsequent retention.			

INCREASE OF LYMPHOCYTOSIS DURING RECOVERY.

While making examinations of the blood of patients who had been operated upon for appendicular abscess it was observed in many cases that, very soon after the percentage of polynuclear cells and lymphocytes had returned to normal, the percentage of lymphocytes became increased. In most cases the increase was absolute, while in others it was only relative.

The following count is that of a case of appendicular abscess sixteen days after operation, where the discharge of pus had almost ceased:

Absolute count ...	...	...	10,000
Differential:			
Polynuclears ...	...	...	57.7 per cent.
Lymphocytes ...	...	...	36.5 "
Eosinophiles ...	...	...	2.0 "
Mast cells ...	...	...	0.5 "
Large hyaline ...	...	...	2.5 "

Most of the cases that showed lymphocytosis continued to do so up till the time of discharge from hospital, so that I could not ascertain how long the condition persisted. The greater number of those cases appeared to be in fairly good health; but perhaps the condition of the blood may be explained by the low condition of the patients after a severe attack of appendicitis.

SYPHILITIC LEUCODERMA AND THE PIGMENTARY SYPHILIDE.

By SIR JONATHAN HUTCHINSON, F.R.S.,
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"DAFFLED" is the term by which to describe the state of the skin in syphilitic leucoderma. A glance at the appended illustration will show what is meant by it.

Dappling may be studied on the coat of a grey horse or a fallow deer, and with especial interest on that of the giraffe. It consists of the location of isolated patches of a tint different from the ground on which they are placed. The patches may be small or so large as to cover almost the whole of the ground, and thus make it difficult to recognize that they ever were merely patches. In the giraffe of South Africa the skin is a brown bay, but almost angular areas are mapped out by lines of yellowish-white, whilst in the giraffe of Northern Africa the lines of light colour have widened out until only islands of brown remain. Yet the two animals are probably not distinct species. In the dappled horse the arrangement of colour is reversed, it is the patches (or spaces) which are pale and the interspaces (or ground) which are of darker tint. I have felt it necessary to state these facts in order to make comprehensible my own theory of syphilitic leucoderma. In the domesticated horse it is only certain individuals which show a marked tendency to dapple in any conspicuous degree. We must suppose, however, that the potential endowment exists in all. Many, perhaps all, dappled horses become whiter—that is, less dappled—as age advances. The young of many animals show in extreme youth a speckling, spotting or streaking of their skins which they lose when adolescent.

My theory as to syphilitic leucoderma is that the human skin is in many persons latently dappled, and that the condition becomes obvious under certain states of disturbed pigment function of some of which the spirillum of syphilis may be the cause.

The two letters which appeared in the *JOURNAL* of November 28th, 1908, p. 1650, warn me to be more careful as to making negative suggestions. The fear of the criticism of men better read and enjoying better memories than myself is now before my eyes. It must suffice, therefore, to say that if any portrait or detailed description of leucoderma syphiliticum in a negro or in one of the dark races has been published, I should be very thankful to be referred to the work in which it occurs. Such records, if they exist (and probably they do), would be most helpful to us in the endeavour to interpret the phenomena of this interesting condition.

In my last letter* I left the description of our own museum portraits unfinished. I will now, with your permission, attempt to complete it. Before doing so, however, it may be well that I should say a few apologetic words in reference to the letters from Dr. Pernet and Mr. Ernest Lane, which have appeared in the *JOURNAL* of November 28th, 1908, p. 1650.

These gentlemen point out, and with, I regret to say, some truth, that I have much understated the case as regards the amount of attention which has been given to this subject by English authors. I was wishful to show that the condition is one which is probably far more frequent on the Continent than it is with us, and had no wish to disparage or neglect our own literature. I admit that the expressions I used were too strongly put, and they can at first sight be explained away only by pleading either ignorance or forgetfulness. I hope my friends will allow me to plead guilty to their accusation under the head which they may deem the most pardonable. My words have, however, been taken to imply much more than they were intended to. They were dictated when I was standing on the Museum floor with a display of six portraits of leucoderma syphiliticum before me from Continental sources, and not a single one from an English source; and although I was aware that most of our systematic works, whether on syphilis or dermatology, had mentioned it, I had forgotten that any of their authors had recorded original facts, and thought that most had derived their information from foreign sources. I felt sure that, although the condition is one which invites alike the camera and the artist's brush, no English portrait of it had appeared. Whilst my letter was in the printer's hands my memory was fortunately reinforced in reference to the portrait given in the new *System of Syphilis*, and by the indulgence of the Editor I was allowed to squeeze in at the last moment a line of postscript in order to show that I knew of it. Now, of this portrait I had been previously quite cognizant, and had pointed it out with much commendation to

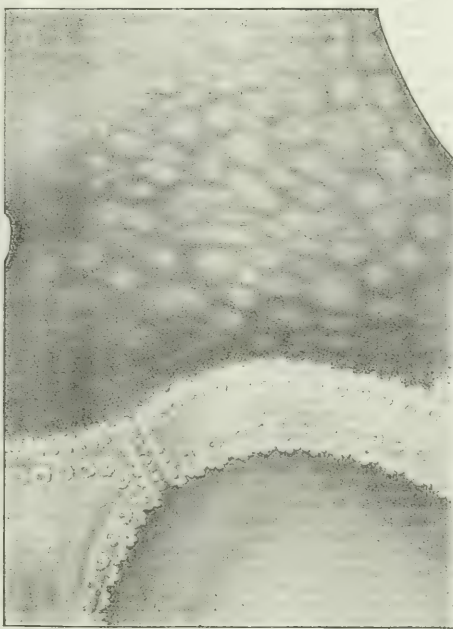


Fig. 1.—The arrangement of leucoderma syphiliticum on neck of a girl. Copied by permission from Chotzen's Atlas.

some friends, but I had not then been able to display it with the others in my collection (it has since been added), and at the time I wrote it had absolutely escaped my recollection. It was, in fact, brought back to my recognition by one of my friends, to whom I had myself shown it a fortnight

* *BRITISH MEDICAL JOURNAL*, November 21st, 1908, p. 1592.

previously. Even when I added the postscript I did not know of the existence of any letterpress description of it. I have since found out and read the able and interesting article contributed by Mr. Arthur Shillitoe to this most important work on this very subject.

So far as my references to modern works during the past week have extended, I should have been inclined almost to repeat my statement of belief that the condition is one which is rare in English practice, and has been but little studied either by dermatologists or writers on syphilis were it not for Mr. Shillitoe's article. Mr. Shillitoe has enjoyed in the department of the Lock Hospital devoted to women very exceptional opportunities for observation. The result is that he declares that a condition which most of us had supposed to be decidedly rare is really quite common. He actually found it in 75 per cent. of a series of syphilitic patients observed consecutively. The explanation is that in addition to having a splendid field to work over he made most painstaking search, using optical aid, and thus no doubt identified it where most of us would have failed to see it.

As I have said, were it not for this article I do not think that I should incline to make any apology to my friends your two correspondents. I find exceedingly little evidence that any of the brief statements in systematic works were written from personal observation. In more than one instance there are misstatements which prove that they were not. What I wrote as to the disease not having been observed or described did not mean that it had been omitted from textbooks, but that no original work had been recorded. Mr. Shillitoe's account, however, relieves our home literature from this charge, and seems to prove that the condition, if well looked for, is as common here as on the Continent and in America.† There remains, however, a fact which I cannot but

very much as to its degree of development, and that in a large majority of cases it may be very inconspicuous. As regards my own experience, although I have recognized a few ill-marked cases, I have certainly never seen conditions approaching in conspicuous peculiarity those shown in several Continental portraits. Had such come under my notice I should certainly have preserved a photograph or a water-colour portrait, and I have none. Some of my dermatological *confrères* may have done so and will now bring them to light, but as yet I have not heard of any.

I regret having been obliged to occupy so large a portion of your space in explanations of a somewhat personal character. The necessity has been laid upon me by the publication of your correspondents' somewhat impetuous letters. I had already promised to explain "next week," as regards Mr. Shillitoe, my wholly accidental omission; and had this been waited for, the necessity for anything further might probably have been anticipated. I will now gladly pass to the more congenial task of dealing with the subject itself. There are, perhaps, few topics which better exemplify the advantages of such a collection as that which we have now made at the Polytechnic Museum, and I would earnestly beg any who may be interested in leucoderma syphiliticum to do me the honour of an inspection of the collection. It will supply a good substratum of recorded and easily appreciated facts and will obviate important misconceptions which have found expression in some of our textbooks. The collection is by no means complete as regards all that has been published, but no pains will be spared to make it more so, and the loan of any drawings which may be



Fig. 2.—From the back of the neck of Neumann's portrait.

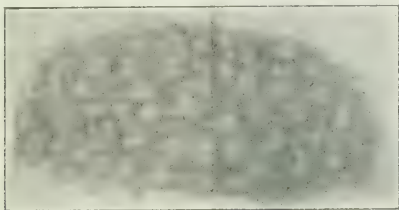


Fig. 3.—From the loin of the same.

still think implies something—that the affection has been widely discussed and well illustrated by portraits elsewhere, but has not until within the last few months claimed any detailed attention here; or been thought to be worthy of pictorial representation. If it could be made probable that there is great difference in the degree of prevalence in different races and different climes the fact might serve some purpose in our discussion as to its probable causes. For the present, however, with Mr. Shillitoe's statements before us, we must wait. We must note that this form of leucoderma is one which varies

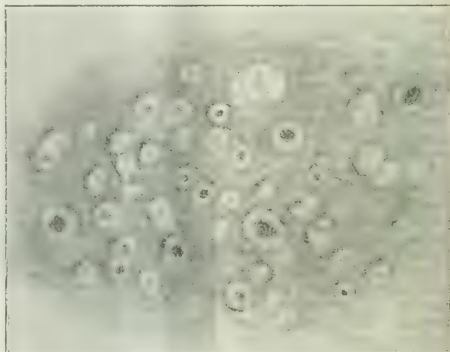


Fig. 4.—From the back of the neck of one of Chotzen's portraits.

The suggestion is that the pale spots are normal, and the dark ground and the central "nuclei" abnormally pigmented. It is essential that the reader should recognize that there are no "spots" in any other sense than changes of tint. The conditions here shown have been purposely somewhat exaggerated, with the object of clearness.

entrusted to us will be most gladly welcomed. The following is a list of what we can offer for present inspection:

1. A coloured lithograph published by Pommier in 1881. It represents the neck and part of face of a young woman.†

† In reply to the question whether "pigmentary syphilis" or "syphilitic leucoderma" is the preferable term, it may be replied that both are needed. In a large proportion of cases of syphilis there is in the secondary stage some disturbance of pigment, and those in which the changes become conspicuous range themselves in two groups: those in which pigmentation alone is evident, and those in which leucodermic patches are present. No doubt the two are closely connected, and it is assumed, but by no means proved, that the one may precede the other. Clinical convenience, however, requires that we should recognize each by its appropriate name. The omission to do so has led to considerable apparent contradiction in the statements of authors. Those who consider the condition common are dealing with the pigmentary form only, and those who say that it is very rare with the leucodermic. The shield has two sides.

* It gives me the greatest pleasure to bear my testimony to the very high value of the articles contained in this work. It is invaluable to the student of syphilis. I have learnt much from it and hope to learn more. If, however, there be a place of purgatory for bad index makers, I fear that whoever compiled its index will have a long stay. The words "pigmentary syphilis" are indexed, but under them the reader is referred only to an unimportant half-page on the general topic, and no mention is made of an excellent four-page original article by Mr. Arthur Shillitoe, several of which pages bear that heading in large type.

† It may be suspected that, although Mr. Shillitoe has given us a beautiful portrait of syphilitic leucoderma, he is in these statements dealing chiefly with cases which were mainly pigmentary. All his patients were, he informs me, women.

Unfortunately the colours have undergone some change, and it is not so clear as could be wished. Author's diagnosis: Syphilide pigmentaire.

2. A chromo-lithograph from Chotzen's *Atlas*. The neck of a young woman exhibiting in the most definite manner large areas of dull white arranged dapple-wise on a brown skin.

3. From Chotzen's *Atlas* we have one designated "Lues: Leucoderma colli." It shows the back of the neck and shoulders of a dark-haired young woman dappled over with white patches which cover almost the entire surface. The pigmented network is not very dark and by no means conspicuous.

4. In one of Neumann's two portraits the front of the neck and upper part of the bust are shown, and the condition of dapping is very definite. "Leucoderma syphiliticum."

5. Copied from the St. Louis Hospital collection and published in the *Atlas* edited by Dr. Pringle, we have shown the side of the neck of a young woman of a dark, swarthy skin. The skin of the neck is darker than that of the shoulder, and is dappled over with white ill-margined patches about the size of fourpennylbits. In several instances these have become confluent. The ground network is very dark.

6. Mr. Shillibe's portrait represents the side of the neck of a young woman with brown or Auburn hair. It is dappled with white patches, which cover the greater part of the surface.

7. Tafel 157 of Kaposi's *Atlas* represents the back of the neck of a woman with brown hair. Numerous small spots are scattered over the neck, not larger than split peas, and all of them consisting of a white ring, which in some instances encloses a dark centre like the nucleus within a cell. The enclosed nucleus about the same tint as the ground colour. The patches are in some places confluent, and they cover the greater part of the surface. The diagnosis is "Leucoderma syphiliticum. Pigment syphilis." It can scarcely be considered to be either pigmented or leucodermic, but only congested. It resembles the following:

8. Number 210 in the supplement to Jacobi's *Atlas* has the diagnosis "syphilis maculosa congestiva, leucoderma syphiliticum." It represents the front of the bust, shoulder, and neck of a young woman, which is dappled all over with a pink eruption, which encloses lighter coloured spots. On the front of the neck these spots are white. It is tolerably clear that a diffuse erythematous condition has brought out the dappled pattern of the skin. Only on the neck is there evidence of pigmentation.

9. Tafel 158 from the same *Atlas* and with the same nominal diagnosis represents the front of the trunk from the nipples to the upper part of the thigh, marbled or dappled all over by a pigmented network. The contrast in colour is not very great. The neck and shoulders are not shown. A man.

10. A second portrait of Neumann represents the back of the neck and almost the entire trunk. The groundwork of the entire skin is very dark, swarthy rather than black, and it is spotted over with darker patches the arrangement of which it is difficult to interpret. On the back of the neck, however, there occur definite areas of white skin enclosing darker spots, as in Kaposi's portrait mentioned above. Across the loins the condition of mapped-out dapping is definite, and the paler spots have dark centres. The contrast in colour is nowhere very marked.

11. The portrait published by Dr. Taylor of New York. The effect is a marbled one. The patches are very dark, and Taylor distinctly recognizes three forms.

12. A portrait given by Dr. MacLaren's valuable *Atlas of General Diseases* (Plate 12). This was published in 1887, but I have only recently found it.

It will be seen that these portraits present us with some interesting problems. They are not all alike. Two of them show the dappled condition occurring over the whole trunk, and in one of them, perhaps both, the patient was a male. Two of them showed a condition which has possibly hitherto escaped notice in England—I desire to speak with the utmost caution—the presence of a dark nucleus in the centre of the white patch.

Now, if we observe the arrangements of colour on the skins of animals to which I have already adverted, we have at least three distinct types as regards the relation of patches to ground.

In the leopard black patches occur on a yellow ground, and many of the patches have yellow centres.* In a few of the latter black nuclei occur, which are thus surrounded by yellow, which again is margined with black. This is exactly what occurs, but in reverse order, in the portraits of leucoderma syphiliticum given by Neumann and Kaposi respectively.

In the giraffe dark patches are mapped out on a yellow ground. The ground in one variety is so scanty as to be little more than lines, but in another it may increase so as to comprise the greater part of surface and to reduce the patches to comparatively small areas.

Thirdly, we have the pattern shown on a deer or dappled horse, in which light-coloured patches, mostly round and

of very various dimensions, occur on a darker ground. This is the condition usually realized in syphilitic leucoderma. It may be further noted that on some regions (see loins and neck of Neumann's portrait) the pigmented areas are squared rather than round, in exact imitation of what occurs in the giraffe, and in some of the regions of skins of leopards and other animals.

Fournier, who devotes one of his admirable clinical lectures† to "Syphilide Pigmentaire ou Ephelique," is emphatic in declaring that this condition stands apart from other syphilitic conditions, and should be studied by itself: "Accident très bizarre, très curieux, qui s'éloigne de tous égards des autres déterminations cutanées de la vérole." He does not admit that the white "taches" are in any degree decolorized, but regards them as normal skin. He had seen but one case in a male. He thought the condition incurable by specifics and that it never lasted less than one or two years and often longer.

He distinguished it from Addison's disease by stating that in the latter the pigmentation is general and uniform, "non-tachetée." If, however, we deny, with him, that the white patches are other than of normal tint, then this condition is "non-tachetée" also, for it is the pigmentation of the ground which is excessive, and this is not tachetée. Thus we reject altogether such terms as "macular lesion" as inapplicable, and come to the conclusion that the condition is one of diffuse melanoderma plus the peculiarity of a normally pale skin in patches. This brings us very near to the suggestion of a functional temporary and minimized type of Addison's disease, due, possibly, to derangement of the suprarenal capsules. Fournier denies, and I cannot but think with good reason, that it can be regarded as in any way secondary to preceding syphilitic eruptions.

We may, I think, safely assume that the peculiar patterns evolved in cases of this affection are physiological, and due to original organization and not to disease. Building on this assumption, I would further suggest that in secondary syphilis, disordered function of the suprarenal and other organs favours the accumulation of melanin in the cells, and that, finally, exposure to light brings about its deposition in unprotected parts. Thus we explain the preference of the malady for the female sex, and for the neck and bust, and its tendency to persist.

We may conjecture that the affection is far more common in non-syphilitic subjects than has yet been suspected. If some observer, as zealous and keen-sighted as Mr. Shillibe, would conduct a series of control observations on healthy individuals—brunettes by preference, but not excluding those of the male sex—we should probably obtain some very interesting facts. In the meantime I would invite those interested in the matter to pay an observation-visit to the Zoo, and afterwards to devote half an hour to our Chenies Street Museum.

A CASE OF VINCENT'S ANGINA.

By J. T. C. NASH, M.D., D.P.H.,

CORNER MEDICAL OFFICES OF HEALTH FOR NORFOLK.

The following case appears to suggest that the organisms associated with the name of Vincent might after all be merely ordinary oral parasites which happen to find a suitable nidus for multiplication in certain throat conditions, especially where there is a tendency to the formation of a false membrane through the action of streptococci or pneumococci, or even the *Bacillus diphtheriae*: but it is only just to state that a previous case of Vincent's angina had occurred in the same house in an adult female in the preceding August. In this case, also, Vincent's organisms and streptococci were found bacterioscopically.

Mlle. P., aged 20, complained of severe headache on October 16th, 1906. On the 18th she noticed a pricking pain in the throat on the right side, accompanied by some dysphagia. Appetite good, and no constitutional signs of any moment beyond headache, which persisted for some days.

On October 20th, 1906, the patient was examined by me. She was a pale, thin, and delicate-looking young woman, with a fair complexion, and a few freckles on the nose and cheeks. She had a slight fever, and was otherwise well. The throat was examined, and a small, white, circular patch was seen on the right side of the pharynx, about the size of a pea. The patch was slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On October 21st, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On October 22nd, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On October 23rd, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On October 24th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On October 25th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On October 26th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On October 27th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On October 28th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On October 29th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On October 30th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 1st, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 2nd, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 3rd, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 4th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 5th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 6th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 7th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 8th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 9th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 10th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 11th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 12th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 13th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 14th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 15th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 16th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 17th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 18th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 19th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 20th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 21st, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 22nd, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 23rd, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 24th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 25th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 26th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 27th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 28th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 29th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On November 30th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 1st, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 2nd, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 3rd, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 4th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 5th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 6th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 7th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 8th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 9th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 10th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 11th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 12th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 13th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 14th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 15th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 16th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 17th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 18th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 19th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 20th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 21st, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 22nd, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 23rd, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 24th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 25th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 26th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 27th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 28th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 29th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On December 30th, 1906, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On January 1st, 1907, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On January 2nd, 1907, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On January 3rd, 1907, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On January 4th, 1907, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On January 5th, 1907, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On January 6th, 1907, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On January 7th, 1907, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On January 8th, 1907, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On January 9th, 1907, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On January 10th, 1907, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On January 11th, 1907, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On January 12th, 1907, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On January 13th, 1907, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On January 14th, 1907, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On January 15th, 1907, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On January 16th, 1907, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no other symptoms.

On January 17th, 1907, the patient was examined again. The white patch had increased in size, and was now about the size of a walnut. It was still slightly raised, and had a yellowish centre. The surrounding mucous membrane was normal. The patient was otherwise well, and had no

Clinical Signs.

On examination the tongue was normal, and there were no enlarged glands; a white membranous patch was visible between the pillars of the right fauces, and there was slight nasal discharge.

Bacteriological Examination.

A swab taken from the white patch of deposit was first rubbed on blood serum for incubation at 37° C., and then on a clean slide for immediate examination. After standing with Loeffler's methylene blue, the immediate examination revealed numerous fusiform bacilli and spirilla, the organisms described by Professor Vincent. These failed to grow on the inoculated serum, which after twenty-four hours' incubation at 37° C. revealed the presence of streptococci.

Treatment.

The treatment adopted was that which is recommended for angine de Vincent—namely, tincture of iodine locally, and potassium chlorate internally.

Result.

The organisms of Vincent disappeared rapidly, the streptococci more slowly, but recovery took place in a week.

The data in this and other cases mentioned are too meagre to permit any reliable conclusion to be drawn, but in each of my cases it seemed probable that street dust inhaled accounted for the sore throat and streptococci, and that Vincent's organisms were merely accidental, but in view of Vincent's own experience and descriptions further study of similar cases is required.

I am strongly of opinion that if more throat swabs were subjected to immediate examination than at present obtains, and Vincent's organisms looked for, it would be found that these organisms are not so rare as is thought.

The question of their pathogenicity also requires further investigation, and appears to be worth the attention of the clinical pathologist.

The point to be decided is this: Is Vincent's angina a sufficiently distinct disorder to deserve a specific designation? The symbiosis of spirilla and fusiform bacilli point in this direction, as also the fact that the particular spirilla are difficult of cultivation. They really seem to be more of the nature of spirochaetes.

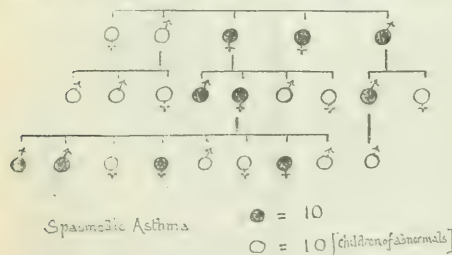
The above notes were written nearly two years ago. There appeared in the issue, November, 1908, of the *Journal of the Royal Institute of Public Health* a contribution by Dr. M. A. Arnold on Vincent's organisms which corroborates the views I have expressed. Dr. Arnold's contribution is well worth attention. The clinical appearance of the membrane seen on the fauces in the cases, in which I have examined for and found Vincent's organisms, is very suggestive of diphtheritic membrane. I am afraid my own opportunities of further study of these organisms are now likely to be few, but I venture to hope others will follow the matter up.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

MENDELIAN HEREDITY IN ASTHMA.

As I think the enclosed chart, showing, in black, the members of a family who have been afflicted with



spasmic asthma, will be of interest to Mendelians, I shall be glad if you will publish it.

The numbers—10 normal and 10 abnormal descendants—are in accord with Mendel's theoretical 50 per cent. of each class in such cases, for there was almost certainly a heterozygous abnormal parent of those shown in the first line.

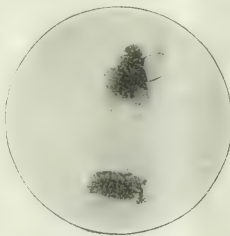
Wrexham.

H. DRINKWATER.

DIPTEROUS LARVAE INFECTION.

It must be an uncommon experience to have two cases of infection by dipterous larvae under one's care at the same time. The method of infection in the one case and the consequence of the infection in the other may warrant their being reported.

CASE I.—Mrs. B., aged 55, an asthmatic, while sitting sewing, felt a fly under her right nostril. She at once tried to expel it by blowing the nose, but without success. An attack of asthma coming on at once, she had recourse to the fumes of a powder which she habitually used at such times. The fly, not quite dead, fell out, but could not be found. This was on a Wednesday afternoon. Severe attacks of sneezing troubled her the same night, and the next morning there was a bloody nasal discharge. The nose began to swell, and the discharge became more bloody and the sneezing more annoying. By Friday she could not leave her bed: by Saturday night the bleeding was sharp and the swelling had spread to the cheeks and eyelids. Such was her condition on my seeing her on Sunday morning. In addition there was a foul, sanious discharge, the lining membrane was much swollen and cracked, the pain and distress severe. The septum nasi showed an old-standing perforation centrally. The nose was washed out with a saturated solution of boric acid and an antiseptic inhalation given. By next day the patient's distress was so serious that Dr. Marry was asked to see her with me. The nose was douched several times a day with potassium permanganate, which kept down the fetid smell, but gave no other relief. By Wednesday morning the discharge of maggots began and kept up for about ten days. A perforation occurred through the right nostril just below the nasal bone. As the right ala became very much swollen and blocked the passage it was incised, and a small nest of maggots was revealed. They spread into the right cheek up to the lower eyelid; they burrowed into the gums and appeared in the mouth. In spite of douches of hydrogen peroxide, mercury perchloride, and permanganate, they kept on appearing up to the number of about a dozen and a half each day. Between 100 and 150 maggots must have been passed in all. They left the nasal cavity disorganized, and bone exposed in many directions. I secured one of the maggots, which were evidently too large for those of the house fly, and put it in a bottle. It hatched out a blue-bottle. The accompanying photograph shows the fly and its case.



CASE II.—While attending the last case I saw an elderly lady who had an epithelial tumour the size of a small hen's egg growing in front of the left ear. It had begun to bleed. On examining its base, which was about 1½ in. by ¾ in., I saw a few maggots. Evidently the bleeding was due to their destruction of the tissue where the vessels entered. In spite of strong applications for their destruction the maggots, which proved far more numerous than I thought, succeeded in riddling the tumour in twenty-four hours, causing pretty severe loss of blood. By next day the tumour was fetid, the bleeding continuous, and the face as far as the eye oedematous. Dr. Marry saw the case with me, and we decided to remove the growth with the cautery. The whole centre was a mass of maggots. When the tumour was removed down to the level of the skin a large nest of maggots was found in the cheek, and had to be destroyed with the cautery. They had evidently developed from ova of the housefly, being much smaller than those of the previous case. Promptly the bleeding stopped and the swelling disappeared, leaving only the scar resulting from the use of the cautery.—I am, etc.,

Trinidad, B.W.I.

STEPHEN M. LAURENCE, M.B., C.M.

OEDEMA OF THE EYELIDS WITH PYREXIA.

My attention has been drawn to an article in your issue of December 12th, 1908, by Dr. Spriggs, under the title of

"An Epidemic of Influenza, Characterized by Oedema of the Eyelids."

As several pyrexial cases in which this phenomenon of oedema of the eyelids was a prominent symptom occurred in this town during the latter half of last year, I am prompted to offer the following remarks. In all some 9 or 10 cases of this description have been brought to my notice, 3 of these occurring in my own practice and 5 in that of my neighbour, Dr. W. F. Lloyd, of Windsor. While the symptoms presented by these cases showed great similarity one to another, they were hardly such as to suggest an influenzal origin to either of us—though, considering the protean character of this malady at the present time and the diversity of opinion as to its real nature, it is of course impossible to assert that our cases could not have owed their origin to this cause.

The cases seen by us approximated more to a gastrointestinal type—some disorder of the bowels, either diarrhoea or constipation with flatulent distension, being present in every instance. In 3 cases in which the fever was unusually prolonged a suspicion of enteric fever was aroused, but when the blood was tested for Widal's reaction the result was negative. The oedema of the lids was in every instance early and transient, disappearing mostly within forty-eight hours. It was, however, a very prominent symptom, sufficient always to attract the attention of the patient and his friends. In no case were the eyelids reddened, nor were the conjunctivae observed to be injected. The pyrexia was mostly greater than in the cases related by Dr. Spriggs. In two of my cases it reached 103° and in the other 102° F. In no case was the patient suddenly prostrated by the attack as so often occurs in influenza. All my cases were walking about in a febrile condition when first observed, and had to be sent to bed. Albuminuria was not present in any case. The duration of the fever varied; the shortest period of illness observed was ten days and the longest three weeks. No heart or lung symptoms were noticed, and the fancies were invariably healthy; in fact, in no case was any cause discovered sufficient to give rise to the pyrexia. Notwithstanding this these patients were decidedly ill, apparently more so than the cases already related in your columns, for in one or two instances, notably one case of Dr. Lloyd's which lasted three weeks, the condition was such as to give rise to a certain amount of anxiety.

We have thought it well to place a brief record of these cases before your readers, not with the idea of contrasting them with the cases related by Dr. Spriggs, but in the hope that others who may have met with this somewhat unusual symptom in conjunction with a pyrexial condition may be induced to relate their experiences, and so possibly be the means of enabling us to classify similar cases that may confront us in the future.

Windsor.

CHAS. R. ELGOOD.

INAUGURAL SYMPTOMS (GASTRIC ULCER).

I READ Mr. Moynihan's address with very great interest, but I scarcely anticipated that I should have such an early opportunity of putting his advice to practical use or of verifying his statements as to the inaugural symptoms of ruptured gastric ulcer. His address was published on November 28th, and on the following day, about 5.20 p.m., I received a very urgent summons to see a young woman who lives only a few doors from my house. I returned with the messenger, and the history given me was that about seven or eight minutes previous to my arrival, as she was lying on the couch, she was seized with a sudden overwhelming pain in the region of the stomach, and felt sick and faint. She is said to have lost herself once or twice owing to the intensity of the pain, and to have become very pale.

I found her in a reclining posture on a couch, her expression extremely anxious, eyes turned up, lips bloodless, and with beads of perspiration on the brow. The skin of the face, chest, and abdomen was very pale. Her arms and hands (which were exposed, as she was wearing a short-sleeved blouse) were warm, as also were her legs and feet. She made one or two attempts to vomit, but only brought up a teaspoonful or two of glairy-looking fluid. Her pulse on my arrival was 86, regular and about normal in strength and volume, but after the attempts at vomiting it became 96, and remained so until I left her. Her respiration was 34, short, shallow, and moaning on expira-

tion. The temperature in the axilla was 98.6°. There was great tenderness over the region of the stomach about 2 in. below and to the inner side of the left costal margin. The abdominal muscles were very rigid, but it was noted that those of the left side were much more so than those on the right. There was no distension of the abdomen. The patient was a young woman aged 23 years, and I had treated her two years ago for an attack of hæmatemesis.

From the above symptoms I diagnosed that she had a ruptured gastric ulcer, and I recommended her immediate removal to the Leeds General Infirmary. This was done, and Mr. Moynihan operated as soon as she arrived, finding a perforation of an ulcer on the lesser curvature of the stomach, near the cardiac orifice.

I think this case may be of interest, coming immediately after the publication of Mr. Moynihan's address, and verifying in such a striking manner his description of the inaugural symptoms of this condition, as opposed to the usual textbook descriptions. I am doubtful also whether any case has been observed so early, and on that account may be thought worthy of record.

Leeds.

JOHN EXLEY, M.R.C.S. Eng., L.R.C.P.I.

IONIZATION IN CHRONIC ENDOMETRITIS.

DR. HERMAN's instructive paper on the "Use and Abuse of the Curette," in the JOURNAL of December 5th, 1908, encourages me to advocate a method suggested by Dr. Samuel Sloan, of Glasgow, and others for the treatment of chronic endometritis by means of ionization. The details of the technique are of the simplest character, and can be carried out by any physician.

The vagina having been previously douched with an antiseptic solution, a sterilized copper sound, varying in calibre according to need and having an insulated stem connected with the positive pole of the continuous current of an electric battery, is introduced into the cavity of the uterus. A large pad of absorbent cotton or of several layers of lint 6 in. by 6 in., soaked in a saline solution, is laid on the hypogastrium and connected with the negative pole. The circuit is then closed and the current gradually increased until a record of 20 to 40 milliamperes is reached, and this maximum is maintained for about fifteen minutes; afterwards the current is gradually reduced to zero, then the commutator is changed and 5 milliamperes of a reverse current is allowed to pass for three to four minutes in order to loosen the copper sound, which otherwise will be found to be tightly grasped by the neck of the uterus. The current is now again reduced to zero and the sound gently withdrawn. By this means the internal surface of the uterus is thoroughly cauterized. As there is abundant discharge for a day or two after the operation, vaginal douching is recommended.

The advantages of this method are that the endometrium, while thoroughly dealt with, is not wounded, any abraded surface is encouraged to heal, there is no danger of sepsis or of septic absorption, the discomfort to the patient is but slight, no anaesthetic is required, and the patient does not need to retire to bed after the operation.

In order to observe how the copper is carried into the tissue of the uterus, let the physician take a piece of raw beef and plunge a thick copper wire connected with the positive pole into one side, while a platinum electrode in connexion with the negative pole is introduced into another part of the beef at a distance of 5 to 6 inches. In a few minutes after the current has been turned on, the positive copper electrode will be found tightly fixed in the beef, while the negative platinum electrode will be only loosely held, and a streak of the green oxychloride of copper will be noticed starting from the copper electrode and diffusing gradually through the mass of beef towards the negative pole.

I have employed this method with gratifying results in several cases of endometritis accompanied by chronic discharge during the menstrual periods, and also in cases of menorrhagia, both with or without pain. The discharge is lessened or made to disappear and the amount of menorrhagia is reduced. I am convinced that this plan of treatment deserves an extended trial and all the more that it offers in many instances an effective substitute for the process of curettage.

Glasgow.

W. F. NORTHVILLE, M.D.

Reports

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

THE ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.

CASE OF SUPPURATING DERMOID OF MEDIASTINUM.

(Reported by THOS. B. MOUNT, M.B., CH.B., House-Surgeon.)

A boy, aged 17, was admitted under the care of Dr. Bottomley on October 7th, 1908, with the following history:

History and Clinical Course.

He had had good health up to November, 1907; he was then laid up with chilblains and blisters of the toes, which persisted for some weeks. Cough commenced in January, and swelling of the abdomen, followed by oedema of the legs, was noticed in April, 1908.

On admission he was suffering from general oedema and ascites; both increased rapidly in spite of medical treatment and repeated tapping, and the patient died on November 25th. The physical signs were: Dullness on percussion behind and for about an inch on either side of the manubrium sterni continuous below with an enlarged cardiac dullness. Over this area the breath sounds were tubular without accompaniments, and vocal resonance increased. There were no cardiac murmurs. The urine was of about normal amount, and contained no albumen till a few days before death. The evening temperature was usually between 100° and 101°. The diagnosis of tuberculous glands in the mediastinum obstructing the superior and inferior venae cavae was made.

Necropsy.

On opening the thorax, the pericardial sac appeared to be very much enlarged, but this on incision proved to be a large cyst, distended with purulent fluid, which contained yellow fatty masses and long hairs. The cyst was adherent to the diaphragm below; above, a narrow neck ran up in front of the superior vena cava, and communicated with a large loculus which lay anterior to the arch of the aorta and its branches; its wall was lined with scaly, fat-covered integument, and the cavity was at one point constricted by a broad fleshy band. The heart lay embedded in the thick posterior wall; no sign of any pericardial sac could be found, and the cyst appeared either to have grown from the pericardium, or in its growth to have become very completely adherent to it. The chambers of the heart, especially the auricles, were flattened, but otherwise healthy. The pleural sacs were obliterated by extensive adhesions between the layers, and the lungs, liver, and other viscera were congested, but except for this showed no disease.

Streptococci were grown on culture from the cyst fluid.

IN an investigation of the solubility of lime in water, an account of which was presented to the Chemical Society recently, Messrs. G. T. Moody and L. T. Leyson have endeavoured to avoid the errors which largely vitiated the results obtained by earlier workers, and some of the results obtained in the course of the research are of more general interest. Lime prepared from chalk consistently showed an apparently greater solubility than pure lime from calcite, and this was found to be due to the presence of impurity, chiefly silica, which is not revealed by the ordinary test of judging the strength of lime water from its alkalinity. As is well known, the solubility of lime is less at higher than at lower temperatures; but the authors of the paper found that when the temperature of saturated lime water was raised it remained supersaturated, and only gave up the excess with extreme slowness; on the other hand, solutions of lime were appreciably weakened by passing through filter paper or other fibrous substances. The official lime water is intended to be a saturated solution of lime at ordinary temperatures: the deficiencies in strength which are occasionally found in the article supplied in shops are usually due to careless preparation or to exposure to the air, but it appears that other considerations must not be entirely ignored.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

BIRMINGHAM BRANCH.

PATHOLOGICAL AND CLINICAL SECTION.

Birmingham, Friday, November 27th, 1908.

Professor LEITH in the Chair.

Rhinitis Caseosa.—Professor LEITH and Dr. C. J. LEWIS gave an exhibit of bacterial cultures obtained from a case of rhinitis caseosa. The clinical history of the case, communicated by Dr. Glegg, was as follows: The patient, a woman of about 40 years of age, was sent to Dr. Glegg by an ophthalmic surgeon, who suspected an intranasal cause for the lachrymal obstruction from which she was suffering on the right side. Two years ago she had influenza, and since then the right side of the nose had become stopped up. She also had several carious teeth removed from the upper jaw on the right side. There had been a good deal of frontal pain on that side. The right side of the nose was filled with a mass of putty-like material, with an intensely fetid odour. This was removed under an anaesthetic, and the right maxillary antrum opened by removing a portion of its anterior wall. The mucosa was hypertrophied and polypoid. The small polypi were removed with cutting forceps, but the mucosa was not curetted. A large opening was found in the outer antral wall. This opening was enlarged below, and the cavity packed with gauze from the nasal cavity into the antrum. The gauze was removed next day, and alkaline lotion used thereafter. The discharge has entirely ceased, and the nasal cavity is clear. Now, three months since the operation, there was no recurrence of the former symptoms. On examining the material removed by Dr. Glegg, Professor Leith and Dr. Lewis found several organisms, which they deemed to be non-pathogenic, and also a streptothrix, which they consider to be probably pathogenic. The characters of the suspected streptothrix are:

1. Microscopically—is a typical streptothrix, Gram-positive, and not acid fast.
2. Cultures. (1) Agar—Colourless growth invading medium, becomes covered on surface with white chalky bloom, gradually assuming a pinkish tint. (2) Stab-jelly—slowly liquefied formation of a bubble. (3) Broth—forms pellicle, and forms flocculent deposit at bottom. (4) Milk—forms pinkish film adherent to tube. (5) Serum—similar to that on agar. (6) Potato—A colourless growth which speedily forms the chalky bloom. This bloom is much more chalky than that of *Streptothrix nigra*.
3. Pathogenicity—doubtful. Tested thrice since isolation. First animal (guinea-pig) died in three days, and a different germ obtained from its tissues. Second animal (guinea-pig) died in three days, and no germ recovered from its tissues. Third animal (rabbit), inoculated on November 23rd, 1908, is still alive and well.

Tubal Pregnancy.—Mr. J. FURNEAUX JORDAN reported four cases: (1) Aged 29. Seven children, youngest aged 3. Losing for nine weeks before operation on September 25th, 1908. It began as an ordinary menstrual period, and was free from any accompanying pain until the last few days. There was acute tenderness and a distinct swelling in the left half of Douglas's pouch. The tube was dilated, and protruding through the dilated fimbriated extremity was an organized blood clot. A quantity of dark blood and blood clot occupied the pelvis. Sections taken across the tube showed that only a limited portion of the wall of the tube had been stretched by and formed a covering to the tubal mole. At first sight it appeared that the mole was intramural, but a careful examination revealed a thin, flattened-out layer of tubal mucous membrane lining the entire covering. It is possible that this epithelial lining was pushed in front of the pregnancy as it made its way into the tube wall. Several chorionic villi were found in the clot. (2) Aged 31. Married eighteen months; one child,

9 months old. Seven months ago was infected with gonorrhoea, from which she said she had quite recovered. The menstrual period, due on September 2nd, did not come on until September 9th, and from then until October 16th, when first seen, the loss had been continuous. Very little pain, except on September 9th, the day of onset, when it was severe in the lower part of the abdomen. There was a large tender swelling filling up the left half of Douglas's pouch. On October 25th the specimen shown was removed. It consists of the left appendages, and the outer end of the tube is dilated and occluded by adhesions to the ovary. Its contents were thick blood, fluid, not clotted. In the left ovary was a cyst the size of a small apple. In the middle of the tube, proximal to the dilated portion and distant $\frac{1}{2}$ in. from it, was a small swelling. Microscopically this proved to contain a small, firm clot with chorionic villi in it. It occupied the lumen of the tube, the wall of which showed no sign of thinning in any portion. (3) Aged 41. Married seventeen years; five children, youngest aged 6. One miscarriage two years ago, ever since which she has had pain in the left side. For two months has had continuous uterine haemorrhage, varying in quantity. It began as an ordinary period. The pain has been very severe in the lower left part of the abdomen. A small swelling could be detected in the place of the left tube. At the operation on October 5th an unruptured left tubal pregnancy was removed. The site was the middle third of the tube, and in its thickest part the swelling was nearly $\frac{1}{2}$ in. in diameter. Microscopic slides show a small organized blood clot occupying the lumen of the tube, surrounded everywhere by the folds of the tubal mucous membrane. In the clot are chorionic villi. There is no sign of any invasion of the tube wall by the pregnancy. (4) Aged 28. Married one year. In January, 1905, went two weeks over her time, then lost for a week, stopped for three days, lost again for a fortnight, at the end of which time she was seen with Dr. Sturge. Pain was not marked. Douglas's pouch was completely occupied by a firm, tender swelling, which was diagnosed as a peritubal haematocle. At the operation, on February 20th, the swelling proved to be a right ovarian cyst, about the size of an orange. In the very middle of the tube of the same side was a very small swelling, which Mr. Furneaux Jordan cut open. There was immediately extruded a small clot. Microscopically it proved to be a tubal pregnancy. Slides and photographs of slides were shown, in which the relations of the parts were clearly seen. A chorionic villus with Langhans's cells and syncytial cells, and also, adjacent to the tubal mucous membrane and in the muscular wall of the tube, a number of decidual cells. The microscopic slides of Cases I, II, and III were very kindly cut by Dr. Mackie, pathologist to the Birmingham Hospital for Women. Those of Case IV were cut by Professor Leith, of the Pathological Department of the University. To Professor Leith the author expressed his indebtedness for his interest in the case, and for the beautiful and excellent photographs he took for him.

Perforation of Small Intestine.—Dr. MACKEY showed organs from a case of ulceration and perforation of the small intestine associated with chronic interstitial nephritis. The patient, a woman of 27, had been admitted into Queen's Hospital on account of profuse haemorrhage from the bowel; she had neither pain, tenderness, nor rigidity, and the haemorrhage soon became very slight. There was no diarrhoea; the temperature remained normal. On the eighth day after admission she suddenly developed all the signs of general peritonitis, and died. At the autopsy the lower half of the small intestine was infiltrated with blood; the mucous membrane was the seat of numerous—over a hundred—small ulcers, three of which had perforated and caused a general peritonitis. The mesenteric vessels appeared normal; the heart showed marked hypertrophy and the kidneys well-marked interstitial nephritis. Dr. Mackie thought that there had been a severe haemorrhage into the wall of the bowel, and that the ulceration of the damaged mucous membrane was secondary.

Malformation of Internal Female Genitals.—Mr. H. P. COLE showed a specimen which consisted of a mass representing the entire internal genitalia removed by operation from an unmarried woman, aged 22. The operator was Mr.

Jordan Lloyd, who kindly gave permission to demonstrate the case, and provided the clinical history. The mass removed lay on the pelvic floor, slightly to the left of the middle line, between bladder in front and rectum behind. There were no broad ligaments, no round ligaments, and no ovaries. The mass was rounded in outline, shaped somewhat like a uterus, and measured $\frac{1}{2}$ cm. long by $2\frac{1}{2}$ cm. broad. No lumen was present. The cut surface showed the presence of numerous small whitish encapsuled areas, enclosed by a definite cortex. On either side were two folds connected to the central mass, above and below, but separate from it between these points. In the free edge of this fold was a distinct unbroken tube with muscular walls and a lining layer of large cubical cells. Further investigation was needed definitely to determine the nature and origin of these structures, but it was suggested that the central mass might represent the uterus filled with an adenomatous growth of the developing mucous membrane, or that the mass was really an instance of the inclusion of one organ, or a part of one, within another; in other words, an embryonic "rest." The tube in the lateral fold was regarded as a remnant of the Wolffian duct, or possibly of the Mullerian duct.

Lymphatic Leukaemia.—Dr. DOUGLAS STANLEY showed the spleen and stomach from a case of lymphatic leukaemia. The patient was a woman aged 81, and was shown as a living case at the March meeting, 1908. The cause of death was exhaustion, due to a gastro-colic fistula.

Reports of Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Friday, December 11th, 1908.

E. HASTINGS TWEEDY, M.D., President, in the Chair.

Intermenstrual Pain.

DR. R. D. PUREFOY, in a paper on intermenstrual pain, said that one of the least common and least understood varieties of pain connected with and dependent on menstruation was that to which Priestley in 1872 applied the term "intermenstrual." Medical literature furnished but scanty records of such cases, and details as to treatment and its results had been seldom supplied. It often proved rebellious to treatment, and showed marked liability to recurrence. It was generally met with between the ages of 25 and 35, and was commonest in sterile women or those who had not been recently pregnant. Some writers had described the pain as paroxysmal and sudden in occurrence and severe in degree; and many attributed it to the condition known as hydrosalpinx. The speaker was unable to agree with those statements as to the nature of the pain and its causation. In the most typical cases there was but little discoverable disease of the uterus and appendages, and in only a few cases was it associated with such watery discharge as might be attributed to leakage from a hydrosalpinx. Treatment should be constitutional to improve the general health, and local if disease of the uterus or appendages could be detected. A second paper on the same subject was read on behalf of Dr. SPENCER SHELL. In the discussion which followed, Dr. WILSON said he thought that where there were local lesions which could be corrected, with the result that the pain ceased, the case hardly came under the head of intermenstrual pain; neither did cases in which congestion of the ovaries was relieved by the loss of blood at the period. The difficulty of treating cases of pain that came on a definite number of days after a menstrual period, and ceased a definite number of days before a period, was very great, and although the drugs mentioned by Dr. Shell might give relief, it was a matter of considerable doubt as to what the condition really was. Dr. ASKE thought the condition was probably due to some form of toxæmia arising from an excess of internal secretion of the ovary. Dr. NEILL said that salicylate of menthol had recently been advised for relief of pain. Dr. FITZGERBON said that in speaking of intermenstrual pain there was a tendency to mix up a variety of different diseases. They should keep in mind that the pain should be one which occurred at a fixed time between the periods, and in which there

was no definite organic disease. The ignorance which existed as to ovulation made it difficult to say certainly that it was congestion of the ovary that caused the pain, but he expected that Dr. Sheill's suggestion of circulatory treatment would improve the condition. Dr. KATHERINE MACKENZIE said she did not find the condition common in an excessive degree. She found aspirin rather a dangerous drug, as far as its gastric symptoms were concerned, although it certainly relieved pain. She found phenacetin to do good, if ammonium or antihistaminics were given, they should be given after food and with tea or coffee, which neutralized their effects. She regarded both drugs as dangerous, because they were compounds of antifebrin. The President said that women suffered from constipation and congestion of the pelvic organs, and he believed that this congestion would be relieved by free purging better than by the drugs mentioned. He thought that in most cases not due to constipation or neurasthenia they would find some disease of the tubes which might give no evidence of their condition to the examining finger. Dr. PEARSON, in reply, said he agreed with Dr. Fitz-Gibbon's limitation of cases, but such typical cases were rare. He was very sparing in his prescription of drugs, and considered that anything like repeated use of the coal-tar remedies was greatly to be deprecated.

LIVERPOOL MEDICAL INSTITUTION.—At a meeting on December 17th, 1903, Mr. R. KELLY read a note on the *Treatment of general peritonitis by the Murphy method*. After giving an account of the axioms laid down by Murphy in this condition, namely, early and speedy operation, removal of offending appendix, or closure of bowel wound, the Fowler position and proctocolysis, he demonstrated an apparatus to effect the continuous rectal irrigation, and illustrated his remarks by five cases. Mr. W. THELWALL THOMAS had been much impressed a few years ago by Murphy's demonstration of the advantages of the Fowler position and continuous rectal perfusion, and resorted to it in all cases of septic peritonitis with marked success. Mr. LITTLETON JONES read a note on a case of *Aneurysm of the femoral vein*. The history was that, after violent exertion in lifting a sail, the man experienced sudden great pain in the groin, which was found to contain a swelling. It was irreducible, and evidently contained fluid, and was thought to be a hernial sac containing fluid. Operation revealed a sacculated aneurysm of the femoral vein, and any attempt to empty it caused constriction of the neck of the sac. The vein was ligated above and below, and the aneurysm dissected out. It was seen to be of recent origin. The man soon recovered, and without any oedema after ligation of so important a vein. In another case the aneurysm was fusiform, and operation was again followed by recovery. These two cases led one to believe that violent exertion might cause rupture of one or more coats of a vein, apart from any predisposition to varicosity, and in that way these conditions might be brought forward as accidents under the Compensation Acts. Dr. A. ALSTON THOMPSON read a paper on *Mechanical and manual massage*, and compared the physiological effects of the two processes. He related his experience with mechanical massage in eye diseases, chronic deafness, chronic abdominal affections, gout, rheumatism and allied conditions, venous congestions, exudations, nervous affections, and gynaecological conditions, and gave a demonstration of his technique.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.—At a meeting in December Mr. H. W. W. GRAY read a paper on Bier's method of producing *Local anaesthesia* as applied to a case of amputation at the wrist. It consisted in putting a Martin's bandage round the upper arm, selecting a vein near the bend of the elbow, isolating it, opening it and injecting into it 30 to 40 c.c. of a 1 to 2 per cent. novocain solution. In a few moments anaesthesia was completed, and the amputation was carried out; all that the patient complained of, apart from the discomfort of the tourniquet, was a slight burning sensation at the wrist, and she made an attempt to withdraw the arm while the operation proceeded. It thought necessary a considerable amount of the anaesthetic could be expressed by massage from the open vein after the operation. He commended the method on account of its simplicity and its efficacy and its advantage to isolated practitioners. In another paper Mr. Gray

dealt with *The treatment of burns* by the thorough antiseptic cleansing of the affected area and surrounding parts under anaesthesia if necessary, and thereafter dusting over these areas very freely a powder composed of equal parts of pure boric acid and pure carbonate of bismuth (the subnitrate of bismuth should not be used as it causes intense smarting pain). This powder formed with the early exudate a "seal" which protected the affected area from fresh infection; no gauze, cotton-wool, or bandages should be applied. Any discharge which later might trickle from underneath the seal was wiped away and fresh powder dusted on. He also dealt fully with the treatment of cases sent to hospital after sloughing had started in the affected areas. If sloughs were very adherent, boric acid fomentations, antiseptic baths, peroxide of hydrogen, etc., were used to loosen them and lessen septic absorption. When the slough was loosened, an anaesthetic was given, and the area treated as above. If the parts were not sufficiently disinfected the scab which first formed might swell rather badly; in this case it should be removed in a few days, and fresh boric acid and bismuth dusted on. He had not required to remove a seal on account of decomposition on a second occasion. The parts affected should be kept at rest, but joints should be moved once every morning and every evening to prevent ankylosis. The method did away with the pain of frequent dressings, and resulted in a pliable scar, vascular in constitution, and with no tendency to contract. Dr. MACKENZIE BOOTH, in a paper on anaesthesia in *Intranasal manipulation*, gave his experience of various local anaesthetics with and without the addition of adrenalin. He thought eudrenine and codrenine were best for general use, and gave in detail the various methods of application, and their use in the examination of the nasal cavity. He then described what he considered the limitations of local anaesthesia in nasal surgery, and compared it as a whole with general anaesthesia.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—At a meeting on December 17th, 1903, Mr. P. E. BARRETT, President, in the chair, Mr. SIDNEY SNELL showed a little boy from whom he had removed a retrobulbar tumour by Kronlein's operation. The result was very satisfactory, the eye was retained, and the proptosis was gradually diminishing. He also read notes on a case of *Acute bromism* after three 5-grain doses of bromide. There was a bulous eruption on the ears, a tingling sensation in the hands, and coryza. All the symptoms cleared up when the bromide was withheld. Mr. GARRICK WILSON read notes on a case of supposed rheumatic peritonitis. A boy who had suffered from rheumatic fever had acute abdominal symptoms, and was submitted to operation, when there was found a great deal of clear serous fluid. No primary focus could be found. The boy recovered, but convalescence was interrupted by symptoms of acute rheumatism, which were alleviated by salicylates. Dr. ARTHUR HALL showed 2 cases in which remarkable improvement of *Spherocytic leukaemia* followed the use of the x rays. In both cases the patient had been able to work for several months. No bad symptoms had resulted. The red corpuscles had increased with the decrease in the whites. He also showed a case of myoclonus in a man following influenza. The spasms were limited to the left deltoid, trapezius and coraco-brachialis. At times they were very painful. They could be brought on by raising the arm above the horizontal. Dr. F. H. WADBY, in a paper on *Decimal dispensing*, uttered a strong protest against the action of the Board of Trade in establishing a standard metre, kilogram, and litre, differing slightly from the original standards, and differing in such a manner that the British litre, instead of measuring 1,000 British c.c., actually measured 1,000.16 c.c. This defect subverted for calculation purposes that fundamental principle of decimal proportion which was the most valuable characteristic of the real metric system. He deplored the fact that the General Medical Council had introduced these now legalized standards into the *British Pharmacopoeia* of 1893, in place of the original standards which had hitherto been adopted. He also mentioned the suggestion of Professor Parker that our existing national systems of weights and measures admit of convenient correlation of a physical basis in virtue of the circumstance that a cubic inch of water at 122° F. (= 50° C.) weighed exactly 250 grains.

In conclusion, the author urged that it was not reasonable to attempt to establish artificial relations between systems of weight and measure in defiance of those relationships which experience or custom demanded. The dozen was far superior for subdivisive purposes to the ten, and the best solution of all difficulties would be to learn to count in dozens instead of in tens.

PATHOLOGICAL SOCIETY OF MANCHESTER.—At a meeting on December 9th, 1903, Dr. MILLIGAN (President) in the chair, Mr. C. ROBERTS and Dr. C. POWELL WHITE showed two specimens of congenital tumour of the kidney removed by operation; and some similar tumours from the Pathological Museum of the University of Manchester. All the tumours contained cells resembling sarcoma cells, epithelial tubes, muscle fibres, etc. They were distinguished from sarcomata by the presence of the epithelial tubes, which were formed by differentiation from the sarcoma-like cells, and hence these and similar growths had been placed by Dr. Powell White in a class by themselves under the name of "kistocytomata." Sir WILLIAM SINCLAIR gave a short address on peritonitic adhesions, drawing his illustrations almost entirely from obstetrics and gynaecology. He maintained that if the peritoneum was wounded or became inflamed, as, for example, in the slighter attacks of lymphatic infection in childhood, adhesions were inevitable; exceptions must be extremely rare, and could depend only upon the movements of the intestines when the omentum did not come within range. He traced the formation of adhesions from the fibrous exudation stage to the stage of firm, non-vascular fibrous adhesions which displace organs or interfere with their functions. In gynaecology, when adhesions of the uterus could be diagnosed or reasonably suspected, manipulative treatment was futile. Operation was indicated, and details depended upon what was then made out by touch and sight. Inasmuch as adhesions were inevitable, their production in certain operations should be aimed at; they should be made useful and conservative; their formation should not be left to blind chance so that they may become a cause of discomfort or danger. Professor DELÉNE, in a paper on methods of examination of milk, showed that milkborne infections were either direct zoonous infections (for example, tuberculosis), indirect anthroponous (for example, typhoid), or belonged to a mixed class in which the infection was brought about by indirect faecal pollutions (for example, summer diarrhoea). In zoonous infections the pathological state of this fluid might be indicated more or less clearly by alterations in composition, by an excess in the amount of cells, or by the presence of specific pathogenic bacteria. In anthroponous infections there was usually evidence of contamination with extraneous products and of the presence of specific pathogenic bacteria. These, as well as cells and other products derived from the udder, could be separated by centrifugization, and obtained in a thick viscid mass generally known as "skime." Physico-chemical analysis and simple microscopical examination, estimation of the number of "leucocytes," and estimation of the number of bacteria yielded results which had no constant relation to the fitness of the milk and could not be relied upon as bases for preventive administrative action; while determination of the presence of specific pathogenic bacteria by various methods, and of the pathogenic action of milk by inoculation, though very useful in special cases, were too slow for administrative purposes. Measurement of the slime was the only method capable of being used in routine administrative work, but it could not be relied upon to exclude all infectious milk from the market. By this method it would, however, be possible to eliminate from the milk supply a very considerable portion of the unsound milk.

CLINICAL SOCIETY OF MANCHESTER.—At a meeting on December 15th, 1903, the President, Dr. J. J. Cox, delivered an address, entitled *A Due Conservatism in Medical Therapeutics*. In the course of it he deprecated the indiscriminate use of the catheter, both in the case of post-nasal adenoids and for uterine conditions. He referred to the impossibility of keeping pace with the numerous products of the chemist, and maintained that a wise policy held fast to that which had been proven. Stress was laid

upon the value of such therapeutic measures as massage, hydrotherapy, and phlebotomy, which did not always receive the attention they deserved at the hands of the profession. A practical point upon which he felt strongly was the great advisability in infantile ailments of ensuring sufficient sleep, and to this end Dover's powder provided a well-tried and useful means.

CHELSEA CLINICAL SOCIETY.—At a clinical meeting on December 15th, 1903, Dr. A. F. PERCY, President, in the chair, the following were among the cases shown:—Mr. J. HOWELL EVANS: Case of *Tumour of the lower jaw* on the right side about the size of a duck's egg. It commenced two years ago after an alleged injury. It appeared to be lobulated, but there was no positive evidence of cancer. The x-rays showed that the jaw was affected only on the outer side but were negative as regards diagnosis. Dr. ALFRED EDWARDS: A case of *Impetigo erythematosa*, affecting the scalp, ears, backs of hands and fingers, forearms, points of elbows, and hard palate. The scars on the face were pitted, and all the lesions on the limbs were of a "folliclic" character. The exhibitor believed "folliclic" to be merely a nodular form of lupus erythematosis, or ulerythema, and considered that this case confirmed his opinion. Dr. GREY: Three cases of rodent ulcer, 2 healed by the x-rays and 1 by the x-rays and Finson-rays combined. Dr. GUNNING: A case of congested fold of mucous membrane between the first lower bicuspid of each side and the upper lip, in a boy aged 15; also 3 cases to demonstrate the practicability of developing the "fusion centre" of children affected with strabismus, by means of an ordinary stereoscope and "Kroll's pictures." Dr. ASHLEY BALDWIN: (1) An unusual case of *Spina bifida* in a boy aged 6. There was no tumour, but a depressed area over the sixth and seventh dorsal vertebrae, the laminae being present. There was incontinence of urine, weakness of sphincter ani and of the legs, and a tendency to fall down. (2) A case of carcinoma high up in the rectum successfully treated by a double operation, abdominal incision, and subsequent removal of the tumour after forcing it through the anus.

Reviews.
The third volume of KERN'S *"Surgery"* tempts a reviewer to employ exaggerated terms of commendation. The editor deserves congratulation on his selection of authors, and the series of admirable articles which compose this volume forms a high testimonial to his judgement. Dr. Cushing writes first on the surgery of the head, and the chapter is worthy of one who has made many valuable contributions to this subject. He is at his best in his descriptions of cranial injuries and their effects on the brain, a subject by no means always lucidly treated in textbooks. Newer procedures such as the relief of compression in basal fractures and the treatment of injuries of the head in the newborn receive adequate consideration. Operative methods are very fully described and illustrated. The illustrations are also a great feature of the second chapter, by Dr. E. W. Andrews, on the surgery of the neck. Dr. Albert Kocher writes on diseases of the thyroid gland. With the experience of these affections afforded by the surgical clinic of Bern, it is little wonder that the article is a complete monograph of much value. More particularly of interest is the discussion of the group of affections included under the heading "thyrotoxicosis," and of their relations to fully developed Graves's disease. Professor Theodore Kocher's results in 200 cases of Graves's disease are quoted, a mortality of 4.5 per cent. and 65 per cent. of cures.

This article on the nose and its accessory sinuses is by Dr. Harman Smith. It is chiefly notable for its discussion of the modern methods of treating sinus suppuration. Dr. G. E. Brewer writes the two articles which follow, on the surgery of the larynx and trachea and the surgery of the thorax, and again methods of treatment from the chief feature of the text and are abundantly illustrated. In Dr. Finney's article on the breast there are some matters that call for remark. It may be questioned

whether any good purpose is served by distinguishing a new type of "intraocular myxoma" from the fibroadenoma, and as their "characteristic feature" is the projection into dilated epithelial-lined ducts and spaces of papillomatous growths, the relation of these tumours to the cysts with intracystic papillomatous growths, which are described later, requires definition. These matters are mentioned here to call attention to the confusion which still exists concerning the classification of various mammary affections. The necessity for revision is shown by the statement on p. 582 that 50 per cent. of cysts with intracystic papillomatous growths become carcinomatous, which may be paralleled with a statement in a well-known handbook of morbid anatomy that these growths are always benign! Mr. Edmund Owen writes the chapter on the surgery of the mouth, teeth, and jaws. He advocates the Brophy operation for cleft palate, operates on the cleft palate before the harelip, and considers that the most favourable time for the operation is between the ages of 2 weeks and 3 months. The surgery of the tongue is separately dealt with by Dr. Da Costa. For clearing out the glands of the neck he recommends the operation of Crile and others—that is to say, the excision of the whole gland mass in one piece from below upwards, including the internal jugular vein.

The remainder of the volume is devoted to abdominal surgery. The introductory articles are by Dr. J. C. Munro; then follow the surgery of the stomach by Mayo Robson, the surgery of the liver and bile ducts by W. J. and C. H. Mayo, and the surgery of the pancreas and spleen by B. G. A. Moynihan. The mention of these names is sufficient to show the quality of the articles, embodying as they do the views and practice of acknowledged authorities.

OPHTHALMOLOGY.

Owing to an accidental oversight we have not hitherto called attention to a very instructive book on *Preventable Blindness* written by Mr. N. BISHOP HARMAN, whose large experience as Oculist (with care of blind children) to the London County Council schools particularly fits him to set forth his experience in book form. It amounts, of course, to a dissertation on ophthalmia neonatorum, which, although known to all practitioners, is not even yet recognized as being the cause of so much blindness as it really is. It is a disease which can practically always be prevented, and if taken in time can in nearly every case be cured, and yet more than one-third of the blindness among school children is still due to it. If it were included among those diseases which it is compulsory to notify, it is probable that its disastrous effects would almost entirely disappear. Short of that, all that can be done is to educate the public, and particularly all nurses, so that it shall be at once recognized and appropriate treatment adopted. In the book before us a very valuable historical summary of the disease is given. In a short chapter dealing with the causes of blindness it is shown that in the census returns for 1901 there were living between 1,000 and 2,000 persons whose blindness might have been prevented, while in a large series of cases the author found that 36.36 per cent. of the cases in the blind schools were there on account of the ravages of this disease. This total, large as it is, is really less than the true figure, for it does not include cases in which a little sight has been obtained from operations and other means which enables the sufferer to be classified among the partially blind; if these were included the total would exceed 40 per cent. The incidental and clinical character of the disease and the risk of permanent injury are discussed, and an important section is devoted to its contagiousness. This is a point on which the Local Government Board requires instructing, for in answer to a question by Lord Robert Cecil in the House of Commons, Mr. John Burns, the President of that Board, stated that "the danger scarcely existed." That, of course, is absurd, and Mr. Harman well cites as an example to the contrary an instance in which a mother and four children all became infected from one case. A good photomicrograph illustrates the chapter on bacteriology, and then follows one on treatment and another on prophylaxis.

Textbooks on ophthalmic surgery still appear, though whether the supply exceeds the demand is, perhaps, better known to the authors and publishers than to any one else. A book on *Diseases of the Eye* has just been brought out in the series of Oxford Medical Publications, and the author is Mr. M. STEPHEN MAYOU.³ The first chapter, devoted to a description of the methods of examination of the eye, is sketchy; it seems to assume that the reader knows all about the subject, and it is to be doubted whether the beginner could learn much from the meagre details given. In discussing Snellen's test types on page 56, we are told that the types "are graduated, so that the letters at the distance marked over each line subtend an angle of 5' on the retina (the distance between two cones)." If the cones were separated by the space represented by this angle, there would only be room for a dozen or so in the eyeball. As a matter of fact, there is no difficulty in distinguishing things which subtend an angle of one minute or even less, and the letter which Snellen indicates by 5 subtends at 6 metres an angle of five minutes, with an angle of one minute subtended by each component part of the letter, and every one knows that most eyes are capable of seeing more than 5. In Chapter III, dealing with diseases of the conjunctiva, the author reaches his own special subject, to the investigation of which he has given so much attention. The illustrations are infinitely better than in the preceding chapters, and this section is evidently written by one who has devoted himself to bacteriological investigation. Chapter IV deals with the cornea and sclerotic. A photograph shows the author's chair and headpiece for the localization of foreign bodies by means of the x-rays. Perhaps few surgeons will agree with the statement that "it is little use attempting to extract foreign bodies in the eye after three days, unless they are loose in the vitreous or embedded in the lens, as they become surrounded by lymph." The fifth chapter deals with diseases of the iris, ciliary body, and choroid, and describes the ordinary conditions met with. Chapter VI, dealing with diseases of the lens, occupies only fourteen pages, which is certainly not a large space to devote to this structure. After that the retina, vitreous, and optic nerve are discussed in one chapter, followed by glaucoma, disorders of ocular muscles, diseases of the eyelids and orbit. The whole of the operations on the eye are condensed into forty-nine pages, and, finally, there is an appendix. The book is nothing like so large as it looks, owing to a wide margin, large type, and a large space between each line. We are not particularly impressed with the book. It cannot be considered to compete seriously with the many textbooks already in existence, and, if it aims at being a cram book, it is too large. No doubt the author was limited in the space at his disposal, for we know enough of his previous publications to feel sure that he is capable of producing a book which would be more generally useful.

The effect of a want of balance in the muscles of the eye looms large in the minds of some people as a cause of neurasthenia and many other ills of the nervous system. Every one will agree that until recent years the subject was much neglected; however much the eye muscles were out of gear, no attention was given to them unless the want of parallelism of the eyes was sufficient to cause an obvious squint. A reaction came, and certain authors, notably in America, went to the opposite extreme, and made out that pretty well every disease to which the human frame is heir owed its origin, directly or indirectly, to some defect of the ocular muscles. Thoughtful men set to work to find out where the truth lay, and as usual it was found to be somewhere between the two extremes. Volumes have been written on the subject, but one of the most complete works is that written by Dr. LUCIEN HOWE, of Buffalo. Volume I of *The Muscles of the Eye* was published more than a year ago, and consisted of a description of the anatomy and physiology of the eye muscles. Volume II, which has now appeared, deals with pathology and treatment, and consists of five parts split up into numerous chapters and divisions. It contains 374 pages of text, and

² *Preventable Blindness*. By N. Bishop Harman, M.A., M.B., F.R.C.S. London: Baillière, Tindall and Cox. (1907.)

³ Oxford Medical Publications. *Diseases of the Eye*. By M. Stephen Mayou, F.R.C.S. London: Henry Frowde; and Hodder and Stoughton. 1908. (Cr. 8vo, pp. 400, 119 illustrations, and 8 coloured plates. 5s.)

100 more of bibliography, index, and appendix.' The book contains good material, and the facts are well and carefully arranged. It represents an enormous amount of work, and includes within its pages reference to all the work which others have done on the subject. No one who is interested in this branch of ophthalmology could afford to be without a copy, and we heartily commend it to our readers.

THE RAT PROBLEM.

The Rat Problem, by W. R. BOELTER,² deals with a question which has lately come prominently to the front in the domain of preventive medicine. The desire of the author is to enlist public opinion in the crusade against rats and other vermin, and thus pave the way for the passing of a bill drafted on the lines of the Danish Rat Law by the Incorporated Society for the Destruction of Vermin.

The first chapter deals with the natural history of the brown rat (*Mus norvegicus*), tracing its introduction into Europe from Asia in the eighteenth century, destroying on its march the less savage black rat (*Mus rattus*), and rapidly, owing to its great fecundity, becoming a serious pest. It is suggested that there are in this country at least as many rats as there are human beings, and on the moderate estimate that each rat does one farthing's-worth of damage daily by the destruction of food and other material, the annual loss is calculated to be £15,000,000. This figure has been arrived at by means of certain rat feeding experiments, and by systematic inquiry among land owners, farmers, shopkeepers, shipping, dock and colliery companies, and others.

Only one short chapter is devoted to the part played by rats in the dissemination of disease, but as the book has been written more for the lay than for the medical reader, the notice this branch of the subject receives is sufficient for the purpose in view. The channels of communication between the rat and man, resulting in the propagation of trichinosis and plague, are shortly described, and as regards the latter disease, while it is stated that the rat is not the only agent of dissemination, it is claimed that to disregard that factor would defeat any scheme for the stamping out or even the partial reduction of the disease.

Considerable space is devoted to the means for exterminating rats, and "the ruthless destruction of some of their natural enemies, the owl, the weasel, and kestrel," is deprecated. An interesting account is given of the numerous mechanical devices for exterminating rats, many of which are said to be very efficient in the hands of experts who are familiar with the habits of the animal. The use of chemical poisons for this purpose is not very strongly advocated; although seemingly a cheap method it is said that in practice it is found to be the most expensive, because it frequently entails the accidental loss of other life. An account is given of the more or less successful efforts of bacteriologists in this and other countries to find a reliable virus poisonous to rats and mice only. While it would seem that this quest has not yet been altogether successful, the author appears to favour Neumann's virus ("ratin"), partly because it is supplied in a form for convenient use by inexperienced persons. Favourable though the experimental trials with this virus appear to have been, the author doubts its power so far as transmitting the disease from rats which have been poisoned to healthy rats is concerned. Be this as it may, it is not surprising that when this or any other virus comes to be prepared on a commercial scale and sold by local tradesmen disappointing results should be obtained. Moreover, having regard to the possible risks attending the indiscriminate use of all such animal poisons, sooner or later it will become necessary to impose conditions upon their sale to the general public, especially in view of the recent unfortunate occurrence in the City of London recorded by Dr. Collingridge.

The book is attractively written, well illustrated, and is carefully calculated to serve its purpose.

¹ *The Muscles of the Eye*. By Lucien Howe, A.M., M.D., Professor of Ophthalmology in the University of Buffalo, etc. Vol. II. Pathology and Treatment. Illustrated. New York and London: G. P. Putnam's Sons. The Knickerbocker Press, 1908. (Roy. 8vo, pp. 482, 16s.)

² *The Rat Problem*. By W. R. Boelter. London: John Bale, Sons and Desimous, Ltd. 1909. (Fcap. 4to; 165 pages and 75 illustrations. 2s. 6d.)

ANATOMY.

In compiling this textbook of the comparative anatomy and development of the fetal membranes and placenta, Professor GROSSER¹ has undertaken a piece of work that was well worth doing and has performed the task exceedingly well. The text is written in the pellucid style in which occasionally a German can write, and it is admirably matched and illuminated by the numerous illustrations, mostly photographic, and the diagrams. It is thus an attractive book to read, and the author has at the same time been so successful in the judicial tone of his summary that the critic has no need to deal with the matter of his judgements. The descriptions and argument develop so smoothly, and the author is so careful to indicate the questions that remain unsettled and to describe the reasons of those from whom he differs, that his reader is not likely either to misunderstand him or to be entrapped into any false position. About a quarter of the volume is devoted to the history of the fetal envelopes, and in this, after a clear account of the processes in the easily observed Sauropsidae, Professor Grosser discusses the forms of development of the amniotic cavity in mammals and the early stages of their embryology. The rest is devoted to the subject of placentation, and in this, after an adequate description of the semiplacentae and of placenta verae in animals, he discusses in detail all the recent work that has been done on the implantation of the human ovum and its early development. In the course of the discussion the origin of most of the placental anomalies is indicated, and there is a section on the biology of the placenta which, for completeness' sake, one might have wished extended on the chemical side. As it is, the results of the important chemical investigations on placental metabolism, which have been fairly numerous, are only indicated, but perhaps the author might plead that he is an anatomist. Otherwise, the book is a satisfactory one, and the printer and illustrator deserve praise as well as the author himself.

NOTES ON BOOKS.

ALTHOUGH intended only for pharmacists, there is a good deal in *The Chemist's Annual for 1909*,² edited by Mr. JOHN HUMPHREY, which should be found useful by medical men. Suggestions with regard to details of treatment might at times be gathered from the Supplement to the *British Pharmaceutical Codex*; while in the additions to the *Pharmaceutical Journal Formulary* registered during the last two years may be found a great number of recipes for the preparation of elegant mixtures, pastes, and pills, such as crowd a modern chemist's shop.

Dr. W. T. BEEBY and Mr. E. REYNOLDS-BALL have furnished a very readable and practical guide to *The Levantine Riviera*.³ Every one who has travelled by railway between Genoa and Spezia must have been struck by the extreme beauty of the scenery of this narrow strip of coast between the mountains and the sea, as far as occasional glimpses between the innumerable tunnels allowed him to see it at all. This coast undoubtedly should and does attract many who require a sunnier and more southern winter climate than that of England, with less crowd, less fashion, and probably less expense than at most places of the Western Riviera. The little guide book seems to us, in its descriptions of Rapallo, etc., only to give the Eastern Riviera the praise which is really its due.

A more decorative exterior is the most obvious change in the edition of *Whitaker's Peerage, Baronetage, Knightage, and Companionage for 1909*.⁴ There are many who may be disposed to quarrel with the terms used in the title of the work, but few will cavil at its contents. These, as in former years, set forth alphabetically the names of all persons, whether male or female, who are deemed to have a right to a handle of any sort to their names, or who have been admitted by the reigning monarch to any one of the numerous Orders. The very useful introductory matter

¹ *Vergleichende Anatomie und Entwicklungsgeschichte der Eihäute und der Placenta mit besonderer Berücksichtigung des Menschen*. Von Dr. Otto Grosser, A. O. Professor für Anatomie im Wien. Wien u. Leipzig: W. Braumüller. 1909. (Sup. roy. 8vo, pp. 326; 210 Abbildungen im Text u. 48 auf chromolithographierten Tafeln. M. 10.)

² *The Chemist's Annual for 1909*. London: The Pharmaceutical Press. (Imp. oct., pp. 994. Price 5s. net.)

³ *The Levantine Riviera: A Practical Guide to all the Winter Resorts from Genoa to Pisa*. By W. T. Beeby, M.D., and E. Reynolds-Ball, F.R.G.S. London: Reynolds-Ball's Guides. 1908. (Fcap. 8vo, pp. 168; illustrations and a map. 2s. 6d.)

⁴ *Whitaker's Peerage, Baronetage, Knightage, and Companionage*. London. 1909. (Post 8vo, pp. 500. Price 5s.)

includes this year a glossary of official terms, from which the significance of a number of phrases frequently employed, but not always clearly understood, may be immediately ascertained. Information is given, for instance, as to the functions of little-known bodies and officers, such as the Court of Claims and the Clerk of the Chique. This reference work, in spite of the moderation of its size, is comprehensive and easy to consult.

MEDICAL AND SURGICAL APPLIANCES.

THE NEW TYPE OF NEWTON-ROENTGEN GENERATOR.

At the Sheffield meeting of the British Medical Association, Dr. Lester Leonard of Philadelphia brought forward some results of instantaneous x-ray exposures obtained with the aid of a closed magnetic circuit transformer, capable of producing a very large volume of secondary current through the tube. Subsequently, at the Amsterdam Congress of Radiologists, the inventor, Clyde Snook, also of Philadelphia, read a paper on this form of generator, and on that occasion Messrs. Newton and Co., of London, secured the right to manufacture these machines in this country. The Snook-Roentgen apparatus, for those who can afford to possess it, will greatly simplify x-ray procedure. No trouble can arise from induction coil or interrupters; and the output of the rays is absolutely controlled by the movement of a crank handle. It is the result of six years' careful study of the induction coil, the aim being—as with improvements of this induction coil itself—to suppress the inverse discharge as completely as possible and to increase the useful secondary current. The apparatus consists of two parts, one a dynamo or inverted rotary converter—serving the purpose of the interrupter in the ordinary installation in that it takes up continuous current from the main, and sends it out as alternating current—and the other an oil-immersed closed magnetic circuit transformer, deriving its primary low voltage current from the converter. But the essential point about the apparatus, which adds so greatly to its efficiency, is the arrangement by which the rectifying switch receiving the high tension secondary current from the transformer is maintained in synchronism by being mechanically attached to the axis of the dynamo or converter producing the primary alternating current. This mechanical rectifying arrangement, which makes it possible to utilize the full value of both phases of the current, overcomes a difficulty which radiologists have experienced for years. Practically the entire output of the closed circuit transformer is available, and there is no need to trouble about synchronism because the rectification takes place on the shaft of the generator, any variation in pace will affect both movements equally and simultaneously. Thus, while the best induction coils only give, perhaps, 20 per cent. efficiency, the Snook apparatus gives more like 90 per cent. A demonstration upon the top-side x-ray machine which Messrs. Newton have introduced showed that it was easily possible to adjust the current delivered to the tube up to 40, or even 60 milliamperes, indeed, to an extent beyond the power of any x-ray tube at present constructed to withstand. Nor was the easy adjustment limited to the higher outputs of electrical energy, for equal steadiness was obtained down to the fraction of a millimetre. The movement of a crank handle to produce the rapid delivery of any desired amount of unimpaired energy to the tube is surely the last word in simplicity. It may be added that this machine is probably the first electrical invention—at any rate, so far as medicine is concerned—to be manufactured in this country through the instrumentality of the new Patent Act. If it had not been for that piece of legislation the machines would undoubtedly have been imported from the United States. The apparatus is on view during January at Messrs. Newton's premises at Temple Bar, E.C.4, and those who are interested in x-ray work are invited to witness demonstrations, for which no special appointment need be made.

Antiseptic Chamber.

DR. R. FORBES OWEN, Streatham writes: May I be allowed to reply to your kind criticism on the light question contained in the article on my open-air chamber, published on December 5th, 1908, p. 1686? There will be a flood of light from large top lights in all the four corners of the roof; and again, any who desire to remain indoors during the evening hours, or in the day, may wish that they should really be necessary, and the caves serve a very important office in protecting the open-air panels, and the gallery also from the wind and rain, while allowing the air to freely circulate all throughout the chamber. A single child, for one can be built for as little as 45s. and so up to 12 beds in one chamber about 180s. are covered and sheltered.

MEDICAL INSPECTION AND AFTER.

MEDICAL TREATMENT OF SCHOOL CHILDREN

IN THE JOURNAL OF DECEMBER 26TH, 1908, p. 1869.

IN the JOURNAL of December 26th, 1908, p. 1869, appeared the text of the reports presented to the London Education Committee by a special subcommittee appointed to inquire into the whole question of the medical treatment of children attending public elementary schools in London, but we were not then able to deal with certain appendices to the majority report, of which we will now give some account.

In the course of its inquiry the subcommittee found it desirable to ascertain how far existing medical institutions would be in a position to meet the increased demands for the medical treatment of elementary school children expected to arise as a consequence of the institution of medical inspection. The elucidation of this matter involved not only questions as to the numerical sufficiency or the provision that is or could be made, but also the situation of the institutions, hospitals (general and special), free dispensaries, and provident dispensaries, in relation to the distribution of the population from which children attending elementary schools are chiefly drawn.

The committee first, in November, 1907, addressed a circular letter to hospitals in the county of London, but the information thus obtained showed that a wider inquiry was necessary. In consequence, on February 7th, 1908, the following circular letter was addressed to the authorities of hospitals, dispensaries, and kindred institutions:

Sir,—The Education (Administrative Provisions) Act, 1907, gives the Council further powers, and imposes new duties in respect of the medical inspection of children; and the question therefore of how far existing institutions do or can meet the increased demands for the medical treatment of children, has become of immediate importance.

The Education Committee, with the authority of the Council, have accordingly appointed a Special Subcommittee consisting of members of the Council and representatives of a necessarily limited number of outside institutions to inquire into the whole question of the medical treatment of children attending public elementary schools within the county.

The Committee are advised that the greatest difficulty experienced by the hospitals is in dealing with the large numbers of children who present themselves for treatment of the teeth or the eyes, dental diseases and errors of refraction being respectively the ailments for which treatment is usually desired. The Committee, with a view to making the fullest possible inquiry into these matters, are anxious to obtain further information from the hospitals and dispensaries of London in respect of these classes of cases.

I am accordingly directed to ask you to be so good as to supply me with the information asked for on the accompanying schedule, if possible by 14th February, 1908, viz.—(1) The number of children under 14 treated during the years 1906 and 1907 for various ailments of the teeth, distinguishing between treatment for measurement, for extraction of teeth, and (2) with similar information for the same period in respect of children treated for various affections of the eye, distinguishing between (a) errors of refraction, (b) actual diseases, (3) what accommodation exists for the treatment of children under (1) and (2) respectively above, and whether it would be practicable to treat larger numbers of children during the regular hours of work of the institution, or to make the institution under special arrangements outside the regular hours for the exclusive treatment of elementary school children.

The Committee desires me to express the hope that if it be found necessary to submit this letter to the Hospital Committee, arrangements will be made in the meantime for the preparation of the necessary information, inasmuch as it is desired that the return for the various hospitals and dispensaries of London shall be printed and submitted to them at their next meeting, which has been fixed for Friday, 21st February, 1908.

We reproduce the table in which the replies received were summarized by the subcommittee. We also give a map of the county of London showing the position of hospitals and dispensaries, which reveals, what is of course well known to every one who has given attention to the subject—that institutions for medical relief are very much concentrated in the central districts. The figures on the map show the number of children of school age in the various districts.

Among the appendices is a report made in November, 1907, by the Day Schools Subcommittee on the work of the medical officer. The report states that it was found that medical inspection created a demand for medical attendance, and that that demand did not produce a corresponding supply. It could not now be shown in full detail

that the health of many children was impaired, temporarily or permanently, for want of medical treatment. It could also be shown that, in a considerable proportion of cases, medical treatment was practically unattainable. The medical officer (Education) had a medical staff consisting of two full-time doctors, two half-time doctors, twenty-three quarter-time doctors, and thirty-two nurses under a superintendent. The whole of this staff was employed in inspectorial work alone. The report then gives some particulars of the number of children found defective in respect to vision, hearing, ringworm, teeth, and tuberculosis (external), and the committee states that the facts point to the general conclusion that there were two classes of cases which the hospitals found unmanageable: the mere weight of numbers seemed to prevent their dealing adequately with the very common forms of childish defects (vision, hearing, ringworm, teeth), while they had equal difficulty in dealing with chronic cases demanding prolonged treatment (tuberculosis). Up to the present time the powers of the Council had been limited to inspection. As a result of that inspection, many preventable but unremedied evils had been discovered, and fresh powers and fresh duties had now been laid upon education authorities by Parliament.

Following this report are memoranda and notes of evidence taken by the subcommittee under the heads (a) as to the teeth, (b) as to vision, (c) as to ringworm and favus, (d) as to suppurating ears and adenoids, and (e) as to tuberculous disease. The general conclusion as to the last-named has already been given in the JOURNAL, but is of so much importance that it may be here reproduced:

TUBERCULAR AND DEBILITATED CHILDREN SUITABLE FOR TREATMENT IN RESIDENTIAL CONVALESCENT SCHOOLS OF RECOVERY.—General.—For a number of tubercular children, especially those suffering from bone or joint disease, there is little in the way of prevention in the earlier stages, and the hospitals generally do most in relieving the urgent stages comparatively late in the disease. There are also large numbers of children with diseases causing much damage, such as small ulcers on the surface of the eye, troubles about throat, nose, or ears, which become most chronic, the children known as quite typical to every one who has sat on attendance committees, whose parents are quite anxious for their health, but who are the object of fair suspicion, dark-rimmed round the eyes, who do not sleep well at night, and on the other hand can hardly be wakened in the morning, will scarcely touch breakfast, often indeed are sick either before starting or even on getting to school, and are essentially the result of their environment, reacting on a delicate organization, and for whom the only hope of satisfactory escape from severe damage is removal from their surroundings for two or three or more months until health is re-established. All this class of children might be considered as suitable for treatment in residential convalescent schools.

Under the heading (f) "provision for treatment," notes of evidence given by Mr. C. H. Warren, representing the Provident Medical Association, and Mr. T. Hancock Nunn, representing the Juvenile Benefit Society, are given.

PROVIDENT DISPENSARIES.

Mr. Warren stated that there were 38 provident dispensaries and medical clubs in the London County Council school area; 18 of these were under the control of the Metropolitan Provident Medical Association, the others were independent institutions, more or less in touch with and represented on the London Provident Dispensaries Council. Attached to these dispensaries there were upwards of 320 general medical practitioners and dental surgeons. About 110,000 persons were enrolled as provident members of these institutions, some 50,000 being children. In return for regular payments on the principle of insurance, medical treatment was given to members whenever required. Each member joining selected from the staff his own medical attendant who became the family doctor. Patients suffering from special ailments requiring hospital or other treatment were usually sent to the most suitable institution. The conditions for medical treatment by the Provident Medical Association were that persons should join while in health—children being only admitted with a parent or guardian—and that payments should be kept up during health and sickness. Medical attendance was given at the dispensaries, in the doctors' surgeries, and in the homes of the patients. The benefits of provident dispensaries were limited to those who were unable to pay ordinary medical fees. The usual rates of payment were 6d. a month for adults and 2d. a month for children, 1s. 6d. a month being the maximum charge for a family. The object of provident dispensaries was to provide through

the general practitioners medical treatment for ordinary ailments of working-class families. They were not at present equipped for dealing extensively with cases of dental caries, errors of refraction, suppurating ears, etc., these being usually treated, if at all, in general or special hospitals to which they were often sent on the recommendation of the dispensary medical officer. To deal with these cases satisfactorily it would be necessary to enlarge the equipment of the dispensaries, and in some cases, to make special appointments on the staff. A start in this direction could be made without much delay in the dispensaries of the Metropolitan Provident Medical Association, and no doubt the system would be extended through the influence of the London Provident Dispensaries Council to the other provident dispensaries of London.

In reply to the question whether the Provident Dispensaries Council could arrange for the medical treatment of children not members of a provident dispensary and unable to pass a medical examination, Mr. Warren said that the provident dispensary only dealt with those persons and families who had made provision for medical treatment by joining before illness overtook them. The scale of fees charged was in every case designed on the principle of insurance, and not as a payment for an actual illness. But in the majority of provident dispensaries, including all those controlled by the Metropolitan Provident Medical Association, provision had been made for persons requiring immediate treatment, who paid a special entrance fee with a view to their remaining as provident members after the particular illness. An arrangement could be organized by the provident dispensaries in co-operation with the London County Council for the treatment of children not members of a provident dispensary—so long as the interests of the general practitioners were safeguarded, and an endeavour was made to enrol the parents of such children as provident members. For such cases of special treatment payment in accordance with a fixed scale would have to be made either by the parents of the children or, failing that, by the London County Council. At present the Metropolitan Provident Medical Association only dealt with a very limited number of children, but the system was very elastic and was designed to cover London working-class medical treatment.

To carry out medical treatment of school children would require the co-operation of the body of general practitioners in London and would entail the development of many special forms of treatment—for instance, in cases of weakness in the teeth, eyes, and ears of children, which had not up to the present been needed or practicable. In co-operation with the London County Council the Metropolitan Provident Medical Association and the London Provident Dispensaries Council would endeavour to make their organizations meet the required want, and open dispensaries or clubs in working class districts. This would require time to accomplish, and must be preceded by an arrangement securing the services of a much larger body of medical practitioners than was at present attached to the dispensaries. Such an arrangement could probably be made, and would be immediately attempted if the London County Council gave encouragement. The advantages would be that a system would be created on a natural basis, in which parents, the medical profession, and public spirited persons of the class now managing the hospitals, would all take a share, and be interested in securing satisfactory medical arrangements for children, on the footing that the bulk of the cost was found by provident subscriptions or parents, in the same manner in which the English working classes were accustomed to provide for their own sickness, through subscriptions to friendly societies, and that the whole responsibility for the children's health and the great cost of their medical attendance should not be thrown on the local education authority and the rates. It would be better for the community that a sound general system should be adopted at first, although it might only be possible to bring it gradually into complete order, and adapt it to the wants of the families as experience demanded.

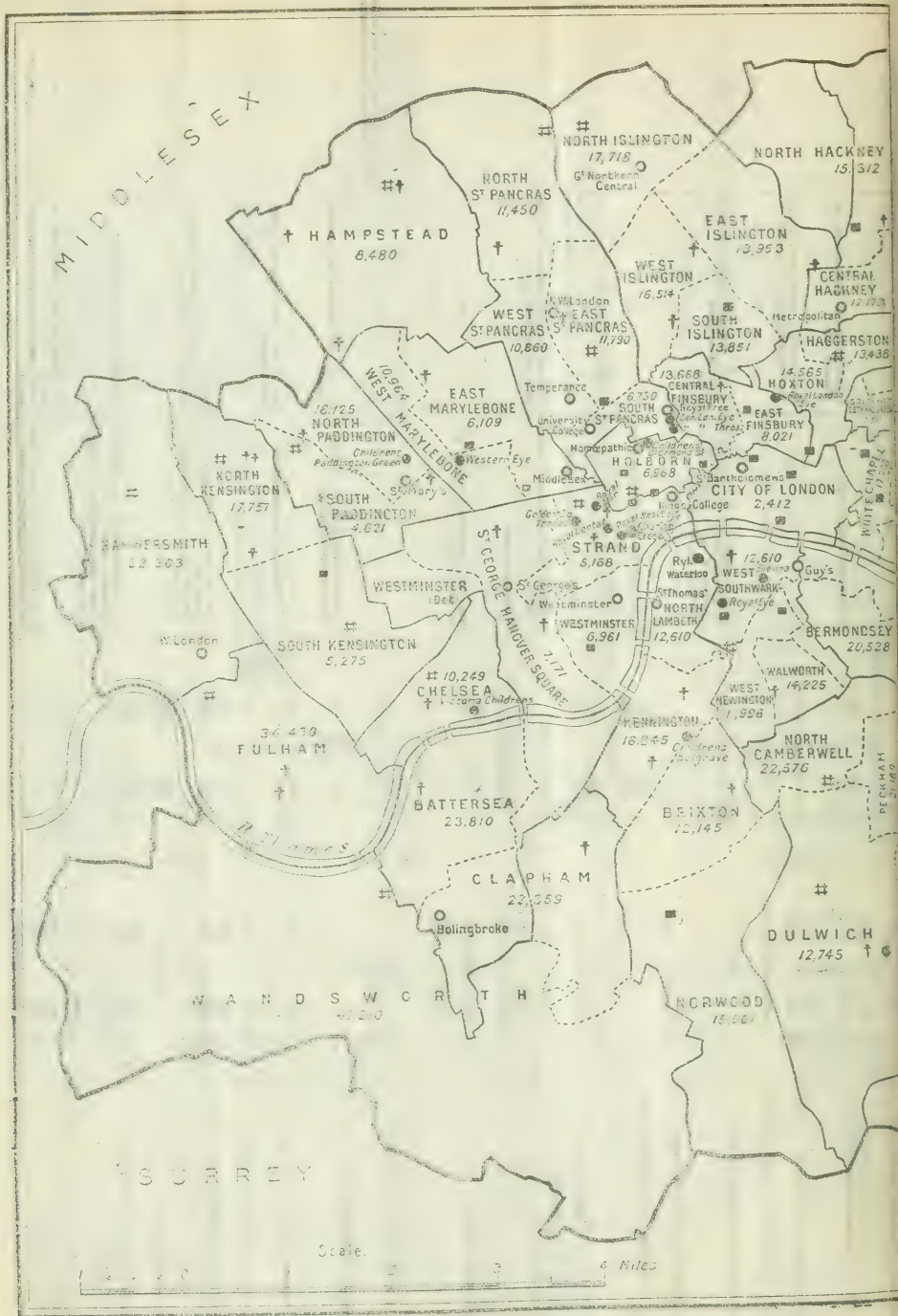
JUVENILE BENEFIT SOCIETY.

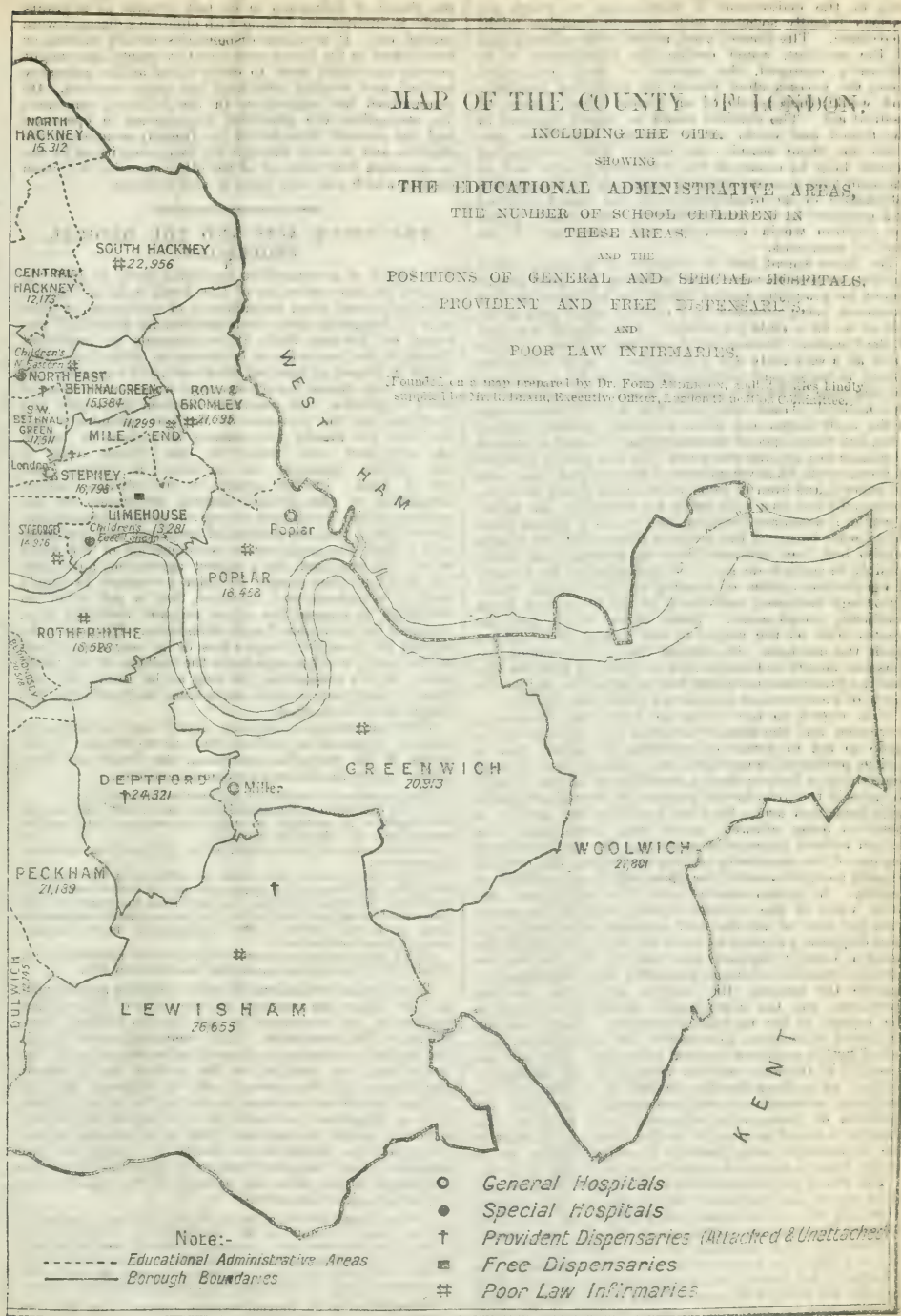
Mr. Hancock Nunn considered that the Juvenile Foresters' movement was capable of great extension, particularly in the direction of the development of

Summary of Replies from Hospitals, Dispensaries, and other Institutions.

Name of hospital, dispensary, or institution.	What number of children under 14 were treated during the years 1906 and 1907 for various affections of the teeth, distinguishing (a) for preservation, (b) for extraction of teeth?		What number of children under 14 were treated during the years 1906 and 1907 for various affections of the eyes, distinguishing (a) errors of refraction, (b) actual diseases?		What accommodation exists for the treatment of children under (2) and (3) respectively?	Would it be practicable (a) to treat larger numbers of children during the regular hours of work of the institution, or (b) to make arrangements outside the regular hours for the exclusive treatment of delinquent school children?	Remarks.
	(1)	(2)	(3)	(4)			
Inixon Dispensary	1906. (a) Nil (b) 142	1907. (a) Nil (b) 165	1906. (a) Nil (b) 21	1907. (a) Nil (b) 18	—	—	—
Broomfield and Knightbridge Dispensary	1906. (a) 1906 (b) 1907	1907. (a) 92 (b) 1907	1906. (a) Not dealt with (b) 1905 (c) 11	1907. (a) 1905 (b) 11	(2) Dental department with honorary dental officer (3) No ophthalmic department No special accommodation	No, but would be willing to consider any proposal made to them. Much larger numbers could be treated during the working hours of the institution. quite impracticable	—
Bloomsbury Dispensary	1906. (a) — (b) 4	1907. (a) — (b) 2	1906. (a) — (b) 8	1907. (a) — (b) 6	—	No	—
Canterwell Provident Dispensary	1906. (a) 40 (b) 400 (c) 450 (d) 450 (e) 450	1907. (a) 40 (b) 50 (c) 450 (d) 450 (e) 450	1906. (a) 40 (b) 50 (c) 450 (d) 450 (e) 450	1907. (a) 40 (b) 50 (c) 450 (d) 450 (e) 450	—	No	—
Evelina Hospital for Sick Children	1906. (a) 1,097 (b) 1,097	1907. (a) 642 (b) 642	1906. (a) 295 (b) 295	1907. (a) 215 (b) 215	—	No	—
Forest Hill Provident Dispensary	1906. (a) 20 (b) 55	1907. (a) 25 (b) 65	1906. (a) 4 (b) 96	1907. (a) 6 (b) 108	—	No	—
German Hospital	1906. (a) 187 (b) 203	1907. (a) 166 (b) 118	1906. (a) 106 (b) 192	1907. (a) 237 (b) 259	—	No	—
Great Northern Central Hospital	1906. (a) 500 (b) 500	1907. (a) 231 (b) 231	1906. (a) 251 (b) 331	1907. (a) 252 (b) 360	—	No	—
Haverstock Hill and Malden Road Provident Dispensary	1906. (a) 20 (b) 55	1907. (a) 25 (b) 65	1906. (a) 4 (b) 96	1907. (a) 6 (b) 108	—	No	—
Holloway and North Islington Provident Dispensary	1906. (a) 187 (b) 203	1907. (a) 166 (b) 118	1906. (a) 106 (b) 192	1907. (a) 237 (b) 259	—	No	—
Hospital for Sick Children, Great Ormond Street	1906. (a) 20 (b) 25	1907. (a) 30 (b) 25	1906. (a) 20 (b) 25	1907. (a) 30 (b) 25	—	No	—
Islington Dispensary	1906. (a) 50 (b) 50	1907. (a) 50 (b) 50	1906. (a) 50 (b) 50	1907. (a) 50 (b) 50	—	No	—
Kilburn Provident Medical Institute	1906. (a) 20 (b) 25	1907. (a) 30 (b) 25	1906. (a) 20 (b) 25	1907. (a) 30 (b) 25	—	No	—
Metropolitan Dispensary	1906. (a) 217 (b) 217	1907. (a) 99 (b) 114	1906. (a) 217 (b) 217	1907. (a) 99 (b) 114	—	No	—
Middlesex Hospital	1906. (a) 217 (b) 217	1907. (a) 99 (b) 114	1906. (a) 217 (b) 217	1907. (a) 99 (b) 114	—	No	—
Miller Hospital	1906. (a) 217 (b) 217	1907. (a) 99 (b) 114	1906. (a) 217 (b) 217	1907. (a) 99 (b) 114	—	No	—
North-Eastern Hospital for Children	1906. (a) 553 (b) 750	1907. (a) 582 (b) 700	1906. (a) 553 (b) 750	1907. (a) 582 (b) 700	—	No	—

[illegible]





outside dispensaries, and suggested that the Council should help in the endowment of dispensaries to which the various friendly societies with juvenile branches might contribute. The Council's aid, added to the subscriptions of the societies, would enable the dispensaries to be efficiently equipped, the absence of such equipment being the parents' chief reason for preferring hospitals, and would thus result in an almost ideal system of medical aid. The children would be drawn together in the school, and would receive medical attendance provided for them outside the school, thus encouraging mutual help by means of the Foresters' Courts, and at the same time securing medical inspection by dispensaries established in the neighbourhood of the school endowed and equipped by the local authority, but towards which the children would contribute the actual cost of the medical treatment.

Mr. Nunn stated that in Hampstead as many school children as possible were urged to belong to a good benefit society for providing against illness, the necessary medical treatment being provided by a medical officer paid at the rate of 4s. 4d. a child per annum. The principle was that of the Foresters' Society, which enabled children to join a court at a very early age and receive a small allowance during sickness and medical attendance for a payment varying from 2d. to 6d. a month. Each court selected its own medical adviser, who could deal with children's teeth in the early stages, and when necessary perform extractions, but where special treatment was required a letter of admission to a hospital was given. The fees paid by children at Hampstead, all of whom were of the working class, were 2d. below 5, and from 4d. to 8d. from 5 up to 14 and upwards. Parents did not, as a rule, apply for treatment for teeth; it would, if necessary, be given, and up to a certain point the expense borne by the society's dispensary: no special dentist had been appointed, but an arrangement might possibly be made to do so. The institution by the Council of a gratuitous system of treating children's teeth would discourage members, and result in the movement being practically swept away. Slate clubs, which had the greatest hold on the people in the poorest parts, did not reach the children. He desired that the provident dispensaries should be brought into co-operation with the distinctly educational movement for the formation of juvenile courts of Foresters and Oddfellows within the schools.

With regard to the extent to which the dispensary movement and the friendly societies movement could be made to act in direct co-operation, he stated that in various provincial towns there had already been formed some thirty or forty medical associations of all the friendly societies in the town for the purpose of providing medical attendance and drugs for their members, the families of members being allowed to join the dispensaries thus formed without necessarily qualifying for membership of any one of the societies by passing the doctor. The juvenile friendly societies existed for those who were certified as healthy. A system which linked the educational and social value of the juvenile friendly societies movement with the care of all the sick members of a family at a local dispensary seemed to meet the need with which the London County Council was faced. In London the juvenile branches of friendly societies were unprepared to provide the nursing, the surgical appliances, surgical operations, and the convalescent treatment indicated in the reports of the medical inspectors. They, however, expressed willingness to consider the new problem presented by the results of medical inspection. The juvenile branches of friendly societies were as a rule financially well off, so much so that the question of dealing with the surpluses accumulated was constantly attracting the attention of those who organized such societies. He thought it would be possible in the future so to organize the dispensaries and juvenile friendly societies as to enable them to deal with a very large proportion of cases.

The School Care Committees were in touch with associations which had for their object the care of children, especially of sick children. On most of the Care Committees the Charity Organization Society was largely represented, and members of the Children's Country Holiday Fund, the Invalid Children's Aid Association, the Children's Aid Society, and similar associations were to be found. He thought it certain that a combination of these societies with the provident agencies might deal effectively

with the whole problem, especially if the suggestions of the Board of Education in its last circular as to grants made to institutions dealing with children's diseases were carried out. If provident dispensaries already existing or established in the future were aided by grants, they might provide eventually near to every school all the necessary medical and surgical treatment the cases required. He summarized his suggestions in the following sentence: To strengthen the provident dispensaries in operation and the juvenile branches of the friendly societies of the district, and to seek through our care committees for the co-operation with them of all the other agencies in a given district which deal with cases of sick children.

THE TRUCK ACTS AND THE MEDICAL PROFESSION.

THE report of a committee appointed early in 1906 "to inquire into the operation of the Truck Acts, and to consider and report what amendments of extensions of those Acts or changes in their administration are desirable" was issued on January 2nd. It recommends an important change in the law so far as it relates to deductions from wages in respect of medical attendance and expenses. As the law now stands, deductions from wages are subject to strict regulation, but contracts between employers and workmen for the provision of medical attendance and medicine are among the matters in respect of which an exception was made in the Truck Acts to the general principle of payment in money and not in kind. In the report of the Medico-Political Committee of the British Medical Association on the working of the Truck Acts as regards medical attendance¹ it was stated that the position of employer and workman now is that the employer, in consideration of the sums which the workman, by a signed agreement, authorizes him to deduct from wages, is under a contract to supply medical attendance and medicine, but is not under an obligation to expend the whole amount deducted from wages in the provision of such attendance. He may make a profit for himself or incur a loss, or he may devote part of the money to other objects for the welfare of the workmen. He is a contractor. So long as he fulfils his contract by supplying medical attendance and medicine, his obligation is discharged.

With the object of ensuring that if any deduction for medical expenses be made, it shall all be devoted to the needs of the particular workman, the Truck Act Committee makes the following recommendations:

That in respect of medicine and medical attendance:

(a) The exception in Section 23 of the Act of 1831, empowering the employer to contract to supply his workmen with medical attendance, etc., should be repealed;

(b) The doctor or doctors must be the choice of the workmen themselves;

(c) The contributions may either be collected by the workmen and paid over direct to the doctor, or may, at the request of the workmen, be deducted by the employer from the wages for the purpose of being paid over either to the workmen's representatives or to the doctor under arrangements made between employers and workmen;

(d) No commission on account of the services rendered by the employer in this transaction should be allowed by law.

These recommendations in some respects accord with, and in others are contrary to, the views of the medical profession, as expressed by the Medico-Political Committee of the Association. That committee stated that in the medical profession it appeared to be generally felt that compulsion was justified on the ground that it was to the interest of the general body of workmen and the average individual workman, regarding his life as a whole, that an obligation to consent to a deduction for medical expenses should be imposed. But in recommending that the workman should be at liberty to choose his own attendant, the Truck Act Committee appear to have taken cognizance of the following passage in the report of the Medico-Political Committee:

The conclusion arrived at by the British Medical Association, as the result of inquiries and deliberations extending over three years, has been that, generally speaking, medical attendance under contracts of any kind will be most satisfactorily given when the individual patient is allowed, so far as the circumstances of the district permit, to choose his own doctor.

¹ SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL, June 20th, 1908, p. 426.

THE COMPARATIVE ANTISEPTIC VALUE OF DISINFECTANTS.

THE methods hitherto employed for the standardization of disinfectants have been confined almost entirely to the determination of their direct germicidal action when the bacteria have been exposed to the action of solutions or emulsions of the disinfectant. To all of those methods objection has been made on the ground that the germicidal action was determined under conditions which did not correspond to those in actual practice when disinfection was carried out on a large scale. Dr. S. B. Schryver and Dr. R. Lessing, who have recently undertaken a fresh investigation, gave an account of their results before a meeting of the London Section of the Society of Chemical Industry on January 4th. Their communication was entitled "A Physico-chemical Method for Comparing the Antiseptic Value of Disinfectants."

Dr. Schryver, who read the paper, said that of the various methods proposed for determining the antiseptic value of the numerous products, proprietary and others, which had in recent years been employed for the purposes of disinfection, perhaps the best known were the "thread method" of Koch, the "garnet method" of Krönig and Paul, and the method, which had been extensively employed in this country, of Rideal and Walker. In the Rideal-Walker method definite small amounts of broth culture of the same species and age were added to a constant volume of a disinfectant solution. A series of trials were made with varying concentrations of the disinfectant to be tested, and of pure phenol under similar conditions, and the relative concentrations necessary to complete germicidal action within equal periods of time was thereby determined. The ratio of the reciprocals of those concentrations was termed by Rideal and Walker the "carbolic acid coefficient," and was regarded by them as the standard of disinfecting power. Various objections had been made to this method, chiefly on the ground that the actual test for disinfection was carried out in the absence of organic matter other than that present in the disinfectant and the minute amount introduced by the bacterial culture, and the conditions of the trial were not therefore entirely analogous to those under which antiseptics were ordinarily employed. Somerville and Walker had endeavoured to remedy that defect by carrying out the disinfecting test in the presence of known quantities of added organic matter, such as protein and starch, and had in some cases obtained widely different numbers for the carbolic acid coefficient. The addition of organic matter could act in different ways with different disinfectants. In some cases—as, for example, in that of permanganate—the disinfectant could be directly destroyed by acting as an oxidiser to the organic matter; in other cases the disinfectant could be dissolved by the organic matter and thus removed from solution and its sphere of activity, an action which was conceivable when disinfection was carried out in the presence of fats by substances soluble in such organic solvents. A still more complicated case was that in which absorption of the disinfectant by the organic matter took place, a process which probably accounted for the behaviour of certain antiseptics recently investigated by Ehrlich and Bechhold. In all such cases the addition of organic matter would considerably lower the carbolic acid coefficient. Nor need such a lowering of the coefficient always indicate a diminished practical value. It was not possible, for example, that the disinfectant might be absorbed by solid matter; if the latter were the material required to be disinfected, it would, after a higher percentage of the disinfectant than the latter, in which case a lowering of the carbolic acid coefficient by the addition of organic matter should denote an increased practical efficiency. One more action of organic matter deserved consideration: Many of the more recently introduced disinfectants were emulsions, and it was generally admitted that their efficiency depended to a great extent on the degree of emulsification, for the addition of organic matter might either accelerate or inhibit the rate of de-emulsification, and thus, in a purely physical way, either decrease or increase the practical value. The problem raised by the introduction of organic matter was therefore one of great complexity, and as the mere

germicidal value as indicated by the various methods already mentioned was regarded as an insufficient test of the practical efficiency of an antiseptic, the authors suggested that a new method might throw some further light on the question. The rate of chemical change produced in a "substrate" by bacterial infection might be regarded as a measure of the vigour of the growth. By introducing substances inimical to the bacteria the rate of growth might be inhibited or even entirely arrested. The principle of the method of the authors depended essentially upon the measurement of inhibition produced when varying quantities of an antiseptic were added to an infected medium, and comparing those quantities with the amounts of phenol or any other standard disinfectant which would produce the same result. Of the chemical changes produced by bacteria, those of protein degradation or conversion of dextrose into lactic acid both lent themselves to chemical measurement. A measurement of the rate of putrefactive change in a gelatine-peptone substrate had been already carried out by one of the authors of the paper.* In that case a meat essence was infected with putrefying liver, and the nitrogen determined in the filtrate from the precipitate produced by adding a given volume of tannic acid mixture to a given volume of the medium removed from the main bulk after different intervals of incubation. This purely chemical method involved a relatively large amount of labour and was impracticable, but it was necessary to measure the rate of change which took place in different concentrations of an antiseptic, owing to the large number of analyses involved. Fortunately, the chemical change, in the case of protein degradation at any rate, closely corresponded to certain changes in the physical properties which could be readily and accurately measured, and in the method now brought forward the electrolytic conductivity had been taken as the index of chemical change. That physical property had already been employed for studying protein changes, notably by Sjöqvist, Oker-Blom, and Bayliss. The medium used in the author's experiments had been either gelatine-peptone or sodium caseinogen-peptone mixture containing about 5 per cent. of gelatine or sodium caseinogenate—that is, caseinogen dissolved in the requisite amount of sodium hydroxide—and 1 per cent. Witte's peptone. In all cases a mixed infection by faeces had been employed, as it was found to produce a much more rapid change in the substrate than was produced by the inoculation with a pure strain, probably owing to the fact that the action of the different species was specific, some degrading the protein to albumoses or proteoses, others acting only on those latter bodies, and others again only on amino-acids, as shown by Nawiasky. A similar method of infection had also been employed by Mr. Wynter Blyth. The relationship between electrolytic conductivity and protein degradation had already been determined by Bayliss in his investigations on the action of trypsin on caseinogen, where he found that the curves representing the conductivity of the caseinogen solution in different stages of digestion and the nitrogen in the filtrate from the tannic acid precipitation were very similar in form. An experiment was carried out to determine the influence of varying quantities of antiseptic on the form of the conductivity curve, and it was found that no putrefaction took place within four days, when the concentration of the phenol reached 0.1 per cent. A concentration of 0.05 per cent. was, however, insufficient altogether to stop putrefaction within that period, although it considerably impeded it. Caseinogen solution underwent a small change on incubation, even in the absence of putrefaction; the alteration in conductivity was, however, small, when compared with the changes produced by putrefaction. For that reason the gelatine-peptone mixture was to be preferred when testing the efficiency of antiseptics. In that latter medium the changes were small. The addition of mercuric chloride diminished the resistance of the substrate; formalin, on the other hand, increased it, owing probably to its capacity to enter into chemical combination with amino-derivatives. The disinfectants themselves also exerted sometimes small changes when present in large quantities, owing to their acid or basic characters. In no case, however, could such changes be mistaken for putrefactive alteration. The

* Schryver, Report No. 1, Inspector of Foods Department, Local Government Board.

factors concerned in the process of disinfection were so complex that the authors had for the present avoided the use of the word, "sterilization" in their description of the suggested methods. Nor had they attempted so far to express any numerical relationship when comparing the antiseptic value of the different disinfectants examined. There were, however, various methods by means of which such a relationship might be fixed; the most feasible would be to determine the relative quantities of the disinfectants which were just necessary entirely to inhibit putrefaction during a given interval. In their experiments no change was produced in the substrate when phenol was in the concentration of 5 parts per mille, although a considerable amount took place with 2.5 parts per mille. The amount necessary for total inhibition lay somewhere between those limits. By taking a larger number of dilutions those limits could be considerably narrowed and the relative amounts just necessary to inhibit putrefaction within a given time ascertained. The method suggested had many advantages, notably the small amount of time and labour involved and the simplicity of manipulation. It was furthermore adaptable to a large number of conditions, varying substrates and disinfectants in different physical forms, such as powders, emulsions, or organic solvents. It was hoped that that wide range of applicability would render the method acceptable to those engaged in the examination of antiseptics.

Dr. WILLIAM DRENFES (New York) asked if the authors of the paper had made any comparative tests between their method and that known as the Rideal-Walker. At first sight the method described by the authors seemed complicated.

Dr. SOMMERFELD said he would prefer to read the paper first before discussing it in detail, and he was followed by Mr. WYNNER BLANCH, who pointed out that the method gave high results for substances which were regarded at the present time as poor disinfectants. That might be because the old method of testing was wrong; but it was for the authors to prove their method was right.

Dr. RIDEAL said that the paper had opened up a new field of work. He thought the method was applicable to the determination of questions concerning preservatives and antiseptics. In his opinion the data were not sufficient to ascertain whether the solutions were of uniform resistance. He considered that it was better to measure the amount of change by some chemical rather than by any physical method. He felt a doubt as to what was really meant by the difference in the conductivity of solutions. He criticized the method of the authors in using faeces of unknown origin containing "a mob of organisms" of different kinds. It was difficult to ensure that any given sample of faeces contained the right amount of bacteria in the right proportion to grade the gelatine in the way suggested by the authors. That must be considered before the test could be regarded as a practical one. He himself and Dr. Walker had never put forward their method as a means of determining the way in which disinfection did its work; their method simply enabled the manufacturer, the buyer, and the seller to see that they were getting an article supplied according to original sample; it was a commercial method to judge whether an article was up to specification.

Dr. DOWFIELD doubted whether there was any possibility of finding a test for disinfectants perfect from an academic as well as from a practical point of view.

Dr. LESLIE, who replied, said that the method he and Dr. SCHRYVER advocated would be found on comparison with other methods to be most nearly in correspondence with the conditions of actual practice. As in practice pure cultures never had to be dealt with, ordinary faeces had been used.

A SOCIETY for the reduction of infant mortality has been founded at Moscow.

UNDER the will of the late Mrs. Frances Roget, of Maida Hill, the National Society for the Employment of Epileptics, and the National Hospital for the Paralysed and Epileptic, each receive a sum of £1,000; a further sum of £500 going to the Home for Epileptics at Muggill.

MR. ALEXANDER ROBB, M.B., M.P., C.M., has been appointed Medical Officer for the Counties of Midlothian, Linlithgow, and Peebles, in succession to the late Dr. Brodie. Dr. Robb has been medical officer of health for the Burgh of Paisley since 1901.

LACTIC FERMENTS FOR PRODUCTION OF SOUR MILK.

In consequence of the demand which has arisen for sour milk corresponding to the Bulgarian "yoghourt," a number of firms have placed on the market preparations of the bacteria necessary for its production; we have received several of these for examination, and the results of the tests carried out are given below. All but one of the preparations are in the form of tablets, and are intended to be taken by themselves, in addition to their employment in souring milk, for the purpose of obtaining a good growth of lactic acid bacilli in the intestine.

The samples examined, and the principal parts of the directions given in each case were as follows:

Fermentacetyl Tablets.—Prepared by the Pasteur Vaccine Co., Paris: English Agents, The Anglo-American Pharmaceutical Co., Ltd., Firth Road, Croydon. Directions: Boil the milk for 3 hours, remove film from surface, cool to 40° C. (104° F.), add 10 to 12 tablets crushed, to each pint, maintain at 40° C. for 10 to 12 hours. Sample received, February, 1908.

Lactobacillus Tablets.—Prepared by la Société le Ferment, Paris. Directions: Boil the milk for 10 minutes with stirring, cool to 38° C. (100° F.), add 3 tablets, rubbed down, to each pint, maintain at about 38° C. for 10 to 12 hours. Sample received, November, 1908.

Opportunists' Cultures in Tubes.—Supplied by Messrs. Oppenheimer and Co., Ltd., 119, Queen Victoria Street, London, E.C. This is a liquid preparation, contained in hermetically sealed tubes, the amount in one tube being intended for one pint of milk; the mixture to be kept at 40° C. for 8 to 10 hours. Sample received, November, 1908.

Salein Tablets.—Supplied by Messrs. Allen and Hanbury, Ltd., Lombard Street, London. Directions: Boil the milk, cool to 40° C., add 3 tablets, crushed, to each pint, set aside in warm place for 6 or 8 hours. Sample received, December, 1907.

Thick Tablets.—Supplied by Mr. W. Martindale, 10, New Cavendish Street, London, W. Directions: Boil the milk for 1 hour; cool to a warm blood heat; add 2 tablets, crushed, to each pint, maintain at the same temperature for 6 to 10 hours. Sample received, November, 1908.

For purposes of comparison, a temperature of 40° C. and a time of ten hours were employed in all cases. It has been pointed out in a recent article by Dr. R. W. Allen (BRITISH MEDICAL JOURNAL, November 23th, 1908; p. 1605) that it is highly desirable to keep the milk at or near boiling point for an hour before sowing it with the lactic bacilli; two series of tests were therefore made, in one of which the milk had been brought to the boil and then allowed to cool, while in the other it was brought to the boil and then kept in a boiling-water bath for one hour and subsequently cooled. The lactic acid formed was ascertained by titrating a portion of the milk with standard alkali solution. The milk employed at first was the ordinary supply of one of the large dairy companies in London. This was practically neutral to begin with; a portion of it was incubated at 40° C. for ten hours, and was then found to contain 0.04 per cent. of lactic acid; another portion was heated to boiling, then cooled, and incubated at 40° C. for ten hours, and was then found to contain only the same negligible trace of acid that was originally present. A portion of the milk which had been boiled was then treated with each of the preparations named above, using the proportions directed: portions of the milk that had been kept at boiling point for an hour were similarly treated, and the whole incubated for ten hours at 40° C. The acidity developed in each was then ascertained by titration, and the results are given in the columns headed I in the table. As the results in most cases were lower than was expected, the remainder of the milk cultures was set aside for a further twelve hours: for this second period the temperature was allowed to fall gradually from 40° and for a considerable part of the time it was about 10° C. The acidity of the different specimens was then again determined, and these results are given in the columns headed II. The plain milk so treated developed 0.26 per cent. of lactic acid; and the milk that had been boiled but had received no addition showed 0.03 per cent.

Another lot of milk was obtained from a country dairy, and carefully tested to prove the absence of preservatives; this was heated to boiling; and kept in a boiling-water bath for an hour. A further series of incubations at 40° for ten hours was made with this; the results are given in the column headed I A.

Percentage of Lactic Acid Produced.

Sample.	Milk brought to boil only.		Milk kept at Boiling Temperature for 1 hr.			
	I.	II.	I.	II.	I.	II.
	10 hrs.	22 hrs. (partly cold).	10 hrs.	10 hrs.	22 hrs. (partly cold).	22 hrs. (partly cold).
Fermentacetyl tablets ...	0.00	0.10	0.00	0.00	0.00	0.15
Lactobacilline tablets ...	0.00	0.05	0.00	0.02	0.10	0.10
Oppenheimer's cultures ...	1.02	1.10	0.75	0.96	0.98	0.98
Sauvignin tablets ...	0.04	0.23	0.03	0.07	0.21	0.21
T.H. diane tablets ...	0.00	0.09	0.03	0.27	0.28	0.28

Some irregularities are shown by the results of different tests on the same product, and this appears to be due to variations in the individual tablets and cultures. The actual formation of curd was approximately proportional to the acidity found by titration. The product was agreeable to taste, and free from bitterness in each case.

THE HISTORY OF THE ELEMENTARY SCHOOL CHILD.

VI.—SCHOOL INSPECTORS.

Nowhere in the school machinery is there such overlapping as in the inspection of schools, and nowhere is there more need for reorganization. There seem to be two great faults in the choice of inspectors: in the first place nearly all are men, and in the second they are chosen for their academic attainments rather than their practical knowledge of teaching. Though many inspectors have had a distinguished university career, it may safely be asserted that only in most exceptional cases have they taught in schools themselves. It follows that they are not qualified to criticize and direct work of a special character beset with such peculiar difficulties as that in the elementary schools. Education authorities draw up syllabuses and frame a general plan, but it is for the inspectors to see whether it works well or ill, to see that it is modified to suit different conditions prevailing in different neighbourhoods, and to suggest alterations, until some really practical scheme is arrived at. At present the inspectors are the reasons why teachers, often exceedingly capable and intelligent, often fall of initiative and interest in their schools, relapse into a dull programme of routine work, because their desire to make the time-table more suitable and more interesting to their classes is not understood, or is misunderstood by the inspectors.

The inspectors themselves—in London, at any rate—are over-inspected, and each has so many schools to get through in the year that if he were to spend time trying to understand the different points of view of the school teachers he would never get round. He also, perhaps, has the fear of being hauled over the coals by his superior officer, for subinspectors do much of the actual work of inspection, while the inspectors spend much time in office work. In London there are 24 school inspectors and subinspectors under the London County Council; 22 of these are men and 2 are women. The staff of school inspectors appointed by the Board of Education for England and Wales numbers nearly 250, of whom over 150 are subinspectors. They are almost all men. These gentlemen, both those appointed by the Board of Education and those appointed by the London County Council, base their reports on the schools on a particular standard of excellence to be attained by the children in such subjects as reading, writing, drawing, and needlework. A child who does not come up to the standard gets a black mark, and the teacher whose class does not produce results which satisfy the inspectors likewise gets a bad report. It does not matter how the children's eyes and brains are strained and forced in the attempt; nothing matters but the net result in fine stitches and pen-strokes. We all know that some children can never sew or write neatly, however good they may be at other lessons, but such idiosyncrasies are not taken into consideration. Indeed, the injury to eyesight has been so great in the past that such pressure is now forbidden in the infants,

departments; there is, however, far too much work done for show purposes at the expense of practical and sensible instruction. Here and there a progressive head teacher allows the girls to mend their clothes in school, but this can only be done outside the time set apart for specimen sewing. Could any other results be possible when men are appointed to posts which necessitate the inspection of needlework? The women teachers who are content to carry out their duties to the letter—and naturally they are in the majority—openly say that they prefer men inspectors to women because, provided they can force these mechanical results out of the pupils, they satisfy the inspectors. On the other hand, those teachers who have the practical training and real welfare of their pupils at heart, and do not wish to sacrifice their sight to the accomplishment of very fine work the uselessness of which is only too obvious, incur the displeasure of the inspectors. In this respect the teachers have a real grievance; the reports made by the inspectors on the teachers are confidential, and as the latter never see what has been said of them there is always a risk of injustice to teachers who may have definite views on the subject of education which, however reasonable, may clash with the personal views of the inspector.

In justice to the ratepayer, to the teacher, and to the elementary school child, the present system of selecting school inspectors should be reformed. The appointments should cease to be a mere piece of patronage extended to men who have taken what is called a good degree, and have influential friends. Candidates should be required to produce evidence that they have studied the art of teaching theoretically, and have had practical experience of the work in elementary schools. In Bulgaria, where a very complete and efficient system of State education has been established, the inspectors are chosen from among former professors of high schools who have had a university education, and have distinguished themselves by their contributions to pedagogical literature, and from among the teachers in primary schools who have taught for at least five years, and have passed the examination for the post of inspector. Similar regulations are greatly needed in this country, and would work a very salutary reform.

LITERARY NOTES.

Among other interesting articles in the current number of the *Cambridge Magazine* is one by the Dean of Canterbury on the famous editor of the *Times*, John Thaddeus Delane. Dr. Wace, who was one of his most trusted contributors, tells that Delane in training himself for the profession of a journalist, was not only called to the Bar but "attended the hospitals for some terms." Delane was always fond of medical and surgical knowledge, and he more than once mentioned to Dr. Wace his experience in Paris under Magendie. To the general knowledge thus acquired, Delane owed much as an editor. Almost alone among newspapers, the *Times* has, as a rule, not only dealt intelligently with medical matters, but has been careful to exclude from its columns the sensational rubbish about supposed new discoveries and mythical triumphs of the healing art with which the most "enterprising" of its contemporaries seem to take a pleasure in misleading their readers. *Quidquid Græcia mendax audit in historia* would seem to be prophetic of the irresponsible manner in which certain halfpenny papers of the present day deal with everything relating to medicine.

In a note contributed to the *Progress Medical* of December 26th, Dr. Cornet deals with the food of the Gauls. Among the early Gauls, as among the Germans, he says, the dietary consisted largely of milk and the produce of the chase, such as boars, reindeers, aurochs, etc. Even human flesh was eaten, probably when animal food was scarce. Little is known about Gaul before Caesar's day. Varro speaks highly of their ham and their sausages. The Gauls loved boiled meat, and boiled oats or porridge formed an important part of their diet. According to Cornet bread was made by the Phœocians or early inhabitants of Marseilles nearly seven centuries before Christ. Leavened bread, however, did not come into use before the time of the Roman dominion, and then only among rich folk. In the Frankish period the baker's shop began to take the place of family baking, especially in towns. The early Gauls, at least those in the interior, did not know

wine; the beverages in use were beer and hydromel. Both these drinks were known to other peoples by other names from the most remote antiquity. In the year 365 after the foundation of Rome, according to Pliny, an enterprising Etruscan trader introduced wine which pleased the Gauls so much that they forthwith determined to raid the country from which the delicious drink was produced. This led to the invasion of that part of Italy which the Romans called Transpaduan Gaul. Before the Roman conquest the Gauls, like the Scythians, Scandinavians, and other savage peoples, drank out of human skulls. After the Roman conquest they became more civilized in their manners, and their diet became gradually modified.

We learn from the *British Esperantist* for January that between August 5th and November 5th, 1908, 18 new Esperanto societies were founded in America—17 in the United States and 1 in Mexico. On the latter date there were 39 Esperanto societies in thirty-nine American towns. In Europe 63 new societies were formed, the principal new additions being 22 in Germany and 5 in Italy. The total number of European societies was 295. The total recorded number of Esperanto societies throughout the world on November 5th was 1,130. The total number of Esperanto magazines was 69. Esperanto has received official recognition in various countries. Thus in Austria-Hungary the Minister for War has given permission to officers and military officials to join the Esperanto Union in Vienna. In France the Departmental Council of the Seine has voted a subvention to the Esperanto Group at Charenton, which also received two further subventions from the municipalities of Charenton and Saint-Maurice. In Cochinchina the Colonial Council has voted a subvention of £20 to the Esperantist Group at Saigon. The use of Esperanto in telegrams was sanctioned in Russia in 1904.

Medical News.

THE late Professor Sacharjin has left two millions of roubles for the erection of a hospital in Moscow.

THE annual dinner of the West London Medico-Chirurgical Society will take place at the Great Central Hotel, Marylebone, on Friday, February 12th.

A NUMBER of medical officers of the Turkish army have been sent by the Ottoman Government to go through courses of study in German and French universities.

A PAPER on the purification of water by ozone and other chemical substances will be read by Dr. S. Rideal at a meeting of the Royal Sanitary Institute, at the Parkes Museum, on Wednesday next at 8 p.m.

PROFESSOR ROBERT KOCH has been elected a President of the German Central Committee for the Prevention of Tuberculosis, in the room of its founder, the late Herr Friedrich Althoff, Ministerial Director of the Prussian Education Office.

THE usual course of lectures and demonstrations at the Hospital for Sick Children, Great Ormond Street, W.C., will commence on Thursday next, when Mr. Arbuthnot Lane will give a lecture on fractures in children, at 4 p.m. The lectures are free to qualified medical practitioners.

THE second lecture of the Hunterian Society is to be delivered by Mr. Bland-Sutton at the London Institution, Finsbury Circus, next Wednesday evening. He will deal with thrombosis and embolism after operations on the female pelvic organs. The lecture is free to all members of the medical profession.

THE second international course of legal psychology and psychiatry at the University of Giessen will be held from April 13th to 18th, 1909, under the direction of Professor Sommer, with the co-operation of Professors Mittermaier and Dannemann of Giessen and Professor Aschaffenburg of Cologne. Further information can be obtained from Dr. Sommer, Professor of Psychiatry, University of Giessen.

A PROVINCIAL sessional meeting of the Royal Sanitary Institute will be held at Manchester on Friday, January 22nd, when, at 2.30 p.m., a visit will be paid to the new Manchester Royal Infirmary. At 7 p.m. a discussion on the infirmary from the hygienic, sanitary, and aesthetic points of view will be opened by the architects, Mr. Edwin T. Hall and Mr. John Brooke.

THE Clinical Society of Newcastle-on-Tyne will entertain Sir Thomas Oliver at its annual dinner on January 14th, in order to congratulate him upon the honour of knighthood recently conferred upon him. On the afternoon of the same day Sir Thomas Oliver will give an address to the

society on the use of caissons in bridge building, with remarks upon the physiology and pathology of compressed-air illness.

THE constitution of the King Edward VII's Hospital for Officers, Grosvenor Gardens, S.W., has been altered. There is no longer an honorary medical staff, as the appointments were for five years only. Patients may now be treated by any member of the surgical staff of a London hospital, and, prior to admission, an officer should select his surgeon and arrange with him as to fees. The hospital is for surgical cases only, and will be maintained as a free nursing home.

THE German Urological Society will hold its second congress at Berlin, April 18th to 22nd, 1909. Among the subjects to be discussed are urology and gynaecology, suppurative non-tuberculous affections of the kidneys, and tumours of the bladder. An exhibition will be held in connexion with the congress. All communications relative to the congress should be addressed to Sanitätsrat Dr. Vossido, Victoriastrasse 19, Berlin, W.

DR. JAMES KERR, Chief Medical Officer of the London Education Committee, will deliver the first of a course of lectures and demonstrations on the medical inspection of school children at the rooms of the Society of Medical Officers of Health, 1, Upper Montague Street, London, W.C., on Monday next, when the chair will be taken by Dr. Charles Newman at 3 p.m. The lecture will deal with the general principles of medical inspection and with annual reports. An exhibition of appliances and material relating to medical inspection is being organized. Full particulars can be obtained from the secretary of the society at the address mentioned.

THE Lord Chancellor has placed on the Commission of the Peace for the County of London the name of Surgeon-General Sir Charles Cuffe, K.C.B., Army Medical Staff (retired). Sir Charles Cuffe is a member of the Naval and Military Committee of the British Medical Association, and Vice-Chairman of Council of the Kensington Division, Metropolitan Counties Branch. President for 1908-9 of the Irish Medical Schools' and Graduates' Association. He serves on various boards of management of industrial and other certified Poor-law schools, is a Poor-law guardian of Kensington, and a member of the Council of the Royal Borough of Kensington, which he has represented since November last on the Joint Subcommittee for Kensington and Westminster of the London County Council for investigating the claims under the Old Age Pensions Act, 1908.

MR. C. F. P. CAVE has reported to the Royal Meteorological Society the results of a number of experiments with kites and balloons arranged by the International Commission for Scientific Aeronautics, with the object of determining the state of the atmosphere as regards temperature and wind velocity at great elevations. The average height reached by the balloons was 10.2 miles, the greatest 14.2 miles. Some of the resulting thermographs showed considerable differences between the up and down tracings, and this was deemed to indicate that fairly rapid fluctuations of temperature may occur in the upper air. Other tentative conclusions put forward were that after a certain height is reached there is no longer a fall of temperature with increase of height. Above a certain altitude there may even be an increase of temperature which cannot be explained by solar radiation, for some of the balloons recording such rise reached their highest point after sunset. At the lower limit of the isothermal layer it would appear that there is a well-marked diminution of wind velocity.

THE distribution meeting of the Hospital Saturday Fund for London was held on January 2nd, £25,000 being divided among the various applicants. The ordinary receipts for the year amounted, it was shown, to £22,659, an increase of some £1,600 as compared with the previous twelve months. It was reported that during the year 1,556 letters of recommendation for convalescent homes had been issued, rather more than two-thirds of these being for admission on the part-payment system. During the previous three months 61 patients had been admitted to the beds endowed by the Fund in various consumption hospitals and sanatoriums, while 41 patients had been admitted to the Brompton Consumption Hospital on the recommendation of the Fund during the year. In the surgical appliance department the attendances of patients reached 8,026, the payments made by them exceeding £1,173. In its report the Distribution Committee drew attention to the fact that the waiting list at various institutions intended for the consumptive continued to be most unfortunately long, and put forward a suggestion that the Fund should endow a greater number of beds in those on which the demands were greatest.

British Medical Journal.

SATURDAY, JANUARY 9TH, 1909.

MEDICAL INSPECTION AND SCHOOL CLINICS.

THE British constitution, of which we are all so proud, exists, it is said, only in the mind of the Speaker of the House of Commons, who, whenever the machinery begins to creak too audibly, evolves from his inner consciousness a new clause. Certain it is that as a people we have no love for a complete, logical, comprehensive scheme. The Abbé Siéyès, that ingenious framer of complete, logical constitutions, would not have had a day's shrift with us. We have taken to heart the injunction to do that which our hand findeth to do to-day and to leave to-morrow to look after itself. We sympathize with Sir Boyle Roche's rhetorical question, What has posterity done for us that we should do so much for it? We do not cross any bridges until we come to them, but sometimes the bridge proves to be round the next corner, and with much screeching of brakes and blowing of horns we are pulled up to see whether it is wide enough and strong enough for our car to pass. These, perhaps trivial, reflections are inspired by the present attitude of the public, or at least of the ratepayers, towards the great question of the health of school children.

The public conscience demanded medical inspection of school children, and Parliament, in making that measure compulsory, added a permission to local authorities, to make arrangements, with the sanction of the Board of Education, for attending to the health and physical condition of children educated in public elementary schools. It provided, also, that the local education authority might encourage and assist the establishment or continuance of voluntary agencies and associate with itself representatives of voluntary associations for the purpose. Medical inspection, as was expected, has disclosed the fact that a large percentage of children in elementary schools need medical treatment; nobody doubts that it must be provided for them in some way, and the ratepayer is lamenting the possibility—nay, the certainty—that it will cost money, and is seeking a compromise.

The matter has been brought to a sort of crisis in London by the report of the special committee to the Education Committee, which was published in the JOURNAL of December 26th, 1908, and is further dealt with in an article this week at page 96. The same problem, on a proportionately smaller scale, is confronting other local authorities throughout Great Britain, and it may be well to examine some of its features, taking London as the most recent and, owing to its size, the most striking example.

It seems clear that the medical attendance and treatment required must be given by private practitioners, by existing voluntary hospitals and dispensaries, by provident dispensaries and societies, or under the Poor Law, unless the education authority itself institutes a system of school clinics. The map of London printed in this issue (pp. 100-101) shows in a striking way that the voluntary medical institutions, even if they were prepared to undertake the

task of caring for school children or if it were politic that they should make the attempt, are not so placed topographically as to render success possible. The work will have to be done locally, and ought naturally to fall to the lot of the members of the medical profession practising in each locality. The Annual Representative Meeting last year adopted a resolution to the effect that the services of the profession should not be given gratuitously to patients who are maintained by public funds, and it appears now to be universally recognized that the treatment of school children in school clinics or elsewhere must be paid for, and though this ought to be a truism, yet in these days it is something gained to have the principle clearly admitted.

The general practitioners of London could without doubt do the whole of what has to be done if they were afforded adequate nursing assistance in certain classes of cases—ringworm and sore heads, for example—and with opportunities for reference and consultation in special cases. Certain classes of cases, such as errors of refraction, would be referred for treatment; while the result of consultation would be provision by charitable or municipal action for chronic debility or illness; children suffering from, or suspected of, internal tuberculosis, for example, would be sent to country schools or sanatoriums.

It seems clear either that the general practitioners must do this work, the greater part of which they already do so far as it is done, or that their field of practice must be seriously diminished. The number of children to be examined and treated will undoubtedly be large, and the administrator's difficulties begin when the question of the organization of the work and the remuneration of those who do it are considered. If we leave out of consideration skilled artisans earning high wages, who as a class appear willing to make provident provision for sickness, there would seem to be only two possible ways in which the work 'can be' remunerated—by a great extension of the provident dispensaries and clubs, or by the municipality.

Now it is a fact that the provident principle has made relatively little headway among that very large class of the working population, larger perhaps in London than in any other city in the country, which earns small weekly wages or exists by casual labour. London is a great port and dépôt of merchandise, and the number of men engaged in handling goods and carting them from one place to another is enormous. The labour is unskilled and very badly paid in relation to the cost of housing, which is probably the most reliable standard of comparison. A certain proportion—we believe a large proportion—of this class does make some provident provision for maintenance during illness of the breadwinner, but does not usually go beyond this, and many do not do so much.

It is easy to say that all ought to make provision; but they do not, and it would seem that the medical profession, as a body of practical men, must either ask the State to insist on compulsory providence, or find some other way of providing medical aid to them and their families in sickness.

Mr. Warren, the representative of the Metropolitan Provident Medical Association, in his evidence reproduced at page 97, stated that there were 38 provident dispensaries in London, that there were about 110,000 persons enrolled as provident members of these institutions, and that of this number some 50,000 were children. As there are probably about 700,000 children of school age in London, it is not too much to say that

the provident dispensary system has, so far, only touched the fringe of the matter. Mr. Hancock Nunn, who also gave evidence (p. 97), expressed the opinion that the juvenile benefit societies could be so extended as to meet the difficulty, but neither of these gentlemen seems really to have thought the matter out, and both admitted that the provident organizations would have to be subsidized by the London County Council if they undertook the work. From whatever side we approach the question, therefore, it seems clear that State aid in some form must be given.

QUINCE'S BUILDING.

A great deal is expected from the report of the Royal Commission on the Poor Laws, but a Royal Commission cannot alter economic conditions: it can only point to means by which their evil consequences may be prevented or diminished. Short of recommending a scheme of universal compulsory sick assurance on the German plan, it is difficult to see what it can propose except an extension of the non-contributory State system of aid in incapacity and old age which has been developing in this country during the present generation. The acceptance of medical relief does not deprive the recipient of civic rights. The Poor-law infirmaries have been converted into well-equipped institutions precisely analogous, except in respect of the medical staff—undoubtedly an important exception from certain points of view—to the great hospitals of Paris or Berlin. Old age pensions have superseded the instruction of the Local Government Board's circular of 1900, "that aged deserving persons should not be urged to enter the workhouse at all unless there is some cause which renders such a course necessary, such as infirmity of mind or body, the absence of home accommodation or of a suitable person to care for them, or some similar cause, but that they should be relieved by having adequate outdoor relief granted to them"; and lastly, as a matter of fact, more than half the total expenditure made out of the poor rates is for purposes altogether unrelated to the relief of the poor: so that if the Poor-law system were abolished to-morrow, the work it does, or by far the greater part of it, would have to be continued under another name.

We have in this country drifted with the tide, not knowing exactly whither we were going, while the German mail boat has gone by us on the steady course laid down by the great pilot Bismarck. But the experience of the medical profession in Germany should be quite sufficient to teach the profession in this country—if indeed it still needs the lesson—that the State will not go out of its way to deal generously with doctors. It has this, at least, in common with Providence, that it is disposed to help those who help themselves, and in the readjustments which are being made, and the many others which will without question have to be made within the next few years, it behoves the medical profession to look after its own interests. But it is essential that the questions should be approached in a statesmanlike spirit, and with a disposition to adapt the medical system to changing social and economic conditions. The State is committed to the policy of providing medical relief, not only for the legal pauper and for the small wage-earning and casual labour classes, but also to giving or procuring proper care for sick or defective children of school age. We cannot see any escape from the conclusion of the Special Subcommittee that, though existing provision of private and hospital practice, to which

we may add the Poor-law infirmaries, sufficiently meets the requirements in the case of children requiring operative and in-patient treatment, other provision must be made for medical treatment of the very large mass of cases of physical deficiencies, including defects of the eyes, ears, and teeth, which are being disclosed by medical inspection.

The State, as has been said, is committed to the principle that the children are to be cared for; it will have to find the money necessary to fill up the large gaps left by the voluntary system, and though local authorities are shying at the suggestion that an additional charge must be put on the rates, it is morally certain that the money will be forthcoming.

A report by the Medico-Political Committee of the British Medical Association on certain points connected with the medical inspection of school children, and the treatment of those found to be defective, has recently been referred to the Divisions, with a request for an expression of opinion on a series of questions dealing with both aspects of the subject. One of these questions asks for the view of the Division as to the distribution and method of selection of the staff of school clinics should their establishment be proposed, and the mode and rate of remuneration; another asks for suggestions as to the methods of ensuring that parents who can afford to pay for the treatment of their children when found to be defective as the result of medical inspection should be compelled to do so.

SPIRITUAL HEALING.

In the JOURNAL of April 30th, 1907, p. 951, and again in that of November 21st, 1908, p. 1579, we discussed an interesting movement for "the moral treatment of nervous disorders" which was recently started in America, and may, for convenience, be referred to by the title of the Emmanuel treatment, from the name of the church in Boston where it seems to have had its origin. In a further article, entitled *Ministries of Healing*, which appeared in our issue of November 28th, 1908, p. 1634, we gave an account of debates on spiritual healing at the Pan-Anglican Congress and the Lambeth Conference held last summer. It was further stated that an association, called the Church and Medical Union, had been formed, with the object of promoting the co-operation of the Church and the medical profession in the healing of the sick. The principles on which the union professes to carry on its work are those embodied in the report of the Lambeth Committee, which were summarized in that article. Our readers have therefore had ample opportunities of learning the objects of the movement and the methods by which they are to be attained. The secretary of the union is Mr. Geoffrey Rhodes, and its headquarters are at Dryden House, 43, Gerrard Street, London, W. The objects of the union are stated to be (1) to establish head quarters in London where books and literature may be consulted, and where persons may come for advice and information; (2) to canvass the clergy and medical men generally all over Great Britain with a view to obtaining their co-operation; (3) by means of literature, lectures, and meetings, to obtain support for the union and the objects for which it has been formed; (4) to recommend courses of reading, as samples of which may be mentioned *Mental Healing*, by the Bishop of Bloemfontein; *Christian Science* and *"Spiritual Healing"*, by Prebendary Yorke Fausset, both published by the Society for the Propagation of Christian Know-

ledge; and *Religion and Medicine*, by Worcester, McComb, and Coriat (reviewed in the JOURNAL of November 21st, 1908), and *The Healing Ministry of the Church*, by the Rev. Dr. S. McComb; these two works are published in this country by Messrs. Kegan Paul, Trench, Trubner and Co., Limited, whose offices, by a convenient coincidence, are at the same address as the head quarters of the Church and Medical Union. A short time ago interviews with Mr. Rhodes appeared in various newspapers. To a representative of the *Daily Mail* he is reported to have said:

"Men and women will be in attendance at our head quarters to interview the patients, who will be asked to give a certificate from the doctor who is attending the case. Then we will arrange for the patient to be seen by a clergyman—if possible by his parish priest. The clergyman of the future will have to study psychology, and it is our intention to have lectures and classes on mental therapeutics, where the clergy will learn how they can help those who need their aid."

How they are to apply their knowledge of "mental therapeutics" when acquired we are not told; nor do we know how far the union has advanced in the realization of its objects. We have seen none of the literature which the union is to make it its business to issue; nor have we seen any accounts of lectures and meetings in its support. What is still more important, we have seen no report of cases treated or of the results obtained. We confess we feel some curiosity as to the exact position of the union, and we should like to know how many members it has so far enrolled. It would also be interesting to know something definite about Mr. Rhodes's special qualifications for the task—useful in itself, but needing for its successful performance, in addition to enthusiasm, wide knowledge and infinite tact—he has undertaken. Till satisfactory information on these points is forthcoming, the medical profession, however much individual members thereof may sympathize with its objects, will be well advised not to give any active support to the union.

Another professor of spiritual healing, who took part in a meeting held at Sion College on November 16th, with the object of promoting the formation of a Central Church Council in the diocese of London for the consideration of questions connected with healing by spiritual means, is Mr. James Moore Hickson, described as of the Society of Emmanuel. He is reported to have said on that occasion that the society was formed more than three years before with the object of reviving in the Church the gift of healing. The members of the society, he said, acted through prayers, the laying on of hands, and, when requested by a patient, anointing, which was performed by a priest. He added that they were in sympathy with all kinds of healing, which they considered to be a gift of God, but they wished for a more spiritual atmosphere round a patient. The Emmanuel Society, it is to be inferred, exists to supply this want. From a little magazine¹ published by Mr. Hickson we learn that he is the President, Lady Mosley the Honorary Treasurer, and the Rev. Charles Mylne the Chaplain of the society. The following are stated to be its objects: "(1) To develop the Divine gifts left to His Church by the Master, especially the gift of healing by prayer and laying on of hands, with the object of using these divine gifts, not only for the healing of the body, but

"as a means of drawing the souls of men nearer to God. (2) To further this purpose by opening a hostel, especially for poor gentlefolks, a class who are beyond the reach of ordinary help where their cases may be diagnosed by duly qualified medical men, and where a band of healers may develop and use their gifts to further the work. (3) To form a strong wall of defence against the powers of evil, by mutual united intercession, and by common reception of the Holy Communion on the Second Sunday in the month. (4) To safeguard the central doctrine of the Incarnation, all regular members should acknowledge the divinity of our Lord *although the operations of the Society should be freely used for all in need of them.*" From a paper by the Rev. George P. Trevelyan published in the first number we learn that the society does not concern itself about every kind of spiritual healing: "That term is used to include healing by mental suggestion and also healing by prayer, apart from a special gift of healing in the person who prays for the sufferer." In a paper which appears in the third number the Right Rev. Bishop Mylne, D.D., says, "In the latest up-to-date book on cancer, which is in the hands of the most scientific men of to-day, there is a case quoted which is, I have no doubt, correctly said to be a unique one of abortive cancer. The case is fully described from a medical point of view—how a patient, stricken unquestionably with cancer, was found to have in place of the tumour, located and verified by several experts, something which could only be called an abortive cancer, the like of which was never heard of before. I happen to know the whole history of the case from the brother of the patient, himself a medical man. It was this: The patient had been suffering from a serious affection of the throat. He went to one specialist after another. Three eminent men told him without hesitation that he was suffering from a cancer growing on the vocal cords, and that nothing but their total excision would save his life. He was a hard-working priest of our church, and of course the operation meant that he would never utter a word again. However, his life had to be saved. The doctors came; the throat was laid open; the operator had the knife in his hand to excise the vocal cords. He stopped dead. Instead of applying the blade of the knife, he took hold, between his thumb and the handle, of all that he found there, and peeled it off like the skin of a fruit. Between the diagnosis and the operation the patient had been anointed with oil in the name of the Lord. That is one of not a few cases which some of us know about, but it is by far the best defined one I know of, and one that is actually celebrated in medical circles: not, of course, being quoted as an instance of what may be done by anointing, but as a case unique in surgical experience." We should be glad to have fuller particulars of this unique case, and for that purpose we respectfully invite Bishop Mylne to furnish us with the name of the "latest up-to-date book on cancer" from which he quotes.

The variety of cases with which the Society of Emmanuel deals may be gathered from the list of patients for whom prayers are asked. The diseases include blindness, "internal weakness" (which seems to be so common among members of the society that we are tempted to suspect that the seat of the affection is the brain), internal growths, consumption, and deafness. There are several cases of insomnia, and we are willing to believe that a perusal of *The Healer*

¹ *Daily Mail*, November 21st, 1908. ² *The Healer*. Printed for the Publisher, J. M. Hickson, Esq., 24, Tavistock Square, W., by Roberts and Lee, Limited, Bedford Street, London, S.E.

would be a valuable remedy for that ailment. Reports of cases of cure of "cancer in bowel," rupture, locomotor ataxy, and colitis are given in the style adopted by the advertisers of quack medicines, but without any clue by which the patient can be traced.

In another number there is a report of a conference of spiritual healers held at Pinner in July last, and it is stated that among those present were the Bishop of Dorking, the Duchess of Bedford, Lord Radstock, Lord Sandwich, and Miss Reed, M.D. We do not call in question the good faith of any of these persons, but we confess we should like to know something more about Mr. James Moore Hickson, who appears to be the moving spirit of the Society of Emmanuel. In *Truth* of November 25th, he is described as a gentleman who probably at one time devoted his energies to massage. Now it would appear he heals by prayer. We are quite open to conviction in respect of the efficacy of his treatment if he will furnish facts on which a judgement can be founded. The art of healing, whether by carnal or by spiritual means, is full of fallacies, and it is a pity that, like so many healers, Mr. Hickson gives no particulars by which the nature of the disease and the genuineness of the cure can be established. Nor is it stated whether the "healing" is done gratuitously.

We have seen that a Miss Reed, M.D., was present at the conference to which reference has just been made. This lady, whose full name is Eleanor M. Reed, and who describes herself somewhat vaguely as "M.D. (U.S.A.)," also took part in the proceedings of the Pan-Anglican Congress, where she oracularly declared that "the real principle of healing was 'intellectual and physical co-operation with the vital powers within the organism itself.'" She added, as if she were announcing a new discovery, that "they needed to realize that the body responded to emotional states, whether there was truth or error behind the emotions; and, given the mental state, they were sure to get the physical results." Although she criticized Christian Science, she said its theories and practices tended "to give poise to the controlling power of mind." We do not gather very clearly what Miss Reed's own method of treatment is, unless it is to be found in the following eloquent but rather cryptic sentence: "Are we not so busy in criticizing the Church that we have no time to study the beauty of the Christian mind, the fruit of her labour—a mind, hallowed by adoration, illumined by faith, empowered by grace, sweetened by divine love —such is the realm in which she bids us look for the 'armour of our physical salvation?'"

We do not know how far these various representatives of spiritual healing agree with each other; we think it not unlikely that they hate each other with the fervour which is generally proportionate to the intensity of the theological belief. If all or any of them can show that they have discovered a new force, or a new method of applying one already known, to the cure of disease, rational medicine will welcome a new weapon. As we have often said, the wise physician understands the action of the mind or the spirit on the body, and uses it for the benefit of his patient. A man who firmly believes in his doctor's skill, or in the efficacy of the treatment to which he is subjected, is in the best possible condition for the operation of curative forces. On the other hand, a patient who believes that nothing can cure him helps to seal his own doom. Avicenna well said, *ipsa interdum prodesse fiduciam in medicum quam ipsam medicinam*. The "lady of the highest rank," who is reported to have said that she would

rather die under the care of Sir Henry Hallford than recover under that of any other physician, must have been a living tribute to his skill.

The fact cannot be too much insisted upon that there is nothing in the least new about faith healing. It is as old as medicine and religion, which in the beginning were one, as they still are among many savage tribes. Faith can move mountains, and it matters little on what it is based or how it is excited. As John Hunter has told us, the touch of a dead man's hand has charmed away a tumour. But there are limits to its action, and while willing to accept faith as an adjuvant, no one who knows anything about disease will admit that by itself it can heal any but ailments the origin of which lies hid in the unknown recesses of the nervous system. By all means let us know the full power of the spirit over the body. Only let us have facts that can be fairly and fully tested. A scientifically trained doctor takes nothing on trust, and there can be no useful co-operation between medicine and spiritual healing unless the facts of each case are fully disclosed. That is the point where science and faith part company; the former is as importunate as Arthur Clennam at the Circumlocution Office, and the wonder workers are as painfully surprised at this as the youthful Barnacle was at the persistence of "the fella that wanted to 'know, you know.'"

PURIN-FREE DIETARIES.

It is generally admitted that the metabolism of purin bodies is a complex process, and that our knowledge of it is far from complete. We know, however, that the purins of animal tissues are derived from the metabolism of cell substances, and are constantly being excreted by the usual paths. When a minimal quantity of these substances is taken in the food, it is permissible to infer that the amount of purin excreted represents the extent of the cell metabolism of the body tissues. As a matter of fact, recent investigations tend to show, other things being equal, that the largest amount of purin is excreted when the standard of health and activity is at its highest, but it has to be remembered that the relation of the amount of excreted purin to that actually formed by the cells of the body is still unknown. The assumption that the purins produced by the cells undergo the same metabolic changes as those purins which are introduced into the body with the food has become current—but after all it is only an assumption. There is much more work to be done before dogmatic statements may be accepted upon this aspect of the subject.

From the investigations of Leathes and his co-workers it appears that there is a tide in the excretion of purins (uric acid and purin bases) which is at flood in the early hours of the day, and ebbs towards the night, while the output of urea is lowest in the early hours of the day and highest after the last meal. The purin output, therefore, is not related to the amount which is being dealt with at the moment, and can only be ascribed to some functional activity connected with the general metabolism. The variations in this activity probably account for the variations in the purin output of the healthy individual when taking a purin-free diet. That these apparent irregularities of output are not due to retention of uric acid and purin bases has now been definitely shown, and it is generally accepted that when the purins are extruded from the cells they are rapidly removed from the body.

When we consider the metabolism of food purins we find that a fraction of the ingested purins rapidly appears in the urine; the remainder cannot be accounted for in detail. Certain foods yield more, others less, urinary purin. The fractional output varies in different individuals, and in the same individual under different conditions. Much has been made of the toxicity of the food purins, and there is some experimental evidence to support the contention, but it is probable that under ordinary conditions uric acid and the purin bases are almost non-toxic. It has to be admitted, however, that it is quite possible for purin bodies to combine with imperfect metabolites so as to form an irritant compound.

In local or general disease the nucleus of the cell bears the chief brunt of the action of bacterial or chemical poisons, and we naturally expect to find that certain infective or toxic conditions are associated with an increased functional activity of nuclear tissues, and, consequently, with an augmented purin output. What we so expect we certainly find, and it is also clear that this output is quite apart from an increased intake, that it is not due to a washing out of the previously retained purin, and that, as a rule, it reflects rather than affects the progress of the disease.

There are, however, a few individuals whose cells do not tolerate well an excess of purins in the tissue fluids—either of exogenous or endogenous origin—and this intolerance is manifested by certain functional disturbances. In these cases the temporary withdrawal of purin material is followed by a cessation of the symptoms. This diminution of purin intake is complicated by the fact that it is almost invariably associated with a decreased amount of protein, and consequently with a decrease of any unknown thermostable substances present in the food which may possess irritant properties. On a purin-free diet, therefore, the patient absorbs less nutriment, and as such patients are generally of the hypersensitive type, the idea of eating a small amount of food may become a "fetish," and so tend permanently to lower the resistance of the tissues to toxins and cancer-cell growths. Among vegetarians a "uric acid free diet" was once advocated, but it is now recognized that such a diet contains too little protein, and an adequate intake of nitrogenous material is rightly insisted upon.

Assuming, therefore, that a strictly purin-free diet is a reduced diet and only a temporary necessity, we may proceed to construct suitable dietaries, and also to detail the foods which may be permitted during a transition period which may suitably precede the resumption of a low average protein dietary.

For experiments in metabolism it is necessary to determine the exact amount of calories and nitrogen yielded by the food consumed. In everyday life, however, this is not practicable. While the patient will readily learn what may or may not be eaten, he rarely carries out instructions as to quantities. The physician, therefore, has to control the intake by keeping a record of the body weight, and by examination of the urea or total nitrogen, acetone, etc., at regular intervals. The urine must also be repeatedly tested for sugars, as there are certain families whose members exhibit glycosuria when the carbohydrates and vegetable proteins are increased.

Speaking generally, the foods which contain little or no protein should be the first to be discarded and the last to be resumed. Unfortunately, however, these are the foods which provide the pleasurable

and stimulating effects of eating. It is thus an advantage not to change the dietary too abruptly, and for a fortnight or so the patient should be advised to restrict slightly the amount of food taken and to eat fish or meat once a day. With regard to drink, not more than two small cups of tea or coffee or chocolate should be taken daily. Soups, beer, ale, and porter ought to be avoided, but claret, Burgundy, hock, whisky, or gin may be substituted when there are no conscientious objections to them. For total abstainers quassia or other bitters are useful, but fermented temperance drinks are not well tolerated. Condiments may be permitted unless renal conditions contraindicate their use.

After this probationary period the "purin-free" diet may be prescribed. The term "purin-free" is, however, a misnomer. A precisely "purin-free" diet would be composed of milk, eggs, white bread, cheese, butter, and a few vegetables; but when the milk contains many cells, as it often does, and the eggs are not absolutely fresh, as they often are not, their purin content comes within the range of our present chemical methods. Because a food is poor in purin we have assumed in the past—and probably we have erred in doing so—that it could not disturb the general purin metabolism; we have yet to learn whether this is so or not. We are really dealing, therefore, with a dietary which is designedly poor in purin. For this purpose the following foods are at our disposal: Milk—fresh, soured, buttermilk, or whey; eggs—boiled, poached, scrambled, or raw; white (not brown) bread and butter; macaroni and cheese, rice, tapioca, semolina, and vermicelli. Suet may be used for puddings of all kinds, such as currant or jam roll, treacle, apple dumpling, etc. Pastries, pancakes, jellies, and the usual tea cakes are also available. All vegetables, except the pulses (peas, beans, and lentils) are poor in purin. Practically all fruits may be permitted. As to drinks, tea, coffee, or cocoa are excluded, and hot water, claret, or burgundy, mineral waters, or hot milk may be substituted. Beer and porter should be discontinued, and alcohol diminished as far as the usual habits make possible. Condiments are generally craved for, and there is nothing to be gained by withholding them unless they are otherwise contraindicated.

After a month or so of this diet a return to the usual form of human food should be attempted. Brown bread, oatmeal, wholemeal, beans, peas, nuts, asparagus, or mushrooms may be gradually added. If it is desired to employ vegetable protein only, then these latter foods should play a large part in the dietary. When animal protein is preferred, sweetbread should be the first kind of meat allowed, since the purins contained in sweetbread are "bound purins," and are badly absorbed, the greater proportion passing out in the faeces. Later, codfish, sole, plaice, mutton, chicken may be permitted, salmon, halibut, and beef and pork being reserved for later periods. When meats are again taken they should be stewed, not roasted, and milk sauce substituted for the meat gravies.

Even when a return to full diet is made it is well to restrict tea, coffee, and cocoa, and to limit soups. With regard to extracts, there is little to choose between any of the obtainable preparations. The purins of yeast extracts are less well absorbed than those of meat extracts, and theoretically are less harmful, but the differences are exceedingly slight.

It will be evident that the prescription of a diet poor in purin calls for careful observation on the part of

The physician. The danger signals of starvation, of glycosuria, and of mental bias, should always have attention, and a return to the average dietary should be the object aimed at. Much information may be gained by the daily determination of the total purin output by clinical methods, but when this is impossible the weight and general condition of the patient may afford useful information. A probable result of the treatment will be a diminution of the amount of protein consumed, but the quantity of food necessary for the maintenance of life and for the provision of latent resistance to disease varies with every individual, and with the same individual at different periods of life, so that it is well to realize that rigid prescriptions and rules as to food are but rarely applicable, and that the percentage of good results from the use of a diet poor in purin depends largely upon the sagacity of the physician, and even then is not so high as the enthusiast suggests.

THE HONG KONG AND CHINA BRANCH.

IN the SUPPLEMENT of this week we publish the official report of the annual meeting of the Hong Kong and China Branch. The report of the honorary secretary and treasurer, Dr. J. Herbert Sanders, shows that the Branch is in a flourishing condition. It has now 130 members, and extends throughout districts right into the far western portion of China. It will be noted that a library with reading room has been established for the use both of members resident in Hong Kong and of those who may be passing through the town: it will also be available for naval surgeons on the station. The library, which contains the latest standard books of reference, cannot fail to be of the greatest service to members. Men practising in distant colonies have many opportunities of adding to knowledge, but they are often handicapped by the want of books of reference. We therefore congratulate the Hong Kong and China Branch on the manner in which the members have chosen to use the grant made to the Branch by the patent Association. The greatest credit is due to the officers, and especially to Dr. Sanders, for the energy they have brought to the discharge of their duties.

THE INDIAN HONOURS LIST.

THE New Year Indian Honours List has been issued from the India Office. A special feature of the Royal Message is the increase in the number of appointments to the Order of the Indian Empire and the Order of the Star of India, in commemoration of the fiftieth anniversary of the assumption of the government of India by the British Sovereign. An increase in the pay of Indian officers and men is also announced. The honours awarded are bestowed chiefly upon native princes and officials, and upon members of the Indian Civil Service; but, in addition, the following officers of the Indian Medical Service are honoured: Surgeon-General Gerald Bomford, C.B.E., M.D., Director-General, I.M.S., is made a Knight Commander of the Order of the Indian Empire; Lieutenant-Colonel John Tasman Waddell Leslie, M.B., I.M.S., Sanitary Commissioner with the Government of India, and Major Walter Hood Orr, I.M.S., Civil Surgeon of the Bahraich District, United Provinces, are made Companions of the Order of the Indian Empire; and Captain Eugene John O'Meara, I.M.S., Civil Surgeon of Mirzapur, United Provinces, receives the Kaiser-i-Hind medal for public service in India.

PRAYER AS AN INSTRUMENT OF MURDER.

HEALING by prayer—or, at any rate, talk about it—is much with us just now. We have also a dim notion that there exists—or did exist, a society for the suppression of vivisection by prayer. Possibly because this has failed, the spiritual weapon is now turned against the vivisector himself. The idea is not altogether new for it is recorded in the life of the late Dr. Anna Kingsford that she used to boast of the vivisectors whom she had done to death by the power of her will. If we remember a right the poor lady had to confess that she had found Pasteur too tough a subject: at any rate her efforts to “remove” him by the spiritual forces she claimed to have at her disposal for some reason or other were not successful. Prayer is now suggested as a lethal weapon to be aimed at vivisectors. There has recently come into our hands a printed document with a covering letter signed “M. Cowan” (without date or address: it would appear that it is being sent to assistants in laboratories. The writer says:—“Some little time ago, in the coffee room of a London hotel, I chanced to hear one of the party at a table close by narrate how he knew a person who was in the habit of praying from time to time for the death of one of our leading vivisectors: he said that always the man indicated had died. I tried to trace the speaker, but, as time had elapsed, did not succeed in doing so: I then thought, as I myself know of the efficiency of prayer, it would be well to try if this were actually so. I thought first of experimenting on Dr. Starling; but it seemed to me unfair to give such a stab in the dark without first letting it be known what was intended. It seemed also almost cruel, without knowing any of the surrounding circumstances, to select at random one from the large number of distinguished scientists on the medical lists. It was, therefore, finally decided to make earnest prayer, giving much thought to the subject, that the Almighty, if the prayer were in accord with His Will, would promptly remove the man most likely to cause future suffering to innocent subjects by his experiments. About a fortnight later, one of our most distinguished medical scientists dropped, and the newspapers were lamenting the loss to science of this vivisector, and the discoveries he was just about to make. It would be interesting to know who was the vivisector here stated to have been prayed to death. We hope Professor Starling feels duly grateful for his escape. Further on M. Cowan propounds a theory of anaesthesia which is as new to us as it probably will be to those antivivisectionists who deny that animals can be, or at any rate are, rendered insensible before experiment. We quote the writer's own words:—“Our Saviour distinctly states: ‘A sparrow falls not on the ground without our Father’; if that be so, then He stands in the laboratory beside the operating trough. Without doubt, He it is who so often gives an insensibility to the agonies endured, which seems unaccountable to the operator. But does He protect the operator and the watching students from the hardening and vitiating effect of constantly participating in cruelty? We are further told that ‘The prayer of the child of God reaches further, is more searching in its effects, than any enactment of the law can be. Not only does it enter the vivisection room, embracing all operations there; it is with the patients in our hospitals, and by the bedside of the poorest sufferer, and it will make its way into the garret or concealed chamber where the student, eager for knowledge and advancement, illegally tortures his helpless victim from day to day.’”

We gather from this that the "child of God" is not above using the weapons of the devil, who is described as the father of lies. How else can odious calumnies which directly spring from the wish to believe evil be accounted for? Ignorance cannot absolve a writer when the means of knowing the truth are within easy reach of all. We will not quote further from a document which may be described as a mixture of cant flavoured with blasphemy. But though the thing is too foolish to influence even the mind of the average anti-vivisectionist, it has a serious side. What can be thought of the motive which leads a person who is virtually anonymous to send such stuff not to vivisectioners, but to laboratory assistants, on the minds of some of whom it is at least conceivable that it might have some effect? Fanaticism is a law unto itself, and to invite the servants in a laboratory to pray for the death of the workers in whose employment they are might possibly be an incentive to crime.

OPSONINS.

AFTER having spent several months in the laboratories of St. Mary's Hospital, learning from Sir Almroth Wright the technique of determining opsonic indices, etc., Dr. G. Wolfsohn returned to the Schöneberg (Augusta-Victoria) Hospital and continued his observations on the diagnostic, prognostic, and therapeutic methods which depend on estimations of the opsonic content of the serum of patients. The opinion which he expresses on the value of the methods is worth considering, especially since his personal studies under Sir Almroth Wright may be taken as a guarantee that he has mastered the technique sufficiently to obviate errors due to want of proper carrying out of details. After briefly describing the technique and the application of the counts, Dr. Wolfsohn proceeds to discuss the doctrine on theoretical grounds. If the doctrine were sound, we should, he holds, possess a numerical measure of the protective arrangements of the organism, an extremely delicate biological diagnostic test and a certain indication for immunizing efforts. Unfortunately, he says, the doctrine including the theoretical basis as well as its practical application, cannot be accepted *in toto*. He leaves the question as to the nature and origin of opsonins unsettled, but he states that much doubt exists whether phagocytosis is tantamount to immunity. Bacteria which have been subjected to that process have been shown to retain their vitality and power of growth; it has been shown that, as far as vital processes are concerned, bacteria behave differently in the organism from the way they behave *in vitro*, and clinical experience has demonstrated that Wright's doctrine does not always tally with actual facts. In illustration of this Dr. Wolfsohn cites the rising of the opsonic index in cases of surgical tuberculosis observed by McIntosh, in which no improvement was taking place. The author further finds that the opsonic index towards the pathogenic bacterium varies in cases in which it also varies towards other pathogenic micro-organisms. In the course of his observations he came across a scarlatina patient whose serum yielded a very high index to typhoid bacilli, and, in accordance with Wright's doctrine, the diagnosis of typhoid fever would have to be made. The same thing was found in several cases of staphylococcal infections and of tuberculosis. This, together with the fact that the raising of the index and clinical improvement do not run parallel, detract from the specific diagnostic value of the opsonic index.

Dr. Wolfsohn further discusses the sources of error in the counting, and states that in spite of considerable experience, on controlling his counts, differences which might amount to 20 per cent. presented themselves. He therefore concludes that Wright's method of determining opsonic indices is not suitable for clinical diagnosis, by reason of its complicated nature and its high experimental error, and that certain diagnoses would be possible only when very large numbers of cells were counted, and the results were very distinct. With regard to the vaccine therapy, Dr. Wolfsohn is inclined to believe that it has a future. He has, however, applied it only in 14 cases, in all of which but one, a case of staphylococcal sepsis in which no effect was produced, the vaccines seemed to do good. With regard to actual objective improvement he expresses himself very guardedly.

ACCIDENT INSURANCE IN GERMANY.

IN the year 1837 the German *Reichsversicherungsmant* determined that every alteration of the intact condition of those portions of limbs which are used in working lessens the capacity for work, and therefore reduces the power of earning. This had especial reference to the hands. In 1904 the decision was modified to the extent that slight injuries to the fingers were not regarded as justifying a permanent compensation, since the individual sooner or later would become accustomed to the altered condition of the hand, and would be able to make full use of it. It would, therefore, not be necessary for the insurance society to prove an objective improvement in order to lessen or stop compensatory payments, provided that it could be shown that the individual could use his hands sufficiently well for the purposes of his work. This matter is discussed by Dr. G. Ledderhose in connexion with a pamphlet which the North German Iron and Steel Works Society has published. In the pamphlet, some 63 cases of finger injuries and 13 cases of eye injury are detailed, with which the *Reichsversicherungsmant* and the Court of Arbitration have dealt. With regard to the interpretation of what is a slight ("geringfügige") injury of a finger, decisions creating a precedent have been given to the effect that the following injuries are included: The loss of the distal phalanx of any one finger, if the scar is satisfactory; the loss of the ungual and second phalanx of the four fingers of the right hand; the loss of the ungual phalanx of two fingers under certain conditions; and the loss of the whole of the ring, middle, or little finger of the left hand. It is believed that use may compensate these losses and that the hands may regain their full capabilities. Ledderhose appeals to medical practitioners to support the decisions. He wishes them, however, clearly to understand that there are limitations within which these decisions hold good. It may be mentioned by the way that the findings of the Court of Arbitration were not acted on. In one case it was decided, however, that compensation need not be made by the insurance societies for slight inconveniences. Ledderhose holds strongly that injuries such as those mentioned, but which leave adherent scars, trophic disturbances, etc., should not be included, and that when the function of the hand is actually limited by the loss on account of the impossibility of using that portion of the hand which was injured, the individual has a claim for permanent compensation. In submitting a claim for a permanent weekly compensation for an injury to the hand, the claimant should have a good sketch of the injured

part and an exact description of the permanent condition of the joints, stumps, skin, etc., laid before the judges. This ought to be done by the medical man called upon to pass an opinion on the case. The final decision will in all cases depend on the presence or absence of such conditions as contracted scars, loss of muscular power in the hand, tremors, atrophy of bones, etc. In presenting this opinion, the medical man should always remember that the laity is incapable of judging whether limitations of function are real or feigned, and it is for him to supply the information that is required. When the question is asked of the medical expert, whether a finger which has been injured will in the course of time, and without change in the objective condition, cause so little inconvenience to the individual as to permit of full use of the hand, Ledderhose considers that no opinion should be expressed as it is never possible to predict complete adjustment to the altered condition with sufficient certainty to justify a confident reply. The whole question illustrates the fact that the German insurance provisions have gradually become evolved from a condition in which the workman derives more benefit than his injuries justified to one in which every contributing factor has to be taken into account in determining whether or not compensation shall be paid. The workmen naturally wish to claim as much as possible, while it is the object of the *Reichsversicherungsgesetz* to settle each claim as fairly as possible. The medical man who is consulted should preserve a strictly neutral attitude.

MEDICAL TERMS IN THE NEW ENGLISH DICTIONARY.¹

THE first part of the *Oxford English Dictionary* for the year 1909 is a treble section, which carries the work from *premisal* to *prophesier*, and contains 4,381 words, including the many *pre*'s and *pro*'s. There are many medical terms, some of them the product of yesterday (for example, *pro-oestrum*), others several centuries old (for example, *probe*). The last-named word (*probe*) is regarded as an adaptation of the late Latin *proba*, a proof, in mediaeval Latin also an examination, being formed on *probare*, to try or test; its chief meaning is the surgical one of "an instrument, commonly of silver, with a blunt end, for exploring the direction and depth of wounds and sinuses." The earliest illustrative quotation is from a book by Hollyband, dated 1580, and reads "Une petite esprouvette, a small instrument where-with surgeons do search wounds, a probe." From its use in surgery *probe* has gained its figurative employment, illustrated by a quotation (of date 1876) from one of Lowell's odes, "We who believe Life's bases rest Beyond the probe of chemic test." *Prodroma*, with its plural *prodromata*, is another interesting medical term; it is, as Sir James Murray points out, an erroneous formation, apparently in imitation of such etymological forms as *carcinoma*, *carcinomata*, and it "possibly originated in a Latin *prodroma*, singular" for Gr. *προδρομή*, a running forward, or in mistaking "the neuter plural *πρόδρομα* for a singular." It is, therefore, more correct etymologically to say the *prodroma* of the disease were so and so than the *prodromata* were so and so, but custom has justified the latter erroneous plural form. There are two

correct singular forms, *prodrome* and *prodromus* (plural *prodromi*); but the former has been little used and the latter is not fully naturalized. All these terms have the same meaning—namely, a premonitory symptom of disease; thus Blancard (in 1693) defined *prodromus* as "a Disease that comes before" a greater, as the straitness of the Breast predicts a "consumption." *Prognosis*, from the Greek *πρόγνωσις*, a recognizing beforehand or foreknowledge, means "a forecast of the probable course and termination of a case of disease; also, the action or art of making such a forecast"; and Sir James Murray has found for his readers the following self-sure and egotistical pronouncement in the *Medical Journal* of 1805: "I had arrived to that certainty of prognosis, that I could have insured the life of an individual by the treatment I recommended, and his death by any other." Methinks, the gentleman doth profess too much! There is a group of allied words which are associated with *prognosis* in the Dictionary—namely, *prognose*, *prognostic*, *prognosticable*, *prognostical*, *prognostically*, *prognosticant*, *prognosticate*, *prognostication*, *prognosticator*, *prognosticatory*, *prognosticon*, *prognosticous*, and *prognostify*. *Proleptic* is a less known word: it is applied to "a periodical disease, of which the paroxysm recurs each time at an earlier hour," and a quotation explains it thus: "So that if the Ague come to-day at four of the Clock, then to-morrow one hour sooner, and so on"; the Greek word from which *prolepsis* comes is *προλαμβάνειν*, to anticipate. We have referred above to the interesting word *probe*; but this part of the Dictionary also contains the synonymous term *provet* (that is, *provet*), from the French *éprouvette* and *éprouver*, to search out; a sixteenth century quotation speaks of the "provet or soundinge irone" as being used to "sounde the depth of the fistle." Among medical terms which have taken on a more specialized meaning in modern times is *prepotency*; it is defined as "the propotent power of a parent organism to transmit special characteristics to offspring," and *prepotent* itself means "having a greater power of transmitting hereditary features or qualities." The earlier meaning of the word was simply predominant or pre-eminent in power, and as such it was employed by Sir Thomas Browne and many others, until Charles Darwin in 1859 gave it its more restricted signification. Other interesting medical terms are *prenatal*, *prepollax*, *prepuce*, *presbyopia*, *prescription*, *presentation* (in its obstetrical use), *presphenoid*, *preastolic*, *priapism*, *primipara*, and *pronation*; but from the examples referred to above the reader will at once see that Sir James Murray's big undertaking fully maintains its high reputation for scholarship and interest.

DEATH OF DR. ARGYLL ROBERTSON.

THE announcement of the death at Gondal, in India, of Dr. Argyll Robertson will be received with general regret throughout the medical profession, to which his name was so well known, and with feelings of deep sorrow by those who had the privilege of his personal acquaintance. Dr. Argyll Robertson, who was in his seventy-second year, settled in Jersey when he left Edinburgh; but though he had retired from practice he retained his interest in ophthalmology, and attended the Section of Ophthalmology at the annual meeting of the British Medical Association at Sheffield last July. He started for India with the daughter and son-in-law of the Thakur of Gondal so recently as November 30th. We propose to publish some account of his life and work in our next issue.

¹ A New English Dictionary on Historical Principles. Edited by Sir James A. H. Murray. Vol. vii. *Premisal*—*Prophesier*. Oxford: at the Clarendon Press. London, Edinburgh, Glasgow, New York, Toronto, and Melbourne: Henry Frowde. Treble section. January 1st, 1909. (Price 7s. 6d.)

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND SALFORD.

THE MIDWIVES ACT.

GREAT satisfaction has been expressed in Manchester, and still more in Salford, at the announcement that the Lord President of the Privy Council has appointed a departmental committee to consider the working of the Midwives Act. Manchester is, perhaps, more favoured than most parts of the country, seeing that the Manchester Midwives Supervising Committee has for two years carried out in a satisfactory way a scheme of providing medical assistance to patients whose weekly income is below a fixed amount. If evidence were needed of the value of the work accomplished by the Joint Committee of the Manchester and Salford Divisions of the British Medical Association, it would only be necessary to call to mind the fact that it was very largely due to the energetic action of this committee that the Midwives Supervising Committee was induced two years ago to initiate the scheme. The cost to the corporation has been very small, in fact insignificant, compared with the benefit that must have been derived by parturient women, who can now rely on getting medical aid, whatever their position in life may be, whenever a midwife considers such aid necessary.

Exactly the opposite state of affairs, however, exists in the neighbouring borough of Salford. Here the corporation has refused to make any provision for medical assistance in confinement cases, while the board of guardians, not content with offering a scheme which is altogether unsatisfactory to the medical profession, has actually without protest allowed individual guardians to cast unfounded aspersions on members of the deputation that represented both the Medical Guild and the Salford Division of the British Medical Association. The Joint Committee of the Manchester and Salford Divisions is so thoroughly convinced of the lamentable failure of the Act in Salford that it has offered to send several witnesses to give evidence before the committee; it has been informed by the secretary that the departmental committee at its first meeting on December 18th, 1908, resolved "to commence by hearing witnesses on behalf of the central organizations representing the principal interests concerned, and would defer to a later stage the consideration of any applications from individuals or from local associations or Branches to tender evidence." The Joint Committee of the Divisions feel strongly that the committee ought to be fully informed as to the respect in which the Manchester scheme has proved satisfactory, and, on the other hand, how completely the Salford guardians have demonstrated the possibility of making the Midwives Act in certain directions a failure.

TREATMENT OF PHTHISIS IN WORKHOUSES.

At a conference of representatives of Poor-law unions of Lancashire and Cheshire held in Manchester about forty out of forty-four unions were represented. The conference was called to consider the best means to provide special treatment for phthisical cases by combinations of unions or otherwise. It was stated that the three unions of Liverpool had combined to erect a hospital of 54 beds for consumptives. The results, so far as the patients were concerned, had not been satisfactory. There had been a long list of deaths, and after six months' treatment in the hospital most of the patients, on returning to their home surroundings, relapsed into their former state. The weekly cost of each patient at the hospital had been about £3, and it was asserted that, considering the results, this was a serious waste of public money. Several speakers pointed out that the spread of the disease was only to be prevented by the education of the people, in taking of proper precautions, and by the provision of isolation hospitals by boards of guardians. A representative from Rochdale said that during the last nine years 443 cases of consumption had been treated at Rochdale workhouse, and of this number 138 had died in the infirmary. The experience of Bolton was said to be that of every 15 cases sent into sanatoriums 5 came back to

die, and 10 were not cured. Mr. A. B. Lowry, Local Government Board Inspector for the North-Western district, stated that in some cases the Local Government Board had refused to sanction proposed combinations of unions pending the report of the Poor-law Commission, and until that report had been issued and fully considered, boards of guardians would have to be careful before launching out into any great expenditure. They would always, however, have to deal with a certain number of phthisical cases and must make provision for them. It was also certainly their duty to take steps to prevent the spread of the disease from parents to children. The recent order of the Local Government Board, which made it obligatory on union medical officers to notify chargeable cases to the health authorities, was a step in this direction. It was subsequently resolved to appoint a committee of nine persons representing Lancashire and three representing Cheshire to take up the whole question, and to submit suggestions on which boards of guardians might act, for dealing with persons suffering from consumption or threatened with it.

THE NOTIFICATION OF BIRTHS ACT IN DARWEN.

The Darwen Corporation has not only adopted the Notification of Births Act, but has apparently made up its mind to administer it in a way offensive to the medical profession. On December 10th four defendants were brought before the Darwen magistrates for not notifying births within thirty-six hours. In one case a doctor said it was an omission on his part, and he was fined 5s. and costs. If that were the only defence made possibly no blame can be attached to the magistrates, as they were bound to carry out the Act. But in another case the defendant—not a medical man—complained that the doctor had not informed him of the necessity of early notification. The Clerk of the Court then asked the defendant if he meant to suggest that the doctor ought to have been summoned instead of himself, and when he replied in the affirmative, the Clerk said: "I think so, too." The Town Clerk explained that the defendant was liable unless he had a reasonable cause to believe that some one else was giving the notice, and the Chairman of the magistrates said that ignorance of the law was no excuse, and the defendant would be fined 5s., "for which," said the Chairman, "you can ask the doctor." It might almost be assumed that this was said in a bantering way; but the defendant did not take it so, for he said: "Can I have a magistrate's order for the doctor to pay the money?" To this the Clerk of the Court replied: "You can ask the doctor to refund it, and if he doesn't the Town Clerk will consider about summoning him." There is nothing in the Act of Parliament that makes the medical man any more liable than the father, and the remarks of the Clerk can only be taken as a deliberate attempt to read into the Act something that is not only not there, but something that was never intended. It seems to us that the Clerk distinctly exceeded his duty in making such a suggestion. It was prophesied over and over again when this Act was under discussion that there would be a disposition gradually to lay all the onus of notifying on the doctor, but even the most pronounced opponent of the Act hardly dreamt that such a barefaced attempt as this would so soon be made to strain the plain meaning of the Act. The decision of the magistrates to fine the defendant 5s. was of course strictly legal; it would have been strictly legal, too, to summon the doctor and to fine him if he had had no satisfactory excuse; but to suggest for one moment that a man not before the court, and with no opportunity of defending himself, was really the guilty party rather than the defendant who was actually fined, is surely a gross injustice and an abuse of the Clerk's position.

WEST YORKSHIRE.

BRADFORD ROYAL INFIRMARY.

THE Lord Mayor of Bradford, as is customary, provided the Christmas dinners at all the Bradford hospitals—the Royal Infirmary, the Royal Eye and Ear Hospital, the Children's Hospital, and St. Catherine's Home for Cancer and Incurables. Accompanied by a large number of the interested public, he made a round of the hospitals on Christmas Day. In a speech at the Royal Infirmary, the

Chairman of the House Committee for the first time appealed for support for the erection of an entirely new infirmary. The existing building, he said, was old, and a new building could be better equipped and worked with much more economy.

MEDICAL MEN AND MIDWIVES.

The case in which Dr. F. K. March, of Bradford, was charged at the Westminster Police Court on December 30th with knowingly aiding one Jane Emily Inglis, of Bradford, unlawfully and fraudulently to secure a certificate of admission to the *Midwives' Roll* is one which should be noted by all medical men. Dr. March has practised in Bradford for many years; his long and honourable career and high professional position are known to all his brethren in that city, and much sympathy is felt with him in the position in which he found himself placed. He had given a certificate to the woman that she had been in bona fide practice as a midwife since 1885, and was trustworthy, sober, and of good moral character; she was accordingly admitted to the *Midwives' Roll* in 1904, and remained thereon until March, 1908, when a report was made to the Central Midwives Board that she had been guilty of negligence and misconduct in the exercise of her calling. Inquiries then made showed that she had been tried at the Leeds Assizes for murder, the indictment alleging the death of a woman arising out of an illegal operation; she was convicted of manslaughter and sentenced to three years' penal servitude. Dr. March having no knowledge of these facts gave the certificate in good faith. The magistrate expressed the opinion that the Director of Public Prosecutions was justified in the course he had taken, as it was very important that the medical profession should understand that certificates of character of persons who desired to practise as midwives were not mere matters of form; that Dr. March had acted carelessly was unquestionable, but after the explanation given the case against him would be dismissed. The magistrate committed the woman for trial to the Old Bailey, bail being allowed. The case shows the necessity for the most careful investigation into the antecedents of persons applying for certificates.

LEEDS.

THE MEDICAL INSPECTION OF SCHOOL CHILDREN IN LEEDS.
AFTER a good deal of discussion, and after hearing representations from various quarters, the Elementary Education Subcommittee of the Leeds Corporation has recommended the appointment of a medical officer to devote the whole of his time to the inspection of school children in Leeds at a salary of £350 per annum. They also recommended the appointment of medical practitioners to assist in the work. These must be prepared to devote one, two, or three half days in the week to medical inspection at a remuneration of one guinea for each half-day's service of thirty examinations. These posts are to be advertised.

Ireland.

[FROM OUR SPECIAL CORRESPONDENT.]

RESEARCH DEFENCE SOCIETY.

The Presidents of the Royal College of Physicians, the Royal College of Surgeons, and the Royal Academy of Medicine have addressed a circular letter to the members of the profession in Ireland, asking them to join in the formation of a Dublin branch of the Research Defence Society. The principal object will be to instruct the public in the facts and to show the purposes of experiments on living animals. Already a large number of lay members have intimated their willingness to join, among these being the Archbishop of Dublin, Right Honourable Viscount Iveagh, K.P., Right Honourable Lord Ashbourne, the Dean of St. Patrick's, the Bishop of Clogher, Very Rev. W. Delany, S.O., Sir Howard Grubb, F.R.S., Rev. Dr. Goynan, Regius Professor of Divinity, General Sir Neville Lytton, Viscount Monk, Archdeacon of Ardagh, the Bishop of Thom, the Earl of Pembroke, Sir A. Pöyten, Bart., late Master of the Rolls, Sir Frederick Shaw, Bart., the Provost of Trinity College, the Dean of the Chapel Royal, the Vice-Provost of Trinity College, etc.

THE NEW NATIONAL UNIVERSITY OF IRELAND.

The Gaelic League still pursues its campaign to induce the Senate of the National University to adopt Irish as a compulsory subject. Boards of guardians, county councils, corporations, and all sorts of public bodies have been enlisted in the crusade and are passing resolutions in support of the league's claims. Then there are many letter writers, of whom Colonel Maurice Moore, C.B., is perhaps the most emphatic. He says of those who are opposed to compulsory Irish:

They want a university to give a Catholic education to all English-speaking Catholics, whether English or Irish, Australian or American. Ireland is the selected site, because it lies between the two Continents, and Dublin is a convenient port; the Irish nation is an accident not worth considering among those other great peoples. . . .

What is it we want instead of this cosmopolitan university? We want, and we are determined to get, a university for Irishmen above all things, and for the Irish language. If the new university is not that, whether it is Catholic or Protestant, it is not for us: it is for the foreigner. And these demands are made not by any clique or league, but by the Irish people.

This struggle for a national university is a matter of principle, on which there can be no compromise: they are determined to fight the battle to the end and risk everything on the result. If the Senate refuses to make Irish compulsory for the matriculation of all Irishmen, there will be a five years' agitation against the new university, and every opposition will be made to the foundation of scholarships. Every anti-Irish senator will be marked down and his seat challenged at the next election, whether he be a Protestant, a Jesuit, or a bishop.

Mr. Charles Kennedy, chairman of Jervis Street Hospital, who died a couple of weeks ago at an advanced age, left a large sum of money. It is rumoured that the Provincial of the Jesuits in Great Britain and Ireland will benefit to the extent of over £100,000, but it is understood that it is intended to use this money for the erection of students' residences in connexion with the new university.

THE DISPENSARY SYSTEM.

Those of our readers who take an interest in Irish Poor-law affairs will recollect that some years ago the Irish Local Government Board decided to amalgamate three dispensary districts in the Ardee union into two, and to divide the salary of the abolished district between the two remaining medical officers because the guardians of that union would not give three medical officers a living wage. The Irish Medical Association took the case into court, but was defeated. A deputation from the village of Cullon, the centre of the absorbed district, and from the neighbourhood, recently waited upon the Ardee Board of Guardians to request it to try to induce the Local Government Board to revert to the former state of things, and we note that the guardians were willing to accede to the request provided they could deprive the existing medical officers of the additions to their salaries. The deputation urged as the reason for advocating a reversion to the old order the hardships inflicted upon the poor by having to go so much further for a doctor.

We referred some weeks ago to the dispute going on in Castlebar Union, where the guardians, having been defeated in their effort to upset the sealed order of the Local Government Board providing five dispensary districts for that union instead of four, have, we observe by the local papers, decided to appeal, but not unanimously. It seems time that the whole Irish dispensary service was reformed, in the interest not of those who, while able to pay, want their doctoring cheap, but of the real poor, "the ultimate peasant on the hillside," who has to depend upon State aid in his hour of need.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

NOTHING NEW TO REPORT.

SCOTTISH MEDICAL AND DENTAL DEFENCE UNION.

At the annual general meeting of the Medical and Dental Defence Union of Scotland, Limited, in Glasgow, Sir Hector C. Cameron occupied the chair, and there was a large attendance of members.

In moving the adoption of the annual report and statements of accounts, the Chairman remarked that the

accounts disclosed more marked progress than in any previous year. He referred to the statement submitted by the Council that a large proportion of threatened actions on being taken up by the Union were abandoned, and expressed the view that this illustrated the benefit of such an association. There could be no question that an association always suggested to persons considering proceedings that they would have a much more serious opposition than if they had to deal only with individuals. He also referred to the fact that the number of claims against dentists by dissatisfied patients was greater in proportion to relative numbers than in the case of medical men. The membership at the close of the previous year was 966; 240 new members were admitted during the year under review, being an increase of one-fourth. The Union had invested funds amounting to £1,204 9s., and the income for the year was £586, with an expenditure of only £270 15s. The Chairman thought that the members might congratulate themselves very much on these figures as showing that progress was satisfactory and consistent. Reference was made to the printed forms issued by the Union for the use of practitioners, there being an indemnity form to be granted by friends of patients in respect of lunacy certificates, and an agreement for use between practitioner and assistant. Dr. Crawford Renton seconded the adoption of the report and statement of accounts, and this was unanimously agreed to. The officers were re-elected as follows:

Presidents.—Sir A. R. Simpson, Edinburgh; Professor Stephenson, Aberdeen; Professor Sir Hector C. Cameron, Glasgow; and Professor Kynoch, Dundee.

Vice-Presidents.—Drs. Affleck, Berry Hart, and Murdoch Brown, Edinburgh; Professor Samson Gemmell, Glasgow; Drs. Crawford Renton and Parry, Glasgow; Drs. John Gordon, Scott Riddell, and Westland, Aberdeen; Mr. Greig, Dundee; Dr. McLachlan, Dumfries; Dr. Frew and Mr. Lipscomb, L.D.S., Kilmarnock; Dr. Ritchie, Dunoon; Dr. Graham Paisley, Dr. Laurie, Greenock; Dr. David J. Penney, Rochesay; Dr. Livingstone London, Hamilton; Dr. MacPhail, Coatbridge; Dr. Kennedy, Perth; Dr. MacAlister, Forfar; Dr. Curror, Kirkcaldy; Drs. Moir and Kerr and Mr. Fraser, L.D.S., Inverness; Dr. Clarke, Dumfries; Dr. Dale, Stranraer; and Dr. Ronaldson, Haddington.

Members of Central Council.—Dr. John Gordon, Aberdeen; Professor Kynoch, Dundee; and Dr. G. Balfour Marshall, Glasgow.

NEW INFIRMARY FOR PERTH.

At a recent meeting of the directors of the City and County of Perth Royal Infirmary, it was unanimously resolved to proceed with the erection of a new infirmary, to consist of 150 beds, at an estimated cost of £400 per bed. The chairman and deputy-chairman were requested forthwith to issue a circular appealing for £10,000, this sum being still required to complete the scheme, principally in consequence of subscriptions originally dedicated for reconstruction having been found to be not available for the scheme as modified by the directors.

Sydney.

[FROM OUR SPECIAL CORRESPONDENT.]

PURE FOOD AND QUACK MEDICINES.

At the end of 1907, just prior to Parliament going into recess, the Premier introduced a Bill into the Legislative Assembly providing for the purity of the food supply. The bill was subsequently scrutinized by commercial men and others, and several amendments were suggested. As a consequence of this, the bill was to some extent recast, and again introduced into Parliament in November, 1908. It consists of fifty-two clauses, but the whole purport of the measure is contained in one clause, which sets forth what is meant by food adulteration. This is defined in the following way:

(1) When it contains, or is mixed with or diluted with, any substance in any quantity or in any proportion which diminishes in any manner its food value or nutritive properties as compared with such article in a pure or normal state, and in an undeteriorated or sound condition; (2) when it contains or is mixed with or diluted with any substance of lower commercial value than such article in a pure state; or (3) when either wholly or in part it does not comply with a standard therefor prescribed by any regulation; (4) when it contains any substance prohibited by the regulations; (5) when it contains any substance concerning which any restrictive regulation has been made in excess of any quantity or

proportion permitted by such regulation; (6) when it is mixed, coloured, powdered, coated, or stained in a manner whereby damage or inferiority may be concealed; (7) when it consists wholly or in part of a filthy, decomposed, or putrid animal or vegetable substance, or of any portion of an animal unfit for food, whether manufactured or not; (8) when it is the product of a diseased animal or of one which has died otherwise than by slaughter; (9) when it is damaged, deteriorated, or perished; (10) when any valuable constituent of the article has been wholly or in part abstracted; (11) when it is in any package, and the contents of the package as originally put up have been removed in whole or in part and other contents have been placed in such package, or if it fails to bear on the package or on the label attached thereto, a statement of the quantity or proportion of any morphine, opium, cocaine, heroin, alpha or beta eucaine, chloroform, cannabis indica, chloral hydrate, or acetanilide, or any derivative or preparation of any substances contained therein; (12) when it is in package form, and the contents are stated in terms of weight or measure, and they are not correctly stated on the outside of such package; (13) when it is in package form, and the package or any label attached thereto, bears a statement, design, or device, regarding such article of food or drug, or the ingredients or substance contained therein, which is false or misleading in any particular.

Another clause provides that:

No person shall sell any article of food or any drug which is adulterated or falsely described, or which is packed or enclosed for sale in any manner contrary to any provisions of this Act.

Another clause prohibits the sale of injurious drugs. The bill would give the Governor power to prohibit, by notification in the *Government Gazette*, the advertising or sale of any food or drug which, in the opinion of the Board, is injurious to life or health; it further forbids newspapers to publish any advertisement prohibited under this clause. As regards quack medicines, power is given to the Government to examine these articles, and to compare the results of the examination with the results spoken of in the advertisement. If the results of the analysis do not support the advertisement, the Government may cause this report to be published. Provision is made for the appointment of an advisory committee to assist the Board of Health on all practical scientific questions. This committee is to consist of a proportion of purely scientific members, with a departmental element giving the Government representation, and power is given for representation of the active practical training interest—the Chamber of Commerce and the Chamber of Manufacturers, and not more than three persons conversant with trade requirements. This bill is now under discussion in Parliament, and as it is one which appeals to all classes as a very necessary measure it is most probable that it will pass practically in its present form.

Special Correspondence.

EGYPT.

Cairo Main Drainage.

In view of the fact that so many people are now sent to Egypt each winter for reasons of health, a large proportion of whom are compelled to make a short stay in Cairo en route to the various desert health resorts such as Helouan and Assuan, a few facts as to the proposed drainage of Cairo may be of general interest. Mr. Carkeek James, the Controller-General of the Cairo Drainage Works, who has been connected for many years with drainage schemes in the Far East, where conditions similar to those of Cairo prevail, has for more than eighteen months studied the problems connected with the Cairo drainage. His final proposals have received the entire approval of the Egyptian Government. Owing to the general flatness of the plain in which Cairo is situated, and to the fact that a suitable site for sewage purification works can only be obtained at a considerable distance, it is impossible to drain the city without pumping being resorted to. A certain small area can be drained by gravitation to the main collecting sewer, but the remainder of the city must be drained on the "sectional system"—that is to say, this area must be subdivided, and the sewage from each such subdivision must be lifted by suitable means, and discharged into the main collecting sewer. In Cairo, the number of days in the year on which rain falls is small, but after even a moderately heavy downpour there is a large amount of surface water to be disposed of. To allow this to enter the sewers would involve heavy expense, not only because

all sewage will have to be artificially lifted one or more times, but also because the sewers, pumping machinery, etc., would have to be increased in size. The station for generating the power for driving the lifting arrangements in the area drained on the "sectional system" will be situated at Pont Sabel and, as there is no nuisance in connexion with a power station, its proximity to good buildings is not objectionable. The main collection sewer will start at Pont Ghamra and follow the new road to Teftiche el Koubbel, thence along the Metarich to Ein el Chams and from there it will follow the Gebel Canal to the main pumping station, which is to be about a kilometre to the east of the village of Kafr el Gamous. From the main pumping station, the rising main will continue along the south bank of the Gebel Canal and of the Alexander Canal up to the point where this latter makes a right angled bend to the north-west. From here it will go across the desert to the site of the purification works at Khanka, where 25 kilometres to the north of Cairo it is proposed to lay out a sewage farm. All existing cesspits and soakaways are to be abolished in order to put a stop to the pollution of the subsoil and sanitary fittings which, in the case of the native population, will be specially designed to conform with their habits and religious customs, are to be introduced. With regard to the branch sewers, best stoneware pipes will be used and every precaution taken to ensure all being watertight. The trenches in the wider streets of the city will in no case exceed 5 metres in depth and in the narrower streets 3 metres. There is, it is said, a strong feeling in Europe and elsewhere that the excavation of the ground for this scheme is going to lead to much ill-health, but the best authorities on the subject agree that there is no need for anxiety on this account, since the trenches for the sewers will not only be narrow, but also shallow, and the amount of excavation required for them will be small in comparison with the large areas of ground that are now being constantly opened for the construction of hotels and buildings. Moreover, all material excavated on the works will be at once removed, by means of overhead cableways, to the trenches that are being filled in, any surplus material being at once disinfected and carried away. So far as tourists are concerned and those responsible for advising a winter residence in Egypt, it should be noted that no work will be done during the tourist season, as that corresponds with the high Nile, which influences the height of the subsoil water. The excavation work for the sewerage of the city must be carried on in summer, when the Nile is lowest and the subsoil water accordingly at its minimum height.

Correspondence.

THE MEDICAL TREATMENT OF LONDON SCHOOL CHILDREN.

SIR,—A perusal of the report of the Education Committee of the London County Council on the medical treatment of children found to be defective by the Medical Inspectors in the Public Elementary Schools, which was published in the *BRITISH MEDICAL JOURNAL* of December 26th, pp. 1869-1874, must fill all ratepayers with dismay.

I have no less sympathy for the half-starved, ill-clad, hygienically housed and consequently diseased children attending the schools, than is felt by any member of the committee, but such sympathy should be tempered by a sense of justice to the general body of citizens, and by a statesmanlike attempt to consider the whole question of political economy involved. I therefore view with alarm the recommendations of the committee, for, if carried into effect, I believe there will be great and unnecessary waste of public funds, in consequence of the proposed scheme overlapping with the ample machinery already in existence, for dealing with those who are unable to pay medical fees in the event of sickness.

I gather from the report that it is proposed: (1) To send all children requiring in-patient treatment to the voluntary hospitals; (2) that "the Council should utilize existing types of institutions, giving financial help if necessary," for all the other children not included in Recommendation (1); (3) that "in districts where there is

no prospect of utilizing existing institutions" the Council should erect and suitably equip school clinics or surgeries.

The first proposal, namely, to send all children requiring in-patient treatment to the voluntary hospitals without payment, is a matter for the boards of the various hospitals concerned, but I believe it will prove to be a burden greater than they can bear, if they are to be sufficiently considerate of the claims of the rest of the community.

The second proposal, namely, to send all the remaining children to the out-patient departments of the voluntary hospitals and to subsidize such as are suitable, is not only unsound in principle but is unjust to the hospital subscribers, to those who seek hospital relief, and to the medical men who attend them. It is unjust to those who have given money to endow hospitals or contribute to their support, because they do so, not with a view to relieving the State of responsibility—a responsibility only just recognized—but they give it for the relief of the urgently sick who could obtain extraordinary and proper treatment in no other way. It is unjust to the medical profession, because the ground upon which the services of the honorary staff of a hospital or other charitable institution are given to it, is that it is a charity supported by the voluntary contributions of benevolent members of the community. If this charitable basis be abolished, the claim upon the staff to act as honorary officers ceases. If hospitals accept contributions from public funds in consideration of undertaking the treatment of certain patients, then, as regards the treatment of those patients, they cease to be charitable institutions. If these grants be made to the hospitals for services rendered, it will give rise to such difficulties as to the particular individuals who should receive the payment as to render the scheme impracticable.

The general question as to whether the hospitals should be subsidized by the municipality is another matter. Personally, I should welcome it, as being the thin end of the wedge towards the entire municipalization of hospitals, which is eventually bound to come.

The third proposal, embodied in the rider to the second proposition, namely, to provide school clinics "where within a reasonable time there was no prospect of utilizing existing institutions," although comparatively innocent at first sight, is in reality a far more serious matter than is doubtless generally realized by the ratepayers. It will necessarily involve a large capital expense, because a glance at the map of the county of London, on which existing voluntary hospitals and dispensaries have been marked, and which I understand is published elsewhere in this issue of the *JOURNAL*, will show that while these institutions are crowded together in the centre, yet towards the periphery they become fewer and fewer in number, until some large areas are left entirely without them. It follows, therefore, that if the committee's recommendation be acted upon, a large number of these school clinics will be established in the near future in this outer ring of London. I submit, however, that the institution of such school clinics is unnecessary, because the machinery of the Poor Law already exists for the relief of those who are too poor to pay for medical treatment, no district of the metropolis being unserved by an infirmary and a staff of district medical officers.

If the public, who have to pay heavily for the various institutions under the Poor Law, had any idea of how ample and excellent this provision for the sick poor is, they would not entertain for a moment the suggestion to multiply still further the already large number of hospitals (Poor Law infirmaries), and other institutions supported entirely out of the rates, where this new work for the school children could be undertaken quite easily, under the auspices of the Poor Law, with but slight increase of staff and modification of already existing buildings, at a comparatively small cost.

For those who know little of the workings of the Poor Law I may say that in my own constituency—the Union of St. George Hanover Square—the ratepayers provide for the sick poor an infirmary (in other words, a hospital) containing nearly 800 beds. This institution has an ample staff of resident doctors and trained nurses, is lighted and warmed on the most modern principles, is equipped with an operating theatre, far better than can usually be found in nursing homes to which rich patients have to go, and could further be equipped with any additional apparatus which the Education Committee might dictate, at the

smallest possible cost. All this is in addition to the provision for the sick inmates of the adjoining workhouse, which accommodates 1,700 persons; and to the lying-in wards; to the staff of district medical officers who visit the sick poor in their own homes; and to a dispensary where the poor can be seen or send for medicines. I have quoted only one Union, but all the other metropolitan Unions are similarly and quite as well equipped.

Over and above all this the Metropolitan Asylums Board provides special schools for ringworm, on the Downs near Sutton, Surrey, which were erected on a site of nineteen acres at a capital cost of £107,000; this school is by no means well filled, although, in addition to the resident staff, a skin specialist attends and undertakes the latest treatment of the disease referred to by the Education Committee—namely, the x rays.

Special schools for eye diseases under the Metropolitan Asylums Board are also provided at Brentwood on the cottage home plan, on a site of 23 acres, at a capital charge of £107,575 for 300 children; and at Swanley, also on the cottage home plan, on a site of 49 acres, for 300 children at a cost of £128,613. An eye specialist attends both schools, but neither is by any means full. Homes for convalescent children are provided at Heme Bay, Margate, and Rustington. At Heme Bay on 2½ acres, at a cost of £17,249, for 134 children; at Margate on a site of 1½ acres, at a cost of about £20,000 for 130 children; and at Rustington on 5½ acres, for 120 children at a cost of £36,000. Five homes for mentally defective children have been provided in various parts of London, and one on a site of 7½ acres at a cost of £13,000 at Witham, Essex.

In view, therefore, of the various excellently equipped infirmaries scattered all over London, few of which are full, and in view also of the ample accommodation of the Metropolitan Asylums Board for the special eye and skin diseases referred to by the Education Committee, it seems to me that it would be an unwarrantable waste of public money to erect or adapt yet other buildings for use as school clinics. I have the greatest respect for the London County Council, but they prove that they ignore or make a clean sweep of existing things, and prefer rather to start their new schemes with everything new from the beginning.

It seems to me far more practical to open a sort of out-patients' department at every infirmary in London—call it school clinic if preferred—where the school children could attend for treatment. The more ill ones could be admitted to the wards straight away, and the less ill ones sent back to their homes or to the school after treatment. Of course it would be necessary to increase the nursing and medical staff, but this could best be done by having a sufficiently large number of part-time non-resident officers who would work in shifts. If this system were extended to the voluntary hospitals it would put an end to the overcrowding and abuse of hospital out-patient departments, since all the cases not suitable for teaching students or needing the knowledge of experts could be drafted on to the proposed out-patient departments of the infirmaries.

The scheme outlined above would be the best—and, to my mind, the only practical one—for preventing the abuse of public funds by those able to pay for themselves. Under the existing Poor-law regulations medical relief is given, where possible, only as "relief by way of loan," the cost of which is recovered in weekly payments from those receiving it; or, if the recipients state that they are too poor to pay, their circumstances are verified by the relieving officers who visit them in their own homes and are therefore in a better position to advise as to the true facts of a case than any hospital almoner can possibly be. An even better plan than that of increasing the numbers of relieving officers would be to combine the duties of school nurse with that of relieving officer; for it is clear that a large number of extra nurses will be required to visit the children actually under treatment in their own homes. Lay visitors of the various health societies and other charitable organizations could do much useful work by undertaking part of this duty, to the benefit of the poor, to whom they could impart some knowledge of the elements of hygiene, and to the rate-payers, who would thus be saved the expense of additional relieving officers.

The objection to this scheme that will doubtless be made is that anything received from the guardians carries

with it the "stigma of pauperism." But this objection is invalid since Poor-law medical relief involves no disfranchisement. It is also illogical, for the poor are pauperized far less by being given medical relief out of the rates, to which they themselves contribute or have contributed, than by being given this relief at a voluntary hospital gratis, out of the charity of the medical profession and of the rich—regardless of whether they can pay or not. Finally, I believe that the finding of the Poor-law Commission will remove the objection altogether, since it is an open secret that the new classification of the poor which they will recommend will absolutely dissociate medical relief from other forms of relief, and the genuinely poor from the vagrants. Whether this will prove to be the case or not, I appeal to the Education Committee to take no decisive action in this matter and embark upon no new scheme until the publication of the report of the Royal Commission on the Poor Law.—I am, etc.

HARVEY HILLIARD, M.R.C.S. and L.R.C.P. Lond.
Guardian of the Poor, St. George's, Hanover Square, and a
Manager of the Metropolitan Asylums Board.
London, S.W., Jan. 3rd.

THE DRAFT CHARTER AND THE REFERENDUM.

SIR,—I venture to state that no more astonishing letter from a President of the Association than that in your issue for January 2nd has ever appeared in the columns of the JOURNAL.

In his letter Mr. Simeon Snell explains how he, in his official capacity as President of the Association for the current year, has done what he could to put himself in direct opposition to the action taken by the Council, on behalf of the Association, in accordance with resolutions of the Representative Meeting, which, confirmed as they were by the Council, constitute, in the language of our present regulations, "decisions of the Association." The logical inference to be drawn from the President's action in withholding his signature to the petition to the Privy Council for a Royal Charter of incorporation is, not that he wishes to obtain certain modifications in the text of the Charter—of which modifications we have heard so much of late—but that he is using his official position to prevent the Charter being granted at all. It may be denied that this is the correct view to take of the President's action, but I would still hold that it is the only one which is justified by the facts of the case.

To be obliged to write this letter is most distasteful to me, but I felt that it was necessary to enter a protest against such a regrettable use of the Presidential office, the most distinguished post which the Association is able annually to bestow on any one of its members, and an honour which is conferred not by reason of previous service rendered to or experience of our Association in its central administration and government, but in consideration of the prominent professional and scientific position enjoyed by the member in question in the locality in which the annual meeting is held.—I am, etc.,

H. A. BALLANCE,
Deputy Chairman of Representative Meetings.
Norwich, Jan. 5th.

SIR,—In the agitation that has been going on for some time throughout the country on the above subject the By-laws of the Association seem to have been forgotten, or at least to have been treated with scant respect. We hear of individual Branches preparing to oppose officially the present Charter before the Privy Council; and even, where this is not done, there have been not a few instances of Branch meetings specially convened for the sole purpose of directing its council to follow in the footsteps of the South-Western Branch. All this, in my opinion, is diametrically opposed to By-law 7. There it is laid down clearly that the "management of the affairs of each Branch shall be vested in a Branch Council, and by what authority certain Branches have taken—to say the least—most revolutionary steps it would probably tax the ingenuity of the promoters thereof to clearly set out. If the view I have above stated should be legally upheld, another question must inevitably be asked: What about the expense incurred by these Branches for illegal objects? By-law 16 is pretty clear on the

financial aspect. "Out of the money received, etc., . . . the Branch shall defray all its expenses," etc. This can only mean legal expenses; and if a Branch can legally only manage its own affairs, to spend money on matters affecting the Association as a whole must be illegal, especially when there are properly constituted authorities for that purpose.

I note with regret our President's letter in the *JOURNAL* of January 2nd. I had thought that it was the duty of any one holding his high position to give effect to the voice of the Association, as expressed through its constitutional and official mouthpiece, and not to be swayed by his own predilections, or by those of irresponsible parties within the Association. This I have always observed in the case of the presidents of other associations, but unfortunately here, as in some other recent cases, the customs and usages of the outside world are too little regarded within the ranks of our Association.—I am, etc.,

London, N.E., Jan. 2nd.

MAJOR GREENWOOD.

SIR,—Before and after the meeting of the members of the Metropolitan Counties Branch called to decide whether steps should be taken to oppose the application for a Charter several asked details as to the twelve and twenty-four members to be elected to the Central Council.

The following facts were given in answer to questions. Other questions that were asked I trust you will allow to be put to those who have raised the present discussion; they show the line along which many members are thinking.

The replies are being awaited; and as the questions were put by moderate men who seem desirous to take an intelligent interest in the Association, may a hope be expressed that some one will answer them?

	12 Members.	24 Members.
How is the United Kingdom to be divided to elect these 12 and 24 men respectively?	Into 12 single member constituencies.	Into 23 single and 1 double member constituencies.
Who will be the candidates in a constituency?	Any member resident in the constituency.	Any member resident in the constituency.
Who will be the nominators in a constituency?	1. Branch Councils in the constituency. 2. Divisions in the constituency. 3. Any 10 members in the constituency.	1. Divisions in the constituency. 2. Any 3 members in a constituency.
Who will be the electors in a constituency?	The Representatives of Divisions in the constituency (no doubt acting as instructed by their Divisions).	The members resident in the constituency.
Are any Representatives of the Branches on this Central Council at present members of the Representative Meeting?	—	Yes.
Are any of these 12 and 24 men likely to be members of the Representative Meeting?	Yes.	Yes.

1. Why do they say that the Representative Meeting will elect these twelve men?
2. Why will these twelve men be more likely to support the Representative Meeting as a whole than many or all of the twenty-four men?
3. Why were these facts, if correct, not stated by the country Branch Councils in their recent circulars?
4. Why don't they allow the Medical Secretary to state the facts, and then we should know where we are?
5. If a half to be present with a two-thirds majority of them is good enough for the Representative Meeting, why is it not good enough for the Central Council?
6. What has all this discussion to do with obtaining a Charter?
7. What is behind it all?
8. Will the house-to-house Referendum help the Association to do more for the general practitioner? Will it put down hospital abuse?

—I am, etc.,

London, S.W., Jan. 2nd.

E. ROWLAND FOTHERGILL.

SIR,—There is an argument which is being strongly urged in some quarters against the action of the South-Western Branch and others in the matter of the Charter

—namely, that to petition for amendment of the Ordinances at the present time will stultify the Association in the eyes of the Privy Council and the public.

I venture to suggest that nothing could be more derogatory to the Association than the lodging of a petition of such moment as one for the grant of a Charter, which lacks the signatures of the three highest officers of the Association—the President, Past-President, and President-elect. It is inexcusable, and the absence of the signatures of these three gentlemen is scarcely likely to escape the attention of the Privy Council—a member of which is, by the way, one of the signatories.

The amendments to the Charter in reference to the Referendum and election of Representatives brought forward at the Sheffield meeting of the Representative Body ought at any cost to have been referred to the members of the Association and a vote taken on them. Better a year's delay in obtaining the Charter than such deplorable action as has been taken by the Council.—I am, etc.,

Putney, S.W., Jan. 2nd.

A. DE WINTER BAKER.

SIR.—The members of the Edinburgh Branch were sent the following post-card:

Do you approve of the Branch Council taking the necessary steps to lay before the Privy Council their view that a Referendum should be taken on the requisition of half the Council, and then by letter addressed to every member of the Association?

The following replies have been received:

Approvals...	...	231
Disapprovals...	...	2
From home...	...	1
Members of Branch...	...	413

We are, etc.,

A. LOGAN TURNER,

FRANCIS D. BOYD,

Honorary Secretaries.

Edinburgh, Jan. 4th.

THE BIRMINGHAM BRANCH AND THE COVENTRY PROVIDENT DISPENSARY.

Testimonial to the late Medical Officers.

SIR,—Eighteen months ago, in response to representations from the Coventry Division, supported by the Birmingham Branch of the British Medical Association, four of the medical officers of the Coventry Provident Dispensary resigned their posts, because they failed to obtain alterations in the rules that were considered necessary in the interests of the profession. Unfortunately, other medical men were found willing to take their posts, in spite of a full knowledge of the causes of the resignations.

In the result the four medical men have sustained considerable pecuniary losses. One has been obliged to leave Coventry for financial reasons; another has experienced serious diminution in his professional income; while a third, Dr. Hird, died in November, 1907, his death being undoubtedly hastened by worry and financial anxiety. Mrs. Hird is left in very straitened circumstances.

The Council of the Birmingham Branch are unanimously of opinion that, in the interests of the Association and of professional unity, a fund should be raised, in the first place to assist Mrs. Hird in her difficulties, and in the next to make presentations to the medical men in token of the approval and sympathy of their professional brethren.

A grant has been applied for from the Central Emergency Fund of the Association.

Since this matter seriously affects the *esprit de corps* of the profession, the Branch Council earnestly appeals to every member to send a contribution to the Honorary Treasurer of the Branch, Dr. Thomas Wilson, 87, Cornwall Street, Birmingham.—We are, etc.,

FRANK MARSH,

President.

ALBERT LUCAS,

J. FURNEAUX JORDAN,

Honorary Secretaries.

Birmingham, Jan. 4th.

The following donations have been received or promised:

	£ s. d.		£ s. d.
Frank Marsh	1 1 0	J. Furneaux Jordan	1 1 0
Thomas Wilson	1 1 0	Albert Lucas	1 1 0
Sir Thomas Chavasse	1 1 0	W. T. Lydall	0 10 6
Professor Gilbert Beilme	1 1 0	A. W. Northall	0 10 6
Professor Priestley Smith	1 1 0	E. N. Nason	0 10 6
W. F. Haslam	1 1 0		

TWO BRAVE WOMEN DOCTORS.

SIR,—The story of the Hyderabad flood has now been overshadowed by that of a far more appalling disaster. Nevertheless the catastrophe that befell the capital of H.H. the Nizam's dominions, three months ago, was of terrible magnitude, and the details published in the newspapers cannot yet have faded from the memories of your readers. The incidents of greatest interest to the medical profession were the destruction of one of the two large hospitals and the flooding of the other, with the saving of its inmates by the resident women doctors, aided by the nursing staff. It is because I think that little attention has been drawn in the medical journals to the heroism of these ladies—though their names were cheered to the echo at the recent Mansion House meeting—that I venture to address this letter to you.

Miss Pinto and Miss Correa, both young women—the latter only obtained her diploma two years ago—were at the time of the flood the resident medical officers of the Victoria Zenana Hospital at a group of beautiful buildings, the corner stone of which was laid by H.R.H. the Princess of Wales. It is unnecessary to repeat the accounts of how, after five days of incessant rain, the water of the river rose, and how eventually the Zenana Hospital was completely surrounded and cut off from all succour: even communication between it and the opposite side of the river being lost. Miss Pinto and Miss Correa had been repeatedly warned of danger by the police authorities of the city and urged to leave, but they refused to evacuate the hospital without orders, or to abandon their patients and their charge. Night came on, and the water still rose, until the danger of which they had been warned became imminent. With the help of the nurses they carried all their patients to the flat roofs of the blocks, contriving for some a partial shelter, a labour not completed until 1 o'clock in the morning, when they, with the whole of the staff, took refuge, though without a particle of shelter, by the sides of those they had saved. Sixty-five women in all crouched in terror throughout that dreadful night; the rain continued to pour on them in torrents—the flood actually rose to within a few inches of their last possible and perilous position, and through the darkness came the crash of falling houses and the despairing cries of drowning people. Dawn brought neither comfort nor relief; all around them was a sea of roaring water; wreckage and heavy beams of timber dashed against the walls of the buildings, which shook at every fresh impact. Death threatened at every moment. A dreadful day succeeded a dreadful night, and it was not until late in the afternoon that the rain slackened, and the flood subsided even more rapidly than it had risen.

In the dusk of evening a small band of rescuers managed to reach the hospital, and eventually with great difficulty, and after hours of labour, got the party down from the roofs to a place of safety, drenched, exhausted, and fainting. Miss Correa's condition was particularly pitiable; her health had been very delicate for a long time before, and the exposure had for immediate result a long and dangerous illness, from which she has not yet recovered. The resident medical officers' quarters, an older and unsubstantial building, collapsed completely, and every thing the lady doctors possessed went down the flood.

My knowledge of the circumstances is not derived from newspaper reports, but from the unanimous testimony of private correspondents at Hyderabad. I hope, Sir, that you and your readers will agree with me that these two physically weak young ladies, one herself an invalid, showed devotion to duty and courage worthy of the best traditions of our profession, and that their names deserve a place in the records of its noble deeds.—I am, etc.

G. H. D. GILLETTE, Lieutenant-Colonel, I.M.S.

(until lately Director of H.H. the Nizam's Medical Department).

THE FLEA AS A CARRIER OF PLAGUE.

SIR,—In the *Proceedings of the Society of Tropical Medicine*, reported in the *JOURNAL* of January 2nd, there is a very abbreviated report on an historical incident bearing on the possible spread of plague by the agency of the flea.

The incident is as follows: On the defeat of the Israelites by the Philistines, when the two sons of Eli,

Hophni and Phineas, were slain, the Ark of God was taken, carried to Ashdod, and lodged in the temple there. An outbreak of pestilence followed, and, owing to it, the Ark was sent to Gath. There, again, plague occurred, and "he smote the men of the city, both small and great, and they had emerods in their secret parts." Whereupon the Gathites forwarded the Ark to Ekron. "And it came to pass, as the Ark of God came to Ekron, that the Ekronites cried out, saying, They have brought about the Ark of the God of Israel to us, to slay us and our people." "There was a deadly destruction throughout all the city." This plague was evidently of a very acute nature, and not bubonic only, for "the men that died *not* were smitten with the emerods."

These three outbreaks, ascribed to the Ark, thoroughly frightened the Philistines, so that they determined to send back to Israel the captured trophy. They arranged to give, as "a trespass offering," golden images of the things which struck the observation of the people most as connected with the outbreak. They had noted (a) the emerods (buboes) on the sick, and the presence of a plague of (b) mice (the Hebrew has only one word for rat and mouse—*akhbar*) that marred the land. Five golden "mice" and five golden emerods, placed in a coffer, accompanied the Ark, which was dispatched on a new cart drawn by milch kine. These took the straight line over the frontier to "the way of Beth-shemesh." The journey from Ekron to Beth-shemesh was about 12 to 14 miles, and the cart, at the end, was unaccompanied by the Philistines. There was no human contact. The kine, "lowing as they went," arrived in the field of a Beth-shemite where the wheat was being cut. The people were rejoiced. They made a burnt-offering of the kine, using the wood of the cart for fuel. The Ark being taken aside, curiosity prompted some to look within it. "Punishment" followed, and fifty thousand three score and ten men died for this "offence!"

The points in the story are:

1. Plague was raging at Ashdod.
2. In its temple rats would swarm, as in such buildings at the present day in India, owing to the amount of food of all sorts thrown about.
3. The Ark with its trappings—that is, its three coverings—was interned in the temple.
4. Its coverings were (a) "a rail of blue and purple and scarlet"; (b) a "covering of badger skins"; (c) "a cloth wholly of blue."
5. The middle covering of badger skins would thus form an ideal place of refuge for the fleas escaping from the rats dead from plague.
6. Outbreaks of pestilence followed on the arrival of the Ark at Gath and Ekron. At both these places human contact entered also.
7. Since no Philistines went with the Ark to the field of Joshua the Bethshemite, there was no human contact in that instance.
8. Looking into the Ark involved removing the trappings, and hence a disturbance of the fleas in the badger skins.

9. This historical incident I suggest as demonstrating the active part played by the flea in the spread of plague, since it bears strongly with the valuable work of the India Plague Commission on this subject.

In the *Literary Supplement of the Times*, December 31st, 1908, a reviewer of Butler's "Characters" quotes—and here is the suggestion of a controversy not extinct yet—"fifty thousand Bethshemites were destroyed for looking into the Ark of the Covenant, and ten times as many have been ruined for looking too curiously into that book in which that story is recorded."

Sir, I suggest that modern science has afforded an explanation for the singular event mentioned, and has thus cleared, in a natural way, what to many has been a stumbling-block in understanding the severity of this "punishment." Many years ago, whilst travelling in the neighbourhood of Beth-shemesh and Ekron it seemed to me a "hard saying." In 1896 I brought to the notice of a high church dignitary the explanation of the mice and emerods. He did not receive it as it was meant! I trust I am not following "too curiously" this subject, lest some may say "after whom dost thou pursue? after a dead dog, after a flea?"—I am, etc.

London, W., Jan. 15

R. HAVELOCK CHARLES.

THE MUMMIFICATION OF CANCER.

SIR.—I have just read the article which you devoted to my method in your issue of December 12th, 1908. If I have not replied to it sooner, it is because I have only just seen the number in question. I am persuaded that your only desire is to get at the facts, and that is why I now write you.

Of that desire I see evidence in your statements respecting my professional status. However desirous I might be to serve you in this respect, I should hardly feel inclined to personally recount to you the details of my works, which you sharply appreciate. Suffice it to say that Professor Lannelongue, who, in 1906, presented my *Treatise on Operative Technique* to the Paris Academy of Medicine, stated, *inter alia*, that "M. Laurent has published valuable and learned works, certain of which have been presented to the Academies of Medicine and Science of Paris, and on which I build hopes of one day seeing conferred upon him the title of Correspondent."

Let me point out, in the first place, that the value of my method does not consist in the mere fact of the use of formol, but rather in the enormous doses and in my manner of using the product. These form a method, a system, which I feel entitled to claim as my own.

You are not convinced of the efficacy of this system. You are entitled to doubt until you have a clear demonstration of the statements placed before you. Like all true scientists, you consider that a clear array of facts should alone carry conviction. So far, you are right. I am prepared to supply you with these facts by means of two series of demonstrations in London. First, by applying my method to, say, one hundred cases, rendered easily observable to medical men, students, and relatives of the patients.

As my stay in London would necessarily be limited, I suggest that the medical men should, in the course of the next two months or so, get together a hundred cases of ordinary external cancer, so that the progress of the treatment may be followed by all. These cases should be taken from three hospitals, and from private institutions as well. They should include cancer and sarcoma of the limbs, facial cancer, maxillary sarcoma, cancer of the lip and tongue, sarcoma of the neck, and cancer of the breast. The condition of the patient should be such that a surgeon could eventually undertake to perform an operation. In several cases therapeutic results would be observed as early as the fifth day. Before and during treatment the photograph, radiograph, temperature, and weight of the patient would be taken; his heart, blood, and urine would be examined.

The second series of demonstrations—comprising complicated cases, internal ones included, strength being sufficient—would be held at some subsequent date.

The term "success" must be defined. I recently stated that seventy successes were obtained by Fenwick out of nearly a hundred cases treated by him with bichromate. That is all right. By the term "cure" is implied a clinical cure; for a cancerous subject should, more than a syphilitic one, continue to be examined several times a year.

When we remember that formol may be administered in such heavy doses—10, 20, and even 50 grams—that it is a far more powerful antiseptic than sublimate, and that it is a first-class fixing agent, then the results achieved cease to astonish us. But the technique, though easy in some cases, is comparatively complicated in others. Therefore we must possess: First, a thorough knowledge of anatomy; and, secondly, previous experience in several typical cases. Given these, and being warned against disappointment, medical men will, I believe, be able to profit by my demonstrations, carried out in their presence.

Seeing the progress accomplished by operation, the x-rays, radium, electricity, and so on, we can hardly doubt that we are on the high road to the cure of cancer. While we are doubtless still far off the day when the cure of cancer will be effected by merely swallowing a few tablets, I still think that a fair hearing should be given to all substantiated claims of progress in therapeutics. I claim that my system of *formolization*, *mummification*, or *embalming*, and sometimes *fibromatosis*, does constitute progress. (I have even applied it, with a modified technique, to cases of tuberculosis.) Under these circumstances, and to whatever extent it may have been rendered

effectively applicable, I venture to think that you would declare yourself satisfied after following my demonstrations.

Inasmuch as cancer constitutes a grave social danger, not only because of the thousands of lives it destroys every year, but also by reason of the nervous dread of those who live in constant fear of its onslaught, I deemed that I should be rendering some slight service to my fellow countrymen by laying before them the principal facts. I therefore had printed at my expense an illustrated sheet describing cancer; I had 25,000 copies distributed, especially among local sanitary authorities and charitable societies, all over Belgium; and I should have liked very much to have supplied every family in the land with a copy.

In conclusion, Sir, I rely upon your acknowledged sense of justice to give this letter the same publicity which you accorded to the article of which it treats.—I am, etc.,

Brussels, Dec. 24th, 1908.

Professor Dr. O. LAURENT.

*** As our attitude to the cancer question has often been misunderstood and sometimes misrepresented, we take this opportunity of stating emphatically once more that our sole object is to prevent, as far as lies in our power, the profession and the public from being misled by unfounded hopes. What is wanted is not rumours and assertions of cures, but irrefragable proof. This can only consist in a sufficiently large number of facts that will bear the closest analysis, and in that analysis it must not be forgotten that accurate diagnosis is an essential factor. The element of time must also be taken into account. In regard to these points we make no distinction between surgical and medicinal or chemical treatment. Professor Laurent makes a sporting offer, but he must know that we have no power to compel hospitals to supply him with patients. He should apply direct to any three London hospitals of good repute; we venture to suggest that the Middlesex should be one of them, as it has a special cancer department and every provision for the testing of new remedies. He might also apply to the Imperial Cancer Research Fund, the directors of which would doubtless help him in getting an opportunity of fully testing his treatment. As for ourselves, we only hold a watching brief; but we assure Professor Laurent that if his method is proved to be successful, though it were only to the extent of materially palliating cancer, nowhere will his achievement find a heartier welcome than in the BRITISH MEDICAL JOURNAL.

SURGICAL TREATMENT OF CHOLELITHIASIS.

SIR.—In the JOURNAL of December 19th, 1908, under the above heading, Hans Kehr (page 93 of the Epitome of Current Medical Literature) is quoted as furnishing to the general practitioner various statistics so that he may be able "to tell his patient, whom he advises to submit himself to the surgeon, what the chances of operative treatment are." His own operations of various kinds number 1,309, out of which number there are altogether 225 deaths, or a percentage of 17.18—that is, roughly speaking, nearly one-fifth—of which it is only fair to say the greatest mortality was in the malignant cases, which amounted to 82 per cent. Deducting the two groups in which the mortality was the highest, "he had 891 operations for uncomplicated gall stones, with 29 deaths—that is, 3.2 per cent." Again in this most extraordinary article, "after dealing with some general considerations with regard to the operations, such as the frequency with which he carried out hepatoxomy [whatever that may mean] in his 'ectomy' operations"—your report was good enough to put the word "ectomy" in inverted commas—"as well as the frequency in which he removed the vermiform appendix when this organ, even if quite healthy, protruded into the wound, he discussed the cause of death."

Now, Sir, I am not an operating surgeon, but how any one with the slightest notion of elementary anatomy and the topography of the abdominal organs can conceive of the possibility of an operating surgeon, in the course of an operation for gall stone, finding "the vermiform appendix protruded into the wound" passes my wit to understand, and vitiates the whole value of the article, even if it did not stand self-condemned in many other particulars. I will not touch on the morality of an operator who, while

undertaking a serious and important operation, complicates that operation by a totally unnecessary interference with what he himself describes as an organ "quite healthy," and so risks the success of his primary operation and further imperils the life of his patient. Again, Sir, this heroic operator, who in the course of one serious operation performs another, as it were, takes it in his stride, gives the general practitioner advice as to "when the proper time has come to hand his patient over to the surgeon." Kehr "is convinced that not more than 20 per cent. of gall stone patients need be operated upon." He does not even suggest when the general practitioner has failed in his efforts to assist the passage of the [stone *per vias naturales*] that this bewildered practitioner should call in the assistance of a consulting physician who may be more experienced than himself in the ways of humouring and coaxing the offending stone through its natural passages and who may have spent many years of study with that object. No! no further chance must be given to the patient, but he must there and then be handed over to the brutal arbitrament of the knife and to the tender mercies of a surgeon who, not content with performing the operation he set out to do, may also indulge in the penchant he evidently has of removing perfectly normal and healthy organs. Truly the old book was wise when it said, "Oh! that mine enemy would write a book!" Now to criticize the statement that not more than 20 per cent. of the cases of gall stones need be operated upon. I have now been in practice many years, and in the course of that time have met with numerous cases of gall stones, and in only one case has it been found necessary to have recourse to operation—a case where Mayo Robson removed from a patient of mine a gall stone which was impacted in the common bile duct. In the early part of my career I made a collection of gall stones which had been passed by my patients through the ordinary channels, and got together a small bottleful of various sizes, from that of little more than sand to some specimens as large as a full-sized marble; and one I remember, which took two full days to pass, was even larger than that, and consisted of an agglomeration of several calculi agglutinated together, which it seemed almost impossible could have been passed through the bile duct, and proved to me that the elasticity and distensibility of that duct was far greater than it had been given credit for. Another point which Kehr in his article does not seem to me to have given any thought to is the fact, which is well known, that certain patients—often stout women of middle age and lethargic temperament—are very prone to pass gall stones at more or less regular intervals. I have met with many such cases. Women who are in the habit of passing these stones know what the symptoms are, and keep by them ready for the emergency a supply of remedies that have been found useful in assisting the passage of these gall stones, and who have become so used to these attacks that very frequently they do not even call in their medical attendant on every occasion they are attacked.

The necessity for operating in cases of gall stones is not only not 20 per cent. of the cases, but it is not even 1 per cent., and Kehr falls into the class of those surgeons I have elsewhere described as "often inexperienced in other safer and more rational methods of treatment." More than that, the mortality of 3.2 per cent. in operations for uncomplicated gall stones is quite excessive and unnecessary, as I am quite convinced that a patient, experienced physician would in a great number—practically the great majority—of these cases have been able to assist the stone to pass without the risk of any operation whatever.—I am, etc.,

Preston, Dec. 21st, 1908.

JAMES A. RIGBY.

THE TREATMENT OF SYPHILIS.

SIR,—Whilst agreeing generally with the view of Mr. E. Lane, as set forth in his excellent paper read before the Westminster Division of the Association, on the treatment of syphilis by intramuscular injections of mercury,¹ there are one or two points to which I take exception. As regards the preparation for injection Mr. Lane gives preference to calomel suspended in olive oil, with which one can only partially agree, for undoubted as the fact is that for removing any active signs of the disease no salt of

mercury comes up to calomel, still, that this removal is of a transitory nature when compared with the same result which is obtained by the employment of some of the other salts—such, for instance, as metallic mercury—this is not only my own experience, but also that of Fournier, vide the *Traité de la Syphilis*.

So convinced am I as to this that although I always now commence treatment with calomel injections, I limit these to a total of four when I continue treatment with injection of the metallic or salicylic salts.

Again, the preparation he recommends—calomel suspended in olive oil—is so painful that few if any patients would stand it for long. According to Fournier, this pain is in the majority intolerable, but luckily, about two years ago I hit on the idea of adding to the calomel preparation I use a combination of creosote and camphor, with a view to producing analgesia. This has proved quite a success, and now I am enabled to give calomel injections with more or less impunity.

There is one other point in Mr. Lane's paper with which I cannot agree. He advises that in carrying out treatment by intramuscular injections one of gr. $\frac{3}{4}$ of calomel be given once a week for a continuous period of between fifteen to sixteen weeks. Personally I would never sanction giving mercury for this prolonged period without a rest from all treatment, for long before the expiration of such a time the highest physiological effects of mercury would have been attained, and any further administration of it could only lead to disaster. Our practice in the army generally and at the Military Hospital, Rochester Row, when the intramuscular method is employed, is to begin with calomel injections, gr. $\frac{3}{4}$, once a week for four weeks, and then to substitute either metallic mercury or the salicylate salt of same to carry on treatment; the maximum number of injections given never exceed eight—more often six—and then a period of rest from all injections of two months is given. This period of rest is imperative, as the combination of injections and rest carries out what is now recognized by all as essential—"chronic intermittent treatment."—I am, etc.,

F. J. LAMBRIN,

Colonel, R.A.M.C.

London, W., Dec. 22nd, 1908.

THE OPERATIVE TREATMENT OF INTRAORAL CANCER.

SIR,—Mr. C. P. Childe, in his paper on this subject, discusses very fully and very ably many technical points on which there is still considerable diversity of practice. With most of his contentions I am in complete agreement, and I believe that surgeons who have most experience or this class of work approximate closely to the procedure he describes. There can be no difference of opinion as to the necessity of wide local removal of the primary disease, and none as to the necessity of complete removal of the whole glandular contents of the submaxillary triangle, and of the chain of glands along the great vessels down to the clavicle in every case. That the dissection of the neck should precede the removal of the primary growth will, I think, equally be agreed, for two reasons—first, in order that this dissection may be carried out aseptically; and, secondly, because many patients who have had the primary growth removed first cannot find courage to submit to a second operation. I assume that in the majority of cases the whole procedure is divided into two separate operations. I am sure that, in spite of some obvious advantages of removing both glands and growth at one operation, the balance of advantage is in favour of two operations.

It is possible in many cases to remove the glands without opening the mouth cavity and so infecting the wound. In these cases the neck wound heals *per primam*, and the second operation can be carried out at the end of six or seven days. Even where the neck wound must necessarily communicate with the oral cavity owing to the position of the growth to be removed, it is better to defer the removal of the latter until the neck wound has healed, or partially healed. I am aware that there is a risk of cancerous reinfection of the neck during the interval, and a risk of re-establishment of collateral circulation, and thus diminishing the advantages of ligaturing the lingual and facial arteries; but I have lost more than one promising case from exhaustion and shock when

¹ SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL, December 19th, 1906, p. 330.

I have been tempted to disregard this risk, and have completed the whole procedure in one operation.

There is another reason which weighs very strongly with me in this matter, and that is the importance of minimizing the interference with deglutition. In addition to removal of a part or whole of the tongue, there is interference with the action of the infrahyoid muscles, swallowing becomes still more difficult, and the danger of inhalation pneumonia thereby increased.

With what Mr. Childe says as to ligation of the lingual and facial arteries I am in entire agreement, and I have practised this as a routine procedure for many years. As the arteries are laid bare by the dissection of the glands it would be foolish not to take advantage of this circumstance, and the procedure is perfectly easy. Personally I always ligature both arteries close to their origin from the external carotid, where they can be found with ease and certainty.

With regard to the avoidance of laryngotomy, it is true, as Mr. Childe says, that preliminary ligation of these vessels makes removal of the corresponding half of the tongue a practically bloodless operation, and obviates the risk of inhalation of any serious quantity of blood. But even a small quantity of blood is apt to obscure the field at a time when a clear view is most necessary; for the precise and certain excision of the primary growth transcends in importance every other part of the operation.

For this reason I have lately employed a preliminary laryngotomy and plugging of the pharynx in almost all cases of removal of intraoral cancers. If the dissection of the neck has been carried out at a previous operation, as is my practice, there is no risk of neck infection from the small wound needed for the laryngotomy. I have found it an entirely harmless procedure, which makes an otherwise difficult intraoral operation quite simple. After the operation is completed the tube is withdrawn, the wound closed, and natural respiration restored.

Mr. Childe does not mention the use of the galvanocautery. I use this wherever possible for the removal of the primary growth, both as a precaution against local cancer infection and as a means of outlining the parts to be removed without hæmorrhage, and therefore with greater precision.—I am, etc.,

EDWARD DEANESLY, F.R.C.S.

Honorary Surgeon, Wolverhampton and Staffordshire
General Hospital.

Wolverhampton, Jan. 2nd.

THE TREATMENT OF FRACTURES OF THE BASE OF THE SKULL.

SIR.—In a paper of much practical value published in the BRITISH MEDICAL JOURNAL of December 26th, 1903, on the treatment of fractures of the base of the skull, by Dr. Maclaren, of Carlisle, a point is emphasized which must be regarded as of cardinal importance in the treatment of fractures of the cranial base attended with a discharge of blood or cerebro-spinal fluid from the ear.

In connexion with this subject I may be permitted to refer to a case which came under my care in Carlisle about thirty years ago. It was that of a boy who fell from a builder's platform placed at a considerable height on to the hard pavement of the street below. He was conveyed on a stretcher to his home about a quarter of a mile away, and when seen, within twenty minutes of the accident, was completely unconscious, convulsed, and had a discharge of blood and cerebro-spinal fluid from the ear.

An unusual feature presented by the case was a complete paralysis of the third cranial nerve, due to the accident, the resulting external strabismus being very pronounced. Acting upon Listerian principles to be observed in the treatment of a compound fracture, the head, which had been shaved for the application of an ice-cap, was cleansed, and the auditory meatus cleared out by means of wet carbolic wool rolled on the end of a probe. The meatus was then packed with cotton-wool wrung out of carbolic solution, and a pad of dry wool fixed over the side of the head. The dressings were changed frequently until discharge had ceased. The boy made a good recovery, and when seen some years after the accident there was nothing to indicate a previous head injury beyond the remains of the third nerve paralysis.

That the danger of septic meningitis in such cases was fully appreciated at any early period of antiseptic surgery

may be gathered from a sentence in Caird and Cathcart's *Surgical Handbook* (1889), where, under "Fractures of the Base of the Skull," it is pointed out that "in addition to general treatment an attempt should be made to combat septic meningitis by gently syringing the ear with 1 in 20 carbolic, dusting in iodoform, and plugging with antiseptic wool."

For obvious reasons the syringe, unless very carefully used, is objectionable.—I am, etc.,

Edinburgh, Dec. 28th, 1903.

WILLIAM BROWN.

THE ESTIMATION OF SUGAR.

SIR.—The interesting communication by Dr. Alexander Francis on hypotism in diabetes is illustrated by a table purporting to show the effect on the amount of sugar passed at different dates, and pains have been taken to estimate this quantity in grams per 100 c.cm., grains per fluid ounce and grains per pint, yet the absolutely essential information, namely, the total quantity of urine passed in twenty-four hours, is withheld. The need for knowing the total excretion of sugar if we are to estimate the gravity of a case or the effect of treatment has been repeatedly pointed out, but is apparently still ignored. It would not afford much information respecting B's income to know that he received 5 per cent. upon his invested capital, nor would it add much to be told that for every £1 he receives 1s. and for every five-pound note 5s. In addition to stating that a patient passes so many grains per ounce we should know how many ounces of urine are passed in order to calculate the quantity of sugar excretion *per diem*. A considerable difference in the percentage of sugar may occur without causing any alteration in the total amount. Some time ago a patient handed me a bundle of reports from the Clinical Research Association, each giving merely the number of grains per ounce, and I was struck by a remark of his wife, who said that she had not been able to notice any correspondence between the quantity of sugar as shown by the reports and the care with which he had been able to follow the rules of the diet that had been laid down for him. As this method is so misleading, I wrote to the Director of the Clinical Research Association and suggested that it would be well to notify subscribers of the importance, in estimating sugar, of getting at the total quantity passed in twenty-four hours, which can only be done where the amount of urine has been measured, and I am glad to say that my suggestion has been adopted.—I am, etc.,

Birmingham, Dec. 24th, 1903.

ROBERT SAUNDREY.

THE UNGODLY COUGH.

SIR.—Allow me to say a few words about the somewhat important subject, "The Ungodly Cough," as treated in the JOURNAL of November 28th. Some thirty or forty years ago I was in the habit of attending service at one or other of three churches here. Much coughing was present in all of them every winter. It used to make me angry, as I attributed it to disrespectful inattention of the congregation. At one of these churches some 180 Blue-coat boys attended. They used to cough incessantly, just like a pack of hounds finding "scent" again after a very brief check. For years past now no such distracting nuisance is to be found, but remarkable freedom from it. Why? Just because the buildings I speak of were heated with coke, the fumes of whose burning coming from the open gratings of the flues in the aisles tickled not, to be sure, the ears of the groundlings, but the fauces and epiglottides of those up in the galleries and on ground floor alike. Carbonic oxide was the transgressor. Wiser plans of heating have now been adopted. Coughing in packs and paroxysms no longer prevails, and the dear Blue-coat boys are as quiet as well-conducted mice. It is rather humiliating to think that neither doctors nor preachers suspected or investigated the cause of the nuisance alluded to, and my excuse for taking up the cause of "ungodly coughing" is because I fear that many country churches and chapels are still heated by coke.—I am etc.,

Stourbridge.

ALFRED FREER, M.R.C.S., L.S.A.

MEDICAL FEES.

SIR.—The article re "Medical Fees" in the JOURNAL of September 12th, 1903, p. 760, may well be noted by the profession.

In the first place, it is the first time in my memory that any public official has negatived the idea with which the public seems to be imbued, that a medical man should attend any and all cases whether he is to receive any fee or not. This is a departure of some importance, which may denote that a sense of justice is on the increase, or that the medical profession is becoming more powerful, and less inclined to be—to put it plainly—“cheated” without demur. In the second place, the criticisms as to the sending in of accounts yearly or half-yearly is one that might well be studied, as there is very little doubt that the profession as a whole has lost, and is losing, thousands by this method of procedure, coupled with the prevalent idea that a medical man will not sue for his fees. If accounts were sent monthly, or at latest quarterly, the profession would be so much to the good, especially if it were generally understood that defaulters would be “county courted” after, say, three months.

We live in a strictly business age, when even members of the aristocracy go on to the Stock Exchange and into trade generally, and as the general training of the community is commercial there is small respect or consideration for those who do not conduct their business affairs on business lines. When at Cambridge some three years ago I noted a letter in the local paper, stating that a Cambridge graduate in medicine might expect to make about £400 a year. This seems a very small sum to look forward to after a six or seven years' course and the outlay in money and work. Had the same amount of both been laid out in any other calling much better results would have been attained. Moreover, this is not the final outlay, as post-graduate study is required at intervals, and the constant supply of books and materials required makes a medical outfit more expensive than that of a cavalry officer, chargers and all.

If there is any need to harden the professional heart in regard to recovering their just dues, it is a study of the list of applicants for the British Medical Benevolent Fund, together with the reports of the financial condition of the various friendly societies, whose enormous reserve funds have practically been made out of what amounts to free medical attendance.—I am, etc.,

Ayr, North Queensland.

J. BOOTH-CLARKSON.

OLD AGE PENSION MEDICAL CERTIFICATES.

SIR,—The other day I received from the pension office of the district a batch of forms to be signed by me to the effect that the claimants were “permanently incapacitated through bodily infirmity from attending at the post office in person” to receive their pensions.

In the case of doctors situated in remote highland and island parishes this work in some cases means many miles of travelling. To whom are we to look for payment for these certificates? Would it be “infra dig.” for us to ask it from the “aged veterans of labour”? It is not “infra dig.” for postmasters to receive the sum of one shilling sterling for “filling in their papers.”

Claimants for a pension get all their other certificates free, and I notice, in reading through the Act, that in the case of all other officials who are required to do clerical or other work in connexion with this huge scheme of national pauperism provision is made for their remuneration. I have looked in vain, however, for some such clause as the following:

In the case of any old age pensioner who is permanently incapacitated through bodily infirmity from attending at a post office in person, he (or she) shall produce a medical certificate to that effect, which medical certificate the doctor shall grant free of charge.

I think the British Medical Association should draw the attention of Parliament to the omission of such a clause, in case any medical man might so far forget himself as to think he was entitled to some remuneration for granting the certificates to which I have alluded.—I am, etc.,

Shetland, Dec. 19th, 1923.

HENRY PEARSON TAYLOR.

THE EXAMINATION AND CERTIFICATION OF MENTAL PATIENTS.

SIR,—I have read Dr. James Neil's paper on the examination and certification of mental patients, in the BRITISH MEDICAL JOURNAL of October 24th, and also Dr. Cockle's

letter on the subject in the issue of November 23th, with the greatest interest.

When a member of the medical profession is asked to see an alleged lunatic it is surely his duty to make a careful examination of the patient with a view to giving advice as to treatment, and not merely to endeavour to obtain evidence upon which to base a certificate of insanity.

The all-important point that the physician has to decide is, whether the patient should be placed under control or not. The relatives, as is only natural, are usually most anxious to avoid certification, and the medical man is reluctant to urge it unless it is absolutely necessary. Insanity is a disease, and, as in all other disorders, the primary aim and object of the physician must be to obtain the best possible treatment for his patient. This in many cases can only be secured in an institution, the restraint being regarded as a part of the treatment.

Should the physician conclude from examination of the patient and information received from the friends that the patient ought to be placed under care, steps must be taken to accomplish this legally. The law requires the medical practitioner first to certify that the patient is of unsound mind and a proper person to be detained under care and treatment, and secondly to state his reasons for arriving at this conclusion.

The facts indicating insanity observed at the time of examination have to be such as will carry conviction to the mind of a layman that the patient is *non compos mentis*. In many instances facts of this character can be readily set down; but in others, though the certifying medical man may be absolutely certain that the patient ought to be placed under care, they are difficult to adduce. It is in this latter class of cases that perseverance and tact are required, and that every effort must be made to obtain material for a satisfactory certificate. Such patients often suspect the medical man, and are consequently very much on their guard in his presence, which enhances the difficulties of the situation. The existence of delusions is commonly considered, by lawyers at any rate, conclusive evidence of insanity, and hence endeavours are made to ascertain if the patient entertains any such, for the purpose of certification. Many people, however, now at large have delusions, and could very possibly be certified in consequence; but this is not done, and rightly so, because their conduct is not sufficiently affected to justify such a step. It is the conduct of the patient that determines the physician's action.

Two patients may hold precisely similar delusions. In one case it may be the duty of the medical man to make use of these delusions to certify the patient, whereas in the other such a course may be absolutely unnecessary.

If a patient is willing to enter an institution as a voluntary boarder, the necessity for immediate certification disappears. This arrangement unfortunately is only possible in the case of patients with private means, as voluntary boarders are not admitted into county asylums. The only alternative to certification for patients unable to pay is a period of probation in the workhouse infirmary.

In conclusion, the idea still unfortunately seems to be prevalent that if a medical man who has made a special study of insanity be called to see a patient he will immediately desire to certify him and have him removed to an asylum. This idea is both mischievous and erroneous and needs correction.—I am, etc.,

Usbridge.

RALPH BROWN, M.B.Lond.

THE LIMITATIONS OF A PURIN-FREE DIET.

SIR,—The purin-free diet, like many another special mode of living, owes its success to the fact that it undoubtedly suits some people remarkably well. That seems to be the best argument against its being universally suitable that we can get. Scarcely two people in any dozen, or perhaps more, whom we meet have similar food tastes or metabolic powers, and it is the little differences which count in ordering a patient's diet.

Some persons seem to have an abnormally sensitive intrahepatic circulation, quite apart from their general circulation. They are often active and nervo-sanguine, or gouty. With such persons an ounce more flesh protein than their usual amount, or a dessertspoonful of alcohol, or a little more exercise or excitement or mental study than usual, will cause hyperaemia of the liver, which produces extreme mental and physical depression. Such subjects

find their greatest safeguard of health in an almost purin-free diet. Their livers seem to act as blood reservoirs which are easily filled, and no doubt part of their languor and irritability is due to actual cerebral arterial anaemia when the reservoir is full. Very often such patients terminate the first ten days or so of a purin-free diet in an explosive bilious attack due to the suddenly lessened intrasplenic blood pressure, and with that in their minds terminate also their attempts at a continuance of their treatment. But if they persist in their attempts, after treating by blue pill, etc., the bilious condition, they do well; and it is an interesting fact that, as was lately pointed out in your correspondence, on returning to purins they find they have acquired greater tolerance for them for some considerable time.—I am, etc.,

C. W. LAWSON, M.A., L.R.C.P.S.

Rothbury, Dec. 18th, 1908.

SIR,—I glean from the last paragraph of Dr. Bryce's letter in the JOURNAL of December 12th, p. 1781, that he thinks that I have not watched my cases for a sufficient length of time to appraise the purin-free diet. May I be allowed to mention that during the last five years I have had the opportunity of watching numerous patients who have lived on the diet, for periods varying from a few months to fifteen or more years, and through my position as medical officer to a purin-free diet home, where patients are received for practical instruction in the diet, I think that I can claim a unique experience.

It is unnecessary for me to enlarge upon the superiority of a fleshless diet in athletes. The remarkable records of strength and endurance furnished by flesh abstainers have been sufficiently published.

I quite agree that the purin-free diet has its limitations. Nobody realizes that more than I do. I have been compelled to abandon it myself. But my experience of its effects will not permit me to accept Dr. Bryce's limitations.—I am, etc.,

Slough, Dec. 14th, 1908.

W. L. BOWEN DAVIES.

SIR,—My long practical experience leads me to endorse Dr. Alexander Bryce's opinions as expressed in his letter in the JOURNAL of December 12th, 1908. I have experimented upon myself with a purin-free diet with every care, and found it infinite inferior to my limited mixed diet treatment. I have also given it to patients with no better results. On the other hand, patients who have come to me and who have been on a strict purin-free diet, have greatly benefited by a carefully regulated purin and anti-purin diet. Experience has taught me, it is not so much the composition of the food eaten but the quantity which is of the utmost importance in cases of indigestion, gout, rheumatism, and many other diseases. The patient should only be allowed a mixed diet in small quantities, so that there is a distinct hunger for every meal allowed. The food should be very nutritious and of a good quality, in order that waste and faecal material is reduced as much as possible, whereby fermentation is lessened and freedom from auto-intoxication assured. A diet of this kind, with a regular action of the bowels, is all that is required to obtain the very best results of treatment by diet. The food faddists, who have grown so numerous of late years, are certainly to be condemned on general medical lines.—I am, etc.,

London, W., Jan 4th.

THOMAS DUTTON.

SIR,—Permit me to crave your kind indulgence for another letter on this subject, with especial reference to one or two statements in Dr. Haig's letter in the BRITISH MEDICAL JOURNAL of December 26th, 1908.

He appears to take it for granted, or that it is an established fact, that the healthy have no difficulty in not only subsisting on a purin-free diet, but in maintaining or even improving upon their health and vigour of constitution, if this be possible. He admits that the unhealthy may have some difficulty in tolerating the diet, but after a "considerable preliminary treatment" this disability is easily removed. That this is not the opinion of even his enthu-

siastic followers is evident from the letter of Dr. Bowen-Davies, who has "seen cases that cannot be put upon a purin-free diet, through inability to digest it."

Dr. Haig states that one cause of my bad results with this diet is patent because my patients failed to digest both proteids and carbohydrates. Now, he must surely have forgotten or failed to refer to my original paper, in which I clearly demonstrated that patients who could at the time of the institution of the purin-free diet digest all kinds of food without difficulty, were compelled after a variable time, never less than nine months, to relinquish the diet, however unwillingly, because of the accession of anaemia, diminished vigour and vitality, nasal catarrh, rheumatism, etc., and a recurrence of the chronic malady for which the diet had been prescribed, and which as a rule at first had been greatly relieved. In a previous letter Dr. Haig suggested that I had obtained those bad results because of a deliberate or unintentional diminution of proteid in the dietary. In my reply I dissipated this idea, contending that in each case the amount was carefully calculated according to his rules, but at the same time stating my belief that the damage was brought about because much of the proteid and carbohydrate they ingested failed to be digested, and remained in the colon undergoing putrefaction with consequent auto-intoxication. But this condition had not necessarily existed before they commenced a purin-free diet, and for a considerable length of time thereafter certainly did not exist, but only became evident when their vitality and powers of digestion had been weakened by a diet which, though theoretically efficient, was practically inefficient for their bodily needs. I have no hesitation in saying that the patients lost vigour as a result of their adoption of the purin-free diet under perfect conditions for testing it, and I have been greatly interested to find that since my paper was written and without any suggestion from me, my staunchest purin-free patient has quietly dropped her fleshless diet because she cannot retain her vigour upon it, even although she knows from experience she is thereby risking an attack of epilepsy.

He appears to think also that I have overlooked the fact "that there never need be more carbohydrate in a purin-free diet than in that in ordinary use." This is in reference to my own experience to cure colitis. I wonder if he will be surprised to know that I have a patient and friend who developed colitis on a purin-free diet which in my opinion contained too much carbohydrate and who is now, and has been for several years, subsisting with comfort on a vegetarian diet which contains a minimum of carbohydrate, but is by no means purin-free.

I am quite at one with Dr. Haig that excess of free purins is conducive to disease rather than to health, doubtless because of their stimulating peptogenic properties, which tend to an excessive ingestion of proteid foods, but I cannot see any reason why the bound purins in the small quantity in which they are found in our accustomed flesh foods, evidently so essential to maintain health and vigour in most people, should damage any but the most sensitive organisms, and such, of course, must be the exception.

Far be it from me to disallow the advantages of science as applied to diet, but I can hardly think that Nature should be so negligent of her duties as to compel humanity to await the results of scientific investigation on a matter so vital to its existence. Her methods of working are far different from that.

I see no reason to abandon my contention that however valuable as a method of treatment, the purin-free diet is not suited as a dietary for the ordinary purposes of nutrition in every-day life.—I am, etc.,

Birmingham, Dec. 29th, 1908.

ALEXANDER BRYCE.

"We cannot undertake to publish further letters on this subject."

The Services.

ARMY MEDICAL RESERVE.

P. C. A.—The Army Medical Reserve of Officers constituted by the Royal Warrant of 1883 was abolished by War Office Order, November 27th, 1908.

Medico-Legal.

POISONING BY FERRO-SILICON.

AN inquiry was concluded in Grimsby on December 21st, 1908, into the circumstances attending the death of five Jewish emigrants during the short sea transit between Antwerp and Grimsby. Their illness was so sudden and death so rapid that it was at first supposed that cholera might have been the cause, and appropriate measures were taken. Ptomaine poisoning was next suggested, but finally the deaths were traced to inhalation of the fumes from nine tons of ferro-silicon which the ship was carrying. This was stowed in thirty-five casks in a hold just below the cabin in which these emigrants were quartered, and on the day on which they fell ill all portholes and doors had been kept closed owing to bad weather. Evidence was given by Dr. Simpson, Medical Officer of Health for Grimsby, to the effect that *post-mortem* examination revealed symptoms indicative of death through inhalation of a poisonous gas, but no evidence of ptomaine poisoning or of any infective disease. The borough analyst said that ferro-silicon was used by steel makers and regularly imported from Belgium. It contained arsenic and phosphorus and was more liable to be affected by sea air than by land air; persons poisoned by fumes from it exhibited great thirst. On behalf of the Great Central Railway Company, to whom the ship belonged, it was stated that cargoes of ferro-silicon had been carried for many years without mishap, but some time ago it had been decided to refuse all such cargo. Acceptance of the present consignment was due to an assurance from the German manufacturers that the ferro-silicon was now manufactured by a process which eliminated all dangerous characteristics from the compound.

VALUE OF A PRACTICE.

VENDOR.—Such a practice would probably be worth from one to one and a half years' purchase.

MEDICAL ATTENDANCE ON HOTEL VISITORS.

J. B. wishes to know whether the proprietor of an hotel is not responsible for the fee if he sends for a medical man to attend to a patient staying at his hotel.

* * * When an hotel keeper sends for a doctor to attend to someone taken ill at his hotel, it is presumed that he is acting as agent for that person, who is alone responsible for the doctor's fees. It would be unreasonable to suppose that an hotel keeper intended to pay the medical expenses of a stranger staying at his hotel, and before the doctor could charge him personally he would have to get a written undertaking from him to be responsible for the medical expenses if they could not be recovered from the patient.

REMOVAL OF LUNATIC.

F. H. G.—The medical man appears to us to have just grounds for complaint on account of the discrepancy between the opinion and directions of the official with whom he communicated by telephone and the statements and action of the relieving officer, more particularly as he was put thereby to considerable and unnecessary trouble. We should be glad to know what reply is received from the Asylums Committee, and the reason for refusing to return the unused certificates. In the meantime, however, we may point out that even under a summary reception order (as provided for in Section 13) this patient would probably have been sent to a workhouse pending removal to the asylum; and also that, inasmuch as the patient in question belonged, presumably, to the "pauper" class—that is, he was "in such circumstances as to require relief for his proper care"—his certification and disposal would be decided most properly by the parochial authorities.

LONG CYCLING ROUNDS.

EIGHT YEARS AN ASSISTANT asks: (1) Can an assistant be reasonably expected to cycle a round of ten or fifteen miles in the rain, on heavy roads, in an exceedingly hilly country district, and this on several days a week throughout the winter? (2) Is a principal bound to provide means of conveyance for an assistant over long distances?

* * * (1) A principal usually expects an assistant to do what he is in the habit of doing himself. If the round complained of is one that the principal would do himself, if he were without an assistant, there would appear to be nothing unreasonable in the latter being expected to do it. It is presumed that both principal and assistant are fairly good cyclists, and that the latter was informed at the time of his engagement that much of the work would have to be done on a bicycle. (2) Not if the distance could be reasonably done on a bicycle. In all these cases the principal must decide as to what is reasonable and what is not. If the assistant disagrees with him, he has only one remedy, and that is to terminate his engagement.

THE TITLE OF M.D.

M.D.BRUX. inquires whether it is the "correct thing" for a medical practitioner to put "M.D. M.R.C.S." when the "M.D." is that given by the University of Brussels.

* * * This has always been a point of contention in the profession, but in the light of modern decisions it would appear that there is nothing illegal in such a practice. The only instance in which this point has come before the law courts without complications was in *Ellis v. Kelly* (30 L.J., 35), where a practitioner was prosecuted for calling himself "M.D." on the strength of possessing the M.D. Erlangen, being at the same time a registered practitioner with the M.R.C.S., L.S.A. Eng. The bench of magistrates before whom the case first came refused to convict, and, on appeal, the Divisional Court upheld their decision. There are abundant precedents for the practice among men of high standing as may be seen by looking through the *Medical Directory*.

AGREEMENT TO PURCHASE A PRACTICE.

MUTANS asks for information regarding the following points as to the purchase of a practice (death vacancy): (1) Does the vendor bear the cost of the agreement and a copy for the purchaser, or is the cost shared equally? (2) On drawing up a legal agreement, what stamp duty is required? (3) When book debts are included in the purchase, if the purchaser does not sign the agreement till a fortnight after the death, nor assume charge of the practice for three weeks, a locum-tenent of the vendor being in charge in the meanwhile, can book debts be collected in the interval by the vendor, or must outstanding debts at the death be left and turned over to the purchaser? (4) To whom belong the earnings of the locum-tenent in the interval?

* * * (1) The purchaser pays all the costs of the assignment of the practice, unless otherwise agreed, and in everything else the expenses are either shared between the parties equally or each pays his own costs. (2) This depends on whether there is a monetary consideration in the agreement or not. If not, a sixpenny stamp is all that is required; but if there is a pecuniary consideration the stamp must be *ad valorem*—that is, it will vary according to the amount of such consideration. (3) (4) All these points depend on the wording of the agreement, and the date of the signature is immaterial. It should be clearly stated in the agreement whether the purchaser takes the practice from the death of his predecessor or from the date of signing the agreement. The answer to the points raised will depend entirely on what was agreed to in this respect.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

DUTIES OF CERTIFYING FACTORY SURGEONS.

PRIVATE.—In the instructions issued by the Secretary of State to certifying factory surgeons it is stated that "the duty assigned to the certifying surgeon in respect to an accident will not authorize any interference with the medical or surgical treatment of the person injured." It is not uncommon, however, for the factory surgeon to fill other duties at a works, for which he gets separately remunerated, and it appears possible that some such arrangement might have been the reason for the action of the particular factory surgeon alluded to. Our correspondent should ascertain in what capacity the certifying surgeon acted.

CERTIFICATES FOR INSURANCE PATIENTS.

POLICE writes that he attended a poor patient with cancer for some months and has since been asked by a relative who insured the deceased to inform the insurance company how long the patient had been ill. This he declined to do on the ground that no medical examination having been made he thought the insurance company should pay for the information. He asks for advice as to the proper course to pursue with due consideration for the interests of the relatives who he believes have acted in good faith. The parties concerned are very poor, and unable to pay any adequate fee for a certificate.

* * * It is true that some industrial insurance companies take no precautions to ascertain that the person is in good health when insured and accept policies through their agents, which are illegal on account of the absence of "insurable interest," but if they will not pay the claim without obtaining certain information, the medical attendant must remember that if he refuses to give it to a duly authorized person, the family and not the company suffer.

THE RELATION OF MEDICAL PRACTITIONERS TO ADVERTISING INSTITUTIONS.

Z. asks: What is the exact medico-ethical position of: (1) A practitioner who holds the post of consulting physician to an institution which advertises cures by light or radiant heat? (2) The consultant to establishments for the cure of obesity, intemperance, morphinism, etc.? (3) To those employed as medical advisers by patent medicine vendors?

* * No general rule can be laid down with regard to the first and second queries except that the advertising should be confined to the medical press or to circulars in prospectuses sent to the medical profession. With regard to the third question, in our opinion a medical practitioner who accepts such a position must be indifferent to any consideration of medical ethics.

MEDICAL ADVERTISING.

A CORRESPONDENT sends us a handbill and a small poster advertising a smoking concert to be held by the "Victoria Cross Tradesmen's Society," which is apparently a provident institution to provide medical attendance, sick pay, and life insurance "for the small cost of 4s., or less than a penny a week," and the medical adviser's name is printed on both.

* * This is on all fours with a case brought before the General Medical Council in November, 1900 (Minutes of the General Medical Council, vol. xxxvii, p. 119, which ended by the defendant severing his connexion with the institution. It ought to be generally known that such advertisements of clubs and benefit societies are not permitted.

CANVASSING.

QUERO writes: "A. B. having taken a house in an outlying part of a town where resident doctors are scarce and the population poor, has employed a man to canvass for him to get members of a weekly payment medical club. The canvasser has instructions not to canvass persons who are in a similar club belonging to X. Y. who lives at a distance, but keeps a resident assistant in the neighbourhood where A. B. lives. Is A. B. acting in any way unprofessionally, or so as to exclude him from membership of the British Medical Association?"

* * Canvassing is distinctly contrary to the resolution of the General Medical Council dated December 1st, 1905, by which the profession were warned that canvassing renders the practitioner resorting to it liable to be charged with infamous conduct in a professional respect, and we think that it would be a bar to membership of the British Medical Association if the facts were brought to the notice of the body asked to elect.

PROFESSIONAL SECRECY.

H. A. L. writes: "A. is consulted by B., a nurse who has acquired the morphia habit. B. is a member of a nursing organization but is not at present on duty. She is anxious to break off the habit, but will not consent to the secret being divulged. What is A.'s duty—(1) respecting the secret; (2) respecting the treatment; (3) respecting B.'s work?"

* * (1) It does not appear in any way to be A.'s duty to violate the established rule of professional secrecy. (2) He should carry out the treatment to the best of his ability. (3) He should advise B. to give up her work while under treatment as it is difficult to believe that it would be successful unless she were under control.

GRATUITOUS ATTENDANCE ON DOCTORS.

H. C. M. (Jersey) writes: "Perhaps you may be willing to allow me a few lines in relation to the matter under the above heading in the BRITISH MEDICAL JOURNAL of December 25th, 1908. I have, indeed, no desire or intention to discuss the principles involved, especially having regard to the fact that the views expressed editorially in the JOURNAL upon so many occasions, in response to appeals, have been, I think, we should all consider eminently reasonable, as well as fair and just to all concerned. Also because, with some knowledge of our profession to guide me, I venture to hold that, among our many failings, want of generosity towards each other in sickness or accident is not one that can with justice be brought against us. I think, however, it may not be without interest to recall how a celebrated physician of the past—I believe Dr. William Abercrombie—acted upon an occasion in which, as he considered, no doubt or difficulty arose upon the question of fee. The little incident was one which that good man and excellent practitioner of the old school, the late Dr. William Dumbreck, of Edinburgh, was fond of narrating to his pupils. It appeared that Dr. Dumbreck, early in his career, had occasion to consult Dr. Abercrombie about himself, and at the conclusion of the consultation ventured, though with some diffidence, to suggest a fee. Said the great man, turning upon his young confère with kindly indignation, "What, sir! What, sir! offer me a fee! Do you think me a cannibal, preying upon my own flesh and blood! Do you think me a cannibal?"

THE ARMS OF THE UNIVERSITY OF EDINBURGH.

M. I.—Stationery bearing the arms of the university is commonly sold in Edinburgh for the use of students, and by no means implies that the user is a graduate. There is, however, a distinction between the use of it in Edinburgh and elsewhere, especially in the case of a non-graduate, but it is possible that in this case the individual is merely using what is left of a supply purchased in Scotland.

Universities and Colleges.

UNIVERSITY OF OXFORD.

The following degrees have been conferred in Medicine and Science:

D.M.—H. W. Kave, Magdalen.

D.Sc.—H. L. Bowdler, New.

B.M., B.Ch.—M. Davidson, Trinity; H. E. Gibson, Queen's; G. D. H. Carpenter, non-collegiate; J. F. Horsey, Wadham; H. M. C. Green, Wadham; O. L. V. de Wesselow, Corpus Christi.

D.Sc.—M. Spote, non-collegiate; H. E. Cockesedge, Keble.

UNIVERSITY OF LONDON.

MEETING OF THE SENATE.

A MEETING of the Senate was held on December 16th, 1908.

Recognition of Teachers.

The following were among those recognized as teachers of the university in the subjects and schools indicated:

King's College.—Dr. St. Clair Thomson (Laryngology).

Middlesex Hospital.—Dr. Victor Bonney (Midwifery and Diseases of Women); Dr. John Cameron (Anatomy); London School of Medicine for Women.—Dr. E. F. Buzzard (Pathology); Miss Mabel E. Gates (Anaesthetics); Dr. T. B. Hyslop (Mental Diseases); Mrs. Florence E. Willey (Midwifery and Diseases of Women).

St. George's Hospital.—Mr. Thomas S. Kerr (Tropical Medicine).

London Hospital.—Dr. Wilfred J. Hadley (Medicine); Mr. Jonathan Hutchinson (Surgery); Dr. Wm. Wright (Anatomy).

St. Mary's Hospital.—Mr. C. Irving Graham (Laryngology); Dr. G. William Hill (Laryngology).

National Hospital for the Paralyzed and Epileptic.—Mr. T. Grainger Stewart (Clinical Medicine).

Registration of Internal Students.

It was resolved that the following be added to the end of the note on page 3 of the Red Book, September, 1908:

Students whose names have been returned by the authorities of a school or institution as having discontinued attendance at an approved course of study and whose names have consequently been removed from the register of internal students may be re-registered, after notification by the authorities of a school or institution that they have resumed an approved course of study. Fees payable in respect of late applications for re-registration will be on the same scale as those payable in respect of late applications for registration.

Regulations as to Approved Courses of Study.

It was resolved that Section 12 of the General Regulations as to approved courses of study (Red Book, September, 1908, p. 7) be amended to read as follows:

A student's attendance at an instruction course as prescribed under Regulation 6 may be exceptionally relaxed with the approval of the Academic Council and of the school or institution to which he is attached, provided that (a) his attendance for the whole course of study does not fall below the minimum prescribed in the schedule to these regulations, if any, and (b) his attendance at the instruction course, though not satisfying the requirements contained in Regulation 5, is in the opinion of the certifying authority sufficient for the student in question. Applications for exemption under this regulation must be made not later than the end of the first term of the session in respect of which such exemption is desired.

(The amendment consists in the words printed in italics.)

Regulation for the B.Sc. (Honours) Degree for Internal Students.

It was resolved that the following be inserted in the regulations for internal students after the fifth paragraph under the heading "B.Sc. (Honours) Degree" (Red Book, September, 1908, p. 198), and after the second paragraph on page 64:

Students who have taken the B.A. (Honours) degree in mathematics as internal students, and have passed the Intermediate Examination in Science for internal students, will not be required to pursue any further approved course of study before being admitted to the B.Sc. (Honours) Examination in mathematics as internal students.

Regulations for the Matriculation Examination.

It was resolved that the regulations for the Matriculation Examination be amended in the following particulars (Calendar, 1908-9):

(a) Page 241, line 1, omit the words "from the list."

(b) Page 241, omit the starred languages.

* Application made in view of change of status of applicant.

(c) Page 241, after the words "elementary biology-zoology" insert the following:

A candidate desirous of offering any language or languages other than those named above should submit his proposal for the consideration of the Matriculation Board. The normal notice of such proposal is six months before the beginning of the matriculation examination for which he enters. Candidates giving less than six months' notice are advised that it may not be possible to make arrangements for papers to be set at the next matriculation examination even though the language be approved.

Proposals to take a particular language, other than those mentioned above, must be accompanied by a special fee, additional to the regular matriculation fee of £2. This fee will be returned should the proposed language not be accepted by the Matriculation Board, but in no other case. The amount of this additional fee varies with the language selected, and can be ascertained on application to the External Registrar.

(d) Pages 243-4 omit the syllabuses of the examination in Spanish, Portuguese, Italian, Modern Dutch, Arabic, Hebrew, Sanskrit, and Chinese.

Military Education Committee.

A committee was appointed to control, under the direction of the Senate and in accordance with the War Office Regulations, the university contingent of the Officers' Training Corps.

Appointments.

Sir William Collins, M.D. M.S., M.P., was appointed a member of the University College Committee for the remainder of the period 1903-9, vice Dr. S. Russell Wells, resigned.

Dr. Frederick Taylor was appointed a member of the council for external students for the remainder of the period 1903-9, vice Mr. Mackinder, M.A., resigned.

Sir William L. Alcock was reappointed a governor of the Maidstone Grammar School.

The Senate have, at the request of the Kent Education Committee, nominated Dr. W. B. Warle (Tunbridge Wells and Southborough) a member of the local Higher Education Subcommittee.

Gilchrist Studentship for Women.

The Gilchrist studentship of £100 tenable for one year by a graduate of the university who is prepared to take a course of study in an approved institution in preparation for some profession, will shortly be awarded. Applications must reach the Principal not later than February 28th, 1909.

Advanced Lectures in Physiology.

The following courses of advanced lectures in physiology will be delivered during the second term:

1. Eight lectures on the chemistry of food by S. B. Schryver, D.Sc., Ph.D., at University College on Fridays at 5 p.m., commencing on January 22nd.

2. Four lectures on some practical methods employed in physiological chemistry by R. H. A. Plimmer, D.Sc., at University College on Wednesdays at 5 p.m., beginning on February 5th.

3. Two lectures on the evolution of function in the human brain in relation to structure by Dr. F. W. Mott, F.R.S., at King's College on Mondays at 4.30 p.m., beginning on February 8th.

4. Eight lectures on the regulation of body temperature by Dr. M. S. Pembrey, M.A., at Guy's Hospital Medical School on Thursdays at 4 p.m., beginning on January 14th.

5. Eight lectures on prophylaxis against infection by Dr. W. Bulloch at the London Hospital Medical College on Fridays at 4.30 p.m., beginning on January 15th.

Courses 1, 4, and 5 have been recognized by the Senate as courses of advanced lectures which a candidate at the B.Sc. (Honours) examination in physiology may name for part of his practical examination.

The course of four lectures on the secretion of urine by Professor T. G. Brodie, M.D., F.R.S., originally announced for the second term, has been postponed to the third term, and will be given at King's College on Mondays at 4 p.m., beginning on June 7th.

Advanced Lectures in Zoology.

The following courses of advanced lectures in zoology have been arranged for the second term:

1. Three lectures on the anatomy and zoological relation of the antrophony species by Dr. Arthur Keith, to be given in the theatre of the Royal College of Surgeons, Lincoln's Inn Fields, on January 15th, 21st, and 29th, at 5 p.m.

2. Two lectures on problems of lake fauna, with special reference to the lakes of Africa, by Dr. W. A. Cunningham, B.A., Ph.D.; details of time and place to be announced later.

The lectures are addressed to advanced students of the university and others interested in the subjects dealt with; admission free without tickets.

Chadwick Lectures on Hygiene and Municipal Engineering.

Dr. Louis C. Parkes will deliver at University College the courses of three Chadwick lectures on the medical aspects of recent advances in hygiene as connected with sewerage on Tuesdays at 4 p.m., beginning on February 2nd.

UNIVERSITY OF EDINBURGH.

ANNUAL REPORT FOR 1908.

Number of Students.

DURING the past year the total number of matriculated students (including 595 women) was 3,323, being 48 more than the number for last year, and the highest number reached for seventeen years. Of these 1,156 (including 505 women) were enrolled in the Faculty of Arts, 295 (including 16 women) in the Faculty of Science, and 1,490 (including 59 women) in the Faculty of Medicine. Of the students of medicine, 667, or nearly 45 per cent., belonged to Scotland; 281, or 19 per cent., were from England and Wales; 132 from Ireland; 76 from India; 306, or about 20 per cent., from British colonies; and 28 from foreign countries. These figures show that the proportion of non-Scottish students of medicine is well maintained; and it is worthy of note that the number of Colonial students exceeds by 34 the highest number reached at any time during the last twenty years.

Degrees Conferred.

The following degrees were conferred during 1908: Master of Arts (M.A.), 182 (including 92 women); Bachelor of Science (B.Sc.), 47 (including 4 women); Doctor of Science (D.Sc.), 4; Bachelor of Medicine and Master in Surgery (M.B., C.M.), 4; Bachelor of Medicine and Bachelor of Surgery (M.B., Ch.B.), 184 (including 19 women); Doctor of Medicine (M.D.), 76 (including 3 women).

The General Council of the University now numbers 10,579.

Fellowships, etc.

The total annual value of the University Fellowships, scholarships, bursaries, and prizes now amounts to about £18,650—namely, in the Faculty of Arts, £11,045; in the Faculty of Science, £1,545; and in the Faculty of Medicine, £3,730. A number of bursaries are in the gift of private patrons, but the great majority of the university bursaries, prizes, etc., are awarded by the Senatus after competitive examination. In addition to the above, a sum of upwards of £660, being the income of the Earl of Moray Endowment Fund, is annually available for the encouragement of original research.

Lectureships, New Courses, etc.

New lectureships have been instituted by the University Court as follows: Mr. R. Stewart MacDougall has been appointed Lecturer in Botany, to give courses of instruction in that subject to men and women students of arts and science. Mr. J. P. Mackenzie, D.Sc., has been appointed to deliver a course of lectures on chemistry to women students in the faculties of arts and science; while Mr. A. C. Cumming, D.Sc., has also become a lecturer in the department of chemistry. The University Court has instituted a lectureship in the history of medicine, and Mr. J. D. Comrie, M.A., B.Sc., M.D., who has been appointed lecturer, is expected to deliver part of the first course before the opening of the present winter session, and the remainder in the summer session. Mr. G. M. Kinnear has been appointed joint lecturer with Dr. T. S. Clouston in mental diseases. Lastly, Messrs. J. M. Cotterill, M.B., C.M., F.R.C.S.E., and J. W. B. Holdson, M.D., F.R.C.S.E., have been appointed Lecturers on Clinical Surgery.

Early in the year several special short courses of lectures were given—one on Sugars; another on The Synthetic Dye Stuff; by Dr. J. E. Mackenzie; Heredity, by Dr. F. H. A. Marshall; Protein Metabolism, by Dr. W. Cramer; Chemistry of Colloids, by Dr. W. W. Taylor; Physiological Aspects of Immunity Problems, by Dr. James Ritchie; Sensory Conduction in Cord, by Dr. Sutherland Simpson.

Personal Changes.

The vacancy caused by the death of Professor Annandale in December, 1907, was filled in June by the appointment of Mr. Francis M. Caird, M.B., C.M., as Regius Professor of Clinical Surgery. At the close of the summer session Professor Cram Brown, then the senior member of the professoriate, resigned the Chair of Chemistry, and was succeeded by Mr. James Walker, D.Sc., Ph.D., formerly Professor of Chemistry in University College, Dundee. Numerous changes in the staff of lecturers, in addition to those already noted, have occurred. Mr. J. W. Bews, M.A., B.Sc., has been appointed lecturer on plant physiology, in room of Dr. A. W. Borthwick. Dr. Harold Pringle succeeds Dr. P. T. Herring, and Mr. W. A. Jolly, M.B., Dr. Sutherland Simpson, as lecturers on histology and experimental physiology respectively. Dr. G. H. Melville Dunlop is successor to Dr. T. M. Burn Murdoch in the lectureship on diseases of children; Major D. G. Marshall, M.B., F.R.S., succeeds Brigade Surgeon Lieutenant Colonel James Arnott as lecturer on diseases of tropical climates; and Dr. Alexander James, Dr. J. O. Affleck, as lecturer on infective fevers.

Structural Changes.

Further progress has been made in adapting to other purposes the rooms in the old buildings vacated by the Natural Philosophy and Engineering Departments on their removal to the new laboratories in Infirmary Street. The upper floor of the old Natural Philosophy Department has, by the elevation of the roof, afforded three good class-rooms, and a women students' reading-room, for the joint use of the Mathematics and Geography Department, and also for teaching military subjects. A handsome room, long used in connection with the Zoology Department, has been adapted as a meeting room, much-felt want by providing a second examination room. An additional room in the new Natural Philosophy building has also

been obtained for the practical training of teachers in Physics. The Dunlop Scholarship Fund has increased so as to permit of the institution of an additional scholarship in the faculty of medicine. There are now twenty-four scholarships in all on this foundation, each of the annual value of about £100.

Additions to the Library.

Additions to the University library for 1908 numbered 5,182.

Benefactions, etc.

By the scheme of allocation lately intimated by the Carnegie Trust for the second quinquennial period provision is made towards certain of the needs of the university, especially in regard to the endowment of lectureships, the purchase of books for the library, buildings, permanent equipment, and apparatus. The Right Hon. William McEwan, LL.D., has given a sum of £5,450 as an endowment for the expenses of upkeep of the McEwan Hall. A grant of £400 has been made by the Combe Trustees, in addition to sums already given, for the purchase of apparatus in connexion with the George Combe Lectureship in General and Experimental Psychology.

Faculty of Medicine.

Several important changes have been made in connexion with the new regulations for graduation in medicine and surgery, which were passed in 1907. The classes in the Faculty of Medicine now open at the beginning of October, instead of, as formerly, about the middle of that month; degree examinations in all the subjects now take place in December; and a graduation ceremonial will be held before Christmas. Accommodation was again given in September, for a scheme of post-graduate courses in medicine, held under the joint auspices of the university and the Royal College of Physicians and Surgeons, and both of these schemes proved highly successful.

DEGREES.

THE following degrees were conferred on December 19th, 1908:

M.B., CH.B.—Girdhari Lal Batra, H. Blyth, J. Brander, J. A. Browne, F.A.; H. B. Caldwell, J. A. B. Carroll, G. H. Lart, Margaret Davidson, J. T. Dickson, W. J. Duncan, W. G. Evans, Helen Forbes, P. J. E. Garvey, H. R. B. Gibson, A. B. Gordon, W. B. Grant, G. R. Gray, R. D. L. Greene, J. A. V. Hackett, J. K. Hamilton, M.A., St. G. M. L. Homan, H. Hutson, W. P. S. Johnson, E. W. Kirk, F. R. Leake, J. Lambell, C. L. Laurent, J. S. Leavack, N. F. Lloyd, C. L. Lowe, Margaret McEwan, J. V. MacDonald, R. MacDonald, G. D. McIvor, W. J. McKeand, D. L. McKenna, Ade J. Macmillan, H. D. McPhail, M.A.; W. J. F. Mayne, A. P. Miller, J. Montgomerie, R. Nehru, N. S. Neil, C. T. H. Newton, J. G. Nicholson, M.A.; E. F. W. Nixey, P. G. Palmer, M. D. Rees, D. Ross, Marguerite Ross, D. H. Russell, E. W. Smerdon, H. M. Spoor, L. D. Stephen, W. Stobie, E. A. Strachan, Alice M. Thompson, N. G. Thornley, Helen M'G. Wakefield, W. H. de Water, A. White, R. C. Wuppermann.

UNIVERSITIES OF MANCHESTER, LEEDS, AND SHEFFIELD.

JOINT MATRICULATION BOARD.

THE Joint Matriculation Board of the four universities of Manchester, Liverpool, Leeds, and Sheffield has just issued its report for the year 1908. The board conducts the matriculation examination on behalf of the four universities, and in the past year for the first time the examination has been held under the supervision of education authorities at eight local centres, at which 127 candidates presented themselves. The examination was also taken as a form examination at 28 schools. The total number of candidates at the July examination was 1,695, against 1,294 in the previous July, while in September the number was 519, against 438 in the previous year. As many candidates take the examination a year before they leave school, those who hold the certificates are now allowed to present themselves in a few subjects at the higher standard for supplementary certificates. On behalf of the education committees of Lancashire and Cheshire, the Board has conducted examinations for the award of senior exhibitions and intermediate scholarships offered by these committees. It has also formulated a scheme, which has been accepted by the four universities, for the inspection and examination of schools. The offices of the board have now been removed from Owens College to premises in Dover Street, which is close to the college.

Obituary.

CHARLES COPPINGER, M.D., F.R.C.S.I.,

EMERITUS PROFESSOR IN THE CATHOLIC UNIVERSITY MEDICAL SCHOOL, DUBLIN.

We have to record with very much regret the death of Mr. Charles Coppinger, which occurred in Dublin last week, after a very long period of defective health.

Mr. Coppinger was Surgeon to the Mater Misericordiae Hospital until a few years ago, when he retired from that position. He was also Professor of Physiology in the Catholic University Medical School, and on retiring from his work there he was appointed Emeritus Professor of the Institutes of Medicine. For some years he was a Fellow of the Royal University, and an Examiner in Physiology in that institution. In the Mater Hospital

Mr. Coppinger was for many years a most successful operator, and an energetic and popular clinical teacher. He was one of the few men who have successfully tied the innominate artery. He also did a great deal of very successful joint surgery. In earlier days he was a well-known microscopist. He was a thorough and devoted worker, but for some time he had practically retired owing to continued ill-health. He was naturally of gentle and retiring disposition, but his work was sound and advanced, and he merited greater prominence in his profession than he attained. His pupils and the other friends whom he attached by his kindness and professional knowledge and skill will learn of his death with extreme regret.

Mr. Coppinger, who was unmarried, qualified in 1869. He subsequently became a Fellow of the Royal College of Surgeons and M.D. of the Royal University.

CHARLES KNOTT, M.R.C.P. EDIN.,

PORTSMOUTH.

ON December 29th, 1908, Dr. Charles Knott, of Portsmouth, passed peacefully away. On Christmas Eve he had an apoplectic seizure, and in the intervening days did not recover consciousness. He had been out of health and even ill for some time past, so that his death was not entirely unexpected; nevertheless, its occurrence has been a shock to a locality in which he was as well known as he was highly esteemed, and will be the cause of deep and lasting regret to many in Portsmouth and elsewhere. He received his medical education at Guy's Hospital, becoming M.R.C.S. Eng. and L.R.C.P. Edin. in 1872, being admitted later on to the membership of the latter college. He settled in Portsmouth immediately after receiving his first diploma, and remained steadily at work in the district until late last year, or, in all, for a period of thirty-six years. During the whole of this time he was closely connected with the Poor-law work of Portsmouth, first as a Parish Medical Officer, and for the last twenty years as Medical Superintendent of the workhouse and its infirmary. When he first took over the latter institution it was a workhouse infirmary of the ordinary type of the time, and by no means realized Dr. Knott's conception of what an infirmary should be. He therefore set to work to bring about reforms, and long before he died had been rewarded by a great measure of success, the nursing school which he organized and controlled at the infirmary being of great advantage to the inmates of the infirmary and a credit to Poor-law nursing in general. Poor-law work, however, was by no means his only occupation; he also carried on a large and successful general practice, and held many appointments.

Among other things, he was Chairman of the Portsmouth Centre of the St. John Ambulance Association, a Lecturer to the same body, Medical Referee of Her Majesty's Customs Fund, Medical Officer of Health for Langport and to the Portsea Union House and Schools, and also held until last year a commission in the 3rd Volunteer Battalion of the Hampshire Regiment. He joined this force in 1882, raised and trained an excellent bearer company, received the Volunteer Decoration, and eventually became Surgeon-Colonel, retiring on the transformation of the battalion into the 6th Hampshire Territorials. His connexion with the St. John Ambulance Association was also long, and his services to it so marked that a few years ago he was honoured by being appointed a Knight of Grace.

For several years he held a seat on the Portsmouth School Board, and throughout his career exhibited a constant interest in children. His sympathy with young people may, indeed, be regarded as one of his strongest characteristics, and it was, perhaps, as much for their sake as in honour of Charles Dickens—whose birthplace was Portsmouth—that he set himself to work on a task the achievement of which he regarded with great satisfaction—namely, the raising of a fund for the maintenance of the "Tiny Tim" bed at his old hospital, Guy's.

Popular as was Dr. Charles Knott with the general public, he was equally esteemed by his professional brethren, and some eight years ago, when the British Medical Association held its annual meeting in Portsmouth, he was President of the Southern Branch. He was, indeed, one of the original members of this Branch, and maintained his interest in the affairs of the Association right up to the end.

Dr. G. P. M. WOODWARD, who died recently at Sydney, was the son of the late Mr. Wm. Woodward, of Clough Prior Castle, co. Tipperary. He obtained the diploma of L.R.C.S.I. in 1850, and that of L.R.C.P.I. in the following year, taking the Fellowship of the Royal College of Surgeons in Ireland in 1879. He joined the Ordnance Department of the army in 1851, and in December, 1853, was promoted surgeon from the Royal Artillery, with which regiment he had served in the Crimea, including the siege and fall of Sebastopol, receiving a medal with clasp, and the Turkish medal. Dr. Woodward again saw active service, this time with the Royal Horse Artillery, during the Indian Mutiny in pursuit of Tantia Topce in Central India in 1858-9, for which he received a medal; he also held the medal for service throughout the Abyssinian campaign of 1867-8 as a staff surgeon in charge of the hospital ship *Mauritius*. He retired with the honorary rank of Deputy Surgeon-General in 1877. Dr. Woodward went to Australia, and about 1882 joined the medical staff of the railways, with which he retained connexion until his death. The railway department was well represented at the funeral on October 6th.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. M. N. Popoff, Professor of Neurology and Psychiatry in the University of Tomsk; Dr. D. J. Kurajeff, Professor of Medical Chemistry in the University of Charkoff; Dr. Epiphany Marques, Emeritus Professor in the Medical Faculty of the University of Coimbra, Portugal, administrator of the hospitals of the university, and author of some works on medical subjects; Dr. E. Delbet, Member of the Chamber of Deputies for the Seine-et-Marne; and Dr. René Blache, Member of the Académie de Médecine, General Treasurer of the French Medical Association.

Public Health

AND

POOR-LAW MEDICAL SERVICES.

SANITATION IN THE COUNTY OF DURHAM.

ALTHOUGH county councils possess very little active power over defaulting sanitary authorities, they are armed with means for putting into action the powers of the Local Government Board. Complaint may be made by a county council under Sec. 299 of the Public Health Act, 1875, if in the opinion of the council an authority is not providing its district with sufficient sewers, is not maintaining those which do exist, is not providing a sufficient water supply, or in other ways is not enforcing the provisions of the Act of 1875. Very few county councils have taken advantage of this section, and some of those who have seem to have met in some instances with only scanty support from the central authority.

The county council of Durham was among the first to use the section for the purpose of hastening public health reforms within the county, and, in spite of rebuffs, is continuing this course of action. The recently issued report to the Local Government Board of Dr. R. J. Reece gives an account of the circumstances which induced the county council to make complaint in July, 1906, of the default of the Hebburn Urban District Council. During the two years which had elapsed between the date of the complaint and the inspection of the district by Dr. Reece, a certain amount of activity had been displayed by the district council, and he had principally to inquire into the defaults of the council in not putting into force its powers with respect to insanitary houses and out-offices. In 1901 there were 2,784 houses in Hebburn, and of these nearly 700 are owned by the Hebburn Colliery Company. It is with these last, of which about 150 are said to be in an insanitary condition, that the greatest difficulties have arisen. The cost of working the colliery is very great, on account of the large amount of pumping necessary, and the thicker seams of coal are getting exhausted. No dividends have been paid to the ordinary shareholders, and at any time the directors may consider the desirability of closing the colliery. The company's houses are occupied by the colliers rent free, and if they are turned out of the worst houses the company would be required to pay a rent allowance, amounting in the aggregate to £1,000 per annum, in accordance with the custom in the Durham coalfields. The question of improved dwellings is thus complicated in a manner not to be found except in the coalfields of Durham and Northumberland; but there can be no doubt that the inspection which has been made by Dr. Reece and the report which has resulted from that inspection will go some way towards creating improved conditions, for it is written in a most reasonable and judicious spirit, which cannot fail to be appreciated by those who are most intimately concerned in the welfare of the district.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL CHANGE OF ADDRESS.

THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL have been removed to 429, Strand.

COMMUNICATIONS respecting Editorial matters should be addressed to THE EDITOR, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, London, W.C.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Asiologia, London*. The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

TELEPHONS (National).—

EDITOR,

2631, Gerrard.

GENERAL SECRETARY AND MANAGER,

2630, Gerrard.

MEDICAL SECRETARY, 2634, Gerrard.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE REFERRED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

W. B. would be glad of references to papers giving most up-to-date information as to the treatment of phthisis by tuberculin, by cinchinate of sodium, by serums, and by graduated exercise, as at the sanatorium in connexion with Brompton.

DIRTY HEADS AND FOOD FACTORIES.

TRANSFORTHANA writes: As a medical inspector of public schools I have, in common with others, had an eye- opener regarding the prevalence of lice and nits in girls' heads. I am a M.O.H. and an inspector of factories. In one school, where food products are made, many "young persons" are employed. Is it my duty to examine these girls' heads; and if lice and nits are found, ought I to reject the candidates? The factor does not consider himself "responsible for the health of the girls in his employ," but expects the M.O.H. to do what is "right and necessary under the Act."

TYPHOID FEVER AND INTESTINAL INFECTIONS.

DR. C. L. FRASER, F.R.C.P., F.R.C.S. Edin. (Berwick-on-Tweed), writes: During the past year it has been my fortune to meet with several cases which presented all or nearly all of the characteristic symptoms of enteric fever. The clinical picture in each instance was as nearly perfect as it is possible to portray the disease, and speaking clinically no doctor of average M.O.H. and an inspector of factories. In one school, where food products are made, many "young persons" are employed. Is it my duty to examine these girls' heads; and if lice and nits are found, ought I to reject the candidates? The factor does not consider himself "responsible for the health of the girls in his employ," but expects the M.O.H. to do what is "right and necessary under the Act."

FORENSIC ASPECTS OF MENSTRUATION AND PREGNANCY.

DR. HORACE G. COLE (Liverpool) writes: Apropos of your article in the JOURNAL of December 12th, 1908, some of your readers, especially those of a psychologically obstetrical turn of mind, might be interested in a case which I am attending. The patient is a healthy woman, aged 33, who has been married nearly a year. Before marriage the catamenia were regular, painless, usually lasted a week, and were unaccompanied by any special psychoses. Before marriage took place it was noticed that the lady became irritable at times. This irritability did not incapacitate her for work, and, indeed, would not be noticed except by those with whom she was very intimate. Ten days after marriage the patient became quite choleric, the fit of angry temper being occasioned by some trifling matter. A week later she menstruated. The same thing—that is, irritability of temper—happened the next three times in each case a week previous to menstruation. Three weeks after the last period she spent the greater part of the night in a nearly hysterical condition. She absolutely refused to give any reason for her laceration. She did not menstruate that month, nor has she done so since. She is expecting her confinement shortly. With the exception of psychical disturbances, pregnancy has run an uninterrupted and typical course; but in regular periodicity these cerebral explosions have taken place. If the patient recollects before-hand, she is able to conquer her animosity to her husband, but, instead, becomes intensely miserable and cries for days at times. At the last attack, during her husband's absence, she had a great desire to open a vein with a pair of scissors—she could think of no other way of getting rid of herself—but decided it might hurt! This has been the only suggestion of suicide in the case. The above data were given to me by the husband; but he seems a very observant man, and there is no reason to doubt his veracity. Both he and his wife seem greatly attached to one another, and he is anxious about the future. I should be glad if readers would offer some suggestions as to treatment.

INCOME TAX.

TAXPAYER writes, with reference to an answer given to him in the BRITISH MEDICAL JOURNAL for December 12th, 1908: If profits of practice are, say, £410, there is an abatement on £150 of this. If in addition to this there is private income of, say, self £200, and wife £50 all of which £250 has already had tax deducted before dividends are received, the total income is assessed at £410+£200+£50=£660, and abatement allowed only on £70—(1) Is this assessment correct? (2) Or can abatement on £150 be properly claimed? or (3) return of tax on the £250 private income be properly claimed? and (4) in case of either (2) or (3) how long after assessment can claim be made by the taxpayer, and what arrears of charges can be recovered?

* (1) The correct assessment is £410, less £70 abatement—that is, £340. The answers to the remaining questions are: (2) No. (3) No. (4) No reply is necessary.

HIRDO writes: Can I appeal against my assessment on the ground that my income for the three previous years has not been taken into account? I am now assistant at £200 a year, and my income up to April, 1909, was returned as that, but previously my incomes as house-surgeon, locum, etc., were £60, £100, £75, an average of £78 1/3 per annum. . . Is it worth while appealing, apart from the fact that only 30s. is in question?

* The time for objecting to the assessment has gone by, and, unless the Commissioners are willing to hear an appeal, our correspondent is out of court. If the Commissioners permit an appeal to be made, the question raised is one for them to determine. It is probable that they would allow the average to be taken as claimed by our correspondent. If, however, they take the opposite view, the case does not appear to be of sufficient importance to make it worth while to contest the decision of the Commissioners in the High Court.

ANSWERS.

R. S. H.—A lecture by Dr. G. E. Herman in which the treatment of retroversion and retroflexion of the gravid uterus was discussed appeared in our issue of April 16th, 1904.

FLEET SURGEON.—In normal vaccinia there is no material present that clinically would be called pus. The contents of the vesicle may become puriform by the accidental access of extraneous organisms, but the observance of the simple precautions now universally enjoined easily obviates this. An account of the histological appearances in the vaccine vesicle and the chemistry and morphology of vaccine lymph is given in *Vaccination: Its Natural History and Pathology*, by Dr. S. Monckton Copeman (London: Macmillan and Co., 1899, 6s.).

LECTURES TO PROBATIONER NURSES.

INFIRMARIUS.—The best way of preparing a syllabus for a course of lectures to probationer nurses would probably be to get a good elementary textbook on physiology and another on nursing and look through them, as there does not seem to be any outline of such a course published. The following works might be consulted: *Mechan's First Stage of Human*

Physiology (London: W. B. Clive, University Tutorial Press); *Lewis's Nursing: Its Theory and Practice*, eleventh edition (London: The Scientific Press, 2s. 10d. net.); Foster and Shore's *Physiology for Beginners* (London: Macmillan and Co., 1894, 2s. 6d.); and Miss Lücke's *General Nursing*, sixth edition (London: Kegan Paul, Trench, Trubner, and Co., 1905, 5s.).

NICOTINE AND TORRACO.

A. N.—The figures given in reply to "J. F. M." (BRITISH MEDICAL JOURNAL, December 19th, 1908, p. 1548) for the percentages of nicotine in tobacco (1.5 to 3 per cent.), were collected from results published by different workers at various times. The figure 1.5 was taken from a series of analyses of different tobaccos made in Italy some years ago; the actual figure given was 1.62 per cent. on the dried leaf, and as the leaf may contain anything up to 35 per cent. of moisture, this would give 1.5 or less per cent. on the air-dry tobacco; the only information given about this sample is that it was Havana tobacco. This is in agreement with such results (few in number as have been obtained by our analyst, who has found much less nicotine in cigars than in pipe tobacco). The subject, however, would require further investigation before any general statement could be made.

TREATMENT OF FOLLICULAR STOMATITIS.

DR. R. M. FRASER (Belfast) writes: The condition to which "W. M." has drawn attention, though not excessively rare, is not mentioned in any literature I have consulted. I should feel obliged if "W. M." would supplement his description by stating whether a vulcanite dental plate is worn, and, if so, is it kept in night and day? and also, in reference to the vulvar condition, whether a pessary is worn. In a patient of my own I made, without success, an attempt to make a culture from a vesicle. Perhaps some dental practitioner could throw light on the matter as to whether it is due to some susceptibility to rubber. Drugs appear useless.

LETTERS, NOTES, ETC.

A WARNING.

DR. A. G. BATEMAN (General Medical Officer, Medical Defence Union, 4, Trafalgar Square, W.C.) writes: May I ask, through your columns, medical practitioners who may be applied to for pecuniary or other assistance by a person calling himself "Dr. J. Backus Taylor, M.R.C.S., L.R.C.P.," not to grant any such aid without first communicating with me? Medical agents should also guard themselves in a similar manner before placing the name of this person upon their lists for employment as assistant or locum-tenent and sending him to clients. There is a Dr. Backus Taylor upon the *Medical Register*; but from circumstances which have come to my knowledge it would be as well not to assume that the individual of whom I write is the qualified practitioner of that name in the *Register*. I shall be glad to afford any information to any one applying to me either personally or by letter.

GLASSWORKERS' CATARACT.

In the notice of the *Second Report of the Departmental Committee on Compensation for Industrial Diseases* published last week, p. 28, in line 25 from top, first column, Dr. Legge was unfortunately misrepresented; it should have been stated that he reported "that all classes of glass furnace workers appeared to suffer," not all glassworkers.

LACTIC ACID BACILLI.

DR. GEORGE HENSHELL (London, W.) writes: Dr. Bushnell's advocacy of the use of cultures of lactic acid bacilli in liquid form whilst admirable in theory is, I am afraid, impossible in actual practice, mainly from the impossibility of securing delivery of such cultures commercially at the patient's house. Whilst agreeing with his contention, I have for some time abandoned the use of them in favour of dried cultures, with which I have obtained the best results. As regards the contamination of the latter, whilst considerable in the case of tablets made from inspissated milk, it may be neglected in those manufactured simply by the addition of an inert powder to the dried bacilli. In these the contamination from the air is not greater than we find in most ordinary articles of diet. I should like to ask Dr. Bushnell whether the Thermos flask will stand sterilization by boiling.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

					£	s.	d.
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An average line contains six words.

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A.B.—It is against the rules of the Post Office to receive letters at *Teste Restante* addressed either in initials or numbers.

An Address

ENTITLED

ALPINE OR HOME CLIMATES FOR EARLY TUBERCULOSIS?

DELIVERED AT THE MEDICAL GRADUATES' COLLEGE
AND POLYCLINIC.

By WILLIAM EWART, M.D.CANTAB., F.R.C.P.

CONSULTING PHYSICIAN TO ST. GEORGE'S HOSPITAL; SENIOR PHYSICIAN
TO THE BELGRAVE HOSPITAL FOR CHILDREN; JOINT HONORARY
SECRETARY TO THE QUEEN ALEXANDRA SANATORIUM, DAVOS.

This question has a practical bearing which is soon to become obvious in a novel aspect—that of the sanatorium patient. The best means for arresting tuberculosis in the individual and the community have always had the attention of the large body of practitioners to which you belong. But it will happen to many of them in the near future to be responsibly concerned with the task of selecting and certifying suitable cases for the great opportunities which will soon be offered by the Queen Alexandra Sanatorium at Davos.

THE QUEEN ALEXANDRA SANATORIUM, DAVOS.

The Sanatorium, which was mentioned by His Majesty the King at the opening of the King Edward VII Sanatorium on June 13th, 1905, as having Her Majesty the Queen for its Patron, and the privilege to be permitted to be called by her name, is now within measurable distance of entering upon its career of usefulness as our only National Sanatorium in the most perfect of all known climatic resorts for pulmonary consumption. It is not yet completed, though its stately mass already overlooks Davos from a commanding site. The delay is still due to the lack of that powerful philanthropy which would not long be withheld from it were we as a body to lend our united forces to a support of its claims.

This is not, however, an appeal for funds, although there is no other profession with wider opportunities to guide private munificence into the most deserving channels. Our study to-day is not that of subsidies, but how we shall turn to the best account the provision, second to none as regards comfort and efficiency, which is being made for our patients at the Queen's great Alpine Sanatorium.

Concerning the national importance of that object, and in extenuation of the reproach of our lateness in carrying it out as compared with some other nationalities, it is gratifying to think that its first tentative embodiment in Davos arose within the British community with the devoted personal labours of the late Mrs. Lord in the service of our poor consumptives, whose welfare is now under the efficient care of the Local Board of Management. The national aim pursued for years by the "Davos Invalids' Home" to provide a sanatorium worthy of the two great English-speaking nationalities, on an excellent site, purchased mainly through the exertions and the generosity of my lamented friend and co-secretary, the late Mr. Arthur Herbert, had received Royal recognition before the end of the century, and upon her accession in 1901 Her Gracious Majesty was pleased to confirm the patronage which she had granted to the "Home" as Princess of Wales.

But the great Queen Alexandra Sanatorium, which now crowns the southern extremity of Davos at an altitude higher than that occupied by any other national sanatorium in Europe, would not have become an accomplished fact but for the quite unparalleled energy and success of our President, the Lord Balfour of Burleigh, in preaching the good cause, not only in Davos, where the British colony has evinced much public spirit, but far and wide throughout the United Kingdom. The indefatigable services of my co-secretary, Mr. D. A. F. Vesey, and of Mr. H. C. Wrinch, our local secretary at Davos, and the work of the Local Board of Management, under the chairmanship of His Majesty's British Consul, Dr. W. Huggard, have all been essential also to the achievement.

THE SELECTION OF CLIMATE AND OF CASES.

Owing to those early beginnings, experience has been accumulating, both from our own work and from that of other institutions in Davos, which will prove of advantage. Without undue presumption we may therefore hope that the future working of the Queen's Sanatorium shall be unsurpassed in the results of treatment. One condition is, however, absolutely indispensable, and that is that we shall have throughout the country your constant co-operation in sending us the most suitable cases. That consideration now prompts me to place before you to-day as

briefly and as clearly as I can the leading notions which may guide your action. I shall, in the first place, endeavour to satisfy you as to the practical soundness of *two propositions* and as to the detrimental influence of *three popular fallacies* in connexion with the full exploitation of the altitude for the cure of tuberculosis.

THE POLICY OF COMBINATION AND SOME PREVAILING MISCONCEPTIONS.

The Policy of Combination.—The two propositions I wish to establish make for one practical conclusion—namely, that our true policy is one of a *systematic combination for individual cases of the Alpine and of the Home Sanatorium treatment*.

Proposition I. The best possible value will be got from the Home sanatorium treatment for early tuberculosis when the patients shall have had the advantage of a preliminary course at the Alps.

Proposition II. The best results are obtained at Davos when patients resort to it at their earliest stage, before any time has been spent over any other form of treatment, whether at their homes or at any of our Home sanatoriums.

The Three Prevailing Misconceptions.—*First Fallacy:*—"All climates are sufficiently good. Everywhere it is the open-air that cures, and this can be had at home." To those of you who have travelled for recuperation after hard work the suitable reply does not need to be suggested. The extent of your gain in health has been conspicuously varied in different localities, according to the kind of open air you have enjoyed.

Second Fallacy:—"The winter is the time for Davos. Let us wait till December, and spend this summer and autumn at home." Our brief answer to this too often fatal misconception is the object lesson afforded by the Davos list of visitors. The most precarious of patients, those *chronic miracles* showing arrest and survival in the advanced stages, are those who find it good to remain in permanent residence at Davos through summer and winter alike. The worst sample of Davos climate, if good for them, should be good enough for our early cases. There need be, then, no closed time for the blessings of the Queen's Sanatorium.

Third Fallacy:—"Try England first and our Home Sanatoriums. It will be time later to fall back upon Davos in second resort." Our safeguard against this fallacy is not merely historical evidence. In the course of annual winter visits to Davos and the Alps during the last twenty-five years I have known patients who had been attracted to the Alps from the Rocky Mountains, and others from high valleys south of the Himalayas. We must bear in mind that the same degrees of altitude are available in many parts of the world, but the climates of these identical altitudes differ in all of them. The same holds good within quite small districts. One of the earliest climatic lessons which I learned was the considerable differences in the individual merits of climates such as those of St. Moritz, the Maloja, Davos-Platz, Wiesen, Arosa, and others, all of them within the same Alpine group. Of course, much greater differences must occur between the mountain climates of different latitudes. In face of these practical differences between valley and valley, need we labour the point that there is an objective importance, and not mere fancy, in the larger question as to the treatment of a patient in the altitude or in the plain.

THE COMPARATIVE VALUE OF HOME AND ALPINE SANATORIUM TREATMENT.

The two great national institutions referred to may be said fairly to represent two rather diverging lines, between which a choice has to be made in the class of cases we have under consideration: the Midhurst Sanatorium, as the type of the many excellent Home sanatoriums—still too few for our needs—the efficient work of which is indispensable as our chief weapon in the fight against tuberculosis, and as the type of the best that circumstances can at the present time offer in this country for the greater number; the Davos Sanatorium, a special effort to carry out for a smaller number the special advantages *not* to be found in this country, and which it is unhappily impossible to procure for the masses—as the type of the best climatic cure which the world can provide.

In our recent climatic therapeutics there has been a tendency to ignore, and another tendency to exaggerate, the therapeutic importance of differences between climates. The practical effect of both is to deprive our patients of some valuable climatic opportunities. Usually the home climates have been favoured; but the opposite has also been known to occur. The welfare of individuals and of the community may probably be better served by the view I have submitted that there is in most cases an excellent alternative in their happy combination. I had previously expressed an opinion that a majority of cases of pulmonary tuberculosis are at an early stage suitable for the Alps. I should like to add the further opinion that a majority of them are curable at home if only treated early enough. These two statements taken together amount to saying that for most of our cases there is a cure both at home and abroad.

The point which arises is whether patients would be any the less curable at our Home Sanatoriums if they had previously taken an early and short instalment of the Alpine cure. *Esperanto credo*, the best answer is to be got only from those who have tried that plan. A further point is whether, just as there are cases which are not suited for the Alps, there may not be some, too, not perfectly suited by our home climates, and which the Alps might suit in a special degree. If we admit the existence of these two minorities outside the majority for which our home sanatoriums are available and for which Alpine treatment would also be suitable, the importance of an "early" selection of the best climate is apparent.

The Alternative of the Alps as an Alternative of Choice or as an Alternative of Necessity.—For the masses, under existing conditions, the alternative does not arise. We are dealing only with those for whom travel and residence abroad are practicable. For many of the latter the alternative of the Alps is, like the better of two good things, a luxury. They can be got well without it in "the long run." And if their choice should have been made for the "longer run" there is safety in the end; or, at any rate, there need be no disaster. But when it happens that a patient has not made sufficient progress in the Home sanatorium, in spite of a fairly long trial, the alternative of the Alps is no longer to be regarded as one of choice but of necessity. Would that he had originally chosen rather than eventually suffered that alternative. Although at the latest date he may yet succeed in securing his life, this cannot now be done without a considerable expenditure of time and of money. These are the uncertain cases which the climatic adviser should have constantly in mind in his chest examinations of early applicants. These are also the best cases to illustrate the other aspect of the same question—the wisdom not of an exclusive selection of one or the other form of sanatorium treatment, but rather of their *systematic combination*; for in that combination, if only it could be adopted in time and in the proper order, lies not only the safety of many a sufferer, but the best saving of expenditure and of earning capacity.

The Alpine Cure Largely Climatic, the Home Cure mainly by Open Air.—The history of the Alpine treatment is instructive. Dr. Spengler began his climatic cure in Davos in 1853, because that valley had been known as far back as the Middle Ages to be free from endemic consumption. In those days, however, perpetual open air, which had already been preached by Bodington in this country, was still farther than it is even now from prevailing among the local population. During the long winter months house hygiene, particularly as regards ventilation, was worse than it is in our great cities. Nevertheless, though the women, for whom there was little outdoor occupation, suffered from anaemia, yet in spite of the long period spent in bad air, they did not develop consumption. This brings very clearly into light the existence of three distinct aëro-therapeutic values in the air-treatment of consumption: (1) Facilities for a perpetual open-air life; (2) freedom from germs; (3) specific climatic quality. In the past the secular immunity of the Alpine altitude from tuberculosis was not due to the first of these values, but existed in spite of its utter neglect. There must have been a singular redeeming virtue in the other two.

In these islands a strictly perpetual open-air life is a preservative and also a cure. But, failing that open-air life, the climate does not possess the qualities which will prevent or check the spread of tuberculosis. In short,

whilst the fullness of the open-air treatment is indispensable in the Home cure, the Alpine cure is not entirely defeated by its incomplete application. Or to state the same thing rather differently: When we take with us the open-air cure to the Alps we are adding excellence to that which is essentially, on its own merits, very good.

The Nature of the Alpine Climatic Advantage.

"Increased vitality" expresses better than any other term the benefit which is conferred. It is felt even by confirmed consumptives and brightens, if it cannot always lengthen, their remaining days. The long survival at Davos of some much advanced cases is a striking proof in point. But we had better look for a demonstration of this remarkable vitalizing power at the other end of the scale—in the man or child who might become a consumptive but is now only depressed by previous illness, overwork, or any lowering circumstances. Why do we send to the Alps the jaded city clerk, the neurasthenic overworked curate, the anaemic exhausted nurse or school mistress? Because there is no change of air which will effect in them with greater certainty a greater change in an equally short time.

The mechanism of these resurrections in vital energy is too well known to you to need more than bare enumeration. Rarefaction of air, dryness of air, and stillness of air, actinic equivalent, and light and warmth equivalent of the sun's rays, physical and mental inspiration from the surroundings, all these factors combine with the influence of the elevation itself and with others perhaps still unknown, such as radio-activity, etc., to render this the strongest of all stimulations: (1) For the nervous system; (2) for the alimentary and metabolic functions; (3) for the richness of the blood; (4) for the nutrition and working power of the heart and of the circulation; (5) for the expansion of the chest, and (6) for the strengthening of the lungs and of respiration.

The immediate rebound is merely the setting free of a hidden store of energy. Where that store is nearly exhausted, this great rapidity of rebound is no longer possible. In the end, too, pilgrims to the Alps will carry away from the mountain just as much proportionate increase in their vitality as they brought to it of vital reserve. Passing to those suffering from tuberculosis, it is clear that a *phenomenally rapid result* of the kind described is attainable only in a patient who has not yet allowed much of his available store of vitality to be wasted by delay under less active measures. His one great opportunity for a rapid cure by the Alpine treatment comes never again; it exists only at the earliest beginning of his degeneracy.

The Mechanism of the Cure of Tuberculosis.—This estimate of the patient's best chances is supported by the latest views as to Nature's method of cure. This is not through the direct operation of our remedies—food, tonic medicines, bracing air, sunlight, rest, graduated exercise, etc.—upon the bacilli or their venom, but through the much more direct operation upon them of our own scavenger and other cells. The *hygiene of disease*, if I may venture to use that expression, consists in raising to the highest pitch the efficiency of our physiological scavenging department and of the protective powers of our juices, at the approach and under the stress of infection. If the energy of our phagocytes should fail to be raised in time to the point of clearing the field whilst the invaders are still few, every passing day will lower it whilst adding to the strength of the invading host. Recovery can no longer be rapid, and it soon becomes precarious.

The Sliding Scale of Profit Derivable from the Alpine Treatment.—If a man were to be offered an assured and profitable investment, he would not continue spending his capital till little of it remained to invest, but would invest at once, and endeavour henceforth to live upon the interest. It is equally true in the matter of health values, that the profit varies with the capital invested.

1. Take the strong man or child whose health is only depressed. He can make the best use of the mountain, and obtain all the good it can give almost without any delay.

2. A less robust subject already threatened with tubercle, though not yet infected, will be able to use the mountain less freely. His profit will be more gradual, yet great in

the end, as it will amount to a practical guarantee of future health, and of freedom from infection.

3. But for the tubercle-infected patient there will be much less activity and much less gain. Even at an early onset of the trouble, it will take *weeks instead of days for the mountain* to make him well.

4. Comes the stage of early bronchial and pulmonary lesion. Our patient is now an *invalid*. Happy if at that time his lot should be cast in the heights where lungs are less slow to heal. But there is at first no active use in the mountain for him; for a while he must simply lie and breathe its atmosphere. He has missed the quick cure. Instead of only weeks, the mountain must now claim *months of his life* to make him safe for the remainder; and with rare exceptions it will never succeed in making a good mountaineer of him.

5. Least of all is this an ambition to be indulged in by those far advanced and badly damaged. Henceforth *mountain-dwellers for life*, or for long periods of time, they can only slowly pace the valley, content to secure from the mountain just their breath and their being.

THE UNSUITABLE AND THE SUITABLE CASES FOR ALPINE TREATMENT OR FOR ADMISSION INTO THE SANATORIUM.

Particulars will in due course be published of the decisions of the Council as to the conditions for the admission, residence, and discharge of patients. As an unlimited stay would not be practicable, and as, in fairness to other candidates on the waiting list, a comparatively short period, possibly renewable, would have to be enforced as is the custom elsewhere, the question of admissibility will have to be most carefully considered by the honorary examining physicians. Unsuitability for admission need not, therefore, imply unsuitability for altitude treatment *per se*. For instance, great advantage might be ultimately derived in Davos by a patient whose condition at the time of application might have been judged to be too precarious to guarantee adequate benefit even from a fairly prolonged stay in the Sanatorium.

The general question as to *suitability for Davos* is quite separate. It is a much more difficult one than that which is before us to day, as it includes a consideration of many confirmed cases, which the sanatorium has to decline, and which we need therefore only mention very briefly.

The Unsuitable Cases for Altitude Treatment.

As a general statement, it may be said that a *majority of all cases* of pulmonary tubercle are suitable for altitude treatment. The minority is that of the unsuitables, and is made up as follows:

1. The Advanced Cases:

- (a) In their terminal stages; or
- (b) With severe visceral complications—cardiac, vascular, renal, gastro-intestinal, hepatic, nervous, alcoholic, etc.; or
- (c) With specially adverse respiratory affections, such as catarrhal bronchitis, asthma, bronchiectasis, emphysema, late laryngeal tuberculosis, and others.

2. The Relatively Early Cases:

- (a) With much catarrhal pneumonia; or
- (b) With active tuberculization, as evidenced by persistent pyrexia, wasting, rapidity of pulse and of respiration; or
- (c) With considerable tendency to hæmoptysis; or
- (d) With any of the pulmonary or of the visceral complications mentioned above; but the cases of quite early laryngeal tuberculosis have to be considered on their individual merits.

The Suitable Cases.

The suitable cases (for the altitude, but not necessarily for the sanatorium) form the majority. They may be taken in the following groups:

GROUP I. *The Chronic Cases* differ much as to their amenability to the curative influence. Although many of them do very well in *permanent residence* in the altitude, they are not, strictly speaking, curable, even at Davos. Much less are they "short-treatment cases." They are not, therefore, suitable in that sense for the Sanatorium.

GROUP II. *The Stages of Confirmed and Active Tuberculosis*.—Many, although not all, cases at these stages are

better suited by the altitude climate than by any other. But as, even in the altitude, they are all slow to heal, their alpine cure has to be reckoned in *months or even in years* during which to send them home would amount to interrupting, and often to ending, progress towards recovery. A few patients of this sort, if they had to be "seen through" their trouble, would monopolize beds to the exclusion of large numbers of "short-treatment cases." Although they may be thoroughly suitable for Davos, the Sanatorium could not undertake the responsibility of such prolonged cures without serious detriment to the interests of the community.

GROUP III. *Early Cases of Mild Type, with Localized Physical Signs of Early Lesion, and with good Antecedents*.—These are eminently suitable for the altitude, and in a large proportion are quickly curable there. They are, of course, admirably suited for a stay in the Sanatorium, followed by a course of treatment at a Home Sanatorium. This is at present and is likely to remain a large group, as many who belong to it are originally of good stamina, and are apt to defer submitting to a medical examination until early physical signs have developed. If sent immediately to the Queen Alexandra Sanatorium, these patients would contribute to a large turn-over of successful "short treatment cases."

GROUP IV. *Early and Mild Latent Cases, without Physical Signs, but Identified as "Tubercle."*—These are the ideal cases for the altitude and for the Sanatorium, because their tuberculosis can be arrested and their chest considerably strengthened by a few weeks' stay in the Alps, with a practical certainty such as is probably not to be equalled in any other climate. After that stay they should immediately proceed to a Home sanatorium to confirm their gain.

GROUP V. *Early Latent Tuberculosis Diagnosed but not Identified*.—This, too, is an ideal field for the best work of the altitude and of the Sanatorium. All the members of this group, whether rightly or wrongly suspected of pulmonary tuberculosis, are sure to derive in a few weeks' stay at the Sanatorium, followed by Home sanatorium treatment, an amount of general and cardio-pulmonary invigoration which will permanently raise them above the danger-line of that "tubercle-catching level" at which they have been living.

It is inevitable that in that number some should be included in whom tuberculosis is really not present, but is only simulated by that *misère physiologique* which is its usual forerunner. Call them "pretubercular" if you will; the name matters little so long as they are not deprived on sentimental grounds of the immense and unmitigated benefit provided by the Sanatorium.

GROUP VI. *The Preventorium Cases*.—This is the group of the most suitable of all cases for the altitude, as they are capable of yielding with the least delay the most brilliant results. But, as tubercle has not been diagnosed in them as present, but only as threatening, they may not claim admission into the Sanatorium. A large, and the most important, proportion of this group is composed of delicate children. Special provision for them in the Alps combined with a Home of Rest for Nurses is one of the most beneficent future developments of the work of the Queen Alexandra Sanatorium to which any large benefit could possibly be applied.

CONCLUSIONS AS TO THE BEST PRACTICAL ADVICE FOR "SANATORIUM CASES."

1. It would be worth everything to a merely threatened subject to be sent to the Alps before tuberculosis had actually set in. In the future, perhaps, this may be possible in connexion with some *Alpine Preventorium*, such as was suggested in my article in the *Practitioner* for July, 1908.

2. For the Sanatorium-cure, as it now exists, the patient's best chance occurs *immediately* when the existence of tuberculosis is diagnosed or strongly suspected. At this earliest stage proper treatment will do more good than at any other stage, and more good will be secured at an Alpine than at any other sanatorium.

3. As in many of these earliest cases the improvement obtainable in the altitude is very rapid, four to six weeks' stay at Davos may place the further progress of the case beyond any risk of relapse, provided the open-air treatment be continued for a further period at any suitable

Home Sanatorium to consolidate the cure. Arrangements should therefore be made accordingly in good time.

The "short and early" *Alpine* cure is the best of all courses for safety and also for real economy. Too often patients are sent to the altitude as a last resource. If, as this implies, there is a curative power in it greater than that of home climates and to which an ultimate appeal has to be made, the patient would have been better off for its earlier help. In fatal cases life itself might perhaps have been saved. In the others there might have been much saving of time and of earning power to outweigh the additional expense of travel. For, although both forms of sanatorium treatment yield their best results at the earliest stage, the advantage arising from earliness, particularly as regards rapid results, is immeasurably greater in the Alps than in our own climate. Safety and economy strongly urge that the *Alpine Sanatorium* should be visited not second, but first.

4. The rationale for this order of march rests upon:

(a) The greater "altitude invigoration" which can be derived by constitutions as yet less debilitated by disease, and upon the greater "altitude expansion" of lungs as yet less extensively damaged; and also

(b) Upon the greatly enhanced subsequent efficiency of the *Home sanatorium* treatment when the early cases have just had the benefit of that initial invigoration and of that thoracic expansion which no *Home climate* can confer.

5. The *Selection of Cases* is simplified by the fact that, at that earliest stage, practically speaking all ordinary apyrexial cases are suitable for a temporary stay in the altitude.

6. The *Selection of Seasons* is simplified by the fact that for these earliest cases all seasons are suitable for treatment under sanatorium rule. As a fact, the individual merits of the several seasons are a minor consideration as compared with the inherent virtues of the "mountain breathing-cure," and these are always equally at our service at all times of the year.

7. As no other treatment is superior to this, no points can possibly be lost through its immediate adoption. But many points might be quickly lost through its delay. For safety, our first climatic prescription should be in all "possible" cases, "Sanatorium treatment in the Alps at once, and *Home Sanatorium* treatment to follow."

8. For those threatened only—and particularly for *Children*—this is the treatment *par excellence*; and for them *Alpine preventoria* must eventually be provided. The risk of bacillary infection, which has sometimes been alleged as a deterrent, is probably smaller at *Davos* than anywhere else; and as a merely sentimental objection it should not be allowed to stand in the way of an untold boon.

9. The later cases, including those which have not been cured by prolonged treatment at our *Home Sanatoriums*, are not to-day under our consideration. For them the best opportunity has clearly been missed. Nevertheless they may still find in the altitude a measure of improvement greater than they could obtain elsewhere, provided they can invest considerable time in their treatment. These are not the cases in which admission to the *Queen Alexandra Sanatorium* could lead to the best and to the most rapid results, nor to the greatest advantage for the greatest number. They are not therefore specially the cases which you will be invited to recommend when the *Sanatorium*, at no distant period as it is hoped, shall at last open its gates.

The German Society of Tropical Hygiene will hold its second meeting in Berlin at Eastertide this year.

According to the *Medizinalkalender für Oesterreich*, the number of medical practitioners in Austria, including *Bosnia and Herzegovina*, at the end of 1908 was 12,278, as against 12,041 in the previous year. Of these, 2,946 reside in Vienna, 269 at *Graz*, 112 at *Innsbruck*, 499 at *Prague*, and 334 at *Lemberg*.

The eighth International Congress of Hydrology, Climatology, Geology, and Physiotherapy will be held this year at *Algiers*, April 4th to 10th, under the patronage of M. Jonart, Governor-General of *Algeria*. There will be an exhibition in connexion with the Congress, and a number of interesting excursions have been arranged. Communications relative to the Congress should be addressed to the General Secretary, Dr. L. Reynaud, 7, Place de la République, *Algiers*.

THE SELECTION OF SANATORIUM CASES FOR TREATMENT WITH TUBERCULIN.

By H. HYSLOP THOMSON, M.D.,

MEIKEN, CHILTERNENTMENT, LIVERPOOL SANATORIUM,
DELSWATER FOREST.

THE scientific and comprehensive basis upon which the sanatorium treatment of tuberculosis has now been placed is chiefly due to the exhaustive work of Wright on the problem of the infections and their treatment by opsonotherapy. The recognition of autoinoculation as a specific factor in the treatment of disease took origin in the observations of Freeman. The possibilities of autoinoculation in the treatment of pulmonary tuberculosis were first recognized by Meakin and Wheeler,¹ who in 1905 were led to the conclusion that the beneficial effect of graduated walking exercise in the sanatorium treatment of consumption was due to autoinoculation with small doses of tuberculin, which raises the level of the opsonic index. In one patient, who had a small, almost healed focus, walking exercise failed to elicit any rise in the opsonic index, and the indications in this case pointed to a total absence of autoinoculation.

Recently Paterson and Inman,² from an investigation of the effect of carefully systematized manual labour on the physical condition of consumptive patients and their progress towards recovery, as gauged by the range of temperature and the level of the opsonic index, concluded that graduated manual labour is directly beneficial to the able-bodied consumptive by reason of the repeated autoinoculations it induces, which find expression in a higher opsonic range. In 95 per cent. of the patients doing heavy manual work, Inman found the opsonic index to be above normal. A rise of temperature to 99° F. as a result of work is regarded as indicating a condition of hyperinoculation, calling for absolute rest. Obviously, manual labour will lead to autoinoculation when walking exercise fails to do so by reason of the more active respiratory and muscular movements to which it gives rise.

Walking exercise and graduated labour, therefore, are important and essential elements of the sanatorium régime, inasmuch as they represent an autoinoculation with tuberculin, the doses of which depends in susceptible cases on the amount of exercise and degree of labour. But autoinoculation as a specific measure has distinct limitations. It is not possible to exercise complete control over the dosage in all cases; moreover, patients treated in this way are inoculated, after a certain phase has been reached, with gradually decreasing doses of tuberculin, and indeed in quiescent cases autoinoculation may cease altogether. The clinical history of many of these cases indicates that this fails to elicit an efficient and lasting immunizing response, and if a high level is to be maintained it becomes necessary to supplement the failing autoinoculation by the introduction of tuberculin from without. The occurrence of relapse in patients who have derived material benefit from autoinoculation may frequently be traced to the failure of the organism to protect itself against a sudden hyperinoculation induced by physical strain, exhaustion, etc. Further, it is the experience of most sanatorium physicians that, other things being equal, patients treated with Koch's tuberculin are less liable to relapse than those in whom no such specific treatment has been employed. In a word, the employment of tuberculin in suitable cases in known and gradually increasing doses produces a marked and efficient tolerance which ensures a greater freedom from relapse. It is therefore suggested that in all cases in which the clinical evidence points to the absence of hyperinoculation and the possibility of a diminishing or absent beneficial autoinoculation, gradually increasing doses of Koch's tuberculin should be administered.

PHASES OF AUTOINOCULATION IN RELATION TO TREATMENT.

The degree of autoinoculation in pulmonary tuberculosis varies within wide limits. In quiescent and almost cured cases it may be entirely absent. In benign cases it is slight, and when the dosage is proportionate to the physiological needs of the organism it is directly beneficial by increasing the agglutinins and opsonins of the blood serum. Apart from the clinical phenomena due to acute disease or a coexisting septic infection we have two distinct types of

pulmonary tuberculosis. In the one, to which the great majority of sanatorium patients conform, a hyperinoculation induced by walking exercise or manual labour is expressed by a rise in temperature; whereas in the other, which embraces a small minority, the temperature under like conditions tends to a subnormal range. It has also been observed in consequence of treatment that certain patients of the reactive type merge through an afebrile phase into the subnormal type.

The following facts have been noted with regard to this subnormal type: Improvement in the local condition as indicated by the character and number of crepitations is more rapid. The effect of graduated labour and walking exercise, which is to reduce the temperature below normal, invariably coincides with a marked improvement in the general and local condition. Lastly, such patients rapidly develop considerable tolerance to Koch's tuberculin. Another suggestive fact, first observed by Latham,³ is that in certain febrile cases tuberculin administered by the mouth in small doses induces a fall in temperature. In several cases which I have under observation a very decided subnormal range followed the administration of tuberculin. Curiously enough, however, in other cases the same dose produced a rise in temperature. The effect seems to depend largely on idiosyncrasy and suitable dosage, although the possible influence of an associated pyogenic infection must be kept in view.

In studying the degree and extent of hyperinoculation in tuberculous patients, we find certain phases of inoculation which are dependent for the most part on the character and extent of muscular effort. In acute cases there may be a continued hyperinoculation during rest, the temperature reaching 99° F. or above it notwithstanding absolute rest in bed. This hyperinoculation may continue indefinitely, or yield to the influence of rest and appropriate treatment. The second phase is characterized by the absence of hyperinoculation during rest and its development as a result of muscular effort. The amount of exercise varies from a few steps to several miles a day, and its effect upon the temperature becomes a useful guide in estimating the patient's susceptibility to hyperinoculation, and likewise to the activity of the disease. The frequency and degree of hyperinoculation induced in this way varies in different cases, and also according to the length and gradient of the walk. As the patient's condition improves, a well-marked immunizing response is gradually evolved, and it becomes more difficult, and at last impossible, to induce hyperinoculation by walking exercise. Finally, in some cases a mean subnormal temperature is attained.

Manual labour may induce hyperinoculation when walking exercise has failed to do so, this being due to the more active muscular and respiratory movements it entails. The majority of patients, however, who are able to take the maximum amount of walking exercise along roads of varying gradient will be found capable of undertaking the heavier grades of manual labour without any injurious reaction. Occasionally a somewhat severe autoinoculation is induced, which, however, yields rapidly to rest and treatment. The absence or presence of susceptibility to hyperinoculation induced by manual labour is of some value in forecasting the ultimate results of treatment. The fact that a specified amount of manual labour under the ideal conditions of sanatorium life gives rise to hyperinoculation is of somewhat unfavourable prognostic significance, especially if it occurs in the case of the wage-earner who is compelled after a course of treatment to follow some arduous occupation. Conversely, the absence of hyperinoculation under like conditions is to be regarded as distinctly favourable.

In patients who are responding well to treatment a stage is reached when even an occasional hyperinoculation fails to occur. This is probably due to a relatively high immunizing response and a diminished tuberculin output. In such patients the temperature at 6 and 8 p.m. is normal or subnormal. Very occasionally it may reach 98.8° F. A temperature of 98.6° F. following walking exercise or manual labour should be regarded as the maximum compatible with beneficial autoinoculation. Even a somewhat frequent rise to 98.6° F. should be viewed with some misgiving. The most favourable indication in this stage is a tendency towards a mean subnormal temperature. In the majority of cases the

complete absence of hyperinoculation under all conditions is only attained after much patience and by gentle gradations.

Although it cannot be accepted as conclusively proved that every rise of temperature to 99° F. and above it in a patient suffering from pulmonary tuberculosis is due to a hyperinoculation with his own tuberculin, it is a wise and safe rule to assume that such is the case. The light which recent investigation has shed on the value of walking exercise and manual labour in the treatment of pulmonary tuberculosis has largely increased the importance of stringent medical supervision and widened the responsibility of the sanatorium physician. The daily routine as regards rest, walking exercise, and manual labour must be carefully mapped out for each patient, and the question of recreation calls for like careful consideration. This was specially emphasized by Latham some years ago. It is somewhat remarkable that certain patients are able to undertake heavy manual labour without any rise of temperature, and yet a game of cards, bowls, croquet, or chess is followed by a rise of one or even two degrees; in the majority of such cases the rise of temperature is probably of nervous origin, as it speedily falls to normal. Occasionally the rise persists, and is obviously due to a hyperinoculation from quickened pulse-rate. Such cases are not suitable for tuberculin treatment.

THE ROUTINE OF TREATMENT.

The following are the general principles underlying the treatment at present carried out in the Liverpool Sanatorium. In febrile cases (temperature 99° F. or above) the aim of treatment at first is to cut short the period of hyperinoculation, so as to hasten the relatively quiescent phase, when the amount of autoinoculation suffices to evoke an immunizing response and becomes directly beneficial to the patient. When hyperinoculation has entirely ceased under all conditions an effort is made to induce tolerance to relatively large doses of tuberculin by supplementing the beneficial autoinoculation which may be present with gradually increasing doses of Koch's tuberculin. The importance of avoiding a hyperinoculation is always kept in view.

Febrile cases are treated by absolute rest in bed and the administration of calcium lactate or calcium chloride with or without some antipyretic drug. In patients with a superadded septic infection some antiseptic form of treatment is employed. The diet is suited to the digestive requirements of each individual, large quantities of milk and in some cases gelatine moulds being given.

Patients with slight degrees of fever which have not yielded to the ordinary therapeutic measures (chiefly absolute rest) are, after a time, allowed to have walking exercise or are prescribed tuberculin in small doses by the mouth. It is a curious yet significant fact that in certain patients with slight pyrexia the autoinoculation induced by walking exercise or the administration of tuberculin in small doses by the mouth gives rise to a lower range of temperature, while in other patients under like conditions a higher range is produced. Unfortunately it is not possible to foresee what the result may be in any given case. The tuberculin may be given in very small doses thrice daily or in larger doses twice or three times weekly. In some cases it is prescribed in mixture along with calcium chloride. When tuberculin administered by the mouth has had a beneficial effect upon the temperature it usually produces a subnormal temperature, but not infrequently the chart shows an absolutely normal temperature, between 98° and 98.4° F. the well-marked amplitude which was previously present owing to a low morning remission having disappeared.

Walking exercise ordered with the view of reducing fever in patients with slight hyperinoculation must be very carefully employed. It is only in a few patients of a certain type that it proves beneficial. If the temperature rises it is doing harm and should at once give place to absolute rest.

When the absence of hyperinoculation during rest has been secured, graduated walking exercise is commenced as the next step in treatment. The walks are at first short but are increased by easy stages. Great care is taken not to prescribe too long a distance for the first few walks, as patients who have been some considerable time at rest are during the first few days very susceptible to hyperinocula-

tion. I cannot too strongly emphasize the importance of systematized and graduated walking exercise, more especially during the transitional stage between hyperinoculation during rest or that induced by movement, and the beneficial autoinoculation which subsequently results from exercise. When in consequence of walking the distance prescribed a rise of temperature to 98.8 or 99 F. results, the distance is shortened or the patient is ordered to rest. Perhaps the greatest difficulty is disobedience on the part of patients to instructions given. To meet this possible difficulty a few lectures are delivered to the patients from time to time on the general principles of treatment, and the importance and true value of walking exercise and graduated labour.

After a period varying from a few days to several weeks, according to the susceptibility of the patient, a stage is reached when the maximum amount of walking exercise is daily undertaken without any resulting hyperinoculation. Patients in whom this stage has remained unimpaired for a week or ten days are prescribed manual labour. The work is ordered not only as a means of inducing a further beneficial autoinoculation, but as a definite test. Broadly, it consists of two grades, medium and heavy, and includes weeding, trimming, moving, joiner work, digging, shovel work, barrow and pick work, etc. Experience has shown that the majority of patients who have been able to take the maximum amount of walking exercise without any rise of temperature or other evidence of hyperinoculation may safely be put to medium or heavy grades of work. From 9 a.m. to noon the patients work, and in the afternoon they are sent a long walk, as many when at work assume a stooping attitude. If the temperature rises in consequence of manual work the patient is ordered to rest for a day or two, after which he is put back to walking exercise until he qualifies again for manual labour.

The final stage in the treatment of male patients is the employment of inoculations with Koch's tuberculin in gradually increasing doses. This is begun when they have passed the test of a week or ten days' heavy manual labour without any resulting hyperinoculation, as indicated by a rise of temperature to 99 F., or an amplitude which exceeds one and a half degrees. The initial dose of tuberculin is $\frac{1}{1000}$ mg., according to the old dosage. Following the initial dose, an inoculation is given every week, the dose being gradually increased during the course of treatment; the maximum dose reached depending in each individual case upon the duration of the patient's residence in the sanatorium. The time for inoculation is the early afternoon, after which the patients rest for the remainder of the day. Patients rest or follow their usual routine, according to instructions, the day after. The injection is given alternately in the right and left interscapular regions under aseptic precautions. Every male patient who has passed the heavy labour test is inoculated in this way, and the experience of this method so far points very definitely to the fact that not only may tuberculin be given in increasing doses with absolute safety, but that in many cases it is followed by a lower range of temperature (that is, a mean subnormal temperature) and improvement in the local condition.

The female patients are treated by a somewhat different method. For obvious reasons, it is not possible to test them so thoroughly, nor is it desirable, as female patients are more susceptible to autoinoculation, and react more strongly to tuberculin than male patients. Further, with few exceptions, they shrink from the needle. The method adopted, therefore, is to test them for a week or ten days with long walks, some of considerable gradient, and if during that time no hyperinoculation has taken place tuberculin is given by the mouth in gradually increasing doses, the initial dose being $\frac{1}{1000}$ mg. Each patient must, of course, graduate for the long distance test by successfully passing through the intermediate grades of walking exercise.

Both male and female patients are carefully watched and tested regarding any increase of susceptibility to hyperinoculation in consequence of the administration of tuberculin either by inoculation or *per os*. As might have been expected, a slightly increased susceptibility has occurred in one or two cases. It was observed when the patient was tested by a long walk or some heavy manual labour on the day following the administration of tuber-

culin. In order to obviate as far as possible any increased tendency to hyperinoculation patients, on the day following the first administration of tuberculin, are allowed to rest or are prescribed a short walk or some light manual work. If this initial test be successfully passed, the same dose is given the next week, and the following day the patient is prescribed a long walk or some heavy manual work. If the temperature remain unchanged an increased dose is given the following week. Those cases in which hyperinoculation takes place are either treated with a smaller dose, followed by rest, or the administration of tuberculin is stopped altogether, and the patients are treated by autoinoculation alone for a further period of time. It is very necessary to avoid any constitutional disturbance, and therefore the rule is strictly adhered to not to increase the dose of tuberculin until the amount already given, *plus* the extent of autoinoculation induced by heavy manual labour in the case of males and distant walking exercise in the case of females, fail to produce a hyperinoculation.

During the past eight months 47 patients have been treated with tuberculin—31 males and 16 females; 28 male patients received 180 inoculations, the minimum dose being $\frac{1}{1000}$ mg., and the maximum $\frac{1}{100}$ mg. In all these cases the patients were first of all tested with walking exercise and heavy manual labour. The 3 remaining cases were treated with tuberculin by the mouth— $\frac{1}{1000}$ mg., divided into twelve doses, one dose thrice daily. It was given with the view of reducing slight persistent fever, and was continued for several weeks. In 2 of the patients the result was very striking; in the third case the patient left before any beneficial effect was observable.

Of the 28 male patients inoculated, 23 have left the sanatorium, all of them able to work. In only 2 were tubercle bacilli found in the sputum before leaving; 5 are still under treatment. Of the 23 discharged, tubercle bacilli were found on admission in the sputum of 16. The effect of the whole course of treatment upon the physical wellbeing and pulmonary condition in the case of these patients was very marked. An effort is being made to keep in close touch with all patients who have been under treatment, so that definite information may be obtained regarding the true value and ultimate results of this method of treatment compared with treatment by autoinoculation alone.

Of the 16 females, 2 were treated by inoculation, the remaining 14 having tuberculin administered by the mouth. In 7 of these cases there was slight persistent fever, and tuberculin was given in the hope that it would favourably influence the pyrexia. In five of the cases the effect upon the temperature was marked. Thus, in one case, during forty days prior to the administration of tuberculin by the mouth, the temperature had registered 99 F. or higher on seventeen occasions; whereas during a like period subsequent to the commencement of tuberculin treatment, it reached as high as 99 F. only on two occasions. In the case of a child, aged 11, who had been under treatment for several months suffering from a discharging sinus connected with hip disease and a swinging temperature, the effect of tuberculin by the mouth was to bring about the expulsion of two small sequestra, with complete healing of the sinus and an absolutely normal temperature. In two cases no beneficial result was obtained. In one of these the tuberculin was stopped as it induced an increased amplitude, with a somewhat higher range; the other patient left the sanatorium before any effect was observed. In the case of the seven remaining female patients tuberculin was administered in increasing doses after they had been thoroughly tested as to the absence of hyperinoculation. The initial dose was $\frac{1}{1000}$ mg.; all these patients are doing well.

As has already been stated, two methods of administering tuberculin by the mouth are employed. In the case of female patients in whom hyperinoculation is no longer induced by walking exercise it is administered weekly in gradually increased doses, usually beginning with $\frac{1}{1000}$ mg. and followed by $\frac{1}{1000}$ mg., $\frac{1}{1000}$ mg., and so on. When it is given with a view to control hyperinoculation and reduce slight grades of fever, $\frac{1}{1000}$ mg. is diluted with glycerine and sterile water and divided into twelve doses, one dose being taken three times in the day; occasionally $\frac{1}{1000}$ mg. is given in single dose every third day. Experience has shown that this method of dividing the doses is more effective in reducing slight degrees of fever.

With the exception of one patient who was treated with bovine tuberculin, Koch's new tuberculin was used in all the cases. In future tuberculin of bovine origin will be given a trial in a certain proportion of cases. This method of selection for treatment by tuberculin in cases of pulmonary tuberculosis has been found useful and practical. It is safe and easily applied in the ordinary routine of sanatorium work.

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CONTUSION OF THE LUNG WITHOUT EXTERNAL INJURIES.

By ED. MARTEN PAYNE, M.B., C.M.ABERD.,

BLACKBURN.

As it appears to be incredible to some that contusion of the lung may result from an accident without visible signs of injury to the chest wall, I think it well, before describing a case which recently came under my observation, and which resulted in an action under the Employers' Liability Act, to cite some of the authorities upon which I based the opinions which I expressed, and defended in the witness box, in respect to it. That the condition is recognized by the Registrar-General as a cause of death is shown by the fact that the phrase "Contusion of heart or lung without wound" is included in *The Nomenclature of Diseases*.

W. J. Walsham, in his *Surgery*, says:

Contusion of the lung without an external wound may be produced by a severe crush or blow upon the chest. The visceral layer of the pleura may or may not be lacerated. . . . Pneumonia or abscess or gangrene of the lung occasionally ensue" (pp. 398-399, ed. 1890).

Erichsen in his *Surgery* (vol. i, p. 829, ed. 1884) says:

Contusion of the lung without injury to the pleura covering it may happen from severe blows on the chest, as from falls from horseback or kicks on the side. It may be complicated with fracture of one or more ribs; but this is not necessarily a concomitant of the injury.

Stonham in his *Surgery* (vol. ii, p. 324, ed. 1899) says:

Contusion and rupture of the lung may result from simple concussion of the chest.

And further (p. 327):

Slight localized pneumonia may result from simple injury to the lung with or without wound of the chest wall. In such cases the inflammation is very limited in extent, produces few physical signs and but little constitutional disturbance. It may, however, be very dangerous in the aged or enfeebled.

Holmes in his *Surgery* (p. 204) says:

In severe contusions of the chest . . . the lung is sometimes lacerated without the chest wall sustaining any visible injury.

Osler in his *Principles of Medicine* (p. 109, ed. 1901) says:

"Contusion-pneumonia." Pneumonia may follow directly upon injury, particularly of the chest, without necessarily any lesion of the lung. Litten gives 4.4 per cent., Stern 2.8 per cent.

Taylor, *Medical Jurisprudence* (ed. 1844, p. 292), says:

The lung may sustain serious injury from a blow or fall, and yet there may be no external marks of violence or symptoms indicative of damage for some hours.

Hoffman, *Atlas of Legal Medicine* (Plate 13), says:

A direct contusion of the lung occurs, especially in cases of fracture of the ribs, but is usually accompanied by laceration of the pleura, and even extensive laceration of the pulmonary parenchyma, but may take place without such associated lesions.

If, then, we can place any reliance upon classical authors, it appears that:

1. There is such a thing as "contusion of the lung."
2. The lung may be contused without being lacerated.
3. Contusion or laceration of the lung may occur without there being any visible injury to the chest wall.
4. The lung may sustain dangerous injuries, and yet no alarming symptoms may show themselves for some hours.
5. Contusion of the lung may give rise to a dangerous form of pneumonia.

I will now proceed to describe my case,

History of Accident and Illness.

On September 11th, 1908, I was requested by my assistant, Dr. Allan, to see, in consultation with him, a man named P. McV. I saw him at about 12.30 p.m. He was quite conscious, and gave me his own account of what had happened.

He told me that on September 8th he felt quite well, and went to his work at about 7 a.m. He came home to dinner at noon, and returned to his work still feeling quite well. The accident occurred at 3.30 p.m. He was working on a roof and fell over a spar or beam of some sort on his right side. Not feeling very seriously hurt at the time, he continued his work until about 5.30 p.m., when he went home. By this time the pain in his side was so bad that he went straight to bed. Fomentations and such home remedies were applied, and the man remained in bed, gradually getting worse in his breathing until the morning of September 11th, when, his friends getting seriously alarmed, at last sent for my assistant, Dr. Allan. He informed me that when he first saw the patient he was lying on his left side in bed. His breathing was shallow and quick, and he complained of great pain in his right side, towards the base of the lung. The temperature was 103°; respirations 35, and the heart small and irregular. The heart sounds were audible but distant; there was no bruit. There was dullness at the right base. The tongue was dry and foul.

When I saw the man, a few hours later, Dr. Allan remarked that his condition seemed to have slightly improved. The decubitus was exactly as above described, and the patient still had the pain in the right side, but he said it was not quite so acute. The temperature was 101°, and the respiration 35, and the heart sounds were difficult to count. The heart sounds were scarcely audible, and there was marked dyspnoea. I could find no signs of external injury to the chest, except redness and tenderness on pressure over a region towards the base of the right lung, where the patient complained of the internal pain. There was marked dullness on percussion in this region, and rales could be heard on both sides of the chest, especially towards the upper lobes. The tongue was furred, and the eyes were bloodshot and somewhat jaundiced. The general impression was a man in the second stage of pneumonia; the immediate anxiety was cardiac failure. The patient died at 2.30 p.m. the same day, exactly seventy-one hours after the accident.

In view of the recent accident I refused to give a certificate, and, by order of the coroner, the body was removed to the mortuary.

Necropsy.

An autopsy was conducted by my friend Dr. Bannister, in the presence of Dr. Allan and myself. There were no signs of injury to the thoracic walls, no ribs were fractured, there was no laceration of the soft tissues. The heart was flabby and light coloured.

Both lungs were more or less generally congested, and at the apices were a few very small scars, indicative of old healed tuberculous lesions. Extending inwards, from the surface of the lower lobe of the right lung, was a patch of red hepatization, about the size of the palm of the hand, and about one to one and a half inches thick. It was judged that this patch, *in situ* would just correspond with the spot indicated externally by the patient as being the place where the pain was so acute and continual, and where he had received the blow in falling. The liver, kidneys, and spleen were somewhat congested, and the coats of the stomach reddened.

Taking all the circumstances into consideration, I arrived at the conclusion that the man died of pneumonia; secondary to contusion of the lung, contracted by the accident. This also was the verdict at the inquest, on which occasion Dr. Bannister was the only medical witness called.

An action for damages against an insurance company followed. The case was tried on November 16th, 1908, at Blackburn County Court by Judge Hamilton, assisted by Dr. R. Hunt as medical referee. The contention was that the man died from pneumonia following contusion of the lung caused by the accident. I was the first medical witness called, and maintained this opinion, in which I was supported by Drs. Bannister and Allan.

The defence was that the pneumonia was due to natural causes, and was a mere coincidence, that it could not have been due to the accident as there were no visible signs of external injury. This view was supported by Drs. R. A. Gray and Walter Rigby, the only medical witnesses called by the defence. The judgement of the Court was that there had been an accident, that the man died of pneumonia, and that the accident had nothing to do with it.

I will now capitulate the grounds on which I formed the opinion that the pneumonia was the result of the accident.

1. The man goes to his work in the early morning feeling perfectly well, comes home to dinner, and returns to his work feeling perfectly well. He falls and hurts his side, not very badly, as he thinks, and manages to finish his job, which is not a very heavy one; but by the time he arrives home, after about two hours, the pain is so bad he

goes straight to bed. He gradually gets worse and worse and dies just seventy-one hours after the accident. Before he dies it is found that he is suffering from inflammation of that part of the lung which exactly coincides with the site of the accident. All this is confirmed by an autopsy. I find that many eminent medical and surgical writers assert that pneumonia may be caused by such an accident. I naturally conclude that the pneumonia was caused by the accident in the present case.

2. It is well known that pneumonia proceeds in three well-marked stages—congestion, red hepatization, grey hepatization. According to Hamilton, the stage of congestion lasts from twenty-four to thirty-six hours. The stage of red hepatization lasts from four to five days; moreover, the red stage is *crimson* red at first, and changes to a *granite* red as it is about to pass into the grey stage. Now, at the *post-mortem* examination the hepatization was crimson; it showed no sign of entering upon the grey stage. It seems, therefore, to be pretty certain that the patch of hepatization was not less than one or more than three days old. Now, if it was three days old, the man must have been suffering from pneumonia in the congestion stage for twenty-four or thirty-six hours *before* the accident; that is, all the time he was getting up early in the morning, returning to dinner, and doing his work, and feeling perfectly well, which seems to be highly improbable, to say the least of it. On the other hand, if the patch was only one day old, or less, then the pneumonia must have come on *after* the accident to which the man attributed the pain in the side, in which case it seems difficult to deny that the accident had anything to do with it.

Having given my reasons for connecting the origin of the pneumonia with the accident, it is now necessary to answer the main objection raised by the defence, namely, that it would be impossible for the lung to be injured by an accident which did not at the same time cause serious visible injuries to the chest walls.

The most striking answer to an objection of this sort is a case in point. Taylor² quotes the following case from the *Lancet* (November, 1842).

A young man, while riding, fell from his horse on his left arm. He complained of no pain for five hours, but in twelve hours he was seized with an alarming flow of blood from the mouth. He died in the course of a few days. After death there were no marks of injury to the chest, but the right lung was ruptured posteriorly throughout its length and much blood had become extravasated.

As it appears to be difficult for some to believe that there can be contusion of the lung without injury to the chest wall, I have endeavoured to find what has been written on the mechanism of this condition. The only author to whom I have access who has written anything on this subject is Hoffman. He says (*loc. cit.*):

A direct contusion of the lung occurs especially in cases of fracture of the ribs; but is usually accompanied by laceration of the pleura and even extensive laceration of the pulmonary parenchyma, but may take place without associated lesions.

Most frequently, however, such lesions appear to develop indirectly—that is, not at the place where the force was applied, but at some distant point, thus: from the part of the lung which becomes suddenly compressed by the external force the air and the blood contained within the vessels are suddenly driven towards the peripheral parts of the lung. There thus results a more or less extensive laceration of the lung tissue with hæmorrhage and interstitial emphysema.

Now, although this explanation appears to be partially correct, more especially in respect to the effect of blows upon the chest, upon the air in the lungs, it does not, in my opinion, take into sufficient consideration the effect of gravity upon the blood and tissues in the case of falls.

As this appears to be a very important subject, I venture to give the results of some experiments I have made.

Let us first consider the effects of gravity upon the blood stream.

We know that when a body falls its velocity continually increases, according to a certain law, until it reaches the ground. The formula is:

$$v^2 = 2gh.$$

where

v = the velocity, in feet per second.

g = the effect of gravity = 32.2.

h = the height from which the body falls.

If a man falls on his side from a height of only 4 ft.,

when his body touches the ground it will have attained a velocity of more than 16 ft. per second:

$$v^2 = 2gh.$$

$$= 2 \times 32.2 \times 4.$$

$$= 257.6.$$

$$\therefore v = \sqrt{257.6} = 16 \text{ approximately.}$$

That is to say, the velocity would be nearly twelve miles an hour, so that the blow would be equivalent to what the man would receive if he were struck by a tramcar running at full speed.

According to Volkman and Vierdosh³ the blood in the large arteries near the heart flows normally at the rate of about 10 or 12 in. per second, and at about 2½ in. per second in the arteries of the foot. We may, therefore, assume that the blood normally moves in the vessels of the lungs at the rate of not more than 1 ft. per second, and that in the arteries it flows towards, and in the veins from, the periphery.

During the fall this state of things continues relatively, that is, if we regard the blood stream with relation to the body, but they are not the same absolutely, that is, if we regard the rate and direction of the blood stream in relation to the ground, towards which the body is falling.

During the descent the blood acquires a velocity, with regard to the earth, of 16 ft. per second. But the blood in the arteries running towards the surface of the lung has already at the commencement of the fall an intrasomatic velocity of 1 ft. per second, which must be added to the velocity accrued by the fall, making a total of 17 ft. per second. On the other hand, the initial intrasomatic centripetal velocity of the blood in the pulmonary veins must be deducted, making the sum of 15 ft. per second.

Now, as already indicated, during the fall these changes in the velocity of the blood in respect to the earth have no effect on the body, because the velocity of the whole body is increasing in a like ratio, just as, when we are travelling in an express train, our blood may be travelling at the rate of 100 miles an hour but we feel no difference, because the whole body is travelling at the same rate. When the fall is arrested, however, the relations of things are instantly changed. The solid elements of the body are brought to a sudden state of rest, while the blood, being a fluid, continues to press onward with its accelerated velocity. Now this sudden change in the relative velocity and, in the case of the pulmonary veins, of direction of the blood stream must have a disastrous effect upon the capillaries at the periphery of the lung. Not only are these organs suddenly engorged on the arterial side by a flow of blood of seventeen times the normal velocity, but that flood, instead of finding its escape through its accustomed exit, is met by another flood, of almost an equally high velocity, forced back through the pulmonary veins. It seems impossible that the wall of these delicate organs could escape rupture.

Let us now consider the effects of the fall and its sudden arrest upon the solid structures of the thorax and its contents.

The thorax is a sort of bony cage, bound together and lined by muscles, fascia, etc. All these materials being highly elastic, the chest walls are capable of sustaining considerable stress without fracture of the ribs or break in the continuity of the soft tissues. The intrathoracic organs, which for our present purpose we may regard as one mass, are attached securely but not rigidly in their position, mainly by the trachea and great vessels and other organs and tissues of the neck and by the walls of the anterior and posterior mediastina. That the attachments are elastic enough to allow of considerable lateral movement is proved by the fact that in cases of left pleuritic effusion the heart may be pushed so far to the right that the apex beat may be found well to the right of the sternum.

During the fall the velocities of the thorax and its contents increase equally; but when the wall of the chest suddenly stops on reaching the ground the intrathoracic organs endeavour to continue in motion, and the surface of the lung is flung upon the pleura costalis, being at the same time compressed by the weight of the rest of the intrathoracic organs straining to overcome the resistance of their somewhat elastic attachments. The intrathoracic organs and the blood they contain cannot weigh less than 5 or 6 lb.—say 5 lb.; but $5 \times 16 = 80$, so that the momentum acquired by the fall would equal 80 ft. lb. What would be

the net effect of this impulse upon the surface of the lung I cannot say, but it would not be a negligible quantity. Probably the greatest danger from this source would be the stress upon the organs forming the attachments.

Of far greater importance, in my opinion, is the effect upon the surface of the lung of the impulse due to the fall of the body and conducted through the chest walls at the place of impact. These walls consist of a series of elastic bony rings, bound together by soft tissues.

If a ring made of an elastic material falls from a height, having its plane perpendicular to the earth's surface, what effect has the momentum acquired by the fall upon a body resting upon its inner circumference at the point opposite to the point of impact?

Let A B represent a wire tightly stretched and fixed perpendicularly between a point, A, in the ceiling, and another point, B, in the floor of a room. Let B D F be an iron ring, having an external diameter of 12 in. and an internal diameter of 11 in. Through the circumference of the ring, at opposite extremities of the diameter, B F, are holes, through which the wire, B A, passes, so that the ring can be drawn up to any desired height along the wire, and allowed to fall freely to the ground.

Let C be a ball of porcelain, or any hard substance, having a hole through it, through which the wire passes, so that it also is free to move up and down upon the wire within the iron ring.

Now, without lifting the ring B D F, raise the ball C as far as it will go along the portion of the wire B F, and let it fall.

It will be observed that, owing to the momentum which it has acquired in falling, it perceptibly rebounds, but not very much.

Next, without touching C, raise the ring B D F along with it until C is about a foot above the ground (that is, about as high as it was raised separately in the first experiment) and let the whole system fall freely to the ground. It will now be observed that the ring itself rebounds but little, but that the ball C will rebound, probably the whole diameter of the ring, proving that a large portion of the momentum acquired by the weight of the ring and the ball taken together has been reflected by the floor, passed through the rim of the ring, and expended in raising the ball C. The exact height to which the ball is raised depends chiefly upon the following conditions:

- The weight of the ring;
- The weight of the ball;
- The modulus of elasticity of the materials of which the ring and the ball are constructed; and, lastly,
- The height from which the ring and ball fall.

Taking the case of an iron ring weighing 12 oz. and a piece of porcelain weighing 2 oz., I calculate that about one-quarter of the momentum generated by allowing the system to fall 1 ft. was expended in raising the porcelain $9\frac{1}{2}$ in. It is obvious that if the weight of the ball is known, the height to which it rebounds is a measure of the momentum passed through the ring, minus the momentum which the ball itself has acquired during its fall, and which begins to exert itself independently and in a direction contrary to the reflected force, the instant the ring touched the ground. For although the ring and the ball during their fall are not physically one, they are acting in strict partnership during that time, and the whole of the momentum which they generate is communicated to the floor when the ring touches it; at that instant, however, the partnership is dissolved by the momentum of reaction passing through the ring, which, in acting on the ball, has not only to impart it an initial velocity sufficient to raise it to the given height, but also to overcome the effect of its own momentum downwards which it acquired in its fall, and which continues for a moment after the dissolution of its partnership with the ring.

It is needless to say, the intensity of the rebound varies with the height of the fall: thus, when the ring was lifted

about 3 ft., not only did the ring itself rebound, but the porcelain struck the opposite side of the rim with such force that it was fractured.

The point upon which I would lay especial stress is, that the amount of force impinging upon that part of the porcelain ball contingent to the rim of the ring, consequent upon the impact on falling, depends not so much upon the weight of the ball as upon the weight of the ring and ball taken together.

The general application of the dynamic principles I have endeavoured to illustrate, to the case of an injury to the lung resulting from a blow or fall upon the thorax, is obvious. It is true that the modulus of elasticity of a rib with its coverings differs from that of an iron ring, but it must be very considerable, especially in the case of a strong middle-aged man whose bones are hard. If such a man fell heavily upon his chest, and the ribs did not fracture, a large part of the momentum generated by the weight of the body and the fall would undoubtedly be conducted through the chest wall, and, impinging upon the surface of the lung, damage it considerably, even if it did not cause the rupture of the organ, as happened in the case quoted from the *Lancet* above.

Now note a seeming paradox—if the ribs are fractured the danger to the lung may be less.

For the iron ring on the wire was substituted one of wood. Inside the ring was strung a piece of porcelain, as in the previous experiments, the holes through the ring for the wire being drilled parallel to the grain of the wood. When the ring and the porcelain were raised to a moderate height and allowed to fall the porcelain rebounded energetically, as it did in the case of the iron ring, and the rebound was a measure of the amount of force conducted through the ring at the moment of impact. The ring and the porcelain were now raised to such a height that the momentum on falling was sufficient to fracture the ring. In this case, although the ring was fractured, the porcelain rebounded but little, showing that it was but little affected by the force of impact.

As the result of many experiments with wooden rings I have arrived at the following conclusions:

Each ring has a coefficient of fracture of its own, so that of two similar rings, one does not fracture as easily or in exactly the same manner as the other. This results from small differences in hardness and direction of grain, etc.

A ring does not fracture easily, and the porcelain rebounds but little, if the holes through which the wire passes are drilled, not parallel to, but across the grain, showing that the force is conducted more easily along the fibro-vascular bundles than across a fasciculus of such bundles.

The phenomenon is also accounted for partly by the fact that a wooden ring is more easily flattened or rendered ovoid by a force applied at right angles to the grain, than by a force applied parallel to the grain, and that the force expended in flattening the ring does not pass through it. For example, two small wooden rings were compressed in a vice, until they fractured: in the first case the force was applied parallel to the grain, and fracture occurred when the diameter had been reduced 2 per cent.; in the second case the force was applied across the grain, and the diameter was reduced more than 10 per cent. before the ring suffered fracture.

If a ring be taken, having one of its sides already fractured, and the holes be drilled parallel to the grain:

(a) If the fracture is on the upper side of the ring, the ring on falling will be fractured on the lower side, and the porcelain will not rebound.

(b) If the fracture be on the lower side of the ring, so that the porcelain is resting on the fracture, the ring on falling may suffer no further fracture, but the porcelain will not rebound.

I therefore conclude that rings which are compressible in the direction of the force applied, or rings which are fractured, conduct the force of impact less readily than rings which are whole and less compressible.

Applying these results to the case of the ribs, I conclude as follows:

If the ribs are soft and pliable, as in the case of young persons, they are less liable to fracture, but, as they bend, the force expended in bending them is absorbed, and therefore does not so easily pass through them and injure the lung.

If the ribs are hard, as in elderly persons, they are more liable to fracture. If they do not fracture, on account of their hardness, a large part of the force applied is conducted through their substance to the detriment of the lung. If they do fracture, the force producing this result is saved from the lung.

It may thus happen that a greater fall may be less dangerous than a lesser one, for, if the fall be just sufficient to break the ribs, but little force will pass through them and there will be less danger to the lung. On the other hand, if the fall be just not sufficient to fracture the ribs, a large part of the force accrued by the fall will pass through the chest wall and there is danger of contusion of the lung.

These results appear to be in agreement with clinical observation, fatal contusion of the lung being of more frequent occurrence in elderly than young persons.

It is needless to say we are not here considering those cases in which the substance of the lung is penetrated by a fractured rib.

Space will not allow me to discuss fully the interesting question whether the consolidation found in cases of contusion of the lung is identical with that of ordinary croupous pneumonia. I will content myself by stating that there are two opinions on this point. The first is that the portion of the lung contused is rendered a suitable nidus for the pneumococcus, and that ordinary pneumonia results. The second is that the solidification is simply due to the coagulation or "organization" of the blood poured into the air cells as the result of the contusion. As Hamilton⁴ says: "It must be remembered that there are pneumonias and pneumonias; that a croupous exudate may be poured into the lung through a multitude of exciting agents, and may even result from purely mechanical causes which lead to embarrassment of the pulmonary circulation."

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- ¹ *Textbook of Pathology*, vol. II, p. 102. ² *Medical Jurisprudence*, p. 352, Ed. 1844. ³ *Kirk's Physiology*. ⁴ *Loc. cit.*

A NOTE ON BODY-WEIGHT IN RELATION TO PULMONARY TUBERCULOSIS.

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It is generally acknowledged (and to some extent acted on in regard to life assurance) that, both in families in which there is supposed to be a predisposition to tuberculosis and in those in which there is none, the overweight members are less likely to develop consumption than the underweight members. C. L. Greene¹ quotes the combined experience of the Washington and National Life Assurance Companies (3,548 cases), showing that in persons apparently without special predisposition to consumption the percentage of deaths from consumption was 5.20 for weights above the standard, 15.67 for standard weights, and 24.20 for weights below the standard; whilst in persons supposed to have a predisposition to consumption the percentage of deaths from consumption was 5.59 for weights above the standard, 25.91 for standard weights, and 42.51 for weights below the standard. Greene² likewise quotes the experience of the Connecticut Mutual Life Insurance Company (1846 to 1895 inclusive), showing that the percentage of deaths attributed to tuberculosis was 22.0 in underweights and only 1.9 in overweights.

C. Muirhead, when studying the causes of death among the assured in the Scottish Widows' Life Assurance Society (1874 to 1894 inclusive), looked up the height and weight as tabulated on admission into the life assurance society (1) of 524 males who ultimately died of pulmonary tuberculosis; (2) of 502 who were said to have died of "apoplexy." Amongst those who died of apoplexy, 59.87 per cent. weighed, on admission for life assurance, above the normal standard for their height and age (as calculated according to Dr. W. Robertson's standard table),

and 40.13 per cent. weighed below the standard; whilst of those who ultimately died of pulmonary tuberculosis only 19.30 per cent. weighed on admission above the standard, the large proportion of 80.70 per cent. weighing below the standard.³

We wished to ascertain as far as possible what the average weight of consumptive patients in a large hospital for consumption was (1) in comparison to their height and (2) in comparison to the average of their former ordinary weights.

In the Mount Vernon Hospital for Chest Diseases it is the rule to enter the height and weight of every patient on admission, and likewise to note what the former ordinary weight was whenever information on that subject can be obtained.

We determined, therefore, with the consent of the medical staff, to collect these data from cases in which the former ordinary weight was mentioned.

(A) In a series of 500 male patients 25 years old and upwards, all of whom had tubercle bacilli in their sputum, we found that the average height was exactly 5 ft. 7 in.; that is, the figure obtained by adding together the heights of all the patients, as entered in the notes on admission, and dividing by 500. Their average weight on admission, obtained in the same way, was 9 st. 1 lb. 13 oz.: 53 of them (10.6 per cent.) weighed more than 10½ st., 3 (0.6 per cent.) weighed exactly 10½ st., and 444 (88.8 per cent.) weighed less than 10½ st. The average of their former ordinary weights was 10 st. 5 lb. 9 oz.: 204 of them (40.8 per cent.) used to weigh more than 10½ st., 16 (3.2 per cent.) used to weigh 10½ st., and 280 (56.0 per cent.) used to weigh less than 10½ st. It seems, therefore, that the average of the former ordinary weights of these male patients (presumably their weights as far as they knew before their illness) was below standard, though of course not so decidedly "underweight" as their average weight on admission was.

(B) In a series of 100 female patients 25 years old and upwards, all of whom had tubercle bacilli in their sputum, we found that the average height was exactly 5 ft. 3½ in., that is, the figure obtained by adding together the heights of all the patients, as entered in the notes on admission, and dividing by 100. Their average weight on admission, obtained in the same way, was 7 st. 9 lb. 13 oz. Eighteen of them weighed more than 8½ st., 1 weighed exactly 8½ st., and 81 weighed less than 8½ st. The average of their former ordinary weights was 8 st. 8 lb. 12 oz. Fifty-four of them used to weigh more than 8½ st., 1 used to weigh 8½ st., and 45 used to weigh less than 8½ st. It seems, therefore, that though the average weight of these female patients on admission was much below standard, the average of their former ordinary weights (presumably their weights as far as they knew before their illness) was scarcely below standard, certainly not so "underweight" as that of the male patients (Series A).

(C) We likewise collected similar data from a series of 100 male patients in their 30th year or upwards, who whilst they were in the hospital presented undoubted physical signs of old pulmonary tuberculosis, though they had no fever and no tubercle bacilli in their sputum (patients in whom, in fact, the tuberculosis appeared to be quiescent or not very active). Their average height was 5 ft. 6½ in. Their average weight on admission was 9 st. 7 lb. 5 oz. Twenty of them weighed more than 10½ st.; 3 weighed exactly 10½ st.; and 77 less than 10½ st. The average of their former ordinary weights was 10 st. 6 lb. 11 oz.; 48 of them used to weigh more than 10½ st., 1 used to weigh 10½ st., and 51 used to weigh less than 10½ st. It seems, therefore, that the average weight in this series of male patients on admission and the average of their former ordinary weights were both below standard, but not so much so as in the series of male patients (Series A) showing signs of active pulmonary tuberculosis and having tubercle bacilli in their sputum on admission. This may be taken, perhaps, to signify that a generally more robust habit of body accompanied their resistance towards tuberculosis, a resistance shown by the relative quiescence of the disease.

Probably the preference shown by pulmonary tuberculosis for "underweights" would have been more strikingly illustrated by our cases had it not been that

¹ See C. Muirhead, *The Causes of Death among the Assured in the Scottish Widows' Fund*, Edinburgh, 1902, p. 44.

	Average Weights on Admission.					Former Average Weights.			
	Average Height on Admission.	Average Weight on Admission.	Percentage above 103 st. in Males, 81 st. in Females.	Percentage exactly 103 st. in Males, 81 st. in Females.	Percentage below 103 st. in Males, 81 st. in Females.	Average of Former Ordinary Weights.	Percentage above 103 st. in Males, 81 st. in Females.	Percentage exactly 103 st. in Males, 81 st. in Females.	Percentage below 103 st. in Males, 81 st. in Females.
500 male patients, 25 years old and upwards, all with tubercle bacilli in their sputum	ft. 10. 5 7	st. 1b. oz. 9 1 13	10.6	0.6	88.8	st. 1b. oz. 10 5 9	40.8	3.2	56.0
100 female patients, 25 years old and upwards, all with tubercle bacilli in their sputum	5 3½	7 9 13	18.0	1.0	81.0	8 8 12	54.0	1.0	45.0
100 male patients, in their 35th year and upwards, with physical signs of old pulmonary tuberculosis, but without fever and without tubercle bacilli in their sputum	5 6½	9 7 5	20.0	3.0	77.0	10 6 11	48.0	1.0	51.

consumptive patients, on admission to hospitals, when the case notes are being taken, are inclined to exaggerate their loss of weight—that is to say, there is a tendency for them to overestimate their former ordinary weight.

Our results have been classified in the accompanying table.

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¹ *Medical Examination for Life Insurance*, London, second edition, 1905, p. 365. ² *Loc. cit.*, p. 129.

ASTHMA: ITS CAUSATION AND TREATMENT.*

By WILLIAM LLOYD, F.R.C.S.Ed.,

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AMONG the various chronic complaints to which the human frame is liable, very few can be considered of a more formidable nature than a confirmed asthma. The idea of its being an incurable disorder, its threatening instant suffocation at every attack, are circumstances altogether so alarming to a patient as necessarily to weaken and depress a mind endowed with the utmost fortitude and resignation. Any remedy, then, whether medicinal or surgical, that is capable of administering permanent relief to a person in such an afflicting situation, must be looked upon as of the utmost importance to mankind.

It may be stated that to-day a radical cure can be promised in a large percentage of cases, especially if asthma is treated in its early stages; of the remainder a number can be relieved altogether for the time, though they may be subject to subsequent attacks.

CAUSATION.

Although it would be idle to deny that the seeds of asthma are sometimes transmitted from parents to their offspring, yet too much pains have been taken by past writers to persuade the world that this is most commonly the case.

This opinion, as far as I am able to judge, was founded on the inefficacy of the remedies generally employed, rather than on the more faithful and unerring testimony of observation. Physicians supposed, as the disorder seldom or never yielded to the power of medicine, that some hidden and unconquerable cause had fixed its roots deep in the constitution, and as an apology for the healing art they have thought proper to charge this to the account of an hereditary taint. Happily, however, we know that in the large majority the case is otherwise. As an example of the hereditaryness of the disease I will describe an interesting case that came under my notice in the summer of last year.

A lady consulted me in June, 1907, and brought her eldest son, who was 22 years of age, suffering from asthma. The family history is briefly as follows: Mrs. E., the mother, aged 51, married twenty-seven years ago, her husband being typically asthmatic. Two children were born of this marriage, both boys. Asthma in each case commenced at two years of age. The father died when the eldest boy was 7 and the youngest 5 years of age. Two years later the mother married again, this time not as an asthmatic. Of this marriage there are three children, the eldest being in his 16th year, perfectly free from any suspicion of asthma.

From this fact (if a solitary case can have any weight) it may be inferred that the predisposition is inherited.

There are numerous theories as to the causation of asthma, but, in my opinion, the only one which can be successfully maintained in the present state of our knowledge is the following: That asthma is essentially a nervous disease, and that it is due to spasm of the bronchial muscles, induced reflexly either by irritation of the nasal mucous membrane or of the alimentary canal.

To state my point clearly, take a case of asthma of nasal origin (fortunately they are the commonest), wash the patient's nose out with a mild antiseptic lotion—boracic acid, for instance—and in ninety nine cases out of a hundred you will produce an attack of asthma, which is immediately cut short on the application of a 10 per cent. solution of cocaine to the nasal septum in the region of the anterior end of the middle turbinate. In cases of hay asthma and ipecacuanha asthma, the excitant of the paroxysm is something applied to the nasal and not the bronchial mucous membrane. Of this fact I have convinced myself by a simple experiment. Plug the nostrils, and allow the patient to inhale pollen or ipecacuanha through the mouth, and invariably he remains free from any suspicion of asthma.

It would appear, then, that there are three factors in the causation of asthma, namely:

1. The presence of hypersensitive areas in the nasal mucous membrane, or a special sensitiveness of the gastric mucous membrane.
2. A special irritability of the pulmonary nervous system, which constitutes the asthmatic idiosyncrasy with which the individual was born.
3. The presence of an irritant—for example, odours, dust, smoke, etc. Error in diet when of gastric origin.

The absence of any one of these factors is sufficient to prevent the disease.

TREATMENT.

The remedies that have been generally made use of in this disease are of great variety, such as expectorants, antispasmodics, etc.; but, like that of all paroxysmal affections, it naturally divides itself into the treatment of the paroxysm and the treatment in the intervals.

The first thing to be done on being summoned to a patient in an attack of asthma is to find out if there is any exciting cause present, and if so to remedy it. Inquire as to the time and digestibility of the last meal, and if his bowels are free and regular; if there be any source of trouble in the stomach or rectum, secure its immediate removal. If there is anything irritating in the air he is breathing, arrangements must be made for removal. If the patient is in bed, get him out and bolster him up in an arm-chair, place before him a table with a cushion on it, on which he may rest his elbows and throw himself forward.

Should the paroxysm persist in spite of these measures, then one of the following remedies must be administered in the hope of cutting it short. I have occasionally found ipecacuanha powder cut short an attack for the rest of the night. The use of pipe tobacco smoking acts admirably in some patients. It must be remembered that remedies of this kind must be given as early as possible, because

* Read before the Chelsea Division of the British Medical Association.

it is just easier to check the asthmatic paroxysm when it is much established.

One of the commonest and most effectual remedies is coffee. It acts better if given very hot and strong and without sugar and milk.

Alcohol, chloroform, and cocaine are remedies of the value of which I have often seen most striking instances in checking an attack however severe. One feels great unwillingness to commence these drugs; still, in face of the frightful agonies of asthma and the uselessness of every other remedy, one is perhaps justified in prescribing one or other of them when the occasion demands.

Shrámionum smoking and inhalation of the fumes of burning nitre paper are remedies also extremely beneficial in some cases.

Potassium iodide is a remedy that, in the opinion of many physicians, is considered almost a specific. I regret to say that in my own experience very little permanent relief has been obtained after a long course of the drug.

It has been stated by many competent practitioners that careful dieting cures a large proportion of asthma because its victims are very often dyspeptics. The food should be nutritious and easily digestible, should be plain, well cooked, and containing the proper proportion of animal and vegetable elements. An important point to remember is that an asthmatic should dine early—5 p.m. is the latest if he goes to bed at 10—so as to allow of digestion being completed and the stomach empty before retiring to rest.

If in the nose some disease or deformity is present likely to cause asthma the condition must be rectified. Where no disease is present on inspection certain parts of the nasal mucous membrane, known as asthmogenic areas, must be cauterized, one by one, at several sittings until improvement is effected.

In prescribing a lotion for nasal cleansing I would point out that nothing acts so well as a solution of common salt in water. The various proprietary nasal compounds on the market containing boracic acid, carbolic acid, etc., are particularly irritating to the nasal mucous membrane of an asthmatic.

A CASE OF PANCREATIC DIABETES ASSOCIATED WITH DILATATION OF STOMACH FOR WHICH GASTRO-ENTEROSTOMY HAD BEEN PERFORMED.

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THE following case is of interest, as it affords an example of the class of cases recently referred to by Mr. Mayo Robson in his Mitchell Banks Memorial Lecture on the anatomy of the pancreas in relation to its diseases, where the disease, in the first instance, produced a dilatation of the stomach which was relieved by gastro-enterostomy, and, in the second instance, by invasion of the pancreas, caused definite signs and symptoms of acute diabetes.

J. McD., aged 46, a lamplighter, was first seen by me in the dispensary in June, 1903, complaining of weakness in the legs, great thirst, and the passing of large quantities of water, of three months' duration, and of indigestion and constipation for nine years.

History.

The patient in his youth had measles, scarlet fever, and enteric fever. When 15 years old he had an attack of rheumatic fever, followed by another similar attack at 28; but, apart from this, he had always been strong and well until nine years ago, when his stomach began to trouble him. He commenced to lose flesh, suffer from constipation, and had difficulty in eating and sleeping. This continued for a few years until he saw Dr. Mayland in 1902, who has kindly given me a few notes of the patient's condition while under his care in the surgical wards of the Victoria Infirmary of Glasgow.

Ten months previous to his admission he had an attack of influenza, which confined him to bed for a fortnight. After this he was troubled more than ever with flatulence, sourness in the stomach, flushing of the face, loss of appetite, and bodily weakness. He had to give up work, and for six months his tongue was always foul, and he was steadily losing in weight. There was never pain in the stomach nor vomiting.

Condition in 1902.

The patient was thin, the face flushed, teeth good, tongue-furred. The heart and lungs were normal.

Abdomen.—Seems normal in appearance. There is, however, marked tympanicity over the epigastrium and left hypochondriac regions, and Hippocratic succussion is present. No tenderness anywhere, and no dullness can be made out. The liver is not enlarged. The stomach was washed out and inflated. It was dilated, especially towards the left side, and extended downwards towards the umbilicus.

Urine.—The urine was neutral, with specific gravity of 1024, and contained neither albumen nor sugar.

A test breakfast was ordered after washing out the stomach, and 24 oz. of brownish fluid were drawn off. The fluid contained free HCl and amorphous semidigested fluid starch-matter.

Four days after admission a laparotomy was performed.

Operation.

After opening the abdomen the stomach was found to be dilated, and the pylorus appeared normal. The internal surface of it was examined digitally and by the speculum. The index finger passed easily through the pylorus without any sense of constriction. The mucous lining seemed quite healthy. A posterior gastro-jejunostomy was performed. In a few weeks the patient was dismissed from the infirmary well.

After-history.

The operation was not attended with the usual satisfactory results, and the weight, which was only 83 st. before the operation, did not quickly increase the patient's weight averaged 11 st. before his stomach commenced to trouble him).

In three years his weight had increased to 10 st., and had remained stationary until December, 1907. At this date he remembers getting a chill which was followed by what his doctor called "catarrh of the stomach." Soon after, however, in January, 1908, diabetic symptoms manifested themselves.

He commenced almost suddenly to experience symptoms that he had never had before—great thirst, foul-smelling faecal evacuations, and the constant passing of large quantities of water. With this there was marked prostration and loss of weight. The bowels were constipated, the motions yellowish, and sometimes sticky in character, and at other times slimy and "mattery." The tongue and mouth became dry, the skin cold, the legs swelled occasionally at the ankles, the taste in the mouth was sweetish. He noticed that the water was frothy, and had a sweet, sickly smell. The eyesight was not so good as formerly; deafness and tinnitus were troublesome. He had been troubled too, with itching of the skin. He had never had jaundice, vomiting, haemoptysis, or melaena. The legs felt very tired, but he had never felt numbness or pricking sensations.

Condition in June, 1908.

The patient is very thin, with a bright expression. The mucous membranes are rather pale. The finger ends are not clubbed, nor are the nails curved. The pupils are equal, and respond to light and accommodation. The tongue is furred, but on its under surface and at the sides it is red and glazed. The throat and palate are very red. Teeth not good, but no suppurative at the stumps. Pulse regular and of moderate tension. Vessels slightly atheromatous; no oedema; no jaundice.

Lungs.—Normal in every respect.

Heart.—Normal in every respect.

Nervous System.—Pupils normal, fundus normal; no catarract, knee-jerks sluggish; no anaesthesia, no ulcers.

Abdomen.—General fullness of abdomen. Scar of operation wound seen to right of middle line. Liver and spleen normal. Kidneys not felt. No ascites. Stomach passes down below the umbilicus (auscultatory percussion). No dullness, no thickening, or tumour of the pylorus or neighbouring parts. Succussion present. Palpation of the pancreas, by throwing forward the epigastrium, is negative. Bismuth meals were given to the patient on an empty stomach, and the shadow on the photographic plates (taken by Dr. Sommerville) corroborated what was already made out on physical examination, that the stomach was dilated to a point below the umbilicus. These plates failed to show any evidence of biliary or pancreatic calculi.

Urine.—A special examination of the urine by Dr. Cairns Douglas showed that it was very pale, feebly acid, specific gravity 1027, with scanty whitish deposit. It contained no albumen, acetone, or diacetic acid; no bile pigments or salts, pus or blood; no evidence of urobilin, although uroserin appeared to exist as a chromogen; diminished indigens; scanty creatinin; microscopically a few flat epithelial cells, and some phosphatic crystals; urea scanty, only 4 per cent., or 1.7 grains per ounce. Sugar, 8.7 per cent., or 38 grains per ounce. A positive Cambridge reaction after separation of all substances that might interfere with the test.

Blood.—Haemoglobin = 60 per cent.; red cells = 4,850,000; white cells = 4,750. Films of the blood were stained in 2 per cent. methylene blue solution and 25 per cent. eosin solution—the red blood corpuscles did not take on the eosin colour sufficiently (Bremer's test: 20 c.cm. of blood, 1 c.cm. of a watery solution of methylene blue (1 to 6,000), and 40 c.cm. of liquor potassiae was mixed in boiling water for four minutes. The blue colour disappeared into a dirty greenish-yellow colour (Williamson's test).

Habits.—Always abstemious. Smoked and chewed tobacco heavily until seven years ago. Never had any venereal disease.

Family History.—Father and mother are both alive and well. He has been married for twenty-two years and has three healthy children. He has always been well looked after.

This case presents many points of interest. The patient had dilatation of the stomach with no pyloric obstruction, and at a later date diabetes mellitus appeared. Have these two diseases any connexion with each other, or has the diabetes only occurred with dilatation of the stomach as a coincidence?

I should like to show, as has already been pointed out by Mr. Mayo Robson, first that in all probability in this case the stomach affection depended primarily on pancreatic disease, and, secondly, that the diabetes which followed depended upon a still further advanced stage of the pancreatic process.

At the time of the gastro-enterostomy it was found that the dilatation of the stomach did not depend on pyloric ulceration or tumour. It must have been due, then, either to primary atony of the stomach wall or to stricture or pressure on the duodenum at some distance below the pylorus. The fact that the patient was always a healthy man before the onset of the stomach trouble and had never suffered from neurasthenia is rather against simple atony. Granted that the duodenum was at fault, what affections could produce sufficient signs of pressure to cause secondary gastric dilatation? Ulcer could do so, with subsequent cicatricial contraction; but in such a case the patient would have had symptoms of pain in the epigastrium, and possibly melaena, which were entirely absent in this case. Cancer might do so, but that diagnosis could be easily excluded by considering the duration of the illness and the absence of physical signs. In both these conditions of the duodenum the pancreas could have been secondarily affected, giving rise to a new set of symptoms depending on pancreatic disease. These possibilities I think can be excluded.

The only other cause of duodenal stricture is pressure from without. The duodenum may be pressed upon by tumours in the abdomen, or may have its calibre interfered with by strands of coarse fibres depending upon old-standing inflammations with adhesions. In the patient under consideration, from the history and from the physical examination, there was no evidence of any liver, omental, or peritoneal disease, nor was the gall bladder at any time enlarged. Diseases of the pancreas, however, could cause pressure against the duodenum; but abscesses, cysts, and tumours of that organ would have manifested themselves by physical examination.

We are left, then, with one other important pancreatic disease which cannot be diagnosed by physical methods, and yet is capable of producing pressure on the duodenum, narrowing its calibre, and, as a result, inducing all the gastric phenomena that were present in this case. In chronic pancreatitis the head of the gland may partly embrace a portion of the duodenum and thereby cause almost complete stricture of the lumen of the bowel. I wish to emphasize the probability, then, that in the case under consideration the cause of the stomach dilatation was in the first instance pancreatitis. Had Cammidge's reaction been taken at this time I have little doubt it would have been positive. It was not, however, until the sudden onset of diabetes that the pancreas was suspected of being the seat of the mischief. The test was performed by an expert, with every precaution taken to prevent fallacy in making the test. It was positive, and corroborated surmises which before could not be definitely proved. Two other signs of chronic pancreatitis naturally presented themselves to my mind—a fatty character of the motions and jaundice. A chemical analysis of the faeces was not made for unsaponified neutral fat, but the appearance of the motions suggested excess of fat and fatty substances. Jaundice was never present, which was unusual, as the bile duct, as a rule, is pressed upon, and causes obstructive or catarrhal jaundice. The outstanding symptoms and signs were the dilatation of the stomach, the marked wasting, the character of the motions, the pancreatic reaction, and, lastly, diabetes.

Diabetes is an uncommon accompaniment of pancreatic disease, and when it does occur it indicates an extensive involvement of the parenchyma of the pancreas. Mr. Mayo Robson says that "the appearance of sugar in the urine, along with other signs of disease of the pancreas, points to a widespread and advanced lesion." The islands

of Langerhans, which are supposed to yield an internal secretion that is capable of exerting an influence over carbohydrate metabolism, become cut off, or their cells are replaced by connective tissue. An intercalary cirrhosis is set up, and Opie has shown that a hyaline metamorphosis is often strictly limited to the islands of Langerhans, while the glandular acini remain intact.

This case presented a somewhat interesting picture of a chronic inflammatory affection of the pancreas, giving rise in the first instance to gastric symptoms, relieved partly by gastro-enterostomy, and, in the second place, by alteration in the bulk of its substance, to diabetes mellitus. The etiological factor in the production of a primary interstitial pancreatitis is not yet known, but no doubt it bears some close relationship to cirrhosis occurring in other organs. The patient is rapidly losing flesh and strength, and although no grave complications of diabetes have as yet manifested themselves, little improvement can be expected either by medicinal or surgical measures.

In conclusion, let me add that I believe the operation of gastro-enterostomy in this case served one useful purpose—it prevented most likely the onset of "gastric tetany." All the elements conducive to gastric tetany were present—dilatation of the stomach with free hydrochloric acid, and prolonged dehydration of the tissues from the diabetes. As I have shown elsewhere, autointoxication and dehydration of the tissues play an important part in causing "gastric tetany," and in all these cases a gastro-enterostomy has diminished the mortality of the disease.

REFERENCE.

¹ BRITISH MEDICAL JOURNAL, 1908, vol. i, p. 1155.

THE CAUSATION OF INGROWING TOENAIL, AND THE LOCATION OF GOUT.

BY G. ARBOUR STEPHENS, M.D. LOND.,

SWANSEA.

THE textbooks usually describe the cause of this inconvenient, uncomfortable, and painful condition as being tight and badly-fitting boots.

If tight boots are the cause, then all the ladies of the land should be sufferers, and chiropody should be a valuable branch of surgery. If badly-fitting boots are the cause, then all the children in cottage homes and most charitable institutions should be sufferers. With so universal a cause, ingrowing toenail ought to be much more prevalent than it is, and on both feet.

I venture to suggest that a more likely cause is the position of the foot during sleep. Most people sleep on their side, but were they asked how they placed their feet, very few could give a correct answer.

What usually happens is that a person on first taking up the side position, places his two feet side by side, but in a very short time the upper one slips down on to the bed, so as to lie wholly or partially on the bed alongside the other. If it slides but a short way, then it lies with its weight resting on the toes, and it is this constant pressure on the side of the big toe during hours of unconsciousness, that gives rise to the pathological condition.

Most persons at some period have experienced what is popularly known as the "fidgets" when getting into bed in an irritable and disturbed condition; they are restless, and do not know what to do with their feet, and at some stage they would notice, were they so disposed, that the upper foot was twisted round the lower one, with the big toe dug into the bed.

Most of the cases I have treated have suffered with the left foot, but in those persons who have had the right toenail affected I found the habit of sleeping on their left side. One patient I had with both nails ingrowing, but he was a ship's officer who had the habit of digging both feet against the side of his bunk.

The accompanying photographs may help to make the matter a little clearer.

Fig. 1 illustrates a position very commonly taken up by sleepers, and shows the pressure to which the big toe is subjected, sufficient to bend it out of the normal position. Fig. 2 shows the foot of a much older patient and the result of pressure exerted for many years.

One can understand from an examination of Fig. 1 the strain to which the joint at the ball of the big toe is

subjected, and in a person with an approaching attack of gout it is easy to understand why it is that a joint that has been under such continuous strain for about five hours



Fig. 1.

should be the spot selected at five o'clock in the morning for the exhibition of the most typical symptom.

One member of the profession, on hearing my suggestion as to the cause of ingrowing toenail, facetiously suggested

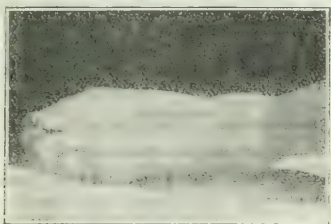


Fig. 2.

that we had better go to bed with our boots on; but, although we cannot all follow him in that habit, I venture to think that ingrowing toenail might be warded off, especially in children, by the wearing of a specially made toecap.

THE EFFECTIVE TREATMENT OF ACUTE AND SUBACUTE RHEUMATISM.*

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[WITH SPECIAL PLATE.]

The title of this paper is intended to imply that the treatment of acute and subacute rheumatism, as advised in the textbooks and as usually carried out in practice, is inadequate and unsatisfactory. It is true that a great advance has been made since the days when it was maintained that cases of this disease did as well upon mint-water or upon lemon-juice as with any powerful drugs. In those days, as some of us can remember, there was no great exaggeration in the story of the physician who was asked "What is good for rheumatism?" and who replied, "Six weeks." At that time it was common for rheumatic patients to remain in hospital for weeks, and the very painful and persistent arthritis, with the profuse acid sweats, formed a clinical picture which is now not seen in hospital wards. Fatal hyperpyrexia, now extremely rare, was then not uncommon. There was, however, even then reason for thinking that treatment by alkalis was of some distinct advantage, in spite of the fact that the alkali employed was generally a salt of potash, and therefore not free from depressing effects, and that it was administered only in small quantities. An investigation of the clinical records of Guy's Hospital, which I made in 1874 as the basis of my thesis for the Cambridge M.D. degree, seemed to me to show clearly that the alkaline treatment certainly gave the best results. Yet these results left much to be desired, and the ineffectiveness of the treatment of acute rheumatism was one of the reproaches of medicine.

It is clearly seen by us all how great an improvement has been effected by the introduction of salicylate of soda. The rapid relief of pain, the fall of temperature, and the shortened duration of the illness are results which follow, we all agree, the administration of this drug. Yet the remedy, it must be confessed, has some side-effects which are annoying and which tend to limit its usefulness. Without much investigation whether these hindrances could be removed by some modification of the method of administration, physicians have been inclined to desert the simple salicylate in favour of some of the organic compounds of salicylic acid provided for us by the ingenuity of German chemists. But the most commonly used of these, acetyl-salicylic acid, the so-called "aspirin," cannot be combined with an alkali, hence we are at once deprived of a useful ally of sodium salicylate; and though free from some of the side-effects of salicylate, it may produce the most dangerous symptoms of salicylate poisoning, as proved by the case of the girl which I have elsewhere narrated who became comatose with typical "air hunger" after seven 15-grain doses of aspirin given in two and one-third days.

The use of sodium salicylate is also hindered by the superstition still prevalent among us that it is a depressant to the heart. The origin of this mischievous notion was probably due, in the first place, to impurities in the drug when a large demand suddenly arose through its early reputation as an antirheumatic. But the drug as now supplied to hospitals is of great purity, and careful observation of its effects for many years enables me to say deliberately that, when given to a rheumatic patient, it does not cause any weakening of the cardiac action. But it must be remembered that the rheumatic toxæmia itself always causes more or less cardiac weakening, and that this may sometimes become specially manifest. If at the time salicylate is being taken, the remedy is almost certain to be blamed for what is in reality one of the effects of the disease. It must be borne in mind, first, that a similar cardiac failure occurs in diphtheria and in influenza, quite apart from the action of any drug, and, secondly, that in every case of acute or subacute rheumatism the cardiac muscle suffers more or less. Endocarditis occurs only in a certain number of cases, and pericarditis is still less common, but the existence of a dilatation of the left ventricle can always be proved by careful percussion. Since I brought forward evidence of this fact before this society in 1898 I have never seen a case of acute or subacute rheumatism, in a child or in an adult, in which dilatation of the left ventricle did not exist. It appears to be invariably present in this disease. For a recent confirmation of this fact I may refer to the instructive article on rheumatic myocarditis contributed to the last number of the *Quarterly Journal of Medicine* (vol. ii, No. 5), by my friend and former house-physician, Dr. Carey Coombs, of Bristol.

The idea that sodium salicylate was a cardiac depressant, conjoined with the frequent difficulties in its administration, have caused physicians to give it only in small doses, and to discontinue its use as soon as or soon after the painful arthritis had subsided and the temperature fallen. It is a common experience that with this method relapses of rheumatic symptoms, in one form or another, have been frequent. It is also a common experience that often the temperature does not fall permanently to the normal, but that the evening temperature persistently rises to 99° or 100°, sometimes for a considerable period, especially in children; this should never be disregarded, for it means that the rheumatism is still active. It is therefore clear that the present treatment of rheumatism is inadequate, for though it controls it does not completely arrest the disease.

But it is not merely inadequate; it is also unsatisfactory, for it aims almost entirely at the cure of the painful arthritis, and pays little or no heed to the heart. It despairs of any real influence on the condition of this organ; it has no hope of diminishing a rheumatic endocarditis, and it usually ignores altogether the affection of the cardiac muscle. This is largely due to the fact that the earlier descriptions of acute rheumatism were the result of observations of the disease not in a children's hospital, but in hospitals for adults. Hence the present absurd arrangement of the textbooks, in which a description of its characteristics in adults is followed by an

* Read at the International Session of the Royal Society of Medicine, December 1st, 1908.

article describing what the writers are pleased to call its "peculiarities in childhood." Yet those who have worked simultaneously both in a hospital for children and in one for adults know well that it is in children that the disease is most frequent and most virulent; that in a considerable number of children the first attack is fatal, and that it fatally cripples the heart in a large number of the cases which survive. If every medical student of the past, and especially the gentlemen who now devote themselves to work in pathological laboratories and no longer visit the wards, had been compelled to study for three months in a children's hospital, we should have been spared such phrases as "rheumatism—that is, arthritis," and it would never have occurred to any one to describe as an "attenuated pyæmia" a malady which is as definite and distinctive, and as certainly microbial, as pneumonia or typhoid, which is one of the most virulent diseases of childhood, and which never produces pus.

We must give up the conception of acute rheumatism as a form of arthritis of adults, with occasional metastasis to the heart, and with certain "peculiarities" when it occurs in childhood. We must insist on the conception that it is a microbic toxæmia most virulent in early life, in which the heart is invariably affected to a greater or less degree, but the joints slightly and often not at all, with the peculiarity that when it occurs in adults the most prominent symptom is often a painful arthritis. It was from this point of view that I wrote the article on Acute and Subacute Rheumatism in the first volume of Dr. Allchin's *Manual of Medicine*, a few months before the epoch-making discovery of the rheumatic diplococcus by Poynton and Paine, and subsequent experience has only confirmed the conviction that this is the right way of presenting the facts.

If we are to seek for an improvement in the treatment of acute rheumatism, it must surely be based on the great and universally acknowledged curative effect of sodium salicylate in cases of rheumatic arthritis. This drug is not a cure for all kinds of arthritis; the remarkable results obtained by it in rheumatic arthritis are not observed if it be used for a tuberculous, pneumococcal, or gonorrhoeal joint inflammation. The prompt subsidence of a rheumatic arthritis under its use can only be due to a definite antagonism to the rheumatic process or microbe—in other words, its action is specific. The general unwillingness of physicians to admit this really unavoidable conclusion is due to the fact that the doses given are usually so small that only the more easily checked manifestations of acute rheumatism—the arthritis and the pyrexia—are fairly controlled. But if the inference is sound, may it not be possible, by a considerable increase of the dose, to produce a definite arrest of the disease in place of the imperfect control exerted by the small doses given at present? The question seems reasonable, but the possibility of an affirmative reply must depend upon the successful avoidance of the unpleasant symptoms which salicylate is apt to produce. Fortunately these are much less troublesome in children than in adults; indeed, among the toxic symptoms observed in adults vomiting is almost the only one which gives trouble in childhood.

The addition of sodium bicarbonate to each dose of the salicylate, in an amount always double of the amount of the salicylate, is a very effectual means of diminishing these side-effects, and the unpleasant taste may be covered by glycerine and peppermint-water or chloroform-water. The use of sodium bicarbonate in combination with the salicylate has two additional advantages. It helps to neutralize the acid toxins of the microbe, which Dr. Ainley Walker and Mr. Ryffel found, by special culture of the diplococcus, to be partly formic and partly acetic acids. And when we remember Dr. Gaskell's discovery, related in the third volume of the *Journal of Physiology*, that dilute lactic acid causes dilatation of the isolated frog's ventricle and finally arrest in diastole, while dilute sodium hydrate causes increased contraction with diminishing size until the ventricle stops in systole with its cavity reduced to nil, we may be reasonably sure that in man the administration of large doses of sodium bicarbonate must tend to cause a lessening of the pernicious cardiac dilatation of acute rheumatism.

Potassium salts should not be used, for the potassium base is really a cardiac depressant.

It is desirable to administer the combined salicylate and bicarbonate in frequent, but at first in moderate, doses. If the frequency be every two hours from 6 a.m. to 10 p.m., with one additional dose during the night, the total daily dose of each drug will be ten times the amount of the single dose. The amount of each should be increased daily, or every second day, until any unpleasant side-effect such as vomiting, deafness, tinnitus, vertigo, or a tendency to delirium is observed. In children, drowsiness, an acetone-odour of the breath, acetoneuria, and a slowing and deepening of the respiration must always be looked out for; if neglected, these may lead to "air-hunger" and fatal coma. Such symptoms are especially liable to occur if the child is costive, and may then be produced by quite small doses of salicylate, especially if the urine is too acid. They may be entirely prevented by careful relief of constipation, conjoined with the administration of a sufficient amount of sodium bicarbonate. Enough must be given to render the urine alkaline, and a surprising amount is often needed to effect this in a rheumatic child. Twice as much as the dose of salicylate is usually sufficient, but occasionally in young children it is not quite sufficient, and extra doses of the bicarbonate alone are necessary to make the urine alkaline. It is also a good rule, suggested by Dr. Reginald Miller, Medical Registrar at the Hospital for Sick Children, never to increase the dose of the salicylate unless the patient's bowels have acted on that particular day.

If, through neglect of these precautions, any of the above-mentioned symptoms of acid poisoning occur, it may be necessary to omit the salicylate altogether, and to increase the amount of the bicarbonate—even to a drachm hourly. With these precautions the administration of large doses of salicylate is quite safe. The only fatal case in my own experience occurred seven years ago, in a child to whom the salicylate was given without any bicarbonate and who was costive. The dose of salicylate was very small, only 20 grains daily (four 5-grain doses), but by an oversight it had been continued for ten weeks, and the importance of the prevention of constipation was not then recognized. The credit of first pointing out the danger of constipation in children taking salicylate belongs to Dr. Languead, formerly Medical Registrar at Great Ormond Street, who published a valuable paper in the *Lancet* for June 30th, 1906.

As soon as any unpleasant symptom due to salicylate occurs in an adult, or if vomiting occurs in a child, the administration of the drug should be suspended for a few hours. Two, or three, doses may be omitted; even a 12-hour interval may be allowed. But the elimination of salicylate in the urine is rapid, and the interval should not be long. After a few hours the medicine should again be given, but in reduced amount, one-half or two-thirds, according to the intensity of the symptoms observed. In many cases even the same dose as before will not produce a recurrence of the toxic effects, and I have sometimes suspected that they may be due in part to a bactericidal influence of the drug, destroying a large number of diplococci so quickly that their internal toxins are thrown in large amounts into the circulation. But it is wiser to reduce the dose of the remedy when it is again given, and to increase it the next day and continue to increase it as before. Almost always it is found possible in this way to reach a much larger dose than caused toxic symptoms at first, sometimes even three or four times as much. If in the course of this increase of dose any fresh toxic symptom occurs, the same plan of arrest and temporary reduction should be adopted as before. There are very few patients who cannot be trained in this way to tolerate large amounts of sodium salicylate, and there is really no need for any of the German substitutes. But one must expect to find every now and then a patient who is specially susceptible to this drug, as others are to mercury, quinine, iodide, or bromide, or even to articles of diet such as eggs.

The initial dose of sodium salicylate may be:

For an adult, 15 grains, or 150 grains daily.

For a child of 7 to 12 years, 10 grains, or 100 grains daily.

For a child younger than 7, 5 grains, or 50 grains daily.

Given in each case with twice the amount of sodium bicarbonate.

The daily increase of dose may with advantage be from 2 to 5 grains in the individual dose—that is, from 20 to

50 grains in the total amount given daily. The increase in the dose should be progressive until the evening temperature is and remains normal. The amount needed for a child may be nearly as great as for an adult, for in a child the infection is more virulent and renal elimination is more active. In some mild cases of acute and subacute rheumatism it may be sufficient to increase the dose of salicylate to 150 grains daily, but in many it is desirable to increase it to 200 or 250 grains, and in some severe cases to 350 or 400 grains. Chorea often requires 250 to 350, or even 400 grains. The doses usually given in this disease are much too small; large doses often cause rapid improvement. But in chorea time is often a necessary factor in the cure; damaged cortical cells require time for the restoration of their nutritive equilibrium after the arrest of the deleterious action of the rheumatic diplococci. A chorea treated early is often promptly arrested by large doses of sodium salicylate and bicarbonate, but a case which is already chronic will require a longer time.

In the chronic rheumatism of adults I have seen improvement commence when the daily dose reached 450 or even 500 grains, while small doses may produce no apparent effect.

The maximum dose in my own experience was given to a boy of 15 years, with severe pericarditis, endocarditis, a much dilated heart, and a tremendous crop of subcutaneous and subperiosteal nodules, many of large size. In this case the dose was raised without any difficulty, and quite rapidly, to a maximum of 600 grains of salicylate with 1,200 grains of bicarbonate daily. This dose was given for two days without any ill effect. After a day free from medicine, it was resumed at the lower rate of 500 grains of salicylate and 1,000 grains of bicarbonate, given for six days in each of the three following weeks. This was followed by a gradual reduction. An icebag was also applied over the heart for the cure of the pericarditis. The final result was most satisfactory.

What are the observed effects of these larger doses of sodium salicylate in acute and subacute rheumatism? Rapid relief of pain and subsidence of arthritis; fall of temperature to the normal with little or no tendency to subsequent rise; rarity of relapse; marked diminution of the torpidity and depressed look of the rheumatic child; and as regards the heart, an easily-observed reduction in size of the dilated left ventricle, while the cardiac impulse becomes stronger and more localized. It would be unreasonable to expect that a murmur due to endocarditis should immediately disappear, but the improvement in the condition of the muscular wall of the heart is often most striking. The rheumatic nodule is specially resistant to treatment, for its abundance of fibrous tissue tends to hinder a bactericide from reaching the diplococci which it contains. Yet under the influence of large doses of salicylate and bicarbonate even large nodules, such as were at one time said to be "equivalent to a sentence of death," will melt away. In the boy already mentioned as many as 216 nodules, some of large size, were counted on one day; yet when he left the hospital not a vestige of them remained. Examples of such nodules will be found in the special plate.

Is it possible to assist the curative influence on the heart by the use of any other therapeutical measure? The answer to this question is very decidedly in the affirmative. In rheumatic pericarditis the extraordinary value of the local application of ice is one of the most certain facts in therapeutics. I advocated the use of the icebag in pericarditis at the Nottingham meeting of the British Medical Association in 1892, and I have used it for the treatment of this condition ever since. Its curative influence is very great. But in using it two points must always be borne in mind. The patient's lower extremities must be kept constantly warm by hot-water bottles, and any considerable dilatation of the right auricle must be relieved by leeches before the ice is applied—the indications for leeches being

an extension of the cardiac dullness in the fourth right intercostal space to two fingerbreadths, rapid respiration, restlessness, and some degree of cyanosis of the lips and face.

The beneficial action of the icebag in pericarditis is clearly a local one, and it suggests the probability that this measure may be useful also in rheumatic myocarditis and possibly even in endocarditis. I think there is no doubt that the application of an icebag to a dilated rheumatic heart (with the precautions already mentioned) certainly causes a more rapid reduction in size of the left ventricle and an increase in strength of the cardiac impulse. And in some cases in which evidence of endocarditis has been present, I have observed under its influence a notable retrogression of the auscultatory signs. The earliest indication of an endocarditis is usually a systolic apex murmur, to which a doubling of the second sound at the apex is often soon added, and in some cases the second element of this double second sound becomes changed into a short mid-diastolic murmur. Under the local influence of ice I have noticed first the disappearance of the mid-diastolic murmur, and the reappearance of the double second sound, soon followed by the disappearance of the doubling, leaving only a systolic murmur and a second sound, and at a later stage the systolic murmur has tended to disappear.

I have gradually made more frequent use of ice in the treatment of cardiac rheumatism apart from pericarditis, and can recommend it as certainly helpful. But the two precautions already mentioned must be always remembered. The combination of ice to the heart with the use of large doses of sodium salicylate and bicarbonate has yielded very remarkable results in practice, and I speak from the

experience of careful trials carried on for three or four years in a hospital service of 60 beds, consisting of 25 beds at the Hospital for Sick Children, with 5 beds for children and 30 for adults at St. Mary's Hospital.

My conviction is that if these methods were adopted universally, the lives of many rheumatic children would be saved, and that an enormous reduction would be effected

in the prevalence of rheumatic heart disease in the adults of the next generation. How much suffering would thereby be prevented can be readily imagined by those who have watched the miserable downward progress of cases of chronic heart disease, the result of former rheumatism.

I commend this method of treatment to your favourable consideration. I submit no statistics, for statistics presented by the advocate of some special treatment are justly suspected as tainted by an involuntary bias. But I ask you to try the method for yourselves. And if to some there seems to be danger in these large doses, I would beg you to remember that an excessive timidity in dosage, due to the fear of doing harm, may often be more detrimental to the patient than a cautious boldness. In medicine a sin of omission is more lightly regarded than a sin of commission, but it may be even more disastrous. In advocating a bolder course I have endeavoured to state clearly the precautions which are necessary. Let no one adopt the former and yet neglect the latter.

A COLLECTIVE investigation on cancer within the boundaries of the State of Hamburg has been made. The material gathered will be edited by Dr. Koerber.

AN Italian Committee for the Study of Cancer has recently been founded. It is under the patronage of the King of Italy, and its Honorary President is the Sindaco of Milan, where are the head quarters of the committee. It is constituted on the same lines as the International Cancer Research Association founded at Berlin in 1908, and its objects are to encourage research on cancer and the publication of the results; to collect statistics on a uniform method; and to promote the establishment of institutes for investigation of cancer.

DESCRIPTION OF PLATE.

Fig. 1 shows many nodules around the elbows, and four or five subperiosteal nodules along the ulna.

Fig. 2 shows large nodules on the occiput, the scapular ridges, and the vertebral spinal processes.

Fig. 3 represents very accurately the many small nodules on the flexor tendons at the wrist in the same patient, but this photograph was taken some years ago from a patient under the care of Dr. J. A. Coutts, and is published with his permission.



Fig. 1.



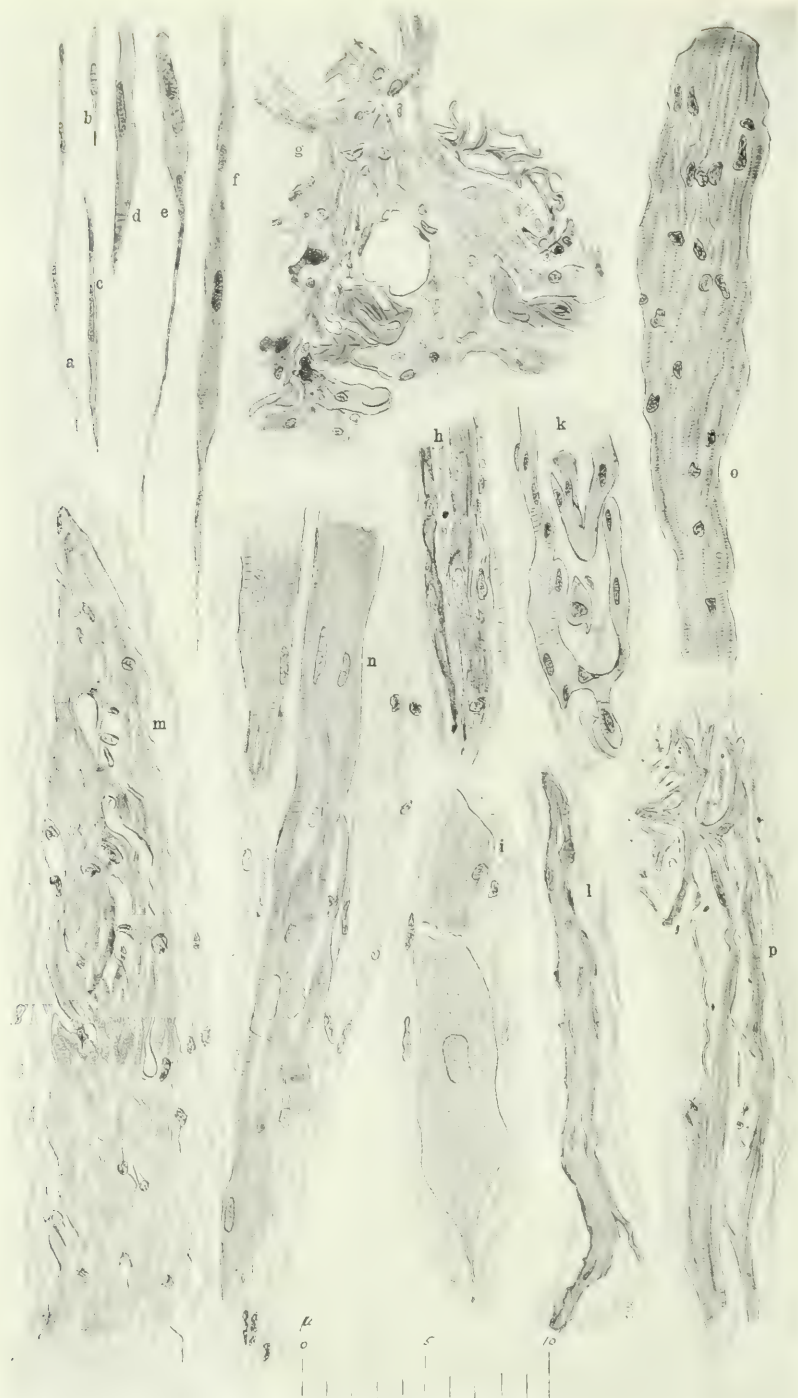
Fig. 2.



Fig. 3.







THE SCIENCE COMMITTEE OF THE British Medical Association.

REPORT CIX.

ON THE PRIMITIVE MUSCLE TISSUE OF THE HUMAN HEART.*

By ALEXANDER GIBSON, D.M., M.R.C.P.,

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[WITH SPECIAL PLATE.]

THE attention recently given to the more accurate analysis of the events taking place in the cardiac cycle of man has resulted in limiting the origin of the beat to certain regions. In the frog's heart we know that the beat originates in the sinus venosus, and it has been tentatively assumed that in mammalian hearts the beat originates in that part which represents the sinus venosus of the amphibian. Recent clinical work, as for instance that of G. A. Gibson and of K. F. Wenckebach, has directed attention chiefly to the superior vena cava as the probable site in man. In the search

for a special muscular tissue originating the cardiac beat three important anatomical contributions to our knowledge have recently been made. Tawara,¹ in his investigations on the auricular connexions of His's bundle, is led to the conclusion that the region anterior to the orifice of the coronary sinus is the spot from which the fibres of this bundle originate, and he therefore infers that this region gives rise to the beat of the heart. Wenckebach² describes certain muscular bundles in the wall of the superior vena cava of a paler colour than those of the auricular muscle. They are seen as ring-like bundles surrounding the proximal part of the vein; single bundles stretch upwards away from the auricle. He describes a marked separation by connective tissue and fat of the musculature of the superior vena cava from that of the auricle when viewed from without. Muscle bands stretch from the superior vena cava to other parts of the heart, especially to the right auricle; these bands can be seen on dissecting the posterior aspect of the heart, and are especially marked in hypertrophic conditions that affect the auricles.

Keith and Flack³ have described a type of muscular tissue in the hearts of several species of animals, including man, which they suppose to be that in which the normal stimulus for the contraction of the heart arises. In the region of the orifice of the superior vena cava associated with a vessel which partially encircles the vein they have described a type of muscular tissue differing markedly from the ordinary muscular tissue of the auricle in being closely embedded in connective tissue, the fibres being fusiform with elongated nuclei and the fibres themselves having a plexiform arrangement. This tissue they describe as similar in its structure to that occurring at Tawara's node in the lower part of the interauricular septum.

OBJECTS AND SCOPE OF THE PRESENT RESEARCH.

This research was undertaken with the view of ascertaining by macroscopic and microscopic examina-

* Towards the expenses of this research a grant was made by the British Medical Association on the recommendation of the Science Committee of the Association.

tion of the human heart what differences, if any, existed in the arrangement and type of muscle fibre in the regions in which most of the primitive and undifferentiated tissue was likely to exist, and from the results of this work to attempt to formulate some working hypothesis that would enable us to associate certain functions with definite anatomical parts of the cardiac musculature. The material used has been from the *post-mortem* room, but in all cases the hearts have been taken from young adults who had died from accident or disease not associated with the cardio-vascular system. The hearts were allowed to soak in running tap-water for twenty-four hours; then, having been stuffed with cotton-wool, they were placed in Kaiserling's formalin solution, afterwards in 90 per cent. alcohol, and finally, for preservation, in Kaiserling's glycerine solution. The portions cut out for microscopic examination having been washed well in running tap-water to remove all glycerine, were embedded in paraffin in the usual way. The stains used throughout for the ordinary examination of sections have been hematoxylin and Van Gieson's picric acid fuchsin; for special purposes Weigert's resorcin fuchsin and Cresylleucht violet have been used.

THE NAKED-EYE FEATURES OF THE AURICULAR ENDOCARDIUM.

If a normal heart be opened and the right auricle

examined from the inside, the endocardium will be seen to present certain thickenings arranged slightly differently in different specimens, and in very different degrees, but preserving some uniformity. Fig. 1 is intended to display these points; the region of the superior vena cava has a whitish endocardium, that near the orifice of the inferior vena cava is yellowish, towards the auriculo-ventricular ring the muscle becomes more visible owing to the endocardium becoming transparent. In the figure the portions where the muscle can easily be seen through the endocardium are dotted. It will be observed that the edge of this thickened

endocardium in relation with the superior vena cava is sharp, except at one point where in the heart figured there is a free cord of thickened endocardium coming downwards to meet and join a tongue of thickened endocardium stretching anteriorly from the region of the foramen ovale. Where the auricular wall becomes trabeculated owing to the formation of the auricular appendix the thickened endocardium is well seen on the convexity of the trabeculae gradually fading away as they stretch towards the more dilated parts of the appendix. The pattern here described is by no means uniform in all hearts, but in young persons some such pattern can usually be found. In older persons the endocardium is most often uniformly covered with a whitish layer, but the parts which show the greatest thickening in the young adult are as a rule also thicker in the old person. The endocardium of the left auricle is for the most part uniform, and of a yellowish-grey tint; in no places in normal hearts is it usual to see the reddish-brown of the muscular fibres through the endocardium except in the auricular appendix.

This thickened endocardium has been examined histologically in a number of regions, and has been found to consist largely of fibrous tissue staining red by Van Gieson's stain. In its substance, or immediately in relation with it, are large numbers of muscular fibres, occurring singly or in bundles, mostly of the smooth or unstriated type (Plate, Fig. a). In the greater number of sections examined this is the only type seen, but in others the type is different, and may be traced through a very

DESCRIPTION OF PLATE.

- Fig. a, Smooth muscle fibre.
Figs. b and c, Smooth muscle fibres showing an increase in thickness.
Fig. d, Fusiform fibre showing slight striation.
Fig. e, Smooth muscle fibre expanded at one end but showing no striation.
Fig. f, Fusiform muscle fibre with a tail-like process to which is attached a smooth muscle fibre.
Fig. g, A muscle syncytium showing cross-striation in one place, from the sino-auricular node (Keith and Flack).
Fig. h, A fusiform partly-striated muscle fibre and a nearly normal auricular muscle fibre with a tail-like unstriated process.
Fig. i, A thick fusiform fibre, with a tail-like process showing a faint suspicion of striation.
Fig. k, A reticular muscle fibre, partly striated.
Fig. l, A bundle of smooth fibres, the cytoplasm of which is increasing in amount.
Fig. m, A muscle syncytium; another section of this showed a slight cross striation.
Fig. n, One fibre and part of another of a Purkinje type.
Fig. o, A muscle syncytium, the fibrils of which are cross-striated.
Fig. p, The upper part is found in the sino-auricular node of Keith and Flack; it shows the manner in which this tissue is connected with the main part of the auricular muscle fibre.

definite series of changes which it will be well to describe before going further into their distribution.

DESCRIPTION OF THE DIFFERENT TYPES OF FIBRES.

In the plate will be seen drawings of certain types of fibres met with in the sections examined. These must be taken as specimens of their classes, for amongst them very few are exactly alike. Fig. *a* is a drawing of the whole of one and part of another smooth muscular fibre as met with commonly in the endocardium. Figs. *b* and *c* are smooth fibres, but slightly shorter and thicker than the normal type. Fig. *d* is still thicker, and shows on either side near the nucleus two longitudinal bands which by careful focussing can be seen to be cross-striated; this is seen also near one pole of the cell. Fig. *e* shows a fibre markedly thickened at one end directly continuous with a long tail-like process

indistinguishable from a smooth muscle fibre. Fig. *f* has a similar but shorter tail-like process, attached to which is a smooth muscle fibre; the cell contains two nuclei, and shows only the faintest evidence in one spot of cross-striation. Fig. *g* is a similar but much broader cell, with only the faintest evidence of striation. Fig. *h* shows a large irregular muscle syncytium in which only at one point could any cross-striation be detected. Fig. *i* shows a nearly normal auricular muscle fibre with a non-striated process side by side with a fibre which for the greater part of its length shows no striation. Fig. *j* is a fairly common type, and seems to be a bundle of non-striated fibres becoming thicker, the next stage being seen in Fig. *m*, which is a muscle syncytium showing irregular cavities containing nuclei; the substance of the fibre appears to be an interlacement of fibrils, stretching for the most part longitudinally. The fibre here depicted, though non-striated in the section from which the figure was drawn, showed some striation in a neighbouring section. This type is very nearly allied to one figured by Tawara (Table V, Fig. 1). Fig. *o* is another syncytium which is very similar in appearance to Fig. *m*, except that it is striated and the bundles which compose it are more longitudinally arranged. Fig. *k* is a fibre met with occasionally in association with the fibres depicted in Figs. *c* to *j*. Fig. *n* is an extremely common fibre, and is of the type of certain Purkinje fibres; for the most part it is striated, though, as shown, many portions have no striation. Fig. *p* shows a reticular type of fibre and its junction towards more normal auricular muscle fibre.

These fibres may be roughly classified into three groups: first, those more nearly related to smooth muscle tissue (Figs. *b*, *c*, *d*, *e*, *f*, *h*, and *i*); secondly, those having a syncytial arrangement (Figs. *l*, *m*, *n*, *o*); and thirdly, those of a reticular structure (Figs. *g* and *p*).

THEIR DISTRIBUTION.

It is too early as yet to do more than indicate the positions in which some of these fibres may be found, but there

are certain regions in which more of one type may be found than the other. It may be said at once that no mere cursory examination would be sufficient to discover even a few types, not only numbers of sites have to be examined, but numbers of sections in various parts. Speaking generally, the greater number of the first type, those which can be traced from smooth muscle tissue, are to be found in the region of the foramen ovale and in the valve of Vieussens.

The fibres of the second class are found most frequently in relation to the superior vena cava and the parts immediately related thereto. Fig. *m* was drawn from a section including part of the superior vena cava and the auricle; Fig. *n* was found in the valve of Vieussens, but is a very common type in the superior vena cava; Fig. *o* was found immediately under the endocardium of a trabecula of the right auricular

appendix, where many other such fibres can be found.

The third class, the reticular fibres, constitute the tissue described by Keith and Flack as the sino-auricular node, found in relation to the vessel which encircles the greater part of the circumference of the superior vena cava. Fig. *k*, however, was found in the valve of Vieussens. All the types of muscle fibres mentioned lie either embedded in the fibrous tissue of the endocardium or very closely in relation with it.

THEIR SIGNIFICANCE.

The presence of the forms mentioned in the first class is probably to be explained from the consideration of the heart as a tube originally developed from elongated cells which showed no striation, the striation only gradually developing it when the organ became rhythmically contractile; those parts which show such fibres in the adult being the remains of the unfinished part of the cardiac musculature, that zone between the highly differentiated tissue of the auricles and the undifferentiated muscular tissue of the veins. Certain neoplasms, too, in the heart and elsewhere show a similar series of changes.

The syncytial fibres may have some function originating the beat of the heart; this would be borne out by their being found largely in the neighbourhood of the superior vena cava, where experiment suggests that the beat usually starts, and their presence in other parts would also be confirmed by the experiments of Erlanger and Blackman,⁴ who find that the beat may arise in a large number of different places in the auricle. These speculations are suggested by the type, arrangement, and site of fibres, and must not be taken as anything more than hypotheses for future work which is being undertaken.

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- 3 Keith and Flack: Journal of Anatomy and Physiology, Edinburgh, 1906, xli, p. 172.
- 4 Erlanger and Blackman: American Journal of Physiology, 1907, xli, p. 125.

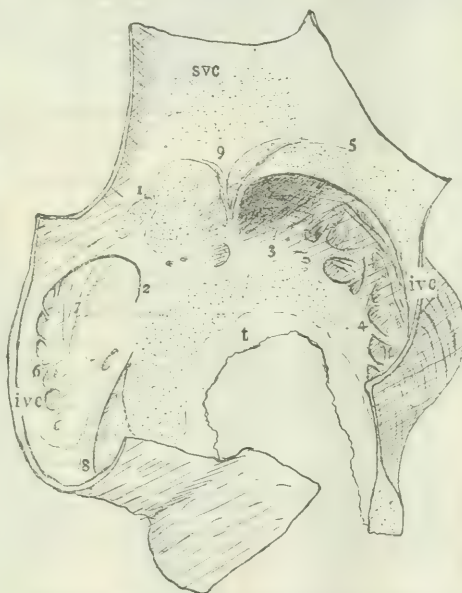


FIG. 1.—The right auricle of a normal young adult opened by joining the opening of the inferior vena with that of the superior vena cava and making a cut from the inferior vena cava down towards the ventricle. *s.v.c.*, superior vena cava; *i.v.c.*, inferior vena cava; *t*, tricuspid valve; the valve of Vieussens is marked by the figure 7, the Eustachian valve by the figure 8. Those portions where the muscular tissue of the auricle can be seen easily through a transparent endocardium are dotted; the undotted parts have a greyish colour which in the region of the foramen ovale is yellowish. The other numbers are for convenience in referring to particular portions in the histological examination and do not concern the description.

REPORT CX.

ON THE DIFFERENCE IN CONTENT OF
IMMUNE SUBSTANCES IN BLOOD
SERUM AND PLASMA.*

BY

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[Abstract.]

SERUM and plasma obtained from rabbit's blood have been compared as regards their agglutinating action on the *Bacterium coli* before, during, and after immunization with that organism.

It is found as a general proposition that the plasma of an animal is more strongly agglutinative than its serum, owing, as we believe, to the loss of some of the agglutinin of the latter in consequence of an "absorption" of agglutinin by the constituents of the clot formed in the blood from which the serum is derived.

This general proposition being fully established by the observations made, it follows that if the serum is at any period found to be as strong as the plasma, and still more if it is found to be the stronger of the two, its increase in agglutinating power must be due to some factor partially or completely absent from the plasma, which adds enough agglutinin to balance, or more than balance, as the case may be, the loss by "absorption."

In the observations now recorded the serum has been found always to be stronger than the plasma during the period of latency and rise in the immunity curve of agglutinin production. And the percentage difference between the two is shown to be greatest during the earlier portion of this period, that is, at a time which corresponds to the time of maximum leucocytosis following the inoculation.

It is, therefore, suggested that the factor in question causing increase in the agglutinins of the serum is the leucocytes of the blood, which are allowed to break up in the sample used for the preparation of serum, but are rapidly separated from the plasma in an extremely powerful centrifuge.

When there is no longer leucocytosis in the blood, and the activity of agglutinin production in the body begins to wane, the amount of agglutinin derived from the leucocytes present no longer overpowers or even equals the loss by "absorption"; and from this point onwards the plasma always shows the higher values.

These observed facts explain the disagreement in the results obtained by previous workers, who paid no regard to the particular stage of immunity with which they were dealing when they made their comparisons between the serum and plasma.

The view here put forward is strengthened by the observation, several times repeated, that if in an immunized animal a new increase in agglutinin production be induced by the inoculation of a totally different micro-organism, this non-specific stimulation rapidly results in the serum again becoming stronger than the plasma in specific agglutinating power. We are unable to offer any explanation of this result unless it be dependent on the increase in the activity and number of the leucocytes present in the blood.

But if this explanation be the correct one, it affords strong evidence that the leucocytes and leucocytic tissues (bone marrow, endothelia, etc.), some, or all of them, are concerned in the development of immunity, and are the source, or, at any rate, a source, of origin of the specific antibodies—agglutinins.

Incidental evidence has also been obtained which shows that plasma, as contrasted with serum, is relatively destitute of complement. And this affords additional support to the view that the complement of blood is derived from its leucocytes.

REPORT CXI.

OBSERVATIONS ON THE PRODUCTION OF
IMMUNE SUBSTANCES.*

BY

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[Abstract.]

If an animal (rabbit) which has been immunized against the *Bacterium coli*, and whose immunity has passed its maximum by a longer or shorter interval of time, receive an inoculation of a different organism, a new rise occurs in the curve of specific *coli* agglutinins in its blood serum. But if the interval which has elapsed before this inoculation is made be of such a length that the immunity of the animal has ceased to be measurably greater than it was before immunization was originally begun, no perceptible increase in agglutinins occurs.

That is to say, that the cells and tissues which are thrown into activity by the new inoculation are precisely those which were already occupied in the formation of agglutinin, and whose stimulation, therefore, leads to its increased production.

Now the tissues which are known always to be stimulated by bacterial inoculations are the leucocytic tissues of the body (bone marrow, lymphatic glands, endothelia, etc.). The observations recorded, therefore, tend to show that these tissues are the site, or a site, of production for the specific antibodies—agglutinins.

The question whether possibly other tissues also are concerned in the production is not here considered. At present we are not aware of any clear and satisfactory evidence in its favour.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

INDUSTRIAL SYPHILIS.

THE notes of a case of syphilis published by Mr. Snell in the JOURNAL of December 5th, 1908, are of paramount importance, and afford another piece of evidence for the compulsory notification of syphilis as an infectious disease. It reminded me of a similar case I had early in that year.

A young woman, aged 22, engaged as a coatmaker, consulted me for a sore she had had on her lip for some week or ten days; it was increasing in size. On the first visit I did not suspect anything of a specific nature, thinking it was simply an infected herpetic vesicle; and also I knew her and her family to be most virtuous. But at her next visit the appearance of the sore raised my suspicions, and upon examination I came to the conclusion that it could be nothing else but a primary chancre. This was afterwards confirmed by a consultant, and the train of symptoms which followed, but they were of a mild character. When I made up my mind as to the correct diagnosis, I endeavoured to find out how she became infected. I put the question as guardedly as possible, but could not elicit anything definite. I told her I should like to see her mother, when, as delicately as possible, I put the case before her, asking particulars about her companions and her work. Her companions at home were above suspicion, but at her place of business it was different; she was engaged in her occupation in a workroom where there were several women engaged, and each one had a different part of the coat to make, and in its various stages was passed from one to another; the girl herself suggested that the sore might have been produced by dye in the cloth with which she was working. To get the hem of the cloth into a workable condition she was in the habit of pressing it against her chin and passing it across several times, so as to make it flat and even. I then inquired as to the health of her fellow workpeople, and the majority

* Communicated to the Pathological Society of Great Britain and Ireland, at Leeds, on January 8th, 1909.

* Communicated to the Pathological Society of Great Britain and Ireland, at Leeds, on January 8th, 1909.

were very respectable, getting good wages at hand-made work. She told me that the one from whom she received the garment had not been well for some time, and had sores in her mouth and other such symptoms that made it certain as to the source from whence she had become infected. This was corroborated by her mother, who made inquiries; though she never suspected the disease. I impressed upon her the gravity and the length of time for treatment.

I maintain, in the interests of the community at large, that syphilis should be made notifiable—as we see here how the innocent suffered—anyway in industrial centres.

Birmingham.

CLEMENT BELCHER.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

GRAY VALLEY COTTAGE HOSPITAL.

ABDOMINAL LACERATION: EXTRUSION OF VISCERA: OPERATION: RECOVERY.

(Reported by T. W. BAILEY, Honorary Surgeon.)

The patient in the following case was admitted under my care in the afternoon of July 31st, 1908, with the following history: The same day, after a dinner of bread, meat, and beer, and a large Spanish onion, he had been riding a bicycle. He was wearing old-fashioned front-flap trousers, and in the left-side pocket of these was carrying a quart bottle containing tea. The bottle got in his way several times, and finally jammed between his body and the handle bars, throwing him on to his right side. On picking himself up, he found the bottle sticking into his stomach, through the band of his trousers, and broken at the shoulder. On withdrawing it gut followed. He was conscious of no pain from first to last, but collapsed on trying to get to the door of a house close by. This was the house of my partner, Dr. Curtis, who, finding him almost immediately afterwards, packed the protruded viscera with warm boracic lint, and brought him in a cab to the hospital, a distance of some two and a half miles.

State on Admission.—On arrival he was much collapsed, and the abdominal parietes were found torn through almost transversely, the right extremity of the tear being about an inch above and to the left of the umbilicus. Filling and extruding from the wound was a mass of viscera the size of a cottage loaf, consisting of part of the stomach, the transverse colon, and some omentum. In the stomach was a 2-inch wound through which food was exuding in considerable quantity.

Treatment.—Operating with the help of Drs. Curtis and Bennion, and the patient being under ether. I attended to all bleeding points first. There had been considerable hæmorrhage both from the torn parietes and the stomach. The latter was then washed out through the wound in its anterior wall, and the opening closed by continuous suture. The peritoneal cavity was then thoroughly irrigated. The next step was to cleanse and pack back all intestine, which necessitated some enlargement of the wound in order that the peritoneum, more freely torn than the muscles, might be properly sutured. The external wound was then closed with three tiers of stitches, room being left for a drainage tube of large calibre.

Progress and Result.—For the first twenty-four hours the man remained greatly collapsed, but after that he improved, and so rapidly that the drainage tube was left out in a few days. The wound, in short, healed by first intention, and the man had an uninterrupted recovery.

REMARKS.—My reason for reporting this case is, of course, the severe nature of the injury and the fact that a considerable time must have elapsed during which the man had a considerable quantity of his abdominal contents outside his abdomen more or less exposed. The happy issue of the case was no doubt in a measure due to the protruded mass of intestine effectually plugging the abdominal wound, and thereby preventing the escape of the stomach contents into the general peritoneal cavity.

THE thirty-sixth meeting of the Bæneological Congress will be held at Berlin under the presidency of Professor Brieger from March 4th to 8th.

Reports of Societies.

MEDICAL SOCIETY OF LONDON.

Monday, January 11th, 1908.

CHARTERS J. SYMONDS, M.S., F.R.C.S., in the Chair.

Mediastinal Growths.

DR. R. CECIL B. WALL, in the course of a paper on mediastinal growths, said that sarcoma of the mediastinum was a disease chiefly of the middle period of life. It was generally associated with pulmonary symptoms, of which cough and dyspnoea were the chief and hæmoptysis not uncommon. Symptoms due to the bulk of the growth were often present, such as stridor, dysphagia, and oedema from venous obstruction. Pain which could be ascribed to metastatic deposits was seldom a prominent symptom. The signs usually indicated either a pleural effusion, which was not uncommonly brown from altered blood pigment, or the presence of a solid mass in the mediastinum or lung. Evidence of impairment of function of various structures of the mediastinum was frequently found. Cancer of the mediastinum occurred somewhat later in life. Pulmonary symptoms were less commonly prominent, and metastatic deposits in bones or implicating nerves usually brought the patient under the notice of the physician. Signs of pulmonary or mediastinal disease were often absent; if present, they tended to indicate obstruction of a bronchus or effusion resulting from pleural metastases rather than massive deposits in the lung or mediastina. In Hodgkin's disease and acute lymphatic leukaemia the presence of a mass of lymphatic gland tissue in the thoracic cavity was merely accidental, but when present might produce symptoms and signs owing to its bulk. Cancer of the pleura seemed to be a disease of later life tending to produce symptoms, as in the case of mediastinal cancer, from metastatic deposits and signs of pleural effusion.

Lymphocythæmia.

DR. LEONARD GUTHRIE and DR. W. D'ESTE EMERY, in a paper on a case of lymphocythæmia in a boy aged 6 years, said that although lymphocythæmia so-called was undoubtedly a definite and separate disease as shown by the *post-mortem* appearances, it was doubtful whether it could be diagnosed with certainty by examination of the blood during life. Excess of lymphocytes was held to be pathognomonic of the disease, but it must be remembered that in early childhood lymphocytosis might be present in many other morbid conditions of the blood, all of which were protean in character so far as the results of examination of the blood were concerned. With regard to terminology, it seemed paradoxical to describe the case brought forward as one of lymphocythæmia when the total leucocyte count only amounted to 2,000 per c.mm., yet though not in excess in the blood, the lymphocytes, if indeed they were lymphocytes, were deposited in incalculable numbers in the tissues and organs.

ROYAL SOCIETY OF MEDICINE.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION.

At a meeting on December 10th, 1908, Dr. HERBERT STENGER, President, in the chair, Dr. ARNOLD W. LEE and Dr. E. J. SIDEBOTHAM read a paper on the *Bacteria of the puerperal uterus*. They had made observations on a series of fifty-eight patients in whom the puerperium was normal. The results of these experiments appeared to show (1) that the uterine secretion after delivery contained organisms in the great proportion of cases after the second day; (2) these organisms closely resembled those found in puerperal infection; (3) streptococci were present in a considerable number of cases, and often showed marked hæmolysis; the discovery of hæmolytic streptococci in the lochial discharge was no certain indication of the existence of infection. Dr. DRUMMOND ROBINSON thought that the weak spot in the paper had been indicated by the authors themselves. It was undisputed that the cervix always contained micro-organisms, and it appeared to him that it would always be impossible to obtain material from the cavity of the uterus without contaminating such material with micro-organisms from the cervix. Mr. ALBAN DORAN read notes of a case in which a woman, aged 35, subject to irregular menstruation for three years,

was seized on April 19th with acute hypogastric pain. A swelling developed in the left iliac fossa. When the patient was admitted into hospital on July 3rd the mass was found to be an oval, well-circumscribed cyst; there was no milk in the breasts, and there had been no show of blood of any kind for several months. At operation on July 10th he discovered a *posterior tubo-ligamentary pregnancy*, opened the sac, and extracted a live fetus; the greater part of the placenta came away with it. The cavity of the cyst was firmly packed with gauze, and a purse-string suture passed round the cut edge of the cyst wall to check hæmorrhage, but not drawn tightly, as the large intestine ran along the back of the cyst. The cut edge of the cyst was sutured to the parietal peritoneum. There were two fresh attacks of hæmorrhage checked by pressure, and forty-eight hours after the operation the packing was removed. There was much fetid discharge for several weeks, but the hæmorrhage never recurred. During the last week in November menstruation returned. The speaker considered that, as there was always great risk of hæmorrhage after operations performed late in ectopic pregnancy, the method which he had adopted was good surgery. Mr. HERBERT PATERSON communicated a case of *Extrauterine gestation* in which operation was performed during the sixth month of pregnancy. The patient was a woman, aged 29, who had suffered from abdominal pain for one month before her admission into the London Temperance Hospital in March, 1908. In the right iliac region and extending to the level of the umbilicus was a smooth, rounded, fixed, tender swelling. The catamenia had been perfectly regular up to the time of admission. A few days after admission the patient became markedly jaundiced, but this lasted only for two or three days. The fetus measured just over 6½ in., and weighed 8½ oz., and the fetal circulation was active at the time of operation. For forty-eight hours the patient was extremely ill, vomiting frequently on account of intestinal paresis. This was treated with repeated doses of calomel, and as soon as the bowels were opened the vomiting ceased and the patient rapidly recovered. He considered the important points in the treatment of such cases to be: (1) The avoidance of the use of ligatures inside the sac, which, as they were certain to become infected, greatly delayed convalescence; (2) the arrest of hæmorrhage by gauze packing; (3) the treatment of the intestinal paresis caused by the gauze packing by early and repeated doses of calomel; (4) the withholding of morphia; (5) the use of continuous saline injection by the rectum, after the method introduced by Dr. J. B. Murphy. The President (Dr. Herbert Spencer) thought that the cases were of much value, since cases of extrauterine pregnancy with living children in the second half of pregnancy were rare. Of three such cases which he had seen, only the last recovered. In the first he left the placenta behind, in accordance with the teaching of the time; in the second he removed the placenta and membranes, and packed with gauze, but the patient died the same night of syncope. In the third he treated the case in the same way as the second, and recovery resulted. Mr. Paterson estimated the pregnancy in his case as "in the sixth month," the fetus only measuring 6½ in. The size usually given for an intra-uterine fetus of 5 calendar months old was 10 in., and for one of 6 calendar months old 12 in. He did not know of any tables giving the size of the ectopic pregnancy fetus, but it was important that the age of the pregnancy should be correctly stated, as the mortality was enormously increased in the second half of pregnancy.

CLINICAL SECTION.

At a meeting on January 8th, Sir T. BARLOW, President, in the chair, Dr. JAMES MACKENZIE demonstrated the *Clinical polygraph*, an instrument which he had invented to replace the bulky revolving drum covered with smoked paper, formerly in use to record various vascular movements. Taking the time of the radial pulse as the standard he was able by a simple instrument to locate the times of other cardio-vascular movements. A small cup received the impressions of the pulsations, and a tube transmitted the impressions to a tambour and lever, the tambour being attached to a Dudgeon and Jacquet sphygmograph. This cup, or receiver, was a circular small shallow metal vessel, and, in use, its open mouth was applied over the pulsating part, so closely that

its edges excluded all communication with the outer air. From its roof arose a narrow pipe, ½ in. long, to which was fitted an india-rubber tube 3 or 4 ft. long, connected by its other end with the tambour, which (the tambour) supported a writing lever 6 in. long, and was attached to the upright stem of the sphygmograph. With this instrument he had made many observations and learnt much, but had also found need for a continuous tracing. This had led to the invention of the *ink polygraph*, whereby ink tracings of indefinite length could be taken on a gradually unwinding roll of paper controlled by clockwork. There were thus two tambours with levers, one to record the radial pulse, the other the movement under observation, and a time marker moved by clockwork. Dr. Mackenzie next showed many records which he had taken by the polygraph, and described the methods by which they should be read and the inferences to be drawn therefrom. Amongst other important observations, he had frequently found a prolongation of the interval between the auricular and ventricular waves in the jugular tracing in cases of advanced mitral stenosis; this he ascribed to alteration in the excitability of the auriculo-ventricular band, and he had designated the rhythm *nodal* rhythm. This also explained the irregularity that occurred in cardio-sclerosis. Drs. Mackenzie and Lewis then demonstrated the method of using the instrument on the human subject. Dr. PAUL CHAPMAN (Hereford) said he had previously doubted whether the times of the various impulses could be definitely measured by Dr. Mackenzie's instrument. He himself had used an instrument by which pulsation was adapted to cardiac (not a radial pulse) record, but it required much skill to obtain thereby records of any value. He had now no doubt that the sequence of events was as Dr. Mackenzie had described, and thought the instrument shown was of great value in correlating cardiac and vascular records with the signs found by other means of clinical investigation. Sir LAUDER BRUNTON said the subject was full of difficulties. He much admired Dr. Mackenzie's skill and patience in obtaining these records, and his ability in deciphering them. He thought the polygraph would help much in the diagnosis and application of medicines to cardiac disease. He considered this the most convenient of recording instruments, though less expensive than many he already possessed. Sir JOHN BROADBENT thought that delay in ventricular contraction in cases of mitral stenosis might be explained in another way than that given by Dr. Mackenzie. As the orifice grew narrower, the passage of the blood through it naturally took a longer time, so that the delay could be explained on a purely physical basis. He also questioned the use of the term "nodal rhythm." In many cases of old-standing rheumatic heart disease, and in the hearts of old people, there was often much general fibrosis, so that it would be difficult to differentiate the auriculo-ventricular bundle. Dr. HERRINGHAM paid a high tribute to Dr. Mackenzie for the work which had led to his putting forward this new method of investigation, though he did not accept without question all that Dr. Mackenzie had said. Dr. THOMAS LEWIS said that the prolongation of the interval between the auricular and ventricular systole could not be explained mechanically. During the taking of a record this change would often occur quite suddenly. For twelve months he had used the method under discussion, and thought that examination of irregularly-acting hearts was futile without it. Dr. MACKENZIE, in reply, said that at this stage it was no longer always necessary to take a tracing. His explanation of the irregular rhythm, which he had called "nodal rhythm," was purely hypothetical, although he had given many reasons for it.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting on December 11th, 1908, Dr. WALKER DOWNE, President, in the chair, Dr. JOHN M. COWAN read notes of two cases of *Diaphragmatic palsy*. One of the patients suffered from peripheral neuritis of alcoholic origin, and the diaphragm was completely paralysed for three months. Thoracic respiration was good, and the ultimate recovery was almost complete. The second patient suffered from Landry's paralysis. Symptoms had commenced fourteen days prior to admission. She was found to be unable to move her limbs in bed or to lift her head; her diaphragm

was inactive, and she suffered from right third, fifth, sixth, seventh palsy more or less complete. The sphincters were active and sensation was normal. Improvement was manifest three days after admission, and on the eleventh day all movements were possible though they were weak. There was no atrophy of muscles, and the reflexes rapidly reappeared, and became even excessive. Recovery was good and complete. Dr. GEORGE M. GRAY demonstrated a dissected specimen of a limb showing congenital absence of the fibula. In its place was a firm fibrous band, to which, in addition to the usual muscles, was attached the popliteus. He also read notes of a case in which there was hernia of a loop of bowel through a foramen in an appendix epiploica. Dr. McLENNAN showed a boy, aged 13, who had been operated upon for a hydrocele of the tunica vaginalis and an encysted hydrocele of the cord. At the operation the encysted part of the hydrocele was found to communicate with a patent processus vaginalis. A radical cure for hernia was performed after removal of the hydroceles. The interest lay in the specimen removed. Had a hernia descended the patent sac it would have passed down behind the hydrocele of the tunica vaginalis, and would have formed a typical infantile hernia. Such a case as this was considered to go far in proving the sacular theory of hernia. The other points in favour of this theory were referred to as the *post-mortem* finding of patent peritoneal processes without the presence of herniae or the history of such. It was noted also that ascites, which did not produce a hernia by forming a sac, often revealed its presence by entering a patent processus vaginalis showing as a congenital hydrocele. Such late congenital hydroceles often indicated a subscutaneous peritonitis. The only similar effect of ascites was occasionally to protrude the umbilicus. Further, intra-abdominal tumours occasionally grew down such processes and formed the contents of herniae, yet no one would imagine that such growths had the power to force the formation of hernial sacs. The descent of the testicle requires a large opening, hence the prevalence of herniae in male infants. In the female similar herniae (oblique inguinal) were found quite commonly, and were always due to the presence of a congenital sac, because the broad ligament formed part of the sac, which would not likely be the case were the sac acquired. Again, it was commonly noted that in recent herniae the sac was long and narrow, evidently being a preformed canal waiting only distension to form the ordinary bulky blunt-nosed hernia. Finally, the success of the radical cure, which dealt principally and most effectively with the sac showed that the sac was the principal factor in the hernia. Another point of interest in the case was the fact that the boy was treated as an out-patient after his operation. It was not contended that such grown-up children should be so treated, but the opinion that it was safe to operate for hernia upon children who could be carried home was given. The dressing employed was a small piece of gauze quite sealed over by adhesive rubber plaster. By this means the wound was protected from urine and other contaminations. As it was comfortable, there was little tendency for the patient to interfere with it. The dangers of operation for cure of hernia were twofold. First, sepsis; it was as possible to overcome this danger in the out-patient theatre as in the ward theatre. Secondly, the danger of yielding of the stitches because of rough movements after operation on the way home; all such stresses upon the stitches were of trifling moment compared to those accompanying retching or even coughing, and in any case the radical cure depended not so much upon the deep stitches as upon the efficiency of the obliteration of the sac.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.
—At a clinical meeting held on December 18th, 1908, Dr. W. H. CHEETHAM in the chair, the following were among the cases shown: Dr. E. F. TRIVELIAN: *Amyotonia congenita* in a child of 11 months. There was very little movement of all four extremities, and such as was present was almost limited to the hands and feet. Knee-jerks were absent. There was marked hypotonicity of the muscle supporting the head. Some improvement had taken place while under observation. Mr. H. LITTLEWOOD: A boy aged 15 in whom *Cholecystenterostomy* had been performed for traumatic stenosis of the common bile duct

In May, 1908, he was struck in the abdomen and treated in hospital for 15 days. Three weeks later he had an attack of jaundice and vomiting, with recurrence of pain in the right side of the abdomen. In September, second attack of jaundice with great pain. At the operation on October 8th dense adhesions were found round the lower part of the bile duct; the gall bladder was greatly dilated. There were no gall stones. Dr. GORDON SHARP: *Severe Habit chorea* of five years' duration in a boy of 16, following an accident. Very marked improvement took place after one week's treatment with arsenic. Mr. A. L. WHITEHEAD: (1) A case of *Acute otorrhoea* followed by thrombosis of the lateral sinus and internal jugular vein and by extradural abscess, in which a mastoid operation and subsequent excision of the jugular vein was followed by recovery. (2) A case of *Chronic otorrhoea* with extradural abscess and thrombosis of the lateral sinus, the clot extending beyond the torcular Herophili into the sinus of the opposite side, in which similar proceedings were attended by partial recovery. Five months later a large subperiosteal abscess extending over the whole skull was opened and drained, with ultimate complete recovery. Mr. DAVID WILSON: *Angioma* of the face in a man of 24, first noticed three years ago; for the last year discomfort and pain felt in it after exertion or with a cold in the head. The swelling is scarcely noticeable in the erect position, but becomes markedly increased by stooping or exertion. Mr. B. G. A. MOYNIHAN: Two cases in which he had removed the *Gasserian ganglion* for trigeminal neuralgia, with a cure resulting. In the first the large depression at the site of operation was, from the aesthetic point of view, a thing to be avoided; in the second case, the resulting scar, about 2 in. long, was only detectable when specially looked for. Dr. JAMES RUSSELL: A case of abnormal elasticity of the skin. Dr. WARDROP GRIFFITH: A patient with rheumatic mitral and aortic disease, with a "nodal rhythm." There was forcible pulsation on the right side of the neck, with almost total absence of venous pulsation on the left side. That on the right side could be abolished by the administration of digitalis, causing improvement in the tone of the cardiac muscle. Mr. LAWFORD KNAGGS: *Lentiginis ossae* in a girl of 14, with slow progress of the disease since first observed at 6 years of age. A skiagraph showed changes at the base and vault of the skull and in the facial bones. Dr. MAXWELL TELLING: A woman with *Retroclic spasm* of twenty years' standing, commencing at 5 years of age, possibly after measles. The deep muscles of the neck contracted very strongly, and the sterno-mastoids were also involved. There was the usual synergic contraction of the occipito-frontales, with slight twitchings of the facial muscles at the height of spasm. There were almost ceaseless and involuntary movements, in which the hands were raised either to the face or to the back of the head, and these would appear to have developed secondarily as the result of persistent attempts to control the spasm by fixing the head. Mr. MICHAEL TEALE: A man, aged 38, left eye blind since childhood from an unknown cause. When the patient looked straight forward the pupil area of this eye was fairly normal in appearance; but when he stooped a shrunken, white, dislocated lens fell in the pupil.

ROYAL ACADEMY OF MEDICINE IN IRELAND.—At a meeting of the Section of Pathology on December 18th, 1908, Dr. A. R. PARSONS, the President, described a case of *Permieious anaemia* in a man aged 45, formerly a fireman on board a cross-channel steamer. He came to the Extern Dispensary of the Royal City of Dublin Hospital on September 10th, 1908, suffering from weakness and shortness of breath. His appearance was so suggestive of serious illness that he was admitted to the medical ward. On inquiry he stated that four or five months ago he had an attack of influenza, and he attributed the onset of his present illness to starting work too soon, because shortly after resuming work he felt a throbbing in his head, and he felt sick till he sat down. A little later he got headache, palpitation of the heart, and weakness in his legs. In spite of these symptoms he continued at work for five weeks, though he felt as if he had a rope across his chest and abdomen, and as if his head were bursting. He remained at home for ten weeks, but as he was making no progress he came to the hospital. Some of the teeth were carious, and covered with tartar. The spleen was not palpable, and the liver normal,

Definite poikilocytosis, and an increase in the white blood cells was found. On September 25th a blood count showed Hb. 20 per cent., red blood cells, 1,150,000, colour index 0.8. Poikilocytosis was still present. In spite of all that could be done the course of the disease, even during the first fortnight, was steadily downwards. He complained of some pain in his right ear, and on September 26th pus escaped freely from the external ear. His temperature rose to 101° F., the pulse to 120. He became stupid and heavy; his temperature rose to 103° F.; he had a sharp attack of epistaxis. On October 6th he seemed to be a shade better, but on the morning of October 7th he got a profuse epistaxis, and died shortly afterwards. The case might possibly be assigned to the ill-defined group called leukaemia, but the weight of evidence was in favour of pernicious anaemia. Professor O'SULLIVAN said that the appearance of the organs at the *post-mortem* examination was similar to that found in pernicious anaemia, with secondary septic infection. The heart showed well-marked tabby-cat striation, and the liver contained a large quantity of iron pigment. The bone marrow also suggested pernicious anaemia. The blood was remarkable and unusual. The earlier specimens showed a definite polymorphonuclear leucocytosis and poikilocytosis, with very few nucleated red blood cells. The blood films made some days before, as well as those made after death, on the contrary, contained large numbers of nucleated red cells, and a great increase in the number of the white cells. Among the latter were numerous myelocytes. Briefly, the appearance of the organs suggested pernicious anaemia; but the blood removed some days before death was much more like myelogenous leukaemia than pernicious anaemia. Dr. O'CARROLL read notes of a case of tuberculosis of lungs with *Tuberculous tumour in the cerebellum* in a girl of 19, who was admitted to the Whitworth Hospital on May 12th, 1908. From Christmas, 1907, she began to have dimness of sight, and later complained of occipital headache and vomiting. Her sight became worse. There was no relation between the vomiting and food. The tongue was protruded slightly to the right. There was no marked difference in the expression of the two sides of the face. She was quite intelligent; her speech was slow and slightly slurring. There was no discharge from the ears. Both knee-jerks were well marked. There was no actual wasting of flesh, and the menstrual function was right. She improved very much in hospital; but in October, during the speaker's absence from town, she complained of headache, and had bleeding from the nose. Her temperature rose; she became somewhat comatose; and lumbar puncture was performed on November 9th, about 30 c.cm. of fluid being withdrawn. She improved a little for a few hours, but died on November 16th, after several days in a state of coma. Dr. PURSER said that at the *post-mortem* examination the only organs showing disease were the cerebellum and the lungs. The pleura was enormously thickened, and the whole lung was riddled with cavities. It was most remarkable that with such extensive disease of both lungs there should be such slight symptoms. The patient at no time had any cough. Mr. GUNN having read a note on bismuth poisoning, Dr. WALTER SMITH said that, apart from its simple mechanical effects, observations from a physiological point of view showed that bismuth might produce the phenomena of irritant poisoning—just the symptoms to be expected from its alliance with the arsenic and antimony groups. There were several deaths on record, so that it was a drug not to be used recklessly. Dr. HAYES said a good many cases of poisoning had been recorded by radiographers from the use of the subnitrate. Patients had died of overdosing, and the deaths were said to be due to the toxic effects of the nitric acid liberated. The shadow of the nitrate was denser than that of the carbonate.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.—At a meeting in Manchester on December 18th, 1908, Dr. A. J. WALLACE (Liverpool), President, in the chair, the following were among the exhibits and communications:—Dr. LLOYD ROBERTS (Manchester): A fibroid polyp of the uterus undergoing extrusion, removed from a patient aged 39, primipara, who suffered from menorrhagia. Angiomatous changes in its structure were demonstrated microscopically. Miss FRANCES IVENS (Liverpool): (1) Ruptured tubal pregnancy in a young lady married

fifteen months, who had an attack of pelvic pain fourteen days after a normal menstrual period. The pain recurred ten days later, and per vaginam the right ovary was the size of an orange, and some thickening could be detected in the left Fallopian tube. Abdominal section revealed a patent left tube, in the ampullary portion of which a plum-coloured swelling $\frac{1}{4}$ in. in diameter was situated. The left ovary was also cystic and was removed with the pregnant tube. The right ovary formed the larger cyst, but partial resection was possible, and healthy ovarian tissue was left near the hilum. Sections from the middle of the swelling showed the intramuscular site of the ovum. (2) Serial sections of the Fallopian tube in a case of peritubal haematocoele removed from a multipara who had profuse irregular bleeding following a scanty period at the usual time. The undilated tube was found closely associated with a mass of blood clot at its fimbriated end. It was permeable throughout, except at one spot where the lumen was encroached upon by a small mass of organizing fibrin and old blood clot, due to either a tubal mole nearly absorbed or to an incomplete tubal abortion. No traces of chorionic villi could be seen. (3) A tubal mole without haematocoele, occurring in a married woman aged 34, 2 para, in whom six weeks' amenorrhoea was followed by three weeks' moderate haemorrhage. Dr. W. K. WALLS (Manchester): A case of rupture of the uterus. The patient, aged 32, was admitted to St. Mary's Hospital following an abortion, in the treatment of which dilatation of the cervix by tents and the evacuation of the uterus had been performed by her doctor. Several feet of small intestine, separated from its mesentery, protruded from the vulva. Laparotomy and end-to-end anastomosis was performed, but death occurred suddenly on the fifth day. At the autopsy primary healing of the bowel had taken place. Dr. GRIMSDALE (Liverpool): Notes of a case in which a woman aged 42 consulted him a year after marriage on account of dyspareunia. The vagina would only admit the little finger, and that with some difficulty. Dilatation of the vagina was suggested, but was not carried out. Nine months later she returned complaining of symptoms suggesting pregnancy, and on examination it was found that she was three months pregnant, the vagina now admitting the index finger with considerable difficulty. On several occasions during the pregnancy vaginal examinations were made, but the tissues continued to be very rigid. A Caesarean section was recommended and carried out at full term with excellent result to mother and child. Dr. A. J. WALLACE delivered his presidential address, which was devoted to a critical review of methods of dealing with pelvic inflammations, including "Belastung" therapy, and the application of Bier's hyperaemic treatment to gynaecological cases. While admitting the favourable influence exercised by hot-air hyperaemia in non-suppurative disease, he held that the evidence up to the present was decidedly in favour of surgical interference in pus cases. It was also urged that gynaecologists should devote greater study to the prophylaxis of pelvic inflammatory disease.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

At a meeting on December 9th, 1908, Dr. SOLLY (President) in the chair, Dr. BRODRIBB (Hastings), in a paper on *The therapeutic uses of sea water*, said the south coast towns showed great lack of enterprise in the matter. Sea water was largely used abroad for scrofulous diseases and diseases of the female generative organs, and might be applied with advantage in the form of douches, sprays, and brine baths in other diseases, such as rheumatism, joint exudations, glandular enlargements, and some skin diseases. Dr. STREET (Westgate) said that the arguments as to the undoubted utility of treatment by the water of inland spas applied quite as forcibly to that by sea water. In neither case was that value at present fully explicable. Dr. GURNEY (Eastbourne) was of opinion that one important therapeutical point not touched on in Dr. Brodrigg's paper was the fact that in sea bathing there was a mechanical stimulation of the skin by the impact of the spray or surf. The movement of the water gave it an important advantage over the brine baths of inland spas in a certain class of cases. Dr. BUCKLEY (Buxton) considered that the cause of sea-water baths for medicinal purposes would not be advanced by the argument that since sea water contained

more dissolved substances than some mineral springs, it must be more potent. The constituents to which mineral waters owed their undoubted efficacy had not yet been definitely ascertained. Dr. W. J. MIDLTON (Bournemouth), in a paper on *Treatment of rheumatic affections by counter-irritation of the spine*, said he was convinced that continuous counter-irritation in the neighbourhood of the cervical and lumbar enlargements of the spinal cord was a powerful means not only of producing a beneficial effect on the nervous system, but also of eliminating germs and toxins. He had treated 27 cases of polyarticular rheumatoid arthritis in both the early and late stage, 3 cases of paralysis, and 2 of hysteria by this method, with marked success. Dr. LUFF (London) stated that the results of his experience of applying blisters to the region of the spine in the treatment of various diseases of the joints did not compare altogether favourably with other methods of treatment. Dr. ARMSTRONG (Buxton) said that, holding the view that in all cases of arthritis there was more or less interference with the nerve-nutrition of the joints, he had for the last twelve years given special attention to the treatment of the so-called "joint centres" in the cord. After trial of various counter-irritants, he had for the last four years employed electric cautery. The applications, which should not make skin lesions, were made to the sides of the cervical enlargement in affections of the upper limbs, and of the lumbar enlargement where the lower extremities were involved. He did not put this method forward as an actual specific for arthritis, nor did he suggest that it precluded the necessity for careful elimination of all reflex sources of irritation, such as gastric and intestinal intoxications, the various sources of septic poisoning, uterine and general nervous derangements; but he could say that since using this method his results in the treatment of a considerable number of cases of this most intractable disease had shown remarkable and most gratifying improvement. Dr. BUCKLEY (Buxton) said that he had given the methods under discussion a fair trial, and had come to the conclusion that counter-irritation of the skin over the spine, whether by blisters or, as he preferred, by Paquin's cautery, certainly alleviated pain; but he had found no evidence of any curative effect, nor did he think it likely that a disease which undoubtedly was due to bacterial action could be cured by such means. Dr. MANTLE (Harrogate) said he did not favourably regard the treatment. Dr. LLEWELLYN JONES (Bath) spoke in support of the paper.

many leading positions in the British Medical Association and at the Royal College of Physicians, and had been appointed Lumsian Lecturer at the time of his death.

His colleagues have brought together, in a handsome and well-printed volume, a series of original papers dealing with rare and obscure cases and subjects, which will materially aid the advance of knowledge in their respective spheres. Drs. Young and Robinson, Professors of Anatomy respectively at Manchester and Birmingham, present an account of certain malformations of the human heart, suggesting new ideas as to their primary seat and origin. Mr. G. A. Wright contributes notes on some of the less familiar joint affections, with the object of clearing up some of the confusion that has arisen from the indiscriminate use of the term "rheumatoid arthritis," and illustrates, by photograph and description, the lesions produced by other causes than rheumatism, such as septic, gonorrhoeal, autotoxic, and gouty affections. The super-vention of epithelioma on lupus vulgaris is discussed by Dr. R. B. Wild, who explains the present state of knowledge and experience on the use of x rays in such cases. Results as to the healing powers of the rays are at present contradictory, but it has only too clearly been proved that they exercise no prophylactic influence against subsequent cancer when used for the treatment of lupus. Prompt excision of the papillomatous excrescence with which the conversion to cancer is first manifested is insisted upon by the writer. Two short papers—the one by Dr. E. S. Reynolds on intermittent limp, of which five cases are recorded and attributed to the vascular changes in the vessels of the leg, and the other by Mr. Westmacott and Mr. Southam on hyperplasia of the superior maxilla, illustrating the pathology of the disease and marking its distinction from leontiasis ossea—will be found of more than common interest. Mr. William Thornburn contributes a paper on the symptoms produced by cervical ribs, a subject which has only received attention within the last few years, and by the cases quoted and the illustrations appended throws a good deal of new light on the causation of certain nervous and vascular disturbances in the upper limb which have not hitherto been satisfactorily explained. Space will not admit of more than reference to other valuable contributions on cholesterin and cholesterol, on gas-containing cysts, on haemolymph glands, and on many other subjects of interest which are combined to form a worthy memorial of one who left no small mark upon the study of clinical pathology in this country.

Reviews.

A WORTHY MEMORIAL.

THE memory of a tireless worker in the fields of pathological and clinical research has been fitly perpetuated by the issue of a *Memorial Volume* by the colleagues and former pupils of the late Dr. Dreschfeld of Manchester.¹ His death in the midst of professional activity deprived his adopted city and university of one of their most active minds, and the short biography with which the volume opens tells of a lifetime of vigorous and original thought and action, at first in the study of pathology, which was systematically taught in Manchester owing to his influence, and afterwards in the field of clinical medicine, in which he achieved a full meed of success both in public and private practice. Early imbued with the personal teaching of such scientific giants as Kolliker, v. Bezold, Virchow, and Bamberger, he brought a well prepared mind to his work in Manchester, and with it the spirit of scientific enthusiasm without which new ideas are too apt to be ignored. He obtained early recognition. Appointments followed one another in the medical school, and private practice rapidly increased, but he yet found time to contribute many papers to contemporary journals, congresses, and textbooks. No less than 112 such contributions are enumerated in the volume before us. He held

THE FACULTY OF SPEECH.

THE idea with which Mr. MACNAMARA has commenced his book on *Human Speech*² is embodied in the first paragraph of the preface, which states that the object of the work is "to explain the nature and action of the living matter of those parts of our bodies by means of which we gain ideas concerning the external world, and are able to express our thoughts in intelligent speech." Keeping this object in view, Mr. Macnamara proceeds to lay the foundation for his later chapters by a brief discussion of the nature of matter, a short consideration of energy and its transformation, and by defining life as a manifestation of certain phenomena which are the result of chemical and other forms of energy acting on a specific structural arrangement of matter. He then enters into a detailed consideration of the structure and capabilities of living organisms, commencing with bacteria and gradually working up to the highest forms. In the course of this survey he describes how the nervous system originated, and how it has been specialized until it has attained its highest type of development in the human brain. Whilst explaining the phenomena and conditions he describes, Mr. Macnamara lays great stress upon the structure-producing power of function, and he expresses his belief in the transmission of acquired characters. Regarding this point, he says that to deny they are inheritable "is indirectly to say that force does not persist." He further clears his position with regard to this much disputed subject by stating that:

if all parts of an organism have their functions co-ordinated into a moving equilibrium, so that every part perpetually

¹ *Dreschfeld Memorial Volume: Containing an Account of the Life, Work, and Writings of the late Julius Dreschfeld, M.D., F.R.C.P., with a Series of Original Articles dedicated to his Memory by Colleagues in the University of Manchester and Former Pupils.* Edited by E. M. Brockbank, M.D., F.R.C.P. University of Manchester Publications. No. XXXV. Manchester: University Press, 1908. (Roy. 8vo, pp. 246. Illustrated. 10s. 6d.)

² *Human Speech.* By N. C. Macnamara, F.R.C.S. The International Scientific Series. Edited by P. Lerge. London: Kegan Paul, Trench, Trubner and Co., Ltd. 1908. (Crown 8vo, pp. 298; 44 figs. 5s.)

influences all other parts, and cannot be changed without influencing changes in all other parts; and if the limit of change is the establishment of complete harmony among the movements, molecular and other, of all parts, then among other parts that are modified, molecularly or otherwise, must be these which cast off the germ of the new organisms. The molecules of their produced germs must tend to conform to the motions of their components, and to the molecular forces of the organism as a whole, and if this aggregate of molecular forces is modified in its distribution by a local change of structure, the molecules of the germs must be gradually changed in the motions and arrangements of their components until they are readjusted to the aggregate of molecular forces. For to hold that a moving equilibrium of an organism may be altered without altering the movements going on in a particular part of it, is to hold that these movements will not be affected by the altered distribution of forces, and to hold this is to deny the persistence of force.

Whether this argument will suffice to convince the unbelievers is questionable, for they will no doubt be able to bring forward many concrete examples to show that the alteration of the equilibrium of the whole does not necessarily indelibly impress itself on the germ cells, and it is possible they may suggest that, even if the effect of particular conditions acting upon a given individual may cause some modification of its germ cells, it is highly probable that such a modification will be merely temporary, and will entirely disappear when these germ cells unite with others from another individual under conditions which are practically, in normal circumstances, always the same.

The later chapters of the book are devoted to a consideration of the reasons why apes cannot speak, and how the psychical areas of the human brain have become gradually developed through the exercise of the power of expressing thoughts in spoken language. Herein again is expressed the power of function over structure which was shown in the case of the Hydromedusae, whose nervous system is "produced from the living matter of the ectoderm by the action of specific modes of energy stimulating this specialized matter." This being granted, one closes the book impressed with Mr. Macnamara's lucid and interesting exposition of a difficult and intricate subject, but wondering why all the attempts of mammals, other than man, to express their thoughts or impressions to each other have failed to result in the production of speech centres, seeing that, so far as we know, the cellular components of the brains of all are of similar character and are associated with similar sense organs.

THE AURICULO-VENTRICULAR BUNDLE.

In a monograph on the auriculo-ventricular bundle in the human heart, Dr. J. G. MÖNCKEBERG³ gives a careful study of the position and constitution of the muscle fibres that connect the auricles and ventricles. In the introduction he refers briefly to the previous work that has been done in this subject by other observers (except the work of Keith and Flack, which is referred to on page 190) and gives a discriminative criticism of the results. He then proceeds to describe the normal course and histology of the auriculo-ventricular bundle in the healthy human heart, dealing first with its appearance in the fetus. From this he proceeds to describe the bundle at different periods of life, from infancy to old age. It will probably be found that in this part of his work he has laid a reliable standard for the comparison of the healthy bundle with the morbid, although the description throws little additional light on the subject beyond certain variations in the course of the main bundle or its branches. It is of interest to note, however, that in the node (*Knoten*) in the wall of the right auricle he failed to detect any nerve-cells or fibres. He gives a minute and detailed description of the peculiar thread-like fibres that are found passing on the surface between portions of the internal wall of the ventricles. Many of the finer of these threads contain within their endocardial covering nothing but the large Purkinje type of cell. The last portion of the book is taken up with the morbid affections of the bundle and its appearance in cases of lesions of the heart wall. He describes in minute detail the examination of the bundle from the node

to the ultimate division in a large number of different affections of the heart, congenital affections, diseases of the endocardium and the valves, acute and chronic myocardial diseases, and diseases of the coronary arteries. There are ten large plates containing numerous excellent illustrations.

There was a great need for such a work as this, and its appearance supplies a want that has long been felt, for there are now many workers in this field, and this careful study will serve as a guide and a standard. The pathological portion confirms the work of Keith, but there is in this part of the work an absence of clinical details which very materially lessens its value. These careful investigations are really of very little use unless they can be correlated to recognized symptoms during life. Reports of reliable and helpful clinical observations accompanying the description of pathological changes may be considered by the author as apart altogether from his line of work, but the absence of these clinical observations diminishes the value of his book. It should not be necessary at this time of day to insist upon the fact that cardiac pathology can be studied in the living as well as in the dead, and that the evidences obtained *post mortem* are only supplemental to those obtained during life. The fault, no doubt, lies mainly with the clinicians who have supplied him with material, but except in cases of heart-block neither the author nor they seem to have realized that in the careful recording of the movements of the circulation, arterial pulse, venous pulse, apex beat, trustworthy information can be obtained of derangement of function of this auriculo-ventricular bundle, and that for these researches to be of any real value the clinical details are of as great importance as the histological appearance. The absence of an index and the meagreness of the descriptive legends attached to the figures materially lessen the usefulness of the work as a handy book of reference.

SURGERY OF GALL STONE.

THE volume entitled *Drei Jahre Gallensteinchirurgie*,⁴ by Professor KEHR, Dr. LIEBOLD, and Dr. NEULING, contains in its first part the clinical histories of 300 cases operated on in the three years 1904-6. The 500 pages which they fill give detailed notes of the history, symptoms, diagnosis, operation, and subsequent course of each case; and in those cases in which the gall bladder was removed a pathological report is also furnished. One fact strikes the reader at once, and that is the large proportion of complicated cases. This is apparently explainable by the rules which Professor Kehr follows in selecting cases for operation. He still follows those enunciated in his previous publications. In acute inflammation of the gall bladder he operates only when the symptoms are very acute; in chronic cases he intervenes when there are signs of empyema. Cases in which medical treatment is capable of producing subsidence of symptoms he leaves alone, and when there is jaundice and calculi are repeatedly passed he also dissuades from operation. Speaking generally, it is in the case which resists prolonged medical treatment that he recommends surgical measures. These principles, perhaps, also explain the large proportion of cholecystectomies and the small number in which cystostomy was deemed sufficient (6.4 per cent.); they explain these numbers only in part, however, for it is clear that removal of the gall bladder is much more of a routine measure in Kehr's hands than in those of most English and French surgeons. In the case of common duct obstruction he speaks against the adoption of cholecystenterostomy, except in rare instances; he upholds the advisability of drainage of the hepatic duct after the removal of calculi, and in these matters he has the support of most other surgeons of experience. In other matters also, the incision for example, he adheres to his previously published views. His collaborators review the clinical records from different points of view. Dr. Neuling writes on the history and etiology of gall-stone disease. Dr. Liebold writes two chapters on pathological anatomy, including a summary of the microscopical findings in the extirpated gall bladders. From these he concludes that "neither

³ Untersuchungen über das Atrioventrikulärbündel in Menschlichen Herzen. Von Privatdozent Dr. J. G. Mönckeburg, I. Assistent am Patholog.-anatom. Institut der Universität Gießen. Jena: Gustav Fischer, 1908. (Sup. roy. 8vo, pp. 336, 10 plates, and 4 illustrations. M. 25.)

⁴ *Drei Jahre Gallensteinchirurgie*. By Professor Hans Kehr, Dr. Liebold, and Dr. Neuling. München: J. F. Lehmanns, 1903. Roy. 8vo, pp. 735. M. 14.)

cystendysis nor cystostomy, but cystectomy, should be looked upon as the normal method of curing a chronic cholecystitis." The after-treatment of gall-stone laparotomies is the subject of the final chapter by Dr. Neuling. The book will raise again the discussion of cystostomy *versus* cystectomy. An aspect of the question which is not faced here is whether the proper solution is not earlier operation before such ravages have occurred that cystectomy is necessary. A surgeon who operates late will obviously find a larger proportion of cases requiring cystectomy than one who operates comparatively early. Practice will follow principles, and the settlement of the latter guides the former. It is not so much in technique that surgeons differ but in the selection of cases.

PHYSIOLOGY.

Applied Physiology is a welcome little book,⁷ and one can only hope that students in the wards will find time to study it in addition to the ponderous tomes on medicine and surgery which they have inwardly to digest during this stage of their curriculum. Too often the student of medicine imagines that his intermediate medical subjects may be safely forgotten when he has passed his intermediate examinations; this book will prove a useful correction for that idea, and a gentle reminder that what he has learnt in the laboratory has direct applications to what he is learning by the bedside. The various chapters relate to metabolism, animal heat, the circulation, respiration, digestion, and excretion. Dr. HUTCHISON is at his best when dealing with the chemical aspect of physiology, and his very first sentence—"the future of medicine depends on the chemical physiologist"⁸—is no doubt true, but indicates his own predilections. Reading between the lines, we are not quite sure whether there is not a note of dissatisfaction running through Dr. Hutchison's work, a sort of unexpressed feeling that if only physiologists were a little more practical and not quite so scientific, how much better it would be for the clinicians. It is quite true that the gaps in the subject are wide. The nervous system, one notices, is conspicuous by its absence among the chapter headings. On the other hand, it is astonishing how many physiological truths which ought to be reckoned with by clinical observers are entirely neglected by the ordinary practitioner, even by those of the highest standing. A new discovery or a new point of view takes a very long time to filter through into medical textbooks. This is partly due to over-specialization. The clinical observer has but little time or opportunity for reading physiological literature, just as the physiologist so often forgets that his science is, or ought to be, the institutes of medicine. The correlation of the two branches is after all, however, only a matter of time; the younger generation of physicians have a better training in preliminary science than heretofore, and are intensely wishful to make medicine less empirical. Books such as the clear and useful one which has formed the text for these remarks will do much to bring about such a desirable end.

In the preparation of the second edition of his *Lehrbuch der Histologie*, Professor SZYMONOWICZ has obtained the assistance of Dr. Rudolf Krause, of Berlin,⁹ and the result is a textbook thoroughly abreast of the times, both as regards technique and our knowledge of microscopic structure. The illustrations have been increased in number, and all manifest that clearness of drawing and reproduction which formed so important a feature of the book on its first appearance. This relates not only to the illustrations in the text, but also to those which appear in the series of beautiful plates which are bound up with the book. Many of these illustrations will be familiar to English readers, as they have been reproduced in standard works in this country.

We favourably noticed Mr. COLE's *Exercises in Practical Physiological Chemistry*¹ on the appearance of the first

⁷ *Applied Physiology: a Handbook for Students of Medicine*. By Robert Hutchison, M.D., F.R.C.P. London: Edward Arnold. 1908. (Cr. 8vo, pp. 310. 7s. 6d.)

⁸ *Lehrbuch der Histologie*. By Dr. L. Szymonowicz, Professor of Histology in the University of Lemberg. Second edition. Würzburg: C. Kabitzsch (A. Stuber's Verlag). 1909. (Roy. 8vo, pp. 548. Illustrations 325—125 coloured plates. M. 15.)

⁹ *Exercises in Practical Physiological Chemistry*. By Sydney W. Cole, M.A. Second edition. Cambridge: W. Heffer and Sons; and London: Simpkin, Marshall and Co. 1908. (Cr. 8vo, pp. 172. 5s.)

edition in 1905, and we are glad to see that the little book has been successful. In the second edition, just published, Mr. Cole has somewhat extended the exercises, and brought the subject-matter up to date. The course is admirably adapted for serving as a guide in a practical class, and we cannot doubt that the work originally designed for the Cambridge school has been and will be found useful elsewhere.

INCOME TAX.

The increased attention which has now to be paid by the public to income tax is evidenced by the appearance of two new books on the subject. In *Income Tax Simplified*¹⁰ Mr. ARTHUR FIELDHOUSE explains how the annual form of return should be filled in, and gives a summary of income tax rules and regulations, together with a number of worked examples of traders' profits with adjustments for income tax purposes, which will, no doubt, be useful to accountancy students and others. The important points collected at the end of this little book will repay perusal, though the description of Schedule E as the "salary and annuity tax" is somewhat misleading, and the statement on page 40 as to the duties of employers is not in accordance with the provisions of the Finance Act, 1907.

Mr. HALLETT FRY's book on *The Finance Act, 1907*,¹¹ which has now reached a second edition, consists of a reprint of the statute, with explanatory notes and comments on the sections relating to income tax. The author exhibits a considerable acquaintance with the law and practice, and the examples given will be of assistance in making clear a somewhat obscure subject. Advantage might have been taken of the opportunity afforded by the demand for a second edition of this book to bring up to date pages 14 to 17, which contain a print of a form of income tax return that has undergone revision and alteration. The note to Section 20 of the Act does not bring out the important fact that the unit of assessment is still the firm and not the individual partners, the right of partners to be separately assessed having now been expressly repealed. The incomes of individual partners may, however, be treated (but not "assessed") separately for the purposes of a claim for exemption, relief, or abatement. In a note to Section 21 Mr. Fry expresses a hope that "in a proper time" employers may be required to pay their employees' income tax and authorized to deduct the amounts so paid from the salaries of the latter. Probably the Revenue authorities would appreciate this alteration more than the employees.

NOTES ON BOOKS.

THE Society for the Study of Disease in Children, which has recently become incorporated in the Royal Society of Medicine, has issued its eighth volume of reports, edited by Dr. G. CARPENTER.¹² They make a handsome volume of some 500 pages, adequately illustrated in black and white and in colours. The report of the annual general meeting is illustrated by photographs of Dr. Henry Ashby of Manchester, Dr. C. Nelson Gwynne of Sheffield, and Dr. A. E. Sanson of London, all, we believe, original members of the society, whose deaths had occurred since the last report. The society has done well to complete its publications by the issue in a separate volume of a *General Index*¹³ of the eight volumes of reports which it has published.

Dr. WEISS, in his compact little pamphlet on *Newer Methods for the Qualitative and Quantitative Analysis of the Urine and Gastric Juice*,¹⁴ has not sought to put before the practitioner an exhaustive account of the methods

¹⁰ *Income Tax Simplified*. Being a guide to the preparation of the Return for Assessment, and a practical and authoritative exposition of the Finance Act, 1907. By Arthur Fieldhouse, Accountant and Auditor, etc. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. 1908. (Demy 8vo, pp. 41. 1s.)

¹¹ *The Finance Act, 1907, in its Relation to Income Tax*. By T. Hallett Fry, Barrister-at-Law. Second edition. London: Stevens and Sons, Limited. 1909. (Demy 8vo, pp. 108. 2s. 6d.)

¹² *Reports of the Society for the Study of Disease in Children*. Vol. viii. Session of 1907-08. Edited by G. Carpenter, M.D. (Demy 8vo, pp. 592. 12s. 6d.)

¹³ *General Index to the Reports for Vols. I to VIII, 1900-08*. London: J. and A. Churchill. (Demy 8vo, pp. 102. 3s. 6d.)

¹⁴ *Newer Methods for the Qualitative and Quantitative Analysis of the Urine and Gastric Juice, performed easily, rapidly, and accurately by the General Medical Practitioner*. Compiled by Richard Weiss, M.A. Ph.D., F.C.S. London: The Robson Company. (2s. 6d.)

used, but has described plainly the steps by which each investigation should be carried out, investigations which may be looked upon in some cases as giving a definite answer, in others as merely indicating some further and more careful work. The various reagents, glasses, and apparatus are compact and cleverly devised, and if, as is the case in the fermentation test for sugar, they require some manipulative dexterity, the latter does not seem to be beyond the powers of any modern practitioner.

The latest fasciculus on the *Proceedings of the Royal Society of Medicine* is dated December, 1908, and covers one or more meetings of thirteen sections. Among these, one, that of anaesthetics, is new; its work was inaugurated by Mr. Richard Gill, its president, in an address on chloroform action. The account of the work of the surgical section contains a paper by Mr. Keetley dealing with the questions of why and how to attempt to preserve the appendix.

MEDICAL AND SURGICAL APPLIANCES.

A Percussion Hammer.

DR. EDGAR CYPIAX (London) writes: A percussion hammer, designed by Dr. Emil Kantorowicz, of Berlin, is constructed on the principle of the ordinary sliding-weight weighing machine, which has two arms of unequal length. If the attached weight be moved along on one of these arms away from the other arm, the greater will be the tendency for the former to descend rapidly; in other words, its momentum will be increased, and vice versa. As the accompanying sketch shows, the nearer the sliding weight is moved towards the percussion end of the hammer the greater will be the impact of the instrument on the finger that has been placed over the area to be percussed, and it thus becomes possible accurately to regulate the force of the stroke. The instrument is more fully described in the *Medizinische Klinik* of September 13th, 1908, and can be obtained from the makers, Messrs. Dewitt and Herz, of Berlin.



Half natural size.

(the stomach or intestines cannot be brought out of or into the parietal incision, the clamps in ordinary use are practically valueless, but by means of the right-angled shoulder in my clamps it can be placed effectively inside the abdominal incision. I have used them successfully in extensive resections of the stomach.

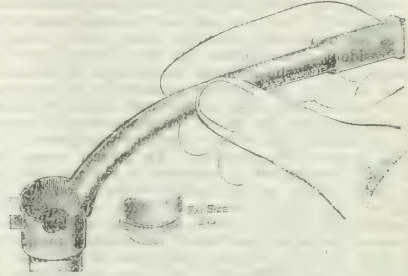


of the colon, and of the small intestine, and end-to-end or lateral anastomosis was completed with precision of juxtaposition of the parts. In cases of gastro-duodenostomy or jejunostomy, where one is obliged to work under the costal angle, I have found them specially useful. In ileocolostomy, where the junction had to be made near the brim of the pelvis, the handle of the clamp rested upon the left thigh. The blades are 5 in. long, in order to meet every possible condition of the parts to be joined together, and the points are prevented from overriding by points like those in the Gelston Atkins twin anastomosis forceps.

¹³The *Proceedings of the Royal Society of Medicine*. Vol. II. No. 2. London: Longmans, Green, and Co. (Price 7s. 6d. net.)

Chloroform Tube Terminal for use with Brüning's Bronchoscope.

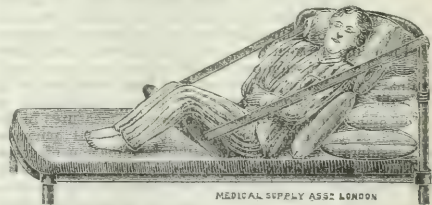
Mr. H. BELLAMY GARDNER (London, W.) writes: Messrs. Allen and Hanburys (Wigmore Street) have made for me a blackened German silver tube with flattened concave end for the delivery of chloroform vapour from a Junker's bottle when Brüning's bronchoscope has been passed through the vocal cords into the trachea or one of the bronchi. By means of this terminal, which at its end is concentric with the orifices of the various portions



of the specula of the bronchoscope and has also a short flange for steadying it in position, chloroform anaesthesia may be suitably maintained without interference with the surgeon's view from the eyepiece or the manipulation of instruments within the speculum. Its blackened surface of nitric bronze does not reflect the light of the electric lamp, and is practically invisible through the instrument while in use.

The "Forsyth" Sling-Pillow.

A sling-pillow has been devised by Mr. Cairns Forsyth for keeping patients in the semi-recumbent and "Fowler" positions. Propping-up by pillows alone is not sufficient, as the patient slips down from his own weight. Several methods have been tried to overcome this. The above-mentioned "sling-pillow" is one of these. The patient is well propped up by means of pillows or a bed rest. The sling pillow is placed under the thighs, and the straps



MEDICAL SUPPLY ASSOCIATION

fastened to the top bar of the bed head. In this way the body may be raised at any angle. It is claimed that this sling-pillow will be found useful in the after-treatment of cases of abdominal section, especially those in which the operation has been in the upper abdomen, and in nursing cases of pneumonia, bronchitis, and pericarditis. The pillow is made by the Medical Supply Association, 228-230, Gray's Inn Road, W.C.

MEDICINAL AND DIETETIC PREPARATIONS.

Sabromin.

FOR the purpose of administering bromine without the employment of bromides, with a view to avoiding the by-effects known as bromism, calcium dibromobehenate has been introduced by Messrs. Meister, Lucius, and Brüning (51, St. Mary Axe, London, E.C.). This compound has received the name Sabromin, on the analogy of the name Sajodin, which is in use for the corresponding iodine compound. It is a white powder, insoluble in water or alcohol, and free from taste and odour. It is also supplied in the form of tablets containing $7\frac{1}{2}$ grains: specimens of these which were submitted were soft and easily powdered, but did not disintegrate when placed in water.

AUSTRALASIAN MEDICAL CONGRESS.

(Continued from p. 30.)

WORK IN THE SECTIONS.

Section of Obstetrics and Gynaecology.

THE work done in this Section was of an attractive character, obstetrical questions considered being for the most part of general interest. The officials of the Section had arranged with some recognized authority to open a discussion by means of a short paper on each day of the session, with the gratifying result that keen interest was displayed by country members, who contributed to the debates the experience gained in lonely country practice. The President of the Section, Mr. E. T. THRING, F.R.C.S. (Sydney), opened the sectional proceedings with a short address in which the position gynaecology held in relation to general abdominal surgery was passed in review. The enlargement of the field of the gynaecological surgeon so as to embrace the whole abdomen was advocated as tending towards advancement. An earnest appeal was made for thoroughness in operation work, and that the time factor should not be unduly strained, on the one hand by "lightning operations," and, on the other, frittering away valuable minutes on useless manipulations. Extensive anatomical and sound pathological knowledge, with less slovenly surgical technique, were urged as essential to the equipment of the abdominal surgeon of to-day. In concluding his address, the President referred to the work of Sargent and Dudgeon on the "bacteriology of the peritoneum," pointing out that the more gynaecologists and obstetricians knew about bacteriology and serum therapy, the more competent they would become to cope with the infectious processes associated with the peritoneum and parturition. Dr. J. A. G. HAMILTON (Adelaide) initiated a discussion on fibroids by a short paper in which he referred to the increasing knowledge regarding the frequency with which degenerative changes occur in these growths, more especially about the climacteric period, and urged an early removal. Dr. G. HORNE (Melbourne) followed with a paper in which he discussed the influence of pregnancy on fibroid growths of the uterus, and instanced cases where the growth practically disappeared during pregnancy. He advanced some ingenious views regarding the causation of myomata. Dr. RALPH WORRELL (Sydney) opened a discussion on the causation, results, and treatment, immediate and remote, of injuries of the genital tract, laying stress on the importance of immediate repair of injuries of the pelvic floor following parturition. Dr. FELIX MEYER (Melbourne) introduced a discussion on the indications for prematurely terminating gestation. He remarked that, conditions being favourable, labour obstructed by pelvic contraction or tumour should be terminated by operative measures in the interests of the child, and that for practical purposes the consideration of the premature termination of gestation might be confined to the toxæmias of pregnancy. Many speakers advocated early emptying the uterus where the symptoms were progressive and did not readily respond to treatment. Dr. CHENHALL (Sydney) read notes and showed photographs of a case of actinomycosis of the female generative organs. Dr. MARY DE GARIS (Muttaharra, Queensland) read notes on a case of anencephaly with face presentation. Dr. F. A. NYULASY (Melbourne) showed lantern views of "Polypoid endometritis, a frequent and dangerous complication of pregnancy and the puerperal state." Dr. T. G. WILSON (Adelaide) opened a discussion on early recognition and treatment of pelvic infectious processes in the puerperium. He approved of the idea that a temperature remaining above 101° F. for two days should be taken as symptomatic of sepsis. Alterations in temperature, pulse-rate, involution of the uterus, and character of the lochia, were the means by which sepsis could be early recognized, increasing knowledge of these infectious processes tending to show the futility of making any sharp differentiation between saprophytic and septic infection. Dr. WILSON urged the importance of making a thorough examination to ascertain whether the uterine cavity was clean or not at as early a date as possible. If the uterus was thought to contain anything it should be carefully curetted and an antiseptic thoroughly applied to the walls, the uterus being subsequently packed with gauze soaked in the antiseptic. In advanced cases he advocated the trial of vaccines.

Section of State Medicine.

The President of this Section was Dr. J. M. MASON, Chief Health Officer of New Zealand, who in the course of an address recorded much progress in that State. In New Zealand the attitude towards public health had greatly improved. There was now no such thing there as a part-time health officer. No man, however important he might be, could now depose the medical man who had dared to condemn his property. While moralists were wringing their hands and there was general regret over the increased reluctance of parents to have children, the true friends of the State were urging that greater care should be taken of those children that were born in New Zealand. The State had established in each of the large centres hospitals where respectable women of the working class could go to be confined. These hospitals were well appointed, and staffed by nurses specially trained in midwifery. Instead of staying up-country far from medical aid, the wives of hardy, reliant pioneers now came into town and received the very best attention. So, too, did the wives of workers in the city. The charges made were of a kind that such people could pay, and the cost to the State was small. The net result was that not only were the mothers protected, but the children were well cared for and got a good start in life. In nearly all cases the mothers had been persuaded to suckle their children. Large increases had been made in the number of dairy inspectors, and a New Zealand municipality had the power to say "No one shall sell milk in our borough unless it has passed through our conduit and has been certified as pure and wholesome by our Health Department." In regard to vaccination, he asked whether it was worth while to continue to maintain a large staff of registrars and inspectors merely for the registration of exemption certificates. Last year in New Zealand, out of 24,321 children born, only 4,486 were vaccinated, and 2,964 were exempted. The balance of 16,871 were not accounted for. The time had come when either parents who had neither had their children vaccinated nor obtained exemption certificates should be brought before the magistrates as a matter of routine, or the law should be altered so that all semblance of compulsion should cease. It was unfair to expect officers of the Health Department to control an outbreak of small-pox if the weapons on which they most relied were denied them.

In the State Medicine Section an address was given by Dr. R. ARTHUR (New South Wales) on "The Colonization of Tropical Australia." It was, he said, a subject on which the medical profession was in a better position to give a pronouncement than any other. He had no quarrel with what was popularly known as the "white Australia" policy; rather he applauded it as embodying a splendid ideal by which a great area of the earth's surface should be reserved for the building up of a community which would be the flower of modern civilization. Unfortunately it did not follow that because a thing was desirable it must necessarily come within the realm of the practicable. About one-third of Australia was within the torrid zone, and various attempts to implant convict settlements in the Northern Territory early last century had been abandoned after a few years' trial of the climate. It was a significant fact that after nearly fifty years of administration by South Australia, the Northern Territory, which was four times the size of Great Britain, had a population of only 680 male and 200 female Europeans. There must be some potent reason for this disinclination of the Anglo-Saxon to go north, and the probable explanation was that no one would suffer gladly a climate which kept between 90 and 100 degrees for months, unless exceptional opportunities for making money were offered to him, and this did not appear to be the case in tropical Australia. On the contrary, the cry was for cheap labour to develop the tropical industries which were carried on by poorly-paid labour in other countries. The all-important issue was, "How can the women and children of a white race thrive there, and what will be the physical condition of the second or third generation of the native-born?" Most enthusiastic accounts of the health of the children under his observation had been given by one medical man, who stated that the people of North Queensland seemed to revel in the heat. On the other hand, Dr. Frederick Goldsmith, who resided for five years

in Port Darwin, wrote in a most pessimistic manner about the possibility of acclimatization, and supported his belief by a wealth of personal experience. Therefore, while reluctant to abandon the ideal of a white Australia, the speaker felt himself forced to the conclusion that a large Anglo-Saxon settlement in Northern Australia was impossible. It would be true wisdom for the Commonwealth authorities to institute a searching examination into the subject before proceeding to any practical steps towards settling people in Northern Australia. In conclusion, he moved that it be a recommendation to the Congress that a deputation approach the Prime Minister and request him to appoint a Royal Commission to inquire into the possibilities of the colonization of tropical Australia by the Anglo-Saxon or other white races. This was seconded by Dr. W. RAMSAY SMITH (South Australia) and passed. Dr. GERTRUDE HALLY (Hobart) gave an account of medical inspection work amongst school children in Tasmania, which was almost commercial in its object, its ultimate aim being to detect children who were physically unfit to benefit by modern educational methods, and improve school conditions for them. Direct treatment was never undertaken. Parents were informed as to the defects found, and advised to submit the child to their own medical attendant. Teachers were also advised concerning the hygienic management of their schools, and as to school care of any particular child. The procedures in city and country schools necessarily differed. In the former the two part-time inspectors visited at least once weekly. They examined all new scholars, and visited the classrooms regularly, when any child who appeared "out of sorts," or displayed any skin eruption, was picked out for special examination. The examination on entering school comprised the usual physical details of height and weight, acuity of vision and hearing, and the like. A history of previous illnesses was recorded briefly, and was of considerable practical value in enabling non-immunes to be sorted out for exclusion in the event of an outbreak of the ordinary communicable diseases. Details were entered in a card index. Spaces were left on the back for entering up the subsequent annual increase in height and weight, with notes of the children's annual progress and condition. The routine work was done by a teacher, the medical inspector seeing the child, and, if necessary, checking the teacher's observations. Defective children were entered up in a register, together with notes of advice given to the teacher. When the defect was likely to interfere with the educational progress of the child a notice was sent to the parent. This memorandum did not exempt the child from attendance from school. Should the child, however, be suffering from an infectious disease another form of notice was sent by parents. Copies of notifications of infectious diseases occurring in city districts were forwarded by the Department of Public Health to the medical inspectors. In the event of an outbreak appearing to be connected with a school the necessary steps for exclusion of cases and contacts, etc., were taken under the direction of the chief health officer. Last year what would probably have been a serious school outbreak of diphtheria in Hobart was prevented in that way. In Tasmania they did not close the schools for outbreaks of infectious disease, but depended on the more rational methods of systematic exclusion. As regarded country schools, a general survey was first made of the rooms and children, such salient details as working positions, grading in desks, general cleanliness and management of the room being specially noted. The card index system had not been introduced into country schools, a model register only being used. Each child was weighed and measured. Vision and hearing were tested, throats examined. Should any child appear delicate, or give a history of rheumatic or scarlet fever or chorea, a further examination was made of their chests. When heart trouble was present special instruction was given in regard to physical exercises and drill. The best available methods of improving the existing condition of things were pointed out to the teacher. Perflation and ventilation were explained, together with the advantages of sweeping with damp sawdust and damp dusting as opposed to "dry methods." In no case was the educational work of the school interfered with, except, perhaps, in such a case as when the suggestion was made that the desks should be turned so as to get left-side instead of back light. At the

lectures at the training college the advantages of a timetable arranged on rational hygienic lines were pointed out. As regarded results, between March, 1907, and June, 1908, some 11,287 children were examined. Of these 4,158, or 36.83 per cent. of all children, were defective to an extent interfering with, or likely to interfere with, their educational progress.

Special Sections.

The Section for Diseases of the Eye, Ear, Nose, and Throat met under the presidency of Dr. LOCKHART GIBSON (Brisbane), who opened a discussion on syphilis, noting the special facilities afforded by the structures of the eye for the study of this disease, and of the effects of treatment, emphasizing the low value of negative histories, and making clear the frequency with which syphilis is met in practice. A paper on interstitial keratitis, by Dr. J. P. RYAN (Melbourne), led to an interesting discussion on syphilitic eye affections in general. Mr. A. L. KENNY (Melbourne) showed seventy-three lantern views of the interiors of clinics in Europe, Asia, and America; and Dr. LINDSAY MILLER (Hobart) showed views of an Egyptian travelling ophthalmic hospital. Other papers on eye diseases were read by the PRESIDENT, on an operation for entropion; Dr. J. P. RYAN, on the diagnosis of trachoma; a pathological report on sarcoma of the iris by Dr. MILLER. Dr. MAHER (Sydney) opened a discussion on the prognosis and treatment of glaucoma, describing his operation for a permanent cystoid cicatrix. Dr. PAEST (Auckland) showed a mattress suture used by him in the extraction of cataract. The ear, nose and throat work included a discussion opened by Dr. BRADY (Sydney) on the treatment of deformity of the nasal septum. He recommended the use of Bosworth's saw and Carmalt Jones's spokeshave, and indicated the proper sphere for the submucous resection known as Killian's; he also showed for Dr. RUSSEL NOLAN (Sydney) some admirably prepared dissections of the temporal bone to illustrate the facial nerve relations to the radical mastoid operation. Dr. KENT HUGHES (Melbourne) read a paper on some points in the anatomy and surgery of the accessory sinuses of the nose, and showed some views of irregularly situated cavities. Dr. EWING (Melbourne) gave reasons for the selection of the intrameatal and tympanomeatal mastoid operation in the operative treatment of chronic suppurative of the middle ear. On the motion of Mr. KENNY, seconded by the PRESIDENT, it was resolved that the Section express its appreciation of the long-continued, original, and epoch-making work in the investigation of the causes and the best methods of treatment of diseases of the ear by Hofrath Professor Doctor Adam Politzer of Vienna, and offer to him on his retirement from his professorial chair in the University of Vienna the homage of its respectful admiration.

In the Section for Radiotherapy and Diseases of the Skin, a paper was contributed by Mr. A. W. FISCH NOYES on the relative proportion of various skin affections in Australia. His conclusions, drawn from an analysis of 5,000 cases of skin disease, were that no affections of the skin existed in this south-east portion of Australia which had not been observed in English clinics. The frequency of occurrence, however, of some affections differed considerably when compared with English figures, but the difference was no greater than was seen between statistics collected in London and those compiled in Scotland. The types had not as yet been developed to any appreciable degree either by climate or other surrounding influences. Dr. ALEXANDER ROBERTSON of the Gilbert and Ellice Island Protectorates, where yaws is common, contributed an interesting paper on the transmission of this affection, and detailed the main points of differentiation between it and syphilis. There were differences in the appearance of the eruption, including absence of polymorphism, the more rapid response amongst the Gilbertians to iodide of potassium, the absence of such concomitant symptoms as throat lesions, alopecia, and iritis. The ulcers had not the "punched out" and other characteristics of syphilis. Gummata and periosteal thickenings were not found in yaws, though they were common amongst the Gilbertians who had contracted syphilis. Yaws was never congenital, and occurred afresh in those who had become protected against syphilis by a previous attack.

The Concluding Session.

The last work of the Congress was a general meeting, at which sundry resolutions passed by different sections were considered and dealt with. The more important resolutions adopted included recommendations to the effect that a uniform system of physical inspection of school children should be adopted by all States, and that there should be an annual conference between professional heads of the State health departments in Australasia, in order to secure better co-operation in hygienic effort. Other resolutions confirmed advocated the provision of a seat for a medical expert on all naval and military boards and councils of defence, and urged that all health authorities and hospital committees should take steps to provide adequate protection for x-ray workers, and that medical men as a whole should take care to consult with regard to x-ray work only qualified medical men. Finally, it was resolved to hold the next Congress in Sydney in 1911, and Dr. Antill Pockley, of New South Wales, was unanimously elected its president. A number of votes of thanks, including one to the President and Mrs. Allen, then brought the proceedings to a close. During the progress of the Congress a good many entertainments were given, the most important being a dinner given by the Victorian to the visiting members of Congress. At this Professor Allen presided, and Sir Thomas Carmichael, the State Governor, and Sir John Madden, the Lieutenant-Governor, and many of the principal Ministers were among the guests.

LITERARY NOTES.

MESSRS. MACMILLAN will, it is announced, publish in the course of the present month a book entitled, *Faith and Works of Christian Science*, a critical examination of the gospel according to Mrs. Eddy by the author of *Confessio Medici*.

The Walter Scott Publishing Company, Ltd., is about to issue a work entitled *Infant Feeding*, by a Physician, in their "Useful Red" series of shilling books.

The fact is perhaps not generally known that the famous Florentine preacher, Fra Girolamo Savonarola, began his career as a student of medicine. He came of a medical family, his grandfather being Michele Savonarola, a celebrated physician of Padua, who was invited to fill the chair of medicine at the University of Ferrara by Duke Nicolò the Third of Este. Michele's son became Court physician to Duke Ercole, and rapidly dissipated the large fortune amassed by his father. It was in the hope of restoring the fallen fortunes of the family that the young Girolamo, Michele's grandson, was destined for a medical career, and his early studies were directed by his grandfather. Girolamo, however, hated Court life, and was disgusted by the wickedness he saw around him. In 1474, at the age of 22, he threw up his profession, and left his home at Ferrara secretly to enter the monastery of San Domenico at Bologna.

The *Rivista di Scienza* ("Scientia"), an "International Review of Scientific Synthesis," published in Milan, enters on its third year of journalistic life in 1909. The objects of the periodical are to deal with general questions relating to the sciences and their mutual relations and to co-ordinate the work done in the different fields of science and facilitate its synthesis. Articles are published in the language of their authors; but, commencing with 1909, the text of the Italian, English, and German articles will be accompanied by a supplement, with the translation in French. The Editorial Committee consists of Signori G. Bruai, A. Dionisi, F. Enriques, A. Giardina, and E. Rignano. The periodical can be procured in this country through Messrs. Williams and Norgate.

To the *Journal of the Royal Army Medical Corps* for December, Major F. W. Begbie contributes an interesting note, with illustrations, on the buried cities of Ceylon. In order to follow the history of those cities, he says, it is necessary to go back as far as the middle of the sixth century B.C. It was at that date that Ceylon, or Lanka, as it was then called, was first inhabited. Very little is known of the history of Ceylon at that period beyond the fact that the island was constantly being invaded from India. Sometimes the invaders were victorious, sometimes the "Sinhalese." These wars continued till the end of the fourth century before Christ, when King Devanampiya-Tissa occupied the throne of Ceylon, the

city of Anuradhapura being his capital. At that time King Asoka reigned in India, his head quarters being at Magadha, 200 miles from Benares. At the beginning of the third century B.C. Asoka sent his son with two Buddhist monks to Ceylon to propagate the Buddhist faith. They converted the king and his followers, who in turn converted the people. To commemorate this event the first of the enormous dagobas, which form a large portion of the ruins of the buried cities, was built close to the capital of Anuradhapura. It was built over the left collar-bone of Gotama Buddha, a precious relic which the King of Bengal had bestowed on his royal brother of Ceylon. Of the 167 original pillars surrounding the dagoba, only 37 now remain; they are supposed to be the remains of a roof built over the dagoba in 119 B.C. They are slender monoliths of beautiful proportions, and are now as they were in 300 B.C. The ruins of the buried cities cover a distance of 16 square miles, and the city was then, as now, divided into two portions, the "Sacred" and the "Political." The modern excavations were begun when Sir William Gregory was Governor, some thirty years ago. Major Begbie gives a description of the ruins, with their temples, pillars, statues, etc. The Temple of Kandy was built to contain the tooth of Buddha. In the centre of this temple is a small chamber containing a huge silver dagoba. This dagoba has six inner shrines, each studded with gems, the doors of which are opened by six different keys kept by six different persons. Inside the innermost shrine, upheld on a twist of gold wire arising from the centre of a golden lotus blossom, is seen the tooth of Buddha, which is an object of the greatest veneration to 400,000,000 people.

In seconding a vote of thanks to Dr. T. Gillman Moorhead, whose sketch of the history of medicine, delivered as an inaugural address at the opening meeting of the Dublin University Biological Association, was referred to in this column in the *JOURNAL* of December 26th, 1908, Professor Mahaffy said he had made a special study of the lives of some great Irish physicians. Among those mentioned by Dr. Gillman Moorhead was John Stearne, who was instrumental in procuring the first charter incorporating the College of Physicians in Ireland. Professor Mahaffy, who said he had read through all Stearne's works, thought Dr. Moorhead had estimated too lightly his contributions to medicine. From Hippocrates, Stearne had learned the vanity of charms and incantations. He went back to the great natural principles of the Hippocrates school: (1) No diseases were specially divine diseases, but all equally natural; (2) that medicine should start not from pathology but from hygiene. The first rational doctors were those who discovered wholesome food for men, who cooked meat, who crushed corn, who selected wholesome vegetables. Hence were discovered the laws of health, and from the violation of these laws, in general, came disease. Hence the famous tract, *De aëre, locis et aquis*—"Site of a city, its aspect and its water supply." And if these precautions failed, what next? As they saw in his works, the third step was a careful clinical observation of individual cases with all their symptoms as a guide to future men, so that they had in his Greek extracts descriptions of typhus fever, of puerperal fever, and other such diseases, so careful and scientific that they could be recognized at once among them. This was the school of Stearne. They had lost his clinical observations, which must have been minute and careful, as well as his prescriptions, which were few, for there was little use of drugs in that sensible school, but they had observations on hygiene which were not antiquated to-day. Hippocrates had announced that every physical organ required exercise, or else it was liable to atrophy. Stearne recommended variety as the essence of a sound life; but he told them that violent exercise, though very good for health, by no means induced longevity, and that a monastic life of simplicity and monotony produced longevity and not necessarily health. Among the few drugs he recommended was the use of tobacco. Stearne's great medical book was on the nature of death—what it is, and whether it was inevitable. He would like to explain to them his theory. As he thought the Tree of Life which would have kept Adam alive for ever a natural tree—possibly still existing, though unknown—so he thought the exceptional lives of the Patriarchs were rare instances, which, if the rule, would have made the world impossible to stand on.

ROYAL COMMISSION ON VIVISECTION.

FOURTH REPORT.

(Continued from page 44.)

WE continue our abstracts from the evidence of which the minutes are contained in the fourth report of the Royal Commission on Vivisection, issued in December, 1907.*

Evidence of Professor Rose Bradford, F.R.S.

DR. ROSE BRADFORD said he had sent in a short summary of the evidence he wished to give. He had divided it into two groups—one dealing with the results obtained in the various committees on which he happened to serve, especially those in connexion with the Royal Society, the other with the use of experiments on animals in the practical work of the physician. In that he had mentioned two or three instances in which he thought the physician in his everyday practice was directly dependent upon the methods he had to employ, involving experiments on animals to obtain the knowledge necessary for the treatment of the sick. For instance, there were many diseases which in the early stages could not be detected by physical examination of the patient, but they could be detected by methods of investigation necessitating experiments on animals. There were classes of cases in which the only satisfactory method of determining whether the patient was or was not suffering from tuberculosis was the inoculation of a guinea-pig with the material expectorated by the patient. He had had the experiments done on several occasions when there was some doubt whether the patient was suffering from tuberculosis or from bronchiectasis. He also quoted diphtheria and typhoid as illustrations of acute diseases in which experiment was useful for diagnostic purposes. In a case of suspected diphtheria the modern diagnosis was made by recognizing the organism. The foundations of their knowledge as to the organisms were derived from experiments which in the past involved experiments on animals—as, for example, to determine whether an organism was virulent or not. In cases of diseases of the bladder and of the kidney it was often extremely difficult to be absolutely certain that tuberculosis was present without an inoculation experiment. In reply to the Chairman, the witness said he attached great importance to the freedom of the physiologist to experiment upon different kinds of animals. First, because he thought that, in order to obtain a really sound knowledge of physiological processes, one wanted to have the opportunity of investigating them under different conditions. Some animals resembled man more closely in certain parts of their structure and functions than others. For instance, the general nutritive processes in the dog had a closer analogy to those in man than in the case of many other animals. Asked if there were any purposes for which he considered the dog essential, he said it was very difficult to carry out experiments on the circulation in other animals than the dog. The dog was the animal in which the circulatory apparatus had much more resemblance to that of man than in the case of many other animals. Then there were the digestive processes and the nutritive processes generally. Asked by Dr. Gaskell if he would include in the circulation the lymph system, the witness replied in the affirmative. If dogs were excluded from experimentation it would cripple physiology in this country to a great extent. He thought demonstration by experiments essential for the proper education of students. The demonstrations must, of course, be on anaesthetized animals, which were killed before they recovered from the anaesthesia. Asked if he had ever known of animals being vivisected for purposes of demonstration (cut into with the knife for purposes of demonstration before students) without anaesthetics, he said he never had. Sir William Church asked about the following passage in the evidence of Mr. Graham:

I only propose to give just one or two cases, so that my argument may not be in the air. Dr. Rose Bradford cut into the ears of dogs, destroyed the tympanic plexus, scraped out the middle ear, and poured in pure carbolic.

Dr. Rose Bradford said he was written to by the Secretary of the Commission with reference to this matter, and he had sent in a statement already with reference to it. These experiments were experiments on the physiology of secretion from the salivary glands—experiments on nervous regulation of secretion which involved the cutting of nerves supplying certain glands, the submaxillary gland and the parotid gland. The nerve going to the submaxillary gland was, of course, easily divided, the nerve going to the parotid gland could not be readily divided, and so, in order to destroy that nerve the ear was opened, under anaesthetics of course, in the usual way in which a surgical operation on the ear was performed, and the interior of a certain portion of the ear was rubbed with a spoon, and then 1 minim of pure carbolic acid was allowed to run in, and was then wiped up with a piece of cotton-wool and the wound was closed. The object of the operation was to divide or destroy the nerves supplying this particular gland. These experiments were done under Certificate B. It was put to the witness that Mr. Graham went on to say that the operation was done under chloroform, but the dog lived for weeks afterwards in what must have been a condition of great suffering. Dr. Rose Bradford replied that there was no evidence of suffering at all. It was a common surgical procedure to scrub wounds with pure carbolic. It was, if anything, rather painless than painful. Pure carbolic acid used in that way destroyed what it was in contact with and did not, therefore, lead to any subsequent sloughing or inflammation when used in a small quantity like that, and was applied in the form of one drop locally. It was a very powerful local anaesthetic. It was applied, for instance, to a painful tooth to destroy the nerve. He thought the experiments referred to entailed no more suffering than obtained in the healing of any healthy wound. The witness was then asked about a statement made by Mrs. Cook that he performed various operations upon the kidneys of dogs at the Brown Institute. She went on to say:

Chloroform and morphia were used for the actual operation, and the animals were then placed in a glass case, with a glazed floor, for observation. Pieces were cut out of the kidneys, and they were mutilated in different ways. In the case of one dog, the operator cut a piece out of a kidney, and then tried to graft the piece and make it grow on another part of the inside of the animal. The animal died in four days.

Dr. Rose Bradford replied that those experiments (which were not done at the Brown Institute) were begun in 1889, and went on for six or seven years. The object of them was to see whether it was possible to produce in animals, by diminishing the amount of kidney substance, a slow poisoning at all akin to that seen in Bright's disease. A number of facts were observed in the course of these experiments, perhaps the most important being that nothing at all akin to Bright's disease was produced by the diminution of the kidney substance. A considerable amount of valuable information was obtained. Thus, accurate information was got as to how much kidney was necessary for the maintenance of life. That affected prognosis. It might also conceivably affect operative interference. Another thing that he thought of some value was that it gave one a different idea of the significance of the quantity of urine that was passed. There were certain conclusions in human medicine that were drawn from a person passing much or little urine, and he thought those experiments showed that at any rate other factors had to be taken into consideration. But the most important thing of all was, he thought, that no such condition as that known as human uraemia was produced. Asked what became of these dogs, the witness said the Commissioners had had a copy of the published paper giving the facts as regarded each one. Summarizing the facts, he would say that a great number of these dogs lived for very prolonged periods in perfect health, without apparent suffering. Some lived, for example, for two years, and they were killed, not because they were ill, but because it served no useful purpose to keep them any longer. Others wasted; they passed large quantities of urine and got thin, but they suffered no more than that. Others, where the quantity removed was greater, got so thin that they became extremely weak, and no doubt ill; they vomited occasionally; and those animals were killed immediately. Some of them, as stated by Mrs. Cook, died within a few days of the operation. He remembered the one alluded to as

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having lingered thirty-six days, because it was a very remarkable one. That animal died suddenly—he did not know from what cause—but the facts as regarded each individual were fully published. On its being put to him that only two died from blood poisoning as the result of wounds, and one in four days, he said he had no doubt that was true. The others were much in the condition of a man who had had a successful operation performed upon his kidney after he recovered. There was no truth in the statement that they were suffering tortures or pain. The only ones in which there was evidence of the wound going wrong in the first few days after the operation were killed. In reply to further questions, he said experimentation by means of animals was of the greatest use in diagnosing diseases in the interest of public health. An officer of health at a port would use animals, for instance, for the diagnosis of plague or cholera. Those were acute diseases, and at a time in the evolution of the disease when it might be impossible to diagnose it by other means. Asked if it would be possible to throw much light on the physiological processes of digestion and assimilation in men by experimenting on ruminants, the witness replied in the negative. In reply to further questions, he said that in diphtheria it was of the utmost urgency to recognize it at the earliest possible moment. He invariably used the antitoxin in diphtheria. Its efficacy very largely depended upon its early administration. He had not the smallest doubt that the antitoxin saved life and cut short the disease. Proceeding, he said he had no doubt that medicine owed a great deal in the past to animal experimentation, and that it must in the future, if it was to continue to make progress, depend on animal experimentation. It was put to him that it had been suggested that under Certificate B the operation was performed under anaesthetics, but that subsequently exploratory operations were performed without any anaesthetics. To this he replied that was not so. In reply to further questions about the condition of the dogs from which parts of the kidney were extracted, he said he would not say there was pain; but in those animals in which there was the smallest amount of kidney left there was very considerable physical weakness and inability to take food, and therefore he had no doubt there was discomfort. There was never any evidence of local pain, and there was no reason for supposing that there should be. He never heard one of these dogs moan or give any actual signs of acute suffering. Asked about the advantages obtained by inoculation in enabling the physician to form a right diagnosis with regard to, for instance, tuberculosis, he said it tended to indicate the proper treatment, and might be the means of saving life if the wrong treatment were negatived, and the right treatment indicated. Asked if the serum used by Sir Almroth Wright was used curatively, Dr. Rose Bradford replied, "On his patients, I believe so." He had no personal knowledge of any cases in which, for instance, in tuberculosis of the urinary tract, that serum had been used. In reply to Dr. Gaskell, he said he had never found the slightest difficulty in anaesthetizing dogs. He had found them very susceptible to certain anaesthetics, chloroform particularly. One could get the most perfect anaesthesia in dogs. Proceeding, he said he thought the present Act caused a little trouble. Personally, he had never been delayed in the course of any experimental inquiry, but he thought he had known of instances where delay had occurred. He thought experiments on animals should be regulated by an Act. Asked if he had any suggestions to make as to any alterations in the Act, the witness said he thought that certain individuals, at any rate, should have more general powers given them; that, instead of having to apply for certificates for different categories of animals, they might be all covered by one certificate. He would not specify those individuals. He thought that ought to be determined by the people who signed the certificates; they might act as referees with reference to that. They might be defined, perhaps, as teachers and professors of physiology in universities and teachers in medical schools. "Heads of laboratories" would be suitable. He thought there might still be certificates for certain animals, but he would do away with all certificates for persons in the position of head of a laboratory. For men who held less responsible positions he would still require Certificates A, B, C,

and EE, but the certificates might be simplified. In reply to further questions, he said he was in favour of an Act being kept up, because it tended to allay public apprehension. He did not think there was any necessity to set up a standard of humanity for the men engaged in work of that kind, because their object was to relieve humanity.

(To be continued.)

REFUGEES FROM REGGIO.

We are indebted to Mr. P. Heywood Haddfield, M.A., L.R.C.P. and S., Surgeon to R.M.S. *Ophir*, for the following notes on the condition and treatment of the refugees from Reggio received on the Orient Royal Mail liner *Ophir*:

As the *Ophir* was approaching the Straits of Messina on December 31st, 1908, she was signalled to stop at Reggio. Those on board were then in ignorance of the catastrophe, but on arriving at Reggio, just after dark, the Commander was requested to take on board, for transport to Naples, over 800 refugees, including more than 150 seriously injured. Fortunately the passenger season was at its slackest, and it was therefore possible to place a good deal of space at my disposal for the accommodation of the injured. Preparations for the reception of both injured and uninjured were rapidly pushed forward on board. For the latter, in addition to such below-deck accommodation as could be spared, the permanent decked-in promenades were further screened with canvas, and large quantities of fresh and tinned meat, bread and biscuits, and hot drinks were prepared. For the injured greater preparations were necessary. A large dining saloon and a smoke-room were rapidly stripped of all chairs, carpets, and other impedimenta, leaving a large floor and table space available; large supplies of mattresses and bedding were arranged in readiness, and surgical and nursing materials were placed handy on convenient sideboards. So well did the stewards and all concerned work that in a very short time excellent hospitals were extemporized, and before the refugees began to arrive everything was ready for their reception.

First came the uninjured; they were transported from the shore (where the scene of embarkation was illuminated by the searchlight of a warship) in ships' boats towed by the steam pinnaces of the cruisers at anchor. I gathered that all local boats and such small steamers and barges as might have acted as tenders had been destroyed by the tidal waves. Sentries were posted over the accommodation reserved for hospitals to prevent it being rushed by the uninjured. Our sailors assisted to unload the boats and directed the refugees to the decks and the food awaiting them. These people were, for the most part, very poorly clad, and all were wet through and bitterly cold—the night was wet and a piercing wind was blowing. They had been starving and without shelter for three days, but the majority did not make so ravenous an attack on the food as we anticipated; their condition seemed one of complete exhaustion, and their mental faculties were dulled and "mazed"—they just dropped asleep where they lay. Stewards were told off to keep supplies of food and hot drinks going all night, and occasionally I walked through the crowds and picked out such weaklings as required better accommodation.

The injured reached the ship in the same way; they were almost all stretcher cases. The sailors lifted the stretchers from the boats and carried them up the steep accommodation ladder, and then again downstairs to the hospitals. The stretchers were heavy and very long, most awkward to handle in the narrow, twisting alley-ways of a ship. Stewards lifted the patients on to mattresses, which were at once slid along the floor and packed as closely together as possible. The coverings which came with the patients, as well as such mattresses as arrived, were soaking wet, and were at once changed for the warm and dry gear provided by the ship; many patients were stark naked save for a single blanket. Each stretcher, as soon as emptied, was returned ashore, as they could not be spared from the rescue work which was still going on. I had intended to make some slight examination as each sufferer came in, but ignorance of the language made it impossible to do this with sufficient rapidity, and I had to be content with stowing the patients away as quickly as possible. Our accommodation was just at an end as the

last patient was admitted. The *Ophir* at once weighed anchor and proceeded for Naples.

Three Italian Red Cross doctors had come on board, but, exhausted with continuous rescue work, rest was essential to them. I found myself in charge of about 160 very seriously injured and exhausted patients, but was able to congratulate myself on having the valuable aid of Dr. Parish, a passenger on board. It was at once apparent that any attempt at active surgical treatment on board was impossible, for there was no space to move about in and very few of the patients could have been treated. The first aid given ashore had been very efficient, so it was judged best to superintend the comfort and alleviate the symptoms of all, rather than attempt more permanent remedial treatment for a few. With nursing help we were well supplied by the stewards and nurses, who made up for lack of special training by great adaptability and careful obedience to orders. Space was so valuable that it had been impossible to leave alley-ways, and the attendants had to pick their way through and over the patients. Beyond placing the men and women on different sides of the saloon, no separation of the sexes was possible, and the usual decencies of hospitals had to be dispensed with; stewards had frequently to assist the stewardesses in moving women patients. Beef-tea, milk, and coffee were freely dispensed. Coffee seemed to be the drink for which they mostly craved, and considering that the patients were for the most part of the lowest peasant class, I was surprised at their knowledge of and demand for ice. Many cases had to be kept going with stimulants, hot-water bottles, and hypodermic medication; but for full resort to these means they would have died. One woman, moribund on arrival, died during the night; her injuries were, I think, chiefly internal. It was not possible to assuage the universal thirst, for almost all were in a condition of high fever. A great proportion of the men were soldiers; the men bore their sufferings with magnificent fortitude, but most of the women were in a condition of hysteria, and on their side of the room pandemonium raged; the most noisy were the least injured. It was extraordinary to find that much of this disturbance was caused by a belief that the ship was going down; no assurances or argument served to quell it, and comparative quiet—so necessary to the patients—was only obtained by putting some of the most noisy under the influence of morphia.

There was a great similarity in the injuries. In most cases they extended fairly generally over the body. Almost all suffered from fractures and dislocations, and in many cases more than one limb was affected. The fractures were, however, mostly simple, but always accompanied by very severe bruising. Contusions, indeed, were general over all the body; many had black eyes and a great number were suffering from conjunctivitis, set up, no doubt, by the dust clouds of the earthquake. Very severe abrasions were also general, and for the most part were in a septic condition. At first sight many appeared to be severely burned, but I found that this appearance was caused by crusts of earth mixed with blood which, by great pressure, had been so firmly moulded to the surface that separation was nearly impossible. It must be remembered that these people had been rescued from the ruins of houses under which they had been pinned during an exposure of several days. Very many cases were gangrenous. In one man who had a crushed arm and shoulder the gangrene extended over the chest and scapular regions; he had lain three days before being rescued. One woman had been pressed down by a beam the sharp edge of which had cleanly divided the skin along the supraorbital margins from eye to eye, and had fractured and depressed the nasal bones at the frontal articulation; the pressure must then have ceased, for the eyes were uninjured. Several women were expecting to be confined; one case was well on in labour, but after handling gangrene I was anxious to avoid examination; we were able to delay matters till on arrival at Naples the services of a medical man from the Maternity Hospital were procured, and he found that there was just time to remove the case to hospital by a special launch. I did not find that there was evidence of any great hæmorrhage having occurred—probably pressure over the wounds had prevented this; there was no hæmorrhage while on board. It was said that many of the survivors had become mad; we had one such case on board, entirely

uninjured, but I do not know whether the insanity was of recent origin or not. It was a satisfaction to note that during the twenty-four hours spent on the ship the general condition of the patients greatly improved.

It was some considerable time after arrival at Naples before arrangements were complete for disembarkation. Large covered barges were used for this purpose, and the patients were transferred on stretchers by a large staff of evidently overworked and overtired soldiers and sailors. On landing at the Arsenal the injured were conveyed to the hospitals in motor cars and army ambulance wagons.

It is impossible to speak too highly of the work of the crew of this ship. The brunt of it fell on the stewards and stewardesses; the patience and tenderness with which they worked uninterruptedly till the last patient was landed, in a scene calculated to try the nerve of even the experienced, was beyond all praise.

Nova et Vetera.

THE GREAT PLAGUE OF LONDON.

In vol. xiv of *Chambers's Miscellany*, published in the year 1846, there is a masterly tract upon the history of the plague in London in the reign of Charles II, the narrative being made up of an abridgement of Defoe's *Journal of the Plague Year in London*, with a judicious interweaving of some additional particulars gathered from other sources. In this tract are recorded the regulations ordained by the Lord Mayor and magistrates of the City of London for staying and extinguishing the epidemic, and these regulations are worth reproduction now, not only on account of their historical interest, but also because they furnish suggestions which may be of value in the preventive medicine of our own times. Defoe wrote his famous account upwards of fifty years after the events to which it refers. When the plague was raging he could have been but an infant in arms. But he took pains to make his history authentic, by referring to all the parochial and other public records and printed pamphlets by medical men and others relative to the plague year, and also by collecting such anecdotes, narratives and minute particulars as could be obtained from persons who had memories of their personal experiences during the period in question.

In September, 1664, it was announced that plague had appeared in the metropolis. At first little was done to avert the spread of the malady, and it was not until the spring of the year next following that any decided means were put into practice for the suppression of the disease. On May 13th, 1665, an especial Privy Council was held at Whitehall upon the subject of the infection, and a committee of the Lords was appointed to consider the means of checking the progress of the plague. Under the auspices of this committee the Royal College of Physicians drew up a small pamphlet containing directions for the cure of cases of the plague as well as for the prevention of infection. In the beginning of July the Lord Mayor and magistrates of the City published their orders for the sanitary regulation of the part of the metropolis under their control. Pursuant to these, persons were appointed in every parish, with the title of "examiners," who were to be citizens of good repute, and whose office was to last for two months. These examiners were to

be sworn by the aldermen, to inquire and learn from time to time what houses in every parish be visited, and what persons be sick, and of what diseases, as near as they can inform themselves; and, upon doubt in that case, to command restraint of access until it appear what the disease shall prove; and, if they find any person sick of the infection, to give orders to the constable that the house be shut up; and, if the constable shall be found remiss and negligent, to give notice thereof to the alderman of the ward.

In addition to these examiners, there were appointed eleven women-searchers in every parish, such as are of honest reputation, and of the best sort as can be got in this kind; and these to be sworn to make due search and true report, to the utmost of their knowledge, whether the persons whose bodies they are appointed to search do die of the infection, or of what other diseases, as near as they can. No searchers, during the time of visitation, to be permitted to use any public work or employment, or keep a shop or stall, or be employed as a laundress, or in any other common employment whatsoever.

Medical practitioners with especial duties as to the plague were appointed in every parish of the City, and were "sequestered" from any practice other than in cases of the epidemic; with regard to them the orders prescribed:

And forasmuch as the said chirurgians are to be "sequestered from all other cures, and kept only to this disease of the infection," it is ordered that every of the said chirurgians shall have twelve pence a body searched by them, to be paid out of the goods of the party searched, if he be able, or otherwise by the parish.

Besides, there were provided especial nurses or keepers to attend the sick in their homes, and special watchmen were charged with the duty of preventing ingress into or egress from the infected houses. The order as to the watchmen was as follows:

That to every infected house there be appointed two watchmen, one for every day and the other for the night, and that these watchmen have a special care that no person go in or out of such infected houses whereof they have the charge, upon pain of severe punishment. And the said watchmen to do such further offices as their house shall need and require; and if the watchman be sent upon any business, to lock up the house and take the key with him; and the watchman by day to attend until ten o'clock at night, and the watchman by night until six in the morning.

Besides the foregoing, there were certain regulations ordered to be observed by householders, as follows:

Orders concerning infected Houses and Persons Sick of the Plague.—Notice to be given of the sickness. The master of every house, as soon as any one in his house complains of either of *itch*, or purple, or swelling in any part of his body, or falleth otherwise dangerously sick without apparent cause of some other disease, shall give notice thereof to the examiner of health within two hours after the said sign shall appear.

Here was early "notification" made compulsory, and the duty of it placed only upon the "master of every house," and not upon the visiting "chirurgian." Further regulations of the authorities were contained in the following orders:

Sequestration of the Sick.—As soon as any man shall be found by this examiner, chirurgian, or searcher to be sick of the plague, he shall, the same night, be sequestered in the same house; and in case he be so sequestered, then, though they die not, the house wherein he sickened shall be shut up for a month, after the use of the due preservatives taken by the rest.

Airing the Stuff.—For sequestration of the goods and stuff of the infection, their bedding, and apparel, and hangings of chambers must be well aired with fire, and such perfumes as are requisite, within the infected house, before they be taken again to use. This to be done by the appointment of the examiner.

Shutting up of the House.—If any person shall visit any man known to be infected of the plague, or entereth willingly into any known infected house, being not allowed, the house wherein he inhabiteth shall be shut up for certain days by the examiner's direction. None to be removed out of infected houses. That none be removed out of the house where he falleth sick of the infection into any other house in the city except it be to the pest-house, or a tent, or into some such house which the owner of the said house holdeth in his own hands, and occupieth by his own servants, and so a security be given to the said parish whither such remove is made, that the attendance and charge about the said visited persons shall be observed and charged in all the particularities before expressed, without any cost to that parish to which any such remove shall happen to be made; and this remove to be done by night; and it shall be lawful to any person that hath two houses to remove either his sound or his infected people to his spare house at his choice, so as if he send away first his sound, he do not after send thither the sick, nor again into the sick the sound; and that the same which he sendeth be for one week shut up, and secluded from company, for fear of some infection at first not appearing.

Burial of the Dead.—That the burial of the dead by this visitation be at most convenient hours, always before sunrise or after sunset, with the privacy of the churchwardens or constable, and not otherwise, and that no neighbours nor friends be suffered to accompany the corpse to church, or to enter the house visited, upon pain of having his house shut up, or be imprisoned. And that no corpse dying of the infection shall be buried, or remain in any church at the time of common prayer, sermon, or lecture; and that no children be suffered, at the time of burial of any corpse, in any church, churchyard, or burying-place, to come near the corpse, coffin, or grave; and that all graves be at least 5 ft. deep. And further, all public assemblies at other burials are to be foreborne during the continuance of this visitation.

No Infected Stuff to be Uttered. That no clothes, stuff, bedding, or garments, be suffered to be carried or conveyed out of

any infected houses; and that the criers and carriers abroad of bedding or old apparel to be sold or pawned be utterly prohibited and restrained; and no brokers of bedding or old apparel be permitted to make any public show, or hang forth on their stalls, shop-boards, or windows towards any street, lane, common-way, or passage, any old bedding or apparel to be sold, upon pain of imprisonment. And if any broker or other person shall buy any bedding, apparel, or other stuff out of any infected house, within two months after the infection hath been there, his house shall be shut up as infected, and so shall continue shut up twenty days at the least.

Every Visited House to be Marked.—That every house visited be marked with a red cross, of a foot long, in the middle of the door, evident to be seen, and with these usual printed words; that is to say, "Lord have mercy upon us!" to be set close over the same cross, there to continue until lawful opening of the same house.

In illustration of this ordinance it is interesting to find in my copy of *The Diary of Saml Pepys, Esq., F.R.S.*, under the date June 7th, 1665, the following entry:—"The hottest day that ever I felt in my life. This day, much against my will, I did in Drury Lane see two or three houses marked with a red cross upon the doors, and 'Lord have mercy upon us,' writ there."

Every Visited House to be Watched.—That the constables see every house shut up, and to be attended with watchmen, which may keep in, and minister necessities to them at their own charges, if they be able, or at the common charge if they be unable. The shutting up to be for the space of four weeks after all be whole. That precise order be taken that the searchers, chirurgians, keepers, and buriers are not to meet the streets without holding a red rod or wand of three feet in length in their hands, open and evident to be seen; and are not to go into any other house than into their own, or into that whereunto they are directed or sent for, but to forbear or abstain from company, especially when they have been lately used in any such business or attendance.

Inmates.—That where several inmates are in one and the same house, and any person in that house happens to be infected, no other person or family of such house shall be suffered to meet him or themselves without a certificate from the examiners of the health of that parish; or in default thereof, the house whither she or they remove shall be shut up, as in case of visitation.

Hackney Coaches.—That care be taken of hackney coachmen, that they may not, as some of them have been observed to do, after carrying of infected persons to the pest-house and other places, be admitted to common use till their coaches be well aired, and have stood unemployed by the space of five or six days after such service.

These orders were ended by an instruction for the constitution of a permanent committee, with powers to deal with difficulties as they might arise, it being enjoined that the aldermen of the city, with the deputies and common councilmen, should meet together once, twice, thrice, or oftener, weekly, as need might determine, in their respective wards, at some accustomed place, such place being clear from infection of the plague, to consult how the orders of the authorities may be put into execution. The orders quoted above extended only to the city proper, which alone was under the rule of the Lord Mayor and aldermen. Similar precautions, however, were enforced in the extra-civic parts of the capital.

THE German Congress of Internal Medicine will hold its twenty-sixth meeting at Wiesbaden, under the presidency of Dr. Schutze, of Bonn, from April 19th to the 22nd. One subject proposed for discussion is: Mineral metabolism in clinical pathology, to be introduced by Dr. Magnus Levy, in connexion with this subject an address on therapeutic dechlorhydratation will be delivered by Dr. Widal, of Paris. Dr. Henry Head, of London, will deliver an address on sensibility and the testing of sensibility. Among other addresses promised are the following: Dr. A. Bickel (Berlin), the action of mineral substances on the glands of the digestive apparatus; Dr. Kùlbes (Kiel), on the enlargement of the heart in animals; Dr. Lenhartz (Hamburg), on the treatment of gastric ulcer; Dr. Eduard Müller (Breslau), the antiferment of the tryptic pancreas and leucocyte ferment, its occurrence and its uses for diagnostic and therapeutic purposes; and Dr. Plönies (Dresden), the relations of diseases of the stomach to disturbances and diseases of the circulatory apparatus, with special reference to nervous disorders of the heart. All communications relative to the congress should be addressed to Geheimrat Dr. Emil Pfeiffer, Parkstrasse 13, Wiesbaden. There will be an exhibition of preparations, apparatus, and instruments relating to internal medicine in connexion with the congress.

Medical News.

A CONGRESS on therapeutics will be held at Cracow in July of the present year under the presidency of Professor Jaworski of Warsaw.

DRS. PÉDEBIDOU, Labbé, Faisans, Beauvisage, Reymond, and Chaumetens were re-elected members of the French Senate on January 9th.

A SOCIETY of radiology has recently been founded in Paris. Its object is the scientific study of the medical applications of radiations in general.

THE Royal Dental Hospital, Leicester Square, has received a legacy of £200, duty free, under the will of the late Mr. William Joseph Topp, of Rotherhithe.

THE Annual Report for 1908 of the Society for the State Registration of Nurses contains particulars as to the movement in the British Dominions, in the United States, Holland, Germany, Denmark, and Sweden.

DR. ROBERT JONES, Medical Superintendent of the Claybury Asylum, has been appointed Lecturer on Mental Diseases in the medical school of St. Bartholomew's Hospital, in succession to Dr. Claye Shaw, who recently resigned the appointment.

THE Lord President of the Council has appointed Francis E. Fremantle, Esq., M.B., F.R.C.S., M.R.C.P., Medical Officer of Health for the County of Hertford, to be a member of the committee appointed to consider the working of the Midwives Act, 1902.

THE Queen has given a donation of £1,000 to be expended in the purchase of extra-regulation articles which will add to the comfort and convenience of sick soldiers in military hospitals at home stations nursed by Queen Alexandra's Imperial Nursing Service.

AT the meeting of the Royal Microscopical Society on Wednesday next, Lord Avebury will deliver his presidential address on seeds with special reference to British plants, at 20, Hanover Square, at 8 p.m. There will be an exhibition of foraminifera dredged from off the coast of Somaliland.

THE secretaries of the Conolly Norman Memorial Committee desire to remind intending subscribers that the list will be closed on January 31st. Subscriptions will be received by W. R. Dawson, M.D., Farnham House, Finglas, co. Dublin, or by J. R. O'Connell, M.A., LL.D., 34, Kildare Street, Dublin, treasurers.

A NATIONAL ambulance dog society (*Société Nationale de Chien Sanitaire*) has been founded in France. The Minister of War, the Colonial Minister, and the Minister of Agriculture are Honorary Presidents. The President is M. A. Lepel-Cointet; the General Secretary, Dr. Granjux. The object of the society is the breeding and training of dogs to find the wounded in war.

THE General Council of King Edward's Hospital Fund for London held a meeting on January 11th. The proceedings, which were purely formal, consisted of the adoption of the resolutions providing for the work of the Fund during 1909 approved at the meeting in December, and the reception from the Prince of Wales of a communication appointing to the various committees the persons mentioned by him in his concluding remarks on the same occasion.

THE British Association for the Advancement of Science meets this year at Winnipeg from August 25th to September 1st. Professor Sir J. J. Thomson, F.R.S., is the President-elect; the President of the Section of Physiology is Professor Starling, F.R.S.; of the Section of Botany, Lieutenant-Colonel D. Prain, F.R.S., I.M.S., formerly Director of the Botanical Survey of India, and now Director of the Royal Botanic Gardens, Kew; and of Anthropology, Professor J. L. Myres, of Liverpool.

THE British Museum completed on Friday a century and a half of existence, for its doors were opened on January 15th, 1759. It was practically founded by a special Act of Parliament passed in 1753 for the purchase of the collection formed by Sir Hans Sloane, the Harleian MSS., and the Cottonian Library. Sloane, who was born in Ireland, was of Scottish extraction, and took the degree of M.D. in

France in 1684. He made extensive collections during a three years' visit to the West Indies as physician to the Duke of Albemarle. He was afterwards physician to Queen Anne and to George I. and succeeded Newton as President of the Royal Society.

MR. J. G. BUCKLE, B.A., Assistant Secretary of the Dreadnought Hospital, Greenwich, has been selected from a very large number of candidates to be Secretary of University College Hospital in succession to Mr. Newton Nixon. He will take up the duties of his new post on March 29th. Mr. Buckle was educated at Malvern and Magdalen College, Cambridge; he passed into the Colonial Service, and was appointed to Hong Kong, where he held the office of Assistant Colonial Secretary and Secretary to the Executive and Legislative Council. On retiring from the service he became Secretary to the Vice-Chancellor of London University, and subsequently Assistant Secretary at King's College, London. Being attracted to hospital administration he accepted office at the Dreadnought Hospital, Greenwich, where his relationship with the committee and the honorary medical staff has been of the most cordial nature.

THE Belgian Permanent Committee on Human Alimentation, which was founded on the occasion of the International Congress on Food held at Ghent in 1908, held its first meeting at Brussels on December 23rd, 1908, under the presidency of Dr. A. J. J. Vanderveelde of Ghent. Among the objects aimed at by the committee are the organization in Belgium of congresses on food, and the participation of that country in international congresses on the same subject, the study of questions relating to the prevention of fraud, the supervision of the sale and manufacture of food preparations, and the promotion of uniform international methods of analysis. The committee will also investigate the question of human food from the chemical, physiological, technical, commercial, legislative, economic, and social points of view. The committee consists of 50 members representing the scientific as well as the industrial and commercial worlds. There are three vice-presidents, MM. Libotte of Antwerp, Sohier of Liège, and Professor van Laer of Brussels; Dr. Schoofs of Liège is General Secretary.

In a letter addressed to Sir Alfred Jones, Chairman of the Liverpool School of Tropical Medicine, Mr. R. Newstead, who is engaged in studying destructive insect life in Jamaica, says that the work of the expedition is progressing most favourably. Mr. Wortley, Lecturer in the Department of Agriculture, was appointed officially by the Governor to assist in the investigations. Mr. Newstead says he has already inspected several large cattle-pens in the West, and has made arrangements to see other estates in various parts of the island. He has also sent out 150 tubes to other localities, with the request that ticks be forwarded from various animals. Further, he has issued circulars asking for information regarding cattle ticks. He has a number of eggs from the various ticks, and as soon as the larvae hatch he intends to put them on material which the Government has placed at his disposal. He hopes to make a series of control experiments and test a few of the remedies which are used by the planters. Dr. Frout, C.M.G., and Dr. Hanley, C.M.G., the medical officers attached to the expedition, are pursuing their investigations into the various diseases indigenous to the island.

TRYPANOSOMES are very common in the blood of horses and other animals along the East Coast of Africa generally, so that it is not surprising to learn that they have also been found in Zanzibar. Dr. Alexander Edington, while passing through there, had his attention called to a horse which showed well-marked swelling of the abdomen and sheath, and on examining its blood trypanosomes were found. Inoculations into another horse, an ox, a donkey, and other animals were positive as regards the former two. The length of the parasite as seen in the blood of horses is 15 μ , on an average, and the breadth 1 μ ; in size it resembles the *T. dimorphum*, but M. Mesnil, to whom specimens were shown, considers it to be different both from this and *T. congolense*, a somewhat similar parasite. Koch and others have also described trypanosomes in horses from Togoland, and it may be that this parasite is similar to some of these. The whole subject of the classification of trypanosomes in horses and other animals in Africa is in a very unsatisfactory condition, and it is to be hoped that no new name will be attached to this one unless it can be shown that it has real claims to a specific entity. Dr. Edington's paper was read before the Royal Society on November 12th, 1908.

British Medical Journal.

SATURDAY, JANUARY 16TH, 1909.

THE INEBRIATES ACTS.

THE Report of the Departmental Committee appointed by the Home Secretary to inquire into the operation of the law relating to inebriates and to their detention in reformatories and retreats is an unusually long document, but of so much general interest and of such importance to the medical profession that its essential points are reproduced in the SUPPLEMENT this week.

The original intention of the Home Secretary was to reconstitute the Committee after it had reported on the Inebriates Acts, and to entrust it with the task of inquiring into the methods of treating drunkenness by means of drugs, thus fulfilling a promise made some time ago to a deputation of parties interested that waited upon him on the subject. The Committee, however, asked for this reference at a comparatively early stage of its labours, and dealt with it without being reconstituted, unless the absence of Dr. Branthwaite from its deliberations on this subject is to be considered a reconstitution. The promise ought never to have been given. It is not the business of the State to investigate the merits of secret and proprietary "cures" exploited for private profit. The members of the Committee evidently took this view, and their report appears to show that they resented the intention to impose such a task upon them. The Departmental Committee, in agreement with the British Medical Association, which in 1906 published a report on the subject (also reproduced in the SUPPLEMENT this week), soon arrived at the conclusion that further powers and facilities for the detention of inebriates are urgently needed, but it was confronted by the possibility that some "cure" might be alleged to be a practicable alternative to detention; so, although the members of the Committee thought it inherently improbable that any treatment by drugs could be enforced by Act of Parliament, they applied for the issue to them of the second reference in order to determine this point.

Their reasons for so thinking were: (1) That it would be impracticable to set forth in an Act of Parliament the various modifications of any specific treatment that must be required by the varying needs of the individual cases; (2) that the opposition to compulsory vaccination showed that the attempt to enforce medical treatment by Act of Parliament produced friction, discontent, and agitation; (3) that it was unjustifiable to tie the hands of medical men to one mode of treatment, and (4) that it would be impracticable, for reasons given, to carry out any specific treatment even if it could be embodied in a statute. The notion of an offender being bound over to come up for treatment so many times a day is, indeed, sufficiently preposterous. This portion of the report ends by deprecating any further public inquiry into the subject.

The section of the report which contains general observations on the nature of inebriety by the medical members of the Committee is, as far as we know, a unique feature in a Government report, and is worthy of imitation, since it lays a foundation on which the whole of the rest of the report is built. It is reproduced in full in the SUPPLEMENT, and is worthy of careful perusal, as it treats the problem of inebriety in a thoroughly scientific spirit. Its leading feature is the repudiation of the dictum that inebriety is a disease; "it is," the report says, "erroneous and disastrous to inculcate the doctrine that inebriety, once established, is to be accepted with fatalistic resignation, and that the inebriate is not to be encouraged to make any effort to mend his ways."

This Committee is the third appointed by Government which has reported that there is urgent necessity for legislation to enable compulsory control to be exercised over the "private inebriate" who devastates his home without committing any public offence. This, it will be seen, was a point made in the British Medical Association's report, but the recommendation now made differs from those of previous Government committees in offering a thought-out scheme of procedure, not merely recommending "proper safeguards," but indicating precisely the safeguards that should be enforced. The first novelty is the proposal to institute a statutory pledge, to be taken voluntarily, but breach of which is to bring liability to the imposition of compulsory measures. The next step also is voluntary. An inebriate may apply to be placed under guardianship, so that, without going to a Retreat, he may be restrained from obtaining intoxicants. If the voluntary guardianship is ineffectual, or if voluntary guardianship is declined by the inebriate, he may be placed compulsorily under guardianship, or sent to a Retreat. The scheme is elaborate and well considered, and it is to be hoped that the Legislature will at last yield to the importunity of official committees, supported by the unanimous voice of the medical profession, and embody it in an Act of Parliament.

The alterations recommended in the Inebriates Act, 1898, are of the most drastic description. More than a million and three-quarters cases of drunkenness have been heard by courts of first instance since this Act came into force, and yet only some 2,600 persons have been dealt with under this Act. The Committee might have added that there are at the present time more than a hundred women in Holloway Gaol qualified to be dealt with, but who cannot be dealt with because the London County Council refuses to find its share of the expense of maintenance. The Committee has investigated very thoroughly the causes of this failure of the Act, and enumerates them under six headings. They find that while some magistrates overlook the Act, others are unwilling, for various reasons, to put it in force. Among these reasons is a frank disbelief in the efficacy of detention as a reformatory agent. The Committee, while pointing out that as only the very worst cases have hitherto been committed, reform was scarcely to be expected, expresses the opinion that reform is not the sole motive of detention, and argues that it is right and just that the inebriate should be detained, even if he be irreformable. He should be detained because he is a noxious element in society, and society has a right to protect itself against his depredations.

It is surprising how great a stumbling-block has been constituted by the definition of "habitual drunkard"

given in the Act of 1879. In several courts the Act has become a dead letter for this reason alone: the magistrates, although they desire to commit drunkards under the Act, find themselves unable to do so because they cannot satisfy themselves that the quasi-inebriate can be included in the definition. The Committee enumerates no fewer than nine defects that have been discovered in practice in the definition, and it has framed a new definition which is held to be free from defect. It presents, however, all the marks of a compromise. The general skeleton is unexceptionable as far as we are able to discern, but how a Committee that has done excellent work in other directions should imagine that an Act of Parliament could contain in a definition such a phrase as "ordinary proper conduct" we are unable to understand.

The next matter in the 1898 Act that is overhauled is the provision which prevents an inebriate being sent to a Reformatory until he has been four times convicted in one year. The Committee declares that an inebriate may have been convicted three or more times without the magistrate before whom he is brought for the fourth time knowing of the previous convictions; that many inebriates, both reformable and irreformable, are able to escape the three convictions; that irreformable inebriates of the worst kind, just liberated from the Reformatories, and plunging into drunkenness again, cannot be recommitted to a Reformatory until they have been four more times convicted; and that ordinary Bank Holiday drunkards, who are not inebriates at all, may nevertheless be convicted four times in a year.

The Committee advises the abolition of the three years' sentence, and propose instead of it an elaborate system of graduated sentences, beginning with discharge on probation, and increasing to detention for three years. In every case, the sentence is for "not exceeding" so long, the implication being that the period of actual detention is at the discretion of the authorities of the Reformatory in which the person is being treated. In no case is an inebriate to be liberated except on probation, and failure on probation is to be followed by immediate recommitment to a Reformatory for a longer period.

The Report terminates with a chapter on finance, in which the extravagance and waste of certain local authorities is condemned, and a strong case made out for the assumption of the whole care of inebriates by the State alone, as cheaper and more efficient. The limits of expenditure laid down are £150 a bed for accommodation, and 11s. 4d. a week for maintenance, limits which are greatly exceeded by several local authorities.

Amid the isolated recommendations scattered throughout the Report is one that persons who, by delirium tremens, make themselves a charge upon the rates, should be *prima facie* considered inebriates, and liable to be proceeded against as such at the instance of the Guardians to whom they have made themselves chargeable; and another, that the work done by the inmates of Reformatories is insufficient and unremunerative, and should be reorganized.

It will be seen that the Report is very elaborate and detailed in character; it suggests several new principles and many novelties of detail in dealing both with those inebriates who offend against the law, and those who do not. It has evidently been a work of great labour, and has had much thought expended on it.

THE ETIOLOGY OF TUBERCULOSIS.

THERE is at present much difference of opinion as to the manner in which the tubercle bacillus gains entrance to the body. The old theory is that the bacilli are inhaled. The advocates of this view are divided into two camps. Cornet and his disciples think that the bacilli are derived from the sputum, which when dry becomes dust and is inhaled as such. Flügge and his pupils hold that the chief source of inhaled bacilli is the spray which issues from the mouths of consumptives whilst speaking and coughing. A theory which has recently gained many adherents, owing to its advocacy by Calmette and his supporters, amongst whom are to be mentioned Whitla and Symmers of Belfast, is that the bacilli gain access to the lungs by way of the alimentary canal; that the mechanism for preventing the access of bacilli to the lungs is so perfect that bacilli can get there only by the intestine, the mesenteric glands, and the thoracic duct. This doctrine has been extended to embrace the origin of anthracosis and other dust diseases of the lungs. It has met with strong opposition from the Breslau Institute of Hygiene. A series of researches from this institute under the direction of Flügge has recently appeared in the *Zeitschrift für Hygiene*; abstracts of these were published in the *EPITOME* last week, No. 23, pp. 7 and 8. The experiments and arguments adduced are so numerous that it is difficult to do justice to them in a short summary. It is assumed that all the modes of infection have been shown to be possible, so that in order to estimate their importance it is necessary to gauge their probability by careful quantitative experiments. It is asserted that alimentary infection in the guinea-pig is possible only when the quantity of bacilli ingested is over 300,000 times the quantity sufficient to cause an infection when inhaled. In the case of the goat and the rabbit the same relations were found to hold, but the experiments were not sufficiently numerous to give such definite figures. The statement that the rabbit is much less susceptible to human bacilli than to bovine is confirmed by the Breslau experimenters.

Another research showed that the spores of harmless organisms could be demonstrated, both by microscopical and biological methods, in the pulmonary tissues within three hours after their inhalation. Feeding experiments, although carried on for a long time with large quantities, never resulted in the spores being found in the lungs. Inhalation of tubercle bacilli, in doses harmless when taken into the alimentary canal, resulted in the bacilli being demonstrated in the alveolar septa and other parts of the lungs within one hour. It was further shown that with small doses the bacilli could not be found in the bronchial lymph glands until after three days. Evidence was found also to support the conclusion that the alimentary canal is almost impermeable to tubercle bacilli when they are taken with the food under natural conditions. The predominance of pulmonary lesions after either alimentary or intravenous infection, it was concluded, was due not to mechanical factors—retention by the lungs as by a filter—but to some special predisposition on their part to tuberculosis. In regard to milk, quantitative experiments afforded evidence that in tuberculous herd milk (not the milk of a single cow), when drunk at the rate of a litre a day, the bacilli are not likely to be so plentiful as to be dangerous. This is supported by statistics which are held to show that in *Persucht* districts there is no increased incidence

of tuberculosis, and that there is as much tuberculosis of all kinds in countries where there is no consumption of tuberculous milk. Bovine infection, it is concluded, is uncommon even in children's surgical tuberculosis. The Breslau experimenters emphasize the view that pulmonary tubercle, the great scourge of humanity, is due to the human type of bacillus. The position taken up is that milk inspection is not to be condemned on these results, but great benefits from it are not probable and must not blind us to other sources of infection. The attempt to prove the improbability of finger infection is not so satisfactory, for bacilli were found on the fingers of 10 per cent. of the children. As these results are from one examination of each child, it is thought possible that every ten days each child would have contaminated its fingers.

It is no new idea to regard tuberculosis as a disease of childhood, but von Behring may claim to have been the first to produce scientific evidence in its favour. Naegeli long ago asserted that nearly every adult inhabitant of Europe harbours a tuberculous focus, and Dr. Franz Hamburger, of Vienna, who has tested a large number of apparently healthy children with tuberculin, by cutaneous or subcutaneous application, states¹ that at the age of puberty over 90 per cent. give a positive reaction. *Post-mortem* examination of individuals at this age revealed that 75 per cent. were definitely tuberculous. He argues that nearly every individual, except a few fortunate residents in rural districts, acquires tuberculosis before the age of 14 years. The clinical signs of the disease may not develop for the bacilli may enter the system without producing any characteristic changes, and may lie latent in a gland or other organ until some accident determines their active growth. It may be that, as Bartels found in animals, the bacilli gaining entrance without producing any local change, lie dormant or nearly so in the glands, producing in them general swelling and hyperplasia, but no formation of tubercles. On the other hand, the bacilli may produce a primary characteristic lesion at the site of entry, with the formation of tubercles and caseation in the related lymphatic glands. In attempting to follow the process beyond this point, Hamburger relies on *post-mortem* as well as on clinical evidence. The tuberculous process may remain localized in the seat of infection and in the lymphatic glands, and is then usually not diagnosable except by the use of tuberculin. The infection may then become inactive, or it may develop farther in one of several ways. The caseating masses may open into a vessel, and a large number of bacilli, being thrown suddenly into the circulation, acute miliary tuberculosis is produced. In other cases the bacilli, owing to causes still unknown, give rise to tuberculous meningitis. If, again, the number of bacilli which escape is small, and if the majority are arrested in one special tissue, localized tuberculosis of bones or glands is produced, or the lymphatic glands may become generally affected, producing general lymphatic gland tuberculosis, and from the bronchial glands the infection may spread to the lungs. Hamburger states that in the large majority of children the infection remains in abeyance for years or permanently, but he believes that the evidence he has accumulated is sufficient to establish the proposition that tuberculosis in adults is usually a recurrence of the disease acquired in childhood, and goes on to suggest that adult phthisis is a tuberculous

process grafted on an already tuberculous organism; Orth is said to have arrived at a similar conclusion, basing his opinion on the results of experiments on animals.

The conclusions of the Breslau school, to which we have referred in the earlier part of this article, will doubtless be subjected to keen criticism. Accurate quantitative work in bacteriology is notoriously difficult. It seems probable, however, that the great difference between the alimentary and the inhalation infective dose is too striking to be due to error or bias. This one fact, if fact it be, gives importance to the work.

THE CHARTER AND THE REFERENDUM.

IN consequence of a point of order raised at the meeting of the Metropolitan Counties Branch on December 30th, the full report of which meeting has not yet been received for publication, the Organization Committee resolved to take legal opinion on the points whether (1) a Branch (or Division) which circularizes Members with the view of ascertaining the individual feeling of Members, and either alone or in combination with other Branches proposes to petition the Privy Council in opposition to the grant of the Charter in the form in which it is presented is acting *ultra vires*; (2) if so, what means are open to be taken to stop such action; and (3) whether expenditure incurred by Branches (or Divisions) in such action is legitimately chargeable to Branch (or Division) funds. The case submitted to counsel and counsel's opinion are published in the SUPPLEMENT for this week, page 21. The case and the opinion should be read in their entirety, but we observe that Mr. Colquhoun Dill is of opinion that a Branch (or a Division) cannot legitimately act in opposition to a decision of the Representative Meeting and cannot apply Branch (or Division) funds in promoting a petition to the Privy Council or obtaining the opinion of the Members of the Branch (or Division) as to whether such a petition should be presented. We, of course, make no comment upon the point at issue, but desire merely to draw the attention of members to the special report of the Organization Committee embodying Mr. Colquhoun Dill's opinion, which will no doubt be submitted to the Council of the Association at its meeting on January 27th.

THE FUNCTION OF SCIENCE IN EDUCATION.

THE annual meeting of the Association of Public School Science Masters was held on January 12th, Sir Clifford Allbutt, the President, being in the chair. In his presidential address the Regius Professor of Physic in the University of Cambridge discussed, with the breadth of outlook and mingled grace and lucidity of expression which distinguish his utterances, the place of science in school education. He said that the field of natural science was for most boys the best foundation of scientific training. The scientific method penetrated into all studies of the modern school, as it penetrated into all life. The humanist winced to see the flower of literature stiffened into a diagram; not only did he deny creative power to science, but he suspected it of corrosive properties, and so was tempted to denounce all compact with it. Imagination was a precious faculty, for which the Olympian schoolmaster professed himself peculiarly jealous. Yet to literature in the sense of food for the imagination very few boys attained. Sir Clifford Allbutt said that our eyes should be open to that besetting sin of the schoolmaster and its devastating consequences whereby the ingenuous and ardent curiosity and recep-

¹ *Munch. med. Woch.*, December 29th, 1908.

tivity of the boy were quenched and deadened so that too often in ideas he remained impoverished for the rest of his life. There was a tendency in school, in spite of science, to forget that there were boys and boys. To most boys natural history and mechanics would prove more congenial than chemistry. In the upper forms there should be a more extensive differentiation, according to the bents, and possibly even the vocations, of the pupils. Sir Clifford Allbutt added that Cambridge had recently opened the First M.B. Examination to candidates on admission. He concluded by saying that his speech would be in vain if he had not half persuaded even the head masters that no boy's education was broad and symmetrical which had contained less science than was required, say, for that examination. In reply to a vote of thanks passed for his address, Sir Clifford Allbutt said it was a profound error to have modern and classical sides in a school. The classics and science ought to be taken together. While agreeing with Sir Clifford Allbutt, as a general proposition, that science should find a place in school education, we think that the foundation of teaching should still be what, for want of a better term, we may call humanistic. Boys who have had no opportunity of acquiring any knowledge of science at school can make up the deficiency later, but strict accuracy in the understanding and the use of words, the ready and correct grasp of a writer's meaning, the intuitive perception of a fallacy, can seldom be acquired otherwise than by means of a classical training, except by men of genius who are a law unto themselves. We make bold to say that research would not so often wander into devious tracks which lead nowhere if all scientific investigators had been thoroughly drilled to appreciate the significance of words, and had mastered the rules of reasoning. It is true, of course, that a knowledge of grammar will not of itself enable a man to speak properly, any more than a knowledge of logic will necessarily make a sound thinker. For illustrations of these statements we may point to the lack of sense of style shown in the writings of many scholars, and the bad reasoning of many of those who have been nurtured in the logic of the schools. Nevertheless the fact remains that men who have been through the humanistic training, though they may have forgotten the small Latin and less Greek they learnt at school, are, as a rule, better able, in the words of the poet, to see life steadily and see it whole, to appreciate evidence and to put their ideas into words that accurately convey their meaning, than those who have got their intellectual nourishment at the somewhat dry breast of Science. There is a scientific pedantry which is far more narrowing to the mind and withering to imagination than that of those who spend themselves in mastering the mysteries of the "enclitic *De*." And without imagination properly used no great advance in science has ever been made.

SPIRITUAL HEALING.

In a paragraph on the spiritual healing movement which appeared in the *BRITISH MEDICAL JOURNAL* of November 21st, 1908, we said that, while we could understand why the clergy should seek to find fresh woods and pastures new for their ministrations in the dark places of nervous disease, we were surprised that one of the authors of *Religion and Medicine*, the Rev. Elwood Worcester, D.D., should be able to say that before beginning the work they had secured the sanction of the leading neurologists of New York. In reference to this we have received a letter from Dr. Waller L. Burrage of Boston, with a copy of the *Boston Sunday Herald* of December 27th, which puts the matter in a different light. As the result of inquiry among eminent physicians, that journal states that

"the consensus of opinion in medical circles is that the 'Emmanuel Movement' has belted with its promoters 'and is running riot; is doing much harm.'" Dr. J. J. Putnam, Professor of Nervous Diseases at Harvard, denied that he approved of the movement, and protested against the use of his name in any manner in connexion with it. He considered the whole affair an injury to the progress of scientific medicine, especially to neurology. Two years ago the Rev. Dr. Worcester had spoken to him about the use of suggestion in certain forms of morbid nervous conditions, and Dr. Putnam then agreed that many cases of depression and moral instability could be benefited by suggestion along proper lines. Dr. Worcester, he added, had given him to understand that his idea was to select those of his parishioners who needed suggestive help, and if there were no real physical disturbances, to lead them along the line of self-control by suggestion. Dr. Putnam further agreed that many of these unfortunate needed assistance in the way of getting some occupation that would stop their introspection and worry. This, he said, was the extent of his advocacy of the practice of psycho-therapeutics by clergymen or any other body of untrained men. He added that he was sure this was the way in which some of his colleagues had been misunderstood "in the deplorable 'matter.'" Dr. Putnam complained that, notwithstanding an emphatic repudiation addressed to the Rev. Dr. Worcester, his name continued to be associated with the movement. He went on to say that the claims of the promoters of the movement were misleading, if not something else. It was a veritable epidemic which should be limited and controlled. "The crowd of untrained and unfitted clergymen 'who at once jump into the rôle of medical men 'and preach and practise what they call psycho-therapeutics is going to do great harm, is an injury 'to the public welfare.'" Dr. Philip Coombs Knapp, Clinical Instructor in Nervous Diseases at Harvard, said his objection to the Emmanuel movement was that it was bringing a horde of unfitted clergy to believe that they could by a few weeks' reading treat diseases of the nervous system. He added that "already there are prominent signs 'that the fad has been used for commercial purposes.'" Dr. William Lee Howard said that "the 'trouble with all these religious sects that claim 'to cure diseases is that they mix up metaphysics 'with physiology, sin with pathology.'" Dr. J. J. Thomas, Assistant Professor of Neurology at Tufts Medical College, said, in regard to the movement: "We do not endorse any such work. . . . Disturbances 'of the nervous system, and the symptoms of these 'disturbances, which are shown in so many various 'ways—physical forms—can only be understood by 'those whose training has been thorough in general 'medicine and who have then specialized in the 'anatomy and physiology of the nervous system.'" Dr. Thomas further referred to the danger to which most forms of mental healing sooner or later succumb, that of attempting the cure of cases unsuited for the psychical method, adding that from published reports in popular magazines the Emmanuel movement had evidently reached this point. Dr. George Waterman, Assistant Professor of Nervous Diseases at Harvard, said he was tired of hearing about the movement, which he did not approve of in any shape or form. Dr. Frank C. Richardson, Clinical Professor of Neurology in Boston University, expressed his hearty agreement with the opinions which we have here summarized. It is plain, therefore, that the statement that the Emmanuel movement has the sanction of "the leading neurologists in New England" is inaccurate. From the

New York Medical Journal we learn that Drs. Joseph Collins and J. Leonard Corning have expressed disapproval of the movement. On the other hand, Dr. Allen Starr looks upon it more favourably, though with reservations which are virtually in harmony with the view expressed in the BRITISH MEDICAL JOURNAL—that is to say, that the medical profession is ready to welcome the co-operation of the clergy in dealing with certain kinds of nervous disease so long as they do not step outside their proper sphere of purely spiritual ministration.

AN ALPINE CLIMATE IN EARLY TUBERCULOSIS.

THE tendency that shows itself throughout the history of medicine to work a sound idea to a point where it becomes useless or even dangerous has in recent years been shown in the excess of zeal with which the open-air treatment has been applied. It has been said that climate counts for nothing, and that our own happy island, with its capricious changes of climatic mood, is as good as that of the more favoured places whither pilgrims flock in search of health. The sentiment is patriotic, but its results, when translated into action, are not always satisfactory. Patients in the early stages of consumption are encouraged to go through the open-air ritual even amid the fogs varied by rain with all the rapid changes of temperature of a London winter, which oblige even the healthy each morning to think of the possibilities of the coming day, and make the problem wherewith they shall be clothed one that the most experienced must give up in despair. Where, then, are such patients to go? To this question Dr. Ewart supplies an answer in a paper published in this week's issue. He may seem at first sight to harp on a familiar string, for the virtues of Davos are admitted by all. They may appear to be summed up in the words of Justice Shallow, "Marry, good air." This may doubtless be said of many other places, but for most of those threatened with consumption the climate of the Alps possesses special advantages. It is a significant fact that even in the sanitary darkness of the Middle Ages consumption was not endemic in Davos. It may, however, be said that for the bulk of people over whom broods the shadow of the "white plague" a stay in Davos is a counsel of perfection. Thanks to the efforts of a number of enlightened men, of whom Dr. Ewart himself is one of the most prominent, this difficulty will shortly be in some measure removed. A national sanatorium at Davos, which bears Her Majesty's name, is now nearing completion, but funds are still needed before it can be made ready for occupation. Dr. Ewart does not plead for money, but we venture to do so on his behalf. It will be a reproach to this country if the usefulness of an institution like the Queen Alexandra Sanatorium is suffered to be crippled for the want of money. We are sure this will not be the case. Money, however, is not everything; it must be applied in the right way if the sanatorium is to perform to the fullest measure of efficiency the function for which it is intended. It is here that Dr. Ewart's advice, founded on his large experience, is particularly valuable. He urges that in order to secure the greatest possible advantage patients should not be kept here, even under the favourable conditions of one of our home sanatoriums, but should be sent in the first instance to the Alps. The benefit thus gained will be maintained and increased by a further course of properly-directed treatment at home. His thesis, in short, is that the best hope of effecting a cure in early tuberculosis is a systematic combination of home with Alpine treatment. But he lays special stress on the importance of the patient being sent to Davos first. Of

course, the special features of each case must be taken into account. There are cases in which the altitude treatment is unsuitable; these are fairly and fully set forth by Dr. Ewart. In any case, patients should not be sent to Davos as a last resource. In pulmonary tuberculosis the fundamental principle of treatment is expressed in the words of the Latin poet, *venienti occurrere morbo*; to advise an obviously doomed patient to go to Davos or anywhere else is to invert the maxim and send the sufferer to seek his death amid surroundings that must make the parting from life more bitter. We commend Dr. Ewart's paper to the serious attention of our readers.

THE HEREFORD COUNTY MEDICAL OFFICERSHIP.

THE earlier history of the action of the Herefordshire county authorities with regard to the appointment of a medical officer for the county has already been related in the JOURNAL.¹ It will be remembered that Dr. Herbert Jones, who held the office of medical officer of health for certain combined sanitary districts in the county, was, at the end of August last, appointed county medical officer of health and school medical officer at a salary of £500 a year. After his election an agreement was placed before him the terms of which differed from those upon which he understood he was appointed, and from any agreements of which we have ever heard of a like kind. The medical officer was asked to contract to pay for any qualified medical assistance he might need in carrying out the duty of the medical inspection of children; to pay office expenses incurred by him as medical officer to the county, with the exception of the cost of certain forms, books, and apparatus, and to pay his travelling expenses. Dr. Jones very properly declined the appointment on these terms, and resumed the duties of medical officer of health to the combined sanitary districts—the appointment he had previously held. Under these circumstances there can be no doubt that the regular and proper course for the Herefordshire County Council or its Public Health Committee would have been to advertise the appointment again. Instead of taking this course the clerk to the County Council wrote to each candidate who had responded to the first advertisement, asking him whether he would be willing that his application should be considered to be still before the committee, but did not in so doing intimate the reason why Dr. Jones has declined to take up the appointment. The facts coming to the knowledge of the Public Health Committee of the British Medical Association, the Medical Secretary was instructed to communicate with all the candidates, informing them of the terms in the agreement which had led Dr. Jones to decline the appointment. Two of the candidates, Dr. Lindsay and Dr. Bygott, decided to apply again upon the condition that the terms of the appointment should be such as the Hereford Division of the Association could approve, having in the meanwhile ascertained it was not the intention of the Public Health Committee of the County Council that the medical officer should be called upon to pay office expenses. A new agreement was drawn up by the clerk to the Herefordshire County Council, and the Public Health Committee of the British Medical Association, having taken legal advice, warned Drs. Lindsay and Bygott, the selected candidates, not to sign it, as it still contained clauses under which they would be liable for various expenses. This advice was taken by these two gentlemen, and as a consequence this second agreement was withdrawn and a third substituted which set out clearly that the only expenses to fall on the medical officer to the County Council were

¹ BRITISH MEDICAL JOURNAL, 1908, vol. ii, pp. 1204, 1308.

travelling expenses. Dr. Bygott, having obtained another appointment, withdrew his candidature; and Dr. Lindsay, being the only selected candidate remaining, might no doubt have secured the appointment for himself, but very chivalrously allowed the particulars of the altered agreement to be made known to all the original candidates and took his chance with them. The result was that the County Council preferred to appoint Dr. Gold, who has accepted the appointment upon the terms of the agreement settled with the advice of the British Medical Association. We sympathize both with Dr. Herbert Jones and with Dr. Lindsay, who seem to have had rather hard measure dealt out to them; but they will have the satisfaction of feeling that they have contributed to prevent the institution of a precedent which could not but have had most disastrous consequences to the public health services.

PRIVATE SANATORIUMS FOR CONSUMPTION AND CANCER.

THE danger to the public of unqualified medical practice is becoming more and more manifest, and is well illustrated in the report of the inquest on a patient who died in a private home conducted by a Mr. J. H. D. Jenkinson at Handsworth, near Birmingham, for the treatment of cases of consumption and cancer. Mr. Jenkinson said he was a chemist and druggist, but had no medical diploma. Before he opened the home he had been in business as a manufacturer of poultry, pigeon, and dog medicines. He received principally consumptive cases, but had had three cases of cancer. According to the sister of the deceased, who had also been in the home, they paid 10s. a week each for board, lodging, and treatment. There is certainly no complaint to be made on the score of expense, and it is astonishing to hear that cases can be properly boarded and lodged for so small an amount, as, according to Bardswell's table, the cost of the diets in working-class sanatoriums, where presumably purchasing was done at contract rates, varied from 13½d. to 22d. a day, so that food alone should cost at least 2s. a week. Mr. Jenkinson was obviously unable to provide medical attendance for this small remuneration, and seems to have contented himself by giving the patient what he called a "high-class tonic," and only sent for the doctor when the patient was dying; hence the inquest. We shall watch with interest the proceedings of Mr. Jenkinson and the home which he conducts with such remarkable economy. The position of the doctor who was called to the patient when *in extremis* was somewhat difficult; if he had given a certificate he might have been considered to be covering Mr. Jenkinson and assisting him in carrying on his unqualified practice. He therefore quite properly consulted the coroner, who in the public interest held an inquest, which has had the desirable result of giving due publicity to the matter. The principle of free trade in institutions of this kind can only lead to scandals. It is evident that they ought to be subjected to some kind of supervision, which might be placed in the hands of local authorities, town or county councils, as we have no wish to see another central body created in London like the Lunacy Board.

MEDICAL THOUGHT IN AUSTRALIA.

ON the proceedings of the recent Australasian Medical Congress a not inappropriate comment would be *coelum non animus mutant*, even though many of those who took part in it are lifelong inhabitants of that part of the globe. To any one, in short, who has followed the account, which is concluded in this issue (page 160), it must be abundantly

clear that the minds of medical men in Australasia and in this country are pursuing identical lines of thought. That this should be the case in scientific matters is not remarkable, but it is interesting that the professional and medico-political subjects discussed at this congress were in so many instances the same as those which received attention at the annual meeting of the British Medical Association at Sheffield. Clearly the conditions with which the medical profession, individually and as a whole, has to deal at the antipodes are closely similar to those in these islands. The president, Professor Allen, devoted much of his address to a consideration of means of lessening maternal mortality in childbirth and of providing increased protection for infants. Much, he noted, had been done for children in late years, but more remained, especially in regard to the prevention of ophthalmia neonatorum. Similarly the address in medicine dwelt upon the marked increase in functional disorders of the nervous system. In view of a suggestion recently put forward here that the physician of to-day ought to undertake some of the procedures hitherto regarded as within the province of surgeons, it is interesting to note that at this congress gynaecologists were urged to regard the whole abdomen and not merely the pelvis as their preserve. Consolation may be derived by those depressed at the conditions among school children in Great Britain from a fact revealed by Miss Gertrude Hally in her interesting account of medical inspection as conducted in Hobart. Out of over 11,000 children examined between certain dates, as many as 38.6 per cent. were found defective to such a degree as to be probably unable to receive full benefit from the education provided in the ordinary schools. On the other hand, a feeling of envy may well be evoked in the minds of many medical officers of health by the statement that it is now in the power of any New Zealand municipality to say, "No one shall sell milk in our borough unless it 'has passed through our conduit, and has been certified as pure and wholesome by our Health Department.'" Hospital abuse also came in for very full consideration, and was the subject of several resolutions. One of these was to the effect that no payment whatever ought to be accepted from patients admitted to institutions maintained either by charitable subscriptions or by Government funds, and that except in case of accidents and emergencies all patients should be required to sign a statement of inability to pay for medical treatment, and should usually be expected to furnish themselves with a recommendation from their ordinary medical attendants. Similar views have frequently been urged in this country. A further resolution dealt with hospitals for patients who can afford to pay. It was somewhat obscurely worded, but the mover clearly explained what it meant and what the object in view was. He desired to see hospitals nationalized and new institutions provided to which only persons able to pay would be admitted. The charges of these institutions should everywhere be the same, and they should possess neither out-patient departments nor a medical staff; each patient should be left free to choose his own medical attendant, and to agree with him as to the fees to be paid for professional treatment. The next congress is to be held in 1911 at Sydney, and Dr. Pockley, a distinguished ophthalmologist in that city, is to be its president.

THE HEALTH OF LONDON.

THE annual report for 1907 of the Medical Officer of Health for the County of London has just been issued with a short preliminary note by the Public Health Committee. The most satisfactory fact which Sir

Shirley Murphy has to record is perhaps that the death-rate, which stood at 15.1 in 1905 and 1906, fell still further in 1907 to 14.6, which is a lower rate than was recorded in any English town having a population of over 200,000, with the exception of Bristol (13.2) and Leicester (12.7). An unsatisfactory fact is that the birth-rate, like the death-rate, is the lowest on record for London. The marriage-rate was also lower than for many years. Two diagrams on the same page show in a striking way the relation of both birth and marriage rates to the means for the years 1851-1907; there is a general correspondence, but the fall in the births began later (1888), and has been more rapid and continuous than that in marriages, which began in 1878, and has shown marked fluctuations. The statistics with regard to phthisis show that the gradual decrease in mortality noted in previous years has continued, but the most interesting point in this section of the report is contained in a table showing phthisis death-rates in relation to overcrowding. In those districts in which the percentage of overcrowding is lowest (7.5 per cent.) the corrected death-rate per 1,000 persons living was 1.078; in those in which overcrowding is worst (27.5 per cent.) the corrected death-rate was 2.118. It is instructive to compare these figures with those in a similar table for cancer, where no correspondence between overcrowding and the disease is disclosed; in fact, the death-rate from cancer, though nearly the same in all districts, is actually lowest in the most overcrowded. A satisfactory feature of the general statistics is that the infantile mortality rate declined to 116: in 1901 it was 148, so that it would really seem as though the educational work of the last few years has not been altogether wasted, and that if fewer babies are born, more care is taken of those that are. These statistics, and many others to which we hope to call attention on a future occasion are contained in Part I of the report. Part II deals chiefly with administrative questions. Reports on cerebro-spinal fever, on flies, on the homeless poor, and on sanitary staffs of metropolitan authorities appear as appendices.

INTERNATIONAL OPIUM COMMISSION.

WE have already announced that an International Opium Commission is to be held at Shanghai. The date of assembly has been postponed from January 1st to February 1st, 1909. We have received from the Secretary of the Society for the Suppression of the Opium Trade a copy of a translation of a circular letter of which the French original has been forwarded on behalf of the Society to the Foreign Minister of each of the twelve Powers (Great Britain, Germany, China, the United States, France, Japan, the Netherlands, Portugal, Russia, Turkey, Persia, and Siam) which have agreed to take part in the Commission. After relating what has been done in the matter, the letter summarizes the present state of legislation in various countries as follows: "In Japan, the Philippine Islands, and most of the self-governing British Colonies, the sale and consumption of the drug are totally prohibited, except for medical use. In China, a great effort is being made to free the Empire from this curse. In Formosa, most of the British Crown Colonies, Macao, and French Indo-China, beginnings, or at least promises, of legislation with the same object have been made. In British India the sale of opium prepared for smoking is prohibited, but that of opium for eating is permitted, except that in Burma it has been forbidden, since January 1st, 1894, to sell opium to Burmans and to certain other native tribes. In the Straits Settlements, also, the sale of opium to Malays is forbidden, but this prohibition, as also that exist-

ing in Burma, appears to be more or less evaded. In the Dutch Indies, where the sale of opium is a Government monopoly, the import and consumption of opium appears to be increasing year by year, to the great injury of the Javanese." The letter proceeds to state that "the cultivation of the poppy (*Papaver somniferum*) and manufacture of opium exist in Turkey, Persia, British India, and China. Turkey opium is preferred for medical use; in the United Kingdom chemists are bound by the directions contained in the *Pharmacopoeia Britannica* to use it exclusively. In Persia, according to the testimony of American missionaries and of a British consul, the cultivators are given to the opium vice, which reduces them to great misery. In India the cultivation has been diminished, in concert with China, which has undertaken to extinguish it entirely within ten years. There is a small amount of poppy cultivation and opium production, chiefly for local use, in the Punjab (Northern India), the Shan States (Burma), and Laos (between Siam and Burma)." The anti-opium societies are not satisfied with what has been done, as may be gathered from the concluding portion of the circular, where it is said that those who, in the United Kingdom, have long combated the opium traffic, whilst they recognize the great measure of progress effected by the Indian Government in undertaking to bring to an end the export of opium to China within ten years, provided the Chinese product is reduced *pari passu*, desire a far more rapid suppression. This, they say, would be so much the easier because, according to the annual reports of the officials in charge of the cultivation, the ryots find other crops more profitable than opium. They hold, too, that the action of Great Britain in bringing to an end a "morally indefensible" trade ought not to be conditioned by that of the Chinese Government. In view of Mr. Leech's statement that China is hampered by existing treaties in her attempts to put down the consumption of opium, they consider that all provisions in these treaties which restrict her freedom in this respect should be annulled. They express the hope that the Governments which participate in the International Commission at Shanghai will not hesitate to take the necessary steps to put an end as quickly as possible to the production and sale of opium except for strictly medicinal purposes. They conclude: "The traffic which supplies the non-medical use of this drug is condemned by medical science, and Japan has resolutely excluded it from her soil. It is reprobated by the moral judgement of the best elements in the Chinese Government and people. Western civilization cannot but sympathize profoundly with China in her supreme effort to free herself from this enervating and demoralizing scourge. The European nations having colonies or protectorates in the East cannot evade the duty of keeping pace with China. We trust that they will not content themselves with this, but regard themselves as bound in honour to set the example of speedy and effective prohibition."

THE BOMBAY MEDICAL CONGRESS.

THE Indian Medical Congress in Bombay will be opened on the morning of Monday, February 22nd, by the president, Sir George Sydenham Clarke, G.C.M.G., G.C.I.E., Governor of Bombay. The ceremony will take place in the Convocation Hall of the Bombay University, and the meetings of the various sections, by which the detailed work of the congress is to be conducted, will all be held within the university. Among the subjects specially selected for discussion are the etiology, prophylaxis, and treatment of plague,

enteric fever, relapsing fever, tropical diarrhoeas, and beri-beri; the differential diagnosis of various types of malarial fever and of dysentery, with suggestions for the prevention of these diseases; the pathological conditions due to the invasion of the Leishman-Donovan body, with suggestions for treatment and prophylaxis; the part played by animal parasites and disease carriers in the dissemination of diseases peculiar to the tropics; the clinical and pathological effects of the different varieties of snake venom; the pathology, distribution, and bacteriology of mycetoma; the bacteriology of leprosy and the results of special methods of treatment; the treatment of cholera; sanitation as applied to India; tropical surgery; and naval and marine hygiene, including quarantine and the incidence of tropical diseases among mariners. During the sitting of the Congress, there will be an exhibition of medical, surgical, and sanitary appliances, foods, and drugs, and a museum of pathological specimens, while a series of demonstrations will be given. These are primarily for the instruction of persons attending the Congress, but afterwards the exhibition will be thrown open to the general public for about three weeks. The Indian railway companies are granting special concessions to members of the Congress, and it is hoped that there will be a large attendance, and that much good work will be done. The General Secretary is Lieutenant-Colonel W. R. Jennings, M.D., F.M.S., of Bombay, and the Assistant Secretary is Captain E. F. Gordon Tucker. Among the Vice-Presidents are the Director-General of the Indian Medical Service, and the Principal Medical Officer His Majesty's Forces in India, as well as members of the Council of the Governor of Bombay, and the leading municipal officials of that city.

KISSING THE BOOK.

THE objections to what is known as "kissing the book" by way of winding up the taking of an oath in a court of law have been stated so often in these columns that in the recent revival of a discussion on the subject in the lay papers there seems something almost as mediaeval as the practice itself. On this occasion the topic has been started by a letter recording the acquirement of "malignant itch" of the chin, mouth, and throat through kissing the book. A scientific dermatologist might possibly be disposed to question this particular incident; but to do so would be mere pedantry, for it is indubitable that kissing the book is not only a nasty practice in itself, but a directly risky procedure. No one can deny that infection of one sort and another might readily be acquired by kissing, either on its cover or on one of its leaves, a volume which is habitually handled and used in the same fashion by persons of all stations in life, such as commonly appear in the witness-box. Various modifications of the practice have been suggested—such as the provision of a washable cover and of weekly supplies of new books—but none would assuredly be effective, nor would any of them be more easily introduced than that which practically is the only real remedy—namely, abolition of the practice altogether. There might be something to be said in favour of its preservation if there were anything particularly impressive in its character; but there can be no comparison between the moral effect on a witness of "kissing the book" by the order of a clerk of the court, who has just gabbled through a scarcely heard formula, and that of a witness raising his right hand and declaring in his own voice, "I swear by Almighty God as I shall answer to God" "at the great Day of Judgement that I will tell the truth, the whole truth, and nothing but the truth." The latter, though known as the Scottish oath, might be better described as the natural oath, for

such gestures as holding up the hand when making emphatic declarations have probably been employed by human beings since the world began. Of their special connexion with oath-taking there is evidence even in records as old as the Bible. In Genesis, for instance, a clear description of the taking of an oath by Abraham in this fashion may be found. How far back "kissing the book," on the other hand, can be shown to extend we are not aware, but it is akin to the kissing of images, and is probably a survival from pre-Reformation days. It is, of course, legally open to witnesses to adopt either one form of oath or the other, but of the comparatively few who are aware of this fact not all are prepared to make themselves conspicuous by standing out for the less accustomed form. Most of the exceptions are medical men influenced by a desire to see an insanitary practice abolished in the public interest. It has been suggested that the Scottish oath should be made compulsory by law, and some such course is probably necessary, for otherwise reform must continue to lie in the hands of officials who are for the most part too hide-bound by legal tradition to take the necessary action. An excellent instance in point was supplied last week by the Chairman of the Southwark Quarterly Sessions, who in addressing the grand jury admitted the drawbacks of the English oath and the simplicity and effectiveness of the Scottish form, but indicated that in his own court, at any rate, no step would be taken towards substituting the latter for the former as the habitual procedure. On the other hand, the judges of the Divorce Court are endeavouring to make the Scottish oath the customary form of swearing witnesses who may appear before them, and there have been among provincial magistrates during the past few years some honourable exceptions to the general rule.

THE ROYAL NAVY MEDICAL SERVICE.

THE Director-General of the Medical Department, Royal Navy, presided at a dinner held at the Criterion Restaurant, London, on January 8th, which was attended by seventy-three officers on the active and retired lists of the Royal Navy Medical Service. After the toast of "His Majesty the King" had been duly honoured, those present engaged in general conversation, and there were not a few instances in which officers then met for the first time since their probationary days at Netley and Haslar. Although the holding of such a dinner has often been talked about, this was the first time on which the scheme was realized, and the success attending this first effort will probably encourage those who took the matter in hand this year to organize similar dinners every year. Fleet Surgeon Lloyd Thomas, H.M.S. *Dædalus*, Bristol, would, we believe, furnish further particulars to any acting or retired naval medical officer who communicates with him.

SIR FREDERICK TREVES, BART., will deliver a lecture on radium in surgery, at the London Hospital Medical College, on Tuesday, January 26th, at 3 p.m.

ARRANGEMENTS have been made for the resumption of the work of the Medical Graduates' College and Polyclinic, 22, Chenies Street, London, W.C.; the first clinic of the new session will be held on Monday next, January 18th, at 4 p.m.

THE Morison Lectures before the Royal College of Physicians of Edinburgh will be delivered by Dr. F. W. Mott, F.R.S., at the College Hall on Monday, January 25th, Wednesday, January 27th, and Friday, January 29th, at 5 p.m. on each day. The subject of the course will be Syphilis of the Nervous System in the Light of Modern Research.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND DISTRICT.

HOSPITAL ABUSE.

THE *Manchester Medical Review* for December, 1908, contains an interesting and valuable paper on the hospital question, which was read by Dr. Arnold W. W. Lea before the Medico-Ethical Association. He found that in Manchester one out of every four of the population received hospital treatment during the year. He accepted the principles laid down by the British Medical Association as to the inability to pay for adequate treatment being the essential consideration for hospital treatment, and that investigation into the circumstances of applicants should be made in all cases. In Manchester the Charity Organization Society carried out such investigations on behalf of the Royal Infirmary, the Salford Hospital, Ancoats Hospital, and the Northern Hospital. In the last year 49,751 cases were investigated, and of these it was found that 2,099 were able to join the provident dispensaries while only 6 were able to pay for medical treatment. During the last five years less than 5 per cent. have been rejected as unfit for hospital treatment. Unfortunately it had not been possible to investigate the cases coming from outside towns which were very numerous, and there was little doubt that abuse often occurred among these. The standard of income rendering patients suitable for hospital treatment in Manchester was for single men or women 12s. to 15s. a week, and for married couples 18s. to 21s. with an allowance of 1s. 6d. for each child. The suitability for treatment depended on many factors, and he thought that the ultimate decision as to the fitness or otherwise must be given by the medical officer after he had been put into possession of the facts of the case. He was afraid that the inquiries made were often very imperfect, and at some of the special hospitals were made with the object of ascertaining how much the patient could afford to contribute to the expenses of the hospital treatment. In certain special hospitals the proportion of the total expenses borne by the patients amounted to almost one-third of the total income, and many of them could not keep their doors open if it were not for the contributions of the patients. He suggested that it was only fair that friendly societies and mutual insurance societies should pay some share in the expenses incurred by their members who receive treatment at hospitals, but so far no satisfactory scheme had been suggested. He saw no reason against the system of pay wards provided sufficient care was taken to limit them to deserving cases, but the suggestion that patients in pay wards should be attended by their own doctor could not be adopted under the present system of hospital management in large towns. The provision of provident hospitals was difficult owing to the great initial expense, but if established by the aid of municipal grants they would be of the greatest value, and could be made available for the use of all the medical men in the district. The essentials for checking hospital abuse he thought were:

1. Efficient inquiry by responsible officials, who should reject all obviously unsuitable cases.
2. In doubtful cases special visits should be made to the patients' homes and the results be recorded on the hospital cards, when the retention or otherwise of the patients should be determined by the medical officers.
3. A subcommittee of the hospital board should investigate all cases above a certain wage limit.
4. Patients should be asked to contribute according to their means.
5. Special hospitals should strictly confine themselves to their own line, but he saw no reason why patients should not contribute some portion of the cost of medicine and applications.

In the discussion which followed, it was stated that the question of hospital abuse was very pressing now in the Children's Hospital, where the new out-patient department, only opened eighteen months ago, seemed already too small for the work. To some extent this was due to the large number of school children advised to have tonsils or adenoids removed. Practitioners often refused

to do this operation and referred the parents to the hospital, though in many instances they could afford to pay several guineas for the operation. Several speakers dwelt on the difficulty of reform brought about by the fact that practitioners themselves so often sent patients to hospital whose circumstances disqualified them for hospital treatment. The position was summed up by one speaker, who said that less than two-thirds of the amount required yearly were obtained by charitable subscriptions; the rest had to be got on a commercial basis by the payments of patients, so that it came to this: that if the managers of hospitals put down hospital abuse, one-third of the income would disappear and the hospitals could not be carried on.

MEDICAL INSPECTOR OF SCHOOL CHILDREN AT BURY.

The Bury Town Council has again had under discussion the salary to be offered to the so-called Assistant Medical Officer of Health, whose duties will be really the medical inspection of school children. At the first council meeting, held on December 3rd, 1908, Mr. Alderman Parks, who said he was a member of the British Medical Association, referred to the fact that the advertisement offering a salary of £200 had been refused by the *BRITISH MEDICAL JOURNAL* and the *Lancet*, and he is reported to have said that if the medical journals boycotted the council it could go elsewhere, and that applications were already coming in. At the council meeting held on January 7th it appeared that only three applications had been received. The minutes of the Health Committee recommended an appointment to be made at £200 a year, and Alderman Greenhalgh in proposing that the recommendation be referred back argued that the salary was inadequate. He said that only three applications had been received owing to the fact that the principal medical journals had refused the advertisements, whilst one of these applicants on being offered the position had declined to accept it at so low a salary. Alderman Ashworth said that £200 was quite sufficient for men who were seeking opportunities to gain experience, while several speakers objected to any dictation by medical associations as to the amount of the salary. Councillor Turner thought that if they were going to appoint a man at a low salary simply that he might gain experience for positions elsewhere it would do away with the value of the medical inspection of children and would destroy the continuity that was essential to the success of the work. In the end the recommendation of the Health Committee was confirmed, and for the present the salary is to be only £200.

An awkward question has been raised, not only at Bury, but at other places—namely, when a medical man has accepted a position at £200 in opposition to the expressed resolution of the Association, does he deserve the support of the Association if he afterwards asks for an increase to £250? It has several times happened in the Manchester district, where there is a sort of consensus among respectable practitioners that no new clubs shall be accepted below 4s. a head per annum, that a practitioner has been willing to accept a club at even 3s. in order to get an introduction, and in a short time has applied for an increase to 4s., giving as a reason that the medical societies objected to clubs below 4s. The question then arises, Does such a man deserve to be supported by other medical men? Ought he not rather to be informed that if he chooses to act in opposition to the Association in the first place, he must not afterwards expect any support in applying for an increase in salary?

WALES.

GIFT BY THE CO-OPERATIVE CONGRESS.

The Newport and Monmouthshire Hospital has been presented by the Co-operative Congress with three dozen bed-tables for the use of patients, each bearing the following inscription:

Blandford Memorial. Presented by the Co-operative Congress at Newport, Mon., on June 8th, 9th, and 10th, 1908, in memory of a fellow worker.

The Blandford Memorial Fund, to which each delegate to the Congress subscribes 1s., maintains a scholarship and also makes a contribution annually to the charities of the district in which the Congress meets.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

SCOTTISH UNIVERSITY WOMEN AND THE FRANCHISE.

IN Edinburgh there was recently held the final meeting of the Committee of Women Graduates of the Scottish Universities (Parliamentary Franchise), to wind up the affairs of the committee and to discuss the advisability of forming a Scottish Universities Women's Suffrage Association. Miss Frances Simpson presided. It was reported that the total legal expenses incurred in the unavailing effort to get the university franchise amounted to £1,200, and that the amount subscribed left a deficit of £70. It was decided to dissolve the committee, and resolved that university women should work for women's suffrage. It was further agreed that the University Women's Suffrage Association should be a separate organization from other bodies, as this would best help the cause. A provisional committee was formed and a subcommittee was appointed to discuss the constitution of the new society. The provisional committee will meet on January 16th to discuss the constitution to be then submitted. The members, representing all the Scottish universities, were entertained by the women students.

ABERDEEN HOSPITAL SUNDAY.

The annual collection for the Royal Infirmary was made in the various churches of Aberdeen on January 3rd. The total collection at 53 churches and meeting places was £988 17s. 10½d., against £1,059 13s. 3½d. at 59 last year.

HEALTH AND GROWTH OF SCHOOL CHILDREN.

The reports of the medical officers to the Govan School Board for the year ending June, 1908, contain some information of general interest. The attention of the medical officers was directed to the condition of the children as regards height and weight, and some valuable statistics were collected.

It was found that there is a very close connexion between the environment and the physical condition. This was clearly brought out if the children were arranged in three classes according to the school attended. In the schools belonging to Class I the children are drawn from the families of commercial, professional, and other well-to-do classes, where the hygienic environment is good, and parental neglect does not exist. Class II includes schools where the children belong to the upper artisan, retail shop-keeping, and lower commercial classes; while Class III represent children of the working class and of the very poorest social scale. On comparison with the standard laid down by Dr. Leslie Mackenzie in his book on *The Health of the School Child* marked fluctuations and differences appear. The comparison is rarely in favour of the Govan child. The difference is least when the child is young, and becomes steadily more pronounced as the child reaches the age of 10, especially in the case of the children forming Class III. It is rather noteworthy that the girls correspond much more closely to Dr. Mackenzie's standard than the boys.

The general average height of the Govan boy is at the age of 5 years only a fraction of an inch behind Mackenzie's standard; at the age of 6 it is 1½ in. below the standard; at 7, about 2 in.; at 8, 1½ in.; at 9, over 2 in., and at 10 years of age it is 4½ in. below the standard. The average height of the girls is slightly above the standard at 4 years; from the sixth to the ninth years it remains 0.9 in. below the standard, when it drops to 1½ in. below, and at 10 years of age it is 2.1 in. below the standard. Thus, the average height of the girl of 10 is fully an inch greater than that of boys of 10.

The weight also fails to reach Dr. Mackenzie's standard, but here, too, the girls approach the standard weight more closely than the boys. At 5 years of age both boys and girls are practically of standard weight, but at 8 years of age the Govan boy is already 4.2 lb. behind the standard, while at 9 years the deficit is 6.7 lb., and at 10 years no less than 10.6 lb., when the average weight of the Govan boy is actually 4 lb. lighter than that laid down by Dr. Mackenzie for a girl of the same age. The Govan girl's weight line is much more satisfactory than that of the boys. Agreeing with the standard at 5 years of age, at

8 it is 3 lb. behind, and at 9 nearly 4 lb., and at 10, 6 lb. behind the standard.

The marked average deficiency in both height and weight is due largely to the influence of the Class III school. When the average of the schools in Class I is separately examined it is found that the average heights correspond very closely to the standard. Up to 9 years of age it is above that standard, but at 9 years it is about 1 in. below, and at 10 years 1.3 in. below. The average of the boys in Class II approximates very closely to Class I, but is always below it, and at 10 years of age is 0.7 below Class I, or 2 in. below standard. The average for Class III is markedly below the other two classes, and at 10 years of age is 4.4 in. behind Class I, and 5.74 below standard. In Class I the average height of the girls is above the standard, except for 10 years of age, when it is a fraction of an inch behind. Girls of Class II are 1½ in. below standard at 9 years, and 1.6 in. below at 10 years. It is again in Class III that the most marked difference is seen, when at 10 years the girl is 2.6 in. below standard height.

The weights for boys in Class I is practically the same as Dr. Mackenzie's standard until the ninth year, when it is 2.6 lb. below standard, and at 10 years 6.8 lb. below. Class II is below the standard, except at 5 years of age, and at 7 years in 2.6 lb., and at 10 years 9.5 lb. below standard. In Class III the deficiency is even greater. Thus, at 5 years the drop is 1 lb., and at 10 years the deficit is 11.7 lb.

The girls' weights in Class I are above standard at 5 and 6, and thereafter approximate closely to standard till the age of 10, when a drop of 3.4 lb. is seen. In Class II the weight is slightly below standard till the seventh year, when a drop of 1.6 lb. is noted, increased at 8 years to 3.5 lb., and at 9 is about 3 lb., while at 10 it is 3.6 lb. below standard. Class III is throughout below the standard—most markedly so at 10 years of age, when the deficiency amounts to 7.4 lb.

It was, of course, to be expected that rickets and parasitic skin diseases would be much more prevalent in the lower-class schools than in the schools of Class I, but one was hardly prepared for the statement that the teeth of children in Class I schools were not markedly superior to those of children in the other classes.

Ireland.

[FROM OUR SPECIAL CORRESPONDENT.]

JUDGE AND DOCTOR.

A DUBLIN newspaper publishes the following, regarding an unpleasant incident before the County Court judge:

A point of interest to the medical profession was raised at Clones Quarter Sessions by Dr. Edward Tierney, J.P., who, being present in court, was called by the judge (His Honour County Court Judge Craig) to give evidence in a case where damages were sought for assault.

Dr. Tierney objected to give evidence unless he got his fee or a promise of it.

His Honour: It is your duty to be sworn.

Dr. Tierney: I decline to be sworn.

His Honour: Very well; I will commit you for contempt.

Dr. Tierney: I can give no material evidence.

His Honour: That does not matter. I will make out an order.

Subsequently His Honour fined Dr. Tierney £2 for contempt. Dr. Tierney was commencing to speak, when His Honour said he would not hear him. Dr. Tierney persisted.

His Honour (to the police): Remove that man.

Dr. Tierney was understood to say that it was not for the sake of the fee, but for the sake of the medical profession, that he objected.

The incident then ended.

In this report we have not all the particulars before us, but we should like to know whether a judge can force a witness, who appears to have been in court by accident, to give evidence in a civil action for damages. Whether that is so or not, Judge Craig seems to need some instruction in the gentler methods of dealing with persons in his court. There does not appear to have been anything which could not have been settled by an explanation. Even the desire to show authority might be exercised without unnecessary brusqueness.

LUNACY IN IRELAND.

The fifty-seventh report of the Inspectors of Lunatics for Ireland for the year 1907¹ shows that the certified insane on January 1st numbered 23,554, and on December 31st, 1907, 23,718, giving an increase for the year of 164 as compared with the increase of 189 for the preceding year, the increase for 1907 being 295 less than the average increase for the preceding ten years, which was 459. These figures do not include the insane wandering at large nor those residing in private dwellings, with the exception of Chancery patients. The insane at the end of 1907 were distributed as follows: In district and auxiliary asylums, 19,511; in Dundrum Criminal Lunatic Asylum, 158; in private asylums, 870; in workhouses, 3,053; and Chancery patients, 126. With regard to the proportionate distribution of the insane in Ireland the inspectors furnish a table which shows that, as in England, there has been for some years an increasing proportion maintained in district and auxiliary asylums and a diminishing proportion in workhouses; thus, whereas in 1880 there were 67 per cent. in district and auxiliary asylums, 27 per cent. in workhouses, and 6 per cent. in private asylums, in 1907 there were 82 per cent. in district and auxiliary asylums, 5 per cent. in private asylums, and only 13 per cent. in workhouses.

The Increase of Insanity in Ireland.

Although the statistics show a numerical decrease in the rate of increase in the certified insane in Ireland, there has been, as in England, a steady increase in the ratio of the insane to general population, for it is to be remembered that in Ireland there has been for many years a steady decrease in the general population. From a table furnished by the inspectors, we see that in 1880 there were 12,932 lunatics under care, giving a proportion of 250 per 100,000 of general population, or 1 in every 400.7 of general population, whereas in 1907 there were 23,718 lunatics, giving a proportion of 542 per 100,000 of population, or 1 in every 184.5, as compared with the 1 to 280 of England and Wales on the same date. Doubtless to some extent increased certification amongst the uncertified reserve revealed by the census returns accounts for this great increase. Thus, from figures supplied by the inspectors we see that the differences between the numbers of lunatics and idiots obtained at the censuses of 1831, 1891, and 1901, and those officially known to the inspectors in these same years were 5,087 in 1831, 4,500 in 1891, and 3,420 in 1901. This does not, however, explain the great increase, for we see that, considering the total insane and idiot, certified or at large, as revealed by the census returns, their proportion to population rose from 1 in every 230.5 in 1831 to 1 in every 177.4 in 1901. A theory which we have sometimes seen advanced to explain Ireland's high ratio of insanity is that constant emigration drains the country of her young and vigorous peasant stock. In relation to this plausible explanation, an interesting report was issued last year by the United States Census Bureau, giving the results of their twelfth census, from which it appears that the Irish immigrants into the United States give a higher ratio of insanity than those of any other country. Probably, however, the increase in Ireland's insane is due to the same cause which appears to be operative in England and Wales—that is, accumulation from declining death and recovery-rates—for we see that since 1903 the total admission-rate to asylums in Ireland had fallen from 90 to 81 per 100,000 of population, and the ratio of first admissions to asylums from 71 to 63 per 100,000 of general population. As already stated, the insane in Ireland are distributed over district and auxiliary asylums, private asylums, the criminal lunatic asylum at Dundrum, and in unlicensed houses as Chancery patients. As the statistical information supplied to the office of the inspectors of lunatics concerning these separate classes does not follow one uniform plan, we are compelled to treat these classes separately.

District and Auxiliary Asylums.

On January 1st, 1907, there were 19,306 in these institutions, and on December 31st, 1907, there were 19,511, giving a total increase of 205 for the year.

Admissions.—During the year 3,554 were admitted, as compared with 3,524 for the previous year and 3,772 for 1905. Of the total number of admissions, 709, or 19.95 per cent., were admitted to district asylums from workhouses. Of the total admissions, also, 2,745 were first, and 809 not-first, admissions. The readmissions thus formed 29.4 per cent. of the total admissions. As regards duration of disorder on admission, in 1,591 the attacks were first attacks within three, and in 448 more within twelve months of admission; in 649 not-first attacks within twelve months of admission; in 560, whether first attacks or not, of more than twelve months' duration; and in the remainder the attacks were either of unknown duration (185) or of congenital origin (121). The admissions were classified according to the forms of mental disorder into: Mania of all kinds, 1,702; melancholia of all kinds, 1,271; secondary, senile and organic dementia, 166; primary dementia, 27; general paralysis of the insane, 61; epileptic insanity, 144; and congenital or infantile defect, 161. A noteworthy feature of the above list is the small number of general paralytics, constituting roughly only 1.7 per cent. of the total admissions, or 2.7 per cent. of the male and less than 0.5 per cent. of the female admissions, whereas in England and Wales the general paralytics form 6.8 per cent. of the total, or 11.6 per cent. of the male and 2.2 per cent. of the female admissions. Formerly this disease was almost unknown in Ireland, and even yet, the inspectors say, it is more rarely met with than in any other country in Europe, and is practically limited to the cities of Dublin and Belfast.

Causation.—Alcohol was assigned as the probable cause of insanity in 383, that is in 10.7 per cent. of the total, or 15.3 per cent. of the male and 5.2 per cent. of the female admissions, as compared with the 21.9 per cent. of the male and 8.9 per cent. of the female admissions in England and Wales. Venereal disease was assigned in 58, that is, in 1.6 per cent. of the total, or in 2.6 per cent. of the male and 0.4 per cent. of the female admissions, as compared with the 5.3 per cent. of the male and 0.9 per cent. of the female admissions in England and Wales. Alcohol and syphilis thus appear to play a much less important part in the causation of Ireland's lunacy than in England and Wales. Other assigned causes were: Critical periods in 195, pregnancy in 67, various bodily diseases and disorders in 177, previous attacks in 314, and mental and emotional stress in 311. Hereditary influences were ascertained in 969, or 27.0 per cent., and congenital defect was recorded as cause in 145, or 4.0 per cent.

Discharges and Deaths.—During the year 1,371 were discharged as recovered, giving a recovery-rate on the admissions of 38.6 per cent. (males 39.8 per cent., females 37.1 per cent.), or on the average (daily number resident of 7.1 per cent. (males 7.4 per cent., females 6.7 per cent.)). These recovery-rates are slightly higher than those in England and Wales in 1907, though unlike England and Wales they were higher in the male than in the female class. There were also 408 discharged as relieved and 79 as not improved, or not insane or insanity doubtful. During the year 1,486 died, giving a death-rate on the average number resident of 7.7 per cent., as compared with the 10.1 per cent. of county, district and county borough asylums in England and Wales. Of the total deaths 1,479 were from natural causes, 3 dying from accident and 4 by suicide. The deaths were due in 434 instances to cerebrospinal diseases, including 74 deaths from general paralysis; in 729 to chest diseases, including 400 from pulmonary consumption; in 96 to abdominal diseases; in 220 to general diseases, including 100 from senile decay and 30 from general tuberculosis; and, as above stated, 3 from accident (1 by poisoning and 2 by cut-throat). It will be noted that the deaths from general paralysis amounted to only 4.9 per cent. of the total deaths, as contrasted with the 16.8 per cent. of England and Wales. On the other hand, the deaths from pulmonary consumption and other forms of tuberculosis formed 28.3 per cent. of the total deaths, as compared with 16.89 per cent. for the same year in England and Wales. Commenting on this high death-rate from tuberculous disease, the inspectors say that there can be no doubt that many cases develop in the asylums, and add:

Moreover, it is not to be assumed that the figures given in our statistics can be taken as embracing the whole amount of tuberculous disease existing amongst the insane, as the immediate

¹ The Fifty-Seventh Report of the Inspectors of Lunatics (Ireland) for the Year ending December 31st, 1907. Dublin: Alex. Thom and Co., Abbey Street. 1908. Price 1s.

cause of death in the case of patients affected with phthisis is frequently some other intercurrent disease, and therefore the existence of tuberculous affection is not disclosed in the statistics. Owing to the small number of *post-mortem* examinations made in Irish asylums, the presence of tuberculous disease, which may not be the cause of death, or may not be discoverable during life, is never brought to light—a circumstance which accentuates the importance of these examinations in obtaining accurate information on this point, as well as on the pathology of insanity generally.

Having regard to the great overcrowding which still exists in many of the district asylums, it cannot be doubted that the conditions under which the patients live in these institutions are in themselves specially liable to spread tuberculous disease amongst those susceptible to its contagion, and that ample accommodation provided in well-ventilated buildings would do more than anything else to lessen the ravages of the disease, which at present is more fatal than any other in Irish asylums, and is liable to be carried from them and disseminated amongst the general population.

Average Cost.—The average cost per patient per annum, excluding charges in respect of buildings, land, etc., calculated on the gross expenditure, less loan repayments, receipts from miscellaneous sources and receipts on behalf of paying patients, was for district asylums, £21 19s. 3d., and for Voughal Auxiliary Asylum, £16 18s., showing a reduction in the case of the district asylums and an increase in the case of the auxiliary asylum as compared with the amounts for the previous year.

Private Asylums.

In Ireland accommodation for the insane who are able to contribute towards their maintenance is provided in licensed houses, of which there are 12; in mental hospitals, not kept for profit, of which there are 4, and a certain number are received into district asylums. On January 1st, 1907, there were 845 patients in the 16 private asylums, and on the last day of the year there were 870. During the year 276 were admitted, of whom 213 were first and 63 not-first admissions. No information is supplied as to duration of disorder on admission, but with regard to the forms of mental disorder they were classified as follows: Mania of all kinds, 80; melancholia of all kinds, 113; secondary, senile, and organic dementia, 24; primary dementia, 4; general paralysis of the insane, 9; epileptic insanity, 3; and cases of congenital or infantile defect, 23. The general paralytics thus formed 3.2 per cent. of the total admissions, a proportion twice as great as that of the pauper class. The table setting forth the probable causes of insanity among the private patients refers, not to the admissions, but to those remaining in the asylum at the end of the year, and are thus of little use for comparative purposes. We may say, however, that alcohol was assigned as cause in 87, or in 10 per cent., of the 870 remaining at the end of the year. During the year, 83 were discharged as recovered, giving a recovery-rate on the admissions of 30.1 per cent., being 8.5 per cent. lower than the recovery-rate of the district asylums, instead of being as much above it as is the case in England and Wales. There were also 54 discharged as relieved, and 40 as not improved. During the year, 73 died, 70 from natural causes and 3 by suicide, the total deaths giving a death-rate on the average numbers resident of 8.5 per cent. Unfortunately no table is furnished showing the causes of death in the private asylums.

State Criminal Lunatic Asylum, Dundrum.

In this institution on January 1st, 1907, there were 162 patients, and on the last day of the year there remained 158. During the year 15 were admitted, of whom 3 were found insane on arraignment; 4 were acquitted of the offences on which they were charged on the ground of insanity or were found guilty but insane, and 8 were convicts who had become insane whilst undergoing terms of penal servitude. Of the 15 admissions, 2 were readmissions and the remainder were the subjects of first attacks, or no information was obtainable on this point. They were classified according to the forms of mental disorder into: Mania, 6; melancholia, 1; dementia, 3; idiocy, 1; and insanity doubtful, 4. No information is supplied concerning the supposed etiological factors, but as to the crimes committed, 6 had committed or attempted to commit murder or manslaughter, 2 rape, 2 burglary, etc., 4 arson or malicious injury, and 1 attempt at suicide. During the year, 8 were liberated or given over to the care of friends, and 10 transferred to district asylums. Only

1 died during the year, the cause of death being pneumonia.

Persons of Unsound Mind in Irish Workhouses.

On January 1st, 1907, there were 3,238 persons of unsound mind in union workhouses, being composed of 1,889 lunatics and 1,349 imbeciles. Of the total number, however, 110 were lunatics boarded out in workhouses from Antrim, Belfast, Ennis, and Londonderry asylums. On December 31st, 1907, there were 3,156 in workhouses, of whom 103 were boarded out from the above-named asylums, showing a further decrease in the number of the insane in these institutions. The inspectors show that the condition of the insane inmates of workhouses in Ireland urgently calls for improvement.

Sydney.

[FROM OUR SPECIAL CORRESPONDENT.]

INFANT LIFE PRESERVATION.

THE Medical Officer of Health for Sydney some four years ago laid before the City Council a plan for inducing a larger number of mothers to feed their infants from the breast, and the council at once authorized the addition to its staff of a woman inspector to act within the city boundaries. A report on the result of this system during the past four years or more in which it has been tried was presented to the Board of Health at a recent meeting. Between July 1st, 1904, and December 31st, 1907, 4,748 nursing mothers in the city were visited by the inspector: this represents 52 per cent. of all births registered, and 67 per cent. of all births which occurred outside public institutions. The average age at which these newborn children were visited was 5.3 weeks. The inspector's duty was to diffuse some general knowledge among the more ignorant of the methods and precautions necessary for the rearing of the babies, but her chief duty was to recommend that they be fed exclusively from the breast. The results have been as follows:

	1904.	1905.	1906.	1907.
Number visited	781	1,455	1,240	1,272
Breast-fed only	564	1,114	977	1,019
Partial breast-fed	166	250	210	202
Not breast-fed	51	91	53	51

The beneficial results of the diminution in the number of infants not breast-fed is reflected in the steady diminution in the infantile mortality-rate, as shown in the following table:

Year.	Death-rate.	Year.	Death-rate.
1901	1.55	1905	0.64
1902	1.86	1906	0.73
1903	1.83	1907	0.81
1904	0.96		

Dr. Armstrong, the city health officer, pointed out that there were many adjacent populous suburbs to which at the present time there was no opportunity of extending this beneficial plan, and proposed that a second woman inspector should be appointed to exercise similar functions in these populous districts. The Board of Health at once accepted his recommendation, and unanimously decided that the Government should be requested to appoint another woman inspector.

AUSTRALASIAN MEDICAL CONGRESS.

At the concluding meeting of the eighth session of the Australasian Medical Congress held in Melbourne in October, 1908, it was unanimously decided that the next session should be held in Sydney in 1911, and Dr. F. Antill Pockley, lecturer in ophthalmology in the University of Sydney and ophthalmic surgeon to the Royal Prince Alfred Hospital, Sydney, was elected president.

Natal.

NATIVE DOCTORS.

SOME recent events have again attracted attention to the existence and customs of native doctors. These men are at present accorded a definite standing by the Legislature; indeed, for all practical legal purposes their position scarcely differs from that of fully-qualified European practitioners. Like the latter, they are expected to take out an annual licence, for which the Government receives a fee of £3, and their legal recognition is so complete that within recent times certain members of this class have been allowed to use the law courts for the enforcement of the payment of fees from patients. Nevertheless, they are, so far as real medical knowledge is concerned, natives pure and simple, whom it would not be easy to differentiate from the tribal "doctors," okeah men, and witch finders of the West Coast of Africa. In spite of their ignorance, however, they are able, as a recent trial revealed, to get hold of the most powerful European poisons, and case after case during the past few years has shown that they are a danger to the public in other ways. Many charges of murder have originated owing to their existence, and though the accused have not always been found guilty, the trials left little room for doubt that murders are from time to time committed with a view to obtaining the heart and other parts of the human body, which in native medicine are considered of value in treatment. Furthermore, the Dinizulu inquiry and other investigations into the circumstances attending the last Kafir rising suffice to show that men of this class exercise a strong influence over native minds, and that "doctoring for war," in which human blood and bones play a part, is still in existence. Men of the same type are doubtless to be found in all semicivilized areas, but when a colony has reached a development such as that of Natal it is difficult to believe that they are any but a retarding influence, helping to keep up customs and habits which, in the interest of all, should pass away. In any case, we know of no other British possession in which such persons are not only suffered by the authorities, but actually recognized and protected by them. Doubtless they would continue to exist and practise their arts for some time to come, whatever steps were taken, but at least the Government should refuse its countenance to them, and for its own credit and repute cease to make a profit out of their existence.

ANKYLOSTOMIASIS.

As recorded in a recent issue, ankylostomiasis is not only causing a considerable degree of suffering among the imported coolies and a great deal of expense to their employers, but is now known to have attacked several Europeans. The mortality returns for November in the Durban area suggest, indeed, that possibly the disease is more rife among Europeans than has hitherto been suspected. The total death-rate for Durban is shown to be only 13.3 per 1,000, which, so far as it goes, is entirely satisfactory; but, on the other hand, nearly 20 per cent. of the whole of the deaths amongst Europeans are ascribed to that vague condition known as marasmus. Two or three years ago this term and its analogues—such as general debility and wasting—used to figure frequently in the reports concerning the Indian population, and there is little doubt now that in many cases they covered deaths from ankylostomiasis, a disease at that time not known to have been imported from India. It seems possible, if not probable, that some of the deaths now attributed to marasmus in the European returns are due to the same cause.

Mauritius.

THE PUBLIC HEALTH.

THE Colonial Office report on Mauritius is by no means encouraging. With an overplus of population and the island at its maximum of productivity, "the future," it is stated, "must give cause for anxiety." Poverty is undoubtedly on the increase, and there is a general tendency towards pauperism, while the plague and the

epidemic of surra among the equines still linger. Poverty is stated to be in great measure answerable for the unsatisfactory condition of public health, but there is, nevertheless, an improvement upon the preceding year. The birth-rate has increased to 37.6 per mille, and the death-rate has fallen from 40 to 34.7. The total population of the island is 377,644, of whom nearly 264,000 are Indians. For some years past there has been an increase in the latter and decrease in the Creole population.

Malaria accounted for 4,262 admissions to the hospitals, a considerable increase on the previous year, and dysentery, with 1,286 admissions, is nearly double that of 1906. Charts are given to show that the curve of the rainfall and that of malaria are practically identical, the number of cases rising steadily from February to April, and then rapidly diminishing to a minimum in September. A similar chart shows the coincidence of dysentery with the rainfall until July, when a prolonged drought set in until November; the consequent stagnation and pollution of the streams was attended by a high prevalence of dysentery and diarrhoeal disorders. Altogether 23,355 cases were admitted into the fourteen hospitals, in addition to the 55,635 persons treated in the dispensaries, an increase of 3,000 over the previous year's figures. It is noticeable that tuberculosis is on the increase. Beri-beri, which is not endemic in the island, broke out simultaneously in three out of the four prisons, and the infection was ascribed to the use of a decorticated unstored rice from the East. The epidemic at once subsided on changing the diet to bread at first, and then to ordinary Indian rice. Plague came to the island in 1899, and since then there have been 6,740 cases and 5,155 deaths, giving a death-rate of 76 per cent. of cases attacked. This is very steady, the highest in any year being 81, and the lowest 73 per cent. The year 1907 is noteworthy as recording only 224 cases, the lowest since the introduction of the disease. A strenuous campaign against rats was kept up, and 125,000 destroyed by the Government ratcatchers. A most important feature of the year was the establishment of a bacteriological laboratory, in which much research work with regard to surra has been done.

Special Correspondence.

PARIS.

The Retiring President of the Academy of Medicine.

*—Treatment of Disseminated Sclerosis by X Rays.—
Diagnosis of Enlarged Intertracheo-bronchial Lymphatic
Glands.—Treatment of Cerebro-spinal Meningitis.*

AT the first meeting of the Académie de Médecine for 1909, M. Bucquoy, the retiring President, passed in review the work of the year, calling special attention to the communications of M. Calmette of Lille on the ophthalmic diagnosis of tubercle, of Professor Vaillard on preventive injections of antitoxin serum in the prophylactic treatment of tetanus in man, and the report of M. Vidal on epidemics, notification and disinfection. M. Léon Labbé, who is a member of the Senate, then took the presidential chair, and Professor Dieulafoy took his seat as vice-president, to which office he was recently elected.

Professor Raymond presented a report on a paper by Professor Marinenco of Bucharest on 2 cases of disseminated sclerosis which had been improved under radio-therapeutic treatment. He had been led to use the treatment owing to the good effects obtained from x rays, especially in cases of syringomyelia, by Raymond, Babinski and others:

CASE I.—A young man, aged 29, had sixteen sittings. There was a notable improvement in the majority of the troubles of motility; the trembling in the upper limbs disappeared almost completely and the patient could carry a glass of water to his lips; he began to write again, speed improved, and muscular strength increased. The walking also improved, but to a less noticeable degree.

CASE II.—A young woman, aged 25, had eight sittings, followed by improvement in walking and diminution of the trembling; she walked with less hesitation and with less fatigue than formerly.

The treatment was applied every other day at the level of the lumbar region. The patients were exposed for seven

to ten minutes on each occasion, the distance from the focus being 15 centimetres and the intensity 1 milliampère. The quantity of rays corresponded to 5 h, and the quality to 7.5 to 8. No skin troubles were noticed. The method was free from danger and should be further tested.

M. Martin du Maguy, of Bordeaux, in a paper on the character of the cough and the distant voice as pathognomonic signs of compression of bronchial tubes from any cause, said these can be observed early, are easy to find and are proportional to the intensity of the compression. The patient is seated, directed to cough, and to repeat the number 333, which in France appears to replace the familiar 99. The physician auscultates the back of the chest, listening alternately at the apex and at the base, over the last intercostal spaces in the scapular line. At the base the sound is distant, and it is easy to diagnose enlarged intertracheo-bronchial lymphatic glands by this method.

At a recent meeting of the Société Médicale des Hôpitaux M. Arnold Netter read an interesting paper on the results of the treatment of cerebro-spinal meningitis. Since 1899 he had treated 36 cases (32 in hospital and 4 in private practice); 14 cases were fatal, giving a mortality of 38.9 per cent.—much lower than the majority of statistics published, which, he said, ranged from 60 to 80 per cent. The only cases included were those in which lumbar puncture had shown a purulent fluid, and in which bacteriological examination revealed the presence of the diplococcus of Weichselbaum. The cases were most numerous in 1899 and in 1908. Six occurred in Russian children, who seemed very susceptible to the disease. The male sex was more affected, giving 28 cases to 8 females. The disease was especially prevalent in the spring and during the cold weather—9 cases in March, 5 in January and April, 3 in February and December. (1) *From 1899 till the end of 1902* M. Netter treated all his cases by prolonged hot baths and repeated lumbar punctures. The hot baths had a favourable influence on the excitement, the pain, and the contractures. The repeated lumbar punctures acted by diminishing the dangers from an accumulation of cerebro-spinal fluid, and by removing an important portion of the microbes and their products. Sixteen patients were treated by this method, with eight deaths, a mortality of 50 per cent.; four children under 2 years of age all died; in children from 2 to 5 years of age the mortality was 33 per cent.; over 5 years M. Netter had two cases—a child of 7 years, who died after three months' illness, and a young woman of 22 years, who was completely cured after a lengthy period. (2) *At the end of 1902* M. Netter began the use of colloidal silver, concurrently with hot baths and lumbar punctures in twenty cases, with nine fatal cases, giving a mortality of 42 per cent. Eliminating the cases which also received antimeingococcic serum, and counting only the hospital cases, the mortality before the use of collargol was 53.9 per cent.; after the introduction of collargol the mortality was 43 per cent. M. Netter found that the introduction of collargol into the cerebro-spinal canal was not advantageous; he obtained better results by its intravenous injection, the explanation being that collargol was not principally a bactericide, but activated the defensive processes in all the organs. (3) *Since the introduction of antimeingococcic serum* M. Netter has treated five cases. Two children aged 3 and 4 months were not included in the statistics, as in one case it was impossible to introduce the serum into the cerebro-spinal canal, and in the other only a minimum dose could be injected; both these cases terminated fatally. The three remaining cases were aged respectively $3\frac{1}{2}$ years, 3 years, and 16 months. Two of them recovered; the first received two intraspinal injections of 10 c.cm. of the serum of Wassermann, and the second received one injection of 10 c.cm., and an injection of 20 c.cm. of the serum prepared by Dopter at the Pasteur Institute. The third case succumbed; it had only received one injection of 10 c.cm. on the twelfth day of the disease when the child was admitted to hospital in a very grave state, the condition being complicated by a serious mastoid disease with peripheral facial paralysis. In this case also the microbes in the cerebro-spinal fluid differed from the diplococcus of Weichselbaum in that they did not ferment sugar and did not agglutinate with serum. The two successful cases were not sufficient to prove the efficacy of the serum, but the effects of the second injection in one case was so

rapid and striking that M. Netter considered the relation of cause and effect most probable. M. Dopter, who followed M. Netter, insisted on the necessity of introducing the serum by lumbar puncture, after withdrawing a quantity of cerebro-spinal fluid equal in quantity to the serum to be injected.

Correspondence.

THE DRAFT CHARTER AND THE REFERENDUM.

SIR,—It appears to me to be obligatory on all of us who are anxious for the success of the application for the Charter to endeavour to bring to an end the present unfortunate difference of opinion as to the means to be adopted in the future for obtaining a Referendum of the members on any points of dispute that may arise. It has frequently been suggested by their opponents that the persons who are in favour of a letter Referendum to each member and a bare majority of the Council are few in number and take no active interest in the general work of the Association. I trust I shall not be misunderstood if I say that I think the latter suggestion, at any rate, would not apply to me. As Secretary of the Bradford Division for the first five years after its inception, and as one who has hardly missed a meeting of committee or of the Division for the whole of that time, I can certainly plead that I have in every way endeavoured to further the interests of the Association. My opinion now is that the vast majority of the members of the Association are in favour of a letter Referendum and that the decision to take this should be by a bare majority of the Council. It is certain that if the Charter is maintained in its present form it will be actively opposed before the Privy Council, and that the petition to grant it will be absolutely rejected until an agreement is arrived at. This would be a grave misfortune, and might possibly imperil any future application for a Charter that might be made.

I would propose that, as the suggestion for endeavouring to obtain an alteration on the two points in dispute, after the grant of the Charter, does not meet with approval, the Council should immediately, on its own initiative, or that three constituencies should requisition it, to call together a Special Representative Meeting to agree to the proposals put forward. The expense incurred will be nothing in comparison with what will be spent if the Charter is pressed forward as it stands. A united representation could then be made to the Privy Council for the alteration of the clauses as desired, and I have no doubt that in due course we should obtain our Charter.

How much better would an ending of this kind be than the one that is sure to result if we appear to differ amongst ourselves!—I am, etc.,

JAMES METCALFE,
Vice-Chairman of the Bradford Division.

Bradford, Jan. 9th.

SIR,—I think it most unfortunate that Mr. Ballance should have written as he has with reference to our esteemed President, for most of us thought that he (the former) was one of the coolest and most moderate of our forward men; but the fact of the matter is that all of them are so enraptured with the idea of the Charter they are ready to devour any one who stands in their way. They are too much in a hurry, and cannot look to the right or the left. We are certain to have a Charter, therefore let us make it as safe and sound and broad as we possibly can.

We may be quite certain that the President would not have acted as he has without very good reason, and the Branches are really confirming the necessity for this action every week, so that I consider Mr. Ballance's letter would have been better unwritten.

His action might have been more justifiable if the President had taken isolated action, but it is not so, for not only are the Branches moving, but the Past-President and the President-elect hold the same views.

I consider Mr. Ballance's letter more the work of a party man than of a statesman, and that it is the help and guidance of men of the latter class that we most require in all things pertaining to the application for a Charter.

Writing such a letter is setting an extremely bad precedent, for attacking the President as he has only makes

other Representatives call to mind how it came about that he himself was elected Deputy Chairman; but it would be exceedingly unwise to follow his example, as it would only resolve itself into a throwing of stones all round, much to the loss of dignity to the Association. I trust Mr. Ballance will see his error.

I certainly hold that there has been undue haste in lodging the application for the Charter under the unsettled condition of opinion in the Association upon the subject. I do not hold with Mr. Ballance that the President is opposed to the granting of a Charter at all.—I am, etc.,

Manchester, Jan. 11th.

G. H. BROADBENT.

SIR.—The letter of Mr. Simeon Snell, published in the *BRITISH MEDICAL JOURNAL* of January 2nd, must have opened the eyes of many to the gravity of the situation that has been created by the precipitancy with which action has been taken in the matter of the Charter by a few officials and others in the name of the Association. The fact that the petition does not bear the signatures of the President, the Past-President, or the President-elect, is sufficiently remarkable in itself to give pause to the ardent spirits who have hurried on a step which should have been taken only in response to the wish of an overwhelming majority of the Association. How small a part is really represented by the signatories to the petition is becoming more and more manifest as the votes of the Branches, given in response to a genuine Referendum, are recorded almost week by week in the *JOURNAL*. The tone of the letters, which in your editorial impartiality you have published from both sides, also reveals a striking difference between the men who counsel delay and deliberation in an enterprise of the greatest moment, and the "insolent and aggressive faction" (if I may borrow John Henry Newman's famous phrase) who brand all who venture to differ from them as "disloyal," "unconstitutional," and apply to them the other terms of abuse which are the usual weapons of disputants who are worsted in argument.

There has been more than one sign of late of this policy of carrying motions by methods equivalent to snatching. We may admire the skill of the "whips" and the tactical genius of "old Parliamentary hands" in their proper sphere, as illustrations of the "slimness" that wins success in political strife as in warfare. But the mere outwitting of opponents is surely out of place in the management of an Association whose aim should be the good of the commonweal by the furtherance of science and the defence of the interests of a profession which is composed of gentlemen. It is scarcely likely that a Charter asked for by a petition in which the names of so many leading members of the Association are conspicuous by their absence will be granted; and a refusal will be a public humiliation that will go far to nullify the influence of the Association with the profession, and its power of advancing the welfare of the public. The responsibility for this must lie on those who have shown such ill-considered haste in presenting the petition. They may have the letter of the law on their side; but abundant evidence has been forthcoming that they have not acted in accordance with its spirit.—I am, etc.,

Cardiff, Jan. 11th.

J. LYNN THOMAS.

SIR.—Surely Dr. Major Greenwood, in his letter published on January 9th, puts a very strained construction upon By-law 7. It does not seem to require any explanation to the ordinary mind that the clause he quotes, "The management of the affairs of each Branch shall be vested in a Branch Council," is not the same thing as if the clause had said that the Branch Council shall under no circumstances concern itself with anything that affects the rights and privileges of the members of the Branch. But I should like to ask, What can be more clearly, more decidedly, and more properly the affair of each Branch than anything that affects the rights of its members, or which affects the Association as a whole, of which the Branch is an integral part? To give effect to such ideas as are contained in Dr. Major Greenwood's letter would be to muzzle, as some would like to do, the individual member, and to make the Representatives our absolute dictators.

I cannot think that such a result would be to the advantage of the profession or of the Association, nor am I

alone in these views, as the following excellent and wise quotations will show:

I hope that every member of our Association will give the best attention to Dr. Walker's able letter. . . . From my own experience I can say that Representatives in the metropolitan area are elected much in the way he describes. . . . so that it must be obvious that the true representative value of our present Representative Body must be of a very meagre character. . . .

I cannot help thinking that if the present intentions of the Representative Body become stereotyped in a Royal Charter, the last stage of the Association will be worse than the first. . . . If, however, the Representative Body in its present shape becomes the sole authority, our fate will then be in the hands of a somewhat larger clique, little more truly representative of the whole Association than was the smaller one of the past, and there will be no Council with the power of shielding us in any way.

It is always well to verify one's references, so let me say that the above quotations are taken from a letter on the Referendum published in the *JOURNAL* of November 2nd, 1907, and that it appears over the signature of "Major Greenwood."—I am, etc.,

Edinburgh, Jan. 10th.

R. MCKENZIE JOHNSTON.

ABDOMINAL EMERGENCIES.

SIR.—The *BRITISH MEDICAL JOURNAL* of January 9th contains a series of papers on abdominal surgery of the greatest interest, papers which invite more comment than one could reasonably ask you to give space for. Both Mr. Sinclair White and Mr. Billington make valuable remarks on Murphy's method of treating acute perforative peritonitis. I believe that the description of this by Dr. F. G. Le Conte in the *Annals of Surgery*, 1906, vol. i, p. 230, has had on the whole a good influence on the results of surgeons in general, chiefly on those of surgeons who had not previously kept the vessels full by frequent small enemata of hot water, who had also not kept their patients on the left side according to the plan first published by Lockwood, while they had douched out the peritoneal cavity, sewed up their wounds, except small openings for drainage tubes, and had also given their patients stimulants and milk by the mouth. But I suspect that the Murphy dicta have also done harm. I think Mr. Sinclair White has put his finger on one spot when he points out that many of our worst cases are not in a condition to stand even "the rapid elimination" of "a gangrenous appendix." Indeed, my experience goes to show that a gangrenous appendix is almost harmless as soon as the cavity in which it lies is made and kept absolutely wide open to the external air, provided especially if it is itself open—that is, if it has perforated. Further, while I agree that the pelvis should be drained suprapubically, that is not enough. The right flank and kidney region should be drained in many really severe cases. Further, my experience confirms that of both Mr. White and Mr. Billington that frequently repeated moderate-sized enemata of warm water are often preferable to continuous irrigation. My results have not been improved by substituting the latter for the former, and neither of them does away with the occasional necessity for intravenous injection of neutral saline solution. This should be given through the saphenous vein, because it is easily found and comparatively large—points of the greatest importance when an almost collapsed patient has to be revived in a hurry. Fowler's semi-sitting position, while excellent in suitable cases, is more than some patients can stand, but they bear the bed raised high at the head, and generally also the lateral decubitus very well.

I should like to see the whole subject of the operative treatment of severe cases of acute septic peritonitis secondary to perforations, etc., carefully treated by some surgeon of extensive experience, good operative skill (we all appear to possess that—a surgeon who cannot remove all the large intestine with its mesocola and accessory glands and have the patient comfortably back in bed in ten minutes appears to be rare), and open mind, one who would give us, without selection, his cases related with a brevity corresponding to that of human life, but with sufficient detail to be of real use, and above all a surgeon who would refrain from trying to settle our doubts by knocking us dizzy with a couple of figures, one minutely small and the other very heavy, tied to an adjective and a noun or two, such as "diffuse," "suppuration," "general," and "peritonitis."

Mr. Bernard Dawson, in his exceedingly valuable paper, has repeated a small error which originated elsewhere. He writes that "Murray in 1905 first suggested appendicostomy for protracted constipation, and later in the same year Keetley performed the operation." Mr. Murray's letter suggesting a temporary appendicostomy in cases of constipation appeared in the *BRITISH MEDICAL JOURNAL*, 1905, vol. i, p. 1299. This led me in the issue of the following week to publish my first case of appendicostomy for constipation, which had been performed three months before, and, of course, demonstrated freely to post-graduates and colleagues, but which was scarcely ripe for publication. I gave the continuation of this case in the *BRITISH MEDICAL JOURNAL* for October 7th, 1905. It was in this latter paper that the possible usefulness of appendicostomy in the treatment of typhoid fever was also first suggested by me. Of that subject I have written at much greater length elsewhere. I am sorry to make these corrections, because Mr. Bernard Dawson's paper is exceptionally accurate. And, above all, it gives many valuable references, generally in such a manner as to spare trouble.—I am, etc.,

London, Jan. 10th.

C. B. KEETLEY.

APPENDICOSTOMY.

SIR,—The increasing advocacy of appendicostomy during the last six years, following the suggestion of Keetley in 1894, and the performance of it for colitis by Weir eight years later, culminating in Mr. Keetley's recent paper before the Surgical Section of the Royal Society of Medicine and those in recent numbers of the *BRITISH MEDICAL JOURNAL*, will serve to encourage its more frequent use and to define its indications. I wish, however, to criticize its performance during operations for *intussusception* "to prevent recurrence," which is given by Keetley, Moynihan, and others as one of the indications for appendicostomy.

About a month before Mr. Keetley's first recorded appendicostomy for intussusception I performed the operation on a collapsed child 9 months old, with the supposed two-fold object of preventing recurrence and of immediate injection of nutriment (March 5th, 1905). It was found that peptonized milk injected through the appendix was immediately expelled from the rectum, and the child died.

My next appendicostomy after reducing an intussusception was on January 11th, 1906, the child being 6 months old; but, instead of preventing recurrence, the child came back three months later with a return of the intussusception, for which I operated successfully a second time, and exhibited the patient before the Bristol Medico-Chirurgical Society on May 10th, 1906.

This is the only recurrence of an intussusception which I have had. I am therefore inclined to regard the anchoring of the appendix as predisposing to recurrence rather than to its prevention, by interfering with the mobility of the caecum, which is naturally very free in the young child, and by making a fixed point below the common site of the commencement of an ileo-caecal intussusception, which is in the ileum, an inch or two above the ileo-caecal valve. If this be a correct deduction from my own experience, the importance of arresting injudicious appendicostomy, with the idea of preventing recurrence of intussusception, is obvious.

I have performed appendicostomy in seven cases with great satisfaction excepting in the above instance; am favourably impressed with it in certain cases of intestinal obstruction; and had performed it twice before the first recorded case of Mr. Keetley for that condition (December 21st, 1906), namely, November 16th, 1905, on a patient of Dr. Kendall; and November 23rd, 1905, on a patient of Dr. R. H. Walter.—I am, etc.,

Clifton, Bristol, Jan. 11th.

T. CARWARDINE.

IS APPENDICITIS A MODERN DISEASE?

SIR,—I was very interested in Mr. Raven's solution of the cause of death of King Herod Agrippa. There are a few points which may lead to a not unprofitable discussion associated with the letter. I venture to point out the "worm" pathology of disease was so common that there is hardly need to explain Herod's worm as either a worm-like appendix, trichinosis, or nematode, etc. Curiously

enough, the account given by Josephus of the death of Herod (*Great does mention worms*, "and a putrefaction of his privy member, that produced worms" (Wars, I, xxxiii, 5). This Herod also had a colon trouble, according to Josephus. The Herods are rather an interesting family medically. One is inclined to wonder whether the author of the Acts confused the accounts of the death of the first Agrippa and his grandfather.—I am, etc.,

Ilminster, Dec. 5th.

W. H. MAIDELOW.

SYPHILITIC LEUCODERMA AND THE PIGMENTARY SYPHILIDE.

SIR,—As Sir Jonathan Hutchinson, in his illustrated communication on this subject in the *JOURNAL* of January 9th, still does not appear to grasp how well this condition is known in England, and considers that Mr. Shillito's account has the only coloured illustration, I feel constrained to draw the attention of himself and your readers to the fact that in the third edition of my textbook,¹ in the coloured illustration of the principal syphilides, Fig. 11 illustrates accurately, and I think adequately, the "pigmentary syphilide," as I prefer to call it, from one of my own cases. In the text, a page and a half are devoted to its description and literature,² and two of my own cases are briefly referred to as proof of its occasional early appearance.

The fact is that though, as I state, it is "a rather rare condition," it is not very rare, and I have seen a good many cases, including a few males, and I should have thought that it was well known to every dermatologist and syphilographer in all countries. I can quite understand that Sir Jonathan Hutchinson has long ceased to refer to textbooks, and I make no personal complaint; but as his authority is so great as a syphilographer, I think it is desirable to point out an oversight, which might otherwise be accepted as a correct statement.—I am, etc.,

London, W., Jan. 9th.

H. RADCLIFFE CROCKER.

P.S.—I consider that it is the ringed pigmentation, rather than the white central portion, which is the abnormality.

SIR,—In the face of the implication contained in a statement made by Sir Jonathan Hutchinson in the course of his recent paper,³ namely:

As I have said, were it not for this article I do not think that I should incline to make an apology to my friends your two correspondents. I find exceedingly little evidence that any of the brief statements in systematic works were written from personal observation,

I should like to be allowed to make a few remarks. In the first place, I must disclaim any desire for apology, especially from Sir Jonathan Hutchinson, whose valuable contributions to medical knowledge are known to and admired by us all. Personally I regret that he should have made any mention of such a thing in a matter of this kind.

As one of the two correspondents mentioned by him, and speaking for myself, I would repeat that in my book on *The Differential Diagnosis of Syphilitic and Non-Syphilitic Affections of the Skin* in 1904, I considered the subject of the pigmentary syphilide of the neck of such importance that I devoted practically a page to the condition (page 200), and also incidentally referred to it on page 47.

Over ten years ago, when I had the pleasure of working at the Lock Hospital, Dean Street, with the late Mr. Edward Cottrell, then in charge of the female department there, I collected 193 consecutive cases of syphilis in women, of which two were old syphilis, two five and six years old syphilis respectively, and the remainder quite early (with a primary sore still present) or recent (not older than two years). These cases were examined by me, and although the investigation of this series was carried out for another purpose altogether, I find, on looking through my tabulated notes, that the pigmentary syphilide of the neck was present in 17 cases:

Pigmentary syphilide	...	...	10
Marked	...	...	2
Slight	...	...	4
Apparently of some standing	...	...	1

17

¹ I believe it was described in the first edition in 1898.

² This goes back to Hardy in 1858, who first described the condition.

³ *BRITISH MEDICAL JOURNAL*, January 9th, 1909, p. 86, col. i.

With the exception of 2 cases, all the others (15) came into the category of early (so-called secondary) syphilis. In one patient, with a marked pigmentary syphilide of the neck, a pigmentary syphilide of the genito-crural folds was also present. As the cases of this series were not examined from the point of view of the pigmentary syphilide specially, the percentage is, of course, lower than it should be.

I have also seen the pigmentary syphilide of the neck in men, but it is very rare. In two such cases the young men presented some of the secondary sexual characters of the female. In another case the lower part of the abdominal region was also similarly affected; this man I demonstrated to the students at University College Hospital.

Among the examples of the pigmentary syphilide of the neck shown by me at the Polyclinic, one patient was a man presenting the condition in a marked manner.

I need say no more in this place, as I am preparing a paper on the subject embodying some seventeen years' observations.—I am, etc.,

London, W., Jan. 11th.

GEORGE PERNET, M.D.

THE APPLICATION OF MENDELIAN RULES TO HUMAN INHERITANCE.

SIR,—I am quite unable to follow Dr. Drinkwater's procedure, and until we have a common standard of what is and what is not to be called Mendelism, it is quite impossible to proceed further.

I make 368 offspring of eight blind individuals in Mr. Nettleship's pedigree. Others may count up to 376; it all depends on the inclusion of certain doubtful cases. Taking 368 we have 131 abnormals and 237 normals. 131 in 368 is not 50 per cent., which is what the simple Mendelian theory demands.

Dr. Drinkwater, as I understand him from his letter in the BRITISH MEDICAL JOURNAL, would in a case like this of offspring of an abnormal:



count one normal and two abnormals, not counting the tail of the offspring because there are no abnormals among them. I should count, as I believe Mendel would have done, four normals and two abnormals. Dr. Drinkwater may not mean this, but it is the only interpretation I can put on his words "if we stop at and include the last abnormal." In a letter of explanation he has courteously sent to me he further tells me that he has excluded the offspring of first or second marriages of abnormals, when there are no abnormals in the offspring of these marriages. I presume also that if an abnormal marry once and have no abnormal offspring, such marriages have also been disregarded. He tells us that one normal may be recessive and another normal dominant to the abnormal. Since he stops at the last abnormal in a family, I presume we must also suppose the dominance of the abnormal to change at this point. But why stop here? Why should not the dominance change more than once during the mating? The moment we admit "personal" dominance as opposed to "character" dominance, and allow personal dominance to vary from mating to mating and even during a single mating, we are, as Dr. Drinkwater shows, able to obtain a desired percentage. But is this Mendelism, or a new theory of heredity, or a confusion of all the issues upon which the application of Mendelian rules to man depends?—I am, etc.,

University College, London, Jan. 7th.

KARL PEARSON.

VINCENT'S ANGINA.

SIR,—In the JOURNAL of January 9th (p. 87) Dr. Nash expresses some scepticism respecting the pathogenicity of Vincent's bacillus. I wish to support that attitude. Routine daily examination of throat and ear specimens has afforded the following evidence:

1. That fusiform bacilli (Vincent's bacillus) and spirochaetes are present in the majority of throat smears (acute and chronic).
2. That they are also present in 80 per cent. of normal throats.

3. That they are of frequent occurrence in discharges from the nose and its accessory sinuses, the antro-tympanic cavity and brain abscesses.¹
4. That they are especially numerous in conditions attended by decomposition and fetor (chronic states).

The cases of acute angina were always associated with either streptococci, pneumococci, diplococci (Gram —), or staphylococci, and it is to these that the exciting cause is to be attributed rather than the *Bacillus fusiformis*.—I am, etc.,

V. H. WYATT WINGRAVE, M.D.

Pathologist, Central London Throat and Ear Hospital.

January 9th.

THE HOME TREATMENT OF SCARLET FEVER.

SIR,—My recent paper under the above heading² has brought me a considerable amount of correspondence, and I trust you will allow me space for one or two further observations in illustration and expansion of the same subject.

I have at present seven cases of scarlet fever under my care in our girls' village home at Barksideside. These cases are in seven different cottages. The girls affected have been mingling freely with others throughout the village since they were attacked. The medical officer of health has watched their progress with the keenest interest. I have suggested to the local secretary of the British Medical Association that he should invite the members and other medical men of the district to call at the village and see these cases any Tuesday, Thursday, or Saturday afternoon (when I am in attendance). I have also invited another medical officer of health to visit us with his class of students (from the London Hospital) for the purpose of inspection. The girls attacked not only mingle freely with the other children in the cottages, but they attend church and school, where they come in contact with any of the other 1,300 children in the village. The ages of the patients range from 8 to 16 years. The cottages in which they live are widely apart from one another. In every instance the symptoms have been clear from the beginning, and later every one of them is having well-marked peeling. Dates and comments are embodied in the subjoined table:

Date of Attack.	Case Notes.	Condition as to Peeling.
November 2nd, 1903 ...	Severe throat and rash	Heavy.
November 5th, 1903 ...	Slight at first, then well marked	Freely.
November 5th, 1908 ...	Throat and rash severe	Heavy.
November 10th, 1903 ...	Well marked	Freely.
November 10th, 1903 ...	Ditto	Ditto.
November 12th, 1903 ...	Ditto	Ditto.
November 13th, 1908 ...	Ditto	Ditto.

Formerly I was much troubled with doubtful cases. Now, under the treatment which I advocate, these give me no anxiety whatever. On the slightest suspicion the children are kept in bed for from two to four days and rubbed each morning and evening with eucalyptus oil. In all confirmed cases I have had the children rubbed once daily until the tenth day.

I have had the assurance throughout that the milk was supplied from farms certificated free from any infectious disease, but I certainly should have no hesitation in taking the milk from a farm where children or others were affected with scarlet fever, provided only that my treatment was fully and absolutely carried out there.

I would suggest that some districts be selected where scarlet fever is threatening to become epidemic, and that all the medical men unite under, say, the medical officer of health to adopt for a test the plans I have set forth. In this trial I would strongly urge that a fully competent staff of careful nurses be selected and supplied for the carrying out of the treatment. For a fair trial the cases under each nurse ought not to be too numerous.

I recommend that when the home treatment of scarlet fever is adopted, the isolation hospital now used for scarlet

¹ Royal Society of Medicine, June, 1908, Clinical and Pathological Aural Discharges.

² BRITISH MEDICAL JOURNAL, October 31st, 1908.

fever should be continued; but only for the purpose of taking in, for a short time, children failing in health. To find out these there must be frequent and careful inspection, with particular inquiries regarding home life when necessary; but, above all, exact weighing of the child from time to time: for before any other sign becomes visible this alone will show that the child is failing. Even among the thousands of boarded-out children from Dr. Barnardo's Homes this is regularly carried out, and the weight recorded. This first indication of failing health demands inquiry and treatment, for it is at this early stage, before any physical signs exist, that the insidious onset of tuberculous trouble is so easily detected and combated. A short period of kind and careful nursing, with changed surroundings, speedily reinvigorates the child. The expense incurred is little in comparison to the benefits that flow from such treatment. Then, for those who are more seriously indisposed, arrangements should be made for the children to be sent to a seaside convalescent home for children. By such kindly forethought and treatment can we alone hope to invigorate thousands of our future men and women—the fathers and mothers of the future. This, too, would do much to draw the sting from the trying position of the poor.

If my method of treatment for scarlet fever were generally adopted, the effects would be alike important and far-reaching, quite apart from the merely professional aspect of the subject. For instance, a friend of mine, who is an owner of some weekly property in London, lately told me that during the past five years sporadic outbreaks of scarlet fever had occurred in his houses on six or seven occasions. In each instance, he said, a bill of costs amounting to several pounds had been incurred for disinfection and cleaning. Such an expense to property owners would be wholly unnecessary if all scarlet fever cases were dealt with by my system. I never order even the washing of a blanket or a night-dress for merely disinfecting purposes after scarlet fever, far less the disinfection of a room. Wherever a patient has been properly treated he ceases to be a centre of infection, and there is no infective risk remaining. Any child may sleep in the bed which the patient has been occupying. In this matter alone there would be a very large saving to the public purse without any risk to the public health. That is only one of many directions in which the marked benefit of the treatment would be manifested.

I should like to be permitted to add a word of warning on the subject of measles. Since my paper was written a measles epidemic appeared in our receiving home, where sixty children were in residence. The epidemic was limited to the first infection—that is, to cases occurring within twelve to sixteen days after the first appearance. Yet I cannot speak with the same confidence in regard to measles as with regard to scarlet fever. I should like to emphasize this, because several correspondents have written to me as if I had recommended my line of treatment being pursued with equal confidence in cases of measles as in cases of scarlet fever.—I am, etc.,

ROBERT MILNE, M.D.

London, E., Dec. 12th. Medical Officer, Dr. Barnardo's Homes.

MEDICAL MEN AND CONTAGIOUS DISEASES.

SIR,—A printed sheet about "insurance benefits for medical men only" has been received by me. I see from it that 920 claims have been paid on account of accidents and certain diseases. I find that 27.5 per cent. of the claims were due to "septicaemia." I admit that medical men are exceptionally exposed to septic infections, but, nevertheless, it appears to me to be out of all proportion to what it ought to be. And yet, I am not surprised. Within a period of fifteen years I have known men to examine fresh wounds with unwashed fingers, and also to handle cases of diphtheria, scarlet fever, and even small-pox, without even deeming it necessary to wash their hands afterwards, until reminded of it by me or the nurse. Such gross carelessness or ignorance of medical and surgical cleanliness is, I am glad to say, the rare exception and not the rule. But it does exist.—I am, etc.,

M.D., D.P.H.

DIARRHOEA OR INFECTIVE ENTERITIS.

SIR,—In the article in the *Times* (Friday, December 25th) on "Immunization against illness," a brief summary

is given of the mortality from "diseases chiefly affecting children." The deaths from whooping-cough are stated to be 11,909, and that "there were also 29,759 deaths from diarrhoea or infective enteritis, of which total 27,494 were in children under 5 years of age."

When studying the etiology and symptoms of whooping-cough I came to a conclusion regarding one symptom, which I thought it well to state clearly in my lecture at the hospital in Great Ormond Street as follows:

There is one symptom to which I would direct your attention—the symptom of diarrhoea, usually occurring in hot weather, and not infrequently diagnosed as the special disease, infantile diarrhoea. It is a very serious and often fatal symptom. The only observation to be made respecting it is that the laryngeal and pulmonary symptoms usually subside when that of diarrhoea arises.

The question of interest is whether some of the high mortality attributed to "infantile diarrhoea" may not be due to whooping-cough. That was the conclusion I came to after several years' careful observation of this singular infectious malady.—I am, etc.,

ROBERT LEE.

Pwllheli, Dec. 26th, 1908.

THE COLD BATH TREATMENT OF TYPHOID.

SIR,—A few years ago very extensive and reliable statistics showed that the death-rate of enteric fever was undoubtedly reduced under the cold bath treatment by about 7 per cent. as compared with other methods. The same results appeared in England, Germany, the United States, and Australia, wherever the Brand system was employed in its essentials. As Osler said, "From 6 to 8 per cent. more lives were saved." In fact, the normal death-rate seemed to be from 6 to 10 per cent., instead of the 17 per cent. which had lasted in England from the days of Murchison.

More recently there has been substituted for the troublesome cold bath system in some places a method of cold sponging or cold packs. I wish to ask if there are any reliable statistics showing the mortality under this method.

Does cold sponging save the 7 lives in each 100, or do we drop back under it to the old 17 per cent.? Of course baths are not possible for all persons and in all places, and sponging is much less trouble, but have we any ground for believing in its power to replace the bath? No doubt it reduces temperature and relieves symptoms, as, indeed, antipyretic drugs did, but are those 7 lives in each 100 patients saved by it or are they lost? What are the actual facts? Are there any statistics which justify us in using it when baths are possible? If there are no statistics, I for one will gladly subscribe towards the cost of collecting them.—I am, etc.,

X.

EUCALINE AS A LOCAL RELAXANT.

SIR,—The action of eucaine in relaxing the sphincter ani in an operation for haemorrhoids as related by Surgeon-Major Porter in the *JOURNAL* of January 2nd (p. 17), is especially interesting to me, as I was the first publicly to draw the attention of the profession to the relaxing power of its congener, cocaine, on the rigid os in parturition (vide *Transactions of the Obstetrical Society of London*, vol. xxxvi, 1895). It will perhaps also be remembered by some, that since the reading of my paper on this question at the Edinburgh meeting, I have pleaded in the *JOURNAL* that a trial of the drug should, as suggested by Dr. Alexander Duke, be made in purely gynaecological work; but I have not so far noticed that the suggestion has been adopted. As eucaine is generally considered less toxic than cocaine, why not try the former in other cases in which relaxation of spasm is wanted—as is spasm of the glottis—another suggestion of Dr. Duke's? I have not used eucaine in rigid os, as I am quite satisfied with the action of cocaine in such cases; but it might perhaps be of service in spasm of other parts as well as in that of the sphincter ani.—I am, etc.,

JOSEPH FARRAR, M.D.

Gainsborough, Jan. 2nd.

THE FLEA AS A CARRIER OF PLAGUE.

SIR,—Has not Sir Havelock Charles, who writes on this subject in the *BRITISH MEDICAL JOURNAL* of January 9th, made a mistake in reference to the covering of the Ark?

The only covering the Ark had was gold. The coverings mentioned in his letter were of the tabernacle, and it does not appear that the coverings of the tabernacle were carried with the Ark in the incidents referred to.—I am, etc.,
January 9th. A. A. M.

SIR,—I was very interested in Sir Havelock Charles's letter, for I have long looked upon the pestilence of the Scriptures as the modern plague and, like him, thought that the Hebrew word probably covered both mice and rats. But a reverend gentleman who understands Hebrew wrote me a long letter in 1905 demonstrating that there was no warranty for it meaning anything beyond mice, and particularly field mice. Does the Hebrew word really represent both rodents? If so, the history, page 1247, vol. ii, 1900, is at once carried several centuries further back. The suggestion of the badger skins is ingenious.—I am, etc.,

Birkenhead, Jan. 11th.

GEO. S. STANFIELD.

THE RHEUMATIC ORIGIN OF SEROUS INFLAMMATIONS.

SIR,—I have read with great interest Dr. Eustace Smith's article on the above subject,¹ as well as Dr. Duker's remarks upon it.²

Dr. Duker speaks of gout and rheumatism, thus marking the identity of those troubles—a point which I have long insisted on.

I have also recorded a case of peritonitis, more chronic than that of Dr. Eustace Smith, in which salicylates cured at once, after many other things had been tried.³ I have not the least doubt that his case did get well because it was treated with salicylates; for years I have never treated appendicitis or peritonitis with anything else, and until the inflammation has gone on to suppuration, or unless it is due to tubercle, I always expect a speedy cure.

His case of endocarditis reminds me of a case of phthisis I saw a good many years ago in a patient who belonged to a very gouty family. As he was somewhat pulled down by night sweats, I gave some phosphoric acid and strychnine, and this was followed by a sharp rise of temperature with signs of arthritis in the left shoulder and the appearance of a systolic murmur at the apex of the heart. The patient died a year or two later of his lung disease, and meanwhile I saw him several times, and the murmur never disappeared. Since then I have believed that endocarditis may be produced by drugs—at least, in the gouty and rheumatic—and have investigated the point in other cases mentioned in my book.⁴

I have also cured many cases of intestinal catarrh in the same way that Dr. Duker did. The slighter and more chronic conditions of this kind are often related to cold, as Dr. Eustace Smith's case of peritonitis appeared to be, and may sometimes be completely cured by the use of warmer clothing over the abdomen and legs.

In the case of the bronchial mucous membranes, as I have pointed out in your columns,⁵ it is best to use alkali and not salicylate, but with other fibrous tissues either solvent may be used, salicylates acting best in acute cases with high temperature, alkalies best in less acute cases, where the acidity of the urine is not much raised. The minor conditions of flatulence and colic are often due to similar causes (urate precipitation by acids or cold, and lead colic is, I believe, due to urate of lead) and can be cured by solvents in exactly the same way. Similar troubles in the stomach are often called "gastralgia," "catarrh," or "gastritis," and the same in the uterus or ovaries, the prostate and bladder, or, in fact, in any fibrous tissue in the body; it is only after solvents of uric acid have been properly given and have failed that we need look for other causes of local trouble—for example, septic conditions, tubercle, or new growths. The conditions that are due to urate retention are generally worst in the hours of physiological retention (evening and night), and, as my friend, Mr. J. Guthbertson Walker of Rochdale, recently pointed out to me, the highest temperatures in appendicitis have been recorded exactly in the hours of greatest uric acid retention (9 to 10 p.m.).

¹ BRITISH MEDICAL JOURNAL, November 28th, 1908, p. 1601.

² Ibid, December 12th, 1908, p. 1778.

³ Uric Acid, edition vii, p. 425.

⁴ Loc. cit., p. 753.

⁵ BRITISH MEDICAL JOURNAL, May 9th, 1908, p. 1100.

I should be inclined to say from my experience that the cases in which appendicitis originates in mechanical conditions are small in number compared with those in which it originates in gout or rheumatism (uric acid retention), though the former may precipitate the latter.—I am, etc.,

London, W.

ALEXANDER HARRIS.

MEDICAL INSPECTION AND SCHOOL CLINICS.

SIR,—Your leading article on January 9th calls for some comments from members of the class frequently referred to in that article and in the reports which it discusses, but, as far as I can judge, very poorly represented in the deliberations of the committees that have taken up this inquiry—namely, the general practitioners, unattached to any hospital, provident or Poor-law dispensary, who, I venture to think, constitute the bulk of the profession. With the possible exception of Dr. Beaton I find no one either on the subcommittee appointed by the London Education Committee, or among the witnesses invited to give evidence before the same, who might be said to represent the class to whom I refer.

You, Sir, in your article presumably take up the cudgels on behalf of the general practitioner, but I venture to think that your conclusions go further towards undermining and ultimately shattering his present status, livelihood, and prospects than does even the report referred to.

The conclusion to which I wish specially to object is that "the State is committed to the policy of . . . giving or procuring proper care for sick or defective children of school age" (p. 103). I ask where and when has such a principle ever been conceded? The furthest we have gone in this direction will be gathered from the findings of the subcommittee; but, Sir, they do not go so far as you do, and the general public may see fit to differ from their comparatively moderate conclusions. When you tell us that all children of school age who are sick or defective must be cared for by the State we rub our eyes.

We are willing to admit (and that is a great advance, or concession if you will) that such children as the State may compel to attend its schools shall be brought there in such a condition of body and mind that the instruction gratuitously provided may be used to the best advantage. Compulsion, in other words, has discovered obligations such as were not dreamt of by the early advocates of free education; but privileges entail similar obligations, and whether these obligations are primarily binding on the compelling State (viewed as a whole) or on the privileged portion of the State (the parents and guardians) in particular is, I think, still open to discussion.

But even if the former of the two alternatives be admitted, this is not going so far as does your article when it refers to all "of school age" as being the care of the State. If age is to be the criterion, then it must be shown that school age is the period of life beyond all others in which non State-aided effort has proved inadequate, and in which State-aided effort is likely to prove most advantageous. What, then, about the clause in the report: "An education authority . . . has no power over a child during the first three critical years of its life, when the harm is usually done." Clearly, if age is the criterion, it would be more rational to attempt treatment during this "critical period," and such, no doubt, will be the next suggestion.

Space does not allow a discussion into the vistas of possibilities that the principle, as enunciated by you, opens up, but let me indicate a few; and here I avoid exaggeration, for I consider the man who exaggerates not so much a knave or a fool, as the limping advocate of a losing cause. A child comes to school insufficiently clad—it is, therefore, "a defective child" within the meaning of the principle; the State must therefore provide boots, socks, and underclothing; insufficiently fed, therefore the State must feed it (we have advanced a few steps in this direction); any illness, however caused, however trivial or serious, however protracted, must be the care of the State if the child is "of school age." This, Sir, and no less, is what can be legitimately deduced from the principle as laid down by you. We shrink from the prospect.

Some very substantial qualifications are demanded, or we, in general practice, shall feel that we have been betrayed by an ill-considered pronouncement. We shall be

¹ BRITISH MEDICAL JOURNAL, 1908, vol. ii, p. 1874.

constrained to say that we looked for confidence but behold confession, for firmness but behold a cry (of despair).—I am, etc.,

Nottingham, Jan. 19th.

A. CHRISTIE REID, M.D.

THE TREATMENT OF SCHOOL CHILDREN.

SIR,—Your correspondent, "Country Doctor" (BRITISH MEDICAL JOURNAL, December 5th, p. 1721), need not worry himself, for very shortly, as far as I can see, he and all his fellows will be as extinct as the dodo, or else in receipt of that reward the State so graciously provides for worn-out workers. For what do we see?

I suppose that my practice is, on the whole, rather above the average. I manage to net about £400 a year; of this about £50 goes for taxes and insurance, and nearly £200 for rent and education of my children, who must be sent away to boarding school, as there is no school available in the neighbourhood.

Now, nearly half my income comes from Poor-law, vaccination, and sanitary appointments. We have already got the vaccination fees docked; we are threatened with a drastic alteration in the Poor-law appointments and the loss of our sanitary work. School officers have just been appointed, and we are advised that school clinics must follow, and that they will be in the hands of the school officer, who will also in most cases be the medical officer of health, who must be in theory a whole-time man, but who, under the new arrangements, appears likely to spread himself over all the paying parts of our work, leaving us the task of making a living by going to help uneducated midwives with impecunious patients in circumstances of difficult midwifery, for whom no one will be financially responsible further than 3s. 6d.—I am, etc.,

December 15th.

ANOTHER COUNTRY PRACTITIONER.

OLD AGE PENSION MEDICAL CERTIFICATES.

SIR,—If Dr. Pearson Taylor looks at the Instructions to Pension Officers, 26, paragraph 113, he will find that the pension officer can, by visiting the person, relieve the medical man of responsibility, a duty which might very properly be left to him to discharge till provision is made to remunerate us for our labour and loss of time.—I am, etc.,

Cahir, Jan. 10th.

J. POWER, M.B.

SIR,—Dr. H. P. Taylor asks in the JOURNAL of January 9th to whom are we to look for payment for signing certificates to the effect that the claimants mentioned on the certificates are permanently incapacitated through bodily infirmity from attending at the post-office in person? I say without any hesitation that the pension officer of the district should provide the money for this purpose. It is he who brings the certificates with the request that they should be signed, and it is he, therefore, who employs the doctor. But he is a representative of the State, and, to quote from another part of the JOURNAL, the experience of the medical profession in Germany should be quite sufficient to teach the profession in this country—if, indeed, it still needs the lesson—that the State will not go out of its way to deal generously with doctors.

We do not ask for generous treatment, but we do ask for fair play and justice. Therefore the correct method to adopt is to demand payment, and if no money is forthcoming to return the certificate unsigned. I wonder at the officer having the impudence to ask such a thing from any doctor. Of course, the amount of money to be paid for each certificate would be small, and would not repay one for the time spent in visiting and examining the claimant, but it is not the £ s. d. I am thinking of, but the principle underlying it. I sincerely hope that all the medical men who have to sign these certificates will get their fees, or else return the certificates unsigned. It is simply another turn of the wheel for other things to follow: our last surprise was the Notification of Births Act, and it is high time now these things were nipped in the bud, and the Government and the public generally were made to know that we want paying for our work, and that we do not consider it *infra dig.* to receive money for work.—I am, etc.,

Liverpool, Jan. 10th.

A. STANLEY PARKINSON.

SIR,—I think Dr. Taylor should have no hesitation in charging pensioners for certificates of bodily infirmity—for

this reason, that any gratuitous services will simply give rise to one more "doctor's grievance," and as such will exist for all time; whereas if the pensioner has to pay for the certificate, the grievance—if grievance there be—is his, and will probably be remedied before next January. Feelings of compassion for these poor old people should not blind us to the utter uselessness of charity; that whatever we give benefits not the recipient, but him whose duty we usurp, in this instance the State.

On the same grounds of pity, we might easily saddle ourselves, as in part we have already, with gratuitous attendance on all sick labourers, whereby we should benefit not the labouring class, but their employers; who could and would speedily cut down wages to the reduced minimum of subsistence resulting from free medical attendance.

An instructive book to read on this subject is G. B. Shaw's *Common Sense of Municipal Trading*, wherein it is shown how a little extra pay to the corporation servant provides the outside employer with cheaper labour from the other members of the family.

The plan I have followed in regard to pension certificates is that, where I know the old people personally, I fill up the certificate gratis, but with strangers and whenever it is likely that the matter will be known to others and be talked about, I have charged an ordinary visiting fee.—I am, etc.,

Bristol, Jan. 9th.

HARRY GREY.

THE STATE REGISTRATION OF NURSES.

SIR,—My absence from home has prevented me from asking before for permission to reply to a letter from Dr. J. A. Coutts, on the State registration of nurses, which appeared in the BRITISH MEDICAL JOURNAL on December 12th, 1908. After Miss Mollett's admirable reply to that letter I need only, and briefly, correct some of the inaccurate statements made by Dr. Coutts, as I feel sure he will not desire that your readers should be misinformed on this important question. Dr. Coutts, I gather, is under the impression that only the matrons of hospitals to which a medical school is attached have either the right or the capacity to form a reliable opinion on the organization or work of nurses. In his attempt to depreciate the constitution and influence of the Matrons' Council he argues as if there were but twelve hospitals in London! The fact is that the sick require equally careful and experienced nursing in upwards of 150 hospitals in the metropolis, and it is greatly to the credit of the matrons of many of these institutions that in spite of very considerable intimidation, carried on for the last twenty years, they have associated themselves together to obtain much needed reforms and improvements in the work and education of nurses. Dr. Coutts cannot deny the Matrons' Council the credit of bringing the question of State registration into the sphere of practical politics; and, considering the determined opposition of influential persons to its policy, one must conclude that it is not quite so contemptible and ineffective a body as Dr. Coutts suggests.

The Society for the State Registration of Trained Nurses only claims to represent the 2600 nurses who have, in spite of the above opposition, associated themselves for the one definite purpose of organizing trained nursing under the authority of an Act of Parliament, although nearly every organized nurses' society in the kingdom is represented by delegation upon its executive committee.

Dr. Coutts, who tells us he is a member of the Central Hospital Council for London, evidently shares the animosity of its moving spirits to independent professional co-operation on the part of trained nurses. He writes:

Now considering that there are, according to Mrs. Bedford Fenwick, 50,000 nurses who will be entitled to registration under the present bill (I have never made any such statement), the fact that only 2,000 could be induced to join the promoting society, after more than twenty years of "strenuous work," is a sure indication that there is no strong desire on the part of the nurses themselves for registration. In the course of these years, moreover, many who joined have doubtless married or given up nursing, and it is a natural inference that a large proportion of the members of the society are not engaged in the active practice of their profession.

What are the facts? The society he criticizes was founded in 1902, and has therefore been working for six

and not "upwards of twenty years." During this time it has been joined by upwards of 2,600 matrons and nurses, who with very few exceptions are unmarried and actively engaged in the practice of their profession. Nurses who have had the courage of their opinions are fully aware that as soon as our bill becomes law thousands of "the best nurses" all over the country will eagerly avail themselves of the professional privileges which it will bestow; but, as registration will not be compulsory, those who consider it injurious to their individual interests will be under no obligation to register.

Finally, Dr. Coutts scouts the idea that coercion has been employed to prevent nurses associating together for professional purposes. I would recommend him to study the papers, pamphlets, and letters of more than one of his colleagues on the Central Hospital Council, and to read up the legal cases in connexion with the Royal British Nurses' Association. Moreover, Dr. Coutts surely knows that various hospital committees who employ large numbers of nurses have for years been publicly opposing the registration movement. Yet he desires your readers to believe that those working women dependent on such committees for their professional education, and thus for their future livelihood, would actually dare to publicly support a reform which their employers publicly oppose. This is a point in nursing economics which need not be further discussed.

But this long-debated question of the registration of nurses is not one to be decided by hospital committees. It is a question affecting the safety and well-being of the community in general, and as such must be dealt with by Parliament. Within the last few years trained nurses, or women posing as such, have been convicted and hanged for murder, proved guilty of performing illegal operations and manslaughter, of extensive frauds and of numerous thefts, have been admitted into private houses on the strength of false certificates, and have over and over again, between their periods of incarceration in gaol, gained "an honest livelihood" at the bedside of the sick, women of evil character flaunt our once honoured uniform "on the street," figure in the divorce court, and frequent the pot-house. Others, ill-trained and incompetent, cause an incalculable amount of human suffering. Year by year an increasing number of such "nurses" are exploited by innumerable nurse farms, which, at enormous profit to themselves, defraud the sick public.

At last this long-suffering public is beginning to realize the disorganization which reigns supreme in the nursing world. This is proved by the widespread support given by all classes of the community to the Matrons' Council and the Society for the State Registration of Trained Nurses in their demand that, by Act of Parliament, order should be evolved out of chaos, the public protected, and the nurses of the future given systematic education, and, when certified, placed under rules of professional discipline.—I am, etc.,

ETHEL GORDON FENWICK,

Honorary Secretary, Society for the State Registration of Trained Nurses.

20, Upper Wimpole Street, W., Jan. 8th.

SIR,—In a letter in a recent issue of your JOURNAL Mr. Sydney Holland has made a statement which may be misleading to many, and one which I think, for the credit of the nursing profession, we are entitled to have corrected. He says that "a two years' London Hospital trained nurse was good enough to be chosen to nurse His Majesty." We know it is a fact that the London Hospital is accustomed to send out to serious cases of illness nurses with this amount of experience only, charging the same fees for them as are required by the nurses who have had their full three years' training. But I put a question to him. Was this nurse sent to His Majesty, after having been seven weeks in Tredegar Home, one year ten months and one week in the wards of the hospital (less, of course, holidays and days off duty), or had she had several years' experience before she was sent to nurse this important case? As Mr. Holland has made such a statement in your columns I think we are entitled to a plain answer from him.

If, as he says, the bill for the State Registration of Nurses will in no way affect the London Hospital, why agitate against it? One can scarcely put any other inter-

pretation upon such a sentence as "Our nurses would not register," than that he is posing as the autocrat of that institution. Surely this will be a matter for each individual nurse unless undue pressure is to be brought to bear upon them?—I am, etc.,

Clapton, N.E., Jan. 11th.

W. F. HADFIELD.

EPSOM COLLEGE.

SIR,—Mr. Morris, in his recent appeal for subscribers to this most excellent institution, stated that only one-eighth of the profession gave their financial support to the college—a not very creditable state of affairs. It is, however, to the concluding remarks of the letter, where he attributes the smallness of the number of subscribers "to lack of thought or to the need of being reminded," to which I would specially refer, in the hope of finding a remedy. I would suggest the institution of an Epsom College Day—say the anniversary of the foundation—for a simultaneous appeal to every member of the profession not already on the subscription list. This could be made through the local secretaries, but sent from the chief office. I would further suggest that sums as low as 5s. should be accepted, in the hope that the regulation guinea would follow in course of time.

Under this scheme no one could plead ignorance of the obligation to support an institution which is of such great benefit to the children of the less fortunate of our body, besides giving comfort to those of our colleagues who "fall by the way."—I am, etc.,

London, W., Jan. 11th.

CHAS. W. CHAPMAN.

COLLEGE REFORM AND THE HOOD.

SIR,—The latest effort made to defend the old position of the Royal Colleges in medicine has been that by Sir John Tweedy, and it was mentioned in your leader on November 28th, 1908. Such authority and support of this endeavour to counteract my original suggestion to join the colleges with the university system demands an answer. It is to be hoped it will be the last of a long series of piecemeal counter-schemes, the weakness of this one and the others being that they would only be makeshifts. No word was sounded why this new view of a united English, Scottish, and Irish college university should be formed at all, nor even why it should supersede the progress so far accomplished in the reform of the colleges during the year. So the movement would be retrograde and undo what has been done, and at best can but serve to warn the University of London of a countervailing opportunity if she were so unloyal as to refuse access to her institution. However, to join all these countries together could give no possible common ground for a university. Besides, this formation of a totally separate, unsupported, and ridiculously insufficient and unprovided-for university, jammed together out of the college system, was entirely rejected when Sir William Jenner's committee proposed the same thing in 1889. We want something better than that in England! Let London lead in this matter with her premier colleges in a substantial and statesmanlike alliance with her own university. Then, if the Scottish and Irish colleges will permit me to say so, the same thesis I have maintained for fifteen years in this cause for the English colleges may equally apply to them.

At the last annual meeting of the Royal College of Surgeons Mr. F. W. Collingwood introduced a small reduplication of the ditto when he asked that the council should grant "some more sufficient title" to the diplomates. This is the frequently discussed theme of the title of doctor, and obviously the colleges cannot grant the degree of doctor as from a university.

But I have often pointed out the "courtesy title of doctor" is quite a different thing, and it is undoubtedly very widely acquiesced in. And it stands not only on a similar application to the custom with M.B.s, but on a fairly earned basis and nearly equal curriculum in comparison with university degrees. The council can therefore legitimately be asked to recognize the "courtesy" custom of such a title, so long as no use were made of the letters M.D., nor any claim put forward to a legal right, until the above reciprocity with the University of London has been established.

At the same meeting the council demurred to grant a hood to the Fellows and Members. At the previous

meeting, when the resolution in favour of a hood was carried, I categorically traversed their reasons for refusing it. They have never satisfactorily been able to reply to this, but blindly adhere to the formula, "Is it likely the council will alter its decision in a matter once decided?"

It is a mistake to assert that no college gives a hood, for, without counting any divinity college that may, the regulations of the Royal College of Organists and the College of Preceptors do make clear reference to the wearing of their own hoods.

It would only be just, on the part of the council, to reconsider the whole matter, and to revise their misguided decision, so as to arrive at conformity with so patent an issue. The right to wear a hood is claimed by right of custom after a completed academical course, and beyond that of a mere certificate, though the degree or licence of the colleges is often acknowledged to be on a fair and legal equality with many graduates who have taken non-honours degrees. The Council of the College itself has often acknowledged this equal talent of their members with graduates from the universities. The same equality is borne out on public grounds. The colleges have been named in the London University Act as worthy of representation with the graduates upon the senate of the University of London. Similar representation has been accorded to the colleges upon the governing bodies of several provincial universities. Other public bodies, such as the General Medical Council and the Midwives Board, treat the college representatives on an equality with those of the universities. And in the eye of the law the statutory qualification of members and graduates, apart from any special or frequently varying local requirements, must be regarded as synonymous. It will be regrettable neglect of the Fellows' and Members' interests if the council refuses to supply this outward mark of equal treatment, and, if an academical dress is to be worn at all, to fail to complete by a hood the academical costume now supposed to be worn.—I am, etc.,

Bognor, Dec. 25th, 1908.

H. ELLIOT-BLAKE.

P.S.—The reform of the colleges concerns a large body of Members and graduates. I propose to print a condensed account of the reform; and if those interested will send me their address, I would intimate to them when it was ready.

THE ST. JOHN AMBULANCE ASSOCIATION AND THE MEDICAL PROFESSION.

SIR,—In the JOURNAL of October 24th, 1908, you publish a memorandum from the Chief Secretary of the St. John Ambulance Association, pointing out how much the association is indebted to the medical profession, and what awards and distinctions are conferred upon doctors who render special service in the cause of the association. As there are exceptions to every rule, so perhaps the association may be free to make what exception it thinks fit; and in my case I may be classed amongst the exceptions. For about twenty years I have served the aims of the association as honorary lecturer and as a paid examiner. When Mayor of Durham (in 1894 and 1895) I organized and arranged a large meeting of miners, holding first-aid certificates, in the Town Hall; and a service in Durham Cathedral, when a special preacher advocated the principles of the association. At the Town Hall meeting I was assisted by the Mayor of Stockton for the time being, when we endeavoured to urge the need of instruction in first aid for miners, and we initiated a subscription for an ambulance for the Durham County Hospital, which was afterwards obtained.

Within the last six years I exerted myself in moving coalowners and others to provide an ambulance shield for the county of Durham for competition amongst teams of miners in first-aid work. The shield was obtained, and the competitions have been regularly held, and ambulance work has been considerably stimulated thereby.

About this time I discovered that a medical neighbour of mine had his name enrolled in the list of distinguished ones in the annual report book of the association; this neighbour had been a lecturer and an examiner for about half the time during which I had been connected with the association. I wrote to the secretary and pointed out to him the difference in his claim as compared with mine for

any mark or distinction. The secretary, in reply, forwarded me a form to fill in, and for me to state what distinction I should like to obtain. Needless to say, the form was not filled in, nor did I ask for any distinction. I preferred to remain an exception to the general rule.

If this is the usual way in which the St. John Ambulance Association confers distinctions on those who have worked for its advancement, then I do not think others will be much encouraged; nor do I think that the association deserves so much gratuitous support from the profession.—I am, etc.,

Durham, Jan. 12th.

EDWARD JEPSON, M.D.

PAYMENT OF DOCTORS FOR HOSPITAL INQUESTS.

SIR,—At a meeting of the honorary medical staff of the Enfield Cottage Hospital held recently, it was unanimously decided to forward an appeal to the Departmental Committee appointed by the Home Secretary, "to inquire into the law relating to coroners and coroners' inquests, and into the practice in coroners' courts."

In this appeal it was pointed out how hardly the law presses upon such medical staffs in not allowing any fees to be paid them when attending inquests on patients who have died in hospital.

Reference was also made to the invariably sympathetic attitude of coroners and juries towards medical men when their attention is drawn to this injustice, and the committee was asked to recommend that the law be altered so that we should receive the usual remuneration.

If the medical staffs of all such hospitals throughout the country would act in the same way, without delay, there can be little doubt that sufficient pressure could be brought on the committee to induce them to consider this appeal favourably, and it is with this object in view that I am asking you to publish this letter.—I am, etc.,

HOWARD DISTIN, M.B.

A Member of the Honorary Medical Staff of the Enfield Cottage Hospital.

Enfield, Jan. 12th.

GRATIS PATIENTS.

SIR,—The increasing difficulties that beset medical men in their endeavours to maintain their social position and to pay their debts are more and more enhanced by the number of people who ask for, and obtain, professional assistance without paying a fee. It would be interesting to know what is our duty as a profession in this matter.

I have attended the following cases during the last week, and they have been a great tax on my energies, and a considerable expense in journeys.

M., aged 64. Enlarged prostate with retention. A gentleman much reduced in circumstances and unable to pay a fee. Several visits at a considerable distance.

F., aged 45, widow of doctor. Receives advice as a matter of course. No fee offered or asked for.

F., aged 38, daughter of retired physician; living with father. No fee offered or asked for.

F., aged 35, daughter of deceased doctor. Earning own living; much reduced in circumstances. Unable to pay fee.

F., aged 40, an Irish lady. Much reduced; trying to get work. Unable to pay.

M., a professor of languages. Illness two years' duration has reduced him to poverty. "Asked by a patient if I would kindly look after him."

I sometimes wonder whether my brother practitioners have as many of these cases on their lists as I do, or whether my reputation consists in being "a good-natured fool." Of this I am certain: "like begets like." A guinea patient will recommend guinea patients, and a no-fee patient will send their equally unprofitable friends, with the doubtful praise: "Oh, go and consult Dr. So-and-so; he is so kind; he saw me for nothing."

With regard to attending doctors' relations, I may mention that I always do all I can to persuade the doctor looking after my family to accept a fee, but usually without success. Personally I think it would be much more satisfactory to all concerned if fees were offered and accepted in the case of doctors' relatives, except where poverty made this impossible or inexpedient.—I am, etc.,

X.M.D.

Medico-Legal.

MIDWIVES AND STILLBORN CHILDREN.

THE coroner for the city of Lincoln held an inquest on January 4th on the body of a child which had been buried as stillborn and exhumed by order of the Home Office in consequence of the receipt by the police of an anonymous letter. In the course of the inquiry, medical evidence was given by two witnesses to the effect that the child was at full term, and weighed 5 lb. 13 oz. There were no external marks or bruises on the body. The right lung was in its upper part completely dilated, and its lower part was also dilated but not entirely. The condition of the left lung was of a corresponding kind. The other organs were normal and healthy. The witnesses could not declare that the child had had a complete and separate existence, but it had evidently breathed, though not for long. There was nothing in the *post-mortem* phenomena inconsistent with the statement made by another witness, not present at the birth but in the same house, to the effect that she had heard the child scream. There was no reason why it should not have lived if it had received proper attention. It probably died for lack of attention during birth or immediately afterwards, being suffocated by being allowed to lie face downwards.

The mother of the child, it was stated, might have had a motive for not wanting the child to live.

The burial authorities accepted the body for interment on the strength of two certificates. One was to the effect that it was a certificate given by a person who was a registered midwife, that she had delivered the mother of the child herself, that that the child was stillborn, and that no medical man was in attendance. The other certificate stated that the person signing it declared that the body brought for burial was the child of certain persons mentioned, that it was born on a given day, but born dead, and that the signer of the certificate was present at the birth. The midwife in question, it was shown, had applied to a medical man for a death certificate but had been refused. She admitted when examined in court that she had not been present at the birth, and did not know whether the child was stillborn, and did not now think it was. She did not know why it had died. She did not write the certificate herself, but admitted that it was written to her dictation and signed for her with her authority. As regards the second certificate, the woman signing it admitted that she had signed it under a name which was not her own, and that she had not really been present at the birth. She did not look at the child when she arrived, as she had been told by the mother to go downstairs and make a fire, and did not know really whether it was alive or dead.

The jury brought in a verdict to the effect that the child failed to live owing to want of attention at birth, and stated that the midwife should be warned as to her future conduct, and that the other woman deserved censure for not attending to the child immediately she arrived at the house.

The coroner, during the course of the inquiry, drew attention to the importance of the issues raised. The facts revealed showed how very deficient the law was in regard to stillbirths. Nothing could be easier than for some one who wished to hush up the circumstances of a birth to get a child buried without any inquiry by any qualified or responsible person as to whether it had been born alive or dead. Questions of infantile mortality were at the present time much to the fore, and it was remarkable that those in high places who had the power to alter the law did not alter it and make death-certificate requirements more rigorous. At the conference of coroners on infantile mortality it was pointed out how defective the law was in this respect, and it was clear that persons, even as ignorant as those who had appeared before the court, could get round the present provisions. In conclusion, he warned both the women involved in the case that they might have to answer for their conduct in another court.

JUDGE'S COMMENTS ON INDUSTRIAL INSURANCE METHODS.

WE learn from the *Birmingham Daily Post* of January 7th that at Tunstall County Court on January 6th, before Judge Ruess, Edward Evans sued the Universal Insurance, Loan, and Investment Company, of Leeds, for £5 18s., the amount of a policy effected by him on the life of his uncle, Joseph Boulton. In support of the claim, it was stated that the policy was taken out on June 24, 1907, that it was issued by the company named Willett, who said there would be no difficulty about the uncle's life, and that he would pay the money if the uncle died. The uncle died in November last, and the company relied for refusal to meet the claim on misstatements as to his health. The plaintiff, in his evidence, said he did not know anything about the questions in the form of proposal, and he did not fill in the answers, but merely signed the form. He admitted that his uncle suffered from bronchitis, and had been under medical treatment for three years. His honour said they had to warrant that the man was free from disease or physical defect. In other words, he had to be a perfect man, which was not often found. Bernard James, district superintendent of the defendant company at Hanley, gave evidence as to the effecting of the insurance. The company issued industrial policies to working people. The agents did not generally fill out the forms to his knowledge. He and the judge said they could not accept that statement, because in ninety cases out of a hundred it was done. William Roberts, superintendent of the company at Tunstall, admitted that a good many of the forms were filled up by the agents; and

Arthur James Willett, who effected the insurance, admitted that he filled in the answers to the questions, but said he put each question to the plaintiff and recorded his answers.

The Judge said it was the recognized business for the agent to fill in the forms. The company could not carry on their business without it. The questions on the form which they got people to sign were most unreasonable. They put the people entirely in the company's power. All they had to do when the death occurred was to find that the deceased at one time had bronchitis, and so on, and so they would escape liability. The policy in that case ought never to have been disputed. He gave judgement for the plaintiff with costs and refused leave to appeal, remarking that one of these days he would give leave to appeal, but it must be on terms. It must be on some such terms that the company paid costs on both sides.

WORKMEN'S COMPENSATION CASES.

Compulsory Operation.

IN *Falloon v. White Star Steamship Company*, which was decided by his Honour Judge Shand at the Liverpool County Court on January 5th, the applicant, a marine fireman, had sustained injury from an accident on the ss. *Celtic* in September, 1908. Since the accident he suffered from rupture to an extent which incapacitated him from following his employment, and he received compensation down to November 27th, 1908; but on that date the employers brought the matter before the court, and alleged that if the applicant submitted to a simple and not dangerous operation the man would be completely cured in about two months. As he had declined to submit to the operation, they contended that they were no longer bound to pay him anything. His Honour adjudged the case to January 5th, by which time the man might be assumed to have recovered if he underwent the operation. On January 5th it was proved that the applicant still refused to undergo the operation.

In giving judgement, his Honour said: If there had been any danger it would have been another matter; but the medical evidence is conclusive that the operation would be simple, and, with anaesthetics, attended with little or no pain, and would have enabled the applicant to resume his employment. His continued incapacity is therefore the result of his own fault, and the payment agreed upon at 16s. 8d. a week during incapacity will be terminated as from this date. In this finding I am confirmed by certain Scottish cases and by the case of *Warneck v. Moreland* in the Court of Appeal. I must close the compensation altogether, making a note that the applicant's incapacity no longer arises from the injury, but from his refusal to undergo the operation.

COMPENSATION FOR BURNS IN AN EPILEPTIC.

H. writes: A workman has an epileptic fit while at work and falls in the fire, sustaining burns which incapacitate him for several weeks. Can he claim compensation? He states that his employer knew he was subject to fits.

* * We are of opinion that this matter can be settled only by the county court judge. It is very probable that if an employer undertakes the responsibility of employing a workman who is the subject of epilepsy he might be called upon to pay compensation if this man suffered an injury "arising out of and in the course of his employment." The knowledge that the workman was an epileptic would probably not relieve the employer of his liability. The workman ought to consult his solicitor with a view to having his claim adjudged before the court.

POOR-LAW MEDICAL OFFICER AND THE COMMISSION OF THE PEACE.

"RUSTICS" writes that he is informed that he cannot be appointed a Justice of the Peace for the county, because he is one of the Poor-law medical officers of the district in which he resides. He wishes to know if this is a general rule throughout the country.

* * Before the passing of the Local Government Act, 1894, which abolished *ex officio* guardians, a Poor-law medical officer could not be appointed a Justice of the Peace, because he was *ex officio* a member of the board of guardians, but since 1894 there has been no legal obstacle to such an appointment.

LIABILITY OF HUSBAND FOR ATTENDANCE ON WIFE.

W. F. E. writes that he was called in to attend a married woman, while on a visit in his district, by her mother. Her husband was aware of this, as he visited his wife several times during her illness. Our correspondent now finds that it will be necessary for him to take steps to recover his fees. He wishes to know who is legally responsible—the mother, who called him in, or the husband.

* * The husband is legally responsible if he lives with his wife. It might be otherwise if there is a judicial separation between them. In that case the question whether he or the wife were responsible for the doctor's fees would depend on the terms of the separation. The mother is not liable, unless she gave an undertaking in writing to be responsible for payment.

Obituary.

DOUGLAS ARGYLL ROBERTSON, M.D., F.R.C.S.E.,
LL.D., F.R.S.E.,

HONORARY SURGEON-OCULIST TO H.M. THE KING IN SCOTLAND;
CONSULTING OPHTHALMIC SURGEON TO THE ROYAL
INFIRMARY OF EDINBURGH.

INTIMATION by telegraph reached Edinburgh on Tuesday, January 5th, of the death at Gondal, India, on Sunday, January 3rd, of Dr. Argyll Robertson. On retiring from practice in 1904 he made his home at Mon Plaisir, St. Aubins, Jersey, for the sake of the milder climate. On November 30th, 1903, he left Jersey for India, via Marseilles, taking with him the Prince and Princess Tarabas, the son and daughter of the Thakur of Gondal, whose acquaintance he first made when that Indian potentate was studying medicine at the University of Edinburgh some twenty years ago. The acquaintance ripened into a warm and close friendship, and Dr. and Mrs. Argyll Robertson were entrusted with the care and education of the eldest Princess after the Thakur returned to his Indian State.

Douglas Argyll Robertson (he was always known thus, though his name is entered in the Register of Fellows of the Royal College of Surgeons as Douglas Moray Cooper Lamb Argyll Robertson) was born in Edinburgh in 1837. His father was John Argyll Robertson, M.D., F.R.C.S.E., a Lecturer in Surgery in the Extra-Academical School, who devoted himself chiefly to ophthalmic surgery, was President of his college in 1848, was followed in the President's chair by James Syme, and had two brothers—Robert and William—also Fellows of the college. Thus, Douglas Argyll Robertson was not only born into a surgical connexion but was, by his father's main bent, directed to that department of surgery in which he was afterwards to become so great an authority and ornament. He was educated at the Edinburgh Institution, at Neuwied in Germany, and at the universities of Edinburgh, St. Andrews, and Berlin. He graduated M.D. St. Andrews in 1857, and became a Fellow of the Royal College of Surgeons of Edinburgh in 1862.

From the beginning of his career he devoted himself exclusively to ophthalmic surgery. From 1867 to 1870 he was Assistant Ophthalmic Surgeon to the Edinburgh Royal Infirmary, his Senior being Dr. William Walker, and in 1870 he was appointed full Ophthalmic Surgeon along with Dr. Walker, and at the latter's retirement in 1862 he was sole Surgeon till 1897, after which he was Consulting Surgeon. While, as has already been said, it was his father's influence that first directed him to ophthalmic surgery, it must be remembered that the time was ripe for the development of this branch of surgery in Edinburgh and elsewhere, inasmuch as it was the time when the founders of modern ophthalmic surgery, Bowman and

von Graefe, were at the height of their fame, and were drawing round them the younger and more brilliant members of the medical profession from all parts of Europe. Argyll Robertson visited von Graefe's clinic at Berlin. Von Graefe died, at the age of 42, in the year 1870, the year in which his admiring pupil was made full Ophthalmic Surgeon to the Edinburgh Royal Infirmary.

Acting on a hint from his friend, Dr. (now Sir) Thomas Fraser, Argyll Robertson turned his attention to the Calabar bean as an important agent in the treatment of eye conditions. The result of his studies was embodied in a paper on the Calabar Bean as a New Ophthalmic Agent, which appeared in the *Edinburgh Medical Journal* and the *London Ophthalmic Journal* in 1863. In 1869 and 1870 he published papers in the *Edinburgh Medical Journal* On Eye Symptoms in Spinal Disease, in which he directed attention to the loss of the reaction of the pupil to light, while it still continues to act

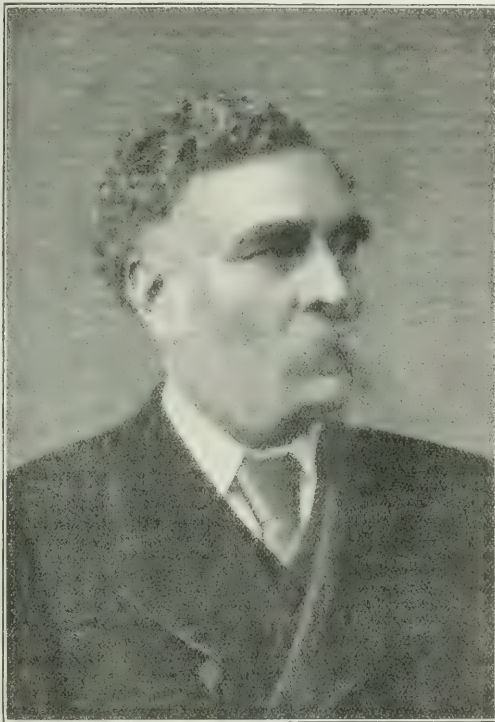
with accommodation in tabes dorsalis—a condition now generally known as the "Argyll Robertson phenomenon." In the Royal London Ophthalmic Hospital Reports for 1876 he contributed a paper on Trephining the Sclerotic: a New Operation for Glaucoma. Later, in the *Transactions of the Ophthalmological Society of the United Kingdom*, he had a paper on a Case of *Filaria Loa*, and several others.

For several years he was Lecturer on Diseases of the Eye in the University of Edinburgh. In 1886 he was elected President of the Royal College of Surgeons of Edinburgh, and in 1896 the University of Edinburgh conferred on him the honorary degree of LL.D. He was Vice-President of the Section of Ophthalmology at the British Medical Association meeting at Dublin in 1887, and also at the meeting in London in 1895, while he was President of the Section at the meeting in Edinburgh in 1898, and he had been President of the Edinburgh Branch of the British Medical Association. He was Honorary President at

the International Ophthalmic Congress in 1888 and 1899, and President of the Congress in 1894. He had been President of the Edinburgh Medico-Chirurgical Society, a President of the Ophthalmological Society of the United Kingdom, a Corresponding Fellow of the New York Academy of Medicine, an Honorary Member of the Royal Medical Society of Edinburgh, a Foreign Associate of the Society of the Practising Physicians of Prague, and an Honorary Member of the Neurological Society of New York.

For many years he was a member of the Committee of Management of the Scottish Joint Board, which grants the Triple Qualification. He was Surgeon-Oculist to Queen Victoria in Scotland, and later Surgeon-Oculist to His Majesty King Edward VII for Scotland.

Dr. Argyll Robertson was fond of the social side of life, and naturally was a member of the Aesculapian Club, the Round Table Club, the Harveian Society, and the Cap and Gown Club. On his departure from Edinburgh in



Photograph by

DOUGLAS ARGYLL ROBERTSON.

McGet, Edinburgh

1904, the last-named club entertained him at a farewell dinner attended by over one hundred members. In replying to the toast of his health he made one of the most delightful speeches he ever delivered. He dwelt on the value of golf to the busy professional man who knew how to make the wise and correct mixture of work and play. Of all recreations he thought it was most to be commended. It was to golf that he attributed much of his good health and much of his enjoyment of life. Some forty or fifty years ago he was one of the leading amateur golfers on the Scottish links. He won the gold medal of the Royal and Ancient Club in 1865, 1870, 1871, 1872, and 1873; and the silver cross in 1867 and 1871. He also attained distinction by winning the gold medal of the Honourable Company of Edinburgh Golfers in 1870, 1874, and 1876. Of all recreations, "commend me to golf" he was wont to say. Golf was his great recreation.

His portrait, painted by Sir George Reid, was presented to him by a number of his professional brethren before he retired. A replica of the portrait hangs in the Surgeons' Hall.

He was fond of shooting, and was a member of the Royal Archers the King's Body Guard for Scotland, where his fine and handsome physique and dignified bearing marked him out in all the public appearances of that select and splendid *corps d'élite* of Scotland. Nor were his recreations confined to golf, shooting, and archery. He was a keen fisher, was fond of travel, had been in India more than once, and once as far as Japan. At one time he was a keen and notable curler. He was a member of that old and select club, the "Coates Club," which has existed for more than two hundred years. Argyll Robertson's dictum was the time-honoured one of curling—"everything level on the ice." A good story of him is told in this relation, not that there were not also many other good stories of his recreations. On one occasion his side was short of a man. Argyll Robertson went into the tent where the beef and greens were being prepared and asked a waiter if he could "play a good stone." The waiter replied that he thought he could. On the ice he did so; he sent up a very good "stone," although it failed to reach the "pot-lid." "Put a little more mustard in it," shouted Robertson, as the waiter sent up his second "stone."

In 1882 Dr. Argyll Robertson married a daughter of Mr. W. M. Fraser, of Findrach and Tornavein, Aberdeenshire. Another daughter married the late Dr. James Foulis, and a third is the wife of Lord Robertson of the Appeal Court. Mrs. Argyll Robertson was a great favourite in Edinburgh social life, and great regret was expressed when she and her husband decided to move to Jersey in 1904. A wide and deep sympathy will be given to her in her great sorrow. There were no children.

Dr. Argyll Robertson's most intimate friend in the medical profession, if not even without that restriction, was the late Sir Thomas Grainger Stewart, whose death he felt very keenly.

We are indebted to Sir Anderson Critchett, Bart, for the following: For nearly forty years I enjoyed the friendship of "the dear old chief," as he was affectionately called by his students, and I know only too well that his loss will leave a void which no other personality can fill in the hearts of all who loved him. The handsome, intellectual head and splendid frame once seen could never be forgotten, for he was the ideal representative of well-balanced mental and physical vigour. The watchwords of his life were Courage, Duty, and Honour, and he possessed in a marked degree that old-world courtesy of manner which is too seldom to be found in this age of lustre, advertisement, and self-assertion. Those who were present at the International Ophthalmic Congress held in Edinburgh under his presidency in 1894 will recall the blended dignity and geniality with which he controlled the meetings, and the generous hospitality extended to one and all by his fair partner and himself. In more recent times he was asked to preside at meetings during similar congresses held at Utrecht and at Lucerne, and we, his colleagues, rejoiced to see him occupy that exalted position, for we felt that Great Britain could not possibly have a grander or more efficient representative. He was an exceptionally brilliant and successful operator, fertile in initiative and resource, possessing that firm yet gentle power of manipulation which begets such perfect confidence in the patient, while those who watched his skilful operations might well exclaim, in the words of his gifted countryman, "The hand of Douglas is his own." The only occasion, within my knowledge, on which he hesitated to face the surgical situation was when it became necessary to operate on his brother, the late Dr. Lockhart Robertson, for cataract, and I felt much honoured when he asked me to relieve him of the fraternal responsibility. It would be impossible to find a more perfect example of the *Mens sana in corpore sano*, for with his great intellectual powers and deep scientific knowledge he combined a love of manly sport. He was an excellent shot, he belonged to the Archers of the Royal Body Guard, and his wife's most cherished ornament was a necklace formed of the numerous gold medals he had won at golf. Although he could show unflinching firmness and force of character when the occasion demanded those qualities, he was never so happy as when in genial companionship he could throw off the fetters of professional responsibility and heartily join in the fun and frolic of the moment. He had a keen sense of humour, and I shall never forget the leonine roar of mingled appreciation and reproach with which he received my suggestion that it was far better to be an Argyll Robertson pupil than to have one. I sincerely hope that his sorrowing friends and former students may be able to provide some permanent memorial of this great and good man, either in connexion with Edinburgh University or with the Ophthalmological Society of the United Kingdom; but the splendid work which he has done

has already placed him in the ranks of the immortals, for he has left a reputation and a name which cannot die.

Not Heaven itself upon the past has power.

That which has been has been, and we have had our hour.

A former colleague writes: Up to the time when Argyll Robertson began practice as an ophthalmic surgeon in Edinburgh the newer methods of treatment of eye disease had received little attention in Scotland. The foundation of what is recognized as the modern ophthalmology was mainly the work of one man—v. Graefe. No doubt v. Graefe's great contemporaries, v. Helmholtz and Donders, contributed not a little to the scientific development of this branch of medicine. Yet it was v. Graefe who gave the lead and took the giant share in the enormous clinical advances which were made in the early part of the second half of last century. It was to v. Graefe that every one specially interested in ophthalmic surgery turned for guidance. Argyll Robertson was of the number who had the privilege of working under and of learning from the great pioneer himself. He was thus inspired with the confidence and enthusiasm in the teaching of v. Graefe which characterized all the pupils of that truly wonderful man. It was not long, indeed, before the knowledge and experience which Argyll Robertson had gained in Berlin began to bear fruit in Edinburgh. Possessed himself of the scientific spirit, he was able to make many important contributions to ophthalmology. Though not given to much writing, he maintained throughout his career a profound interest in his own subject, and, indeed, in medicine generally, and always kept himself fully abreast of the times. As a teacher he was successful in interesting his students. Teaching as he did a subject so full of complex physiological problems, he nevertheless carefully avoided puzzling them by the introduction of any hypothetical or even recondite matter. Clinically, he taught treatment and not pathology. As a practitioner he was able, both in private and in hospital, to render important service to a large *clientèle*. Argyll Robertson had many interests besides those of his own profession, which in a place like Edinburgh, where so many varied interests are represented, brought him a very wide circle of acquaintances. He was a connoisseur in art, and at one time one of the judges in the Royal Scottish Academy. As a golfer he was a well-known figure on the links at St. Andrews, and on more than one occasion carried off the various medals awarded by the Royal and Ancient Club. As a member of the Royal Bodyguard of Scotland—an archer, he was successful in different competitions. Argyll Robertson also took an interest in travel. At different times he visited America, Japan, and India. It was while on a visit to India to the Thakur of Gondal that he died. Although it is now some years since, owing to ill-health, he was obliged to sever for good his connexion with Edinburgh and take up his abode in Jersey, where frequent visits in spring had accustomed him to a more congenial climate, he left behind him many old colleagues and friends who now lament his death.

HUGH M. MONTGOMERIE, M.D. EDIN.,

SENIOR PHYSICIAN WEST CORNWALL INFIRMARY.

We regret to have to record the death of Dr. Hugh Mayer Montgomerie, of Penzance, on December 12th, 1908. For the greater part of the week he had been moving about the town as usual, and very few indeed knew of his sudden illness. He was present on the preceding Wednesday at the opening of St. John's Church House, and the same evening he attended a concert at St. John's Hall on behalf of the West Cornwall Infirmary. He had, however, contracted a chill, and exposure to the weather aggravated his condition. Dr. Symons attended him, but the case rapidly took a serious turn, angina pectoris being the cause of death.

Dr. Hugh Montgomerie was the only child of Dr. J. B. Montgomerie, an old Penzance practitioner, and was born on July 31st, 1864.

He was educated at Winchester School and Edinburgh University, where he took the degree of M.D. He also spent some time abroad, in Paris, Vienna, and Berlin, studying throat and ear diseases, in which he specialized. He practised as a physician, and among other good qualities, was esteemed for his great professional kindness

to the poor. Dr. Montgomerie joined the West Cornwall Infirmary as Honorary Physician about 1887, and was sole physician there for nineteen years. Since the rebuilding of the institution he had been senior of the medical staff. In the Thirties, Dr. Montgomerie's grandfather—after whom the present deceased spelt his name with "ie"—was Physician at the Infirmary, and since that time the family have worthily maintained their association with this good work. Dr. Montgomerie was Secretary of the Penzance Antiquarian Society for three years down to 1900, and in the following year he became its President. In 1898 he was President of the South-Western Branch of the British Medical Association. At one time "Dr. Hugh" was a devotee of bathing, and in his college days played football. His father, Dr. J. B. Montgomerie, who survives him, was President of the South-Western Branch in 1877, and he and Mrs. Montgomerie have the sincere sympathy of a large circle of friends in the loss of their only child.

The funeral took place on December 17th, 1908, at Gulval churchyard, and was very largely attended. The Mayor of Penzance and many leading residents were present. The medical profession was represented by the following: Drs. Miller, Chas. Bramwell, Kenneth Bennett, Edwards, R. Lawrey, R. D. Boase, W. R. Wilson, Basil Page, Collier, Russell Phillips, and Chetwood-Aiken (Penzance), Greenwood-Penny (Marazion), Best (St. Ives), M. R. Taylor (Helston), representing the British Medical Association; Hemstead (Marazion), Jago (St. Buryan), Richmond (St. Just), R. G. Nesbitt (St. Just), Backhouse (St. Ives), and J. M. Nicholls (St. Ives). The floral tributes were very numerous.

SURGEON-GENERAL JOHN EDWARD TUSON, M.D., who died at Eastbourne on December 24th, 1908, at the age of 79, received his medical education at St. George's and Middlesex Hospitals, and took the diploma of M.R.C.S. in 1851. In 1862 he graduated M.D. St. And., and became a Fellow of the Royal College of Surgeons of England in the following year. He entered the Bengal Medical Department as an Assistant Surgeon, June 17th, 1853, and became Surgeon-General September 8th, 1884, in which year he retired from the service. He served in the campaigns on the North-West Frontier of India in 1855 and 1860, being present with the expedition into the Miranzai Valley and mentioned in dispatches; with the Mahsud Waziri expedition in 1860, when he was again mentioned in dispatches, and received a medal with clasp; and in the Indian Mutiny campaign in 1857-8, including the disarming of the Mooltan population, the operations in Rohilund, and the action of Nugeena; for these services also he was mentioned in dispatches, received the thanks of the Commander-in-Chief, and granted a medal. He was the author of an essay on the hypodermic injection of neutral sulphate of quinine in intermittent fever.

The Services.

TERRITORIAL FORCE.

REMUNERATION FOR MEDICAL EXAMINATION OF RECRUITS. WE have received a letter from a Territorial medical officer protesting against the smallness of the fee (£s.) offered for the examination of a recruit. We agree that this is not adequate remuneration, and believe that strong representations have been made to the authorities without effect. The responsibility for the examination of recruits rests with the county associations, and to these bodies the Army Council forwards ls. for each recruit attested. This, we believe, is offered to the medical officer who carries out the examination, and in many cases accepted, but when no medical man can be found who is willing to accept the shilling the county association has to provide the necessary amount. We do not think that 2s. 6d. per recruit would be at all unreasonable, assuming that the examination is conducted according to the regulations.

R.A.M.C. TERRITORIAL.

A. A. M. writes: I was surgeon-captain in the artillery volunteers. Last year I elected to remain with the artillery in the Territorial Force as a surgeon-captain. I am now gazetted as captain in the R.A.M.C. attached to the artillery. What is my designation and what uniform am I to wear? I am unable to find any definite instructions on these points offered by the War Office.

* * The designation is captain, R.A.M.C. (T.F.). the uniform that of the R.A.M.C. (T.). The only compulsory uniform is the service dress.

Contract Practice.

FRIENDLY SOCIETIES AND MEDICAL CONTRACT PRACTICE.

SIR,—The course adopted by the Denbigh and Flint Division is precisely on the lines advocated by Dr. F. W. Style in the *JOURNAL* of January 2nd, p. 68, and a recital of the mode of procedure may interest those of your readers who are engaged in contract practice work.

A subcommittee was appointed to draw up a code of rules for the regulation of contract practice as applied to sick and benefit societies within the area of the Division. Invitations to attend a meeting for the consideration of the proposed rules were sent to every medical practitioner resident within the area.

The meeting was well attended and after careful deliberation the rules were adopted. A resolution to the following effect was also passed:

That in cases where a medical practitioner serves notice on a friendly society, insisting that he declines to undertake attendance upon the members of such society, except in accordance with the contract rules adopted by the Division, no other practitioner within the area of the Division shall apply for or accept the same.

Copies of the rules and of the foregoing resolution, together with a request that the recipient would sign an "undertaking" not to accept any contract practice appointment except in accordance with these rules, were sent to every medical man practising within the Division area.

The results have been highly satisfactory, and several instances have come to my knowledge where both members and non-members of the British Medical Association have declined to continue to hold certain appointments except on the terms and conditions indicated, and the unwavering loyalty of their *confrères* has secured to them the retention of the appointments on their own terms.—I am, etc.,

E. D. EVANS,

Wrexham. Honorary Secretary, Denbigh and Flint Division.

SIR,—Your correspondent Dr. F. W. Style, in your issue of January 2nd, complains that nothing is done to remedy the grievance of remuneration paid to medical men by friendly societies.

In Newcastle-upon-Tyne and in other places the organization of the British Medical Association is effecting a change, and has so far been successful in its procedure, which, if continued, will gradually eliminate the features objected to.

If Dr. Style cares to communicate with me, I shall be glad to furnish him with some information which may be of assistance to him.—I am, etc.,

GARFORTH DRURY,

Secretary, Northumberland Committee, North of England

Branch, British Medical Association,
55, Pilgrim Street, Newcastle-upon-Tyne, Jan. 7th.

M.D. writes: The statistics given in Dr. F. W. Style's letter are interesting and might well be taken to heart by the bulk of the profession, or at least that portion of it which must needs take contract practice to make both ends meet. I cannot help thinking that your correspondent is just a trifle too optimistic as to results of his proposed circular. As long as the "powers that be" are either unable or unwilling to inflict adequate penalties, which shall touch the pockets of delinquents, so long will the friendly societies continue to prey on us. Some twelve years ago, when practising further south, I held a friendly society appointment in conjunction with a neighbouring practitioner. We divided the club about evenly and got 5s. a head. The club, thinking no doubt to play off one doctor against the other, decided to offer a lump sum for attendance on the whole club. This lump sum worked out at a fraction over 5s. a head. I of course refused to have anything to say to these terms; but my worthy colleague ponched the whole without even a protest—as I ascertained from the secretary. Would any working man fall so low? I think not. This class of individual must be curbed through his pocket, and until that happy day arrives I should advise Dr. Style to sit tight on any appointments he may hold.

THE Danish Paediatric Society which was founded last November held its first meeting on December 2nd, when Dr. S. Monrad, Physician-in-Chief to the Queen Louise Children's Hospital, was elected President. Professor Hirschsprung was elected a honorary member.

Public Health

AND

POOR-LAW MEDICAL SERVICES.

NUISANCE FROM FLIES.

THE Public Health Committee of the London County Council has issued a further report by Dr. Hamer, founded on observations made during the summer of 1908, on the extent to which a nuisance from flies is produced in London by accumulations of offensive matter. The observations were conducted on lines similar to those followed in the summer of 1907, the results of which have already been noted in the *JOURNAL* (May 9th, 1908, pp. 1123 and 1135). In 1908, 141 places of observation surrounding nine sets of premises were chosen. These centres consisted of four depots where stable manure or other refuse was manipulated, two stable premises, a cowshed, a glue and size manufacturer's premises, and a jam factory. The places of observation were generally kitchens or living rooms occupied by poor people; in these flypapers were hung, the flies caught were counted, and the species identified. The investigations confirm the conclusion that collections of horse manure play a prominent part in the propagation of flies. Commenting on this fact, Sir Shirley Murphy remarks: "The need of a power regulating the sanitary condition of stables; and, further, of strict exercise of the powers for requiring the removal of manure at sufficiently frequent intervals, and upon due precautions being taken with regard to such removal, has been long felt, but this need has been greatly emphasized now that it has become realized that the fly nuisance of cities is to a large extent due to neglected conditions at stable premises." Dr. Hamer discusses the possibility that there may be a causal relationship between the prevalence of flies and summer diarrhoea; but upon this question no definite conclusion appears to be warranted.

We have also received a strongly-worded pamphlet by Dr. H. E. Armstrong, medical officer of Newcastle-upon-Tyne, on the dangers of flies as carriers of disease. He suggests that the Local Government Board should be asked to hold an inquiry into the subject. From Dr. Hamer's report it appears that Dr. Copeman, Medical Inspector of the Local Government Board, is engaged upon an investigation of this nature.

BORIC ACID IN MILK.

ON December 31st two summonses issued at the instance of the corporation were heard in the Rotherham Borough Court against milk vendors for selling milk containing boric acid. In the first case the analyst's certificate showed that the milk contained a compound in the proportion of 15 grains of boric acid to the gallon. The summons was for having sold milk not of the nature, substance, and quality demanded by the purchaser, and the Town Clerk contended that boric compounds were not natural constituents of the milk being added as preservatives. Dr. A. Robinson, M.O.H., gave evidence to the effect that boric acid was injurious to health, especially in the case of children and invalids. Taken in any quantity it would cause indigestion, and would after a time produce a rash; in his opinion boric acid was only used in milk which came from dirty dairies, or when the utensils conveying the milk were unclean. The bench imposed a fine of £3. In the second case a dairy company was summoned on similar grounds. The analyst had found crystallized boric acid in the proportion equal to 19 grains per gallon. Dr. Robinson, in cross-examination, said that, although the Board of Agriculture had laid down a standard as to the quantity of milk fat in milk, it had not laid down a standard for preservatives. For the defence it was contended that no case had been made out; the milk was skim milk, and would not be used for invalids and babies; the preservative found in the milk was not present in an injurious quantity; it was suggested that a smaller proportion than 40 grains per gallon was not injurious. The bench imposed a fine of 40s. and costs in this case. The probability of an appeal was intimated.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE following degrees were conferred on December 17th, 1908:

M.B., B.C.—G. G. Collet, Trin.

M.A.—A. J. Cardew, Clare.

Mr. J. S. Gardiner, M.A., Caius College, has been appointed University Lecturer in Zoology; and Mr. H. B. Fantham, D.Sc. (Lond.), Christ's College, Assistant to the Professor of Biology.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved at the examinations indicated:

PHARMACY Part I.—*Biochemistry*: K. L. Hart, Davis. *Medicinal Materia and Pharmacy*: W. E. North-Smith, C. J. H. Riches, H. E. Rose.
PHARMACY Part II.—*Anatomy*: R. S. de C. Bennett, J. J. Benyon, H. E. B. Fainalson, A. J. Fainalson, G. F. Malden, H. Rowntree. *Physiology*: R. S. de C. Bennett, J. J. Benyon, A. J. Frädersdorf, C. A. Mortlock-Brown, H. Rowntree.

An Address

ON

MYOMA AND PREGNANCY.

DELIVERED BEFORE THE OBSTETRICAL SECTION OF THE ROYAL
ACADEMY OF MEDICINE, IRELAND.

BY SIR WILLIAM SMYLY, M.D.,

CONSULTING GYNAECOLOGIST TO THE ROTUNDA HOSPITAL, DUBLIN.

My object in this communication is to record a case in which child bearing was complicated by a myoma of the uterus; but I shall first give a short account of the subject generally.

We are all familiar with myomata in pregnant women who are approaching the end of the child-bearing period, which as a rule cause little or no trouble, and are soon forgotten. The few, however, which do cause trouble are noted and published, so that to collect and tabulate the cases which appear from time to time in medical journals would give an altogether erroneous impression of the seriousness of this complication. On the other hand, it must not be forgotten that occasionally serious complications do occur in these cases which tax the skill and resourcefulness of the attendant to the utmost.

We may consider the subject from two aspects: First, the effect of pregnancy on the tumours; and, secondly, the effect of the tumours upon the course of pregnancy, child birth, and the puerperium.

I.

The occurrence of pregnancy in a myomatous uterus causes a change in the position, size, shape, and consistence of the tumours. As the uterus enlarges and rises out of the pelvis, so do the tumours attached to its body. Even those which are attached to the lower segment are drawn upwards towards the end of pregnancy or even during labour, and only cervical tumours or those which grow into the cellular tissue at the sides of the uterus maintain their position or are driven downwards during labour, and are therefore the most likely to cause trouble. As the uterus grows larger and softer so do the tumours attached to it. This change in size and consistence is due to development of their tissues or oedema, the latter condition sometimes causing a rapid enlargement out of proportion to the enlargement of the uterus. At the same time they lose their globular shape, becoming flattened out as the uterus expands, and are more difficult to differentiate from the normal tissues. Necrotic changes are rare during pregnancy, and are generally caused by twisting of the pedicle, but are more common during the puerperium, and may then result in sloughing supuration and general sepsis.

In the puerperium, as the uterus involutes the tumours return to their original condition, and in a few cases have completely disappeared.

II.

If we now turn to the effects of myomatous tumours upon the course of pregnancy, childbirth, and the puerperium, we find that during pregnancy they rarely give rise to serious complications, but that cases have been recorded in considerable numbers in which they caused haemorrhages, abortions, placenta praevia, ectopic pregnancy, intestinal obstruction, ischuria and obstruction of the ureters, with consequent hydronephrosis; twisting of the pedicle with peritonitis; and serious pressure symptoms from the great size of the growth, or from retroversion and impaction of the uterus in the pelvis.

A fact of considerable importance in connexion with pregnancy complicated by myomata is that not infrequently there is great difficulty in forming a correct diagnosis; and as a matter of fact, a large number of uteri have actually been removed in total ignorance of the complicating pregnancy. These mistakes are partly due to the fact that many of the symptoms are common to both conditions, such as enlargement of the uterus, blueing of the vagina and the uterine souffle. Haemorrhage is a common occurrence in pregnancy complicated by myomata, especially in the early months, and all operators should therefore lay to heart the warning given by Olshausen

"that a rapid enlargement of a myomatous uterus accompanied by haemorrhages should always excite a suspicion of pregnancy." In these early cases, too, when the uterus is completely imbedded in tumours, the peculiar softening so suggestive of its condition may be difficult or even impossible to detect.

During labour tumours of the body of the uterus seldom give rise to trouble, and are often overlooked or mistaken for fetal parts, from which, however, with a little care they can be easily distinguished, because they never change their position and cannot be pressed back into the uterine cavity. Not infrequently, however, they cause inertia, and when situated in the lower segment or cervix the latter dilates with difficulty, so that labour may be prolonged over several days. But, as a rule, Nature overcomes the difficulty by drawing up the tumour, or it is pushed down and flattened out by the presenting part. But large tumours adherent in the pouch of Douglas, or which have developed into the subserous areolar tissue, may cause serious and even insuperable obstacles to delivery. Malpresentations are frequent in these cases, and are due either to deformity of the uterine cavity, or to the presenting part being unable to enter the pelvic brim. Placenta praevia occurs with such relative frequency as almost to prove the existence of cause and effect; and the most probable explanation is that the mucous membrane covering the tumour affords such an unfavourable surface that the formation of the placenta is not limited to the serotina, but involves a much wider area, including the reflexa, and therefore more likely to extend into the lower segment.

In the third stage myomata cause trouble much more frequently than in either of the other stages of labour. Imperfect contraction and retraction of the muscular tissue, or retention in whole or in part of the placenta, are frequent causes of haemorrhage. Adhesion of the placenta when implanted upon the tumour itself is especially serious, because the membrane covering submucous tumours is generally so thin that instead of imbedding itself in the decidua, the ovum passes completely through it, and the placenta becomes so intimately connected with the tissue of the tumour that separation may be found difficult, or even impossible; and cases of this kind have been reported in which fatal haemorrhage has followed removal of the placenta, and others in which extirpation of the uterus has proved the only possible way out of the difficulty. Inversion of the uterus due to fundal attachment of the tumour is a well-known complication.

More important because more frequent than any other complication is haemorrhage after labour is completed. It may occur at any time during the puerperium, so that it is difficult to say when a patient with a myomatous uterus is safe. Probably the most frequent and peculiar kind of haemorrhage is that described by Barnes as *paulo-post-partum* haemorrhage. I recorded a fatal case of this kind in the Rotunda Hospital Reports. The patient was delivered in the evening after a normal labour, at midnight there was a violent haemorrhage which was controlled; at six in the morning, a second and fatal haemorrhage occurred; a submucous myoma was found at the *post-mortem* examination. Septic complications due to retention of lochia, portions of the placenta or membranes, or to sloughing and supuration of the tumours themselves are by no means infrequent.

The treatment of these cases, as is evident from what I have already stated, is always a matter of importance and often of grave anxiety to the attendant.

During pregnancy interference is seldom called for, although tumours have been successfully removed without interrupting gestation, but excepting those rare cases in which extreme pressure symptoms, twisting of the pedicle, or sloughing of the tumour render operative interference necessary, it is better to postpone such measures until full term. The induction of abortion, frequently resorted to in former times, has now been altogether abandoned.

At term and during labour those tumours which cause no obstruction or other serious trouble need no special treatment. Polypi should be removed and cervical myomata enucleated, but tumours which grow into the cellular tissue can seldom be removed per vaginam without great danger.

When the tumour is so large and in such a position as

to cause serious obstruction to the passage of the child, we have a number of methods of delivery to select from, and the best choice is often very difficult to determine.

We know by experience that in such cases Nature unassisted will often succeed in overcoming an obstacle which seemed insuperable. This was well illustrated by a remarkable case reported to us by Dr. Kidd, in which a large tumour appeared to fill the pelvic cavity and to offer an insuperable obstacle to delivery. He performed a successful Caesarean section, yet in a subsequent confinement this same woman delivered herself spontaneously. We should therefore make it a rule to wait as long as spontaneous delivery is possible, but not so long as to render operative interference hopeless.

Efforts to drag the fetus past the obstruction by forceps version and extraction, or after perforation, are liable to cause irreparable damage, and are in general to be condemned.

As regards abdominal operation, Caesarean section alone is seldom sufficient. It is more generally advisable to combine it with enucleation of the tumours or extirpation of the uterus. As a rule, panhysterectomy has proved more successful than the supravaginal operation, because, after a prolonged labour, the uterus is often more or less septic, and the retention of a septic stump is not only in itself a source of danger, but its complete removal affords better drainage. Another reason for the complete operation is that the tumours which cause obstruction are always situated so low in the uterus that it is difficult to obtain a stump altogether free from disease.

When the fetus is known to be dead it is better to remove the uterus unopened.

After delivery it is scarcely necessary to point out that *post-partum* haemorrhage must be looked for, and free drainage of discharges secured. And in no other class of cases is complete asepsis from start to finish a more absolute necessity.

I shall now proceed to relate the case:

In September, 1903, I was consulted by a lady, who told me that she had been married eight years, but had no children. She complained of severe neuralgic pains in her breasts, especially at the intermenstrual periods, when they became swollen and painful. Menstruation was regular but very profuse, with expulsion of clots, and lasted a full week generally, but not always accompanied by pain.

The uterus was found to be enlarged, but no tumour was discovered. I diagnosed the case and treated it as chronic metritis.

A year afterwards, September, 1904, she became pregnant and the pregnancy pursued a normal course. Labour commenced on July 5th, 1905, the breech presented and pains were weak and inefficient. On the evening of the fourth day the membranes ruptured and I found the child lying obliquely with the breech in the right iliac fossa. I then made my first internal examination and found the os three-quarters dilated and a head presenting. To the left of the cervix I also found to my surprise a tumour as large as my fist and which I could not push out of the pelvic brim. Having anaesthetized the patient I introduced my hand into the uterus and brought down a foot without difficulty, but extraction proved unusually tedious and the child died before it was completed. Ultimately, however, I succeeded in delivering the dead child without serious injury to the maternal soft parts. After the expulsion of the placenta the uterus contracted well and for some time there was no haemorrhage; but after a time the organ relaxed and enlarged and the discharge became more profuse. The uterus was rubbed and pressed, some clots expelled, and ergot administered with good effect; but after a time the haemorrhage recurred and I washed out the uterus with hot water. The benefit was only temporary, but at no time could the loss be called a flooding; there was no injury to the cervix nor was she at any time bad enough to suggest the advisability of plugging, but still her condition was so unsatisfactory that it was between two and three hours from the birth of the child before we thought it safe to leave the house.

On the fourth day after delivery the lochia became fetid and there was a rise of temperature, which on the following evening rose to 103 F., and the vagina was washed out with creolin lotion.

The following morning she was no better, so I douched the uterus with 1 per cent. formalin solution, after which the temperature sank to normal and remained so for two days. After that it rose again and on the eighth day it was so high and her general condition so unsatisfactory that I asked for a consultation, and Sir Arthur Macan saw her with me in the evening.

Having discussed the advisability of exploring the uterus to see if anything could have been left behind we finally decided to try the intrauterine douche again. Next day her temperature was normal and she gave me no further cause for anxiety.

The numerous complications in this confinement were no doubt all due to the presence of the tumour. The

tedious labour was due to the difficulty in expanding the lower uterine segment. The change in the fetal lie was caused partly by the inability of the presenting part to enter the pelvic brim, and partly to the unequal expansion of the lower segment of the uterus, the left side remaining rigid, whilst the right, becoming overdistended and thinned, would yield to the pressure of the presenting part, which consequently became displaced in that direction.

The hand presentation was due to the lie of the fetus, and its death was caused by obstruction to its delivery and pressure on the cord.

Post-partum haemorrhage is, as I have already pointed out, a common occurrence in myomatous uteri, but is not quite so easy to understand in this case, where the body of the uterus was healthy, and I am inclined to think that it was due to the tumour acting as a ball valve, closing the os and obstructing the escape of discharge, which consequently accumulated in, and by distending the uterus acted in antagonism to its retraction. But whether this was the cause of the haemorrhage or not, it certainly must have been the cause of the retention and putrefaction of the lochia and the septic fever which accompanied it. I had therefore little difficulty in deciding what advice I should give when some months later this lady consulted me again. I explained to her that the tumour, which had then shrunk to about the size of a billiard ball, was at that time doing her no harm, and that unless she again became pregnant would probably cause her no inconvenience. But that in future pregnancies, unless it had been previously removed, she would probably encounter similar dangers to those which she had already passed through.

After some consideration she decided to submit to operation, and accordingly on October 28th, 1905, I opened her abdomen and found the tumour within the left broad ligament, which I incised on its anterior aspect, and enucleated the growth from the cellular tissue and uterine wall into which it was imbedded by about one-third of its bulk. Having closed the cavity with fine silk sutures, I closed the abdomen, and she made a good recovery.

In 1906 she again became pregnant, went to full term, and on April 17th, 1907, delivered herself of a fully-developed living child. Her labour was normal, and excepting a mammary abscess her convalescence was quite uneventful.

A Clinical Lecture

ON

ADENOMYOMA OF THE UTERUS.

DELIVERED AT THE MIDDLESEX HOSPITAL.

By J. BLAND-SUTTON, F.R.C.S.,

SURGEON TO THE HOSPITAL.

ALTHOUGH the pathological condition of the uterus known as adenomyoma was carefully described in a monograph by Professor von Recklinghausen in 1896, and two cases were reported by Cullen in the same year, and many since that date, this disease has not received in Great Britain the adequate attention its importance demands. Cases have been described by Frank E. Taylor, S. Cameron, Tate, Leitch, Uthbert Lockyer, and myself. One of the reasons, and perhaps the chief, which militates against the recognition of adenomyoma is the necessity for a microscopic examination of the tissue, and as this remarkable change in the endometrium is often associated with fibroids, and the symptoms caused by the disease are identical with those set up by submucous fibroids, the nature of the trouble in the uterus is often overlooked. Nevertheless, the tissue changes in the uterus in adenomyoma, in well-marked examples of the disease, are so characteristic that they cannot be mistaken, and the naked-eye features, though they cannot be relied on without the confirmation afforded by a microscopic examination, are often sufficiently marked to lead the surgeon to suspect the presence of this adenomyomatous change in the endometrium.

The specimen which I use to-day to illustrate my lecture is the best example out of fifteen which have come under my observation in the last five years. The

uterus was removed by the subtotal operation from a spinster, 43 years of age, on account of rebellious menorrhagia; the organ completely filled the pelvis, and at the time of the operation measured 40 cm. (16 in.) in circumference. When the uterus was exposed through the abdominal incision in the course of the operation (which was undertaken on the impression that the patient's trouble was due to a large submucous fibroid), I was struck by the peculiar vivid redness of the uterus, and the crown of the organ presented a number of short, ragged villous tufts like soft adhesions. This caused me to remark that I had doubts concerning the nature of the tumour. As soon as the operation was completed I divided the uterus in such a way as to expose the uterine cavity, and on inspecting the cut surface at once realized that this gross enlargement of the uterus depended on changes in the endometrium, and that in all probability we had in hand an exceedingly severe example of diffuse adenomyoma. The parts were carefully hardened, and in due course I made sections through the whole organ.

On looking at the parts, as represented in Fig. 1, it is seen that the walls of the uterus are thickened in a fairly uniform manner, but when the cut surface is critically examined the new material can be distinguished from the strictly parietal or muscular tissue of the uterus; and although it lacks a capsule there is, nevertheless, such a marked distinction between the adventitious and the true tissue of the uterus that the naked eye can fairly well define its limits, and it is possible to trace the line of the endometrium over that portion of the new tissue where it bulges towards the cavity of the uterus. The cut surface of the adventitious tissue differs from that represented by the common hard fibroid in another particular, for instead of forming the well-known vortex arrangement, the muscular tissue is disposed in an irregular manner, and on the freshly-cut surface it produces a pattern not unlike that of the fabric known as "watered silk." When this tissue is examined microscopically, the harder bundles, as already mentioned, consist of unstriated muscle tissue and connective tissue, and the spaces enclosed by these bundles are filled with the peculiar stroma characteristic of the endometrium, and contain gland tubules lined with columnar epithelium of the same type as that which lines the normal tubular glands of the uterus. When isolated sections are examined, the glandular elements appear as islands, but when a consecutive series is examined it is easy to observe that the various glandular tracts are continuous with each other, and, if the investigation involves a sufficiently large tract of tissue, it is possible to follow up the gland tracts until they become continuous with the normal endometrium.

The example just described shows very well the condi-

tions produced when the endometrium is uniformly involved in the adenomyomatous change. In some cases the disease may be restricted to one wall and produce a local enlargement of the uterus. The specimen represented in Fig. 2 illustrates this very well. Here the adventitious mass is formed in the posterior wall of the uterus, and a small nodule which looks like a fibroid projects from the subserous surface of the uterus, and another is embedded in the wall itself. To the naked eye these may be easily mistaken for ordinary hard fibroids, and they often are; but it occasionally happens when such isolated nodules are examined microscopically, they contain the peculiar tissue characteristic of "diffuse adenomyoma," and they are, as it were, the terminal buds of out-runners from the endometrium which have crept through the muscular wall of the uterus, and blossomed under its serous capsule. Pedunculated processes of this kind are more common immediately in the neighbourhood of the cornua of the uterus, and this is explained by the anatomical fact that the walls of the uterus in this situation are thinner

than elsewhere because they are funnelled by the terminal section of the Fallopian tubes. In reference to this, it may be mentioned that the adenomyomatous tissue in the specimen represented in Fig. 1 had involved the endometrium in the left uterine cornu, and had also implicated the mucous membrane of the tube.

The localized patch of adenomyoma which occupied the uterus, represented in Fig. 2, is interesting in another way.

When the specimen was first removed, and the thick mass divided, we could at once discern, even with the naked eye, that the gland spaces in the mass were dilated and filled with colloid material. In some specimens the cystic spaces measure a centimetre or more in diameter.

A sufficient number of uteri affected with diffuse adenomyoma has been examined to show that there is a large variation in the proportions of the two tissues concerned in the pathological formation—namely, the adenoid or glandular element and the myomatous tissue. Judging from my own observations, when the myomatous tissue is in excess, the uterus will be but slightly enlarged and hard, sometimes very hard. In this condition the surgeon will be apt to regard the change as being due to fibrosis unless a very painstaking microscopic examination of the uterine wall is made throughout its whole thickness, in

order to determine the presence of isolated gland spaces, which in some of these hard specimens lack the usual stroma. I am quite certain that some specimens classed as examples of "fibrosis uteri," a diseased condition of the uterus which I described in this JOURNAL in 1899, were really examples of diffuse adenomyoma. When the glandular elements predominate the uterus is much larger than usual, and the fundus of the organ will sometimes



Fig. 1.—Uterus in section, showing diffuse adenomyomatous disease. The polypoid process contains glandular elements. From a spinster 43 years of age.



Fig. 2.—Uterus in section, showing a localized patch of adenomyoma in the posterior wall. From a spinster 32 years of age. The gland spaces were cystic, and filled with gelatinous material. (From the author's work on Tumours.)

rise high in the hypogastrium, and then the nature of the disease is scarcely likely to be overlooked when the uterus is removed, unless it be associated with submucous or interstitial fibroids.

In some specimens the glandular tissue may so preponderate over the myomatous that a tumour-like mass is produced with tubular spaces lined with a double row of epithelium; such are sometimes erroneously described as adeno-carcinoma. The naked-eye characters of the organ in such a case further resemble cancer in the fact that polypoid processes project from the free surface of the endometrium into the uterine cavity.

The early investigators of adenomyomatous disease of the uterus, especially Recklinghausen, held the opinion very strongly that these glandular formations could be explained from an embryological standpoint. After an elaborate research, Recklinghausen expressed the opinion that uterine adenomyomata, and especially those about the tubal angle of the uterus, were mainly derived from vestiges of the Wolffian (mesonephritic) and the Müllerian ducts. Cullen has studied the disease with great thoroughness, and has worked out more than seventy specimens, a larger amount of material than has fallen to the lot of any other investigator; he believes that the epithelial elements are solely derived from the normal glands of the endometrium. Cullen somewhat picturesquely describes the changes in this way:

In cases of adenomyoma of the uterus we usually find a diffuse myomatous thickening of the uterine muscle. This thickening may be confined to the inner layers of the anterior, posterior, or lateral walls, but in other cases the myomatous tissue completely encircles the uterine cavity. This myomatous tissue contains large or small chinks and into these chinks the normal uterine mucosa flows. If the chinks are small, there is only room for isolated glands, and where the spaces are of goodly size, large masses of mucosa flow into and fill them. We accordingly have a diffuse myomatous growth with normal mucosa flowing in all directions through it. The mucosa lining the uterine cavity is normal.

There is another side of the question. Now that this disease is more widely recognized, several observers have drawn attention to the frequency with which inflammatory complications of the Fallopian tubes are associated with diffuse adenomyoma of the uterus. It is true that tubal inflammations are fairly common accompaniments of the ordinary forms of fibroids, especially the submucous variety, but the inflammatory complications of diffuse adenomyoma are not only very frequent, but they are by no means confined to the tubal tissues, they involve the peritoneal investment of the uterus also. This is a

matter of great interest, because it may ultimately come to pass that bacteriologists will prove that the tissue changes which lead to fibrosis uteri and diffuse adenomyoma have a microbic origin. Some important evidence in relation to this view of the disease is afforded by the observations of Archambault and Pearce in New York, and by Grünbaum in Berlin. These observers have recorded cases in which adeno-

myomatous uteri have become infected with tubercle. In both cases the women had a tuberculous focus in the lung, and in Grünbaum's patient a few tubercle bacilli were found in sections prepared from the adenomatous tissue in the uterus. Although tuberculous endometritis is rare, the clinical symptoms which accompany it so closely simulate a degenerating submucous fibroid or a mass of adenomyoma that it is extremely likely to be overlooked. In 1904 I removed the uterus from a spinster 46 years of age,

which was enlarged, and its fundus appeared as a rounded body in the hypogastrium. The patient had become profoundly anaemic in consequence of very profuse and frequently recurring uterine bleeding, associated with an elevated temperature. The irregularity of the haemorrhages and the fever led me to attribute these troubles to the presence of a degenerate submucous fibroid. In due course I performed subtotal hysterectomy. The uterus had firm and troublesome adhesions to the rectum and bladder.

On opening the uterus, after its removal, we saw at once that the trouble did not depend on a fibroid, but on a rounded, unencapsuled mass projecting from its anterior wall into the uterine cavity; the diseased tissues extended into the uterine cornua and the terminal sections of the Fallopian tubes. The manner in which the abnormal tissue involved the endometrium is well represented in Fig. 4. I perceived at once that the disease was of an uncommon kind, and Dr. Gabbett kindly undertook the microscopic investigation of the uterus, and found the new tissue to be a tuberculous mass arising in the endometrium. It contained giant cells, epithelioid systems, and

detached pieces of the uterine glands. He also succeeded in finding tubercle bacilli. Reconsidering this specimen in the new light afforded by Grünbaum's observations, it appears to me extremely possible that this was in all probability an adenomyomatous uterus which had become infected with tubercle bacilli. Cuthbert Lockyer has described in detail an adenomyomatous uterus removed from a spinster 48 years of age in which both Fallopian tubes were tuberculous.

It has been already remarked that this diffuse adeno-

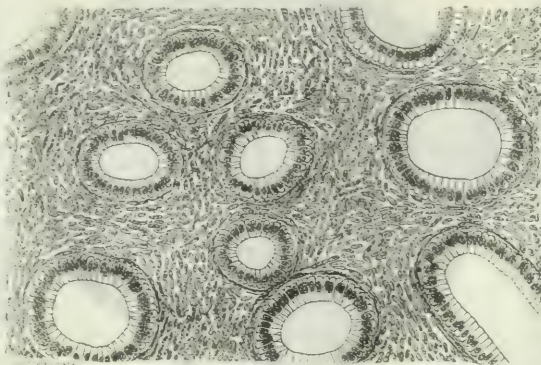


Fig. 3. - A magnified section of endometrium showing the peculiar stroma in which the gland tubes are embedded.



Fig. 4. - Uterus laid open by a vertical incision. The endometrium on the anterior wall is occupied by an unencapsuled mass of tuberculous adenomatous tissue. From a spinster 46 years of age. The patient was in excellent health four years after the operation.

myomatous disease of the endometrium lacks a specific symptomatology. The leading clinical features may be summed up thus: It is most common between the thirtieth and fiftieth years, but it has been observed in patients of 20 and in women of 60 years. It occurs in spinsters and in barren married women as well as in those who are fertile. In regard to this matter, Cullen examined the clinical histories of 49 cases of diffuse adenomyoma of the uterus: "Nine patients were spinsters and 40 were married; of these, 6 were sterile, 2 had had miscarriages, and 32 had had children." Among the 16 cases observed by Grünbaum, 6 had borne children. Of the 15 cases under my own care, 7 of the patients were spinsters; and of the 8 married women, 4 were mothers, and 1 had been delivered of fourteen living children.

The symptoms of which the patients complain are profuse menorrhagia, and in severe cases sanguineous fluid may flow from the vagina, sometimes for five or six weeks without intermission. Pain at the menstrual period is fairly common.

On physical examination the uterus is found to be bigger than normal, and in some cases the enlarged fundus may rise high in the hypogastrium. The contour of the uterus may be quite smooth, but in many instances it is irregular. This unevenness may be due to the localization of the adenomyomatous tissue to one wall of the uterus, or the disease may be complicated by the presence of subserous or interstitial fibroids.

It will be seen that these signs and symptoms are those which commonly accompany a submucous uterine fibroid, and it is under this impression that operative treatment is most commonly recommended and undertaken. These are also the signs furnished by fibrotic uteri. When adenomyomatous changes in the uterus are complicated by chronic bilateral infections of the Fallopian tubes, the nature of the affection is very liable to be overlooked, especially when the uterus is only moderately enlarged.

Occasionally a shrewd and experienced observer may suspect adenomyomatous disease before operation; even then the use of the microscope is indispensable for its identification.

TREATMENT.

The only effectual mode of dealing with this disease is removal of the uterus, either by the vagina, or preferably by the abdominal route. Subtotal hysterectomy with conservation of an ovary gives admirable results, immediate and remote. Even in those cases in which the adenomyomatous mass was complicated with tubercle the patients made excellent recoveries, and the condition of these women many months after operation is stated in the reports to have been excellent. It is also worthy of note that no instance is recorded in which hysterectomy has been performed for this disease and the patient has again come under observation with recurrence.

In order to show the uselessness of drugs against diffuse adenomyoma of uterus I will mention the case of a patient who suffered from profuse menorrhagia. An obstetrician of repute thinking she had a submucous fibroid recommended her to take thirty drops of the liquid extract of ergot three times each day. She continued regularly to swallow this stuff for fifteen years. The menorrhagia became so profuse that at the end of this time I was asked to remove the uterus. It was adenomyomatous. The prolonged use of ergot had caused the tip of her nose to become blue and dry, indeed it resembled the nose of a mummy.

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THE Orient Company's *Ormuz* will make a cruise to Montenegro, Sicily, and various Mediterranean ports in March, and to Athens and Constantinople in April.

REMARKS ON A SERIES OF CASES OF ADENO-CARCINOMA OF THE BODY OF THE UTERUS.

By J. M. MUNRO KERR,

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It is very often stated in textbooks that carcinoma of the body of the uterus only occurs in some 2 or 3 per cent. of cases of malignant disease of that organ. This, I believe, is a quite incorrect estimate and has misled the general practitioner into the belief that the disease is very rare.

Within the last year amongst the cases of malignant disease of the uterus upon which I have operated there have been five in which the disease was an adeno-carcinoma of the body. All these cases occurred in my private practice, and in every case the uterus was examined microscopically in the Pathological Institute of the Glasgow University, and the tumours pronounced to be adeno carcinoma.

In three of the cases adeno-carcinoma was suspected. In these the uterus was curetted and the tissue removed was sent to the pathologist. In two of the cases, however, the diagnosis of fibromyoma of the uterus was made, and the true nature of the condition was only recognized after the uterus had been extirpated. I shall refer to these cases later.

In three of the cases the disease had become diffused over the whole endometrium, but in two it was circumscribed. In one of the latter (Case 1) it was so limited that I had almost completely removed the disease with the curette.

The following is a brief summary of the cases:

CASE I.

Miss K., aged 52, was sent to me by Dr. J. S. McKendrick. Patient stated that the menopause came on when she was 49. The only symptom in this patient's case was irregular uterine haemorrhage, which had been going on for three months before she consulted Dr. McKendrick. Suspecting carcinoma of the body of the uterus, I curetted the uterus and had the scrapings examined by Dr. Teacher, who pronounced them to be adeno-carcinoma. I performed abdominal hysterectomy, removing the entire uterus and upper part of vagina, in St. Elizabeth's Home on October 18th, 1907. Upon examining the uterus after operation a small cavity, about the size of a finger-nail, was observed just inside the internal os. On cutting sections through the part it was found that the curette had almost removed the whole of the malignant tissue. The patient made an uninterrupted recovery.

CASE II.

Miss McH., aged 52, was seen by me in consultation with Dr. McMillan, Pollokshields, on November 3rd, 1907. She stated that the menopause had not occurred, and that for fully sixteen months she had been having uterine haemorrhages. These were sometimes very excessive. During the previous four months she was seldom free from a haemorrhagic discharge. She never had any pain, and, indeed, had no other symptoms but haemorrhage. Upon bimanual examination the uterus was found enlarged to about the size of a fetal head. Both Dr. McMillan and I considered the condition a diffuse fibromyoma. Upon November 14th, 1907, in the Park Nursing Home, I performed abdominal hysterectomy, leaving a portion of the cervix behind. After the operation I opened the uterus which had been removed. I suspected the tumour was malignant because of its being so diffuse and friable. My surmise proved to be correct, for Dr. Teacher reported it to be an adeno-carcinoma. I therefore removed the cervix per vaginam a few days later. The patient made an uneventful recovery.

CASE III.

Mrs. E., aged 54, was sent to me by Dr. Gemmell of Coatbridge on March 10th, 1908. The patient informed me that she had three children, and that the menopause occurred when she was 52. Eighteen months later a haemorrhagic discharge began to occur. This continued almost constantly until she consulted Dr. Gemmell a few days before he sent her to me. During the three months before I saw her there was abdominal pain; prior to this she had no pain. Upon bimanual examination an irregular nodular swelling about the size of a fetal head was felt in the pelvis; the uterus appeared to form part of the swelling. I diagnosed the condition as a fibromyoma. She went into the Lyndoch Nursing Home a few days after I saw her. Considering the case to be one of fibromyoma I performed abdominal hysterectomy, leaving only a small portion of cervix. I sent the specimen afterwards to Dr. Teacher, who reported that the myoma had become invaded by an adeno-carcinoma. I consequently removed the cervix per vaginam a few days later. The patient made an uneventful recovery.

CASE IV.

Miss W., aged 61, was placed under my care in the McAlpine Nursing Home by Sir H. C. Cameron in last May. She informed me that the menopause had occurred fully ten years previously. For nearly two years there had been vaginal hæmorrhages. At first these had been irregular and slight, but eventually they had become more profuse and constant. Beyond a feeling of pelvic uneasiness there was no other symptom. Upon examination under an anæsthetic the uterus was found retroflexed and slightly enlarged, but there was no disease of the cervix. Suspecting the condition to be an adeno-carcinoma of the uterine body, I curetted the uterus; in doing so my curette went through the uterine wall. This, however, was attended with no ill-effects. Dr. Teacher reported that the curetted tissue was an adeno-carcinoma. A few days later I removed the entire uterus and a small part of the upper portion of the vagina. Upon examining the uterus after the operation it was found that the tumour tissue extended over the whole internal surface of the body. In some parts it penetrated so deeply into the uterine wall as to almost reach the peritoneum. The patient made an uninterrupted recovery.

CASE V.

Mrs. McE., aged 55, a widow, was sent to me by Dr. Muir, Possilpark, in July, 1908. The patient informed me that she had never been pregnant. The menopause had not occurred, but about three years previously menstruation began to be a little irregular. Eighteen months ago bleeding from the vagina became continuous. At first she had no pain, but during the last few months she had had a good deal of pain in the lower part of the abdomen and back. On examination under chloroform in Miss Tisdall's Nursing Home, the uterus was found to be slightly enlarged and displaced backwards. The appendages were normal. The cervix appeared normal. Suspecting malignant disease of the body of the uterus, I curetted the uterus. The scrapings were examined by Dr. Hasler Wilson, Pathological Institute, and pronounced to be typical adeno-carcinoma. Upon July 22nd I removed the entire uterus and upper part of the vagina. The examination of the uterus after its removal showed it to be extensively invaded by a diffuse friable tumour. The tumour tissue had penetrated in some parts almost through the whole thickness of the uterine wall. The patient made an uninterrupted recovery.

In considering the above cases the first striking feature is the menstrual history. In two cases a distinct menopause had occurred, but in the three others the menstrual discharge had been irregular, then more profuse, then finally more or less continuous. In the former class of case, when bleeding occurs some time after the menopause, there is little likelihood of the condition being overlooked, for a recurrence of bleeding always attracts attention. In the other class, however, both patient and doctor are apt to take up the attitude of presuming that this excessive discharge is simply a feature of the menopause. Such an explanation is only justifiable if the uterus is curetted, and the scrapings have been pronounced non-malignant.

The second point of interest is the age of the patients. The youngest was 52. This is in agreement with the experience of all gynaecologists that the maximum morbidity is between 50 and 60 years of age.

The slow progress of the disease is another matter of interest. In all, except Case i, the disease had been in existence for a very considerable time.

Yet another feature is the fact that three of the cases were unmarried, and only one of them (Case iii) had borne any children. It would appear that while carcinoma of the cervix is favoured by the occurrence of previous parturitions, carcinoma of the body is not, and in fact is relatively more common amongst those who have not borne children.

The frequency of the coexistence of adeno carcinoma and fibromyoma is another striking feature. In the five cases recorded two had distinct multiple tumours, while one had a few small myomatous nodules. This is a matter well worthy of attention. If one looks over recorded cases of fibromyoma of the uterus, in quite a distinct proportion of cases, 2 or 3 per cent. at least, adeno carcinoma of the body of the uterus was found. I have now performed hysterectomy for fibromyoma of the uterus in nearly 150 cases, and in four of them an adeno carcinoma of the body of the uterus was present.

Except for hæmorrhage there are no characteristic symptoms, pain is seldom a marked feature. A feeling of uneasiness and bearing down may be mentioned by the patients, but these are common complaints amongst women. Severe pain is complained of usually only when the disease is far advanced. Small multiple fibroids occasionally are associated with considerable pain. In only one of my cases was severe pain complained of, and in that case there were several small fibroid tumours. The

hæmorrhage varies very much in amount. Occasionally it is very profuse, but it is often quite moderate. It is most likely to be overlooked when it occurs at or about the menopause, for there is often excessive menstruation at that time.

There is only one way of making certain regarding the nature of the condition—namely, to curette the uterus and examine the scrapings. Curettage of the uterus in this condition must be performed with great caution, for if the disease is far advanced the uterine wall is so friable that the curette may very easily perforate it. This happened in one of my cases (Case iv). As a rule perforation of the uterus with a curette is not attended with serious symptoms provided the operation is performed with all aseptic precautions, but with advanced adeno carcinoma there may be a septic condition of the uterus. In the case referred to no evil effects followed.

The absolute importance of curettage in all cases in which there is the slightest doubt is well illustrated by the following one, which was under my care eighteen months ago:

The patient was 61 years of age. She came to me two years previously, and informed me that she was attending another gynaecologist on account of occasional bleeding from the uterus. I advised her to return to her medical attendant and insist upon having the uterus curetted. She did not take this advice, however, and I did not hear of her for two years. She then consulted me and said she wished to place herself in my hands. At the same time she sent me a small portion of tissue which had come away from the vagina, and which on examination proved to be an adeno carcinoma. When I removed the uterus a few days later the whole cavity was filled with tumour tissue, and the uterine wall was almost completely destroyed.

As I have already indicated, the condition is in many cases associated with fibromyomatous tumours of the uterus, whilst in other cases the uterus may be so distended by the tumour tissue that by reason of its size it simulates a myoma.

In the cases in which there are co-existing fibroids, especially if the patient comes under one's care about the time of the menopause, there is a tendency amongst some practitioners to encourage the patient to wait until the menopause is over, with the idea that in time the fibromyomata will cease to give further trouble. Such a procedure is always very questionable, and, as I have said, is only justifiable if the uterus is curetted, and the scrapings are found to be of a non-malignant nature.

There is another important and practical point in this connexion. In cases where the uterus is very much distended with a malignant tumour, and the condition is mistaken for a fibromyoma because of the size of the uterus, the operator, if he performs supravaginal amputation of the uterus, will leave the cervix behind, and may only discover that he has to deal with adeno carcinoma when he splits open the uterus after the operation is finished and the patient has been placed back in bed. In two of my cases this occurred. In both I removed the cervical stump by the vagina a few days after performing abdominal hysterectomy.

All the patients made uninterrupted recoveries, and left the respective nursing homes within the month. At the present time they are all absolutely well.

RUPTURED TUBAL PREGNANCY AT FOUR MONTHS: OPERATION IN A COTTAGE: RECOVERY.*

By T. LISTER LLEWELLYN, M.D., B.S. LOND.,
BARGOED.

I was asked on May 19th, 1908, by Dr. C. Reidy, of Bargoed, to see a case which he had diagnosed as one of tubal pregnancy.

History.

Mrs. J. E., aged 24, married in February, 1906, had had in May, 1907, one child, which was nursed up to May, 1908.

Menstrual History.

The periods started at 17, but were very irregular for the first two years. From the age of 19 they had varied not more than a day. After the birth of her baby in May she missed four periods. Menstruation started again in October, 1907, and remained regular up to January, 1908, after which date it stopped.

* Read before the autumn meeting of the South Wales and Monmouthshire Branch of the British Medical Association.

Previous History.

She had had no illnesses except constant attacks of epigastric pain since the age of 16. In her first pregnancy she was very well throughout, and had none of the usual unpleasant symptoms. Since January, 1908, she had had repeated attacks, sometimes twice a day, of temporary faintness lasting for two to three minutes, associated with a general feeling of weakness. She had no vomiting, but felt sure she was pregnant.

History of Attack.

At 5 a.m. on May 19th, she awoke with severe pains in the lower part of the abdomen. They lasted fifteen minutes, but did not prevent her from getting her husband's breakfast at 6 a.m. She then felt as well as ever, and was able to do a full day's washing. While scrubbing the floor at 5 p.m. she was seized with very severe pains in the lower part of the abdomen. She lay down on the couch, and felt herself getting very weak. She had a hazy idea of Dr. Reidy's visit, and of being carried upstairs. I saw her with Dr. Reidy at 11 p.m. on May 19th.

Condition on Examination.

The woman was absolutely blanched, restless, and unaware of her surroundings. Her breathing was hurried, short, and gasping. The pulse could be felt at the wrist only with difficulty, and it could not be counted. The abdomen was slightly distended and tense, but nothing was made out on palpation. Vaginal examination was quite negative.

Diagnosis.

The history of four months' suppressed menstruation, together with the sudden onset, severe abdominal pain, and obvious internal hæmorrhage, at once suggested the diagnosis of ruptured tubal pregnancy.

Operation.

Dr. W. A. Reidy gave chloroform. The abdomen was opened in the middle line below the umbilicus, and a large quantity of fluid blood at once escaped. On introducing my hand I found a fetus 4½ in. long quite free among the intestines; the umbilical cord had been torn close to its attachment. The right tube was greatly enlarged and funnel shape. It had been ruptured at the extremity. I ligatured the tube, removed the enlarged portion, and left the ovary intact. The left appendages were normal. I then removed several large clots of blood and pieces of the placenta from the pelvis. There was some slight hæmorrhage deep in the pelvis which I was unable to see or locate. To control this bleeding I placed a gauze plug in the pelvis, and then sewed up the abdomen, bringing the plug out through the lower angle of the wound.

The general condition of the patient was still very bad. Six pints of saline were run into a vein at the elbow with very satisfactory results, the pulse improving very rapidly.

After-History.

May 20th.—Plug removed and not replaced. Slight oozing of blood.

May 21st.—Considerable oozing of blood through lower angle of wound.

May 23rd.—Bowels open after calomel.

May 26th.—Stitches removed. Wound completely closed.

The patient made a good recovery. There was no temperature above 99° F. during her stay in bed. Her only trouble was that she was unable to pass her urine for the first week. She came downstairs at the end of four weeks.

Present Condition.

December, 1908.—She menstruated six weeks after operation, and regularly since. The abdominal scar is quite sound, and there is no trace of a hernia.

The case is interesting from several points of view. Rupture of a pregnant tube is rarely delayed until the fourth month. The chief interest, however, lies in the conditions under which the operation was performed. The room was small and almost completely filled by a large, wide, and low bedstead, which had to be pushed against the wall on one side and left 3 ft. clear on the other. The patient lay in, not on, a large feather bed. The light was very bad: a small tin lamp was nailed to the wall above my head and another lamp stood on a table at the foot of the bed. It was practically impossible for Dr. Reidy to give me any assistance beyond handling me instruments.

No sponges were used, their place being taken by a roll of cyanide gauze taken straight from its package. The case ran an aseptic course throughout, and the precautions taken may be of interest. All instruments, needles, and ligatures were boiled. The operation area was surrounded with towels which had been boiled in water for five minutes. Skin and hands were cleaned with soap and

water and lysol. The nursing was entirely left to her neighbours, who were colliers' wives.

I publish this case in the hope that it will encourage other general practitioners to deal with these cases themselves. Delay of even an hour or two may make all the difference between success and failure. I am convinced that asepsis is not difficult to attain even in a cottage.

I am deeply indebted to Dr. Reidy for his skilful treatment of the patient after operation, and for his help in preparing these notes.

PYELITIS OF PREGNANCY TREATED WITH COLI VACCINE.

By H. T. HICKS, F.R.C.S.,

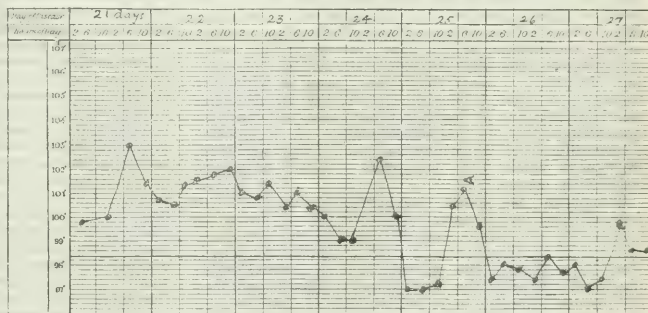
HONORARY GYNAECOLOGIST TO THE DERBYSHIRE ROYAL INFIRMARY.

THE following case is a very typical example of a moderately virulent infection of the right renal pelvis during pregnancy:

S. T., aged 20, was sent to my out-patient department by Dr. Mackay suffering from acute pain in the right side of the abdomen. She was at the fifth month of her second pregnancy, the first pregnancy and labour having been normal in every respect. During the present pregnancy she had been very much troubled with constipation.

The illness started three weeks before admission with aching in the right renal region, beginning behind, but spreading rapidly round to the front of the abdomen and downwards toward the right iliac fossa. The pain was quickly followed by a rise of temperature and a general feeling of malaise. There was no frequency of micturition nor any sign of cystitis.

In spite of a fortnight of incomplete rest in bed at home the symptoms became more marked, and the patient's general condition began to give cause for anxiety. During the first



three weeks the temperature had been irregular, and when I saw her it was 103° F. The pulse was rapid and feeble; the tongue dry and furred. The patient looked pale and ill, and complained of intense pain over the right side of the abdomen. On examination the maximum point of tenderness on deep pressure was below the twelfth rib behind, and there was a definite history of the pain having started here, and of it having spread downwards and forwards into the appendicular and right iliac regions.

There was slight rigidity over the right half of the abdomen, and it was interesting to note the extremely well marked superficial tenderness, which is so often a characteristic sign of pyelitis occurring during pregnancy. The uterus was enlarged to about the fifth month of pregnancy and seemed quite normal. The patient was admitted and was put on a milk diet and a mixture consisting of urotropin (10 grains) and potassium iodide (3 grains). The urine contained pus and a few epithelial casts. It was acid in reaction. There was no tenderness over the bladder, nor was there any evidence of cystitis. A pure culture of *Bacillus coli* was obtained from a catheter specimen of the urine, and a vaccine was prepared. After four days' rest in bed, on the milk diet and medicine, the temperature and pain did not abate; 10 c.cm. of the coli vaccine was then injected. The temperature dropped almost immediately and remained normal, except for one small rise two days later. The pain decreased in severity in a marked manner, so that within a few hours the patient hardly complained at all. She had one or two attacks of slight pain during the rest of the time she was in hospital, but the improvement in her general condition was most satisfactory. The pyuria persisted, but for more than forty-eight hours at a time the urine would be free from pus, and then a large quantity would be passed. After being in hospital a month and a half, the patient went out apparently well in

general health and with the pregnancy unharmed. About three weeks later the pain returned and her general health again became impaired, and she was readmitted. There was, however, no recurrence of the pyrexia, and the patient picked up rapidly with rest in bed and proper dieting. She remained in hospital until full term, when a healthy child was born normally. Four days after delivery the urine was free from pus, and remained so up till now (three weeks later).

There was no difficulty about the diagnosis in this case. The acute onset of the pain, localized at first behind and below the right costal margin, and then spreading rapidly along the course of the right ureter, accompanied with pyrexia and pyuria, left no doubt as to the true nature of the disease. One very prominent feature of these cases is the somewhat diffuse area of great superficial tenderness, which seems to be confined to the cutaneous distribution of the anterior branch of the twelfth dorsal nerve. Pyelitis of pregnancy has to be distinguished in its early stages from pleurisy at the base of the right lung and in the later stages from appendicitis and enteric fever. The knowledge that pyelitis is a fairly common complication of pregnancy, a careful inquiry into the history of the pain, and the fact that the tenderness is most marked behind and below the twelfth rib and along the course of the ureter, together with the intense hyperaesthesia, without much rigidity over the right side of the abdomen, will easily settle any doubt in most cases. The presence of pus in the urine will also give a definite clue to the condition, but it is not by any means safe to negative pyelitis if pus is absent from any given specimen. Several specimens must be examined, and it often happens that the pus does not appear in the urine until some days after the onset of the pain and pyrexia.

No doubt constipation plays a prominent part in the etiology of pyelitis, and almost without exception the infection is due to an invasion of the renal pelvis by the *Bacillus coli*. The renal pelvis is probably infected direct from the colon by means of the lymphatics. It is impossible to accept the ascending theory, because one cannot see why the infection should nearly always be right-sided, and, moreover, the bladder seldom shows signs of infection. In the few cases that I have seen in which the disease was ushered in with cystitis, the infection has been bilateral; and no doubt in these cases, which are far more serious, the infection was ascending. This condition is very different to what may be called simple pyelitis of pregnancy, which, as a rule, runs a very definite and satisfactory course.

The above case shows clearly what I have noted in many of these cases—namely, that the pyuria persists up till the time of delivery, but all the virulence appears to pass out of the organisms as soon as the acute stage is over. Nevertheless, the patients require a considerable amount of care after the acute stage is passed, and they still maintain the pale toxic look which is so characteristic of chronic *coli* absorption. The patient during this quiescent interval should lead an invalid's life. She should be kept warm, and take only very gentle exercise, and her food should consist mostly of milk and farinaceous stuffs. She should take no red meat, and very little fish and other white foods. Alcohol should be strictly avoided. Iron tonics and special attention to the bowels should be insisted upon, and occasional doses of urotropin given. She should accustom herself to drink a considerable quantity of water, especially in the early morning, for flushing purposes. One of the diuretic saline waters will probably be found useful in combination with the urotropin.

She need not be confined to bed, but should take plenty of rest, preferably in the sunshine. If, after the acute symptoms have abated for some time, the patients are treated in the manner outlined above, the pregnancy will in all probability pass on to a normal delivery at term, and at the same time there need be little fear that there will be any permanent damage to the kidney. Should the pyuria persist after delivery, some permanent damage to the kidney substance must be suspected, and the patient should be warned that she may have a recurrence of the disease in future pregnancies, which will possibly result in the formation of a pyonephrosis. One must also not neglect to search for a renal calculus or tubercle bacilli if the urine does not remain free from pus some time after the child is delivered. I have once seen a pyonephrosis develop during the second pregnancy in a patient who had had an attack of pyelitis at the fifth month of her first

pregnancy, but recurrence in future pregnancies is a very rare exception.

With regard to the vaccine, it is, of course, impossible to be sure whether the sudden drop of the temperature and the cessation of the pain in the above case was due to the vaccine or whether it was simply coincidence. I have seen improvement follow the injection of 10 c.cm. *coli* vaccine in other cases of pyelitis, and have no doubt that this treatment should be given a fair trial. If, however, the temperature and pain persist for more than ten days and infection appears to increase in virulence, in spite of the vaccine, dieting, and the administration of potassium iodide and urotropin, the uterus should be emptied.

On several occasions I have seen rapid recovery from pyelitis after spontaneous delivery. No doubt the presence of gestation in the uterus causes pressure on the ureter and prevents free drainage.

The uncomplicated cases of pyelitis run such an even and satisfactory course and the signs and symptoms are so typical that any mistake in the diagnosis must be a matter for regret. The greatest danger lies in mistaking this condition for appendicitis, and since the general appearance of the patient and the acute onset of pain and pyrexia are very similar in both diseases, a hasty conclusion may lead to a disastrous laparotomy.

If the symptoms are prolonged and the infection does not abate within a fortnight on suitable treatment, it becomes a question as to whether the kidney substance itself has not become infected. In one case in which the kidney was explored we actually saw small abscesses in the kidney substance; and although the section of the kidney did no good, for there were many unopened abscess cavities and drainage was impossible, the patient eventually made an excellent recovery, and the pus completely disappeared from the urine after the birth of a living full-term child. If the kidney becomes infected, the possibility of renal pyaemia may be thought of; but since the infection seldom affects both kidneys, there need be little fear of uraemia or anuria.

For practical clinical purposes I should divide the cases of simple *coli* pyelitis of pregnancy into three groups: (1) Mild, (2) moderate, and (3) severe. For the mild forms rest in bed, a milk diet, careful regulation of the bowels, and the administration of potassium iodide and urotropin will probably be sufficient. For the moderate the same treatment should be adopted, with the addition of a *coli* vaccine; and for the severe forms, when this treatment does not meet with success, the uterus should be emptied. It is not advisable to attempt to drain the pelvis of the kidney through the loin, because the patients cannot well stand the shock of the operation, and moreover, if the kidney itself is infected there will be many small foci which cannot be effectively dealt with. By far the safest way to effect free drainage is to relieve the pressure of the uterus upon the ureter. The labour, of course, should be set going by passing a sound or a bougie.

ACUTE INVERSION OF THE UTERUS.

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The following case is of interest, not only on account of its rarity, but of other points to which attention will be drawn:

On August 23rd, 1908, I was called to Mrs. W., aged 31, a primipara, who had been in labour for nine hours when seen at 5 a.m. The child was found to be in the fourth position of the vertex, with the head imperfectly flexed. At 8.30 a.m. the os was fully dilated, and an attempt was made to improve the flexion of the head. The head being still unrotated two hours later, Dr. S. J. J. Weakley was called in; the forceps was applied under chloroform; the head rotated easily, and the child was safely delivered in twenty-five minutes. The patient soon recovered consciousness. The pulse-rate was then 108.

Only one contraction of the uterus was noticed during the first half-hour after the birth of the child, and 1 c.cm. of ergotin was therefore given hypodermically. The patient was restless from bearing down during this period. The uterus remained soft for half an hour longer, when a sudden violent and painful contraction occurred. This was immediately followed by the protrusion from the vulva of the inverted uterus, with the placenta attached. Very little haemorrhage had taken place up to this point. The placenta was easily and quickly peeled off the inverted fundus, which was at once pushed back by the

doubled-up fist. I sent for assistance, as the patient became suddenly very collapsed—pale, clammy, unconscious, the pulse at the wrist flickering and uncountable. The uterus was quite atonic, and immediately the hand was withdrawn from its cavity it reinverted. The haemorrhage was now considerable. In the absence of Dr. Weakley, Dr. E. B. Randall attended, and the patient was given a further 1 c.cm. of ergotin and 25 grain of strychnine hypodermically, and 2 pints of saline were infused into the right median basilic vein. Meanwhile the uterus was controlled as far as possible by bimanual compression. The patient gradually recovered from the shock; the uterus began to retract; so that at the end of half an hour the compression was no longer necessary. The patient recovered consciousness and inquired eagerly after the baby. Her pulse-rate at this point was 120. The haemorrhage had now practically ceased.

The placenta was not morbidly adherent at any spot; no difficulty was experienced in detaching it from the fundus; it was of the "battledore" variety, and appeared to be centrally situated on the fundus. The cord was only 13½ in. long, and was coiled once round the child's body.

AFTER-HISTORY.

The foot of the bed was raised on a chair. For the first four hours 1oz. of brandy was given every hour in an equal quantity of milk. The patient was also encouraged to drink as much water as she could. Later the stimulant was reduced, so that by the third day the patient was taking 2oz. in twenty-four hours. A mixture was given containing ergot in xv and hyoscymus. The bowels were opened on the fourth day by 1 oz. of castor oil; ordinary light diet was allowed after that day. The ergot was stopped on the sixth day; later a mixture was given containing ferri et amm. cit. gr. x and tinct. nuc. vom. m.

The patient's recovery was uneventful; she got up on the twenty-eighth day. The temperature did not rise above 98.3° F. during the puerperium; the pulse-rate after the second day varied between 76 and 84. The uterus involuted naturally; the lochia were scanty and ceased on the eighth day; they were not otherwise abnormal in any way.

I saw the patient on October 20th, 1908; she was then in her usual good health.

I would call attention to this case for several reasons:

1. Its rarity. Acute inversion of the uterus occurred once in 190,000 labours at the Rotunda Hospital Dublin,¹ and not once in 250,000 labours reported by Braun and Spathe;² 1 in 180,000 to 200,000 are the figures given by Eden.³
2. The extreme uterine inertia, whereby the uterine walls were so lax that, after the uterus had been replaced, it reinverted if the hand were withdrawn from its cavity.
3. The shortness of the cord, which was only 13½ in. long; it was further artificially shortened by being coiled once round the child's body, giving a "practical" length of about 6 in.
4. The characteristic and excessive shock which occurred immediately after the inversion, before any haemorrhage occurred. The shock was out of all proportion to the amount of blood lost, which was probably less than 2 pints.

5. I would call special attention to the value of bimanual compression as a successful means of controlling *post-partum* haemorrhage while the uterus is regaining its tone.

I would suggest the following explanation of the events that took place. The explanation is based upon the theoretical considerations detailed in Champneys's epitome⁴ of Matthews Duncan's chapter on acute inversion.⁵ When the child was delivered by forceps, the fundus, owing to the extreme shortness of the cord, was unknowingly pulled upon. After the birth of the child the placenta and its site were further introverted into the cavity of the relaxed uterus by the weight of the child's body exerting traction on the cord. When the uterus did contract, the introverted placental site acted physiologically as a foreign body; it was, therefore, expelled by the contraction. The uterus then relaxed again; the placenta was removed, and consequently an ordinary *post-partum* haemorrhage occurred from the relaxed placental site, both before and after its reposicion inside the body. This was eventually controlled by bimanual compression. The case would thus fall into the class of "artificial active inversion."⁶

In conclusion, I have to acknowledge my indebtedness to Dr. S. J. J. Weakley and Dr. E. B. Randall, of Forest Gate, for the prompt and successful assistance they gave me.

REFERENCES.

- ¹ Lusk, *Midwifery*, 1895 edition. ² Loc. cit. ³ Eden, *Midwifery*, 1906 edition. ⁴ St. Bartholomew's Hospital Journal, May, 1892. ⁵ Mechanism of Natural and Morbid Labour, chap. xx. ⁶ Champneys, loc. cit.

AN EXPERIMENT IN THE TREATMENT OF EPILEPSY.

By DAVID GOYDER, M.D.,

CONSULTING MEDICAL OFFICER TO THE BRADFORD BOYS' HOSPITAL; CHAIRMAN OF THE HOSPITALS COMMITTEE, BRADFORD FOUR-LAW UNION.

THE Bradford guardians decided to remove the same epileptics from the workhouse to a house, Daisy Hill, in order to test the effect upon them of open-air residence with appropriate occupation, but with entire exclusion of medical treatment or the use of any drugs, it having been asserted that such residence alone would reduce the number of fits, and would probably lead to cure. While still at the workhouse, and on the initiative of Mr. Edward Milnes, the same epileptics were separated from the rest, and under an attendant set to work in the gardens of the house, with the objects of improving their condition and rendering them useful. When I joined the guardians, at the election of 1904, the method of treating epileptics by sodium bromide as salt with their food, and the exclusion of all common salt (chloride of sodium), had so impressed me, that I proposed the addition of this treatment in lieu of any other medicines for the same epileptics whom Mr. Milnes had set to work on the grounds. The proposal was accepted and carried into effect by me. This treatment was continued until their removal to Daisy Hill, and with decidedly satisfactory results.

Upon their removal, and in view of the test as to the value of place, all medical treatment was abandoned, the hope being expressed that they would improve without medicine. During this period the personnel of the guardians was radically changed by the election of March, 1907, and Mr. Milnes's excellent supervision as a guardian was gone. Some time afterwards he begged me to keep an eye on the same epileptics at Daisy Hill, and over a year ago I made systematic visits to Daisy Hill and took shorthand notes of their condition. This supervision I have continued to the present time.

I found that the number of fits suffered by the men had not only largely increased, but month by month got progressively worse; as Chairman of the hospital committee I felt my responsibility for the condition of these men, and I took upon myself the duty of altering that condition. I made up my mind that this state of things and this test of place should at once be put an end to; and through Dr. Spark and Mr. Carter it was determined to see that the bromide salt treatment was strictly carried into effect. Dr. Spark is the accredited attendant at Daisy Hill, and under his supervision the new treatment, when determined upon, was cordially carried out.

The following table and comments show the conditions of things from January, 1907, to October of the same year, at which date I intervened:

TABLE I.

No. of Men.	Date.		Fits.	Increase.
	From	To		
10	Jan. 1, 1907	Jan. 31, 1907	65	
10	Feb. 1, ..	Mar. 12, ..	69	(About 6 weeks.)
10	Mar. 13, ..	Apr. 13, ..	58	
10	Apr. 14, ..	May 11, ..	55	
10	May 12, ..	June 8, ..	80	16
10	June 9, ..	July 6, ..	70	
9	July 7, ..	Aug. 3, ..	90	2
9	Aug. 4, ..	Aug. 31, ..	90	
9	Sept. 1, ..	Sept. 28, ..	100	5
9	Sept. 29, ..	Oct. 26, ..	113	48
9	Oct. 27, ..	Nov. 23, ..	108	
			898	in 11 months.

It will be observed that although from July to November the number of men was reduced to 9, the increase in the

number of fits was progressive from 25 to 48. At this stage—namely, November, 1907—the administration of the bromide salt was begun, and the results are seen in the following table:

TABLE II.

No. of Men	Date.		Fits.	Decrease.
	From	To		
9	Nov. 29, 1907	Dec. 27, 1907	70	45 from Sept.
9	Jan. 3, 1908	Feb. 22, 1908	25	53
9	Feb. 23, ..	Mar. 21, ..	50	
9	Mar. 22, ..	Mar. 31, ..	15	(In 9 days)
9	Apr. 1, ..	Apr. 28, ..	59	
10	Apr. 25, ..	May 23, ..	13	100 from Sept.
10	May 23, ..	June 20, ..	50	
8	June 21, ..	July 18, ..	21	
8	July 19, ..	Aug. 15, ..	19	
8	Aug. 16, ..	Sept. 12, ..	9	104
8	Sep. 13, ..	Oct. 10, ..	4	103
7	Oct. 11, ..	Nov. 7, ..	5	
6	Nov. 8, ..	Nov. 30, ..	7	

In 12 months 317—Nov. 1907 to Nov. 1908.

Less fits by 581 than 1907.

It is to be noted that in April and in May-June the number of fits largely increased—this was due to the omission of the salt by the attendant; this man was admonished, but his carelessness was repeated, and he was replaced by another who has proved himself thoroughly reliable, with the result seen at the end of the table. It is also to be noted that the number of epileptics treated fell from 10 to 8, and ultimately to 6, 1 having been removed to hospital for an abdominal operation, but the general and almost continuous fall in the number of fits from 113 a month in October, 1907, to October, 1908, when there were only 4 in the month, sufficiently proves the efficacy of the treatment. The greatest number of attacks, 113, occurred in October, 1907, increasing from the previous July, when only 9 instead of 10 men were under treatment, whereas in Table I when 10 men were again under treatment, that is, from April 26th, 1908, to May 23rd, 1908, the number of fits fell 100 below those recorded from September 29th to October 26th, 1907, before any treatment was begun.

In observing the effects of the bromide salt treatment, it is found that when the epileptics come under its full influence they become rather listless, stupid, and drowsy; this is the expected result, and a result to be attained; it indicates the point of saturation of the system by the salt, the point when the fits become controlled; the dose daily can then be diminished one half, but not altogether discontinued. The drowsy, listless, symptoms soon pass off and the patient is fit again for work. It should be said that the administration of the salt is not confined to giving a definite amount with the three daily meals, but their bread is specially baked for them, the amount of common salt usually mixed with the dough is excluded and is replaced by an equivalent quantity of the bromide salt.

Some eight or ten years ago two French physicians, MM. Toulouse and Richet, discovered that the desired effects from sodium bromide were interfered with when sodium chloride was allowed to be used in the food. When the common salt was excluded from the food, the good effects of the bromide immediately became pronounced; the cause of antagonism was supposed to be decomposition of the salts in the body when taken together. The results were published in the *BRITISH MEDICAL JOURNAL*, and Dr. Enrich read a paper on the same results in his own practice before a meeting of the Bradford Medico-Chirurgical Society. I immediately thereafter tested the treatment in my private practice, with most satisfactory effects in several cases.

The amount of bromide given by experts to patients largely exceeds the doses given by general practitioners,

Dr. McCallum of Kendal, the medical officer of the Starnthwaite colliery and school for epileptic boys, with whom I corresponded after my visit to Starnthwaite, gives 1 to 2 drachms or even more in a day. Our dose may have been a third or sixth of this in mixture, but now the bromide salt we give at meals and with the bread approaches more to his, as he believes, necessary standard. He pushes the doses to saturation of the system, indicated by the diminution or ceasing of the fits, and some degree of drowsiness and stupidity of the patient; but he alleges that this condition does not in any way impair the ultimate intellectual capacity, which returns when the doses are reduced and the fits subside, but he continues the bromide until assured that the attacks are subdued. It is no use trifling with epilepsy if any permanent results are to be achieved; the treatment must be strong, continuous, and well watched. In some cases the salt produces an eruption, but this can be met by cleanliness and appropriate applications; better the rash a hundred times than the epileptic nerve storm and convulsive spasms of the epileptic fit. There is no proof that the mere place of residence has any influence on the ultimate cure of the disease; change of place does diminish the fits for a time, but they ultimately recur and continue as bad as or worse than before; what is wanted is adequate treatment, not change of place.

ON THE FLAGELLATION OF LYMPHOCYTES IN THE PRESENCE OF EXCITANTS BOTH ARTIFICIAL AND CANCEROUS.

BY

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HOME FOR INCURABLES.

PRELIMINARY NOTICE.

In a recent paper¹ we have described how the plasmata of patients suffering from carcinoma will excite amoeboid movements in the leucocytes of healthy persons. In another paper,² which will be published shortly, one of us has shown how leucocytes can also be excited by placing a drop of blood on a film of agar jelly containing a mixture of methylene blue and atropine. In yet another paper³ experiments are detailed which show how this atropine excitant can be so modified as to reduce its poisonous effects, and also that by omitting the agar jelly it can be prepared in a liquid form which enables it, still remaining effective, to be mixed with blood. In this last paper several formulae for making the excitant are given, and among them is one prepared from the following solutions:

1. A volume of Unna's polychrome methylene blue (Grübler) is diluted with an equal volume of water.
2. A neutral solution containing 4.5 per cent. sodium citrate, 1.5 per cent. sodium chloride, and 0.225 per cent. atropine sulphate.
3. A 5 per cent. solution of bicarbonate of sodium.

Of these solutions mix together in a test tube 1 c.cm. of the diluted stain, 4 c.cm. of the citrated solution, 1 c.cm. of water, and 0.2 c.cm. of the sodium bicarbonate solution.

Into a capillary tube draw up a volume of this mixture, and add to it an equal volume of the blood to be examined, freshly drawn from the finger. Incubate the tube at 37° C. for half an hour, and then place a drop of the mixture on to a slide, and cover with a cover-glass, which may be gently pressed down if the blood will not spread. The slide should be examined at a temperature of 20° C.

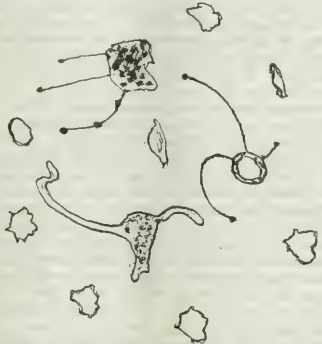
The granules, but not the nuclei, of the leucocytes are well stained. The polymorphonuclear cells can usually be distinguished by the arrangement of the granules which outline the many-lobed nucleus. The eosinophiles of course have large granules which stain well.

In from a quarter to half an hour these cells will extrude long snake-like pseudopodia identical with those seen when agar jelly is employed, because they have absorbed the excitant with the stain while they were in the incubator.

In the first paper to which reference has been made,¹ we have shown that when a cancer patient's blood is mixed with an equal volume of a certain solution of sodium

citrate in a capillary tube, and its plasma, obtained by centrifugalization, mixed with one-eighth of its volume of a healthy person's blood, and then incubated for half an hour, and the slides prepared and examined as above, some of the leucocytes will show the same exaggerated movements. The blood plasma of apparently healthy people occasionally causes the leucocytes of another healthy person to throw out pseudopodia, but if the effects of the cancer plasma be compared with those of the healthy, it will be seen that the movements caused by the former are exaggerated as compared with those produced by the latter. We are therefore of opinion that the plasma of cancer patients contains some excitant for leucocytes.

In the present paper we desire to direct attention to the behaviour of the lymphocytes of healthy people in the presence of the excitant, whether it be cancerous or that composed of methylene blue and atropine. If the slide, prepared according to the stain-containing formula which has just been given, be examined, the small mononuclears will readily be recognized by their size, which is much less than that of the other leucocytes. By this method of *in-vitro* staining (for the granules of the colourless cells become stained) the lymphocytes present rather unusual characters. Most of the textbooks state that they are either non-granular or only contain very small granules, and in fixed films when the cells are killed this usually appears to be the case. When, however,



Sketch of two flagellated lymphocytes and one polymorphonuclear leucocyte, showing exaggerated amoebic movements.

they are living and resting in the stain-containing excitant, it will be seen that the cytoplasm of the small mononuclear cells contains a few deeply-stained granules arranged round the nucleus. These granules may be, and generally are, larger than the granules of the polymorphonuclear cells, though slightly smaller than those of the eosinophiles, and they are further differentiated by the very bright way in which they stain, so that they appear of a brilliant scarlet colour compared with the granules of other cells. It will be noted also that the granules will appear to collect in masses in the cytoplasm round the nucleus.

If the specimen is passed rapidly under the objective (preferably $\frac{1}{2}$ in.), and all the leucocytes examined in turn, suddenly the eye will be arrested by a larger cell which also contains the same sort of bright scarlet granules as are seen in the small mononuclears. We believe these cells to be the large mononuclears or large lymphocytes. Their granules are larger than those of the polymorphs, and slightly smaller than those of the eosinophiles, but they are fewer in number and usually more discrete, and may be collected in masses, as in the case of the smaller cells. By careful observation the outline of the single nucleus may be made out, for it will not be stained, the cells being alive. If the nuclei are stained the cells are dead,⁴ and the excitant has been wrongly prepared. The specimen should be searched and all the lymphocytes carefully examined, the other cells, although they will probably be showing exaggerated movements, being neglected.

We will now describe how these lymphocytes may become flagellated, though it must not be supposed that

flagellation always occurs, for sometimes we see it in every specimen and at other times numerous preparations may be examined without its being observed although the same exciting solution is employed.

Suppose the specimen has been prepared with the methylene-blue formula and the slide is being carefully searched for cells large and small (for lymphocytes of both sizes may become flagellated), which have bright discrete granules, suddenly one meets with a cell, which may or may not be extruding pseudopodia, probably not, and which appears to have a granule which is dancing about, as though by Brownian movement, just outside its cell wall. A close scrutiny will show that the granule is attached to the cell by a thin, hair-like filament. Sometimes this flagellation begins immediately after the slide has been prepared, at other times it may take an hour before it begins, and, as we have stated, it may not occur at all. The cell should be watched and it may be seen that the flagellum is slowly extruded until it may become longer than the width of the cell. Occasionally cells will be found with several flagella extruded, all waving about in the surrounding plasma. We have seen a cell almost surrounded by twenty such flagella. They nearly always have a dot or granule at the distal end and may have others at intervals in the length of the filament. On one occasion we have seen these flagella exhibiting what appeared to be lashing movements. They must not be mistaken for the pseudopodia thrown out by the cells in the presence of the excitant; the pseudopodia, which are much thicker, may continue to be slowly extruded and retracted for some hours, and they generally contain no granules. The flagella, unlike pseudopodia so far as our experience goes, never become retracted, but usually break off in a short time. They must not be mistaken for fibrin, which is much thicker than a flagellum, and it must be observed that if the excitant is correctly prepared, no fibrin will be present as coagulation is prevented. They are quite characteristic and we do not think they will be mistaken once they are seen.

Up to the present we have only seen flagellation occur in those cells, large and small, which have bright staining granules, and as we shall show later, we are of opinion that they are lymphocytes, though when we first saw them we thought they were a variety of eosinophile owing to the size of their granules.

The phenomenon of flagellation was seen by one of us more than a year ago, when he had made the excitant in liquid form, but it was not until more than six months later that one of us suggested that there might be a similar excitant in cancer. The reasons for this suggestion have been fully given in a former paper, together with the steps taken to demonstrate it. The flagellation-producing properties of the blood plasma in cases of carcinoma were observed in one of the early cases which we investigated (a case of cancer of the pylorus). In this case, as in the others, eight volumes of the citrated plasma of the patient were mixed with one volume of the blood of one of us, and having incubated the mixture in a capillary tube and made the slide in the usual way, we found that some of the lymphocytes had become flagellated in precisely the same manner as had so often been seen when the artificial methylene blue excitant was used, though in this experiment there was neither methylene blue nor atropine present.

Since this case we have found that the plasma of several cancer patients have caused healthy people's lymphocytes to become flagellated, but we have not succeeded in demonstrating this phenomenon in every cancer case. On the other hand, we have never yet seen it occur with the plasma of persons other than cancer patients unless artificial excitant was added. In stating this it must be remembered that we have not seen flagellation in many cases, and we do not wish to be dogmatic, for it is quite possible that we may yet find it produced by the plasma of other persons.

We wish to take this opportunity of pointing out that we have recently found excited movements in the leucocytes of healthy persons produced by the plasma of persons who are not apparently suffering from cancer, though the movements so produced are not so marked as those caused by cancer plasma, and the two can be differentiated. We are experimenting with a modification of the citrate solution with which we mix the blood, as we

find that a 3 per cent. solution of sodium citrate sometimes itself excites the production of short pseudopodia. By this means we hope to get a better contrast between cancer and other plasmata. It will be necessary to make a large number of experiments before we can satisfy ourselves that other persons' plasmata never excite amoeboid movements to the same extent as we have found to be characteristic of those produced by the cancer plasmata, or cause lymphocytes to become flagellated.

The next question is: Is flagellation a living phenomenon or is it a *post-mortem* effect? We consider that it must be a living phenomenon, because not only can the extrusion be watched, but we have also seen a flagellated cell extruding and retracting long snake-like pseudopodia. Moreover, the cover-glass has been carefully removed from a slide in which flagellated cells were seen, and was then dropped on to an agar film which contained excitant, when all the cells immediately showed excited movements even if they were not doing it in the first slide.

We have stated that the cells with bright staining granules or masses in the cytoplasm, which appear to be the only ones which become flagellated, are the mononuclear leucocytes or lymphocytes. The identity of the small lymphocytes is conclusive owing to their small size, and in order to determine the class of the larger cell with brightly-stained granules in the cytoplasm we succeeded in staining their nuclei and so clearing up their nature by the following experiment:

A specimen was made with artificial excitant, as described in the early part of this paper. Some flagellated cells were seen, and the appearance of the brightly stained granules noted. An agar film was prepared which contained a sufficiency of stain and alkali to stain the nuclei of lymphocytes at 37° C. in ten minutes.¹ The cover-glass was carefully removed from the first slide, and without allowing the adherent leucocytes to dry, was dropped on to the agar film. A field was found which contained a cell with brightly stained granules. The slide was then incubated at 37° C. for ten minutes. Since the agar film contained sufficient stain and alkali to stain the nuclei in ten minutes, it was found on removal from the incubator and examination of the same field that the cells which had brightly-stained granules contained large single nuclei, which showed them to be lymphocytes. This experiment has been repeated many times.

Up to the present, therefore, we feel justified in stating that it is only the lymphocytes which present brightly staining masses or granules in their cytoplasm, and that it is only these cells which become flagellated.²

There is yet another reason which shows that these cells are the ones commonly known as lymphocytes; we mean the almost invariable presence in them of centrosomes. If blood is placed on a jelly which contains sufficient stain and alkali, and is kept at such a temperature as to cause the granules of the leucocytes to stain deeply, every lymphocyte will be seen to contain one, two, or three brightly stained small round or oval rings lying in the cytoplasm. (These have been illustrated in a former paper.) We presume that these bodies are centrosomes, but as far as can be seen the lymphocyte is the only leucocyte which contains them. They can always be seen on the jelly which excites amoeboid movement in leucocytes. They may be small rings or ovals, and sometimes appear thickened on one side like a signet ring, or they may be semilunar or horse-shoe shaped. They are always present, and can be readily found with a 1 in. objective.

Professor Ronald Ross, who invented the jelly method of *in vitro* staining, has frequently seen these rings. He thought that they might be what are commonly known as nucleoli because they appeared to be within the nucleus. When the cell is spread out between the jelly and the cover-glass, as the nucleus is so large the centrosomes will generally appear as though they were within the nucleus, whereas in reality they are situated outside it, that is, above or below it. One of us who has seen them a large number of times also thought they were nucleoli until he saw them lying in the cytoplasm beyond the edge of the nucleus. Moreover, they become stained long before the nucleus,

and cells will live and be very active with their centrosomes stained, but die if the nuclei are stained. The centrosomes must not be mistaken for "red spots,"³ which begin as small points, and attain a large size, whereas a centrosome (if such it be) is always the same size, and never appears to alter. A red spot is homogeneously coloured, whereas a centrosome is ring-shaped, and only its circumference will colour. As stated above, we have never seen a similar centrosome in any blood cell except a lymphocyte, and if the cells with brightly staining masses or granules in their cytoplasm are placed on stained agar, they will generally exhibit one, two, or three of these rings.

We wish to take this opportunity of stating that, although we have examined a very large number of fresh blood cells by this *in vitro* method of staining, we have never yet seen any sign of a mitotic phase in a cell, though of course we have only examined blood from the peripheral circulation.

At this stage we have no right to speculate as to the nature of these flagella; but perhaps we may be permitted to suggest an hypothesis which we have discussed with several of our friends who have seen this phenomenon. Anyone repeating the technique for demonstrating the excitant for leucocytes in cancer plasma is practically certain, sooner or later, to come across these flagellated cells, so that the advancement of a theory as to their nature, although it may be based on few facts, may not be amiss. The flagella usually separate off and progress through the plasma nodule first. Whether this progression is due to a living movement or to streams in the plasma is difficult to determine. Sometimes they look very much as if they had the power of movement. They can easily be seen to break off, and can be followed if the microscope has a mechanical stage. They usually either stick to a red cell or get lost among them.

About a year ago a lymphocyte which had become flagellated owing to artificial excitant was shown to Dr. E. H. Ross, of the Egyptian Public Health Department, Port Said, and he remarked upon the resemblance which it presented—though a possible association between flagellation and cancer was then quite unthought of—to the gametocyte of malaria. When he saw the separation he also suggested that the flagella were spermatozoa.

Now this is a suggestion which may be of the greatest importance, an importance which is greatly increased if flagellation is produced by a possible excitant in the plasma of persons suffering from carcinoma. We are aware, and Dr. E. H. Ross was also aware, of certain cytological difficulties in the way of the suggestion. But these difficulties are by no means insuperable, and do not render the suggestion impossible. In this paper we shall not go into these cytological problems, as our original intention was merely to record the facts as seen by us. Yet we will draw attention to the possibility of the brightly staining masses and granules in the cytoplasm being chromatin, and to the dot or nodule at the ends of the flagella being composed of one of these granules. Hermann, quoted by Walker,⁴ has described chromatin bodies in the cytoplasm of cells, deriving them from the nucleus, and it has been suggested that this may be the extrusion of the male element. If the flagella are spermatozoa, and if they are produced by some excitant in the plasma of cancer patients, they may play an important part in the causation of the disease. It is impossible to say what cells may be fertilized by these spermatozoa, if they are such, and we do not propose to speculate further.

In conclusion, we may add that we have not yet been able to fix a flagellated cell on to a slide, because the filaments break off on being handled. If a specimen containing cells with brightly staining granules in the cytoplasm is fixed on to a slide and restained, the brightly staining granules and masses seem to have disappeared in the process of fixation.

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¹ Dr. Stevens has informed one of us that he has in the tropics seen red cells apparently become flagellated, but he has never seen a leucocyte appear like the one he saw in our laboratory. This is referred to in the *Practical Study of Malaria and Other Blood Parasites*, second edition, by Dr. Stevens.

NOTE ON THE TREATMENT OF PERNICIOUS ANAEMIA.

By BYROM BRAMWELL, M.D., F.R.C.P.E.,

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DURING the past year I have met with two cases of advanced pernicious anaemia in which, after a certain degree of improvement had taken place under arsenic, arrest of the improvement occurred, and in which the administration of iron was then attended with very marked and rapid alteration for the better.

It has for long been recognized that in typical cases of pernicious anaemia, in which the colour index is above the normal and each individual red blood corpuscle contains more than the normal amount of haemoglobin, the administration of iron is usually unattended with benefit, and is in many cases apparently injurious. This certainly has been my own experience; but I have met with some exceptions, amongst which the two cases to which I have just referred are perhaps the most striking. The notes of one of the two cases are as follows:

Mrs. P., aged 54, was admitted to the Edinburgh Royal Infirmary on September 1st, 1908, complaining of weakness, bleeding piles, and swelling of the feet.

History.

The patient stated that she had been a strong, healthy woman until three years previously; she then had an attack of what she termed "jaundice"; this lasted for seven weeks; she has had two other attacks of the same sort since, the last about a year ago. For thirteen years she has been troubled off and on with bleeding piles; for some months before her admission to hospital the piles had been worse.

Condition on Admission to Hospital.

Temperature 99.2°, pulse 108, respirations 32; extremely pale and anaemic. The face had a yellow tinge, but there was no jaundice; the feet were swollen. The patient was not emaciated, but stated that she had lost a good deal of flesh lately.

The blood showed all the characteristic features of advanced pernicious anaemia. The red corpuscles numbered 545,000 per cubic millimetre, the haemoglobin equalled 15 per cent., the colour index was 1.2, the white corpuscles numbered 3,800 per cubic millimetre. The differential count was as follows: Polymorphs, 73 per cent.; small lymphocytes, 19 per cent.; large lymphocytes, 7 per cent.; eosinophiles, 1 per cent. The red corpuscles showed marked poikilocytosis; no normoblasts or megaloblasts were found.

The appetite was poor; the patient complained of thirst. The bowels were constipated. All the teeth were absent. The patient stated that she had had no teeth for three years, and that she had for a long time only had one or two teeth; she further stated that she had not suffered from dental caries or from a sore mouth; her teeth simply dropped out, and did not decay.

The tongue was slightly furred; the liver was considerably enlarged, projecting $\frac{3}{4}$ in. below the costal margin; the spleen was somewhat enlarged.

The patient was very short of breath and suffered from palpitation, and at times faintness. The pulse was 108, soft and weak; the blood pressure 120. Blowing systolic murmurs were heard in all the cardiac areas, most marked at the apex.

The urine contained a trace of albumen but no casts or other abnormal constituents.

There were no haemorrhages in the retina; the fundus oculi was pale, the optic discs normal.

Treatment.

Gradually increasing doses of arsenic, commencing with 2 minims of Fowler's solution three times daily, increased every fourth day by 1 drop. The maximum dose, which the patient was able to take was 10 drops three times daily.

Progress and Result.

Under this treatment great improvement rapidly took place. On October 1st, the patient was looking and feeling very much better, and the condition of the blood showed a marked improvement—the red corpuscles were 1,800,000, the haemoglobin 50 per cent., the colour index 1.2. From October 1st to November 10th, although the general condition improved, there was no alteration in the state of the blood. On November 11th Robertson's Bland's pill capsules—one No. 3 capsule (equal to three Bland's pills) three times daily—were prescribed. Under this treatment striking improvement in the condition of the blood immediately took place. On November 20th, the red corpuscles equalled 3,000,000, the haemoglobin 60 per cent., and the colour index 1.2. On November 23rd the patient was discharged from hospital, and advised to continue the iron. On January 13th, 1909, when she was last seen, she stated that she was perfectly well. She looked very well—many years younger than on her admission to hospital. The blood examination showed the red corpuscles 4,100,000, the haemoglobin 65 per cent., and the colour index 0.7.

It is important and interesting to note that the iron produced a marked and rapid increase in the number of red corpuscles, and that after the administration of iron the colour index fell from 1.2 to 0.8.

Table showing the Condition of the Blood at different Dates.

	Red Blood Corpuscles.	Haemoglobin.	Colour Index.	White Blood Corpuscles.
		Per cent.		
September 3, 1908	545,000	15	1.2	3,800
" 6, "	580,000	16	1.2	—
" 12, "	890,000	25	1.2	3,600
" 16, "	1,200,000	30	1.2	—
" 29, "	1,600,000	40	1.1	2,200
October 6, "	1,900,000	45	1.6	3,200
" 16, "	1,600,000	50	1.2	5,500
" 29, "	1,800,000	45	1.1	3,600
November 3, "	1,600,000	45	1.2	3,200
" 10, "	1,800,000	50	1.2	6,600
" 20, "	3,000,000	60	0.9	5,000
December 2, "	2,900,000	55	0.8	—
January 13, 1909	4,100,000	65	0.7	7,600

* Arsenic prescribed.

† Iron prescribed.

‡ Patient discharged from hospital on November 21st.

The fact that the patient had had no dental caries and no glossitis and that there had been no oral sepsis is an interesting point. I have met with and recorded some other cases of pernicious anaemia in which the same fact has occurred. I consequently doubt whether oral sepsis has the important influence in the production of the disease which some authorities have suggested. I am disposed to think that the glossitis from which many patients who are affected with pernicious anaemia suffer is a consequence rather than a cause—due, presumably, to the same toxin, whatever it may be, which is the cause of the anaemia.

SOME REFLECTIONS REGARDING THE FREE USE OF BACTERIOLOGICAL CULTURES FOR THE DESTRUCTION OF RATS AND MICE.

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Owing to the general use of certain microbic cultures for the destruction of rats and mice, field mice, rabbits, and other small rodents, the question of a possible danger which these cultures may present with regard to the health of human beings has lately been raised.

The destruction of vermin is of course most important, both from a hygienic and an economic point of view. Rats and mice are the principal propagators of the plague, and probably of many other contagious diseases; we know, also, that rats and mice in warehouses, etc., and mice and voles in the fields, are often the cause of enormous damage. In France, for example, in the year 1903, field mice did nearly a million pounds worth of damage to the crops, and the scourge was only stopped by applying in the fields a virus prepared at the Pasteur Institute in Paris at the request of the French Government. In Great Britain, according to recent estimates, the damage caused by rats amounts to as much as £10,000,000 per annum.

It is incontestable that the introduction of raticide viruses has played a most important part in the campaign against these animals, nor must we forget that the application of these bacteriological methods for practical purposes is only of recent date, and that they have not yet been brought to complete perfection. It will readily be admitted that it is only since the introduction of these methods that the systematic and scientific study of the destruction of rodents has begun, and that it is solely by persevering in this direction, and by taking advantage of

every resource offered by science, that serious and lasting results can be obtained.

It would, therefore, be most undesirable in the general interest, if the free development of this science and of this new industry were prevented, as we should thereby be denied the advantage to be gained by practical experiments and trials with biological methods, in the campaign against destructive animals. It would be most unscientific to do this without sufficient reason.

The viruses of Loeffler, Danysz, Issatschenko, Neumann, and Dunbar belong to the group of microbes called *Salmonella* or *Bacillus enteritidis*. According to the most recent investigations, two types are to be distinguished among these bacilli, differing from each other in several biochemical characteristics.

Type I, to which belong the bacillus of Loeffler, of hog cholera, and of psittacosis, all apparently identical with the *Bacillus paratyphus* B.

Type II, to which belong the bacilli of the viruses of Danysz, Issatschenko, Neumann, and Dunbar, which seem to be identical with the *Bacillus enteritidis* of Gaertner.

The bacillus of psittacosis, discovered by Nocard during an epidemic among parrots, must be placed in a special category, as it appears to be very dangerous to man. All the other bacteria belonging to the *Salmonella* group call for special examination. The bacillus of hog cholera was for a long time considered to be the cause of this disease, but we now know with certainty that, although this bacillus is often found in the excreta and in the blood of pigs affected with cholera, yet it is in reality another microbe, invisible under the microscope and able to penetrate porcelain filters, which is the real agent of the disease. The visible microbe is a concomitant of no importance, unable to cause hog cholera in pigs. I lay great stress on this point, as it has a most important bearing on the subject.

The investigations of the American bacteriologist, Salmon, have incontestably shown that if the blood or the serum of a pig that has died, or is ill with cholera, are filtered, and if another pig is inoculated with these liquids, freed from all visible organisms, it will become infected with the disease, whilst inoculation with the visible bacillus, which has up to the present been looked upon as the sole agent of hog cholera, produces no appreciable effect. Thus we have a microbe which has for many years unjustly borne a bad reputation, and it is only now, since the existence of microbes invisible under the microscope has been established, that we are able to do it justice and declare it to be quite inoffensive.

Is it not possible that similar circumstances may obtain with respect to the microbes of Flugge and Gaertner, and particularly with those of the raticide viruses, which, whilst bearing great resemblance either to the *Bacillus paratyphus* B or to the *Bacillus enteritidis*, differ considerably from them as regards their biological characteristics, especially in their virulence?

Cases of infection through food are comparatively rare, as appears evident from the very small number of cases reported in medical literature in the course of a year, and yet, surprising as it may seem, large quantities of preserved meats, smoked or salted hams, sausages, etc., and even smoked sturgeon, contain bacilli belonging to the groups *Paratyphus* B and Gaertner.

Valuable light has been thrown on this question by the recent investigations of Drs. Muehler, Dahm, and Fuerst at the Institute for the Study of Infectious Diseases in Berlin.¹ They bought at random, in the shops of Berlin, fifty-seven specimens of preserved meats, and subjected them to minute bacteriological examination. Some white mice were also fed with portions of each. The results were quite unexpected; forty of these portions of meat gave characteristic diseases to the mice, which in the majority of cases proved fatal, but upon the autopsy of the mice cultures identical with *Bacillus paratyphus* B and the Danysz virus were found, while in the meat none of either the one or the other of these microbes could be traced.²

Since Couradi and Uhlenhuth first drew attention to the frequent presence in Nature of paratyphic bacilli they

¹ This fact does not prove that there were no pathogenic microbes in the incriminated samples, but it proves in an incontestable fashion that preserved meats may produce serious accidents in connexion with which *Bacillus enteritidis* may be found in the blood of the victims, while at the same time it may be impossible to discover these microbes in the articles of food which have caused the illness.

have been found everywhere—in articles of food and in the excreta and the urine of perfectly healthy persons and animals. Huebener³ found *Bacillus paratyphus* B in various kinds of *charcuterie*, fresh and preserved, of which he and his family partook without the slightest evil effects. Rimpand⁴ found the *Bacillus paratyphus* B in the excreta and the urine of eleven perfectly healthy individuals, none of whom had come into contact with persons suffering from disease. Uhlenhuth, Huebener, Nylander and Bohtz⁵ have frequently found the bacillus of hog cholera or *Bacillus paratyphus* B in the normal contents of the intestines of pigs.

It should be noted that in 1903-4 nearly 600,000 litres of cultures of the Danysz bacillus were distributed in France, in different departments, for the purpose of destroying field mice; that for more than ten years some hundreds of litres of virus have been distributed every week for the destruction of rats, and that consequently more than a million persons have handled this virus without taking any special precaution, and that, in spite of that, no appreciable case of illness has resulted, either in man or among domestic animals.⁶

CONCLUSIONS.

The following points should receive special attention:

1. Mice die after having eaten meat, and show the presence of the *Bacillus paratyphus* B or Gaertner's bacillus in the blood, whilst these microbes could not be discovered in the meat itself. (Muehler, Dahm, Fuerst.)

2. Small and large quantities of food containing the *Bacillus paratyphus* B or Danysz virus have been eaten by human beings, without the slightest evil effects being apparent. (Huebener, Danysz.)

3. *Bacillus paratyphus* B is often found in perfectly healthy human beings. (Couradi, Uhlenhuth, Rimpand, and others.)

The following conclusions would, therefore, appear to be justified:

1. That the microbes of the *Salmonella* group are extremely widespread in Nature.

2. That, if these microbes are found frequently in cases of poisoning through food, it is far from being proved that they are the active agents in these occurrences.

It is much more probable, as maintained by Professor Marx,⁷ that they are due to ptomaines or other poisons emanating from foodstuffs more or less tainted, and that the microbes in question are only inoffensive concomitants, as in the case of hog cholera.

In the course of the above-mentioned investigations Drs. Muehler, Dahm, and Fuerst have once more confirmed the value of the raticide viruses; they found notably that the Danysz bacillus killed more than 50 per cent. of wild and over 90 per cent. of domestic rats.

I think, therefore, that microbic cultures which have been handled for more than ten years by more than a million individuals, and which have been scattered broadcast on bread or grain in many parts of the world and placed within reach of domestic or other animals without causing any serious accident, cannot reasonably be considered dangerous.

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⁶ With a view of showing the many opportunities of infection which were afforded by the methods adopted when applying the virus over large areas, it may perhaps be of interest to describe in detail the manner in which it was distributed. For an area of 1,000 hectares (2,500 acres approximately) a quantity of 1,000 litres (225 gal. approximate) of the virus was employed, and from 1,200 to 1,500 kilos. (24 to 30 cwt. approximate) of crushed grain was soaked with it. If sufficient receptacles were not to be had to contain all this grain and liquid, the grain was put on the floor of a schoolroom, a barn, or the large room of an inn, the virus poured over it, and the mixture effected by means of spades. The bait, thus prepared in the morning, was distributed in the fields during the afternoon. For the purpose of distribution, a large number of the inhabitants of the village were requisitioned—men, women, and even children of over 12 years of age. Each person received some of the soaked grain in a basket or some other receptacle, and they used their hands to place it where required. One man was able on an average to lay the necessary bait for 1 hectare (2½ acres) in a day, and as the work had to be finished as quickly as possible, many persons were thus occupied for several days in succession. The bait was apt to stick to the hands, to the garments, to the baskets, and to everything with which it came in contact. The peasants, and especially the children, absorbed it more or less; the animals on the farms, game, and birds ate considerable quantities of it. The inhabitants of about 1,000 parishes in France were thus brought into contact with the virus.

ACUTE PANCREATITIS FOLLOWED BY PANCREATIC ABSCESS: OPERA- TION: RECOVERY.

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Up to the present time there are few men who had the felicity of diagnosing a case of acute haemorrhagic pancreatitis before abdominal section; but in order that this privilege may be transferred from the few to the many it is necessary that these somewhat obscure cases (though not, it seems, so very uncommon) should be reported, in the hope that some points may be elicited which will help to make the clinical picture of this disease more complete.

The following case of acute haemorrhagic pancreatitis was followed subsequently by a pancreatic abscess and eventual recovery:

M. R., a married woman, aged 46, was admitted to the Waihi Hospital, New Zealand, on June 24th, 1908.

History of Attack.

Early on the morning of June 23rd she was seized with acute agonizing pain in the abdomen, accompanied by very frequent vomiting and sweating. She vomited about every half-hour, and, from the description, it was evidently very severe. The bowels moved once just after the pain began. At the end of twenty-six hours the pain lessened and the vomiting stopped; she was then brought to the hospital, a distance of some eight miles.

Condition on Admission.

The temperature was 100° and pulse 90. She complained of severe pain just above the umbilicus, and there was a little general abdominal distension. She would allow only the gentlest pressure on the abdomen, but it was not anywhere rigid. There was no jaundice; the face was rather pinched but not in any way "Hippocratic"; in fact, she did not look very ill.

Previous History.

It appeared that she had frequently had attacks of abdominal pain, the first occurring about seven years ago. Latterly the attacks had become more frequent, and after the last one, three months ago, she became jaundiced. The attacks were usually associated with diarrhoea. Dr. Cheesman, of Karangahake, had told her she had gall stones, and advised removal, but her aunt had died after an operation for gall stones, so that she was reluctant to undergo one. She had for a long time suffered from "indigestion."

Progress.

On admission enemata were given without result. The next day she seemed a little easier, although the pulse was a very little faster. On June 26th the bowels had not moved and the distension was increasing. The distended transverse colon showed below the umbilicus. No flatus had been passed. The pulse had increased to 120 and the tongue was very furred; she had not vomited but felt a little sick. There was no jaundice and the liver dullness was present. Pain was still definitely located at a spot about 1 in. above the umbilicus in the middle line. The upper part of the abdomen moved better in respiration than the lower. Rectal and vaginal examination proved negative. A few hours later she began to vomit again and immediate operation was decided on.

First Operation.

June 26th, 1908. An incision was made in the middle line, cutting out the umbilicus. On opening the abdomen, fat necrosis of the omentum was immediately noticed. The incision was now extended upwards, and a large quantity of blood-stained fluid was found free in the abdominal cavity. In the region of the head of the pancreas a large hard swelling, feeling about the size of a Tangerine orange, was palpated. On lifting up the stomach and omentum, many necrotic patches were seen in the fat round the region of the duodenum. In spite of gentle handling a hole was torn in the gastroduodenal omentum, just below the pylorus; this exposed the head of the pancreas, which was seen to be intensely engorged and the dark red colour. The tear had caused considerable oozing from vessels on the surface of the pancreas. It was now seen that all the structures in this region (except the pancreas) were unduly softened and friable, due to the action of the digestive ferments; this would account for the tear in the gastroduodenal omentum. Two small swabs soaked in adrenalin were passed into this tear, and attention turned to the distended condition of the bowel. It was not so distended as to warrant puncture, and a long rectal tube was threaded; on passing the tube a quantity of light yellow faeces evacuated; on passing the bowels more ran out. The gall bladder was small and thickened, and had two enlarged tortuous veins running over the surface; one stone was felt in it. The swabs were now removed from the rent in the pancreas; the bleeding had stopped. A gauze tube was passed down to the head of the pancreas through the hole in the gastroduodenal omentum and brought out of the upper end of the wound. A second tube was put down towards the pelvis. A small incision for drainage purposes was also

made through the abdominal wall about the level of the tip of the tenth rib and a tube passed down from here into the right kidney pouch. This tube was removed in forty-eight hours.

The next day the pulse was 100 and temperature 99°. There was a little vomiting but no pain since the operation. The patient felt comfortable. Rectal saline injections were given every four hours for two days. Sips of water and champagne were given for twenty-four hours. Tympanitis was still troublesome but it could always be relieved by the rectal tube. On June 28th a turpentine enema was administered with good result. She was now on peptonized milk. The wound required dressing twice a day. The patient got on well, and had a normal temperature until July 7th, when she had occasional attacks of pain, which reminded her of the pain she had experienced with previous attacks of "gall stones." At this time also the temperature began to rise, until on July 12th it was 102.8° and the pulse over 100. The abdomen once more became tender and tense. As the discharge coming away from the tube leading down to the head of the pancreas was becoming less and the temperature rising, further operative interference became imperative in spite of the low general condition of the patient; in fact, she was now in a worse condition than she had been since entering the hospital, and the following operation was performed as rapidly as possible; the time occupied was about thirty-five minutes.

Second Operation.

July 13th, 1908. Mayo Robson's incision for exploring the gall bladder was made with the patient on a sand pillow. Firm adhesions were met with fixing the liver to the colon and the great omentum. The great omentum showed patches of fat necrosis, but they were yellow and smaller than on any other occasion. There were also small filamentous adhesions about every patch of necrosis seen in the field of operation. The adhesions were separated with some bleeding, exposing the fundus of the gall bladder and part of the duodenum. A probe was then passed down the sinus leading from the original median incision, and it was found to end in adhesions just above a small hole leading into the region of the head of the pancreas. Swabs were packed into the kidney pouch and all round the site of the operation, and with the finger the opening in the pancreas was gradually enlarged. About an ounce of foul pus escaped, and the finger found itself in a cavity with smooth walls containing a necrotic piece of pancreas; this was removed with forceps, and was found to be about an inch and a half long by half an inch wide. Considerable arterial bleeding was now encountered from somewhere about the mouth of the abscess cavity; this was very troublesome, but finally stopped on pressure with a swab soaked in adrenalin.

Stones could be felt in the cystic duct and two in the common duct, but as the patient was in anything but a favourable condition I simply incised the thickened gall bladder, and tied in a small tube, hoping that some of the stones would eventually come out. No bile escaped, showing complete blockage of the cystic duct. The incision was closed after seeing the head of the gall bladder to the peritoneum and passing a large drainage tube well into the abscess cavity in the head of the pancreas and another into the right kidney pouch. The sinus in the original median incision was closed with fishing gut; 1½ pints of saline were then put into the right basilar vein, and the patient put back to bed.

The next day flatus was passed, and the bowels were moved; but there was considerable pain in the wound, and for the first time blueness of the lips and blue spots in the cheeks were noticed. From now on the temperature gradually came down to normal, but it was not until a fortnight after this operation that the temperature kept steadily on the normal line. The gall bladder drainage tube came out about seven days after the operation, and the tube from the pancreatic abscess was removed after the temperature became normal. A small gall stone came out of the wound about a week after the operation, and seemed to give the patient much relief; ten days after this six small pale stones appeared in the dressings, which were unfortunately thrown away by the nurse before I could examine them, but from the glimpse I had of them I should think they were pancreatic calculi.

On August 27th the temperature again rose suddenly to 103°. This was due to an abscess in the left arm, which discharged the following day just before I had arranged to incise it. No other rise of temperature was observed. Several times during the illness the urine was tested for sugar, but none was found. Cammidge's reaction I was unable to try.

She was discharged from the hospital on September 6th, feeling quite well.

Up till the time the abdomen was opened I must admit that the diagnosis of pancreatitis had not entered my head. I have thought since that if I had seen her in the first twenty-four hours when the vomiting and pain were so intense I might have considered it, but she did not come to the hospital until this had subsided. The reason for operation was that the symptoms of obstruction were becoming marked and the general condition of the patient worse. The diagnosis made before operation was obstruction due to an impacted gall stone, on account of the comparatively gradual increase in distension and the previous history of the patient. A symptom which has been described in these cases is that the abdominal distension

is more marked above the umbilicus, whereas in this case the abdominal swelling was more marked below the umbilicus, owing to the distension of the colon. No pancreatic tumour was felt, owing perhaps to the difficulty of palpation due to the general tenderness of the abdomen. The only symptom which seems now to have pointed strongly to pancreatic inflammation was the constancy of the tender point 1 in. above the umbilicus. A perforated gastric ulcer might have caused this, but in this case the liver dullness was always present, and neither the appearance of the patient nor the abdomen was at all suggestive of this latter condition, for the abdominal wall, though tender, was not rigid, and the distension was very slow in becoming marked, making the clinical picture more one of intestinal obstruction than peritonitis. I do not think this case would have required the second operation for the pancreatic abscess if I had made a deeper incision in the pancreas: as it was, the drainage tube must have lifted away just enough to prevent free drainage.

On October 19th, 1908, I saw this patient again, and she was in good health and felt quite strong, but is troubled with a small fistula leading from the gall bladder out of which a small quantity of mucus issues. At date of writing, November 16th, 1908, the patient is quite well, and the fistula has been healed for about three weeks.

ARROWS AND ARROW WOUNDS IN NORTHERN NIGERIA.

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The weapon of war most generally used among pagan races of Northern Nigeria is the bow and arrow; even the more civilized races, who fight on horseback with spear or sword, generally include a strong company of archers among their forces. The arrow is also used in the chase, and is then, as far as one can learn, anointed with the same poisonous substances that are prepared for human quarry. Native big game hunters, who may have access to gunpowder, fire their arrows (which are much stouter than the ordinary bow arrow) out of Dane guns at close quarters; the hunter in this case is often the first to fall! There seems to be no objection among the natives to eating the flesh of game killed by these weapons. The arrow consists usually of a simple barb made from local iron mounted on a shaft of stout reed, the whole measuring about 2 ft. in length. They are usually very neatly made, and as many as thirty or forty arrows can be carried in one quiver. A winged arrow is practically unknown, but this is explained by the fact that the arrow is not meant to kill, but is simply a poison carrier; consequently they are generally discharged at close range, though instances are on record of men being hit at ranges varying from 150 to 200 yards.

Usually the first intimation that hostilities have commenced is a shower of arrows shot into the air, but there is no doubt in the bowmen's mind as to where they are to fall, and a few generally find their billet. Other tribes, especially hill pagans, adopt other tactics and go in for sniping at close quarters—a most unpleasant experience for those sniped at.

The bow apparently does not come in for nearly the same amount of care in its manufacture as do the arrows, though it seems to fulfil its purpose quite well.

There is great difficulty in extracting from the natives any reliable information as to the composition of their poisons, and there seems to be a different recipe for each district. Evidence is accumulating to show that in nearly all the Northern Nigerian poisons some form of *strophanthus* plays a part. The composition of the poisons, however, is never simple, but consists of various animal and vegetable ingredients which may have a local reputation for being noxious. Thus the inspissated juice of various cacti and euphorbiae is a favourite ingredient with hillmen, while the roots, leaves, and fruit of other wild plants are often incorporated.

Animal secretions in a state of decomposition are said to be used by some of the more savage tribes. The people in one district are credited with the manufacture of a poison so deadly that only the very aged and feeble are allowed to make it. Others, again, adopt the simple method of

using a decomposing carcass as a sort of pincushion for infecting their arrows. Finally, there would appear to be districts where the tetanus bacillus abounds, and arrows are rendered poisonous by merely planting them head downwards in the soil.

The native is particularly reticent (and often cunningly misleading) about a matter that affects him so closely, but the results of sending home all available specimens of poisons is encouraging. The poison paste, as seen on the arrow heads, has a dark and often varnished appearance: it is partly soluble in water, a resin-like substance being frequently precipitated. In all probability old paste loses most of its poisonous properties; injections into animals with old material generally produce no result. It would seem that the natives themselves realize this fact, for they generally "brew" a fresh supply of poison before starting on any raiding expedition, or in anticipation of a visit from the white man and his troops. On more than one occasion I have noticed that the marksmen are accompanied by poison bearers, who carry the poison in a fresh and liquid state enclosed in small gourds. The Bowman then inoculates each arrow as required by dipping it into the poison cup.

Nearly all the samples of arrow poisons from Northern Nigeria that have been sent to the Imperial Institute for analysis have been found to contain *strophanthus* and strychnine, besides several other substances physiologically unimportant. Both poisons are derived from plants growing locally.

The injuries from arrows range in severity from a mere skin scratch to the transfixion and laceration of some deeply placed organ; and the seriousness or otherwise of such wounds depends upon the part of the body hit and the character of the poison used. As far as my observations go, the individual powers of resistance on the part of the patient need not be considered, as the troops sent on an expedition are all picked men in sound health. The temperament and fatalistic tendencies of the native soldier, however, should always be remembered, as these factors certainly affect the prognosis.

The range at which an arrow is fired greatly affects, of course, the degree of its penetration, and the resulting wounds are proportionately serious. A deep artery may be wounded, or fatal haemorrhage may occur from the transfixion and laceration of some internal organ. I have come to believe, too, that the toxic effects of a poisoned arrow are enhanced by the depth of the wound it causes. In the first place, the poison is more easily rubbed off under such circumstances; secondly, the arrow head must necessarily remain a certain time *in situ*, thus allowing the poison to be absorbed; and, lastly, remedial measures are more difficult to adopt if the wound is deep.

A wound from a poisoned arrow should always be considered serious, however slight the injury may appear, and whatever part of the body is affected. Perhaps wounds of the limbs are less dangerous than most others, while wounds that affect serous membranes or vital organs are naturally graver on account of the attendant complications.

As mentioned above, the age of the poison is important; it may be old enough to be inert, or the paste may require a little time in contact with the blood and fluids of the body to be dissolved and absorbed. It may be taken for granted that no surgically clean arrow ever leaves the bowstring, so that sepsis has to be guarded against in any case.

The clinical symptoms vary considerably, as might be expected from the composite and uncertain character of the poison. Slight wounds that do not penetrate far beneath the skin generally do well and give rise to no symptoms if treated on sound surgical lines. Deep wounds, however, are more serious, and the accompanying table, which is extracted from the medical report on the Chibbuk expedition in 1907, shows briefly the history of the 10 fatal cases which formed 20 per cent. of the total casualties on that occasion.

It will be seen that the dangerous cases arrange themselves roughly into three groups:

Group I includes those cases in which death follows rapidly (quarter of an hour to two hours) upon the injury as the direct result of the poison, or from haemorrhage. The clinical symptoms here are those of a failing heart, and it is not always easy to say whether the patient is dying from a heart poison or from internal haemorrhage.

Case.	Length of Life after being Hit.	Nature of Injury (Arrow Wounds).	Remarks.
1	½ hour	Deep wound of back	Strychnine injections probably too late. In Case 2 also tannic acid not used at once, as the soldier thought slightly of his wound.
2	½ hour	Slight wound of thigh	Arrow extracted; death from syncope.
3	1 hour	Right lung pierced	Died almost at once on reaching hospital.
4	1½ hours	Right lung wounded	Patient brought in collapsed, and died in a few moments after admission.
5	1 hour	Left kidney wounded	Wound apparently clean, but cellulitis set in on the third day.
6	5 days	Perforating wound of forearm	Spreading cellulitis; death from meningitis; arrow extracted by patient; cellulitis.
7	36 hours	Frontal sinuses pierced	Tannic acid used early; arrow extracted by patient; cellulitis.
8	30 hours	Deep wound of thigh	Tannic acid used early; tetanus supervened thirty hours before death; wound apparently healthy.
9	8 days	Deep wound of buttock	Tannic acid used early; incisions for cellulitis, which cleared up; tetanus supervened twenty-four hours before death.
10	7 days	Forearm perforated	

When first seen the wounded are generally in a state of collapse, and the condition of such patients seldom warrants surgical search for internal bleeding. Diagnosis in such cases as 1 and 2, however, is not as a rule difficult. The stricken man with cold and sweat-covered skin, whose dilated pupils show no reaction, and whose pulse is slow, small, and irregular, presents a picture that is fairly easily recognizable.

Group II comprises cases in which apparently the heart poison is not at work but in which septicæmia sets in some hours or days after the injury. A certain number of cases are bound to become septic, but there are other wounds (of which Nos. 7 and 8 in the above table are instances) which apparently are aseptic in the beginning and give no cause for alarm. In those cases that end fatally there is a very rapidly-spreading oedema of the cellular tissues with high temperature, and the infection is probably erysipelatoid.

Group III contains what may be called the "convulsive" cases. Here the diagnosis is of some special interest as the spasms may be due either to tetanus or strychnine poisoning. In Cases 9 and 10 the early appearance of trismus, the tonic nature of the spasms, and the late onset of the symptoms generally, made the diagnosis of tetanus fairly certain; moreover, the samples of poison which were sent to England for analysis were declared to be free from strychnine.

The treatment of poisoned arrow wounds must necessarily be prompt, and where several cases are brought in at once the deepest wounds should receive first attention. Since promptitude is so important, and the surgeon cannot attend to each case immediately, I instruct the Europeans and the native non-commissioned officers in the principles of first aid. Each European engaged with the troops is supplied with a lancet, dressings, pure carbolic acid, and tannic acid, while each native section commander also carries a supply of tannic acid and bandages. In this way much time is saved. The procedure adopted whenever possible is as follows: A ligature is placed above the wound, which is then sucked by the wounded man himself or a comrade (the dangers of the practice are, of course, fully explained); the arrow is extracted when necessary and the wound cauterized by a glowing stick or by pure carbolic. The ligature is now removed and bleeding encouraged; finally tannic acid powder is packed into the wound and a dressing applied. In wounds of the face and other parts where ligation is not possible, manual compression should be tried and the wound excised or scraped, according to its size.

The French colonial surgeons place great reliance on tannic acid in the treatment of poisoned-arrow wounds. After using it in nearly 100 cases, I certainly think it has a curative action, provided that it is applied to the wound early enough. The exact method of its action does not seem quite clear, but possibly, besides constricting the blood vessels, it may form some insoluble or inert com-

pound with the active agents of the poison. Clinically it is observed that the efficacy of the drug varies inversely with the depth of the wound. It may be mentioned that the native soldiers have great belief in the drug, and such faith, of course, means a great deal in the treatment of sickness.

The after-treatment of simple cases is conducted on rational lines; a brisk purge is given as soon as possible, while stimulants and light food are generally indicated for the first few days. The more serious cases will require further treatment. In the first place, I think it is always advisable, in the case of natives, to remove the arrow if it has not been already extracted by the wounded man himself. Even where the case is hopeless, the patient generally wishes to be rid of his "thorn in the flesh," and I think in such circumstances the medical officer is justified in acting in accordance with the patient's wishes, rather than in following his own surgical instinct. Where an arrow has transfixed a limb, it is often better to thread the barb right through; much time is thereby saved, as backward delivery is often difficult; moreover, better drainage is thus established.

In the heart poisoning cases hypodermic injections of strychnine are indicated, and every attempt should be made to rally the patient. Each moment is precious, and while the wound is being attended to by an assistant, the surgeon should be injecting strychnine.

Obvious puncture of a large artery calls for ligation which should be well above the level of the wound on account of the possibility of septic infection and secondary hæmorrhage.

Cases of cellulitis require early and extensive incisions and generally prove very troublesome amid the rough and ready conditions of bush practice. A point worth remembering in such cases is, that baths, whether for the whole body or for the local treatment of wounded limbs, can be easily extemporized by excavating the ground and lining the cavities with waterproof sheeting.

It is best to isolate convulsive cases in some quiet part of the camp. The strychnine cases should be treated with the ordinary antidotes, but the tetanus cases do not seem very amenable to treatment. Chloroform and morphia would seem to be the only remedies as far as symptomatic treatment is concerned. The latter drug should be pushed and feeding conducted by enemata. In the absence of any antitoxin nothing more can be done beyond keeping up the patient's strength, and relieving distress.

In the general treatment of wounded soldiers in bush fighting it is well to remember one or two points. All wounds, of course, must be treated on strict antiseptic lines, though it must be admitted that compliance with these ideals is not always easy. Beds are very rarely available on active service, but it is important that patients with wounds should not lie on the bare ground, and native mats or ground sheets are generally available. Shade will be essential, and protection against dust storms and rains must be ensured. The water supply will need careful attention, and drinking water should be boiled before use. The food difficulty will arise quite early, and since the soldier's wife does not accompany him, other arrangements will have to be made. These, of course, will depend entirely upon local conditions, but, in any case, the medical officer will be amply repaid for any trouble he may take over the material comforts of his patients.

No real remedy for arrow poisons appears to exist among the natives themselves. Charms, of course, are popular, and they generally consist of small portions of a Koran bound up in leather, but almost any small article may be considered as a *ju-ju* according to the faith of the wearer.

At a recent meeting of the Zoological Society of London a paper by Dr. A. E. Brown, Secretary of the Zoological Society of Philadelphia, was read on the tuberculin test in monkeys. The paper described experiments recently carried out with a view of suppressing tuberculosis in monkeys. At the same meeting Professor E. A. Minchin read a paper on the flagellates parasitic in the blood of fresh-water fishes, in which five species of *Trypanosoma* and four species (two new) of *Trypanoplasma*, from fishes of the Norfolk Broads, were described in detail. Particular attention was paid to the minute structure of the parasites, and it was shown that it is possible to give a uniform description of the nuclear apparatus of both *Trypanosoma* and *Trypanoplasma*.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

THE USE AND ABUSE OF THE CURETTE.

I THINK the profession ought to feel deeply indebted to Dr. Herman for his timely and outspoken remarks on the above subject in his lecture published in the *JOURNAL* of December 5th, 1908. That the curette has become, in the hands of many medical men, by its too frequent and uncalled-for use, a weapon of offence, there is a deplorable wealth of evidence.

As a general practitioner, in my early days of practice I used the curette with a frequency for which I now chide myself. I learnt by experience that those cases of neurasthenia, with pain and aching in the iliac or hypogastric regions, with anaemia, leucorrhoea, and the other attendant symptoms, were not at all benefited by the operation of curetting to which I had submitted them, unless I except some little benefit derived by a few through the subtle suggestion of an operation. But I found that all those cases after operation required a more lengthy period of rest in bed to effect a cure than did my later cases whom I treated simply with rest in bed, plenty of natural food and sleep, douching, and sometimes tamponade. A general practitioner is more in a position than a consultant to learn the true nature of the causes which have induced the neurasthenic condition. More especially true is this in the case of newly-married women, who seem now to be resorting in droves to this operative procedure for relief from symptoms begot purely by a profound change in their lives, and at a time when the nervous system, unable to adapt itself to its new surroundings and conditions, exaggerates every little worry into a life's tragedy. A case I had a few years ago may illustrate my contention.

A dressmaker who had suffered for years from anaemia, dyspepsia and dysmenorrhoea, married. Her husband suffered from habitual insomnia and constipation following on an operation for appendicitis—a constipation only relieved by a daily enema. These and other troubles threw the newly-married wife into neurasthenia with pain especially in the ovaries and uterus. A few weeks' rest in bed with local treatment benefited her. She rose from bed and removed to a new house, which brought back a return of the congestion in the pelvic region. I had finished attendance before she removed. Her anxious husband on the advice of his friends consulted a specialist. I received a note from the latter saying that my patient was suffering from some enlargement of the body of the uterus with some atony of the muscular wall with a narrowed long cervix, that the operation of curetting was imperative, and that no conception was possible without an operation. The anxious husband had two or three weeks to cool his ardour for operation (during which time he learned that a friend's wife had had a similar operation performed upon her and nearly died from peritonitis following it). He went from one extreme to the other. I was asked to call again to see the patient. In my judgement the operation seemed unnecessary. I ordered rest, douching and tamponade for at least six to eight weeks. I attended to the husband's constipation and alleviated the insomnia. I had to discontinue the treatment of the wife in four weeks as I found she was pregnant. I have since attended her during two confinements.

Another case which came under my notice emphasizes certain points to which I have referred.

A married woman living apart from her husband suffered very much from metrorrhagia with enlargement of the uterus. Living in lodgings and lack of funds compelled me to send her to hospital. She was curetted, and on the second day after operation was obliged to walk from a private to a main ward. This brought on haemorrhage more severe than she had experienced, which persisted until her dismissal from hospital on the seventh day. Her condition on coming out was considerably worse than when she went in. I was informed by her that, out of the eleven patients in the ward where she lay, she was the only one, she was jokingly told, who had not had the distinction of being curetted more than once. The others had gone through two, three, or even four campaigns of curetting, and she was promised by them a speedy return. After she came out she rested in bed, and with local treatment was able to return to her former occupation of waitress.

The curetting of the virgin uterus is a thing apart. It appears to me as a routine to be a most revolting practice, and, on such slight grounds as instanced by Dr. Herman, one to be severely condemned.

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ALEX. FRASER, M.D.

A CASE OF HYDATIDS OF THE RIGHT OVARY.
The patient, aged 58, had during the last ten years lived in Italy, but prior to that she had lived in New Zealand. She had had two children and only ceased menstruating four years ago. At the menstrual periods she had never lost much.

About eight years ago she detected a small lump in the centre of the lower abdomen and twice she sought special medical advice regarding it. Those who saw her on these occasions and advised that it should be left alone no doubt considered, as I myself did, that the tumour was a fibroid of the uterus. Since she first observed the lump she has complained occasionally of a feeling of pressure on the bladder and of frequent desire to pass water. She consulted me because she had for eight weeks experienced more discomfort about the bladder. Apart from occasional backache she had practically never complained of any pain.

In the hypogastrium and extending farther into the left than the right iliac region was a very firm and somewhat ovoid swelling. It was not tender to the touch, and on bimanual examination it appeared to be uterine as the slightest movement of the abdominal swelling moved the cervix uteri immediately, and no portion of the body of the uterus was distinguishable from the tumour. It was quite evident, however, that the greater portion of the right half of the tumour was cystic, and on this account I strongly advised that the growth should be removed.

On November 2nd I opened the abdomen mesially. The tumour was so covered by bowel, omentum, and bladder, and was so very intimately incorporated with these structures and with the uterus, that the non-uterine character of the growth was only revealed as I freed these structures. The tumour then presented the appearances of a dermoid of the right ovary, and its exact nature was only revealed when it was laid open after the operation was completed. The tumour was of about the size of a full-term fetal head, and was crowded with the so-called daughter and grand-daughter cysts.

Hydatid cyst of the ovary is a great rarity. The tumour was not very large, and it evidently had grown very slowly. It, like other cysts of the ovary, had contracted firm adhesions with bowel, omentum, bladder, and uterus, without there resulting therefrom any very well-marked disturbance. Hydatids are not uncommon in Australia, but as far as I have been able to gather they are, comparatively speaking, rarities in New Zealand.

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DIACHYLON AS AN ABORTIFACIENT.

THERE is some reason to believe that diachylon is now being used to a considerable extent in the East End of London as an abortifacient. Recently several cases have come to my notice in which puzzling symptoms following abortion were traced to the use of diachylon. Naturally, patients under such conditions are not likely to be frank in their statements, and the doctor is greatly hampered in arriving at a diagnosis. This is neither fair to the doctor nor the patient. The medical man is not given the chance of doing himself justice as a clinician, while the patient's sufferings remain unrelieved. I therefore feel that it is expedient to draw attention to the fact that this practice is becoming more prevalent in the metropolis. In the blue line on the gums we have fortunately an obvious and reliable sign which should always be looked for in suspected cases. There is an impression among some medical men who have given the subject little attention that the blue line requires some time for its development, and that it is not likely to be present if diachylon has been taken for a short period only. Experience, however, shows that in all cases of plumbism from the ingestion of diachylon in which severe symptoms appear, the blue line is almost invariably present, and is often very distinct. As has been pointed out before by several observers, diachylon is a particularly insoluble lead compound, and seems to be absorbed very slowly from the alimentary canal. The following three cases, about which I happen to have a few notes, may be of interest in this connexion.

CASE I.

MRS. H., married and mother of a numerous family, came to me on April 25th, 1908, complaining of severe pains in the abdomen. She had missed her periods for two months, and

admitted having taken some steel and pennyroyal pills. She was given a sedative, and told to keep in bed for a day or two. On May 13th she was called to see his room, and found that she had aborted, expelling a three months fetus. The secondines did not come away at the time, but were expelled on May 15th. Up to this point I considered the outlook very favourable. The patient's sister, however, who happened to be in the room, informed me that she herself had recently miscarried after taking some diachylon which she purchased in a shop and swallowed in the form of pills. On the patient's look at the patient's gums, and to my surprise I found that she had a well-marked blue line. She admitted having also taken a few diachylon pills. In the subsequent history of the case the pernicious effects of the drug soon became evident. The woman suffered from severe attacks of vomiting and abdominal colic over a period of six weeks. During this time I was called to her on two or three occasions at night, and had to administer morphine and opiates to relieve the intolerable pain. Her expression was anxious and her complexion sallow. There was obstinate constipation throughout. The symptoms of lead poisoning were the only sequel of the miscarriage; there was no pyrexia, pelvic tenderness, hæmorrhage, or foul discharge from the vagina. The treatment consisted in the administration of magnesium sulphate and opiates. The patient was kept in bed on a milk diet. Potassium iodide was given for three days in the second week, but as it appeared to aggravate the symptoms it was discontinued. The patient finally made a slow recovery.

CASE II.

Mrs. P., a mother of several children, came to my surgery on June 27th, 1908. She complained of pains in the stomach and pains in passing urine. She stated that she had suffered in this way for three weeks, and had been attended by a doctor who thought at first that there were some symptoms of enteric fever, but subsequently changed his diagnosis to that of "floating kidney." In reply to my questions she said that she had attacks of vomiting, with pain, but no diarrhoea. A certain reserve on the part of the woman led me to examine her gums, where I found a well-defined blue line. She then confessed that she had had a miscarriage four weeks previously, for which she had taken some diachylon made into pills. She was not at all surprised when I told her that her present symptoms were due to the drug, but said that she did not tell the first doctor who examined her anything about it as she had not asked her. She was given a mixture containing tinct. chloro. et morphinae to relieve the pains, and was told to take Epsom salts every morning. Improvement was rather slow. The urine, examined on August 5th, was found to be markedly albuminous. Being now free from attacks of colic, she was given potassium iodide in a mixture to aid the elimination of lead, and subsequently a mixture of liq. ferri perchlor. with liq. ammon. acet. for the anæmia and albuminuria. I saw her again in September, when she appeared to be doing well; the albumen had disappeared from the urine.

CASE III.

Mrs. M. H., aged 37, a mother of six children, sent her sister to me on December 10th last for a bottle of medicine to relieve pains in her stomach. The history was that the patient had miscarried some three weeks previously, that living a considerable distance from my surgery she was attended by a nearer doctor, who said that everything was all right, but that the retention of removal from one house to another, and possibly a cold, had brought the pains back again. My suspicions being aroused, I advised that, if possible, the patient should come and see me herself. This she did two days afterwards, and on inspecting the gums I found a well-marked blue line. On being questioned the patient stated that she had been taking somebody's female pills, but on my asking her if that was all she took she admitted that she had taken some pills which another woman had given her, and which had been made by the woman herself from some substance like soap. The symptoms were vomiting and attacks of abdominal pain. She had the same dazed, sallow, and anæmic look which was noticeable in the other two cases quoted. This patient is still under treatment.

In conclusion I wish to say that I have been greatly aided in coming to a correct diagnosis, particularly in the first case, by the perusal of the articles which have appeared on the subject in the BRITISH MEDICAL JOURNAL during the last few years. I have since had occasion to consult them several times for the elucidation of some obscure points in the symptomatology and for suggestions about treatment.

London, E.

EDMUND HAY, M.B., C.M.

RECTAL INJECTION OF BROMIDES IN
PUERPERAL ECLAMPSIA.

SEEING the letter of Dr. Alfred E. Townley in the JOURNAL of September 19th, 1908, brings to my recollection a severe case which I had during the deep snow of 1881 in a primipara. The convulsions came on before delivery, and continued for nearly two days after. The head was

shaved, ice applied to the scalp, and chloroform was constantly administered, but nothing appeared to relieve until I injected per rectum potassium bromide, gr. xxx, with chloral hydrate, gr. xxx. This I repeated four hours afterwards. Soon after the convulsions stopped, and she made a good recovery. Hydrate of chloral by enema is advised in Swayne's *Obstetric Aphorisms*, fifth edition, 1871, and about that time, whilst a student at Guy's, I heard potassium bromide suggested as an enema.

Bridport.

W. A. E. HAY, M.R.C.S.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE
HOSPITALS AND ASYLUMS OF THE
BRITISH EMPIRE.

COVENTRY AND WARWICKSHIRE HOSPITAL.

A CASE OF AUDITORY VERTIGO: CURE BY OPERATION.

(Reported by F. FAULDER WHITE, F.R.C.S., Honorary Surgeon to the Hospital.)

The patient in the following case, a man aged 35, was admitted to hospital under my care on June 4th, 1908. He said he had had a running from the left ear for many years. Three months before admission he had suddenly become helpless from extreme vertigo while sitting at supper. He was very sick. Similar attacks recurred, becoming more frequent as time went on, until he was never sure of himself. He noticed that any exertion brought on an attack of vertigo. These attacks were often accompanied by vomiting.

State on Admission.—The man could not walk without staggering. He was quite deaf on the left side. The left ear was somewhat offensive in odour, and there was a minute central perforation in the membrane.

Operation.—On June 7th the membrane and malleus were removed through the meatus with a portion of the outer attic wall. Some carious bone was also removed from the walls of the middle ear. The parts were well cleansed with irrigation and attic mops, and a tympanic tube was left in the ear.

Progress.—For some days after the operation drops of chloroform solution were poured into the ear from time to time, but irrigation was not commenced before the fourth day. Some headache and giddiness were complained of at first, and antikamnia was prescribed.

Result.—There was steady improvement from the first, and no vomiting or severe vertigo occurred after the operation. He was transferred to the out-patient department on June 27th. The ear was sweet when he left off attending. Since then I have received the following letter from him; it is dated September 3rd: "I am very much better now. I am not suffering from giddiness up to the present. I thought a many times I would like to write to you to say how grateful I am." Three days later he cycled several miles to see me. He looked well, and said he had not felt giddy for some weeks. There was a slight discharge from the ear, which was without odour.

REMARKS.—I should not perhaps have reported this case but for the fact that two fatal accidents have recently been attributed to auditory vertigo. Some people have the idea that this trouble is necessarily hopeless; but, although a severe case, the above is one of many in which giddiness has passed away after disinfection of a diseased ear. Ear disease is most common, and vertigo may suddenly supervene. It follows that no one with ear disease should be allowed to drive a railway engine or motor car.

THERE are many who consider that the commercial strength of any seaboard country is best gauged by its shipping, and medical men interested in the subject will find a comprehensive review of it in the issues of the *Shipping World* for January 6th and 13th, the account being illustrated by an immense variety of photographs. Statements as to the shipping power of various countries are often misleading owing to registered tonnage alone being considered; but this error is avoided in this review, actual carrying power, not mere tonnage, being the unit of comparison.

Reports of Societies.

THE SOCIETY OF TROPICAL MEDICINE AND HYGIENE.

Friday, January 15th, 1909.

Sir PATRICK MANSON, K.C.M.G., President, in the Chair.

The Parasite of Kala-Azar and Allied Organisms.

Captain W. SCOTT PATTON, I.M.S., in a paper on this subject, said there was still much difficulty and doubt as to the cycle of events in the life-history of the parasite of kala-azar and those of the other closely allied organisms which were associated with Oriental sore and infantile splenomegaly. In all probability these were different species of the same genus. Christophers had shown, contrary to general belief, that the genus to which they belonged was not *piroplasma*; indeed, there was insufficient evidence that they could be regarded as a distinct or a new genus. Major Rogers had made an important contribution to our knowledge of the Leishman-Donovan parasite when he showed that in sterile citrated splenic blood the organism developed a flagellated form, but its morphology indicated that it was not a trypanosome. At no stage of the life-cycle did its appearance suggest a close relationship to any of the various phases of trypanosome metamorphosis. It was more nearly related to the familiar entozoan of the house fly, *Herpetomonas muscae domesticae*. Several of the stages of this organism were so closely allied to those of the kala-azar parasite that there could be no doubt of their affinity, and an exact knowledge of the life-history of *Herpetomonas* was essential to the study of the Leishman-Donovan parasite. Many erroneous impressions as to the morphology of *Herpetomonas* had gained credence. If carefully tested it would be found that the statement that it had two flagella (which was supported by the authority of Prowazek) was untenable. The double appearance, remarked by that observer, was due to fission, which took place during one of the earlier stages. Actually, there were three main periods in the life-cycle, the pre-flagellate, flagellate and post-flagellate, but there was no clear dividing line between them. The organism in the pre-flagellate stage, which was seldom seen, was found only in the upper part of the intestine; and it was then a round or oval body of 5.5 μ in diameter, with blepharoplast, small nucleus, and granules. In the flagellate stage a single stout flagellum developed from the proximity of the blepharoplast, and gradually elongated. There was a large central nucleus, with a clearly marked rod-shaped blepharoplast. At this period the organism divided by longitudinal division, and fission also took place lengthways through the flagellum. Large numbers of parasites in this stage of development could be found attached in palisades to the epithelium of the hind guts of flies; here, however, they lost their flagella, and in this post-flagellate stage became small rounded spheres which divided again by simple fission. As to communication of the infection in insects, infected flies were extremely prevalent in butchers' shops and at meat stalls, and he thought that transmission took place by healthy flies sucking up the organisms which had been deposited on the meat with the contents of the intestine. Another species of *Herpetomonas* which infested bugs was even more closely allied to the pathogenic agent of kala-azar than the *Herpetomonas* of flies. The first periods of the life of this parasite were passed in the crop and mid-gut, and at this time the organism was practically identical with the Leishman-Donovan body. Division took place here also by longitudinal fission, but in this instance four young unflagellated organisms resulted, flagella being afterwards pushed out from the body protoplasm. Bugs could frequently be seen with their proboscides plunged in the excreta of other bugs, and no doubt transmission took place in that way. His published description of the development of the parasite of kala-azar in the bed bug, *Cimex macrocephalus*, showed that it was not a sporozoan. It was a true flagellate, a *Herpetomonas*, and there were at least three pathogenic species: *H. donovani*, which was responsible for kala-azar, *H. infantum*, for infantile splenomegaly, and *H. tropica*, for Oriental sore. His

experiments in inoculating dogs with kala-azar had given results entirely different from those of Nicolle. The whole question was extremely complicated, and not the least of the difficulties was the fact that in bugs and blood-sucking flies of all descriptions a large variety of intestinal flagellates were so frequently parasitic that infection by them might almost be regarded as normal. Some of these forms closely resembled stages in the development of pathogenic protozoa, and they gave rise to endless doubt and confusion.

Dr. SAMBON agreed that the double flagella were division forms. The reason that the pre-flagellate stages were rare was that they could be found only after recent suction of blood. Was it not possible that there was sexual transmission also—such, for instance, as occurred in *Metaphagus ovinus*, in which an ookinet passed to the ovary? In blood suckers the life-cycle was more complete, and there was a sexual form of reproduction; in non-blood suckers the life-cycle was modified and multiplication was by schizogony.

Dr. Low said it was by no means clear that the parasite of kala-azar was a *Herpetomonas*. The *Herpetomonas* had no sexual stage, but the fact that the organism of kala-azar was intracellular and passed through a bug suggested a sexual stage.

Sir HAVELOCK CHARLES said that during a considerable experience in Persia he had seen a great deal of Oriental sore among camel drivers, but he never saw a case of kala-azar. On the contrary, in Lower Bengal, where there were no camels, kala-azar was, of course, very prevalent.

Dr. WENYON said that a hard and fast line could not be drawn between *Herpetomonas* and trypanosomes. Many varieties of trypanosomes had stages which closely resembled *Herpetomonas*. *T. theileri*, the well-known parasite of South African cattle, was an instance, and another illustration might be found in a trypanosome of snakes in which both forms were seen. The French Commission now investigating sleeping sickness had shown that some trypanosomes, after passing inside the proboscides of mosquitos, might assume *Herpetomonas* forms, and that they then attached themselves to the epithelium of the pharynx in exactly the same way as *Herpetomonas* did in the intestine. Might it not be that the influence of the blood of a vertebrate host tended to produce trypanosome forms; that of the intestine to produce *Herpetomonas*?

Sir PATRICK MANSON said that the life-history of the Leishman-Donovan parasite was not even approximately known. The figures shown by Captain Patton differed considerably from those of Leishman, which indicated division of nucleus, division of blepharoplast, but no division of flagellum. In the new forms, young flagella grew. The supposition that infection took place by an animal feeding on the excreta of its own species, assumed a fact that was contrary to the usual course of Nature. With regard to the differentiation of species, Novy had failed to infect a dog by the parasite of infantile splenomegaly; it remained healthy, but, after many months, when he killed it, he found the bone marrow was crowded with parasites.

Captain PATTON replied.

ROYAL SOCIETY OF MEDICINE.

SECTION OF PATHOLOGY.

At a meeting on January 19th, Mr. S. G. SHATTOCK, President, in the chair, Dr. RONDONT recorded the histological examination of 3 cases of juvenile general paralysis, all the patients being hereditary syphilitics. The chief microscopic lesions consisted of a perivascular infiltration of lymphocytes and plasma cells, neuroglia proliferation, and neuronic degeneration. The author showed that the changes had not been limited to the cerebral cortex, but involved the basal ganglia. The President exhibited sections made by him from a piece of the aorta of King Menepthah which was sent to the Royal College of Surgeons by Dr. G. Elliot Smith, who unwrapped the mummy, on the instructions of M. Maspero, Directeur général du Service des Antiquités de l'Egypte. The mummy was found in the tomb of Amenhotep II, Thebes, and was that of the reputed Pharaoh of the Exodus. The sections showed the picture typical of senile calcification of the media, the wavy, parallel, elastic lamellae being perfectly preserved, and the interlamellar

¹ Scientific Memoirs, Government of India, No. 27.

material thickly strewn with particles of calcium phosphate. Dr. C. R. Box communicated two instances of idiopathic dilatation of the ureter without obvious mechanical obstruction. He stated that the ureter was rarely if ever dilated without a similar change in the renal pelvis, and the cases were no exception to the rule. In one of them chronic ureteritis and pyelitis were present. Possibly swelling of the mucosa, with perhaps superadded spasm, had during the acute stage been sufficient to obstruct the narrow extremities of the duct. The other case presented no signs of inflammation, and the narrator speculated whether the theory of mucosal hypoaesthesia, which Mr. Shattock had advanced to explain idiopathic dilatation of the bladder, was also applicable to a like condition occurring in the ureter. Mr. GIBSON recorded the changes observed in phosphorus poisoning in a rabbit, the observations being carried out at the laboratory of the London County asylums. Phosphorus had been administered to the animal by Sir Thomas Oliver in minute doses at meal times during a period of three weeks, and the brain, spinal cord, and sciatic nerves were sent to the laboratory. The staining methods employed were: Haematoxylin and eosin, polychrome blue, Nissl and Heidenhain's iron method. The following changes were noticed: The *motor cortex* showed changes in the shape, structure, and staining reactions of the cells. By Nissl's method many of the cells were well stained and appeared healthy. In marked contrast, however, to these cells were others which showed changes. Many of the pyramidal cells appeared larger and more circular and had a swollen look. Several of these cells were vacuolated, as many as half a dozen vacuoles appearing. Other cells were diminished in size with their outline blurred and indistinct, while others presented a wrinkled appearance with interrupted envelope. The nuclei in some cells were swollen and distorted; in others shrunken; in some displaced in position, in others not visible at all. In the swollen cells changes were noted in the Nissl bodies; instead of the customary mosaic pattern there was an appearance of fine dust or a homogeneous aspect. The apical processes of the cortical cells were very much distorted and twisted, giving them a corkscrew appearance. In the *spinal cord* appearances similar to those noted in the cerebral cortex were present. The degenerated or "shadow" cells were very numerous; and the same characteristic of a swollen badly staining cell lying beside an apparently normal one was noteworthy. Here and there in the substance of the cord minute haemorrhages were evident. Sections of the sciatic nerve were also examined but no changes worthy of note were detected. Dr. F. PARKES WEBER described the following cases: The first was that of a man, aged 35, who suffered from intense chronic jaundice due to carcinoma in the head of the pancreas. Ascites was present, and there was much fever. *Post-mortem* examination showed the presence of disseminated "islands" of necrosis in the liver, of the kind described by Curschmann in Germany (1899) and afterwards by Oertel in America. The central portions of these necrotic areas were often deeply stained with bile pigment, and in many of them a subsequent small cell infiltration had taken place. The present case differed somewhat from those previously described in that the jaundice was due to cancerous obstruction of the common bile duct. The second case was that of a man, aged 22, who died from acute hepatic atrophy, with clinical signs of icterus gravis supervening on those of ordinary jaundice. He gave a history of having been treated for a hard chancre not long previously. Messrs. C. E. WALKER and G. DEBAISIEUX described some observations made by them on the *Nucleoli in the cells of malignant growths*. In cancer cells the nucleoli, besides being more numerous than in normal cells, were very frequently irregular in shape. They multiplied rapidly, and the change in staining reaction when they passed out of the nucleus was altogether absent, or not nearly so marked as in the case of normal cells. An intermediate stage appeared to exist between normal and cancerous cells in simple inflammatory tissue. The interpretation with regard to the normal cells (where the phenomenon had been observed in hydra, spongiella, planarian worms, mammalian cells, and various plant cells) was that the multiplication and extrusion of the nucleus was dependent upon, and intimately connected with, meta-

bolism taking place in the nucleus. If this interpretation were correct, the nuclear metabolism in many cancer cells differed considerably from the normal, as it also did in the cells of inflammatory tissue, though in a less degree.

SECTION OF SURGERY.

At a meeting on January 12th, Mr. WARRINGTON HAWARD, President, in the chair, Mr. E. W. HEY GROVES read a paper, prepared in collaboration with Professor WALKER HALL, on the *Function of the colon* in relation to colic exclusion. Observations were made, more particularly upon three cases, in one of which a caecal fistula existed for a considerable period after the performance of ileo-sigmoidostomy, thus permitting simultaneous analysis of faeces passing from the ileum directly into the pelvic colon and those from the excluded gut. These analyses, and others of the faecal output at different periods after partial or total exclusion of the greater part of the colon, led to the conclusion that the lowest section of the large bowel was quite capable of performing alone the physiological duties of the whole colon. After "exclusion," water absorption was very nearly as complete as in the normal condition, and the irreducible minimum of nitrogenous waste in the faeces was not materially increased. Excision of the excluded part did diminish water absorption slightly, at any rate for a time; but since it appeared that perfect health was incompatible with the retention of a large cul-de-sac in which mucus and bacteria accumulate, and which might become a veritable cesspool by antiperistalsis from the rectum, it was essential either to remove the excluded part or to provide some means by which it might be flushed and, if possible, be allowed to atrophy. Mr. MACADAM ECCLES thought it might now be accepted that there was no physiological danger from the exclusion of the colon. Some abnormal excitement must be present for antiperistalsis to occur. It was better, therefore, to perform lateral anastomosis or "semi-exclusion," permitting some of the intestinal contents to reach the caecum and supply the requisite normal stimulus. Mr. MUMFERY did not agree with the views of the last speaker; Hertz and others had seen antiperistalsis in conditions scarcely removed from normal, and his own experiments on cats showed that antiperistalsis from the transverse colon towards the caecum occurred normally as the usual first result of entrance of food into the large intestine. Lateral anastomosis was unsatisfactory; he preferred division of the ileum, and of the colon above the anastomosis with formation of an iliac opening to drain the excluded gut. Mr. GROVES, in his reply, said that Mr. Lane had found lateral anastomosis unsatisfactory, partly for the reason that without stenosis of the old path beyond the new opening contents continued to pass that way and the artificial opening was practically useless. Mr. EDRED CORNER and Mr. MARTIN HUGGINS read a paper on *Obturator hernia*, based in part upon a case under their care and partly upon a collection of 250 cases from the literature. Their patient had been operated upon three times for intestinal obstruction due to nipping of a small piece of small intestine lodged in the right obturator canal. At the last operation a radical cure was performed by invagination and obliteration of the sac, using an incision in the pectineal region to supplement the abdominal manipulations. Of 970 cases of strangulated hernia admitted to St. Bartholomew's 2 only were obturator; of 1 026 at St. Thomas's 4 were obturator. Combining the figures this gave an incidence of 1 in 332 cases of strangulation. The occurrence was six times as frequent in men as in women. Child-bearing had influence only in so far as it conduced to rapid increase and subsequent loss of fat, since emaciation was the only constant antecedent. The youngest patient was 12, and the oldest 87 years of age, but it was very rare under 45. The obstruction was generally imperfect, and hence 80 per cent. were undiagnosed; attention was almost always called to the condition by supervention of obstructive symptoms. The small bowel was alone involved in most cases, but the ovary and tube might be. The right side was involved in 60 per cent., left in 33 per cent., and both in 7 per cent. The mortality was 33 per cent. The PRESIDENT remarked upon the frequent absence of classical signs of acute obstruction, emphasized the importance of rectal and vaginal examination, and asked

as to the frequency of the obturator pain so beloved of examiners. Mr. BARKER asked if it would have been possible to invaginate the sac without making the external incision. Mr. McADAM ECCLES mentioned a case he had recently operated upon, in which symptoms of obstruction had existed for a fortnight before the woman was brought to hospital; this delay was not uncommon in these cases, because only part of the lumen of the gut was involved; it was, in fact, a form of Richter's hernia. He thought it very doubtful if a lump could ever be felt in the thigh. Mr. GROVES asked if the sac passed through the same opening as the obturator vessels and nerve? Mr. CORNER, replying, said that pain in the course of the obturator nerve was rarely mentioned in the records; it was impossible to invaginate the sac from the abdomen alone; no tumour could be felt in the thigh in his case; the herniation undoubtedly occurred through the same canal as the vessels.

THERAPEUTICAL AND PHARMACOLOGICAL SECTION.

At a meeting on January 5th, Dr. BURTON BROWN, President, in the chair, Professor CUSHNY, in a paper on *Tissue antiseptics with reference to animal infections*, said that since Lister had demonstrated how completely the activities of pyogenic organisms could be held in check by means of drugs, many attempts had been made to achieve the same result in diseases more strictly medical. In the specific fevers, and especially in tuberculosis, corrosive sublimate, carbolic acid, organic preparations of silver, and, more recently, formaldehyde, had all in turn been tried and abandoned; the host was too vulnerable, the parasite too resistant. There was, however, one group of diseases—for example, syphilis, malaria, and sleeping sickness—in which the malady was due to a parasite, less perfect in its adaptation to its surroundings, less resistant to drugs, and in these a greater success had been achieved. In some experiments undertaken to test the resistance of trypanosomes of sleeping sickness to arsenic, antimony, and bismuth, a proportion of 1 in 200,000 proved sufficient to banish the parasite. Thus 1 mg. of antimony destroyed the parasites in a 200 gram rat. Arsenic acted more slowly than antimony, and in the case of bismuth the damage done to the host was generally irreparable. The trypanosomes were not permanently destroyed, but in course of time returned. As often as they were banished they returned, and at shorter and shorter intervals. Finally, a race of antimony-resistant or of arsenic-resistant trypanosomes was produced, which, retaining this quality, could be propagated from rat to rat. The arsenic-resistant trypanosomes, however, were still susceptible to antimony or bismuth and vice versa, and in this might be found a modern indication for the use of old-time polypharmacy. In a patient treated at once with all the drugs available few trypanosomes would survive the combined attack. The trypanosome obtained from the rat which was resistant for any one drug, injected into a mouse, again became non-resistant to that drug. Dr. ALEXANDER HAIG, in a paper on *Salicylates as retentives of uric acid*, maintained that while large doses of the drug acted as solvents of uric acid, small doses acted as retentives. This retention was proved by the diminution in number of certain granules in the blood, and was invariably accompanied by a quickening of the capillary circulation. A measure of the time of the "capillary reflux," he maintained, was thus an accurate measure of the amount of uric acid in the blood. Dr. A. P. LUFF dissented entirely from the view that it was in any way possible to estimate the amount of uric acid in the blood by the appearances in the blood referred to. He had searched in vain through Dr. Haig's writings for an account of a single chemical estimation of the amount of uric acid. He denied that there was any proof at all that uric acid was a poison, or that the many symptoms attributed to it were due to it. Dr. H. C. CAMERON said that apart from the question as to whether or not the capillary reflux time was influenced by the amount of uric acid in the blood, there was so large a number of varying factors which did profoundly influence it—temperature, posture, emotion, the condition of the digestive organs, etc.—that he could not think that the results obtained could be reliable.

LIVERPOOL MEDICAL INSTITUTION.—At a meeting on January 7th, Mr. F. C. LARKIN in the chair, Dr. SMART reported a case of *Reinfection by syphilis* in a patient, aged 30, who first acquired syphilis in September, 1904. During the next year he had three courses of treatment by mercurial inunction, each extending over a period of six weeks, the first and last course being carried out at Aix-la-Chapelle. This attack was characterized by marked pigmentary skin lesions. On January 1st, 1906, he was again exposed to infection, and on the 26th he developed a hard chancre, the diagnosis being confirmed at Aix-la-Chapelle, where he was sent for further treatment. Mr. THRELWALL THOMAS read a note on a case of severe *Trigeminal neuralgia* treated by removal of the Gasserian ganglion. The patient, a man aged 58, had suffered from neuralgia for sixteen years. All the usual medical remedies had been resorted to but with no benefit. Cushing's operation was performed last June. The ophthalmic nerve was not removed. He has remained quite free from pain since. There is, however, distinct sensation over a large area supplied by the superior maxillary nerve. Dr. H. H. CLARKE, in a note on the differential diagnosis between human and bovine tuberculosis, said he had tried in six of his own cases the modification of Pirquet's cutaneous reaction as suggested at the last international congress. He considered that his results justified an extended trial of this method. Mr. R. W. MURRAY read a note on the after-results of 217 operations performed during the past three years for the radical cure of inguinal, femoral, and umbilical herniae. No recurrence had taken place in any patient under 40 years of age. Neither truss nor any other support was worn after the operation. The author considered the sac the essential cause of the hernia, and its complete removal was a particular feature in all the operations. Dr. W. B. WARRINGTON read a paper on the natural history of cirrhosis of the liver with reference to the value of the *Talm-Morison operation*. He considered that the disease could be distinguished from other morbid conditions which clinically it partly resembles, such as syphilis, chronic perihepatitis, and peritonitis. True cirrhosis is a rapidly fatal disease when symptoms have developed themselves, and the utility of the operation is doubtful.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting on December 16th, 1908, Dr. P. BOOBYER, President, in the chair, Dr. JAMES WATSON read a paper on a case of *Epiploecy* and aseptic drainage by a modified method, for liver ascites. After reviewing the history of the operation suggested in this country by Drummond of Newcastle, and afterwards performed by Mr. Rutherford Morison, and independently by Chiazzi of Bologna, he explained that its object was to relieve the portal obstruction occurring in cirrhosis by a collateral circulation established in the omentum, which was stitched to the abdominal wall. Drainage was not essential in every case, but in the case of a woman of 27 who had come under the speaker's care in hospital, the patient's condition was so bad on the day fixed for operation (at her earnest request) that drainage was brought about first. Her condition, however, allowed the suturing to be also carried out successfully, and she progressed satisfactorily till the eighth day. Her mental equilibrium had never been altogether satisfactory before the operation, and she became excited and screaming on the ninth day, and died comatose on the tenth. The amount of ascitic fluid secreted decreased rapidly after operation, becoming practically nil within three days of it. A limited *post-mortem* examination showed the liver to be extensively diseased, and microscopic sections shown by Dr. Watson and microphotographs by Dr. J. Millar showed the glandular tissue to be reduced to a minimum. The speaker would regard the condition of the liver and the ascites as attributable to some fairly acute toxæmia, for the more acute symptoms dated back to an attack of diarrhoea, faintness, failure of vision and memory attributed to a meal of strawberries and cream about four months previous to her death. The President alluded to the *post-mortem* appearances of Dr. Watson's case. Dr. WEBBER and K. BLACK criticized the value of this as a remedy for ascites, and regarded the observation of the excretion of urine and ascitic fluid subsequent to the operation as inconclusive in consideration of the small quantities.

of fluid administered. Dr. A. J. SHARP asked for information as to the presence of leucin and tyrosin in the urine, and compared the case to acetonaemia proving fatal after operation and anaesthesia. Dr. WATSON, in his reply, pointed out that the marked reduction of the ascites within two or three days after operation could not be attributed to the development of new vessels. He would rather compare it to dropsy, which in the light of experimental evidence was much more due to toxæmia than to obstruction. Mr. H. B. TAWSE showed specimens of rhinoliths from three different cases, and commented on their pathology, and Dr. J. WATSON read notes of two cases of intestinal obstruction treated by bowel drainage, and showed a specimen from one case which proved fatal.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.—At a meeting in Manchester on January 15th, Dr. A. J. WALLACE (Liverpool) in the chair, Professor LORRAIN SMITH and Dr. W. FLETCHER SHAW (Manchester) read a paper on the pathology of *red degeneration of uterine fibroids*. They had examined four specimens, three of which were associated with pregnancy. Staining by Weigert's fibrin method they found extensive thrombosis of the blood vessels in the red areas of all four specimens, and this they consider the essential and characteristic change. There was no evidence of recent or old extravasation of blood. The myomatous tissue was also in a state of atrophy and degeneration, being replaced by a homogeneous substance, which stained faintly with eosin. This form of necrotic softening was very common in fibroids, and further observation was necessary to show whether red degeneration ever occurred apart from such a process of necrosis. Excess of fat, as droplets and crystals, was also found. Two of the patients had presented toxæmic symptoms, and in each of these cases the authors found an active leucocytosis and bacteria in the tumours—staphylococci in one, diplococci in the other. Neither bacteria nor a leucocytosis was found in the other cases. Finally, the authors pointed out that redness depended upon Virchow's angiomatous degeneration, and might be present in such a degree that the tumour had considerable naked-eye resemblance to the true red degeneration. Drs. LLOYD ROBERTS, BRIGGS, DONALD, WALLS, FOTHERGILL, LEA, GRIMSDALE, and CROFT discussed the paper; and Professor LORRAIN SMITH, in reply, expressed his opinion that the bacterial infection was secondary to and predisposed to by the thrombosis; that the excess of fat was dependent upon arrest of absorption resulting from the thrombosis, and that pregnancy, by mechanically hampering the circulation in the tumour, and the puerperium, with its increased coagulability of the blood, were possibly predisposing factors in the causation of red degeneration.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—At a meeting on January 8th, Dr. EDWARD SERGEANT, President, in the chair, Dr. W. G. SAVAGE, in a paper on the *Scientific control of diphtheria*, pointed out that this disease stood out in striking contrast to some other infectious diseases, because its microbial origin had been fully proved and bacteriological diagnosis was sufficiently elaborated to enable the presence of the bacillus to be reliably and readily detected. He then submitted a scheme for its control. It included free and accessible bacteriological diagnosis by all medical practitioners, the usual procedure of notification, isolation and subsequent disinfection of every established case, the routine bacteriological examination of all immediate contacts and of some remote contacts, the isolation of all contact carriers either at home or in a hospital, and the discharge from isolation only after a sequence of negative examinations. He advocated institutional rather than home isolation; in Colchester the newly-erected administrative block of the small-pox hospital had been used for the isolation of contacts since 1906. In respect of contact carriers three "peas" were open: To do nothing; to isolate until free from infection; to limit their range of infectivity by preventing contacts from mixing with others as far as practicable, such as by prohibiting school attendance. To do nothing was as impossible as to allow a case of diphtheria to return to school as soon as the child was able to get up. It was important to have at least two, and preferably three, negative results before declaring the non-

infectivity of either a diphtheria patient or a contact carrier. In 1905 in Colchester if one negative result had been relied upon the error would have been 24 per cent., and if two negatives it would have been 5.3 per cent. The use of antitoxin as a preventive measure was both unnecessary and unscientific. The injection of serum did nothing to prevent the spread of infection, but rather, by inducing a sense of security and a selfish knowledge of self-protection, it would tend to check proper preventive measures being adopted. In the course of the discussion which followed Dr. SEATON said that he was afraid the proposals would involve a great deal of expense and would also interfere unduly with the liberty of the subject. He would like to have had some definite statistical evidence of the value of the scheme. Dr. GRIFFITH stated that no outbreaks of diphtheria had occurred in Hove since he had adopted a method of procedure similar to Dr. Savage's. He could not agree that antitoxin was not a prophylactic, but he considered that where it was given the case must be kept under observation. Dr. HOWARD-JONES considered that nasal as well as throat examinations should be made. He was strongly of opinion that antitoxin was a prophylactic. Dr. E. W. GOODALL was of the contrary opinion, and did not regard serum as a preventive. He considered that carrier cases should be dealt with on the lines suggested by Dr. Savage.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—At a meeting on January 5th, Dr. MAY THORNE in the chair, Miss GARRETT ANDERSON read the notes of a case of *Chronic pancreatitis*. The patient was a married woman, aged 32, who had had no previous illnesses. Five months before admission to hospital she was seized with severe pain in the right hypochondrium. The acute pain lasted for two hours, and was succeeded by a dull aching pain lasting for two weeks. Three weeks before admission there was a second attack, and a slight attack occurred while the patient was under observation. Two days after the first attack she became jaundiced, and the jaundice persisted until death. When admitted she was very emaciated: the icterus was not very deep; the stools were soft and clay-coloured, and were not obviously fatty. There were occasional nausea and vomiting, with irregular pyrexia. There was a leucocytosis of 17,000, which increased to 50,000 before death. On examination of the abdomen the liver was found to reach to three finger-breadths below the costal margin, and was slightly tender. The gall bladder could not be felt. The diagnosis was thought to lie between obstruction of the common bile duct by gall stones and by malignant disease of the head of the pancreas. The emaciation suggested malignancy, while the apparent absence of an enlarged gall bladder was in favour of the other alternative. A laparotomy was done, and the bile ducts were found to be empty, while there was a hard mass in the region of the head of the pancreas, with enlarged glands in the portal fissure. The gall bladder was covered by the liver, and contained about 3 oz. of healthy bile. There were numerous adhesions about the bile ducts, the pancreas, the stomach, and duodenum. Permanent drainage of the gall bladder was established. After the operation the jaundice decreased, but marked anorexia persisted. A fortnight later the patient became suddenly collapsed, and there was hæmorrhage through the drainage tube. A week later there was bleeding from the mouth and nose, and the patient died. Calcium chloride and adrenalin solution were given during the last fortnight, but they did not check the hæmorrhagic tendency. Miss HAMILTON read an abstract of the *post-mortem* notes of the same case. A hard nodular mass was found in the head of the pancreas. The liver was enlarged, weighing $3\frac{1}{2}$ lb. It contained a few nodules resembling nodules of new growth, and in the upper part of the right lobe there was an abscess cavity the size of a hen's egg, containing bile-stained pus. Near the gall bladder the liver substance was broken down by hæmorrhage, and there was blood clot in the gastro-hepatic omentum and round the neck of the gall bladder. No biliary or pancreatic calculi were present. The spleen weighed 8 oz.; the other organs were normal. Microscopically the head of the pancreas presented no normal tissue, but showed a central necrotic area surrounded by a zone of fibrous tissue round which was an area of round-cell infiltration. The nodules in the liver had the same

structure. The body and tail of the pancreas showed an interstitial fibrosis. The islands of Langerhans were normal. The pancreatic duct was dilated.

Rebivius.

INTRACELLULAR ENZYMES.

Dr. H. M. VERNON has published a valuable monograph on *Intracellular Enzymes*, being the substance of a course of lectures given in the physiological laboratory of the University of London. He says: "I should scarcely have had the energy to collect and publish the material without the stimulus of an invitation to give these lectures." This is a sufficient testimonial to the value of the very few hundred pounds which the University of London has hitherto devoted to its highest function—the advancement of learning—an annual expenditure which soon, if not at once, threatens to come to an end owing to the poverty of the university and the ridiculous expenditure on the examination system. The State, which in Germany would give more than half a million a year to its metropolitan university, to London University gives a beggarly £8,000, excluding the grants to the incorporated colleges which cannot be used for the general purposes of the university. Work of the very highest value is done by the scientific men who occupy the chairs at the constituent colleges in the face of great difficulties. It is certain that these very difficulties act as an incentive to men of spirit, and that opulence of endowment and equipment generally leads to inglorious ease. In America, the land of great university endowments, this is prevented by a wise limitation of the salaries of the professors to very modest amounts, and a multiplication of posts in which each man can carry out independently his own line of work. How fruitful this policy has been is to be seen by the growing volume and importance of the American journals of physiology and experimental medicine. A most hopeful policy which the University of London can now take up, and is actually considering, is the raising of funds for the purpose of endowing research fellowships to be held at any of the laboratories of the constituent colleges, and thus stimulate in London the output of such work as that of Dr. Vernon at Oxford.

The intracellular enzymes differ from the exo-enzymes, such as are found in the secretions, by reason of the fact that they are bound up in the protoplasm of the cells, and, so long as the cells are alive, only exert their activity intracellularly. On the death of the cells the protoplasm disintegrates, and many of the constituent enzyme groupings split off and pass into solution. It is inferred, although absolute proof is wanting, that these enzymes were elaborated by and used during the life of the protoplasm. The fact that the secreting glands put out their enzymes into the secretions, which act at a distance, is greatly in favour of this view. It has been suggested that life is nothing more than the sum total of the activities of the enzymes contained within the living matter, but this simply pushes the difficulty further back and does not really bring us any nearer to the great mystery, for we know little more of the constitution of an enzyme than of living matter.

The first method to obtain intracellular enzymes was that of Buchner. He ground up the cells with quartz sand and squeezed the juice out by hydraulic pressure. Macfadyen and Rowland ground up the cells at the temperature of liquid air (-180° to -190° C.), at which temperature all chemical decomposition is stopped, and thus avoided the admixture of sand, which may absorb a certain amount of the ferments. Vernon finds that the extracts of ordinary minced organs yield ferments of maximal power in the shortest time if a mixture of three parts glycerine and two of water be used. The glycerine activates the zymogens. He has also investigated the daily yield of ferment of such an organ as the kidney when washed out with a stream of saline solution. When saline containing 2 per cent. NaCl is used the yield is almost nil, while chloroform saline causes an immediate and rapid setting free of the endo-enzymes.

Another method of study largely used is that of the

autolysis of the organs. Slices of an organ such as the liver are removed aseptically and kept at body temperature, or the minced organ is kept in the incubator and chloroform or toluol added to prevent or limit bacterial action. "Any or all the stages of (protein) digestion can be investigated by making kjeldahl determinations of the total nitrogen in the filtrate from samples of the press juice which have been precipitated by suitable reagents, and comparing them with the nitrogen in the unprecipitated juice." Hot trichloroacetic acid precipitates native proteins, 7 per cent. tannic acid proteoses, 40 per cent. phosphotungstic acid with 10 per cent. sulphuric acid proteoses, peptones, and di-amino acids, but not the mono-amino acids. In addition to acid and alkali acting proteoses which split native proteids, the juices of the organ obtained by pressure yield erepsin, which splits proteoses into amino-acids and ferments such as arginase, which can split individual amino-acids, and in particular one which can split ammonia off from amino-acids, and is perhaps identical with the urease which can be obtained from micrococcus urea by the simple method of extracting with water the alcohol precipitate of fermenting urine. Enzymes which hydrolyze nucleo-proteins can also be obtained from the press juices; these split nucleic acid into phosphoric acid and xanthin bases; also a guanase which converts the purin base guanin into xanthin; an adenase which converts adenin into hypoxanthin, and a xantho-oxidase which oxidizes these two into uric acid. A uric acid splitting ferment which breaks uric acid into urea and glycin also occurs. The yield of these proteolytic enzymes increases with embryonic growth and functional capacity, is diminished in hibernating animals, and in animals and children wasted by disease, and is increased in the mammary gland during activity.

The investigation of the endo-enzymes in disease opens up a wide field of research, which is just beginning to be worked. Brugsch and Schittenhelm have obtained evidence that in gouty patients the whole series of ferments connected with purin metabolism is enfeebled, and assert that when such patients are fed with nucleic acid its metabolism and the excretion of the uric acid formed is much slower than in normal people. In dealing with the fat and carbohydrate-splitting endo-enzymes, Dr. Vernon, among the many points of interest, here gives an account of those experiments of Harden and Young by which they demonstrate that the press-juice of yeast is activated by phosphates, and discusses the evidence in favour of the enzyme lactase being developed by feeding with milk animals which do not possess it. Confirmation is afforded of the assertion of Otto Cohnheim that pancreatic extract and muscle extract together have a powerful glycolytic action, and, therefore, of the theory that the pancreas by an internal secretion may activate the use of sugar by the muscles.

The later chapters deal with the oxidizing enzymes, the general constitution and mode of action of enzymes, reversible enzymic action, antiferments and the influence of antiseptics and temperature on ferment action. But enough has been said to show the interesting and valuable material which the author has gathered together in this volume, material which he has put forward in a particularly clear and easy style.

THE MARGINATE PLACENTA.

The marginate placenta was first described by William Hunter in 1794. The work before us (*Die Placenta marginata und ihre Entstehung*, by Dr. P. SPAMENI²) is a careful attempt to elucidate its origin and importance. Credit is due to the author for the trouble he has taken, but we cannot say that the result of his labour amounts to very much. There may be readers of this journal who know not what a marginate placenta is. For them we may explain that while the amnion can be stripped off a normal placenta right up to the insertion of the umbilical cord, the chorion as a rule is inseparably attached to the placenta at its edge. The marginate placenta is one in which the chorion is not attached to its edge; there is a margin, outside the attachment of the chorion. In width

¹ *Intracellular Enzymes*. By H. M. Vernon, M.A., M.D. London: John Murray. 1908. (Med. 8vo, pp. 252, 7s. 6d.)

² *Die Placenta marginata und ihre Entstehung*. Von Dr. P. Spameni, Professor und Director der Universitäts-Frauenklinik in Perugia. Mit 11 Abbildungen im Text. Berlin: S. Karger. 1906. (Sup. roy. 8vo, pp. 70.)

this margin varies from $\frac{1}{2}$ in. to 2 in. Outside the attachment of the chorion there is generally a ring of yellowish-white thick tissue, to which Busch gave the name of "annulus fibrosus." This ring is so constant that it is one of the most important signs of the marginate placenta. It is composed of decidual and chorionic tissues which have undergone necrotic change. Obviously, a marginate placenta is only found by those who carefully examine every placenta, and our author thinks that it is much commoner than is generally supposed. The first fact that he demonstrates is that a marginate placenta is generally a small placenta, and there is generally a small quantity of liquor amnii. The next is that it follows the law demonstrated by Matthews Duncan, which applies to twins, to monsters, and other departures from the normal in pregnancy, in being more common in first pregnancies, and in the later pregnancies of those who have had many children. Retention of chorion is commoner with a marginate than with a normal placenta, and so are its consequences, hæmorrhage and fever. Our author then quotes and criticizes the theories put forward by different writers to explain marginate placenta. Having done this, he expounds his own view. He points out that early in pregnancy the decidua serotina is cup-shaped; the ovum lies in the cup. There is no sharp distinction between decidua vera, serotina, and reflexa. As the ovum grows the sides of the cup are pressed outwards, until the decidua vera and reflexa are in contact. If the intraovular pressure is deficient the contact of the two decidua is imperfect. There is a circle at which the chorion laeve and decidua reflexa do not correspond to the chorion frondosum and decidua vera. Deficient extension of the uterus may also be due to undue rigidity of the uterine tissue, and such rigidity, in our author's view, is likely to be present in first pregnancies. This mechanical explanation of the production of placenta marginata is ingenious. But for practical purposes it does not seem worth much. If we accept it we remain still ignorant why the intraovular pressure is deficient, and why the uterus is rigid, and without knowledge of how these factors come into being, we can neither predict nor prevent the occurrence of placenta marginata. But the author is entirely satisfied with his theory. He says: "My conception of the origin of placenta marginata not only clears up all that is unknown, that on every other theory remains obscure, but finds evidence in its favour in all the facts hitherto brought forwards." We hope that nothing that our Boeotian intelligence has led us to say may disturb the author's happy delight in what he takes to be a complete solution of all difficulties.

OBSTETRICS.

We noticed the first edition of this work (*Introduction à l'étude clinique et à la pratique des Accouchements**) in our issue of July 25th, 1891. Since then, to the regret of all interested in obstetrical science, one of the authors, Dr. VARNIER, has passed away, we are sorry to read, "after many years of cruel agony." The book, we are informed, was long out of print, and when stray copies appeared in the market, they fetched almost incredible prices. Therefore, in 1904, a reprint was issued. Now we have a new edition. Some defective illustrations have been redrawn, and though some still do not satisfy Dr. FARABEUF, he hopes that he will be pardoned these on account of the good ones, which have been borrowed or imitated liberally, "ordinarily with acknowledgement of their origin, which is good, but not always, which is bad." The text has been added to, and some new illustrations inserted, but the size of the work has not been increased. Dr. Farabeuf says that he believes that Varnier would have approved these modifications, because his friends and pupils, who still exist, do so; but he accepts the sole responsibility. The work is not a complete treatise on midwifery. The subjects of which it treats are mentioned in the title page.

* *Introduction à l'étude clinique et à la pratique des Accouchements.* Anatomie—Présentations et positions—Mécanisme—Toucher—Manœuvres—Extraction du Siège—Version—Forcées. Principes fondamentaux d'obstétrique. Vérifiés, rectifiés ou établis à l'aide de l'expérimentation sur le mannequin naturel et de l'observation sur la parturiente. Par le Professeur L. H. Farabeuf et le Docteur Henri Varnier. Préface du Professeur A. Pinard. Nouvelle édition. Paris: Georges Steinheil, 1906. (Demy 4to, pp. 49.) Dessins démonstratifs de L. H. F., donnés avec les répétitions nécessaires, 375 figures. Fr. 15.

It is a book invaluable to the teacher of midwifery; of less value, perhaps, to the practitioner. The author says, "To critics, benevolent or malevolent, I replied and I reply: How have I always observed and experimented? On pelves of bronze or wood? Never in my life. I am not so stupid. I have observed, manipulated, and experimented on dead bodies preserved in glycerine and consequently kept supple; and, when possible, on the dead bodies of eclamptic patients who were in labour." These he calls his "natural mannequins." For an account of the general character and teaching of the book we will refer our readers to our notice of the first edition, for they remain practically unaltered. The illustrations are excellent; we know of none better. The letterpress exhibits the special merits that we are accustomed to in French literature—order, clearness, grace, and wit. It is a credit to the great country of which the author is one of the most brilliant sons.

Dr. P. BOUQUER begins his book, *Action de la contraction utérine sur l'œuf humain*,* with two propositions that seem to us contradictory. One is that when the uterus contracts, if the shape of the bag of membranes was ovoid the effect of uterine contraction is to make it spherical. This we think is correct; for the sphere is the shape in which the content is largest in relation to the superficies. If this is correct, the author's other proposition is not, namely, that if the bag of membranes is spherical, the effect of uterine contraction is to make it ovoid. No doubt the bag of membranes may pass from a spherical to an ovoid shape; but such a change accompanies uterine relaxation, not uterine contraction. The author draws what seems to us an irrelevant comparison with the crystalline lens of the eye. It seems irrelevant because the crystalline lens is not a hollow muscle, nor are the changes in its shape regulated by a hollow muscle. He speaks of the bag of membranes as being "inextensible, or less extensible than the lower segment of the uterus." But if it were inextensible its shape could not be altered at all. If it is only slightly extensible, the word with the negative prefix does not apply. The author's definition of "the lower segment of the uterus" is that it is "the part below the insertion of the utero-sacral ligaments." These ligaments vary so much in different subjects that this definition is not very exact. The author thinks that "primitive placenta prævia," that is, a placenta which was during pregnancy implanted over the os uteri, is quite exceptional; that in most cases of placenta prævia the placenta has been detached and pushed into the os uteri in front of the child. We agree that the effect of uterine action in placenta prævia is to detach the placenta and push it into the cervical canal; but we think that it is so because the placenta was primitively implanted over the os internum, which therefore could not dilate until part of the placenta had been detached. By reasoning which we cannot quite follow, the author holds that because ante-flexion is the natural shape of the uterus in most virgins, implantation of the placenta on the anterior part of the lower segment of the uterus is physiologically impossible. An ante-flexed uterus, he holds, is generally a healthy one. In placenta prævia, he says, labour comes on prematurely for a pathological reason, which is that the uterus is irritable, in consequence of endometritis; and, secondly, for a physiological reason—namely, inextensibility, owing to the low insertion of the placenta. The author theorizes ingeniously as to the part taken by different zones of the uterus in the first stage of labour. Space does not permit us to give his views in detail. He summarizes the matter as follows: "The true physiological wedge is the fetal wedge, which is alone capable of assuring complete dilatation—and not the bag of waters, which is only a dilator when the membranes are extensible." Perhaps our understanding is at fault; but this proposition seems to us to be contradicted by the frequency with which children are born in the amniotic sac. The author draws a distinction between painful and painless uterine contraction, but he hardly makes enough of the fact that the suffering which attends childbirth is due not only to the contraction of the uterus but to the stretching open of the soft parts; and it

* *Action de la contraction utérine sur l'œuf humain. Phénomènes passifs de la grossesse et du travail.* Par le Docteur P. Bouquer, Médecin de la Maternité de Brest. Paris: G. Steinheil, 1908. (Imp. 8vo, pp. 154, illustrations 45. Fr. 10.)

increases in severity in proportion as the parts which are stretched are richly supplied with sensory organs. The author is an original thinker, but it seems to us that he attaches too much importance to the bag of membranes and not enough to what German obstetricians have long described as the "fetal axis pressure" and the "form restitution force."

The work entitled *Consultations et formulaire de thérapeutique obstétricale*¹ is an excellent book for the French general practitioner. The various conditions that may call for treatment in the course of pregnancy, labour, and childbirth, both of mother and infant, are here described in short, pithy sentences. The authors' advice is, on the whole, sound and good. They do not lack courage, for they describe the intramuscular injection of mercury and intraspinal injection of stovaine as if these proceedings were as simple, safe, and easy as the administration of an enema or a bath. The volume is not illustrated. The English general practitioner has a choice among several books as good as this and adapted to English manners and customs, weights and measures; so that we can hardly advise him to get this, highly as we think of it.

PULSATING EXOPHTHALMOS.

Drs. DE SCHWEINITZ and HOLLOWAY, of Philadelphia, have lately brought out a book on the interesting subject of *Pulsating Exophthalmos*². The work is based upon an analysis of 69 cases, and is an elaboration of a paper read before the College of Physicians of Philadelphia in 1907. A lengthy table at the end of the book contains an analysis of 80 cases. Of these, 11 are regarded as doubtful or atypical, and are not used in making up the figures. The remaining 69 are classified thus: traumatic, 54; idiopathic or spontaneous, 13; tumour, 1; and cause not stated, 1. Of the 69 only 7 had both eyes affected, while of the traumatic cases 31 were males, 16 were females, and in 7 the sex was not stated. The greater number occurred between the ages of 30 and 40; the youngest patient was 4 years old, and the oldest 58. In the majority, the condition followed indirect injuries such as blows or falls, while gunshot or other penetrating wounds were responsible for a few. Of the idiopathic or spontaneous cases 70 per cent. occurred in women, and most of them were in the fourth decade of life; out of 313 reported cases the oldest was 81. The most frequent pathological condition found was a rupture of the internal carotid artery into the cavernous sinus, while tumours of the brain have in a few instances been known to have burst into the orbit.

As regards symptoms, exophthalmos, pulsation, and a bruit are the most marked, while the most common displacement of the eyeball is down and out. The subjective bruit is usually the first and most distressing symptom from which the patient suffers. Stasis and engorgement of the ophthalmic veins sometimes gives rise to the formation of venous swellings and tumours adjacent to the globe, usually situated in the upper and inner portion of the orbit below the arch, although they may occur at other parts. The masses are usually fusiform in shape, almost invariably painless, soft and compressible, while over them can usually be detected a thrill or pulsation. The lids are generally swollen, and the conjunctiva may be chemosed or injected, or ectropion may develop, while tortuous or dilated conjunctival vessels are usually present. The vision varies much; sometimes it is unaffected. The fundus may be more or less congested, with or without retinal haemorrhages. Naturally the ocular muscles are affected to a greater or less extent. Pressure on the carotid in most cases caused the bruit and pulsation to disappear, and the proptosis to be less marked. Occasionally a pulsating exophthalmos has been followed by a pulsating enophthalmos due to atrophy of the orbital tissues. The diagnosis of the disease is easy enough, but the underlying etiological factor is by no means so readily determined, and each case has to be considered on its own merits.

¹ *Consultations et formulaire de thérapeutique obstétricale*. Par les docteurs P. Budaux, Accoucheur des Hôpitaux de Paris, et P. Chantier, Chef du Laboratoire de la faculté à la maternité de Beaujeu. Paris: A. Maloin, 1908. (Poup. 8vo, pp. 320. Fr. 4.)

² *Pulsating Exophthalmos*. By G. E. de Schweinitz, M.D., Professor of Ophthalmology in the University of Pennsylvania, and Thomas B. Holloway, M.D., Instructor in Ophthalmology in the University of Pennsylvania. Philadelphia and London: W. B. Saunders Company, 1908. (Med. 8vo, pp. 124. 10s.)

The prognosis as regards life is good, but as regards vision extremely doubtful. With regard to treatment the following means have obtained favour. (1) Ligation of the larger blood vessels of the neck. (2) Operations on the orbit. (3) Compression of the common carotid. (4) Direct compression of the venous swelling in the eyelids and angles of the orbit. (5) Gelatin injections. (6) Rest and the administration of certain drugs. Double ligation of the carotid has frequently been followed by death, while the much less serious operation of ligation of the superior ophthalmic vein has given such good results that it is likely to supplant the more severe operation, though it has as yet been performed in comparatively few cases. In this series, compression of the common carotid was used in 12 cases, with cure in only 1. Gelatin injections were given in 3 cases and 1 was cured. The administration of potassium iodide and the instillation of adrenalin have given favourable results.

The book deals very thoroughly with the whole subject of pulsating exophthalmos, and in it the most complete account of the disease will be found.

DISEASES OF CHILDREN.

MEDICAL works of the epitome class usually leave much to be desired. As a rule many important points are omitted, and many of the statements made are too absolute, owing to the space not allowing of the requisite qualifications. To those who have neither time nor opportunity for consulting the larger treatises on children's diseases, Dr. APERT's *Precis des Maladies des Enfants*³ can be commended. It is one of a series of works on medicine edited by Drs. GILBERT and FOURNIER, and has been carefully compiled. Very few important points would seem to have been missed, and the information contained is both accurate and concise. We have noted very few points calling for adverse criticism, and of these most might be claimed as coming within the category of those on which individual experience has the right of expression. We will cite one or two instances: In the section on bronchopneumonia, Dr. Apert claims that it should be considered an infectious disorder, and that patients suffering from it should be strictly isolated. In this country we have hitherto been far from regarding cases of bronchopneumonia as coming under the class of truly infectious disorders, notwithstanding that there is a growing opinion in favour of their being treated by methods in which open air forms a more prominent feature than is at present usual. In the differential diagnosis between bronchiectasis and tuberculous cavitation, a distinction made by the author is that the former usually occurs at the base and the latter at the apex of the lung. Many authorities, however, believe that tuberculous cavitation in children occurs more often at the bases than at the apices of the lungs, and that this distribution is the more frequent the younger the child. In the etiology of chronic hydrocephalus, again, Dr. Apert would seem inclined to attribute the disorder to syphilis in a very much larger proportion of cases than most authorities would accept. An introduction by Dr. Marfan on the clinical examination of children adds to the value of the work. The book is daintily bound in limp red covers with white lettering, and the paper, print, and illustrations are all that can be desired.

Dr. DINGWALL-FORDYCE's book on *Diet in Infancy*⁴ is yet another on the present popular theme of infant feeding. The full title of the work would suggest that the author had propounded a thesis which he was prepared to defend by means of an essay. The work, however, deals with infant feeding in the ordinary way, and no attempt is made to substantiate the assertion that it is the essential introduction to the study of disease in childhood. In the preface the author modestly states that his little volume "pretends to no heights of eloquence, and no profound depths of scientific information." In spite of this, we may say that in many ways he deals with his subject in a more

³ Bibliothèque du Doctorat en Médecine. Publiée sous la direction de A. Gilbert et L. Fournier. *Precis des Maladies des Enfants*. Summary of Diseases of Children. I. Par le Dr. Apert. Paris: J. B. Baillière et Fils, 1908. (Post 8vo, pp. 532. 75 figures. Fr. 10.)

⁴ *Diet in Infancy. The Essential Introduction to the Study of Disease in Childhood*. By A. Dingwall-Fordyce, M.D., F.R.C.P.E., Extra Physician to the Royal Hospital for Sick Children, Edinburgh. Edinburgh and London: W. Green and Sons, 1908. (Cr. 8vo, pp. 184. 3s. 6d.)

scientific manner than is to be found in larger volumes of a more pretentious character. He has evidently studied the subject deeply, and his advice is, on the whole, sound and trustworthy. Exception may be taken to the dogmatic statement, more than once repeated, that peptonized or predigested food should *always* be given in cases of continued high temperature. Many healthy infants object to such foods at the start, and it would seem a doubtful policy to commence their administration at a time when, although the digestive powers are impaired, there is also usually a marked disinclination for food of any kind. The book is not an easy one to read, as the author has arranged his chapters in a series of numbered paragraphs. Many of these numbered paragraphs, again, are subdivided into others of a somewhat arbitrary character, headed by letters. The whole effect makes the book read somewhat disjointedly. At the end of the volume are eleven appendices, all of them of interest; but one or two, such as that dealing with the technique of the tuberculin test in cattle, seem out of place in a work intended for the busy practitioner.

Books written for mothers and nurses, and at the same time for members of the medical profession, are seldom likely to be entirely successful. It says much for Dr. Comby's methods that his little work, *Alimentation et Hygiène des Enfants*,⁹ written for such different classes of readers, has reached a third edition, and this in spite of his having hampered himself by arranging his subjects in alphabetical order. In addition to sections dealing adequately with the diet of infants and older children, there are others on baths, school hygiene, dentition, physical education, gymnastics, games, growth, walking, clothing, etc., most of which receive scant attention in the usual textbooks. In each of these the reader has the advantage of Dr. Comby's experience and advice expressed in language both terse and clear. In the section on the artificial feeding of infants, the dilution of cow's milk with "boiled or sterilized water is advised as being all that is necessary in ordinary cases. The proportions of milk to water recommended, however—namely, 1 to 1 at birth, 2 to 1 at 4 weeks, 3 to 1 at 8 weeks, and pure milk at ages over 8 weeks—are greater than in use here. But the experience of Dr. Comby, and his claims to speak with authority on such points are both indisputable, and his advice of such simple methods is strong confirmation, if any were nowadays needed, of the non-necessity of the complicated percentage systems of Roth and his followers. In France, indeed, and to a less extent in this country, the plan advocated by Parrot, and more recently by Budin, of giving undiluted cow's milk from birth, and simply increasing the quantity with advancing age, is finding increased favour. Budin, it is true, advised the use of sterilized milk alone, but it is a moot point whether sterilization is a necessary step in such a method, or even desirable as a routine practice. The only real essential probably is that the infant should be accustomed to the undiluted milk from the start. In a new section in the present volume the author strongly advocates the use of butter-milk in some of the intestinal disorders of infants and children: and it would seem that the subject deserves more attention than it has hitherto received in this country. Dr. Comby's work is worthy of the success it has attained.

In neither the title page nor the preface of Dr. SIMPSON'S little work, *A Guide to the Feeding of the Infant during the First Year*,¹⁰ is there any clue to the class of readers for whom it is written, and it is only from the elementary nature of much of the text that we gather that it is mainly intended for nurses and mothers. Written in a clear and simple style, it would seem well adapted for its purpose. It can be said that Dr. Simpson's advice is sound and judicious, and his somewhat arbitrary tone will only render his work the more useful to those for whom it is intended. In a section entitled, "Should Milk be Boiled before Use?" we read, "If we compare a number of healthy infants reared on unboiled milk and an equal number of healthy

infants reared on boiled milk, we find that the former class show a more uniformly high standard of good health and development." Now, whilst we believe this to be possibly true, and there is an increasing consensus of experienced opinion to support it, we would not have thought the fact so readily capable of demonstration as Dr. Simpson's assertion would lead us to suppose. It should not be forgotten, moreover, that many of the medical officers attached to municipal milk dépôts are of a directly contrary opinion. Dr. Simpson is sceptical as to the value of barley-water as an addition to cow's milk, and states that it should not be given during the first three or four months of life, owing to the starch it contains. But theories promoted on test-tube experiments should not weigh against extensive clinical experience, and it is only during such early months that any advantage is claimed for the use of barley-water over plain water in infant feeding. In later months it can advantageously be replaced by a more frank addition of some starchy material. Whilst denying the virtues of barley-water in the early months of infant feeding, the author states that the addition of lime-water renders the curd "much finer in quality, and therefore of a less irritating nature, than the firm, hard curd" ordinarily formed. Clinical experience here again is in favour of the use of lime-water, although test-tube experimental evidence may be wholly wanting as in the case of barley-water. We would ask the author, indeed, if he is prepared to demonstrate any notable difference in the clots formed when an acid is added to cow's milk diluted with equal quantities of plain water, barley-water, and lime-water respectively. The criticisms we have passed are of a minor character, and in no way detract from the favourable opinion we have formed of the little book.

That some elementary knowledge of the principles of medicine and surgery adds an increased interest to the work of nurses is not to be doubted. Many of the lectures they attend in the course of their training are devoted to elementary anatomy and physiology, and but few touch upon the clinical aspects of disease. The more enthusiastic nurses commonly supplement these lectures by consulting some of the ordinary textbooks on medicine and surgery, but even the smallest of these usually contain more information than is needful for nurses' purposes, or than their previous training will enable them intelligently to grasp. Under these circumstances, Dr. McCOMB'S book, *Diseases of Children for Nurses*,¹¹ may supply a want. In it the chief symptoms and complications in each of the ordinary diseases and the main points in the nursing are briefly and clearly indicated. The amount of information afforded, it is true, is not profound, but it may well serve as a basis for the nurse to build upon. In addition to those dealing with the separate diseases, there are preliminary chapters on peculiarities of children's diseases, and nursing in childhood, and concluding ones on infant feeding, therapeutics, and medical terminology. On the whole the matter would seem to have been well selected for its intended purposes. If a future edition is called for, however, it might be well to leave out such subjects as the methods of blood examination, lumbar puncture, fetal circulation, and many others, and to devote more space to the symptoms of the complaints. The illustrations add to the value of the book.

TUBERCULOSIS IN INFANCY AND CHILDHOOD.

The publication of the volume of essays by various writers, entitled *Tuberculosis in Infancy and Childhood*,¹² is opportune. The editor, Dr. KELYNACK, in an introductory chapter, says that the essays afford evidence that tuberculosis and a tendency thereto exist among the infants and children of civilized people to an extent not generally realized; the articles on Scotland by Dr. R. W. Philip, on Ireland by Sir John Byers, on France by MM. Calmette and Breton, on Germany by Professor Nietner, on Norway by Dr. Andvord, on Sweden by Dr. Barr, on Switzerland

⁹ *Alimentation et Hygiène des Enfants*. By Dr. Jules Comby. Paris: J. Rueff. 1908. (Cr. 8vo, pp. 505; 23 illustrations. Fr. 5.)

¹⁰ *A Guide to the Feeding of the Infant during the First Year*. By J. W. Simpson, M.D., F.R.C.P.E., Assistant Physician, Sick Children's Hospital, Edinburgh. Edinburgh: James Thin. London: Simpkin, Marshall, and Co. 1908. (Cr. 8vo, pp. 88.)

¹¹ *Diseases of Children for Nurses*. By Robert S. McComb, M.D., Assistant Physician to the Dispensary, and Instructor of Nurses at the Children's Hospital of Philadelphia; Assistant Physician to the Medical Dispensary of the Hospital of the University of Pennsylvania. Philadelphia and London: W. B. Saunders and Co. 1907. (Demy 8vo, pp. 450, 10s.)

¹² *Tuberculosis in Infancy and Childhood: Its Pathology, Prevention, and Treatment*. By Various Writers. Edited by T. N. Kelynack, M.D. London: Baillière, Tindall, and Cox. 1908. (Demy 8vo, pp. 389; 27 illustrations. 12s. 6d.)

by Dr. Carrière, and on New Zealand by Dr. Mason all tend to confirm this conclusion. The volume contains also articles on antenatal tuberculosis by Dr. J. W. Ballantyne, on tuberculosis of the various organs and systems by writers specially competent to deal with each, and a careful discussion of the diagnostic and therapeutic use of tuberculin in infancy and childhood by Dr. Clive Rivière. Dr. Leslie Mackenzie, Medical Member of the Local Government Board in Scotland, and Dr. J. H. Meikle, Medical Officer of Schools, Edinburgh, contribute a valuable joint article on school hygiene and medical inspection in relation to tuberculosis in children. They give first general statistics for Scotland, and then the results of special examinations of school children. With regard to the latter they make the following observations:

In these school investigations, the examination was limited to what was possible at school—physical signs and symptoms. None of the cases were verified by bacteriological examination. Allowance must, therefore, be made for non-tuberculous consolidations; but, whenever possible, the child got the benefit of the doubt, and only the marked cases were recorded.

But the probable prevalence of tuberculosis is not to be decided on such facts alone. Vast numbers of enlarged glands were found, some certainly tuberculous. Bronchitis we have already mentioned. Enlarged tonsils and adenoids were numerous. Malnutrition of every grade was common. Thus, many morbid conditions strongly predisposing to tuberculosis were present in a large number of children. All these point to the probable existence of "latent" tuberculosis—an unfortunate term meaning "active" tuberculosis, but not as yet to be diagnosed by ordinary clinical methods. (The word "latent" should be dropped; it is ambiguous.)

Medical inspection, the authors point out, is only the first step, and in cases of suspected tuberculosis it ought, they consider, to be followed up by "the detailed and prolonged observation that is possible only in an organized clinic." Diagnosis must be repeated and systematic, and each suspected case must be followed into its home. On this head they write:

If medical inspection is seriously to affect the prevalence of tuberculosis, the examination of the child must lead back to the examination of his whole environment—food, sleep, cleansing, family history, occupations of parents, health of other members, and, in general, every circumstance that lessens the likeness of the home to a well-conducted sanatorium. If every case of malnutrition is followed back to its home environment, the chances of infection will be diminished, and the medical inspector will know how to estimate the danger.

It is easy to foresee that special clinical provision must be made for the "observational" diagnosis of tuberculous cases, and diagnosis must be taken in the wide sense. It implies not merely the recognition of gross disease, which is the climax, but of all the malnutritional conditions that lessen the child's capacity for school work, or diminish its resistance to common ailments.

With regard to special methods of diagnosis, they say:

Wholesale use of tuberculin is out of the question. Equally so is Calmette's reaction, except under the most stringent hospital conditions. The risk of damage to the eye may not be great; but the risk is positive, not negative. The test would not normally be applied in an out-patient department, and in our opinion it ought not to be applied in schools. This assumes that the test is reliable—a point still unsettled. The eye is too tender and too precious an organ to be exposed to any avoidable risk. We think, too, that with more detailed clinical care, more extended scrutiny of glandular conditions, bones, joints, skin, teeth, tonsils, appetite, circulation, disease history, and family history, many marginal cases will come to light. It may be that minute doses of Koch's new tuberculin may become quite safe for diagnosis, but the use of it must be a matter for consultation with the parents. And none of these special methods can be applied profitably except in a regular clinic under skilled supervision.

Dr. Philip states (p. 198) that in Edinburgh, in the domiciliary visits paid by the Assistant Physician of the Royal Victoria Dispensary for Consumption, by the nurses, and by the ladies of the sanitary committee, particular attention is paid to the children of the household so that the unaffected may be separated from the affected as much as possible and affected children prevented from attending school. On the other hand, Dr. Philip is clear that a tuberculous child ought not to be kept at home, but sent to a school "run on physiological lines and presided over by teachers whose chief aim should be to assist in the development of the delicate frame"; and he is equally clear that no child or teacher affected with tuberculosis ought to be allowed to continue attendance at an ordinary school.

The volume, as we have said, is timely, and will well repay careful study, which will be much facilitated by an excellent index.

NOTES ON BOOKS.

THE volumes of the reprint on thin paper of the *Dictionary of National Biography* continue to appear with admirable punctuality, and since our last notice the alphabet has been traversed as far as Lluelyn, the last name in the eleventh volume of the reprint, and in the thirty-third of the original issue. The work suffers nothing from the thin paper, and in spite of the fact that the individual volumes of the reprint are larger, they are, on the whole, easier to handle, and perhaps in other ways more convenient to consult. Among the medical names in the eleventh volume is that of Lettsom, whose share in founding the Medical Society of London is commemorated in the course of lectures delivered annually before it. The tenth volume contains the biographies of John Hunter, of Anne his wife, whose poems and songs are enumerated, and of William Hunter, his brother, and of Edward Jenner, the latter by Dr. Norman Moore. The biography of William Harvey, from the same hand, fills nearly six pages in the ninth volume, which also contains a note on the life of Sir Charles Hastings, the founder of the British Medical Association. We can only again commend this great work of reference to every man of scholarly tastes.

SIR GEORGE WATT'S *Dictionary of the Economic Products of India* having been out of print, the author was requested by the Government of India to prepare a corrected and abridged edition of the work. The handsome volume on the *Commercial Products of India* which has recently appeared is the result. Every possible care has been taken to render this important publication as accurate and complete as possible. The compilation has been prepared under the supervision of Sir W. T. Thiselton-Dyer, Director of the Royal Botanical Gardens, Kew, aided by an advisory committee of experts, and the author has referred on special subjects to special authorities and made use of information obtained in India and systematically collected and indexed in the India Office. The "products" are arranged in alphabetical order and access to the contents of the book is made very easy and complete by means of page headings and marginal references and a copious and elaborate index. The work includes all sorts of commercial products—mineral, vegetable, and animal—foodstuffs, fibres, materials for arts and industries, intoxicants, narcotics, medicines, poisons, and so forth. Indeed, there does not appear to be any omission of any article of indigenous production sold in India or exported elsewhere, whether in raw or manufactured state. The descriptions of the source, preparation, and disposal, in trade and commerce, of the various materials dealt with are most ample, and abundant if not exhaustive references are given to books and papers relating to the subject under consideration. Trade statistics down to the year 1905-6 are given. The amount of information contained in this large, closely-printed volume is immense, and cannot fail to be of great interest and service to students of Indian products, whether for scientific or commercial purposes. Indigenous industries are described, as well as more recent methods of dealing with raw material introduced from foreign countries. Agriculture and livestock are fully treated, and long and learned discussions are to be found on matters of physiological and medical interest, such as the cultivation and use of opium, cinchona, cannabis, aconite, datura, abrus, erythroxylon, and many other plants employed as nervines, drugs, or poisons.

To the volume known as *Herbert Fry's Guide to the London Charities* we have drawn attention on many previous occasions. The edition for 1909 is the forty-fifth annual issue, and is edited by Mr. JOHN LANE. It is a compact handbook, giving in alphabetical order a list of all charities either established in or working from the metropolis, together with the names of their principal officials, their annual income, date of their foundation, their address, and the objects of each institution or association. The list is preceded by a general review of charitable enterprise in London during the year 1908, and by a few pages of notes on certain bodies which during the past year have for one reason or another come specially under notice. The book is to be commended as of decided utility.

¹ *The Commercial Products of India*. By Sir George Watt, C.I.E., M.B., C.M., LL.D. Aberdeen and Glasgow, F.R.C.L. London: John Murray. (Roy. 8vo, pp. 1197. 16s.)

² *Herbert Fry's Royal Guide to the London Charities*. Edited by John Lane. London: Chatto and Windus. 1907. (1s. 6d.)

MEDICAL AND SURGICAL APPLIANCES.

Simple Form of Vaginal Douche Tube.

DR. ALEXANDER DUKE (London) writes: A practical and useful form of vaginal douche tube is depicted in the accompanying illustration, made for me by Messrs. Howlett and Son, Charlotte Street, E.C. The stream of water is ejected in hollow cone shape, similar to others much more



expensive, and with the additional advantage there is nothing to get out of order, and the tube should last indefinitely unless broken by direct violence. The simplicity of the plan for obtaining the cone-shaped flush of water, combined with the moderate price asked, should recommend the tube. Rectal nozzles can also be made on the same principle.

PRAYER AS AN INSTRUMENT OF MURDER.

UNDER this heading an account of an attempt to organize the destruction of vivisectors by prayer, with extracts, was given in the *BRITISH MEDICAL JOURNAL* of January 9th, p. 112. The document, which was signed "M. Cowan," without date or address, and which bore no imprint, was handed to us by a member of the medical profession who is prominent in a line of research of the greatest importance to the well-being of mankind. It had been sent not to him but to one of his laboratory servants. Since then it would seem that "M. Cowan" has been inspired to send her appeal to some at least of the experimenters themselves. We therefore think it well to publish the whole document, with the covering letter, as it was placed in our hands:

Dear Sir,—I beg leave to introduce the enclosure to your notice, for, though a section of the community feel very deeply upon the subject therein treated, there is no desire to act harshly or hurriedly. They feel that very many err more through a want of thought and consideration for the real question at issue, than from any wish to do what is contrary to the instincts of justice and humanity.

This copy is therefore sent in time for you to weigh the pros and cons and to come yourself to a decision.

Yours truly,
(Signed) M. COWAN.

Some little time ago, in the coffee-room of a London hotel, I chanced to hear one of the party at a table close by narrate how he knew a person who was in the habit of praying from time to time for the death of one of our leading vivisectors; he said that always the man indicated had died. I tried to trace the speaker, but, as time had elapsed, did not succeed in doing so; I then thought, as I myself know of the efficiency of prayer, it would be well to try if this were actually so. I thought first of experimenting on Dr. Starling, but it seemed to me unfair to give such a stab in the dark without first letting it be known what was intended. It seemed also almost cruel, without knowing any of the surrounding circumstances, to select at random one from the large number of distinguished scientists on the medical lists.

It was therefore finally decided to make earnest prayer, giving much thought to the subject, that the Almighty, if the prayer were in accord with His will, would promptly remove the man most likely to cause future suffering to innocent subjects by his experiments. About a fortnight later one of our distinguished medical scientists dropped, and the newspapers were lamenting the loss to science of this vivisector and the discoveries he was just about to make.

Our Saviour distinctly states: "A sparrow falls not on the ground without our Father." If that be so, then He stands in the laboratory beside the operating trough. Without doubt, He is who so often gives an insensibility to the man enduring, which seems unaccountable to the operator. But does He protect the operator and the watching students from the hardening and vitiating effect of constantly participating in cruelty?

Vivisection is not a question of expediency, it is a question of right and wrong. What the Royal Commission decides, permits or does not permit, is of little or no importance in comparison with the will and mandate of a higher Power. The prayer of the child of God reaches further, is more searching in its effects than any enactment of the law can be. Not only does it enter the vivisectioning room, embracing all operations there, it is with the patients in our hospitals, and by the bedside of the poorest sufferer, and it will make its way into the garret or concealed chamber where the student, eager for knowledge and advancement, illegally tortures his helpless victim from day to day.

Let us not confine our prayer to our own country and our familiar surroundings, but let it include all kingdoms, peoples, and languages; France, Germany, Khartoum, India, America, or wherever there may be scientific experiment, experiments practised contrary to the will of our God.

If, as we are told, "the heart of man is deceitful above all things, and desperately wicked," it is conceivable that amongst all the thousands of medical men and distinguished scientists

there may be one individual who answers to that description. Is it not our duty to protect the general public from the evil influence of that one man? We owe it to our poorer neighbours, when we take them into hospitals principally supported by us and the handsome donations of our rulers, to ensure to them that unauthorized experiment, that is, experiment without the consent of the patient or his friends, be not practised there.

For many years, in fact since 1877, the subject of vivisection has been greatly and distressingly in my thoughts.

So difficult it is to understand how a God, such as we know our God to be, sympathetic, all powerful, and easy of access, does not interfere on behalf of His creatures, helpless and oppressed; but may there not in these cases be some ultimate advantage to the sufferer, in no way contemplated by the oppressor? If the Captain of our salvation was made perfect through suffering, if we ourselves must through much tribulation enter into the Kingdom of God, then, without doubt, we may hope that in cases of long and unmerited suffering, another and superior footing, in their future state, may be accorded to these animals.

If it be so, that the Almighty has vouchsafed to His followers the gift of prevailing prayer, let them use it. It is the prayer of the people of God, the followers of Christ, that must win the battle in the struggle against vivisection. When we pray, "Thy will be done," surely we allow that some one is to do it. Then let us not permit cowardice, or credulity in the belief of a great benefit to future generations, to restrain our prayers—a benefit to be won by the torture in the present of millions of our humble friends; to be won by the investigations of those who are impervious to all feeling of pity for the defenceless, helpless, and weak.

Altho' there are many Christian people who daily impetrate the Almighty not to permit any discovery of real value to be made by such cruel means, and this prayer has certainly not gone unanswered. Let us pray, then, not only occasionally or spasmodically, but, fixing the mind upon this subject, offer up our prayers morning and evening continually. Let us be particular only to ask for what accords with the will of God.

Who are the men to whom Christ says, "If ye shall ask anything in My name, I will do it"? Is it not those who have made a covenant with God by sacrifice (Christ's)?

Do these scientists expect us to believe all they tell us? Are they serious in asking us to trust them? "Surely they are not serious."

Let them take thought now, and be warned. It is not too much that we petition for. Who can tell if God will turn and repeat, that these men perish not?

God saw the work of the men of Nineveh that they turned from their evil way, and God repented of the evil that He said that He would do unto them, and He did it not."

Their fate is in their own hands.

M. C.

We may remind our readers that this letter and the accompanying exhortation to pray for the death of vivisectors were sent to a servant in a laboratory. That seems to us the only thing that gives it any importance. Vivisectors, of course, will only laugh at it; but it is conceivable that the document might have some effect on the minds of half-educated persons. We need not comment on the state of mind of a woman—for it has the marks of the sex of the author writ large upon it—who prays for the death of fellow creatures and invites other people to do likewise. We need only point out that the moral outlook of the thoroughgoing antivivisectionist is akin to that of the religious persecutor. In both is visible the same arrogant assurance that they are in the counsels of the Almighty, and that they have a direct mandate from Him to destroy any who differ from them in that belief. We venture to suggest to "M. Cowan" that it would be more charitable if, instead of praying for the death of vivisectors, she were to ask for the services of the Christian Scientists to charm away the sufferings of the victims of the scientific "torture" chamber. As we understand the teaching of Mrs. Eddy and her apostles, faith on the part of the subject of their "treatment" is not required; therefore their power should extend to animals as well as to human beings. This would at once be an opportunity of proving the non-existence of pain, without the anaesthetics of whose efficacy antivivisectionists profess to be sceptical, and would save the souls of the prayer-murderers from any danger of blood-guiltiness.

In the meantime we call the attention of "M. Cowan" to the fact that the only apparent answer to her prayers has come in the form of a donation to the London Hospital for the furtherance of medical research work. This reminds us of Mrs. Carlyle's story of the old lady who one rainy summer took part in a public prayer for fine weather. In the middle of the pious exercises a tremendous thunderstorm burst over the heads of the worshippers. This shook the faith of the old lady to such a degree that she exclaimed, "Oh, Lord, this is too ridiculous!"

LITERARY NOTES.

THE article which appeared in the BRITISH MEDICAL JOURNAL of January 16th, p. 165, under the title of The Great Plague of London, was contributed by Sir James Sawyer of Birmingham. We regret that, owing to a misunderstanding, his name was omitted.

A short time ago we quoted the well-known lines:

Perhaps it was right to disseminate your love,
But—why did you kick me downstairs?

After a good deal of trouble we found them attributed to John P. Kemble (1757–1823) in Cassell's *Book of Quotations*, by W. Gurney Benham. The lines are there given as follows:

When late I attempted your pity to move,
Why seemed you so deaf to my prayers?
Perhaps it was right to disseminate your love,
But—why did you kick me downstairs?

The source is said to be a comedy called *The Pencil*, produced on November 23th, 1788 (Act I, sc. 1). There is a footnote to the following effect:

This is Bickerstaff's comedy, 'Tis Well 'Tis No Worse, adapted and reset. The lines appear as above in *The Annual Register*, 1783, appendix, p. 201, among "Miscellaneous Poems," and are headed "An Expostulation"; also in the *Asylum for Fugitive Poets*, 1786, vol. 1, p. 15. In both cases the lines are published anonymously. It is presumed that John Philip Kemble was the author, but this is not certain. The lines were not in Bickerstaff's comedy as produced in 1770.

Isaac Bickerstaff was a real man, a short account of whose stormy career may be found in the *Dictionary of National Biography*. The name is best known to students of English literature as a pseudonym used by Swift in ridiculing the predictions of one Partridge, a London shoemaker in the early part of the eighteenth century, who professed to have the gift of prophecy. Out of Swift's papers on this subject grew the *Tatler*, in introducing which Steele adopts the name because it had "gained an audience of all who have any taste of wit." The difficulty of running familiar quotations to earth is often very great. Thus the saying that "Cleanliness is next to godliness," to which a Scriptural source has frequently been attributed, belongs to Charles Wesley; it occurs in a sermon on dress. Boswell tells the following story of Johnson:

When I once talked to him of some of the sayings which everybody repeats, but nobody knows where to find, such as *Quos Deus vult perdere, prius dementat*, he told me that he was once offered ten guineas to point out from whence *Semel insanivimus omnes* was taken. He could not do it; but many years afterwards met with it by chance in "Johannes Baptista Mantuanus."

The words occur in the First Eclogue of Mantuanus's *De Jovis Amore*, and the whole line is:

Id commune malum: semel insanivimus omnes.

Dr. Birkbeck Hill says the words *Quos Deus vult perdere, prius dementat* are probably a rough translation from a fragment of Euripides. Another oft-quoted saying, *Quantula sapientia mundus regitur*, is attributed to the Swedish Chancellor, Oxenstierna. As to this there is a note in Great Duff's *Notes from a Diary* (1886–1888), which well illustrates the difficulty of which we are speaking. The entry is as follows:

Byrne writes on her to-day's date [May 24th, 1838]:

"Do you recollect the hunt I had for the correct version of Oxenstierna's saying about 'the little wisdom with which the world is governed'?" Six various readings I had before me, each one endorsed by an extremely respectable authority, and your *Geflügelte Wörter* told me the original authority for it was *Lundblad's Svensk Plutarch*: so I searched, first at the Boleian. No! No Lundblad there. Then at the British Museum: some portions of the work, but not the one I wanted. Then, through a Swedish friend, in the Library at Upsala: no Lundblad at all. At last he ran it to earth in the Royal Library at Stockholm, and the correct version turned out to be *different* from every one of the six above referred to, and to run as follows:—
"An nescis, mi fili quantilla prudentia regitur orbis?"—(*Scensk Plutarch* II. Stockholm, 1826. Page 95.)"

Under the title of *A Collection of Contemporary Documents (MS. Eg. 2134) Relating to the Trial of Mary Queen of Scots, 1586* (J. T. Savage, Chatham Street, Ramsgate), Dr. Charles Cotton of Ramsgate has made a very interesting contribution to the history of the trial and death of Mary Queen of Scots. The documents, which are known as the Bardon Papers, were intended for publication sixty years ago, but drifted into the British Museum instead. How these papers got to Bardon, an old manor house in Somerset, is a mystery; but Dr. Cotton, who is connected by marriage with the Leighs of Bardon, suggests a probable explanation. The Leighs were an old Devonshire family, a branch of which settled at Bardon in the latter half of the sixteenth century, and were closely connected with a certain Robert Scudamore. If this Scudamore is the same person as the Scudamore who was Under Secretary of State at the time these papers were written, and lived in Walsingham's house, it is easy enough to see how they came to Bardon. Dr. Cotton says there is little doubt that the Bardon Papers passed from Scudamore into the hands of the first Leigh of Bardon about the year 1595, were brought to Bardon soon after, deposited with other documents in an attic, and left there till their existence was forgotten. Dr. Cotton does not claim to be an ardent supporter of the unfortunate Queen; he states the case in an impartial manner. There seems to be little doubt that the entire mass of evidence brought against Mary at her trial was forged by Elizabeth and her Ministers. Mary was not only dangerous because she stood in the way of the Reformation; she was likely to succeed to the throne of England very shortly, as her cousin was old, and Elizabeth's Ministers knew that their safety would end with her life. It was necessary to remove her; but this could not be done without a pretext, therefore the letters proving her implication with the plot against Elizabeth's life were forged, and she was tried and executed. At the trial not a single document was produced. Mary was condemned solely on copies of letters and depositions. She was never allowed to see either Babington or her secretaries, Maw and Curle, after their confessions implicating her in the plot against the Queen's life, though she demanded it as a right. No witnesses were present during the trial at Fotheringay, and at the Star Chamber at Westminster Mary was absent whilst the witnesses were examined. Of the two letters in the Bardon collection which purport to be from Mary to Babington only the first bears her signature, and this merely asks him to forward to her a packet of letters from France. The most conclusive proof that Mary knew nothing of an attempt to assassinate Elizabeth lies in the fact that neither in her letters to Mendoza and Paget, nor in the references to her letters to Charles Paget, Englefield, the Duke of Guise, and the Bishop of Glasgow does she ever allude to the possibility of compassing her cousin's death; and none of the notes and papers of the commissioners contain any reference to the fact that Mary knew her friends were plotting to kill the English Queen. It was not difficult to trump up a charge against Mary. Walsingham's spies were everywhere, in the Tower, in the seminaries abroad; the very clerk at the French Embassy entrusted to copy out Mary's ciphered letters was said to be in his pay. Whilst Mary was busy planning for her escape, the fact that Elizabeth's life was threatened was carefully hidden from her; Gifford did not tell even Mendoza of this part of the plot till the beginning of August, 1595, and by that time the game was almost up. At her trial she acknowledged that she had known something had been kept from her, as the conspirators knew she would never consent to it, and that her name might have been used without her knowledge, as indeed it was, in a way she little guessed at the time. For Walsingham and his creatures forged letters from her to Babington which drew forth from him all the details of the plot, including the assassination, and when they had all the necessary evidence to implicate the Queen, it only remained to arrest the chief conspirators and try Mary for her life. In the interest of historical truth, it is a great pity that the Bardon Papers have never been published, and it is to be hoped that Dr. Cotton, who has so ably brought the matter contained in these MSS. to the notice of those who are interested in all that concerns Mary Stuart, will not rest satisfied till he has published the full text.

ROYAL COMMISSION ON VIVISECTION.

FOURTH REPORT.

(Continued from page 164.)

We continue our abstracts from the evidence of which the minutes are contained in the fourth report of the Royal Commission on Vivisection, issued in December, 1907.*

Evidence of Dr. Henry Head, F.R.S.

Dr. Head gave evidence as to the relation of our knowledge of nerve diseases and experiments on animals. The dissecting room helped very little. The anatomist could not even say whether the biggest tracts visible to the naked eye conducted upwards or downwards. The beginning of our present knowledge came with Waller's discovery that a nerve degenerated when separated from its nutritive centre. This law was the direct outcome of experiments on animals, and its application to the brain and spinal cord was responsible for the greater part of the knowledge of the structure of the nervous system now possessed. But for Waller's law Gowers could not have used the injury in man to discover ascending tracts in the lateral column. But there was a great deal of dispute about them until Mott and others settled their anatomical connexions once for all by animal experiment. By experiments on animals a tract or set of tracts could be divided precisely; the animal was kept alive until degeneration had taken place, and was then killed. By suitable means the dead parts could be coloured so as to stand out clearly in the microscopical picture. The method by which these dead structures were made to show up clearly against the healthy parts was discovered by Marchi from experiments on animals. Waller's law and Marchi's method, applied to material obtained from experiments on animals and from disease or injury in man, were responsible for almost all our knowledge of the anatomical paths in the nervous system. Our present knowledge of the anatomy of the nervous system depended to an enormous extent on methods discovered from experimentation on animals, and in the utilization of these methods upon material derived from the results of disease or accident. For a knowledge of ingoing sensory paths, they were obliged to fall back mainly upon disease, because man alone could tell of his sensations, but disease produced irregular and diffuse destruction, and the most instructive conditions rarely came to *post-mortem* examination. Even here, when observation of disease on man started with a preponderating advantage, in that man could tell of his sensations, experiments on animals were necessary to supplement the rare opportunities offered by disease. On the motor side experiments on animals had the overwhelming advantage that the destructive lesion or the stimulus could be localized accurately, and observations could be made, under the direct conditions of experiment, time and place being convenient. Hughlings Jackson discovered by long and laborious observation that when certain parts of the surface of the brain were the subject of disease, certain movements were produced in the limbs. But these results remained a brilliant hypothesis until Hitzig in Germany, and Ferrier in England, showed by simple direct experiment that stimulation of the surface of the brain in animals produced movements of the limbs such as Jackson had described. In spite of a generation of clinical observation since that time, many important details of cortical localization remained undecided until Sherrington and Grünbaum's experiments on the anthropeid apes. It might be asked: Why not experiment on men who offer themselves voluntarily? The witness held very strongly that no man had the right to be the subject of an experiment unless the whole conditions surrounding the experiment were previously known as well as they could possibly be at the time. In his own case the most careful observations were made upon patients suffering from accidental injuries to nerves. Then an experiment upon himself was designed so that the question which could not be answered by these accidental lesions was put directly, and the answer given clearly. Every now and then, for the

relief of pain, man was operated upon under conditions closely representing those of animal experiment, as in the division of the posterior roots for pain and the operation of the removal of the Gasserian ganglion at the base of the skull for persistent neuralgia. The operation was brilliantly successful, and now that people were getting skilled the mortality went down every year. One particular case he had under observation now was done about 1897. The operation enormously improved the general vitality, because the patients had suffered from terrible pain over long years, and the relief often turned them into entirely different beings. It altered the appearance of the face, because one must divide the motor nerve for certain parts of it. It partly took away the power of movement. That side of the face was very nearly dead to all sensation, and the nutrition of the parts supplied by the divided nerve was somewhat affected. If one took care, in the present day, the eye was not affected. In the old cases the eye used to suffer a good deal. The mortality was high at first. Proceeding, the witness told the story of a small research, which illustrated the close interrelation between animal experiment and the utilization of the material obtained from disease. The problem was: Why did pain caused by irritation of some internal organ radiate on to the surface of the body or into the limbs, and why did these parts become tender? It had long been known that when an internal organ (such as the heart) was affected the pains were not always situated over its position; they seemed to go into other parts of the body. In consequence of the work of Dr. Gaskell, some suspected that this was the way in which the internal organs expressed themselves when they were diseased. Dr. James Mackenzie and the witness independently attacked the problem and examined for a number of years the actual facts as they occurred in patients in the hospital. They selected instances in which one organ, if possible, was affected. For instance, in such a disease as stone in the kidney, they watched the pain produced by the stone, and then saw the stone removed and the pain disappear, and by a series of observations, extending over a number of years, they determined that when an internal organ was affected in this sort of way, it expressed itself by pain radiating round the body, associated with areas of tenderness on the skin. So little had that any relation to anything that was known that most people doubted that these areas occurred. But throughout the whole research they were much supported by Sherrington's experiments on the distribution of the posterior roots. He found by experimenting that, supposing one worked out the parts supplied by one posterior root, it was found that they spread over the body and limbs, and were distributed in a sort of zone, like a half-belt round the body. The witness was in touch throughout the whole of his observations with Sherrington, who was at that time working out these zones, which were previously entirely unknown in animals; that fact made him certain that his observations on referred pain were correct, and enabled him to propound a set of figures, what might be called a map of the body. Sherrington carried on experiments on animals for some four or five years, and operated on a considerable number. He used monkeys and cats. Asked if the animal would be in a state of suffering on account of the operation, the witness said, Not in the least, except for possible post-operation discomfort. The whole point in the operation was that the animal should be as normal as possible, otherwise it was no good. Asked if the nerves would not come together again, he replied that arrangements were made that they should not, just as in human neurotomy. The Chairman then referred to what he thought a very cruel operation—namely, unnering a horse to make an animal which is lame in the feet insensible in the feet altogether, and asked if the operation could be done under anaesthetics if the veterinary surgeon performing it thought right. The witness said, Yes, perfectly well, and if it was done so that the nerve did not come together it would not be cruel in any sense of the word. Done on a horse not under anaesthetics, he did not think it would be excessively painful. Done extremely quickly it would be a momentary violent stab of pain, and then the thing would be over; but the only pain that could come in was when the nerve regenerated, not when the nerve was divided.

* London: Printed for His Majesty's Stationery Office, by Wyman and Sons, Limited, 109, Fetter Lane, E.C. And to be purchased, either directly or through any bookseller, from Wyman and Sons, 109, Fetter Lane, Fleet Street, E.C.; and 32, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Edinburgh; or E. Ponsonby, 113, Grafton Street, Dublin. (1908.)

If the nerve remained divided no pain could come in. Continuing his evidence as to the research, the witness said the next stage was to find out what happened if these parts that Sherrington had been working upon were irritated in man. That could obviously not be done by an ordinary experiment, but shingles, as was well known, produced the most violent irritation of the posterior root, the ganglion. By working on shingles and on the dead-house material microscopically, and using the method for colouring that had been discovered on animals, they were able to show that irritation of the ganglion was able to produce these zones on the body closely resembling, but differing on the other hand to a certain extent from, those obtained by Sherrington. At the end of this stage it was at once seen how little was known about the distribution of the nerves on to the surface of the body. Generations of anatomists had dissected the nerves of the human body, and it was thought they knew all that was to be known about their distribution. Yet when a workman came to the hospital, any physician or surgeon who was honest with himself, had to say his knowledge gained from dissection told him nothing with regard to the sensory condition of that man's hand. They were so impressed with the absence of knowledge on these points that they set to work first of all to observe what actually happened when by accident various nerves were divided. They began to suspect that there were certain laws underlying the whole thing which had never been formulated. But good as hospital patients were it was obvious that no working man could give the time required or the attention for a long and elaborate series of observations. Therefore, after they had made several hundreds of observations on ordinary hospital patients, the witness determined to have three nerves divided in his own arm. This was done with the most successful results; the question that was put by the operation was answered immediately with a clearness they could not obtain by any other means, and for five years they had been working out the results of that experiment. The problem they wanted to solve was this: There went to the hand nerves which went to the muscles, and nerves which went to the skin. Ordinary accidents divided both. They wanted to know what happened if only the nerves that went to the skin were divided and all the nerves which went to the muscles were left untouched. They desensitized the skin over the whole of the part. They took only the skin nerves and left all the nerves which went to the muscles; the result was that they discovered that under this sensation, which was what they all had when they touched themselves, there lay an entirely unappreciated sensory mechanism, which was responsible for an enormous amount of sensation, but that it ran with muscular nerves, which was an entirely new fact, and a thing which had revolutionized the conception of sensation altogether. In old days they would have been told, if one cut all the sensory nerves going to the skin one desensitized the part. It was nothing of the kind. One must cut the sensory fibres in the muscular nerves before one did that. They could not test the sensation of animals. But the whole point was that running alongside came a series of experiments on the way in which nerves united in animals, which were necessary to show how these reunited nerves conducted. That could be done only on animals. Experiments on animals could not tell them about what a human being felt; for that they required disease. On the other hand, in many of the cases where they had to depend upon human beings they only knew what was the matter with them because they had made that lesion in animals. In reply to Sir William Church, he agreed that *mutatis mutandis* all he had said applied in a very large measure to researches into other organs in man. Experimentation upon animals could not take the place of clinical observation; the one could only be fruitful with the other. He wished to point out the uselessness of experimenting for a practical end. Men had been experimenting for practical ends and observing for practical ends with regard to pain and disease with comparatively little progress. It was only when they determined to see whether they could not apply the theoretical results obtained by Dr. Gaskell to the structure and the functions of the nervous system that they discovered these other laws, which were of daily

practical importance. Practical results were the by-products of a manufacture of which knowledge was the aim. In reply to Sir William Collins, he said he had no doubt that this experiment had revolutionized their conception of sensation. The three nerves he divided were the radial and the two branches of the external cutaneous, one of which ran down the front of the forearm, the other down the back of the forearm. The anatomist had always said that the radial played a considerable part, but when the radial was divided in man they could not find out that anything of the kind happened. Asked as to the part played by the ulnar nerve, the witness said the motor power was accurately known; the sensation was very imperfectly known. Dr. Head proceeded to refer to observations made by Sherrington on animals and by himself upon human beings, where the ulnar nerve had been divided. It was found in those cases that if one gave the anatomist a patient in whom the ulnar nerve had been divided, he could not tell whether it had been divided and partly reunited, or whether it had not been divided, except by looking at the motor supply. If by any chance the motor supply was uninjured, he could not tell in what condition that nerve was; he could not tell whether to cut down and suture that nerve, nor could he tell if one did cut down upon it what one would find. Asked if he would be surprised to hear that a surgeon seeing a case of division of the ulnar nerve at the elbow joint, and finding loss of sensation in the little finger and the adjacent portion of the next finger, had cut down upon the ulnar nerve and resutured it, and found sensation restored, the witness said, Not in the least, because he cut down without knowing, except on the motor side, what he was going to find. Time after time he had known the ulnar nerve cut down upon in ignorance that it had reunited and reunited. Recently a patient of his own, in whom the ulnar nerve was united, was operated upon and the nerve exposed, simply because it was not known whether that nerve was united or not. His experiment referred to deep sensibility. It was found that after the operation a touch with the finger could be appreciated and localized, although the whole of the skin had been rendered insensitive. Secondly, it was found that by pressure pain could be produced with the same amount of pressure as on a normal hand. Asked if the experiment necessitated a revision of their opinions as to the distinction usually drawn between motor and sensory nerves, the witness said, No, between muscular and cutaneous nerves, which was a different matter. Asked if he considered it necessary to make a distinction in speaking of sensation generally between sensation to touch, sensation to pain, and sensibility to temperature, the witness said, Yes, discriminating also heat and cold. Asked whether those forms of sensibility travelled along with the motor nerves or with the cutaneous nerves, he said one form of touch travelled along the cutaneous nerves and one along the deep fibres; one form of pain travelled along the cutaneous nerves and one along the deep fibres. Heat and cold travelled solely along the skin fibres. Localization of a spot touched travelling along the deep fibres did not carry the power of distinguishing two points; sensory impulses travelling from the skin carried the power of discriminating the two points. Those views were new. He supposed the first publication of it was in 1905. Sherrington worked independently, and published his results in the usual way, and it was the witness's knowledge of Sherrington's publications that helped him so profoundly in his research. In reply to other questions, he said that localization of pain would not by itself localize a stone in the bladder. A better instance in some ways was the pain down the inner side of the arm, produced by heart disease, which was a thing not understood at all. Asked if he had worked at the regeneration of nerve he said, Yes. Asked whether he was a centralist or a peripheralist, he replied it would be impossible to say, because they were beginning to see that the problem was not so simple as that. He agreed that both peripheralists and centralists claimed, as the result of experiments on animals, the accuracy of their view because it was like all those things; they had to work on both sides of the question before they ultimately reached the truth. In reply to a question as to a recent paper by Marie in which it was asserted that the third left frontal

convolution did not play any special rôle in the function of language, the witness said it was that very point that was in dispute. It was one of the points that they could not settle by experiment, and which they had to wait for observations. It was one of the earliest localizations and still one of the most disputable. Asked if without his experiment on himself, by experiment on animals alone, could this revolution in our conception of sensation have been attained, Dr. Head said, Not of sensation, but the very fact that Sherrington had told them that there were these afferent fibres made it perfectly certain that there must be a sensory function attached to them. What that sensory function was, was a thing that only a human being could tell them, and that was what they set themselves to show; but the idea would not have come to them had they not had this elaborate work of Sherrington's, which told them that a large proportion of the fibres in the muscular nerves were not motor. In reply to further questions, he said the operation on himself was done under general anaesthesia. There was absolutely no pain above the division during the healing. He went about his work as usual, with his arm in a sling. It healed by first intention. In reply to further questions, he said that in his opinion the knowledge gained by his experiment directly tended to the amelioration of future suffering by more skilful and expert treatment. It had opened up and enabled them to understand things not understood before. It tended to correct errors either in diagnosis or treatment which might have existed in the absence of that knowledge.

(To be continued.)

Medical News.

THE German Society of Tropical Hygiene will hold its second congress this year at Easteride.

At a meeting of the Royal Society of Arts, John Street, Adelphi, London, W.C., at 8 p.m., on Wednesday next, Dr. James Cantlie will read a paper on the part played by vermin in the spread of disease; the chair will be taken by Sir Malcolm Morris, K.C.V.O.

LIEUTENANT-COLONEL J. W. T. GILBERT, V.D., Royal Army Medical Corps (Territorial Force), 3rd Home Counties Brigade, has received the Royal permission to accept the silver medal of the Order of Orange-Nassau, conferred upon him by the Queen of the Netherlands.

MR. F. W. WHITE, 26, Browning Road, Manor Park, Essex, has compiled what he calls a United Daily Calendar, showing the dates of the month on which all the days of the week will fall during 1909. It is for many purposes a very convenient desk companion.

A DISCUSSION on the report of the Royal Commission on the Care and Control of the Feeble-minded will be opened at the meeting of the Child Study Society, at the Parkes Museum, London, on Thursday next, at 8 p.m., by Dr. G. E. Shuttlesworth, Mrs. E. M. Burgwin, and Mrs. Dickinson Berry, M.D.

At the annual meeting of the North of England Obstetrical and Gynaecological Society on January 15th the following gentlemen were elected office-bearers for the year: President, Dr. J. W. Martin (Sheffield); Treasurer, Dr. W. K. Walls (Manchester); General Secretary, Mr. W. H. Phillips (Sheffield).

A DISCUSSION on ulcerative colitis will take place at the meeting of the Medical Section of the Royal Society of Medicine on Tuesday next, at 5.30 p.m. It will be opened by Sir William Allchin, and statistics of cases of ulcerative colitis during the past twenty-five years will be presented from the chief London hospitals.

THE third annual dinner of past and present students of the Royal London Ophthalmic Hospital will be held at the Trocadero Restaurant, Shaftesbury Avenue, London, W., on Wednesday, February 10th, under the presidency of Sir Anderson Critchett, Bart., C.V.O. Further particulars can be obtained from either of the honorary secretaries, Mr. Arnold Lawson, 12, Harley Street, and Mr. J. Herbert Parsons, 27, Wimpole Street, London, W.

THE laboratory of the Chicago Department of Health has recently examined six different systems for ventilating tramway cars, and the Department has given notice that if, after a reasonable lapse of time, arrangements for the installation of one of the approved methods of ventilation are not made, suits will be instituted against each company

for every improperly ventilated car, every day that it is in the service.

IN the Howard Prize Essay, read by Mr. P. E. Braun before the Royal Statistical Society on January 19th, on the "Cost, Conditions, and Results of Hospital Relief in London," the author dealt with the accounts of the London hospitals for 1906. He therefore inevitably included recommendations which are so far ancient history in that they have already been anticipated and dealt with. Nevertheless, the paper was an interesting contribution to consideration of the subject, and some of his conclusions which are of general interest and not open to criticism may be mentioned. He showed that the total ordinary expenditure of 123 hospitals in Greater London reached the enormous sum of nearly one million sterling—in exact figures, £999,982—and that the ratio of management to ordinary expenses was usually lowest in the case of the great general hospitals with medical schools attached. The premier position in this respect was held by St. Bartholomew's. The twelve general hospitals derived 52 per cent. of their united income from invested property. The percentage of persons dealt with by provident and charitable dispensaries and as free patients by private practitioners was quite unknown.

THE good work done by the Hospital for Invalid Gentlemen at 90, Harley Street, has long been recognized and appreciated by the medical profession, and it is to be hoped that the effort now being made to raise money to erect and equip the new building at 19, Lisson Grove, will meet with a full measure of support from the benevolent public. The Duchess of Albany laid the foundation stone of the new building in Lisson Grove on January 18th, in the presence of a distinguished company. The President of the institution, Lord Waldegrave, explained that the objects of the hospital were to afford a home in illness, with medical and surgical treatment, to gentlemen of small means. The last report gives an indication of what is meant by this phrase by furnishing the following list: "The wives, daughters, and relatives of clergymen, naval, military, and professional men, governesses, artists, and others." The patients contributed towards the charges for medical attendance, nursing, and medicine, and the institution thereby afforded an admirable example of how to carry out the true principle of charity of helping those who help themselves. Patients were admitted from all parts of the United Kingdom, from India, from the colonies, and from other countries, and a striking testimony to the valuable work of the hospital was to be found in the praiseworthy efforts made by ex-patients to collect money for the new hospital. A lease of the new site on the west side of Lisson Grove had been secured for 99 years, and it was proposed to erect upon it a compact hospital which would be economical both in building and in management. The new premises would provide 30 beds, and the accommodation would be so arranged that there would be 16 single rooms for patients. The vote of thanks to the Duchess was moved by Mr. W. Bridgeman, M.P., and seconded by Dr. S. Shore Nightingale, a nephew of Miss Florence Nightingale, one of the founders and the first lady superintendent of the hospital.

ASSOCIATION OF MEDICAL LIBRARIES.—At a meeting of those interested in medical libraries, held at Leeds on January 9th, it was decided unanimously to form an association of medical libraries, and a provisional committee was appointed to draw up the constitution and rules. Professor Osler (Oxford) was invited to become the first President, and Professor Walker Hall (Bristol) and Mr. Cuthbert E. A. Clayton (librarian, Manchester Medical Society) were asked to undertake the duties of temporary secretaries. The following are some of the objects of the association:

1. Intercourse of those interested in medical library work and the discussion of matters associated with the fostering and care of libraries.
2. Diffusion of information as to the branches of medical literature specially catered for at different centres, and as to the value of the various books and new periodicals which are issued from time to time.
3. The promotion of measures whereby a larger number of practitioners in each centre may be induced to utilize the library facilities of each district.
4. The consideration of matters connected with the present rapid increase of periodicals, publications of books, etc.
5. The opening up of better chances of advancement for library assistants. By such means there would be an inducement to parents to put their sons to such an occupation, and the librarians would be able to have better material for training.
6. The exchange of duplicate books and periodicals.

When the association is in working order, it is hoped that a certain number of the libraries interested will join together to form a circle for the loan of their research and other literature.

British Medical Journal.

SATURDAY, JANUARY 23RD, 1909.

THE FURTHERANCE OF RESEARCH.

It is with particular pleasure that we welcome the announcement that an anonymous benefactor has given £20,000 to the Medical School of the London Hospital, with the express stipulation that the interest accruing therefrom shall be applied solely in furtherance of medical research. The fund has been placed in the hands of the trustees of the school, who will pay the proceeds yearly to three administrators selected by the donor. These are the Hon. Sydney Holland, the Chairman, and two members of the acting staff of the hospital. Under the terms of the gift its benefits are not to be confined to students educated at the London Hospital, but will be open to qualified medical men from any part of the British Empire who are willing to prosecute original investigations in the field of medical science within the walls of the London Hospital or College.

Benefactions to hospitals are by no means rare in this philanthropic country: the peculiar feature of this gift is that it is to be devoted not in aid of the ordinary charitable work of the hospital, but for the promotion of medical knowledge by research. Although antivivisectionists are always trying to make the public believe that scientific investigation is well paid and is undertaken with the object of gaining money, it is unfortunately the fact that one of the obstacles in the way of progress is that so few men can afford to give time to work that, however profitable to mankind, too often does not supply them even with the plainest living wherewith to support the high thinking necessary for research. Hence many young men consumed with what Huxley called the divine thirst for knowledge, and gifted with the ability to wrest secrets from Nature, have to give up to practice what was meant for mankind. It is a discreditable sign of the spirit which animates a section of the public that, whereas large sums are got from sentimental persons by societies which have never succeeded in saving a single guinea-pig from a needle prick or a superfluous dog from a painless death in the laboratory, appeals for money for use in the acquisition of knowledge that would lead to the alleviation of pain in thousands of human sufferers, and probably to the extirpation of some of the diseases that afflict our race, meet with a very inadequate response.

Splendid gifts have, of course, been made occasionally by enlightened persons. The Lister Institute is a standing proof of the enthusiasm of humanity that animates Lord Iveagh. The Imperial Cancer Research Fund is another evidence that there are among us men who know how to make their wealth useful to their fellow creatures, but we believe the work of that noble monument of philanthropy is still crippled by want of money. The Cancer Investigation Fund of the Middlesex Hospital, which was established for the purpose of "curing persons afflicted

"with cancer and of investigating and promoting our "general knowledge of treating that dreadful disorder," is another institution of which we are justly proud, and endowments for research in physiology and pathology are given by various bodies. Among these may be mentioned the Sharpey Scholarship at University College, London; the Gillson Research Scholarship of the Apothecaries' Society; and the Lectureship on Experimental Pathology founded by Mr. Robert Gordon at Guy's Hospital. But there is not one of these that would tempt any one not devoted to the work for its own sake. From a financial point of view the income derived even from the humblest practice is larger than that offered by any of them.

Men who wish to give themselves to original investigation are obliged for the most part to content themselves with posts as assistants in medical schools where they have to give a large part of their time to the arduous work of teaching in exchange for the opportunities of research. As an example we may cite a case within our own personal knowledge in which one of the first of living histologists served for eleven years at a great university in a subordinate position in which his salary never exceeded £250. Even professors are often paid at a rate that would be scorned by many a city clerk.

If in Germany the vineyard of research attracts more labourers than it does here, the reason is that the German Government is wise enough to see the value of such work and to grant liberal subventions for its support. In America there has in recent years been a kind of rivalry among two or three millionaires in the endowment of research; but it is questionable whether the vast sums that they have given are put to the best use. In some cases the money is given for the foundation of palatial laboratories while no provision is made for their maintenance. Hence the work done has not always been in proportion to the apparent magnificence of the endowments. In this country no Government would give any but the scantiest subsidy for scientific work, because such expenditure of money would bring no votes, and would be the object of much criticism. While due acknowledgement must be made of the liberality of a few far-seeing men, it is not too much to say that the funds for research work have to a large extent been supplied by the medical profession itself. Taking the Middlesex Cancer Investigation Fund as an instance, while the founder gave between £3,000 and £4,000, and Lady Stafford £5,000, over £35,000 was contributed by a physician, Sir Joseph de Courcy Laffan. The British Medical Association has during the last twenty-five years given more than £20,000 in scientific grants and research scholarships. It has also given nearly £2,000 to various societies in aid of scientific research. In addition to these sums the Association has spent between £3,000 and £4,000 on collective investigations concerning a number of common diseases. It has spent more than £1,000 in researches on anaesthetics, an almost equal amount on investigations as to new drugs; between £600 and £700 in the collection of data relative to feeble-minded children, and further sums in inquiries as to the eyesight of railway servants and sailors, and the decay of teeth. Moreover, the Association has encouraged research work in ophthalmology and public medicine by the bestowal of prizes. Of the many benefactions for the encouragement of research made by individual members of the profession we need not speak.

In matters of benevolence, as in other things, deep often answers unto deep. It may therefore be hoped that the example of the anonymous benefactor whose gift to the London Hospital Medical School will so largely increase its power for good, may be imitated by other lovers of their kind. Next to the actual relief of suffering by known methods—most of which now in use, it may be said parenthetically, are the fruits of research—there is no way in which money can be spent with greater certainty of promoting the greatest good of the greatest number than the provision of means for the discovery of new truths from which may spring more effective methods of stamping out disease and promoting the health and thereby the happiness of the human race. But it must be remembered that the work, if it is to be profitable to science and to mankind, must be done with the sole object of getting at truth without direct thought about its practical application. It is not always the man who finds or makes the materials who builds the house.

SIDELIGHTS ON WORKMEN'S COMPENSATION.

IN order to form an accurate idea of the practical working of an Act of Parliament one must do more than read the law reports of cases published in the newspapers. In the matter of workmen's compensation, for instance, there is much which can only be learnt from practical experience—experience which is chiefly gained by members of the legal and medical professions. At a recent meeting of the Law Society, Sir John Gray Hill, an ex-President, took occasion to state his views on the practical working of the Acts. The report of what he said is not pleasant reading for those who have sounded the praises of this famous measure. We are not concerned to deal with all the legal difficulties which he exposed, but he drew attention to some matters of medical interest which it may be worth while to record.

He first endeavoured to penetrate the nebula which has surrounded the definition of the word "accident" in relation to infectious disease. As the law now stands, it is almost impossible to say with certainty whether a person suffering from any particular complaint is the victim of an accident within the meaning of the Act. On the one hand, anthrax acquired by a woolsorter and heat-stroke sustained by a stoker have been held to be accidents. On the other hand, poisoning by red lead and subcutaneous cellulitis over the patella (miners' bent knee) have been held not to be accidents.

Confusion has also arisen in relation to the question whether a workman can be required to submit to an operation calculated to increase his working capacity. In this matter the English and Scottish courts have taken opposite views; the English Court of Appeal laying it down that a man may not be compelled to undergo an operation by a promise of increased compensation. Dealing lightly with these two matters, Sir John Gray Hill said: "The bacillus of Naaman the Syrian probably arose out of and in the course of his employment, and was, I presume, on the authority of the anthrax case, an accident. If he had come under the Act, and had persisted in his refusal to dip seven times in Jordan, the Court of Appeal would probably, on the authority of *Rothwell v. Davies*, have refused to stop his allowance from his employer the King of Syria."

Passing, however, to an even more serious question—namely, the moral effect of the Workmen's Com-

pensation Act—Sir John brought forward much information he had collected of a disquieting character. He has taken counsel with several members of the medical profession, who had, he said, opened his eyes to some of the serious results of an Act which should do nothing but good.

He quoted an extract from the address at the Sheffield meeting of the British Medical Association, in which Mr. Pye-Smith said: "It is sad to find by painful experience to what an extent unfair advantage is taken of this Act by some of those for whose benefit the laws were framed. Instead of honestly trying to get back to work as soon as possible, thus proving their manly independence and retaining their self-respect, the injured workmen, in too many instances, try to persuade themselves and their medical examiners that they are incapacitated for work long after their condition justifies such a contention. The hope of obtaining a lump sum as compensation no doubt acts in some cases as a strong motive to profess that no improvement is taking place in their condition."

A very similar tale was told by the senior physician to a Liverpool hospital, who said: "From our experience, the Act has in general exercised a decidedly demoralizing effect on workmen, especially on those who are, as a rule, disinclined to steady labour. We are pestered with friends making the most ridiculous claims for compensation where no grounds exist, and even in cases of heart disease they assert that 'some trifling accident accelerated death.'" The same physician told the following story. A workman who had received an injury to his hand was given £75 in lieu of weekly payments. Before long he came to the hospital suffering from delirium tremens. He told the doctor that he had spent £60 on drink, and £15 on his friends. "He seemed," added the doctor, "to take a pride in telling the story."

Sir John also mentioned a case in which a firm on medical advice paid £100 in compensation. Within a few months the wife of the injured man summoned him for a separation order on the ground of persistent cruelty, alleging that since the payment he had done very little work, and he then admitted he had only £3 left out of the £100. The average workman is neither a malingering nor a drunkard, and it is difficult to see why the Act cannot be amended so as to give less opportunity to those who have these tendencies.

As one of the means for preventing malingering, Sir John Gray Hill suggests that an amending Act should provide for the appointment of a medical assessor to sit with the county court judge on the demand of either party, making provision for a sufficient remuneration to him." As a footnote he adds: "This would also afford a good check upon the unreasonably divergent testimony of medical witnesses."

There is a blacker side of the working of the Compensation Act that does not seem to have been touched upon by Sir John Gray Hill. In France, as we gather from some of the medical journals, there are doctors so lost to all sense of professional honour as to make a practice of giving false certificates which are used by workmen to extort compensation. It would be difficult to find words strong enough adequately to condemn such an offence, which is calculated to reflect discredit on the whole profession. We observe that the Royal College of Surgeons in Ireland has a by-law providing that "any Fellow who shall be convicted before the Council of having made a false or corrupt report, or gives a false certificate

"to any magistrate, insurance company, public board, or other body or individual, respecting the state of health of any person, shall be expelled;" and that if a Licentiate be so convicted, "his letters testimonial shall be withdrawn." We have no doubt that every other college in the United Kingdom would likewise enforce the most stringent disciplinary measures, and that the General Medical Council would be equally ready to take effective action. Probably the suggestion that a medical assessor should always be at the side of the county court judge when claims for compensation are dealt with, which we are glad to see has the approval of Sir John Gray Hill, would go a very long way towards deterring dishonest workmen or their advisers from attempting to institute proceedings founded on fraud. That there are undue temptations to workmen of easy conscience not only to claim compensation for injuries which are not permanent, but also to malingering in order to get weekly compensation from the employer, and sick pay from the club, is well known to all medical men, and was clearly stated by Sir Thomas Oliver in his address before the Life Assurance Medical Officers' Association, published in our columns on November 14th, 1908.

THE FUTURE TREATMENT OF THE INSANE.

At a meeting of the Westminster Division of the Metropolitan Counties Branch, a report of which is published in the SUPPLEMENT to this week's issue, an interesting discussion took place on the future treatment of insanity. It is matter for regret that Dr. Savage, who was to have opened the discussion, was unable to be present. Dr. Ewart, the chairman, said that the urgent question of the day was that of the environment suitable for different stages and varieties of insanity, and that the view, so often advocated in this JOURNAL, that special hospitals were needed was gaining ground. That this is the case was abundantly shown in the course of the discussion. Dr. Mott put the case for hospitals where acute cases could be treated without going through asylums and without receiving the brand of certification. Referring to Dr. Maudsley's offer of £30,000 to the London County Council towards the foundation of a hospital for mental disease, to which reference was made in the JOURNAL of December 19th, 1908, p. 1828, and on several previous occasions, Dr. Mott said that Dr. Maudsley was anxious to see the institution in being, but as yet nothing had been done owing to the alleged difficulty of finding a suitable site. In connexion with this subject he related an incident which points a moral the London County Council would do well to take to heart. Soon after Dr. Maudsley's munificent offer was announced, a similar scheme was mooted at Baltimore, and the architect and the future director of the hospital were sent to Europe to learn what was being done. On hearing how matters stood, the architect said to Dr. Mott that probably the Baltimore hospital would be completed while the London Aediles were still thinking how they were to begin. Dr. Coupland said that the proposals to deal with incipient insanity without legal certification, to encourage hospital treatment and the formation of farm colonies, indicated advances that might result in the gradual elimination of such cases from large asylums, which from their very character could not be so helpful towards restoring a patient to sanity as more limited and home-like surroundings. Many asylums, he added, were now provided with detached buildings for the hospital treatment of acute cases, but, generally speaking, it would almost seem as if England, the pioneer in the

more enlightened and humane treatment of insanity, had fallen behind other nations in certain respects. He looked forward to her regaining her position through the influence on public opinion effected by the labours of the Royal Commission and the enlarged opportunities for scientific study of the subject in accordance with the aims of Dr. Maudsley and Dr. Mott. The debate was brought to a close by the unanimous adoption of a resolution that the London County Council should be urged to take immediate steps to establish the hospital suggested by Dr. Maudsley. We hope this expression of professional opinion will stir the Council into activity. While fully recognizing that there may be some difficulty in finding a suitable site, we cannot help thinking that there must be a certain lack of earnestness in regard to the scheme among those whose business it is to carry it into effect. Enthusiasm is a mighty driving power, and we should like to see some manifestation of that force on the part of the London County Council in the direction indicated. It is possible that there may be obstacles, subtle but none the less effective, in other quarters which may be held to justify delay. Public bodies, even more than individuals, are always ready to find specious excuses for inaction when they are not particularly eager to act. The lazy man can always find a lion in his path, if he wishes to do so. We feel bound to say that a most serious responsibility will lie upon the London County Council if it fails to act on the strongly expressed recommendations of its own Asylums Committee.

ALCOHOLISM AND FEEBLE-MINDEDNESS.

At a recent meeting of the Society for the Study of Inebriety a thoughtful paper was read on this subject by Dr. W. A. Potts of Birmingham, lately one of the medical investigators to the Royal Commission on the Care and Control of the Feeble-minded. Commencing with an avowal of his conviction, in accord with the views expressed by Drs. Bevan-Lewis and Shuttleworth, that the origin of mental defect is nearly always complex, he pointed out the difficulty of picking out a single factor and attempting to ascertain how far its influence extended. He adduced instances from the family histories of special-school children showing how frequently both alcoholism and phthisis coexisted in the parentage, and in some cases also a neuropathic heredity. Etiological truth lay somewhere between the extreme views held on the one hand that alcohol had little or nothing to do with the feeble-minded, and on the other that it was the most important cause of all. After a few words on the general action of alcohol, which (as Dr. Mott had pointed out) he considered paved the way for the far-reaching effects of other injurious agencies, Dr. Potts proceeded to consider the influence of heredity. He argued that, admitting to the full Weismann's dictum that acquired characteristics cannot be transmitted, there was still ample scope for the production of injurious results in the offspring if the parents are exposed to toxins of various kinds. Alcohol circulating in the maternal blood might directly poison the germ cell and interfere with its due development. The embryo, moreover, might be adversely affected by similar conditions, and as a result there might be an interference with formative processes, leading to physical deformities or nervous abnormalities. After quoting Leppmann's statistics as to the infantile mortality among drunkards' children in Paris—42 per cent. dying during their first year—Dr. Potts maintained that impaired vitality and nervous instability might result from parental alcoholism. Amentia of greater or less degree has been traced by Dr. MacNicholl, of New

York, to parental alcoholism, and he found that whilst amongst school children free from hereditary alcoholic taint 96 per cent. were proficient, 4 per cent. dullards, and 18 per cent. sufferers from neurosis or organic disease; the corresponding figures for those with hereditary alcoholic taint were 23, 77, and 76 respectively. Reviewing the diverse opinions expressed by witnesses before the Royal Commission (some of whom, notably Miss Dendy and the late Dr. Ashby, assigned little importance to parental alcoholism as a causative factor), he cited the result of Dr. Tredgold's exhaustive investigation of 150 cases of amentia, which was that, while a neuropathic inheritance seemed to be the chief cause, alcoholism *with* such inheritance accounted for 38.5 per cent. of his cases, and, *without* such inheritance, for 8 per cent., making a grand total of 46.5. Dr. Potts and Mrs. Hume Pinsent had found, on examining 250 mentally defective and 100 ordinary children in the Birmingham schools, that alcoholic heredity in a direct line obtained in 41.6 per cent. of the former and in only 22 per cent. of the latter. In conclusion, Dr. Potts recorded his opinion that "the evidence is not clear that alcoholism, by itself, in the father will produce amentia, but that in combination with other bad factors it is a most unfavourable element; while maternal drinking, and drinking continued through more than one generation, are potent influences in mental degeneracy."

HOSPITAL ABUSE IN NEW ZEALAND.

A LETTER which we have received from a New Zealand correspondent appears to prove that hospital abuse is still in its infancy in this country, and that exploiters of the medical profession at home have a great deal to learn from our democratic colony. According to our correspondent, every town and every rural district in New Zealand has its hospital or hospitals. These institutions are supported by the public, who subscribe 26s. a year, and by a Government grant equal to the amount of the public subscriptions. These hospitals are staffed by salaried medical officers whose average remuneration, we are told, is about £200 a year for a hospital of 18 beds, with an unfurnished residence. But the doctor's duties are not confined to attendance on the occupants of these 18 beds. Every annual subscriber of 26s. a year, within a radius of seven miles, is entitled to the free service of the medical officer for himself, his wife, and his family; if he goes into the hospital he has to pay a further sum of 5s. a day for maintenance. Naturally the majority prefer that the doctor should do the travelling and save them 35s. a week. Under these circumstances the statement that "private practice is allowed," as an additional inducement to men to take up these positions, appears to be conceived in a vein of dubious humour. On the whole it would seem that our correspondent is justified in saying that "the hospital is a Government subsidized competitor against all medical men, and particularly against its own appointed medical men." He encloses two cuttings from the *New Zealand Herald* in confirmation of his statements. One of these describes a conference of delegates from the New Plymouth, Hawera, and Stratford Hospital Boards. In view of the fact that members of the medical staffs, in addressing the conference, had made frequent use of the words "charity" and "charitable aid" in connexion with the hospitals, the following resolution was adopted: "That, having in view the fact that every member of the community contributes directly or indirectly, or both, to the erection and maintenance of public hospitals, this conference affirms the principle that any person is entitled to

"claim admission to such hospitals for treatment as a matter of right, and not of privilege or charity." This is at least clear and straightforward, and no doubt, if the Governor of New Zealand were to contribute to a soup kitchen, the same conference would regard him and his family as eligible recipients of tickets for soup. In a subsequent issue the same journal publishes an interview with Mr. L. J. Bagnall, "one of the most prominent members of the Auckland Hospital and Charitable Aid Board." It is a little surprising that the word "charitable" is still allowed to blot the title of this board. However, Mr. Bagnall admits that "in some towns the misuse of the hospitals has become so serious that doctors are unable to obtain a living." This is apparently regarded as perhaps an unfortunate fact, but necessary for the good of the Commonwealth. In the New Zealand ethical system it would be a far greater injustice that the well-to-do should pay for medical attendance. Mr. Bagnall adds that if the doctors' contention that they should be paid for attendance by those who can afford to pay were admitted, "we should find ourselves in the position of having to pay all the doctors who give their services at present for nothing, which would mean, in the case of the Auckland Hospital, an extra cost of at least £1,500 a year." This remark closed the interview. Evidently the prospect of the payment of this sum to the men who had earned it was too much for the tender consciences of the New Zealand journalist and the dispenser of "charitable aid."

ARTIFICIAL LANGUAGES.

THIS is an age of many inventions. Among these not the least remarkable is the crop of artificial languages which has sprung up within the last quarter of a century. Volapuk, the "blue language" and others, have vanished, while Professor Henderson's "Lingua," Dr. Molenaar's "Panroman" and Karl Lentze's "Interpretor" can scarcely be said to have breathed. Esperanto has shown more vitality. How long will this last? It is not a code of rules artificially framed that makes living speech; the grammar merely represents the results of an analysis of spoken language. If Esperanto is to be a living tongue it must inevitably suffer the changes which natural languages undergo. A conventional language is stricken from the first with barrenness if it is not transmuted into a living tongue. In the case of an artificial language there is an additional modifying factor of incalculable power to be reckoned with. This is nationality. A language must be adapted to racial and social characteristics. It is a natural growth subject to modifications, as the people whose means of expressing themselves it is adapted themselves to changes of environment, mode of life, intellectual outlook, and moral conventions. Hence if Esperanto lives long enough, its grammar, even among those who strive hard to preserve its pristine "purity," must become more and more complex as exceptions forced upon it by the development of civilization and the exigencies of new conditions increase and multiply. An artificial tongue bound within the rigid structure of its original framework can never adapt itself to the varying phases of human evolution, or even to the expression of national sentiment in its slow but steady changes. Hence it can never be the language of art or literature, or even science, but must at best be a *lingua franca* adopted by certain persons in each country for practical convenience. We agree with Dr. Champeaux, who, discussing the subject in the *Revue Philosophique*, says, as we have often said, that it would be better to return to Latin; or if that is a counsel of perfection, the *Volkslatein* or popular Latin suggested by Hermann

Diehls or Dr. Ch. Colombo's "Latin Commercial" might with advantage be adopted. That would at any rate help us to keep a key that opens the door to the masterpieces of literature. Notwithstanding all that is said about the spread of Esperanto, the problem of an international scientific language is so far from being solved, that quite recently Dr. Paul Sollier, after predicting that Esperanto was about to be dethroned by another artificial tongue, "Ido," went on to propose that French should be definitively chosen as the language of science, while English should be the language of commerce. The inevitable congress on the subject was to be held at Luxembourg. What the outcome of the congress was we are unable to say. Since then we have received a draft of another new tongue invented by Elias Molce, Ph.D. It is to be called "Tutonish," and is described as "an International Union Language, under a Liberal 'Anglo-Saxon Leadership.'" This is not so ambitious as Esperanto, as it is merely "simplified English." But whether the international conference of English, American, German, Scandinavian, and Dutch "legally-appointed linguists" would accept it is somewhat doubtful. The fact that so many rivals are in the field is sufficient to prove that Esperanto does not altogether justify the claims made on its behalf by enthusiasts, some of whom, like certain leaders of the Gaelic restoration in Ireland, would find a difficulty in carrying on a conversation in the jargon in which they profess to see the universal language of the future.

THE DEFINITION OF HYSTERIA.

THERE are probably few who feel satisfied with the accounts of hysteria to be found in systematic works. It is usual to avoid anything like a definition of the disorder, but to describe a series of symptoms which have been from time to time called "hysterical." Some of these are unknown or almost unknown in this country, and our accounts of them are chiefly taken from French writers; it is therefore extremely interesting to read a criticism of the accepted French views by one of the most brilliant French neurologists, Dr. Babinski, the well-known physician to La Pitié Hospital in Paris. An old Chef de Clinique of Charcot at the Salpêtrière he was originally deeply imbued with the teachings of his master, but subsequent experience has led him to modify his opinions, and so long ago as 1901 he maintained in a communication to the Société de Neurologie that a great deal had been included under the name of hysteria which does not properly belong to it. In his present essay¹ he affirms that much of what is called hysteria is organic disease, or mere imposture. He proposes as a test for what is hysterical that it should be curable by suggestion, or conversely only those phenomena should be called hysterical which can be produced by suggestion, and for this group he proposes a new name—"pithiatic," or curable by persuasion. He declares that a great number of the phenomena described by the Salpêtrière School have disappeared from the Paris hospitals since less attention has been paid to them. It has always seemed to us that either hysteria was different in France from what it is in England, or that many conditions were included by French writers which had really nothing to do with this neurosis, and it is therefore not altogether surprising that there should be this indication of a reaction against the teachings of thirty years ago.

MOTOR AMBULANCES.

WHEN motor ambulances for use in connexion with street accidents were first introduced in America some years ago they were a decided failure. Since then great advances have been made both in ordinary

automobile manufacture and in the adaptation of electrical and other motor engines to vehicles for use as street accident ambulances. At each of the exhibitions at Olympia within the last few years admirable ambulances of a self-propelled type have been on view, and those which came into use a year or more ago in the City of London have proved, it would seem, an entire success. It is clear, therefore, that motor ambulances are destined to take the place, sooner or later, of horse-driven vehicles of the same purpose in all places where work of this sort is thoroughly organized and on a large scale. For this reason a suggestion put forward a short time ago by a contemporary named *Motor Traction* is timely, and well worthy of consideration by the authorities. It was to the effect that bodies such as the Metropolitan Asylums Board, the London County Council, the St. John Ambulance Association, the Metropolitan Street Ambulance Association, the principal London hospitals, and bodies of like type in the provinces, should put their heads together and decide upon the ideal length and breadth and other measurements of a hand stretcher. If this were done the builders of motor bodies would make sure that all ambulances turned out by them were so constructed as to carry a greater or less number of stretchers of the indicated size. There is no doubt that some such step might well be taken; for while it is not desirable to tie the hands of those who manufacture stretchers in point of material, weight, and general construction, there is at present an entirely superfluous degree of variety in point of size. The dimensions, in short, of stretchers might well be standardized, and standardization of the carrying capacity of ambulances would follow. This would be an advantage, because in that case it would often happen that a patient was ready waiting on a stretcher of suitable size for insertion into an ambulance when the latter arrived, and the rapid transport of the injured person to his home or a hospital would be facilitated. A by-result might also be a reduction in the cost both of ambulances and stretchers, for standardization of size has been found to have this effect in connexion with many important industries, such as cycle manufacture, bridge building, and the like.

FALSE CERTIFICATES OF STILLBIRTH.

AT page 254 of this issue will be found a record of the concluding stage of a case in which the burial of a child was secured by two women who falsely declared that they had been present at its birth, and that it was stillborn. The body was exhumed, and examination showed that it was a healthy full-term child, that its lungs were partly inflated, and that probably it had died merely from neglect immediately after birth. This is an addition to the many cases from time to time recorded in these columns, which abundantly prove the need for alteration in the law regarding certification of death and regarding the interment of children allegedly stillborn. Before 1874 stillborn children, if not buried in the back garden, were freely received by the cemetery authorities; since that date they have been bound to demand either a medical certificate of stillbirth, an order from the coroner, or a declaration of stillbirth from some person who, if the child had been born alive, would have been obliged to register its birth. In addition, one of the sections of the Notification Act of 1907 entails notification to the medical officer of health of the birth of a child which has reached a gestation period of seven months, even if stillborn; and the rules of the Midwives Board oblige midwives to notify to their supervising authority the birth of stillborn children. These latter regulations, however, do not

¹ *La Semaine Médicale*, 1909, p. 3.

materially improve matters, neither of the authorities mentioned being directly concerned in the prevention of improper burials. Things, therefore, remain very much as they were thirty-four years ago; as they were at the date when a Select Committee of the House of Commons, under the chairmanship of Sir Walter Foster, drew up an exhaustive and excellent report on the general subject of death certification; and as they were when, nine years ago, we devoted a series of editorial articles to this subject giving reasons for the regret expressed that no effect had been given to the recommendations of the Select Committee. Since then the only progress to be recorded is that last session two bills dealing with certification of deaths got as far as being introduced in the House of Commons. At the present moment we only desire to refer to the special point of stillbirths, and to point out that in the present state of the law nothing stands between the quiet putting away of a child which is only "stillborn" because it has not been allowed to live but the caution of cemetery authorities in accepting declarations from persons who are neither medical men nor coroners. Things, indeed, may be considered even in a worse state than before, for it is natural that—as in the case which is the basis of this note—cemetery authorities should freely accept declarations from midwives, since they now have a kind of official character. There are, in short, the strongest grounds for holding that every case of reputed stillbirth not certified by a medical man should be the subject of an immediate official inquiry. This is clear when it is remembered that a child which has got so far towards independent existence as to have its head or even its thorax free and to be able to emit cries can, however great its inherent vitality, be intentionally destroyed with the greatest ease, and yet no charge of murder would lie against the person ending its existence, however base the motive, however open the means. Nor, indeed, would the perpetration of such a moral, though not legal, crime, be in the majority of cases easy to prove by a medical man not actually present at the birth, even if the child from a medical point of view was in nowise stillborn. What constitutes stillbirth is a subject on which textbooks on obstetrics are for the most part singularly silent, and it is possible that there is some variation of practice with regard to the certification of children who scarcely survive delivery, or die during its course. This, however, does not affect the point to which it is desired to draw attention, namely, that at the present moment it is perfectly easy not only to kill intentionally and with the basest motives a perfectly healthy child during or immediately after birth, without running the risk of a charge of murder, but to secure its interment without a medical certificate and without inquiry.

HISTOPATHOLOGY OF THE VERMIFORM APPENDIX.

ALL who have stayed in Copenhagen know the name of Carlsberg and of his munificent bequests to art and science. By the aid of one of the Carlsberg Funds there has just been issued a valuable monograph on the pathology of the vermiform appendix by C. U. Maaløe.¹ This consists of some 266 pages of Danish text, a short summary of the main points in English by H. M. Kyle, D.Sc., and 56 excellent photomicrographs. Some of the photographs are stereoscopic, and all are exquisitely reproduced. The book and plates have been sent to the English-speaking pathological institutes, where they will be found of great use for purposes of demonstration. On behalf

of English medicine, we take the opportunity of thanking the Trustees of the Carlsberg Fund for defraying the expenses of this issue. After describing some work on the blood vessels and musculature of the organ, Maaløe refers to the appearances of the follicles as shown in photographs taken from a series of preparations of the caecum and vermiform appendix after treatment with weak acetic acid and glycerine. The follicles stand out as opaque areas. From a consideration of appendices removed from persons whose ages varied from 4 months to 83 years, Maaløe considers that the follicles increase in size and number up to 18 years. After this period there is a gradual decrease, which commences at the apex and continues proximally to the caecum. While this atrophy increases with age, it varies individually, so that there may be extremely different pictures at the same age. It is only the course of the atrophy which seems to be constant. Maaløe injected the lymphatics of the submucosa, and found a small-meshed network at the base of the Lieberkühn glands. The follicles are surrounded, but not pierced, by lymphatics. He does not accept the view that the appendix is an organ which is in process of disappearance. He looks upon it rather as a specialized lymph organ, whose activity increases and decreases according to the calls made upon it, and is related to that part of the intestinal digestion dependent upon bacterial action (decomposition of cellulose). Discussing obliterations, occlusions, and strictures of the appendix, Maaløe expresses the opinion that the view of Ribbert, that the obliterating process begins at the end of the organ and continues regularly from there in a proximal direction, at the same time pushing the mucous membrane in front of it, does not fully state the case, since he met with as many cases of localized inflammatory obliterations as otherwise. There are two factors, therefore, which come into play—inflammation as an occasional factor, and involution as the disposing factor. After detailing the histological appearances of cases of diverticula of the vermiform appendix, Maaløe concludes that these diverticula are in the great majority of cases to be considered as pulsation diverticula, which in the form of mucous membrane herniae have passed out through lymphatic or vascular spaces or chance pathological defects. These diverticula contain mucus, epithelial cells, and leucocytes in uncomplicated cases, and often become the seat of inflammatory reaction and subsequent perforation. Even if the latter does not occur, recurrent attacks and extensive adhesions are common results of this condition.

ADULT MALE WITH UTERUS BICORNIS.

A VERY marked instance of pseudo-hermaphroditismus masculinus internus in a married man 59 years old has recently been reported by Arnolds of Dusseldorf. The patient was under treatment for diabetes, but was a robust man with a good beard, hairy chest, and fully-developed penis and scrotum, though he was a cryptorchid at birth. When about 12 years of age it appeared that he felt something like a testicle coming down, and that he pushed it back again, as it was painful. A few years later a testicle undoubtedly appeared in the left inguinal canal. He had been married since the age of 40 to a widow who had borne children to her first husband, but this second union proved barren. The patient, however, was, it appears, quite potent until his virility had been lowered by diabetes. The left testicle began to swell, then it grew very painful, and the bowel in the painful

¹ *Histopatologiske Studier over Processus Vermiformis*. By C. U. Maaløe, M.D. Published by the aid of the Carlsberg Fund. 1908. Copenhagen: Lund.

¹ *Pseudohermaphroditismus masculinus internus*. Report of meeting of Niederheinisch-westfälische Gesellschaft. I. Gynäk. Monatschr. f. Gyn. u. Gyn., October, 1908, p. 463.

left inguinal canal was strangulated three times, but on each occasion it was reduced by taxis. The patient could not tolerate a truss. Arnolds examined the parts, and found that the right testis was wanting. What was taken for the left was apparently converted into a tumour as big as a man's fist, but some cord-like structures and other unfamiliar movable tender bodies were defined on palpation, malignant disease was diagnosed, and so Arnolds operated. He removed the tumour entire, without dissecting it out of its envelopes. He tied off very large blood vessels, until he came to a kind of pedicle—a tough cord which ran from the abdominal cavity into the inguinal canal. It was as thick as the man's little finger, and when divided Arnolds could see that its lumen was wide, and on further inspection detected a narrower lumen on each side of the wider canal. The inguinal canal was closed by a radical operation. The tumour was dissected afterwards. Instead of being a cancerous testicle it was a perfectly well-developed uterus bicornis unicollis, with two full-sized Fallopian tubes and two genital glands with relations precisely like those of the female ovaries. The wide lumen was the cervical canal, the symmetrical smaller lumina were relics of the Wolffian ducts. The genital glands were examined microscopically, and proved to be testicles, each with an epididymis but neither with a vas deferens. The cervix had formed the long cord or pedicle of the "tumour" (that is to say, the two cornua and appendages), proceeding, it appears, from the back of the prostate, so that it probably opened into the caput gallinaginis. The patient recovered, but returned to Arnolds two months later on account of severe local pain and constipation. A big tuberosus mass could be defined in the upper part of the abdomen, lying across the lumbar spine, immovable and apparently retroperitoneal. The presence of diabetes made Arnolds suspect that the tumour was pancreatic, but no fat passed in the stools. Possibly, he adds, it may have developed in relics of the genital tract, near the kidneys. This case is one of the most distinct instances of the presence of a uterus in an undoubted male ever recorded.

A CONDEMNATION OF ANTIVIVISECTIONISM.

AT the sixtieth annual convention of the American Association for the Advancement of Science, held at Johns Hopkins University during the week commencing December 28th, 1908, the governing council adopted the following resolution: "From time to time attempts, fostered largely by erroneous statements and accusations and false sentiment and prejudice, are made in some parts of the country to enact specific legislation prescribing the conditions under which experiments on animals may or may not be performed. Be it resolved by the Association for the Advancement of Science that animal experimentation has been of incalculable benefit to medical science and art, the progress of which is absolutely dependent on experimental methods, as are all the physical and natural sciences. That no abuse of the practice of animal experimentation in the country has been shown to exist to warrant specific legislation relating to the general subject of prevention of cruelty to animals. That the unrestricted performance by proper persons of scientific experiments on living animals is essential to the maintenance and progress of medicine and biology."

THE NATIONAL LIBRARY OF WALES.

SIR JOHN WILLIAMS, who has since his retirement from practice added very largely to his library of Welsh literature, has now handed over the whole collection numbering some 20,000 volumes to the

governing body of the National Library of Wales, which was established by Royal Charter in March, 1907. The old Assembly Rooms in Aberystwith, until recently used as scientific laboratories by the University College, have been remodelled and fitted with steel book stacks to hold 80,000 volumes, while a fire-proof strong room for storage of manuscripts and rare books has been provided. Sir John Williams's gift includes the Shirburn collection, formed between 1690 and 1740 by the Rev. Samuel Williams and his son, the Rev. Moses Williams, F.R.S., which had been in the possession of the Earls of Macclesfield at Shirburn Castle since 1749; it includes manuscripts in Welsh and Cornish, and by subsequent additions Sir John Williams has raised the total number of manuscripts to about 500. Among printed books the library is particularly rich in Bibles, prayer-books and hymn-books; it contains every Welsh Bible printed before 1800, and two of the first Bibles printed in 1588. In addition to the purely literature there are many books in Gaelic, Irish, Cornish, and Breton.

THE ASSOCIATION'S HOUSE.

THE new house of the British Medical Association at 429, Strand, has been in use for several months for the central work of the Association, and the suitability and general amenity of the building is gratefully acknowledged by all who have occasion to use it for long or short periods. All the central committees have been meeting in the building and the Central Council will use the new council room for the first time on Wednesday next. This is a handsome apartment with a dome-shaped roof; it is lighted by day from above, and at night by side-lights; it is panelled in light oak, and upholstered in dark green leather. The library, which is a large room on the first floor, with a gallery in the mezzanine floor, is panelled in mahogany, and lighted by lofty windows. The workmen have now nearly completed the internal fittings of the library, but the task of arranging the books on the shelves and revising the card-catalogue will be tedious. Meanwhile, as members are aware, the common room on the third floor is arranged as a reading room, where current periodicals can be consulted.

MEDICAL OFFICERS OF HEALTH AND PRIVATE PRACTICE.

THE Public Health Committee of the British Medical Association has presented to the Divisions a report, reproduced in the SUPPLEMENT this week, on the desirability of health officers being required to give their whole time to the work. This action has been taken in accordance with the instructions of the Annual Representative Meeting at Sheffield; but, as the committee point out, the question is most conveniently considered in the form: Should medical officers of health be debarred from engaging in private practice? The memorandum embodied in the report sets out the reasons in favour of whole-time appointments and those to the contrary with impartiality, refraining from any expression of opinion.

A MEETING in support of the British Medical Benevolent Fund will be held at the Royal College of Physicians of London on Tuesday, February 9th, at 5 p.m. The chair will be taken by Sir John Tweedy, President of the Fund, and an address will be delivered by the Bishop of Oxford (Dr. Paget). The Lord Mayor of London and the President of the Royal College of Physicians will also speak. All persons interested in the Fund, whether ladies or gentlemen, are invited to attend. Full particulars as to the Fund can be obtained by communicating with Mr. George Bethel, 11, Chandos Street, Cavendish Square, London, W.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND DISTRICT.

DR. RAYNER AND THE STOCKPORT INFIRMARY.

DR. EDWIN RAYNER, Treasurer of the British Medical Association, owing to the pressure of other duties, has resigned his position on the active staff of the Stockport Infirmary. Dr. Rayner had been a member of the honorary medical staff since 1875, and for some years senior surgeon. At the meeting of the board at which Dr. Rayner's resignation was received, the Chairman expressed his sense of the loss which the hospital would suffer by the withdrawal of Dr. Rayner's active co-operation, and moved the following resolution:

That this committee receives with regret the resignation of Dr. Rayner as honorary surgeon, an appointment which he has held since 1875, and now wish to record on the minutes their warmest appreciation of the very valuable professional services which he has generously and untiringly given to the patients of the infirmary during this long period of years, services which cannot be overestimated.

That the good work done by Dr. Rayner as a member of this committee should also be made note of, as he has done much by his attendance, knowledge, and judgement to further the best interests of the institution.

That Dr. Rayner be appointed a consulting surgeon to the infirmary, and that his name be added to the list of vice-presidents, and this committee trust that his good health and energy may long enable him to help them with his advice, and to continue his interest in the Stockport Infirmary.

This was seconded by Dr. Murray, who by Dr. Rayner's retirement becomes senior surgeon. Dr. Murray said that Dr. Rayner had served as honorary surgeon for a longer period than any member who had ever been on the honorary medical staff, and it was difficult to form any estimate of the good he had done by his knowledge, judgement, and skill. The resolution, which was supported by Canon Symonds, was unanimously adopted.

MEDICAL REFEREES IN COMPENSATION CASES.

The question has often of late arisen in Manchester, Ought a medical referee for an insurance society to visit club patients or patients who have made claims under the Workmen's Compensation Act without first acquainting the medical attendant of their intention to make such visit? It is held that no medical attendant can reasonably object to such visits made simply on behalf of an insurance society, and on the side of the insurance society it is said that such visits are intended to be in the nature of surprise visits to detect possible malingering, and that notice given to the patient would defeat their object. On the other hand, it often happens that the referee himself is simply a neighbouring practitioner, and naturally some jealousy may be caused by the visit of a possible rival in a district. Besides, in some cases it would seem as if it were not so much the patient who was suspected as the medical attendant, and the visit of the referee is really to see if the doctor is correct in his diagnosis and strict enough in giving certificates of unfitness for work. Such suspicion has lately been rather resented, and the Joint Committee of the Manchester and Salford Divisions, after discussing the matter, has expressed its definite opinion that referees ought always to notify the medical attendant beforehand of any intention to make a visit on behalf of an insurance society, though it is not necessary to give the patient notice of the visit; it is felt to be only a reasonable request that the medical attendant should be afforded an opportunity of being present at any examination of his patient by another doctor.

NEWCASTLE-UPON-TYNE.

LIEUTENANT-COLONEL SIR GEORGE H. PHILIPSON.

AN honorary appointment under the new Territorial scheme which has given great satisfaction and pleasure to the medical profession in the North of England is that of Sir George Hare Philipson as Lieutenant-Colonel for the Northumberland Division. By his business qualifications and tact the colonel will prove himself to be a most useful member of the Board of Administration.

THE ROYAL VICTORIA INFIRMARY.

Dr. Thomas Moffatt Allison has been elected Assistant Physician to the Royal Victoria Infirmary. For several years past Dr. Allison has given considerable attention to the study of diseases of children.

SIR THOMAS OLIVER.

On January 14th, in the Turk's Head Hotel, there was gathered one of the largest assemblages of medical men that has taken place in Newcastle, the occasion being the annual dinner of the Newcastle-upon-Tyne Clinical Society. Nearly 130 sat down to dinner. In the afternoon, at the College of Medicine, the annual address to the society had been delivered by Sir Thomas Oliver, who chose for his subject "Caisson disease," and at the evening banquet Sir Thomas was the guest of the society. The president, Dr. A. J. Collis, was supported on the right by the guest of the evening, the High Sheriff of Northumberland, Sir Isambard Owen, and Dr. Drummond, and on the left by the Lord Mayor of Newcastle-upon-Tyne, Sir George Hare Philipson, Sir Walter Runciman, Bart., and Dr. G. H. Hume, etc. An excellent dinner having been disposed of and the King toasted, the President gave the health of "Our Guest," briefly describing his career and alluding to the services rendered by him to the Home Office and to workers in industries generally. In acknowledging the toast and thanking members for the splendid reception, Sir Thomas Oliver told the story of his coming to Newcastle thirty years ago. He did not regard himself, he said, as in any way a leader in the movement of industrial hygiene; he had simply followed where others had led, others who were even more entitled to honours than he was. His speech was at once an appeal for the appreciation of mediocrity, which after all plays an important part in the world's work, and for the better recognition of the general medical practitioner, whose rewards are not always commensurate with the services rendered to the public. Sir Isambard Owen, in an excellent speech, proposed "The University of Durham College of Medicine and the Royal Victoria Infirmary," and the toast was gracefully acknowledged by the President of the College of Medicine, and by Dr. Drummond, Chairman of the Honorary Staff of the Infirmary. To Dr. G. H. Hume was entrusted the toast of "The Lord Mayor and Corporation," which was acknowledged by the Chief Magistrate. In a speech at once learned, pregnant with truth, full of suggestion and sympathy, Alderman Richardson proposed "The Clinical Society," to which Dr. George Foggan made a neat and most appropriate reply. Mr. Ouston proposed "The Visitors," responded to by the High Sheriff of Northumberland and by Dr. Edgar Collis, H.M. Inspector of Factories, who seized the opportunity of alluding to the services rendered by Sir Thomas Oliver to the Home Office and the cause of industrial hygiene. The banquet will be long remembered as one of the largest and most successful ever held in the North of England. Too great praise cannot be given to the honorary secretary of the society, Mr. Joseph W. Leech, for to his power of organization and untiring energy must be attributed the success of the meeting.

GLASGOW UNIVERSITY CLUB.

The North of England Glasgow University Club is to hold its annual meeting in Newcastle-upon-Tyne on Wednesday, February 17th. Sir Hector C. Cameron will give an address, open to all members of the medical profession, in the afternoon at the College of Medicine, and will be the guest at the banquet of the club that evening.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

At the March meeting of the Northumberland and Durham Medical Society, an address will be given by Sir Lauder Brunton, Bart., on "The Treatment of Heart Disease," and in the evening a dinner will be held.

LEEDS.

THE ADULTERATION OF MILK.

The city and county analyst, Mr. T. Fairley, in a report for the four months ending December 31st, 1908, states that 153 samples of milk were submitted for examination, and 41 samples found to be at fault. In the case of 33 there was added water, in 5 there was a partial extraction

of fat, in 2 both these vices prevailed, and in 1 case there was an addition of boric compounds; the proportion of adulterated specimens was 26½ per cent., as compared with 16 per cent. for the fourth quarter of last year. In common with these figures, one must note a very flagrant instance, in which a farmer was prosecuted before the Leeds stipendiary within the last few weeks. Mr. Fairley had certified the milk as containing 28 per cent. of added water, and the case was adjourned pending an analysis by the authorities at Somerset House. As this showed a percentage addition of 29, the defendant was convicted. In view of the fact that three previous convictions were on record, the defendant having been fined £5 in 1904, £10 in 1906, and £20 again in 1906, the stipendiary imposed a fine of £30 and costs, and warned the defendant that his next conviction would be followed by a fine of £100, which is the maximum penalty. One cannot but feel that in the case of hardened offenders a term of imprisonment without the option of a fine would be an appropriate punishment; if the law does not admit of this, the power of the authorities should be strengthened.

CORONER'S INQUESTS IN LEEDS.

During the year 1908 the number of inquests held in the coroner's court was 687. Of these, 425 were in the case of males and 262 in that of females; 26, 14 male and 12 female, were in the case of children under 16 years of age. In 5 cases a verdict of wilful murder and in 3 cases a verdict of manslaughter was returned. Suicide when of unsound mind was the verdict in 39 cases, and in 3 cases the verdict was *felo de se*. Nine men and 6 women were found to have died from the immediate effects of excessive drinking. Accidents and misadventures accounted for 258, and 6 were cases of drowning. In 115 cases in which the facts in connexion with death were communicated to him the coroner decided that no inquest was necessary. In connexion with these last figures it would be well if medical men would bear in mind that the responsibility of deciding whether an inquest should or should not be held rests with the coroner, and in any case in which there seems the slightest doubt in the matter the facts of the case should be laid before the coroner. Perhaps the medical profession of Leeds is unusually fortunate in having a man of such large experience, good judgement, and courtesy and consideration as Mr. J. C. Malcolm to deal with as coroner.

THE GENERAL INFIRMARY.

Miss Lownsbrough, who has acted as housekeeper at the General Infirmary since 1875, has tendered her resignation to the board. This is an announcement which will be noted with sympathetic interest by many generations of former residents, for every one will agree that throughout her long connexion with the infirmary Miss Lownsbrough has done everything in her power to render the term of office of the members of the resident staff a period of their lives to which they can look back with grateful recollections. Miss Lownsbrough will carry with her the best and most cordial thanks of many men who have long left the infirmary, and they will wish her long life and every happiness in her retirement.

WEST YORKSHIRE.

BRADFORD ANTHRAX INVESTIGATION BOARD.

The third annual report of this board for the year ending October 31st, 1908, is one of great interest. The board was originated by the Bradford Chamber of Commerce, and is financed by many prominent members of the Bradford trade, with the assistance of a grant of £50 a year from the Treasury. It may be interesting to note, too, that Dr. T. M. Legge, H.M. Chief Medical Inspector of Factories, made a personal contribution to the fund, "as a mark of appreciation of the value of the work which the board has already done." Professor F. W. Eurich is the board's bacteriologist, and superintends all the investigations made on its behalf. During the year under review 435 samples of wool, hair, and dust were examined. Anthrax bacilli were cultivated from 21 samples, of which 20 were blood-stained. During the past three years nearly 600 samples of wool, hair, and dust—not blood-stained—have been examined for anthrax with

negative results, while 139 blood-stained specimens have been tested, with the result that anthrax germs were found in 14.4 per cent. Dr. Eurich consequently points out that blood-stained material and the dust arising from it, with its scales of dry blood, are the means of spreading anthrax spores, and may be called the "carriers" of anthrax. This is perhaps the most valuable of the deductions made during the past year. If blood-stained fleeces and wool can be eliminated from the materials handled by the workmen anthrax will probably become a negligible quantity. With regard to the effect of washing and disinfection of blood-stained material, the fact that many cases of anthrax had occurred in men who manipulated the wool after it had been dried and washed is explained as due to the difficulty of washing out blood. Blood can easily be recognized even after washing, and the blood-stained fibres are still capable of giving off a fine germ-laden dust. Previous steeping in cyllin or Leach's germicide appears neither to facilitate nor to retard the removal of blood by subsequent washing; solutions of formaldehyde, on the other hand, fixed the blood to the fibre still more firmly. Formaldehyde, cyllin, and Leach's germicide fail to kill anthrax spores within the matted blood-stained fibres in the time in which they produce this result when acting on spores simply suspended in water or artificially dried on to the fibre. Formaldehyde, 2 per cent., will kill anthrax spores under the latter conditions in two hours, but anthrax bacilli could be cultivated from blood-stained mohair after steeping *en masse* without interruption for five days. Cyllin which will kill anthrax spores in water or dried on to wool in a 1 per cent. solution in one hour failed to kill them even in a 2 per cent. solution at the end of that time when a piece of matted blood-stained wool was placed in a basinful of the disinfectant. The actual time required by cyllin and Leach's germicide to kill anthrax spores under these conditions could not be determined from want of suitable standard material.

The attempt made to disinfect unopened bales of wool by electrolysis did not produce satisfactory results. Numerous statistics are given connected with the imports of wool, mohair, camel's hair, etc., and the relative dangers of the different classes of materials. Details of anthrax cases or suspected anthrax cases that have occurred during the past year are also given.

The whole report reflects the greatest credit on the board, and Professor Eurich is to be congratulated on his untiring scientific efforts to devise means for stamping out this disease.

LIVERPOOL.

THE SCHOOL OF TROPICAL MEDICINE.

DR. J. O. WAKELIN BARRATT and DR. WARRINGTON YORRE, who left England on August 12th, 1907, to investigate blackwater fever, have returned to England, having spent fourteen months in Nyassaland. The expedition was provided with an extensive equipment for pathological and chemical study, and unusual opportunities for the study of blackwater fever presented themselves. Nearly all the cases occurring in the Protectorate during the period came under observation. Every assistance was given by the Government Medical Staff and by the Shire Highlands Railway Company. Two hospitals were available for the reception of cases of blackwater fever—the railway hospital at Luchenza and the Government Hospital at Blantyre, the latter being exceedingly well equipped. One of the members was attacked with dysentery, but otherwise the health of the expedition was good. The expedition was financed in equal shares by the Colonial Office and by the Liverpool School of Tropical Medicine.

THE NEW DENTAL HOSPITAL.

The foundation stone of the new dental hospital was laid by the President of the hospital, the Earl of Derby, on January 16th, the Lord Mayor presiding. Lord Derby, in the course of his remarks, said that it was not possible to over-estimate the harm done by bad teeth to the constitution of boys and girls. Many men were sent back from South Africa on account of their teeth, but many suffered from their teeth who were not sent back. It was the desire of those founding the hospital to bring to the doors of the poor the best that dental science could do, and he believed that the effect of their work and of the generosity

of the subscribers would be very great on the health and life of coming generations. Mr. W. H. Gilmore, the Warden of the hospital, said that he believed the new building had been designed on the most economical and efficient lines; it was rather remarkable that at the time they would be opening it they would be celebrating the jubilee of the institution. The dental school, opened in 1876, had last year a record number of students. As many as 27,000 patients attended during the year. The true business of the hospital was to save teeth, not to extract them, and over 16,000 teeth had been saved—a number which for the first time was in excess of those extracted.

The site of the new building is at the corner of Pembroke Place and Boundary Place, within two or three hundred yards of the university and the Royal Infirmary. The estimated cost of the building and equipment is £10,000, of which three-fourths has been already given or promised.

WALES AND MONMOUTHSHIRE.

A GREAT TRUNK SEWER.

ONE of the most complete schemes of sewerage ever carried out has just been finished in the Western Valleys of Monmouthshire. It is designed on the separate system—that is, the sewage is kept separate from the rainfall as far as possible. The sewer is calculated to provide for a population of 200,000, which is ample for the Western and Sirhowy Valleys, but is capable of enlargement. At present this scheme comprises 35 miles of sewer, while the Sirhowy branch, when added, will make it nearly 50 miles. The work was commenced on October 5th, 1905. It has cost £236,000, the original contract being for £210,121, certain alterations and extra work having been undertaken. The Sirhowy section was commenced in April, 1908, and will probably be completed in about eighteen months. The engineers for the whole scheme are Mr. Baldwin Latham and Mr. George Chatterton of Westminster. At the outset there was considerable opposition to the trunk scheme, various other schemes being put forward as equally efficient and less costly, in particular the septic tank method. The scheme resembles a huge three-pronged fork. The handle of the fork runs from the outfall in the Bristol Channel, about two miles from the mouth of the Usk, up to Crosskeys. From this point the Sirhowy branch runs to Tredegar, and a parallel to this is a sewer tapping Abercarn, Newbridge, Crumlin, and Aberbeeg. At the latter place there is another division, one branch running to Ebbw Vale, and a parallel branch through Abertillery and Blaenau, terminating at Nantyglo. It is intended, however, some time in the near future to connect up Brynmawr with Nantyglo. The three branches take their courses from the three rivers—Sirhowy, Ebbw, and Ebbw Fach. The pipes at the northern portion commencing at Nantyglo and the other termini are 12 in. in diameter, and gradually increase in size as the valley is descended. At Aberbeeg, the junction of two of the branches, the diameter is 2½ ft., at Newbridge 2½ ft., at Risca 3½ ft., and at Bassaleg 3½ ft. Near this point they are connected with an 11-ft. tank sewer, which is three quarters of a mile long, and has a capacity of 3,000,000 gallons. In this tank sewer the sewage is shut back until the time comes for its discharge into the Bristol Channel. From the tank sewer to the outfall, a distance of nearly three miles, the sewer is about 3½ ft. in diameter, and is made of cast iron pipes. A special point in the scheme, which offered considerable difficulty, was the tunnelling, more than a mile in length, under Ford's Lane, at Bassaleg, where the road and railways had to be crossed. A considerable quantity of water was met with in the construction of this tunnel. Owing to the narrowness of the valleys in a great many places along the routes the only possible situation for the sewer pipes was in the bed of the river Ebbw. At these places the sewer is made of steel pipes surrounded with concrete. The most difficult portion of the scheme was naturally that part of the outfall below high-water mark in the Bristol Channel. This is about 1,030 yards in length, and had to be carried out between the tides, with the exception of the extreme point of the outfall, which was completed by means of divers. The outfall is somewhat remarkable from the fact that the whole of it is laid with

at least 4 ft. of covering over the top of the pipes, so as not to form any obstacle to navigation, a 4-ft. trench having been made on the foreshore for its accommodation. The point of termination is marked by a can buoy, which forms a conspicuous mark for vessels. The outfall apparatus comprises a penstock chamber fixed in the sea-wall of the channel. Here the discharges will be regulated by an electrical recording apparatus, which will record the time when the valves are actually open and shut. According to the Act of Parliament the discharging of the sewage into the sea will take place in the time elapsing between one and a half hours before high tide and three hours twenty minutes after high tide. The sewage will be "stored back" during the remaining portion of the tide. Whilst discharging the sewage will be taken away to sea by the ebb tide. Experiments have shown that a very short distance from the outfall, owing to the enormous flow of water in the Severn estuary, all chances of contamination are removed.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

HISTORY OF MEDICINE.

THE first of a course of eight lectures on Medicine among the Ancient Egyptians, Greeks, and Romans was given in the Forensic Medicine Theatre of the University of Edinburgh on Wednesday, January 13th, by Mr. John D. Comrie, M.A., B.Sc., M.B., the first holder of the lectureship on the history of medicine in this university.

Dr. Comrie said that in preparing a course of lectures on the history of medicine he had encountered at the outset several difficulties. In the first place he must show that the commonly accepted notion regarding ancient medicine, which believed it to be a mass of foolish traditions and childish remedies, was quite erroneous. With all their follies and shortcomings, among the practitioners of the healing art, even in the most distant past, were men of skill and noble character. The history of medicine must be treated as a branch of the history of civilization, for the strange practices which they found in medicine at various epochs were often simply a reflex from the manners and ideals of society at the time. He intended in this preliminary course to treat of the foundations of the Western medicine from the earliest time to the declining days of the Roman Empire.

With regard to Assyrian medicine, the medical procedures of the peoples inhabiting the Euphrates basin were closely bound up from about 1500 B.C. onwards with those of Egypt. In Babylon the doctor was mentioned as early as 2700 B.C. and of the Code of Laws promulgated by Hammurabi, King of Babylon, about 2200 B.C.; some nine referred to the remuneration of medical practitioners for the treatment of various diseases. From incidental references it appeared that the operation for cataract was frequently performed, and that unqualified persons attempting surgical operations unsuccessfully were to be punished by having their hands struck off. The highest fee allowed for the successful treatment of a severe wound was equivalent to 25s. of our money, and apparently if the patient did not recover the doctor was not paid. When Nineveh was destroyed in 606 B.C. the library of King Assurbanipal, consisting of some 20,000 books of cuneiform characters inscribed on baked clay tablets, was left among the ruins. Out of these nearly 1,000 consisted of medical works which had come down from a very early epoch. In these such substances as sesame, olive and castor oils, syrup of dates, honey, and salt could be identified as favourite remedies; fasting was very frequently prescribed. Several letters written by consultants to one another or to their royal patients had also been found, and from these they found that quarrels among Assyrian doctors were by no means unknown. A favourite method of seeking medical advice in ancient Babylon was to lay the sick person in the public square to talk with the passers-by; any of these who had suffered from symptoms of a similar nature were able to give him encouragement and describe the remedies which had been useful to themselves.

Long before the time of the Exodus, medical practitioners in Egypt had reached a position of dignity and

usefulness; and about 1500 B.C., while Egypt was at the zenith of her glory, and while Israel was still a sojourner within her borders, a very definite idea of their social position and the methods of treatment adopted could be formed. Of the papyri from which this knowledge was derived, by far the most important was that brought to Germany by Professor Ebers in 1873. From this many of their ideas regarding physiology and the nature of disease were known, and many of the substances used as remedies could be identified. Among the latter were such familiar substances as magnesia, lime, iron, soda, nitre, and vermillion; peppermint, fennel, thyme, cassia, caraway, juniper, cedar-wood oil, and turpentine, gentian and other bitters; opium, squills, colchicum, mustard, onion, mandrake, and henbane; linseed, castor oil, frankincense, myrrh, and yeast. The names of many other drugs it was still impossible to translate. Wounds were treated by means of a plaster of crocus and essential oils, and various external applications, like poultices; inhalations and massage were in common use. Tumours were removed by means of beautifully-shaped bronze knives, and bleeding was stopped by the cautery. For the treatment of ophthalmia applications were employed, and the eyelids were manipulated by copper forceps, almost identical with the steel ones of the present day. The sacredness of the human body did not permit of amputation, except of hopelessly shattered limbs, but the fractures of bones were set with neatness and precision in splints of wood or plant fibre wrapped round by linen bands. The shapeliness of broken limbs after treatment by Egyptian doctors was moderately good, but did not reach the success of the Greeks who, in Plato's time, seem to have anticipated almost every device known to this branch of modern surgery. The social position of the medical profession in ancient Egypt had given rise to considerable discussion. The physicians undoubtedly belonged to the priestly class, though they were not priests themselves. Six sacred books on medicine were kept in the temples of Thath by priests, who had to know their contents by heart. In some cases medical treatment had to conform to the sacred original. The embalmers were of a lower and quite different class from the physicians, although the Hebrew applied the general term "healer" to them both. Many of the physicians of early Egypt reached a high place as the friends and councillors of Pharaohs, and one, who lived apparently in the time of the Third Dynasty (3500 B.C.), was in later times even deified and worshipped at Memphis and other places. All these facts sufficed to show that the assistance of a class trained in the art of healing was eagerly sought in the lands where the dawn of our civilization began. When it was remembered that the time of which he had spoken was a period of slow transition from an age of bronze to one of iron, it would be seen that this art occupied a position of high efficiency as compared with others, and of great advancement in the general scheme of human knowledge.

A NEW SPHYGMOMANOMETER.

At a meeting of the Royal Scottish Society of Arts held in Edinburgh on January 11th Dr. G. A. Gibson described a new sphygmomanometer, for determining and giving a graphic record of the systolic and the diastolic blood pressure in man. The principle of circular compression is utilized to estimate the systolic blood pressure, while at the same time the diastolic pressure is measured. The instrument has a mercurial manometer, the lumen of which is exactly that of the ordinary physiological kymograph. The air in the armlet can be increased, and the pressure on the limb therefore raised, by means of a large syringe, quickly or slowly according to requirements. By means of a valve the pressure may be also lowered quickly or slowly. The pulsations of the artery below the point of compression are recorded by means of a transmission sphygmograph.

SCARLET FEVER EPIDEMIC IN ABERDEEN.

Professor Matthew Hay, Medical Officer of Health, states that the present scarlet fever epidemic is the worst experienced in Aberdeen since 1897, when there were over 1,000 cases. The present epidemic made its appearance towards the end of September, 1908, and up to the present there has been an average of between 50 and 60 cases per week. The cases are distributed all over the town, although much more numerous in some wards than in others, but in none

is there complete immunity. The severity of the present outbreak is to some extent due to the fact that there has been very little scarlet fever in the town for several years, and it was quite in accordance with the expectations of the sanitary and medical authorities that the epidemic should be of widespread dimensions. The attack is, however, fortunately not of a very virulent type, and the death-rate is very low. It will be noted that all over Scotland there is just now a great deal of scarlet fever. Diphtheria is also very prevalent, but not nearly so much as a few weeks ago. There are also many cases of measles in the town, as many as of scarlet fever; but measles is not now a notifiable disease, so the exact number cannot be stated by the authorities. Whooping-cough is also common, and has already caused a number of deaths.

INTRODUCTION OF PROFESSOR DEAN.

The classes at Aberdeen University were resumed after the Christmas vacation on January 12th with an almost full attendance of students. The chief feature in connexion with the resumption of the winter session work was the introduction of Professor Dean, the new occupant of the Chair of Pathology. Principal Lang introduced the new professor to a crowded and enthusiastic audience, which included Dr. Angus Fraser, Professors Matthew Hay, Reid, Cash, and MacWilliam, Dr. George M. Duncan (who conducted the work of the Chair most ably during the first half of the winter session), and several members of the Royal Infirmary staff and of the junior teaching staff of the university. In welcoming Professor Dean the Principal paid an eloquent tribute to the late occupant of the Chair, Professor Hamilton, in course of which he said no one who had ever been brought within his circle of personal influence could forget a presence so vital, so magnetic, and so full of vivacity, and no one who had studied in that class-room could fail to remember a teacher remarkable for the lucidity of his exposition, a most kindly yet most thorough instructor. Every recollection of the laboratories that he fitted up and equipped was associated with him who there demonstrated to his students and there conducted and completed the researches that had made his name known far and wide. They all hoped that Professor Hamilton would yet recover strength and enjoy a long and tranquil evening-tide. The Principal then in fitting terms introduced Professor Dean, referring to his distinguished career and his qualifications to continue the great traditions of the Chair and to add to the lustre, already brilliant, that rested upon it.

Professor Dean on coming forward got a great reception from the large audience, and his opening remarks, in which he referred to his old teacher, were listened to with deep interest, and will be read with approbation by Aberdeen students all the world over. He said

The feeling of pride and pleasure that I naturally have in the honour conferred on me by my appointment is shadowed by the thought of the circumstance which led to the necessity of a change in the occupancy of this chair. The severe loss that the university has sustained by the retirement of Professor Hamilton is, I am sure, the thought uppermost in all our minds. Before Professor Hamilton's time, although excellent work had been done here in several branches of pathology, it may be said without exaggeration that the teaching of pathology as a scientific subject was unknown in Aberdeen. On his appointment as the first occupant of the Erasmus Wilson Chair of Pathology in the University he had before him both a great opportunity and a great task. The admirable manner in which he made the most of the opportunity and carried through the task is attested on all hands. He organized and equipped the department of pathology both in the University and in the Royal Infirmary in such a manner as to make it a credit to any university or institute. His conduct of the department on all its sides put the Aberdeen School of Pathology in a leading position in this country and brought distinction to the University. Not only did he do this, but he did much work for the good of the community in the North of Scotland. It was largely through the agency of his department that the public benefited by newer methods of diagnosis and treatment which had a bacteriological or pathological basis. For example, I recall that during the period when I was his assistant he brought into use in the North of Scotland the bacteriological diagnosis of diphtheria and of typhoid fever, and the examination of water by bacteriological methods. Professor Hamilton's devotion to scientific research has been tireless, and his work, by its high quality and thoroughness, has gained the respect of his fellow workers everywhere. His *Textbook of Pathology* for many years has been regarded as the most important work of that character on the subject of pathology which has appeared in the English language. His investigations have embraced a wide range of subjects. I may

mention his works on the nervous system, on the healing of wounds, on bronchitis, on tuberculosis, and on the infective diseases of sheep, to which in recent years he has given so much attention. That these have been regarded as important contributions to scientific knowledge is attested by the fact that his work has gained the approval of the highest adjudicating body in this country—the Royal Society—which conferred on him the honour of a Fellowship—a distinction which gave much pleasure to many of his friends and old students throughout the world. Professor Hamilton's teaching powers were of the highest order, as I can now attest from a fairly wide experience of teachers at home and abroad. As a lecturer he had the power of arousing and retaining the interest of his students in the subject. His vigour, his enthusiasm, his lucidity created a deep impression on every one with whom he came in contact. He brought before the students matured judgement, the result of a careful analysis of the subject matter, thus saving them much confusion of ideas. He spared no pains in making his lectures models of scientific exposition. The value of experimental methods was constantly kept before his pupils. He trained those that came under him to become observers, and enforced on them the necessity of accurate scientific method. He could not tolerate anything slipsidish, and I feel convinced that many have benefited greatly by this characteristic, though at the time it may be feared they did not realize its value. Professor Hamilton's position as a teacher in the pathological world of Great Britain is unique. There is certainly no one in this country who has so many pupils occupying important positions all over the world as teachers of pathology and as scientific investigators. London has several, and others are to be found in Edinburgh, Cambridge, Manchester, Birmingham, Belfast, Glasgow, Hong Kong, the Malay Peninsula, to mention a few of the positions which occur to me. Perhaps his greatest achievement, however, is that by his teaching of pathology he has laid the foundation of a scientific knowledge of medicine in a great number of young men who as the result of that teaching, when they have gone out into the world, have been able to bring into their ordinary medical practice a higher quality of service to their fellow-men. Personally Professor Hamilton, essentially a generous-minded and warm-hearted man, has gained the admiration and affection of many generations of students. I am sure we all sincerely hope that an improvement may take place in the state of his health, so that he may have that period of restful happiness in his life which he has so richly earned. What I have said will indicate in some slight degree how deeply I realize that it will not be easy for me to follow in the footsteps of my predecessor. I feel sure, however, that I may rely on the generous sympathy of my students, many friends in the medical profession, and of my colleagues, many of them my old teachers.

Professor Dean then proceeded to deliver his opening lecture on "The Conveyance of Infective Diseases in the Light of Modern Research." Professor Dean has been appointed Pathologist to the Aberdeen Royal Infirmary in succession to Professor Hamilton.

A SCOTTISH UNIVERSITY WOMEN'S SUFFRAGE SOCIETY.

A meeting of the Committee of Women Graduates of the Scottish Universities (Parliamentary Franchise) was held on Saturday, January 16th. The meeting, which was representative of the Universities of St. Andrews, Glasgow, and Edinburgh, was of the Provisional Committee formed on the preceding Saturday at the last meeting of Scottish Women Graduates. A report was submitted by the sub-committee, which had drawn up a scheme for the formation of a university women's suffrage society. It was agreed that such an association should be formed, on a non-party basis, to assist in promoting the cause of women's suffrage. The object of the society "is to obtain the Parliamentary franchise for women on the same terms as it is, or may be, granted to men." The aims of the society are to hold meetings in every town and village in Scotland; to send a petition to the House of Commons from every such meeting at which is passed a resolution in favour of the enfranchisement of women, and to induce public bodies and societies to do the same; to canvass every household in Scotland; to secure statements on the subject from every member of or candidate for a Scottish constituency; to ask, or arrange to have asked, preferably by electors, questions on the subject at every political meeting addressed by a member or a candidate in Scotland; to work at Scottish Parliamentary elections; to place a women's suffrage organizer in every constituency in Scotland, beginning with the four university towns; to select, compile, and distribute suffrage literature, and to correct mis-statements in the Press; to encourage literary, social, and political clubs; to hold debates and lectures on the subject; to induce teachers, speakers, and lecturers on the subject to point out to their hearers that the principles of liberty apply as much to women as to men. The membership of the Society is to be open to graduates—women

of any university and women on the *Medical Register*; all others in sympathy with the movement may become associates of the society.

Ireland.

[FROM OUR SPECIAL CORRESPONDENT.]

IRISH IN THE NATIONAL UNIVERSITY.

The struggle which has been originated by the Gaelic League in reference to Irish in the new National University still proceeds. The National newspapers are flooded with correspondence, *pro* and *con*, and the county councils and other public bodies continue their contributions of supporting resolutions.

The question has become one of serious importance, for many look upon the proposed requirement that all students must know Irish as a fatal measure if adopted. There have been rumours as to the views of certain members of the Senate, but there has been especially an uneasy feeling that the timidity of the majority must end in the acceptance of the compulsory policy. The newest development is the pronouncement of the Roman Catholic Episcopal Standing Committee, which appeared in Dublin on Wednesday last. It is signed by Cardinal Logue, the Bishop of Waterford, and the Bishop of Cloyne. They declare their profound interest in the work of the National University and its colleges. They have no doubt that Irish Catholics, no matter how slender their resources, will provide from the outset "the advantage of the highest education in the truths of religion and of the necessary facilities for the practice of divine worship." The Committee notice with deep pain "that the Senate is receiving in the columns of the public press treatment which is neither creditable nor servicable to the nation." And they proceed:

Whether it be good for the Irish language movement, and good for the new university to make Irish compulsory is a question for fair argument. For our part, we look forward to the day when the Irish language will again be spoken throughout the country, and will in consequence become largely the medium of instruction in the constituent colleges. But to reach that stage we consider that by far the best means is to set up in the colleges bright centres of Gaelic study that will, by their light and by their rewards, attract young Irishmen within the sphere of their Irish influence. The progress of Irish in our seminaries and in numbers of the intermediate schools of the country, so far from being an argument for compulsion, shows what the voluntary system, under our constant encouragement, has hitherto done, and what no doubt it will do still more successfully in the colleges of the new university. It is quite possible that in existing circumstances compulsion, instead of being a help, would be a hindrance to the language movement. It certainly would drive away from the university not a few students who, if once brought under the influence of the Gaelic school of a constituent college, would grow up good Irishmen. Entertaining these views, and deeply concerned alike for the revival of our national language and for the success of the National University, we deem it right to put them on record for the information of our people.

This declaration will cause much heartburning, but the influence of the bishops is such that the question in dispute is probably settled.

CONVOCATION OF THE ROYAL UNIVERSITY.

A meeting of Convocation of the Royal University convened for Tuesday last, fell through owing to the want of a quorum of thirty. While waiting for the expiration of the recognized time the graduates present discussed a motion proposed by Mr. Frank Hugh O'Donnell, M.A., ex-M.P., expressing regret for the passing of the Royal University, and wishing success to the new universities established in its place. Mr. O'Donnell regretted that anything should happen to weaken the ties between North and South, but hoped that notwithstanding the reality of patriotism would flourish between them, and that the bonds of common love for Ireland would prove stronger than all disintegrating influences. He condemned the decision to exclude extern students. He thought it was an infamous thing to deprive thousands of young Irishmen of the stimulus and reward of studies in their own Irish homes. He congratulated the University of Belfast on the admission to its Senate of representatives of the graduates. On

the other hand, in the National University in Dublin only one-fourth or one-fifth of the governing body would be representatives of the graduates, the triumphant majority being Crown nominees. He hoped their brethren in the North would use their utmost efforts to raise the rest of Ireland to the same level of academic self-government and academic freedom which was to be enjoyed by the graduates of Belfast.

Dr. McWalter, who seconded the motion, said that if Convocation had been given more power it would have been unnecessary to create two new universities, and thus cut off the North from the South of Ireland.

Dr. King Joyce alleged that there had been cases in which honours had been refused to candidates because some of the senators had private feeling against them.

Sir William Thomson, C.B., defended the Senate from these charges, and was supported by the Chairman (Dr. Leslie, Belfast), Sir James Creed Meredith, Mr. F. Hugh O'Donnell, Mr. Charles Doyle, K.C., and Dr. Condon, Barrister-at-Law.

The motion was carried without opposition.

JUDGE AND DOCTOR.

An Irish doctor writes with reference to the incident related under this heading in the JOURNAL of January 16th, page 177:

Some time ago I had to attend at quarter sessions at which this judge presided, and I too was witness in an assault case. There is no railway, so the journey—about twelve or thirteen miles to the quarter sessions village—had to be made by road. I was detained all day in anticipation of the case being called, and had to return again on the next day and wait till the afternoon, when the trial came on. I did not, like Dr. Tierney, stipulate that I would like to have my fee arranged before being sworn, with the result that a guinea for the doctor was the total amount allowed in payment for my evidence, and this entailed two days' waiting, besides journeys, hotel expenses, and my liability for a guinea a day for my locumtenent in case of any urgent Poor-law dispensary call during my absence. Considering the whole circumstances it would be difficult to say which was harder hit—Dr. Tierney for contempt of court or I for respecting it. Naturally, after such treatment one can have very little ambition so to further the ends of justice again. Perhaps you would be so good as to tell me the best course to adopt on getting a summons to attend and give evidence at this judge's court in future?

It will be remembered that Dr. Edward Tierney, who was in a civil court (the Clones Quarter Sessions) apparently by accident, was called upon by the judge to give evidence in an action for assault. He refused on the ground that no fee was paid or promised. The judge then fined him £2 for contempt, and ordered him out of court when he attempted to speak. Although he exercised his power in a harsh manner, the judge appears to have been technically in the right. Any one who has come to court without fee or conduct money must give evidence if called upon. In practice, however, we have always understood that in courts of civil jurisdiction the judge will protect a witness by refusing to compel him to be sworn when his lawful fee and conduct money is not paid. Unless the proper fee and conduct money are tendered, a witness who absents himself cannot be committed for contempt. In the case put by our correspondent he might have refused to attend unless he was paid in advance; and having regard to the rule about conduct money, we see no reason to prevent him from insisting on payment of the cost of a conveyance both ways, his hotel expenses for one night at least, and the usual daily fee which is paid to professional witnesses under the rules of court. That, at any rate, would be the proper course for a medical witness to adopt in England. Having attended court without insisting on any payment, his position would be the same as that of Dr. Tierney, who was committed for contempt.

ALCOHOLIC PATIENTS IN THE BELFAST WORKHOUSE INFIRMARY.

Dr. Fulton, one of the visiting medical attendants of the Poor-law Infirmary, has lately made an important and instructive report to his committee dealing with the number of alcoholic patients yearly admitted to the infirmary. Some of these patients are actually in delirium tremens on admission; some develop it immediately afterwards. The law allows the guardians to make a charge of 6s. 5d. a week, but this sum is ridiculously small. As these patients are one of the most dangerous and expensive kind

Dr. Fulton urges that the charge should be three guineas a week, and adds that many of the patients were able to pay this sum. Last year 283 male and 203 female alcoholic patients were admitted; this is exclusive of cases admitted to the surgical wards and subsequently transferred to other wards. Many of these patients were parents, and their homes were going to desolation. This system, says Dr. Fulton, of admitting them without any restraint whatever, is simply manufacturing by the hundred paupers who will in years to come fill, and be permanent inmates of, the workhouses and asylums. The report is being considered by the guardians.

THE BELFAST MUNICIPAL ELECTIONS.

One new medical councillor has been added to the Belfast City Council. Dr. John McLroy is a well-known and popular medical man, and he has been returned unopposed for Dock Ward, in the room of Sir Thomas Dixon, Bart., who retired. Dr. McLroy was practically adopted by all parties, and will be one of the most trusted members of the Council. Dr. Brown and Dr. Henry O'Neill have been re-elected without opposition, although the latter was threatened with it in the earlier stages. Dr. James Williamson was opposed at the polls, but came out victorious with 1,674 votes against his opponent's 64, raising his majority from 400 at the last to 1,510 in this election. The profession generally congratulates their medical brethren on their success, and feels sure that medical interests and public hygiene will be safe in their hands.

Special Correspondence.

PARIS.

Treatment of Cancer of the Skin and Mucous Membranes by Radium.—The Legion of Honour.

PROFESSOR GAUCHER recently devoted a clinical lecture at the St. Louis Hospital to the treatment of cancers of the skin and mucous membranes by radium, which has been carried out in his wards for the last year by Dr. Dominici. The radiation of radium consists of rays called respectively alpha, beta, and gamma. The first two are corpuscular rays formed by the projection of electrified particles of matter, the alpha being charged with positive and the beta with negative electricity. The gamma are vibratory rays, consisting in the propagation of a commotion of the ether caused by the production of alpha and beta rays, which results from the disintegration of atoms of radium. The gamma rays have the greatest, the alpha rays the least penetrating power. The activity of radium—that is, the intensity of its radiation—is measured either directly, in electrical unities, or relatively, taking the activity of uranium as the unity.

Apparatus.—Two kinds of apparatus are used in radium-therapeutics: (1) Supports of metal or cloth on the surface of which a pulverized radium salt is spread and maintained by means of some adhesive substance, generally Danne's varnish. The bromide, carbonate, or more often the sulphate, of radium is used pure, or mixed in varying proportions with an inert salt, the bromide, carbonate, or sulphate of barium. The metallic supports are in various forms—discs, quadrilateral plates, balls, ovoids, or cylinders—according to the conformation of the part to which they are to be applied. They can thus be applied to flat or convex surfaces, within cylindrical cavities, such as the external auditory meatus; they can be insinuated beneath the eyelids, etc. (2) Apparatus with free salts of radium, contained in tubes or ampoules of glass, the salt of radium being pure or mixed in varying fixed proportions with a barium salt. In describing an apparatus in which the salt is stuck on metal or cloth it is necessary to know (1) the surface on which the radium salt is spread; (2) the weight of the salt; (3) its theoretical and effective activity. Thus a metallic or cloth square whose side measures 2 cm., on which is stuck 1 cg. of pure radium sulphate, would be described as apparatus: S. (surface), 4 cent. cubes; W. (weight), 1 cg.; A. (activity), 2,000,000. In practice, however, the radium salt is mixed with barium salt, and the activity of the mixture is expressed by the respective proportions of radium and barium; thus the apparatus generally used in treating epitheliomas are said to be of A. 500,000, because

the radium-producing powder is a mixture of one part of a radium salt with three parts of a barium salt. This is the theoretical and not the real activity, which may be modified by various causes—for example, the absorption of a part of the radiation by the varnish, the superposition of the layers, etc. The activity of metal apparatus is less than in apparatus made of cloth, as in the former the grains of radium are completely embedded in the varnish, whereas in the latter the grains stick out of the layer of varnish. A very useful apparatus containing the free salt is a glass cylindrical ampoule containing 9 cg. of pure radium salt; this is placed within a silver sheath of 1 mm. thickness.

Application.—The apparatus may be used in the treatment of epitheliomas in one of two ways: (1) By utilizing the radiation as it is furnished by the apparatus, or after having filtered it, allowing all the gamma rays, and a large portion of the beta rays to pass; if not also the alpha rays. (2) By filtering the radiation so as to suppress the alpha rays, almost all the beta rays, and the less penetrating fraction of the gamma rays. This is the Dominici's method of ultra-penetrating radiation. The two methods have the same rules as to the protection of healthy tissues from the radiation, and the asepis of the diseased parts; to protect the neighbouring healthy tissues, lead slides or plates covered with tarlatan are used; asepis of the diseased tissue is necessary to prevent erysipelas or lymphangitis.

Method of Composite Radiation is the name given to the first of the above, since it brings into play the totality or the largest portion of the different effective radiations of the apparatus used. (a) These are used without the interposition of any screen save a thin piece of gold-beater's skin to protect the apparatus from organic liquids; (b) the radiation is partially filtered by means of substances with relatively slight absorbing power, such as rubber, cotton-wool, tarlatan, or aluminium, which is one of the least dense metals, and consequently one of the most permeable to the radiations. Composite radiation is used in two ways, either to prevent or to cause the production of massive sloughs. The first way, devised by M. Danlos, consists in placing the apparatus on the tumours during a very short time, for example, ten minutes, and frequently repeating the applications. Neoplastic tissues can thus be caused to undergo retrogression without causing any scar. The method is excellent, but is only applicable to epitheliomas of small dimensions, and very sensitive to the radiations. The duration of the treatment is extremely long, and certain cancers resist its action. The destructive method, used by MM. Louis Wickham and Degrais, consists of placing on the tumours apparatus of A. 500,000 and leaving them *in situ* for six to ten hours on the average for each zone of application. These applications are completed in two or three sittings, which at intervals of one or several days, after which the treatment is stopped. The effects are shown by an intense reaction of the neoplastic tissue followed by the production of a slough, which falls off about the sixth week, leaving a red and squamous skin surface, which eight or ten weeks after the end of the treatment takes on the appearance of a white, supple, and regular cicatrix. Drs. Wickham and Degrais advise, before applying the radium, that the diseased part should be carefully cleaned, removing the crusts and making the part aseptic.

Method of Ultra-penetrating Radiation consists (1) in the filtration of the radiation, only keeping the ultra-penetrating rays of Dominici; (2) in varying the intensity of the radiation thus obtained. The ultra-penetrating radiation of Dominici is defined relatively to the nature and the thickness of the screens traversed to the radiation of the radium itself, and to the x rays. Dominici describes as ultra-penetrating rays those which have traversed leaden plates of five-tenths to several millimetres of thickness. The rays thus filtered are essentially the gamma rays and an infinitely small quantity of beta rays. The ultra-penetrating gamma rays are rays which have traversed metallic screens which intercept the great majority of ordinary x rays. The advantage of suppressing the alpha rays, the great majority of the beta rays, and a fraction of the gamma rays, which correspond to the ordinary x rays, consists in the remarkable innocuity of the ultra-penetrating radiation which remains, an innocuity which

does not interfere with its healing properties when applied to gangrenous, inflammatory, and neoplastic processes.

Apparatus.—Dominici uses very powerful apparatus surrounded by plates of lead, silver, or gold the thickness of which is calculated so as to let pass only the ultra-penetrating rays. The lead screens, for instance, are superposed on apparatus with radium fixed in varnish containing 6 mg. to 1 cg. of sulphite of radium of A. 500,000, or else over glass ampoules containing pure radium bromide. The thickness of the lead sheath varies from five-tenths to several millimetres, to which are then added sheets of paper to a thickness of 1 or 2 millimetres. This is then put into a rubber sheath. The paper stops the secondary radiation given off by the leaden sheath, and the rubber protects the apparatus from the action of organic liquids.

Applications.—The apparatus of Dominici are either placed on the surface of tumours or in their depressions, or introduced by surgical operation into the interior of neoplasms. The apparatus is left in position for a period of 20 to 120 hours at the most for a single series of applications. The application is continuous or intermittent; thus, if a patient objects to wearing the apparatus during the day, it is left *in situ* from 9 p.m. to 9 a.m.; the apparatus is removed once or twice a day to be cleansed and to allow of the surface of the neoplasm being cleansed. In some cases the tumours receive at once the amount of radiation necessary to determine their retrogression; in other cases the treatment is recommended after an interval of three or four weeks. If the retrogression stops the treatment is begun again, and, if necessary, the intensity of the radiation and the length of its application are increased.

Therapeutic Effects.—Under the influence of the treatment the deep neuralgic pains cease, gangrene disappears, the neoplastic process stops, and finally, after a period of eight to fifteen days, during which a more or less intense flow of plasma occurs, the tumour begins to retrogress. The vegetations are reabsorbed, the ulcerations gradually fill up, the healthy portions of tissue become free, and, finally cicatrization is established in five to eight weeks. This applies to medium cancers, and not to extensive or very ulcerated or infiltrating cancer. Sometimes cancers of the skin require three or four months' treatment. It is simpler to treat cancers of medium type by the method of composite radiation producing a slough, an application of six to ten hours only being necessary; but when the tumours are extensive or deeply infiltrated and ulcerated, then the ultra-penetrating radiation is preferable. The latter is absolutely necessary in all cancers in cutaneous regions or those on mucous membranes only.

Treatment of Cancers of Cutaneous-Mucous Regions.—Wickham and Degrais have been able to cure cancers of the palpebral conjunctiva by short and repeated applications of apparatus of A. 500,000. Epithelioma of the mucous portion of the lip are aggravated by radiations of strong intensity. On the other hand, they are improved or cured by ultra-penetrating radiation, the intensity of which is relatively very small. Professor Gaucher described the three following cases:

1. Superficial epithelioma of the mucous membrane of the lower lip, of four years' duration, refractory to cauterizations with silver nitrate and the thermo-cautery. This was cured after twenty-four hours' application of an apparatus furnishing an ultra-penetrating radiation of about 3,500 gamma rays through 1 mm. of lead.
2. Typical cancrroid developed on the posterior surface of the lower lip in a plaque of leucoplasmia, in the form of hardened ulceration covered with a crust with raised edges, above the mucous membrane. Cured in two months after forty-eight hours' application of an apparatus giving 4,500 gamma rays through 2 mm. of lead.
3. Epithelioma of rapid development on the mucous membrane and at the left commissures of the lower lip. Cured after 40 hours' application of an apparatus giving a radiation of 4,500 gamma rays through $\frac{1}{2}$ mm. of lead. The cure is maintained—nine months since treatment.

The same treatment has been applied to cancers of the tongue, and Professor Gaucher has seen papillary epitheliomas restricted to the chorion of the mucous membrane retrogress after twenty-four or forty-eight hours' treatment with apparatus giving an ultra-penetrating radiation of A. 500,000. The "precancerous" condition of the mucous membrane—that is, leucoplasmia of the mouth—is

cured by this treatment. The results of treatment of infiltrating cancer of the tongue extending below the mucous membrane are encouraging, for amelioration has been obtained in conditions such that it would not seem impossible to cure eventually by means of radium certain varieties of one of the most terrible and the most incurable cancers.

The President of the Republic has conferred the Cross of the Legion of Honour on M. Louis Bazy, interne in the Paris Hospital, for the following act of devotion: In the month of March last, Dr. Iselin, chef de clinique of Professor Berger, was performing an Estlander's operation in the Necker Hospital, when Bazy, who was assisting him, received a spurt of pus in the left eye. He could not leave the operation as no one was washed and ready to take his place immediately. It was only when the operation was finished that he was able to take any precautionary measures, but the eye was already inoculated, and in a few days he had a conjunctivitis. At length, after seven months' suffering, it was necessary to enucleate the eye as sympathetic trouble was threatening the sound eye. Thirty years ago, in 1879, the Cross was conferred on M. Harbelin, interne in the Trousseau Hospital, who contracted diphtheria during a tracheotomy, but he died a few hours after receiving it.

MUNICH.

The Aerztliche Verein.—The Aerztliche Bezirks-Verein.—Other Medical Societies.—Post-graduate Courses.—The Library of the Aerztliche Verein.

Just seventy years ago twenty Munich doctors united to found the society known as the Aerztliche Verein. The object of the society was the furtherance of medical science, the exchange of practical experience, and friendly intercourse between the members. The sympathy it met with amongst general practitioners was not very great, as may be gathered from a letter addressed to the president by a doctor who had been asked to join the society. He wrote: "I cannot see how any advantage can arise from such a society, and I have no wish whatever to hear everybody theorizing in his own particular way. It is impossible that anything can be expected except general rivalry and difference of opinions. It is wiser that each man should draw his own conclusions and find his examples with the old masters according to his own ideas." What would the poor man have said had he lived nowadays, when every one is supposed to belong to at least half a dozen societies? Anyhow, he gave an entirely wrong prognosis, as appears from the fact that in 1836 the Aerztliche Verein organized the fight against cholera. Policlinic stations were established in all parts of the town, and members of the society gave their time and strength to the work. Later on their fight was renewed against typhoid fever, at that time a widely-spread, never-ceasing epidemic in Munich. It was also at the meetings of this Verein that Pettenkofer first developed his theories regarding the causes of these epidemics. These theories, little as they are recognized now, laid the foundation for the present hygienic sanitation of Munich and many another town. The Aerztliche Verein, which had been increasing steadily until it had become an important factor in public life, supported the views of its renowned member, and on this account received on the occasion of its fiftieth anniversary official recognition from the Government and the town council. From this time on the Verein became the centre of medical scientific life in Munich. It is even at the present date the most prominent medical society, though it has long ceased to be the only one.

There are, indeed, quite a number of medical societies. Medico-legal and ethical, as well as of late the economic, questions are dealt with by the Aerztliche Bezirks Verein, to which every qualified medical man must be admitted. It is in this Verein that the members for the Aerztekammern are elected. This Aerztekammer is the representative body, meeting once a year to consult the wishes of medical men concerning their own legal affairs and on questions of social hygiene. The Government is obliged at least to answer any requests made by the Bezirks Verein. This, of course, is not much if the Government

displays no goodwill or is not particularly interested. Yet it is something.

Beside these two Vereins there is the Neue Standesverein Münchener Aerzte, due to a secession from the Bezirks Verein, where a rule of tyranny had sprung up, the majority having got into the hands of a too radical element which treated social medical problems much in way of the social democratic organizations. Another Bezirks Verein for the districts around Munich includes also a number of Munich doctors amongst its members.

All these different Standes-Vereine, which deal with medico-legal affairs, are members of the Deutsche Aerzte Vereinsbund, the representative body of German doctors, which however is not based on an organization instituted and approved by the Government, as the Aerztekammern, but is a free union or combination. Further, all doctors who wish to treat Krankenkassen patients are required to enter the society for "Freie Arztwahl."

Scientific life has also been divided into several channels. There are ophthalmological, laryngological, pediatric, gynaecological, psychological, morphological, physiological societies.

There is besides these a Klinkerschaft uniting the students of medicine during the clinical years. This is intended to prepare these future doctors for the legal and ethical side of their later life. There is also a branch of the Leipziger Wirtschaftliche Verband, and there are some smaller clubs with the same object as the Aerztlicher Verein: in fact, there are now a-days so many specialities in medical societies that it is hard to say why the Aerztliche Verein still exists, especially as of late the scientific demands of practitioners have been met in the most admirable and satisfactory manner imaginable, and in a way that no papers read on scattered subjects in an evening could possibly fulfil. These are the "Fortbildungskurse" (post-graduate courses, lectures, etc.) held in the different clinical institutes and delivered by our best professors, docents, and practitioners, and accessible to every doctor free of charge.

But notwithstanding all this the Aerztliche Verein still holds the first place, and every doctor of repute will enter it. Perhaps not the least attraction presented by this society is its splendid library. Owing to the generosity of the editor of the *Münchener medizinische Wochenschrift*, Hofrat Spatz, this library is provided not only with all the important periodicals, both German and foreign, but through him and occasional donations from others adds yearly many volumes to its collection of books. When one sees the queer old building, standing in a quiet side street, resembling an old monastery, the broad stairs leading to the old-fashioned, dark, and mouldy rooms, the feeling strikes one of the disparity between it and its valuable contents. But in the meantime we must be satisfied with what we have until the longed-for Pettenkofer-Haus is built, where all the different scientific societies intend to have their club rooms. Whether, however, this will ever be built, and, if so, when, nobody knows.

According to the *Deutsche medizinische Wochenschrift*, the total number of medical practitioners in Germany on November 1st, 1908, was 31,640, as against 31,416 on the corresponding date in the previous year. They were distributed among the various States as follows: Prussia, 19,130; Bavaria, 3,487; Saxony, 2,298; Württemberg, 1,043; Baden, 1,263; Hesse, 747; Mecklenburg-Schwern and Mecklenburg-Strelitz, 362; Oldenburg, 165; Brunswick, 265; Thüringen, 706; Anhalt, 150; Waldeck, 50; Lippe and Schaumburg-Lippe, 77; Lübeck, 77; Bremen, 198; Hamburg, 721; Alsace-Lorraine, 903. The proportion of doctors to population in the large cities was as follows, the ratios given being per 10,000 inhabitants: Wiesbaden, 25.8; Munich, 15.8; Strassburg, 14.2; Kiel, 13.1; Larger Berlin, 12.3; Frankfurt-on-the-Main, 12.1; Halle, 11.8; Karlsruhe, 11.7; Breslau, 11.6; Königsberg, 11.2; Posen, 11.1; Hanover, 10.9; Cassel, 9.8; Dresden, 9.8; Cologne, 9.7; Stuttgart, 9.6; Leipzig, 9.4; Stettin, 8.7; Danzig, 8.7; Brunswick, 8.5; Düsseldorf, 8.4; Aix la Chapelle, 8.3; Magdeburg, 8.2; Hamburg, 7.8; Erfurt, 7.5; Nuremberg, 7.5; Bremen, 7.1; Mannheim, 7.0; Altona, 6.1; Dortmund, 6.0; Krefeld, 5.7; and Elberfeld, 5.7. Included in the list are 55 women doctors, who practise almost without exception in the towns. Berlin has 17; Breslau, 5; Frankfurt-on-the-Main, 4; Munich, 3; while Hamburg and Dresden each have 2.

Correspondence.

LORD LISTER ON SULPHO-CHROMIC CATGUT.

SIR,—I desire with your permission to add in your columns a few words regarding sulpho chromic catgut to what was stated in my paper on the preparation of catgut for surgical purposes published in the *JOURNAL* on January 18th, 1908, p. 125. It does not begin to be absorbed for about ten days, and it is then gradually eroded, retaining considerable firmness to the last. It is thus well adapted not only for tying vessels in wounds, but also for the ligature of arterial trunks in their continuity and for buried sutures. Its trustworthiness for these purposes has been amply demonstrated by long experience.

I may add that immersion of the catgut in 1 to 20 solution of carboic acid for about twenty minutes before the commencement of an operation has afforded perfect security of an aseptic state of the thread, while no disadvantage arises from its remaining in that solution for any length of time which on other grounds may be found convenient.—I am, etc.,

January 14th.

LISTER.

THE DEPARTMENTAL COMMITTEE ON THE MIDWIVES ACT AND GENERAL PRACTITIONERS' INTERESTS.

SIR,—The appointment of a Departmental Committee to inquire into the administration of the Midwives Act, 1902, is an incident of considerable importance to a large portion of the medical profession in England and Wales, especially to the general practitioners whose work lies entirely or partially among working-class communities, yet the event appears to have attracted very little attention from those whose interests are chiefly involved. With the exception of an excellent account of the local situation and the state of professional opinion given by your Manchester and Salford correspondent (January 16th), there has been no reference to the subject in the *BRITISH MEDICAL JOURNAL* as far as I have noticed.

The Departmental Committee appointed by the Lord President of the Council will be chiefly concerned with two questions: (1) As to the supply of midwives; (2) as to the remuneration of medical practitioners called to abnormal cases by midwives acting under the rules of the Central Midwives Board.

As a member of the Central Midwives Board nominated by the Lord President it would be unbecoming in me to criticize the composition of his Lordship's Departmental Committee, but I have no desire and I am under no temptation to do so. Any serious inquiry must be useful. There is, however, one defect so obvious as to suggest mere oversight, yet probably entailing such unfortunate consequences that it may be mentioned with the wish to be helpful, and without offence to any concerned. The Departmental Committee as at present constituted contains no member of the medical profession conversant with the routine of midwifery work among the poorer classes, with the sort of practice, in fact, which brings the doctor into close relations with the midwife while she is engaged on the duties of her calling. The Departmental Committee is, without doubt, composed of able men, all distinguished in their own particular official positions, but it is difficult to believe that the report of a committee even so composed will be received with the same confidence by the medical profession as that of a committee containing one or more medical members qualified by special experience, independence, and sound judgement to elicit the most valuable evidence, not merely to give evidence.

It would be a misfortune if an easily removable defect were to weaken the confidence of the great body of the medical profession in the value of the report of the Departmental Committee when it appears, and diminish the ardour of co-operation in giving practical effect to recommendations.

With regard to the two chief points for inquiry, I should like to offer some suggestions to our professional brethren. These suggestions are the outcome of considerable rumination over the reports which come regularly to the Central Midwives Board, and over what one learns in conversations with medical practitioners, weighed in the light of

personal experience as a general practitioner in years gone by. My suggestions, put forward with all diffidence, may form some basis of discussion among those chiefly concerned. I harbour no illusion that they are matured in detail for practical application.

First, with regard to the supply of midwives, we are at present, both as to quantity and quality, just emerging from a state of barbarism. There are too many midwives of sorts here in the North; it is alleged that there are too few in the South and West of England. That may be true; but there are over 15,000 midwives actually in practice in England, with an annual increment of about 1,000. Any distribution by relieving the congested districts is of course utterly impracticable. As a rule, the ordinary midwife, except she occupies an official position, must practise where she was brought up, or at least where she has resided for years and is well known. With the officially appointed it is different. Another difficulty to be overcome or circumvented is that so few of the numerous midwives can make a decent living out of their professional earnings alone. And now that quackery among women and infants has been suppressed by the tyranny of the Central Midwives Board, the struggle is harder than ever. Many of them have to engage in supplementary occupations not always compatible with the midwife's calling. Upon the whole a distinct improvement is already observable among the midwives as a class. There are, of course, many shocking exceptions, but these are being gradually eliminated through the administration of the Midwives Act by the local supervising authorities and by the Central Midwives Board. How, then, are we to maintain a reasonable standard of efficiency while supplying a sufficient number of midwives for the classes of the population of England and Wales which require their services? A suggestion for a solution comes from the recent action of some of the county councils. Several county councils in England have offered scholarships or bounties to suitable women to induce and enable them to go into training as midwives. If this is done voluntarily by some local authorities, why should it not be made obligatory on all? That is to say, the State, as in Continental Europe, should train and partially subsidize the number of midwives required by their people. In this country "the State" would be the county and county borough councils, and they would select suitable pupils for training and train only the number required in their own areas. This arrangement would do away with the demoralizing competition which there is some reason to fear is already tempting to crime. It would also put an end to that selection of the unfittest which we may observe now going on all over England. It is such economical and easy benevolence to dispose of the widow of a manservant, or support the poor woman burdened with a chronically ailing husband, to send her for training as a midwife. The ground of selection is not the fitness, but the poverty of the pupil. Under a better system, if such women were not only poor, but fitted by education and temperament to make efficient midwives, so much better satisfied with the selection the committee of a county council might be—conscious of a public service and a benevolent action. But it is a mere platitude to assert that poverty alone should never establish a claim to public assistance towards training for the calling of midwife. There are many arguments in support of the changes which I am hinting at. The better the position of the midwife, the more it will be sought by the most suitable class of women, and the more the midwife will fear to lose her post by transgressing against either moral or legal obligations in her professional capacity. It might be premature to suggest here the establishment by co-operation of rate-aided lying-in hospitals for the training of midwives like the State-supported maternity hospital schools of France and Germany and other countries; these will come with the municipalization of all public hospitals and the restriction within reasonable limits of "hospital abuse," a consummation perhaps not so far off as the many who are indifferent to the signs of the times may believe.

The second important question before the Departmental Committee is the remuneration of medical practitioners who are summoned at the request of midwives to render assistance in cases of danger or difficulty. The worst blot upon that very defective measure, the Midwives Act, 1902, is the entire absence of any germ of a provision for the

payment of fees to medical practitioners called upon to render their professional services to poor women in emergencies. Probably the advocates of the Bill felt in their haste to get it through that if it were weighted with controversial clauses it would sink out of sight. Nevertheless the Act with some amendments appears destined to work a beneficent social revolution. The most urgent amendment required is the removal of the intolerable grievance from which the hardest working members of the medical profession suffer at present.

It is therefore highly desirable that suitable witnesses should go before the Departmental Committee to offer evidence founded on intimate personal knowledge of the working of the Midwives Act as it affects the general practitioner.

It seems to me that sympathetic and well-informed witnesses from the Manchester and Salford area alone could contribute most important, perhaps sufficient, evidence on the working of the Act in urban communities. Manchester shows the administration of the Act at its best; Salford at its worst. There can be few districts in the country where such a striking and instructive contrast forces itself upon public attention. In Salford an unenlightened majority of a borough council refuses to administer the Act in an efficient manner, and subjects the medical practitioners within its jurisdiction to ill-usage, while an unspeakable board of guardians endeavours to increase the number of paupers among its working people and withholds on paltry pretences well-earned remuneration from the practitioners who are so unfortunate as to be called upon to do the work in emergencies of their district medical officers when they cannot be found. In Manchester everything is in favourable contrast to this: details would occupy too much space, but the facts are open to all the country. There is no need for concealment. I should like to add that Manchester is unique in the country in making admirable provision for poor women suffering from any form of puerperal fever instead of sending them to the workhouse.

I have no idea what the scope of the evidence which the Departmental Committee will require may be, but some account of the administration of the Midwives Act in Manchester and Salford could hardly fail to be relevant and useful, and our local medical organizations might very well combine in the endeavour to get the facts of the local situation brought to the attention of the Departmental Committee.

The most important question of all which keeps forcing itself upon our minds is this: What must be the amendment of the Act which will remove the exasperating grievance under which so many practitioners suffer? They give their services night or day well knowing that there will be no payment, or they refuse to obey the summons, and are held up to the scorn and contempt of their neighbours as hard-hearted, callous, cruel, and avaricious.

Such a condition of things is intolerable; it has been suffered too long, and should cease forthwith.

This is no political question, and the whole profession might combine to use such influence as it may possibly possess in order to obtain a reasonable settlement. Local authorities should be made legally responsible for the fees of the accoucheurs who come to the aid of the midwives in emergencies. The employment of a midwife under existing social conditions may well be considered *prima facie* evidence of poverty in the family of the patient, and if any proportion of professional fees is recoverable from husbands, that must be a question for the local supervising committee, not for the doctor. He should be as confident of receiving payment for this kind of work done as he is at present of receiving a fee for the notification of certain diseases. It is all work in the interests of organized society. Prompt and skilful treatment in cases of obstetric emergency saves lives, and prevents the disablement and misery which results from certain chronic ailments. Such aid brought to the poorer working-class women has the additional advantage of saving the pockets of the ratepayers by preventing extreme impoverishment and consequent demand for relief from the rates. To the ratepayer it matters little whether the pittance which goes into the professional purse is administered by the city, or borough, or county council, or by the board of guardians, but, as a rule, he has "no use" for the

guardians; he only wishes to know that his money is disbursed fairly and for value received without the harassment and ill-usage of those who have earned it.

If you work out the arithmetic of the situation by addition and subtraction, without attempting to estimate pain and agony of mind, you will come to the conclusion that it would well repay the ratepayers of city or county to take matters out of the hands of the "guardians of the poor," to put a stop to the cruel ill-usage of the humble medical practitioner, and to remunerate him decently well for his services to the community.—I am, etc.,

Manchester, Jan. 18th.

WILLIAM J. SINCLAIR.

* Sir William Sinclair has probably overlooked references to the appointment of the committee published in the JOURNAL during December. During the last year the whole subject of the payment of medical practitioners called in by midwives has been frequently discussed in the Association and mentioned in the JOURNAL. The discussion on the subject at the Annual Representative Meeting was reported in the SUPPLEMENT to the JOURNAL of August 1st, p. 137 et seq. A motion made at that meeting was finally adopted in the following amended form:

That it is the opinion of the Representative Body of the British Medical Association that no arrangements for obtaining the skilled assistance of the medical profession for midwives in an emergency or otherwise will prove satisfactory until, in the interests of humanity, it is made compulsory on the Local Supervising Authorities to guarantee payments to all members of the profession for such assistance on a definite scale of fees.

The Medico-Political Committee of the British Medical Association, at its meeting on January 6th, 1909, resolved to recommend the Council to authorize it to prepare and submit evidence on behalf of the Association to the Departmental Committee, in accordance with the previous decisions of the Association on the subject. This recommendation will come before the Council at its meeting on Wednesday next. It may be convenient to add that the Departmental Committee is constituted as follows: Mr. Almeric Fitzroy (Clerk to the Privy Council), Chairman; Mrs. Charles Hobhouse, Mr. J. S. Davey, C.B. (Assistant Secretary, Local Government Board), Dr. A. H. Downes (Medical Inspector for Poor-law Purposes, Local Government Board), Dr. F. H. Champneys (Chairman of the Central Midwives Board), Mr. John Pedder (a Principal Clerk, Home Office). A preliminary meeting to arrange the course of procedure was held on December 16th, 1908, and Dr. Francis E. Fremantle (M.O.H. Hertfordshire, and a Member of the Council of the Association for Promoting the Training and Supply of Midwives) was added to the Committee shortly afterwards. The Committee held its first meeting for the hearing of evidence on Wednesday last, January 20th, when Mr. G. W. Duncan, Secretary of the Central Midwives Board, gave evidence on its behalf. As already stated, the President of the Midwives' Institute protested, immediately after the composition of the Committee was announced, against the omission of a representative of the midwives. We are informed that Miss Wilson has now resigned her seat on the Central Midwives Board by way of emphasizing her protest. We understand further that Mr. Parker Young had the following notice of motion on the agenda paper of the meeting of the Central Midwives Board on Thursday, January 21st:

That the Lord President of the Council be respectfully requested to consider the advisability of adding to the Departmental Committee representatives of the interests of general medical practitioners and midwives, as the Board consider that such additions would greatly enhance the value of the report eventually come to by that committee.

THE STATE REGISTRATION OF NURSES.

SIR,—My letter in the JOURNAL for December 12th, 1908, has called forth so many critics that considerations of space compel my reply to each to be of the briefest. I have to thank Mrs. Hadfield and Miss Mollet for the courteous tones of their communications. The former lady's query as to why the matrons and nurses opposed to registration do not hold meetings in protest is a fair and reasonable one. It is much more difficult, it may be said, to arouse enthusiasm in those who are merely resisting than in those who are clamouring and contesting for a change in the existing order of things. When the proposed change involves a manifest injustice to themselves, those concerned are apt to rest in a state of fancied security that

it will never be allowed to be brought about. The matrons and nurses opposed to registration, moreover, are mostly engaged in the active practice of their profession, and it is difficult to arrange and organize meetings amongst ladies whose time is so fully occupied. A better proof than that afforded by many meetings of the nurses' objection to registration is that only lately they have been extensively circularized and urgently implored to join the promoting society, and their response to the appeal has been but feeble. They might deplore the "present chaotic state of nursing affairs" and "wring their hands," but still they have not joined in any considerable numbers.

Mrs. Hadfield does not strengthen her case by her reference to the London Hospital. Like only too many others, she attempts to narrow the point at issue into one of a difference between the nursing arrangements at that hospital and those obtaining elsewhere. But the question of registration is a vastly wider one, concerning the nurses at numberless other hospitals besides the London. As that hospital is so often attacked, however, it is only just to say that, with ample opportunities of judging, I am perfectly satisfied that the nurses sent out by it are in every way capable and efficient.

Miss Mollett's letter is more ably written than convincing. The objection to registration arising from the dread of creating a body of inferior medical practitioners is to me a minor one, and yet one deserving of some attention. My main objections to registration Miss Mollett only meets with vague promises of what will be accomplished by the "Nursing Council" when once registration is established. With a recollection of the conduct of her two societies in the past, and the large share they are clamouring for in the representation of that "council," I would still cry to my fellow-practitioners, "Ne credite ego." There is no vagueness about one portion of Miss Mollett's letter; on the contrary, there is a clear indication of how her two societies, if they gain their way, are prepared to interfere and dictate in the nursing arrangements of every hospital in the kingdom.

With Drs. Shuttleworth and Hayes Newington I am in cordial agreement. The injustice, absurdity, and insuperable difficulties attaching to any scheme of general registration do not apply to a separate one for their nurses, male and female, with their more strictly special and uniform training. Should such a form of registration, too, be established, it would be only right that gentlemen with experiences similar to their own should have a dominant voice in its control and management.

My contention that a majority of the medical profession are opposed to registration has not been challenged in the JOURNAL, although it has been elsewhere. That being so, I will only say at present that I am prepared to substantiate it, and that at the time it was penned I was fully aware that 90 out of 93 members voted in favour of it at an annual meeting of the Association.

Mrs. Bedford Fenwick says I argue "as if there were but twelve hospitals in London," but I fancy she will be the only person to take me in that light. So much had been claimed for the Matrons' Council and the Society for the State Registration of Nurses, that they were "representative of all that is best in the nursing world," that it was essential to point out, regarding the former body, that, whilst they could only claim the matrons of three of the twelve leading hospitals in London as belonging to it, the matrons of the rest were opposed to registration. A similar disproportion, in the same direction, obtains in the case of the matrons of the leading hospitals in the provinces and Scotland. To point out these facts is not to ignore the numerous other hospitals and the excellent work done at them by matrons and nurses. Mrs. Fenwick apparently is more enamoured of the work of the matrons and nurses at most hospitals than these ladies are impressed in favour of her societies. Let me call her attention, and that of Miss Mollett, to a report of a meeting held in Edinburgh, in the JOURNAL for December 19th last. The meeting was rightly claimed as being "highly representative" of both the nursing and medical professions in Scotland, and it was unanimously agreed to take steps to oppose the present bill. One speaker, moreover, called attention to the significant fact that at a meeting which was, without doubt, thoroughly representative of the nursing profession in Scotland, not a single member of the Matrons' Council was present.

Mrs. Fenwick charges me with inaccuracy, but the charge sits lightly on me. It matters little whether the Society for State Registration was only nominally formed in 1902, when the coterie responsible for calling it into being, and for its title, is identical with that which has been endeavouring for twenty years and more to gain control of the nursing profession. It is unreasonable to expect the ordinary individual to follow her societies in their flights at nomenclature, of which the "Matrons' Council of Great Britain and Ireland" is such a masterpiece. In a nursing publication largely devoted to the interests of her societies I read of numerous other societies with high titles, all in favour of registration, and a high authority in the nursing world has, not inaptly, compared them to "stage armies."

Mrs. Fenwick is certainly "courageous in raising the bogus cry of "coercion" in a medical journal. Such a charge might influence the layman, but will certainly not serve with any one with the slightest acquaintance with hospital régime. I certainly know of no hospital committee which would seek in any way to influence, let alone coerce, their nurses either for or against registration. If Mrs. Fenwick is better informed, let her give specific instances, instead of dealing with generalities without forthcoming proofs. Moreover, if hospital authorities take such unworthy advantage of their positions, which is unthinkable, what is there to prevent the trained nurses from joining her societies when they have passed from under the committees' control?

The rest of Mrs. Fenwick's letter simply obscures and is beside the question. She knows, or ought to know, that the present bill does not even pretend to abolish the evils in the nursing world to which she refers. On the contrary, it would, in my opinion, tend to further and increase them.

Lastly, there is evidence that in the Colonies registration has resulted in a lowering of the social status and education of those entering the nursing profession, and has led to a diminution of the standard of training. It is further stated that one at least of the legislative bodies has been approached with a view to the course of training being reduced from a three years' to one of two years' duration. —I am, etc.,

London, W., Jan. 19th.

J. A. COUTTS.

THE DRAFT CHARTER AND THE REFERENDUM.

SIR.—At the last Representative Meeting I voted for the Cardiff resolution in favour of a Referendum by voting papers sent to every member. I did so solely for the sake of conciliation, though I have always felt that on many subjects no member can possibly be in a position for forming a good opinion unless he attends Division meetings. But recent events have made me doubt whether my vote was well placed. To my mind, Mr. Ballance was only doing his duty as Deputy Chairman of the Representative Meeting when he uttered his protest in the JOURNAL of January 9th. Moreover, it has become evident that if a voting paper Referendum is ever to be satisfactory, some steps will have to be taken to ensure that both sides of any question are fully presented to the voters. To present only half a case cannot be a good way of arriving at the best opinion of the Association.

On considering the various matters that are ever likely to be the subject of a Referendum, it would seem possible to divide them into two great classes: First, the additional objects for which the Charter was largely framed, which are named in Section 2 (2), vi, vii, viii, ix of the Charter. They are, in brief, the supporting of Parliamentary candidates, facilities for sales of practices, and schemes for medical defence and benevolence. On such broad subjects I imagine every member is competent to form a good opinion without attending a Division meeting. Even the so-called "JOURNAL members," who either take no interest in medico-politics, or at any rate whether from choice or inability never attend a Division meeting, can form a proper opinion on such matters from their own personal knowledge. I would suggest, then, that on these matters, and only on these, Referendum by voting papers might be allowed. This would go a long way towards satisfying those members who fear lest the Representative Meeting may launch out too fast into new enterprises.

On the other hand, there are many subjects where no one can be expected to give a proper opinion unless he

attends a meeting where difficulties can be ventilated and both sides of the question be fully debated and explained by experts. Full discussion on such subjects as the medical treatment of school children is essential before any one can possibly be in a position to give a satisfactory vote. On such matters, then, I would recommend Referendum by personal voting in Division meetings, at which, of course, every member has a right to be present.

Now it must be evident that neither the Council nor the Representative Meeting will agree to any further postponement of the application for the Charter. It is too late to draw back, and whatever happens the Charter must go forward as it is. But there is no reason why there should not be some present concordat as to some future modification of Ordinance 17 which can easily be effected after the Charter is obtained. It is humiliating to have to confess that the greatest stumbling-block in the way of such a concordat is the feeling of mutual suspicion that exists, and any proposal from either side must attempt to allay these suspicions. Compromise of some sort must be attempted. It may be true, according to the opinion of legal counsel published last week, that the opposition of the South Western Branch cannot be maintained before the Privy Council, but we ought not to be satisfied with that. We should not be content with simply squashing opposition: we want union, and it is not sufficient to gain a victory by driving discontent below the surface.

I would propose, then, that those Branches which have threatened to oppose the Charter should be approached, not from any fear of their opposition being effective, but in a true spirit of conciliation, and that an amendment of Ordinance 17 on something like the lines above suggested be proposed. This could hardly be done officially, as the Council is now bound to prosecute the request for the Charter as it stands. Of course, there is no guarantee that the Representative Meeting would ratify such a proposal when the Charter is once obtained, though I am strongly of opinion that it would be accepted provided the present opposition be dropped. If my confidence in this is not shared by the South-Western Branch I would further suggest that, without calling together a Special Representative Meeting, all the present Representatives might be circularized, and asked if they would agree to such a compromise after the Charter is obtained. Even that, of course, would not bind a future Representative Meeting, but it would go as far towards it as is possible, and to ask for more is to ask for what is constitutionally impossible.

If I understand the feelings of the members of the South-Western Branch they do not so much desire to throw out the Charter as to have a particular alteration made beforehand. The method they threaten to take to obtain this cannot possibly succeed. The worst they can do is to delay the Charter; even that is hardly possible unless counsel's opinion is utterly wrong. The next worst is that they may cause a great waste of Association money. I am sure they can find no satisfaction in that. All the Privy Council can do is to reject the Charter. And what then? Will the South-Western Branch be any nearer to getting a voting paper Referendum? Not in the least. Rather I imagine the feeling of irritation that would be caused would indefinitely remove any such possibility, and might even prevent any proposal for compromise being accepted. These are not threats: they are simply a presentation of human nature as it is. In fact, the South-Western Branch has everything to lose and nothing to gain by catching at too much. The scheme I have ventured to propose may seem impractical and chimerical if an absolute guarantee is demanded. It is, at any rate, an attempt to go as far towards compromise as devotion to the best interests of the Association will allow me. I give every credit for a similar feeling to the South-Western Branch, and I am not without hope that both sides to this dispute will see that there is more to be gained by conciliation than by force and mutual recriminations.—I am, etc.,

Salford, Jan. 18th.

J. H. TAYLOR.

SIR,—In your issue of January 16th Mr. Lynn Thomas complains of "the precipitancy with which action has been taken in the matter of the Charter by a few officials and others in the name of the Association."

The facts are as follows: At its meeting on October 28th, 1903, the Central Council approved of the draft Charter,

Ordinances, By-laws, and Schedule thereto, submitted by the Organization Committee as finally revised by Counsel, and of the form of petition to the Privy Council praying for the grant of such Charter: it also passed a resolution directing that all necessary steps be forthwith taken to present a petition to His Majesty to grant a Charter in the form approved; and it further referred the matter to the Chairman of Council and the Chairman of the Organization Committee to carry out the necessary arrangements. The petition was presented on December 21st.

Mr. Lynn Thomas appears to think that these two officials should not have acted on the very explicit instructions, duly given to them by the Council at its meeting on October 28th, 1903, at which Mr. Lynn Thomas was present, to arrange forthwith for the presentation of the petition.

It will be for the Council at its next meeting to approve or to disapprove of the action of these two officials as it may see fit, and I as greatly regret the attitude adopted by Mr. Lynn Thomas as I do the tone of his letter.—I am, etc.,

Norwich, Jan. 19th.

H. A. BALLANCE.

SIR,—Did the postcards, showered without warning upon the members of the South-Western Division, really prove anything by the almost unanimous replies? I was talking to a member quite recently, who said that he replied in the affirmative on his card; but, as a matter of fact, he knew nothing about this Referendum business.

Such replies to a question (which, by the way, appeared to require an affirmative answer), sprung upon busy men who probably have never given the subject a thought, or considered the disastrous consequences which such a vote means after the Charter is cut and dried for passing, I believe to be unreliable. Insurrections spread among the masses like wildfire, and here we have issuing as a result a general upheaval which is calculated to wreck the long-looked-for Charter. The armchair critic is a useful individual, but the armchair voter, with his feet on the mantelpiece, is often indifferent in matters requiring thought and attention.—I am, etc.,

Liskeard, Jan. 19th.

JOS. WM. GILL.

SIR,—It is very kind of Dr. McKenzie Johnston to speak of certain extracts from a letter of mine published in the *JOURNAL* of November 2nd, 1907, as "excellent" and "wise quotations," and I appreciate the compliment. But I deny the charge of inconsistency which would seem to be conveyed by the quotations in question. I am now, and have always been, in favour of what is contended for by the opponents of the present Charter, but none the less I repudiate *in toto* the unconstitutional method adopted to enforce their views.

Dr. Johnston will observe that my "very strained construction" has been adopted by eminent legal authority, and would appear to be the law. I should have thought that to the "ordinary mind" the clause I quoted meant what it said, and that if a council were to be appointed to manage only the affairs of a Branch, it was not intended to arrogate to itself the right of performing functions reserved by the Articles and By-laws for the executive of the whole Association. If the views of a Branch have been properly brought before that executive by its appointed delegates, and rejected after due consideration in a proper and constitutional manner, is it right for that Branch to hamper the Executive when acting for the whole Association? Is it playing the game? I think not, and although I am in favour of the postal vote and opposed to the two-thirds majority of Council *re* Referenda, in my opinion these matters are insignificant in comparison with the unconstitutional course taken by those whom I should otherwise be prepared to support. The want of cohesion and self-discipline, which is only too evident in many of the letters published in the *JOURNAL* on this subject, is much to be deplored, and does not augur well for the future of the Association. It seems only too likely that the Privy Council, when it perceives how little respect has been shown for our present Articles of Association, will hesitate to grant us any Charter when the whole matter comes under its consideration.—I am, etc.,

London, N.E., Jan. 19th.

MAJOR GREENWOOD.

SIR.—At a meeting of Eastbourne Division, held in the Mayor's Parlour, Town Hall, Eastbourne, on the 15th inst., the following resolutions were unanimously adopted, twelve members being present:

1. That this meeting of the Eastbourne Division of the British Medical Association, taking into consideration the fact that the proposed system of taking the Referendum was before the Divisions for weeks before the Annual Representative Meeting at Sheffield, was passed at that meeting by a large majority, and subsequently confirmed by the Council, earnestly appeals to those Branches opposing the Charter to withdraw their opposition.
2. That the honorary secretary be instructed to forward a copy of the foregoing resolution to the Editor, for publication in next week's issue of the JOURNAL.

—I am, etc.,

Eastbourne, Jan. 16th.

WM. MUIR SMITH.

SIR,—By direction of the Council of the Southern Branch, the following question has been put to every member of the Branch:

Do you approve of the Branch Council joining the Council of the South-Western Branch in taking the necessary steps to lay before the Privy Council their view that a Referendum should be taken on the requisition of half the Council, and then by letter addressed to every member of the Association?

The replies received are:

Yes	...	...	...	...	...	173
No	...	...	...	...	...	10

The total membership is 419.—I am, etc.,

H. J. MANNING,

Salisbury, Jan. 16th.

Honorary Secretary.

OPERATIONS FOR CARCINOMA OF THE TONGUE.

SIR,—Will you allow me to refer to Mr. Butlin's article in the BRITISH MEDICAL JOURNAL dated January 2nd? Since writing my paper, which was published in the *Practitioner*, November, 1905, and which Mr. Butlin does me the honour to discuss, I have discovered another fact which increases the necessity for the removal of the entire hyoglossus muscle, even in small cancers which are situated on the dorsum of the tongue anywhere in the middle of its anterior two-thirds. In two cancers of this kind I have found in each case small cancer-bearing lymphatic glands buried among the fibres of the hyoglossus muscle, the fibres of which muscle had to be ruptured before the lymphatic glands could be presented. To me the interesting point about these lymphatic glands was their position. In consequence of their situation, they would have been unrecognizable and inaccessible in any operation conducted from the mouth. The only way in which they could have been safely removed was the method by which they were removed—that is, by excising the hyoglossus muscle from its attachment to the hyoid bone.

Mr. Butlin appears to me to agree with the main object of my paper, which was to attack a commonly adopted method of dealing with advanced but operable cases.

Increasing experience increases my difficulty in deciding which is the small cancer of the tongue; the size of the superficial ulcer or fissure, as the case may be, may be very misleading.—I am, etc.,

London, W., Jan. 18th.

G. LENTHAL CHEATLE.

APPENDICOSTOMY FOR INTUSSUSCEPTION AND FOR INTESTINAL OBSTRUCTION.

SIR,—That Mr. Carwardine should not think well of appendicostomy in cases of intussusception is natural under the circumstances he relates, but he can scarcely connect the death of his first case, "collapsed" when operated on, with the appendicostomy, and perhaps the recurrence in his second case was equally independent of that operation.

I should be glad, with your permission, to acknowledge that my very brief allusion to this subject in former papers requires qualification and justification. In the great majority of cases intussusception begins in the ilco-caecal region. In most dangerous or fatal examples the caecum is carried far away from its proper seat, and generally half round the abdomen into or near the left iliac region. Mr. Charles Clubbe, of Melbourne, whose personal experience of about 144 cases

in fourteen years entitles him to speak with great authority, says the most frequent starting point is the *caput caeci*.¹ In one of my cases the appendix was invaginated, its distal into its proximal part. That the appendix may play a part in starting the trouble may also be inferred from the fact that Meckel's diverticulum does sometimes start an intussusception. Naturally, therefore, the appendix has been removed as a prophylactic, by the late Herbert Allingham. An analogy with Mr. Carwardine's letter may be recognized in the report of von Prendisberger that he had seen the amputated appendix stump form the starting point of a new intussusception (J. V. Wichmann).

But when intussusception recurs after operative reduction, it is said generally to affect a different part of the intestine.² Therefore I should not expect appendicostomy to prevent recurrence altogether; but I should expect it to hinder recurrence, to limit its size, and to prevent the tumour from being carried right round the abdominal cavity into regions where the difficulty of manipulating it is increased.

It has been said with confidence that anchoring the caecum must favour intussusception by furnishing a fixed point. This would be true if the invagination were effected by some external force like that of the left hand putting a glove on the right. But intussusceptions are effected by internal force, by the circular and longitudinal muscle fibres of the intestinal wall. Fixing the caecum no more favours this than stopping a train would help a passenger to shut the sliding door of a compartment in a corridor carriage.

But there are other reasons for performing appendicostomy when operating for intussusception, besides the possibilities above mentioned. It permits immediate hot lavage of the intestine, which is inflamed and bruised, and its peritoneal coat often torn by the intussusception or by its operative reduction; it checks haemorrhage, and washes away clots and decomposing mucus and faeces. Its value as a means of recovering from shock may be disputed, on the ground that hot water, or neutral saline solution, or peptonized milk can be easily administered per rectum; but they are not in danger of being quite so quickly and completely returned when passed in through the appendix.

I should like to add that appendicostomy for this purpose can be done in the simplest possible way. The abdominal incision will most likely be near the outer border of the right rectus—that is, so placed that the appendix will come through it easily. One stout catgut suture through the caecum close to the appendix root and through the parietal peritoneum, and one silkworm-gut suture to attach the appendix to the skin, will suffice. The latter and the ligature which ties the appendix to the catheter need no prolongation of the anaesthesia whatever. With or without appendicostomy, the abdominal incision has to be closed. The appendix lies, as it were, in the surgeon's hand when he has reduced the intussusception.

Intussusceptions may be roughly classified into (1) ordinary or fairly mild cases; (2) severe cases—that is, such as can be reduced, though perhaps not without difficulty, leaving a segment of intestine a good deal bruised and inflamed; and (3) irreducible and desperate cases. Appendicostomy is for Class 1 and still more for Class 2. For Class 3, in which Mr. Carwardine's first case should be placed, may I suggest that the required first injection is not so much of milk into the colon as of neutral saline into the internal saphenous vein? But, of course, such cases generally die, whatever may be the details of treatment.

Mr. Carwardine has made a mistake of one year in the date of that case of intestinal obstruction of mine to which he refers, and though it was the first of my cases in which the faeces were for a time wholly evacuated through the appendix, it was not the first case of intestinal obstruction for which I did an appendicostomy. In the BRITISH MEDICAL JOURNAL, October 7th, 1905, p. 865, will be found this sentence: "Since this paper was read, Dr. Crombie of Sidcup and I have performed appendicostomy as a substitute for caecal colotomy, and have found the appendix easily dilatable." In the *Lancet*, 1906, April 14th, p. 1023, this case is referred to as having been

¹ BRITISH MEDICAL JOURNAL, 1907, Jan. 15th, p. 1428.
² J. V. Wichmann, of Copenhagen. *Nordiskt Medicinskt Arkiv*, 1905, Abt. 1, H. 3, N. R. 13. (The paper is in German.)

performed "partly" with the object of "giving egress to faeces." It was a genuine case of intestinal obstruction with faecal vomiting; but, as it proved to be wholly due to accumulation of faeces in a subject of chronic constipation, it was referred to as above, and in my last paper it is classed as a case of chronic constipation (Case 27). Every one of these case reports is an abstract of an abstract; and, though carefully made, details of some importance may be occasionally omitted accidentally. In this manner I have unintentionally misled Mr. Carwardine, and no doubt others. He is too powerful an ally in upholding appendicectomy for me to dispute with him about any question of priority. I congratulate him sincerely on the cases of appendicectomy for intestinal obstruction he mentions. They should deserve publication and prove instructive. Apologizing for the length of this, I am, etc.,

London, W., Jan. 19th.

C. B. KETLEY.

IS APPENDICITIS A MODERN DISEASE?

SIR,—The interest which appears to be aroused by the condition of King Herod's appendix, leads me to believe that the moment is opportune for reminding your readers that an excellent description of a case of appendicitis is to be found in Heister's *Observations*, and the following extract is from Wirgman's translation:

Observation CX.—In the month of November, 1711, as I was dissecting the body of a malefactor in the public theatre at Altdorff, I found the small guts very red and inflamed in several places, inasmuch that the small vessels were as beautifully filled with blood as if they had been injected with red wax, in the most skillful manner, after Ruysh's method. But when I was about to demonstrate the situation of the great guts, I found the Vermiform Process of the Caecum preternaturally black, adhering closer to the peritoneum than usual. As I now was about to separate it, by gently pulling it asunder, the membranes of this process broke, notwithstanding the body was quite fresh, and discharged two or three spoonfuls of matter.

This instance may stand as a proof of the possibility of inflammations arising, and abscesses forming, in the appendix, as well as in other parts of the body, which I have not observed to be much noticed by other writers; and when, in practice, we meet with a burning and pain where the part is situated we ought to give attention to it. It is probable that this person had some pain in this part, but of this I could get no information. In such cases I look on clysters prepared with emollient and discutient herbs, such as mallows, marsh-mallows and camomile-flowers, boiled with milk and used frequently to be of excellent use; as they reach the part and may resolve the inflammation, partly by their warmth, partly by their resolving and discutient qualities, opening the abscess, that the matter may be discharged by stool, and the patient hereby may be saved; which when the parts in the abdomen become corroded, can scarcely happen, but death must follow.

—I am, etc.,

Birmingham, Jan. 17th.

LEONARD G. J. MACKEY.

THE RHEUMATIC ORIGIN OF SEROUS INFLAMMATIONS.

SIR,—Without the least intention of being controversial, and only with a view to contributing some points to the interesting problem of rheumatism and appendicitis, I should like to record that I have never yet in a case of fatal rheumatism found the appendix vermiformis diseased. This does not in any way prove that appendicitis may not be rheumatic, but I think it is interesting when it is remembered how frequently these two diseases occur in this country. It may be that others who have looked for this point may have had an experience different to my own, and it is possible that when the rheumatic infection attacks the appendix it spares the other viscera. I am also confident that in children who have had rheumatic fever once, twice, or even frequently, appendicitis is very rare—so rare, in fact, that it attracts immediate attention. One case I have seen occurring with chorea, and one case I also recall sent up for immediate operation. Advanced heart disease made one hesitate, and the condition, whatever it was, got well. Salicylates were given, and the therapeutic result might have been claimed as proof of a rheumatic appendicitis. This child, however, died in another attack of acute rheumatism, and the appendix was found normal, which considering the acute illness of the child in the first attack, appeared to me a very unlikely event.

Such cases of peritonitis as I have seen of rheumatic origin, and occurring in fatal rheumatism, have been confined to the upper half of the abdomen, and particularly

to the region of the liver and spleen. As I have pointed out before, rheumatism, when it affects in children the right hip, either alone or with perhaps a slight arthritis of some small joint such as an interphalangeal, may closely simulate appendicitis. There is fever, the right limb is slightly flexed, and the pain referred above Poupart's ligament. Surgeons in my knowledge have come desperately close to making their familiar incision, which on these occasions would have brought them to the wrong side of the acetabular cavity. Lastly, arthritis we know may occur in appendicitis, and in those cases in particular in which the local signs are indefinite. Although this is pyaemic, much relief may at first be obtained from salicylate treatment, particularly if the arthritic pyaemia is mild in type.—I am, etc.,

London, W., Jan. 19th.

F. J. PONTON.

TREATMENT OF ACUTE AND SUBACUTE RHEUMATISM.

SIR,—I have read with much interest Dr. D. B. Lees's very instructive article on the effective treatment of acute and subacute rheumatism, in the *JOURNAL* of January 16th, a subject upon which his able and prolonged investigations have given him every right to speak with authority. With his general conclusion that we now give too small doses of sodium salicylate in rheumatic fever I am quite in accord, and look upon our present practice as the extreme swing of the pendulum away from the excessive doses used when the drug was first introduced. The rebound was chiefly brought about, I think, by the comparative frequency of salicylate delirium which followed the routine exhibition of 20 grains every hour or two hours. On one point in his paper Dr. Lees will, I trust, forgive me if I join issue with him. He says:

We must give up the conception of acute rheumatism as a form of arthritis of adults, with the occasional metastasis to the heart, and with certain "peculiarities" when it occurs in childhood.

In justice to the physicians at St. Thomas's in the late Seventies and early Eighties, I must say they never taught us such a conception, but impressed upon us the fact that acute rheumatism was a constitutional malady, nearly allied to the ordinary "specific febrile disorders." One quotation from a paper I wrote in 1886* on *The Nature of Acute Pneumonia in Children* will be sufficient to prove my contention; in it I say:

All will admit that the lung lesion in acute pneumonia is no more characteristic of this state than is the joint lesion in rheumatic fever; but we should consider it a distinct retrograde step were we to style this latter acute arthritis. The clinical picture of rheumatic fever is a far more complex one than is that of acute arthritis; it includes in addition pneumonia, pleurisy, pericarditis, endocarditis, and a peculiar sweat, as well as a remarkable subservience to salicin and a tendency to high temperature, etc. Now the clinical picture of "acute pneumonia" is more complex still;

and so on.—I am, etc.,

Birmingham, Jan. 16th.

ARTHUR FOXWELL.

THE FLEA AS A CARRIER OF PLAGUE.

SIR,—In the *JOURNAL* of January 16th there are two letters criticizing mine, referring to the flea as a carrier of plague, in the *BRITISH MEDICAL JOURNAL* of January 9th.

A. A. M. asks have I not made a mistake in reference to (1) the covering of the Ark; (2) it does not appear that the coverings of the tabernacle were carried in the incident referred to. A. A. M. has studied Exod. xxv, 11, and so has found out that the Ark was overlaid with pure gold. But, if he had extended his reading to Numbers iv, 5, 6-14, he would have also read:

And when the camp setteth forward, Aaron shall come, and his sons, and they shall take down the covering vail, and cover the ark of testimony with it. And shall put thereon the covering of badgers' skins, and shall spread over it a cloth wholly of blue, etc., etc.

The historic incident to which I referred was preceded by the battle of Ebenezer, in which the Israelites were defeated by the Philistines. In order to raise a religious enthusiasm in their defeated troops and encourage them for a renewal of the conflict, the elders of Israel sent for the Ark to Shiloh. Naturally, under such circumstances, everything that priestcraft and ecclesiastical ritual could

* *Practitioner*, July, 1886.

do would be done to impress the wavering minds of the discomfited army with the certainty of invisible help. It raised the drooping spirits, for "they shouted with a great shout, so that the earth rang again." Numbers iv, 5, 6, therefore, makes it clear that when the Ark appeared in public it carried its trappings, and especially in such a case as the present, "when the camp setteth forward" to battle.

Bearing on the hypnotic influence of such sacred emblems, I may cite the example of the Labarum in the armies of Constantine, the image of Christ carried by the troops of Justinian, and the Holy Lance with the Crusaders at Antioch. The Mohammedans had their sacred standard, and the Sassanian monarchs of Persia the blacksmith's apron on a flagstaff, etc.

Dr. Stansfield has a doubt that the Hebrew word *akhbar* covered both rat and mouse. Well, there is in Biblical Hebrew only one word for both these animals, just as in the Egyptian language there was the common word *Pennu*, in the Greek *μῦς*, and in the Latin *mus*, for mouse and rat. If the "reverend gentleman who understands Hebrew" will give me the special word for rat, I shall be obliged. The fact is these words cover several species of rodents, and not mice, and rats, and field mice only, and could equally well be translated otherwise.

The bearings of my original letter were:

1. That it has been proved by actual experiment that the flea transmits plague from rat to rat.

2. If only one were permitted to make a criminal more useful in his death than in his life, then it could also be proved, by direct test, that the flea carries plague from the rat to man.

3. Failing No. 2, which, owing to the frailties of some of the weaker brethren, is impossible at the present time, I suggest the incidents following on the capture of the Ark as a natural verification of the transmission of the pestilence by fleas, and, in the instance of Beth-shemesh, without any human contact whatever.

I do not wish to play upon or cavil with words, but simply to direct thoughtful minds to what has been, for I hold, with Chrysostom, that "it is not names which give confidence in things, but things which give confidence in names."—I am, etc.,

London, W., Jan. 19th.

R. HAVELOCK CHARLES.

P.S.—Some people may say that the rat was unknown to the Egyptians, Greeks, Hebrews, and Romans. The reply to this is: (1) That fossil remains of both rats and mice have been found in the pleistocene deposits of Europe and Asia. (2) Amongst Egyptian papyri there is one of a satirical nature, in which is a picture of a "Battle between the Cats and the Rats." I am indebted to one of the first authorities of the day on these matters for the following note:

There is another word, to which some of the earlier scholars attached the meaning "rat," in Isaiah ii, 20, but it is now generally rendered "mole." This word occurs here only, and alike its spelling and meaning are doubtful. In the late Hebrew there were two other words, *qamri* and *sor*, used in addition to *akhbar* to signify "mouse." If the rat was known to the Hebrews, they had apparently no other word but *akhbar* to designate it. The last word was used also in Western Aramaic. In Syriac there were at least two words for "rat," but there is no root in Hebrew corresponding to these words.

R. H. C.

THE HOME TREATMENT OF SCARLET FEVER.

SIR,—I was interested to see Dr. Robert Milne's letter in the BRITISH MEDICAL JOURNAL of January 16th on the above subject, and also a former communication from him (vol. ii, 1908, p. 1333), in which he referred to my father, Mr. J. Brendon Curgenven, in connexion with this treatment.

Over twenty years ago my father first suggested the inunction of eucalyptus oil in scarlatina; he wrote to the medical papers, read a paper before the Epidemiological Society, and also, I think, before the Society of Medical Officers of Health. A certain number of medical men took up the matter, but our profession is conservative, and the fear of infection in a serious illness like scarlet fever is so great in the public mind, that there was always difficulty in fighting against the wet sheet and the six weeks' isolation. I was in practice with my father when we first tried this treatment. There can be no doubt

that it mitigates the symptoms and lessens the chance of, even if it does not prevent, complications, besides preventing the spread of infection.

With Dr. Milne I shall be glad to see the treatment thoroughly tried, for if it be found, as both he and I contend, to do away with the long infectious stage during desquamation, it will save the country large sums of money in connexion with the isolation hospitals.

Although Dr. Milne mentioned my father in his first communication, I notice that throughout his last he refers to the treatment as if it were his own, which I think is hardly right. The credit of having introduced it certainly belongs to my father.

I agree with Dr. Milne with regard to measles. I have tried eucalyptus in a good many cases without benefit, and never found it prevent the spread of the disease.—I am, etc.,

London, W., Jan. 17th.

J. SADLER CURGENVEN.

VINCENT'S ANGINA.

SIR,—The evidence originally given by Professor Vincent in favour of the pathogenicity of the fusiform bacillus and spirillum described by him has always seemed to me to be weak. He himself describes one clinical type, in which the fusiform bacillus is found, as being much like diphtheria. Another form, to which he has given the name "ulcerative membranous," is in some cases at least strongly suggestive of scarlatina; indeed, there may be a scarlatinal erythema, a pseudo-rheumatism, and later albuminuria and endocarditis, though Professor Vincent attributes these to a superadded infection, usually streptococci. The majority of the cases, however, described as ulcerative membranous seems to be indistinguishable clinically from what are usually called septic throats.

Yet another form is described which closely resembles syphilitic ulceration; but though Professor Vincent states that the bacteriological examination will make the diagnosis clear, he adds that it is important to know that secondary syphilitic lesions may be the site of a superadded infection by the spirillum and fusiform bacillus. These points are to be found in a paper by Professor Vincent in the *Lancet* for May 13th, 1905.

Thus such a diversity of effect is attributed to a common cause that it is difficult to accept the reasoning as sound. Strong evidence would be necessary, and this I do not think has been produced.

In the article to which Dr. Nash kindly referred I gave, with my own experience of the examination of films, a brief account of the experimental evidence, so far as I could trace it, as to the pathogenicity of the organisms.

Dr. Wyatt Wingrave's valuable observations show how widely distributed such organisms must be.—I am, etc.,

Blackburn, Jan. 16th.

MILES B. ARNOLD.

THE ST. JOHN AMBULANCE ASSOCIATION AND THE MEDICAL PROFESSION.

SIR,—I quite agree with the remarks of Dr. Edward Jepson concerning his experience and views of the St. John Ambulance Association and the method of distribution of their honours.

Some time ago one of the officials of the Order attended a function for the presentation of prizes, and announced the fact that "H.R.H. the Prince of Wales, Grand Prior of the Order, had expressed his approval and sanctioned distinction for a certain medical man to be made a Knight of Justice," an irregular procedure surely, as it had not appeared in the *Gazette* at that time, but a very proper recognition for a medical man who gives his time and services in the way so very many do; but the point of the whole thing was this, as Dr. Jepson shows, it was a question of "kissing going by favour." There were many medical men who had done a great deal more in the way of lecturing and routine work who had been passed over and had not "caught the eye" of the secretary of the Order, as some would have it.

Quite recently there was a case of a retired army doctor who had put in not more than two or three years' work in the ordinary way for the association, and was made a Knight of Justice.

Consistency seems to be the one thing wanting in the actions of those in authority at St. John's Gate.—I am, etc.,

January 18th.

ANOTHER LECTURER.

DR. DOUGLAS ARGYLL ROBERTSON.

SIR,—In the excellent notices I have seen of my friend, the late Douglas Argyll Robertson (I believe I have not seen them all), there is no mention of the fact that he was one of the first, if not the first, to teach what was afterwards called "practical physiology" to classes of medical students. This was in Edinburgh, in connexion with the Chair of Physiology, about 1865, while the chair was held by John Hughes Bennett. The origin of this class is interesting historically. For many years John Hughes Bennett had given a course of histology and the application of the microscope to medicine. Early in the Sixties, John Goodsir, the anatomist, and, it is only just to add, the physiologist, was in the habit of bringing home new and strange physiological instruments from Germany—things called myographs, kymographs, non-polarizable electrodes, ophthalmometers, recording drums, etc.—hitherto unknown in Edinburgh or elsewhere in this country, so far as I am aware. This was the washing of the Helmholtz-Du Bois-Reymond-Ludwig ware on the shores of this country. These instruments soon made their appearance in the anatomical rooms. Bennett expostulated with Goodsir, and Goodsir replied, "Well, Dr. Bennett, they are instruments you should have; take them over at the price I paid for them." This Bennett promptly did, and so arose the Museum of the Physiological Department of the University of Edinburgh.

Argyll Robertson at this time became Bennett's assistant, and although, as is correctly stated in several notices, he determined to be an ophthalmologist, he taught a practical class for several summer sessions, introducing the chemical analysis of urine, the volumetric estimation of sugar, phosphates, and urea, and also a short course of demonstrations in electro-physiology, the use of electrical apparatus, and the elementary physiology of muscle and nerve. This he by and by handed over to William Rutherford, who systematized and extended the course, and to whom much credit should be given. I am proud to say that I came next in lineal succession, and I well recollect that when I became Bennett's assistant (1869-70) and had to face this practical class I received invaluable aid from both Argyll Robertson and William Rutherford. "Argyll," as we loved to call him at that time, presented me with several books on physiology of a practical character, which are now in the library of the Physiological Department of the University of Glasgow—I am, etc.,

Stonehaven, Jan. 18th.

JOHN G. MCKENDRICK.

THE HUNTERIAN SOCIETY'S MEDAL.

SIR,—Last June you were good enough to insert a notice that the Hunterian Society had decided to award a silver medal annually for the best essay by a general practitioner embodying the results of his own investigations. In view of the number of applications received for particulars of the competition I venture to send you the following details:

The competition is open to all registered general practitioners in the United Kingdom and the Channel Islands. The subject of the essay can be chosen by the candidate, but must fall within the province of medicine, surgery, or midwifery.

The essay must be unpublished and original, and based on the candidate's own observations, except for references to the literature of the subject. Observations may be included in the essay which have been made by means of special methods not available in ordinary practice, by workers engaged in these special methods, but the candidate must duly acknowledge the source of his information. Two type-written copies of the essay must be sent in, together with any material which the candidate may desire to submit. The essay must be marked by a motto and accompanied by a sealed envelope containing the candidate's name, address, and qualifications, and a signed statement that he is a general practitioner. On the outside of the envelope the motto must also be inscribed. The last day for sending in essays for the present competition is December 31st, 1909.—I am, etc.,

W. LANGDON BROWN.

Senior Honorary Secretary.

37A, Finsbury Square, E.C.,
Jan. 13th.

Universities and Colleges.

UNIVERSITY OF LONDON.

OFFICERS' TRAINING CORPS.

THE Military Education Committee appointed by the Senate to manage the university contingent of the Officers' Training Corps has received the sanction of the Army Council to the formation of a contingent which shall include an infantry, an engineer, and a medical unit, these units being composed of three companies of infantry, one company of engineers, and two sections of a field ambulance respectively. It is expected that additional companies will be formed at a later date. The rules for the contingent provide that admission to the contingent shall be restricted to gentlemen who are members of the University of London, or are non-matriculated students pursuing a regular course in schools of the university, save that power is reserved to the commanding officer in special cases to admit gentlemen who, though not comprised in either of the foregoing categories, are desirous of gaining the certificates of proficiency obtainable in the Officers' Training Corps. The corps is intended for the preliminary training of young men with a view to their qualifying for commissions in the Special Reserve of Officers, or the Territorial Force, and membership of the corps is restricted by the Army Council to British subjects of pure European descent. Cadets enrol normally for two years, but enrolment for one year may be permitted under special conditions in the present session. After the second year of membership cadets may re-engage annually for the purpose of obtaining Certificates A or B, but they will not, unless in exceptional circumstances, be permitted to remain as cadets for more than four years. Two of the infantry companies will be located at University College and King's College respectively; the location of the third company is not at present fixed. The engineer company will not be attached to any particular school of the university. The members of the medical unit will be drawn from the medical schools attached to the university, more than a hundred students from Guy's, St. Bartholomew's, St. Thomas's, University College, King's College, and other medical schools having already applied for membership. Enrolment in the contingent will begin immediately. With regard to head quarters, no arrangements have yet been made, and the training will be carried out for the present in the colleges attached to the university; the consideration of this question, as of other questions, such as the possibility of organizing cavalry and artillery units, has been postponed pending the appointment of the adjutant and the establishment of the infantry, engineer, and medical units.

UNIVERSITY OF ABERDEEN.

THE PROFESSOR PIRIE MEMORIAL.

THE movement which was started some time ago to provide a memorial to the late Professor Pirie has met with substantial success, and at a meeting of subscribers held in Marischal College, on January 15th, it was resolved that the memorial should, with the sanction of the University authorities, take the form of a stained-glass window in the ante-chapel of King's College.

UNIVERSITY COURT.

The Aberdeen University Court met at Marischal College on January 12th, Principal Lang presiding. The Secretary submitted an intimation from the Rector, Mr. Asquith, that he had appointed Sir John Fleming as his assessor in the University Court. The Principal welcomed Sir John Fleming, who had already, some years ago, while Lord Provost of the City, been a member of the Court and had done excellent services for the University while the great extension scheme was in progress. Afterwards the Principal referred to the retirement of Dr. James E. Crombie from the assessorship which he had occupied with so much distinction and benefit to the University particularly in connexion with the Quatercentenary celebrations in 1906. It was unanimously decided that a copy of the following minute should be sent to Dr. Crombie:

The services of James E. Crombie, Esq., LL.D., as Rector's Assessor having for the present at least terminated, the University Court hereby records its profound and most grateful appreciation of Dr. Crombie's wise counsel, ever ready co-operation, and unobtrusive but abounding liberality. During the nine years in which he was a member of the Court he was seldom absent from its meetings and he took an active interest in all its work. The University Court recalls with special emphasis his unwearying labours in connexion with the Quatercentenary celebrations, the success of which was largely due to his organizing genius. In Dr. Crombie the students of the University found a most reliable adviser and a most devoted and efficient friend. The University Court offers this imperfect tribute to the energy and the personal qualities of one with whom it was a privilege and an honour to be associated.

UNIVERSITY OF BIRMINGHAM.

THE total number of students who have entered the university this session is 210 as against 201 for 1907-8. There has been an increase from 79 to 85 in the Medical Faculty, if occasional students are included, such as those in Public Health. Excluding occasional students, those who have entered for the full course number 34, as against 27 last year. Among the other departments there is only a slight increase in those of Commerce and Science.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

At a meeting of Council on January 14th, Mr. Henry Morris, President, in the chair, modifications in the College By-laws with a view to the admission of women to the conjoint examination were considered, and referred to a committee for future report.

University of Birmingham.

Mr. H. T. Butlin was reappointed a member of the Court of Governors of the University of Birmingham for three years expiring January 1st, 1912.

Board of Examiners in Dental Surgery.

The vacancy occasioned on this Board by the retirement of Mr. G. H. Makins will be filled up at the next meeting of Council. Mr. Makins is not eligible for re-election.

CONJOINT BOARD IN ENGLAND.

The following candidates have been approved at the examination indicated:

FIRST COLLEGE, PARTS I AND II (Chemistry and Physics).—E. B. Argles, R. A. Ransbury, J. D. Bangay, H. W. Barnes, W. A. H. Bell, H. C. Bingham, W. H. Bland, R. C. Briscoe, E. A. Brock, R. G. Brown, T. H. Brown, G. Cock, R. I. Dacre, H. R. Dive, S. O. Dolan, J. D. Driberg, H. Dudley, A. G. B. Fenwick, L. E. Forster, E. D. Fountain, S. S. Greaves, C. A. Haynes, F. T. Hill, G. G. Jack, H. D. Lamb, D. Lewis, J. Lloyd, O. G. Maglinski, A. W. Matthew, G. W. Maw, H. M. A. Menagé, W. Morris, H. H. P. Morton, F. H. Mosse, N. S. Nairne, L. E. Napier, H. B. Owens, T. H. Parsons, A. S. Plant, C. S. Ramsay-Hill, J. Rashad, J. Rawson, J. E. Rawson, J. E. Richards, J. E. Rivera, G. Robinson, J. A. Robinson, F. Roux, F. Simpson, C. R. Smith, G. S. Stathers, J. Totton, C. G. C. Vawdrey, L. G. White, F. H. Woods.

Part III (Elementary Biology).—E. V. Briscoe, R. C. Briscoe, G. Cock, J. S. Cocks, R. Curle, W. K. Fry, T. W. Hancock, F. W. Herbert, J. S. Higgs, J. W. McIntosh, C. H. Medlock, J. Millard, T. H. Parsons, C. H. Phillips, A. S. Plant, P. H. Rawson, G. D. Robertson, G. Robinson, F. Roux, T. S. Stafford, C. de B. Thomson, J. Totton, L. D. Wright.

PART IV (Practical Pharmacy).—H. R. L. Allott, J. V. O. Andrew, H. J. Bates, E. F. W. Buckell, J. Capell, T. Cock, M. Donaldson, R. H. W. Fisher, M. Graves, G. H. G. Griffiths, L. S. M. Habich, V. P. Hutchinson, F. Kahlenberg, M. M. Khan, H. Lee, W. E. Levinson, F. G. Lioyd, R. H. Mawhood, J. J. W. Methven, A. Morgan, F. Morris, A. B. Peggrew, C. M. Plimpre, E. D. W. Reid, L. M. Routh, C. P. C. Sargent, F. S. Sowers, J. E. Tilling, R. T. Timbers, M. C. Wall, R. J. Wooster, J. F. W. Weyer.

SECOND COLLEGE (Anatomy and Physiology).—N. H. Bamboat, R. S. de C. Bennett, W. H. Boyd, R. P. Brothie, S. A. Burn, C. G. Colver, A. G. W. Compton, J. H. Cumming, A. K. Dalal, H. B. F. Fainalson, P. T. Fisher, F. Garratt, K. B. Greenwood, J. E. Hemper, A. Jones, G. L. Jones, B. R. Khanna, A. B. Kramer, W. M. Landon, D. McRae, A. F. C. Martyn, L. Milton, W. F. Morgan, W. H. Parr, W. S. J. Peiris, C. A. Pereira, N. P. Pritchard, T. S. Rajan, J. M. Redding, T. C. Reeves, D. Scott, B. Z. Shah, J. M. Shah, P. Smith, J. R. C. Stephens, J. L. Stewart, L. C. Watkins-Baker, A. M. Werapremala.

* Passed in Part I only.

† Passed in Part II only.

Contract Practice.

REPORT OF THE CHIEF REGISTRAR OF FRIENDLY SOCIETIES.

PART A. Of the Report of the Chief Registrar of Friendly Societies for the year ending December 31st, 1907, has recently been issued. If some what belated in its appearance, the report certainly makes up for this by its completeness and the care with which its statistics have been compiled. As the registrar points out, the functions of his office are very much wider than they are popularly supposed to be, since they are not restricted to the registration and control of friendly societies alone, but are concerned with building societies, co-operative societies, trade unions, loan societies, and others, and with the administration of the very numerous Acts of Parliament governing these institutions. In view of the enormous sums of money handled by these societies in the aggregate—sums largely representing the thrift of the working population of the country—it will be obvious that the activities of this office are of the first importance to the country as a whole. A few years ago there was great uneasiness, almost amounting to panic, concerning the financial condition of the friendly societies as a whole. The present report shows a certain amount of improvement in this respect, although the position is still far from satisfactory. In the case of 506 societies from which valuations had been received, there was a net gain in value of £122,738, but against this must be set the fact that only 35 per cent. of the societies could show a surplus and 65 per cent. disclose a deficit. In every case where deficits have been wiped out or reduced, this has been accomplished by the members making a voluntary sacrifice either in the way of increased contributions or of a reduction of benefits. The unsatisfactory financial position appears to be to a great extent due to the excessive management expenses, which in too many cases are partly met by an improper transfer of money from benefit funds to management

funds. Thus it is shown that of every £1,000 expended by the "collecting societies" £502 are applied to management expenses; yet, in spite of this, no less than 9 out of 62 of these societies show a deficiency in the management fund.

From the point of view of medical men engaged in contract practice the report is very disappointing. In every case where "medical aid and medicine" is mentioned in the tables given this is lumped with "sick pay" or sick or accident benefit, so that the report fails to give any data by which the proportion of funds applied to the payment of medical men can be estimated. This is the more to be regretted as many of the tables give comparative figures of expenditure for various years, and had this item been separately tabulated the figures would have been of the utmost value to those who are engaged in endeavouring to improve the conditions of contract practice.

The only place in which the figures for medical attendance are given is in the Report of the Registrar of Friendly Societies for New South Wales, which forms one of the appendices to the report. According to this, "an amount of £90,698 was paid away during 1906 to provide for medical attendance and medicine. This represents an average cost of 17s. 6d. per head of mean membership." Unfortunately the tables do not give us the average amount of contributions by members of these New South Wales societies, but the capital per member works out at £9 8s. 6d.

It would perhaps be well for the British Medical Association to consider whether it should not approach the Registrar of Friendly Societies with a view to ascertaining whether it would be possible for him in future to obtain separate figures as to payments made to medical men in the case of those societies which provide medical attendance.

The Serbices.

EDINBURGH TERRITORIAL HOSPITAL.

The first mess dinner in connexion with the 2nd Scottish General Hospital of the Territorial Force was held in Edinburgh on the evening of January 12th. There were about fifty officers present, including as guests Mr. Haldane, General Sir Edward Leach, and several others. The administrator of the hospital (Lieutenant-Colonel Wyville Thomson), in proposing Mr. Haldane's health, stated that this was the first time the officers of the hospital had met together. Speaking of the progress of the hospital, he said that the personnel was complete with the exception of a quartermaster, whose place could be filled at any moment if it was necessary; the officers' mail-and-file were complete. The personnel was not only complete but he believed double the number could have been recruited had it been necessary. A very high class of enthusiastic and intelligent men, who represented all the professions and trades likely to be of service in the complicated business of running a field hospital, had been enlisted. He did not believe there existed a finer body of men for the special purpose for which they had been enrolled. In order to head quarters, the hospital was at present in progress for premises which would be convenient to the university and Royal Infirmary. In the matter of drill and instruction there was a difficulty, because the authorities had not seen their way to give an instructor, and the help of others had to be asked, which was neither pleasant nor right. Seventy-five nurses had been enrolled, and it was expected that by the end of the month the full complement of 120 nurses would be obtained. As to the equipment, Mr. Haldane, in reply, said his situation were points that had not yet been settled. Mr. Haldane, in his reply, in touching upon this matter, said that the decision would be left to those on the spot. The first problem in army organization was to devise the most perfect organization. The Territorial system was founded on scientific principles. The toast of success to the second Scottish General Hospital was proposed by Lieutenant-General Sir Edward Leach, and Lieutenant-Colonel Gibson, Senior Physician, who replied, referred to the debt of gratitude owing to Sir George Beaton and Professor Cunningham.

TERRITORIAL FORCE.

Uniform of Officers.

X. Y. Z. writes: I think your correspondent "A. A. M." on p. 193 of the BRITISH MEDICAL JOURNAL, should know that paragraph 408 of the Territorial Force Regulations says, that "claims of officers whose transfer to the Territorial Force necessitates an alteration of uniform may be specially considered by the Army Council for such portion of the grant as will not exceed actual expenditure on the purchase or alteration of outfit." Paragraph 405 says: "The Army Council will . . . consider the claim of an officer transferred . . . to such portion of the grant as would not exceed his actual expenditure for the purchase or alteration of his new outfit."

What "A. A. M." should do is to make application through his commanding officer to the cashier of the command his unit is in for the £20, and he would get a ruling on the point

definitely as to what he would be allowed; or another way would be to produce receipts for purchase of the new uniform, and forward them through the same channel to the cashier of the command.

Remuneration for Medical Examination of Recruits.

Questions were asked in the House of Commons as well as the House of Lords on this matter, but in such a way that no satisfaction was obtained. Paragraph 611 of the Territorial Force Regulations says that the County Associations will be allowed a sum of 1s. for the medical examination of each recruit. I understand that the associations will not pay this to Territorial medical officers unless they make special application for the fee.

Personally, I hold that if a medical man joins the Royal Army Medical Corps, it is part of his duty to medically inspect recruits, and should expect no fee for doing so; but that if a civilian medical practitioner is called in to do so, the fee of 1s. is totally inadequate for the work required of him. With the exception of examination of urine, it is equally as exacting as for life insurance properly to examine recruits in accordance with directions as laid down.

The fee should be at least 2s. 6d. for a civil medical practitioner, and I think the Naval and Military Committee of the Association should make representation to the Director-General of the Army Medical Department on the matter.

Medico-Legal.

AN ACTION FOR SLANDER.

On Wednesday last the Court of Appeal Lords Justices Vaughan Williams, Farwell, and Kennedy commenced the hearing of an application by Dr. George Lawrence, of 61, St. Fillan's Road, Catford, for the new trial of an action brought against him by John Papa Nicholas, of 87, Down Hill Road, Hither Green, for slander. The case had been tried by Mr. Justice Grantham and a special jury in December last, when the plaintiff was awarded £200 damages, the jury adding a rider to the effect that the name of the plaintiff ought to be restored to the *Medical Register*. The hearing of the appeal had been expected. The grounds of appeal were the non-reception of evidence tendered on behalf of the defendant, and misdirection.

Mr. Lush and Mr. Neilson (instructed by the Solicitor to the London and Counties Medical Protection Society) were for the appellant; Mr. F. E. Smith, K.C., and Mr. Hogg for the respondent.

At the conclusion of the arguments on Thursday the court ordered a new trial.

CERTIFICATES TO MIDWIFE CANDIDATES.

The case to which reference was made on January 9th, p. 116, reached its final stage on January 14th, when the woman in question was charged at the Central Criminal Court with having obtained admission to the Midwives' Roll by a certificate which she knew to be false, and pleaded guilty. In mitigation of penalty her counsel urged that it was not necessary under the Act that she should furnish a certificate covering more than a year previous to her application, and that if she had intended to act in a fraudulent manner she would not have put forward a certificate which covered the early period of her career, during which she had been twice tried for murder. The Recorder, after remarking that the prosecution was a very proper one to institute, deferred sentence until next session, directing that the defendant should meanwhile be detained in custody.

FALSE DEATH CERTIFICATES.

THE two women who figured in the inquest at Lincoln, of which an account was given in these columns at page 190, January 16th, were charged in the magisterial court on January 14th in the same city with wilfully making false declarations. They pleaded "not guilty," but it was proved against them that they had secured the burial of the child by alleging that they had been present at its birth, and that it was stillborn; whereas neither of them was really present at the birth, and neither of them knew whether the child was born alive or dead. It was shown at the previous proceedings that the child from a medical point of view was born alive. It was also shown that one of the women had signed her declaration with a name which was not her own. The court found the defendants guilty, and fined each of them £2 17s. including costs, or, in default, one month's imprisonment. One of the women was a registered midwife.

INDUSTRIAL INSURANCE COMPANIES.

MIDLANDS writes: I saw a poor patient about a year ago, diagnosed chronic Bright's disease, with hypertrophied heart and enlarged liver. I told the patient the serious condition he was in, and warned wife and children that he would not live very long. Since then he has amused himself by doing a little light work at intervals. A short time ago he became very ill, and after a week or so died of uræmia. About eight or nine months ago the patient got insured in two of the companies which will accept candidates without medical insurance. During the past week I have been pestered by the superintendents, assistant superintendents, agents, etc., of

these companies, who wish to find out various details. I have refused to give any information, but stated that I would give any information they might wish providing the son and wife consented and that I charged a fee. Have I done correctly? I should be glad to know what is the usual custom in these difficulties, which must be fairly common with all general practitioners.

* * This case illustrates the manner in which some industrial insurance companies carry on their business, a subject upon which the county court judge at Tunstall expressed himself very decidedly, as reported in the *JOURNAL* of January 16th, p. 190. We think our correspondent was right to refuse to answer any questions put to him by the company without the consent of the deceased person's family, and further that he is entitled to be paid by the company for any information given to it.

FOUR-LAW MEDICAL OFFICER AND THE COMMISSION OF THE PEACE.

DR. JNO. MILSON REODES, J.P. (Ivy Lodge, Didsbury), writes: I quite agree with your answer to "Rusticus" in the *JOURNAL* of January 16th, p. 190, and should be pleased to furnish him if he likes with the names of and county for which a clerk to the guardians was two years ago appointed one of the Justices of the Peace.

COMPENSATION FOR PERMANENT DISABILITY.

M.D. writes: I am attending a schoolmistress suffering from neuritis and muscular atrophy of the right arm with ankylosis of the right shoulder, secondary to an accident some twelve months ago from falling in the playground during school hours. She did not give up work until a fortnight ago, when she sent in her resignation. She will be permanently incapacitated, and I wish to know if she can claim compensation from the local education authority. At present this authority denies liability, on the ground that the patient did not have to give up work for so long; but I cannot think this is a valid objection.

* * The chief difficulty in the way of a successful claim would be the absence of notice. Proceedings for the recovery of compensation shall not be maintainable unless notice has been given as soon as practicable after the happening of the accident. Absence of notice is not, however, a bar to a successful claim if it can be shown that the employer is not thereby prejudiced, or if there is reasonable cause for not giving such notice. The question whether the employer is prejudiced or whether there is reasonable cause for the lack of notice is for the court to decide. Our correspondent should recommend his patient to see a solicitor.

NOTICE OF TERMINATION OF APPOINTMENT.

PECKHAM wishes to know how far he is liable legally, having accepted a post under a public authority on the agreement to give three months' notice on leaving, if he insists on leaving after two months' notice, and offering to put in a locum tenens for the third month.

* * Our correspondent is legally bound to give the three months' notice. In default, he might be sued for any extra expense caused to the authority by the legal notice not having been given. His proper course is to approach the authority in question, and point out the necessity of his leaving, and offer to furnish a suitable substitute. Under such circumstances his offer would most probably be accepted.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

INTIMATION OF CHANGE OF ADDRESS.

G. G. complains, as have so many before, that he has received a card notifying the change of address of a West End physician who is entirely unknown to him and asks whether it is usual.

* * We have often pointed out the objection there is to sending out such notices broadcast as it is certain to be regarded as an advertisement although it is quite possible that there was no such intention.

DUTIES OF CERTIFYING FACTORY SURGEONS.

PIRATE.—In reply to our correspondent's further inquiry we can only say that it is clear that B. has no right to attend the injured person by virtue of his office of certifying surgeon, and equally clear that he should not abuse such office by touting for work; but it is impossible to judge B.'s conduct without knowing by whose authority and under what circumstances the treatment was undertaken.

A DISCLAIMER.

DR. R. J. COLLIE (London, W.) writes: At the request of the Stratford Division of the British Medical Association, some few weeks ago I read a paper entitled *Medical Evidence and the Laws Relating to Compensation for Personal Injury*. A short time afterwards the editor of the *Medical Magazine* wrote asking permission to publish the paper, and I agreed. In the article I took occasion to deprecate the increasing prostitution of medical evidence, which, as you are aware, is confined to an infinitesimally small proportion of the profession. I have been greatly annoyed to see in the daily press certain isolated quotations from my article, which, without the context, are calculated to give a wholly unfair view of the position. The object of this letter is to state that I have taken no part in the publicity given to the article, nor was it done with my sanction, and that, while I am anxious that those who lay themselves open to the charge of unfair dealing should be exposed, the lay press is under no circumstances the medium that I should have voluntarily chosen for this purpose. I have communicated with the office of the *Medical Magazine*, and am assured that it has in no way been in communication with the lay press.

THE ETIQUETTE OF CALLING BY A NEWCOMER.

LANCASHIRE asks whether it was a breach of medical etiquette for a newcomer to be five or six weeks before calling upon the other resident doctor? It is suggested that he may have had much to do in the work of settling himself in a new house in a new place.

*. There is no limit to the time within which such a call should be made. All that can be said is the sooner the better, as until this obligation of medical courtesy has been fulfilled there may be a doubt as to whether the newcomer wishes to be on friendly terms.

DEATHS FOLLOWING ACCIDENT.

P. is medical officer to a workhouse. An old woman who was an inmate fell in the night and broke her leg, and died three days afterwards of shock. P. reported the case to the coroner, who held an inquest. It has been suggested that P.'s action was unnecessary and that he might have given a certificate in the ordinary way. Would P. have been justified in doing so?

*. If P. had given a certificate of death it would have been referred to the coroner, who would have held the inquest, as the death arose from injury. In such cases the certificate of death should be withheld and the coroner communicated with.

POST-MORTEM EXAMINATIONS FOR CORONERS IN IRELAND.

R. C. P.—The coroners' law is the same in Ireland as in England. In England the London County Council and some other authorities pay fees for evidence given in coroners' courts by resident medical officers of workhouses. At Bradford the corporation has authorized the payment of fees in the case of persons dying in the workhouse outside its infirmary or imbecile wards. The subject is now engaging the attention of the Medico-Political Committee of the British Medical Association, and we may call our correspondent's attention to the letter of Dr. George Walker published in the *JOURNAL* of December 5th, 1908, p. 1721. So far as we are aware no medical officer of a workhouse or county infirmary in Ireland has obtained a fee for making a post-mortem examination or giving evidence regarding the death of any person dying in either institution. Under these circumstances it would not be wise in our opinion for a medical coroner in Ireland to pay a fee to a county infirmary surgeon, as his account would probably be objected to by the county council auditor and the fee paid disallowed.

SUPERSESSON.

B. is called to a child suffering from acute illness. After attending for some time he discovers that A., who is ill, has been the regular attendant of the family. When A. had recovered, B. asked the parents if they would wish the case to be handed over to A., but they requested B. to continue in attendance. B. said he did not wish to attend unless the parents were quite certain in their own minds, and in the evening he received a polite note saying that as A. had been their medical attendant for five years it would be best for him to take charge of the child. B. then withdrew. A. now holds that B.'s conduct was unethical, as he was prepared to continue in attendance if the parents had wished him to do so. B., on the other hand, considers that he has done even more than could be ethically required of him. We are asked to say who is right.

*. Assuming the above statement of facts to be correct we think that by offering to withdraw as soon as A. had recovered, B. showed that he had no wish to take advantage of A.'s temporary inability to attend to his practice.

THE MEDICAL PROFESSION AND THE SALE OF WINES AND SPIRITS.

R. B. M.—We can sympathize with the feelings of our correspondent in receiving the typewritten letter he encloses from

a firm of local wine merchants requesting his recommendation of their goods, but we are glad to see that there is no suggestion of the offer of any corrupt inducement which too often accompanied such communications before the passing of the Prevention of Corruption Act.

Obituary.

JOHN DEWAR, M.B., C.M., J.P.,

PORTREE, SKYE.

We regret to have to announce the death of Dr. Dewar of Portree, which occurred on January 13th. Up to within a fortnight of his death Dr. Dewar was able to discharge his duties, but symptoms of what appeared to be enteric fever then set in. Subsequently a positive diagnosis of this disease was departed from, and symptoms of cerebral disease developed which ended fatally.

John Dewar was born in Easdale, one of the islands of the west of Inverness-shire, forty-seven years ago. He graduated at Glasgow University in 1887, taking the degrees of M.B. and C.M. After practising a short time at Dunvegan he settled in Portree about nineteen years ago. He had an extensive practice in the island, and held many public appointments. He was Medical Officer under the Parish Councils of Portree and South Skizort, Public Health Officer under the Skye District of the County Council, and was Medical Superintendent of the Martin Memorial Hospital, Uig. He identified himself with all matters likely to promote the welfare of the district. He was a member of the School Board for many years, was a Justice of the Peace for the County, and last year was appointed an honorary Sheriff-Substitute for the County, a unique honour for a medical man.

In the course of his professional career, Dr. Dewar had to deal with several serious outbreaks of typhus fever, notably one at Sconser, for the prompt and effective manner in which he stamped out that disease in the district he received the special thanks of the then Secretary for Scotland, Lord Balfour of Burleigh.

REGINALD R. WHISHAW, M.B., B.C. (ANTARCTIC).

F.R.C.S. (ENG.),
QUEENSLAND, AUSTRALIA.

LETTERS have arrived announcing the death of Dr. Reginald Robert Whishaw, formerly of Croydon, and more recently of Queensland, and the news will be heard with deep regret by his old friends in this country. Dr. Whishaw, on the completion of his general education, went to Cambridge, and after graduating B.A. turned to medicine, which he studied partly at Cambridge and partly at St. Thomas's Hospital. In 1885 he became M.R.C.S., L.R.C.P.; he graduated as M.B. in the following year, proceeding in 1888 to the Bachelorship in Surgery and the Fellowship of the Royal College of Surgeons. Meantime he filled the post of Demonstrator of Anatomy to the Bristol School of Medicine, having previously held a corresponding but junior appointment at Cambridge. He also held office as a resident at the Brompton Consumption Hospital and the Hospital for Children at Liverpool. Finally he settled down in practice at Croydon, where he was a member of the surgical staff of Croydon Hospital and carried on an extensive practice. After some years' successful work in this neighbourhood, however, the condition of his health became somewhat disquieting, and being advised to go abroad he chose Australia. In that country his constitution regained full strength, and he determined to remain there altogether. A year or two ago he became Assistant Medical Superintendent of the Hospital for the Insane at Willowburn, in Queensland, and it was to his connexion with this institution, and not to a recurrence of his original ill-health, that his death was due. During the performance of his duties a sudden attack was made upon him by a homicidal patient; the result was a fracture of the base of the skull, and death followed rapidly on December 10th, 1908. He had been sufficiently long in Australia for his excellent personal and professional qualities to have become widely known, and his untimely death at the age of 46 is a cause of general regret. Dr. Whishaw was twice married, and leaves a widow and four children.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL CHANGE OF ADDRESS.

THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL have been removed to 429, Strand.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, London, W.C.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Arctophila, London*. The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Arctophila, London*.

TELEPHONE (National).—
EDITOR, GENERAL SECRETARY AND MANAGER,
2631, Gerrard. 2630, Gerrard.
MEDICAL SECRETARY, 2634, Gerrard.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL NOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

1. We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

C. D. desires advice as to the choice of a phonendoscope.

ANTIGUA desires to hear of a home where a woman, aged 46, suffering from paralysis agitans, would be taken; 10s. a week would be paid for her maintenance, and she is a very suitable case for charity.

B. B. W. desires to know the names and addresses of makers (not dealers) of the rubber portion of the ordinary nitrous oxide facepiece.

ANSWERS

ENQUIRER.—Permission to practise in the Principality of Monaco can, we believe, be obtained without serious difficulty by those holding British qualifications deemed equivalent to the French Diploma of Medicine. As such are at present regarded, the degree of Doctor of Medicine "of the University of the United Kingdom of Great Britain," and the Diplomas of Fellowship of the various Royal Colleges and of the Faculty of Physicians and Surgeons of Glasgow. Applicants have to undertake to practise in the Principality during the whole of the summer and autumn months, during which the place is hot and very empty, but fulfilment of this obligation is not always exacted. There are already five or six medical men holding British qualifications resident in the place, and last year among the British medical men, the vacancy thus created has, it is understood, been filled. Practically the only scope for practice is among the floating population of winter visitors.

DEFECTIVE CHILDREN.

IN reply to inquiries from two correspondents we would recommend in the case of an imbecile girl, aged 14, that application should be made to the Superintendent of the Magdalen Hospital for Imbeciles, Conde Down, Bath. In the case of a boy of the same age, the Royal Albert Asylum, Lancaster (Secretary, Mr. S. Keir), would seem to be a most convenient place. Failing that, application might be made to Mr. J. J. C. Turner, Secretary and Superintendent, Eastern Counties Asylum, Colchester, where the boy would probably be received on moderate payment.

In reply to another correspondent, who asks where a deaf and dumb boy could be taught to speak, we should recommend

application to Miss Hewitt, School for Oral Teaching of Deaf, Eaton Rise, Ealing, London, W., who would send particulars as to payment required by the society, etc.

FOLLICULAR STOMATITIS.

M. W. writes: In reply to Dr. R. M. Fraser's inquiry in the JOURNAL of January 9th, I beg to state that in the case referred to by me, vulcanite or india-rubber, either as dental plates or pessaries, have never been in use. The teeth are good, there is no complaint of indigestion, and the constitution is sound: the cause, therefore, must be looked for in some other direction.

LETTERS, NOTES, ETC.

ARSACETIN.

MESSRS. MEISTER, LUTETS, and BRUNING, Limited, have drawn our attention to the fact that in the note on their book on *Methods for Testing* published January 16th, page 195, the two last sentences were so placed as to confuse their meaning. These should have read: "The first item described is arsacetin, a drug favourably mentioned by Professor Neisser in his address on syphilis at the Annual Meeting of the British Medical Association at Sheffield. Chemically it is shown to be sodium p. acetyl-amino phenylarsine." They add that they will have much pleasure in supplying a copy of the book free of charge to any reader interested in its subject.

THE USE AND ABUSE OF THE CURETTE.

DR. ALEXANDER DUKE (London, W.) writes under date December 20th, 1908: The remarks made in the JOURNAL of December 19th, p. 1342, by Dr. Donald (Manchester) are much to the point. "We are all seeking after truth," and if any of us can "go one better" (even as regards our own results in restoration of health to suffering women) why should we not endeavour to do so? Following hard and fast lines never has led to much advance. We must leave the beaten track sometimes. Dr. Donald says, "The majority of the patients whose cases I have recorded sought advice on account of the intense pain at the onset of menstruation. The medical man who can diagnose the cause and give the most *lasting relief* surely should be entitled to the most credit." That the curette has been abused no man of any experience will deny, and Sir James Barr in his interesting paper on mitral stenosis very properly alludes to this abuse as practised on a patient suffering from "cardiac disease." I venture to say that a great number of cases treated by the usual routine of dilating and curetting would be much more benefited by uterine drainage (not by gauze, which only helps to dam up the secretions which as a rule are too viscid to permeate or escape through the gauze), but a proper-sized flexible tube (my intrauterine stem of spiral wire open from end to end and I have used for years past with good results, and if not effecting a cure, the curetting then, quite time enough to resort to. The uterus described by Bossi (small shaped) I imagine is produced by the continued spasmodic efforts of the body of uterus to force the secretions (normal or abnormal) through the obstructed cervix. I may be quite wrong, but reasoning from the cardiac hypertrophy so well known, I do not think my theory is so far out, more especially as by continued drainage and keeping cervical canal patent I have been able to find the uterus changing its shape and feel normal at least. It is quite obvious that a healthy uterus cannot become acutely flexed. Why not treat the flabby condition, and endeavour to restore muscular tone? Dilate if necessary. Drain, and by the rest afforded by the draining preventing spasm, and by allowing free exit of all secretions reserve the operation of curetting, etc., as a *demer ressort*.

"SUCH A SAVING."

(Overheard): Young mother (to a friend): "I went into hospital for my second. I was confined and churchered and baby was christened, vaccinated, and circumcised, all in a fortnight! Such a saving!"

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

An Address

ON THE

PHYSIOLOGY AND PATHOLOGY OF
WORK IN COMPRESSED AIR.DELIVERED TO THE NEWCASTLE-UPON-TYNE CLINICAL
SOCIETY.

BY

SIR THOMAS OLIVER, M.D., LL.D., D.Sc., F.R.C.P.,

PHYSICIAN TO THE ROYAL VICTORIA INFIRMARY, NEWCASTLE.

My experience of compressed-air illness has been entirely gained during structural alterations on the Redhugh Bridge, the building of King Edward VII Bridge, and the tunnelling operations which are at present proceeding under the River Tyne between Wallsend and Hebburn. It took four years to build King Edward VII Bridge. In order to support the enormous weight which the bridge is obliged to carry, the piers had to be large, and as these had to rest upon a secure and solid foundation it was necessary to excavate the soil in the bed of the river to the depth of 70 ft. below high-water level mark. In their excavations the workmen passed through strata of silt, gravel, clay, soft coal, etc. The caissons successively in use were large, as may be inferred from the fact that thirty-five men worked in each caisson at one time. The working chambers measured 113 ft. in length, 35 ft. in width, and 9 ft. 6 in. in height, and had a cubic capacity of 23,142 ft. The total number of men employed in caisson work was 150, and the total number of days spent in this kind of work was 267; 48 men worked under air pressure through the three caissons from start to finish without being affected; 29 men worked through two caissons, or 180 days, and remained in good health; and 49 men through one caisson, or 90 days, without symptoms. No man over 40 years of age was allowed to work in compressed air; 4 per cent. of the men applying for work were rejected at the primary medical examination, while 31 men, partly through fear and partly through muscular pains, gave up their employment within a fortnight. The largest number of cases of compressed-air illness occurred when the pressure employed varied between 24 and 32 lb., and principally during the months of September and October. No case occurred under 20 lb. pressure, but there was one case of "bends" at 22 lb. pressure. The largest number of men employed in building the bridge in any day was 750.

A caisson when in position is in its simplest form an iron cylinder, somewhat bell-shaped at its lower extremity, and closed at its upper by a sliding door which forms the ceiling of the chamber wherein the men work, and which separates it from the material lock or the chamber through which the buckets filled with soil escape through the sliding doors that constitute the roof of the caisson. Leading out of the upper part of the caisson at its side, just underneath the ceiling referred to, is an iron door which, when open, allows of entrance into a smaller chamber called the "air lock," and through which the men gain entrance into and emerge from the working chamber proper. If a caisson is large it may have two or three shafts or cylinders leading into it. It is not necessary to have the material lock on the same cylinder as the air lock. In Amsterdam I found the soil was removed through a material lock on a different shaft to that by which the men entered and left the working chamber. This is known as the Zschokké lock, and is worked automatically. On the Tyne all the caissons had three shafts, each with its own air and material locks. When placed in position on the bed of a river, a caisson, being a pneumatic chamber, would swim were it not for the large amount of concrete superimposed upon it. Air under pressure is pumped into the chamber to keep the water out and to allow the men to work therein. The surplus air escapes by the cutting edge of the bell-shaped expansion, and by this means ventilation is secured. In making tunnels the caissons are constructed in rather a different manner, since the line of procedure is not vertical but horizontal. Caissons have to be strongly built so as to withstand enormous air pressures. When the necessary depth has been attained

and further sinking is unnecessary, the caissons are filled internally with concrete, and they thus become the foundations upon which the piers of a bridge are built and the superstructure reared.

COMPRESSION AND DECOMPRESSION.

When men are passing into compressed air for the first time they often experience unpleasant sensations. Many become nervous, and they are conscious of their heart beating a little more quickly. Others, again, experience a considerable amount of discomfort which gradually increases to severe pain in the ears owing to the membrum tympani being forcibly driven inwards. This occurs when there is a deficiency of air in the middle ear either as the result of the Eustachian tube not being patent enough or as a consequence of naso-pharyngeal catarrh. The tympanum has been known to rupture, and as the blood vessels in the middle ear are dilated hæmorrhage has occurred, leaving a temporary or permanent injury behind in the organ of hearing. Workmen who are in the habit of passing through the air locks can, by a peculiar method of swallowing, carry air up the Eustachian tube, and by thus equalizing the pressure on either side of the tympanum escape the pain and unpleasant sensations which are experienced by the men who are new to the work. In my experiments upon animals, although most of them seemed to bear rapid compression quite well and to be uninfluenced by it, others would fall upon their side and become convulsed—symptoms which disappeared as the pressure went on rising, and from which they entirely recovered by remaining in the compressed air. Since it is the men who are about to work in compressed air for the first time who are most likely to suffer pain and discomfort in the ears, and there will always be some men who will never be able to bear compressed air well, there ought to be some means inside the air lock whereby those inside can communicate with the man in charge of the pipes outside, so that the pressure may be reduced on the supervision of symptoms, since these may become almost unbearable and if not relieved might lead to serious harm, although in my own experiments animals that were convulsed improved with a rising pressure. It is well to raise the pressure slowly, for by this means the men become accustomed to the changing conditions and they are less likely to suffer in the manner indicated.

When the pressure inside the air lock has come to equal that inside the cylinder the inner door is pushed open, and the men pass into the caisson and descend the ladder to the bottom of the shaft. Here they work for a few hours. Since it is necessary that the air inside the caisson shall be kept as pure as possible, an excess of air must be pumped in, and care must be taken that it is not fouled by the products of combustion of naked lights. The electric light is preferable to lamps and candles. The surplus of air escapes by the free edges of the caisson. Free ventilation keeps the air in the interior of the caisson cool. As there is a danger of the air coming from the compressor engine becoming too hot, the cylinder should be covered by a water jacket in which cold water is kept circulating. It is most unusual for men to become ill when working inside a caisson; most fortunately, too, very few accidents occur inside.

After three or four hours' work the men leave the caisson, and in passing out through the air lock they undergo what is called "decompression." It is occasionally during, but mostly after, decompression that symptoms of compressed-air illness show themselves. Having entered the air lock and closed behind them the door leading into the caisson, the pressure in the air lock is for a brief period the same as that under which they have been working; but, by opening a valve on the outside of the air lock, the man in charge allows air to escape into the external atmosphere, and, when the pressure inside the air lock has come to equal that of the external air, the door can readily be opened, and the men emerge enveloped in a thick cloud of white mist.

LENGTH OF SHIFT.

The length of time spent by the men in the working chamber should be inversely proportional to the pressure. As excavation of the bed of a river proceeds and the caisson sinks, the pressure inside has to be correspondingly raised, and the duration of the working period neces-

sarily shortened. At King Edward VII Bridge there were two shifts—one for the day and another for the night. When the pressure was 25 lb. the men worked ten and a quarter hours, namely:

6 a.m. to 8.30 a.m.	...	...	2½ hours
9.15 a.m. to 1 p.m.	...	...	3¾ "
2 p.m. to 6 p.m.	...	...	4 "
			10½ "

But as the caisson sank and the pressure rose to 35 lb. the number of hours worked a day was shortened. Four hours was the longest time spent in a caisson, and the greatest depth attained was 70 ft. below high-water level mark. On tidal rivers the pressure keeps rising and falling with the tide. In some of the American tunnels the men were allowed to work only one hour at a stretch when the pressure was 50 lb. In Amsterdam I found the men working at a depth of 66 ft. below the surface, and under a pressure of 30 lb. These men worked four hours at a stretch, came out for eight hours, and returned to work for another four hours, making an eight-hour day. Although in Holland the intervals between the shifts were unusually long compared with those on the river Tyne, there were just as many cases of the minor forms of compressed-air illness among the Dutchmen as among the men on the Tyne.

Although one of my patients became ill in the air lock when undergoing decompression, it is generally after the men come out of the air lock that symptoms develop. As a rule the men come out feeling quite well. It may be before they leave the works, when they are proceeding homewards, have reached home and gone to bed, or are partaking of a meal, that the men all at once complain of severe pains in their limbs or abdomen. Some are sick and vomit, others become dizzy and in trying to walk fall owing to sudden loss of power in their lower extremities; others, again, have a bleeding from the nose or mouth, or are the subjects of a degree of nervousness often amounting to terror. In the worst forms there is unconsciousness.

Occasionally the symptoms resemble hysteria, or there is intense excitement, which goes on to frenzy. The most common symptoms are muscular pains, known as "bends," or there is loss of power in the lower extremities, attended by retention of urine, and requiring the use of the catheter. Fortunately in most instances the paralysis of the limbs passes away in a few days, but occasionally it lasts for months, with all the physical signs of a limited myelitis. In one of my own cases the paralysis, which was accompanied by loss of sensation, became permanent, bedsores formed, and the patient succumbed to septicaemia and tuberculosis.

CAUSE OF THE SYMPTOMS.

Men inside a caisson are working under abnormal conditions. They are under a higher atmospheric pressure than when at the surface. The work, too, is hard, since it is all manual labour, hence the necessity of pumping into the caisson a superabundance of air drawn from an uncontaminated source. Although the air supplied may be pure, it may become fouled inside the caisson by gases evolved from the strata during the process of excavation. It was when passing through a thin stratum of soft, mushy coal on the river Tyne that unpleasant odours were complained of by the men, and several of them became ill. At this particular time the men were not working under high atmospheric pressure, so that probably the air had become impure by H₂S or CO, and this circumstance contributed to their becoming ill. High pressure, while an important factor in caisson disease, is not the only factor. At Greenwich, for example, out of 9 cases of compressed-air illness, 3 occurred in men who were working in a pressure of only 12 lb., and at the Blackwall Tunnel men also became ill under remarkably low pressures. The worst and only fatal case which I had was that of a man who had been in a pressure of 25 lb. for four and a half hours, and who was decompressed in three minutes. The length of exposure to the pressure and the purity of the air breathed have to be considered as well as the amount of pressure. Although opinions differ, yet the influence of the purity of the air breathed cannot be altogether ignored when viewed in the light of Snell's experience at the Blackwall Tunnel. When the amount of air supplied was 4,000 cub. ft. per man

per hour, there were 28 cases of compressed-air illness in 100 days, but when 12,000 cub. ft. of air were supplied the cases fell to zero. Copperthwaite maintains that the number of cases of compressed-air illness is proportional to the amount of carbonic acid in the air breathed, and that when the CO₂ reaches 1 per cent. illness may be expected. Although the greater the amount of air supplied per man the less likely it is to contain impurities, yet at the Brooklyn Bridge, New York, while 1,400 cub. ft. were supplied per man per hour, the air in the caissons frequently contained 0.3 per cent. of CO₂. On the river Tyne 1,320 cub. ft. of air were supplied, and the average amount of CO₂ present was 0.2 per cent.

The larger the number of men working in a caisson the greater should be the amount of air introduced in a given time. Now and again it happens that a caisson suddenly sinks on to a clay bed and the surplus air can no longer escape as heretofore by the free edge of the caisson. As air under compression is still being pumped into the caisson, this chamber would probably rupture were it not for the fact that both at the upper part of the shaft and on the compressor engine itself there are safety valves which act automatically when the pressure inside the caisson reaches a little higher than the maximum pressure the men have been working at on any particular day. In tunnelling operations, where the line of procedure is not vertical but horizontal, when gravel is reached there is often a very free escape of air, so that in order to keep up the pressure enormous quantities of air have to be pumped in—say 4,000 to 8,000 cub. ft. per hour—a large amount compared with the 1,320 on the river Tyne, but yet small when compared with 15,000 cub. ft. occasionally required at the Baker Street and Waterloo Tunnel. At the Baker Street Tunnel sometimes the amounts of air sent in were 1,300 and 2,000 cub. ft., and it is interesting to know that when the freest ventilation prevailed there were only eight cases of compressed-air illness in one month, and when the worst conditions prevailed there were thirteen cases in twelve days. In passing through the clay soil the amount of CO₂ in the London tunnels frequently rose to 0.1 per cent., whereas with a gravel face the percentage varied between 0.05 and 0.07. In making the Hudson Tunnel, New York, the CO₂ occasionally rose to 2 per cent., or 20 parts per 1,000 of air, and the men died at the rate of 25 per cent. per annum. Although at first sight it would appear as if at the Hudson Tunnel the large percentage of illness was due to the amount of CO₂ present in the air, yet it cannot be said that CO₂ is the cause of compressed-air illness, since in London it was found that it was not when the men were working at a clay face and the percentage of CO₂ highest that the amount of sickness was always greatest; nor on the river Tyne did there appear to be any close relation between the amount of sickness and CO₂ in the air.

In all industrial occupations experience has shown that the freer the air is from CO₂ the larger is the amount of work done by the men and the less is their sense of fatigue. Opinions differ as to the harmful effects of this gas upon workmen. At the Brooklyn Bridge the men suffered when the CO₂ in the air reached 0.3 per cent., and Copperthwaite tells us that when the CO₂ rises to 1 per cent. illness may be expected. Owing to the comparatively small size of my compressed-air chamber I have not had the opportunity of trying experiments upon animals larger than dogs. I have, however, been struck by the results obtained when mice, rats, and dogs have been exposed to varying percentages of carbonic acid and carbon monoxide. According to Copperthwaite, 1 per cent. of CO₂ is regarded as dangerous, and yet I have exposed a dog for two hours under a pressure of 25 lb. in an atmosphere containing 3.4 per cent. of CO₂ and 0.6 per cent. of CO and decompressed the animal in thirty-five seconds without the slightest harm resulting; also to 3 per cent. of CO₂ for two hours and decompressed in twenty-five seconds, and yet the animal suffered no inconvenience. The same dog was in compressed air containing 2.26 per cent. of CO₂ for seven hours and under 50 lb. pressure, and developed no symptoms after decompression, while a rat, after exposure to 0.62 per cent. of CO₂ atmosphere for seven hours under 50 lb. pressure and gradually decompressed, was found dead on the following day.

Carbon monoxide is a deadly poison, and yet by degrees animals seem to become acclimatized to it. I got a dog to

become capable of breathing under 50 lb. pressure an atmosphere containing 0.3, 0.4, 0.57, 0.8, 0.95, and 1.6 per centages of CO for from eight hours with the smaller quantities to two hours with the larger percentages, and to be decompressed in the last instance in three-quarters of a minute without suffering. The question of the acclimatization of man and animals to CO is very important from the point of view of the work of the coal miner and rescue work after colliery explosions.

Sulphuretted hydrogen is also a very poisonous gas, but I found that traces could be borne for four hours—for example, 0.005 per cent. for one hour, 0.019, and 0.02 also for one hour without any mishap, but that 0.2 per cent. was fatal.*

Without oxygen mammalian life cannot be maintained, and yet under certain circumstances oxygen is a poison. The exposure of animals to high atmospheric pressures of oxygen is dangerous. In exposing mice to 10 atmospheres of oxygen the breathing after a short time becomes rapid, the animals become comatose, and they die in convulsions before decompression is effected. Now, since animals exposed to the same pressure of ordinary atmospheric air did not exhibit in the caisson any symptoms at all, the presumption naturally is that the oxygen acted as a poison. Exposures of animals to high pressures of ordinary atmospheric air and to oxygen are therefore not the same. Oxygen is a protoplasmic poison; it lessens respiratory exchange and induces convulsions. Professor Lorrain Smith of Manchester University found that "exposure of animals to a tension of 170 to 180 per cent. atmosphere of oxygen causes in a short time diminution in the power of the lungs to absorb oxygen actively, and that with a continuance of the exposure the arterial oxygen falls till it reaches the level for which mere diffusion of oxygen from the alveolar air might account." This effect is largely due to the fact that oxygen has an irritating effect upon the lungs, and produces first congestion of these organs, and subsequently haemorrhagic consolidation of them. The lungs become hepatized as in pneumonia. Finding that very high pressures of oxygen atmospheres caused death by inducing pneumonia, Lorrain Smith is of the opinion that inflammation of the lungs is a cause of caisson disease; but, as we have already seen, this can scarcely be the cause, for the symptoms of compressed-air illness are not on the side of the respiratory organs, but in the neuro-muscular system.

PHYSIOLOGY OF CAISSON WORK.

When a gas and a liquid are brought into contact with each other the liquid takes up the gas in solution, and this absorption will continue until the liquid saturated with gas ceases to take up more. No chemical compound is necessarily formed as a consequence of this union. The amount of gas in solution depends upon the solubility of the gas, the temperature of the liquid, and the amount of pressure. The amount absorbed varies directly with the pressure in accordance with Dalton's law. When men are working in compressed air their blood will take up a larger amount of nitrogen and of oxygen in simple solution than at atmospheric pressure. Since the oxygen of the inspired air mostly enters into loose chemical combination with the haemoglobin of the blood corpuscles there will be only a small amount of oxygen taken up by the liquid part of the blood, and what is taken up will probably quickly disappear in the tissues. The amount of carbonic acid normally present in the alveolar air of the lungs at ordinary pressure is about 5.6 per cent. Dr. John Haldane, whose work on this subject is of the greatest value, maintains that in a caisson the "compressed air makes no difference as regards the solution of CO₂ in the blood, since, unless the air breathed is foul, the presence of CO₂ in the lung air is kept constant by the breathing, whatever the total atmospheric pressure may be"—that is to say, that any slight excess of CO₂ will stimulate the respiratory centre, quicken and deepen the breathing, and thus get rid of the excess of CO₂. Experience, on the other hand, shows us that asphyxia by CO₂ does occur, either by accumulation of CO₂ in the blood or through a deficiency of oxygen. It is different with nitrogen, which forms 79 per cent. of ordinary atmospheric air. This gas does not enter into chemical combination with the blood.

In compressed air larger quantities are taken up by the liquor sanguinis; and, as the nitrogen-saturated blood circulates through the body, the tissues in time also become saturated with the gas. Each time the right ventricle contracts, the blood which is sent to the lungs becomes saturated to the same pressure of nitrogen as that of the nitrogen in the alveolar air. The arterial blood will part with this nitrogen to the tissues, so that the venous blood returning to the right side of the heart will contain less nitrogen, and be again ready to take up more gas in passing through the lungs, but the amount of nitrogen taken up will gradually get less and less with each systole as saturation takes place and the pressure of nitrogen in the blood and tissues becomes equal to that in the alveolar air.

Haldane has given a vivid description of the saturation of the blood and tissues by nitrogen. The gas in solution in the blood exerts the same pressure as that exerted by the gas in contact with the blood; and when the external pressure falls, as during and after the decompression of a workman in the air lock, the gas in solution again assumes the gaseous state, and appears in the form of bubbles in the blood and tissues. The parts of the body which have a rapid circulation become more rapidly saturated than those with a feeble circulation, and as they become more quickly saturated they will also the more quickly desaturate. It has been known for long that stout men do not bear work in compressed air well. The explanation is apparent. Mr. Ramsbottom—my former colleague in the physiological laboratory—and myself found that fat absorbed under pressure a large quantity of air. The fat of the human body is capable of obtaining a much larger quantity of nitrogen than blood, hence the role attributed to obesity in the compressed-air illness of caissoniers. Even admitting this, there is probably involved in the circumstance more than the question of fat.

At King Edward VII Bridge the men worked in pressures up to 35 lb., but in some places work has been done in 67 lb. pressure, equivalent to 4.45 atmospheres. Experimentally higher pressures have been borne. Leonard Hill exposed himself to a pressure of 75 lb., and Greenwood to 92 lb. Greenwood was in the compressed-air chamber for fifty-four minutes, and although two hours seventeen minutes were spent in decompression he experienced severe pains twenty minutes after leaving the compressed-air chamber. Paul Bert exposed dogs to 10 atmospheres of ordinary air for a lengthened period and decompressed them slowly without any bad effects.

In the discussion which followed the reading of my paper on the Use of Caissons in Bridge Building, at the Society of Arts, May 11th, 1906, Mr. E. W. Moir, of Messrs. Pearson and Son, contractors for the Admiralty Pier at Dover, the Hudson Tunnel, New York, and other large engineering undertakings, gave interesting data in regard to the length of time animals could remain under high pressure without any bad effects. At the old Hudson Tunnel the mules remained underground under pressure for twelve months. All that time they appeared to be quite comfortable; they were frisky, and they worked eight-hour shifts. After being in compressed air for over a year, the contractors, wishing to bring them to the surface, gave each of the mules a bottle of whisky and applied mustard jackets over such parts of their bodies as they thought might possibly become affected. The mules were brought out very slowly, half a day being spent in decompression. The animals were no worse for their long immersion, for when sold they realized excellent prices.

PATHOLOGY OF CAISSON DISEASE.

Two years ago Dr. Parkin, Assistant Physician Royal Victoria Infirmary, and myself carried out a series of experiments upon pithed frogs in compressed air. I gladly take this opportunity of publicly expressing to Dr. Parkin my sense of indebtedness for the generous help he then rendered me, and of the assistance I have received from his thesis on Compressed Air. We subjected frogs to extremely high pressures, and after a time suddenly decompressed some of them. The web of a frog's foot was drawn over the inside of the glass window of the compressed-air chamber, and by means of the microscope and electric light illumination we could watch the circulation of the blood in the frog's capillaries. During compression the circulation proceeded

* For assistance in the gas analyses I am indebted to my colleague in the Physiological Laboratory, Mr. Frank Howson, M.A.

quite naturally, but after sudden decompression, while the circulation seemed to go on apparently unchanged, by degrees the rate of the blood flow diminished, and gradually ceased, preceded by a slight to-and-fro movement. All at once a bubble or two of air would appear in the capillaries, and these running together formed a large embolus inside the vessel. Occasionally air bubbles appeared in the tissues external to the blood vessels, and were due sometimes to rupture of the capillaries or to desaturation of the tissues. It is the presence of gaseous emboli in blood vessels, the accompanying stagnation of the circulation, and the occasional rupture of small blood vessels with hæmorrhage which are the pathological lesions present in most cases of compressed-air illness. It is the bubbles of nitrogen gas in the small blood vessels of the brain and medulla and the presence of air spaces in the cerebral tissue which explain the sudden death of divers and caisson workers after decompression: also the presence of similar lesions in the lower part of the spinal cord which explains the paralysis of the lower limbs, and when present in the muscles and around the joints, the severe pains known as "bends." In opening the bodies of frogs, mice, and rats which had died shortly after decompression, bubbles of air can be seen escaping from the heart when that organ is cut into, also from the liver and the subcutaneous tissues. The bubbling of gas in the blood and tissues of the body after sudden decompression is aptly compared with the effervescence which occurs in a bottle of soda water on removal of the cork, and, in a word, is the pathology of caisson disease.

Apart from the dangers incidental to rapid decompression, caisson workers are exposed to other risks—for example, (a) accidents occurring inside the caisson during the ordinary work therein: fortunately such accidents are extremely rare; (b) the breathing of an atmosphere polluted by CO_2 , CO or H_2S ; (c) sudden inrush of water into a caisson, owing to an untimely manipulation of the doors of the locks; and (d) sudden rupture of a caisson.

The first two of these risks have been already dealt with, but the possibility of a sudden inrush of water calls for a few remarks. During the building of a pier at Havre in September, 1905, one door leading into a caisson was opened at the wrong time. As a result of the sudden fall of pressure, water rushed into the caisson and drowned one of the workmen. The other men only escaped with difficulty. The possibility of an accident such as this can only be obviated by having competent and reliable men in charge of the locks.

Another danger is sudden rupture or explosion of a caisson. This occurred a few months ago at Hebburn, where, after the men had been working for nearly two hours in a pressure of 30 lb., the caisson suddenly burst. The four men inside were immediately decompressed; one man who was at the bottom of the shaft was killed by falling timber, broken iron plates and debris, but the other three, although injured about the head and limbs, in no way suffered as a consequence of the immediate decompression. The accident occurred about the breakfast hour. In conjunction with Dr. Macley, of Wallsend, I visited the scene of the explosion in the afternoon. On the following day, along with Dr. Inglis, of Hebburn, I visited the injured men in the Hebburn Infirmary, but although all were bruised, as the result of the physical injuries they received, not one of the men, either then or subsequently, was anything the worse for the instantaneous decompression. It might be argued that the length of time spent by the men that morning in the caisson was too short for a considerable amount of gas to have passed into solution in their tissues; but although the figures given are approximate, Haldane states that in one hour the various parts of the body became saturated with nitrogen to the extent of 70 per cent., and in two hours to 92 per cent. The fact remains that three men were instantaneously decompressed, and not one of them developed symptoms of compressed-air illness. It is difficult to say why no serious symptoms followed.

PREVENTION.

Believing that the cause of caisson disease is the liberation of bubbles of gas in the blood vessels and in the tissues, and that slow decompression by giving time allows the dissolved nitrogen to gradually escape through the vessels of the lungs into the alveolar air, physiologists have recommended that decompression should be slowly per-

formed; also that the time spent in the act should be directly proportional to the amount of pressure and the length of exposure to it. Compression also should not be quickly hurried over. One minute for every 5 lb. of pressure, or three minutes for each atmosphere, formed the minimum time spent in the air locks at the King Edward VII Bridge for decompression—a short time compared with the forty minutes required of the workmen in Amsterdam exposed to only 2 atmospheres of pressure. Hill and Macleod recommend when men have been exposed to 2 atmospheres, or 30 lb. pressure, thirty minutes to one hour to be spent in decompression, and for 3 to 4 atmospheres—that is, 45 to 60 lb. pressure—one to two hours for decompression. My feeling is that it would be almost impossible to get the British workman to submit to spending this length of time in decompression, and no wonder, for during decompression the temperature inside the air lock falls several degrees, and the men, perspiring and fatigued with their work, are apt to become chilled unless they have been supplied with blanket rugs. Besides, it is well known that the workmen prefer to run all sorts of risks than endure the ennui of slow decompression. Some boast of having come regularly out of the caisson through the mud lock, quickly decompressed, without experiencing the slightest inconvenience, but this circumstance must not be taken as a recommendation for the adoption of a procedure which both experience and experiment show to be extremely dangerous.

The irksomeness of slow decompression can, to some extent, be overcome by "stage" decompression on the lines indicated by Haldane. He recommends as being within the limits of safety rapid decompression from a high to a moderate pressure, and this to be followed by slow decompression for the remainder of the pressure. It is possible to decompress from 6 to 3 atmospheres, from 4 to 2 atmospheres, or from 2 to 1 suddenly, and then to decompress slowly during the remainder. "The danger of rapid decompression," Haldane says, "depends not on the absolute difference between the initial and final pressures but on the proportion between the two pressures. If this proportion is only 2 or 2.3 to 1 the decompression is safe; if, on the other hand, the proportion is 3 or 4 to 1 the decompression is dangerous." It is towards the end and not in the early stages of decompression that the danger reaches its maximum, hence the pressure may be suddenly reduced one-half provided the remainder of the decompression is slow. This method of decompression would certainly expedite the transmission of the men through the air lock and would shorten the time spent in decompression.

If there is one occupation which should be followed only by comparatively young men, and one in regard to which previous medical examination of the workman is necessary, it is work in compressed air. In medicine it frequently happens that experience is in advance of explanation. It has been known that the men who suffer least are those who are aged between 20 and 30 years of age, who are temperate and of spare build, and whose tissues are still elastic. Stout, flabby men do not bear caisson work well, the reason being, as Vernon found, that fat not only takes up six times more nitrogen than most of the other tissues and fluids of the body, but it saturates and desaturates more slowly. As already stated, it remains to be shown that slow desaturation is a disadvantage.

TREATMENT.

Since compressed-air illness is due to the presence of bubbles of air in the blood and tissues, both Mr. W. E. Moir of Messrs. Pearson and Son, and Dr. Andrew Smith of New York suggested that on the appearance of symptoms the workman should be placed in an air lock and again compressed. It has been shown experimentally that during recompression the bubbles of air disappear, and that if the second decompression be slowly effected the symptoms may not reappear. Recompression must certainly give rapid relief to the "bends" or muscular pains complained of by the men. There should be no large working in compressed air undertaken without there being close at hand a medical air lock large enough for one or two men to lie down in, suitably heated and lighted. I can bear testimony to the efficacy of recompression even in cases where minor degrees of muscular paralysis had appeared. At the Hudson Tunnel it was found that, after the introduction of

the recompression chamber, the death rate among the workmen fell from 25 to 14 per cent. per annum. To get the best results the men should be placed in the immersion chamber as early as possible after the development of symptoms. In many instances symptoms do not recur after recompression; in other instances relief may or may not be obtained. The following is an interesting experience of recompression given to me by a patient under my care in the Royal Victoria Infirmary:

On August 6th, 1908, a sinker, aged 25, went to work at 6 a.m., and remained under 30 lb. pressure until 9 a.m. After coming out of the air lock he felt pains in his back and fainted; he was carried into the medical lock and recompressed in a pressure of 20 lb. At 10 a.m. he had recovered, and preferred to go back to work in the caisson, where he remained until 12 p.m. feeling quite well and doing his work as well as the other men. He had hardly left the air lock a second time when he was seized with pains in his arms and elbows, and was placed in the recompression chamber. After being there for half an hour and feeling relieved, the pressure was lowered to 24 lb., but as the pains returned the pressure was again raised, and he remained in the chamber until 6.15 p.m., when he came out free from pain. He left the works and was proceeding homewards, when he was seized with pains in the right arm; but he went home, had tea, went out for a short walk, and afterwards went to bed. The pains by this time had become so severe that he could not sleep. He got up, and going back to the works he re-entered the medical lock at 10 p.m., where he stayed until 5 a.m. on August 7th. He slept for four hours in the medical lock, and on coming out was all right, but severe pains developing in his knee. He again entered the medical lock at 5.45 a.m. and stayed there until 8.45 a.m. in a pressure of 25 lb. Shortly after leaving the recompression chamber the pains returned, and as these were severe Dr. Macley gave him a hypodermic injection of morphine and sent him into the Newcastle Infirmary. The patient, who was a well-developed man, had previously worked under 25 lb. pressures in Dublin for six months, and in Glasgow for four months under lower pressures, without suffering. When admitted into the infirmary he was still in such pain in the knees and elbows that he had to have another injection of morphine. There could be felt distinct creaking in the skin over the left knee as in emphysema. By degrees the pains lessened and ultimately disappeared. The temperatures for the three evenings after his admission were 100°, 100.4°, and 99.80° F. The sounds of the heart, which were normal, were distant and not at all easily heard.

When recompression cannot be carried out, as, for example, when the symptoms come on long after a man has left the works, he should be put to bed, kept warm, and if in great pain a hypodermic injection of morphine may be administered. In many of these cases, even although there is no paralysis of the limbs, there is frequently a paralytic condition of the bladder attended by retention of urine, and calling for the use of the catheter. Muscular paralysis, loss of sensation, bedsores, and complications must be treated on ordinary lines.

Since the risks to life from rupture of a caisson are enormous, the greatest care should be taken to prevent such an accident. Whether the shifting of the surface of the river's bank towards the Tyne at Hebburn on account of the excessive dredging of the river so pressed upon the caisson and cracked it, or whether there had occurred a sudden lowering of pressure followed by a jerk of the caisson which broke its attachments, it is difficult to say, but engineers are agreed that caissons should be made of strong steel or of wrought iron plates, and not of cast iron, and that these chambers should be made of such strength as to bear two or three times greater pressure than is ever likely to be required of them.

THE Belgian Minister for the Colonies has ordered the establishment in the Congo territory of six new lazarettos for patients suffering from sleeping sickness. The lazarettos will be under the charge of Belgian doctors.

THE Local Government Board in England has issued to port sanitary authorities, and certain other sanitary authorities, a circular (Foreign Meat, No. 3), stating that there has been published in the *London Gazette* of January 22nd a notice containing a schedule of labels and marks declared to be admissible as official certificates in respect of foreign meat which consists of pork, or other edible parts of the pig, which has been subjected to inspection in Denmark, the Netherlands, the Dominion of Canada, and the Dominion of New Zealand. Attached to the circular are facsimiles of the marks. The fact that such a label is attached to the carcasses of pigs or any other kind of imported pork does not exempt the meat from liability to examination.

A Lecture

ON THE

USES OF THE CALCIUM SALTS IN VARIOUS MORBID CONDITIONS.

DELIVERED AT THE MEDICAL GRADUATES' COLLEGE AND
POLYCLINIC, NOVEMBER, 1908.

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In 1898 Sir Almroth Wright pointed out that conditions of deficient blood coagulability do not always manifest themselves in a tendency to actual hæmorrhages, but also manifest themselves in a tendency to increased transudation of plasma through the capillary wall—that is, in a tendency to “serous hæmorrhages.” He pointed out that this condition of serous hæmorrhage can to a large extent be controlled by increasing the coagulability of the blood by the administration of a calcium salt. Examples of such serous hæmorrhages are urticaria, chilblains, oedema of the feet and hands not due to heart disease, kidney disease, or venous obstruction, and a certain form of headache known as the “lymphatic type of headache.” Chilblains are always associated with a condition of defective blood coagulability, and the condition is also fairly frequently associated with the liability to attacks of urticaria and epistaxis.

LYMPHATIC TYPE OF HEADACHE.

This type occurs more frequently in women than in men, and generally manifests itself as a dull heavy ache in the frontal region, or occasionally as a throbbing pain in the frontal and temporal regions. In a few cases it may occur in any part of the head. It is generally experienced on waking in the morning, and usually diminishes in intensity or disappears after a few hours. It is most intractable to the ordinary methods of treatment for headache, and may persist for years unless the association of it with a lowered coagulability of the blood is recognized and suitable treatment for that condition employed. The subjects of this form of headache are usually of the lymphatic type, with a tendency to slight oedema of the face, eyelids, hands, and feet. There is generally some anaemia and a varying amount of lassitude, both physical and mental.

G. W. Ross was, I believe, the first to suggest that serous hæmorrhage might be the basis of these headaches, and he demonstrated that in 10 cases of lymphatic headache which were definitely shown to have a lowered coagulability of the blood, the administration of a calcium salt was in every case followed by the exaltation of the coagulability of the blood, and concomitantly with or closely following upon this alteration in the blood the headaches were relieved. He also showed that decalcification of the blood by the administration of potassium citrate, with the consequent diminution of the coagulability of the blood, caused a reappearance of the headaches.

During the past nine years I have treated a large number of cases of deficient blood coagulability in both private and hospital practice, with remarkably successful results in the majority of cases. I propose in this communication only to deal with those cases (121 in all) in which I am able to record the results of the treatment after the lapse of prolonged periods from the initial course of treatment. In no single case amongst those recorded in this paper has this period of observation been less than one year, and in several of them it has extended over from one to eight years. The results, therefore, show whether the improvement is a lasting one or not.

With the exception of the 5 cases of aneurysm, which were treated in hospital practice, all the cases were treated in private practice, as I found that in such cases I was better able to follow up the results of the treatment, either from the patients themselves or from their medical attendants, than in the cases of hospital patients. In several of the cases the diminished coagulability of the

blood was experimentally determined before the commencement of treatment; in others it was inferred from the symptoms and history.

METHOD OF TREATMENT.

The calcium salt that I have used in all the cases was calcium lactate, as that salt possesses many advantages over calcium chloride. Calcium lactate has scarcely any taste, and is practically devoid of irritant properties, whereas calcium chloride is an irritant to the stomach, and possesses a most unpleasant taste. The lactate is sufficiently soluble in water (1 in 15), and the organic lactic acid moiety of the salt is readily oxidized in the system, with the result that the base is placed more fully at the disposal of the organism than in the case of the mineral acid salt. In other words, calcium lactate is more readily absorbed into the blood than is calcium chloride. It is important that the lactate should be fresh as it decomposes after long keeping. The indication of its freshness is that it should form a clear solution in water, or at least that the solution should only be faintly turbid. Any definite white precipitate in its solution is an indication that the salt has undergone some change, and that therefore in that state it should not be employed.

For adults the dose given in all the cases was 15 grains of the calcium lactate dissolved in a fluid ounce of chloroform water, with the addition of a half to one minim of tincture of capsicum. This dose was always ordered to be taken three times a day, and one hour before meals. I consider that the administration of the medicine about one hour before meals is an important point, as it allows absorption of the salt to take place prior to the introduction of food into the stomach, and so the precipitation of the calcium by the phosphates and possibly other constituents of the food is prevented. The calcium lactate was in all the cases given over a period of six weeks. Constipation is a common accompaniment of the administration of the calcium salt, and must be controlled. For this purpose it is not desirable to give saline purgatives, owing to their precipitant action on calcium salts. The laxative that I have found most useful in such cases is an infusion of senna pods, which should be taken at bedtime.

In a small proportion of the cases described as cured a few slight relapses occurred, generally some months after the course of treatment, but these were in all cases speedily relieved by the readministration of the calcium lactate for a short period (generally from one to two weeks).

THE VARIOUS CONDITIONS TREATED AND THE RESULTS OF THE TREATMENT.

Headache.—These cases were all of the lymphatic type, and were associated with slight oedema of the feet and hands, and generally of the face and eyelids. The records of 45 cases are known. Of these, 37 (82 per cent.) were cured, 2 were considerably benefited, 2 were slightly benefited, and in 4 cases (9 per cent.) no good resulted. The headache was generally relieved in from one to three days. These headaches were always associated with lassitude, and in all the cases successfully treated there was a remarkable improvement in physical and mental tone. In cases of headaches not of the lymphatic type the treatment with calcium lactate is not of the slightest use.

Chilblains.—All the cases were associated with cold hands and feet, and with some oedema of the hands and feet, which was generally slight in amount. The records of 37 cases are known. Of these, 29 (78 per cent.) were cured, 1 was considerably benefited, 3 were slightly benefited, and in 4 cases (11 per cent.) no good resulted. In several of the cases recorded as cured slight relapses occurred, generally in the following winter, but they all rapidly responded to another course of treatment with calcium lactate of usually two to four weeks' duration.

Boils.—All the cases were associated with cold hands and feet, and with slight oedema of the hands and feet. The records of 8 cases are known. All were cured, and up to the present time no relapses have occurred.

Urticaria.—Seven cases of severe urticaria associated with coldness of the extremities and oedema of the hands and feet were treated. None of them were cases of urticaria due to food. Six were cured, and in one case no good resulted.

Flushing of the Face.—These cases were associated with coldness of the extremities, and generally with cardiac palpitation. The records of 6 cases are known. Four were cured, and in 2 cases no good resulted.

Aneurysm.—Five cases of aneurysm of the arch of the aorta occurring in hospital patients were treated with calcium lactate. Considerable benefit resulted in every case. The drug appeared to encourage the deposition of fibrin within the aneurysmal sac, with recession of the swelling, more rapidly than any other drug I have tried. Two of the patients had previously been in hospital under me for the treatment of their aneurysms, and had then been treated with large doses of iodide of potassium, so that I had the opportunity in these two cases of comparing the effects of the two drugs. Beyond all doubt the calcium lactate acted more rapidly and more efficiently than did the potassium iodide, and without the unpleasant effects produced by the large doses of the iodide.

Haemoglobinuria.—The calcium lactate treatment was employed in three cases, with very marked benefit in controlling the condition in all three cases. A brief description of one of the cases will serve as an example: The patient, a male, aged 57, was first seen two years ago with a history of haemoglobinuria extending over the preceding six months. The attacks recurred during that period every one to three days, and the urine during the attacks resembled burgundy or porter in colour. The attacks were associated with flushing of the face, and coldness and slight oedema of the hands and feet. The haemoglobinuria was quickly and completely checked by the administration of calcium lactate. During the two years there have been a few slight returns of the haemoglobinuria, which can be readily controlled by the administration of a few doses of the calcium lactate, without the patient having to give up his work, which he was formerly compelled to do during the attacks.

Oedema of the Feet on Exertion.—Two cases of troublesome oedema of the feet were treated with calcium lactate. The oedema was neither cardiac nor renal in its origin, and was not due to venous obstruction or any ascertainable organic disease. Both patients had been treated for some time without avail with various drugs, massage, baths, electricity, etc. In both cases there was a marked deficiency in the coagulability of the blood, and both were rapidly cured by the administration of calcium lactate.

Vesicular or Bullous Eruptions.—Three cases associated with deficiency in the coagulability of the blood were treated. In two cases the feet were affected, and in the other case the hands. Other remedies had been tried without avail. All three were rapidly cured by the administration of calcium lactate.

Other Conditions.—Of the following affections, erythema, lichen planus, gouty pruritus, pruritus ani, and perspiring hands and feet with offensive perspiration, one case of each was treated, with success in every case. In all five cases other remedies had been tried without avail. Each of the cases was found to be associated with a marked deficiency in the coagulability of the blood, and fairly rapid cures were effected by the administration of calcium lactate.

SUMMARY OF RESULTS.

Of the cases detailed in this paper it will be seen that 78 per cent. were cured, 9 per cent. were considerably benefited, and in 13 per cent. of the cases no good resulted from the treatment. In none of the 121 cases referred to were any bad symptoms produced by the administration of the calcium lactate, and amongst a large number of other cases treated with that salt, but not referred to in this paper on account of the inability to follow up the ultimate results of the treatment, in only three cases have any unpleasant symptoms been produced which necessitated the withdrawal of the calcium lactate. In those three cases the symptoms that supervened during the course of treatment certainly pointed to some commencing thrombosis, probably caused by the calcium salt. In one case there was a definite slight attack of venous thrombosis in the right calf; in the second case slight numbness of the arms and legs associated with tingling occurred, and in the third case noises in the ear and deafness were produced. In the three cases the unpleasant symptoms rapidly subsided after ceasing the administration of the calcium salt.

Remarks

ON THE

USE OF ALKALIS IN PRACTICAL
MEDICINE.

By EUSTACE SMITH, M.D., F.R.C.P.,

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Of the stock medicines in common use none are prescribed with greater frequency than the alkalis. As remedies for all kinds of dyspeptic troubles, for gout and rheumatism in their many manifestations, for urinary acidity and sandy deposits, and in the child for all forms of catarrhal derangements, we turn at once confidently to the alkaline salts. But valuable as these medicines can be in the treatment of disease they must be used with discretion, for, like other drugs, they are only of service when prescribed for appropriate conditions and on a definite plan. There are plain limits which it is important to recognize within which alone their operation can be expected to be useful, and outside of which their influence is calculated to be rather harmful than a source of benefit.

When taken before meals alkalis have first a local action. They neutralize to some extent the acidity of the gastric and intestinal contents, but are most to be valued for their curative influence upon catarrhal conditions of the mucous membrane. To be serviceable they must be prescribed only in moderate doses, and discontinued as soon as their administration has ceased to be obviously beneficial. In excessive quantity the effect of the remedy upon an empty stomach is to increase the secretion of acid. The stomach at once sets to work to neutralize the alkali, and if called upon day after day to make a similar effort, the continued strain cannot fail to be injurious and must increase the weakness of an already enfeebled organ. If the dose be pushed still further so as to overcome in a great measure the acidity of the gastric secretion, the consequent loss of digestive energy must aggravate the derangement and add to the discomfort which the remedy was intended to allay. When absorbed into the circulation the salts increase the alkalinity of the blood, modify its secretions, and if continued too long become a fruitful source of anaemia and languor. Carried out through the kidneys alkalis reduce or annul the acidity of the urine and are at first beneficial, but in immoderate dose or a too protracted course may give rise to cystitis or even vesical haemorrhage. In some exceptionally susceptible patients an alkali taken several times a day, even in ordinary dose, is capable of producing very undesirable consequences. A girl of 10, lately a patient in a London hospital, was found to suffer from cystitis whenever she began a course of potassium citrate. In this child a dose of 10 grains taken three times a day invariably caused the urine to become opalescent in a few hours and turbid and offensive before the end of the week. Fortunately such susceptibility is not common. It must, however, always be remembered, when prescribing alkalis with the object of influencing the renal secretion, that we may reduce the acidity of the urine without necessarily modifying the faulty condition of the system upon which the excess of acid depends.

Alkalis have a local action both upon the stomach and bowels. In catarrh of the stomach their influence for good is very decided; but this appears to be due not so much to their chemical action upon the gastric contents as to their undoubted influence in restoring the deranged mucous membrane to a normal condition. In certain morbid states of the stomach the secretion of gastric juice is exaggerated. This may be the consequence of mild irritation of the gastric mucous membrane, or of mental emotion, or a too sedentary occupation combined with insufficient exercise. The patients suffer greatly from weight or discomfort at the epigastrium and complain of sour eructations and often of vomiting. The power of alkalis to neutralize in any material degree this excessive secretion has been called in question by many notable observers—Trousseau amongst others—and the relief which these remedies undoubtedly bring is due probably to their local action upon the walls of the

stomach. The effect of alkalis is not, however, limited to this local action, for, when used with judgement, they seem to have the power of influencing the whole system for good and setting up a favourable change, which is not always a merely transitory improvement. We often have occasion to notice the prolonged benefit which follows a course of alkaline waters at one of the many spas both at home and abroad. Acting in this manner, the salts of the alkalis are not so much antacids as alteratives—that is, drugs which, given in modest dose for a period of weeks or months, are able, without producing any immediate or striking change, to correct a morbid condition of an organ or of the whole system, and set up an improvement which, if not permanent, is slow to pass away. But it must be kept in mind that to achieve this result the dose of the alkali must be studiously moderate. It is judicious, when using it thus for its more distant effects, whether upon the urine or elsewhere, to employ the citrate or acetate, for these salts, not being alkaline until they undergo a chemical change in the blood, do not tax the gastric energies or call upon that organ for an increased effort, to which at the time it may be unequal. Still, even with these remedies we must be careful to use them with judgement. Directly they begin to produce signs of anaemia, or earlier if possible, their use should be abandoned. We do no good in chronic ailments by impoverishing the blood, and whenever we prescribe drugs which may have such an effect it is essential to keep a careful eye upon the patient to see that the limits of safety are not overstepped.

In gastric derangements the bicarbonates of soda and potash are favourite remedies and are probably equally efficacious. They should be given in moderate quantities—10 to 20 grains are usually sufficient (for children 5 grains to 10), and it is well, as it adds to their curative value, to combine in each dose a few grains of sodium chloride. I have also found that the tincture of colchicum seeds, in very small doses (2 or 3 minims), is a useful stomachic which in cases of dyspepsia forms an addition to the draught of no little importance. When an alkali is thus prescribed purely for its local action upon the stomach, it should be taken before food, and it is advisable, at any rate after the first few days, to make up the mixture with a freshly-made bitter infusion instead of with water. If, however, the object of our prescription is merely to correct acidity, it should be taken two hours after food, and the bitter is best omitted, as its presence in the draught was held by Dr. Prout materially to reduce the neutralizing properties of the alkali.

If there be great irritability of the stomach, the alkaline draught should be made effervescent with citric acid added at the time of administration, and in such a case the inclusion in the prescription of a minute quantity of antimonial wine increases the sedative effect of the remedy. Thus, 20 grains of sodium bicarbonate with 5 of sodium chloride and one drop of antimonial wine in a bitter infusion may be made effervescent with 16 grains of citric acid. It is best to use a quantity of acid insufficient completely to neutralize the soda, so as to leave the draught slightly alkaline. It should be taken three times a day or oftener before food.

The caustic alkalis—the liquor potassae and liquor sodae—have a more decided sedative action upon the stomach than the bicarbonates; and the liquor potassae given in ten or fifteen drop doses with a few grains of potassium nitrate in a bitter infusion is a remedy of very definite value. The liquor potassae acts well also in combination with other stomachics. In cases of continued dyspepsia with obstinate constipation, sleeplessness, and abdominal pains, I have often found speedy relief and prolonged improvement to follow a draught containing twenty drops of liq. potassae with 1 oz. each of infusion of rhubarb and the compound infusion of gentian, taken regularly for a week or longer every morning before breakfast.

Long courses of alkalis are rarely of service in the management of ordinary flatulent dyspepsia, for although very useful in the early stages there always comes a time when their continued administration ceases to be beneficial. As has been said, their chief value consists in their power of reducing an acute or subacute catarrh of mucous membrane. When this has been done and the gastric lining is left flabby and relaxed, a different kind of medication is required. In the treatment of dyspepsia alkalis

rarely do good if the urine is habitually alkaline, or neutral, or only very slightly acid; also, when the tongue is of good colour and clean, or pale and flabby, with marks at the sides indented by the teeth, these remedies cease at once to be appropriate. The soda salts can be borne for a longer time than the corresponding salts of potash, for the latter are apt to have a depressing effect upon the heart, and may have to be discontinued for that reason. The same disadvantage is shared by all the potash salts, and whenever full doses of the chlorate have to be continued day after day, as in the treatment of ulcerative stomatitis in the child, sodium chlorate, which can be given in large doses without risk, should always be made use of.

In addition to the salts of potash and soda, the heavy carbonate of magnesia, and the carbonate of lime are very useful. The former combined with powdered rhubarb is a familiar remedy in every well-ordered nursery, and is invaluable as a preliminary step in the treatment of stomach derangement in the child. For a mild diarrhoea it is better to combine the rhubarb with a few grains of aromatic chalk; for the latter, while in no way interfering with the aperient properties of the rhubarb, heightens its astringent effects. It may be remarked that a teaspoonful of treacle in the draught effectually disguises the nauseous taste of the remedy, and deprives it of its only disadvantage. For infants the dose may be mixed up into a stiff paste with two or three drops of the same sweetener, and smeared by the nurse's finger upon the back of the child's tongue. Given in this way the remedy is not unwelcome to the patient, and runs little risk of being expectorated.

When our object is to neutralize acid in the caecum, the insoluble alkalis are to be made use of, for these are more likely to pass unaltered through the stomach and reach the lower bowel unchanged. The pains often complained of in the lower part of the bowel, caused by local distension with gas temporarily locked up by spasmodic contractions of the intestine, usually yield quickly to the insoluble magnesian salt. The remedy should be combined with a small dose of codeina ($\frac{1}{8}$ to $\frac{1}{4}$ grain) in a draught made stimulating with compound spirits of ammonia and aromatics. In aperient doses these salts produce more irritation of the bowel than is caused by the soluble sulphates of soda and magnesia, and this effect is found to increase by repetition. Trousseau long ago pointed out that when given on successive days the sulphates each time produced less and less effect, while in the case of the insoluble salts the aperient action was more and more marked with each fresh dose of the medicine, and soon led to the passage of mucus, often blood-stained, and evacuated with painful straining.

In addition to their value in derangements of digestion, alkalis are of especial service in the treatment of urinary acidity and the discharge of sand and gravel. It may be the fact, as has been inferred from experiments, that heightening the alkalinescence of the blood does not augment its power of delaying or preventing the formation of gouty deposits, but there is no doubt that increasing the alkalinescence of urine has a decided effect in preventing the deposition of uric acid from that secretion into the kidney and bladder. As Sir William Roberts has remarked, "it is chemically impossible for uric acid to be deposited from an alkaline urine," and it is a matter of common observation that a course of alkaline waters, such as that of Vichy, prevents the deposition of sand as long as its use is continued, and, in spite of experimental evidence I may add, seems to exercise a restraining influence upon acid formation for a considerable time afterwards. In an alkaline or weakly acid urine the uric acid is converted into a urate, and remains in solution at the temperature of the body. By such means it seems possible—although this has been denied—that small renal calculi may be reduced in size sufficiently to pass through the ureters and be discharged. To effect such a result, however, a long course of the remedy is required. As already stated, the neutral salts should be used for this purpose, especially the citrate of potash, for these salts may be taken in moderate dose for a long time without disadvantage. A favourite remedy for this condition in gouty persons is the carbonate or citrate of lithia, but this salt must be used with caution. Lithia is an alkali which is capable of exercising a poisonous action if given in large doses, and cannot, therefore, be used as an alkali of blood or

lymph, as the dose required for such a purpose might have dangerous consequences. It is said also to form an insoluble compound with the triple phosphate of soda and ammonia; and its solvent action upon uric acid, at any rate in the living organism, has been called in question.

The citrate of soda is utilized in the feeding of infants. One of the difficulties met with in fitting an infant with a satisfactory diet is the firm clot formed by the casein of cow's milk in the infant's stomach. This density of clot is explained by Sir A. Wright to be due to a combination of the caseinogen of the milk with calcium salts, and he has recommended the use of soda to replace the calcium in the combination, for the clot thus formed is comparatively loose and easy of digestion. Alkalinizing the milk with bicarbonate of soda is an old practice, but it had this disadvantage, that the calcium when displaced was thrown down and lost to the system. By using the citrate of soda the alkali still joins with the caseinogen, displacing the calcium, while the citric acid unites with the latter base, forming a soluble salt which is absorbed into the circulation. The proportion recommended for ordinary use is 1 or 2 grains of the citrate to each ounce of the milk.

The bicarbonate of soda is an alkali which is often taken for a lengthened period in cases of dyspepsia. In a long course of this remedy each dose should be combined with a few grains of sodium chloride, for the latter salt has the property not only of aiding metabolism, but also of increasing the vitality and power of resistance of the red corpuscles. It also counteracts the tendency of the bicarbonate to form uric-acid concretions. But still, even with this safeguard, the protracted use of the carbonated salt is not to be recommended, for such a course must tend to weaken the digestive energy, and lead before long to anaemia and depression. It may, however, be sometimes considered advisable in cases of severe acid dyspepsia to give large doses of bicarbonate of soda for short periods of time on account of the beneficial immediate effects of the remedy. When there is great acidity of stomach towards the end of digestion from acid fermentation of food, 30 or 40 grains, or more, given in one dose about three hours after a meal, will often quickly allay the more distressing symptoms, especially if the draught be made stimulating with compound spirits of ammonia and aromatics. The painful cramps which often afflict the habitual dyspeptic, especially in the night, may be put a stop to by the same remedy taken at bedtime. Much larger doses than these have been recommended by some, and I myself have heard the late Dr. Piory at the Charité Hospital in Paris recommend 3 to 10 grams (48 to 160 grains) of the bicarbonate to be taken three or four times a day in cases of pyrosis. Such inordinate dosage, however, is quite unnecessary, for this unpleasant symptom is rarely found to resist the action of a few grains (5 to 10) of the compound kino powder given several times a day, as recommended by Sir Thomas Watson. Since the introduction of the salicylate the bicarbonate of soda is now little used in the treatment of acute rheumatism. The two salts are, however, sometimes given together. When the salicylate is prescribed in large doses for the treatment of chorea, the addition of double the quantity of the bicarbonate of soda has been recommended by Dr. D. B. Lees for the purpose of counteracting any depressing effect of the salt, especially the dyspnoea, which sometimes follows excessive doses of the drug. The chief objection to this practice is, of course, the profound anaemia which such medication is liable to induce.

In suppression of urine the bicarbonate of soda given in 40 grain or 50 grain doses every four hours will sometimes quickly promote a return of the secretion, especially if the remedy be combined with a drachm of the spirits of nitrous ether; but the suppression of urine which is liable to occur at the end of an attack of enteric fever or scarlatina is most rapidly brought to an end by a copious enema of hot water (100 F.), which the patient should be directed to retain as long as possible.

The alkaline preparations are also useful in cases of acute bronchitis when secretion is viscid and thick and difficult to expel, for the salts of soda and potash have great influence in increasing the fluidity of the mucus and favouring expectoration. The bicarbonate of soda is usually made use of for this purpose, but is inferior in value to liq. potassae, which should always be preferred,

In cases of acute bronchitis with fever, dyspnoea, and failing acidity of urine, Dr. A. Haig recommends bicarbonate of soda to be given in sufficient doses to make the urine alkaline, and states that when this is done the temperature falls, and all the symptoms are quickly relieved. The quantity required is, however, large—20 to 60 grains for a child and 90 to 120 grains for an adult in the twenty-four hours. The remedy must not be given with ammonia, which lessens its neutralizing power, but may be combined with digitalis as a cardiac tonic.

I will not here refer to the action of those special salts of the alkalis—the bromides of sodium, potassium, and ammonium, the lactate, sulphate and hypophosphite of calcium, and other similar combinations whose influence depends not so much upon the base as upon the element with which the base is incorporated—the union creating a new body with very definite therapeutical endowments. These are ordered not for their general action as alkalis but for their specific influence as remedies for the relief of particular complaints. I may, however, refer in conclusion to another use for the bicarbonate of soda which should not be passed over without due recognition. Just as this salt is beneficial in catarrhal conditions of the mucous membrane for its local action, so it is found to have a healing influence when applied to sores and inflamed surfaces of the body as an external application. Alkaline baths are used largely in skin diseases for the relief of irritation; 2 to 10 oz. of the bicarbonate of soda dissolved in an ordinary warm bath has a welcome soothing effect in cases of eczema, psoriasis, urticaria, lichen, and prurigo. The value of the salt as a local application is best seen, however, in the case of ulcerated surfaces and phlegmonous inflammations. A solution of 15 or 20 grains to the ounce of water kept applied to an intractable ulcer will be found to exercise a surprising influence in promoting the healing of the sore. I have seen large superficial ulcers which had resisted all previous measures begin at once to heal under the use of this simple dressing.

In whitlow, after the escape of the pus by incision or otherwise, the bicarbonate of soda solution applied on lint and oiled silk causes the pain and suppuration to disappear with remarkable quickness. It is unnecessary to increase the strength of the solution, for the value of the application does not depend upon any antiseptic action of the salt; indeed, its activity is far greater than that of iodoform or other antiseptic. It is thought that the effect is due to its local influence in raising the alkalinity of the blood, which has been found by Brucker and others to be greatly reduced in cases of febrile reaction set up by bacteriological intoxications. The same treatment is equally useful in cases of burns, scalds, otorrhoea, leucorrhoea, etc., and the value of the solution as a douche to the pharynx in cases of tonsillitis and septic inflammations is recognized by every one. There is one other use for the bicarbonate which should not be omitted: The aching which often comes on suddenly in a decayed tooth from direct irritation of the dental nerve by acid secretions in the mouth can be quickly relieved by washing out the mouth with the solution. The alkali neutralizes the acid and at once puts a stop to the pain.

WE have to congratulate Dr. C. A. Mercier on a somewhat rare honour, the winning of the Swiney Prize. This, so far as the medical profession is concerned, is awarded only once in ten years. The prize itself is a quinquennial award, but goes alternately to members of the legal and medical professions. There is no competition for it, nor do candidates submit their names to the adjudicators. These are the Council of the Society of Arts, and the Royal College of Physicians, who adjudge the prize to whomever in their opinion has made the most valuable contribution to jurisprudence, either medical or legal, during the previous ten years. The prize, which is a sum of 100 guineas and a cup of the same value, was established in 1844 by the late Dr. Swiney, who died in that year, bequeathing £5,000 to the Society of Arts for the purpose indicated. The cup stands about 24 in. high, and is an exceedingly fine piece of silversmith work, the design from which it is quinquennially reproduced having been prepared by the late Mr. David MacIscle, R.A. The work of Dr. Mercier, which the adjudicators seem to have had specially in view, was his book entitled *Criminal Responsibility*.

An Address

ON THE REMEDIAL USE OF ALCOHOL.

DELIVERED BEFORE THE BORDER COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION,

BY JAMES MACDONALD, M.A., M.D.,

CARLISLE: PRESIDENT OF THE BRANCH.

IN bringing the subject of alcohol as a remedial agent before your notice a few introductory words of explanation may be offered as to the reasons which have induced me to select this topic for my Presidential address. For the literature with regard to it is generous in quantity; the theme has been worn threadbare by much previous discussion. It is hardly necessary for me to point out to you that for many years alcohol has occupied a prominent place in the medical man's pharmacopoeia. But recently a powerful crusade has been organized against its use, and the leaders in the movement boldly declare that it either possesses no therapeutic efficacy at all, or that its remedial effects could be equally well produced by other drugs. This is the fact that has mainly determined me to take up the subject of alcohol on the present occasion. In the words that I shall have the honour of addressing to you my principal object will be to point out the position of alcohol in the treatment of disease and the uses to which it may safely be applied, where it undoubtedly acts efficaciously, and where its exhibition may be advantageously withheld. In addition I shall endeavour to give some particulars bearing on its later history.

The use of alcohol in the treatment of disease goes back to remote times. Up to a comparatively recent date it was given more or less empirically. With the growth of physiology a scientific element was introduced into the rationale of its administration. A cursory review of the physiological position with regard to alcohol forms, therefore, a natural basis for the present address. What, shortly, is the influence of alcohol in moderate doses upon the heart and blood vessels, the nervous system, and metabolism?

With regard to the precise action of alcohol on cardiac muscle, opinion varies. Drs. Loeb and Bachem in Germany and Dr. R. E. Dixon in this country assert that in small doses it is capable of directly increasing the activity of heart muscle. On the other hand, it is held that this contention has still to be proved.

It is generally agreed that dilatation of superficial blood vessels follows the use of alcohol through the influence of the drug on the vasomotor nerves. In this way the action of the heart is relieved and its efficiency is increased; but when the question of the blood pressure is considered a difference of opinion arises. Physiologists of various countries insist that the pressure is maintained, owing either to a constriction of the vessels in the interior of the body or to an increase in the output from the heart. Other views on this subject of the blood pressure are held by some clinical observers. The medical evidence recently given by Dr. Ralph Stockman before the Whisky Commission has an interesting bearing upon this point. He conducted a series of experiments on himself and on three other medical men with pot-still whisky, patent-still whisky, brandy, and diluted pure alcohols. In the first place, he found that the results produced on the circulation by whisky and brandy were due to their alcoholic contents and not to the residues or distillates—in other words, the action was essentially that of alcohol. Coming to the point under consideration, he stated in evidence that alcohol, taken under conditions of perfect quietude, did not influence the pulse-rate or blood pressure. Under large doses of the drug the blood pressure falls.

Upon the brain and nervous system alcohol does not act as a stimulant. It has, on the other hand, a depressant effect. And it is this sedative, benumbing action of which the physician makes use. "No one," says Schmiedeberg, "will expect any special advantage from a stimulation of the sensations and of the mental functions in disease. We aim rather, as much as possible, at protecting from every form of excitement those areas which are usually in a state of increased sensitiveness, and consequently

keep all strong stimuli arising in the outer world as carefully as possible away from the patient. These efforts are assisted by a mild narcosis which the taking of the wine brings about, even although it be no more than a slight deadening of the hypersensitiveness. Just as rest enlivens and refreshes, so can wine have a like effect by favouring the conditions for rest, although it does not stimulate any function directly."

With regard to the value of alcohol as a food there is a fair consensus of opinion. Graduates of Edinburgh University will recall the interesting lecture of Sir Thomas Fraser on the Life-History of Alcohol in the Human Body. As the result of investigation he found that an average man can consume 1 oz. to 1½ oz. of absolute alcohol in twenty-four hours, according to weight. The products of oxidation did not cause any increase in the amount of carbonic acid or urea excreted, because while still in the body it impaired cell action. On the assumption that it was consumed as food, alcohol has the same value as a carbohydrate of equal weight. Pursuing his experiments upon patients, he observed that in the case of patients on normal diet with steady weight, on the addition of 1 oz. to 1½ oz. of dilute alcohol to the diet the weight was increased; that in patients with a more than sufficient diet and increased weight alcohol increased the weight still further; and that in both of these classes of patients the general health was disordered by the stimulant. On the other hand, he found that when alcohol was given to patients upon a restricted diet with diminished weight, in a few days there was a slight increase in weight, while the general condition was rather better, sleep was secured, and the other functions were satisfactorily maintained. The material point is that the decrease in weight was checked. The conclusions at which Sir Thomas Fraser arrived have been corroborated by subsequent observers. It is hardly necessary to add that alcohol is readily absorbed by the stomach when other nutriment cannot be retained, while it also acts as a stimulant to gastric digestion.

These, then, are the chief physiological data which guide the clinician in the use of alcohol as a remedial agent—the widening of the blood channels with increased flow of blood to the brain and other organs, with a diminished resistance in the peripheral vessels and temporarily increased activity of the circulation, the lethargic action on the brain and the widely admitted fact that alcohol possesses a certain definite value as a food.

Consider, now, in the first instance the use of alcohol in lobar pneumonia. For the past fifty years the treatment of this disease has afforded much material for debate. To-day it is still a vexed question, bristling with points of controversy. On one matter there is agreement—that the present treatment is unsatisfactory. The result is reflected in the figures which tell the story of its fatality. It has been computed that in England and Wales with their population of thirty millions over 220,000 persons are annually attacked by this disease, and that the attendant mortality is 14½ per cent.

If we bear in mind that pneumonia or pneumonic fever is an acute specific infection caused by a germ, the manifest desideratum is an antidotal virus to do for it what serumtherapy has done with happy results for diphtheria. In the absence of a curative serum the remedial treatment is symptomatic. What, then, is the position of alcohol? Assuming that the views of eminent specialists as presented in current medical literature may be taken as fairly indicating the trend of professional opinion, we may advance the general proposition that alcohol, judiciously employed, plays a useful and important part in the treatment of this disease. On the other hand, there is a considerable body of medical men who altogether refuse to admit its efficacy, while there still remain a few practitioners with whom it is an article of faith to treat all cases of this kind with copious libations of brandy; but they are a decadent minority.

The points to which the physician looks for guidance in its use are the state of the heart, especially with regard to the onset of over-distension of its right side, with the small, rapid, feeble, and irregular pulse, the embarrassed breathing, the facial pallor, and the other symptoms of what has aptly been described as "right-heart misery." The presence of rigid vessels is also an indication for its use, as well as the occurrence of delirium.

With some practitioners it is the custom to withhold alcohol until the pulse begins to flag, while others would apply it judiciously throughout. It is the cardinal rule of the many to employ free stimulation with alcohol in increasing doses towards the crisis. Administered on these lines, it is regarded as a valuable and necessary aid to such other stimulants as strychnine, digitalis, and oxygen.

Dr. A. O. Affleck of Edinburgh has recently made an important contribution on this subject. He points out that the same value does not attach to the use of alcohol as a heart supporter as formerly; for most cases it is believed by many to be unnecessary, and that even in the case of the aged and feeble its employment in any but small amount may be harmful. While Dr. Affleck is far from denying it a place in the therapeutics of pneumonia, he believes it to be inferior to strychnine for the heart, a drug which he thinks might often be given with good effect early in the disease.

The views expressed by Dr. Affleck form a link, as it were, with the body of medical opinion which sees no advantage in the employment of alcohol, and is entirely opposed to its use in the treatment of disease. The practitioners of this school are largely identified with the work of temperance reform. The London Temperance Hospital may be looked on as the mouthpiece of the movement. Instituted in 1874 as a protest against the excessive use of alcohol which was then the practice, it has grown in importance, both as regards the scope of its work and the number of its patients. The object for which it exists is to discourage the employment of alcohol and to furnish trustworthy evidence of the results of its disuse. In 1906, with over 1,200 patients on the register, alcohol in the form of rectified spirits of wine was given in four cases, all of which were fatal. Last year (1907) there were about 70 cases of pneumonia under treatment. The medical staff claim that the results they obtain without alcohol compare favourably with those of other hospitals. Whether that be so or not, the unwisdom of forming a broad generalization from a comparatively limited number of cases is obvious. And, besides, in a disease like pneumonia there are many contributory factors and side elements which have to be taken into consideration. The experience of this hospital only serves to show what is generally recognized, that the majority of these cases get well without alcohol. It does not affect the issue in favour of its utility in certain contingencies. I dare say many of you can recall instances where the timely use of alcohol at a critical juncture has turned the scale when life was trembling in the balance. After all, an ounce of practice is worth a pound of theory.

Let me now direct attention to the use of alcohol in the eruptive and continued fevers and submit to you a few impressions drawn from my experience at the Carlisle Fever Hospital.

It is commonly agreed that as a rule, under normal conditions, young children, who form the large majority of these cases, go through the eruptive fevers without the aid of alcohol or any other drug. But there are exceptions. There is, for example, the occurrence of pneumonia in scarlet fever, associated with nephritis, or with gangrenous sore throat—the so-called deglutition pneumonia—or, again, the pneumonia arising independently of these sources. These are all conditions of true croupous pneumonia. For the renal form of the disease there is a direct drawback to the exhibition of alcohol, but in the deglutition pneumonia and in septic conditions generally the use of alcohol has proved of service.

Again, in the treatment of diphtheria in children alcohol has a place. It is useful as an aid to strychnine in the grave attacks of syncope which from time to time occur in that disease with startling suddenness. Repeated vomiting, also, is an obstinate symptom to cope with, especially when associated with a septic state, quick, irregular, or intermittent pulse and albuminuria, indicating severe intoxication. In such conditions, when peptonized food and nutrient enemata have failed, iced brandy has alone been retained by the stomach. Nourished on alcohol in this way, for several days patients have been tided over a critical period and put in the way of ultimate recovery.

To say that many cases of typhoid fever do not need alcohol is a loose way of stating that the disease frequently

runs a mild, uncomplicated course. Alcohol, however, is never given in the local hospital as a matter of routine, and its employment is subject to periodic revision. A frequent low tension pulse with dicrotism, a sustained high temperature with muttering delirium, marked tremor, and septic conditions, these are the symptoms which distinctively call for its use, and which have been found to be relieved by its administration.

A cognate question may arise as to the proper course to adopt in the case of persons suffering from this disease who have been used to taking alcohol habitually to excess. Ought they to be put upon stimulants as soon as they come under treatment on the ground that they are supposed to be dependent upon it, or should alcohol be withheld until the special indications for its employment are apparent? Professional opinion upon this point is variable. Two cases that recently came under my observation at the hospital are of interest in this connexion. The salient points are these. The patients, a man and a woman of middle age, living about four miles from the hospital, were intimated to the local authority in the third week of their illness to have typhoid fever. The man had already had several attacks of intestinal hæmorrhage. To remove patients such a distance, at a critical stage of their illness and under these special conditions, was palpably to contravene the primary canons of precaution in this disease. But in point of home surroundings the state of affairs was most unfavourable. Extraordinary circumstances justify exceptional measures, and as Hadibras says:

For when your case can be no worse
The desperatist's the wisest course.

To say that these persons had been for years addicted to the inordinate use of alcohol is a euphemistic way of stating a plain but pathetic fact. After admission to hospital the cases ran a protracted course of some severity—the man continued to have hæmorrhages for some weeks, the woman suffered from a suppurative otitis media, one of the rarer incidents in this fever. Neither patient, however, presented in a marked degree the special indications for the employment of alcohol, and it was accordingly withheld throughout their illness, which ended in recovery.

The experience of these cases gives a measure of support to the view that the mere history of previous excess is no reason for the immediate exhibition of alcohol. (A series of charts was then exhibited.)

Typhus fever has only an academic interest for the general practitioner. His chief concern and trouble are with the diagnosis. The views of Murchison on the use of alcohol in this disease hold in the main to-day. Patients under 20 years of age do best, as a rule, without it; most patients over 40 are benefited by it from the commencement of the second week, while persons of intemperate habits require alcohol earlier and in greater quantity than others. Typhus, in sharp contrast to typhoid fever, runs a swift, short, definite course, with a crisis like pneumonia. In the sleeplessness and delirium characteristic of this disease, the benumbing effects of alcohol are utilized with benefit. The "perpetual moan" of these patients is turned to "dreamlike ease" under the soothing influence of good whisky and paraldehyde.

The use of alcohol in lobar pneumonia and typhoid fever have been considered in some detail because these diseases are the classic battleground on which the alcohol controversy has been so often waged. Other maladies or conditions will occur to you in which experience has proved the utility of alcohol. As a sedative, for example, in certain nervous ailments, as the modest but serviceable nightcap in the sleeplessness of old people, or as a dietetic in the convalescence from acute diseases, whether it is taken in the form of beer or stout, or the "mellow-tasted burgundy."

On the other hand, there are states in which the use of alcohol ought to be discouraged. It is barred in acute forms of renal disease. In neurotic conditions associated with feelings of depression, where it is taken for the temporary but agreeable relief it affords, it is best withheld. Necessary as it is at all times to bear in mind the insidious qualities of alcohol and the remote pathological effects of its abuse, a special warning must be uttered in dealing with diseases peculiar to women, in view of the fact that of late years there is evidence to show that female intemperance is on the increase.

And now with regard to the administration of alcohol. The admission must be made that even to-day alcohol is frequently given in a haphazard fashion and as a matter of routine. Too often it is allowed merely in deference to the wishes or entreaties of patients or their relatives, who have views of their own on the subject which they are not as a rule slow to impart to the medical attendant. A recent charge of malpraxis has an interesting bearing on this statement, where it was alleged by the prosecution that the lax or wrongful employment of alcohol by a medical practitioner hastened the death of a patient. But if alcohol is to keep its place as a therapeutic agent it must be administered on rational lines. The same scientific precision must safeguard its use as in the case with other powerful drugs, such as strychnine or opium. As with these, so with alcoholic stimulants, a fixed standard of purity must be secured. With regard to whisky, for example, which has lately fallen from favour as a stimulant in disease, owing to the uncertainty of the results which attend its analysis, it is generally admitted that spirit of this kind should be kept in bond for an age-limit of at least two or three years before it is taken out for consumption. Brandy is perhaps more largely prescribed, partly because of its recognized purity, and partly because it has a place in the *British Pharmacopœia*.

But in whatever form alcohol is applied the dosage must be definite—6 oz. to 9 oz. being a reasonable daily range for an adult—its employment must be subject to frequent revision, and it must be at once withdrawn when the object for which it was given is attained.

In the history of therapeutics there is nothing more striking than the remarkable modification that has come over medical opinion during the past thirty or forty years with regard to the remedial use of alcohol. About the middle of last century Allison, Graves, Stokes, and Todd advocated the liberal employment of stimulants in fevers. They based their teaching on the theory that alcohol was an article of food. By their personal magnetism they dominated with their views the rank and file of the profession. And alcohol was given with a prodigal hand. Stokes tells of a patient that "brandy was freely administered to him, and omitted only when the patient showed symptoms of its disagreeing with his brain," a delicate way, surely, of depicting a condition which in those days of large doses must have been far from uncommon. In the case of a year-old child with pneumonia Anstie gave 6 oz. of wine daily and nothing else for twelve days; 24 oz. of brandy with no other sustenance for similar periods of ten days was a customary incident in the case of adults. Bentley Todd gave a girl with typhoid fever and pneumonia 48 oz. of alcohol in twenty-four hours.

The fashion in colossal doses had its day, and a new era of reaction has taken its place. In this connexion Sir Victor Horsley has compiled a set of official facts and figures which bring into sharp relief the altered attitude of medical men with regard to this question. I will not burden you with statistics, but I will try to put the substance of his tables before you in an easily digested form. An analysis of the money spent upon alcohol and milk by several London hospitals was made, giving the returns for one year in each decade from 1862 to 1902. In 1862 the cost of alcohol per bed was £3 8s.; in 1902 it was £1 5s. The cost of milk per bed in 1862 was £1 6s.; in 1902 it was £3 18s. So it appears that in point of consumption milk and alcohol have changed places. In the case of the Metropolitan Asylums Board the cost of stimulants fell from 1s. 4.7d. per head in 1894 to 4.5d. in 1905. These results are supported by the returns from local institutions. At the Cumberland Infirmary, Carlisle, the average annual cost for alcohol and malt liquors during the past ten years works out as follows: Alcohol, 11.5d. per head; malt liquors, 0.6d. per head, or about 1s. in all. During the last three years, 1905-7, the figures per head are: Alcohol, 5.2d.; malt liquors, 0.4d.; total, 5.6d. Alcohol does not enter largely into the treatment of the insane, but the statistics furnished by the Cumberland and Westmorland Lunatic Asylum virtually repeat the above experience. From 1862 to 1906 the average cost per head for wines, spirits, and porter was 1½d. Up to 1900 the cost was always above 1d., in 1875 touching 3d. Since then it has kept below 1d., almost reaching the vanishing point in 1906, when the cost per head stood at ⅓ of a penny.

In commenting generally upon these returns, it will be noticed that they contain no information of the results of treatment. That is an important omission. And, again, the greatly increased consumption of milk in our various hospitals raises a pertinent question: What precautions are the managers of these institutions taking to safeguard the purity of the milk service? It is well known to you that the dangers associated with milk in the way of conveying disease, are many and serious. Existing legislation on the subject is notably defective, while it is common knowledge that the hygienic regulations which are in force are inadequately administered by many sanitary authorities.

Broadly stated, then, it is obvious from the figures which have been quoted, that medical opinion has markedly changed, and there is a fear that following the tendency of reaction, the swing of the pendulum may go to the opposite extreme.

What are the factors that have operated to produce this result? There are, of course, habits or fashions in therapeutics as in everything else. Fashions in the past have sometimes been regulated by the prevailing theory of the origin of disease. In the days, for example, when diseases were set down to inflammation, bloodletting was all the vogue, and the use of alcohol was looked on as a perilous enormity. Then came the period when our bodily ills were ascribed to lowered vitality, and stimulants were administered to therapeutic excess. At the present day the bacterial origin of disease does not materially affect the employment of alcohol, which is generally given with judgement and discretion on the lines which have been indicated.

A consideration of the influences which have tended to lessen the use of alcohol would be incomplete without a reference to the work of the medical advocates of temperance reform. Temperance propagandism, from a professional standpoint began about the end of the eighteenth century. With a Scotsman, not inappropriately, rests the distinction of inaugurating the movement, for a certain Dr. Trotter of Edinburgh, it appears, wrote a treatise on the effects of drunkenness on the human body, which was published in 1804. From that time onwards the history of the agitation has been one of progress. Simultaneously, with the wave of temperance that has flowed over the country in recent years it has taken on fresh activities, and at the present day a group of eminent medical specialists are conducting a vigorous campaign against alcohol.

Every one must admire the unselfishness of their devotion to a crusade which makes for the solution of a grave social problem. The mental and physical deterioration wrought by the abuse of alcohol are evils with which we, as medical men, are only too familiar. But these reformers go further. With much strength of language and on every occasion—in the press, on the platform, and in book publications—they roundly assert that as a food alcohol is useless and as a remedy it is harmful and unnecessary. The profession, it seems, has changed its views on the subject, and in a tone of finality we are told that in the matter of alcohol we are on the high road to therapeutic nihilism. Referring to the hospital statistics which have been cited, they argue that if to the economies effected by the restricted use of stimulants were added the elimination of cases which were due to drink, the thorny task of hospital finance would be solved for ever. With a sublime confidence in the future they base their visionary forecast on the modest assumption of creating a sober nation.

The danger of establishing the habit of inebriety by the remedial use of alcohol is a matter of grave concern to the apostles of temperance reform. They have equipped a hospital to deal with this evil. The distinctive principle of the London Temperance Hospital is to guard patients from the perils that beset them in this way. That exceptional cases do occur which may be put down to this cause is freely admitted. The question, however, is a complex one. It is difficult to collect anything like accurate information on the subject. We know how ready the public are when anything goes wrong to lay the blame upon the doctor. Looking back over the past twenty-five years, I cannot help thinking that this danger has been greatly exaggerated. By caution and discrimination the element of risk should be largely corrected, and, in any

case, the good of the greatest number is the first consideration which overshadows everything.

A favourite device with the opponents of alcohol is to refer to it invariably as a poison. The motive is obvious. In the course of a discussion on this subject which took place in the House of Commons under the late Government, professional opinion was quoted in favour of this view. Speaking to the question, the Lord Advocate said, "As for the medical evidence, we must be driven to the conclusion that in this case as in others doctors differ. When we hear it stated that alcohol is a poison, I wonder if honourable members are aware that the Majority Report of the Royal Commission contained these words: 'We must recognize the fact that most people still regard alcohol as an ordinary article of diet which is only harmful if taken to excess.'" And he concluded: "It is idle to say that alcohol is a poison and nothing more, and that the use of it is inconsistent with any work demanding acute and alert judgement."

A suggestion coming from a society called the International Union of Medical Abstiners was put forth some time ago in the *BRITISH MEDICAL JOURNAL*. It was to the effect that an inquiry be made as to the value of alcohol in lobar pneumonia and typhoid fever, and the International Union has invited the staffs of hospitals in various countries where it is represented to co-operate in the work. The idea is to treat all cases of these diseases alternately with and without alcohol. Apart from the humanitarian aspect of the proposal, I wonder whether, if a member of this union were seriously ill, he would adhere to his guiding principles—if he would remain faithful to his dogma? From a speculative point of view it is an interesting question. It is whispered that a well-known doctor—a professed advocate of total abstinence—was in the habit of taking champagne when his energies were flagging. They often flagged.

Early last year a noteworthy pronouncement on the use of alcohol—strongly traversing the views of medical reformers—appeared in the *Lancet*. It was drawn up by a group of well-known medical experts who, recognizing that in the employment of alcohol the needs of the patient must be the first consideration of the professional man, expressed the opinion so long and generally held that in disease alcohol is a rapid and trustworthy restorative. And the signatories further hold that in many cases it may be truly described as life-saving, owing to its power to sustain cardiac and nervous energy whilst protecting the wasting nitrogenous tissues.

The manifesto discharges a kindly service as a protest against the uncompromising opposition of a body of extremists to the rational use of alcohol. It does more. It applies a spur to the indifference displayed by many medical men with regard to an eminently practical question. It is true that on minor points a divergence of opinion exists, but on fundamental principles there is common agreement. In the past the instruction given in our medical schools on this many-sided question was scanty and inefficient. It is doubtful if the student of to-day is as thoroughly impressed with its importance as he ought to be. If the subject were taught in a sound and systematic manner, the young practitioner would be better fitted to form a judgement on one of the difficult problems that confront him on the threshold of his career. But he would still do well to bring to its solution a broadminded spirit of tolerance and moderation.

To recapitulate, in the foregoing remarks I have endeavoured to trace the position of alcohol as a therapeutic agent. I have shown how in this matter the attitude of the profession has undergone a marked change. A system of excessive dosage has given way to caution and conservatism in its exhibition, and the reactionary tendency to go to the opposite extreme has been indicated. Alcohol is a drug, and as such must be administered with the same precision and discrimination which we employ in prescribing other powerful drugs. Given with these precautions, alcohol is an invaluable remedy in the treatment of disease.

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OPERATION AT END OF FIFTH MONTH FOR EXTRAUTERINE GESTATION WITH LIVING FETUS: RECOVERY WITHOUT RECURRENT OR SECONDARY HAEMORRHAGE.*

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IN the following case pregnancy began in the left Fallopian tube. The last show, four months before the operation, was no doubt a uterine haemorrhage caused by the abnormal gestation and not a menstrual period, as the fetus was too well developed to represent only four months of pregnancy.

J. E., aged 35, was admitted into my wards in the Samaritan Free Hospital on July 3rd, 1908. She was sent to me by Mr. Poodle, of Sittingbourne, suffering from an abdominal tumour of uncertain nature. This patient was fairly nourished, but her hair was turning grey. Her cheeks were flushed. She had been married for eleven years and her only child was 10 years of age. Since its birth until the present illness there had never been any signs of pregnancy.

History.

On Easter Day, April 19th, when scrubbing her floor, the patient had a sudden attack of hypogastric pain and vomiting, and at once took to her bed. Mr. Poodle noted symptoms of peritonitis with tenderness chiefly to the left of the hypogastrium. A distinct lump was definable in the region of the appendix a day or two later.

The catamenia during the past three years had become irregular, with intervals of seven or eight weeks. They had also grown scanty and painful. I found after careful inquiry that there had been no show of any kind for four months before admission.

The patient was kept in Rochester Hospital for several weeks, and was ultimately discharged at her own request. Mr. Godfrey Taunton kindly informed me: "The physical signs when she was in hospital were: Fullness in the left fornix, slightly impaired mobility of the uterus, which seemed enlarged, the sound passing 2". During the last week of her stay there was distension of Douglas's pouch with fluid. The temperature ranged from 101° to normal. There was no obstruction of the bowels, but much constipation, requiring enemata. There seemed to be no evidence of rupture of a fetal sac; in fact, the only symptoms complained of were abdominal pain and occasional sickness. The patient gave a history of passing a decidua cast, but also stated that she frequently passed something of the kind. I could define no fetus or fluid swelling in the abdomen, and my diagnosis lay between salpingo-ovariis and extrauterine pregnancy."

After her discharge from Rochester Hospital the fullness increased until Mr. Poodle was able to define a circumscribed and fluctuating tumour.

Condition on Admission.

I found the abdomen distinctly distended but not tense. A tumour occupied the hypogastrium, extending as high as the umbilicus. It lay mostly to the left of the middle line, and was hardly movable. Palpation was painful, and set up contraction of the muscles of the abdominal wall. The tumour was more definable on the left than on the right side. Fluctuation was not marked. Distinct gurgling was noted over the right iliac region.

The cervix was thick and short, and closely connected with the tumour in the abdomen. A soft mass occupied Douglas's pouch and the left fornix; it was tender to touch. The sound passed for 4½ in. upwards and forwards; there was no blood or mucus at its point when withdrawn, but some clear glairy mucus. The uterus and mass were almost fixed. The breasts were fairly developed but flaccid; no milk could be pressed out of them. The areolae were well marked; the patient's complexion was naturally dark. The tongue was pale and rather glossy. The bowels, previously regular, had been constipated all through the illness. The patient had suffered from dysentery in 1902 and 1904. The pulse was 84, small, compressible, and distinctly intermittent.

Diagnosis.

I kept the patient under observation for seven days. The temperature did not rise above normal. On July 5th an attack of pain occurred and kept intermitting all the afternoon, passing away before the night. No fetal heart sounds could be heard on auscultation. Not a trace of blood or sanies came away before the operation, and their total absence was somewhat misleading. Although the history suggested ectopic gestation, I rather suspected axial rotation of an ovarian cyst, with

subsequent adhesion of intestine. It is true that there had been absolute amenorrhoea for at least four months if not five, but that symptom has been observed when a patient's health is impaired by the pain and the local peritonitis caused by twisted pedicle; besides, the total absence of haemorrhages is unusual in extrauterine pregnancy. The condition of the breasts and areolae did not absolutely favour the diagnosis of pregnancy; the outer limit of the areolae were sharply defined as in many dark-complexioned subjects when not pregnant. Still, diagnosis was very obscure, as the symptoms of several pelvic diseases which seemed possible in this case are known to be irregular.

Operation.

I operated on July 10th, assisted by Dr. Drummond Maxwell, Dr. Belfrage administering the anaesthetic.

On opening the abdominal cavity I found much intestine adherent to the tumour. On setting the bowel free I noted that the vermiform appendix was quite healthy.

The tumour was now seen to be a big cyst. Its walls were dull and of a deep ochreous colour, such as is seen in an ovarian dermoid after chronic axial rotation. On tapping, a little turbid fluid came away. I then passed my hand behind the cyst, and could feel a fetus lying in its lower part. I pushed the greater part of the cyst gently out of the abdominal wound and carefully enlarged the tapping puncture with scissors till I was able to extract a fetus of about the twenty-fourth week which showed signs of life. The sigmoid flexure ran on the posterior wall of the sac.

Although I took pains to extract the fetus as gently as possible, the greater portion of the placenta was torn away with it. The sac wall bled profusely. I packed the cavity with a long roll of gauze, and as the cut edge of the sac bled freely I made a purse-string suture round it, but I drew on it very little, as the least traction affected the sigmoid colon, which was incorporated with the wall of the sac. The bleeding from the edge was, however, checked by the suture without much traction. On the other hand, the cavity of the sac required repeated packing. I sewed the edge of the sac lightly to the parietal peritoneum and closed the abdominal wound except at its lower extremity, where a portion was left open on account of the gauze packing.

After-History.

There was twice as much for four hours after the operation, and a pad was applied to the lower part of the abdomen. For two days the patient suffered from nausea and vomiting with high pulse.

At 12 p.m. on July 12th, fifty hours after the operation, Dr. Belfrage administered chloroform and I prepared to dress the wound. I feared that the haemorrhage might recur, as in cases recorded by Malcolm¹ and others. In drawing the gauze out of the wound I found that it was saturated with cool blood, but became very thick. When the sac was emptied I was greatly relieved as I noted the total absence of oozing from any part of the sac. About two or three minutes later I passed some dry, absorbent wool into the lowest part of the sac, and on retracting I found that it was not stained with fresh blood. I packed the cavity of the sac lightly with a roll of gauze.

Within seven hours rather free uterine show, the first for four months, was observed, but there was no more oozing from the sac. No traces of decidua came away from the uterine cavity then nor later. Much fetid, bloody fluid collected in the sac for several days after the dressing; it was washed out with antiseptic solutions. The dressing gave the patient great relief; flatus passed freely, and the bowels were easily relieved by enemata. The knot of the purse-string suture came away on July 17th, and the remainder, with the sutures fixing the sac to the parietal peritoneum, were gradually eliminated.

By July 23rd, the cavity of the sac had greatly contracted, so that it had become a sinus. A sound introduced into it passed 5 in. downwards and backwards. On pelvic exploration, the uterus was found to be distinctly movable. The end of the sound which had been passed into the sinus could be felt touching the anterior wall of the rectum behind the uterus.

On August 10th I left the patient under the charge of Dr. Drummond Maxwell. The sinus, as was to be expected, contracted very slowly, and there was some purulent discharge, free from faecal odour.

On September 9th the patient was discharged from hospital. I examined her on my return from a vacation, two days before she left my wards. She had gained flesh, and was in very good general health. The sinus had become narrow and tortuous, discharging a little pus daily. The cervix had undergone very marked involution, having become short and thin, whilst, when I examined the parts before the operation, it was very thick. The sac seemed to have contracted on to the back and fundus of the uterus, the whole mass being to a slight extent movable. The right fornix and Douglas's pouch were free. A slightly tender body, feeling like the ovary, could be defined in the left fornix. There had been no period since the operation.

On December 1st Mr. Poodle informed me, in reply to a letter, that the patient was very well in general health, and only complained of a feeling of soreness over the left inguinal region. The sinus was gradually getting shallower. Menstruation had recently occurred but the show was scanty.

The Fetus.

The height of the fetus was 23 cm., or nearly 9 in. The hairy scalp was distinct, the eyebrows well developed. The skin was almost opaque, not wrinkled, and bore no distinct lanugo. The

* Read at a meeting of the Obstetrical and Gynaecological Section of the Royal Society of Medicine, December 10th, 1908.

limbs were well developed, with perfect hands and feet, bearing equally perfect fingers and toes; the nails were very short. The external organs were of the female type, distinct and without any visible anomaly; meconium escaped from the rectum, and there was no sign of spinal deformity, fissures of the lip and palate, or ectopia of the viscera. This fetus moved its limbs and distinctly cried when extracted, and it showed signs of life for some minutes after delivery. At the end of the fifth month the fetus of intrauterine pregnancy measures about 25 cm. in height. Granting that an ectopic fetus is less well-developed, especially as regards nutrition, I think that the proportions in this specimen indicate that the pregnancy had advanced to the end of the fifth month.

Placenta and Cord.

The placenta, as I have already stated, was torn through during extraction. The greater part, very thick, appeared quite normal; but at the edge there was a large infarct, over 2 in. long by 1 in. broad and 1 in. thick. The laceration during extraction seemed to have begun on the brittle tissue of this infarct. The portion of the placenta removed, some 4 in. in width, included the umbilical cord, which was 8 in. long.

The acute attack of pain on April 19th seemed to indicate rupture of the tubal sac into the left broad ligament, and a "posterior tubo-ligamentary pregnancy" (Taylor), as I found it to be at the operation. The lower boundary of the sac, in that case, was therefore the rectum. The pressure on the bowel caused constipation, as Mr. Tannton reported, and as was the case after admission into my wards, until the removal of the gauze packing. The placenta was not attached to the bowel, else there might have been diarrhoea (Freund). The fetus was living, therefore *Bacillus coli* infection, not rare in posterior tubo-ligamentary pregnancy, had not taken place.

The most important question, however, in regard to this case is the treatment of the sac. I fail to see how I could have adopted any safer method than that which seemed to me the only way to save the patient's life. The tearing through of the placenta was accidental, whilst on my attempting to remove the remainder so much haemorrhage occurred that I left it alone and packed the sac. Arterial blood spouted from the cut edges of the sac, but the purse-string suture checked it at once. The sac was secured to the lower edges of the abdominal wound, otherwise the packing would not have been effective. The packing was removed on the second day and the haemorrhage did not recur.

On the other hand, the disadvantages of this method, inevitable under the circumstances in my case, were clearly manifest to me. The cyst wall, let it be remembered, consisted not only of the posterior layer of the broad ligament but also of the adjacent peritoneum of Douglas's pouch. Therefore, when I drew tightly the purse-string suture on the cut edge of the cyst wall, the large intestine was dragged down, forming a sharp angle, so that obstruction would have occurred had I not relaxed the suture considerably. Then this same suture, as well as those which fixed the edges of the sac to the wound, did not come away until much local suppuration had taken place and the pus mixed with the sanies from the remains of the placenta made up a fetid semifluid substance which necessitated daily dressings of the sac.

Lastly, I dreaded the spread of the suppuration, as in Dr. Herbert Paterson's case;² but I feared much more the recurrence of haemorrhage, as in Mr. Malcolm's, to which I have already referred, and fortunately there was no more bleeding, and the suppuration did not extend. Still, I understand that Dr. Paterson and others find that sutures and ligatures may be dispensed with in the treatment of the fetal sac late in pregnancy, and I desire to learn how far this method guarantees the patient against that essential and imminent danger, never absent when the fetus is alive—namely, haemorrhage.

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At the annual meeting of the Wolverhampton Sunday Hospital Collection Committee it was reported that the income was £534 as compared with £553 in the previous year. The money has been allocated as follows: General Hospital, £447; Eye Infirmary, £93; Women's Hospital, £49. The expenses have been slightly reduced.

A CASE OF TUBAL PREGNANCY WITH EARLY OPERATION.

By HOWARD F. WARNER, M.B., B.S. Lond.,

M.R.C.S. Eng., L.R.C.P. Lond.,

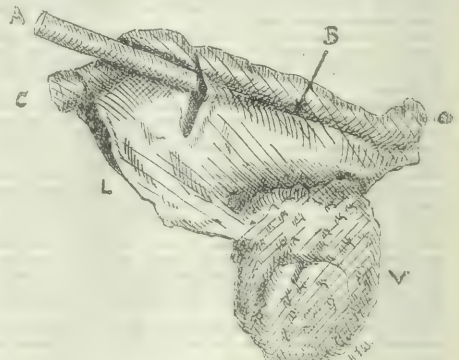
RAYWARD'S HEATH.

The interest in this case lies not so much in its rarity, for such cases are by no means uncommon, but in the somewhat puzzling nature of the symptoms, their comparative mildness, and in the short period after actual rupture at which the abdomen was opened.

Mrs. X., aged 42, married three years, had had no children, but one very early miscarriage about two years ago. She had always suffered from spasmodic dysmenorrhoea, menorrhagia, and, since marriage, from dyspareunia. She complained that for two days she had had abdominal discomfort and pain passing through to the sacrum, exactly similar to the pain generally experienced with the menses, but more acute. She had hitherto been always regular, but at the present time was about one week overdue, and though there was a "show," the flow was not as copious as usual. There was great pain on attempting to micturate and considerable difficulty; the pain was also felt passing through into the rectum and in the right iliac fossa.

The patient was of a very neurotic temperament, and considering her age and previous menstrual history it seemed probable on the first visit that the symptoms might be due to a somewhat early menopause. Hot turpentine fomentations, warm douches, and rest in bed, together with a placebo, were ordered, and on the following day the pains were much better.

I heard nothing further of the patient for seven days, during which time she had been gradually getting about again; then



Posterior view of specimen. A, Glass rod passing firstly through secondary rupture in broad ligament, and then through primary rupture into the tube; B, external limit of sac in tube—the rod will not pass beyond this point; C, divided end of tube; this is closed up; D, osium abdominale (closed); E, broad ligament, cut edge; F, ovary.

I was sent for, to find that the pains had come on again, and were now of a definitely colicky nature, the flow had become more profuse, and trouble with micturition was again present. On examination the patient complained of tenderness all over the abdomen, which, however, moved well on respiration; deep pressure was impossible anywhere, but the tenderness was most marked just above the pubes, in the right iliac fossa, and in the right loin. She also stated that the pain from the loin radiated downwards to the vagina and down the right thigh. The kidneys were not palpable, there was no superficial tenderness anywhere, and beyond determining that muscular resistance was greater in the right iliac fossa than in the left, the abdominal examination was very unsatisfactory owing to the general deep tenderness. There was no jaundice and no history pointing to gall stone. At this time the temperature was 98°, and the pulse (taken at the end of the visit) was 84, the tongue was furred and moist, but the general appearance of the patient was quite good. The attacks of pain lasted about half an hour and "doubled her up"; there was sweating with the pain, but no vomiting, and during the attacks she had felt faint, but there had been no loss of consciousness. She was not anæmic. The urine contained no pus, and, owing to menstruation, it was impossible to attach any value to the presence of blood, but at this time I thought the diagnosis lay between renal colic, tubal pregnancy aborting, and possibly appendicitis.

Vaginal examination revealed an enlarged and very tender cervix; the uterus was freely movable, normally placed, and extremely tender, giving the same pain as the dyspareunia on being touched; owing to the tenderness nothing further could be made out, except that the rectum was fuller than it should have been if the history were correct. Rectal examination

revealed nothing further, and no swelling could be felt in the pelvis. Castor oil was given and morphine $\frac{1}{2}$ grain, hypodermically, and two morphine suppositories ($\frac{1}{2}$ grain) were used at intervals during the night.

On the following day the condition had completely changed. The temperature was 99.5° and the pulse 120; the face had a definitely abdominal look, and for the first time the general appearance of the patient was not satisfactory. The pain was now mostly referred to the umbilical region and pelvis, and there had been vomiting as the result of the hypodermic injection of morphine on the previous day. The patient was restless but not anxious, and was not anxious about her condition when not actually in pain. The pain was now more continuous and less colicky: the bowels had been freely moved three times after the castor oil, the motions being entirely liquid. Considering the diagnosis again I thought it unlikely that appendicitis could have lasted so long (twelve days) without any pyrexia hitherto, without the pain becoming localized and with the general condition keeping so satisfactory in spite of the diffuse abdominal pain, and also in the absence of general peritonitis to account for the diffuse pain. Renal colic was now unlikely, as most of the pain was umbilical and pelvic, was more continuous, the temperature was now raised, and the hypogastric facies was becoming marked, and above all, the history of the case, revised in the light of its subsequent development, seemed to take on a new significance. I diagnosed right tubal pregnancy, probably aborting, and called in Mr. Buck, of the Sussex County Hospital, who came on the following morning.

Operation.

An anaesthetic was given, and with the muscles thoroughly relaxed it was possible to make out a doughy resistance in the right lateral fornix per vaginam, but nothing of the nature of a pelvic swelling; a small subserous abscess was also felt in the anterior wall of the uterus (which doubtless accounts for other points in the patient's history); by the abdomen the examination was still negative. On opening the abdomen a swelling about the middle third of the right Fallopian tube was found, and a clot of blood rather larger than a walnut was adherent to the posterior surface of the broad ligament just below the tube. The tube, ovary, and part of the broad ligament were removed in the usual way, and less than a tumblerful of blood clot was found in Douglas's pouch and removed, and the abdomen closed.

On examining the specimen it was seen that the tube had ruptured into the broad ligament (possibly during the first attack of pain thirteen days previously), and that the broad ligament was now in the act of discharging the ovum through a small rupture on its posterior surface which must have been very recent on account of the very slight haemorrhage which had occurred, and was probably synchronous with the change for the worse which had occurred on the previous day, this being the first time that the peritoneum had actually been involved.

The ovum in this case cannot, at most, have been more than five weeks old before symptoms began, which in itself makes the case somewhat unusual, though by no means a record; but the interesting point, and one which should be emphasized, is the importance of early operation in doubtful cases of ectopic gestation. The haemorrhage (internal), pain, sleeplessness, and anxiety, if allowed to continue in the hope that medical means will suffice, must vastly prejudice the patient's chances when operation ultimately becomes necessary; and the surgeon is too often called in after the patient has been "watched" almost into the world to come, when the dangers, both operative and post-operative, are vastly increased, and at the best a slow and tedious convalescence is the result.

PERFORATIVE PERITONITIS FOLLOWING ENTERIC FEVER: OPERATION: RECOVERY.

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ALTHOUGH operative treatment for perforative peritonitis following enteric fever is the rational method of treatment, and although, at any rate in Colombo, such cases are frequently seen in the medical wards of the General Hospital and diagnosed early, the condition of the patients is so seldom favourable that surgeons rightly refrain from interfering with such cases. The vitality of a patient already lowered by this toxic disease, may not stand the additional strain of an operation attended with shock, under an anaesthetic. On the other hand under favourable circumstances, when such cases are left alone and if the severity of the primary infection is not great, there is some chance of such a case developing localized peritonitis and the inflammation terminating in an abscess which can be opened and drained under local anaesthesia.

Improved aseptic precautions and saline transfusions

and injections of strychnine, etc., constitute the armament of the present-day surgeon to oppose the danger of shock and secondary infection following laparotomy. But with all these precautions, who can foretell what course the primary disease is going to run? Therefore, it is always with a great deal of diffidence that a surgeon undertakes to operate on such cases.

This report is based on a case successfully operated on by me in December, 1907, and I may mention that it is the very first case ever successfully tackled in Ceylon. A few months ago, prior to this case, my colleague Dr. T. F. Garvin and I operated on a similar case, but the patient survived only three days after the operation.

The patient, a fairly-nourished male, aged about 30 years, was admitted into the General Hospital, Colombo, on December 14th, 1907, with the usual symptoms of peritonitis.

History.

It was elicited that he had been suffering from a mild type of fever and headache for some days prior, but that his illness had not been severe enough to confine him to his bed. In fact, he was discharging his duties as an attendant of the Victoria Eye Hospital until the day previous, when he felt a sensation inside his abdomen as if something had given way while he was lifting a heavy lotion bottle. This was soon followed by acute pain in the abdomen, vomiting, and tympanites.

On admission the abdominal parietes were rigid and tender; tympanites was well marked, obliterating even the hepatic dullness; the bowels were constipated, and the right thigh was flexed. Pain was referred to the umbilicus, where tenderness was most marked. The tongue was dry and furred. Pulse 108, rapid, but of fairly good tension; temperature 102° F. Mr. Buck assured me that he had given a castor oil and turpentine enema and half a grain of calomel internally.

Diagnosis.

When I saw the case I decided to operate at once. I was mainly influenced by the favourable condition of his pulse and his general appearance. Four of my colleagues who happened to be at the time at the hospital also saw the case, and the diagnosis arrived at was either perforative peritonitis caused by the rupture of an ulcer of the bowel in an ambulatory typhoid, or of a gangrenous appendix.

Operation.

I made a median incision under chloroform, extending from the umbilicus to the pubis, and on opening the peritoneal cavity exudation lymph was seen, and gas escaped. The small bowel was inflamed, and the coils about the region of the umbilicus were adherent by recent lymph. The escape of gas led me to think that there was undoubtedly a perforation of a hollow viscus. I first examined the caecum and the vermiform appendix, and found them quite intact. When I traced the ileum from its junction with the caecum upwards I discovered, about 2 ft. from the caecal end, a perforation large enough to admit the tip of my little finger. The surrounding area was infiltrated and thickened. There was extravasation of faecal matter among the coils of the gut. My attempts to close the perforation with Lambert sutures were frustrated by the sodden condition of the bowel, but I managed to close the perforation without much delay, and mopped out the peritoneal cavity below the level of the umbilicus with gauze mops soaked in normal saline. I did not disturb the bowels above or resort to irrigation of the peritoneal cavity—a practice which I have long since discontinued. A gauze drain was placed in the recto-vesical pouch, and the abdominal incision closed in three different layers. The perforated bowel was gently wrapped up in the free end of the omentum and placed just below the abdominal wound. Two pints of normal saline was transfused into each arm-pit, and strychnine and adrenalin was each injected hypodermically. The pulse after the operation was 140. At 10 p.m. it was 108. The patient was fairly quiet; the saline and strychnine injections were repeated. At 12.30 a.m. the pulse was 118 and of fair volume. He complained of thirst. He was placed in Fowler's position and a saline enema (about 8 oz.) was given at 4 a.m.

Next morning (7.50 a.m.) the pulse was 120 and small. He had slept fairly well, complained of no pain over the abdomen, and had passed urine naturally; no motions and no flatus had been passed. The temperature was 101.2° F. A saline enema (5 iv) was ordered every third hour, and turpentine capsules (m.v. each) every fourth hour. At 4 p.m. the pulse was 120; he had passed flatus, but there was slight tympanites present. The turpentine was omitted; and eserine sulphate $\frac{1}{2}$ grain in a drachm of water given every second hour. At 8 p.m. the abdomen was tympanic and distended; no flatus had passed; the pulse was small and rapid. The turpentine capsules were repeated. At 9.30 p.m. he had vomited once or twice; the pulse was 120, and he had abdominal pain. He had had no sleep, and tional 15 grains was ordered.

On the morning of December 16th the temperature was 98.4° F., the pulse 106 and of fair volume. He had passed flatus and the tympanites was much less. He had vomited several times, and had pain over the abdomen. The dressings were removed; the discharge was offensive and slightly recalcitrant in odour. In the evening the temperature was 101.4° F., the pulse 124. Pain was much less; he had passed flatus and felt more comfortable. Eserine was repeated every fourth hour.

On December 17th the temperature in the morning was 100.6° F.; the pulse 108, of good volume. He had passed a motion on the previous night. Respiration was less laboured. Flatus had been passed; abdominal distension was much less and the patient felt better. A morphine injection was given at bedtime.

On December 18th the pulse was 126; he had slept well. In the evening he passed five loose motions. Morphine was repeated.

On December 19th the pulse was 110; he had slept very well; the bowels had been moved three times only. Bismuth and morphine was given internally. The abdomen became distended, but this was relieved by a soap enema.

On December 20th the morning temperature was 99.8°, the pulse 108 and of good volume. He had passed only one motion, and had slept well after a chloral and bromide draught.

From December 21st to 27th the temperature ran an irregular course; the bowels also moved freely, but no attempt was made to check the motions completely, as it produced distension and discomfort. Whenever the motions were too frequent bismuth and morphine were given internally. In the meantime he was given digitalis and nuxvomica in a mixture, and was fed on cow's milk, malted milk, chicken broth, liquid peptonoids, brandy, etc. From December 27th, 1907, to January 1st, 1908, his temperature was normal, but there was then again a slight rise, not exceeding 99° F.

The abdominal wound became infected, and had to be dressed daily. At one time a little faecal matter passed through the lower end of the wound, but it has since ceased. Now the wound is almost healed, and the patient is enjoying ordinary diet. Vidal's test proved negative three times.

Irrigation of the peritoneal cavity at the time of the operation is not attended with the best results. I believe it tends to spread the infection all over the cavity, and at the same time dilutes the antibodies formed by the organism to resist the invasion of the micro-organism; therefore the less the interference the better the result. Gauze drainage acts much better than rubber tubes by virtue of its capillary attraction. After the fourth day the abdominal cavity may be irrigated with a mild antiseptic lotion such as sterilized boric, as was done in this case.

I must express my gratitude to my house-surgeon, Dr. T. de Krelser, for the great attention and care bestowed on this case.

ON THE METHOD OF MEASURING THE SYSTOLIC PRESSURE IN MAN, AND THE ACCURACY OF THIS METHOD.

BY

LEONARD HILL, and MARTIN FLACK,
M.B., F.R.S. B.A., B.M.Oxon.

THE systolic pressure is usually obtained by means of the armlet or cuff independently invented by Riva Rocci and Hill and Barnard. The armlet may be used with a mercurial or spring manometer. The pressure is raised until the radial pulse is obliterated, the armlet being applied at the level of the heart to avoid the influence of the hydrostatic pressure of the column of blood in the body, and so obtain the true systolic pressure of the heart. One of us (L. H.) has perfected recently a form of sphygmometer which serves the same purpose as the armlet and mercurial manometer, is as accurate, far simpler and quicker in use, and can be carried in the waistcoat pocket. The instrument consists of a rubber bag, about 1½ in. in diameter, and enclosed in a silk cover, which is connected by a short length of tubing to a straight glass tube—the gauge. The gauge is carried in a case like that of a clinical thermometer. It consists of a tube open at one end and expanding into a small air space at the other end. Near the open end is a side hole. The closed end is formed of an inch of solid glass to hold the gauge by, so that the air space is not heated by the fingers. On placing the open end of the gauge in water the water rises up to the side hole and forms a meniscus there. This is the zero of the scale, the tube being graduated up to 250 mm. Hg. The tube of the bag is slipped over the open end so as to cover the side hole. The bag must not be blown out to distension, but be about two-thirds full of air. The subject is given the gauge to hold by its solid end; and the observer takes the wrist of the subject, places it at the heart level, and, covering the bag

with his fingers and palm, presses it down over the radial artery, his thumb being behind the wrist. With the index finger of the other hand the observer keeps the radial obliterated to prevent a pulse re-entering from the anastomosis with the ulnar artery. With his second finger placed between the index and the bag he feels when the pulse is obliterated by the pressure of the bag, and then reads the position of the top of the meniscus in the gauge. The bag, being large, flaccid, and entirely enclosed by its silk cover and the fingers (its tube escapes between them), takes the place of the leather cuff and the bag of the armlet. Small unenclosed bags give untrustworthy readings, for part of the pressure applied goes in distorting the rubber bag, and is not transmitted to the artery. After use the fluid is jerked out of the gauge. Care must be taken on refilling that there is no water in the side hole, to prevent the meniscus rising. The side hole can easily be cleared by blowing into it, and the orifice of the tube can be cleared by the bristle of a nailbrush. The instrument is made by Mr. Hicks, 8, Hatton Garden, E.C.

Considerable doubt as to the accuracy of the obliteration method of measuring the systolic blood pressure has been expressed recently, particularly by Dr. William Russell.¹ It has been asserted that much of the pressure applied by the armlet method may go to compressing the stiff wall of a degenerated or contracted artery. Herringham and Womack have just published a series of observations in which they found that the resistance of the wall of the *post-mortem* brachial artery may vary from 4 to 34 mm. Hg. They say that the resistance does not vary with age; that at every age exceptional cases occur; that the extremes vary greatly and irregularly; that the two brachials may differ by as much as 10 mm. Hg. The same was found true of the carotids and iliacs. Their results, in our opinion, point to varying *post-mortem* contraction of the arteries as the cause of the resistance—*post-mortem* contraction which is excited by injury and relaxed by freezing, and has been so fully and ably studied by MacWilliam.² We have no right to assume that much *post-mortem* contraction occurs in the living artery. This contraction is the natural response to injury which causes the closure of cut and torn arteries. Moreover, it is a well-established fact that obliteration of a living artery excites it to relax, and thus renders error from the resistance due to a contracted state unlikely. We have tested the accuracy of the obliteration method on man in the two following ways, and both ways, as far as our tests go, show that the method is an accurate one.

I.—THE GRAVITY METHOD.

It has been proved by Mummery and also by one of us (L. H.) that the obliteration pressure in the femoral of the dog is the same (within 1 or 2 mm. Hg) as the systolic pressure taken in the opposite femoral with a cannula and Hürthle manometer. It has been proved by one of us (L. H.) that in a dog placed in a vertical posture, head upwards, the pressure in the femoral artery is higher than in the carotid by the hydrostatic pressure of the column of blood which separates the two points of measurement, while, if the dog is turned head downwards, it is higher in the carotid than in the femoral by the same column of blood. The pressures were measured directly with cannulae and mercury manometers.

Carrying out similar observations on man with the aid of two armlets and two mercurial manometers, we obtained like results. It is very improbable that this would be the case if the resistance of the arterial wall entered into the readings, for the contraction of the arteries varies with the pressure they have to support and with the control of the vasomotor nerves, and both factors are modified very greatly by change of posture. In the case of sclerosed arteries, it is unlikely that any two of them would be degenerated and stiffened to a like extent.

On students we have placed one armlet round the upper arm and another round the calf, and used the pulse in the radial at the wrist and posterior tibial artery at the ankle as the index of obliteration. One of us controlled the pump and read the manometer, while the other felt both arteries and signalled the moments of obliteration. It is essential that the readings of the two arteries be taken together and not successively, to avoid errors arising from oscillations of pressure due to the varying attention or excitement of the subject.

We took the readings with the student (1) lying supine in the horizontal posture; (2) standing with the observed leg relaxed and the weight thrown on the other leg; (3) lying supine with the legs raised into the L-shaped position; (4) hoisted up by rope and pulley into the vertical head-down posture, the rope being attached round the foot of the leg which was not observed, and the observed leg attached to this leg by a bandage, so that the posterior tibial artery could be felt at the ankle.

The readings were taken both on raising and lowering the pressure repeatedly and the average taken.

Subject.	Posture.	Brachial Artery. Pressure in mm. Hg.	Posterior Tibial Artery. Pressure in mm. Hg.	Difference in mm. Hg.	Height of Column separating in cm.	Difference Calculated from Height of Column in mm. Hg.
H. H. R.	Horizontal	140	138	2	—	—
	Standing	136	204	68	89	63.5
	L posture, legs up	122	76	46	60	46.1
	Vertical head down	148	70	78	1010*	77.7*
P. H. R.	Horizontal	126	126	—	—	—
	Standing	140	204	64	86	66.1
	L posture, legs up	132	78	54	65	50.0
	Vertical head down	116	42	74	91*	70.0*

* The arm was not in quite the same position in regard to the heart level as in the standing posture. It had sunk headwards, so that the column of blood separating the two points of measurement was longer.

Considering the difficulty of reading sharply the return of the feeble posterior tibial pulse in the head-down posture, the agreement of the calculated and observed differences is astonishingly near. A most interesting point in these observations is the indication that they give that while the pressure which the heart has to overcome does not alter greatly, the pressure in the cerebral arteries is kept approximately the same in the horizontal, standing, and vertical head-down postures, in spite of the enormous differences in the effect of gravity.

Thus, in P. H. R. the pressure at heart-apex level was approximately 125 in the horizontal posture, 140 in the standing, and 110 in the vertical head-down posture. The vertical distance from base of brain to armlet in the standing posture was about equal to 20 mm. Hg; so that, deducting this amount, the pressure in the circle of Willis would be about 120 mm. Hg. In the vertical head-down posture the subject kept his head bent up somewhat, so that the vertical column separating armlet and base of brain was less—say, equal to 10 to 15 mm. Hg; and, adding this, the pressure in the circle of Willis would be about 120 mm. Hg. In the horizontal posture it was actually 126 mm. Hg. In the case of the arteries of the legs there was no such regulation. At the level of the calf the pressure was 126 in the horizontal, 204 in the standing, and 42 in the vertical posture. The regulative mechanisms engaged are (1) constriction of the arteries, (2) the output per minute of the heart, (3) support of the venous and capillary system by the muscles, (4) the respiratory pump. In the standing posture the pulse is more rapid, the arteries in the abdomen and limbs constricted, the skeletal muscles braced up, the respiratory pump more active.

In the case of patients with high arterial pressure we have applied the gravity method to the two brachials, one arm being held up and the other down, and the pressure read in two armlets at the same time.

In one case of aneurysm, the systolic pressure varied so much with successive beats that no good readings could be obtained.

Our second method, we think, proves with certainty the accuracy of the obliteration method. We have, it is true, up to now tried it in only a few cases, but we commend the trial of this method to those who wish to test the matter further on cases where readings are high and arteries thickened. We place one armlet round the

Case.	Difference in Height Measured equal to mm. in Hg.	Difference in Pressure Observed.	Arterial Pressure.
Sclerosis, anging pain, emphysema	17.0	17.5	140
Chronic nephritis, thick arteries	10	10	185
Diabetes, small con- tracted arteries	15.2	15	175
Chronic nephritis, ar- terio-sclerosis	11.6	12	197
Paraplegia	11.55	11	175

Many experiments on healthy subjects gave the calculated reading within 0.2 mm. Hg.

brachial, and another narrower one round the forearm of the same arm. We find the obliteration pressure with the first armlet. Suppose it is 150 mm. Hg. We lower the pressure in this armlet to, say, 145 mm. Hg, so that the arterial blood can get through into the limb, but cannot get out of the veins of the limb until the pressure in the veins rises above 145 mm. Hg.

Allowing sufficient time for the veins to fill, we then measure the pressure in one of the superficial veins, and find that it does finally reach this pressure thus: We raise the pressure in the second armlet above 1.45 mm. Hg, and choosing a suitable vein above this armlet, by stroking, empty it upwards past the next valve, then quickly lowering the pressure in the second armlet observe the pressure at the moment when the vein fills from below. One of us watches the vein, and signals the moment of filling; the other the manometer. We repeat this observation several times. Now if we find the pressure in the vein reaches 145, we know that the obliteration pressure was correct within 5 mm. Hg, for no one can suggest that the wall of a superficial vein offers any noteworthy resistance; and as the venous pressure is found by the second armlet to be 145 mm. Hg, and equal to the pressure in the first armlet, and as the pressure in this is within 5 mm. Hg of the obliteration pressure, the latter is proved to be correct within 5 mm. Hg.

Subject.	Obliteration Pressure.	Pressure Main- tained in Brachial Armlet.	Pressure Measured in Veins of Forearm.
G. T. ... Sclerosed arteries	156	150	148
F. T., aged 59	122	110 114	110 114
G. ... Pipe-like arteries full of plaques	156	120 130	118 176
G. M. ... Hard arteries	148	142	140
T. C. ... Granular kidneys, thickened tortuous arteries	194	184	100 First reading. 110 Second .. 140 Third .. 180 Final reading after waiting long enough for venous pressure to rise.
A. J. ... Phthisis, tortuous arteries	(1) 106	100	40 First reading. 80 Second .. 100 Final ..
	(2) 106	95	36 First .. 72 Second .. 92 Final ..
	(3) 106	100	40 First .. 60 Second .. 58 Third .. 92 Fourth .. 102 Final ..

We have also tested the method on several normal men.

To carry out this method properly a vein must be chosen which does not fill from above, or, at any rate, not quickly. With such high pressures in the veins the valves

leak, and in some cases the leakage is such that we have not been able to carry out the method. A slender vein can generally be found which answers the purpose. The pressure in the second armlet must be lowered quickly directly the vein has been stroked empty, so that the filling of the vein from below may be observed before it can leak full from above.

In cases of high pressure it is difficult to get patients to endure long enough the somewhat painful feeling of pressure which results from the maintenance of the first armlet at a pressure close to the obliteration pressure. It is necessary to work quickly in these cases, and give a rest between each test.

REFERENCES.

*1 BRITISH MEDICAL JOURNAL, October 10th, 1908. *2 *Proc. Roy. Soc., LXX, 1902.*

TREATMENT OF INOPERABLE CANCER BY HYPOCHLORITES.

By JONATHAN E. A. G. BECKER, M.B., C.M.E.DIN.,

LONDON, S.W.

DURING the past three or four years I have, when called upon to deal with cases of inoperable cancer, employed a method of treatment which is entirely novel so far as I am aware. The cases in which I have carried it out thoroughly are not numerous, and at present only the three recorded are of sufficiently old standing and sufficiently verified as regards diagnosis.

1. *Secondary Invasive Growth—CASE I.*

A woman employed as a cook in a large block of flats in London. In October, 1901, ovariectomy was performed on her at Guy's Hospital and the right ovary removed. Little relief from her previous symptoms resulted, and she continued to attend as an out-patient, the uterus being curetted on two or three occasions. As she continued to fail in health she was readmitted in November, 1902. On laparotomy a mass was found in the pelvis, suggesting a malignant growth with secondary deposit in the omentum. No microscopic examination was made, but from the relations of the mass and its appearance it was concluded that it was a case of malignant disease. Consequently the abdomen was closed without further interference, and the patient discharged in February, 1903.

Ten months later, or in December, 1903, the special treatment in question was commenced. By May, 1904, five months later, the patient was so far recovered that she was able to do all her household work and to go out bicycling, riding as far as thirty-five miles in a day. In appearance and feeling she was perfectly well. Nevertheless, the treatment was continued for several months longer. At the date of writing, four years later, this patient is still in good health and earning her living by her own exertions.

CASE II.

A woman who had a radical operation for mammary carcinoma at Guy's Hospital in March, 1907, the diagnosis of cancer was verified by microscopic examination. Two months after she had been discharged, some enlarged glands were noticed on the left side of the neck, and these were removed surgically at the Soho Hospital for Women. Again, two months later, further growth was observed in the same locality, whereon the special treatment was commenced. In two months' time the growth had disappeared, and at the time of writing, eighteen months later, she is in absolutely good health, feeling well, taking active exercise, and pursuing her ordinary occupation—that of a school teacher.

CASE III.

A French gentleman, who, through a bicycle accident, received a blow on the right breast. A tumour formed, and was diagnosed in May, 1904, as a malignant growth. In consequence a radical operation was performed at King's College Hospital in the same month, the growth, on microscopic examination, being found to be a spindle-celled carcinoma. The patient was seen now and then by his surgeon, and in 1906, though the cicatrix seemed in good order, the conclusion was reached by this surgeon that there was a secondary and inoperable growth in the sternum itself. Subsequently the patient had x-rays applied a few times and received some injections of what was probably a culture of *M. neoformans*.

Finally, in November, 1907, he placed himself in the hands of the writer of this note, who commenced the special treatment in question. It was continued until May, 1908, at which date all evidence of new growth had disappeared, and the patient was apparently in perfect health, locally and generally. That is still the position at the date of writing, eight months later.

In describing these cases it has not been thought necessary to enter into finer details of their clinical course, but their more essential features are all duly recorded. It is conceivable, of course, that in Case I the growths seen and deemed by the operator to be malignant and inoperable may have been tuberculous. Such cases do occur, but it

would be a strange coincidence if one followed a previous operation for cystic disease of the ovary. In the other two cases the initial disease was verified microscopically, and, as in the first case, the recurrences were deemed by surgeons holding positions on the senior staff of important London hospitals to be malignant.

I propose to report the conditions of these three patients again a year hence, whatever it may be.

The treatment employed was the injection of a solution of hypochlorites of potassium and sodium. This I prepare by dissolving 5 grams of KOH and 4 grams of NaOH in a litre of distilled water, and passing it through washed chlorine gas. Of this solution, 1½ to 2 c.cm. were injected daily for a varying period, usually under the skin over the deltoid muscle or over the great trochanter, so that the solution might enter the system at a site in the general neighbourhood of the lymphatic glands. The growth itself and the skin over it were carefully avoided. So, too, was the use of alcohol during treatment. I use an ordinary all-glass syringe with a platinum needle (to avoid corrosion), and in making the injections adopt ordinary aseptic precautions. There is a varying amount of local pain, lasting for from two to five minutes. I have not seen any reaction.

Should any medical reader care to try the treatment and desire further details, they are, of course, at his disposition.

THE TREATMENT OF CANCER WITH COCAINE.

By ROBERT MUNN GILCHRIST,

BOLTON, LANCs.

THE first time I used cocaine in the treatment of cancer was as a local application in a very painful secondary case, the primary growth having been removed a few weeks before by the late Dr. McGill of Leeds. On its recurrence, I saw Dr. McGill along with my patient, and he at once came to the conclusion that further operation was out of the question. This was a very instructive case, as, being on the face, you could watch the progress of the growth under varying forms of treatment.

Before the use of cocaine, from the first indication of a fresh deposit until ulceration occurred was a period of about three days, but after the use of cocaine this period was lengthened to as many weeks, thus showing that cocaine had some influence in retarding the growth.

In July, 1891, discussing with my late friend, Dr. Calderwood, "the Mattei treatment of cancer," I said that the only agent I had ever used having any effect on the growth of abnormal epithelial tissue was cocaine, and having a very suitable case under my care at the time, I determined to try the effect of the internal administration of cocaine.

CASE I.

Mrs. C. was 49, and almost *articulo mortis*. Extreme anæmia, probably from secondary deposits in stomach and liver in this case of uterine cancer, had brought her into this condition. Having an idiosyncrasy to opiates, whichever way administered, made this case not a very easy one to treat, especially as she was suffering very much pain. I commenced the treatment with cocaine by giving her one-eighth of a grain every three hours, and gradually increasing it to one-quarter of a grain. The growth in this case occupied almost the whole of the vagina, and involved both bladder and rectum. She had excruciating pain, retention of urine, general anasarca with albuminuria, and most alarming attacks of hæmorrhage. The effect of the administration of cocaine was most marked and immediate. The hæmorrhage became less and less, the pain was very much relieved, the anasarca and albuminuria disappeared, sickness stopped, and she again began to take her food with relish.

She continued to improve for six months, when, being much upset by her husband, she had an attack of meningitis, from which she died.

CASE II.

Miss W. consulted me about her breast in May, 1891. I found a growth involving the whole of the left breast, and enlargement and induration of the axillary glands. The skin over the breast was becoming affected, and I advised immediate removal. To this she would not consent. I then commenced treatment by administering cocaine both internally and externally. The pain, which had been the most important factor, became to all intents and purposes a negligible quantity. The skin broke down in many places over the breast, but healed. The growth seemed to remain in a stationary condition, and the glands in the armpit, if anything, became smaller. She continued in

this way without any material change until December, 1892, when she died from an acute attack of phthisis.

CASE III.

Mrs. H., aged 52, came to me in July, 1891, with cancer involving the whole of the uterus. Her chief symptoms were pain and hæmorrhage. The general condition of this patient was very bad, as she had suffered for years from a large number of chronic ulcers on the legs. Here I again administered cocaine, with the result that the hæmorrhage at once ceased and the pain became a very unimportant factor. She improved very much constitutionally, and was able to walk a mile from home a week before her death, which took place in April, 1892, from obstruction of the bowels. She would not consent to operation.

CASE IV.

N. C., aged 38, came under my care in November, 1891. I found a cancer involving the entire lumen of the rectum. He had great pain and difficulty in passing his stools, which act was always accompanied more or less with hæmorrhage. He continued under my treatment for about ten months, during which time he gained slightly in weight, and had very little pain. The hæmorrhage ceased, and the growth seemed to be stationary, as also to become more regular in outline to the touch. Because I could not promise him a definite cure he placed himself in the hands of a quack. He quickly got worse and died.

CASE V.

Mrs. M., aged 50, had cancer in the left breast. The growth was about the size of a pigeon's egg, and the skin was adherent to it. The nipple was retracted, and the axillary glands hard and enlarged. She commenced taking cocaine in September, 1892, and continued until July, 1893, when I amputated the breast and excised the glands. During the six months she was taking the cocaine the growth seemed sometimes to be a little smaller, sometimes a little larger—in fact, correspondingly as she took the cocaine. I have lost sight of this case.

CASE VI.

Mrs. B., aged 47—a case of uterine cancer—came under my care when in a very advanced state. She was shrunk and shrivelled, and had most marked cachexia. In this case also the hæmorrhage ceased, and the pain was very much alleviated. She died after ten months' treatment.

CASE VII.

Mrs. W., aged 43, came to me in April, 1892, with advanced cancer of the left breast. She had the six large breasts. The growth involved the entire breast; the skin was affected, and the glandular enlargements in the axilla were very marked. This case improved less than any other in which I have administered cocaine, and she died in October, 1892. The treatment at first seemed to stay the growth; but sloughing commenced, and, if there was any peculiarity, it was the size of the sloughs that kept coming away.

CASE VIII.

Mrs. E., aged 43—another case of advanced uterine cancer—came under my care in August, 1893. Here again the cocaine has controlled the hæmorrhage, and there is no other symptom of the growth present besides a sensation of weight. The more cocaine she takes the better she is, and she is performing her household duties.

CASE IX.

Mr. W. This was a case of some malignant disease involving the pyloric end of the stomach. Opiates failed to give any relief to his suffering, so I administered cocaine, from which he had considerable benefit. He died suddenly after three or four months' treatment.

CASE X.

Mrs. B., aged 47, had considerable swelling in the right breast, with enlargement of axillary glands. She had the usual pains. After four months' treatment the enlargements have entirely disappeared, and she is now in her usual health.

CASE XI.

Mrs. C., aged 42, had also swelling in the right breast, with pain and enlargement of axillary glands. After two months' treatment the breast has returned to its normal condition, and she is now in her usual health.

CASE XII.

Mrs. R., aged 37. A similar case to Case XI. Here again the symptoms have disappeared under treatment.

CASE XIII.

Miss H., aged 35, had swelling in the left breast, with pain and enlargement of axillary glands. Under treatment with cocaine all the symptoms have disappeared, and she is now in her usual health. The mother of this patient died some years ago from cancer.

CASE XIV.

Mr. B., aged 50. Seven years ago I removed an epithelioma from his lower lip. Some months ago he consulted me as regards a whitish-looking blister which had come on the site of the cicatrix. I gave him cocaine both internally and externally, and the lip has resumed its normal appearance.

In all these cases the administration was followed by benefit.

1. In every case the general constitutional condition of the patient was very much improved, even if that was only for a time.

2. From the observations I have made in these cases, I consider, so far as the relief of pain is concerned, that cocaine stands unrivalled, for while easing, or altogether taking away pain, we have none of the objectionable conditions which opiates produce.

3. In every case of uterine cancer where hæmorrhage was a prominent symptom the administration of cocaine was followed by immediate benefit; either stopping the flooding entirely or leaving only at intervals a show.

As to the *modus operandi* of the drug I offer no opinion. The cases cited show the general improvement in health, the relief of pain, and the power of controlling hæmorrhage. Whether it has any power over, or effect on, the embryonic epithelial cell, whereby a malignant is converted into a benign tissue, or whether its action is on the nerve terminals, or whether it is only by its powerful stimulating action generally, that cocaine has any control over the symptoms mentioned I do not know, but I know that patients suffering from cancer bear larger doses of cocaine with impunity than is generally understood, looking as if there was some natural affinity between the one and the other.

If a patient came to me suffering from a growth in which the diagnosis was doubtful, I would administer cocaine, and if there was then no improvement I could almost certainly say the growth was not malignant. So that I consider cocaine also a valuable diagnostic agent.

Reverting again to the cases mentioned, I may say that I cannot trace Nos. 5 and 8; No. 10 died last year from bronchitis, and Nos. 11, 12, 13, and 14 are still living and have not had any recurrence of the disease.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A CANCER HOUSE.

It appears to me that the following facts may be of some interest to your readers.

Some short time ago a man came into my consulting room one evening. He had tuberculous glands in his neck, and in trying to elicit a family history he gave me the following remarkable and interesting account.

His family lived on a farm in Glamorganshire. The house is old, and at one time had been of considerable size, and occupied by the agent of the property on which it was built. Latterly this house had been divided into two smaller houses by a partition wall, each house being occupied by a family of farmers, who were not related to one another—the T.'s, my patient's family, on one side, the R.'s on the other.

Mary T., the farmer's wife, suffered from cancer of the stomach, from which she died at the age of 76 in 1882.

Her daughter-in-law, Emma T., lived in a farm near by, and who nursed her in her illness, moved with her family into the house on the old woman's death. She was operated on for cancer of the breast in 1886, which recurred, and from which she died in 1890 at the age of 49.

Her daughter, Edith T., nursed her mother in her last illness, and she in turn developed cancer of the breast, which returned after operation, and she died from the recurrence in 1896 at the age of 32.

Edith T. was nursed in her last illness by Mrs. R., who lived in the other half of the divided house. Mrs. R. died in 1900, aged 68, from cancer of the breast.

Her husband's nephew, David R., came to live at the farm after Mrs. R.'s death, and he died there in 1903, at the age of 32, from cancer of the throat.

We have here a series of 5 fatal cases of cancer under one roof, if not actually in one house, in a period of twenty-one years, and only two of these persons were blood relations—Emma and Edith T., mother and daughter.

It seems there is something more than coincidence here, and that probably there are predisposing, if not determining, factors to be found in the house and its surroundings. The house is built on the side of a stream that courses down the valley. The stream, which is often swollen with floods, is not sluggish, but the subsoil is always saturated with moisture. The valley is thickly wooded, and many trees are affected with arboreal

tumours, one tree, an ash, close to the house, being much disfigured by these bosses.

Mr. Keith W. Monsarrat, in the *Medical Annual* for 1899 and 1900, summarizes the views of Haviland, Noel, Fiesinger, Lloyd-Jones, and others, that cancer is most prevalent in low-lying districts, near rivers which are liable to floods, and that proximity to trees is connected in some way with the prevalence of the disease. The connexion between the prevalence of cancer and the prevalence of arboreal tumours has also been noted by many observers. These vegetable tumours are apparently contagious, as several usually exist on neighbouring trees, and it is supposed that the infection is borne from tree to tree by insects.

ROBERT J. SIMONS, M.R.C.S., L.R.C.P.

Bridgead, Glamorgan.

RUPTURE OF THE VENTRICLE.

I was called to see a man, aged 80, who had been found dead in bed. He had been quite well previously, and had been heard moving about half an hour before he was found. There were no signs of any struggle.

At the *post-mortem* examination the pericardium was found to contain 4 oz. of fluid blood and 8 oz. of clot. The heart weighed 20 oz. On the front of the left ventricle was a zigzag rupture, $\frac{3}{4}$ in. long, communicating with the interior of the ventricle. All the valves were atheromatous, especially the aortic and mitral. There were large calcareous plaques in the aortic valve. The heart muscle was hypertrophied and showed extensive fatty degeneration. The coronary arteries were normal. The aorta and large vessels were atheromatous and calcified. The right pleura was adherent all round and the left pleura at the apex. The right lung weighed 2 lb. 1 oz., and contained a small old tuberculous focus at the apex. The left lung weighed 1 lb. 13 oz., and had a large calcified tuberculous nodule at apex. There were evidences of bronchitis and oedema throughout both lungs. The liver weighed 3 lb. 13 oz. and was fatty. The spleen was very hard and weighed 8½ oz. The kidneys weighed 6½ oz. each and showed chronic nephritis, with diminution of cortex and cysts both on the surface and internally. The capsule stripped easily. The bladder was in a condition of chronic cystitis, and the prostate was enlarged and cystic. The brain weighed 2 lb. 12 oz. The dura mater was very adherent to the bone. The basilar and other arteries showed marked atheroma.

Death was due to rupture of the ventricle, probably the result of some strain, such as coughing. I believe spontaneous rupture of the ventricle is a very uncommon condition.

London, N.

SIDNEY F. FOURCARE, L.S.A.

A CASE OF FOREIGN BODY IN THE PLEURAL SAC.

THE patient in the following case was a baby of 8 months, which when I first saw it on August 4th presented all the phenomena of severe right-side pneumonia, and in addition an incessant short-cough.

Progress.—During the next few days its condition oscillated, and on the 9th I found evidence of pus in the right pleura, though much of the dyspnoea was gone. As I was going away early next day, I asked my locumtenent to place the case first on his list and visit it, prepared to operate if need be.

Treatment.—This he did, and, my partner, Dr. H. W. Garden, administering chloroform, incised the swelling which I had located and let out a little very fetid pus. A drainage tube was inserted and kept in till August 22nd, the child meantime improving somewhat. Three days later, having returned home, I reassumed charge of the case. I found the cricoid of the sinus inflamed, the surrounding tissue oedematous, and a little non-offensive pus exuding. On passing a probe a spot was felt which suggested bare bone, but did not feel quite like it.

Result.—About a week later, during which the child's condition improved somewhat, I noticed, when about to dress the case, a little brown spot in the wound not larger than the point of a blunt pin. I seized it with forceps and drew out a body about 1½ in. long and as thick as the lead pencil supplied with pocket-books. It was soaked with pus, and a little offensive. After carefully washing it I thought at first it was a piece of a sweeping broom, but on more minute examination I recognized it to be a spike of the common meadow barley, *Hordeum pratense*. The spike was quite perfect. The next day the child was vastly better, the wound had taken on a healthy appearance, and in ten days the wound was healed and the child quite well.

REMARKS.—It seems incredible that a baby of this age could have sucked a body of the size and shape stated into its larynx, and that this should have passed down the right bronchus, worked its way through the base of the lung, and finally into the pleura, whence it was removed through the chest wall. On the other hand, if the body were swallowed and passed up from the stomach through the diaphragm into the pleural cavity, the dyspnoea, stridor, and symptoms of pneumonia could not be explained. The mother could throw no light on the affair. One whole day the child had been out of her sight and in the care of a neighbour, but this woman denied having given the baby any grass stalks to play with, and I could elicit no history of sudden spasm or partial asphyxiation, such as one would expect to occur when the foreign body passed the epiglottis.

Chadwell Heath.

T. RECELL ATKINSON, M.D. Durh.

VARICELLA AND HENOCH'S PURPURA.

THE two following cases exemplify certain morbid relations:

CASE I.—In December, 1907, D. B., a girl of 7, recovering from varicella, began to suffer from pain and swelling in the larger joints. Salicylate of sodium was prescribed, and in two days these symptoms abated, to give place to vomiting and abdominal pain, tenderness, and distension. Treatment gave little relief until, after several days, blood began to appear in the evacuations. The heart was now found to be affected, and exocardial and endocardial murmurs were audible at base and apex. Coincidentally there was a return of arthritic pain, and about wrists and ankles appeared an eruption of purpuric spots. There was no renal nor other complication. Recovery was slow, and a cardiac bruit persists. The child was fair, of delicate appearance, defective teeth, motherless from early infancy, without evidence of past tuberculosis, but exhibiting in her stature and gait (congenital) dislocation of both hips, a state confirmed by skiagram.

CASE II.—A. W., a boy of 2½ years, had pertussis and bronchopneumonia in March, 1908, and by June had only partially recovered, when he, with other members of the family, were attacked by varicella. The lesions were of the usual distribution, the severest those on the belly, where an intense red aureola surrounded each, and where into each vesicle haemorrhage had obviously taken place. Above the knees and on the arms were several subcutaneous ecchymoses. The boy was very sick and in constant gastric pain. The abdomen became swollen; the surface around the varicella lesions oedematous, tender to palpation. An intestinal haemorrhage was predicated; it appeared after several days of constipation. The vesicles soon began to slough, and so deeply as to expose the muscles—varicella gangrenosa. Haemorrhage ceased; the abdomen, however, continued to be swollen, the inguinal glands enlarged, and when the boy was well enough to run about, and the family removed to another town, he still presented the picture of tuberculous peritonitis. This patient had not been vaccinated, as his mother attributed the death of an earlier child to the severity of vaccinia.

REMARKS.—The two cases illustrate the play of related morbid processes—the infective and the rheumatic, the rheumatic and purpuric, purpuric and tuberculous.

Clifton.

DAVID A. ALEXANDER, M.B.

THE TREATMENT OF CHILBLAINS BY PEROXIDE OF HYDROGEN.

SINCE 1903, when Dr. Norman Walker quoted Courtin of Bordeaux (in the *Medical Annual*) as originating this treatment, I have frequently employed it, and have been greatly pleased by its almost unvarying success. My plan is for the patient to bathe the affected parts in peroxide of hydrogen (10 vol. strength), diluted with equal parts of previously boiled water, still hot, for fifteen or twenty minutes, twice daily. This treatment has the additional advantage of being capable of being carried out even if the chilblains are cracked and ulcerated, though it is well to diminish the strength of the peroxide if much pain and irritation is produced by the application. A continuation of this treatment for two or three days in most cases will effect a cure.

Lincoln.

E. MANSEL SYMPSON, M.D.

DIACHYLON AS AN ABORTIFACIENT.

DR. EDMUND HAY's interesting memorandum in the JOURNAL of January 23rd, p. 214, giving an account of three cases of plumbism due to the taking of diachylon to procure abortion, calls attention to the somewhat curious fact that hitherto London seems to have escaped this evil, which has spread so widely in the populous centres of the Midlands. Thanks to one or two sentences of hard labour upon midwives, who were proved to have sold these "diachylon pills" for improper purposes, there appear to be somewhat fewer cases in the districts about here. Cases still, however, occur from time to time. Only last month I saw one which ended disastrously. Its history is briefly as follows:

A young single woman, aged 23, the daughter of highly respectable parents living near Sheffield, was brought to my consulting rooms by her parents, on account of great weakness and very severe headache. She looked extremely anaemic and very ill. On examining her chest, I found the breasts full and tense, with a small quantity of secretion from the nipples on pressure. Further investigation showed the uterus reaching to the umbilicus. An amenorrhoea of about six months was admitted. On looking at the gums, I found a deep blue-black border. Everything was denied by the patient herself, both the possible pregnancy and the taking of diachylon. However, I pointed out to her parents the gravity of the symptoms, sent her back home, and urged them to call in their own medical man at once. I wrote to him explaining the position of things, and two days later I received from him a letter, saying that he had been hastily summoned to the patient the day before to find she had been delivered of a dead fetus whilst at stool. Unfortunately that is not the worst. One month later he telephoned, asking me to go over at once and see the girl with him. She was then in the last stage of cardiac failure secondary to subacute nephritis. The headache had been agonizing. There was double optic neuritis, with extensive haemorrhagic retinitis; vision almost gone; the blue line was still very marked, and she was in extreme distress from dyspnoea. In fact, her condition was quite hopeless.

It seems that she had suffered from albuminuria for some years previously, so that the effect of the diachylon on the already impaired kidneys was doubly severe.

With cases such as the above coming under observation, it does seem that some steps should be taken to put a stop to this evil. So far it has been found impossible to move the authorities in the matter. In spite of much trouble and many meetings, with strong resolutions passed, urging the desirability of putting diachylon on the poisons schedule (as is ergot), we were informed that, acting upon "expert" advice, they considered that it was unnecessary. I can only say, "*Ne crede Experto!*"

I am satisfied that the simple procedure of putting diachylon on the poisons schedule nobody would be the loser, and on the other hand the evil we suffer from would soon die out, at any rate in its present form.

As it is, no respectable chemist in the affected districts sells diachylon without pointing out its dangers, and the disreputable people who trade in it, knowing the purpose for which it is being purchased, require checking. By scheduling it as a poison such a check would be provided.

Should this scourge extend largely in London it is possible that adequate pressure may be brought to bear upon the authorities to do something; hitherto, the provinces have failed to stir them.

Sheffield.

ARTHUR J. HALL, M.D., F.R.C.P.

A METHOD OF TREATING EXCESSIVE AXILLARY SWEATING BY OPERATION.

This condition is very common and is a source of very great discomfort to those who have to work in hot climates, wearing tight clothing.

About three years ago an army surgeon was unfortunate enough to contract septicaemia while operating, and eventually had to suffer extensive loss of his left axillary glands. Owing to sinuses it was necessary to excise a large portion of skin, and when he recovered he noticed that he no longer sweated from this axilla. Investigation showed that the whole of the hair-bearing skin of the axilla had been removed, and with it the large sweat glands as well.

The contrast to the other axilla was so great that, being under orders for service on the West Coast of Africa, he determined to have something of the same kind done to the right axilla. Under eucaïne and adrenalin the whole of the hair-bearing skin was excised, and now he has two non-sweating axillae.

The operation is very simple, quite painless, does not entail opening the axilla, and is free from risk. If careful suturing is carried out the incision heals by first intention, and the arm can be used in a week or sooner if necessary. This may appear rather a drastic method of treating hyperhidrosis, but it is satisfactory and radical. Ordinary measures were quite useless, and the officer now regrets that he did not know of this method of cure before.

F. J. W. PORTER,
Major, R.A.M.C.

Colchester.

Reports of Societies.

MEDICAL SOCIETY OF LONDON.

Monday, January 25th, 1909.

CHARLES BARRETT LOCKWOOD, F.R.C.S., President,
in the Chair.

Wertheim's Operation.

DR. COMYNS BERKELEY read a paper on the radical abdominal operation for cancer of the cervix by Wertheim's method. Wertheim modified the original operation by clamping forceps across the vagina before he divided this structure, and since he had performed the radical abdominal operation more consistently and in a larger number of cases than any one else, this operation had, at any rate in England, been attributed to him. Dr. Berkeley had collected full statistics of 229 cases of the true Wertheim operation from different operators in the United Kingdom. He pointed out that Wertheim's operation had a great advantage over simple vaginal hysterectomy both in its percentage operability and percentage of cures, whilst if only similar cases were taken there was not much difference between the primary mortality. The primary mortality for simple vaginal hysterectomy with Continental operators was on an average about 9 per cent. Doderlein gave a table of 4,368 vaginal hysterectomies with a mortality of 9.1 per cent. The mortality for Wertheim's operation in early cases worked out at 6.8 per cent., in moderate cases 8 per cent., and in advanced cases 26.7 per cent. The mortality of the 229 Wertheims which he had collected was 18.3 per cent., the mortality of his own cases was 16.6, of Wertheim's 458 cases 15.2. The primary mortality, taking all the cases, was high, but the statistics showed that this death-rate was considerably lowered with the increased experience of the operator; in Wertheim's first 30 it was 40 per cent., in his last 30, 7 per cent. The high mortality when compared with simple vaginal hysterectomy was entirely due to the fact that cases of a much more advanced nature could be operated upon with safety by Wertheim's method. The percentage operability of vaginal hysterectomy was about 12. In comparison with this a large number of operators had a percentage operability of 40 and over. He (Dr. Berkeley) and Dr. Bonney had kept careful record of all cases of cancer since they commenced operating by Wertheim's method, and their percentage operability to date was 67. Although vaginal hysterectomy might have a low primary mortality, the after-results of this operation were disappointing. Waldstein out of 274 cases had 4 living after five years, and the statistics of other operators gave similar results. As the Wertheim operation had only been performed in England, with the exception of a case by Wallace in 1903 and one by Spencer in 1904, since 1905, the statistics as to the percentage of cures were at present of no use, as five years was regarded as the shortest limit for that purpose. Of 200 cases that Wertheim had operated upon more than five years ago, 138 were still living, a percentage of 62. Polossan had 60 per cent. and Bumm 30 per cent. living free from recurrence after five years. That increased percentage of cures was due to two factors. By Wertheim's method the parametrium and cellular tissue could be removed, whereas in vaginal hysterectomy it had to be left behind, and Wertheim's clamps prevented local cell implantation. Dr. Berkeley discussed the pathological findings of the parametrium and cellular tissue in cases of cancer of the cervix, and showed that it was infected with cancer in 60 per cent. of the cases. He also discussed the question of local recurrence and cell implantation, and showed that by the extended abdominal operation local recurrence was rare. In comparing the operation of para-vaginal section with Wertheim's operation, Dr. Berkeley

thought the chief decision as to which was the best method must rest upon the question whether it was necessary in Wertheim's operation to remove the regional glands. If the glands that could be surgically removed were diseased, in a large number of cases those which could not be removed were also diseased, and many operators said that for that reason it was useless removing any glands, and in favour of that contention was the fact that glandular infection was not present in probably more than one-third of the cases. Some statistics from the Middlesex Hospital Cancer Investigation Laboratories strikingly illustrated that point. Supposing there were no need to remove the glands, then the advocates of para-vaginal section contended that by that operation just as much parametrium and cellular tissue could be removed without so much danger to the patient. In Shauta's hands, who had probably had more experience of that operation than anyone else, the results were good, the total mortality for 258 cases being 10.8, and in 79 early cases 3.7. His percentage of cures over five years had been 55, and his percentage operability had been nearly as great as those who operated through the abdomen. Dr. Berkeley showed a special pair of clamps which entirely overcame the difficulties and dangers associated with Wertheim's clamps. He also showed 27 of the 30 specimens that he and Dr. Bonney had removed.

Dr. SPENCER thought the authors had not fully stated the low mortality of vaginal hysterectomy. Some operators had had a lower mortality from vaginal hysterectomy than that stated in the paper. The most terrible thing about the operation was the high mortality—Wertheim's first 200 cases showed a mortality of 24 per cent., and in the 400 9 per cent. After vaginal hysterectomy the mortality was not more than 4 per cent. or 5 per cent. It was a very serious thing to submit a patient with early cancer to such a formidable operation. One great drawback of the operation was that the woman was unfit afterwards for intercourse, whereas, after vaginal hysterectomy, she could not only continue to have connexion, but her feelings were retained. He criticized the method of rendering hospital operability statistics. A fairer method would be to state the total hospital statistics. It would be interesting to see what would be the result in the patients mentioned in the paper after an interval of five years.

Dr. McCANN thought the future of the operation lay in its application to early cases. He had great doubts whether that or any operation was of value in advanced cases. At first he did the operation only on advanced cases, and the cases occurred rapidly. If the operation were applied to early cases he believed the mortality would be as low as that of vaginal hysterectomy. A very important point was ensuring hæmostasis and careful covering of the surfaces of the peritoneum. If those matters were not carefully attended to there was likely to be subsequent infection. If they were attended to, even if the bladder leaked or there was a rectal fistula, the patient might survive. It was his practice to keep the patient in the Trendelenburg posture for as short a time as possible, examining the patient's pelvic organs before having her put into that position. He agreed with Dr. Spencer that the present method of rendering percentages of operability was absurd. Where the bladder was involved the operation was not justifiable, in his opinion. He had never kept a drain in longer than forty-eight hours, and if hæmostasis was sufficiently established it was not necessary to put in a drain at all. If the bladder was regularly emptied after the operation cystitis would rarely occur.

Dr. LEWERS was very firmly convinced of the value of the operation, and that it would be the operation not only for cancer of the cervix, but also for the body of the uterus in the future. Up to the present he had done the operation twenty-two times. Out of his first ten he lost four, but in the second ten none at all. In all the cases in which he did it the condition of cancer was advanced. In the majority of the cases he thought the operation must be commenced as an exploratory laparotomy, because in some it was not possible to go on to finish the operation.

Dr. RUSSELL ANDREWS said his experience was very similar to that of Dr. Lewers. He had had very few opportunities of dealing with early cases. He believed the mortality from the operation, when it was properly

understood, should not be higher than from vaginal hysterectomy.

The meeting concluded at a late hour with the reading of a paper by Mr. W. F. BROOK (Swansea), entitled, "A preliminary note on the relationship of delayed union in fractures to deficiency of calcium salts in the blood."

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Friday, January 8th, 1909.

JOHN LENTAGNE, P.R.C.S.I., President, in the Chair.

Extroversion of the Bladder.

MR. C. ARTHUR BALL, in a paper on the treatment of extroversion of the bladder, expressed an opinion that the safest and most satisfactory procedure was the transplantation of the ureters into the rectum by an extraperitoneal operation, and gave a lantern demonstration of a case in which the operation had been carried out in a boy aged 5 years. The child was operated on last July, and the result was satisfactory, the child being in perfect health six months later, and having very fair powers of retaining urine in the rectum. Three months after the operation urine could be retained up to three and a half hours, and this control had continued to improve since then. The PRESIDENT said the case was, so far as he knew, the first satisfactory one that had been done in Dublin, and illustrated the improvement which had been effected in dealing with an apparently hopeless condition. He desired to know whether it had been proposed to infold the rectum at the point where the ureter entered it, so as to make it less likely to slip out, and give a broader field for adhesion on the part of the ureter. Mr. SETON PRINGLE asked if there was any trouble in keeping the peritoneum back, and in seeing what was being done. Mr. BALL, in reply, said he did not think infolding of the rectum had been done. In his case there seemed to be no tendency to slip out. He did not see the peritoneum until he first came on the rectum. One would have expected it to get in the way sooner that it did. There was considerable separation of the pubic bones, and the pelvic cavity was consequently very shallow, so that the case was ideally arranged for the surgical procedure carried out.

Abscess of the Pancreas.

Mr. SETON PRINGLE gave an account of the case of a patient, aged 46, with a marked alcoholic history, who was admitted to hospital on the twelfth day of his illness with signs of peritonitis of the upper abdomen, where a large tumour mass could be felt. Operation was performed immediately, and a large abscess found in the lesser peritoneal sac; the edges of the opening into the abscess were sutured to the parietal peritoneum and a large drainage tube inserted. There were numerous patches of fat necrosis in the omentum, and a small quantity of bloody fluid in the larger sac of peritoneum. The patient progressed favourably for a few days, but gradually lost strength and died on the twelfth day after operation. The urine several days after operation gave a marked Cammidge "C. reaction." At the *post-mortem* examination it was found that the head and body of the pancreas had sloughed, only the tail surviving; no gall stones were discovered. He considered that the pancreatitis in his patient was the result of alcoholic gastro-duodenal catarrh. Only some 16 cases of operation for pancreatic abscess had been recorded. The PRESIDENT said that cases of comparatively newly-recognized diseases, the symptoms of which were most obscure, were just such as should be brought forward in detail as by Mr. Pringle. The case showed the importance of early operation. If the abdomen had been opened at an early stage it was possible that the gangrene might have been averted; at any rate, it would have been more hopeful. It was only by the bringing forward of such cases that they would be able to arrive at an early diagnosis. Mr. STOKES said he had seen a similar case operated on a couple of years ago, in which acute septic peritonitis was found at the *post-mortem* examination. But for that the case might have pulled through. The question of draining behind had been raised, but the Americans had given that up unless the inflammation were confined to the tail of the pancreas. Mr. BALL suggested that the apparently greater frequency of the disease in hospital patients than in private patients might arise from differences of habits in eating and drinking.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

At a meeting on January 26th, Sir LAUDER BRUNTON, F.R.S., in the chair, a discussion on *Ulcerative colitis* was opened by Sir WILLIAM ALLCHIN, who, after referring to the comparative infrequency of the condition, its age and sex incidence, alluded to 177 cases collected from the case records of three of the larger general hospitals in London. He then referred to the influence, if any, of previous residence in a warm climate, with especial reference to the form of sporadic ulcerative colitis usually classed as dysentery, and to its relation with chronic interstitial nephritis. He next gave an account of the clinical features of the disease, its duration, liability to relapse, and event. The mortality was distinctly higher than in tropical dysentery, but the prognosis in any particular case was very uncertain. The *post-mortem* appearances were described. The influence of one or other form of *Bacillus dysenteriae* was discussed, the speaker maintaining that the evidence was adverse to the microbiotic identity of the sporadic and epidemic disease. The causative influence of tissue vulnerability in certain cases was referred to, and lastly the methods of treatment—medicinal, by enemata, surgical operation, or by the use of serums and vaccines. Mr. MAKINS, referring to its surgical treatment, argued for a simple colostomy, preferably in the ascending colon. Appendicostomy not diverting the intestinal contents was much less useful. Of 6 cases in which he had done colostomy, only 1 was really cured, but only 1 died. The contraction of the bowel after colostomy for ulcerative colitis was, however, a much more serious matter than after that performed for other conditions. If the artificial anus were left open more than seven or eight months, the re-establishment of the normal channel was a very difficult matter; indeed in some instances it was necessary to maintain the artificial opening for life. Dr. HALE WHITE thought ulcerative colitis quite distinct from tropical dysentery. As to its identity with asyrium dysentery he thought the matter was not proven, and he pointed out that its prevalence was much greater than in institutions other than asylums, suggesting that some influence of the nervous system was involved. Reference was made to the causation of ulcerative colitis by the bursting of a liver abscess into the intestine. He likewise condemned short-circuiting in operative treatment and could not speak favourably of rectal irrigation or the use of drugs. Three cases had come under his notice during the last year that had apparently recovered under the use of a coli vaccine and artificially soured milk. The discussion was then adjourned until February 10th at 5.30 p.m.

SECTION OF ANAESTHETICS.

At a meeting on January 20th, the bill by which it is proposed to control the administration of anaesthetics (see SUPPLEMENT, BRITISH MEDICAL JOURNAL, December 5th, 1908, p. 502), was discussed, Dr. DUDLEY BUXTON proposing that Clauses I, IV and V, be approved, and also Clause III if amended so as to read:

This Act shall not apply to any person registered under the Dentists Act, 1878, who shall administer nitrous oxide gas with the object of producing a state of unconsciousness during any dental operation, act, or procedure.

Dentists, he said, always had been recognized as proper persons to administer nitrous oxide gas, and this right should not be taken from them; but that they should be prohibited from administering the more dangerous anaesthetics unless they possessed a medical qualification in addition to their dental one. Mr. ROWLAND COLLUM said that the amendment proposed was essential in order to make the bill fair; for, by another clause, dental students were to be forced to receive thorough theoretical and practical instruction in anaesthetics; and yet by this clause, unless amended, they would be liable to a fine if they ever administered one afterwards. Dr. SLK opposed the whole bill on the ground that legislation was not the proper way to bring about the required result. The House of Commons would never pass such a bill. Dr. HEWITT said the safety of the patient should be the first consideration of every medical man. It was not right that a dentist should be permitted to administer even nitrous oxide gas. A medical training was essential to the safe administration of any general anaesthetic.

Mr. PREEDIE pointed out certain errors that some of the speakers seemed to him to have made in their interpretation of the bill, for the wording of which he was responsible, and the meeting was adjourned to February 5th.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting on January 15th, Dr. WALKER DOWNE, President, in the chair, Dr. W. B. INGLIS POLLOCK read a paper on *Nystagmus, and theories regarding its causation*. Opening with a brief account of the searching nystagmus of Sym, the pseudo-nystagmus of Duane, and true nystagmus, the latter was divided, according to its causation, into congenital, occupational, organic, nervous disease type, labyrinthine, and toxic, including the general anaesthetics, ether and nitrous oxide, ether and nitrous oxide and oxygen. A short description was then given of the various theories of the mechanism of nystagmus. Duchenne ascribed it to a retardation of the nervous impulses to one member of a system of antagonized muscles, while Widmark associated it with a want of harmony between the centre for the co-ordination of the ocular muscles and the volitional impulse. Gowers had recently brought forward a theory based upon Sherrington's researches into the spinal centres and the alternate contraction of opposing muscles. He believed that the centre for the control of the ocular muscles might be disturbed by influences from many sides, allowing a reciprocal muscle-reflex alternation between antagonistic ocular muscles to be set up. The paper was illustrated by a case of congenital pseudo-nystagmus, a case of congenital nystagmus due to high refractive error, and a case of miner's nystagmus with the vertical variety in one eye and rotational in the other. Dr. JAMES F. GEMMILL gave a lantern and microscopic demonstration of the auriculo-ventricular muscular bundle of His in the adult human and in certain fetal hearts. Dr. JOHN M. COWAN demonstrated a series of tracings of the venous pulse, illustrating the different conditions which may result from interference with the auriculo-ventricular bundle of His.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on January 6th, Dr. P. BOORBYER, President, in the chair, a discussion took place on *The attitude of the municipality to the treatment of phthisis*. Dr. A. FULTON, in opening the debate, argued in favour of municipal sanatoriums, which, apart from curative and philanthropic influences, had a great educational value. Nottingham was so rich in medical charities that there was no need for extension of municipal treatment in the direction of further out-patient departments or dispensaries. He did not think the establishment of additional sanatoriums would injure the medical profession financially, for the richer class of patients would not be likely to avail themselves of such institutions, while the profession generally would be glad to be excused a long and profitless attendance on the poorer ones. The admission, treatment, discharge, and after-care of patients should be in the hands of some expert devoted to this purpose. It might even seem right to subsidize patients for some time after their discharge rather than let the benefit received be undone again by insufficient food before their proper earning powers came back again. The President traced the statistical mortality from tuberculous diseases and phthisis in the past and at the present time, showing that the general death-rate both of tuberculosis and phthisis had now been halved as the result of general sanitary improvements in the course of the last half-century. Of men and women engaged in the same class of work in the lace trade, the phthisis-mortality was very much heavier amongst the men, probably as a result of their more intemperate habits. He pointed out also what could be done by local sanitary authorities in the matter of preventive action, especially when aided by notification and personal teaching from expert health visitors. Dr. F. H. JACOB insisted on early examination of sputa before physical signs became obvious if cure was to be brought about. He thought it better for the serious cases to be isolated in municipal sanatoriums, and urged the need of house disinfection with every change of tenancy. Dr. C. H. CATTLE thought the results of the experiment of opening forty beds to phthisis patients at the Nottingham Isolation Hospitals

had been more successful than might have been anticipated. Besides great benefit to early cases such an institution sheltered many cases of which the home nursing sooner or later broke down owing to the heavy demands upon the strength, the rest, the food and the purses of relatives in their own houses. At the same time the present provision for forty beds was quite inadequate and might easily be filled even if increased to ten times that number. Dr. W. TIBBLES did not favour further extension of municipal sanatoriums, for the ultimate results of such treatment were not as good as was at first supposed. He thought the urinary, intestinal and other infective forms of tuberculosis should be guarded against quite as much as phthisis. Dr. W. HUNTER was on the whole satisfied with the preventive methods at present available in the homes of patients, and considered the expense of any further considerable extension of the sanatorium system at the expense of the ratepayers would be great enough to make it absolutely prohibitive. Dr. A. J. SHARP drew a graphic picture of the appalling mortality still due to tuberculosis in towns, about 450 deaths from it occurring annually in Nottingham alone, those dying being mainly persons in the middle and most useful age-periods of life. Notification came first and foremost of all preventive measures, and till that had been adopted no sanitary authority had at all realized its responsibility with regard to this disease. Dr. O. K. WRIGHT instanced the great educational value of sanatorium treatment even on the limited scale adopted by the Nottingham Corporation; despite the most inclement weather, he had found patients became readily acclimatized to fresh air in the course of a very few days. Miss I. E. FOX (Mansfield) had noticed that the introduction of compulsory notification of phthisis in Sheffield had been accompanied by very little friction. Actual instances of phthisical subjects infecting their co-workers in offices had come under her notice at Sherwood Forest Sanatorium. Dr. J. WATSON again urged the importance of early examination of sputum, and thought that any municipal scheme should give facilities for examination of sputum from people who had not placed themselves under medical care. Dr. FULTON, replying, attributed the stationary mortality from tuberculosis in Ireland partly to inherent poverty and partly to withdrawal of many of the fittest subjects by emigration. Phthisis in Nottingham at the present time was a burden the expense of which was not borne by the public, but by wives and relatives, who toiled to keep their homes together until they themselves broke down usually with the same complaint. The PRESIDENT detailed the methods of house disinfection now utilized in Nottingham. He was grateful for any recognition of curative value in the branch of sanatorium work under his direction, but, apart from the isolation of a few advanced cases, the main purpose of municipal sanatoriums was educative. Thus, in New York the average stay of each patient was only five weeks, or just long enough to get him well drilled in all matters of personal hygiene. As to the economic loss of lives, this was, to say the least, most serious. Indeed, it would be far cheaper to build sanatoriums and isolate as many patients as possible, for in that case the ratepayers would not be burdened with the maintenance of their bereaved and penniless dependents, as they were at present. After the conclusion of the discussion, a vote taken of those members present showed a strong and practically unanimous feeling in favour of voluntary or compulsory notification of phthisis being adopted.—At a meeting on January 20th, Dr. P. BOOBYER, President, in the chair, Mr. R. G. HOGARTH and Dr. R. HEELIS showed a man, aged 29, suffering from gigantic *Enlargement of the skull* and extremities, and from spinal kyphosis and other bony deformities. Up to the age of 12, when he broke one thigh, nothing abnormal was noticed, but about that time the upper jaw began to swell, and since then he had broken one humerus. His mental condition was normal, and although he sometimes had pain at the back of the eyes he seldom had headache. In spite of some features suggestive of leontiasis osseæ, the case as a whole seemed to accord better with acromegaly. Mr. HOGARTH showed a man, aged 40, employed as a caretaker, suffering from aneurysm of the innominate artery. Operation for distal ligation of the subclavian and common carotid arteries had been declined two years ago, but the disease appeared

practically unchanged since then. Mr. Hogarth also showed a girl, aged 10, who had suffered from multiple tuberculous lymphadenitis to a degree which made the condition inoperable. A few caseous glands were removed from the neck and systematic treatment with tuberculin in doses of $\frac{1}{1000}$ milligram carried out over a period of nine months. The result had been highly encouraging. Mr. R. G. HOGARTH read a short paper on certain *Derangements of the knee-joint* the result of traumatism. In the case of a young man under his care a movable lump within the joint proved on removal to consist of both articular cartilage and bone. Another case illustrated very well the "quiet necrosis" or osteo-chondritis desiccans which followed some injuries of this kind. A third case was in a young girl who, after recovering perfectly from an attack of acute synovitis lasting a month, relapsed. Eventually, after several attacks of slight synovitis, an operation resulted in the removal of a fibrous pedunculated body which took origin from the synovial membrane. Mr. Hogarth further traced the anatomical features of the joint concerned in the production of these injuries, and indicated occasional difficulties in locating and removing a loose body so produced, as well as the important relation the popliteus tendon bore in operations for their removal. Treatment by means of a steel bar hinged splint, which effectually prevented torsion, was recommended. Drs. R. WOOD (Ilkeston) and J. S. BOLTON discussed the paper. Dr. J. WATSON showed the placenta (single), fetal bags of membranes (distinct), and twins, of which one was living at birth and one previously dead, from a case of extreme hydramnios in a young married woman.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—

At a meeting on January 20th, Dr. SOLLY (Harrogate), President, in the chair, Dr. BUCKLEY (Buxton), in a paper on *Intestinal lavage* on the Plombières system, said that where evidences of intestinal putrefaction could be found from examination of urine, stools, etc., better results were obtainable by douching than by the use of chemical antiseptics, and in those cases where appendicectomy might seem to be indicated for lavage of the colon, this method should first be tried. Mr. WILLIAM ARMSTRONG (Buxton) said he had used intestinal lavage for the last eight years in a large number of cases. He reported in his paper in the "Arthritis" number of the *Practitioner* some six years ago a very remarkable case of rheumatoid arthritis cured by intestinal lavage alone. Certain cases of arthritis, many cases of urticaria, recurrent erysipelas, eczema, ordinary eczema, and neurasthenia had been greatly helped by this method. The important points had always seemed to him to be the exact indications for this treatment; and his experience had shown that the most reliable guide was the increase of the aromatic sulphates. Dr. ACKERLEY (Llandrindod Wells) asked if it was to be understood that the only treatment in the cases mentioned was intestinal lavage. On receiving an affirmative answer, he expressed his doubts as to the value of local treatment of the colon in securing permanent results in such cases. In all cases where there was a catarrhal or septic condition of the colon, treatment ought to be directed in the first place to guarding against oral sepsis and securing perfect mastication and insalivation of all kinds of food hard or soft. Removal of mucus by lavage had only temporary results. The secretion of mucus was protective, and the aim should be to prevent injurious substances entering or being formed in the bowel. In its proper place, as accessory to other treatment, he fully recognized the value of intestinal lavage. Dr. MOTTILOR (Harrogate) considered the method of intestinal lavage a most valuable addition to ordinary eliminative spa treatment. It was so even in Harrogate, where the waters usually act as laxatives. Dr. MANTLE (Harrogate) thought the theory of intestinal autointoxication might be carried too far; he was inclined to think with Hertz that it was necessary to have a breach of mucous membrane—an abrasion or ulcer—to get absorption of toxins from the bowel. He had found washing out the colon gave good results in some cases of rheumatoid arthritis and chronic skin diseases, but only when associated with colitis, and unless mucus was seen he would not advise it in such cases. Mr. C. R. B. KEETLEY said that appendicectomy or some such operation was a supplement to the Plombières treatment which might occasionally be found of utility.

Reviews.

AN OBSTETRIC DIARY.

A DIARY of the first three deliveries of Queen Charlotte, the wife of George III., has been edited by Dr. NIGEL STARK, and published under the title, *An Obstetric Diary of William Hunter*.¹ One thing that strikes us is the difference between the physician of 1762 and his successor of to-day. William Hunter, as most medical men know, was a man of much wider knowledge and greater refinement of intellect than his illustrious brother John, who, concentrating all his mind on anatomy and surgery, remodelled the methods of surgery for all time. William Hunter was a scholar, an anatomist, a numismatist, and a courtly gentleman. He was called in by Mr. Hawkins to advise as to Queen Charlotte, but he does not seem to have done much more than to listen to Mr. Hawkins and feel Her Majesty's pulse. Mr. Hawkins, like many of his contemporaries, seems to have thought that the sovereign remedy was bleeding, and Dr. William Hunter's chief service to Queen Charlotte during her pregnancy was to protect her from unnecessary depletion. He was not present at the delivery. This was supervised by the midwife, Mrs. Draper, not a person of very good judgement, for a little after 6 she told Dr. Hunter that "it would be slow," and at half after 7, "when I little expected it from what Mrs. Draper had told us, the Prince was born." Hunter waited in an anteroom. He examined the placenta and the "cloaths." He visited the Queen during the lying-in, felt the royal pulse, and prescribed some harmless carminatives. Almost the only thing that Hunter did that he could do better than Mrs. Draper was the examination of the placenta. It is curious to speculate what he would have done if his examination had led him to conclude that a piece of placenta or of chorion was retained *in utero*. Would the royal personages who did not allow him to supervise the birth of the infant have permitted him to explore the royal uterus and bring away retained placenta or chorion? We very much doubt it, and doubt if Hunter would have proposed it. His examination of the placenta doubtless interested him as an anatomist, but from a clinical point of view it was about as useful as the carminative draughts he prescribed. If a bit of retained placenta had led to haemorrhage or septic poisoning, and thus to loss of life, it would at that time have been said to have been a "visitation of Providence." What will be the duties of an accoucheur a hundred years hence? Anaesthesia will be expected by every mother as a matter of course; probably spinal anaesthesia. Will the ordinary general practitioner take his patient's opsonic index, and inject a few millions of dead bacteria, or will he call in a specialist, appointed by the local authority, to do this kind of thing for him? Whatever he does, we may be sure that by that time, if anything goes wrong, he will not be able to put the blame upon Divine Providence. We are told that "William Hunter had a talent for relating anecdotes with such facial and vocal expression that if he had adopted the stage as a profession he would have risen to high rank as a comedian." Considering the very limited obstetrical services that Hunter was allowed to render to his illustrious patient, it seems likely that his talent for amusing people had more to do with his success in practice than his professional skill.

GYNAECOLOGY

THE second volume of Professors KELLY and NOBLE'S *Gynaecology and Abdominal Surgery*² includes chapters on complications following operations, on the surgery of pregnancy, uterine and ectopic, and on the operative

surgery of the breast, liver, gall bladder and bile ducts, stomach, intestines, vermiform appendix, pancreas, spleen, kidney, and ureter; also other chapters on tuberculosis of the peritoneum, penetrating wounds of the abdomen, hernia, and the use of drainage in abdominal and pelvic surgery. This volume is of a high degree of excellence both as to text and illustrations, maintaining the well-approved character of the articles in the first volume, which was reviewed in the JOURNAL for March 14th, 1908. As we read so much about operations, we may feel inclined to turn, for a change, to the chapter on tuberculosis of the peritoneum, by Dr. George Ben Johnston of Richmond, Virginia. Had that article been written twenty years ago we should have found, we suspect, enthusiastic eulogies of operative measures; but Professor Johnston, like many other contemporary workers, is not enthusiastic about surgical treatment. He observes that Billings, A. E. Halstead, and Shattuck consider that in the ulcerative and fibrous forms of tuberculosis of the peritoneum the surgeon merely writes the death certificate, and adds that Ochsner states that a review of the literature of the subject has convinced him that surgeons who insist on thoroughness in operations for tuberculous peritonitis have had most unsatisfactory results. Dr. Johnston gives details of different methods of opening, and drying, or flushing with fluids the tuberculous peritoneal cavity, with little or no comment, and in conclusion states that

in general it may be said that in an affection of this kind one's first efforts should be directed towards treating the patient, while the second consideration has to do with the most approved method of handling the local process. Whether this is to be done surgically, symptomatically, or specifically will depend, for the present, very largely on the attitude of the physician in charge.

In short, experience is against the free use of the knife in very random operative procedures, still too often undertaken for the relief of a grave and obstinate disease the treatment of which is, nevertheless, most unsatisfactory. We can turn—not with pleasure but at least with satisfaction—to other affections where the contemporary surgeon may justly claim triumphs in improved operative methods. Diseases of the female breast are included in this volume, the chapter being written by Dr. Bloodgood of Baltimore. The coloured drawings of diseases of the breast as seen when the parts are laid open by the scalpel after operation are triumphs of scientific art, brilliant even in a publication issued from the Johns Hopkins University. On the other hand, we question whether the portrait of two dozen pressure forceps (Fig. 530) is likely to be instructive to the beginner who attempts a modern radical operation for removal of a cancerous mammary gland. The instruments cover three-quarters of the field of operation and the divided sternal end of the pectoralis major—one of the points which the illustration professes to show—does not come out clearly. The drawings showing the dissection and removal of the lesser pectoral muscle are much more instructive, whilst further on we find that the process of dissection along the axillary vein is represented by another big crop of forceps. The text in this chapter is very good. The mortality in operable cases in which the complete operation for the removal of the cancerous breast has been performed in the Johns Hopkins Hospital is 2 per cent. Dr. Whitridge Williams contributes the chapter on extruterine pregnancy. He does not advocate operation where there is a quiescent haematocoele, interference being only necessary when suppuration occurs, or when the haemorrhage continues. He considers that when the fetal sac is opened late in pregnancy the placenta should not be removed, except when its partial separation has already given rise to profuse haemorrhage; under such circumstances its removal becomes imperative, no matter how dangerous it may appear. Like all other living authorities, Dr. Williams admits that the removal of the fetus late in extruterine pregnancy is probably still the most dangerous operation which gynaecologists are called upon to perform. He adds that doubtless improved technique will gradually result in diminution of its dangers. Dr. Williams notes that the first vaginal operation for extruterine pregnancy in the States was performed in 1816 by Dr. John King, of Edisto Island, near Charleston, South Carolina. A full-term child was removed after cutting through the posterior vaginal wall.

¹ *An Obstetric Diary of William Hunter (1762-1765)*. Edited with notes by J. Nigel Stark, M.D., F.F.P.S.G., Surgeon, Royal Samaritan Hospital for Women, late President, Glasgow Obstetrical and Gynaecological Society, etc. Reprinted from the *Glasgow Medical Journal*. Glasgow: A. Macdonnell, 1908. (Demy 8vo, pp. 55, 1s.)

² *Gynaecology and Abdominal Surgery*. Edited by Howard A. Kelly, M.D., F.R.C.S. (Hon. Edin.), Professor of Gynaecologic Surgery at the Johns Hopkins University, Gynaecologist to the Johns Hopkins Hospital, Baltimore, and Charles P. Noble, S.D., Clinical Professor of Gynaecology at the Women's Medical College, Philadelphia, Surgeon-in-Chief, Kensington Hospital for Women, Philadelphia. Illustrated by Hermann Becker, Max Brodel, and others. Volume II. Philadelphia and London: W. B. Saunders Company, 1908. (Sup. roy. 8vo, pp. 900, 871 illustrations. 35s.)

It is interesting to recall that another gynaecologist, Gaillard Thomas, was born in Edisto Island, that Marion Sims was a native of Lancaster, S.C., and that Bozemann was born in Georgia, close on the borders of that State, which has been so fertile in cotton and gynaecologists. The chapter on operations of the stomach has for its author a British surgeon, Mr. Moynihan, and no better writer could have been chosen. His views and his methods are well known in this country; in this work he has the advantage of several good illustrations by Max Brödel and Becker demonstrating the different stages of gastrectomy, gastropexy, gastrostomy, and pyloroplasty. Howard Kelly contributes an excellent chapter on the surgery of the ureter, and Noble and Brooke M. Anspach make good use of nearly a hundred pages devoted to the surgery of the kidney. Kelly's article on splenic surgery will be read with interest; and in a chapter on surgery of the pancreas, by Dr. Opie of New York, the illustrations demonstrating operative measures are of the highest quality in every respect, whilst the text has been carefully prepared. A monograph of 130 pages by Dr. John E. Murphy treats of intestinal surgery, including the operative treatment of rectal cancer, fistula, and hemorrhoids, but excluding operations for diseases of the vermiform appendix, a subject taken in hand by Drs. Kelly and Elizabeth Hurdon. The chapter on operations on the gall bladder, bile ducts, and liver by Dr. Ochsner contains some fine illustrations by Becker and others. The chapter on operations for inguinal hernia by Martin of Philadelphia also has an excellent series of illustrations. We must not omit mention of a somewhat original article on the technique of drainage, and of the chapter by Dr. Brown Miller of Washington on complications following operations. In writing on penetrating wounds of the abdomen Dr. Floyd McRae gives some good statistics, and, like previous writers, shows that in modern military surgery nearly all the cases which recovered were those in which no operation was performed. Guy Hünner writes on femoral, umbilical, and rarer forms of hernia, whilst Ross, Norris and Barton Cooke Hirst contribute chapters on Caesarean section, operations during pregnancy, and the operative treatment of sepsis in the child-bearing period.

Nine years ago we reviewed a fasciculus of the useful and instructive reports from the gynaecological clinic in Helsingfors. The present number, like that which was previously submitted, contains an article by Professor ENGSTRÖM himself; its subject is the premature detachment of the normally situated placenta, and is mainly a report and review of one case. Two other contributions make up this instalment of the reports. The first, by Dr. Renvall, is the complete monograph on appendicitis during pregnancy and labour, reviewed in the JOURNAL on January 2nd, p. 24. The second is a brief but interesting note on supernumerary mammae secreting milk, by Dr. Björkqvist. The value of these *Mitteilungen* is high, so that they ought to be found in every British public medical library at least, else much good matter will be lost to us.

We noticed the third edition of *The Principles and Practice of Gynaecology for Students and Practitioners*¹ in our issue of April 1st, 1905, and the fact that it has now reached its fifth is evidence that it is a book that a good many people want. If the title were altered by the insertion of the word "surgical" before "gynaecology," and the striking out of the words "for students and practitioners," we should have nothing but unqualified praise to give it. The writer is a surgeon of experience and resource; his descriptions are detailed and methodical, and illustrated by admirable drawings. Like every intelligent medical man of the present day, Dr. DUDLEY is firm in his faith in the principles laid down by Lord Lister. In his practice he is, if we may be allowed to coin a word, even hyper-Listerian. Special clothing for the surgeon

during an operation—a gauze turban, mask, india-rubber gloves—and the repeated washings of the patient's skin with different chemicals, are here described as essentials. Lord Lister not long ago expressed in our columns his confidence in a simple application of 1 in 20 carbolic acid, and his belief that repeated scrubbing with various chemicals were injurious rather than beneficial. Still it is proper that a textbook should be up to date; and it is better to take too much care about antiseptics than to neglect them. As a textbook of *surgical gynaecology*, we know none better in the English language. But the medical part of the book is as poor as the surgical is good. The author copies the imaginary pathology and the bad local meddlesome treatment of thirty years ago. We will not linger on these unfortunate defects, but only advise the reader to study Dr. Dudley's descriptions of operative details, and go to other works to learn about dysmenorrhoea, endometriitis, sterility, and the minor diseases of women generally.

In one of his entertainments we remember hearing the late Mr. Corney Grain say that there was nothing so mean and cowardly as to say of a man that "he means well," and yet that is exactly what we are obliged to say as to the authors of *Practical Gynaecology*.² They mean well, but they have not attained perfect realization of their intentions. This book sets forth more than a nurse need know, but not enough for a student of medicine. Like some other inexact writers, the authors do not distinguish between sterilization and disinfection. Sterilization of the hands, the patient's skin, the air, and everything in contact with the patient, is impossible. What can be and ought to be attained is to reduce the unavoidable dose of microbes to such a small one that the patient's phagocytes can deal with it. The operation of vaginal hysterectomy is described in a general sort of way; but we should be sorry for the patient on whom any one should attempt the operation with no more information than he finds here. Abdominal section is not described at all; but the after-treatment is. The mode of sterilizing dressings by superheated steam is described; but this is hardly the business either of nurse or student. The writers' favourite antiseptic appears to be a proprietary article the exact composition of which is not known. At p. 163 the nurse or student is told that sometimes the uterus is fixed by adhesions; and that in such cases a course of "plugging and douching" for two or three weeks may lead to absorption of the adhesions. It is not the business of a nurse to express an opinion on treatment of this kind; and for her this piece of information is not required. Looked at from the student's point of view we should have liked to have seen him told that daily plugging the vagina in a case of pelvic peritonitis would cause the patient much discomfort, and that the benefit of it is very doubtful. There is no doubt that peritoneal adhesions are absorbed without either plugging or douching; and most physicians would teach that in pelvic peritonitis the quieter the patient is kept, and the less the parts are meddled with, the better. We hope that Mr. Young's next venture into publication may be work of a more ambitious kind, and that he will think and observe for himself, and not merely reproduce what he has seen done and heard said by other people.

SYPHILIS.

The System of Syphilis,³ now in course of publication, promises to be, when the six volumes are all published, an encyclopaedic work of reference. The subjects dealt with in the first volume may be mentioned seriatim. The history of syphilis has been well done by Dr. Iwan Bloch of Berlin, whose *Ursprung der Syphilis* has been reviewed in these columns (vol. i, 1902, p. 1033). Once more the author insists on the Columbian origin of syphilis, and

¹ *Mitteilungen aus der gynäkologischen Klinik des Professor Dr. Otto Engström in Helsingfors.* Vol. VII, Part III. Berlin: S. Karger, 1906. (Suppl. 8vo, p. 169 to p. 306 of Vol. VII. M. 460.)
² *The Principles and Practice of Gynaecology for Students and Practitioners.* By E. C. Dudley, A.M., M.D., ex-President of the American Gynaecological Society; Fellow of the Royal Society of Medicine, England. Fifth edition. London: Henry Kimpton, 1908. (109s. 8vo, pp. 806; 431 illustrations and 20 full-page plates. 22s.)

³ *Practical Gynaecology: a Manual for Nurses and Students.* By Nettie Stewart, Sister in the Gynaecological Ward of the Royal Infirmary, Edinburgh, and James Young, M.B., F.R.C.S.E., Clinical Tutor in Surgery, and late Resident Gynaecologist, Royal Infirmary, etc. Edinburgh and London: Oliver and Boyd, 1909. (Crown 8vo, pp. 543. Numerous illustrations and plates. 5s.)

⁴ *Oxford Medical Publications. A System of Syphilis.* Edited by Dr. Alex. Power, M.B.Oxon., F.R.C.S., and J. Roach Murphy, M.D., M.C.Camb., F.R.C.S., with an introduction by Sir Jonathan Hutchinson, F.R.S. Vol. i. 1908. London: Henry Frowde, and Hodder and Stoughton. (Roy. 8vo, pp. 416, 63 plates, some of which are coloured. 2s. 2s.)

with so much evidence that it is difficult not to accept the matter as settled, thus coming back to the ideas of earlier writers, such as Astruc, whose views had been to some extent shaken by those who traced the existence of syphilis in Europe back to Roman times, for instance. Dr. Bloch insists on the great harm done to the advance of knowledge of syphilis by John Hunter's unfortunate experiment on himself, and his dogmatic attitude on such points as visceral and brain syphilis. It is dangerous to rely on authority, however great; indeed, the greater the more dangerous. This is exemplified by Ricord's idea that the secondary symptoms of syphilis were not infectious. Dr. Bloch is in error when he gives Ricord the credit of having been the first to draw the distinction between the soft sore and the true syphilitic chancre; the quality of chancres was demonstrated by Bassereau. The microbiology of syphilis has been thoroughly dealt with by Dr. Metchnikoff, and the difficult subject of the general pathology has been well presented and brought up to date by Dr. F. W. Andrews, who is to be congratulated on the fact that he has given illustrations of plasma cells stained by the Pappenheim method, for the plasma cell has been somewhat neglected in this country, apart from British dermatology, of course. Students who come from their pathology lectures and work appear as a rule to know next to nothing about the plasma cell. Colonel Lambkin gives a good review of the primary and early symptoms in the male, whilst Mr. Shillitoe does the same for the female. As to the illustrations of the former article, those delineating the primary sore might have been on a larger scale with advantage—Plate XXXVI, for instance. Dr. G. F. Still contributes an exhaustive review of congenital syphilis. The use of the word "pemphigus" in connexion with the early and rare syphilitic rash of infants is to be deprecated; "bullous syphilide" is much better. As to the treatment of congenital syphilis, the author speaks of $\frac{1}{4}$ gr. and $\frac{1}{2}$ gr. doses of grey powder, but there need be no hesitation in prescribing 1 gr. thrice a day, for syphilitic infants stand mercury well. It should have been insisted a little more that congenital syphilis is infectious, and that every care should be exercised by those in attendance on such infants in order to avoid infection, for it is not so rare a source of spread to the healthy as is supposed. Altogether a good series of articles on some of the special aspects of syphilis.

Dr. MAISONNEUVE's original Paris thesis¹ on the prevention of syphilis by means of calomel ointment has been dealt with already in these columns. An English translation has now appeared, and will certainly prove of interest to those not familiar with French, especially as the translation is on the whole well done. But with regard to the description of the solution of continuity necessary for the penetration of the micro-organism as "the port of entry" (for *porte d'entrée*), it smacks of the ocean and customs returns, and may be due to the fact that the translator is a naval surgeon. Why not "the open door"? The experimental inoculation of syphilitic virus which Dr. Maisonneuve allowed to be carried out on himself—with happy results, fortunately, as far as the prophylactic effects of the calomel ointment were concerned—need not detain us, for it is now a well-known episode in the recent history of syphilis. But a more important point is the ascertained fact that the remedy has been proved to be a failure in several instances (Gaucher, Neisser, etc.). Notwithstanding this, however, the use of the ointment should not be given up, for, applied very early, it may possibly be of prophylactic use. The difficulty of the proof of a negative does not require to be insisted on here.

PRINCIPLES OF SEWAGE TREATMENT.

The Principles of Sewage Treatment,² by Dr. DUNBAR, of Hamburg, is one of the best books on the subject that has yet appeared. To the English reader it is doubly interesting in that it gives an account by an outside authority—for

Dr. Dunbar's experience in dealing with problems of sewage disposal in Germany is well known—of the history and development of modern methods of sewage treatment in this country, and also in that it embodies a great deal of the results of Continental research and practice. The translation from the German has been well done, and the book is profusely illustrated and well arranged.

The first part deals with the historical development of the sewage problem, and we learn that until a few years ago pollution of the streams had received even less attention in Germany than here, but that in recent years the laws which have been passed, and the establishment in Prussia of a central authority for dealing with questions of water supply and pollution of rivers have made the position more satisfactory there. It is admitted that English experience has been the foundation of German practice; but the accounts of what has been done of late years in Germany and elsewhere make it clear that it is quite necessary for the English expert to keep himself fully conversant with foreign ideas.

Two short chapters deal with the present position of sewage treatment and the objects of purification works, and in these the causes of variation in sewages are discussed, and, as might be expected from a Hamburg writer, special attention is drawn to the facts that on the one hand epidemics may be spread by polluted rivers, and on the other that large amounts of sewage may be poured, without causing appreciable nuisance, into rivers of sufficient size.

The bulk of the volume is given to a description of the various methods of sewage treatment and a discussion of their merits. Screening and sedimentation have received much greater attention on the Continent than here, inasmuch as in many cases there the sewage undergoes no further treatment, and the chapters dealing with these matters deserve very careful study.

The discussion of the merits and demerits of septic tanks is worthy of notice, and may be said to represent very closely the view of the majority of English observers. Under the head of methods for the removal of putrescibility, Dr. Dunbar describes surface irrigation on land, land filtration, artificial biological methods, and Degener's method of treatment with powdered lignite, which has been brought into use in several German towns. The "absorption theory" of the action which takes place when sewage is applied to land or artificial beds is very fully set out, and is to a certain extent very convincing. In discussing contact beds the necessity for washing the medium is insisted on. The various methods of distributing sewage upon percolating filters are given in considerable detail, and what is called the Hamburg filter, in which the distribution is effected by spreading the sewage over a top layer of very fine material, is described in full.

The treatise concludes with chapters on the disinfection of sewage, on the supervision and inspection of sewage works, and on the utility and cost of the various methods of sewage treatment. In speaking of the tests to be applied to a sewage effluent, Dr. Dunbar states that one great object to be effected in sewage purification is the removal of the organic sulphur, the presence of which indicates the putrescibility of the liquid, and calls the estimation of its amount the "Hamburg putrescibility test." His standard for a good effluent is that it should be non-putrescible, and should produce no perceptible changes in the stream into which it is discharged.

The utility and cost of the various methods are not compared in any detail, and what is said would be of little service to anyone setting out to formulate a scheme of sewage disposal. It is, indeed, in this direction that some may find the book disappointing. It would have been impossible for the author, within the limits he has set himself, to give sufficient detail to serve for the preparation of a sewage disposal scheme; but he has, however, been very successful in delineating the principles underlying all methods of sewage disposal, and this volume, with its copious illustrations and bibliography, is worthy of the attention of the most advanced student of the subject.

Much good work in the investigation of methods of sewage purification has been done by the Hamburg State Hygienic Institute under Dr. Dunbar, and it would have been useful for the English reader if this work could have been described in detail, but that perhaps would have

¹ *The Experimental Prophylaxis of Syphilis*. By Dr. Paul Maisonneuve. Translated by Fernand L. de Verteuil, M.B. Edin., M.R.C.S., L.R.C.P., Surgeon R.N. 1908. Bristol: John Wright and Co. (Cr. 8vo, pp. 116, 4s.)

² *The Principles of Sewage Treatment*. By Professor Dr. Dunbar, Director of the Hamburg State Hygienic Institute. Translated by Dr. H. T. Calvert. London: C. Griffin and Co., Limited. (Med. octavo, pp. 294, 15s.)

extended the present volume too greatly, and the reader must content himself with the list of references given in the bibliography.

A MEDICAL NOVEL AND SOME MISCELLANIES.
The average representative of the surgeon's craft in modern novels is not a very attractive figure—a cold-blooded abstraction, and often a butcher: but in *The Bias*,⁹ by Miss MARGUERITE CURTIS, he is of quite another character—an idealist who cherishes his illusions, and believes in free will and credits human nature with an inclination towards good. The other professional character in the book—a psychologist—takes precisely the opposite view. Given free choice and a balance of material benefits on the side of evil, no woman, and but seldom a man, would prefer good to evil. Anxious to convince his surgical friend of his error, he persuades him to try an actual experiment by submitting a young ward of the latter alternately to good and evil influences. For six months of the year she is allowed to move freely in the fastest of the smart sets of the metropolis; the remainder she spends in good works in a quiet country village. The result of the experiment we will leave readers to learn for themselves, only promising that the *dénouement* is dramatic, and the interests of the novel well sustained to the end; whether the tests were applied in such fashion as to ensure a decisive result, supposing one to be possible, is not quite certain. In the way of professional criticism no remark need be made, except that it is unusual for a successful Harley Street surgeon to keep, so to speak, surgery hours, remaining at home between six and seven in the evening, on the office-chance of patients arriving. For the rest, the book is quite worth the attention of those to whom problem novels in any wise appeal.

*The Grammar of Life*¹⁰ is the work of one who, "perplexed and troubled" by the intellectual chaos and unrest of the day, set himself to solve the problems involved by reading "books of a varied nature, comprising philosophies, religions, sciences, histories, general literature, and fiction"; he also did a little travelling, and "mingled with both saints and sinners." The result is that he finds "no phenomenon of life, however complex and astonishing, incapable of solution." A second product is this volume, in which, thanks to the capacity of the author for expressing, if not explaining, himself in succinct language, most of the more abstract questions involved by the existence of this world and its inhabitants are dealt with in 237 pages of large print. For the rest, the author's methods are those of other metaphysical philosophers, and his answers will doubtless please those who regard a question as satisfactorily answered when its factors have been restated in other than everyday terms. Who, for instance, could be so unreasonable as to wish for any other explanation of life than that it is a form of motion? or who so unphilosophic as to gird at his existence when he learns that, whereas the universe at large has no why, no wherefore, and no purpose, man, at any rate, has a definite object? This is to go on developing his compatibility with his environment until the optimum is reached. This effected, he will retrograde until apparently he is once more a struggle-for-lifer decked in wodes and skins, unless meanwhile—something else happens. Whether he has a soul is not stated; probably he has not, as his chief characteristics as a living being are the possession of three instincts. Therein he is on a level with the dog, but better off than the cat. The latter is a proud, independent animal, lacking the gregarious instinct which, with those of reproductiveness and self-defence, are the attributes of dogs and men. The gregarious instinct is that which endows its possessor with a conscience and induces him to sacrifice himself for the good of the community. What a conscience is we could not discover. Possibly some other reader may be more fortunate.

To the volume entitled *Reminiscences: Personal, Professional and Philanthropic of John Blackwood, M.D.*,¹¹ attaches

⁹ *The Bias*. By Marguerite Curtis. Edinburgh and London: W. Blackwood and Sons, 1908. (Crown 8vo, pp. 321. 6s.)

¹⁰ *The Grammar of Life*. By G. T. Wrench. London: W. Heinemann, 1908. (Fool 8vo, pp. 250. 6s.)

¹¹ *Reminiscences: Personal, Professional, and Philanthropic of John Blackwood, M.D.* Edinburgh: A. Elliot; and London: Simpkin, Marshall, and Co. (Medium 8vo, pp. 324. Price 6s.)

something of the interest of a conundrum, for though the author writes under an assumed name, it is indicated that there are many who will guess his identity. He was born near Edinburgh in 1832, became M.D. Edinburgh about 1853, taking honours for a thesis entitled *De Dyspepsia*, then obtained honours at the M.B. London examination, practised near that city for some forty odd years, and finally retired to Edinburgh, where he is still living. The avowed object of the book is the solution of the vexed problems of human unfitness and the disclosure of the lines on which health, happiness, and success may first be attained and then preserved; and included in it are a certain number of sketches of personalities famous in Scotland during the first half of last century, and some comparison of Scottish and English systems of medical education and examination. Speaking of the Fifties, during which his studies were completed, the author says that the dissecting and clinical courses in London took a wider range than Edinburgh, and were more thorough; but with regard to lectures and the application of study to practice, the Edinburgh professors excelled their fellows in London. As for examinations, they were less thorough in the Scottish than in the English metropolis. Such instruction as the book contains is conveyed in the form of minute descriptions of conversations held by the writer with various persons, and of equally detailed accounts of his thoughts, feelings, and motives on sundry occasions. The volume, it is stated, is based on a diary carefully kept throughout the writer's life, and this would probably have been guessed by any one familiar with the precision of language and wealth of apparently superfluous detail characteristic of the diaries of early Victorian days. Though some readers may get a little weary, there are many who will find it—in the language of our forefathers—vastly entertaining.

Few folk and no professional riter, as the book itself might say, could rede *The Arcana of Nature*¹² without feeling envious: it is a history of certain people who falsified the saying that there is no royal road to learning. Swedenborg it is true was a well-educated man as times then went, but the knowledge which made him famous was due to no effort of his own, and the others were entirely unlettered individuals when first they gave proof of attainments. For instance, the remarkable exposition of the history and laws of creation from which the present volume derives its title and of which it supplies a reprint, was penned by Hudson Tuttle when a mere youth and scholastically an ignoramus. We say penned, because he, like Andrew Jackson Davis and Swedenborg, received his knowledge in reddly made lots and had nothing to do but rite it down. The kind purveyors were spirits with whose world each of these riters was equally familiar. Nevertheless each differs from the other in his account of its constitution: which is curious. They were alike, too, in the worldly wisdom with which they applied their spook-inspired knowledge, thus attaining financial positions frequently unreachd by mere burners of midnight oil. Finally there was similarity in the circumstances in which their knowledge commonly came. It was usually in the dreamy quiet of their own apartments at the end of a day's work, and Swedenborg for instance received his first communication from the spirits at the end of a generous dinner. As it seemed possible that the same easy rode to achievements without labor lay open to all, we have tried it. The result is this review, for the contents and style of which we consequently neither seek praise nor accept blame. Nor yet for its orthography, which is somewhat on the lines of the book itself, or, in other words, on those of the Simplified Spelling Board. In conclusion, though still dubious as to the true genesis of Mr. Tuttle's work, we congratulate Dr. EMMET DENSMORE on the restraint of his general statements about his heroes and their doings.

Among the annuals which have reached us is the ninth yearly issue of the *Daily Mail Year Book*.¹³ It should doubtless be found useful by those who do not habitually read the daily papers, as it purports to supply information on all the questions of the day. This is effected for the most part by supplying extracts from speeches, Blue Books,

¹² *The Arcana of Nature*. By Emmet Densmore, M.D. London: Swan Sonnenschein and Co. (Demy 8vo, pp. 471. Price, 6s.)

¹³ *The Daily Mail Year Book*. By Percy L. Parker. London: Associated Newspapers, Limited, 1909. (Crown 8vo, pp. 272. 6d.)

or other publications bearing on the special subject, and fairly well summarizing their more recent aspects. In the selection of these the editor, Mr. PERCY L. PARKER, seems as a rule to have exercised a wise discretion, but over the general "make up" the trail of the office boy is unduly obvious. Thus about one-sixth of the whole microscopic space devoted to "Some Medical Matters" is given up to a description of an *ignotum quid* called the Ethological Society; and elsewhere, under the heading "Women's Suffrage Abroad," is hidden a fifty-word account of a really notable event, the genesis of the Research Defence Society. There is a certain quaintness, too, about the section which ostensibly consists of brief biographies of "men and women of our time." On what principle this section was constructed is not clear, as it may be regarded as a hotch-potch of people with whom every schoolboy is well acquainted, and of persons whose existence is of no practical importance to anybody but themselves and their friends. On the whole, one scarcely needed the editor's assurance that these biographies have been "personally revised in nearly every instance"; but this fact lends an attractive flavour to statements such as that Mr. Hilaire Belloc, M.P., is "one of the three cleverest young men in London," the others being Max Beerbohm and G. K. Chesterton. The latter, it will perhaps interest readers of the *Illustrated London News* to learn, is "the most scintillating and epigrammatic of living journalists," as well as a poet, satirist, and controversialist. Information is also supplied as to the more recent doings of some of the personages who figure in these biographies; thus Mr. W. H. Massingham, a "strenuous, brilliant, and sensitive Liberal journalist," "visited Constantinople in 1903." The disclosure of this feat alone makes the book worth buying, for the occurrence of the political marvel of the year "the bloodless revolution" in Turkey seems at once explained. We are glad to see that medical men do not figure largely in this section. Among those whose names appear are Sir James Crichton-Browne, "one of the most famous specialists on mental and nervous disorders and public health," and Dr. C. W. Saleeby, who among other claims to admiration, "married Mrs. Meynell's daughter," and had, it seems, "a brilliant university career." He also "championed the Beard ferment treatment for cancer," and "his father founded the Mount Lebanon Schools."

SLEEPING SICKNESS.

A QUARTERLY report on the progress of segregation camps and medical treatment of sleeping sickness in Uganda,¹⁴ by Captain GRAY, R.A.M.C., issued recently by the Sleeping Sickness Bureau, Burlington House, London, contains some facts of interest and importance. The medical officers in charge of the various camps have been trying the various drugs from time to time put forward as specifics for this disease, and have unfortunately found that all are wanting. As the conclusions are based on the results of the treatment of hundreds of patients under rigid conditions, they are far more valuable than those that can be drawn from experiment with drugs on animals in a laboratory. Dr. Van Someren reports adversely on the combined treatment by atoxyl and mercury, but gives a more favourable account of a new drug, "soamin" (sodium-amino-phenyl-arsinate, Burroughs, Wellcome and Co.). The action of this drug, he concludes, is similar in many respects to that of atoxyl without the toxic effects of the latter, and should, he recommends, replace it for routine use in the camps. Dr. Hodges, who writes an introduction to the report, sums up the question of the treatment of sleeping sickness at the present time as follows: "There is no doubt that the hopes expressed by Professor Koch and others that atoxyl would prove a general and permanent cure for cases of sleeping sickness must now be abandoned. Personally I have never allowed myself to hope for a cure in more than a limited number of favourable cases. This may, I think, still be hoped for, though the time has not yet arrived when we can say with confidence that any apparent cure will remain per-

manent." The report is published by the Sleeping Sickness Bureau, and the formation of this office is clearly going to be of the greatest use in disseminating information quickly and in a form which everyone can easily obtain.

NOTES ON BOOKS.

The Year Book and Diary,¹⁵ which has been issued by the publishers of the *Sanitary Record* for twenty-seven years, is a diary with space for three days on each page, interleaved with thin blotting paper and containing in the first fifty pages a mass of information useful to medical officers of health or sanitary inspectors. The section on sanitary legislation in 1908 is clearly written and may be referred to with confidence. There is a list of thirty-six sanitary and allied societies having their headquarters in London, and detailed particulars are given of most of them, including the regulations as to the examinations of the Royal Sanitary Institute and of the Institute of Sanitary Engineers, but no mention is made of the Sanitary Inspectors' Examination Board. Two other noticeable omissions in the list are the Society of Medical Officers of Health and the National Association for the Prevention of Consumption and other forms of Tuberculosis.

To the ninth volume of the reports of the Ophthalmological Department of the Caroline Medico-Chirurgical Institute in Stockholm,¹⁶ the editor, Professor WIDMARK, contributes three articles. He describes a case of bilateral detachment of the retina due to inflammatory extension from an old empyema antri in which complete recovery took place; three cases of toxic amblyopia of unusual origin, two being due to excessive coffee drinking, and one probably to arsenic; and five new cases of sympathetic ophthalmia treated by sodium salicylate, with three successes. Dr. Lindahl details the results of his investigations into the bactericidal properties of the lacrimal secretion. Dr. Forsmark describes a remarkable case of bilateral symmetrical epibulbar tumour, which he considers a "leucosarcoma"; the histological picture is, however, uncertain, and the possibility of gumma is excluded only by the long duration of the swelling. Dr. Lamm figures an unusual appearance of the fundus due to a congenital anomaly, possibly a "rest" of the hyaloid artery, and also recounts a case of orbital tumour. The first article is from the pen of Dr. Haas Gertz, and gives the theoretical basis and method of use of a new apparatus for estimating refraction in inverted ophthalmoscopic images.

Miss McISAAC's *Hygiene for Nurses*¹⁷ is, on the whole, a useful compilation. It takes the reader satisfactorily through the usual course of elementary hygiene, without ever verging on originality. The information given about foods and adulteration is practical but somewhat scrappy. The section on medical inspection of schools consists almost entirely of quotations from the regulations drawn up for medical inspectors in the United States, and is out of place in a work addressed to nurses.

A "little learning" is, perhaps, more dangerous in nurses than in most other members of the community, and it is just this mitigation of wholesome ignorance which is likely to be developed by Dr. G. H. HOSKIE'S *Practice of Medicine for Nurses*.¹⁸ Nurses ought not to "practise medicine." So much the author admits in his preface, where he writes: "Because it is the author's belief that the nurse should neither diagnose nor prescribe, little space has been given to differential diagnosis and the dosage of remedies." Nevertheless, the whole book is a temptation to the ambitious nurse who might be desirous of doing those things. After a dissertation on the treatment of various forms of tonsillitis, including even the incision of abscess, the various complications of this disease are enumerated, and the author adds: "Because of the seriousness of all these affections it is usually advisable to have a physician direct the treatment of every severe case of tonsillitis." In this country we would substitute the word "always" for usually. As a manual of nursing the book is inferior to any of the well-known textbooks.

¹⁵ *The Sanitary Record Year Book and Diary*, 1909. London: The Sanitary Publishing Company. (Cr. 4to, pp. 60. 2s. 6d.)

¹⁶ *Mittheilungen an d. Anatomisch u. Chirurischen Medico-Chirurgischen Institute zu Stockholm*. Edited by Dr. J. Widmark. Ninth vol. Jena: Gustav Fischer. 1908. (Sup. roy. 8vo, pp. 130, illustrated. M. 5.)

¹⁷ *Hygiene for Nurses*. By Isabel McIsaac. New York and London: The Macmillan Co. 1908. (Cr. 8vo, pp. 222. 6s.)

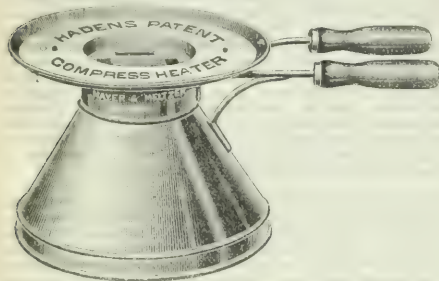
¹⁸ *Practice of Medicine for Nurses*. By George Howard Hoskie, A.M., M.D. With a chapter on the Technic of Nursing, by Pearl L. Lupton. Philadelphia and London: W. B. Saunders. 1908. (Fol. 8vo, pp. 284. 6s. 6d.)

¹⁴ Quarterly Report on the Progress of Segregation Camps and Medical Treatment of Sleeping Sickness in Uganda. For the quarter December 4, 1907, to February 24th, 1908. By Captain A. C. H. Gray, R.A.M.C., Medical Officer in Charge of the Sleeping Sickness Extended Investigations. With an introduction by Dr. A. D. P. Hodges, S.M.O., Uganda. London: Sleeping Sickness Bureau, Royal Society, Burlington House, W. (Is.)

MEDICAL AND SURGICAL APPLIANCES.

Compress, Haden's Patent Compress Heater.

DR. WILLIAM E. BURTON (London) writes: I desire to call attention to a very simple and excellent device for the heating of compresses, fomentations, dressings, etc. The apparatus consists, as shown in the cut, of two parts, of which the lower is to contain hot water, and to be placed on a gas or spirit stove; and the upper part is a tray, pierced centrally, to permit the vapour from the boiling water to heat the compresses, etc., placed thereon. Both



upper and lower parts are made of copper, tinned inside, and each is furnished with a wooden handle which allows of their being moved without risk of burning the hands. I have had occasion to make use of this very handy little apparatus, of which I cannot speak too highly as regards (a) efficiency, (b) simplicity, (c) cheapness. It does away completely with the delay and risk of scalding (arising from the usual fomentation methods, in the absence of a properly trained nurse) and saves the doctor's time in explaining. I have no financial interest in this invention, which is known as "Haden's Patent."

THE STANDARDIZATION OF DISINFECTANTS.

The questions of introducing a method of standardizing disinfectants, and the influence of organic matter upon germicidal value, have been investigated by C. J. Martin and H. Chick.¹ As the results of previous investigations on the process of disinfectants,² the latter came to the following conclusions:

1. A complete analogy exists between a chemical reaction and the process of disinfection, one reagent being represented by the disinfectant and the second by the protoplasm of the bacterium.
2. In the case of anthrax spores, the disinfection process proceeds in obedience to the equation for a unimolecular reaction, if numbers expressing "concentration of reacting substance" are replaced by "numbers of surviving bacteria."
3. The simple law does not hold good in all cases—for example, paratyphoid bacilli—for there are variations in individual bacilli.
4. Temperature influences the process regularly, and Arrhenius's equation can be applied. In killing paratyphoid bacilli with mercuric chloride, the reaction velocity increases about three times when the temperature is raised 10° C., while when phenol is employed, the velocity is increased from seven to eight times.
5. It is deduced from the fourth conclusion that considerable advantage is gained by the use of warm solutions of disinfectants.
6. It could be shown that a definite logarithmic relation exists between the concentration of the disinfectant and the mean reaction velocity of disinfection in the case of mercuric chloride. It is not, however, the concentration of the salt but that of the metallic ions which stands in relation to the reaction velocity.
7. Some evidence was obtained that, in disinfection with mercuric chloride, a toxic compound is formed between the metal and the substance of the bacterial cell. This compound prevents all further growth, but vitality can be restored by the addition of a large excess of soluble sulphide.

In the more recent article it is pointed out that disinfection is most often required for utensils, soiled linen, closet pans, dejecta, etc., and for the washing of walls and articles of furniture, while less frequent objects of disinfection are the sterilization of surgical instruments, and

hands, and the preservation of serum, vaccine, and the like against bacterial contamination. With regard to standardization, Martin and Chick hold that it must be carried out at a constant temperature, as the disinfection process has a high temperature coefficient. They arbitrarily selected a temperature of 20° C. In order not to complicate the test, it is, they state, desirable to employ a constant number of bacteria per unit volume and to conduct the experiment in such a way that the bacteria shall possess a constant degree of resistance. Since it has been shown that a logarithmic relation exists between the reaction velocity and the concentration of the disinfectant, it follows that the time factor must also be kept constant, and thirty minutes is suggested as a suitable time during which the disinfectant may be allowed to act on the bacteria. In the case of metallic salts, a sulphide must be employed to neutralize the traces of disinfectant carried over with the test sample, and in the case of mercuric chloride, a large excess of this substance in solution is required to decompose the compound formed between the metal and the substance of the bacterium.

They find that a disinfectant varies in efficiency toward vegetative organisms, and in some cases the efficiency is ten times as great as it is in the case of other bacteria. In the case of spores, the action of phenol and emulsified disinfectants is too feeble for practical use, and the metallic salts are by far the most efficient germicides. They found that the ratio between the concentration of phenol required to kill the same number per unit volume of sporing and vegetative forms in the same time varied between 17 to 1 and 25 to 1. A virulent strain is somewhat more difficult to kill than a non-virulent strain of the same microbe. Owing to the variations in the resistance of different germs toward the same disinfectant, it is necessary to use one arbitrarily selected germ for testing purposes. *B. typhosus* appears to be suitable, since it occupies a position which in many respects might be termed average, but it is not necessary to employ a virulent strain. The presence of 10 per cent. of blood serum in the testing material reduces the efficiency of 1 per cent. phenol by about one-eighth. The effect upon emulsified disinfectants is greater. The effect on mercuric chloride is much greater, a 0.5 per cent. solution being reduced to from 0.6 to 0.06 of its original value as the concentration of the serum was increased from 5 to 30 per cent.

The presence of particulate organic matter—for example, animal charcoal, dust, albumen precipitated in a state of fine division, bacteria, and faeces—was found to affect the germicidal value of emulsified tar acid disinfectants to a much greater extent than that of phenol solution. The whole of the emulsified tar acid could be removed by a suitable addition of the particulate organic matters named. The authors have drawn a curve representing the adsorption of tar acids by animal charcoal. When a 3 per cent. suspension of dried and finely particulate faeces is employed, the efficiency of phenol is only reduced by about 10 per cent., while that of the emulsified tar acids is reduced from one-third to one-eleventh of the original value. The soluble commercial cresols occupy an intermediate position, the reduction depending on the solubility. The reduction in the case of the emulsified tar acids was found to be higher the finer the emulsion. Within the limits of concentration of disinfectant employed the amount of emulsion removed by the particulate faeces was approximately proportional to the concentration of disinfectant. The removal was found to be due principally to adsorption of the emulsion upon the surface of the particles. The authors give the details of a method of standardizing disinfectants in the presence of faeces, based on the foregoing considerations.

In a further communication³ the same authors briefly deal with the power of an emulsified disinfectant to kill germs, as compared with that of the same disinfectant after solution of the active principles. They found that the emulsified condition was important, inasmuch as the germicidal value sank considerably when the emulsion was destroyed by dissolving the tar acids in alcohol. They were able to demonstrate that the emulsified condition permitted of adsorption of the emulsion particles by bacteria, and in support of this they adduce evidence of the disappearance of emulsified particles. A curve is plotted which shows the rate of adsorption.

¹ *Journal of Hygiene*, 1908, vol. viii, No. 3.

² *Ibid.*, 1908, vol. viii, No. 1.

³ *Ibid.*, 1908, vol. viii, No. 5.

ROYAL COMMISSION ON VIVISECTION.

FOURTH REPORT.

(Continued from page 229.)

We continue our abstracts from the evidence of which the minutes are contained in the fourth report of the Royal Commission on Vivisection, issued in December, 1907.*

Evidence of Dr. A. D. Waller, F.R.S.

Dr. Waller gave evidence as to some of the statements made in Miss Lindaf-Hageby's book, *The Shambles of Science* (original edition). With regard to the "dog injected with a substance derived from a lunatic," he was present at the lecture, and could identify the dog. As regards "a troublesome dog," on going through the description he could only say he saw nothing of the sort. He did not think this lecture took place in the university. It could not have taken place at the date given by Miss Hageby, because the laboratory books showed the lecture on "a dog injected with a substance derived from a lunatic" took place on that date (February 26th). He agreed that it might have taken place somewhere else. He was present at the lecture on March 12th, described as "The only completely satisfactory method." Asked if he considered that Miss Hageby's book gave a fair and accurate representation of what took place, he said, Oh, no; it was a representation coloured by the sentiments of the lady—in good faith, no doubt. Dr. Waller was then asked about the lecture on December 3rd, 1902, as to which she stated on p. 11:

He inserted one point of a pair of forceps under the skin behind the skull for a moment. . . . The animal begins to struggle, quickly moves its limbs to its back, and tries with hands and feet to thrust away the instrument.

The witness's note on this was:

The ordinary reflex movements that do not imply any sensation.

On page 12 she said:

The wound is cauterized.

His note was:

Presumably the cord is destroyed.

That meant pithing. He meant that there was no cauterizing. Then on page 13 was the episode of the frozen rabbit left in an ice-box, and on the next page the description of its start with horror. What happened was that the rabbit was put in an ice-chest—a refrigerator—to lower its temperature, but the refrigerator was not cool enough, and the animal's temperature was not lowered. It was not anaesthetized. It was simply put into the refrigerator to show that its temperature did not go down as that of a cold-blooded animal would. There was no vivisection at all, and no freezing of the animal. Miss Hageby's description was:

The animal was taken out of the freezing machine quite unconscious but frozen stiff, like a piece of wood. With all signs of terror the animal springs back, trying to get away, but half-paralysed by the cold and half-fascinated.

The witness's comment upon that was simply that all that was impossible. Asked about February 3rd, 1903, when there was said to have been

an experimental production of blood clotting by injection of a nucleoprotein,

Dr. Waller said he was there and gave the anaesthetic; and there was a description on page 30 of the anaesthetist looking "most careful, as if he were attending the precious life of some human patient," and so forth. It simply meant that it was one of the very first lectures delivered in the laboratory, and he laid great stress upon anaesthesia, and gave the anaesthetic himself in order to show how it was to be done by other people in the laboratory. Asked, as regards all these experiments at which he was present, if there was any case in which the animal was operated upon either without anaesthetics or without sufficient anaesthetics, he replied, Certainly not. No experiment had been performed in that laboratory in

which an animal had not been completely insensitive to pain. If there were movements in the animal, they were reflex—the ordinary convulsive movements that happened. Asked about the lecture on February 19th, described as

An experiment that is not supposed to be useful, he said he was present. On page 59 they said:

The lungs are exposed, and artificial respiration kept up by means of a pump attached to the operation table, and worked by electricity.

His addition to that was "pumping air plus chloroform vapour"; that was to say, the artificial respiration apparatus was attached to an apparatus for producing anaesthesia. That was the usual method. On page 60 it was said:

We can be almost certain that the dog has been also curarized, because it is absolutely still, with the stillness that is characteristic of the "Hellish Woolah."

His comment on that was that it was not curarized. In his notes it was stated that:

The animal was absolutely motionless under artificial respiration through a chloroform flask giving between 2 and 3 per cent. of chloroform vapour to the insufflated air. I was present.

He had been measuring the percentages at about that period. Asked if that would be sufficient to account for the animal's being completely still, he said, Absolutely; and it would run the risk of being overdosed with that percentage. Asked as to the lecture on February 26th, he said it was on the circulation, on the effect of choline, which was the particular thing—one of the alkaloids, one of the pyramines. "A dog injected with a substance derived from a lunatic" was a description, after a fashion, of choline; it was a substance derived from a lunatic. The animal was fully anaesthetized. He was absolutely certain there was no interval in which the dog was suffering. As to March 12th, when the lecture was described as "The only completely satisfactory method," and Miss Hageby began by stating, "He has doubtless found the remedy to be curare," the witness said he was absolutely sure no curare was used. His note was:

Incorrect. The animal was under artificial respiration through the chloroform flask, getting between 2 and 3 per cent.

There was a remark on p. 134 to the effect that at the end of the lecture one other—the director of the laboratories—came to try the action of betain. He remembered that, because it was a preliminary trial of betain, and if any point had been made of that he would explain it. On p. 135 there was the following statement:

When an anaesthetic or narcotic has been given to the animal the students are told so, or they see the anaesthesia being kept up by repeated doses of the anaesthetizing agent.

His note was "Not necessarily." On this occasion the anaesthetic was certainly given. Asked what he meant by "not necessarily," he said one did not mention it on every occasion. At every turn the animal was anaesthetized, but it might often happen that one did not mention it. He took it for granted. He did not think he would necessarily say so himself. In reply to further questions, he said his definition of light anaesthesia and deep anaesthesia implied that there was no sensitiveness to pain in light anaesthesia any more than in deep anaesthesia. He had given the following definition:

The fingerpost between this first stage and the next is quite clear; if when the conjunctiva is touched the eye winks, the anaesthesia is "light," if the eye does not wink the anaesthesia is "deep."

In deep anaesthesia all sensation and voluntary motion were lost. In deep anaesthesia the movements were more profoundly affected. Asked by Sir William Church as to a statement by a witness, who said that the fall in blood pressure which took place on the administration of chloroform was produced really by asphyxia and by that alone, and not by the chloroform itself, Dr. Waller said that chloroform of itself tended to produce a fall, but that asphyxia tended to produce a rise. Respiration and the heart were interfered with; the respiration activity diminished and the heart activity diminished, and the vasomotor centre relaxed, and there was a fall of the pressure and diminution *all pari passu*. He had no hesitation in saying that the action of chloroform did at times diminish the blood pressure. In reply to further questions, Dr. Waller quoted the following passage

* London: Printed for His Majesty's Stationery Office, by Wyman and Sons, Limited, 103, Peter Lane, E.C. And to be purchased, either directly or through any bookseller, from Wyman and Sons, 103, Peter Lane, E.C.; or 32, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Edinburgh; or E. Ponsonby, 116, Grafton Street, Dublin. (1908.)

from a lecture in which he dealt with *The Shambles of Science*:

If the two young ladies under whose name the publication entitled *Shambles of Science* has appeared, came simply to get "copy," the case is easily understood; but I am unwilling to believe this; and, indeed, the case looks to me much more like that of a pair of very ill-advised busybodies supporting each other through a trying ordeal for the sake of what they imagined to be an errand of mercy. I am sorry they came. I should have told them or any other non-professional women that they had better not come to such lectures, for they would run the risk of being misled, and, as evidenced by experiments where no suffering to living animals was caused. Indeed, one would look very much askance at the young woman who should be able to look on while an animal was, as she imagined, undergoing torture. For the naked details of even a properly conducted vivisection, ignorantly considered, as must be the case if they are considered at all by an unprofessional person, appear revolting—so do the details of a surgical operation or of the slaughter of an animal for food, or of the proceedings in the dissecting room, and the post-mortem room. The minute and graphic account of such details by ignorant women is from every point of view mischievous and deplorable, and I very much regret that these two unfortunate ladies should have obtained the opportunity to torment themselves and their readers by their conscientious misrepresentations. Physiologists, when vivisection is necessary, do not take either pleasure or pain in its naked details, and they systematically take due precautions to fully anaesthetize animals required for experiment. The incredible motives sometimes attributed to physiologists by well-meaning people, and the unlimited adjectives and substantives by which they are held up to public reprobation can only be left to the antidote of their own excess. It is really labour lost to be constantly pleading "Not guilty" to this, that, or the other quite outrageous statement; we can only wonder that well-meaning people can so quietly harbour such infamous thoughts. Nor have we failed to question our own conscience. We well know that physiologists are subject to the common laws governing the human mind, and that habit must tend to engender inattention, and that inattention would be cruelly. We are on our guard against our own inattention, but knowing that we are human, we do not resent indignantly as might be expected of us the reminder to be on our guard that is contained in the denunciations of our critics. We also know that there is evil in the appearance of evil, that things right and proper in themselves, but offensive of appearance, ought not to be exposed. And if exposure by even competent authority must offend and injure the imaginations of ordinary men and women, how much more injury and offence to the public mind will be committed by incompetent and self-deluded women who have entered what is, to their minds, nothing more than a chamber of horrors, where in reality the "quivering flesh" and "palpitating heart" and "tortured nerves" are more often than not only the living parts of dead animals, and where, in any case, an animal, even if alive, has been absolutely deprived of sensation. When one attempts to realize what kind of images must hold possession of an ignorant, prejudiced, and sensitive person—man or woman—who has seen, without understanding, he ceases to wonder at bad language, yet what can be hoped to say that shall reach the mind of the deluded fanatics whose pity has been fanned to hatred by agitators. And can it be expected of us that we should say anything at all to persons who can employ sensational literature to poison the wells of human sympathy? In this laboratory—and no doubt in others—our very first concern is to administer anaesthetics properly when anaesthetics are required. And I make the deliberate statement that animals in this laboratory are anaesthetized with as great certainty and accuracy as are the patients in any hospital in the United Kingdom. Can it be necessary to tell you that we do not juggle with bottles of "colourless and odourless" liquid, as imagined and stated by the two ladies who have visited these "shambles"? You shall see for yourselves what takes place outside the lecture room whenever it is necessary to anaesthetize an animal. I have chosen cats for my demonstration, since the demeanour of these animals is most familiar to us.

Asked as to a statement by a witness that when artificial respiration had to be kept up, and for that purpose tracheotomy was performed on the animal, the tracheotomy was performed before any anaesthetic was administered. Dr. Waller said, "Not in my practice, most certainly." He knew of no laboratory in England in which tracheotomy would be performed on an animal before the administration of some anaesthetic. He would disapprove of such a practice. In reply to further questions, he said an animal immobilized by curare could be anaesthetized. He had never known curare administered without anaesthetics. If 2 per cent. of chloroform was present, an animal was of necessity under the influence of the anaesthetic. If artificial respiration was going on with that percentage of chloroform vapour he knew he was on the safe side as regards pain to the animal, and on the unsafe side as regards its life. He was more liable to lose the animal than to let it out of anaesthesia. Asked about Miss Hageby's description of the killing of the dog by blowing air into the jugular vein, he said he did not remember the

details. They did not sound to him very likely, but what he should imagine might be the explanation of what she saw, or thought she saw, would be that with air in the veins convulsions happened, and in order to make sure, as any person would do, the lecturer said "Kill the animal," meaning simply to put the scalpel into the medulla. That would be one's natural action if one saw a convulsion on the part of an animal that had been so treated. It was common to have struggling when the air was in the vascular system. It was of the same nature as the struggles of apoplexy or anaemia. There was absolutely no sensibility to pain. Asked by Dr. Gaskell how he could tell when a sufficient amount of an anaesthetic had been given to prevent the animal from feeling pain, Dr. Waller said one's ordinary quick and practical test was the conjunctival reflex. The differences between the reflex and automatic movements and the convulsions were often very deceptive as indicative of conscious voluntary impulses; but still one would tell by the behaviour of the animal whether the movements were indicative of sensation or not, simply from their general character. Proceeding, he said that in the state of light anaesthesia one knew that the first movements to disappear in the case of a man were the obviously purposive movements, and one knew that when that happened there was no sensation; and one judged from the character of the movements that the animal was in an analogous state, having no sensation. But, as a matter of fact, his practice, and he thought, the practice of most physiologists, was to go as far as the conjunctival reflex. Asked if, when complete abolition of the conjunctival reflex had once been obtained, a very considerable time elapsed in which no chloroform was given before any sensation of pain ever came back, he said, Yes. He agreed that there was a very considerable time after the conjunctival reflex had been abolished in which one might be perfectly certain that there was no sensation of pain; and he would go further: One knew that one could keep the animal anaesthetized; that if one had brought it down by 2 per cent., one could keep it there at $1\frac{1}{2}$ per cent., 1 per cent., and a $\frac{1}{2}$ per cent. as time went on. He had had an animal as long as twelve hours under anaesthetics, and at that time only a very low percentage indeed was wanted to keep it under. In reply to Mr. Tomkinson, he said he would not call morphine an anaesthetic, but a narcotic. It was a question of words again. He could imagine the stupor produced by morphine or alcohol being so profound as to amount to anaesthesia. He had kept cats under for a very long time; dogs he had kept in perfect anaesthesia for three or four hours. He had found no difficulty in anaesthetizing dogs. He had not lost a dog for several years. Asked about Mrs. Cook's statement to the Commission that she had witnessed baking and freezing of animals at the Imperial Institute, he said that no heating experiments were ever made in the laboratory. The only ones ever made were on reducing the temperature. The baking was pure imagination absolutely, and the freezing was never there. He noticed the temperature of the ice-chest at the time was noted as 8° Centigrade, and no animal was exposed to a temperature below the freezing of Fahrenheit.

(To be continued.)

ALDERMAN F. R. Mutch, M.D., was the recipient on January 20th of an illuminated address from the Nottingham Medico-Chirurgical Society. Dr. Mutch, who has been in practice in Nottingham for some thirty years, has held a seat on the City Council for two-thirds of that time, and has been Chairman of the Health Committee for the past nine years. In view of his services to the city and the credit which they reflected upon the medical profession, the Nottingham Medico-Chirurgical Society determined some time ago to recognize them formally in the fashion stated.

In the large seaport town of Karachi, the health officer, Dr. Kaka, D.P.H., induced the municipal scavengers to be inoculated with Hafkine's plague prophylactic. The greater number, that is, 1,114 out of a total of 1,206, were inoculated before the beginning of last plague season. At the close of the season it was found that the mortality from plague amongst the uninoculated was 11, and amongst the inoculated 3. To put the result in another way, if the 1,114 inoculated persons had suffered to the same extent as the 92 uninoculated, they should have had 133 deaths instead of 3, a difference of 96 per cent.

IRISH AND SCOTTISH DEGREES AND DIPLOMAS.

SIR CHARLES E. BALL took the chair at a well-attended meeting of the members of the Irish Medical Schools' and Graduates' Association and of the Scottish Medical Diplomates' Association held at the Hotel Cecil, Strand, on January 21st, to consider the exclusion of graduates of the universities and the diplomates of the Scottish and Irish Corporations from candidature for positions on the staffs of certain hospitals in England.

Dr. H. MACNAUGHTON JONES moved the following:

That the present exclusion of all persons who do not hold certain qualifications from candidature for honorary positions on the staff of a public hospital is contrary to the public weal, and is a restriction which is not to the interest of the institution itself, excluding, as it does, all other candidates who may have exceptional claims to fill such positions.

The principle advocated had been accepted and approved in the three divisions of the United Kingdom on three occasions—at the annual meetings of the British Medical Association in Dublin (1887), Glasgow (1881), and Bournemouth (1890). It had received the approval of a Special Committee of the British Medical Association appointed to consider the question, and of the Select Committee of the House of Lords that had under its consideration the organization of the metropolitan hospitals. The BRITISH MEDICAL JOURNAL of February 4th, 1893, said that the efforts made to remove the invidious distinction which had come into existence in England had the warm support of the British Medical Association, which at three general meetings had condemned the monopoly by a large majority. It must at the outset be understood that Irish and Scottish graduates or diplomates did not complain that they were not appointed to English hospitals: it was that they were excluded from candidature though they held the higher degrees and qualifications of their universities and colleges. There was a rule which declared practically that they were not to enter within the sacred circle of favoured candidates for certain hospitals. At present no Scotsman or Irishman, no matter how well qualified by experience or original research he might be, who did not happen to hold the favoured English qualifications, could apply for an appointment in these hospitals, and the slur was publicly thrown in their faces by advertisement in the lay press. The two reasons given by those who defended the practice were first that these institutions were not State institutions; they were not on a par with the public services, military or civil; they had been endowed by private munificence and were supported by private donations and subscriptions, and those entrusted with the control of their maintenance and administration were entitled to make any rules or regulations they saw fit for their efficient conduct and welfare; secondly, that the rules requiring certain qualifications to be held by candidates were justified by the inferior standard of knowledge required from, and the lower ethical restrictions placed on, the possessors of all other qualifications. In regard to the first, it must be remembered that it never could have been the intention of the founders of those hospitals to limit their sphere of usefulness to the State, whether as a means of treating the sick poor or as affording opportunities for the study of disease and the discovery of new means of cure. When many of them were founded the conditions of medical education were widely different to what they were now, and the centres from which instruction and knowledge were to be obtained comparatively few, and situated widely apart, in England, London alone, in Scotland, chiefly Edinburgh, in Ireland, Dublin alone. It was natural that the authorities of the hospitals, animated as they were still by the views of their medical staffs, should impose restrictive regulations in regard to the qualifications of those seeking office; to secure such qualifications, residence was compulsory in one of the great centres of medical education. Those corporations had thus a monopoly in the supply of candidates—also the hospitals were closely associated with the teaching staffs of the schools. The interests of the corporation, the school, and the hospital alike demanded a close unity of all three. The reputation of each in attractiveness of its diploma, teaching, and the ability of the staff touched the financial prosperity of all three. Gradually, however, new centres of learning

came into existence; facility through new means of intercommunication and transport enabled students to take that diploma which was most to their future interests and in accord with their circumstances at the time to obtain. Hospitals with teaching opportunities multiplied enormously. The State insisted on having its share in regulating the standard and character of the education required of those whom it took under its protection by registrable recognition. The State by Acts of Parliament interfered with the charters of the colleges by alteration and amendment, and, in the instance of the Royal College of Surgeons of Ireland, deprived it of the privilege of securing that appointments to certain hospitals in Ireland should be only held by those who possessed its diploma. Gradually, through the Medical Acts, they found the State taking a greater part in the scheme for the education of medical men, and also through its representatives on the General Medical Council making itself in a degree responsible for the efficiency of the institutions, whether schools or hospitals, on which that education depended, for every hospital recognized by the General Medical Council became part of the local school. They thus found that the condition of affairs to-day, when a triple qualification was demanded of registered practitioners, and when there were two grades of graduates and diplomates, was widely different from that which existed when the diplomates of the different corporations appropriated certain hospital appointments and the authorities of the hospitals acquiesced. It seemed, on the face of it, paradoxical that the higher degrees in medicine of any university should not confer the same privilege as an ordinary Membership Diploma of a College of Physicians, and that the higher degree in surgery to be obtained only by conforming to exceptionally severe conditions were to be ignored by a hospital authority, and to be looked upon as insufficient to entitle their possessors to hold hospital appointments. The State had the right to-morrow to enact that the hospital appointments in dispute should be open to men who possessed such qualifications as it considered adequate. And if the hospital authorities persisted in upholding that prohibition rule, then the demand for a State licence which would entitle its holder to become a candidate for any public appointment in the State would take a practical shape, and the diplomas of the corporations would become ornamental appendages which could be ignored or obtained at option. As to the second reason given for the rule—namely, that the character of the Scottish and Irish examinations was not on a par with the English ones, he should feel inclined to meet that with a simple denial, and say that the *onus probandi* rested on those who made the assertion.

Dr. A. J. HORNE (President of the Royal College of Physicians, Ireland), in seconding the resolution, said that he considered the examinations in Ireland and Edinburgh would favourably compare with any examination held in London. If they succeeded in enlisting in their services the medical and the lay press he thought that the particular object which they had met together to secure would soon be an accomplished fact.

Mr. AUGUSTUS P. HILLS said if the Governors of hospitals would take the trouble to find out that the different degrees had not the differences that they were supposed to have, a great deal might be done.

The CHAIRMAN said that the Scottish and Irish graduates were able to hold their own not only in entrance examinations but in their devotion to duty, which ensured their selection for the highest ranks of the profession. There was a sort of national spirit which tended to make them prefer a Scottish graduate for a Scottish appointment, and an Irish graduate for an Irish appointment, and an English graduate for an English appointment. Nobody quarrelled with that. But what they had a right to protest against was the statement that "you are not fit to become candidates." If that point were put plainly and temperately before the public, he thought it would end in what the associations so much desired to be carried out.

The resolution was unanimously adopted.

Dr. WALSH moved:

That the advertisements in the columns of the lay press that honorary offices in certain hospitals are open only to those holding the diplomas of some particular corporation gives to the public the impression that such restrictive regulation is justified by the exceptional character of such qualification, which is not in accordance with fact.

Mr. JOHN LENTAIGNE (President of the Royal College of Surgeons, Ireland) seconded the resolution. He held it was absolutely untrue that the restriction was justified by the exceptional character of the qualifications stated. He said without hesitation that the examination for the Fellowship of the Royal College of Surgeons in Ireland was as high and difficult an examination as that for the Fellowship of the Royal College of Surgeons of England. The public advertisements in the *Times* and other newspapers could not be interpreted in any other sense than as implying the inferiority of the bodies that were excluded. They cast a glamour on those other bodies—a glamour which was absolutely unjustified and undeserved. In Ireland this was called a boycott of Irishmen and Scotsmen in favour of certain corporations in London. These corporations ought not to require the support of such methods; they should have been only too glad to repudiate and refuse the advantages which accrued to them in that way. It was asked that the objectionable advertisements should cease. They had a right to stir up public opinion, to stir up Parliament if necessary, and he believed that Parliament would step in to stop the present state of things. If the hospitals did not set their own houses in order it would be done for them, and perhaps here might be more things done for them than they would like when the time for reform came.

Dr. MACAN said that the stigma of the objectionable advertisements did not simply affect men who might or might not be candidates for hospital appointments, but, when conveyed in the advertisements of the lay press, it affected every practitioner in England who might derive his qualification from one of the Irish or Scottish bodies.

The resolution was carried unanimously.

Sir THOMAS GALLWEY, K.C.M.G., moved:

That these resolutions be forwarded to such persons as the councils of the two associations may determine.

He thought that the opposition came from the lay persons on the corporations of the hospitals.

Dr. L. S. McMANUS (Direct Representative for England on the General Medical Council), in seconding the resolution, said that he was there as an Irish graduate of an extinguished university. The university might be extinguished but the individual members of it were very much alive, with plenty of reserve vitality and plenty of fighting power when occasion arose, when any injustice was inflicted upon them by their colleagues in England. It was not, he thought, quite accurate to say that the opposition came from the laymen on the boards of hospitals. He thought the usual procedure was this: The board of governors asked the medical board to send them up a certain number of names and the medical board carefully excluded Irish and Scottish colleagues. That was only confined to some of the larger hospitals and only confined to one or two corporations. As to the Poor Law of England the Irish had a very good look in, for any number of Irishmen occupied Poor-law offices throughout England. He was a member of the Battersea Council, and when the post of medical officer became vacant two years ago, forty medical men had a meeting and selected an Irishman, a Nationalist Catholic, to the exclusion of a great many Englishmen. So that the spirit of bigotry was not universal. But, as a rule, those bodies were not representative; they were run by a little clique who had resolved themselves into a sort of self-admiration society who were absolute monopolists and intended to keep the monopoly as long as they could. But he believed that retribution was coming, and when the one-party system had become a fact the corporations would have a very considerable difficulty in maintaining their present position. Their associations had suffered in the past from a certain amount of idiotic pride. It had not been considered dignified to take the lay press into their confidence. An attack could be made through the lay press, and yet their associations never seemed to hit back through the lay press; they were too proud, and the people throughout the country were listening to all sorts of faddists, believing that the members of the associations were far worse than they were. He hoped they would take the lay press into their confidence, and that through its columns their grievances might be ventilated by some who could efficiently and wisely put them before the public mind. He felt certain that if they only appealed to the justice of Englishmen their grievances would very soon be remedied.

After Dr. FITZGERALD POWELL, Dr. W. DOUGLAS, and Dr. NORBURY had spoken, the resolution was unanimously adopted, and the meeting closed with a hearty vote of thanks to the Chairman.

In the evening the members dined together at the Hotel Cecil under the chairmanship of Sir CHARLES M. CUFFE. Dr. H. MACNAGHTON JONES, in proposing the toast of "The Scottish and Irish Universities and Corporations," said that as far as the United Kingdom was concerned the birthplace of anatomy was Edinburgh. Sir CHARLES B. BALL acknowledged the toast, as also did Mr. J. LENTAIGNE, who asked for sympathy for the unfair treatment of the Royal College of Surgeons of Ireland. The toast of "The Irish Medical Schools' and Graduates' and Scottish Medical Diplomates' Associations" was submitted by Dr. A. J. HORNE, and was replied to by Dr. MACAN and Dr. D. WALSH. The health of "The Chairman" was given by Colonel JAMES MOORHEAD, and the proceedings terminated after the CHAIRMAN had responded.

THE WORKMEN'S COMPENSATION ACT FROM A MEDICO-LEGAL POINT OF VIEW.

A DISCUSSION of considerable interest to doctors and lawyers who are concerned with the working of the Compensation Act was opened last week at the Medico-Legal Society, when a paper was read by Mr. Arthur S. Morley, F.R.C.S., entitled, *Some Experiences of the Difficulties and Abuses of the Workmen's Compensation Act*.

He explained that, while the Act was designed to provide relief for the genuine worker, it had imposed much hardship on employers by exposing them to the plots of lazy and dishonest workmen, aided by the less reputable members of the legal profession. He knew as a fact that it was the custom of some of the latter gentry to ascertain day by day from the receiving-room porters at hospitals the names and addresses of casualties, and to offer to take charge of the cases of injured men. Having placed every difficulty in the way of an amicable settlement to increase his own costs, a solicitor of this class would allow the case to be fought, with the result that the claimant only recovered a portion of the compensation, the remainder going to the solicitor. As a result, employers and insurance companies were inclined to settle rather than fight, for although the defence was often good, nothing could be extracted from the other side in respect of costs. The reader of the paper also drew attention to the extraordinary amount of malingering occasioned by the Act. Injuries to hands and fingers were often turned to profit. A man would pretend he could not get a proper grip as a result of a slight injury; and if his employers had no work of a light character to offer he was entitled to compensation. It was impossible for the examining surgeon to swear there was no disability. The result was continuance of the compensation. Mr. Morley cited one extraordinary case of malingering which came within his own experience. A man had received an injury from which, as he alleged, total blindness had resulted. He was led into court by his wife. Mr. Morley examined him in the ante-room of the court, on behalf of the employer. When giving evidence Mr. Morley said that the man was able to see quite well. Asked whether he had used an ophthalmoscope, he replied No, and for the following reason. When testing the man's eyesight he threw a match on the floor, and asked the patient to pick it up. The patient groped about on the floor near the match, but said he was unable to see it. In the meantime Mr. Morley had knocked down a pin with which the patient had fastened his tie. He then noticed that when the patient was resuming his attire, and so off his guard, he picked the pin up off the floor without the slightest difficulty. These facts being proved, there was judgement for the employer! Dealing with the appointment of medical referees, Mr. Morley said that it was still quite rarely that the services of a medical referee were requisitioned. These gentlemen were not always very competent judges, since they were not yet accustomed to treating cases absolutely judicially. He explained that when the Home Office recently appointed referees it carefully excluded all candidates who, from their connexion with insurance companies or from their position as advisers to big companies, had had extensive experience of this class of work. The

reason for taking this course was to prevent the possibility of a referee having to judge cases in which his own company might be interested; but the result was that many of the men most experienced in examining these claims were excluded. Perhaps the most interesting part of the paper was that which dealt with the effect which the Act has had upon the employment of those who are physically defective. Experience had shown, he said, that in the case of a defective workman, sooner or later the conditions which existed would give rise to complications which might be made the basis of a claim for accident. Insurance companies were already beginning to find out that premiums must be raised unless careful medical examination was insisted on. One large railway company with which he was connected had all candidates for employment examined, and he had instructions to reject any men who had any condition which could conceivably bring about complications from which claims could arise, although their maladies were quite trivial and not incompatible with continued health and hard work for many years. One possible way out of the difficulty, which was undoubtedly telling on the working classes, would be to legalize the process of "contracting out" of the liability. Another suggestion he would make was that the responsibility of the costs of an unsuccessful claimant should be thrown upon the union or the solicitor who had taken up the case if the workman himself could not pay them.

Owing to the interest of the subject, the consideration of this paper was postponed until the March meeting of the society.

ERGOPHOBIA.

SURGEON writes: As a medical examiner under the Workmen's Compensation Act, I have read the article on p. 231 with no little interest. Let me say at the outset that I cannot conceive what employers of labour were about when they allowed such a one-sided Act to become law. Now that they are fully realizing this, they themselves are fast awakening to the fact that soon a condition of things will arise which must seriously interfere with the trade and prosperity of the country. As the Act stands, the employer is nothing but an exploited party to be shot at by all and sundry, a legitimate target to receive the fire, for the most part, of those who are too idle to try to work. In saying this I do not mean to imply that there are such things as honest claims, and that for these the Act is not a right and proper one. But when this is granted there still remains the broad, solid fact that the general tendency is towards a lessened independence in any desire to return to work, and a loss of self-respect in the desire shown to make the term of their incapacity extend to a period long after their condition justifies such a contention; in order to do this, medical certificates have to be produced—a matter about which there is in most cases not the slightest difficulty, especially if it be a club patient, for to withhold means trouble, and that often of a serious nature. Thus the merry game goes on, and the battle rages between fitness and unfitness, the aim, of course, being to extract a lump sum, which is often used neither wisely nor well, until, having got to the end, the interesting invalid thinks the best to resume work. As a medical examiner, I have always tried to impress upon employers that they should act, and not promptly, in all cases in which there is a difference of opinion between myself and the doctor in attendance as to capacity for work; and were a medical assessor appointed, as suggested, to sit with the judge on the demand of either party, no doubt great good would result. The difficulty would be to get a suitable man, one qualified for the work, and at the same time independent enough to give an unbiased opinion. This means a State-aided appointment, with a fairly large retaining salary (which does not obtain at present), and, if thought proper, a reduced fee for each attendance at court. In any case, the amount offered should be such as would make it worth a medical man's while to lay himself out for this particular kind of work.

THE second congress of French-speaking doctors on physiotherapeutics will be held in Paris in April. Among the subjects proposed for discussion are the following: Physical agents (massage, Bier's method, x rays, hydrotherapy) in the treatment of varices and varicose ulcers; clinical and scientific disadvantages of the practice of physiotherapy by empirics; physical agents (electricity, radiography, massage, and re-education) in the diagnosis and treatment of infantile paralysis; physical agents (electricity, Bier's method, diet, light treatment, radium-therapy) in the treatment of acne. The congress is under the scientific patronage of Professors d'Arsonval, and Bonchard, Gariel, Gilbert, Hayem, Huchard, Raymond, and A. Robin, and Drs. Benit Barde, Lucas-Championnière, and Trissier.

THIRD INTERIM REPORT OF THE ROYAL COMMISSION ON TUBERCULOSIS.

THE third interim report of the Royal Commission on Tuberculosis is devoted to the investigations of Dr. F. Griffith on the presence of tubercle bacilli in the milk and faeces of cows not showing any signs of disease of the udder during life.

Commenting on Dr. Griffith's work, the Royal Commissioners remark that they have already, in their second interim report, stated that "a very considerable amount of disease and loss of life, especially among infants and children, must be attributed to the consumption of cow's milk containing tubercle bacilli." But whilst the danger arising from cows affected with recognizable tuberculosis of the udder is obvious, it was, in the opinion of the Commissioners, "undecided what is the danger, if any, attaching to the milk of tuberculous cows in which the udder presents no evidence of disease." This matter has therefore been investigated by Dr. Griffith.

SCOPE OF INVESTIGATION.

The faeces and the milk of naturally tuberculous cattle have been tested by means of inoculation and feeding experiments upon animals. Observations have been made on six milch cows. Three of the animals—B, C, and F—showed clinical evidence of tuberculosis, but in none of the six could any tuberculous disease of the udder be detected during life.

In order to obtain the faeces the action of the rectum was stimulated by the injection into it of air through a sterile glass tube, and the faeces were received directly into a pail, which was applied to the margin of the anal orifice. These precautions were necessary, since in one case, B, there was a purulent discharge from the vagina; and in three cases, B, C, and F, the *post-mortem* examination revealed extensive tuberculosis of the uterus. A portion of the faeces was rubbed up in a mortar with sufficient salt solution to moisten it, and pressed through muslin to form an emulsion. This material was inoculated into guinea-pigs by the intraperitoneal method. Care had to be taken as regards dosage. It was found that 0.5 c.cm. of the emulsion almost invariably caused death from acute peritonitis; but when a smaller dose, 0.05 c.cm., was used all the animals survived the immediate effects of the inoculation. The infectivity of the faeces was also tested by feeding both guinea-pigs and young swine, the latter animals being about 11 weeks old.

The milk of five cows, B, C, D, E, and F, was tested for the presence of tubercle bacilli, strict precautions being taken to ensure absence of contamination during its collection. A metal catheter, connected by pressure tubing to a flask, was inserted into the milk sinus of the udder, a separate apparatus being used for each quarter, and the milk was withdrawn from the udder by the exhaustion of the air in the flask. Before the insertion of the catheter each teat was washed with a solution of perchloride of mercury and with methylated spirit, and the opening was inspected to ensure that no faecal matter was pushed in with the catheter. With the milk thus obtained guinea-pigs, and occasionally rabbits were inoculated. The usual dose given to a guinea-pig was 10 c.cm. of uncentrifuged milk plus the deposit of 20 c.cm. of centrifuged milk. The milk of three of the cows was also administered, by feeding, to young swine.

RESULTS OF EXPERIMENTS.

The following is a summary of the experiments:

COWS MANIFESTLY DISEASED.

Cow B was a shorthorn, and had calved four weeks before the commencement of the observations. She reacted to tuberculin, was in poor condition, and had a short frequent cough. *Post-mortem*, the thorax was found to be very extensively tuberculous, and there was also tuberculosis of the alimentary tract and the uterus. The udder was found to be free from tuberculous lesions. The faeces of this cow were inoculated intraperitoneally into 25 guinea-pigs; 8 of these animals succumbed to septic infection, 1 remained healthy, and the remaining 16 developed tuberculosis. Several guinea-pigs were fed with faeces, but all remained healthy in spite of the fact that they received fifty times the amount of faecal emulsion which readily produced tuberculosis when inoculated intraperitoneally. Four young swine were fed with faeces, the total amount given to the four animals being 19.1 kilograms. They were killed after periods varying from 63 to 100 days subsequent to

the first feeding, and all showed generalized tuberculosis. The milk of Cow B in the first series of experiments was inoculated into 56 guinea-pigs, none of which produced satisfactory evidence that the milk injected contained tubercle bacilli. Subsequently the cow was inoculated with 20 c.c.m. of tuberculin, and the milk was then tested again. Out of 16 guinea-pigs inoculated, 11 developed tuberculosis. Three pigs fed with the milk prior to the inoculation of tuberculin developed no disease.

Cow C, a Jersey, was emaciated and feeble, breathed hard, and had a frequent cough. Her temperature was febrile, and there was no rise sufficient to constitute a positive reaction after the inoculation of tuberculin. *Post mortem* she exhibited severe thoracic tuberculosis; the Peyer's patches of the small intestine contained caseous nodules, and there were several small ulcers in this part of the gut; the uterus was extensively tuberculous. The udder was normal. The faeces of this cow were inoculated into 30 guinea-pigs; 17 of them became tuberculous; the rest died too soon for tuberculosis to develop. Out of 14 guinea-pigs fed with the same material only 1 became tuberculous. The following experiment gives some idea of the large number of tubercle bacilli in the faeces of this cow. One gram of faeces was added to two litres of sterilized water, and 2 guinea-pigs were inoculated intraperitoneally, one with 1 c.c.m., the other with 2 c.c.m. of the mixture. Both animals developed severe general tuberculosis, the former dying in sixty-three days. A young pig, fed with 5.55 kilograms of the faeces, was killed forty-eight days after the first meal, and showed disseminated tuberculosis, with enlargement and caseation of the submaxillary and mesenteric glands. On three occasions the milk of this cow was tested upon guinea-pigs and rabbits; none of the animals in the first batch became tuberculous; on the second occasion tuberculosis was produced in 2 guinea-pigs; and in the third experiment 3 rabbits and 4 guinea-pigs became tuberculous.

Cow F was very emaciated and feeble, and was killed after she had been under observation for a few days. The *post-mortem* examination revealed severe generalized tuberculosis. In the left hind quarter of the udder, in the tissue forming the wall of the main sinus near the teat, there were four reddish-grey, caseating nodules, up to a pea in size. The rest of this quarter and the other three quarters were normal in appearance. The faeces produced generalized tuberculosis in guinea-pigs. The milk was inoculated into 32 guinea-pigs; 11 of these died prematurely; the others developed general tuberculosis, which in many instances was of a particularly severe type. Three pigs died in death in from eighteen to twenty-four days after inoculation.

COWS NOT MANIFESTLY DISEASED.

Cow A was a shorthorn heifer in good condition, and the diagnosis of tuberculosis depended entirely on the positive result of the tuberculin test. When killed, the animal was found to have an enlarged retropharyngeal gland which was cystic, with thick fibrous walls, and filled with breaking down caseo-necrotic substance. In the Peyer's patches of the small intestine there were three grey nodules containing caseous foci, two soft caseous nodules, and a small ulcer in which no tubercle bacilli could be demonstrated. A caseous mesenteric gland, a caseous gluteal gland, and four tubercles in the lungs were also noted. All other organs and glands were healthy. The faeces were used to inoculate and feed 41 guinea-pigs. None of these animals developed tuberculosis. Four other swine were also fed, the total amount of faeces administered being 25.6 kilograms; 3 of these animals proved to be free from tuberculosis; in the fourth the *post-mortem* examination revealed tuberculosis of the submaxillary glands, a caseous focus in one mesenteric gland, four caseating tubercles in the liver, and about thirty on the surface beneath the pleura of each lung.

Cow D was fat and in good condition, the diagnosis of tuberculosis resting entirely on the positive result of the tuberculin test. *Post mortem*, the lungs were found to contain discrete tuberculous nodules, several of which measured about 10 by 6 by 5 cm. On section, these were composed of softening, yellow, caseo-necrotic substance surrounded by fibrous walls. A few of the nodules had ulcerated into the bronchi, in which soft caseous substance was seen, and mucus-pus could be squeezed out of many of the bronchioles. The bronchial and mediastinal glands were enlarged, caseo-necrotic, and gritty. There was no tuberculosis in any other organ or gland in the body. Out of 11 guinea-pigs inoculated with the faeces of this cow 2 became tuberculous; the faeces also produced tuberculosis in 2 out of 3 rabbits inoculated. Two swine remained healthy after feeding with the same material. The milk was tested upon guinea-pigs, but produced no evidence of tuberculosis.

Cow E was in very good condition, but gave a positive reaction to tuberculin. After death there were found in the lungs three small tuberculous nodules, and in the caudal mediastinal gland thirty to forty calcareous nodules up to a pea in size were discovered. In a suprapneal body there was a tubercle the size of a rape-seed in which tubercle bacilli were demonstrated. There was no tuberculosis elsewhere. Dr. Griffith failed to demonstrate tubercle bacilli in either the faeces or the milk of this animal.

GENERAL CONCLUSIONS.

In their review of the experiments summarized above, the Royal Commissioners remark: "The presence of tubercle bacilli in the milk of cows clinically recognizable as tuberculous confirms the opinion we expressed in our second interim report that the milk of such cows must be considered dangerous for human beings. The experiments

which we have carried out with regard to the infectivity of the faeces of tuberculous cows were dictated by knowledge of the fact that dirt of various kinds from cows and the cowshed is almost constantly present in milk as it reaches the consumer. Cows suffering from extensive tuberculosis of the lungs must discharge considerable numbers of bacilli from the air passages in the act of coughing, and some of the bacilli thus expelled may find their way into the milk. But our experiments indicate that the excrement of cows obviously suffering from tuberculosis of the lungs or alimentary canal must be regarded as much more dangerous than the matter discharged from the mouth or nostrils. We have found that even in the case of cows with slight tuberculous lesions tubercle bacilli in small numbers are discharged in the faeces, while, as regards cows clinically tuberculous, our experiments show that the faeces contain large numbers of living and virulent tubercle bacilli. The presence of tuberculous cows, such as B, C, and F, in company with healthy cows in the cowshed, is therefore distinctly dangerous, as some of the tubercle bacilli which escape from their bodies in the excrement are almost certain to find their way into the milk."

LITERARY NOTES.

A THIRD edition of the Hungarian *Pharmacopoeia* is in preparation and will soon be published. The Hungarian portion of the text is already in type; the revision of the Latin text, which has been entrusted to M. Stephan David, a scholar of high reputation, is nearing completion.

In the *New York Medical Journal* Dr. Charles Greene Cusumon gives an account of the career of Benjamin Franklin, from which it appears that he gave considerable attention to the study of medicine. He was the first foreign associate elected by the French Royal Society of Medicine. That society, which was founded in 1776, had among its members at the time such men as Daubenton, Jussieu, and Vicq d'Azyr. In the *Transactions* of the society it is recorded that in 1776 Franklin presented a work by Dr. Perkins, of Boston, entitled *On the Nature and Origin of Epidemic Catarrhal Fevers*. Marat, who, as is now well known, was not a "horse doctor," as Carlyle calls him, but a physician, presented Franklin with a work on physics written by him. When the pretensions of Mesmer were to be examined the Academy of Science named Franklin one of the Commissioners. From a letter written to Sir John Pringle by Franklin it appears that he had used electricity in the treatment of paralysis. To other correspondents he writes on the inoculation of small-pox, and on solvents for stone in the bladder, and he was the author of papers on the cause of the heat of the blood in health and of the cold and hot fits of some fevers; on gout (from which he himself suffered grievously), and of a work entitled, *Some Account of the Success of Inoculation for the Small-pox in England and America; together with Plain Instructions by Which Any Person may be Enabled to Perform the Operation and Conduct the Patient through the Distemper*. This was printed in London by W. Strahan in 1759. It seems from the introduction to have been written in response to a request from Heberden for information as to the success of inoculation in New England.

The literature that in the last few years has been steadily gathering around the name of Napoleon shows no sign of diminishing. It is now announced that the French Society of the History of Medicine is about to institute an exhaustive inquiry as to the state of the great Emperor's health at the time of Waterloo. The investigation, it is stated, will be made by a committee of which the chairman will be Professor Landouzy.

The first part of a new periodical, devoted, as its name—*Archiv für die Geschichte der Naturwissenschaften und der Technik*—imports, to the history of science, has recently appeared. The editors are Drs. Karl von Buchka and C. Schafer of Berlin, H. Stadler of Munich, and Karl Sudhoff of Leipzig. The publisher is F. C. W. Vogel of Leipzig. The *Archiv* will appear at irregular intervals, six parts forming a volume. The language is not limited to German. The first part contains contributions in French and Italian, besides German. The price of each volume will be 20 marks.

In the January number of the *West London Medical Journal*, Dr. S. D. Clippingdale gives an interesting account of Hammersmith quacks in the eighteenth century. He refers to the advertisement of one Neeler, a resident in King Street, which appeared in the *St. James's Evening Post* of November 24th, 1737, for a "noted girdle," the wearing of which would cure all skin diseases, even those of the feet and scalp. Dr. Clippingdale says this magic girdle is probably referred to in the following anecdote of Johnson, which was published in the *Morning Advertiser* of April 23rd, 1776:

As Dr. Johnson and Mr. Boswell were riding upon the Western Road they observed written up over a shop, "Girdles for the itch and all scurvy diseases," upon which the doctor observed, with his usual politeness and humour, "Boswell, if that man would advertise his medicine upon the Northern Road he would make his fortune and do good service to your countrymen."

Then there were two quacks, husband and wife, named Loughterburg, who dwelt on Hammersmith Mall. Both professed to have a miraculous gift of healing, and naturally they proclaimed the fact to the public. They were besieged with crowds of applicants, sometimes, it is said, to the number of three thousand. The treatment was gratuitous, but tickets for places in the crowd were required, and the prices of these found their way into the pockets of the gifted healers. Their method was not limited to the laying on of hands, for Horace Walpole, in a letter to the Countess of Ossory, dated July, 1769, says:

Loughterburg, the painter, is turned an inspired physician. His sovereign panacea is barley-water; I believe it is as efficacious as mesmerism.

A full account of these cures (says Dr. Clippingdale) was published in 1789 by a Mrs. Platt in a pamphlet having the following title: *A List of Cures performed by Mr. and Mrs. Loughterburg of Hammersmith Terrace, without Medicine. By a Lover of the Lamb of God.* The Loughterburgs should have lived in these days when they would doubtless be active members of the movement now being carried on by Mr. James Moore Hickson, the Rev. Percy Dearmer, Bishop Fallows of Chicago, and so many others who would probably take unto themselves the same title which the sacred prophetess of the ex-scene painter assumed. The vogue of the Loughterburgs, it may be surmised, was not long, for the failure of one of their healings led to the storming of their house by an angry mob, and the healers folded their tents like the Arabs and silently stole away. We need not give any "modern instance" to point the moral of the story.

The Clarendon Press at Oxford has within the last few years published a good many medical books—a development which may perhaps be traced to the influence of Professor Osler. Its history may, therefore, be interesting to some of our readers. The following brief account is based on a detailed article which lately appeared in the *Times*: The tercentenary of the birth of Edward Hyde, the famous Lord Clarendon whose daughter became the wife of the Duke of York, afterwards James II, falls on February 18th of the present year. Clarendon was educated at Oxford, and in 1660 was elected Chancellor of the University. After his fall in 1667 he resigned the office. The first edition of his *True Historical Narrative of the Rebellion and Civil Wars in England* was published by the Oxford University Press between 1702 and 1704. With the profits derived from the publication the university built, in 1713, a new printing house near the Sheldonian theatre, where before that date a large part of the printing work of the university had been done. The name of Clarendon was attached to the new building. The copyright of the *History* remains perpetually in the possession of the university, to which the rest of Clarendon's MSS. were presented in 1753 by his great-granddaughters. In 1860 the profits of the *History* amounted to £10,000. The Clarendon trustees decided to employ the money to help the university to meet the demands of physical science; and in 1872 the Clarendon Laboratory for Experimental Philosophy was erected as part of the University Museum. The name of Clarendon is thus preserved at Oxford by the Clarendon Building, the Clarendon Press, and the Clarendon Laboratory. The Clarendon Building was the Clarendon Printing House from 1713 to 1830, when the new printing house was built in Walton Street, now known as the Clarendon Press. The Clarendon Building has still some

connexion with the Press, inasmuch as the delegates of the Press hold their meetings in the room originally designed for that purpose. The Clarendon Building has just undergone an elaborate series of repairs, and at the present date its refaced walls give something like the impression they must have been made in 1713.

Nova et Vetera.

MODERN MEDICAL APHORISMS.

THE "Aphorisms" of Hippocrates breathe the highest spirit that should animate the practitioner of the art of healing and the clinical observer. In contrast with these may be placed the aphorisms of La Mettrie, the physician (seldom consulted, as Carlyle says) of Frederick the Great, which breathe the spirit of the shrewdest worldly wisdom. We cite them, not so much for the edification as for the amusement of our readers. Here and there, however, there are hints which may be useful to some simple-minded brethren who, for the lack of the knowledge that is generally learnt only by bitter experience, may find themselves at a disadvantage as compared with men much inferior to themselves. They are likely to be helpful to men of the type of "Lydgate," drawn with a master hand by George Eliot in *Middlemarch*. La Mettrie says:

Distrust your professional brother—*medicus medicum edit*. If you are in a fix lay the responsibility on the backs of the consultants. Never try an active remedy on a person of high position; it is a better that a great lord should yield to human destiny, even prematurely, than that the doctor should be compromised. In the case of consultations try to arrive on the scene a quarter of an hour before the others, in order that you may see the patient alone and gain his confidence while seeming to study his disease. Visit the patient during the time the remedy is displaying its effects; make some small change in the mode of administration; thus you will supplant not only one or two brother practitioners, but the whole Faculty. Take care to stand well with the surgeons and pay court to the apothecaries. Do not give medicines to those who do not like them. In the case of the others order only drugs that are anodyne, well known, and have not a bad taste. Do not pay too many visits; this would gain for you the reputation of being eager for fees. Unpunctuality will be excused if you plead the number of people you have to see. Always have the air of being busy. If you are asked out to dinner, arrive late and look as if you had been hurrying, and arrange that you shall be sent for at dessert. If women discuss the causes of a disease, do not contradict them but agree with them. If women advertise you, your fortune is made. Above all do not despise the support of ladies' maids and nurses.

These maxims will doubtless seem cynical to young men with lofty ideals of their profession. Some of them recall the arts of Sawyer late Knock-em-off, in which he was anticipated by no less a man than John Huxham, from whom, *via* Ferdinand Count Fathom, Dickens may have borrowed them. The touch as to making a slight change in the mode of administration reminds us of the window or arch which that eminent architect, Mr. Pecksniff, introduced into the plans drawn by his students, thereby stamping them with his own genius. We have heard a well-known physician, now no more, praised by lady patients for the "elegance" of his prescriptions; these contained water in the same proportion to the medicine as the sack bore to the bread in Falstaff's tavern bill. We have seen diagnostic *coups de theatre* performed at the bedside—after careful preparation beforehand. In fact, there is nothing in La Mettrie's aphorisms but what is an important part of what is called "experience" in medical practice; and a man is not necessarily to be condemned as dishonest who uses these means to make real knowledge tell. If he has no knowledge, of course, that is another matter. It has been said, *Homo homini lupus*. This is certainly not infrequently true in regard to doctors. We complain—and justly enough—of the public. But after all, our worst enemies are those of our own household.

Another set of aphorisms, credited to Dr. Amédée Latour, may be compared with those we have cited. They are to the following effect:

The physician fusses, but it is the disease that leads him about. Life is short, patients are hard to please, the brethren are deceptive. Practice is a field of which worldly wisdom is the manure. A patient is like flannel; neither the one nor the other can be left for a moment without danger. The patient who pays his doctor is exacting; the patient who does not pay

him is a despot. Simplicity, modesty, truth! Charming things—everywhere else than by a patient's bedside where "simplicity" is taken to be hesitation: "modesty," diffidence of oneself; "truth," roughness. Medicine is the only profession in which lying is a duty. The doctor who goes away has the same chance as a lover of finding himself replaced by a substitute on his return.

As in the case of the other maxims already quoted, we do not wish to be understood as recommending these as embodying the highest perfection of professional morality. But that they are profoundly true few men who know the world will deny, and they may be commended to enthusiastic youths as useful prolegomena to all introductory addresses.

Medical News.

SIR WILLIAM GOWERS will give a lecture on unilateral optic neuritis from cerebral tumour at University College Hospital on Wednesday next at 4 p.m.

HIS EXCELLENCY THE LORD LIEUTENANT has accepted the invitation of the President and Fellows of the Royal College of Surgeons in Ireland to the annual college dinner on Saturday, February 20th.

HIS MAJESTY THE KING has been pleased to grant permission to Dr. George Ogilvie to accept and to wear the Insignia of Knight of the Royal Order of Isabel la Catolica, conferred upon him by the King of Spain.

DR. F. M. SANDWITH, Gresham Professor of Physic, will give four lectures at Gresham College on February 9th, 10th, 11th, and 12th, at 6 p.m., in which he will discuss Malta fever, diphtheria, and the life-work of Pasteur.

THE annual dinner of the Chelsea Clinical Society will take place at the Gaiety Restaurant, Strand, W.C., on Thursday, March 4th. Particulars can be obtained from Dr. K. R. Collis Hallows, 104, Buckingham Palace Road, S.W.

The Lettsomian Lectures at the Medical Society of London will be delivered by Dr. Sidney Martin, F.R.S., on February 1st, 15th, and March 1st, at 9 p.m. on each evening. The subject of the lectures is functional disorders of the stomach and intestines, their diagnosis from organic disease and treatment.

THE French Congress of Scientific Societies will be held this year at Rennes. Among the subjects proposed for discussion are: The relations of sociology and anthropology; healthy and cheap dwellings; alcoholism—the evil, its causes and remedies; tuberculosis and the means of avoiding contagion; high altitude and seaside sanatoriums; methods and disinfection against contagious diseases, and the results obtained in towns, rural districts and establishments in which disinfection is practised; the water supply of towns—the contamination of subterranean lakes; leprosy and pellagra in France; the part played by insects and especially the common fly in the dissemination of contagious diseases; hygiene of the school child.

IN the course of his presidential address to the Royal Meteorological Society on January 20th, Dr. R. H. Mill remarked that it was popularly held that sunshine, heat, and dryness were necessarily good, and rain and cold necessarily bad. These current and erroneous beliefs affected the meteorological departments maintained by many municipalities so strongly that to be above the local average in the "bad" elements and below it in the "good" was held to be a disgrace never to be acknowledged if it was possible to deny it. He had even heard of instances in which reports were suppressed in order to obviate misconception, and of others in which instruments were moved to obtain more agreeable records.

THE first Negro Congress on Tuberculosis was (we learn from the *Medical Record*) held at Tuskegee, Alabama, during the third week in December, 1908. On the opening day, "Health Sunday," seven meetings were held, and in the course of the next six days the 1,500 students of the Tuskegee Institute attended the evening meetings, at which addresses, illustrated by stereoscopic views, were delivered. It was decided to establish a permanent tuberculosis committee at Tuskegee, with similar committees at other leading negro institutions. A propaganda will be set on foot in the press that circulates among the negro population, and the State Boards of Health will be asked to supply printed matter about the disease and the means of preventing its spread.

A REPORT by Dr. Masson on the administration of the isolation hospital and camp during the recent outbreak of

bubonic plague in Trinidad has been issued. In the period May 30th to September 28th there were 19 cases with 15 deaths, giving a death-rate of 78.9 per cent. This would indicate that the disease was of a virulent strain, though no frankly pneumonic cases were seen. The report says little about infection of the rats in the town, but this will probably be dealt with by the medical officer of health later. It will largely depend on this whether the disease will break out again, and Thompson's report on a seventh outbreak of plague at Sydney should be well studied by the authorities in Trinidad. There is nothing unusual in the clinical details and pathology of the cases reported on: they are typical of ordinary bubonic plague.

LORD ROBERT CECIL will preside at a dinner of the staff and students of the London School of Clinical Medicine at the Savoy Hotel on Friday, February 19th. Among those who have promised to attend are Sir Thomas Barlow, Bart., K.C.V.O., Sir W. J. Collins (Vice-Chancellor of the University of London), Sir William Watson Cheyne, C.B., Sir William Church, Bart., K.C.B., Dr. J. F. Goodhart, Admiral Swinton C. Holland, Sir Malcolm Morris, K.C.V.O., Sir Richard Douglas Powell, Bart., K.C.V.O. (President of the Royal College of Physicians), Colonel W. B. Leishman, R.A.M.C., Inspector-General James Porter, C.B. (Director-General of the Medical Department of the Royal Navy), Lord Ridley, Mr. A. W. Mayo Robson, Sir Thomas Smith, Bart., K.C.V.O., and Professor Starling.

A QUARTERLY court of the directors of the Society for Relief of Widows and Orphans of Medical Men was held on January 15th at 5.30 p.m., Dr. Blandford, president, in the chair. Fifteen directors were present. The deaths of three members were reported, among them being that of Sir Henry Pitman, a vice-president of the society. A vote of condolence to Lady Pitman was passed from the chair. Three new members were elected. A sum of £528 had been distributed among the annuitants of the charity as a Christmas present, each widow receiving £10, each orphan £5, and each orphan on the Copeland Fund £5. Since the last court one of the annuitants of the charity had died: her husband had paid in subscriptions £35 12s., and died in 1855: since that date his widow received in grants from the society the sum of £5,300. This is a most striking instance of the advantages of joining the society. The sum of £1,242 10s. was voted for half-yearly grants to the widows and orphans at present on the books of the society. Relief is only granted to the widows and orphans of deceased members, and during the past three months five letters had been received from widows of medical men left penniless asking for relief, but this had to be refused, as their husbands had not been members of the society. Membership is open to any registered practitioner who at the time of his election is residing within a twenty miles' radius of Charing Cross. Full particulars and application forms for membership may be obtained from the secretary at the offices of the society, 11, Chandos Street, Cavendish Square, W. The invested funds of the society now exceed £100,000.

THE usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on January 15th, Dr. de Havilland Hall in the chair. In accordance with custom, at the first meeting of the year special reports on the cases of those members who seem to be unlikely to be ever able to resume professional work were examined, when it was determined to make provision for chronic illness. It was foreseen that this would involve a considerable outlay, but the number of chronic cases has increased more quickly than was anticipated, and now, numbering over 40, they require an outgo exceeding £3,000 per annum, and at each valuation of the society's business a substantial special reserve has been made in respect of them. Five years has elapsed since the last valuation, and the actuaries are now engaged in estimating the necessary reserves for the business. The amount required for the chronic cases is growing very large, and this part of the business bids fair to become one of its most important features. Although last year the ordinary sickness claims amounted to rather more than the expectation, they have generally shown a margin in favour of the society. When the report is presented to the members at the annual general meeting to be held in May next, it will be found that both during the year 1908 and during the quinquennium of which it is the final year, the financial strength of the society has grown in a satisfactory manner. Prospectuses and all further particulars on application to Mr. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

British Medical Journal.

SATURDAY, JANUARY 30TH, 1909.

TUBERCULOUS MILK WITHOUT UDDER DISEASE.

THE Third Interim Report of the Royal Commission on Tuberculosis (p. 291), based on the experimental inquiries of Dr. F. Griffith regarding the presence of tubercle bacilli in the milk and faeces of cows affected with tuberculosis, but without disease of the udder, affords an important practical corroboration and amplification of the findings published by the Royal Commissioners in 1907. They then stated, in their Second Interim Report, that "there can be no doubt but that in a certain number of cases the tuberculosis occurring in the human subject, especially in children, is the direct result of the introduction into the human body of the bacillus of bovine tuberculosis; and there also can be no doubt that in the majority at least of these cases the bacillus is introduced through cow's milk. Cow's milk containing bovine tubercle bacilli is clearly a cause of tuberculosis, and of fatal tuberculosis in man." After pointing out that the demonstration of tubercle bacilli in cow's milk may sometimes be a matter of difficulty, the Royal Commissioners proceed: "There is far less difficulty in recognizing clinically that a cow is distinctly suffering from tuberculosis, in which case she may be yielding tuberculous milk. The milk coming from such a cow ought not to form part of human food, and indeed ought not to be used as food at all. Our results clearly point to the necessity of measures more stringent than those at present enforced being taken to prevent the sale or the consumption of such milk."

In this clause of their report the Royal Commissioners in no way indicated that the danger was confined to such tuberculous animals as exhibited recognizable disease of the udder. Farmers, however, have been desirous of putting this limited interpretation upon the Commissioners' verdict, and have been endeavouring to find some support for this attitude by appeal to statements contained in the report of a previous Royal Commission on Tuberculosis (1895). This Commission remarked that "according to our experience, then, the condition required for ensuring to the milk of tuberculous cows the ability to produce tuberculosis in the consumers of their milk is tuberculous disease of the cow affecting the udder. It should be noted that this affection of the udder is not peculiar to tuberculosis in an advanced stage, but may be found also in mild cases." An even stronger expression of opinion in favour of the farmers' view was published by Sir John McFadyean in 1901.¹ He then stated that "not every cow that is tuberculous gives milk containing tubercle bacilli. It is true that opinions with regard to this point are not absolutely unanimous, but there is ample evidence to justify the assertion that, as a rule, the milk is not dangerous until the udder itself becomes diseased. The experi-

ments pointing to an opposite conclusion form only a small minority, and the results obtained in most of them were probably due to carelessness on the part of the experimenter. . . . The important question, therefore, is not what proportion of milch cows are tuberculous, but what proportion of them have tuberculous udders."

The Third Interim Report of the present Royal Commission removes ambiguities and previous misconceptions on this point. Dr. Griffith's researches, fully accepted and endorsed by the Royal Commissioners, conclusively show that both the milk and the faeces of cows clinically tuberculous, but with no disease of the udder, are liable to contain living and virulent tubercle bacilli, and often contain them in very large numbers. Every person acquainted with the conditions which usually obtain in cowsheds used for milking purposes will readily understand that the process of milking is conducted in such a way as to make contamination with particles of faecal material the rule rather than the exception; the danger of introducing tubercle bacilli into the milk when these bacteria occur in the intestinal tract is, therefore, always present, and is a grave menace to the health of the consumer.

Hitherto English authorities have lagged behind investigators in other countries, notably Germany and America, in realizing these dangers. In 1899, for example, Rabinowitch and Kempner published an important investigation on the milk of cows reacting to tuberculin. They examined the milk of 14 animals, only one of which exhibited disease of the udder manifest by physical examination; but in ten out of these fourteen they succeeded in proving that tubercle bacilli were present in the milk which the animals yielded.

In 1907 Schroeder and Cotton published in a report to the American Bureau of Animal Industry (Bulletin, No. 99) an interesting series of cases in which they showed that tubercle bacilli are disseminated with the faeces of tuberculous cattle, and that this dissemination occurs not only with visibly diseased animals, but also with those in which the diagnosis of tuberculosis depends entirely on the application of the tuberculin test. In the same year Dr. Mohler, Chief of the Pathological Division of the American Bureau of Animal Industry, reviewing the evidence which had been accumulated on this subject, wrote as follows: "That milk coming from a tuberculous udder is capable of transmitting the infectious principle is conceded by all who have given the subject any consideration. It has been equally established that in advanced generalized tuberculosis the udder may secrete tubercle bacilli without showing any indication of being affected. Careful experiments performed by trained and eminently responsible investigators have also demonstrated beyond reasonable doubt that tubercle bacilli at certain times may be present in the milk of cows affected with tuberculosis to a degree that can be detected only by the tuberculin test, so that in a herd of cows in the various stages of tuberculosis it is to be expected that some of them will secrete tuberculous milk, which, when mixed with other cows' milk, makes the entire product dangerous." In view of the fact that Dr. Mohler's own experimental investigations on this subject are justly recognized in America as being thoroughly reliable and of high practical significance, this expression of his opinion is well worth consideration.

We are glad to find that the serious attention of bacteriologists in this country has now been turned to

¹ Address on Tubercle Bacilli in Cow's Milk as a Possible Source of Tuberculous Disease in Man. Trans. Brit. Congress on Tuberculosis, Vol. 1, p. 83.

the importance of these problems. The number of cows investigated by Dr. Griffith is relatively small, but his results are positive, and the conclusions deducible from them are unambiguous; taken in conjunction with the work already placed on record in other countries, they furnish an incontrovertible proof that the milk of clinically tuberculous cows is, even in the absence of udder disease, a serious danger to human health.

With regard to cows apparently in perfect health but yielding a positive reaction to the tuberculin test, Dr. Griffith's experiments only deal with three animals. In two of these he was able to demonstrate the presence of tubercle bacilli in the faeces, but in none of the three has he been able to state that they occurred in the milk. From such a limited number of cases it is impossible to generalize; others who have made more extensive observations apparently find that tubercle bacilli may occur not only in the faeces but also in the milk of these physically healthy but tuberculin-reacting animals. A very much larger accumulation of experimental statistics must be provided before reliable conclusions can be drawn as to the magnitude of this danger. Nor does it appear possible, at least until the extensively tuberculous beasts have been eliminated from our milch herds, to attempt to enforce the exclusion of animals which are in the early stage of the disease, where diagnosis can only be established by the tuberculin test.

Our Government has been expending money on scientific research, which has led to results of immediate practical importance. It now rests with our legislators to provide a basis for administrative measures which shall safeguard the public from the risks of contracting disease by the consumption of milk obtained from cows seriously affected with tuberculosis, whether or no the udders of these animals be recognizably tuberculous. This requirement is obviously necessary; but in view of the appallingly extensive prevalence of tuberculosis amongst cattle, it does not appear possible at present for the Legislature to proceed further.

THE STANDARDIZATION OF DISINFECTANTS.

WITH unfailing regularity the medical journals of this and especially other countries publish articles on new antiseptics and disinfectants. From time to time fresh claims are put forward for this or that drug or compound, until the number of preparations for which disinfectant properties are claimed bewilder the medical, to say nothing of the lay, mind. In addition to the difficulties which arise from the actual number of preparations, that arising from the want of uniformity of methods of standardization has to be taken into account, and it is in regard to this matter that the greatest confusion has arisen. But even if a uniform method were introduced into daily practice, there would be no guarantee of the value of any given disinfectant, unless it could be scientifically proved that the method really measured, within the limits of reasonable experimental error, the disinfectant capabilities of substances under the conditions in which such disinfectants were used.

This want of uniformity led Dr. Martin, Director of the Lister Institute, to organize some two years ago a thorough investigation of the subject. The nature of the process of disinfection was studied, in the first instance by Miss Chick, in the institute's laboratories,¹

with the result that a complete analogy was found to exist between the process of disinfection and a chemical reaction. This research enabled the author to enunciate certain general laws of disinfection, and to determine how far the process is modified by variations in the concentration of the bacteria and of the disinfectant, and in the temperature at which the tests were applied. The laws thus determined were found, rather unexpectedly, to be capable of being expressed by a simple formula.

Starting from the foundation afforded by this accurate knowledge, Dr. C. J. Martin and Miss Chick proceeded to study the means of applying standards to disinfectants. Of the methods hitherto used in bacteriological laboratories for standardizing disinfectants, the thread method of Robert Koch, the garnet method of Paul and Krönig, and the drop method known as the Rideal-Walker represent those with the most scientific basis. The trustworthiness of Koch's method of testing the antiseptic by applying it to silk threads on which anthrax spores have been dried is challenged, on the ground that it demands a higher standard of efficiency than is necessary. Apart from this, a perusal of the paper to which we have referred demonstrates other defects in this method. Again, the garnet method cannot be accepted as satisfactory, as the conditions are artificial and not in the least analogous to those obtaining in practice. The Rideal-Walker method, while superior to the two others, needs, in the opinion of the authors, modifications to satisfy the requirements of a scientific test. In the Rideal-Walker method the temperature was kept more or less constant, and the number of bacteria per unit volume as well as their degree of resistance was not allowed to vary. Martin and Chick insist on the importance of keeping these conditions as constant as bacteriological methods will allow, and, further, lay great stress on the necessity of making the time of disinfecting the same. The constants employed in their experiments are, therefore, temperature, concentration of bacteria, virulence and resistance of bacteria, culture medium, and time.

It is shown that among the vegetative organisms considerable variations in resistance occur, and the resistance of virulent germs is not quite identical with that of old strains of the same micro-organism. The resistance to phenol of spore-forming microbes is from 17 to 25 times greater than that of vegetative organisms. Practically, phenol and emulsified disinfectants are too feeble for use with sporing germs, and only the metallic salts are efficient germicides for this purpose.

The next problem attacked—the determination of the conditions under which the test, with constant temperature, number of bacteria, medium and time, is to be carried out—opened up a much more debatable chapter, and the solution offered, even if not absolutely ideal, is one which must be regarded as highly satisfactory. To fix the germicidal value of a disinfectant by its action in aqueous suspensions would practically be to limit the applicability of the method to the disinfection of surgical instruments. Disinfectants are, however, mainly used for the treatment of infected excreta, sewage, etc., when, as in nearly all other circumstances under which disinfectants are used—such as the cleansing of wounds, the disinfection of furniture and dust-laden objects, and the streets—the disinfectant has to act in the presence of organic matter. Objections have been raised to testing disinfectants in the presence

¹ Harriette Chick, D.Sc., and C. J. Martin, M.B., D.Sc., F.R.S., *The Principles Involved in the Standardization of Disinfectants and the Influence of Organic Matter upon Germicidal Value*, *Journal of Hygiene*, vol. viii, No. 5, 1908, pp. 655-697. See also p. 286 of this issue.

faecal matter, and the authors state that when employed in their natural condition marked variations occur, which destroy the value of the test. Dried and finely divided faeces, however, were found to yield constant results, and it was discovered that it was the particulate condition rather than the composition which was of moment.

The experiments reveal some interesting facts with regard to the germicidal values of the various types of disinfectants. Taken broadly, disinfectants may be divided into three classes: The metallic salts, the dissolved phenols, and the emulsified tar acids. In comparing the phenol coefficient in the presence of organic matter of these groups, or rather of certain types of these groups, with the phenol coefficient when tested in water, striking differences were met with. The action of the metallic antiseptic salts, as would have been expected, on organic matter greatly interfered with the action on the bacteria and the concentration of mercuric chloride required to fulfil the requirements of the test in the presence of dried faeces was ten times that needed when water was used. Miss Chick had previously shown that the concentration of Hg ++ ions, and not that of the mercuric salt determines the germicidal power. This observation, however, does not indicate that the efficiency of mercury is lessened ten times by the presence of organic matter, since the concentration of mercury ++ ions is only increased slightly under these conditions. At the other extreme, the phenols only lose about 10 per cent. of their efficiency in the presence of faecal matter. Between these two extremes come the emulsified tar acid preparations and the soluble cresols. The finer the emulsion the greater is the loss of germicidal efficiency in the presence of faecal matter. In other words, all forms of organic matter appear to have the power of lessening the efficiency of disinfectants, the diminution being least marked in the phenols and more marked in fine emulsions of the tar acids than in the coarse emulsions. The authors explain this loss of efficiency on physical and not on chemical grounds. The loss is to a great extent due to adsorption of the emulsion upon the surfaces of the particles of organic material. The same process appears to play an important part in the actual disinfecting action of the emulsions. In another paper,² the same authors investigate the germicidal action of the tar acid preparations as emulsions and as solutions. The active principles of these preparations when dissolved have less disinfecting power than they possess as emulsions, and this was shown to be due to the adsorption of the emulsified tar by the bacteria.

Critics will search for objections to the method of standardizing disinfectants described by Drs. Martin and Chick, for there can be no doubt that if introduced as a normal standard, many reputed disinfectants must lose much of their reputation. The objection to the presence of faecal matter is certain to be raised, as it has already been raised. But no valid argument can be set up if the results obtained by these most careful and capable workers are confirmed. It is to kill germs in the presence of faecal matter that disinfectants are chiefly required, and dried faecal material from different sources has yielded approximately the same results. No rational argument can be adduced against making the temperature and time constants,

since every scientifically-minded person realizes that no workable results can be obtained with more than one variable. No matter what inconveniences may be caused by the upsetting of old ideas and the introduction of new ones, the work is of the utmost importance, and must be regarded as worthy of full consideration by all those concerned in hygiene, since the welfare and safety of the public in no small measure depend on the answer to the question, What is the best disinfectant to be used for a specific purpose?

THE BRITISH MEDICAL BENEVOLENT FUND.

THE British Medical Benevolent Fund deserves the strongest support of the profession and of the public. To bring this home to both is the object of the meeting to be held on February 9th at the Royal College of Physicians. The chair will be taken by the President of the Fund. An address will be delivered by the Right Reverend the Lord Bishop of Oxford, who will be supported by the Right Honourable the Lord Mayor of London, the President of the Royal College of Physicians, and others. Better representatives could not have been found. The Bishop of Oxford is the son of Sir James Paget, who was for many years the President of the Fund. The Lord Mayor is the recognized leader of all national movements in the cause of charity, while Sir John Tweedy and Sir Richard Douglas Powell well represent the medical profession. The Fund was founded in 1836, so that for upwards of seventy-two years it has continued its beneficent work. It has slowly accumulated invested funds out of the income of which it now supports 126 annuitants and spends in this department about £2,500 annually. No candidate is eligible for an annuity till past the age of 60 years. Many most distressing cases, however, occur at a much earlier age, and for these means of relief have to be found in the subscriptions and donations of the year. These fluctuate and can only be approximately forecast. For this reason the grant department of the Fund is a constant anxiety to the managers, for the Fund cannot spend what it has not got; its capacity for good is limited by the contributions of the year. If every medical man would make even a small subscription every year the income could easily be doubled. The need for this Fund is most strongly recognized by those who themselves know best the hard struggles of early professional life, and it is from the medical profession itself that the main support of the Fund comes. Little is given by the public at large. Yet there is no profession which does so much for the public, in public and in private, with so little or no remuneration. The medical profession has therefore a just claim upon public consideration which no other profession can make in equal degree. To bring this prominently forward is the second object of the meeting. The profession itself can show that it is in earnest, not alone by contributing as freely as it can afford, but also by using its influence in every way that offers to bring the claims of the Fund before those of the public who are likely and able to help it. There is no doubt that the work and objects of the Fund only require to be known and realized for the financial support which is so necessary to be forthcoming. Contributions may be sent to the Honorary Treasurer, Dr. Samuel West, 15, Wimpole Street, London.

"PRAYER AS AN INSTRUMENT OF MURDER."

OUR conjecture as to the sex of the writer of the extraordinary document published in the JOURNAL of January 23rd was correct. "M. Cowan" turns out to

² Harriette Chick, D.Sc., and C. J. Martin, M.B., D.Sc., F.R.S., A comparison of the Power of a Germicide Emulsified or Dissolved, with an Interpretation of the Superiority of the Emulsified Form, *Journ. of Hygiene*, 1908, Vol. viii, No. 5, pp. 699-703.

be a woman who is described as "an Irish lady of means," and who is said to be a member of the London Antivivisection Society. Mrs. Cowan herself, according to a correspondent who is quoted by the *Observer*, is quite unrepentant. She says, however, that she does not pray for the death of the vivisector but for his "removal." Yet she speaks of a vivisector "dropping," apparently as the result of "earnest prayer." "Removal," it may be remembered, was the euphemism employed by the "Invincibles," who vainly tried to murder Mr. W. E. Forster but succeeded in "removing" Lord Frederick Cavendish and Mr. Burke. Mrs. Cowan's idea of "removal" is, she explains, slight paralysis or the inheritance of a fortune that would enable the vivisector to settle down in the country. Well, Pasteur was more than slightly paralysed and yet continued his work, while several prominent vivisectors are men of considerable private fortunes that would enable them to live in idleness if the thirst for knowledge did not consume them. Mrs. Cowan obviously knows as little about men of science as she does about their work. It is amusing to note how the antivivisectionists are tumbling over each other in their eagerness to repudiate this too candid member of the fraternity. Mr. Sidney Trist states that his society is in no way responsible for the circular, the issue of which it deplors. Miss Woodward, Honorary Secretary of the Society of United Prayer for the Prevention of Cruelty to Animals, declares that it is highly unlawful to pray for any one's death. She goes on gravely to say that Mrs. Cowan's letter was considered at the last committee meeting of the society, "when one of our members, Miss Burgess, remarked very truly that an unrepentant vivisector dead might do more harm to the community than a living vivisector. We can control the actions of the living, but we do not know what evil influences may be set at work by the uncontrolled spirits of the dead. It is at least a curious fact that our work was never so severely attacked as shortly after the death of several well-known vivisectors." This is an aspect of the vivisection question which is quite new to us, and opens a new vista of enterprise for the opponents of that method of research. Mr. Stephen Coleridge, in a characteristic letter, states that both he and his society are entirely unconnected with the circular. He professes, however, to be afraid lest its transmission to the vivisectors may not possibly lead to retaliative efforts of a similar nature having for their object his removal, and he appeals to all who support his efforts to defend animals from vivisection to make precatory efforts in his defence in order that he may not fall under the malign influence created by the force of malevolent suggestion which may possibly be exercised against him by the vivisectors and by Lord Cromer's earnest associates in the Research Defence Society. Is it that he might be better able to guard himself against this "malign influence" that Mr. Coleridge recently applied to be enrolled as a member of the society? But Mr. Coleridge may be comforted; no one but himself takes him quite seriously, and vivisectors have no time to spare for the contemplation of his devices to keep himself well in focus on the stage whereon he struts and frets his hour, amid so many jealous rivals, for the admiration of the populace. For instance, there is Mr. Bernard Shaw, whose clowning, though poor enough in itself, is more amusing than the Malvolio-like solemnity affected by Mr. Coleridge. Mr. Shaw says "the genuine vivisectionists would be the last people in the world to protest against an experiment so interesting, so important, and so thoroughly scientific in method." Mr. Shaw's notion of scientific method may be gathered

from his style of argument on the many subject with regard to which he so often comes forward to enlighten the public mind. We can assure him that no "genuine vivisectionist" would object to being prayed against by persons of the type of Mrs. Cowan. But fanatics do not always confine themselves to prayer; and, assuming that Mrs. Cowan is as harmless as she is silly, there are, as we have pointed out, persons to whom what Mr. Coleridge calls her "minatory suggestions" might move to the use of more carnal weapons.

PHYSIO-THERAPY.

CONSIDERING the great developments that have taken place during the last ten years in the application of physical means to the treatment of disease, it would be surprising if in Germany, where every department of professional study possesses its special organ, physical treatment should be content to remain unrepresented. Special establishments with all the necessary apparatus for the physical treatment of diseases have been opened in many of the great centres of medical teaching, and the new *Jahrbuch* devoted to physical methods of treatment is edited by Professor E. Sommer, the able Director of the Physical Polyclinic at Zurich.¹ Probably one reason why the value of these means of treatment has been more generally recognized by the medical profession in Germany and German-speaking countries than elsewhere has been the great popular success of the methods advocated under the name of *Naturheilkunde* or *Natural Methods of Healing*, which include practically all means of treatment except the administration of drugs. As the so-called nature-curers are for the most part unqualified and irregular practitioners, it is highly desirable to let the public know that the profession takes account of and employs in a scientific manner all that is valuable in their system. There is ground to fear that if the medical profession in this country stands apart from the scientific use of physical means these will fall into lay hands and be made a cover for the quack, instead of being under the direction of regularly educated scientific practitioners who are not only conversant with their practical application but have studied scientifically the diseases for which they are suitable and are able to give rational reasons for their use. Some of these means have not received from us the attention they deserve, and are regarded with prejudice by many who have heard of them only in association with some objectionable form of quackery. This is especially true of what may be called *medico-mechanics* or the treatment of disease by mechanical forms of massage and movement, often spoken of as the system of Zander. Zander Institutes for the treatment of disease by mechanical means exist in most large centres of population and the chief health resorts of the Continent, but in England the establishment at Bath is almost the sole example. The *Yearbook* contains articles on the treatment of disease by baths, including mud-baths and the use of "fango," a volcanic mud, electro-therapeutics, medical gymnastics, sun-baths, hydrotherapy, massage, light treatment (said to be superior to radium), and other rays, and high-frequency currents. Dr. Jungmann gives a critical account of the progress in the use of light in the treatment of disease, and describes the various modifications, rational or fanciful, which have been introduced into it, not always with benefit. Kromayer and Dyck have made out a good case for the quartz lamp invented by the former; they claim, not

¹ *Jahrbuch ueber Leistungen und Fortschritte auf dem Gebiet der physikalischen Medizin*. Begründet und herausgegeben von Professor Dr. Ernst Sommer, Direktor der Universitätsklinik für physikalische Therapie in Zurich. 1. Jahrgang. Leipzig: Otto Nönnich. 1908. (Roy. 8vo, pp. 440. M.10.)

only that it is simpler, but also, that cases have been cured which had been unsuccessfully treated by the Finsen lamp, that the duration of treatment is generally shorter, and that good results have been attained not only in lupus but in naevi, alopecia areata, and acne rosacea. Professor von Leyden of Berlin has contributed a short article in which he urges that the modern physician must be prepared not only to prescribe drugs, but to correct hygienic mistakes, to regulate diet, modify surroundings, and recommend occupation, to employ apparatus for the application of light, heat, cold, or electricity, or medico-mechanics; to send his patients to special places for treatment, to homes of rest and sanatoriums, to concern himself with insurance schemes against sickness, accidents, and old age; in fact, to consider many questions with which formerly he had nothing to do. It is impossible to stand aside and to regard these matters as outside the proper sphere of medical practice. Physical methods are with us, and ignorance of them or refusal to employ them can only injure the medical profession.

LOW LIVING AND HIGH RENTS.

At an inquest in Southwark on December 18th, 1908. Dr. F. J. Waldo, the coroner, contrived, by apt questions to the witnesses, to bring into strong relief the difficulties suffered by the poor in the matter of finding living accommodation at a reasonable price. The child on which the inquest was held died from tuberculosis, and was one of a family of seven persons—father, mother, and five children—occupying a small house of two rooms. This was furnished by the landlord after a fashion, but the whole family slept in one room. The average income of the family—the father being often out of work—was 14s. 6d. a week, and out of this small sum no less than 9s. 4d., or far more than 50 per cent., went in rent. High as is the sum, it appears, nevertheless, to be a smaller rent per room than is frequently paid for corresponding accommodation in the same locality. One reason why the rents of such houses and rooms are so very high as compared with the means of those who occupy them is that they are often farmed by some small capitalist in the neighbourhood. Buildings for the working classes, such as are commonly erected, either through private enterprise or by municipal authorities, are intended only for persons in possession of furniture, and no attempt, so far as we are aware, has been made to cater for those who have no capital wherewith to furnish a home. Houses and rooms of the character described at this inquest presumably come under the tenement-by-laws of the borough council, and Dr. Dennis McCarthy, who in the course of his evidence in the case gave some striking evidence as to the evils of subletting, said that the house in which the deceased lived was fairly clean, but there would appear to be no special machinery for supervision, and it is not clear that the by-laws are so constructed as to prevent overcrowding within them. Clearly the public health cannot reach a desirable standard so long as there is such an immense disproportion between rent and income in the case of a large section of the less well-to-do working classes, for even the physical difficulty of supporting life on the small income which remains must be immense, and the moral atmosphere induced must be as eminently favourable to alcoholism as it is inimical to cleanliness and sound living of every kind. So long as any considerable portion of the population continues to live in such conditions there must be plenty of scope for the energies of the Mansion House Council on the Dwellings of the Poor, to which attention was recently drawn in these columns.

"ARTIFICIAL LANGUAGES."

We have received a letter from Dr. Sydney Whitaker, of Waterloo, Liverpool, Vice-President of the T.E.K.A., an association of Esperantists, of which an account was given in the BRITISH MEDICAL JOURNAL of December 5th, 1908, p. 1687. Dr. Whitaker charges us with making "misleading statements" about Esperanto. One of these would appear to be that Esperanto is not a living language. We are assured that it has been a living tongue for several years, "spoken whenever and wherever Esperantists meet." If this criterion be accepted, it might be argued, with much greater force, that "Yiddish," "thieves' Greek," and the many varieties of argot in different countries, are living tongues. Dr. Whitaker informs us that there is no "natural language." The BRITISH MEDICAL JOURNAL is scarcely the place for a discussion on the origin of language, a problem as to which the French Institute many years ago had to decline to receive communications. But surely there is a difference between a language learnt at one's mother's knee, spoken by a whole people whose legends, poetry, achievements and aspirations are written in it, and an artefact product formed in a way that suggests that its begetter had, as Armado's page says in *Lore's Labour's Lost*, "been at a great feast of languages and stolen the scraps." Even if we allow Esperanto to be "living," in the same sense as the man made by Frankenstein was living, the question remains, Will it live? If we may say so, with all respect, we should judge that Dr. Whitaker has not given much attention to the study of the history of languages, or he would not be so perplexed as he appears to be by our statement that if Esperanto is to live it must, as it is spoken by people of different nationalities, suffer changes which will in the course of time make them unable to understand each other. Dr. Whitaker finds our statement that nationality modifies language neither grammatical nor lucid. On the point of grammar he must excuse us if we do not accept him as an authority. As regards lucidity, will he contend that an acquired language is quite the same thing in the mouths of men of different nations? This very day we overheard an educated Englishman ask a Swiss waiter the extraordinary question how "maudeagraw" came by its name. The foreigner was completely non-plussed, till philanthropy led us to whisper to him that the interpretation of the mysterious word was "Mardi gras." Do Italians, Frenchmen, and Germans all speak English with the same accent or with the same turn of phrase? If even the English-speaking peoples differ in their use of a common language which they have learnt in the natural way, it is surely not a dark saying that different races speaking an artificial jargon will impress upon it something of their own linguistic character. We may remind Dr. Whitaker of the Prioress, of whom Chaucer says:

And Frenssh she spak ful faire and fetisly
After the scole of Stratford-atte-Bowe.
For Frenssh of Parys was to hire unknowe.

We venture to foretell that in a few years the Esperanto of Paris will be almost as unknown to Dr. Whitaker. This prediction is not made at random, for a French writer, M. Remy de Gourmont, not long ago related the experience of a foreigner who went to Paris fondly thinking that Esperanto would smooth away all difficulties of language. He found that no one understood him. This victim of misplaced confidence, speaking perhaps in his wrath, describes Esperanto as a mosaic of vocables taken from various European tongues, but carefully deformed by the removal either of the first syllable or the last. The result is often misunderstanding of a deplorable kind. Now, he says that he knows a little French, and wishes

to know what mental aberration has led Esperantists to use *viol* (rape) to denote a violet. We have not space for his account of his misadventures with Esperanto, but we may quote his conclusion. Having left home, he says, with a large stock of Esperanto, he will return with a little knowledge of French. This he considers an immense gain. French has given him the key to a new world. We congratulate him, for Esperanto scarcely serves to give him the key to a room in a hotel. That is the whole case in a nutshell.

SPIRITUAL HEALING BEFORE THE FRENCH LAW.

THE French Supreme Court of Appeal decided eight years ago that persons not possessing a regular medical diploma who professed to cure disease by "magnetic passes" came under the provisions of the Law of November 30th, 1892, against unqualified practice. This decision was understood to apply to all forms of treatment by what may be called non-medical methods. A recent decision of the *Chambre Criminelle* of the Court of Appeal would seem, however, to imply that this is not the case. An appeal was lodged against a judgement acquitting a youth who, as may be gathered from the text of the decision which is published in the *Semaine Médicale*, practised what would in this country be called spiritual healing. The decision sets forth that it appears from the evidence in the case that X., aged 16 years, when he received or visited sick persons who sought his aid for the relief or cure of their ailments, confined himself, invariably and whatever the nature of the disease, to placing one of his hands on the seat of pain, addressing a mental invocation to a spirit which he believed himself to have the power of moving to favourable intervention; that he had never in any circumstances ordered any remedy or medicament of any kind, given any prescription, or direction to the patients; that his acts had nothing in common with medical treatment, and were based wholly upon his belief in supernatural help without the employment of any therapeutic procedure; and that in these circumstances, which had been fully proved, the decision appealed against was right in view of the fact that X. had not committed the offence of illegal practice of medicine as defined in Article 16 of the Law of 1892, and forbidden by Article 18 of the same law. It follows that there was no violation of the law. On these grounds the appeal was rejected. The French are the most logical of people, and they are justly proud of their system of law in which everything is codified, and the provisions are laid out with the symmetry of a Dutch garden, in a manner so different from the chaos of cases and judgements and Acts of Parliament in which the dispensers of justice in this country have to grope their way. The case we have quoted, however, seems to show that even the French law is sometimes in contradiction with itself, unless it be held that "magnetic passes" are mere tricks, while the invocation of healing spirits is an appeal to something believed to be real. In that case all the magnetisers have to do to put themselves in order is to add incantations to their "passes." The problem is a knotty one, for according to the French law as expounded by our contemporary, either spiritual healing is a vain thing, and therefore comes within its provisions as a fraud, or it has some active effect, and then it comes under them as a form of quackery. This dilemma, however, is of too wide a compass to catch within its horns any but those who deny the possibility of any spiritual intervention in human affairs. An enactment interpreted in this rigid spirit

would treat prayer to the Deity for a person afflicted with a disease as a violation of the law against the illegal practice of medicine. This would be absurd, for it would penalize prayer for the sick and punish a person for believing in a spiritual power.

PUBLIC OR PRIVATE PHILANTHROPY.

WHILE philanthropic institutions abound on every hand and workers are always forthcoming to serve on committees, the study of the wide subject of philanthropy in relation to the State is probably but little regarded in the desire to push forward the claims of each particular scheme to which its supporters have committed themselves. The late Mr. Kirkman Gray left behind him a series of papers which his widow, assisted by Miss B. L. Hutchins, have now issued in a volume¹ which is not only interesting as giving a clear account of the lines of thought that have slowly developed as experience has increased, but contains the carefully thought-out conclusions of a student of the subject. These conclusions are worthy of careful consideration by all who may be occupied in the same field of labour. In the first part of the book the transition in thought is traced by which private philanthropy has gradually passed, and is still passing, into the hands of public bodies. The general thesis is laid down for discussion that widespread want resulting from broad and general causes cannot be adequately provided for by private philanthropy, and that it is the business of the community to assist its weaker constituents, and at the same time to control them. But there is no consistent doctrine to determine the relation of the State or community to the weaker classes of society, and for lack of it there has at all times been a wastage of power and a partial failure in result. The history of the advance of public recognition of public duties shows only too plainly that the stimulus of the agitator has been needed before effective action has been taken. The reform of the prison system, of the Poor Law, of sanitation, education, and a host of other movements for the improvement of the conditions of life for the poorer classes, were all started and stimulated by the action of agitators, such as Mrs. Fry, Mr. Chadwick, and many others, the support of the general philanthropist following afterwards, and leading by slow degrees to official action and control. The second part of the book is devoted to the discussion of the means by which the intervention of the State can best bring about the necessary control, and to what extent it can best be left to co-operate with private philanthropy. Among many questions thus considered there is probably none that commands more serious thought than that relating to the prevention of crime by juvenile offenders. It will doubtless surprise the reader to learn that the proportion of criminals convicted in this country between the ages of 12 and 16 stands at a higher figure than for the age-period from 21 to 30. The Prisoners' Aid Society does much to reclaim, but further co-operation between private workers and public officials is needed to cope with the circumstances which lead to such an appalling amount of juvenile depravity. In relation to the hospital system as at present prevailing, the gradual multiplication of institutions both for treatment and for isolation which are under public official control appears already to have reached the proportion of two-thirds of the whole number of public hospitals, and only one-third still remain under the control of committees responsible only to their own subscribers. This part of the subject does not appear to have been very fully con-

¹ *Philanthropy and the State, or Social Politics*. By Kirkman B. Gray. Edited by Eleanor Kirkman Gray and B. L. Hutchins. London: P. S. King and Son. 1908. (Demy 8vo, pp. 350. 7s. 6d.)

sidered by the writer, and may be regarded, with some other papers contained in the volume, as a fragment only, the completion of which was prevented by his early death. It is, however, well worthy of careful study as indicating some of the lines which future developments are likely to follow.

RESEARCH DEFENCE SOCIETY.

THE letter from Mr. Stephen Paget, which is published at p. 304, shows the progress made by the Research Defence Society within a year of its foundation. Beginning this time last year with 7 members, it has now more than 2,000, of whom 230 are ladies. A branch has just been formed at Dublin: 700 persons were present at the inaugural meeting. The branch has already 400 members. Branches have also been formed at York and Birmingham, and others are in course of formation at Bournemouth, Brighton, Cambridge, Edinburgh, Hull, Leeds, Liverpool, Manchester, Norwich, Oxford, Shrewsbury, and Torquay. The method in which the society conducts its campaign is fully described by Mr. Paget; his letter will, we hope, be read by every one under whose eyes the JOURNAL comes. We feel strongly that his disinterested efforts in a cause the advocacy of which necessarily entails upon him a good deal of unpleasantness from those opposed to vivisection entitle him to the gratitude of all who have at heart the advancement of the art of healing. We congratulate him and his fellow workers on what they have already done for the diffusion of a knowledge of the truth about the methods of biological experiment and the confutation of calumnies, and we heartily wish them increasing success in their most useful and truly philanthropic undertaking.

INTESTINAL PSEUDO-PARASITES.

DR. MALCOLM ALLEN ROYAL¹ has made a study of the mistakes which may arise in microscopic examinations of the faeces through confusing various kinds of vegetable material with animal parasites. Banana fibres are sometimes mistaken for tapeworms, and two cases of this nature have been cleared up in the author's laboratory. One was a child, aged 2 years, who was said to become more or less restless just before passing these spurious worms; the other was a man, aged 38, suffering from anaemia of obscure origin; his stools had been examined and material resembling tapeworms had been occasionally found. Upon further correspondence with the attending physicians, the connexion of these appearances with the ingestion of bananas became fairly well established. Many cases are on record where the cells of oranges or lemons have been mistaken for trematodes. Dr. Royal records the case of a man of middle age, apparently in good health, who noticed on several occasions a peculiar appearance in his faeces, and brought specimens to his doctor, who examined them microscopically. The doctor was puzzled at first as to their nature, but on questioning the patient found that these supposed worms occurred in the faeces only after eating oranges, and that oranges disagreed with him. The doctor's suspicion that the material in question really consisted of orange cells was confirmed by appeal to a botanist. Celery fibres may be mistaken for *Ascaris mystax*, *Oxyuris vermicularis*, *Uncinaria americana*, *Trichocephalus trichiurus*, or *Dipylidium caninum*. On several occasions Dr. Royal has found these fibres in specimens of children's faeces which have been

brought to him on the supposition that the excreta contained parasitic worms. The vegetable character of the material was at once proved on testing it for cellulose, and inquiry elicited the fact that the passage of the faeces had been preceded by an attack of indigestion due to eating celery. Fragments of onion, according to the author, may be mistaken for *Ascaris lumbricoides*, *Anchylostomum duodenale*, or *Ascaris mystax*. Sauerkraut, he finds, might be mistaken for the undeveloped *Ascaris lumbricoides*, *Ascaris mystax*, or *Uncinaria americana*. Portions of dates, oatmeal, thread, rhubarb, and pineapple are also liable to lead to an erroneous diagnosis of various parasitic worms. An interesting feature of Dr. Royal's work is that in the case of all the above-mentioned vegetable materials he has demonstrated the resemblance to animal parasites by experiment upon himself. "As experimental work, I ingested large quantities of the different fruits and vegetables, making the diet for the day consist principally of one article. At various intervals following the ingestion of the different substances, examinations of the stools were made, and especially after the end of twenty-four hours, this being the time generally required for the food to pass the length of the intestinal tract." As a standard for comparison with the material found in the faeces, teased fragments of the various vegetables, after maceration in 5 per cent. potassium hydrate, were used. Dr. Royal supplements his article with an interesting set of drawings showing the resemblances between the true and the pseudo-parasites.

A RADIUM INSTITUTE.

THE announcement which appeared in the newspapers on Thursday as to the foundation of a Radium Institute was incorrect in several particulars. There is no question of a Royal Charter being granted. The institute will bear the name of "The Radium Institute." The King has taken the keenest personal interest in the foundation of such an institute, and it is through his instrumentality, aided by the liberality of Sir Ernest Cassel and Lord Iveagh, that the scheme is now about to be carried into effect. A committee has been formed, of which the chairman is Sir Frederick Treves, Bart., G.C.V.O., C.B. The members will include one named by Sir Ernest Cassel, one named by Lord Iveagh, Sir William Ramsay, K.C.B., the Hon. R. J. Strutt, Professor Sir J. J. Thomson of Cambridge, Sir Lauder Brunton, Bart., and Sir Malcolm Morris, K.C.V.O. We understand that a site has been secured, but it is not expected that the institute will be ready for work for some months. The institute will have no connexion with the Imperial Cancer Research Fund.

THE King has been pleased to appoint Mr. George Andreas Berry, M.B., C.M. Edin., F.R.C.S. Edin., to be Honorary Surgeon Oculist to His Majesty in Scotland, in the room of the late Dr. Argyll Robertson.

ON the occasion of the publication on January 1st of the first number of the twenty-fifth volume of the *International Centralblatt für Laryngologie, Rhinologie, und Otologie*, Sir Felix Semon, its founder and editor, received from laryngologists all over the world most gratifying expressions of their appreciation of the great services rendered to the study of the speciality by the foundation of that periodical and by the manner in which it has been conducted.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND DISTRICT.

HOSPITALS AND THE EDUCATION AUTHORITIES.

AFTER a full discussion, the joint committee of the Manchester and Salford Divisions has declared itself strongly opposed to any arrangement by which public hospitals would undertake to treat school children in return for a subsidy from the education authorities. The committee entirely disagreed with the system which is now being tried in Sheffield. In that city the education authorities have entered into an arrangement by which, in return for every guinea subscribed by the authority to a hospital, six recommendation letters shall be received, which the authority can distribute to children needing treatment whose parents are unable to pay ordinary fees. The joint committee considers that even if a guarantee be given that full inquiry will be made as to the circumstances of the parents, and that only those who are unable to pay will be sent to the hospitals, the objections against public authorities dumping their patients into charitable institutions still remain. It is unfair to the subscribers, and beyond a doubt will very soon lessen the amount of charitable donations to hospitals; in fact, it would be just as reasonable if workhouse hospitals were to ask for public donations. It is equally unfair to the honorary staffs of the hospitals, who, in many cases, have already more work than they can well do, and it would only be mere justice that those who do the work the State requires should receive the pay. In its last annual report, the Medico-Political Committee, in reply to a request for advice from the Ulster Branch of the British Medical Association on the matter of treatment in hospitals having honorary staffs, recommended that the services of the medical profession should not be given gratuitously to patients who are maintained by public funds. The Annual Representative Meeting was entirely in agreement with this and passed a special resolution to this effect. The question is sure to be raised in Manchester before long, for already some of the hospitals are finding that their resources are being taxed by the large number of school children crowding to them, whose parents have been urged by the authorities to provide medical or surgical treatment; some of the hospitals are in such a critical financial condition that it would probably need some firmness on the part of the medical staffs to resist a scheme like that of Sheffield.

THE ROYAL INFIRMARY AND MEDICAL WOMEN.

Last week the Board of Management of the Royal Infirmary received a deputation from the Federation of University Women in Manchester and the Association of Manchester Medical Women, together with a representative of the medical women students in Manchester. The deputation presented resolutions from the societies mentioned urging the claims of medical women as candidates for resident appointments at the new infirmary. The Chairman of the Board assured the deputations that the board was in full sympathy with their request. The medical board also favoured the idea of throwing open to women the resident posts at the infirmary, and had twice recommended the board to do so. He regretted, however, that, owing to lack of accommodation in the new building, it was at present impossible for the board to consider applications from women candidates for resident posts. It was a pity that the application had not been made five years ago, when the plans for the new building were under consideration. In a letter to the *Manchester Guardian* the deputation replies that such a request would have been unreasonable at that time considering the limited accommodation in the old building, and it never doubted that the building of the new infirmary would solve the problem of accommodation. The letter continues: "It is unthinkable that the board which has carried out this great scheme could not with the help of the able superintendent reorganize the present accommodation in such a way that quarters may be found if necessary for a woman resident, and the fear is expressed that exclusion from the resident infirmary posts in Manchester may drive the most promising women students elsewhere."

INFIRMARY ARRANGEMENTS.

Arrangements have now been made for the treatment of accidents and casualties at the central branch of the infirmary which is still kept at the old buildings in Piccadilly, and which will be worked in conjunction with the new infirmary. The casualty and accident department at the new infirmary is, of course, open day and night, but the central branch in Piccadilly is for the present only to be open from 9 a.m. to 6.30 p.m. every week-day for minor accidents and emergencies, and an adequate staff of doctors and nurses will be kept there during these hours. It has also been arranged that out-patients who reside at such a distance from the new infirmary as to make it difficult for them to attend there, may be seen at the Piccadilly branch at 9 a.m. All the arrangements are of a provisional nature and may be modified from time to time as occasion requires.

LIVERPOOL.

SUGGESTED MUNICIPAL ACTION FOR DEALING WITH TUBERCULOSIS.

COUNCILLOR A. SHELMEIRINE, who has devoted many years to problems of public health and especially to the question of tuberculosis, has presented to the health committee his report as delegate of the committee to the International Congress of Tuberculosis at Washington. He recommends: (1) The establishment of a municipal dispensary, or arrangements with the existing dispensaries, in the poorer quarters of the city, where those persons afflicted with tuberculosis might attend at stated periods to be examined, receive advice and, if necessary, treatment. (2) The provision by the municipality of beds in an open-air hospital or sanatorium for the treatment of early cases of the disease. At present, he says, a man with consumption has no opportunity for treatment unless he has means at his disposal, and his only alternative is to find refuge in the Poor-law infirmaries. (3) The provision of an institution for the isolation of those advanced dangerous cases which could not be properly isolated and treated at home. The advanced case of consumption was the most dangerous form of the disease to the community, as it was principally through such cases that the healthy members of the family were infected. (4) As far as possible, healthy children should be isolated from those suffering from tuberculosis, as they were most susceptible to attack. (5) The provision of a pure milk supply was of the highest importance, and until tuberculosis could be eradicated from dairy cows the number of sterilized milk depots should be increased, as there was no doubt that they had already saved thousands of infant lives. The measures at present in operation in Liverpool were, as far as they went, as perfect as possible for the suppression of tuberculosis, but they were insufficient when it was considered that there were 8,000 or 9,000 people in the city suffering from the disease, and that over 2,000 lives are annually lost in Liverpool by its ravages. Something of a more far-reaching nature should be attempted by an important municipality like that of Liverpool. Dr. H. H. Clarke, chairman of the Medical Board of the Hospital for Consumption and Diseases of the Chest, has written to the press pointing out that Mr. Shelmeirine has not recognized the fact that what he now recommends has for the most part been carried out in practice for many years by that hospital, which has a branch sanatorium with 40 beds in Delamere Forest, has 30 beds in the hospital in Mount Pleasant, has a large out-patient dispensary and a laboratory; it has further co-operated with the health committee on the lines which Mr. Shelmeirine recommends, and has an arrangement with the Victoria Nursing Association for visiting patients in their own homes.

THE POOR-LAW SANATORIUM AT HESWALL.

The annual report of West Derby and Toxteth Park Joint Hospital at Heswall, drawn up by the Clerk to the Committee (Mr. H. P. Cleaver), has just been issued. From this it appears that the weekly cost per head was: In maintenance, 14s. 6d.; building repairs, furniture, etc., 10s. 0d.; and other charges, £1 1s. 8d. With regard to the cost and the results obtained, Mr. Cleaver draws attention to the following points:

Cost of Maintenance.—With regard to this apparently large item, it should be remembered that sanatorium patients cannot be treated without very good and plentiful food; also the quantity of clothing required is in excess of an ordinary hospital. Further, in necessitous cases, flannel underclothing is given to patients on their discharge. The greatest handicap under this heading is the small number of beds, as it has been proved beyond any doubt that it is always more expensive proportionately to keep up a small establishment than a large one. Again, the fact must not be lost sight of that a proportion of the patients treated in the hospital have ceased to be a burden upon the rates through recovery, whereas probably all of them would still have been in and out of hospital had the sanatorium not existed.

Result of Treatment.—The lay mind is so expectant as to look for a "cure" in every case treated, whereas in many cases it is a subject for satisfaction when the disease is "arrested" or "quiescent," so as to enable the patient to follow some employment. It is difficult to keep in touch with every patient after leaving, but some old patients had visited the hospital who owed their present good health to their treatment, and who would willingly present themselves to the committee should they wish it. They are all working, and some have been discharged for a considerable length of time. Nine former patients visited the matron at Christmas, and all were in good condition with one exception and earning their own living. Another point that should be emphasized is that 75 per cent. of the cases treated last year were discharged free from the tubercle bacillus, so that they have ceased to be dangerous to the general public. The standard of classification of patients on discharge is a very high one, the patient being entered as "disease arrested" if there seemed to be the slightest doubt of his relapsing in even a small degree. Without prejudice, and for a fact, I know that the officials at the hospital are more cautious in this way than is the general rule. This makes a fresh difference in the appearance of the statistics. Boards of guardians all over this country are beginning to realize the fact that the West Derby, Liverpool, and Toxteth guardians, in being the pioneers in this movement, have taken a most essential step towards the public welfare, and one which will soon become universal. I believe that the Bradford guardians, the second in the field, are now enlarging their sanatorium.

BIRMINGHAM.

PLAYING FIELDS FOR BIRMINGHAM.

UNDER the auspices of the Birmingham and District Housing Reform and Open Spaces Association, a public meeting was held at the Council House recently to consider a scheme for acquiring 250 acres of land from the Birmingham, Tame, and Rea District Drainage Board at Castle Bromwich for the purpose of providing suitable playing fields. It was estimated that the land would be self-supporting, as it would be utilized by the numerous cricket and football clubs in the neighbourhood. A resolution to support the association in acquiring the land was carried unanimously.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

The Medical Officer of Health for West Bromwich has just issued his first annual report on the medical examination of the children attending the elementary schools in the borough. Dr. H. Manley is not only the medical officer of health but also the school medical officer, and he has examined upwards of 3,300 children since his appointment in March, 1908. He has adopted a system with regard to the examinations by which it will be possible to trace every child from its birth to the end of its school life, and to establish a set of complete statistics of considerable local value. He divides the parents of children attending elementary schools into four distinct classes:

1. Those who really take an interest in their children, and who could, if they chose, send their children to private schools, but are fully sensible of the excellent teaching provided by the State.
2. Parents who are equally interested in their children, but have not the pecuniary means to carry out all that they would wish.
3. Parents who are in the position of Class I, but who are quite indifferent as to the cleanliness or welfare of the child.
4. The idle, dissolute class, where the home is dirty, the parents often drunken, and where the child reflects in clothing, in boots, in vermin, and in health the home environment.

The boys, of whom only one-third had reached the sixth standard, averaged 54.8 in. in height and 73.6 lb. in weight. The girls averaged in height rather more, being 55.7 in., and in weight 72.8 lb. In the matter of boots and clothing, while both sexes were gravely in need of boots, the

boys especially, there were 42 boys and 12 girls insufficiently clad. Dr. Manley comments severely on the verminous condition of the girls. Inquiry was made as to the care of the teeth, and in most cases it was found that a toothbrush was never used, yet the condition of the teeth was much better than might have been expected. The condition of the eyes and eyesight was only tested by the master or mistress in many schools, but sooner or later a specialist must be appointed. A certain number of children were found to be backward and defective, and required more detailed and personal attention than could be given in the present condition of an ordinary school. For such children it might be possible some day to provide special schools. The chief factors which singly or in combination were found to be the cause of retardation in school progress were:

1. Mental defects, generally hereditary, but in some rare cases the result of illness or shock. This class should as far as possible be sent to special schools.
2. Physical defects.
3. Frequent and prolonged illnesses which have prevented the child from regular attendance at school.
4. Constant migration from town to town, or even from school to school.
5. Bad environment, including bad homes, drunken parents, criminal surroundings, neglect, and indifference.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

UNIVERSITY OF EDINBURGH.—HISTORY OF MEDICINE.

THE second of the course of eight lectures on Medicine among the Ancient Egyptians, Greeks, and Romans was given by Dr. John D. Comrie on Wednesday, January 20th. The lecture consisted mainly of a consideration of the Ebers and Berlin medical papyri, followed by a demonstration of lantern slides illustrative of Egyptian life, Egyptian pathology, and Egyptian surgery.

ROYAL INFIRMARY, GLASGOW.

THE annual meeting of the contributors was this year of special importance. The annual report submitted showed that, despite the reconstruction, the work of the hospital had not been impeded or materially diminished. While the average number of resident patients was 591, against 593 in the previous year, the outdoor department treated over 5,000 more patients than in 1907. The average cost of each bed, fully occupied, was somewhat higher than in the previous year—£70 9s. 11d., against £69 5s. 6½d. in 1907. The honorary treasurer's report showed that the total ordinary revenue was £30,308, while the total ordinary expenditure was £42,969, leaving a deficiency of £12,661, but the extraordinary revenue, £43,954, was very high, so that, after meeting the deficit of the ordinary income, the sum of £31,293 was carried to the credit of the stock account—the largest amount on record. The reconstruction had made great progress during 1908, and it was expected that the laundry power house, extension of nurses' home, and admission building would be ready for occupation in the spring, and that the north or surgical block would be ready for patients before the autumn. Immediately on completion of the north block the managers proposed to proceed with the erection of other portions of the new building. The present building scheme had nearly exhausted the special fund of £128,000 collected in 1904. The first (1897) fund was earmarked for reconstructing the front or medical block. As the present time was not very suitable for collecting more money, the managers asked the Court of Contributors for authority to transfer £150,000 from the Accumulated Stock Fund and use it for building purposes. The report alluded to the agreement come to by the boards of the infirmary and St. Mungo's College as to the best means of securing the continuance of clinical teaching in the Royal Infirmary and the subsequent conferences which took place between representatives of these boards and the University Court.

The Lord Provost moved the adoption of the report; the motion was seconded by Principal Sir Donald MacAlister,

who stated that in his opinion the proposals made at the conferences with the University Court were eminently reasonable and practicable, though details were still under consideration. He had no hesitation in anticipating that a satisfactory arrangement would be carried out; in that case better accommodation for teaching women students would be made and the opportunities for all other medical students would be so amplified that Glasgow as a clinical centre would compare well with any other.

In moving a special resolution to authorize the transfer of £150,000 to the building account, Mr. J. D. Hedderwick said that, though the formal notice of the motion had been very short, still the subject had been mentioned in every annual report since 1896. The citizens had responded handsomely to the appeals made in 1897 and 1904. On the first occasion they were asked to subscribe to the reconstruction of the front block as a memorial of Queen Victoria's Diamond Jubilee. Of the £100,000 asked, £80,000 had been obtained, which, with interest, was now £98,000. It was earmarked for this special purpose. The appeal in 1904 produced £128,000, which was raised by interest to £138,000, but this sum had now almost all been paid away. The total cost of reconstruction was estimated at £500,000. The stock account amounted to £295,976; if the transfer of £150,000 was authorized, this, with the money collected, would make £386,000 of the total £500,000 required. The motion was seconded by Mr. J. Glen, and evidently met with the full approval of those present, as an amendment moved by Dr. Charles Workman that the matter be referred back to the managers for further consideration was not seconded.

JUBILEE INSTITUTE FOR NURSES.

The report of the Council of the Scottish Branch of Queen Victoria's Jubilee Institute for Nurses for last year showed that there are now 303 nurses on the roll. An average of eleven new posts yearly had been created in the last six years. The Council had acquired and furnished an adjoining flat, and arranged that two more Queen's nurses should be trained every half-year. This flat had been purchased out of the funds bequeathed to the institute by the late honorary secretary, Miss Guthrie Wright. To provide the additional income to cover present expenditure and to meet the training of the four extra nurses the public were appealed to. Thirty-five nurses had completed their course of six months' district training during the year. Two of them were given the special training necessary to qualify for the examination of the Central Midwives Board, which they had passed. During the year the Scottish Council was responsible for the maintenance of thirty-seven Queen's nurses and probationers. Thirty-two nurses whose training had been completed during the year had been permanently engaged by local committees. The number of affiliated branches in Scotland was now 199. A Queen's nurse from the home had given daily attendance at the special school for cripple and mentally deficient children. Sir Henry Littlejohn claimed that the institute should rank along with the municipal and other public bodies as a large contributing factor in the reduction of the death-rate; he contrasted the state of things prevailing in the homes of the poor before the introduction of Queen's nurses with that of the present day, and spoke in the highest terms of the quiet, unobtrusive work of the nurses in their attendance on both acute and chronic disease.

SELKIRK MEDICAL OFFICERSHIP.

The Town Council of Selkirk has had considerable difficulty in finding a successor to Dr. John Muir, who resigned the medical officership of the burgh some time ago. The position was offered to Dr. Somerville, the medical officer of health for Galashiels, but he did not see his way to accept it. At a recent meeting of the council it was suggested that the vacant appointment should be advertised, but at a salary considerably higher than that paid to Dr. Muir. Another proposal was that Dr. Oliver Newton, medical officer for Roxburghshire, should be appointed, with Dr Muir as assistant. Neither plan was approved. In order to get out of the difficulty, the council has now decided to ask Dr. Muir to continue in office, and it has been agreed to offer him a considerable increase in his salary.

Ireland.

[FROM OUR SPECIAL CORRESPONDENT.]

ULSTER MEDICAL SOCIETY.

ON Thursday evening, January 21st, Mr. Kirk, the President of the Ulster Medical Society, entertained the Fellows and Members to a most enjoyable smoking concert in the Medical Institute, Belfast. About 120 were present. Mr. and Mrs. Kirk received the guests in the library, and subsequently the concert was held in the large hall of the institute. Several members and friends sang, and some short and witty speeches were enjoyed. Reference was made to the conferring of the honorary Fellowship of the society on Sir William Whitla, and Sir William suitably replied.

Special Correspondence.

MUNICH.

New Chief Medical Officer of Health.

AN important change is about to take place in the post of the highest Bavarian medical officer. Geheimrat Grashey, Medicinalreferent im Ministerium des Innern, retires on February 1st, and will be succeeded by Professor Dieudonné. This appointment has been made in accordance with the special wish of the new Minister of the Interior, v. Brettreich, and it may be regarded as the commencement of a new era in the administration of medical affairs, and as foreshadowing hygienic reforms. Professor Dieudonné, until now an army medical officer, is well known as a hygienist, especially as a bacteriologist. From 1893 to 1898 he was attached to the Kaiserliche Gesundheitsamt in Berlin. In 1897 he was a member of the imperial commission under Koch for the investigation of the plague in India. From 1898 to 1904 he lectured at the University of Würzburg, being at the same time head of the military bacteriological investigation laboratory. Since 1904 he has held a similar position in Munich. His widest-known work is *Immunität, Schutzimpfung und Serumtherapie*, an admirable survey of modern progress in these subjects. Personally he is highly esteemed and liked, and is regarded by the medical profession as certain to be the right man in the right place.

Correspondence.

RESEARCH DEFENCE SOCIETY.

SIR,—Wednesday in this week (January 27th) is the first anniversary of the founding of the Research Defence Society. The committee, therefore, wish me to send you a short statement of the work of the past year.

The society will celebrate its birthday by the inaugural meeting of the Dublin Branch. This meeting will be held in the theatre of the Royal Dublin Society. More than 180 persons, beside members of the medical profession, have expressed their intention of joining the Dublin Branch Society. Among them are the Archbishop of Dublin, Lord Iveagh, Lord and Lady Pembroke, Lord Ashbourne, Lord Monck, the Bishop of Clogher, the Bishop of Tuam, the Deans of St. Patrick and of Christ Church, Dublin, the Provost and Vice-Provost of Trinity College, Dublin, and Sir Neville Lyttelton. By the inauguration of this branch, the Research Defence Society, which had but 7 members this time last year, will now have more than 2,000, of whom 230 are ladies.

The society has lost by death 10 members: Professor Ayrton, Sir John Banks, Mr. Harold Barnard, Dr. C. E. Beever, Dr. J. G. Glover, Mr. Arthur Lister, Lord Polimore, Mrs. Roget, the Earl of Rosse, and Sir Thomas Stevenson.

Since the last report, which I sent to you in May of last

year, the following have consented to be Vice-Presidents of the society:

Sir William Abney.	The Duchess of Montrose.
Mrs. Garrett Anderson.	Mr. Eden Phillpotts.
Lord Barrett Ball.	Lady Priestley.
Lord Barrymore.	The Bishop of Bangor.
Lady Bliss.	Mrs. Romanes.
Lady Buckley.	The Marchioness of Sligo.
Lady Burdon-Sanderson.	Lord Stalbridge.
The Dean of Chester.	Lady Stanley of Alderley.
Lady Cromer.	Lady Sutton.
Lady Foster.	Sir Reginald Talbot.
The Earl of Glasgow.	Mr. A. G. Vernon-Harcourt.
Sir Samuel Hoare.	Bishop Welldon.
Lord Lamington.	The Duke of Wellington.
Sir Frank Lascelles.	Mrs. Robert Peel Wetherhead.
Lord Malmesbury.	The Bishop of Winchester.
The Duke of Montrose.	

Rules for the society, and for the branch societies, have been approved by the Committee, and will be submitted in due course to a general meeting of the society.

Branch societies have already been formed, or are in course of formation, in Birmingham, Bournemouth, Brighton, Cambridge (University Branch), Dublin, Edinburgh, Hull, Leeds, Liverpool, Manchester, Norwich, Oxford, Shrewsbury, Torquay (Devon Branch), and York. Several of these branches have already more than one hundred members.

The progress of the society has been watched with great interest in America, by many well-known representatives of science and medicine; and steps have been taken for the defence of research in the United States.

The society has issued the following pamphlets:

1. Letter from the President, announcing the formation of the Society.
2. Report of the Inaugural Meeting.
3. Experiments on Animals during 1907 in Great Britain and Ireland.
4. Some Facts as to the Administration of the Act.
5. The Value of Antitoxin in the Treatment of Diphtheria.
6. Evidence of Sir Frederick Treves.
7. Yellow Fever and Malaria.
8. Have Experiments on Animals advanced Therapeutics?
9. The Extinction of Malta Fever.
10. Evidence of Lord Justice Fletcher Moulton before the Royal Commission, July, 1907.
11. The Work of the Research Defence Society.

A further series of pamphlets is in course of preparation, including:

1. The recent correspondence in the *Times*.
2. An account of the use of a serum treatment in cases of epidemic cerebro-spinal meningitis.
3. An account of the anaesthetics used in experiments on animals.
4. Answers to some statements commonly made by the opponents of all experiments on animals.
5. A reprint of Dr. Bushford's article on the Advance in the Knowledge of Cancer (*Nature*, December 31st, 1903).

A great many bound sets of the pamphlets already issued have been sent to the chief public free libraries in London and in other towns, and to many other libraries, institutes, and clubs. Very many have also been sent in answer to personal applications. These bound pamphlets may be procured through any bookseller.

Representatives of the Research Defence Society have spoken at a large number of meetings or debates in London or in other towns. On other occasions the society has sent literature for the use of speakers in debate. The society is always willing to send a representative to a debate arranged by any literary society, club, or debating society, or to any public meeting, with this exception, that it does not propose to accept "challenges" from the antivivisection societies or to arrange with them the terms of a debate.

A collection of lantern slides has been prepared, with a descriptive catalogue, for the use of anybody who wishes to give a lecture on some of the discoveries that have been made by the help of experiments on animals.—I am, etc.,

STEPHEN PAGET,

Honorary Secretary Research Defence Society.

70, Harley Street, W., Jan. 25th.

THE MEDICAL TREATMENT OF LONDON SCHOOL CHILDREN.

SIR,—The suggestions which appeared in the *JOURNAL* of January 9th in the letter of Dr. Harvey Hilliard, advocating the existing Poor Law and its institutions as the

method and means by which defective children in the elementary schools of the country should be dealt with, will not, I hope, be taken too seriously by the medical profession, and still less form the basis of any recommendation to the Education Department and county council authorities by the British Medical Association as a whole. The principle laid down by Dr. Hilliard in his letter is so thoroughly bad and out of date with modern thought and the times that I do not propose to follow him in detail to show how impracticable and impossible are his suggestions from a Poor-law point of view, but I assert that it would be easy for officials engaged in the practical administration of it—as apart from the knowledge which guardians possess, and who only know one side of the work—to show that, besides its impossibility, his scheme, if adopted, would not at any rate mean economy, but rather an enormous increase in national and local burdens.

It is useless for Dr. Hilliard and those who agree with him to argue upon supposed alterations expected by the promised report of the Poor Law Commission; that report is not yet before us, and, whatever its decisions might be, it would have to be followed by legislation, and could not be applied to this question. The reform of the Poor Law is needed, but it will still have to be Poor Law, of a more modern, humane, and discriminatory character; but it will not, and should not, be applicable in any way to the children of the nation now outside the Poor Law.

It is more than probable, and I think highly necessary, that any alteration in the Poor Law will be in the direction of divorcing the Poor-law children from their present care and giving to them the same chance in life that falls to the lot of other children more happily placed, and whom we rightly regard in common with our other children as the future assets of the nation. It is quite certain also that, assuming it were possible—and it is a very large assumption—to deal with all these defective cases through the agency of the Poor Law and its kindred institutions, the necessity of greatly increasing the staff and equipment of the various infirmaries would entail such enormous expenditure, out of all proportion to any benefits and results obtained, as to greatly exceed what Dr. Hilliard and we all agree in lamenting—namely, the present high taxation for Poor-law purposes.

We all know that under the present Poor-law system these "children of the State" cost the ratepayers on an average £30 *per annum* for maintenance purposes alone, not counting the thousands and thousands of pounds of ratepayers' money spent in capital construction and in establishment charges, and still less counting the extra cost of the defects from which they suffer, and yet Dr. Hilliard would have us believe that it would be more economical to draft our other defective children suffering from ringworm, ophthalmia, etc., into our Metropolitan Asylums Board schools and homes, and our adenoïd and other children into our Poor-law infirmaries and Poor-law schools with their blighting and demoralizing influence upon the children, rather than to have these children treated in the school clinics with other neighbouring medical agencies, part and parcel of a continuity of educational work, in the atmosphere of their homes, friends and companions, and with the air of freedom, decision, and initiative, which alone can build up self-reliant and resourceful characters. If any one doubts the demoralizing effects of our Poor-law system upon "the children of the State," let them read the letter of Lord Lytton and Mrs. Barnett in the *Times* of January 8th, and also the recent report upon the educational work of the Poor Law in the certified schools of England and Wales by the Board of Education, which letter and report are unanimously condemnatory.

Dr. Hilliard will admit that whilst all this treatment for defects may be going on under his proposed Poor-law system, the children must be educated during the period of detention. It is shown by the clearest evidence that under Poor-law auspices these children are a year behind the standard of ordinary children, and that during the best time of their growing lives, when vital impressions are most easily received, as the report says:

Rows and rows of fat, clean, well-shod infants sitting, bored and listless, listening with praiseworthy patience to deadly details about some plant or animal that they were never likely to see or hear of again; or reading in unison what they did not understand; or reading, again in unison, some simple primer for the third or fourth time.

This detention of defective children which Dr. Hilliard advocates under Poor law conditions, in the familiar barrack school or infirmary, is one that I feel sure public lay and medical opinion in the mass will universally condemn quite irrespective of the cost, and it is obvious that under such a system the cost would be more.

There is need in this great matter for some of us to think Imperially, and it is a significant reflection, in view of Dr. Hilliard's letter, that the joint committee of the London County Council, composed as it was of lay educational experts with a very strong representative and authoritative medical committee, after taking evidence and going thoroughly into the matter, did not make any such suggestions for utilizing the Poor Law to carry out this great work.

Had they done so, I doubt very much whether public opinion would tolerate such a proposition; the stigma of pauperism which Dr. Hilliard so airily insinuates and discusses as applying to the working classes in their relations to our present system of hospital relief and Metropolitan Asylums Board services to the public, is a travesty of existing facts, but the scheme which he now proposes would indeed be a pauperism engrafted upon our educational system of free children, with all its degrading and stultifying social effects. The whole proposal is a retrograde and reactionary step in a great national movement, which should find at least the medical profession united in its action and opinion, and in the vanguard of this public health progress.

The recognition by the State of the necessity for inspection and treatment of defective children in our elementary schools has been brought about mainly by the past work and agitation of medical men and medical public opinion in our press, of which this JOURNAL has taken its full share over a series of many years, and now to suggest that this work—enormous in its extent and of a very special character—should be tacked on to an effete and discredited Poor law system in the throes of transition, would reflect no less discredit upon our profession as citizens and thinkers than to our reputation and sincerity as doctors in the cause of physical deterioration and national prosperity, were it adopted by our Association.—I am, etc.,

MORGAN L. FINCANE, L.R.C.P., M.R.C.S.,
Parish Doctor, late a Guardian and Manager of the Metropolitan
Asylums Board.
London, S.W., Jan. 25th.

FLAGELLATION OF LYMPHOCYTES.

SIR,—Referring to the paper by Drs. H. C. Ross and C. J. Macalister in the JOURNAL of January 23rd, p. 206, I should like to point out that, in relation to a paper on the Etiology of Cancer read by me before the Liverpool Medical Institution in 1899, I exhibited specimens and illustrations of this phenomenon which I had noted in connexion with the cells forming the round cell infiltration occurring in the proximity of minute secondary deposits in the interstitial spaces in sections from a case of cancer of the stomach. Large numbers of the round cells had lost their usual spherical shape, and appeared markedly spiked and irregular. From their surfaces projected fine prolongations, to the ends of which were attached minute oval or diamond-shaped, spore-like refractile bodies, which stained green with the methyl green of the Ehrlich-Biondi-Heidenbain stain. They also stained well with Ehrlich's acid haematoxylin. In fact they responded to stains as does chromatin, particles of which I concluded they were. They resembled miniature spermatozoa, but whether they were in any way connected with cell fertilization it was impossible to determine. Some flagellate bodies were found separate from the cells. Such a conjecture reminded me at the time of the theory, promulgated, I believe, by Klebs and mentioned by Ruffer and Walker¹ in their paper on the so-called parasites of cancer, that one of the functions of leucocytes might be the fertilization of cells throughout the body. Their appearance gave support to a conviction I have always had that, as cell comes from cell, so each must be fertilized to ensure reproduction. This I regard as a definite law, not proved, maybe, by actual demonstration of the phenomenon, but recognized by constant recurrence of effect.² At the time neither myself

nor Professor Sherrington, to whom I showed the specimens, could offer any interpretation of the phenomenon, nor attribute to it any definite significance, as it was found in fixed tissues. It is very interesting to me to find that Drs. Ross and Macalister have noted a similar, or what may be even an identical, phenomenon in living cells.

I have also noticed and described at the Liverpool Medical Institution a somewhat similar appearance in specimens of blood from myeloid leukaemia, which were several times washed and centrifuged in sodium citrate in normal saline solution, then very carefully spread into films and stained with Leishman's stain. Peculiar alterations in contour, which I regarded and described as flagellation, had taken place. From the surface of the large neutrophil myelocytes, and also from the other varieties of mononuclear cells, fine prolongations extended in a form resembling flagella; they were thicker at their attachment to the cells than at their extremity. From some cells only one, from others several, flagellate prolongations were noted. When situated away from the nucleus they were seen to be formed of cytoplasm only. When derived from the cell in close proximity to the nucleus, fine strands of nuclear chromatin substance extended from the nucleus for a short distance into them. In cells containing ruby granules these were occasionally found at the base of these flagellate prolongations. These flagellate prolongations varied in length from one to several times the diameter of the cells. They were to be clearly distinguished from pseudopodia such as one sees in the actively amoeboid polymorphonuclear cells, and as they occurred in the absence of organisms they were not associated with active phagocytosis at the time.³ In a perfect film of blood the lymphocytes show a dual architecture of the cytoplasm. (a) A basophile reticulum with honeycomb-like apertures. (b) Enclosed in this reticulum is a non-granular transparent gelatinous substance in close association with the archoplasm and like it taking on a faint pink with eosin. This material passes out in long, fine prolongations through the apertures of the basophile reticulum, giving to the cell a starred or radiate appearance. These flagellate prolongations must not be confused with the basophile fringes and buds. I should also like to mention that in perfectly fixed specimens of blood, embedded and cut into sections, centrosomes can easily be distinguished and examined in polymorphonuclear neutrophils, eosinophile cells, and neutrophil myelocytes. I have failed to determine their presence in basophile cells, although there is little doubt that they exist.

The large myeloplaxs of the bone marrow also possess peculiar strands of cytoplasm extending from the surface, very similar to the dendrites of nerve cells. In developing bone they are sometimes so regularly arranged as to give the cell a ciliated or, when thicker than usual, a cogged-wheel appearance.

I shall be very pleased to show my drawings and specimens to Drs. Macalister and Ross if they should wish it.—I am, etc.,

ROBERT J. M. BUCHANAN, M.D., F.R.C.P.
Liverpool, Jan. 23rd.

LACTIC ACID FERMENTS FOR PRODUCTION OF SOUR MILK.

SIR,—With reference to your recent editorial on an examination of some commercial lactic ferments,⁴ may I direct attention to certain points in connexion therewith which are very important and often overlooked?

1. The time of incubation (six to ten hours) laid down by some manufacturers is much too short. As your own results show, in the case of solid tablets there is little acid production in ten hours. At least twenty-four hours are necessary to produce an adequately soured milk, and to ensure that the lactic acid organisms are predominant.

2. The organisms are often no longer living in solid tablets. This is serious, as in such cases, though in twenty-four hours or less a curd is often formed, the curd is a rennet curd produced by "lab-forming" organisms not killed by the boiling of the milk, and growing vigorously at such a suitable temperature, in a suitable nidus, and without competition. The result of consuming such a product (which may not be unpalatable) must be

¹ Journ. Path. and Bact., 1902.

² Liverpool Med. Chir. Journ. February, 1900, p. 156.

³ Exhibited by aid of 1/2 in. oil immersion No. 18 eyepiece, Zeiss.

⁴ BRITISH MEDICAL JOURNAL, January 9th, p. 104

highly deleterious and rather enhance the unfavourable bacterial condition of the alimentary canal which the treatment is designed to cure. It is always advisable to test the curd produced with litmus paper in order to ascertain that it is strongly acid and not alkaline.

3. It is necessary to lay stress on the fact that, though all preparations on the market are said to produce "Bulgarian yaghourt," the greater number of them do not contain the organisms isolated from that substance. The principal ferment of this sour milk is peculiar in its properties, acid-producing power, and resistance, and in these particulars is greatly superior to any of the ordinary lactic organisms known to us, and is more adapted to growth in the alimentary canal. These facts, so strongly urged by Metchnikoff, have been largely obscured on account of the greater difficulty found in producing milk soured by the right organism, and because the milk so soured is not quite so palatable as that produced by ordinary lactic acid organisms. It is well to consider whether these objections should be allowed to weigh against the greater value in therapeutic efficiency.

4. The recent work of Critchard, in Metchnikoff's laboratory, explains the reason of failures experienced in the administration of tablets. He has shown that for the full activity of the Bulgarian bacillus an acid environment is necessary. This is easily obtained by the administration of milk soured by the organism, and care must be taken that the milk is really sour and curdled, as otherwise there is no guarantee that the organisms have grown.—I am, etc.,

King's College, London, Jan. 23rd.

R. TANNER HEWLETT.

THE TREATMENT OF SYPHILIS.

SIR,—In his letter of January 9th, p. 123, Colonel Lambkin raises several interesting points.

1. Calomel injections are transitory in their action; therefore they are better suited for an interlude during continuous treatment, their effects are more rapid and transitory than metallic mercury, so that treatment by the mouth can be sooner resumed.

2. The preparation used by Mr. E. Lane is less painful than that used by Colonel Lambkin, so that calomel injections are continued for a longer period. Colonel Lambkin never gives more than eight injections of calomel or metallic mercury, more often six, whereas Mr. E. Lane gives fifteen to sixteen. Colonel Lambkin, after six to eight injections, allows a two months' rest. This would seem to be necessary with the preparation he uses, for, as far as my experience goes, the use of a combination of creosote and camphor is not only unnecessary, but a distinct disadvantage; the injection used by Mr. E. Lane is unattended by pain.

The formulæ suggested by Colonel Lambkin seem capable of various modifications from time to time; thus, in 1903 the use of a basis of anhydrous lanolin and paroline, containing 2 per cent. of carbolic acid, was suggested. In 1907 a basis of palmitine, with a mixture of creosote and camphoric acid, was proposed, whilst now the mixture of creosote and camphoric acid is altered to a combination of creosote and camphor. This would seem to be eminently more suitable, as camphoric acid is not soluble in an equal part of creosote.—I am, etc.,

London, W., Jan. 18th.

T. P. BEDDOES.

THE MECHANISM OF THE ASTHMATIC DYSPNOEA.

SIR,—An essential part of Dr. Auld's interesting lecture on asthma, published in the *JOURNAL*, December 26th, 1908, p. 1850, is a distinct challenge to those who hold that the obstruction in the bronchioles depends on vascular distension, not on bronchial constriction.

Dr. Auld contends that adrenalin given hypodermically relieves the asthmatic dyspnoea by inhibiting the respiratory centre, not by constricting the bronchial vessels. How, then, would he explain the equally rapid relief afforded by inhalation of adrenalin spray? So given the drug acts only locally; neither the respiratory nor any other centre could be affected.

It is unsafe to argue that because it is thin and relatively non-vascular, the bronchial mucosa cannot become turgid at all. It cannot, of course, swell to the extent possible in the nasal mucosa.

Dr. Auld refers to the relatively moderate dyspnoea which characterizes generalized acute capillary bronchitis, and challenges anyone to affirm that the alleged hyperaemia of the bronchial mucosa "could suddenly cause a much greater obstruction of the air tubes than is produced by acute inflammation." There should be no hesitation in accepting this challenge. There are two separable vascular factors in the distension of the bronchial mucosa in asthma:—(1) Vaso-dilatation of the bronchial (not the pulmonary) area; and (2) vaso-constriction of the cutaneous, and possibly other, areas. The latter is at least as important as the former. Hence we may relieve asthma either by constricting the bronchial area (as by adrenalin), or by dilating the cutaneous area (as by the nitrites or general hot baths of any kind). Even more efficient is it to operate on both factors simultaneously as follows—place the patient in a vapour bath from which the face is excluded, and cause him at the same time to breathe cold air through an inhaler containing broken ice.

The reason why the obstructive dyspnoea in generalized acute capillary bronchitis never approaches in intensity to that of a severe asthmatic paroxysm should now be obvious. In acute bronchitis, as in practically all febrile affections, the factor of peripheral vaso-constriction is entirely lacking. Not only is there no added vaso-constriction as in asthma, but even the normal vascular tone is in great part inhibited; as Broadbent has pointed out, "pyrexia as such gives rise to . . . great relaxation of the peripheral vessels." Pyrexia, indeed, acts on the vascular system like the nitrites. Hence an attack of almost any fever, even bronchitis, if sufficiently acute, usually frees the asthmatic from his complaint for the time. There are several classical illustrations. Trousseau noted that throughout an attack of bronchopneumonia a habitual asthmatic slept flat on his back,¹ and Watson relates two cases in which severe asthma was replaced entirely and permanently by acute phthisis.²

The most notable, though not the only, exception to the rule that pyrexia implies relaxation of the vascular periphery is malaria. This is of special interest in this connexion, because it is well known in malarial districts that an attack of ague may take the form of an asthmatic paroxysm (Norman Chevers³).—I am, etc.,

London, S.E., Jan. 15th.

FRANCIS HARE.

THE HOME TREATMENT OF SCARLET FEVER.

SIR.—Dr. Robert Milne, in his paper on the above subject, shows evidence of much genuine faith in his own conclusions, though the data upon which he bases them must be far from convincing to any one who has studied infectious diseases, and scarlet fever in particular, at all carefully.

His main theory appears to be that the infectious agent in scarlet fever is located principally, if not entirely, in the desquamating cuticle.

Not only is it admitted by many authorities (though not yet definitely proven) that such is not the case, but it has even yet to be proved whether the germ of the disease ever occurs in the desquamating skin at all. If such were the case, surely the fine branny scales, shed profusely by most patients, and wafted freely about by every breath of air, would carry infection to large numbers of the susceptible individuals in the immediate neighbourhood of houses or hospitals containing scarlet fever patients. Yet the "striking centres" of scarlet fever is surprisingly small, and such centres do not act to any extent as foci of infection.

On the other hand, it has been most conclusively proved by the classic, if unjustifiable, experiments of Hickler, that the mucus from the mouth and throat of a scarlet fever patient is highly infectious, even when diluted with weak carbolic lotion, till long after the visible signs of the disease have disappeared. It is difficult to understand how Dr. Milne's two-hourly painting of the tonsils (and that only during the first twenty-four hours) with 10 per cent. carbolic oil—itself an antiseptic of very doubtful value under any circumstances—can possibly render them or the throat innocuous. Unfortunately the specific organism of scarlet fever has not yet been discovered, but

¹ *The Pulse*, 1890, p. 85.

² *Chir. Med.*, New Syd. Soc., vol. i, p. 625.

³ *Principles and Practice of Physic*, 4th edition, vol. ii, p. 360.

⁴ *Clinical Researches on Disease in India*, 1860, p. 55.

from our disappointing experience of the utter uselessness of local applications (apart from the merely mechanical effect of douching) in the closely analogous disease, diphtheria, in which bacteriological verification can be obtained throughout the course of treatment, it is highly probable that Dr. Milne's procedure of tonsil painting has no other effect than that of relieving symptoms. How does Dr. Milne explain the by no means uncommon occurrence of "return" cases where the "infecting" case had finished desquamating long before, and had no unhealthy abnormalities, such as rhinorrhoea or otorrhoea, evident? Also the non-occurrence of "return" cases where children have been sent home from hospital while still desquamating freely, and without having undergone any kind of skin inoculation? His explanation of the "return" cases quoted by him is, to put it mildly, a trifle far-fetched.

Much careful work on this subject has been done by Millard, Priestley, Lauder, and more recently by Simpson, Cameron, and Mervyn Gordon, to name only a few of the observers on strictly scientific lines, and doubtless they would hail with delight the discovery of so simple a way out of the great difficulties surrounding this complex question were it ever proved to be efficacious.

The use of eucalyptus oil for inoculation is not as unknown to a "conservative" profession as Dr. Milne suggests. There are few fever hospitals of any importance in the country that have not at some time or other, I imagine, made trial of it and found it both troublesome and of little or no value, besides being most unpleasant to the unfortunate sufferers, whom I myself have known to cry for long enough after the oil had been applied to the scalp, for instance, on account of the stinging of the eyes which resulted.

What possible effect this inoculation of the skin can have upon the throat Dr. Milne alone knows. Perhaps the action is the same as that of the whitewash on the scriptural sepulchres. To "keep the aroma in the rooms, and sprinkle a little (of the eucalyptus oil) on the beds day by day," is doubtless most gratifying to those who like the smell; but has anyone ever yet heard of a mere aroma killing microbes?

With the number of notifications of scarlet fever throughout the country showing no diminution year by year, but rather the reverse, for which the existence of unrecognized cases is largely blamed, is it not most unjustifiable for known cases, while still undoubtedly in an infectious condition, to be deliberately turned out amongst the general community to mingle freely with them? While exposing themselves in public places and in public conveyances, how does Dr. Milne know how many persons of whom he never hears his patients may have infected, directly or indirectly? That he believes his cases to have been rendered free from infection, on such grounds as he has set forth in his paper, will hardly carry weight against the scientific evidence to the contrary.—I am, etc.,

Newcastle-upon-Tyne, Jan. 25th.

HAROLD KERR.

SIR,—I can verify the statement of Dr. J. Sadler Curgiven in the *BRITISH MEDICAL JOURNAL*, p. 251—namely, that the credit of the eucalyptus treatment is due to his father, Dr. Brendon Curgiven. In the *BRITISH MEDICAL JOURNAL*, March 29th, 1890, is a report of a paper read by him before the Epidemiological Society, and in the *BRITISH MEDICAL JOURNAL*, October 26th and November 23rd, 1889, are communications on the same subject. I can well remember reading these at the time, and purchasing some of the special eucalyptus oil—"olensaban." I think it was termed—which I used on every case I came across in my practice at that time.—I am, etc.,

St. Leonards, Jan. 24th.

PERCY NEWELL.

OEDEMA OF THE EYELIDS WITH PYREXIA.

SIR,—With reference to the article by Dr. Charles R. Bigood in the *JOURNAL* of January 9th, p. 88, I cannot help noticing the similarity of the symptoms present to those which occur in mild cases of trichinosis. In fact, the pyrexia and constitutional disturbance associated with marked gastro-intestinal symptoms and transient oedema of the eyelids would, in the absence of proofs to

the contrary, at once raise in my mind a suspicion of that disease, which I am inclined to consider more prevalent than is generally suspected. The demonstration of eosinophilia on examining the blood and the finding of adult trichinae in the stools would, of course, easily establish the diagnosis.

That some of the cases should arouse a suspicion of enteric fever was not to be wondered at, as this disease and acute rheumatism are the affections most likely to be confounded with trichinosis, the latter when the young trichinae are migrating in the tendons near joints.

The amount of prostration present seems to vary greatly. I have seen a patient with a high temperature apparently suffering little inconvenience and asking to be allowed out of bed.—I am, etc.,

CHRISTOPHER L. W. BUNTON, M.B.,

Plymouth, Jan. 16th.

Fleet Surgeon, R.N.

PERNICIOUS ANAEMIA AND PYORRHOEA ALVEOLARIS.

SIR,—Dr. Byrom Bramwell's interesting note on pernicious anaemia appears to be incorrect in one particular, which is remarkable, as he appears to have considered the condition as possibly due to oral sepsis.

The evidence was clear before him as to the presence of typical pyorrhoea alveolaris at a recent date. "The teeth dropped out." This was absolutely diagnostic of the presence of this disease. The absence of pyorrhoea should always be carefully noted by a dentist who recognizes its less obvious symptoms and signs.—I am, etc.,

London, W.

C. WYNN WIRGMAN.

THE APPLICATION OF MENDELIAN RULES TO HUMAN INHERITANCE.

SIR,—I am sorry that Professor Pearson is unable to understand my letter in the *JOURNAL* of January 2nd. I do not think he can have read it carefully, for there is no reason whatever to conclude that I should interpret his illustrative case in the way he assumes. Mendelians would here reckon four normals and two abnormal. If this were a part of Nettleship's chart, I should include all the normals; but if either or both of these abnormal had only normal children I should not count these (that is, the children), but stop at the last abnormal in the vertical line of descent. If, on Nettleship's chart, any abnormal has only had normal children, and these are not counted, then there are 134 abnormal out of 274 descendants (of abnormal), and this gives a percentage of 48.9, which is near enough to the 50 per cent. to claim it as Mendelian.

This being what I have done, Professor Pearson has put a wrong interpretation on my words, and though he quoted me correctly as far as the quotation goes, he ought to have finished the sentence. He says his interpretation is the only one he can put on my words, "if we stop at and include the last abnormal," but this quotation stops in the middle of a sentence where there is not even a comma. What I said was, "If we stop at and include the last abnormal (+ brothers and sisters) in each line of descent."

Why Professor Pearson concludes that I should (in his illustration) not reckon the three normals "the tail of the offspring" I cannot imagine, seeing that I distinctly say "+ brothers and sisters," for surely the word "include" refers to them as well as to the last abnormal. Now, if the last abnormal in each line of descent in Nettleship's family had had no children there would have been no doubt about the chart being Mendelian.

It may be that my method of counting is not correct, and that one is not justified in omitting the children of "last abnormal," and yet one cannot help being struck with the fact that of the 98 abnormal parents so many as 31 have had only normal children, and, in the absence of any other explanation, I suggested the theory contained in my last letter.

The real point at issue is, Does Nettleship's chart conform to Mendel's law of inheritance, or does it not? I contend that up to a certain point—the last abnormal—it does. Professor Pearson, including the children of these abnormal, says it does not; but until one knows why so many (31) affected individuals should not have any abnormal offspring I cannot see that we are justified in taking Professor Pearson's view expressed in his first

letter, that "the odds are several million to one against Nettleship's material being a sample of a population obeying Mendel's rules."—I am, etc.,

Wrexham, Jan. 20th.

H. DRINKWATER.

THE CAUSATION OF INGROWING TOENAIL, AND THE LOCATION OF GOUT.

SIR,—The dear old textbooks may often be in the wrong, but it is seldom that they are proved so to be, and I do not think their integrity has been shaken by Dr. Arbour Stephens's observations on the above subjects in the *BRITISH MEDICAL JOURNAL* of January 16th, 1909.

First, if pressure from contact with the bed during sleep were the cause of ingrowing toenail, this condition would invariably occur at the inner side of the big toe; but it does not, it is quite common at the outer side of the big toe. Secondly, in the position depicted by Dr. Stephens (Fig. 1) the right foot is supported by the resting of the right internal malleolus on the inner side of the left heel, and the right knee is supported on the left knee, and there is no strain whatever on the right big toe, and no pressure worth considering. This also disposes of Dr. Stephens's theory of the location of gout. Fig. 2 calls for no comment beyond the fact that it is a chronic partial luxation due to the continued wearing of pointed boots.

Is there, after all, a necessity for finding a sole cause (forgive the phrase) for the so called ingrowing toenail? Pressure, dirtiness, traumatism, including a wound by the corner of the nail, may be causes, continued pressure being always a contributory cause.

In two cases, recently under observation, the nails were cut close to the quick, leaving a sharp corner at either side, and it is clear that a slight lesion of the soft parts can be thus started, and a chronic inflammatory condition kept up indefinitely.

The location of gout is generally admitted to be determined by exercise, and as people spring off the big toe in walking, this toe-joint is a very usual sufferer. Gravity congestion is probably often contributory. The fact that the gouty attack is often first noticed on waking requires no more explanation than does muscular stiffness at the same hour, and is due to the slowing of the blood current during sleep, which favours exudation.

A patient of mine, who generally walks, once cycled when "gouty," with the result that the patch of gout occurred the next morning on the right instep instead of the usual right big toe.

Long-continued pressure can cause a localized gouty manifestation, for I have seen it in the elbow and heel in gouty subjects confined to bed for a week or two—I am, etc.,

Tamworth, Jan. 20th.

CHARLES H. JOY.

THE ACTION OF ALCOHOL ON PROTOPLASM.

SIR,—In the *JOURNAL* of April 18th, 1908, Mr. Kesteven wrote an interesting account of the paralyzing and destructive action of alcohol on amoebae when they were immersed in solutions of it varying from 1 to 7 per cent., and seemed to have been struck with the fact that it had no stimulating effect. Did he calculate how much alcohol would be in his body if every one of its cells was bathed in a 3 per cent. solution, and consider what his condition would probably be?

Not far from the same time I saw an account of a similar experiment with paramoecia, but in that case with solutions of only from 1 in 1,000 to 1 in 5,000, and with a result just the opposite to that obtained by Mr. Kesteven. The little animals underwent their multiplications by division several times as often before they died out as when they had no alcohol, and showed greater activity and vitality all the time.—I am, etc.,

Tonbridge Wells, Jan. 18th.

EDW. G. GILBERT, M.D.

CONFERENCE ON THE MEDICAL PROFESSION AND FRIENDLY SOCIETIES.

SIR,—I do not know what is the main object of the conference which is to be held in London on Saturday, February 6th: but as we have given considerable attention to this subject in Lancashire, I may be allowed to make two or three remarks.

We are of opinion that the position and circumstances of the working man have very greatly improved since

friendly societies were first formed, and that in most cases no corresponding increase has been made in the rate of remuneration of the medical officers.

Through the fact of having medical officers attached to a club their services have been exploited, with the result of considerable advancement and prosperity to it, and so also with regard to industrial assurance companies, for which we have been paid a merely nominal fee. Think of the millions some of these have in reserve, and the part the profession has played in this accumulation. A charitable feeling on our part at first probably had some place, but for many years many medical men have smarted considerably at attending men who were earning increased wages, and well able to pay ordinary fees, and saw no way of altering the condition of affairs.

Now that the profession is getting better organized, there is more hope that something definite can be done. Whilst we have no objection to no restriction being made as to those joining a friendly society, what we contend for is that medical benefits should only be available for those whose wages are below a certain standard. Therefore, the first thing to contend for is a wage limit, and this may be made to vary in town and country.

And so in regard to the remuneration. There should be a hard-and-fast rule that 4s. per annum should be the minimum rate of payment for the medical officer, but in large towns it should not be less than 6s.

These things can be easily obtained by union and organization and the ventilation of opinions in our *JOURNAL* and at meetings such as the one referred to above.

I feel somewhat concerned in reference to this meeting, as I do not see many names on the card of invitation who have been prominent in the past in dealing with the subject of friendly societies; and I certainly feel that it would be a great sacrifice to attend such a meeting at this time of the year except there would be likely to be some tangible advancement of the subject. On the other hand, for men to stay away who are conversant and have been for many years would be a great mistake if such a meeting went wrong by not having a controlling force present.

As there is some doubt as to my being able to be present I shall feel obliged if these fragmentary remarks can be read by those able to attend.—I am, etc.,

8, Ardwick Green, Manchester,
Jan. 26th.

G. H. BROADBENT.

THE DEPARTMENTAL COMMITTEE ON THE MIDWIVES ACT AND GENERAL PRACTITIONERS' INTERESTS.

SIR,—Sir William Sinclair has done good service to the general practitioner by drawing his attention through the *JOURNAL* of January 23rd to the formation of this committee by the Privy Council.

There is no doubt that in 1902 the medical profession was caught napping. There will be no excuse for us if we lose the opportunity now offered to amend the Act, and the present rules of the Central Midwives Board which are only in force until September 30th next.

The British Medical Association has been asked if it desires to tender evidence. The reference to the Departmental Committee is:

To consider the working of the Midwives Act, 1902, and in particular with reference to the supply of midwives and the cost of training, the remuneration of medical men summoned on the advice of midwives under the rules in pursuance of the Act, and the delegation of their powers by County Councils under the Act.

There seem to be four principles that should be urged:

1. Adequate and immediate representation of the general practitioner by general practitioners nominated by the Association on to the Departmental Committee.
2. Adequate representation of the general practitioner by general practitioners elected by the Association on to the Midwives Board.
3. Adequate guaranteed payment for services rendered to the State by attendance given before, during, and after labour.
4. No State subsidizing of midwives.

With these acceded to, the profession can rest content that the Act will not so grossly be able to be worked to the detriment of the doctor or of the woman and child for whose benefit it has been enacted.

Will every general practitioner, therefore, at once bestir himself and take steps to induce his local medical society (or Division of the Association, Branch Council or Executive Committee of the Division) to put at the disposal of the Association evidence on the four points referred to the committee, as also a resolution in favour of the four principles enumerated above? Time is valuable.—I am, etc.,

London, S.W., Jan. 26th.

E. ROWLAND FOTHERGILL.

THE PUBLIC HEALTH COMMITTEE'S REPORT.

SIR,—If further proof is required of the desirability of the opinion of the Association being taken by a poll of its members instead of by meetings of the Divisions, it can be found in the report of the Public Health Committee. It most fairly states both sides of the question, and is an admirable example of how a report should be drawn so as to inform the members of the *pros* and *cons*, and to obtain their opinions by means of a poll.

The decision to formulate a "declared policy" of the Association on the question of the "desirability of health officers being required to give their whole time to the work" is one of far-reaching importance, and I venture to say that the method of ascertaining the opinion of the members through meetings of the Divisions as at present constituted is likely to give an absolutely wrong impression of their views.

The question is one which affects practitioners in rural districts, whether medical officers of health or not, to a far greater degree than those who practise in the large towns; in fact, as the latter already have whole-time health officers, the question only affects the practitioner in the town to a very minor extent. Yet the meetings of the Divisions, being held in the towns, will be attended by about half a dozen members residing close at hand, and the rural medical officer of health and practitioner will, as usual, be conspicuous by his absence. This half-dozen will probably, after a brief discussion, unanimously pass a resolution the drift of which is a foregone conclusion, and the "declared policy" of the Association on this matter will be settled.—I am, etc.,

Gunnislake, Jan. 25th.

ALBERT BOWHAY.

GRATIS PATIENTS.

SIR,—It is ridiculous for a doctor who is making a moderate income to expect his family to be attended for nothing by a general practitioner.

The case is rather different with regard to the services of a specialist, to whom we as doctors have other means of making amends.

Personally, I always pay fees to my family's doctor; but I do so in a proper way, and therefore always succeed in getting the fee accepted.

I think we as a profession are at fault in not accepting fees when they are offered; but, alas! the offer is not always forthcoming. The whole system is an abuse.

Not long ago, a retired surgeon-colonel, holding a Government appointment, brought his child to me. The child needed tonsils and adenoids removed. "You will be able to do the operation in your consulting room, I suppose?" said he. I did what was necessary, but not in my consulting room, and I was never even thanked. This was a man with an income of at least £800 a year.—I am, etc.,

January 17th.

F.R.C.S.

INTERNAL INJURY WITHOUT EXTERNAL BRUISING.

SIR,—To judge from discussions that have arisen from time to time with medical friends there seems to be a wide variation of opinion as to the amount of damage that can be inflicted on the internal organs without injury to the skin and superficial structures. The paper in your issue of 16th inst. by Dr. Marten Payne is a valuable contribution to the physics of the subject, and it should help largely to dispel the misconceptions that we sometimes come across, especially in cases that come into court.

Some years ago, when I was in the East, a man was brought in dead, having been killed in a row with another man. At the *post-mortem* examination he was found to have the second to tenth ribs fractured on one side, and the first to tenth on the other. The lungs were badly

ecchymosed and the heart ruptured; liver, stomach, kidneys, transverse colon, and spleen all lacerated more or less.

In court the witnesses for the Crown all stated that these injuries were produced by "prodding" in the chest with the sawn end of a bamboo used bayonet fashion.

Now, with all these extensive injuries to the internal organs, there were no marks of violence on the front of the body except a severe bruise and slight scalp wound on the left frontal protuberance. The picture presented to my mind was that of a typical buffer accident, and one had no difficulty in coming to the conclusion that the man had first been knocked down and then jumped upon, which subsequently proved to be the case.

I had also many years ago a case of a child aged about 5 years run over by a hansom cab conveying three men and the driver; there was severe contusion and laceration of the lungs, but no skin or rib injury. Any medical man with tropical experience can call to mind many cases of ruptured spleen with no external marks of violence. My object in writing is, if possible, to get a definite expression of opinion from those who have exceptional opportunities of forming one, in order that there may be a diminution in the number of such discrepancies in evidence as is instanced in your correspondent's paper.—I am, etc.,

Bedford Park, W., Jan. 19th.

J. SHEPLEY PART.

Public Health

VITAL STATISTICS IN ENGLAND AND WALES (1908). We are indebted to the Registrar-General for the following rates, compiled and published for the convenience of medical officers of health. The figures are provisional and subject to revision.

ENGLAND AND WALES.

Annual Birth rates, Death-rates, and the Death-rates from the Principal Epidemic Diseases.

	Annual Rate per 1,000 Living.			Deaths Under One Year to 1,000 Births.
	Births.	Deaths.	Principal Epidemic Diseases.	
	Crude.	Corrected*		
England and Wales	26.5	14.7	1.29	121
76 great towns ...	27.0	14.9	1.59	128
142 smaller towns...	26.0	14.0	1.26	124
England and Wales less the 218 towns	26.2	14.7	1.38	110

* The corrected death-rates are the rates which would have been recorded had the sex and age constitution of the populations of the several areas been identical with that of England and Wales as enumerated in 1901.

COSTS OF DISINFECTION.

In a case heard by Judge Selge at the West London County Court on January 15th the question whether the landlady of furnished rooms can recover the cost of disinfecting them was considered. It appeared that the rooms had been taken for a consumptive patient by the defendant. The plaintiff, who let the rooms, was not told that the proposed tenant was in an advanced stage of consumption. After the death, which took place in four days, the landlady expended £2 5s. on disinfection, and judgement was given for this amount. It is interesting to notice that the only other reported case on the subject came before the same judge when sitting at the Folkestone County Court in 1899 (see *Law Times*, 1899, vol. cvii, p. 101). There an innkeeper sued the executors of a guest who died of consumption for the cost of disinfection. It was held that the costs could be recovered on the ground that the law would imply a contract on the part of the guest to pay for any extra expense properly incurred by the innkeeper as a consequence of the infection of the guest. His Honour also decided that on the evidence of the medical officer of health consumption was an infectious disease, and that it would be dangerous to let the rooms again without disinfection.

THE INSPECTION OF MEAT.

In a recent report, Dr. Robertson, M.O.H. for Leith, stated that no two towns at present had the same system of meat inspection. There was no reason why there should not be a standard. The danger from the consumption of tuberculous meat had been exaggerated; the tubercle bacilli were seldom located in the substance of animal flesh. At present there were instances in which a carcass quite fit for human food was condemned, the butcher having to bear the entire loss.

Obituary.

GEORGE EASTES, M.B.LOND., F.R.C.S.ENG.,
FORMERLY TREASURER AND PRESIDENT OF THE METROPOLITAN
COUNTIES BRANCH.

THE announcement of the unexpected death of Mr. George Eastes, at one time Honorary Secretary and for many years Treasurer of the Metropolitan Counties Branch, has been received with great regret by all members of the British Medical Association who knew, if only by report, the enthusiastic interest he took in its welfare, and the time and energy which he devoted to work for it as the occupant of the offices mentioned, as a member of the Central Council, and in other capacities. Those who had the advantage of Mr. Eastes's personal acquaintance will miss in him a staunch friend, always ready, not only to offer sound advice, but to take infinite trouble, and give unsparing labour to the study and elucidation of any matter affecting the honour and interests of the profession.

George Eastes was born on May 16th, 1841. He was the eldest child of Mr. Silvester Eastes, M.R.C.S.Eng., J.P., Mayor of Folkestone, who at that time occupied a house in the old town, which clustered round the harbour, while fields, as he remembered, then extended on the West Cliff right up to the old parish church. His first school was at St. Margaret's Bay. He then went to Tonbridge Grammar School, where a somewhat severe rule prevailed, for the boys were compelled to rise at 5 a.m. and work till breakfast at 8 a.m. Later on he was transferred to Maidstone School, and then, after the signing of the peace following the Crimean war, he wrote a competition poem on "Peace," for which he gained the first prize. Leaving Maidstone, where he had chiefly distinguished himself in mathematics, at the age of 15, he was apprenticed to his father, and worked in his surgery till October, 1860, when he entered Guy's Hospital. While pursuing his first year's work he saw the advantage of a London University degree, and passed the matriculation and Preliminary Scientific Examinations of the University of London in rapid succession. In 1864 he passed the Intermediate M.B. examination, and obtained the diploma of M.R.C.S.Eng. In 1866 he graduated M.B. and took the diploma of L.R.C.P.Lond. He took the diploma of F.R.C.S.Eng. in 1868. He served as House-Surgeon at Guy's Hospital, and was afterwards appointed Surgical Registrar and Tutor, a post he held for two years. During these years he was a close friend of Hilton Fagge, Phillips, Oliver Duke, and of his seniors he had the profoundest affection for Hilton, Cooper Forster, Moxon, and Gull. In 1868 he succeeded Dr. Egbert Charlton in practice at 5, Albion Place, London, W. He married, on February 9th, 1869, Fanny Elizabeth Friend, of Hambledon, Hants, who with three children survives him. During the years of general practice he displayed great activity in all matters connected with the profession. In 1871 he published a

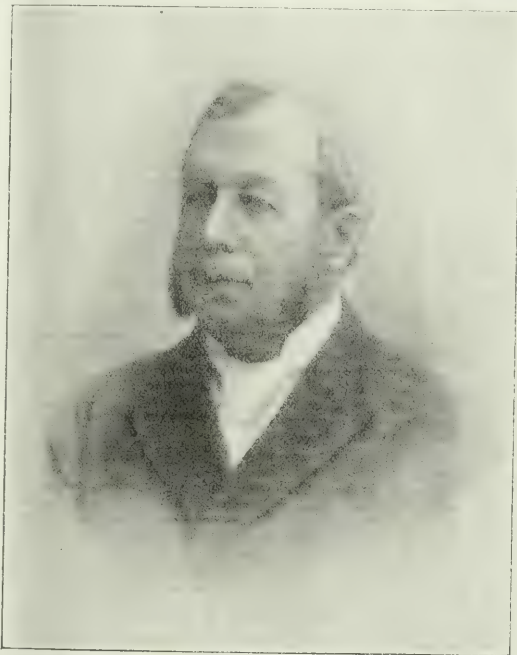
Memoir of Harvey, who was a native of Folkestone; and during the succeeding years he started, and almost solely by his unaided personal efforts raised, a fund for a memorial to Harvey, which took shape ultimately in the statue on the Lees at Folkestone which was unveiled in August, 1881.

His close connexion during these early years with the Guy's surgeons brought him much anaesthetic work. He was one of the founders of the Society of Anaesthetists, and for fourteen years was Anaesthetist to the Great Northern Hospital; it was in this sphere that he performed some of the most laborious work of his life. He was Secretary of the first committee appointed by the British Medical Association to inquire into the various anaesthetics, their uses, modes of administration, dangers, etc.; thousands of communications were received, and to the labour of tabulating results, in which to some small extent his family participated, he nightly devoted many hours. His report was published in the fourth volume of the *Transactions of the Society of Anaesthetists*.

Mr. Eastes joined the British Medical Association early in his career, and was elected Honorary Secretary of the Metropolitan Counties Branch in 1886. He retired in 1888, and four years later was elected Treasurer of the Branch, an office which he retained until 1899. In 1900 he became President, delivering in that capacity an address on *Our Numbers and Our Work at the Close of the Century*. In 1901 he again accepted office as Treasurer, and finally gave it up in 1903, being elected Vice-President of the Branch in the following year. He was Secretary to the Collective Investigation Committee of the Branch from 1885 to 1887. He was also for many years, and down to last July, a Representative of the Branch upon the Central Council, and for part of that period was an active and useful member of the Journal and Finance Committee. He was Secretary of the Section of Public Medicine at the Annual Meeting in 1889, and Vice-President of the same Section at the Annual Meeting in Newcastle in 1893.

At some date, which cannot now be definitely ascertained but probably about 1874, Mr. Eastes joined the staff of the *BRITISH MEDICAL JOURNAL*, and for a good many years, under the editorship of Mr. Ernest Hart, took an active part in the working, serving for some years as a sub-editor along with Mr. Dorn and the late Dr. Fancourt Barnes. He always maintained his interest in journalistic work, and was an occasional contributor to our columns down to the time of his death. In this work, as in everything else to which he turned his attention, Mr. Eastes showed himself a man of sound and temperate judgement, ready to take any pains to master his subject, and possessing an admirable power of stating a difficult and complicated subject with lucidity.

He was an active member of the Royal Medical and Chirurgical and of the Obstetrical and Clinical Societies of London, as well as of the Harveian Society. Of the last named he was President in 1895, and delivered



Photograph by

GEORGE EASTES.

(Adolphus Tear, Ipswich.)

an address on Evolution in Treatment from 1831 to 1895.

He was secretary and one of the founders of "The Guyite Club, 1863," which post he held from its initiation to the time of his death. It originally had forty-three members, of whom now only fifteen survive. In this little society much of his love and constant loyalty to old friends was exhibited, and amongst these few old Guy's friends his memory will be cherished *Dum taceat nobis* (the motto of the club).

In his home his chief characteristic was his absolute truthfulness, honesty of purpose, and belief in the goodness of others. Method and accuracy ruled his every action. Early in life he was fond of riding, shooting, and the sea, and possessed a veritable passion to get to the top of a hill to take a wide view of Nature. Later in life he indulged to a small degree a strong wish to travel. His practice was not at first very lucrative, and for long he had had to battle with pecuniary difficulties, and only finally successfully won the battle at quite a recent date. But he never allowed these anxieties to interfere with his public work, nor with the genial greeting which he always had for friends old or new.

Mr. Eastes seemed to those who knew him well to have aged a good deal during the last few years, but he experienced no symptoms of an alarming character until January 18th, when he had a severe attack of pain; at the same time he was suffering from catarrhal symptoms, and was advised to keep the house. After a few days' rest he appeared much better, but on January 23rd he had a recurrence of the pain, and almost immediately expired. The first part of the funeral service, conducted by the Rev. Prebendary Gurdon, was held at Christ Church, Lancaster Gate, on January 27th. It was attended by a large number of his old friends and colleagues, including Sir Jonathan Hutchinson, Dr. Frederick Tayler, Mr. Butlin, Dr. F. T. Roberts, and Mr. Alban Doran: the British Medical Association was represented by Mr. Edmund Owen and Mr. Guy Elliston. The interment took place at Folkestone Cemetery on the same day.

We regret to record the death of Dr. SYDNEY SHAKSPERE BROADBENT, of Penton House, Hanley, Staffordshire, at the age of 57. His health began to fail at the beginning of last year, and in July the renal trouble from which he was suffering developed materially. It caused him much suffering, but in spite of it he grappled manfully with his duties, and it was not until about ten days previous to his death, at the beginning of December, that he finally gave up work. Dr. Broadbent, who was born in Stalybridge, received his medical education at Sheffield Medical School, and in 1896 became L.R.C.P., L.R.C.S. Edin., and L.F.P.S. Glas. A few years later he settled down in practice at Hanley, where his kindly disposition made him very popular with his patients. Outside his work he figured very little in public, except in connexion with St. Jude's Church, at which he held the office of churchwarden. He was often to be seen, however, at meetings

of the local Branch of the British Medical Association, of which he was a member, and was well esteemed by his colleagues. A man of artistic tastes and quiet unobtrusive manner, he did much good in his life, and exercised a healthy, refining influence on those about him. His funeral was attended by a large gathering of his old patients and personal friends, who thus testified to the high regard in which they held his professional qualities, and to their esteem for him as an upright, honourable man. Dr. Broadbent was married, and leaves a widow but no children.

Dr. GEORGE DICKSON died at his residence, 9, India Street, Edinburgh, on January 18th, in his 71st year. His whole professional life was spent in Edinburgh. He graduated M.D. Aber. with honours in 1864, and took the diploma of F.R.C.S. Edin. in 1882. He was a quiet and unobtrusive man, who had many warm friends; he was a notable Freemason, and was so highly esteemed by his brother Masons that there was scarcely a lodge in the district of which he

was not an honorary member. He was connected with the Lodge of Edinburgh Mary's Chapel, No. 1, for forty years, and for five years, from 1891, was Right Worshipful Master. He was associated with the Grand Secretary and the late Past Master in editing the history of the lodge. At the time of his death he was Librarian and Historian of the lodge, and he devoted much care to the old minutes, which are in existence from July, 1599. He was a prominent member of the Grand Committee of the Grand Lodge. He was Secretary of the lodge when the King (then Prince of Wales) was made a member of the lodge, and one of Dr. Dickson's treasured possessions was the pen which the Prince of Wales used on that occasion. At the tercentenary celebration of the oldest minute of his lodge Dr. Dickson was presented with his bust by the brethren of the lodge. A year ago, at the annual festival, after the election

of the office-bearers of his lodge, Dr. Dickson was presented with a beautiful silver salver in recognition of the affection and esteem in which he was held by the brethren of the lodge. He used to say that he could count his absences from the lodge on the fingers of one hand. He is survived by a widow, one son, and three daughters.

We have to record the death of Dr. LORRAINE, of Hawick, which occurred on January 12th, after an illness of about three months. Born fifty-six years ago, Dr. Lorraine took the diplomas L.R.C.P. and S. Edin., in 1879. After spending three years in Colorado and Texas, he returned to Britain, practised in England for a short time, and then settled down in Hawick. He held the appointment of Medical Officer to Stobs Camp. He is survived by a widow and family.

THE German Surgical Congress will hold its thirty-eighth annual meeting this year in Berlin, from April 14th to 17th, under the presidency of Professor H. Kummel, of Hamburg.

necessary, having regard to the fact that there was to be a new trial.

Lord Justice Farwell and Lord Justice Kennedy concurred, and a new trial was ordered, the plaintiff paying the costs of the appeal; the costs of the first trial to abide those of the second.

AN ACTION FOR LIBEL.

MACLEOD V. MULLOCK AND TRIPP.

In this case, which was heard by Mr. Justice Lawrence at the Suffolk Assizes on January 22nd and 23rd, the plaintiff sought damages against the defendants for libel.

Mr. F. E. Smith, K.C., and Mr. Hansell were for the plaintiff; Mr. Hohlner, K.C., and Mr. Wild for the defendants. Mr. H. C. Dickens watched the case on behalf of the British Medical Association.

According to the statement of claim, it was alleged that in or about the early part of May, 1905, the defendants, acting by the defendant Mullock, falsely and maliciously wrote and published of the plaintiff and of him in his profession to Dr. Wilson Tyson a letter which contained the following statements:

"Dr. Macleod tried to get the use of a bed for one of his patients at the Southwold Hospital without asking the permission of the staff. . . . Dr. Macleod also touts for patients, and I will give you a specific instance of this. On May 2nd he approached a patient of mine who is the caretaker of the local golf club, and the following conversation ensued: 'You are looking very badly?' 'I have one of my headaches,' she replied. 'I must give you something for it,' said he, 'but as I cannot examine you here, come round to my house to-morrow, and I will see what I can do for you.' She demurred, but he over-persuaded her. She went to his house, and he kept her there for one and a half hours, and examined her eyes, etc. I heard a rumour of this on the 4th inst., and went at once to my patient, where she told me exactly what occurred. She said she had no wish to leave me, and was quite satisfied with the way I had always treated her and her family. . . . Dr. Macleod is guilty of a breach of professional etiquette. He gets his wife to call on my patients, and she occupies herself in advertising his successes and in insinuating that he has knowledge and experience superior to that possessed by other men practising locally. . . . I should also add that Dr. Macleod gave Dr. Tripp and myself a promise that if he were called in to see any of our patients he would inform us of the fact. This promise he has repeatedly broken."

The defendants pleaded privilege. They said that they were members of the British Medical Association, one of the objects of which was the maintenance of the honour and int. res of the medical profession. They further alleged that Dr. Wilson Tyson was at the time the Secretary of the North Suffolk Division of the Association, of which Division the defendants were members, and that it was the duty of Dr. Tyson to inquire into and deal with any matters affecting the maintenance of the honour and interests of the profession. They therefore had a common interest with Dr. Tyson.

Mr. F. E. Smith, in opening the case, said that his client had at one time been a member of the British Medical Association, but since he had resigned that body had no jurisdiction over him, and he would contend that the defendants had no right to make complaints about him to the Medical Association. The plaintiff came in March, 1907, to settle in Southwold, where the two defendants, Dr. Mullock and Dr. Tripp, were already in practice. In May, 1903, Dr. Mullock, acting on his own behalf and on that of Dr. Tripp, wrote to Dr. Tyson, the honorary secretary of the local Division of the British Medical Association, of which the defendants, and not the plaintiff, were members, the letter quoted above. Dr. Tyson, having consulted his committee, and having received a telephonic communication from the defendants leaving the matter in his hands, communicated by letter with the plaintiff, specifically indicating the charges which the defendants had made against him, and offering the arbitration of the British Medical Association should he desire to offer any explanation. The plaintiff, in answer, wrote refuting the various charges made, and expressing a hope that the influence of the Association might result in a retraction and apology by the defendants, though he did not admit its authority to decide such a serious matter. No apology being forthcoming, these proceedings were commenced.

At the commencement of the plaintiff's case Dr. Bateman, Secretary of the Medical Defence Union, was called to produce a letter from the defendants. He objected to do so on the ground that it was privileged.

Mr. Justice Lawrence ordered it to be admitted.

The plaintiff then gave evidence, in the course of which he refuted the charges made against him in the letter above set out.

Other witnesses in support of the opening having been called, Mr. Hohlner submitted that the occasion was privileged, whereupon Mr. F. E. Smith said he was quite satisfied to treat the occasion as privileged, and to submit the question of malice to the jury.

The defendants both gave evidence, and said that they felt justified on the facts before them in going to the British Medical Association for advice, and that they did not expect Dr. Tyson to communicate with the plaintiff. They denied the existence of any malice towards the plaintiff. They still believed the charges made to be true, but had not justified on the advice of

their solicitor, there not being sufficient legal proof of the facts alleged.

His Lordship, in summing up, said, according to the report in the *East Anglian Daily Times*, that there was no doubt that the occasion on which the defendants wrote the libel was privileged, and the question was whether the defendants had forfeited the advantage of this by not using it rightly. In order that the privilege might be good, it was necessary that the words should not be malicious, if true. Malice would be established if it could be shown that the defendant had some indirect motive, or some spite. The first thing to inquire into was whether the words used were true. If a defendant said the words were true, and proved them to be true, there was an end of the matter. If he did not do that, the door was open to him to say that he honestly believed that what he wrote was true. There was also a middle position. If a man recklessly it was true or not, that this kind, not making inquiry whether it was true or not, that was malicious, and that was the question they had to ask themselves in this case, and also whether these gentlemen had some indirect motive. There might, for instance, be jealousy of a new doctor coming to Southwold. The question was whether, when Dr. Mullock wrote the letter to the secretary of the Division of the British Medical Association, he was using the occasion honestly, or was abusing it. If a person on such an occasion stated what he knew to be untrue, there would be no doubt that he was abusing the occasion, but there was a state of mind short of telling a deliberate falsehood by which a person might be held by a jury to be abusing the occasion, and in that sense to have spoken maliciously. If a person, through being very angry, or from some other wrong motive, allowed his mind to get in such a state as to make him cast aspersions on another person recklessly, not caring whether they were true or false, a jury would be justified in finding that he had abused the occasion. It had been said that anger would be such a state of mind, and he thought a gross and unreasoning prejudice would be such a state of mind. Dealing with the letter itself, he said that there was a reference at the outset to the plaintiff going to Southwold. He, of course, had a perfect right to go there. If there came to-morrow a cloud of ten thousand doctors to Southwold, they would have a perfect right to go there, though, of course, nobody would help it. A point had been made that they could possibly help it. A point had been made that in the letter to Dr. Tyson the defendants only asked for advice. Asking for advice did not make an untrue statement. There was one thing to be learnt from this case, and he thought it would be very useful to all of them. They must remember that when they went to a doctor he thereby acquired some interest in them until the day of their death. It might be desirable when they went to a doctor to begin with the remark, "and the patient without prejudice." If they did not say that, the doctor might pursue them to the end of their lives. He would never let them go if he could help it. After dealing with other portions of the letter and the allegations contained in it, his lordship concluded by saying that Dr. Tripp had nothing to do with the letter of May 14th to Dr. Bateman, and if the jury took a more serious view of the case because of that letter, that ought not to be visited on Dr. Tripp, but it ought to be visited on Dr. Mullock.

The jury returned a verdict for the plaintiff with £300 damages. Judgement accordingly.

WORKMEN'S COMPENSATION CASES.

Cardiac Strain.

JAMES COE v. THE FIFE COAL COMPANY was an arbitration under the Workmen's Compensation Act, before Sheriff-Substitute Hay-Shennan at Dunfermline, in connexion with an injury sustained by the appellant, Coe, while in the employment of the Fife Coal Company. Coe, along with two other men, was engaged in driving a heading off the main level up to a gradient of 1 in 35. The heading had been driven about 60 ft. up. Rails had been laid down, but no wheel had been put up, and the men had to let the full buckets down the steep gully by hand. The work involved great strain. The appellant had repeatedly complained about the want of a wheel, and on May 1st he refused to go to work on this ground, but did go on the promise that the matter would be attended to. When letting down the ninth or tenth bucket he felt a sudden pain in his chest, and sat down, saying that he was jerked himself. He continued to work intermittently for about a week, and was thereafter totally incapacitated until August 10th, but he has now completely recovered. The Sheriff found that the cause of Coe's incapacity for work was cardiac breakdown, due to the fact that the work in which he was engaged was too heavy for him; that the incapacity was not caused by accident within the meaning of the Act, and that the appellant was therefore not entitled to compensation. On appeal to the Court of Session, the Division affirmed the Sheriff's decision, and found Coe liable in expenses.

The Lord President said the question put to them was whether the injury to the workman was an accident within the meaning of the Workmen's Compensation Act. He confessed that he found the case one of great delicacy and difficulty. Where so many had failed, he was not going to try and define what an accident was. But he could say without fear of being wrong that accident connoted something different from disease. Where what had gone wrong with a man had had its origin in something which happened during his work, it became difficult to say in certain cases whether there had been an accident

or not. Cases at both ends of the line were very easy. A broken leg or scarlet fever would be very easy to judge, the one the one way and the other the other. But with cases just about where the line might be it became a matter of great difficulty. His lordship came to the conclusion, though not without hesitation, that as the sheriff had the advantage of a medical assessor, and had the assessor's views upon what was the matter, that it was not for the court to interfere with the judgement on what was primarily a question of fact. It might be very truly said that there was not much difference between straining the muscles of a man's back and straining the heart, which after all was just a big vessel. But, on the other hand, the view which the doctor had taken was simply that the man was overtaxed by over-exertion. Upon the best consideration, his lordship had come to think that the only thing they could do was to adhere to the judgement of the sheriff.

Lord Kinnear and Lord Pearson concurred.

ILLEGAL CREMATION.

At the Lambeth Police Court on January 18th Ada Emma Webb, of Westmoreland Road, Camberwell, was summoned for having on December 29th last unlawfully and knowingly carried out, procured, and taken part in the burning of certain human remains—to wit, the remains of a certain child—except in accordance with the regulations and provisions of the Cremation Act, 1902. According to a report of the case published in the *Morning Advertiser* of January 19th, Florence E. Rogers, a barmaid, stated that in December last she was expecting her confinement, and the child was unexpectedly born dead about 2 o'clock on the morning of December 29th. She said nothing about the matter, and at her request Miss Kirby, another barmaid, the same afternoon took the body of the child, wrapped in a nightdress and some brown paper, to Mrs. Webb. That was the last the witness saw of the body. Grace Kirby said she took the body of the child and half a sovereign to Mrs. Webb's house. Mrs. Webb said she had no idea of Miss Rogers's condition, and that she was a wicked girl. The defendant and the witness went to an undertaker named Simpson, taking the body with them. The undertaker said that he could not possibly take the body without a doctor's certificate. Mrs. Webb and her witness then returned to Mrs. Webb's house, and the witness then left her, leaving the body behind. Mrs. Webb said she would get rid of it the same night. Detective-Inspector Hawkins stated that on January 11th, accompanied by Detective-Sergeant Hedges, he called upon Mrs. Webb, and said to her that he was inquiring what had become of the body of a baby brought to her by Kirby on December 29th. The defendant replied that Kirby brought the baby to her house; she took it to the undertaker, but he would not bury it because she had not got a doctor's certificate; Kirby left half a sovereign with her, and she burnt the body in her kitchen stove. Addressing the Court for the defence, Mr. Robinson questioned whether there had been an offence under the Cremation Act of 1902, which, he suggested, related entirely to burnings in crematoria. He submitted that, although the defendant acted foolishly, she was a person deserving of sympathy rather than of censure. Mr. Hopkins, the magistrate, said he did not see how he could possibly hold that the defendant did not come within the terms of the section under which the proceedings were taken. At the suggestion of the magistrate the defendant (who was stated by Inspector Hawkins to be a most respectable woman) went into the witness-box. She said she did not know that Rogers was expecting to be confined, and the first she heard of the matter was when the body was brought to her house by Kirby. She still had the 10s. which was brought with the body. She made an effort to see Rogers, but failed. Mr. Robinson thought it was perfectly clear that the defendant did not do this for profit. Mr. Hopkins remarked that when the papers in this case were put before him he thought that it seemed hard that the defendant should be made the scapegoat for the offence of others, but at the same time one saw that she had not the strength of mind to throw off the responsibility which they put upon her shoulders. The defendant took upon herself the responsibility of dealing with the body of a child of the history of whose birth she knew nothing, and brought herself within the section of the Act. She would have to pay a penalty of £10, and 2s. costs. The magistrate expressed his willingness to allow the defendant a fortnight in which to find the money.

CONVICTION OF UNQUALIFIED DENTISTS.

At the Rhyl Police Court, on January 12th, a summons was heard against Edward Hanlon, of Rhyl, who was charged on the information of David Hugh Jones, M.D.S., of the same town, with the offence that he, not being registered under the Dentists Act, 1878, and not being a legally qualified practitioner, unlawfully used an addition or description implying that he was specially qualified to practise dentistry. Mr. Joseph Lloyd appeared for the informant, and stated that the action was supported by the local dentists and by the London and Counties Medical Protection Society. In evidence, and produced circulars which defendant had printed and caused to be registered. For the defence Mr. W. Russell (Messrs. Russell and Russell, solicitors, Bolton) appeared. No evidence was called. The defendant was fined 10s. and costs.

At the same court A. George, of 16, Water Street, Rhyl, and Thomas Thurgood, of Wellington Road, Rhyl, pleaded guilty to similar charges, and they were mulcted in the same fine and costs.

A COMPANY AS DENTIST.

On January 23rd Mr. Justice Swinfen Eady heard the action of Attorney-General against George Smith, which was brought at the instance of the British Dental Association for alleged breaches of the Dentist Act, 1878.

Mr. William K. C. and Mr. A. W. Turner appeared for the plaintiff; the defendants were not represented.

It appears that the company had been formed in 1906 to carry on the business of George C. Smith, whose name had been struck off the *Dentists Register* in 1906. Since that date several convictions had been secured against him under Section 3 of the Act, for practising without a qualification. It was alleged that the company was unlawfully carrying on the business of dentists at several places in London and the neighbourhood. They employed the defendant, George C. Smith, and other persons not being registered dentists or legally qualified medical practitioners to carry on the practice. The question for decision was whether the company was a person within the meaning of Section 3 of the Dentists Act 1878, and the plaintiffs relied upon the case of *Pharmaceutical Society v. London and Provincial Supply Association*. They also referred to the case of the *King v. the Registrar of Joint Stock Companies*, a case decided by the Irish Courts in 1904, where it was held that "dentists" meant "registered dentist," and that, as a company could not be registered under the Companies Act, it could not be registered as a dentist. They also referred to the Irish case of *Attorney-General v. Myddleton's Limited*, where it was decided in 1907 that a company may be restrained from using the word "dentists" in such a way as to amount to a false representation, leading the public to believe that the persons it employed were qualified dentists. Mr. Justice Swinfen Eady granted a perpetual injunction and ordered the company to pay the costs.

The Services.

TERRITORIAL FORCE.

PROMOTIONS OF REGIMENTAL MEDICAL OFFICERS.

It is notified from the War Office that promotions of Regimental Medical Officers of the Territorial Force are governed by the same conditions as those which apply to officers of the Royal Army Medical Corps (Territorial Force). In both cases recommendations for promotion should be submitted when such officers have completed the necessary period of service, and are otherwise qualified for promotion. When a vacancy occurs in the command of a medical unit, recommendations as to the manner in which it should be filled will be similarly submitted.

THE EAST SURREY BEARER COMPANY.

The annual dinner of the East Surrey Bearer Company, R.A.M.C. (Volts), now the 3rd Home Counties Field Ambulance, of the Territorial Force, took place on January 23rd at Kingston, Lieutenant-Colonel J. J. de Zouche Marshall being in the chair. The guest of the evening was Lieutenant-General Sir E. R. Elles, Chairman of the Surrey County Territorial Association, and among the officers present were Lieutenant-Major E. O. Wright, R.A.M.C., and J. Harper; Surgeon-Major T. H. Dickson; Majors E. St. Vincent Ryan and H. Beale Collins; and Captains L. N. Lloyd, R.A.M.C., R.A.M.C. G., R. Edsell, M.D., and E. Canny Ryall; and Lieutenants A. J. Preston, A. S. Coad, R. L. Nares, and G. L. Edsell. About seventy of the rank and file of the corps also attended the dinner. When proposing a toast to the guests Colonel Marshall mentioned that he wanted the clergy and doctors of Surbiton to remember that the Home Counties Field Ambulance was a distinctly educational corps, and that all its members received most valuable training in first aid and in the subjects taught by the Army Medical Corps.

AFTER the first international congress on accidents to workmen held at Liège in 1905 the Permanent International Congress chose Rome as the place where the second congress should be held. The congress will open on May 23rd of this present year. The following are the principal questions on the programme: (1) The organization of medical services for the observations and treatment of the consequences of accidents to workmen. (2) The organization of a medico-legal service to deal with cases of accidents and the establishment of definite criteria whereon the reports of experts shall be based. (3) The diagnosis and prognosis of post-traumatic nervous affections. (4) The estimation of the working capacity of the workman before and after the accident—(a) method of investigating fitness for work; (b) the importance of the condition before the accident; (c) anthropological and sociological criteria; (d) the influence of the varying circumstances on the accident. (5) The influence of the mode of compensation on the evolution of post-traumatic nervous diseases. (6) Statistical data from the medical point of view, since the application of the law as to compensation. The General Secretary of the Congress is Dr. Bandone, Medical Lieutenant-General in the Italian army, and Chief Military Inspector of Health, 38, via Borgognona, Rome.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

The following degrees were conferred on January 16th :

M.C.—R. Davies-Colley, Emm.
B.Sc.—A. E. Stansfeld, Joh. ; F. J. Cleminson, Govt. and Cai. ; R. F. Priestley, Govt. and Cai. ; B. Hughes, H. Selw.

The following have passed the examination in Tropical Medicine and Hygiene :

H. C. Brown, J. Dorgan, H. R. Dutton, L. T. R. Hutchinson, J. M. O'Brien, A. G. Payne, P. L. Stallard, H. E. Stanger-Leathes.

UNIVERSITY COLLEGE, LONDON.

LECTURES ON NATIONAL EUGENICS.

A COURSE of eight lectures on National Eugenics, in connexion with the Galton Laboratory, will be given at University College on Tuesdays at 5 o'clock beginning on February 23rd. The first lecture will be given by Professor Karl Pearson on "The Purpose of the Science of Eugenics." On the four following Tuesdays the lectures will be given by Mr. D. Heron, and will deal with the following subjects : Methods of Eugenic Inquiry ; Transmission of Physical Characters in Man ; Transmission of Psychological Characters in Man ; Inheritance of Disease and Deformity. The course will be continued in the third term, beginning on May 4th, when Miss E. Elerton will lecture on "Effects of Kinship in Marriage" and "Comparison of Heredity and Environmental Factors." Full particulars of the lectures can be obtained from the Secretary of University College.

CONJOINT BOARD IN SCOTLAND.

The following candidates have been approved at the examinations indicated :

FIRST EXAMINATION.—H. L. Batra, K. Bhushan, E. W. Marsh, A. F. Henriques, P. A. Dasgupta, B. G. Shiroodkar, A. I. Luke, M. M. Datta, J. K. Sharma, D. B. Gajdar, E. D. Shroff, N. B. Mehla, K. Nath, N. S. Williams, S. N. S. Aiyangar, T. Sebastian, W. Elder, J. Hegarty, H. W. Ward, V. T. W. Eagles, F. Chand, W. A. Reardon, W. A. Rees, H. W. M. Wallace, C. M. Willmott, E. P. Ghose, J. W. Craig, F. F. Kervalla, W. P. Over, P. C. Banerjee, and A. S. Douglas.

SECOND EXAMINATION.—E. Thorp, T. E. Ferguson, J. M. Christie, J. M. Dalzell, P. W. Grant, W. J. H. Davies, Z. A. de Cruz, E. C. Hamilton, D. A. Evans, N. P. Vaid, and J. Adams.

THIRD EXAMINATION.—B. J. Hatfield, H. V. A. Gatchell, W. Whitfield, W. T. Henderson, H. L. Batra, E. W. Wilbourne, G. B. Moon, Emma M. Johnstone, D. Hickey, K. Bhushan, E. W. Marsh, A. F. Henriques, and A. I. Luke.

FINAL EXAMINATION.—H. D. Dadyseth, F. J. de Souza, W. F. Mitchell, T. M. Jamieson, A. G. Curphy, J. B. Kelso, W. P. Boist, G. N. Braham, Kathleen Reid, Hilda L. Keane, T. J. Vaughan, G. F. Forde, H. A. Higginson, H. W. Turner, A. O'Flaherty, B. M. Tenby, E. Gibson, E. C. Wilford, J. E. Brown, A. M. Shah, G. V. Bhatavdekar, H. R. Gogte, A. Davidson, K. S. Commissariatwalla, T. B. McKendrick, F. H. Kiddle, D. S. Sardesai, P. Stewart, H. S. Harling, J. Aiken, and E. J. Lumsden.

CONJOINT BOARD IN IRELAND.

The following candidates have been approved at the examinations indicated :

FIRST PROFESSIONAL.—M. J. Aherne, A. T. Cannon, T. F. Collins, H. J. Cotter, C. J. Hegarty, C. Hennessy, C. F. D. Kelly, F. McLeahy, A. Verling.

SECOND PROFESSIONAL.—T. F. O'Donnell, J. H. Barry, P. W. Black, P. Daly, J. M. Gilmor, C. J. Halpin, A. Hamilton, C. W. Joyce, C. J. Lonsdale, A. G. McIlwaine, D. McDavitt, A. J. Neilan, P. J. O'Connell, D. P. H. Pearson, F. Phelan, C. Roche, P. R. Todd, A. Wiley, F. Webster.

* With honours.

SOCIETY OF APOTHECARIES OF LONDON

The following candidates have been approved at the examinations indicated :

Surgery.—*G. K. Aubrey, *J. Bramley-Moore, *J. B. Tackaberry, H. B. Waller, *H. V. White.
Medicine.—H. W. B. Deaneher, *J. J. S. Rowe, *J. B. Tackaberry.
Forensic Medicine.—J. B. Tackaberry.
Midwifery.—H. S. Brown, A. C. Jenkins, B. A. Keate, J. B. Tackaberry.

* Section I.

† Section II.

The diploma of the Society has been granted to Messrs. G. K. Aubrey, J. J. S. Rowe, J. B. Tackaberry, H. B. Waller, and H. V. White.

It is announced that an International Antivivisection and Animal Protection Congress will be opened in London on July 6th. In connexion with the congress there will be an exhibition at the Caxton Hall of appliances for making the transport and slaughter of animals humane, and of clothing materials which have been obtained without any cruelty to animals.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL

CHANGE OF ADDRESS.

The offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL have been removed to 429, Strand.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

H. B. wishes to know of a school or tutor in France where a boy of 10, whom he wishes to send up to Osborne, may receive a good English education, and at the same time learn to speak French fluently. H. B. would like to hear from a parent who has had personal experience of such a place, and who can vouch for the sanitation of the house and locality.

TREATMENT OF BRONCHIAL ASTHMA.

A MEDICAL MAN who has suffered from bronchial asthma for many years, has been able by care in diet and his mode of living to attend to his practice, but during the last six months has been much worse. He asks for advice, but adds that he cannot take potassium iodide.

ANSWERS.

AJAX.—Country members of the Association may have letters sent to the office of the British Medical Association, 429, Strand, London, W.C. Letters will also be forwarded on request.

LETTERS, NOTES, ETC.

CANCER OF THE TONGUE.

DR. A. S. MORTON (Putney, S.W.) writes: I have read with very great interest the article on cancer of the tongue by Mr. Butlin. The statistics seem evidently to have been prepared with great care, but there appears to me to be one great source of fallacy, and that is the diagnosis, for if the diagnosis is wrong the entire statistical results must be wrong also. Many years ago a case of cancer of the tongue was seen by me; it was treated in the orthodox manner of the period, such as various local measures, antisyphilitic and other constitutional remedies, removal of a tooth, avoidance of tobacco, and so forth; finally, the man was seen by Sir James Paget, who pronounced the case cancer of the tongue, and advised removal of the organ. The man was afterwards seen by Mr. Edward Cock, of Guy's, who said it was not cancer at all; he advised a certain line of treatment, which was useless; and finally the patient disappeared from observation. Some considerable time afterwards I met the man in the street. He then said he was quite well, and the tongue appeared to be healed perfectly, due to the skill of some old woman. Now, if this tongue had been removed, either with the entire glands or otherwise, it would have gone to swell the percentage of successful operations. Regarding microscopic diagnosis, some time ago, at a post-graduate course of lectures, Sir Jonathan Hutchinson said, "I do not wish to decry the use of the microscope as an aid to diagnosis in cancer, but do not rely upon it entirely." He then proceeded to relate a case in which the subsequent results proved it to be one of cancer, although the histologist had pronounced it to be benign. I do not pretend to be one of the "scientific" and "academic" brigade of the Royal College of Surgeons, but I could multiply such cases as the above, and I have no doubt that many of the despised and ignorant members of our College could do likewise. I can also state that I have seen many cases of cancer of various organs where the patients had declined all surgical interference, and yet they managed to live for a great number of years. It would be very interesting if some statistics could be prepared showing how many years such patients do live after diagnosis and refusal of operation, and in some way to compare these cases with those who have suffered the operation to be performed.

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Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication; and, if not paid for at the time, should be accompanied by a reference.

N.B.—It is against the rules of the Post Office to receive letters at Postes Restantes addressed either in initials or numbers.

A Lecture

ON

RADIUM IN SURGERY.

DELIVERED AT THE LONDON HOSPITAL, JANUARY 26TH, 1909.

BY

SIR FREDERICK TREVES, BART., G.C.V.O.,
C.B., LL.D.,SERJEANT-SURGEON TO H.M. THE KING; SURGEON IN ORDINARY TO
H.R.H. THE PRINCE OF WALES; CONSULTING SURGEON TO
THE LONDON HOSPITAL.

SPECIALLY REPORTED FOR THE "BRITISH MEDICAL JOURNAL."

MR. HOLLAND, MR. FENWICK, AND GENTLEMEN,—It has appeared to me, as it has appeared to many, that there is the possibility of a great future for radium in the domain of surgical therapeutics. I say *possibly*, because radium is a new remedy, and one must exercise the very greatest caution in speaking of the potentialities of a new remedy. A new remedy is a thing of great expectations and of very ready promises, but sooner or later it must be inevitably associated with a measure of disappointment. I need not remind you of the expectations which were aroused on the introduction of the x rays; they were to revolutionize surgery. Well, they have not done so. But the x rays have accomplished a marvellous work. And yet it is not perhaps unsafe to say that we are within sight of that point where the limitations of the x rays in treatment will be found. The same applies to the high frequency current. That measure was to cure practically every human ill; yet I think I am right in saying that the expectations formed of it have not been realized, and that those who hoped so much from it may feel that they are to a certain extent in the position of false prophets. So also with the Finsen light. There never was a more splendid enterprise in hospital administration than the introduction of the Finsen light into this hospital. The good it has done it is impossible to express in ordinary language; but yet, I imagine, we are not very far from reaching the actual limit of the good that is to be effected by that measure. On the present occasion I have not to preach to you any new doctrine. I merely wish to place before you a *provis* of the present position of this subject of radium in surgery, and to state the facts which seem to justify us in supposing that the utility of radium is likely to be great. I will first of all, if you please, speak of the maladies that radium can cure, then of the method in which radium acts, and, lastly, of the lines upon which the investigation of its powers is likely to proceed. First of all with regard to the cases which radium can cure. In this connexion I do not propose to deal with published cases, although the literature of the subject is large enough; I propose only to speak of patients whom I have actually seen and personally examined. The majority of these were seen in the Paris Institute, and I should like to say how deeply obliged I am to Dr. Louis Wickham, the Director of the Institute, for his courtesy and kindness in allowing me to see the work of that institution.

Let us deal first of all with angioma, using the term in its widest sense. It may be said, and I think without hesitation, that radium will cure every form of naevus. It can cure the "port-wine" stain, and I would ask surgeons at the present day what measure they have available of which they can say the same. It can rid the patient of a pigmented mole, of a hairy mole—two troubles practically incurable if the size be beyond certain limits. In connexion more definitely with naevus, let me take four illustrative cases. One is that of an infant with a naevus on the crown of the head the size of a gooseberry. There is no means of dealing with such a growth except by operation. It was cured by a comparatively short application of radium. Here is another case, a little more striking—a girl with an angioma of the eyelid the size of a plum. This had been subjected to four operations; twice it had been excised, twice it had been treated with the actual cautery, but with no benefit. It was perfectly cured by radium without trouble or discomfort to the individual. Perhaps a more striking case is that of a young woman who had a naevus occupying nearly the whole of one

side of the face. She had been subjected to innumerable operations, but with only very imperfect success, I should almost say with no success. But under the influence of radium—and the treatment was, of course, long extended—she was cured. The last case I will trouble you with under this head is also remarkable. It was that of a child of 12 with a fibrous angioma situated in the substance of its arm, free from the skin, which was uncoloured and sound. The mass was of the size of a hen's egg. It was treated with radium from two sides, and was entirely dispersed in four weeks. It is, I am bound to confess, a little astonishing that a solid mass of such magnitude, not a mere subcutaneous growth, should have vanished so readily. I may here remark that it seems possible to say of radium that there is a relation evident between the amount of radium used and the good it can accomplish. Until now, considering the little quantity of radium available, it means that we are dealing with a substance which may be regarded as limitless. You cannot say that of x rays, of the high-frequency current, or of the Finsen light, for they, at least, seem to have reached the limit of their powers. It would not, perhaps, be unsound to draw the conclusion from that that if you could have radium enough you could carry out surgical measures far beyond the confines to which radium is at present restricted. With regard to skin affections, you probably know well enough the effect of radium in curing chronic local eczemas, and especially forms of eczema associated with itching. Nothing is more curious in the use of radium than the manner in which it immediately cures, and apparently permanently cures, itching when placed over the surface on a piece of varnished silk. Then radium can cause keloid to vanish; the keloid left by a wound, the keloid left by tuberculous glands, and that obstinate form known as the acne keloid. For instance, I saw in Paris a man, about 30 years of age, the nape of whose neck had been in an appalling condition from acne keloid; apart from the disfigurement produced, the incessant distress made his life almost unbearable. This man had subjected himself to many forms of treatment, but with practically no result. Under the influence of radium the condition had disappeared, and the skin had become almost normal in appearance. I will say nothing about vanishing glands in certain cases where radium has been used, because that may be quite accidental, and it would be premature to draw conclusions from the occurrence.

Now we come to rodent ulcer. Radium will cure rodent ulcers. Of what grade? Rodent ulcers which have existed for many years, in which the tissues have become adherent to the bone, or apparently to the bone, in which there is ulceration, and in which—and this is the most important point of all—in which the Finsen light, the x rays and cataphoresis have all been tried and have all failed.

Such cases—and there are many of them—may be cured by two sittings of radium lasting one hour each, the parts being finally left free from attachment to the deeper parts, the skin being soft and pliable. Why I lay stress on such cases as this is for this reason: it has been said radium only acts by means of the x rays, which are part of its radiation. Anyhow, here are cases, numerous enough, in which a condition is cured which has refused to heal after persistent treatment by x rays. In other words, radium can effect a cure where x rays cannot.

With regard to epithelioma of the tongue and epithelioma of the lip. They are cured by radium. You say of what degrees? I acknowledge that the cases are in the early stages of epithelioma; but they are epitheliomata that are ulcerating, and that, so far as we know, can yield to no other treatment except that of operation. If, therefore, an epithelioma of the tongue can be cured by radium, and cured to the satisfaction of those who are responsible for the case, it is a case of epithelioma treated without operation. Many of these I have seen. And you will notice in the present issue of the *BRITISH MEDICAL JOURNAL* a paper showing the treatment carried out by Dr. Dominici, in which it will be evident to you that epitheliomata of some degree, and one might say almost extensive epitheliomata, have been treated with a measure of success. The same remark applies to commencing epitheliomata on the inside of the mouth. With

regard to epithelioma of the face, I can speak of these cases seen in the Paris Institute. An epithelioma of the face which had perforated into the nasal passage; that was cured after a good many sittings. An epithelioma of the ala nasi, which was destroyed under the influence of radium after sittings which amounted in all to eight hours. An epithelioma of the cheek the size of a two shilling piece cured and the surface healed over.

You may ask, But are these results permanent? They apparently are. It is true that no great amount of time has yet elapsed; but I saw one case in Paris where an epithelioma of the face cured by radium was perfectly sound at the end of two years. We await with interest the extension of this measure of treatment to malignant disease of the uterus and rectum.

Now, with regard to the action of radium. Radium is obtained from pitchblende, a compound of uranium, and I show you specimens of it obtained from Joachimsthal. In appearance, while it is not unlike pitch, it is a little more like anthracite coal. Here is a piece of pitchblende with a little of the rock with it. Here is a seam of pitchblende as it runs in the igneous rock in which it is found. Here, again, is a specimen of pure uranium. Uranium plays a very large part in the manufacture of radium. Radium has, as you know, never been isolated; what we speak of as radium is the sulphate, the carbonate, or the bromide of radium. It appears as a whitish powder, and that powder becomes later on a little yellow, and then perhaps a faint brown. There is radium in this glass tube, and it has turned the glass violet, because it is soda glass. If this had been potash glass it would have turned it brown. On exposure of the glass to heat the colour vanishes. At present the commercial value of radium is artificially very high. If radium ever sank to such a degree of cheapness that it was worth its weight in mere gold it would be exceedingly cheap.

You know, of course, that radium gives off heat, that it is phosphorescent, that if it is dissolved in water it decomposes the same into its component parts; but the main property is that it is radio-active. Radio-activity means that the rays given off by radium have the power of penetrating solid and opaque substances, the power of affecting a photographic plate, the power of producing fluorescence, and the power of rendering air or other gas a conductor of electricity. These rays are of three kinds, known as the alpha, beta, and gamma rays. The alpha rays and the beta rays are composed of material particles or ions, which carry a charge of electricity. That they are material is shown by the fact that the power of these rays is lost when they are passed through cotton-wool. The alpha rays are composed of ions of fair size, having a mass equal to that of an atom of hydrogen. They carry a charge of positive electricity, they are deflected only by an intense magnetic field, they have little penetrating power, and a relatively slow velocity. The beta rays, on the other hand, are composed of ions of smaller size, having a mass equal to only $\frac{1}{1836}$ part of that of an atom of hydrogen. They carry a charge of negative electricity, are easily deflected by a magnetic field, have great penetrating power, and move with a very high velocity. The gamma rays are of a different type. They contain no ions; they carry no electric charge; they are consequently not deflected by a magnetic field; they have enormous penetrating power, and their velocity is about the velocity of light, with which they are comparable. When I tell you that in surgery some of these rays do harm and others do good, you will see how desirable it is to have some acquaintance with the three types of rays.

With regard to general qualities, the alpha rays may exist alone. For instance, polonium, a radio-active substance discovered by Madame Curie, and named after her own country, contains only alpha rays. Alpha and beta rays are absolutely distinct and independent; they can exist the one without the other. But the beta rays and the gamma rays are inseparable, they are never found dissociated. The alpha rays are supposed to give off the heat, and they burn. They are capable of producing a very troublesome ulcer of the skin. They have greater ionizing power than the beta rays, probably as 100 to 1. The penetrating power of these three kinds of rays is expressed as follows: Taking the penetration of the alpha rays as 1, they are stopped by a sheet of mica. The beta rays have a penetrating power of 100, and will pass

through a centimetre of lead. The penetration of the gamma rays, on the same basis, would be represented by 10,000, and will pass through one inch of steel. The alpha, beta, and gamma rays have a very close resemblance to the rays which are met with in the vacuum tube used in the production of the x rays. I had this vacuum tube brought here for this purpose. When the current is running through the tube the "cathode rays" pass from the cathode or negative pole to the anode or positive pole.

They correspond to the beta rays of radium. If you take the five qualities of the beta rays as above given, those same qualities are found in the cathode rays. They carry ions which have a mass about equal to the thousandth part of that of an atom of hydrogen, they carry a charge of negative electricity, they are deflected easily by a magnetic field, they have great penetrating power, and their velocity is very high. The x rays are dependent upon the cathode rays, and are inseparable from them in the same sense that the gamma rays are inseparable from the beta rays. Where are the equivalents to the alpha rays in this vacuum tube? If holes are made in the cathode, streams of light pass back in the opposite direction. These are called the "canal rays," or the "diacathode rays." And their qualities are the same as those already given as characteristic of the alpha rays.

The next question is with regard to the application of radium in treatment. The main feature in the application of radium is surface. It is ridiculous to attempt to apply radium as a broken up bead in a glass tube without any notion of the amount of alpha and beta and gamma rays you are using or how far the radiation extends. In applying radium surgically you want surface. In other words, a little radium spread over an even surface is much more powerful and can be much more exactly used than a bead of it in a glass tube. The power of any prepared plate of radium can be estimated by the electrometer with precision. Here are three specimens of the type of apparatus as now used in the Radium Institute in Paris. They are adapted for various localities and are of varying radio-activity.

The strength, by the way, of radium is estimated by taking uranium as a unit. Radium is then represented by a radio-activity of 2,000,000; a piece of "quarter-strength" will therefore have a radio-activity of 500,000. The powdered radium, when placed on the disc or plate, is covered with a varnish, which is unaffected by boiling, by alcohol, or by the heat of a sterilizer. In this specimen are only 10 mg, but every milligram is available. Put the same quantity into a glass tube, and the agent is almost useless. Radium can be mounted on "gum elastic," as in the uterine stems employed, or it can be spread on silk or cloth, or on anything which can be varnished.

Radium must be ordered by a definite prescription. For the individual case a plate of a certain diameter is ordered, and the proportion of alpha, beta, and gamma rays required will be stated in the prescription. The alpha rays may have to be cut off. How? By a certain thickness of aluminium, a very thin plate. Then comes the question of the distance; how close should the plate be held? The closer it is held the more intense is the effect, but the narrower the area of action. How long shall it be applied? Radium of this type I now show can be applied for about an hour at a time. Dr. Dominici, has made special use of the ultra-gamma rays, the most penetrating rays of all, and allows them to act for hours at a time. This limited action is secured by so screening the plates that what passes through into the patient's body are only the ultra-gamma rays, those of the most intense velocity and the greatest penetrating power. There is a still more curious thing with regard to radium. Suppose this to be a closed glass vessel in which you have suspended a tube containing a solution of radium, or a salt of radium. If you put into that vessel a penny, that penny becomes radio-active. This is not due to the rays coming through the glass of the tube. Screen the tube with any thickness of lead you like, and it will make no difference, the penny will still become radio-active. This induced radio-activity is due to something which comes out of the tube, and that something is the "emanation." If you break the glass globe with which the experiment is made you find every bit of it is radio active. Take the penny out and it is radio-active and

remains so for a considerable time. Scrub the penny with emery powder, and it loses its radio-activity. Test the emery powder used, and behold it has become radio-active. Wash the penny with nitric acid and it loses its radio-activity; evaporate the nitric acid and the residue left is radio-active. In brief, there comes off from radium an emanation, or if you like a vapour, which has the power of rendering any body it touches radio-active. There is no method of inducing radio-activity except by the emanation, and it is evident that this emanation leaves on any surface it touches an active deposit—a deposit which you can take off and remove.

It is probable that much of the future of radium as regards surgery lies with the emanation. This active deposit forms on any surface exposed to the emanation. By increasing the surface so exposed you increase the amount of radio-activity.

As I have been very careful not to mention any fact other than what I have myself seen, I wish to state the following as a thing told me: An eminent scientist in London has used a solution of this active deposit as an injection into the tissues of the body, for it is easy to get a solution of that deposit. This solution was injected into a mouse which was the subject of an abdominal cancer produced artificially, and the growth vanished. It is scarcely fair to mention this case, because I can add no further details. Such an experiment needs to be verified and supplemented by many other data. I have noted the local effects of subcutaneous injections of the solution of the emanation in the human subject. I will not give you details of the case, because the issues are misleading, and open up a wide subject into which I need not now go. Each injection performed in this patient with an ordinary hypodermic syringe produced a scar and pigmentation of the skin such as I have never met with in my whole surgical experience. The appearance at the site of each puncture was entirely new to me, and led me to think that I was viewing a condition of scar which had hitherto been unknown.

I will now conclude by pointing out the lines upon which the future investigation of this subject will probably extend. First of all, it is very essential to ascertain the action of the radium rays and of the emanation upon bacteria and their products. In the next place, the selective action of the radium on certain tissues must be studied. This selective action is one of the most astonishing things about radium as illustrated by the manner in which it picks out vascular tissue for destruction. Under its influence this tissue, as met with in the angina, vanishes. What is radium likely to do for other conditions associated with vascular growth? What is it likely to do for Graves's disease? Has it any kind of selective effect upon embryonic tissue, which is allied to that of certain growths? All that has yet to be ascertained. Then comes the effect of radium in large amount. On this question of the amount great possibilities appear to hang. Little has yet been done, except by Dr. Dominici, to ascertain the effect of introducing radium into the substance of a growth in a tube permeable to its rays, such as a tube of thin aluminium. So far as he has investigated the matter the results have been encouraging.

Then come the questions of the effect of the emanation if inhaled, the effect of injection into the diseased parts of a solution of the emanation, the utility (if any) of radio-active water and other substances rendered potent by radium.

Finally, let me once more warn you against raising false hopes in discussing the potentialities of a little-known remedy.

A PETITION promoted by the Betterment of London Association to the Prime Minister requesting early legislation to check unnecessary and objectionable street noises has been signed by a large number of medical men residing in the West End of London.

THE second international course of legal psychology and psychiatry will be held at Giessen, April 15th to 18th, 1909. The course will be under the direction of Professor Sommer, who will have the co-operation of Professors Mittermaier and Dannemann of Giessen, and Professor Aschaffenburg of Cologne. All communications on the subject should be addressed to Professor Dr. Sommer, University of Giessen.

Observations

ON

HUMAN GLANDERS:

WITH A STUDY OF SIX CASES AND A DISCUSSION OF THE METHODS OF DIAGNOSIS.

BY

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WITHIN the last few years five cases of glanders have been admitted to the wards of the Westminster Hospital. The disease, in its different types and stages, presents such diverse clinical pictures, and diagnosis is so often difficult, that there is warrant for recording these cases at some length.

This article was almost complete in 1905, but after making a study of 134 cases reported in the literature, an exhaustive treatise by Robin of Montreal appeared with an analytical report of 156 cases, including most of ours. Hence we did not feel justified in burdening the literature with a repetition of what had been so well done in Robin's thesis, but preferred to await further cases to enable us to investigate several points that had occurred to us. So far no other case has come into our hands, but many have been diagnosed recently in London, and we are firmly convinced that with a better knowledge of the protean symptomatology many will be revealed which otherwise would be overlooked. There can be no doubt that the Registrar-General's statistics, which show glanders as a rare disease, are misleading, and considerably underestimate the incidence of this disease.

CASE I.

H. A. L., aged 25, horsekeeper. Admitted November 12th, 1904, under the care of Mr. Spencer.

On October 31st fell in the stable and hurt his ribs; for this he was strapped. Two days later went to a dentist with an "alveolar abscess"; "cellulitis" developed, and for this he was treated at various places; no incision was made. On November 9th nodules appeared on the limbs, more or less in the neighbourhood of the joints, the knees more especially. Next day, 10th, a pustular eruption broke out on the neck, trunk, and limbs; the buccal mucosa sloughed, and a nasal discharge appeared; the upper part of the face became swollen. On admission temperature 103.4° F.; respirations 38. Restless, low delirium; no expectoration, no diarrhoea. The glandular lesions were of three types: (1) A diffuse, brawny, dark-purplish swelling of the face and neck, (L.) involving the temporal portion of the left conjunctival sac; the advancing edge erythematous. (2) A pustular eruption, distributed without special reference to aspect, upon face, neck, trunk, and limbs; the lesions consisted of a clear yellowish-white matter head upon an angry red areola. Upon the left cheek these pustules ultimately became confluent, and, breaking down, left a large honeycombed, ulcerating surface. (3) Multiple subcutaneous and intramuscular nodules apparently in the course of the lymphatics; these nodules reddened, superficially and broke down; but in no case did the skin actually give way over them. One or two were incised for diagnostic purposes; the pus was thick, yellow, curdy.

Abdomen normal. Splenic dullness increased, but edge impalpable.

Breath sounds altered chiefly in respect of prolonged expiration; there was sign of consolidation; no gross added signs; the sounds might be described as "wheezing."

There was some articular pain, but the joints were not distended. There was no enlargement of the axillary, inguinal, or cervical lymphatic glands. The tongue was not furred, but the mucosa of the cheeks was extensively ulcerated. Mucopurulent discharge from the right nostril. Sensation, general and special, undisturbed.

The temperature kept above the 103° line until a few hours before death, which occurred on November 14th, at 6 a.m.

Thirty-two horses became glandular, and it is worth noting that seven days elapsed after the first appearance of symptoms in the man before a diagnosis of glanders in the horses was made.

Pathological Findings.—Examination of the pus from a superficial abscess during life revealed polymorphonuclear leucocytes, and after prolonged search and careful staining a few typical *B. mallei* and no other organisms (Fig. 6);

some of the pustules, however, had become contaminated with staphylococci. From the deeper abscesses pure cultures were obtained on potato and glycerine-agar of an organism morphologically and culturally resembling *B. mallei* and these inoculated into guinea-pigs gave positive results, though the animals died too rapidly in thirty-six hours to allow of "characteristic" changes suggesting that the organism was of exceptionally high virulence. Typical *B. mallei* were obtained from the bodies of the guinea-pigs.

Post-mortem Appearances.—(Eighteen hours after death).—Body well nourished; great tumefaction of soft tissues of the face, especially of the left cheek and lips—the swelling is partly due to inflammatory oedema and exudation and partly to the presence of abscesses in the skin and muscles; numerous pustules of varying size (pin's head to pea) in the skin of the head, neck, trunk, and extremities (Fig. 1); some stand out, others are flat and depressed, whilst on the left side of the cheek and jaw many have broken down so as to produce a punched-out honey-combed appearance with a dusky purple hue; the muscles are the seat of numerous abscesses containing a thick sanious pus; joints normal; mucosa of nose and adjacent sinuses is much swollen and hyperaemic, that over the inferior turbinated bone resembling an aggregation of small papillomata (Fig. 2). The lungs are much engorged and oedematous and the seat of numerous small nodules with softened centre and hyperaemic periphery; pleurae covered with a thin layer of fibrinous lymph. Spleen, 12 oz., soft and homogeneous. Remaining viscera normal, save for engorgement of kidneys, adrenals, and brain.

Histological Appearances.—The abscesses in the skin, muscles, and lungs consisted of collections of round cells with indefinite nuclei, though some of these were undoubtedly polymorphonuclear cells; for the most part they could not be distinguished from monomorphonuclear cells by any method of staining. The blood vessels, of which some are in the centre of the cell collections, are congested, but it is not clear whether the virus has arrived by the veins or lymphatics. A characteristic feature of all these areas is the extensive central degeneration of a peculiar type, the *chromatolysis* of Unna, resulting in a deeply staining diffuse network of debris which obscures the detail of the sections. In the skin there is an epidermal and subepidermal collection of round cells, amongst which are some swollen and desquamating epithelial cells. In the muscles the cell collections spread along the interfibrillar tissue, and there is much surrounding oedema (see Fig. 3). In the lungs the small areas of consolidation consist of alveoli filled with cell and plasma exudation, and surrounded by a broad zone of hyperaemia in which the alveoli are choked with red blood corpuscles. Examination of the thickened, corrugated and hyperaemic mucosa of the nares showed merely oedema and congestion. There was no evidence of cell infiltration or proliferation, and no organism could be found.

Bacteriological Examination of Sections.—(Careful search, after special staining (carbol-thionin blue after preliminary treatment with acid) revealed sparsely scattered typical beaded bacilli in the lungs, skin and muscle abscesses, but the central degeneration, with its avidity for the same dyes, rendered their identification difficult

(see Fig. 7). It must be stated that, with a modified Romanowski's stain, the bacteria were found just as readily, and the general appearance of the sections was more pleasing.

CASE II.

A. A., aged 45, horsekeeper. Admitted under the care of Mr. Spencer, July 14th, 1905.

Illness commenced seven weeks since with severe frontal headache, pains in the muscles of calf and forearm, and prostration. No history of infection could be obtained, and no initial lesion was discovered. Not till five weeks later did he notice any swellings; then in quick succession painful lumps appeared in the left leg and forearm. He stated that these lumps had to some extent decreased in size; he had no joint pain, no intestinal or respiratory disturbance, no ulceration of or discharge from the nasal or oral mucosae. Temperature, 102.2°.

Upon examination, some eight or ten subcutaneous and intermuscular abscesses were found and incised. All save one were upon the lower segments of the extremities. The urine at first was normal but subsequently became albuminous. Carbolic acid occurred after the first operation, at which pure phenol was applied to the abscess cavities. A few more abscesses formed and were opened. A fortnight after admission the right knee became swollen. It was aspirated, and, as the fluid contained *B. mallei*, subsequently opened and drained. From this time the condition was one of progressive intoxication with asthenia. Severe diarrhoea set in and respiration became embarrassed, though no pulmonary physical signs were detected. The temperature, which hitherto had run an irregular course, varying between normal and 104.8°, took a steady upward trend, and at death was 105.2°.

Pathological Findings.—On the day after admission pus from a cutaneous abscess revealed, after careful search, one or two bacilli only, and no other organisms; but characteristic cultures of *B. mallei* were obtained on glycerine-agar and potato (brownish slimy growth) in forty-eight hours, and these cultures, inoculated into guinea-pigs by Professor Hewlett, produced typical enlargement of the testicles. Fluid from the affected knee-joint, aspirated on August 8th, showed only two bacilli in the centrifuged deposit; but here, again, typical and luxuriant cultures were obtained.

Blood Examination.—On July 21st, when the general condition was fairly good, agglutination experiments were tried with the

serum, even in 1 in 2 dilution, caused no clumping or loss of motility. About this time, also, cultures of the blood were made in large quantities of peptone broth and glycerine-peptone broth with negative results; but on August 10th—the day before death—the blood was again drawn direct from the vein, and in forty hours typical cultures were obtained.

Post-mortem Appearances.—(Four hours after death).—Rigor mortis; body emaciated; numerous surgical incisions in skin and subcutaneous tissues of the extremities; one pustule on the left hand and another on the chest. Blood in the lungs alone showed evidence of secondary infection—the right, 17 oz.; the left, 14 oz.; no pleurisy; scattered throughout the lower lobes and felt superficially were numerous dark, haemorrhagic, firm areas of small size, con-



Fig. 1.—Photograph taken after death of Case I. The honeycombed appearance produced by the broken-down pustules on the cheek and jaw is well shown. Also some small pustules, discretely scattered over the left shoulder, and a few on the right and on the trunk.

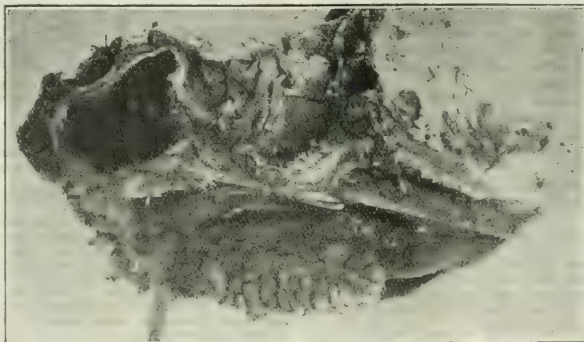


Fig. 2.—Wall of nasal cavity of Case I showing papillomatous condition of oedematous and engorged mucosa over inferior turbinated bone.

solidated so that they sank in water; in the centre of some of these areas was a little pus; the intervening lung tissue was apparently normal, as were the bronchi and trachea. Nothing of note in the heart (10 oz.), peritoneum, or abdominal viscera, save for slight congestion of the intestines; spleen (6 oz.), purple colour and firm; kidneys (15 oz.), febrile; brain (45 oz.), arteries and thoracic and abdominal glands all normal. The right knee-joint had been drained, and the cartilages were roughened.

Histological Appearances.—The lesions were similar to those in Case I—namely, inflammatory foci of a haemorrhagic type, but less active. In the lungs were patches of pneumonic consolidation, with much surrounding haemorrhage and great

curdy pus and gelatinous matter. The wound in the arm was sewn up and healed by first intention. In the thigh wound a sinus formed, but closed up rapidly; the superficial parts granulated and healed perfectly under a "lent" bandage.

On January 25th, 1902, there was pain in the left shoulder, which passed off, however, without anything definite developing. The notes state that "about half a dozen raised spots with vesicles are scattered over the left shoulder and neck under the chin." There is no evidence that these had anything to do with the disease. He was discharged well.

Pathological Findings.—From the pus typical cultures were obtained on glycerine-agar plates and subcultures on potato on December 24th, and these inoculated into guinea-pigs by



Fig. 3.—Section of muscular abscess from Case I showing purulent infiltration between the fibrils, congestion of vessels, chromatosis of the infiltrating cells. (Semidiagrammatic drawing by Mr. J. Braxton Hicks.)

congestion of the capillaries. In these areas the central alveoli are filled with leucocytes, and the adjacent ones with leucocytes, blood, and fibrin in varying amount; in some the bronchi are occluded by a proliferative and exudative bronchitis, and in the centre of one is a vessel filled with leucocytes and debris (suppurative bronchitis), an appearance suggesting an infection via the pulmonary artery (Fig. 5). The affected bronchi are near to the inflamed vessels, so the condition may be described as septic bronchopneumonia. *B. mallei* were found in scanty numbers in the lungs in the pneumonic areas, but not in the spleen or kidneys, which showed little change histologically.

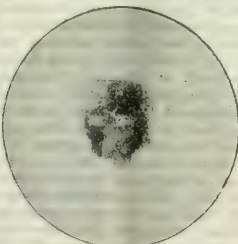


Fig. 4.—Patch of haemorrhagic bronchopneumonia. (About natural size.)

CASE III.

H. S., aged 25; horsekeeper. First seen in out-patient department by Dr. Hebb, who recommended him for admission with a tentative diagnosis of glanders.

Syphilis five years ago, but no sign for three years. The present illness began fourteen days ago, when he awoke to find swellings of right arm and leg; he thinks they have not increased in size since. On and off he has had severe nagging pains in both places. There have been no nasal or pulmonary signs or symptoms. The swellings were intramuscular abscesses, that on the arm being discrete, with little or no surrounding induration. The thigh lesion, on the other hand, showed a red area, cancer size, on the front of the thigh about the middle, and a wide area of brawny induration. Temperature on admission (December 18th, 1901) was 99°, rising to 103° at midnight.

Operation, December 23rd.—The swellings incised, contained



Fig. 5.—Section of a patch of pulmonary consolidation of Case II. In the centre is a branch of the pulmonary artery, which is filled with purulent clot; around this are alveoli filled with cell exudate and in a condition of advanced degeneration, while further afield are alveoli engorged with blood corpuscles; to the left and below this artery are a bronchiole and a vein, the former filled with cell exudate the latter with corpuscles. (Semidiagrammatic drawing by Mr. J. Braxton Hicks.)

Mr. Shattock gave positive characteristic reactions, namely, "acute inflammation of tunicae vaginales, adherent testes, and intense engorgement."

On February 6th only *Staphylococcus pyogenes aureus* were cultivated from the wound.

CASE IV.

T. M., aged 26, carpenter, working in a stable where there were sick horses. First saw Mr. Turner in the out-patient department, where a diagnosis of glanders was suggested.

Admitted June 2nd, 1905, under the care of Mr. Stotham. Temperature on admission 101°. There had been general malaise for three weeks; pain and tenderness in lower third of the thigh and peroneal aspect of the right leg came on suddenly eight days ago, and confined him to bed.

At the operation intermuscular abscesses were found; there was no affection of bone or periosteum such as the clinical signs had led one to expect. Both wounds granulated well.

Pathological Findings.—On June 2nd, 1905, a blood examination showed a distinct leucocytosis, but no increase of polymorphonuclear cells. Red corpuscles, 4,920,000; haemoglobin, 55 per cent.; leucocytes, 19,400. On June 2nd in the fresh pus only one or two bacilli were found after long search, but characteristic cultures were obtained on various media, the growth being described as a Gram negative, relatively-thick bacillus, actively motile and non-beaded, and badly staining. Typical inoculation results were obtained in guinea-pigs in three days. Seen again August 4th, 1906. Had no further trouble of any kind; his blood at this date possessed no agglutinating power for the *B. mallei*.

CASE V.

A. B., aged 22, carman. First seen by one of us in the out-patient department in May, 1904.

At that time the disease had existed for nine months. The patient stated that the earliest symptom was deafness, a sense of fullness in both ears; the nose became obstructed, and both nostrils discharged. His speech had become indistinct about a month after the onset of the trouble. When seen, the soft palate was entirely destroyed; the hard palate was perforated, and there was a widespread granular erosion in the oral and nasal pharynx. On the lateral aspect of the dorsum linguae was a soft dysrhex swellng, walnut size. There was no history of evidence elsewhere of acquired or congenital syphilis. The father and mother were healthy, but there was tuberculosis on both sides of the family. The condition was regarded as

syphilitic, an opinion concurred in by Mr. de Santi and most of those who saw the case subsequently. Mercury and iodides were prescribed.

In October, 1904, he was admitted under the care of Mr. Tubby, and remained under treatment at intervals until April, 1905.

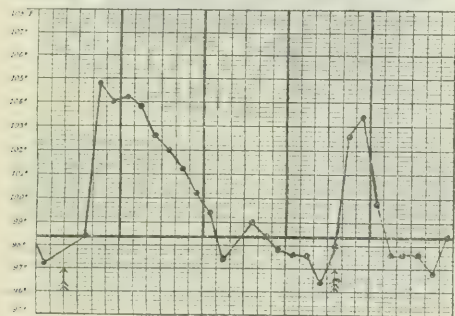
On admission, the oral surface of the hard palate, posteriorly, was tuberculated, and bathed in tenacious mucus; the tonsils were ulcerated, and the posterior wall of the pharynx, which had been the seat of extensive shallow ulceration, was now covered with crusts. When these were removed it was seen that many small ulcers had become confluent; the edge was circinate; in some places healing had occurred, with the formation of slightly depressed and puckered cicatrices; here and there yellow points indicated the sites of ulcers in process of formation. The lingual mass had become a large shallow ulcer, with a broad raised edge, pallid at the summit, indurated, and pretty sharply defined.

There was but little tenderness; salivation was marked. The anterior parts of the nose were not ulcerated, and there was no nasal discharge. The cervical glands were moderately enlarged.

The lesions were painted with lactic acid and kept constantly cleansed. In November mercurial injections (biniodide) were commenced; the tongue was several times scraped.

The failure of antisyphilitic remedies was so pronounced that, although no tubercle bacilli were found in the scrapings, light treatment (x rays) and high-frequency applications were tried, but without success. By December, 1904, the ulceration had spread considerably, involving the anterior parts of the tongue, but for a month or two the progress of the disease seemed to be arrested and the patient's general condition improved. The temperature curve for nine weeks showed an almost uniform daily intermission of 2 or 3 degrees, but for the last month or two of his first stay in hospital was almost within normal range.

Readmitted January 14th, 1905. The temperature having been practically normal for 48 hours, mallein n°xvi was injected



Mallein reaction, Case v.

→→→ Injection of mallein, n°xvi. →→→ Injection of mallein, n°xvi.

and a definite reaction resulted. A second injection on the 17th produced a similar but less marked result. On the 26th an injection of tuberculin was given; there was no local reaction, and though on the 28th, 29th, and 30th there was some elevation of temperature there was nothing like a typical pyrexia.

Admitted for the third time, April, 1905. The disease had spread extensively, having destroyed the alveolar parts of the upper jaw anteriorly and to the left posteriorly. Almost the whole of the anterior third of the tongue was destroyed; the right antrum of Highmore was invaded.

Hypodermic injections of calomel were employed, thirteen doses of 5 grains each being given in six days, but without benefit.

By the courtesy of the medical superintendent of the Lambeth Infirmary, Dr. Quarry, we have learnt that death took place from "exhaustion" on August 19th, 1905. The lungs were clear; there was no generalized eruption, but he had had abscesses about the buttock, and at death there was a gangrenous patch on the palmar surface of the right hand. The lower jaw was extensively necrosed; there was ulceration of the nasal passages, with inflammation of the conjunctiva and lacrimal sac on the left side. The central two-thirds of the tongue had sloughed.

Pathological Findings.—A portion of the spreading edge of the ulcer was examined histologically several times during his stay in hospital. The tissue, consisting of mucosa and submucosa, showed the appearances of intense inflammation with superficial ulceration and subjacent inflammatory exudation and oedema; superficially there were fungi and bacteria of various kinds, but none characteristic; no tubercle bacilli could be found on special examination. A diagnosis was ultimately arrived at by inoculating a piece of the ulcer into a guinea-pig, subcutaneously, and obtaining a positive Strauss reaction. A more recent examination in the light of the diagnosis is of interest; a few beaded bacilli, sometimes in clumps, resembling *B. mallei*, can be found in the deeper parts amongst the cell collection, and no other organisms but these in the depths. The

cells are of all kinds, leucocytes and connective tissue cells, with numerous blood vessels scattered amongst them. A striking feature is the presence of comparatively large areas of cell degeneration (chromatolysis) with a marked affinity for blue dyes. No giant cells were seen. The tissue is for the most part of the nature of granulation tissue.

CASE VI.

(Under the care of Mr. C. C. Choyce, Assistant Surgeon to the Seamen's Hospital, who kindly allowed us to make use of his notes and to see the case.)

A horse-bus driver in November, 1906, noticed two "boils" in the neck just below the left side of the jaw; these increased in size for a week, when they were accidentally cut by a barber who shaved him. In two weeks his general health became affected, and a doctor lanced the boils and a lot of "yellowish discharge" escaped. Gradually a large swelling extended around these boils over the whole side of the neck, and the discharge increased in amount. His general health grew worse, and in six weeks from the onset he had severe pains in the calves, which lasted three weeks, and he went to an infirmary. The swelling then spread on to the chest, and two or three small lumps appeared on the chest below the main swelling; these spread and coalesced, perforated the skin in several places, and ultimately fused into one large ulcer, extending from the second left intercostal space to the jaw, 3 in. to 4 in. in diameter, irregular floor and edges, with pus undermining them and discharging dirty-yellow foul pus; in the neighbouring bluish skin were several small, round, ragged ulcers discharging pus. In this state he was admitted to the Seamen's Hospital fourteen weeks after the onset. *B. mallei* were obtained in almost pure culture from the discharge, and corroborated by Professor Hewlett after animal inoculation, the guinea-pig dying in two days with swollen testicles.

Progress.—Active surgical treatment was adopted with a view to removing the entire area of disease, followed by skin grafting; in the course of this the ulcer perforated into the trachea, and into one of the larger veins. He was discharged nine months after admission, cured, and a year later he was perfectly well and had resumed work.

The sputum was several times examined as he had a troublesome cough, but no bacilli were found, and on his reporting himself the cough had disappeared. There was a little pyrexia throughout, but not marked, and there were superadded pyogenic cocci to account for some of this. The serum was examined by us during the healing stage, but no agglutinative action was found.

About three weeks before the onset two of his horses were removed from the stables suffering from some trouble "involving the air passages," though the L.C.C. inspector denied any cases of glanders in the stables.

A study of these cases will reveal the remarkable circumstance that there is but one factor common to all six cases. This is an occupation bringing the individual into more or less direct connexion with horses. In all but Case v there was, in addition, a degree of prostration quite out of all proportion to the clinical signs. In Cases iii and iv it was entirely upon these two observations that even a tentative diagnosis was made, and it was not until bacteriological and inoculation evidence was forthcoming that the nature of the cases was established. So various are the lesions of chronic glanders that the mere fact of an occupation in any way likely to bring the patient into contact with sick horses, whether as coachman, carman, groom, stable hand, or veterinary surgeon, should bring the disease to the surgeon's mind whenever a chronic inflammatory lesion of the oral or nasal mucosae, or an inflammatory mass in the subcutaneous or muscular tissues, presents itself in such a patient.

Acute and subacute cases do not, as a rule, present such great difficulties in diagnosis; nevertheless, many mistakes have been made. The exanthematous eruption, the appearance of which is almost a certain precursor of death, has been mistaken for small-pox (Bosellini, Stewart, Wherry), variella (Gutowski), impetigo contagiosa (Post), herpes zoster necrotica (Bosellini), erythema nodosum (Harte), and anthrax (Bonome). The general febrile state has been mistaken for typhoid (Buseke, Stewart, Goodall, Collie, Ehrlich, Rémy), influenza (Anderson, Harte, Gutowski), pyaemia or septicaemia (Post, Bell, Goodall, Parker, Tedeschi, Ehrlich, and Wherry), acute rheumatism (Goodall, Ehrlich, and Wherry), pneumonia (Post, Collie), typhus (Rémy).

It is to be noted that in the literature there has been a failure to distinguish in description between the lymphatic nodes and the true exanthematous eruptions. Many cases of recovery after the occurrence of "lymphatic abscesses" are recorded, but of survival after the appearance of a generalized cutaneous eruption, few, if any. The cutaneous lesions appear as pink papules, which become vesicular and then pustular. In Case i there was never any

close resemblance to small-pox; but it is obvious, apart from the fact that good observers have made the mistake, that confusion might arise.

All authors are agreed as to the difficulty of distinguishing the lesions of chronic glanders from those of the other granulomata, especially syphilis and tubercle, including lupus. As a distinction between glanders and tubercle, both Besnier and Hallopeau mention the rapid progress of the ulceration, and the tendency to spontaneous healing, which characterize the former. Besnier further states that there is no analogy between the profuse suppuration of glanders and the secretion of lupus. For discrimination between chronic glanders and syphilis we have no criteria, since even the fallible evidence often to be derived from therapeutics is in this case ruled out by the fact that of all the drugs vaunted in the treatment of glanders, mercury is the only one for which success can be claimed with any show of reason.

Whilst these remarks apply to chronic lesions of the mucosae, there is still less to be said of cases such as Nos. III and IV. In very many reports mention is made of some peculiar character of the pus. It may be pink, red, grey, or merely a gelatinous material, quite unlike true pus. To find such contents in an abscess occurring in a patient whose occupation and illness had already aroused a suspicion of glanders would, of course, be so far confirmatory, but in itself the phenomenon cannot be regarded as of high importance.

If we appear to lay too much stress upon these points it is because a common termination of a chronic case is, in an acute outburst, fatal from its inception. The interval of quiescence may be a month or two, or ten years. Here, too, we may point out that, judging from the clinical course of Cases III and IV, it would be extremely easy to overlook their nature altogether.

Some authors have referred to "the typical chancre of glanders"; the term is misleading, and is, indeed, not often met with in the most modern reports. In some cases evidence that a given lesion is the infection point is complete; in many presumptive; but in a very great many it is impossible to do more than hazard a guess as to the means of entry of the virus. In some cases of wounds infected direct from an affected animal the initial site has been considered "characteristic" in appearance, but there is no general consensus of opinion as to the characters.

A case very similar to our No. v, in which for a long time extension took place by continuity only, has been described and figured by Besnier in the *Atlas of Italic Skin Diseases*; Hallopeau and Janselme, Bonomé, and others have described cases of long duration very similar, but in most of them there have been other lesions to afford some clue to the nature of the malady. Upon this fact—the multiplicity of the lesions—Gabrielides and Remlinger lay great stress as diagnostic, but we think this feature is only reliable in the case of the more acute forms.

The Mallein Test.

In three of our cases diagnostic injections of mallein were given. Of these, only five out of six injections were under proper conditions, but in all a typical reaction followed. The constitutional disturbance was not much more than could be accounted for by the pyrexia. Pain at the point of injection and at the site of the lesion was noticed; in three instances there was vomiting, and in one the malaise and restlessness were such that a hypodermic injection of morphine was given. In one instance there was a definite rigor. In one case the temperature rose in five hours to 104.8°; and fell to normal in another thirty-six hours; an injection given the next day led to an immediate rise to 103.4°, with return to normal in eighteen hours. In the other 3 cases the maximum rise—103.8°, 103.8°, and 103.2° respectively—was attained in ten, fifteen, and eighteen hours, and in all three the return to normal was delayed beyond forty-eight hours. In two instances injections of tuberculin were given as controls, but in neither was there any response. It is noteworthy that all 3 cases were "chronic," and that the most typical reaction was obtained from that of longest duration. In several other cases which turned out not to be glanders the mallein test produced no reaction, including 1 case of generalized tuberculous subcutaneous abscesses, which did give a typical "tuberculin reaction."

The dose we have used in all cases is 10 to 15 minims, and this, though the usual dose for a horse, has not produced any untoward results in non-glanderous cases.

Animal Inoculation.

For practical purposes this is perhaps the most reliable diagnostic procedure. In four of our cases it was tried with positive results, and in one the diagnosis was not arrived at until this was done, it being impossible to isolate any characteristic organism from amongst so many contaminating bacteria that occupied the ulcerated surface (Case v). In these contaminating cases it is better to inoculate an emulsion of the suspected tissue subcutaneously into the abdomen of an adult male guinea-pig; if inoculated intraperitoneally the contaminating germs may cause death from peritonitis before the characteristic enlargement of the testes with acute inflammation and engorgement of the tunicae vaginales is produced. The reaction is noticeable in seven to ten days as a rule, but in some few cases it has been delayed for several weeks (seven in one case reported), and in others it has not been obtained at all, and it must be remembered that the bacilli may be present in too scanty numbers to infect.

Liénaux suggests, with good cause, that the *B. mallei* are not always of equal virulence, and hence a certain number are destroyed in the guinea-pig, whilst others of more active character are capable of producing a positive reaction. In one of his experiments with an attenuated culture a positive Strauss reaction was only obtained after ten days, but a typical growth appeared on potato in three days, and so it is advisable to make cultures on potato simultaneously with the animal inoculations.

Bullock and Twort have also found that the virulence of *B. mallei* obtained from human cases, of which they had five, including two acute, is much greater than that from equines, and they got a rapid positive reaction in two or three days. In our Case v, however, a definite reaction was not obtained until the twelfth day, though in the acute cases the response was more rapid.

Valuable results of experimental inoculation with cultures of *B. mallei* have been worked out by Nicolle, who details the various types of lesions following inoculations into guinea-pigs of different ages and sex. He proved the marked vulnerability of the tunica vaginalis of the adult male, the greater resistance of the female, and the still greater resistance of the young male guinea-pig. From this it seems feasible to conclude that several animals should be used, and these adult males only, and that varying doses should be inoculated. Further, he showed that the testicular lesion is not the only one of importance, though in the later stages it is a striking one.

Bacteriological Diagnosis.

The *B. mallei* in the lesions are generally very scanty, and even in the acute abscesses it is often impossible to find them, so that in apparently sterile pus it may be recommended to bear glanders infection in mind. The bacilli are difficult to stain, and are Gram negative, and where there is much cell degeneration the deeply-staining detritus masks the bacilli and increases the difficulty. In four of our cases it will be noticed that in films of the pus from the abscesses only one or two bacilli were found after prolonged search (Fig. 6). They stained well with weak carbol-fuchsin warmed for some time, but we found it much more satisfactory to stain with carbol-thionin blue or carbol-gentian violet after a preliminary treatment with acetic acid, and where the cell degeneration was most marked, as in sections, this latter method was most valuable (see Fig. 7); but in most cases equally good results were obtained with a modified Romanowski's stain. The size of the bacilli and the definite beading are fairly characteristic (see Figs. 6 and 7). With careful staining they were found in greater numbers in the lung tissue of our cases than at first appeared.

In contrast to the difficulties of bacterioscopic diagnosis the cultural characteristics are so definite and so constant as to render the diagnosis simple. Smears of pus.

* Since writing the above, one of us (J. M. B.) has met with an, as yet unclassified, streptothrix which caused a fatal suppurative pneumonitis in a man, and which, when inoculated intraperitoneally into guinea-pigs, causes a rapid and enormous enlargement of the testicles, with immobility, etc., and severe general symptoms. The details of this will be published at length later, but it is worthy of note here.

which is generally uncontaminated in the unopened abscesses or farcy buds, on glycerine-agar produce in twenty-four hours a gelatinous confluent growth, and on potato a brownish growth in forty-eight hours, which later darkens, and after some time may become of a chocolate tint. Compared with the brownish growth of *B. coli* it is darker, more gelatinous, and more luxuriant, yet in one of our cases the organism was at first described as coliform. The question of motility is of importance in this respect.

Note on B. mallei.

The *B. mallei* is by all authors said to be non-motile and often

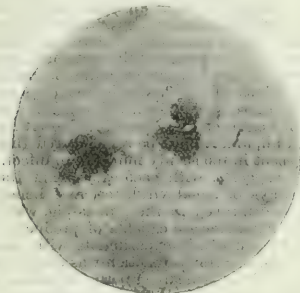


Fig. 6.—Two bacilli, the larger one showing beading, in the pus taken during life from a superficial abscess. ($\times 1,000$.)

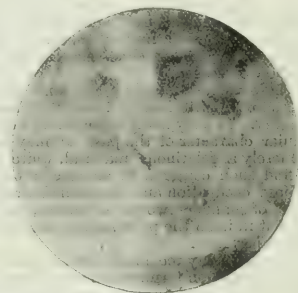


Fig. 7.—Single bacillus seen in focus and two out of focus in section of lung. ($\times 1,400$.)

showing active Brownian movements. The strains obtained by us were to all appearances, however, actively motile, and many individual organisms were seen to move across the field of vision. Repeated observations strengthened our suspicion that the *B. mallei* is truly motile, despite the fact that no flagella could be demonstrated by any method of staining. Mr. E. N. Nelson has for long held that he can see flagella, and with him we are inclined to agree.

There is another point that we wish to note concerning the virulence of *B. mallei*. It appears to be generally taken for granted that the organism soon dies out on culture media and when grown for long as a saprophyte loses its virulence. Our experience with our strains cannot confirm this. A potato subculture from the blood of Case II was kept in the cold incubator for twelve months from August, 1905, and then, even, subcultures from this grew slowly and proved virulent for a guinea-pig. From the organism, reobtained from the animal, subcultures were successively made in November, 1906, January, 1907, and in May, 1907, showing a capacity for remaining alive for months. It must be added, however, that a glycerine-bouillon flask inoculated in May, 1907, failed to give subcultures in August, 1907, the flask containing a prolific mass of organisms arranged in long chains and sometimes branching—a pleomorphism often described. Some of these long kept cultures on potato were inoculated into guinea-pigs in fairly large doses, but beyond raising the temperature and producing some malaise produced no fatal results.

HISTOLOGICAL DIAGNOSIS.

There is only one feature that may perhaps be regarded as characteristic of glandrous lesions, namely, the peculiar nuclear degeneration known as *chromatolysis*. This, indeed, is found in some other necrotic lesions, but in glanders the process is very considerable and constant, beginning very early, so that in small foci the deeply-staining detritus resulting from this degeneration is a striking feature (Figs. 3 and 5).

The question as to whether the lesions are true abscesses or granulomata is still debated. According to McFadyean the former is the case in horses, whilst Unna describes the lesions in man as consisting of epithelioid cells derived from proliferative connective tissue cells. In our most acute case (I), though polymorphonuclear cells were found in films from the pustules in life, the sections *post mortem* showed cells for the most part with round, indefinite nuclei, which may, of course, have contracted after death. In the more recent lesions in the lungs, however, the polymorphonuclear cells predominated; hence we are inclined to consider the lesions as comparable with local abscesses,

with rapid liquefaction and marked chromatolysis, with in the more chronic foci, an additional element in the form of connective tissue cells, due to the proliferative reparative process.*

No giant cells, such as described by others, were found in any of our sections, though the ballooned epidermal cells (Fig. 8) might at first glance be mistaken for giant cells. In Case v, in the light of our present knowledge, we think that the marked chromatolysis in the floor of the ulcer would prevent us overlooking the diagnosis in a similar condition.

BLOOD EXAMINATION.

McFadyean remarks, in discussing the *B. mallei*: "It is a tissue parasite, and in all cases of glanders and farcy in horses the bacilli are almost entirely confined to the lesions and discharges from them; no doubt they are transported by the blood as well as by the lymph, but in horses there is never a septicæmia." Considerable quantities of blood of affected animals have failed to transmit the disease after experimental inoculation, and it is almost impossible to find the

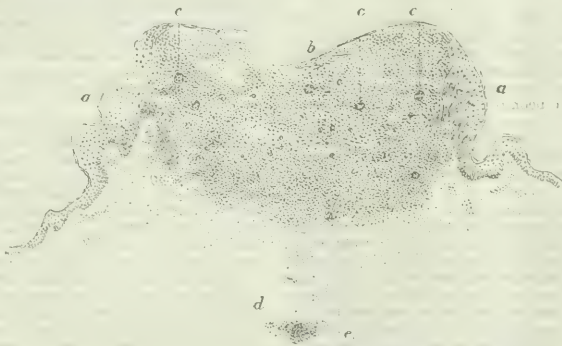


Fig. 8.—Drawing of section of pustule in skin of glanders (Case II). *a*, Thickened epidermis—acanthotic oedema. *b*, Honey layer of epidermis. *c*, Large round bodies containing many round deeply-stained masses probably balloon or swollen epidermal cells. *d*, Sweat gland. *e*, Hair or part of hair follicle from which epidermis has been torn away; cell infiltration consists of round cells (probably polymorphs for the most part). (From a drawing by Dr. H. G. Adamson.)

bacilli in the blood of acute cases in horses.

Sections of lung in Case II bear out this view. In Case II, the only one in which blood cultures were made, the *B. mallei* were only obtained in the blood drawn shortly before death, and it is most probable that this was merely a terminal infection, such as seen in many other infections. Experimentally, also, the organisms after inoculation into the veins rapidly disappear from the blood and become localized; a somewhat analogous condition was seen in Case II, where the

* Duval and White working recently with experimental glanders support this view.

organisms set up an arthritis early in the course of the illness.

Leucocytosis does not seem to be a marked feature; in two acute cases (Picher) there was no leucocytosis, whilst in one of our chronic cases there was a slight increase (19,000), but no increase of the polymorphs; and in an acute case of Wherry's there were 21,000, but he does not mention a differential count.

Agglutination Test.—In horses McFadyen has obtained positive agglutination phenomena in very weak dilutions—1 in 1,600 as compared with 1 in 300 in healthy animals. Dr. Eyre tells us that in 3 cases recently admitted to Guy's Hospital the serums agglutinated *B. mallei* in dilutions of 1 in 100. In our Case it no definite results could be obtained, and various observers have obtained different results; but at present the value of this diagnostic procedure must be regarded as indefinite.

Mode of Infection.

In none of our cases was there definite evidence of the point of inoculation or path of infection, and the general evidence, clinical and experimental, on both these questions is so conflicting that the time is hardly ripe for the expression of decided opinions. The hypothetical paths are by direct inoculation through a wound or by the hair follicles, by inhalation or by ingestion.

Direct wound infection is conclusively proved by laboratory accidents; glands has been assigned as the most frequent cause of accidental death amongst laboratory workers.

As to the hair follicles, Babes performed numerous experiments on guinea-pigs, rubbing in an emulsion of *B. mallei*, and succeeded in producing infection. Nocard, however, repeated the experiments with indefinite results.

Infection by ingestion has been definitely proved, in horses, by MacFadyen, but the comparative frequency of respiratory lesions and the infrequency of abdominal, in man, suggests that the problem will be as difficult of solution as that which has to be faced in the case of tuberculosis. Gutowski pointed out that ward infection does not occur, and in this connexion we may record that one of our acute cases on several occasions was allowed to breathe through an apparatus containing glycerinated broth, which however remained sterile. It is obvious that no stress can be laid on an experiment under such conditions. The fact remains, however, that contact, not only directly with infected sputum and discharges, but even with soiled fomites, may be dangerous.

Weichselbaum and Phillipowicz have recovered *B. mallei* from the urine, and Cao from the milk of sick mares. Cao also observes that the *B. mallei* remains virulent after passing through the alimentary canal of flies and other insects.

Although it is generally recognized that knackers and others dealing with glandrous carcasses are rarely infected, yet the case is different with man, because the disease is necessarily allowed to proceed to the bitter end; and it is only in the latest stages that the organism becomes generalized in the blood, which is then highly infectious.

Extension from a primary local lesion, if it occurs, does so in the first instance by the lymphatic vessels; and this, unlike the blood infection that may ensue, is not necessarily fatal.

Latency of the bacillus in the tissues is well recognized, for the records show many cases in which entire quiescence was observed for several years, yet admitting of a fatal outburst. Babes states that he found encapsuled glandrous nodules in the viscera—especially the lungs—of knackers and others dying of some other disease, and discusses the question of occult glands.

The incubation period varies within wide limits. For instance, in the recent Czernowitz laboratory accident the disease broke out amongst several of the staff in a few days after the scattering of the bacilli by the breaking of a centrifuge tube; in Stewart's case, after the autopsy on a guinea-pig, the first symptom appeared in six days; in Picher's case, six weeks after a bite by a glandrous horse.

In conclusion, we must express our thanks to Dr. Hebb for much valued advice; to Dr. Colcott Fox for kindly having had made for us the photomicrographs (Figs. 6

and 7); and to the staff of the hospital and to Mr. C. C. Choyce, for permission to make use of their cases.

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ANAESTHESIA IN THE HUMAN SUBJECT* WITH KNOWN PERCENTAGES OF CHLOROFORM VAPOUR.*

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INTRODUCTION.

THE theory and practice of anaesthesia are too often spoken of as distinct and even antagonistic entities. This view is founded on a misconception. Theory is based on practice, and on that alone; and if in practice by careful and accurate measurement any facts appear that are not accounted for by the theory, this must be due to some error in the latter.

There is, however, a suppressed premiss in the statement of the case that is often the unconscious basis of such ideas. It does not necessarily follow that the facts observed on healthy animals can be applied without correction to the pathological conditions often met with in the human subject. It is, therefore, by no means waste of time to examine as carefully and accurately as may be, details of anaesthesia in man that have already been carefully studied in the lower animals, and this is what has been attempted in the observations that are recorded in the present paper.

It is, perhaps, a truism to say that our knowledge of any subject is in direct proportion to the accuracy with which exact measurement can be applied to it. Yet this

* Read before the Section of Anaesthetics, Royal Society of Medicine, on December 9th, 1908.

self-evident statement is sometimes lost sight of in cases like the present, where measurement is often difficult and in some cases still impossible. But the ideal should always be kept in mind, and one should not feel satisfied with our knowledge of anaesthesia until we are able to predict exactly what effect will follow from the inhalation and absorption of a known quantity of the drug employed.

We are still very far from this ideal, but in the present paper one of the initial steps is now taken—namely, that of measuring the percentage in the inspired air.

No attempt has been made to estimate the amount of chloroform absorbed or to trace the fate of such absorbed chloroform in the body, though these factors are of supreme importance in the action of the drug. Yet in justification of the limited scope of our subject it may be urged that the percentage in the inspired air is the only factor that is under the direct control of the anaesthetist, and it is the immediate cause of all effects produced.

APPARATUS.

In order to ascertain the strength of the chloroform vapour at any moment it is necessary to deliver this from some form of machine. Two methods are available for the construction of such apparatus. The first—that employed by Snow, Vernon Harcourt, and Levy—is that where the patient draws the air through the apparatus by means of his respiratory muscles, the so-called "vacuum" system. While this method lends itself to the construction of a small and compact instrument it has the disadvantage that it places some obstruction in the way of free respiration. Whether this does much harm or not, it at least introduces an additional factor, and accordingly the second method—which has been used by Dubois, Waller, and Roth-Drager—has been preferred. In this case the mixture is supplied to the patient by mechanical power, the so-called "plenum" system.

The apparatus finally adopted after a long series of trials was of a very simple type. It has been already described in this JOURNAL.¹ Briefly, it consists of a circular copper vessel 5 in. in diameter and $\frac{1}{2}$ in. deep, which contains 150 c.cm. of chloroform; $1\frac{1}{2}$ in. from the bottom is fixed a shelf closed except for two oblong holes. Immediately above and touching this shelf is a circular plate, movable by means of a hollow rod in the centre, and pierced by two triangular apertures. These can be adjusted by the centre rod so as to expose more or less of the fixed oblong holes in the shelf, and so produce greater or smaller openings into the space below. Air (supplied from a small foot bellows or from an electric fan) enters the chamber by one tube opposite one aperture, and leaves by another tube, opposite the other, taking up more or less chloroform vapour according to the size of the apertures. A thermometer in the hollow rod indicates the temperature of the chloroform below, and a water jacket surrounding the chamber serves to keep the temperature between certain limits.

The first thing to be determined in an apparatus of this kind is the degree of accuracy with which it works under actual conditions of surgical anaesthesia, and this may be a very different thing from the accuracy obtained in a physiological laboratory. In the latter case all that is required to reduce the instrumental errors to a minimum is the careful application of the ordinary principles of physics, but in the anaesthesia of the human subject the first care is the condition of the patient, the second the necessities of the surgical procedure; and it is only when these requirements are satisfied that the observer can take the steps necessary to test the accuracy of the apparatus.

The possible errors can be classified under three headings:

1. Errors of the method used in testing.
2. Errors of the chloroform apparatus itself.
3. Unknown errors due to the necessities of the surgical procedure.

1. Errors of Method.

The percentage of chloroform was determined by means of the densimetric method introduced by Waller and Geets.² Levy³ has shown that this method gives practically identical results with that of the combustion method of Vernon Harcourt.⁴ The maximum error under ordinary conditions does not exceed 0.1 per cent.—that is,

2 per cent. vapour may be read by the densimeter as 2.05 or 1.95 at the worst. As the smallest variation that can be perceived on the patient is 0.25 per cent., this limit of accuracy is amply sufficient.

2. Errors of the Apparatus itself.

The following points were specially tested:

(a) *Errors of Repetition.*—Repeated determinations were made of percentages nominally the same. The results were:

1st Reading.	2nd Reading.	3rd Reading.	4th Reading.
Per cent.	Per cent.	Per cent.	Per cent.
(a) 1.15	1.15	1.15	—
(b) 1.3	1.35	1.35	—
(c) 1.65	1.6	—	—
(d) 2.5	2.4	2.4	2.4

These readings combine both possible errors, yet the greatest variation of any one reading was 0.2 per cent., and the usual variation about 0.1 per cent. or less.

(b) *Temperature Errors of the Densimeter.*—Waller and Geets give a formula for this correction, but as the conditions were rather different in the present series of experiments, direct determinations were made. The following values were found:

Temperature Fahrenheit.	Grain.	Mean Percentage Correction.
46.0	-0.0025	+0.23
44.5	+0.0020	—
66.6	-0.0010	+0.05
65.6	-0.0005	—
81.0	-0.0016	-0.2
81.2	-0.0015	—

Room temperature, 70° F.

These corrections have, therefore, been applied at the appropriate temperatures.

3. Variations in the Air Supply.

In the special form of apparatus used, air is pumped through the chloroform chamber in a steady stream by either a foot bellows or else by an electric fan. Both sources are apt to vary, so that the point was specially examined.

Air in Litres per Minute	Percentage of Chloroform.	Mean.
20.0	2.15 2.05	2.10
12.5	2.15 2.25 2.20 2.15	2.19
8.5	1.90 2.00	1.95

The percentage is therefore practically constant between 20 and 8.5 litres per minute.*

Below 8.5 litres per minute the percentage falls, so that if the assistant forgets to pump or the electric fan works badly no harm is done. The usual air supply is between 16 and 20 litres per minute; as it is given in a constant stream it is required to be double the normal ventilation of the lungs, which is about 10 litres per minute for the average adult.

4. The Presence of Impurities in the Chloroform.

After the apparatus has been in use for two or three hours the chloroform is often turbid from the condensation of the water vapour in the air. This in the quantities present causes a very slight error.

Normal.	With Water.
(a) 2.55	2.50
(b) 1.1	1.15
(c) 2.1	2.05

* A. G. Levy points out (*Lancet*, May 27th, 1905) that the percentage of chloroform will be independent of the air current when in any machine the stream of air is divided, so that part passes over the liquid chloroform and part direct to the patient, the perfection of adjustment depending on the relative velocity in the two paths and the amount in which viscosity comes into play in the chloroform airway. In his apparatus, which is of the "vacuum" type, the percentage was constant between the limits of 33 litres and 9 litres air stream per minute.

5. Unknown Errors in the Operating Theatre.

Finally, it might be said that under the exacting conditions in actual practice the apparatus might develop unknown errors. A typical case was therefore selected, and in the laboratory was rehearsed again in dummy, the conditions being exactly the same, except that a densimeter bulb was put in place of the patient.

Theatre Reading. Per cent.	Laboratory Estimation. Per cent.
1.0	1.1
2.5	2.4
2.5	2.55
2.5	2.4
2.0	2.1
1.75	2.7

This case is graphically represented in Fig. 1.

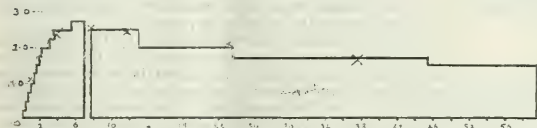


Fig. 1.—Case XXXIII. Boy, aged 9. (Undescended testicle, Mr. Collier.) Dr. Beaumont. Repetition of curve. Crosses mark the actual estimations in the laboratory.

TYPICAL CASES.

This preliminary work being disposed of, it was then possible to study the effect of known percentages on the human subject with some confidence that the nominal amounts were really administered.

The records of the first 50 cases form the basis of this communication. While this number may seem very small to the professional anaesthetist, who counts his administrations by thousands, and while it certainly is too small to allow any conclusions to be drawn as to the frequency of the more unusual occurrences, yet it is quite sufficient to provide a good deal of information on the more common features of anaesthesia in the ordinary type of case.

Full notes were taken of each administration in the customary manner. But on reflection it became evident that as two factors were accurately known—(a) the percentage inhaled and (b) the time—it was possible to plot these figures on squared paper so as to show the progress of anaesthesia in a graphic manner. Time in minutes is measured along the abscissa and the percentages of chloroform along the ordinates, and Fig. 3 may be taken as a typical curve from an average case.

Such a curve deserves a little study. The first thing that is evident is the little break in the administration that occurs about the eighth minute (more or less according to circumstances). This represents the passage of the patient from the anaesthetizing room to the operating theatre, and conveniently divides the record into two parts—(1) the period of induction, (2) the period of surgical procedure. Theoretically this break is a disadvantage, and it has always been made as short as possible. It serves, however, to mark the point at which the patient is ready for operation, and so it has been taken as the end point of the induction period.

During this time the curve indicating the percentage rises gradually, and in the majority of the cases a regular routine was followed. An arbitrary rule was made that the percentage should have the same figure as the time; in other words, during the first quarter-minute the percentage was 0.25, at the half-minute it was 0.5, in one minute it was 1, in two minutes 2. After this point the rise was made more gradually, and depended on the condition of the patient; in an average case 2.5 per cent. was reached in three minutes, and if necessary 3 per cent. in four minutes.

Several considerations determined this routine. It is necessary to remember, on the one hand, that a high percentage—over 2—is dangerous in the early periods of anaesthesia, as Waller has shown. The absorption of chloroform is most rapid in the second minute (Brodie and Widdowes), so here again a low percentage is indicated.

Further, if 2 per cent. is given at once, the patient is apt to cough and struggle, so that it is necessary to begin slowly. On the other hand, time is valuable; for most cases eight to nine minutes should suffice for induction, and no surgeon likes to wait for twenty minutes while the patient is being prepared for an operation lasting but ten. There are other reasons, which are under investigation at the present time, why it is undesirable to prolong the period of induction further than safety dictates. So that the apparently arbitrary rule that was adopted is not without justification on theoretical grounds, and experience proved that it worked very well in practice. The patients go under very evenly and gradually, there is no discomfort, and there is a marked lessening of the usual struggling or excitement; very often there is no struggling at all.

It is not possible yet to state definitely that this arbitrary rate is invariably safe, as the present series is too short to give definite data, but no sign of danger was to be seen in the induction of any of the cases.

Sometimes a slower rate was used with good results, especially in very thin nervous subjects and in children. In the earlier cases this slower rate was tried in ordinary cases, but here no advantages were seen, and many disadvantages, so that the arbitrary rate was finally adopted.

The patient was usually ready for operation in about eight to nine minutes, the minimum time being six minutes, the maximum twelve and a half (Fig. 2), so that anaesthesia with these known percentages need not take an unreasonable time.

It is possible to make some interesting comparisons with the "open" method. It is usually supposed that this is specially expeditious, but in the cases I have actually timed the induction period lasted from eight to ten minutes, sometimes longer. To judge from the condition of the patient, one would guess (it is little more) that ordinarily during this time the open cone gives more than 2 per cent. in the first two minutes, and less than 3 per cent. in the last four minutes. Exact determinations

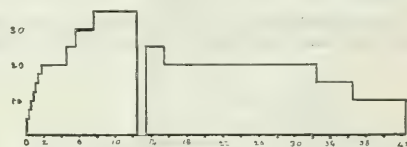


Fig. 2.—Case XVI. Female, aged 30 (Appendicitis. Mr. Clayton-Greene.) Dr. Beaumont. Stout patient taking much chloroform.

of what is really given would be of great interest. One would expect to find that while the skilled professional anaesthetist would give percentages not differing greatly from what has been suggested as the optimum, the less skilled learner is much less happy in his choice.

The second half of the curve, that which has been termed above the "period of surgical procedure," is usually (as is well shown in Fig. 3) marked by a gradually decreasing series of steps; 2 per cent. is generally required up to about the twentieth to the twenty-fifth minute

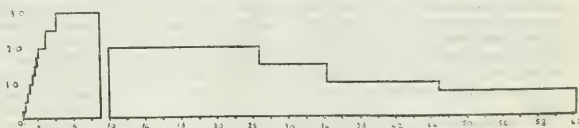


Fig. 3.—Case XXXVII. Female, aged 37. (Tenoplasty, Mr. Pepper.) Dr. Beaumont. An average case. Figures on the ordinate represent percentages of chloroform. The abscissa shows the time; each division is equal to two minutes.

(Figs. 1, 3), then 1.5 per cent. to the forty-fifth minute, but the percentages in this part of the curve vary greatly. In Case XLIX, for example, 1.5 per cent. was used from the twenty-first minute till the sixty-sixth; in Case XXX, 0.75 per cent. was given from the sixtieth minute to the one hundred and thirty-sixth, but in the majority of the cases the values are of the order given. As in any other mode of administration the percentages must be increased a little if the patient vomits, and it is well to increase the amount slightly before the skin is sutured if the

patient is on a low percentage, or if, as in gastro-enterostomy, special relaxation is required; but usually this precaution has not been necessary.

INDIVIDUAL VARIATIONS AND UNUSUAL CASES.

The description given above applies to the great majority of the fifty cases. While it is true that no two cases are exactly alike, yet when the patient is an average specimen of adult age and the operation is not one of especial difficulty, it is found the anaesthetic curves show great similarity, and it is not necessary to describe each one in detail. One can therefore turn to the next chapter—namely, the consideration of the individual variations and the unusual cases. These can be classified under four main headings: 1. Age. 2. Build. 3. Alcoholism. 4. Operation required.

With regard to these subdivisions, it will be necessary to have a much larger series of cases to enable very precise conclusions to be drawn, still certain preliminary observations can be ventured upon with a considerable degree of accuracy.

1. The Effect of Age.

No very old persons were included in the series, but there was a very definite little group of five children, with an average age of 10 years, which can be compared with the typical adult. As a rule less chloroform was required

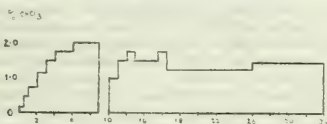


Fig. 4.—Case XI. Boy, aged 11. (Wiring fracture, Mr. Clayton-Greene). Dr. Beaumont. Takes less chloroform than the type.

(Fig. 4); one case, however, took an amount quite equal to the normal.

2. Build.

This appeared to have a marked influence. Fat persons took much more chloroform than thin, and Figs. 2 and 5

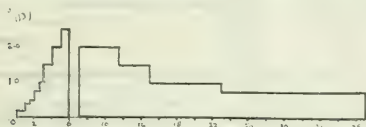


Fig. 5.—Case XIII. Male, aged 34. (Appendicitis, Mr. Clayton-Greene). Dr. Blumfeld. Slightly built and thin. Took very little chloroform.

are excellent examples. These cases had the same operation, on the same day, performed by the same surgeon, and the amount of chloroform required is much more in the case of the stout woman than the thin man. Of the 50 cases, 5 were distinctly spare and 4 very fat, and the same rule held throughout.

It must be remembered, however, that the number of cases is too few to enable a general inference to be made, and Dr. Levy has drawn my attention to a thin patient that took a quite abnormal amount of chloroform, so that other factors must have some influence on the result. Case VII is, perhaps, an example of this—there was a slight tendency to goitre, and the percentage used was much less than the average.

The subject is one of considerable interest from the theoretical point of view, and experiments on the subject are in progress. The objection might be raised that all fat hospital patients are so because they are alcoholic, and should therefore be included in the next section, but on this point no certain information was forthcoming.

3. Alcoholism.

These persons took more than the average, even when not of especially stout build (Fig. 6).

One patient, a big, muscular man of 34, alcoholic, and requiring immediate laparotomy as the result of an "accident" (he had been stabbed in the abdomen just below the liver), took so much chloroform that the machine,

even at 3.5 per cent. did not give enough, and the case was finished with the cone (Fig. 7). Here the open method must have yielded more than 4 per cent. at the least.

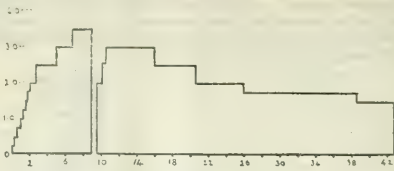


Fig. 6.—Case XXIX. (Ventral hernia, Mr. Lane). Dr. Beaumont. Alcoholic patient of average size. Takes more chloroform than the type.

4. Effect of the Operation.

The most obvious variation is shown where a very prolonged operation is necessary. Case XXX, lasting two and a quarter hours, was kept perfectly anaesthetized at 0.75 per cent. for the last ninety minutes.

A very important point was observed by Dr. Beaumont, which had been previously suspected, but of which the proof had been wanting. A patient is being kept quite evenly under, and a steady percentage—say 1 per cent.—has been given for some time. The operation procedure is of an ordinary type, and the corneal reflex is just absent. Now if the surgeon, by pulling on the parietal peritoneum, excites violent afferent impulses, the corneal reflex comes back, and the patient becomes less deeply anaesthetized even if the percentage remains the same.

Dr. Mathison and I verified this on animals, and we observed in addition that the blood pressure falls, and the respiration is quickened and increased in depth.

The inference is important. Ordinary anaesthesia is due partly to the direct action of the drug and partly to a condition closely analogous to sleep. Violent afferent impulses remove this latter factor, exactly as in poisoning by morphine, where the patient can be roused by shaking, to sink back into narcosis when the stimulus ceases.

The reflex quickening and deepening of respiration is also worth noticing from a practical standpoint. The patient in this condition is taking in more chloroform than before, and every anaesthetist is aware of the possibility of an overdose being given under these circumstances.

The account of this series would not be complete without the notes of those cases where, by mistake or other cause, the result was not what was expected. Four cases were abnormal in this respect. Case XXXIV (Fig. 7)



Fig. 7.—Case XXXIV. Man, aged 34. (Exploratory laparotomy, Mr. Pepper). Dr. Beaumont. Case requiring more than 3½ per cent.

has been already referred to, and it must be admitted that here the machine was at fault; such cases can only be dealt with by special means.

In Case XII induction was completed by the open method, but here the standard rate of increase was not adopted, and the case should hardly be counted a failure.

In Case XXXVIII death occurred two hours after the patient had been removed from the theatre. The case

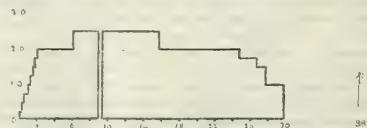


Fig. 8.—Case XXXVIII. (Hydrocephalus.) Male, aged 22. Artificial respiration at arrow (38th minute). Death two hours after removal from theatre (2 hr. 43 min.).

was one of suspected cerebellar tumour; on opening the cranium no tumour was found, and the patient's condition

became so unsatisfactory that the anaesthetic was discontinued, and the incision rapidly closed. Eight minutes after this artificial respiration became necessary, and after two hours the heart stopped. *Post mortem* there was great dilatation of the ventricles of the brain, and the existence of basal meningitis prevented the opening of the cranial cavity relieving the pressure.

Case x presented some interesting features. The anaesthetist was using the apparatus for the first time, and

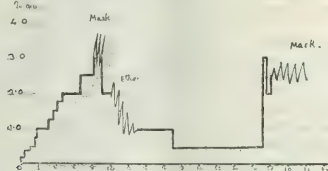


Fig. 9.—Case X. Man aged 36. (Ventral hernia, Mr. Clayton-Greene.) Description in text.

found some difficulty in translating his knowledge of anaesthesia into the percentages given by the machine. Induction was too slow (it was before the standard rate had been adopted), and when the patient was moved to the theatre a mask was placed over his face in transit. This evidently gave a higher percentage than was expected, and the result was that after a latent period of one minute the breathing became embarrassed, and artificial respiration had to be performed, ether being used to keep up anaesthesia. The patient came round in a very satisfactory manner, and then was given 1 per cent., and later 0.5 per cent. This latter amount, as can be seen from the other curves, was much too little for the stage of anaesthesia, and the patient began to recover consciousness; 3 per cent. was then hastily given, then 2 per cent., and finally the machine was abandoned and the mask used to finish the operation. The difficulties met with were evidently the result of the use of an unfamiliar method, but one valuable piece of information was disclosed, namely, that the effect of an overdose is not immediately seen, requiring about a minute to become evident.

CONCLUSIONS.

There are many things observed from time to time in this series that fall under the class of unmeasurable phenomena. It is hoped that future work may remove at least some of these into the category of accurate measurements, when they can be considered with more certainty than is now possible. Particularly would one wish that numerical values could be assigned to the individual variations and to the post-chloroform effects that are now so meagrely dealt with. But, from the facts recorded above, the following points may be noted as reasonably certain.

1. Anaesthesia with known percentages of vapour in man at least as easy and certain as by the ordinary method, even when the latter is carried out with the greatest skill.

2. If it is desired to induce anaesthesia in from eight to ten minutes, the ordinary adult must be given percentages rising to 2 per cent. in two minutes, then to 2½ per cent. in three minutes. This amount usually will suffice. There is no objection to raising the percentage to 3 per cent. in five minutes (not sooner) if it is required, *provided due care is exercised*.

3. When induction is completed, 2 per cent. is usually ample, gradual diminution to 1.5 per cent. and 1 following in about twenty to twenty-five minutes, and the anaesthesia can be maintained in this way much more easily and regularly than by the open method.

4. Children generally require less than the above amounts, 2 per cent. for the induction and 1.5 per cent. for the later stages. Some thin adults will also require less than the average, some fat, muscular, or alcoholic adults more, but the data are not sufficient to furnish more precise rules.

5. From the above it is evident that the general features of anaesthesia are the same in man as in the other mammalia. Minor points of difference are seen in the greater individual variations and in the percentages required, 2½ per cent. in man being approximately equal to

2 per cent. in the cat. When due allowance is made for these differences, it is legitimate to apply the conclusions deduced from experiments on animals to the human subject. When it is remembered how conclusively Waller has shown the much greater safety of a known percentage in animals, the importance of the inference can be seen.

Finally, it is again my pleasant duty to convey my thanks to my colleagues at St. Mary's Hospital, who have in every way given me the kindest assistance. Particularly are my acknowledgements due to Dr. Blumfeld, Dr. Collum, and Dr. Beaumont, to whom the credit of the practical success of the method largely belongs.

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ATROPHIC RHINITIS COMPLICATED BY MASTOID ABSCESS AND EXTRA-DURAL ABSCESS.

By FRED. STOKER, M.B., F.R.C.S. EDIN.

So far as I am aware atrophic rhinitis is not a common cause of mastoid suppuration, particularly in the absence of signs of middle-ear suppuration.

Mrs. M. A. S., aged 30 years, came to me on November 5th, 1908, complaining of pain over the mastoid and frontal areas. She had had atrophic rhinitis for twelve years, and had been treated in various ways without any benefit. The right ear had been partially deaf for four years, the deafness coming on gradually. She had had no pain in the ear until lately, and never had otorrhoea according to her own, her mother's, and her husband's testimony. No history or signs of syphilis or tubercle.

On November 5th she complained of intense pain over the right mastoid and frontal areas, tenderness over the same and on pressure on the right tragus. The post-auricular gland was enlarged, but as her head was infested with pediculi great weight was not attached to this, particularly as she said it had been in much the same condition for months. Temperature 103.5°, pulse 120. No rigors or signs of intracranial mischief. Both nostrils were wide and partly covered with stinking crusts. The left inferior turbinal had been removed. The septum was deflected to the right. By posterior rhinoscopy the Eustachian orifices were seen to be dilated and the walls and roof of the naso-pharynx dry, glazed, and covered with adherent crusts. On examining the right ear no perforation could be seen in the membrane, which was opaque, thick, white, and immobile with Siegle's speculum. Rinne's test was negative; the watch could not be heard at all; Weber's test was referred to the right side. There was no redness, swelling, or oedema over the mastoid process nor was the auricle displaced.

Leeches were applied in front of and behind the auricle, followed by large fomentations. Drops of a solution of cocaine and ac. carbolic. (āā gr. v) in glycerine (5j) were instilled into the ear and a purgative given.

The patient felt much relieved, had a fairly good night, and next morning (November 6th) the temperature had fallen to normal, the pulse to 96. She still, however, had a great deal of pain and tenderness. The same night she became much worse, and a swelling became apparent above and behind the auricle, displacing it downwards and outwards. Operation was advised, and early next morning (November 7th) the mastoid antrum was opened, giving exit to over a drachm of thick yellow pus. Considerable bone destruction had gone on posteriorly, therefore the lateral sinus was exposed, and a rough curet was used to remove granulations from its external aspect, it was not thrombosed. The mastoid cells were thoroughly opened up, the mastoid antrum, almost as large as a Barcelona nut, was curetted, the patency of the aditus assured, and the cavity packed with gauze. The temperature, taken immediately before operating, was 100° F.; after the operation it was normal.

From this time until November 13th, she did well generally, except that the pulse was rapid (see chart), but still complained of intermittent frontal pain and tenderness. On this date facial paralysis of the right side was noticed, but it was by no means marked. I considered it might be due to inflammatory thickening near the stylo-mastoid foramen in the death of other symptoms, and could not decide that the head pain was due to intracranial mischief, as she had no other signs of such trouble, such as rigors, vomiting, optic neuritis, spasmus of limbs, vertigo, or the pulse or temperature of brain or meningeal disease, although the two last symptoms are known to be uncertain quantities. Her mental condition was clear and alert, but she was very restless.

On November 14th the facial paralysis was worse, and at night the pain was intense, and had extended over the right side of the head. There was tenderness on pressure over the squamous portion of temporal bone. The temperature was normal, and the pulse 110. There was no vertigo or other signs of involvement of the intracranial portion of the auditory

nerve, therefore it was concluded that the paralysis was due to pressure on the facial nerve in the middle ear, where possibly the bony wall of the aqueduct of Fallopius was deficient. Extradural abscess over the tegmen tympani was considered as a probable solution of the cause of pain, and on November 15th the previous operation was extended and the complete mastoid operation performed. The middle ear was filled with granulations, and no trace of the ossicles could be seen. The cavity in the bone was enlarged by cutting upwards and the middle fossa opened. The dura was covered with granulations but did not bulge. A probe passed under the dura in a forward and inward direction entered an abscess cavity $\frac{1}{2}$ in. from the opening, and about 1½ drachms of thick, yellow, foul pus escaped. Good drainage was secured and the wound gently packed with gauze and drained posteriorly. The mastoid wound was also packed and drained through the auricle, from which a flap was cut. The temperature and pulse before operation were 99° and 100 respectively; after it they fell to 98.2 and 72. The patient became exceedingly restless in a few hours, having to be held down in bed; $\frac{1}{4}$ grain of morphine was given hypodermically and secured sound sleep for eight and a half hours.

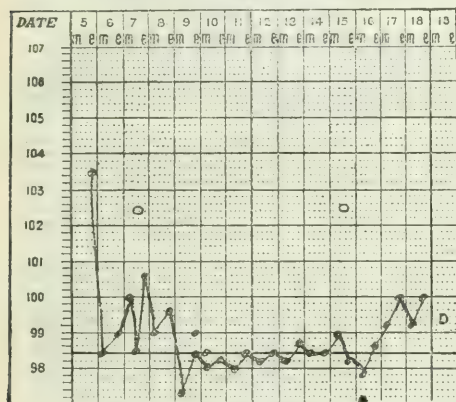
November 16th. Much quieter, but still restless; slow cerebration; no pain in head; pupils equal and active; some stiff-

It would undoubtedly have been better in this case to have explored the middle fossa at the time of the first operation, as well as the lateral sinus. This procedure would not have unduly prolonged the operation, and much valuable time would have been saved.

It has since appeared to me that a more effective route for draining the floor of the middle fossa might be obtained where the complete mastoid operation is done, if the infero-lateral opening usually made was continued inwards and forwards by removing the roofs of the external meatus, middle ear, attic, and antrum. The external semicircular canal would not be in danger if a bent probe were kept over it, and the others could be safeguarded by cutting, as before noted, inwards and forwards. (See figure.)



In the above diagram 1 corresponds to area over glenoid cavity; 2, to area over external auditory meatus; 3, to area over mastoid antrum; 4, to area over middle ear; 5, to area over Eustachian tube; 6, to area over internal ear; 7, to position of lateral sinus. The area outlined in coarse is that to be removed.



○, Operation. □, Death.

ness of back of neck; both knee-jerks very active. No other signs. Basal septic meningitis diagnosed and but prognosis given; pulse 84, temperature 97.9; facial paralysis much improved.

November 17th. Pulse 104, temperature 100°. Drowsy, restless, and irritable, reminding one very much of the picture of the first stage of cerebral irritation. Has vomited a little (one mouthful) once without retching. No pupil disturbance or other cranial symptom, except those present yesterday. Facial paralysis scarcely perceptible; taking nourishment fairly well.

November 18th. Cannot be roused. Conjunctiva insensitive. No squint, pupils equal. Pulse 132, respirations 46, no stertor. Later, pulse 144, respirations 48 and of Cheyne-Stokes type at intervals, temperature 100 F. Perfectly quiet, with an occasional gentle movement of the hands and arms, not at all convulsive in character.

November 19th. Died quietly at 8.30 a.m.; no autopsy obtained.

The infective process in this case had evidently passed from the naso-pharynx to the middle ear and destroyed the ossicles, and had also invaded the antrum and gradually rarefied the mastoid bone. No symptoms occurred, however, until the aditus became blocked with granulations or swollen mucous membrane, as until then a free road was available into the naso-pharynx for the products of inflammation. When the block occurred the symptoms appeared—the result of tension.

When the signs and symptoms set down as characteristic of intracranial disease, such as rigors, vomiting, optic neuritis, pupil changes, convulsions, hydrocephalic cry, etc., are absent, one is liable to be lulled into a false sense of security. Until the last two days of life of the patient whose case has been described, restlessness was the most noteworthy symptom. It was characterized chiefly by the continual efforts of the patient to get up on her hands and knees; she would stay in that position for a moment and lie down again. This sequence would sometimes occur five times in as many minutes.

A CASE OF OEDEMA WITH RESOLUTION BY URINARY CRISIS.

BY

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This case of what may be called a urinary crisis in a man with chronic parenchymatous nephritis is worth recording, if only on account of the phenomenal loss of 4 st. 3 lb. in four days coincident with the disappearance of oedema.

The patient, a man 27 years of age, got wet through twelve days before admission; nine days before admission he had abdominal pain, diarrhoea, sickness, and malaise; a few days later oedema was noted, and one day before admission phlebitis of the left thigh appeared. Eight years ago he had had an attack of kidney disease with oedema. On admission on July 11th, 1907, he had oedema of the legs and lower part of the abdomen, and thrombo-phlebitis of the left femoral vein. The urine—specific gravity 1028—contained a considerable amount of albumin, and showed diminution of chlorides, but there were no casts or blood. There was no hypertrophy of the heart, and the blood pressure was 100 mm. of mercury.

The phlebitis soon subsided, but the general oedema increased. On July 26th he weighed 11 st. 12½ lb.; on September 9th, 12 st. 1 lb.; on September 14th, 12 st. 10 lb.; on October 10th, 13 st. 11½ lb.; on October 16th, 14 st.; and on October 23rd, 13 st. 7½ lb. The average amount of urine passed was about 30 oz., and the intake of fluid was restricted for most of the time to 60 oz. From the time of his admission various means of reducing the oedema were employed, but without effect. He had successively and in different combinations theocin, caffeine, hot air baths, pil. digitalis co., puncture of the legs. For a period of four weeks, when in the summer Dr. Spriggs looked after the patient, the amount of fluid taken was not restricted. These measures did not have any beneficial effect. On October 5th he developed an attack of cellulitis of the left groin and lower part of the abdomen on the left side, which soon passed off. On October 16th his weight, as already stated, was 14 st.; it then slowly decreased, and a week later (on October 23rd), when it was 13 st. 7½ lb., the amount of urine suddenly increased from 48 oz. in twenty-four hours to 98 oz., and on the succeeding days was 112, 166, 180, 160, 204, 112, 138 oz. The hot-air baths were then stopped (on October 30th), and the amount then fell to 84 and 60 oz. on October 31st and November 1st; by this time the oedema had completely disappeared. On October 31st he weighed 9 st. 4 lb., having lost 4 st. 3 lb. since October 27th, and after losing 2 lb. more, his weight increased to 9 st. 6 lb., when he left the hospital free from oedema on November 12th. After the sudden disappearance of oedema he

OCTOBER.

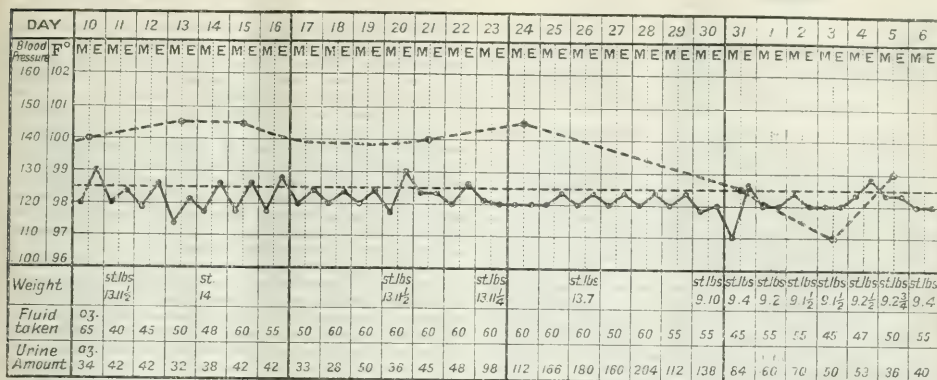


Chart showing weight of patient, amount of fluid taken, and of urine excreted in the twenty-four hours, and temperature (continuous line) and blood pressure (interrupted line), of a man with chronic nephritis who lost 4 st. 3 lb. in weight and extensive oedema in four days.

had some slight headache and felt weak, but did not suffer from thirst.

The loss of over 4 st. in four days was so remarkable that the weighing machine was carefully tested in order to exclude any fallacy, but it was perfectly accurate. The alteration in the man's appearance produced by the disappearance of the oedema was very remarkable. In 1905 Dr. Atlee and one of us (H. D. R.) recorded a case of a man with chronic nephritis who lost 4½ st. in weight in sixteen days, or at the rate of 4 lb. a day, as the result of disappearance of oedema and diuresis, which was then ascribed to the use of caffeine citrate.¹

To arrive at some understanding of the nature of this process of resolution of oedema by urinary crisis, it is necessary to recapitulate briefly the following points in the history of the above case. The patient had been given hot-air baths daily from October 15th. On October 16th his weight was 14 st. The baths caused only very moderate sweating, and during the next seven days the weight diminished only by 2½ lb. As will be seen by reference to the table, the urine fluctuated during this period between 38 to 50 oz., and similar fluctuations had been the rule during the preceding three weeks. On October 22nd the increased excretion began and continued for eight days, returning to about the normal excretion on the tenth day, whenceforward it remained fairly constant, about a mean of 56 oz. From October 23rd till October 30th the patient lost 56 lb. in weight, and, inasmuch as he still continued to assimilate an ample milk diet, the whole of the loss of weight may safely be attributed to the subsidence of the oedema. During this period the excess of urine excreted over the ingested fluid, calculated at a mean specific gravity of 1008, only accounts for a loss of weight of 39 lb., the remaining 17 lb. must therefore be accounted for.

During the period under consideration the bowels were constipated, and only open on alternate days, the faeces being very hard and firm. Since the faecal evacuations would not account for any appreciable loss of fluid, it is obvious that the loss of weight must be attributed to the increased secretion of sweat,² which during this period was very profuse; the patient lay in a constant bath of perspiration, and his sheets had to be changed frequently. It is true that during the whole of this period the hot-air baths were continued daily, but the loss of weight due to the influence of the baths has been shown to have only averaged 3 lb. in seven days before the onset of the crisis, so that during the crisis the loss of weight by sweating must have averaged 2½ lb. a day.

The blood pressure was recorded at intervals during the whole period of his illness, and was practically stationary at 140 mm. Hg till the day after the onset of the crisis, when it began to fall, reaching 130 mm. Hg on the fourth day, at which point it remained stationary till the patient's discharge. The cause of the subsidence of the oedema cannot therefore be

sought in an increased activity of the heart, nor can the fall of blood pressure, coming as it did after the first day of the crisis, be interpreted as other than that due to relief of the peripheral constriction caused by the subsidence of the oedema. Unfortunately during the crisis it was not possible to carry on observations on the urine other than a perfunctory record of the specific gravity.

The case is of interest on account of the light that it throws on the problem of oedema. The well-known *verdünnungsversuch* of Kovesi and Röth-Schulz² has directed attention to the incapacity of the nephritic patient to deal with increase of the water ingested. These authors consider the inability of the kidney to deal with increased amounts of fluid, as evidenced by the insufficient increase of diuresis and diminution of molecular concentration, to be an almost constant phenomenon in cases of parenchymatous nephritis. Cases occur in which the kidney shows an ability to deal with increased ingestion of water hardly below that of the normal kidney, and v. Noorden³ has shown that in such cases, in spite of their efficiency in this direction, there may be a well-marked oedema. Though oedema must be, of course, an expression of the retention of water, such retention may occur in spite of the ability of the diseased kidney to deal with an increase of water ingestion as efficiently as the normal one. A survey of the charts of this patient during the several weeks preceding the crisis gave no indication of considerable inability to deal with the slight increases of ingested water that had occurred during the course of his dietary, and, in order to set the question at rest, it was decided a month after the occurrence of the crisis to subject him to the *verdünnungsversuch* of Kovesi and Röth-Schulz.

A case of syphilitic nervous disease with normal kidneys and of about the same weight was selected for comparison and investigated by one of us (F. L. G.). The results are summarized in the following table:

	Normal.	Nephritis.
8 to 12 a.m.	70 c.cm. passed; Δ 2.05	115 c.cm.; Δ 1.75
1 to 2.30 p.m.	Given 1,200 c.cm. soda water	200 c.cm.; Δ 0.75
3.15 p.m.	160 c.cm. passed; Δ 0.80	200 c.cm.; Δ 0.75
4.15 p.m.	201 c.cm. passed; Δ 0.64	120 c.cm.; Δ 0.8
5 p.m.	150 c.cm. passed; Δ 0.15	94 c.cm.; Δ 0.12

Δ = freezing point of urine. After about three hours diuresis ceases.

The mean results show that in this case of nephritis there appeared to be no incapacity to deal with a large increase of ingested fluid. In both cases, when the mean nitrogen excretion was taken on days when the total fluid diet was 700 c.cm., and on a day when the fluid was increased to 2,300 c.cm., there was an increase of the total

nitrogen and chlorides during the period of diuresis. In the case of the normal man the nitrogen increase was 5 per cent., and the chlorides 2 per cent., and in the case of nephritis the nitrogen increase was 7 per cent. and the chlorides 3 per cent. It is therefore possible that the absence of an equivalent diminution of the freezing point in Kövesi and Röth-Schulz results was due to the washing out of retained products of excretion in the nephritic cases.

A case like the one recorded here would apparently offer an argument against the attempts to reduce oedema by decrease in the ingested water, and indeed there would appear to be much to be said in favour of Strauss's view that such a decrease may be dangerous. If the retention of water be not due to the inability of the kidney to excrete it—and this seems to be proved in this case by the fact that the increased water excretion was effected to a great extent by the skin—such a retention is probably a response to the increased osmotic tension of the tissues due to retained products of excretion. It is not enough to show, as v. Noorden and his pupils¹ have done, that the excretion of solids is not impaired by restricting the water given, we may still be depriving the organism of the protective mechanism by which the retained solids are prevented from disturbing the normal condition of the tissue cells, and such treatment may precipitate the onset of uraemia.

As to the cause of onset of these urinary crises when both kidneys and skin glands suddenly pour out the retained fluid, we are still in the dark. It is obviously of great importance that in such cases there should be records of the elimination of the nitrogen and salts both before and during the crisis.

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Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

IODINE FOR STERILIZATION OF THE SKIN OF OPERATION AREAS.

THAT the importance of this subject is fully recognized by most operating surgeons is well shown by the numerous methods which are practised, and which need not be enumerated.

They are based on the knowledge that germs of various kinds lurk in the depths of the true skin, as well as superficially, and that they have an unhappy tendency to sweat on to the surface during the operation, and to infect the wound. The amount of labour expended on attempts to sterilize the operation area is very great, and the consumption of material correspondingly large. Occasionally, owing to "over-preparation," eczema results. For military or naval surgeons it is important to secure some method which is certain, rapid, and capable of being effected with a minimum of assistance and materials. For emergency work in private practice the method which I am about to advocate would be very useful. It consists in the use of a 10 per cent. spirituous solution of iodine. The idea is not in any way original, for I first learnt of it from a note of a paper by Dr. A. Grossich, of Fiume, in the *EPITOME OF THE BRITISH MEDICAL JOURNAL*, of November 21st, 1908. Since that date the whole of my operation cases have been prepared as follows:

The evening previous to operation the patient has a hot bath, using plenty of soap, but excessive scrubbing of the operation area is not permitted. It is then shaved, washed, and a piece of dry lint bandaged on. Nothing more is done until the patient is on the table. If eucaine is being used the area is *freely* painted with 10 per cent. spirituous solution of iodine (practically the liniment) and the eucaine injected. Before making the skin incision the area is painted once more. In the case of a general anaesthetic the iodine is painted before the administration is begun, and again when the patient is ready.

Preliminary scrubbing and wetting is not desirable, for Grossich points out that the superficial layer of the epidermis is not an absolutely compact tissue. The cells are loosely packed, and intercellular spaces exist which communicate with the external air by microscopic clefts. These clefts, which contain fat, sweat, and bacteria, are readily penetrated by an alcoholic solution of iodine, which dissolves their contents. On the other hand, in the method of cleansing commonly practised these clefts are likely to be closed by the swelling of the cells which is caused by hot water; or their contents may be retained by water and microscopic fragments of soap. For these reasons it is much more difficult to disinfect the skin by liniment of iodine after it has been cleansed by soap and water than if it had not been so cleansed and is quite dry. At the end of the operation the sutures are painted.

The following operations have been performed under this method: Appendectomy, radical cures of hernia and varicocele, hammer-toe. In every case healing by first intention has resulted. The number of operations—30 in all—is not great, but it enables me to state that I have obtained just as good results from using this very simple method as when I had the skin prepared the day before and again on the table, using turpentine, ether, soap, and mercury biniodide. The labour involved is enormously diminished, and a great saving of material is effected.

The potency of iodine as a sterilizer of such septic material as catgut is now well known, and it is only reasonable to expect just as good results in the sterilization of the skin.

F. J. W. PORTER,
Major, R.A.M.C.

Colchester.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

WESTERN INFIRMARY, GLASGOW.

(Notes of cases under the care of Dr. J. CRAWFORD RENTON.)

1. Gastro-enterostomy and Pylorotomy.

J. M., sailor, aged 62, was sent to me by Dr. Whitehouse, suffering from dilatation of the stomach and an indefinite pyloric tumour. On opening the abdomen the tumour was found to be movable, with no evidence of disease of the liver. A small section of the tumour was cut out for examination. Gastro-enterostomy was performed. Professor Muir's report on the section was adeno-carcinoma. The patient recovered well from the first operation, and in three weeks pylorotomy was performed in the usual way. One or two glands were enlarged and were removed along with the others. The patient progressed favourably, and has gained 8 lb. since the operation two months ago.

2. Gastro-enterostomy for Duodenal Ulcer.

A. D., aged 35, was placed under my care by Professor Stockman. There had been severe haemorrhage in June when I first saw him with Professor Stockman, but his condition then was too serious to advise operation. The haemorrhage recurred in October, and he returned. Posterior gastro-enterostomy was performed (Mayo's method) and the duodenal ulcer blanket-stitched. He did well and has gone home.

3. Gastro-enterostomy for Ulcer of the Stomach.

M. A., female, aged 37, was sent to me by Dr. Monie of Airdrie, with symptoms of ulcer and pyloric contraction. On opening the abdomen a large ulcer was seen to occupy the lesser curvature of the stomach, with so much induration around it that a pseudo-bourglass contraction existed. Gastro-enterostomy was performed posteriorly. The patient made a good recovery and has gone to the country.

4. Cholecystotomy for Gall Stones and Suppuration.

B. R., male, aged 19, was sent to me on account of intense pain over the gall-bladder region. On opening the abdomen the gall bladder was found full of pus. A stone the size of a hazel nut occupied the cystic duct, and, along with several others, was removed. The patient recovered.

It is so unusual to have gall stones in one so young that I think it right to record the case.

5. Cholecystotomy for Gall Stones and Suppuration.

Dr. William MacLennan asked me to see L. C., aged 28, complaining of intense pain in the gall-bladder region, with high temperature, and, in addition, severe pain in the right thigh. There was no evidence of any swelling in the thigh, and the pain appeared to be one of those reflected pains concerning which Dr. MacKenzie of London has written so ably. The abdomen was opened, and the gall bladder was found full of pus; seven stones were removed. On recovering from the anaesthetic the first remark the patient made was, "The pain in my leg is quite away." The gall bladder was drained in the usual way, and she is now quite well.

6. Kraske's Operation for Epithelioma of the Rectum.

P. D., aged 21, came under my care for epithelioma affecting the middle part of the rectum. Kraske's operation was performed, the sphincter being retained. The patient recovered without any fistula.

Two cases operated on three years ago remain quite well. I still think favourably of this operation in suitable cases. Unfortunately patients do not come early enough.

7. Excision of the Knee-joint for Rheumatoid Arthritis.

M. P., female, aged 34, the subject of general rheumatoid arthritis, was placed under my care by Professor Stockman, as the knee-joint had become fixed at a right angle. An x-ray examination showed spikes on the femur and tibia in various directions. Excision of the knee-joint was performed, and the patient is now walking about free from pain.

8. Appendix Cases.

While continuing to be satisfied with the Fowler position, along with saline infusion into the bowel in cases of gangrenous appendix with abscess, as also in general peritonitis, I think we have helped eight bad cases recently by using a double dose of antistreptococcic serum into the rectum, which is repeated if necessary.

9. Laminectomy for Pott's Disease.

Two cases were noted in the BRITISH MEDICAL JOURNAL, one three and a half years ago, the other eighteen months ago. An opportunity was afforded recently of hearing of them, and it is satisfactory to record that they are both quite well. The laminectomy was only performed after all other means had been used.

10. Hysterectomy for Fibroid (Chorion-Epithelioma?).

A. F., aged 44, was sent to my care by Dr. Haldane, of Bridge of Allan. She gave a history of considerable haemorrhage. I advised operation, and hysterectomy was performed in the usual way. The appearance of the tumour led me to request an examination by Professor Muir and Dr. Teacher. Their report is as follows:

The uterus proves to contain the remains of a hydatidiform mole. There is the usual large amount of infiltration by trophoblastic elements, and there are large masses of trophoblastic cells (chorion-epithelial). While this is not absolutely diagnostic of chorion-epithelioma, it suggests very strongly that danger of development into this tumour was present.

THE General Association of French Medical Practitioners, which was founded on August 31st, 1858, will celebrate its jubilee in April, 1909.

An international congress for the amelioration of the condition of the blind will take place at Naples this spring. Questions relating to the training, education, work and rights of the blind will be discussed. Arrangements have been made for a joint meeting with the Congress of Ophthalmology, which is to be held at Naples at the same time.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Friday, January 22nd, 1909.

J. PORTER PARKINSON, M.D., in the Chair.

Rheumatoid Arthritis.

THE CHAIRMAN showed a case of rheumatoid arthritis in a young child.

Dorothy G., aged 2½ years, began to suffer from swollen and painful joints in June 1908; the ankles and wrists were first affected, then the knees, elbows, and other joints. There was much pararticular swelling, with excess of fluid in the joints. The joints were at times acutely painful, and the temperature rose occasionally to 103° or 104°. There was much wasting, and the child had a pallid earthy tint of skin, and appeared to be suffering from a slow toxæmia. There was general enlargement of the lymphatic glands, especially in the axillae and groins. The spleen was much enlarged, extending four finger-breadths below the costal margin. Over parts of the trunk and legs was a diffuse brown pigmentation resembling that seen in adults suffering from the same disease. The lungs and heart were normal. There was extreme wasting of the muscles of the legs and forearms. Intervals of pyrexia alternated with fever, often up to 103° F. or higher, lasting for a week or so, during which the joint pains and swelling, the lymphatic and splenic enlargements, and the cachexia were all much increased.

There had been great improvement during the last six weeks both in the general and local symptoms.

Dr. MILNER BURGESS said he thought the name "rheumatic" should be dropped in connexion with such cases, as it seemed to be the general opinion that there was no relation to rheumatism.

Dr. E. I. SPRIGGS said that occasionally, on seeing a case for the first time, there seemed to be some difficulty in diagnosis between subacute or chronic rheumatism and rheumatoid arthritis, though that difficulty generally vanished when the case was carefully gone into. Recently he showed before the Clinical Section an adult male with true rheumatoid arthritis who had enlarged glands in the groin, axilla, and above the elbow; he also had exophthalmic goitre. In the latter disease there was frequently pigmentation, and in chronic infective arthritis in adults. Exophthalmos had also been described in connexion with Still's disease, though he had never seen it. The spleen was probably enlarged in children because that organ responded more easily to infective conditions in them than in adults. He mentioned a case like that of Dr. Parkinson's in which material had been obtained from the joint, but efforts to cultivate a micro-organism were fruitless.

Dr. PARKES WEBER asked whether von Pirquet's reaction for tubercle had been tried.

Dr. PARKINSON replied that he used the term "rheumatoid," and agreed that such cases should not be called "rheumatic." Dr. Spriggs's case of rheumatoid arthritis in which glands were enlarged was interesting in showing the link between the cases in children and in adults. He did not think the case was tuberculous, but would try the reaction.

Congenital Cystic Disease of Kidneys.

Dr. T. R. WHITFAM showed a specimen from a case of congenital cystic disease of the kidneys, and a skiagram taken during life. Both kidneys were from a male infant, aged 11 months, who was brought up for whooping-cough and found to have an enlarged abdomen with bulging in both flanks and some dilated superficial veins. Two masses could be felt symmetrically situated, and the anterior edges extended from the costal margin to the middle of Poupart's ligament. The tumours were slightly movable, and the percussion note over them was dull. The liver could be felt 1½ in. below the costal margin. The abdomen had been noticed to be large since birth. The specific gravity of the urine varied from 1005 to 1010. The urine contained a varying amount of albumen, from 0.1 to 0.8 per cent. The quantity of urea was from 0.4 to 1.8 per cent., the total being from 1.05 to 3.12 grams per diem. The child, who was not greatly troubled by the cough, became rapidly worse. A transient oedema of the hands

and feet occurred for a few days, and towards the end the liver became enlarged and some purpuric spots appeared on the trunk. Death was ushered in by convulsions. The kidneys weighed 7½ oz each. They were uniformly pale and tough, and showed little difference between the cortex and medulla. They were crowded with innumerable cysts, the largest being the size of a very small pea. The capsules were somewhat adherent. The pelvis were dilated and contained a deposit of uric acid sand, but the ureters were normal and there was no obstruction to the flow of urine.

Dr. PARKES WEBER congratulated Dr. Whiplam on having diagnosed the condition during life. In his opinion, however, congenital cystic disease was not the only disease which might give rise to enlargement of both kidneys and albuminous urine in a child. He had published a case which showed diffuse lymphocytic growth of both kidneys.

Dr. ROBERT HUTTON asked whether congenital cystic kidneys were ever unilateral, as he had made such a diagnosis in an adult case. He could recall two other cases in which the diagnosis was made during life. If a nodulated tumour could be felt in both loins and there was suspicious urine he thought the diagnosis was justified.

Dr. CAUTLEY said he thought the diagnosis could be justified if only one kidney was felt, as there were several cases on record in which one kidney showed signs and the other was found *post mortem* to be also cystic.

Dr. FORSYTH quoted a case in which two enormous cystic kidneys were found *post mortem*, but only one had been felt.

Fibrosis of Lung.

Dr. JEX BLAKE showed a case of fibrosis of the left lung of considerable standing in a child aged 8 years.

There was a history of phthisis on both sides of the family. The patient had whooping-cough at 12 months, and "pneumonia" at 4; no other illnesses. At 5 he was admitted in April, 1906, to St. George's Hospital with fibrosis of the left upper lobe and bronchitis; while in hospital he showed irregular fever, 99° to 101° every evening. In January, 1908, he was admitted to the Victoria Hospital with the complaint of cough and wasting; the signs of fibrosis at the left apex were more marked, and there was slight clubbing of the finger tips. While in hospital he coughed little, and no sputum could be collected; the temperature was irregular, rising occasionally to 99° to 100°.

On January 12th, 1909, he was brought to the hospital again, with a history of cough and general illness for one week.

No sputum had been obtained since he had been in hospital.

The x-ray examination showed general opacity of the upper part of the left lung; the heart was drawn over to the left; the diaphragm was low, and moved poorly on both sides.

The chief point of interest about the case was that on admission it showed Grocco's paravertebral triangle of dullness on the right side behind.

The CHAIRMAN asked the opinion of members on the value of Grocco's triangular dullness. He believed the sign to be present in this case, but some had said that it was present in every child whether healthy or diseased.

Dr. EWART said that in his hands the Grocco sign had been valuable as a sign of fluid, but it was, of course, necessary to exclude the presence of dullness from consolidation. The crucial test was to change the position of the patient, and if the fluid was free the triangular dullness should disappear, and should return on restoring the body to the former position. Empyema, not being commonly free, did not answer to this test. When fluid filled the peritoneal cavity and raised the diaphragm, Grocco's sign could be found as a big equilateral triangle bisected by the spine.

Infant Mortality as Seen in a Children's Hospital.

Dr. DAVID FORSYTH read a paper on Infant Mortality as seen in a Children's Hospital. An exact pathological knowledge of the causes of infants' deaths was of the greatest practical importance from the point of view of prevention. Hitherto our principal guide in this matter had been the official returns of the Registrar-General, which showed the relative importance of various diseases in this connexion. These returns, however, were in some cases difficult to harmonize with the experience in the wards and *post-mortem* room of a children's hospital. Conditions known to be frequent causes of death in hospital practice occupied a relatively insignificant place in the official returns, whilst others which were officially important were in practice unimportant. With the object

of obtaining statistics based on accurate death certification, Dr. Forsyth had examined the death records of the Evelina Hospital for Sick Children from January 1st, 1885, to December 31st, 1906, and had analysed the causes of 1,202 consecutive infant deaths under one year. The numbers in this series were as follows:

Acute lung diseases, 254; diarrhoea, 188; whooping-cough, 135; tubercle, 128; marasmus, 78; congenital defects, 75; syphilis, 55; septic conditions, 44; intussusception, 34; mastoid disease, 32; meningitis (non-tuberculous), 26; rickets, 13; convulsions, 13; all other diseases, 127. Total, 1,202.

The method adopted in tabulating these cases was explained, and reasons were given to show that a comparison with the returns for England and Wales was permissible. For reasons specified, the three items—prematurity, measles, and whooping-cough—were excluded from the comparison. Under the remaining headings, the mortality in the official and in the Evelina Hospital returns stood thus in percentages:

	Evelina Hospital.	England and Wales.
Acute lung diseases	23.8	21.40
Diarrhoea	17.6	23.30
Tubercle	12.0	5.10
Marasmus	7.3	16.30
Congenital defects	7.0	6.50
Syphilis	5.2	1.50
Septic conditions	4.1	—
Intussusception	3.2	—
Mastoid disease	3.0	—
Meningitis (non-tuberculous)	2.4	2.00
Rickets	1.2	0.59
Convulsions	1.2	12.20
Injury at birth	—	0.75
Starvation	—	0.70
Other causes	12.0	10.16
	133.0	100.00

Whilst a fairly close correspondence existed between the two series, many striking differences must be noticed. Acute lung trouble and congenital defects showed no great divergences. With diarrhoea, the somewhat smaller figure that represented the Evelina Hospital mortality was accounted for by two facts. In the summer, when diarrhoea was rampant, the accommodation in children's hospitals was overtaxed, and even moribund cases might be sent away. Secondly, it was probable that some of the deaths in the official returns which had been ascribed to diarrhoea would have been registered under other headings if facilities for *post-mortem* examinations were as great in general practice as in hospitals. With regard to marasmus, a difference of more than 100 per cent. existed between the two series of figures. Since the official returns represented over 15,000 dead infants, its interpretation possessed wide practical importance. Marasmus was a term of vague significance, and was often employed in connexion with diseases of which it was merely a symptom, especially with syphilis, improper feeding, and tubercle. It could not be doubted that deaths from these causes were sometimes registered as due to marasmus, and that a proportion of them should be distributed under other headings. These criticisms applied even more forcibly to deaths from "convulsions," the official returns for which were no less than 1,000 per cent. of the Evelina figures, and represented 11,000 deaths. The term "convulsions" under no circumstances represented more than a symptom, and when employed as a cause of death merely hid under a meaningless designation important fatal conditions, the returns for which were unduly minimized. With regard to syphilis, this disease was held responsible in 1905 for only 1,200 infant deaths in the whole of England and Wales—little more than 3 a day. In the same year, however, 19,000 infants under 2 months were

stated to have died from prematurity. Probably this large figure included the deaths of numbers of syphilitic infants. As a matter of fact, the deaths in 1905 from syphilis of infants under 3 months amounted only to 300 according to the official returns. Other deaths from this cause must be looked for under the heading "marasmus." With regard to rickets, the hospital figures were twice those for England and Wales. Here it must be remembered that cases of rickets were often fatal from bronchopneumonia or diarrhoea, and the primary condition was likely to be overlooked. After referring to acute mastoid disease as a cause of infant mortality, Dr. Forsyth passed to the question of tubercle. The Evelina Hospital figures included only those cases in which tubercle was the actual cause of death, and excluded all in which, though a tuberculous lesion was found *post mortem*, death resulted from some other cause. The difference in the two series was probably to be explained by the tendency of tuberculous disease in infants to simulate other non-tuberculous affections. Probably the hospital figure, 12 per cent., more nearly represented the real mortality than the official figure, 5 per cent. The frequency, however, with which life was destroyed by tuberculous infections incurred during infancy was underestimated even by this larger number, because many such cases did not die until their second year, and their deaths did not come into the infant mortality returns. The full importance of tubercle as a factor in infant life would be better revealed by statistics dealing with deaths up to 15 or even 18 months. At the Evelina Hospital 50 children died of tubercle between these ages. Many, if not most of them, must have been infected during their first year. In conclusion, Dr. Forsyth expressed the hope that these Evelina Hospital statistics would lead to the preparation of corresponding figures from the records of other children's hospitals. An accurate knowledge of the causes of infant mortality could be best obtained from those institutions in which special opportunities existed for ascertaining the exact causes of infant deaths. If, further, the absolute numbers in each series were published, they would be in a position to draw valuable conclusions based on many thousands of cases. At present 20 per cent. of the mortality, representing 25,000 deaths, was attributed to vague symptoms. When the community had set a proper value on infant life, such terms as "convulsions" and "wasting" would no longer be accepted for death registration. If no more satisfactory explanation of the cause of death were forthcoming further steps would be insisted on, as was done to-day with adult deaths. By this means a far-reaching and practical measure would be taken to diminish the present excessive waste of infant life.

The CHAIRMAN said the Section was much indebted to Dr. Forsyth. He commented on the few deaths attributed to rickets being put under the heading of the terminal trouble, whatever it might be.

Dr. DUDFIELD said that Dr. Forsyth had shown a classification of deaths on a strictly scientific principle, which could not be said for the Registrar-General's classification. The Registrar-General's rule that if the duration of the disease was not mentioned on the death certificate the first disease on the list should be taken as the cause of death led to some curious results. For instance, syncope would be mentioned first and diabetes second. In a case of bronchopneumonia or tubercle and whooping-cough, whooping-cough was usually selected for the cause of death. "Marasmus" was a very favourite term with the profession.

Dr. HUTCHISON expressed surprise that mastoid disease was responsible for 3 per cent. of the deaths. He did not think that this would be found to be the case at the Great Ormond Street Hospital. Might it be due to the large amount of whooping-cough treated at the Evelina?

Dr. MEREDITH RICHARDS said that marasmic children admitted to hospital would have proper treatment and many of them would recover; whereas, if they were not admitted to hospital, death was more likely to occur. In tubercle also there was a large amount of selection. Therefore, it was necessary to take precautions when comparing hospital figures with those gleaned from the community in general.

Dr. W. EWART said that a *post-mortem* basis seemed to

be the only reliable scientific one. The difference in statistics from a hospital and those from sources remote from hospitals was an index of the progress of medical science.

Dr. CAUTLEY, after congratulating Dr. Forsyth on his energy in regard to the paper, went on to say that the conditions of hospital practice were so different from those in everyday life that he doubted the applicability of the results. He would have liked to have known the ages or the mean age of the cases.

Dr. FORSYTH, in reply, said that it was from the scientific aspect that he regarded the figures. The methods adopted in tabulating death registration were different from those in a hospital. He understood from Dr. Duffield that if a child died from septic meningitis or mastoid disease twelve months after having suffered from scarlet fever, the death was attributed to scarlet fever. That was misleading. Another point was that his statistics were taken over a period of twenty-three years. Twenty-three years ago the death-rate from mastoid disease was probably much higher than now, and no doubt now it was less than 3 per cent. He had tried to show that a diagnosis on clinical data was not always a true one, *post-mortem* examination giving the most accurate figures.

OBSTETRICAL AND GYNAECOLOGICAL SECTION

Thursday, January 14th, 1909.

HERBERT SPENCER, M.D., President, in the Chair.

Histology of the Smaller Myomata.

Dr. FLORENCE E. WILLEY read a paper on this subject. She said sections of young myomata, from 5 mm. diameter upwards, illustrated the following points:

1. That the proliferating cells in growing tumours were muscle cells.

In sections from patients, aged 30 to 40, with enlarging uteri, the areas of proliferation showed less connective tissue in proportion to the muscle than was found in non-proliferating muscle bundles of the same uterine wall, and the muscle nuclei were oval to rod-shaped; whereas seedling tumours past the menopause consisted largely of fibrous tissue, and the muscle cells had narrow rod-shaped nuclei.

2. The cells which proliferate were not those of the vascular system, but cells common to the whole uterine parenchyma.

3. The shape of early growths was most various, depending on the direction of the muscle bundles concerned rather than on any relation to vessels, large or small. Capsule formation began later, when the growing tumour assumed an oval or spherical shape.

4. Subperitoneal fibromyomata often began by proliferation of the muscle bundles immediately beneath the peritoneum, and capsule formation in these was first seen on the site adjoining the uterine wall.

5. In sections of sixty to seventy uteri of all ages no fibromatous seedling had been found before puberty, and those in women past the menopause consisted largely of fibrous tissue.

The author concluded that fibromyomata arose as irregular patches of proliferation of muscle cells of the uterine parenchyma, which had no special relation to the vascular system. The cause of this proliferation was unknown, but the absence of growing tumours before puberty and after the menopause suggested some relation to the activity of the sexual organs.

The PRESIDENT corroborated Mrs. Willey's statements as to the absence of capsules in many small fibroids, and had been surprised to hear it asserted that they always had capsules.

After remarks by Dr. HEYWOOD SMITH and Dr. MACNAUGHTON-JONES, Mrs. WILLEY replied.

Remote Results of Abdominal Hysterectomy.

Mrs. STANLEY BOYD gave the remote results and *post-mortem* findings four and a half years after operation in a case of abdominal hysterectomy for cancer of the cervix, followed by vesico-vaginal fistula. Vesico-vaginal fistula developed six days after the operation, but was small, and gave the patient comparatively slight inconvenience, so that she persistently declined operation for its closure. The case was watched for four and a half years, during which time there were intermittent attacks of pyuria, which were attributed to suppuration in the neighbourhood of the bladder bursting into it. In August, 1908, the patient was admitted into the Great Northern

Hospital with suppuration about the right kidney, under Mr. Peyton Beale, too ill for anything but incision of abscesses and palliative treatment. She died September 12th, 1908. The *post-mortem* examination showed no recurrence of growth, but complete occlusion of the right ureter at its vesical end, where it was embedded in a mass of cicatricial tissue, right pyonephrosis, perinephric suppuration, subdiaphragmatic abscess, and right empyema.

The PRESIDENT said he had often wondered what happened to patients with ureteral fistulae when the fistulae closed, as Wertheim had shown that they frequently did, and whether the extensive removal of the tissues around the ureters might not lead to cicatricial obstruction of these tubes.

Dr. A. H. LEWERS said that he had had a case of vaginal hysterectomy for carcinoma of the body of the uterus many years ago, in which a ureteral fistula had developed. Nothing of an active kind was done for it, and some months later the fistula healed. The patient was seen several times subsequently, and there was no evidence of anything wrong with the kidney.

Dr. G. F. BLACKER had had three cases of ureteral fistula occurring after total abdominal hysterectomy. In the first case, owing to septic changes, the corresponding kidney had to be removed, and this was followed by complete recovery. The second case developed an attack of acute suppression of urine, lasting twenty-four hours, about five weeks after the operation. The patient recovered and the fistula healed. In the third case the patient developed a high temperature a month after the operation, and the *Bacillus coli* was found in the urine. Eight weeks after the original operation the patient died with symptoms of pyaemia, and at the *post-mortem* examination a small abscess was found at the site of the fistula.

Mrs. STANLEY BOYD replied.

The Role of the Perineal Body in Labour.

Dr. R. H. PARAMORE read a paper on the rôle of the perineal body in labour. He stated that the perineal body played no part in the support of the viscera, nor did its rupture facilitate prolapse. Yet the perineal body exercised a far-reaching influence during childbirth which was neither necessary nor good. In the descent of the fetal head through the outlet of the pelvis, the pelvic floor became transformed into a broad, gutter-like declivity, at the lower end of which the posterior commissure of the pubo-rectalis muscle is found. The dilatation of the anus and the increase in length of the base of the perineal body showed how much the tissues below the pelvic floor stretched. The tension of these thinned-out peritoneal tissues determined the more forward projection of the anterior segment of the head, the head being ovoid in shape. If the vulvar aperture was destroyed by a laceration, the movement forward of the anterior segment of the head did not occur. It was evident that a perineal tear, by allowing birth with the least possible distension of the muscle, might undoubtedly in many cases prevent an injury which predisposed to prolapse. An early peritoneal tear might be a blessing in disguise. Perineal tears, when they did not involve the sphincter, were trifling injuries, and the only reasons for suturing them were to check haemorrhage and prevent infection. The main mass of the pelvic floor musculature passed behind the anal canal and remained intact, in spite of such a tear. The continued extension of the head could be prevented by adopting the method of Toff. When the head appeared at the vulva, two fingers were placed between it and the pubes, and traction exerted backwards. Simultaneously the head might be pressed downwards and forwards from above the anus.

Dr. MACNAUGHTON-JONES said he would be sorry to think that it should go out from this Section that there should be any divergence from the obstetrical rule of at once closing a perineal tear. Rectocele and vesicocele constantly occurred with what Howard Kelly called "relaxed vaginal outlet," where there was no apparent laceration, but in which the perineum was weakened.

Dr. AMAND ROUTH thought that there could be no possibility of doubt that the perineal body serves many useful purposes, and that its integrity was essential to the

preservation of the tone of the vaginal and vulvar outlet.

LARYNGOLOGICAL SECTION.

At a meeting held on January 8th, Dr. DUNDAS GRANT, President, in the chair, a discussion took place on the *Modern treatment of syphilis*, especially with regard to the upper respiratory tract. Dr. LIEVEN (Aix-la-Chapelle), who opened the discussion, referred to the recent advances in syphilology, including the identification of the *Spirochaeta pallida* and the detection of specific antibodies in the serum of people infected with syphilis. No serum-therapeutic treatment had, however, been found effective. The chief remedies were still mercury and iodides. Mercury had been proved by Neisser, by experiments on anthropoid apes, to assist the organism to defend itself against the spirochaete, and also to kill the microbe. Atoxyl was found experimentally to produce the same results, but if given in sufficiently large doses to be effective it was dangerous to the optic nerve. In the administration of mercury Dr. Lieven advocated inunction and subcutaneous or intramuscular injection, and compared the advantages of soluble and insoluble salts for injection. His preference was for calomel as far as effectiveness was concerned, but he reserved it for the malignant forms, the salicylate being more suitable for routine treatment. These salts should be avoided in cases of Bright's disease or diabetes. Inunction was better tolerated if combined with baths of soap and sulphur. The secretions of the sebaceous and sweat glands rendered it capable of being absorbed and of circulating in the body as an albuminate. Stomatitis was best combated by brushing the teeth after each meal with a paste of salol and chlorate of potash, and by rinsing the mouth every hour with a solution of aceto-tartrate of aluminium. Iodides were most useful in tertiary manifestations, but were also effective against secondary vegetating patches at the entrance of the nasal passages and on the floor of the nose. Iodism was often removed by the daily administration of 15 grains of sulphuric acid in 7 oz. of water. Iodipin might be substituted for those who were very sensitive to iodides. Dr. Lieven thought that there was not yet sufficient evidence in favour of treatment by means of the various arsenic preparations. Before treatment was commenced the diagnosis should be certain, and in doubtful cases the spirochaetes should be found, or time should be given for the serum test or the appearance of a roseola. Inunctions or injections should then be given, in most cases no local treatment being necessary. Chancres on the lips or face might be covered with mercurial plaster; those inside the nose or mouth should not be cauterized, simply dusted with nasophen, or, for pain, orthoform. Secondary ulcerative patches might be painted with a concentrated solution of chromic acid, and over this a 10 per cent. solution of silver nitrate to form an adhesive scab. At the end of the first year iodides were given. After the healing of tertiary lesions under the iodide of potassium (the most rapid remedy) iodipin injections together with mercurial inunctions were useful. Colonel LAMBRIN, R.A.M.C., considered inunction to be the ideal remedy, but difficult to carry out in practice. He therefore made use of injections, and he started usually with $\frac{1}{2}$ grain of calomel once a week for four weeks, and then continued with metallic mercury. He favoured local treatment in the upper respiratory passages by means of chromic acid and even curetting. He had treated about 120 cases with arsenic, and had found less soreness of the throat, but since his observations in Uganda, he had given up atoxyl. Sir FELIX SEMON considered the oral administration of mercury no preventive of severe tertiary manifestations. Local applications were needless, and malignant cases should be treated with calomel injections and with sarsaparilla rather than with iodides. Major FRENCH, R.A.M.C., commenced treatment with inunctions, and afterwards injected grey oil. He always stopped smoking during treatment. Dr. BENDORS favoured administration by the mouth. He spoke well of injections and of Zittmann's decoction, in which the mercury was in the form of an albuminate. Mr. BAKWELL used injections of mercuric benzoate and inunctions. Dr. DONELAN advocated inunctions, then mercury and iodides, and then inunctions again. The discussion was continued by Mr. STUART LOW, Dr. STCLAIR THOMSON, Dr. SCANES SPICER, and the PRESIDENT; and Dr. LIEVEN replied.

MEDICAL SOCIETY OF LONDON.

Monday, February 1st, 1909.

CHARLES BARRETT LOCKWOOD, F.R.C.S., President,
in the Chair.*Functional Disorders of the Stomach.*

DR. SIDNEY MARTIN delivered the first of the Lettsomian Lectures for 1909. He divided functional disease of the stomach into three groups: (a) Gastric irritation, in which the symptoms were induced mainly through irritation of the organ from various causes; (b) gastric deficiency, which might result from irritation of the organ, and in which the main condition was that of deficiency of the function of the stomach; (c) indigestion of nervous origin in which symptoms referable to the stomach were associated with a large number of symptoms referable to the nervous system. The term "gastritis" ought to be reserved for inflammation of the stomach, which might occur in various diseases or as a result of an irritant poisoning, and such cases he did not propose to consider. Reference would be made to organic disease—ulcer and carcinoma—of the stomach. The digestive activity of the stomach contents (that was the amount of pepsin secreted) increased or diminished with the amount of hydrochloric acid secreted by the mucous membrane. In the ordinary forms of gastric irritation which were commonly described as acid dyspepsia there was hyperchlorhydria. The percentage of hydrochloric acid secreted two hours after a meal was between 0.25 and 0.4 grams. That was an undoubted fact, which he could verify not only from his own observations but from those which had been made on a large scale in other countries. In functional cases, such as were admitted into the wards of a hospital, in which there were severe symptoms and usually grave defects of nutrition, it was found that the condition was more frequently one of hypochlorhydria than of increased secretion of acid. All the cases recorded were diagnosed as functional, partly from the duration of the illness, partly from the symptoms, but mainly from the fact that recovery occurred more or less completely as a result of treatment. He had records of 25 cases; in one case there was no secretion of acid in two hours' digestion; in 4 cases the total acid secreted was under 0.1 per cent.; in 7 cases the secretion was from 0.11 to 0.14, and in the remaining 14 cases the secretion was either normal or (in 4) was increased. A large proportion of the cases showed a great deficiency of gastric secretory activity. Of the 7 cases of neurosis, 1 showed achlorhydria, 2 a percentage of 0.12, 1 of 0.2, 1 of 0.24, and 2 of 0.29 hydrochloric acid. All those were cases of indigestion of food, with great predominance of nervous symptoms, and the gastric analyses showed the great variations which occurred in the secretion of acid in such cases; 16 of the other cases were definite instances of damage to the stomach by irritation of various kinds. In 2 cases there was marked increase in the amount of acid secreted. In 7 the percentage of acid was between 0.18 and 0.23. In 3 the percentage was about 0.12, and in 4 the percentage varied between 0.02 and 0.03. These cases might, therefore, be divided as regards the secretion into 7 of hypochlorhydria, 7 of normal secretion, and 2 of hyperchlorhydria. In the case of achlorhydria, after three weeks' treatment a fair percentage of acid was found in the stomach contents, and in 2 other cases a similar result was obtained. In another case, however, the percentage of acid was actually less after a month's treatment, although that patient eventually was to all intents and purposes restored to health. The 2 cases remaining were those of gastroparesis, both occurring in women. One showed a diminished percentage of acid, 0.12; the other showed a slight increase (0.23). At the time cases came under treatment there was great variability in the secretion of acid in the stomach, so that it was impossible solely from the symptoms to determine whether the case was one of increased acid secretion, diminished acid secretion or absence of acid secretion. The digestive power was fairly proportional to the amount of acid secreted, but even when some acid was secreted no pepsin might be present in the stomach contents. Organic acid was absent in nearly all those cases that showed an acidity of over 0.2 per cent., below that percentage of acid organic acids were found, chiefly

lactic acid, in small quantities, although in one case it was 0.14 per cent. Two of those cases were of the nervous type, in one the secretion of acid was 0.21 per cent., and in the other, a case of neurotic vomiting in a young girl, it was 0.29 per cent. Dr. Martin then gave details of 18 cases of ulcer of the stomach. Of these 5 showed a deficiency of 0.1 per cent. and under; the remaining 13 cases were either slightly below normal or more than the normal, that was, they showed hyperchlorhydria. He drew attention to one case in which three years after gastro-enterostomy the secretion of acid was 0.14 per cent., and the digestive power was 54 per cent., both below the normal. He would speak later of the condition of the stomach after gastro-enterostomy and ulcer, and draw attention to the fact that not only might there be deficiency in secretion, but also from time to time an increase of secretion. Dealing with a series of 18 cases of carcinoma, he considered that they contrasted strongly with cases of ulcer and cases of functional disease, inasmuch as the greater proportion showed a great diminution of acid secreted as well as a great diminution of digestive power. In conclusion, Dr. Martin said his review of secretory activity in disease showed that the result of analysis of the stomach contents could not be relied upon as absolutely diagnostic.

OPHTHALMOLOGICAL SOCIETY OF THE
UNITED KINGDOM.

Thursday, January 28th, 1909.

R. MARCUS GUNN, F.R.C.S., President, in the Chair.

Hereditary Lamellar Cataract.

MR. BISHOP HARMAN read a paper on four generations of lamellar cataracts. He showed the pedigree of a family for five generations, four of which presented a marked inheritance of congenital cataract. Seventeen childships were traced, comprising 63 persons; 8 died in infancy; of the remaining 55 it was known that 19 had congenital cataract. In no case had there been any in-breeding, or marriage with a person similarly affected. The type of cataract was, for the most part, central opacities of varying size; some were minute, Y or X or star-shaped, others showed definite lamellar formation. In some cases the cataracts were of long standing, and no evidence could be found that they had progressed beyond the stage at which they were earliest seen. Probably the number of cases of cataract found did not represent the true total, for in one childship of seven members amongst whom only one case of cataract was admitted, examination of the seven showed that four had lenticular opacities. The inheritance was strictly from those who had cataract. In no case was cataract found in a child where the parents were free from the defect. When a defect had disappeared from a branch of the family it did not tend to reappear. The teeth usually were good, and no other developmental errors were found.

MR. HARMAN also read notes of a case of unusually rapid development of cataracts in a boy of 9 years. A year previously his vision had been recorded at school as $\frac{1}{20}$; an examination passed three months before showed that he could then write well. When seen he was quite blind; both lenses were completely cataractous; the lens matter was soft and opaque. The lenses were removed by curette evacuation at the Belgrave Hospital, and at the end of six weeks the boy left the hospital able to read $\frac{1}{20}$ with cataract glasses, and later on he saw $\frac{1}{10}$. He showed no trace of general disease, but there was some evidence of defect in his ciliary vessels.

Colours of Benham's Top.

MR. A. S. PERCIVAL (Newcastle-on-Tyne) read a paper entitled "Note on the Colours of Benham's Top," and demonstrated the different colours shown when the top was rotated clockwise as compared with those when the rotation was in the opposite direction. The explanation, which was not yet certain, was highly technical, and he suggested several theories.

Rhythmic Oscillations of Pupil.

MR. PERCIVAL also read a contribution entitled "Note on Some Rhythmic Oscillations of the Pupil." He said that all were familiar with the rhythmic contraction and

dilatation seen in certain diseases, and which were usually looked upon as of grave significance. He compared this with the oscillatory discharge from a Leyden jar which occurred under certain conditions. If it were discharged through a conductor of high resistance the charge simply died away. If it were discharged through a good conductor, such as a coil of wire, the discharge consisted of a number of excessively rapid oscillations or surges. He then compared the nerve cell and axis cylinder with the Leyden jar and conducting wire, stating that owing to disease the discharge of nerve impulse was made in an irregular manner. He regarded the movement tremors of disseminated sclerosis as an almost exact parallel to the oscillatory discharge of a Leyden jar.

Retinal Exudation.

Mr. DAVID J. WOOD (Capetown) sent a communication on a case of retinal exudation with extreme distension of vessels and perhaps arterio-venous anastomosis. He had contributed a similar case to the twelfth and another to the twenty-fifth volume of the society's *Transactions*, and recently he had seen and examined a third instance of this rare condition. He saw the patient first in 1902, and ordered glasses for her; there was then no complaint of the sight being bad. Later, as she had an attack of dimness of vision, he examined her fundi, and found large blood vessels running up to a patch on the upper part of the fundus, which possibly might have resulted from a former haemorrhage. The patient, who was then 50 years of age, returned in 1907, reporting that a few days previously the right eye had suddenly failed. He found that to be due to a diffusive opacity in the vitreous; no fundus details could be made out. Then the vitreous began to clear, and the drawing he showed represented the appearance seen. There was a white area above, and enormously dilated blood vessels could be seen running up to it from the disc. The colour of the vessels, which were very tortuous, was intermediate between that of arteries and veins. From the left trunk a vessel sprang which was arterial in colour, while another vessel, obviously venous, sprang from the opposite main trunk. There were fine choroido-retinal changes, which covered the inner part of the fundus. He thought the growth was probably sarcomatous, and his colleague advised excision, but he was so impressed with its likeness to his other cases that he held his hand. He hoped to report further on the case. He had not been able to hear more of his second case, already mentioned.

Mr. TREACHER COLLINS described a similar case, and remarked on the rarity of the condition; and Mr. G. COATES described the pathological findings in a case he had thoroughly examined.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Friday, January 15th, 1909.

W. G. SMITH, M.D., President, in the Chair.

A Year of Mental Hospital Work.

Dr. DAWSON read a short report of the more interesting points which had arisen in the practice of Farnham House Mental Hospital during the year ending March 31st, 1908. Of the admissions, the essential cause in 29.4 per cent. was diathesis, in 47 per cent. various forms of moral and physical wear and tear, and in 23.5 per cent. toxic influences; there was, however, a neuropathic heredity in 71.4 per cent. The forms of disease in the cases due chiefly to diathesis were mania, melancholia, and dementia, with two cases of alcoholism. In one of the cases belonging to the second class the cause appeared to have been relief of anxiety. Of the toxic cases, one of alcoholic paranoia was quoted as showing that some alcoholic cases exhibited no symptomatic pathognomonic of their origin. A case of true diabetic melancholia was also detailed, in which recovery occurred when the sugar disappeared. Amongst the admissions melancholia had been the prevailing form of disease. Albuminuria had been found in 12 cases, mostly of a depressed cast, glycosuria in 8. Arterial pressure was tested in 7 admissions, being found normal in 2, high in 5. A case was related which seemed to show that large doses of bromide may possibly lower resistance to micro-organisms. Thyroid treatment was tried in 7 cases, with good results in 3. Two, how-

ever, were not improved, and the state of the heart induced by the drug had given some anxiety for a time. Atropin treatment had been used in 2 cases of alcoholism with some immediate success, unsuccessfully in a case of morphinism. Suprarenal had been found useful in keeping excitement in check. Some advantage had been found in the use of formates and lecithin.

The PRESIDENT said that the discussion in that section last year had shown that the influence of alcoholism *per se* in the production of insanity had been overrated. He was anxious to know if there were any definite mental variations correlated in any way with the forms of alcoholism. It was said that the police of France found absinthe drunkards to be homicidal, and had to separate them from the others, and it was possible that the essential oils in absinthe were important in producing pathological results. He would also like to know if there was any particular type of mind, or mental development, that was specially predisposed to alcoholic disturbance.

Dr. KIRKPATRICK had some difficulty in understanding what Dr. Dawson meant by regarding diathesis apart from heredity in some of his figures. Did he recognize a type of individual who was likely to go mad apart from any hereditary taint? He thought there was a difficulty in accepting mental stress and strain as a general cause of insanity, although it might be a predisposing cause in conjunction with some weakness, hereditary or acquired.

Dr. DAWSON, in reply, said the correlation of alcoholism and mental affection did not appear to have been studied. He was strongly of opinion that any one who had a neurotic heredity or who had acquired it should abstain absolutely from alcohol. Melancholic and demented patients were liable to suffer more from glycosuria than others. There were very few cases of insanity in which there were not contributory and exciting causes, and his classification was only intended to embrace what he considered the predominating cause of the particular attack. Diathesis was probably always hereditary, but it was not possible in all cases to trace the heredity. He held diathesis to be a different thing from heredity. He had not had experience of cases due to eye strain.

Intracranial Tumour.

Dr. DRURY read the history of a case of intracranial tumour in a woman aged 30. Her symptoms had lasted for six months before she came under observation. When seen the cardinal symptoms of brain tumour were present, but there was nothing to indicate its position. As she was getting rapidly worse, unconsciousness impending and sight almost gone, an operation for relief of pressure was performed by Dr. Arthur Ball on July 13th, 1908. A large trephine opening was made in the temporal region on the right side under the muscle; the dura opened and a small quantity of fluid escaped; the wound then closed. Improvement followed rapidly; at intervals vomiting and headache returned, and the brain was tapped, fluid being drawn off on each occasion. These intervals became shorter, till eventually tapping had to be done daily. A tube was then inserted and kept in permanently for several weeks. During all that time very large quantities of fluid escaped. The patient improved so much that she could walk about, and could see and recognize people, and had neither headache nor vomiting. The wound was kept aseptic during the whole time. She suddenly became unconscious one morning, and died the next morning, November 8th, nearly five months after operation. The case was brought forward to illustrate the relief afforded by an operation of this kind, where there were no symptoms to indicate the position of the lesion, and, therefore, where no operation with any hope of cure could be attempted. It was found that the lesion was a large cyst in the cerebellar and pontine regions, which could not have been dealt with even had it been localized.

Polio-myelitis of the Conus Medullaris.

Dr. O'CARROLL reported a case. A girl, aged 17, had been sent up from the country suffering from "tumour of the bowel." This turned out to be a very big prolapse of the rectum. Some months previously she had had a febrile attack, following which she had suffered from incontinence of urine and faeces. Later the bowel prolapsed. The sphincter ani was entirely relaxed, and the opening of the urethra rather wide. Sensation was perfect. The patient's general health was good. Under

treatment, principally by the faradic current, complete control was recovered in the rectum, but the patient was unable to retain urine for more than two hours when she left hospital.

Reviews.

RADIOGRAPHY AND DIAGNOSIS.

THE long-anticipated *Manual of Practical X-Ray Work*,¹ of which Drs. ARTHUR and MUIR, of the West London Hospital are the authors, is not only interesting in itself, but also important as marking a further stage in the co-ordination and systematization of radiology. Hitherto we have had descriptions of the methods employed by individual workers; now we have an effort to gather up certain accepted and reliable conclusions from the great mass of experience accumulated during the past few years. This is not to say that the book before us is a complete portrayal of present-day x-ray practice, for in a truly representative volume the therapeutical side would not be limited to one short last chapter out of ten, even though it may be true that in this branch of the subject uncertainty still prevails, and that the value of the treatment in many cases is still unconfirmed. It is inevitable that a large portion of the *Manual* should be devoted to the choice and working of apparatus, because it is here more than anywhere else that the inexperienced are perplexed by divided counsels. The book has been written—if for one class of workers more than another—for army and navy surgeons; and in dealing with apparatus, the convenience of those who require electrical equipment on the field or apart from the ordinary source of supply is consulted. The working of accumulators is treated most fully, and sometimes, as when dealing with the condenser and the phenomenon of self-induction, the authors take liberty with technical correctness in order to ensure ease of comprehension. With regard to the interpretation of radiograms, there will be general sympathy with Dr. Arthur and his colleague when they insist that only men of sound medical training and experience should be allowed to control the x-ray tube and interpret its results. For the non-professional operator to offer medical opinion upon a radiogram is sheer impertinence, and in dealing with radiographic appearances (of bones and joints, for example) the authors wisely make no attempt to indicate or correlate the pathology of many of the conditions considered. That can, of course, be done for himself by the medical man. They adopt a conservative attitude towards instantaneous radiography, and evidently care little for the somewhat sensational methods of making short exposures which are being advocated. Nor do they believe that orthodiagraphy will soon be superseded, judging by the exhaustive chapter on that subject, in connexion with which they describe a modified arrangement of their own for giving the orthodiasepic outline of the heart and the mediastinal contents—a method which appears to have the merit of simplicity if not of absolute accuracy. The excellent section on diagnosis is illustrated by a series of radiograms and, what are better still, by drawings made from radiograms. These sketches illustrating various conditions of the parts are more successful than some of the diagrams illustrating apparatus; the first of the latter, for instance, gives a rather misleading idea of the earliest x-ray tubes. The substitution of drawings made from radiograms for the unsatisfactory reproduction of the radiograms themselves is a hint for future writers on the subject of the x rays. The authors, however, ventured to reproduce one unique radiogram, secured with the aid of a soft tube, showing distinct shadows of the radial and ulnar arteries, made opaque by an excessive calcification of their walls. The unusual appearance certainly to some extent survives the half-tone reproduction. The work as a whole, in spite of the constant developments of a new science, will probably occupy a standard place in British literature for a long time to come.

The extraordinary literary fertility of German radiologists is illustrated again in the massive compilation by

Dr. WETTERER, of Mannheim, whose manual of Roentgen-therapy² is by far the largest work yet issued on a subject which in England has scarcely attained the dignity of a literature. The water-colour drawings by Fraulein Schneider, reproduced by the four-colour printing method, and illustrating the action of tubes and the appearances of irradiated parts, help to give it distinction, and a bibliography containing more than 2,000 references is another valuable feature. Many readers will turn first to the large section devoted to radiumtherapy, in which the differences between the radium and the Roentgen rays as therapeutic agents, together with the indications for the use of the former, are fully canvassed. The author has found that ten-minute contact applications of radium weekly are of value in certain cases of lupus. The hypertrophic and verrucous varieties react better to radium treatment than the flat, disseminated disease, which is more amenable to the Finsen light. He describes his method of securing an elective action of the rays by inserting aluminium filters between the capsule and the skin, thereby obtaining deeper effects with less violent surface reactions. In dealing with the biochemical effects of the radium rays, he relates the particulars of some experiments upon rats. Sixty milligrams of highly-active radium bromide, applied for two hours, gave rise to a widespread process of degeneration in the reproductive organs of the animals. The sections on Roentgenotherapy cover an immense field, and the statement of the biological side of the question alone would form a substantial treatise. The influence of the x rays upon inflammatory processes in the joints is fully treated, and the author cites cases of arthritis deformans within his own practice, in which disappearance of pain and reduction of swelling were brought about by their use. No chapter is more important than that dealing with x-ray injuries. These are divided into two classes—that is, primary injuries resulting from absolute or relative over-exposure, and secondary or subsequent injuries due to the cumulative effect of radiations upon the same part. The x rays ought under no circumstances to be applied without the most careful use of a dosimeter. Here, he says, punctiliousness becomes a virtue. Absolute over-exposure only takes place, as a rule, if the dosimeter is not used or is used wrongly—as, for example, if the measuring field be in the region of weak and the irradiated field in the region of intense emissions. By relative over-exposure he means the application of normal doses to extra-sensitive tissue. Upon new patches of psoriasis, for instance, a dose of 5 to 6 H. may cause a stubborn dermatitis or x-ray ulcer. As author of a work which indicates wider fields for a new therapy, Dr. Wetterer may, perhaps, be accused of forming the over-estimates of enthusiasm, but his work taps so many sources and invokes so many authorities as to disarm criticism, if not to dispel all doubt. The book is more than a manual; it is an excellently arranged encyclopedia.

The second edition of Dr. PAUL VAUDET'S *Technique Précise de Radiothérapie et Radioscopie*³ fully bears out the intention expressed in its title. It is an exposition of exactness in the application of the x rays to medicine, and the point wherein it differs from other textbooks of radio-therapeutics is in the emphasis it places upon scientific as against experimental methods. The first edition was published in 1905, and the new volume, which is about half as large again as its predecessor, includes a further section on radiography and radioscopy (screen examination), methods of diagnosis which during the past three years have taken a more important place. The main portion, relating to radiotherapy, might have been brought even more fully up to date, for the Roentgen Society of London has been working very much along the lines indicated by Dr. Vaudet, and some of the conclusions published in its journal respecting the standardization of radio-activity and x-ray dosage might have been of service to him. Indeed, one is rather impressed by the absence of the names of British

¹ *Handbuch der Röntgentherapie, nebst Anhang die Radiumtherapie* Von Dr. Josef Wetterer. Leipzig: Otto Neumann, 1906. (Royal 8vo, pp. 910; 198 figures in the text, and 15 plates. M 27.)

² *A Manual of Practical X-Ray Work*. By David Arthur, M.D., D.P.H., and John Muir, B.Sc., M.B., Ch.B., and B.Sc. (Pub. Health). London: E. & S. B. Sonnet Limited, 1906. (Demy 8vo, pp. 256, 126 illustrations. 7s. 6d.)

³ *Technique Précise de Radiothérapie et de Radioscopie. (Instrumentation pratique)*. By Dr. P. Vaudet; with a preface by Professo E. Gaucher. Second edition. Paris: Alfred Delcroix, 1906. (Med. 8vo pp. 223, with 20 plates and 25 illustrations in text. Fr. 6.)

workers, both in the chapters themselves and in the ample bibliography which is appended, although, of course, it must be recognized that the pioneers of precise methods in Roentgen work have been Holzknecht, Sabouraud, Kienbock, and Ondin, who belong to the Continent. Dr. Vaudet dates the end of the empiric period and the beginning of the scientific from 1901-2. It was about this time that Holzknecht brought forward his chromo-radiometer, and stated a definite measurement—namely, 5 H. units—as the quantity of x rays that would produce a definite reaction of the skin. Dr. Vaudet elaborates Holzknecht's discoveries, and deals in an interesting way with the conditions necessary to secure equality of irradiation, the laws governing the intensity of x ray action upon the tissues, the degrees of reaction, periods of latency, and methods of localizing the rays and protecting doctor and patient. He looks forward to the day when it will be possible to prescribe a dose of x rays with the same exactness and certainty as a chemical medicament. The newer part of the book introduces a chapter on the working of the screen stereoscope of M. Estanave of Paris. The chapters dealing with the x -ray diagnosis of fractures are valuable, especially in view of the fact that certain conditions, such as incomplete fracture of the acetabulum, are only recognizable by means of the x rays. The detailed information on the radioscopic examination of the pathological thorax will also be of assistance to those who have difficulty in interpreting the shadows. The book may be heartily commended as affording a glimpse of the refinements practised by French workers.

THE CAUSE OF CANCER.

*The Lectures on the Pathology of Cancer*⁴ which Dr. C. P. WHITE has published were delivered in Manchester in connexion with the Pilkington Cancer Research Fund. The purpose of the author has been to give a general outline of the subject and to call attention to certain points which he considers are neglected or imperfectly dealt with by most writers. The book is divided into four parts, dealing respectively with the classification of tumours, the characteristics of cancer, conditions affecting the origin and development of cancer, and advice as to treatment. As Dr. White holds a particularly high reputation for accurate work and sound criticism in cancer research, we are disappointed to find that in this volume he often contents himself with vague generalities where precise explanations would have been more acceptable. An example may be quoted from page 41, where he is comparing cancer cells with unicellular organisms.

Whether or not cancer cells show a still closer resemblance to unicellular organisms by occasionally manifesting a sexual process in the course of reproduction is not certainly known, but various observations on the characters of the mitoses in cancers tend to show that such is the case, although some of the changes seem open to doubt.

Evidently Dr. White is not altogether satisfied with certain recent cytological work, and he may have good reasons; but in scientific criticism vague expressions of opinion, such as that quoted, are unsatisfactory. We want definite statements of the work to which the author refers, definite opinions about it, and scientific reasons for these opinions. Much of what Dr. White says about studying cancer in relation to general biological problems is interesting, but there is too great a tendency to lapse into abstract speculation. Liberal use is made—for example, on pp. 45-48—of metaphorical language about stable and unstable equilibrium.

The immediate essential causal factor of tumour formation is thus an *unstable condition of equilibrium* between the component parts of the body.

Without raising any objection to the use of the term "equilibrium," one would like to know how far its meaning can be expressed in precise language. What are the scientific methods for demonstrating and investigating physiological or pathological "equilibrium" of the tissues? Obviously, in tumour formation, normal intercellular influences are disturbed; but if the conception of "unstable equilibrium" is to be helpful, and not merely a restatement of this obvious fact, it must be shown that the forces which are supposed to be disturbed in their

"balance" lend themselves to examination by qualitative and quantitative methods. Dr. White complains that scientists take too strict a view of cellular pathology, and are accustomed to explain all pathological changes by cellular activities, without considering the organism of which the cells are the constituent parts.

A living organism, however, is not a mere aggregation of cells; it is a distinct entity in itself—an individual—and the cellular activities are everywhere subordinated to the control of the whole organism; . . . the organism does not grow because the cells proliferate, but the cells proliferate because the organism grows.

How does Dr. White propose to study the organism as "a distinct entity in itself"? His point of view seems more appropriate for the field of metaphysical speculation than for experimental science. And his criticism that pathologists limit their attention to "mere aggregations of cells" and neglect "the organism" seems to overlook the enormous amount of valuable work which has been done on immunity and kindred subjects. In fact, the most striking feature of experimental pathology at the present day is the prominence which is given to changes which modify the organism as a whole, or, to put it from Dr. White's point of view, which cause the "organism" to modify its own component parts.

Notwithstanding its ambitious title, we doubt if the pamphlet on the genesis of carcinoma, by Professors APOLANT and EHRLICH,⁵ tells us much which is new or important about the origin of this disease. Professor Apolant, who contributes the histological portion of the article, calls attention to the rarity with which tumour formation occurs in rabbits and guinea-pigs, as compared with rats and mice; he also observes that for each species of animal there is generally one particular organ which is more likely to be the site of tumour formation than the rest of the tissues. In his histological investigations of mouse tumours he finds no corroboration of Ribbert's theory that inflammatory processes in the connective tissue play an important part in the genesis of cancer. According to Professor Apolant,

the development of mouse carcinoma, its further differentiation, its definite outcome, and also the formation of sarcoma, are to be regarded as the product of two factors; the one of these is to be found in the biological properties of the tumour cell, the other in the resistance manifested by the organism in relation to this influence. The working of these two factors, in co-ordination or in opposition, determines all the appearances which have been described.

Professor Ehrlich, attacking the same problem from the biological standpoint, elaborates the theory that the influence of defective nutrition (Athrepsie) plays an important part in tumour formation. This view is based on the results of numerous experiments showing that after a preliminary inoculation with a rapidly-growing tumour the growth of a second piece of malignant tissue inoculated into the same mouse is inhibited. His assumption is that the first and vigorously-growing tumour exhausts the requisite nutritive material, and that in consequence the subsequent inoculum is so poorly nourished that growth is either completely inhibited or greatly retarded. It is to be hoped that Professor Ehrlich will be able to elaborate from this line of research some results possessing a practical therapeutic value.

Dr. AICHEL claims that his hypothesis as to the cause and nature of malignant tumours⁶ is new. For the precise grounds on which he ascribes novelty to his theory we must refer our readers to the text; we find them a little difficult to understand, and we confess that his suggestions seem to us to be closely akin to a cancer hypothesis which is very ancient indeed. Malignant growths, according to Dr. Aichel, can only arise when the somatic cells have absorbed from without a "something" which transforms them into malignant cells. He therefore sets himself the task of ascertaining what this "something" is. After considering various other possible agents and rejecting them in turn, he arrived at the conclusion that the "something" consists of leucocytes. "The normal somatic cell through fusion (Amphimixis)

⁴ *Lectures on the Pathology of Cancer*. By Charles Powell White, M.A., M.D., F.R.C.S. Manchester: University Press, 1908. (Sup. roy. 8vo, pp. 84, with 35 illustrations. 6s. 6d.)

⁵ *Ueber die Genese des Carcinoms*. Von H. Apolant und P. Ehrlich. Jena: Gustav Fischer, 1908. (Sup. roy. 8vo, pp. 94. M. 1.)

⁶ *Eine neue Hypothese über Ursachen und Wesen bösartiger Geschwülste*. Von Dr. Otto Aichel. München: J. F. Lehmann, 1908. (Sup. roy. 8vo, pp. 36. M. 1.50.)

with a leucocyte produces the malignant cell, and from this, through cellular division, a malignant tumour arises." We are not convinced that Dr. Aichel, in the development of this theme, has made any substantial advance on other well-known suggestions that the malignant cell arises from hybrid fertilization by a leucocyte.

GLANDERS.

In this book, *Glanders: A Clinical Treatise*,¹ MR. WILLIAM HUNTING has condensed a great deal of the practical experience of a lifetime. He has kept pace with the discoveries of *Bacillus mallei* and mallein; he has seen the identity of glanders and farcy (the cutaneous form) settled beyond dispute; he has had a large share in influencing and shaping the new regulations for the control of glanders, and now, as chief veterinary inspector of the London County Council, he has a leading share in carrying into actual practice the provisions of the Glanders Order for 1907, so largely inspired by him. The book, then, is the outcome of unique opportunities, and from the clinical and hygienic point of view it is extremely valuable. It does not attempt a complete account of the pathology and bacteriology of glanders, but for the veterinary clinician and for the horse owner it is full of valuable advice the outcome of acute and discriminating observation. The use of mallein is described in detail, and the author points out how, under the old Order of 1894, it was possible for owners to detect disease before it was evidenced by any symptoms; they could then sell the latently-infected horse, and so spread glanders to distant parts of the country. Table IV, illustrating the distribution of glanders, shows that 90 per cent. of the total cases occur in London and the home counties. "I was rash enough a few years ago," the author writes, "to express the opinion that a horse was not infective until clinical symptoms were developed. That was a grave error. . . ." After this renunciation, the author mentions conditions in apparently healthy horses affected with latent glanders which may be dangerous, especially those in which the trachea is ulcerated—a not uncommon lesion. With regard to the method of infection, the author is emphatically in favour of the view that it takes place usually by ingestion; he almost denies the possibility of infection by inhalation, and somewhat unnecessarily attacks the theory of aerial infection in tuberculosis. Speaking of prevention, there are some statements of great interest to private horse owners—namely the dangers (1) of sending horses to livery stables when the owner goes out of town; (2) of turning horses out to grass in the company of other strange horses; (3) of horses being stabled with strange horses at army manoeuvres; and (4) of buying old cast horses from London stables without previous testing with mallein. There is a valuable appendix dealing with cases of glanders in man, and a number of such cases are briefly described. Some of the literature on the subject is mentioned, although in this respect more detail would have been an advantage. The author draws attention to the fact that glanders has been scheduled as an industrial disease, so that employers are liable for compensation; also that by the Glanders Order of 1907 veterinary inspectors have to notify the medical officer of health of cases of glanders. One of the most valuable features of a valuable book is the series of fourteen beautifully executed coloured plates, showing typical lesions of glanders in horses.

THE CRIMINAL: PROPHYLAXIS AND TREATMENT.

In comparatively small compass the author of this valuable little book, *The Principles of Anthropology and Sociology in their Relations to Criminal Procedure*,² discusses on the one hand the development and conclusions of criminal anthropology and criminal sociology, and, on the other hand, criminal law and procedure. The first three chapters are devoted to a succinct account of the principles of the classical school of criminology and the rise of the modern science of positive criminology, as embodied

principally in the teachings of Lombroso, Garofalo, and Ferri; to criminal sociology and to the relation of the criminal to society and the question of penal responsibility. In the two succeeding chapters punishment and the bearing of modern views of the nature of criminality upon criminal law are ably expounded. Thereafter follow descriptions and analyses of the fundamental principles of Anglo-American and Continental criminal law and procedure. After that, in each succeeding chapter, one part of criminal procedure is taken and examined in the light of modern criminological science, suggestions as to alterations and reforms being made at the end of each chapter. The accounts of criminal anthropology and sociology are less happy than those in which comparative criminal law and procedure are treated, the author being somewhat too ready to accept the Lombrosian stigmata as of proved distinctive value. Beyond this, however, we have nothing to utter but praise. The descriptions of comparative criminal procedure are clear and instructive, and the author's criticisms and suggested alterations well worthy of consideration. Perhaps we can best convey the essence of his view of the whole matter by saying that, in his opinion, the sole logical basis of all legal action against the criminal should be the fact and degree of his dangerousness to society, and should not be based on moral or ethical grounds, on the principle of moral liberty or free will. If only this great principle of danger to society be accepted as criterion, most of the reforms in criminal law and procedure—such as the substitution of detention and reform for punishment, the fitting of the degree of repression to the criminality of the delinquent and not to the crime itself, and many other reforms as to prosecution, defence, and simplification of the law must inevitably follow. We hope this book will be widely read.

Another recently-issued book dealing with the same matter, though more restricted in scope and largely statistical in treatment, is a monograph, entitled *Britain's Blot*,³ by DR. J. F. SUTHERLAND, Deputy Commissioner in Lunacy for Scotland. Dr. Sutherland has had twenty-eight years' experience of lunacy, inebriety, and delinquency in Scotland, and is thus well qualified to speak with authority. He is convinced that there are two distinct types of recidivist—namely, the habitual petty delinquent and the habitual criminal, between whom there is nothing in common save their haunts. Further, in each class there is a proportion—in the petty delinquents a large and in the habitual criminals a small proportion—of psycho-pathological cases. An important conclusion arrived at by the author is that there is no established connexion between drink and professional criminality, or, if there be any link, that it is slender and remote. As already stated, a large part of this book is statistical, the figures and maps given relating to the relative incidence of the several crimes and their topographical distribution in Great Britain; but admirable summaries are given also of modern views on criminal anthropology, illustrated by anthropometrical data collected in Scotland, and of the penal systems which obtain in America and on the Continent. Following this, the author discusses prophylaxis, jurisprudence, and penology, and then states his own suggestions for juridical and penal reform. With regard to criminal responsibility, we note that under the heading of "The Criminal Law in Relation to Free Will, Responsibility, and Punishment," Dr. Sutherland says, "a safe and sociological maxim is that the idea of wrong depends upon the moral, intellectual, and physical damage which volition and action bring to society;" and later on, "it might well be that the main purpose of punishment should be the protection of society and of property by the reclamation by improved methods of habitual criminals and offenders who are salvageable, and by the sequestration of those not so under safeguards." In this Dr. Sutherland appears to share the views of the writer reviewed immediately above, but we do not gather that he, like some other modern criminologists, would exclude the question of responsibility altogether, for in discussing the free-will question he avows himself neither a free-willer nor a determinist, but expounds a

¹ *Glanders: A Clinical Treatise*. By William Hunting, F.R.C.V.S. London: H. and W. Brown, 1908. (Demy 4to, pp. 100, three full-page photos, and 14 coloured plates. 10s. 6d.)

² *The Principles of Anthropology and Sociology in their Relations to Criminal Procedure*. By Maurice Parmelee, M.A. The Chilton's Library of Economics, Politics, and Sociology. New York and London: Macmillan, 1908. (Cr. 8vo, pp. 418. 5s.)

³ *Britain's Blot: Recidivism, Criminality, and Habitual Petty Delinquency: A Problem in Sociology, Psycho-Pathology, and Criminology*. By J. F. Sutherland, M.D. Edin. F.R.S.E., F.S.S. Edinburgh: William Green and Sons, 1908. (Med. 8vo, pp. 126. 3s.)

compromising "relativity" which appears to be midway between these two positions, enjoying the advantages of neither. Notwithstanding the passages quoted above, therefore, we doubt whether Dr. Sutherland would follow the bold lead of some who would exclude the moral liberty question altogether, and say that the question in every case is not, Is this man responsible or irresponsible? but Is this man dangerous to society, and, if so, how dangerous? Dr. Sutherland's book contains a great deal of valuable information in small compass.

In the year 1904 a book by Professor ERNST SCHULTZE of Bonn,¹⁰ published that year, entitled, *The Psychoses of Military Prisoners*, formed the subject of an article in the BRITISH MEDICAL JOURNAL of May 28th, 1904, on *Dementia Præcox and Simulation*. In that book Professor Schultze showed how considerable were the numbers of insane military prisoners who had been repeatedly punished for various offences—notably desertion—which subsequent events left no doubt were directly traceable to early but undetected mental disorder. To prevent such occurrences Professor Schultze made several important suggestions, including a compulsory two years' training in mental diseases for all army medical men, a period of mental observation for all persistently refractory soldiers, the employment of mental experts in all doubtful cases, and a regular and systematic inquiry into the mental history and character of all recruits and candidates for the army. Since the date of his earlier work Professor Schultze has had the opportunity of investigating the mental state of fifty-one more military prisoners, before his removal to Greifswald put an end to his opportunity of observing such cases, and the results of his investigations were published in 1907.¹¹ To a considerable extent Professor Schultze's task as reformer has been lightened, for many of the suggestions he made have been put into effect: for instance, recruits now bear with them to the army on joining an account of their school life. Professor Schultze devotes the first five chapters of his new volume to the clinical histories arranged under the categories of manic-depressive insanity, feeble-mindedness, hysteria, epilepsy, and dementia præcox. Lengthy clinical notes, however, are omitted, as sufficient for the purpose were published in the first book. Feeble-mindedness is treated at considerable length, as this forms one of the most important considerations in the question of treating military prisoners. In the next chapter are discussed some cases which do not fall within any of the above categories, and in the last chapter, which takes up more than half the book, Professor Schultze considers the total clinical material with particular reference to the sources of failure to diagnose the condition, the recognition of simulation, the connexion between the mental disorder and the acts for which the individuals were punished, and finally makes further suggestions as to reform. Without entering into details, we may mention that the first work gave an account of the histories, offences, and mental status of 32 insane or mentally defective military prisoners, and the second book of 51 more; making, with 17 cases sent from the Andernach Asylum, 100 cases in all. A large proportion were of either illegitimate or uncertain birth; about one-half were more or less given to alcoholic abuse, and 64, or about two-thirds, had been previously punished, that is, before the commission of the military offence. Naturally, repeated offences were most common in the imbecile class, and in some of these were of great frequency; for example, one had been punished 35 times, another 26 times, and another 16 times. Hysteria and epilepsy came next in frequency, then manic-depressive insanity, and dementia præcox last. Although the histories of cases described in the first work have been continued and brought up to date, so far as possible, in the present book, the matter has been so treated that a knowledge of the former is not presumed. Nevertheless, we should strongly advise those interested in the subject to procure both works. The books will be found to be of the greatest interest and value to criminologists generally.

¹⁰ *Ueber Psychosen bei Militärgefangenen nebst Reformvorschlügen. Eine klinische Studie.* By Professor Dr. Ernst Schultze. Jena: Gustav Fischer, 1904.

¹¹ *Weitere psychiatrische Beobachtungen an Militärgefangenen.* By Dr. Ernst Schultze. Jena: Gustav Fischer, 1907. (Roy. 8vo, pp. 138, M.3.)

SQUIRE'S "COMPANION."

SQUIRE'S *Companion to the British Pharmacopœia* is so well known to prescribers of any therapeutic enterprise that it might seem to be sufficient merely to announce the fact that an eighteenth edition has appeared; but this edition has undergone so much revision and expansion that it becomes a duty to give some account of the new volume. Over half a century ago the late Mr. Peter Squire published a comparison of the London, Edinburgh, and Dublin pharmacopœias, and this was succeeded in 1864 by the first edition of the *Companion*, which contained 220 pages. The new edition¹² contains 1,460 pages—610 more than were contained in the seventeenth edition, published nine years ago. The book, in accordance with its title, follows generally the arrangement of the *British Pharmacopœia*, but the official preparations are given under the main heading; thus, under "Hydrargyrum" we find the official plasters, liniment, pill, and ointments, and this is followed by notes upon non-official preparations. After the official title of each drug are given the synonyms, and, in the case of all important drugs, the French, German, Italian, and Spanish equivalents, when they are known. The later headings in each article are solubility, medicinal properties, dose, prescribing notes, incompatibles, official preparations, preparations which are not official, antidotes, foreign pharmacopœias, descriptive notes and tests.

From the first appearance of the *Companion* the subject of solubility has received particular notice, and in the present edition closer attention and a very much larger number of figures have been included. It was suggested in the BRITISH MEDICAL JOURNAL that in those instances in which a substance is extremely soluble in a menstruum the increase in volume caused by its solution should be given. In the more commonly prescribed chemicals this suggestion has been followed in the present edition—thus, ammonium bromide, 1 in 1½ of water measures 2; ammonium phosphate, 1 in 2 of water measures 2½; potassium iodide, 4 in 3 of water measures 4; and quinine hydrochloride, 2 in 1½ of water measures 3. The prescribing notes have been considerably enlarged, and we are informed, and can well believe, that they have involved a very large number of practical experiments. We agree that it is in the best interests both of medicine and pharmacy to give such a note, which is of more value than to suggest a fixed formula, as it leaves the physician a judicious liberty in varying the quantities of the active ingredients in accordance with the requirements of the individual patient. The notes on preparations contained in foreign pharmacopœias will also be useful as an aid to prescribers, beyond their more immediate purpose of indicating, in the case of patients residing abroad, the character and strength of preparations useful in various countries. The notes on medicinal properties, which have been read and revised by Dr. Taylor Grant, are brief, and, as a rule at any rate, very much to the point. The descriptive notes have been read by Mr. E. Morrell Holmes. The paragraphs on tests have been rewritten, and particular attention has been given to the methods for the detection of likely and unlikely impurities.

The doses mentioned are those in which the substance is usually given, but in the cases of potent chemicals, drugs, or preparations, the doses are compared with the maximum single and daily doses of one or other of the more important foreign pharmacopœias, or where such information is not available, with a textbook of recognized foreign standing such as Hager. The tabulated comparison of the chief standardized potent preparations of the British, United States, German, and French pharmacopœias will be found useful for reference. A chapter on thermometric memoranda and special tests has been included. The article, on therapeutic agents of microbial origin, has been revised and partly rewritten by Dr. R. Tanner Hewlett. The concluding portions of the book are occupied by lists of the spas of Europe, enumerating first those of Britain, afterwards the Continental, giving the locality, temperature, season and medicinal properties; a list of spas classified according to their temperature and properties is also given. There are three indices—a therapeutical classification of remedies, a list of remedies for special ailments, and a general index.

We often hear complaints that the art of prescribing is

¹² *Squire's Companion to the British Pharmacopœia.* Eighteenth edition. London: J. and A. Churchill, 1908.

being lost, and that the younger generation is tempted more and more to rely upon the ready-made mixtures, pills, and tablets which enterprising wholesale firms present to notice. A book such as this should afford the best remedy, for it gives in a convenient and reliable form just such information as the prescriber needs when he desires to step a little outside his own beaten track.

DERMATOLOGY.

THE new and enlarged edition of the justly popular manual, *Diseases of the Skin*,¹³ by Sir MALCOLM MORRIS, has been brought up to date by him, with the assistance of Dr. ERNEST DORE. The large amount of work done in the dermatological world since the third edition was published (in 1903) has necessitated increasing the book by forty-eight pages, but at the same time the object of the author to write a manual and not a treatise has been well kept in view, with the result that a very handy volume has been produced. A feature of the work is that the index, which by the way is very full, enables the reader to see at a glance the main lines of treatment available in any given disease. A careful perusal of this well-known manual proves that the authors have done their work of revision thoroughly. They have been discriminate in their selection of material, and there is no doubt the book fully deserves the favour it has met with in the past. The plates are excellent and add to the value of the book.

A book, *Die Praxis der Hautkrankheiten*, embodying and founded on the dermatological teaching of Dr. Unna, has been recently brought out by Dr. IWAN BLOCH.¹⁴ It is a large, closely-printed volume, that will repay perusal on a variety of points which have been investigated in an original and special way by Dr. Unna: and it may be said at once that the author has very thoroughly assimilated the master's teachings, but he has unfortunately produced an unyielding and indigestible morsel, made up of a minced-up mass of details. Notwithstanding this drawback, the work is one that will be used for reference with profit by all specially interested in diseases of the skin; the more so as a good index is provided. The introductory chapters on the anatomo-physiological aspects of the subject and the histological and staining technique are of special importance, for dermatology is much indebted to Dr. Unna for the staining methods he has introduced and perfected. In the sections on pathology and treatment again valuable information is given.

The *Treatise on Diseases of the Skin*,¹⁵ by Professor STELWAGON, of Philadelphia, which has been several times dealt with in these pages, continues to enjoy such popularity that a fifth edition has been called for. In this instance the high praise already bestowed upon this excellent work can merely be repeated. But it should be added that the present issue has been thoroughly revised. The book is in every way excellent—text, illustrations, and form, making it one of the foremost works of reference on a subject of great complexity.

Earlier editions of Dr. NORMAN WALKER'S *Introduction to Dermatology*¹⁶ have been reviewed in these columns, and the popularity of the book can be gauged from the fact that a fourth edition has been called for. With every edition there is distinct improvement. The coloured illustrations are very good, and show a great advance in artistic merit on those of previous editions. This is due to the excellent casts of Dr. Cranston Low. In his preface the author states his belief—one shared by many teachers—that students are none the worse for being taught dogmatically. It must not be forgotten, however, that dogmatic teaching

if pushed too far, may interfere with the free play of the power of observation. Some of the greatest clinical teachers have followed what may be called the Socratic method, which, while it does not eliminate judicious dogmatism, at the same time stimulates the power of reasoning from observation. As an introduction to dermatology, Dr. Walker's book can be highly recommended. The diagrams showing the microscopical characters of the various morbid conditions are most valuable, for a knowledge of these lesions is of the utmost importance in diagnosis and treatment.

THE SENSES OF INSECTS.

THE name of Forel is so well known as that of an accomplished observer of what used to be called, and what might still very well be called, the habits of insects, that the reader will take up the volume entitled *The Senses of Insects*¹⁷ with the expectation of being at once instructed, interested, and even amused. Nor will he be disappointed, for the book teems with striking original observations, with acute reasoning and with scathing criticism. But if the reader hopes to find in it a reasonably brief and consecutive statement of Forel's own conclusions, he will be deceived. The book consists of a series of papers written at different times, and later on collected into a budget, which took a long time to get published; additional notes, comments, and criticisms being added here and there. Mr. MACLEOD YEARSLEY, to whom the work of translation has clearly been a labour of love, has, as he explains in his preface, done something to put the several sections into logical order, but he has not felt justified in omitting or paraphrasing Forel's polemics, which render the book a study in the psychology of man as well as insects.

Having said so much by way of doing our duty, and warning the reader of the kind of book he is asked to buy, we may go on to commend it most heartily to every one who has a love for natural history. The old-fashioned term is used advisedly, for it is by no means necessary to be a specialist in order to enjoy nearly every page. There is so much that is curious, so much that is stimulating to thought, so much indeed, if we are in a mood to be metaphysical, that goes to the very root problems of existence.

After nine chapters on vision, smell and taste, and hearing, we find two on orientation in space which to many readers will prove the most interesting part of the volume. Forel rejects utterly, and with vehemence, the theories of a special mysterious force, or of a static or geotropic sense. Orientation, or the so-called homing sense, he says, the result of experience gained through known senses, especially sight and smell. In aerial flight it is the sense of sight which is most important, and, in the bee as in the pigeon, is probably the only sense concerned.

Mr. Yearsley has added some explanatory footnotes, the longest containing a triumphant criticism of the assertions of Cyon and others with regard to Japanese dancing mice. The assertion is that this animal possesses only a single semicircular canal. Mr. Yearsley quotes Dr. Gray of Glasgow, who has dissected the ear, and can find no difference between the canals of the waiting and those of the ordinary mice. The point is illustrated by the reproduction of a very beautiful preparation by Dr. Gray in which the three canals are very plainly visible.

NOTES ON BOOKS.

THE thirty-fifth volume of *St. Thomas's Hospital Reports* for 1908 is edited by Dr. H. G. TURNER and Mr. W. H. BATTLE.¹⁸ Besides the ordinary medical, surgical, and gynaecological reports by the respective registrars, and those of the various special departments by members of the honorary staff, there is a report for 1906 from the Clinical and Pathological Laboratories by Dr. Leonard Dudgeon and one from the X-ray Department by Dr. Greg. The volume also contains four original papers—

¹³ *Diseases of the Skin: An Outline of the Principles and Practice of Dermatology*. By Sir Malcolm Morris, K.C.V.O., etc., with the assistance of Ernest Dore, M.D., etc. London: Cassell and Co. 1908. (Crown 8vo, pp. 702, 10 coloured and 47 black and white plates, with illustrations in text. 10s. 6d.)

¹⁴ *Die Praxis der Hautkrankheiten* [The Practice of Skin Diseases]. Unna's Lehrbuch. Von Dr. Ivan Bloch. Berlin und Wien: Urban und Schwarzenberg. 1908. (Sup. roy. 8vo, pp. 712: 92 illustrations. M.18.)

¹⁵ *Treatise on Diseases of the Skin, for the Use of Advanced Students and Practitioners*. By Henry W. Stelwagon, M.D., Ph.D. Fifth edition. Philadelphia and London: W. B. Saunders Company. 1907. (Royal 8vo, pp. 1150, 257 illustrations and 34 full-page coloured and half-tone plates. 25s.)

¹⁶ *An Introduction to Dermatology*. By Norman Walker, M.D., F.R.C.P. Fourth Edition. Edinburgh and London: W. Green and Sons. 1908. (Demy 8vo, pp. 350; with 28 coloured plates and 69 illustrations. 9s. 6d.)

¹⁷ *The Senses of Insects*. By A. Forel. Translated by Macleod Yearsley, F.R.C.S. London: Methuen and Co. (Med. 8vo, pp. 340. 10s. 6d.)

¹⁸ *St. Thomas's Hospital Reports*. New Series. Edited by Dr. H. G. Turner and Mr. W. H. Battle. Vol. XXXV. London: J. and A. Churchill. 1908. (Demy 8vo, pp. 512. 8s. 6d.)

one on the reduction *en masse* of strangulated and non-strangulated herniae, by Mr. A. B. Howitt and Mr. Edred Corner, who also contribute one on the treatment of gangrene in strangulated herniae; a third on the etiology of the granular kidney of childhood, by Dr. J. E. H. Sawyer, in which he suggests a similar causation as for the more rapidly progressing cirrhosis of the liver; and a fourth on the bacteriology of the more unusual forms of conjunctivitis, by Mr. P. N. Pantou.

The third volume of the eighteenth series of *International Clinics* for 1908¹⁹ contains an unusually large number of papers—twenty-five in all. Among them is one by Dr. J. Jastrow, entitled, On the Trail of the Sub-conscious, and another on Chronic Milk Infection (Marasmus), by Dr. R. B. Gilbert. But that which for its subject-matter is especially valuable is one by Mr. James Sherren on the diagnosis of injuries of the peripheral nerves from those of the spinal cord, in which he applies the conjoint observations of himself and Dr. Head to practical surgery.

The twentieth volume of the *Transactions of the Southern Surgical and Gynaecological Association* covers the work done at the annual meeting held in New Orleans in December, 1907. It has been edited by Dr. W. D. Haggard, and is notable for the excellent reproduction of engravings and other pictures of an early date, dealing with subjects connected with anatomy, surgery, and gynaecology, with which the address delivered by the President, Dr. Howard A. Kelly, of Baltimore, on art applied to medicine and surgery, is illustrated. Apart from this interesting paper, there are some fifty others dealing with various points in surgery. The majority deal with general surgery rather than the special field of gynaecologists. Included is an excellent and prolonged discussion on the treatment of fractures.

In the autumn of 1907 the dermatologists gathered in force in New York, and as an outcome we have received two portly volumes entitled the *Transactions of the Sixth International Dermatological Congress*, 1907.²⁰ Each of these volumes contains some 500 pages, and both are adorned by numerous plates. The book doubtless constitutes a mine of information with regard to current opinions on dermatological subjects; but though there are lists of specimens exhibited and of cases shown, and of contributors, and something in the way of a general index, there is no general list of papers read. It is to be feared, therefore, that much of the excellent work done at this congress will be utilized by a far smaller number of persons than might otherwise be the case.

¹⁹ *International Clinics*. A Quarterly. Edited by W. T. Longcope, M.D. Eighteenth series, 1908. Philadelphia and London: J. B. Lippincott Co. 1908. (Roy. 8vo, pp. 365.)

²⁰ *Transactions of the Sixth International Dermatological Congress*. Edited by Dr. J. A. Fordyce, Secretary-General. New York: The Knickerbocker Press, 1908.

MEDICINAL AND DIETETIC PREPARATIONS.

ORGANIC ARSENIC COMPOUNDS.

"*Kharasin*" and "*Orsudan*."—Two new organic compounds of arsenium have been recently introduced by Messrs. Burroughs, Wellcome, and Co. (Snow Hill, London, E.C.), under the names "*Kharasin*" and "*Orsudan*." *Kharasin* is described as sodium 3-methyl-4-aminophenyl-arsenate, containing 23.7 per cent. of the element arsenium, and *Orsudan* as its acetyl derivative, containing 25.4 per cent. of arsenium. Both are white crystalline powders, very readily soluble in water; they are also supplied in the form of 1-grain tabloids, for administration by hypodermic injection or by the mouth. Specimens of these which we examined dissolved completely with great readiness.

Arsacetin.—We have received from Messrs. Meister, Lucius, and Brüning, Limited (51, St. Mary Axe, London, E.C.), a specimen of a new organic arsenium compound which they have recently introduced under the name "*Arsacetin*." This is described as sodium para-acetyl-amino-phenylarsinate, or acetyl-atoxyl, and it is stated that the introduction of the acetyl group results in producing a compound of much lower toxicity (just as acetalanilide is less toxic than aniline, or phenacetin than phenetidine), and of greater stability and similar therapeutic effect. *Arsacetin* is a crystalline white powder, readily soluble in water; examination showed it to be free from inorganic arsenious and arsenic compounds, while rich in arsenium.

Preparations of Atoxyl.—Messrs. R. W. Greiff and Co. (20, Eastcheap, London, E.C.) have forwarded samples of various preparations for the administration of atoxyl (sodium para-amino-phenylarsinate). These include tablets containing 0.05 gram ($\frac{3}{4}$ grain) of atoxyl with sugar of milk; tablets containing the same amount together with $\frac{3}{4}$ grain of lactate of iron; capsules containing 5 grains of Bland's pill mass with $\frac{3}{4}$ grain of atoxyl; and ampoules of solution of atoxyl for hypodermic injection. Examination of the specimens showed that the tablets disintegrated well in water; the capsules contained the iron in the ferrous condition, but the envelope did not dissolve at all readily when shaken in warm water.

Hydrogen Peroxide.

Messrs. McKesson and Robbins (New York; London agent, Mr. A. C. Wootton, 14, Trinity Square, E.C.) supply a stable solution of hydrogen peroxide for medical and surgical purposes, under the name "Pyrozone." This is a 3 per cent. solution, and it is claimed that it will keep for at least six months without loss of strength. We have recently examined a specimen which had been in our keeping for over seven months, and found it to contain just 3.0 per cent. of real peroxide, with only 0.05 per cent. of mineral acid.

Compound Liquorice Powder without Sugar.

Messrs. Lorimer and Co. (Britannia Row, Islington, N.) have submitted a sample of their Pulv. Glycyrrh. Co. sine Saccharo, in which sugar is omitted and the powder sweetened with saccharin. The dose is thereby reduced to one-half, and the powder is made more suitable for use by diabetic or gouty patients.

MEDICAL AND SURGICAL APPLIANCES.

The Single-Service Milk Container.

A MONO-SERVICE MILK-PAIL which seemed to offer several advantages in the distribution of milk and its care after reaching the household was noticed in this column on June 15th, 1907. We have recently received from America a pamphlet dealing with the "Single-service Container," and describing a paper vessel which seems to be identical with the mono-service milk-pail with the exception of an alteration in the lid. Along with the pamphlet is enclosed a report on the appliance from Dr. A. H. Stewart of the Bacteriological Laboratory of the Bureau of Health, Philadelphia. This report is entirely favourable, and Dr. Stewart states that the milk contained in the single-service container is cleaner bacteriologically and will keep two days longer sweet than that in the ordinary glass bottle. Amongst other advantages of the container over the glass bottle, he enumerates the low initial cost and the absence of loss from breakage, the saving of labour and money in the re-collection and cleansing, lessened weight, and the impossibility of contamination in transit. With these opinions we see no reason to differ. As the containers can be supplied at a cost of 1d. for 20 quart or 25 pint vessels there should be an ultimate saving in their use over that of glass bottles. We should be pleased to see one of the large dairy companies giving the apparatus a trial.

A Help for Very Bad Sight.

One of the most useful appliances which we have recently seen for the assistance of those unfortunate cases which have but little vision left in the only seeing eye is a spectacle suggested and used for some years in suitable cases by Mr. R. W. Doxey, of London and Oxford. It consists simply of an aplanatic lens of about 14 or 15 D. set in a spectacle frame, and having fixed in front of it a bar which is adjusted so that when it is touching the paper which the patient is about to read things are at the best focus, while it also indicates to the patient the line which he is reading. Every one knows how a patient with perhaps advanced optic atrophy is enabled just to read with a large convex lens which greatly magnifies the print. The great disadvantage of this is that the lens must be held in one hand and moved backwards and forwards, so that it is never steady, nor is it kept at the right focus. This disadvantage is completely done away with in the instrument under notice, while the patient very soon gets to be able to run his eye along the line with ease and precision. Its limits must be recognized. It is utterly unsuitable and useless for any one with binocular vision, or who can in any way use the two eyes; it should only be ordered for patients who have but one eye effective, the sight of which is so bad that only by strong magnification of the print is reading possible. The instrument is made by Messrs. Davidson and Co., Opticians, Great Portland Street, W.

ROYAL COMMISSION ON VIVISECTION.

FOURTH REPORT.

(Continued from page 288.)

WE continue our abstracts from the evidence of which the minutes are contained in the fourth report of the Royal Commission on Vivisection, issued in December, 1907.*

Evidence of Professor Lorrain Smith.

Dr. Lorrain Smith gave evidence on behalf of the University of Manchester and the Pathological Society of Great Britain and Ireland. After describing the experimental work carried on at the university, he said the work of the public health laboratories was highly valued by a large number of local authorities, representing about five millions of people, and officers of public health found their reports of great value as regarded the detection and prevention of the spread of disease. Some of the hospitals also availed themselves of these reports, which were often very helpful in diagnosis. The university had never had reason to find fault with any of the licensees for the manner in which the experiments had been carried out. It considered further restrictive measures unnecessary and undesirable. The experiments necessary in the Public Health Laboratory were practically all inoculations. Over 2,000 animals a year were used for investigations for sanitary authorities. The cases of diagnosis of diphtheria in which it was found necessary to resort to other than cultural or microscopic investigation was a very small proportion. In his own department experiments were made for purposes of investigation chiefly. He had conducted a good deal of research at Belfast; this included researches into conjunctivitis. It was not inoculation in the sense of taking a definite bacillus or streptococcus of a known virulence; it was rather an accidental inoculation which might arise from merely wounding the surface. So far as he could observe there was no great pain in these experiments. The eyeball did not slough; there was only a little conjunctivitis. The aim of the experiments was to avoid severe effects on the part. The animal was kept, he thought, a month or two afterwards. Then the eyes were examined microscopically after death to see if one could discover any trace of inflammation or any degeneration, or even the presence of microbes. But they discovered nothing by that method. The witness then described the aim and methods of pathological investigation. He dwelt on the fact that the point arrived in the investigation of disease when progress was practically stayed unless one had recourse to experimental methods. Arterio-sclerosis was a disease of the walls of arteries of insidious origin, commencing usually at about middle life and gradually progressing until it became directly or indirectly a cause of death. It led to hæmorrhage and softening of the brain, to various forms of heart disease, and to a slowly developing form of Bright's disease. The various forms of the disease had been carefully described, but its cause was not known, and to gain this information they required to have in their possession some agent which would set up the process. Josué made the discovery in 1903 that repeated injections of adrenalin into the circulation of rabbits set up a form of arterio-sclerosis in the walls of the vessels. Adrenalin promised to be of still greater value, since it might enable them to discover the cause of arterio-sclerosis. Then pneumonia was one of the most common of acute diseases, and might be studied in two ways: (1) The bacteria which caused it, and (2) the conditions of the patient which rendered him liable to become infected. The second only concerned him at that time. People carried about in their mouths and elsewhere the bacteria which caused pneumonia. Hence, the question before the pathologist was not merely to explain where the infection came from, but the conditions of the patient which permitted the pneumococcus to spread from its usual haunt in the mouth and throat and find its way to the lungs, where it set up inflammation. In order to work out these conditions one point to which to direct

attention was the lungs themselves. Could an agent be found which in itself might be used to cause pneumonia without the aid of bacteria? Such an agent had recently been discovered by the experimental method. It had been found that to submit an animal to an atmosphere of oxygen would, ere long, bring on pneumonia. The simplest possible way, therefore, of working out these conditions, so far as the lung itself was concerned, was to place the animal in an atmosphere richer in oxygen than the air they normally breathed. Pneumonia had been very fully studied by the methods of morbid anatomy, and the data obtained were of great value in enabling them, to understand the cause of the disease, but they had yet much to learn regarding the activity of the lung and its relation to the onset of inflammation. It was at this stage of the problem that experimental investigation became necessary in order to test the truth of hypotheses suggested by the data obtained. A third illustration he had taken from a study of derangements in metabolism. The commonest and most important of these was fatty degeneration. Such a change was seen, for example, in cases of poisoning by arsenic, but that disturbance might be due to a large variety of causes. It occurred more or less universally in gland cells, and its importance might be gathered from the fact that in the muscular fibres of the heart wall it formed one of the most serious types of heart disease. In regard to this condition a great amount of information had been obtained by means of starvation experiments. It was thought that fat appeared in the cells, say, of the liver in such conditions from dilapidation of the cell substances; but by means of these experiments evidence had been obtained that the presence of fat was in many cases to be explained by the absorption by these cells of fat transported by the blood from the tissues under the skin and elsewhere which normally contained fat. The starvation experiments consisted in depriving the animal of food. The animals were dogs and birds. In order to study the kind of fat found in the process of degeneration, the animal was deprived of food until its body contained little or no fat. They were supplied with water. They were deprived of food for a week or two, or even for a month. At the end of that time the animals were fed up again. They showed no symptoms of pain. They were unhappy; there were no particular symptoms. In fact, there was an experiment on record where the milk of a bitch was studied after a period of starvation in this way. It had had puppies, and was able to suckle them. After the animals were starved of fat they were fed with fat of other animals which was of a different character. Then one could follow the relation of this abnormal fat to other tissue changes. A great deal of light had thus been thrown on the process of fatty degeneration. Another important branch of this investigation was exemplified by nervous disease. It had been for years a well-established fact that one of the earliest changes in nervous disease was a breaking down of the nervous tissue system into fat, which was absorbed by lymphatics and disappeared. These changes were found in the dead body in damaged nerves in the spinal cord and brain, and the investigation of them had been carried out by the methods of morbid anatomy with great energy and success. Since it had been discovered that changes of this nature were found in the spinal cord associated with the occurrence of local inflammation elsewhere, as, for example, the presence of pus in the pleural cavity, this form of tissue disintegration had been taken up experimentally, and it had been shown that slow absorption of the poisons generated by bacteria took place along the nerve sheath, and that these poisons on reaching the spinal cord set up fatty changes in the tissue of the spinal cord at the point where the nerve branched off. In other words, they had obtained a new means of attacking the obscure problem of the causation of such diseases as general paralysis, locomotor ataxia, and recurrent insanity. Asked if he had been successful with animals in stopping cases which he believed he saw, he said it was rather early to say that, because the research was just in process. He considered there was very reasonable prospect of success. Finally, he wished to refer to a disease regarding the causation of which they had as yet no knowledge—rheumatoid arthritis and osteo-arthritis. What in that case was required above all things was the means of experimental

* London: Printed for His Majesty's Stationery Office, by Wyman and Sons, Limited, 109, Fetter Lane, E.C. And to be purchased, either directly or through any bookseller, from Wyman and Sons, 109, Fetter Lane, Fleet Street, E.C.; and 39, Abingdon Street, Westminster, S.W.; or Oliver and Boyd, Edinburgh; or E. Ponsonby, 116, Grafton Street, Dublin. (1908.)

investigation of the disease. Something very similar to the disease was found in animals. So far they had not been able to reproduce it. Asked by Colonel Lockwood if he had any objection to the present restrictions placed by law upon operations on living animals, the witness said, No. He did not know that it had placed Englishmen at a very serious disadvantage as compared with other nations. In reply to further questions, he said he thought he would be expressing the feeling of pathologists that further restrictions would delay research, and so far they would object to them. He had seen a fair number of experiments upon living animals, and had never seen any cruelty connected with them. In all the cutting experiments he had witnessed the animals had always been under anaesthetics. He had witnessed none of the starvation experiments to which he had referred. They were not carried on in England. Asked by Sir William Collins what had been learnt by experiments on animals in addition to Gull's and Sutton's work, Dr. Lorrain Smith said they had learnt that they had got a substance that would cause arterio-sclerosis. They were working out the effect of this substance. It was quite a new investigation. He had not witnessed the experiments in connexion with it. In reply to further questions, he said the submission of the animal to an excess of oxygen caused pneumonia, apart from any organism. That was an example of inflammation without bacteria. In man the usual pneumonia was caused by bacteria. Asked if the result of his investigations was to suggest that oxygen ought not to be employed in the treatment of pneumonia, he said he had debated that point with physicians like to the late Dr. Dreschfeld. It was rather difficult to answer it definitely. He thought Dr. Dreschfeld did not use it when he saw these experiments. He agreed that if oxygen produced pneumonia, the use of oxygen in pneumonia would be rather a homoeopathic remedy. Proceeding, he said he did not wish to disparage the importance of morbid anatomy as a means of research. He merely wished to indicate that the natural development of the study of disease was to commence with morbid anatomy, and that the experimental work was required to test the conclusions. Asked if he accepted the *Bacillus paratyphicus* as the cause of paralysis, he said the experiments he had seen were done by a variety of toxin-producing microbes; the *Bacillus coli* was tried and Gaertner's bacillus, and he thought, a mixture of bacilli. The result of those investigations was that one got definitely degenerative lesions in the spinal cord at the point where the nerve emerged. Asked if the evidence pointed to spinal paralysis being a bacillary disease, he said that in this particular part probably it did not; but there had been a large amount of evidence published lately to connect it with the diphtheroid bacillus. This investigation was rather to show that experiments had found out a mode of introducing the toxin into the nervous system in a form in which it had local effects. Apparently, so far as he had seen the experiments, the toxin might be of various kinds. Asked if he had been able to produce the results that he identified with those of general paralysis without the use of the *Bacillus paratyphicus*, he said, Yes, they had, with ordinary bacilli such as were found in the intestines, been able to produce effects of this order. He had tried the same experiment with poisons derived from other than bacillary sources. In reply to further questions, he said the fasting experiments on dogs were performed by Rosenfeld and Lebedeff. Rosenfeld published them in the *Zeitschrift für klinische Medizin*. As far as he knew no similar investigations had been made in this country. In reply to Sir John McFadyen, he said it would be in his opinion entirely unnecessary, as a means of ensuring compliance with the Act, to legislate so as to give greater publicity to the names of those engaged in vivisection, and to give in fuller details for public information the nature of the experiments. He had no reason to suppose that painful experimentation was carried on in this country. The statements about the cruelty and pain which were inflicted were misrepresentations, so far as he knew. He thought that that misrepresentation of the facts might be an honest misrepresentation, but that it might be continued, and even increased, if the laity were provided with details even of painless experiments. Asked by Sir Mackenzie Chalmers if, when he experimented under Certificate B, he understood that not only the cutting operation

itself, but any subsequent painful part of the operation, such as stimulating a nerve, or sewing up the wound, must be done under anaesthetics, he said, Yes. In reply to further questions, he said he represented the council of the university, which was the executive body. Mr. John W. Graham, who had given evidence, and described himself as Principal of Dalton Hall in the University of Manchester, did not represent any faculty of the university. Mr. Graham was not a member of the council of the university. Dalton Hall was a hall of residence for students. So far as he knew, no inquiry was made by Mr. Graham as to what went on locally in his own university. Asked whether general paralysis of the insane was not commonly supposed to be a sequel of syphilis, he said, Yes. His work had not necessarily tended to negative that in any way. Their work had been rather on the method in which toxins were absorbed so as to localize the lesions in the spinal cord. Various toxins might produce the same degenerative effects. In reply to Mr. Ram, he said he thought the treatment of fatty degeneration of the heart, or medical knowledge with regard to it, had been advanced by the starvation experiments on animals. The witness was then asked by Dr. Gaskell to tell the Commission about the case of Mr. Cecil Shaw which had been referred to by the Hon. Stephen Coleridge. Was it true that Mr. Shaw did experiment without a licence? Dr. Lorrain Smith said, No. The witness did the experiment. An eminent ophthalmologist in Belfast, now deceased, appealed to him to undertake this research. The witness was not specially acquainted with ophthalmology, therefore he associated himself with an ophthalmologist, and it was in these circumstances that the combination came about. Mr. Cecil Shaw practically did the whole research except the vivisection part of it. Asked why his name did not appear in connexion with it, he said it should have done; it would have been less ambiguous. These experiments which he had just recounted with regard to the absorption of toxins along the nerve sheaths was in the line of this investigation; it had engaged his attention more or less continually ever since. He had explained the whole circumstance and the Irish Home Office was satisfied with his explanation. He was attacked another time about doing experiments without a licence himself in a research on bacteria of the intestines of dogs, although he stated in the investigation that the intestine was removed after the animal was dead. He did not consider that the experiments on the eye caused the rabbits a good deal of pain. They did not succeed in causing iritis. It was a very minute quantity of jiquirity, the least speck of dust on the point of a camel-hair brush. No inflammation was caused except conjunctivitis. In reply to further questions, he said that at Manchester he did not demonstrate to students. There were no demonstrations in pathological experiments and experiments involving vivisection. He considered that such experiments might be useful to students. He knew how he was impressed the first time he saw a physiological experiment. One of the things that stood out in his recollection of Professor Rutherford's teaching almost more clearly than anything else was the experiment of blood pressure. He could not say what anaesthetics he used. He had no specific recollection of the point, but he was sure the animal was anaesthetized throughout. Sir William Church said they had had a witness before them lately who seemed to be under the impression that when an animal was kept under chloroform by means of having a tube introduced into the trachea, and then vapour of chloroform supplied to the animal through that tube, the tube was introduced without the use of anaesthetics—in other words, that the wound was made without the use of anaesthetics. The witness said he had never seen it done. He agreed that there was no difficulty whatever in keeping an animal under anaesthesia under those circumstances.

(To be continued.)

AN International Congress on Leprosy is to be held at Bergen in August next. We understand that Sir Jonathan Hutchinson and many prominent dermatologists will take part in the proceedings, and that the etiology of the disease will occupy a large place in the discussions.

RADIUM:

ITS PHYSICAL AND CHEMICAL PROPERTIES.

RADIUM and the kindred radio-active bodies furnish an excellent example of the logic of discovery. In a sense it may be argued that the x rays—and thus eventually radium—were found by a happy accident, being the outcome of a series of experiments on the electric conductivity of gases at low pressures; but the x rays and the phenomena connected with them merely gave an indication of the experiments which led up to the discovery of radium, the most revolutionary discovery of modern science.

THE DISCOVERY OF RADIUM.

It is common knowledge that during a discharge of electricity at high tension, through an attenuated gas, material particles (cathode rays) having a mass equal to the thousandth part of the mass of an atom of hydrogen are driven at enormous velocity from the cathode, and that when these material particles are stopped in their career, they produce fluorescence and give rise to the x rays, believed to be either light waves of exceedingly short wave lengths or an irregular series of pulses set up in the ether. The fact that these rays produce fluorescence when they impinge on barium platino-cyanide and similar substances suggested the search which eventually culminated in the discovery of radium. Becquerel investigated various fluorescent bodies to see whether they gave rise to the x rays, and found that in the case of the fluorescent uranium salts a penetrating radiation could be detected. Further research showed that all salts of uranium—whether previously exposed to the light or not, and whether fluorescent or not—were able to give off rays affecting a photographic plate. A search was made for similar substances and it was soon found that thorium appeared to possess a similar property. The fact that uranium, when pure, was less active than certain native minerals containing it prompted further investigations, and eventually three new substances were discovered, all of which showed radio-activity, polonium, radium, and actinium, radium being enormously the most active of the various bodies.

PHYSICAL PROPERTIES OF RADIUM.

There is no need to detail the methods of preparation of radium from pitchblende. Enormous quantities of pitchblende have to be worked in order to procure a few grams of the mixed chlorides of radium and barium, and advantage is taken of the relative insolubility of radium chloride to effect separation by fractional crystallization. To prepare a gram of the chloride 10,000 kilograms of the mineral must be treated.

When once radium chloride had been obtained pure, except for minute traces of barium, the first question presenting itself was whether radium was or was not an element. This was solved by Demarcay by spectroscopic methods. The atomic weight of radium has since been determined, though not with certainty, as about 225. For the purposes of research, the most important property of radium is the power it possesses of making gases conductors of electricity. This property renders it possible to standardize samples of radium-bearing substances, to determine the relative activity of radium under different conditions, and, in a word, to study it in a quantitative manner. Standardization is effected by noting the speed with which a given electroscope is discharged owing to the ionization of the surrounding air.

In the address delivered by Sir Frederick Treves at the London Hospital, published after revision by him at p. 317, he described the three types of radiation produced—the alpha, beta, and gamma rays—and also the remarkable gas or emanation that is given out by radium. Among other properties the self-luminosity of radium salts was described. It may be noted that the greater the purity of the salt the less the luminosity, for the bulk of the fluorescence is due to the bombardment of barium impurities by the rays emitted from the radium. In connexion with this self-luminosity the curious fact may further be noted that it decreases with the lapse of time, but that it may be recovered by recrystallizing from a solution in water.

Another remarkable physical effect produced by the presence of radium is the power which the rays have of increasing the electric conductivity of liquids and solids as well as gases. The thermal effects of radium are too well known to require any description.

THE EMANATIONS.

Owing to the nature of the case Sir Frederick Treves was unable to discuss any details of the very peculiar properties connected with the so-called emanations or gases given off by radio-active bodies. It is noticeable that all attempts to get an emanation from polonium or uranium have so far resulted in failure. The radium emanation is obtained by dissolving a radium salt in water and bubbling air through the solution. Relatively large quantities are thus continuously produced for a short time, but soon the radium is completely deprived of its emanation and the radio-activity of the preparation vanishes for the time. About a month is required before the radium has fully recovered its original activity.

The properties of the emanation are even more remarkable than those of the parent body, radium. It is radio-active, but it loses its activity in an exceedingly short space of time. Within three and three-quarter days the activity has been diminished by half, and the fact has been determined that in the same time the radium from which the emanation was produced, and which temporarily lost its activity, has regained as much activity as the emanation has lost. In other words, the sum of the activities of radium and of the emanation of radium is constant. This statement remains true whatever length of time is considered.

The phenomenon has been explained by Rutherford and Soddy by their "disintegration theory." These observers believe that the atom of radium decomposes as it emits the alpha rays, and that radium emanation is radium minus the alpha rays or alpha particles. The emanations seem to be chemically inert. By applying Graham's law of the diffusion of gases, their molecular weight appears to be about 100, the atom of hydrogen being taken as unity. The radium emanation has a boiling point of about -150°C ., and the thorium emanation of about -120°C . Sir Frederick Treves has explained how the emanation deposits a substance on the walls of the vessel in which it is contained. If the activity of the deposit is considered, it is found that it decreases in a peculiar manner in three definite stages. The first stage is short, and during this the activity, as measured by the alpha rays, falls with great rapidity. The second stage is marked by a constant discharge of activity showing no signs of decay, while in the third stage the rate of decay is very much slower than in the first. It is believed that the emanation decomposes into three radio-active bodies, known as Radium A, Radium B, and Radium C, these being transformed into one another in alphabetical order. When this change has occurred, however, and when Radium C may be imagined to have decomposed, radio-activity persists. This can be shown to be of a complex character, and it has been necessary to assume the existence of still further bodies called Radium D, E, F, and G. This conclusion is based on the way in which the production of alpha, beta, and gamma rays is found to wax and wane. For example, when one of these bodies is being examined it will be found that the alpha rays are continually increasing in amount, while there may be few, if any, beta or gamma rays. After a short period the alpha rays will be found to have disappeared and the beta and gamma to preponderate, and at a later stage the types of radiation produced may be reversed, and so forth.

ORIGIN OF RADIUM.

It was stated above that uranium gave rise to no emanation. It has been found, however, that it does give rise to a body more radio-active than itself, Uranium X. When this is separated from uranium, the activity of the uranium is found to be diminished, just as the activity of radium is lessened by the removal of its emanations. The importance of this will be seen later.

In view of the fact that radium is continually being subjected to a process of decay, it is clear that it must be continually produced. It is always found closely associated with uranium. The suggestion has been made that actinium

provides the necessary link between uranium and radium. The following experiment was therefore conducted. A solution of actinium chloride, prepared from a quantity of carnotite ore containing 20 per cent. of uranium, was sealed up in a glass bulb and tested intermittently for traces of radium emanation. Two months after the experiment was started, the amount of radium emanation recovered corresponded to 5.7×10^{-9} grains of radium. The bulb was again sealed, and after 193 days emanation corresponding to 14.2×10^{-9} grains was found. In other words, 8.5×10^{-9} grains had been produced in 193 days. In this solution about 200 grams of uranium was present. It has since then been shown by Rutherford that radium is not produced directly from actinium, but from ionium, which is usually associated with actinium. The application of this discovery to geology by Professor Jolly last year at the meeting of the British Association in Dublin was probably the most original contribution made on that occasion.

The following table illustrates the putative kinship of radium:

Substance.	Time to Fall to Half Value.	Nature of Rays.
Uranium	4,500 years	Alpha.
Uranium X	22 days	Beta and gamma.
Ionium	—	—
Radium	1,500 years	Alpha.
Radium emanation	3.75 days	Alpha.
Radium A	3 minutes	Alpha.
Radium B	26 minutes	Slow beta.
Radium C	19 minutes	Alpha, beta, and gamma.
Radium D	40 years	Gamma rays.
Radium E ₁	6 days	No rays.
Radium E ₂	4.8 days	Beta rays.
Radium F (Polonium) (Radio-tellurium)	143 days	Alpha rays.

Now radium F, or polonium, is radio-active, and must certainly change into some other substance. It may be noted that with uranium the following elements usually occur: Lead, thorium, bismuth, and barium, and also the gases hydrogen, argon, and helium. Now the last of these substances is generally regarded as identical with the alpha particle emitted by radium. Ramsay has shown that radium emanation can be got free from helium, and that as it decays within a sealed tube helium makes its appearance. If, however, emanation is allowed to decay in contact with copper sulphate, argon is produced instead of helium, while in the presence of water neon makes its appearance. No mention need be made here, in view of the prominence that has been given them, of the apparent transmutation of copper under the influence of radium emanation to lithium, and possibly sodium, by Sir W. Ramsay. It should be noted, however, that Madame Curie has tried to repeat Ramsay's experiments, using platinum vessels without success.

The hypothesis has long been suggested that lead is the final product of radio-active change. It is noticed that in primary ores of the same geological age the ratio of uranium to lead is constant. In the case of thorium, barium, and bismuth no such relation holds. The most serious objection to this theory is that, while the atomic weights of uranium and lead are 240 and 207, fourteen transformations would have to occur within this very short range. Another difficulty consists in the fact that the atomic weight of radium emanation seems to be about 100.

Many problems are raised by the most elementary study of radio-activity. From a gram of a radium salt a stream of energy is continually flowing; nothing affects this constant discharge. It is immaterial whether the salt is wet or dry, whether it is heated almost to the glowing point or whether it is plunged into the extreme cold of liquid air, it can be made to enter into one form of chemical compound or another, it can be mixed with other salts, and subjected to the action of powerful

electrical or magnetic forces and still the bombardment continues, containing in its minute bulk all the gorgeous radiant majesty of a shower of incandescent meteorites. The hypothesis that radium derives its energy by absorbing energy radiated to it through space breaks down on investigation, and the fact that radium evolves energy from itself is established beyond dispute. The chemical changes which the element undergoes are entirely unaltered by conditions of temperature, and are so enormously greater in amount than any of those with which the chemist is acquainted, that no chemical hypothesis can be advanced.

It is believed, therefore, that the atom of radium is being continually disintegrated, a conception harmonizing remarkably with the hypothesis of atomic structure advanced independently by Sir J. J. Thomson. The theory is a return from a different standpoint to the fundamental ideal set forth by Prout and others since his time as to the unity of all forms of matter. Prout believed that the various elements were all built up of hydrogen, and, in fact, were multiples of that element. Sir J. J. Thomson's hypothesis is that the elements are built up of minute vibrating systems of corpuscles, and these corpuscles are the small bodies known as the beta rays. They, as Sir Frederick Treves pointed out in his lecture, are negatively charged and may be regarded as having inertia of purely electrical origin. The positive alpha rays, on the other hand, have a mass comparable with that of hydrogen, and a difficulty arises from the fact that no similar positive electrified body with only electrical inertia has been demonstrated to exist.

Despite this condition, however, pointing as it does to a difference in kind between negative and positive electricity, Sir J. J. Thomson's view of the atom has much to recommend it. The atom would consist of negatively charged corpuscles rapidly moving in orbits, within a sphere of positive electricity. The corpuscles would arrange themselves in systems and there would be a certain critical value necessary for the atom's stability. From such a system, energy derived from the rotation of the corpuscles would be slowly radiated. The velocity of the corpuscles would be reduced, their stability would be suddenly upset, and during the explosive moment of rearrangement certain portions of the atom would be set free as radiations. A fact strongly in favour of the accuracy of this view is that it was designed to explain the general behaviour of atoms. It is at the least a highly remarkable coincidence that it should be found to fit in closely with the new knowledge derived from the study of so remarkable a substance as radium.

BIBLIOGRAPHY.

The bibliography of radium and radio-active substances is already enormous; probably the best and most recent general account is to be found in the volume entitled *The Radio-active Substances: their Properties and Behaviour*, by Mr. Walter Makower, Assistant Lecturer in Physics in the University of Manchester, reviewed in the *JOURNAL* of October 24th, 1908, p. 1277.¹ The volume on *Radio-activity*, published in 1904 by Professor Soddy,² who has himself contributed much to the investigation of the subject may also be consulted; and his paper on "A method of applying the rays from radium and thorium to the treatment of consumption," published in the *BRITISH MEDICAL JOURNAL* of July 25th, 1903, p. 197, may still be read with interest. Those who wish to follow the development of the subject may consult the files of *Nature* for the last few years. Our Paris correspondent gave an interesting account of the therapeutic use of radium at the St. Louis Hospital in cancer of the skin and mucous membrane in the *JOURNAL* of January 23rd, p. 242.

¹ London: Kegan, Paul, Trench, Trubner, and Co., 1908, 5s.

² London: Electrician Publishing Co., 1904.

THE report presented to the eighth annual meeting of the Peckham Nursing Association stated that the organization, which exists to give nursing attendance free to the poor in their own homes, and to attend cases of sickness and operation among the middle classes for a moderate fee, had received a grant from the Metropolitan Hospital Sunday Fund. Since its foundation over 26,000 visits had been paid to 1,191 poor patients.

CREMATION.

PROGRESS OF CREMATION.

For some years past we have published figures, obtained from official sources, as to the number of cremations carried out in this country and the establishment of new crematories. On each of these occasions we have taken the opportunity of urging upon the medical profession the advantages of this mode of disposing of the bodies of the dead, alike in regard to the respect due to those who pay the inevitable debt of mortality and to the welfare of the living. We have shown that the objection on religious grounds which used to influence the minds of many has lost much of its force. It was met long ago by Lord Shaftesbury's famous question, If the burning of a body interferes with the Resurrection, what becomes of the blessed martyrs? Religious feeling can be satisfied by services when the ashes are placed in the urn just as well as when the body is laid in the grave. The Roman Catholic Church still forbids cremation, but there is reason to believe that this prohibition has a disciplinary and ritual or political rather than a strictly theological basis. In Italy cremation was, when first introduced, regarded, if not intended, as a sign of revolt against clericalism. As the Roman Catholic Church spreads its branches over the world this prohibition, which, if we are rightly informed, in its origin had only a local significance, has been extended over a corresponding area, carrying with it an official disapproval of cremation which has been misinterpreted into a formal condemnation of the practice on theological grounds. It is not surprising, therefore, that in Catholic countries cremation is almost as extraordinary an event as an *auto da fe* would be in these days. It is strange, however, that in what is at present the most anticlerical of countries—France—it makes little progress. In the Jewish community, although cremation is not much practised, there is no official prohibition. In Germany it has lately made rapid headway, notwithstanding opposition on the part of religious bodies. There are crematories at Bremen, Chemnitz, Coburg, Eisenach, Gotha, Hamburg, Heidelberg, Heilbronn, Jena, Karlsruhe, Mayence, Mannheim, Offenbach-on-the-Main, Pörsneck, Stuttgart, and Ulm. The number of cremations carried out in 1908 was, according to *Die Flamme*, 4,050, as against 2,977 in 1907. Quite recently the remains of Prince Edward Saxe-Weimar Eisenach were burnt instead of being deposited in the family mausoleum. This is said to be the first time that the body of a prince of a reigning house in Germany has been cremated. In New South Wales there is a cremation society which held the first general meeting in November, 1908, under the presidency of Dr. Creed, M.L.C., and in Auckland, N.Z., under the presidency of Dr. J. S. Purdy.

In this country, as has been stated in previous articles, many of the clergy are in active sympathy with the movement for the substitution of cremation for burial, and there

are not a few signs that it is becoming more common. It is still, however, almost wholly confined to persons belonging, in an intellectual sense, to the higher classes. This is probably in large measure due to the inertness which makes any departure from long-established custom repugnant to the average, and still more to the ignorant, man. The advocates of cremation should not therefore be discouraged by its slow progress, but should welcome every sign, however trivial, of advance.

It is satisfactory to record that during 1908 there was a decided increase in the number of cremations throughout the country. In this increase the London crematories—Woking, Golders' Green, and Ilford—figure most prominently, the total number being 86, or 20 per cent., more than in the previous year. In the provinces the increase was only 4, or 1.4 per cent. The increase in the frequency of cremation in London is attributable partly to the diffusion of the knowledge of its advantages by the press, partly to the active propaganda carried on by the Cremation Society of England. The table at the foot of this page shows at a glance the progress of cremation in Great Britain during the last twenty-three years.

The following table shows the relative numbers of cremations in London and in the provinces:

London Crematories (Woking, Golders' Green, Ilford).			Provincial Crematories (Manchester, Glasgow, Liverpool, Hull, Darlington, Leicester, Birmingham, Leeds, Bradford, Sheffield).		
1907.	1908.	Increase.	1907.	1908.	Increase.
416	502	86 (20 per cent.)	289	293	4 (1.4 per cent.)

THE SENTIMENTAL ASPECT.

In such a matter as the disposal of the remains of the dead the sentimental aspect cannot be disregarded. Probably what makes the idea of cremation repulsive to many people is the sudden and complete destruction of the tenement in which dwelt the soul of one we knew and perhaps loved. But to any one whose imagination can pierce below the ceremonies and the coffin in which a body is laid to rest, the prevention of corruption by the quick action of fire should surely be more comforting than the thought of any one we knew being doomed in the words of Claudius:

To lie in cold obstruction and to rot.

We have no wish to dwell on the horrors of the charnel house, but we cannot shut our eyes to the fact that burial means decay with its accompanying loathsomeness. To this favour must we all come if we are laid in the earth or, what is far worse, in vaults. The gorge rises at the notion of the process of decomposition. Cremation, on the other hand, has no such disgusting associations.

Table of Cremations Carried out in Great Britain since the Opening of Woking Crematorium in 1885.

	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.		Total.									
Woking	3	10	13	28	46	54	99	104	101	125	150	137	173	240	240	301	273	275	143	138	95	140	108	119	3,115
Manchester								3	30	47	58	52	51	62	88	83	96	81	92	98	97	90	96	116	1,240
Glasgow											1	10	16	12	16	20	18	20	24	19	35	44	30	28	293
Liverpool													10	27	23	40	40	54	35	40	35	46	34	32	418
Hull																	17	13	18	20	15	17	29	37	166
Darlington																	1	2	1	7	4	13	8	6	42
Golders' Green																		5	158	220	252	298	290	264	1,587
Leicester																			1	5	8	16	12	14	68
Birmingham																				1	19	22	25	33	118
Leeds																					16	15	16	24	71
Ilford																					9	23	18	19	69
Bradford																					1	14	13	6	34
Sheffield																					7	6	18	12	43
Total	3	10	13	28	46	54	99	107	131	172	209	201	250	341	367	444	445	451	477	569	604	743	705	795	7,264

By its means the ashes of the dead may repose inoffensively for an indefinite period amid beautiful surroundings. It justifies the words of Shelley speaking of Keats's grave: "It almost makes one in love with death to think that one would be buried in so sweet a place." The consequences of burial, however, are the reverse of sweet, whereas cremation is an act of kindness to the living as well as to the dead, and enables us to keep their memory undisturbed by ideas of decay.

THE ECONOMIC ASPECT.

It is tolerably certain that cremation will sooner or later be forced upon us as a compulsory measure owing to the want of space for burial. Already municipalities are confronted with the ever-increasing difficulty of enlarging their cemeteries or finding room for new ones. The cost of this will necessarily increase as ground available for the purpose becomes less easy to find, and therefore more expensive. The dangers to health from overcrowded graveyards need not be dwelt upon, as they are recognized by all. Cremation offers the readiest and the best solution. It is not only cleanly and wholesome, but cheap, a circumstance which has to be taken into account by local authorities as well as by private persons.

CRIME AND CREMATION.

The only serious objection to cremation from the point of view of the public safety is the possibility of its destroying evidence of crime. If the provisions of the Cremation Act are complied with, the chances of the body of a person who has died in circumstances warranting any suspicion of foul play being disposed of by cremation are very remote. Indeed, hiding of the evidences of crime is made far more easy by burial as ordinarily carried out than by cremation. For cremation two medical certificates signed by two registered medical practitioners are required; this alone suffices to show how much more stringent the regulations of the Home Office under the Cremation Act are than those for burial. In proof of this it may be stated that according to the latest returns more than 8,000 bodies were buried in 1907 in England and Wales without any medical certificate at all. In an article published in the *JOURNAL* of February 8th, 1903, p. 339, it was stated that since the Home Office regulations under the Cremation Act came into force—that is to say, from May 1st, 1903, to December 31st, 1907—1,739 cases were submitted for cremation to the medical referee. Of these, 7 were referred to the coroner, who held an inquest in 3, and thought such an inquiry unnecessary in 4. In 31 cases certificates were referred back to the certifying doctors for further information or owing to some irregularity in filling up the form. In 20 a *post-mortem* examination was ordered by the medical referee. In 4 cases the medical referee refused to authorize cremation, and in 6, in which the deceased persons were from abroad, it was found impossible to comply with the statutory regulations. Thus, of the total number of cases submitted to the medical referee, in 68, or nearly 4 per cent., further information was required or the necessary authorization was refused.

During 1908, 489 cases were submitted to the medical referee of the Woking and Golders Green Crematories. Thirty-eight of these were referred back, in 4 cases the application was refused or withdrawn, and in 2 from abroad cremation was refused. The reasons of the refusal are to be found in the following rules and orders under the Cremation Act with regard to persons dying abroad or at sea:

The duties of the medical referee shall be as follows:

He shall not (except where an inquest has been held and a certificate given by a coroner in Form E) allow any cremation to take place unless he is satisfied that the death of the deceased has been duly registered by the production of a "certificate of registry of death" on one of the forms provided by the Registrar-General for production in case of burial.

In these cases the registrar never issues a certificate of registry of death, and the coroner very rarely holds an inquest. Therefore, since the medical referee cannot obtain either of these he cannot sanction cremation. For the same reason, a "provisional certificate of registration of death" is of no use for the purpose. The medical referee can only allow cremation on the production of the certificate of registry of death itself. Of the 38 cases referred back by the medical referee during 1908, 4 were reported to the coroner, who held an inquest in each case.

In 27 cases certificates were returned on account of some irregularity in filling up the forms or because further information relative to the cause of death was required. Of these 23 were ultimately passed, and 4 were refused or withdrawn. In 7 cases *post-mortem* examinations were made. These figures, besides showing the care with which permission to dispose of bodies by cremation are issued, suggest that there is considerable laxity as to orders for burial. If the total number of deaths occurring yearly in London is put roughly at 70,000 (15 per 1,000 on 4,700,000 people) and if the figures yielded by the investigation of the number of deaths which come before the medical referee are of any value, it would appear that in London alone in 560 cases of death where burial is now carried out on a registrar's certificate an inquest should have been held, and in 980 a *post-mortem* examination should have been held to establish satisfactorily the cause of death.

Another point which seems to us to make strongly in favour of cremation is the fact that it would place in the hands of the Registrar-General much more trustworthy information than he obtains under the existing system. From the figures we have quoted it is obvious that many of the statistics issued are, in a scientific sense, valueless. Figures collected with the precautions against error required for cremation would be far more likely to supply a more solid foundation for conclusions as to the causes of death and as to the prevalence of certain diseases. In illustration of this it may be mentioned that the Medical Referee for the London Cremation Company has not yet come across a case in which the diagnosis on the certificates was completely substantiated by a *post-mortem* examination. This does not, of course, imply that medical diagnosis is generally at fault; it must be remembered that the cases with which he has to deal are, from the very fact that extra precautions are considered necessary, obscure in their nature, even when they are not open to suspicion in other respects.

CRIMINAL PROSECUTIONS UNDER CREMATION ACT.

During 1908 there was one criminal prosecution under the Cremation Act by the Home Office. The case was tried at Edgware Petty Sessions on May 6th, and a report of it was published in the *JOURNAL* of May 23rd, 1908, p. 1263. An undertaker was charged (1) with unlawfully and knowingly burning the body of a stillborn child; (2) with contravening the regulations made by the Secretary of State by causing and procuring the cremation of a stillborn child otherwise than on the written authority of the medical referee acting on behalf of the London Cremation Company. A report of another case, which was tried since the beginning of the present year, may be found at page 315 of the *BRITISH MEDICAL JOURNAL* of January 30th.

HOW TO ENSURE CREMATION.

There can be no doubt that cremations would be more numerous but for the matter that the wishes of dying persons in regard to this fact are not always fulfilled. The reason is generally that no definite instructions as to the disposal of his body are left by the deceased. It may be well, therefore, that it should be generally known how a person can ensure that his body shall be cremated if he wishes. For this purpose the person desiring it should communicate his wishes to his executors and friends. It is not sufficient merely to insert a direction in a will, because the will is rarely looked at until after the funeral. Moreover, any such direction, having no effect in law, would not bind unwilling executors. It is advisable, therefore, to appoint executors who may be relied on to respect the testator's wishes in respect of cremation. As a further precaution, any gift to them might be made conditional on their doing so. A more certain way is to become a member of the Cremation Society of England (324, Regent Street, W.). Membership, in addition, offers the following advantages:

A Life Member is entitled to be cremated at any Crematorium in Great Britain without fee.

The wish of a person to be cremated after death is more likely to be fulfilled if he is a Life Member. For life membership prepay the cremation fee, and thereby relieves the survivors of a portion of the funeral expenses.

The Certificate of Life Membership, given by the Society, clearly indicates the desire for cremation, and relieves executors and others of the responsibility of deciding. The wishes of many persons are often forgotten, or not acted upon, if no

definite instructions are left. A member, beside being kept in touch with the progress of the movement, by means of publications, etc., has the right to vote at all general meetings of the Society, and therefore to influence its policy.

The following are the rules governing life membership:

Rule 5.

The members of the Society shall be persons of either sex who have been approved by the Council, and who

(a) Pay to the Society a subscription of one guinea per annum.

(b) Qualify for life membership under Rule 6.

Rule 6.

Any person who shall make application to the Society in the form provided for that purpose and pay the sum of five guineas shall thereby qualify as a life member of the Society, and shall as such life member be entitled—subject to the legal forms being complied with—to be cremated at death without further fee at any crematorium in Great Britain that is in working order.

The payment of six annual subscriptions of one guinea shall qualify a person for life membership.

No financial liability beyond the payment of the subscription is attached to membership.

BRITISH MEDICAL BENEVOLENT FUND.

At the January meeting of the Committee twenty cases were considered, and grants amounting to £180 made to nineteen of the applicants. Appended is an abstract of the cases relieved:

1. Widow, aged 70, of M.R.C.S. No income; slight help from children. Relieved sixteen times, £173. Voted £10.
2. Daughter, aged 33, of late M.D. Glas. Used to support herself by nursing, but the last three or four years has had very bad health, and is now quite incapacitated. No income; slight help from a friend and the Distressed Gentlefolks' Aid Association. Relieved four times, £41. Voted £10.
3. Daughter, aged 64, of late M.R.C.S. Had maintained herself as a governess from the age of 16 until a few years ago. Invested her savings in a company which has just gone into liquidation. Voted £12.
4. M.R.C.S., aged 65. Used to have a good practice, but has lost several patients through death and removal. Receipts last year not very much more than his rent, and is not in good health. Voted £12.
5. L.R.C.S. Dub., aged 64. Was a ship's surgeon for many years, but was obliged to resign, having contracted a drug habit, and now finds it impossible to get work, although there is every reason to believe that for five years he has taken neither narcotic nor stimulant. Was given an interim grant of £2 at Christmas, and now voted £5, with leave to apply again in six months, a medical friend undertaking to receive the money and satisfy himself as to the use made of it.
6. Widow, aged 85, of M.R.C.S., L.S.A. Only income £25 a year from the United Kingdom Beneficent Association, and has been bedridden for six years. A friend who formerly helped died recently. Voted £5.
7. L.R.C.P. Edin., aged 78. Used to have an excellent practice, but receipts have greatly fallen off owing to changes in the neighbourhood, and applicant has unavoidably exhausted his savings. Voted £12.
8. Daughter, aged 49, of late L.R.C.P. Edin. No means, and is not in a fit state for undertaking remunerative work of any sort. Voted £10.
9. Medical student, who hopes to get qualified in eighteen months' time, but whose father recently died, leaving applicant and four sisters quite unprovided for. A grant has been made him at his school and help is promised by local friends, but meanwhile money is urgently needed for unavoidable expenses. Voted £20, to be distributed to the family at the discretion of an honorary local secretary.
10. Wife, aged 39, of M.D. Edin., who is confined in an asylum. Income £13 a year. Has taken lodgers, but is at present unable to do so on account of a recent surgical operation. Two children, aged 13 and 12. Relieved four times, £28. Voted £10.
11. Widow, aged 59, of M.R.C.S. No income. Slight help from children. Has permanently injured her right hand. Relieved five times, £58. Voted £12.
12. Daughter, aged 71, of late M.R.C.S., L.S.A. Income £20 a year, and carous a few shillings occasionally by needlework. Relieved nine times, £35. Voted £5.
13. Widow, aged 60, of L.R.C.P., L.R.C.S. No income; health failing; endeavours to earn a little by needlework, but finds it difficult to obtain. Relieved ten times, £105. Voted £12.
14. Widow, aged 38, of M.R.C.S., L.S.A. Quite unprovided for at husband's death. No income; slight help from friends; has maintained herself as a housekeeper until about a year ago, when she developed phthisis. No children. Relieved once, £5. Voted £5.
15. Widow, aged 51, of M.R.C.S., L.S.A. Quite unprovided for at husband's death, and with the assistance of this fund and relations has brought up her four children, whom it is hoped will soon be able to support her. Relieved thirteen times, £150. Voted £12.

16. Daughter, aged 68, of L.R.C.P., L.R.C.S. Edin. After father's death at the age of 92 applicant became a teacher, properly intended for her support having had to be realized. Has now a teacher's pension of £15 a year and a little help from the Indigent Gentlewomen's Fund. Relieved twice, £23. Voted £5.

17. Widow, aged 55, of L.F.P.S. Glas. Nursed her husband for several years before his death, and now endeavours to support herself by letting lodgings. No children. Relieved once, £5. Voted £5.

18. Daughter, aged 57, of late M.R.C.S., L.S.A. Maintained herself for several years as a governess, but now dependent on small earnings from needlework and music pupils. Relieved once, £12. Voted £12.

19. Widow, aged 54, of L.R.C.P., L.R.C.S. Ire. No income; children do not help. Relieved four times, £41. Voted £6.

Contributions may be sent to the Honorary Treasurer, Dr. Samuel West, 15, Wimpole Street, W.

Nota et Vetera.

A MEDICAL ROLL OF HONOUR.

PHYSICIANS AND SURGEONS WHO REMAINED IN LONDON DURING THE GREAT PLAGUE.

WHEN the Great Plague of 1665 occurred in London, there was a general stampede of all who could leave the city. The exodus included those to whom the distressed inhabitants naturally turned for help, namely, the clergy and the doctors; and the panic-stricken and plague-stricken inhabitants were left largely in the hands of irregular practitioners in both professions. The medical refugees included men of high reputation and great wealth; among them one, at least, whose name is a household word in the annals of medicine. All the officers of the College of Physicians, led by their president, fled; to find, on their return, that their college had been broken into and the college coffers emptied.

How many medical men remained at their posts is not accurately known. There were not many. Apparently not more than twenty-five. Not a large number to minister to the medical needs of a population estimated at 240,000 and in a time of pestilence. No list has been preserved of this small band of heroes. A study of contemporary literature, however, and an examination of valuable manuscripts in the Guildhall Library, most kindly transcribed by Mr. Edward M. Borrajo, the City Librarian, has enabled the compilation of the following list, which, however, cannot pretend to be more than an approach to completeness:

I. PHYSICIANS.

In the compilation of the following biographical notes, Monk's valuable "Roll of the Royal College of Physicians" has been largely drawn upon:

Allen, Thomas, is mentioned by Pepys as being in London during April, 1666, when the Plague was still raging severely. Dr. Allen was educated at the University of Cambridge (Trinity and Caius Colleges) where he took the degrees of M.B., 1654, and M.D., 1659. He became a member of the Royal College of Physicians in 1659, a Fellow in 1671, and Censor in 1674-79, and 1682. He was a Fellow of the Royal Society and Physician to Bethlehem Hospital. He died of "dropsy" in 1684.

Baber, Sir John, resided in King Street, Covent Garden. He was the son of Mr. John Baber, Recorder of Wells, Somerset, and was born April 18th, 1625. He studied first at Winchester and then at Christ Church, Oxford. After graduating M.B. (1646) at Oxford, he travelled abroad and took his M.D. (1648) at the University of Angers. On returning to London he joined the Royal College of Physicians, becoming a Fellow in 1657 and Censor in 1660. He was appointed Physician-in-Ordinary to Charles II. and knighted by that monarch, March 19th, 1660. He died in 1703. Sir John Baber's presence in London during the plague year is established by entries in *Pepys's Diary*.

Barwick (or Berwick), Peter, resided in St. Paul's Churchyard, until his house was destroyed by the fire of 1666, when he removed to Westminster. He was the son of Mr. George Barwick, of Witherslack, Westmorland, and was born there in 1619. He was educated at Sedbergh Grammar School, and then at the University of Cambridge (St. John's College), where he took the degrees of B.A. (1642), M.A. (1647), and M.D. (1655). He

joined the Royal College of Physicians in 1655, became a Fellow two years later, and was Censor in 1674-84 and 1687. This good man seems to have been noted for his loyalty, his piety, and his charity. He was with Charles I at the battle of Worcester, remained steadfast to the Royal cause during the Commonwealth, and at the restoration was appointed a Physician-in-Ordinary to Charles II. He is mentioned by Dr. Hodges in *Loimologia* as one of those who remained in London during the plague year. During the whole of that year he never missed attending daily service at St. Paul's Cathedral. His practice was to rise at 6, walk over to the Cathedral for prayers, and then return to his house to see gratuitously all sick poor who came to seek his aid. He seems to have stimulated the Cathedral clergy to their duty, for one of the canons writing to the Dean, states that Dr. Barwick had been inquiring as to the celebration of the Holy Communion, which appears to have fallen into abeyance, possibly from the fear of spreading contagion. In old age he became completely blind and suffered severely from stone. He died in his 84th year and was buried in the crypt of St. Faith beneath St. Paul's Cathedral. He married the widow of an eminent merchant, and left a daughter who became the wife of Sir Ralph Dutton, Bart., of Sherborne.

Brooks, Humphrey, lived in Leadenhall Street. He was a Londoner by birth, and was educated at the Merchant Taylors' School. He subsequently went to Oxford (St. John's College), and took there the degrees of B.A. (1640), M.B. (1646), and M.D. (1649). He was admitted a member of the Royal College of Physicians in 1640, and chosen a Fellow in 1674. He was Censor in 1675-80-81-84 and 1692, and "Consiliarius" in 1693. He died "very rich" at the age of 76, and was buried in the Church of St. Andrew Undershaft. He was the author of a work entitled, *A Conservatory of Health, Comprised in a Plain and Practical Discourse upon the Six Particulars Necessary for Man's Life* (London, 1650, 12mo). His presence in London during the plague is vouched for by his contemporary, Dr. Hodges.

Burnett, Alexander, of Fenchurch Street, was M.D. Camb. 1648, and F.R.C.P. Lond. 1648. Dr. Burnett, while engaged in company with Dr. Glover, Dr. O'Dowd and two other physicians in making an autopsy upon a person who had died of the plague became himself infected and died August 25th, 1665. All present at this fatal *post-mortem* examination caught the virus and died, some the same day, the rest the day following. Dr. Burnett was ordinary medical attendant to Pepys, the celebrated diarist. Pepys says the plague was first brought into the city itself (it had begun in the western suburbs) by the doctor's own manservant. Under date August 10th, 1665, he writes: "To my great trouble hear the plague has come into the city, but where should it begin but in my good friend and neighbour's Dr. Burnett in Fenchurch Street, which in both points troubles me greatly." Dr. Burnett seems to have taken the necessary precautions for protecting his neighbours, for under date August 11th Pepys writes: "I saw poor Burnett's door shut, but he hath, I hear, gained great goodwill among his neighbours, for he discovered it himself, and caused himself to be shut up of his own accord, which was very handsome." Referring to Dr. Burnett's death, Pepys has the following entry: "Aug. 25.—This day I am told that Dr. Burnett, my physician, is this morning dead of the plague, which is strange, his man dying so long ago, and his house this month opened again. Now himself gone! Poor unfortunate man!" Pepys was evidently not aware that Burnett had contracted the disease at a *post-mortem* examination and not from his servant.

Congers, William, was born in 1622. He received his early education at the Merchant Taylors' School, and then proceeded to Oxford (St. John's College), where he graduated M.D. in 1653. He was admitted a member of the Royal College of Physicians in 1656, and settled to practice in London. "He was," says Dr. Monk, "one of the few physicians who remained in London during the Great Plague, devoted himself to the duties of his position and the succour of the sufferers from that disease, to which he himself fell a victim."

Coysh, Elisha.—It is doubtful whether this physician should receive a place in this list. He had a house in the City and another at Highgate. When the plague broke out he left the former and retired to the latter, where he

received such patients as could afford to reach him there. Dr. Coysh was M.D. Oxon. (1657), and F.R.C.P. Lond. (1673). He died in 1685.

Glisson, Francis, resided in New Street, St. Bride's, Fleet Street. He was the son of Mr. William Glisson of Rampisham, Dorset, where he was born in 1597. He entered the University of Cambridge (Cains College) in 1617, and graduated B.A. in 1620, M.A. in 1624, and M.D. in 1634. He became a member of the College of Physicians in 1634 and was elected a Fellow in 1635. He was Gualstonian Lecturer in 1655, Censor in 1656, and President in 1667-8-9. In 1636 he was appointed Regius Professor of Physic in the University of Cambridge. In 1648 he was residing in Colchester, and during the siege of that town was one of those selected to make terms with Lord Fairfax. He returned to Cambridge, but his salary as Regius Professor falling much into arrear (he received no stipend for about five years), he came to London and obtained an Order in Council, dated March 7th, 1654, for payment of the sum due to him. He did not return to Cambridge, but remained in London and joined a small body of scientific men which became the nucleus of the Royal Society. He published at least two important works, one in 1650, on Ricketts, the first description of that disease issued in this country; the other, in 1654, on the Liver, in which "Glisson's capsule" is first described. He died October 14th, 1677, and was buried in St. Bride's Church, Fleet Street. His services during the Plague are gratefully referred to by Dr. Hodges in his work *Loimologia*.

Glover, John, was born in America, and studied at the University of Harvard, where he graduated in arts. He then came to this country, and graduated M.D. (1654) at the University of Aberdeen. He settled in London, and became an Honorary Fellow of the Royal College of Physicians in 1664. He was one of those who met his death (August 25th, 1665) at the *post-mortem* examination in which Dr. Burnett and others took part.

Hodges, Nathaniel, resided in Watling Street. This remarkable man was the son of the Vicar of Kensington, and was born at the old Kensington Vicarage, September 13th, 1629. He was educated first at Westminster School. He entered Trinity College, Cambridge, in 1646, but in 1648 he was transferred by the Parliamentary Visitors to Christ Church, Oxford, where he completed his university career, and where he graduated B.A. in 1651, M.A. in 1654, and M.D. in 1659. Settling in London, he was admitted a "Candidate" of the Royal College of Physicians in 1659 and a Fellow in 1672. He was Censor in 1682, and Harveian Orator in 1683. During his Censorship he presented to the College a fire-engine. During the plague, his daily routine, taken from his autobiography, is thus described in the *National Dictionary of Biography*:

He rose early, and took an antipestilential lectuary as large as a nutmeg. After transacting household affairs, he entered his consulting room. Crowds of patients were always waiting, and for three hours he would examine them and prescribe, finding some who were already ill and others who were only afflicted by fear. When he had seen all he breakfasted, and visited patients at their houses. On entering a house he had a disinfectant burnt on a hot coal, and, if hot or out of breath, rested till at his ease, then put a lozenge into his mouth, and proceeded to examine the patient. After spending some hours in this way he returned home, and drank a glass of sack, dining soon after off roast meat and pickles or other relish, condiments of all sorts being cheap and abundant in the city during the epidemic. He drank more wine at dinner. Afterwards he saw more patients at his own house, and paid more visits, returning home between eight and nine o'clock. He spent the evening at home, never smoking tobacco, of which he was a professed enemy, but drinking old sack till he felt thoroughly cheerful. After this he generally slept well. Twice during the epidemic he felt as if the plague had infected him, but after increased draughts of sack he felt well in a few hours, and escaped without serious sickness.

Dr. Hodges's valuable services to his fellow-citizens do not seem to have met with the recognition they deserved. He was constantly harassed by want of money, and was frequently in debt. From the Corporation he received two gifts of £100 each (Guildhall Library MS. 270). Nevertheless, his poverty increased, and it seems incredible that this faithful public servant was allowed to end his days in a debtor's gaol. Yet such was the case. Dr. Hodges died in the Fleet Prison on January 10th, 1688. He was buried in St. Stephen's, Wallbrook, where a handsome monument has been erected to his memory. Dr. Hodges wrote several works on the plague, the most important of which is

Zoimologia, or an Historical Account of the Plague in London in 1665, published in Latin by the author in 1672, and translated into English by Dr. John Quincy in 1720. Readers of Harrison Ainsworth's novels will recollect that it was Dr. Hodges who attended the grocer's daughter in *Old St. Paul's*.

O Doud, Dr. was one of those who, with Drs. Burnett, Glover, and others, met his death in making a *post-mortem* examination on a person who had died of the plague on August 25th, 1665. He received his M.D. degree from the Archbishop of Canterbury. Further particulars of him have not been obtained.

Paget, Nathan, was the son of the Rev. Thomas Paget, Rector of Stockport, but born (1615) in Manchester. He went first to the University of Edinburgh, where he graduated M.A., then studied medicine at Leyden, where he graduated M.D. in 1639; returning to this country, he settled in practice in London. He became an Extra-Licentiate of the Royal College of Physicians in 1640, a "Candidate" in 1643, a Fellow in 1646, Censor in 1655-7-9-67-8, and Harveian Orator in 1664. He died in 1677. He is mentioned by his contemporary, Hodges, as one of the few physicians in London during the plague. He was an intimate friend of Milton, and married a cousin of the poet's third wife, Elizabeth Minshull.

Peck, Samuel.—Particulars of this physician are wanting. He is not mentioned in Munk's "Roll of the College of Physicians," nor in the lists of graduates of any British university. He probably graduated abroad. He is mentioned, however, more than once in the City archives as "Dr. Sannuel Pecke, Dr. in Phisicke," and the following entry shows that he resided in London, and did meritorious work during the plague year: "Bolton, Mayor, 26 February, 1666.—Upon the humble desire of Doctor Peck, who did especial service in visiting and prescribing physic to the poor infected in the late visitation of the plague within this city and liberties, it is ordered by this Court that Mr. Chamberlain shall pay unto him the sum of fifty pounds in recompense of the said service." (From MS. 295 in the Guildhall Library.) Peck had further sums from the Corporation, amounting in all to £100.

Wharton, Thomas, resided in Aldersgate Street. He was descended from an ancient North of England family, and was the only son of Mr. John Wharton of Winstou, co. Durham, where he was born in 1614. He studied at both the Universities of Oxford (Trinity) and Cambridge (Pembroke). He did not, however, at the time receive a degree from either, but subsequently—namely, in 1647—by virtue of letters patent issued by the Parliamentary General, Sir Thomas Fairfax, he received the degree of M.D. from the University of Oxford. Meanwhile he had been up in London studying physic under Dr. Bathurst, Physician to Oliver Cromwell. Having obtained his degree, he was admitted a Member of the Royal College of Physicians in 1648, and a Fellow in 1650, and held the post of Censor for the years 1658-61-6-7-8-73. When the plague broke out he set himself seriously to determine whether he should remain in London or flee. He decided to remain, being induced to that course, it is said, out of consideration for the large number of poor people who attended his clinic at St. Thomas's Hospital, of which he was then Physician. To St. Thomas's Hospital, also, the Government sent all the Foot Guards as soon as they were seized with the plague. For his services to the troops Wharton was promised the first vacant post as Physician-in-ordinary to the King; but when the vacancy arose he was put off with an augmentation in his coat of arms, for which he had to pay Sir William Dugdale, the Herald, £10.¹ Dr. Wharton died in 1673, and was buried in the Church of St. Michael Bassishaw, where a marble tablet bears an eloquent testimonial to his worth and work. Dr. Wharton was the author of *Adenographia* (in which "Wharton's duct" is first described), published in London in 1646, and again in Amsterdam in 1659.

Witherley, Sir Thomas, was a member of the University of Cambridge, and received his M.D. degree there in 1655. He became a Fellow of the College of Physicians in 1677, Censor in 1683, and President in 1684-5-6-7. He was Physician in Ordinary to King Charles II. He died March 25th, 1693. For his services during the plague he received two sums of £100 each from the City Corporation (Guildhall Library, MS. 270).

II.—SURGEONS.

Most of the books of the Barber-Surgeons Company were destroyed in the Great Fire of 1666. The courteous Clerk of the Company, Mr. F. C. Lingard, however, has kindly furnished what particulars he could collect, and these, with certain details from the Guildhall MSS., has enabled the following brief notes to be prepared of Surgeons known to have been in London during the plague:

Effe, John, cannot be traced in the books of the Barber-Surgeons Company, but he is stated to have received from the City Corporation the sum of £40 for his attention to the sick poor (February 22nd, 1666).

Gray, Thomas, having been apprenticed first to Mr. John Hancock and then to Mr. William Hunt, was admitted "Chirurgion" October 12th, 1652. For his services to the Plague patients he received from the City the sum of £30. He seems to have fallen a victim to his duties, for the Corporation granted to his widow a sum of £70.

Hannan, Edward, having been apprenticed to Mathew Alsopp, was admitted a "Chirurgion" December 2nd, 1652. For his services during the Plague the Corporation voted him the sum of £30, and he dying, apparently from the distemper, his widow received in 1666 also a sum of £30.

Higgs, Edward, having been apprenticed to Mr. Dextery (sic) Saunders, was admitted a "Chirurgion" April 14th, 1629. For his services in "dressing the poore visited of the plague," the City Corporation voted him at various times sums amounting in all to £90.

S. D. CLIPPINGDALE, M.D., F.R.C.S.

SOUTHWOLD LIBEL CASE.

UPON the suggestion of local members of the profession, who desire to give practical expression to their sympathy with Drs. Mullock and Tripp, of Southwold, a fund has been opened to assist them in defraying the heavy expenses which they have incurred as the result of the recent action which they were called upon to defend. Cheques to be made payable to Dr. H. P. Helsham, Beccles, or Dr. W. Tyson, Lowestoft, and crossed "Barclay and Co." The following amounts have been already promised:

	£	s.	d.
Dr. C. J. Acton, Wangford	10	10	0
Dr. Bruce Goff, Gloucester Place, W. ...	5	5	0
Dr. H. P. Helsham, Beccles	5	5	0
Dr. H. M. Evans, Lowestoft	5	5	0
Dr. W. Tyson, Lowestoft	5	5	0
Dr. W. A. Sham	3	3	0
Dr. W. Berry, Lowestoft	3	3	0
Dr. W. L. Bell, Lowestoft	3	3	0
Dr. Alex. Macleod, Notting Hill	2	2	0
Dr. A. C. Baileman, London	2	2	0
Dr. H. Blake, Yarmouth	1	1	0
Dr. S. Barradell-Smith, Lowestoft	1	1	0

A Correction.

We regret that the report of the above case which appeared in our last issue (p. 314) was incorrect in the following particulars. We set out the alleged libel as it was printed in the statement of claim; but as a matter of fact the libel actually relied on by the plaintiff was contained in the following letter addressed by Dr. Mullock to Dr. Wilson Tyson:

"Wymering House, Southwold,

"7th May, 1908.

"Dear Sir,—I shall be obliged for your opinion on a point of medical ethics.

"In January, 1907, there were three practitioners in this town—Dr. Herbert, and Tripp, in partnership, and I. Dr. Herbert left the town, and Dr. Tripp took on the practice by himself, buying Dr. Herbert's share. About March Dr. D. T. MacLeod appeared, took the house which Dr. Herbert had lived in, and put his plate up. He called on Dr. Tripp and me after some delay, and told us he had come here for his health, and really didn't want many patients, but that if he was called, and to attend any of our present patients he would at once let us know. He is now attending some of our patients, but in only one instance in my practice has he informed me of the fact. Dr. Tripp has never heard from him on the subject. Many unpleasant things have happened almost from the time of Dr. MacLeod's advent: such as attempting to get the use of a bed for one of his patients at the hospital, not asking our permission (Dr. Tripp and I comprise the medical staff). We once interviewed him on the subject, when he denied that he was in any way to blame. His wife goes to our patients and tells them of her husband's successes, and insinuates that he, having had so much experience, must know more than younger men. We have had suspicions for some time that Dr. MacLeod has been 'touting,' but we have never had any definite proof until the present instance. On the 2nd of this month he approached a patient of mine, who is the caretaker in the local golf club, and the following conversation ensued: 'You are looking very badly?' 'I have one of my headaches,' she replied.

I must give you something for it,' said he, 'but as I cannot examine you here, come to my house to-morrow, and I will see what I can do for you.' She demurred, but he overpersuaded her. She went to his house, and he kept her there for one and a half hours, and examined her eyes, etc.

'I heard a rumour of this on the 4th instant, and went at once to my patient, when she told me exactly what occurred. She said she had no wish to leave me, and was quite satisfied with the way I had always treated her and her family.'

'Dr. D. T. MacLeod had a practice at Dunvegan, Jews' Walk, Sydneyham, some years ago, which he said he left because his health broke down through overwork.'

'Dr. Tripp is quite in sympathy with me, and will combine with me in any concerted action which may be necessary.'

'I have submitted above facts to the Medical Defence Union, who advised me to communicate with you. I have not approached Dr. MacLeod on the subject.'

'What do you advise?'

'Yours truly,

'R. W. MULLOCK.'

MOTOR CARS FOR MEDICAL MEN.

A HAND-CLEANER FOR MOTORISTS.

THE motorist or cyclist who believes in the efficiency of "the master's eye" in promoting the duration and good working of his engine or machine is likely to attend to many minor repairs for himself. One of the greatest disadvantages in doing so is that any handling of the working parts of a motor or cycle usually leaves the hands blackened and greasy. The "Flash" hand-cleaner supplied by Messrs. Brown Brothers, Limited (Great Eastern Street, London, E.C.), is introduced to provide a more efficient cleansing agent for such cases. It is a paste containing a soapy basis with a considerable proportion of ground pumice; the latter greatly facilitates the removal of dirt and grease, and the preparation is most useful for its purpose. It is described as being antiseptic, but does not appear well suited for surgical cleansing, which is, of course, not the purpose for which it is intended.

THE COST OF MOTORING.

DR. R. MARTIN (Medical Officer Banbridge Dispensary District, co. Down) writes: I have read with much interest the article on "Motor Cars for Medical Men" in the JOURNAL of January 2nd, and also Dr. Cropper's remarks and those of Dr. Relfon in the issue of January 16th. In connexion with this I would like to give my experience. In the middle of October, 1907, I purchased a 10-h.p. two cylinder Chamber's car, and up to the present time I have covered 7,500 miles, and my total out-of-pocket expenses for the year and three months is £43 14s. 5d. This covers petrol, oil, grease, brasso, and other sundries, also tyres, in reference to which I may say I have still in use a serviceable set and two repaired covers, at least good for many miles, for the front wheels. This works out at 1.3d. per mile; and, seeing that I ran the car from the first as a novice, the result is exceedingly satisfactory. In addition, I had a man for cleaning and washing, but only that my work is so heavy I could easily do this myself. His wages are not included, as he does gardening and other work as well. With regard to depreciation, I would consider 25 per cent. ample, as at the end of five years—say, doing 4,000 to 5,000 miles a year—the car should have a very decent second-hand value. My cost is much less than horses, and the comfort and convenience of the car not to be compared with them.

LITERARY NOTES.

Malaria is the title of a new international journal whose scope is indicated by its name. It will be published quarterly by J. Ambrosius Barth, of Leipzig. The editor is Dr. C. Mense, of Carlsbad. He will have the advantage of the co-operation of Professor Ronald Ross in England, Dr. MacCallum, of Baltimore in the United States, Dr. Nocht in Germany, while France will be represented by Dr. Sergent, of Algiers, and Italy by Professor Angelo Celli. The yearly subscription will be 20 marks.

The publication of a work entitled *Essai sur la Société Médicale et Religieuse au XII^e Siècle*; Gilles de Corbeil, *Médecin de Philippe Auguste et Chanoine de Notre Dame, 1140-1224*, by M. C. Viellard, is announced. Professor Ch. V. Langlois contributes a preface. The book is published by Honoré Champion, of Paris.

Reference was made in the JOURNAL of January 23rd to the difficulty sometimes experienced in tracing quotations familiar to every one to their source. As an instance, *Quos Deus vult perdere prius dementat* was cited, with Dr. Birkbeck Hill's suggestion that it is probably a rough translation of a fragment of Euripides. As some of our readers are keen in this kind of literary chase, the following note by Malone may be of interest. We quote it as it is given in the edition of Boswell's *Life of Johnson*

published by J. M. Dent in his series of "Temple Classics":

Mr. Boswell was furnished by Mr. Richard How, of Apsley, in Bedfordshire, as communicated to that gentleman by his friend Mr. John Pitts, late Rector of Great Brickhill, in Buckinghamshire:

'Perhaps no scrap of Latin whatever has been more quoted than this. It occasionally falls even from those who are scrupulous even to pedantry in their Latinity, and will not admit a word into their compositions which has not the sanction of the first age. The word *demento* is of no authority, either as a verb active or neuter. After a long search for the purpose of deciding a bet, some gentlemen of Cambridge found it among the fragments of Euripides, in what edition I do not recollect, where it is given as a translation of a Greek Iambic:

'Ο θεός θελει απολεσαι πρωτ' αποφρονειν.

"The above scrap was found in the handwriting of a suicide of fashion, Sir D. O., some years ago, lying on the table of the room where he had destroyed himself. The suicide was a man of classical acquirements: he left no other paper behind him."

Another of these proverbial sayings,

Incidit in Scyllam, cupiens vitare Charybdim,

I some years ago, in a note on a passage in *The Merchant of Venice*, traced to its source. It occurs (with a slight variation) in the *Alexandris* of Philip Gualtier (a poet of the thirteenth century), which was printed at Lyons in 1558. Darius is the person addressed:

Quo tendis inermem,

Rex periture, fugam? nescis, heu! perditte, nescis

Quem fugias: hostes incurris dum fugis hostem

Incidit in Scyllam, cupiens vitare Charybdim.

The author of this line was first ascertained by Galeottus Martius, who died in 1476; as is observed in Menagiana, vol. iii, p. 130, edit. 1762. For an account of Philip Gualtier, see Vossius, *De Poet. Latin.*, p. 254, fol. 1697.

A line not less frequently quoted than any of the preceding, was suggested for enquiry, several years ago, in a Note on the *Rape of Lucrece*,

Solamen miseris socios habuisse doloris.

But the author of this verse has not, I believe, been discovered.

With reference to the "Greek Iambic" above quoted we cannot say with Holofernes, "Ho! Ho! I smell false Latin": but it seems to us, in the words of Launcelot Gobbo, to have "a kind of smack." We give it as it is printed, but we may point out that it does not scan and cannot be construed. We are informed by a learned clerk of Oxford that there is no such word as *anopheva*. It is suggested that the line is a bad attempt to translate *Quem Deus vult perdere*, etc.

The fact that houses may be infected with diseases, one tenant after another dying of the same malady, was noticed as long ago as in the fifteenth century. Messer Agnolo Pandolfini, a rich merchant prince of Florence, in his treatise "Del Governo della Famiglia," quoted by Mrs. Oliphant in her *Makers of Florence*, thus advises his sons as to the taking of a house, giving them as an example his own experience:

I chose a house in a good neighbourhood and well-known street, where honest citizens lived of whom I could without danger make friends, while my wife found good company among their wives. And I informed myself who had lived in it in times past, and inquired whether they had been healthy and fortunate. There are certain houses in which, it would seem, no one can live happily.

To Guy's *Hospital Gazette* of December 26th, 1908, some interesting reminiscences of Thomas Addison are contributed by Sir Samuel Wilks. He says that when he first entered Guy's in the early Forties of the last century Addison was the most notable man there. It was at once apparent that he was a leader of men. It was a real treat to hear Addison talk, often adorned with a Latin quotation, as his scholarship was good, and with an occasional outbreak of oratory. When Jenner demonstrated the absolute difference between typhus and typhoid fever, Addison was loth to admit it, and it is interesting to learn that Gull took a considerable time to give it his full adhesion. Addison was one of the physicians of his day to adopt Laennec's method of physical examination of the chest. An elder colleague of Addison spoke of the stethoscope as the new playingthing, just as leaders of the profession at a later date called the laryngoscope a physiological toy. Addison's dogmatic manner was contagious, for Sir Samuel Wilks tells us that he remembers hearing at one of the chief medical societies when a young aspirant to fame displayed some conceit in describing a case, a remark to the effect that Guy's men thought themselves the *crème de*

la crème. He thinks this opinion was a general one at the time, and he is of opinion that it may be as beneficial for an institution to have a little conceit of itself as for an individual to think well of himself. Sir Samuel Wilks would evidently join in the prayer of the Scots minister, "God, gie us a guid conceit o' oorsels." Addison had been a colleague of Bateman at the public dispensary, and was a great authority on skin diseases. This doubtless helped to prevent his overlooking the discoloration of the skin which is the principal outward and visible sign of the disease which bears his name. Notwithstanding Addison's power over others he was a man of nervous temperament, subject to fits of despondency. This led him to resign his hospital appointments while still in the vigour of life. It was felt to be such a loss that a deputation headed, Sir Samuel Wilks thinks, by the late Dr. Galton, waited upon him to urge reconsideration of his decision. Addison's answer was, "My work is over; I have left it for others." He left London, and not long afterwards passed beyond that bourne from which no traveller returns. He was born in 1793 and died in 1860.

Dr. Farquharson, the absence of whose genial personality from Parliament, if it has not exactly eclipsed the gaiety of nations, has at any rate added to the dullness of the House of Commons, lately delivered an address in Aberdeen on the humour, phrase-making, caricature, and oratory of that assembly. As illustrations of the humour of the House of Commons he quoted a number of "bulls." Among these were: "Mr. Speaker, will you allow me to recapitulate what I had intended to say?" "The right hon. gentleman shakes his head, but I am very sorry to hear it"; "Mr. Speaker, I think I see a noise"; "Certain officials are hide-bound with red tape"; "The keys of the Irish difficulty were not to be found in the empty pockets of the landlord"; "It is a lie, Sir, and it is high time we nailed this lie to the mast"; "The present state of affairs is enough to make a man commit suicide or perish in the attempt"; "Mr. Speaker, I smell a rat, I see him floating in the air, but mark me, Sir, I will nip him in the bud"; "The apple of discord has been thrown into our midst, and if it is not nipped in the bud it will burst into a conflagration which will deluge the world"; "You may depend upon it that the pale face of the British soldier is the backbone of the Indian Army." Dr. Farquharson had apparently forgotten Lord Cross's memorable statement that he "heard a member smile," and Castlereagh's still more memorable declaration that he was about to "embark on the chief feature on which this question hinges." All who knew Dr. Farquharson, either as physician or as legislator, and in particular many members of the British Medical Association, in which he was at one time a prominent figure, will, we are sure, join us in wishing the genial Laird of Finzean many years of happiness in his mountain home.

One of the most impressive and picturesque sights that Florence offers to a stranger is a procession of the *Misericordia*. But probably few of those who have ever seen the black silent figures carrying their burden through the crowded streets of the city have a clear idea of their origin, which affords one more proof of the wonderful charity which flourished side by side with the most brutal indifference during the middle ages. The confraternity was founded in the thirteenth century by a Florentine porter, Pietro Borsi, with the twofold object of employing the spare time and reforming the vices of his fellow-porters whilst they were waiting for jobs in the Piazza of San Giovanni. Borsi first persuaded them to fine each other for swearing, and then with the proceeds to buy litters for the use of the public, each porter in his turn giving his services in carrying the sick and wounded to the hospital and the dead to the burial. In those troubled times, when street fights were things of daily occurrence, the brothers had plenty of opportunity for their charity, and the confraternity grew and developed. The Brothers now often nurse the sick in addition to their other labours, but the institution remains the same, and is still flourishing in Florence. All classes from the highest to the very lowest belong to it, taking their turns when summoned by their bell. The long black robe worn by the Brothers, which disguises them as completely as a domino, is used to prevent their ever working upon the gratitude of their patients, from whom they may only accept a drink of water in recompense of their services.

Medical News.

A SWISS Neurological Society has been formed, the head quarters of which are at Zürich. The President is Professor von Monakow.

A LAW making compulsory the pasteurization of all milk and milk products, other than those from cows which have passed the tuberculin test, came into force in Chicago on January 1st.

THE discussion on ulcerative colitis at the Medical Section of the Royal Society of Medicine has been adjourned until Wednesday, February 10th, at 5.30 p.m. The discussion will be continued by Sir Patrick Manson.

SIR JAMES CRICHTON-BROWNE, Treasurer of the Royal Institution, announces that the sum of £10,000 had been anonymously and unconditionally placed at the disposal of the managers for the purposes of the institution by a lady.

THE anniversary dinner of the Medical Society of London will be held at the Whitehall Rooms, Hôtel Métropole, on March 10th. Further particulars can be obtained from the Secretary, 11, Chandos Street, London, W.

A COURSE of lectures and demonstrations on the feeding of infants will be given at the Infants' Hospital, Westminster, by Dr. Ralph Vincent, on the afternoons of Tuesday, Thursday, and Friday during next and the following week.

THE annual oration before the Hunterian Society will be delivered by Dr. Rawes on Wednesday, February 10th, at 8.30 p.m., in the theatre of the London Institution, Finsbury Circus. The title is *Psychiatry: a Retrospect*. All members of the medical profession are invited.

ON the recommendation of the Morison Lecturer, the Treasurer of the Royal College of Physicians of Edinburgh has awarded the 1908 Morison medals for meritorious attendance on the insane, along with the usual premiums, to Mrs. Mary Gandie, Royal Asylum, Montrose, and Mr. Donald Munro, Inverness District Asylum.

AT a meeting of the Cold Storage and Ice Association to be held at the Royal Society of Arts, Adelphi, at 7.30 p.m. on Tuesday next, Mr. C. J. Tabor will read a paper on the preservation of food by artificial refrigeration; among the subjects discussed will be bone taint, the effect of refrigeration on the fat cells of fish, on poultry, and on goods stored in a bad condition.

THE Council of the British Medical Association, on the recommendation of the Medico-Political Committee, has appointed a special subcommittee, consisting of Dr. J. A. Macdonald, Mr. H. W. Armit, Dr. E. R. Pothergill, Dr. C. E. Haslip, Dr. E. H. T. Nash, and Mr. T. Jenner Verrall, to report on the proposed establishment of the central church council for the diocese of London, and to consider the whole subject of spiritual healing.

H.R.H. THE PRINCESS OF WALES has kindly consented to receive purses for the National Hospital for the Paralysed and Epileptic some time during the autumn. These purses will be for the Jubilee Fund, for which over 500 collections are being made throughout the country, some by former patients and pensioners of the hospital. The Duchess of Albany is President of the Executive Jubilee Committee, which hopes to raise £50,000. A portion of this sum will be devoted to an extension of premises, the building of which began a few days ago.

THE meeting at which the claims of the British Medical Benevolent Fund to the support not only of the profession but of the public will, we may remind readers, take place at the Royal College of Physicians of London on Tuesday next, at 5 p.m. The chair will be taken by Sir John Tweedy, President of the Fund, and an address will be delivered by the Bishop of Oxford, son of the late Sir James Paget, at one time president of the Fund. Among other speakers will be the President of the Royal College of Physicians of London.

THE election of Professor S. Kitasato, Director of the Infectious Diseases Institute at Tokyo, to the Honorary Fellowship of the Royal Society, was made the occasion of a dinner given in his honour by a number of his pupils and friends. Congratulatory addresses were delivered by Professor Kitajima and Dr. T. Takaki, Director of the Formosan Medical Institute, who said that whatever had been done for the improvement in public health in Formosa should be credited to Professor Kitasato, under whom he had studied bacteriology. It may be mentioned that the document in which the honour bestowed on Professor Kitasato was conveyed to him was in Latin.

British Medical Journal.

SATURDAY, FEBRUARY 6th, 1909.

THE THERAPEUTIC EFFECTS OF RADIUM.

THE question of the hour in medicine is the healing virtue of radium. Whether it will, like so many other things in the domain of therapeutics that come like shadows, so depart, fade away like Hans Breitmann's "barty" into the *Ewigkeit*, remains to be seen. But whatever be its fate it has not, like the gem of purest ray serene of which Gray sings, been left in the dark unfathomed caves of the unknown; it has made its entrance on the stage of medical life in a glare of publicity of which there are few instances on record. Last week an amusing and unedifying example of too "up-to-date" journalism was shown by the London Press. An announcement of the foundation of a radium institute which was wrong in nearly each and singular particular was made, with every appearance of authority, in all the newspapers. We were able to give the correct version of the facts. As far as we know, not one of the papers, which had evidently been victimized by some parties interested in creating a "boom," offered any apology for a piece of carelessness which caused serious annoyance in various quarters, and which might have done something to imperil the success of an enterprise that may possibly have a great future before it, and, at any rate, ought to be allowed a fair field for its development. The error was indeed corrected, but without any of the pomp of journalistic heraldry with which it was announced. Therefore, for the sake of any of our readers who may have been misled by the announcement in the newspapers, and who may have overlooked the statement made in the JOURNAL of last week, we think it well to repeat that the Radium Institute is to be known simply by that name, and that there has been no question of granting it a Royal Charter. It is understood to be founded in accordance with the wish of the King, and the means of carrying the scheme into effect have been supplied by Lord Iveagh and Sir Ernest Cassel. It is to be altogether independent of the Imperial Cancer Research Fund or of any other institution. A site has been secured in the neighbourhood of All Souls' Church, Langham Place. The committee under whose direction it will be conducted consists of Sir Frederick Treves (chairman), Sir Lauder Brunton, Sir Malcolm Morris, Sir William Ramsay, Professor Sir J. J. Thomson of Cambridge, and the Hon. R. J. Strutt. The services of a highly competent man as medical director have already, we believe, been secured. Some time must, of course, elapse before the new institution is in working order. It is intended to charge suitable fees to those who can afford them; for the cost of radium is very great, and owing to causes which need not be discussed here it has lately risen to a degree that makes it difficult to procure a sufficient supply. The justification of the existence of the Radium Institute lies in this fact; for under existing conditions it is practically impossible for individual medical men to obtain enough for use in any but the smallest way. It will be the special

function of the new institute to determine the therapeutic potentialities of radium under strictly scientific conditions and on a scale sufficiently large to afford a solid basis for a final judgement. It is an interesting experiment, and the profession will watch its progress and issue with interest.

The physical and chemical properties of radium are fully described in a special article published at page 347. Here we are concerned only with its therapeutic effects. That radium has an irritant and caustic action on animal tissues was discovered by accident. The idea of applying it in the treatment of growths, malignant and other, was a natural inference. For two or three years past a Radium Institute has been in existence in Paris, and to Dr. Louis Wickham and his collaborator, Dr. Degrais, we are chiefly indebted for what is known about its therapeutic action.¹ They claim for radium the following effects: (1) The modification of diseased tissue, the promotion of cicatrization and cure of morbid conditions, with or without previous ulcerative destruction; (2) analgesia; (3) an apparent bactericidal action. The modifying action on morbid tissues varies greatly. Thus, a warty epithelioma is more resistant than the ulcerative form of the disease, or than lupus tissue. The analgesic properties of radium are most marked in superficial pain, hyperaesthesia, or itching. In deep-seated pain its effect was uncertain. Its bactericidal power has been successfully tested on staphylococci and gonococci. To the Medical Congress held at Rheims in August, 1907, Dr. Wickham presented the results of a study of the therapeutic effects of radium extending over several years, and comprising 1,500 applications made in 1,100 cases. His experience led him to the conclusion that it has a beneficial action in certain kinds of skin disease—dry, chronic, and localized in character, such as certain eczemas, certain forms of neurodermatitis, lichen, psoriasis, vascular and pigmented naevi, tuberculous lesions, and cutaneous epithelioma.

It is in the treatment of cancer that the greatest interest will be felt in regard to the possibilities of radium. Wickham and Degrais confirm the conclusion arrived at by M. Danlos that it affords the best means of dealing with small caucroids. They go beyond this, and claim to have practically cured cancer of the face. "In all cases," they say, "one obtains a surface of repair which is smooth, on the same level as the surrounding healthy tissues; the white discoloration soon takes on a normal tint; to the touch it gives a sensation of appreciable suppleness in cases where the lesions were situated about orifices, and there practically never occurs retractile cicatrization. So perfect is the scar that it is sometimes difficult to find the traces of the former lesion." Wickham holds that radium has a selective action on cancer cells, and that in some cases it can modify or destroy them without producing any visible lesion. A summary of their results and of those of Dr. Dominici was given in the BRITISH MEDICAL JOURNAL of January 23rd, p. 242, where the method of application is described. Reference to the most recent results obtained by Wickham is made in the address by Sir Frederick Treves, which is published in this issue of the JOURNAL. It should be stated that Dr. Wickham, though not perhaps unnaturally optimistic in his estimate of the therapeutic properties of radium, is careful not to offer it to the profession as a cure for

¹ See communications to the International Medical Congress of Dermatology held at New York, September, 1907; to the Congrès de Médecine held at Rheims, October, 1907; and to the Paris Académie de Médecine, January, 1908.

all forms of cancer, or an infallible cure of any. He thinks it a useful addition to the x -ray treatment, to surgical procedure, and to the use of caustics. He cherishes a hope that means may be discovered of making it possible to apply radium emanations to the deeper parts of the body.

At the Congress of the International Surgical Society held at Brussels in September, 1908, Dr. James H. Sequeira gave his experience of the treatment of cancer by radium. He has found that the cases in which radium can be usefully employed are few. "It is," he says, "impossible to apply it to any large area "on account of the small quantity at command." He has used it chiefly in conditions in which it is impossible or undesirable to apply the x rays, for instance, in the treatment of small ulcers of the nose and other cavities, but otherwise he does not find that he can do more with radium than he can with the x rays.

Sir Malcolm Morris and Dr. Ernest Dore state that in the treatment of certain forms of malignant disease radium has undoubtedly a place, and has succeeded where x rays have failed.¹ The reason of this is because it can be applied in small cavities not directly accessible to the x rays, and in situations, such as the neighbourhood of the eye, where the use of rays is inadvisable. In other forms of malignant disease radium, whether applied externally or embedded in the tissues, has not been of much use. Cases of rodent ulcer cured by radium have been recorded by Mackenzie Davidson, Hartigan, Holzknecht, and others.

Enough has been said here, and more will be found in Sir Frederick Treves's address, to make out a *prima facie* case for radium as at least a useful adjunct in the treatment of cancer. But so far there is little to prove that it is more effective than the x rays, and these, we know, often fail after what looks like a brilliant initial success. While some believe radium to have a selective action on cancer cells, others see nothing to justify this inference. It is now well known that in some cases a process occurs in epithelioma which leads to spontaneous cure. This fact must never be lost sight of in estimating the results of treatment of cancer. Again, assuming that radium has all the virtues ascribed to it by those who have used it, the inevitable question rises to the mind, How long will the apparent cure last?

To put the matter briefly, the problem which the Radium Institute has before it is this: Is radium a new healing force or merely a very powerful and penetrating caustic?

THE REGISTRAR-GENERAL'S REPORT.

The annual report of the Registrar-General for England and Wales is usually one of the most interesting Blue Books of the year, for it throws much light not only on the prevalence of various diseases, but also on many social questions: it is true that the trustworthiness of some of the data has been called in question, but as to the accuracy of the broad facts there can be little or no doubt. A short statement of the principal points in the seventieth annual report—that for 1907—is published in the SUPPLEMENT, but we may here call attention to one or two matters of general interest.

In the first place, it appears that the decline in the

mean annual rate of increase of population which has been observed during the last thirty years has continued, the rate being 11.27 in 1907, as compared with 11.69 in the previous year, and with 12.10 in the quinquennium 1901-05. The increase or decrease of population is governed by two factors—the balance between births and deaths, and the balance between emigration and immigration. So far back as trustworthy statistics extend there has always been an excess of births over deaths, and an excess of emigrants over immigrants. The natural increase is the excess of births over deaths, and the diminished rate of increase of the population is due to the birth-rate having declined more rapidly than the death-rate. The birth-rate reached its highest known point in 1876, when it equalled 36.3 per 1,000 of population; since then it has, with slight fluctuations, steadily fallen, and in 1907 reached the lowest point on record, 26.3, which is 0.8 below that recorded in 1906, and 2.1 below the average for the ten years 1897-1906. As will be seen from the statistics published last week (page 310), the rate in 1908 was 0.2 per cent. higher than in 1907.

The proportion of marriages among marriageable persons in the population has decreased since 1876 in the proportion of 103 to 93. The proportion of spinsters in the marriageable population has always been smaller than the proportion of bachelors, but appears to be tending to increase. Age of marriage has undoubtedly an influence on the birth-rate, but, as is pointed out in the report, the ages of men at marriage are, so far as concerns the growth of the population, of much less importance than the ages of women at marriage. The fact that child-bearing is practically limited to the period between the ages of 15 and 45 years, and that the fertility of married women is highest at the earlier age groups, makes it evident that any great alteration in the ages of women at marriage must necessarily have important effects on the birth-rate. Men and women intermarry at all ages; but, taking the records for the ten years 1893-1907 as an example, over 40 per cent. of the bridegrooms, and nearly 60 per cent. of the brides, were at their first marriage under 25 years of age, while the mean age at marriage in those ten years averaged 26.9 years for all bachelors and 25.3 years for all spinsters.

The number of deaths attributed to cancer has, as is well known, shown for many years a very marked and steady increase. As it is a disease of maturity and age, the best way of measuring its increase is to compare the mean death-rate per million living at ages 35 years and upwards. In the *Decennial Supplement* Dr. Tatham showed that this rate had risen from 1,834 in the decennium 1881-1890 to 2,316 in 1891-1900; he now adds that the corrected rate was 2,645 in the quinquennium 1902-1906 and 2,734 in 1907. A comparison with earlier statistics involves many fallacies, one of the chief being, no doubt, that diagnosis is more careful than formerly—a view borne out by the fact that the statistical increase is shown to be largely due to the more frequent detection of internal cancer at an operation or on *post-mortem* examination. That this is not the whole explanation seems fairly clear for several reasons. Among these is the fact that the increase has gone on apparently at much the same rate during the last few years, although there has not, so far as we can judge, been any corresponding increase in the readiness of surgeons to operate in suspected cases of internal cancer. The statistics have for years past indicated that the deaths from cancer at ages over

35 years are increasing more rapidly among males than among females. In the ten years 1881-1890 there were 60 deaths among men to 100 deaths among women; in the ten years 1891-1900 the proportion had risen to 69; in the five years 1902-1906 to 77, and in 1907 it was 79. In the seven years which ended in 1907 there died from cancer, in round numbers, 85,000 men and 123,000 women; the greater number of deaths among women was accounted for entirely by the fact that the generative and mammary organs of women are much more frequently the seat of disease than are those of men. In the period of seven years ending with 1907 the recorded deaths of males from malignant disease, affecting other than the generative and mammary organs, were equal to a rate of 730 per million, whilst the deaths of females with the same reservation did not exceed 594 per million. During this same period of seven years of every 10,000 males dying of cancer, 2,157 suffered from cancer of the stomach, while of the same number of women dying of cancer 2,241 suffered from cancer of the uterus. Further analysis of the statistics shows the very large part which cancer of the gastro-intestinal system plays in producing the mortality from the disease in both sexes. Among males the organ most frequently invaded was the stomach, which was the seat of disease in nearly 22 per cent.; the liver and gall bladder were invaded in nearly 15 per cent. of the whole, the rectum in 10 per cent., and the intestines in 8 per cent. Taken together, the parts here specified were attacked in more than half the cases. Among females, while the generative and mammary organs were affected in more than two-fifths of the total cases, a further two-fifths was contributed by affections of the stomach, liver, intestines, and rectum taken together.

When commenting in the *Decennial Supplement* on the fact that the total death-rate from all forms of tuberculosis had within the previous forty years fallen by nearly 38 per cent., Dr. Tatham drew attention to the fact that according to the statistics available, considerable changes had taken place in the fatality of its several forms. Whilst, on the one hand, tuberculosis of the lung, the brain, and the peritoneum is now less destructive than formerly, on the other hand, there has been a considerable increase in the fatality of the other manifestations of tuberculosis, including general tuberculosis and scrofula, as well as tuberculous affections of the bones, joints, and other organs not mentioned above. In the ten years 1891-1900, out of every hundred deaths from tuberculosis 69 were ascribed to phthisis, 11 each to tuberculous meningitis and tuberculous peritonitis (formerly called "tabes mesenterica," and 9 to other forms of tuberculosis. During the same period the death-rate from tuberculosis was 2,010 per million of the population, and 11 per cent. of the deaths from all causes were due to this disease. In 1907 the death-rate was 1,605 per million, and represented 10.7 per cent. of the mortality from all causes. It appears that of the total number of deaths from tuberculosis at all ages 18 per cent. were those of children under the age of 5 years, the rate for boys being 277 and for girls 230 per million living. The mortality-rates from phthisis show a decline at practically every period of life as compared with the previous quinquennium, although it has been rather greater in the country than in the town.

The number of deaths attributed to alcoholism and delirium tremens was 2,201 (1,328 males and 873 females), but Dr. Tatham again calls attention to the

fact that the deaths actually assigned to these causes form an imperfect measure of the mortality caused by alcoholic intemperance, the best available indication being probably furnished by the combined mortality from alcoholism and cirrhosis of the liver. This mortality, which has been increasing for many years, reached its highest point in 1900, when the rate was 623 per million men living above 25 years of age, and 449 among women above that age. In the seven succeeding years there was a steady decline, equal in the case of men to 24 per cent., and in that of women to 19 per cent.

Puerperal sepsis accounted for the deaths of 1,465 women in 1907, and 2,055 deaths were attributed to other diseases or accidents of pregnancy or childbirth. Of this total, 102 deaths were assigned to abortion or miscarriage, 70 to puerperal mania, 449 to puerperal convulsions, 608 to placenta prævia or flooding, and 826 to other accidents of pregnancy or childbirth. In 224 out of the 826 deaths last mentioned the cause was precisely stated—this was, ectopic gestation in 74 instances, ruptured uterus in 26, inversion of that organ in 7, deformed pelvis in 27, adherent placenta in 27, conditions necessitating Caesarean section in 16, and malpresentation in 6. Of the 2,055 cases in this category, 352 were further complicated, the complicating cause being embolism in 178 instances, diseases of the heart or blood vessels in 48, kidney disease in 43, bronchitis or pleurisy in 27, and pneumonia in 6. These 2,055 deaths, added to those from the puerperal septic diseases, numbered 3,520, and were equal to a rate of 3.83 per 1,000 births. In the ten years immediately preceding, the average proportion had been 4.39 per 1,000.

ALCOHOL AND CHILDREN.

THE effect of alcohol on the mind of the child has recently been very fully discussed by Dr. Leopold Lang, of Vienna,¹ who has arrayed a considerable body of evidence, proving, first, that drunkenness in the parents tends to produce grave mental defect in the offspring, whether one or both parents are intoxicated only at the time of conception or are habitual drunkards; and, secondly, that the drinking by juveniles of alcoholic liquors, even in moderate doses, seriously affects their mental capacity and development. These two questions belong to different departments of inquiry and differ in complexity, the first being a biological question beset with great difficulties and impossible of solution by statistical methods alone, whilst the second does very largely admit of statistical proof if supplemented by psychological observation and experiment. This difference in the orders to which these two questions belong is reflected in the opposing views held regarding the first question, whereas on the second there is, we believe, general agreement amongst medical men.

In support of the ancient belief that children conceived in drunkenness are, as Burton said, "never 'likely to have good brains,'" Dr. Lang adduces the evidence of Lippich, who found that out of 97 such children only 14 were normal; of Bourneville, who out of 1,372 idiot children in whom the circumstances were known, found that 321, or 23.4 per cent., were so conceived; and of Bezzola in Switzerland, who found that of 68 idiot or profoundly imbecile children, the conception times fell, in one-half the cases, in New Year, Carnival, or Vintage—all of them periods of alcoholic excess—

¹ *Die kindliche Psyche und der Genuss geistiger Getränke*. By Dr. Leopold Lang. Vienna: Josef Salfar. 1907. (Roy. 8vo, pp. 41. M. 1.40.)

whilst the conception times of the other half were evenly distributed over the remaining thirty-eight weeks of the year. These figures referred only to one canton, that of Grisons. To broaden the basis of his inquiries, therefore, Dr. Bezzola plotted a conception curve for the whole 8,196 weak-minded children in Switzerland who in the year 1897 were unable to attend school on account of their mental condition, and contrasted this with a general conception curve obtained from almost a million birthdays of the ordinary population. The result, Dr. Lang says, proved highly significant. In February the curve of the weak-minded reached far above the general curve, sank slightly in March and then rose again in April, to reach a first maximum which lasted up to June. Thereafter the curve sank and remained low during the summer months—periods of hard work with no time for excessive indulgence—and then rose steeply in October, to fall again below the general curve in the last two months of the year. February, therefore, in which falls Carnival; April to June, the chosen months for weddings and feasts; and October, Vintage time, showed notable elevations of the weak-minded over the normal curve, and satisfied Dr. Lang of the truth contained in the observation of an Austrian elementary school master, who said that when in the first class they found many feeble-minded scholars, they knew that six years before there had been a good wine year. Fluctuations exactly similar to those recorded by Bezzola were observed by Hartmann in plotting the conception curve of 214 criminals in Zurich. Mainly on the above-mentioned grounds Dr. Lang bases his belief in the special poisoning of germ cells—what Forel has termed blastophthoria—by alcohol at the time of conception, a belief which was perhaps embodied in the Spartan nuptial laws of Lycurgus.

On the wider question of the habitual and excessive consumption of alcohol producing a defective progeny, Dr. Lang does not bring forward any new evidence, but quotes the well-known statistics of Bourneville, who showed that of 2,891 juvenile first admissions (idiocy, epilepsy, weak-mindedness, and hysteria) to the Bicêtre and Vallée, 43.2 per cent. had drunken fathers; 3.6 per cent. drunken mothers; in 1.9 per cent. both parents were drunken, and in 51.3 per cent. the parents were abstainers. According to the statistics of Bleuler of Zurich, 70 per cent. of the epileptics of Burghölzli Asylum had an alcoholic heredity; Lunier asserted that 50 per cent. of the idiot and imbecile children of France had drunken parents, and much evidence supporting the opinion as to the baneful action of alcohol has been published by Schmid-Monnard, Fletcher Beach, and Hitzig. Dr. Lang recalls the fact, frequently commented upon by other writers, that in Norway, where in 1816 the distillation of spirits was declared free, drunkenness subsequently greatly increased, followed in the years 1825 to 1835 by an increase in the number of idiots amounting to 150 per cent.; whereas after the restrictions placed upon the consumption of spirits in that country the number of idiots fell in ten years by more than 16 per cent., notwithstanding an increase in the population of 14 per cent.

In discussing the effect of moderate drinking by juveniles, Dr. Lang gives the results of considerable numbers of experiments upon students and others as to the mental output of work with alcohol and without. Most of these experiments, conducted by Drs. Führer, Smith, Demme, Rudin, Kürz, and others, are already widely known and do not require further

mention, as they only corroborate what is already well known from investigations in this and many another country—namely, that alcohol, even in moderate doses, acts as an immobilizer of nervous functions, beginning with the highest and latest acquired, enfeebling the power of voluntary attention, retarding the power of calculation, and reducing ideal associations from logical and complex to less complex associational levels. Dr. Lang, however, gives one or two particulars worthy of notice. The experiments with students showed that on the day following the drinking of small quantities of alcohol, even though they appeared to themselves to have slept better than usual, the output of work was less than the normal. Another interesting point concerned the relative number of marks earned by school children, arranged according to whether they never drank alcohol, only exceptionally, or every day. The tables furnished by Dr. Lang, taken from the results of Dr. Bayer of Vienna and those of the Association of Abstinent Teachers in Holland, give parallel results. They show that in the "very good" and "good" classes the abstainers head the list by considerable proportions; in those giving "moderate" or "sufficient" results the proportions are about equal, and in those giving "inadequate" or "bad" results the proportion of those who drink is more than twice as great as of the abstainers. A surprising fact related by Dr. Lang is the considerable proportion of school children in Holland, Austria, and Germany who drink beer, wine, and even spirits. To take only one example: Inquiries in Vienna disclosed the fact that in that town more than 53,000, or over 32 per cent., of the whole number of school children, regularly drank beer; nearly 20,000, or over 11 per cent., wine; and nearly 6,000, or 3.5, spirits. To what extent juvenile drinking obtains in our country we do not know. Accurate information on this point would be valuable, particularly if at the same time the educational results could be obtained and compared from this point of view. We imagine, however, that in this country juvenile drinking is of infrequent occurrence, and that in this matter, at least, we can say, "Let the galled jade wince, our withers are unwrung."

THE ACCURACY OF THE MEDICAL REGISTER.

WE draw the particular attention of all registered medical practitioners to the letter from the Registrar of the General Medical Council, which is published at p. 369. It is very much to the interest of the medical profession that the *Medical Register* should be accurate, and Section XIV of the Medical Act, 1858, empowers the Registrar to write a letter to any registered person, addressing him at his address on the *Register*, to inquire whether he has ceased to practise or has changed his residence. If no answer be returned to this letter within a period of six months, the name may be erased from the *Register*. When a special effort was made some years ago to comply with this section, we remember that we afterwards received a number of complaints from medical practitioners who found that their names had been erased. On Monday last circulars from the Registrar were addressed to every person whose name appeared on the *Medical Register*, except those belonging to the Royal Navy, Army, and Indian Medical Services whose names appear on the official lists of those services. It is important that every practitioner who has received the circular should

reply, and that any registered practitioner who may not have received the circular and who is not a member of one of the services mentioned should communicate at once with the Registrar of the General Medical Council, 299, Oxford Street, London, W. Notices have been sent to all the principal papers in London, in the provinces, in Scotland, in Ireland, and in the Colonies, drawing attention to the issue of the circular. The expense of issuing the circular is estimated at about £300, but it is believed that the money will be well expended, inasmuch as the result ought to be to make the *Medical Register* of 1910 absolutely accurate. It is, as we have said, in the interest of all medical men to respond promptly to the inquiry. The intention we understand, is to remove the name in every case in which an answer is not received within the stated period. It must be recognized that the General Medical Council is in this dilemma: either it must leave on the *Register* the names of persons of whom no trace can be found, and who, very possibly, may be dead, or it must remove these names although the person is alive. Of the two, the latter seems to be the less harmful procedure, for whereas it is always possible to restore a name which has been taken off, provided the identity is safeguarded, to leave on the *Register* the name of a man who is dead gives an opportunity for personation.

THE EMMANUEL MOVEMENT.

IN THE BRITISH MEDICAL JOURNAL of January 16th, p. 171, we showed that the statement made by the leaders of the so-called Emmanuel movement in Boston that it had the sanction of the leading neurologists in New England was incorrect. Since then we have received a letter from Professor Coombe Knapp, of Harvard, who had evidently not yet seen the article just referred to, in which he says that when the new movement was begun one or two neurologists of Boston were consulted and that they, thinking that the work was to be under medical control, gave a partial approval to it. Other neurologists of Boston were not consulted at all and most of them at the outset regarded the movement with scepticism. When its true character was known, even those who had given a partial approval protested, but their protest was disregarded and they were constantly quoted as advising and approving of it. Now, he says, every neurologist of standing in Boston has recorded his condemnation of the movement. This shows that the clerical healers lost no time in shaking themselves free from any medical direction. Already we have the interviewer and the snapshotter showing them at work. An illustration of their methods is given from personal observation by Mr. Ray Stannard Baker, who had an opportunity of watching the practice of the Rev. Lyman P. Powell, of St. John's Church, Northampton, Massachusetts. His method is simply suggestion with or without hypnotism. Speaking of those who seek counsel of the priestly healers, Mr. Powell says: "Our idea, of course, is to influence their subconscious 'lives': to replace their hopelessness and moral weakness with suggestions of power and virtue and strength. We do not need to produce a hypnotic sleep, except in rare cases, to reach this end. All that is required is a relaxation of mind and body, a repose, in which the deeper nature is open to suggestion. We don't know why it is, but if good thoughts and strong purposes are thus impressed upon the mind of a patient in times of repose, these good thoughts act upon and stimulate his life afterward. He is cured, sometimes instantly, of his sickness or his sin, but usually the treatments must continue for

"some time." It might have been foreseen that the vaulting ambition of spiritual healers would not allow itself to be confined within the vague domain of "functional" diseases. Mr. Baker says he visited "one of Mr. Powell's patients who was afflicted with a malignant internal growth and often suffered the most excruciating pain. She had been more or less bedridden for years and had taken all sorts of medicine for relief. Mr. Powell has been treating her now for many months, not promising a cure but merely freedom from suffering. The pain instantly disappears under his treatment, so that the patient rests in perfect comfort or is even able to get up and walk. In four or five days, however, the pain returns, and Mr. Powell gives another treatment. This summer a remarkable thing happened. Mr. Powell was away on his vacation for several weeks, and during a part of the time the woman suffered acutely; but on the day she heard that Mr. Powell was returning, so great was her faith in his power to bring relief that the pain stopt before he arrived. He is thus able to make the life of a suffering woman comfortable and even happy where it was formerly wholly miserable." Assuming all this to be true, one may wonder where religion comes in here: it is a plain case of simple faith in a man working its effect in a favourable medium. We are told that the religious element is to be found in "the quieting and hope-inspiring meetings of the church, where every one is looking on the bright side of life." Then there is "the important matter of confession. Before a patient can be successfully treated he must unburden his soul and let the minister who is treating him understand to the depths all the sources of his trouble. Without this it is impossible to begin anew"—and so forth. It may be pointed out that this doctrine lay at the bottom of a rule of the mediaeval Church that a doctor in charge of a patient suffering from an illness which threatened to become serious should give up attendance within three days unless the patient went to confession and received communion. That devotional exercises may be of help in some cases is unquestionably true; religion is hope, and hope is a powerful medicine. In this way anointing and laying on of hands may be serviceable by ministering to a mind diseased which is beyond the reach of medicine. But if "spiritual healing" is to do good, cases must be carefully selected for its application. Such cases are limited in number, and they all bear the same character of neurosis. One who, in Hamlet's phrase, knows the stops of an unstable nervous system can play upon it and sound it from its lowest note to the top of its compass. It is a dangerous power which should be exercised only with the utmost caution and under skilled supervision. We therefore solemnly warn those well-meaning clergymen and others that they are employing an instrument which, if misused, may have the most harmful effects on sufferers. History is full of the evils wrought by such means, and abundant evidence could be brought forward to show that spiritual healing is apt to degenerate into superstition, and from that into unspiritual imposture.

"ARTIFICIAL LANGUAGES."

WE have received a further communication from Dr. Sydney Whitaker complaining that we did not publish his letter in defence of Esperanto in full. We dealt with all the points in it that seemed to us of any importance. He repeats that we were guilty of a breach of the laws of grammar, and quotes the sentence which he thinks faulty. It is recorded that the father of Frederick the Great, once seeing a crowd of people reading a placard on a wall in Berlin, had the curiosity

to go near, and saw that it was a pasquinade on himself. He at once ordered it to be fixed lower on the wall so that it might be read more easily. In this spirit we quote the sentence which falls under the lash of the Esperantist Zeilus: "It [videlicet, language] is a "natural growth subject to modifications, as the people "whose means of expressing themselves it is, adapt "themselves to changes of environment, mode of life, "intellectual outlook, and moral conventions." We cannot see where Priscian's, or rather Lindley Murray's, head is scratched in this. Our blindness is like that of Teufelsdröckh, whose famous epiphon on a noble sportsman remained, he says, unengraved "for an "alleged defect of Latinity, a defect never yet fully "visible to myself." We have also received a letter from Dr. Major Greenwood, to whom our criticism seems superficial, and who finds our arguments unconvincing. We take leave to think that the superficiality is on the other side; and in regard to convincing, we can only say that the prosperity of an argument, like that of a jest, lies in the ear of him that hears it. Dr. Greenwood quarrels with our interpretation of Chaucer's lines about the prioress's talking French "after the scole of Stratford-atté-Bowe." He says the poet was ridiculing her pronunciation. No doubt he was, but the fact remains that Anglo-Norman French was at the date of the famous pilgrimage spoken at Court, and there was a well-known nunnery at Stratford-le-Bow where Chaucer meant us to understand that the lady had been educated. The point seems to us to help our argument rather than that of Dr. Greenwood. All we wished to show was that language inevitably changes, and that unless Esperanto is held by its devotees to be immutable and indefectible it must in time become altered. The vocabulary and pronunciation of English have altered to a marked degree within the last century, and to a considerable extent within the last thirty or forty years. A language which sprang from the mind of Dr. Zamenhof, as Minerva sprang full armed from the head of Jove, cannot escape the lot of ordinary human speech. The subject has been very fully discussed in the JOURNAL from both sides, and we would say to any other disputants who may feel moved to enter the arena:

Claudite jam rivos pueri: sat prata biberunt.

VAGINITIS FROM WATER.

AN acute vulvo-vaginal discharge in an adult is a very compromising malady, but it is recognized that dirty linen and dirty habits may cause the infection of the subject quite independently of sexual relations, and it has long been known that the vulvo-vaginitis of children, a disease usually far more acute than simple leucorrhoea in the adult, is thus propagated. Recent researches appear to show that staphylococcus infection is sometimes conveyed by the water used for washing and for vaginal injections. Van de Velde made cultures from 9 cases of acute cervical metritis associated with colpitis and vulvitis, and on subsequently examining the well-water the patients had used for their ablutions detected the same species of blastomycetes as he had discovered in the pus. Dr. Boshower of Haarlem,¹ has recently published a similar case of much importance, as the patient might have been deeply compromised by her malady. He was consulted by a young lady, aged 19, for a very acute discharge with all the objective and subjective features of gonorrhoea. As far as could be made out there was no reason to suspect gonorrhoeal infection. Boshower submitted specimens of pus from this case to Dr. Havelaar, Director of the

Municipal Laboratory of Haarlem. Great pains were taken to avoid all sources of error. The gonococcus could not be found. The pus contained in abundance the *Staphylococcus pyogenes albus*, which had the haemolytic properties of that species. Water taken with suitable precautions from the well used by the patient for washing yielded pure cultures of the same microbe. It was found that two younger sisters of the patient, both little children, had previously suffered from vulvo-vaginitis; and Mendes de Leon in 1907 reported instances of that malady in which there could be no doubt that this staphylococcus was the infecting germ. Boshower remarks that ten years ago Hofmeier taught that genital infection not due to gonorrhoea was not rarely observed in nulliparae, and adds that with the knowledge to which we have attained since 1898 we can indicate with great certainty the line of travel of these infections and not rarely make clear their cause.

OLD AGE PENSIONS IN GERMANY.

THE HON. W. P. REEVES, formerly State Commissioner for New Zealand, who last year resigned that office to become Director of the London School of Economics and Political Science, delivered last Tuesday at the school a lecture on State-aided pensions for the poor. Germany, France, and Belgium, he said, afforded examples of contributory pensions, and Denmark, Australia, New Zealand, and the United Kingdom of limited free pensions. He expressed the opinion that all pension schemes in the future would belong to one or other class, since a system of free State universal pensions was not likely ever to be applied. The Belgian system of superannuation for the poor, provided by voluntary contributions with an added State donation, had encouraged thrift, but as it had yielded only an average pension of £3 a year the State had found it necessary to institute a system of free old age pensions for the utterly destitute. The greater part of the lecture was devoted to the system of compulsory insurance which has been in force in Germany for twenty-six years, and is applicable to men and single women earning less than £100 a year. Mr. Reeves pointed out that, as the funds were provided by equal contributions from employers and employed, the principle of the system was that of deferred wages, and it was a question whether thrift was encouraged by withholding 2 per cent. of wages. Professor Ashley had shown that of the 10,700,000 men insurable 8,857,000 were insured, and of the 5,800,000 women who were qualified to provide for pensions 4,524,000 were paying their contributions. The system provided for old age, sickness and accidents, and in 1907 nearly £30,000,000 was expended; of this £8,400,000 was expended in pensions to the aged and infirm. The State bore the cost of management, and added to every pension a bonus of £2 10s. a year. For the working of the system the wage-earners were divided into five grades: (1) Those who earned up to £17 10s. a year; (2) those who earned any sum between £17 10s. and £27 10s.; (3) those who earned between £27 10s. and £42 10s.; (4) those who earned between £42 10s. and £57; and (5) those who earned between £57 and £100. The lowest wage-earners paid seven-eighths of a penny a week for their old-age pension, and the highest wage-earners about 2½d. No special consideration was shown for a married man. The five grades of pensions were: (1) £5 10s. a year; (2) £7; (3) £8 10s.; (4) £10; and (5) £11 10s. If the labourer died after subscribing for 200 weeks his wife and children were entitled to receive what he had subscribed, but nothing more. The lot of the widows and orphans was one of the black features of the

¹ Infection Staphylococcique des Organes Génitaux. Rev. de Gyn. et de Chir. Abdom., vol. xii, September-October, 1908, p. 775.

system. A married woman could not qualify for an old-age pension. The amount of the weekly contribution was fixed for ten years. If the insurers, after having subscribed for not less than four years, broke down and were unable to earn wages, they were entitled to more generous treatment. If curable they were treated in State sanatoriums, and received temporary sickness pensions. If incurable they received a pension regulated by the number of years they had subscribed, and varying from a minimum of £5 16s. in the lowest grade for four years' subscriptions to £22 10s. in the highest grade for 50 years' subscriptions. The insurer began to pay his contributions at the age of 17, and for an old-age pension he had to subscribe 50 weeks a year for 24 years—1,200 weeks in all.

DEATH UNDER STOVAINE.

THE unfortunate incident of the death of an elderly patient under stovaine, injected subdurally to produce spinal anaesthesia for a necessary operation—the inquest on which is referred to on page 376—must apparently be added to the relatively very small number of fatal cases attributable to this valuable anaesthetic. The patient was 72 and a house painter, who, in addition to an enlarged prostate and its complications, had a degenerate heart and diseased lungs. The use of both chloroform and ether as general anaesthetics being contraindicated, and the safest of the known local analgesics was properly chosen, and sympathy is to be extended to Dr. MacCormac in the matter. No therapeutic agent capable of absolutely abolishing pain can it is to be presumed, ever be absolutely safe. In regard to spinal analgesia, over 5,000 cases collected by one investigator show only five deaths. Mr. Barker has recorded a series of 300 cases, and Messrs. Spencer and Houghton, Mr. McGavin, and Dr. Mill Renton a series of 50 each without a single fatal result and with hardly an untoward symptom. Experience shows that patients who take general anaesthetics badly, including the aged and alcoholic, usually bear stovaine well, and the absence of shock after even serious operation has been remarkable. In regard to a possible fright factor it is of interest to recall that in the first case selected for the administration of chloroform in the Edinburgh Royal Infirmary the patient died on the table, immediately after the first incision. It is fortunate for the future of chloroform that, owing to the unavoidable absence of Simpson, the anaesthetic was not administered. It is the rule in operating under local anaesthesia that the field of operation should be screened from the patient, and the custom to distract meanwhile the patient's mind by engaging him in conversation. It is doubtless one of the drawbacks of the method, especially in the presence of heart weakness, that the head must be kept raised in order to protect the medulla and its nerves from the influence of the drug. In view of the infrequency of ill effects after stovaine the present regrettable result may fairly be taken as an exception that proves the rule.

THE ARMY MEDICAL COLLEGE.

SIR ALFRED KEOGH, Director-General of the Royal Army Medical Corps, and the members of the Royal Army Medical College on Tuesday evening entertained at dinner Viscount Middleton, who, when as Mr. St. John Brodrick he was Secretary of State for War, founded the College. The chairman in proposing the toast of the guests, said that Lord Middleton had studied the subject of a medical service with an army in the field as it had not been studied since the days of Sidney Herbert. The College was established with the view of improving the early education of the army medical officer and of giving him the advanced and

special education which he required at various stages of his career. The College was also designed to undertake research into the origin and spread of military diseases. Already the admissions to military hospitals had been diminished, the death-rate in the army lowered, invaliding lessened, and recruiting improved. Lord Middleton, in expressing his acknowledgement, said that the fierce light which now beats upon a campaign affected the medical service even more than the combatant services, for the patriotic restraint which held men back from criticizing soldiers for losing lives impelled them with double force to make free with doctors for not saving them; it was never realized that it was only in very recent campaigns that the medical department had been allowed a say at all on anything but the actual care of sick and wounded. "Prevention is better than cure," and for every wounded man the medical officer could heal he could save a dozen lives by attending to the sanitation of the hospital, by proper selection of the sites for camps, and by the control of drinking water. The seven years which had elapsed since the South African war had been most important in the medical history of the British army: the number of medical officers had increased by 40 per cent., while the qualified candidates had since 1902 been double the number of commissions vacant. The College gave about six months of the most modern professional training to officers after seven years' service, and the Royal Army Medical Corps was no longer cut off from the companionship of the civil profession. In conclusion, Lord Middleton said that one of the causes which had spoiled every modern effort to reorganize the army was the want of continuity in the views of successive administrators. He urged the medical service of the army to avoid this pitfall.

A CIRCULATING LIBRARY OF HYGIENE.

DURING the last four years the members of women's clubs of Massachusetts have had in circulation a library of books on matters relating to health and hygiene. The result has been that a great public interest in personal and public health, and especially in the suppression of tuberculosis, has been aroused. It is believed, says the *Medical Record*, that no other one agent has had a more happy influence upon the public mind, resulting in legislative appropriations for the care of the tuberculous, the establishment of local antituberculosis and visiting nursing associations, and the foundation of day camps. It is proposed now to extend the library scheme to the country at large, and the General Federation of Women's Clubs will recommend that such a library be bought and circulated by the clubs.

PLAGUE IN THE AZORES.

THE last issue of the *Oporto Hospital Gazette* contains a lengthy account of plague conditions in the Azores, by Professor Sousa, head of the Bacteriological Laboratory in Oporto, who was recently sent out in charge of the medical mission to combat the outbreak. His letter is dated December 31st. The first task has been to divide the island of Terceira (to which apparently the plague is limited) into six districts, each under the charge of a separate staff and assistants. Disinfection brigades were also organized, special attention being directed to the parish of Sta. Barbara, the focus of the formidable outbreak of the pneumonic form of the disease. Rat brigades have been started, 40 reis (about 2d.) being paid for each rat, the animals being dropped into petroleum after being killed in order to avoid flea infection. The disease seems to have begun in June

and to have been especially marked in the Angra and Prai da Victoria districts. In the former, of 85 cases there were 50 deaths, and in the latter, of 107 cases 52 deaths. In Angra there were 40 cases of the pneumonic or septicaemic type, all of which proved fatal. The rats were found affected in all the parishes whence specimens had been received, and cats had also been found with abundant bacilli, in some cases, indeed, so abundant as to be spoken of as "indescrivable," which the phototype given in illustration fully bears out. Professor Sousa, however, does not seem to believe in the affection of the poultry, and describes the experiments that he made to infect them, but they were too restricted to be of much value. The Hong Kong experiments carried out by Dr. Simpson in 1902, apart from other evidence, conclusively shows that fowls can not only be affected artificially, but became naturally affected by the disease during an epidemic.

WOUNDS OF THE URETER IN CHILDBIRTH.

THE researches and experiences of Mr. Henry Morris, Dr. Howard Kelly, Dr. Fenger, and other contemporary writers have greatly advanced the surgery of the ureter, but an injury to that duct, not rare in the course of an abdomino-pelvic operation, is always a very serious complication. In childbirth it is much less frequent; still it is not unknown, and the after-consequences are distressing and ultimately dangerous, for urinary fistula with incontinence of urine is nearly always followed in these cases by destructive suppuration of the kidney. An interesting discussion by leading French authorities recently followed the reading by M. Pozzi of a report of an instance of the complication in question.¹ A woman, aged 35, consulted him because urine had come away through the vagina for nine months, beginning after a lingering labour. The cervix had been rigid, the membranes ruptured prematurely, and complete uterine inertia set in. On the fifth day the patient's doctor introduced the forceps after using Tarnier's dilator, but the cervix retracted as the blades of the forceps were being applied and manual dilatation proved a failure. Then some incisions were made in the cervix. Within a few days urine was observed escaping from the vagina, and the complication was ascribed to vesico-vaginal fistula resulting from an extension, during the extraction of the fetus, of one of the incisions made in the cervix. The patient was kept under observation, and it was noted that occasionally the urine ceased to escape from the vagina and that then she complained of sharp pains running from the right hypochondrium to the iliac fossa, accompanied occasionally by fever. M. Pozzi found wide laceration of both commissures of the cervix, especially on the right where the tear extended into a cicatrix occupying the corresponding vaginal fornix. No fistula, however, could be detected in the vagina, and nothing escaped from the uterus when fluids were injected into the bladder, yet the vagina was constantly moistened by urine. The right kidney was tender on palpation. Luys introduced the cystoscope and detected partial, not complete, obstruction of the right ureter a centimetre above its vesical orifice. As the left kidney and its duct were proved to be quite sound, Pozzi removed the right kidney. That organ was found to be the seat of hydro-pyonephrosis and its secreting tissue was almost destroyed. Four months later the patient reported herself as in excellent health and free from all urinary complications. Obstetricians, remarked Pozzi, believed that ureteral fistulae after childbirth were usually the result of

gangrene of the ureter by compression, especially in lingering labours, rarely to damage by instruments. The attendant at this labour, on the other hand, believed that a laceration beginning from one of the incisions which he had made, had really extended into the ureter. Pinard, in discussing the case, expressed doubt as to whether a laceration of the kind reported could involve the ureter; it would more probably extend upwards into the uterus. He considered forced dilatation and incisions unjustifiable. Under the circumstances, in this case the uterus should have been opened from above. Champetier de Ribes related an instance of uretero-vaginal fistula after basiotripsy. On the seventh day, probably after the separation of a slough, urine began to escape from the vagina; the fistula was closed by operation. Hartmann agreed with Pozzi that the kidney should be removed, as transplantation of the ureter above the stricture did not always bring about restoration of the functions of the kidney. Routier admitted that, in two cases in which he had transplanted the ureter, he found afterwards that that duct closed again, and the kidney underwent atrophy. In two cases of uretero-vaginal fistula spontaneous cure occurred, but in both the catheter proved that the ureter on the side on which the fistula had developed was strictured. Schwartz, who had removed a suppurating kidney two years after a uretero-vaginal fistula had developed as the result of damage during the extirpation of a big fibroid, said that the patient was doing very well seven years after the nephrectomy. Doléris, concluding the discussion, agreed with Pozzi that lateral incisions made in the cervix with scissors or scalpels might involve damage to the ureter. The duct was safe only when Dührssen's systematic incisions were made, as then it retreated before the knife.

PROFESSOR RAMON Y CAJAL, of Madrid, the famous anatomist and one of the winners of the Nobel Prize, has been created a Senator of Spain.

MR. SINCLAIR WHITE, Surgeon to the Royal Infirmary Sheffield, has been elected a corresponding member of the Surgical Society of Paris.

THE Hunterian oration before the Royal College of Surgeons of England will be delivered by the President, Mr. Henry Morris, on Monday, February 15th, at 4 p.m. Fellows and Members desiring to be present must apply to the Secretary for cards.

THE International Opium Commission was opened at Shanghai on February 1st by the Viceroy, who had a special Imperial mandate for the purpose. Subsequently the Commission unanimously elected Bishop Brent President, and Mr. Carey, Commissioner of Customs, and M. Gieter, interpreter to the French Consulate, secretaries. It was resolved that the official language should be English, the secretaries undertaking to make summaries of speeches delivered in other languages.

At a meeting of the Clinical Section of the Royal Society of Medicine on Friday next Mr. Butlin will, at 8.30 p.m., exhibit his collection of drawings of early carcinomas of the tongue and of conditions which may be mistaken for it, and will speak of the results of operations which have been practised in the cases exhibited. Microscopic sections of the cases will be on view. Messrs. Arthur Barker, W. C. Spencer, and G. L. Cheate will take part in the discussion of the subject.

¹ *Revue de Gynéc. et de Chir. Abd.*, March-April, 1909, p. 364.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

LIVERPOOL.

THE ROYAL INFIRMARY.

At the annual meeting of the Royal Infirmary allusion was made to several changes in the staff which have taken place during the past year. These were the death of Mr. E. R. Bickersteth, senior consulting surgeon, the resignation of Mr. George G. Hamilton and the appointment of Mr. W. Thelwall Thomas as surgeon in his place, and the election of Mr. F. A. G. Jeans as assistant surgeon. Dr. R. J. M. Buchanan, having been seven years assistant physician, has, according to the laws of the institution, become entitled to be styled "physician to out-patients." The financial state of the institution gives ground to some anxiety. The yearly expenses continue to increase, but the income does not increase in the same proportion. The cost of the x-ray department alone had been £500 during the year. When the present building was opened eighteen years ago a maintenance fund of £28,000 was liberally subscribed, and was expected to last for ten years. As a matter of fact, by judicious management and economy it is not yet all expended, and there is still one year's contribution remaining to be transferred to the general account. An urgent appeal is made for a fresh guarantee fund of £25,000 to enable the work to go on in the future with the same success as in the past. Apart from ordinary routine the most important step the committee has taken during the year has been the definite adoption of plans for a new out-patient department. Towards the cost of this, £10,000 has been given by the family of the late Mr. E. R. Bickersteth in memory of the deceased eminent surgeon, and this sum has been supplemented by another substantial and several smaller sums. It is intended to make an appeal to the citizens to assist in its maintenance. It is expected that the foundation stone will be laid in the course of the next few months, and that the work will be prosecuted without any unnecessary delay.

THE MEDICAL INSTITUTION.

At the annual meeting of the Medical Institution, on the recommendation of the council, an addition to the laws was passed by which practitioners of homeopathy who are ineligible as members of the institution shall also be ineligible as visitors. The membership of the society has largely increased of recent years, and the extension and decoration of the buildings has been greatly appreciated. Through the liberality of the president, Mr. T. H. Bickersteth, a convenient room has been comfortably fitted up for private study and research in the library.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE.

Sir Alfred Jones, chairman of the Liverpool School of Tropical Medicine, recently entertained a number of pupils of the school and friends of the movement at dinner. He delivered an address in which he recalled the fact that the Liverpool school came into being in 1898, and was formally opened on April 21st, 1899, by that greatest of scientists, their much-loved friend and counselor, Lord Lister. The university lent its indispensable aid, as did the Royal Southern Hospital. In the short space of ten years the school had spent no less than some £75,000 on the study of tropical medicine. With this term the school had started on a new system of instruction; three weeks had been added to the ten weeks' period of study, and the university had decided to give its diploma in tropical medicine only to students who had undergone this course of thirteen weeks. Owing to the lengthened term it would not be possible to give more than two such courses every year, and the courses had therefore been fixed to begin on January 6th and September 15th. The corresponding examinations for the diploma would be held about April 5th and December 13th respectively. In addition to these two full courses there would be a short course lasting only one month, for practical instruction in tropical pathology and medical entomology, to be given from June 1st to 29th each year. It was hoped that this would be of

the greatest utility to medical men returning on short leave to England, as it would enable them to acquire the practical technique of microscopic and similar work, which had been much desired by many of them. After the four weeks' short course, a class examination would be held, and a certificate would be issued for the first four weeks of the full Lent and autumn courses. The career of the school had been a brilliant one; it had numbered amongst its investigators no less than thirty intensely keen young medical men, drawn from the British Isles, the Colonies, and foreign countries. Most of these investigators had taken part in twenty-one expeditions to tropical countries—some had lost their lives in the enterprise, but all had added materially to their knowledge of tropical diseases, and had been the means of bringing about a revolution in the health conditions in the tropics. They had, in addition, trained 255 medical men and others to fit them to carry out effectively their work in our tropical possessions. Not only had the study of tropical diseases conferred an immense benefit upon the science of medicine, but it had given new and undreamt-of advantages to commerce, civilization, and to administration in tropical countries. They could point to Ismailia in Egypt, Klang, Port Swettenham, Hong Kong, Marathon, and many other places where malaria, if not eradicated, was fast disappearing. Only recently Dr. Johnston, who had thirty years' experience in Jamaica, visited the Liverpool school to bear testimony to the value of their teaching in the prevention of malaria. In Dr. Johnston's own experience it had reduced the mortality amongst the native soldiers of the West Indian regiments serving on the West Coast of Africa some 75 per cent. The preventive measures were not only of use to white trading officials and officers, but also of immense advantage to the natives themselves. Similar eloquent testimony had been recently furnished by Sir Henry Blake and by many other administrators, medical men, and travellers returning from the tropics. Similarly Rio, Santos, New Orleans, Havana, and the Philippines had been rendered as safe and as secure as any modern well-governed province or city in Europe. The construction of the Panama Canal was no longer a health problem; the previously insurmountable barrier of disease had been removed. The work had increased by leaps and bounds, and unless more financial support was forthcoming their work would have to be very seriously curtailed.

MANCHESTER AND DISTRICT.

WOMEN DOCTORS AND THE ROYAL INFIRMARY.

A CONSIDERABLE amount of excitement has been caused among women doctors and medical students in Manchester by a letter from Judge Parry in the *Manchester Guardian* on the subject of the appointment of women resident medical officers at the new infirmary. No one can ever charge Judge Parry with wrapping up his convictions on any subject, and he leaves us in no doubt as to his opinions on this point. He admits that something might be said for appointing a woman doctor for the women's and children's wards, but considers the suggestion to appoint a woman as a general resident medical officer to be "indefensible." He continues:

In my view we have no right to impose on the sick poor a class of medical treatment that we should consider unsuitable or undesirable for ourselves. The tradition of the infirmary has always been to give sick poor the very best medical attention and comfort that can be obtained, and the best measure of that is to be found in what rich people, who are free to choose for themselves, do actually choose. For the infirmary to appoint a general resident woman doctor would be to exploit the infirmary as a charity in the interest of a particular class of medical education. I feel sure that many subscribers would resent that course.

The Chairman of the Infirmary Board has also thought it necessary to correct a wrong interpretation which the press and the women's deputation put on his previous remarks. It had been assumed that the board had really decided in favour of the appointment of women, and that the only obstacle that prevented immediate action was the want of accommodation. He thought he had stated with sufficient clearness that the appointment of women as resident medical officers had not been fully considered by the board, and that no conclusion had been come to on

account of the difficulty of providing accommodation. He adds that to assume that the accommodation required would only be one small bedroom and one sitting-room is to take a very superficial view of the matter. In reality the change might involve additional buildings and necessitate rearrangement of and additions to the domestic staff and the reorganization of the work of the infirmary. The board could not at present undertake to deal with such a far-reaching question. Further, he says that though the educational facilities which the hospital affords are of great importance, the primary object of the charity is the welfare of the patients, and anything likely to interrupt the general work of the hospital is to be avoided.

THE PUBLIC HEALTH LABORATORY.

The public health laboratory associated with the Manchester University is at present conducted in York Place, some distance away from the university. Its work is concerned not only with the training of medical students under Professor Delépine, but also is associated with the wider interests of the public. As director of the laboratory, Professor Delépine has during the past year been engaged on an exhaustive report on the prevention of tuberculosis from tuberculous milk. As far back as 1892 he drew attention to the dangers of an infected milk supply, and the report, which is being compiled at the request of the Local Government Board, will contain something like a quarter of a million data that have been examined and correlated. Investigations, too, have been made at the instance of the Manchester corporation as to the effect on health of air impregnated with sewer gas. The value of the various types of mechanical filters for the treatment of drinking water has also been investigated. A special inquiry is being made by Drs. Lea and Sidebotham as to the reliability of bacteriological diagnosis in the detection of sources of puerperal fever.

Of late years there has been a constant and increasing demand for special and routine investigations which can only be undertaken at a properly equipped laboratory, and this, together with the regular teaching requirements, have made the present accommodation far too small. There are now fifty-five students using the laboratory, and the success of the teaching is shown by the positions which past students have obtained, there being now a considerable number of medical officers of health in various parts of the country who have received their training in this laboratory. At present the building is in debt to the extent of over £4,000, and the constant demand for further connected researches can hardly be met without a substantial endowment. At present the fees obtained for the work of the staff are the chief sources of income, and are not sufficient to support it adequately.

WEST YORKSHIRE.

OPEN-AIR SCHOOL TREATMENT IN BRADFORD.

The open-air school established experimentally last year at Thackley by the Bradford Education Committee is the subject of an interesting report by Dr. Crowley, the Medical Superintendent. Physically, all the forty children were unsatisfactory in one way or another. The curriculum included ordinary school work, with outdoor lessons; nature study and intervals for play and rest; three meals a day were given. The rest consisted of an hour's sleep in deck chairs, and both shower and slipper baths were provided. Physical exercises formed an important part of the curriculum. The results of the school were shown in an improvement in the general appearance and carriage of the children, increased weight and chest measurement, and improved condition of the blood, as shown by the amount of haemoglobin present. The cost of maintaining a school of this description is, of course, greater than under ordinary conditions, but Dr. Crowley looks on this class of school as part of the great movement in preventive medicine, and must necessarily lead to the greater efficiency of the individual, thus returning the capital used in an indirect manner. The report is convincing as to the advantages to these poor little weaklings; but it appears that something further will soon have to be done in this direction. Why are these weaklings

here at all? If the municipality is compelled to perpetuate an undesirable factor which it has not the power at present to prevent, is it not necessary that some action should be taken in the future in this direction? A report on the physical condition of the parents of these children would be of assistance, and perhaps Dr. Crowley will be able to undertake such an investigation. Where it becomes the duty of the municipality to see that delicate infants are reared in the most hygienic manner possible, should it not also have some say in the antenatal or anteconception condition of its future protégés?

BIRMINGHAM.

EPIDEMIC OF MEASLES.

The report of the medical officer of health (Dr. Robertson) for last week indicates that a somewhat serious epidemic of measles has broken out in various parts of the city. Measles has assumed just now a greater degree of prevalence than for some years past. Last week there were 20 deaths from measles, as compared with 15 in the preceding week, and 8 during the week ending January 9th. Twenty deaths is an exceptionally large number, and there have not been so many for two years. Most of the deaths were due to the fact that the parents do not take sufficient care of their children when they are afflicted with this disease.

WALES.

WEST WALES SANATORIUM.

At the annual meeting at Carmarthen of the governors of the West Wales Sanatorium, opened last summer at Alltymynydd, the Chairman deplored the absence, through indisposition, of Mrs. Davies-Evans, wife of the Lord-Lieutenant of Cardiganshire, who had not only taken the leading part in the sanatorium movement from its inception, but had been the prime mover of the presentations which they would shortly make to gentlemen who had held office in connexion with the executive. He particularly referred to Dr. Douglas Reid of Tenby, the first honorary secretary, Mr. P. J. Wheldon (Carmarthen), the treasurer, and Dr. Bowen Jones, another honorary secretary. To Dr. Reid, who was the pioneer of the movement, he handed a replica of the Cromwellian cup; a silver salver was presented to Mr. Wheldon, and a silver inkstand to Dr. Bowen Jones. Dr. Reid, in reply, recalled the seven years' work which culminated in the erection of the sanatorium. He commented on the practical solicitude of the late Lady Drummond, who had given a large sum of money, without which the sanatorium could not have been built. As to the clerical work, he said he had 3,500 letters in his possession; all of them had been answered, some of them twice and thrice. Altogether about 10,000 letters had passed through his hands. Mr. Wheldon showed how ignorance and prejudice in regard to the suppression of tuberculosis had been overcome, and Dr. Bowen Jones paid a high compliment to Mr. Wheldon, who, he said, had done a great deal of secretarial work for him. Mr. Parry Edwards was also presented with a silver inkstand, in acknowledgement of aid rendered to Mr. Wheldon in the financial department. "Profound gratitude and satisfaction" was expressed by the governors to Princess Christian for her gracious message intimating her desire to become the patroness of the West Wales Sanatorium, and with acclamation her name was so enrolled. Earl Cawdor, was elected president, and Mr. D. Davies, M.P., Llandinam, Sir James Drummond and Colonel Davies-Evans were appointed vice-presidents. Mr. Wheldon was re-elected treasurer, and Captain Harries, of Bryntowy, consented to become the honorary secretary, the consideration of the appointment of a paid secretary being postponed. The treasurer, in his annual report, which was adopted, stated that the receipts for the building fund came to £8,367 5s. 2d.; £1,000, lent by Sir James Drummond, had been repaid; and about £415 was due to the contractor and building side of the account. An adverse balance on the building side of the account. The furnishing account, including £500 from Mr. David Davies, M.P., came to between £800 and £900, and there

was a deficit of £27. The maintenance account, which had been in existence for four or five years, contained a separate account made by H.R.H. Princess Christian. On this there was a balance of £32 12s. 9d. The auditor had declared that £1,672 3s. 5d. had been collected for the maintenance fund for 1908-9. Colonel Davies-Evans observed that there was £331 0s. 3d. in hand on account of the memorial account. The honorary secretary (Dr. Bowen Jones), in his annual report, expressed warm thanks to Mr. D. Davies, M.P., for his generous contribution of £500 to the furnishing of the institution, and to Llanelly subscribers for a contribution of £294 9s. to the same fund, in addition to the gift of the turret clock.

The Medical Superintendent (Dr. Basil Adams) submitted the first annual report, and stated that since the formal opening of the sanatorium, by Princess Christian on July 20th, 1908, additions had been made to the staff, bringing the total to ten. On August 25th the first patients—four men and one woman—entered the sanatorium, and by October 3rd all the male beds (12) and half the female beds (5) were occupied. On December 31st 20 patients were undergoing treatment. Up to date 30 had been admitted (12 from Carmarthenshire, 11 from Pembroke-shire, and 7 from Cardiganshire) and 10 discharged. Of the discharged, 2 were fit for work, to which they returned and were now working; 2 were fit, and were looking for suitable work; 4 were continuing treatment (one in another sanatorium); and 2 proved to be unsuitable cases. With one or two exceptions, the cases admitted were not of the type that had been expected, as they did not come within the category of early cases. The most suitable had to be picked out of a large number of applicants, over 30 unsuitable cases having been examined and refused. It was hoped that all interested in the sanatorium's welfare would not advise cases of several years' standing to apply for admission, or that class which sought treatment as "a last resort" or "their only hope." That would only lead to much trouble for the authorities and disappointment for the would-be patients. Apart from the 2 unsuitable cases, all the patients had made satisfactory progress. The Chairman spoke in commendatory terms of the splendid work of the medical superintendent, Mr. Wheldon hoped that some generous benefactor would provide a pony and trap and a microscope.

Ireland.

[FROM OUR SPECIAL CORRESPONDENT.]

ALCOHOLISM AND THE POOR LAW.

DR. FULTON, one of the visiting medical officers to the Belfast Poor-law Infirmary, recently made a report as to the number of alcoholic cases admitted to the infirmary, the expense necessitated, and the encouragement thus given to the manufacture of that class of pauper; many of the cases were said to be well able to pay. The statistics have been sharply criticized, and at a meeting of the board on January 26th Dr. Fulton made an explanatory report which considerably modified the impression given by his former one. There were 78 cases of delirium tremens out of the 490 alcoholic cases mentioned during 1908; the sum £3 12s. formerly mentioned as the cost per week was not the actual cost, but given as a guide to guardians as to what they should charge if they had power to exceed the 6s. 5d. Many of the cases required hospital treatment, which they could not get elsewhere, and their lives had been saved by admission to the infirmary.

THE VICE-CHANCELLORSHIP OF THE NATIONAL UNIVERSITY.

At a meeting of the Senate held this week, the election of a vice-chancellor was considered. It is announced that two candidates were proposed—Sir Christopher Nixon, Bart., and Dr. Sigerson. The former is Vice-Chancellor of the Royal University, and is very well known. Dr. Sigerson is devoted to the cultivation of Celtic literature. He is Professor of Biology in the Catholic University

Medical School, and Fellow in the Royal University. The Senate was unable to come to a decision, and the election was postponed to a future day.

IRISH IN THE NATIONAL UNIVERSITY.

The Gaelic Leaguers, who are intent upon having Irish made compulsory in the new National University, have not received the bishops' views with any cordiality. The so-called West Briton character of some of the prelates is openly discussed and not in flattering words. The leaguers point out that the bishops admit that the matter is one for fair discussion, and they make liberal interpretation of the words. The Dublin Corporation on Monday last had the following motion under consideration:

That the present being a grave epoch in the native language movement, fraught with momentous consequences to national education, in its primary, secondary, and university stages, and to the University of Ireland, in the position it should occupy, as a reviving centre of national thought, in the coming restoration of the Irish language, the Corporation of Dublin therefore resolves: (1) That the time has arrived for the expression of the will of the Irish people upon this supreme racial question by a demonstration of national magnitude in the City of Dublin. (2) That in order that such demonstration should have national dignity all creeds and classes should participate. (3) That to accomplish these objects, a conference, representative of all phases of opinion throughout the country, and of public bodies, should, in the opinion of this corporation, be immediately convened by the Gaelic League.

Dr. McWalter (Alderman) proposed as an amendment:

That the corporation has absolute confidence that the (Catholic) Archbishop of Dublin, as Chancellor of the National University, will take all necessary steps for the safeguarding of the Irish language in that university.

But the temper of the members is indicated by the rejection of the amendment, which only received 4 votes against 38 for the motion.

What is called the Students' United Association sent a deputation to a meeting of the United Trades Council on Monday night on the same subject. It was stated that they wanted to put some of the spirit of the students of other countries into those of Ireland. The council was asked to co-operate in a torchlight procession after a meeting in the Mansion House on Monday night next. And the request was agreed to.

The movement, noisy but not large, spreads through the country, and the Senate of the university is rather to be pitted in the face of this crusade. It is known that the members are much divided in their views, but the day must come when they will have to answer the question, "Under which king?" A sedate university finds itself suddenly in the midst of a great political storm, and it will need considerable astuteness to steer it through its troubles. But the feeling grows that the attacking forces are losing strength, and that in the end the bishops will be victorious.

RESEARCH DEFENCE SOCIETY.

A branch of the Research Defence Society has, as was stated in the JOURNAL of January 30th, been founded in Dublin. The inaugural meeting was held in the Lecture Theatre of the Royal Dublin Society on January 27th. Sir John G. Nutting, Bart., D.L., who took the chair in the unavoidable absence of the president of the society, the Earl of Cromer, said the fact that before the branch was actually formed over two hundred persons of every class and profession in Dublin, in addition to a large number of medical men, had intimated their intention of joining, showed what a widespread feeling existed in Ireland in reference to scientific research. People were anti-vivisectionists because they were either uninformed or misinformed. The Very Rev. the Dean of St. Patrick's proposed the first resolution as follows:

That a Dublin branch of the Research Defence Society be, and is hereby, established.

He said it was humiliating that the advocates of science should be so hampered in their efforts, and so slandered as to their motives, that a society of that sort should be needed among those who benefited every day by their labours in the cause of humanity. He regarded the society exactly as he regarded the Society for the Prevention of

Cruelty to Children. The society had nothing at all to conceal, and it had every motive to court and provide the fullest inquiry. After giving instances of the great value to humanity of results obtained by experiments on animals, he said there were a few who would say that it was altogether wrong to experiment on animals, however painless the experiment might be. What lay behind that position was this: That the life and the happiness of the lower animals were to be weighed exactly in the same scales as the life and the happiness of mankind; that they had rights to equal treatment. Those who used that argument did not understand what human life meant, and were led away by false sentimentalism which prevented them from realizing the vast amount of suffering beyond their immediate ken. Count Plunkett, in seconding the motion, said that all they asked was that men of science might be allowed to strike at the roots of much human suffering, and, for this noble end, to experiment on the lower creation. No matter how they theorized, they could not put man on a level with the lower creation. The motion was passed, with two dissentients. Mr. Stephen Paget read a letter from Lord Cromer in which, after expressing his regret at being unable to attend the meeting, he went on to say that all interested in scientific research must attach the greatest importance to the action now being taken in Dublin, for which they were greatly indebted to the very able and energetic assistance afforded by Sir Henry Swanzy. Mr. Paget then spoke of the advances which the society had already made in England, and mentioned that, in addition, that example was being actively followed in America. Of the Antivivisection Society, he said, sensible people were sick unto death. They had flooded the country far and wide with literature which for badness was without a parallel. Its disseminators seemed to stand alone and unrivalled in the knowledge of how to be cruel. Dr. Horne, President of the Royal College of Physicians, moved:

That the sincere thanks of the Dublin Branch of the Research Defence Society are hereby given to the Right Hon. the Earl of Cromer, President of the Society, for his kind message conveyed through Mr. Stephen Paget.

After congratulating Mr. Paget on having secured Lord Cromer as the first president of the society, and referring to the work done in the laboratories of Ireland, he said it seemed a very curious fact that the State imposed the greatest difficulties possible upon men of high culture before permitting them to perform a single experiment. The precautions taken in this matter were wise enough in one sense, but when they looked around the country and saw what was going on in the rural parts, they found swineherds and cowherds and stud grooms performing the most serious operations on animals without any check or any inspection whatsoever. Mr. T. W. Russell, M.P., seconded the resolution. He said every one in public life was simply deluged at present with the literature of the antivivisectionists. Mr. Paget was quite right when he declared that they wholly misrepresented the position in the eyes of the public. The real issue was whether curative science was to be an observational science purely or an experimental science as well. The resolution was carried, there being only one dissentient. The Rev. Father Finlay, S.J., moved:

That the following do form the Executive Committee of the Dublin Branch of the Research Defence Society for the ensuing year, with power to appoint one or more honorary secretaries, who shall be or shall become members of the Committee: Dr. Coleman, C.M.G., Mrs. Francis Dixon, Dr. Frank Dunne, Dr. J. Magee Finny (President of the Royal Academy of Medicine), Mr. Jacob Geoghegan, Dr. Andrew Horne (President of the Royal College of Physicians), Mr. John Lentaigue (President of the Royal College of Surgeons), Dr. Lumsden, Professor Mettam, Miss Isabella Mulvany, LL.D., Professor Edmund J. McWeeney, Count Plunkett, Mr. George Prescott, Dr. Scharff, Mr. L. Edward Steele, Sir Henry R. Swanzy, and Professor W. H. Thompson.

He remarked that the type of mind which made its possessor shrink to think of the supposed fearsome cruelties to which he received his antitoxin, and knew him blissfully indifferent as to all that happened where his beef tea came from, furnished a pretty nut to crack for psychologists. Mr. Blood, K.C., seconded the resolution, which was carried without dissent.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

SCOTTISH POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

THE annual meeting of this association held in Glasgow on January 29th was well attended, and the occasion was taken to present to Dr. Matthew Martin, the treasurer, a very fine gold watch with a suitable inscription as some recognition of the valuable services he has rendered to the association since its formation. The annual report, which was adopted, stated that during the past year contra-advertising had not been so frequently required as in previous years. The secretary, Dr. W. L. Muir, 1, Seton Terrace, Glasgow, had been able to give full particulars to applicants for appointments in connexion with a number of parishes, and had given advice in many matters of difficulty, one of a somewhat novel kind being an incident in which the parish council professed to be unable to pay the medical officer's salary on account of want of money. Attention was called to the opposition of the Government to an amendment proposed by Mr. Wason and Mr. Cross in the House of Commons to add to the bill to amend the Local Government (Scotland) Act a clause to the effect that medical officers should not be dismissed from their appointment unless by or with the consent of the Local Government Board. Mr. Wason, however, had promised to reintroduce the Parochial Medical Officers (Scotland) Bill, which did not reach a second reading during last session. The financial report showed a satisfactory balance in hand.

THE LATE DR. ARGYLL ROBERTSON.

An Indian paper reports that by special request the body of the late Dr. Argyll Robertson was cremated on the banks of the river Gondli, the funeral service being read by the Rev. G. S. Stevenson. The ceremony was deeply impressive. According to ancient custom no Hindu Rajah can take part in a funeral procession, nor wear a black or white turban as a sign of mourning, nor do the ladies of a princely family go to the burning ghat, but all these ancient customs were broken by the Thakur Sahib and his family out of friendship for the distinguished surgeon. Not only so, but at the end of the funeral service the Thakur Sahib himself kindled the funeral pyre of his guru (teacher) and friend. Hindus and Mussulmans united in closing their shops as a mark of respect to the deceased, and in sending messages of condolence to Mrs. Robertson.

PROFESSOR CHIENE.

Owing to indisposition, Professor Chiene has been allowed three months' leave of absence by the University Court. His work in the chair of systematic surgery is being done by Mr. David Wallace, while his work in the Royal Infirmary wards has been undertaken by Mr. Alexis Thomson.

PROFESSOR CAIRD.

The Cap and Gown Club—the youngest of the social clubs of Edinburgh—had as its guest on Saturday evening, January 30th, Professor F. M. Caird, on his promotion to the Chair of Clinical Surgery in the University of Edinburgh. There was a large attendance.

COLINTON MAINS HOSPITAL, EDINBURGH.

The meeting of the Public Health Committee of Edinburgh Town Council on February 2nd had before it an extract from a report by Dr. Dittmar, the Medical Inspector of the Local Government Board in Scotland, who had visited the hospital on January 18th and 19th. The extract is in these terms:

So far as I could judge the administration is excellent. I would sum up my general impression of the hospital in all its parts as being by far the finest and best adapted for its purpose that I have ever seen. I do not think that Colinton Mains Hospital could be materially improved on in structure or general arrangement.

South Africa.

PERSONAL HYGIENE AND PUBLIC HEALTH.

DR. WILFRED WATKINS-PITCHFORD's presidential address to the Public Health Section of the South African Medical Congress was conceived in a thoroughly progressive spirit. He emphasized the point that municipal hygiene should not have only a negative side. It should aim not only at the prevention of disease, but at the provision of conditions in which good health can be attained and maintained by the whole community. "It should be as much a duty," he said, "to provide gardens and playgrounds as to insist on the proper ventilation of dwellings and the absence of overcrowding; the water should be not only free from dangerous contamination, but should be provided in quantities sufficient for the amplest cleanliness; food should not only be unadulterated, but should be intrinsically good; not only should vice and crime be suppressed, but a wholesome morality should be actively fostered." Perhaps it is owing to the spread of this same spirit that we now hear less of the term "preventive medicine" as a synonym for "public health administration."

In considering more particularly the problems of hygiene as applied to modern South Africa, Dr. Watkins-Pitchford enumerated as special features in the South African environment:

The mixed character of the population, the generally low standard of education, the comparatively undeveloped condition of agriculture and forestry, the high altitude of some of the more important parts of the country, the absence of large bodies of water, the heat of summer, the heaviness of the rain storms during certain seasons, and the dryness of the atmosphere and prevalence of hot winds and dust storms at other seasons.

Perhaps the most serious of these conditions is the absence of large bodies of water, combined with the character of the rainfall, which of course makes it particularly difficult to conserve. This involves an inadequate water supply in a climate where a particularly abundant one is almost an essential of health, and renders water carriage of sewage difficult or impossible. Dr. Watkins-Pitchford estimated that the minimum daily supply should be 150 gallons a head in South African communities, and for the provision of this he advocates the formation of lakes in the upland districts as the highest statesmanship. After dealing briefly with a number of matters in which public health administration in all countries is usually carried on in the same way, he made some very interesting comments on the personal habits of the people themselves, and especially the want of adaptability of the European colonists in such matters as dress and dwellings. It seems strange that in South Africa British conservatism should defeat common sense and the costumes suitable for the climate of London or Capetown, or that houses in a subtropical climate should be constructed of inferior materials and roofed with galvanized iron. Dr. Watkins-Pitchford suggests that the latter material should be heavily taxed, not only with a view to encouraging the home manufacture of roofing tiles, but also to ensure a healthier type of dwelling. He further advocates the construction of houses with basement stories, that is, with several rooms partly below the level of the ground, and with flat roofs. He points out that many houses on the shores of the Persian Gulf are so built; the basement rooms provide a cool refuge during dust-storms and hot winds, while at other times the family can enjoy an outdoor existence on the flat roof. Altogether Dr. Watkins-Pitchford is to be congratulated on an exceptionally interesting and suggestive address.

THE Local Government Board in England has issued a circular to local authorities calling attention to the Local Authorities (Admission of the Press to Meetings) Act, 1908, which gives to duly accredited representatives of newspapers and news agencies the right to attend the meeting of any local body which has the power to make a rate. The Act reserves to a majority of the authority at any meeting the power of temporarily excluding representatives if such exclusion be deemed desirable in the public interest.

Special Correspondence.

PARIS.

Académie de Médecine: Prophylaxis of Phlebitis and Embolism.—Election to Chairs in the Faculty of Medicine.—The Recent Disturbances in the Latin Quarter.—Society for the Study of Radiations.

AT a recent meeting of the Académie de Médecine Professor Chantemesse communicated the results of a research on the prevention of thrombosis and embolism by the modification of the patient's blood. It has long been known that under pathological conditions the coagulability of blood may be increased or diminished. Coagulation is due to a diastase—the fibrin ferment—whose action is helped by calcium salts and prevented by citrates, oxalates, and fluorides. Wright first proposed the application of these chemical methods in the human subject. The clinician found that other factors played an important part in intravascular coagulation, that is, the general and more particularly the local slowing down of the circulation, and the presence in the wall of the vein of microbes provoking coagulation. Professor Chantemesse laid stress on a third cause, holding that all conditions accompanied by a great destruction of blood slowly created in the organism a disposition to spontaneous defence, which to check the loss of blood increased its intravenous coagulability. Thus in typhoid fever or menorrhagia coagulability of the blood was spontaneously increased; and when contributory circumstances, such as slowing the circulation or surgical ligation, ensued, thrombus was formed or phlebitis occurred, and occasionally embolism—an accident particularly frequent in patients after operation for fibroma. Examination of the coagulability of the blood in typhoid fever showed that on the eve of hæmorrhages the coagulability fell greatly, and that it rose above normal when a phlebitis occurred. In a special form of spontaneous phlebitis which occurred in typhoid fever the patient had a violent rigor which recurred in a few hours or days, suggesting purulent infection, but there was no poly-nucleosis; a culture only showed the presence of the typhoid bacillus, and the condition was simply a parietal phlebitis, the rises of temperature being due to the migration of minute particles detached from the clot. If complete obliterating phlebitis with oedema ensued, the symptom usually ceased; a small dose of citric acid prevented the phlebitis spreading, but if the dose was too large, the clot dissolved too rapidly, and small particles carried into the general circulation gave rise to intermittent febrile attacks as in primitive parietal phlebitis. Professor Chantemesse had seen in a typhoid patient with repeated intestinal hæmorrhage the prolonged use of calcium chloride bring about phlebitis; citric acid caused the rapid recovery from the phlebitis, but the coagulability of the blood diminished so rapidly that hæmorrhages recurred. From these observations Professor Chantemesse concluded that the blood in women who were operated on for fibroma because they suffered from repeated hæmorrhage was more coagulable than normal, and that as the ligature favoured local stasis, voluminous thrombi were formed, and becoming detached caused sudden death. This theory was substantiated by the study of the coagulability of the blood in such cases, before and after operation, and before and after the administration of citric acid. In all cases of fibroma the coagulability of the blood was greater than normal before operation; after two or three days' treatment with citric acid the coagulability was again normal, and the patients recovered without any accident or embolus. The coagulability of the blood could be measured at the bedside. To prevent coagulation of normal blood *in vitro* an equal volume of solution of potassium oxalate of 1 in 800 was necessary. Several samples of blood were mixed with solutions of different strengths (300, 200, 100, 50, 25, 12.5, 6.25, 3.125, 1.5625), the mixture being kept in fine pipettes, as described by Wright. In a few hours it was easy to see if the coagulability was normal or above or below it. The chemical agents, when ingested, did not act until after two or three days, and must not be given for a longer period. The dose of calcium chloride must not exceed 4 to 6 grams daily, and of citric acid 12 to 18 or even 24 grams daily; they must

be given diluted in a large volume of water. Their use should be followed and regulated by repeated examinations of the coagulability of the patient's blood. Dr. Netter said that since the publication of Wright's results he had often used sodium citrate in phlegmasia.

The following nominations to chairs in the Faculty of Medicine have been confirmed by official decree:—M. Gilbert Ballet, Professor of History of Medicine and Surgery, has been appointed to the Clinical Chair of Mental Pathology and Diseases of the Brain, replacing Professor Joffroy, deceased; M. Pierre Delbet, Professor-Agrégé, has been appointed Professor of Clinical Surgery, replacing Professor le Dentu, resigned; M. Hartmann, Professor-Agrégé, has been appointed Professor of Operations and Instruments, replacing Professor Berger, deceased.

Following the rioting in the neighbourhood of the Faculty of Medicine, delegations of practitioners and students were received by the President of the Republic and by the Premier, M. Clemenceau. The incidents were discussed at a Cabinet Council, and as a result the examination which was held for the diploma of admissibility to the aggregation has been annulled. Moreover, the first and second year students have been permitted to continue their practical anatomy and lectures, and will be allowed to take their two registrations of January and March at the same time, but only on condition that no fresh disturbances occur before the month of March.

A new medical society has been founded, with the title "Société de biologie médicale de Paris," for the study of all radiations known in physics and their application to biological and medical science. The society will meet at 9 p.m. on the second Tuesday of each month at 12, Rue de Seine, in the rooms of the Surgical Society. The president of the society is Dr. Bécclère; vice-president, Dr. Guilleminot; general secretary, Dr. Harst; treasurer, Dr. Aubourg.

BERLIN.

Paying Patients in Municipal Hospitals.—Municipal Bacteriological Laboratories.—Decline in the Birth-rate.

THE Berlin municipal authorities are engaged in deliberations on a proposal to reserve special wards in the municipal hospitals for such patients as are able and prepared to pay full price for their accommodation and treatment. During the discussions the question has been raised whether Berlin citizens, other than the needy and indigent, are entitled to the benefits of hospital treatment on payment of the fixed sum. Curiously enough, no authoritative answer can be given. Some of the magistrates hold that the municipal hospitals were erected and destined solely for the care of the "legal poor," although at a later period the municipality made an arrangement with sick clubs and similar organizations to admit their members on payment of 2 m. 50 pf. (2s. 6d.) a day; all other Berlin citizens, they hold, should be rigidly excluded, save under circumstances in which non-admittance might endanger life, and they therefore conclude that it is illegal to take in well-to-do citizens as paying in-patients. Others hold the opposite view. Among the hospital rules and regulations there appears to be none that enjoins the exclusion of any class of citizen, and the large number of artisans, business men, teachers, and officials who form the staple of the paying in-patients would be indignant if they were accused of having entered the hospitals (to the expenses of which they, as ratepayers, contribute) illegally. At the same time, it is recognized that 2s. 6d. a day is far too low a charge for well-to-do patients, and it is suggested that it should be raised to a sum which would mean, at least, no loss to the hospital.

Three institutes for bacteriological examinations in cases of infectious disease, on lines very similar to the State institutes, have been started this year by the Berlin municipality. Their object is twofold: First, to undertake bacteriological examinations on the appearance of epidemic or infectious diseases at the request of the medical officials or of the police authorities; and, secondly, to carry out bacteriological examinations gratuitously (at the request of physicians or general practitioners) in cases in which infectious disease is suspected but cannot be confidently diagnosed without careful bacteriological

examination. The three institutes will be chiefly concerned with diphtheria, meningitis, typhoid fever, dysentery, and with the toxic effects of trichinosis, anthrax, glanders, and meat, fish, and sausage poisoning. Tuberculosis will still be left to the State institutes. To facilitate the sending of samples special vessels have been prepared, and are to be kept in stock at every chemist's.

The surplus of births over deaths in Germany—that is, the actual increase in population—which had amounted to 910,275 persons in 1906, fell to 882,625 persons in 1907, this decline being due almost in all districts to a decrease in the births. Nevertheless, in respect of the surplus of births Germany compares favourably with the other great States of Europe both as to the crude figures and as to their proportion to the population.

Correspondence.

THE ACCURACY OF THE MEDICAL REGISTER.

SIR,—A very searching inquiry is now being made as to the accuracy of all names and addresses on the *Medical Register* under the following Section (XIV) of the Medical Act, 1858:

XIV. It shall be the duty of the Registrars to keep their respective Registers correct in accordance with the provisions of this Act, and the Orders and Regulations of the General Council, and to erase the Names of all registered Persons who shall have died, and shall from Time to Time make the necessary Alterations in the Addresses or Qualifications of the Persons registered under this Act; and to enable the respective Registrars duly to fulfil the Duties imposed upon them it shall be lawful for the Registrar to write a Letter to any registered Person, addressed to him according to his address on the Register, to inquire whether he has ceased to practise, or has changed his Residence, and if no Answer shall be returned to such Letter within the Period of Six Months from the sending of the Letter it shall be lawful to erase the Name of such Person from the Register, provided always that the same may be restored by Direction of the General Council should they think fit to make an Order to that Effect.

On February 1st a circular of inquiry was posted to every registered practitioner, *excepting only* officers of the Navy, Army, and Indian Medical Services whose names appear in the Navy and Army Lists.

It is of vital importance to all registered practitioners who have not received an inquiry in course of post that they should immediately communicate with this office, as in the event of no communication being received from them it will be lawful to erase their names from the Register, according to the Act, and then very serious disabilities will be incurred.—I am, etc.,

H. V. ALLEN,
Registrar.

General Council of Medical Education and Registration
of the United Kingdom, 229, Oxford Street,
London, W., Feb. 2nd.

THE TREATMENT OF SCHOOL CHILDREN.

SIR,—In the excellent report of the Medico-Political Committee with regard to the above subject the children are divided into three classes:

1. Children whose parents can provide the requisite treatment at their own expense.
2. At the other extreme, children whose parents are in such circumstances that treatment under the existing Poor Law is carried out.

3. Children falling into neither of the foregoing groups. There is no doubt whatever that Class 3 will gradually absorb Classes 1 and 2. Class 2 will be diminished by the natural inclination to keep out of the hands of the Poor Law; and Class 1 will gradually diminish, because, if a man can get his children just as well looked after without payment as by paying, it is not in his nature to go on paying.

Apart from these considerations, look at the tendency of the age. It is one of gradual Socialistic progress, and that progress alone will soon result in there being no three classes, but only one class. This will mean that

all children between the school ages will be inspected and treated free of all charge to the parents.

Now, we as a body of general practitioners must look ahead and adapt ourselves to these changing times. The system of treatment of these children should be such a system that could be made to meet any demand upon it in the future and yet not injure the livelihood of the general practitioner. I suggest that until the time comes when the State will pay for the treatment of all children attending school we adopt the measures handed in by Dr. A. H. Williams at the Annual Representative Meeting in 1908:

The medical inspector reports a child as defective. The parent is to be notified that the defect is to be attended to before the child may return to school. Should the parents be unable to pay for treatment then the Education Department is to give a voucher for the payment of the fee on a fixed scale. The parent may then take his child to any practitioner whom he may select, and the practitioner will receive his fee from the Education Department.

There are, however, many practitioners who would want to refer special cases to specialists. If existing conditions are left as they are, these cases would go to the hospitals—the very thing we want to avoid. In the working of this important measure there should be no consideration of any charity whatever. I therefore further suggest that specialists should be appointed (include all of them if possible), who would deal with these cases; but no case should go to any specialist except by a note from a general practitioner, together with the voucher. These specialists could see these patients either at their own consulting rooms, or they could have a building erected for their own convenience, and they would be paid according to a fixed scale. Such, stated briefly, is my proposal. This measure will assuredly pass quickly to the stage of treatment I have mentioned, and I think we ought to begin our method of treatment as we intend to go on.

By adopting this plan we should do away with a good deal of hospital abuse; it would mean a more comfortable existence for many a practitioner; no abuse could come into the system; no practitioner would lose his own patients, and, moreover, it would work very simply.—I am, etc.,

Liverpool, Jan. 25th.

A. STANLEY PARKINSON.

THE MEDICAL TREATMENT OF LONDON SCHOOL CHILDREN.

SIR.—Dr. Morgan Finucane's criticisms in the *JOURNAL* of January 30th of my suggestions which were published under the above heading in the *JOURNAL* of January 9th call for some reply.

If Dr. Finucane's deductions had not been drawn from false premises, they would carry considerable weight, but he attributes to me suggestions I have never made, and then proceeds with strong adjective and sweeping condemnation to storm a position I have never occupied. I agree with nearly all Dr. Finucane says with regard to the existing Poor Law, but I have not advocated the treatment of the defective school children under the auspices of the Poor Law as it exists at the present moment. I have merely called attention to the fact that legislation is pending which will reform the Poor Law on the lines laid down by the Royal Commission, and it is this reorganized and reformed Poor Law, a Poor Law purged of all the evils to which Lord Lytton and Mrs. Barnett, and many others, have called attention, and which Dr. Finucane quotes with so much zest. I assure Dr. Finucane that I have no wish, and have never suggested, that the defective scholars under discussion should be sent to join the "rows and rows of fat, clean, well-shod, bored, and distless children" sitting in a barrack school.

Dr. Finucane cites the worst side of the Poor Law—an aspect of it already falling out of date; but surely, as a late guardian, Dr. Finucane should know that the modern tendency is against barrack schools and towards the scattered homes plan. I even instanced in my letter the scattered homes for ophthalmia under the Metropolitan Asylums Board. Dr. Finucane, however, ignores this, and, although he urges us to think Imperially, his own mind on this subject seems filled by thoughts of the "rows of sleek children" already mentioned. But all this is sentiment—and much of it false sentiment, in my opinion—for if a man is dependent upon public charity his position in the State is morally the same, no matter by

what name he be called or by what charitable organization he exists.

To come to the one practical point in Dr. Finucane's letter: He states that if the proposed work for the children were undertaken under the auspices of the Poor Law, "the necessity of greatly increasing the staff and equipment of the various infirmaries would entail such enormous expenditure as to make the scheme impracticable," and more costly than that of school clinics. Surely a certain staff and equipment will be required in any case, whatever system be adopted, and I fail to see that it would be more costly to add to and improve an existing service than to start a new one. Dr. Finucane does not tell us why he thinks the work would cost more under the Local Government Board than under the Board of Education.

All I urge is that the education authority should hold their hand until the Poor Law Commission's Report is published, and then strengthen the plea of those who see the necessity for a reform of the existing Poor Law—Dr. Finucane and myself among them—by deciding to confine themselves to education, and leaving the public health authority—the Local Government Board under the Poor Law—to treat the children with regard to matters medical.—I am, etc.,

London, S.W., Feb. 1st.

HARVEY HILLIARD.

ATOXYL AND SOAMIN AND THE TREATMENT OF SLEEPING SICKNESS AND SYPHILIS.

SIR.—In the *JOURNAL* of January 30th, 1909, p. 285, attention is drawn to the last quarterly report of the Progress of Segregation Camps and Medical Treatment of Sleeping Sickness in Uganda, by Captain A. C. H. Gray, R.A.M.C.

One of the most important of the somewhat diverse reports collected from the medical officers in charge of the different segregation camps is that by Dr. Van Someren, Medical Superintendent of the Chagwe Camp. As you state:

Dr. Van Someren reports adversely on the combined treatment by atoxyl and mercury, but gives a more favourable account of a new drug, "soamin" (sodium-amino-phenyl-arsinate; Burroughs, Wellcome, and Co.).

Now, this is very strange, because "soamin" and "atoxyl" are the same thing, both being sodium-amino-phenyl-arsinate. Soamin is the trade name for Messrs. Burroughs and Wellcome's product, and atoxyl that for the product first put on the market by the German firm (Lanolinfabrik, Martinikenfelde, Berlin). Any superior results obtained by Dr. Van Someren, therefore, were not due to his using a different drug, but to his using, in all probability, a pure commercial preparation of that drug. I have had personal experience in my own work of this preparation of Messrs. Burroughs and Wellcome, and can testify to the purity of the preparation and its efficiency in animals affected by trypanosomes.

This error has involved a large amount of labour and of unnecessary printing on the part of the Sleeping Sickness Bureau, and it seems to me well that public attention should be drawn to it, so that this spirited competition between atoxyl and soamin may come to an end.

The same mistake has been made by observers using soamin in syphilis and other diseases, but it is curious that it should have been allowed to pass by all the experts both at the camps in Uganda and on the Sleeping Sickness Bureau in London, and a cablegram to Uganda that soamin is a pure form of atoxyl is distinctly indicated.

The substance in question is the sodium salt of para-amino-phenyl-arsenic acid, and was first discovered by a French chemist, Béchamp, over fifty years ago, and a few years ago was introduced as a drug by a German firm under the trade name of "atoxyl." It had a brief reputation as a drug in certain skin affections which was rapidly destroyed by the strong toxic effects of certain impurities, which led to blindness in some cases of its continued use.

The use of the drug was revived by the discovery of Thomas and Breil that it had a marked destructive action upon trypanosomes, and they suggested that it should be used as a drug in sleeping sickness.

It had been so used in many cases long before Koch used it in Africa, and by several observers, the cases being those

of infected Europeans. Koch's share in the work consisted in applying it on a large scale in an expedition of which he then fortunately happened to be in command in Africa; but from extensive experiments on animals and a certain number of cases in man, the action of atoxyl was well characterized and known before any of Koch's work appeared.

It was known to the workers in Liverpool that in all cases life was enormously prolonged by the administration of atoxyl, and that in all cases the parasites could be driven out of the blood by its use, and very often that many successive attacks could be cut short. We also knew perfectly well that in a large percentage of cases recurrences took place, and that ultimately a fatal issue could not be avoided. Why otherwise should we have sought for better methods, or introduced the atoxyl-mercury treatment?

Nor is it any news to us that the combined treatment with atoxyl and mercury often fails. Our own published results show that we have failed in curing large animals with the combined treatment.¹ But our experiments also indicate that it is a better treatment than that by atoxyl alone, and these results have been confirmed by several independent observers, not only in experimental work, but in treatment of sleeping sickness in man. Further, they are confirmed, in my opinion, by the results of this same Sleeping Sickness Bureau's report, which virtually recommends the abandonment of the combined treatment. Any one who reads the report can see that in all the different camps the percentage of improvements is greater and the percentage of deaths much less in the case of the combined treatment than with the arsenical preparation alone.

It may be pointed out that we are not here dealing with counsels of perfection (we rarely are in medicine, especially in the department of treatment), but with what is the best treatment for a disease which is invariably fatal when untreated. Quinine is a specific for malaria, yet there are cases which do not get better and ultimately die in spite of it; mercury is a specific for syphilis, yet, unfortunately, recurrences take place even after mercury. Similarly, amido-phenyl-arsenic acid is a strong specific for trypanosomiasis, and the best we know at the present time, especially in combination with a mercurial treatment. An ever-growing volume of evidence shows that a similar treatment is most efficacious in syphilis, another protozoan disease.

Surely it is too soon to pronounce dogmatic opinions derived from a few months' work in these segregation camps. If the workers have been disappointed as a result of the high anticipations raised by Koch's statements, it only shows that they are not among those who discount such statements at their true value, and are not carried away by lurid reports in the lay press.

In conclusion, I would like to be allowed to do justice to the work of another French chemist, Fourné, who pointed out that atoxyl was identical with Béchamp's substance, as credit is often ascribed to Ehrlich for this discovery. Ehrlich and Berthelm's work consisted in showing the true constitution of the body, in that the arsenic atom is directly on the benzene ring. A similar result was obtained and published practically simultaneously by Moore, Nierenstein, and Todd.—I am, etc.,

Liverpool, Jan. 30th.

BENJAMIN MOORE.

TREATMENT OF RHEUMATIC AND RHEUMATOID ARTHRITIS BY RADIANT HEAT AND CATAPHORESIS.

SIR,—Referring to the interesting article on the treatment of rheumatic and rheumatoid arthritis by radiant heat and cataphoresis, I agree that much benefit is derived by the heat from the radiant lamp, but am not able completely to verify the conclusions. Dr. Bailey attributes the extra benefit obtained from the large American lamp to the ultra-violet rays. Is it not a fact that the glass of the lamp prevents the passage of the ultra-violet rays? Experimentally I have found that a thin smearing of vaseline is sufficient to resist them, and the skin itself is a barrier to their passage, except under special conditions. Any ultra-violet rays which may pass will be used up in the superficial layers of the skin, and therefore their

therapeutical value is very small indeed. There is no doubt that this lamp has greater beneficial influence than the incandescent lamps as used in the ordinary way.

With regard to the adoption of local ionization in the treatment of rheumatic conditions, I have had many successes, but the condition of several after a prolonged course of treatment has been most disheartening.

At the present time it is difficult to give a definite prognosis in any special case; though the symptoms in many instances are similar, the reaction obtained is often disappointing. It would be interesting to have the opinion and results of other workers in this branch on similar cases to those Dr. Bailey has recorded.—I am, etc.,

West Hartlepool, Jan. 14th.

H. E. GAMLEN.

SODIUM BICARBONATE IN THE TREATMENT OF ACUTE RHEUMATISM.

SIR,—In his remarks on the use of alkalis in practical medicine, published in the JOURNAL of January 30th, my friend Dr. Eustace Smith writes:

When the salicylate is prescribed in large doses for the treatment of chorea, the addition of double the quantity of the bicarbonate of soda has been recommended by Dr. D. B. Lees for the purpose of counteracting any depressing effect of the salt, especially the dyspnoea which sometimes follows excessive doses of the drug. The chief objection to this practice is, of course, the profound anaemia which such medication is liable to induce.

I hope that Dr. Eustace Smith will forgive me for saying that his "of course" is simply another illustration of the fact that symptoms caused by the disease which we call "acute rheumatism" are too frequently ascribed to the remedies employed in its treatment.

In his second Harveian Lecture Dr. Cheadle writes:

The effect of rheumatism in producing anaemia in adults is sufficiently well known, but in children this is still more remarkable; the extreme pallor and the haemic murmurs are often most notable. . . . Where the rheumatic state is actively developed, anaemia proceeds apace in children. The presence of the rheumatic poison appears to be inimical to the red corpuscles or their haemoglobin; it either promotes their disintegration or interferes with their production.

And he quotes Trousseau's statement that there is, perhaps, no acute disease which produces anaemia so rapidly as rheumatism. With regard to chorea, Dr. Cheadle says, in the same lecture:

I am convinced that rheumatism is the by far most common and potent factor.

In the report on the Pathology of Acute Rheumatism and Allied Conditions, by Dr. Ainley Walker and Mr. Ryffel, published in the JOURNAL for 1903 (ii, 659), this sentence occurs:

The micrococci have a haemolytic action upon red blood corpuscles greater and more rapid than that of any other streptococcus which we have yet examined—a fact of interest in relation to the very rapid and considerable anaemia of rheumatic fever.

In severe untreated cases of rheumatic fever with pericarditis the pallor is often intense, but I have never seen any marked increase in the anaemia in cases treated by large doses of bicarbonate and salicylate; in fact, the more effectively the rheumatism is treated, the less is the degree of anaemia, as of other rheumatic symptoms.—I am, etc.,

London, W., Feb. 1st.

DAVID B. LEES.

THE IMPORTANCE OF RESEARCH IN MENTAL DISEASE.

SIR,—In the issue of the BRITISH MEDICAL JOURNAL of January 23rd I have read with interest the discussion in the Westminster Division on the subject of Dr. Maudsley's generous offer to the London County Council of the endowment of a hospital for the treatment of acute mental illness. Now, Sir, I fear greatly that the realized importance of the treatment of mental disease will obscure the infinitely greater importance to the nation of research regarding mental diseases. This would be a national calamity. The most up-to-date treatment of acute mental illness can easily be arranged for in suitable hospitals attached to our asylums if these are properly staffed and equipped and arranged with small wards and extensive verandahs. No town hospital can ever compete with a country one in treatment in a case where the "verandah

¹ Moore, Nierenstein, and Todd: *Annals of Tropical Medicine*, vol. i, 1908, p. 265.

hospital" is the ideal, and graduated garden work the best means of establishing convalescence. Research work, on the other hand, must be the basis of all advance in specific treatment, and research work can best be carried on in town, as isolation is a terrible barrier to the research worker. It seems to me that a strong effort should be made so to place the new mental hospital that it will be in very close touch with a fully equipped teaching school. Even if elaborately fitted up research laboratories are established at the new mental hospital, no one director can possibly be a leader and adviser in the many different directions that research may take.

The ideal is incorporation with a university whose laboratories would be available for research students in every line; and though in this way a suitable site might cost much more, a great saving in cost would result from the consequent efficiency and saving in laboratory equipment.

No small hospital can hope to retain the services of leading men in bacteriology, histology, physiology, psychological physics, organic chemistry, etc., while close association with a university and its laboratories would secure these advantages and tend to gather a group of young and keen research workers around the new school.

I earnestly hope that this aspect of the case will be given full consideration. Could a new pavilion for acute mental diseases not be built for one of the large hospitals which already have medical schools attached to them and properly equipped laboratories? I would again insist that treatment of an efficient kind can comparatively easily be arranged for on up-to-date lines; but if this chance of securing an efficient mental disease research school is lost it may be a generation before another chance comes to this country.—I am, etc.,

W. A. PARKER.

Gartloch Hospital for Mental Diseases, Gartloch, N.B.,
Jan. 26th.

APPLICATION OF MENDELIAN RULES TO HUMAN INHERITANCE.

SIR,—I am sorry if I still misunderstand Dr. Drinkwater; but when he takes upon himself the responsibility of developing an entirely new theory of Mendelism he must not be surprised if his readers cannot at once appreciate a position the consequences of which are so extraordinarily sweeping. In Dr. Drinkwater's paper which I criticized he wrote of Nettleship's pedigree: "The disease-bearing branches contain 255 members, of whom 53 per cent. were night blind; so that here again is another example of Mendelism in the human subject." There was no hint that a new method of counting had been adopted, which had never occurred to any Mendelian before; we were merely informed that "here was another example of Mendelism in the human subject." Counted in the ordinary and accepted Mendelian fashion, there were 237 normals, 133 abnormals, in addition to 10 normals and 1 abnormal of doubtful determination as to sex, and not improbably doubtful as to night-blindness also; 133 is not 50 per cent. of 370, but differs so widely from it that the odds against night-blindness following the Mendelian rule are gigantic. In order to get the necessary 50 per cent., about 100 normals have to be removed, and thus Dr. Drinkwater achieves by removing all the offspring of night-blind individuals who have had only normal offspring. Presumably he also removes—for so he informed me he had done—the offspring of first or second marriages of abnormals, when there were no abnormal offspring of such marriages.

I ask first: How can such a theory possibly help the medical man? Our discussion is on the application of Mendelian rules to man. On Dr. Drinkwater's theory the medical man cannot predict, until all the offspring are born to an affected individual, whether he will, on the average, have 50 or 0 per cent. of affected offspring; and, further, it depends on the relative prepotency of the parents, for it may be, to quote Dr. Drinkwater, that "in the human subject one normal may be recessive, whilst another normal is dominant to the abnormal. If this does happen, it may be that these 'last abnormals' were recessive to the normals whom they married" (January 2nd, 1909). Let us suppose that the "last abnormal" is (BN); then mated with (NN), we shall have 50 per cent. of (BN) or of recessive

night-blind persons, who would somewhere have appeared again in the descent—owing to intermarriage—as night blind, and broken the continuity of the long normal lines. It would be of interest if Dr. Drinkwater would give the gametic formula which he supposes would cover the cases of his "last abnormals," whose lines give only normals.

But there are still more serious criticisms to be made of Dr. Drinkwater's new Mendelism. What becomes of the 50 per cent. reached by the old Mendelism, if we are to follow his method of counting? The observations which gave 50 per cent. before must now be discarded, or are we to say that the Drinkwater rule is only to be applied when we fail to reach the correct percentage. Further, every Mendelian anticipates some cases, in which a (DR) × (RR) will give no abnormal offspring, just as he anticipates some cases which give all abnormal offspring. If one offspring only be born, it will be normal in half the cases and abnormal in the other half. If two offspring only are born there ought to be 25 per cent. of cases in which both are abnormal and 25 per cent. of cases in which both are normal; if three offspring are born there will be equal (12.5) percentages of cases with all the offspring normal and with all abnormal.

Dr. Drinkwater completely destroys the whole point of the Mendelian theory by cutting out every case in which (DR) × (RR) gave one, two, three, etc., runs of (RR). It is absolutely the same as if a man tossing a penny in arbitrary series of 1 up to 12 removed those series in which there was a run of heads when he set about demonstrating that tossing gave 50 per cent. of heads and 50 per cent. of tails. No logical mind would accept such a demonstration of the equality of heads and tails. Actually Nettleship's data give 14 cases in which one offspring only was born to an abnormal, and in 6 of these that offspring was abnormal. Dr. Drinkwater cuts out the 8 remaining cases in which one normal offspring was born to an abnormal. There are 5 cases in which two offspring, both abnormal, were born to an abnormal, and 10 in which two offspring, both normal, were born to an abnormal; the latter go out, according to Dr. Drinkwater's rule. There are 4 cases in which three offspring, all abnormal, were born to an abnormal, and 6 cases in which three normals only were born to an abnormal, the latter again disappearing from Dr. Drinkwater's results. He, however, included many cases in which one, two or three or more normal offspring were born to an abnormal before the first abnormal offspring came. Must the abnormal, who died before he got beyond the second or third normal child, be supposed to have a different gametic constitution from those who survived and had at last an abnormal offspring?

There is, in fact—not to mince matters—hopeless confusion in such a method of treating Mendelism. The author of it can hardly have realized that to obtain his Mendelian ratio he has introduced the absurdity that no true (DR) can die until he has produced at least one abnormal child; for, if he does, his gametic formula is a mystery, and his offspring are to be excluded from a count of the descendants of the abnormal. Certainly Mendel deserves better treatment from those who profess to be his followers!—I am, etc.,

University College, London, Feb. 2nd.

KARL PEARSON.

THE PREVENTION OF RECURRENCE AFTER OPERATIONS FOR CANCER.

SIR,—The paper of Mr. Charles Ryall, on the Technique of Cancer Operations,¹ shows clearly the danger the surgeon runs in operating of sowing the seeds of an early recurrence, and the mass of facts he has quoted point, apparently, most clearly to some autoinoculation of the patient of so active a type that he compares it to a bacterial infection in its character. I have no wish to dispute this, but I would venture to point out that, like so many theories in connexion with cancer growth, it does not fully explain all the facts of the case; most likely it is not the whole story, but probably there is another factor—possibly that of traumatism and after-irritation of the wound—that has also something to do with it, and which would just as easily explain the facts as presented. For instance, in the effect of curettage of a malignant gland he mentions, the recurrence might also be due to the bruising and tearing

¹ BRITISH MEDICAL JOURNAL, October 3rd, 1908.

of the tissues, as well as the dissemination of cancer cells which conceivably take place. The facts that appear to me to be somewhat against this being the whole explanation are that these facts are now very well known to surgeons operating for cancer, and a surgeon will not, if he can help it, cut into the cancer tumour whilst operating, giving it a good wide margin; yet even then cases are seen of stitch recurrence, and it is difficult to imagine that wandering cancer cells are so numerous in the outlying tissues as readily to infect the wound like that; if they are present in such numbers, then it is very difficult to understand why operations are as successful as they are.

There may be an additional factor in the case, and may that not be the traumatism and irritation caused by the stitches? In many cases the effect of traumatism may be quite clearly traced in the origin of cancer, particularly about the breast. The evidence is indisputable. In the analysis of a number of cases published by Cecil Leaf it is mentioned that traumatism accounted for at least 35 per cent., and that the percentage was probably higher than that. This does not prove that traumatism *per se* is sufficient to cause cancer, but in a patient disposed to develop it it may be the exciting cause; and in a patient already suffering from cancer surely trauma might be expected to develop it. It would be interesting to learn whether cancer has been known to develop in patients suffering from it who have sustained an injury, particularly a wound, in some remote part of the body which has subsequently developed cancer. The extreme rarity of antioinfection in cancer of the lip and in the mouth—I have never seen a lower lip infect the upper—is remarkable, and, even when it does occur, might be accounted for in another way. I have seen cases in which cancer has developed around a suture left in for some time after an operation. Two well-marked cases I remember where a suture was overlooked, which showed recurrence nowhere else; and another case of excision of the tongue by the method of division of the lower jaw, where the silver suture left to unite the symphysis was the centre of the most active recurrence. On the theory of traumatism and subsequent irritation of the wound by a foreign body this is just what would be expected.

Why cancer should develop about the stitch holes, and not on the cut edges and other parts of the wound, when all have been equally liable to infection, is only understandable on the explanation that a clean-cut wound does not cause so much irritation and injury as a stitch which is dragged through the tissues, and left to irritate the susceptible parts for many days. It may be that in certain persons, especially when already the subject of cancer, certain cells otherwise normal may, if bruised or irritated, be capable of taking on malignant action.

Mr. Charles Ryall does not even mention the most valuable means we have at present for preventing recurrence after an operation, namely, the judicious use of the x rays. Possibly he has not had experience of this, for if he had I think he must have mentioned it. I have found that the x rays, especially if used at the time of an operation where practical, are of the very greatest value for preventing recurrence in the site of the wound, and even when it does occur, especially in stitch scars, it clears up in a beautiful and convincing manner by this treatment. I advocate, however, the use of the rays from the very first in all cases; and then all these things that Mr. Charles Ryall describes do not occur. When it can be done it is an immense advantage to give the fullest possible dose of x rays at the time of an operation to the open wound, because it is a chance for the most effective use of the rays that never occurs again, as x rays are more effective on a surface than at a depth, and possibly may act by destroying loose cancer cells scattered about the wound if such exist. I have had a few cases dating back as far as five years in which this was done in which there has never been any signs of recurrence, the cases are possibly too few and the time too short to convince the sceptical, but should be very suggestive to those surgeons who are anxious to do all that is possible to save the great risk of recurrence that is always present in these cases. I will venture to quote one solitary case, of no great value perhaps to those who require evidence by hundreds.

About two years ago a woman, aged 32, had an operation for cancer on her breast. It was only a partial operation in an early cancer. It was doubtless an inefficient operation, and

should not have been done; it recurred at once, and was operated on most thoroughly by another surgeon six weeks afterwards, who removed the entire breast and cleared out all the glands; still, it recurred almost immediately, and he operated again, taking away the greater part of the pectoral muscles, and it was passed on to me at once for x -ray treatment. This was about two years ago, and up to the present there has never been the slightest sign of recurrence.

The unbelieving surgeon will regard this only as an example of thorough and successful surgery, and will hold that the x rays had nothing to do with it; but I have had very few failures, and quite enough similar successful cases to convince any unprejudiced observer, and think it is a pity that the great value of the x rays for preventing recurrence is being so slowly recognized. I think the reason is that the successful use of the rays is not so easily attained as is imagined; it is not so simple and easy as the administration of doses of salts or quinine by any one who happens to have an x -ray outfit at his disposal; and it is surprising what inefficient individuals this work is sometimes left to. Sometimes the hospital hall porter, or the handy man about the place, or a nurse; but, after all, I think the most inefficient x -ray work is done by the surgeon himself who happens to possess an outfit. No man can serve two masters, and a first class surgeon is very seldom a practical scientist, and, unfortunately, often despises what he does not understand. I hope I shall not be misunderstood as implying that surgeons do not conscientiously do everything possible for their patients, for I know many that do advise the use of x rays after operations; but, on the other hand, there are many who never even think of suggesting it. I was speaking about it to one who has operated on a good many cases of breast cancer, and he assured me that he had no recurrence in fully 80 per cent. of his operations; to such a one as that the x rays could offer no advantage.—I am, etc.,

Melbourne, Nov. 23rd, 1908.

T. G. BECKETT.

WORK IN COMPRESSED AIR.

SIR,—In his address on the Physiology and Pathology of Work in Compressed Air, in the BRITISH MEDICAL JOURNAL of January 30th, Sir Thomas Oliver describes a series of experiments carried out by Dr. Parkin and himself thus:

We subjected frogs to extremely high pressure, and after a time suddenly decompressed some of them. The web of a frog's foot was drawn over the inside of the glass window of the compressed-air chamber, and by means of the microscope and electric light illumination we could watch the circulation of the blood in the frog's capillaries. During compression the circulation proceeded quite naturally, but after sudden decompression, while the circulation seemed to go on apparently unchanged, by degrees the rate of the blood flow diminished, and gradually ceased, preceded by a slight to-and-fro movement. All at once a bubble or two of air would appear in the capillaries, and these running together formed a large embolus inside the vessel, etc.

Sir Thomas Oliver does not give a word of acknowledgment that he owes this experiment to me. It is an experimental demonstration of which any man may be justly proud, especially when it is completed by recompression bringing about re-solution of the bubbles, and, as I observed once, recovery of the circulation. It is the most convincing demonstration of the fact that bubbles are the cause of caisson disease, a fact which Sir Thomas Oliver was very unwilling to acknowledge in a conversation with me some years ago at the London Hospital Medical College. This is the second time Sir Thomas Oliver has described this experiment as if it was his own. The first time was when he read a paper at the Society of Arts, a paper for which, I believe, he was awarded a gold medal. The second time he goes a step further and describes experiments which demonstrate that relatively high percentages of CO₂ have no effect in increasing the risks of compressed air, without any acknowledgement of the work of Dr. Greenwood and myself, work which proved the statements made by him on this very matter at the Society of Arts to be erroneous.

In the matter of the frog-web experiment, Dr. Parkin was introduced to me by a distinguished colleague, and I was asked to give him help and advice as to the performance of experiments on compressed air. Dr. Parkin, under my direction, had a chamber made like mine, and repeated my experiment, and acknowledged his indebtedness to me in the thesis he wrote on this subject.

I have yet to learn of any single new experimental fact which has been contributed to the pathology of caisson

disease by Sir Thomas Oliver. How little of the experimental work he has done is shown by the fact that he describes the experiments as done on pithed frogs. He mentions with approval the method of stage decompression, which recently has been introduced as the routine practice in the Admiralty, a method founded on certain theoretical assumptions of Dr. John Haldane, and experiments on goats carried out to prove these assumptions by Dr. Haldane, Dr. Boycott, and Mr. Damant. I take this opportunity of saying that Mr. Greenwood and I have repeated on pigs some of their fundamental experiments on goats, and with contrary results. Stage decompression has proved in our experiments less safe than uniform. We do not admit the justice of the theoretical postulates on which it is based. There are many factors still unknown in the causation of decompression bubbles, and one of these we have some evidence to show is the presence of food in the alimentary canal. The escape of the men in the burst caisson mentioned by Sir Thomas Oliver may have been due to this in part, and in greater part to absence of fatigue, as the caisson burst about the breakfast hour. The increased number of cases which occur with long and repeated shifts we believe is due not to fuller saturation of the body with nitrogen, as Drs. Haldane and Boycott suppose, but to fatigue of the heart brought about by prolonged work. The circulation is then too feeble to allow the escape of nitrogen during decompression. The men sit quiet and weary in the lock. They ought during decompression to breathe oxygen and work hard.—I am, etc.,

Loughton, Essex, Jan. 30th.

LEONARD HILL.

THE HOME TREATMENT OF SCARLET FEVER.

SIR,—The line of prophylaxis indicated by the pathology of scarlet fever is for clinical purposes the same as in a series of fatal diseases such as diphtheria, measles, and whooping-cough, and of less serious affections such as influenza, mumps, and others. It is admitted that in all of them the upper respiratory tract is the head quarters of infection; yet are we ever taught that the entire stress of our efforts at disinfection should be concentrated upon that region? I have consulted our best and most recent textbooks, but in most cases I have found no reference under the headings of prophylaxis and treatment to this all-important matter. Doubtless the indication is so obvious that it might be held to go without saying. But the practical result of that silence is that it commonly goes without doing, as is too well shown by the relapses of influenza and whooping-cough, and by the late contact cases of diphtheria and of scarlet fever.

External ablutions are indispensable, and fortunately they are practised. But Dr. Robert Milne is entitled to credit for the attention which he pays to a more dangerous surface; only, if I may say so, his method is too limited locally in its application. Whether we are dealing with scarlet fever, or with any of the other diseases I have mentioned, we should bear in mind that cleanliness is the simplest and the most efficient of our antiseptics, and that our patient's disease is unwashed until the entire upper mucous tract is systematically and frequently cleansed. Opinions may differ as to the merits of the simple and painless method which I have long advocated and practised in all these conditions, namely, frequent instillations of jassin oil through the nostrils, to spread above and behind to regions inaccessible to sprays, douches, and gargles, to be continued from the onset through the entire duration of the period of observation. If this is not good enough let us find some better method. But let us not allege the fact that we cannot destroy the microbes *in situ* as an excuse for continuing to neglect adequate efforts to sweep them clean away.—I am, etc.,

London, W., Jan. 31st.

WILLIAM EWART.

THE REMEDIAL USE OF ALCOHOL.

SIR,—The address delivered before the Border Counties Branch by Dr. Macdonald bristles with controversial points. I will take only one—the treatment of lobar pneumonia. As Dr. Macdonald truly observes, an ounce of practice is worth a pound of theory.

In my experience of fifteen years' practice in a purely working class district on a clay soil, I have seen from forty

to fifty cases of lobar pneumonia, many of the patients being alcoholic subjects, and have yet to write my first death certificate for that disease.

I rely on digitalis, strychnine, careful feeding, and *absolute rest*, but always refuse at that critical period, when the overburdened and dilated right heart has almost reached breaking point, to help my patient over the precipice by prescribing the so-called stimulant that must often by its paralysing effect on the cardiac nerves, take away his last chance of recovery.

In a recent severe case of double pneumonia in a lad of 18 the crisis was delayed, and my courage almost failed, especially as the relatives begged piteously to be allowed to give him brandy "before he died." I assured them that, desperate as the case appeared, if they kept to the non-alcoholic treatment the patient would recover. And he did. "Lobar pneumonia, cardiac failure"—so runs the usual certificate, and the cause of the cardiac failure in 99 cases out of 100 is—alcohol.

I send this note just to encourage young abstaining practitioners who are apt to be led astray by dogmatic statements as to the virtues of the old-fashioned alcoholic treatment of lobar pneumonia.—I am, etc.,

Stoke-on-Trent, Feb. 1st.

A. A. HILL.

ALPINE OR HOME CLIMATES FOR EARLY TUBERCULOSIS.

SIR,—I have read with much interest the address delivered at the Medical Graduates' College by Dr. William Ewart on the above subject, and from a long experience of Alpine climate I am enabled to confirm all that Dr. Ewart expresses regarding the value of mountain air as a remedial agent in the treatment of early phthisical cases. The importance of the question is immense, but I can only briefly refer to the extraordinary change of opinion which has taken place in some quarters as to the virtue of climate in the open-air treatment.

For reasons which I will mention in a moment the Swiss Alps have not proved as attractive to frail people of late years as formerly. The family with a son or daughter who looked rather delicate but otherwise attracted no particular attention is not now so often seen. The young person who cannot walk uphill without a strained breathlessness, or other inoffensive individuals with a slight cough, are scarcely met with. It must be remembered that these "invalids" bring with them many relatives and friends in their train. We might therefore suppose that they would be welcomed by the Swiss hotel proprietor, and that he would do as much for the comfort and convenience of delicate clients as in days past. Instead, you see announced in hotel advertisements and prospectuses the intimation that "consumptive cases are not received," "persons with tuberculosis not admitted," and at the same time stress is laid on the "air cure" being especially potent in neurasthenia, debility, convalescence, and overwork!

I think it is almost a popular creed that mountain climate is *par excellence* more suited to lung troubles than to most other conditions, but one of the reasons for all this confusion is the "scare of infection." The belief that tuberculosis is "caught" by coming in contact with a person suffering from the complaint has taken root in places. Some persons have been known to write to an hotel to be assured that no consumptives were admitted before they settled on taking rooms. One thing and another has led the hotel proprietor to intimate publicly that his house is barred to such cases, and the "cases" have taken him at his word and remain at home, or perhaps visit the South Coast resorts. Others have the well-equipped English sanatoriums open to them. It may be asked why, if in search of health, they do not enter the sanatoriums of Switzerland and obtain with disciplinary treatment the grand advantage of Alpine air and sunshine. A few do so, but English people will never be induced to patronize largely the foreign sanatorium. This remark, of course, does not apply to the Alexandra Sanatorium at Davos, as that establishment will be English in the true sense.

It has become the fashion within the last few years for a winter holiday to be taken in Switzerland by thousands of English, and although they arrive late—say about

December 15th to 20th—such a large influx compensates for the thin autumn season and the absence of the invalid class who arrive earlier and make a longer stay. Every hamlet and many summer hotels that can offer good skating and tobogganing in winter with convenient slopes in the vicinity for the Norwegian ski, advertises and opens its doors for the two months of mid-winter devoted to "snow sports." There is an atmosphere of heroism and hurry about these places which ill suits the easy-going valetudinarian. A reckless excitement for speed leads to all sorts of accidents, and in some cases loss of life; but the magnificent surroundings of dry, crisp snow, keen, frosty air, and a brilliant sun are found nowhere like it in the world, and can be enjoyed in quite a rational, health-giving manner, if one is disposed that way. That there has been some neglect of Alpine climate, from a medical point of view, within the last few years can be explained by the establishment in England of first-class sanatoriums for open-air treatment, with excellent management and appropriate dieting, which have proved a counter attraction; but there is a factor among the manifold advantages of a calm atmosphere, with dry, cold air in the winter climate at the snow levels which we cannot obtain elsewhere in any such intensity or profusion—namely, *sunlight*. We shall hear more of the sun bath as time goes on.—I am, etc.,

Montreux, Switzerland, Jan. 23rd.

TUCKER WISE.

THE CAUSATION OF INGROWING TOENAIL AND THE LOCATION OF GOUT.

SIR,—Will you kindly allow me a short space to thank Dr. Joy for his letter in support of my theory with regard to ingrowing toenail and the location of gout?

As he points out in the last paragraph, long-continued pressure can cause gouty manifestations, in his case by direct pressure, in mine by indirect pressure. In the second paragraph he points out that ingrowing toenail is quite common on the outer side of the big toe, where, of course, the hoof, however tight, cannot press.

With regard to Fig. 2, I might say that the owner of the original would smilingly protest against such an accusation as wearing pointed boots, he being a member of the well-known family of tramps.

One can easily understand Dr. Joy's delight in the dear old textbooks, especially if they are well bound, but perhaps I may be allowed to point out that although my dear old textbooks suggest that chilblains may be treated by painting with tincture of iodine, I prefer to treat them with calcium salts; also it is of interest to reflect that whilst my dear old surgery textbook suggests that callous ulcers of the leg may be treated by bandaging, red lotion or even amputation, I prefer to rely on the method I introduced, namely, by calcium iodide.

My innate modesty revolts at the idea of attempting to add anything to that unfathomable fund of knowledge that exists in Harley Street, with which sentiment I feel certain I have Dr. Joy's sympathy.—I am, etc.,

Swansea, Jan. 31st.

G. ARBOUR STEPHENS.

CONFERENCE ON THE MEDICAL PROFESSION AND FRIENDLY SOCIETIES.

SIR,—Is it not rather sad—to use no stronger term—to find the Charity Organization Society intervening in the affairs of a body of educated men, and is it not somewhat suggestive of a trade dispute?

If we *must* imitate the methods employed in trade, let us at least take the position of masters, not that of servants. In the commercial world, when it is desired to raise the price of some commodity, those who control the market do not confer with their customers, they agree amongst themselves, and the price is raised.

Has not there been quite enough parleying? By all means let there be a conference, but let it be amongst ourselves, and let it be held with the firm determination to have no half measures, but to finally settle the question.

It is possible for the medical profession to struggle on without the help of the friendly societies, but I fancy that the latter would not have quite so huge a capital if we severed our connexion with them. So long as we allow the friendly societies to fix the terms of remuneration,

etc.—that is, to occupy the position of masters—so long must we be content to occupy the position of servants.

Unfortunately it seems to be indisputable that amongst our number there are many who put a very low value upon their services, and whose code of ethics is still lower. It seems probable, as "M.D." says in his letter in the JOURNAL of January 16th, that "as long as the 'powers that be' are unable or unwilling to inflict adequate penalties which shall touch the pockets of delinquents, so long will the friendly societies prey on us." Cannot, then, some effort be made to induce the licensing bodies or the General Medical Council to make it unprofessional conduct to accept contract work under the present system?

Assuming that canvassing and advertising are deemed unprofessional because they savour of trade methods, is not it inconsistent that acts which no tradespeople would be guilty of are allowed to pass unchallenged? Would any sane shopkeeper entertain for a moment the suggestion that he should habitually sell goods at a price far below their value? And yet this is what we do when we undertake to supply medical and surgical attendance to farmers, builders, and tradespeople for 4s. a year. If it is unprofessional to act like a tradesman, is not it also unprofessional to act like an idiot? I am sorry that I can think of no less offensive word to describe our conduct.

Instead of being a matter affecting only a certain section, is not it one which concerns the honour of the whole profession? If so, then surely it is the manifest duty of those in authority to make it impossible for the friendly societies to be in a position to say, "If one doctor will not accept our terms there are plenty of others who will."—I am, etc.,

February 1st.

ANHIDROTIC.

THE ST. JOHN AMBULANCE ASSOCIATION AND THE MEDICAL PROFESSION.

SIR,—I have read with interest the letters of Dr. Jepson of Durham and "Another Lecturer" in your issues of January 16th and 23rd, and beg to assure them that the same grievance of which they complain—the irregular method of distribution of honours by the Order of St. John—also obtains in South Wales. I have been an ambulance lecturer continuously for over fifteen years, and have done other work for the St. John Ambulance Association, for which I admit I have received the lowest grade of "Decoration" which the Order of St. John gives. But there have been two or three flagrant instances in this district of men receiving distinctions after two years' connexion with ambulance work. In 1905 I examined a man for a first-aid certificate, who in 1907 was promoted over my head (I am also an officer in the brigade) to a position on the staff of the district. The only reason assigned for this promotion after two years' work was the fact that he had contributed a few pounds to his local corps. Again, in 1906, I examined for a first-aid certificate a man who in 1908 was made an Assistant Commissioner for his district. This distinction, after two years' work, was due to the fact that he has collected a good sum of money for his local centre. These were (two laymen, but I know a retired army doctor in the South of England, who was made a Knight of Grace after three years' service for the St. John Ambulance Association.

I have talked over these matters with a large number of doctors who give ambulance lectures, and who are officers in the brigade, and they are so thoroughly disgusted with this favouritism, that if another instance occurs they will sever their connexion with both the St. John Association and Brigade.—I am, etc.,

January 25th.

DISGUSTED.

THE REPORT OF THE PUBLIC HEALTH COMMITTEE.

SIR,—Will you allow one interested in this matter space for a few comments? First, I would like to endorse Dr. Bowley's letter in the JOURNAL. It is almost impossible for me and many others to attend meetings of the Divisions. It means my leaving home about 12 o'clock, and getting home again at 8 o'clock, a length of time I cannot afford to be away from my practice. To notice the reasons advanced for the employment of whole-time men:

1. The everyday duties of sanitary inspection and supervision are not habitually performed by whole-time men holding large districts, in spite of paragraphs 1, 3, and 6 of the instructions of the Local Government Board. I have

a local paper containing reports of several meetings of local authorities, when the annual reports were read. In each case, the report as to the sanitary condition of the district, and the work done to improve such conditions, was from the sanitary inspector, the medical officer of health merely dealing with the statistics, etc. A man I met recently told me that in case of an outbreak of infectious disease in the district in which he resides the medical officer of health asks him to see to it. In a village near here, a cesspool taking all the drainage of the village has been allowed to exist close to the public well, and it was not till a new squire came into the place and complained that the medical officer of health took any action, or, as far as I can find out, had any knowledge of the condition.

2. This suggestion I maintain is a most unjust one to make. Where is there any justice or fairness in condemning a set of men on a pure assumption? When or where has it been shown that the part-time men as a whole do not do their duty because of fear of their patients? Let this be proved before damning a whole class of men, many of whom have been doing good work under most discouraging circumstances for years. Were not almost all the pioneers in the sanitary service part-time men, and did they do no work for fear of their patients? If you are going to argue from inference, not from proved facts, is it not agreed that a man cannot be expected to do good work while his appointment rests at the pleasure of men with whom he may come into opposition in the course of his work? But work is done in spite of this risk, and therefore I say that it is grossly unfair to assume that a man will not do his duty because he may have to deal with his patients. After twenty years' work I can say that I have had much less trouble to get work done by those who were my patients than by those who were not. People are much more likely to listen to a man in whom they already place confidence than to one who comes only to find fault.

3. He is more likely to have the interests of his district at heart than one who is not dependent on its welfare.

4. The knowledge of his patients and their home life is often of the utmost value to the medical officer of health, and he gets to know things no outsider could ever discover.

5. This argument applies equally to any and every public appointment.

6. This public opinion is largely manufactured by the inspectors of the Local Government Board, for of course if they take any view, the general public accept that as being the view of experts. The Local Government Board inspectors like large districts (I was told by one of them) because they get more uniform treatment of the statistics and of course it is much easier for them to deal with one large district than twenty small ones. But I have never known it said by any one of them that part-time men, as a whole, are not doing their duty as well as the whole-time men. If a man is not doing his work, he can be removed by the Local Government Board not approving his reappointment, and should be.

As an addition to the propositions for the employment of part-time men, I would point out that it is necessary for the inhabitants of country places to have medical men resident in the district, and it is to the advantage of the people that they should be good men. We hear a good deal about a proposed State medical service, to include sanitary and Poor-law officers. Now, if this work is to be taken from the general practitioner, how is he to live? There are lots of places where, even with these appointments, it is only possible to make a bare living.

We also hear of a possible national medical service. I would ask my brother practitioners to pause and think before they talk so glibly of a State service. The State's idea of the value of medical services is shown by the salaries offered to well-qualified men after six or more years' study; and it would seem from these that £250 a year is looked upon as affluence.—I am, etc.,

February 1st.

A COUNTRY M.O.H.

THE MEDICAL PROFESSION AND UNPAID STATE WORK.

SIR.—The question which rises uppermost in the minds of the thinking element of the laity with regard to the medical profession is, How do they live? See how the

medical man is mercilessly sweated from the birth of a child of poor parents to the death of this individual. A midwife is probably engaged to attend the mother in her confinement. There arises some complication which places the patient's life in danger. A medical man is summoned, and has to neglect his own work in order to attend to this case. Fee most probably *nil*, or at the most he has to be contented with what he can get. A medical man attends a confinement. The Government asks the doctor to send a notification to the local authorities. Fee *nil*. Then let us follow this child a little further. He goes to school, and his parents for some reason or another keep him away for some time. This means the loss of a grant, so at once the school officer tells the parent that a medical certificate must be obtained. No fee is offered, but medical men are now refusing to sign these certificates without reward. Medical school inspectors are appointed to ascertain physical and mental defects which may be present in the children attending elementary schools. No provision is made for remedying defects discovered, but this duty is expected to be carried out by medical men without fee or reward. The child grows up and the State protects him in every way. He must not work more than a certain number of hours a day, and he must not work except at union wages. If (generally through his own fault) he becomes unemployed, then the rates must help him. Again the unfortunate medical man must put his hand into his pocket to help pay the rates. Then the man grows old and obtains an old-age pension. We are told that this is thanks to a Liberal Government; but I should rather say, Thanks to the middle class, which does not take so much recreation as the working man (so-called), and which is the financial butt of all Governments. Some of these pensioners cannot visit the post office, so at once a certificate to that effect is required; let the medical man sign it. Fee *nil*. Then the old man dies and requires a death certificate to be signed by a medical man. Fee *nil*.

What, on the other hand, in spite of this treatment, has the medical man done for the State, and what is he still doing? He is pointing out how the public health may be safeguarded by attention to hygiene. He unostentatiously works away at ascertaining the cause and treatment of disease. He gives ambulance and other lectures for the benefit of the public, and in innumerable other ways assists the State. The time has come when we must by united effort teach the powers that be that we refuse to work for nothing. If we combine, our voice must be listened to. The more we do for nothing, the more we may do. Let us steadfastly set our faces against these socialistic abuses, which are so fast growing apace. Let us teach the State that it has a duty to perform to not only the working but also to the professional classes. The medical man may toil morning, noon, and night; what cares the State so long as it obtains his services for nothing? Has this present Government, which boasts so freely of its beneficent work, passed one measure to benefit the condition of a profession which holds in its power the very life of the people? The time has now come for action. Let the Divisions rise to a sense of their duty, and in no uncertain voice demand that social progress shall not be made at the expense of the hardest worked and worst paid profession in the world.—I am, etc.,

PESSIMIST.

Medico-Legal.

DEATH UNDER STOVAINE.

At Battersea, on January 22nd, an inquest was held by Mr. John Troutbeck with regard to the death of a man aged 72, a house painter, who died while under the influence of stovaine at Wandsworth Infirmary. Dr. W. L. MacCormac, the assistant medical superintendent of the infirmary, according to the report in the *Wandsworth Borough News*, said that an operation became necessary if the patient's life were to be prolonged. He suffered from enlargement of the prostate, with great pain, and because he had a senile heart and diseased lungs stovaine by subcutaneous injection was chosen in preference to a general anæsthetic. It was injected between the third and fourth lumbar spines, and loss of sensation below the level of the injection began in about eight minutes. Having made the injection, Dr. MacCormac and his assistant washed out the patient's bladder, and while this was being done the patient, who was stone deaf, exchanged thoughts with him by gestures. Before the operation

was begun the patient's face was noticed to be very pallid, and he yawned immediately. Failure of the circulation and respiration followed, and the ordinary stimulants failing to combat this collapse, death occurred half an hour later. The yawning began about ten minutes after the stovaine had been injected. He attributed death to anaemia of the brain, and connected it with the stovaine. He could not see what else caused the yawning. But the only reason why he connected death with the stovaine was because death followed so soon after its use. In reply to a question by the coroner whether it would be correct to say he died from anaemia of the brain while he was under the influence of stovaine, Dr. MacCombe said he would be glad if he would put it that way. Dr. Freyberger, who made the necropsy, gave the cause of death as bloodlessness of the brain in consequence of failure of the heart while the man was under the influence of stovaine, and stated that he had known two similar cases.

The jury returned a verdict of "Accidental death," and expressed the opinion that everything possible had been done for the patient.

POST-MORTEM EXAMINATIONS FOR CORONERS IN IRELAND.

DR. JAMES M. HERON, J.P. (London, S.W.), writes: In the *BRITISH MEDICAL JOURNAL* of January 23rd, in reply to "R. C. P.," you state: "So far as we are aware, no medical officer of a workhouse or county infirmary in Ireland has obtained a fee for making a post-mortem examination or for giving evidence regarding the death of any person dying in either institution." In one case, during the summer of 1908, at an inquest held in the County Infirmary, Downpatrick, by two Justices of the Peace (Messrs. McLean and Denvir) respecting the death of a patient who died after admission, Dr. Elwood, assistant surgeon to the infirmary, was called as a medical witness and was paid a fee for giving evidence as to the cause of death. I had been asked to act, as one of the justices of the county, at the inquest, but was unable to do so owing to another engagement. The inquest was held during the absence of the coroner for the division. Perhaps this case may serve as a precedent for use hereafter by the Medical-Political Committee of the Association. The payment of this fee passes under review by the auditor, but I do not think that he will undertake to investigate the circumstances of each inquest held, but must be satisfied by the certificate of the expenses incurred by the coroner in holding an inquest, or in this case by his substitute—namely, the court formed by two justices of the peace. The payment interested me greatly at the time of the inquest as I knew it to be illegal, but I have satisfied myself that the payment was made.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

CARDS AND FEES.

SOLEMAN asks (1) whether a newly-established practitioner should leave cards or a card when making his courtesy call; (2) whether fees for attendances at inquests made by a locumtenens belong to the latter or to the principal.

*(1) He should leave one card. It is not usual for a gentleman making a social call to leave more than one card. (2) If the attendances at inquests take place during the time the locumtenens is in the service of the principal the fees must be paid to the latter.

Public Health

AND

POOR-LAW MEDICAL SERVICES.

SCHOOL CLOSURE.

M. O. H.—Article 57 of the Code is as follows: "If the sanitary authority of the district in which the school is situated, or any two members thereof, acting on the advice of the medical officer of health, require either the closure of the school or any department thereof, or the exclusion of certain children for a specified time, with a view to preventing the spread of disease or any danger to health likely to arise from the condition of the school, such requirement must at once be complied with." This article has usually been interpreted as meaning that a sanitary authority or two of its members could only insist upon the closing of a public elementary school provided the medical officer of health advised that such school should be closed. There are conceivable circumstances—such as the absence through illness of the medical officer of health or there being at the time no medical officer of health in office—which would necessitate the sanitary authority or two of its members issuing a closing order without acting upon the advice of the medical officer of health.

Universities and Colleges.

UNIVERSITY OF OXFORD.

Natural Science Scholarships.

THE following scholarships are announced for competition in Natural Science: March 9th, Keble College; March 16th, Merton, Exeter, and New Colleges; June 29th, Brasenose College.

Degree in Medicine.

The degree of B.M., B.Ch., has been conferred on Cyril D. H. Corbett, of University College.

UNIVERSITY OF CAMBRIDGE.

Third Examination for Medical and Surgical Degrees, Part II.

THE examination in the Easter Term will in future begin on the last Tuesday but one before the end of term.

H. Scott, B.A., Trinity College, has been appointed Curator in Zoology in place of D. Sharp, M.A., F.R.S., who has resigned.

The following degrees were conferred on January 28th:

M.D.—H. H. Clarke, Trin.; H. H. Dale, Trin.; H. Rischbieth.

M.B.—G. F. Greenwood, Sid. Suss.

B.C.—H. B. Elton, Gonv. and Cai.; W. W. Treves, Gonv. and Cai.;

A. E. M. Woolf, Eum.

The next examination for the Third M.B., Part II, will take place in the Easter Term on Tuesday, June 15th.

UNIVERSITY OF MANCHESTER.

The Botanical Department.

MR. W. H. LANG, M.B., D.Sc., Lecturer in Botany in the University of Glasgow, has been appointed to the new Chair of Cryptogamic Botany at the Manchester University. The Chair has been founded under a bequest of the late Thomas Earker, formerly Professor of Mathematics at Owens College. Dr. Lang was a research scholar of the Glasgow University, and has made a special study of the cryptogams, travelling for the purpose in Ceylon and the Malay Peninsula. His appointment is especially suitable as the late Professor Earker was interested in the Bryophyta, of which Dr. Lang has made a special study. Dr. Lang has for several years been an external examiner at the Manchester University and is now an examiner in the University of London.

Miss M. Stopes, D.Sc., Ph.D., has been appointed Special Lecturer in Palaeobotany in the university. Some time ago Miss Stopes was assistant lecturer in the university and resigned the position in order to visit Japan, where she made a collection of fossil plants from the mesozoic coal measures. She did good work at the laboratory for botany in the University of Tokio, where she gave a course of lectures on fossil plants.

Pro-Vice-Chancellor.

Professor H. B. Dixon has been elected Pro-Vice-Chancellor of the University in place of Professor Horace Lamb, whose term of office has expired.

Lancashire Education Committee.

THE Vice-Chancellor has again been nominated as representative of the University on the Lancashire Education Committee.

UNIVERSITY OF BIRMINGHAM.

Number of Students.

THE registered students of all kinds last session numbered 960, of whom 507 were matriculated students proceeding to either a junior or senior degree. They were distributed as follows, the numbers in previous years being given for comparison:

	1903-4.	1905-6.	1907-8.
Faculty of Science	99	177	226
Faculty of Arts	85	140	180
Faculty of Commerce	13	22	24
Faculty of Medicine	89	79	77
Total matriculated	286	419	507
Unmatriculated	554	483	453
Total	840	902	960

In the Faculties of Science, Arts, and Commerce there were 450 male and 279 female students, and in the Faculty of Medicine 170 male and 43 female students.

Income and Expenditure.

THE following are particulars of income and expenditure for the year ending September 30th, 1908: Income—General endowment, £5,343 3s. 3d.; special endowments, £1,955 0s. 2d.; Government grants, £11,000; local authorities' grants, £7,583; students' fees, £13,865 11s. 4d.; engineering testing fees, £9 15s. 6d.; bacteriological department, £1,395 19s. 2d.; brewing school, £1,368 17s. 5d.; sundries, £556 7s. 4d.; total, £47,530 2s. 3d. Expenditure—Principal's department, £2,643 9s. 4d.; Vice-Principal's department, £656 6s. 8d.; stipends of professors, lecturers, and demonstrators, £24,260 19s. 4d.; examinations, £2,358 11s. 7d.; degree congregation, £35 0s. 7d.; one-third of membership fees for university societies, etc., £181 5s. 8d.; departmental expenses, £7,580 18s. 7d.; library, £373 17s. 3d.;

interest on mortgage and bank interest, etc., £2,078 16s. 11d.; general management, £3,378 14s. 4d.; maintenance, £4,113 14s. 10d.; brewing school, £1,556 14s. 8d.; annuities payable under the will of the late Sir Josiah Mason, £152; sundries, £454 18s. 10d.; Queen's College Hall of Residence, £1,279 9s. 7d.; total, £52,264 2s. 10d. Deficiency on the year, £4,934 0s. 7d.

Proposed Pension Scheme.

The council of the university approved a pension scheme, limited to full-time professors and some of the principal officials. At the age of 65 a contributor may retire and be entitled to an allowance of one-sixtieth of his then salary for every year's service with the university, with a maximum of half salary. Such a scheme can be made self-supporting with regard to all members entering the service after it is established on a contribution of 10 per cent. of salary, of which 4 per cent. will be contributed by the professors and 6 per cent. by the university. The difficulty is to meet the claims of the present staff, many of whom are approaching superannuation age, and who cannot contribute except during the years which remain to them before attaining 65. Before the liabilities to the present staff are disposed of, the university will have to provide sums which vary considerably every year, a maximum being about £1,100 in 1925, diminishing gradually after that date, and finally disappearing twenty years later.

Hall of Residence for Women Students.

The new hall of residence for women students was taken over by the university on January 1st, 1909. The buildings are situated on a site on the eastern side of Edgbaston Park Road, opposite the new university buildings. The land has been granted by Lord Calthorpe on a lease for ninety-nine years, at a ground rent of about £30 a year. The buildings have cost £16,000, and donations have been received amounting to £12,500. They provide accommodation for sixty students. The new hall is under the direction of Miss S. Margery Fry as warden. The buildings, lease, and funds have been offered as a free gift to the university.

The New University Buildings.

The total cost of the present new buildings of the university, together with their equipment and the laying out of the site, will be, when completed, just over £500,000, to which must be added another £50,000 to provide for the further expenses of staff and maintenance. Towards this sum only about £300,000 can be provided out of the funds at the disposal of the council, so that another £250,000 is required at once. This sum the council is most anxious to raise before the middle of this year, when it is hoped that the King may consent to open the new buildings in person. Sums amounting to £58,900 have been already promised, including £30,000 from Sir Charles Holcroft, Bart., and £10,000 from the Lord Mayor (Alderman G. H. Kenrick).

UNIVERSITY OF LIVERPOOL.

The following diplomas were granted by the Senate on January 27th:

Diploma in Tropical Medicine.—John Rhodes Dickson, M.B., C.M. Edin.; Henry Joseph Glover, M.B., C.M. Edin.; Francis Wood Graves, M.B., Ch.B. Edin.; James Herbert Hugh Harrison, M.R.C.S., L.R.C.P.; Jamshed Byramji Manna, L.M.S. Bombay; Charles Ross Pearce, M.B., C.M. Edin.; Alexander Frederik Schoorl, M.D. Leyden; George Edward Stewart, M.B., C.M., F.R.C.S. Edin.

Diploma in Public Health.—Charles Samuel Brewer, L.R.C.P., L.R.S. Edin.; Herbert Macpherson Cargill, M.B., Ch.B. Edin.; Katherine Rosebery Drinkwater, L.S.A., M.B., B.S. Lond.; Bertram Thomas Johnson Glover, M.B., Ch.B. Liverpool; Clive Oswald Stallybrass, M.R.C.S., L.R.C.P., M.B., B.S. Lond.; John Teare, M.B., Ch.B., Victoria and Liverpool.

UNIVERSITY OF EDINBURGH.

Additional Examiners.

At the January meeting of the Edinburgh University Court the following additional Examiners were appointed: Professor Arthur Thomson, University of Oxford (Anatomy); Professor John B. Haverfield, University College, Cardiff (Physiology); Professor James Martin Beattie, University of Sheffield (Pathology); Dr. William Fordyce, Edinburgh (Midwifery); Dr. William Russell, Edinburgh (Clinical Medicine).

Gift to the Natural Science Laboratory.

It was reported that Emeritus Professor Crum Prown had presented to the University, for the Department of Natural Science, a Natterer's apparatus for the liquefaction of gases.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

An ordinary quarterly comitia was held at the college on Thursday, January 28th, the President (Sir R. Douglas Powell), in the chair.

Lecturers.

The President announced that he had nominated Dr. G. H. Savage as Harveian Orator and Dr. Lindsay as Bradshaw Lecturer for 1909, and Mr. Foulerton, F.R.C.S., as Milroy Lecturer for 1910.

Swiney Prize.

The President further announced that the Swiney Prize had been awarded to Dr. C. A. Mercier for his work on criminal responsibility.

Membership.

The following gentlemen were admitted Members of the College:

George Augustus Auden, M.D. Cantab., L.R.C.P.; Francis William Clark, M.D. Durh., L.R.C.P.; John Frederick Halls Dalry, M.D. Cantab., L.R.C.P.; Robert McCarrison, M.B. R.U.I.; Edward Fretson Skinner, M.B. Cantab., L.R.C.P.; Arthur Lionel Hall Smith, M.B. Cantab., L.R.C.P.; James Aubrey Torrens, M.B. Lond., L.R.C.P.

Diplomas in Public Health.

In conjunction with the Royal College of Surgeons diplomas in Public Health were granted to the following gentlemen:

Alfred Ball, M.B., B.S. Lond., L.R.C.P., M.R.C.S.; Robert James Bethune, M.D., B.Ch. R.U.I.; Arthur Burnell Carter, L.R.C.P., M.R.C.S.; Bertram Walter Cherrett, M.B., B.S. Lond., L.R.C.P., M.R.C.S.; James Clark, M.D., Ch.B. Aberd., M.R.C.P. Lond.; James Alfred Patrick Cullen, M.B. Lond., L.R.C.P., M.R.C.S.; Leonard Fabian Hirst, M.B., B.S. Lond., L.R.C.P., M.R.C.S.; Duncan Matheson Johnston, L.R.C.P., M.R.C.S.; Andrew Alexander McWhan, M.B., Ch.B. Glasg.; Frederick Septimus Penny (Captain R.A.M.C.), M.B. Lond., L.R.C.P., M.R.C.S.; Norman Hamilton Walker, M.B., B.S. Lond., L.R.C.P., M.R.C.S.; Arthur Harold Wilson, L.R.C.P. and S. Edin., L.F.P. and S. Glasg.; Subrahmanyan Yenamandram, L.M. and S. Madras.

Licence.

The licence of the College was granted to eighty-one gentlemen.

Communications.

The following communications were received:

1. From the Secretary of the College of Surgeons, reporting proceedings of their Council on January 14th, 1909.
2. From the Home Office, enclosing for the information of the College a letter from the organizing committee of a proposed international congress for improving the condition of the blind, to be held in Naples, March 30th to April 3rd, 1909.
3. From the Dean of the Faculty of Medicine, University of Edinburgh, proposing the third week of June as the date of the next examination for the Murchison Scholarship, to be held in Edinburgh this year. This was agreed to for the present year, and the fixing of a permanent date, convenient both to the College and the University, was deferred.
4. From the Rector of the University of Geneva, inviting the College to send a representative to join in the commemoration of the 350th anniversary of its foundation, and of the 400th anniversary of the birth of Calvin, the founder, to be held in Geneva, July 7th to 10th, 1909. The invitation was accepted, and it was left to the President to nominate a representative.

Councillors.

On the nomination of the Council Drs. Sidney Phillips, W. Pasteur, Sidney Martin, and A. E. Garrod were elected Councillors in the room of Drs. Osler, Crocker, Tooth, and Acland, who retired by rotation, and Sir William Allchin was elected a Councillor for one year in the place of Dr. C. E. Beever, deceased.

Central Midwives Board.

Dr. Champneys was re-elected a representative of the College on the Central Midwives Board for one year from April 1st next.

University of Birmingham.

Dr. Theodore Williams, who retired by rotation, was re-elected a representative of the College on the Court of Governors of the University of Birmingham.

Reports.

The following reports were received:

1. From the Committee of Management, dated December 18th, 1908, recommending that (a) Whitgift School, Croydon, and King's College School, Wimbledon, be added to the list of institutions recognized by the Examining Board in England for instruction in chemistry and physics; (b) the Municipal Technical Institute, Portsmouth, which is already recognized for the courses of instruction in chemistry and physics, be also recognized for instruction in biology; (c) the Medico-Chirurgical College, Philadelphia, be added to the list of institutions at which the curriculum of professional study required for the diplomas of the Royal Colleges may be pursued, and whose graduates may be admitted to the Final Examination of the Examining Board in England on production of the required certificates of study.
2. The annual return by the examiners of the results of the examinations for the licence in the year 1908.

Library.

Books and other publications presented to the library during the past quarter were received, and thanks returned to the donors. A special vote of thanks was passed with acclamation to Sir William Allchin for a valuable gift of a twelfth century manuscript copy of the *Regimen Sanitatis*.

Obituary.

THOMAS LAURENCE READ, M.R.C.S.,

KENSINGTON.

A LARGE circle of friends and patients will learn with sincere regret of the death of Thomas Laurence Read, who had been in active practice until Christmas Eve, when he had a slight attack of aphasia without any lasting hemiplegia; from this he was rapidly recovering, and was, indeed, planning a change to Brighton, when on January 20th he had a hemiplegic seizure on the left side. From this he partially rallied, and his death, which was quite sudden and unexpected, occurred on January 28th, at 2 a.m.

He was born in Hornton Street, Kensington, on August 15th, 1833, and was therefore in his 76th year. Few even among those who had known him for many years realized that he had reached such an advanced age, for he was alert and full of energy to the very end of his active career. After being educated at the Old Hall, St. Edmunds, Ware, he was apprenticed to his father, who was a popular practitioner in Kensington, and a friend of Thackeray and Dickens. His medical education was completed at St. George's Hospital, where he was a contemporary of Henry Gray the anatomist. To the hospital he was always warmly attached, and his genial face was familiar to many generations. In 1856 he became a Member of the Royal College of Surgeons, and immediately started in practice with his father in Campden Hill. A little later—about fifty years ago—he settled in the house in Petersham Terrace in which he died; the house was then newly built and surrounded by market gardens. The alterations in the surroundings of his home correspond with the vast changes which he had witnessed during more than fifty years' general practice. To the practice of his profession he gave unreservedly all—and it was much—that lay in his power. It is indeed remarkable how well he bore his incessant hard work and worry, for his holidays were scanty, and he devoted himself heart and soul to the interests of his patients. As a practitioner he was as sound as he was straight. He had no need to cultivate any artificial bedside manner; his own genial and naturally sympathetic personality, of which he seemed and was entirely unconscious, made him welcome wherever he went; his patients valued him as a doctor, and felt that he was a friend. That he was a representative of the best type of general practitioner was recognized by his election in this capacity as a member of the Council (1901-3) and of the House Committee (1902-3), of the Royal Medical and Chirurgical Society, and of the Council of the Royal Society of Medicine.

Mr. Read lost his wife some twenty years ago, and leaves a large family. He has had two sons in the profession; the elder died some years ago at Odiham, the younger has for some years been in partnership with his father.

Sir THOMAS BARLOW, Bart., K.C.V.O., writes: Everybody who knew Read trusted him. The keynotes of his character were his practical wisdom and his genuine kindness of heart. These qualities contributed to make him a fine example of the best type of general practitioner. For, although he was always grateful and appreciative of help in diagnosis and suggestion from any of his *confères*, yet his acquaintance with his patients was so intimate and his knowledge of therapeutics was so sound that he seemed almost intuitively to realize the limits of what could be attempted by way of treatment, and he was so thorough and unselfish that he had no need for flattery and honeyed speech. He keenly enjoyed the friendship of all sorts and conditions of men, but most of all that of his professional brethren, and his devotion, through a long life, to his old medical school and everything connected with it was remarkable. Read "warmed both hands at the fire of life"; he was in harness almost to the end, and he leaves a vacant place in the affectionate memory of all who knew him which will long remain unfilled.

We are indebted to Mr. Read's old friend, Mr. Pickering Pick, for the following note:

He was a very prominent general practitioner, who practised his profession in Kensington for more than half a century. In fact, he has been associated with Kensington all his life, his father having been in practice in that place at the time of his birth. Read will be much missed and mourned by a large circle of patients and friends; his genial, sympathetic manner, and his kindness of heart endeared him to all with whom he came in contact.

JOHN EVAN SPICER, M.A., M.D., B.C. CANTAB.,

MEDICAL REGISTRAR TO THE LONDON HOSPITAL.

On January 13th, in Switzerland, John Evan Spicer was killed by an avalanche. By his death the medical profession and the London Hospital lost one of their most promising men, one who would have taken a front place in the ranks of physicians and public men.

He was born at Dulwich in 1875, and educated at Clifton and Cambridge; he entered the London Hospital in 1900, and, after holding all the resident appointments, he was appointed Medical Registrar in June, 1908. While working at the hospital he contributed to medical literature "An Unusual Case of Dilatation of the Stomach" (*Clinical Society's Transactions*, vol. xxxix), "Three Cases of Malformation of the Tracheo-Oesophageal Septum" (with Dr. Keith) (*Journal of Anatomy and Physiology*), "A Case of Abnormal Development of the Oesophagus" (*Lancet*, 1907), "Imperforate Urethra in the Fetus as a Cause of Dystocia" (*Proceedings of the Royal Society of Medicine*).

Although Spicer's experience and knowledge of medicine were great, yet the sense of loss which spread over the hospital when the news became known was a markedly personal one. More even than the loss of the physician the loss of the man was deplored.

At the memorial service held by the Free Church Camps for Schoolboys a large gathering of men were present, and the tributes to his memory by Sir J. W. Bann in the *Daily News* and *British Weekly*, and the sincere expressions of grief which came from all associated with him in work, testify to the many interests he had at heart.

All through his hospital career the great feature of his life was ardour. He was more than keen. Whether going round with the clerks or dressers in the morning, there was an intense zeal about all his work which spread to all with whom he was associated. His knowledge of the patients was not confined to the medical aspect, for many is the man or woman who was helped materially, while in hospital and after discharge, by Spicer to keep things going till completely restored to health and work. There were many sad hearts in humble homes when the sad news became known. Between his terms of residence, working in the post-mortem room or anatomical laboratory, he displayed the same ardour in all he undertook, and no day's work was too heavy. He excelled in powers of organization in all his work at the hospital, whether teaching, investigation, or recording; in conducting the locumtenent agency, in arranging Christmas troupes, in arranging particulars for camps, those powers shone out, and have made the labours of those who will attempt to take up his work so much simpler. Spicer was magnificent; of wide experience in medicine here and abroad; exceptionally well read, constantly cheerful even when dead tired, ever ready with jest, or song, or help, his departure has left a gap which no man can fill; but at the root of it all was an earnest Christianity which impressed all his fellow-workers with its reality and sincerity. The memory of that meeting at Whitefield's Tabernacle, when, in spite of inclement weather and short notice some three or four hundred of his fellow campers gathered together to do homage to his memory was a grand testimony to his position among the young men of the Free Churches. The testimonies which were borne there to his ardour, organization, cheerfulness, and Christianity in camp life were in keeping with the whole of his life at Dulwich, and in the hospital, and in spite of the deep feeling shown there was the predominant assurance that his life had not ended; but would remain in its influence for many years to come. So is it at the hospital—we miss the square-shouldered form, the fine head, the manly step, but his influence on his clerks, dressers, and fellow residents will ever remain as a witness to the life of a good man.

R. M.

GEORGE ELLIS, M.B.Dub., F.R.C.S.I.,

DUBLIN.

THE medical profession of Ireland lost its oldest member in the person of Dr. George Ellis, who died in Dublin on January 27th, having attained his 100th year. He retired from practice no less than forty years ago, being possessed of ample means. Even the older members of the senior group of the profession now living did not know Dr. Ellis, for although he continued to take interest in the progress of medicine, he did not attend the meetings of societies. He was, however, known to some, and was much respected. He does not appear to have held any public appointments.

Dr. Ellis was educated in Trinity College, where he took the degrees of A.B. and M.B. in 1834. He became Fellow of the Royal College of Surgeons in 1844. His contributions to the journals were few, but in one he strongly advocated the use of rennet wine, which he prepared by adding sherry to pieces of the stomach of a newly-killed calf, and allowing it to rest in a bottle for three weeks. He gave this wine to those, especially medical men, "who were very liable to suffer from gastric trouble through worry of mind and body and irregular hours for meals and sleep." He was the author of *Irish Ethnology, Socially and Politically Considered*.

THE death has taken place at Oyne, Aberdeenshire, of Dr. DAVIDSON, who retired from general practice some years ago. He was a graduate of Aberdeen University, and held important appointments, first in Egypt and afterwards in Australia. In consequence of a breakdown in health he returned to Aberdeen, and, after a period of rest, practised in that city. His health again threatened to give way; he retired to Oyne about five years ago. Dr. Davidson gave much time and attention to the cultivation of roses, a subject on which he was an authority.

The Services.

INDIAN MEDICAL SERVICE.

THE result of the January examination was announced on January 30th, 1909. There were 39 candidates, of whom 33 ultimately entered for the examination; of these 31 qualified, the first 12 being admitted as Lieutenants-on-Probation, while one withdrew during the examination. The names of the successful candidates, with the marks obtained by each out of a possible total of 5,100, are given below, together with their degrees and medical schools.

Name.	Degrees, etc.	Medical School.	Marks.
H. C. G. Semon ...	M.B., B.Ch.Oxon., M.R.C.S., L.R.C.P.	Oxford University; University College Hospital, Freiburg University, Germany	4,016
V. B. Gokhale ...	M.R.C.S., L.R.C.P., L.M. and S. Bombay	Grant Medical College, Bombay; King's Col- lege, London; Univer- sity College Hospital	3,633
A. M. Jukes ...	M.D., B.S.Lond., D.P.H.Cantab.	St. Bartholomew's Hospital	3,566
G. G. James ...	M.B., B.S.Lond.	University College, Cardiff; Westminster Hospital	3,504
W. D. Keyworth ...	B.C.Cantab.	Cambridge Univer- sity; Charing Cross Hospital	3,381
B. Gale ...	M.B., Ch.B.Glas.	Glasgow University	3,319
J. H. Horne ...	M.B., Ch.B.Edin.	Edinburgh University	3,312
H. H. Kind ...	M.B., B.S.Lond.	St. Bartholomew's Hospital	3,280
M. D. A. Kureishi ...	M.R.C.S., L.R.C.P.	Tabernacle Medical College; King's College Hospital	3,231
R. E. Flowerden ...	M.B., Ch.B.Aberd.	Aberdeen University;	3,225
A. J. Lee ...	M.B., B.S.Lond.	St. Thomas's Hosp. University Coll. Hosp.	3,194
I. G. B. Shand ...	M.B., Ch.B.Edin.	Edinburgh Univ.; Extra Mural School of Medicine, Edinburgh	3,188

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL CHANGE OF ADDRESS.

THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL have been removed to 429, Strand.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

SUFFERER asks for advice as to the prevention and treatment of attacks from which he has suffered four or five times a year. The last attack began after a deposit of urates for several days, the symptoms being soreness and dryness of the throat, the soft palate and the uvula being congested, intense frontal headache, aching in the limbs and slight shivering, with, on this occasion, no elevation of temperature, although in other attacks it is raised to 101°. There ensues suddenly profuse nasal discharge without odour, with morning cough, which is relieved by expectoration of a large quantity of white frothy mucus. The cough, nasal discharge, and lassitude continue for from ten days to three weeks. Of the many drugs tried, he has derived greatest benefit from sodium salicylate.

ANSWERS.

SENEX.—South Formosa is by no means an unhealthy place, and the climate is fair. The means to be adopted for the preservation of health in the tropics will be found in any of the works on tropical medicine or tropical hygiene. The following may be mentioned: Professor Simpson's *Maintenance of Health in the Tropics* (London: Bale, Sons and Danielsson, 1905, 2s. 6d.), and *The Principles of Hygiene in Tropical and Sub-tropical Countries* (London: Bale, Sons and Danielsson, 1908, 15s.), by the same author. If the emigrant is a medical man, he should take Manson's *Tropical Diseases*. Fourth edition (London: Cassell and Co. 1907, 12s. 6d.), and Daniels and Stanton's *Laboratory Studies in Tropical Medicine*. Second edition (London: Bale, Sons and Danielsson, 1907, 16s.).

TREATMENT OF TAPEWORM IN CHILDREN.

DR. J. COCKBURN SYSON (Glasgow) writes: A patient of mine (girl) first exhibited symptoms of *Taenia solium* by passing segments of the parasite at the age of 18 months. During the past nine and a half years—she is now 11—repeated attempts have been made, without success, to dislodge the worm. All the usual anthelmintics were tried. Reading of filmaron in the JOURNAL of January 16th, I procured the drug and administered it according to directions. A few hours afterwards about 2 ft. of worm were dislodged, including the head.

FIRST-AID LECTURES.

J. N.—In deciding what fee to ask for a course of first aid to the employees of a company, the position of the company and the nature of the work might be taken into consideration, as well as the amount which the lecturer might be able to make by his practice in the time which he must give up to the class. If the work is hazardous, it is to the interest of the employers that the men should be instructed in first aid. Generally speaking, it is fair to give a course to working men, when the expenses are paid by the employers, at half fees—namely, 10s. 6d. for each meeting, or £2 12s. 6d. to 3 guineas for the course of five or six meetings.

LETTERS, NOTES, ETC.

ERRATA.—In line 2 of the fourth paragraph of Dr. Harold Kerr's letter on The Home Treatment of Scarlet Fever (BRITISH MEDICAL JOURNAL, January 30th, p. 307), the name "Stickler" is incorrectly printed "Hickler." In the following letter on the same subject, by Dr. Percy Newell (p. 308), the special oil referred to should have, been termed "oleusaban," not "oleusanban," as printed.

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An Address

ON

THE SIGNS OF EARLY DISEASE OF THE THYROID GLAND.

DELIVERED AT A COMBINED MEETING OF THE BURNLEY AND DISTRICT MEDICO-ETHICAL SOCIETY, AND BURNLEY DIVISION OF THE BRITISH MEDICAL ASSOCIATION.

By GEORGE R. MURRAY, M.A., M.D.CAMB.,
HON. D.C.L.DURH., F.R.C.P.,

CONSULTING PHYSICIAN TO THE ROYAL VICTORIA INFIRMARY, NEWCASTLE;
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In many diseases which develop gradually and run a chronic course the earliest signs of ill-health are apt to be overlooked. The textbooks, as a rule, describe a disease as it appears in its typical form, while insufficient attention is paid to the symptoms of the early or mild forms of the malady. It thus happens that a disease may have made considerable progress before it is recognized, and so valuable time is lost, during which suitable treatment might have been applied.

I propose, therefore, to-day to draw your attention to some of the signs of early thyroidal disease, which, though by no means rare, are not as well known as they might be.

In diseases of the thyroid gland symptoms of two kinds may occur. In those in which the gland is increased in size there may be local symptoms due to the enlargement itself. These are mechanical in origin, and are the result of the pressure exerted by the goitre upon neighbouring structures in the neck. The other symptoms are due to variations in the functional activity of the gland induced by the structural changes which occur in it.

When the various pathological changes to which the thyroid gland is liable are fully developed the symptoms are so marked and striking that the diagnosis presents no difficulty. The various forms of goitre are readily recognized as such, the real difficulty being not to determine whether the tumour is a goitre or not but to distinguish between the different varieties of goitre which may occur. A well-marked case of exophthalmic goitre, of myxoedema, or of cretinism is readily diagnosed, provided the observer is familiar with the general aspect of the disease. On this occasion we may with advantage consider some of the early symptoms presented by these diseases by which we may recognize them at the earliest possible moment and so lose no valuable time in applying the most appropriate treatment. The importance of this is twofold. First, one finds that patients in the earlier stages of thyroidal disease may go about for a considerable period without the true nature of the disorder being recognized; secondly, the value of early treatment is so great, both in diminishing the period of ill-health and in obtaining a better result than when it is deferred until the disease has become fully established.

Some of these cases with slight symptoms are in an early stage of a more severe attack which will follow if treatment is not successful in checking their further development. Others are mild types of the disease, and may for long remain stationary in this condition. Such cases, both of myxoedema and Graves's disease, have been described by Continental writers as *formes frustes*—an unnecessary term, as they are simply mild cases such as we find in so many other maladies.

As the function of the thyroid gland is to supply an internal secretion which escapes by way of the lymphatics into the blood stream, by which it is distributed to all parts of the body, diseases of the thyroid may be divided into three classes, according to the manner in which this function of the gland is influenced by them. Thus some diseases have no appreciable effect upon the secretory function of the gland; others lower or abolish it according to their severity, and in yet a third class it is greatly increased and possibly perverted as well.

As examples of the first class may be cited uncomplicated acute thyroiditis, simple parenchymatous goitre, and many cases of adenomatous or cystic goitre. The

second class is illustrated by cretinism and myxoedema, and the third by exophthalmic goitre and those cases of goitre in which the "goitre-heart" is present.

SIMPLE PARENCHYMATOUS GOITRE.

The normal thyroid gland is subject to variations in volume, as it may become temporarily enlarged during menstruation or pregnancy, subsiding afterwards to its usual size. Such enlargements are physiological, and occur in response to some temporary stimulus or demand for an increased functional activity. In many cases, however, a simple enlargement of this kind tends to go on increasing in size and becomes pathological. This occurs most frequently in adolescents and young adults, and much more frequently in women than in men. In the early stages the swelling is apt to escape notice unless the thyroidal region is inspected and palpated in the course of a routine medical examination. As the thyroid grows the total circumference of the neck is increased, and the gradual tightening of the collar may first draw attention to the goitre. On inspection the front of the neck looks full and rounded, and the skin is often marked by the pressure of the collar stud. If the patient be made to swallow a mouthful of water the swelling is seen to rise and fall again during the act of deglutition. This movement of the swelling is characteristic of all enlargements of the thyroid gland, unless it is fixed by adhesions, or, as in the case of malignant goitre, by the extension of the disease through the capsule into the surrounding parts. During this movement the horseshoe shape of the uniformly enlarged gland is often clearly to be seen. On palpation the swelling will be found to take the same shape as the thyroid gland, though it will be several times as large. It is firm and elastic in consistence, and there is no tenderness on pressure. No thrill can be felt, nor is any murmur as a rule audible on auscultation over it. When the goitre has reached a larger size, the veins overlying it may be enlarged and visible; there may be a sense of fullness in the neck and some difficulty in breathing. This, however, is much more common in adenomatous and cystic goitres than in the form under consideration.

This simple parenchymatous goitre may be distinguished from exophthalmic goitre by the absence of tachycardia and other symptoms of Graves's disease, and from enlargement due to the presence of adenomata or cysts by its symmetrical shape, though of course the two forms of enlargement may be combined in the same case.

As this form of goitre is a simple hypertrophy which takes place in response to a demand for increased activity, it is analogous to the hypertrophy of the mammary gland which takes place during pregnancy and lactation. The treatment is therefore on rational lines, and consists in supplying the increased amount of thyroidal secretion which is required from another source. When this is done the gland gradually diminishes in size. If the treatment is commenced at an early stage the gland may return to its normal size. If the hypertrophy has been present for some time the result may not be so good, but a marked reduction in size may be expected in many cases. As an illustration of this class of case I may refer briefly to the case of a girl, aged 13, who was under my care at the Newcastle Royal Infirmary, in which there was a considerable goitre which caused some difficulty in breathing. The total circumference of the neck was 16½ in., and after treatment for eleven weeks it was reduced to 13 in., and the symptoms due to the goitre were removed. In this and other similar cases the question of an operation for the removal of a portion of the goitre to relieve the dyspnoea had been considered, but was obviated by the treatment.

As a general rule, when a goitre is unilateral, the enlargement is due to an adenoma or cyst in one lobe. The size of an adenoma or a cyst would not be affected by thyroid extract. I have, however, seen one interesting case which was sent to me by Dr. A. Smith, of Whickham, in which one lobe alone was enlarged. I regarded this enlargement as being due to an adenoma, and advised its removal, as there were signs of pressure. The patient, however, refused operation, and therefore we decided to try the effect of thyroid treatment. To our surprise, the enlarged lobe steadily diminished in size, and the patient was relieved of her symptoms. This case suggests that a

unilateral goitre may in some cases be due to a simple hypertrophy, and that it is worth while to try the effect of this treatment if there is any doubt as to the cause of the enlargement.

In cases of simple goitre it generally suffices to give from 3 to 5 grains of dry thyroid powder in a tablet each night. In some cases it is advisable to give this dose two or three times daily, provided no marked acceleration of the pulse occurs. If there is no distinct reduction in the size of the goitre after treatment for a month or six weeks, there is nothing to be gained by continuing it further. If there is a decided reduction, it is advisable to continue the treatment for three or four months, so as to obtain its full benefit, and to resume it for a month occasionally if there is any sign of recrudescence.

If goitre is at all prevalent in the district the patient should drink no water unless it has previously been boiled or distilled. The local application of iodine, especially in the form of the red iodide of mercury ointment, is also useful.

MYXOEDEMA.

We may pass on now to the consideration of the mild type of myxoedema which results from a partial fibrosis of the thyroid gland, which occurs not uncommonly in women between 40 and 50 years of age. When the fibrosis is complete, a fully-developed case of myxoedema results. In arriving at this advanced stage of the disease, the symptoms are at first slight. I believe, however, in some cases that the fibrosis of the thyroid is only partial for a long period. In some it possibly never progresses beyond this stage. Thus, we occasionally come across these mild early cases of myxoedema which have been neither recognized nor treated, the result being a prolonged period of ill-health for the unfortunate sufferer, which she might have been saved if the disease had been diagnosed and treated at its commencement.

The symptoms which result from partial thyroidal fibrosis usually come on very gradually, between 40 and 50 years of age, and are not infrequently mistaken for those which so commonly occur in women during the menopause. There is a gradual loss of mental and physical energy, so that every action appears to require a special effort. The result is that the patient's sphere of action becomes more and more restricted. Such patients say they take no pleasure in life and have lost interest in their surroundings. They are apt to shun the society of others and to become depressed and melancholy at times. If by force of will a normal mode of life is continued they will tell you this is only accomplished by a considerable mental effort and expenditure of energy. The memory is often defective, especially for names and for recent events. Slight visual hallucinations are very common. They are rarely complained of, but a clear account of them may be obtained on carefully interrogating the patient. In these slight cases the hallucinations are not, as a rule, so clearly defined as they are in some advanced cases, but take the form of some ill-defined object, indistinctly seen "out of the corner of the eye," like a mouse rapidly crossing the room. Sensations of cold are often complained of, although the temperature of the body may be scarcely, if at all, below normal. The facial appearance is somewhat altered. The cheeks become rounded and fuller, and a central pink flush appears. This change may impart a fictitious appearance of improved health and nutrition, which is liable to be mistaken for such by the friends of the patient, who imagine that she is getting stout and rosy. A careful inspection will, however, show that there is also a small amount of swelling of the eyelids, which has a translucent appearance like the swelling due to a slight subcutaneous oedema, but does not "pit" on pressure. The skin of the face may be rather pale and waxy in appearance, or it may have a pale yellow tinge. The lips are rather swollen and the mucous membrane pale. The eyebrows may be rather scanty, and the forehead is often transversely wrinkled.

The subcutaneous swelling on the body generally is not sufficient to attract the patient's attention, though it may be found on careful examination. In the supraclavicular region the swelling may be quite distinct. The hands are somewhat altered in appearance, the back of the hand being rounded and swollen. The feet often show a similar condition, though the swelling may not be sufficient to

necessitate the use of a larger size of boot, as in the more fully-developed stages of the malady. The skin is rather dry; on the backs of the hands it may be smooth if there is much swelling, or it may be loose and wrinkled, like that on the hand of a washerwoman. A fine desquamation takes place, especially on the legs, the results of which are clearly seen, on removing a pair of black stockings and turning them inside out, as a fine white powder. The hair may partially come out, though its texture may not be appreciably altered.

Such are the main symptoms produced by early thyroidal fibrosis, easily recognized when looked for, but otherwise easily passed over. In doubtful cases a careful examination of the thyroidal region of the neck may show that the gland is diminished in size. As already mentioned, these symptoms are liable to appear at the time of the menopause. When the ovary atrophies at the same time as the thyroid gland, the symptoms of the menopause, such as a feeling of pressure on the top of the head, hot flushes and sweats, may occur in addition to those which are due to the thyroidal fibrosis. The nervous symptoms in each case are somewhat similar. A careful examination of the patient for the slight signs of myxoedema will, however, enable a correct conclusion to be drawn as to the cause of the symptoms complained of.

There is a condition of lipomatosis which I have seen in several cases which closely resembles a slight form of myxoedema, which has not as yet received adequate recognition. In this there is an elastic subcutaneous swelling like that which we see in myxoedema, but differing from it in distribution. The skin is not dry as it is in true myxoedema. The hair and nails are unaffected. The swelling is generally more localized than in myxoedema. One case which appeared to be of this type occurred in a lady of 31. There were well-marked swellings in the supraclavicular region, over the deltoids, over the hips and upper gluteal region. The swelling was greater on the right side of the body than the left. The circumference of the right arm at the level of the insertion of the deltoid was 13 in., of the left 12½ in. The circumference of the middle of the right thigh was 22½ in., of the left 20½ in. In these cases the swelling has no sharp edge, but gradually shades off, and it is quite painless. In addition to the situations already mentioned, it may be present on the backs of the hands. As a rule the face is not affected; if it is the swelling is only in the cheeks, which have no central flush, and there is no swelling of the eyelids as in myxoedema. When the swelling covers a considerable area, as it does on the outside of the thigh, the skin is dimpled when it is pinched up between the finger and thumb. The final test is the action of thyroid extract. It will be found that even after taking two or three times as much thyroid extract as would suffice to relieve a true myxoedema in the course of a month, these swellings are only slightly, if at all, diminished in size. They appear to consist of irregular deposits of subcutaneous fat, and are possibly more closely allied to the swellings which occur in adiposis dolorosa, from which, however, they differ in size and in the absence of all pain and tenderness.

The treatment of these cases of mild myxoedema is simple. Thyroid extract should be given in doses of 5 minims of liquor thyroidei each night for a month. If decided improvement has then taken place this dose may suffice, if not, it is advisable to increase it up to 10 minims, and to continue this dose until all the symptoms have disappeared. The permanent dose will be from 5 to 7 minims, for it must be clearly understood, and also explained to the patient at the outset, that the treatment must be continued for the rest of her life. If, later on, the partial fibrosis becomes total it will be necessary to increase the permanent dose to 10 minims each night. This amount of the extract appears to correspond to the daily output of secretion from an average normal gland. This statement is based on the fact that my first case of myxoedema, in which I believe there is now no active portion of the gland left, has been kept quite free from myxoedema for more than seventeen years by this dose taken six nights in the week.

EXOPHTHALMIC GOITRE.

We have now to consider the effects of hypersecretion of the thyroid gland, just the opposite condition to that

which obtains in myxoedema. The result of excessive secretion is best seen in a typical case of exophthalmic goitre. The microscopical appearance of the enlarged thyroid gland exhibits changes which indicate that there is an enormous increase of functional activity. Fully-developed exophthalmic goitre is so characteristic that no description is required. The goitre, exophthalmos, rapidly-beating heart, with nervousness, tremors of the hands, and emaciation, make up a clinical picture which can be readily recognized. It is, however, to the less obvious cases that I wish more particularly to draw your attention. In the first place I may remind you that in more than a quarter of all the cases of definite Graves's disease one symptom, and that the most obvious of all, the exophthalmos, is absent. Thus in 170 of my own cases² exophthalmos was present at some stage of the disease in 123, but in 47, or more than 25 per cent., there was no exophthalmos at all. Why this remarkable sign is present in one case and yet absent in another which otherwise has similar symptoms cannot at present be explained. The whole pathology and causation of the exophthalmos is still obscure. Of the various explanations of it which have been given, the only one which is tenable is that which attributes it to an abnormal development of the retro-bulbar fat in the orbit. At an autopsy this mass of fat presents a striking appearance, and may be seen even in cases in which there is such a degree of general emaciation that hardly any fat is visible in other parts of the body. The fat from one orbit alone in one of my cases weighed 1 oz. A simple experiment will show how such a mass of fat produces exophthalmos. The head of a dead sheep or smaller animal, such as a guinea-pig, will serve the purpose quite well. The upper part of the skull and the brain are removed so as to expose the optic foramen. A small trocar and cannula are pushed through the optic foramen alongside the optic nerve until the orbit is reached. The trocar is withdrawn, and a warm syringe filled with melted paraffin or agar-agar to which some colouring matter has been added is attached to the cannula. The fluid is then injected into the orbit behind the eyeball, which gradually begins to protrude, and any degree of exophthalmos can be produced according to the amount of fluid injected. Later the orbit can be opened and the distribution of the solidified agar-agar examined. The exophthalmos thus persists after death, which it would not do if it was caused by vascular congestion or spasm of Müller's muscular fibres.

Exophthalmos is so striking a symptom that when present the diagnosis is easy. It is, however, to the cases in which this symptom is absent that I wish to direct your attention. When there is no actual exophthalmos there may be a rather staring expression in some cases, which is due to a slight spasm of the elevator of the upper eyelid (Stellwag's sign). This may be either constant or intermittent. When it is persistent there is a notable absence of blinking, the palpebral fissure is rather wider than it should be, and the effect is to give a rather startled expression. When it is temporary it may only appear for a moment when the eyes are suddenly directed in some new direction. The patient will probably come to you complaining of palpitation. This may only be felt from time to time, or it may be continuous. If always present it is easily aggravated by any exertion or excitement. Disagreeable throbbing, especially in the carotid arteries, is often mentioned. The pulse will be found to be frequent—100 or very often 120, or even 130 or 140. If the patient is examined when lying in bed the pulse will be less frequent by 10 or 20 beats a minute. Apart from infective diseases and organic disease of the heart, Graves's disease is the commonest cause of persistent tachycardia. In fact, in all cases, apart from cardiac and infective maladies, in which there is a frequent pulse of 90 or more, it is most important to look carefully for other signs of exophthalmic goitre. Many of these cases are described as examples of paroxysmal or persistent tachycardia and their true nature overlooked. This frequent pulse is such a constant symptom that in 178 of my cases of exophthalmic goitre in which the frequency was recorded, in only 4 was the pulse between 90 and 100, while in 174 it was between 100 and 200. In some of these slight or early cases palpitation may not be complained of, and it is only on examination that the high frequency of the pulse is discovered.

On examination the heart is found to be beating more or less violently and the cardiac impulse can be both seen and felt over a larger area than usual. In these mild cases of the disease there is generally no dilatation or other change in the heart itself. The action of the heart is precisely similar to that we often find in a healthy but nervous young man who presents himself for examination for life assurance or who is undergoing any other mental strain or has just taken violent exercise. If the tachycardia is the only symptom present and the thyroid gland is not enlarged, we may conclude that it is not a case of Graves's disease. For example, I recently saw a lady, aged 52, who had suffered from palpitation for four years. The palpitation came on during an attack of influenza. The pulse was 120 sitting, 104 lying down. The thyroid was normal in size, there were no ocular symptoms, no definite tremor and the weight was increasing. The heart was normal in size and there was no valvular disease. Such a case must be regarded as one of simple post-influenzal tachycardia.

The enlargement of the thyroid gland is generally slight. The gland may be only twice or thrice its normal size, so that the swelling may not even be noticed by the patient at all. It is necessary, therefore, in these cases to make a careful examination of the front of the neck to determine whether there is enlargement or not. It is important while doing this to make the patient swallow a mouthful of water, as in some cases the gland lies rather low down in the neck, and a slight enlargement is more readily detected during the upward movement which accompanies deglutition. The enlargement is uniform and painless. A very notable feature in these cases is the mental condition. The general characters of the mental state in the fully developed disease are well known. In the slight cases also the mental condition may be quite characteristic. There is a condition of irritable weakness, in which a desire to perform many active duties is accompanied by an inability to accomplish them without inducing a disproportionate amount of fatigue. Such patients are anxious to undertake useful work, but are very fussy and nervous in doing it. They feel uncomfortable when in a crowded assembly, and are often obliged to leave early. They are restless, and find it difficult to continue any single occupation for long. There is a remarkable tolerance of cold and sensitiveness to heat. A result, doubtless, of the increased oxidation going on in the tissues. This condition of general nervousness often shows itself in the presence of strangers.

The characteristic fine tremor of the hands is usually present, though it may be necessary to look closely to see it. This tremor was present in 163 of my 180 cases. It was absent in 7, and was not noticed in 10. Weakness of the legs and a feeling as if they would give way in walking may be complained of in these mild cases.

No case should, then, be regarded as one of Graves's disease unless the pulse is 90 or more a minute, and there is either slight exophthalmos, some enlargement of the thyroid, or tremor as well. If two or three of these symptoms are present, the case should be regarded as a mild case of Graves's disease.

There is a special variety of Graves's disease which is generally described as secondary, which may occur in a mild form. As I have already mentioned, in cases of simple goitre of various kinds there is, as a rule, no evidence of hypersecretion, and so the symptoms are purely local. In some cases of goitre, even of some standing, however, the secreting activity becomes increased. This may be so marked that the symptoms of Graves's disease are fully developed, and there is no difficulty in recognizing that we have to deal with a distinct case of secondary Graves's disease. Fourteen of my 180 cases were of this type. In 2 of them the goitre had been present for thirty years, and in others for various periods of from three to twenty-five years before symptoms of hypersecretion developed.

There are, however, cases of goitre in which tachycardia appears alone without other symptoms. These cases have been described by Continental writers as examples of "goitre-heart," so it is well to recognize the existence of these cases, especially in view of any operative treatment, as there is more risk when these signs of cardiac disorder are present than when they are absent altogether. The pathology of this condition is probably the same as

that of Graves's disease, the symptoms being due to excess or change in the character of the thyroidal secretion.

It is also well to remember that if for any reason a patient has been taking large doses of thyroid extract for a long period a condition of thyroidism may be produced in which many of the symptoms of Graves's disease develop—such as tachycardia, tremor, nervousness, sweating, and emaciation.

Time will only permit me to allude very briefly to the treatment of these slight cases of exophthalmic goitre. As in fully developed cases, we must enforce a sufficient amount of mental and bodily rest according to circumstances. A liberal diet, which includes two or three pints of milk, is required to compensate for the increased metabolism. A mild faradic current applied to the neck for two or three hours daily is often most beneficial. A prolonged course of arsenic in small doses, with or without the addition of tincture of convallaria, is also useful in most of the cases. On no account should thyroid extract be given in these cases, as it naturally only aggravates the symptoms.

REFERENCES.

¹ *Edinburgh Medical Journal*, August, 1900. ² *Lancet*, November 11th, 1905.

Remarks

ON
THE NATURE AND TREATMENT
OF

PARENCHYMATOUS GOITRE.

By FRANCIS L. A. GREAVES, F.R.C.S.,

— SURGEON TO THE DERBYSHIRE ROYAL INFIRMARY.

UNDER the term "goitre" several varieties of enlargement of the thyroid gland are embraced, and in classifying them great difficulty is felt at the outset from the fact that the varieties are not very distinct.

Part of the gland may show changes characteristic of one class, while another part may display all the features of a goitre of another class. English pathologists regard parenchymatous goitre as distinct from adenoma of the thyroid, but the German schools do not make this distinction. But there is much to recommend the English classification from the point of view of the practical surgeon.

The normal thyroid gland consists of a vascular fibrous stroma, including in its meshes rounded follicles or acini which either possess a central lumen or are filled entirely with epithelial cells. The acini are lined with a single layer of cubical epithelium without basement membrane, and the lumen may be either clear or filled with colloid material.

PARENCHYMATOUS GOITRE.

In parenchymatous goitre there is glandular proliferation which results in the production of clusters of cells or of gland-like acini lined with epithelium, which may be somewhat irregular and flattened compared with the normal gland. Both varieties may be seen in the same specimen. The cut surface of a fresh goitre shows to the naked eye a reddish or dark brown colour; in parts where many of the acini contain masses of colloid material the section has a translucent honey-like appearance. All the tissue elements in these goitres are increased in amount.

The patient presents a smooth, full neck, reminiscent, when present to a small extent, of Burne-Jones's paintings. This condition is more common in females than in males, and generally commences about the age of puberty. It is at first quite painless, giving rise to no discomfort. The consistency of such a gland is rather soft and has a somewhat elastic feeling on palpation. It is movable on swallowing.

It frequently enlarges during the menstrual period, and the patient sometimes complains of a slight sensation of suffocation at that time. The voice is not altered and no laryngoscopic changes are to be seen. In many of these cases I have found great hypertrophy of the tonsils, and removal of these seems to have some influence in producing

diminution in the size of the gland; possibly this may be due to the improvement of the patient's general condition.

This mild variety of parenchymatous goitre, which is exceedingly common in Derby and Derbyshire, often subsides gradually without treatment as the patient develops. It is quite common for people here to say that they had a Derbyshire neck when they were young. The popular treatment in the female is to apply a string of artificial pearls or a black velvet neck band, and I was recently much interested to read in the *BRITISH MEDICAL JOURNAL* that the Abyssinian treatment of goitre is to tattoo a string of beads round the neck.

Besides the enlargement of the gland at the menstrual period I have seen the same occur during pregnancy, and decrease in size after childbirth.

When the goitre enlarges to a further degree, the swelling is unsightly, the feeling of suffocation becomes more marked, especially in the recumbent posture. There is often associated anaemia, and the case demands treatment.

An inquiry into the residential situation of the patient is made, and the water supply and general hygienic surroundings ascertained. The water should be boiled and flavoured with lemon to make it palatable. Internally a mixture containing iodine and potassium iodide is given, and if there is anaemia, iron and arsenic also. Thyroid extract may be tried, commencing with $\frac{1}{4}$ -grain doses every other day, and gradually increasing it up to 1 grain three times daily. But the effect on the pulse should be most carefully watched. In my experience the result of treatment with thyroid extract has been very disappointing. If no diminution occurs with this treatment after a month's trial it is useless to continue. Locally the red iodide of mercury ointment has seemed to have some effect, the patient spreading it over the enlarged gland, and then sitting in bright sunshine or before a hot fire. It is very difficult not to blister the skin, however, and although good results are reported from India, its effect has not been very convincing in my own practice.

If such cases are watched for some time the swelling, instead of being uniform, becomes asymmetrical. The changes producing the asymmetrical enlargement are briefly as follows: The acini undergo great dilatation with colloid, the lining cubical cells become flattened, the intervening stroma is absorbed, and a small cyst is formed. This degenerative cystic formation generally causes the formation not of a single cyst but multiple small ones. Haemorrhage may take place in these, thus increasing their volume. Another cause of asymmetry is the growth of a definite encapsulated adenoma, which in its turn often becomes cystic. There may be one or many adenomata, and all stages of cystic degeneration of these may be seen in one gland. Again, asymmetrical enlargement is seen in carcinoma, primary or secondary, in sarcoma, and in endothelioma of the gland. Suppuration is yet another cause of asymmetrical enlargement, and is due to breaking down of new growths, especially sarcoma, to suppuration in a pre-existing cyst, either due to auto-infection or to the injudicious introduction of a septic needle. Metastatic pyogenic deposits have been seen in pyaemia and very rarely gummatous and tuberculous granulomata.

If the parenchymatous goitre is of long standing, other degenerative phenomena are common. Fibrous degeneration, with shrinking of the acini and blood vessels and great increase of the fibrous tissue stroma, may be found. This has been observed to lead to myxoedema, or at any rate patients with myxoedema sometimes give a history of having had previously an enlarged thyroid. Impregnation of the fibrous tissue stroma and colloid substance with lime salts is quite common, and true bone is said to have been observed. Colloid degeneration of the stroma itself is sometimes seen; and in such cases the walls of the blood vessels, becoming softened, may give way and a sudden enlargement of the gland due to haemorrhage take place. Amyloid degeneration is occasionally found. The arteries being the chief seat of change, but circumscribed amyloid deposits have been also seen.

Course.

Many goitres, besides the deformity and slight dyspnoea, give rise to no other symptoms.

Dyspnoea, however, is often urgent, and depends on several factors. The gland being tightly bound round the trachea by the deep cervical fascia causes lateral pressure

on the sides of the trachea, producing the "scabbard-shaped" stenosis. If one lobe only is enlarged the anterolateral aspect of the trachea is pressed inwards. It is extremely rare for the pressure to be exerted in an anteroposterior direction, and I have not seen such a case. Another cause for very urgent dyspnoea is enlargement of one or both lobes in a downward direction and impaction behind the sternum. Dyspnoea due to paralysis of the abductor muscles of the larynx by pressure on the recurrent laryngeal nerves I believe I have seen in one case; it was most urgent; aphonia was present at the same time, but the patient was far too cyanosed when I saw her to warrant a laryngoscopic examination; hemithyroidectomy was performed, and she is now well but has paralysis of the right recurrent laryngeal nerve.

Dyspnoea due to penetration of the trachea may be produced by malignant disease or rupture of a suppurating cyst. Softening of the tracheal rings is supposed to occur, but my experience coincides with that of Berry; in one case in which stridor had been so marked that tracheotomy had been performed I was able to show *post mortem* that the tracheal rings were compressed laterally, but no absorption of cartilage had taken place, and they were in no wise softened.

Besides these cases of dyspnoea, acute oedema of the larynx has been seen, more often in malignant disease of the thyroid than in simple, and swelling of the mucous membrane of the trachea itself may also occur. If there is inflammation of the thyroid gland itself, there may be extension into the lumen of the trachea; but more often the swelling of the tracheal lining is only part of a general catarrhal condition of the air passages due to cold, influenza, etc., and only becomes noticeable from the lumen of the trachea being narrowed by a thyroid tumour. A patient with a parenchymatous goitre often says there is no dyspnoea unless he has a cold, and then it may be very urgent indeed.

Difficulty in swallowing is not a common symptom, but in one case under my care it was the only one. Several cases of intense dysphagia due to goitre have been described, but were mostly due to extensions of the thyroid behind the oesophagus and pharynx.

Pressure on the cardiac nerves and on the large blood vessels has been described, especially in the intrathoracic goitres. Tachycardia and irregular heart-beat and some oedema of the head and face, especially the eyelids, have resulted from such goitres.

The symptoms hitherto detailed have been mechanical or pressure symptoms. If the thyroid gland is removed or atrophies, the train of symptoms known as myxoedema results. Now, when all its elements undergo hypertrophy, are there no physiological symptoms produced other than pressure symptoms?

In order to answer the question properly it is necessary to consider what we know of the secretion of the thyroid gland, which is so necessary to the human body. The thyroid is a ductless gland and the colloid substance which fills its acini is its internal secretion or contains it.

The colloid is formed from the granules which can be seen in the cells of the acinus; these granules discharge themselves into the lumen of the acinus, where the colloid collects until a separation of the cells is produced by pressure and the colloid is emptied into the lymphatic spaces. From these spaces the lymphatic vessels convey the secretion into the blood stream by the thoracic duct, etc. According to some observers the colloid is directly absorbed also by the capillary blood vessels. Chemical examination of the gland shows that it contains two products, a nucleo-albumen and the colloid substance. This latter substance is a compound proteid containing iodine, the percentage varying, but forming about 3 per cent. of the dried gland. The colloid is not a nucleo-proteid, as no albumin is yielded by gastric digestion. When the colloid is subjected to digestion, only those substances which contain iodine possess active properties. The active substance, called iodothyronin, produces the same effect on the metabolism of the body as the gland substance itself. It is a brown amorphous substance, almost insoluble in water, but readily soluble in weak alkalis. It contains phosphorus and about 10 per cent. of iodine and gives no proteid reaction.

The nerve supply of the gland is derived from the vagal nerves and the sympathetic. Pembrey did

not observe any structural changes in the cells as the result of section or stimulation of these nerves or of the vago-sympathetic trunk, and states that the evidence is all against nervous control of the glandular tissue of the thyroid. Edmunds, experimenting with dogs, comes to much the same conclusion. He says:

The paralyzing operation does produce some effect both clinical and pathological, but not a great effect; and it must be inferred that the secretion of the thyroid gland is due mainly to a chemical stimulus acting directly on the secreting cells, or on the nerve endings distributed to them, or through fibres which pass along the blood vessels with the sympathetic fibres.

The present belief appears to be that the thyroid gland is in a constant state of slight activity, which is increased under certain conditions. The stimuli which affect the gland appear to be chemical and arrive by way of the blood stream. Proteid feeding has been thought to produce hyperactivity, in fowls at any rate; but Forsyth's controverts this view, which was put forward by Chalmers Watson in 1904. Fordyce² (Edinburgh) has made some interesting observations as to the result of feeding rats with milk only or bread and milk. Increase of colloid was found in the pure milk-fed rats. The fact that symptoms of hyperthyroidism do not occur in all goitres that are hypertrophied cannot be due to diminution of the lymphatic spaces by increased amount of fibrous tissue present and the consequent contraction that would follow. In those cases of parenchymatous goitre in which the colloid is so abnormally increased in amount that the freshly cut surface has a honeylike appearance, one would have expected that the colloid would readily have been absorbed by the lymphatics, which are also increased in number. But as a rule we find no symptoms of hyperthyroidism in such cases, so it is probable that the amount of colloid material is no indication of the amount of active internal secretion, and this enormous increase of colloid is a sign of gland degeneration rather than of increased cell activity.

Exophthalmic Symptoms.

But there are occasionally seen cases—the *formes frustes* of the French—which present clinically in the goitre, and also microscopically, typical parenchymatous glands, and which have also marked general symptoms, especially tachycardia and tremors. It has been attempted to prove that those cases of Graves's disease which have apparently benefited by hemisection came under this category. With this view I disagree, and will relate two cases in justification.

CASE I.

Mrs. C. W. came to the out-patient department of the Derbyshire Royal Infirmary in June, 1905. She had had no children, and gave a history of poor general health. The thyroid was enlarged, especially on the right, where it extended from the right sterno-clavicular joint to the submaxillary region. There was some hoarseness and difficulty in swallowing, but tachycardia, palpitation, and tremors of the hands, faintness and giddiness were the chief symptoms. There was no exophthalmos, and von Graefe's sign was absent. The heart was enlarged, and the pulse-rate 136. There was impaired movement of the right vocal cord.

She was admitted under Dr. Thornton, and as with rest, etc., no improvement followed, I saw the case with him and advised operation. A very large right lobe was removed, and part of the isthmus, the pathological report on which is as follows: "This is a typically parenchymatous goitre. The cells of the thyroid are of different sizes, and their lumen is full of colloid substance. There is no small-celled infiltration or epithelial proliferation."

The wound healed by first intention, and she was discharged with a pulse-rate of 80, palpitation and tremor still present; the right vocal cord was still not freely mobile, and the dysphagia had not quite disappeared. For two months she was kept under observation and the dysphagia became more marked, a swelling in the middle line running up to the thyro-hyoid membrane appeared, and in September, 1906, I removed a lobulated tumour undergoing cystic degeneration. Since then there has been no dysphagia, her general condition is better, and the tachycardia only present on any mental excitement.

This was one of the *formes frustes*, which benefited to a considerable extent by operation.

CASE II.

E. W. had been a domestic servant, but had done no work for two years owing to Graves's disease. The symptoms were increasing, swelling of the thyroid gland, pulsation and thrill, very marked exophthalmos, von Graefe's sign, Stellwag's sign, tremors of hands, jerky movements, tachycardia, hot flashes, and wasting diarrhoea. The pulse-rate was 140 when seen at

the out-patient department. She attended for four months and did not improve; she was then admitted under Dr. Thornton, who treated her for six weeks.

As she was getting weaker rather rapidly he asked me to operate. I used local anesthesia, allowing the patient to smell a Skinner's mask flavoured with chloroform. The whole right lobe was removed and the left superior thyroid artery ligatured. The microscopical report was: "This is a thyroid gland showing the characteristic cell proliferation found in exophthalmic goitre."

Although rather excitable for twenty-four hours after the operation, she made a rapid recovery and has now been at work for nearly twelve months. Her pulse-rate is about 80 and all her other symptoms have practically disappeared except the exophthalmos, which I think is much the same, but the patient declares is better.

I think it is not necessary to say more to prove that this was a true case of Graves's disease which had benefited by operation. I have had the opportunity of seeing with Dr. Thornton several other cases of *formes frustes* in which the symptoms have not been so well marked, but the occurrence of hyperthyroidism as the immediate result of surgical interference may be touched upon in this connexion.

In one of my own cases, a girl with a large parenchymatous goitre and a thick short isthmus, there were symptoms of hyperthyroidism, restlessness, rapid pulse (140), flushed face and slight elevation of temperature for forty-eight hours after operation. The wound, which was drained as usual for twenty-four hours, was perfectly aseptic throughout. After forty-eight hours the pulse-rate came down to normal, and the patient was discharged cured in a week. In a case under one of my colleagues I saw the same condition. In the case of a young man, operated on by Mr. C. H. Hough at the Derbyshire Royal Infirmary, the heart, a few hours after operation, became very rapid and irregular, great restlessness and sweating was noticed, together with tremors of the hands. The patient died in thirty-six hours from the time of operation. All these cases were both clinically and microscopically parenchymatous goitres. In all the internal secretion must have been distributed to the body in excess at the time of the operation. This must have been due to the manipulation of the gland forcing the internal secretion into the lymphatic spaces, although, as far as possible, this is reduced to a minimum by retracting the surrounding structures away from the gland and touching it as little as possible with the hand. Another cause must be escape of the internal secretion directly into the wound when the isthmus is divided. To limit this as far as may be, the isthmus is, when possible, crushed in a clamp, ligatured and divided, and the wound is rapidly washed out with hot normal saline to limit the amount of internal secretion left in it. If the isthmus is thick and fleshy, the application of the crushing clamp itself must force an undue amount of internal secretion into the surrounding lymphatic spaces. I have noticed that post-operative hyperthyroidism has not occurred in patients whose thyroids contained enormously dilated acini, but rather in those firm, fleshy glands in which the acini are only moderately distended with colloid; these patients are usually young people—that is to say, post-operative hyperthyroidism is most likely to occur in the actively secreting glands of moderate size, and not in the parenchymatous glands which are enormous and whose contained colloid is more a sign of degeneration than active secretion. I know that certain patients with cystic goitre, when the cyst has ruptured during operation, have exhibited signs of post-operative hyperthyroidism, but as a rule no such manifestation occurs. Enough has been said to warrant the belief that the colloid is the vehicle which contains the active internal secretion, and this may be present in a larger or smaller amount, but the quantity of colloid substance present is no indication of its physiological value.

THE OPERATION.

A sandbag is placed under the neck. The anaesthetist is shut off from the operation area behind a sterilized sheet held over two upright iron supports. The sheet is continued over the body, and there is a slit in it which comes over the goitre, the edges of which can be clipped to the skin incision. In parenchymatous goitre the incision should be transverse. The resulting scar is excellent, and can be concealed by a strip of velvet or a necklace. None of my patients have been dissatisfied with the

cosmetic result. The anterior borders of the sternomastoids should be well defined to permit of easy retraction. The infrahyoid muscles and the layer of fascia covering them are divided close to the hyoid bone and dissected off the front of the gland. In this way the nerve supply is not interfered with, and the line of suture at the end of the operation does not coincide with the skin incision. All bleeding is now carefully stopped. The upper pole of the lobe to be removed is cleared first, and the superior thyroid artery and vein clamped between two pairs of forceps and divided, and then tied off in one ligature. In some of my earlier cases I tied the superior thyroid vessels with an aneurysm needle and then divided them. But since the ligature with which the artery was tied once slipped off when I was dividing it, I have given up the aneurysm needle. The next step is to tie the middle thyroid vein, and in doing so to free the outer border of the gland. Then the upper border of the isthmus and the pyramidal lobe is cleared, and then the lower border of the isthmus is defined. The inferior thyroid vein is tied at this stage, and the thyroidea ima if present. The isthmus having been defined is crushed up in a clamp, one blade of which is carefully passed between the trachea and isthmus. The crushed portion is easily tied and divided; if any colloid escapes at this time into the wound it is washed out at once with hot sterile saline solution.

The half gland can now be held downwards and forward, and the attachment is the inferior lateral ligament and inferior thyroid artery. This is the most anxious part of the operation. The artery is in such close relationship to the recurrent laryngeal nerve that several methods have been adopted to protect the latter. Careful isolation of the nerve has been performed, but in one case in which I did this the patient suffered from recurrent laryngeal palsy which did not clear up for several weeks after operation. Another method is to cut obliquely into the tissue of the gland itself and to pick up the points of the inferior thyroid artery inside the capsule. In this way the nerve is not seen and the bleeding arrested easily, but unless the assistant is very careful not to allow the ends of his forceps do more than seize each bleeding point, I conceive it possible that the nerve might be nipped up and included in a ligature just the same. I now prefer to hold the gland well out of the wound, and, cutting absolutely on to the capsule itself, pick up the branches of the artery just as they penetrate the capsule. By this means I often see the nerve, but do not disturb it with instruments, and so have never had any traumatic neuritis. The gland being now free is lifted out of the wound, a hole is made at the lower end of the musculo-fascial sheet, a drainage tube inserted, and the muscles and fascia sutured where divided, the sandbag under the neck being removed at this point and the head raised by the anaesthetist. The skin is now sutured with interrupted finest silk-worm gut, the glass drainage tube is left projecting, and the wound carefully dressed with sterile gauze, wool, and bandage. The patient is propped upright in bed, with bed-rest and pillows carefully supporting the head. The wound is dressed in twenty-four hours and the tube removed. The patient is allowed out of bed on the fourth day. Stitches are removed on the sixth or seventh, and a collodion and gauze dressing applied.

Single adenomata may often be shelled out easily, and sometimes multiple ones also by cutting into the gland capsule and dividing the gland substance until the adenoma is reached. But it often happens, if many adenoma are present, that a hemi-extirpation is the only practicable operation possible.

The immediate results of thyroid operations are excellent; healing by first intention is practically always obtained. Amongst nearly forty cases that I have had in hospital and private practice, there has been one case of suppurative, and that occurred after the wound had apparently healed, being due to a spreading infection from the site of the tube.

REFERENCES.

¹ *Physiological Journal*, 1907. ² *BRITISH MEDICAL JOURNAL*, 1907.

THE late Mr. J. A. D. Shipley, solicitor, of Newcastle-on-Tyne, has directed that after the payment of certain legacies his residuary estate, estimated at £100,000, should be divided amongst various local charities, including the Royal Victoria Infirmary and other medical institutions.

PULMONARY TUBERCULOSIS IN CHILDREN.

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I hold the view that phthisis is one of the most common diseases of childhood, and that among those who die of it at the ages when it causes the highest mortality, the majority have contracted and suffered from the disease in childhood—that is, during the first fifteen years of life.

I am aware that eminent men have frequently and recently expressed opposite views. I know that to venture to express my views is to be called an alarmist; but I consider that in order to abolish the high phthisis death-rate in early adult life it is absolutely essential to admit that the disease has existed in a recognizable condition for years, and during these years, has been in the highest degree amenable to treatment.

Death and Morbidity Statistics.

Various figures are given as to the number of persons found at autopsies to have tuberculous lesions in the lungs.¹

Death Statistics, London, 1905.

Estimates vary from 27 to 75 per cent. Let nearly the lowest—30 per cent.—be taken.² In 1905 the phthisis death-rate in London was 0.142 per cent. of persons living.

(a) Therefore for every 0.142 persons dying of phthisis, 30 suffer from it. This ratio probably holds also for children, and if not, it is too low. The number of children dying of phthisis in London in 1905 at ages 5 to 15 was 176.³

(b) Therefore the estimated number of children dying of phthisis in London in 1905 at ages 5 to 15 was 92.

(c) From (a) and (b) we find that the number suffering from phthisis corresponding to the 142 dying of it = $30 \times \frac{142}{0.142} = 30,000$.

(d) Number of children aged 5 to 13 in London = 694,774. From (c) and (d) we find that among 694,774 children the number suffering from phthisis = 30,000.

Results of Medical Inspection, London, 1905.

The number of children on the rolls in the London schools examined was 165,915. Therefore the probable number suffering from phthisis among these was $\frac{30,000}{694,774} \times 165,915$

= $[\log. 30,000 + \log. 165,915 - \log. 694,774] = 7.164$ —that is, it is probable there were, roughly, 7,164 children suffering from phthisis in the schools examined, and from (b) and

(c) the number of deaths from phthisis = $\frac{142}{694,774} \times 165,915$

= 34 (approximately).

In the report of this year, 1905, there is no record of the finding of any cases of phthisis, though we have seen that it is probable some 7,000 children were suffering from it in the schools examined.

Death Statistics, London, 1906.

The alteration in percentage death-rate from phthisis in London between 1905 and 1906 was 0.002.⁴ The number of deaths from phthisis between 5 and 15 was (74 + 82) 156, instead of 176 in 1905.⁵ Considering the ages 5 to 13, this number would be 123. Hence there was no material alteration in the number of deaths.

Results of Medical Inspection, London, 1906.

In the schools examined this year there were on the rolls 208,374 children, and there was again no record of cases of phthisis.⁶

In an examination undertaken in a few schools with special reference to phthisis, a few cases were recorded, reaching the percentage of 0.5.⁷

But if 123, according to the Medical Officer of 11¹, for London's returns for 1906, died of phthisis among the 694,774 children in London, there must have been, roughly, 36 school children who died of it, and some 7,605 children suffering from it, among the schools examined.

These calculations are based on nearly the lowest set of figures obtainable. We can only suppose that these 7,000 children were all suffering from it in a so-called latent stage; or, in plain language, in a stage not sufficiently advanced for those particular observers to detect it.

We are thus met at the outset with a startling fact. Some 200,000 children were on the rolls in the schools examined, and were inspected by certain members of the staff of twenty-five doctors. It is true that the examinations were not as systematic as is demanded now, but a fair number were cases of delicate children picked out by the teacher, or the doctor, for ill health,

and hence were more likely to have been suffering from phthisis than if the work had been purely routine—that is, only among non-selected cases. It has been contended that there were no cases of phthisis in those schools because they had been drafted into the "invalid schools." There is no record in 1905 of such a drafting in the report of those invalid schools; and if they had been so drafted there would have been some mention of the examinations in the ordinary schools, when the fact that they suffered from phthisis was detected. According to the figures I have just given it is obvious that there must have been children examined in every stage of phthisis, except the late stages, and that the examining doctors failed to detect the disease. What happened in London is sure to have happened elsewhere.

In a leader on the subject in the *BRITISH MEDICAL JOURNAL* of February 9th, 1907, is the following passage:

It is a curious fact that no cases of pulmonary tuberculosis, or of predisposition to pulmonary tuberculosis, are noted in the London elementary schools. In France a large number of children, ranging from 2 years to the end of school age, are received into sanatoriums for children, either predisposed to or suffering acutely from tuberculosis. How is it, then, that in England, where such a large number of deaths occur from phthisis, no notice is taken of the disease until after school age? It is in the highest degree improbable that the true condition here differs so essentially from that existing in France, and a careful inquiry into the matter would be of the very greatest interest.

In 1906⁸ the presence of sixteen phthisical children is reported in the invalid schools.⁹

Dr. Newsholme quotes the following figures as obtained by various observers to indicate the amount of phthisis in our school children.¹⁰

	Number of Children Examined.	Percentage Phthisis.
Drs. Lecky and Horton (Brighton)	806	0.37
Dr. Mackenzie (Edinburgh)	600	2.3
C. O. S. (Edinburgh)	1,318	1.4
Professor Hay (Aberdeen)	600	0.5

Dr. Greenwood, in Blackburn, among 1,023 children, gives 6.7 per cent.¹¹

The late Dr. Grancher, of Paris, in a most careful paper on the subject, found the percentage among 4,226 children to be 15.¹²

Dr. Hyslop Thomson reports from Glasgow that among 779 patients seen for chest complaints in hospital there were 43 children under 16 with phthisis.

Proportion of Tuberculosis Found Post Mortem in Children Dying of Various Diseases.

With tuberculous lesions in any organ, Harbitz¹³ of Christiania, among children under 15, found 42.5 per cent.

Comby,¹⁴ of Paris, gives for children aged 2 to 10, the percentage 67, and for the ages 10 to 16 the percentage 64.

Nägeli,¹⁵ of Zurich, has furnished a series of figures, which are frequently quoted. For children under 13 his series gives a percentage of 17. But he explains that this figure is much too low, as for various administrative reasons children with tuberculosis are commonly refused admission to the hospital at which the necropsies were made.

The most complete table I have been able to obtain is that drawn up by Hamburger and Sluka,¹⁶ who give their own results and also the figures obtained by other observers. A most careful bibliography is given at the end of the paper.

Author.	Age of Children.	Number of Necropsies.	Number of Tuberculous.	Tuberculous per cent.
Müller	0-15	500	209	46
Baginsky	?	806	144	18
Orth	0-15	418	47	11
Nägeli	0-15	88	15	17
Burchhardt	0-15	130	72	43
Ancell	0-15	154	42	28
Hamburger and Sluka	0-14	451	100	40

¹ Read in part before the Worcestershire and Herefordshire Branch of the British Medical Association, and in part before the Association of Registered Medical Women, London.

Further information is given for special ages (1) by Müller,¹¹ (2) by the authors:

Age.	Number Found Tuberculous.	
	1. Per cent.	Per cent.
5-6	50	60
7-10	40	64
11-14	75	77

Hamburger and Sluka¹² also state that among 100 children dying in a hospital in Vienna, of various diseases, 40 had tuberculosis, recognizable by macroscopic examination. This number would, of course, be much higher if microscopic examination had been made. These Austrian figures probably fairly represent English ones—for it has been shown that the death-rate in London was 142 per million, while for Austria in 1901 it was 144.¹³

Ganghofner²⁰ has given figures for 1,800 autopsies on children who during life had not been recognized as suffering from tuberculosis:

271 deaths, ages 4-6, percentage with tubercle = 26.9.
123 deaths, ages 6-8, percentage with tubercle = 26.8.

It is very difficult to obtain figures as to the numbers in whom tubercle was found in the lungs, and we can only consider approximate figures.

Hamburger²¹ gives 63 cases of pulmonary tuberculosis in 160 cases of tuberculosis. Nägeli states that of his cases nine-fifteenths showed lesions in the lungs.

Dr. Newsholme²² estimates that among deaths due to tuberculosis the proportion due to phthisis is 69.5 per cent. Professor Osler²³ quotes Müller to the effect that, in children, the lungs are involved in 92 per cent. of tuberculous infection. This was the percentage at autopsies at the Munich Pathological Institute.

We may note here that Baginsky, in 933 autopsies in children with tuberculosis, could find no case in which the lungs only were infected, indicating, that primary lung tuberculosis is rare in children.²⁴

We thus see that statistics from autopsies support the contention that tuberculosis of the lungs is a common disease in children.

There is a serious discrepancy between the figures for tubercle of the lungs in the dead, and the highest figure we have been able to find for recorded English observations in the living, that given by Dr. Greenwood, 6.7 per cent. Apparently observers class the undiscovered cases as "latent," but I can hardly believe we are willing to admit we cannot do something better at diagnosis than this.

PROBABLE AGE OF INFECTION.

Professor Behring has said: "The bacilli which gain access to the alimentary tract in infancy constitute the important etiological factor in the production of the tuberculous infection which leads to consumption."²⁵ With this statement I agree, and I believe that the great majority of the cases of consumption, especially those who die between 15 and 35, were infected in early childhood, and have had tuberculous lesions in the lungs for periods varying from five to twenty years.

In a recent most able paper read by Dr. Newsholme before the Epidemiological Society, he altogether differs from Professor Behring, and in support of his view he adduces statistics relating to the ratio between deaths from phthisis and the infantile mortality in various countries.

His argument is that tuberculous infection from cow's milk must take place mainly in those districts or countries where the greatest amount of artificial feeding takes place. This appears reasonable, except in so far as we need not limit the period of probable infection to the first year of life; I would extend it in a lessening rate through the years of childhood. The best gauge of the amount of artificial feeding is admittedly the infantile mortality rate. So far, in the main, I agree. But then, Dr. Newsholme continues, if the liability to the infection and the infant mortality are both greatest under the same circumstances—that is, when there is much artificial feeding—then the infant mortality-rate and the phthisis-

rate should show a definite correspondence in the various towns and countries. But he states "there is an utter absence of correspondence," and in support of this statement he gives statistics. Hence he deduces that Professor Behring's theory of the frequency of infantile tuberculous infection is in the highest degree improbable.

I disagree entirely with this deduction. If the infantile mortality is high, that means that a large number of the children infected with tuberculosis by cow's milk die in early infancy. Probably the majority of those seriously infected die. These deaths will be certified as due to every disease of which babies may die, and will not materially raise the phthisis-rate.

Surely it is obvious that, according to this view, there will be left, in such areas, a much smaller proportion of children than usual with tuberculous infection, and hence a high infantile mortality will produce a low phthisis death-rate. And this view is confirmed by the actual statistics given by Dr. Newsholme.²⁶

	Phthisis-Rate.	Infantile Mortality-Rate.
England and Wales	1.23	139
Belgium	1.25	147
Scotland	1.53	123
Ireland	2.15	99
Norway	2.02	86
Sweden	2.92	96

Dr. Newsholme also argues against this view (that of frequent tubercle of the lungs in childhood), because the phthisis death rate has declined greatly in the last forty years, and he states there has been no corresponding improvement in the condition of the dairies. This is not a very convincing argument; many of us think there is a very appreciable increase in the trouble taken to obtain germ free milk. We still use milk which is a disgrace to civilization—but we used to use milk which was a disgrace to barbarism. We take a certain amount of care now in regard to the milk after it has left the hands of the milkers, and we sometimes endeavour to destroy the tubercle bacilli, though we still do little to prevent their obtaining entrance to the milk.

Now let us see whether my view finds support, or the reverse, from other statistics given by Dr. Newsholme²⁷—namely, the varying death-rates from phthisis for the two sexes at different age periods.

RATIO OF MALE TO FEMALE DEATH-RATE AT EACH AGE PERIOD. That of Females at each Age Period = 100.

Age Period.	Urban Counties.	Rural Counties.
0	117	117
5		46
15	107	92
25	134	121
35	160	121
45	224	166
55	241	163
65	223	164
All ages	150	116

The main fact is that in childhood, from 5 years to 15 in the towns and somewhat longer in the country, there is some factor which keeps the male phthisis death-rate below the female; and conversely, as the boy reaches manhood, there is some factor which causes the male phthisis death-rate to be higher than the female.

In early childhood, as babies, boys and girls are treated very much alike. As children there is a distinct difference. From 5 to 15 is the boy's "good time." His comfort is considered before his sister's, and he himself succeeds in assisting to maintain this desirable state of things. He is regarded as needing the best food, and out of school hours he is out of doors playing. The girl is all too frequently

indoors nursing the baby or helping in the house. If the boy and girl are both infected with pulmonary tuberculosis, which has the best chance of keeping in good health? The boy undoubtedly. Hence during boyhood the male phthisis death-rate will be lower than the female.

In the country this state of things will probably continue in the boy's favour longer than in the town, for, if the boy begin work at 12 or 13, in the country it will probably be out-of-door work. In the towns circumstances will be less in his favour, and this fact is borne out by the phthisis death-rate.

As the children reach adult life the factors in favour of the boy cease to operate: the male is the breadwinner, and the stress of work falls on him. Suppose, again, both the boy and girl infected; throughout his boyhood circumstances have been favourable to the boy, he has held his own in the fight against the bacilli. But once let such a boy be exposed to the stress of work, with the many influences so aptly described by Dr. Newsholme as "urbanization," and the apparently latent infection will take effect; the young man will succumb. No such immense change in circumstances takes place as a girl reaches womanhood, and hence the phthisis death-rate among the young women is then less than among the males.

The second factor operating to maintain this inequality is the larger number among the girls who have succumbed to tuberculous infection in childhood. A smaller number of infected are left alive in early adult life among the females than among the males.

Urbanization.

The discrepancy between the phthisis death-rate of men and women is much higher in the towns, and this is what one would expect, for the urbanization would have more effect on the men than women. But as the effects of urbanization would take some considerable time to act detrimentally, it is reasonable to consider that the effect would be greatest in later years, and hence would produce its chief effect on the death-rates at a period when our two previous factors have nearly ceased to act.

Methods of Tuberculous Infection.

A few years ago we believed that in infant infection was by the alimentary tract, and that inhalation infection was unimportant. We believed that children suffered from tuberculosis mainly in the alimentary, glandular, and osseous symptoms. In regard to adults, the idea was that infection was mainly by inhalation, and that the phthisis, which causes the appalling death-rates from 15 onwards, was a disease originating in the lungs. So far as experimental evidence in animals went, there was nothing directly to contradict these views.

The most important points in recent work on this subject were very clearly recorded, with most careful references, by Sir William Whitla in the *BRITISH MEDICAL JOURNAL* of July 11th, 1908. He considers that the following points are proved:

1. That the bovine type of bacilli is found in human tubercle, the great majority occurring in intestinal or mesenteric disease.
2. That the bacilli can pass through the mesenteric glands without leaving any trace, thus disproving the widely accepted belief that, if no abdominal lesions are found in cases of phthisis, it is proof that infection was not via the alimentary tract.

Hence we cannot accept figures, such as Dr. Still's, based on the older theory.

3. "That in the immense majority of cases tuberculosis is not contracted by inhalation, but by the ingestion of bacilli or bacilliferous products by way of the intestinal mucosa." (Calmette.)

No one who has read the paper alluded to can doubt that, very shortly, this last contention will be an axiom.

The common route of infection appears to be the intestinal mucosa—not the stomach—by way of the lacteals or lymphatics to the mesenteric glands, thence (either free or in phagocytes) into the thoracic duct, to the venous circulation, and thence to the lungs. The deep cervical glands share in this infection, and this is of importance as explaining some of the cases of cervical adenitis in which no local lesion can be detected, and as suggesting that in many cases, when there are tuberculous glands in the neck, their infection is a later event than that of the lungs, and has occurred by the same route.

As bearing on this question as to when the disease is acquired, I may quote the opinion of the Royal Commission of 1894, that: "No doubt the largest part of the tuberculosis which man obtains through his food is by means of milk containing tuberculous matter." And Dr. S. Martin says "that the milk of cows with tubercle of the udder preserves a virulence which can only be described as extraordinary."

The work reported by Sir William Whitla indicates that the chief track of tubercle infection is by the alimentary system. The commissioners insist that milk is the most common article of infected food. Undoubtedly milk is more used as a food by children than by adults, and hence this line of reasoning leads back to my original contention—that the greater part of the phthisis existing in adults starts in young children. Further, von Behring, and also more recent observers, have shown that the greatest permeability of the intestinal mucosa exists in early childhood, and, hence, that it is at this period that tuberculous infection of the lung is most liable to take place.

It is no doubt probable that a certain amount of infective material is first inhaled into the mouth and pharynx and then swallowed. This source of infection is open to children and adults alike, with again, however, a reservation in favour of its more common action in childhood, for the reason that it is in childhood that we find the greatest amount of mouth breathing, and in early childhood that we find the greatest tendency to place in the mouth articles other than food which may have become infected with tuberculous dust.

Dr. Newsholme puts forward the view that segregation of consumptives, particularly of the advanced cases, has been the most important item in the various changes which have brought about a decrease in the death-rate from phthisis.

I venture to suggest another change which has worked in the same direction—namely, since the beginning of compulsory education, the taking of the children out of their homes, for five hours a day, into the schools. The homes are the places where the most infection must exist for they are the places where the last stages of a consumptive's life are passed. In school there are rarely cases of advanced consumption.

But, though the present conditions are an improvement much may still be done in the same direction. There are phthisical children in school and phthisical teachers, and whenever these have coughs they may be a source of danger. Dr. Tatham has found a specially high phthisis-rate among teachers. Heyman²⁸ has shown that in coughing tubercle bacilli are given off, and were collected by him on Petri dishes in 70 per cent. of the experiments. Cadéac²⁹ has shown that the bacilli contained in these "droplets" of phthisis sputum are highly virulent. And, though we may not consider there is much danger of their being inhaled directly into the lungs, yet it is undoubtedly possible that the other method of infection mentioned may occur. Hence it is important that all phthisical children who cough in the day time should be excluded from school. In Denmark no teacher is admitted to the elementary schools without a thorough examination to exclude phthisis, and this is an excellent example for us.

Dr. Bulstrode, in his *Report on Sanatoria*, states that there is one subject on which opinion and evidence are alike—namely, the overwhelming importance of the early diagnosis of the disease, and he quotes Dr. Latham, "That the early diagnosis of pulmonary consumption is a question of supreme importance, perhaps the most important which the physician has to face." Again and again the point is urged that the patients in the sanatoria die because they are sent too late. Hence we are brought back to the importance of the question as to what extent phthisis exists in children.

I am aware that there is a certain number of physicians who say that they will not admit any case to be phthisis until and unless they find bacilli. I have so little sympathy with such a death-dealing view that I can only quote the words of a man whose authority most will acknowledge. Professor Grancher said:

To wait for the presence of tubercle bacilli—that is to say, to wait for the presence of cavities in the lung—is to do an immense injury to the patient, to render incurable or very difficult of cure a tuberculous infection which would have been curable in an earlier stage.

I well remember the two cases, both of close personal friends, which impressed this view upon myself. In the one case we hunted twenty-one times for the bacilli, over a period of two years, before we found them, and then the disease had advanced so far it required years to arrest it; and in the other case we examined twenty-seven specimens, and only demonstrated the disease to an unbelieving family doctor at a stage when it had become hopeless.

There is a widespread belief concerning phthisis which is extremely mischievous—that it is a disease which tends to a fatal termination in a period of less than five years. It is an extremely chronic disease, frequently starting and recognizable in childhood, and tending in the majority of cases to recovery.

Dr. Newscholme, to a certain extent, admits this view, for he says that "in notified cases of phthisis the infection very commonly dates back ten to twenty or even more years." If this statement only applies to the elderly among his phthisis cases, it has no bearing on my point. But if he admits the same statement for cases which are notified at ages of 20 to 30, then it would point to the infection having occurred in childhood.

So far I have tried to consider how far evidence, from widely different sources, supports the view I have put before you. Now, only shortly, I venture to lay before you my own experience on the subject. I started examining school children with two ideas on this subject:

1. That most authorities reported that phthisis is very rare among school children, but did not produce any statistics by men whom I could ascertain to have had special experience in diagnosing the disease in adults.

2. That over and over again while living abroad at phthisis stations, patients used to come to me, too late for cure, stating that they had been under their own doctor for years, and that they had started abroad directly he admitted that they had phthisis.

Gradually it began to dawn on me that there was some connexion between these two ideas. Then came the London statistics, a record of work in London among children, which contained no mention of cases of early phthisis, while the mortality returns showed that they must exist in large numbers. I began to consider whether the statements as to the infrequency of phthisis among school children was due, not to its rarity, but to the rarity of doctors who diagnose it.

When we want an opinion on a case of eye disease we consult an oculist. So with various other specialities, and I believe that the diagnosis of early phthisis is just as specialized a work. The cases of early phthisis do not commonly attend the hospitals complaining of lung symptoms, but of a hundred other trivial ailments. The temporary weakness is treated and the lungs are not examined. Hence students leave hospital with an idea of phthisis gathered from the advanced cases in the wards. Naturally we fail to detect cases early, and say we are not sure until we find bacilli.

The figures I have obtained from the children I have examined are, I believe, still too low (see table).

The most valuable figure I consider to be the percentage for the routine cases, town and country—namely, 14.3. The figure for all cases is somewhat higher, namely, 15.4 per cent., and for the selected cases is naturally still higher, namely, 17.9 per cent. In many cases the numbers dealt with are so low as to render the results almost valueless. My figure for all cases, 15.4 per cent., is almost the same as that given by Dr. Grancher.

I am told that some of my cases of phthisis are chronic bronchitis. Professor Osler says: "The frequency of bronchitis prior to recognized lung tubercle cannot be regarded as causative, rather is it symptomatic of existing tuberculosis."¹⁰ I think one difficulty has arisen from the fact that so commonly, bronchitis is a symptom, and yet our textbooks classify it as a disease. I have studied four textbooks on this subject recently, and so far as the point is alluded to at all, it is evident that bronchitis is used to indicate the pathological condition, quite apart from the etiology; the result is that the bronchitis, which is a mere symptom of phthisis, is spoken of as if it were the main disease.

I believe that a chronic non-tuberculous bronchitis is rare between the ages of 5 and 50, unless due to heart disease, Bright's disease, or some other definite pathological entity, and is extremely rare in comparison with phthisis. Dr. Sutherland, in his recent book on *Treatment*

Table showing Results of Examination of Children in Town and Country Schools.

Routine means that the children were taken as they chanced to occur at the given age. *Selected* means that they were those picked out for some sign of ill-health, either by the teacher or myself. This group included many cases picked out only for defective eyesight, vermin, etc.

Routine or Selected.	Sex.	Age Period.	Number Examined.	Number with Phthisis.	Percentage Phthisis.	Town or Country.
Routine ...	Male	3-6	41	2	7.3	Country.
" "	"	12-14	97	17	17.5	
Selected ...	"	6-12	56	9	16.1	
Routine ...	Female	3-6	55	7	12.7	
" "	"	12-14	241	28	11.5	Town.
Selected ...	"	6-12	139	21	15.1	
Routine ...	Male	3-6	55	4	7.3	
" "	"	12-14	44	6	13.6	
Selected ...	"	6-12	29	5	17.2	Country.
Routine ...	Female	3-6	79	5	6.3	
" "	"	12-14	315	63	20.0	
Selected ...	"	6-12	255	33	12.3	
All cases ...	Male	All ages	134	29	14.9	Country.
" "	"	"	128	15	11.7	Town.
" "	Female	"	438	56	12.8	Country.
" "	"	"	549	101	18.4	Town.
All cases ...	Both sexes	All ages	632	85	13.4	Country.
" "	"	"	677	116	17.1	Town.
All cases ...	Both sexes	All ages	1,309	201	15.4	Town and country.
Routine ...	Both sexes	3-6 (12-14)	427	55	12.6	Country.
" "	"	"	493	78	15.8	Town.
Routine ...	Both sexes	3-6 (12-14)	930	133	14.3	Town and country.
Selected ...	Both sexes	6-12	195	30	15.4	Country.
" "	"	"	164	38	20.7	Town.
Selected ...	Both sexes	6-12	379	68	17.9	Town and country.

of Diseases in Children, does not give a chapter to "chronic bronchitis"; apparently he agrees that it is a disease of the aged. He regards an intermittent bronchitis as a common complication of fibroid phthisis; he speaks of the chronic bronchitis of young children due to rickets, but the usual chapter on chronic non-tuberculous bronchitis is absent.

A child with tuberculous infection in the lungs is by no means necessarily what people mean by "consumptive." In the majority of cases I believe the disease tends naturally to cure, and that, when this is not so, it is on account of one of the following reasons:

1. That the child started life with a hereditary predisposition to the disease, which must be counteracted by special treatment.
2. That the child has been subjected, or is continually being subjected, to so severe an infection that its vital forces are beaten at the outset.
3. That the circumstances of its life are unfavourable.

These three possibilities render it imperative that we should find out which children are already infected, in order that we may counteract any hereditary tendency and alter any adverse circumstances.

Phthisis is not a disease which requires combating chiefly on account of its fatal tendencies, but because it is a disease creating our army of "ineffectives," the people

who are prevented by chronic ill-health from doing effective work. Again, it is a disease to be fought because so many of our children with the best brains are attacked by it. If ever a teacher says to me that such and such a boy is the sharpest in the school, I always notice the lungs with extra care.

Early Symptoms and Signs.

The following remarks do not refer to cases in an advanced stage, children definitely ill, nor need I allude to the classical types of the tuberculous.

Night sweating is a symptom concerning which one of my colleagues has no faith. He says that they all say they sweat. That seems to me only saying that "all men are liars," and needs qualification. There are certain distinctions to be made:

1. If the sweating has existed all the child's life, it is probable the original cause was rickets. If it has started recently, or has existed in infancy, stopped, and started again, it has weight.
2. If the sweating is not constant, but occurs from time to time, whenever the child catches cold (of course excluding the results of hot drinks at night).
3. The sweating must be on the forehead or round the neck. It may be elsewhere as well, but, if the forehead is always dry, I am sceptical.
4. The sweating must be worse in cold weather.
5. Must not be due to heavy bedclothes.

If these five conditions are present, sweating at night in children over 5 is mainly due to tuberculosis.

Morning Anorexia.—The second symptom of importance is eating no breakfast. You doubtless remember the eminent man (was it Sir A. Clark?) who said that if a man over 40 ate a good breakfast he would pass him for life insurance. There are few children with active phthisis who willingly and regularly eat a good breakfast.

Fatigue.—The third symptom is that they tire easily. They may forget the tiredness in excitement, but, if so, they collapse afterwards. Many of my cases of phthisis reach home from school so tired they promptly go to sleep.

Other Symptoms.—Other symptoms are legion. Children with early phthisis are constantly catching cold, have headaches, etc. Cough is a matter of chance, the majority of early cases do not cough in the daytime, hence are not dangerous to others. One symptom, which can only be discovered in a fairly intelligent patient, is pain, pain quite apart from pleurisy, occurring early, over a small lung area. It is a feeling of soreness or dull ache, and appears to indicate inflammation commencing in a new focus.

Loss of weight is most important. We are having our children suspected of phthisis weighed monthly.

Temperature.—I often find a rise even in the morning; but rarely in the fibroid cases.

Auscultatory.—In examining the chest, most of us have some special sign on which we lay weight. Professor Grancher laid great stress on any change in the character of the inspiration as indicating a tuberculous focus. I confess that I have tried, in vain, to feel any certainty in regard to this point. The chief point that I generally try to make out is whether there is any area which sounds unlike the rest; the place of difficulty to me is the right apex, as it is not easy to determine variations from the normal at this spot. Two of the doctors who carried out part of the special work in the London schools speak of certain changes they find as indicating an atelectatic condition of lung. These changes are patchy dullness, tubular breathing, and crepitations. I do not believe such a condition exists beyond infancy, except as a pathological curiosity, and in this view I have the support of Professor Osler.²¹ It is common to hear that such and such a sign, such as crepitations at one apex, have no significance, because on the next examination they have cleared up. If there is one thing certain about crepitations due to early phthisis, it is that they may be present one day and not a week later.

THE NATIONAL BALANCE SHEET.

Dr. Newsholme, in his *Prevention of Consumption*, gives most valuable figures. He states that there are 60,000 deaths annually, as well as a heavy financial loss to the country, from phthisis. From the male deaths he estimates that the loss to England and Wales is not far from ten million pounds annually, and that the loss from sickness, or what I have spoken of as the non-efficient workers,

comes to one-fifth of the total loss from sickness, and costs one friendly society alone at least half a million sterling in a year.

It is also stated that one-eleventh of the total cost of pauperism in England and Wales is caused by consumption.

This year the country has a unique opportunity to initiate steps to end this fearful loss of lives and money. Whether or no we consider it is easy to diagnose phthisis in children, every one agrees it is important to do it, and also that it is particularly difficult to diagnose in what Dr. Newsholme calls the "latent stage." But in all the demands made by the various education authorities in regard to the qualifications of their medical officers, I have not seen one which has demanded special skill in this branch of work.

And yet this is the disease which takes infinitely the heaviest toll in men and money; and if we are to stamp it out the cheapest time to do it is in childhood, before the sufferer becomes a broad-winner, and while the disease is in an early stage. Dr. Newsholme urges various steps to improve the present appalling state of affairs. First and foremost, I would suggest that the utmost care should be taken to ensure careful examination of the lungs by competent doctors, under the new scheme of medical inspection of children—and that any idea that it is possible to decide by looking at a child whether he needs "inspection" or examination (which is the present idea of the Board of Education) should be absolutely negated. And then, so soon as we know roughly the number of cases of early phthisis we have to cure, let these children be drafted into open-air schools and cured while cure is easy and inexpensive.

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IODINE IN SURGICAL TUBERCULOUS DISEASE.

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ONE of the most common diseases with which we are confronted in China (as probably also in other countries) is tuberculous disease of joints, bones, glands and skin.

Last summer we had a special number of tuberculous joint cases which either occupied our beds or attended the out-patient department for change of dressing, and it occurred to us to try iodine liniment.

The first case which we seriously undertook to treat by this method was that of a lad with tuberculous disease of the right elbow. As usual, a native doctor had accupunctured the swollen member. Having a poisoned hand myself, I asked my colleague to operate. He excised the joint and removed every vestige of disease. Every possible care and precaution was exercised to secure a good result. After a few weeks, with the usual treatment of iodoform dressings, the condition of the elbow was, as the experience of similar cases had proved us to expect it would be, that it was healed to a certain degree, but with several sinuses persisting. We again put the lad under chloroform and thoroughly scraped the sinuses from which pus was freely discharging. Then we thoroughly swabbed the sinuses with iodine liniment, we did not put in any drainage, but dressed with gauze and wool, replacing the arm upon an angular splint. Two days afterwards we removed the dressings and to our surprise there was not a particle of discharge. Every day after we swabbed the sinuses with iodine liniment, and they healed as though they had been

touched with a magic wand. Before the lad left the hospital he had secured splendid movement. He could write with a Chinese pen and manipulate his chopsticks with celerity.

It is unnecessary to record similar cases or describe the many cases of tuberculous abscesses, ulcerated glands, skin ulcers, etc., which have all entirely healed under this treatment.

Our experience, after over six months' trial, is that, although iodine liniment acts well upon ulcers and sinuses of a mixed infection, the results are not quite so rapid or satisfactory as is its action upon tuberculous disease.

Our *modus operandi* is as follows: We operate or scrape, as usual. Then we thoroughly swab the cavity with iodine liniment (B.P.). A piece of cotton-wool twisted around the end of a probe forms a good swab, and can be graduated according to the size of the sinns. The liniment is applied *every day*. The application does not cause pain, except a momentary sensation, when applied to some surfaces: neither does it destroy tissues, as does pure carbolic acid. Granulations do not become excessive. At the first application we insert a thin piece of gauze or pack lightly, but never at subsequent dressings. Gauze plugs and strips for drainage have undoubtedly been responsible for many chronic sinuses. From the first we give a mixture internally containing syrup. ferri iodi, 1 drachm, and potassium iodide, 5 grains, thrice a day.

In the case of large phagedænic ulcers, which form so large a part of our clinics in China, we first of all either scrape or foment, so as to get access to the base of the ulcer. Then the iodine liniment is applied daily. One of the worst cases of this character that we have been called upon recently to treat involved the entire dorsum of the man's foot and toes, exposing the tendons and bones. It was scraped, and iodine liniment used from the first. To-day it has almost completely healed, and without any signs of the usual extensive granulations.

We happened to mention this method of treatment at a medical meeting, since when I have received several letters from those who have tried it. They all report satisfactory results, so I make no apology for publishing it.

So far, we have failed to discover any reference to this special form of treatment in any available medical literature. Perhaps it has been and is still being used by our more enlightened compeers; but to those who are prepared to persevere with this particular form of treatment we can wish them no higher joy or greater satisfaction than up to the present has been our reward.

THE CONTROL OF INFECTIOUS DISEASES IN AND OUT OF THE SCHOOLS.

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ONE of the most important results of the medical inspection of elementary schools will be probably the more effective control of infectious diseases in a community.

The control of epidemics by public health authorities has been developed on systematic lines until it has reached a high degree of efficiency, but inasmuch as the supervision of the schools has been partial only, it has been possible for an epidemic to gather force before it was dealt with seriously. Not infrequently it is found that over 70 per cent. of cases in an epidemic occur in children who have been attending elementary schools, and this fact makes it most desirable that the school in which the first few cases occurred should be put under as complete supervision as possible.

The spread of diphtheria in schools affords a good example of this. A child sickening for the disease may, whilst still attending the school, infect many of its classmates. Pencils are still used indiscriminately by different children in the same class, and the pencil used one day by a diphtheritic child is put into the common box, and the chances are all in favour of its being used by another child on the following day. Children, especially younger children, are continually putting their pencils into their mouths, and a more favourable condition for the spread of diphtheria cannot be imagined in practice. Whilst investigating the rapid spread of diphtheria in one class of a

school, I watched the children for a few minutes. In that short space of time many of the scholars put their pencils into their mouths. I collected all the pencils of the class, made stroke cultures in a few tubes, and the borough bacteriologist reported the presence of the Klebs-Loeffler bacillus in the growth. One diphtheritic child who put a pencil in its mouth would be a potent factor in the spread of the disease among its classmates, and a more powerful stimulus is always given to this spread by the presence in a class, firstly of unrecognized cases of diphtheria ("sore throats"), and secondly of children in whose throats also exists the *Bacillus diphtheriae* (Klebs-Loeffler), and who are sickening for the disease, and able to communicate it to others. In the class mentioned, I took swabs from seven throats, and found the Klebs-Loeffler bacillus in two of the children who were still in the class.

Whatever be the origin of the first case—milk or drains—there is no doubt that the elementary schools play a most important part in the spread of diphtheria, first on account of the overcrowding and bad ventilation which still obtain to a greater or lesser extent in the elementary schools, and secondly on account of the use in common by the children of school materials. Of these, pencils are the most used, but in infants' classes plasticine is also handled in common by the scholars. This modelling material, excellent as it is for kindergarten work, and loved by the children as a substitute for clay, must be regarded as dangerous whenever a case of diphtheria has occurred in a class.

Measures taken to check the spread of infection may be classified as taken: (1) In the school; and (2) outside the school.

In the school itself, it is, of course, necessary to consider the possibility of drain defects as being the first cause of an outbreak, after which attention is given to those conditions whereby the infection is spread from one child to another.

The use in common by the children of school material should be controlled, also the use of drinking cups. The danger from pencils may be done away with by the provision of a small metal pencil box for each child. The box, bearing a small label for the child's name, can be obtained at a cost of one penny, and the children take a pride in seeing that they have their own pencils. When diphtheria has occurred in a class, the use of common materials should be stopped or controlled in a similar way.

The overcrowding in schools, always favourable to the spread of infection, will only gradually be done away with, but the new requirement by the Board of Education of a 9 ft. and 10 ft. basis for infants and older children respectively is a step in the right direction; the gradual replacement of the long desks by dual or even single desks, apart from their advantages in the way of back-support and comfort, and lessening of eye-strain, will aid to some extent the diminution of infection, as also will the routine disinfection of schools.

Not the least important matter to deal with in the schools is the presence in a class of children who have the *B. diphtheriae* in their throats, who are sickening for the disease or are suffering from it in a mild form ("sore throats"), and who are possible sources of infection to other children. And herein the aid of medical inspection to the public health should be at its greatest value.

When a case of diphtheria occurs in an elementary school child the school medical officer visits the class and examines the children's throats. The use of wooden spatulas, one for each child, the spatulas being destroyed after use, is necessary. All cases of sore throats are excluded from the class, swabs being taken at the time. In this way would be removed those children in whom there was diphtheria in a mild and unrecognized form.

By the term "*Bacillus diphtheriae*" is meant the true Klebs-Loeffler bacillus, possessing the accepted cultural and morphological characteristics. The variation in virulence of this true diphtheria bacillus is recognized; but even when the virulence is very low, provided the morphological type and such characteristics as the polar staining with Neisser's method are retained, it is regarded as the true bacillus of diphtheria (Klebs-Loeffler). As such, its presence is a reason for regarding a throat as a means of infection to others. The pseudo-diphtheria bacilli may or may not be convertible into the

true bacillus; the evidence is at present all in favour of this view, but the fact is not proven; and in the practical efforts to check the spread of the disease no more can be done than to obtain some control over those children in whose noses and throats are found the true diphtheria bacilli. This at least is possible in practice, and, inasmuch as such control is based upon facts proven and knowledge certain, it is both desirable and justifiable.

So widespread are the pseudo-diphtheria bacilli so frequently found in the "normal" throat that the control of each child harbouring the Hoffman bacillus in nose or throat is not within the range of practical administration. Even if it were proved beyond doubt that the Hoffman bacillus may become the true type bacillus—and this is possible at any time—it would be necessary still to show that the change occurred frequently or rapidly. If it were so proved, it is to be hoped that some indication and warning will be found more useful and more sure than the vague "lowering of resistance" so often referred to.

This outline has been confined to the methods of control in the school. The sanitation and drainage are found to be perfect, the school premises have been efficiently disinfected, sources of infection such as pencils and other common-use materials have been controlled, cases of suspicious throats have been excluded, and thus a fairly complete check is put on the infection in the school.

But what about the further control of these "sore-throat" children who have been excluded from school? They still remain possible sources of infection outside the school, and it is here that the Public Health and the Medical Inspection services should meet; there should be no gap through which these cases might escape, and, free from control, continue the infection.

The "sore-throat" cases, of which many may be mild diphtheria, recover and return to school, still harbouring the bacilli in their throats and noses. When a child is certified to be suffering from diphtheria and is taken to the sanitary hospital, it is not allowed to leave the hospital until two negative swabs have been taken from the nose and throat. The London County Council has an excellent regulation that during the prevalence of diphtheria in a district, no children excluded from school on account of diphtheria or sore throat may return to school until they have obtained a medical certificate, based on a bacteriological examination, that they are free from diphtheria.

The phrase "during the prevalence of diphtheria in a district" gives the key to the situation. A sore throat occurring in a child may or may not be a serious matter, but a sore throat in a child who is in a district where diphtheria is prevalent, and who has been in contact with diphtheria cases, must be regarded seriously. The child is a "contact" case, and it is a most desirable thing that cases of "sore throat" excluded from school should be followed up. Where the medical inspection branch is administered from the Public Health Department this can be done by a health visitor, part of whose duties would consist in visiting and obtaining information concerning these excluded cases. Such a health visitor would be a trained nurse, having experience of fever hospital work, and possessing the Royal Sanitary Institute's certificate for health visitors; and it is a matter of great importance that she should be possessed of such tact and patience as would enable her to carry on her work quietly and unobtrusively and yet thoroughly. A child who had been excluded from school on account of a "sore throat" with the coincident circumstance of being a "contact" case, might or might not have diphtheria. The health visitor, on her visit to the home, explains things to the parents, advising them to consult a doctor, and a form is given to them for the doctor. The following form would be suitable:

Date

Dear Sir,
To the Medical Attendant.
I have examined, a scholar at the
..... School, and have excluded (him) (her) on account
of a condition of Sore Throat.
At the time of exclusion, a throat swab was taken, which
on Bacteriological examination gave a {positive} result for
the Klebs-Loeffler bacillus. {negative}

Yours faithfully,
.....
School Medical Officer.

The medical man whom the parent consulted could then

take charge of the case, and, if it was diphtheria, would notify in the ordinary way. By these means these excluded "sore throats," diphtheria or not, would come under medical supervision, they would not be free to continue the spread of the disease.

The methods described for diphtheria would be applicable in a modified form to the cases of scarlet fever, and also, to a slighter extent, to the non-notifiable diseases. There is no doubt that scarlet fever is spread to a great degree in schools by the very slight and unrecognized cases, which are sometimes not noticed at all, and often noticed only when the child begins to peel. The rapid examination of a class in which scarlet fever had occurred would enable the school medical officer to exclude promptly these unrecognized cases. Teachers can be educated to recognize suspicious cases. Sore throats, and even a rash in the case of scarlet fever, weeping eyes and nasal catarrh at the onset of measles, are signs which should enable an intelligent teacher to exclude the child.

The teachers are often able to give information to the medical officer concerning children away from school on account of the non-notifiable infectious diseases. Accurate information concerning the spread of the non-notifiable diseases is difficult to obtain, but a fair indication can be obtained by the system whereby the school attendance officers send a form to the school medical officer. When an attendance officer visiting the home of an absentee finds that the child is suffering from measles, whooping-cough, varicella, or other non-notifiable infectious disease, he fills in a form and posts it to the medical officer. The form is on a card which can be used in a card index system. The disadvantage of this system is that the information may come a few days after the child has fallen ill, but it at least gives information concerning the spread of the non-notifiable diseases; and it can be supplemented by a card sent by the teacher on the occurrence of the first case of each disease occurring in the school. This would be early information, and information concerning the first case of an infectious disease occurring in a school is often of great value to the school medical officer in his efforts to check the spread of infection in the schools.

It is probable that as the system of school medical inspection becomes fully developed, the closure of schools on account of epidemics will become less frequent. The leading public health authorities agree that closure of elementary schools is of doubtful value in checking the spread of measles, except in country districts where the school is the one and only meeting place of children. In town, the children meet and mingle in many places and on many occasions. Usually schools are closed only after a large proportion of children have developed measles, and this fact may contribute to the non-success of the measure, but there is one method of closure for measles, recommended by the Local Government Board, which is of particular value in safeguarding the children under 5 years of age. The attendance of these children at school is not compulsory, but large numbers of them are sent to school, and under certain economic conditions, when they cannot be looked after and cared for properly at home, it would be an advantage for these children to attend school if the school premises were efficiently ventilated and the general conditions were good, and the young children were allowed to sleep in comfortable positions when they wanted to. Any one who has visited a babies' class in the afternoon will have seen many of the children sleeping with their heads on their desks. The report made to the Board of Education recently by its special committee recommended that for children 3 to 5 years old school nurseries should be provided, isolated from the main building in order to reduce the risk of infection.

But under present conditions something can be done to protect these younger children, to bring them to the age of 5 or 6 without contracting measles—a desirable end, for the measles mortality among children under 5 years old is very great. If early information is obtained concerning the first case of measles in an infants' school, the school can be closed from the ninth to the fifteenth day with good effect. The first measles child may have infected others in the school, but those children who have caught measles will not be infectious until about the ninth or tenth day. As the school is closed on the ninth day these children will not spread the disease in the school; also,

all the children who have caught measles from the first case will sicken between the tenth and the fifteenth day—that is, during the time the school is closed. The advantage of the short closure of six days will be apparent to educationalists.

It is evident that full co-operation between the public health and the medical inspector's departments is necessary in order that these methods be carried out thoroughly, and such co-operation will surely lead to the strengthening of the weak points in our defence against the infectious diseases of childhood.

THE MEDICAL ASPECT OF DENTISTRY AND THE NECESSITY OF DENTAL INSTRUCTION FOR MEDICAL STUDENTS.*

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THE historical associations between medicine and dentistry date from very early times. Hippocrates, besides studying medicine, devoted some attention to dentistry. He invented forceps for the extraction of teeth, observed the necessity for the proper cleansing of the teeth, and for this purpose prescribed the following dentifrice:

A charmed rabbit's head and three charmed mice ground into a powder.

He also recognized the fact that destruction of the bone of the jaws might follow affections of the teeth—and might even end fatally. Celsus also practised dentistry, and in his *De Medica* he advocates filling carious teeth with pieces of slate wrapped in cotton. Galen differentiated between inflammation of the pulps of teeth and inflammation of the root membrane, and prescribed a number of tooth-powders and mouth washes. To come down to more modern times, that famous surgeon, Ambroise Paré, in the sixteenth century devoted considerable attention to the treatment of teeth, and invented a splint for holding loose teeth in position, as well as several forms of forceps. The great John Hunter did not omit the teeth in his multifarious researches, and wrote a most accurate treatise upon the *Natural History of the Human Teeth*. But here comes a hiatus. Since the time of John Hunter until quite recent times medical practitioners have taken but little interest in dental diseases, probably because dental practitioners began to spring up and the matter was left to them, but also, alas! I am afraid, because the practice of dentistry was associated for a long time with a certain element of shamed-facedness, if not of quackery, and medical men passed it by on the other side. This position is now, however, no longer tenable, because it is now recognized that dental, medical, and surgical diseases are so intimately related that a proper conception and therefore treatment of one is impossible without some knowledge of the other. In order to substantiate the statement I will proceed to give definite instances of the intimate cause and relationship existing between dental and medical lesions.

Quite a lengthy list of ailments, from appendicitis to glaucoma, have been ascribed to the direct or indirect influence of the teeth, but I shall confine myself to those which have been well established, and in which I can to some extent speak from personal experience. These may be classified as being due to:

- (1) Reflex irritation;
- (2) Direct extension of morbid process; or
- (3) Septic absorption.

LESIONS DUE TO REFLEX IRRITATION.

Epilepsy.—Attacks of this disease are undoubtedly set up by peripheral irritation, not the least of which is dental caries; many cases have been reported, and one case is recorded in which the patient always developed an attack of *petit mal* when visiting his dentist. I have had one definite case in which the patient, a little girl, did not

show any marked improvement despite excellent medical treatment until her teeth were treated. The attacks then subsided. Some twelve months afterwards a recurrence of dental pain in another tooth was followed by a further attack of epilepsy, and this did not recur after the tooth was filled. Hysteria has also been said to be due to dental irritation, but I am more inclined to think that odontalgia is more usually a symptom of hysteria.

Neuralgia.—Neuralgia of the fifth nerve and the *trigeminal* are too often associated with dental troubles to need any verification. Brachial neuralgia may be due to irritation arising from the teeth. I have myself seen three such cases. In all three the pain was confined to the region of the circumflex and cutaneous branch of the musculospiral nerves. It was associated with exposed pulps in lower premolars, twice on the right side and once on the left; in each case pain started in the tooth, and then leaving the tooth became as it were transferred to the shoulder and arm, and only yielded to the devitalization of the affected dental pulps. In one case the pain ceased within half an hour of treatment, despite the fact that the patient had been unable to sleep all night on account of the pain in the shoulder. A considerable number of cases have been recorded of facial paralysis due to dental lesions; this in many cases is undoubtedly due to the close association between the fifth and seventh nerve through Meckel's, the otic, and submaxillary ganglia.

"Spurious" Tetanus.—Many cases of this condition, which is quite common, were formerly supposed to be due to the teeth. It is now known as trismus, and in some cases may be due to irritation of the branch of the fifth nerve supplying the masseter, but is more frequently due to a local cellulitis about the angle of the mandible caused by the suppurative at the apex of a lower third molar.

Cardiac Irregularity.—Sir R. Douglas Powell¹ records a case of "excessive" cardiac irregularity and spasmodic heart pains "which a course of Naheim baths and resistance exercises only slightly relieved," but was completely cured by attention to the teeth, which were "extensively decayed and surrounded by tartar."

Pelvic Pain, etc.—Instances of leucorrhoea and uterine pain synchronizing with dental pain and ceasing on the removal of the tooth have been recorded. Conversely, dental pain is often associated with uterine disturbance; several such cases have come under my notice, one quite recently, in which the severe dental pain occurred every month at the menstrual period in quite healthy teeth (second upper molars), and was not relieved by any dental treatment, not even by extraction, but was "transferred" to the first molars.

Ear Disorders.—Affections of the ear are frequently associated with dental irritation. Neuralgia of the ear is very frequently merely referred pain from a carious tooth; many of us must have had subjective experience of this, especially if we have had the misfortune to bite suddenly upon an exposed pulp. Hilton, in *Rest and Pain*, mentions a case of persistent purulent discharge from one ear which only yielded to treatment after removal of a carious molar, and he suggests that "the reflex irritation had led to interference with nutritive function of the nerves supplying the external meatus."

Eye Disorders.—This interference with the neurotrophic function is undoubtedly present in many obstinate cases of conjunctivitis; I have seen several such cases. Many cases of spasm and paresis of the ocular muscles have been recorded as being due to dental irritation.

Local Cellulitis.—Among diseases due to direct extension of the morbid condition of the teeth may be mentioned cellulitis of the face and neck, of which I have seen two fatal cases, one in a man aged 40, another in a woman aged 35, both arising from lower third molars. In another similar case the patient barely escaped with his life owing to the exceedingly high temperature, septic absorption, and inability to take sufficient nourishment on account of the severe trismus present. I remember Mr. Levason, with whom I was associated for some years, treating a case in which an abscess arising from a mandibular molar had tracked down beneath the cervical fascia, and was eventually opened in the axilla. Empyema of the antrum occurring through dental infection is too well known to need any verification. The *Streptothrix actinomycetes* occasionally finds a way into the jawbone through

* Read at the Otago Section, New Zealand Branch, of the British Medical Association. For many references in this paper I am indebted to Messrs. Smile and Colyer's excellent work on *Diseases and Injuries of the Teeth*, chapter xix of which I would suggest might be published as a separate pamphlet for the use of medical students.

a carious and septic tooth, and gives rise to the characteristic "lumpy jaw." One such case which I saw gave rise to considerable difficulty in treatment, having been treated for cellulitis, alveolar abscess, and non-eruption of the third molar, until I was fortunate enough to find the organism.

Myeloid sarcoma frequently originates from the fragment of a buried root. Mr. Jordan Lloyd is a firm believer in this, and I have on two occasions seen him find the bit of tooth which caused the growth; and to satisfy him I made sections of the fragment to verify its dental structure.

Epithelioma.—It is common knowledge to all how epithelioma of the jaw or tongue may follow irritation from a rough tooth. But there are cases of burrowing epithelioma of the jaws which I believe arise from the irritation (by a septic tooth) of embryological remains of the epiblast, which are nearly always present—and known as the epithelial sheath of Hertwig—in the periodontal membrane. Many cases of ulcerative stomatitis, which may develop into cancrum oris, unquestionably arise by infection from septic teeth, and it is impossible to successfully treat the stomatitis without attention to the teeth. It is just possible that some cases of acute septic endocarditis may trace their origin to infection from the teeth and mouth. At least, in one such case I found the same organisms—a staphylococcus, *Streptococcus brevis*, and a short bacillus (? the *Bacillus necrodentalis* of Goadby)—present *post mortem* in the mouth, bronchi, the alveoli of the lungs, and on the valves of the heart.

Local Conditions not Dental.—Conversely there are many local conditions of the mouth which are liable to be mistaken for dental affections. For instance, I have seen a whole roomful of medical students mistake a primary chancre of the lip and jaw for an alveolar abscess, and a case of bilateral odontotoma was for months treated as alveolar abscesses. A man whom I saw not long ago suffering from epithelioma of the superior maxilla was treated for some time for a simple ulcer of the mouth. Some four years ago I remember seeing a case in which during life the only symptom was constant odontalgia of the left side; the teeth were all perfectly sound, the patient felt ill and depressed, but there were no signs whatever. *Post mortem* a glioma about the size of a pigeon's egg was found just over the left Gasserian ganglion.

Chronic Lymphadenitis.—But to turn to a more frequent and more overlooked class of cases—those due to septic absorption from the teeth and mouth. The association of chronic lymphadenitis with carious teeth is now quite recognized. Several series of statistics have been compiled, but those of Odenthal of Bonn are perhaps the most conclusive, and are as follows:

Children examined	...	987
No glands and no carious teeth	...	28.6 per cent.
Glands enlarged	...	70.7 "
Glands and caries	...	50.0 "
Caries and no glands	...	0.5 "

I am unable to say whence these statistics were obtained, but, even if it were from a very "tuberculous" district, the fact that only 0.5 per cent. showed caries without gland enlargement is very significant. A chronically inflamed gland is one which probably is tuberculous or is likely to become so, and in carious teeth associated with tuberculous cervical glands tubercle bacilli have been found.² (I have found them in the saliva, but have not succeeded in demonstrating their presence in the teeth.)

Pyorrhoea Alveolaris.—The condition known as pyorrhoea alveolaris, "Riggs's disease," or more correctly marginal periodontitis, is even more closely associated with general systemic conditions than is dental caries. This disease may be defined as a suppurative condition of the upper part of the periodontal membrane due to an upset of the balance between the resistance of this latter tissue and the ordinary organisms of the mouth. The latter may become more virulent or the oral tissues may become less resistant, owing to: (a) The local accumulation of salivary calculous material, or (b) the presence of some general systemic disorder, such as gout, rheumatism, chronic alcoholism, chronic heart, kidney, or lung disease, diabetes, syphilis, or plumbism. When once established it is difficult to treat. The patient usually complains of

malaise, dyspepsia, loss of appetite, and constipation, accompanied by a malodorous breath, disagreeable taste in the mouth, and occasional expectoration of pus, or purulent saliva. Some amount of anaemia is always present, and loss of body weight is marked in prolonged cases. The teeth are always more or less loose, the gums red, swollen, and glazed, and pus can be extruded from the space between the gum and the tooth. Strange to say, the teeth are not always tender, and this latter fact often misleads the patient, and sometimes his medical adviser, as to the cause of his trouble. Mr. Rickman Godlee records three such cases.³

One, a lady aged 40, who was treated for two years for lung trouble with no cessation of symptoms. Pyorrhoea was then found to be present, was treated, and the expectoration (which had consisted, to use the patient's own words, of lumps of green and yellow stuff) completely stopped.

Another patient, aged 25, presenting symptoms similar to the last, but with marked loss of body weight, was treated in the same way, with the result that, in her own words, "Life was again worth living."

In the third case, Mr. Godlee ascribes several attacks of acute trouble, accompanied by stomatitis and glossitis, to an exacerbation of a previous suppurative periodontitis.

It cannot now be doubted that this condition of pyorrhoea alveolaris is responsible for a large proportion of the cases of pernicious anaemia. Dr. W. Hunter goes so far as to say that he believes that the infection arises in nearly all cases from the mouth. It is, however, generally conceded that this condition arises from toxic absorption from some part of the alimentary tract, and of the latter, the mouth is, *a priori*, the most probable part. I have had two definite cases, both in men about 40 years of age. They both suffered from marked suppurative periodontitis.

The first was a typical case—"anaemic," lemon yellow complexion, muscular weakness, malaise, loss of appetite, etc. A blood count showed only 1,700,000 red corpuscles per c.mm. and haemoglobin 41 per cent. The patient was seen early, the pyorrhoea treated and arsenic given in increasing doses. He made a gradual recovery.

The second case did not come under treatment until both the local and general conditions were very advanced. The only hope of eradicating the disease was by extraction of the teeth, and to this course the physician with whom I saw the case would not agree, thinking the risk of haemorrhage too great. In spite of local and general treatment the man died.

These two cases serve to illustrate many similar cases which have been recorded, and establish the necessity of at any rate eliminating oral sepsis in all cases of pernicious anaemia. Dr. Dauber, of the Women's Hospital, Soho, has recently come to the conclusion⁴ that septic teeth have a distinct influence upon uterine and ovarian conditions, and gives many instances in which the gynaecological lesion has only yielded to treatment after the oral conditions have been corrected. Mr. Kenneth Goadby in the Erasmus Wilson Lecture for last year records a number of cases of pyorrhoea alveolaris wherein marked improvement and in some cases absolute cessation of both local and general symptoms ensued after raising the opsonic indices of the patients to the organisms found in the periodontal discharge.

Prevention.

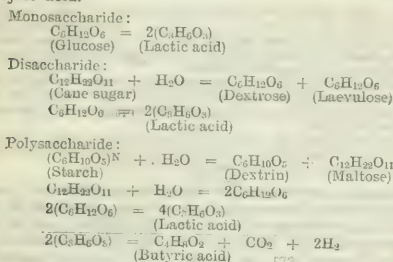
Even when these conditions are treated by the only means often available or possible—that is, the extraction of the teeth—we do not arrive at a much better state of affairs, for how large a proportion of the chronic gastric and intestinal cases filling the medical wards and the out-patient department of our hospitals is formed by prematurely toothless middle-aged men and women!

The only rational hope lies in the preventive treatment of dental disease, and therefore the next stage in my argument is a brief reference to the causes of dental caries. This, like many other diseases, is not the outcome of one single and specific cause, but is the resultant of several coincident forces which may be summarized as:

1. A lowered resistance on the part of the buccal and dental tissues.
2. The action of certain organisms.
3. The presence of fermentable carbohydrates.

These three factors must be coincident. The total elimination of any one factor would prevent the occurrence of caries. The first stage of the formation of a carious cavity is chemical, and the first step is obviously all-important. Many mouth organisms are capable of

fermenting carbohydrates with the production of acid, chiefly lactic but occasionally butyric acid. A reference to the accompanying table will show that monosaccharides are the most readily fermentable. Disaccharides require to be first inverted to monosaccharide by an enzyme formed by certain of the mouth organisms before lactic acid is produced. Starches require a double inversion, the first stage brought about either by ptyalin or organisms, before fermentation to an acid can occur, but in all cases it is seen that lactic acid is the end product unless, as occasionally happens, this lactic acid is again split by the action of organisms to yield butyric acid.



Thus it is very evident that if carbohydrates remain in contact with the tooth for a sufficient length of time an acid is tolerably certain to be produced (because the necessary organisms are practically always present), and this acid dissolves the lime salts of the enamel, and a cavity is originated at the point of action.

Bearing in mind these facts, it is obvious that anything which favours the lodgement of carbohydrates on or around the teeth very much increases the risk of caries. Certain carbohydrate foods, such as biscuits, chocolates, caramels, soft white bread, cakes, and scones, are of themselves very adhesive. Milk, too, tends to leave a film upon the teeth, which readily yields lactic acid.

It is, perhaps, interesting to observe at this point the comparative consumption of sugars in the various countries as shown in the following table:

Sugars Consumed per Capita, 1905.			
New Zealand	...	...	108.64 lb.
United States	...	...	92.46 "
Great Britain	...	...	77.83 "
Excess of New Zealand over Great Britain	...	...	30.81 "

Without reference to statistics, I should say that the incidence of dental caries in these three countries is roughly in the same proportion as the above figures.

But just as important as this is the configuration and structure of the teeth. Teeth irregularly disposed and crowded together will retain more foodstuffs in inaccessible positions than teeth normally placed. The same is true of teeth showing numerous pits, crevices, and other developmental defects in the enamel. Some of these irregularities are hereditary, some are due to accidental causes and habits; but the vast majority are due to one cause—non-development of the mandible—and this in turn is due to improper diet. It is significant that all these irregularities arise between the ages of 6 and 12. It has unfortunately become the custom of civilized people to feed children between these ages upon comparatively soft and pappy food which does not exercise their muscles of mastication. It is a well-known fact that those bones having the strongest muscles attached to them are developed most, and vice versa. The tongue also is one of the most important organs of mastication, and has a direct moulding and expanding influence upon the mandible. If the tongue does not develop, the mandible does not fall in, but it never expands; and the teeth, having been already formed, when they erupt adopt irregular and misplaced positions. Figs. 1 and 2 represent the shape of the mouth and the disposition of the teeth when this has occurred, and this is becoming so frequent an occurrence that these shaped arches are becoming the "normal" condition.

But not only is the horizontal plane of the bones affected, but also the vertical. This in the maxilla becomes "V" shaped as shown in Fig. 3. Fig. 4 shows what should be the normal shape of the oral and nasal

cavities. This "V" shaped arch does not arise from lack of development, but from insufficient expansion, for it has been shown by measurements of these cases that the distance between A B and A' B' remains the same. The effect on the nasal cavities is obvious—their vertical and horizontal measurements are greatly diminished; further, if the nasal septum has an inherent tendency to growth, this can only occur by its becoming deflected. The result is that nasal breathing becomes more difficult, and, in any slight inflammation of the nasal mucous membrane, impossible: the patient acquires the habit of mouth breathing, adenoids develop in the stagnating cavity, and the tonsils enlarge. A vicious circle is thus established,

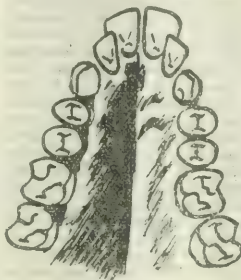


Fig. 1.



Fig. 2.

for persistent mouth breathing leads to further irregularities of the teeth, and deficient expansion, especially of the maxilla.

These statements may be summarized as follows:

Lack of any hard or fibrous food causes under development of the tongue and other masticatory muscles. A weak, small tongue fails to expand the mandible, which in turn does not expand the maxilla, and therefore the nasal cavities remain small and ill-developed.

The dependence of the upper alveolar arch upon the lower is obvious upon reference to Figs. 3 and 4, where it is seen that the teeth articulate by means of inclined planes, and that the inner cusp of the lower teeth always closes inside that of the upper tooth, and thus any outward

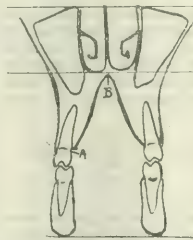


Fig. 3.

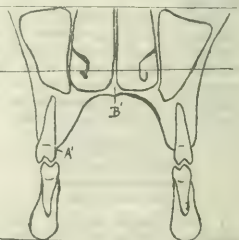


Fig. 4.

movement of the lower teeth must be followed by a similar movement of the upper teeth. This system of double inclined planes ensures the parallel movement of the whole of each tooth, and prevents the mere outward movement of the crown swinging upon the apex of the root as on a pivot. This is experimentally proved by the fact that most cases of the type of irregularity of the upper teeth seen in Fig. 1 can be remedied by an expanding or other device inserted on the inner aspect of the lower teeth; and this practice I have adopted for some time with success.

Foodstuffs also play an important part in the development of the teeth. If the mother during the period of gestation exists upon a diet poor in lime and phosphates, the child's teeth will probably be poorly developed. The same thing applies to the diet of the child between the ages of 12 months and 12 years, when the permanent teeth are developing.

There is a popular idea that it does not matter what happens to the deciduous teeth—one frequently hears the

expression, "Oh, but they are *only* his first teeth." Consequently the child is given all sorts of rubbish to eat under the belief that it does not matter. But it *does* matter, for two very important reasons:

1. An exceedingly bad habit is thus contracted by the child most difficult to eradicate when the permanent teeth arrive.
2. Broadly speaking, carious deciduous teeth mean carious permanent teeth.

Caries of the deciduous teeth causes contraction of the alveolar processes by allowing the teeth to come closer together, and thus leads to crowding of the permanent teeth and all its attendant evils. Caries of the deciduous teeth most frequently leads to alveolar abscesses, which infect the underlying permanent tooth germs and arrest their development, with the result that the teeth are erupted in a hypoplastic condition, and fall an easy prey to caries. A soft diet also impairs development of the permanent teeth by not exercising the jaws, and therefore not stimulating a sufficient blood supply to the ameloblasts and osteoblasts of the dentine papilla. We are therefore driven to the conclusion that from whatever standpoint the subject is considered, the prime factors in the causation of dental caries are errors of diet—chemical and physical.

What, then, can be done? That something should be done is gradually coming to be recognized on all sides; that so little has been done up to the present is most astonishing when one considers that dental disease of some kind is present in 80 per cent. to 90 per cent. of the people of civilized races. It is thus indubitably the most widespread of all diseases, and, as I have attempted to show, is far-reaching in its effects. But, unfortunately, cause and effect are not always associated.

There has been in the past, both in dentistry and medicine, too great a tendency to regard the teeth as isolated parts of an organism, as organs which exist of themselves and for themselves, and not intimately linked up in function with the rest of the body. Pawlow showed that mastication was the natural, and therefore the best, stimulus for gastric and saliva secretion; and efficient mastication implies an absence of caries. The teeth, it must be recognized, are an integral and inseparable part of the alimentary system, physiologically and pathologically. It is this fact, together with all that it implies, which should be impressed upon a medical student. I have heard abdominal surgeons express the opinion that, in view of the increasing number of gastric and intestinal cases, there is "a something" at work which is appreciably lowering the resistance of the alimentary tract. In my opinion this something is to be found in the enormous strain thrown upon it by the constant ingestion of improperly masticated food, incorporated with organisms (more or less virulent), toxins, and pus from diseased teeth; and also because of the avoidance of hard food, in part secondary to the tenderness of the diseased teeth. The intestines become atonic, having to deal only with non-fibrous easily-digestible substances. Any organ or organism which is overstrained or is atonic falls an easy prey to the attacks of micro-organisms.

Dental caries is largely due to errors of diet commencing before birth and extending over the first twelve years of a child's life. It is just during those periods that a medical man's advice is most often sought as to the suitability or otherwise of articles of diet, or, at least, he has opportunities of pointing out authoritatively the deleterious effects of common dietetic errors; and on account of this, in my opinion, a large percentage of the prevalence of dental disease lies at the door of the medical profession. We should therefore do all in our power to remove this stigma. A medical student, before he qualifies, should have some knowledge of what diet is beneficial and what deleterious to the teeth, and he should be taught to put this into practice; in doing so he will only be fulfilling the general principles of correct dietetics, for it might be stated in general terms that "what is best for the teeth is best for the rest of the alimentary system." He should also know something of how to aid natural resistance to caries by artificial prophylaxis; he should be able to write suitable prescriptions for various mouth washes, dentifrices, etc., for varying conditions of the mouth; he should be able to instruct parents in the care of their children's teeth. All this and more he should know. He is taught along similar lines with regard to the eye, and ear, and

throat; why, then, should the teeth and mouth be omitted?

Medical men are often so situated as to be compelled to relieve dental pain, and I do not think I shall be hurting the feelings of any member of this Association when I say that this relief is most usually afforded by the extraction of the offending molar. But this is not as it should be. Therefore I would have the medical student to know the value of a tooth—to know when it can be lost and when it must be saved. The mere extraction of one tooth will often ruin a patient's articulation.

A medical student, too, should be able to recognize the difference between dental myelitis,* periodontitis, and alveolar abscess, and be able to relieve the pain of each of them without extracting the tooth should this be desirable. A medical man is often asked by a patient for an opinion as to dental treatment, or may be called in consultation with a dentist; in either case he will find such knowledge extremely useful, and it will obviate those awkward *contretemps* when the doctor says one thing and the dentist another. I am not suggesting that the dentist is always right; he is apt sometimes to take a narrow view of things, and forget that the teeth are necessary to the proper functioning of the rest of the body, and I have known a patient's general nutrition and health seriously impaired by injudicious dental treatment. It may be thought and said that I would make every medical man a dentist. That is not so, but, even if it were so, it would be only fair to the public, since every medical man is entitled legally to practise dentistry, irrespective of any dental training. On the other hand, in passing, I may say that I should like to see the converse true—that is, every dentist with a medical qualification. A medical student should also recognize the effects of measles, scarlet fever, rickets, and syphilis upon the teeth. He should be thoroughly imbued with the absolute necessity of close attention to the oral hygiene of patients whose treatment necessitates a prolonged milk diet, as in typhoid and surgical abdominal cases. He should know something of the treatment of fractures of the jaws by interdental methods.

The necessary amount of knowledge could be acquired by a medical student in a very short time; it would add no time to the length of his curriculum, and he himself would, I think, be the first when he got into practice to appreciate its value.

The medical inspection of school children is looming ahead, and it is highly improbable even if it were expedient that dentists as well as doctors will be appointed, yet it is very necessary that an efficient and reliable examination and report on the children's teeth should be made, as well as of other organs. Therefore on this account also it is desirable that medical practitioners should have some accurate knowledge of dental matters. This can be obtained in two ways: First, by making it necessary for every student before sitting for his final examination to present a certificate showing that he has received instruction in dental surgery, including a few lectures and practical instruction in the extracting and dressing of teeth. Secondly, to ensure that students should take this seriously by occasionally setting a dental question in the medical examination papers.

In order to facilitate the practical part of this scheme and in order to render the possible treatment of many medical and surgical cases more logical there should, of course, be an efficient dental department attached to every public hospital and dispensary.

In conclusion I would appeal to you, if I have convinced you of the desirability and practicability of these suggestions, that you will not be content with mere expressions of opinion but that you will take some active step towards the attainment of this object—that it may ever be the proud boast of the medical profession that it strives to the best of its power to eradicate those diseases from the incidence of which it derives its livelihood.

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* Called sometimes "pulpitis."

FEEDING TRIAL IN RELATION TO
"EPIDEMIC ENTERITIS"

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THE possibility of using a practically sterile food for infants in relation to infantile summer diarrhoea, or "epidemic enteritis," has been considered from many points of view, all or most of the methods used starting with cow's milk as their basis.

Now as the case incidence of this disease in large town and crowded areas, as compared with rural districts, seems to be double, or practically so (11.5 against 5.0), it appeared probable that an experimental feeding of a number of infants living in their own homes, and in crowded and poverty-stricken districts, such as Bermondsey and Southwark, would be instructive both from a medical and bacteriological point of view, especially if the experiment were conducted during the summer months, in which the case incidence of this disease is highest.

It was with the object of collecting data with reference to this subject that some feeding trials were conducted with infants collected from various sources—the outpatient departments of Guy's Hospital, Royal Waterloo Hospital for Children, and the Surrey Dispensary. Special food was provided gratis for the use of selected infants in their own homes. The infants were brought up to the dispensary weekly, where they were weighed and medically inspected, while charts of their weight were carefully kept, together with notes as to the occurrence of rickets, scurvy, and especially diarrhoea.

The method employed was by using dried milk, of which there are several varieties on the market, prepared principally by German, French, and English firms, the last-named drawing their supplies from a particularly pure and carefully supervised source in New Zealand. Briefly, the method of preparing dried milk is as follows:

The cows are first inspected with reference to disease, such as tuberculosis, etc., by a veterinary officer. A contract is then made with the farmer, who undertakes to deliver the milk at the factory within three hours of milking. On receipt it is cooled by running over a cooler which has water at 50° F. running through it. Meanwhile the cans in which the milk was delivered are placed in a trough full of lime water; afterwards they are rinsed by being placed over a jet of cold water, and then over a jet of superheated steam, finally they are again rinsed with a jet of cold water before being returned to the farmer. A sample of the milk after cooling is now estimated for butter fat by Babcock's process, and farmers are paid in New Zealand for the milk on the basis of its butter-fat contents. Next the cooled milk is filtered by pressure through a filter composed of four prepared pieces of filter paper and a specially prepared cloth, to remove any dirt and filth present. I am informed that the amount of filth removed from even the most carefully collected samples is surprising. The mixed product having been again standardized to secure a product as nearly constant in composition as possible, the moisture is abstracted by allowing the milk to fall in a constant thin stream over revolving cylinders, heated by steam to a temperature of 240° F. The milk is in contact with the cylinders for about 2 seconds only. The dried powder is then removed mechanically and at once packed in hermetically sealed tins for export.

The efficiency of the process to destroy any organisms, whether pathogenic or otherwise, present in the original milk, may be inferred from the following passage occurring in Dr. Klein's description of several of his experiments: "Notwithstanding the prodigiously large number of specific organisms with which the sample had been infected by me, none of them could be detected after the milk had been subjected to this drying process."

The method I employed, which was found to be the easiest both from the distribution and feeding point of view, was as follows:

Each child, when first taken under treatment, was carefully weighed, then thoroughly examined with a view to rickets, scurvy, marasmus, etc. A chart was made out with notes, and a card given to the mother. To each mother was given a sealed tin of the milk, bearing printed instructions as to feeding, for easy reference; also a small measure holding roughly a drachm weight of the food, together with two bottles and a supply of teats, the latter of the variety that will fit over the neck of almost any bottle.

According to the infant's age the mother was instructed to put so many measures of the dried milk into the

bottle, previously rinsed out with boiling water, and then to fill up with boiling water to a mark made on the bottle with a file. This obviates all the trouble to the mother of weighing the powder or measuring the water. Roughly, 1 of powder to 7 of water is the strength of food we usually start with, and a table, as given below, is supplied for their guidance to the nurses who distribute the food.

Age of Infant.	Intervals of Day Feeding.	No. of Night Feeds.	Boiling Water.	Dried Milk.
1 week	2 hourly	2	1 oz. to 1½ oz.	1 measure.
2 to 3 weeks	2 hourly	2	2½ oz.	2 measures.
4 to 5 weeks	2 hourly	1	3 oz.	2 to 2½ measures.
6 to 12 weeks	2½ hourly	1	4 oz.	3 to 3½ measures.

and so on in about the same ratio.

No fixed quantity was given, the amounts being varied according to the results of observations by the medical officer, each child being prescribed for separately, and the food modified as occasion demanded. The mothers' attention was also drawn to the fact that, as some of the fat separates out and floats on the surface, the bottle requires shaking occasionally during a feed. Printed instructions were given to the mothers, and insisted on by the nurses, as to scalding bottles and teats when not in use, and also as to the importance of making each feed separately, and not keeping a feed, or part of one, from one feeding time to another. I prescribe, in addition, a small quantity of orange, or sweetened lemon juice to be given daily with a teaspoon after one of the feeds.

The results as to weight were most gratifying, the infants gaining in weight from 4 oz. up to 10 oz. weekly, the average weekly increase being about 6 oz. The worst drawback we have to contend with is the fact that the mothers will not bring up the children regularly to be weighed and inspected, even although the food, bottles, and teats are all supplied gratis. They will often miss several weeks at a stretch, and frequently drop off altogether after a few weeks, just as the child has begun to make progress.

With regard to chemical composition, I used two varieties of dried milk—the half cream and full cream—the difference, of course, consisting mainly in the amount of fat present.

As the experiment only ran for about eighteen or nineteen weeks, comparison of their respective merits cannot be made, the incidence of diarrhoea being the special object aimed at. The cost, if the mother had to buy the food herself, works out at roughly from 2d. to 4d. a day for a young infant.

Chemical Composition of one of the Samples known as "Full Cream," together with a Dilution of 1 to 7 with Water, Compared with Cow's Milk and Human Milk:

	Dry Powder.	Diluted 1 in 7 Water.	Cow's Milk.	Human Milk.
Milk proteins	22.2	2.7	3.7	1.5
Milk sugar	41.0	5.1	4.7	6.8
Butter fat	27.4	3.4	3.7	3.3
Salts	5.9	0.7	0.7	0.2
Moisture	3.5	88.1	87.2	88.2
Total solids		(11.9)	(12.8)	(11.8)

As will be seen by the above, dried milk diluted with water, 1 part to 7, nearly approximates to human milk as regards fats and sugar, the proteins and salts in lesser degree; when it is remembered that the composition of cow's milk may vary considerably in different samples—the fat alone varying from a minimum of 1.9 per cent. to a maximum of 6.9 per cent., and the total solids from 10 per cent. to 16 per cent.—the advantages of having a food with a definite chemical composition, which is always constant, is very great.

Acidity of Samples Examined.

Dried milk A, 10% sol. ...	100 c.cm. = 6.8 c.c. N/10 NaHO sol.
Dried milk B, 10% sol. ...	100 c.cm. = 4.4 " "
Samples of ordinary milk taken:	100 c.cm. = 17 to 20 " "

The ash of the dried milk Sample B after incineration gave no effervescence with HCl, nor could any evidence of the presence of boracic acid be detected.

With regard to the feeding value of dried milk, if the calorific value of its protein, fat, and carbohydrate are worked out as such, a child, for instance, of, say, 10 lb. weight being fed every two hours during the day and two feeds at night would have sufficient calorific energy at its disposal to satisfy its requirements and a very liberal margin of nearly 200 foot tons to spare daily, the amount varying according to whether Voit's, Clittenden's, or another scale is taken as the standard.

The curds produced by solutions of the dried milk are extremely small, and vary slightly in consistence as to the kind of milk used, whether "half" or "full cream."

Experiments conducted with rennet as regards the clotting capacity gave the following results:

A sample of boiled cow's milk with rennet=	thick solid curd.
" unboiled "	= large heavy curds.
" dried milk solution—1-7 (B) "	= very small curds.

I also frequently examined the faeces of the infants fed on the dried milk, but could not detect any curds except in the case of the child suffering from diarrhoea, which was of the lenteric variety. Probably the citric acid, etc., in the fruit juice was largely responsible for the absence of curds; unfortunately I did not do a control feeding without the fruit juice.

The Bacteriology of Infantile Diarrhoea in Relation to Milk Feeding.

The following amoebae and bacteria have been isolated from the faeces of children suffering from this complaint: Amoebae, including *Paramoecium coli*, *Sarcomonas intestinalis*, and *Amoeba coli* (as far as I am aware, very little work has been done on these organisms, therefore I have neglected them), together with the moulds, etc., such as *Oidium albicans*, *Aspergillus glaucus*, *Penicillium glaucum*, and *Mucor mucedo*. The principal bacteria which have been isolated from the stools of children suffering from diarrhoea are noted below. Whether the diarrhoea is produced by the lactic acid fermentation caused by many of these organisms, or by direct absorption of toxins from the alimentary canal, is still a debated point. A brief glance at the actions of the commoner bacteria associated with infantile diarrhoea, on milk under laboratory conditions—that is, incubated at 37° C.—may be of interest.

B. coli forms acid, gas, and firm clot in litmus milk; it also ferments lactose, forming acid and gas.

B. dysenteriae turns litmus milk first acid and later alkaline, and does not ferment lactose.

B. enteritidis (Gaertner) usually turns litmus milk alkaline and does not affect lactose; but different strains of the bacillus act differently.

B. enteritidis sporogenes gives a very characteristic reaction with litmus milk. First, a large clot is formed; later this is broken up by the abundant gas formation, and an almost perfect separation into curds and whey takes place; the latter is acid, and swarms with the bacilli. As this organism is spore-bearing it would not be destroyed by pasteurization or raising to boiling point only, but apparently it is destroyed by the drying process.

B. butyricus (Bodkin) was isolated by Klein in 1895. It ferments lactose, forming acid and gas.

Thermophilus No. 1 bacillus with litmus milk slowly gives alkaline reaction, does not change lactose, but with galactose forms acid and gas. It produces fatal diarrhoea in rabbits, rats, and monkeys fed on food contaminated with cultures of it.

Looking at the foregoing list of organisms, and their actions on milk, the staple diet of infants, it is at least feasible to assume that, presuming they are not present in the intestine (except, of course, *B. coli*, which is always present), the use of a sterile food during the diarrhoea season must be advantageous.

Even assuming the absolute necessity of symbiosis, as held by many authorities, there are plenty of organisms having their normal habitat in the intestine without introducing fresh ones of a highly pathogenic nature through the medium of filthy milk.

With reference to the weight increase, as previously mentioned, from 4 oz. to 6 oz. weekly, I think, it was not bad when it is remembered that none of the infants were normally healthy or well cared for. All were collected from the out-patient departments, all were children of the poorest and most neglected class; and all were suffering from one or other of the various ailments so common amongst this class of children, principally bronchitis, bronchopneumonia, marasmus, and in some cases diarrhoea, but the latter were, of course, not included in the report as to the incidence of same during the feeding, but a record kept only of their increase in weight after the diarrhoea had ceased.

Summary.

The trial lasted nineteen weeks altogether, during which 38 infants were supplied with the food gratis, and fed solely on it.

The length of time during which the children were under observation varied, some being brought up regularly every week for the whole time, and these did the best; on the other hand, others were only brought up for a week or two, and then were not seen again owing to the slackness of the mothers, or, perhaps, because they were too busy to spare the time to bring the children to the dispensary. During the whole period we had 5 cases of diarrhoea, but as 2 came to us already suffering from the complaint, and 2 contracted it at times when they were not being fed by us—that is to say, they ran out of food, and instead of coming up at once for a fresh supply the mother fed the infants for about a week on such substitutes as boiled bread and water, condensed milk, etc.—it is only fair to exclude these also. The only case I cannot account for is that of a child who was fed on dried milk solely from start to finish, and had an attack of diarrhoea lasting two days during that time. A careful bacteriological analysis of the faeces failed to demonstrate the presence of any organisms usually associated with epidemic enteritis; I am of the opinion that the attack may have been purely accidental, especially as it lasted such a short time, and the child did not lose more than 4 oz. in weight during the attack.

In conclusion, I am of opinion that dried milk is deserving of further trial during the summer months when epidemic enteritis is so prevalent, especially amongst the poorer classes, and, if prepared as indicated, it is a food which if not absolutely sterile is very nearly so.

Appended is the result of the bacteriological analysis both of the solution of dried milk prepared as directed, and also of a sample of ordinary milk after pasteurization. I would desire to acknowledge my indebtedness to my chief, Dr. Eyre, for his kind supervision; also to my colleagues, Messrs. Leeming and Ryffel, for their kind assistance. As unfortunately one supply of dried milk was sent me in a cask a bacteriological analysis was only possible of sample "B," which was sent out in sealed tins. A solution in sterile water smeared on the surface of nutrose agar failed to give a growth in seventy-two hours after incubation at 37° C.

Bacteriological Analysis of Sample B Dried Milk.

Ten grams were weighed into a sterile flask and made up to 100 c.cm. with sterile water and used for analysis.

Number of organisms growing on gelatine plates and capable of multiplying at 20° C. after six days, 200 per c.cm.

Organisms on agar plates cultivated at 37° C., 0 per c.cm.

"Microbes of indication":

<i>B. coli communis</i> ...	absent from 1 c.cm.
<i>B. enteritidis</i> (Gaertner) ...	" " "
<i>B. enteritidis sporogenes</i> ...	" " "
<i>Streptococcus faecalis</i> ...	" " "

No tubercle or diphtheria bacilli could be detected.

A few moulds developed on the plates, but were probably only indicative of aerial contamination; 50 c.cm. were centrifuged in a high-speed machine, and both cream and deposit examined microscopically and culturally for organisms, but none were detected. A few leucocytes only were observed in cream and deposit.

A sample of ordinary cow's milk was subjected to pasteurization for twenty minutes at 75° C., and after straining through four thicknesses of sterile butter muslin into a sterile flask, gave the following result on analysis:

Organisms growing on gelatine plates at 20° C., 70,000 per c.cm.
Organisms growing on agar plates at 37° C., 600 per c.cm.

Cream and deposit after centrifugalizing examined microscopically:

Cream:	Streptococci	}	present
	Staphylococci		
	Epithelial and pus cells		
Deposit:	Streptococci	}	present
	Staphylococci		
	Epithelial and pus cells		

Cultures on blood serum of creams and deposits showed the presence of a large Gram-positive, spore-bearing bacillus, probably *B. subtilis*, only (not inoculated or investigated further).

Specific examination after pasteurization—

<i>B. coli communis</i> absent from	...	1 c.cm.
Klebs-Loeffler bacillus	...	1 "
<i>B. enteritidis</i> (Gaertner)	...	1 "

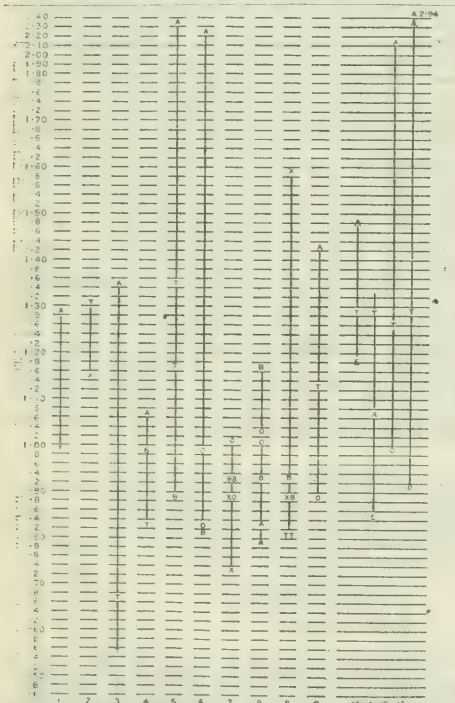
No tubercle or diphtheria bacilli were detected in cream or deposit.

CAN OPSONIC ESTIMATIONS BE RELIED ON IN PRACTICE?

By E. C. HORT, B.A., B.Sc. UNIV. PARIS, M.R.C.P. EDIN.

It frequently happens in hospital practice and in private that a reliable method of diagnosing difficult cases of infection is urgently needed. In no disease is this more true than in tuberculosis. For general use, where ordinary methods fail us, the cutaneous methods of von Pirquet, Moro, and Wolff Eisner, including Calmette's modification of these by conjunctival instillation, are not of pre-eminent value. In private practice the dangers and fallacies of

Chart showing Different Opsonic Indices of Identical Serums, as Estimated by Different Observers.



Calmette's test effectually bar its universal acceptance. Of Professor Courmont's modification of the serum diagnosis of tuberculosis there are not as yet sufficient data to judge. In this country, and in America, it is widely believed that in the opsonic index we have at last a method which is trustworthy not only for diagnostic purposes, but also for prognosis, and in determining treat-

ment. After extensive trial of its merits, mainly in tuberculosis, over a period of three years, I am not able to endorse the view that the index is a safe guide to diagnosis and treatment, even when estimated by acknowledged masters of the opsonic art.

In order to test its value as presented to us to-day, I have from my own private practice taken a series of cases, some of which had been sent for diagnosis, and in whom a trustworthy opinion, apart from physical signs, was therefore of real importance. No sort of selection has been made, and results that favour the opsonic method of estimation have been impartially recorded side by side with the unfavourable ones. In all cases the nature of the test has been explained to the various observers, who have without exception encouraged the inquiry. One observer, indeed, expresses the hope that the tests will be published in order to stimulate further efforts in improving the technical details. Such devotion to the highest traditions of scientific research cannot but command our admiration. Each observer mentioned in the accompanying chart is the same throughout, and is designated always by the same letter. It is, perhaps, unnecessary to say that only experts with years of practice and only those directly connected with well-known laboratories have been asked to examine the various serums supplied. In each of these twelve cases two or more samples of serum drawn at the same time and under precisely similar conditions, have been sent to two or more workers, sometimes in the same laboratory, sometimes in different laboratories. In addition to this, as will be seen, occasionally two samples of the same serum have been sent to one observer, who was not informed that they were samples of identical serums.

In each case the following precautions were taken:

1. Whether taken from vein, finger, or ear, the serum was separated from the clot at the end of six hours after puncture of skin or vein.
2. No serum was estimated unless quite free from contamination from red cells.
3. In sealing the tubes all possibility of heating the serum was obviated by using tubes with long drawn ends.
4. All tubes were sealed within five minutes of collection.
5. All indices were estimated within twenty-four hours of collection.
6. All samples of each batch of serum were taken from blood provided by one bleeding, in most cases by venipuncture.

TESTS 1 AND 2.

Disease suspected: renal tuberculosis.

A dose of 100 mg. T.R. tuberculin was administered by the mouth and the indices to tubercle bacillus were estimated by two observers in different laboratories, both before and after inoculation. The interval between the two sets of observations was fifteen hours. The indices returned were:

Before Inoculation.			
Observer A.	O.I. to T.B. ...	1.29	Phagocyte count not kept
Observer T.	" " " " " "	0.97	" " " "

After Inoculation.			
Observer A.	O.I. to T.B. ...	1.15	Phagocyte count not kept
Observer T.	" " " " " "	1.30	" " " "

In this case observers A. and T. differed in their estimation of the index after inoculation by 0.15, a small difference. Before inoculation they differed by 0.32, a not inconsiderable difference. Further whilst A. estimated that inoculation was followed by a fall of index, Observer T. registered a rise. Two indices were within normal limits and two outside it.

TESTS 3 AND 4.

Disease suspected: tuberculosis, position of focus unknown.

In this case there was no direct evidence of any organ being directly the seat of tuberculous infection, but in view of anomalous pyrexia it was necessary to exclude, if possible, such a contingency. Two series of observations were therefore undertaken with a week's interval. In the first test two samples of the same serum were sent to one observer, and a third sample was sent to a second observer in a different laboratory.

The indices returned in the first test were:

Observer A.	O.I. to T.B. ...	1.34	Phagocyte count not kept
Observer T.	" " " " " "	0.67	" " " "
Observer T.	" " " " " "	0.55	" " " "

In the second test three tubes of the same sample of serum were sent to three observers in three laboratories a week after the first test.

The indices returned were:

Observer A.	O.I. to T.B. ...	1.06	Phagocyte count not kept
Observer B.	" " " " " "	0.98	" " " "
Observer T.	" " " " " "	0.82	" " " "

In the first test the maximum variation was 0.79, the minimum 0.12, and the middle variation 0.67. Observer T. differed from himself by 0.12. In no case was the index within normal limits.

In the second test the maximum variation was 0.24, the next largest 0.16, the minimum 0.8. In no case was the index outside the normal limits.

TEST 5.

Disease: pulmonary tuberculosis, with well-marked physical signs, fever, and tubercle bacillus in the sputum.

Four tubes of the same sample of serum were sent to three observers in three different laboratories. To Observer T. two tubes of the same serum were sent without his knowledge. The indices returned were:

Observer B.	O.I. to T.B.	0.88	Phagocyte count of 100 cells, 211	240
Observer T.	"	1.17	Phagocyte count not kept	
Observer T.	"	1.34	"	"
Observer A.	"	2.34	"	"

The maximum variation here was 1.46, the next largest 1.17, and the minimum 0.17, the figure by which Observer T. differed from himself. In this case two indices were within normal limits and two above.

TEST 6.

Disease suspected: military tuberculosis. In this case the patient was extremely ill with high fever, but the physical signs in the lungs were anomalous.

Four tubes of the same serum were sent to three observers in three different laboratories, two tubes of identically the same serum being given to Observer O. without his knowledge. The indices returned were:

Observer A.	O.I. to T.B.	2.20	Phagocyte count not kept	
Observer O.	"	0.96	Phagocyte count of 100 cells, 126	130
Observer O.	"	0.82	"	107
Observer B.	"	0.82	"	193

In this case the index returned by B. was practically identical with one of the indices returned by O., who differed from himself by 0.14. The maximum variation between A. and B. was 1.40. In a case almost certainly tuberculous clinically of four observations only one was outside normal limits.

TEST 7.—Serum from Normal Individual.

In this case six samples of the same serum were sent to three observers in three different laboratories, each observer receiving unknown to him two samples of the same serum.

The indices returned were:

Observer X.	O.I. to T.B.	0.72	Phagocyte count of 100 cells, 202	
Observer O.	"	0.87	"	222
Observer B.	"	0.92	"	231
Observer B.	"	0.93	"	232
Observer X.	"	0.89	"	249
Observer B.	"	1.07	"	288

In this case B.'s observations were practically identical, and were very close to single observations of O. and X. The latter, however, differed from himself by 0.17, and O. differed from himself by 0.20. The maximum variation also was considerable—namely, 0.35. The fact, however, that all observers returned an index within normal limits is striking.

TEST 8.

Disease suspected: renal tuberculosis. In this case there was present, in addition to the signs incriminating the left kidney, a large inflamed tuberculous cervical gland undergoing rapid softening. Massage of the kidney was undertaken, and the opsonic indices were estimated before and after massage. In each case six samples of the same serum were sent to six observers in five different laboratories, each observer receiving, unknown to him, two samples of the same serum. Observer B. alone was given tubes before and after massage.

The indices returned were:

Before Massage.				
Observer A.	O.I. to T.B.	0.78	Phagocyte count of 100 cells,	—
Observer A.	"	0.83	"	"
Observer B.	"	0.85	"	193
Observer O.	"	1.00	"	228
Observer O.	"	1.03	"	233
Observer B.	"	1.17	"	245

After Massage (Twenty Hours)

Observer T.	O.I. to T.B.	0.81	Phagocyte count of 100 cells, 227	281
Observer T.	"	0.82	"	229
Observer B.	"	0.89	"	220
Observer B.	"	0.93	"	232
Observer X.	"	0.89	"	246
Observer X.	"	1.59	"	443

In this case some of the results are remarkably consistent. Observer A. differs from himself by only 0.05, Observer O. by only 0.03, Observer T. by only 0.01, and Observer B. returns an identical index before and after massage of 0.95. On the other hand, the value of this unanimity is upset by the maximum variation before massage, 0.39, and a maximum variation after massage of 0.78. Again, whilst B. returns an identical index before and after massage, his second reading gives a drop after massage of 0.24, the difference between his first two observations. Further, Observer X. is seen to differ

from himself by 0.70. In conclusion, it is worth noticing that in a case obviously tuberculous only two indices were returned as being outside the normal limits, one being 0.02 below and the other 0.39 above.

The interval between the two sets of observations was twelve hours.

TEST 9.

Disease suspected: pulmonary tuberculosis.

In this case three samples of the same serum were sent to three observers in two laboratories.

The indices returned were:

Observer A.	O.I. to T.B.	1.42	Phagocyte count of 100 cells, 95	67
Observer T.	"	1.02	"	180
Observer O.	"	0.95	"	178

Here A. differed from O. by 0.47. The next largest variation was 0.40, and the smallest 0.7. Two indices were well within normal limits, and one much above.

TESTS 10, 11, 12, 13.

Disease suspected—pulmonary tuberculosis. Moderate fever.

In this case, on three successive days three samples of identical serums were sent on four different occasions to three different observers.

The indices returned were as follows:

11.30 a.m. first day:				
Observer A.	O.I. to T.B.	1.48	Phagocyte count of 100 cells, 136	92
Observer T.	"	1.28	"	90
Observer E.	"	1.18	"	159

6 p.m. first day:				
Observer A.	"	1.6	"	147
Observer T.	"	1.28	"	230
Observer E.	"	0.81	"	113

6 p.m. second day:				
Observer A.	"	2.16	"	145
Observer T.	"	1.26	"	221
Observer O.	"	0.95	"	178

6 p.m. third day:				
Observer A.	"	2.94	"	197
Observer T.	"	1.28	"	—
Observer O.	"	0.92	"	—

It is of interest to note that the temperature at the times when the various sets of observations were made were as follows:

First Set.	Second Set.	Third Set.	Fourth Set.
99.6	100.6	100.2	99.0

The observations of Observer T. were remarkably consistent, being on all four occasions practically identical. The maximum variations of T. from A. on each occasion were, however, 0.20, 0.32, 0.90, 1.66. The maximum variation in all the observations was 2.02.

That opsonins do exist as factors to be reckoned with appears to have been firmly established by Sir Almroth Wright and his many followers. That they represent more than a fractional part in the highly complex machinery of immunity production we may still be permitted to doubt. Granted, however, for the moment, that opsonins are the important factor in the phenomenon of immunization that many believe them to be, the question at the head of this paper is constantly arising. Technical considerations of standardization of emulsions, cultural difficulties, agglutination questions, and so forth concern only those experts whose responsibility it is to render such technicalities as free from sources of error as possible. They do not affect the practising physician, whose only concern is with the pertinent questions of reliability and cost. As regards cost, as every one knows, it is high and necessarily so, and a most serious objection to wide use of the method it is. Regarding the question of reliability, it is quite impossible to ignore the fact that countless observations have been reported in which estimations have appeared to be of the highest value, either in diagnosis, or in directing some particular line of treatment. This is by no means, however, a universal experience, even when every effort has been made to secure the services of the high priests of the art. There appears, indeed, to be a growing conviction that, except possibly in the hands of an extremely small band of experts, the method is not of the general utility with which it has been credited.

The results I have quoted seem to support this conviction. If there is a satisfactory answer to these results, no doubt it will be forthcoming.

I take this opportunity of acknowledging my indebtedness to Dr. A. Venning for continuous help in the collection and separation of the serums referred to.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

IMPERFORATE PENILE URETHRA: COMPLETE OCCLUSION OF MEATUS.

On January 31st I attended a lady at the delivery of her sixth child. Labour was perfectly normal, and the child was a healthy male weighing 9 lb. 6 oz. When I visited my patient two hours later, the nurse informed me that the infant's penis was "tied down underneath." I found that there was no meatus at the end of the penis, nor any urethral orifice further back. The condition otherwise simulated hypospadias, and the scrotum, divided into two folds, presented the appearance of a pair of labia, which suggested hermaphroditism. The integuments of the dorsum of the penis were hypertrophied, and hung like an apron over the glans, which was perfectly formed. I made a careful dissection of the glans at the site of the meatus, and to my great relief urine gushed out when my incision had reached the depth of $\frac{1}{2}$ in. I had, in fact, opened the blind end of an otherwise perfect urethra. The child now passes urine without any difficulty through the artificial opening, and is a fine, healthy, well-developed infant, progressing favorably. The parents and their other children are perfectly healthy.

St. Albans, Herts.

JOHN HOBBS, L.R.C.P. and S.Irel.

[This condition is uncommon. For extreme cases see Professor Arthur Keith, "Malformations of the Hind End of the Body." Lecture II, *Healing Imperforate Penile Urethra*. JOURNAL, December 19th, 1908, p. 1507; also Shattock, "Imperforate Urethra in a Fetus of about the Fourth Month," *Trans. Path. Soc.*, vol. xxxix, 1888, p. 185. "Occlusion most frequently occurs between the triangular ligament and the glans, and often the whole of this tract is affected" (Keith). Our correspondent will bear in mind that (1) patent urachus is always possible when a male infant is born with any mechanical obstruction to micturition, so that he may find that in his case urine will leak from the umbilicus if the bladder be allowed to become distended, but that this symptom usually develops after infancy. (2) Hermaphroditism is quite probable in this case. The testes may be undescended, and even there be one or both genital glands in the scrotum one or both may ovaries. In respect to the surgery of congenital occlusion of the meatus Duplay's advice should be followed. The incision through the line of atresia should be followed by the introduction for several days of a large bougie, which need only be passed for a short distance into the urethra; otherwise cicatricial contraction may advance to such an extent as to interfere with micturition and to involve well-known vesical complications.]

INVERSION OF THE UTERUS.

Dr. A. W. HOLTHUSEN's interesting case of acute inversion of the uterus following delivery recalls to my mind a similar case with which I had to deal about three years ago.

On April 4th, 1906, I received an urgent message from a neighbouring practitioner to come and assist him in a confinement case. I found the patient pale and collapsed; there were signs of profuse hemorrhage, and the uterus was completely inverted and lying outside the vulva. My colleague explained that he had only arrived at the house about ten minutes before me in response to a call from an untrained midwife of the Gamp type, and found the patient in the condition described; he had just had time to peel the placenta off the inverted uterus. At his request I made an immediate attempt to replace and reinvert the organ. The patient was lying on her left side in a state of extreme shock, with a barely perceptible pulse and shallow respiration. I gripped the displaced organ with my left hand and pressed it steadily upwards. The vagina and cervix were readily dealt with, but considerable difficulty was experienced in reinverting the body and fundus of the uterus. Having pressed the fundus through the os, I used the closed fist of my left hand while steadying the abdominal walls with the right. After a little manipulation the fundus was at last pushed back to its proper position. There was no recurrence of the inversion. As, however, the patient remained in a collapsed condition, it was decided to resort to saline infusion. In the absence of more suitable apparatus, an antitoxin syringe was used for this purpose, and a pint of the salt solution injected into the subcutaneous tissue

between the scapulae in repeated doses. Some strychnine was also given hypodermically, and stimulants were administered by the mouth. The patient revived considerably, and was left to the care of her friends, who were instructed to keep her very quiet.

I did not see the patient again until three weeks later, when she walked into my surgery carrying her baby. She complained of some pain in her back and attacks of dimness of vision, but otherwise felt well. I was subsequently told by her medical attendant that her recovery was uninterrupted. I have recently ascertained that the woman has had another child since, and that labour was in every way normal. At the time of the inversion the patient, whose age was 22, was going through her second confinement. Nothing special occurred on the first occasion. There was a strong suspicion in this case that the inversion was the result of traction on the umbilical cord by the midwife, but this was strenuously denied. The latter stated, however, that the cord was twisted round the child's neck when it was born.

London, E.

EDMUND HAY.

HERPES OF THE SECOND AND THIRD CERVICAL POSTERIOR ROOT AREAS, ACCOMPANIED BY FACIAL PARALYSIS.

As motor paralyses accompanying herpes zoster are comparatively rare, the following case is of some interest.

On October 27th, 1906, the patient, a man aged 50, noticed "a few little pimples" above the left ear and behind the ramus of the jaw, and in the occipital region on the left side. Between this day and October 30th the eruption developed fully, consisting of vesicles, some of large size, on an erythematous base. There were no premonitory symptoms, and no definite pain was complained of during the development of the rash, only a little aching of the face. The pulse-rate was quickened and the temperature a little raised.

As seen by me on November 1st, the distribution of the eruption was as follows:

1. Below, it extended to the clavicle.
2. Above, to some distance above the ear, over the lower parts of the parietal and occipital bones. A few scattered vesicles extended forwards almost to the temporal crest of the frontal bone.
3. Anteriorly, on the face it extended to about the anterior margin of the ramus of the jaw as low as the angle of the mouth, and on the neck it extended to the middle line.
4. Posteriorly, it extended to the middle line of the neck and lower part of occipital bone.

This distribution comprises, as I understand, the second and third cervical posterior root areas of Head, though I have not been able to find diagrams illustrative of the area supplied by the second cervical posterior root, herpes of this area being invariably associated with herpes of the third cervical root area. There were also a small isolated patch over the second left chondro-sternal articulation, and two or three isolated vesicles just below the left ala nasi.

The crop of vesicles was most abundant over the whole length of the sterno-mastoid muscle, especially behind the ear. On the ear itself there were a few scattered vesicles.

On October 30th, when the eruption was at its height, the face was noticed to be swollen on the left side, and the lower eyelid to be puffy.

On November 3rd well-marked paralysis of the left side of the face showed itself. The mouth and nose were drawn to the right side, the left eye could not be closed, the left eyebrow drooped whilst the right was drawn up, and he laughed and frowned with the right side of the face only.

On November 13th there remained of the eruption only the erythema, but recently the patient had begun to complain of severe pain at times, especially at night, about the neck and jaw.

The patient was a very unhealthy subject, badly nourished, and deformed by very pronounced lateral curvature of the spine, and in addition showed distinct physical signs of tuberculous disease of both lungs, a condition to which Dr. Head alludes in his article in *Alburt's System* as frequently associated with herpes.

Bristol.

E. WATNERHEAD.

THE RADICAL TREATMENT OF ELEPHANTIASIS.
In the JOURNAL of October 31st, 1908, containing the paper and discussion on the treatment of elephantiasis, there is but scant mention of the radical treatment of this disease as affecting the extremities. Sir Havelock Charles makes some complaint that Indian clinical experience takes a long time to permeate to writers in England, but judging from his further remarks, where he refers to his having removed the affected tissues from the knee to the toes, etc., and that Major Stevens, he believed, had very successfully practised the same, it would appear that our Madras clinical experience has taken a long time to permeate to Calcutta.

The first operations of this kind ever performed in India were performed by me in Madras at the Royapetta Hospital, and subsequently the operation was practised a considerable number of times both by myself and various colleagues at the General Hospital, Madras. My early cases were published in the proceedings of the South Indian Branch of the British Medical Association. The Director-General, Indian Medical Service, of the time, when visiting Madras, saw some of my earlier cases: the procedure was new to him. I mentioned the operation to the then surgeon to the College Hospital, Calcutta, and his reply showed that it was new to him also. Sir Jonathan Hutchinson, when touring in India, also saw some of my cases.

So many surgeons have had a hand in bringing the technique of the radical operation for scrotal elephantiasis to its present high state of perfection that no surgeon or group of surgeons can claim priority; but in the matter of the radical operation on the extremities I do claim priority for Madras. Experience has shown that the operation in selected cases is sound and justifiable. I use the term selected advisedly; it would take too long here to go into the advantages and disadvantages of the operation. Suffice it to say that in those cases in which the limb has attained such dimensions that the mass interferes seriously with progression—cases in which in former times amputation has been performed—the operation under notice is to be recommended.

W. B. BROWNING, Lieutenant-Colonel, I.M.S.

Thurles, Tipperary. Principal Medical College, Madras.

ANGINA.

RECENT physiological experiments (Schäfer, Oliver-Sharpey Lectures, April 9th, 1908) show that the coronary arteries differ from the systemic in the matter of the contractility of their walls. It has been generally recognized, and it is demonstrated by Schäfer and Legendorff's experiments, that the coronary arteries are little, if at all, controlled by vaso-motor muscle.

The absence of contractile power from the coronary arterial wall distinguishes these vessels from the vasa vasorum of the aortic wall. For since intravascular tension determines vaso-constriction in systemic arteries, the volume of blood circulating in the nutrient arterioles of the aortic wall is in an inverse ratio with the lateral pressure of the aortic stream, while the volume of blood in the nutrient arterioles of the cardiac wall is in a direct ratio. Therefore, during periods of high blood pressure, the influences at work upon the aortic wall are katabolic, while those at work upon the cardiac wall are anabolic. It follows that hypertrophy of cardiac muscle keeps pace with the circulatory requirements necessitated by advancing peripheral resistance, while hypertrophy of aortic muscle, if occurring at all, does not keep pace with these requirements.

In other words, while the normal ratio existing between the lateral pressure of the blood stream and the resistible capacity of the containing wall is maintained in the case of the ventricle, it becomes altered in the case of the aorta, and the walls of this vessel are rendered liable to strain.

The difference existing between the coronary arteries and the vasa vasorum of the aorta in the matter of their respective contractile powers thus affords an intelligible explanation of the pathological conditions underlying the symptoms of angina.

Moreover, since vaso-constriction is a protective action, the absence of it during periods of increased aortic

pressure lays the coronary arteries open to strain and to diseases resulting from strain. Consequently the atheromatous and ossified state of the tissues of this artery, frequently observed in the subjects of angina after death, is to be regarded as a direct result of increased blood pressure, and as a concomitant condition rather than as a cause of angina.

London, S.W.

WALTER VERDON, F.R.C.S.

GLOSSINA MORBITANS AND SLEEPING SICKNESS.

THE following brief note may be of interest in the consideration of the question as to whether *Glossina morsitans* may or may not be capable of conveying *Trypanosoma gambiense* in the same manner as *Glossina palpalis*.

During a recent investigation of the conditions obtaining in the northern part of the Katanga I was able to make the following observations:

1. Of natives who were living in villages in the vicinity of which neither *G. morsitans* nor *G. palpalis* was found—

233 men showed 17 cases of infection.
118 women showed no cases.
83 children showed 2 cases.

Thus of 434 natives 3.9 per cent. were infected.

2. Of natives who were living in villages in the immediate vicinity of which *G. morsitans* was to be found but not *G. palpalis*—

844 men showed 37 cases of infection.
372 women showed 1 case.
259 children showed 2 cases.

Giving a percentage of infection for 1,475 natives of 2.7.

3. Of natives who were living in villages in the immediate vicinity of which *G. palpalis* was to be found—

572 men showed 75 cases.
254 women showed 34 cases.
200 children showed 11 cases.

Giving a percentage for 1,026 natives of 11.7.

These figures show clearly that there is absolutely no evidence that the infection has spread more rapidly amongst those villages which are situated in *morsitans* areas than amongst those which are free from the presence of this fly.

The routes which are in common use amongst the natives in this part of the country pass through both *palpalis* and *morsitans* areas, though the former are very much smaller than the latter.

If *G. morsitans* is to be reckoned alike with *palpalis* as a transmitter of the disease, we should expect to find that the villages situated in *morsitans* areas would show at least as heavy a percentage infected as those in *palpalis* areas. For it is to be remembered that natives are surely bitten in this country one hundred times more often by the former than the latter fly.

These figures, however, show that the *palpalis* villages are far more more heavily infected than the *morsitans*, and the comparison becomes still more strongly marked if we eliminate the travellers—namely, the men—and consider the women and children, who represent more fairly the effects of the bites of the fly in the vicinity of the village. In every case where women or children were found to be infected in *morsitans* villages they had recently arrived at the village from some endemic area.

When it is borne in mind that trypanosomiasis has certainly been present to some degree in that country for three or four years, and that it is impossible in most parts for travelling natives to avoid being bitten hourly by the *morsitans*, it would seem impossible that no more evidence would have come to hand if this fly had been able to carry the infection.

It is, perhaps, wise to add that the part of the country from which my observations have been drawn is situated far to the north of the Katanga copper belt, and that the systematic inspection of natives entering the mineral belt from all quarters has revealed no single case of infection from the area referred to for the past four months.

ARTHUR PEARSON,

Chef du Service Médical de l'Union Minière
du Haut Katanga.

Reports of Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF ANATOMY AND PHYSIOLOGY.

Friday, January 22nd, 1909.

T. H. MILROY, M.D., President, in the Chair.

Reaction Time.

THE PRESIDENT said he wished to put before the members the result of some work which he had done on reaction time, and which he had undertaken in order to study the nature of mental fatigue. By reaction time was meant the period which elapsed between the initiation of a sensory stimulus and a volitional motor response on the part of the stimulated individual. One might estimate this time for hearing, sight, or touch, taking the same type of motor response as indicator in each case. When a series of reaction times was taken for any of the above-mentioned senses, it was observed that there were naturally distinct variations in the intervals between the sensory stimuli and the motor responses; but it might also be observed that in all cases, after a prolonged series had been taken, fatigue gradually sets in, as shown by a lengthening of the reaction time. This fatigue might affect the sensory paths, the sensory centres, the intermediate central paths between these centres, and the voluntary motor centres, or the motor path as far as the muscles themselves. In all cases a preliminary series of reaction time experiments was made in order to obtain an average normal result. Then, following such a series, various devices were employed in order to fatigue mainly the sensory, then, in another series, mainly the intermediate central paths, and in still another, the motor paths. From a careful study of a large number of experiments on the reaction time, it appeared as if in all cases the fatigue had its seat in the higher centres concerned in the direction of the attention towards the sensory motor reaction. These higher centres appeared to be required in order to link the various synapses of the higher physical and volitional motor centres more closely together, and thus facilitate the transmission of the nervous impulses. Thus, in their fatigue there was a delay in transmission, probably due to the higher resistance at the synapses, which were not so closely linked together as when the attention was freshly directed towards the act at the outset of the experiment.

After remarks by Professor DIXON, Professor FRASER, and Dr. DAWSON,

Dr. WALTER SMITH said that, in judging of reaction time, an important factor was the duration of the stimulus. There was a great difference between the momentary impact of a visual stimulus and the relatively long duration of even the shortest sound. The subject was valuable to physicians and surgeons in estimating the phenomenon of knee-jerk, or the many manifestations of disordered and delayed sensations in hysteria. A most important point was the fatigue in the synapses between neurones. It was possible to draw an analogy between mental and digestive processes. In the nervous system they might recognize the possibility of a stimulus of stimuli just as there was in the digestive system a ferment of ferment.

Dr. MOORHEAD said he strongly believed that after a short rest following work one could turn to a new variety of work that required just as much attention, whereas if one turned to the same kind of work the same power of attention would not be appreciated.

THE PRESIDENT, in reply, said the nature of impressions varied according to the stimulus. One's idea of certain sounds was based on past sensations and memories which called forth a different mental condition. There were certainly two paths between neural centres, one voluntary, the other formed by habit, but they could not say whether the linkage was always made by the one path, nor could they recognize where volition came in. His tests were for the purpose of finding where fatigue occurred, not to find what alterations in duration of stimuli produced—that had been carefully worked out by others. It was difficult to tell how change gave rest. Sight plus hearing would produce greater fatigue than one form of fatigue carried the whole way down.

The Sterno-clavicular Joint.

Dr. H. M. JOHNSTON presented a communication on this joint, and exhibited drawings. The security of the joint was shown to depend mainly upon the costo-clavicular ligament, which was always tense, even when the upper extremity was hanging by the side. Owing to the attachment of this ligament to the clavicle being on the posterior-inferior aspect, elevation of the clavicle was permitted by a movement of rotation taking place, during which the anterior surface of the bone became directed somewhat upwards. The interarticular meniscus, intervening between the inner end of the clavicle and the sternum and first costal cartilage, and against which, owing to the laxity of the capsular ligament, the articular surface of the clavicle could move (upwards and downwards, forwards and backwards), serves rather as a "buffer," preventing shocks and jars being transmitted to the sternum, than as a ligament. To the sternum and costal cartilage (this meniscus intervening) the inner end of the clavicle seemed to be, as a general rule, firmly applied. During pulling, and when supporting the weight of the body by hanging from the hands, the clavicle was drawn somewhat outwards. This did not occur during reaching movements, as the contraction of the subclavius muscle prevented the clavicle being drawn away from the sternum as the scapula moved outwards and forwards.

Professor DIXON stated that he had seen the dissections made by Dr. Johnston, and was convinced that the explanations given of the function of the costo-clavicular ligament and of the subclavius muscle were the correct ones.

Specimens.

Professor McLOUGHLIN exhibited a specimen of *Dorsal subclavian artery* and one of *Duodenal diverticulum*.

Lantern Demonstration.

Professor FRASER gave a lantern demonstration of a series of slides showing (a) the living model from the front, the back, and the side, with the superior extremity in various positions; (b) a series of the head and neck, showing the various movements—flexion, extension, lateral inclination, and rotation to right and left; (c) a series of the trunk, showing its various movements—flexion, extension, lateral inclination, and rotation to right and left; (d) a series of the lower extremity, showing the various degrees of flexion from the outer and inner aspects of the limb.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.—At a meeting on Wednesday, February 3rd, Dr. G. A. GIBSON and Dr. W. T. RITCHIE read a paper on a historical instance of the *Adams-Stokes syndrome due to heart-block*. A distinguished physician had enjoyed during a long life very excellent health, excepting that during his youth some suspicion had been aroused by the condition of the lungs, which led to his spending a winter in Rome, immediately after graduation. In 1899, being then 75 years old, he had a serious attack of influenza, and in the following year he retired from the positions which he occupied, and settled in Edinburgh. Until his house was ready he lived in one of the suburbs, and used to go backwards and forwards by train. In September, 1900, when in the train going into Edinburgh, he was suddenly attacked by unconsciousness and muscular rigidity. He was seen shortly afterwards by Professor Wylie and Dr. Gibson, and the condition was then found to be one of great prostration. Consciousness had returned, but the patient was very dull and listless. The pulse at the wrist was only 6 per minute, the apex beat being the same, and there were no missed beats. The first sound was quite distinct, and was followed by a clear, ringing second sound, but between these were other feeble sounds (to be referred to later). In the course of a few hours the attack passed off, and the pulse returned to its normal rate, between 60 and 70, with complete disappearance of the nervous symptoms. A slight attack occurred in St. Paul's Cathedral, London, in October, 1900, and again in November, 1901, in his own house. A more serious and more prolonged seizure was experienced at Christmas, 1901, after which the normal was again reached. This condition of matters continued until July, 1902, when there was a sudden attack at church, with a pulse-rate of 16, and syncope symptoms. In February, 1903, another seizure occurred in a tramway car, and the same afternoon another attack came on in the street. The condition of the pulse during these attacks was not observed, as he was not seen by his medical attendant until afterwards. During the same month he

went to London in order to attend the meeting of the General Council, and had one or two attacks of syncope character, but the pulse was not observed to be below 40 at this time. Towards the end of the month he returned to Edinburgh, and was found to be very faint; his pulse then was 40. In March there were several attacks, and the pulse fell to 32 per minute. During the rest of his life the pulse was never found to be above 34, or below 28; it was almost invariably 32 per minute. From March, 1903, until June, 1907, when he died, there was no syncope or epileptiform attack. The patient manifested the keenest interest in his own condition, and encouraged every inquiry into the nature of his affection. He was seen by many distinguished men from time to time, all of whom expressed their views in regard to the nature of the disease. From first to last there was a good deal of gastro-enteric catarrh, with dilatation of the viscera and considerable constipation. There never was any renal affection, and the respiratory organs were wonderfully healthy, with the exception of slight impairment of the percussion sounds at the apices, accompanied by harsh breathing. After the cessation of the attacks of fainting and palpitation there never were any nervous symptoms. The patient slept well, and every intellectual faculty was alert to the end of life. The circulatory organs presented features of the greatest interest. There was a distinct cervical venous pulse of the auricular type; the apex beat was slightly further to the left than usual; the impulse was well sustained and perfectly regular, with a usual rate of 32; the arteries were somewhat thickened, but not in any way resistant; the condition of arterial pressure will be mentioned later. Percussion of the heart showed some enlargement, there being some dilatation with hypertrophy. On auscultation the first sound was replaced by a loud, high-pitched murmur, heard over the whole præcordia, and particularly distinct at the apex; the second sound was loud and ringing, especially about the aortic cartilage. Between the incidence of the systolic murmur and its attendant second sound there could always be heard perfectly distinct sounds, usually two in number, which were by no means loud; these were assumed to be caused by the pulsation of the auricles. Careful comparison of tracings taken from the jugular veins, the brachial and radial arteries, and the cardiac apex, amply confirmed this impression, as there were always two, if not three, elevations made by the movements of the cervical veins for each ventricular impulse. It was perfectly clear that the cause was one of partial, or incomplete, heart-block, as there was no absolute dissociation of ventricular and auricular movements, the ventricular pulsation being immediately preceded by an auricular impulse, although the interval between auricular and ventricular pulsation was not always exactly the same. In other words, the conductivity varied considerably. At a later period the condition seemed to pass into complete block. It was very interesting to find that the arterial pressure was extremely high during the systolic period, reaching as much as 230, and falling to 75 during the diastolic period. A comparison of all the phenomena with similar cases which have been under our care has shown us that it was a very interesting example of the Adams-Stokes syndrome due to heart-block. The termination came with dramatic suddenness after the patient had passed through a period free from any disturbing symptoms. At the *post-mortem* examination, which was expressly ordered by himself, the heart was found to be enlarged, measuring $17 \times 12 \times 11$ cm. The circumference of the heart 2 cm. below the auriculo-ventricular groove was 37.5 cm.; the subpericardial fat was abundant; the cavities were all dilated and hypertrophied; the hypertrophy of the tænia terminalis was well marked. In the right ventricle there were patchy thickenings of the endocardium; the tricuspid valve showed some fibrous thickening, but no calcification; the pulmonary artery and valve were healthy; the segments of the mitral valve were thickened and calcareous, the basal part of the aortic cusp being particularly affected; the chordae tendineae were somewhat thickened, but not shrunken, and the fibrous change extended into the apices of the papillary muscles; the endocardium showed patchy thickening, greyish-white fibrous areas being seen on some of the columnae carneae; the cusps at the aortic orifice were all thickened, but not shrunken or

adherent to one another, and their basal parts were calcareous; the sinuses of Valsalva were dilated; the aorta was atheromatous, as were also the coronary arteries whose branches in the heart wall were seen as greyish-white lines. A portion of the septum of the heart containing the auriculo-ventricular node and the auriculo-ventricular bundle was examined microscopically, and a similar comparative study was also made of the same region in healthy hearts, examined in serial sections. The examination showed that there was a dense fibrous transformation spreading from the aortic cusp of the mitral valve into and largely replacing the normal tissue of the auriculo-ventricular node and first part of the bundle. The fibrous tissue was dense, and presented irregular areas of calcification, so that the appearances differed very strikingly from those presented by the interlacing network of fibres in the node and all the corresponding parts of the healthy heart. The auriculo-ventricular bundle further down, nearer the membranous septum, and towards its bifurcation, showed less fibrosis and no calcification, although calcareous deposits were found in the adjacent fibrous tissue. The tissues at the junction of the superior vena cava and right auricle were also examined microscopically; the most important change in this region was found to be a pronounced fatty infiltration.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting on February 3rd, Dr. P. BOOBYER, President, in the chair, Dr. R. D. MAXWELL, Obstetric Registrar to the London Hospital, delivered an address on the *Operability of cancer of the cervix in the light of recent operative technique*. Pointing out how frequently an operation showed the disease to be far more extensive than had been anticipated, he urged the need for examination of doubtful cases under anaesthesia, with exploration and microscopic examination of the cervical mucosa. Comparing the results of operation by the vaginal route with abdominal panhysterectomy (implying complete segregation of the cancer) as advocated by Wertheim, cure was much more likely in the case of the more radical abdominal operation, and the pioneers in this particular field deserved credit for not being deterred by a high immediate death-rate at first associated with it. At the same time he thought such an operation ought not to be performed after the age of 60. Briefly alluding to the vesical and other urinary complications associated with convalescence from Wertheim's operation, Dr. Maxwell pressed the importance of systematic education of the female population in the early symptoms of cancer, so that cases might come under expert notice much earlier than was the rule at present. As the result of the crusade against cancer in Germany initiated by Winter, of Königsberg, the percentage of operable cases had there materially increased; and similar good might result in the United Kingdom from the pamphlets on cancer placed in the hands of registered midwives during the last two years.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—At a meeting on January 22nd, Dr. W. H. CHRETHAM in the chair, Dr. MAXWELL TELLING, in a paper on the clinical relationship of *Erythema nodosum*, adduced evidence to show that this disease was not one of the manifestations of the rheumatic infection. He also contended that it was not a variant of the erythema exudativum multiforme of Hebra, but that it was a specific disease allied to the acute eruptive fevers. Dr. MYER COPLANS showed organisms of *Vincent's angina* obtained in each of four outbreaks within the past three months in Leeds and the East Riding. The organisms were spirilla and fusiform bacilli obtained from cultures of throat swabs on alkaline-glucose-serum slants (1 per cent. glucose). Mr. B. G. A. MOYNIHAN showed an appendix removed within three hours of the onset of an acute attack of severe pain associated with an extremely rigid abdominal wall. The symptoms suggested a *Perforation of the appendix*, but the condition found was one of thrombosis of the vessels in the distal part. The distal part of the appendix, the territory of the thrombosed vessels, was a deep purple colour, the remainder being pale. This condition, it was suggested, was the early stage of which gangrene and perforation are the later stages. Dr. E. F. TREVELYAN showed (1) a boy aged 14 with *Disseminated sclerosis*, which the parents attributed to an injury sustained seven months ago. Gait slightly

reeling; speech drawing; aimless laughing; nystagmus; convergence deficient; intentional tremor; knee-jerks exaggerated with left foot clonus. There had been several epileptiform seizures. (2) A girl aged 24 with *Epilepsy*. In at least two fits there had been a precurse motor aura, the patient being impelled to run forward before unconsciousness supervened. Mr. J. F. DONSON showed a *Heart with stab wound* from a butcher's knife penetrating the left ventricle. The wound was sutured with two catgut stitches with great immediate improvement; however, death resulted from sepsis sixty hours after operation. Mr. J. STEWART showed a specimen of *Tubal gestation* removed from a patient, aged 24, who was suckling her second child, aged 5 months. Mr. MICHAEL TEALE showed a child with an opacity of the greater part of the capsule of the lens of each eye, probably due to a persistent remnant of the embryonic capsule of the lens.

LIVERPOOL MEDICAL INSTITUTION.—At a meeting held on January 28th, Mr. T. H. BICKERTON, President, in the chair, Mr. THIELWALL THOMAS read notes on two cases of *Actinomycosis* of the cervico-facial type. The first occurred in a housemaid who had nothing to do with cattle; the disease was very severe, and involved the facial bones. The second was that of a young man who looked after a horse and frequently chewed corn. Both cases commenced as gum-boils. The treatment consisted in free incisions, packing the wounds with gauze soaked in tincture of iodine, and the internal administration of potassium iodide and iodinipin. Both cases recovered after an illness lasting many weeks. Mr. MONSARRAT referred to a case under his care in which the infection was pharyngeal in origin, and closely resembled tubercle. In spite of energetic treatment, including a vaccine, the patient died from extension to the vertebrae. Mr. DOUGLAS-CRAWFORD mentioned two cases which he had reported two years ago—one of the cervico-facial type, and the other which had attacked the abdominal wall; both cases were treated by excision, local application of iodinipin, and potassium iodide internally. Both ultimately recovered. Dr. BAKER YOUNG described a case of *Muscarin poisoning*. The symptoms were those of catarrhal jaundice, followed by peripheral neuritis and paroxysmal dyspnoea. Atropin was the drug chiefly employed, but the case ended fatally. Mr. LITTLER-JONES reported two cases of *Diaphragmatic hernia*. One followed a perforating wound of the left wall of the chest; a portion of the eighth rib was excised, the diaphragm repaired, and the patient ultimately made an excellent recovery. The second case was that of a child who presented symptoms of intestinal obstruction. The hernia was reduced through an abdominal incision, but the patient died some days later from severe haematemesis. Drs. RUNDLE and STENHOUSE WILLIAMS read a note on the *Serum treatment of diphtheria*, with special reference to anaphylaxis.

MEDICAL SOCIETY OF LONDON.—At a clinical meeting on February 8th, with Mr. CHARTERS J. SYMONDS, F.R.C.S., in the chair, the following cases were shown:—Dr. A. F. VOZLCKER: A case of widespread *Peripheral neuritis* of uncertain origin exhibited to the Society on November 9th, 1908, as a doubtful case of diffuse glioma of the cord; also a case of *Hydatid cyst of the liver successfully treated by drainage*. Dr. G. A. SUTTERLAND: A case of *Generalized paralysis* of uncertain origin in a boy 3 years of age, admitted to hospital on October 2nd, 1908, after an indefinite illness of six days' duration, characterized by loss of appetite, abdominal pain, and constipation, when he lay in a curiously apathetic condition and made no attempt to move arms or legs. There was a frequent, loose, and toneless cough. All the extremities were flaccid and paralysed, very slight power being present in the upper extremities only. The knee-jerks were absent and a doubtful flexor response was elicited on the left side. The abdominal and cremasteric reflexes were absent. There was rectal and vesical incontinence. The diaphragm was apparently quite paralysed. After twelve weeks he was now definitely improving, and was putting on weight and gaining power in all the paralysed muscles. Mr. P. MAYNARD HEATH: A case of *Typhoid peritonitis of the femur*. Dr. F. PARKES WEBER: A case of *Acquired chronic acholuric jaundice*

with *splenomegaly*; a case of *Splenomegaly*, due to inherited syphilis (?); and a case of *Raynaud's gangrene* in a malarial subject. Dr. WILFRED HARRIS: A case of *Syringobulbia*. Fifteen years ago the patient had haematemesis. He had since been subject to pains in the right side and shoulders and the back of the head. There was marked hemiatrophy of the right half of the tongue and coarse nystagmus on looking to the right. In regard to sensation there was complete loss to pin-prick, heat and cold over the second, third, and fourth cervical root areas on both sides. Mr. CHARTERS J. SYMONDS: A case of *Congenital dislocation of the hip four years after Lorenz's operation*; and a case of *Stricture of the oesophagus*, showing the method of treatment by a long rubber tube. Dr. W. H. CROLY (introduced by Mr. L. Eliot Cressy): A case of *Epidermolysis bullosa*. Mr. T. H. KELLOCK: A case of *Deformity of long bones in a boy* aged 6 years. There was considerable laxity of the joints, chiefly noticeable at the right hip, which it was possible to rotate outwards to a very abnormal degree. Skiagrams showed bending of the shafts of the long bones and great irregularity of ossification at the epiphysal ends. The pelvis was a good deal deformed, approaching the tri-radiate form. Dr. F. S. PALMER: A case of *Spinal caries followed by pressure paraplegia*, in which considerable recovery followed laminectomy.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—At a meeting held on February 2nd, Dr. MAY THORNE in the chair, Miss GARRETT ANDERSON gave the history of a case of *Carcinoma of the colon*. The patient was a woman aged 59, in whom the growth had been felt per vaginam as a small movable mass just above the brim of the pelvis. Eight inches of the sigmoid were excised through an oblique incision in the right inguinal region. As the patient's condition was too serious to allow an anastomosis to be made, the distal end of the bowel was closed, and the proximal end was brought out in the colotomy wound. A Paul's tube was used for the first few days. She made a good recovery, and was shown wearing a Pengelly-Bailey belt, which was recommended as being clean and easy to manage. The parts removed at the operation showed an annular growth of columnar cell carcinoma. Miss GARRETT ANDERSON also showed, on behalf of Miss Cock, a woman, aged 45, who for three years had noticed a small *Lump in the left breast*. It was hard and was fixed to the skin, and there were some small hard glands in the axilla. The swelling was considered to be a scirrhus, though the history was somewhat long. The question was raised whether there was a secondary growth in the sacrum as the patient complained of severe pain in that region. Miss DONNE showed a girl with an *Osteoma growing from the upper border of the scapula*. The scapula was also elevated, owing to absence of the lower part of the trapezius, and there was scoliosis with a triple curve. Mrs. SAVILL showed a case of *Scleroderma*. Four years ago the patient had been treated daily, over a period of two years, with x rays, and her left arm presented the typical appearance of x-ray dermatitis, with scarring (keloid in places), tetangetectases, and two painful ulcers. The PRESIDENT showed (for Mrs. Scharlieb): (1) A *Cystic tumour of the uterus* with the microscopic characters of an endothelioma. The patient had been aware of the existence of a tumour for eleven years. (2) A *Malignant adenoma infiltrating the wall of the uterus* as far as the peritoneal coat. There was a history of irregular and profuse menstruation for three years, and, for a shorter period, of loss of flesh, anaemia, and a foul vaginal discharge. The patient died of heart failure thirty hours after panhysterectomy, death being preceded by vomiting of tarry material, possibly due to secondary growths in the stomach. (3) An *Epithelioma of the vagina*. The patient from whom the specimen was removed had worn a ring pessary for twelve years, and seven months before the growth was discovered the pessary had to be forcibly extracted, as the vaginal tissues had grown over it.

The State Children's Association has issued a leaflet explaining the provisions of the Children Act, 1908. The leaflet (price 1d.) and fuller information regarding the Acts affecting children can be obtained on application to the Secretaries, 58, Old Broad Street, E.C.

Reviews.

VACCINES AND IMMUNITY.

SINCE Professor Paul Ehrlich first enunciated his theory—familiar now as the side-chain theory—by means of which he endeavoured to provide an explanation of the processes by which immunity is regulated, various efforts have been made to make the details of the theory intelligible to those interested in the endeavour to bring it into closer touch with the various pathological problems connected with the study of medicine. Continental workers, with a whole-hearted acceptance of the theory as a working hypothesis, have made rapid strides in the direction of further investigation along lines indicated by Ehrlich, with the result that most important facts have been slowly but surely accumulating. These investigations are scattered broadcast in numerous periodicals, and writers like Aschoff, Römer, Kolle and Wassermann, and more recently Kraus and Levaditi, have endeavoured to bring these investigations together in monographs and textbooks, so presenting the advances made as a result of Ehrlich's fundamental theoretical deductions. For reasons which are not far to seek, these results have hardly found a just recognition in English textbooks of medicine and pathology. First amongst these reasons is not the cumbersome terminology used, nor the speculative arguments advanced, but very largely hesitation on our part, due probably to our innate dislike for involved theoretical discussion. A short monograph, written by Dr. SCHATILOFF,¹ is published just at a time, however, when the medical world has realized that it can no longer remain satisfied with the old pathological shibboleths which were based on the findings of morbid anatomy. We are no longer satisfied with the expressions "cloudy swelling," "colloidal degeneration," and "amyloid transformation," for these terms merely describe the shipwreck produced by processes which we do not understand. No doubt Sir Almoth Wright's work on opsonins has opened our insular eyes more widely to the principles of immunity than all the advances made by Ehrlich and his school, if for no other reason than that the theory of opsonic reaction to infection is a much more simple and demonstrable one. No doubt it is, at present at least, practically impossible to find a place for opsonins in Ehrlich's scheme of immunity, but this is no excuse for neglecting to appreciate the more recent advances based on his theory. Dr. Schatilloff devotes the first thirty pages of his publication to a most successful attempt to render Ehrlich's theory more intelligible, and we must confess to great assistance derived from the discussions in this part of the book, and from the most serviceable diagrams which pictorially represent what is too often difficult of comprehension. The meaning of such terms as "toxones," "toxoids," "lysins," "complementoids," and "precipitinogens," is no longer obscured by terminological difficulties. Even if Dr. Schatilloff had written no more than these first thirty pages, he would deserve great credit, for his efforts, if we are not greatly mistaken, will help the reader to a thorough grasp of the difficulties which attend this new theory. No doubt there is still very much to be done in filling the obvious gaps in our knowledge, even when helped by the most recent advances based on Ehrlich's hypothesis, but the writer has wisely shunned what is still in dispute, and gives to the reader a survey only of what is generally accepted. We should signally fail in our duty, however, if we did not call the reader's attention to the admirable work contained in the last fifteen or sixteen pages, for within these narrow limits Dr. Schatilloff has contrived to give the reader full details of a reaction of the serum of infected patients which, already acting as a touchstone, is showing the existence of infective agents which so far have baffled all detection—for example, the acute infections which cause measles, whooping-cough, scarlet fever, and the like. For once we meet with a German book which disregards all references, and is satisfied to give the facts only; this is disappointing in some ways, but the gain in terseness is very great. The amount of work which has followed upon the important results published by Bordet and Gengon could not be given fully in the small compass of this part of the book, but the

process itself, as originally planned by Bordet and Gengon, and the corrections and improvements suggested by subsequent workers, are all fully set out, notably those initiated by Wassermann in his application of the test to the investigation of syphilis.

Various well-known authorities of the Pasteur Institute in Paris have collaborated in the publication of a volume on bacterial therapy, vaccination, and serumtherapy,² forming part of the *Bibliothèque de Thérapeutique*, edited by MM. GILBERT and CARNOT. Metchnikoff gives a fairly full and reasoned account of intestinal therapy by the ingestion of acid-forming bacteria, and considers the varieties of bacteria which may be most suitably employed for this purpose. He seems a little angry with the people who argue that this treatment may be dangerous on the ground that in rabbits the experimental administration of lactic acid produces degenerative changes in the vascular system, and remarks sarcastically:

Applying to mankind the results of experiments on rabbits it would be necessary to conclude that man is extraordinarily susceptible to chicken cholera, that he is absolutely refractory to recurrent fever, and that he cannot contract syphilis except when the virus is inoculated in the eye.

True, the constitution of a rabbit is different from that of a man; but it does not follow that these experiments on rabbits are worthless; whilst not amounting to a refutation of Metchnikoff's favourite doctrine, they at least raise a point demanding further consideration. Sacquépée's lengthy article on vaccination against small-pox is good on the whole, but we are surprised that he does not attach more importance to the purification of vaccine lymph by the use of chloroform; in looking over his article the only reference which we have found to this method is a single line on p. 67. The articles on vaccination against hydrophobia by Remlinger, and on diphtheria antitoxin by Louis Martin, are both valuable, but do not call for any special comment. We note that Vaillard and Dopfer, writing on the serumtherapy of bacillary dysentery, do not think much has been gained by the efforts made to produce a polyvalent serum.

The necessity for a polyvalent serum does not seem to have been demonstrated hitherto, at least so far as our own practical experience goes. Although for the immunization of our horses we have employed solely cultures of the Shiga-Kruse type, all our dysentery cases, whether produced by the Shiga-Kruse or by the Flexner bacillus, have been influenced in an equally favourable manner.

The article on the serumtherapy of epidemic meningitis is by Wassermann and Leber of Berlin. These authorities regard the specific serum as an important therapeutic agent when inoculated intraspinally, and quote a recent epidemic in which the mortality amongst the untreated cases was from 78 to 80 per cent, whilst amongst the cases which received large doses of the serum the mortality did not rise above 12 to 15 per cent. Dujardin-Beaumez, to whom is entrusted the article on serumtherapy and vaccination in bubonic plague, makes the significant remark that "the true prophylaxis which is effective against plague is the extermination of rats, the sole propagators of this disease." We are disappointed to find that the chapter on serumtherapeutics in poisoning by snake venom, written by Calmette, is cut down to the meagre space of nine pages. Calmette is one of the greatest living authorities on this subject, which is one deserving of lengthy treatment, and we think that the value of the volume as a whole would have been increased if the article had been expanded. The editors of the book are to be congratulated on having secured the services of so many eminent writers, and we look forward with interest to the appearance of further volumes in the same series.

DRS. KRAUS and LEVADITI, who are editing a treatise on the technique and method of immunity investigation,³

¹ *Bibliothèque de Thérapeutique*. Publiée sous la direction de A. Gilbert et P. Carnot. Médicaments microbiens. *Bactériothérapie, Vaccination, Sérothérapie*. Par les Docteurs Metchnikoff, Sacquépée, Remlinger, Louis Martin, Vaillard, Dopfer, Besredka, Wassermann, Leber, Dujardin-Beaumez, Salimbeni, Calmette. Paris: J. B. Baillière et Fils. 1909. (Post 8vo, pp. 500, 26 illustrations in the text. Fr. 8.)

² *Handbuch der Technik und Methodik der Immunitätsforschung*. Herausgegeben von Professor Dr. R. Kraus und Dr. C. Levaditi. Erster Band. Zweite Lieferung. Jena: Gustav Fischer, 1908. (Sup. roy. 8vo, pp. 359-1138, 2 coloured plates, 1 chart, and 94 illustrations in the text. M. 20.) Zweiter Band. Erste Lieferung. (Pp. 278, with illustrations. M. 8.)

³ *Die Ehrlichsche Seitenkettentheorie, erläutert und bildlich dargestellt* [Ehrlich's side-chain theory explained and diagrammatically represented]. By Dr. P. Schatilloff. Jena: Gustav Fischer. 1908. (Roy. 8vo, pp. 48, Tab. 7. M. 2.)

have issued the second part of the first volume. The article on vaccination against variola, by Dr. Gustav Paul of Vienna, covers the ground fairly well, but is written very conspicuously from the German point of view, and may appear to English readers to treat work done in this country less fully than it deserves. Dr. Paul does not think that lymph purified by the chloroform method can be regarded as reliable for general use; and there is no necessity, he argues, to resort either to this or to any other method for the rapid elimination of extraneous organisms, provided that proper precautions are taken to produce the lymph in a comparatively pure condition. For this purpose he recommends the use of a protective covering (*Tegminderband*) which is applied over the area where the calf has been inoculated; this procedure has been followed in Vienna since 1897. Perhaps Dr. Paul would attach more importance to the chloroform method if he studied it more thoroughly. In the article on protective inoculation against typhoid fever by Dr. Friedberger, the most noteworthy feature is the full account given of Wright's work and the statistics on this subject. In the next chapter, on preventive inoculation against cholera, Dr. Friedberger betrays a little too much anxiety to pick holes in Haffkine's brilliant work; he informs us that "the essential nature of cholera-immunity" was first brought to light by certain German investigators. Similarly the chapter on plague prophylactics, by Drs. Wassermann and Leuchs, would have been improved by a fuller recognition of the work done under the auspices of the British Government. There are several chapters on tuberculosis. Dr. Löwenstein contributes two on human tuberculosis, dealing with the therapeutic and diagnostic uses of tuberculin; Dr. Römer writes on tuberculin testing and vaccination in bovines; and Dr. von Pirquet discusses the cutaneous and conjunctival reactions with tuberculin. These articles all contain useful collections of data, but do not attain to a very high standard of impartial criticism. Dr. Römer's articles, for example, reveal a strong personal bias in favour of the Behring school. The great merit of the book lies in the very full and carefully written descriptions of technical methods, and in this respect its utility will be highly appreciated by all workers on immunity. In discussing theories some of the writers are less successful. They rely too much on the bald "historical" method of presenting a long string of persons' names with a particular theory or opinion attached to each; and when they attempt to criticize, the evidence of impartial judgement is often obscured by special pleading in favour of a particular point of view. The first section of vol. ii will prove of great service to those engaged in the practical work of antitoxin preparation. Professor Kretz, of Prague, describes the technique of producing and collecting diphtheria antitoxin from horses, and Dr. Levaditi gives a very interesting account of the preparation of antibacterial and antitoxic immune sera from large animals in the serum department of the Pasteur Institute in Paris. The testing and standardization of diphtheria antitoxin is dealt with by Dr. Madsen, of Copenhagen; the chapter on tetanus antitoxin is by Drs. Eisler and Pribram, and includes a short discussion of the employment of this antitoxin for prophylactic and therapeutic purposes; and the preparation and employment of antitoxic serum in cases of dysentery caused by the Shiga-Kruse type of bacillus is fully described by Dr. Doerr, of Vienna. Another important article in the volume is Professor Calmette's account of the preparation of antitoxins against snake poisons.

In the second edition of his *Vaccine Therapy and the Opsonic Method of Treatment*⁴ Dr. ALLEN has incorporated a large amount of new material and has increased the bulk of the volume by nearly a hundred pages. A special feature of the new edition is the expansion of the chapter on infection by the tubercle bacillus. The author attaches high importance to the differentiation of tubercle bacilli found in the human body into "human" and "bovine" types, and for general clinical purposes recommends the use of a vaccine prepared from a mixture of these two types of bacilli. Unfortunately an element of confusion

arises owing to the fact that certain clinical pathologists make use of these terms "human" and "bovine" in ways which would not be acceptable to Koch and other high authorities who have established this differentiation on a definite basis of bacteriological experiment. Put briefly, what the bacteriologist means by a "bovine" strain is one which grows poorly on artificial culture media, and is of high virulence for rabbits, in contrast to which the characters of "human" strains are abundant growth on artificial media, and relatively low virulence for rabbits. When tested by these criteria, very nearly all the tubercle bacilli which have been obtained from human tuberculous lungs have been found to be of the "human" type. Dr. Allen, however, appears to attach importance to certain clinical pathologists who, relying on tests other than those mentioned above, have arrived at very different conclusions. For example, he quotes one observer who from "a most careful study" of 112 cases of pulmonary phthisis formed the opinion that 68, or 60.8 per cent., of these cases "showed a symbiotic working of the human and bovine types," and that 6 cases, or 5.3 per cent., "had almost exclusively bovine bacilli." We must remind Dr. Allen that the majority of bacteriologists are not prepared to concede that the *typus bovinus*, as defined by Koch and subsequent workers, occurs in the human lungs with anything like the frequency which a few physicians and opsonists imagine.

INJURY AS A CAUSE OF NERVOUS DISEASE.

ACCURATE knowledge of the place and importance of bodily injury in the causation of diseases of the nervous system is of great importance to every medical man who may be called upon to give evidence on this point in courts of law. The conclusions of a critical survey of over 1,500 cases of this kind on which judgement was given in legal courts, all of which cases had come under the personal observation either of Dr. Kurt Mendel or of his father, Professor E. Mendel, of Berlin, should, therefore, prove of use, particularly in these days of frequent application for compensation under the Workmen's Compensation Act. Dr. KURT MENDEL's volume⁵ on injury in the etiology of nervous diseases, large as it is, is yet restricted to the discussion of the effect of trauma in general paralysis, cerebral tumour and abscess, apoplexy and meningitis, tabes dorsalis, multiple sclerosis, syringomyelia, myelitis, amyotrophic lateral sclerosis, and progressive muscular atrophy; progressive muscular dystrophies and neuritis; paralysis agitans, exophthalmic goitre, acromegaly, and epilepsy, and does not enter into the great field of traumatic neurasthenia and hysteria which, on account of their importance, will be treated in a separate volume to be published later. Each of the diseases above mentioned is treated in a separate chapter, illustrated by clinical notes and the judicial verdicts obtained. Few subjects are more hedged by difficulties. Apart altogether from the difficulty of duly apportioning the relative importance of the influence of trauma on the one hand, and predisposition, congenital or acquired disposition, on the other, there are difficulties as to matters of evidence, such as the proof that the individual concerned was sound in health up to the day of the accident; that other etiological factors besides trauma were absent; the time relation of the injury to the appearance of the disease, and the amount of injury received. To a certain extent these questions are of scientific and not forensic importance, for in German courts it is not necessary to prove that the injury was the sole factor; also the deepening of an already existing disease by accident has the same value as its traumatic production *de novo*; and further, in practice the court is content with a considerable degree of probability and when in doubt is in favour of a traumatic origin. For the author's discussion we must refer inquirers to the book itself, which is well worth reading, and need only give here his main conclusions. After the general statements that any injury, and in particular that of the skull or spine, may increase an existing nervous disease, or prejudice its course, or stir up a latent disorder, and that an injury may bring about a *locus minoris resistentie* on which soil other causes may become operative—for example, head injury in syphilitics may

⁴ *Vaccine Therapy and the Opsonic Method of Treatment*. By R. W. Allen, M.D., B.S. Second edition. London: H. K. Lewis, 1908. (Demy 8vo, pp. 256. 7s. 6d.)

⁵ *Der Unfall in der Ätiologie der Nervenkrankheiten*. By Dr. Kurt Mendel. Berlin: S. Karger, 1908. (Sup. roy. 8vo, pp. 189. M. 8.)

determine general paralysis, or in tuberculous subjects, tuberculous meningitis, etc.—Dr. Mendel considers (1) that the following diseases: General paralysis, brain tumour, tabes dorsalis, multiple sclerosis, amyotrophic lateral sclerosis, progressive muscular atrophy, progressive muscular dystrophy, paralysis agitans, Basedow's disease and acromegaly, being of endogenous nature are never of purely traumatic origin, however severe the injury; (2) that polyneuritis and brain abscess may be the direct result of injury, in the latter case, of course, in association with septic infection; and (3) that apoplexy, meningitis, myelitis and epilepsy may be brought about in completely sound individuals with no disposition to any of these diseases, as the result of injury, and may thus occur as purely traumatic diseases.

The considerable damage—amounting even to large losses of substance in certain parts, for example, in the frontal and parietal convolutions, etc.—which the brain can sustain without consequent mental or indeed any symptoms, often occasions surprise, and has led to the description of these parts as “dumb” areas, *stumme Gehirnteile*. Not long ago Professor BURR published an able paper¹ in which he maintained that head injury, no matter how severe, never produces insanity except in predisposed individuals. Possibly Professor Burr's view is an extreme one, but in any case the absence of symptoms, say in cases of cerebral tumour, and the restoration and mode of restoration of functions after extirpation of the cortical areas subserving these functions, as demonstrated by Hitzig, offer a wide and fruitful field for inquiry. For this reason, a pamphlet on the restoration of function in diseases of the brain,² reprinted from the *Monatsschrift für Psychiatrie und Neurologie*, Bd. xix, Heft 1, by Professor ANTON, the successor of Wernicke at Halle, will be read with interest. Professor Anton shows that there dwells in the human central nervous system a wide capacity for adaptation, an innate power of self-regulation, not only towards stimuli and effects from without, but with regard to internal disturbances of the cerebrum. The explanation of this power of adaptation or ability to take on vicarious function is given in a sentence, when Professor Anton says that “the constituent elements of the central nervous system possess greater possibilities of function than normally come into action; as is proved whenever another part is abolished.” Further, the nearer the injury is to the periphery the more restricted the possibility of vicarious action, or the higher the injury the greater the possibility, and consequently vicarious function in a case of cortical injury can be most easily assumed by neighbouring parts, the symmetrical parts in the other hemisphere and the subcortical centres. This compensatory action, however, if sufficiently pronounced, takes effect at the expense of other functions; other brain areas become more excitable, possibly also more easily fatigued; the sound areas undergo to some extent an alteration of function, and there is, in fine, a readjustment of the equilibrium of the whole, corresponding to the production of a new cerebral type. We have thought it sufficient to give here only the guiding principles expounded by Professor Anton in his too brief paper; for the author's valuable references to experimental cases, for the expression of this principle of vicarious function in symptomatology and for the practical lessons to be drawn therefrom we must refer readers to the work itself.

THE BRAIN IN RELATION TO THE SKULL.

THE atlas³ prepared by Professor HERMANN, of Erlangen, consists of seven sections illustrating the topographical anatomy of the brain and skull, and should prove of great value to anatomists, surgeons, and neurologists.

Professor Hermann has devised a careful and ingenious means of accurately determining by section and topography the relation of the skull to its contents, and gives 69 artistically-executed coloured photographic plates,

representing the skull with its sutures, the dura mater with its vessels, the convolutions and fissures, and a successive series of sections through the brain from above downwards, lateralwards, from before backwards, and from behind forwards. A study of these plates enables one to obtain a correct knowledge of what structures an instrument would pass through, if it travelled straight or obliquely through any part of the skull. Moreover, some idea of what structures a bullet would damage could be arrived at after locating its position in the skull by a skiagram.

The plates have either a transparency in front, naming all the structures seen through in a clear and comprehensive manner, or a diagrammatic tracing opposite with explanations of the relations of the calvarium and its sutures to all the subjacent parts or the relation of the various structures of the brain to the base of the skull. Plates 63, 64, 65, and 66 show projections of the lateral ventricles from above, from in front, from behind, and from the side; the situation of the principal branches of the middle meningeal artery is shown. As the author remarks, these plates should be useful as a guide in the operation of puncture of the lateral ventricles. Section 7 contains some exceptionally fine plates, which should be very useful to the surgeon.

The line system of Krönlein is adopted for cranio-cerebral topography, and in plate 67 the skull is seen exposed, and the lines are exhibited on the surface, together with the situation of the fissure of Rolando and the Sylvian fissure, with its branches as determined by this method. The next plate, 68, by ingenious arrangement and photography, demonstrates the exact relation those lines which were seen on the external surface bear to the convolutions and fissures of the brain after removal of one-half of the cranium and the membranes. The last plate, 69, shows the relation of Krönlein's system to the structures exposed when one-half of the brain is removed by mesial section through the corpus callosum, stem of the brain, and the cerebellum. No medical library of importance should be without a copy of this valuable pictorial anatomy of the brain in relation to the skull.

SURGERY.

Modern Surgery, by Dr. ROSWELL PARK,⁴ is an attempt to epitomize the modern principles and practice of surgery for the use of those who require such a condensed presentation. The author covers a very wide field within a comparatively small compass, and has studied the art of compression to some purpose. Some day textbooks of surgery will still further unload matter which they are not really called upon to supply, and get rid of chapters on inflammation, infection, and general parasitology which belong to treatises on general pathology. Parts I and II of the first volume treat of surgical pathology and surgical diseases; Part III of surgical principles, methods, and minor procedures. This last part is rather shapeless, and facts are not so arranged that the reader gathers clear ideas as to what methods the author recommends. Nor can some of the methods detailed be called modern—for example, the intraspinal injection of cocaine. No surgeon who has any experience of intraspinal anaesthetization, or is acquainted with the literature of the subject, would use this drug to-day. Injury and repair occupy Part IV; wound treatment is included, and this section is clearly written and adequately illustrated. The remainder of the first volume is devoted to surgical affections of the tissues and tissue systems. The author's views on the parasitic origins of tumours are temperately stated; a series of illustrations of “parasites” in cancer are given with the statement that their “existence is undeniable.” This part of the volume is marred by vagueness in definitions, and there are several instances of statements, more especially those bearing on pathology, which cannot fail to confuse the student. To describe the “tuberculous” as one of the varieties of acute osteomyelitis; to insist on a distinction between osteosarcoma and sarcoma of bone; to classify arthritis into dry, acute, purulent, and chronic, is to make statements not sufficiently precise for a textbook. The second volume treats of

⁴ *The Principles and Practice of Modern Surgery*. By R. Park. A.M., M.D., LL.D. Vol. I, General Surgery. Vol. II, Regional Surgery. London: H. Kington; and Glasgow: A. Stevenson. 1908. (Imp. 8vo pp. 1074. 36s.)

¹ Trauma of the Head as a Cause of Insanity. By Charles W. Burr. *Journal of the Amer. Med. Assoc.*, January, 1907.

² Über den Wiedereinsatz der Funktionen bei Erkrankungen des Gehirns. By Professor Dr. G. Anton. Berlin: S. Karger; and London: Williams and Norgate. 1905. (Demy 8vo, pp. 32. 1s.)

³ Gehirn und Schädel, eine topographisch-anatomische Studie in photographischen Darstellungen. Von Dr. R. Hermann, a.o. Professor der Anatomie an der Universität Erlangen. Jena: Gustav Fischer. 1908. (Sup. roy. 4to, pp. 12; 69 zum Teil Mohrfarbenen Lichtdrucktafeln. M. 60.)

regional surgery. One meets early with a plate (xlv) which presents the topographical anatomy of the cerebral cortex according to the ideas of five years ago, corrected by the researches of Sherrington and others. In its clinical descriptions, its illustrations, and its synopses of treatment, however, this volume is a reliable guide. The author is conservative, but at the same time in sympathy with advances in surgical practice, and his volume may be consulted by student and practitioner with advantage.

The seventh edition of this *Manual of Surgery*,¹⁰ so widely known by students under the familiar title of "Rose and Carless," needs no criticism. In this, as in previous reissues, careful revision with judicious alteration here and there have maintained the high position of the book as an authoritative treatise on modern surgery. The authors can fairly claim, among many other merits, that of having kept their manual, which has passed through seven editions in the course of ten years, within convenient bounds. In his interesting preface, Mr. CARLESS, after an allusion to his colleague and to the share he has taken in the preparation of this edition, points out that the task of keeping the book at its present high level will be increased rather than lightened in future years. Surgery, he states, is in an eminently plastic condition: new problems are awaiting settlement, new therapeutical methods are being adopted, and novelties of all sorts are being exploited. It seems to be probable that the operating surgeon, while extending the range of his work in some fresh directions, will be ousted in others. Though we are not optimistic as to any immediate results of cancer research, it is gratifying to know that the surgical authorities who are responsible for this work are convinced that in some future edition they will be able to chronicle a more effectual and scientific cure of this disease than the present-day procedure, which they regard as mutilatory. In our renewed praise of this manual full recognition is due to those who have so ably assisted the authors in the work of revision and in additions to the pathological and electrical subjects. We would venture to suggest that it would be well in future to include a list of the illustrations, to which in the present edition some clear and good additions have been made by Dr. Dupuy.

The excellent *Treatise of Operative Surgery*, by Dr. BICKHAM of New Orleans, has, in its third edition,¹¹ been so much enlarged and rendered so very comprehensive that it is likely, while attracting increased favour from the teacher and the operating surgeon, to be regarded as an inconvenient, if not impossible, guide by the student. In its present form it is undoubtedly a standard and very reliable work of reference, and thoroughly fulfils the author's original intention of describing the best and most approved technique of modern practical surgery. In his heavy task of revising the work Dr. Bickham has, he very gratefully acknowledges, received constant aid and encouragement from his wife. He has also good reason for thanking the lady artist who in this, as in previous editions, has done so much by her original illustrations to make quite clear the teaching of the text.

Dr. BOCKENHEIMER's surgical atlas¹² is a selection of coloured pictures, 150 in number, illustrating types of disease which come to the surgeon for treatment. The pictures are extremely good, the equal of those in any clinical atlas. Faithfulness to the last detail is necessary in such illustrations if they are to be of any real service, and these fulfil this requirement. Naturally those of new growths occupy the first place in point of number, and they form a remarkable series. There are gaps, of course

—it would take many atlases to fill them—but the series is well chosen; the appearances are typical, and extreme examples have been wisely avoided. The accompanying text contains a description of each plate and paragraphs on differential diagnosis and treatment. In many cases also the clinical history of the patient is given, and this adds materially to the value of the plate. Students, surgeons, and teachers of surgery will welcome this atlas; the plates are so true that they merit detailed study, and are admirable for demonstration purposes.

Dr. W. STOECKEL, Director of the Gynaecological Clinic at Marburg, has compiled an atlas of cystoscopy,¹³ showing various morbid conditions of the bladder in disease of the female pelvic organs. The plates show both primary bladder lesions and lesions in this viscus secondary to affections originating outside it. Changes in the bladder in pregnancy in cystocele, and in cystitis are shown, and of particular interest in this group are the pictures of fistulae. The illustrations of conditions invading from the outside include carcinoma and parametritis. There are also pictures of ligatures, of a gauze tampon, and of a pair of artery forceps which made their way into the bladder. The plates are excellently reproduced, and form a series of much interest and value.

The new and revised issue of Mr. MANSELL MOULLIN's essay on *When to Operate in Inflammation of the Appendix*, will,¹⁴ we have no doubt, prove a useful and instructive guide to the proper treatment of the grave affection which is here discussed. In this collection of four clinical lectures will be found a full and definite statement of the necessity of prompt surgical intervention in all but a very few cases of acute appendicitis—a line of treatment, it may be pointed out, which, when advocated by the author in his earlier edition, was not so widely accepted in this country as it is at the present time. In the concluding lecture will be found an excellent review of the clinical phenomena of appendicitis, deductions being drawn from the more important of these with regard to the nature and prognosis of the inflammatory attack and the indications for immediate or for delayed operation.

NOTES ON BOOKS.

THE *Calendar* for 1908-9 of the University Correspondence College¹⁵ will be useful to intending candidates for the Matriculation Examination of the University of London since it contains the papers set at the January examination, together with answers and solutions. Some years ago the Senate resolved, we believe, to appoint moderators to look after the examiners; it would be interesting to know with what degree of diligence these officers exercise their moderating influence.

The Medical Inspection of School Children, a series of lectures delivered at the West London Post-Graduate College, is a reprint of six articles which have appeared in recent issues of *The Medical Officer*. The greater portion of the first two lectures will be found at first hand in the three Memoranda on School Medical Inspection issued by the Board of Education, but in the process of explaining the scope of the Board's suggestions matter of a useful character has been incorporated. The writer, however, has confused the Annual Report to the Local Education Authority with that to the Board of Education. Skin diseases, examination of the eyes, examination of the teeth, and ear, nose and throat affections are dealt with in the subsequent lectures. While there is to be found in each of these lectures much valuable information, there is an absence of appreciation of the facts that the school doctor is not employed at a hospital or dispensary, nor has he the time and opportunity of indulging in the luxury of extreme specialism. The possibility of carrying out many of the suggestions made does not seem to have been seriously considered. In publishing information for the help and guidance of the new school doctor care should always be taken that the material is suitable and, at least,

¹⁰ *A Manual of Surgery for Students and Practitioners*. By William Rose, M.B., B.S. Lond., F.R.C.S., Emeritus Professor of Surgery and Member of Council, King's College, London, and formerly Senior Surgeon to King's College Hospital, etc., and Albert Carless, M.S. Lond., F.R.C.S., Professor of Surgery, King's College, and Surgeon to King's College Hospital, Examiner in Surgery to the University of London, and to the Victoria University of Manchester, etc. Seventh edition. London: Baillière, Tindall and Cox. 1908. (Demy 8vo, pp. 1392, 554 illustrations.) 28s.

¹¹ *A Treatise of Operative Surgery, covering the Surgical Anatomy and Operative Technique involved in the Operations of General Surgery*. Designed for Practitioners and Students. By Warren Stone Bickham, M.D., Ph.D., Ill. Third edition. Philadelphia and London: W. B. Saunders Company. 1908. (Demy 8vo, pp. 1205, illustrations 454, 28s.)

¹² *Atlas Chirurgischer Krankheitsbilder*. Von Dr. Ph. Bockenheimer. Berlin: Urban und Schwarzenberg. 1908. (Demy 4to, pp. 466, 159 illustrations in colours.) M. 36s.

¹³ *Atlas der gynäkologischen Cystoscopie* [Atlas of Gynaecological Cystoscopy]. Von Professor Dr. Stoeckel. Berlin: A. Hirschwald. 1908. (Dbl. port 4to, pp. 34, 70 illustrations.) M. 12s.

¹⁴ *When to Operate in Inflammation of the Appendix: Clinical lectures* by C. Mansell Moullin, M.D. Oxon., F.R.C.S., Senior Surgeon to the London Hospital. Third edition. London: John Bale, Sons, and Davidson, Ltd. 1908. (Demy 8vo, pp. 48, 2s. 6d.)

¹⁵ Cambridge: Burlington House; London: 32, Red Lion Square. Small 8vo, pp. 150, 1s. net.)

likely to be of use to him in the performance of his duties. This is not always the case, and in these lectures many matters are referred to concerning which, however interesting, it is problematical if the school doctor will, under present conditions, have the opportunity of utilizing the information given.

The tenth and last volume of *Green's Encyclopedia and Dictionary of Medicine and Surgery*¹⁶ has just been issued, and the editor may be congratulated on the completion of a task which was perhaps not altogether worthy of his distinguished abilities. Some years ago the same publisher issued an *Encyclopedia Medica* in thirteen volumes, and in the present publication a medical dictionary containing thousands of definitions has been incorporated with the encyclopedia, and a system of cross-references introduced. In addition, the opportunity has been taken to note important advances in medical and surgical practice, sometimes in the form of new articles, sometimes by addition to the older articles, sometimes by short paragraphs or definitions giving cross-references to the original contributions. The editor's expert knowledge of teratology has led to the inclusion of a large number of rarely-used terms connected therewith—a fault, if it be a fault, atoned for by a new and able article in vol. iii on human embryology. In vol. iv Dr. BALLANTYNE also contributes a long article on diagnosis in gynaecology, which, whatever may be said about its appropriateness in a dictionary, is certainly an excellent piece of work. A new article on heart-block, by Dr. J. S. Fowler, is a model of lucidity and conciseness, and the summary of recent views on immunity is satisfactory. We have reason to think that, from the point of view of the lexicographer, the later volumes are better done than the earlier, the editor no doubt gaining experience of this very difficult art during the progress of his task.

The character of the *Practical Hints in General Medicine*¹⁷ offered by Hospital Assistant K. S. AGNIHOTRI, Ph.G., of Panhala, in the Kolhapur State, can best be gathered from a few extracts:

80. Castor oil. In many parts of America castor oil in half-ounce or ounce doses is largely used as a fatening agent in place of cod liver oil. Life to concocture. The proper way to economize life is to sleep every moment that is not necessary or desirable that you should be awake.

254. Patent medicines. A doctor should never prescribe a patent medicine which he does not know the formula exactly.

298. Primipara (sic). For two weeks before the expected date of delivery give your primipara half an ounce of castor oil every other night; labor will be a dream.

The "hints," which are arranged alphabetically, have been drawn from a great variety of sources, and constitute a very grotesque collection. It is fair to add that many of them are sound and likely to be useful.

An *Epitome of Urine Examination* by the same author¹⁸ presents no novelty, but the physical characters of the excretion and various methods of qualitative and quantitative examination of normal and abnormal constituents are systematically and correctly described. The microscopic examination of urinary deposits is very cursorily alluded to, and no mention is made of bacteriological examinations.

The *General Dispenser*,¹⁹ by the same author, of which a third edition has recently been printed at Kolhapur, has been compiled for the benefit of dispensers or compounders in Indian hospitals and dispensaries, to whom it will undoubtedly be helpful. The book lays down clearly and concisely the duties of this class, gives an outline of pharmacy, dispensing, and prescribing, supplies brief notes of the action and uses of drugs and poisons, and of the treatment of excessive doses of the latter, and appends some information bearing on the duties which the dispenser may be called on to perform in the hospital when assisting the officer in charge in treating the sick and wounded, or when, as often happens, he is left in charge during the temporary absence of the latter. The work is of a practical character throughout, and is well fitted to accomplish its purpose.

Materia Mnemonics, a small pamphlet sold by William Bryce, bookseller, Edinburgh, at the price of 3d., is commended to the attention of examiners in *materia medica* as containing illustrations of many questions they ought not to ask.

The second issue of *Nisbet's Medical Directory*,²⁰ the edition for 1909, has appeared. It consists of two parts. Part I contains an alphabetical list of registered medical practitioners, giving addresses and diplomas and chief appointments held. This list has been improved by the introduction in some cases of additional initials for purposes of identification. Part II consists of a local directory, in which the names are classified under places of residence. The preface states that the present edition contains over 1,000 entries more than last year, but by attention to arrangement and printing the bulk of the book has not been increased.

In the sixth edition of his little work, *A Simple Method of Water Analysis*,²¹ in which he describes the method of analysing water by means of "soloid" reagents, Dr. J. C. THRESH gives a short guide to the interpretation of the results obtained. We agree with him that a hard-and-fast line cannot be drawn as to the amount of chlorine which should condemn a water. A very great deal of good would be done if medical officers of health would more systematically examine water supplies for chlorine and record the results. We should then be much better able to obtain a chlorine standard for particular districts. Dr. Thresh still estimates his results in parts per gallon. Has not the time arrived for the universal estimation in parts per 100,000?

²⁰ *Nisbet's Medical Directory*. London: James Nisbet and Co. (8vo, pp. 786. 7s. 6d.)

²¹ *A Simple Method of Water Analysis*. By John C. Thresh, M.D., D.Sc., D.P.H. London: J. and A. Churchill, 1908. (Fcap. 8vo, pp. 62. 2s. 6d.)

MEDICAL AND SURGICAL APPLIANCES.

A High-temperature Gas Flame.

IMPORTANT modifications in the construction of the Bunsen burner have made it possible to secure an almost completely homogeneous non-luminous gas flame, giving a considerably higher temperature than the Bunsen burner, and being also more economical in its consumption of gas. The burner, called after its inventor, the Meker, depends for its efficiency on the success with which the problem of obtaining exactly the right mixture of air has been solved. In the Bunsen burner an excess of gas was always present, and any attempt to increase the air supply beyond a low limit resulted in the formation of an explosive mixture and in the flame firing back. The Meker burner differs from the Bunsen in having a larger number of airholes at the base, in having the mixing chamber shaped like an inverted bottle, or like an injector, and in being furnished at the top with a deep nickel grid. The grid resembles a square-celled honeycomb, and is 10 mm. deep, the area of each cell being 2 mm. square. It prevents back-firing by means of the wide cooling surface it presents to the gas, for it is only with great difficulty that a flame can travel in the direction opposite to the gaseous mixture which gives rise to it, if in this inverse direction it encounters a very large cooling surface. The peculiar shape of the stem secures the perfect admixture of gas and air, and as a result of these modifications the cool inner zone of the Bunsen flame is reduced to a height of 2 mm., and the temperature of the flame is found by the thermo-couple to be practically the same at all points. Its heat is sufficiently intense to melt silver, gold or copper without the use of a blowpipe. If an air-blast is used, the temperature attained is about 1,800° C. Though the value of the burner is obvious, and though it works well in the laboratory, it is not likely that it will displace the Bunsen, for many laboratory purposes its temperature is inconveniently high, and the absence from it of the three zones of the Bunsen will be missed. For supplementing the Bunsen, however, it will be found invaluable, for it enables many operations which under ordinary circumstances have involved all the trouble of the blowpipe flame to be performed with the greatest ease. It should be added that the flame does not roar. The cost of the ordinary laboratory size is half a guinea; compressed-air burners of a similar size are made in two qualities, and cost 16s. and 28s. 6d. respectively. Specially constructed furnaces for working with the Meker burner are also supplied. The patent rights for this country and the colonies

¹⁶ *Green's Encyclopedia and Dictionary of Medicine and Surgery*. In 10 volumes. Edited by J. W. Ballantyne, M.D., F.R.C.P.E. Edinburgh and London: W. Green and Sons. (Imp. 8vo. 15s. per vol.)

¹⁷ *Practical Hints in General Medicine*. Series 1. By K. S. Agnihotri, Ph.G., Hospital Assistant, Panhala (Kolhapur State). Kolhapur Mission Press. (Demy 16mo. 12 annas.)

¹⁸ *Epitome of Urine Examinations*. By K. S. Agnihotri, Ph.G., Hospital Assistant, Panhala (Kolhapur). Kolhapur Mission Press. (Demy 16mo. pp. 50. 10 annas.)

¹⁹ *The General Dispenser*. By K. S. Agnihotri, Ph.G., Hospital Assistant, Panhala (Kolhapur State). Kolhapur Mission Press. (Demy 16mo. pp. 266. Rs. 1.4.)

have been acquired by the Cambridge Scientific Instrument Company, which has recently issued a list (No. 55) containing a full illustrated account of furnaces made on this principle.

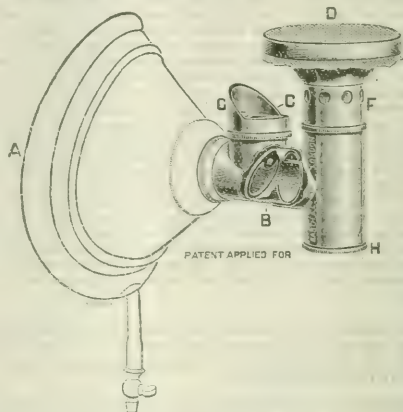
Irrigation and Rectal Feeding.

We have received from Dr. H. JOSEPH CATES, Extern Midwifery Assistant, St. Bartholomew's Hospital, a description of an apparatus which he has contrived to facilitate rectal feeding, continuous saline infusion, irrigation, or any other purpose in which a regulated flow of fluid at a constant temperature is required. It consists of a metal hot-water jacket, inside which is a glass cylinder holding about a pint and a half of fluid. The stem of this passes out from the bottom of the hot-water jacket, where it is connected with a stopcock, by which the flow of the fluid can be easily regulated. To the lower extremity of the stopcock is fixed rubber tubing, at the end of which either a catheter or a needle can be attached as required. The advantages claimed for the apparatus are that it retains the heat well, is of simple construction, is easily cleaned, takes up very little room, and can be packed into a small compass. On the jacket is a strong hook on which the appliance can be hung on the bedrail, on the back of a chair, or elsewhere. It has been made for him by Messrs. Meyer and Meltzer, of Great Portland Street.

An Open Inhaler for the Administration of Ether, Chloroform, or Mixture.

Mr. HARVEY HILLIARD (Anaesthetist, Royal Dental Hospital; Assistant Instructor in Anaesthetics, London Hospital) writes: Three years ago I published¹ the description of a regulating inhaler, designed for the dosimetric administration of either ether or chloroform or of mixtures of these drugs. The chief feature of this apparatus is that the anaesthetic to be administered is placed in a reservoir, and the anaesthetist then arranges the mechanism so that a definite percentage of vapour can be delivered in the inspired air. Finding, however, that many anaesthetists prefer still to use a drop bottle, but are dissatisfied with the character of the masks in common use, particularly when it is desired to administer ether by the open method, I have designed the apparatus here figured, with a view to eliminating the inherent disadvantages of the ordinary masks. With ordinary masks it is almost impossible to attain to anything like regular, unvarying minimal dosage, since it is impossible to tell how much of a given quantity of the anaesthetic the patient inhales, and how much air gains admittance round the mask. The method is necessarily wasteful and inaccurate, and untoward results are only avoided by the skill and judgement of the anaesthetist. There can be little doubt that a certain proportion of the deaths reported from chloroform are due to the sudden variations in the dose of the anaesthetic. Anaesthetists have consequently turned from the increased dangers of chloroform to the safer administration of ether by the open method, and here, even more than in the case of chloroform, difficulties are met with. The induction of anaesthesia by this method is unnecessarily prolonged, and owing to the respiration taking place to and fro through the mask, as much of the anaesthetic is blown into the room as is inhaled by the patient, with consequent discomfort to the operator, anaesthetist, and assistants. In the apparatus shown an ordinary nitrous oxide facepiece, A, is used, and the patient breathes only through valves B and C in such a way that the inspired air passes through gauze, D, on which any desired quantity of the anaesthetic can be dropped. The gases of expiration pass out freely at the aperture, C, being prevented passing again through the gauze by the inspiratory valve, B; thus, less than half the usual quantity of the anaesthetic is required. For an adult it is necessary to use eight to sixteen layers of gauze stretched over the inspiratory opening of the inhaler, by means of the fixing ring, E. For a child less would be required. The gauze carrier, F, is detachable, and is pierced half round its collar by holes; by rotating the gauze carrier the holes are made to pass over a slot in the tube beneath them, and thus extra air can be admitted in a regular manner to mix with and dilute that passing through the gauze. To commence the administration, a drop or two only of the anaesthetic should be sprinkled on the gauze, the carrier being rotated sufficiently to uncover all the holes, so that the weakest possible vapour may be inhaled at first. As the patient becomes accustomed to the anaesthetic, the holes are occluded one by one by rotating the gauze carrier, and when they are completely closed larger quantities of the anaesthetic may be sprinkled on

the gauze, as the patient will by that time be insensitive to the strength of the vapour. Provided the facepiece is made to fit accurately, the following advantages ensue: Much less time is occupied in inducing anaesthesia with this apparatus than with any other open mask: dosage becomes more precise, since as the patient inhales the whole of the anaesthetic administered, his condition can be more accurately watched, and the anaesthetist is not subjected to the inhalation of the anaesthetic, which the patient blows from the ordinary mask with each exhalation, and his judgement, in consequence, runs much less risk of becoming dulled after prolonged administration. This point is, moreover, further ensured by the expiratory valve of the inhaler being protected by a little cowl, G, which can be turned in any position to direct the expired air away from the administrator. The detachable cap, H,



has been provided to prevent any possible excess of the anaesthetic fluid running through the apparatus, owing to too little gauze having been used, with the consequent risk of blistering the patient's face. The valves are mounted on removable collars, which can be withdrawn for cleaning. The several portions of the apparatus may be taken apart for this purpose, or for packing inside the facepiece to facilitate carriage. The method of employment for chloroform is self-evident, but for giving ether it is recommended to start with a little C.E., mixture, as this is more pleasant for the patient and shortens the induction period, and when he has become accustomed to breathing this vapour, then ether alone may be quite comfortably substituted. With this apparatus I have kept patients comfortably anaesthetized under ether for periods lasting two hours, for Wertheim's hysterectomy in the Trendelenburg position, and for the removal of the Gasserian ganglion in the sitting posture. From an experience of several hundred cases in which the apparatus has been used, I believe unpleasant after-effects are much less likely to be met with, owing to the greater precision of dosage its use makes possible. The appliance has been made for me by Messrs. Barth and Co.

MEDICINAL AND DIETETIC PREPARATIONS.

Liquid Surgical Soap.

Under the name "Sterilla," a liquid antiseptic soap has recently been put on the market by Mr. H. E. Matthews (The Mall Pharmacy, Clifton, Bristol). It is a pleasantly fragrant liquid, which we find to be free from uncombined alkali, both caustic and carbonated; when used for washing the hands it yields an abundant lather, and shows great efficiency as a detergent, while even repeated use causes no irritation of the skin beyond a slight smarting which only lasts for a few seconds. The maker has submitted for our inspection the certificates of a well-known bacteriologist, which show that for *B. typhosus*, *S. pyogenes aureus*, and *B. diphterie* this soap possesses a bactericidal power equal to that of pure carbolic acid. From its nature it cannot cause corrosion of instruments, but will distinctly help to prevent it. It can be obtained in ordinary glass bottles or in a nickel bottle for safe carriage.

¹ *Lancet*, September 27th, 1905.

ROYAL COMMISSION ON VIVISECTION.

FOURTH REPORT.

(Continued from page 396.)

WE continue our abstracts from the evidence of which the minutes are contained in the fourth report of the Royal Commission on Vivisection, issued in December, 1907.*

Evidence of W. E. Dixon, M.D.

Professor Dixon gave evidence as representative of the Therapeutical Section of the Royal Society of Medicine. Speaking about anaesthetics and narcotics, he said there was no essential difference between an anaesthetic, a narcotic, and a hypnotic. The drugs of the alcohol series which acted on the brain formed a very large group, including alcohol, chloroform, ether, paraldehyde, chloral, urethane, and many more. These drugs all acted in the same way, and their differences were determined entirely by differences in the rate of absorption and excretion. Chloroform and ether were absorbed extraordinarily rapidly. They were taken into the blood almost immediately, and when the administration was stopped they were excreted equally rapidly. On the other hand, chloral, given by the mouth, remained in the blood over a very long period. With animals, he personally preferred in many experiments to use urethane to chloroform. Perhaps chloroform was given first to get the animal under quickly; then the urethane was given either intravenously or subcutaneously, or into the peritoneal cavity, and it got into the blood and produced anaesthesia lasting from six to eight hours. The dose of urethane necessary to anaesthetize a rabbit was $1\frac{1}{2}$ gram per kilo body weight, and for a dog or a cat about 1 gram per kilo body weight. According to that reckoning, the dose to produce anaesthesia in man would be about 70 grams or 2 oz., but it was not employed for that purpose. The drugs of which he had been speaking acted on all the nerve cells in the brain in much the same way, except that in every case they paralysed the sensory nerve cells before the motor, so that there might be complete anaesthesia whilst movement could still be got; on stimulating an afferent nerve movement might be got when the sensory cells were all obliterated from the brain. Morphine acted quite differently; it only attacked the sensory nerve cells, so that if one produced complete anaesthesia from morphine, one could still get very distinct reflexes. It could be administered to man in anaesthetic doses, and quite distinct reflexes could still be obtained, although when the man subsequently recovered he had never felt anything at all. Morphine was very rarely used alone as an anaesthetic, not because it was not one, but because it left the motor cells active and the animal was reflex. The action of morphine on dogs was precisely the same as that on man. It was nearly always used for dogs—not alone, because it was necessary to cut out these movements. It was quite commonly used now for man in Germany, when it was given with some drug which also paralysed the motor cells as well as the sensory, and so in Germany, and to a limited extent in England, it was given with hyoscine (the so-called morphine-scopolamine narcosis) for operations where chloroform was deemed unsuitable. In that combination it both produced complete anaesthesia and prevented reflex movements. Two other minor points he wished to draw attention to were: First, that when surgical anaesthesia was produced the amount of anaesthetic necessary to continue that anaesthesia might be continued indefinitely by the subsequent administration of 0.2 or 0.3 per cent., or even less. The test commonly employed was the reflex test; if there was a corneal reflex one knew that the motor cells were beginning to recover their activity. The second point was the great value of giving morphine before administering chloroform. This combination produced a very perfect anaesthesia, the quantity of chloroform necessary being much smaller than would be required if no morphine had been given. Coming to curare, he said

that it was not an isolated drug; there were lots of other drugs having the same type of action. All that group paralysed the nerve cells, the brain, and every one of them paralysed the motor nerve endings, and they might all cause convulsions by acting on the spinal cord. Some members of the group had one action well defined and others another. Curare first paralysed the motor nerve endings and later the nerve cells, whilst hemlock paralysed the nerve cells and nerve endings, roughly, about the same time. Curare given alone was a complete anaesthetic if enough was given, although those conducting experiments in England assumed that curare had no action on the nerve cells, and always gave enough of some other anaesthetic to paralyse the brain completely. Claude Bernard's experiments only applied to the spinal cord; all that he showed was that the sensory cells in the spinal cord were not paralysed by curare. Nevertheless, they believed that small doses of curare would paralyse the motor nerve endings before the brain cells were paralysed, but that large doses of curare would paralyse the whole of the brain like chloroform. That meant that the animal would absolutely cease to feel pain with a large dose of curare. With a small dose it might, he thought, continue to feel pain though unable to express it by action. In reply to further questions, he said that when operating on animals he usually had a box into which he put the animal, and poured in chloroform in the case of cats and ether in the case of rabbits; to dogs he gave the chloroform by hand very slowly. Dogs very easily died of chloroform, but if one went sufficiently slowly they never died. He never killed a dog by any chance whilst administering anaesthetics to them now. Usually there were no renewal doses. The animal was placed on the table, and he gave it the urethane or chloral (usually, almost always, urethane), and then the animal was anaesthetized for very much longer than was required. He gave the urethane by injecting it into the blood. Chloral he did not use much, but he generally gave it into the peritoneal cavity. Chloral, like chloroform, depressed the heart. It produced exactly the same anaesthetic effect as urethane. There was one other point about curare which he thought extremely important, and that was that it was excreted with extraordinary rapidity; so that if one gave an animal curare it remained curarized only for a very short time. So quickly was it excreted that one could not poison a man by the mouth, because as fast as the drug got from his stomach into his blood it went out by the kidneys. He himself had taken a large dose of curare, and had never had any symptoms at all; yet if he had had a cut on his skin and let the curare get in, the curare would, he had no doubt, have paralysed or depressed his motor nerve endings. The importance of that was that if one gave an animal an anaesthetic plus curare, the curare disappeared very quickly, the anaesthesia still existing. Supposing that he injected curare into a vein, the animal remained curarized, say, for half an hour to three-quarters of an hour. If that animal had got urethane plus curare, the curare action was over in half an hour or three-quarters of an hour, while the anaesthetic action of the urethane continued for eight hours at the least. The blood pressure was just as delicate an indication of the action of chloroform as the reflexes. During the whole of his operations the blood pressure was always taken by a cannula connected with an artery to a mercurial manometer. The animal was given an anaesthetic to begin with, and it never recovered from it. He used curare very rarely. Asked what was the state of things produced by curare, which made him able to perform an operation when the animal had curare and not able to do it when it had not, the witness said, Supposing he wished to stimulate a nerve, he excited the nerve in one way or another, and he would get, if the muscles were intact, simply contraction of muscles; but if he had eliminated the muscle effect he had only got the vascular effect left. During the three or four, or perhaps five, times he had used curare he had always been absolutely satisfied that the animal had not felt pain. Speaking as to the difficulty of obtaining evidence from clinical experiments, he said he was on a committee of the British Medical Association for suggesting what drugs should go in the new *British Pharmacopoeia*, when it became necessary to find out the value of certain new silver compounds. They sent out about 300 notices to the leading ophthalmic surgeons, and

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surgeons attached to lock hospitals, asking them what was the value of these new compounds, and the results which came in were most remarkable. It would be thought that in dealing with the action of silver compounds used for eye work, conjunctivitis, and various forms of inflammation of the eye, that if it was possible to make any definite statement from clinical observations it would be about a disease which one could actually see; yet the decisions of these expert physicians and surgeons as to the value of these new drugs were exactly divided. Some of them said, "This drug is our sheet anchor in the treatment of disease." Others regarded the same drug as quite inert and worthless. The explanation was simple. It meant that the conditions in a clinical experiment were never the same; there was no control experiment. No two men were exactly the same in every respect, except that one was being treated for a particular disease. The compounds mentioned had not been tested by animal experiment. In an experiment on an animal one had exact conditions and control. He had made experiments on perhaps eighteen to twenty dogs during the past year. There was never any difficulty in keeping a dog under an anaesthetic provided it was given slowly at first. The danger was that if one gave a dog 6 per cent of chloroform vapour it died in a minute or half a minute. If one gave it 0.1, then went to 0.2, then to 0.3, and so on, it never died. These experiments lasted perhaps two or three hours, and the animal was always killed before it recovered. He killed it generally by injecting air into a vein. He had a vein always prepared. He blew in a little air which went straight to the heart, got behind its valves, and the heart stopped beating. Proceeding, he said he gave a series of demonstrations regularly to classes. He had never seen any levity on the part of students. It was the most important part of their curriculum without any exception. Asked if there was any way by which many drugs could be standardized, except by watching their effects upon animals, he said there were five drugs—digitalis, strophanthus, squills, ergot, and cannabis indica—the chemistry of which was so little known that they could not standardize them otherwise than physiologically. The witness handed in a list of ten different ergots bought at different chemists' shops. A practitioner having to treat a woman in labour gave one of those ergots, and probably in three cases out of four it was inactive. The same applied to digitalis. This difficulty was got rid of by having the drugs—each brew—standardized. Certain wholesale chemists standardized each lot they sold. The only way by which their action could be ascertained was by experimentation on animals. The absence of accurate knowledge of the strength of drugs had led to most diverse opinions being expressed by medical practitioners as to the value of certain drugs. Cannabis indica was more usually non-active than active as bought in shops. For those drugs he had mentioned chemistry was at present quite worthless. Through their not being able to isolate the alkaloids with ease, it was very difficult to tell what was the strength of any given specimen. Asked if the composition of curare was ascertained with any certainty, he said curarine had been prepared in Germany, but one could not buy it. He did not think anything was known about its chemical composition. The tests of anaesthesia in animals that were chiefly used were the reflexes and blood pressure. As far as he knew, no attempt had been made to utilize the blood-pressure gauge for the purpose of determining the amount of anaesthesia in human beings. In the case of morphine, the test of the presence or absence of the lower reflexes was inapplicable. By a reflex action he meant an unconscious action. Most of our reflexes were unconscious. It was part of the essence of being reflex that it was an involuntary act. A reflex action might sometimes be controlled by consciousness; but consciousness was not necessarily present to a reflex action. He had taken curare himself by the mouth in a big enough dose certainly to completely curarize a dog. It had no effect of any kind at all. What he took was a very active specimen. Asked if the restriction under the Act with regard to curare should apply to the other drugs that resembled it, the witness replied that most of the other drugs paralysed the brain before they paralysed the motor nerve endings. As an example he mentioned nicotine, which paralysed the brain first. In the case of curare it happened to be the other way round; it went for the nerve endings first,

and then to the brain. That was why there was all this fuss about curare. Asked whether it was not a fact that different observers watching the same experiments on animals had drawn different conclusions, he said they did not differ on the facts. The facts remained the same. They only drew different conclusions as to how the effect was produced. There was no reason at all for supposing that a dog was less sensitive to the action of morphine than other animals of the same size and weight. He would say it was more sensitive. He had had large experience of giving morphine to dogs. In reply to further questions, he said there were no drugs with which they were acquainted which had any different action on the heart or on the kidneys of animals from that in man. The only differences which occurred were in the brain. For instance, cocaine in big doses caused convulsions. Cocaine acted on the cerebral hemisphere. In the frog there were practically no cerebral hemispheres. One could give an enormous dose of cocaine and get hardly any twitches. In the rabbit a relatively smaller dose, but still a very big dose, was wanted. In the dog, in which the cerebral hemispheres were better developed, a still smaller dose, in a monkey still smaller, and in man the smallest, was wanted. One could tell the dose of cocaine necessary to produce convulsions by weighing the cerebral hemispheres and then the body; the dose of cocaine varied in relation of these two exactly. Chemical poisons did not multiply in the blood. There was some relationship between chemical constitution and physiological action, but a small change sometimes produced a tremendous difference in action. In his opinion, urethane was the best anaesthetic for animals. Asked if it was essential to keep the provision in the Act that curare must only be administered with another anaesthetic, he said he thought that a good provision. He agreed that otherwise there would be a period of time during which there would be sensation without motion. When he took curare it was done accidentally. He did not know what was going to happen, but nothing happened at all. In Germany they had got pure crystals of curarine, but the supply of curare had given out. They were still dependent on the natives, who kept the sources of curare a secret. He regarded the statement about experiments on animals before students having a deteriorating effect on their character and humanity as absolutely ludicrous. They were every day doing more and more operations under local anaesthesia. Now they injected the local anaesthetics in quite a number of cases into the spinal theca, where it paralysed first the sensory cells, and the man lost all sensation to pain. Touch went next. Pain went first, then tactile sensation, and lastly motion. That was the sequence that always occurred. Consciousness was retained all the time. A number of experiments on the anaesthetic point were done on the investigators themselves. A man had his arm bared, and one drug was injected there, and another drug given here, and one could test it in that way. Where the animals came in mostly was as to the toxicity of these things. Anaesthesia was one property, toxicity another, irritability another. The toxicity and irritability were tested on animals. With some local anaesthetics there were considerable dangers. With cocaine one might in certain people accidentally inject the cocaine into a vein, in which case it produced a toxic action on the brain and on the heart. Secondly, one might get sufficient irritation at the seat of injection to produce objectionable symptoms. As the result of this work they had certainly determined the best local anaesthetic, and were going to recommend that it should be put in the *Pharmacopoeia*. Asked what animals were generally used for standardizing drugs, he said in the case of digitalis, strophanthus, and squills they used frogs; in the case of ergot they used cats—that was under licence alone, and the animals were anaesthetized the whole time; and with cannabis indica they used dogs. The drug was injected, the dog became intoxicated, it recovered completely, and was none the worse. In the standardization of drugs either the animal was under anaesthetics, or there was no suffering at all. Asked what modifications he would suggest in the Act, he said he would give a comprehensive licence to responsible persons, heads of laboratories; and to workers, to people who were not so responsible or who were not heads of laboratories, and so on, he would give an endorsed licence, only allowing them to do certain experiments, and only doing those

experiments under the control or supervision of someone who had had more experience in research than they had. He would abolish the certificates altogether. He would require, were such licence to be given, that a report of the whole experiment should be sent to the Home Office at the completion of the experiment. He would encourage an increase in the number of advanced students doing research work for the M.D. degree. He had never seen a painful experiment on an animal. Asked if he thought it would be well to allow the use of animals under a lethal dose of anaesthetic to enable students who were perhaps qualified medical men to gain manual dexterity in the performance of operations on human creatures, he said he thought that would be a wise provision to make for the sake of humanity. Asked if in his opinion it would be satisfactory if there were to be a freer permission of entry to witness these experiments by independent, properly-accredited witnesses in order to reassure the public, he said if the people were responsible people—that was to say, if they had had a medical education—he would not object at all. Asked if in reporting to the Home Office he would be prepared to certify that, to the best of his belief and endeavour, all the experiments which he had been carrying out had been done painlessly, he said, Yes. Asked if he would be prepared to append a certificate to that effect, he said he always did append a certificate to that effect. He thought in two or three cases he put down that they had experienced "slight pain" or something of that kind. After a subcutaneous injection of some drug an animal felt ill after it, and one had to say that it felt pain. With regard to the standardization of drugs such as digitalis, ergot, and strophanthus, he said that if a time came when they understood sufficiently of the chemistry to estimate the active bodies chemically, then the need for animal experiment would disappear. Asked if he thought that if the Act were repealed now that there would be danger of animals being unnecessarily employed for purposes of vivisection, he said he thought the medical profession would be strongly against the Act being repealed now, because any irresponsible person could make all kinds of experiments if he wished to do so at his private house. He did not agree that the Act had operated altogether antagonistically to the advance of physiology. Asked if he thought that the Home Office was likely to get assistance from the Association for the Advancement of Medicine by Research, he said, Certainly, because that body practically consisted of the highest scientific opinions in the country. Asked if he thought that the present inspection and machinery under the Act gave any real security to the public, he said, Certainly. No case of irregularity had been detected in his laboratory. Asked if he thought they might reasonably trust to the responsible vivisectioners under the Act without inspection, he said, Certainly; but at the same time there was no objection to any number of inspectors. Practically, whenever one did an experiment there were a great number of unofficial inspectors. It would make absolutely no difference to any conscientious man whether there was inspection or not. He had heard of no ill-conducted laboratory in this country.

(To be continued.)

THE BORDET-GENGOU REACTION.

SPECIFIC tests of one kind or another designed to render diagnosis more exact are multiplying apace, and it is important that the underlying principles should be grasped and we therefore propose to endeavour to give some account of the principle upon which the reaction observed by Bordet and Gengou¹ a few years ago rests, because it is probable that its more extended application will prove to be of great importance.

In discussing the matter it must be assumed that the reader is conversant with the nomenclature adopted by Ehrlich in his exposition of the "side-chain" theory, or with that adopted by the French school when dealing with the various problems connected with immunity. Should the reader, however, feel the necessity to brush up his acquaintance with the complicated terminology connected with this subject, he could not do better than turn to the

small compact monograph by Schatloff reviewed elsewhere in this issue.

No doubt, on first reading a description of the reaction described by Bordet and Gengou, it will be felt that it is most complicated, but when once its details are mastered and the various effects appreciated, it will be brought home to the reader that at last a very real gain to clinical medicine has been effected by the modern study of the reaction of the serum of the blood to foreign substances when they gain access to the blood stream.

The generic term "antigen" has been coined to indicate all these substances, bacterial bodies, animal cells, and substances such as the serums of animals and snake venom, or vegetable substances such as ricin and abrin, which though incapable of ultimate chemical analysis, seeing that their composition is profoundly changed during that proceeding, produce changes in an animal which can be demonstrated either *in vitro* or *in vivo* or in both. Ehrlich has classified the various substances formed in an animal injected with these substances—the antibodies—into three groups, according to whether they constitute (1) antitoxins, (2) precipitins and agglutinins, or (3) lysins. A lysin is a combination of complement—a substance which occurs naturally in the healthy or undisturbed animal body—and of amboceptor which, as its name implies, is a receptor having powers of combination, on the one hand with complement (complementophile affinity) and on the other with the particular kind of animal cell (cytophile affinity) which when injected into another animal gives rise to the appearance in the serum of this particular amboceptor. The particular amboceptors which are operative in the Bordet-Gengou reaction are two in number, and the reaction turns upon the fact that the complement is capable of becoming anchored to the amboceptor produced either by bacteria or by animal cells. The subject appears to become very complicated when it is added that five substances are necessary for the reaction, but they can be arranged in two groups, and it is proposed to refer only to the observations on the typhoid bacillus, although Bordet and Gengou experimented with different bacteria. An animal susceptible to its action is injected with a culture of the typhoid bacillus (the antigen). It reacts by developing as one amongst other antibodies a bacteriolyisin, that is to say, the complement naturally occurring combines with an amboceptor produced by the liberation from certain cells of the inoculated animal of receptors possessing the special character of having two affinities, one for the complement and one for the bacteria which gave rise to their liberation, in this case the typhoid bacillus. The inoculated animal is bled, and its serum is obtained after whipping the blood, by centrifugalization. The serum is then heated for half an hour at 57°C., that is, is "inactivated," or deprived of its complement. The complement being destroyed, free amboceptors are present in the serum, a measured quantity of which is mixed with some of the original antigen used—an emulsion of typhoid organisms, and a measured quantity of the serum of a normal guinea-pig added. The three constituents are then heated for about an hour in an incubator at 37°C. What takes place now is this: the amboceptor already mentioned is enabled to link itself by its cytophile affinity with the bacteria, and by its complementophile affinity with the complement contained in such abundance in the serum of a normal guinea-pig. To use a phrase so commonly associated with this reaction, the complement is "anchored to the amboceptor," and is no longer free to combine with any other amboceptor.

The ingenuity of the Bordet-Gengou reaction consists in this: that to this complement another amboceptor is offered, and the inability of the complement to become thus anchored to another amboceptor is taken as an indication of the affinity of the first-named amboceptor for the typhoid organism. If the inactive serum of a normal animal not immunized against the typhoid bacillus be placed in contact with typhoid bacilli and guinea-pig complement, no anchoring of the latter body will take place, and it will be free to enter into any other alliance of a suitable character presented to it. The remaining two elements of the five above mentioned constitute the alternative alliance. If a rabbit be immunized by injecting it, say, with the washed red corpuscles of a sheep, a hæmolytic serum is produced—that is to say, in the rabbit's serum an amboceptor is developed which by combining

¹ *Annales de l'Institut Pasteur*, 1901, vol. xv, p. 269.

with the rabbit's complement on the one hand and with washed sheep's corpuscles (the second element of this group) on the other produces such an effect that the latter are laked, the haemoglobin being transfused into the normal saline solution, with which a suspension of the sheep's corpuscles is made. Before, however, exposing the rabbit's serum to the suspension of sheep's corpuscles it is heated to $57^{\circ}\text{C}.$; in this way the rabbit's complement is destroyed and haemolytic amoebocytes left free which, though capable of combining with sheep's corpuscles, do not in such combination lake the latter, because no complement is available. To review the reaction we may now set out the five constituents in the following way:

First Group:

1. Typhoid organisms = Antigen₁ = A_1 .
2. Amoebocytes formed as a result of injecting the *Bacillus typhosus* into an animal, subsequently heating the serum to destroy complement = A_1 .
3. Complement of a normal guinea-pig = C.

If these three constituents are brought together at a suitable temperature ($37^{\circ}\text{C}.$) for one hour, they combine together in a very stable union.

$$(A_1 + A_1 + C).$$

Second Group:

4. Amoebocyte obtained as above in a haemolytic serum = A_2 .
5. Sheep's red corpuscles = Antigen₂ = A_2 .

These two at suitable temperature combine thus:

$$(A_2 + A_2).$$

If all five constituents are now placed in an incubator at $37^{\circ}\text{C}.$ for about two hours and are subsequently allowed to stand in the cold, two combinations exist thus:

$$(A_1 + A_1 + C) \text{ and } (A_2 + A_2).$$

The preparation will show sheep's corpuscles unlaked, and the mixture, though bright red, will be quite opaque. The complement C has been anchored so effectively to $A_1 + A_1$ that it is not capable of entering into the combination $A_2 + A_2$.

If the serum of an animal injected or infected with an organism quite different from the typhoid organism be prepared and substituted for A_1 , and called A_3 , the combination $A_1 + A_1 + C$ can now *not* take place, because the cytophile affinity of A_3 does not fit the antigen A_1 , and the complement C is free or unanchored. If now to these three constituents be added the above second group, $A_2 + A_2$, and the mixture be exposed to $37^{\circ}\text{C}.$ for a couple of hours, and then in the cold for several hours, the following arrangement will occur:

$$(A_1 + A_3) \text{ and } (C + A_2 + A_2)$$

but $C + A_2 + A_2$ constitutes what is known as a haemolytic system, and haemolysis will take place, the mixture of five substances now appearing as a clear red solution.

We shall not attempt to give here the many details as to the preparation of a haemolytic serum of proper strength, and as to the various dilutions of the various ingredients of the reaction, but it is hoped the principle has been made clear. This reaction has been made use of for clinical purposes by Wassermann and Bruck in conjunction with Neisser. If in the above Group 1 there be substituted for the antigen A_1 , an emulsion of a fetal syphilitic liver (containing Schaudinn's spirochaete of syphilis) and if the serum of an animal infected by typhoid or other organism be replaced by the inactivated serum of a patient known to be syphilitic, no haemolysis will occur on subsequently adding the members of Group 2, whereas if the suspect serum belongs to a patient not the subject of syphilis, haemolysis *will* occur on adding Group 2. This is now known as the Wassermann reaction or sero-diagnosis of syphilis. It has been turned to excellent account, for it has given corroborative evidence that the so-called para-syphilitic conditions—tabes and general paralysis—are of syphilitic origin, and that these maladies are expressions not of an effete infection but of a present active one.

The Bordet-Gengou reaction has already been turned to good account also in the diagnosis of infection in which the causative antigen, though certainly existent, has so far eluded detection; nor is the scope of this reaction limited to the detection of infective micro-organisms, but should be applicable to the detection of poisoning by other organic agents which are possibly responsible for much of the obscurities of clinical medicine.

A word of warning is necessary as to the limitations of this reaction, for it has been shown that a similar reaction

to that described by Wassermann can be obtained when the antigen (A_1) is not a syphilitic but a normal one; the reaction is, however, much weaker, so that the test becomes, as does the agglutination test in typhoid fever, specific truly, but only quantitatively, not qualitatively. It has further been discovered that lipid substances such as lecithin can produce the reaction; so also can sodium oleate. Despite these discoveries, the test may be accepted as reliable on the ground that, though the reaction is not due to the presence of the spirochaete alone as an antigen, it is due to the presence of a body occurring in fetal tissues which are the seat of syphilitic infection. The serum of normal individuals never gives the reaction, and 80 per cent. of syphilitic cases yield a serum which does.

We would call particular attention to the probable value in the future of the careful experimental study of the test devised by Bordet and Gengou, which, though demanding extreme care in all the manipulations, yield results readily appreciable by the naked eye. We have endeavoured to explain the principle upon which the reaction depends, and we believe that it is eminently desirable that it should be applied to other diseased conditions than those mentioned; it appears to open a new road along which many advances may be made.

COMPLIMENTARY DINNER TO DR. HERBERT JONES.

DR. HERBERT JONES was entertained at dinner at the Mitre Hotel, Hereford, on February 4th, by members of the British Medical Association and of the Society of Medical Officers of Health. Dr. EDGAR MORRIS, President of the Worcestershire and Herefordshire Branch of the British Medical Association, was in the chair, and, after the health of the King had been duly honoured, proposed the health of Dr. Herbert Jones. The dinner, he said, was held that the members might show their appreciation and esteem for Dr. Jones and to give him an assurance that he had their united sympathy. Those who knew him would understand the worry he must have experienced during the time there was a difference of opinion between himself and the county council. His medical brethren had cordially upheld him in the position which he had taken up in reference to the public health appointment. In what he had done he had acted for the good of the county at large. His brethren in the county appreciated him as a medical officer of health, knew him to be a good man, honourable and straightforward, strenuous in his work, and enjoying the full confidence of his profession, who only regretted that he was not the county medical officer of health. The President then handed to Dr. Herbert Jones a loving-cup bearing the following inscription:

Presented to

HERBERT JONES, Esq., D.P.H.CAMB.,
by Members of the British Medical Association and
the Society of Medical Officers of Health,
as an expression of their personal esteem, and in
recognition of his self-sacrificing services in the
interests of Public Health, February 4th, 1909.
Hereford.

The toast was drunk with musical honours.

DR. HERBERT JONES, in responding to the toast, thanked the President for the eloquent terms in which he had proposed his health. Most of those present had at some time or other known a convalescent patient to say that it was almost worth while being ill to get well again. He had experienced something of that sensation that evening. He desired to say nothing of his misunderstanding with the county council. It was impossible always to escape difference of opinion. He was intensely gratified that he had been asked to be their guest that evening and for the token of goodwill they had placed in his keeping. That gratification was intensified when he remembered that they intended this honour not only towards himself personally, but towards the whole public health service. On giving up general practice and starting in the public health service he had determined that his new association should in no wise divorce him from the old. However highly he might prize the exquisite example of the silversmith's art, it seemed to him that they had given him that which was far more

a prize and far more to be desired, and that was the personal support extended to him in the time of his doubts and difficulties; their action had done something that might have a more far-reaching effect in days or years to come, for their support of him would be a source of inspiration and encouragement to others. He was sure that they would feel, as he did at that time, that there was no more precious feeling a man might have than the ability to say with confidence and assurance, "I have friends who are tried and trusted and true."

The President then announced that letters of regret at their inability to be present and their personal esteem for Dr. Herbert Jones for the services rendered to the profession and to public health, had been received from the following: Sir Shirley Murphy, Dr. Holbeche (Malvern), Dr. Reid (Stafford), Dr. Symons (Bath), Dr. Manley (West Bromwich), Dr. D. S. Davies (Bristol), Dr. Davies (Swansea), Dr. Bond (Gloucester), Dr. Robertson (Birmingham), and many others.

Dr. SNELL (Coventry), in proposing the toast of "The British Medical Association," said that the privilege fell to him owing to the absence of Dr. Robertson of Birmingham, who, he regretted to say, was ill. On behalf of his own Branch and of the South-Western Branch of the Society of Medical Officers of Health, he desired to say that they were intensely gratified at being able to take part in the presentation to Dr. Herbert Jones. It was a great advantage that through the British Medical Association the services of preventive medicine and curative medicine worked hand in hand, not only for themselves, but for the public weal.

Dr. J. A. MACDONALD (Chairman of Representative Meetings of the British Medical Association), who responded, said that he was grateful for the invitation that had enabled him to do honour to his friend, Dr. Herbert Jones. The British Medical Association had the interests of its members and the public always at heart; there was no association organized like it, and its influence for good extended throughout the British Empire. He would ask them all to unite loyally in the great work of the Association, even if it meant some personal sacrifice.

Mr. LYNN THOMAS, C.B., said that he had hastened his return from Paris to join their gathering, for he felt that the occasion was unique. It gave him great pleasure to propose the toast of the Society of Medical Officers of Health, having among its number a member with such sterling qualities as "the man of the evening." It was difficult to make the public understand the point of view of medical officers of health. They always tried to carry out what was best for the public, but it took the public a long time to find that out, and it was only by having men of the stamp of Dr. Herbert Jones that they could hope to attain their ends.

Dr. J. C. McVAIL, Ex-President of the Society of Medical Officers of Health, in responding, said that it had two aims in view: (1) The protection of its members, and (2) scientific investigation of disease. Those who were carrying out these aims were often misunderstood by many who were in power and authority. He was particularly glad to be there that evening on account of its being a joint meeting to do honour to Dr. Herbert Jones, whom he had known for some years. Dr. Herbert Jones was thoroughly business-like, and did not fear to bring before the Council anything for the benefit of the public health. He thought the authorities Dr. Herbert Jones was serving should rejoice in the fact that the County Council had not deprived them of the benefit of his services. The medical officer of health and the private practitioner should co-operate cordially, and there was no better guarantee for this than that the medical officer of health should previously have been a general practitioner. Preventive medicine and curative medicine worked together for the preservation and advancement of the race, and the State should not be slow in recognizing the fact, and adequately remunerating those who work in its interests.

The late Sir Arthur Vernon Macan, of Dublin, the distinguished obstetrician, left personal estate in the United Kingdom valued at £25,924. He bequeathed his midwifery instruments and objects for the teaching of midwifery to Trinity College, Dublin, and his French and German medical books and his English books on midwifery to the Royal College of Physicians, Ireland.

THE STATE REGISTRATION OF NURSES

THE HISTORY, PROGRESS, AND PRESENT POSITION OF THE MOVEMENT.

EARLY HISTORY.

THE question of establishing an official register of nurses, recently the subject of correspondence in this JOURNAL, has a long history.

There is a common impression that nursing as a distinct occupation for lay women practically came into existence with the creation of the Kaiserswerth Deaconesses Institution in Germany and the noble work of Miss Nightingale in this country, but this is not quite true. Doubtless, in private life, the sick depended in earlier times mainly on the care of their personal friends, with such miscellaneous assistance as could be secured; but, so far as ward work is concerned, the extracts from the account of St. Bartholomew's Hospital published in the JOURNAL last year, show clearly that not only must lay women have taken to nursing as a regular occupation, but that in many respects the question of hospital nursing as it then was had been well thought out, and that in broad outline the rules laid down were in keeping with those of the present time.

Those thus engaged were no doubt of a class inferior to that which for the most part fills the nursing ranks to-day, and of course, too, from a modern standpoint they must have been very ignorant. As regards those moral qualities which help to make a good nurse, it is difficult to believe that either in the early Victorian age or at any other period were nurses of the gruesome type familiar to readers of *Martin Chuzzlewit* the rule rather than the exception. There must, in short, have been excellent if ignorant nurses long before Miss Nightingale came on the scene.

In any case it is certain that in the year 1634—that is to say, early in the reign of Charles I—there was a sufficient number of women working as nurses in London for a movement much of the kind now in progress to be going on, and this, as now, was presumably instigated partly from a desire to improve the position of nurses, partly in the interest of the public. It was headed by an eminent physician of the time, Dr. Peter Chamberlen, and had it been successful would have resulted in all nurses being placed under the aegis and control of the Royal College of Physicians. It was not successful, but that it took place at all shows that the idea of regulating the education of nurses, of giving them a definite official status, and of submitting them to control—in short, of nurses' registration—is really quite ancient, though to most of us it seems so modern.

In its present form the movement began almost as soon as systematic training of nurses had become at all general. Agitated quietly in the early Eighties, it practically first reached the surface through the action of the Hospitals Association. At a meeting of this body in October, 1887, the late Sir Andrew Clark brought the subject forward, stating that one of the purposes of the association was to obtain registration of nurses; their work, he said, formed an important part of hospital administration, and their registration was necessary for the security of those engaged in nursing who were competent, of good character, and of proved loyalty in the performance of their duties.¹ These attributes, he added, were not always to be found among nurses who offered themselves for employment, and the ability of a nurse to perform her duties could only be established by examination and certification.

This meeting was entirely favourable to the idea and resolved to give effect to it. The only immediate result, however, was the prompt formation of another body which, though equally favourable to the idea of registration, did not approve of the constitution of the Hospitals Association and its methods. This body was christened the British Nurses' Association, which originated two months after the date of the meeting of the Hospitals Association in question, and was at once joined by the matrons of a large number of the more important hospitals in London and the provinces.

For a time these two bodies, though in a way antagonistic to one another, seem to have been practically identical in their aims. The more active of the two was

¹ BRITISH MEDICAL JOURNAL, 1887, vol. ii, p. 851.

the British Nurses' Association, and in a few months it seems to have had at its back most of the leading medical men in London. The result was that early in 1888² a meeting of medical men was held in St. George's Hall, at which the late Sir William Savory, then President of the Royal College of Surgeons, was in the chair, being supported by Sir Henry Acland, Dr. (afterwards Sir Richard) Quain, Lord (then Sir Joseph) Lister, Sir Dyce Duckworth, Sir Douglas Powell, Sir Joseph Fayer, and other prominent medical men. The subject was debated at considerable length, and the meeting ended in unanimous adoption of the following resolution:

This meeting desires to express its cordial sympathy with the British Nurses' Association, and pledges itself to support that Association by every means in its power, and urges all nurses in the United Kingdom who are eligible for membership to join the Association for the sake of promoting the advancement of that profession.

In the course of the same year, however, there seems to have been a change of view on the part of the Hospitals Association, and by the beginning of 1889 a counter current had set in. The result was that a manifesto against nurses' registration was published,³ bearing the signatures of persons connected with a large proportion of the London hospitals.

This manifesto, which was met by a Mansion House meeting in favour of nurses' registration, does not seem to have proved very effective, however, for at its autumn session in the same year the General Medical Council considered the question at issue and passed the following resolution:

In the opinion of the Council it would be much to the advantage of the public, and particularly would it be of much convenience to the practitioners, that facilities useable under proper guarantees in all parts of the United Kingdom should be given by Act of Parliament or otherwise for the authoritative certification of competent trained nurses, who when certified should be subject to common rules of discipline.

The next event to be noted was the granting to the British Nurses' Association of a Royal Charter, its importance lying in the fact that the approved preamble contained a statement to the effect that the maintenance of a list of nurses showing what training they had received and when and where in each case it had been obtained was of importance to the public.

Next came the foundation of the Matrons' Council of Great Britain and Ireland in 1894, the second of its stated objects being "to bring about a uniform system of education, examination, certification, and state registration for nurses in British hospitals."

PROGRESS.

Up to this time the British Medical Association had not expressed any view favourable or unfavourable to the movement. In 1895, however, when the annual meeting was held in London, the question was brought forward and the following resolution unanimously adopted:

In the opinion of this meeting it is expedient that an Act of Parliament should as soon as possible be passed for the registration of medical, surgical and obstetric nurses, and the Council of the Association are therefore requested to consider the matter and to take such measures as may seem to them advisable to obtain such legislation.

In due course this resolution was referred to the Parliamentary Bills Committee, the body at that time filling for the Association the functions now exercised by the Medico-Political and some other committees. The question having been duly discussed this committee decided to arrange for a conference between itself and various institutions likely to be interested in the matter. This took place early in 1896⁴ and resulted in the proposal from the chair of the following resolution:

A legal system for the registration of nurses is inexpedient in principle, injurious to the best interests of nurses, and of doubtful public benefit.

In voting on this motion it was asked that only those representative of nursing institutions should take part, and it was adopted by 6 votes to 5. Curiously enough, the decisive vote, that which turned the scale against registration on this occasion, came from the honorary secretary of the body especially founded to secure registration—namely, the Royal British Nurses' Association.

It should be added that, from the record of the proceedings, it would appear that many of those present felt that prosecution of a scheme for general registration of all nurses might interfere with another movement then in the course of active development—namely, that which some five years later resulted in the passage of the Midwives Act.

After this set-back, there was a kind of pause in the movement so far as its public discussion by representative bodies was concerned, but it continued to progress on the American continent and other countries, and in England renewed activity was heralded by the foundation of the Society for the State Registration of Trained Nurses. The object of this society was, of course, as its name connotes, "to obtain an Act of Parliament providing for the legal registration of trained nurses."

So far as actual attempts at legislation go, the subject, however, did not reach the surface until 1904, in which year two bills were introduced into the House of Commons. One of these was promoted on behalf of the society just mentioned, and the other—providing for the registration both of nurses and of nursing homes—by the Royal British Nurses' Association.

A manifesto against these bills was promptly prepared and was as promptly answered by the other side, copies of both documents being published in this JOURNAL.⁵ The net outcome of the matter was that the House of Commons decided to appoint a Select Committee to consider the issues involved. This committee held seven meetings, and the session being then at an end asked to be reappointed. Meantime it published a Blue Book containing minutes of the evidence received.

In the same year the question was considered at a meeting of the Royal College of Surgeons in Ireland, and ended in the adoption, with two dissentients, of the following resolution:

It is essential that nurses throughout the United Kingdom should be sufficiently educated for the performance of the responsible duties entrusted to them. That a minimum standard of education, and under rules of discipline, could be secured only by an Act of Parliament. That as a preliminary to such legislation it is desirable that a Select Committee of the House of Commons should be appointed at an early date to inquire into the whole nursing system.

In this same year the Medico-Political Committee of the British Medical Association, which was now in full work, likewise considered the subject and prepared a memorandum,⁶ drawing attention to the principal provisions of the two bills. It considered that the board proposed to be established under either bill was unduly large, and that attempts to represent so many bodies and institutions should be abandoned. The medical profession, it thought, would be adequately represented by three medical practitioners, one nominated by the Crown, one by the General Medical Council, and one by the British Medical Association. The opinion was expressed that the earliest age at which nurses should be registered was 24, training to commence after the age of 21; and, with regard to penal clauses, that no penalties should apply to a nurse who acted gratuitously, or to a nurse who nursed for hire but did not claim to be a registered nurse. This memorandum was circulated among the Divisions, but does not appear to have attracted much attention.

At the Annual Representative Meeting at Oxford in the same year,⁷ it was formally moved:

This meeting approves of the principle of the registration of nurses.

This resolution was carried by a large majority, and it was agreed that it should be brought to the notice of the Select Committee of the House of Commons which was then sitting.

The following year, 1905, was one of great activity. Application was made to the Board of Trade for a licence of incorporation to a society named the Society for promoting the Higher Education and Training of Nurses, all the applicants being laymen of influence. They held that as legislation for the State registration of nurses could not be looked for at any early date, something should be done to improve the organization of nursing. To this end

² BRITISH MEDICAL JOURNAL, 1888, vol. i, p. 371.

³ *Ibid.*, 1889, vol. ii, p. 149.

⁴ *Ibid.*, vol. i, 1896, p. 157.

⁵ Vol. i, 1904, pp. 803 and 859.

⁶ SUPPLEMENT, BRITISH MEDICAL JOURNAL, vol. i, 1904, p. 106.

⁷ *Ibid.*, vol. ii, 1904, p. 118.

⁸ BRITISH MEDICAL JOURNAL, vol. i, 1905, p. 254.

they formed themselves into an association, whose stated objects as stated in the articles were:

1. To promote the higher education and training of nurses.
2. To promote unity of curriculum in the training of persons intended for the nursing profession.
3. To recognize approved training schools.
4. To grant certificates of proficiency in nursing to persons who have passed prescribed examinations after training, and to grant certificates of training and proficiency in nursing to persons who have been trained in recognized schools, and have passed prescribed examinations, provided that the society shall not grant titles or diplomas.

The succeeding articles dealt with the curriculum to be demanded, registration of those certified, removals from the Register, and the maintenance of examination and lecture halls properly equipped for lectures and demonstrations.

This application at once met with strong opposition, the Council of the British Medical Association appointing a subcommittee to watch the matter, and various associations representing nursing took corresponding measures. Eventually, evidence against the proposed licence was formally given before the Board of Trade by witnesses who included⁹ the Chairman of the Representative Meeting, and the Chairman and two members of Council of the British Medical Association, and by representatives of the Central Hospitals Council and of the Royal College of Surgeons of Ireland. The view expressed was that the time had long passed when private persons should be allowed to group themselves together to carry out State duties. The medical profession was prepared to accept a system of registration which would supply it with the means of recognizing who was a properly-trained nurse, but it would only accept State registration and not pseudo-registration by a private body, more especially one which consisted of laymen only.

When Parliament met, two bills with registration of nurses as their object were again introduced in the House of Commons, and the Select Committee of the previous year was reappointed. This body heard a great deal more evidence, including that which was tendered in favour of registration on behalf of the British Medical Association by the Chairman of the Representative Meeting.¹⁰

The publication of the report of the Select Committee almost coincided with a further consideration of the topic by the Annual Representative Meeting at Leicester in the same year. On this occasion it was proposed that the resolution passed in the previous year at Oxford should be rescinded, and that the question of the State registration of nurses should be referred to the Divisions,¹¹ but after some discussion the motion was amended so as to read:

That the subject of State registration of nurses should be referred to Divisions for their consideration.

The principal recommendations in the report of the Select Committee¹² were that

A register should be kept by a central body appointed by the State, consisting of representatives of the medical profession, of training schools for nurses, of the public, and of matrons and nurses. This body should decide what persons should be admitted to the Register and what evidence of training should be required.

Unregistered persons should not be prohibited from following the occupation of a nurse provided they did not give themselves out as registered nurses.

Four years after the passage of any Act such as that contemplated, the central body ought to submit to the Privy Council a report on the advisability of instituting a separate register for nurses whose training was of a lower standard than that laid down for ordinary registered nurses.

There should also be a separate register for registered asylums nurses, the persons admitted being nurses who had served not less than three years in not more than two asylums and had received the certificate of the Medico-Psychological Association.

All homes purporting to receive patients for profit, or to supply nurses to the public, should work under a licence, and a condition of such licence should be that when nurses were sent out or employed at a nursing home who were not registered nurses, the fact should be definitely stated.

In the following year, 1906, the movement followed much the same course as in the previous year. Two bills were again introduced in the House of Commons and deputations for and against these measures were received by the Lord President of Council. Meantime the Medico-

Political Committee of the British Medical Association, in accordance with the resolution of the Representative Meeting the previous year, submitted the subject of nurses' registration to the Divisions in the following form:

1. Does the Division approve in general of the method of registration for nurses proposed by the Select Committee of the House of Commons?
2. Does the Division approve of the separate register of midwifery nurses?

At the same time the committee caused to be published¹³ a memorandum in which the main recommendations of the Select Committee of the House of Commons were summarized. A certain number of replies from various Divisions were received, and the whole question was again discussed at the Representative Meeting which was held that year in London.¹⁴ The discussion ended in the adoption, by 90 votes to 3, of the following resolution:

This meeting approves of the recommendation of the Parliamentary Select Committee that there should be a State registration of nurses, and is of opinion that on any central council or board appointed the medical profession and the nursing profession should be adequately and directly represented.

To this resolution it was proposed and agreed, with one dissentient, to add the following words as a rider:

The representation of the medical profession on the Central Nursing Board should be at least one-half of the number of the members of that body.

PRESENT POSITION.

The following year, 1907, was one of comparative inaction, though two bills were again introduced in the House of Commons. Last year, 1908, the same bills were again introduced into the House of Commons, while a third bill dealing with the same general subject was introduced in the House of Lords on behalf of the Central Hospitals Council. This bill, to quote from a note on the subject published in this JOURNAL at the time,

ignored the principle which the Legislature has followed in regard to registration of medical men, solicitors, dentists, pharmacists and midwives, and its effect would have been to place the control of the public safeguard for the efficiency of nurses entirely in the hands of hospitals and other training institutions, the governing bodies of which are selected for their administrative capacity in hospital management and not with any regard to their capacity for directing the training of nurses.

As will be gathered from this passage, the bill was rejected. It was formally opposed on behalf of the British Medical Association, and received short shrift.

Subsequently both the bills introduced in the House of Commons were allowed to drop, but immediately afterwards one of these bills, that which the Council of the British Medical Association on the advice of the Medico-Political Committee was disposed to favour, was introduced in a modified form into the House of Lords. Here it was amended and reamended on multiple occasions, but finally passed the third reading by a large majority and was remitted to the House of Commons, by whom it was ordered to be printed on November 18th. Ireland is included in its scope. At first there was some doubt whether this would be the case, as the Local Government Board in Ireland objected. Its objections were withdrawn, however, owing to the urgent desire for Ireland to be included in the bill, which was expressed at various public meetings in Ireland.

In the final moulding of this bill the Medico-Political Committee of the British Medical Association had, it is understood, considerable say. The more important provisions of the bill are as follows:

The establishment of a Council of 16 persons; 3 being appointed by the Privy Council (1 at least of these being a woman); 1 medical man by the Local Government Board; 1 medical man by the General Medical Council; 3 medical men by the British Medical Association (1 to be resident in England, 1 in Scotland, and 1 in Ireland); 1 medical man by the Medico-Psychological Association; 7 direct representatives of registered nurses (4 nurses to be elected by those having addresses in England or Wales; 1 by those in Scotland, 1 by those in Ireland, and 1 (who must be a past or present matron of a public hospital for the insane) by nurses' in the Nurses' Mental Register).

The election, however, of these seven direct representatives will not take place until the Lord President

⁹ BRITISH MEDICAL JOURNAL, 1905, vol. i, p. 1062.

¹⁰ *Ibid.*, p. 1186.

¹¹ SUPPLEMENT, BRITISH MEDICAL JOURNAL, vol. ii, 1905, p. 140.

¹² *Ibid.*, p. 158.

¹³ SUPPLEMENT, BRITISH MEDICAL JOURNAL, 1906, vol. i, p. 78.

¹⁴ *Ibid.*, vol. ii, p. 121.

of Council certifies that the register of nurses is sufficiently advanced to admit of an election by registered nurses. Meantime their places will be filled as follows:

Two past or present matrons selected by the Matrons' Council of Great Britain and Ireland: 1 past or present matron of a public asylum for the insane, to be appointed by the Asylum Workers' Association; 1 nurse by the Society for the State Registration of Trained Nurses; 1 nurse by the Queen Victoria's Jubilee Institute for Nurses; 1 nurse by the Royal British Nurses' Association; 1 nurse by the Irish Nurses' Association.

In other words, the Nurses' Council is to be formed under this bill of 6 registered medical men, of 7 direct representatives of nurses, and of 3 persons who need not necessarily belong either to the one class or the other.

The councillors are to hold office for five years, and, besides maintaining a *Nurses' Register*,

1. To frame rules (A) regulating their own proceedings; (B) regulating the issue of certificates of registration and the conditions of admission to the register of nurses; (C) regulating the course of training and the conduct of examinations and the remuneration of the examiners; (D) regulating the admission to the register of persons already in practice as trained nurses at the commencement of this Act; (E) regulating, supervising, and restricting within due limits the practice of registered nurses; (F) defining the particulars required to be given in any notice under this Act.

2. To appoint examiners and inspectors.

3. To decide upon the places where and the times when the examination shall be held.

4. To issue and cancel certificates of registration.

5. To publish annually a register of nurses containing the names, addresses, and qualifications of nurses who have been duly registered under this Act.

6. To decide upon the suspension or removal from the register of the name of any nurse for any breach of the rules and regulations from time to time laid down under this Act by the Council, or for conduct disgraceful in a professional respect, and also to decide upon the restoration to the register of the name of any nurse so suspended or removed.

7. To take proceedings against persons guilty of offences under this Act.

Any person within three years from the date at which the Act comes into force can be registered on showing that he or she is at least 21 years old, of good character, and either—

- (1) holds a certificate of training for such period as may be prescribed by the rules framed under the provisions of the Act from a hospital or from hospitals approved by the Council, or from an institution or institutions which the Local Government Board recommend, and certify to be wholly or partly maintained out of rates; or (2) holds a certificate of similar training as a nurse authorized by the Local Commissioners of the Admiralty for the sick berth staff of the Royal Navy, or as a nurse authorized by the Army Council for soldiers of the Royal Army Medical Corps; or (3) holds a certificate from the Local Government Board for Ireland, that she possesses the qualifications prescribed for the purposes of section fifty-eight of the Local Government (Ireland) Act, 1898; or (4) produces evidence satisfactory to the Council of training prescribed by the rules framed under the provisions of this Act, and has in addition been for at least three years in bona fide practice as a nurse, or employed as a nurse in a naval or military hospital.

After the expiration of three years certification can only be obtained by satisfying the Council that the applicant has been trained in an approved hospital or hospitals, or in an institution recommended by the Local Government Board, or in the navy or army, and by passing such examination as the Council may prescribe, or producing a certificate of having passed an examination which the Council will accept in lieu thereof. The register is to be kept in two parts, one being a general register, and the other a register of asylum-trained nurses. The persons admitted to the latter must hold the certificate of the Medico-Psychological Association, or its equivalent granted under conditions approved by the Council, or must have qualified as mental attendants in the Royal Army Medical Corps.

Provision is made for a fee of 3 guineas for examination, of 2 guineas for registration, and for a payment of 2s. 6d. annually by all registered nurses.

No penalty is imposed on persons following the occupation of nursing unless they pretend they are registered nurses. Training institutions not accorded recognition by the Board may appeal to the Privy Council, and nurses removed from the *Register* may appeal within three months from the date thereof and to the High Court of Justice. All rules drawn up by the Council must be approved by the Privy Council.

Finally the Council may, on representation made within four years from the commencement of the Act, be given power to institute a register of nurses, to be called a register of "associate" nurses, having a lower standard of training than that required for registered nurses, but such nurses would not be entitled to use the word "registered" except in connexion with "associate," and would have no voice in elections of direct representatives.

Compared with its predecessors, this bill, which of course still has to run the gauntlet of the House of Commons, may be regarded as a compromise, as an attempt to meet the views of various conflicting parties. It accords to the medical profession a considerably higher proportion of representatives than the Medico-Political Committee in its original memorandum asked for, three of the six medical representatives being appointed by the British Medical Association itself. It secures the interest of asylum workers by placing one nomination in the hands of the Medico-Psychological Association, and by also giving nurses on the Mental Register a direct representative. It secures alike to private and official training schools a continuance of their present powers.

It does not attempt to interfere with the practice of nursing by women who have undergone no training or only part training, but puts a premium on efficient training by conferring on persons deemed efficiently trained a definite status and a title which cannot be used by other people. On the other hand, those admitted to the status of registered nurse will be submitted to discipline and control, having to obey rules laid down for their conduct, or in default risk the erasure of their names from the *Register*. These rules before they take effect will have to be approved by the Privy Council, and at the last session of the General Medical Council it was resolved to suggest to Government that before they were approved by the Privy Council they should be submitted to the General Medical Council, as in the case of the rules of the Central Midwives Board.

Finally, as regards the history of the movement, there is one curious fact. From the beginning the arguments respectively used by the opponents and advocates of the registration of nurses have scarcely varied. Everything that has been said for or against can be found in effect set forth in issues of the *BRITISH MEDICAL JOURNAL* published twenty years or so ago.

MEDICAL PROTECTION.

We are requested to state that the National General Insurance Company, Limited, is now issuing policies of insurance to members of the London and Counties Medical Protection Society, Limited, on the following terms:

1. The London and Counties Medical Protection Society, Limited, will, as heretofore, undertake the defence of members in actions brought against them, where, in the opinion of the Council, such actions are proper cases to be defended.

2. In the event of the defence being unsuccessful, and of judgement being given against the member sued, the National General Insurance Company, Limited, will pay the amount of damages awarded, together with the plaintiff's taxed costs, not exceeding in the whole £2,000 in any one year for any one member. The effect of this will be that in all cases where the Council undertakes the defence, the member will be fully protected (subject to the limit mentioned), whatever the ultimate result of the case may be.

3. The premium to be charged by the National General Insurance Company, Limited, for the indemnity has been arranged at 10s. per member per annum, with the addition of 5s. in respect of each qualified assistant and 2s. 6d. for each dispenser employed.

We are informed that large numbers of the members of the London and Counties Medical Protection Society have already taken out the above policies. The insurance is available only to members of the London and Counties Medical Protection Society, and the benefits of such insurance can be obtained only when actions are defended by the society at its own cost. As the Council of the London and Counties Medical Protection Society does not knowingly defend actions in which its members are in the wrong, this complete indemnity will not benefit any

medical or dental practitioner who is careless or culpable in dealing with his patients. Full particulars of these policies can be obtained either from the National General Insurance Company, King's House, King Street, London, E.C., or from Dr. Hugh Woods, 31, Craven Street, Strand, London, W.C.

Nova et Vetera.

AN OLD PHYSICIAN'S CLASSICAL EDUCATION.

BASED ON MATTHEW BAILLIE'S UNPUBLISHED PAPERS.

It may be conjectured that the old physicians aimed at the acquisition of classical learning on the same grounds as the other well-bred men of their times, and that they studied the ancients not so much for learning's sake as because not to be versed in Latin and Greek was to lose caste among gentlemen.

John Hunter, a rugged revolutionary, despised this attitude of mind as heartily as might any modern. "They wanted to make an old woman of me, or that I should stuff Latin and Greek at the university," he said to Sir Anthony Carlisle, referring to his phenomenally short sojourn at St. Mary Hall, Oxford, in June and July, 1755; "but these schemes I cracked like so many vermin as they came before me" he added, somewhat naively, suiting action to word and "cracking" an imaginary insect upon the table in front of him. The anecdote gives us an unconventional, a vivid idea of Hunter and of eighteenth century habits south as well as north of the Tweed. But we need not particularize.

John Hunter of course had been sent to the English University much too late in life, for he was born in 1728, and was 27 and an able surgeon, as well as *viveur*, when set down to a task usually undertaken seven or eight years earlier. Why he was sent to Oxford we do not know, or whether he sent himself. Most probably he went at the suggestion of his brother William, who, a scholar himself, feared that John would suffer in his profession through lack of the ordinary genteel outfit of quotations from the Latin and Greek authors, or—and this was perhaps most important—would continue hampered in his studies by inability to read Latin, which was at that time the international language of science.

It would be interesting to know what Hunter saw and heard at a clerical and leisurely university, where Jacobitism interested a few vehement spirits overtly, and learning, though dear to many, would seem to have been in permanent hiding. His Oxford life seems to have hardened his feeling towards literature into life-long dislike. In 1775 he writes to James Baillie, his minister brother-in-law:

I am not anxious about my children but in their doing well in this world. I would rather make them feel one moral virtue than read libraries of all the dead and living languages. You know I am no *scholar*, therefore do not feel the beauty of language when I do not see the use of it.

The letter is characteristic of John Hunter, and of a type of utilitarian semicivility very aggressive to-day. James Baillie, a man of culture himself, afterwards became a Glasgow professor, and was the father of the famous authoress, Joanna Baillie. His son Matthew he was careful to educate well, sending him first to the Grammar School of Hamilton and then to the University of Glasgow. Later the opinion of William, not of plain-spoken John Hunter, was taken in matters educational by members of the Baillie family. It was by the advice of William Hunter that Matthew Baillie chose medicine as a profession, and by the same advice, we must suppose, that, after his father's death, he was entered at Balliol College, Oxford, in 1779. From Oxford he wrote some fourteen letters to his uncle and patron, Dr. William Hunter, in whose London house he lived, and from whose instructions he profited during vacations. These letters, which, with the exception of the first, have not apparently been published, are preserved among her family papers by Miss Hunter Baillie, granddaughter of Dr. Matthew Baillie, to whom the writer desires to tender his best thanks for leave to reprint their more interesting passages.

In a letter dated March 13th, 1779, Matthew writes to his uncle:

Dr. Sir.—I would wish to receive your advice as my Parent about that plan of study you would wish me to pursue at Oxford. I would wish likewise to talk over with you the manners of the Place, that I may not go unguarded or unprepared to it. I am told that there is a great deal of dissipation in it. I would therefore wish your warmest advice with regard to my Behaviour.

It would be unfair to infer from this last passage that young Baillie was a prig. On the contrary, he was a lad of high character, deeply impressed with a sense of obligation to William Hunter, who, as his guardian, had come to the rescue of his mother, sisters, and himself when the death of Professor Baillie had left them in straitened circumstances. It is interesting to note that, at about this date, the famous Professor Thomas Reid, the metaphysician, who had taught young Baillie logic in Glasgow, writes to William Hunter in praise of the lad's sense and integrity, and hopes they will stand him in good stead in Oxford, where application is not easy.

Continuing his letter, young Baillie refers to the study of languages. As to Latin, Greek and French:

I would wish to make myself as complete in these as possible.

Writing from Oxford on April 10th, 1779, he says:

Upon Thursday last I entered a Student of Balliol College and underwent all these Forms which were necessary at my entrance. I found no room ready for me at Balliol, but am living at present in another Gentleman's room who has gone to London.

In the letters which follow very little more is said of college life: indeed, they are the reports of a student to his master, but as such they contain a marvellous record of hard work.

Speaking of translations on May 5th, a few days after entering at Balliol, Baillie writes:

I now send you part of what I have done, transcribed from my little books, exactly in the order in which it lies there. I have not picked out one passage and omitted another, according as I thought them good or bad, but you have it exactly in its proper order. When it is sent you I beg your opinion about it whenever you have time to write, but at the same time would wish you would shew it to no person. It will only bear the examination of those who are willing to make every allowance.

Then follows a note which implies that he left Glasgow with a good knowledge of Homer. He said:

Since I came to Oxford I have likewise read eleven books of the *Odyssey* with a more critical eye than ever I did any Greek before.

He translates a passage of Caesar into English and retranslates into Latin without reference to the text. The translation accompanies the letter, and has been sparsely, and perhaps hesitatingly, corrected in the great William Hunter's handwriting. Several other translations occur in this correspondence.

In the same letter Baillie writes conscientiously about his expenditure:

If you think it proper I will send you now and then a general scheme of my expense, and if there is any article which can be cut off with decency I beg you would retrench it. I would wish to live at the least expense it was possible, but at the same time not appear mean.

He attends his tutor Prosser's lectures, and at a later date thanks his uncle for politeness shown by him to this don and to Dr. Lee. He also makes mention of Professor Whyte, Laudian Professor of Arabic, and of a Dr. Leigh. The mention of a professor of Oriental languages suggests that his studies went beyond Latin and Greek.

On October 14th, 1779, we find him writing to his uncle:

Altho Dramatic Compositions in every Language are the most difficult, yet I do not find this Author (*Sophocles*) so troublesome as I expected.

Later he says:

I finished yesterday the Plays of *Sophocles*.

On November 14th, 1779, he declares:

I at least can say that I write Latin at present more easily than formerly.

About this time, being already a Glasgow exhibitor, he asks his uncle and guardian to help in procuring for him another small exhibition. He obtains Bishop Warner's exhibition in succession to a Mr. Hadow (a family name

still well known in the university), and thanks William Hunter for applying for it in his behalf:

If my other qualifications should be mean I hope at least it shall never be said I have been deficient in gratitude.

The small exhibition is "a very necessary addition in so expensive a place as Oxford." The letter is signed, "Yours most affectionately."

In 1780, when still only a lad of 18, he reads the plays of Sophocles a second time between New Year's Day and February 17th. He notes that the choruses are obscure. At the same time he despairs of ever writing Latin as purely and with as much facility as English. His taste is evidently improving, and he has travelled a long distance since he wrote from Glasgow to his uncle about the neglect of scansion prevalent in the North—a neglect that must have made nonsense of Virgil to a Scottish student. He wrote:

Quantity is still shamefully neglected in Scotland. We scarce know what is meant by Quantity. Since you have wrote me, I have been paying attention to it, and yet after all I shall be found very deficient.

At Oxford he made up for all deficiencies, and got through a prodigious amount of classical study, having, as he himself states, read Caesar, Livy, Cicero's *Tusculan Disputations* and *The Offices*, Terence (the Latinity of this author being found impure), Tacitus, Seneca, eleven books of the *Odyssey*, Plato's *Dialogues*, Xenophon's *Anabasis* (much admired by him), Demosthenes, selected orations of Aeschines, and, as before mentioned, Sophocles (twice), besides translating into English and then retranslating into Latin five or six books of Caesar and the *Tusculan Disputations*.

All this time he was bent on becoming a physician, and, indeed, studied hard under William Hunter in his vacations, thus laying the foundation in his Oxford days of his unrivalled anatomical knowledge.

Matthew Baillie's own account of his early education is contained in an unpublished memoir of his life, written "with a view of furnishing authentic materials." It is interesting as throwing light on the excellence of education in the Scotland of the eighteenth century and on the boyish ideals and experiences of a learned physician of the past. Dr. Baillie writes as follows:

I went to the English School at Hamilton when I was not quite five years old, and remained there till I was near seven. The schoolmaster's name was Allen, a most respectable man, and he was married to a sister of my Father. I was taught writing and arithmetic by Mr. Telfair, who succeeded Mr. Allen after his decease. I went to the Latin School at Hamilton before I was quite seven years old, and remained there six years. The Master of the School was named Whale. He was a man of quick parts, of various knowledge, and with a considerable turn for humour. He was an excellent Latin scholar, but was not very thoroughly acquainted with the Greek, altho' he had enough of the latter language for the creditable teaching of his school. I was there taught both Latin and Greek, and was considered as a good scholar. I was most commonly at the head of my class, but this arose entirely out of my emulation and industry. There were several Boys in the School of better Parts than myself, but they had less diligence. When I left the school in the afternoon, and went to my Father's house, the first thing I did was to prepare myself for the lessons of the next day. When this was done, I played with all the wildness and spirits of Boys at that early age.

Before I had quite completed my 13th year I left school and became a Student at the University of Glasgow. I first entered the Latin and Greek Classes, and went through a full system of classical and Philosophical education there in the course of five Sessions. The Professors in these various departments were men of considerable eminence, were exceedingly attentive to their duties, and had the power of exciting great emulation among the students. I still maintained the same character among the students which I had done at school, and chiefly from my industry and emulation. I had it likewise very early and very frequently impressed upon my mind by my Father, that my chance of future success in life depended entirely upon my industry and good character. In the year 1779, when I had not completed my 18th year, I was appointed to an Exhibition in Balliol College Oxford by the Professors of Glasgow, and in April of that year came up to England. I thence waited immediately on my arrival upon Dr. Hunter my Mother's Brother in Great Windmill Street, who received me kindly, and I staid with him about ten days before I went to Oxford. He was the Relation who had it most in his power to be useful to me with regard to my future prospects, and this determined me to enter into the medical Profession. I had no strong liking for this Profession, as happens to some individuals, but I had no dislike to it, and I entered upon it willingly. At this time too I waited upon Mr. and Mrs. Hunter,

and they received me kindly, altho' there was a disagreement between Him and his Brother Dr. Hunter. After being ten days in London I went to Oxford and remained there nearly eighteen months without interruption. I had the advantage of a very good Tutor, the Revd. Mr. Prosser, now the Revd. Dr. Prosser, a Prebendary of Durham, and improved myself considerably in the Classics, more especially the Greek, and acquired by reading some general knowledge. At that time Science was very little cultivated at Oxford, and I gained little in addition to what I had brought with me from Glasgow.

He studied mathematics, however, to some purpose while at college, though he does not tell us to what point. In 1780 his medical studies began in London, but he continued to keep his terms in Oxford. It is not our purpose to describe Matthew Baillie's medical education here, as that is sufficiently recorded by Wardrop, his biographer. He found William Hunter "mild and kind," never "familiar and warm," though he enjoyed his confidence to such an extent that he became chief teacher in his Windmill Street dissecting-room in 1781. Of William Hunter as a teacher he says:

He excelled very much every Lecturer whom I ever heard, in the clearness of his arrangement, the aptness of his illustrations, and the elegance of his diction. He was probably the best Teacher of Anatomy that ever lived.

V. G. P.

THE BRITISH MEDICAL BENEVOLENT FUND.

A MEETING in support of the British Medical Benevolent Fund was held in the Library of the Royal College of Physicians, London, on Tuesday, with Sir JOHN TWEEDY, President of the Fund, in the chair.

Dr. SAMUEL WEST (Treasurer) said that the Fund was founded in 1836, and during the past seventy-three years had expended over £70,000 in grants, and rather more than that amount in annuities. The object of the Fund was the relief of medical men and their families in severe and urgent distress. The only qualification to benefit by the Fund was poverty and distress. Temporary distress was relieved by grants of money, and permanent ill health or old age was relieved by annuities. The value of the annuities was from £20 to £25. The grants of money varied from £5 to £20, and last year over £2,000 was distributed in that manner. The Fund stood as a bulwark between the benevolent public and the begging-letter writer and other impostors.

The BISHOP OF OXFORD (Dr. Paget) said that the Fund made provision by pension and by grants for medical men who had fallen into poverty by no fault of their own, or for the wives and children of medical men when left in poverty. There was no profession in which a man was so much compelled without any choice of his own, without any chance of escape, to run such great risks of unavoidable impoverishment involving himself and his family. In most cases, when a student came to the end of his education for the medical profession, when he was qualified to seek for practice and hoped to earn a living, he had spent a very large sum of money and had drawn all that he could from his home. In other words, most medical men by the time they qualified for practice had fairly well exhausted their capital. From the very first the medical man had to meet expensive demands. It was appalling to think what was required of a medical man in the way of keeping up appearances. He must not only have a house, but it must be of a considerable size and in a good position. Then there was the necessity of spending a good deal of money on clothes. He was expected to show a sort of chastened expensiveness in his attire, a kind of sober and unostentatious dignity in his apparel. He was not required to be smart, but the medical man must certainly not be casual or indifferent in his dress. Altogether he must incur a considerable outlay long before he could hope to begin to earn anything at all. Then he must have a carriage or a motor, for a medical man who proposed to see his patients without would find them very few. It was also generally expected of a medical man, and wisely so, that he should be married, and thus he incurred quite early in his career a very considerable burden of anxiety and expense. It was of the utmost importance that the medical man should have the health to support that burden of anxiety for many years so as to be ultimately rid of pecuniary embarrassment, for a doctor was lucky if he was quit of debt by the time he was

forty years of age. Everything, then, depended on his health and ability to stand hard work. They were his one asset without which theory, education, ability, skill, and recommendations were useless. The medical man therefore risked his all upon his health, and his health was exposed to extraordinary risks, considering the load of anxiety under which he worked. His time for sleep and his time for meals was uncertain. He had to risk exposure to all sorts of weather at all times of the day and night; he could never be sure of a spell of rest for many years, and he hardly ever got a holiday. He was constantly exposed to the risk of infection from fever and blood poisoning. Therefore he was risking his health all his life, and he was doing this under very real conditions of difficulty and strain, so that the medical man's hold upon health and power of work was secured to him by the most precarious tenure. It must be remembered also that health meant more to a medical man than to most men, for the public preferred to employ a doctor who was himself well and strong. It was a disastrous matter for a medical man to have a long illness, and it was disheartening for him after a protracted spell of ill-health to take up his practice again, for often it would be found that his practice had more or less left him. The public turned to those medical men of whose stability of health and readiness for work they could be assured, and it was pathetic to think how often a man struggled through a convalescence from illness, only to find that it would take him months or years to recover lost ground. That great asset of health on which a medical man staked his all was of such a precarious nature that the need for the British Medical Fund was clearly indicated. Another method of understanding the urgent necessity of this Fund was by looking through the list of the cases relieved. The want which was relieved by the annuities given by the Fund was urgently pathetic, but behind that list of annuities there were a great many deserving cases for which no money at all could be provided. When it was remembered that the subscriptions for the year were unfortunately not enough to warrant any grant at all in a large number of necessitous and deserving cases, then it was recognized what a great need there was for the encouragement of this Fund. His father, Sir James Paget, lived and worked under the full stress and strain of those risks which had been described. Sir James Paget through all his early professional life was burdened with debt, mostly not his own, and he was, moreover, in most precarious health; at first he did not and could not save anything at all. Speaking of the risks which a professional life such as that of Sir James Paget involved, he doubted whether, could they have been foreseen, any prudent man would have incurred them. It might be summed up in the fact that if Sir James Paget had died before he was 47 he would have left his wife and children in extreme poverty, for before that time he had not been able to save a shilling, and the largest life insurance he could have afforded would have been quite insufficient for bringing up his children. The Bishop concluded his appeal by saying that when he thought of the gallant courage shown by his father in his work, of his uncomplaining fortitude, of his ceaseless and invincible diligence in his professional labours, of his daily cheerfulness, and of the patience with which he bore the risks described, he did not doubt that he would be successful in pleading for the Fund which was devoted to the benefit of medical men.

THE LORD MAYOR OF LONDON said that he had always felt the highest admiration for the medical profession and for its self-denying devotion to the service of the public. He referred, first, to the family practitioner, who was very often the sole friend and comfort in a bereaved household, and then referred to the successful work done by the Corporation of the City of London through its medical officers in preventing disease in the Port of London. The Corporation of the City of London was engaged in the prevention of the entrance of disease into this country. It was enabled to carry out this work successfully because the medical profession had worked for years in order to discover means for preventing the spread of disease. As the result of those labours its medical officers were able to stop the entrance of disease, and thus the city was saved from diseases which might decimate the population. It must be remembered also that the prevention of disease

was an excellent thing for the State, because health was considerably cheaper than disease. He considered that the State and the public had done very little in return for the benefits which the medical profession had conferred on the country, and it seemed to him that the public should be called to its duty in that respect, and he hoped that the Fund would benefit greatly as a result of the meeting.

SIR R. DOUGLAS POWELL suggested that if every member of the medical profession were to contribute even a small sum to the Fund it would have a great effect on its position, and that good effect would be increased if medical men interested their friends in the work of the Fund and recommended it to the notice of the charitable public.

SIR JOHN TWEEDY, in a few concluding remarks, pointed out the importance of what the Lord Mayor had said in regard to the economical value of the medical profession in preserving the health of the nation.

The business of the meeting terminated with a cordial vote of thanks to Sir John Tweedy for presiding.

THE UNIVERSITY OF BRISTOL.

THE EXPECTED CHARTER.

If rumour be true the charter for the new University of Bristol will be granted by the Privy Council before Easter, and the university will come into being before the new year. The Committee that has worked so long and so hard for this object may well congratulate itself on reaching the goal that it had in view, for it is only a little over thirty years since the University College was opened, and but one since the first prospectus and list of donations towards the university was published.

THE MEDICAL SCHOOL.

It will be of interest to pass rapidly through the successive stages since the germ of the university first started into activity. It may be claimed, without fear of contradiction, that the first step towards the goal now so nearly won was the foundation of the medical school in the year 1814, or perhaps, to be more correct, the course of lectures given by Dr. J. C. Prichard, Mr. Bowles, and Mr. Shute at the Royal Infirmary in that year. In 1818 these lectures were recognized by the London authorities, and the first prospectus of the Bristol Medical School followed in 1832. Since that time to the present—for the school was affiliated to the college in 1893, and made a faculty in 1907—a regular course of medical instruction has been carried out; and though the lecturers had little to do with the foundation of the college, it was due to the needs of that school and the desire to have the means of higher education, that the idea occurred to others that a university college was required. To complete the history of the connexion of the medical school with the college, it may be added that after being housed for some years in King Square it was moved to Old Park, and from that site to the present buildings now part of the college.

THE UNIVERSITY COLLEGE.

According to Latimer, the author of *The Annals of Bristol*, it was in the spring of 1873 that a proposal was made to found a technical college of science, of which the medical school was to form a part, and an appeal was made for subscriptions to carry out this idea. The chief promoter of this scheme was the present Bishop of Hereford (then head master of Clifton College), and he was strongly supported by Professor Jowett, Dr. Temple (then Bishop of Exeter), Sir Henry Roscoe, and Mr. E. A. Freeman. As a result, the University College was started in the autumn of the same year, with a staff of two professors and four lecturers, being housed in a temporary premises in Park Row, a building now occupied by the South Midland Royal Engineers.

From the first the history of the college has been one of continued success; a very large number of students have passed through it, and it was found necessary at different times to increase the staff and enlarge the buildings, till at the present time there are nine professors, one assistant professor, twenty-four lecturers, and three readers in the

Faculty of Arts and Science, and eight professors and twenty-one lecturers in the Faculty of Medicine.

The available space in the building in Park Row soon became exhausted, and a move was made to the present site, where a building valued at £45,000 was erected.

THE PROPOSAL FOR A UNIVERSITY.

Though the college has always proved a great success, it was soon felt that the educational equipment of the city would not be complete till it could grant its own degrees and provide a place and afford facilities where original work could be carried out. Further, it was felt that if a high standard of work was to be aimed at it was essential that those who gave their time to instructing others should be well paid, for it would be impossible to command the services of the best teachers if the emoluments were insufficient to attract and to retain the best men. For this a considerable endowment would be required, and it was with this object in view that a movement was made by certain prominent citizens in 1907 to start a fund for the endowment of a university. Following the example of some of the recently created universities of the North of England, a sum of a quarter of a million was asked for, and the recent gift of Lord Winterstoke of £15,000 about completes that sum.

Some years ago there was started to assist the college in its financial needs a society known as the University College Colston Society. It was founded on much the same plan as the well-known political societies which bear the name of the great Bristol philanthropist—that is to say, an annual dinner, a subscription list, and a speech by some person distinguished, in the case of the college, not in the political but in the educational world. The idea originated with Mr. W. Reid, the proprietor of one of the Bristol papers, who pointed out that more than half of Colston's gifts to the city were for educational purposes, and that the citizens of Bristol would be carrying out the objects and aims of Colston if they helped towards the higher educational movement of the present day. For some years this society has met annually, and the dinner and the donations have both helped in their way to advance the college. But of all the meetings, that which will be longest remembered was the meeting of January 14th, 1908, for it was then the proud privilege of the president, Mr. G. A. Wills, a member of the well-known Bristol family, to announce that his father had given the sum of £100,000 to the university fund, and by this magnificent gift had assured the existence of the Bristol University. Mr. Henry Overton Wills, the gentleman who has given this sum, has not lived in Bristol for some years, but his name will always be remembered as the founder of the university.

This magnificent gift of Mr. H. O. Wills overshadows the donations of others, but a large number of wealthy persons in the city have given handsomely, so that as mentioned before the sum of about £250,000 is now in hand for building and endowment.

It would be invidious to mention the names of only a few of the many who have worked so hard for the university, for some one might be omitted; but a notice such as this, which is intended to be a short record of the many steps that have been taken, would be very imperfect if no reference were made to Mr. Albert Fry, who unfortunately died before he saw the fulfilment of his hopes, to the Bishop of Hereford, the Bishop of Bristol, and the Right Hon. Lewis Fry. There are many more, and only space prevents their mention.

THE MERCHANT VENTURERS' COLLEGE.

But unfortunately there have been difficulties in the path, and these are not even now removed. It was hoped that it would be possible to come to some agreement with a technical college that has for many years been in existence in Bristol known as the Merchant Venturers' Technical College. This institution had its origin in a school founded in March, 1856, under the title of the Bristol Trade and Mining School, and was taken over by the Society of Merchant Venturers in 1885. At first it was known as a school, but to bring it into line with like institutions in other towns the name was changed to college. The society that owns the college is the last surviving of the old trade guilds of Bristol, and, like some of these in London, has made use of its surplus funds to further

education. The foundation of this college was at the time of its opening commented on by a prominent citizen who expressed a regret universally felt that "while we have a grammar school and a university college, both admirably officered and doing good work, but sadly hindered by lack of funds, we see a gigantic trade school arising to be a rival to both of them." This has unfortunately proved only too true. When the university scheme was started it was hoped that some support would be granted by the city out of the rates and this has been promised, but only on condition that some working agreement is come to between the two bodies. Negotiations have been going on now for a very long time, and it is hoped that an agreement may be come to. If report be true the university committee have come to an end of their patience, and it is hoped that the Privy Council will grant the Charter in spite of the fact that the Merchant Venturers will not join in the university. It is possible that the question of the rate may be got over, but a very practical solution of the difficulty would be for the university to be independent by raising another £100,000 which would put it in a better position though not as good a one as if helped by a rate.

THE AIMS OF THE UNIVERSITY.

The Draft Charter was laid on the table of both Houses of Parliament last autumn, and for the due time. It is now before the Privy Council, and only requires to be laid before the King to receive confirmation.

This account would not be complete without some reference to the aims of those who are promoting the university. Hitherto the students have been trained and instructed mainly for the University of London, and, in the case of the medical students, for the Conjoint Board as well. It is hoped soon that there will be a complete system of examinations as well as instruction for degrees granted by the University of Bristol, and it is quite certain that the standard of work required will not fall below that of either the older or of the more recently formed universities. Bristol, with the magnificent endowment obtained, will be able to offer as good an education and at as reasonable a cost to parents as any in the United Kingdom, while it is intended that the degrees shall rank as high. It is further hoped that by awarding bursaries and scholarships to deserving students that original work of a high order may be carried on within its walls which will bring renown to the university and to the city.

The present building will, of course, have to be much enlarged, and the committee were very fortunate in being able to purchase the buildings of the Blind Asylum. This will give the university a fine frontage on the main road, though the present building will have to be replaced by a more suitable one. No plans are at present published, and, indeed, it would be premature to do so, for until the charter is actually in the hands of the committee no steps can be taken.

LITERARY NOTES.

We have received the first copy of *National Health*, a magazine which appeals to all interested in questions of public health. It is the official organ of the Women Sanitary Inspectors' Association, the Children's Protection League, and the Women's National Health Association of Great Britain. Among the contents of the first number is an article on the Children's Protection League, by Lord Monkswell. Mr. Henry Curtis, F.R.C.S., contributes a paper on rickets; Dr. A. Nimmo Walker discusses the Midwives Act in its relation to the blindness of infants; Dr. O. E. Starr, L.D.S., discusses the question of the care of the teeth; Dr. Elizabeth Knight writes on the social and sanitary conditions of prison life. There are also articles on the passing of the woman sanitary inspector, a second-grade nurse, and the medical inspection of school children, with reports, editorial reflections, and other matter. The editorial offices are at the rooms of the Medical Society, 11, Chandos Street, Cavendish Square, W.

Among the books in Messrs. Methuen and Co.'s New Announcement List, an early copy of which we have received, is one entitled *Drugs and the Drug Habit: Chapters on the Dynamics of a Remedial Particle*, by Dr. Harrington Sainsbury, Senior Physician to the Royal Free Hospital. The purpose of the work is said to be to point out the precise relation in which the medicament stands to

disease, and how it is fitted to solve the problem, physical and psychic, which the malady sets; to claim for the drug its position as a natural force obedient to natural laws, and to show how impossible it is to separate it, including its latest congener the *serum*, from other classes of natural products; to make prominent the fact that drug habits are but instances of a law fundamental throughout nature, and to discuss the broad lines upon which prevention and cure should proceed in the treatment of habit; in brief, to naturalize the drug both in its use and abuse.

Messrs. Bale, Sons, and Danielsson, Limited, will shortly issue a History of the Reading Pathological Society, written by the President, Dr. Jamieson B. Hurry. This society ranks as one of the oldest medical societies in the country. The good work it has done is shown by the numerous original communications which have been published during the past seventy years, to which full references will be given. The volume will be illustrated by a series of portraits, and contain descriptions of the medical library and pathological museum, which form so essential a part of every progressive medical society.

Mr. Alston Rivers will publish at once a volume entitled *Labour and Housing at Port Sunlight*, by W. L. George, author of *France in the 20th Century*, who has made a careful survey of the first attempt at a model village. Though his opinion on the whole is favourable, he freely criticizes the system.

We had not intended to say anything further on the subject of Esperanto at present, but we have received a letter from Dr. G. S. Robinson of Eastbourne which courtesy compels us to notice. Referring to the statement which we quoted from Mr. Remy de Gourmont as to a friend who asked "what mental aberration had led Esperantists to use *viol* (rape) to denote a *violet*," Dr. Robinson says: "The answer, of course, is that *violet* is the Latin for a violet, and (as with most scientific terms), the Esperanto equivalent, '*volo*'—not '*viol*,' by the way—is taken direct from that language as a common source. The Latin, English, and French languages all use the root-word '*viol*' for both '*a violet*' and '*to violate*'; but Esperanto never uses the same root-word for two different meanings, and so prevents any possible confusion." *Volo*, on the whole, strikes us as a more infelicitous name for the proverbially modest flower than *violet*. But on looking at the vocabulary in *Esperanto Self Taught*, by Mr. William W. Mann (London: E. Marlborough and Co.), we find at p. 17 *violeto* given as the Esperanto equivalent for violet. The book bears what may be taken as the imprimatur of Dr. Zamenhof, the founder of Esperanto; it may, therefore, be assumed that it contains no error. There is evidently some difference of opinion among Esperantists about the proper form of the word. *Non nostrum tantas componere lites*. The fact, however, serves to illustrate our remarks as to the inevitable mutations that must take place in Esperanto as in languages developed by the natural process.

Contract Practice.

PROPOSED FEDERATED SOCIETIES' MEDICAL BENEFIT ASSOCIATION.

THE following circular has recently been issued, and it will be noticed that the promoters of this new organization hope that the scheme may be in working order at the beginning of next April. It will be observed that it is intended to apply to members of dividing friendly societies who live outside the radius of their own society's doctor and have hitherto been unable to take advantage of the facilities for medical benefit at the cheap rate provided by the societies.

FEDERATED SOCIETIES' MEDICAL BENEFIT ASSOCIATION IN CONNECTION WITH THE NATIONAL FEDERATION OF DIVIDING FRIENDLY SOCIETIES,

7, COLEBROOKE ROW, N.

At the 1908 Conference a general desire was expressed that the Federation should do something to place facilities for Medical Benefit at a cheap rate within the reach of those members who, by reason of living outside the radius of their own Society's doctor, were debarred from such benefit. At the same time it was made clear that no scheme that involved Secretaries in additional work, or which interfered in any way with the funds of individual Societies would be generally acceptable.

The Federation Executive now have the pleasure to announce that they have adopted a scheme which, whilst giving members, in whatever part of Greater London they may reside, the services

of a local medical man at the same rate as that usually paid in London societies, does not interfere in the smallest degree with the funds of individual Societies nor put upon local Secretaries any additional work of any kind. The scheme will be worked under the name of the "Federated Societies' Medical Benefit Association," and will be managed by a committee of five members appointed by the Executive. The Association will select about 100 doctors, in different localities, and publish their names on a suitable display card, which Societies may exhibit in their meeting rooms. It will then be open for members of Affiliated Societies to choose any name from this list, and, on forwarding the name to the Federation Office, together with a quarter's subscription (1s. 1d.), they will receive in return a receipted membership card which will entitle them immediately to the services of the doctor whose name the member has chosen.

Many of the doctors whose names will appear on the published list have agreed, if their approval is first sought, to attend other persons in the member's family at the same rate of payment. With this extension it is hoped that the scheme will afford a wide scope of usefulness and place every Affiliated Society in London in a more advantageous position in respect to the facilities for medical benefit which it can offer its members than is at present possible with even the largest Dividing Societies in London.

The scheme is intended to meet the case of only those members who are unable to take advantage of the service of their own Society's doctor, and no Society agreeing to exhibit the Association's card need apprehend the scheme will interfere with the working of local Societies' own medical funds; and in order to make this further sure, the doctors whose names will appear on the Association's list will be found, in most cases, to be the doctors already acting for local Societies.

It is claimed for the scheme that it is simple and effectively meets the desired end whilst avoiding objections which were feared, and it is hoped to get it into working order by the beginning of April. Societies wishing to give their members the advantage of the scheme will be supplied with the Association's card (about 18 by 16 inches) for exhibition in their meeting rooms. This card will contain all necessary information, and members need only be referred thereto. Applications for cards should be sent to the Federation Office.

RULES.

1. Members of any affiliated Society may become members of the Association.
2. The contributions to the Association shall be 1s. 1d. per quarter payable in advance, by post. Two or more quarters may be paid at the same time, but in all cases this card must be sent for receipt to be acknowledged thereon, and a halfpenny stamped envelope enclosed for its return. No member shall be entitled to benefit during any period for which the contribution has not been paid.
3. For such payment the member shall be entitled to receive free medical attention and medicine (but not attention or appliances in surgical cases), and a certificate of inability to work where such, in the doctor's opinion, may be necessary, from the doctor whose name appears on the other side of this card.
4. Each member must observe his doctor's regulations as to surgery hours and the giving of notice for home visits; and this card must be produced at each visit to or from the doctor.
5. Members may change their doctor at the beginning of any quarter but not at any other time. Notice of any desired change must be sent with the contribution.
6. The Association shall be managed by a Committee appointed by the Executive of the National Federation of Dividing Friendly Societies and all funds shall be banked under the control of two trustees.

FRIENDLY SOCIETIES AND MEDICAL CONTRACT PRACTICE.

SIR,—It is pleasing to note that Dr. F. W. Styles's letter has created some stir in the profession, and still more so to know that Denbigh and Flint have taken some action. Would not the profession be better served by their Divisional representatives if such actions spread, instead of so much grumbling in the medical and lay press?

I venture to suggest that the action should be organized by the central governing body, and a big effort made to make it general throughout the land, as there must be a considerable amount of overlapping in practices on the border of two Divisions.

Further, I venture to suggest that the manner in which the parish appointment is worked is to some extent responsible for clubs, with low fees for women and children. The parish doctor finds it better to take a few shillings per annum than to be obliged to see the patient for nothing as a pauper. Why should a pauper be compelled to have his doctor chosen for him? The appointment should, to my mind, be open to all who care to put their names down for the work, and the pauper be given choice.

In a few hours a clerk could ascertain the amount of the parish pay earned by each doctor for the past year at the cost of a few shillings to the ratepayers.

One further grumble in conclusion. Why should a doctor who has an infectious case which cannot be conveniently isolated at home be compelled in many districts to hand his patient over to the medical officer of health at the isolation hospital?—I am, etc.,

January 18th.

GRUMBLER.

Medical News.

WE are requested to state that Dr. Phineas Abraham has resigned the post of Surgeon to the Hospital for Diseases of the Skin, Blackfriars.

DR. JAMES MENZIES of Worksop has, on the recommendation of the Duke of Portland, Lord-Lieutenant of the county, been appointed a Justice of the Peace for Nottinghamshire.

AT the meeting of the Society of Tropical Medicine and Hygiene, to be held at 11, Chandos Street, Cavendish Square, W., on Friday next, at 8.30 p.m., Dr. H. G. Waters will read a paper on a new pathogenic spirochaete associated with bronchitis and fever; and Dr. T. Fausset Macdonald will present a communication entitled *Tropical Notes from Barbados*.

A QUARTERLY meeting of the Medico-Psychological Association of Great Britain and Ireland will be held in the new medical schools, Cambridge, on Tuesday, February 23rd, at 3 p.m., under the presidency of Dr. Charles Mercier. Dr. H. B. Donkin will introduce a discussion on the certification of mental defectives as proposed by the report of the Royal Commission on the Control of the Feeble-Minded, and Dr. William Graham will read a paper on the modern movement of psychotherapy.

ZAMBACO PACHA, M.D., of Constantinople, has given £600 to the French Society of Dermatology and Syphilography for the foundation of a prize which is to bear his name. The prize will be awarded every two years to the author of the best work sent in dealing with a subject in the domain of dermatology or venereal diseases. The competition is open to all nationalities, but the essays must be written in French. The first award will be made in April, 1911. The essays must be in the hands of the general secretary on or before November 30th, 1910.

THE eleventh International Congress of Ophthalmology will be held at Naples in April next (2nd to 7th). We are asked to state that an effort is being made to arrange special terms for travelling expenses and hotel accommodation for those who may wish to attend the Congress. It is proposed to issue for perusal before the meeting the communications offered for discussion at Naples. These will be sent only to those who have signified their intention to be present, and have paid the congress subscription (25 francs for members, 10 francs for each accompanying member of a family). To facilitate these arrangements it is most desirable that those who wish to attend should make the earliest possible intimation to one of the corresponding members for Great Britain and Ireland—Mr. Walter H. Jessop, 73, Harley Street, London, W.; Dr. George Mackay, 20, Drumshugh Gardens, Edinburgh; or Sir Henry Swanzy, 25, Merrion Square, Dublin.

ON February 5th, at a meeting held at the Warneford Hospital, Leamington, Dr. Thursfield was presented with his portrait in oils by his colleagues on the staff and committee and other friends. The presentation was made by the Chairman of the Hospital Committee (Major Chesshyre Molyneux), who said that Dr. Thursfield was elected Honorary Physician in 1882 at the time when the hospital consisted simply of the old building and had no ground except that upon which it actually stood. Owing in a very great measure to Dr. Thursfield's energy, four new wards and a nurses' home had been built, while the hospital had acquired three acres of land giving plenty of light and air. In addition, Mrs. Thursfield had generously furnished and equipped two of the wards at her own expense. The portrait represents Dr. Thursfield in an M.D. gown, and is considered an excellent likeness.

THE London County Council at its meeting on February 2nd approved arrangements which the Education Committee have made with the Queen Victoria's Jubilee Institute of Nurses for the treatment in their own homes of children suffering from suppurating ears. It has been found in many cases that the usual treatment by syringing, requiring as it does time, care, and patience, is not carried out properly by the parents. A card will be sent to parents whose children are found by the school doctor to be suffering from the affection, telling them that a nurse will attend at the house and administer treatment after the child has been seen by a medical practitioner. On the back of the card is an order to be signed by the doctor requesting the nurse to "syringe the ears of the child twice daily for the next three weeks, using only warm boracic acid lotion, and afterwards drying out and insufflating a very little dry boracic powder." After thus arranging the doctor's prescription for him, the Council nevertheless adds: "It is to be distinctly understood that the nurse, if she attends your

child, will act under the instructions of the doctor of the hospital authorities as the case may be, and that the London County Council will accept no responsibility for the treatment prescribed or given."

THE third meeting of the Departmental Committee appointed by the Lord President of the Council to consider the working of the Midwives Act was held at the Privy Council Office on Thursday, February 4th. Mr. Almeric FitzRoy, C.V.O., was in the chair, and Miss Bertha M. Broadwood, Honorary Secretary and Director of the Cottage Benefit Nursing Association, and Miss Rosalind Paget, Honorary Treasurer of the Incorporated Midwives Institute, gave evidence on behalf of their respective institutions.

DR. BENJAFIELD is medical officer of health for the district of Glenorchy, in Tasmania, and his little pamphlet, *Health in the Orchard*, draws an idyllic picture of the place that may well tempt those who seek the simple life. Glenorchy, we are told, is a tract of land some 10 miles square, "dotted all over with cultivated gardens and orchards." There people "spend all day in the sunshine, pruning in winter, digging and ploughing in spring, weeding and spraying in big apple and pear orchards, picking small fruits in the early summer, and later on the hard fruits as they come in." No wonder many of them are still young at 85, and their death-rate is only 4 per 1,000. Incidentally, the Tasmanians are trying to place more of their fruit, and especially their pears, on the home market, and it is gratifying to learn that Dr. Benjafield has been a pioneer, not only in pear culture, but in solving the many problems connected with the packing and shipping of this delicate fruit. We hope to meet Dr. Benjafield's pears at many an English dessert in the near future.

At a recent meeting of the Child Study Society, when the chair was taken by Mr. C. McLaughlin Barlow, LL.D., member of the London County Council Education Committee, a discussion on the report of the Royal Commission on the Care and Control of the Feeble-minded was opened by Dr. Shuttleworth, who, while recognizing the extraordinary industry of the Royal Commissioners, ventured to criticize some of their recommendations. In the first place, he doubted whether it was advisable to "tar with the same brush" the adult lunatic and the simply abnormal—perhaps only subnormal—child, as was contemplated in Recommendation III (BRITISH MEDICAL JOURNAL, 1908, vol. ii, p. 416), which proposed that all persons of unsound mind, whether lunatic or idiot, as well as the "feeble-minded," should be legally included in the term "mentally defective," thus abolishing the distinction between mental derangement and original mental deficiency, which has important administrative as well as scientific bearings. He thought also that a too rigid requirement of notification and registration of young children found unfit for ordinary education, though capable of benefiting by special instruction, would defeat its own end by wounding the susceptibilities of parents and tend to prevent those of the well-to-do classes especially from seeking for such children appropriate training. Mrs. Burgwin, Superintendent of Special Instruction, London County Council, referred to the difficulty of exact and early diagnosis in the case of many younger children and to the disadvantage of divorcing from the scheme of elementary education, and transferring to an authority controlling adult lunacy the care of children of school age, whatever might be desirable after that age. Dr. Ettie Sayer, Assistant Medical Officer (Education), London County Council, urged that parental susceptibilities must be subordinated to the general social weal. Dr. Caldecott, Medical Superintendent, Earlswood Asylum, discussed the recommendations from the institution point of view, urging that it would be retrogressive legislation to confuse and confound with lunatics the class of mentally defectives in whose interest the so-called "Idiot Act" of 1836 had been obtained. Dr. Kerr, Chief Medical Officer (Education), London County Council, criticized the proposals to remove from the purview of the Board of Education and the local education authority all the abnormal children found in schools; he thought it would be both imprudent and impracticable; and Dr. Crowley, Medical Superintendent to the Bradford Education Authority, hoped that it might be arranged for the present special schools to continue their work under the education authorities by way of contract with the new Committees for the Care of Mentally Defectives, as contemplated in Recommendation XLII. Mr. J. J. C. Turner, Secretary and Superintendent of the Eastern Counties Asylum for Imbeciles, trusted that a way would be found to utilize the existing charitable institutions which had been doing good service for so many years. The Chairman briefly summed up, and after the usual votes of thanks the meeting dispersed.

British Medical Journal.

SATURDAY, FEBRUARY 13th, 1909.

THE CENTENARY OF CHARLES DARWIN.

AT the present day the counsel, "Let us praise famous men," is in little danger of being forgotten, for the centenaries of great men's birth and those of their death, sometimes of the publication of a particular work, are made the occasion of commemorative oratory and celebrations of one kind or another. There is an inborn tendency in the human mind to ceremonial cult. Formerly each of the saints had his proper festival; in our modern calendar their places have been taken by the warrior, the statesman, the poet, the author, the inventor, the explorer, and the man of science.

This week it is the turn of Charles Darwin, who was born on February 12th, 1809. Darwin is of special interest to medical men, not only because he built a monument of scientific research more lasting than brass, but because he came of a medical stock and was himself intended for the medical profession. His father was a physician at Shrewsbury who was admitted by professional rivals to have the gift of prognosis to which Hippocrates rightly attached such importance. He was a man of great sagacity, strongly opposed to bleeding in the days when surgeries on certain days were like shambles, and who long before typhoid fever was recognized as a distinct disease told his famous son that two utterly distinct kinds of illness were confounded under the name of "typhus fever." He was vehement against drinking, and himself never drank a drop of alcoholic fluid. He had also much of that worldly wisdom without which scientific knowledge does not generally lead to success in medical practice. Charles Darwin's grandfather, Erasmus Darwin, author of *Zoonomia*, was also a physician, and was widely known in his own day as a poet and a botanist, characters which he attempted to combine in his *Loves of the Plants*, ridiculed by Canning in the *Loves of the Triangles*. Charles's brother, Erasmus, one of the few people of whom Carlyle speaks well, took a medical degree, but never practised.

Charles, like his brother, was educated at Shrewsbury under Dr. Butler. The training given there at that time being strictly classical, the school was, he says, to him simply a blank. So little promise of future greatness did he show at this time that his father once said to him, "You care for nothing but shooting, dogs, and rat catching, and you will be a disgrace to yourself and all your family." Even then, however, he was fond of science and literature. He used to sit for hours reading the historical plays of Shakespeare; he read also Thomson's *Seasons*, and Byron and Scott. In after-life, to his own regret, he wholly lost all pleasure from poetry of any kind, including Shakespeare. The imaginative faculty had become atrophied from his overwhelming interest in facts. He worked with his brother at chemistry out of school hours, and was nicknamed "Gas" in consequence. He was once publicly rebuked by the head master for wasting his time in such useless subjects;

to quote his own words: "He (Dr. Butler) called me, very unjustly, a poccourante, and as I did not understand what it meant, it seemed to me a fearful reproach."

As he was doing no good at school his father sent him in 1825 to Edinburgh University, where he stayed with his brother two years. He was sent there to study medicine. He says with much frankness: "But soon after this period I became convinced from various small circumstances that my father would leave me property enough to subsist on with some comfort, though I never imagined I should be so rich a man as I am; but my belief was sufficient to check any strenuous effort to learn medicine." He says the instruction at Edinburgh in those days was altogether by lectures, and these were intolerably dull, with the exception of those on chemistry by Hope. Darwin makes the interesting incidental remark that to his mind there are no advantages and many disadvantages in lectures as compared with reading. Dr. Duncan's lectures on *materia medica* he describes as "something fearful to remember," but the fact that they were delivered at 8 o'clock on winter mornings may have had something to do with this unpleasant recollection. The lectures on anatomy, too, he found not only dull, but disgusting. In regard to this he says, "It has proved one of the greatest evils in my life that I was not urged to practise dissection, for I should soon have got over my disgust; and the practice would have been invaluable for all my future work." Darwin also attended regularly the clinical wards in the hospital. Some of the cases distressed him a good deal, and vivid pictures of some of them remained in his mind. But the hospital work did not interest him much, though he had previously felt a keen interest in clinical work among poor people at Shrewsbury. He attended on two occasions the operating theatre at Edinburgh and saw two very bad operations, one on a child, but he rushed away before they were completed. He never attended again, and he says that hardly any inducement would have been strong enough to make him do so. This, he adds, was long before "the blessed days of chloroform."

Clearly he had no vocation for medicine; on the other hand, he was interested in natural history, and made friends among men who cultivated that branch of knowledge. He was well acquainted with Grant, afterwards Professor at University College, London. One day, when they were walking together, Grant burst forth in high admiration of Lamarck and his views on evolution. Darwin listened in silent astonishment, but Grant's eloquence produced no effect on his mind. He had previously read his grandfather's *Zoonomia*, in which similar views are maintained, but they had no effect on him. Nevertheless, he says, it is probable that the hearing of such views rather early in life maintained and praised favoured his upholding them under a different form in his *Origin of Species*. He was a member of the Royal Medical Society, but, as he bluntly puts it, "much rubbish was talked there."

The idea of his becoming a doctor was given up, and he was sent to Cambridge with the intention of entering the Church. The intention, he says, was never formally given up, but died a natural death when on leaving Cambridge he joined the *Beagle* as naturalist. At Cambridge he says his time was wasted. He got a pass degree without difficulty. He continued to collect minerals with much zeal, but, as he says, quite unscientifically, and he was interested in insects, and in

the habits of birds. From Henslow he acquired a taste for botany, and he must have had some reputation for scientific knowledge among his contemporaries, for one of them who saw him at work with his beetles predicted that he would one day be a Fellow of the Royal Society, a notion which he says seemed to him preposterous. His friendship with Henslow was the turning-point of Darwin's career, for it was on his recommendation that he accepted Captain Fitzroy's offer to go as volunteer naturalist on the famous cruise of the *Beagle*.

Here we must leave him, for the vast work he did in science, though it had indirectly a great influence on the development of medicine, was done in the wide field of general biology. It can scarcely be claimed that his study of medicine did much for his intellectual development in that direction. His aptitude for science was doubtless largely inherited. One cannot avoid the reflection, which has a far wider application than to this particular case, that Charles Darwin could not have accomplished what he did had it been necessary for him to work for his daily bread.

FRIENDLY SOCIETIES AND THE MEDICAL PROFESSION.

THE conference convened by the Charity Organization Society, a full report of which will be found in the SUPPLEMENT, will have served a useful purpose if it induces the leaders of the chief friendly societies to make a serious attempt to meet the objections which the medical profession has advanced to the present system under which these societies provide medical assistance for their members. The conference was attended by, amongst others, representatives of the British Medical Association and of many of its Divisions, and by some of the leading officials of the chief friendly societies.

The moderation of the address with which Dr. James Pearse opened the discussion was recognized by subsequent speakers on the other side. He struck the right note at the beginning by saying that the relations between friendly societies and the medical profession should be cordial, since one of the main objects of friendly societies was the assistance of their members in sickness, while that of the medical profession was the alleviation of sickness. He asserted, as we believe with complete justice, that the medical profession does not object to the principle that friendly societies are entitled to provide for medical attendance on their members in sickness; it objects to the way in which the principle is acted upon, alleging that it is neither fair nor reasonable. Basing himself on a recent actuarial report made for the Manchester Unity of Oddfellows, he showed that the remuneration actually paid by that friendly society for medical attendance to members while actually drawing sick pay worked out at 2s. per sick week, and this calculation does not include the large number of members who consult a medical man for minor ailments without going on the sick-list. The main conclusions of his paper were that the fee paid bore no relation to the work done; that the system was intended to apply only to men in the receipt of ordinary workmen's wages, and not to well-to-do persons and employers of labour; and that

women and children were to be included in medical benefits, the payments made by them, or on their behalf, must be adjusted so as to afford remuneration bearing a reasonable proportion to the medical services rendered.

The speakers representing the friendly societies protested that the statement that members of those societies who were so fortunate as to attain to affluence still took advantage of the medical benefits gave a false impression. While admitting that such cases might occur, they asserted that they were altogether exceptional; but it was once more asserted with some vehemence that the friendly societies would not even consider any suggestion for fixing a wage-limit. Upon this point there may be, we think, some misapprehension, and to illustrate what is meant we will go back to the very complete report on the economic conditions of contract medical practice issued by the Medico-Political Committee of the British Medical Association in 1905. That report contained a mass of information upon contract practice in all its forms, but if attention be confined to the chief friendly societies, which compose the most widely-distributed, and perhaps the most numerous, group of organizations connected with contract medical practice, it will be found that their objects are primarily the insurance of working men earning weekly wages against sickness, loss of employment, and loss of tools. The insurance against sickness was primarily an insurance against loss of wages during sickness; the provision of medical attendance in addition was a natural development of the principle, but, though very general, it is not universal.

Friendly societies, or at any rate many of the most important, including the Oddfellows and Foresters, consist of affiliated bodies in which the local branches have a large measure of independence, although subject to general rules made by annual conferences of delegates, and controlled in certain respects by a central executive. The terms of appointment and remuneration of medical officers are matters within the discretion of the local branches, though the question of remuneration may be influenced by the general rules of the Order relating to the management fund, since medical officers are in many instances paid out of it. It would appear that the possibility of the exclusion of certain members from medical benefits—a point raised by the suggestion to impose a wage limit—would depend on the general rules of the Order. In the report from which we quote, it was stated that what is commonly called the abuse of clubs is perhaps more prevalent and more difficult to remedy in the friendly societies than in any other kind of organization for giving medical attendance to the working classes, and that the main source of this difficulty was that the provision of medical attendance is not their primary object. At previous discussions with representatives of friendly societies two objections to the institution of a wage limit have always been made, and they were repeated at the meeting last Saturday. These are, first, that the friendly societies will not permit the medical profession to dictate who shall and who shall not be admitted to ordinary membership; and, secondly, that a friendly society cannot constitutionally exclude any member from any benefit which the society offers. With regard to the former of these objections, the only reply that need be made is that no such claim has ever been made on behalf of the medical profession; but the medical profession is equally determined to resist dictation and to retain its independence, and it is clearly to the interest of the community, including the members of friendly societies that it should. With regard to the second point, the Medico-Political Committee ascertained in the

course of its inquiry that in many districts the friendly societies do not provide medical attendance, the contribution for medical attendance being optional. Moreover, those friendly societies governed by a central committee, of which the Hearts of Oak may be taken as the type, do not provide medical attendance. It would therefore seem, as the Committee pointed out, that an extension of the distinction between medical and other benefits already to some extent recognized by the friendly societies, would open a way to the solution of the wage-limit problem.

We are glad to believe that one result of the conference is to afford a prospect that the National Conference of Friendly Societies will be disposed to resume the consideration of the subject and to suggest a discussion. Good may be expected to result if the representatives of the friendly societies recognize that the medical officers of these societies have legitimate cause of complaint, and that it is to the interest of the societies themselves to remove them. Sir Thomas Barlow said that if the friendly societies looked only to driving the hardest pecuniary bargain they could with their medical officers, they would not get the kind of service to which their members were entitled. This is true, and Dr. Pearse is not the only medical man who has given up club practice, not without reluctance, because he felt that the conditions were onerous and unsatisfactory. It may be gathered from several of the speeches made at the conference last week that the leaders of the friendly societies are now willing to admit that reform is desirable. On the other side, we can confidently assert that there is no desire to hamper friendly societies in encouraging their members to make provision for sickness, but that medical men to-day will be found no less willing than their predecessors in the past to do all that is in their power, on a basis just and equitable to both parties, to further so desirable an object.

PROFESSIONAL TITLES.

ALTHOUGH the Poisons and Pharmacy Act, 1908, passed during the last session of Parliament, does not directly affect the medical profession, it nevertheless has some bearing upon a point very vital to its interests—namely, the use of titles implying professional qualifications. The Act is of the nature of a compromise between the views of those on the one side who hold, and as we think rightly hold, that inasmuch as a corporate body cannot go through a curriculum, pass examinations and receive a qualification, it should not be allowed to use the titles conferred upon persons who have done so; and the views of those on the other side who hold that companies carrying on the business of chemists should be allowed to use certain titles without restraint.

Whilst the representative bodies of the chemists were anxious to restrict the use of their descriptive titles to those who really possessed them, there already stood upon the Statute Book a proviso which, to a certain extent, weakened their position; this, commonly known as the "widows' clause," was intended to preserve to the widow of a deceased chemist the fullest interest in her husband's business by enabling her or an executor or trustee to carry it on. Although it was necessary that a qualified assistant should be employed, yet the responsible proprietor might be

unqualified, and the qualified assistant personally not known to the general public by name. This privilege accorded to the widow, executor or trustee, a majority of the chemists were unwilling to give up, and the principle of possible lay proprietorship once admitted, it became more difficult to withstand the claim of the companies to assume the style of pharmaceutical chemists or what not. What has been gained in the new Act—and it is a substantial gain—is that companies trading as chemists must employ a superintendent who is duly qualified and registered, and who is not similarly employed by any other company or firm, and further that on any premises where this superintendent does not personally conduct the business there must be a duly registered chemist whose name and certificate of qualification must be conspicuously exhibited on such premises. These requirements are absolute, but, if they be observed, it is competent for a company to use the description of chemists and druggists, or of dispensing chemists and druggists, provided that the superintendent before alluded to is a member of the board of directors, or of the firm or partnership. It is true that the title of pharmaceutical chemist is not conceded to a company, but the public will hardly draw the fine distinction between "dispensing chemist and druggist" and "pharmaceutical chemist." Broadly speaking, then, while the operations of companies and partnerships are brought under regulation, the use of some titles which hitherto implied personal qualification has been conceded to bodies corporate in which there need be but one qualified person.

Medical and dental companies constituted on similar lines, namely, with one qualified person on the list, have from time to time been brought to notice, and care must be taken lest this new departure with regard to chemists be not taken as affording a precedent for any similar weakening of the meaning of the professional titles of medical men or dentists. We have no "widows' clause" to hamper our position in this matter, and so long as the only effective restraint on unqualified practice lies solely in the direction of a prohibition of the assumption of medical or dental titles by the unqualified, the full meaning of those titles must be preserved in all its integrity.

The whole issue is another example of the inefficiency of medical legislation in this country, which deals with words and not deeds, and necessitates jealously safeguarding titles and descriptions with a care which to the outside public may appear exaggerated.

THE EMMANUEL MOVEMENT.

IN the JOURNAL of February 6th, page 360, it was stated that every neurologist of standing in Boston had condemned the Emmanuel movement, but that, nevertheless, the clerical healers had continued their ministrations, dispensing with medical direction. Events move so fast that it is not easy to keep up with them. From a letter published in the *Boston Medical and Surgical Journal* of January 21st, which came into our hands almost immediately after our last issue had gone to press, it appears that a medical advisory board had in the meantime been formed. The members of this board are Drs. Joel E. Goldthwait, James G. Mumford, Richard C. Cabot, and Joseph H. Pratt. These gentlemen state that they believe the Emmanuel movement to be sound in its fundamental principle, which

is that the effective co-operation of physician and minister is of value to many sick persons. Assuming that the sick person has faith in religion—the precise theological shade is immaterial—that statement is so trite as to be a truism. The members of the medical advisory board go on to admit that mistakes have been made, and that “methods which seemed “adequate at an early stage of the work now need to “be improved, and in particular a closer relation “between the physician and the clergyman is “desirable.” In order to preserve and extend the co-operation between the two, the following rules have, they say, recently been adopted by the Emmanuel clergy: “(1) No person shall be received for treatment unless with the approval of, and having been “thoroughly examined by, his family physician, whose “report of the examination shall be filed with the “minister’s records. (2) No patient shall be referred “for diagnosis or treatment to any specialist or “assistant save with the advice and consent of the “patient’s own physician. (3) All patients who are “not under the care of a physician must choose one, “and put themselves in his care before they can “receive instruction at Emmanuel Church. To “those who ask for advice in this choice there “shall be handed a printed alphabetical list of “all the general practitioners (internists) attached to “the visiting and out-patient staffs of the Boston City “Hospital, the Carney Hospital, the Homeopathic and “the Massachusetts General Hospital.” From this, or from any other source which the patient may prefer, a physician is to be selected. It rests wholly with the physicians, and not with the Emmanuel clergy, to decide whether a patient shall be referred to a neurologist or other specialist, and which cases, if any, are suitable for treatment by moral and religious education at Emmanuel. “The advisory board,” it is stated, “is concerned solely with advice and counsel “regarding the manner of conducting the work, and “in no sense with the examination, control or treatment of individual patients.” The well-meaning physicians who formed the advisory medical board, however, appear very quickly to have been awakened to the fact that their position was open to misunderstanding, for in the following issue of our Boston contemporary (January 29th) we find them explaining that they do not approve of the Rev. Dr. Worcester’s treating any one who is not actually and constantly the patient of some physician. They state that “the “physician must be in control throughout.” They add that they do not think this full medical control has been obtained heretofore, and that “in this “respect” they disapprove of much that has been done at Emmanuel and wish to change it. They have thought it expedient to substitute the following for the third of the rules above printed: “No “person shall be accepted for advice by the clergy “except on the recommendation of and in co-operation with a responsible physician. In case the “clergyman’s opinion is asked regarding the choice “of a physician, the inquirer shall be referred to “the annual reports of the principal hospitals “of this city. The physicians whose names “appear in these reports will, of course, not be “regarded as responsible for or in any way connected with Emmanuel, whether they may have “said ‘Yes’ or ‘No’ in answer to the question which “we asked them in our personal letter regarding fees.” They conclude by saying that the Rev. Dr. Worcester realizes the wisdom of discontinuing any semblance of a clinic. “To emphasize this he has discontinued “all medical examinations at the church and abolished “the former medical staff. He does not intend to “treat disease. He simply stands ready to assist in

“the moral and spiritual re-education of any person “whom a physician asks him to see.” These, as Mr. Peter Teazle would say, are noble sentiments. But we confess we are somewhat doubtful how long it may be before the worthy divine is driven by the unreasoning faith of patients, and perhaps a little by his own belief in his healing mission, to go back to the ways he has, evidently in deference to a strongly-pronounced professional opinion, been induced to abandon. In saying this we do not wish to be understood as hinting a doubt as to his perfect good faith. But the gift, real or supposed, of healing the spirit is sometimes dangerous to the possessor, and experience has shown that it very easily leads him to look upon the soul’s tenement of clay as being an appanage of his spiritual kingdom.

DIFFICULTIES UNDER THE MIDWIVES ACT.

THE measures hitherto adopted to secure smooth and satisfactory working for the Midwives Act, 1902, cannot be said to have been successful. The rules and regulations of the Central Midwives Board (appointed under the Act) require for their effective operation the support of registered medical practitioners; no serious attempt was made in the first place to ensure such support. The midwife is compelled to advise that the assistance of a medical practitioner must be obtained in all cases of difficulty and urgency. A midwife who disregards this rule is liable to have her name removed from the roll of midwives. Such a regulation takes away the discretionary power of the patient or of those immediately concerned, and leaves no alternative, without serious possible consequences, but the acceptance of the midwife’s advice. The real responsibility of the registered midwife ceases when she has taken steps to give effect to the rule requiring her to seek medical assistance. It does not appear to have been thought necessary by the State to make provision for the final and essential step in this stringent regulation. Difficulties were soon encountered in consequence of this omission. Midwives found it was not always easy or possible to obtain medical help under these circumstances. After considering numerous complaints arising in this manner, the authorities concerned appealed to the Local Government Board to help in the solution of the difficulty. A circular was then addressed by the Board in February, 1908, to local authorities asking them to draw up regulations calculated to secure for the people the advantages sought by the Act in a manner satisfactory to the members of the medical profession. In response to this appeal some boards of guardians have issued regulations and accepted some measure of responsibility. This step does not appear to have removed the difficulty; indeed, in some instances it has accentuated the point of grievance. In a case at Halifax recently reported in the local press the method has failed. The guardians sent out a circular to medical men and the midwives, and placed in the hands of midwives forms for securing medical attendance which, to the lay mind, have all the appearance of orders. The guardians expressed their willingness to pay in the case of poor persons, but declined to pay the doctor in cases in which they think the patient is able to pay, leaving the doctor to struggle for his remuneration. The Halifax Division of the British Medical Association, after carefully considering the circular issued by the board of guardians, resolved to advise members not to act under the local regulations after a certain date unless the guardians were willing to modify their circular in regard to the clause

dealing with the remuneration of medical men summoned in urgent cases on the messages from midwives. This resolution was forwarded to the guardians, who agreed to receive a deputation from the Division on the subject. Nothing came of it. The guardians appeared to think they have exerted their powers to the full extent, or, at any rate, appeared unwilling to go further, declining to give a guarantee that the practitioner called to the assistance of a midwife should be remunerated by the local authority except in the case of poor persons. This, in the view of the Halifax Division, did not carry the matter beyond the scope of the powers of the guardians under the existing Poor-law Acts. A large and representative meeting of the Division held recently, unanimously resolved to reaffirm the previous resolution, to the effect that all members of the Division be advised not to act under the regulations of the guardians as they at present exist after March 31st, 1909. Neither the guardians nor the local Division can be said to be wholly to blame for this unsatisfactory result. It should not be left to local authorities, liable to be influenced by considerations wholly or in part irrelevant to the issue, to decide and regulate essential principles affecting the administration of important Acts. It is undesirable that matters of this kind should be the subject of local discussion often attended by misunderstandings and friction which ought not to exist between medical men and public bodies. The subject is one of the points referred to the Departmental Committee at present engaged in considering the working of the Midwives Act, and as a result of its deliberations and recommendations the present difficulties may be overcome by the establishment of some satisfactory scheme applicable uniformly throughout the country. The fact that a Departmental Committee has been found necessary, with this matter as one of its principal terms of reference, should diminish the annoyance felt in places where difficulties have arisen. The effect of the combined action of the profession in Halifax is an assertion of the principle that the medical man is a free agent, at liberty to attend on call of a midwife if he is able and willing to do so, as before the issue of the local regulations, and in cases where there is reasonable uncertainty as to the remuneration to refer such cases to the relieving officers.

UNQUALIFIED PRACTICE AND SECRET REMEDIES IN GERMANY.

THE German Government has introduced a bill to regulate the practice of healing by unqualified persons and to limit the trade in secret remedies. While not absolutely prohibiting unqualified practice, the bill proposes to penalize the treatment of either men or animals at a distance—that is, without examination—and also the treatment of human beings for gonorrhoea, chancre, or syphilis; the use of any general anaesthetic remedy; and treatment by hypnosis or by mystical processes (*mystischen Verfahrens*). While the bill does not actually forbid the treatment of infectious or notifiable diseases, this may be prohibited under certain circumstances by police ordinance. Every unqualified person practising the art of healing as a trade will be required to notify himself to the police, giving particulars of his education and character. He will have to keep trade books, and must not treat patients at a distance, and under certain circumstances he may be forbidden to practise. The Imperial Board of Health will have discretionary power to limit the trade in certain means or materials for preventing, mitigating, or curing diseases or injuries of men or animals. The bill proposes to

forbid the publication of misleading advertisements relating to the treatment of disease, of advertisements offering to treat disease by letter, or advertisements of remedies for sexual disorders, for the relief of sexual weakness, or the prevention or removal of pregnancy, and of all secret remedies. Professor Rumpf of Bonn has suggested¹ certain amendments which he regards as necessary. He urges the inclusion of all infectious and notifiable diseases in the prohibited list, as it is in the interest of the public health that these should be recognized and brought to the notice of the authorities without delay. Further, he would include unqualified practitioners in midwifery among those to be brought under the scope of the law. He would make it incumbent upon all unqualified persons having places of business in more than one police area to notify in each, and he would make it penal for such unqualified persons to advertise or publicly announce their tolerance by the police by the word "licensed" (*Koncessioniert*). He thinks their books should be open to the inspection of the medical officer of health for the district, and should contain the name of each patient, his complaint, the diagnosis, and prescription. He wishes the words "its consequences" to be added after syphilis, and he desires to include words which will prohibit the advertising or puffing of quacks who may live outside the jurisdiction of the German courts. He would further penalize the advertisements of any means or remedies "for curing or removing obstructions" (*Störungen*). The bill proposes to forbid the advertisement of any secret remedies except in trade journals, such journals to be scheduled by the Commissioners of the Imperial Council, and to this Professor Rumpf would add words prohibiting "causing of the public by agents." The penalties contemplated by the bill for a breach of this law are six months' imprisonment and a fine of 1,500 marks (£75), or either. We trust the German Government will succeed in passing this bill. Even without Professor Rumpf's amendments it promises to be an effective means of preventing the trade in secret medicines, and will do much to restrict the operations of the rogues who thrive on the weakness and fears of those who put themselves in their power by consulting them. The need for such legislation is not less obvious in Great Britain, and public opinion here cannot fail to be influenced by the fact that Germany, after the experience of forty-five years of free trade in medicine, has recognized that such a state of things is injurious to the commonweal and needs legislative regulation.

THE SCHÄFER METHOD FOR RESTORING ANIMATION IN THE APPARENTLY DROWNED.

SOME months ago the Chief Surgeon of the Metropolitan Police applied to the Royal Society of Medicine for an expression of opinion as to the best method for restoring animation in the apparently drowned, and a committee appointed to prepare a report decided in favour of the "Schäfer" method.² They recommended its adoption to the exclusion of all other methods, because it is simple, available under a variety of circumstances, and can be carried out by a single person, while the directions are "incapable of being misunderstood."³ As a consequence of this report a broadside of Instructions has now been issued by the police; it contains

¹ *Soziale Medizin und Hygiene*, 1909, p. 20.

² *BRITISH MEDICAL JOURNAL*, 1905, vol. ii, p. 1405; *Med. Chir. Trans.*, 1904, vol. lxxvii, p. 602.

³ *Proc. Roy. Soc. Med.*, vol. ii, No. I, p. 5.

reproductions of four good photographs illustrating the two movements, and it may fairly be said that it would be difficult for anybody to misunderstand the directions. "With the arms extended" is perhaps not quite clear; "stretched out in front of the head" would have been a better phrase for the uninitiated, but then there are the figures to help. It is to be noted that Professor Schäfer's recommendation to "place a thick folded garment beneath the chest and epigastrium" has been omitted, probably in the interests of simplicity and to avoid a second of wasted time, but it is almost a pity, especially as the operator, if he knows what awaits him in the way of physical work, will certainly throw off his coat before beginning. "When natural respiration has commenced, the patient should be allowed to lie in a natural position on one side," say the instructions. It would surely not have involved any sacrifice of lucidity to embody the recommendation of the committee to place the patient on the *right* side. The liver is extremely congested, and the heart recovering from over-distension, and the left lung rids itself more readily than the right of water and mucus. Other points that render the method preferable to that of Sylvester are the prone position, which allows water and mucus to run out of the mouth, and keeps the tongue forward; upward pressure of the diaphragm exerts a stimulating action on the heart; "expiration" or compression is a better stimulus to the respiratory centre than expansion; and finally, though this is doubtful, more air can be exchanged per minute. Any one who has had to perform artificial respiration on a big, heavy, or muscular man for more than a very few minutes knows that the effort becomes very exhausting, and that the efficiency of the Sylvester expansion movements rapidly diminishes so soon as the operator is tired. Where only one person is available there is no doubt that a method which takes mechanical advantage of body weight rather than muscular effort has an advantage outweighing minor theoretical superiorities; and if, as appears probable, theoretical precision is combined with the greater simplicity of the new method, it is to the advantage of the public for the police, following the lead of the Royal Life-saving Society, to adopt it.

VIVISECTION AND THE POOR.

The antivivisectionists have had the flash light of truth turned on them of late so steadily that it is no wonder they have shown signs of discomfort under the exposure. Their wailings in the newspapers are not worth serious notice, but are amusing as they are so obviously the appeals of rival showmen. Their object is so plain and their controversial methods are worn so thin by constant use that all but a few fanatics must agree with Mr. Stephen Paget when he said, at the inaugural meeting of the Dublin Branch of the Research Defence Society, that sensible people are sick unto death of them and their stale stock of calumnies which they persist in offering to an indifferent public. Not even theological controversies which have grown musty and out of date are so wearisome as antivivisectionist literature. One may read feet or yards of the effusions of Mr. Stephen Coleridge, Miss Beatrice Kidd, Dr. Hadwen and the other scribes who have adopted as a profession the systematic vilification of men who give their lives to the enlargement of the boundaries of knowledge for the good of their kind, without finding a new point, a new fallacy, or even a new lie. One should therefore perhaps be thankful to the Secretary of the London and Provincial Antivivisection Society for

putting forward something which strikes us as novel. As it is particularly silly, it was natural that it should come from the dullest of the many wearisome writers on the "torture" of animals in laboratories. In that illuminating medium, *Reynolds's Weekly Newspaper* (January 31st), we find Mr. Sidney Trist writing as follows: "The vivisectors allege that experiments on animals are useful but not conclusive until tested on man. Who is the final test tube? The vivisector, or those well-to-do persons who are likely to be profitable patients? By no means. The absolute test in all these matters is money. The man who is likely to physically benefit, if it is possible, from vivisection, is the wealthy man or woman; the man who is likely to be the final test tube—to make sure that the experiment is a success—is the man who has least to give and only his life to lose." In a letter about the Dublin meeting above referred to, Mr. Trist says that one of the speakers "talks nonsense." We thank the courteous Secretary of the London and Provincial Antivivisection Society for teaching us these words, which we make no scruple in applying to himself. The opposition to the dissection of the human body lasted much longer and had an infinitely stronger support than the campaign against vivisection. It was not until 1832 that the Anatomy Act was passed. In the debate on the subject the argument that the measure was for the benefit of the rich was used by some one of the same temper of mind as Mr. Sidney Trist. He was answered by Macaulay in a passage which we quote, because it applies exactly to Mr. Trist's fustian about "the wealthy man or woman" and the "man who has least to give and only his life to lose." On February 27th, 1832, Macaulay said in the House of Commons: "Again as to bad surgery: this is of all evils the evil by which the rich suffer least and the poor most. If we could do all that in the opinion of the Member for Preston [we do not know who he was, but he would seem to have been an archetype of Mr. Trist] ought to be done, if we could prevent disinterment, if we could prevent dissection, if we could force every student of medical science to go to the expense of a foreign education, on whom would the consequences fall? On the rich? Not at all. As long as there is in France, in Italy, in Germany, a single surgeon of eminent skill who is, to use the phrase of the Member for Preston, addicted to dissection, that surgeon will be in attendance whenever an English nobleman is to be cut for stone. The higher orders in England will always be able to procure the best medical assistance. Who suffers by the bad state of the Russian school of surgery? The Emperor Nicholas? By no means. The whole evil falls on the peasantry. If the fees of surgeons should consequently rise, if the supply of regular surgeons should diminish, the sufferers would be not the rich, but the poor in our country villages, who would again be left to mountebanks and barbers, old women and charms, and quack medicines. The honourable gentleman talks of sacrificing the interests of humanity to the interests of science, as if this were a question about the squaring of the circle or the transit of Venus. This is not a mere question of science; it is not the unprofitable exercise of an ingenious mind; it is a question between health and sickness, between ease and torment, between life and death. Does the honourable gentleman know from what cruel sufferings the improvement of surgical science has rescued our species? I will tell him one story, the first that comes into my head. He may have heard of Leopold, Duke of

"Austria, the same who imprisoned our Richard
 "Coeur-de-Lion, Leopold's horse fell under him
 "and crushed his leg. The surgeons said that
 "the limb must be amputated, but none of them
 "knew how to amputate it. Leopold, in his agony,
 "laid a hatchet on his thigh, and ordered his servant
 "to strike with a mallet. The leg was cut off, and the
 "Duke died of the gush of blood. Such was the end
 "of that powerful Prince. Why, there is not now a
 "bricklayer who falls from a ladder in England who
 "cannot obtain surgical assistance infinitely superior
 "to that which the Sovereign of Austria could com-
 "mand in the twelfth century." The moral of the
 "tale may be further pointed for the instruction of
 "Mr. Trist and his friends by reference to the fact that
 "since 1832 surgery has made greater advances than it
 "had made during all the centuries of recorded time
 "before the date of Macaulay's speech. And it is a fact,
 "which no candid person who knows the history of its
 "progress can deny, that the advance has been
 "mainly due to the application of knowledge acquired
 "by vivisection. It may be added that this advance
 "has benefited the poor far more than the rich.

SCHOOLBOYS AND LONG RACES.

IN another column we publish a letter signed by Sir
 Lauder Brunton, Sir Thomas Barlow, Drs. Goodhart
 and Hale White, and Sir Alfred Fripp, in which the
 statement is made "that school and cross-country
 "races exceeding one mile in distance are wholly
 "unsuitable for boys under the age of 19, as the con-
 "tinued strain involved is apt to cause permanent
 "injury to the heart and other organs." This opinion
 is expressed in a letter to Mr. Herbert Farmer, an
 old Harrovian and Middlesex county football captain,
 who himself considers such races highly injurious;
 but we feel inclined to ask whether, if there
 were definite evidence of "permanent injury" to
 and "wreckage" of boys' lives, we should not have
 had an expression of opinion from the medical officers
 of public schools which would have prevented the
 continuance of the practice. A race or wrestle for
 sport is like a race or struggle for life. The body is
 spent to the utmost, the consumption of oxygen
 temporarily becomes greater than the supply, and
 lactic acid and other products of incomplete oxidation
 poison the heart and muscles. But the body has been
 evolved and is built to stand such strains in the
 struggle for existence; it recovers, as a rule, quickly
 from its temporary intoxication by fatigue products.
 The healthy boy is far less likely to push himself to
 the extreme of exhaustion than the man. The schoolboy,
 as a rule, is in better training than the city week-end
 athlete (over 19), who is handicapped by long hours of
 office work and indulgence in tobacco; there is a great
 deal of talk about the athlete's heart, but very little
 definite proof that permanent cardiac trouble is pro-
 duced by over-indulgence in athletics *per se*. In the
 type of athletes who suffer from heart trouble,
 syphilis and indulgence in alcohol and tobacco
 have to be reckoned with. Disorders of cardiac
 action produced by excessive effort in the un-
 trained state quiet down and entirely disappear
 with rest and abstention from tobacco, and leave,
 we believe, the heart not one whit the worse.
 From pathologists we can gain no definite evidence
 that the hearts of athletes are enlarged beyond that
 degree which is the natural response to the increased
 work required of it. The navy and the blacksmith
 carry out daily for many years the severest toil, while
 the athlete's period of strain is usually short. We
 have no evidence that such toil, apart from syphilis
 and alcohol, causes vascular degeneration. We fail to

see any reason for stopping boys running cross-country
 races so long as they are fit and enjoy it, and the
 distances are of moderate length. The practice
 which requires severe criticism is that of com-
 pelling all boys alike to run these races. If the boys
 are left to themselves only those constitutionally
 fit for such exercises will take to it. The others
 will stand aside. If compulsory games and runs
 are enforced, there ought to be strict medical
 inspection, so that none of the unfit and untrained
 may be compelled to do muscular work beyond their
 powers. The training and development of the boys'
 physique should be as important a part of the school-
 master's charge as the training of mind and character.
 In this respect reform is urgently wanted, but we
 cannot see any reason for frightening all boys off
 cross-country runs, and setting up the idea that it is
 safe to indulge in such runs after 19, and not before.
 Boys should be taught to run, not to win or break
 records, but to improve their physique and increase
 their enjoyment of life. A return to the true spirit of
 sport is what is required.

THE WAR AGAINST THE MOSQUITO.

SIR PATRICK MANSON has been entertained at dinner
 by the Authors' Club, Mr. Percy White being in the
 chair. In his speech he said that in his early years of
 tropical experience he was in the island of Formosa,
 and one disease had a special fascination for him—
 elephantiasis. Later he went to Amoy, a large town
 on the coast of China, where he saw many more cases
 and many more forms of the disease. Still he failed
 to find an explanation. In 1874 he came to London,
 where he heard that Timothy Lewis had discovered
 that in the blood of a proportion of the inhabitants in
 certain districts of India there was to be found an
 organism, which he called the *Filaria sanguinis*
hominis. These parasites Lewis had found in more
 than one instance in association with elephantiasis,
 or elephantoid diseases. On his return to China
 in 1876, Sir Patrick Manson discovered that the
 parasites were present in some districts in 10
 per cent. of the population; in other districts
 they were present in 50 per cent.; while in
 other places they were not found at all. He
 described how he ultimately succeeded in tracing
 the filaria into the mosquito. It was now absolutely
 sure that certain kinds of mosquitos were the means
 for the transmission of the filaria of the blood, and
 therefore of those diseases to which that parasite gave
 rise. In the early Nineties he interested himself in
 the malaria parasite, discovered some time before by
 Laveran in Algiers. He felt convinced for many
 reasons, epidemiological as well as biological, that the
 insect was the intermediary of the malaria parasite.
 Being in England, he was unable, for want of material,
 to test and work upon this hypothesis. He sent a
 paper on the subject to the BRITISH MEDICAL JOURNAL,
 and the Editor said the idea seemed a good one, and
 asked why he did not go to work upon it himself.
 But to do that he would have been obliged to go to
 a malaria country. A sum of money was promised by
 the British Medical Association for this purpose,
 on condition that the Royal Society would give a
 similar amount; this, however, the society could not
 see its way to do. About that time he met Professor
 Ronald Ross, who took up the idea and worked it
 out to the brilliant conclusion which all the world
 knew. The doctrine was received by many with
 ridicule. But there was one man in England at that
 time who recognized the importance of the discovery.
 That was Mr. Joseph Chamberlain, then Secretary of
 State for the Colonies, who, when asked for a

sum of money for certain experiments, at once acceded to the request. The experiment in the Roman Campagna, with the complementary experiment in Italy, and the work of Professor Ross and many other scientific men, had absolutely confirmed the mosquito-malaria theory, and now, in most places where malarial fever was rife, the practical application of the theory was leading to important advances in sanitation. The discovery of the relation between mosquitos and yellow fever had rid Havana of that disease, and that discovery was enabling the Americans to construct the Panama Canal. There was proof that the tsetse fly acted in a like manner as regards the fly diseases of cattle and the fly disease—the sleeping sickness of man. They knew that a certain kind of tick was the medium by which relapsing fever was conveyed. They were fairly sure that other diseases were conveyed by bugs and lice. Doubtless the result would be practical measures which would tend to minimize the dangers of these diseases, if not to prevent them altogether. Several tropical diseases, notably malaria and yellow fever, were still geographically limited; but if precautions were not taken in time, he believed that, with the opening up of the Panama Canal and by the repeated passage of rapid steamers across the Pacific, yellow fever would be introduced into the Sandwich Islands, Manila, and to the Continent of Asia. Further, if measures were not taken to prevent the introduction of fever-carrying mosquitos into some countries hitherto free from malaria, by-and-by these countries would become exceedingly unhealthy and malarious. The moral was that discovery was of little use unless it had practical application. Damp was not the cause of disease. It was damp in the form of puddle and swamp that was so admirably suited to the mosquito. Again, it was not dirt that caused disease, but the ticks and other carriers of germs which thrive in dirt. He concluded with a note of warning as to the preventable calamity which he considered was hanging over Asia and the Pacific by the probable spread of yellow fever to the former and malaria to the latter through the introduction of disease-carrying insects.

LEPROSY IN NEW SOUTH WALES.

THE report for the year 1907 regarding leprosy in New South Wales has just been received. The details of the new cases have been carefully worked out with Dr. Ashburton Thompson's usual thoroughness, with the co-operation of Dr. D. Wallace, of the Coast Hospital and Lazarets. During 1907 seven persons were reported as suspected lepers, but after careful investigation only five of these were certified, of whom four were ultimately admitted. The fifth case, a Greek sailor, was, in accordance with the Immigration Restriction Act, detained on board his vessel until its departure. The other four cases were respectively a native of Lahore, who absconded, and could not be traced by the police; a woman born in Australia in 1856, her mother being a native of London and her father the son of Dutch parents it is said, but a native of Penang (the patient visited Singapore in 1877 and lived for some time in Batavia); and two Chinamen. The report gives elaborate details of the examination (surveys they are called) of the cases admitted previously to the year 1907. The value of these reports lies in the fact that they apply to a limited field and to a limited number of patients. It is really a great mistake to suppose that for the clinical study of leprosy a large number of cases is necessary. On the contrary, where numerous lepers

are congregated together, investigators, who are only human, lose some of their enthusiasm, another factor in this depressed attitude being the monotony of life and climatic influences. In leprosy areas, better far to study and follow up a few selected cases. This applies especially to the therapeutic aspect of this baffling complaint. Dr. Ashburton Thompson has been well advised in adding tabular statements as to the incidence of leprosy in the other States of the Commonwealth.

THE ETIOLOGY OF GOÏTRE.

CAPTAIN ROBERT MCCARRISON, M.B., B.Ch., I.M.S., communicated recently to the Royal Society the results of a research to determine, by experiment on man, whether goitre was caused by matter held in suspension in goitre-producing waters, and to ascertain, as far as possible, the nature of the suspended ingredient which had been surmised to be responsible for the production of the disease. The experiment was made at Gilgit, Kashmir, and the results, of course, can only be directly applied to goitre as it occurs there. Thirteen individuals, including Captain McCarrison, were given suspended matter which had been removed by filtration from goitre-producing water every morning before the first meal of the day. Captain McCarrison and three others developed enlargements of the thyroid gland. The experiment was repeated in the case of eight individuals who were given the same suspended matter, which had previously been boiled for ten minutes; in no case did any enlargement of the thyroid gland occur. The conclusion drawn from these results is that goitre is due to a living organism of disease present in the water. The incubation period of experimentally-produced goitre was thirteen to fifteen days. The suggestion is made that the organism of goitre exists as an intestinal parasite in goitrous individuals, since an intestinal antiseptic appeared to have a marked curative effect. Experiments were made on monkeys to test the possibility of the spread of the disease by the faeces of infected individuals but with negative results. Plentiful amoebic infection of the intestine was found in the majority of cases of goitre examined. It is not known, however, whether amoebae have any relationship to the disease.

DR. SIDNEY MARTIN will deliver the second Lettsomian Lecture on functional disorders of the stomach and intestines, their diagnosis from organic disease, and treatment, before the Medical Society of London, on Monday next at 9 p.m.

DR. F. W. MOTT, F.R.S., Fullerian Professor of Physiology and Pathologist to the London County Council, will deliver a course of lectures at the Royal Institution on the evolution of the brain as an organ of mind on six consecutive Tuesdays—February 23rd, March 2nd, 9th, 16th, 23rd, and 30th—at 3 p.m. In a further course of lectures Dr. Mott will deal with the structure of the human brain.

THE Prince and Princess of Wales will honour the Royal College of Surgeons of England with their presence at the delivery of the Hunterian Oration by the President, Mr. Henry Morris, on Monday, February 15th. The Prince of Wales has graciously consented to become an Honorary Fellow of the College, and the Diploma of Honorary Fellowship will be presented to His Royal Highness in the presence of the Council on that day.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

LIVERPOOL.

THE MILK SUPPLY OF HOSPITALS.

SOME time ago the Liverpool Medical Institution appointed a special committee of its members to consider whether the Liverpool voluntary hospitals should be advised to take action to ensure greater purity of their milk supply with special reference to tuberculous infection, and to report thereon to the institution. The following formed the committee: Mr. T. H. Bickerton (President), Sir Robert Boyce (Chairman), Dr. Buchanan and Dr. H. H. Clarke (Secretaries), Dr. Hope, Dr. Annett, Dr. E. E. Glynn, Dr. C. A. Hill, Dr. N. Percy Marsh, and Dr. W. B. Warrington. These names are fairly representative of the voluntary hospitals of the university and of the public health department. The report, which has recently been presented to the institution and adopted, lays emphasis on the importance of a pure milk supply, especially in the case of invalids and children, and draws attention to the fact that more than 5 per cent. of the samples of railway-borne milk were so deficient on chemical analysis that legal proceedings were taken; 5.4 per cent. contained tubercle bacilli, and 72 per cent. contained organisms commonly present in the excreta of cattle. The report states that

Pure milk of good quality can only be obtained from healthy cows, kept clean, under good hygienic conditions, and properly fed. The milk should be rapidly cooled, and delivered as quickly as possible to the consumer, being protected from contamination during transit. Many of the best dairies at the present time are conducted under conditions favourable to the supply of pure milk, and the problem is therefore how best to insure that our voluntary hospitals be supplied only from such dairies.

In Appendix I to the report are given suggested forms of contract for the supply of pure milk, designed to secure the following conditions:

1. Systematic inspection of the farm.
2. Periodical analysis of the milk for fats, solids, and adulteration.
3. Bacteriological examination at intervals for the usual infective organisms, more especially tubercle, and for other bacterial examination.
4. Periodical application of the tuberculin test.
5. The farm and accessories to be properly equipped and kept up to an approved standard of hygienic efficiency.
6. The use of special milk cans—or chums—for transport of convenient size, rain-proof and dust-proof, and capable of being easily sealed. These to be registered, numbered, and stamped on the outside with the tare weight.

In Appendix II the value of the tuberculin test is discussed, and the opinion is expressed that it is not safe to use the milk of any tuberculous cow for human food, and that the tuberculin test is the best means at present available for detecting tuberculosis in cattle. The real objection to its use is said to arise mainly from an uneasy suspicion that tuberculosis is exceedingly prevalent amongst the cattle of Great Britain, and from a still more uncomfortable uncertainty as to the quarter on which the loss will fall if tuberculosis in cattle is to be eliminated.

A conference will shortly take place between representatives of the governors and medical boards of the voluntary hospitals and the Milk Committee with a view to giving effect to the foregoing conclusions.

VACANT POST OF MEDICAL OFFICER TO THE POLICE IN LIVERPOOL.

The Corporation of Liverpool has advertised in the local press for a medical officer to attend the members of the police force of the "B" Division, including the members of the staff departments residing within the division. The advertised salary is fixed at £60, to be increased to £80 per annum after five years' service. The "B" Division comprises about 280 men, and the members of the staff department residing in the district number about 50, so that the salary offered by the wealthy and important Corporation of Liverpool for attendance on its police constables works out at less than 4s. a head per annum. It is stated that in London and other cities the payment

works out at or about 10s. a head. It is true that in Liverpool the Corporation supplies the medicines at its own expense, but, on the other hand, the medical officer has several anxious and responsible duties to perform besides the actual treatment of the sick constables. Thus, a daily report has to be made of those who go off duty through illness, and of those who are able to return to duty, and the Watch Committee may call for a special report on any constable who is off duty. Further the medical officer is required to report on cases applying for superannuation, and has to spend about two hours each month in examining recruits. It is worthy of remark that the retiring medical officer was in receipt of £100 per annum, to which sum the salary was raised from £80. The Corporation seems to think that the resignation of the medical officer is a favourable occasion to effect a paltry economy in dealing with the lives and health of the constables it employs. This is all the more remarkable at the present time when it is announced that the municipal budget for the current year will involve a very substantial increase in the rates. The rates must be borne by all alike, but the idea of the Corporation seems to be that the medical profession is to be made to pay a special contribution by the docking of the salaries of such of its members as are in the service of the Corporation.

MANCHESTER AND DISTRICT.

THE NATIONAL ASSOCIATION OF MIDWIVES.

THE National Association of Midwives at its meeting in Manchester last week discussed the omission from the Departmental Committee now considering the working of the Midwives Act of any direct representative of the midwives of the country. It was stated that it had become almost a custom in appointing such committees to add at least one representative of any interest that might be affected by the inquiry. This was quite fitting, as such representatives having practical experience of the matters to be discussed, might often be able to throw considerable light on the subjects. The association passed a resolution respectfully asking that a direct representative of the midwives might be added to the committee.

THE MANCHESTER HOSPITAL FOR SKIN DISEASES.

The remarkable increase in the number of patients treated at this hospital, largely owing to the "light" treatment, is shown by some figures given at an annual meeting of the subscribers to the hospital. In 1888 the patients treated numbered 632; in 1901 they had increased to 1,989, while last year they numbered 8,796, making 48,916 attendances during the year. The hospital has a most elaborate and complete department for treatment by Finsen light and x rays, which caused patients to be drawn from almost every part of the country. In 1902, out of over 58,000 attendances no less than 28,895 were for the "light" treatment. The contributions received from patients last year amounted to £1,131, of which £731 was from the out-patients. There was a slight decrease from private and "light" patients, and on the full year's working there was a deficiency of £656. An appeal was made for £2,500 to free the new building from debt, and also for £1,000 to place the income account on a good footing. The regular subscriptions needed increasing by something like £650. Dr. Lancashire, referring to the medical report, called attention to the great increase in the number of cases of parasitic skin diseases which the hospital had treated. He thought that if their figures could be taken as any indication of the prevalence in Manchester and Salford of that class of disease, they were worth the consideration of the medical officers of health. The cases were extremely difficult to eradicate because, even if cured by attendance at the hospital, the patients on returning home were soon reinfected, and the only real remedy was to eradicate the disease from the people's homes.

Inquiries on the subject fail to show any greater prevalence of these diseases than usual, nor does Dr. Lancashire say anything except that the hospital has treated more cases. This is undoubtedly due to the fact that health visitors, school inspectors, and teachers are making more rigid and systematic examinations of school children than formerly, and urging parents to obtain treatment. The Children's Act passed in the last session

of Parliament will enable the education authorities to deal more effectually with these cases, as the parents may be called on to cleanse the persons and clothes of the children properly within twenty-four hours after receiving notice, and failing that the medical officer may remove a child to suitable premises provided by the authorities and there detain it until it has been "properly cleansed with suitable appliances." But it is evident that even this will be of little use unless the sanitary authority most thoroughly cleanses all the bedding and clothes at the children's homes and insists on examination of all inmates of any house where an infectious case has been found. The problem is, in fact, that of not only enforcing cleanliness, but of educating the people as to the causes of these diseases. That this is no slight task is evident when it is remembered that the popular idea is that these diseases are caused only by debility and it is not at all a rare thing in the out-patient departments of the hospitals for parents to ask for a bottle of medicine to cure scabies and impetigo. It is satisfactory to know that Dr. Ritchie, the chief medical officer of the Education Committee, is fully alive to the necessity of thus educating the parents, as is shown by the circulars on infectious skin diseases recently alluded to in this column.

WEST YORKSHIRE.

THE WORKMEN'S COMPENSATION ACTS.

There is a strong feeling amongst medical men in the West Riding that in the public interests some effort should be made to obtain an amendment of these Acts. There is a great deal of malingering and consequent loss of industrial fitness amongst injured workmen. Some of this is possibly more apparent than real. Owing to the uncertainty of the law and the possibility that he may not be able to meet the medical charges, the injured person frequently does not obtain adequate treatment. He allows his case to drag along wearily month after month until he practically ceases to take any interest in attempting to recover. Probably some contributory scheme by the workmen concerned would tend to make them take a more active interest in their own recovery. In making the award there should be some provision for the payment of medical charges. The questions of workmen suffering from partial physical disability, the necessity for the more general employment of the medical referees, unanimity amongst the medical men concerned as to matters of fact, and other allied matters, all call loudly for adjustment. The Bradford Division has appointed a committee to consider these questions and make proposals to lay before the authorities. Such action taken by those who are in touch with all the difficulties connected with the question in one of the most active industrial centres in England is sure to be productive of good.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

NORTHERN INFIRMARY, INVERNESS.

SOME time ago we drew attention to the changes in the medical staff of the Northern Infirmary, Inverness, and pointed out that the alteration in the constitution whereby one of the staff, who had served fifteen years and should have gone on the consulting staff, had been appointed for another term of years, thus blocking the promotion of the assistant members, who naturally looked for advancement to the acting staff of the institution, did not seem to be conducive to the proper working of the infirmary.

The managers held a meeting on January 29th to consider the report of a subcommittee appointed to draft a new constitution, and, while agreeing that many of the changes are an improvement on the old regulations—such as the appointment by the managers of directors who will control all the affairs of the infirmary—the changes proposed in connexion with the medical staff are not such as will commend themselves to those who have the interests of the institution at heart. For instance, the appointment of the members of the medical staff "shall only be for one year," and they "may thereafter be reappointed annually

during the pleasure of the directors." It is usual to make the appointments to the staff for five years, reappointing for further periods of five years until the holder attains the age of 60 or 65. The assistant members are in future to be appointed for three years and may therefore be appointed annually during the pleasure of the directors, but vacancies in the acting staff may be filled up by the appointment of one of the assistant members; formerly they knew that on a vacancy occurring they were sure of promotion; now, however, the directors may appoint an outside medical man to the vacancy. But a change in the constitution relating to the consulting staff is, we believe, unique in the history of hospital administration. The new rule relating to the consulting staff reads as follows: "It shall be the duty of the consulting members to attend, when possible, all consultations, and, subject to the approval of the directors, they shall have the right to operate in the infirmary. There shall be placed at the disposal of the consulting members, for patients on which they may wish to operate, such number of beds as the directors may see fit to allocate." This is an unwise rule, likely to cause friction between the members of the consulting and acting staffs. The rule as it stands is unworkable.

PROPOSED EXTENSION OF ABERDEEN ROYAL INFIRMARY.

The directors of the Aberdeen Royal Infirmary, in their report, which has just been issued, mention that, with the generous gift of £26,758 received lately from Lord Mount Stephen, they propose to increase and improve the accommodation to enable the hospital to cope with the ever-increasing demands upon it. They propose to apply the funds:

1. In erecting, in connexion with the surgical block, three new operating theatres, each with suitable surgeon's room and anaesthetic and sterilizing rooms, one of these theatres and appurtenances being attached to and opening from each of the floors on that block.
2. In erecting on Sim's Square, on the other side of Wolman-hill from the infirmary, a building to provide suitable accommodation for the out-patient department, also suitable premises to which the dispensing rooms might be removed from their present site.
3. In reconstructing the portion of the basement of the surgical block at present occupied by the dispensing rooms, so as to provide suitable accommodation for the electrical department.
4. In improvements on the premises occupied by the gynaecological department.
5. In improvements on the premises occupied by the ophthalmic department.
6. In providing for increases and improved accommodation for the resident medical staff and for the nursing staff by utilizing the space at present occupied by the casualty and out-patient department, and in certain other minor improvements.

The block of ground known as Sim's Square, on which it is proposed to accommodate the outdoor patient department, was some years ago acquired by the Primrose Trustees, the price paid for it (£7,000) being part of the £10,000 which the trustees had resolved to set aside as a gift to the infirmary. When these additions and alterations are completed, Aberdeen will have a thoroughly equipped and up-to-date hospital. The present accommodation of the infirmary is sorely taxed, especially on the surgical side, and the generous and timely gift of Lord Mount Stephen will help the directors out of their difficulty. In a letter accompanying his munificent gift, Lord Mount Stephen says:

I consider it would be little short of a calamity if what I have done for the hospital should have the effect of weakening the interest of the people of Aberdeen in the old infirmary in which I was a patient sixty-two years ago.

He has set a splendid example to all those who at any time in their lives benefited by hospital treatment, and who in the days of their prosperity should remember the institution which helped them in sickness and poverty.

THE GLASGOW ROYAL INFIRMARY.

An alarming outbreak of fire occurred on the evening of February 7th, in the front block of the Glasgow Royal Infirmary. The scene of the fire was the chapel situated on the fourth floor, and, fortunately, the damage was confined to the roof of the chapel and the dome of the building. As a precautionary measure the medical superintendent removed a number of the patients from the medical wards to another part of the building. The damage is estimated

at £1,000. The block where the fire occurred faces Cathedral Square. It was designed by Adams, and is considered to be one of the masterpieces of that famous architect. The Glasgow Royal Infirmary receives the sum of £80,000 from the estate of the late Mr. James Dick, of Glasgow, and it is reported that two other Glasgow infirmaries will receive £40,000 each.

Ireland.

[FROM OUR SPECIAL CORRESPONDENT.]

UNIVERSITY COLLEGE, CORK.

DR. J. J. CHARLES, who, for thirty-two years prior to 1907, when he resigned, had held the Chair of Anatomy and Physiology in Queen's College, Cork, has notified the authorities of University College, by which the old Queen's will in future be known, of his intention to found in perpetuity a large gold medal to be competed for in each alternate year by physiological and anatomical students. Dr. Charles's patriotism contrasts favourably with that of an Arts colleague of his who, on his death after a fifty-six years' professoriate in Queen's College, Cork, bequeathed his library and a large sum of money to a university college on the other side of the Channel.

NORTH INFIRMARY, CORK.

Dr. Charles has also intimated his desire to establish and endow a bed in the North Charitable Infirmary of the city, to perpetuate the memory of his son, Captain Godfrey E. Charles, M.B., who, after a conspicuously successful university career, entered with first place the Indian Medical Service, and was shortly afterwards appointed acting professor of anatomy in Lahore. The early death of Captain Charles on the threshold of a career of great promise caused amongst his many friends deep regret, and the sympathy of the community went out to his father in his heavy bereavement. Dr. J. J. Charles is the eldest of the brilliant sons of the late Dr. Charles of Cookstown. One of his brothers was the late Dr. T. Cranston Charles, who did much research work in physiological chemistry. Another of his brothers is Sir Havelock Charles, K.C.V.O., a former student of Queen's College, Cork, who entered with first place the Indian Medical Service, became Professor of Anatomy, and afterwards of Surgery, in Calcutta University, and in 1906 was appointed Physician-in-Ordinary to the Prince of Wales.

HEALTH OF BELFAST.

At the meeting of the City Council held on February 1st a remarkable fall in the mortality for the previous month was reported. In the corresponding period of last year 111 deaths from zymotic diseases had been registered; in this year 16; in last year from pneumonia 91, and in this year 61; deaths from respiratory diseases in general and from phthisis showed a much smaller decline. The deaths of 147 children under 1 year and of 178 above 60 were registered last year; only 126 and 128 respectively this year. The total death-rate from all causes was 20.2 as compared with 27.1 last year. A few cases of cerebro-spinal meningitis had occurred, and the renewal of the Notification Act for this disease was agreed to. These satisfactory figures help to explain the general absence of a "busy time" amongst medical men usual at this season of the year. The climatologists say it is the mild winter which Ireland has experienced, even when severe frost was reported in England; the temperance party say that bad trade means less drink, and less drink means better health; and the Health Committee are inclined to view the low death-rate as the result of their vigorous policy.

The Medical Officer of Health, in a report on some insanitary property, draws attention to an undoubted evil in the following terms:

During our inspection we observed an utter absence of personal cleanliness amongst the inhabitants of the district.

There is urgent necessity for reform amongst the people themselves in their habits; they seem practically ignorant of the benefits accruing from cleanliness.

The conditions present to our minds a large field for moral and social reform.

It has been found necessary to give 402 verbal notices for dirty houses.

DESTITUTE SICK IN BELFAST.

The eighty-second annual meeting of the Belfast Society for the Relief of the Destitute Sick, one of the oldest charitable societies in Ulster, was held at the City Hall on February 5th. The Marchioness of Londonderry presided. The society is most unostentatious, and through private information and the visiting of ladies finds out really deserving cases of destitute sickness, and gives greatly required aid. Professor Lindsay, M.D., in seconding the re-election of some members of committee, pointed out that probably one-third of the population of large towns lived in poverty, and advocated the claims of this society. Dr. Calwell seconded a vote of thanks to Lady Londonderry for presiding, and said that any society which had the imprimatur of her name could appeal without fear to the public.

Special Correspondence.

PARIS.

Professor Tuffier on the Mode of Action of Physical Agents (Radium, X Rays, and High-Frequency Currents) on Cancer.—The Population in France during the First Half of 1908.—Salaries of Nurses in the Paris Hospitals.

IN his wards at the Beaujon Hospital Professor Tuffier has submitted some patients suffering from uterine cancer to treatment by radium, which was carried out by M. Dominici. It is as yet impossible to state the results, as the patients have only been observed for four months. In one case the patient suffered from an inoperable cancer; she was curetted, and radium then applied. In a month Dr. Tuffier was easily able to operate. Microscopic examination showed that the adhesions were inflammatory and not neoplastic. It was the connective tissue, sclerosed by inflammation, which was the cause of the immobility of the uterus. Another patient who had been operated on eight months previously for cancer of the uterus returned with a recurrence in the vaginal cicatrix and the foot of the broad ligament; radium caused five-sixths of the pathological infiltration to disappear, but an induration still persisted. The cancerous nature of the growth was established by microscopic examination. In the first case an apparatus consisting of a cylindrical glass ampoule containing 9 centigrams of pure radium bromide, enclosed within a silver sheath 1 millimetre thick, and then placed inside a rubber drain 2 millimetres thick, was introduced into the cancerous uterine cavity. This apparatus furnished an ultra-penetrating radiation of 16,000 to 17,000 gamma rays. In the other cases a cloth apparatus was used, A. 500,000, the weight being 4 centigrams; the surface was enclosed in a lead capsule 1 millimetre thick, surrounded by a paper envelope also 1 millimetre thick. The apparatus was protected by a double envelope of thin india-rubber, and had an ultra-penetrating radiation of 3,500 to 4,000 gamma rays. It was applied every sixth day and left *in situ* for twelve hours each time. In order to judge the results obtained, sections were cut of the tissue treated by radium, and from these Dr. Tuffier draws the following conclusions, which are subject to modification:

1. The radiations penetrated to a depth of at least 2 cm.
2. The action of the radiations on the cancerous tissue was produced slowly; the absence of any morphological tissue modification for six or more days does not in any way imply that no action will follow later.
3. The action of the radiations was on the cancer cells and on the connective tissue framework, but not equally, for the connective tissue was less rapidly affected, the action being first and especially an elective one on the cancer cell.

The radiation can be regulated so as to cause no alteration in normal tissues, while at the same time stopping certain inflammatory processes; it does not destroy the elements of vascular connective tissue in a state of inflammatory reaction, but modifies its nutrition. The radiation can stop the development of the cancer temporarily by modifying the evolution of the epitheliomatous cells in different ways, which M. Dominici believes to be: (1) An excitation of the chromatin and of the

nucleoli, followed by the death of the cells which are the most specialized from the neoplastic point of view; and (2) arrest of the cancerous evolution of the cells which are the least advanced in neoplastic transformation. Comparing these results with those produced by the x rays, Dr. Tuffier found that the latter were powerless in dealing with subcutaneous cancers, but in ulcerated, granulating, and bleeding tumours they exercised an incontestable haemostatic action, causing cicatrization and producing an anaesthetic effect; but the healing was superficial and left the deep cancer intact. Microscopic examination of cancers treated by x rays showed that their action was specific on the cancer cell, the healing action being neither in the inflammatory reaction of the tissues treated, nor in the vascular troubles or haemorrhages. There were no arterial lesions, as thrombosis, no diapedesis but an elective necrosis of the neoplastic elements. The microscope showed that their action was very limited in depth, and that often in spite of apparent cure, active neoplastic elements were found at a depth of less than 2 millimetres from the surface treated; isolated and atrophied cells were found in the most superficial portions, but active cancer cells with karyokinesis, proof of their proliferating activity in the subjacent layers. Dr. Tuffier also investigated the method of action of high-frequency currents (fulguration), which were applied by M. Keating-Hart in five cases of inoperable cancer, once alone, and in the four other cases after ablation and as complete a curetting of the neoplastic tissue as possible. The cicatrization of the wound after the detachment of the slough seemed to be more rapid than after a simple curetting, and the cutaneous cicatrix was supple and smooth. Unlike the x rays and radium, the sparks of high-frequency currents had no specific action on the cancer cell, but acted especially on the connective tissue. The results varied according to the length of time after treatment the examination was made. Immediately after treatment, on the healthy skin, the cells of the epidermis showed absolutely no alteration, but the superficial parts of the derma showed oedema and congestion. On an ulcerated cancerous tissue the epithelial cells were exactly similar to those which had not been fulgurated, but the connective tissue which surrounded them to a depth of 1 millimetre appeared distended by serous fluid; the protoplasm of the connective tissue cells was swollen, and numbers of white cells and a few red corpuscles were present. In sections made on the eighth day after treatment at the level of the tumour covered with skin these changes were no longer visible, save that there was perhaps sometimes a little oedema of the superficial portions of the derma; the cancer cells situated below the epidermis remained in full activity. At the level of the ulcerated or abraded portions, the connective tissue of the tumour to the depth of about 1 millimetre was markedly hypertrophied, and sections made at this level showed inflammatory tissue with hypertrophied connective tissue cells, branching and anastomosing, newly-formed blood vessels, leucocytes scattered between the cells, and fibres of newly-formed connective tissue; in the midst of this connective tissue the epithelial cells remained intact, and some few of them were in karyokinesis. At the end of fifteen days the superficial portion of the tumour, forming a layer about 1 millimetre thick, consisted of adult fibrous tissue very much hypertrophied when compared with the deep layers which had not been reached by the spark. In the midst of this fibrous tissue the neoplastic cells were as it were choked and becoming atrophied. Fulguration, therefore, although it had no elective action on the cancer cell, could, by the mechanism of inflammation, eventually destroy these cells, but its action remained localized to the superficial layers; and even when cicatrization was obtained, there were, as in the case of the x rays, below it a cancer in process of evolution, though more or less hindered by the sclerosed fibrous framework. To form a definite judgement Dr. Tuffier thought it would be necessary to examine the tumours or the cicatrices several months after the application of the sparks.

In a recent number of the *Journal Officiel* appeared the statistics relating to the population in France during the first six months of 1908, compared with the same period in 1907. Heretofore these statistics have only appeared annually. The situation showed a marked improvement during the first half year of 1908. Instead of an excess of

deaths numbering 55,007 as in 1907, there was an excess of births amounting to 11,066. This result was due chiefly to the fall in the number of deaths, the total of which fell from 457,752 to 399,336; but it was due partly also to an increase in the number of births, which rose from 402,745 to 411,402.

The male and female nurses in the Paris hospitals, to the number of about 1,500, recently held a meeting at the Bourse du Travail. After listening to speeches by MM. Abadie and Duval, the assembly voted an order of the day demanding a minimum salary of five francs a day and the application of the law giving one day of rest in seven.

Correspondence.

ANAESTHETICS ADMINISTERED FOR QUACK PRACTITIONERS.

SIR,—The other day I received a communication from the General Medical Council in which was the following notice:

Any registered medical practitioner who knowingly and wilfully assists a person who is not registered as a dentist in performing any operation in dental surgery, either by administering anaesthetics or otherwise, will be liable, on proof of the facts, to be dealt with by the General Medical Council as having been guilty of infamous conduct in a professional respect.

The next day a literary friend of mine was telling me that a man whom he knew had just had his knee "put in" by a "bonesetter," and that the operation had been done under gas. It would be interesting to know who the qualified (?) practitioner was who administered the anaesthetic. I expect that this will appear one of these days. And then—?—I am, etc.,

February 5th.

NITROUS OXIDE.

THE VACANT POLICE APPOINTMENT IN LIVERPOOL.

SIR,—I think the attention of the members of the British Medical Association ought to be drawn to the flagrant attempt of the Corporation of the City of Liverpool to sweat the medical profession in connexion with the post of medical officer to the police. An advertisement appears in the daily local press of February 3rd for a medical officer to attend the members of the police force of the B division, including the members of the staff department residing within the division, and offering a salary of £60 per annum, rising to £80 after five years' service. As there are about 280 men in the B division, and the members of the staff department residing in the division are about 50, the salary offered works out at less than 4s. a head per annum. The salary of the retiring medical officer was £80, rising to £100 per annum. This reduction is being made at a time when a considerable increase is contemplated in the rates. I hope the members of the medical profession will unite to take some effectual means to frustrate this attempt on the part of the Corporation to effect a paltry economy at their expense.—I am, etc.,

February 8th.

A RATEPAYER.

SODIUM BICARBONATE IN THE TREATMENT OF CHOREA.

SIR,—In the *JOURNAL* of February 6th, p. 371, my friend, Dr. D. B. Lees, refers to my paper on alkalis in the number for January 30th. He takes exception to the statement made therein that the chief drawback to the treatment of chorea by large doses of alkalis is, "of course, the profound anaemia which such medication is liable to produce." Dr. Lees is in complete disagreement with this expression of opinion, and considers my use of the words "of course" to be especially inappropriate. In his view it is not the alkali but the rheumatic element in the choreic state which is the sole cause of the anaemia, for he holds that the poorness of blood during convalescence is in no way dependent upon the remedies which may have been used in the treatment.

Now, while I am perfectly willing to admit that rheumatism is an active cause of impoverishment of the blood, especially in early life, I maintain that an alkali given frequently in large and repeated doses also contributes materially to the same undesirable end. Of these two propositions one

is surely as well founded as the other, and I had no idea that either could be called in question. It follows then that in the treatment of chorea one may be pardoned for doubting whether in this or other occasional outcrop of the rheumatic constitution it is desirable to augment so largely the lowering effect of the complaint upon the blood by the free use of a remedy which has itself a similar depressing action. Therefore, although I am far from wishing to understate the authority with which Dr. Lees is entitled to speak on such a matter, I cannot bring myself to agree with his conclusion without much modification. In writing this I assume the accuracy of Dr. Lees's assumption that chorea is invariably associated with the rheumatic dyscrasia. This, however, is an arguable proposition and one to which I should hesitate to give my unqualified adhesion.—I am, etc.,

London, W., Feb. 6th,

EUSTACE SMITH.

APPENDICITIS AND RHEUMATISM.

SIR,—On page 186 of the BRITISH MEDICAL JOURNAL for January 16th I find the interesting statement by Dr. Alexander Haig, to the effect that in his experience appendicitis is more often due to retained uric acid than it is to mechanical causes. This must be due to the fact that the great fame of Dr. Haig brings to his office a special class of appendicitis cases, and of a sort which some of us might not classify separately as belonging to the appendicitis group.

In my own work a rough classification would place about 50 per cent. of appendicitis cases in the group in which extension of an acute colitis, the presence of irritating faecal contents, or psora traumatism lead to a swelling of the soft inner structures of the appendix within the firmer narrow outer sheath, until they suffer from compression anaemia. Bacteria then attack the unprotected anaemic tissues promptly. Such cases appear to be distinctly mechanical in origin. Perhaps 30 per cent. of my cases of appendicitis are of the class in which the appendix, undergoing normal involution, is inflamed in a chronic way through irritation of entrapped nerve filaments in hyperplastic connective tissue; 15 per cent. of my cases may be due to the congestion which goes with a loose right kidney; the remaining 5 per cent. would contain some odd or rare forms of appendix inflammation—tuberculosis, cancer, actinomycosis, and here and there a case in which the lymphoid layer of the appendix—perhaps other layers—is responding to the influence of retained uric acid in the blood.

In all of the cases of the first group, representing true infective appendicitis, it is perhaps best to operate just as soon as the diagnosis is accurately made. In the second group I have held that operation is advisable only when the "intestinal indigestion" and other reflex symptoms become too annoying. The third group of cases are apt to fade out as soon as the loose kidneys are fixed, and they seldom call for removal of the appendix. In the fourth group of cases some will require operation and some not. I have usually advised against operation in the cases in which irritation of the appendix was caused by "retained uric acid in the blood." One can separate these cases fairly well, I think, if he is accustomed to making nice diagnoses.—I am, etc.,

New York, Jan. 30th.

ROBERT T. MORRIS.

IODINE FOR STERILIZATION OF THE SKIN OF OPERATION AREAS.

SIR,—With reference to the memorandum by Major Porter, R.A.M.C. (BRITISH MEDICAL JOURNAL, February 6th, 1909, p. 332), I should like to say that the method has been adopted for some time in the clinic of Professor von Eiselsberg in the Allgemeine Krankenhaus at Vienna. The line of incision is painted over before operation with a spirituous solution of iodine, and after the stitches are inserted the painting is repeated. The object is not only to sterilize the incision area, but to prevent the invasion of staphylococci, etc., from the neighbouring unsterilized skin. When I was working in Professor von Eiselsberg's clinic in 1907 I saw over 200 operations all treated in this way, and in no case was there ever a suspicion of a stitch abscess, all the incisions being absolutely sterile. It is a measure well worth adopting in this country. With regard to the preparation of the skin, the patients are all washed with soap and water half an hour prior to the operation

and then rubbed with pure alcohol, the skin dried, and a pad of sterile gauze applied until the operation; no antiseptic dressing is ever put on. The results will bear comparison with any of our English hospitals.—I am, etc.,

H. GOODWIN, F.R.C.S.Ed.

Bovey Tracey, South Devon, Feb. 7th.

PERNICIOUS ANAEMIA AND PYORRHOEA ALVEOLARIS.

SIR,—I am surprised at Mr. C. Wynn Wigram's statement that dropping out of the teeth is clear evidence of the presence of typical pyorrhoea alveolaris at a recent date. I am under the impression that in old people the teeth not infrequently drop out from simple atrophy of the gum without any pyorrhoea, and that the same thing may occur between the ages of 50 and 60, or even earlier. I have also seen the teeth drop out without any pyorrhoea alveolaris in some cases of tabes. Not being a dentist, my opinion on the point is, however, of little value. I have therefore consulted an eminent dental colleague whose opinion I regard as authoritative; he writes me as follows:

I have to thank you for the two copies of the BRITISH MEDICAL JOURNAL containing your note on a case of pernicious anaemia, and a letter commenting thereon by Mr. C. Wynn Wigram. I had, however, read both of these communications before and had it in my mind to write something in correction of the assumption put forward that a condition of pyorrhoea alveolaris is a necessary precursor of the shedding of the teeth. As a matter of fact, the shedding of the teeth may, and most frequently does, occur as a physiological, not a pathological, process.

Atrophy of the teeth takes place: with the disappearance of the socket, the teeth first loosen, then fall out, the process not being accompanied by, or due to, any septic infection whatever, and no pus being formed. This atrophy may be a simple atrophy, or an osteoporosis. In pyorrhoea alveolaris the alveoli also atrophy, but the condition is one of osteitis rarefaciens, which is always secondary to a suppurative inflammation of the gums due to infection by pyogenic cocci, usually associated with a deposit of tartar on the necks of the teeth, often with a general oral sepsis, and sometimes with wasting diseases or other disturbances of metabolism—for example, gout or rheumatism.

The simple atrophy of the alveoli is to be regarded as a senile change, so too, as a rule, the osteoporotic, but the alveolar process may disappear prematurely, a state of affairs which has been dignified by the name of atrophial alveolaris praecox.

I must emphatically dissent from the dictum of Mr. Wigram that the dropping out of the teeth is absolutely diagnostic of the presence of pyorrhoea alveolaris at a recent date. I must confess at the same time that I have no knowledge of the "less obvious symptoms and signs" of this disease which he leaves us to infer are only recognizable by a dentist, though I am anxious for enlightenment.

—I am, etc.,

Edinburgh, Feb. 4th.

BYRON BRAMWELL.

CONFERENCE ON THE MEDICAL PROFESSION AND FRIENDLY SOCIETIES.

SIR,—Heartily as I agree with your correspondent "Anhidrotic," I feel that even the satisfactory settlement of the club question—if that be possible—would be but a half-measure.

Is it not time for the causes of the evil to be attacked and removed? These seem to me to be, at least in the main, obvious enough, yet much talk and little treatment is accorded to the matters which are mere symptoms. In my opinion, the causes are: (1) That a large section of the lay public, imbued with the spirit of the times, is consumed with desire for the cheap. These people require not an honourable gentleman who puts his patient's good before all questions of personal advantage, but a hired quack, whom they tempt to cheat them by inadequate payment, often grudgingly given, often withheld. And (2) that men not fit to enter any profession—least of all the medical—have unscrupulously employed trade methods, and have even sought to cloak their actions under the guise of philanthropy.

The education of the public may be achieved in time if we reform within the profession, and if men like Sir Thomas Barlow will speak out as he did on February 6th. For the safeguarding of the honour of the profession surely some means can be found. Could a recognized scale of charges not be drawn up by the Association as a recommendation, and could not each Branch, or, if thought advisable, a smaller district, decide upon a minimum local fee?—I am, etc.,

February 9th.

ONE WHO TRIES TO PLAY THE GAME.

THE HOME TREATMENT OF SCARLET FEVER.

SIR.—In view of Dr. Harold Kerr's summary dismissal of Dr. Milne's claim as to the efficacy of eucalyptus oil in preventing the spread of infection in scarlet fever, I should like to submit a few cases which certainly appear to support Dr. Milne's statements.

After seeing Dr. Milne's first communication on the subject I decided to try this method of inunction, but substituted the sucking of formamin tablets for the throat-brushing. In the following table are included all the cases of scarlet fever, except those removed to hospital, that I have attended since beginning this line of treatment:

Cases in House.	Children.	Subsequent Cases.	Desquamation.	Remarks.
1	3	1	0	Hands and feet.
2	2	1	0	Hands.
3	2	1	0	Hands.
4	2	4	1	Free; rubbing stopped.
5	2	3	1	Nil.
6	2	3	0	Nil.
7	2	2	0	Nil.
8	2	2	0	Nil.
9	2	0	0	Nil.
10	2	1	0	Nil.
11	2	1	0	Nil.
12	2	1	0	Nil.
13	4	1	0	Nil.

Only children who had not previously suffered from scarlet fever are included in the second column, and the parents and other adults living in the house have been entirely ignored.

I noticed in the first few cases that desquamation occurred on the parts from which the oil had been washed or rubbed off. Hence, in the later cases, I prohibited washing for five days, and ordered the hands to be covered with cotton gloves. After adopting this plan none of the cases desquamated.

It seemed to me that in this series of cases recovery was much more rapid than usual, even in those which were very acute at the onset of the attack. The only explanation I can offer is the patient's living in an atmosphere of eucalyptus vapour, which should prove an advantage in the fight against the specific organism.

Dr. Harold Kerr scoffs at the idea of an aroma killing anything—an undoubtedly ridiculous idea, an aroma being a sensation due to the presence of the vapour of some volatile substance. May not the vapour of the volatile substance be of some value as an antiseptic? Surely he does not deny that formalin vapour comes under this category?

I shall not attempt to give the explanations Dr. Harold Kerr asks for; and I hope he will be kind enough not to explain away the facts I have given on the grounds either of twelve errors of diagnosis or of twelve separate coincidences.

Finally, I should venture to suggest that Dr. Harold Kerr would be better able to sit in judgement on Dr. Milne and his methods if he gave these a trial instead of quoting authorities and asking conundrums.—I am, etc.,

Dunfermline, Fife, Feb. 1st.

J. DALGLIESH.

THE RADIIUM INSTITUTE.

SIR.—We are told in your editorial of last week that the justification of the existence of the Radium Institute lies in the fact that radium is expensive. We are also told that it is intended to charge suitable fees to those who can afford them. In other words, a monopoly is to be created for the treatment of certain diseases with funds provided

and an amount of patronage accorded which will ensure its success. May I ask if the formation of an institute on these lines is fair to those members of our profession who have devoted their time, at great personal risk and some sacrifice, to the study of radiations in general? There already exists in many of our large hospitals special departments devoted to the application of x rays, Finsen light, and electro-therapeutics in which the necessary experiments with radium could be carried out, granting that the material is forthcoming. Might I suggest that the Radium Institute find the radium, and that the work be done by the specialists connected with our existing special departments?

One might imagine, from the amount of publicity which is being given to the therapeutic effects of radium, that some new phenomena had been recently developed; but this is not the case. Sir Frederick Treves's lecture upon the subject contains nothing that is new, and that was not previously known to all those who have studied the subject. He is, however, to be congratulated in bringing the facts to the notice of the profession in a manner calculated to win their confidence. Many hospitals have already a supply of radium, and experiments have been in progress during the last six years. The Imperial Cancer Research Fund has also experimented, and many of the results obtained have from time to time been published. The reported results have certainly not been quite so successful as those quoted by Sir Frederick Treves, but the amount of radium at their disposal may not have been large enough.

That radium has a great field of usefulness in the treatment of disease I am confident, and it may effect cures where the x rays have failed; nevertheless it is unfair to decry the x rays on this ground. There is no royal road to cure any disease, and one method of treatment often fails where another is successful. The x rays have proved a useful servant to us, and I most emphatically disagree with the assertion that we have reached the limit of their power. Indeed, I am more in agreement with those who say that radium can achieve nothing which the x rays cannot do better and more quickly. The x rays may have cured many cases where radium has failed.

As an instrument for diagnosis the x rays have far surpassed the predictions of the early workers, and if surgery has not advanced as the direct result of their application it is because surgeons have been slow to take advantage of the increased power placed in their hands. In the treatment of lupus the x rays have achieved more than any other therapeutic agent, notwithstanding that in some cases they fail to produce any very marked benefit. In the treatment of ringworm and syphilis a cure can be promised with certainty. In epithelioma and rodent ulcer a cure can be brought about, but unfortunately it is seldom lasting. Warts, moles, dermoids, port-wine marks, etc., can be removed. Itching is relieved in nearly every instance, and as an analgesic the x rays have no competitor. In the treatment of cancer the x rays have proved of the greatest service; they certainly, so far, cannot be put forward as a cure, although they have a direct influence upon the growth of young cancer cells; but they relieve the pain, lessen the rate of growth, diminish the amount of discharge, enable the patients to sleep, make their lives more comfortable, and occasionally bring about as nearly a cure as can be obtained by any other method.

The scope of the application of the x rays is continually enlarging, and will continue to enlarge as our knowledge of them increases. Their action upon the blood is as yet imperfectly understood, and we have an unlimited field for research yet untrodden.

Experiments with the x rays are exceedingly costly and dangerous, and it must not be forgotten that whilst the initial cost of radium is enormous, when once obtained it is a constant quantity, whose properties only require investigation; x rays, on the other hand, have to be produced by means of mechanical and electrical contrivances, which are constantly being improved, involving an everlasting renewal and change of costly apparatus. The progress of the x rays has in the past been hampered by want of funds, and if the Radium or some other institution could help us in this matter, I can safely predict a valuable return for the money.

The analgesic properties of radium are for the most part

superficial, whilst it is in deep-seated and un-get-at-able pain that the x rays prove most useful.

I do not for one moment wish it to be thought that I in the least degree depreciate the value of radium, but inasmuch as the effects of radium are to a large extent due to its giving off x rays I contend that the investigation of these therapeutic agents should rightly be placed in the hands of those who in the past have sacrificed so much in their efforts to apply the x rays to the relief of pain and suffering.

The question has been asked, Is radium a new healing force, or merely a very powerful and penetrating caustic? It is curious that the same question was asked about the x rays. As far as the x rays are concerned, the fact that deep-seated structures can be influenced without any effect being produced upon the skin, and that changes in the blood follow their application should be a sufficient answer; and as far as radium is concerned, there can be not the slightest doubt that it exhibits properties far exceeding those of a caustic; moreover, its effects are not penetrating.

If the Radium Institute is to carry out investigations with any chance of success, it must necessarily be equipped with the apparatus for generating x rays, ultra-violet rays, high-frequency currents, etc. May we assume that these agencies will also be applied to paying patients? If so, where, may I ask, will this institution differ from an electro-therapeutic institute run for the purpose of making a profit? Whilst I heartily agree that no stone should be left unturned which is likely to increase our

knowledge concerning these valuable remedies, it must not be forgotten that radiography is recognized as a special branch of our profession, and there exists a number of medical men whose living depends upon it. I trust that the committee of the Radium Institute will keep this fact in mind when drawing up rules for their future guidance. —I am, etc.,

Birmingham, Feb. 8th.

JOHN HALL-EDWARDS.

BOYS' RACES.

SIR,—Pray extend the hospitality of your columns to the opinion of our highest medical authorities, and so save many a boy from physical wreckage in his youth or later years.—I am, etc.,

J. HERBERT FARMER,

Old Harrovians and Middlesex County Football Captain, 1886-91.

19, Portland Place, W.

January 26th, 1909.

Dear Mr. Farmer,

In reply to your inquiry, we have no hesitation in saying that we consider that school and cross-country races exceeding one mile in distance are wholly unsuitable for boys under the age of 19, as the continued strain involved is apt to cause permanent injury to the heart and other organs.

Yours faithfully,

(Signed)

LAUDER BRUNTON.

THOMAS BARLOW.

JAMES F. GOODHART.

W. HALE WHITE.

ALFRED FRIPP.

Obituary.

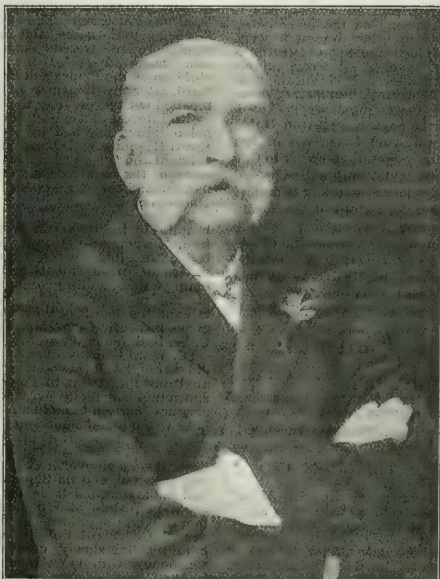
ALEXANDER PATTERSON, M.D., F.R.C.S.,

LATE SURGEON TO THE WESTERN INFIRMARY, GLASGOW.

DR. ALEXANDER PATTERSON, for some thirty years a leading consulting surgeon and teacher of clinical surgery in Glasgow, died recently at Draperstown, co. Derry, a property which had been in his family for many years, and to which he retired about four years ago.

Alexander Patterson was educated at the University of Glasgow, and graduated M.D. in 1854; he became F.R.C.S. Edin. in 1860, and F.F.P.S. Glasg. in 1869. In 1868 he was appointed Dispensary Surgeon to the Royal Infirmary and Surgeon to the Glasgow Lying-in Hospital. In 1872, having removed to the western part of the city, he became Surgeon to the Lock Hospital, and shortly afterwards to the Western Infirmary, then recently opened. While attached to the Royal Infirmary, he had the great advantage of witnessing the steps by which Lord Lister developed the antiseptic system. Patterson early grasped its significance, and in addressing the Glasgow Medico-Chirurgical Society in 1873, he spoke of it as ranking only second in importance in practical surgery to the introduction of chloroform. As an operator he was

both skilful and successful, remarkable for his neatness and rapidity, due, probably, in part, to the fact that he was ambidextrous. His surgical dexterity, combined with his adoption of the antiseptic system, account for the long series of ovariectomies he performed without a death, at a period when such a record was the exception rather than, as at the present day, the rule.



He was a pioneer in renal surgery, and published in 1880 what is believed to be the first case of nephrotomy deliberately undertaken for the removal of a stone from the kidney. He wrote on the treatment of aneurysm by digital compression, and on strangulated hernia, his interest in the latter subject leading him to devise a herniotome, which was a great improvement on that invented by Sir Astley Cooper. He also appreciated the

importance of fresh air at a time when the belief that warmth was necessary for surgical patients sometimes led to hospital wards being very ill-ventilated. He insisted on all the windows in his wards being kept wide open at the top day and night, and often asserted, not only that the nurses in his wards were the healthiest in the infirmary, but also that surgical patients admitted with bronchitic coughs rapidly got rid of them.

He was a man of some what austere exterior, but possessed a most genial and lovable nature, and was always delighted to help a younger man to acquire the surgical art. As a clinical teacher he had a high reputation, and his old students will agree that what they learnt from him has always remained with them. As an operating surgeon Dr. Patterson was for some thirty years one of the best known men in the West of Scotland, whose opinion was valued as highly as his operative skill was admired.

In his early days he was an enthusiastic volunteer, and always recalled with pleasure that he was one of the guard of honour formed to receive Queen Victoria at the opening of the Loch Kairine Waterworks in 1859. He had a fine collection of coins, tokens, and medals, and was well known as a collector of the works of Robert Burns.

GEORGE WATT, M.D., J.P.,

ABERDEEN.

STUDENTS of Aberdeen University in the early Seventies will bear with regret of the death of Dr. George Watt. He died from cardiac disease on the morning of February 3rd. A native of Donside, where he was born sixty-one years ago, he went to Aberdeen with the intention of studying for the legal profession, but medicine had greater attractions for him, and after being three years in a lawyer's office he entered Marischal College as a medical student. After graduating M.B. and C.M. in 1876, Dr. Watt practised four years in Yorkshire, but returned to Aberdeen in 1880, and soon acquired a large general practice; for many years he acted as one of the Dispensary Surgeons and was Medical Officer to Blairs College and St. Nazareth House. An ex-President of the Medico-Chirurgical Society, he continued till the last to take an interest in its proceedings, especially the Widows' Fund, of which he acted as treasurer. Some years ago he purchased the estate of Invernettie, Strathdon. Dr. Watt was a devoted Churchman and a staunch Conservative; he was a man of amiable disposition, ever ready to hold out a helping hand to a brother in distress; he was held in high esteem by the medical faculty in Aberdeen. He leaves a widow and daughter—an only child—to whom the sympathy of a wide circle of friends will be freely extended.

Public Health

AND

POOR-LAW MEDICAL SERVICES.

DAMAGES FOR DEFECTIVE DRAIN.

H. G. writes: A. is a medical practitioner renting a house from C., and B. lives next door. B.'s servant puts a tin down the water-closet drain, which, by causing an obstruction, brings about a bursting of the drain into A.'s cellar, which then has 4 in. of water, owing to the overflow of a surface drain that C. had neglected to put in order. The cellar walls are soaked in a foul mixture of stale water and faecal matter, and A., who had been convalescing from an illness, has a relapse due to blood poisoning. Acting on medical advice, A. closes the house and removes to other quarters with immediate favourable results. His locum tenent and servants also exhibited signs of sewage poisoning. (1) From whom can A. claim compensation for damages? (2) Would C. have ground for a claim against B. for depreciation in letting value of the house?

* (1) On the facts stated A. would have a claim on B. for damages, but the matter is complicated by reason of the cellar being already in an insanitary condition owing to C.'s default. Our correspondent before taking any action would be wise to consult an experienced solicitor, as many technical points might arise, as, for instance, the nature of the drain, and who was responsible for keeping it in repair; was the drain that burst B.'s private drain, or a drain common to A. and B.? (2) C. would also have a claim against A., but the fact that the damage might have been partly due to his own default would tend to militate against his claim.

Universities and Colleges:

UNIVERSITY OF EDINBURGH.

The following candidates passed at the January examinations for the diploma in Tropical Medicine and Hygiene:

Samuel Alexander McClintock M.B., Ch.B., Stewart M'Naughton, M.B., Ch.B., Hugh Lancelotti Sells, M.B., Ch.B.

UNIVERSITY COLLEGE OF SOUTH WALES AND
MONMOUTHSHIRE.

At a meeting of the council on February 4th, Sir Alfred Thomas, M.P., presiding, much time was given to the consideration of the financial position, and a committee was appointed to prepare a scheme for submission to the Court of Governors on February 13th. Arrangements were suggested for the award of the ten scholarships to be offered to the Cardiff Education Committee by the college in return for the increased annual grant of £400.

Mr. J. Austin Jenkins, B.A., the registrar, was appointed representative of the college on the council of the Central Welsh Board; Dr. W. E. Thomas, F.R.C.S., the Rev. J. Morgan Jones, and the Rev. H. M. Hughes, B.A., were elected, with the principal, the representatives of the council on the court of the university.

It was resolved to present an address in English and Welsh on the occasion of the Darwin jubilee celebration in Cambridge next summer.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

At the monthly business meeting of the college, held on Friday, February 5th, the President admitted as Licentiates in Midwifery the undermentioned candidates who had passed an examination for that Licence held on Thursday, February 4th:

Mangaldas Vibhucandas Mehta, B.A., L.M. and S., Bombay, 1908.
Kathleen Reed, L.R.C.P. and S. Edin., L.F.P. and S. Glasg., 1909.

CONJOINT BOARD IN IRELAND.

The following candidates have passed the examinations indicated:

THIRD PROFESSION EXAMINATION.—G. F. Allison, A. D. Clanchy, J. M. E. Coghlan, O. G. Connell, C. A. Farrell, J. W. Flood, F. H. Gleeson, P. Harrington, J. P. Johnston, D. J. Lyne, J. Mitchell, F. J. McManus, J. H. O'Neill, R. P. Thomson, H. Q. O. Wheeler, J. McG. Williams.
SUPPLEMENTAL EXAMINATION.—T. S. Ambrose, J. P. Carroll, M. Cahill, J. J. Cosgrove, J. P. Gimes, J. M. Marrow, P. W. O'Connor.

APOTHECARIES' HALL OF IRELAND.

The following candidates having passed the necessary examinations have been granted the diploma:

C. J. Neelan, T. B. Johnson, E. Johnson.

Hospitals and Dispensaries.

THE ROYAL PORTSMOUTH HOSPITAL.

OPENING OF NEW CHILDREN'S WARDS.

THE new children's wards of the Royal Portsmouth Hospital were opened on February 3rd by Princess Victoria of Schleswig-Holstein. President of the Portsmouth Branch of the League of Mercy. With the erection of the children's wards three of the four blocks included in the original plans of 1897 have been completed.

The new block, which owes so much to Mr. J. J. Young, J.P., Chairman of the Building Committee, are designed on the most modern principles of sanitation and hygiene. It contains two wards, one for boys and the other for girls, with 20 beds and 4 cots in each. There are also two small side wards with 2 beds in each; accommodation is thus provided for 52 children in all, as compared with 36 in the old wards. The wards have windows on every side except the north, and they will have the sun the whole day through; the area of glass is estimated to equal one-fifth of the area of floor space. The enamelled walls are embellished with inset picture panels illustrating well-known nursery rhymes executed in painted tiles procured from the Royal Doulton Potteries. The wards are fitted with their own kitchens, bath-rooms, and necessary offices. At the southern ends there are covered balconies for convalescent patients. The new wards are called the "Edward and Mary," after the children of the Prince and Princess of Wales, and the "Young" ward, after the chairman of the Building Committee. It was recalled with pride that the royal family have always taken a warm interest in the hospital, since the foundation stone of the old building was laid by the Prince Consort in 1847, and His Royal Highness and Queen Victoria became its patrons, as King Edward and Queen Alexandra are to this day. The foundation stone of the new blocks was laid in 1897 by the Duke of Cornwall and he were opened two years later by the Duke and Duchess of York.

Princess Victoria of Schleswig-Holstein was received at the hospital by the Bishop of Winchester, president of the institution. Alderman Sir George Couzens, chairman of the governing body, the Rev. W. C. Hawksley, chairman of the committee of management, and Mr. J. J. Young, J.P., chairman of the building committee, Statements as to the raising of the necessary funds, the steady growth of the hospital, and the details of the actual building of the new wards were given respectively by Mr. Young, Dr. Ward Cousins, and Mr. C. W. Ball, honorary architect to the hospital.

Dr. Ward Cousins, in eulogizing what he termed "those splendid wards," said they were up-to-date, and there had never been anything like them in Portsmouth before. They would be of enormous benefit in the treatment of the poor children. The original decision to build a hospital was arrived at a meeting held at the Beneficial Society's Hall, Finsbury, in 1846, when the Mayor (Mr. James Hoskins) presided, and on that occasion £700 was raised in the room, and 100 life subscribers were obtained. Several sites were offered by the Board of Ordnance. A contract was accepted, and on September 27th, 1847, the Prince Consort laid the foundation stone, the building being formally opened by the then Bishop of Winchester on January 22nd, 1849. Commenting on the progress of the institution during the next fifty years, Dr. Ward Cousins said that it was an old-fashioned building, but slowly, quietly, and unostentatiously good work was done within its walls, and various extensions and reforms were effected. Towards the end of the last century the wave of hospital improvement which had spread over the country reached Portsmouth, at the time of her late Majesty's Diamond Jubilee. Plans were got out for the rebuilding of the whole hospital, and in 1899 two new blocks were opened. Now they were about half-way through the new Portsmouth Hospital, which was sure to make progress and be completed.

A vote of thanks to the Princess Victoria was proposed by Sir George Couzens, and seconded by the Rev. W. C. Hawksley, after which Her Highness made a tour of inspection of the hospital.

Medico-Legal.

PUBLIC INQUIRY REGARDING A DEATH FOLLOWING AN OPERATION.

BEFORE Sheriff Laing and a jury at Aberdeen on February 4th an inquiry was held—probably the first of the kind in Scotland—in regard to the death in the Royal Infirmary, Aberdeen, of a child 3 years old. The petition set forth that "on January 6th, in the Royal Infirmary, while Alexander Mann was beginning to recover consciousness after undergoing an operation under an anaesthetic he became sick, and died from asphyxia caused by his being unable to bring up the vomited matter with which his stomach was charged."

Evidence was led to the effect that this child was a patient at the out-patient department of the infirmary. The attending surgeon considered that it was necessary that the child should come up for a slight operation on a stated afternoon. Dr. Smith, the surgeon who was consulted, stated that he gave instructions that on the day of the operation the boy should have a light breakfast, no dinner, but perhaps a little milk or beef-tee in the forenoon before bringing him to the infirmary. Dr. Smith's evidence was corroborated by the house-surgeon. On the other hand, the mother of the child stated that she got no definite instructions as to feeding, and that the boy's dinner, which she ate, was a bowl of soup, and she gave him a little beef-tee, consisted of a few pieces of beef. She further stated that the nurse in charge did not ask her what food the boy had taken that day, neither did the house-surgeon nor the surgeon who operated. These two gentlemen stated in their evidence that they did not inquire as to what food the child had taken. Dr. Danson, the house-surgeon, stated in his evidence that he administered the anaesthetic, A.C.E. mixture; the child took the anaesthetic well, and the operation was performed by Dr. Gibbist quite successfully. It lasted about eight or ten minutes, and was quite simple. About four minutes after Dr. Danson had ceased administering the anaesthetic he noticed some sickness coming on as the boy was recovering from the anaesthetic. He called for certain things, used them, and the boy recovered. Another and a much more severe attack followed, and the doctor suggested a more radical step for bringing the boy round, which was carried out in succession. The boy breathed for some time after that, and apparently had recovered, but within three or four minutes he showed signs for the third time that he was going to vomit, with the result that artificial respiration was adopted and the throat cleared out. Eventually, however, the boy became so bad that the operation of tracheotomy had to be performed. The boy vomited solid beef, and Dr. Danson took beef from his throat and from below the wound.

Sheriff Laing, in addressing the jury, said: "This case is different from the usual class of cases in connexion with the inquiries under the Fatal Inquiry Act. There was no fatal accident in the case, and the reason why the inquiry was held was that the Lord Advocate may order an inquiry into any case where death has arisen from circumstances into which he thinks it necessary there should be some investigation. The importance of the case, apart altogether from the unfortunate result which attended the operation, lay in the fact that the sudden death occurred in the Royal Infirmary. The circumstances attending the death of the child were perfectly clear. It appeared that it was necessary that some slight operation should be performed, and Dr. Smith, who was consulted by the child's mother, fixed a certain date on which the mother should take the child to the infirmary for the purpose of having it operated on. It was clearly proved that Dr. Smith gave the usual and necessary instructions to the child's mother—to see that on the morning of the operation the child should get nothing substantial to eat. To use Dr. Smith's own words, he told the mother that she should give him an aperient the night before; that in the morning he was only to have a very light breakfast, and that he should have nothing between that time and the operation unless it was a glass of milk or a little beef-tee, or some slight nourishment of that kind. Having reviewed part of the evidence, the Sheriff concluded: 'There has been nothing disclosed which in any way reflects on the administration or management of the infirmary. It is essential, of course, that an institution of the kind, within whose walls a great and noble work is being performed, should carry with it the confidence of the public at large, and I can only desire to say that there has been nothing in this case suggestive of any further action or carelessness in the way in which the operation was performed, or that reflected on the management of the infirmary in any way. A verdict in accordance with the evidence was returned.'

FEES AND EXPENSES FOR TREATMENT OF DECEASED PATIENT.

LAST week an interesting case was tried at the Tralee Quarter Sessions, in which Dr. F. G. O'Connell, Adams, and Dr. John Booth were plaintiffs, and intimately associated were the further actions of Mr. Richard Sumner, a chemist, and Miss O'Toole, the proprietress of a private hospital. The defendants were the executors of the late Mr. Hugh Burke, of Tralee, who died leaving a large estate.

Mr. Burke, who was a patient of Dr. Hayes, of Tralee, was sent by him to Cork to consult Dr. Atkins, in whose consulting-room he showed symptoms of uræmia. Dr. Atkins, on seeing him, told that Dr. Atkins sent him to Miss O'Toole's private hospital,

where for three days his condition was extremely precarious and he eventually died, on the fourth day. The executors objected to pay the medical expenses of the case unless they were proceeded against. The County Court Judge gave judgment for the plaintiffs in each case, with full costs and travelling expenses, remarking that Dr. Atkins's fee of thirteen guineas was very moderate under all the circumstances.

An interesting point submitted was whether a private hospital is entitled to charge £10 for the inconvenience caused by the death of a patient residing therein. Apparently his Honour thought so, because he allowed the greater part of the nurse's charges.

WORKMEN'S COMPENSATION CASES.

Employers' Payments for Treatment.

SULEMAN v. OWNERS OF "BEN LOMOND"—a case which came before His Honour Judge Sir Sherston Baker, sitting at Grimsby County Court on January 26th—raised a point of considerable interest to hospital authorities. According to a note in the *Law Times*, the question was whether payment by the employers to a hospital for the benefit of an injured workman could be deducted by the employers from the weekly payments made to such workman under the Act of 1906. It appeared that an Arab seaman, while engaged on duty on board the ss. *Ben Lomond*, fell from the upper to the lower deck, and sustained serious injuries to his left thigh. The authorities of the Grimsby Hospital, to which he was taken, required the owners of the steamship to guarantee the hospital payment of 14s. a week for taking care of the injured man. This the respondents did, and admitted their liability to compensate the man at 16s. 1d. a week during his past and future incapacity. They, however, deducted 14s. a week from the 16s. 1d. during each week that the man was in the hospital. His Honour Judge Baker held that the money paid by the respondents to the hospital under the above circumstances was clearly a benefit which the applicant received from the respondents during the period of his incapacity, and that they were entitled to deduct the 14s. from the weekly payments whilst he was in the hospital.

RECEIPT STAMP.

R. R. R. asks: (1) Should the assistant give a receipt for his salary when he is paid? (2) Should the assistant affix a stamp on receipt when he receives the salary account? (3) Is the receipt a lawful receipt if the assistant affixes a stamp and initials it, but fails to put on the stamp the date on which his salary has been paid him? (4) If he fails to do so what amount of fine is imposed by law on principal and assistant each? (5) If he fails to either stamp, or initial the stamp, can he not claim and recover in court the amount of salary which he has been already paid?

. The answers to our correspondent's questions are:

(1) If his principal desires to have a receipt he should give one. (2) Yes, if the amount is £2 or upwards. (3) Yes, the assistant must cancel the stamp, but is not bound to write the date of receipt of the money across the stamp. (4) The person giving the receipt without a stamp is liable to a penalty of £10. (5) No, certainly not. If an assistant in such circumstances sued for his salary a second time, his principal could not produce the unstamped receipt as evidence of payment, but the payment might be proved in other ways.

FOR COUNTERS (NEW) LONDON AND ALL OVER THE WORLD

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

OBLIGATIONS OF A SUBSTITUTE.

W. J. E. writes: A. and B. are practitioners in the same town. A. is urgently summoned to Mrs. C., who has met with an accident. He is out, however, and Mrs. A. sends the messenger on to B., who attends for A. Some months subsequently Mrs. C. sends for B. to attend her child. Ought B. to do so? B. feels that Mrs. C. might never have known him had he not attended for A., and yet if he refuses to attend her child he will undoubtedly offend her, and so very likely alienate others who it is very possible may become his patients.

. It is admitted that B. acted as A.'s substitute, and obtained the introduction to the family in that capacity; hence it would be contrary to the principles of professional ethics if a few months after he were to accept the lady's child as his patient. He must disregard the contingencies which appear to weigh with him; but, if he explains the honourable obligations under which he is placed as A.'s substitute, he will find that he will gain more than he will lose in the estimation of his neighbours.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL CHANGE OF ADDRESS.

THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL have been removed to 429, Strand.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, London, W.C.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attilio, London*. The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

TELEPHONE (National).—
EDITOR. GENERAL SECRETARY AND MANAGER.
2631, Gerrard. 2630, Gerrard.

MANAGER. 2634, Gerrard.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

WESTMORLAND asks for experience of rotagen and thyrodoxin in the treatment of exophthalmic goitre. The former is expensive and the latter is said to give equally good results and is cheaper.

CLEANING DENTAL PLATES.

B. asks how to clean a gold dental plate which is constantly covered with deposit on its palatal surface.

"The plate can be cleaned with superfine powdered pumice and Castile soap, picking both up with a damp tooth-brush. A trade preparation, "Savon Lacoste," made by Lacoste et Cie., 5, Camberwell New Road, S.E., is convenient.

LETTERS, NOTES, ETC.

A PRIESTLY FEBRIFUGE.

DR. A. P. LANGE (Couva, Trinidad) recently sent us a sample of a reputed febrifuge, prepared by a parish priest who is a native of the island. The preparation is stated to be made from native herbs. Dr. Lange informs us that it has been used in obstinate cases of malarial fever with marked success, that it has diaphoretic properties, and is mildly purgative.

The analyst's report on this specimen is as follows: It is a turbid acid liquid containing a considerable quantity of sediment; it contains no alkaloid, but a bitter principle has been extracted which is probably the principal constituent. It has not been obtained in a crystalline condition, and was therefore probably not a pure substance; but it appeared to be of glucosidal nature. It would require a rather elaborate investigation to ascertain whether this body is identical with or related to any of the ordinary medicinal glucosides. The liquid gives no indication of the identity of the plants from which it is obtained, beyond what is suggested by a pronounced odour resembling that of pimento which is observable when it is heated.

THE CAUSATION OF INGROWING TOENAIL AND THE LOCATION OF GOITRE.

DR. CHARLES H. JOY (Tamworth) writes: Surely Dr. Stephens can appreciate the difference between being "confined to bed for a week or two" and nightly rest in bed; and is it not

obvious that the pressure of tight boots includes compression of the outer side of the big toe by the adjacent toe? Dr. Stephens exultingly informs us that his patient (Fig. 2) is a tramp, and draws the inference that he therefore could not possibly have worn pointed boots. What an inference! In conclusion, I submit that we are not discussing textbooks or the salts of calcium—I refer Dr. Stephens to the opening statement in my first letter; and I respectfully suggest that when his "innate modesty revolts," etc., it is not always wise to ignore it.

AUSTRALIA FOR THE SONS OF MEDICAL MEN.

DR. RICHARD ARTHUR, President of the Immigration League of Australasia, writes that he intends to be in London in May, and that he inquires addressed to him as to agricultural colleges in Australia, at the Royal Colonial Institute, Northumberland Avenue, London, W.C., will receive attention. Information can also be obtained from Captain Collins, Commonwealth Offices, Victoria Street, S.W. As he thinks that many medical men may be considering the advisability of sending sons to farm in Australia, Dr. Arthur intends to be present at the annual meeting of the British Medical Association in Belfast.

MEDICAL FOOTBALL.

THE result of the Rugby football match between English and Irish medicals (a goal and four tries to nothing in favour of the home team) at Richmond last week came as a surprise, especially to those who were present to watch the match. The Englishmen were the ten and played the advantage of a strong wind behind them till half time, when they had only scored a single try, owing to the fine defence of the Irishmen. The first scoring, twenty-five minutes after play opened, was due to a brilliant run by Palmer. All the remaining points were scored by the home team during the last ten minutes of play. The Englishmen were the equals of their visitors in tackling and their superiors in every other aspect of the game, getting the ball out of the scrum three times out of four. Bad luck contributed in no small measure to the failure of the visitors, for on nine separate occasions before they appeared on the field circumstances had forced them to reorganize their positions. It may be hoped that a game between English and Irish medicals, now that it has once been started, may become an annual fixture.

On Saturday, at Hale End, the London Hospital added to its prestige by defeating the United Services eighteen points to nil. The victory was due to good combined play on the part of the Hospital backs and the manifest lack of combination on the part of the Services.

Guy's Hospital visited the Plymouth district, and was defeated by the latter eleven points to nil. Plymouth was playing its full side, but the hospital showed unmistakable signs of the reorganization that had had to be effected to get up a team, although it had very much more of the game than is evident from the score.

St. Thomas's played the Royal Naval College at Greenwich, and were defeated chiefly in the first half of the game, the result being two goals and three tries to the R.N.M.C., and a try to the visitors.

University College won their game against the Crystal Palace Engineers. After a keen fast game, with plenty of instances of smart tackling, the Engineers lost to the College by two goals and three tries to nil, the success of the latter being due to the play of their three-quarter backs, who exchanged the ball with such excellent judiciously that they always had a spare man on the wing to dash for the opponents' line. In forward play the two sides were equally matched.

A "STOUT" FEE.

A MEDICAL practitioner, who was attending a licensed victualler, and had brought a physician to see him, said in an undertone to the wife as they were going upstairs that the fee would be "three guineas." After the consultation, as the money did not seem forthcoming, he again mentioned the fee, which was promptly paid. The doctors then prepared to depart, but the lady of the house interposed, and asked what was to be done with the three glasses of stout, which they now saw with surprise on the table, and which she averred her doctor had ordered as they were going upstairs. She thought "three Guinness" was the fee—perhaps a not unusual mistake for a publican's wife. It was a "stout," if not exactly a fat, fee.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

Eight lines and under	£ s. d.
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A page	2 13 4
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N.B.—It is against the rules of the Post Office to receive letters at Postes Restantes addressed either in initials or numbers.

The Hunterian Oration

ON

JOHN HUNTER AS A PHILOSOPHER.

DELIVERED AT THE ROYAL COLLEGE OF SURGEONS
OF ENGLAND ON FEBRUARY 15TH, 1909, IN THE
PRESENCE OF THEIR ROYAL HIGHNESSES THE
PRINCE AND PRINCESS OF WALES.

By HENRY MORRIS, M.A., M.B., F.R.C.S.,
PRESIDENT OF THE COLLEGE.

MAY IT PLEASE YOUR ROYAL HIGHNESSES,

MR. VICE-PRESIDENT,

YOUR GRACE, MY LORDS, LADIES AND GENTLEMEN,—
My first duty is to request Your Royal Highnesses to accept the grateful and respectful thanks of this College and the surgical profession of England which this College represents, for the great favour you do us by honouring the memory of John Hunter, whose inheritors we are, by your presence here to-day.

We shall ever remember with great pride that you, Sir, have deigned to accept the diploma and sign the roll of the Honorary Fellowship of the College, and the graciousness of this act has been deeply accentuated by its having been performed in the presence of Her Royal Highness the Princess of Wales.

I will also venture to add that your Royal Highnesses' visits of sympathy and compassion, such as those of the last few days, to several of the London hospitals—visits which give so much gratification and delight to the patients, and so much countenance and encouragement to the management and staffs of the hospitals—tend to qualify you, Sir, for the diploma you have to-day received; for in the noblest spirit and in the best sense of the words you have thus been engaged in that most essential part of the surgical curriculum known as "walking the hospitals."

We are met in memory of John Hunter, who was born 181 years ago yesterday, died on October 16th, 1793, and is interred in Westminster Abbey.

Those who founded this oration designed that it should be expressive of the merits, not only of the said John Hunter, but also of such persons, deceased since the delivery of the last oration, whose labours have contributed to the improvement or extension of surgical science.

Two men of remarkably strong character—namely, Sir Joseph Fayrer, Bart., K.C.S.I., LL.D., F.R.S., and Mr. Timothy Holmes—died in 1907. The former, a Fellow of this College, was distinguished for his public and private services in India and at home, for the sound good sense of his teaching and practice, and for his standard work on the poisonous snakes of India. Mr. Holmes was noted for his scholarship and extensive learning, for the eloquence of his spoken and the pungency of his written language, and for his services in various capacities in connexion with this College.

In 1908 death removed three others, namely Mr. William Allingham, Mr. Reginald Harrison, and Sir Alfred Cooper. All three were men well known by their works and writings in their respective fields of surgery, and the last two will be remembered by those who knew them personally for their exceptionally genial characters and lovable natures. Mr. Reginald Harrison and Sir Alfred Cooper, like Mr. Holmes, were Vice-Presidents and members of the Council. Mr. William Allingham likewise had served for a term of years as a member of the Council.

By the death of Professor Charles Stewart, LL.D., F.R.S., who was conservator of the Hunterian Museum for twenty-three years, and who died in office in 1907, science lost a distinguished physiologist, and this College a most able officer, a skilful draughtsman, and a very lucid and admirable lecturer.

An Italian poet has feigned that at the end of the thread of every man's life there hangs a little medal or collar stamped with his name, and that when Time with the shears of Atropos has cut the thread, he throws the medals

into the river Lethe; but that about the river there are many birds flying up and down, who catch the medals, and, after carrying them round in their beaks a little while, let them fall into the river; only there are a few swans which carry off certain medals to a temple consecrated to Immortality.

Though it may be that none of the names I have mentioned have been carried by the swans to the Temple alluded to by Aristotle, other birds have secured the medals, and, sparing them from the waters of Lethe, have deposited them with the records of this College. There they will not be forgotten.

Those are rare epochs in science which are marked by distinct progress due to some particular worker like John Hunter.

Though his name is not associated with any very striking discovery like that of the circulation of the blood by Harvey, or the specialization of nerve function by Charles Bell, his influence upon many sciences was both far-reaching and profound. His contributions to knowledge in human and comparative anatomy, in the natural history of plants and animals, in vegetable and animal physiology, and in geology and palaeontology, were of such signal value that progress was made in each of these sciences through his labours. In one of his papers to the Royal Society, Hunter, in referring to the light thrown on pathology by the then recent physiological discovery of the lymphatics as part of the absorbent system, wrote: "A discovery in any art not only enriches that with which it is immediately connected, but elucidates all those to which it has any relation."

The truth of this is illustrated by his own investigations, which, by enriching physiology, illuminated the whole range of Medicine and Surgery, and may be said to have given birth to the *Philosophy of Disease*, as Pathology may well be named after what Hunter did for it.

He was the only man in England in the eighteenth century who took a really comprehensive view of the phenomena of Nature; the only great natural philosopher between the date of Sir Isaac Newton's death in 1727 and the coming of those brilliant examples of our national intellect, Erasmus Darwin, John Dalton, Humphry Davy, and Thomas Young, all epoch-makers whose works appeared immediately after Hunter's death in 1793.

There was, however, in France, an exact contemporary of Hunter, whose life work was very similar to his. This was Louis-Jean-Marie Daubenton (1716-1800), the rival of Réaumur as the leader of natural history in France; a considerable anatomist, who dissected and described 182 species of quadrupeds; a coadjutor of the great Buffon; a great authority in vegetable physiology, in mineralogy, and on fossils.

It is highly probable that Hunter and Daubenton were influenced to some extent by each other's work—Hunter by Daubenton, more particularly in palaeontology.

Sir Richard Owen has styled Cuvier "the Founder of Palaeontology," but the claim to that title really belongs to Daubenton, whose memoir on the application of comparative anatomy to the study of fossil bones was published in 1762, or thirty-four years before the writing of Cuvier on the subject.

Very different opinions concerning (1) John Hunter's early education, and (2) his method of investigation as a philosopher, have been expressed by his biographers; yet clear information is obtainable on these points.

The impression to be gathered from much that has been written of him is that he was one of the class of untaught geniuses, who have risen to the highest intellectual eminence by their own unaided powers; that up to his twenty-first year he was indolent, averse to study or to submit to being taught, idling his time in bird-nesting and low companionship, and that he finally took up the study of anatomy and entered the medical profession after failing to become, or tiring of being, a millwright or a cabinet-maker.

I am satisfied, from the evidence of extant letters written by his relatives and contemporaries, that this description is wrong in nearly every particular.

He was the grandson of Francis Hunter, who was the second son of Hunter, the laird of Hunterston in Ayrshire, whose family history goes back to the thirteenth century.

His father was the owner of a small estate at Long Calderwood in Lanarkshire, seven or eight miles from Glasgow, which he farmed himself.

John Hunter's mother was a Miss Paul, the daughter of the Treasurer of the City of Glasgow.

John was the youngest of ten children: but besides himself, only two brothers and two sisters lived to grow up. Both brothers received the usual school and university education. James, the eldest, became a writer to the Signet. William, who was ten years older than John, was celebrated as a teacher of anatomy and surgery, and a leading London physician. Of the two sisters, Dorothea Hunter married the Reverend James Baillie, afterwards Professor of Divinity in the University of Glasgow, and became the mother of the famous physician, Dr. Matthew Baillie, and also of two daughters, one of whom, Joanna Baillie, was the highly gifted authoress of the *Dramas on the Passions*, and one of the closest friends of Sir Walter Scott. The other sister, Janet Hunter, died within a year of her marriage, and immediately after John Hunter came to live in London in 1748. Her husband was a sociable, musical, but unbusinesslike young man, named Buchanan, of good family and good patrimony, who had settled in Glasgow as a partner in a large firm of timber merchants. At that date there were no upholsterers in Scotland, and high class furniture was made in workrooms in timber yards, where foreign and rare, as well as indigenous and common, woods were obtainable. It was here that John Hunter, who prided himself upon his manual dexterity, tried his hand at cabinet-making during a short visit which he paid to his sister, Mrs. Buchanan. Hence originated the statement made by his spiteful and disparaging biographer, Jesse Foot, that Hunter had served, and failed, as a millwright or carpenter.

John Hunter lost his father when in his fourteenth year, and having for some time before ceased to attend school, continued to live at home under his mother's influence, till he came to London in his twenty-first year to study anatomy under his brother William.

He was fond of games, but passed much of his time rambling amongst the woods and brags, and taking notice of every form of animal and vegetable life.

Thus, without going to school and college, and getting the same education as his two brothers, he was gaining the knowledge which he could best assimilate, and laying the foundation of his future greatness in natural science and surgery.

The constant companionship of his mother, and the example set him by his brothers and sister, Dorothea, was an education in itself. John Hunter might have said what Charles Bell¹ wrote of himself: "My education was the example set me by my brothers. There has been a good deal said about education, but they appear to me to put out of sight example, which is all in all." And speaking of his mother, Bell adds, "she was my only teacher."

One gets the impression from their biographies that the home life of both Hunter and Bell had an elevating and an educating influence, and was devoid of the superstitions and fanaticism then prevalent in Scotland.

Since the time of Demosthenes, who from his seventh year was brought up and educated by his mother, a great many men who have attained to greatness have ascribed their success to the instruction received from their mothers. Two of Hunter's most distinguished disciples, Sir Benjamin Brodie and Sir Charles Bell, did so very emphatically. Cuvier is another instance.

In reference to his lack of school and university training, it is well known that there are those to whom this routine is insurmountably repugnant, but who yet are eager in the acquisition of other forms of knowledge. To quote Sir Charles Bell again in reference to his own experience, he said: "The memory of verses, or Latin rules, without intellectual comprehension of some principles, I was incapable of. This incapacity depressed me, and it was only when in professional education I found subjects more suited to my capacities that I began to respect myself, and favourably compare myself with my fellow-students." Charles Darwin also has told us that school as a means of education was to him simply a blank. John Stuart Mill as a philosopher, Henry Thomas Buckle as a historian, and Robert Louis Stevenson as an essayist and writer of fiction may be cited from amongst many other dis-

tinguished men who had no regular school or university education.

As to the assertion that John Hunter was fond of low society, his association with the men he met at the house of his highly educated and highly cultivated brother, William, and the fact that he married Sir Everard Home's sister, a charming and accomplished woman, all tend to contradict it.

Mrs. John Hunter was very musical, and wrote the words for Haydn's (1732-1809) English Canzonets, one of which—*My mother bids me bind my hair*—is among the best known. Hunter himself was fond of art, and a collector of prints and engravings and armour.

As to what was the philosophic method pursued by Hunter as a man of science, his writings tell in no uncertain manner.

There are only two methods open to the intellect—Deduction and Induction. Deduction starts from a general proposition and reasons from this to individual cases. Induction starts from individual facts and reasons upwards to general propositions.

For example, reasoning by deduction from the major proposition, "All men are mortal," and the minor proposition which I will put thus, "Mr. Brown possesses all the attributes of man," we arrive at the conclusion that "Mr. Brown also will in time die."

Reasoning by induction, on the other hand, we first ascertain (say from reading innumerable biographies, from the records and histories of nations, from tombstones and epitaphs, and from various facts in past and present experience) that every one who has lived has died; and then we conclude that not only will Mr. Brown himself die, but that all Brown's family and all the families of Brown, of Jones, and of Smith, etc.—in fact that all men are mortal, notwithstanding the miraculous disappearance of Enoch and that Elijah "went up by the whirlwind into the skies."

Did time permit I might illustrate the difference between deduction and induction by other but less simple instances than that I have just given, and at the same time show the difference between the Scottish and English national methods of inquiry—for example, between Cullen and Hunter in their investigation as to whether all animal matter is originally vegetable matter; or between Hutton and William Smith, who respectively were the founders of Scottish and English geology; or, again, between Watt and Cavendish, who at the same time discovered, Watt by deduction and Cavendish by induction, that water is the component of two gases.

Of each of these instances, it may be truly said that the inductive philosopher (the Englishman) established the facts, and the deductive philosopher (the Scotchman) established the ideas.

Deduction and induction have for the most part been employed separately; but by a few investigators they have been combined.

In the history of the world, there have been three great intellectual movements, leading to three great schools of philosophy, namely, the philosophy of Antiquity identified with Greece, Scholasticism identified with Charlemagne and France, and the New Philosophy which is of English birth and identified with the name of Francis Bacon.

Excepting the philosophy of Aristotle which was largely inductive, the first two were chiefly deductive. The Baconian is known as the New Inductive method.

In reviewing the intellectual movement of the eighteenth century in England, Scotland and France, in its bearing on Hunter and his work, we find that each country adopted one of the two philosophic methods as the national method.

To understand this movement better, it would have been well, had time permitted, to take a brief glance backwards at the philosophy of earlier ages.

Up to the end of the fifteenth century first Greek Philosophy, and then Scholasticism had monopolized men's thoughts; but during those two thousand years and more, they had done nothing to mitigate human suffering, nothing to advance the public weal, nothing to extend the empire of man over the material world. Indeed the application of science to useful practical ends was deemed by the old Greek philosophers to be unworthy of men of learning, degrading and debasing to philosophy, and insulting to philosophers.

Scholasticism, which was a blend of Christianity and Paganism, an "ill-starred alliance between the old philosophy and the new faith," was in reality the logic of Aristotle associated with the teaching of the Church, and by it Reason became subject to Authority, and was made the mere handmaid of Faith.

As men's interests ceased to be centred in ecclesiastical disputations, and their attention became by degrees directed to Art, Science, and practical discoveries, they looked about for some one who would lead them to the dawn of a new Philosophy.

This leader was discovered in Bacon, who propounded a philosophical system essentially new, and differing alike both in method and object from that of the Ancients, and that of the Mediaevalists or Schoolmen.

Bacon described with scorn the uselessness of the Philosophy of the Platonists, the Peripatetics, the Stoics and the Epicureans. Equally he scouted the system and dogmas of the Schoolmen.

Whilst disclaiming to be himself the founder of a sect or school, and fully foreseeing that his method was by no means perfect, he gave a new and powerful impulse in a direction diametrically opposed to both the Greeks and the Scholastics.

Some who have never studied his works seem to entertain a very incorrect idea as to what it was Francis Bacon really did for science. Of course he did not invent Induction. The inductive method has been practised ever since the world began; by every infant before weaning, by every new-born mammal as it learns that it will get milk from its mother, not from its father; by every farm labourer who finds by experience that he cannot gather grapes from thorns nor figs from thistles, and that if he sows tares, he will not reap wheat or garner barley. We are all employing the inductive method daily; and many who have never read the rules laid down in the *Novum Organum* are conducting the process as well as or better than many who have.

Bacon's great merit is that he "led forth the sciences from their house of bondage"; that he directed the minds of men away from mere verbal disputations to the discovery of truth by observation and experiment; that he incited men to develop the industrial arts and to acquire knowledge and apply it "to the glory of God and the relief of man's estate."

The chief cause of this great reformation in Philosophy was the great reformation in Religion.

THE INTELLECTUAL MOVEMENT IN ENGLAND.

In England that enlightened scepticism and spirit of inquiry which in religion conduced to toleration, in politics to freedom, and in physics to natural science, came to the front in the sixteenth century with the Reformation, increased with the Rebellion of 1645, and was confirmed by the Revolution of 1688.

The Reformation dissipated the notion of the infallibility of the Church. The history of different countries shows that as long as the governing power was in the hands of ecclesiastics, there was no toleration in Religion and little or no advance in Science. It was in England during the reign of Queen Elizabeth that Government for the first time in any European country was carried on without the active co-operation of ecclesiastical authority; and it was also during her great reign that there began the growth of that splendid literature which was to stimulate and increase the national spirit of liberty and inquiry, and to spread its influence, in a generation or two later, first over France, then throughout Europe.

During the first half of the seventeenth century, which was a period of great superstition, there was an effort to reverse the enlightened policy of Elizabeth. The influence of this on works of learning is well illustrated by the two books of Sir Thomas Browne. His *Religio Medici* was published about 1634. In this book the author exhibits a superlative degree of credulity, expresses his belief in witches, and declares his willingness to assent to a proposition all the more because of its improbability, and his readiness to believe in a thing in proportion to its actual impossibility. But twelve years later (1646), when the Civil Wars of the Rebellion were raging, and men's intellects were becoming more and more independent of authority, Sir Thomas Browne's second book, *Enquiries into Vulgar and Common Errors*,

appeared, and proved to be a systematic and elaborate attack upon most of the superstitions then prevalent. The striking inconsistency between these two works by the same author marks the growth of the vast social and intellectual changes which culminated in the overthrow of ecclesiastical intolerance and political persecution.

During the Commonwealth and after the Restoration came an increased desire for knowledge. The period following the Revolution of 1688 forms one of the most important periods in the history of the world, because it was then, and in this country, that the human intellect was completely freed from subjection to authority; and it was then, and in this country, that the triumph of liberty over despotism, and of reason over blind and enforced credulity was permanently and completely accomplished.

The suppression of superstition was further aided by the earnestness with which the physical sciences began to be cultivated during the Commonwealth, and after the Restoration.

The Royal Society was established in 1662, and Robert Boyle (1626-1691), who adopted the views and method of Bacon, was making discoveries of the very first importance.

When Hunter arrived in England, he came amongst a people deeply imbued with the Baconian spirit, for if Harvey, Hobbes, and Newton be excepted, all English scientists for a hundred and fifty years after the death of Bacon, in 1626, were eminently inductive.

Newton, who was born sixteen years after Boyle, had been dead twenty-one years when Hunter came to London in 1748; and the only giant mind in England to be likened to Hunter was Edmund Burke (1728-1797). The reflective and philosophic statesman who resembled him in the power of his intellect, in his marvellous capacity for thinking, and in his conception of general principles based on long considered ideas. Hunter's role was the philosophy of Life and Nature; Burke's, the philosophy of Civilization.

Though during Hunter's life there was no one in England pursuing science who was at all comparable with himself, or with the great Scottish and French philosophers and scientists then living, still the period covered by Hunter's residence in London was one of great national brilliancy and renown in many branches of learning and culture, despite the depths of political and commercial degradation into which the country fell owing to the taxation of America, and the American war and its consequences.

The British Museum was founded in 1753 through the collections made by Sir Hans Sloane being purchased by the Government on his death.

Sir Hans Sloane followed Sir Isaac Newton as President of the Royal Society. Like Hunter, he was led to study medicine owing to his intense love of natural history. He was the first person in England to attempt to form a museum; and it is interesting to note that the British Museum, the Glasgow Museum, and the unrivalled Museum in this College, owe their existence to collections made by London medical men of Scottish extraction, namely Sloane, William Hunter, and John Hunter respectively.

In Literature and Art the eighteenth century was very illustrious. The Royal Academy was founded in 1768 at the instigation of Benjamin West, a Pennsylvanian Quaker, who startled the Italians by likening their Belvidere Apollo to a Mohawk warrior, and is said to have painted 400 pictures for King George III. With West, three other artists were associated in obtaining the Charter of the Royal Academy, one of them being Penny, the son of a London surgeon, who was made the first Professor of Painting. Dr. William Hunter was appointed the Professor of Anatomy.

It has been said by one of the biographers of Sir Joshua Reynolds that there centred round him as the first President of the Royal Academy a "surprising and splendid constellation of genius, such as never before his time, and never since, illumined this country."

Reynolds lived opposite John Hunter in Leicester Fields, now Leicester Square, and his genius as an artist has pictured for all times, on the canvas suspended behind me, the thought-inspired features of the famous surgeon.

"The Marriage à la mode," the "Rake's Progress," and the other "pictorial sermons," as they have been called, of Hogarth; the "Blue Boy," the "Celebrated Duchess,"

and the grand landscapes of Gainsborough; the character portraits of Lady Hamilton by Romney, and probably some of the earlier paintings by Lawrence and Hoppner, must have been known to Hunter. So, too, the works of West, Cosway, Richard Wilson, Opie, and others of less importance.

Now, for the first time in its history, this country produced genius enough to establish its claim to the honourable distinction of having "an English School of Painting."

Bartolozzi, the Florentine, settled in London in 1764, and for forty years was occupied here in engraving pictures—his reproductions being as a rule more beautiful than the originals.

Angelica Kauffmann, too, was delighting Londoners by her sentimental pictures, astonishing them by her cold-blooded and unsentimental marriages, and decorating with pseudo-classic paintings the interiors of houses in the Adelphi and of mansions elsewhere, built by the brothers Adam.

Hogarth, Edmund Burke, Samuel Johnson, Oliver Goldsmith, David Garrick, Sterne and others, all friends of William Hunter and his brother John, were meeting daily at the Literary Club, the Turk's Head, or Reynolds's house.

Fielcing, having published *Tom Jones* (1749) and *Amelia* (1751), was annoying Richardson by his burlesque of *Pamela*, and worrying the Government and the Lord Chamberlain by his satires on bribery and the elections.

Smollett's *Roderick Random*, published in 1748, may have been read by Hunter during his first journey from Scotland to London.

The Rev. Laurence Sterne created a great popular success by the gross innuendoes and indecencies of *Tristram Shandy*; and the prim little Fanny Burney (*Madame d'Arley*) became famous as a novelist of irreproachable propriety.

"The Tragic Muse"—Sarah Siddons—had all but drawn tears from Hunter's eyes, and David Garrick as "Felix" in *The Wonder: A Woman Keeps a Secret*, must on some occasion or other have made him laugh until he sobbed.

Pope and Swift and Sir Robert Walpole died when Hunter was 16 or 17 years old.

Alexander Pope was a friend of Cheselden, and Cheselden was Hunter's first surgical instructor.

In this way, through Cheselden perhaps, or perhaps from hearing the poems read aloud when a boy at home, Hunter must, I think, have been influenced or inspired by Pope. The *Essay on Man* was published in 1734, and it is impossible to read some of Hunter's statements, or to follow his lines of thought, without being frequently reminded of passages on Nature, and the Universe, and the relation of man to the rest of the universe, which that poem contains.

Lastly, as a collector of prints, pictures, weapons and armour, et cetera, Hunter probably encountered that personification of affectation—Horace Walpole—in some of the curio shops or sale rooms of the town, when Walpole was hunting for oddities and rarities to add to the motley collection for which he was notorious. Collecting was becoming quite a fashion of the time.

THE INTELLECTUAL MOVEMENT IN SCOTLAND.

The intellectual movement in Scotland differed widely from that in England in the seventeenth and eighteenth centuries.

After the passing of the Acts of 1707 ratifying the Union of Scotland and England, good roads and canals connecting the chief towns and districts were made, and manufactures and commerce were promoted. Hence it happened that just about the date of Hunter's birth, Scotland for the first time in her history, produced two classes of enterprising and thinking men, whose aims were essentially secular, namely an industrial class, and a philosophical class.

During Hunter's early manhood, commercial and manufacturing prosperity had fairly set in, and philosophers and scientists of the very highest eminence were beginning to make the name of Scotland famous by their labours.

The number of original thinkers in Scotland in the eighteenth century is the more noteworthy, because in all the previous centuries the country had only produced two authors whose works were of the least merit, namely,

Buchanan (1506-1582), the Scottish historian and the greatest Latin scholar of his time; and Napier (1550-1617), the inventor of logarithms.

But the most striking fact about Scotland in the eighteenth (and the first half of the nineteenth) century was the existence of so many philosophers, and the creation of a noble and enduring literature, at a time when the Scottish were the most priest-ridden and superstitious people in Europe, not excepting even Portugal and Spain.

Besides the influence of the Scottish Kirk, another cause of the continuing ignorance and superstition of the people was the national method of inquiry. Centuries of ecclesiastical supremacy had influenced the nation in favour of the Theological Method of reasoning; and as the Church required the acceptance on faith of general principles and dogmas, and regarded it as heresy to doubt or question, this method was necessarily the deductive. Induction under such conditions is impossible. Paley, and the authors of the *Bridgewater Treatises*, and many essayists tried it, and failed.

When, therefore, the ablest minds in Scotland directed their thoughts and attention to philosophy and science, they without exception employed the deductive system with which they had been made so long familiar.

Thus it was with Hutcheson and Reid in metaphysics; with Adam Smith and Hume in political economy and history; with Black in physics and chemistry; Cullen in pathology; Hutton in geology; and Leslie and Watt in chemistry. In all branches of science it was the same. All the discoveries made by Scotsmen concerning both the inorganic and the organic world were made by the deductive method.

THE INTELLECTUAL MOVEMENT IN FRANCE.

As there is reason to think that Hunter was acquainted with the scientific work going on in France, notably that of Daubenton, and as Hunter's work was not without effect on some of the great French scientists, such as Cuvier and Bichat, I propose to examine very briefly the intellectual movement in France just before and during Hunter's lifetime.

The spirit of intellectual progress for which France was celebrated during the age of Richelieu and Descartes in the first half of the seventeenth century did not continue. In the second half of that century, and during the rest of the reign of Louis XIV, it was thwarted and delayed by the despotic and protective spirit of government, which was an early but a weighty cause of the French Revolution; just as liberty and reform in England were checked by attempts in the first half of the seventeenth century to suppress the popular will, and to reinstate in power the Catholic clergy.

Immediately, however, after the death of Louis XIV. in 1715, the state of the popular mind in France, which was thirsting for inquiry and hungering for liberty, was as favourable to the reception of the Baconian system in that country, as the popular desire for political and intellectual freedom in England had been in the seventeenth century.

When, therefore, in spite of the natural vanity of the French people during Louis's lifetime, the eyes of France turned after 1715 to England as the only country where liberty was known, nearly every Frenchman of eminence in literature and in medical and other sciences either visited England or learnt the English language; many did both.

Voltaire, Diderot, Buffon, Montesquieu, all took part in introducing English literature and English philosophy into their own country.

During the second half of the eighteenth century many of the best intellects in France were directed to physical science. A hundred years before, Descartes had made it a fundamental principle of his philosophy that we must ignore the knowledge of the external world—that is, of Nature—and must depend on "thought." Now, Helvétius, the most celebrated French moralist, and Condillac, the most celebrated French metaphysician of their period, said, "We owe the whole of our knowledge to Nature." It was this latter view which led to the discovery of more new truths in science by Frenchmen between 1750 and the end of the eighteenth century than had been made in all previous periods put together. The names of Lavoisier,

Foucroy, Berthollet, Fourier, Buffon, Daubenton, Cuvier, and Bichat bear testimony to this.

The vast discoveries which were being made roused general interest and curiosity in France. Some acquaintance with Science came to be considered essential to a good education. Lectures in all branches of science drew together persons of the highest rank as well as of the several classes below them. Women of fashion attended lectures on chemistry, geology, mineralogy, physiology, and anatomy. Antoine Petit's lectures on anatomy (commenced in 1768) were delivered before overflowing audiences. Cuvier² tells that the anatomical descriptions which Daubenton wrote for Buffon were to be seen on the toilet tables of ladies. Oliver Goldsmith, who was in Paris in 1755, remarks with surprise that he saw "as bright a circle of beauty at the Chemical Lectures of Rouelle as gracing the Court of Versailles." It was the same at the public séances of the Académie Française in 1779, and at Foucroy's lectures on Chemistry in 1784.

Such was the condition of the intellectual life in France, and particularly in Paris, during the latter half of Hunter's career.

The same spirit prevailed in this country. The English democracy had just begun to enter eagerly into political life. There was also a great increase in the general desire for knowledge, and this demand was augmented by the very steps taken to satisfy it. Now for the first time the public at large took some interest in the cultivation of the fine arts, and in 1760 was held the first public exhibition of pictures by English artists. It was during the eighteenth century that booksellers first started shops in the provinces, and that circulating libraries, and periodical reviews were first introduced. The publication of the proceedings in Parliament, against which the last standing order was passed in 1728—the year of Hunter's birth—and concerning which the Lord Mayor and an Alderman of the City of London were sent to the Tower in 1771, became an established parliamentary institution from 1772. Before the second quarter of the eighteenth century printing establishments were almost unknown in provincial English towns, and printing presses were only by degrees being set up in country towns in the latter half of the century. It was in the eighteenth century also that the earliest systematic attempts were made in England to popularize the sciences by lectures, to spread knowledge of physical truths through the medium of encyclopaedias, and simple treatises, and to give enlightenment by means of public addresses on such subjects as political rights of the people. It was in the latter half of the same century that Sunday schools, reading clubs, and debating societies first came into existence.

This desire to learn, and this rapid and widespread diffusion of knowledge amongst the peoples of France and England, were in large measure attributable to the fact that both the French and English national philosophical method was Induction. The condition of the Scottish people at the corresponding period was in marked contrast.

By comparing countries whose national system is Deduction with those whose national system is Induction, it is abundantly proved that knowledge is never widely diffused amongst a people by the deductive method, which begins with ideas; but that it spreads by means of the inductive process, which begins with facts. The deductive process, by dealing with abstract ideas, appeals to the thinking faculty and not to the senses; and as ideas are more difficult to grasp than facts, and as there are more good observers than great thinkers, deduction influences the popular mind much less than induction. Hence it was that the Scottish people did not seek enlightenment, and were content to continue in subjection to theological authority; hence it was that in England the overthrow of Scholasticism (that is, of the purely syllogistic philosophy of the Middle Ages) by the Baconian system, was followed by the general extension of knowledge and trade; and hence it was that in France in the seventeenth century the deductive philosophy of Descartes, and the Cartesian philosophers, did not lead to the general instruction of the people; whereas in the eighteenth century, after English literature, English opinions, and the philosophic views of Bacon and Locke were introduced into France

by Voltaire and others, knowledge spread rapidly amongst all classes of the French people.

With increase of knowledge came unhappily a feeling of revenge for the political and social wrongs they had suffered for generations; and the French mind, bent on obtaining freedom, was fired by a deadly determination to resist oppression and defy absolutism which finally culminated (in 1789) in the revolting cruelties of the greatest and most ghastly Revolution the world has ever known.

On October 16th, 1793, John Hunter died suddenly when attending a Board meeting in St. George's Hospital. On the same day and about the same hour Marie Antoinette was beheaded in Paris.

HUNTER'S METHOD OF INQUIRY.

The study of Hunter's works shows that he combined to an exceptional degree the two philosophic methods, deduction and induction.

There is no evidence that Hunter studied formal logic any more than Latin and Greek.

He was essentially a thinker rather than a scholar, yet an experimental philosopher rather than a metaphysician.

But Hunter saw that for a complete scheme of knowledge deduction and induction are supplementary to each other; and when the time comes, if ever it does come, when all the intellectual resources of man are fully developed and perfectly co-ordinated, then these two methods of reasoning will no longer be regarded, as they now often are, as hostile to one another, but will be combined in a single system.

Though a great inductive philosopher Hunter employed the deductive method very largely, especially in pathology. He reasoned downwards from premisses and hypotheses which he deliberately invented, and in doing so arrived at conclusions, sometimes unproven, sometimes inaccurate, sometimes only approximately correct.

Still, though it is true that some of his doctrines have had to be modified, some even set aside altogether, yet on the other hand it is astonishing how many of his speculative conclusions, both in physiology and pathology, formed at a time when microscopes were very inferior and chemical science was in a backward state, have been confirmed by his successors working with much better instruments and with additional and very superior aids to research. Thus did his genius often outstrip facts and anticipate discoveries.

His employment of the inductive method is illustrated by his attempt to explain congenital defects by a reference to transitory structures, and the metamorphoses of foetal life, as in the case of congenital hernia, which arises from the failure of the peritoneal process to become shut off from the peritoneal cavity. Other instances of his use of induction are his scheme for the classification of monstrosities, based on the disposition which every species of animal and every part of an animal body has, to deviate from nature in a manner peculiar to itself; his instructions to Jenner, as to how he should ascertain whether colour-blindness is due to a general defect, or to a failure to appreciate the usual impressions made by primary colours; his careful and patient anatomizing of so many hundreds of different species of animals and of so many animals of the same species; his numerous observations of plants; and his untiring investigation of the diversities of structures and organs in order to arrive at accurate conclusions as to what structures and organs are necessary for the performance of different functions.

As a result of these dissections and observations, he pointed out the conditions which characterized groups of animals, classifying them according to their hearts, their nervous systems, their stomachs. In this he anticipated Cuvier.

Following the induction method he trusted to nothing but his own observations, and to testing his ideas by the most varied and exact experiments. His *Treatise on Bees* is an admirable illustration of this.

Yet, in making inquiries, before drawing his conclusions he is neither prodigal of facts, nor wasteful of experiments. In reference to Swammerdam's minuteness of description of the particular structure of bees, he says that minutiae as such should be avoided, that they are only of value in so far as they elucidate principles; that notice need not be taken of things that are common to a bee and to other

insects, "but only of its peculiarities which distinguish it from all others (animals) and constitute it to be a bee."

Hunter in his *Observations on Digestion*, when criticizing Reaumur and Spallanzani, remarks: "I think we may set it down as an axiom that experiments should not be often repeated which tend merely to establish a principle already known and admitted; but that the next step should be, the application of that principle to useful purposes." And then he goes on to say: "But the application of principles requires more than simply the knowledge of the principle itself, and therefore those who cannot reason from analogy, or draw general conclusions from a few convincing facts, and who require to have every relative conclusion or inference proved by experiment, must be pleased with Spallanzani; but he must tire even those whom he informs and much more those who read his works in expectation of something new."

He made great use in practice of analogy and comparison, of resemblance and of difference. Many arguments and inferences drawn from analogy occur in his writings, some of them amounting to the most perfect induction, but others, it must be acknowledged, leading him into error. Fallacies of analogy are to be found in his *Treatise on the Teeth*—for example, he concludes from his experiments with madder on the teeth as compared with others on bone, that the teeth have neither a vascular supply nor absorbents. Again, he argues from the existence and use in carnivora of canine teeth, to their use in man, as organs for tearing and the prehension of food; thus ignoring or overlooking the fact that canine teeth are far more developed in some animals which are exclusively frugiferous.

Some of his analogies are indeed mere conjectures—for example, he infers that the bionspids are less useful than either the incisors or the molars, and he attempts to support this by saying, "in most animals, so far as I have observed, there is a vacant space between cutters and grinders."

It was chiefly by induction that he concentrated the scattered facts of comparative anatomy, and thereby advanced the progress of physiological science.

But a considerable part of his pathology also is based on the inductive process.

Notwithstanding his vast achievements in physiology, he was even greater as a pathologist.

If it be remembered what pathology was before his own time, it must be admitted that in this science Hunter remains without a rival. It is in this science especially that his depth of insight, his profundity of thought, and his comprehensiveness of view mark him out as a genius.

With Hunter, pathology included the laws of disease, not only in man, but in the whole of the animal and vegetable kingdoms. His outlook was even more comprehensive still, for it embraced not only the whole of the organic world, but the deviations from the typical form in the inorganic also.

In the study of the obscure phenomena of disease there is more scope for speculative ideas than for experimental research, at any rate for the forms of research which were possible in Hunter's day. It is therefore in his pathology much more than in his physiology, that Hunter employed the deductive method.

Thus he lays it down "as an axiom that two processes cannot go on at the same time in the same part of any substance." Two different fevers cannot exist in the same constitution; nor can two local diseases be present in the same part at the same time. Such names as *rheumatic gout*, which imply a combination of two diseases suggest a possibility of a union which according to Hunter's principle cannot exist.

Again, in his treatise *On the Blood, Inflammation and Gunshot Wounds*, he adopts the principle, that the specific qualities in disease tend more rapidly to the skin than to the deeper seated parts; and he regards this as a law of Nature, similar to the principle by which vegetables always approach the surface of the earth.

The whole chapter on Sympathy in his *Principles of Surgery* is full of deductive reasoning.

The doctrine of Health and Disease,* as explained by him, in his *General Principles of the Blood*, as well as in his *Principles of Surgery*, illustrates his desire to build arguments on principles which he spontaneously assumed.

Still another instance of deduction is his reasoning from the hypothesis that the immediate cause of action is the same in both animals and plants, but that whilst in animals there is a greater quantity and variety of motion, in plants there is more real power. He illustrates this difference by the horse and the vine. The vine can raise a column of fluid five times higher than the horse's heart can do, the energy or power of the animal being weakened by being directed to several different purposes.¹⁰

Starting with the idea that the capacity of action both in animals and in vegetables is of three kinds, he hoped by studying every inanimate to action—in reference to the power as distinguished from the quantity of action—that he or his successors would be able to arrive at fundamental truths as to the principles of organic motion.

In his *Treatise on Venereal Disease* his arguments are based upon the too hasty generalization that affections which admit of cure without the use of mercury are not venereal. He thus made the remedy the test of the disease, and sought to substantiate this preconceived idea by facts.

His attempts to prove that monsters are formed as monsters from their very beginning supplies another example of his use of deduction.

Through following the deductive method, Hunter neglected to take account of those "predisposing causes" of disease which could only be generalized from observation, and to which his English contemporaries who were inductive pathologists attached great importance. Hunter, indeed, denied the existence of "predisposing causes."

When reasoning deductively he so much relied on his premises that he sometimes refused to accept any evidence by which they were impugned. In fact, when using the deductive method, he had the failing of all deductive reasoners of not placing full confidence in facts.

In his inductive investigations, however, he never disguised or perverted facts to make them tally with his hypotheses. Instead of endeavouring to render facts and theories consistent with one another, when they evidently were not, he would adhere to his hypothesis without blinking the facts. Thus he asserted that teeth are extraneous bodies without either circulating vessels, absorbents, or nerves, but when after transplanting teeth, he thought he had established the fact that they were "capable of uniting with any part of a living body," he explained this power of uniting by attributing to teeth what he called a "living principle."

His "Croonian Lectures" ¹¹ on motion contain admirable examples of his employment of the combination of deduction and induction.

Buckle in his *History of Civilization* (vol. iii, pp. 432-5) attempts to explain the intimate union of deduction and induction in Hunter's intellect, by the fact that he was born and remained till his twenty-first year in Scotland, and afterwards passed the rest of his life in London, where he became socially and intellectually a native of England. "Hence," says Buckle, "the early associations of his mind were formed in the midst of a deductive nation, the later associations in the midst of an inductive one. The country of his birth made him deductive, the country of his adoption made him inductive. As a Scotchman he preferred reasoning from generals to particular facts; as an inhabitant of England he became inured to the opposite plan of reasoning from particular facts to general principles." And Buckle adds, "I make no doubt that one of the reasons why Hunter, in investigating a subject, is often obscure, is that on such occasions his mind was divided between these two hostile methods."

Buckle's line of argument is here purely deductive, and capable of being thrown into three or four strictly correct syllogisms—correct, that is, as to figure of syllogism, but not as to the ideas on which they are founded. Before accepting or rejecting Buckle's explanation, however, we must consider the premises on which he bases his conclusion. Like many deductive reasoners, he assumed the truth of his major premiss without having examined the facts on which it rests. He, an Englishman, has argued like the Scotch he describes; his logic being good if we concede the general propositions from which he starts.

But can we concede them?

Is it true that philosophers who have passed their youth among a nation whose method is deductive, and their manhood among a nation whose method is inductive—

or vice versa—have their minds divided between these two hostile methods, and, in consequence, are often obscure in their investigations?

The conclusion will be proved to be false if it can be shown that a philosopher may pass his youth in a country without ever coming under the influence of the national philosophic method.

This was the case with John Hunter; he never did come under the influence of the ordinary Scottish teaching. In Scotland the clergy had the control of all centres of education, both public and private, throughout the country. They directed what should be taught, and how it should be taught, not only by village schoolmasters and masters of grammar schools, but by the professors in the universities, and even by private tutors. Had John Hunter continued at school and proceeded to a Scottish university, he would of course have come under the influence of the deductive method.

But even if his education had been of the usual Scottish type, it does not follow that he would have adopted the Scottish philosophical method. His two brothers, James and William, who did receive such an education, did not adopt it; not even William, who was a resident pupil for three years, and a lifelong friend and correspondent of so thorough-going and so able a deductive reasoner as Cullen.

The courage shown by John Hunter when a boy of 12 years old, in a cottage scene described by his niece, Joanna Baillie, justifies the assertion that he was not imbued with the clerical teaching and superstitions prevalent at the time in Scotland. In the eighteenth century the most popular divines in Scotland, as well as the clergy generally, taught that Satan frequently appears clothed in a corporeal substance, and that he seized persons and carried them away in the air. When the preacher mentioned the name of Satan, the church resounded with sighs and groans, and the congregation were petrified with awe as they listened with gasping breath and hair standing on end. Such impressions were not easily effaced. Images of terror accompanied the ignorant people to their homes. No wonder, therefore, when a ghost in form of the devil appeared, whilst Hunter was chatting in a neighbour's cottage, that the cottagers, educated after this manner, were stricken motionless with fear, whilst young Hunter, brought up differently, attacked and drove away the apparition with the fire-logs.

The second statement made by Buckle is that the conflict in Hunter's mind between deduction and induction darkened his understanding. I can no more accept Buckle's explanation of the occasional obscurities in Hunter's utterances than Buckle could accept Otley's, namely, that they resulted "from a deficient education." I agree with Buckle that a deficient education no more makes a man obscure in his statements than a good education makes him lucid. With educated and uneducated alike, the power of clear expression depends on clearness of thought. When Hunter is obscure it is either owing to the complexity of his subject, or to his own mind being in doubt.

The adoption by Hunter of both methods—Deduction and Induction—was, in my judgement, the result of two causes: (1) the natural scope and bent of his mind, and (2) the nature of the subjects to which he devoted his life.

Induction is largely the method required for the profession he chose. Locke and Sydenham had left it on record that in their opinions the medical sciences to be properly pursued, ought to be approached by the Baconian method; and Hunter was one of a family, several members of which showed a great leaning towards and a marked aptitude for these sciences.

James Hunter gave up his profession as a barrister, and William, who was to have been a clergyman, abandoned the Church for Anatomy, Surgery, and Medicine; and John of his own free will, went directly into the medical profession. Their sister's son, Matthew Baillie, became the celebrated London physician and pathologist, whose medallion portrait is stamped upon the cover of the *Transactions of the Pathological Society of London*.

John Hunter was also a disciple of Bacon in that he employed induction in the pursuit of truth with an ulterior regard to utility and the good of mankind.

On the other hand, being a great thinker, he naturally inclined to the deductive method. But the tendency in

this direction was not so strong with him as with the purely deductive philosophers. He had not the deductive force of Descartes which could build up a profound philosophy with mathematical precision and by introspective examination, starting from a single subjective principle, such as "*Cogito, ergo sum*"—"Ego sum rex cogitans."

It was not as a logician, but as an observer and experimenter that Hunter excelled; it was not the beauty of his logic, but the industry with which he collected facts, and the ability and honesty with which he reasoned from them, which made Hunter great. He naturally possessed the special requirements for induction—namely, a desire for knowledge, the love of inquiry, acuteness of observation, ingenuity in devising experiments, and the habit of taking nothing for granted which he could verify for himself. Had it been otherwise, John Hunter might have become a deductive pathologist of the Scottish type, like the only other great British pathologist of the eighteenth century—the illustrious Scotsman, William Cullen.

If it be true, and I do not think it is, that in Hunter's mind the two philosophic methods were in rivalry or conflict, and that this conflict led occasionally to confusion of thought and obscurity of language, the perplexity arose from the very comprehensiveness of his mind, and the grandeur and vastness of its conceptions.

If, on the other hand, as I believe was the case, he employed at will both deduction and induction, but did not succeed in fully co-ordinating or completely combining the two methods, that was only because, notwithstanding his wonderful genius, he yet fell short of being an absolute monarch of the whole kingdom of the intellect.

REFERENCES.

- ¹ *Letters of Charles Bell*, p. 10. ² *Blanes*, vol. i, p. 56. ³ *Hunter's Works*, vol. iv, p. 26. ⁴ *Ibid.*, vol. iv, p. 87. ⁵ *Ibid.*, vol. iv, p. 95. ⁶ *Ibid.*, p. 132. ⁷ *Ibid.*, p. 10. ⁸ *Ibid.*, vol. ii, p. 255. ⁹ *Ibid.*, vol. i, p. 347. ¹⁰ *Ibid.*, vol. iii, p. 10. ¹¹ *Ibid.*, vol. i, p. 510. ¹² *Ibid.*, Croonian Lecture, vol. iv, p. 294. ¹³ *Ibid.*, vol. i, p. 18. ¹⁴ *Ibid.*, vol. iv, p. 195.

An Address

ON THE IMPORTANCE OF EARLY DIAGNOSIS

IMPORTANCE OF EARLY DIAGNOSIS WITH A VIEW TO SUCCESSFUL TREATMENT.

DELIVERED BEFORE THE WESTMINSTER DIVISION OF THE
METROPOLITAN COUNTIES BRANCH OF THE
BRITISH MEDICAL ASSOCIATION,

BY A. W. MAYO ROBSON, D.Sc., F.R.C.S.

MR. PRESIDENT.—May I express the pleasure it has given me to be the guest of the Westminster Division of the British Medical Association, and the great honour I feel in being invited to open one of your clinical debates?

The proposition I wish to consider is, Are there not many cases seen by all of us (but especially by those who are acting as the regular medical advisers to their patients) in which the early symptoms, though definite and pronounced enough to enable a diagnosis to be made, are treated by palliative remedies simply for the relief of symptoms, and only at a later stage, when disabling conditions have developed or dangerous complications have ensued, is the importance of radical treatment insisted on? Some of these cases are such as could be easily cured by medical and general treatment carried out thoroughly, and with a set purpose, if the disease were recognized at its onset; in others, after medical treatment had failed to cure, surgical measures adopted at an early stage could be undertaken with hardly any risk, whereas if left until serious complications have supervened, operative treatment, then absolutely necessary, can possibly only be carried out with considerable danger to the patient and great anxiety to the relatives and to the professional attendants.

The blame for procrastination when a diagnosis has been made and absolute rest or rigid diet or other radical treatment advised must often be laid at the door of the patient or the friends, though we cannot always exonerate ourselves from tacitly sanctioning it; for as a rule our patients are prepared to place confidence in our knowledge and

judgement and to be guided by us if we are definite in our opinion, and especially if in consultation we are in agreement.

Much of the blame undoubtedly lies in a reliance on the traditions of the past, when means of making a diagnosis were less exact, when more faith was placed in treatment by drugs, and when operation yielded such results that the physician and the general medical attendant were very properly averse to invoke the aid of surgery, either for purposes of diagnosis or for radical treatment.

Let me might possibly run the risk of alarming our patients, I fear we are sometimes apt to reserve the many new means of diagnosis, such as an exhaustive pathological examination and examination by instruments of precision, to the later stages of illness, and not to place that reliance on them in the early conditions which daily experience shows they are worthy of being credited with—for instance, the early use of the sigmoidoscope where rectal examination by the fingers is negative, the employment of the x rays in obscure abdominal and thoracic conditions, a more thorough examination of the excreta and of the blood by a skilled pathologist, and many other means that involve the consent or even the co-operation of the patient.

It is quite unnecessary to dwell on the dangers of procrastination in the more obvious surgical conditions, such as strangulated bowel, perforative peritonitis and other similar catastrophes, where delay is well recognized to be dangerous, but I wish to draw attention specially to the disadvantages and dangers of procrastination, both in the diagnosis and in the treatment of that large class of diseases on the borderland of medicine and surgery, where a too prolonged medical treatment, quite capable of affording some relief, lulls the patient into a false sense of security.

DUODENAL ULCER.

Among this class let us first consider duodenal ulcer, now recognized to be a common ailment, often attended with the dangerous complications of hæmorrhage and perforation, both of which accidents demand surgical treatment under most unfavourable conditions.

I want to ask the question why we should wait for these serious catastrophes before making a diagnosis and radically treating the condition, seeing that the symptoms of duodenal ulcer (pain three to four hours after meals, relief by taking food or by taking alkalis, pain recurring regularly in the night or in the small hours of the morning, flatulency, tenderness over the duodenum, rigidity of the right rectus and frequently the presence of occult blood in the motions), are so characteristic as to enable an early diagnosis to be made with almost absolute precision. Moreover, the disease in the earlier stages is curable in a large percentage of cases by medical and dietetic treatment alone, whereas if left until numerous relapses have occurred or complications have supervened, it can only be treated radically, by operation.

As soon as it is seen that medical treatment has failed to cure, or failed to prevent relapses, why should we wait until hæmorrhage or perforation demands surgical treatment, when at an early stage the operation of gastro-enterostomy should prove curative with a modicum of risk—speaking not only from my own but from the experience of several other surgeons—of hardly over 1 per cent.?

CHOLELITHIASIS.

I would next draw attention to cholelithiasis, which until comparatively recent times was considered a painful malady, seldom or never attended by danger, the numerous serious and fatal complications to which gall stones give rise being apparently ignored.

In an experience approaching 1,000 operations on the biliary tracts, in many of which I have had to perform extremely difficult and dangerous operations on patients in the last stages of illness from deep jaundice, infective cholangitis, persistent vomiting, suppuration in the gall bladder, perforation of the bile ducts, or exhaustion from repeated attacks of pain, it has been more and more driven home to my mind how much better it would have been had operation been advised at an earlier stage, when surgical treatment would have been quite simple and the probability of recovery approaching 99 per cent., arguing not only from my own but from the experience of others, both at home and abroad.

Under ordinary circumstances, nothing can be simpler than an operation performed for gall stones on a normal-sized or slightly distended gall bladder, before the concretions have entered the common duct, and before the anatomy of the parts has become completely disarranged by adhesions and contractions, and before serious complications, both local and general, have manifested themselves.

Not least among the dangers, if concretions are allowed to remain, is that of malignant disease. It is well recognized that chronic irritation is one of the most potent causes of cancer, and the constant irritation of gall stones is in this respect a danger that cannot be ignored.

I have operated on many cases of cancer of the gall bladder and bile ducts and in a very large proportion have found gall stones. Zenker found gall stones present in 85 per cent. of cases of cancer of the gall bladder, Musser in 69 per cent., Courvoisier in 74 out of 84; Jale in 23 out of 30, Bertrand in 14 out of 15, Sievert in 95 per cent., and Brodowski in 100 per cent. of all cases examined. These facts cannot be ignored, and point so strongly to gall-stone irritation producing primary cancer of the gall bladder and liver that I think it ought to have weight with us in advising on the early diagnosis and surgical treatment of cholelithiasis.

Were the recognition of gall stones a difficult matter there would be much to say in favour of delay; but seeing that with comparatively few exceptions cholelithiasis may be recognized, even in the earliest stage (by the digestive symptoms with which it is associated, by attacks of discomfort in the epigastrium even before the characteristic symptoms are felt, by the irregular pain radiating round the right side to the shoulder blade, by the tenderness in the gall-bladder region, and by a careful pathological examination of the excreta, not for gall stones but for signs of disturbance in the upper bowel and the pancreas which are nearly always associated with early cholelithiasis), there can be little excuse for a failure to diagnose the condition. As soon as the later characteristic pains supervene, there is, of course, no need to wait for jaundice or the more serious manifestations in order to recognize the cause.

Here again medical treatment is capable of affording great relief. This it does not by causing dissolution of gall stones, but by relieving the catarrh and inflammatory conditions that are associated with them; but it does not remove the disease, and sooner or later patients who have been tided over the early manifestations develop complications of one kind or another that demand surgical treatment at a later stage and under much less favourable conditions. I have seen many such cases in which a diagnosis of gall stones had been made years before, but the relief of symptoms had put the patient in a fool's paradise, and only later, when serious complications had supervened or possibly cancer had developed, was the folly of delay made manifest. I proved many years ago—and an extended experience has further confirmed my observations—that the removal of gall stones can be undertaken at an early stage with hardly any risk, if the simple operation of cholecystotomy can be performed, but when the more formidable operations of choledochotomy, cholecystectomy, and other procedures have to be undertaken in the presence of jaundice, infective cholangitis or other serious conditions, the simplicity and safety of operation can no longer be urged.

CARCINOMA OF THE STOMACH.

This is one of the diseases which, if caught in an early stage, can be cured in a considerable proportion of cases. Unfortunately it is difficult of diagnosis in an early condition. No one has done more than Professor Osler to advocate an early diagnosis of cancer of the stomach, if needful by an exploratory operation, in order that radical treatment may be carried out at a time when there is a hope of cure; and if only this truth could be impressed on those who see these cases in an early condition, at a time when the symptoms are merely those of dyspepsia, and if, in such doubtful cases, a consultation were insisted on, so that the matter might be taken seriously at the earliest possible moment, we should find that much could be done for these otherwise hopeless cases.

When so little was possible from either medical or surgical treatment, the early diagnosis was of little moment.

from a practical point of view, but now that surgery has proved it possible to remove cancer of the stomach, when seen early, before a tumour or other pathognomonic symptoms have developed, the importance of an early diagnosis cannot be too strongly insisted on. There is ample evidence to show that for some length of time cancer is purely a local disease, and just as in the breast, the tongue, and the uterus we can point to patients living comfortable and happy lives many years after the removal of the disease, so in gastric cancer it is reasonable to estimate, and, in fact, can now be proved by positive evidence, that a like result may be anticipated.

Whenever a patient at or after middle age complains somewhat suddenly of indefinite gastric uneasiness, pain, and possibly vomiting, followed by loss of weight and energy, especially if associated with anaemia, the possibility of cancer of the stomach ought to be entertained, and if no improvement takes place in a few weeks at the most, an exploratory operation is more than justified, and ought to be more frequently advised and carried out. Although a chemical examination of the stomach contents and a general examination of the patient may give strong grounds for suspicion, our diagnosis can often only be rendered certain by a digital examination, which may be effected through a small incision, that can, if needful, be made under local anaesthesia, and that without more risk, if in an early stage, than ordinarily attends the administration of an anaesthetic. I can point to patients living and well from whom I removed cancer of the stomach so long as eight or more years ago, and many other surgeons can give similar experiences.

Even at a later stage, supposing a diagnosis has not been made until a tumour has developed, operation is worth performing, as relief can be given and life prolonged by the operation of gastro-enterostomy. I am, moreover, firmly convinced that many deaths are ascribed to cancer when the disease is inflammatory, and perfectly curable by gastro-enterostomy without removal of the tumour; and did time permit of it I could relate a number of instances in which I have done this operation, because I thought the tumour of the stomach, which I believed to be cancer, was too large and too extensive to remove, in which the patients have made a complete and permanent recovery and are perfectly well now, years after operation.

Although there is no pathognomonic symptom of early cancer, the absence of free HCl in the gastric contents after a test meal is suspicious, as is also the presence of albumose in the urine, of blood in the faeces, and of Salomon's test—the finding of a certain amount of albumen in the stomach contents some hours after it has been thoroughly cleared by lavage.

SIMPLE ULCER OF THE STOMACH.

This is another disease I would specially mention, as if diagnosed early and treated radically at first it is quite curable by medical treatment in a considerable proportion of cases, whereas if merely treated palliatively the disease is almost certain to relapse and to become chronic.

Only last week I operated on a lady who had suffered from stomach symptoms continuously for twenty years, during which time she had had every imaginable form of treatment. At the operation I found, as suspected, a large chronic ulcer along the lesser curvature of the stomach, which had led to a marked hour-glass contraction. This is a good example of many similar cases that I have seen, in which the patients, after suffering and being treated year after year for symptoms, which no amount of medical treatment could possibly cure, have had at last to submit to operation or to lose their lives. Had the disease in this case been diagnosed in an early condition and thoroughly treated by diet and rest, she might have been saved these twenty years of suffering.

Leube has shown that at least one-half to three-quarters of all cases of ulcer will be cured by early medical treatment, but if they are not cured in that time they will not be cured by medical treatment alone.

The more recent observations made at the London Temperance Hospital by Mr. Paterson and Dr. Rhodes on 153 consecutive cases, under the care of Dr. Soltan Fenwick and Dr. Parkinson, are still more striking, showing that the proportion of real cures in cases of confirmed chronic ulcer, even after prolonged treatment by diet and rest in hospital, is under 25 per cent. I have elsewhere

given my views on this subject, and shown how safe and successful surgical treatment is—the risk, for instance, of gastro-enterostomy being very little over 1 per cent. But what I plead for now is an earlier recognition of the condition, so that adequate medical treatment may be applied in time, in order to save the necessity of having to appeal to surgery.

The symptoms of gastric ulcer are so well known as to need no further description now, and the serious complications of perforation, haemorrhage, hour-glass contraction, cicatricial stenosis, gastric dilatation, extensive perigastritis, perigastric abscess, inflammatory tumours, fistula, and others that could be mentioned, only go to prove how serious for the patient the want of early diagnosis and of radical treatment have been. Moreover, it is now clearly and definitely proved that chronic irritation due to long-continued ulcer is an undoubted cause of cancer, which complication might be prevented by an early diagnosis and treatment.

My conclusions are not the vain thoughts of mere imagination, but have come as the result of an experience approaching 1,000 operations of one kind or another on the stomach.

OVARIAN TUMOUR.

To pass to an entirely different subject. I have operated some hundreds of times for large ovarian tumours, and many times with serious complications. The question has often crossed my mind during the operation, Why should these cases have been allowed to go on so long before being submitted to operation, when no amount of medical treatment could have done an atom of good, and they could have been recognized in their infancy by a bimanual examination, and removed with almost absolute certainty of recovery before any complications had supervened? Here an early diagnosis and early treatment would have saved the danger of suppurating cyst, twist of the pedicle, ruptured cyst with general peritonitis, and many other complications that are apt to supervene at all stages of this disease.

CANCER OF THE UTERUS.

So much has been written recently on the importance of the early diagnosis and treatment of cancer of the uterus by an examination of all cases of irregular intermenstrual bleeding or post-climacteric haemorrhage that the subject need not be further dwelt on; nor is it necessary to labour the question of a careful examination of the rectum, if needful by the sigmoidoscope, in cases of rectal discomfort or haemorrhage in middle or advanced life in order to recognize and treat cancer in that region at the earliest possible moment.

DIAGNOSIS OF THE CAUSE OF JAUNDICE.

Although I should have liked to insist on the importance of an early diagnosis in appendix trouble and the desirability of absolute rest, of absolute starvation, and of the avoidance of the routine aperient in all cases of abdominal colic until a diagnosis of the cause has been established, by which many operations in the acute and dangerous stages might be avoided, and although I should have liked to dwell on the early diagnosis of cancer in various positions in order that a timely radical operation might be done, I must omit them for want of time, and I will only give one more example, and that is the symptom of jaundice and the early diagnosis of the cause with a view to successful treatment.

The onset of jaundice after 35 to 40 years of age is an important event that may herald a condition which will slowly yield to general treatment, which may demand operative treatment for its cure, or which may prove to be incurable. To treat such cases simply as catarrhal jaundice after medical treatment has been pursued for two or three weeks without relief, is to my mind unjustifiable procrastination.

Careful clinical and pathological investigation is therefore, from my point of view, incumbent on the medical attendant at a much earlier stage than is often considered necessary, as on the diagnosis will depend the treatment.

As I have recently given my views on the subject at one length before the North London Medico-Chirurgical

Society in a paper which has been accepted for publication, I need not enter at length into the various causes.

Gall stones in the common duct should be readily diagnosed, with few exceptions, by the previous history and by the attacks of pain, followed by an increase of jaundice, frequently associated with symptoms of infective cholangitis, and, as soon as diagnosed, I think they ought to be removed by cholecystotomy before more serious complications supervene.

Jaundice of painless origin is seldom due to cholelithiasis, but, if due to interstitial pancreatitis, it may be diagnosed by a careful examination of the excreta, and by the discovery of the pancreatic reaction in the urine and the presence of urobilin, and by the discovery of an excess of neutral fat in the motions, and the evidence of an incomplete obstruction of the common duct as shown by the presence of stercoribilia in the faeces. In many such cases, medical and general treatment, thoroughly carried out, will bring about relief or cure; but if the obstruction is persisting after a month, or at most six weeks, of treatment, the question of exploratory operation ought to be considered with a view to removing the cause, if that be possible, or of short-circuiting the obstruction where the cause cannot be taken away, for it is to be borne in mind that the circulation of bile in the blood tends to its deterioration, and to the production of a haemorrhagic tendency, which makes later operations more dangerous, whereas an early operation can be done with very little risk and a probability of recovery in 97 or 98 per cent. of cases.

If the clinical and pathological examinations give rise to a strong suspicion of cancer of the pancreas or of the common bile duct I would still advise exploration before the more advanced blood changes and changes in the liver owing to biliary congestion render even an exploratory procedure a matter of some anxiety and danger; moreover, it is a fact that a short-circuiting of the gall bladder into the duodenum has been followed by cure in quite a number of cases in which both my medical friends and I thought the disease to be undoubtedly malignant; but in any case, even if really malignant, relief to the distressing symptoms of jaundice may be given by a cholecyst-enterostomy and will be gratefully appreciated by the patient.

Were it necessary further to illustrate my proposition, it would be easy to give further examples of diseases in which an early diagnosis is of vital importance to successful treatment both medical and surgical, but where the mere treating of symptoms and a delay in making an exact diagnosis necessarily postpones rational treatment until the disease may be too advanced to yield to general and medical measures or possibly even too serious for relief by surgical treatment except at a greatly increased risk.

It was announced in the JOURNAL of January 23rd that an anonymous benefactor had given £20,000 to the London Hospital Medical School, with the express stipulation that the interest accruing therefrom should be applied solely in furtherance of medical research. We learn from the *London Hospital Gazette* that the fund has been placed in the hands of the London Hospital Medical College Endowment Fund, Mr. Douro Hoare, the Hon. H. L. W. Lawson and Sir Frederick Treves, whilst the administrators are the Honourable Sydney Holland, Dr. Bertrand Dawson, and Dr. Henry Head. Although the administrators will be responsible for the manner in which the income of the fund is to be disbursed, they will invite the heads of departments to express their views, and will be ready to consider the claims and suggestions of individuals. The donation will form the nucleus of an endowment fund which, according to the scheme set forth in the prospectus, will be applied for the following purposes: (1) To secure the maintenance of the London Hospital Medical College in full efficiency and equipment, so far as buildings, laboratories, and apparatus are concerned, for the investigation of disease and its treatment, with a view to the lessening of human suffering; (2) to secure for the college the services of teachers and investigators of the highest standard; (3) to improve medical education generally; (4) the liberation of the college from its existing debt, which has been contracted in attempting to carry out these objects. The sum required for these purposes will be at least £150,000.

The Morison Lectures

PATHOLOGY OF SYPHILIS OF THE NERVOUS SYSTEM IN THE LIGHT OF MODERN RESEARCH.

[With Special Plate.]

DELIVERED AT THE ROYAL COLLEGE OF PHYSICIANS, EDINBURGH, JAN. 25TH, 27TH, AND 29TH, 1909.

BY F. W. MOTT, M.D., F.R.S., F.R.C.P.

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LECTURE I.

MR. PRESIDENT AND FELLOWS OF THE COLLEGE.—Allow me to thank you for the great honour of having been invited to give the Morison Lectures in this ancient College of a city so long renowned as a great seat of medical science and learning.

In considering the general pathology of syphilis of the nervous system, it is not necessary to refer to the different bacterial and other organisms which have been described by various authorities as being the specific agent in the production of the lesions characteristic of this disease before the discovery of the *Spirochaeta pallida* by Schaudinn. This organism, whether it be, as its discoverer believed, a protozoon or a bacterium or micro-organism between a protozoon and a bacterium, is regarded as the specific organism of syphilis by these best competent to judge—namely, Metchnikoff, Hoffmann, Neisser, Levaditi, Bertarelli, Shennan, and many others. Metchnikoff and Roux were the first to demonstrate experimentally the communicability of syphilis to animals, and to show that the nearer the animal approached to man the more the disease approached in its characters and virulence the human form of the malady. Thus, although other animals, especially apes and anthropoid apes, have been successfully inoculated, the chimpanzee alone reproduces with absolute certainty the human symptomatology. This is as we should expect, for the blood precipitin reaction of this anthropoid approaches most nearly that of man. The experiments of Neisser, Hoffmann, Bertarelli, Levaditi, and numbers of others have confirmed this important discovery, and many new facts have been added to our knowledge of the general pathology of syphilis by experiments on apes and other animals, and I would mention in particular the important discovery by Bertarelli that he was able to inoculate the spirochaete into the cornea of the rabbit and transmit it through a series of such animals. Levaditi has experimented successfully with the cornea from one of these animals, and not only transmitted it through a series of rabbits, but used the cornea infected with spirochaetes to produce an infection of the eyelid of an anthropoid ape. Lastly may be mentioned the important observations upon the bio-chemical changes in the fluids of the body by the Wassermann-Neisser-Brück method of serum diagnosis. Upon this tripod, of the discovery of the specific spirochaete, the communication of the disease to apes, and the serum diagnosis, a vast amount of most valuable work rests; the tripod is mutually supporting, and every day fresh evidence is forthcoming to strengthen the opinion that the true cause of syphilis has been discovered; that, although as yet no vaccine has been successful, this is no longer a hopeless outlook; and, lastly, a most valuable means of diagnosis of syphilis and parasymphylis has been obtained.

THE MICROBIOLOGY OF SYPHILIS.

The *Spirochaeta pallida* examined in fresh preparations is seen with much greater difficulty than other coarser spirochaetes which may exist in the primary sores on the genitals or secondary papules of mucous surfaces. Hoffmann states, in order to find them, seek the edges of red blood corpuscles, to which they often are seen to be attached by one end (a process of climitropism). It is barely $\frac{1}{2}$ μ thick, and possesses on an average 8 to 12 very regular, narrow, and very steep coils, the height of which at the ends diminishes somewhat (vide Figs. 1, 2, 3, 4 in Plate). The length of this corkscrew-like organism varies within wide limits, from a few up to

26 coils or even more. Examined with a paraboloidal reflecting substage condenser, by which living organisms appear light on a dark background, the *Spirochaeta pallida* can be seen to rotate on its long axis and oscillate to and fro with a pendulum-like movement, contrasting thus with the coarser and larger spirochaetes, which have an eel-like movement. An observation of Hoffmann showed that the untreated serum of a syphilitic patient caused a cessation of movement after about a couple of hours.

(Hoffmann.)

DIFFERENCE BETWEEN THE *SEREBRIS-SPIROCHAETE* AND OTHER KINDS OF SPIROCHAETE. — (Hoffmann.)

Spirochaete.

Other Forms.

1. Large size, 10 to 15 μ on the average, still often more than this. The extreme tenuity of the fibre itself. This relation between length of fibre and its thickness is very characteristic.
2. Very slightly refractile in fresh preparations, therefore only visible with the best apochromatic lenses.
3. Ends are pointed, often terminating in long red threads.
4. Movements screw-like around their long axis; lateral pendulum movements; movements forwards and backwards still less active, often remains a long time inactive anchored to a blood corpuscle whilst it exhibits rotatory and slight geniculum movements.
5. The spiral possesses deep, steep, and very regular coils of corkscrew form. Fibre excessively thin in comparison to the length and depth of the spiral.
6. Relation of the depth to the length of the coils mostly greater than 1—namely, 1.0-1.2; 1.0-1.5.
7. Great elasticity and retention of the spiral form, therefore with more difficulty deformable.
8. Only trifling variations in breadth in respect to the form; only the length, therefore also the number of coils, variable.
9. It is coloured by Giemsa, red (general scattered chromidial substance).
1. Fibres relation to their length far thicker, therefore they have a plumper appearance; the finer forms are mostly shorter than the *Spirochaete pallida*.
2. Strongly refractile, and therefore easily seen in fresh preparations.
3. Ends blunt. End threads seldom seen.
4. Lateral movement much more active, eel-like and sinuous, and more rapid change of position. Anchors to cells much less frequently, and detaches itself quicker.
5. Coils flatter, irregular, in many forms (*Sp. dentium*) narrower fibres, thick and plump in comparison to the breadth of the coils.
6. The known relation is smaller than 1.
7. Softer and more pliable, therefore the form is more changeable.
8. Greater variability, all transitions from small to large, from thick to thin examples.
9. Colour more bluish-red; nuclear rod or rod-nucleus in plasma often demonstrable.

Schaudinn and Hoffmann were able to prove that the *Spirochaete pallida* is found in all cases of syphilis, and is never found in any other affections. They also discovered spirochaetes in fresh preparations, not only on the surface of the chancres and papules, whether of the skin or mucous membranes, but also in the depths of the tissues and in the juice of enlarged inguinal glands of syphilitic cases. Metchnikoff, Roux, and Levaditi have demonstrated the presence of the spirochaetes in chancres on the face and penis of monkeys in association with other organisms; they also found the spirochaete in papules. Buschke and Fischer discovered spirochaetes in abundance in the liver and spleen of an infant affected with congenital syphilis, and Levaditi demonstrated numbers of spirochaetes in the fluid contained in the bullae of pemphigus occurring in a congenital syphilitic infant. Since then an ever-increasing army of workers have, with a few notable exceptions (Saling, Schulze), supported the discovery of Schaudinn. In fact, this organism has been shown in every possible lesion which is definitely syphilitic (Metchnikoff). In some cases they cannot be found in the primary sore unless a very careful search is made, and even then the search may not be successful. The same applies, with even more force, to the secondary eruptions.

The spirochaetes have been discovered in the capillaries of the skin and in the perivascular tissue. Although only occasionally found in the blood, the spirochaetes are more numerous in the lymph and lymphatic organs in general, and, according to Metchnikoff, their presence in lymphatic

vessels may be said to be constant in syphilis, and it is at times possible to see a very large number in the perivascular spaces although their number in the corresponding blood vessels may be exceedingly limited. I have examined a number of primary sores, mucous tubercles, and cutaneous papules sent to me from the lock hospital, also fetal tissues and the tissues of several congenital syphilitic infants, and in all cases smears have shown spirochaetes by the Giemsa method, sometimes, however, only after long and diligent research. In one case of secondary papules I found the spirochaetes by the Levaditi method, although I was unable to find them in the blood. When the disease becomes generalized and there is a polyadenitis, the organism can be found in glands far removed from the primary lesions; thus Lewandowsky found spirochaetes in the juice of the epitrochlear gland. It is presumed that for a short time, perhaps some hours, the organisms remain in the lymph clefts and spaces of the tissues at the point of inoculation; there it multiplies, and in a short time extends into the lymphatics and produces microscopic changes; although macroscopic changes are not visible. In confirmation of this it may be mentioned that Levaditi and Yamanouchi have inoculated the chimpanzee with syphilis, and at a time when the point inoculated did not show the slightest microscopic indication of primary syphiloma they were able to detect an active pullulation of spirochaetes and specific histological changes. The same investigators have recently published some very interesting researches upon incubation in syphilis. These observers, by a series of observations on keratitis in the rabbit induced by introducing a small portion of an infected cornea into the anterior chamber and by killing the animals at varying periods of time afterwards, also by introducing the infected cornea of the rabbit beneath the skin of the eyelid in apes and a chimpanzee eyelid and examination of the tissues for spirochaetes by the Levaditi method, formulate the following conclusions: The period of incubation which precedes the manifestation of the primary syphiloma of the monkey and the specific keratitis of the rabbit is not due to the existence of an evolutionary cycle of the *Treponema pallidum*. It corresponds to the slow but progressive histological lesions provoked by the pullulation of the microbe of syphilis. This pullulation is not marked at first, in consequence of a defective assimilation, caused on the one hand by a change of medium, and on the other, by the conditions which preside over the supply of nutritive materials. But, as soon as the vessels and new-formed cellular elements assue to the treponema the nutritive principles of which it has need, the multiplication by the parasite becomes active, and puts an end to the period of incubation.

The organisms after local development at the point of inoculation in man and in the anthropoid ape soon reach the nearest lymphatic glands, where probably they again multiply in the lymph sinuses and spaces, setting up an adenitis; these changes may be biological, provoked by the organism for its perpetuation, and not altogether in the nature of a defence on the part of the tissues against the invasion by the organism. The living organism usually prevails and passes into the general lymph stream, causing polyadenitis and an infection of glands remote from the seat of inoculation. The organisms may thus find their way into the thoracic duct, and a general infection of the blood stream takes place, with the development of the secondary eruption (rosola). Moreover, a profound bio-chemical change occurs in the blood and fluids of the body. Occasionally, as first pointed out by Lang, and as I myself have observed in several cases, quite early in the disease, even before the primary sore is healed, symptoms pointing to meningitis may occur; also, as will be pointed out later, and which I have seen illustrated by many examples, the most severe and the most intractable cases of brain and spinal syphilis occur within the first twelve months after infection; it is quite probable that the meninges were infected at the time of the rosolar rash in some of these cases, but the symptoms occurring then were slight and overlooked. Not infrequently severe symptoms of meningitis have occurred within a few months of the primary sore. I have had one case in which well-marked signs of meningitis occurred while the sore was yet unhealed. It is reasonable

* Some authors prefer this term to *Spirochaete pallida*.

to suppose that if the spirochaete is the cause of the secondary cutaneous eruption by a sort of metastatic process in the skin capillaries, the same may occur in the meninges. The following case reported by Gautier and Maloizel is interesting in this respect, and tends to support that conclusion: A young woman affected with secondary syphilis had seven successive attacks of cutaneous eruption, simultaneously with sudden fever, headache, stiffness of the neck, and vomiting, accompanied by lymphocytosis of the cerebro-spinal fluid—a complex of symptoms of syphilitic meningitis. Again, Boidin and Weil have reported a most interesting case of a young man, aged 18, who had (1) a hard chancre in the middle of June; (2) headache in the middle of July; symptoms of meningitis and lymphocytosis of cerebro-spinal fluid August 5th; roseolar rash August 12th. Cure of the meningitis by injection August 17th.

It is a pity that some of the fluid of such cases was not used for experimental inoculation on an ape. So far only Hoffmann has succeeded in showing that the cerebro-spinal fluid may be infective, for he has successfully inoculated a monkey with the cerebro-spinal fluid obtained blood free, and taken with all precautions from a man suffering with a papular syphilide. Neisser states that Dohio and Tanaka have found spirochaetes in the cerebro-spinal fluid in the case of a patient with a papular eruption; a second examination, as well as one by Neisser himself, was unsuccessful. It may be that centrifuging a fluid of such low density would disintegrate such delicate organisms. Again, we know that it is not infrequently impossible, except by culture or inoculation, to find tubercle bacilli in the cerebro-spinal fluid of tuberculous meningitis. Until experimental investigations have been made with fluid obtained from early acute cases of syphilitic meningitis, the absence of the organisms upon microscopic examination, and failure of experimental inoculation is no valid argument against their being the cause of the meningitis. It may be said that if the spirochaetes are the cause of the meningitis, they could be shown in sections or in films of the exudation. It is seldom that syphilitic meningitis is rapidly fatal, and cases would rarely come under early enough observation; moreover, not more than 1 or 2 per cent. of syphilized persons suffer with obtrusive symptoms of meningitis, and they seldom die in consequence thereof, and still more rarely do they die for at least some months after the onset of symptoms. I have been unable by the silver or Giemsa method to find spirochaetes in the exudation of typical cases of syphilitic meningitis. But I was unable to find trypanosomes in the similar cell infiltrations of the meninges and perivascular spaces of sleeping sickness, although I have examined quite a thousand sections obtained from 30 cases. Yet, it cannot be doubted that the *Trypanosoma gambiense* is the exciting cause of the meningo-encephalitis.

Syphilis is characterized by being an eruptive malady following the inoculation of the virus, presumably the spirochaete of Schaudinn, and by the possibility during the remainder of the life of the individual of fresh eruptions occurring in connexion with the existence of the virus in the body. A blow may be followed by a gumma, or a syphiloma may occur spontaneously in any part of the body at any period of time after infection. Microscopic examination shows that essentially the same tissue reactions occur in these late manifestations of syphilis as in the primary or secondary stages. It is well known that tertiary

lesions are, as a rule, non-infective; consequently we should not expect to find the active agent, or what we believe to be the active agent—*Spirochaeta pallida*—except in a few instances, and then only in small numbers. This is actually what has occurred. For a long time attempts to prove the existence of the spirochaetes in tertiary lesions failed, and this led to the not unwarrantable view (which may be true) that the organism may exist in a latent and attenuated, possibly intracellular, form, and it is possible that late manifestations may be the result in some cases of secondary lesions which have remained latent until raised into activity by some exciting factor, such as exposure to cold, trauma, and toxæmia—microbial or otherwise. For at no period after infection may not such syphilitic meningitis occur. I have described a case of congenital syphilis in which cerebro-spinal meningitis occurred in a girl of 16. I was unable, however, to find spirochaetes, although the meningitis was very active and typically syphilitic in its histological character. It must be admitted that this is a part of the microbiology which is unsatisfactory. The spirochaete, however, has, in a few instances, been found in a gummatous tumour. Schandinn found it in a gumma of the liver. Blaschko recently claims to have discovered spirochaetes in scrotal papules which occurred sixteen years after infection. Reuter and Schmorl claim to have found

spirochaetes in syphilitic aortitis embedded in the proliferated intima between the fibrils, sometimes in places in which regressive changes are absent. Moreover, Benda claims to have demonstrated typical spiral, straight, and granular forms of the spirochaetes in the external layer of the media, and still more in the connective tissue adjacent to a patch of syphilitic endarteritis. Just as there are, relatively, but few successful observations proving the existence of spirochaetes in tertiary lesions, so there are, relatively, few successful experiments of inoculation of animals from tertiary lesions. Hoffmann has, however, succeeded in inoculating an ape from a gumma occurring in a man three and a half years after primary infection.

It has already been stated that the *Spirochaeta pallida* is an organism between a bacterium and a protozoan, and in spite of the divergent views respecting the classification of spirochaetes, there are, in my judgement, more characters linking them to the protozoan than to the bacterium. The *Spirochaeta pallida* contracts, moves, and modifies its structure in a manner different to a bacterium. The appearance of resting forms is totally different, and they arise in a different manner to the spores of bacteria (Prowaczek). Again, the clinical aspect of affection from spirochaete invasion differs from that of bacterial diseases, and conforms especially to certain trypanosome infections. There is a periodicity of the symptoms altogether unknown in bacterial diseases. But, what has struck me from my own personal experience and knowledge, is the great similarity of the histological lesions of the nervous tissues of chronic trypanosome infections—for example, sleeping sickness and dourine—to syphilitic and parasymphilitic lesions (vide Plate). The universal perivascular infiltration in the central nervous system of lymphocytes and plasma cells was thought by Nissl and Alzheimer to be pathognomonic of general paralysis and syphilis, but I have shown that exactly the same occurs in sleeping sickness. In the *mal de coit* of horses an ataxic paraplegia occurs, and I have found, in five specimens sent to me by Dr. Lingard from the Imperial Bacteriological Institute of India, posterior root degeneration and

DESCRIPTION OF FIGURES ON PLATE.

Fig. 1.—*Spirochaeta pallida*, smear preparation of condylocoma, stained by Giemsa solution. Magnification, 3,400.

Fig. 2.—Another portion of the smear, showing appearances of two spirochaetes twisted around one another; possibly this is the result of longitudinal fission. Magnification, 3,400.

Fig. 3.—*Spirochaeta pallida* from smear preparation of mucous tubercle. Magnification, 1,800.

Fig. 4.—Section of spleen from a case of congenital syphilis, stained by the Levaditi method. Magnification, 1,400.

Fig. 5.—Perivascular infiltration with lymphocytes and plasma cells, stained with polychrome blue, from a case of gummatous cerebro-spinal meningitis. Magnification, 250.

Fig. 6.—Section of central nervous system from a case of sleeping sickness in a European, showing perivascular infiltration with lymphocytes and plasma cells. Magnification, 250.

Fig. 7.—Section of a small vessel showing the sheath infiltrated with lymphocytes and plasma cells and with proliferated glia cells. Experimental sleeping sickness in an ape. Magnification, 320.

Fig. 8.—Section of cortex cerebri from a case of sleeping sickness in a European, stained to show the neuroglia. Magnification, 450.

Fig. 9.—Section of brain of ape infected with *Trypanosoma gambiense*, showing perivascular neuroglia cell hyperplasia. Magnification, 320.

Fig. 10.—Blood smear from a case of sleeping sickness, showing *Trypanosoma gambiense*. Magnification, 2,000.

Fig. 11.—Blood film showing *Trypanosoma brucei*. Magnification, 1,700. It will be observed that it would be difficult to decide the nature of the parasitic organism by morphological characters alone.

All the figures, with the exception of 7 and 8, are photomicrographs; these two figures are from drawings made by Dr. Edgar Schuster.

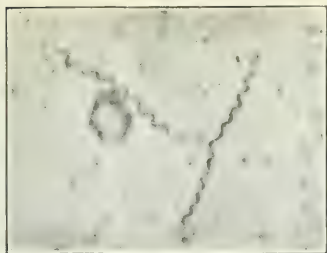


FIG. 1.

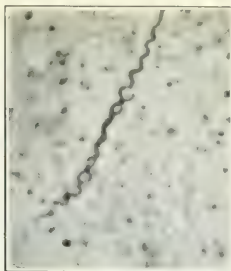


FIG. 2.

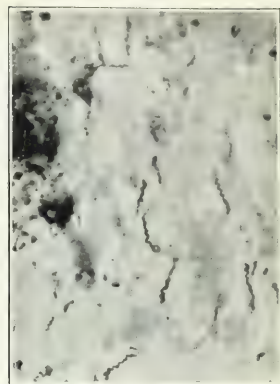


FIG. 4.

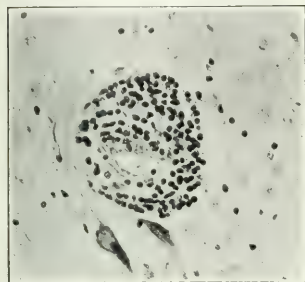


FIG. 5.

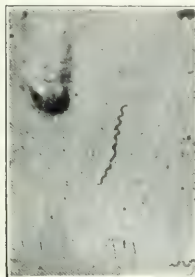


FIG. 3.

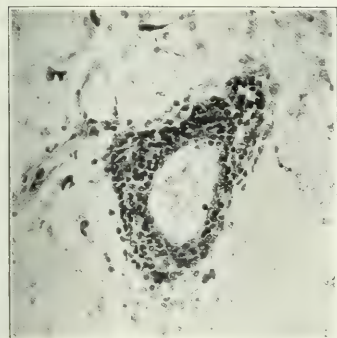


FIG. 6.

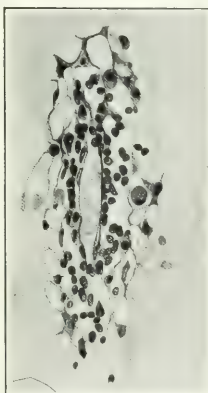


FIG. 7.

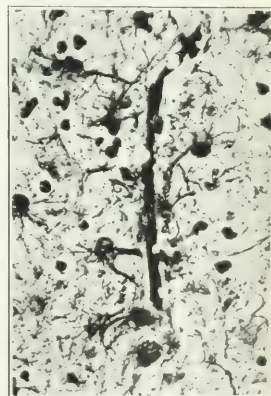


FIG. 8.

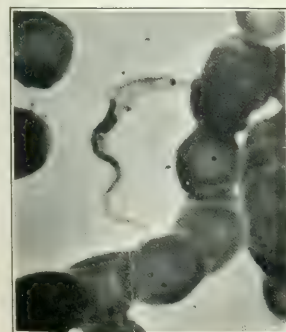


FIG. 10.



FIG. 11.

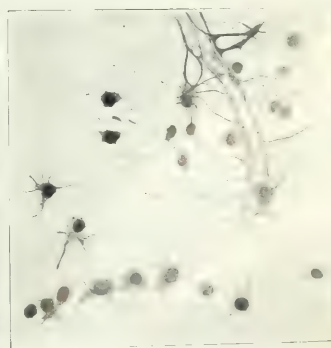


FIG. 9.



sclerosis of the posterior columns of the spinal cord. Spielmeyer has obtained by experimental trypanosome infection of dogs a lesion of the posterior columns of the spinal cord simulating the ataxic lesion; he has also produced optic atrophy. Again, there is similarity in the fact that lymphocytes and plasma cells are found in the cerebro-spinal fluid in trypanosome diseases of animals and man—for example, sleeping sickness. Moreover, Levaditi has shown that, in point of view of sensibility in respect to haemolyzing poisons, blood corpuscles, spirochaetes and protozoa constitute a homogeneous group, and the spirochaetes correspond in this respect more to the protozoa than the bacteria.

The study of all these diseases is primarily biological. The contagium vivum is a living organism whose activities, like that of all living organisms, are for self-preservation and the preservation of the species. The chemical toxin which the organism produces is to enable it to live and multiply. The spirochaetes consist of a viscid plasma covered with a membrane which serves as a means of osmosis. This osmotic membrane is a lipid substance, like that which forms the membrane of the red corpuscles, and is sensitive to haemolyzing substances.

The fact that Castellani has discovered a spirochaete, which he terms *Spirochaeta pallidula*, in yaws is of importance in showing that a spirillary organism not quite morphologically identical with that of syphilis is probably capable of producing a chronic disease in many of its features not unlike syphilis. It might be argued that all the postulates laid down by Koch have not been fulfilled, and, therefore, that we have no right to claim that the *Spirochaeta pallida* is the specific organism of syphilis. Thus the organism, although it has been grown in celloidin capsules, has not been cultivated on an artificial medium outside the body, and the disease reproduced by injection of such a culture. But the same argument might be applied to certain established protozoal diseases—for example, malaria and sleeping sickness.

Dourine may almost be regarded as the syphilis of equines, for it is characterized by an infective sore on the genital organs, affection of the nearest lymphatic glands, then infection of the blood stream followed by successive eruption of plaques; and, as in syphilis, so in dourine and sleeping sickness, the juice of the lymphatic glands, in a condition of acute swelling, shows the specific organisms more readily than the blood films. The trypanosomes may disappear from the blood entirely, even without the administration of drugs, and reappear, giving rise to an irritating eruption of papules and fever, and the trypanosomes can be found in smears obtained by scarifying the papules more readily than from smears of the blood. This was demonstrated by Lingard in the case of *mal de coit* of horses, and by the French observers in a case of sleeping sickness. So, also, in syphilis I have been able to find an abundance of spirochaetes in the secondary papules of the skin, although I was unable to find them in the same cases in the blood films. It is a remarkable fact that Neisser was unable to inoculate animals by injecting the virus into the blood or into the organs; success was only obtained by scarifying an epiblastic skin surface and rubbing in the virus. This is precisely the seat of eruptions and pullulation. It looks as if the organism, to perpetuate the species, must find its way out of the body in the way it came in. Sir Patrick Manson (Huxley Lecture) expressed the opinion that, by analogy, we must presume that all trypanosome diseases are carried by some biting insect which acts as alternate host. But dourine spreads in the same way as syphilis. It is quite possible that the *Trypanosoma equiperdum*, which differs very little from the *Trypanosoma evansi*, may be this trypanosome which has acquired the habit of pullulation in the mucous cutaneous orifices, and, when infection occurs, always tends to get back there. In syphilis the same habit may have been acquired. It is known that mucous tubercles and condylomata (secondary eruptions) are more infective than the primary sore, and contain immense numbers of spirochaetes. Similarly, upon reading Lingard's experiments, I find he mentions that the *Trypanosoma equiperdum* was found in great abundance sometimes in the vaginal mucus when it could not be found in the blood. Again, he was more successful when he inoculated animals by scarifying the genitals and

inoculating with blood from a papule or with vaginal mucus than when he injected the blood into animals. These facts accord very much with Neisser's experiments, and would seem to indicate that a habit had been acquired by the *Trypanosoma equiperdum* of developing in the mucous membrane of the genital organs, and of using this acquired habit as the means of preserving the species.

Finally, the therapeutic agents, mercury and arsenic in the many forms employed, are specific for both trypanosome and spirochaete affections. They are not of much use for bacterial infections. Mercury, particularly in the form of inunction, is especially valuable; and this may be owing to the fact that it prevents the pullulation of the spirochaetes on the surface of the body, including the mucous orifices, a habitat which these organisms have found particularly favourable for perpetuation of the species by transmission to another individual. Mercury, moreover, administered in any way, tends to come out by the skin, as can be readily demonstrated.

I have pointed out that, practically, the morbid tissue changes in syphilis are similar, whether the lesion be the primary sore or a gumma twenty years later; moreover, it is difficult to understand how the spirochaete, seeing that it has hardly ever been found in tertiary lesions, can produce the same specific cell hyperplasia so long after the primary infection. The following hypotheses may be put forward to explain the phenomenon of a gumma appearing spontaneously in the central nervous system long after the primary sore and apparent cure of the disease:

1. The spirochaete, or some modified form of it, has remained latent in the tissues at the seat of the lesion, and, for some reason, inherent or otherwise, the resistance of the tissues at that particular spot has become lowered, and the organism has exerted again its specific activity—possibly in some not yet discovered intracellular form.

2. The specific organism has remained latent in some other tissue—for example, the marrow of bone, the spleen or glands—and, escaping into the blood or lymph circulation, has, like a new growth, engendered a metastasis, which has developed and increased, producing a hyperplasia of the fixed tissue cell elements, conjunctival and endothelial.

3. There may be varieties of specific spirochaetes, one of which may have an elective affinity for the central nervous system, as we know the *Trypanosoma gambiense* has. It is difficult to differentiate this trypanosome from other forms by morphological appearances (vide Fig. in Plate); how much more difficult would it be to differentiate varieties of *Spirochaeta pallida*!

4. The invasion of the body by the spirochaetes has altered the blood and lymph bio-chemically, so that the tissue reactions to all causes which would lead to injury may take on the specific character.

Thus a blow on the head, vascular stasis, or some inherent weak spot may become the seat of a gummatous process. Although we are only beginning to unravel these biological problems, the evidence so far appears to be in favour of the fixed tissue cell hyperplasia with subsequent necrobiosis being a reaction to the influence of the specific organism. The fibrosis may be regarded as the attempt on the part of the tissues to repair the damage done in the struggle between the specific virus and the tissues; it is accomplished by the young connective tissue cells which have survived the fray; these are converted into fibroblasts and eventually into sclerous fibrous tissue. The amorphous caseous material is the residuum of the dead cells and organisms, especially the former, which, owing to the toxic influence of the virus and the cutting off of the vascular supply, have undergone necrolysis and plasmolysis. The organisms, when found, are not discovered here when the struggle is past, but at the growing edge, where the new blood vessels and embryonic cell hyperplasia is most active; for it is here that the organism finds pabulum for its multiplication.

LECTURE II.

In my last lecture I endeavoured to point out some facts and hypotheses of the biological problems of syphilis, especially in relation to disease of the nervous system. To-day I wish to draw your attention to modern researches bearing upon the bio-chemical changes which occur in the tissues and fluids of the body as a result of the entry and persistence of the syphilitic virus in the body.

I must, however, first make a slight digression, in order that you may obtain a better understanding of the altered bio-chemical conditions; this digression refers to the nature of lipoids—substances which have recently, in connexion with haemolysis, attracted a great deal of attention, and I wish here to acknowledge my indebtedness to Dr. Rosenheim for valuable information. "There seems to be a good deal of truth in the opinion of Bang that the importance of proteins as carriers of life (*Träger des Lebens*) has been over-estimated, while that of the lipoids has been neglected." Pfüger and most physiologists have taught that the vital activities depended essentially upon proteins. Bang contested this exclusive view. The name "lipoid" was given by Overton to fat-like substances which are contained in the cells of all living things, animal and vegetable. They were named by Waldemar Koch "lecithans," but this name has not been adopted. These lipoids may be divided into three groups: (1) N and P-free cholesterolin, fatty acids, and lipochromes; (2) nitrogenous but P-free cerobrosides; (3) phosphatides containing both N and P. Of these, the most important are the mono-amino phosphatide *lecithin* and the di-amino-phosphatide *sphingo-myelein*.

These lipoids were, until recently, considered of little importance; in fact, cholesterolin was looked upon as a physiological curiosity by virtue of the fact that its crystals had a chip out of one corner, and little else was said about it except that it was contained in the red blood corpuscles and formed the principal constituent of gall stones. Lecithin was known to be a constituent of the red corpuscles, but it was not until Flexner and Noguchi's experiments on cobra venom had been published that the importance of these bodies in the action of toxins aroused attention. They found that cobra venom contains two poisons, a neurotoxin and a globulin which has the property of dissolving red corpuscles. If, however, they washed the red corpuscles free of serum, the cobra venom no longer had a haemolyzing action; but, on adding serum to the washed corpuscles, an addition of cobra venom produced haemolysis. Clearly something was contained in the serum which interacted with the venom to produce the result. Kyes showed that the activator is soluble in alcohol and in ether, and he finally identified the substance as lecithin. But cholesterolin, another lipid, has the property of counteracting the activating effect of lecithin on cobra venom. This antagonism of cholesterolin and lecithin points to some bio-chemical or bio-physical relationship between the two bodies. Moreover, this relationship as regards osmotic membranes and haemolysis has been experimentally put to the test by Pannucci. This observer constructed glass cells covered with a membrane impregnated with lecithin and cholesterolin; in these he placed haemoglobin solution, then suspended in the toxin solution; the haemoglobin behaved differently as regards diffusion according to the proportions of these substances in the membrane. If we regard the red blood corpuscles as consisting of a sponge-like protein stroma holding the haemoglobin in solution, the whole being covered with a membrane consisting of a properly adjusted complex of the lipid substances, cholesterolin and lecithin, then we may suppose that haemolysis occurs as a result of a chemical or physical disturbance of the balance between the cholesterolin and lecithin. This idea of an osmotic membrane to the red corpuscle was, as far as I am aware, first pointed out by Professor Schäfer in the section, *Blood*, *Quain's Anatomy*, 1893. In haemolysis the membrane is either dissolved by the action of a ferment or a physical change occurs in the membrane, by which it becomes permeable to the large haemoglobin molecules; whereas in its natural perfect state it will only allow the smaller ions Ca, Na, and K to pass through (Fig. 12). It is probable that all cells and unicellular organisms possess similar osmotic membranes, and that the lysis of these organisms depends upon physical or chemical changes in the osmotic membrane, which is termed a "periplasium." The importance of this question is obvious in regard to cytotoxicity, bacteriolysis, and protozoology, and it will become especially apparent when we come to the study of the Wassermann reaction of the deviation of the complement in the sero-diagnosis of syphilis.

In regard to the origin of lipoids, especially in patho-

logical conditions, it is necessary first to refer to an important paper by Munk just published. This observer has used the polarizing microscope to distinguish between fat and lipid in cells; the latter is doubly refractile when the Nicol's prism is rotated. Ambrose and Held made use of this method for determining the existence of the myelin sheath in the anterior and posterior roots of the embryo. Munk finds that the existence of lipid droplets in the cell is associated with dissolution of the nucleus and destruction of the cell. Rosenheim remarks that the phosphatides may form a link with the cell nucleus, which possibly obtain their necessary supply of P from this source. A lipid substance in great abundance, then, means cell dissolution, the nucleus highly charged with phosphates and the cell protoplasm breaks up into a lipid complex as a result of the nucleolysis and plasmolysis. It may be suggested that Levaditi's experiments show that the spirochaetes stimulate the fixed tissue cells to proliferate, and then, invading this bed of young cells rich in nucleus, they, by the action of some secretion or otherwise, cause these same embryonic cells to undergo lysis, thus providing the necessary pabulum for their own growth and proliferation. It is probable these young cells are more easily attacked than the older cells, and this may be the reason why the spirochaetes are found in such great abundance in fetal tissues, and why the fetal tissues, especially the liver, contains such an abundance of lipid substance serving for the Wassermann reaction, although chemically it does not differ from lipid substance which can be obtained from normal tissues.

We are now in a better position to consider the serum diagnosis by the Wassermann and other methods dependent upon bio-chemical changes induced in the body by the introduction of the syphilitic virus whereby immunity to future inoculation is effected; and which, in my opinion, lies at the root of the late degenerative processes occurring in the central nervous system, and which are collectively termed parasyphilis.

Although it has now been ascertained that the syphilitic virus induces in the body metabolic changes whereby larger amounts of lipoids occur in the serum, and also in the cerebro-spinal fluid in general paralysis and tabes, yet these same lipoids are found in the normal tissues and fluids, the specific character is manifested by quantity rather than quality. The substances which in haemolysis play the part of *antigens* are lecithins, combined with other substances, especially soaps (Rondoni and Sachs), and those which play the part of *antibodies* are possibly complexes of cholesterolin. Yet, although in describing the Wassermann and other methods and the evolution of the knowledge concerning the same the terms "antigen" and "antibody" will be used, yet it is better to state at once that they do not conform to the antigen and antibody of bacteriolysis, and that the deviation of the complement (or fixation of the complement) may possibly depend upon the presence of these two kinds of lipoids, which we have previously seen play such an important part in the action of cobra venom.

THE SERUM DIAGNOSIS OF SYPHILIS BY THE WASSERMANN METHOD.

To explain the principles of this method it is necessary to make a few introductory remarks regarding its origin. Bordet, in 1901, discovered the phenomenon known as the absorption or deviation of the complement. At about the same time Gengou discovered a similar phenomenon when working with precipitins. Wassermann, Neisser and Brück, Levaditi, Citron, Plaut, Stertz, and others have applied this method of the absorption of the complement of Bordet and Gengou to the diagnosis of syphilis by the existence of syphilitic antibodies and antigens in the blood serum and cerebro-spinal fluid of persons suffering with primary, secondary, and tertiary syphilis, as well as in the post-syphilitic, parasyphilitic, or late syphilitic affections—namely, tabes and general paralysis. The epoch-making experiment of Pfeiffer on bacteriolysis may be said to have afforded the foundation of our knowledge of the principles governing immunity. Bordet by his observations came to the conclusion that bacteriolysis by the serum of an immunized animal was due to the presence of two substances, the one destroyed by heat (thermolabile) present in normal serum, the other (thermostable)

a substance which resisted heat, and was only present in the body fluids and blood of an immunized animal. The former is called the cytase or complement, the latter the immune body or antibody (amboceptor, Ehrlich).

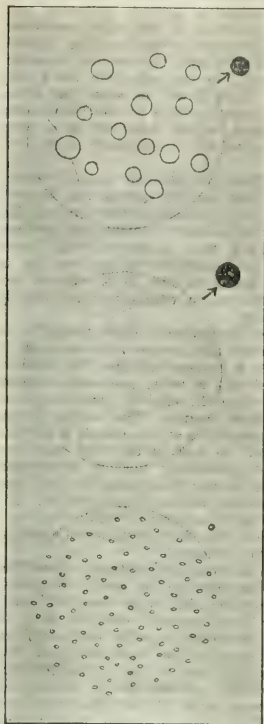


Fig. 12.—a, Normal blood corpuscle with osmotic membrane permeable to ions of Na, K, Ca. b, Chemical explanation of haemolysis by dissolution of osmotic membrane and escape of haemoglobin. c, Physical explanation of haemolysis by a bio-physical alteration of the osmotic membrane by which it becomes permeable to the large haemoglobin molecules.

antigen, but specific for each animal. Bordet has introduced the terms "antigen" and "antibody," the former to signify any substance which, when injected into an animal, will cause the production of an immune serum; the latter to denote the antagonizing substance produced and which is the essential for the immunizing action of the serum. Now, if either the antibody or the complement be not present, or be removed, the specific bacteriolytic or haemolytic action of the serum or fluid is lost. Again, if the antibody in the presence of the complement is linked up to the antigen, both the antibody and the complement will be inactivated. To find out if a given serum or fluid—for example, cerebro-spinal fluid—contains either the antigen or the antibody is by the experimental inductive method known as the *deviation of the complement*. How is this effected?

We require first to immunize an animal against the blood of some other animal; for this purpose the blood corpuscles of a sheep are injected into the circulation of a rabbit. The blood serum of the rabbit is thus made haemolytic to the corpuscles of the sheep by virtue of an immune body *plus* the normal complement or cytase. The latter can be removed by heating to 56° C. for thirty minutes without destroying the former. We have thus the immune body, which by itself will not dissolve the washed corpuscles of the sheep. If, however, we add the normal serum of a guinea-pig, the amboceptor or immune body

links up the complement or cytase and the corpuscles are dissolved.

The second part of the experiment is the deviation of the complement, or its neutralization, so that haemolysis no longer takes place when the serum of the guinea-pig is added to the immune body and the washed sheep's corpuscles. This is effected by the presence of both antigen and antibody in the fluid to be examined. The serum, or cerebro-spinal fluid, to be examined is mixed in varying dilutions with a watery solution of the liver of a syphilitic fetus, which will contain the antigen (lipoid). A small amount of the serum of a guinea-pig is then added, and the total volume made up to 2 c.cm. with saline solution. The series of tubes containing these mixed solutions are placed in an incubator at 37° C. for one hour, and then the sensitized blood corpuscles are added. (By sensitized corpuscles I mean washed sheep's corpuscles in immune rabbit's serum which has been heated.) The mixtures are again placed in the incubator for two hours at 37° C., then taken out and put on ice overnight. The next morning the amount of haemolysis in each tube is estimated (vide Fig. 13). If, on the one hand, antigen and antibody have been present they have united with the complement, and no solution of corpuscles will have taken place because the complement is fixed; if, on the other hand, the immune body (antibody) was not present then the complement (cytase) has remained free to act upon the sensitized corpuscles and lead to their solution. A control experiment, using a normal serum, or cerebro-spinal fluid, namely, one which contains no antibody, must be used at the same time.

In the hands of nearly all trustworthy and experienced investigators this method, introduced by Wassermann, has yielded most valuable results as a means of diagnosis. It is claimed even that it is more reliable than the Widal reaction for typhoid. Plaut obtained a positive reaction in 80 to 90 per cent. of undoubted cases of syphilis by this method. He found the reaction specific; it is not definitely present in a non-syphilitic individual; it enables a diagnosis of the constitutional disease to be made, but not of the organ affected. He did not obtain the reaction with the cerebro-spinal fluid in 25 cases of syphilis in which the nervous system was not affected, while the serum as a rule gave a positive reaction. This was not unexpected from what has already been said as regards the cerebro-spinal fluid and its secretion. It shows that the reaction depends upon the production of some substances by the

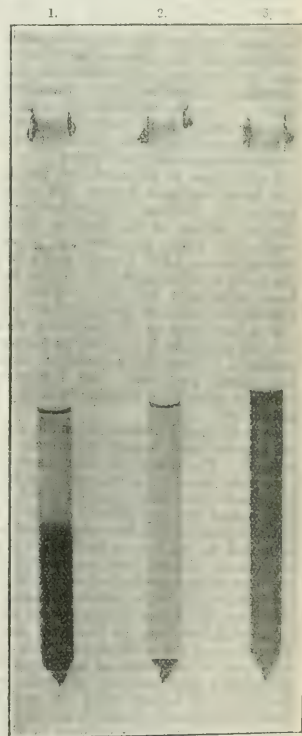


Fig. 13.—1, Cerebro-spinal fluid of general paralysis, showing the Wassermann reaction on removal from the incubator. 2, Ditto after standing overnight on ice. 3, Control with normal cerebro-spinal fluid, showing total haemolysis.

tissues of the nervous system themselves. The nature and origin of that substance will be discussed a little later, but reference will now be made to the remarkable unanimity of opinion of all those who have made experiments upon this subject as to the almost certainty with which the cerebro-spinal fluid of general paralytics, and to a less degree of tabetics, give this Wassermann reaction. According to Plaut the reaction may be negative with the cerebro-spinal fluid in cases of syphilis of the nervous system, but he obtained a positive result in 94 out of 95 cases of general paralysis with the cerebro-spinal fluid, and in every one of the cases the serum gave a positive reaction. In cases of cerebral syphilis the serum was usually positive and the cerebro-spinal fluid usually negative; in 70 to 80 per cent. of the cases of tabes the cerebro-spinal fluid gave a positive reaction. Citron, G. Meier, W. Fischer and G. Meier, Michaelis, Weygandt, Fleischmann and W. J. Butler and others have obtained similar positive results by this method.

At my suggestion, my assistant, Dr. Candler, in conjunction with Dr. Henderson Smith at the Lister Institute, has been engaged in applying this reaction to a number of my cases in the hospital and the asylum, with the following results: They have now examined the cerebro-spinal fluid of 100 cases, of which 94 were asylum cases and 6 were in general hospitals. Forty-six cases of general paralysis were examined, 41 of which gave a positive reaction by the Wassermann test, a percentage of 89.1. The reaction was not obtained in any of the control cases. Two cases of locomotor ataxia failed to give the reaction, but it may be noted that neither was in an active stage. A negative reaction was also obtained in a case of syphilitic meningitis in which the cell contents of the cerebro-spinal fluid were diminishing rapidly in numbers under specific treatment. It is also interesting to note that cases of tuberculous meningitis failed to give the reaction, although in one case the cerebro-spinal fluid contained a large number of leucocytes per cubic millimetre.

I wish here to acknowledge the kind assistance which has been rendered during this research by Dr. Robert Jones, the Medical Superintendent, and Dr. Hughes, Medical Officer of the London County Asylum at Claybury; Dr. Bond, the Medical Superintendent of Long Grove Asylum; Dr. Ingram and other Medical Officers of the London infirmaries; Mr. Gibbs, Surgeon at the London Lock Hospital; and Dr. Nepean Longridge of Queen Charlotte's Lying-in Hospital for Women.

For the purpose of diagnosis, therefore, especially of general paralysis, it is a very important addition to clinical methods. Since its application, however, many doubts have been cast upon the interpretation of the facts whether indeed the reaction is in any way due to syphilitic antibodies.

Levaditi and Yamanouchi made a study of the diagnosis of syphilis and general paralysis by the Wassermann method. The results of their researches are very favourable from the clinical diagnostic point of view. Levaditi and Marie have demonstrated the facts that normal liver can replace the syphilitic liver in the preparation of the antigen, and the cerebro-spinal fluid of general paralytics supposed to be rich in antibodies is devoid of spirochilic properties. These facts show that the sero-reaction in question, although clinically a specific test for syphilis, had nothing to do with syphilitic antigens and antibodies. Moreover, the active substances of liver extract, syphilitic or normal, contrary to the true antigens, are soluble in alcohol; and the sero-reaction can be obtained with bile salts and with lecithin, or with soap (Sachs and Altmann), cholesterolin and vaseline (Fleischmann), although more feebly. The sero-reaction of syphilis and of general paralysis is the same, and is not due to the intervention of antibody or syphilitic antigen in the usual sense of the word, and has no relation with the *Spirochaeta pallida*. Landsteiner and Porges have also demonstrated that the extract of the liver owes its particular properties for this reaction to the presence of lipoids and bile salts soluble in alcohol at 80° C. These products are found not only in the liver, but also in different organs of man and animals. Landsteiner, Müller and Potzl state that in syphilitic serum substances are present which in the general sense are not antisiphilitic bodies, but which bind up with certain constituents of normal

and syphilitic tissues. Moreover, they assert that the blood serum of animals infected with *T. equiperdum* and *T. gambiense* contain similar substances which they have called *Histafines*. Yet being a characteristic reaction, it is attributable to the presence in the serum and in the cerebro-spinal fluid of certain at present unknown compounds, which in the presence of bile salts, soaps and lipoids of the liver, precipitate and determine the fixation of the complement. Levaditi and Yamanouchi consider that these compounds arising in the organism itself may be a cholesterolin ester. Thus it will be seen that these authorities give a new interpretation to the phenomena of the Wassermann method, which, however, in no way militates against its value as a practical method of diagnosis.

They also assert that there are between normal serums and lipoids of the body and specific serums and liquids, only quantitative and not qualitative differences; the reaction of Wassermann is provoked by histogenic and not bacterial substances. They find, moreover, that lipoids serving for sero diagnosis not only exist in the liver but in other organs, the brain, the corpuscles of the blood, etc. They are probably complexes in which lecithin largely enters into the composition.

Levaditi, Ravaut, and Yamanouchi have proved that when syphilis leaves intact the central nervous system, although the serum gives a positive reaction, the cerebro-spinal fluid does not, and this is what one would expect. It is, however, different when the central nervous system is affected even in a slight degree. The cerebro-spinal fluid can then acquire properties which enable it to yield the Wassermann reaction. In fact, in the four cases out of the many examined presenting nervous symptoms, which were neither tabetics nor paralytics, the fluid has twice given a positive reaction, although quite feeble. The method of fixation of the complement would up to a certain point then serve for the early diagnosis of syphilis, especially when the brain is affected.

The researches of the above-named authors show that there is not any parallelism between the results furnished by the cytological examination and those obtained by the Wassermann method. The leucocyte reaction may be very marked in certain secondary specific cases without the cerebro-spinal fluid being in the least able to fix the complement. Such was the case in one of my patients with well-marked syphilitic cerebro-spinal meningitis. This patient was a woman, aged 34, admitted under my care at Charing Cross Hospital as a case of tabes; upon examination I diagnosed cerebro-spinal syphilitic meningitis (pseudo tabes). Lumbar puncture gave 370 lymphocytes per c.mm. She was put on mercurial inunction, and in a fortnight she had greatly improved; the lymphocytes were now only 70 per c.mm. A fortnight later the lymphocyte count was 20 per c.mm., and she was well enough to be discharged, nearly all the symptoms having disappeared. The Wassermann reaction was negative on the last two occasions when lumbar puncture was performed; it was not tried in the first instance. The existence of numbers of lymphocytes in the spinal canal does not necessarily entail the appearance of substances which in the presence of lipoids engender the phenomenon of Wassermann. Marie and Levaditi, and we at Claybury, found that there is a parallelism between the rapidity of progress of general paralysis and the degree of intensity of the Wassermann reaction; no doubt, therefore, there is a connexion between the breaking down of nervous substances (destructive metabolism) and the amount of this complex lipid substance, with which probably the reaction is associated, and upon which it, in a measure, depends. I have been attempting to ascertain the chemical nature of this substance, but my results are not yet sufficiently advanced to make any definite statement. However, I have found that the blood and cerebro-spinal fluid in parasyphilitic affections contain a marked excess of lipoids, inorganic salts, and splitting products of the phosphatides; and that this excess is proportional to the intensity of the disease. I have also found that a cerebro-spinal fluid which gives a positive Wassermann reaction, after removal of the protein content by precipitation with alcohol, fails to give the reaction. I am, therefore, in agreement with Noguchi, who, working on the relation of protein, lipoids, and salts to the Wassermann reaction, has come to the following conclusions:

1. "The high value in respect to complement binding exhibited by blood serums from syphilitics and spinal fluids from general paralysis is associated with an excessively high content of globulin, but there does not exist a direct quantitative relation between the two. Cases of secondary syphilis which have been under prolonged and proper medication do not exhibit the globulin increase and usually fail to give the Wassermann reaction. The active substances entering into the Wassermann reaction are precipitable with the globulin and chiefly with the euglobulin fraction of the fluids.

2. "Temperatures of 70° to 76° C. destroy the active substances. Exposed to sunlight the active substances deteriorate slowly. A photodynamic substance such as eosin, under the direct influence of the sun, brings about their complete and rapid destruction. This effect does not occur in the dark. The active substances are subject to tryptic and pepsic digestion and are destroyed by weak acids and alkalis.

3. "The active substances in the blood serums and spinal fluids cannot be separated from them or from the globulin precipitate by alcohol.

4. "There are contained in the alcoholic extracts of normal and syphilitic blood and organs certain acetone soluble lipoids which possess high antigenic values for the Wassermann reaction. Cholesterol is inactive and the bile salts less active than the lipoidal bodies.

5. "Sodium cholate is about as active as sodium taurocholate and glycocholate, but neurin and choline are inactive."

Porges and Meier found that by addition of lecithin certain substances contained in syphilitic serum are rendered evident by a flocculent precipitate, and they have employed this method in place of the deviation of the complement method. But it is generally thought that this precipitation method is not so specific as the Wassermann method; moreover, Neubauer, Porges, and Salomon were able to show that syphilitic serum only behaves stronger in this respect than normal serum. Fritz and Kren found that the lecithin test is not absolutely reliable, for non-specific diseases as tuberculosis, lepra, etc., give a precipitation; still less reliable is the test with glycocholate and taurocholate of soda. In respect to the Klausner reaction of globulin precipitation it was found that it was more uncertain than the lecithin and bile salts flocculation.

Neisser, Bruck, and Stern's investigations are of importance, for they have made a large number of experiments with apes and anthropoid apes, as well as observations on human beings. They conclude that the antigens are not identical with the living virus, nor of the same substance. They do not consider that mercury and atoxyl cause a destruction of the antigen, but that treatment by these drugs injures or destroys the spirochaetes. Moreover, it has been found that antibodies exist normally in small quantities in some of the lower apes; it has so far not been found in the higher apes; it is therefore not a new product in syphilis, but it is enormously increased in quantity in this disease. They consider that the serum diagnosis researches prove a direct association of syphilis, tabes, and general paralysis. Immunity to reinoculation occurs when the virus has become generalized in the blood and lymph (Neisser). It is probable that the generalization of the virus engenders simultaneously changes in the properties of the serum, by which changes it becomes capable of giving the Wassermann reaction and preventing reinoculation.

There are a number of other reactions which show that a profound bio-chemical change occurs in the blood in constitutional syphilis. Thus Klausner has shown that distilled water added to syphilitic serum causes a precipitation due to the amount of a precipitable globulin which syphilitic serum contains. Fornet and Schereschewsky have shown that the serum of paralytics and tabetics exclusively give with the serum of syphilitic patients a positive precipitin reaction. It is claimed, therefore, by them that this observation proves the syphilogenous origin of these two diseases.

The simpler method of Noguchi, to which I have been giving attention, consists in boiling for a few seconds 0.2 c.cm. of the cerebro-spinal fluid with 0.5 c.cm. of 10 per cent. butyric acid solution of 0.9 per cent. sodium chloride, and then adding 0.1 c.cm. of normal solution of

caustic soda, and boil again very briefly. A flocculent precipitate is obtained in parasyphilitic affections.

Dr. Noguchi informs me that he has obtained positive results with the cerebro-spinal fluid of cases of general paralysis, tabes dorsalis, cerebral syphilis, cerebro-spinal syphilis, spinal syphilis, tertiary syphilis, and some few cases of secondary syphilis. Negative results were obtained in cases of alcoholic psychosis, dementia praecox, imbecility, idiocy, and other non-specific diseases. However, as one would expect, the fluids from cases of tuberculous meningitis, pneumococcal meningitis, and epidemic cerebro-spinal meningitis gave a large precipitate. The slightest blood contamination of the fluid renders the test valueless. Should the results be constant, this method will be of great value on account of its simplicity. It is due to the presence of a globulin; it has before been remarked that there is a parallelism between the presence of albumin in the cerebro spinal fluid and the Wassermann reaction.

Summary.—The original method of Wassermann is the most complicated, but is regarded by the majority of investigators as the most specific and reliable. Whatever may be the explanation of the facts, all the evidence goes to prove: (1) That these methods in the hands of competent observers afford a valuable means of diagnosis, and are especially useful when applied to the cerebro-spinal fluid for the determination of the existence or not of general paralysis. (2) That similar substances, whether antibodies or not, occur in the serum of syphilitic and parasyphilitic persons in such quantities as are not found in the serum of normal persons or in the serums of people suffering with other diseases. (3) That similar substances are found in the cerebro-spinal fluid of tabetics and general paralytics, and the amount of those substances which cause a deviation of the complement or a precipitation is in proportion to the activity and length of duration of the disease; that these substances are of tissue origin, or arise from tissue destruction caused in some way by the action present or past of the syphilitic virus. (4) It is probable that the syphilitic virus excites an increased loosening of complex lipid substances, containing lecithin and cholesterol, etc., from the red corpuscles and cells of the body. (5) That this prevails through life, and in certain cases of syphilitic infection—namely, general paralysis and tabes—the central nervous system, which under ordinary circumstances is protected against the loss of its lipid substances, takes part in the process, and this is manifested by the presence of lipid and globulin in the cerebro-spinal fluid which acts as the antibody in the reaction. This lipid complex, as well as globulin, increases in amount as the process of neuronic decay proceeds. It is probably owing to the presence of these substances that the granulation of the ventricles, so characteristic a feature of general paralysis, arises as a result of stimulation to proliferative hyperplasia of the ependymal epithelium. Choline may also be present owing to decomposition of lecithin, but this may occur in any active degenerative process of the myelin, and is not pathognomonic of any particular disease.

Other lipoids of the phosphatide group are present usually in considerable amount and in proportion to the extent of myelin destruction and dissociation. I have pointed this out in the *Archives of Neurology*, vol. ii, 1902, p. 304, where, after referring to the work of Flexner, Noguchi, and Kyes on cobra venom, "I stated that the products of degeneration of nervous tissues in general paralysis are numerous, and consist not only of choline, but also of a number of bodies of the lecithin group, being various derivations of 'protagon.' Choline is the most easily separable and recognized physiologically and chemically, and it is possible that the products of degeneration vary according to the cause and nature of the destructive process. Still, there is no evidence to show that these products of degeneration can *per se* produce the clinical manifestations and morphological changes indicating neuronic irritation and destruction of general paralysis; otherwise we ought to get these changes in other diseases, also destructive lesions of the nervous system. Therefore I think it may be conceived as possible that there is a latent toxin in the blood which combines with endo-complements the products of deranged neuron activity, producing locally (this is, where the neuron metabolism is deranged either by stress, circulatory deficiencies, or hereditary physiological or anatomical defects) an active neurolysin proportional to (a) the amount of latent toxin in the blood, and (b) the amount of endo-complement produced by the deranged neuron metabolism."

Blumenthal states that he has found that the blood of syphilitic persons, also tabetics and paralytics, contains

a large increase of lecithin as compared with the normal. He finds also an increase of lecithin in the faeces in tabes and general paralysis, and a great decrease in the bone marrow. He considers that tabes and paralysis are associated with a progressive impoverishment of the body in lecithin. It is more probable that there is an impoverishment of lipoids.

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ON THE EARLY DIAGNOSIS OF CANCER OF THE TONGUE, AND ON THE RESULTS OF OPERATIONS IN SUCH CASES.*

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In the first week in January the BRITISH MEDICAL JOURNAL published the results of my operations for cancer of the tongue on 197 patients. They were, after the paper had been put together, brought up to 200. The results remain very much the same, for no further death occurred as the result of an operation, and a couple of cases have been added to the list of "successful cases." A medical journal, commenting on my paper, expressed surprise that the total number of cases was so small, and, while believing that I had perhaps performed more operations for cancer of the tongue than any other British operator, evidently thought that some of the Continental or American surgeons must have operated much more frequently. I own that, when I put all my cases together, the number seemed to me small for five-and-twenty years' work of a surgeon whose name has been associated with cancer of the tongue for a great part of that time. So I looked to see what had been done elsewhere. I think that Professor Kocher, in a longer series of years, has not operated on more than 120 to 140 patients. Billroth had comparatively few cases. And no other Continental operator seems to me to have exceeded 100 cases; few of them have nearly approached that number. On the other hand, I think Mr. Whitehead, whose name was justly held in the greatest esteem throughout the world for his operation for cancer of the tongue, probably operated on quite as many patients as I have done.

The limited number of cases which come under the care

of any one surgeon led me to wonder how frequent cancer of the tongue is; and, as I could not find any definite published information on this matter, I wrote to Dr. Tatham of the General Register Office. With his usual courtesy and readiness to afford assistance to those who are studying death-rates, Dr. Tatham at once sent me information to the effect that during the seven years, 1901-7, there died in England 5,253 persons of cancer of the tongue, making a yearly average of 750. I suppose another 50 to 70 cases may be added to account for the persons who are treated successfully, but I am afraid that is rather a large estimate. Still, it may probably be roughly reckoned that about 820 people suffer from cancer of the tongue in England every year, and that 750 of them die of the disease, either with or without operation. Surely, a result not very creditable to surgery! Yet, I think we in this country probably show as good or better results of our operations than the surgeons of any other country. For the feeling on the Continent and in America is absolutely pessimistic regarding cancer of the tongue. One of the most distinguished of the American surgeons wrote recently to tell me that, in about 36 cases, he only knew of 2 definite cures. And one of the chief Austrian surgeons told me in September that he did not remember ever to have had a successful case. Professor Kocher appears to be one of the very few surgeons who is really hopeful over his results.

For a long time it has been evident that we must operate earlier if we are to hope for better results. Billroth spoke of the importance of early diagnosis years ago, but no one has really worked at it until quite recently. Circumstances were against us all: such as the difficulty of persuading doctors and their patients to submit to operations for what were not certainly known to be cancers; the imperfect examination of the reputed precancerous conditions when they had been from time to time removed.

Fortunately, five years ago Dr. Bashford, of the Imperial Cancer Research, asked me for specimens of early cancer of the tongue; and, still more fortunately, the first material which I gave him, and which I believed to be a precancerous condition, proved to be typical epithelioma. This roused my suspicion regarding precancerous conditions and led me to urge persons suffering from what appeared to be almost trivial conditions to submit to operation. I suppose I have become a greater master of the art of persuasion than I was ten or more years ago. But sure it is that I have succeeded in collecting a dozen cases of very early cancer and have had them all carefully drawn; and the microscopical examination has been made by the Imperial Cancer Research.

And, again, happily the BRITISH MEDICAL JOURNAL has published excellent reproductions in colour of twelve of my drawings, and these have been sent out all over the world, so that the knowledge of the appearance of early cancer of the tongue has been very widely spread. This is a great tribute to the liberality of the British Medical Association and to the enterprise of the Editor of the JOURNAL and the General Manager.

The conditions which are represented may fairly be divided into five classes:

1. A little plaque like a hard sore, smooth and polished, but neither ulcerated nor excoriated.

2. The transformation or replacement of a simple ulcer by a cancerous ulcer, which only differs from the simple ulcer by feeling a very little stiffer and a very little firmer.

3. The transformation of an entire plaque of leucoplakia into a plaque of cancer. The difference is marked by very slight thickening, a denser white, and furrowing or fissuring in various directions, but without excoriation or ulceration.

4. The transformation of one small area of a leucoplakic tongue into cancer, only marked at first by very slight and superficial hardening.

5. A white wart growth or compound wart, neither broken or ulcerated, and feeling at first as if it were fixed to the mucous membrane, and quite superficial.

There are other conditions in which cancer of the tongue begins, but these seem to me to be the most frequent and the most typical.

I am sure the Fellows and Members would like to know the results of the surgical treatment of these early conditions. There are twelve cases of which I have drawn

* Delivered before the Royal Society of Medicine, February 12th, 1909.

ings, and two cases which occurred before Miss Mabel Green had begun to draw for me. I include these two cases because they have already been referred to in the BRITISH MEDICAL JOURNAL, and are of especial interest.

The incisions only aimed at free removal of the cancer, with a sufficiently wide area of surrounding healthy tissue. Of the 14 patients, 3 are dead—one of nephritis and heart failure a year and a half after the operation, and without recurrence of the cancer; one of affection of the cervical glands without recurrence in the mouth; and one, who was operated on for cancer of the right border of the tongue, of cancer of the left border of the tongue, which he would not allow to be cut out until the glands were diseased beyond the reach of operation. The tongue between the two borders was quite healthy. The remaining 11 patients are alive and well at periods of eight months (1 case), one to two years (2 cases), two to three years (2 cases), three to four and a quarter years (6 cases). One patient of the last group, for whom I removed the left half of the tongue to very far behind the disease, and the lymphatic glands, suffered a year later from a fresh outbreak of epithelioma on the tip of the stump, where it was constantly rubbing against a large lower molar tooth, decayed and isolated. At the present time, three years after the removal of this second cancer, he is quite well. It may therefore be claimed that there is not a single case of local recurrence of the disease in any of the 14 patients, although 8 of them lived for three to more than four years after the operation. The glands were removed in 9 of the cases.*

The extent of the operation was generally quite out of proportion to the size of the cancer. But this was in order to remove long-standing leucoplakia and chronic superficial glossitis, from which the patient had in most cases suffered for years. On the other hand, there were two cases in which the cancer was removed between two elliptical incisions which were only just wide of its borders. In both these cases the disease was of very limited extent. The actual cancer in one of them measured about $\frac{1}{2}$ in. across by $\frac{1}{4}$ in. in thickness. It was one of the smallest cancers of the tongue which I have ever seen. The incisions passed pretty deeply into the muscular substance of the tongue. There was never any local recurrence, and the defect in his tongue was so trivial that his medical attendant, who had not been told of the operation, examining his mouth more than three years later to discover the source of infection of enlarged glands from which he was then suffering, did not perceive that his tongue had ever been operated on. Yet he died of epithelioma of his glands due to that tiny cancer. I have brought sections of another very small cancer of the tongue which was cut out by a very moderate operation, but which killed the patient through his glands, although it never recurred in his tongue.

At this moment, it would scarcely be too much to say that the air is charged with the emanations of radium. We are told that epithelioma of the tongue can be cured by radium. Had I been asked my opinion on this question a month ago, I should have said that, although two or three people in different parts of the world have claimed this power for radium, the general belief is that rodent ulcer is the only variety of malignant disease which radium is competent to cure. And I should have added that the only case of epithelioma of the mouth in my own practice to which radium had been applied (by the most skillful man with the best material) had ended disastrously. But I have, within the last few days, seen a case in which a typical epithelioma of the inside of the cheek is so much better, under the application of radium, at the end of four months that it looks as if it would be quite cured. And this has apparently been accomplished without inflammation or sloughing or profound ulceration of the disease. I understand that the radium in this case was applied by means of the disc. As this epithelioma was about $1\frac{1}{2}$ in. in diameter and ulcerated all over, when I saw it four months ago, there seems no reason to doubt that small epitheliomata of the tongue may be removed by radium, probably with a better scar than would be left by any

other efficient agent. But, having said this, it must not be forgotten that the removal of the primary disease is only part of the cure of epithelioma. Even the smallest, the youngest, and apparently the most insignificant epithelioma of the tongue is capable of affecting the lymphatic glands, as the cases I have related show. So that, unless radium is discovered to possess a far-reaching influence, spreading from the seat of the primary disease to the associated lymphatic glands, I am afraid that the surgeon must still occupy an important place in the treatment of epithelioma of the tongue.

UNNA'S METHOD OF TREATING ULCERS OF THE LEG.

By GEORGE PERNET, M.D.

WITH reference to the abstract of a German paper on Unna's bandage published in the *EMITOME* of January 16th, 1909, par. 33, I should like to point out that Dr. Hecker has missed an important point in the mode of application. I have treated a good many varicose ulcers of the leg by Unna's method, especially when I was out-patient assistant to Sir Victor Horsley at University Hospital. At that time I looked up Dr. Unna's original paper on the subject and carried out the method on the lines laid down by him, and I may add with very gratifying results.

In as few words as possible, the following is the *modus operandi*:

The ulcer itself is cleaned up with a 1 in 2,000 solution of mercury perchloride. Iodoform is then dusted or blown on to the floor of the ulcer only. In one instance only of the hospital series first treated (1891-2) by me in this way did I see iodoform dermatitis produced, but that was characteristic and rather severe. Some of the substitutes for iodoform are therefore to be preferred for this and other reasons.

Unna's gelatine paste, liquefied in a hot water bath, is then painted on the parts surrounding, but not on the ulcer itself, well beyond the latter, and wherever there is redness or discoloration of the leg. A good formula is that of the *U.C.H. Pharmacopoeia*:

Zinc oxide	...	...	10 parts
Gelatine	...	...	15 "
Glycerine	...	...	30 "
Water	...	...	45 "

Fig.: Soak the gelatine in the water for two hours; add the glycerine; apply a gentle heat till dissolved; stir in the zinc oxide to a smooth consistence; allow to cool.

Two or three double-headed 3 in. muslin bandages (in one piece rolled from either end, and not bandages made by stitching the ends of two ordinary bandages together) are next required. Muslin, such as is used for plaster-of-Paris work, answers very well. I now use sterilized bandages of this kind, put up separately. A two-headed bandage is wrung out in warm (sterilized) water, and the middle of the bandage is then placed on the leg opposite the ulcer, the two heads being firmly held one in each hand. The first turn is then made with pressure vigorous enough to reduce the diameter of the limb, the bandage being brought well over the ulcer. This way of employing the two-headed bandage is the crux of the whole matter, and the central idea of the method, and is a very different thing to bandaging from the toes upwards as recommended by Dr. Hecker. The bandage is then taken round the leg, with firm pressure, especially over the actual ulcer, allowing the turns to take one more or less where they list, the two hands being used for this purpose, and the turns being evenly applied, an easy matter, the bandage being wet. Meanwhile the liquefied paste is painted on the bandage as it is wound round the limb, either by the patient or an assistant. Two or three bandages can be used in this way, a few figure-of-eight turns being taken under the foot in order to fix. The result is a splint, which allows patients to go about their work as usual. If there is a great deal of discharge from the ulcer the bandage will require to be changed the next day, but after the first few days the bandage can be left on for several days together.

The method in its principles is really the same as our English one of strapping ulcers (Baynton's), but it is more

* I am not sure whether the glands were removed in another of the cases. Two of the patients were operated on by Mr. Percy Power at St. Bartholomew's Hospital, and I was present at the operations. Mr. Power thinks that he removed the glands of one of these patients (the man who died of nephritis) a few days later. But the notebooks do not contain a record of the operation.

elegant and more efficacious. The point to bear in mind is the firm pressure on the edges of the ulcer in order to flatten them down. I repeat this because what is called Unna's method of treating *ulcus cruris* is frequently performed in a very perfunctory and inefficient manner, the idea which underlies it being entirely overlooked.

I have obtained very good results by this method; in some cases, indeed, excellent. In the case of women especially, such as landresses, charwomen, etc., the patients are able to follow their occupation with comfort and earn their living, so precarious at the best of times—an important item for these poor people under existing social arrangements. Of course, wherever possible, I agree with Dr. Hecker when he says the bandages should be applied "before the patient leaves bed." Personally, when ordering ordinary bandaging of the legs from the root of the toes upwards to support varicose veins, I have for a good many years recommended patients to do this before they got up in the morning, namely, before the effects of gravity in the vertical position came into play.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

X-RAY TREATMENT IN VENEREAL SORES AND BUBOES AFTER OPERATION.

THE patient is placed on his back with his head raised. A strip of lead, 9 in. wide, with a central hole, is placed over the penis; above and below this is placed foil covering the body from the neck to the knees. A small piece of lead, which has an opening just a little larger than the sore, is placed over the penis, so that the sore is exposed; the patient, using both hands, steadies the foil and the penis; the hands and arms are covered with foil. The tube is 6 in. distant from the part. The tube must be soft (about 2 in.); the amperage about, but not exceeding 4. The exposure is of five minutes' duration. After four days, if there be no reaction, a further exposure of five minutes is given; after four more days, if there still be no reaction, a further five minutes is again given, continuing until a reaction is produced, when the exposure is reduced by one-half, other conditions remaining the same, and the interval is extended to seven days. The applications are continued until the sore heals, and stopped directly the first signs of radio-dermatitis are noticed. The patient should be made to understand thoroughly the value of absolute cleanliness.

In the case of buboes which have been operated on the method and exposure are precisely the same—a small piece of foil surrounding the part and protecting the tissues in the vicinity.

All the lead in actual contact—that is, the "apron" and the small pieces—are boiled daily after use, the larger pieces once a week, unless they get soiled in any way. Each patient has a sterile piece of lead in contact for each exposure. Iodoform, calomel powder, or other dressings must be removed from the part to be treated before exposure, as they absorb the x rays. The usual dressing subsequently employed is sterilized gauze for open buboes, mercury perchloride (1 in 2,000) on lint for venereal sores.

The results have been extremely valuable. The healing of the chancre is considerably accelerated, in all probability in less than half the time as contrasted with any other local measures.

In the case of venereal sores the tendency to suppuration or of hyperplastic matting of the nearest lymphatic glands is also reduced, a matter of extreme importance as regards the efficiency of the soldier. The healing of large operation wounds after excision of broken-down glands and scraping of the babo is markedly accelerated, the suppuration is lessened, and more healthy granulations make their appearance.

I have no knowledge of x rays having ever been used in the above class of cases.

H. C. FRENCH, Major, R.A.M.C.

Royal Herbert Hospital, Woolwich.

AURAL IMPACTION OF A CHERRY STONE FOR TWENTY YEARS.

When I first saw the patient in the following case—as a locumtenent after her confinement—I noted a discharge

from the right ear. Just inside the external meatus, and completely occluding the canal, was a rounded mass bathed in pus, which I thought might be a large polypus. Having no instruments with me I postponed closer examination, simply giving instructions for the ear to be syringed with warm boracic lotion three times daily. On my next visit, two days later I found that, the ear having been very painful, poultices as well as syringing had been used, and the body I had observed but not identified had been extracted in two halves; one had come away with the poultice the previous evening, the other the morning of my visit. The former had been thrown away. The latter I saw and examined. It was half a cherry stone covered with a loosely adherent membrane and cartilaginous in appearance. The interior was honeycombed and bathed in pus. Both pieces came away without any sort of assistance—simply adhering to the poultices. The patient's mother, who was present, gave me the following history:

When aged 5—or twenty years before I saw her—the patient pushed a cherry stone into her ear, and immediately told her mother. It was not far in, and the mother tried to extract it with a pin, but only pushed it deeper. For the next few years the stone remained visible, and caused periodical attacks of earache. Frequent attempts were made by the mother to extract it by means of hairpins and the like; but it got pushed further in by degrees, and eventually could not be seen. No medical man was consulted. The stone continued to cause deafness and frequent attacks of earache, but there was no discharge from the ear until the seventh month of her recent and second pregnancy. The earache then became more severe and persistent and a slight purulent discharge appeared.

During her subsequent delivery—that after which I first saw her—the patient "felt something burst" in her ear during a pain, and the discharge soon became more profuse, the earache continuing; sixteen days later the stone was extracted as stated. It would seem that it had been dislodged from its deep position, and possibly broken, during the straining of childbirth, and, once loosened, was gradually forced outward by the pus behind it, until finally, with the aid of syringing and poultices, it came out altogether.

Bournemouth.

J. E. ESSELMONT, M.B., Ch.E.

REFLEX COUGH.

A few days ago I was called to see a boy whose parents had lately come into the district.

The history was that for the last eighteen months, following an attack of whooping-cough, he had suffered from a distressing cough, so severe that he had been sent home from school "as he kept the other boys awake at night." The patient had been under treatment the whole time in various parts of the country. On examination nothing was found in the chest, nose, throat, or mouth to account for the cough, which was of a typical reflex type. The right ear, however, showed a quantity of cerumen, and on gently syringing I was able to extract a large mass, embedded in the centre of which was a complete clover flower about the size of a marble. This foreign body had given rise to no ear symptoms nor could I fix the date of its entry. The cough ceased within a few hours and the boy has returned to school.

My only excuse for reporting this somewhat trivial case is to draw attention to the necessity of a systematic examination of all organs which may be irritated reflexly and so give rise to symptoms which refuse to yield to routine treatment.

Limpfield. J. REGINALD BENTLEY, M.B., B.C. Cantab.

WE are requested by Dr. Grosz, Secretary-General of the Sixteenth International Medical Congress, which is to be held at Buda-Pesth from August 29th to September 4th this year, to call the attention of those who propose to take part in the proceedings of the Congress to the regulation that the manuscripts of their communications should be dispatched by February 28th, 1909, at latest, to the office of the Congress, VIII Esterházy-utca 7, Buda-Pesth (Hungary). We would also remind our readers that the subscription to the Congress is twenty-five crowns in Austro-Hungarian currency, which sum may sent by post-office order to Professor Dr. de Ellischer, Treasurer of the Congress, VIII Esterházy-utca 7, Buda-Pesth.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

BIRMINGHAM BRANCH.

PATHOLOGICAL AND CLINICAL SECTION.

Birmingham, Friday, January 29th, 1909.

Professor LEITH in the Chair.

Chondro-Sarcoma of the Humerus, removed by Berger's Operation.—MR. GEORGE HEATON showed a patient after Berger's interscapular thoracic amputation for a chondro-sarcoma of his shoulder:

The patient was a youth aged 21, who had noticed an enlargement of his left shoulder for ten years. The growth had rapidly increased in size during the last twelve months. The tumour measured 23 in. in circumference. It was a large irregular-shaped chondro-sarcoma, growing from the upper epiphysis of the humerus. In places the mass was undergoing a mucoid softening. The head and upper third of the bone had been almost completely destroyed by this growth. The shoulder joint was not implicated, but the mass had become fixed to the scapula, rendering amputation at the shoulder joint itself impossible. The tumour itself was shown and microscopic sections of it exhibited. The patient made an excellent recovery, and had since the operation increased in weight so much that when he left the hospital his weight without his entire upper extremity exceeded his weight when he entered the hospital, and before the operation.

Acute Toxaemia from Liverpool Rat Virus.—DR. OLIVE ELLWOOD read a note on a case of acute toxaemia caused by the Liverpool rat virus:

The patient, aged 13 years, was seen to swallow a piece of bread 1 cub. in. in size, soaked in a solution of the Liverpool rat virus, obtainable at any chemist's. Exactly twenty-four hours after the accident the child became suddenly cold, clammy, and drowsy. Within half an hour the following symptoms had declared themselves: Unconsciousness, combined with irritability on being touched; pyrexia to 99.8° F.; increased pulse rate to 150-160 per minute. At the end of twelve hours the temperature was 102°, pulse 160, breathing slightly stridorous, unconsciousness and irritability were maintained, and fibrillar twitches of the face and hands developed. Urine was in the bowels were considered; there were no abdominal pains nor cramps, and no vomiting, and, except for the latter feature, the clinical picture resembled that of the stage of irritation of acute meningitis in a child. At the end of twenty-four hours from the onset the temperature was 99°, and the symptoms were commencing to abate, and at the end of thirty-six hours recovery was complete. One stool was passed during the attack; that was apparently normal. The symptoms in the case were mainly cerebral, and thus differed materially from the cases reported in the BRITISH MEDICAL JOURNAL of November 21st, 1908, which were typical instances of acute gastro-enteritis. In these cases, however, considerable doubt seems to be present as to whether a specific infection of the food taken with the virus had really taken place.

Red Infarct of Heart.—DR. MILLER showed a specimen of red infarct of the heart, with microscopic preparations:

The case was that of a man aged 56, who was admitted to the General Hospital under Dr. Saunders, suffering from severe pain in the region of the heart, difficulty of breathing, and swelling of the feet. He had been taken ill suddenly some two months previously. He had never suffered from heart symptoms previously, but he had had four attacks of influenza. On examination his heart was found much enlarged. There were no distinct murmurs. The pulse was very irregular and intermittent. At first the patient improved under treatment, but then the oedema became more marked, and spread all over the body; he suffered severely from sleeplessness, pain, and difficulty in breathing, and died six weeks after admission. At the necropsy the heart was found to be much enlarged, weight 3½ oz. All the cavities were dilated and their walls hypertrophied. The mitral valve showed chronic thickening, and admitted four fingers easily. There was a softening thrombus at the apex of the left ventricle. The aortic valves and the first part of the aorta were fairly healthy; the arch and the descending portion showed well-marked atheroma. Both coronary arteries showed well-marked fatty and calcareous atheroma. The left coronary was completely blocked by a mixed thrombus which was adherent to its wall practically from its commencement. On cutting into the wall of the left ventricle a large area of a deep red colour and hard consistence was found in its anterior part. The remainder of the muscle was pale yellow in colour. On microscopic examination the red area showed necrosis of the muscle fibres indicated by the failure of their nuclei to take on haematein, and by the way in which they stained with van Gieson's counterstain. The spaces between the fibres were occupied by large numbers of red blood corpuscles, practically unaltered. In places the muscle fibres had disappeared almost altogether,

leaving spaces or vacuoles occupied by red cells and leucocytes. The yellow areas of muscle showed a similar appearance, but without the red cells. There appeared also to be a fairly diffuse but not very marked increase of fibrous tissue in the myocardium. A specimen stained for fat showed the reaction in the muscle bundles immediately under the endocardium. There were also numerous fine fat globules between the muscle fibres. The lung showed large numbers of infarcts, one of which occupied the whole of the left lower lobe. The remainder of the organs showed chronic venous congestion.

Pneumonia in One Family.—DR. STACEY WILSON gave the clinical history of a series of cases of pneumonia occurring in the same family at the same time. There were five children in the family, and all developed symptoms of severe bronchopneumonia, two of them dying. Dr. MILLER showed microscopic preparations and cultures from one of the fatal cases in the above epidemic. At the post-mortem examination the lungs were found to show the characteristic appearances of bronchopneumonia. Cultures were made from the lung substance, and an organism was isolated with the characters of the influenza bacillus. The organism only grew upon blood agar in the form of minute isolated colonies practically invisible to the naked eye. Microscopically the germ was a minute bacillus, which lost the stain with Gram's method. A similar organism was demonstrated in stained sections of the pneumonic lung.

SPECIMENS.

Dr. FUSLOW showed the following specimens:

1. **Broad Ligament Cyst with Twisted Pedicle.**—The cyst, which formed a tumour of the size of a six months pregnancy, was removed from a single woman, 22 years of age. She had noticed a swelling of the abdomen for twelve months; there had been severe pain, which commenced suddenly for six weeks before admission. The twisting was through two complete turns, and involved the ovarian ligament; the ovary was swollen to the size of a foal's egg, and was removed with the cyst. On section its interior showed several extravasations of blood.

2. **Uterine Fibroid and Pyosalpinx.**—This was removed from a sterile married woman, aged 40. The fibroid, 4 in. in diameter, occupied the anterior wall of the uterus, the uterine cavity skirting round the growth. In the outer half of the left tube was a swelling containing inspissated pus. The patient had complained of severe menorrhagia and dysmenorrhoea.

3. **Blood Cysts of Ovaries.**—This specimen was removed from a multipara, 28 years of age, who had had three severe attacks of pelvic peritonitis during the past nine months. She was admitted at the end of the third attack. There were fixed tender swellings on each side of the uterus and double pyosalpinx was diagnosed. On opening the abdomen the uterine appendages were found to be densely adherent, and were with difficulty enucleated; the appendix was also involved, and was removed. The specimen shows dilatation and occlusion of both tubes, but the larger part of the swelling is formed by the ovary, on each side, the one on the right side containing a blood-filled cyst 1½ in. in diameter. The pathological report was as follows: The tube shows chronic inflammation, and its wall is continuous with the substance of the ovary. There is a cyst in the outer part of the ovary, full of blood clot, and the lining of the cyst consists of layers of lutein-like cells, the condition being one of haematoma of a corpus luteum.

4. **A Uterus Containing a Large Number of Small Fibroids, in all Positions, in its Walls.**—The whole constituted a tumour as large as a four months pregnancy, and was removed by vaginal hysterectomy, combined with dissection of the uterus, from a woman who was blanched by severe haemorrhages.

All the patients made good recoveries.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

Friday, February 19th, 1909.

Sir THOMAS BARLOW, M.D., President, in the Chair.

Cancer of the Tongue.

Mr. H. T. BUTLIN read a paper on early operation for cancer of the tongue, which is printed in this issue of the BRITISH MEDICAL JOURNAL (see p. 462).

Mr. BARKER said that Mr. Butlin's work should stimulate all surgeons to increased activity in the removal from the tongue of small masses which are suspected to be cancerous; but in all such cases ought they to remove the glands? He did not like to say anything to prevent surgeons from removing the glands in these operations, but he had had so many cases where he had not removed the glands, and where recurrence had not taken place, that

he felt it only right to bring the matter forward. He emphasized the point that the term "cancer of the tongue" included many types varying in degree as regards malignancy.

Mr. W. G. SPENCER considered that a patch on the tongue affording any suspicious induration should be cut out and examined microscopically; if small-celled infiltration was found lying below the epithelial downgrowth, then the case, in his opinion, was cancerous, and if the infiltration was spreading down through the muscle fibres, then the glands would be affected.

Mr. CLUTTON agreed with Mr. Butlin's views.

Mr. BOWLEY said that he had removed the glands in all operations of the nature under discussion except in one case in which the small growth removed had turned out to be one of the type in which there was not any tendency for small-celled infiltration to descend in columns or individually. The patient remained well, but he thought it was the exception that proved the rule. Referring to the case recorded by Mr. Butlin of successful treatment of epithelioma by radium, he (Mr. Bowley) was doubtful if the case was epitheliomatous.

Dr. BASHFORD pointed out how small growths on the tongue appeared much smaller on the surface than they were in the substance of the organ; as the growth descended it had a tendency to spread out in a fanlike form. He thought some attention should be paid to this possibility in addition to the significance of the amount of surface area affected and the degree of hardness of the growth. At his laboratory he and Dr. Murray had 43 different distinct carcinomas under observation and they would be unwilling to say that any one of the 43 was a duplicate of the other. He (Dr. Bashford) differed from Mr. Barker, because there were no means of saying how any particular carcinoma would behave.

Mr. BUTLIN said that only two points had been raised in the discussion to which reply was needed. First there was the difficulty of making a diagnosis between some of the early conditions of cancer and the conditions which might be mistaken for them. His drawings showed how very difficult this was. Hence, the safe course to pursue in all cases of doubt was to remove the disease, which could be done by a comparatively small operation, almost without danger. Secondly, there was the necessity of removal of the lymphatic glands in every case of cancer of the tongue. This was a matter which had occupied his attention incessantly during the last thirteen to fifteen years. He had come to the conclusion that it was his duty to advise patients with cancer of the tongue to have the corresponding glands removed. He quite agreed that there were cases in which it might not be necessary, and he admitted that some forms of epithelioma might be less dangerous to the glands than other forms; and the time might come when they might be able to distinguish between the more and the less dangerous forms. But at present they could not do so; and as he had shown that the glands might be fatally infected through the smallest and youngest cancer of the tongue, he felt sure that, for the present, the glands should be removed in every instance in which the patient could bear the operation. The discussion on this question that night reminded him of a somewhat similar discussion twenty-five years ago at the Harveian Society, when Sir Mitchell Banks came down from Liverpool to try and persuade them to remove the contents of the axilla in every case of cancer of the breast, whether the glands were enlarged or not. He (Mr. Butlin) was one of those who opposed his teaching on that matter, and pointed out that many cases could be collected in which the removal of the breast alone had sufficed to cure the patient, and that the glands had not become affected later, and that it was a very harsh measure to submit all patients to a large and dangerous operation (the mortality was then about 12 per cent.) which was only necessary in a certain proportion of the cases. All that was true, but Sir Mitchell Banks was right and he (Mr. Butlin) was wrong, and he ventured to say there was not any surgeon of distinction and repute in this or any other country who did not make a practice of removing the contents of the axilla in operations for cancer of the breast.

Dermoid Cyst of Mediastinum.

Mr. GODLEE showed a case of dermoid cyst of the mediastinum treated by operation and illustrated by a

pathological specimen. This was the continuation of a case presented to the Clinical Society before operation by Mr. G. E. O. Williams and Dr. Batty Shaw on October 27th, 1905 (reported in *Trans. Clin. Soc.*, 1906, xxxix, 210, describing the previous history, clinical signs, and symptoms). The patient was submitted to several operations in University College Hospital. In the first of them the lower part of the cyst was exposed by the removal of costal cartilages. The upper part was in such intimate relation with the large vessels at the root of the lung that its removal was impossible. Some portions of its inner wall and large quantities of hair were taken away. On subsequent occasions other portions of the skin lining the interior were cut away and cauterized. The result had been a considerable improvement in the general health and a diminution of the expectoration. But a large opening remained, in which the deep part of the cyst appeared, a forcible pulsation being transmitted to it by the action of the heart. There was a certain amount of discharge, consisting of mucus and sebaceous material, with a characteristic offensive smell. There had been several attacks of haemoptysis, in some of which a considerable amount of blood had been lost. Hardly any hairs were now produced. The pathological specimen shown was one presented to the museum of the Royal College of Surgeons by Mr. Thomas B. Monat, of the Royal Boscombe and West Hants Hospital. It was reported by him in the *BRITISH MEDICAL JOURNAL*, 1909, i, 90. It was under the care of Dr. Bottomley, and had been diagnosed as one of tuberculous glands. The cyst, which was on the left side of the chest, presented many features of resemblance to that of Mr. Godlee's case. The lower part was intimately associated with the pericardium, the upper was imbedded amongst the large vessels of the mediastinum. The importance of considering the specimen in connexion with the living case was that it was possible thus to appreciate the kind of difficulty likely to be encountered in any attempt at removal of these particular cysts, which were in all probability teratomas.

Gonorrhoeal Rheumatism.

Mr. GODLEE also showed a man with feet deformed by gonorrhoeal rheumatism.

Orycephaly.

Dr. H. MORLEY FLETCHER showed 4 cases of oxycephaly. They exhibited the characteristic abnormally-shaped cranium, exophthalmos due to imperfect formation of the orbits, impairment of vision, the result of partial or complete optic atrophy, and varying degrees of malformation of the superior maxilla. There was no obvious defect of intelligence in any of the cases shown.

Diffuse Periostitis of Tibias.

Mr. P. MAYNARD HEATH showed a case of diffuse periostitis of both tibias without other evidence of congenital syphilis, and a case of congenital syphilitic knee.

Congenital Splenomegaly.

Dr. F. PARKES WEBER showed a case of congenital splenomegaly with chronic acholuric jaundice in a boy, aged 14. There did not appear to be much evidence that the chronic acholuric jaundice was "haemolytic" in the case; at all events, the evidence that it was due to congenital fragility of red cells was insufficient. An interesting point was that the patient's mother said that all her children were born yellow, and remained yellow for three to six months after birth, but the jaundice was permanent only in the patient exhibited. Dr. Weber also showed a case of chronic swellings of the fingers in a woman, aged 20. The only thing of which she complained was a persistent swelling or hard oedema of all her fingers, more or less noticeable as long as she could remember. The case seemed to be allied to those of so-called "acrocyanosis."

Acromegaly.

Mr. R. HIGHAM COOPER showed a case of advanced acromegaly. The patient was a man aged 51, who stated that the enlargement of his extremities was first noticed in the great toes seventeen years ago. Several attempts to take skiagrams of the sella turcica had been made, but without success.

Elephantiasis Treated by Lymphangioplasty.

Mr. W. SAMPSON HANDLEY showed a case of elephantiasis treated by lymphangioplasty in a clerk, aged 46, who had never been abroad. The disease began in 1895 with swelling of the left testicle and pain in the left leg. The patient had now been back at work for some weeks, and there seemed to be every prospect that the result of the operation would be permanent.

Leprosy.

Dr. HERBERT P. HAWKINS showed a case of leprosy exhibiting trophic changes in the hands and feet, with anaesthesia. The patient was a girl, aged 19, who was born of English parents at Perambur, about three miles from Madras. About two miles from her home was a leper hospital.

Anaurotic Family Idiocy.

Dr. POYNTON showed a case of anaurotic family idiocy in a female, aged 9 months, who was brought to the hospital because she was unable to sit up; she had a dull and heavy expression, and was apparently almost blind. The particular points of interest were: The early age at which suspicion was aroused, the extremely well-marked changes in the fundi, the superficially healthy appearance of the infant, and that the diagnosis of rickets had been made, as in three other cases under observation in the last four years.

Splenectomy.

Mr. L. COLLEDGE (for Mr. W. E. FISHER) showed a married woman, aged 47 years, on whom splenectomy had been performed for splenic infarction.

Exhibit.

Dr. M. MACNAUGHTON-JONES, jun., demonstrated a simple appliance for obtaining and automatically maintaining any required pressure above or below that of the atmosphere within any closed cavity containing air.

SECTION OF SURGERY.

Tuesday, February 9th, 1909.

WARRINGTON HAWARD, F.R.C.S., President, in the Chair.

Lymphatics of the Colon.

Mr. J. F. DOBSON read a paper, prepared in association with Mr. J. KAY JAMIESON, on the lymphatics of the colon. Their observations were based on the examination of 23 specimens injected with a suspension of Prussian blue. A minute description of the arrangement of the lymphatic vessels and glands, with a classification into epi-colic, para-colic, intermediary, and main groups, was illustrated by numerous diagrams and pictures. The special interest of the investigation lay in relation to cancer of the colon. The comparative immunity from glandular metastasis and recurrence after removal, generally thought to be enjoyed by these growths, was not borne out by statistics, and the work of Clogg and others went to show that local and visceral recurrences were not uncommon. Disseminated cancer cells might lie dormant in the glands for considerable periods. The observations of the authors showed that dissemination might take place along the chain of glands that ran parallel to the long axis of the gut, and thence, following the line of the mesenteric vessels, towards the apex of a triangle of mesentery whose base extended for a considerable distance on either side of the actual growth. The practical outcome of this must be evident, but it was shown, with reference to actual cases, exactly what areas must be removed to secure complete extirpation of the affected tissues, with growths at various points in the course of the colon. In the course of their investigation of a case of cancer by serial sections of the mesenteric area involved, they were able to confirm the observation that glands apparently normal might be the seat of cancer cells, and that, on the other hand, glands might be enlarged owing to the absorption of products from the ulcerated surface and yet contain no cancer cells. They had reason to believe that infection was by embolism and not by permeation, and observed that communications existed between the lymphatic vessels and the veins. One important practical point was that the whole lymphatic area of the splenic flexure cannot be removed.

The Torus Palatinus.

Mr. RICKMAN J. GODLEE read a paper on the torus palatinus, and exhibited many casts, photographs, and specimens. The torus was a median ridge, boss, or vallum, sometimes with a median sulcus, occasionally found beneath the mucosa of the hard palate. Patients were now and then brought to surgeons with a small tumour in that situation, and it was important to know that such a swelling might be not abnormal. Mr. Godlee had come across such cases in his practice and was led to investigate the frequency of its occurrence. He examined some thousands of skulls in the Hunterian Museum and at Oxford; he obtained from dental surgeons, Mr. Mummery and Mr. Hern among others, several casts of the condition, and he was able to collect a considerable literature. The outcome of his research was to show that such a condition was not very uncommon, and that it had no little interest from the anthropological point of view, inasmuch as it appeared to be of much greater frequency amongst the primitive races.

Mr. BUTLIN mentioned a case he had had, with special reference to the fact that in the course of five or six years there appeared to be some slight increase in size, which might, however, be due to the soft parts over the bony boss. He considered it of interest that the daughter of his patient had also a "torus."

Professor KEITH thought it was undoubtedly a racial characteristic, and decidedly most marked in the primitive skulls. The Neanderthal skull had a marked heaping up of bone along several of the sutures, of the same character as that which formed the "torus." He was unable to assign any cause for such local hyperplasia.

Mr. TURNER said it had been regarded as a stigma of degeneration, but amongst 530 inmates of an asylum examined by him it was present in only two. He thought that some cases of swelling in this situation might be of the nature of hypertrophic exostoses similar to those found with pyorrhoea. He had examined a great many animals, and had found a torus in not a few; there were few among the higher apes, few among the carnivora; he had found it present in a porcupine and a manatee.

Mr. STANLEY MUMMERY believed that in some instances the swelling might be pathological and even become cancerous.

Mr. HERN made a few remarks about his specimens, and said the sister of one of his cases had also the "torus."

Mr. GODLEE, in reply, said he thought the torus was undoubtedly an anatomical peculiarity, and not a pathological condition.

SECTION OF MEDICINE.

Wednesday, February 10th, 1909.

T. H. GREEN, M.D., in the Chair.

Ulcerative Colitis.

THE adjourned discussion was opened by Sir PATRICK MANSON. He considered that ulcerative colitis was merely the name of a phase of a disease which hitherto had been described under the term "dysentery." The same virus, whatever it might be, might cause gangrene, ulceration, or catarrh of the colon. But dysentery was not itself a disease, only a symptom-complex. He divided dysenteries into bacterial, protozoal, and vermicular. Operation performed, as it would be in the tropics, by unaccustomed surgeons was not a hopeful method of treatment. The great majority of cases of dysentery imported into this country were amoebic dysentery, which was amenable to treatment by ipecacuanha. Dysentery with persistent pyrexia was probably either malarial or complicated with liver abscess.

Dr. CLAYE SHAW alluded especially to asylum dysentery. In his experience the disease in the asylum epidemics attacked earlier and to a far greater extent the insane patients with nerve degeneration, the healthy staff later and in slighter degree, thus arguing for the great importance of a nervous factor in the causation of some cases of intestinal ulceration.

Dr. SIDNEY PHILLIPS thought ulcerative colitis was much more common than formerly, and suggested that certain alterations in the food supply of the community might be an explanation. He referred to the frequency of severe pain in ulcerative colitis; also to the occurrence of

leucocytosis and the frequency of hiccough in his experience. In his cases no other bacteria than streptococci and *Bacillus coli* were found. He had found benefit in some of his cases from giving mercury, and from adrenalin in some of the haemorrhagic cases. He had seen improvement from surgical operation, but never immediate cure. It was to be remembered that sometimes the cases recovered spontaneously.

Mr. W. G. SPENCER mentioned a case in which great improvement took place after colotomy and irrigation, but in which any attempt to close the opening brought back the symptoms.

Dr. NORMAN DALTON mentioned a case of multiple papilloma of the colon which clumped Shiga's bacillus; he had lately met with a case of ulcerative colitis which clumped the typhoid bacillus and Flexner's bacillus, but not Shiga's bacillus. The important point seemed to be rather the virulence of the organism present than any specificity. He considered that cases had been saved by colotomy, and in his experience it had been possible to close the colotomy wound.

Mr. LOCKHART MUMFERY said that by the use of the sigmoidoscope the type of ulceration present could be made out. There were many different types, and he thought it was the cases with deep ulceration that did not get well under medical treatment. Of his series of 20 cases coming to operation there were only 5 that were fatal. Appendicectomy he thought the operation of choice; in his experience marked and rapid improvement followed. If it failed caecostomy could be done.

Dr. BERTRAND DAWSON alluded to the difficulty of gaining a clear idea of what was understood by ulcerative colitis. The two chief symptoms in the cases he had analysed were hectic fever and marked wasting. The typical cases conformed very closely to dysentery. Appendicectomy did much good in many cases, but return to ordinary life was often followed by relapse. He suggested as a possible cause of colitis the excretion of some toxin by the colon. If the real cause were above the ileo-caecal valve the frequent failure of operation would be explained. The use of *coli* vaccine had been followed by improvement in a few cases in his experience.

Mr. ZUM BUSCH described cases in some of which colotomy was done in the transverse colon, the bowel being completely divided and the distal end closed, with good results.

Sir WILLIAM ALLCHIN replied.

PATHOLOGICAL SECTION.

Tuesday, February 16th, 1909.

Mr. S. G. SHATTOCK, President, in the Chair.

A Statistical View of the Oponic Index.

Mr. M. GREENWOOD, Jun., read this paper. He said he thought it was clear enough that the value of oponic determinations had been disputed by experimental workers whose records appeared—at least to a statistical outlooker—to entitle them to some more conclusive answer than the facile charge of imperfect technique. The pivot upon which the whole question turned was evidently the degree of credence to be attached to mean phagocytic power as determined from a small number of cells. It was necessary to examine with some attention the possible sources of error or uncertainty which may be shown to exist. It was not difficult to see that the errors involved fell into two groups. They had first the errors of technique, using the term in its widest sense, and secondly the error dependent on the fact that they measured not all the cells but a sample of them. One took the data furnished by an experienced observer, analysed them, and obtained a measure of uncertainty—that is, found that two samples differing one from another by not more than an assigned amount could not with certainty be referred to separate classes or "populations." How much of this uncertainty depended on the worker's incomplete technical skill and how much on inherent biological variability it might not be possible to define. He must be understood to speak only of the error attaching to the method as practised by the best workers at the present time, and he would describe as briefly as he could the principles upon which the study of this error seems to be possible. Dr. White

and himself had undertaken a tolerably extensive study of the variation observed in the enumerations of phagocytic cells made for the purposes of the oponic index with respect to the tubercle bacillus. Their material consisted of fifteen counts of cells made by Dr. Alexander Fleming, Dr. T. P. Strangeways, and his co-workers Miss Fitzgerald and Dr. Whiteman. The smallest count in the series was of 400 cells, the largest one of 2,000. The majority included 1,000 cells. They employed the usual processes of statistical analysis, and found that while not one of these counts could by any possibility be regarded as "normal," all with one unimportant exception, were extraordinarily good examples of variation described by skew curves. The types discovered were those known as Pearson's first and fifth types. The charts exhibited were examples from their series; all told the same story, so that it was unnecessary to trouble them with a multitude of diagrams. On the analytical features of these curves he did not propose to dwell. Any one interested in the matter would find a detailed examination of them in a recent memoir by Dr. White and himself, published in *Biometrika* (1909, vi, Part 4). Some general features of the results were, however, worth immediate notice. In the first place, it was apparent that the distributions were highly asymmetrical, or, in technical language, exhibited "skewness" of a high order. That, of course, was an experimental proof that the Laplace-Gaussian postulates with reference to the causes of variation were, taken as a whole, inapplicable to these examples of phagocytosis. It was an interesting matter of speculation, at any rate, to inquire how this variation might conceivably have arisen. Sir Almoth Wright had offered the following solution: In any mixture of serum, corpuscles, and bacillary emulsion, the actual number of bacilli present might be large enough to give each phagocyte more bacilli than were ever ingested even by the most highly charged cell in the count. But, since the mixture of the respective constituents was not perfect, all phagocytes had not the same chance of ingesting bacilli; some cells had numerous bacilli within reach, as it were; others were far away from the well-spread board. If the hypothesis were true, the Gaussian postulate that no one cause-group contributed much to the total variation did not hold for phagocytic counts. Therefore, a skew distribution might be expected, and would, not improbably, take the form actually observed. Beyond that Mr. Major Greenwood said he must not go. Accordingly, while such a hypothesis was consistent with their results, it was to be remembered that a multitude of other hypotheses, including one of a true biological variability of the cells, would accord equally well with the ascertained facts. Thus the observation that all their frequency curves had a negative start—allowing for a bacillary content of less than zero per cell—might by some be thought to warrant a belief that certain phagocytes were, if the expression be permissible, negatively chemotactic. It was further to be observed that even if Sir Almoth Wright's hypothesis found entire acceptance, the necessity of testing the method on the basis of skew frequencies remained. Let them conceive of a diagram as representing the whole "population" of cells involved in any one case. Then let them remember that in practice one took a small handful of fifty or a hundred cells blindfold from this "population." The most superficial consideration of the diagram led at once to the following conclusions: (1) They were not equally likely to obtain random samples, each of which differed by the same quantity from the mean of the whole "population," one in excess, the other in defect. In other words, samples were liable to biased error. (2) The range beyond the mean was greater than the range up to the mean. Therefore, great positive deviations might conceivably occur in random sampling while correspondingly great negative deviations were excluded. This, of course, only applied to extreme deviations. (3) Owing to the marked skewness of the curve the mean was not a good descriptive constant; the mode (the most frequently occurring as distinct from the mean value) was more reliable. The truth of propositions (1) and (2) would be further illustrated in the sequel: (3) was, he thought, of some importance. The whole object of employing a mean value was to have expressed by a single constant some of the main features of a distribution. In any symmetrical frequency, such as the "normal" curve, the mean coincided

with the mode and was evidently the most useful single constant they could obtain. When, however, there was a marked skewness, as in their phagocytic counts, since the mean and mode were far apart, knowledge of the mean only might lead them to form a very incomplete idea as to the general features of the count. The mode, on the other hand, was relatively better for summarizing purposes, although, of course, no one constant would render an adequate account of any frequency-system. For these practical reasons and certain theoretical ones which he need not discuss, he suggested that it was advisable to replace the mean by the mode for testing indices. Unfortunately, the true mode could only be found by a relatively long arithmetical process; still, even a value determined by inspection or the roughest graphical consideration was not improbably better than the arithmetic mean value. The largest count in their series was one by Dr. Strangeways and his colleagues of 2,000 cells, a count made up of eighty samples of twenty-five. Taking the eighty means as separate observations, they analysed the resultant frequency distribution and obtained the curve exhibited in the diagram. It was a well-marked example of Type 1, sensibly skew and an excellent fit. While admitting that the number of means upon which the result was based was comparatively small, the excellence of the fit led the speaker to think that it afforded a provisional solution of the problem as far as samples of twenty-five were concerned. As before, let them imagine that this curve represented the whole "population" of means. Then the chance that drawing a sample from this population would give them a result not differing from the "population" mean by more than an assigned amount was merely a question of areas. Thus the chance in favour of getting a sample mean of 1.353 or less was the ratio of the area from the start bounded by the ordinate 1.353 to the rest of the area. The odds against this were 5.68 to 1. In terms of the "real" mean this deviation corresponded to an index of 0.8. In this way they saw that the odds against random sampling being responsible for indices of 0.9, 1.1, 1.3 were respectively 1.88 to 1, 3.6 to 1, 12.46 to 1. This amounted to saying that even so extreme a deviation as 1.3 might be reasonably expected to appear rather less often than once in thirteen times merely as a result of random sampling and without any coincident physiological change in the "population" whatever. In other words, no definite importance could be assigned to variations within the limits of 0.8 and 1.3 at least. He was aware that workers seldom relied on samples of twenty-five cells, although very far-reaching conclusions had in the past been based on counts of this size. How far the limits of probable variation would be narrowed by a consideration of samples of 50 or 100 was not certain. That they would be narrowed to some extent, but not it might be very much, was probable. Dr. White and he had, they thought, succeeded in showing that:

- (1) Phagocytic distributions were markedly asymmetrical.
- (2) This asymmetry, although reduced, was not removed by emulsions of (from the experimental standpoint) maximal thickness.
- (3) The mode of a phagocytic distribution was a more reliable constant than the mean.
- (4) A corollary of (1) positive and negative deviations would not occur in random sampling equally often. Further, they had not proved, but rendered somewhat probable, that samples of twenty-five were unreliable, at least within the limits of 0.8 and 1.3.

OTOLOGICAL SECTION.

A MEETING was held on February 6th. Dr. PETER MACBRIDE, President, in the chair. The PRESIDENT read notes of a case of *Dermoid of the mastoid region*. The chief point brought out was its extreme rarity. Dr. DAN MCKENZIE exhibited a *Mastoid pillow*, the peculiarity of which was an opening in the centre sufficiently spacious to receive the ear and mastoid region without exercising any pressure on the tender parts; the object being to allow the patient to lie on the side operated on in order to permit of more free drainage. Mr. ARTHUR CHEATLE showed a case of *Chronic middle-ear suppuration with caries of the anterior mental wall and zygoma*. The probable actual cause was traumatic, the result of the patient's pushing a piece of wood into the ear. In Mr. Cheatle's opinion the caries of the bone was entirely separate from the chronic middle ear suppuration, which

had existed from boyhood. He thought the local wound caused by pushing in of the wood had become infected by the middle-ear discharge and so caused osteitis. Dr. KELSON read notes of a case of a girl who was exhibited at the previous meeting on account of having both *External auditory meatuses filled with white deposit*. At that meeting the provisional diagnosis of diphtheria was made. Cultures, however, showed the presence of *Staphylococcus aureus*, and a cure was obtained by the frequent instillation of glycerine of carbolic acid. Mr. SYDNEY SCOTT demonstrated a series of lantern slides showing *Hair cells in the organ of Corti (human)*. Mr. C. E. WEST showed cases and specimens illustrating *Malignant disease of the external auditory canal and middle ear*. He mentioned that he had seen 7 such cases in two years, and suggested that malignant disease of the ear was more frequent than was generally supposed, and that the condition, perhaps, had been frequently missed owing to lack of careful examination. Mr. HUNTER TOD read notes of a case of *Chronic osteo-mycetitis of the skull, the result of mastoid disease (with specimen of calvarium)*. The condition occurred in a woman who had suffered from purulent discharge for two years and who was operated on on account of a large abscess of the mastoid process. At the time of operation a large area of bone above and behind the mastoid process was found to be necrosed. The skull gradually became affected throughout its entirety until eventually, after nine months, the patient died as the result of meningitis. This case, in the opinion of the Section, was unique, although similar cases had been described as a result of infection through the frontal sinuses.

MEDICAL SOCIETY OF LONDON.

Monday, February 15th, 1909.

JOHN LANGTON, F.R.C.S., in the Chair.

Functional Disorders of the Stomach.

Dr. SIDNEY MARTIN, in his second Lettsomian lecture, said the motor power of the stomach varied very considerably in disease, and the deficiency was towards weakening the motor power both in functional and organic disease, that was, it was towards dilatation of the organ. Dilatation occurred as a result of gastric irritation, of gastric insufficiency, and of organic disease, more particularly of pyloric stenosis and other forms of obstructive disease which hindered the expulsion of the stomach contents into the duodenum. It played a great part in stomach disease, being in so many cases the main sign observed that the distinction between functional dilatation and that due to organic disease was of very great importance. In hyperchlorhydria the stomach might show no loss of motor power for a long period, months or even years; but in some cases signs of dilatation occurred and the stomach might become greatly dilated. The dilatation might be diagnosed by presence of the stomach tumour, by a succussion splash in the stomach, and by the determination of the stomach area by means of auscultatory percussion. Other means of diagnosis were inflation of the organ by air or by making the patient drink 30 grains of sodium bicarbonate in 4 or 5 oz. of water, and the same quantity of tartaric acid in water. The normal stomach held about 35 oz. of water (although it varied very considerably in size), and the determination of the amount of liquid which the stomach could contain was sometimes useful as an additional method of diagnosis. The amount contained might be estimated by seeing how much could be tolerated in the stomach without distress, and how much could be siphoned off afterwards. Signs of slight dilatation occurred commonly in functional disease, more particularly in cases of gastric insufficiency and of nervous disorder. The term which some would apply to that condition was not dilatation, but myasthenia. He did not think it was necessary to use that term as long as one considered the important point that in many such cases signs of dilatation occurred only after a meal, and might disappear in four or five hours. Dilatation might thus be temporary. As the condition progressed, it tended, however, to become permanent. A point that must be considered was whether great dilatation of the stomach was ever the result of functional disease. There was no doubt that this did occur. Such great dilatation was unmistakable, inasmuch as the stomach formed a flabby bag in the abdomen which was readily palpated

and the outlines of which could be recognized with a fair amount of accuracy. The importance of the recognition that functional disease might cause great dilatation of the stomach was evident from the fact that the operation of gastro-enterostomy might be suggested for such a condition, which by other means might be relieved. Gastropnoxis was a condition which required a separate discussion. It usually occurred in women who had lax abdominal walls, and not infrequently in those who had had many children. It might, however, occur in single women. In it the stomach was greatly dilated and sank in the abdomen, the lower border being nearly on a level with the pubes. In such a case there was a bulging of the lower part of the abdomen which was most obvious when the patient stood up, and frequently on standing up there was a dragging pain in the abdomen which was removed when lying down. Gastropnoxis was in many cases associated with a previous prolonged period of indigestion of food, and was directly associated with pain, vomiting, and wasting. It was sometimes associated with enteropnoxis and with movable kidneys. In one such case occurring in a multipara, aged 42, indigestion had lasted eight years. There were well-marked signs of gastropnoxis. The secretory activity of the stomach was as follows: the total hydrochloric acid secreted was 0.23, digestive activity 72 per cent., and no organic acids were present. There, in spite of the prolonged symptoms and the dilatation of the organ, the secretory activity of the stomach was normal. The patient lost all the symptoms when the stomach was stitched up. In another case, also that of a multipara, there were similar signs of gastropnoxis; the secretory activity was 0.12 hydrochloric acid. It was evidently of great importance to have a clear idea as to what were the causes which produced irritation of the stomach, not only from the point of view of diagnosis, but also, what was more important, from the point of view of treatment. In the first place must be put imperfect mastication which might be due either to the bad habit of bolting food, or to the deficiency in number and soundness of the teeth. In the next place food, either in too great quantity, too rich, too highly spiced, or too indigestible, was a frequent cause of irritation of the stomach. That was a cause which frequently acted for years, and if combined with sedentary habits led to grave defects of nutrition and serious damage to the digestive organs. Meals taken at irregular times and exercise or work soon after a meal were also a source of stomach irritation. The deficiency of daily exercise with the causes already mentioned, and rush and over-excitement of life, with perhaps periods of stress and worry, might lead to grave gastric disorder. Briefly, it might be stated that it was proper regulations for remedying the defects enumerated which resulted in successful treatment of such cases. The stomach was also readily affected by nervous influences, chiefly emotional, leading to secretory and motor disturbances. One other cause of irritation of the stomach, and one of the first importance when present, was a chronic intoxication from bacterial sources which resulted from pyorrhoea alveolaris, from chronic tonsillitis and discharges from disease of the nasal passages and from the antra, which when swallowed led to chronic poisoning of the body. In some cases the removal of those sources of intoxication led to a recovery of the individual. In other cases chronic intoxication resulted from drain emanations in the house. In a certain number of cases of functional disorder intestinal intoxication resulted partly from putrefactive processes of the faeces and partly from infection of the pancreas through the pancreatic duct or from the appendix. Dr. Martin concluded by considering in detail advanced cases of functional disorder and indigestion of nervous origin.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Friday, January 29th, 1909.

R. D. PUREFOX, M.D., in the Chair.

Modified Instruments.

Dr. ASHE demonstrated a new principle for application to Bozeman's catheter and Braun's hollow sound by means of which every part of the uterus could be dealt with with

out fear of undue pressure. The instrument which he exhibited allowed all the fluid to come back, and with it the uterus could be flushed out. It was simple and cheap, and could be absolutely sterilized.

The CHAIRMAN considered that the instrument had a wide range of utility.

Adeno-carcinoma of Vulva.

Dr. SOLOMONS exhibited specimens of this condition. Adeno-carcinoma of the vulva was very rare. He was able to show the specimens by the kind permission of Dr. Tweedy, the Master of the Rotunda Hospital.

M. W., aged 33, married eight years, 4-para, was admitted in November, 1908, to the Rotunda Hospital. She had noticed a lump in the vulva two weeks before admission, and this ruptured just before she entered the hospital. Pruritus was absent. Patient was blanched from loss of blood. On examination it was found that there was a large stinking mass protruding from the vulva, which seemed to spring from inside the right labium, just at Bartholin's gland. The tumour was evidently a haematoma. On its removal an excavated sloughing sore came into view, which had all the appearance of acute phagedaena. A microscopic examination showed nothing save blood clot. The cavity was plugged with iodoform gauze. Thinking that perhaps the affection was syphilitic, the patient was given a mixture of hydrarg. perchor. and potassium iodide. Insufflation with calomel was also used. Two weeks later, as there were no signs of improvement, the excavated sore was opened up, scraped, curetted, and thoroughly swabbed out with iodized phenol. In spite of this treatment, combined with keeping the wound plugged with peroxide of hydrogen, alternating with formalin 1 in 5, together with the antisyphilitic treatment, the phagedaenic sore spread with alarming rapidity, and it became evident that a condition of malignancy probably existed; this, despite the fact that no glandular enlargement existed anywhere and the negative microscopic findings. Therefore, under an anaesthetic, the parts were explored, and the curette, knife, scissors, cautery and nitric acid were freely used in an endeavour to stay the disease, whilst large portions of the tissue that had not sloughed were removed for microscopic examination. Although the infection spread over to the other side, yet the urethra seemed in no way implicated, and lay in the midst of the disease as an isolated tube.

Dr. ROWLETTE reported that the case was one of adeno-carcinoma of the vulva. This diagnosis was only arrived at after he had cut a great many sections. There were no apparent primary growths in any part of the body, and the only possible original seat of the disease seemed to be in Bartholin's gland.

Ruptured Extrauterine Pregnancy.

Dr. FREELAND exhibited specimens. They were taken from a patient, 35 years old, who had been married fifteen years and had had four children and four abortions. She had come to him two weeks before complaining of haemorrhage, and menstruation overdue two weeks. On examination she was found to have retroverted uterus and a small tubal mass in the left side. He thought she had a tubal pregnancy. She would not remain in hospital; she had considerable pain when she went home. She returned the next day, and the following Tuesday he operated. On opening the abdomen he found the pelvis full of blood. The fetus had escaped into the abdomen, and was attached by the cord to the rest of the ovum in the tube. The ovary was left in position, and she had done very well.

Remarks were made by the CHAIRMAN and Dr. HOLMES.

Double Pyosalpinx.

Dr. FITZGIBBON exhibited specimens. They were from a patient aged 31. She had been married seven years, and had had one pregnancy, which ended at term, five years before the operation in August last. She had been under observation eighteen months, and during that time very little change was seen in the pelvic condition. The uterus was normal in size and hard. On the right side there was a hard mass pressing down on the right fornix, and on the left side they could make out a tube thickened but not embedded. Her periods were normal, and she was very little troubled until the last six weeks, when severe pain came on. The abdomen when opened seemed tolerably normal until he attempted to pull up the intestines, when nothing would move, and he found the whole of Douglas's pouch filled with adherent small intestines. He got the whole of the tumour out without tying any vessels, as they had been obliterated. He closed the stump of the cervix with two interrupted sutures and packed the pelvis with

gauze. Two days after the operation the pulse went up to 110, though the temperature neither then nor subsequently went above 99°. He withdrew the gauze and put in a long drainage tube. On the third day the pulse rose gradually to 160; the following night it fell to 140. He then put in a shorter tube. She continued to improve, but next morning he found a smell of urine. He replaced the tube with one of rubber, and concluded that the drainage tube had sloughed through the bladder. He kept the tube in until he got a diminution in the amount of pus, although some still came away in the urine. The patient made a good recovery. The case showed the danger of hard drainage tubes put through the abdominal wall into the pelvis, and also showed how pyosalpinx, which was obviously chronic for eighteen months, could still set up an infection of the pelvis, although it was stated that if left for twelve months the pus would become sterile.

The case was discussed by Drs. HOLMES, JELLETT, and GIBSON, and Professor ALFRED SMITH and the CHAIRMAN.

Radical Cure of Backward Displacements of the Uterus.

Dr. JELLETT read a communication on this subject. He began by discussing the present attitude of gynaecologists towards the radical cure of backward displacements of the uterus. He considered that in all cases in which the symptoms called for relief a radical operation should be performed in preference to the prolonged use of a pessary. As exceptions to this rule he mentioned puerperal displacements, as they could usually be cured by the temporary use of a pessary, and cases in which the circumstances or general health of the patient made operation inadvisable. He showed that, if a patient had to be curreted, the performance of a radical operation prolonged her stay in hospital only by a week. He divided the different radical operations into three groups: (1) Cases in which a major operation had been performed, and in which the peritoneal cavity had been opened. For these cases he always concluded the major operation by performing a ventral suspension. (2) Cases in which the displacement was complicated by adnexal disease. In these cases he advised the opening of the abdomen followed by ventral suspension. (3) Cases of uncomplicated backward displacement. In these cases he unhesitatingly advised Alexander's operation on account of its safety and its after-results. He then discussed Alexander's operation, and referred to the statements of Drs. Herman and Galabin, who considered it an essentially dangerous operation. In opposition to this he quoted statistics of 385 cases, practically all of which were successful, and amongst which there was a single death from croupous pneumonia, and unconnected with the operation. His own statistics were as follows:

Forty-four cases were operated on. In 39 the usual double incisions were made, and in 5 a single incision. There were thus eighty-three separate incisions, and every one of these healed by primary union. One incision subsequently suppurated, owing to the fact that the subcuticular suture broke during removal and was left behind. One patient died, but her death, which was from double croupous pneumonia coming on about a week after the operation, had nothing to say to it. In one case the uterus subsequently fell back, and in this case only one ligament had been shortened. The other was left, as it was difficult to find, and as the operation had been already prolonged by the preliminary steps of curreting, trachelorrhaphy, and sigmoidectomy. In this case the uterus was in a normal position when the patient was seen six months later, but it had fallen back when seen two years later. Two patients at least were subsequently delivered, and after delivery the uterus remained in a normal position.

Dr. Jellett then stated in detail the reasons he considered Alexander's operation the operation of choice in cases of uncomplicated backward displacement of the uterus.

Remarks were made by the CHAIRMAN, Professor ALFRED SMITH, Dr. ASHE, Dr. HOLMES, Dr. GIBSON, Dr. FITZGIBSON, Dr. MATSON, and Mr. L. G. GUNN.

Dr. JELLETT, in reply, said the difference between the treatment which he advocated and the use of the pessary was a week in hospital, and he thought that was less serious than two or three years' pessary treatment, even if in some cases the pessary succeeded. Kelly's operation was not an ideal one, but it had the advantage of taking very little time to do when the abdomen was already open. So far from Alexander's operation causing a hernia, it would probably cure any inclination to hernia, as the walls

of the inguinal canal were sutured and a patulous external ring was closed. Obliquity of the uterus was not, he thought, a matter of importance. In three or four cases in which he only shortened one round ligament he had in a month or so found the uterus in the middle line. The great majority of cases were those in which the uterus had fallen back after childbirth, and in these there was no necessity to look for causes of sterility; but if there was any doubt as to the condition of the adnexa, he agreed with Dr. Holmes in opening the abdomen. In one of his cases a patient became pregnant afterwards, and had great pain from pulling on the external abdominal ring as the uterus developed. The uterus was also very large, and there was hydramnios. He feared during pregnancy that the operation was in some way responsible for this, but eventually the woman was delivered of a stillborn syphilitic infant. He thought that a similar cause probably accounted for the repeated abortions in the case recorded by Dr. Purefoy.

LIVERPOOL MEDICAL INSTITUTION.—The third pathological meeting of the session was held on February 4th; the PRESIDENT (Mr. T. H. Bickerton) in the chair. Mr. NEWBOLT showed: (1) *A Lipoma removed from the ischio-rectal fossa of a lady.* The symptoms were those of a chronic ischio-rectal abscess. (2) *A Calcified fibroma of the thigh which had been present for fourteen years.* (3) *Recurrent myxoma of the thigh.* (4) *Hairball removed from a girl's stomach.* A bismuth x ray showed the mass projected through the pylorus. Dr. HARCOURT showed: (1) *Horny growth from the lower eyelid.* (2) Two cases of *Malignant disease of the ear.* (3) *Cyst of the eye following a kick some years before.* The resulting blindness was attributed to detachment of the retina. Dr. GROSSMANN considered this case to be one of embryonal lens, due to the growth of some displaced portion of ectoblast. Dr. LEITH MURRAY showed: (1) *A section of a Supravrenal rest found in an inguinal hernial sac.* (2) *Sarcoma of omentum.* (3) *Eggshell fibroid of the uterus.* Dr. TINNE showed a specimen of *Trachina viperæ.* He remarked that the venom fangs of snakes in that no venom had ever been demonstrated. The local effects of being struck were vaso-constriction, followed rapidly by a hard white oedema. Dr. LLOYD ROBERTS showed a *Lung with an azygos lobe,* and read a note on malformations of the lung. Mr. THELWALL THOMAS and Dr. MURRAY BLIGH showed: (1) *A Gall bladder with calculus blocking the cystic duct removed from a woman aged 54 years.* (2) *Thyroid adenoma with a shrivelled calcified cyst in its centre; the cyst had been tapped eight years previously.* (3) *Exophthalmic goitre removed from a girl aged 18 years.* Symptoms had been present for twelve months. Marked improvement followed operation. Sections showed great proliferation of the acinous epithelium with little colloid material. Dr. ERNEST GLYNN showed: (1) *A Heart with large vegetations on the aortic valves containing pneumococci.* The man had enjoyed good health until attacked with lobar pneumonia seventeen days before death. (2) *A case of Bronchiectasis,* with abscesses in the lower lobe of the right lung, due to impaction of a clove in the bronchus, which must have been present for several weeks. Sir ROBERT BOYCE read a note on *Actinomycosis as a source of infection for man.* He had examined a considerable number of cases of this disease in pigs and cattle, and noted the frequency with which the udder of the cow had been affected. He suggested the possibility of milk being affected from the diseased udder, and gave this as an additional reason for the sterilization of milk before consumption. Dr. T. R. GLYNN referred to a case of actinomycosis which had commenced in the lung, and later gave rise to nodules in the legs. Inquiry failed to elicit the possible source of infection.

In the New York Supreme Court a decree was recently granted to a woman annulling her marriage with a man on the ground that at the time of the marriage he was suffering from tuberculosis, and was, therefore, incompetent to contract a marriage. The husband, although he had put in an answer to her complaint, did not appear to defend the action when the case was called for trial.

Reviews.

THE PROLONGATION OF LIFE.

No subject can be of greater interest to the human race than that of the prolongation of healthy life. Many writers, well qualified to speak with authority, have put forth their views from time to time, and the admirable lecture, *On Means for the Prolongation of Life*, delivered some five years ago before the Royal College of Physicians of London by Sir HERMANN WEBER,¹ may be said to have summarized the main conclusions upon which all are more or less in agreement. A third and enlarged edition of this lecture has recently been issued in which the various aspects of the subject are arranged in order convenient for reference by means of a comprehensive index, to which is appended a full bibliography.

Foremost among the conditions conducive to health stands the habit of regular exercise. The truth of the poet's line, "the Wise for Health on Exercise depend," was never more needful to be borne in mind than at the present time, when cheap, easy, and rapid means of conveyance are always at hand to tempt the middle-aged town dweller to ride when he ought to walk, and thus to allow his circulation to stagnate, his tissues to get clogged with effete products, and his whole organism to grow old before its time. The rush of modern city life too often leads to the notion that time spent on daily exercise is time wasted, but to those who are not blinded by the engagements of the moment and can look at the larger view of the question, the prospect held out by Sir Hermann Weber will demonstrate the wisdom of maintaining a due proportion between work and exercise under most conditions of everyday life.

Next in importance to exercise comes the question of diet. Popular tradition has long since established the notion that certain kinds of meat are more digestible and less "gouty" than others, and a section on foods, which appears for the first time in this edition, will aid in the extinction of some time honoured fallacies on these points, enabling the reader to gather from a few words the sum of actual knowledge on the subject.

Every man or woman who has lived for fifty years will have formed an opinion as to their personal requirements in the matter of food, but few of them would admit that they had arrived at a perfect diet and most would be willing to profit by the experience of those who have attained the goal of a healthy old age. With respect to drink, old customs are rapidly undergoing change, especially among the elderly, and the influence of moderation on longevity is becoming universally recognized. But the term "moderation" admits of wide interpretation and is sometimes used to cover an injurious amount of moderate drinking whereby the processes of degeneration are hastened and the attainment of long life is prevented. The critical period of life, during which the seeds of premature degeneration are most frequently sown, is that of early middle age. Between the years of 35 and 45, when the full vigour of manhood is most felt, the unrestricted indulgence in more food and alcohol than is needed with every meal must be attended by insidious changes in vital organs which do not show themselves until serious mischief has been done. The free liver who reaches the full term of life has generally combined his enjoyment of the good things of the table with habits of active exercise in some form; but the deaths of many men of fine physique before the age of 60 can often be clearly traced to the indulgences of previous decades. While he may never be the "worse for liquor" in a legal sense, he may be daily the worse for liquor in a physiological sense, and must pay the penalty by the shortening of his life.

Many elements combine to produce healthy longevity, and the part played by the nervous system has always to be borne in mind. Anything which may tend to depress the vigour of the nervous organization must react primarily upon nutrition, and the author cites many instances to show how physical vigour may be regained by mental activity after it has become stagnant from mental inaction. Mental, no less than physical, exercise

is an essential factor in the maintenance of health as life advances.

Sir Hermann Weber's book teems with wisdom, scientific observation, and common sense, and presents, in a form which is at once interesting and convincing, a true guide to the attainment of that which every one in his heart desires.

CARDIAC AND VASCULAR DISEASES.

FOLLOWING upon the first series of Professor VON NEUSSER'S *Clinical Treatises on the Symptomatology and Diagnosis of Disorders of Respiration and Circulation*, a second volume is now before us dealing with the subjects of *Bradycardia and Tachycardia*.² The translator is again Dr. Andrew MacFarlane, of Albany, U.S.A., and the value of the small but very comprehensive work is greatly enhanced by the addition, in an appendix, of a careful summary by Dr. Howell, of Baltimore, of the present state of knowledge with regard to the cause of the heart beat, and the steps by which it has been arrived at. A very complete bibliography of Adams-Stokes disease and of tachycardia also adds considerably to the practical value of the book. The phenomena of bradycardia and tachycardia, in spite of the efforts of physicians and experimental physiologists, are still open to controversy, and in this little work will be found a clear statement of the facts and theories which have up to the present time been observed or recorded. Bradycardia is first considered, and the three main theories of its production are duly weighed. Impairment of excitability, diminished conductivity, and enfeebled contractility on the part of the cardiac muscle, have each in turn held the field in discussions upon this point, and there can be but little doubt that they may each and all, together or separately, play a part where inflammatory or degenerative processes are at work. It is clear that the author believes that the Adams-Stokes syndrome may possibly be due to many causes. The chief stress is laid upon the epileptiform seizures rather than upon the cardiac lesion, which has in some cases been proved to be absent. The important difference between temporary and persistent bradycardia is rightly insisted upon, the latter condition being far more serious as regards prognosis. Tachycardia, in association with febrile disease, with drug intoxication and with various forms of heart disease, is fully considered, and its prognostic significance pointed out. The curious phenomena of paroxysmal tachycardia as opposed to symptomatic tachycardia are carefully described and discussed. The whole treatise may be cordially recommended to the notice of all workers in these difficult subjects, not only as affording a clear indication of the present position of knowledge, but as suggesting the lines upon which further investigation may travel in order to reach a clearer conception of the causes and curability of these peculiar conditions.

In a short monograph on *The Heart and Sudden Death*, Dr. THEODORE FISHER³ has brought together some papers contributed by him to a contemporary journal with the object of clearing up certain misconceptions which he believes to be prevalent. His estimate of the average intelligence of the present-day practitioners and morbid anatomists would appear to be low, if we may judge from the points of pathology which he deems it necessary to emphasize. The occurrence of sudden death both in unsuspected and in recognized heart disease is sufficiently frequent to render some of his comments superfluous. Fibroid degeneration of the cardiac muscle is, from the writer's point of view, one of the most important factors in the production of sudden death. Fatty infiltration, on the other hand, he relegates to a much less prominent position, and he does not regard the presence of fat in the interstitial structures within the heart wall as evidence of cardiac weakness. The view that the fatty heart is a common cause of death under an anaesthetic is held to be a myth, although fatty changes may be found

¹ *On Means for the Prolongation of Life*. By Sir H. Weber, M.D., F.R.C.P. Third edition. London: J. Bale, Sons and Danielsson. 1908. Demy 8vo, pp. 222. 4s. 6d.

² *Disorders of Respiration and Circulation*. By E. von Neusser, M.D., of Vienna. Part II. *Bradycardia and Tachycardia*, with bibliography. Authorized English translation by Andrew MacFarlane, M.D., Albany, U.S.A. New York: E. B. Treat and Co. 1903. (Demy 8vo, pp. 150. 81.25.)

³ *The Heart and Sudden Death*. By Theodore Fisher, M.D., F.R.C.L., Assistant Physician to the East London Hospital for Children. London: The Scientific Press, Limited, 1908. (Cr. 8vo, pp. 54. 2s.)

in such cases in association with fibrosis. He maintains that rheumatic endocarditis produces more uniform lesions than the endocarditis arising from other septic causes, and that these latter are more prone to cause irregular puckering of tissue and consequent obstruction of coronary vessels, leading to sudden death. Cardiac pathology presents so many puzzles to the clinician that the experience of those who have had especial opportunities of study is always interesting, if not always convincing; and we can commend Dr. Fisher's little monograph as well worthy of perusal, containing, as it does, a clearly expressed account of the writer's views on a subject to which he has devoted much attention.

The value of percussion as a means of determining the apparent size of the heart, although universally recognized, has, nevertheless, been the subject of much discussion at various times. In a recent monograph by Dr. ARAVENTINUS of Athens—*Die Perkussion in der Bestimmung der Herzgrößen*—the different views of observers in many schools have been brought together and examined very minutely by the light of his personal investigations and by the revelations of the Roentgen rays. No less than 274 references are given to the works of previous writers between the years 1761 and 1907, forming a very interesting historical summary of the views of competent observers, but showing very clearly that the personal element plays a considerable part in the conclusions at which they severally arrived. Roentgen-ray examination has greatly aided percussion, but it must still be confessed that their combined use, even in the most skilled hands, cannot always attain to accuracy. The writer of the monograph sums up with great care the lessons which may be learnt from the exhaustive study that he has made, but it is somewhat disappointing to note that these do not vary in any important point from the teachings of our own accepted textbooks.

Arterio-sclerosis is a fertile subject for investigation and discussion, and much has been done of late years to advance knowledge by both processes. Dr. L. M. WARFIELD, of St. Louis, Missouri, has brought together, in a compact little volume,² a very readable account of modern views on the subject, and makes many suggestive observations, which deserve further attention. Writing from exclusively American experience, he is of opinion that the rush and worry of modern business life is having a damaging effect upon the blood vessels of the present generation, and that diseases arising therefrom are more frequent than they used to be. Arterio-sclerosis would appear to be becoming somewhat of a catch-word amongst that section of the public which delights to talk about its diseases, and there is obvious danger that the supposed disease may be made the scapegoat for serious conditions arising from other causes. The author gives a good account of the physiology of the circulation, and shows how compensation for defect in one part may be effected in another, so that even an advanced condition of vessel change may not be indicated by definite symptoms. He also discusses the effects of adrenalin, and maintains that its abuse is liable to lead to degenerative changes in the muscular walls of the smallest arterioles. He directs particular attention to the liability of abdominal vessels to sclerosis, and considers that the vessels of young children after infectious disease are prone to sclerotic change. Incidentally he mentions the special liability of the coloured races to vascular degeneration. His views on prognosis and treatment do not differ materially from those generally accepted. The book constitutes a pleasant *causerie* on the whole subject, and as such may be read with advantage, but it makes no pretence to the precision and accuracy of a textbook.

AN INDEX AND A DICTIONARY.

BUT little more than twelve months have elapsed since we published a review of the first edition of the *Index of*

Treatment,³ by Dr. HUTCHISON and Mr. STANSFIELD COLLIER, and we have already to record the appearance of a fourth edition, fully revised and clad in a somewhat more imposing dress, but only enlarged to the extent of some thirty-five pages. Our commendation of the work as a really useful and practical aid to the busy practitioner has evidently been fully endorsed by a very large number of the fraternity. Every year brings with it fresh ideas of treatment founded on closer investigation of physiological and pathological processes, and there is always a tendency to run away with any new and attractive notion directly it has been brought forward, with the common result that it falls into disrepute owing to misguided application. A textbook of treatment, kept well up to the level of modern knowledge, can do much to prevent this by holding an even balance between scepticism on the one hand and over-enthusiasm on the other. In the new edition of the *Index* there are a few entirely new articles, notably one on hypnosis and its uses in aiding treatment by suggestion. The writer, Dr. Milne Bramwell, wisely refrains from dogmatic assertion and contents himself with the far more convincing method of stating in plain terms what has been achieved thus far and in what directions further advance may reasonably be looked for. It has sometimes been supposed that the higher types of intellect are more susceptible to suggestion than others, but the cases quoted would go to prove that a very considerable amount of success has been achieved among the debased and degenerate types. The patient has been taught to control his own organism. Climatic treatment is accorded a place in the new volume, and the description given by Dr. Leonard Williams of the various types of health resort, of necessity somewhat curtailed, will be found most useful as a guide not only to the selection of a suitable place but also to the avoidance of the unsuitable. The comments and recommendations are marked by strong common sense. Dr. Calvert has contributed a short article on certain points in prescribing and the incompatibility of some common combinations which should be specially noted. The whole work maintains its high level of accuracy and usefulness.

In response to the publisher's invitation, Dr. ARTHUR LATHAM has compiled a small *Dictionary of Treatment*,⁴ for which, after exhaustively testing it, we have nothing but praise. Within the compass of a volume not too large for a pocket will be found a concise, but by no means meagre, account of the best methods of dealing with almost every disease that is likely to come within the experience of the busiest practitioner. It is essentially a handbook of reference for the busy man. By means of heavy type its headings and cross-references are rapidly found, and the information conveyed under each, although of necessity somewhat dogmatically stated, is at once singularly comprehensive and clear, although expressed in very few words. Only in dealing with some of the newer methods, such, for instance, as vaccine therapy, does the writer dilate at all upon his subject. The reader will do well to study carefully, sometimes reading between the lines, the section descriptive of vaccine treatment in general. Whatever the future may have in store, it is evident that at the present time these procedures ought to be employed with the utmost caution. The sections relating to diet and the feeding of infants are particularly worthy of note, and the general instructions for dealing with tuberculosis, and many other much-debated diseases, are marked by strong common sense. The little book is a veritable mine of trustworthy information.

HYDROTHERAPY, ETC.

Dr. T. D. LUKE's *Manual of Natural Therapy*,⁵ is a concise volume corresponding to the manuals of physical and dietetic therapy in use on the Continent. In other

¹ *Die Perkussion in der Bestimmung der Herzgrößen* (Perkussion in the Determination of the Heart's Boundaries: A Historical, Critical, and Clinical Study). By Dr. Anast. Araventinus, of Athens. Berlin: Max. Günther. 1907. (Cr. 4to, pp. 80.)

² *Arterio-Sclerosis*. By Louis M. Warfield, A.B., M.D., with an introduction by W. S. Thayer, M.D., Professor of Clinical Medicine, Johns Hopkins University. St. Louis, Mo.: C. V. Mosby Medical Book Co. 1908. (Imp. roy. 8vo, pp. 192, 8 illustrations.)

³ *An Index of Treatment by Various Writers*. Edited by Robert Hutchison, M.D., F.R.C.P., Physician to the London Hospital, and H. Stansfield Collier, F.R.C.S., Surgeon to St. Mary's Hospital. Fourth edition. Revised: John Wright and Co., London. Stimpkin, Marshall and Co., and New York: Williams Wood and Co. 1908. (Demy 8vo, pp. 942, 21s.)

⁴ *A Dictionary of Medical Treatment for Students and Junior Practitioners*. By Arthur Latham, M.A., M.D. (Oxon.). Physician to St. George's Hospital, etc. London: J. and A. Churchill. 1908. (Cr. 8vo, pp. 325, 6s. 6d.)

⁵ *A Manual of Natural Therapy*. By Thomas D. Luke, F.R.C.S. (Edin.). Bristol: J. Wright and Sons. 1908. (Demy 8vo, pp. 312; with 30 plates and 125 illustrations. 7s. 6d.)

words, it is a practical manual of therapeutic methods other than those by drug-giving, and embraces most of the ground occupied by the numerous volumes of Solis Cohen's *System of Physiologic Therapeutics* and by the large *Handbuch der physikalischen Therapie*, edited in Germany by Goldscheider and Jacob. The book is divided into six sections, of which the first and probably the most important is devoted to the use of water in the treatment of disease, including the use of peat, "fango," and medicated baths. The succeeding sections deal with heat and light, massage and rest cures, electricity, and diet, in the treatment of disease. In the sixth section the modern "cure" in hydropathic establishments and sanatoriums and by foreign mineral waters is discussed. A great advantage of the book consists in the author's precision and clearness when he enters upon the principles involved in the different methods of treatment. For instance, in Chapter II the general principles of hydrotherapy are admirably explained, and very much to the point are his remarks (pp. 281, 282) on treatment at establishments. The Roman inscription which he quotes from the baths of Caracalla—

fed deder per-Curæ vacuus luno adeas locum
Ut morborum vacuus abire queas,
Hic enim non curatur qui curat—

suggests, however, that in some cases successful treatment is likely to be more easily obtained at places rather distant from home than at any in the neighbourhood. This is, doubtless, recognized by many of our kinsmen from the other side of the globe, who every year help to throng the health resorts of Europe. On p. 8 the author refers to "American physicians, such as Kisch, Baruch, and Kellogg." Surely he refers to the Marienbad physician. Dr. E. H. Kisch, supposing him to be American because he contributed to a well-known American textbook on the subject. On p. 28 the author's reasonings lead him to conclude that a condition of "hydraemic plethora" is an impossibility, but chlorosis is not a very rare disease, and the researches of Lorrain Smith (1900) have shown that in chlorosis the total blood volume is excessive, and that, therefore, the condition may almost be termed one of "hydraemic plethora." On the whole, the book will probably be found very useful to many medical practitioners, though some may object that the author's use of the term "natural therapy" suggests that other treatment (by drugs) is "unnatural."

CONGENITAL TUBERCULOSIS.

Dr. SITZENFREY, in his monograph on congenital tuberculosis, reviews the literature of the subject, and describes his investigations of twenty-six placentas of tuberculous mothers. In addition to the placentas, the fetal membranes, the umbilical cords, and the newly born infants which came to the *post-mortem* room were also examined. The author finds that the extent of disease in the offspring is proportionate to the intensity of the tuberculous process found in the placenta. Thus, in one case in which the placenta was riddled with miliary tubercles and larger tuberculous foci the child died four-hours after birth; in another case, in which the placental tubercles were relatively scanty, the child succumbed, when three months old, to a chronic pulmonary tuberculosis, with bilateral tuberculous pleurisy; and in a third case, in which, after patient search, no more than one tuberculous focus could be discovered in the placenta, the child is still alive and well. Dr. Sitzenfrey is of opinion that white infarcts afford a particularly favourable site for the development of tubercles. Both fetal and maternal elements contribute to the structure of villous tubercles, with the exception of the so-called "primary villous tubercle," which is formed from fetal elements alone. The epithelioid and giant cells are derivatives of the cells constituting the stroma of the villi or of the vascular endothelium. With regard to the significance of the placental vascular system in the possible transmission of tuberculosis, Dr. Sitzenfrey points out that long-continued engorgement of the villous capillaries may lead to rupture of these vessels into the maternal intervillous spaces; then the possibility arises that subsequent lowering of the vascular pressure in the villous tufts may

permit the entrance of maternal blood, and so allow the transference from the maternal to the fetal vascular system of tubercle bacilli which may be circulating in the former. Again, when the tuberculous changes are localized exclusively in the decidua vera, these foci may penetrate the amnion, infect the liquor amnii, and in this way lead to intrauterine infection of the fetus. The author has also succeeded in demonstrating the presence of tuberculous changes within the vessels of the umbilical cord. Dr. Sitzenfrey's book is an interesting and important contribution to the study of congenital tuberculosis, and may be thoroughly recommended to the attention of our readers.

NOTES ON BOOKS.

DR. ALEX HILL is to be congratulated upon the admirable conception and excellent execution which has resulted in the production of his account of *The Body at Work*.¹⁰ The book satisfies a long-felt want and constitutes a textbook of physiology adapted to the use of the general public, for it is written in words whose meaning must be plain to any one who has a moderate acquaintance with the English language, and no preliminary knowledge of chemistry and physics is necessary for the comprehension of Dr. Hill's statements regarding the phenomena of bodily activity. In a book intended for the general reader, the phenomena associated with reproduction are not easily dealt with, and we think Dr. Hill has been wise in excluding them from this volume. All the other important phenomena are dealt with in a descriptive rather than a detailed and critical manner, with the result that the reader is presented with very clear and definite word pictures of the initiation, progress, and termination of the various bodily processes. In other words, Dr. Hill has adopted the dogmatic method of teaching, which is undoubtedly the one best adapted for his purpose. Though the book is not primarily intended for medical students, they will nevertheless find it an excellent introduction to more detailed study.

The third edition of Captain C. A. THIMMS'S *Hindustani Self Taught*¹¹ has been edited and revised by Professor I. F. Blumhardt, M.A. While the plan and general arrangement of the book have been preserved, useful alterations and additions have been made in order to render it more easy and useful as an introduction to *Hindustani* as a spoken language. The words and subjects of conversation selected are those likely to be of practical service to travellers and residents in India. Some of the phrases are perhaps more classical than those employed in common talk, but the patois of servants and coolies, which varies in different parts of the country, could hardly be introduced into a guide to the *lingua franca* of the whole continent.

*Truth's Dictionary List*¹² for 1909 has been issued in a small bound volume. It contains the names of various individuals, organizations, and firms which have incurred unfavourable notice in *Truth*. That it is found useful appears from the fact that five editions were called for last year. This year the scope has been extended to cover two complete years and references are given to the page and volume of *Truth* in which fuller details are to be found. The names are classified under a number of headings, one of the longest sections being that devoted to "medical quacks," a large proportion of the names in this part of the list being of transatlantic origin. In the introduction to this section attention is called to the fact that many of these persons "while declared under a 'fraud order' from using the mails in the United States, are allowed to carry on their business in this country with perfect immunity from interference." Yet that the law is strong enough to deal with the more flagrant forms of quackery has been demonstrated by the recent convictions of Hawkins and Montague at the Lewis Assizes.

¹⁰ *The Body at Work*. By A. Hill, M.A., M.D., F.R.O.S. London: E. Arnold, 1908. (Demy 8vo, pp. 460, 46 figs. 16s.)

¹¹ *Hindustani Self Taught, with English Phonetic Pronunciation*, By Captain C. A. Thimms. Third edition. Revised by I. F. Blumhardt, M.A., M.B.A.S. London: E. Marlborough and Co. 1908. (Cr. 8vo, pp. 112, 2s., cloth 2s. 6d.)

¹² London: *Truth* Offices, 1909. (Cr. 8vo, pp. 94, 1s., post free, 1s. 1d.)

¹³ *Die Lehre von der kongenitalen Tuberkulose, mit besonderer Berücksichtigung der Placentartuberkulose*. Von Dr. Anton Sitzenfrey. Berlin: S. Karger, 1909. (Sup. roy. 8vo, pp. 156, 28 illustrations in the text. M. 5.50.)

A GERMAN Central Committee for the care of the teeth of school children was constituted on February 1st. The Honorary President is Dr. von Stundt, Minister of State, the President, Dr. von Moeller, Minister of State. Among the members of the committee are Professor Kirchner and Professor Williger.

MEDICINAL AND DIETETIC PREPARATIONS.

Pills of Phenolphthalein with Aloin, etc.

ALTHOUGH the value of phenolphthalein as an aperient is of quite recent discovery, its use for this purpose is already large. Messrs. Parke, Davis, and Co. (Beak Street, London, W.) have submitted samples of a pill containing phenolphthalein, aloin, strychnine, belladonna, and ipecacuanha, which is recommended for the treatment of chronic constipation, as well as for the relief of migraine, and in other cases. The pills are gelatine coated, and we found the coating to be soluble in a few minutes at body temperature. The combination should prove useful.

Vegetable Fat for Cooking.

We have examined a sample of a vegetable fat for cooking purposes, supplied by the Vegetable Butter Company (6, Trinity Square, London, E.C.) under the name "Palmino." It consists of a pure white fat, odourless and practically tasteless; it melts at 25°C. (77°F.), and appears from the results of analysis to be a pure refined coconut oil; it is practically neutral (the "acid value" being only 0.25), and, having a very low iodine-absorption value, is not prone to rancidity. To those who object to employing animal fat in cooking, Palmino will no doubt prove acceptable. Further, a fat which, like this, is free from flavour, and contains neither water nor other non-fatty constituents, has a suitable melting point and is free from rancidity, is likely to prove a serious rival to lard, dripping, etc., even with those who have no objection to the latter on the score of their source.

ROYAL COMMISSION ON VIVISECTION.

FOURTH REPORT.

(Concluded from page 415.)

THIS week we conclude our abstracts of the evidence given before the Royal Commission on Vivisection.*

Evidence of Professor D. J. Hamilton.

Professor Hamilton gave evidence on behalf of the University of Aberdeen, which only desired him to give evidence about some special inquiries which he had made with regard to diseases in sheep, in the course of which recourse was had to experiments on animals. The experiments were first carried on privately and afterwards at the suggestion of the Highland and Agricultural Society. He was Chairman of a Departmental Committee which was appointed by the Board of Agriculture in 1901, and which issued its Report in 1905. In that Report there was a detailed account of the researches which had been spread over four years. The object was to investigate louping-ill (*chorea paralytica ovis*) and braxy. These two diseases of sheep were the cause of enormous mortality all over Great Britain, especially in Scotland, the northern counties of England, and also in Ireland. The mortality was so great that in certain districts sheep farming as a profitable industry was threatened with extinction. That had been going on for a great many years, and some parts of Scotland had become depopulated on account of the enormous loss. A quarter of a million, it was said, was lost annually from braxy alone, and that was probably an under-estimate. In the case of braxy he had known, from his own experience, 10 to 15, 25, 50, 80, and 100 per cent. of mortality over certain districts on certain farms. From louping-ill the mortality was usually not so high, but sometimes came up to 15, and 20 to 25 per cent. There was great interference with business, not only in the transference of sheep, but in the whole farming operations. With regard to louping-ill, their first experience was gained in the valley of the North Tyne, where the Duke of Northumberland fitted up a station so that they could undertake the investigation. Most of his experiments on that disease were carried out in that neighbourhood. The first symptom was that the sheep appeared dull, and separated itself from other sheep; it then showed more or less pronounced toxic symptoms, looked as if it was suffering from alcoholic intoxication,

with a reeling gait, giddiness, and a tendency to lean up against any support. In forty-eight to sixty hours afterwards the animal fell over on its side, and then passed into the second stage of the disease, in which it was convulsed, contracted, and so on. In four or five days the animal passed into the third stage, in which it became more or less paralysed in all its extremities. Usually within a week or ten days after the commencement of the disease it died. The great majority of cases terminated fatally. They began by studying the phenomena by visual and other external means of examination and examination of the carcasses of animals that had died. In the vast majority of cases, if one saw the animal immediately after death, or if one slaughtered it in the height of the disease, the organs appeared to be practically healthy; a few punctiform hæmorrhages along the intestine were perhaps the only residue found. He could never find anything wrong with the blood. They produced no result by inoculating the blood; nor did the cerebro-spinal fluid produce any apparent effect. As a last resource they investigated the liquid in the peritoneal cavity, which very often presented a turbid appearance, especially a few hours after death, and on inoculating this subcutaneously they killed the inoculated animal practically in every case. In the intestine sometimes the bacillus was found in tremendous numbers. It resembled the anthrax bacillus, but grew differently; probably there was a certain relationship between them. After inoculation under the skin the animal usually died in from thirty-six to forty-eight hours. Some cases, however, were protracted over four or five days. In such cases he had seen the most perfect reproduction of the disease, not only in the sheep, but also in the rabbit. The conclusions they came to were that the disease was caused by a specific bacillus inhabiting the intestine, and under certain circumstances getting into the peritoneal cavity. They also concluded that the disease was spread through the dejecta of the animal through the manure, and also through the carelessness of farmers in leaving the carcasses about everywhere. The spores would lie in the soil for a long time apparently, and they were taken up by a second sheep, and in that way the disease was reproduced. Braxy was due to an organism of the same nature, although not identical with that of louping-ill. It was originally discovered in Norway by Nielsen by experimenting on living animals. Their investigations corroborated that discovery. The habitat was the same as that in louping-ill. The symptoms were quite different. It got the name of braxy, he believed, from an old Scandinavian derivation, signifying the suddenness of the fatality of the disease. "Beadsot" it was called in Scandinavia, and the word "braxy" was probably a lineal descendant of that. When an animal was attacked with either of these diseases treatment had very little effect upon it. Segregation had been tried over and over again. Immunization was the only feasible remedy so far. They found that the introduction of the organism in an attenuated condition, although it apparently produced a certain amount of immunity, was dangerous. Moreover, the carrying out of this method on a large scale in sheep-farming districts was impracticable, because it entailed the use of a delicate instrument in unskilled hands. Hence it was given up. Braxy was essentially a disease of first-year sheep. Farmers looked upon their two-year-olds as practically safe. That suggested that immunity, if it was acquired, must be acquired through some agency residing in the soil, and the idea struck them that the spores of the organism getting into the alimentary canal were Nature's agent in inducing this immunity. There were certain months of the year in which sheep were more susceptible to the disease. It began usually in September and went on to about the middle or end of February. His strong impression was—and he had heard it from sheep farmers—that all the animals passed through a mild attack of the disease. The organism was got in a pure state first and isolated in a pure condition; after that it was grown artificially from the peritoneal liquid. Then this was administered as a drench by the mouth. That was done at the time when sheep were practically immune from the disease—in August. They had experimented for several years progressively, modifying the method and studying what the effect would be over a whole braxy season, to ascertain what would be an effective dose, and in what form the bacillus

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ought to be administered. They had obtained fair success, but by no means what they anticipated in the way of still further progress. It was all done by experiments on living sheep and on rabbits and guinea-pigs. There was very good evidence to show that they had arrived at a true immunizing remedy. What was defective still was apparently the method of preparing it. He thought they would prepare it in the spore stage instead of the bacillary stage, and if so, there would be a much better chance of its immunizing the animal. During August, 1906, they treated some 13,000 sheep, and in February, 1907, some 4,000. He was speaking of both braxy and louping-ill. A very important point was to make out experimentally whether one could immunize an animal against braxy and louping-ill at the same time, as that would mean that one could save the farmer gathering his sheep twice or three times a year. These experiments were still going on. Asked to what extent he could say he had ascertained any benefit to the flocks, he said it would perhaps serve the purpose of the Commission if he gave an individual instance. A proprietor on the west coast of Scotland who was determined that he would see the experiment carried out properly, took the very greatest pains. He made the crucial experiment of drenching 400 sheep. That composed his whole stock of first-year sheep except 20. They were put under exactly the same circumstances, the first lot treated against braxy, the second lot in its natural state. Of the 400 drenched sheep, he lost 30 up to the end of May, many of them, it was said, from louping-ill. The witness examined the peritoneal liquid from the carcasses of 11 of these, and could not discover that there were any deaths from braxy, or only two, which were doubtful. Thirty out of 400 he lost from all causes, whereas in the case of the 20 undrenched sheep he lost 19. Very few of the 30, if any, died from braxy; in the others there was no doubt about the presence of braxy. That had been his invariable experience. There were some braxy-like diseases which were continually called braxy among farming people, but these differed from braxy in the scientific sense of the term. They concluded from the returns they got, the evidence they heard, and the examination of the peritoneal liquid, that, with certain exceptions, the mortality in the cases treated by them was considerably lower than in those not treated. When he said, "with certain exceptions," he meant on certain farms where apparently the disease they suffered from was not braxy at all; it was very often a disease known as blackquarter. The animals did not seem to suffer the slightest pain when the preventive was administered by the mouth, except that they were a little upset for a day or two, and giddy occasionally. If his experiments were successful, even to the extent of reducing the prevalence of braxy 5 per cent., that would mean enormously more lives saved than were lost by experiments. He thought they were on the lines calculated to prevent the diseases; he had never seen anything that did any good when once the animal was attacked by braxy. He thought they had the means by bacteriological investigation of discriminating accurately between braxy, blackquarter, malignant oedema, and louping-ill. They doubtless belonged to a family, and they had certain points in common. In the matter of growth and some other points it had a resemblance to anthrax. He had tried protecting sheep against all the diseases simultaneously. He did not know yet if it had been successful; it was being tried by mixing the preventive fluids against the four diseases. The evidence pointed to the fact that louping-ill was communicated by ingestion rather than by inoculation. The immunity in braxy seemed, in the majority of cases, to last the lifetime—that was, from two to two and a half years in the case of animals for slaughter. As in the case of small-pox, there were found exceptions here and there. He was not so sure with louping-ill whether that was so. Two-year old sheep took the disease, and it was said sometimes took it twice. But it tided the animal over the louping-ill season, and that was the great point. The investigations had been followed with great interest by the agricultural community of Scotland, and so far as he knew the line of investigation pursued had had their approval. Asked what he thought would be the general feeling of agriculturists in Scotland with regard to a proposal that experiments on animals with a view to extend knowledge as to human or animal disease should be prohibited by law,

Professor Hamilton said that from conversation and wide experience he had had with intelligent farmers he thought it would raise a *furor* among the intelligent agricultural population if anything of the kind were attempted. In reply to questions, he said that without a travelling licence he could not have effectively experimented without breaking the law. He would not trust to laboratory experiments exclusively on a matter of that kind. With certain exceptions here and there on particular farms and in particular districts, the returns, so far as braxy was concerned, had shown that the mortality in the drenched was very considerably lower than in the undrenched districts. They had a very great deal to learn yet, but he was thoroughly confident they would be able to combat the disease. He had had every encouragement from farmers in the attempt to immunize their sheep by drenching. A shepherd could carry out the immunizing proceeding by drenching perfectly well. No attenuation to any extent was caused by the method of cultivation. In the natural disease exposure to weather might have the effect of attenuating the organism to a certain extent. Their method was to give a mild form of the disease at the time of year at which the animal was not naturally subject to it, so as to cause immunity. If given at other times of the year they would be killed in great numbers. The inoculation experiments conferred undoubtedly a certain immunity, but the difficulty was in the administration of the system in unskilled hands. Proceeding, he said it was his opinion—and he thought that of the Medical Faculty of the University of Aberdeen—that the existing Act should continue. In reply to further questions, he said the method of drenching had been employed for the prevention of pleuropneumonia of cattle, for instance, but he did not know that it had been applied to these diseases of sheep, nor by the method he had described. He would not say that drenching had not been a method in use, but it had been applied empirically. Of late the alimentary canal had been looked upon as the source from which one could treat several contagious diseases and produce immunity, and much more so than formerly. Asked as to the system of preventive treatment followed in bygone days of drenching with the dung of pigs fed on pasture covered with the manure of sheep, he said they supposed that this pigs' manure treatment of these diseases (which was a thoroughly empirical one) had nothing in it at first; however, the farmers were so positive about its virtues, that they made further inquiry into it, and after they discovered the intestinal habitat of the organisms they were dealing with, the explanation was afforded of how the pigs' manure might act as a prophylactic, because it might contain the bacillus. The pig was always put out to feed upon the grass over which the sheep were grazing, the manure was collected after it had been upon the grass. The manure was filled with spores of some kind, most likely the spores which were the cause of the disease in the sheep, and if one administered the manure to the sheep an immunity was conferred upon the animal. He did not know whether his experiments had been repeated by any Norwegian bacteriologists, but the Norwegian Government had sent a representative from their Agricultural Department to learn about them. He had also had a good deal of correspondence on the subject with Professor Jensen of Copenhagen. He had had no evidence of his experiments being disputed or confirmed. The inquiry was still incomplete. Proceeding, he said that on the majority of farms the experiments had succeeded wonderfully well; on other farms they had been a failure; the mortality had been fairly high, and apparently for a very good reason. The sheep were treated for one disease and they died from something else. The prophylactic was prepared by himself. They had usually distributed it to the farmers free until the previous year, and, he thought, part of the foregoing year (1907 and part of 1906) when they had to make a small charge for it. The applications were so numerous that the preparation was attended with a fair amount of expense, and they made a small charge for it, which was willingly paid. Asked if there was any risk in eating braxy mutton, he said there was no other animal except the sheep that took braxy. He did not know that he would like to eat braxy mutton himself, but other people did, and it did them no harm, apparently. Dogs and other animals ate the carcasses with impunity.

Nova et Vetera.

THE MADNESS OF TASSO.

Much has been written and still more conjectured and even invented, about the poet Tasso; and in these days, as in his own, opinions differ widely concerning him. The interest of this fresh work on *Tasso and His Times*¹ lies in the fact that it is written from a more or less new standpoint, that of a medical man.

The author has brushed aside the legends which cluster so thickly round Tasso's name, and has set himself out to trace the course of his malady, and its effects upon his mind and character. The gradual deterioration of the courtier-poet, the friend of princes and scholars and the admiration of all Italy, the decay of a brilliant intellect and the souring of a naturally sweet and unsuspecting nature, is a pitiful story, and is told with sympathy and insight by Dr. Boulting, who incidentally gives us a vivid picture of the life of a man of letters during the latter half of the sixteenth century. The Italian princes were generous patrons of art and literature, and their courts were refuges for needy genius. Each little potentate had a crowd of poets, painters, and scholars dependent upon him; he treated them almost invariably with great kindness. Yet one cannot help suspecting that it was not only the love of learning which led these dukes and marquises to surround themselves with the most learned and famous men of their day, but also the hope that their own names might shine the brighter by the reflected glory of those around them. Their intense jealousy in regard to each other's "lions," and the intrigues and bribes used to draw them from each other's courts, seem to confirm this view, and throws a curious light on the times when beauty and wisdom in all their forms were worshipped so fervently.

The relations between the patron and his protégé were those of master and servant, and the poet dependent upon a sixteenth century prince was entirely in his power. Yet many enduring friendships were formed between scholars and artists and their protectors. Tasso was intimate with several members of the various noble houses he served, and some of these, in spite of quarrels and ingratitude, remained his devoted friends and admirers to the end.

Torquato Tasso was born at Sorrento in 1544. He was the son of Bernardo Tasso and Porzia de' Rossi, and the descendant of a noble family of Bergamo. His father was celebrated throughout Italy as a soldier, courtier, and poet, and Torquato was destined for a Court career, the only opening in those days for young men of short purses and long pedigrees. Brought up at the Court of the Duke of Urbino, he went through a course of study at the University of Padua, and then entered the service, first, of Cardinal Luigi d'Este, brother of Alfonso II, Duke of Ferrara, and then that of the Duke himself. "Torquato was a born courtier," says his biographer, and at Ferrara he was in his element. He became the friend and companion of Alfonso and his sisters, the Princesses Lucrezia and Leonora, and plunged into a life of feverish excitement and activity, both mental and physical. It was a life that would have worn out the strongest, and Tasso was not a strong man. From his earliest childhood and throughout his youth he persistently burned the candle at both ends, and to this Dr. Boulting attributes his mental breakdown. The old stories that Tasso went mad for love of Leonora d'Este, or else was forced by Alfonso to feign insanity as a punishment for winning his sister's love, he looks upon as mere myths; indeed, he goes so far as to deny the truth of Tasso's ever having been in love with Leonora at all.

Overstudy in childhood and the terrible strain of later years were the cause of his trouble. The first signs of mental disturbance appeared in the year 1575, when his health began to fail. He grew irritable and suspicious, imagined himself slighted and insulted by his friends and betrayed by his servants; he fancied that he had been denounced to the Inquisition, and lived in daily fear of being poisoned by his enemies. He was tormented by religious doubts and fears, and to crown all, he was full of anxiety concerning his masterpiece, the *Gerusalemme Liberata*.

It is not surprising that his brain gave way under such a strain, though the process was a gradual one. The Duke, seeing his state, treated him with the greatest possible kindness, sending him to one of his country houses for rest and change of air, and putting him under the care of his own doctors. By these learned men Tasso was bled and purged; but he himself had great faith in a certain Ferrarese druggist, who undertook to cure him in a few days. Perhaps, on the whole, it was lucky for Tasso that Lucrezia d'Este commanded the chemist to take his orders from the Court physician, who prescribed blood-letting, with a course of white wine to follow. Tasso, however, grew worse and worse; and it must be admitted that he was a sore trial to the friends who were doing their best for him. Not only did he pour forth his grievances against the Duke in wonderfully sane and plausible letters addressed to all his friends and neighbouring princes, but he was consumed with anxiety about the souls of Alfonso and his courtiers. He suspected them of heresy, and wished to go to Rome to denounce them to the Inquisition. Alfonso put up with him for a long time. When one considers the absolute power of an Italian prince in those days one cannot help acknowledging that Tasso's patron behaved with great forbearance, but his patience gave out when the poet drew his knife on a servant in the presence of the Princess Lucrezia. This was in the summer of 1577, and Tasso was imprisoned for a short time. He was very quickly released and sent to one of the ducal country houses for a change, but soon asked for permission to go to the Monastery of San Francesco. Here he spent his time in going to confession, and writing to the Inquisition. The monks tended him with great care, but he suspected them of playing tricks with his wine, and wrote to complain of this to the Duke.

When he became too great a responsibility for the monks he was taken back to the Castello at Ferrara, where he was lodged in his own rooms with a couple of attendants to look after him, and a grille across the window. He managed to escape, however, and spent some time at Sorrento with his sister. Then he began to long for the gay life of the Court, and the Duke consented to take him back to Ferrara on the condition that he would submit to a course of medical treatment. Tasso had private apartments, not in the palace, and here he lived for a time. His doctor's prescriptions have been found amongst the papers of the Estensi; they consist chiefly of calmatives, sleeping draughts, and purges. In the summer of 1578 he ran away again, and wandered through Mantua, Padua, Venice, Urbino, and Lombardy. Wherever he went he met with unflinching kindness, and the honour due to a distinguished poet. He was sheltered and kept by the great reigning houses of Italy till he grew weary of them, and wore out their patience with his suspicions and irritability. In 1579 Duke Alfonso again took him back to Ferrara. It was just at the time of his third marriage, and in the bustle of the wedding festivities Tasso imagined himself neglected. He brooded over this fancied slight till his brain gave way utterly. One day he flew into a maniacal fury, and was taken to the hospital of St. Anna a raving lunatic. That was in March, 1579, and he remained there till July, 1586. The hospital had certain rooms set apart for maniacs, and on his arrival Tasso was put into one of these, and chained down. The chain served the purpose of a straight waistcoat, and was a necessity at first, for Tasso had assaulted and beaten one of his warders. His place of confinement, however, was not the gloomy cell in which Goethe and Byron have inscribed their names, but a much airier room; and, when he grew calmer, his chain was removed, and he was given a much better apartment. After the first few months of his imprisonment he lived in large and well-furnished rooms, received visits from his friends, was allowed to write to anyone he wished, and even went out, attended by responsible persons. He was allowed to spend a day with the Marchesa of Massa and Carrara at her Villa di Madalera, and stayed at Belvedere with Lucrezia d'Este. The history of his seven years at St. Anna is a proof that the treatment of the insane at that period in Italy was as humane and enlightened as it was in some parts of Spain in the previous century. There is no hint of the horrors prevalent in the asylums of our own country at a much later date. Tasso's mental condition varied greatly during this time—fits of excitement

¹*Tasso and His Times*. By William Boulting. London: Methuen and Co. (Pp. 307. 10s. 6d.)

were followed by a terrible depression; he was caused great grief by the deprivation of religious consolation, for, though lunatics were treated with unusual consideration in Italy, they were denied both confession and communion. In 1586 Tasso was invited to Mantua by the prince of that city, and, greatly against the wishes of the Duke, he left Ferrara for the last time. Thenceforth his life consisted of ceaseless wanderings from town to town, from court to court. Dr. Boulting clearly brings out the progressive deterioration which brain disease wrought not only in the poet's mind but in his character. He had only been a few months at Mantua when he considered himself slighted, and left the Court for Bologna. Thence he travelled to Loreto and Rome, then to Naples, Florence, and Mantua, then back to Rome and Naples, always poor, always ill, and tortured with anxiety about his writings and his religion. Princes, cardinals, patriarchs, even popes, offered him shelter, but he could not rest. His weary pilgrimage ended at Rome on April 25th, 1595, when he died at the Convent of San Onofrio, where his last days had been spent.

Dr. Boulting has told the sad story in a sympathetic spirit and with much literary skill. The book, on nearly every page of which there is evidence of scholarly research, should be especially interesting to medical men as it deals with a remarkable case affording valuable material for the study of morbid psychology.

MIDLAND MEDICAL UNION.

ON Wednesday, February 10th, the annual meeting of the Midland Medical Union was held at Chesterfield, Dr. R. G. ALLEN (of Belper), President of the Union, in the chair. The annual report was presented and adopted, and the accounts for the year as audited were passed. A vote of thanks was accorded to Dr. R. G. Allen, the retiring President, for the care and attention he had devoted to the work of the Union during a very busy year. Mr. Josiah Court, J.P., of Staveley, was elected President for the ensuing year. The Council and other honorary officers were elected, and the General Secretary (Mr. G. S. O'Rorke, LL.D., of Nottingham) was reappointed.

Proposed Amalgamation with the British Medical Association.

After careful discussion, it was resolved that the Union approach the British Medical Association with a view to becoming (without losing its identity) a committee of that association in a manner similar to that adopted in the case of the Durham Medical Union. A referendum taken by postcard was read, from which it appeared that the majority of the members were in favour of the proposal. It was further resolved that the matter be referred to the consideration of two subcommittees, one for the Nottingham Division of the Union, and the other for the Derby Division, and that (subject to their consent) the following gentlemen be appointed, with power to add to their number:

Nottingham Subcommittee.—Messrs. J. H. Cox and J. Mackie, Drs. F. R. Mutch, A. Fulton, and W. H. Hill.

Derby Subcommittee.—Messrs. J. Court, J.P., and R. G. Allen, Drs. G. Booth, J.P., J. A. Goodfellow, and A. Green.

Dr. T. HENDERSON, Honorary Secretary Nottingham Division of the British Medical Association, who was present by invitation, spoke in favour of the proposal. Dr. W. St. A. St. John, Honorary Secretary of the Derbyshire Division of the British Medical Association, was also present.

Dinner.

After the meeting, the annual dinner was held at the Hotel Portland under the presidency of Mr. R. G. Allen (in the absence through illness of the newly-elected President, Mr. J. Court). Amongst those present were the Mayor (Mr. S. E. Short) and Mayoress of Chesterfield, Mrs. R. G. Allen, Dr. W. Dyson, J.P., Sinclair White, and Mrs. Wilkinson, A. Hall, Dr. Burgess, J. G. Shea, J.P., and Mrs. Shea, G. Booth, Mr. V. E. Sutcliffe and Mrs. Sutcliffe, Mr. F. J. Waldmeier, Dr. and Mrs. J. A. Goodfellow and Dr. R. A. McCrae, Dr. T. Henderson, Mr. J. A. Magee, Dr. and Mrs. W. C. Rainsbury, Dr. R. Godwin Chase, the Rev. W. F. Dutton, M.A., and Mr. G. S. O'Rorke, LL.D., General Secretary.

The loyal toasts were proposed by the CHAIRMAN and were cordially received. The toast of "The Midland Medical Union" was proposed by Dr. ARTHUR HALL (Sheffield) and acknowledged by the CHAIRMAN. The toast of "The Guests" was submitted by Dr. J. G. SHEA, and after a hearty reception was acknowledged in felicitous terms by the Mayor. The remainder of the evening was devoted to music, Miss Jackson Lee (soprano), of Sheffield, and the Cavendish Quartette being present, and a most enjoyable evening was spent.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

DURING the weeks ended November 14th, 25th, December 5th, 12th, 19th, 26th (1908), January 2nd, 9th, and 16th (1909), the deaths from plague in India amounted to 1,621, 1,646, 1,626, 1,583, 1,788, 1,683, 1,431, 2,155, and 1,991 respectively. The returns show a gratifying decline compared with any year since plague first appeared in India in 1896. The mortality returns for the year 1908 show that the number of deaths from plague in India amounted to about 148,700 only, compared with 1,315,892 during 1907. The year 1909 opens with no signs of any serious recrudescence of the disease.

The distribution of plague in India may be gathered from the following figures: During the week ended November 21st, 1908, the mortality from plague was—in Bombay Presidency, 782; Bengal, 71; United Provinces, 52; Punjab, 275; Central Provinces, 104; Central India, 64; Hyderabad State, 20; Madras Presidency, 48; Mysore State, 162; Burma, 43. During the week ended January 16th, 1909, the figures were: Bombay Presidency, 475; Bengal, 188; United Provinces, 231; Punjab, 589; Central Provinces, 198; Central India no deaths reported since December 13th, when 16 were announced; Hyderabad State (last report December 19th—10 deaths announced); Madras Presidency, 17; Mysore State (no returns); Burma, 312.

MARITIMES.

During the weeks ended December 17th, 24th, 31st (1908), and January 7th, 14th, 21st, 28th, and February 4th and 11th (1909), the fresh cases of plague in Mauritius numbered 15, 15, 4, 2, 4, 4, 1, and 1; the deaths during these weeks amounted to 10, 9, 4, 1, 2, 3, 1, and 1 respectively.

GERMAN EAST AFRICA.

On November 24th a fresh case of plague occurred.

BRITISH EAST AFRICA.

Kisumu declared free from plague.

ZANZIBAR.

On November 22nd, 1908, 2 fresh cases reported.

EGYPT.

Between November 10th and December 25th, 1908, 193 fresh cases of plague reported, and 44 deaths from the disease. In Alexandria 3 cases reported, and in Port Said 1.

TRIPLEX.

In Bagdad, from November 6th, 1908, to January 5th, 1909, fresh cases reported, 31; deaths from the disease, 7.

In Beirut, 5 fatal cases of pneumonic plague reported on January 2nd, 1909.

STRAITS SETTLEMENTS.

On November 2nd, 1908, 1 case of plague reported.

FORMOSA.

Between November 7th and 14th, 1908, fresh cases of plague, 17; and 5 deaths from the disease.

CHINA.

At Tong-Shan and district plague was reported to be epidemic in November 2nd, 1908. Sporadic cases in Hong Kong reported during the past three months.

JAPAN.

Between October 13th and December 16th, 1908, the fresh cases of plague at Awa, Miochinomya, and Kobe numbered 25, 15, and 18 respectively. At Awa, of the 25 cases, 18 proved fatal. At Osaka a fresh outbreak of plague was reported on December 17th, 1908.

UNITED STATES AMERICA.

Between July 15th and December 16th, 1908, the fresh cases reported numbered 4, with 3 deaths from the disease.

BRASIL.

Rio de Janeiro.—Between August 24th and December 20th, 1908, the fresh cases of plague numbered 87 and the deaths from the disease 46.

PERU.

Between September 25th and October 28th, 1908, 68 fresh cases of plague reported, and 25 deaths from the disease.

ECUADOR.

From Guayaquil and Milagro, between November 7th and 15th, 1908, fresh cases of plague numbered 15, with 10 deaths.

AZORES.

Between July 1st and October 27th, 1908, at Terceira, 112 fresh cases of plague reported and 53 deaths from the disease.

QUEENSLAND.

On November 5th, 1908 a fatal case of plague reported at Brisbane.

REPORT OF THE Royal Commission on the Poor Laws and Relief of Distress.

This report of the Royal Commission appointed on December 4th, 1905, was issued on Wednesday last. It is a folio volume of 1,252 pages, consisting of a Majority Report filling 670 pages; memoranda and notes by individual members of the Commission filling 48 pages, and a separate or Minority Report, which contains 518 pages.

MAJORITY REPORT.

The Majority Report is signed by the Chairman, Lord George Hamilton; Dr. Kelly, Bishop of Ross, Ireland; the Right Hon. Sir Henry Robinson, K.C.B., Vice-President of the Local Government Board for Ireland; Sir Samuel B. Provis, K.C.B., Permanent Secretary to the Local Government Board for England; Mr. Frank Holdsworth Benthall, J.P., Ex-Chairman of the Bradford Board of Guardians; Dr. A. H. Downes,¹ Senior Medical Inspector for Poor-law purposes to the Local Government Board for England; the Rev. Thory Gage Gardiner, M.A.; Mr. C. S. Loch,² Secretary of the London Charity Organization Society; Mr. J. Patten Macdougall, C.B., Vice-President of the Local Government Board for Scotland; Mr. T. Hancock Nunn,³ member of Hampstead Board of Guardians; the Rev. L. R. Phelps, M.A.; Dr. William Smart, Vice-Chairman of the Oxford Board of Guardians, Adam Smith Professor of Political Economy, University of Glasgow; Mrs. Bosanquet,⁴ and Miss Octavia Hill.⁵ The reference to the Commission was:

1. Into the working of the laws relating to the relief of poor persons in the United Kingdom;
 2. Into the various means which have been adopted outside of the Poor Laws for meeting distress arising from want of employment, particularly during periods of severe industrial depression;
- And to consider and report whether any, and if so, what, modification of the Poor Laws or changes in their administration or fresh legislation for dealing with distress are advisable.

The Majority Report consists of the following nine parts:

- Part I.—Procedure.
- Part II.—Statistical Survey of Poor Law Problems.
- Part III.—Historical Sketch of the Poor Laws down to 1834.
- Part IV.—Historical Development and Present Condition of the Various Branches of the Poor Law.
- Part V.—Medical Relief.
- Part VI.—Distress due to Unemployment.
- Part VII.—Charities and the Relief of Distress.
- Part VIII.—Miscellaneous.
- Part IX.—Review of Existing Conditions and Proposed Changes.

PART I.—PROCEDURE.

In the opening passages of their report the Commissioners state that they were impressed by the immense scope of the investigation entrusted to them, and add the observation that since 1834, when the operations of the Poor Law as a whole were last brought under the consideration of a Royal Commission, there have been presented to Parliament nearly a hundred reports of inquiries into subjects connected with the Poor Law; none of these reports, however, included in their purview pauperism as a whole, and the Commissioners state that in their report there are for the first time submitted proposals involving not only large and important modifications of the Poor Law and its administration but a revision of the methods of voluntary assistance. Having regard to the magnitude of the subject, and to the fact that the Poor Law regulates daily, and almost hourly, the lives of a heterogeneous population exceeding in size that of the city of Liverpool, the Commissioners resolved to direct their efforts towards laying down principles, leaving administrators and officials

to work out the details later on. For the same reason they limited their inquiries in the main to a survey of the general operations of the Poor Law with the object of offering suggestions and guidance to the Government.

The Commissioners also took into consideration the fact that at the time of their appointment a number of official inquiries into subjects which came within their terms of reference had recently been conducted or were actually proceeding. The three rules of procedure, therefore, which they adopted with a view to limiting the scope of their inquiry were:

- (1) To consider principles and, wherever possible, to avoid details.
- (2) To avoid any attempt at inculcating or exculpating individuals or individual boards of guardians.
- (3) To accept as far as possible the evidence and recommendations of recent or current inquiries into subjects connected with their inquiry.

Under the first head of their reference the Commissioners began by inviting chairmen of boards of guardians throughout England and Wales to report any serious defects in the Poor-law system and the best remedies; subsequently a communication was sent to all boards of guardians stating that the Commission would be happy to consider any written representations. A similar letter was sent to every parish council in Scotland. Out of the 645 unions of England and Wales replies were received from 548, either from the chairmen or from the boards, or from both. A list of questions as to the working of the Unemployed Workmen Act was sent to every distress committee, and many replies were received. The number of witnesses examined was relatively small, the Commission finding it more convenient to take evidence in the form of a written statement. Among the bodies which submitted evidence were the Local Government Boards for England, Scotland, and Ireland, the British Medical Association, the chief Poor-law and charitable associations in England and Scotland, and trade unions, friendly societies, and co-operative societies.

Special Investigations.

As certain aspects of the matter referred to the Commission seemed to call for local investigation in typical districts which the Commissioners themselves could not undertake, a number of special investigators were appointed and presented reports which the Commissioners describe as valuable; they are not contained in the volume now issued.

Among these reports is one on the methods and results of the present system of administering indoor and outdoor Poor-law medical relief in certain unions in England and Wales visited for the purpose by Dr. J. C. McVail, and one on the overlapping of the work of the voluntary general hospitals with that of Poor-law medical relief in certain districts of London, by Miss Norah B. Roberts.

PART II.—STATISTICAL SURVEY OF POOR-LAW PROBLEMS.

In this part the Commissioners, after reviewing a large mass of statistics, state that Poor-law expenditure, estimated per inhabitant, has increased from 7s. 0½d. to 8s. 2½d. since 1871-1872, and is only 7½d. less than it was in 1834; while the expenditure per pauper has increased from £7 12s. 1d. to £15 12s. 6d. in the same period. The country is maintaining a multitude of paupers not far short of the numbers maintained in 1871-2, and is spending more than double the amount upon each individual. The increased expenditure has done little towards diminishing the extent of pauperism.

Medical Relief: Poor-law Infirmeries.

The Commissioners find that there has been an increase in the number of the able-bodied sick relieved indoors since 1891-2—the first year for which statistics are available—and that this increase has been fairly general in both urban and rural areas, but has been highest in some of the urban groups of unions. It is thought probable that this is to be attributed to the development of separate Poor-law infirmeries, which has rendered the receipt of indoor medical treatment less distasteful; the number rose from 78,319 on January 1st, 1904, to 91,738 on January 1st, 1908. The Commissioners believe that over three-fourths of the poor under medical treat-

¹ Mr. Loch, Mr. Nunn, Mrs. Bosanquet, and Miss Octavia Hill sign subject to memoranda appended to the Report. Dr. Downes signed subject to a memorandum, making a note detaching himself from the schemes of new administrative machinery proposed in the Report.

ment in London are relieved in Poor-law institutions, whereas less than one-half are so relieved outside London. Notwithstanding the large number of medical charities in London, the London proportions for indoor and outdoor paupers under medical treatment are higher than the provincial proportions, and it appears that the young and middle-aged avail themselves of the London Poor-law infirmaries to an extent which, when compared with other parts of the country, is abnormal. The Commissioners note that there has been no reduction in pauperism notwithstanding sanitary improvements, and arrive at the following general conclusion:

"It is very unpleasant to record that, notwithstanding our assumed moral and material progress, and notwithstanding the enormous annual expenditure, amounting to nearly 60 millions a year, upon poor relief, education, and public health, we still have a vast army of persons quartered upon us unable to support themselves, and an army which in numbers has recently shown signs of increase rather than decrease. To what is the retrogression due? It cannot be attributed to lack of expenditure. Is this costly and elaborate machinery we have established defective, and if so where does it fail to accomplish its end? Is the material upon which this machinery operates becoming less amenable to the remedies applied?"

PART III.—HISTORICAL SKETCH OF THE POOR LAWS DOWN TO 1834.

This section of the report goes back to a period antecedent to the Elizabethan Poor Relief Act (1601); sketches the history of legislation in the eighteenth century; gives an account of the Poor Law Commission of 1832, and of the principles of the Poor Law Amendment Act of 1834, and concludes with a brief summary in which it is stated that the two main principles of the Poor-law reform of 1834, so far as relief was concerned, applied to the able-bodied alone; they were:

First.—That relief should not be offered to able-bodied persons and their families otherwise than in a well-regulated workhouse.

Secondly.—That the lot of the able-bodied should be made less eligible than that of the independent labourer outside.

PART IV.—HISTORICAL DEVELOPMENT AND PRESENT CON- DITION OF THE VARIOUS BRANCHES OF THE POOR LAW.

This part, which occupies 150 pages, contains, in addition to the recommendations with regard to the Local Government Board, the following proposal to substitute the term Public Assistance for Poor Law:

"It has been impressed upon us in the course of our inquiry that the name Poor Law has gathered about it associations of harshness, and still more of hopelessness, which we fear might seriously obstruct the reforms which we desire to see initiated. We are aware that a mere change of name will not prevent the old associations from recurring if it does not represent an essential change in the spirit of the work, but in our subsequent criticism and recommendations we hope to show the way to a system of help which will be better expressed by the title of Public Assistance than by that of Poor Law. The general aim will remain, as it always has been, the independence and welfare of the people, but as a means towards that end we desire to introduce into all branches of the work a spirit of efficiency and hopefulness. We think that this object will be made more easy of attainment, and that the work will be more accurately described by a change of title. Accordingly, we recommend that the Division of the Local Government Board which has hitherto dealt with 'the Relief of the Poor,' should in future be known as the Public Assistance Division."

As a corollary the Commissioners (in Part IX) recommend that the duties now performed by boards of guardians should be separated into two categories, and propose to call into existence two bodies for the discharge of the two sets of functions—namely:

(1) A local authority for central administration and control within an enlarged area.

(2) Local committees for dealing with applications, investigating and supervising cases, and undertaking such other duties as may be delegated by the local authority.

They recommend that the new local authority shall be known as the Public Assistance Authority, and that the committees which will carry on its work locally shall be known as Public Assistance Committees.

This part of the report concludes with the observation that, while the rise in Poor-law expenditure was accompanied by a diminution in pauperism, it was possible to regard it with some degree of acquiescence, since it is worth while to pay highly for the restoration of paupers to independence. There are, however, indications that the present administration has reached the limits of its remedial powers, and the Commissioners are convinced that its policy both of cure and of prevention must be extended more especially in making the giving of relief conditional upon the recipient accepting a way of life likely to restore him to independence. This, they point out, is no new principle. "It was the leading note of the 1834 administration, and has been so ever since, that one class—the able-bodied—should be relieved only under certain conditions. It is now necessary to apply the principle to other classes. It has proved, indeed, impossible to push a curative policy any further in its absence: sickness cannot be cured, either in institutions or at home, unless the patient will accept conditions; economic evils cannot be combated unless those who suffer from them will conform to conditions; moral weakness cannot be strengthened unless the authorities have power to impose conditions. And what those conditions are to be must become manifest through a careful and progressive study of the causes of pauperism."

PART V.—MEDICAL RELIEF.

This part of the report contains seventy pages, divided into three chapters, dealing respectively with the development of the system of medical assistance to the poor, a review of the system of medical assistance to the poor, and with general conclusions and proposals.

The third chapter begins with the following general statement:

The effects of a system of medical relief under the Poor Laws on a principle of restriction, hedged in by difficulties of attainment, and, till lately, accompanied by political disfranchisement, have been clearly shown in the evidence given before us:

1. It has to some extent produced the result which was intended. It has deterred men from applying to the Poor Law, has fostered independence, has called into existence and stimulated the growth of friendly societies, medical clubs, provident dispensaries, and the like.

2. It has, however, probably led to the neglect on the part of many to provide themselves, their wives, and families with medical attendance, and so helped to impair the health of the present generation.

3. It has called into existence a vast amount of medical charity. The out-patient wards of hospitals are only one instance of the eagerness with which men avail themselves of free medical advice, often, no doubt, as a second opinion where there is grave apprehension or want of confidence in a medical man.

4. It has helped to develop on a large scale the sale of patent medicines, and has created a class of practitioners who give advice and supply medicines at an almost inconceivably low price. As to the value of that advice or of those medicines, we pronounce no opinion. In matters of health the lessons of experience are learnt but slowly and sometimes too late to profit the learner, and it may be said that the system tends to encourage inefficiency and to demoralize both him who gives and him who takes.

The first point to which we would call special attention is the large number of institutions and of social agencies dealing with sickness. We have hospitals, convalescent homes, and retreats for the dying, maintained by voluntary effort. We have infirmaries under the care of the guardians, and infectious hospitals, managed by the sanitary authorities. All these provide institutional treatment. For domiciliary treatment, we have outdoor medical relief from the Poor Law, provident dispensaries, and free dispensaries. We have also a far-reaching organization of friendly societies which put medical aid in the forefront of their pro-

gramme and which are of great value to the nation because not only do they aid the growth of thrifty and provident habits, but they give an opportunity for the exercise of self-government. As things stand, we have not merely much overlapping and consequent waste, but the illogical result that, whereas the inmate of a workhouse infirmary runs the risk of disfranchisement, the patient in a voluntary hospital incurs no such liability.

Sickness as a Cause of Pauperism.

The Commissioners then proceed to consider reforms for the co-ordination, utilization, and development of existing agencies for the provision of medical assistance. They state that sickness is admittedly one of the chief causes of pauperism, and that the more chronic its character and the longer its duration, the greater the likelihood of its producing dependence upon the rates. They estimate that at least one-half of the total cost of pauperism is swallowed up in direct dealing with sickness, while to this burden must be added its indirect effects, the widows, children, and old people cast upon the rates through preventable deaths of breadwinners, and the host of degenerate, imbecile, maimed, and blind, with whom disease helps to populate our workhouses. They conclude that there is little, if any, exaggeration in the statement that "to the extent to which we can eliminate or diminish sickness among the poor, we shall eliminate or diminish one-half the existing amount of pauperism."

Gratuitous Medical Attendance.

Considering next objections to gratuitous medical attendance, the Commissioners conclude that while one of the first objects of a change in the present system of medical assistance should be to render it more accessible to, and more readily obtainable by, the working classes, it should be administered in such a way that those who contribute towards their own medical assistance should obtain it on more eligible terms than those who do not.

Objections to Transfer of Medical Assistance to Sanitary Authorities.

The report states that numerous witnesses, a considerable proportion of whom were medical officers of health, suggested that the proper remedy for the existing chaos in the organization of medical assistance of the poor is to hand over the administration of medical assistance to the sanitary authority, thus uniting in one body the responsibility for the public prevention and treatment of disease.

The majority of the Commissioners reject this proposal on various grounds. Among others that it is the duty of the sanitary authority by propaganda, persuasion, and forethought, to make its services attractive to all classes of the community, independent of their economic position; that these authorities have allowed to fall into desuetude the power of recovering the cost of treatment in their hospitals, which, except in London, they legally possess; that while there are over 1,800 sanitary authorities in England and Wales, there are only 643 Poor Law unions, so that to hand over medical assistance to the sanitary authorities would be to hand it over to a larger number of authorities with smaller areas than at present, thus reverting to a system that existed prior to 1834; that as medical treatment is largely a question of dieting, the transfer would involve extending the functions of sanitary authorities to maintenance, thus creating two relief authorities where only one exists at present; and, finally, that before the functions of an existing authority are enlarged by transferring to it the duties of another, it is generally required that the authority so enlarged or elevated shall have discharged satisfactorily the primary duties entrusted to it. "This," the Commissioners state, "cannot be said of many sanitary authorities, especially in rural districts."

After analysing further the defects of the present system in quality, in extent, and from overlapping, the Commissioners propound the following scheme of reform, which is quoted in full:

"(f) SCHEME OF REFORM.

"It is in the hope of attaining this end that we submit the following scheme of reform which assumes that the area of administration of the future Public Assistance Authority will be the county and the county borough, and that within each area this authority will have local committees working under it.

General.

"1. That medical assistance should be reorganized on a provident basis."

"2. That in certain cases power of compulsory removal to and detention in an institution should be given to the authorities under proper safeguards.

"3. That there should be systematic co-operation between the Public Assistance Authorities, the Sanitary Authorities, the Education Authorities, and the Voluntary Medical Institutions, based on a clear definition of their respective functions.

"4. That no disfranchisement should be attached to any form of medical assistance.

"5. That the arrangements for indoor and outdoor medical assistance should be periodically inspected by medical inspectors on behalf of the Local Government Board.

Functions of the Public Assistance Authority as to Medical Assistance.

"6. That in taking over the existing powers and duties of boards of guardians in regard to medical relief the new Poor-law authority, or, as we shall call it, the Public Assistance Authority, shall undertake the following functions:

"(i) To co-ordinate and, when necessary, supplement the medical institutions of the county or county borough and to suggest methods of co-operation with the sanitary authorities and the authorities in charge of voluntary hospitals.

"(ii) To organize an outdoor and provident medical service easily accessible in all parts of the county or county borough, this service to include the provision of competent midwives.

"(iii) To develop an adequate nursing service throughout the county or county borough, preferably in connexion with voluntary nursing associations.

"(iv) To subscribe, when necessary, towards these purposes.

"(v) To arrange for adequate supervision of, and report on the efficiency and adequacy of the medical institutions and medical service through the county or county borough.

Establishment of Medical Assistance Committees.

"7. That, to assist the Public Assistance Authority in carrying out the above functions, they shall appoint a committee from among their number, to which shall be added representatives of the Health Committee of the County Council or of the County Borough Council, and of the local branch or branches of the British Medical Association. This committee shall be called the County or County Borough Medical Assistance Committee, as the case may be, and shall have power to co-opt representatives of local hospitals, county or county borough nursing associations, dispensaries, and registered friendly societies.

"8. That, where necessary, a local committee on similar lines shall be appointed by each Public Assistance Committee for the purposes of the local administration of medical assistance. This committee shall be termed the Local Medical Assistance Committee.

"9. That all, or any, of the functions defined in No. 6 may be referred by the Public Assistance Authority to the County or County Borough Medical Assistance Committee.

"10. That the following shall be the lines of procedure for carrying out the functions mentioned in No. 6:

Institutions.

"(i) To consider in conjunction with each "Local Medical Assistance Committee" the needs of the county or county borough and the needs of each relief district in the way of hospital (including infirmary) accommodation.

"(ii) To reorganize existing Poor-law medical institutions throughout the county, or county borough, with a view to making them most effective for different classes of patients. (This would be done in conjunction with the committees in charge of workhouses, schools, etc.)

"(iii) To organize schemes of co-operation between Public Assistance institutions and voluntary hospitals.

²Cf. Report by Dr. McVail, pp. 157-162; Report of Committee of British Medical Association on Contract Practice; Evidence by Dr. Lauriston Shaw etc.

"(iv) To develop a system of paying and free cottage hospitals in conjunction with voluntary and endowed charities, these to include provision for confinement cases.³

"(v) To arrange schemes of co-operation between hospitals and provident dispensaries or outdoor medical service.⁴

Outdoor Medical Service.

"(i) To require the 'Local Medical Assistance Committee,' in conjunction with the local doctor, to map out their district into convenient medical districts or 'dispensary areas.'⁵

"(ii) To approach any free or provident medical institution, including private medical clubs, already existing in the district, and invite them to fall in with the scheme. (Refusal not to check procedure.)⁶

"(iii) The local authority may subscribe to the provident dispensaries, subject to the sanction of the Local Government Board, and under the conditions mentioned in Section 10 of the Poor Law Act, 1879.

Relation of the Poor Law to Provident Dispensaries.

"11. That where any applicant for medical assistance is not a member of a provident society, he shall apply to and at once be treated by a district medical officer.⁷

"12. That the relieving officer, or, as he will be called in future, the Assistance Officer, shall inquire into and report the case to the Public Assistance Committee, whose action shall be directed towards—

(i) Recovery of cost.

(ii) Strengthening of provident agencies.

"13. That with a view to enlisting the services of all competent medical practitioners in the locality of a provident dispensary, the British Medical Association be requested to suggest a general scheme or scale of fees and wage limit to be applied by their local branches as local circumstances may suggest.

"14. That under such scheme all local medical practitioners consenting to come under it shall be on the list

³ It is not suggested that this should be done suddenly or that it should be thrown mainly upon the rates. It is a popular form of charity, and to publish the needs of a district would be a guide to charitable donors. Also there is much evidence in favour of small self-supporting hospitals, or nursing homes, and these might be organised in conjunction with the local medical men, and, to some extent, upon a provident basis.

⁴ This scheme would have to vary with local conditions. In London the Central Hospitals Council and the Hospitals Committee of the British Medical Association are in favour of pre-arranged treatment to dispensary members who may be sent for consultation by dispensary doctors, and of using the out-patient departments of the hospitals mainly for consultative purposes. (Cf. Holland, Vol. III., App. xvii. (B), and Montefiore, Vol. III., App. xxii. (A).) We have no evidence to show whether provident hospitals would follow the same line, but at Manchester the hospital authorities refer out-patients to the provident dispensary. The British Medical Association witnesses say: "It is remarkable how many hospitals who only give general replies on other matters go out of their way to say that they would welcome co-ordination of the provident dispensaries." (Whitaker, 39191.)

⁵ The nature of the "dispensary" to be established in each area would vary with the nature of the district. In large and sparsely-populated districts a room in a cottage, with a locked cupboard for drugs, might be sufficient. In a crowded area, a complete building, with waiting rooms, etc., and a dispenser, might be necessary; while in medium districts attendance at the doctor's own house might be preferred. The determining factor would be the distance to be travelled by the patient. Existing buildings might often be utilized, e.g., public assistance, provident, and free dispensaries.

⁶ It is probable that in many cases these would join at once. The Secretary to the Metropolitan Provident Medical Association says that already some of the free dispensaries have been converted into provident dispensaries, and that he is constantly approached by others with the same object. (Cf. Warren, 35487 (44), 35592-4.) Want of funds is generally the chief obstacle to the establishment of a universal provident system; this motive would probably increase. The head of a large free dispensary in Birmingham is strongly in favour of a provident system. (Cf. Evidence of Dr. Haeger Wilson, 44618 et seq.) Doctors also are glad to come in with their private patients, thus saving themselves the trouble of management and collection, and friendly societies arrange for their members to join.

⁷ This procedure may be slightly modified if, and when, the office of District Medical Officer is abolished. On this matter the Commissioners say: "When the scheme which we propose is in full working order, the member of a provident dispensary will be able to choose his doctor from the list of those working with the dispensary. We recommend that certain cases in receipt of public assistance, such as the aged and widows with young children, might be enrolled as members, and their fees paid by the Public Assistance Committee. To ensure prompt attendance in cases of sudden and urgent necessity, we think that every doctor who joins the dispensary should be required to give an undertaking to attend any such case for a suitable fee. We hope that, ultimately, it may be possible to dispense altogether with the service of the district medical officer, and that his duties will be shared among medical men practising in the district. Meanwhile, arrangements might be made to retain the district medical officer on the staff of the provident dispensary."

of dispensary doctors, and any applicant who is a member of the dispensary shall be entitled to select such a practitioner as he may prefer.

"15. That arrangements should be made, where necessary, for the reception of patients in voluntary and general hospitals by the payment of their cost or by some other agreement between the Public Assistance Committee and those in management of the hospital.

"16. That any practitioner attached to a provident dispensary may, where the patient is a member of such dispensary and in need of institutional treatment, recommend him for admission to the local Public Assistance infirmary, and in certain cases, where arrangements have been made, to a voluntary or general hospital.

"17. That, so far as the patient is concerned, admission under such conditions shall be covered by the subscription to the provident dispensary.

"18. That as regards certain cases in receipt of public assistance (such as the aged and widows with young children), the Public Assistance Committee may enrol all such cases as members of a provident dispensary by paying the necessary fees."

METHODS OF ASSISTANCE.

Indoor Relief or Institutional Assistance.

The Majority Report recommends that general work-houses should be abolished, and advises classification as an essential preliminary to making indoor relief rightly effective, and accordingly that such relief should be given in separate institutions appropriate to the following classes of applicants:

1. Children.
2. Aged and infirm.
3. Sick.
4. Able-bodied men.
5. Able-bodied women.
6. Vagrants.
7. Feeble-minded and epileptics.

It is recommended that the treatment of inmates should be made as far as possible curative and restorative; that all indoor cases should be revised from time to time by a responsible committee with a view to seeing whether the existing treatment is producing the desired result, or whether it is desirable that the treatment should be altered. It is also recommended that the central authority should exercise a more strict control over expenditure on buildings and equipment.

MEDICAL RELIEF AND ASSISTANCE.

The main proposals of the Majority Report for medical assistance are as follows:

Medical Relief or Assistance.

"The primary responsibility of the Public Assistance Authorities for the inspection and supervision of medical assistance should be clearly recognized and carefully maintained; but, meanwhile, the arrangements for both indoor and outdoor medical assistance should be periodically inspected by medical inspectors on behalf of the Local Government Board; to this end the Board's staff of medical inspectors should be increased. (V., 127.)

"That, the Public Assistance Authority, to assist them in carrying out the functions in connexion with medical assistance, shall appoint a committee from among their number, to which shall be added representatives of the Health Committee of the County Council, or of the County Borough Council, and of the local branch or branches of the British Medical Association. This committee shall be called the County or County Borough Medical Assistance Committee, as the case may be, and shall have power to co-opt representatives of local hospitals, county or county borough nursing associations, dispensaries, and registered friendly societies.

"That where necessary a local committee on similar lines shall be appointed by each Public Assistance Committee for the purposes of the local administration of medical assistance. This committee shall be termed the Local Medical Assistance Committee.

"That all or any of the functions of the Public Assistance Authority in regard to medical assistance may be referred to the County or County Borough Medical Assistance Committee.

"That, in all matters affecting medical assistance, there should be systematic co-operation between the Public Assistance Authorities, the Public Health Authorities, the Education Authorities, and the Voluntary Medical Institutions, based on a clear definition of their respective functions.

"That the medical and nursing needs of each area, whether institutional or otherwise, be reviewed, and, if necessary, supplemented, regard being had to the available provision made by Poor-law, sanitary, or voluntary authorities.

"That medical assistance should be organized on a provident basis.

"That a general system of provident dispensaries should be established, of which existing voluntary outdoor medical organizations be invited to form an integral part, and that every inducement should be offered to the working classes below a certain wage limit to become, or to continue to be, members of a provident dispensary. To this end the subscription to the provident dispensary should cover the following advantages to its members:

(a) Power to choose their own doctor from the doctors upon the list of the dispensary.

(b) The provision of adequate medical assistance at a rate or fee within the reach of those subscribing to the provident dispensary.

(c) Institutional treatment upon a recommendation from the dispensary doctor.

"That the Public Assistance Authority should have power to subscribe, if necessary, to the purposes indicated in Recommendations 114, 115, and 116.

"That medical treatment should be more readily accessible to all who are in need of it; that, in cases of illness in which immediate treatment is necessary, the physical condition of the patient should be the first consideration; that in such cases medical aid should be obtainable in the first instance by application to any medical officer in the service of the provident dispensary.

"That, except as regards the cases requiring immediate attention above referred to, all necessitous persons shall receive medical relief through the Public Assistance Committee.

"That certain cases in receipt of Public Assistance, such as the aged and widows with young children, might be made members of the provident dispensary on payment of the necessary fees by the Public Assistance Committee.

"That domiciliary medical assistance at the public cost should be conditional upon the maintenance of a healthy domicile and good habits.

"That no disfranchisement should be attached to any form of medical assistance."

MINORITY REPORT.

The Minority Report is signed by the Rev. Prebendary H. Russell Wakefield, Alderman and ex-Mayor of the Borough of Marylebone and Chairman of the Central Unemployed Body for London; Mr. Francis Chandler, Secretary to the Amalgamated Society of Carpenters and Joiners and ex-Chairman of Chorlton Board of Guardians; Mr. George Lansbury, member of the Borough Council and Board of Guardians, Poplar, and of the Central Unemployed Body for London; and Mrs. Sidney Webb.

It agrees with the Majority Report on many matters of principle.

It recommends the abolition of Boards of Guardians and the transference of their duty and property to the County and County Borough Councils strengthened for the purpose, which should act as Destitution Authorities according to the following plan, which is quoted in full:

"That the services at present administered by the Destitution Authorities (other than those connected with vagrants or the able-bodied)—that is to say, the provision for:—

(i) Children of school age;

(ii) The sick and the permanently incapacitated, the infants under school age, and the aged needing institutional care;

(iii) The mentally defective of all grades and all ages; and

(iv) The aged to whom pensions are awarded—should be assumed, under the directions of the County and County Borough Councils, by

- (i) The Education Committee;
- (ii) The Health Committee;
- (iii) The Asylums Committee; and
- (iv) The Pension Committee respectively."

It recommends also that the general mixed workhouse should be abolished, and replaced by a system of classification and special treatment adapted to the requirements in accordance with the scheme outlined above.

MEDICAL RELIEF.

With regard to the Poor Law Medical Service and medical relief generally, the minority of the Commissioners report as follows:

"That the continued existence of two separate rate-supported medical services in all parts of the kingdom, costing, in the aggregate, six or seven millions sterling annually—overlapping, unco-ordinated with each other and sometimes actually conflicting with each other's work—cannot be justified.

"That the very principle of the Poor Law Medical Service—its restriction to persons who prove themselves to be destitute—involves delay and reluctance in the application of the sick person for treatment; hesitation and delay in beginning the treatment; and, in strictly administered districts, actual refusal of all treatment to persons who are in need of it, but who can manage to pay for some cheap substitute. These defects, which we regard as inherent in any medical service administered by a Destitution Authority, stand in the way of the discovery and early treatment of incipient disease, and accordingly deprive the medical treatment of most of its value.

"That it has been demonstrated to us beyond all dispute that the deterrent aspect which the medical branch of the Poor Law acquires through its association with the Destitution Authority causes, merely by preventing prompt and early application by the sick poor for medical treatment, an untold amount of aggravation of disease, personal suffering, and reduction the wealth-producing power of the manual working class.

"That the operations of the Poor Law Medical Service, being controlled by Destitution Authorities and administered by Destitution Officers, inevitably take on the character of unconditional 'medical relief'—that is, relief of the real or fancied painful symptoms—as distinguished from remedial changes of regimen and removal of injurious conditions, upon which any really curative treatment, or any effective prevention of the spread or recurrence of disease, is nowadays recognized to depend.

"That whilst domiciliary treatment of the sick poor is appropriate in many cases, it ought to be withheld—

(i) Where proper treatment in the home is impracticable;

(ii) Where the patient persistently malingers or refuses to conform to the prescribed regimen; or

(iii) Where the patient is a source of danger to others.

"It has become imperative in the public interest that there should be, for extreme cases, powers of compulsory removal to a proper place of treatment. Such powers cannot, and in our opinion should not, be granted to a Destitution Authority.

"That where Destitution Authorities cease to abide by the limitation of their work to persons really destitute, or pass beyond the dole of 'medical relief,' their attempt to extend the range or improve the quality of the Poor Law Medical Service brings new perils. We cannot regard with favour any action which, in order to promote treatment, openly or tacitly invites people voluntarily to range themselves among the destitute; or which tempts them, by the prospect of getting costly and specialized forms of treatment, to simulate destitution. Nor do we think that an authority charged with the relief of destitution, whatever its method of appointment or whatever the area over which it acts, or any authority acting through officers concerned with such relief, whatever their official designation, can ever administer a Medical Service with efficiency and economy.

"That, with regard to the suggestion that the medical treatment of the sick poor should be left either to provident medical insurance or to voluntary charity, it has been demonstrated to us that these offer no possible alternative to the provision for the

sick made by the Public Authority. With regard to domiciliary treatment, the evidence as to medical clubs "contract practice," provident dispensaries, and the out-patients' departments of hospitals is such as to make it impossible to recommend, in their favour, any restriction of the services at present afforded by the district medical officers and Poor-law dispensaries. Nor do we feel warranted in giving any support to the proposal made to us that the whole of this outdoor medical service of the Poor Law should be superseded by a publicly subsidized system of letting the poor choose their own doctors. Any such system would, in our judgement, lead to an extravagant expenditure of public funds on popular remedies and "medical extras," without obtaining, in return for this enlarged 'Medical Relief,' general regularity of life or more hygienic habits in the patient. With regard to institutional treatment, we gladly recognize the inestimable services rendered to the sick poor by the hospitals, sanatoriums, and convalescent homes supported by endowments or voluntary contributions. We approve of the use now made of these institutions by public authorities, and we think that many more suitable cases than at present might, on proper arrangements as to payment, be transferred from rate-maintained to voluntary institutions. But it is clear that such institutions provide only for a small fraction of the need, and that they leave untouched whole districts for some cases, and whole classes of cases everywhere, which there is no prospect of their being able or willing to undertake.

"That the Medical Service of the Public Health Authorities, which now extensively treats disease, and actually maintains out of the rates a steadily increasing number of the sick poor, is based on principles more suited to a State Medical Service than that of the Poor Law. These principles, which lead, in practice as well as in theory, to searching out disease, securing the earliest possible diagnosis, taking hold of the incipient case, removing injurious conditions, applying specialized treatment, enforcing healthy surroundings and personal hygiene, and aiming always at preventing either recurrence or spread of disease—in contrast to the mere 'relief' of the individual—furnish in fact the only proper basis for the expenditure of public money on a Medical Service.

"That such compulsory powers of removal in extreme cases, as have been asked for, are analogous to those already exercised, with full public approval, by the Public Health Authorities; and that the proposed extension of such powers can properly be granted only to an authority proceeding on Public Health lines.

"That we therefore agree with the responsible heads of all the four Medical Departments concerned—the Chief Medical Officer of the Local Government Board for England and Wales, the Medical Member of the Local Government Board for Scotland, the Medical Commissioner of the Local Government Board for Ireland, and the Medical Officer of the Board of Education—in ascribing the defects of the existing arrangements fundamentally to the lack of a unified Medical Service based on Public Health principles.

"That in such a unified Medical Service, organized in districts of suitable extent, the existing medical officers of health, hospital superintendents, school doctors,* district

medical officers, workhouse and dispensary doctors, and medical superintendents of Poor-law infirmaries—the clinicians as well as the sanitarians—would all find appropriate spheres; that one among them being placed in administrative control who has developed most administrative capacity.

"That we do not agree with the suggestion that the establishment of a unified Medical Service on Public Health lines necessarily involves the gratuitous provision of medical treatment to all applicants. It is clear that, in the public interest, neither the promptitude nor the efficiency of the medical treatment must be in any way limited by considerations of whether the patient can or should repay its cost. But we see no reason why Parliament should not embody in a clear and consistent code definite rules of chargeability, either relating to the treatment of all diseases, or of all but those specifically named; and of the recovery of the charge thus made from all patients who are able to pay."

UNEMPLOYMENT.

Proposed Ministry of Labour.

The Minority Report discusses at length the question of unemployment and its prevention, and recommends the establishment of a Ministry of Labour with six Divisions, one being a National Labour Exchange, the function of which should be not only (a) to ascertain and report the surplus or shortage of labour of particular kinds, at particular places; and (b) to diminish the time and energy now spent in looking for work, and the consequent "leakage" between jobs; but also (c) so to "dovetail" casual and seasonal employments as to arrange for practical continuity of work to those now chronically under-employed.

For the ultimate residuum of men in distress from want of employment, who may be expected to remain, after the measures they recommend have been put in operation, the minority of the Commissioners suggest that maintenance should be freely provided, without disfranchisement, on condition that they submit themselves to the physical and mental training that they may prove to require. That it should be the function of the Maintenance and Training Division of the Ministry of Labour to establish and maintain receiving offices in the various centres of population, at which able-bodied men in distress could apply for assistance, and at which they would be medically examined and have their faculties tested in order to discover in what way they could be improved by training. They would then be assigned either to suitable day training depôts or residential farm colonies, where their whole working time would be absorbed in such varied beneficial training of body and mind as they proved capable of; their wives and families being, meanwhile, provided with adequate home aliment.

LITERARY NOTES.

A CORRESPONDENT raises a question of quantity in regard to the pronunciation of the word "vertigo." He says he has been taken to task for pronouncing it with the middle syllable long. There is no question that the *i* in vertigo is long in Latin. But English lexicographic oracles offer a choice. The *Encyclopædic (Lloyd)* and the *Standard Dictionaries (Funk and Wagnall)* give both pronunciations, the former putting vertigo first, the latter giving the preference to vertigo. We ourselves share that preference. It has the sanction of Swift, who was very strict in his prosody, and who writes in the lines about his own death (Sir Walter Scott's edition):

That old vertigo in his head
Will never leave him till he's dead.

Charles Lamb, too, writes:

This sick vertigo here
Preacheth of temperance, etc.

In both these cases the rules of scansion require vertigo. On the other hand, there is the "genius of the English language" which tends to throw the accent as far back as possible. Therefore, if any one chooses to pronounce the word vertigo, we should say with Dogberry, "Take no note of him, but let him go." We may quote, in illustration of the freedom which we think Englishmen should allow each other in matters of pronunciation—in accordance

* The question has been raised of the relation in which, with a unified Medical Service, the necessary medical activities of the Local Education Authorities should be placed. The question is one to be determined, in our opinion, by the dominant characteristics of the service. Within the limits of school age, the predominant service should be that of education; and the responsibility for the normal child should rest with the Local Education Authority. The case is different with the mentally defective child, for which the new Local Authority for the Mentally Defective will have the responsibility; and with the child withdrawn from school for definite illness, for which the Local Health Authority will be responsible. But when the child, without being so ill as to be withdrawn from school, requires the services of a doctor—as, for instance, in school medical inspection, in medical examination for scholarships, and in the treatment of minor ailments—we suggest, that the Local Education Authority should, where the two Authorities are Committees of the same Council, not set up a medical staff of its own, but call in the Local Health Authorities as its agent; just as it does already with regard to inspecting and certifying the drainage of the school building. On the other hand, where the children in the hospitals and sanatoria of the Local Health Authority are in need of education (a point now often neglected, we suggest that the Local Health Authority should not have its own teachers, but should call in the Local Education Authority as its agent. The case may be different where (as at present in England and Wales, outside the County Boroughs) the two Authorities are not Committees of the same Council, and do not serve the same areas. But even here arrangements could usually be made on similar lines.

with the practice of painters and poets, as laid down by Horace, *Hanc veniam petimusque damusque vicissim*—a story which, though old, is worth repeating. It was in the days when every professional man was supposed to have the classics at his finger ends, and, as Sidney Smith said, a false quantity perpetrated early in life often ruined a promising career. A Scottish advocate was pleading before the House of Lords, and repeatedly spoke of curators. We think it was Lord Denman whose feelings were so ruffled by this pronunciation that at last he asked the learned counsel if curator would not better grace his eloquent lips. The barrister at once retorted, "Certainly, my lords. In the presence of so many eminent senators and illustrious orators, I have not the slightest hesitation in speaking of curators." Coming back to our correspondent's question, we are inclined to say that among medical men vertigo is the generally accepted pronunciation.

Shiute (Health) is the name of a new monthly journal devoted to the diffusion of a knowledge of health and hygiene. It is to be the official organ of the Women's National Health Association, and it will appear under the editorship of the Countess of Aberdeen. It is intended to make the magazine thoroughly adapted to the needs of the Irish people, and the prevailing maladies and exceptional conditions of the country will be fully dealt with. The first number will contain a foreword and notes by the editor; an article on the results obtained in the home treatment of tuberculosis by the class method, by Joseph Pratt, M.D., of Boston, U.S.A., with photographs illustrating how sleeping places were contrived for patients on the roofs and in the yards of tenement dwellings; an article on what the Women's National Health Association can do to advance the cause of school hygiene, by T. Clarke, LL.D.; an account of the babies' clubs of Belfast; and a short story. In addition to the articles and notes, each number will form a record of work done by including the reports of the various branches of the association. The publishers are Messrs. Maunsell and Co., 96, Middle Abbey Street, Dublin.

"The Mosaic Sanitary Code and its Relation to Modern Sanitation" was, we learn from the *Yorkshire Daily Observer*, the subject of a highly interesting and valuable paper read by Mr. P. M. Raskin, of Leeds, before a general meeting of the North-East Centre of the Sanitary Inspectors' Association. Mr. Raskin said there was not a distinct department of public health in the government of ancient Judea. The duty of dealing with infectious disease, such as leprosy and epidemics of all kinds, was delegated to the priests. The Talmud mentioned the office of a physician in the Temple, whose duty it was to look after the health of the High Priest. In later times, however, according to the Talmud, every town counted among its permanent officials a physician who supervised the circumcision of children and looked after the communal well-being. A theological student was even forbidden to live in a place where there was no physician. The main provisions of the Mosaic sanitary law related to (1) the prevention of infectious disease; (2) food and diet; (3) sewage and refuse disposal; and (4) domestic sanitation, ablutions, baths, and general cleanliness. The laws with reference to infectious disease, as laid down in Leviticus and Numbers, seemed to be based on the principle that as infectious diseases were mostly communicated by contact, all cases of such were to be isolated; that all contact with any centre of infection was to be avoided; that when such contact, in unavoidable circumstances, had taken place, there must be first segregation to prevent the spread of infection, and finally purification before the infected person could be readmitted into society. The great scourge in many parts of the East, as Egypt, Arabia, etc., still was leprosy. The Mosaic laws, therefore, lay down stringent rules for preventing the spread of the terrible malady. Infected clothing was to be burnt, an infected house had to be emptied, the infected parts of the building removed, and the walls scraped. If the malady recurred, the whole house had to be demolished and the materials removed to an unclean place outside the camp, and never used again. The priest, who seemed to have acted as medical officer of health and sanitary inspector combined, had to diagnose every suspicious case and to visit infected houses, and then finally declare them clean or unclean. Every corpse

was considered a possible centre of infection, and those who touched a corpse, or were under the same roof as a corpse, or who touched a grave, were regarded as unclean, and had to purify themselves. Modern sanitarians, said Mr. Raskin, might prefer to disinfect a house with carbolic acid, sulphur, or formalin than with the Biblical caper-bush hyssop, but this possessed great disinfecting properties and was very likely the best disinfectant of the time. The laws as to food might also be classed under the head of sanitary laws, for they might be fairly considered to have been ordained in the interests of health, moral and physical. The prohibition against eating blood, repeated in the Pentateuch not less than five times, exclusively belonged to the Mosaic law, and must have been made on sanitary grounds, both in the immediate and wider sense of the term. The immediate reason for this prohibition was probably because blood was considered the likeliest vehicle for the entrance of the germs of disease into the human system. The farther command to cover all blood with earth (to disinfect it) lent additional ground to the supposition that blood was considered unclean from a sanitary point of view. Passing to the provisions made by Moses for the disposal of sewage and refuse, Mr. Raskin said he believed there was no direct indication in the Pentateuch about the method in vogue in ancient Judea for the disposal of such matter. But according to Josephus Flavius, who wrote about 75 A.D. and a later Biblical commentator, David Kimbi, perpetual fires were kept up outside the gates of Jerusalem for the purpose of consuming the refuse of the city. If this were the case, then the problem of refuse disposal must have been solved in ancient Judea in as efficient a manner as in our own time. In the ancient Judean Public Health Act of about 450 B.C., provision was also made for dealing with offensive trades. The Talmudists regarded the laws of health as of greater importance than those which were of a merely ritualistic character. It was forbidden to eat the meat of an animal that had eaten poison, or to drink water left uncovered overnight. Coins were not to be placed in the mouth, as they might have been touched by persons suffering from infectious disease. It was likewise forbidden to eat from unclean vessels, or from vessels that had been used for unseemly purposes, or to eat with dirty hands. The washing of the hands and face in the morning was considered very important. There was also the custom of washing the hands before and after meals. Mr. Prigdin Teale, who was in the chair, said the paper was one of the most remarkable and interesting the association had had addressed to them. He had given a short account of the discovery in Crete of terra-cotta pipes for carrying water in a house and the period must have been about 2000 B.C. And it seemed that from that remote age until seventy or eighty years ago civilization had not been in the habit of using terra-cotta either for water carriage or drainage. It must have been the adherence of the Jewish community to the rules laid down in the ancient code which had given them their wonderful vitality. He had often wondered, when an ancient Jewish community grew to such a size that it was difficult to carry out all the details of the code, if provision were made for emigration. Nearly every one of the greatest cities of antiquity had disappeared, and he had had the impression that such places as Babylon and Nineveh had grown to such a size that in the end the sanitary arrangements could not be carried out, and thus the sites had become unhealthy and destructive to life.

SOUTHWOLD LIBEL CASE.

THE following additional donations have been promised to the fund opened to assist Drs. Mullock and Tripp in defraying the heavy expenses which they incurred as the result of the recent action which they were called upon to defend:

	£	s.	d.
Dr. S. Johnson Taylor (Norwich)	5	5	0
Anonymous	4	4	0
Anonymous	2	2	0

Cheques should be made payable to Dr. H. P. Helsham, Beccles, or to Dr. W. Tyson, Lowestoft.

Medical News.

THE eighth International Congress of Otolaryngology will be held at Buda-Pesth next August.

DR. SCHUMANN LECLERCQ, of Carlsbad, has been made Chevalier of the French Legion d'Honneur.

THE annual general meeting of the Association of Certificated Dispensers will be held in the Apothecaries' Hall, London, on Thursday next at 7.30 p.m.

AN association for the repression of venereal diseases has been founded at Warsaw. It comprises two sections: one social and legislative, the other medical.

A SUM of £1,080 has already been collected for the erection of a monument in memory of the late Professor Cornil. M. Fallières, President of the French Republic, has given £12 to the fund.

AT the January examination for sanitary inspectors under the Public Health (London) Act, 1891, held by the Sanitary Inspectors' Examination Board, 19 candidates passed, of whom 9 were women.

A GOVERNMENT Laboratory of Bacteriology has been founded in Warsaw. The director is Dr. Tschernomozky. The laboratory is intended chiefly for the purposes of veterinary and public health researches.

THE German Emperor has conferred upon Sir James Reid, Bart., Physician-in-Ordinary to the King and the Prince of Wales, the First Class of the Order of the Crown, on the occasion of the visit of their Britannic Majesties to Berlin.

THE Cross of a Commander of the Francis Joseph Order has been conferred upon Professor Koloman Mueller, of the Medical Faculty of the University of Buda-Pesth. Professor Mueller is a member of the Hungarian House of Magnates.

THE University of Heidelberg has received from a foreign benefactor interested in the advancement of science the sum of £5,500 towards the foundation of a radiographic institute. It is expected that the institute will be in working order by Easter.

DR. JAMES ROSS WATT, of Ayr, President of the Ayrshire Branch of the British Medical Association, has, on the recommendation of the Earl of Eglinton and Winton, Lord Lieutenant of the county, been appointed a Justice of the Peace for Ayrshire.

AT a conference on women's lodging houses to be held at the British Institute of Social Service, 11, Southampton Row, London, W.C., under the presidency of Sir John Kirk, Director of the Ragged School Union, on Wednesday next, at 4 p.m., it is proposed to form a small committee to consider how to forward the national provision of safe shelter for unprotected women.

WE learn from the *Boston Medical and Surgical Journal* that radium has been for the last five years in continuous use in a clinic at the Boston City Hospital. Although without the designation, a radium institute has in a way existed there, where questions relating to the physics of radium have been studied as a guide to the intelligent use of it in the treatment of the patients.

ON the occasion of their leaving Orsett, Dr. and Mrs. Corbett were presented by their friends with a handsome grandfather clock, an illuminated address, and a purse of 50 guineas, as a mark of respect. Dr. Corbett, in acknowledging the presentation, regretted that owing to bronchial attacks he had been recommended to leave Orsett, after residing there for seventy years, and take up his residence in a warmer place.

THE address by Sir Thomas Oliver on some medical and insurance problems arising out of recent industrial legislation, given before the Life Assurance Medical Officers' Association on November 4th, 1908, as reported in our columns of November 14th, page 1496, has been printed in a pamphlet, together with a report of the meeting on December 2nd, when the discussion of the paper was continued. Copies can be obtained on application to the honorary secretaries of the society (2, Frederick Place, Old Jewry, E.C.), price two shillings.

THE United States Senate on January 26th passed a bill forbidding the importation of opium into the States except for medicinal purposes, and then only under strict regulations to be prescribed by the Secretary of the Treasury. All other forms of opium, smoking opium, or any derivative of opium, are, according to the *Medical Record*, absolutely shut out. Possession of the forbidden drug, it is expressly stated, shall be deemed sufficient evidence to convict, and offenders may be punished with two years' imprisonment and a fine of £1,000.

THE fourth meeting of the Departmental Committee appointed by the Lord President of the Council to con-

sider the working of the Midwives Act was held on February 17th at the Privy Council Office, Mr. Almeric W. FitzRoy presiding. The following witnesses attended and gave evidence: Miss Wilson, President of the Incorporated Midwives Institute; Mr. F. B. Harris, Deputy Town Clerk of Nottingham, on behalf of the Association of Municipal Corporations; Mr. Joseph Brown, of Dewsbury, on behalf of the Association of Poor-law Unions in England and Wales; and Mrs. Wallace Bruce, on behalf of the Association for Promoting the Training and Supply of Midwives.

THE members of the West London Medico-Chirurgical Society dined together at the Hotel Great Central, Marylebone, on February 12th, with Colonel T. H. Hendley, I.M.S., in the chair. Mr. R. Lake proposed the toast of "The Imperial Forces" in a patriotic speech, which was acknowledged by Inspector-General J. Porter, R.N., who emphasized the importance of attracting the best men to the naval medical service, as it was necessary to keep the men in the Navy in health because they took so long to train that it was not an easy matter to replace them. Sir Richard Douglas Powell, in submitting the toast of "The West London Medico-Chirurgical Society," spoke of the influential position it had attained in the course of its twenty-seven years of existence. The Chairman, in replying, gave a short account of the work and progress of the society during the past year. The toast of "Kindred Societies and Guests" was proposed by Mr. L. A. Bidwell, and was responded to by Sir William Church and Dr. W. P. Herringham. Mr. Aslett Baldwin, who was in charge of the arrangements for the dinner, was heartily congratulated on the successful result of his efforts.

THE annual meeting of the After-Care Association, established thirty years ago, to aid poor persons discharged recovered from asylums for the insane, was held on February 3rd at the house of Dr. Savage, who presided. Amongst those present were the Bishop of Croydon, Mr. H. J. Tennant, M.P. (Parliamentary Secretary to the Board of Trade), Dr. D. Nicolson, C.B. (Lord Chancellor's Visitor), Dr. E. M. Cooke and Mr. A. H. Trevor (Commissioners in Lunacy), Drs. Blandford, Bond, Bower, Robert Jones, Percy Smith, Shuttleworth, and others, including many ladies. The report of the council, read by the Secretary (Mr. W. Thornhill Roxby) stated that much individual care and attention was needed in suitably placing persons, who though recovered from insanity, were frequently the subjects of peculiarities and prejudices. During the year 1908 no less than 388 applications for aid had been received, and with few exceptions the 248 women and 140 men had been successfully helped. Personal influence exercised by the office staff was an essential factor in dealing with these cases, and timely and tactful intervention often prevented relapses. The receipts for the year amounted to £1,054 and the expenditure to £297; £50 had been granted by the City Corporation, and the City Companies had been good friends of the association. A Guild of Help had been instituted in connexion with the association, and two new local branches had been formed. Mr. Roxby pleaded for punctual payment of subscriptions and for new ones, which would be gratefully received at the offices of the association, Church House, Westminster. The adoption of the report was moved by the chairman (Dr. Savage) and was seconded by the Bishop of Croydon, who laid stress on the necessity of supporting this very useful charity, which was the only one existing in the United Kingdom for helping mental cripples who had fallen out by the way to regain the industrial high-road of life's journey. Such a task was often beset with difficulties, but he was thankful to say the word "impossible" had passed out of the vocabulary of the noble profession of medicine. Dr. Nicholson and Dr. Blandford, in supporting, referred to some of the improvements that had taken place in the working of the association, and commended it to a greater share of public support. Mr. H. J. Tennant, Mr. Woolcombe, Dr. Marriott Cooke and Mr. Trevor also spoke, and after the adoption of the report and the election of officers, Dr. Robert Jones, of Claybury, read portions of a paper entitled *The Urgent Need of Helping Mental Convalescents*, pointing out that over 8,000 persons were reported in the Lunacy Commissioners' Blue Book from 1908 to have been discharged recovered from asylums in England and Wales, 1,228 from the London asylums alone, of whom 705 were women, at least one-tenth of whom were friendless and another tenth were without friends able to render them assistance. It was imperative, in the public interest, and from the point of view of preventing relapse, that these poor people should be adequately assisted, and that this society should be furnished with means to extend its beneficent work. The meeting closed with a vote of thanks to the chairman and host.

British Medical Journal.

SATURDAY, FEBRUARY 20TH, 1909.

THE MEDICAL SCHEMES OF THE POOR LAW COMMISSION.

THE Royal Commission on the Poor Laws and Relief of Distress has not avoided that pitfall and reproach of such commissions which is indeed bringing the whole system into discredit—a minority report. In this instance the minority report, signed by four out of the eighteen members of the Commission, is called a separate report, and in length it does not fall far short of the majority report, for it occupies 500 folio pages. We give elsewhere in this issue (p. 479) a general account of both reports, and reproduce textually the principal recommendations with regard to medical relief.

Both reports recommend the abolition of boards of guardians: the majority proposes to set up in their place a statutory committee of the county council or county borough council, to be called the Public Assistance Authority, consisting as to one-half of members of the council, and as to the other of persons experienced in the local system of relief appointed by the council from outside. This authority would set up and supervise Public Assistance Committees, the areas of which would at first be the existing union areas. The recommendation of the minority report is really very similar, since it proposes that the county and county borough councils, strengthened in numbers for their enlarged duties, should replace the boards of guardians and become the Destitution Authorities for the counties, and should appoint education, health, asylums, and pension committees. Both the majority and the minority recognize the necessity for the classification of persons, whether children, aged, sick, able-bodied, vagrant, or feeble-minded, and that to make indoor relief effective it should be given in separate institutions to the various classes.

One of the chief points of divergence between the majority and minority is with regard to medical relief. The majority recommend that medical assistance should be reorganized on a provident basis, in accordance with the recommendations of the report of the British Medical Association on contract practice, and of the results of Dr. McVail's special investigation made for the Commission. It would be the duty of the Public Assistance Authority to co-ordinate, and if necessary supplement, existing medical institutions, and to suggest methods of co-operating with the sanitary authorities and with voluntary hospitals. It would also be its duty to organize an outdoor provident medical service, easily accessible from all parts of the county or county borough, and to include the provision of competent midwives; to develop a nursing service, preferably in connexion with voluntary nursing associations; to subscribe towards these purposes, and to supervise and report on the efficiency and adequacy of the medical institutions and medical service in the county or county borough.

The Public Assistance Authority would appoint a committee consisting of members of the authority, with representatives of the Health Committee of the county, or county borough councils, and of the local Branch or Divisions of the British Medical Association. This Medical Assistance Committee, it is recommended, should have power to co-opt representatives of local hospitals, nursing associations, dispensaries, and registered friendly societies. There would be power to appoint Local Medical Assistance Committees, constituted on similar lines, to which the local administration of medical assistance might be delegated. The Public Assistance Authority, acting in conjunction with the Local Medical Assistance Committee, would organize medical relief both with regard to in-patients and out-patients. It would reorganize existing Poor-law medical institutions with the view of making them as effective as possible for different classes of patients, and it would organize schemes of co-operation between institutions under the direct control of the Public Assistance Authority and voluntary hospitals; it would develop gradually a system of paying and free cottage hospitals in conjunction with voluntary and endowed charities, to include provision for confinement cases, and it would arrange schemes of co-operation between hospitals and the provident dispensaries or outdoor medical service.

The proposals for an Outdoor Medical Service are founded strictly on the provident principle: it is recommended that the Local Medical Assistance Committee should, in conjunction with the local profession, map out its district into convenient medical districts or dispensary areas, utilizing existing buildings in popular places, the doctor's own surgery in medium districts, and a room in a cottage where the population is sparse. The Local Committee would invite free or provident medical institutions, including private medical clubs already existing in the district to fall in with the scheme, and would have power to subscribe to provident dispensaries subject to the sanction of the Local Government Board. Whether co-operation of existing organizations could be secured or not, it would be the duty of a Local Medical Assistance Committee to establish a general system of provident dispensaries, and to offer every inducement to the working classes below a certain wage limit to be members of a provident dispensary, each member to be entitled, (1) to choose his own doctor from the doctors upon the list of the dispensary, (2) to adequate medical outdoor assistance, and (3) to in-patient treatment upon the recommendation of his dispensary doctor. If an applicant for medical assistance is not a member of a provident society he would be entitled to apply and at once be treated by a district medical officer; but the Commissioners hope that ultimately it may be possible to dispense altogether with the service of the district medical officer, and that his duties will be shared among medical men practising in the district. Meanwhile, arrangements might, they think, be made to retain the district medical officer on the staff of the provident dispensary.

The Commissioners recommend that, with a view of enlisting the services of medical practitioners in the locality of a provident dispensary, the British Medical Association should be requested to suggest a general scheme or scale of fees and wage limit to be applied by its local Divisions as local circumstances may suggest. A list of dispensary doctors containing the names of all local medical practitioners

willing to come into the scheme would be formed, and any dispensary member would be entitled to choose his own doctor. The dispensary doctor would have the power to recommend a patient for indoor treatment, whose admission under such conditions would be covered by his subscription to the provident dispensary. In order to meet the case of aged persons and widows with young children, it is recommended that the Public Assistance Committee should have power to pay the necessary fees to make them members of the provident dispensary. There remains the case of those persons who do not belong to provident dispensaries and cannot be induced to join. The Commissioners recommend that in illness demanding immediate treatment the physical condition of the patient should be the first consideration, and that he should be entitled in the first instance to apply to any medical officer belonging to the provident dispensary; but that the relieving officer, to be called in future the Assistance Officer, should be required to report the case to the Public Assistance Committee with the view of recovering the cost and strengthening provident agencies. If the case is not urgent, all necessitous persons should receive medical relief through the Public Assistance Committee. Finally, the Commissioners recommend that medical assistance in the patient's home given at the public cost should be conditional upon the maintenance of a healthy domicile and good habits, and that no disfranchisement should be attached to any form of medical assistance.

The separate report of the minority is a discursive document containing many passages of fervent eloquence, even its summary of conclusions reading more like an article in a monthly magazine than the serious recommendations of a Royal Commission for fresh legislation. It is largely occupied with a discussion of the prevention and cure of unemployment, and suggests the establishment of a Ministry of Labour, one of whose duties it would be to organize a National Labour Exchange. With regard to medical relief, the minority accept the suggestion, considered and rejected by the majority, for a unified medical service in which medical officers of health, hospitals superintendents, school doctors, district medical officers, workhouse and dispensary doctors, and medical superintendents of Poor-law infirmaries—clinicians and sanitarians alike—would all find appropriate spheres. They suggest that the person among all these clinicians and sanitarians—who has “developed most administrative capacity” should be placed in control in each locality, but they do not indicate how this individual is to be selected. They condemn the provident scheme of the majority, for the curious reason that they believe it would lead to an extravagant expenditure of public funds on popular remedies and medical extras without obtaining in return greater regularity of life or more hygienic habits in the patients. They recommend, therefore, the continuance of the outdoor medical service of the Poor Law. They do not give in detail any scheme for carrying out their recommendations, contenting themselves, so far as we can see, with recommending the establishment of a “unified Medical Service on Public Health lines,” believing that it would, by searching out disease, securing early diagnosis, treating incipient cases, enforcing healthy surroundings and personal hygiene, prevent recurrence or spread of disease in contrast to the mere relief of the individual. That

the report of the minority contains many valuable suggestions may be admitted, and as it is to be published in a separate volume as a book, it will no doubt receive all the attention from the public that it deserves; but its proposals with regard to medical relief appear to us to be nebulous and insufficiently considered.

THE HUNTERIAN ORATION.

ON February 15th the Royal College of Surgeons held its annual festival in commemoration of John Hunter, the founder of its unrivalled museum. The Hunterian Oration was delivered by the President, Mr. Henry Morris, to a distinguished assembly, conspicuous in which was the Prince of Wales, who was that day admitted, like his Royal father, to the Honorary Fellowship of the College. It must be as difficult to find anything new to say about John Hunter at this time of day as it is for the Orator whose duty it is year by year to say anything fresh of William Harvey at the sister college. The President was fully equal to the occasion, and among the sixty-four previous Orations there is probably none more interesting in itself, more ingenious in its argument, more felicitous in its illustrations, or more graceful in diction than that delivered on Monday last.

It is likely enough that John Hunter would have been almost as much surprised to hear himself discussed as a philosopher as M. Jourdain was to learn that he had been speaking prose all his life. We should not indeed wonder if he looked upon the “philosophers” of his time in the same light as he regarded the scholars—that is to say, as old women. It suggests curious reflections to note how blind the most distinguished of his contemporaries were to the greatness of the man who was striving to throw light into dark places where secrets of the utmost importance to man were hidden, and laying the foundations of a new knowledge of which they had no notion. Samuel Johnson was intimate with the leading men of his day, and he had a special liking for medical practitioners of all grades. This makes it all the more remarkable that, although William Hunter is mentioned in a letter to Sir Joshua Reynolds, we think we are right in saying that the name of John Hunter does not appear in Boswell's *Life* of “the great Cham of literature,” as Smollett called him. Johnson was to some extent interested in natural history, and he said that Goldsmith was writing a *History of Animated Nature* which he would make as entertaining as a Persian tale, though he thought that if he could tell a horse from a cow that was the extent of his knowledge of zoology. What Macaulay said of Panizzi long afterwards—that he would give ten mammoths for an Aldus—might have been said of Johnson. It may pretty confidently be assumed that John Hunter's lack of literature, to use the language of that day, would in any case have made him seem to Johnson as one outside the world of learning. And Johnson, in an intellectual sense, to the eighteenth century in England exemplified, in Hamlet's words, “the very age and body of the time, his form and pressure.” It must be remembered that Haller and the other anatomists and men of science of that time were all skilled in the learning of the schools. Mr. Morris agrees with Buckle that it was not Hunter's defective education that made him obscure in his statements. He says rightly enough that, “with educated and uneducated alike, the power of clear expression depends on clearness of thought.” But the faculty of clear thought,

though a natural gift, is developed by education. Even when education has done its best, the clearest thinkers will, we imagine, agree with Goethe that "the worst of it is that it is hard to think." John Hunter, in his efforts to express his ideas, reminds one of Burns's description of himself as "a blind 'Cyclops groping round his cave.'" If a poet felt the want of education so keenly, the same want, whether felt or not, must have hindered far more seriously the utterance of a man of science, especially of one who had so much to teach, if he could have put it into words that accurately conveyed his meaning.

Of Hunter's method of inquiry, Mr. Morris says that he combined in an exceptional degree the two philosophic methods—deduction and induction. Though born and brought up in Scotland, where in his day the deductive method of reasoning prevailed, Hunter very largely used the inductive method, which since Bacon has been characteristic of English thought. We think it may be gathered from Mr. Morris's own illustrations of Hunter's method that, while deduction often led him astray, a great part of his permanent additions to knowledge was arrived at by the less flowery and more toilsome but surer road of induction. As Mr. Morris says, "When reasoning deductively he so much relied on his premisses that 'he sometimes refused to accept any evidence by 'which they were impugned.'" This, of course, is the special weakness of the deductive reasoner, and examples of it are still too common even among high scientific authorities at the present day. "It was 'not,' as Mr. Morris says, 'as a logician, but as an 'observer and experimenter that Hunter excelled; 'it was not the beauty of his logic, but the 'industry with which he collected facts, and the 'ability and honesty with which he reasoned from 'them, which made Hunter great.'" His method is summed up in his well-known but too often misquoted recommendation to his pupil, Edward Jenner: "Why 'think—why not try the experiment?" Of course, what Tyndall called the scientific use of the imagination has a great place in research; it is this that makes the difference between those humble but necessary workers whom Huxley called the hodmen of science and the builders of the Temple of Truth. But the unscientific use of the imagination has often led men into quagmires by following Will-o'-the-wisps, whereas facts once established go to make up the solid foothold for which Archimedes asked that he might move the world. Of course, they may be misinterpreted, and in themselves they are like dry bones till life is breathed into them by the generalizing mind that can see their meaning and their relation to each other. Hunter was at once a collector of facts and an interpreter of them. Whether he was ever consciously deductive or inductive in his thought may be doubtful. In any case he had the genius which, like Sentimental Toomy, can "find a wy," and his place is among the immortals of our race.

THE ANTITRYPTIC ACTION OF HUMAN SERUM.

WITHIN a period of little more than ten years a branch of science has developed with such rapidity that even those actively engaged in its study have no little difficulty in mastering all the theories suggested and propounded, and have still more difficulty in selecting from among these theories those worthy of serious attention. The subject is immunity. Although the work of Nuttall stands in very close relation to the

present line of thought and dates back to 1838, the actual revolution in the conception of immunity appears to have taken place in 1897, when Ehrlich enunciated his "side-chain" theory. A few years previously Buchner had written on the bactericidal functions of serum, but Pfeiffer was practically the first to study and explain the phenomenon of bacteriolysis. This he did in 1894. Haemolysis next attracted the attention of workers, and the names of Bordet, Ehrlich, and Morgenroth, among others, are associated with the subject. The discovery of the phenomenon of agglutination arose out of the work which Grünbaum, Gruber, and Durham carried out in 1894, and shortly afterwards independently by Widal. Precipitins and a number of other concepts also date back to about 1897 or a little later.

Since the early work of this kind it appears to have become a fashion to translate all biological phenomena into the action of definite specific chemical substances, and those who accept this view must be prepared to accept an indefinitely large number of constituents in the serum of normal and diseased animals. The mere mention of the large number of cytolsins, the so-called bacteriotropic substances, the allergens, the aggressins, and the anaphylactins, to mention only a few examples, will suffice to show that an almost incredible complexity exists in this branch of research. It might be well to pause and inquire whether the appearance of phenomena, each of which is supposed to depend on one specific substance at least, is sufficient evidence of the existence of such a substance, or whether, like so many physiological processes, the function of a complex structure may not be complicated, according to the conditions governing the exercise of function. In other words, is it not reasonable to believe that blood plasma, which is a highly complex fluid, and which is certainly not biologically identical with serum, may have the property of killing bacteria or inhibiting their growth, of dissolving certain foreign blood cells, of precipitating certain forms of proteid, of exercising now a positive, now a negative chemiotaxis with regard to the leucocytes, and so forth, without possessing a special constituent for each of these phenomena?

One argument against the assumption of special specific chemical substances is to be found in the fact that rabbit's serum possesses a marked haemolytic action for guinea-pig's blood cells. Under what circumstances outside the laboratory can rabbit's serum (not plasma) come into contact with guinea-pig's red blood corpuscles? Yet we are asked to believe that a special substance exists whose one and only function is to dissolve these foreign cells. Perhaps in time much of the confusion which now reigns in regard to these multitudinous phenomena and functions may be cleared up; but so far from this being the case at present, almost each day brings a report of fresh immune "substances."

While the power of human serum to inhibit the action of trypsin is not a new idea, and especially since it has been found possible to immunize guinea-pigs against the action of this ferment, L. Brieger and J. Trebing¹ have grappled seriously with this problem. It had already been shown that the serum of persons suffering from croupous pneumonia exerted a heightened antitryptic power up to the onset of the crisis, when the power is markedly diminished. Ascoli and Bezzola look upon tryptic digestion as due to two components, one of which is contained in the

¹ *Berl. klin. Woch.*, June 1st, pp. 1041-1044, and July 20th, 1908, pp. 1519-1521.

pancreatic juice, while the other, which they call "kinase," is produced by the leucocytes. The increase of the inhibitory action is thus regarded as being due to an antikinase. Brieger and Trebing tested the inhibitory action by mixing serum with a 1 per cent. solution of trypsin in varying proportions, allowing a measured quantity of the mixtures to act on ox-serum plates kept at 55° C. for twenty-one hours. They found that the normal serum inhibited the digestion when 1 part of serum was mixed with 4 parts of the trypsin solution in some cases, while in a few others, when 1 part was mixed with 6 of trypsin, the process was stopped. They record this as a reaction with 1 in 4 or 1 in 6. Next, they examined the serum of a number of persons who were suffering from carcinoma. In nearly all the cases the inhibitory reaction was marked in the proportion of less than 1 in 6, 1 in 10 being the most common. In 4 cases, in 2 of which the diagnosis was not confirmed by the microscope, the reaction was present at 1 in 4. One of the remaining two was suffering from very advanced disease, while the other was a case of epithelioma, which may differ in its essentials from true carcinoma. The serum of persons suffering from diseases other than carcinoma frequently yielded a normal reaction. Nevertheless, the observers found that in cachexia from other causes, such as pernicious anaemia, nephritis, etc., the inhibition was well marked. A curious fact was elicited in testing the blood of persons suffering from cancer and other diseases who had been given pancreatin by mouth; the inhibition decreased, and in carcinomatous cases has returned to normal, to increase again a few days after the drug was left off. In persons suffering from other affections, whose serum showed a normal reaction, the degree of inhibition rose during the exhibition of the pancreatin.

Brieger and Trebing are inclined to the view that, if considered together with the clinical signs, this serum reaction has some value in the differential diagnosis of carcinoma. The claim which Salamon makes of having first pointed out that the serum of carcinoma patients possesses an antiproteolytic action need not confuse the issue, since he did not work with tryptic digestion, and his diagnostic method differed considerably from that of Brieger and Trebing. Whether this antitryptic power of serum can in fact be used for diagnostic purposes depends on the practical experience of clinicians, and can be determined only by careful study; but it would be of considerable interest to learn on what physical, chemical, or biological basis the phenomenon is founded. That it is not purely specific has already been clearly shown.

THE ROYAL COMMISSION ON VIVISECTION.

WITH the evidence of Professor D. J. Hamilton, published in this week's issue, we bring to a close the summary of the evidence given before the Royal Commission on Vivisection. The labour of summarizing so huge a mass of material has not been light. Some idea of the magnitude of the task may be formed from the fact that a rough estimate shows that the evidence has been reduced to about one-quarter of that reported in five Blue Books. Often during the long-drawn-out process we have said with Antonio, speaking to his friends about his sadness, "it wearies me"; and we have no doubt that we should have expressed the thought of many readers if we had added, "You say it wearies you." We had a

strong feeling, however, that the task, though tedious and in some ways disagreeable, was necessary for the enlightenment of many who for one reason or another may not have given attention to the subject. Few people who are not members of Parliament have ready access to Blue Books, and we should imagine that comparatively few of those who enjoy that privilege ever take advantage of it. The whole case for and against vivisection has now been placed before the profession, and we advise all who take part in newspaper or platform controversies on the subject to read and study it carefully. We have purposely given greater space to the antivivisectionists than to the witnesses on the other side; for instance, no fewer than twenty-nine pages of the JOURNAL were devoted to the evidence of Mr. Stephen Coleridge alone. We did our best to bring out all the essential points in their evidence, and the fact that not a single complaint, except one relating to a trifling and obvious misprint, has reached us, may be taken as a proof of the fairness of our abstracts. No one who reads the evidence with a mind open to conviction can, we think, fail to be struck by the flimsiness and futility of the antivivisectionist testimony. One wonders how some of the witnesses could have been put forward to speak of matters as to which they were obviously almost wholly ignorant and to give evidence which was so easily dissipated into air by the lightest touch of cross-examination. It is not surprising, therefore, that antivivisectionists have expressed their opinion as to the manner in which their case has been put forward by some of their representatives in terms the reverse of flattering. It cannot be pleasant to see a cause towards the support of which one has been induced to give money in the belief that it was built on the solid rock of truth crumble into dust because it rests only on a rotten scaffolding of "platform facts."

LONDON TERRITORIAL DEFICIENCIES.

OWING apparently to the popularity of the play "An Englishman's Home" at Wyndham's Theatre, and the efforts of some widely circulated newspapers, there is at the present moment a mild territorial boom in London; but if their general readiness is to be judged from the dilatoriness displayed with regard to the medical branch, it is to be feared that the London County Associations are not fully prepared to take advantage of the interest which has been excited. There will be found at page 504 a short account of the present position of the medical units of the two Divisions. First and Second, of the Territorial Force which London is called upon to provide. It can only be described as extremely unsatisfactory, and there can be no hesitation in asserting that the London County Associations must accept the responsibility for this. The position of the First Division, which has been much assisted by the City of London County Association, is better than that of the Second Division, which is dependent upon the County Association for the rest of London. The main cause of the difficulty in completing the organization is the want of head quarters and drill halls. The First Division, indeed, has head quarters which it inherited from the volunteer companies, but they are not adequate. The position of the Second Division is much worse, inasmuch as it has no head quarters nor any place, except certain drill halls at Woolwich, where men can be trained. Such a state of things is disheartening to the officers, who are giving time and energy without any commensurate result, and must of course greatly discourage recruiting. We are aware that the London County Association suffers from want of money, but

we venture to think that, with a little good will, head quarters and drill halls might speedily be found in some convenient part of western or south-western London.

SPIRITUAL HEALING.

THE Church and Medical Union, to the formation of which reference was made in the JOURNAL of November 28th, 1908, p. 1635, held a meeting on February 16th, at which a paper on The Gift of Healing was read by Lieutenant-Colonel J. S. Hepworth. He said the Church should go hand in hand with the physician and proclaim to the world her mission to heal the sick body as well as the soul. Hitherto no organized attempt had been made to bring into harmony the teaching of the Church and medical science. At Boston, said the lecturer, where healing homes had been established, it had been found that the root of the mischief in the patient had been the deliberate thrusting of religion out of the life. He quoted a paragraph from the report of the Lambeth Conference embodying the principles which the union adopted. In that paragraph it was stated that "medical science is the handmaid of God, and should be fully recognized as the ordinary means appointed by Almighty God for the care and healing of the human body." "The committee," it was added, "believes that discoveries in the region of medicine and surgery come to man through Him who is the light and the Life, the Divine Word." The lecturer went on to say that to be practical Churchmen they should place prayer first. Cases must be taken in hand by their spiritual rulers. "In each diocese there should be a healing house, where resident clergy, selected and set apart for the work by the bishop, should reside in community with resident physicians, selected, say, by the Medical Association, ready at all times to attend to the wants of the people, poor and rich alike. Ultimately every large parish or large centre of religious work should have its resident clerical healer as part of its staff." After some discussion, the Rev. Percy Ellis, Vicar of St. Mary's, Tothill Fields, said the gift of healing still belonged to the Christian community represented by medical men. He deprecated Colonel Hepworth's suggestion that religious healing should be made part of the practical Church organization. Neither the clergy nor the people were prepared for this, and a long time must elapse before they were ready for anything like an organization tacked on to any parish or diocese for that particular work. If a mistake were now made the result would be injurious to a great and good cause. Colonel Hepworth seems to us to have altogether misconceived the purport of the deliverance of the Lambeth Conference which he quotes, and we are glad to note that the Rev. Percy Ellis is alive to the mischief that may be done by too much zeal in the direction of spiritual healing. What has happened at Emmanuel Church, Boston, should be a warning to enthusiasts at home, who, if we may judge from Colonel Hepworth's statements, have not followed the movement so closely as might appear from their confident assertions. We do not think we can give reasonable cause for offence to any sensible religious person in saying that a claim to the possession of the gift of healing on behalf of the Church is a dangerous delusion. The medical profession, we repeat, is willing to co-operate with the clergy, recognizing the great help that a mind at ease is to the efficiency of medical treatment. The saddest words of a dying man we know are those of poor Oliver Goldsmith, who when his physician said to him that his pulse was more disordered than his physical condition seemed to account for, and asked if his mind was at ease, replied, "No, it is not!" But the

doctor and the clergyman have each their definite and distinct sphere, and the intrusion of the one into the other's domain can only lead to harmful consequences.

THE FIGHT AGAINST TUBERCULOSIS IN AMERICA.

THE International Tuberculosis Exhibition, which has been open to the public at the American Museum of Natural History since November 30th, was closed on January 17th. It was visited by 753,301 persons. The exhibition is to be transported to Philadelphia, where it will be under the direction of the Department of Public Health. An attempt is to be made to strike at the root of the enemy by starting a crusade in schools. Dr. James A. McFaul, Roman Catholic Bishop of Trenton, has expressed his gratification that the fight against tuberculosis had at last become concrete, referring particularly to the fact that Archbishop Ryan, of Philadelphia, had recently given instructions that the educational crusade against the white plague should be carried on in all the elementary schools, as well as all the higher institutions of learning, in his diocese. "The result of the movement thus begun," said Bishop McFaul, "will be to enlist the services of 16,000 clergymen in 13,000 parishes in the United States, and the education of 1,250,000 Catholic school children in this respect. The general effect will be that 17,000,000 Catholics in the United States will be enabled to lend their help in preventing the spread of the terrible scourge of "consumption." The Massachusetts educational authorities, acting under a law of the Legislature of 1908, are, according to the *School World*, establishing courses of instruction on tuberculosis in all the schools of the State. In addition to these public movements, many of the private organizations throughout the country have established, and are establishing, open-air schools for consumptive children, it being estimated that about 2 per cent. of the pupils in the larger city schools have tuberculosis. The first public school for consumptive and pre-consumptive children to be established in the United States was opened in Providence, Rhode Island, in January, 1908. The work is done entirely in the open, and the benefits of the fresh-air treatment are combined with the teaching and training of the public schools. Many similar schools have been opened. In addition to these specially-conducted schools, several of the States require that the important facts about tuberculosis shall be taught in the lower grades of the public schools. It is expected that within five years the majority of children in the United States will be taught concerning the evils and dangers of tuberculosis before they leave the lower grades of the public schools. Nor is it only in schools that the campaign is being carried on. The gramophone is being enlisted in the cause. "Don't spit on the floor of your home," is the greeting which Governor Hughes, of New York, received a short time ago as he stepped into the main building of one of the county fairs at which he was to speak. This direction came from the mouth of a large gramophone which was lecturing daily for the Committee of the Prevention of Tuberculosis of the State Charities Aid Association in connexion with one of the exhibits which is being shown at the county fairs throughout the State as part of the effort of this Association to teach the people the cause of tuberculosis and the means of combating it. Other specimens of gramophonic oratory are the following: "To nail your bedroom window shut is to drive a nail in your coffin"; "Work in the fresh air, sleep in the fresh air, live only in the fresh air."

DECLINING SUPPORT FOR ANTI-VACCINATION.

THE National Antivaccination League has fallen on evil days. A circular recently issued by the executive council of the League announces the existence of a great lack of support on the part of the general public. "Owing to various causes over which the council had 'no control,' it is said, 'the income of this League showed a considerable diminution in 1908 as compared with previous years, and had it not been for two 'legacies received during the year there would have been a large deficit.'" Then follows the oft-repeated appeal for funds. Finding it impossible to interest the public sufficiently to induce them to provide the sinews of war for the campaign against vaccination, an attempt is about to be made to tack on a few more "objects." At the annual meeting of the League, to be held on February 24th, a paper is announced on "Should the 'objects of the League be extended?" by Mr. J. P. Swan, who appears to be one of the guiding spirits. As Mr. Swan is actively engaged in a general attack on "Orthodox Medicine," and an attempt to establish the vendors of herbs on an equal plane with registered practitioners, it is not difficult to foresee the nature of the proposals which he is likely to bring forward. It will be interesting to see how the League emerges from the troubles with which it is now beset, and it is not unlikely that the extended objects will act as mill-stones to drag the League deeper into the Slough of Despond into which it has fallen. Since the last annual meeting of the League there have been significant changes among the officers. The services of Mr. Bonner, the paid lecturer and agitator, have been discontinued, and his name has disappeared from the list of officers announced in the *Vaccination Inquirer*. Lukewarm reception and meagre attendance at the meetings organized, together with a depleted exchequer, are possible explanations. The standard of absurd fallacy published in this official organ has risen to a still higher level under the changes in the staff arrangements which have recently been found necessary. In the February issue readers are informed that: "The 'object of the Vaccination Acts is comparable to the 'compulsory dosing of all infants with alcoholic 'drinks with a view of preventing them becoming 'drunkards in after-years. If all our temperance 'friends would only realize this our ranks would soon 'be largely increased." This is very amusing, but, at the same time, it is distinctly an insult to the intelligence of the League's temperance friends.

KNOWLEDGE AND HEALTH.

DR. A. J. COLLIS'S presidential address to the Newcastle Clinical Society was an earnest and eloquent appeal for the further diffusion of knowledge among the people as a means of improving the public health. Dr. Collis touched on practically every source of preventable disease, and showed clearly in each case the direct causal connexion between the public ignorance and the death-rate. Of course there is nothing new in this, so far. "Everybody knows" that a great proportion of the deaths that take place from the infectious and contagious diseases, and the no less important class of diseases due to unsuitable food and insanitary dwellings, are preventable. Everybody knows it, but all this unco-ordinated knowledge is of little avail as yet. As Dr. Collis points out, the consumptive who is allowed to expectorate freely in one district may find himself fined 40s. when he steps across the boundary into another. Three years ago a Royal Commission was appointed to inquire into disease occurring among grouse, but no public money has ever been spent on investigating measles and whooping-cough, two pre-

ventable diseases, each of which kills an average of 14,000 children annually in the United Kingdom alone. Dr. Collis is not content with merely rehearsing the facts, he suggests the formation in each county of a health association to deal with preventable diseases on the lines of the county associations which now control the Territorial Force. A county health association, he suggests, should consist of all the medical officers of health, medical inspectors of school children, certifying factory surgeons, and public vaccinators in the county, and he would make the association responsible to a central body in London with a Minister of Public Health. He would make each association responsible for its own area, and in this way believes that public health administration throughout the country would be co-ordinated while the education of the public in public health matters would be supervised by the association, which would institute lectures adapted to the special needs of the locality, or to the circumstances of any epidemic which happened to be prevalent. Those who attended all the lectures and passed a simple examination would receive certificates, and employers would be encouraged to give preference to young persons who had obtained the certificate. Each association also should have a staff of women health visitors. Further, he suggested that each association should have its own public health laboratory for bacteriological and clinical examinations, and the staff of the laboratory should give addresses at medical societies on recent advances in public health. The scheme is ambitious, but, as Dr. Collis remarks, "The country is already invaded, and we are suffering 'from this cause an annual loss of at least 100,000 'lives and a large number of permanently disabled— 'a loss far greater than the wastages of war have ever 'produced."

TIN IN CANNED FOODS.

AT the close of the South African war large quantities of canned foods were thrown upon the markets and were reimported into this country. On examination of these foods at the various ports of arrival, it was found that several of the consignments had become unsound owing to the development of gas in the interior of the cans, while others were rejected owing to the unsightly character of the contents. Beef essences had become turbid from the presence of dissolved tin. Dr. Schryver states¹ that all canned foods become more or less contaminated with tin as the result of the contact of the food with the tin plate of the can, and that meat extracts and essences take up more tin than most other meat foods—a circumstance to be explained by the acidity of the meat extractives. Canned fruits and lobsters take up considerable quantities of tin, the interesting point being that the tin penetrates the solid foods, so that they contain more of the metal than the surrounding liquid. The quantity of tin taken up increases with the age of the foodstuffs, although with acid foods solution takes place at a greater rate during the first few months. Not only may tin be thus dissolved and absorbed, but lead may also be derived from the solder. Messrs. Ungar and Bodländer found that when minute doses of tin are introduced into animals by subcutaneous injection for a considerable period nutrition becomes affected and paralysis develops. The presence of tin salts in large quantities in food causes irritation of the bowels, and individual susceptibility plays an important part in the intoxication. Although it is difficult to say how much tin is required to cause symptoms, Dr. Schryver thinks that

¹ Local Government Board (Medical Department) Reports of Inspectors of Foods, Dr. G. S. Buchanan and Dr. S. B. Schryver. London: Messrs. Wyman and Sons, Fetter Lane, E.C. (4d.)

much larger quantities of tin would have to be taken than the amounts usually met with in canned foods. Canned foods containing 2 grains of tin to the lb. would probably cause irritation of the bowels, and all such foods, if over two years of age, should be regarded with suspicion. Tins that have become blown should be destroyed. Each can ought to bear the date and the name and address of the maker. The toxicology of tin poisoning is dealt with in a separate chapter, and the calorimetric and gravimetric tests are described. Leach found that after three months very little more tin was dissolved, but in his experiments solid foods to absorb the tin were not present. In Ungar and Bodländer's experiments a tin of asparagus was found to contain 1.88 grains of tin per lb. Weber found in peaches 2.26 and in blackberries 4.20 grains of tin per lb., while in preserved herrings Gunther found 7.2 grains per lb. In some of the canned foods brought from South Africa Schryver found only $\frac{1}{2}$ grain of tin per lb. at the end of six years, but a can of tripe contained 2 grains per lb. and canned lobsters 2.39. Illustrative cases of tin poisoning in members of families who had partaken of such foods show that the chief symptoms were colic, sickness, and diarrhoea, but in every instance the amount of tin present in the food ranged from 1.8 to 13 grains or more per lb. Experience shows that canned foods, such as fruits, when consumed within a few months of canning, although often containing $\frac{1}{2}$ grain of tin per lb., do not in ordinary circumstances occasion gastro-intestinal irritation in the amount usually taken at a single meal, but the ingestion of older foodstuffs containing larger quantities of tin is not without risk. It is not simply a question of the immediate development of symptoms, for, as in the case of chronic plumbism, the possible storing up of the metal in the tissues has to be borne in mind. In the main, experiments show that there is not much probability of serious risk of chronic poisoning by the absorption of non-irritant compounds of tin as a result of a diet which consists largely of canned foods continued over considerable periods of time.

"ANTIVIVISECTION AND THE POOR."

IN THE JOURNAL of February 13th, we quoted a passage from Macaulay's speech in the debate which preceded the passing of the Anatomy Act in 1832, in which, if we may use a Gladstonian phrase, he "smashed, shattered, and pulverized" an objection made by the "Member for Preston" to the effect that the measure was one for the benefit of the rich. We said that we did not know who was the Member for Preston of that day. We have to thank Dr. A. Maude, of Westerham, for supplying the information. It was Henry Hunt, well described by Dr. Maude as "a prototype of many Radical politicians of to-day who are fond of 'expressing very decided opinions on scientific questions of which they have little knowledge.'" Hunt was at one time a farmer in Wiltshire; then he joined the Marlborough troop of yeomanry, and was fined £180 and imprisoned for six weeks for challenging his colonel to a duel. He took to politics, and, after a second imprisonment for assaulting a gamekeeper, he began farming again in Sussex. In this enterprise he was unsuccessful. His true sphere of activity was that of a turbulent politician, and he was again imprisoned after the so-called "Peterloo Massacre" in 1819. In 1830 he was returned to Parliament as Member for Preston. In 1833 he lost his seat, and became a blacking manufacturer. He died in 1838. Romilly calls Hunt "a most unprincipled demagogue," but the author of his life in the *Dictionary of National Biography*, says his own memoirs are the worst evidence against him. To our mind, Hunt's greatest

achievement is that, by his opposition to scientific progress, he succeeded in getting himself immortalized by Macaulay, in whose speech he is enshrined like a fly in amber.

THE MEDICAL INSPECTION OF SCHOOL CHILDREN.

THE question of the treatment of school children found to be suffering from disease requiring medical treatment is now before the British Medical Association. A number of Divisions have recorded their opinion, but the question is still under consideration. The county councils are trying to settle details as to the payment of inspectors and the provision of proper treatment. We do not propose to touch on the matter here further than to utter a word of warning to educational authorities as to the exercise of a reasonable amount of discretion in regard to the use they make of the reports of their medical officers. This may seem elementary; but that the warning is needed is shown by a document which has just been placed in our hands. It might be expected that the London County Council, which claims such extensive rights over the population subject to its sway, would set an example to less important bodies. The kind of example it sets may, perhaps, be gathered from a letter addressed to a parent not long ago by an education official. It runs: "I have to 'inform you that the Council's Medical Officer ' (Education) has examined your daughter . . . and 'has submitted a report, the following of which ' (sic) is an extract: 'On examination she was 'found to have very foul discharge of both 'ears; on the right side the whole internal 'wall of the tympanum is granulating, and these 'granulations extend into the attic and probably 'into the antrum. A radical mastoid operation is 'urgently needed. The left ear has had a radical 'mastoid operation done, but owing to the fact 'that the bony projections have been badly rounded 'off, it will never heal; it is granulating and 'discharging freely and requires reopening. It is 'proposed to get the child admitted to the — Hos- 'pital in — if the parents' consent can be 'obtained.'" We are not responsible for the English of this extract. We would ask, however, What is likely to be the effect of such a report on an ignorant parent's mind? The reflection which it contains on the handiwork of the surgeon by whom "the left ear has had a radical mastoid operation done," is the point which we think will strike our readers most forcibly. If this kind of report is to be sent about to parents, the results are likely to be unpleasant to all concerned. The children's parents will be alarmed by the technical jargon, which they will naturally interpret as meaning something dreadful; the practitioners who have treated the child in the first instance will feel justly aggrieved by the frank criticism to which their work is subjected by a specialist; while it is conceivable that the latter may be liable to an action for libel. At any rate, such a procedure is scarcely calculated to lead to the promotion of a brotherly feeling between practitioners and specialists, or, as in the present instance, between one specialist and another. Every necessary information for the guidance of the parent could easily have been given without quoting the opinion of one operator on the work of another.

THE INTERNATIONAL OPIUM COMMISSION.

THE International Opium Commission has been continuing its sittings at Shanghai, and has received reports from all the countries represented except Canada, India, and Russia. A memorandum submitted by

China at the meeting on February 8th has been criticized on the ground of hasty preparation. It contained an historical note showing that opium mixed with tobacco was smoked in China in the middle of the seventeenth century, that there had been a decline in the importation of foreign opium from 4,910 tons in 1888 to 3,220 tons in 1906, but that this decline was due to displacement by the native drug, the total production of which in 1906 was estimated at 34,800 tons. The memorandum asserted that the production of native opium had fallen in 1908 to 21,860 tons, but it is added that the figures given are the result of sifting scraps of information received here and there, and are, therefore, only approximate. In the inland provinces the taxation is irregular, and official returns practically unknown. The memorandum estimates that in China, with a population of 400,000,000, of whom 50,000,000 are adult males, the total number of opium smokers is about 13,500,000. The memorandum admits that the clandestine importation of morphine, chiefly from Japan, is increasing, and that such clandestine importation does occur would appear to be proved by the fact that whereas, according to the Customs returns, only 96 oz. of morphine were imported into all China during 1907, there are single shops known to have as much as 1,000 oz. in stock. At a subsequent meeting the memorandum was criticized by Sir Alexander Hosie, one of the British delegates, who said that it showed only a small part of the facts; he pointed out that the revenue collected from the native opium in 1908 in the I-chang Collectorate alone was £695,345, a sum larger than the total revenue from the whole of the foreign opium imported into China during that year. It had been asserted that the area under poppy cultivation had been reduced, but as the acreage was unknown the statement was valueless, nor could he accept the statement that poppy production had been entirely suppressed in the Mukden province of Manchuria, inasmuch as he had seen the crop growing there last summer. Sir Alexander Hosie also asked for information as to the number of smokers registered under the regulations in force in China, but added: "Such information is immaterial to, and should not be allowed to obscure, the main issue—namely, that opium in China is a great evil, and the removal of the temptation the only cure." In conclusion, he said that, in spite of the absence of any well-organized and uniform scheme for accomplishing the task which China has set before her, there could be no doubt that fair progress has been made in several provinces. Much still remained to be done, but the Chinese Government, whose sincerity was beyond question, had the sympathy of the British delegation and of the Commission in its efforts to eradicate the opium evil from the Empire.

THE HUNTERIAN FESTIVAL.

The Hunterian Oration before the Royal College of Surgeons of England on Monday last was attended by the Prince and Princess of Wales. Their Royal Highnesses, who were attended by Lady Mary Forbes-Trefusis, Lieutenant-Colonel Sir Arthur Bigge, and Captain B. Godfrey-Faussett, R.N., arrived at the College at 4 p.m., and were received by the President, Mr. Henry Morris, by the Vice-Presidents, Sir W. Watson Cheyne and Mr. A. Pearce Gould, and by the Secretary, Mr. S. Forrest Cowell. The party were then conducted to the secretary's office, where the members of the Council of the College were assembled, together with Lord Rosebery, who is an Honorary Fellow. The President called upon the Secretary to read the minute of the Council's proceedings

electing His Royal Highness the Prince of Wales an Honorary Fellow. The minute was as follows: "At a meeting of the Council of the Royal College of Surgeons of England, on February 11th, 1909, the President reported that His Royal Highness the Prince of Wales had consented to become an Honorary Fellow of the College. The votes of the Council were thereupon taken in accordance with the requirements of the Charter of 1899, and the President declared His Royal Highness George Frederick Ernest Albert, Prince of Wales, to be duly and unanimously elected an Honorary Fellow of the College." Mr. Morris then handed the diploma of Fellowship to the Prince of Wales, and, after the roll had been duly signed, the Prince was invested with the robe of Fellowship, and the royal party were then conducted by the President and the Vice-Presidents through the college corridor and common room to the theatre, where they received a respectful welcome from the audience assembled to hear the Hunterian Oration delivered by Mr. Morris. The chair was taken by Sir W. Watson Cheyne. On the conclusion of the oration the Prince and Princess of Wales were escorted to the reception room, where tea was served, after which the royal party left the college. Among the specially invited guests present were Adeline Duchess of Bedford, Lady Mary Howard, the Marquis of Bath, Sir James and Lady Reid, Sir R. Douglas Powell, Sir Frederick Treves, and Sir Thomas Smith. In the evening a dinner was held, the President being in the chair. Among the guests were Lord Aldenham, Lord Chylesmore, the Master of the Rolls, the President of the Royal Society of Medicine, the Astronomer Royal, the Treasurer of the Inner Temple, the City Remembrancer, the Master of the Apothecaries' Company, the President of the Royal College of Veterinary Surgeons, the President of Sion College, Sir Clifford Allbutt, K.C.B.; the Director-General of the Royal Navy Medical Service, the Director-General of the Army Medical Services, and Colonel Mark Lockwood, M.P. After the usual loyal toasts, which were gracefully proposed by the President, the memory of John Hunter was drunk in silence. The toast of "The Visitors" was proposed by Sir William Watson Cheyne, and responded to by the Master of the Rolls and Colonel Lockwood. Sir J. Crichton-Browne proposed "The President and Orator," and Mr. Henry Morris, in reply, said that although he had that day delivered the sixty-fifth oration to the memory of Hunter, he did not wish any one whose duty it might be to follow him to imagine that these sixty-five lectures had in any way exhausted the subject. He referred to the work which they were able to do to-day as compared with what was possible before Lord Lister's great discovery, and said that as a profession they hoped to go forward to the achievement of still greater things in the cause of humanity. The College was spending thousands of pounds yearly in procuring volumes which enriched the library, and in adding to and improving that marvellous museum of which the nucleus was formed by John Hunter.

MILK AND NOISE.

THERE would appear at first sight to be little connexion between milk and noise, for what more innocent-looking and suavely quiet and dreamy than the lacteal fluid extracted from placid cows browsing in flowery meads? Yet, if we follow its peregrinations before it reaches the consumer thereof, we shall find that milk leads to an amount of noise that jars the nerves and depresses the vitality of the town-dweller to a quite unnecessary extent. Missing some of the links in the chain of events, we may begin with the nocturnal or very early

morning rattling of the large distributing milk-vans laden with churns, frequently driven at great speed, the roads being clear at that time. Later, but still early in the morning, commences the house-to-house delivery of milk, either by noisy horsed carts with untired wheels or rattling hand-carts. As if this were not bad enough, the people in charge of these vehicles make a point, apparently, of creating as much metallic noise as possible by pitching the milk-cans about and banging the lids, as if to herald rosy Aurora with the sound of timbrels. In addition, the delivery of milk does not seem possible unless accompanied by strange jodellings. Both the sound and the sick suffer from these noises of the milk trade, and complaints to the large distributing companies on this head do not lead to an abatement of the nuisance. The only solution of the difficulty, and one that has been pointed out to some of the managers of the larger concerns, is the abolition of the dirty—not to say filthy—milk can, clean, sealed glass vessels being substituted, the employment of vehicles with rubber tyres, and the stopping of the unnecessary street cries.

MEDICINE IN THE UNIVERSITY OF LONDON.

We hear that a memorandum is in course of circulation to the deans of the medical schools in London and other members of the Medical Faculty of the university, outlining a scheme for the formation of a Faculty Board, which would act as the executive committee of the Faculty. We have already ventured to express the opinion that the affairs of the university cannot be set in order save as the result of an inquiry by a Royal Commission, ending in the grant of a new charter. If, however, in the meanwhile one particular defect in the present constitution of the university, which is paralysing the Medical Faculty, can be put right by a vote of the Faculty itself, as seems to be the case, it can require no argument to convince teachers in the medical schools of the advisability of giving the most careful consideration to the proposal.

THE APPLICATION FOR A CHARTER.

THE *London Gazette* for February 16th contains a formal notice, dated from the Privy Council Office, February 15th, that a petition of James Alexander Macdonald and other members of the British Medical Association, praying for the grant of a Charter of Incorporation, has been presented to His Majesty in Council; and His Majesty having referred the said petition to a Committee of the Lords of the Council, notice is further given that all petitions for or against such grant should be sent to the Privy Council Office on or before the 3rd day of April next.

IN connexion with the announcement elsewhere that His Royal Highness the Prince of Wales was elected an Honorary Fellow of the Royal College of Surgeons of England on the day of the Hunterian Festival, February 15th, it may be of interest to recall that the King had the Honorary Fellowship conferred upon him on June 14th, 1900, when His Majesty was still Prince of Wales. The Earl of Rosebery is an Honorary Fellow of the college, having been elected on the same day as the late Marquess of Salisbury, July 12th, 1900. King Edward the Seventh is also an Honorary Fellow of the Royal College of Physicians of London. It may be added that His Majesty is Patron of the British Medical Association, of which the Prince of Wales is an Honorary Member. As showing the special interest which His Royal Highness takes in medicine, it may be mentioned that he was elected an Honorary Fellow of the Royal Society of Medicine some time ago.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The King's Speech will probably be disappointing to those who are interested in social legislation, and in particular to those who looked forward, perhaps not with any very sanguine anticipations, to a comprehensive bill dealing with public health administration and the public health service. It would appear that the session is to be mainly devoted to finance, so that, in the words of the Speech, "less time than usual will be available for the consideration of other legislative measures." Among the measures thus relegated to a secondary place, the bills dealing with Irish land and with housing and town planning, which are remainders from last session. A bill for the constitution of trade boards in industries in which sweating prevails is promised, and also a bill to remove certain inequalities of treatment which have been found to arise under the Old Age Pensions Act of last year. Last on the list are bills to amend the law in regard to inebriates, the outcome of the report of the Departmental Committee on the operation of the law relating to inebriates and their detention in reformatories and retreats. A bill dealing with the supply of milk, and another regulating the hours of work in shops, are also promised. The report of the Royal Commission on the Poor Laws receives the unusual honour of being mentioned in the King's Speech, and it is stated that the recommendations of the Commission are engaging the careful attention of the Government. This phraseology appears to indicate that the Government do not intend this Session to introduce legislation to deal with the subjects investigated by the Commission. The Milk Bill, it is understood, will be a measure for unifying legislation by applying to the whole country the provisions of various milk clauses which have been from time to time enacted in private bills.

The Housing and Town Planning Bill, introduced by Mr. Burns on Wednesday, was read a first time. The bill, which is on the lines of that introduced last year, proposes to amend the law relating to the housing of the working classes, and to provide for town planning schemes, provision with respect to the appointment and duties of county medical officers of health, and the establishment of public health and housing committees of county councils. The bill, which is supported by the Attorney-General, the Solicitor-General for Scotland, and Mr. Masterman, will be read a second time on Monday.

Old Age Pensions.—In answer to a question from Mr. Fell, the Chancellor of the Exchequer stated that the number of claims for pensions granted up to January 31st was 613,962, and that the applications still under consideration on January 31st, exclusive of those which were the subject of appeals, were 65,768. The number of claims made up to December 31st last had been 741,306.

* SUPPLEMENT to the BRITISH MEDICAL JOURNAL, January 16th, 1909, p. 25.

AN International Exhibition of Hygiene will be held at Turin during September, October, and November.

A BILL has been introduced into the Pennsylvania Legislature offering a prize of £10,000 for the discovery of a cure for tuberculosis that shall be as effective as the antitoxin of diphtheria.

THE Second International Conference on Leprosy will be held this year at Bergen from August 16th to the 19th. The preliminary programme includes the following subjects: The geographical distribution of leprosy; the forms and diagnosis of the disease; its causes and manner of propagation; its pathological anatomy; and its treatment. The conference will be held under the patronage of the Norwegian Government and King Haakon. The President will be Dr. G. Armauer Hansen, discoverer of the *Bacillus leprae*. The Vice-President is Professor C. Boeck, of the University of Christiania, another recognized authority on leprosy. The Secretary-General is Dr. H. P. Lie of Bergen, to whom all communications relative to the congress should be addressed.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND DISTRICT.

FRIENDLY SOCIETIES AND THE MEDICAL PROFESSION.

THE feeling in Manchester medical circles with regard to the recent conference as to friendly societies is one of disappointment, and the idea is widespread that a much stronger stand should be taken than hitherto. Up to now medical men have only appealed with a sort of deferential humility for better terms from the friendly societies. It is now seen quite plainly that that is useless, and strong measures are demanded. In one large club in Manchester the club doctors smart under the necessity of treating as club patients scores of men far better off than themselves. Men earning even £1,000 a year are not ashamed to take advantage for themselves of this wealthy penny-a-week club, while they can afford to pay guineas to consultants for attendance on their wives and families. So far from being rare, this is quite a common thing in Manchester. Moreover, since the Workmen's Compensation Act came into force, club patients for the merest trifle of an accident call on their club doctor with an eye to some possible compensation. The amount of work done in some clubs has almost doubled from this cause alone, though the fee remains the same as was agreed on some years ago. The friendly societies complained at the conference about the alleged carelessness of club doctors in the giving of certificates of unfitness for work. If they only knew the proportion of certificates asked for, compared with those actually given, they might be surprised by the amount of claims that they would have to meet if the club doctors were less strict. It seems, too, to be quite forgotten that any club doctor who is too strict in withholding certificates may expect very soon to be told that his services are no longer required. For as things are arranged, the club doctor is not engaged by, nor dismissed by, the central organizations, but by a few local members who attend the local club meetings, the very men whose claims for sick pay the doctor has to scrutinize, and it must demand no small amount of firmness for a servant in such a position to tell one of his masters that he is either malingering or even exaggerating his symptoms. In fact, it is felt in Manchester that the whole club system, started originally with the best intentions, needs radical reform in every direction. It is fast coming to this, that the best men will refuse to take clubs—they will give their support rather to such societies as the Hearts of Oak, that simply pay a fee for entrance examinations but do not provide medical attendance. It is freely prophesied that the time will come when the only clubs for medical attendance will be those conducted by medical men themselves in the form of public medical services. The fact is that with the British Medical Association in its present fully-organized state, and the profession with a second string to its bow in the shape of public medical services, it is felt to be high time to cease supplications, and to make demands from the friendly societies, and it is quite certain that the genuine working men will not suffer from such action in the long run.

THE SALFORD UNION INFIRMARY.

The vagaries of the Salford Board of Guardians would be somewhat comical if they were not rather serious. Their latest freak is an attack on the medical staff of Hope Hospital, because, purely in the interests of the patients, the medical men have agreed to prohibit certain concerts which have been held regularly in the hospital. The senior resident medical officer states that the concerts had not been conducted in the best interests of the patients. The patients attending had not got back to their wards till 9.30 p.m. and their return to the wards had disturbed those actually ill in bed. Children have been present who ought to have been asleep long before that hour. Patients suffering from consumption have attended who, both for their own sakes and the sake of those with whom they mingled, would have been better in bed, while the day nurses who had to accompany their patients were deprived of needed rest. The concerts have frequently been held twice a week. This state of affairs has gradually super-

vened on occasional concerts, which, properly conducted, did no harm, and the medical officers thought it was high time to stop it. As is not unusual when anyone disagrees with certain of the Salford Guardians, the most unworthy motives have been attributed to the doctors for their action in the matter. Two guardians said that a merry evening and the "recreative quality of music" would do the patients more good than all the doctors' medicine in Salford. Another guardian said the doctors were not honest in their advice, and, again, that the doctors had not the interests of the patients at heart. It is a good thing for the poor patients that they are not left to the sentimental mercies of certain of the guardians, and if the medical men were not strong in their convictions and fearless in carrying them out, the action of some of the guardians would not tend to getting the best advice from their medical officers.

THE PROGRESS OF TROPICAL MEDICINE.

At a meeting of the Manchester Statistical Society last week, at which Dr. Niven took the chair, Sir Rubert Boyce, Professor of Pathology in the Liverpool University, gave an address on the progress of tropical medicine, in the course of which he said that the remarkable developments in tropical medicine had unquestionably been built upon the foundation of bacteriology firmly laid by Pasteur, and to the same school of thought belonged the further developments in the field of animal parasitology. Just as Pasteur had given us an insight into the means of prevention of infectious diseases, so tropical medicine had shown us how to combat vastly more devastating classes of disease, such as malaria, yellow fever, Malta fever, sleeping sickness, and tropical anaemia. When it had been shown that the *Anopheles* mosquito was the sole carrier of malaria, regulations for its destruction were soon promulgated. First in India and then in Sierra Leone, Ross had organized mosquito brigades to do away with the breeding places of the *Anopheles*, to drain the land, oil the pools, and deal with every patch of water. Rivers, lakes, and large collections of water were for the most part free from the larvae, which were found in small pools by the roadside, ditches, margins of marshes, and so on. As a result of these measures, the mortality among the West Indian regiments serving on the West Coast of Africa had been reduced 75 per cent., while the Grecian League against malaria had informed the Liverpool School of Tropical Medicine that its efforts had had wonderful effects in the plain of Marathon which used to be a hotbed of the disease. In 1906, 90 per cent. of the cases of sickness there were from malaria, while in 1907 the percentage had fallen to 47. At Ismailia, a town of 8,000 inhabitants, there were 1,550 cases of malaria in 1902. Antimalarial operations were then undertaken, and the figures since then have been, for 1903, 214 cases; 1904, 90 cases; and 1905, only 37 cases. Similar results had obtained with yellow fever. In New Orleans an epidemic of yellow fever in 1898 produced 13,817 cases, with 3,984 deaths, while in 1905 the total was 3,384 cases, with 443 deaths. Similar brilliant results had been obtained in Rio de Janeiro, Havana, Panama, and other hotbeds of yellow fever. The facts with regard to Malta fever and ankylostomiasis were cited as showing the value of prophylactic measures, and Sir R. Boyce concluded by expressing the opinion that there was little doubt that in time the tsetse fly would be conquered, and sleeping sickness no longer be a terror throughout wide districts of Africa.

Professor Delépine, in proposing a vote of thanks to Sir R. Boyce, said that the overcrowding of our large towns was perhaps as difficult a problem as that of the jungle, and he wished that the same energy were devoted to combating disease in our midst as had been shown in combating illness in the tropics.

A MEDICAL PLAY.

There can be little doubt as to the success of Dr. Sackville Martin's new three-act comedy, *Cupid and the Styx*, played last week at the Gaiety Theatre, Manchester. It is something of a satire on hospital life in a provincial town, makes extremely light of love and death and suicide and things that ordinary persons take with a certain amount of seriousness. The three medical men represented are little but flirts, all in love with a nurse whose only recommendation is a pretty face, and all imbued with a very high sense of their own dignity. The whole care of Nurse Price is to

make the best catch for a husband; she gets engaged to both the house-surgeons at once, and is ready to take whichever will marry her first. But, fortunately or unfortunately for them, Sir Peregrine Prendergast, the senior physician of the hospital, falls in love with her at sight, and makes her a totally unexpected offer of marriage in writing without any preliminary love-making. She accepts it at once, and the scene between the two house-surgeons when they hear of it is amusing indeed. The comic situations throughout the whole play are decidedly good. The hospital porter, well played by Mr. L. Mudie, is a doddering elderly man who wants a lighter job and thinks that if he can only get the vacant position of public hangman he would be quite satisfied because the work is light—"only drawing a bolt"—and his past experience as hospital porter "used to folks as isn't alive"—has well fitted him for such a post. By far the most powerful part is that of Philip Barton, a bank clerk with a mania for writing plays and poems which are all returned by managers and editors. At last in despair he determines that he will get into the papers somehow even if it involves a reputation as a suicide. This character is well drawn, and Barton's frenzied despair at the idea that his wife and in fact everybody else fails to appreciate his artistic temperament were excellently rendered by Mr. M. Sherbrooke. The portrait is that of a self-centred egoist, who never really intends to commit suicide though he talks like Socrates about it. There is an admirable comic scene in which with a show of frantic earnestness he discusses with the two house-surgeons the easiest and most artistic way to commit suicide and the exact dose of laudanum that will just do the deed; he begs the surgeons to certify when the inquest is held that he was perfectly sane; he takes a small dose of laudanum, is brought into the hospital, the stomach pump is applied, he is walked about and slapped with a wet towel, and recovers. Then the senior house-surgeon, to show him up, gives him a hypodermic injection of water only, and tells him that he will be dead in a few minutes. At once Barton accuses the surgeon of brutal murder and goes into a frenzy at the idea that he has to die after all. The play ends somewhat abruptly, with a bit of sham seriousness on Barton's part when he learns the truth, and this ending is not so powerful as the earlier parts; there is a feeling of something more to come which never arrives. Nevertheless, Barton's part places the play on a high level of comedy. The fun is nowhere coarse, and the bits of practical common sense put in a witty form are often clever. Sir Peregrine Prendergast, who has a good deal to say that is rather prosaic, now and then breaks out into something better, as when he says, for instance, "I don't believe in young men marrying and reproducing their species without first proving that their species is worth reproducing." The acting throughout was capital, and Dr. Martin owes much to the way in which the play was cast. There was no question about the good reception, and he had a most enthusiastic call from a good house at the end. There may be some rather grim jesting about death, and possibly there may be some slight resentment felt at the way in which hospital staffs and nurses are represented. Nevertheless, as a comic satire it is excellent, and perhaps that is all that was intended.

WEST YORKSHIRE.

MEDICAL INSPECTION OF SCHOOL CHILDREN IN BRADFORD.

AN attempt was made some time ago to obtain the insertion of a clause in an omnibus bill promoted by the Bradford City Council giving the school medical officer power to act as a certifying surgeon under the Factory Acts in his district. Through the opposition of Dr. Walker, a member of the Bradford City Council, this clause was deleted, but it came up again at a meeting of the council on February 9th. The resolution was to "ask the Home Secretary to take the necessary steps to appoint the school medical officer in each district as the certifying surgeon under the Factory Acts." Dr. Walker again opposed the proposition and carried the majority of the council with him. Dr. Walker stated that when the subject of school clinics was before the council, he had received a promise that only necessitous cases should be medically treated, but unfortunately it had not been kept. Little or no discrimination was exercised in picking out the children for treatment, and in distinguishing between

needy children and others. In a letter to the *Yorkshire Daily Observer* of February 13th, Dr. William Mitchell, Honorary Secretary of the Bradford Medico-Chirurgical Society, strongly supports Dr. Walker in his protest "regarding the methods of those responsible for the medical inspection and medical treatment of school children in Bradford. . . . Many children," he says, "are being treated at the expense of the ratepayers whose parents are perfectly able and willing to obtain and to pay for private treatment at home. Patients are being filched from them by the school medical officers and treated gratuitously, often against their wish." Complaints are heard in every direction. There appears to be an enthusiasm in the school medical officers for carrying on their work which, however laudable in itself, ignores the feelings and interests of their professional brothers. This should not be impossible of adjustment; it is hoped the protests of the medical profession, and it may be added of the ratepayers, will be duly noted by the authorities and that the school medical officers will exercise the greatest tact and discretion in carrying out their important duties.

BRISTOL.

ROYAL INFIRMARY.

The annual meeting of the Governors of the Royal Infirmary was held on February 9th, the President, Sir George White, who was in the chair, said that Mr. Hale, V.P.R.I.B.A., had consented to act as arbitrator in the open competition for plans for the new buildings. As a result the plan submitted by Mr. H. Percy Adams had been accepted, and the proposed building, capable of further extension, would be erected in Mandlin Street and Alfred Hill. The canvass for annual subscribers had, he said, been very successful, 233 having been added in the year. For the first time in the history of the institution the subscription list had reached £5,000. The deficit of £3,000 on the previous year's working had not been paid off, but Mr. Samuel White still held his offer of £1,000 good if the balance was subscribed. The income for 1908 including legacies was £16,429. Expenditure, ordinary and extraordinary, was £16,849. The President went into considerable detail with regard to the ordinary expenditure, which showed a slight increase on the previous year. The number of in-patients had been 3,869, and out-patients 49,998, a total of 55,867, against 50,092 in 1907. The cost per in-patient had been £3 3s. 10d., against £2 18s. 5d., due to the fact that the patients had been retained longer, an average of twenty-three days, against nineteen and a half in 1907. The various changes in the staff were touched on, and it was reported that the receipts from private sources had reached £2,377, an increase of about £400. The usual votes concluded the meeting.

HANDEL COSHAM MEMORIAL HOSPITAL.

It is very much to be regretted that the committee has been obliged to close part of the hospital on account of financial troubles. It will be remembered that the institution was opened on June 1st, 1907, and it was believed that there was sufficient income from the balance invested after the building and equipment had been paid for to take in 52 patients. By the will of the late Mr. Handel Cosham, a sum of about £140,000 was left to found a hospital for Kingswood and district, and of this over £40,000 was spent in building, etc. The Court of Chancery, in whose hands the money was placed, appointed certain trustees to carry out the details, and a splendid hospital, fully equipped, was built. But apparently the income derived from the invested funds has not been sufficient, and, after a year and a half working, the hospital is so far involved in debt that the closing of two wards has been necessary. How soon they will be reopened again is doubtful, as the closing of half the hospital will not result in much saving.

WALES.

CARDIFF INFIRMARY.

At a meeting of the Board of Management on February 10th, it was resolved on the report of the medical board presented by the Chairman, Dr. Tatham Thompson, to grant Mr. William Sheen permission to give two demonstrations to members of the Royal Army Medical Corps at

the Infirmary. On the recommendation of Dr. Tatham Thompson and Mr. Lynn Thomas, C.B., it was decided to send a limited number of convalescent patients to the Newport nursing home at Bassaleg, when the sanitary arrangements have been extended; the home is beautifully situated, and the drafting of patients into it will make room for some of the many patients awaiting admission to the infirmary. It was reported that during the year 2,245 in-patients and 16,323 out-patients had been treated. The income of the infirmary was £12,102, the expenditure £15,849, and there was an overdraft at the bank of £17,781. As the maintenance of the new wing would involve an annual expenditure of £4,000 an additional annual income of £7,000 was required, and the new wing will not be opened until this has been obtained. From various friends of the infirmary the capital sum of £32,212, yielding an annual income of £1,300, had already been obtained; and the Lady Aberdare League for the collection of shilling subscriptions had met with a great measure of success. Sir W. J. Crossman's scheme for consolidating workpeople's contributions had also borne excellent fruit. The gift of an operating theatre and the casualty wards by the late Mr. Thomas Webb will be commemorated by giving his name to one of the new wards established through the generosity of his nephew.

USK DISTRICT COUNCIL.

At a meeting of the Usk Urban District Council held on February 9th, Dr. H. G. Jenkins, in his annual report, stated that the general health of the district had been good, there having been no epidemic of any kind. The birth-rate was 14.48 and the death-rate 12.5 per 1,000 of the estimated population. The birth-rate was the lowest on record, and the death-rate was slightly below the average. There was only one death registered under 1 year of age, probably a record for the county.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

IRISH IN THE NATIONAL UNIVERSITY.

The members of the "Students' Union"—and a great many more who were not students—held a meeting in the Mansion House, Dublin, last week, and then paraded the streets with lighted torches, in the hope of convincing the senate of the National University that Irish must be made compulsory in that institution. Banners, mottoes, and all the paraphernalia of such a display were shown, and speeches were made by irresponsible people, who could not be accepted as having any opinion on educational matters worth recording.

At the annual National Convention on February 10th, under the presidency of Mr. John Redmond, M.P., the leaguers seized the opportunity to have a declaration made by the members.

Mr. Boland, M.P., availing himself of the statement by the bishops that the question was one for fair discussion, urged the adoption of a resolution declaring that Irish should be compulsory. The last tragedy of a nation was not the loss of its independence, but the loss of its language. They must have Irish from the very first days that the university opened its doors, or it would be nothing but a poor imitation of English and other foreign types.

The seconder (Rev. M. MacBrennan) said there could be no compromise.

Mr. John Dillon, M.P., declared that he opposed the resolution, and was loudly groaned. Why, he asked, was there no agitation against a royal university, and no proposal to pull or burn it down? It was royal, said someone, and, therefore, they tolerated it. He declared that throughout this controversy an entirely false issue had been put before the Irish people by many of those who advocated the cause of compulsory Irish. It had been said and repeated that this was a fight between the friends and foes of the Gaelic revival; that those who were opposed to compulsory Irish were fighting to preserve the university as a reserve for English Catholics and pro-English Irish Catholics. He absolutely repudiated that statement. The real question was one of academic method, and

whether compulsory Irish would best serve or would injure the Gaelic revival.

Dr. Douglas Hyde (President of the Gaelic League) said the only difference between him and Mr. Dillon was that Mr. Dillon thought it would be better to wait before Irish was made an essential, and he (Dr. Hyde) was of opinion it was better to do it now that they had the chance and the power. This university had been established with Irish money, and since they had paid the money they had the right to have some say in calling the tune. Without Irish there was a risk of making it a replica of Trinity College. Irish was the poor man's tongue; and, inasmuch as it was the poor man's tongue, it was banned from the rich man's school.

At first the voting was apparently rather even, but when the motion was put a second time it was declared to be carried.

POPULAR LECTURES ON PUBLIC HEALTH.

At the meeting of the Fermanagh branch of the Irish Medical Association held in Enniskillen on February 6th the following resolution was unanimously passed on the motion of Dr. Leonard Kidd:

Though large sums of public money are paid to those who instruct the public in agriculture, dairying, fruit culture, the technicalities of various trades, the care of cattle, fowls, bees, etc.; and notwithstanding that the community is taxed for the maintenance of hospitals and sanatoriums for the treatment and cure of disease—much of which is preventable—no public money has hitherto been available for the remuneration of those properly qualified to instruct the people in matters of hygiene and the preservation of their health.

Now that the Legislature has at length recognized public health lectures as a subject of technical education and as one entitled to share in the local grants, it is no longer necessary to regard the services of the profession in lecturing and instructing the people as a matter of philanthropy. And while we consider such philanthropic societies as the Woman's National Health Association are deserving of every sympathy and encouragement, we are of opinion that their existence is the strongest possible proof and condemnation of the neglect and incapacity of the Government, central and local, in matters of sanitation and public health.

We are further of opinion that medical men should not lecture under the auspices of such philanthropic societies, or at all, unless adequate remuneration be provided; and we suggest that these societies should co-operate with the county councils for the selection and remuneration of suitable lecturers.

We desire to point out that if medical men continue to give public health lectures gratuitously philanthropy will be usurping the functions of the Government, and local authorities will never be given the opportunity of exercising their newly acquired powers of paying for lectures and instruction in hygiene and public health.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE DICK BEQUEST.

MEDICAL charities in the West of Scotland benefit largely by the munificent bequest of the late Mr. James Dick, manufacturer, Greenhead, Glasgow. By his will he directed his trustees, after payment of certain personal bequests and legacies to local charities amounting to £82,000, to allocate the residue of his estate to such Scottish charitable schemes or institutions as they might select. The residue is estimated to amount to upwards of £600,000. The will was contested in the Law Courts to determine whether the directions were sufficiently explicit to constitute a valid bequest. The Lord Ordinary and the First Division of the Court of Session held that the will was not valid, on the ground of uncertainty, and the House of Lords upheld the decisions of the lower courts. Thereupon the trustees advertised that they were willing to consider applications, and were, we believe, inundated by proposals of all types. After careful consideration of all claims, they announced the first allocation of grants amounting to £311,500. Though the main proportion of the funds has been devoted to West of Scotland schemes and institutions, practically every part of Scotland comes in for a share. The bulk of the present grants has been allotted to medical charities, which receive upwards of £230,000.

Owing to the difficulty of realizing the funds, it is expected that it will be a considerable time before the remainder of the funds is allocated.

Glasgow Royal Infirmary	£80,000
Victoria Infirmary, Glasgow	50,000
Western Infirmary, Glasgow	50,000
Glasgow Maternity and Women's Hospital	10,000
Royal Hospital for Sick Children, Glasgow	10,000
Royal Samaritan Hospital for Women, Glasgow	10,000
Glasgow and District Branch for the Prevention of Consumption	5,000
Broomhill Home for Incurables	3,000
Consumption Sanatoria of Scotland	3,000
Glasgow Cancer Hospital (Free)	3,000
Glasgow Convalescent Home, Lenzie	3,000
Royal Glasgow Asylum for the Blind	3,000
Crookston Home	2,000
Falkirk Infirmary	2,000
Incorporated Glasgow Dental Hospital	2,000
Lady Hozier Convalescent Home, Lanark	2,000
Lanfine Home for Consumptives	2,000
Royal Edinburgh Hospital for Sick Children	2,000
Royal Victoria Hospital for Consumption, Edinburgh	2,000
Greenock Hospital and Infirmary	1,500
Argyle Nursing Association	1,000
Ayr County Hospital	1,000
Chalmers Hospital for Sick and Hurt	1,000
Cottage Nurses' Training Home, Govan	1,000
Dumfries and Galloway Royal Infirmary	1,000
Dundee Royal Infirmary	1,000
Dunoon District Cottage Hospital	1,000
Glasgow Eye Infirmary	1,000
Glasgow Ophthalmic Institution	1,000
Glasgow Women's Private Hospital	1,000
Higginbotham Sick Poor Nursing Association, Glasgow	1,000
Incorporated Edinburgh Dental Hospital	1,000
Kilmarnock Infirmary	1,000
Kilmuir Seaside Home	1,000
Northern Infirmary, Inverness	1,000
Royal Infirmary, Edinburgh	1,000
Royal Infirmary, Edinburgh, Convalescent Home	1,000
West of Scotland Convalescent Seaside Home, Dunoon	1,000
Glasgow Ear, Nose, and Throat Hospital	750
Blairgowrie and Rattray Districts Cottage Hospital	500
Blantyre Cottage Hospital	500
Children's Convalescent Home, Edinburgh	500
Dundee Convalescent Home	500
Edinburgh Hospital and Dispensary for Women and Children	500
Edinburgh Lying-in Institution	500
Eye, Ear, and Throat Infirmary, Edinburgh	500
Gilbert Bain Memorial Hospital, Lerwick	500
Glasgow Cancer and Skin Hospital	500
Glasgow Central Dispensary	500
Glasgow Hospital for Women	500
Glasgow Lock Hospital	500
Johnstone and District Cottage Hospital	500
Kilmarnock Nursing Association	500
Leith Hospital	500
Nairn Town and County Hospital	500
Ochiltree Convalescent Home, Ayrshire	500
Royal Victoria Eye Infirmary, Paisley	500
St. Andrew's Ambulance Association, Glasgow	500
Victoria Hospital, Rothesay	500
Denny and District Cottage Hospital	250
Cottage Home for Convalescent Children, Helensburgh	250

WESTERN INFIRMARY, GLASGOW.

An extraordinary general meeting of the court of contributors held last week approved of the Provisional Order made to the Secretary for Scotland to provide for the discontinuance of the Glasgow Hospital for Skin Diseases as a separate institution and for the application of the property thereof, and for other purposes. The managers were further empowered to meet all cost and charges incident to the Provisional Order out of the funds of the Western Infirmary.

STUDENTS' REPRESENTATIVE COUNCIL.

The annual conference of Delegates from the Students' Representative Councils of the Scottish Universities was held in Aberdeen on January 29th and 30th. Among the motions submitted and discussed was one by the St. Andrews' delegate that the Scottish universities be petitioned with a view to making diseases of children a part of the final examination for the degrees of M.B. and Ch.B. It was argued that the subject ought to have a permanent place in the final examination. After dis-

cussion an amendment that the Scottish universities be petitioned to make the classes on diseases of children in the various universities uniform, became the finding of the conference. The delegates also discussed the question of the provision of a separate medical college for women students, holding that the present system of co-education of the sexes in several subjects in the medical curriculum was unsatisfactory and undesirable.

REGISTRATION OF NURSES IN SCOTLAND.

The Scottish medical and nursing professions have been for some time back watching the Registration of Nurses Bill. It was felt that the terms of the bill which passed the third reading in the House of Lords and had been sent down to the Commons, were not suitable to Scotland. The opinion was expressed that in the interests of hospital work and of public and private nursing, steps should be taken to secure for Scotland such treatment as would enable it to obtain the fullest possible benefit from a system of registration. With this object in view a meeting of those interested was held, as reported in these columns on December 19th, at the Royal College of Physicians, Edinburgh. This meeting was attended by, amongst others, the Presidents of the Royal Colleges of Physicians of Edinburgh and Glasgow and the superintendents and matrons of all the principal hospitals in Scotland. At this meeting the terms of the registration bill were carefully and fully discussed. While admitting that registration was desirable, and, indeed, inevitable, it was generally felt that registration on the lines proposed would be hurtful to the interests of Scottish nursing. The meeting considered that the work of training nurses would be much better done if a separate registration authority were constituted in each country. The committee then appointed to draw up a scheme of registration suitable for Scotland has now issued its report, and at a further meeting of the committee in Edinburgh it was approved of without a dissenting voice.

The report states that registration is necessary, but the committee considers it very undesirable that the registration and, as a necessary consequence, the training of Scottish nurses should be controlled by a registration council whose head quarters would be in London. If the recent bill became law the training, education, and status of Scottish nurses would be alien in interests and sympathy to Scottish nursing. Considering the excellence of the training given to nurses in the leading hospitals, the proposal to make the examination by the registration council an essential qualification for registration was unnecessary, and would place an undue burden and expense on candidates, and, further, would tend to create the impression that the main object to be aimed at in training a nurse was to enable her to pass such an examination. A much better plan, in the opinion of the committee, would be to leave the examinations, as far as possible, in the hands of the training schools, the registration council reserving such powers of supervision as would enable the council to ensure an adequate standard of attainment on the part of applicants for registration. It was pointed out that the fee of 5 guineas proposed to be charged for examination and registration was excessive, since the majority of those who would be called on to pay it would probably be in receipt of small salaries.

The committee, having formed these conclusions, does not recommend the nursing profession to adopt this bill now before Parliament as applying to Scotland, but advise that a bill which it has drafted should be brought before Parliament exclusively applicable to Scotland. The committee expressed the opinion that the existence of a separate registration council in Scotland would stimulate and promote the training of Scottish nurses in a manner that a registration council sitting in London could not achieve.

The committee also advocates a system of reciprocity, and suggests the insertion in any bill of a clause providing that nurses registered in England or in Ireland should be held as registered in Scotland, and that nurses registered in Scotland should be held as registered in England or in Ireland.

A meeting of those interested in the subject will be held at 3 p.m. on February 27th in the Merchants' Hall, 30, George Square, Glasgow, under the presidency of Lord Inverclyde.

SELKIRK MEDICAL OFFICERSHIP.

Mention was made in these columns of the deadlock which had occurred in connexion with the resignation of Dr. Muir as medical officer of the burgh of Selkirk. The town council offered the position to various medical men, but they all declined. After the last meeting of the council it was understood that Dr. Muir was willing to resume duty at an increased salary. At a subsequent meeting, which was held in private, it was decided that it was impossible to agree to the conditions which Dr. Muir laid down in the event of his resuming office. It was, therefore, determined to advertise for a medical officer. It will be interesting to watch further developments in the case; and it is to be hoped that the members of the medical profession in the neighbourhood will support one another in the endeavour to put the appointment on a proper and satisfactory basis.

ROYAL MEDICAL SOCIETY BANQUET.

The annual dinner of the Royal Medical Society was held in Edinburgh on the evening of February 9th. The Senior President, Dr. W. Kelman Macdonald, presided over a gathering of about a hundred gentlemen. The guest of the evening was Sir Donald Macalister, Principal of Glasgow University. Sir Donald Macalister, in proposing "The Royal Medical Society," said that reverence was due to it as the senior medical society of the United Kingdom. It was still in its vigorous prime, and it had retained not only the mature vigour of age, but all the portentous gravity of youth. A roll of membership that included among its ordinary members Oliver Goldsmith, Charles Darwin, and Joseph Lister, was glorified for all time. Cambridge and Glasgow shared a portion of the glory those names had shed upon the world, and in the name of both universities he made his acknowledgements. He acknowledged on behalf of a third institution which he represented the hospitality of the society to the members of the General Medical Council, and referred to the position the General Medical Council held with regard to education. The kind of education the State had put under its charge was not education for culture, considered as an end in itself. The Medical Acts had a strictly practical end in view. They bid the Council see to it that a medical man possessed "the knowledge and skill requisite for the efficient practice of medicine, surgery, and midwifery." A university might properly impart to and demand from its medical graduates a higher and wider education than that. It might rightly insist on more "knowledge," but it might not be satisfied with less "skill." Greater proficiency on one side must not be purchased at the cost of less efficiency on the other. The one concerned the reputation of the medical graduate as a man of learning; the other touched the public safety, and it was in the interest of the public safety that the Legislature created the General Medical Council. Modern advances in medical and surgical treatment, in the arts of healing and prevention, put new powers for good into the doctor's hands. But to learn to use them skillfully needed more study in the wards and more practice at the bedside than before. For that more than the second half of the curriculum was required. When the two half-sections were more than the whole would contain, something must give place. Should it be the first half, or the second half, or the whole? There was the practical problem, and he commended it to the Royal Medical Society as a problem worthy of its statesmanship. The one solution that was barred, from the point of view of the public, was that which would crush up or crush out the second half. The public was made up of patients, actual or potential. That was why the public thought it worth while to make legal and educational provision for the production of doctors. After referring to the growth of the Edinburgh Medical School and the efficiency of its clinical teaching, he concluded his remarks by saying that clinical skill could not be crammed, time and a certain detachment of mind were factors in the product. If these were stinted, practical efficiency suffered; and it was by their practical efficiency that doctors, Scottish or non-Scottish, must in the end stand or fall. The General Medical Council would look after the minimum curriculum; that was its function. It was on the superminimal after the bare essentials were provided for, on the higher instruction provided, and on the stricter standards enforced, that the special reputation of a school or university chiefly depends.

COMBATING CONSUMPTION IN EDINBURGH.

Dr. Philip, in an address to the Council of the Edinburgh Charity Organization Society on Concerted Action in the Prevention of Consumption, said that such action was the key to success. In Edinburgh alone about 400 people annually died from consumption. The proportion of tuberculosis in school children was much greater than was commonly supposed. From observations of several groups of school children taken at random in the City of Edinburgh, he found that no fewer than 30 per cent. had tuberculosis. There were in the city a large number of tuberculous nests. The issue was one of considerable magnitude and complexity. The problem was not how to cure a certain number of individuals and restore them to work. The preventive programme must be comprehensive. It was not merely a question of notification or sanatoriums; it must be an organized and co-ordinate programme, such as notification, a tuberculous dispensary, a hospital for advanced cases, a sanatorium for early cases, and a working colony. He believed that there were 4,000 people in Edinburgh who ought to be under surveillance on this account. Dr. Leslie Mackenzie, medical member of the Local Government Board, stated that the Board, so far as that was possible, had given whole-hearted support to the views put forward by Dr. Philip, and hoped to continue to do so.

Cape Colony.

NEW REGULATIONS AS TO MIDWIVES AND NURSES.

New regulations on the subject of the certification of trained nurses and midwives in Cape Colony have, after a long delay, been gazetted. The chief alterations in regard to midwives are that the registration of certificates from outside the Colony is abolished, and examination will, in all cases, be compulsory. The curriculum of a midwife from outside will, however, if equal to that exacted in the Colony, be accepted. Training in a recognized lying-in institution will be compulsory. This must cover a period of three months, and must include a course of lectures, and the conduct, under the direction of a medical practitioner or registered midwife, of at least fifteen cases. In regard to nurses, training schools must henceforth be recognized by specific resolution of the council, having regard not only to the actual number of patients, but to the class thereof, and to the quality and extent of the instruction. The training schools will be of two classes, the first including those having 400 or more patients per annum, and the second those having fewer than 400, but not fewer than 200. In the first class three years' training will be required, and in the second class four years. If the candidate has been trained partially in an institution of one class and partly in one of the other, a period of eighteen months in the second class shall be regarded as equivalent to one of twelve months in the first. The council will continue to register trained nurses who produce approved outside certificates.

Special Correspondence.

BERLIN.

Visit of the King and Queen to the Kaiserin Friedrich Hans—Medical Inspection and Treatment of School Children.

While in Berlin King Edward and Queen Alexandra visited the fine Institute for Medical Post-Graduate Instruction, dedicated to the memory of the late Empress Frederick, the Kaiserin Friedrich Hans für aerztliches Fortbildungswesen. Their Majesties were specially interested in the various collections and permanent exhibitions, which form so notable a feature of the establishment. Its fine, admirably lighted rooms (the institute dates from 1905) contain a permanent exhibition of objects of medical technical industry. Manufacturers know the advantages of presenting these objects to the institute, and practitioners here find an assemblage of all appliances they may require in every branch of professional work, including, of course, surgery, radio-therapeutics, etc. A special department is devoted to chemo-therapeutics, and the chemical remedies so largely manufactured in Germany; there

are separate rooms for casts, for tropical medicine, for balneology, and ample space is reserved for temporary scientific exhibitions. There is a collection also of medical teaching appliances placed here by the Prussian Government, to whom it belongs, and used for lecture experiments and demonstrations. These lectures, which are free to graduates, are given in a lecture-room for 250 hearers. A library and a reading-room for general use are provided, and other rooms, with about twenty working places each, are devoted to practical courses of study in microscopy, bacteriology, and experimental medicine. There is a studio for scientific photography and a workshop for casts. Close to the latter Professor Lassar's celebrated collection of models has found its place. Professor R. Kutner is at the head of this fine institute. To him fell the honour of conducting the King and Queen through the building, and of delivering a short address, illustrated by photographs on the screen, before Their Majesties.

A public meeting, convened by and presided over by Herr Hentig, late Prime Minister of Coburg-Gotha, was held in the Session Hall of the Prussian Upper House on February 10th by the German Central Committee for the Care of the Young (*Jugendfürsorge*). Its proceedings were devoted exclusively to a discussion of the institution of school doctors, its results after ten years' practical experience, its aims, and its limitations. Dr. A. Lewandowski presented a report of the general inquiry instituted by the committee six months ago, and in an able and exhaustive speech commended its outcome. A list of questions, accompanied by a paper of simple guiding maxims, had been sent to the elementary schools (*Volkschulen*) of all places in Germany of over 5,000 inhabitants—524 schools in all. Replies had been received from 468, almost 90 per cent., and formed the basis of the report. It was a gratifying sign, said Lewandowski, that the school authorities in general seemed fully alive to the importance of proper hygienic arrangements in school buildings and playgrounds, and of such measures as special classes for backward and dull children, individual treatment of shortsighted, deaf, neurasthenic, weak-chested, or slightly crippled children, meals for the underfed, dental supervision and treatment, and other aids to health advocated by German school doctors. It was satisfactory, too, that in general the relations between school authorities and school doctors had been of the smoothest. Much good had been effected by parents' evenings, meetings at which school doctors discussed some point of importance, and questions were asked. The dangers of alcohol had been from the first explained and kept before the minds of both children and parents. Useful advice on the selection of a trade suited to bodily condition and physique had been given, and the spread of epidemics in schools had been prevented. It was, however, useless to deny that school doctors did not, and could not, effect all the good of which their office was capable while the limitations that tied it down remained in force. At present the German school doctor's functions were almost exclusively advisory. He examined the pupils at entrance and at stated intervals, and recommended medical treatment where he considered it advisable. But, for reasons of medical etiquette, he was debarred from carrying out that treatment himself, even though he might know that the child, owing to the negligence of the parents or from other causes, was without any medical care whatever. Nor had he any means of forcing the parents to do their duty. When he had diagnosed, say adenoids or the initial stage of phthisis, when he had stated the case and advised special treatment, the school doctor's function was at an end. This, said Dr. Lewandowski, was an ambiguous state of things; in concert with many of his colleagues he raised his voice against its continuance. No one now doubted that the institution of school doctors was a step in the right direction. In the ten years the system had existed it had effected much good and produced a great store of experience. But if it was to have its full share in raising the physique of the nation and stamping out the diseases that were its scourges it must not remain an isolated measure of stunted scope, but must be extended and centralized, must be worked and moulded by municipal and State authorities into a link of that great chain the forging of which Germany, he hoped, would complete before long—a chain of free

medical care for the people, from earliest infancy to manhood and womanhood. The discussion was opened by Geheimrath Freund, of the Prussian Ministry of the Interior. He declared himself in full sympathy with the hopes of the Central Committee, as formulated by Lewandowski. State legislation alone could give the school doctors adequate executive powers. But the financial side—and the question of funds came uppermost in all great schemes—was a matter that concerned the communities more than the State. German communities were freer financially than English, inasmuch as they were entitled to vote funds—without appealing to Parliament—to any purpose they might judge useful to the community at large. Dr. Gottstein, honorary town councillor of Charlottenburg, in a closely argumentative speech, pleaded for enlargement of powers and centralization. The "school doctor" must be henceforth the "school-children's doctor," though this alone would not suffice; for it was an established fact that much of the children's ill-health had its root in unsatisfactory home conditions; and as it was useless to hope for cures while these remained what they were, centralized action was necessary. To be of use the medical care of the people must not be cut up into bits, the one having no official cognizance of the other, but must form a single organic whole.

Correspondence.

BOYS' RACES.

SIR,—Probably those medical practitioners who have the advantage of an extensive practical experience of school boys who regularly run in "school and cross-country races exceeding one mile in distance"—I mean the medical officers to our great public schools—will realize the very unfortunate effect that is almost certain to be the outcome of the laconic letter—we may call it the "certificate"—to Mr. Farmer signed by Sir Lander Brunton, Sir Thomas Barlow, Dr. Goodhart, Dr. Hale White, and Sir Alfred Fripp. One naturally wonders on what grounds these high medical authorities base their assertion that for boys under the age of 19 the continued strain "is apt to cause permanent injury to the heart and other organs." This is indeed a very sweeping generalization; and though it is probable that individual instances of boys who have taken part in long runs have been brought before these gentlemen as patients, I cannot think that they have had opportunities of watching the effects of such runs on the average healthy boy which alone would justify the statement to which these gentlemen subscribe. As with vaccination so with runs, to many nervous parents it is *Post hoc, propter hoc*.

For eight years I was in medical charge of an English public school of about 650 boys, and from the outset was particularly anxious to note any ill-effects from long cross-country runs, for I started on my work as deeply prejudiced against races exceeding one mile in length as any of those distinguished subscribers of the letter. But experience showed that the harm done was a myth, provided, of course, that only the physically sound were allowed to take part in the healthy exercise of "runs."

My experience, at any rate, was diametrically opposed to the statements of Sir Lander Brunton and his colleagues, and I never once came across a boy who, after I had certified him as fit to run, was any the worse even for the long cup race of about nine miles.

It would be very useful if the question under consideration could be made the subject of discussion at the annual meeting of the Association at Belfast.—I am, etc.,

Clifton, Feb. 14th.

P. WATSON WILLIAMS, M.D. Lond.

SIR,—A few weeks ago I was consulted by a senior boy of one of the leading English public schools, who was sent to me by his parents on account of an unusual listlessness which he had shown during the holidays. They further asked my opinion on the advisability of his continuing to take part in the long distance cross-country competition races (five to six miles) in which he took a prominent place. On examination I found a coldness of extremities, slight but distinct cyanosis of the cheeks, and a slightly dilated heart, the physical signs showing unmistakably

that the heart and circulation had been unwisely subjected to some physical strain, and on inquiry I found that the family history showed a very marked tendency to early cardiac degeneration. Needless to say, I vetoed any continuation of the long-distance competition races.

My patient informed me that occasionally after the races he was very much done up, his description of his feelings clearly indicating that his condition on these occasions was not one of healthy exhaustion but more akin to collapse, and yet this apparently escaped the observation of the school authorities. Lest any reader should think that the boy in question was one who welcomed a medical certificate to free him from taking part in a sport which did not interest him, I may add that he not only took a prominent place in the running team to represent his school in competition contests, but he equally excels in every other branch of school athletics. I sincerely trust that Mr. Farmer will be successful in his efforts to attain an urgently-needed reform.—I am, etc.,

Edinburgh, Feb. 14th.

CHALMERS WATSON, M.D.

SIR,—I have read with much interest your remarks upon Mr. Herbert Farmer's letter in the *BRITISH MEDICAL JOURNAL* of February 13th, and having for years participated in both long-distance running and swimming, I feel I can, from a practical point of view, entirely agree with your conclusions that cross-country running does no harm to the average boy, but should not be insisted upon for all boys. One may hold, as a general rule, that if a boy enjoys long-distance running, then it will do him nothing but good; but if it is inkome to him, then he is in all probability physically unfit for it. To my mind, the "sprint," especially the "quarter," is a much more unnatural and severer strain on the circulatory system than the slower long-distance race. If parents would only take the trouble to have their children medically examined occasionally, then any who were unfit for ordinary school sports could have their exercise regulated. I have often seen cases of boys at public schools who were quite unfit to participate in the usual school sports on account of their cardiac condition, but such cases are the exception and not the rule.—I am, etc.,

LESLIE THORNE THORNE, M.D., etc.

London, W., Feb. 13th.

SIR,—I hope you will permit me, as a former winner of the United Hospitals' cross-country race, and one who as a schoolboy was keen on paperchases, to offer a few comments upon this most important question.

No boy who suffers from cardiac disease, or any serious physical disability, should go in for any violent sport such as football, running, jumping, or rowing, but in my opinion the ordinary school paperchases involve a much less serious strain on the heart than any of the faster races from 100 yards to a mile, or a hurdle race, or a short distance steeplechase, and certainly than a boat race.

In an ordinary paperchase, even where there is a competitive element in it, there are so many obstacles, heavy ground to be crossed, and time occupied in looking for the scent, that there is not the same strain upon the heart as in the more violent races to which I have alluded.

Provided, then, that there is proper medical supervision, as there should be for all kinds of boys' sports, and that suitable training is carried out, and the runs adapted to the age of the boys, I am of opinion that there are few more healthy forms of sport for growing boys.

It is possible that the manifesto in question may have been written as a protest against Marathon races, and road races of a similar kind, which are quite another thing, but I think it is due to the profession, and especially to those members of the profession who are medical officers of schools, that some evidence should be brought forward to justify what seems to me a grave attack upon one of our well-recognized forms of school athletics.—I am, etc.,

Leighton, E., Feb. 15th.

CHARLES F. HARFORD.

THE DRAFT CHARTER AND THE REFERENDUM.

SIR,—We wish to draw the attention of the members of the Association to the serious effect which the proposed action, headed by the South-Western Branch, in petitioning the Privy Council against the Draft Charter will have upon the South African Branches of the Association. In the

spirit of combat which has been aroused since the Sheffield meeting there is a possibility of the interests of the members of the Association being forgotten, and it is to be hoped that more reasonable counsels will prevail.

This Branch of the Association in South Africa, Cape of Good Hope, has been looking forward to the granting of the Charter since 1905, mainly for the reason that it might have power to increase its subscription so as to enable it to carry out its duties, which it is unable to do at present on the 4s. per member allowed out of the present subscription of 25s., the deficit being made up out of a balance accumulated previous to 1902, and further, to undertake the duties of medical benevolence and medical defence. A further want is the power to form a South African Committee composed of members from each South African Branch which shall have full power of—

- (a) Levying subscriptions on Branches and members to any amount necessary for carrying out its work.
- (b) Shall control and administer medical benevolence.
- (c) Shall take up medical defence.
- (d) Shall be representative of the Branches in matters of medico-politics and of medico-ethics.
- (e) Shall be the central organizing committee for holding congresses and issuing publications.

The regulations for this committee have been considered by each Branch, and in a few months will be finally settled; but, until the Charter is approved, work in this connexion cannot be entered upon.

To the Representative Meeting in July, 1906, the Special Representative Meeting in May, 1907, and the Exeter meeting in July, 1907, representatives were sent from this Branch and the views of the Branch stated. The subject of the Charter has been discussed *ad nauseam*, and it appears to us that the raising of the method of taking the referendum at the last moment is only with a view of delaying the passage of the Charter and the scarcely veiled hope that success in this will finally kill it.

"The Association" as at present constituted has expressed, after more than adequate consideration, its approval of the Charter, and any counter petition, if successful, can only result in the subject being sent back by the Privy Council to the Association to settle the difficulty and to re-petition that Council when the members have settled their differences.

As the objection is not to the Charter but to one of its Ordinances, we think that this point could well have been left to be settled constitutionally after the Charter has been granted.

We now come to the reason for writing this letter. The patience of our members is becoming exhausted, and unless the constitution of the Association is quickly altered so as to give the Colonial Branches more autonomy and more power to enlarge their scope, there is the very grave danger of a serious fission occurring in the South African Branches, which will threaten their very existence, and from the ashes of which a Colonial Association will rise. Many of us who have belonged to the British Medical Association for years are most anxious to prevent this, but unless more prudent counsels are adopted we fear this result will occur.

We notice that this agitation springs from those, no matter how highly placed, who have not the intimate acquaintance with the needs of the Association and its members, both home and colonial, as those who have occupied official positions for years.—We are, etc.,

A. JASPER ANDERSON,

President.

H. A. MOFFATT,

Hon. Secretary,
Cape of Good Hope Branch.

Capetown, Jan. 27th.

MEDICAL REGISTRATION.

SIR,—Anxiety to many practitioners may be averted, and comfort obtained by many, if you will kindly publish the enclosed correspondence.

To H. E. Allen, Esq., Medical Registrar.

Dear Sir,—I am writing to you regarding our mutual interest. I enclose a card addressed to myself, and request your kindness to inform me whether you have received my reply to your letter of the 1st.

Section XIV of the Medical Act is most unjust to medical practitioners, and should be repealed. It is unfair that if, from any cause, registrars do not receive answers to their single applications, they can erase names from the Register, and that no acknowledgement of an answer is required from a registrar,

from whom a printed postcard would suffice, costing little and relieving much anxiety.

February 8th, 1909.

Reply, dated February 9th, 1909:

We have 32,000 replies to deal with; it has taken three people five days to open them, and they will not be sorted for two or three weeks at least. Your entry has been marked off as correct; no need to trouble further. We shall not remove any name for not answering until we have sent a second (registered) inquiry.

N. C. KING,
Assistant Secretary.

—I am, etc.,

Malvern, Feb. 11th.

STANLEY HAYNES, M.D.

PERNICIOUS ANAEMIA AND PYORRHOEA ALVEOLARIS.

SIR,—I regret that Dr. Byrom Bramwell cannot agree with my statement. I have paid great attention to the oral condition of my cases for some years, and, though no rule is without its exceptions, feel sure that in 99 per cent. the cause of teeth dropping out is pyorrhoea alveolaris.

With regard to the question raised by Dr. Bramwell's friend of the "less obvious symptoms and signs" of this disease, I must say, not being a dentist myself, I see many cases in which I do not feel justified either in assuming or denying its presence without investigation by a competent dental surgeon.

As regards the various points raised, I have followed Dr. Bramwell's example, and enclose a letter from Mr. J. G. Turner of Wimpole Street, which deals with the subject from a dental point of view.—I am, etc.,

London, W., Feb. 12th.

C. WYNN WIRGMAN.

SIR,—The important point seems to be whether Dr. Byrom Bramwell has found pernicious anaemia in a subject definitely free from oral sepsis. The answer to this must be a decided negative. In this case, as Mr. Wynn Wirgman says, the dropping out of the teeth may be taken as clear evidence of the presence of pyorrhoea. Pyorrhoea is by far the commonest cause of "dropping out of teeth," and in the absence of all evidence to the contrary must be accepted as the cause in Dr. Bramwell's case.

As to "atrophia alveolaris praecox," I am inclined to regard it (in common with tabetic alveolar atrophy) as a very unsatisfactory thing—always remembering "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy." A dry form of alveolar caries, infective and analogous clinically to dry caries—say, of the hip joint—is very common and leads slowly to loss of the teeth, apparently without any septic infection and with no formation of pus. In course of time this dry form of pyorrhoea alveolaris generally merges into the purulent, a pocket here and a pocket there gradually showing definite pus discharge.

It is, I believe, this "dry" form of "pyorrhoea" which has given rise to the idea of early senile decay of the alveoli of the jaws, as well as to alveolar atrophy as an accompaniment of tabes, diabetes, etc.

J. G. TURNER.

Wimpole Street, London, W.

APPLICATION OF MENDELIAN RULES TO THE HUMAN INHERITANCE.

SIR,—What I especially endeavoured to show in my last two letters were two points which Professor Karl Pearson ignores in his letter of February 2nd. However, it is clear from paragraph 4 of his letter that he now understands my method of counting. The two points are:

1. If there had been no children born to the last abnormal (which is quite conceivable) my contention is that, without doubt, Mendelians would have considered Nettleship's chart as conforming to Mendel's rules; for of the 274 individuals descended from abnormal, 134 were abnormal and 144 normal.

If this result is not near enough to that required by theory, then I do not know how it is to be regarded.

2. The second point is that of 98 abnormal parents nearly one-third had normal children only.

Will Professor Pearson kindly furnish his explanation of this striking fact? So far, no more likely explanation has occurred to me than the one quoted in italics in the second paragraph of the professor's letter; and he has not by any means shown it to be an erroneous view. Though it may be "new" and offer difficulties, it is not therefore "absurd."

I am, at any rate, not alone in my view that prepotency may change with the mating, for Professors J. Arthur Thomson and Cossar Ewart go further and believe it may

change in the individual. Thomson, in his *Heredity*, pp. 116 and 117, says:

In large families there is sometimes observable an interesting change in the direction of preponderance in the successive children. With a virile middle-aged father and a much younger mother, the older children may be markedly maternal in the expression of their inheritance, the younger children as markedly of the maternal type. . . . Professor Ewart records the case of a very young pigeon of hooded and filled breed which was mated with an old one not decorated with hood or frill. The result was that the first young were smooth headed and smooth breasted, but that those of later broods had the specialized characteristics of the mother.

I still maintain, in spite of Professor Pearson's scathing criticism, that so long as abnormal continued to be produced in Nettleship's night-blind family, the proportions agreed closely with Mendel's rules; and this was not in a small number of individuals, but in a number sufficiently large to warrant one in feeling satisfied that a close approximation to the correct "average" result was somewhat obtained.

If, then, the chart falls strictly into Mendelian lines up to the point which includes all the abnormal, there seems to be no escape from the conclusion that some new factor must have come into operation where Mendel's rule begins to be inapplicable; and when we know the real cause of dominance we may know what this new factor is.—I am, etc.,

Wrexham, Feb. 9th.

H. DRINKWATER.

PULMONARY TUBERCULOSIS IN CHILDREN.

SIR,—Dr. Mary Williams has supported the views she holds regarding chronic pulmonary tuberculosis in children in an able manner, but her conclusions are based upon somewhat insecure foundations.

To refer first to the death statistics given. Death statistics not based on autopsies are of little value, and the statistics quoted in which the cause of death has been ascertained by *post-mortem* examination draw no distinction between acute and chronic tuberculosis of the lungs. It is scarcely necessary to remark that the vast majority of cases of tuberculosis of the lung occurring in children seen in the *post-mortem* room are either acute or subacute in nature. In the second place, allowing (what I am not prepared to admit) that infection of the lungs in children generally takes place from the intestines, it does not appear to me that such a view supports the contention of Dr. Williams. A caseous bronchial gland, whether infected from the air or from the intestinal canal, may remain quiescent for several years, and when disease of the lung arises from the gland during childhood, the disease is almost invariably acute or subacute in nature. With regard to another heading, when drawing deductions from statistics based upon clinical evidence of chronic tuberculous disease of the lungs in children, it is necessary to know what the observers have considered to be evidence of tuberculosis. Dr. Williams, although she holds a strong view on this subject, seems to be uncertain as to the physical signs of chronic tuberculous disease of the lungs. Again, the symptoms considered by Dr. Williams to be indicative of phthisis are certainly of little value. Speaking broadly, the symptoms mentioned may be said to be those of dyspeptic children, of children the subjects of cyclical albuminuria, or of children physiologically delicate—to use a word of ill-defined meaning, but which must be understood by those who have to deal with children. It is necessary, however, to admit that some of these dyspeptic or delicate children may have tuberculous bronchial or mediastinal glands, but the presence of such glands can very rarely be diagnosed.

Possibly a common ailment in children may sometimes mislead Dr. Williams. This ailment is recurrent fever. The frequency with which a short attack of fever sometimes recurs in children is remarkable, but even in a case in which the fever appears only occasionally, if examination of the child were to take place just after an attack, it is probable that any one holding the views of Dr. Williams would diagnose tuberculosis, especially as some bronchitis more commonly than not accompanies the fever. In this connexion it may be of interest to add that a few years ago I looked up, at their homes, all the cases I could find of children who had been under my care for recurrent attacks of fever associated with bronchitis. In

the majority the attacks grew less as puberty was approached, though in one or two instances chronic bronchitis seemed to be developing. In no case was there any indication that tuberculosis was present.

In conclusion, reference may again be made to the evidence of the *post-mortem* room. Here I believe—and this is a standpoint from which I feel I can speak with some authority—that the evidence is strongly against the frequency of chronic tuberculous disease of the lungs in children. On the contrary, the *post-mortem* room not infrequently shows that cases of chronic disease of the lungs in children, which have been thought during life to be tuberculous, prove to be non-tuberculous.—I am, etc.,

February 12th.

THEODORE FISHER.

SIR.—The somewhat sweeping statements made by Dr. Hamilton Williams in her interesting article on Pulmonary Tuberculosis in Children, published in the JOURNAL for February 13th, can hardly be accepted without further consideration. She starts with the assumption that at about 30 per cent. of autopsies tuberculous lesions are found in the lungs. For children certainly this figure is probably sufficiently accurate, for, without ransacking Europe for figures, statistics from the different hospitals for children in London show that about one-third of those dying in them are found on *post-mortem* examination to be tuberculous, and in the vast majority of these the lungs are affected. But Dr. Hamilton Williams further assumes that because pulmonary tuberculosis is so commonly found after death there must be large numbers of children in whom the disease is present during life in a more or less latent form, and that it may remain latent for periods varying from five to twenty years. Now, of this I believe there is no sufficient evidence; on the contrary, all clinical experience shows that the rapidity with which tuberculous disease spreads in the lungs is generally in inverse proportion to the age of the patient, being rapid in early life, comparatively slow in later life. Certainly, in children, when once tuberculous mischief has started in the lungs, it usually spreads very quickly, and in a markedly disseminate fashion, proving fatal before there has been time for any extensive excavation to occur. Severe symptoms develop with corresponding rapidity, and the reason why children suffering from pulmonary tuberculosis are not found in the London elementary schools is not, as Dr. Hamilton Williams suggests, the inefficiency or carelessness of the medical examiners, but is simply due to the fact that as soon as recognizable physical signs are present the children are usually too ill to attend school. It is true that caseation of the bronchial or mesenteric glands may be latent for long periods, and I shall welcome information from Dr. Hamilton Williams or any one else as to how in the great majority of such cases the presence of these diseased glands can be detected by ordinary methods of physical examination.

To come to personal experience: Out of 120 consecutive autopsies on tuberculous children for which I was responsible, it seemed probable that death was directly due to the tuberculous disease in 94, whilst in 26 it resulted from some intercurrent condition. In 13 of the latter cases the bronchial or the mesenteric glands, or both, were alone implicated, and the diagnosis of tuberculous disease in these would, I believe, have been impossible during life. In the 13 remaining cases there was more extensive tuberculous disease, and in all but one the lungs were affected; with the exception, however, of two or perhaps three instances, the pulmonary lesions were of such a character that they would almost certainly have proved fatal in a few weeks.

Clearly, therefore, in these 120 cases there was no evidence to support the idea that more or less latent disease of the lungs is common in children, and is a frequent precursor of pulmonary tuberculosis in adult life; on the contrary, clinical and pathological findings alike point to the conclusion that, whilst tuberculous disease of the lungs is very frequent in early life, in the great majority of instances it rapidly proves fatal. That is to say, the disease must not be looked for in schools, but amongst children who are ill, either at home or in hospital. If unsuspected pulmonary tuberculosis were at all frequent in early life, it would certainly be met with in autopsies on children dying from other diseases, and until such *post-mortem* evidence is forthcoming I must refuse to

accept speculations based on statistics which are liable to many fallacies.

A few years ago we were taught that pulmonary tuberculosis (apart from the military form) was always due to infection through the respiratory channels; now the pendulum is swinging in the opposite direction, and we are told that in the immense majority of cases the disease is contracted not by inhalation, but by the ingestion of bacilli or bacilliferous products by way of the intestinal mucosa. We have the further statement that the largest part of the tuberculosis which man obtains through his food is by means of milk containing tuberculous matter. If both these statements are correct, it follows that in most cases of pulmonary tuberculosis the tubercle bacilli should be of the bovine type, but notoriously I believe this is not the fact. Will the supporters of the view that the disease is due commonly to infection by milk through the intestine explain this discrepancy? Does the bovine bacillus, when it multiplies in the lungs, undergo a transformation into the human type? I ask in no spirit of controversy, but merely to get a satisfactory answer to a very important question.—Yours, etc.,

London, W., Feb. 16th.

J. WALTER CARR.

THE VACANT POLICE APPOINTMENT IN LIVERPOOL.

SIR,—The attention of the Watch Committee has been called to statements upon pages 435 and 438 in your issue of February 13th, to the effect that the Corporation of Liverpool has taken advantage of a vacancy occurring among the medical attendants to the police force as an opportunity of reducing the pay of the appointment from £80 to £60 per annum.

As a matter of fact the retiring medical attendant was appointed at £60, as have all others appointed to similar offices during the last ten years. The salary is a commencing one of £60, rising by increment of £20 to £80 after five years' service.—I am, etc.,

M. H. MAXWELL,
Chairman of the Watch Committee
of Liverpool.

February 16th.

The Services.

THE TERRITORIAL FORCE.

THE LONDON COUNTY ASSOCIATIONS AND THE MEDICAL ESTABLISHMENTS.

THE part which the county associations are called upon to fill in the scheme of the Territorial Force is very important: a county association is responsible for the administration of the units of the force within its county area, except when called up for annual training in camp, when embodied, or when engaged in actual military service. From the formidable list of its duties we select only those which are pertinent to the subject in hand. The county association is required to provide and clothe the necessary men, to find the necessary drill halls, head quarters, storehouses, etc., to provide saddlery for horses, and to arrange for attendance at drills. It receives a grant from army funds, and the income of an association from this source is regulated by the Army Council on the principle of payments by results: the association itself, however, administers and conducts its own expenditure. To meet the general expenses of administration it receives establishment grants, among which are the following: Administrative medical office of the division, £25; mounted brigade field ambulance, £35; field ambulance, £195; general hospital, £40; sanitary company, £35; and for medical details at special rates according to the establishment in the county. The grant made for a medical office is intended to cover the cost of office accommodation, clerical assistance, postage, stationery, etc. To enable a county association to provide the necessary horses for the instruction of mounted men, and such vehicles as are not issued by the War Department for such units as may require them at times other than that of the annual training in camp, it receives special grants. Among these are for a mounted brigade field ambulance £55, and for each field ambulance £60, but the payment of these grants is subject to a certificate of efficiency from the general officer commanding.

Expenditure in connexion with the provision of such land and buildings as the Army Council may consider

necessary for the proper discharge of its functions by the association is met by grants from army funds, and among the buildings to be thus provided are drill halls and head quarters of units.

The regulations contemplate the probability of a deficit, and a county association is authorized to receive money from private sources, either for general or specific purposes.

London has two county associations, one for the City and the other for the rest of London; there is also a county association for Middlesex. In the scheme of organization for the Territorial Force London supplies two divisions and a mounted brigade.

Each division is required under the regulations to provide, in addition to its staff officers—the Administrative Medical Officer, the Staff Officer to A.M.O., and the Sanitary Officer—the following medical units: Three Field Ambulances, two General Hospitals, and one Sanitary Company.

For various reasons the organization of medical units in London has presented peculiar difficulties, and, in spite of the expenditure of much energy and labour, it has only been possible very recently to complete the arrangements for the First Division while those for the Second are still incomplete. The First Division, although not, so far as we can make out, officially assigned to the City of London County Association, seems to have been particularly favoured by that association. In this division the required three field ambulances, two general hospitals, and one sanitary company have been provided, and are now recognized. The number of officers for the three field ambulances is complete, and they have from 52 to 91 per cent. of men. The sanitary company has its five officers, but only 42 per cent. of men; the two general hospitals are complete. It has for head quarters the former head quarters of the Royal Army Medical Corps Volunteers (London) Companies in Calthorpe Street, St. Pancras, W.C., but these are found to be inadequate.

The medical arrangements of the Second Division are in worse case. There are no medical head quarters for the division, and the only foothold that the head quarters staff has is a small room in Craig's Court House, Charing Cross, and it has been threatened with expulsion even from this. Of the three field ambulances for the division, two, Nos. 4 and 5, have head quarters at the Brookhill Road School of Ambulance, Woolwich; the buildings are, however, inadequate for the purpose, have no suitable drill hall, and do not provide sufficient accommodation for the equipment of even one field ambulance. No. 4 Field Ambulance has in addition a small drill hall and accommodation for two ambulance wagons at Erith, and a lecture room and accommodation for two wagons and harness at Dartford. No. 5 Field Ambulance has a lecture room at Greenwich. Both these field ambulances were formed from the R.A.M.C. (Vols.) Woolwich Companies, and are nearly up to full strength. There are, however, vacancies for officers in both. No. 6 Field Ambulance has been raised recently in London, and 71 men and 7 officers having been obtained, application was last week made for recognition by the Army Council. There are still vacancies for three officers: the number of men who have joined since application for recognition was made raises the total to 94. The unit has been raised under very great difficulties, since there was no nucleus to start with and no head quarters: it was for a time permitted to use the head quarters of the 13th Battalion at Kensington, but for the last three months it could only use it as a drill hall once a week, and a room was obtained in Vauxhall Bridge Road, which has been used for recruiting purposes and as a lecture room; this room is at the present moment the only head quarters the Field Ambulance has, for the 13th Battalion has withdrawn permission to use its hall, as it is required for its own purposes. Repeated applications to the London County Association to provide suitable head quarters have always been met with the reply that until the unit is recognized the Association has nothing to do with it. It was pointed out that if the head quarters were allotted the required number of men would be found in a very short time, but this appeal has met with no response. The requisite number of men has now been obtained, but the County Association does not seem to be making any serious effort to find head quarters.

As to the two general hospitals, the staff of medical officers *à la suite* is complete, and the No. 4 General Hospital has its complement of officers and men, so that application for its recognition will shortly be made. No. 3 General Hospital is not yet formed, but it is probable that the whole of the men will be supplied from the staff of one large firm. The Sanitary Company of this division was recognized last July, but down to the present time

has not been provided with head quarters, although repeated and urgent applications have been made. It has 2 officers and 55 men, who have been drilling with the 6th Field Ambulance. The full complement of a sanitary company is 5 officers and 105 men.

It is hardly necessary to insist that there are a great many points in the above simple statement of facts which reveal an unsatisfactory state of affairs.

The allowance of £25 per annum to provide an office for the administrative medical officer and his staff, and all office expenses, is so inadequate as to be absurd: it would not pay the wages of an office boy. It is true that this is the sum allowed by the Army Council, but it ought to be supplemented by the County Association.

At present men are only supplied with one suit, and it is really dangerous to send men into camp for fifteen days without a change; fortunately, last year the season was dry, but in a wet summer the consequences to the health of the men might be serious.

The want of transport is a serious drawback to the medical units: each field ambulance should be provided with a minimum of three ambulance wagons, three carts, and three modern water carts.

The importance of the Sanitary Company does not appear to be sufficiently appreciated by the County Association, and yet prevention of disease is recognized to be the most important part of the duties of a military medical service, and is the governing factor in the organization of the Royal Army Medical Corps. Yet, as we have said, the Second Division cannot obtain head quarters in which to train their men in their special duties, and in neither division can they receive even elementary instruction in water purification, since the necessary apparatus cannot be obtained.

ROYAL ARMY MEDICAL CORPS.

EXAMINATION FOR ADMISSION.

The following is the official list in order of merit (with the marks obtained) of successful candidates for commissions in the Royal Army Medical Corps at the recent examination in London, for which 57 candidates entered:

Name.	Medical School.	Marks.
H. S. Ranken	Glasgow University	503
J. A. Mansfield	Edinburgh University	504
P. S. Tomlinson	University College, Bristol	505
W. H. O. Richardson	Queen's College, Cork	506
C. T. V. Benson	St. Thomas's Hospital and Cambridge University	509
W. P. McArthur	Queen's College, Belfast	517
E. C. Cusker	Trinity College, Dublin	518
A. W. Bevis	St. Mary's Hospital, London	519
F. W. M. Cunningham	Edinburgh University	520
E. M. Parsons-Smith	St. Thomas's Hospital	521
O. V. Sweeney	St. Thomas's Hospital	522
S. S. Dykes	Edinburgh University	523
J. J. D. Roche	Dublin University	524
R. H. Nolan	University College Hospital, London	525
R. C. Priest	St. Thomas's Hospital	526
M. White	Queen's College, Cork	527
R. C. Paris	King's College Hospital	528
P. G. M. Elvery	Royal College of Surgeons, Dublin	529
H. E. Joynt	Guy's and Durham College of Medicine	530
M. J. Williamson	Aberdeen University	531
A. S. M. Winder	Dublin University	532
W. Mathieson	St. Thomas's Hospital and Cambridge University	533
J. R. Yourell	Dublin University	534
J. R. Hill	Edinburgh University	535
O. L. Franklin	Manchester University	536
H. B. Edwards	King's College Hospital	537
A. D. Stirling	University College, Dundee	538
W. B. Rennie	Marischal College, Aberdeen	539
J. Becton	St. Bartholomew's Hospital	540
G. P. Taylor	Edinburgh University	541

EXAMINATION FOR PROMOTION.

The following is the list of successful candidates at the November examination for promotion of Majors of the Royal Army Medical Corps in technical subjects:

Major I. A. O. McCarty.—(d) ii (already passed in technical subjects).
 Major D. J. Collins, M.B.—Technical subjects (already passed in (d) ii).
 Majors H. A. L. Howell and E. C. Hayes.—(d) ii (have yet to pass in technical subjects).
 Lieutenant C. M. Drew, M.B.—(h) ii and iii (already passed in (d) ii and (h) i).
 Lieutenant A. A. Sutcliffe, M.P.—(h) iii (already passed in (d) ii and (h) i and ii).
 Lieutenant A. G. Cummins, M.B., and Lieutenant H. E. Gottle.—(h) ii (already passed in (d) ii and (h) i and iii).
 Lieutenant R. G. Archibald, M.B.—(d) ii and (h) iii (has yet to pass in (h) i and ii).
 Lieutenant J. B. G. Mulligan and Lieutenant P. S. Stewart, M.B.—(d) ii (already passed in (h) i, ii, and iii).
 Lieutenant T. W. O. Sexton.—(d) ii and (h) ii and iii (has yet to pass in (h) i).

ROYAL ARMY MEDICAL CORPS (TERRITORIAL FORCE).

Major J. Clay, M.B., 1st Northumbrian Field Ambulance.—(d) ii (as required of an officer of the Regular Forces before promotion to the rank of Major).

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE following appointments have been made:

- Dr. Rivers to represent the University at Fiftieth Anniversary of the Foundation of the Anthropological Society of Paris.
Dr. Langley, a member of the Board of Electors, to the Professorship of Anatomy.
Dr. Fletcher, a member of the Board of Electors, to the Dowdall Professorship of Medicine.
Dr. H. Starling, M.D., a member of the Board of Electors, to the Professorship of Physiology.
Sir Clifford Allbutt, a member of the Board of Electors, to the Professorship of Pathology.
Dr. Gaskell, a member of the Board of Electors, to the Professorship of Surgery.
Dr. Humphry has been co-opted a member of the Degree Committee of the Special Board for Medicine.
F. C. Stirling, M.A., M.D., Trinity College, has been approved for the degree of Doctor in Science.
The following degrees were confirmed on February 11th:
M.D.—T. M. Neatby, Joh.
M.B.—B. P. Campbell, Cla.; W. K. Kerworth, St. Seiv.
M.B., B.C.—O. R. Smaile, Govv. and Cal.; F. B. Treves, Govv. and Cal.
B.C.—T. W. Wood, Pemb.

UNIVERSITY OF LONDON.

MEETING OF THE SENATE.

A MEETING of the Senate was held on January 27th.

Recognition of Teacher.

Dr. Francis O'Brien Ellison was recognized as a teacher of physiology at St. Mary's Hospital.

Curriculum for the B.Sc. (Pass and Honours) Examination in Physiology for Internal Students.

It was resolved that in and after 1910 the regulations for the B.Sc. (Pass and Honours) degree in physiology for internal students (Red Book, September, 1903, pp. 195, 207) be amended so read as follows:

A.—Pass Degree.

The curriculum in physiology shall consist of:

1. A complete course of not less than sixty lectures on physiology.
2. A practical course of histology extending over not less than three months and occupying not less than sixty hours.
3. A practical course of physiological chemistry extending over not less than forty hours, and including:
The preparation, properties, and methods of estimation of the chief carbohydrates.
The properties of fats, fatty acids, and the common oxy-fatty acids; saponification.
The properties of the chief proteins.
The action of ferments.
The chief disintegration products of the proteins; amino-acids and their derivatives.
Urea, creatine and creatinine; the purin group; uric acid.
4. A course of practical physiology (including demonstrations and practical exercises) extending over not less than six months, and occupying not less than 120 hours.

In this course the student is expected to acquaint himself with the methods employed for the demonstration of the fundamental physiological processes as laid down in the syllabus, and to carry out such chemical manipulations or simple experiments as are comprised therein.

A revised syllabus has also been issued.

B.—Honours Degree.

The degree is open to the following classes of candidates:

- (a) *General Class.*—Students who have passed the Second Examination for Medical Degrees (Parts 1 and 2) as Internal Students.

Such students must, subsequently to attending the prescribed courses in physiology for the Second Examination for Medical Degrees, pursue an approved course of study for the B.Sc. honours degree in physiology extending over at least one year, involving not less than sixteen hours' laboratory work per week, as well as attendance at two at least of the courses of advanced university lectures in physiology of the year previous to the examination. Such students will not be required to present any subsidiary subject at the B.Sc. honours examination.

- (b) *Students who have passed the Intermediate Examination in Science.*

Such students must attend the course in physiology prescribed for the B.Sc. pass degree, and must, in addition, after completion of these courses, have pursued a further course of study extending over at least one year, and involving not less than sixteen hours' laboratory work per week, as well as attendance at two at least of the

following courses of advanced university lectures in physiology of the year previous to the examination.

Subsidiary Subjects.—Human anatomy and morphology, organic chemistry, physical chemistry, physics, zoology, botany.

Assistant to the Professor of Protozoology.

Miss Muriel Robertson was appointed one of the assistants to the Professor of Protozoology, vice Dr. J. D. Thomson, resigned.

Date of the M.B., B.S. Examination.

It was resolved that the examination for internal and external students for the M.B., B.S. degrees held twice in each year should commence on the fourth Monday in October and the first Monday in May.

Appointment of Representatives.

Mr. G. H. Cowen, M.B., B.S., has been appointed a member of the Council of Hatherly University College, Southampton. Mrs. Schary, M.D., M.S., has been reappointed a governor of St. Mary's College, Paddington.

Date of the Advanced Lectures in Physiology.

Dr. W. Bulloch is unable to deliver the course of lectures on prophylaxis against infection announced to be given by him at the London Hospital Medical College.

DEGREES.

The following candidates passed the examination indicated:

INTERMEDIATE MEDICINE.—C. Aids, Guy's Hospital; C. H. Beckus, St. Bartholomew's Hospital; S. G. Billington, University of Birmingham; Margaret B. Blocker, London (R.F.H.) School of Medicine for Women; E. Blackwood, University of Leeds and Guy's Hospital; Florence H. Bousfield, London (R.F.H.) School of Medicine for Women; T. D. Bowen, University College, Cardiff, and University College; G. P. Bradley, London Hospital; B. W. Brown, King's College and Westminster Hospital; A. A. C. Russell, University College; G. B. Buckley, Victoria University of Manchester; Winifred F. Buckley, London (R.F.H.) School of Medicine for Women; A. B. Cardew, Middlesex Hospital; A. E. Clark, University of Sheffield; J. H. Cobb, University of Glasgow; H. St. G. Colton, King's College; L. Corwell, Guy's Hospital; E. G. H. Cowen, Charing Cross Hospital; H. Davies, University College; W. H. Dupré, St. Bartholomew's Hospital; W. H. Eggar, Middlesex Hospital; R. F. Emihson, Charing Cross Hospital; D. B. Evans, University College, Cardiff; G. T. Foster-Smith, Guy's Hospital; Frances J. Preston, London (R.F.H.) School of Medicine for Women; V. Glendinning, Guy's Hospital; Alice M. L. Greaves, London (R.F.H.) School of Medicine for Women; F. W. Hamilton, Middlesex Hospital; H. L. Hopkins, Guy's Hospital; W. H. Laird, St. Thomas's Hospital; L. Levene, University College; G. Marshall, Guy's Hospital; M. Mayers, London Hospital; P. J. Monaghan, Guy's Hospital; Hannah G. Morland, London (R.F.H.) School of Medicine for Women; J. G. Mosley, London Hospital; C. T. Neve, St. Bartholomew's Hospital; T. T. O'Callaghan, Guy's Hospital; W. H. Parkinson, Victoria University of Manchester; B. R. Parmer, Guy's Hospital; E. B. Porter, London Hospital; J. L. Pugh, Guy's Hospital; H. E. Robinson, London Hospital; C. F. Schuler, St. Thomas's Hospital; E. P. Scott, London Hospital; R. G. Sparkes, St. Mary's Hospital; Mildred B. Sturgeon, London (R.F.H.) School of Medicine for Women; F. B. Todd, St. Bartholomew's Hospital; R. T. Vivian, St. Bartholomew's Hospital; G. E. S. Ward, Middlesex Hospital; H. P. Warner, Guy's Hospital; E. H. V. Welch, St. Thomas's Hospital; F. S. Williams, University College, Cardiff; H. W. Williams, St. Bartholomew's Hospital; R. M. Wiltch, University College, Bristol.

* Distinguished in pharmacology. † Distinguished in physiology.

UNIVERSITY OF ABERDEEN.

UNIVERSITY COURT.

Annual Financial Statement.

A MEETING of the University Court was held in Marischal College on February 9th, when Professor Matthew Hay presided in the absence of the Principal who has been indisposed for some time.

The Chairman, as convener of the Finance Committee, in moving the adoption of the report reviewed the condition of the university finances.

General Fund.—The general fund showed a balance on the credit side of £1,334, as compared with a balance of £752 for the year 1906-7. The improved condition was due partly to an increase in the number of students and partly to the raising of the class fees in the Arts Faculty. In 1906-7 the matriculated students numbered 890, while in 1907-8 they were 932, and if the teachers in training who attend university classes are included, the numbers were 1,299, the largest number in the history of the university. The total revenue from class fees payable into the fee fund account, from which the surplus, if any, after paying the salaries of professors, passes into the general fund, was £10,642 in 1906-7 and £11,510 in 1907-8—a gain of £863. The increase of students was confined to the women, who now number one-fourth of the total number of students and nearly one-half of the arts students. The faculty showing the largest growth was the Arts Faculty.

Decrease in Medical Students.—Professor Hay then referred to the decrease in the number of medical students, showing that, in common with nearly all other medical schools, Aberdeen University had had fewer entries in medicine than formerly, but there were now signs that the ebbing of the tide had reached its limit. The Scottish universities could scarcely expect in future to attract any considerable proportion of their medical students from across the Tweed, England and Wales being now

well served by several new universities with an equipment not inferior to their own. If, however, a southern student had decided not to attend the university at his own door, and was attracted by the traditional reputation of the Scottish universities, he ventured to believe that Aberdeen would continue to attract her share of such students, and of students from our Colonies. Aberdeen, both academically and residentially, offered undoubted advantages. The university now possessed laboratories of the newest type, the classes were not of unwieldy size, and there were good hospitals, which had multiplied in recent times, afforded adequate medical and dental instruction. Aberdeen was admittedly one of the healthiest towns in the empire, with a climate suited to vigorous work, as well as to healthy living. There was probably no university town in which students could live more cheaply and comfortably.

Salaries of Assistants and Examiners.—Referring to the salaries of assistants and examiners, amounting to totals of £2,504 and £265 respectively, the Chairman said these could bear to be largely augmented, both by an addition to the emoluments of existing assistants and examiners and by an increase in their numbers. These two bodies of officers required, in the unanimous opinion of the Council, to be increased. The Committee on any scheme of increased staffs and Senatus, the first consideration in the matter being the necessity of securing the best possible committee could not, however, at the present moment encourage the Committee for this purpose, as some of the most important of the university ordinances had been recast, or were about to be recast, and the changes involved might seriously affect the revenue from class fees, and might well wipe out the present surplus.

Extension of buildings.—In the building extension account there was a debit balance of £1,087, but it was noted that the payment of outstanding subscriptions promised to the extension fund would at least reduce the residual burden to the university in regard to this account. It would be a matter of much gratification to the Court and a noteworthy finish to the history of the great extension movement had it been possible to say that the scheme had been brought to a close without any debt.

The Carnegie Grants.—The most valuable financial feature of the year was the payment to the university of the employment grants which had been accumulating in the hands of the Carnegie trustees under their first quinquennial scheme of distribution of grants. The sum thus received last year amounted to £25,000, exclusive of the grants for provisional assistance to the library. This sum was devoted to the complete endowment of the Lectureship in Geology and to the partial endowment of the Lectureship in French. Under the second quinquennial scheme similar grants could become available for the departments of Education, Literature, History, and Constitutional History. During the five years just ended, the university had received £45,000 from the Carnegie Trust. Of this sum, £30,000 had been capitalized for endowments for History, Geology, and French, while £15,000 had been expended on the maintenance of the library, the equipment of laboratories and museums, the provision of certain additional assistants, and the better results, the provision of certain additional assistants, and the better results might be made in some quarters. Whatever criticism may be made by the Trust, all admitted that the payment of class fees by the Trust, all admitted that the grants for the better endowment and equipment and staffing of the university had been of the utmost advantage.

Degree of LL.B.—Professor Hay then referred to the institution of new lectureships in the Law Faculty, which made it possible for the university now to grant the degree of LL.B.

Benefactions. Finally, the Court was reminded of the new benefactions which had been received during the year. Dr. Dey, a member of the Court, continued to give his usual annual donation of \$50 to the library. Another recent member, Dr. Crombie, whose retirement from the Court was so sincerely regretted, and whose unsparring generosity had helped them in their financial emergency, had placed the university under new obligations by his open-handed assistance to the athletic association, the erection of their much-needed pavilion. Professor Traut, another member of the Court, had most generously gifted, in memory of his wife, the sum of £1,000, the interest of which was to be applied to the most commendable conditions, for the assistance of accessions and deserving students. The very valuable Colonel Milne Fund had come into operation last year, and was applied to a similar purpose. It ought to be widely known that certain funds, the bursary funds, were now available for the private assistance of worthy students attending the university. The Rev. Mr. Hill, Buckle, made a further contribution of fifty guineas to the fund, to supplement his previous endowment of the Calthrop Prize in History. The Primrose trustees provided sums for prizes in Law and Agriculture, and the trustees of the late Mr. William Knox had agreed over the sum of £2,134 for the endowment of four bursaries in Divinity and Medicine and for scholarships in Arts. For medical bursaries had come into operation during the year, the management of the fund being in the hands of a special body of trustees.

The report was approved, and the secretary was instructed to send a copy to the secretary of the Scottish Education Department, as required under the ordinance.

VICTORIA UNIVERSITY OF MANCHESTER.

IT is announced that Sir T. H. Holland, D.Sc., F.R.S., has been appointed to the Chair of Geology, vacant through the resignation of Professor W. Boyd Dawkins. Sir T. H. Holland will, subject to the sanction of the Secretary of State for India, resign the post of Director of the Geological Survey in India, which he

has held since 1903, and will also resign the Readership in Geology in the University of Calcutta. It is expected that he will enter on his duties in Manchester next October, and meanwhile the department of Geology will remain under the supervision of Professor Boyd Dawkins, who has been appointed Honorary Professor in the University.

It has been arranged that the Bishop of Salford should give two lectures on Wednesday evenings, March 17th and 24th. The subject of the first lecture will be Medicine and the Medical Science in Ancient Iran; the lectures will be open to the public without charge.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

AN ordinary council was held on February 11th, Mr. Henry Morris, President, in the chair.

Election of the Prince of Wales as Honorary Fellow.

The President reported that H.R.H. the Prince of Wales had graciously consented to become an Honorary Fellow of the College. The Council thereupon unanimously elected His Royal Highness an Honorary Fellow.

Diplomas.

Diplomas of Membership were issued to 81 candidates found qualified at the recent examinations. Diplomas were also issued jointly with the College of Physicians to 13 candidates found qualified in Public Health.

Board of Examiners in Dental Surgery.

Mr. C. T. Dent was appointed on the Board, in the vacancy occasioned by the retirement of Mr. G. H. Makins.

CONJOINT BOARD IN ENGLAND.

BOARD IN ENGLAND.
At a meeting of the Council of the Royal College of Physicians, on January 28th and of the Council of the Royal College of Surgeons on February 11th the Diplo. of L.R.C.P. and M.R.C.S. were conferred upon 31 candidates who have completed the Final Examination in medicine, surgery, and midwifery of the Examining Board in England and have complied with the by-laws. The following are the names of the successful candidates, namely:

[illegible]

CONJOINT BOARD IN IRELAND.

THE following candidates ~~have been approved~~ at the examinations indicated:

FINAL PROFESSIONAL.—J. J. Barry, C. H. Bryan, F. S. Crean, J. J. Cuskelly, C. J. B. Dunlop, J. J. Dwyer, J. Ellenbogen, D. J. Harty, P. Maquire, J. O'Brien, M. C. O'Hara, D. O'Sullivan, W. G. Ridgway, H. N. Ritchie.

DIPLOMA IN PUBLIC HEALTH.—Captain W. O'S. Murphy, I.M.S.,
M.B.R.U.I.; S. Poole, M.D. Univ. Edin.

Medico-Legal.

WHAT IS AN ACCIDENT?

THE much-vexed question. What is an accident within the meaning of a policy of insurance? has once more come before the courts for consideration. The companies make every endeavour to avoid accepting liability for any death caused by disease or other intervening cause. A case which was heard in the Court of Appeal last week shows how difficult it is to frame a policy which will effect this object.

It appeared that by the terms of a policy the company undertook that if at any time during the continuance of the said policy the insured should sustain "any bodily injury caused by violent, accidental, external and visible means, then, (a) in case such injury should within three calendar months from the occurrence of the accident causing such injury directly cause the death of the insured, to pay to the legal personal representatives of the insured the capital sum of one thousand pounds." The policy further provided as follows: "Provided always and it is hereby as the essence of this contract agreed as follows:—

"3. That this policy only insured against death . . . where accident within the meaning of the policy is the direct or proximate cause thereof, but not where the direct or proximate cause thereof is disease or other intervening cause, even although the disease or other intervening cause may itself have been aggravated by such accident, or have been due to weakness or exhaustion consequent thereon, or the death accelerated thereby."

The insured when hunting, while endeavouring to jump his horse over a fence in which a strand of wire was concealed, was violently thrown to the ground upon the far side of the fence, which was a few feet lower than the side from which he took off. He fell upon his left shoulder and side. The ground was very wet, and the arbitrators before whom the case came in the first instance found as a fact that he was wet to the skin by the fall. They also found as a fact that as the result of the fall the insured suffered no trauma or wound to the body or lung, but that he did suffer a severe shock to the nervous system whereby the general vitality of his body was impaired. After the fall the insured remounted his horse and rode towards home. He was overtaken as soon as possible by his second horse, on which he then continued his journey home at a trot, where he arrived at about 2 p.m. The arbitrators found as a fact that to ride home in the way he did was, in the circumstances, the course least likely to aggravate the effects of the accident, and was rendered inevitable by it. The effect of the shock from which he suffered was to lower his general vitality, and the effect of the ride home in his then condition was to lower his vitality still further. The cumulative effect of both these causes, but not the effect of either exclusively of the other, was to lower the general vitality of his body to an extent which made attack by the pneumococcus possible, and the arbitrators found that onset thereupon took place one and a half hours after the accident.

The course of this disease the arbitrators found upon the evidence to be as follows: The pneumococcus is generally present in the respiratory tracts of the normally healthy, but remains innocuous by reason of the resisting power of the body and of the lung in particular. If the vitality of the lung is lowered either directly or locally by physical injury to it, or indirectly by the general vitality of the body being lowered, the resisting power of the lung, together with that of the other organs, is impaired, and so continues until the vitality is restored. When the resisting power is impaired the pneumococcus is enabled to settle upon the lung, and, while it remains impaired, to multiply there.

The Court of Appeal held that the direct or proximate cause of the death included all those things which could fairly be considered as attendant results of the accident: that the words "disease or other intervening cause" meant a cause independent of the accident; and that the death was the direct result of the accident.

STATUS OF AN UNREGISTERED DENTIST.

IN a judgement issued by Sheriff Thomson (Hamilton), in connection with a case at the instance of a dentist against a customer for the recovery of a sum for remaking a set of teeth, he dealt with a question as to the power of an unregistered dentist to recover fees for work done. The pursuer's agent cited the judgement of the English court in support of his contention that the Dentists Act of 1878 prohibited an unregistered dentist from recovering charges for operations, such as teeth extraction. The Medical Act of 1886 was quoted by the defendant to show that the prohibition embraced charges for other dental operations. Sheriff Thomson took this view, holding that the pursuer was not entitled to recover payment for the work done; he granted absolvitor, with expenses.

FEEES TO MEDICAL WITNESSES FOR GIVING EVIDENCE AT INQUESTS IN WORKHOUSES IN IRELAND.

DR. DANIEL CROWLEY (Coroner for S. Division, Galway, Loughrea), writes: Omitting certain unnecessary words from paragraph xxxii, 9 and 10 Vic., cap. 37, Coroners Act Ireland, the following will be found:

That when any Inquest shall be holden on a person who has died in any public Hospital, or Infirmary or in any Building, or Place belonging thereto, or in any County or other Lunatic Asylum, or in any public Infirmary, or other public Medical Institution, whether the same be supported by Endowments or by voluntary subscriptions, then the Medical Officer whose Duty it may have been to attend the deceased person is not entitled to the fees or remuneration herein provided.

A workhouse hospital in Ireland is not a public one, neither is it supported by endowments or voluntary subscriptions: it is only for the poor, and consequently I hold the medical officer is entitled to his fee for giving evidence. There are people treated besides the poor, but the medical officer is not entitled to any remuneration from them for his services. I am twenty years a coroner and have two workhouses in my district. I have always paid the medical officer the usual fee when holding inquests in either of them, and have held inquests in two others when acting for adjacent coroners, and have done the same, but now a coroner cannot act outside his own district since Mr. French, M.P., Coroner for Wexford, rushed his bill through the House of Commons last August. Mr. French did not consult any of the C. Galway coroners when pushing his bill, and that would have been the time for doctors of public medical institutions to get paragraph xxxii repealed if they had only known.

CUSTOM AS TO ASSISTANTS.

R. R. R. asks: (1) Should an outdoor assistant be allowed to put up his name plate on the house in which he resides? What is the custom or law on the subject? (2) Is it customary for an outdoor assistant to provide himself with the usual surgical and obstetrical instruments, such as clinical thermometer, midwifery forceps, Higginson's syringe, the usual pocket case of instruments, and hypodermic syringe?

*. (1) There is nothing illegal in an outdoor assistant putting his name plate on the house in which he resides, but it is not customary. Most principals would object to it, as it might seem to the public to imply a partnership, which as a matter of fact did not exist. (2) It is customary for the principal to supply all such instruments, and any others that may be necessary for use in his practice. Even if an assistant may possess any of such instruments, the principal has no right to expect him to make use of them while in his service.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

THE DUTIES OF NURSES.

IGNORANS.—We are informed that hospital nurses are taught to make the patients wash their private parts for themselves, except in the case of helpless patients, in fevers and the like, where the nurses have to do it.

CONTRACT NOT TO PRACTISE.

A. writes that thirty years ago he agreed not to practise in B's district; the wording of the agreement is that "the said A. will not carry on or assist in carrying on the said profession, business, or calling of surgeon or apothecary in" B's district, and goes on to say that A. may practise in a small town near called Z., where A. lives and has his surgery. (1) A patient of A.'s of several years' standing calls at his surgery in Z. with her child for treatment, and receives no medicine for which she pays. When told by A. that the child should be seen in the morning she mentions that she has moved to another village, which is in B's district. A. at once tells the woman to send for B. in the morning. He asks, Does this constitute a breach of agreement, as the child was living in B's district, but attended in Z., where A. has permission to practise? (2) Would it be a breach of agreement for A. to attend at his surgery in Z. a genuine patient who lives in his district, but who is temporarily living in B's district, the patient having never been attended by B.?

*. (1) Yes, this is a breach of the agreement, but as A. committed it unwittingly, and so soon as he knew referred the case to B., it would hardly be a good foundation for an action for breach of contract: but it would have been better if A. had written a note to B. to explain. (2) No, this would not, in our opinion, constitute a breach of agreement. We may say that in such cases there should be a fair and liberal interpretation of the contract on both sides, and so long as there is an obvious intention to keep loyally to it, we do not suppose any difficulty will arise about such small points.

THE ADVERTISING DRUGGIST.

H. K. writes to complain that a firm of druggists has sent a circular to the matron of his hospital drawing her attention to the value of a certain culture of the lactic acid bacillus, and offering, if their preparation is used, to assist by making bacteriological examinations of the finished product.

"Our correspondent is of opinion that such a communication should have been addressed not to the matron but to the medical staff, and we agree that all matters of this kind should be addressed to the secretary of the hospital rather than to the matron. In any case, however, the matter is one for the decision of the medical staff.

MEDICAL ETIQUETTE.

PEN writes: A. being ill, and B., his assistant, doing his work, a patient who did not like to be attended by an assistant called in C. We are asked to say: (1) Would it be considered professional for A., who has recovered, to write to his patient or to C., stating that he is now able to resume his work? (2) What is the etiquette on C.'s part when he knows that the reason for his attendance on A.'s patient is that A. was ill?

"A. may write to his patient and say that he is well again, and will be glad to resume charge if so desired. (2) C. should express his willingness to hand over the case to A., but if the patient desires it he may continue to conduct the case to its termination.

PUBLIC HOSPITALS AND PRIVATE NURSING.

GENERAL PRACTITIONER sends a copy of a circular issued by a provincial hospital enclosing a card of terms for nurses supplied from the hospital, and stating that all the nurses engaged on the hospital's private staff have had a full training of three years. The circular is signed by the senior physician and senior surgeon. Our correspondent raises the question whether this does not involve an amount of undesirable advertising on the part of the signatories.

"Some hospitals endeavour to help their funds by supplying private nurses, and presumably the circular was issued as an advertisement to promote this object. It would have been better, however, if it had been signed by the secretary and the matron instead of by any of the medical and surgical staff.

Public Health

AND

POOR-LAW MEDICAL SERVICES.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

A MEETING of the Council of this Association was held at 9, Cophall Avenue, London Wall, E.C., on February 4th, Dr. Balding, J.P., in the chair.

Superannuation.—A member about to retire from his Poor-law appointments, one of which he had held for forty-eight years but the other for only twenty, inquired whether he was entitled to the same pension as if he had held them both for the full term of forty years. It was considered by the Council that he was entitled to be paid on the same scale as if he had held both for the full term of forty years; that the only points that could be taken in estimating his pension under the Superannuation Act of 1896 were, (1) How long he had been in the Poor-law service; (2) what was the amount of his Poor-law salaries at the time of his retirement?

Medical Inspection of School Children.—Another member wrote complaining of the extra work that had been brought upon Poor-law medical officers through the working of the provisions of the Act with reference to the medical inspection of schools, and asking if something could not be done to obtain extra remuneration for work of this nature. After some discussion, the Council decided that no steps could be taken until it had better evidence as to the amount of extra work entailed. Another member complained of the recent Notification of Tuberculosis Order issued by the Local Government Board, especially at the postponement of a charge made against him, and given and of the smallness of the fee. The Council considered that it was too early to make representations to the Local Government Board, and that it would be better to watch for a time the working of the Order.

Dismissal of Medical Superintendent.—A case was considered in which the appointment of a medical superintendent of a Poor-law institution had been determined by the board of guardians, presumably in consequence of a charge made against him by the matron. This charge had never been investigated by the guardians, who had simply postponed its consideration for three months, and had then determined the medical superintendent's office. It appeared that in this case the guardians had full power to appoint to and determine the office without requiring the consent of the Local Government Board, so that the officer was entitled at the instance of the guardians. The solicitor to the association thought that the postponement of the matter by the guardians had been to give the accused time to bring an action against the matron, and that, as this had not been done, they

had dismissed him. The letters of the complainant showed that the institution in question was in an unhealthy state, and that its administration seriously required looking into. After some discussion, in the course of which several of the members present expressed their regret that the complainant had not promptly sued the matron for damages, it was decided to bring the facts of the case before the Local Government Board, and satisfaction was expressed that the Local Division of the British Medical Association had intervened in the matter.

Alleged Illegal Appointment.—A letter was read from the Local Government Board in answer to the complaint of the association with regard to the alleged illegal appointment of a district medical officer by the Driffield Board of Guardians. In answer to the complaint that no advertisement had been issued by the guardians, and that after the election, a licentiate had been paid for by them until the officer elected could take up his duties, it was stated by the Local Government Board that the appointment was legal, as notice had been given of the election at one of the two preceding board meetings according to Article 156, General Orders, July, 1847, and that with regard to the payment for licentiate, objection must be raised before the local auditor. The opinion of the Council was that when such notices of election were given under Article 156, the proposed salary of the officer was also stated, or it was presumed that the salary would be the same as that of the predecessor of the officer to be elected. As in Article 157 it was specially laid down that the salary must be stated in the advertisement issued for such an officer, it seemed reasonable to suppose when the alternative notice was given at a preceding board meeting, that there also the salary would be mentioned. The honorary secretary was instructed to write again to the Local Government Board, and make inquiries on this point. It was also decided to instruct if possible one of the Driffield ratepayers to appear before the Local Government Board auditor, when he made his periodic audit of the accounts of the guardians.

HEALTH OF CARDIFF.

The estimated population of the city of Cardiff in the middle of the year 1908 was 191,446; 5,172 births and 2,538 deaths were registered, equivalent to a birth-rate of 27.0 and a death-rate of 13.2. The number of deaths from zymotic diseases was 219, and there were 644 deaths under 1 year of age, yielding a zymotic death-rate and infant mortality-rate of 1.14 and 124 respectively. Measles caused 5 deaths, equal to a death-rate of 0.02, scarlet fever, 10 deaths (0.05); diphtheria, 22 deaths (0.11); enteric fever, 7 deaths (0.03); whooping-cough, 48 deaths (0.25); diarrhoea, 127 deaths (0.66); respiratory diseases, 392 deaths (2.04); phthisis, 218 deaths (1.14); other tuberculous diseases, 94 deaths (0.49).

The following table shows the birth-rate, death-rate, zymotic death-rate per 1,000 persons living, and infant mortality in Cardiff as compared with the rates in England and Wales during 1908, and with the rates in Cardiff during previous years:

	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality-rate.
England and Wales ...	26.5	14.7	1.29	121
76 great towns ...	27.0	14.9	1.59	128
142 smaller towns ...	26.0	14.0	1.26	124
England and Wales (less the 218 towns)	25.2	14.7	0.99	110
Cardiff ...	27.0	13.2	1.14	124
Cardiff (1907) ...	25.9	15.0	1.91	151
Cardiff (ten years) 1897-1906	31.4	15.8	1.98	145

MEDICAL INSPECTION OF SCHOOL CHILDREN.

A MEDICAL INSPECTOR OF SCHOOLS.—1 and 2. In an urban district with a population of 30,000, and where there are about 5,000 children in twelve schools, the medical inspection of the children who enter, and of those who are about to leave, would take quite two hours a day for three days a week during the school year. The remuneration for this should be at the rate of £150 per annum, based upon the following recommendation of the Subcommittee of the Medico-Political Committee of the British Medical Association:

That the remuneration of a medical inspector be calculated on the principle of a definite rate per working hour. That the school medical officer be paid at the rate of £50 per annum for an attendance of one half a school day per week, half a school day being defined to be two hours.

3. The Local Government Board does not sanction a whole-time appointment as medical officer of health at a smaller salary than £500 per annum. This would be a fair salary for a town of the size named.

4. It is neither customary nor necessary to "test the vision" in the case of children under 6 years of age, but in the case of children suffering from strabismus or other obvious visual defect it is usual to make an examination.

Obituary.

JOHN TAWSE NISBET, M.D., C.M. EDIN.,

LIVERPOOL.

We regret to have to announce the sudden death, in the prime of life, of Dr. John Tawse Nisbet, of Liverpool.

Dr. Nisbet was the son of a distinguished clergyman of the Church of Scotland, the Rev. Dr. Nisbet, of the Cathedral of St. Giles, Edinburgh. His mother, whose maiden name was Tawse, belonged to a family long settled at Stobsish, East Lothian.

Dr. Nisbet had a distinguished career in the University of Edinburgh, and graduated M.B., C.M. in 1884. He took the degree of M.D. in 1889, his thesis being commended. He was successively House-Physician in the Edinburgh Royal Infirmary and House-Surgeon in the Edinburgh Royal Hospital for Sick Children, and then established himself in Liverpool, where he was appointed Assistant Medical Officer to the Infirmary for Children, a position which he held for fifteen years. He was also Consulting Physician to the Children's Rest, an institution in which he was keenly interested. He held the rank of Surgeon-Captain in the Lancashire Hussars. Dr. Nisbet enjoyed a large and high-class general practice. His professional gifts were of a high order; these, combined with his kindness, geniality, cheerfulness, and self-sacrificing devotion to the interests of his patients, caused him to be beloved and esteemed in no ordinary degree. His end came with startling suddenness. He had often been told by those who knew him intimately that such incessant work as he undertook, with few if any holidays or times of relaxation, involved no little personal risk; but there was no reason to suppose that he was suffering from any serious disease, nor, indeed, that he was ill at all. On Saturday, February 13th, while he was visiting a patient, he was suddenly seized with faintness, and, though every possible means of resuscitation was tried, he expired in a few minutes by the bedside of the patient whom he had come to attend. The event was a pathetic, though in a sense an appropriate, ending to a singularly useful, kindly, and laborious life, devoted solely to the welfare of the sick and suffering.

Soon after settling in Liverpool, Dr. Nisbet married Miss McCardy, and he leaves a son and a daughter, both grown up. Dr. Nisbet was a great and general favourite among his medical brethren. His removal will be deeply mourned by his patients, who always found in him a faithful friend and adviser, and by a large circle of private and professional friends. The interment took place on February 16th, at Halewood Church, preceded by a service at Christ Church, Linnet Lane. A very large gathering of medical practitioners and others attended to show their esteem and regard for the deceased.

Dr. S. W. THOMSON, who succumbed on February 13th to an attack of post-influenzal pneumonia, will be greatly mourned by many friends and medical colleagues. He was peculiarly endowed with the power of gaining and returning affection. He was an Owens College man, and graduated M.B., Ch.B. in 1894. He had led a very varied life, but all his leisure was devoted to philosophical speculation, reading, and discussion. His thesis for the M.D. of the Victoria University, Manchester (1905), was a learned attempt to explain the activities of the nervous system in terms of electrical energy, a close analogy being drawn between the synapsis and the elements of a Leyden jar. In later years he had been working at an elaboration of this theory. He served with distinction in the Ashanti expedition for the relief of Coomassie, and was specially mentioned for saving life by sucking the wound from a poisoned arrow. For some time he was partner in practice with Dr. Vansbrough Jones, of Didsbury, and was universally beloved. Thereafter he made many voyages to Brazil and elsewhere, and was in great demand among the captains as a ship's doctor. He had lately been acting as Assistant Medical Superintendent at the Sandlebridge Epileptic Colony.

THE death is announced after a long illness of Dr. FRANK UTREN PURCHAS, of Newtown, Montgomeryshire. He was

born in Jamaica in 1861 and was educated at the Godolphin School, Hammersmith. He returned to Jamaica and subsequently resolved to enter the medical profession, and graduated M.B., C.M. in the University of Edinburgh in 1887, taking the degree of M.D. in 1890. Shortly after graduating he went as an assistant to Newtown, subsequently joining his former principal, Dr. Ferguson, in partnership. He was Senior Medical Officer to the Montgomeryshire Infirmary, in which he took much interest; he raised a fund to complete the equipment of the operating room and was an ardent supporter of a project to build a new infirmary. He was also Certifying Factory Surgeon and Parish Medical Officer for Bettws and Llanllwchaearn and Medical Officer for the Post Office. In 1891 he married the second daughter of Sir Pryce Pryce-Jones, by whom and by one daughter he is survived. His skill in his profession and the interest he took in public work related to it caused him to be very highly esteemed in the district in which he practised, where his loss will be much felt.

By the death of Mr. T. J. PATRICK HARTIGAN at the comparatively early age of 48 the profession has lost an able and energetic member. The son of an army officer, he spent his youth in India, whence he returned at the age of 17. He studied medicine at Galway, and was for some years Surgeon on the P. and O. and other steamship lines. After practising for a short time in Shropshire he settled in general practice at East Grinstead. In 1894 he became Medical Officer to the East Grinstead Workhouse and Urban District. Subsequently he was elected a member of the Urban District Council, of which a couple of years later he became Chairman. Not content with general practice in a quiet country town, Mr. Hartigan's ambition led him to take the Fellowship of the Royal College of Surgeons of England in 1899. While studying for these examinations at St. Bartholomew's Hospital he visited London daily, although continuing to practise at East Grinstead. Eventually giving up general practice, he devoted himself to dermatology, which he had studied in Vienna and elsewhere. Being appointed Assistant Surgeon and Pathologist to the Hospital for Diseases of the Skin at Blackfriars, he started practice as a skin specialist in Harley Street, and was beginning to do well in this branch of his profession, when his promising career was brought to a close. For the last two or three years his health had been failing, and he had been under medical treatment for renal disease which led ultimately to somewhat sudden heart failure. He leaves a widow and two young children.

WE have to announce the death of Dr. J. J. MURPHY, a well-known general practitioner in Dublin, where he enjoyed a very considerable practice for many years. He became a Licentiate of the Apothecaries' Hall in 1872, and in the same year obtained the licences from the Edinburgh colleges. He was very popular, and as a practitioner had the confidence of the public. He was twice married, his second wife being the daughter of the Right Hon. T. A. Dickson, at one time a prominent member of the House of Commons. He leaves a widow and five children.

MR. J. LESLIE FRASER, L.D.S., of Inverness, was well and favourably known to the profession in the North of Scotland. He was a welcome and honoured guest at all the meetings of the Northern Counties of Scotland Branch of the Association, seldom missing a meeting, his pleasant social qualities adding much to the success of our gatherings. For two years past he had suffered from repeated attacks of cardiac asthma. Last year he derived great benefit from a course of treatment at Nauheim, his friends fondly hoping that by taking things easy he might eventually be restored to his former robust state of health. An attack of cardiac distress, however, accompanied with uræmic symptoms, proved too much for an already weakened heart, and he passed away on the morning of February 12th, in his 47th year. Mr. Fraser had one of the largest dental practices out of Edinburgh, patients coming to consult him from long distances. As already indicated, Mr. Fraser was highly respected by the medical practitioners in the North of Scotland; he was a man of the most genial character, kindly disposed to all who were

in any trouble or distress; he will be much missed by a large circle of friends, who to his widow and children extend their warmest sympathy.

News has just been received from South Africa of the death of Dr. JAMES KEY, eldest son of Dr. Andrew Key, of Montrose, one of the senior members of the profession in the north-east of Scotland. After receiving his early education in Montrose, Dr. Key went to the Aberdeen Grammar School, later on going to Marischal College, where he graduated M.B. and C.M. in 1890. After assisting his father in Montrose for two years, he went to South Africa, and, on the outbreak of the Boer war, was among the first to take up arms on behalf of the Mother Country. He served throughout the campaign as captain in the regular army, and received the South African medal with three bars, as well as the King's medal. Dr. Key had the distinction of receiving Lord Roberts on the distinguished Field-Marshal reaching Bloemfontein. At the close of the war he was gazetted a captain in the South African Constabulary. He subsequently acquired a practice in Roopepoort. While studying in Aberdeen Dr. Key made a name for himself in sporting circles. He was a crack Rugby forward in the university team, and as a batsman his services were greatly valued in the university as well as the Aberdeenshire county eleven. He was 41 years of age, and leaves a widow and two sons to mourn his loss.

SURGEON-MAJOR THOMAS JOHN TUCKER, who died on January 27th, at his residence at Hindon, Wiltshire, was born in 1828, and received his medical education at Guy's Hospital. He obtained the diploma of M.R.C.S. Eng. in 1855, and in the same year entered the army as an assistant surgeon. He served first with the 10th Regiment during the Indian Mutiny, and was present when three native regiments mutinied at Dinapur on July 25th, 1857, and at the defeat of the rebels under Koer Singh, with the capture of Jugdespur in the following August. In February and March, 1858, he took part in the advance to Lucknow, and was present at the actions of Chanda, Umecurpur, Sultanpur, and Dura, and at the siege and capture of Lucknow. For his services he received the Mutiny medal and clasp. Subsequently he served with the 51st Regiment and retired in 1877 with the rank of surgeon-major.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Eugene Boddart, of Ghent, a young surgeon who had already won for himself a considerable reputation by his work, especially in the domain of urinary surgery; Dr. Henry Lamy, Physician to the Tenon Hospital, Paris, Director of Professor Chantemesse's laboratory, where he made researches on the action of the typhoid toxin on the nervous system, and on the mechanism of the renal secretion, author of articles on epilepsy, Graves's disease, and myxoedema, etc., aged 45; Dr. Van Ryn, of Brussels, General Secretary of the Belgian National League against Tuberculosis; Freiherr Franz von Preuschen von und zu Liebenstein, Professor of Gynaecology in the University of Greifswald, aged 64; Dr. G. Ruegenburg, of Bonn, a member of the Reichstag since 1903, and of the Chamber of Deputies from 1898 to 1907, in both of which assemblies he was a staunch defender of the interests of the medical profession, aged 68; Dr. F. Legge, Professor of Anatomy in the University of Cagliari; Dr. G. dell' Isola, Lecturer on Medical Pathology in the University of Pavia; Dr. P. J. Diakonoff, Professor of Surgery in the University of Moscow; Dr. J. E. Marques, sometime Professor of Clinical Medicine in the University of Coimbra; Dr. S. B. Rannett, formerly Lecturer on Orthopaedic Surgery in the University of Groningen; Dr. M. Tschistjakoff, Lecturer on Venereal Diseases at the Russian Army Medical Academy, St. Petersburg; and Dr. R. Rybalkin, Medical Director of the Department of Nervous Diseases in the Marien Hospital, St. Petersburg.

MESSRS. EVANS, GADD AND CO., of Bristol and Exeter, have issued, with the title *Drugs and Medical Requisites*, a price list, which, in addition, contains prescribing notes, an article on violet leaves in medicine by Mr. H. Wippell Gadd, a list of synonyms, and a note on the standardization of drugs.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL

The offices of the British Medical Association and of the British Medical Journal are at 429, Strand, London.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the Journal, etc., should be addressed to the Office, 429, Strand, London, W.C.

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2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.

2630, Gerrard, BRITISH MEDICAL ASSOCIATION.

2634, Gerrard, MEDICAL SECRETARY.

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CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "An Enquirer," and so on. By attention to the request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

KHOUK would be much obliged to any member who would suggest an anal instrument for an old lady, aged 70. Deafness has come on gradually, and is apparently due to advancing years. What she requires is some form of apparatus which would enable her to hear general conversation in a small room.

DENTER asks for advice with regard to a patient, aged 4, suffering from paresis of the right arm and leg, caused by falling on her head when 3 months old. The patient can use the arm for the coarser movements, and run about fairly well without much fatigue but with a slight limp; there is a slight dropping of the toes, and a considerable amount of eversion but very little shortening. He desires to know if any light instrument can be used to correct this, or would operative treatment be of more use, and, if so, at what age it should be done? The patient has a boot with iron support to calf and a spring to lift the toes, but this does not correct eversion.

GOAT'S MILK.

DR. COLIN CAMPBELL (Southport) writes: Would any of your readers very kindly inform me where I can obtain a healthy young goat in kid, and what would be a reasonable price? I want one badly.

LETTERS, NOTES, ETC.

A WARNING.

DR. OGIER WARD (73, Cleopside, London, E.C.) writes to warn medical men with regard to a man who applied to him, giving the name of Morris, for clerical work and bookkeeping. From information in the possession of the Charity Organization Society, it appears that he also goes by the names of Wallis, Watts, and perhaps Hart. His story with regard to his past employers appears, so far as it can be tested, to be untrue, and the references he gives are unwarranted. He is said to be tall, spare, active, looking about 30 years of age, wears glasses, and speaks rather jerkily.

PROPORTIONAL REPRESENTATION.

DR. G. CRICHTON (London) writes: In France a new electoral law is called for, and an important political party, in a manifesto just issued, makes a special feature of proportional representation. In the new Constitution of United South Africa the Parliament which will be created and will exercise sovereign powers over the different states is "to be elected by proportional representation, so avoiding the possibility of the tyranny of majorities." It is plain common sense that this method, which has been before the Associa-

tion for two years, should at the present juncture be carefully considered. It has been before the Annual Meeting on two occasions, and has been slurred over. The plan of single-member constituencies was introduced into Parliamentary elections at the instance of the late Marquis of Salisbury twenty years ago, and has from the first proved most unsatisfactory. The recent scheme for elections to the Central Council adopts this plan, about to be discarded in politics. Is it too much to ask that committees of Divisions, especially those members who are to be Representatives, should take the trouble to comprehend the scheme? It is really very simple in its working. A model election might be arranged at trifling cost. A clear statement of the minds, the opinions of the members of our great Association, is far from being a matter of indifference. Otherwise, men elected on no clear ground will act, if at all, indecisively; and as there is a constant change of personnel on our Councils, so our policy will be unstable, depending on their private opinions, and not, as it should, on clear principles thoroughly debated beforehand. An explanatory pamphlet is issued by the Proportional Representation Society—price 1d.—23, Martin's Lane, Cannon Street, London, E.C. Surely every secretary who has an intelligent interest in the working of our machinery will supply his committee with these.

AN ALLIED CURE FOR CONSUMPTION.

MR. H. OSBORNE O'HAGAN (Casa del Mare, Cabbe Roquebrune, Alpes Maritimes, France) writes: "May I be permitted to correct an impression that may have been given in my letter which appeared in your issue of January 16th last? I spoke of the rights I had acquired for the Churchill treatment without explaining that these rights were in connexion with the inhalant "spirone," and I did not include the Churchill preparation of hypophosphites, the full advantages of which had already been disclosed. The inhalant alone was the secret treatment which was claimed as a specific for all inflammation in connexion with the lungs, throat, nose, etc.; but foremost in his treatment of tuberculosis stand the hypophosphites, although Dr. Churchill stated in his works that the inhalant was such a valuable adjunct in such cases as to double the success both in time and in the number of cases. It is only recently that I fully realized this, although in tuberculous cases I have always stipulated also for the use of the hypophosphites. So long as the physician has information of the particular hypophosphites to be used he does not want the formula, and as to the inhalant the formula for that is now at the disposal of the medical profession. It is essential that the hypophosphites should be pure, and to secure this the late Dr. Churchill placed the preparation of his hypophosphites with Messrs. Swann, the eminent chemists, of Paris, who hold the sole rights thereof. I am anxious that it should be understood that in advocating the use of hypophosphite and spirone I am in no way interested in Dr. Churchill's particular preparations of the hypophosphites."

MEDICAL FOOTBALL.

THE match between the United Hospitals and the Royal Navy, played at Richmond on February 10th, resulted in a win to the Navy by eleven points to three. The Navy had a fairly representative team, but the Hospitals suffered very severely from the absence of the London Hospital backs. The most notable features of a game remarkable for the excellence of the play was the particularly clever run by which Cooper scored for the Navy just after half time, tricking his opponents on three several occasions by feinting to pass and continuing his run, and the really brilliant co-operation between the Hospitals' representatives which resulted in Mullins securing a try shortly before the finish of the game.

The big scores to which the London Hospital fifteen are rapidly becoming accustomed were increased, when playing against St. Mary's, in the Inter-Hospital Challenge Cup-Tie; the London secured a victory by thirty-nine points to none.

In the first round of the Inter-Hospital Cup-Tie at Richmond, King's College Hospital, after making a good fight in the first half, were beaten by St. Thomas's Hospital by three goals and three tries to a try.

The London Hospital defeated Charing Cross at Richmond by thirty-two points to nil. Charing Cross, however, though obviously overplayed, made a capital defence, and on one or two occasions seemed as if they would succeed in stealing a try from their opponents. Lindsay and Henle, as half-backs for the London, were largely responsible for the heavy scoring, giving the three-quarter line all their opportunities.

A hotly-contested match on the same day between University College Hospital and Guy's resulted in a victory for the latter side by one try to nothing.

Play on February 15th between the Middlesex Hospital and St. Thomas's in the second round of the Inter-hospital cup tie ended in a draw. It is expected that the match will be replayed early next week. The winner has a bye in the semi-final round and will enter the final. Play throughout the match was bad, the best feature of the game being the really good defensive work by Penny, who won his blue for Cambridge. During the second half of the game Hunter had to retire owing to a damaged collar bone.

The most interesting of next week's fixtures is the match between the London Hospital and Guy's (semi-final), which will take place on Wednesday at the Richmond Athletic ground.

THE LIMITATIONS OF A PURIN-FREE DIET.

MIDDLE-AGED writes: Having been on the above régime for over three years, as well as one of my family, I can say that, as far as people of ordinary health are concerned, it is quite feasible. Previously, though in good health from the insurance point of view, I was a frequent sufferer from rheumatism, headache, dental troubles, tendency to constipation, and short febrile attacks resembling influenza. For two and a half years now I have been quite free from all these annoyances, and even ordinary coryzas have been much less frequent, and last from one to two days only. The influenza-like attacks were, to my mind, due to what Dr. Haig calls collaemia, and at the beginning of my change of diet, when I was also taking salicylate, a similar brief attack supervened, brought on, I presume, by the drug.

I have never brought myself consciously to propose such a diet to a patient, because the good results are slow in developing, and because I consider that serious consequences may attend the too sudden withdrawal of all stimulating foods, such as meat, etc., and beverages, such as tea, coffee, cocoa, etc.; to most people the diet seems to offer so little that is palatable that they would rather continue in their present state and be subject to frequent malaises. However, one other relative has gone in for the diet with good effects, and the example of my well-being is gradually affecting the mode of living of many others who have the opportunity of seeing me frequently.

Dietary for Three Days for a Person Weighing 150 lb. net, aged, say, 40.

FIRST DAY:

Lunch (12.30 to 1).—Green vegetables, baked potatoes and butter. Stewed figs, ½ pint junket. 2 oz. grated pine kernels with cream (whipped).

Dinner (7 or 7.30).—Biscuits, butter. 1 oz. grated cheese or curd. Light pudding. Cream, stewed fruit.

SECOND DAY:

Lunch (12.30 to 1).—Green vegetables, potatoes with butter and cheese sauce. Fruit tart cream, ½ pint milk.

Dinner (7 or 7.30).—Biscuits, butter, two boiled eggs. Milk-pudding, containing ½ pint milk. Stewed fruit, cream.

THIRD DAY:

Lunch (12.30 or 1).—Green vegetables or salad, potatoes and butter. Pudding or cutlets containing 2 oz. of nuts. Stewed fruit, cream.

Dinner (7 or 7.30).—Biscuits and butter. Cheese soufflé or cheese omelette. Cream, stewed fruit, roast chestnuts.

Daily quantities: ½ pint of cream, 2 oz. of butter, 2 to 3 oz. of biscuit, 3 pints of milk, or 6 oz. of grated nuts, or 6 to 7 oz. of cheese, or the latter three in combination in varying quantities, all of which to be made for any eggs.

Remarks.—If a breakfast is required, milk or milk and biscuits, the above meals being reduced by the amount taken at breakfast. Unfertilized eggs are preferable to fertilized. Olive oil is useful where it can be taken, either neat or in salad according to season; raw fruit when in season, dried fruits in winter, stewed if preferred; nuts can be incorporated in many puddings, as also milk or milk powder.

Cheese can also be incorporated in many ways; macaroni cheese would be a substitute for biscuit, butter, and cheese. I should say that any person of ordinary health and under 35 could make the change. In those of more advanced years and chronic invalids I doubt whether the change could be made at all. In any case I would suggest waiting for a temporary restoration to normal health.

In my case I do not feel the loss of any of the foods I have abandoned, and even alcohol has no charms. Many may argue that life under such circumstances is not worth living, but it must be conceded that immunity from small ailments brings with it the feeling that grave illnesses, which, after all, always are the results of severe colds or gastric indulgences, are no longer possible in my case. In this category I would place appendicitis, enteric, pneumonia, bronchitis, all acute rheumatic affections, and possibly even Bright's disease, diabetes and tuberculosis.

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A Clinical Lecture

ON

CHRONIC SPINAL MENINGITIS:

ITS DIFFERENTIAL DIAGNOSIS AND SURGICAL TREATMENT.

By SIR VICTOR HORSLEY, F.R.C.S., F.R.S.,

SURGEON TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND
EPILEPTIC, AND CONSULTING SURGEON TO UNIVERSITY
COLLEGE HOSPITAL.

THIS afternoon I desire to deal with a subject on which as yet I have published nothing, but on which I have been threatening to publish something for the last ten or twelve years. It is the question of operating in a group of cases which are apparently fairly common. For instance, without much trouble Dr. Grainger Stewart has collected (November, 1907) the records of 21 cases which I have operated upon. So it is a class of case which is met with fairly frequently, certainly more commonly than tumour of the spinal cord. It presents the same symptoms—except certain minutiae—as tumour of the spinal cord; indeed, these cases have usually been diagnosed as tumours of the spinal cord and transferred to the surgeon, and yet they are not tumours at all. They are cases of chronic spinal meningitis, the causation of which has yet to be finally determined. They yield to surgical treatment when ordinary medicinal treatment has failed. I do not mean to say that they all yield to surgical treatment—I wish they did—but so many do that it is quite clear that earlier diagnosis would have saved, in my opinion, the majority, if not all, of the cases.

Like all these subjects when a new clinical condition is recognized, many things are brought in under the same heading which do not belong to it at all; in fact, the very expression I have used—"chronic spinal meningitis"—would suggest to you at once that such a vague clinical expression must include a number of conditions which do not owe their existence to the same cause. The class of case I refer to you will recognize from my having said that they resemble tumour of the spinal cord. They are those in which an adult person—because I have only one case below the age of puberty—begins to complain of pain and progressive loss of power in the legs, with it may be also slight kyphotic curvature of the spine, and develops ultimately a progressive paraplegia that runs through the ordinary course and terminates fatally.

The first clear case of this kind which I met with was some ten years ago, when Sir William Gowers referred to me a gentleman who had complete paraplegia, who had a distinct but a very slight kyphotic curve of the dorsal vertebrae, and who, Sir William Gowers thought, was probably a case of caries and secondary paraplegia, which was commencing when he first saw the case but which was very advanced when the patient came under my care. I confess that, for my own part, I did not accept the diagnosis of caries, but I was unable at that time to substitute any other for it; and, inasmuch as the patient had compression paraplegia, I, of course, agreed to operate, from the general point of view of relieving the compression. But when I came to operate, I found that instead of the neural canal being narrowed by disease of the bone, it was narrowed because the theca of the cord was enormously distended and filled up the lumen of the canal. Further, on opening the theca, instead of finding a tumour inside, compressing the cord, I found nothing but a very considerable excess of cerebro-spinal fluid, and a cord that was rather shrunken. Being anxious lest there might be a tumour other than at the point exposed, I explored with a probe up and down the neural canal for a distance of 5 or 6 in. but found nothing. But inasmuch as the localization diagnosis of the upper limit of compression was quite clear, the symptoms corresponding to a lesion at the sixth dorsal root level, it was obvious there was nothing more to be done than to close the wound, and this I did. The patient made an ordinary recovery and gradually began to improve, until now, from having retired from the city, he has gone back to the city and is engaged in Stock Exchange work.

Such was the first case of the kind I have seen, and it attracted my attention very forcibly, because in the first instance an accurate diagnosis was completely wanting; and, secondly, because here was a condition which was getting worse under antisyphilitic remedies and every other kind of drug treatment, but the progress of which was completely stopped by laminectomy, freely opening the theca and washing out with mercurial lotion. The patient, as I say, got well, went back to work, and has remained well.

Without wearying you with details, I may say that I have seen a relatively large number of such cases, on most of which I have performed laminectomy and subdural mercurial irrigation. All the cases also which have been referred to me have been diagnosed at the time I have received them as tumour of the spinal cord or disease of the vertebral column. But naturally during ten years one becomes more wary, and I have for a long time shown that there are certain features in these cases which should lead to their being recognized as cases of chronic spinal meningitis and not tumour. That is the position which now deserves discussion. I would have raised this question long ago but for the fact that inasmuch as the first twenty operations were not followed by death, no anatomical examination of the condition was forthcoming.

In 2 cases, however, we have obtained the spinal cord. In one the operation had been completed, and six weeks after the wound healed the patient died suddenly from syphilitic myositis—probably of the atrioventricular bundle. In the other no operation was done, and the patient succumbed to the paraplegia. In both a meningo-gliosis (sclerosis) was found. The spinal cord, so often seen at the operations to be shrunken, was markedly contracted in a tabes case, and exhibited microscopically typical glial sclerosis.

I shall not take up your time by going into a critical examination of the accounts of chronic spinal meningitis which have been given by the classical neurological writers, although the clinical investigation of these cases needs a great deal of further work to render the description in the textbooks definite and practically accurate. The real matters of interest relate to the circumstances under which the condition arises, which can be relieved by surgery, what is the proper surgical treatment, and what is likely to be the result.

Of recent years similar cases have been described in America and in Germany. The first actually published¹ was one under the care of Drs. Spiller and Nusser and operated upon by Dr. Edward Martin, the patient making an excellent recovery. In April, 1907, Professor F. Krause made an interesting communication² to the German Surgical Society, and described 6 cases (out of 22 referred to him as tumour cases) in which the hydrops and meningitis serosa spinalis were demonstrable as the cause of the paraplegia. The condition was determined in 2 of the cases by *post-mortem* examination. Krause quotes Dr. H. Schlesinger,³ who described the condition anatomically in 1898 in a case of paraplegia with necropsy. Professor Oppenheim,⁴ who had examined Krause's cases clinically and treated them medically, also regarded the disease as an extensive meningitis.

Since this lecture was delivered (July, 1907), there has been published a further brief communication from Dr. Spiller,⁵ in which he again draws attention to the case published in 1903, and, after saying that the condition cannot be distinguished clinically from tumour of the cord, advises earlier surgical intervention.

The cases of parasitic and other cysts referred to in his argument with regard to the mechanical conditions of pressure do not elucidate further the nature of the cases under discussion, and therefore, in the short time at my disposal, I shall confine myself strictly to what Spiller calls "circumscribed spinal meningitis."

It will now be evident how closely these cases resemble instances of tumour of the spinal cord. I might take any one of the series of notes which I have before me and outline it. Let me take the last which we had, and which was put down on the notes here as "Spinal tumour, extra-medullary." That is the diagnosis from the medical side, and it is as recent as July of this year (1907). So you see that up to the present time our diagnosis requires a good deal of perfecting. This patient is now in the convalescent home, so I regret I cannot show her to you.

She was a single woman, aged 40, without anything particular in the family history. There was a previous personal history of anaemia, but nothing in the nature of a serious illness until 1901. For the last ten years she had very heavy work as a dressmaker, with much standing and kneeling. Six years ago she had a severe attack of influenza, when she was ill for a month with pains all over her; and very soon afterwards she began to complain of pains in the right loin, worse on movement, and a feeling as if the muscles of the thigh were tightening. In drawing your attention to the fact that this case is referable to influenza as the probable cause of the meningitis, I would remind you of the cases of meningitis described in 1890 and 1891 by Horatio Wood of Philadelphia, because several of these cases have appeared now to be residual cases of such spinal meningitis as was originally described by Wood. The pains spread gradually to the front and back of the right thigh, and during the last twelve months they have caused painful cramping and twitching of muscles of the right leg. The right toe often cocks up involuntarily with the pain. Ultimately, therefore, the pain in this case has affected the whole of the right leg, having begun in the right groin. It involves a diffuse area, one which is supplied by several nerves; there is no particular nerve-root distribution which is involved, but the whole limb is in pain, and can be shown on a chart. I invite your attention to this point first, because this I consider to be the most valuable among the minutiae which serve to distinguish these cases from cases of spinal tumour. A tumour of the spinal cord commonly exhibits the symptom of pain as localized to one nerve root; it does not give you, as a rule, areas of pain which necessarily involve many nerve roots. If spinal tumour cases are examined minutely it will be found that in the large majority of them the pain begins at or near one nerve root, and to the distribution of that spot the patient will chiefly ascribe his or her pain. This chronic spinal meningitis, on the other hand, being a general condition, tends to affect diffuse areas painfully, exception being always made for the upper limitation of anaesthesia. (See below.)

We will now pass on. For two years or more there has been besides this pain marked tightness and numbness of both thighs, as if they were made of marble. During the last two years there has been slight dribbling on micturition, and during the same period the pain has been so severe that it limited freedom of walking, so that the patient could only take one step at a time in going up and down stairs. Four weeks ago there was severe pain in the small of the back. Many of these patients describe a painful area in the spine without necessarily exacerbation on movement. On admission the patient was a very stout, healthy-looking woman, with no indication of disease in the circulatory or alimentary systems, nothing abnormal in the cerebral nerves, or cranium or upper limbs. The pupillary reactions were equal and normal. So to the middle of the body there was nothing discoverable. There was slight wasting of the whole of the right leg and general weakness of the whole of the right leg—see how universal these symptoms are—some eversion of the ankle with weakness on dorsiflexion of the foot, and some extension of the hip. There was very considerable alteration of sensation. The alterations of sensation were these: that she had relative anaesthesia of the whole of the right limb and of the right hypochondriac region, the anaesthesia being to all forms of sensation as well as relative analgesia. The coexistence of analgesia and anaesthesia I always think is an extremely serious point to bear in mind in all spinal cases, because it carries with it the assumption that the spinal cord itself is centrally involved in the lesion, whatever it be. With regard to the deep reflexes, the knee-jerk was markedly diminished on the right side, present on the left, but both were, on the whole, diminished. I will come back to the question of the knee-jerks later. As regards the superficial reflexes on admission, the plantar reflex on the left side is flexor, but it is less definitely so on the right. When I examined her later I found she had an extensor response. The abdominal reflexes were present on the right and left. With regard to the sphincters, I have said already that there had been dribbling after micturition. There should have been added there a most important point, namely, that there was no trophic lesion whatever in the skin, nor apparently any tendency to

decubitus. On testing her with pilocarpin to map out the deficiencies of the secretory system, for comparison with the tactile anaesthesia, according to the methods which I have demonstrated as useful for twenty years, there was found a very marked parallelism.

That is the story of a typical case. On operating at the level of the dorsal segment a marked degree of chronic meningitis was found and relieved. But such extremely marked localization, one side being apparently chiefly affected, would of course lead to the assumption that certainly one half of the cord must be primarily affected, and might carry with it the further assumption that the lesion was more probably a tumour than general meningitis. I wish to draw particular attention to this point at this stage, because all these cases, if you look into them carefully, present a certain degree of unilaterality by the time they come under our direct notice. In further illustration of this point I show you sections of the spinal cord of an interesting case, which was not treated surgically and died in the hospital a short time ago. In these specimens you will notice that there was a condition of things exactly parallel to what I have frequently observed—namely, a sclerotic condition of the cord, beginning below and creeping up the cord. As a matter of fact, all the lower part of the cord shows only the endogenous fibres preserved. When you look at it with the lens you see that the ascending degeneration has affected one side notably more than the other. Consequently, although it is put down as universal disease, it nevertheless has a distinctly unilateral pathological locus. So the fact that we find that most of these cases have a unilateral origin must be recognized at the onset, because it must not prejudice our opinion. Probably we are naturally inclined, when there is marked unilaterality in the symptoms, to jump to the conclusion that it must be tumour. But now, after this series of cases, it must be recognized that that is not the fact—that it may equally be this condition of chronic general meningitis.

Now as regards further details. First the quality of the pain. As I said before, pain is felt in one limb to begin with, and then it spreads to the other limb, and then up the back. It is generally said by the patient that the pain is in the substance of the limb, and it feels in the majority of cases like a tightening or drawing up, and most patients complain specially of the sensation of tightness. And while speaking on that point I may also draw your attention to the fact that sometimes they have in addition the typical girdle tightness or compression, a feeling as of a band around the middle of the body. With regard to the degree of the pain, it may be similar to that in tumour cases, in that it may be so severe as to prevent sleep.

With regard to ordinary sensation, we will refer to this under the heading of "hyperaesthesia and anaesthesia." With regard to hyperaesthesia, this patient whose case I have just recounted to you on some days had very marked hyperaesthesia over the whole leg, a condition of things which I have never seen in a tumour case, in which at the outset there would be either a marked zone of hyperaesthesia at the upper limit of the anaesthesia, or a similar area corresponding to the nerve root or roots on which the tumour was situated. But when there is hyperaesthesia over a large area, it ought always to suggest to you that a number of nerve roots or their central representation mechanisms are in a state of irritation, at any rate in a state of physiological hyperexcitability. So that the distribution of the hyperaesthesia in these cases is an important symptom as helping to correct the diagnosis.

With regard to tactile anaesthesia, none of these cases that I have seen yet have had absolute anaesthesia; it has always been relative, and sometimes it has been present only to a slight degree, though extending over a large area. Microscopically, in neither of the two cases in which we have been able to obtain a *post-mortem* examination so far were the nerve roots much affected. So it is easy to understand that there may be widespread paraplegia, and yet no absolute anaesthesia anywhere. Nor is there dissociation, for as this is a general affection of the roots altogether, all the fibres are affected, and therefore all forms of sensation—touch, temperature, etc.—are affected in greater or less degree.

Next, as regards efferent phenomena. First, with regard to movement. How do these patients become paralysed? They become paralysed first by a gradual sense of weakness coming on in the whole leg. You know that is a very common description given to you by patients who become paraplegic from tuberculous caries, because in that condition you get a kind of ischaemia of the spinal cord as a rule, and the whole machine, as it were, becomes weak, the conductivity of the whole cord becomes impaired, and therefore the patient says the whole leg is weak. So it is with these cases, where there is a general condition affecting the spinal cord and its roots, naturally the symptoms are grouped *en bloc*. As can be seen from these notes of the cases, a localized extra weakness of one joint, as for instance the ankle or the hip or the knee, may often be seen, but no restricted root paralysis—that is to say, paralysis of groups of muscles served by any one root. The general loss or diminution of the action of one joint involves the decadence of several segments of the spinal cord. Thus a gradual weakness which develops until at last the patients cannot stand. In a certain number of cases, even in a comparatively early stage, they complain of spasticity. So that some of these cases undoubtedly are diagnosed as instances of lateral sclerosis—that is, the old idea of lateral sclerosis; and when you come to examine the spinal cord in a very severe case you will find there is not only a lateral sclerosis, but a general sclerosis throughout the cord. The explanation of the sclerosis I will come to later.

With regard to the other efferent phenomena, I have already referred to and demonstrated that secretion is proportionately paralysed with the advance of the paraplegia. With regard to the vasomotor system, as a rule these patients show no vasomotor phenomena, quite unlike a bad case of compression paraplegia from caries or tumour, where vasomotor phenomena are more often observed. One limb may become oedematous, the joint may fill up with fluid—a so-called myelitic arthritis—and where at one stage the part may be crimson in colour, and as the paraplegia develops it may change into pallor, and, finally, in the last stage there may be obvious vasomotor contraction extremely marked with a shrunken dry skin. These meningitic patients do not present this picture at all; their skin looks very normal, and, as I said before, they show no tendency to trophic disturbance. Possibly at the very end they ultimately develop bedsores, like other paraplegics, but they have not the striking tendency to decubitus that an ordinary case of localized compression of the cord has. Before passing from the question of sensory troubles, especially in connexion with the nerve roots, I must refer to one private case which illustrates very strikingly the connexion between affection of the roots and this general affection of the membranes of the cord. The case was that of a lady, whom I saw with Dr. Ferrier originally, and who had complained of a severe pain in the heel—that is to say, in that branch of the posterior tibial nerve which supplies the skin of the heel. This pain was for many years treated as a functional pain, and the unfortunate family differences which followed only emphasized once more the extreme necessity of caution in diagnosing functional disease. One day she suddenly developed a peculiar outbreak of herpes in the distribution of the first and second lumbar roots—that is, a definite root distribution; and then it was naturally thought that the posterior tibial trouble was a peripheral neuritis. When I saw her with this herpetic eruption it was quite obvious that she had what appeared to be an affection of the whole nerve supply of the limb, but I did not recognize at the time that she was one of this class of case. However, the pain was so great and disabling that I suggested dividing the posterior roots of the first and second sacral nerves. This was not accepted by those in direction of the case, and for two years this patient went on, gradually walking less and less, until at last she was practically sitting in a chair all day long. Still, she had no paraplegic symptoms of the ordinary kind. It was then decided that she should be operated upon, and accordingly I exposed the theca of the spine over the lower end of the lumbar enlargement, in order to divide these two roots. As I then found the theca enormously distended, of course it was apparent that the case must be one of chronic spinal meningitis. On opening the theca a great rush of cerebro-spinal fluid occurred, the lumbar enlargement and

the commencement of the cauda equina were covered with thick yellowish-white matted arachnoid, and yet, as above stated, the pain was limited to the first and second sacral area, and the herpes to the first and second lumbar. Thus, the intermediate roots apparently had not suffered sufficiently to cause symptoms. I divided the posterior roots of the first and second sacral nerves, and then followed out the treatment I advise in these cases, and irrigated out the subdural space thoroughly with 1 in 1,000 sublimate solution. She made a very good recovery, and now she walks five miles at a time, and has, of course, lost her pain. It is now three and a half years since the operation was carried out, and she is apparently in perfect health, a position which is, perhaps, partly due to spinal mercurial inunction, which I have had continuously carried out since the operation. But this is the only case of the whole series I have seen in which there was a herpes, in which there was any evidence of posterior ganglionic affection, or any evidence of such minute root localization, and I only dwell upon it because it is such a striking illustration how in these cases we can be deceived.

Now we come to the question of the part of the spinal cord affected in this condition. This certainly is a very interesting question. The two cases I have used as illustrations obviously began in the region of the cauda equina, and in the large majority of these 21 cases the mischief apparently began all over the lower half of the back of the cord, and the large majority of them, I find on going over the notes, have (in consequence of the need of exposing the highest segment of cord symptomatically involved) been operated on at a point somewhere between the fourth and ninth dorsal—that is to say, in the mid-dorsal region. This is interesting, because, of course, we know that for one reason or another the mid-dorsal region has been, certainly for seventy years, recognized to be the usual seat of so-called transverse myelitis—at any rate, it has been referred to that region without any explanation being forthcoming. Whether it commences—like this case, for instance, which begins about the lower part of the lumbar enlargement and gradually goes up the cord—or whether it attacks the lower half of the cord simultaneously, will probably not be found out for a long time. But, however that may be, by the time the case is referred for operation, the exploration must begin in or just below the mid-dorsal region, because in the majority of these cases the zone of anaesthesia extends from the sixth to the eighth dorsal nerve root.

With regard to the age of the patients, I have already said that, with one exception, they were all adults. This question of age has a very important bearing, first on the question of the causation of the mischief, and, secondly, on the prognosis. I will therefore deal now with these two points. We will speak of prognosis first, because that is relatively an easier point. As we have to deal with a chronic inflammatory condition, the prognosis simply depends on the usual rule, that if a patient is below middle life or at middle-life recuperation is likely to be very good; if beyond middle life, it is likely to be very poor. The oldest case which I find I have operated upon was a private patient, a lady who was 60 years of age, and I am sorry to say she did not improve in the least. It was a very bad case; there was a great deal of pachymeningitis, and there was a depressing history of congenital disease. She only had one brother alive and "healthy." One brother had died of locomotor ataxy, and a sister, whom I saw, suffered severely from combined syphilitic sclerosis, and so on. I believe the fact that she did not improve was entirely due to her age. Turning now to the next point—namely, the cause of the condition—I have said that there is a considerable excess of cerebro-spinal fluid in these cases, and have referred to the thickening of the arachnoid and the matting of the nerve roots. Before we discuss further the pathological conditions, I ought perhaps to make reference to the collection of cerebro-spinal fluid in the neural canal as a clinical fact, and discuss with you whether it has any bearing on these cases. The cerebro-spinal fluid, of course, is secreted by the lining membrane of the cerebral ventricles, by the lining surface of the choroid plexus, and it is secreted at a rapid rate. Although it is secreted under pressure, it is thus manufactured quickly, and if the pressure is relieved by a little trephine opening connected with the

ventricles or other part of the cerebro-spinal system, it escapes in very large quantity. There are several other points connected with the physiology of the cerebro-spinal fluid which are of interest. The ependymal epithelium, which is flat in the ventricles, becomes columnar at the commencement of the aqueduct of Sylvius under the posterior commissure, and this fact, as Professor Dendy has shown, applies to all animals, and is especially marked in the mouse and animals as low in the scale as that. So it would seem to have some physiological significance, and he suggests that the cilia of these epithelial cells serve by accelerating the circulation of the cerebro-spinal fluid downwards. Of course the cerebro-spinal fluid as it is being secreted must be got rid of; it must flow out of the ventricles, and must pass into the cavities of the body. It has been shown that as it is manufactured high up, under positive pressure, it finds its way out along the lymphatics along the course of the nerve roots. That it has this circulation in the cord is proved first by the injection of coloured fluids into the ventricle, and also by such very interesting pathological cases as the one published last year by Dr. Barnes, where a growth in the ventricle was disseminated all the way down the central canal, showing that the virus was gradually carried down along this natural highway, as it were, by the stream of cerebro-spinal fluid.

As regards the spinal cord, we find that in these cases there is a large collection of cerebro-spinal fluid around the cord, and it is under great pressure, because in the first place it distends the dura mater, so that it almost fills the canal, and there is no impulse in the theca when it is exposed for laminectomy. Instead of the theca rising and falling with respiration and also indicating the pulsation of the heart, there is no movement in it whatever. When you open the ballooned theca, the fluid jets out, and then, when the whole thing collapses, you can see that there is a normal active movement of the cord; so that, at any rate, by the time these cases come to operation it is obvious that this physiological relationship of the cerebro-spinal fluid has become very abnormal, and that instead of having a proper circulation you have stagnation. I do not want to push this point too far, because we know so very little about it. We know nothing from the experimental point of view beyond the effect on the spinal cord of persistent stagnation or accumulation of cerebro-spinal fluid, but it is suggestive. And, seeing that these patients who do improve may improve so markedly simply from the free opening of the theca *plus* washing out—the effect of which I will discuss presently—it is very difficult to get away from the idea that this pressure does play an important part, and that consequently some of the benefit of surgical treatment is to be attributed to getting rid of such pressure.

The spinal cord, being subjected to this pressure, necessarily must undergo some ischaemic changes; and here we are in a very great difficulty, because we have no pathological material to enable us to say whether the changes which we can find in the only two cases which have died during these years are to be looked upon as truly representative because they were both cases in an advanced degree of the disease.

Causation.

That brings me to the next consideration—namely, the causation of the meningitis. In one of the cases just referred to certainly, and in both to some extent, there would be no doubt that syphilis was the cause; and, under those circumstances, one would say naturally that the sclerosis of the cord which was so very clear (see below), was a primary syphilitic sclerosis.

The point of chief interest is the condition of the cord in an average case. In every case when the theca has been opened and fluid allowed to escape the cord has presented a shrunken appearance, and once a slightly yellowish tinge. I have never operated upon an early case, except the one I referred to in which there was herpes, and there the matting of the arachnoid precluded an opinion as to the condition of the cord. I show you here the cord of one of the two cases referred to above, a man who was in this hospital, and on whom I operated some time ago. He had recovered from the operation and was commencing the usual improvement, when he died quite suddenly. The immediate cause of death proved to be the common event in cases of chronic syphilis—

namely, syphilitic disease of the atriocentricular bundle of the heart. In this case the cord presents a remarkably flattened appearance, and on examining the sections with the lens there is seen a definite sclero-gliosis all round the periphery of the cord. In this case, I think, all the columns are universally affected except in the cervical region. The nerve roots themselves are very slightly attacked, and therefore the incoming fibres of the column of Burdach are not much affected, but the fibres of the column of Goll are particularly. Therefore this case, at any rate, was not simply an instance of pachymeningitis, but pachymeningitis combined with a certain degree of sclero-gliosis of the cord. It is quite possible that this was the pathological condition in the majority of the cases I have seen and operated upon, but it is impossible with the present means at our disposal to speak positively.

Since the difficulty just experienced of discussing accurately the pathology of these cases is due to the fortunate rarity with which laminectomy ends fatally, I may fitly conclude by describing their treatment. In every instance all these cases have been liberally treated with drugs, and have had the most conscientious anti-syphilitic treatment when referred for surgical care, and yet they have steadily gone downhill. This, by the way, might be advanced as an argument that they cannot have had their origin in syphilis. Although, on my own part, I think a number of them are not actually syphilitic, some of the cases certainly are, and, as so constantly happens in syphilis of the nervous system, resist all treatment not directly applied by surgical intervention.

On the question of syphilis, I said earlier in the lecture that though this chronic meningitis was a disease essentially of adult age, there was one case I had treated in which the patient was not an adult, namely, the instance of a boy aged 12, who was admitted into the National Hospital under Dr. Beevor three years ago. His history was that he had a rather rapidly oncoming difficulty in walking, with cramps in the right leg, followed by weakness, and then in the left leg. Later the legs jumped, but there was no girdle sensation and no sphincter trouble. When he was admitted he also had a slight degree of nystagmus, which was a cerebral point. He had spastic paresis in the arms and legs, slight loss of power, and so on. It therefore seemed to be a definite case of high affection of the spinal cord, and the nystagmus was the only point which might have led one to hold one's hand. But, of course, nystagmus in a child, especially with a slight visual defect, was not enough to establish a contrary diagnosis or one of cerebral complication, and when I came to expose the theca I found it was a typical case of chronic meningitis, the theca being notably distended and a large amount of cerebro-spinal fluid liberated. The cord appeared normal, and on examination of the posterior median fissure nothing abnormal was found. He went out greatly improved. I believe that was a case of congenital syphilitic origin (cf. Gilles de la Tourette). But the record of causation is like much clinical work, unfortunately, in being the expression of beliefs rather than actual scientific fact. For my own part, since so very few of these patients have suggested traumatism as a cause, it is not a likely one, and, as Oppenheim particularly states, such serious meningitis is not a sequela of concussion or railway spine. Then when we come to think of other kinds of chronic specific inflammation we shall conclude, I believe, that a certain number of these cases are gonorrhoeal. I am quite ready to admit that we have not proved cytologically or bacteriologically that the cerebro-spinal fluid contains either excess of lymphocytes or gonococci, but as regards excess of corpuscles, that is not a necessary concomitant when we think of gonorrhoeal arthritis. Therefore the cytology of the affection is of less importance, and, as regards the bacteriology, great difficulties exist in tracing the gonococcus. I regret that I have no direct evidence to substantiate my view, and the only point I can adduce is that infection with gonorrhoea occurred in several cases relatively a short time before the occurrence of the spinal symptoms and in the absence of other infections.

Treatment.

Now for the detail of this surgical treatment. I have already suggested to you in the remarks made earlier that

it consists in simple laminectomy, opening the theca, and washing out the theca with a mercurial lotion. Here we enter at once on the general and interesting question of notable benefit attending the free opening of the so-called serous spaces and washing out with some antiseptic, because I suggest the parallel of this surgical treatment of spinal meningitis is the well-known surgical procedure of opening the abdomen to cure tuberculous peritonitis. I believe there is no risk in washing out the theca with strong solutions of mercury, even up to 1 in 500 strength, though I have only used that strength once or twice. Still, I should not have any hesitation in using it at any time where there was much exudation in the arachnoid, following it up with 1 in 2,000, and leaving in some of this strength when closing the wound.* The skin wound, I think, should be completely closed, not drained. I used to sew up the theca, my object being to arrest the escape of cerebro-spinal fluid into the wound. I have now given that practice up in almost all cases, because in the first place I found wounds healed as quickly, and there is as a rule no greater escape of cerebro-spinal fluid, so that that reason for suturing was not a very important one. Undoubtedly, too, there is less discomfort to the patient afterwards—namely, less tendency to headache and less tendency to the temporary praxia and tachycardia which laminectomy cases not infrequently show. But I have also come to believe that allowing the escape of the cerebro-spinal fluid into the wound cavity for a time, for a few days at any rate, secures a valuable new state of things, for it must get away. It does not necessarily get away through your suture opening, which remains as dry as when closed; therefore it must drain away through the lymphatics of the walls of the wound. If we can thus establish an artificial exit for the cerebro-spinal fluid by means of the lymphatics in and among the muscles surrounding the spine, then, of course, we have established a fistulous association for the carrying on of the circulation of the cerebro-spinal fluid exactly analogous to Sen's and Cushing's methods of treating hydrocephalus. Non-suturing of the theca in the operation, therefore, has a possible advantage. It is difficult to prove that this circulation exists to the degree one believes, but at any rate most of the fluid escapes in that way necessarily because it does not flow out between the stitches of the closely sutured wound. After the wound is completely healed, free mercurial inunction of the spine should be ordered, especially over the scar, on the idea that having arrested the disease an attempt should be made to secure active "absorption" and a complete restoration to health.

In concluding this sketch of an imperfectly understood chronic condition I would express the view that probably many cases of so-called acute myelitis are really meningeal in origin, and that a laminectomy and free drainage of the subdural space might arrest the whole process and the subsequent fatal injury which the cord sustains in such conditions.

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As a matter of fact the circulation of cerebro-spinal fluid is so active that probably any drug introduced into the theca is very soon washed out into the wound and lymphatics.

THE sanitary staff in Cuba has recently been increased with the view of mastering the yellow fever, which has not been under complete control, and the addition has proved a fortunate step, for last October was a particularly wet month. The rain in Havana was continuous, rendering the mosquito campaign most difficult. It is, moreover, in October that *Stegomyia* is most abundant. The magnitude of the task may be judged from the fact that the number of houses visited and "petiolized" during the month was 51,381, and that there were 176 cases in which *Stegomyia* larvae were found. There were 15 cases of yellow fever in July, but these dropped to 2 in August and 1 in September, while in October no cases occurred. The work of the staff is, however, by no means confined to the war against mosquito larvae. The dairies are kept under very strict inspection, and during the month of October alone 2,416 analyses of milk were made, and only 38 samples were found to be unsatisfactory.

THE SCIENCE COMMITTEE

OF THE

British Medical Association.

REPORT CXII.

OBSERVATIONS ON THE PHYSIOLOGY OF THE FEMALE GENITAL ORGANS.*

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I.—GENERAL CALCIUM METABOLISM.†

SINCE much of our work upon the physiology of the female genital organs has centred around the connexion existing between the calcium metabolism and the functions of these organs, it has been necessary for us to leave the bypath of our special investigation for the main road of general physiology, in order that we might, if possible, learn more than is usually known or understood concerning the rapid tissue changes which undoubtedly occur in the general calcium metabolism. We felt that unless we had some guide as to the ordinary (non-genital) influences at work we should be unable rightly to interpret or to assign proper importance to any observations we might make in connexion with the special functions under investigation.

We feel, at the same time, that it is expected of clinicians, when they leave their sphere of greatest activity, that they shall duly acknowledge and recognize the invidiousness of their position. We do this most assuredly, and most earnestly crave indulgence for the incompleteness and sketchiness of our work. In extenuation, it will be easily understood in the first place that we have been unable to devote continuous time to the work, which, consequently, has been carried on under difficulties; and, in the second place, that we have only endeavoured to get some insight into the general calcium metabolism in order to control our special observations. The real work on these general questions has yet to be done by others. We trust that some enterprising physiologists, to whom the work really belongs, will take it up—if, indeed, many of the matters to which we shall allude are not already under consideration.

In any investigation of the rôle of any product of, or factor in, metabolism, it is necessary first of all to be able to isolate that body from the tissues to which its activities are chiefly confined, and to be able to estimate any changes it may undergo quantitatively and qualitatively in different circumstances.

In order to be able to investigate the variations in the blood-calcium content, one of us (W. B. B.) devised a method for the quantitative estimation of the calcium salts. A preliminary communication was made in the *BRITISH MEDICAL JOURNAL*, April 20th, 1907, concerning this method and the reasons for which it was devised. Briefly, it consists in precipitating the calcium in the blood in the form of crystals of calcium oxalate, and, after certain dilutions and precautions against the formation of other crystals, counting those of calcium oxalate, which are very uniform in size, on a haemocytometer plate. Any slight inequality in size is corrected by the large

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† This article is based on a paper read by W. Blair Bell, upon Some Observations on the Physiological Importance of the Calcium Salts, before the Liverpool Medical Institution, February 15th, 1908, and published in the *Liverpool Medico-Chirurgical Journal*, July, 1908.

number counted. An average of 1 crystal per square gives an index of 1 (see Fig. 1).

Since that date the method has been investigated by other observers—many of whom have been kind enough to communicate their views and results to the author of it—and the expression of opinion has been very favourable as regards its accuracy. In this respect the author has been greatly indebted to Professor Herbert Jackson, of King's College, for the deep and friendly interest he has taken in the matter, and for the comprehensive investigations made in his laboratory into the reliability of the method. His verdict is that it is an excellent clinical method.* We are ready to admit (in the present state of chemical knowledge) that this may not be a strictly accurate chemical method, for probably only the ionized calcium is precipitated and estimated; but this is of small importance so long as the method is, as we believe it to be, relatively accurate. At the same time we would point out to those chemists who have criticized the method on theoretical grounds that really they have no *locus standi* until they can define and demonstrate what amount of calcium is ionized in the blood and what is not.† We may here state that the only adverse criticisms that have come to our knowledge through the medical press or otherwise have been advanced by men who have never seen the method practised! It will, however, be observed that we are meeting criticisms that have arisen or may arise, even though they may not be worth serious consideration.¹

In further reference to the method—in augmentation or qualification of the original preliminary communication—we would like to say that we have quite recognized, as, indeed, was originally indicated, that no comparison can rightly be made between a watery solution and an albuminous solution, such as blood. In fact, strictly speaking, an index should be established for every fluid for itself. We hope eventually to indicate how this may best be done so as to bring all more or less into line, for we have always recognized that albuminous or colloidal solutions are the best adapted to this method of calcium estimation. Any actual estimation mentioned in these papers will only concern blood, unless it is specifically stated to the contrary. We have taken the normal maximum in human blood to be about 1 crystal per haemocytometer square. This is an index of 1, and is based on many observations. Whether it is strictly accurate or not is of little importance at the moment, for we have only required a relative measure.

From many communications received, and from observing the work of others not conversant with the method, we think that the main difficulties have arisen:

1. In bad technique with regard to the cleanliness of the flasks, pipettes, and plates, all of which must be scrupulously dry and clean when used.
2. In the illumination and magnification. As mentioned in the original paper, only a *dull artificial light* is of any use. An $\frac{1}{2}$ in. objective with a No. 2 eyepiece ($\times 420$ approximately) and an Abbe condenser give the best view. We cannot overrate the importance of getting the picture correctly, otherwise it is impossible to recognize the crystals for certain.

There is one more point also alluded to in the original

paper. If there is a very large number of crystals with much unevenness in size, greater dilution must be made in the initial stage of the process, and allowed for in the final calculation. Conversely, we may add, if there are exceedingly few or no crystals (very rare) to be seen, the final dilution should be lessened—say, 250 c.mm. of water should be used instead of 500 c.mm.—and allowed for in the final calculation. It has been stated that in the dilutions used calcium oxalate is soluble; we can only say that if the method is properly carried out the solubility point of calcium oxalate is never reached.

Before describing the results of the observations made we should like to discuss what value can be attributed to an estimation of the lime salts in a blood examination. In the first place, we must state that we take it as an accepted fact that the other soluble salts are concerned in the part played by the calcium salts. Secondly, we would point out that in dealing with the blood one is dealing at all times with a very variable tissue; any chemical body it contains is like an elusive Will-o'-the-wisp, which leads us a merry dance before we can come to any conclusions at all. But, after all, how can we expect otherwise? If any one ever seriously anticipated that the calcium content of the blood could be finally and definitely expressed as being one in so many thousand, as is stated in the textbooks, he must, indeed, be indicted with laboratory vision of the worst type. These things cannot be settled by *in vitro* examination. Life, as we call it, with its never-ending changes, is a necessary adjunct to metabolism.

This statement, if carefully considered, should be sufficient answer to those who have written of the "curious use"² one of us (W. B. B.) has made of the word "index" in connexion with the calcium content. This word has passed into current medical use in connexion with many other varying metabolic factors; why not also in connexion with calcium? Far better had chemists qualify the statement to be found in textbooks that the blood contains so much calcium, estimated as CaO! It may do so in regard to the special sample that was under investigation; but there the accuracy begins and ends. The use of the

word "index" makes the matter clear in regard to the method under discussion; no other word would do so.

The calcium content of the blood is, then, like that of any other food supply, a variable quantity. Apparently it corresponds to some extent with the coagulation-time variations which have been worked out by Coleman³ and others. We would emphasize the fact very strongly, however—for it seems in danger of being overlooked—that the coagulation of blood depends on many factors, of which calcium is only one, and that acting within limits. We think, however, from our own observations and from a private communication we have received from T. Addis, that it will be shown that variations in the calcium content do not cause changes in the coagulation time to the extent usually believed.⁴

In order to assure ourselves of the diurnal variations in the calcium content we each estimated the other's blood at frequent intervals throughout one day, during which we ate practically the same food and took the same amount of exercise and rest. The accompanying table shows the result.

It will be seen that, with the one exception, which may not have been quite accurate, our blood contents varied regularly and together. We have not followed the quest

* Cf. action of "Antileukozystserum" *in vitro* and in the circulation; it is diametrically opposite (Delezenne, *zt. nach. Jahresber. f. Tierchemie*, 1900, S. 141).

† Since this paper was written, T. Addis's paper has appeared. see previous footnote.

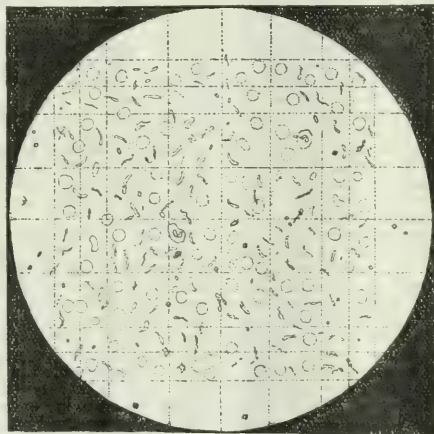


Fig. 1.— $\times 420$. Normal blood, calcium content.

* Since this paper was written, a very careful experimental criticism has also appeared. See "The Effect of the Administration of Calcium Salts and of Citric Acid on the Calcium Content and Coagulation Time of the Blood," T. Addis, *Quarterly Journal of Medicine*, January, 1909.

† In connexion with this question of "ionized" and the so-called "masked" calcium in the blood, we would point out that chemists are not all agreed. Many assert that the "masked" calcium—that is, the calcium in combination with proteins—cannot be split off and precipitated by oxalic acid. Others (see W. A. Osborne, *Journal of Physiology*, vol. xxvii, p. 400) think that oxalic acid precipitates all the calcium present.

	W. B. B.	P. H.
Sunday, June 23rd, 1907:		
8.45 a.m.	Index, 0.7	Index, 1.2
10.0 a.m. Breakfast	—	—
11.30 a.m.	Index *	Index, 0.92
1.30 p.m. Luncheon	—	—
3.30 p.m.	Index, 0.45	Index, 0.5
3.45 to 5.15 p.m. Walking exercise	—	—
5.15 p.m.	Index, 0.65	Index, 0.55
8.0 p.m. Dinner	—	—
10.0 p.m.	Index, 0.6	Index, 0.43

* Error in technique spoilt this count; as far as could be seen index was about 1.0.

through the night. That is a small matter of research we leave open to others—not that we would shrink the task if we thought any knowledge of use to us could be gained by performing it.

This observation, which has been confirmed by other counts, was very instructive, and useful in helping one to form conclusions as to the value of indices under varying conditions, and showed the importance of taking the blood at the same time each day when making observations on a case, or performing experiments on animals. This diurnal variation gives confirmation also to the statement we have made that the blood is the agent of the tissues in respect of the calcium salts; and an index of the blood can, therefore, be construed into an index of the condition of the tissues.

In normal physiological conditions, if the tissues are needing calcium, one would expect to find a low calcium index—that is to say, the tissues will be taking up all the calcium they can get. There are, however, other sides to the question; for example, the calcium supply in the food may be low, or the absorptive functions in the bowel deficient; the tissues may want calcium, and the blood be unable to supply it in the form required; or, again, calcium may find its way into the blood in a reversed direction—from breaking down tissues—as sometimes occurs in pregnancy.

We refrain from mentioning further possibilities, for such a picture appears anything but easy of interpretation. It was, moreover, the complexity of these conditions which impelled us to seek out the regulating or controlling factors in the calcium metabolism, for we felt that upon some elucidation of this difficult problem depended the correct interpretation of many blood indices, and the probable deductions to be made eventually in questions of genital activity.

Let us state at once that much remains to be done in this direction, and one of us (P. H.) hopes in the near future to follow up the full relationship of the ductless glands to the general calcium metabolism, both in its normal and pathological aspects.

That the lime salts play a very prominent part in the metabolic processes of all living tissues there can be no doubt, and it is therefore somewhat strange that until recently so little interest has been displayed in the matter. The part played in bone formation, and in the coagulation of blood and milk (comparatively recent discoveries), and the so-called "tonic" influence on cardiac muscle, founded on the splendid work of Sidney Ringer, have been the only matters to attract attention, and even these have never been followed out properly.

Lately, however, a calcium "wave" seems to have come over medical science, and admirable work has been done in different departments by Sir A. E. Wright, Sir James Barr, MacCallum, and many others: even at the present time, however, the conclusions arrived at are very imperfect, and this we venture to think is largely due to the absence of a broad and comprehensive view of the subject, which alone can correlate all the issues.

We have, therefore, kept ever before us the importance of taking a wide outlook on all the work that has been done, and have attempted to harmonize our own observations of a general nature with those of the special functions we set out to study, for those functions are not local in origin or effect, but general.

Broadly speaking, then, we have come to the conclusion that the lime salts are not only necessary for the construction of the body and its growth, but also for keeping it healthy and in repair, and for the reproduction of the species.

These salts only become apparently pathological—as far as we can discover—when, like that beneficent process known as inflammation, they endeavour to rescue diseased structures and to repair them. As long as the disease—arthritis, for example—continues, so long will the reparative attempts, which include a determination of calcium salts to the part, be carried on. This reparative function of the calcium salts naturally follows on the original constructive rôle. You can cause no definite lesion, medical or surgical, in an animal, nor find one in the human subject, without there being a determination of calcium salts to the injured region, as indicated, if the lesion is severe enough, by a fall of the calcium salts in the blood until convalescence sets in—that is to say, until the demand has been met or the regulators of the calcium metabolism have established an equilibrium in the altered circumstances.

This selective and retentive power of the cell for calcium salts is probably in part under the influence of the calcium-regulating factors to be discussed presently. At the same time there is every reason to believe that individual cells exhibit a self-regulating selective and retentive power in regard to all chemical compounds with which they are brought into contact.

Had we not been able to make these observations experimentally the fact has always been there for the observing. Who has not seen the calcareous deposits at the site of many an old chronically inflamed area? It is an everyday observation in the case of tuberculous disease, but has the full significance ever been realized?

We believe that there is no such thing as calcareous degeneration. What does happen is that there is a calcification—the result of a reparative process—in diseased structures.* We would refer, in this connexion, to an extremely interesting paper by O. T. Williams, in which he claimed that the calcium soaps, which he demonstrated to be deposited in diseased appendices, were the cause of the condition known as appendicitis. Is it not possible, however, that these calcium compounds are there as the result rather than the cause of the inflammation? We would also point out that ordinary fibrous tissue, especially scar tissue, is relatively exceedingly rich in calcium salts, for the benefit of those who are at all sceptical of the deductions drawn concerning the deposition of calcium compounds.

These views, as already stated, have been entirely supported by hundreds of blood examinations, particulars of which would be superfluous here; and these observations, like those on the diurnal variations, have been of great importance in assisting us to understand the blood index.

In addition to constructive and reparative processes in which the calcium salts are retained or fixed, there are other processes no less important—indeed, it was the mystery surrounding them that led us to look for the regulating factors in the calcium economy.

Even while circulating in the blood the calcium salts play a large part in the health of the individual. We say "even while circulating," whereas, of course, we mean to speak of them in the same way as one does of the oxygen in the form of oxyhaemoglobin, or of the opsonins in the blood—in the potentialities each possesses.

It is to the metabolism associated with the rapid tissue changes rather than that associated with the retention of lime salts, already alluded to, that we now wish to call attention. Suppose that the individual is structurally and physiologically perfect for the time being, what are the processes in which the calcium salts take part? We do not pretend to know all, nor perhaps even the larger number, but we will mention briefly those which we think are most worthy of attention, and of which we have some knowledge.

In regard to these rapid tissue changes, in the first place there can be no doubt, we think, that the lime salts are largely concerned in the contraction of the involuntary muscle throughout the whole body. If we were able to abstract the lime salts from the blood, or prevent them gaining

* The deposition of calcium soaps is an intermediate stage leading to calcification.

admittance, the heart would fail and involuntary movement generally would cease. Sidney Ringer's brilliant work in this direction established these facts. In a later paper, when dealing with uterine contractions, we shall illustrate the effect of calcium salts upon the heart. We do not for one moment say that involuntary muscles cannot be affected by other chemical and physical agents, but there is very strong evidence to show that the calcium salts play a large part in the production of the normal stimulus, and—to speculate—probably of the primary stimulus in the embryo. In subsequent papers we shall deal with the question of uterine contractions, and also with the processes with which calcium salts are concerned in menstruation, pregnancy, and lactation.

We have made, also, some observations in regard to the calcium content of the blood and its coagulability, and while we have not made any serious study of the question—for T. Addis, of Edinburgh, has informed one of us in a private communication that he has this matter in hand—we would like to make a few remarks upon the subject here.

We have often been asked if there is not a certain element of danger in the free administration of calcium salts. From many observations and experiments we feel quite justified in saying No. One cannot force up the calcium index in the blood much beyond the usual maximum, in normal circumstances, either by oral administration or subcutaneous injection, and even if this were possible—to have a lawyer's alternative—clotting in the vessels, if they were healthy, would not occur. We have killed animals with intravenous injections of calcium salts without producing intravascular clotting, *except where the vessels had been previously damaged*. There is therefore, we think, an optimum amount with a quickest normal clotting time, and the latter excess of calcium salts cannot increase. Given, of course, an inflamed or damaged vessel—for example, phlebitis after typhoid fever or arteritis—and one may get a deposit of lime salts in the damaged walls (vide supra), and possibly clotting in the damaged vessel, which will be most likely to occur if the calcium optimum index for clotting exists.

One more point in this connexion. Sir A. E. Wright showed that the oral administration of an excess of calcium—which we presume he thought got into the blood—delayed clotting; but apparently, from observations we have made, this is not due, as he thought, to an excess, but to a deficiency, in the blood. It is probable that after excessive dosage the body becomes immune or resistant to the absorption of calcium salts, or excessively active in their excretion, effected probably by the thyroid secretion. This point might with advantage be studied in infant feeding and rickets.

Of the many other points that have interested us in taking a general survey of the calcium metabolism we may single out two which have brought into our minds matters of some importance.

If we are right in our main belief that the calcium metabolism is largely concerned in the physiological processes of women, may not the alteration in the calcium economy at the menopause be to some extent accountable for the deposition of fat? This does not of course coincide with the general ideas concerning obesity and the allied metabolic processes to which that condition is usually attributed; but in view of the close connexion between certain fatty acids and calcium metabolism we feel that there may be some association which future investigation will lay bare. Excellent work on the relationship of these fatty acids to one another in regard to the absorption and deposition of fats, and on the formation of calcium soaps has already been carried out by O. T. Williams (loc. cit.).

The other suggestion we would make is this: May not the deficient excretion of calcium soaps by the bowel in physiologically active women be the cause of chronic constipation—an ever-present evil with the female sex? We think these points are well worthy of bio-chemical investigation.

Before discussing the regulating factors it may be well to include here an observation which has given rise to some controversy. While looking for a suitable organic compound of calcium for hypodermic injection it occurred to us to try gelatine, which, as is well known, contains a large amount of calcium; indeed, it has been suggested

that the power of gelatine, when used therapeutically in cases of aneurysm to influence the coagulability of blood, is due to the contained calcium.*

We were consequently led to investigate this animal product, and found that by the method already described it was possible to estimate the calcium. Though, of course, not strictly comparable with blood, we may state that, although the commercial samples vary, we found the average index to be about 20. It will be readily understood how this quantity might influence the blood of the individual into whom it was injected. As yet no direct experiments have been done in this direction, but we found that intravenous injection of 4 per cent. gelatine solution did not cause intravascular clotting. Gelatine corresponds, therefore, with other calcium compounds in this respect, and by this behaviour tends to confirm the suggestions that its calcium content is responsible for the raised coagulability, if this does occur, rather than any nucleo-proteid-like substance.

The following protocol illustrates the action of a 2 per cent. solution of gelatine subcutaneously injected upon the systemic blood calcium content.

White Buck Rabbit.			
November 1st, 1907:			
9.45 a.m.	Index 0.67	10 c.c.m. 2 per cent. gelatine solution injected.	per cent. gelatine subcutaneously
11.45 a.m.	" 0.67		
12.45 p.m.	" 0.7		
3.45 p.m.	" 0.7		
5.40 p.m.	—	10 c.c.m. 2 per cent. gelatine solution injected.	subcutaneously
5.55 p.m.	Index 0.76		

If, therefore, the gelatine does raise the calcium content of the blood a 2 per cent. solution does not appear to be strong enough. It is only fair to state that Boggs⁸ found the period of increased coagulability to be at a maximum as long as twelve hours after the injection. The diverse results obtained in the experiments of Boggs and the conflicting opinions of Dastre and Floresco⁶ on the one hand, and those of Brat⁷ and Sackur⁹ on the other, regarding the influence of gelatine upon the coagulability of the blood may be explained on the theory of immunization we have already alluded to, or—and this is more likely—on the ground that the methods employed by them for estimating the coagulability were inaccurate.

It was in connexion with the coagulation, or "setting," of gelatine that we made some observations which have given rise to controversy. The results of our experiments led us to ask if it was not possible that the presence of calcium was necessary for the occurrence of this process. In October and November, 1907, we carried out a series of experiments in which we tried the effect upon the coagulation of gelatine of solutions of the following substances: oxalic acid, acetic acid, ammonium oxalate and sodium citrate.† We do not think it necessary to give the protocols in detail, but will briefly summarize our results.

We found that we obtained a heavy white precipitate of calcium oxalate with ammonium oxalate and oxalic acid, and that the salts above mentioned caused marked retardation of the coagulation time. Further, that the acids (if the gelatine was in weak solution) also retarded the coagulation under ordinary circumstances; but that if the solutions were kept at a temperature which would prevent gelatinization for about forty-eight hours, that process did not occur at all. Further, we found that the prolonged action of ammonium oxalate, but not of other salts, prevented coagulation.

Now, in regard to the criticisms raised with reference to the suggestion that it might be worth while for chemists to discover if calcium was really an integral part of gelatine, and whether gelatine existed as such without calcium—in the first place, let us state that in all the papers quoted to disprove our suggestion (it has never been more than a suggestion) there is no mention of calcium-free gelatine having been obtained. Morner¹⁰ and

* See previous note.

† Compare these experiments with the statements made by H. E. Roaf (Reference¹¹).

many others have done their best to obtain calcium-free gelatine, but as far as we know no one has succeeded. It seems to us, therefore, that, whether our suggestion is right or wrong, it is hardly logical to argue that because a certain percentage has been removed without interfering with the coagulability, calcium has therefore nothing to do with the process. In regard to this point, Addison's work on blood coagulation is of much interest.

Nor does it appear reasonable to assume, as has been done,¹ that because in certain experiments delayed coagulation only was obtained, therefore the calcium cannot be concerned. We have secured prevention of coagulation, but to that we do not wish to attach undue importance, although such positive evidence is certainly of more value than the negative evidence just alluded to.

It has also been suggested that the hydrogen ions in the oxalic acid are responsible for the result. This seems to be quite as indefinite a statement, and one which requires some proof. However, until calcium-free gelatine has been obtained which will gelatinize, and so prove our suggestion to be wrong, we would commend to unbiased observers the following points which seem to us to be worth consideration in any attempt to settle the question:

If calcium is a factor in the coagulation of blood—and we believe that this is usually accepted—and oxalic acid and ammonium oxalate prevent that coagulation by precipitating the calcium, is it not possible that the same result obtained in the case of gelatine is due to the same cause? Again, most salts retard the coagulation of blood, just as the "setting" of gelatine is delayed by them. C. J. Martin¹⁰ attributes the result obtained by citric acid and citrates in the case of the blood to an alteration in the ionization of calcium; and this is, we believe, universally accepted. Is it not possible to apply the same idea to the action of these and similar compounds upon gelatine? This is a small matter, perhaps, and we have no wish to discuss it at greater length, as it in no way concerns our work; but, having made a promise to deal with any criticisms raised,¹ we have therefore attempted to fulfil it.

In our investigations we have so far touched but slightly upon the importance of the ductless glands in the regulation of the calcium metabolism. Time has not allowed that complete inquiry which will, as already mentioned, be pursued later by one of us. There are several points, however, to which we desire to draw attention, for they seem to have some relation to genital activity.

First, in regard to the thyroid gland. Clinically, we had observed that in most cases of exophthalmic goitre, where the thyroid secretion was in excess, the blood calcium index was low, an observation which caused us to suggest to Sir James Barr that calcium salts might possibly have some therapeutic, or at least symptomatic, advantage in this disease. Sir James Barr very kindly gave these salts a trial, with undoubted advantage in many cases, the pulse-rate being markedly lowered.

Following this up, we excised the thyroid, and as far as possible the parathyroid glands of four cats. Two were quite young, and two full grown. Two died in a few days—one young and one adult—the former with tetanic convulsions on the fourth day, and the adult a few days later with slight spasms and great muscular weakness.

The other young cat died at the end of fourteen days, much emaciated, and with great muscular weakness. The last—a large black tom-cat—was becoming lethargic and myxoedematous, so we castrated him. From that time he steadily improved, and is at present quite lively and particularly intelligent. His coat is perhaps a trifle dull and dusty-looking, otherwise there is nothing at all indicative of myxoedema.¹¹ This effect of castration, if one can claim so much in a solitary instance, requires further investigation. We have been told that Stanley Kent obtained the same result, but never published an account of his experiments.

With regard to the observations made on the blood of these cats, in each of the young cats the calcium index ran up to a remarkable extent, while the older cats were not affected in the same way. All the animals lost weight.

The following are the protocols of these experiments:

I. Large Tortoise-shell Tom-cat.

November 25th, 1907. Index 0.78. Weight 3,350 grams. Complete thyroidectomy.

¹¹ Recently an improvement in the condition of his coat has been brought about by the administration of thyroid gland extract.

November 28th, 1907. Not well; lying very quiet. Slight muscular twitchings.

November 29th, 1907. Very quiet. Spasms when touched. Some muscular weakness. Index 0.74. Given 5 c.cm. thyrocal solution and 5 c.cm. 20 per cent. gelatine solution.

November 30th, 1907. Better. Still weak. No spasms. Index 1.3.

December 1st, 1907. Died during night. Weight 2,800 grams.

II. Young Tortoise-shell She-cat.

November 25th, 1907. Index 0.48. Weight 1,550 grams. Complete thyroidectomy.

November 28th, 1907. Very restless; quite strong.

November 29th, 1907. In continual tetanic convulsions; cannot stand. Index 5.5. 5 c.cm. thyrocal solution hypodermically and 5 c.cm. gelatine solution 20 per cent.

November 30th, 1907. Convulsions more intermittent. Still violent. Index 9.0. 10 c.cm. thyrocal solution given hypodermically.

December 1st, 1907. Better. One slight convulsion. Very weak. Index 3.0.

December 2nd, 1907. Died during the night. Weight 1,240 grams.

III. Young Black Tom-cat.

November 27th, 1907. Index 0.67. Weight 1,750 grams. Complete thyroidectomy.

November 29th, 1907. Apparently quite well.

December 1st, 1907. Index 2.7.

December 5th, 1907. Index 14.0. Cat getting weak.

December 6th, 1907. Index 15.0. Cat much weaker.

December 7th, 1907. Index 11.0. Cat still very weak, but seems a little brighter.

December 8th, 1907. Index 12.0. Cannot use hind legs. Injection of 5 c.cm. thyrocal.

December 9th, 1907. About the same condition. Weight 1,210 grams.

December 10th, 1907. Index 7.0. Cat seems much better. Injection of 5 c.cm. thyrocal.

December 11th, 1907. Index 18.0. Cat seems not nearly so well to-day.

December 12th, 1907. Died during the night.

IV. Large Black Tom-cat.

November 27th, 1907. Index 0.3. Weight 3,250 grams. Complete thyroidectomy.

November 29th, 1907. Apparently well.

December 1st, 1907. Index 0.7. Apparently well.

December 5th, 1907. Index 0.5. Very quiet.

December 6th, 1907. Index 0.4. Rather weak.

December 7th, 1907. Index 0.8. Seems better than he was yesterday.

December 8th, 1907. Index 0.4. Seems strong but very lethargic.

December 9th, 1907. Index 0.4. So dull and apathetic that he is apparently developing myxoedema. Weight 2,890 grams. Castrated.

December 10th, 1907. Index 0.3.

December 11th, 1907. Index 0.6.

December 12th, 1907. Index 1.0. Quite active and bright. Stole some fish.

December 23rd, 1907. Index 1.0. Apparently normal.

We likewise operated upon three rabbits, but in none of these did we get the results obtained with cats. Beyond some temporary loss of weight they showed hardly any symptoms at all; nor did the calcium indices show marked increases. It will be noted, however, that the only one at all ill was the young one. The primary drop in the calcium content which follows all operations occurred, and was followed by a gradual restitution to the normal. This is seen from the following protocols:

I. Grey and White Buck.

November 23rd, 1907. Index 0.8. Weight 2,700 grams.

November 24th, 1907. Complete thyroidectomy.

November 25th, 1907. Index 0.57.

November 26th, 1907. Index 0.45.

November 27th, 1907. Index 0.3.

November 28th, 1907. Index 0.4. Weight 2,550 grams.

November 29th, 1907. Index 0.7.

November 30th, 1907. Index 1.0.

December 2nd, 1907. Index 1.1. Weight 2,410 grams.

December 4th, 1907. Index 0.72. Weight 2,340 grams.

December 11th, 1907. Index 1.0. Weight 2,420 grams.

December 18th, 1907. Index 0.8. Weight 2,640 grams.

II. Brown Buck.

November 23rd, 1907. Index 0.8. Weight 2,140 grams.

November 24th, 1907. Complete thyroidectomy.

November 25th, 1907. Index 0.54.

November 26th, 1907. Index 0.57.

November 27th, 1907. Index 1.2.

November 28th, 1907. Index 1.0. Weight 2,140 grams.

November 29th, 1907. Index 1.1.

December 9th, 1907. Index 0.62. Weight 2,120 grams.

December 16th, 1907. Index 1.7. Weight 2,260 grams.

December 20th, 1907. Animal seems ill.

December 21st, 1907. Died. *Post-mortem* examination showed intestinal obstruction. Intestines much matted together and distended. This was evidently the cause of death.

III. Black and White Doc (not full grown).

November 23rd, 1907. Index 2.0. Weight 1,510 grams.
November 24th, 1907. Complete thyroidectomy.
November 25th, 1907. Index 1.4.
November 26th, 1907. Index 0.7.
November 27th, 1907. Index 0.4.
November 28th, 1907. Index 0.2. Weight 1,400 grams.
November 29th, 1907. Index 0.55. Rabbit seems ill.
½ c.cm. thyrocol given hypodermically.
November 30th, 1907. Index 0.74. ½ c.cm. thyrocol given hypodermically.
December 2nd, 1907. Index 1.2. Weight 1,410 grams.
Rabbit better.
December 4th, 1907. Index 0.9.
December 7th, 1907. Index 0.9. Weight 1,320 grams.
December 11th, 1907. Index 1.8. Weight 1,310 grams.
November 18th, 1907. Index 0.87. Weight 1,340 grams.

It is, however, well known that rabbits and herbivorous animals generally do not exhibit the effects of complete thyroidectomy and parathyroidectomy (if the latter is effected, which is somewhat doubtful) to the same extent as carnivorous animals. This probably explains the results of our experiments on rabbits.

There can be little doubt, we think, that the thyroid secretion plays some part in the calcium metabolism along, perhaps, with other functions, and the evidence all seems to point to an excretory effect.

Scordo and Franchini (Crocco's Clinic)¹¹ have recently arrived at the same conclusion from a careful examination of the calcium excretion in the urine of patients suffering from exophthalmic goitre. On the other hand, MacCallum and Voegtlin,¹² in their work on the parathyroids and calcium metabolism, arrive at a different conclusion. There must be, however, some connexion between the secretion of the thyroid gland and the calcium metabolism, even if only an intermediary one, and we shall allude to this in a later paper in regard to thyroid activity during menstruation and pregnancy.

Next, the pituitary gland has engaged our attention. It is hardly necessary to say that the gland has frequently been found to be diseased in connexion with bony overgrowths, such as one finds in acromegaly; consequently it is natural to imagine that the secretion of the gland is normally concerned in the limitation of bony deposition, or calcium retention. But, further, it is found that the extract made from the infundibular portion of the gland (Fig. 2, 1)—strangely enough the non-glandular portion—has an enormously powerful influence upon involuntary muscle fibre. This effect is most marked upon the uterus, as we hope to show in a later paper. The glandular portion of the gland (Fig. 2, 2) is inactive in this respect. Mr. H. H. Dale, of the Wellcome Laboratories, who has kindly furnished us with the extract, has done much good work on this subject. Professor Schäfer, however, was the first to remove the pituitary gland from the lumber room of "embryonic relics."

We have reason to believe that further investigation will show that an intimate connexion exists between the pituitary extract and the calcium metabolism. Our experiments have been limited in number, but seem to show that under the influence of pituitary extract there is an

increase of calcium in the blood, whether it is a normal or permanent effect we are not at the present moment prepared to say.

Again, adrenal extract, as every one knows, has not only a marked influence on involuntary muscle, but also causes calcium retention in the tissues. Acting upon this knowledge, Bossi¹³ of Genoa has found that osteomalacia can be much improved by the administration of this product, and experimentally it has been shown that calcareous retention in the blood vessels is brought about by its influence.¹⁴ This, however, may be a natural process consequent upon a arteritis.

Lastly, the ovaries (and testes possibly also) influence calcium metabolism, as is shown in many ways: osteomalacia has been cured by oophorectomy, and we know that calcium retention occurs after the menopause. It is possible, also, that the part played by the internal secretion of the ovary in menstruation and pregnancy has reference to the calcium metabolism concerned in these processes.

This syndrome of facts leads one to many speculations — speculations which must be checked by careful experimentation. It seems, however, more than probable that the ductless glands preserve a balance in the calcium metabolism — as they do in many other metabolic processes — one acting anabolically, another katabolically.

It is sufficient for our present purpose to know that there is some important relationship, but we hope in the subsequent papers to indicate and illustrate more fully the connexion that exists between these glands and the functions of the female genital apparatus.

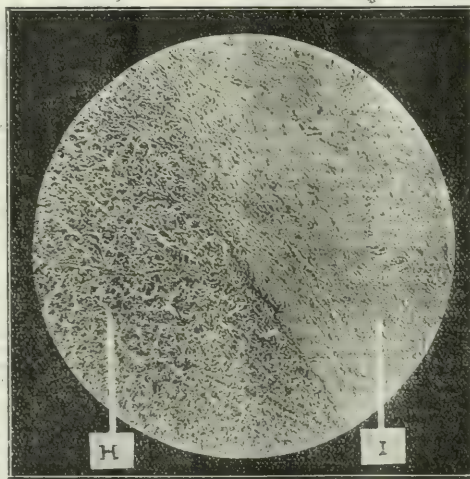


Fig. 2.—Pituitary gland ($\times 250$). Note sharp line of demarcation between hypophysis and infundibulum.

[The methods used by Coleman, and others, have been seriously questioned.—W. B. R. P. H.]¹⁵ O. T. Williams, The Etiology of Appendicitis, *Liverpool Med.-Chir. Journal*, July, 1908. ¹⁶ Zittel, *Munch. med. Woch.*, 1901, S. 1645; Gley and Richard, *Comptes Rendus Soc. de Biol.*, 1903, Bd. 55, S. 464. ¹⁷ T. Hogg, *Dent. arch. Brit. Med.*, 1904, 19, xxix, S. 539 [The methods used by him have also been questioned.—W. B. R. P. H.] ¹⁸ Dastre and Floresco, *Archiv. de Physiol.*, 1895, S. 402. ¹⁹ Brax, *Berl. Klin. Woch.*, 1902, S. 1146 and 1170. ²⁰ Sackur, *Grenzgebiete*, 8, S. 188. ²¹ Morner, *Zett. f. Physiol. Chem.*, 1899, Bd. xxviii, p. 471. ²² C. J. Martin, A Communication to the Physiol. Soc., Lister Institute, 1904. ²³ Scordo and Franchini, *Il Policlinico*, 1907, xvi, p. 285. ²⁴ MacCallum and Voegtlin, *Johns Hopkins Bulletin*, March, 1908, 13, Bossi, *Zentralbl. f. Gynäk.*, Nos. 5 and 6, 1907. ²⁵ Wells, *Chemical Pathology*, p. 545, various references.

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ON SLEEP AND WANT OF SLEEP.

BY

THE RIGHT HON. ROBERT FARQUHARSON, M.D.

"A blessing on him that invented sleep. It wraps us up like a garment," and "Sleep that does weigh our eyelids down, and steep our senses in forgetfulness." These hackneyed quotations sum up the case in favour of Nature's sweet restorer, and we all sympathize with the poor monarch who in vain sought the nightly refuge from the trials and worries of the world so freely granted to the meanest of his subjects.

I am not going to attempt to be instructive in this paper. My ambitions do not point so high, and I should like to imitate the man who, if not witty himself, was the cause of wit in others, by inducing more especially general practitioners of large practical experience to help in clearing up some still obscure points in connexion with sleeping;

and perhaps consultants and scientific experimentalists will have a look in too, and join a symposium to instruct more ignorant people what sleep really means, how it is lost, and how it can be regained quickly, efficiently, and safely. In the first place, is it not the case that there must be varieties of sleep? Unless the classical researches of Durham have been superseded by some industriously obtrusive German, it must be still taken as proved that the physiological process known as sleep results from an anæmic condition of the brain. But then there is a pathological variety. The stertorous coma of apoplexy, the anæsthetic unconsciousness of chloroform or opium poisoning, the nodding off after a heavy dinner or a good dose of the stronger wines, the sleep of utter exhaustion when we read of soldiers falling asleep on the march, little children tired out with the irrepresible vivacity of their waking hours, and the classical instance narrated by Sir Thomas Watson, and painted by Sir Charles Bell, of the man who had been operated on for tracheotomy.

"Though half a dozen candles are held close to his face to throw light on the wound, and though the surgeons, their hands smeared with blood, are still busy about his throat, making arrangements to ensure the patency of the orifice, the patient falls asleep."

I have known three very distinguished men who never could keep awake after dinner—Sir J. FitzJames Stephen, the late Sir George Campbell, and Lord Strathnairn. This illustrious general was excessively hospitable, and when I was quartered in Dublin, hardly a day passed without his orderly riding into barracks to invite some of us to dinner. Before the wine was placed on the table the old gentleman invariably began to nod, and when his forty winks were over he pulled himself together, sprinkled his face freely with cold water, and was bright and brisk for the rest of the evening. And some judges scandalize the court by their invariable habit of dropping into a deep sleep in the middle of a case about which they eventually have to give judgement. This would seem a convenient time to ask the question to which I have never yet succeeded in getting an answer—why these short naps of five or ten minutes, snatched in the middle of work, or even of play, are so extraordinarily refreshing? Over and over again, when completely tired out with the rush and bustle of London, or the strenuous increasing strain of parliamentary life, I have closed my eyes when I felt an "exposition of sleep" coming over me, and have waked up more pulled together than even by seven or eight hours between the sheets; and why, on the other hand, the same dose, administered in the early morning after the first waking, makes one sleepy, sluggish, and irritable, and easily worried during the rest of the day? How, again, are we to explain the irresistible onset of sleep which comes upon us when listening to a dreary sermon or lecture, or reading a dull book, or trying in vain to follow a wearisome debate in the House of Commons? So much, then, for the causes of sleep, and shall I be considered very stupid if I venture to ask what the precise physiological conditions are under these varied circumstances? Anæmia cannot explain them all, so will some one tell me in easy and simple language, devoid of scientific technicalities, and especially avoiding the jaw-breaking phrases that are worse than Greek and Hebrew to some of us, which depend on a full-blooded brain, and to which the very ingenious experiments of Durham specially apply?

Now for some of the reasons why we do not sleep. An overtaxed brain is a frequent cause. They say that the only time Gladstone went off his sleep was during his anxiety for Gordon during that anxious time at Khartoum. As a general rule, on retiring from the House after the most strenuous debates, he invariably laid down his troubles at his bedroom door, brewed himself a cup of tea, and read for an hour or so some novel recommended by his daughter, who was his censor of the press. This seems to be rather curious—the double action of tea. Undoubtedly one often feels drowsy after drinking it; and young ladies, on returning from a ball, frequently take it to soothe their nerves, whilst, on the other hand, nothing is more certain than its irritating effect in preventing sleep. Probably the warmth of the infusion explains its soporific action, for a copious draught of almost boiling water is well known to woo the gentle goddess effectually. Some people need a nightcap of whisky, hot or cold, while

others insist on a superadded pipe; and there is no doubt that weakly people are often made to sleep soundly by being furnished with some easily digested nourishment after getting into bed. Then the room must neither be too hot or too cold, the bed must be properly placed, the weight of clothing must be carefully regulated by the temperature; chilly mortals appreciate a hot bottle, and whilst some cannot sleep with an open window, others are obliged to fling it wide before slumber can be obtained.

Heavy suppers must be avoided, and champagne in particular; either keeps people wide awake, or makes them restless, and obliged to sit up or get up, and toss about on their pillow at an unusually early hour. Of course, worry must be avoided, and it is wise not to open letters at night, lest they contain something disconcerting or depressing. Any regular noise, like a crowing cock, or a barking dog, or a squalling baby, must be suppressed, and the brain must be kept at rest as far as possible, although some people are soothed by a little reading just after turning in. Music, they say, has power to soothe the savage breast; and a good story may be recalled of one of Lord Rosebery's daughters, who was taken to task by the nurse for thinking too much after she got into bed, and who replied, "You know, I can't make my mind sit down."

It is the fashion to say that you can cure insomnia by counting up to a regulated number, or imagining sheep jumping over a gap, or some device of that kind; but I have never yet met any one who would confess to having derived benefit from these domestic expedients. So at last it comes to this, that everything else has failed and we must have recourse to narcotics; and here some important ethical questions come in. Some physicians—rather pedantically, I think—will not give their sleepless patients relief by drugs for fear they get into the habit of taking them regularly. Of course, we cannot altogether ignore this view; but Sir Lauder Brunton, the wisest and most suggestive of modern physicians, once put the case in a nutshell by saying, "Insomnia is a bad habit, and may become permanent if we do not break it."

So what are the best remedies, how should we use them, and what are the contraindications and dangers attending their use?

Now, this brings us to what is or ought to be admitted as the most difficult and delicate bit of therapeutics. To begin with, idiosyncrasy, that baffling and inexplicable individual peculiarity, introduces an element of difficulty and danger. The old saying, "What is one man's meat is another man's poison," applies still more emphatically to drugs, and we may get into great trouble if we do not "gang warily" when dealing with narcotics. For instance, a single drop of laudanum has been known to kill a baby, and yet, whilst I have seen a woman display well-marked physiological symptoms after a few 10 minim doses, I have often prescribed 20 minims of the tincture of belladonna for a child of 2 years without anything of the kind; and it is well known that a single application of the liniment will bring out a very irritating papular eruption on some skins. Certain people can take large quantities of opium without bad effects, and toleration is rapidly produced. James Payn graphically describes how he saw De Quincey toss off the best part of a glass of laudanum without the slightest inconvenience.

Then take my own case. Bromide of potassium, which so effectively soothes the nervous system and causes refreshing sleep as a general rule, even when pushed to heroic doses, has never had the slightest effect on me, and the same remark applies to the entire synthetic series, with the single exception of veronal, which cannot be used freely without unpleasant and even dangerous effects. Now, to choose our special form of drug. After all, nothing equals the rapid and eminently soothing sleep given by morphine, and its subcutaneous use not only relieves pain as by magic, but beats any other form of tonic and stimulant clean out of the field. Chloral depresses the heart, and must be used with caution, for the uncertainty of its action warns us to feel our way with great care in prescribing it, for death has been known to follow a single dose of 30 grains, and a series of cases has been recorded in which symptoms arose akin to blood poisoning, with purpuric and scorbutic eruptions, ulceration of the gums, and great prostration, ending in death; and I have known a single

moderate dose of bromide of potassium bring out the unsightly and irritating, eruption of acne which is one of its most unpleasant physiological effects. The great advantage of sulphonal is that it may be continued for prolonged periods without increasing the dose. The late Sir Henry Thompson at one time took a nightly draught, which had to be very carefully prepared because of its insoluble nature; and an active and energetic friend of mine, and one of the best shots in Aberdeenshire, has taken 10 grains three times a week for many years with good effect, and has never found it necessary to go beyond that quantity; on the other hand, it is not quite free from danger, and not very long ago an elderly lady friend of mine died from evident accumulation in her system from a series of not very heavy doses taken for purely narcotic purposes.

So much for the choice of narcotics; may I say a few words about the anatomical or pathological conditions which may interfere with their action? Sleep being produced by anaemia of the brain, what is the effect of the rigidity of the arterial system in advancing years, and which, of course, prevents the rapid variation of the conditions of circulation within the cerebral mass? and what is the precise effect of pregnancy, or alcoholism, or diabetes, or glycosuria, or Bright's disease, or blood and urine loaded with uric acid, or a congested liver, or blocking of what old-fashioned writers used to call the "primae viae" by chronic constipation? Space forbids me to pursue this suggestive line further, but if the Collective Investigation Committee of the British Medical Association, which formerly did excellent work, still exists, I would recommend this subject to their earnest consideration. For, so far as I know, either there is no sufficient information to guide us or it is so scattered as to be of comparatively little use; and further contributions to our knowledge will be gratefully received and acknowledged by those who, like myself, are ignorant, perhaps through no fault of our own.

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The Morison Lectures

ON THE

PATHOLOGY OF SYPHILIS OF THE NERVOUS SYSTEM IN THE LIGHT OF MODERN RESEARCH.

DELIVERED AT THE ROYAL COLLEGE OF PHYSICIANS,
EDINBURGH, JAN. 25TH, 27TH, AND 29TH, 1909.

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LECTURE III.

I ENDEAVOURED in my last lectures to indicate some of the advances made in our knowledge of the biology and bio-chemistry of syphilis, and in this my last lecture I will try to correlate the facts with clinico-anatomical knowledge, especially in relation to the etiology of the parasyphilitic affections, tabes, and general paralysis.

PARASYPHILIS (FOURNIER); METASYPHILIS (MOEBIUS).

Parasyphilis is the term given by Fournier to those diseases of which syphilis is essentially the cause, but which are not directly the result of the syphilitic virus. Such diseases are: General paralysis, tabes dorsalis, tabo-paralysis, and primary optic atrophy. These diseases are really a single morbid entity owning the same cause; insidious in onset, progressive in character, and uninfluenced by antisiphilitic remedies. These various clinical types of parasyphilitic disease are the result of a primary neuronic dystrophy; they have a similar pathogenesis, and may occur simultaneously or successively in the same individual. In tabes dorsalis the spinal sensory protoneurons are affected; in general paralysis the cortical association neurons; in tabo-paralysis both are affected simultaneously or successively. The dystrophic process is due to a lack of durability of the neurons; it may be a slow process of decay and death of the intraspinal portion

of the sensory protoneurons, as in the case of tabes dorsalis; it may be a rapid process of decay and death of systems and communities of neurons of the brain, as in general paralysis. The former is a smouldering destruction of neural elements, the latter a conflagration often fanned into flames by microbial toxæmia, autotoxæmia, or circulatory disturbances associated with arterial anaemia and venous congestion with blood stasis of the brain. It is probable that Erb's spinal paralysis and certain cases of amyotrophic lateral sclerosis may be primary post-syphilitic dystrophies.

Fournier thus classifies parasyphilitic affections:

I. ACQUIRED SYPHILIS.

1. Acute hystero-neurasthenia of the secondary period.
2. Different neurasthenic manifestations of a more advanced stage.
3. Tabes.
4. General paralysis.
5. A special form of epilepsy.
6. A special form of muscular atrophy.

II. HEREDO-SYPHILIS.

Numerous dystrophic troubles, general or partial; malformation, notably dental; arrest or retardation of physical and intellectual development, infantilism, dwarfism, inborn lack of vitality, cachexia, marasmus, rickets, hydrocephalus, certain forms of simple meningitis in early life, possibly certain cases of true epilepsy, juvenile tabes, spinal and optic juvenile general paresis. The gravity of these affections lies in the fact that they are uninfluenced by antisiphilitic treatment. The local and general failure of development may be due (1) to the direct influence of the virus upon the life and growth of the tissues, or (2) indirectly to exhaustion of the specific energy of the cells of the central nervous system by the establishment of an altered metabolism, the bio-chemical nature of which is not yet fully understood. But, as a provisional hypothesis, we might suggest that the unloosening of lipid substances into the blood, which we know occurs in congenital syphilis, may lead to a defective *vita propria* of all the cells of the body. In some lesions of congenital syphilis it may be actually due to the local invasions and multiplication of the spirochaete, for they have been found in abundance in situations where local lesions exist—for example, the epiphysis of bone—and why not in the epiblastic enamel germs?

We might provisionally suggest as a hypothesis that in all cases of acquired and congenital syphilis the living contagium, spirochaete, excites the tissues and fluids of the body to a defensive reaction. The difference in the effects of inoculation may depend upon the virus itself. Some striking examples will be given later on which apparently indicate that there may be a special neurotoxic virus, and if such instances were more numerous we could hardly believe that coincidence could explain the facts. If, as there is reason to believe, the *Spirochaeta pallida* is the living contagium, and that, becoming generalized in the lymph and blood stream, it produces the secondary manifestations, then there is a certain amount of chance what tissues will be attacked; for the living agent, swept along in the blood stream, may become lodged anywhere, and, by blocking capillaries, cause a local focus of tissue infection. The existence of a generalized eruption implies virulence of the circulating blood, and experiments demonstrate the fact that the blood is virulent during the eruptive stage; thus, Neisser has obtained a positive result by injection of blood into the skin in the chimpanzee, and Roux and Metchnikoff have successfully inoculated a macaque monkey from the blood of the chimpanzee in the eruptive period. It would be of great interest to know how long the virulence of the blood persists after the generalized eruption, or if the consecutive attacks which may occur even after fifteen or twenty years are explained by the "contagium vivum" remaining latent in the lymphatic glands or some deep-seated organ. What is the evidence in favour of this view?

It is generally admitted that the subjects of tabes and general paralysis are recruited especially from those individuals who have had a mild attack and who very seldom show any signs or symptoms of tertiary gummatous skin, visceral or bone lesions. Fournier states: "The comparative mildness of the primary constitutional symptoms in those who ultimately

mately become tabetic would almost seem to indicate that, when the syphilitic virus expends itself in severe primary and secondary manifestations, there is a less tendency to the subtle poison which proves so disastrous to the nervous system." From an experience of over 500 necropsies made on paralytic patients I have been surprised at the rarity of severe tertiary skin and visceral lesions as compared with the cases of true syphilitic brain disease. Arterio-sclerosis, in the form of fibrotic plaques of the aorta, is, however, very common in paralytic dementia, which, however, is now regarded as a parasymphilitic affection. Again, although paralyses in the prodromal stages of the disease often give themselves up to debauchery and sexual congress with loose women, I have never seen or had my attention called to a case of general paralysis among the vast numbers in the London County Asylums that showed a primary sore or a secondary rash. Krafft-Ebing noted the same fact, and concluded that the reason was that every paralytic had had syphilis and was therefore immune. He caused this hypothesis to be put to a crucial test. Nine cases of general paralysis were selected that gave no history and showed no signs on the body; these patients were inoculated with the virus of a typical hard chancre and watched for 180 days. They presented no signs of infection. The only assumption is that they were immune owing to previous infection, and that they possessed a power of resisting the action of the syphilitic virus. The concordance of this result with the statistical data of antecedent, inherited, or acquired syphilis in cases of tabes and general paralysis given later, led to the widespread acceptance by neurologists of the view that tabes spinalis or cerebri (general paralysis) is essentially of syphilitic origin. No syphilis, no tabes. Only a few eminent neurologists, such as von Leyden, refuse to accept the syphilitic origin of tabes, and one of the arguments employed against this view is that antisymphilitic remedies are of no avail in preventing the disease or arresting its progress. Moreover, we know that many people develop general paralysis or tabes dorsalis, even though they have been treated with mercury systematically from the primary infection onwards. So much has this impressed some authorities that they have even asserted that overmercurialization is the cause of the disease in question. The average time which elapses between the primary sore and the onset of tabes and general paralysis is, according to the observations of Schuster, the same in persons who have been thoroughly treated with mercury and those who have either not been treated at all, or only insufficiently. All the facts, therefore, go to prove that the syphilitic virus has in some way or other damaged the durability of the neurones, so that systems or communities die prematurely. It has been observed that Fournier includes other functional and organic diseases of the nervous system among the parasymphilitic affections. We have less knowledge concerning them and their pathogenesis. I have, however, seen cases of general paralysis in which the motor symptoms were most pronounced and the dementia slight, in which all the deep reflexes were exaggerated, and the plantar extensor reflex present on both sides—a very unusual occurrence in the ordinary paralytic dementia. At the autopsies there was a well-marked sclerosis of the crossed pyramidal tracts without any coarse lesion in the brain and cord to account for it. I have also seen cases of progressive amyotrophic lateral sclerosis occurring in the subjects of syphilis which appeared to be the result of the progressive degeneration of the whole motor efferent tract from cortex to periphery without any sensory disturbance. Some of the cases of Raymond cited by Fournier (*les affections parasymphilitiques*) with sensory troubles, namely, rheumatic pains and paraesthesiae, are obviously, from the account given of the appearances of the spinal cord *post mortem*, cases of subacute gummatous meningitis involving the roots. The serum diagnosis and the examination of the cerebro-spinal fluid bio-chemically and microscopically will permit us in future to determine whether syphilis is the essential cause of these degenerations. For every nervous disease, whether functional or organic, occurring in a person who has suffered from syphilis is not necessarily syphilitic in origin, yet when we consider the profound influence the virus has upon the blood and tissues of the whole body, it is not illogical to assume that any disease, local or constitutional, functional or organic, occurring

in a person who has acquired or inherited syphilis may possibly have found a suitable soil for development, owing to the diminished vital resistance of the tissues occasioned by such a potent and persistent poison as syphilis. Thus syphilis, although not a direct agent in such a case, by its devitalizing influence and the impoverishment of the lipoids, becomes an important indirect causal factor of the disease in question. There are many known ways in which syphilis can cause functional disturbances of the nervous system and lead to the development of neuroses and psychoses. The theory of the possibility of the syphilitic virus, or the lipid products of its activity, stimulating the neurones to increased dissimilative action and exhaustion, has been shown to have considerable support from recent investigations. There are, however, other conditions which are well known—namely, the change in the blood and blood vessels, and in the lymph and lymph channels. Long ago Virchow pointed out that in syphilis there is a diminution of red blood corpuscles and a hyperalbuminosis. Later, Schülgowski, Hafter, and Laacke described a considerable fall in the red blood corpuscle count. In the secondary stage Martin and Hiller, also Letzius, showed that not only is there a diminution in the number of red blood corpuscles, but also an absolute diminution of the haemoglobin content of the corpuscle. Anz found, besides the fall in number of the red blood corpuscles, an increase of the white, so that one can speak of a relative and absolute leucocytosis. Later observers showed that there was a diminution of polynuclear leucocytes, and that the leucocytosis was due to a great increase of lymphocytes, which increase we may associate with the polyadenitis. Further, there is an increase of eosinophiles. These changes in the blood in the secondary period increase in intensity with each fresh series of syphilitic manifestations, and diminish as they diminish; moreover, the blood changes disappear with the disappearance of the secondary symptoms under antisymphilitic treatment. Fournier long ago described the favourable influence of mercury upon the blood formation; clearly, then, the mercury, by its influence upon the productiveness of the syphilitic virus, allows a return of the normal haemopoietic formation, or arrests a too rapid haemolytic action. The French authorities were the first to call attention to a syphilitic anaemia, and to point out that iron had no influence thereon. The ebb and flow of the amount of oxyhaemoglobin is correlative to the flow and ebb of lymphocytes, which might indicate that, with the pouring out of an abundance of lymphocytes from the lymph stream into the blood stream, there was associated a pouring out of the virus that occasioned the irritation and hyperplasia of the lymph-cell elements. Hoffmann asserts that he has observed the serum of a syphilitic patient produce immobility and agglutination of the spirochaetes. Perchance it is that when the virus can no longer be neutralized by the defensive reaction of the blood serum embolic capillary effects are produced, causing papular eruptions of the skin, mucous tubercles, and occasionally meningitis. Selenow demonstrated blood changes before the outbreak of the secondary exanthem, therefore before the secondary incubation stage. It is probable that before the eruption becomes visible, microscopic changes have occurred in the affected cutaneous capillaries and adjacent skin structures, much in the same way as in the primary sore; consequently, we should expect a blood change to precede the eruption. The anaemia may be due to a haemolysis owing to an unloosening of lipid substances (lecithins and cholesterol) from the red corpuscles by the action of a toxic substance of the virus acting as a lipolytic ferment disintegrating the osmotic membranes or by chemical interaction in the lecithin and cholesterol complex, forming the osmotic membrane producing physical changes by which the membrane becomes permeable even to the large haemoglobin molecules (Fig. 12). It may be supposed that the protein stroma of the corpuscle is covered by a film or membrane formed of this lipid substance, and the virus acts upon it in such a way as to dissolve, dissociate, or destroy the membranous film covering the corpuscle, and causing thereby a liberation of both the haemoglobin and the lipid substance into the serum. According to Levaditi and Yamanouchi, the lipoids serving for serum diagnosis not only exist in the liver, but in other organs, the brain and the red corpuscles.

They are probably complexes in which lecithin enters largely. The anaemia may, however, be due to interference with the functions of the haemopoietic tissues; in support of this is the fact established experimentally by Neisser, that the red marrow and spleen are especially rich in the virus. Since mercury can rapidly improve this blood dyscrasia, it is probable that it does so by arresting the development of the *contagium vivum* in these blood-forming tissues. In congenital syphilitic children haemoglobinuria may occur, and this may be due to the existence of a large quantity of the virus in the blood causing haemolysis of the corpuscles. Many authorities working at the subject of metabolism in syphilis have shown that the nitrogen metabolism is altered. "Von Boick, Stephanow, and Bjelakow found that the assimilation of nitrogen of food sinks, and the percentage of extractives increases considerably in relation to the urea." (Max Nonne). This would indicate an altered dissimilative metabolism. There is therefore considerable evidence to show that causes exist which render the organs of the body more vulnerable, not only to other infective agencies—for example, tubercle causing scrofula—but also to the evolution and development of neuroses and degenerations by a devitalizing influence on the tissues by the unloosening of lipid substances. We have now to consider how far do these researches, biological and bio-chemical, help us in determining the etiology of tabes and general paralysis.

ETIOLOGY OF TABES.

(*Tabes Dorsalis, Tabes Optica, Tabo-Paralysis, General Paralysis.*)

The Wassermann method of diagnosis has come to strengthen and confirm the belief of many neurologists like myself: "*No syphilis, no tabes.*" This was previously based solely upon statistics and observations relating to the etiology of the disease. Moreover, the etiology and the serum diagnosis are reciprocally supporting not only of the parasymphilitic theory, but also of the view that there is one morbid entity which may be described as tabes—a view first put forward by Fournier, and which I have supported by comparing the clinical notes, and in a large number of instances the *post-mortem* results (with microscopic investigation) of 60 cases of tabes dorsalis and 60 cases of tabo-paralysis. I came to the conclusion that Fournier was justified in asserting the identical relation of the etiology, the close relationship and overlapping in the symptomatology and pathology, and that he was right when he destined them one day or other to be grouped in a single pathological entity; for Ferrier, in his admirable Lumleian Lectures on tabes dorsalis, says: "... and here I would express in concurrence with Fournier, Mott, and many other neuropathologists of the present day, my belief in the essential pathological identity of tabes and general paralysis. They are, in my opinion, merely different aspects of the same polymorphic disease." Both are tabetic, or wasting, affections of the sensory protoneurons in the one case, and of the cortical neurons in the other. The essential etiological factor is the same, and the average time elapsing between the primary infection and the onset of the degenerative process corresponds in the two diseases. Fournier remarks that the establishment of the syphilitic origin of tabes dorsalis, from his experience, would necessarily end in the application of the doctrine to general paralysis. In fact, there are so many symptoms in common and so many analogies of evolution and termination associating these two diseases, that it was quite natural to conclude the etiology of one from that of the other.

I have endeavoured to show in the *Archives of Neurology*, vols. i and ii, and elsewhere, all the evidence of the etiology of tabes and general paralysis tends to prove that there is in all probability one essential cause—syphilis, acquired or congenital; and that there are a number of contributing factors, any one of which by itself, or even in combination with others—for example, sexual excess, mental stress, heredity, injury, etc.—is not capable of producing the disease. The fact that congenital syphilis leads both to tabes and general paralysis at so early a period of life as to exclude most of the contributory factors except heredity, is an argument in favour of syphilis being the essential cause. Moreover, males and females are affected with juvenile optic tabes, and general paralysis in equal

numbers. Thus, of 500 general paralytics that have died and been examined *post mortem* at Claybury, there were 5 males and 5 females who suffered with juvenile general paralysis; that is, 2 per cent. of the total. The study of heredo-syphilis in relation to these parasymphilitic affections is especially convincing as to the essential cause of tabes and general paralysis being syphilis. This has been brought home to me in a very convincing manner in the large number of cases in which I have studied the family histories. I will cite a few examples: A young man was admitted to Claybury suffering with what were termed epileptic fits; the seizures did not cease, and he died; externally there was nothing on his body to show that he had congenital syphilis: his liver, however, showed typical signs of congenital syphilis, and the brain was typical of general paralysis. A brother in Caterham Asylum presented the facies of a typical congenital syphilitic. I ascertained that the father died of general paralysis, and the mother, when I interviewed her, was in the early stage of dementia. I was asked to see recently at Hanwell a young girl who, blind from optic atrophy, had later become demented. I was informed there were no signs of syphilis on the body, and she was one of a large grown-up family. Fortunately the mother was there at the time. I therefore had the opportunity of interrogating her. I found it was quite correct that she was one of a large family, but I also ascertained that, prior to the birth of this child, there had been several miscarriages and stillborn children, that this child had suffered with snuffles and a rash, that she had taken it to the hospital, and grey powders had been given. When the rash disappeared she ceased to attend further. As so often happens in these cases, the mother had not apparently suffered, and showed no signs of syphilis.

Another example I may mention. A juvenile paralytic boy was admitted to Bexley and died there. Recently his brother has been admitted with commencing signs of the disease. The former had Hutchinson teeth, but no history of syphilis could be obtained from the father. This man died in Guy's Hospital. I wrote to the registrar, and I received the information that he had had syphilis. Perhaps the most convincing case is the following one, which died in Claybury about a year ago. A boy was admitted with dementia, contraction of all four limbs, and epileptic seizures. Dying not long after admission, the *post-mortem* examination revealed very advanced general paralysis. There were no signs on the body, and the boy up to 12 years of age was bright and intelligent, then mental symptoms set in and steadily progressed. A history from the father showed that five years before marriage he had contracted syphilis, and, in spite of long treatment by an eminent physician, had not been cured, for the first child died within forty-eight hours of birth, the second within twenty-four hours, the third suffered with late interstitial keratitis, and later nerve deafness; then came the patient, and afterwards healthy children. I could multiply these instances, for altogether I have notes of some 60 cases, and in the great majority (over 80 per cent.) there are indubitable signs or an unquestionable history, as in the above cases, pointing to hereditary syphilis. I have found no case in which I could *certainly* exclude syphilis. Particularly common is optic atrophy, which takes these children to the blind school, and there they develop fits or signs of mental deterioration, and are next sent to the asylum.

The cases of tabes occurring in heredo-syphilis are not nearly so numerous as the cases of general paralysis; the ataxy is usually not very marked, optic atrophy is very common, and tabo-paralysis is met with often associated with optic atrophy; optic atrophy occurs also pretty frequently in the paralytic dementia of congenital syphilis. I have seen two brothers so affected, and die after developing the signs of progressive dementia.

The period of time elapsing between the evolution of tabes and general paralysis and the acquired infection varies considerably; it may be from three to thirty-one years; but the average is eight to fifteen years. The life of the neurons has been reduced, and the time that will elapse between infection and the onset of decay depends upon the intensity of the virus and the inborn resistance of the nervous system, together with other supplemental factors causing stress. In these hereditary cases it is surprising how frequently we find one of the parents, and occasionally both, suffering

from paralysis or tabes; this implies an inborn tendency to this degenerative condition. Now it may be asked, if twenty-five years, or even more, can elapse in an adult between the acquirement of syphilis and the onset of the symptoms of parasyphilis, why should not the same long period occur occasionally in congenital syphilitic cases, so that instead of the first symptoms commencing at puberty they are not manifest till adolescence, or even considerably later? Nonne relates a case of a workman, aged 32, who had suffered for two years with lightning pains and had never been infected with syphilis or addicted to drink, and who presented all the typical signs of ataxy. He had been treated in the hospital for severe hereditary syphilis. I have seen a somewhat similar case; moreover, I have occasionally observed similar cases of general paralysis—for example, a man aged 28 died recently in one of the London County Asylums of very advanced general paralysis. The disease was first manifested at the age of 18, when he had a fit. His character was strange; he married, had one child born dead, and afterwards his wife left him. He had no signs of syphilis on his body, but I found that his father had died eight years previously in Claybury Asylum. In my Croonian Lectures upon the Degeneration of the Neuron, I remarked that it is very probable that some of the cases occurring in adults in which syphilis can with certainty be excluded, may still owe the disease to an inherited syphilitic taint. It is not even necessary, as quite one-half of the juvenile cases show, that they should exhibit any external signs of congenital syphilis, for many of the juvenile cases which I collected were proved beyond doubt to be born of syphilitic parents, although manifesting themselves no external signs of syphilis, whereas brothers and sisters exhibited very definite signs. A case of general paralysis died at Bantstead Asylum which had previously been under the care of Dr. Percy Smith at Bethlehem Hospital. This woman had characteristic signs of congenital syphilis, but she did not manifest symptoms of progressive dementia till she was 30 years of age. The patient was an unmarried woman, and there was no reason to believe that she had acquired the disease. Recently Christian Müller has put forward the same hypothesis to explain those cases in which no history of acquired syphilis can be obtained. He describes two cases of women (virgins) who were the subjects of well-marked signs of congenital syphilis, and who died of general paralysis at the ages of 42 and 43 years. The symptoms were not noticeable until a year or two before death.

Dr. Ferrier has in a masterly manner reviewed the evidence which points to syphilis being the essential cause of general paralysis and tabes, and, in conclusion, I cannot do better than quote him: "One might multiply arguments in favour of the causal relation between syphilis and tabes, but they are unnecessary. For those above related, singly and collectively, leave, in my opinion, little room for doubt that tabes and general paralysis are in all cases of syphilitic origin, and that tabes, *per se*, is as much a proof of antecedent syphilis as a gumma of the skin."

Although syphilis is the essential cause, yet, as Fournier showed, tabes and general paralysis are not syphilitic, but an outcome of syphilis, and the riddle is still unsolved why only about 3 to 5 per cent. of the persons infected with syphilis should subsequently suffer with one of these degenerations of the nervous system termed parasyphilitic. But only 10 to 15 per cent. of persons suffering with diphtheria develop post-diphtheritic paralysis; these are usually cases in which the local infective process was mild and often unnoticed; in that respect, like parasyphilitic affections, which more often than not follow mild and even unrecognized primary infection and secondary symptoms. Is it because the virus is attenuated or modified, and thereby has acquired a special neurotoxic action, or is it because in a small percentage of individuals the cells of the body, especially the cells of the nervous system, react to the virus in a hypersensitive manner? As already indicated, there are facts which suggest the possibility of a certain form of virus with a neurotoxic action. Thus Babinski remarks that it seems possible that a syphilitic virus may sometimes be endowed with a particular aptitude for attacking the nervous system; he reports the case of two students who were infected the same day by the same woman; both died fifteen years later of general paralysis; these students were, however, related. I have recently heard of two pro-

fessional men, not related, who acquired syphilis about the same time from the same nurse; ten years later they developed general paralysis. Marie and Bernhard relate the instance of two men who were infected from the same source, and ten years later suffered with tabes. Erb narrates an instance of four patients infected by the same woman, who later became the subjects of either tabes or general paralysis, whilst a fifth, who had connexion with the woman but was not infected, did not suffer with any disease later. Probably the most striking example supporting this theory of a special neurotoxic virus has been afforded by Brosius, who relates that seven glass-blowers suffered with chancre of the lip, and out of five who ten years later came under observation, four suffered with either tabes or general paralysis. If we accept the fact that a spirochaete is the specific causal agent of syphilis, it is conceivable that there may be varieties of this organism, as there are of the malarial parasite or trypanosome. Again, the organism may become attenuated or modified in its passage through the bodies of certain individuals, or it may be attenuated or modified by the action of mercury. It may thus happen that the virus may vary in different cases of infection. This, however, is speculation, and is not supported but rather contraindicated, so far, by experiments on animals. For although lower apes have the disease in a mild form when inoculated from the human being, yet the syphilitic virus of an infected *Macacus rhesus*, when used to infect a chimpanzee, appears to have lost none of its original virulence; for the chimpanzee suffers as badly as if it had been infected direct from the human source of the virus. We are probably, therefore, on more certain ground in attributing the variation of the effects which will follow infection not to the variation of the virus, but to the reaction of the individual himself, and we may represent this in the form of an equation:

$$\text{Symptom complex } x = \frac{V}{R} = \frac{\text{virus}}{\text{resistance}}.$$

If the virus V is constant, R resistance must vary. But R is made up of a number of factors, some of which we can ascertain, but it is generally impossible to decompose R into all its constituents. Roughly speaking, we may say that it is made up of what a man is born with, what has happened after birth, and what will happen in the future to resist the reaction of the specific virus, which in the majority of instances is of lifelong duration. Most authorities agree that with the widespread syphilization of a race for many generations, the disease tends to assume a milder form; the effects of the disease are not so severe, and a widespread tendency to an inherited immunity has been brought about. The conversion of a rural into an urban population has done much towards racial syphilization and to the diffusion of a tendency to inherited immunity, and the begetting thus of a mild form of disease. But, whereas there are fewer cases of severe syphilis than formerly, there are more cases of tabes and general paralysis. The interesting description given by Colonel Lamb of the syphilization of the natives of Uganda shows how severely a race previously free from this disease suffers from malignant skin, bone, and visceral disease. He also points out that tabes is very rarely seen. If we consider some facts concerning congenital syphilis, we must come to the conclusion that immunity is possible; how, otherwise, can we explain the law of Profeta, namely, the non-syphilitic child of a syphilitic mother does not acquire syphilis from the syphilized mother who suckles it? Again, the child may be syphilitic and the mother may show no signs of syphilis; the mother does not acquire syphilis by suckling that syphilitic child, whereas a wet nurse does. In the former case the fetus has acquired some antitoxin, or something from the maternal blood which has stimulated its own tissues to react against the virus; in the latter (Colles's law) the mother has derived from the blood of the syphilized child an antitoxin or something (not the living contagium) which has stimulated her tissues to react against the virus so effectively that she cannot be infected. There is no reason to suppose that the germ cells do not participate in this reaction, seeing that every cell in the body is subjected to the sensitizing influence of the chemical products of the virus by means of the blood and lymph. The experiments of Ehrlich have been quoted by Neisser as opposing the view of inherited immunity; on the

other hand, Conradi's recent experiments on lyssa support it. The histories I obtained in a large number of cases of juvenile general paralysis and cases of congenital syphilitic nervous disease revealed the fact that the mother very frequently had miscarriages, abortions, and typically syphilitic children without herself suffering at all, or presenting any signs of syphilis. In two instances the mother died of general paralysis; in a considerable number of instances the father died of this disease. As a general rule, the result of successive conceptions is as follows: Miscarriages, abortions, dead children, children dying in infancy—often of meningitis or hydrocephalus—children who later in life suffer with nervous affections—for example, nerve deafness, paralytic dementia, optic atrophy, and tabes—and, finally, healthy children. Such a chain of circumstances would undoubtedly indicate that either the virus was becoming attenuated or the resistance of its action was increased. In any case, we have reason to suppose that the children who were born with a syphilitic rash would be immune to reinfection, also those who afterwards suffered with parasymphylis; Kraft-Ebing's observation supports this premiss. It is probably a question of the degree of immunity to reinfection that would obtain in the presumably healthy children that followed the diseased ones. But such a chain of events does not always occur, for sometimes children are born with signs of heredo-syphilis after the birth of several healthy children: also parasymphylitic children may be born after the birth of several healthy children. This may be explained by the fact that the specific virus has become active again in the mother, which inference is negatived in most instances by the fact that she herself may say that she has been in good health, and no signs of the disease can be discovered in her. Another explanation offers itself, and it is that the specific virus may have attacked one ovum and spared another. Levaditi has seen the spirochaete within an ovum. No two individuals, even of the same family, are born alike, because the germ-plasm out of which they were formed may be similar, but is not the same; one inherits ancestral tendencies which the other does not; and it may happen, therefore, that a child born later than the healthy children possesses less inborn resistance to the action of the virus; consequently, manifests congenital syphilis or, later, parasymphylis. How can we explain this process of decay of particular groups, systems, and communities of neurons? Why should we have optic atrophy in one individual, atrophy of the spinal portion of the sensory protoneurons in another, decay and atrophy of the cortical neurons in a third, and, in many instances, a decay and atrophy of the whole nervous system? We cannot suppose that it is caused by the random metastasis of the syphilitic organism in the membranes, or coats of the blood vessels, conveyed by the lymph or blood stream, as is probably the case in the true syphilitic lesions of the brain and spinal cord. Everything points against this, for, although parasymphylitic affections present the most varied signs and symptoms, there is one sign usually present which is, for all practical purposes, only met with in parasymphylis, namely, the Argyll Robertson pupil. No coarse random lesion will explain the constancy of this phenomenon; moreover, this condition, although a sign of syphilitic infection, does not occur in true syphilitic brain disease. Spirochaetes have never been found in the cerebro-spinal fluid nor have antigens. Antibodies are found proportional to the extent of neuronic decay in tabes and general paralysis.

I think all the facts are against the views of Lesser, Bose, and others, that these late manifestations of degeneration of the nervous system may be regarded as quaternary syphilis, a very late effect of the virus comparable with syphilitic ophthalmitis, glossitis, and other sclerotic lesions. According to this view, we should be compelled to consider the meningeal and perivascular infiltrations and the glia cell proliferation as the cause of the degeneration. But there are many reasons why we cannot accept this hypothesis. The view I take of the process is that parasymphylitic disease of the nervous system depends upon two factors, intrinsic, innate, and extrinsic, acquired—the soil and the seed; the vital resistance and the specificity of the virus, V.

All those conditions which may be inherited or acquired,

which tend to active metabolism of systems, communities, and groups of neurons functionally correlated, owing to those conditions of stress causing in one individual spinal neurasthenia, in another cerebral neurasthenia, will, in conjunction with the effect of the syphilitic poison, cause the nerve cells to exercise an abnormal dissimulative metabolic activity.

Ehrlich points out that we cannot suppose that the cells of the body possess *per se* an executive defensive capacity to neutralize the noxious effects of all forms of organisms, and his work on haemolysins shows that the haemolysin for the corpuscles of a particular animal only occurs after incorporation of the molecules of those corpuscles. But we may suppose that there is an inherent aptitude for the cells of the body of certain individuals to adapt themselves readily to defence against the action of the syphilitic virus in a race that has been widely syphilized for generations; consequently, a larger number will have a mild form of the disease. Cases of tabes and general paralysis occasionally arise within three years of the primary sore; possibly this may be due to an inherent hypersensibility to react to the poison. Dr. Byrom Bramwell has recorded a remarkable case of tabes which came on ten months after infection; it would be interesting to investigate the family history and past personal history of these cases to ascertain whether or not it was a second infection.

The nerve cells are perpetual elements incapable of regeneration, highly differentiated, and complex in structure and function; their centre of nutrition is the nucleus, and when decay sets in, the regressive process attacks first the fine twigs and branches of the tree, the dendrites and dendrons, and the rootlets; in fact, the process is an inversion of its growth and development. But what should cause this premature decay and lack of durability, for the specific energy of the whole of the neurons in the healthy body is sufficient to last until the vital spark dies out? We know the more prolonged duration of infectivity of the syphilitic virus as compared with other contagious diseases, also that one attack of syphilis confers immunity during the rest of the individual's life; moreover, the experiments of Kraft-Ebing are important to remember in this respect. The nerve elements being perpetual and having acquired a habit of increased metabolic activity, will continue it during life, and will contribute to the excess of lipoids in the blood. When there is no longer metabolic equilibrium, and decay sets in, these lipid proteid complexes are thrown off in increasing numbers; this seems probable from the fact that in general paralysis and tabes the quantities in the cerebro-spinal fluid increase with the progress of the decay. The process of decay will manifest itself in the earliest stages by an increased irritability and functional activity of the nervous structures, often manifesting itself in a *hyperaesthesia sexualis*, emotional exaltation and, not infrequently, in striking intellectual activity, followed in each case by exhaustion and loss of function. In my second lecture I referred to the fact that the lipoids may be products of nuclear activity and the highly phosphorized nuclein may be really the source of vital action. We can, therefore, understand how detrimental a *hyperaesthesia sexualis* is to the vitality of the body by the fact that it occasions a loss to the body by the sperm of nuclein substances highly charged with phosphorus.

The uselessness of antisymphylitic remedies is thus accounted for; indeed, they are generally positively injurious in true tabes and general paralysis because they lower the vital energy of a system which has over-immunized itself against the syphilitic virus. The only hope of doing any good is by an early diagnosis of the disease and suppression of all those exciting causes which use up the nervous energy and tend to overturn the normal metabolic equilibrium of the nervous structures. Other factors come in, determining the location of the degeneration, and although microbial infectious and microbial toxæmias are not directly responsible for these parasymphylitic affections, yet they may be an exciting agent in the onset of the disease to the aggravation of the symptoms and the acceleration of the progress of neural decay and the fatal termination. I have often observed when influenza, dysentery, or pneumonia were prevalent in the asylums a number of general paralytics died after a succession of epileptiform or apoplectiform

seizures, and I have found, *post mortem*, that they were suffering from one of these morbid infections. It is a common thing to find on the *post-mortem* table patches of bronchopneumonia, the appearances of which would accord with clinical notes in the case-book reporting the occurrence of seizures; and, if the brain be examined microscopically, it is easy to prove that these fits may correspond with acute degenerative changes, doubtless caused partially by congestive stasis and partially by a toxic condition of the blood exciting and accelerating the process of neural decay. Bacterial invasion, *secondary or terminal*, of the organs of the body of a *non-specific* nature, therefore, may accelerate the morbid process of decay or bring about a fatal termination.

In conclusion, I thank the Fellows for their kind attention, for I am not unmindful of the fact that many distinguished men have preceded me in the delivery of the Morison lectures. I feel that I have dealt imperfectly with a very difficult albeit important subject still in its infancy; and I can only hope that the words of the old philosopher, Lucretius, may come true, "that one thing after another will grow clear, and dark night will not rob you of the road, to keep you from surveying the utmost things of Nature; in such wise things will light the torch for other things."

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A CASE OF ACUTE ASCENDING PARALYSIS.

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LANDRY'S disease is sufficiently uncommon to make the report of a case which recently came under my care worthy of publication.

The patient, a man aged 24 years, had had no illness during the last few years, except an occasional cold, which did not incapacitate him from work. He got wet cycling a week previous to my seeing him, but followed his occupation during the next four days and did not feel at all unwell; on the fifth day he remained at home complaining of vague pains and a feeling of general weakness. He did not improve, and I saw him two days later.

I found him sitting on a couch downstairs still complaining of pains in his shoulders, legs, and back, the latter being the most severe and referred to the sacral region. He also complained of a feeling of numbness from the middle of the body down to the feet and of weakness in the legs, but there was no definite pain, nor at this time any definite paralysis. He could rise up from the couch and stand or walk without assistance, but said he did not feel safe on his feet. There was no difficulty in breathing or swallowing, and no rise of temperature. The knee-jerks were entirely absent.

The next day he still had pain in the back and said it felt weak, and the weakness in the legs had progressed to a definite paralysis, so that he could not get up or stand without assistance, and his feet were affected to about the same extent, but, judging from the slight motion remaining, the posterior muscles were paralysed to a greater extent than the anterior. He was unable to turn over in bed and felt easier in a chair, where he sat huddled up, often requiring support to maintain his position or help in changing it. He now complained of some weakness in the arms, and his voice was weak

and husky; he had some difficulty in clearing the throat, and cough was wanting in energy, and there was some difficulty in swallowing. The abdominal muscles were flaccid, and seemed to have lost power, and probably the intercostals, the quadratus lumborum, and the muscles of forced expiration were beginning to share in the paralysis. The movements of the chest were impaired, but there was no dyspnoea. Sensation in the paralysed parts was unaffected: he could feel the slightest touch of a pin on the finger, and pain when pricked with a pin. The muscles felt of normal firmness, and were not tender when handled.

On the third day the paralysis had rapidly extended; the legs were almost motionless, but he was still able slightly to extend them at the knees. He begged to be out of bed, and sat more huddled up from paralysis of the back and abdominal muscles, and had to be supported by pillows, or, when I saw him, by a friend on either side. He was unable to raise the arms at the shoulders, but could flex and extend the elbows, although not able to hold a cup with his fingers or to carry it to his mouth. His head hung forward. He spoke in a whisper, but beyond that the speech was not affected, and no paralysis of the tongue, lips, or face was observed. The loss of voice was probably due in a great measure to paralysis of the expiratory muscles. He had great difficulty in clearing the throat of secretion, the power to cough and all expiratory efforts being almost entirely lost. There was much trouble in swallowing, but no regurgitation of fluid through the nose, and the soft palate, as far as could be judged, was not affected, the dysphagia being due to paralysis of the muscles presiding over the act of swallowing. He was able to swallow small pieces of jelly better than liquids. He had no marked dyspnoea and no violent respiratory struggles. No ocular paralysis was observed. About 11 p.m. he was almost asphyxiated by the accumulated secretion in the throat which he was unable to expel.

On the fourth day I found he had passed a very bad night, the secretions in the throat causing much distress. He could not clear his throat, and swabs or sponges had to be used. He lay almost motionless, and during the day became rapidly worse. The movements of the chest were quicker and feebler, and the paralysis affected the respiratory muscles—pharynx and larynx more and more. Swallowing became exceedingly difficult, but he was able to take a little jelly, but no nasal fluids were quite clear, and down to this time the temperature was never half a degree above normal. At 10 p.m. it rose to 102°.

He died quite suddenly about 1 a.m. next morning. About half an hour before death the sphincter became paralysed and he passed faeces involuntarily. There was no convulsion or struggling, and his mental condition was quite clear to the end; in fact, he made himself understood to the nurse within a few minutes of death, which appears to have been due to asphyxia.

No treatment seemed of any avail. An autopsy was not obtainable.

The chief features of the case, apart from its rapid progress, were:

1. No obvious cause, beyond getting wet.
2. Absence of knee-jerks from the onset, before any actual paralysis was noticed.
3. No rise of temperature until within three hours of death.
4. Sensation unimpaired, the only sensory symptoms being numbness and vague muscular pains.
5. Perfect consciousness of his state to the end.
6. Rapidity with which the paralysis affected the acts of coughing, all expiratory efforts, and swallowing.

With regard to the order of invasion, after the feet and legs became paralysed the progress of the disease was so rapid that it was difficult to follow the exact sequence, except (a) the posterior muscles of the legs and thighs appeared to be affected before the anterior or to a greater extent, and (b) the muscles moving the upper arm on the scapula before those of the forearm.

As a note of distinction from acute disseminated myelitis I would mention (1) the absence of anaesthesia or any impairment of sensation; (2) normal temperature except just before death; (3) the freedom of the rectum and bladder until within half an hour of the end.

The reports on the therapeutic results with radium which have come from Germany seem scarcely so optimistic as those from Paris. Dr. H. E. Schmidt of Berlin (*Jahrbuch über physikalische Medizin*, p. 193) says that in all cases of naevus treated by him he has always found a tendency in course of time for the redevelopment of telangiectases, generally some months after the discontinuance of the treatment, and he believes that in such cases treatment by Finsen light or electrolysis is necessary to complete the cure. He speaks of one specially good result which he obtained in a case of naevus pigmentosus pilosus in a child. The growth was on the left cheek, about the size of a shilling, dark brown, and hairy. After prolonged treatment the naevus disappeared, leaving only a not very noticeable scar, but here and there dilated vessels began to appear in it, yet by following up the cure with Finsen-light treatment most of these dilated vessels were removed, and the final result was very good.

ARTERIAL BLOOD-PRESSURE RECORDS BEFORE AND AFTER MUSCULAR EXERTION.

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DISEASES OF THE CHEST, VICTORIA PARK, ASSISTANT PHYSICIAN
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THERE exists a remarkable divergence of expert opinion on the question as to whether the results of systolic arterial blood-pressure readings by the method of circular compression represent in all cases the true blood pressure. Those who hold the opposite opinion consider that, more particularly in cases where these readings reach the higher limits which are met with—say from 200 to 300 mm. Hg—the manometric index records something beyond the pressure of the blood itself; in other words, that a part of the force spent in obliterating the lumen of the vessel is due to the resistance of the arterial wall itself. Whilst the majority of those who have worked in this domain of clinical medicine favour the former view, yet several observers—among whom may be mentioned Drs. William Russell, George Oliver, and W. P. Herringham—have given reasons for dissent from the prevalent opinion.

It would seem that light may be thrown on the question, even though we cannot hope thus to actually prove the matter, by observations taken before and after violent muscular exertion in healthy men, seeing that it can hardly be maintained that the blood-pressure readings as measured after such exercise can be influenced by the resistance of the arterial wall. For, in the first place, there is in such conditions a state of vaso-dilatation, so that the effect of hypertonic contraction can be excluded, and, secondly, it is premised that the subject observed is free from arterio-sclerosis. If, then, on the one hand, as the result of muscular exertion of this kind, a considerable arterial blood pressure should be reached, this would point to the possibility of an equally great height being attainable as the result of disease; but if, on the other, but a moderate elevation—say well below 200 mm. Hg—be met with, this would afford even stronger evidence of the improbability that the heart in morbid conditions would be capable of overcoming pressures much greater than this.

The only observations made on these lines which I have met with in the literature are as follows:

T. C. Janeway found, in an experiment with the Erlanger apparatus (5 cm. armlet), on a healthy young man of 26 years, a rise of pressure after he had run up three flights of stairs = 40 mm. systolic and 20 mm. diastolic, the observations being taken during the sitting posture.¹

W. Russell says²: "I submit that the 20 mm. rise after violent exercise marks the limit of the reserve of power of the normal average heart."

K. A. E. Fries made observations on the pulse and blood pressure in foot-racers.³ He determined the pulse-rate and blood pressure in athletes in races of various lengths, using the Recklinghausen-Landergren modification of the Riva-Rocci sphygmomanometer to measure the latter. In general he finds that the pressure rises during the first 35 to 40 minutes of running (10 kilometres), and then falls to considerably below its original level. After one English mile the rise might be from 10 to 40 mm. Hg, the pulse then beating 120 to 160. After a "Marathon" race (40.2 kilometres) the fall below the pressure at starting might be from 10 to 20 mm. Hg.

It may be urged in criticism that the mere fact of this compensatory vaso-dilatation during severe exertion lessens the work of the heart, and therefore renders my argument of little value, seeing that in disease there is frequently vaso-constriction. It is doubtful, however, how far this argument is a sound one.

My own observations were of two kinds. Through the courtesy of several of the competitors for the *Evening News* Marathon race last autumn I was enabled to make observations on them immediately before and after practice runs varying in distance from 5 to 13 miles. Secondly, I made observations on three hospital residents before and after they had run quickly down and up several flights of stairs. The results confirm in the main the observations quoted above.

Four competitors for the Marathon running race were examined. Oliver's haemomanometer was the instrument used (a modification of the Riva-Rocci method). The observations were taken on the arm, this being of course at the level of the heart, and the subject being in the sitting posture. The first observations were taken in every case immediately before the competitor started his course, and the last directly after he had finished (within a minute approximately). The details are given in the table at the foot of this page.

The readings of diastolic pressure and pulse were only approximate. Nos. I, II, and III were, apart from some cardiac hypertrophy, healthy men. No. IV exhibited some thickening of the superficial vessels and cardiac hypertrophy. No. I was very slightly dyspnoeic at the time of the second observation. No. II stopped running on account of his leg "giving"; no signs of exhaustion. No. III was dyspnoeic at the time the second observation was made, and seemed somewhat exhausted. No. IV was likewise rather dyspnoeic. The weather was very hot at the time of all the observations. It will be seen that three of the cases showed a rise of from 25 to 28 mm. systolic pressure, the diastolic either remaining constant or rising to a less degree. One case (No. II) showed a fall of systolic pressure. The observations on the hospital residents were taken under similar conditions to the others, the first being made in each case before the subject started running down and up several flights of stairs, and the last directly after he had finished (within about a quarter of a minute). The observations were taken on the forearm.

		Before Exertion.		After Exertion.		Difference between Systolic Pressures.	Difference between Diastolic Pressures.
		Syst.	Diast.	Syst.	Diast.		
No. I.	Mr. P. M., 24 yrs.	115	100	152	—	37	—
No. II.	Mr. A. J., 28 yrs.	120	95	138	90	18	-5
No. III.	Mr. C. W., 23 yrs.	135	99	145	90	10	0

Syst. = systolic pressure. Diast. = diastolic pressure.

The diastolic readings were only approximate. No. I ran three times up and down stairs, No. III twice, and No. II once. Nos. I and III were markedly dyspnoeic as the result of the exertion; No. II was less so. At the time No. I ran the weather was very hot. The results show a rise of from 18 to 37 mm. systolic pressure.

CONCLUSION.

My results point to a rise of from 20 to 40 mm. Hg, corresponding to a height of perhaps 160 to 170 mm. as the measurement which is probably near the limit of reserve power of the normal heart. Consequently these observations at least throw doubt upon the idea that readings obtained in the neighbourhood of 300 mm. really represent true blood pressure.

REFERENCES.

¹ *The Clinical Study of Blood Pressure*, p. 122. ² *Arterial Hypertension, Sclerosis, and Blood Pressure*, p. 54. ³ *Hygieia*, Stockholm, 1907, p. 1206.

	Before Run.			Distance Run.	After Run.			Difference between Systolic Pressures.	Difference between Diastolic Pressures.
	Systolic.	Diastolic.	Pulse.		Systolic.	Diastolic.	Pulse.		
No. I. Mr. G. B., 35 years ...	143 mm.	100 mm.	64	About 12 miles	168 mm.	100 mm.	100	25 mm.	0
No. II. Mr. H. A., 35 years ...	125 mm.	100 mm.	64	Between 12 and 13 miles	105 mm.	—	—	—20 mm.	—
No. III. Mr. F. C., 37 years ...	142 mm.	100 mm.	60	10½ miles	170 mm.	120 mm.	—	28 mm.	20
No. IV. Mr. T. D., 51 years ...	152 mm.	100 mm.	88	About 3 miles	189 mm.	100 mm.	103	27 mm.	—

The results are recorded in millimetres of mercury = mm.

THE TREATMENT OF CHRONIC GONORRHOEA BY ANTIGONOCOCCAL VACCINE.

By ARTHUR LOXTON, M.B., F.R.C.S.E.,

SURGEON TO THE BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND
URINARY DISEASES.

THERE appears to be a general consensus of opinion that for systemic gonorrhoeal infection, the hypodermic injection of known doses of dead gonococci is the most effective means of treatment; but, so far as I know, no one has yet published his experience of treating chronic gonorrhoea by this method.

For the last twelve months I have been treating obstinate cases of gonorrhoea in this way, and I am persuaded that for certain cases it is most valuable. As yet I am by no means prepared to say the method is invariably curative, but with experience I believe its value will become very greatly enhanced.

The constitutional disturbance caused by the injection varies with the temperament of the individual. In a highly-strung man it may be so severe as to cause him to refuse further treatment, while in a phlegmatic individual who has confidence in his doctor, appropriate doses only give rise to slight headache and malaise some hours after the injection. For this reason it is a good plan to inject the vaccine in the late afternoon, so that business may not be interfered with, and discomfort deferred till bedtime, when the patient may sleep it off. Experience shows that to get any good effect from inoculation two or three points must be attended to:

(a) The gonococcus should be demonstrated in the urethral discharge. It is obviously of no use to inject antigenococcal vaccine if the gonococcus has died out and the discharge is perpetuated by other forms of bacteria.

(b) It is useful to get a patient into a good state of health before commencing the treatment. This may be accomplished by means of a holiday or the exhibition of iron.

(c) It is most important that the dosage be carried out systematically. I find that the best results are obtained by commencing with small doses—forty or fifty millions of sterile gonococci—and, as the patient becomes accustomed to the treatment, rapidly to increase the inoculation. This may be done in two ways—either the number of organisms may be increased or the interval between the doses may be shortened. A judicious combination of the two gives the best results.

I will briefly relate 3 cases in illustration:

CASE I.

In October 1905, a gentleman, aged 27, contracted syphilis, and in July 1906 a urethral discharge was present in which I failed to find gonococci. In August, 1907, the patient again contracted urethritis, and the gonococcus was present in large numbers. This attack ran a prolonged course. Time after time the discharge was reduced to a minimum, but the slightest departure from strict teetotalism was immediately followed by relapse, and gonococci could always be demonstrated in the discharge. He was under continuous treatment during January and February, 1908, yet on March 11th gonococci were plentiful. He then submitted to injection of vaccine, and had five injections, the last being on May 12th. The discharge diminished from the first, diplococci disappeared, and the patient was cured. Quite recently I met this gentleman, and he says that he dines, goes to smoking concerts, and other amusements, places no restriction on himself, yet remains quite well.

CASE II.

Last September a gentleman sought my advice on account of what he believed to be a long-standing urethral discharge. In 1904 he suffered from gonorrhoea and was under treatment for some months. He believes he has never been quite well since. His account now is that ten days after exposure to infection he noticed a small amount of discharge first thing in the morning. He cured this himself, but after drinking a few glasses of beer the discharge returned. He received the usual treatment till October 7th, when, as I was able to see diplococci in the discharge, I suggested antigenococcal injection, and gave him at once 0.5 c.cm. of the Lister Institute vaccine. On October 20th I injected 1 c.cm. and no further discharge was observed. As a precaution the 1 c.cm. was repeated on November 3rd and 16th. On December 3rd I examined the patient and could find nothing wrong, and a week or two ago he wrote to say he was quite well and leading his ordinary life.

CASE III.

This case illustrates the advantage of rapidly increasing the dose. Last April a gentleman, 30 years of age, consulted me for gonorrhoea. He had had several attacks, and probably had

not been quite free for some years. He was under treatment till the end of July, when he was advised to take a holiday. In October he returned to me and said that, although he was better, he was not well; he had to refrain entirely from alcohol, or he suffered from an annoying discharge. Gonococci were recognized, and on October 7th 0.5 c.cm. antigenococcal vaccine from the Lister Institute was injected subcutaneously, on October 23rd 1 c.cm., and on October 31st 1 c.cm. These injections caused no constitutional disturbance, and the patient was better. On November 23rd he came again, saying that he had been to a dinner party, had drunk wine moderately, and the next morning had again seen some discharge. On December 7th gonococci were once more demonstrated, and as the previous injection had not caused any marked discomfort, I advised the patient to have a few injections at short intervals, and of increased dosage. Accordingly, on December 11th I injected 1 c.cm. antigenococcal vaccine, on December 17th 1.75 c.cm., and on December 21st 2 c.cm. The patient went away to spend Christmas at a seaside hotel and was snowed up, so that his holiday was passed almost entirely indoors. He placed no restriction upon himself as regards smoking, eating, or drinking, and has suffered no return of his complaint.

These cases show that in the hypodermic injection of sterile dead gonococci we possess a curative agent which in all probability will prove to be of marked service in the treatment of gonorrhoea. If this surmise proves to be correct, it is a method which deserves to come into general use, because the way it brings about a cure is the most rational with which we are acquainted. At present we have no other means of attacking the gonococcus directly. Our injections, or drugs administered internally, can only act indirectly upon the organism; but if we can produce in the juices of the body a substance which is a poison to the gonococcus, then we may hope that the disappearance of the signs of the disease thus brought about means that the gonococci are killed, and not merely hidden away in a quiescent state, ready to light up again when an opportunity presents itself.

The antigenococcal vaccine prepared by the Lister Institute is a convenient and reliable preparation with which to make the injections. The gonococcus is such a delicate organism, and so difficult to grow, that unless one has a laboratory in one's consulting room the attempt to manufacture a vaccine from the individual case is almost certainly doomed to failure.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A PLEA FOR MORE ACTIVE TREATMENT OF ACUTE GONORRHOEA.

THE treatment of a case of gonorrhoea is surrounded with difficulties, and it can hardly be gainsaid that in this country it is only too often carried out imperfectly and attended with indifferent success.

Within the last four years I have had under my care 19 cases of acute gonorrhoea, and facilities were available for their efficient and thorough treatment under my supervision. The treatment I invariably adopted was briefly the early and repeated irrigation of the anterior portion of the penile urethra without the administration of any specific internally.

I have been in the habit of directing the patient as follows: Ten ounces of a solution of boiled water allowed to cool to a comfortable temperature, 99 to 100° F., to which has been added a grain of potassium permanganate, is allowed to flow into the urethra from a douche can, to which is connected a length of tubing and a suitable glass or bone nozzle. The patient is directed to grasp the penis between the index and middle fingers of the left hand, so as to shut off the anterior $\frac{1}{2}$ in. of the penile urethra, the douche can is raised to a height to ensure a moderate pressure of fluid and the flow started and stopped by means of a convenient clamp on the rubber tube. Failing a douche can, a strong syringe with a ring at the end of the piston might be used; a syringe of this character can be easily manipulated by the right hand. Urination is to be performed when possible prior to irrigation. These irrigations are repeated hourly or oftener (three to four times in two hours) during the day, and at night also if this can be effected without disturbance of natural rest.

The boiling has already rendered the water sterile, so that the addition of a small quantity of potassium

permanganate is for effect rather than for its therapeutic virtues. With the exception of occasional saline aperients, and other hygienic measures, no further treatment is required.

This treatment has in my hands been rewarded with invariable success, the discharge disappearing even in the severest cases within ten to seventeen days; moreover, during the period of treatment all the distressing symptoms, such as chordee, priapism, and painful micturition, are mitigated. The degree of comfort enjoyed by the patient is an encouraging contrast to the distress which usually characterizes this malady; further, no complications have arisen in the whole series of cases treated by this method.

I was led to adopt this method of treatment on the grounds: (1) That the infection is primarily confined to the very foremost part of the penile urethra. (2) That local treatment is as rational when applied to the urethra in a condition of catarrhal or suppurative inflammation as it is when applied to a purulent ophthalmia and pyorrhoea alveolaris, and similar affections of other mucous membranes. (3) The restriction of the irrigation to the anterior part of the urethra precludes the risk of infection of the healthy membranous and prostatic portions. (4) At the same time there appeared no reason to complicate a simple procedure by including the whole urethra and bladder in the operation, as advocated by some authorities. It is no exaggeration to say that such grave complications as cystitis, orchitis, epididymitis, have been excited by the dissemination of the virus in the method of vesical and urethral irrigation. (5) Despite the fact that the organisms are intracellular and may be in the deeper layer of the mucous membrane, and bearing in mind that the infection is generally a mixed one, the washing out of the debris prevents further reinfection, and the temperature of the fluid used leads to an engorgement of the neighbouring vascular area with accompanying serous exudation, and this, presumably by virtue of its opsonizing properties, reinforces the natural resistance of the tissues to bacterial infection, much in the same way as a fomentation acts on an inflamed area. (6) Internal treatment is unnecessary: the patient is saved from the usual unwholesome therapeutic agents, which so often give rise to gastric derangement and consequent lowering effects.

It may be said that the practical difficulty of carrying out this method is so great as to preclude its adoption, but in view of the many complications of this disease involving serious crippling and even loss of life. I would point out that, in the case of those patients whose circumstances allow an interruption of business, it is the duty of the medical attendant to ensure that the position of his patient is such as to enable treatment to be immediately and strictly carried out. The patient should be sent to some home spa, where nursing homes with male attendants might be provided. By so doing success is ensured and a journey to a Continental doctor, after prolonged desultory treatment, as so often happens, is obviated. In the poorer class the patient should, where possible, be induced to seek admission to the Poor-law infirmary. The absence of appropriate institutions for the treatment of venereal cases, which under the present social conditions must inevitably arise, is a deplorable fact.

J. JACKSON MOORE, L.R.C.S.I., L.R.C.P.I.,
D.T.M. Liverpool Univ., West African
Medical Staff.

Sierra Leone.

GONORRHOEAL RHEUMATISM DIAGNOSED HYSTERIA.

The following case may prove of interest to your readers. The patient, a married lady, aged 24, who had had no children, no miscarriages, and no previous illnesses, except measles when a child, consulted me on account of pain "all over the top of the head." Her profession, the stage, entails an amount of facial gesticulation, and she informed me that whenever she wrinkled her forehead or raised her eyebrows, the pain was severe. She described it at that time as being of a sharp, stabbing character, and she experienced the same pain when she was dressing her hair or putting on her hat. When the scalp was at rest it felt tender, and there were occasional twinges, and all the time "she felt it was there." She had been rigorously treated for neuralgia with no beneficial

result, and had finally been informed that the condition would get better in time, that it was a form of hysteria, and that she had better try to forget it.

Upon examination the scalp was found to be distinctly tender to the touch, movement was evidently painful; there was a slight erythema and a scarcely appreciable amount of oedema or "puffiness," which the patient explained as being due to the rubbing on of liniments. The tender area seemed limited to the attachments of the occipito-frontalis. The supraorbital nerve was not tender. There was no discharge from either ear, and the mouth was in an extremely good condition, oral sepsis being put completely out of court. Examination of eye, nose, and throat failed to reveal any condition of disease. She informed me that she had not suffered from sore throat or rashes of any kind—that she had no trouble with her digestion, but that her scalp had been scurfy for some time. All the excretory functions, as far as I could elicit, were normal. Upon explaining to her the importance of a thorough examination, she consented to my finding out whether any vaginal discharge existed or not. I found a muco-purulent discharge present in small quantity in the vagina, and a drop of muco-pus could be squeezed from the urethra. I obtained films, and the gonococcus was found to be present. I diagnosed gonorrhoeal rheumatism affecting the aponeurosis of the occipito-frontalis. I instructed her to empty the lower bowel by means of a saline aperient before coming to see me, and I then injected 25 c.cm. polyvalent serum per rectum, allowing her to rest for half an hour in a recumbent position before proceeding home. I ordered a vaginal douche of 1 in 4,000 zinc permanganate, and gave her grains v of guaiacol carbonate three times a day. The usual directions as to diet and aperients were given. I had intended to repeat the injection of serum, but found this to be unnecessary as the patient made steady progress towards a complete recovery.

E. URQUHART BARTHOLOMEW, M.R.C.S.,
L.R.C.P., etc.

London, W.C.

L.R.C.P., etc.

THE EXTIRPATION OF CANCER WITH FORMALIN.

I AGREE that the extirpation of cancer with formalin is not a new treatment, and your article reminded me of a case in which I employed it years ago, shortly after the use of the drug became general; and though I did not think there was anything wonderful about it, perhaps a short report may be of interest.

An elderly woman came to me with a small scirrhous tumour of the right breast. The conditions were very favourable for excision, and I urged immediate operation. She went away to think over it, and I did not see her again for about nine months, when she was brought into hospital suffering from profuse haemorrhage proceeding from a sloughing ulcer at the apex of a huge mass of cancer. To check the haemorrhage I plugged the deep pit with wool, and, in the hope of abating the stench, I thought I would try the effect of formalin. I think I used a solution of formalin and water, equal parts. I left the plug in for some days, and, on removing it, I was surprised to find a considerable area quite dry, and of the consistence of cheese, and this I cut away until red showed in the black mass, and I then plugged it again. I continued this treatment for some ten weeks, during which the patient suffered no pain; and, when I judged the whole of the tumour had been destroyed, I left the sloughs to separate, which they did in due course, leaving a clean granulating surface free from any trace of disease. Unfortunately, the patient died not long after of cancerous deposits in various internal organs. I made one mistake. I carried the caustic action of the formalin too deep over the centre of the tumour, with the result that three or four of the ribs were exposed, and, when the sloughs separated, the patient had the unique experience of being able to see under two of her ribs. There were some enlarged glands in the axilla, but under the formalin treatment they shrunk until they could not be felt.

It appeared to me that the difficulties of limiting the destructive action of the formalin were too great to make it generally applicable, and I never repeated the experiment.

Cootesbill, Ireland.

T. H. MOOREHEAD.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

CASHEL UNION HOSPITAL.

OBSCURE SPINAL PARALYSIS.

(Under the care of Dr. LAFFAN.)

R. G., steward, aged 51, was admitted on August 29th, 1908.

History.

He stated that backache commenced some time in November, 1907; he described it as straggling and worse at night in bed. It continued until January 21st, 1908, when it got very much worse. In June pain in both hypochondria was added to the back pain, but did not trouble him while he lay still. He described his sensations as if a rope were tied around him tight at times. There was no connexion between this cincture feeling and the pain, as one would come at times without the other. He had been exposed to much cold and wet. He had pneumonia of the left lung about fifteen years ago, and about twenty-five years ago sustained an injury to the elbow-joint, from which some splinters of bone seem to have come away. It was not operated on. The joint remained stiff. He was a temperate man and did not smoke. The back pain was not confined to any particular spot, but seemed to be diffused over the whole back from the ribs down to the ilium. On July 1st, 1908, he complained of a sleepy feeling in the right toes, and about a week afterwards in the left toes. This sleepy feeling continued to ascend until it involved the whole of both lower extremities with the adjacent portions of the abdomen and pelvis. He went to a brother's house on July 24th, and soon after that began to notice that his limbs were not as strong as before.

State on Admission and Course.

He was anaemic, thin, and unhealthy. The facial muscles were unaffected. He complained of extreme backache, and it could be seen readily that he was semi-paralysed in the lower limbs. The weakness of these gradually increased. On September 7th he got retention of urine, and found that after two days in bed he could scarcely put his limbs under him at all. He remained in this condition until September 21st, when severe hypochondriac pain set in, followed by entire loss of motor power. During the progress of the case some slight tremors occurred in the muscles once or twice. He never had headache or ocular symptoms. The lower limbs looked somewhat wasted. The pupils were medium in size and sensitive to light. Speech was normal. The retention of urine continued from September 21st. There was no evidence of a paralysed sphincter ani. Enemata, however, came readily away. His intellect was unaffected. Respiration was 24, pulse 108 to 112, temperature 97.6°. The heart and kidneys were sound. Electric reaction was natural, and there was no ankle clonus. The patellar reflex was normal, as was also tactile sensation. I will not weary your readers by details of treatment, which presented nothing new. He gradually sank and died on September 27th, the mode of death being by way of exhaustion.

The diagnosis in this case must remain obscure in the absence of a *post-mortem* examination. Probably the disease was a malignant tumour pressing on the cord. I would here observe that there is an enormous loss to the public and to science occasioned by popular prejudices against *post-mortem* examinations. I believe such prejudices, however, are not so great or so widespread as they were, and that in consequence it should not be impossible to secure compulsory examinations in all institutions where the inmates receive gratuitous treatment.

THE General Association of Medical Practitioners of Norway, which was founded in 1836, will hold its thirteenth congress at Bergen in August next.

Reports of Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF STATE MEDICINE.

Friday, February 5th, 1909.

W. R. DAWSON, M.D., President, in the Chair.

Irish Recommendations of the Royal Commission on the Feeble-minded.

THE PRESIDENT read a paper entitled "The Irish Recommendations of the Royal Commission on the Care and Control of the Feeble-minded," in which he gave a short account of the chief recommendations.

Mr. LOUIS KELLY, B.L., said he was astonished that such a revolutionary report was so little known and the extent of its recommendations so little appreciated by those who professed to take an interest in the subject. In criticizing the recommendations, he wished to point out that while past and present inspectors of lunatics were exclusively medical men, there was no provision in the law as it stood that these posts should be compulsorily assigned to medical men. In England there were legal inspectors who had done good work, and he objected to the exclusiveness of the recommendations in that respect. The recommendations also proposed to make permanent the present local committees who controlled the asylums in the country. He had no great veneration for a scheme by which so much control and authority was vested in men who had absolutely no training or qualification for the duties imposed on them. Such committees had done and were doing things which no person who was interested in the well-being of the insane could justify. Their very irresponsibility might be taken as an excuse for acts of which he would give some examples collected at random, and in which violence to patients under circumstances which gave no justification for it, and committed by men who were notorious for assault even outside the asylum, was condoned. The President had indicated another weakness in the scheme in regard to the course to be adopted when money was sought to be obtained for building purposes. He objected to the proposed multiplicity of control, which only perpetuated one of the fatal defects of the present lunacy system of administration, in which there were nine bodies which had a certain amount of power and authority. He could not, however, conceal from himself that the report was a marked advance, and its generosity towards Ireland was one of its outstanding characteristics. In the special grant for the provision of necessary accommodation it went further than it did in respect of England or Wales. He hoped the recommendations of the report would become more generally known, and to some extent carried out, and that it would not be pigeon-holed, like the recommendations of the Viceregal Commission on Poor Law in 1891, and others, which proposed the most salutary changes.

Dr. LEFFER said the subject of the care of the feeble-minded and the degenerates of the country was inseparable from Poor Law reform, and the latter would have to come first. In the workhouses, as at present constituted, all the factors that made for degeneracy in the population were being run by State aid. If they reformed the workhouses they would prevent the propagation of degenerates and control the feeble-minded. He was old enough to have given written and verbal evidence before the committee appointed by the Lord Lieutenant of Ireland, the Lunacy Administration, whose report was issued in 1891. The recommendations of that committee were never given effect to, because they ignored the legal difficulties of the subject, and nothing had been done since to alter or amend the Irish Lunacy Laws. The chief difficulty would be in controlling the feeble-minded, who numbered twice as many as the idiots and imbeciles together, and who were capable of doing much more injury to the race than the latter. It would be regrettable if they had to depend for the control of the demented and degenerate on the whim of justices of the peace, one of whom had refused to commit an obvious lunatic who the next day killed a farmer.

Dr. McVITTIE said the question of teachers for the feeble-minded was a central point. He was satisfied that there were many children in whom intelligence developed late,

and that such children, if suitably handled by properly trained teachers, might become useful members of the community. Most of them were ruined in school. Nine out of ten of the teachers under the National Board had nearly all the qualities required to make successful teachers destroyed before they were launched. Their nervous systems were ruined, and their capacity to deal with neurotic or delicate children eradicated. He had examined many such teachers. They were excitable and neurotic, and had been worn and worried by studying a great deal of rubbish for examinations. They would be getting something done if they pressed on the Government the importance of selecting teachers with greater care as regards their physical training. The propagation of degenerates extended beyond the workhouses. There were children in large towns who were reared in unfortunate circumstances as regards health, and if they were to be sent to schools with long hours he was afraid they must have an ever-increasing ratio of feeble-minded people.

Miss BUCHANAN, P.L.G., said that the Viceregal Report, if carried out, would do much to reform the present shocking state of the workhouses in Ireland, and the recommendations of the Royal Commission would deal with the feeble-minded. The Poor Law dealt with destitution, but the feeble-minded and defective need not be destitute in order to be a source of injury to the community. The public did not know that there was only the Stewart Institution to which an imbecile child could be sent, and there were cases constantly coming before her board of guardians in which people not absolutely destitute begged that an imbecile child should be sent to the institution. But because the Stewart Institution had come to be regarded by Catholics as an unsuitable place for their children, such children could not be sent anywhere but to the wards of a workhouse. Even a child sent to an English institution had been brought back because it was found that she was of Catholic parentage. There was no place for sane epileptics except the workhouses. The whole matter called loudly for legislation. The recommendations of Royal Commissions were important, but they were of no use if they were pigeon-holed.

Dr. COLLES said the legal difficulty was illustrated in the recommendation, that the statutory committee of a council, if it did not like the guardianship of a child, could constitute itself the guardian of the child. That had struck the Commissioners as strong, and they provided an appeal to a court of summary jurisdiction, and if any one was dissatisfied with that they could go to the judge of assize. He suggested to the Commission that a better plan would be to vest in the county court judge the power of appointing a guardian, not only of a child, but of a feeble-minded adult, and power to define the powers which the guardian should exercise over his ward. The Commissioners seemed to be inspired by the idea that if they could get a designation that would not hurt people's feelings, opposition would be disarmed, but he thought the associations of the term "mentally defective" would ultimately become as objectionable as the terms "lunatic" and "insanity," which were not originally opprobrious.

The PRESIDENT was of opinion that the ideal method of dealing with the feeble-minded and every other class of mentally defective would be to make the whole thing a national service like the Army Medical Service. He thought, however, it would now be impossible to get rid of the control of the county councils, and that the recommendations provided for their proper subordination to the central authority had the power to stop the grant if everything was not satisfactorily carried out. The number of defectives in workhouses was very large, and the treatment of their mental condition was about as bad as it could be. Many inmates of prisons were drawn from the feeble-minded; almost always they became alcoholic when thrown into criminal associations, and speedily went from bad to worse. The average of previous convictions for Dublin defectives—who constituted 11 per cent. of the inmates of the prisons—was nearly 18. Such facts showed the necessity for interference, and one of the advantages to be derived from any far-reaching system of control would be the placing under detention of women during the child-bearing period, which would diminish and probably extinguish the supply of defectives.

UNITED SERVICES MEDICAL SOCIETY.

Wednesday, December 9th, 1908.

Surgeon-General Sir ALFRED KEOGH, K.C.B., D.G., A.M.S., in the Chair.

Use and Abuse of Alcohol.

FLEET SURGEON ANDREWS read a paper on recent research work on the use and abuse of alcohol. He pointed out that the drink problem was almost coeval with the history of man, and that so far the results obtained by temperance legislation were disappointing. Owing to the unequal powers of resistance possessed by different individuals it was impossible to determine definitely the amount of alcohol which could be taken without harm. At the same time, the steady decrease in the amount of alcohol taken per head per annum pointed to a steady spread of temperance. He pointed out that alcoholism, as the uncontrollable desire to drink to excess, was generally acquired, though sometimes hereditary, and in the former connexion he pointed out the influence of solid customs. Writers were by no means unanimous as to the harmfulness of alcohol; while Starke, amongst others, had pointed out the evils due to the abuse of tea and coffee and the beneficial effects of alcohol as an antidote to theine and caffeine. With regard to the action of alcohol considered as a food, Fleet Surgeon Andrews pointed out that it could only be looked on as such in a strictly limited sense, owing to the impossibility of storing it in the body. Dr. Rivers, however, had stated that alcohol increased muscular work when administered to a person in a state of fatigue, which was somewhat similar in its action to the condition produced by mental fatigue. The vasomotor changes effected by alcohol and the benefits resulting therefrom were discussed, and Bianchi's investigations into the action of alcohol on the heart and circulation were mentioned, as also the effect of alcohol on the blood pressure. The affect of alcohol on bodily organisms was touched on. After some further remarks on alcohol and its connexion with cirrhosis, and in connexion with its effect on the powers of resistance to general infection, Fleet Surgeon Andrews concluded that alcoholic drinks in general and malt liquors in particular were to a certain though limited extent foods; that the effect of alcohol on the individual depended on the nature of the life led, whether sedentary or otherwise, and whether indoor or open air. Alcohol should be looked on as unfavourable to pregnant women and children. It was favourable to muscular work in small amounts, especially when no great mental effort was involved.

Lieutenant-Colonel DAVIES said the total abstainers asserted that it was a poison as to which there could be no doubt; they also denied that it was a food. Food was a substance which could produce heat and energy without deleterious effect. It was not correct to deny that alcohol was a food, although, of course, it did not form tissue. As to the use of alcohol in the army under the conditions of service, they had to consider the conditions of disease, forced exertion, and the special fatigues and exposures of war. As to climate, there was ample evidence from the experience of arctic voyagers and alpine guides and climbers in regard to cold, and from Indian experience as to heat, that alcohol was injurious; as to exertion, the evidence was equally strong.

Sir VICTOR HORSLEY said they had no right to call a substance a food which could not be advantageously utilized in the body. With regard to its being considered a food for the production of work, no one with any knowledge of military experiences would accept any results on the use of alcohol as a food likely to produce muscular energy. The death-rate among moderate drinkers was higher than among abstainers; the incidence of sickness rate was higher than among total abstainers. Under these circumstances he thought they ought to teach that it was a higher national duty to adopt total abstinence than indulge in so-called moderate drinking.

Dr. E. I. SPRINGS said it was striking to notice that whilst methyl, ethyl, and propyl alcohols and others all belonged to the same series and were classed as depressants, no attempts were made to show the beneficial effects of any other members of the group except ordinary alcohol. Although tea and coffee were no doubt frequently abused, he did not think that any one whose work

had taken him among the lower classes of their great towns could pretend for a moment that the harm done by their excessive use was in any way comparable to that done by alcohol.

Sir HAYLOCK CHARLES said contrary opinions were advocated. The drink problem, truly, had been coeval with the history of mankind, and during the stress and strain of the process they termed "civilization," man had sought out many inventions, some helpful, and not a few harmful, for the use made of them. Temperance legislation had been decried, but some endeavour would be made to direct the drink traffic in the road least harmful to the nation.

Fleet Surgeon COLLINGWOOD said that alcoholism was responsible for the diminishing birth-rate; but pointed out that doubtless there were many factors producing such a result.

Dr. COLLINSON said that as to whether alcohol acted as a food or not, he certainly thought that those who did not take drink, or rather were total abstainers, were very much larger eaters than those who partook of alcohol. It would be found that where tea and coffee were taken in excess, instead of alcohol, there was a liability to a certain amount of nervous breakdown.

Sir ALFRED KEOGH thanked Fleet Surgeon Andrews for his very excellent paper. He also said he was sure the thanks of the society were due to Sir Victor Horsley for coming to the meeting. The discussion was a very important one both to the army and navy. He was much struck by the manner Sir Victor Horsley in his speech placed before the meeting the question of alcohol and their relation to the public.

MEDICAL SOCIETY OF LONDON.

Monday, February 22nd, 1909.

CHARLES BARRETT LOCKWOOD, F.R.C.S., President, in the Chair.

Pernicious Anaemia.

MR. L. S. DUDGEON emphasized the fact that the blood in all the cases of pernicious anaemia which were to be referred to in his communication gave a typical blood picture—namely, a diminution of the red cells to about 1,000,000 per c.c.m., a high colour index, various degenerative changes in the red cells, great diminution or absence of rouleaux formation, leucopenia, a relative lymphocytosis, and the presence of nucleated red blood corpuscles—megaloblasts and normoblasts. There was no clinical evidence of any disease apart from pernicious anaemia in any of those cases, and in those instances where an autopsy was performed no cause was found for the severe anaemia. In 9 out of the 11 cases the serum presented a yellowish-green coloration which was quite distinctive. There was no reaction for bile pigment and it failed to give any spectrum. In the remaining cases that coloration of the serum was obscured by the presence of bile pigment. In his experience, apart from pernicious anaemia the reaction did not occur, even in 3 cases where the blood picture was identical with that disease. It had been suggested that anaemia was dependent upon the presence in the serum of a substance or substances which allowed the red cells to be taken up by the phagocytes in the blood. From the observations conducted in the present research there was nothing to support that view when the immune serum and immune red cells were incubated in the presence of normal leucocytes. With regard to pernicious anaemia, however, it was shown, as in the case of the haemolysins and haemagglutinins, that phagocytosis of the immune red cells by normal human leucocytes occurred in the presence of normal serum. Those observations on pernicious anaemia, and similarly in certain other diseases, lent great support to the view that the red cell itself must be reckoned with in observations on immunity. In conclusion, Mr. Dudgeon pointed out that although it was impossible up to the present time to demonstrate many of those most important points concerning the blood immunity of pernicious anaemia, yet it was known that phagocytosis of red blood corpuscles mainly by endothelial cells in the various tissues in that disease, as also haemolysis, was recognized; but how far these changes were directly related to the terminal stages in the disease, and

how far to its actual source, remained to be seen. He did not consider that there was any evidence to show that autoinfection by streptococci and the resulting auto-intoxication was in any way related to the pathology of the disease.

Dr. H. S. FRENCH read a paper on some clinical aspects of pernicious anaemia. In his opinion, slight evening pyrexia was seldom absent in patients affected with pernicious anaemia who were decidedly ill. Pigmentation within the mouth of precisely similar character to that seen in Addison's disease might occur in pernicious anaemia cases treated with arsenic; the spleen was to be felt in about one-third of the cases, and it was really enlarged; nerve symptoms were not at all uncommon in pernicious anaemia; the colour index, though typically higher than 1 when an advanced stage of the disease had been reached, was not always nor continually high, especially during a period of improvement in the patient's condition, when it might be actually low; and pernicious anaemia, as they now knew it, was very possibly only a late and almost incurable stage of a disease which, it was to be hoped, would some day be recognizable early enough to be cured.

ULSTER MEDICAL SOCIETY.—At a meeting held on February 18th, Professor SINCLAIR in the chair, Dr. MAGUIRE read notes of and showed a case of *Acromegaly* in a woman; there was no diminution in the field of vision and no glycosuria, but although the menopause had occurred three years before, the breasts were producing a plentiful supply of milk. Captain STONEY-ARCHER, R.A.M.C., showed a case where the *Clavicle* had been twice fractured with resulting muscular paralysis and anaesthesia of the thumb, side of arm, and hand. Captain Archer had cut down on the part, elevated the depressed bone, inserted an ivory plug, and wire sutured the ends. Anaesthesia rapidly disappeared, and full strength returned; but latterly some pain had been complained of, possibly due to adhesions or callus. Captain Archer also showed a case of *Irritable heart* in a soldier who joined in a route march, and persevered to the end immediately after a post-operation three months' rest. The heart at times was very irregular, at times regular, running up to 160 per minute, and, as shown by sphygmogram, dropping one to three beats, followed by a very forcible upstroke, and further delay. Several members spoke on the case. Dr. CALWELL introduced a discussion on *Ulcer of the stomach*, and the points mentioned were the rise in the curve of age incidence in the female during adolescence, which accounted for the preponderance in the female sex that did not appear from 25 years of age onward, the site of ulcer being nearly limited to those parts which were most constantly bathed in gastric juice during the three ordinary positions of the body. The protection from self-digestion of the mucous membrane was a function of the stomach just as the peristalsis and the opening and closing of the orifice, the secretion of resorcin, pepsin, and hydrochloric acid, and the absorption of fluid and salts; and as these functions were all perverted, even annulled, by various conditions, so it was reasonable to surmise that the function of self-protection might be perverted or annulled by similar conditions. The frequency with which cases of ulcer were associated with migraine, nervous influence, infections, so that corresponding types of ulcer might be formed, lent support to this view. Some remarks on diagnosis and treatment completed the paper. Professor LINDSAY and Dr. DEMPSEY also spoke, and the discussion was adjourned till Thursday, March 4th.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on February 5th, Dr. WALKER DOWIE, President, in the chair, Mr. JAS. MACLEAN showed a case of a very severe and protracted *Cerebro-spinal meningitis*, with complete recovery, in a female child of 4½ years. The onset was sudden, and the temperature was very variable, frequently dropping from 103° F. to normal in a very short time and as quickly rising again. After seven months' acute illness the temperature fell to subnormal, and did not again become febrile. Meningeal symptoms gradually passed off, and by the eleventh month she was well, but naturally very weak and emaciated. Recovery appeared to have been in great measure due to the large quantities of nourishment she was able to take. A striking feature in the case

was the exudation of a sticky serous fluid from the back of the neck. Dr. KERR LOVE described a case of *Perissinus abscess*, with mural thrombus, in the sinus, basal meningitis, and tuberculous tumours in the pons, cerebellum, and cerebrum. He considered there was a danger of the aurist too often considering tuberculous ear disease to be primary or secondary only to disease of the temporal bone, whereas many were hopeless cases of general infection. Such theories led to aggressive surgery, and perhaps to the opening of the cranial cavity in hopeless cases. Taking the view that the affection in the temporal bone was carried from a distance by the blood stream, the primary lesion being in the thorax or abdomen, more conservative treatment was called for, and one would be slow to open the cranial cavity unless localizing symptoms of a curable condition declared themselves. Dr. KENNEDY showed the pathological specimens. Dr. HENRY RUTHERFORD showed a girl, aged 8, the subject of *Ossseous ankylosis of the jaw after otitis*. The condyle and neck were excised and she could now open the mouth well, but the teeth, especially the incisors, were not accurately apposed. He also discussed some cases of contusion injuries of the abdomen, illustrating how conflicting symptoms might be. He thought that in cases of doubt it was much better to operate. A specimen of *Rupture of the colon by bursting (éclatement)* was also shown.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on January 21st, Dr. RENNET, President, in the chair, a discussion on *Anaesthesia* was introduced by Professors CASH and MACWILLIAM and Dr. DALGARNO, Senior Anaesthetist to the Royal Infirmary. Professor Cash stated that chloroform was intrinsically toxic in its effect, that primary heart failure might occur, though usually respiration was first affected. There was a fall in the blood pressure with chloroform before the reflexes were gone, which was not the case with ether. Chloroform reduced the oxygen-carrying power of the blood, and narrowed the coronary vessels; ether dilated these. In chloroform anaesthesia there was a narrow margin between anaesthesia and injury to the organism. The heart toxicity of chloroform was many times greater than that of ether. In imperfect anaesthesia there was reflex danger with chloroform, not with ether. Any danger with ether was readily removed by careful administration and proper temperature, while no amount of care would entirely avert danger with chloroform in certain cases. In concluding, he expressed the opinion that unless there was strong reason to the contrary, ether should be chosen as the routine anaesthetic. Professor MacWilliam confirmed certain of the above opinions, and referred to the microscopic changes which took place in the brain cells after chloroform, the body of the cell becoming attenuated, though they showed great and rapid powers of recovery even after deep and prolonged anaesthesia. Chloroform relaxed the muscles of the heart and arteries, and while heart, respiration, and arteries were all acted on, the heart was the chief factor in danger. Too strong a vapour exerted an inhibitory action through the vagus which might kill immediately. The important point was not the percentage of chloroform in the air taken into the chest, but the steady intake into the circulation, which varied according to the rapidity and depth of breathing. In his opinion, chloroform should not be given as a routine anaesthetic without considering whether ether or local anaesthesia might not meet the case. Dr. DALGARNO dealt with the practical application and administration of anaesthetics, pointing out the necessity of careful preliminary examination and preparation of patient, and detailed the changes in technique necessary for the anaesthetizing of alcoholic, timorous, fat patients, etc. Previous starvation and purgation might be overdone. The preliminary administration of drugs—strychnine, saline infusion, morphine and atropine, sparteine sulphate, etc.—were dealt with. Various forms of apparatus were exhibited and discussed, and various anaesthetic sequences were considered, and he gave statistics from the records of the Aberdeen Royal Infirmary for three years, during which time 4 deaths occurred out of some 6,000 cases, all of which took place in the early stage of administration of chloroform and in bad cases, 2 of them emergency operations. Mr. SCOTT RIDDELL then dealt in a very complete manner with spinal analgesia, sketching

the history of this method, and detailing the advantages and disadvantages which it had. The discussion was adjourned till the next meeting.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on February 5th, Dr. W. H. CRETHERM in the chair, Dr. MACGREGOR YOUNG opened a discussion on *Anaesthetics*. In comparing the relative safety of ether to chloroform he said that the British Medical Association Committee had found that chloroform was seven times more dangerous to life than ether; but, in his opinion, if its finding had been that chloroform was seventy times more dangerous, he would still have thought the proportion understated. Ether as an anaesthetic vapour administered with reasonable care was not dangerous at all, whereas chloroform even in skilled hands might be attended by fatal results, and he did not think any apparatus had brought its administration within the limits of absolute safety. With regard to the after-effects with which ether was credited in the way of bronchitis, bronchopneumonia, etc., this was so much a question of personal experience as to make general conclusions of small value. For his part, the more he gave of ether the less was he inclined to blame the anaesthetic and the more its faulty administration, the absence of warmth during the operation, in the theatre, the corridor, the ward or bedroom, and the after-care of the patient in the way of inhalation, posture, etc. As regards ethyl chloride, the eccentricities and even fatalities of this anaesthetic might be due to a failure to appreciate the enormous difference that the warmth or coldness of the apparatus made in so volatile a drug. The status lymphaticus was discussed: acid intoxication as a cause of death after chloroform was not always recognized. He had seen one death lately from this cause in an adult. The patient had had anorexia for weeks, and was starved in consequence, from an unrecognized tuberculous peritonitis. The strangulation of a ventral hernia necessitated urgent operation. Chloroform was given, with the result stated. He had tested the urine in 40 cases for acetone, and found it in 1 before and 5 after operation. In none were there any untoward effects. Ether was the anaesthetic given. Mr. PAINCE TEALE supported Dr. Macgregor Young's conclusions as to the safety of ether compared with chloroform, and drew attention to the increasing employment of the former anaesthetic. He also outlined the history of the introduction of ether as an anaesthetic. Dr. J. B. HELLIER said he thought that bronchitis and pulmonary complications generally were much more frequent after the administration of ether than after chloroform had been given, and that deaths from these causes were not infrequent. In estimating the safety of an anaesthetic, one had therefore to take into consideration not only deaths during the administration, but occurring later owing to its secondary effects. Mr. H. LITTLEWOOD showed (1) a *Meckel's diverticulum* removed from the hernial sac of a child 3 months old, and (2) a *Stone removed from a horse-shoe kidney*. Dr. A. G. BARES showed a case of *Gonorrhoeal arthritis treated with vaccine*. Dr. ALEX. D. SHARPE showed a case of *Syphilitic affection of the nose and pharynx*, and advanced *Tuberculous disease of the larynx*. Mr. W. THOMPSON showed a *Large intestine showing two malignant growths*, one of which perforated after ileo-sigmoidostomy. Mr. J. F. DORSON showed an *Omental band causing attacks of intestinal obstruction simulating appendicitis*. Dr. WARDROP GRIFFITH showed a case of *Mitral stenosis with phthisis*. Cases and specimens were also shown by Dr. D. SANDERSON LONG, Mr. J. BASIL HALL, Dr. E. O. CROFT, Mr. B. G. A. MOYNIHAN, Dr. J. B. HELLIER, Dr. C. OLDFIELD, and Mr. SECKER WALKER.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on February 17th, Dr. J. MACKIE in the chair, Dr. A. STANLEY GREEN (Lincoln) read a short paper on *The uses of Bier's hyperaemia in general practice*. This was Nature's method of bringing up reinforcements and was valuable both for the relief of pain and also in septic cases the need for repeated fomentations was done away with, while much smaller incisions would suffice where these were necessary. Passive or venous hyperaemia was produced by suction glasses or rubber bandages as shown, and instances were given of the value of such treatment

in septic wounds of the limbs and fingers, of the scalp facial erysipelas, chronic ulcer of the leg, orchitis, gonorrhoeal and tuberculous arthritis, mumps, mastitis, axillary abscess, boils, and carbuncle. Where possible it was also advisable to prepare a vaccine from the patient's own pus, and utilize this in the treatment. The paper was discussed by the CHAIRMAN, Drs. W. T. ROWE, R. B. PURVES (Lincoln), W. HUNTER, and R. WOOD (Ikeston), and Dr. GREEN replied. Dr. W. T. ROWE read a short paper on *Indigestion in children beyond the age of infancy*, in which he traced the various symptoms to which indigestion might give rise in children, and after alluding to the marked idiosyncrasy exhibited by some children to certain articles such as eggs or porridge, criticized the overuse of certain foods, such as bread and butter, potato, porridge, brown bread, fruit, salt meat, and root vegetables. He also made suggestions as to treatment and alterations in a faulty diet. The paper was discussed by the CHAIRMAN, Drs. F. H. JACOB, A. S. GREEN (Lincoln), R. M. HAMILTON (Annesley), J. S. BOLTON, A. FULTON, W. HUNTER, A. J. SHARP, and S. E. GILL, and Dr. W. T. ROWE replied. Dr. C. H. ALLEN showed a case of *Marked hypertrophy of the penis*, apparently due to lymphatic obstruction, in a collier aged 44, who had received a severe blow in the groin six months previously. The condition had been materially relieved by circumcision, but at one time the penis had measured 8 in. in length and 8 in. in circumference. Dr. THOMSON HENDERSON showed sections of an *Eye in which a magnetic fragment of steel had been embedded more than four years*, also other specimens showing pigmented and unpigmented sarcoma of the choroid. Dr. R. B. PURVES (Lincoln) showed a *Fibro-sarcomatous tumour*, weighing 6½ lb., in the testicle, removed from a man aged 70, two years ago without recurrence; an *Appendix attached by two shroud-like adhesions to the posterior wall of the bladder in a man*, and prior to removal causing micturition at regular and definite intervals; also *Fullopian tubes, the seat of chronic inflammation*, in a girl aged 20, and removed on account of fistulous pyuria occurring through the posterior wall of the bladder, and leaving a urinary fistula after operation.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—

A clinical meeting was held at the Medical Society's Rooms on Thursday, February 11th, Mr. E. NETTLESHIP in the chair. Mr. BISHOP HARMAN showed *Models on an economical plan for the Diaphragm test and a Substitute for smoking* for the use of patients suffering from tobacco amblyopia who felt the loss of their tobacco. The latter consisted of quassia made up in the form of chewing-gum, and the idea was suggested to him by the remark of a night watchman with tobacco amblyopia, who had to sit by a fire all night and did not know how to employ his time if he did not smoke. Dr. A. LEVY showed a case of *Obstruction of the cilio-retinal artery*. The vessels were sclerosed, and that was the only evidence of arterial disease, the viscera being sound. Mr. CUNNINGHAM showed a case of *Aniridia* and gave the family history of the condition. Mr. NETTLESHIP brought three drawings illustrating *Hæmorrhages, believed to be choroidal*, following a blow on the eyebrow; also choroiditis behind the retinal veins. Mr. HANCOCK showed a case of *Pituitary neoplasm with ocular symptoms* in a child. The physique of the child seemed to suggest that it was an early case of acromegaly, and skiagrams showed an abnormal appearance in the pituitary region. Mr. MACNAB called his attention to a paper on the subject by Uthoff at the Heidelberg Congress. Dr. MACKENZIE DAVIDSON exhibited the skiagrams of the case, showing the small abnormal opacity in the region of the pituitary body in front of the sella turcica. He said he had never seen an appearance of that nature before. Mr. LESLIE PATON said he had seen a case of a similar nature at intervals in the last six years. The boy developed intense optic atrophy in both eyes, evidently due to pressure on the chiasma, and the sequel was that he was now in an asylum. Mr. MACNAB gave a synopsis of the paper by Uthoff to which allusion had been made. Mr. FISHER questioned whether the skiagram enabled one to say that the bone cavity containing the sella turcica was enlarged. Mr. E. W. BREWERTON showed a case of *Cyst of the iris* which at first had the appearance of sarcoma. Mr. RAYNER D.

BATTEN showed two cases of *Hereditary retinitis*. He believed it was a retinitis with secondary atrophy rather than an actual atrophy.

HARVEIAN SOCIETY OF LONDON.—At a clinical meeting held at St. Mary's Hospital on January 28th, Dr. WILLIAM HILL demonstrated *Direct vision laryngoscopy and Tracheobronchoscopy*, using Brining's or Chevalier Jackson's instruments. He showed: (1) *Growth on right vocal cord*; (2) *Pachydermia of cords*; (3) *Tuberculous growths*; (4) *Tuberculous laryngitis*, where the ulcerations had healed under daily direct vision treatment in hospital; (5) *Subacute laryngitis*; (6) *Chronic laryngitis*. He also demonstrated the *Bifurcation of the trachea*. After cocaineization of the larynx a tracheoscope was passed through the vocal cords during inspiration to a distance of 3 in. After further cocaineization, Brining's extension bronchoscopic tube was passed through the tracheal tube to the bifurcation. No coughing occurred in any of these cases, showing the efficiency of Mr. Harrison's method of cocaineization. Dr. Hill also showed the apparatus used in *Oesophagoscopy*, and related a case in which he had used it. He showed Chevalier Jackson's *Gastroscope*, together with the laryngeal and tracheal instruments of Kirstein and Killian, which led up to the perfected instruments of Brining and Jackson. Mr. CECIL GRAHAM exhibited by direct laryngoscopy the condition of a *Tuberculous patient from whom an interarytenoid tubercle had been removed under chloroform* by the aid of Brining's laryngoscope. Mr. FITZMAURICE KELLY showed a case of *Endothelioma of the tonsil with enlargement of the cervical glands*, and also a case of *Osteo-arthritis of the left metatarsophalangeal joint associated with cystitis*. Dr. WILCOX showed a case of *Collapsed lung with secondary fibrosis* in a child. He discussed the possibility of congenital bronchiectasis and fibrosis following phthisis. Mr. LAMING EVANS showed a case of *Congenital dislocation of the left hip of the supra-cotyloid variety* in a girl of 7. There was a complete absence of lordosis. Trendelenburg's sign was present.

Rebiefus.

DIETETICS.

WE may congratulate Dr. G. A. SUTHERLAND on the successful accomplishment of the well-planned *System of Dietetics* which, under his editorship, has been added to the series of Oxford Medical Publications.¹ He has secured the co-operation of a distinguished body of collaborators, who have amply justified his choice. The volume opens with an introductory chapter by Sir Lauder Brunton, which contains practically all that such an introduction should include, but the student would have been helped by a short bibliography, giving references to the chief works which have influenced modern thought on this subject.

Dr. Harry Campbell is interesting and philosophical on the evolution of diet, following on the lines traced by Malthus and Darwin. He imagines the simian ancestors of mankind as living on fruits and roots, insects, vermin, birds, small reptiles, frogs, eggs and small mammals, just as some monkeys do now, and he describes the hominid as gradually acquiring greater facility in killing other animals for food, and hence becoming more and more carnivorous. He represents early man, when he had arrived at the stage at which he became entitled to that name, as living by hunting, mainly carnivorous in his food, and not reverting to vegetables for a considerable portion of his diet until after the development of the art of cookery; but before the possession of vessels in which the process of boiling could be adequately performed he was unable to avail himself of the great store of starch which Nature conceals under hard envelopes, and its full development was not until agriculture had multiplied enormously the supply of the most important kinds of starchy food. This process has gone on until, in our own time, the proportion of vegetable food in the diet of man is greater than

¹ *A System of Diet and Dietetics*. Edited by G. A. Sutherland, M.D., F.R.C.P. Oxford Medical Publications. London: H. Frowde (Oxford University Press), and Hodder and Stoughton, 1908. (Roy. 8vo, pp. 906. 30s.)

it has ever been since he bore that title. Dr. Campbell does not consider this a matter for congratulation. He shares the view that the excess of carbohydrate food eaten now, in what he calls, perhaps not very politely, the "age of pap," is largely the cause of the decay of teeth, especially as it is presented in a form that demands so little mastication.

Dr. E. I. Spriggs has written admirably on the physiology of digestion; in fact, too much praise cannot be given to the care he has taken to place before the reader an account of the present state of knowledge, so that while not disguising the gaps that exist, the story of the digestion and absorption of food in man is made intelligible. He might have mentioned the evidence tending to prove that the food lies in layers in the stomach, that last swallowed occupying the central position, so that it does not come at once in contact with the gastric juice, as this arrangement explains how it is salivary digestion may continue for a considerable time after food has reached the stomach, and justifies the practice of taking pudding after meat, which, without this explanation, seems to be irrational, since a quantity of carbohydrate food is introduced into a stomach when digestion is in full activity and much acid gastric juice present. The utility of Dr. Spriggs's article is greatly increased by the inclusion of the valuable tables of the composition and heat-value of different articles of food compiled from Atwater and Bryant. The arguments on both sides of the controversy respecting the protein requirements of the body are stated temperately, but scarcely do justice to Chittenden's contention that we cannot rely upon "preference" as a safe ground for dietetics; the more recent experiments made by the same observer on dogs are not given, although reference is made to those of Rosenheim and Munk, which are adverse; in fact, he hardly appreciates sufficiently Chittenden's arguments and facts as set forth in his latest book (*The Nutrition of Man*, 1907), where some of the objections raised are dealt with.

Dr. E. Cantley describes the various dietetic cures in vogue, and has hardly a good word to say for one of them. Dr. Spriggs is an advocate for the common experience of mankind as against Chittenden, but Dr. Cantley uses Chittenden against the faddists. He draws a gloomy picture of the economic effects of vegetarianism, but we doubt if he is justified in thinking that if it were pushed to its logical conclusion it would not pay to keep sheep for wool or cows for milk or fowls for eggs. Long before there was any prospect of the mutton of New Zealand and Australia being available for the food of Europe, when carcasses were boiled down for tallow, it paid to keep sheep at the Antipodes, while in India at the present day cows are kept for milk and fowls for eggs. The chapter on proprietary foods, also by Dr. Cantley, contains an instructive table giving information respecting the composition and nutritive value of most of these articles. Dr. F. D. Boyd writes on artificial feeding, a subject upon which he has already done good work.

Dr. Harry Campbell, who writes on alcohol, accepts the views of Dr. Archdall Reid that races of mankind become gradually immune to the "charm" of alcohol, and that drunkenness is a sign of recent civilization, or at least of recent access to the free use of alcoholic drinks. While not advocating total abstinence, he is justified in pointing out that large numbers of people take far too liberal a view of what they are pleased to call moderate drinking.

The subject of feeding in fevers has been entrusted to Dr. Claud Ker, who deals somewhat vaguely with the diet in enteric fever; in discussing the alleged advantages and obvious objections to the use of solid food he has left the question more open than seems prudent. It is quite true that many mild cases do well on semi-solid food, but some who have given it a trial for some years have abandoned it owing to the occurrence of accidents from time to time which were probably due to it and which might have been avoided by following a more cautious regimen.

Drs. Noel Bardwell and Chapman, in the section on diet in tuberculosis, repeat the substance of their excellent and well-known monograph on the subject. Their opinion that very high feeding often results in the arrest of the tuberculous disease should be noted. Great praise is due to these gentlemen for the pains they have taken to study the cost of diets and to show that cheapness is not inconsistent with efficiency.

The chapter on the diet of gout and rheumatism is by Dr. A. P. Luff, who advocates for the gouty the adoption of Chittenden's dietetic principles, but repudiates the notion that meat is a poison, and will have nothing to do with "purin-free" diets. He makes some common-sense remarks upon the popular prejudice against potatoes and strawberries in gout and on the insufficient consumption of fluids by women. The article on the diet of diabetes by Dr. Rose Bradford is disappointing, as it fails to say anything as to the need for making the diet rules quantitative as well as qualitative, nor does it point out that a satisfactory diabetic diet must contain a sufficient number of heat units. Considering the importance of the subject, the article is too short, as may be seen if we compare the ten pages devoted to it with the fifty allowed to the diet of tuberculosis.

Dr. Cantley has written a good article on the treatment of obesity, giving a clear account of the principal dietetic systems, but he does not mention the importance of meat as an appetite producer; however, his general principle of an all-round reduction in the diet is quite sound. We note that he gives an abstract of the article on the different proprietary remedies for obesity which was published in this JOURNAL. Diet in arteriosclerosis is dealt with by Dr. Campbell, who says all that in the present state of our knowledge can be safely affirmed respecting it, and says it very well.

The important chapter on the dietetic treatment of stomach and intestinal diseases is written by Dr. H. P. Hawkins. He describes methods of examination after test meals, but it is doubtful whether it is desirable to reduce the quantity of fluid given with an Ewald test breakfast from half a litre to half a pint as the quantity of contents obtainable is often rather scanty. He prefers an enema containing 1 oz. of dextrose dissolved in 10 to 15 oz. of normal saline solution to the ordinary nutrient enemata used for rectal feeding. He discusses the diet of hyperacidity very sensibly, and his conclusions are, we believe, in accordance with general clinical experience. He does not seem as certain as he might be that surgical interference for gastropnoia is worse than useless, but on the other hand he perhaps exaggerates the incurability of extreme cases, as we know of one case in which in 1901 the great curvature reached the pubes, yet the lady is now and has been for some years perfectly well. We cannot help regretting that Dr. Hawkins did not give such diets as he would prescribe instead of copying those of German authors, which are not always adapted to English palates or composed of articles in common use in this country. The theory that flatulence may be accounted for by exhalation of CO₂ from the veins of the stomach is, as Soupault called it, a pure hypothesis; deficient mastication, whether from defective teeth or otherwise, is by far the most common cause of this affection.

Dr. Hale White has only a limited subject to deal with in jaundice and other affections of the liver, but he has said what is necessary very well. We may refer in passing to his experience with the subcutaneous injection of oil as proving it to be a practicable means of aiding the nutrition of the body.

Dr. Sutherland writes on the dietetics of diseases of the lungs other than tuberculosis. It would not have been out of place to have mentioned the remarkable relief occasionally given by an emetic in attacks of asthma, and in the indication for alcohol in pneumonia he has not mentioned the collapse that sometimes occurs after the crisis. It would have been well to give more exact directions than that alcohol should be given "at regular intervals," and it is exceedingly doubtful whether the chronic alcoholic when suffering from pneumonia is benefited by the administration of alcohol; on the contrary, he is often intolerant of its effects, and it has to be replaced by digitalin and caffeine. Dr. Hadley writes on the dietetics of heart disease, a subject upon which there is not much to be said, but what there is may be found here.

Dr. Rose Bradford deals with the diet in urinary and renal diseases on generally approved lines, but he does not mention the views of Klemperer on the importance of excluding lime and foods containing lime, while giving preference to those containing magnesium bases, in the treatment of oxaluria.

Dr. James Taylor, who discusses the diet in nervous

diseases, does not mention migraine, and, curiously enough, neither migraine nor headache appears in the index. Graves's disease is dealt with in three of the chapters—namely, in those on nervous diseases, on heart disease, and on blood diseases.

Dr. Colcott Fox, who has contributed the chapter on skin diseases, has made less of it than might have been expected. Under the heading, "Diet in Old Age," Dr. Campbell sets out what is known of the matter; while Dr. Sutherland's chapter on diet in the diseases of infants and children of necessity to some extent repeats what has been said in preceding chapters, but is sensible and sound.

The last chapter is that by Sir Patrick Manson on diet in the diseases of hot climates, a subject with which he deals briefly, but with a knowledge founded on great experience.

We have found these essays eminently readable, and in our opinion the book is one which not only deserves to be read and appreciated widely, but to be kept for reference on the shelves of every practitioner.

THE DISEASES OF AGED PERSONS.

The old adage that a man is only as old as his vessels has always been held to be a sufficient explanation of premature degeneration of elderly folk, but a wider study of the physiological and pathological changes as age advances, such as is presented in the comprehensive treatise recently put forth by Professor RAUZIER, of the Montpellier School of Medicine, opens up many interesting problems that have been somewhat neglected in the general textbooks.

That the author has devoted many years of careful investigation to his subject is proved by the introductory chapter contributed by Dr. Grasset, who incidentally criticizes the views of Metchnikoff with respect to the immortality of certain tissues, such as the cell which divides into two living cells, leaving no dead cell behind it, and maintains the thesis that every living being dies at its appointed time. Death is a natural process, but old age is a disease which can to a certain extent be retarded, and, if it were possible to safeguard the body from the wear and tear of mental and bodily ills, there is no reason why the patriarchal term of years should not be attained.

Dr. Rauzier's book is large, and has doubtless been in preparation for a long time. It is obviously the work of a physician who brings to bear upon his subject the teachings of a wide clinical experience and a close study of the writings of previous observers. The modifications of disease as occurring in the persons of patients over 60 years of age is the real text of the work, and, as a preliminary, the author examines closely into the changes which must be regarded as normal to the gradual oncoming of senility. Foremost among these are those affecting the circulatory system. Great stress is laid upon the importance of recognition of the universal affection of all the blood vessels, which has been described by Boy-Tessier as "arterio-xerosis." This is held to be a natural process, but somewhat unequally distributed. It is regarded as distinct from what is generally known as "arterio-sclerosis" in the fact that it is common to all vessels, both arterial and venous, and that it is not subject to the fatty or calcareous degeneration which constitutes atheroma. Such a process of slow hardening of vessels must of necessity influence the course of diseased conditions when they occur, and throughout the consideration of the diseases of the various systems this underlying factor has always to be reckoned with. As in development the vessels are the earliest to come to perfection and the brain the latest among vital organs, so in old age the brain may remain unaffected while the general vascular system has undergone profound change. The powers of the mind are often retained in almost pristine fullness long after the body has become enfeebled by the natural onset of decline. Gradual failure of function, whether of the muscles or of the internal organs, is the first evidence of senility. The old man can neither move about nor eat and drink with the same impunity as before, but within the limits of his powers his functions are not materially disturbed, they are only diminished.

The first part of Rauzier's book is devoted to the consideration of this normal decline, and the later parts to close examination of the diseases of the various systems and the modifications which they present when occurring in old people. In so comprehensive a treatise there must be a certain amount of overlapping, and the book as a work of reference would gain by compression, more especially in the discussion of those forms of disease which are chronic and usually prevent the attainment of old age. A good account is given of the blood changes in late life and of the conditions of the heart, which, like the blood vessels, undergoes certain changes which render it less able to resist the extra strain thrown upon it by over-exertion or by disease of other organs. The respiratory and digestive systems present many interesting modifications, and the proneness of the alimentary canal to be affected by cancer in any part of its course in the persons of the aged is fully discussed and the arguments for and against operative treatment carefully weighed by comparison of results obtained in many clinics.

Affections of the kidney are described at somewhat unnecessary length. The subject of renal insufficiency from any cause rarely attains to long life.

The diseases of the nervous system and of the skin are fully discussed, the latter being dealt with by Dr. Vedel, Professor of Dermatology at Montpellier.

So comprehensive a work on a subject which has rarely been studied collectively from the clinical point of view should be welcome to all schools of medicine. While many of the diseases of old age are apparently in their course the same as in the adult, there must always be borne in mind the structural changes incidental to advancing years, which are implied by the term "arterio-xerosis," already referred to. A gradual shrinkage of cell tissue, with an equally gradual development of connective tissue, must be assumed to be continually at work as a normal process, while the thousand and one causes for vascular degeneration in individual organs or areas may be influencing the vascular supply at the same time. Thus the state of his vessels does, indeed, influence the age of the patient and the manner in which it modifies the course of disease is well shown in Dr. Rauzier's book.

THE SOUL OF SPAIN.

A REALLY good book on a foreign country is by no means a common thing. Many people, after a hasty tour of a few weeks, during which they visit only the big cities and live at hotels, think themselves capable of writing exhaustively on the manners and customs of a people; but books of travel written in this fashion are worse than useless—they are misleading. A foreigner can know little or nothing of the character of a people with whom he has had no actual intercourse, of whose ways of thought, religion, and social life he is completely ignorant. At every turn he comes upon something which he does not understand, which, ten to one, he misunderstands and misjudges; and in this way all sorts of mistakes concerning other nations arise, and in some cases do untold harm. This has been particularly the case with regard to Spain, a land of which most Englishmen know little and understand less. This reproach cannot be justly brought against Mr. HAVELOCK ELLIS. In his charming study, *The Soul of Spain*,¹ which is not a book of travels in the ordinary sense of the word, he has striven to bring before us the real Spaniard with all his characteristics, as they are shown in Spanish art and literature, and he has been entirely successful. He has written with such insight and sympathy—one might almost say with such love—that it is impossible to read his book without understanding Spain better and realizing a little what a great nation she still is.

In the preface Mr. Havelock Ellis refers to his work as "inadequate and superficial," but there is no trace of superficiality throughout the book. He has returned to Spain again and again, studied her history, art and literature, and learnt to know her people from within, till he can look on life with the eyes of a Spaniard; and the result is a strikingly vivid portrait that few Englishmen could have drawn. Not many of our countrymen, for example, could understand the Spaniard's attitude towards religion so

¹ *Traité des Maladies des Vieillards*. [Treatise on the Diseases of Aged Persons.] By Dr. G. RAUZIER, Professor of Pathology and General Therapeutics, Montpellier, with a Preface by Professor Grasset. Paris: J. B. Baillière et Fils. 1909. (Demy 8vo, pp. 705. Fr. 12.)

² *The Soul of Spain*. By Havelock Ellis. London: A. Constable and Co. 1903. (Mel. 8vo, pp. 430. 7s. 6d.)

thoroughly as the man who can write about their behaviour in church in the following terms :

We realize how far we are from the present when we enter a Spanish church. The ecstatic attitude of devotion which the worshippers sometimes fall into without thought of any observer is equally unlike the elegant grace of the French worshipper or the rigid decorum of the English, while perhaps, if it is a great festival, groups of women cluster on the ground with their fans at the base of the piers, and the children quietly play about in corners with unchecked and innocent freedom. Nor are the dogs and cats less free than the children: at Tudela I have even seen a dog curled up in the most comfortable chair by the high altar, probably left in charge of the church, for he raised his head in a watchful manner when the stranger entered; and in Gerona Cathedral there was a cat who would stroll about in front of the *capilla mayor* during the progress of Mass, receiving the caresses of the passers-by. It would be a serious mistake to see here any indifference to religion; on the contrary, this easy familiarity with sacred things is simply the attitude of those who in Wordsworth's phrase "lie in Abraham's bosom all the year," and do not, as often among ourselves, enter a church once a week to prove how severely respectable, for the example of others, they can on occasion show themselves to be.

This "easy familiarity with sacred things" is an essential part of the Spaniard's character; his religion permeates his whole life. In another passage Mr. Havelock Ellis, in speaking of the anticlerical movement and the growth of scepticism in Spain, says:

We cannot well imagine the religious element in the Spanish people dying out. It is too deeply ingrained in the very fibre of the race. If Catholicism had no existence in Spain one feels that the Spaniards would invent it. Mysticism, even monasticism, is part of their very temperament, a temperament at once so ardent and sensuous, so ascetic and unflinching.

These lines describe the Spanish character derived, according to the author, partly from race and partly from the influences of climate. The Spaniard is descended from African stock, says Mr. Havelock Ellis,

and remains to-day, in the best sense of the word, a savage. His childlike simplicity and intensity of feeling, his hardness and austerity combined with disdain for the superfluous, his love of idleness tempered by the aptitude for violent action, his indifference to persons and interests outside the circle of his own life—these characteristics and the like, which have always marked the Spaniard, mark also the savage.

The climate of Spain has further accentuated these characteristics, with the result that no nation, perhaps, has been so persistently misunderstood as the Spanish. The charge of cruelty, for instance, which is so often made against them is no more merited by them than by any other nation. It is true that the Spaniard is indifferent to pain, but this does not prevent his being capable of deep tenderness and indulgence. Strange as it may sound, many of the Spanish casuists have been famous for their indulgent views in theology, and even the Inquisition is now recognized to have been less cruel than many other religious persecuting bodies. Mr. Havelock Ellis cites Valera as his authority for saying that the town of Salem alone

was responsible for more torture in the name of religion than can be put to the account of the Holy Office from California to the Straits of Magellan.

Those who accuse Spaniards of cruelty would do well to remember that it was in Spain that the first hospital for the insane was founded six hundred years ago, and that the treatment of the inmates was infinitely more enlightened than in our own asylums two or three centuries later. The bull-fight is another form of Spanish cruelty which the Englishman is fond of decriing; but, as Mr. Havelock Ellis justly remarks:

In Spain itself only a section of the public cares for bull-fights; very many Spaniards of all classes do not go and do not like it; the part of religion in the native progress are equally opposed to it. Certainly it is the national sport of Spain, just as horse racing and betting constitute the national sport of England. In both cases alike we must not identify the whole nation with the national sport. Apart from its repulsive elements—which are as objectionable to many Spaniards as to the stranger—the bull-fight is a fascinating exhibition of skill; and, since the contest with the bull is very rapid and the animal's death swift and certain, it must be said that if sport is to be defended at all, this kind of sport compares favourably with fox hunting or pheasant shooting. The element of risk also, the fact that the would-be slayer may himself be slain, adds an element of dignity which is wanting in nearly every other form of European sport.

If our insular ideas concerning Spanish men are revolutionized by Mr. Havelock Ellis, this is still more the case

with regard to Spanish women, whom he is inclined to regard on the whole as superior to their countrymen. The languorous, passionate beauties so often depicted in novels, plays, and pictures are not typically Spanish. On the contrary, the typical Spanish woman is specially marked by sweetness and strength; the ideal Spanish woman is at once strong, independent, self contained, and at the same time wholesomely gracious and gentle. She is, as Valera says, "angelic but robust." This last-named quality is very marked; the average Spanish woman is not only strong, she possesses a vast fund of energy. Mr. Havelock Ellis says:

Not long since I spent a Sunday in the old Castilian city of Palencia, and watched how the women—stout and matronly as well as young women—amused themselves at a game between bowls and ninepins, casting the large heavy balls along the grass with unwearying satisfaction during the whole of a long afternoon in the most businesslike and yet gleeful manner, while a few children stood looking on at their elders. I have never seen English women of the people, or indeed the women of any other land, playing at anything so vigorously healthy and innocent for the sheer joy of muscular exertion, and a race whose mothers have so much wholesome energy to spare can scarcely be very exhausted or decadent.

These last few words are significant, for they express the author's opinion of the state of modern Spain. All her modern writers are pessimistic regarding her future, but Mr. Havelock Ellis does not agree with them. The real root of the evil, he holds, lies in the Spaniard's belief that the life of his country is finished, that the race is decadent, unable to carry on the traditions of their ancestors. Let them but once realize that this is not the case, that the bulk of the Spanish nation is as sound and strong as ever, and their problem will be solved. The concluding words of this interesting and instructive book are full of hope and encouragement, and Mr. Havelock Ellis leaves us with the conviction that there is a future, and that a glorious one, for Spain.

FORENSIC MEDICINE.

WHAT are the relative values of the precipitin test and the "deviation of the complement" test for the forensic differentiation of human from animal blood? This is the question which is discussed by several eminent German pathologists in a pamphlet published recently in Berlin.¹ From his high position as an authority on forensic medicine Professor Uhlenhuth's opinion is naturally of great importance. In his view, the "deviation of the complement" method, originated by Bordet and Gengou² and adopted by Neisser and Sachs, is of great service in scientific laboratory work where pure albuminous solutions are under investigation. But he attaches less value to it in forensic practice, where we have to deal with traces of blood subjected to all sorts of contaminations. Fallacies arising from many of these complications may be eliminated by special care and the employment of control experiments, but nevertheless difficulties arise from the fact that the "deviation" method is so sensitive that it gives positive results with sweat, mucus, nasal secretion, saliva, etc., and hence may be misleading. These difficulties, he maintains, are not encountered in the precipitin method as employed by him. He therefore considers that it is not permissible in forensic practice to regard a positive result given by the Neisser-Sachs method as overruling a negative outcome of the precipitin test. It is, however, urged by some of the contributors, who regard the "deviation" test as a useful adjunct to the precipitin test even in forensic medicine, that a negative result obtained by the former and more delicate test would, when found, be of service in strengthening the assumption that the presence of the particular blood under consideration could be excluded.

The little book of 128 pages upon toxicology, by F. A. ROSSMÄSSLER,³ is wonderfully comprehensive considering its size, and affords an excellent, though rather superficial, summary of the chief facts connected with a large number of poisons. The author deals with all the important, and with a comparatively large number

¹ Nachprüfung des von Neisser und Sachs angegebenen Verfahrens zur forensischen Unterscheidung von Menschen- und Tierblut. By various authors. Abdruck aus dem klinischen Jahrbuch, Bd. XIX. Jena: Gustav Fischer, 1908. (Roy. 8vo, pp. 49. M. 150.)

² BRITISH MEDICAL JOURNAL, February 13th, 1903, p. 415.

³ Toxicologie oder die Lehre von den Giften. Von F. A. RossmäSSLER. Wien und Leipzig: A. Hartleben. 1908. (Cr. 8vo, pp. 142. M. 5.)

of unimportant, poisonous substances in a brief but interesting manner, and the book can be recommended to those who only desire to gain a bird's-eye view of the subject. The author states in his preface that, in his opinion, every educated person should know something of poisons and their effects upon the human body, and it has evidently been his object to write a book which would satisfy the requirements of the educated public generally rather than the medical public in particular; he consequently, therefore, avoids technical expressions as far as possible. Perhaps the most complete part of the book is that which treats of poisons derived from plants, and the author has allowed himself more latitude in these chapters than in those devoted to chemical poisons. The chapter dealing with animal alkaloids is very brief and uninteresting. On the whole, however, the book is good as far as it goes, but it does not go very far.

A CONDEMNATION OF ALCOHOL.

We have already noticed several of the contributions to the system of treatment of diseases of digestion and metabolism which is being published in fasciuli by Professor A. Albu, of Berlin, and we have recently received the section on the indications for the administration of alcohol in the treatment of internal diseases, by Professor GEORG ROSENFELD, of Breslau,⁸ which is one of the most uncompromising condemnations of the use of alcohol in disease that has ever appeared in a medical publication not avowedly inspired by temperance principles. According to Professor Rosenfeld the evidence that alcohol is capable of preventing waste is contradictory, and the balance is against it. He believes that to promote the combustion of fat in the body the presence of some other substance is necessary, which he compares to the wood and paper used to start a coal fire, and that carbohydrate is this substance needed for the oxidation of fat. If carbohydrate is absent fat accumulates in the liver. He divides carbohydrates into hepatic and non-hepatic, an example of the latter being seen when sugar is injected into the veins in animals. It is a peculiarity of this non-hepatic sugar that it is oxidizable by animals depancreatized or poisoned by phloridzin. It has a tissue-sparing effect, and in certain people alcohol has the power of converting hepatic into non-hepatic sugar, thus acting as a tissue sparer. This occurs in people who tend to obesity, and the experiments which had positive results were made on Jews who have a well-known predisposition to become fat. Kuelz in one case of diabetes found that alcohol diminished the sugar; according to Hirschfeld it diminishes the nitrogen, but not the sugar; Neubauer, in experiments upon four patients, found that alcohol diminished the acetone and oxybutyric acid, but had no effect on acetone produced in healthy persons by excessive meat diet; Benedict replaced the fat in a carbohydrate-free diet by alcohol, with the result that the acetone was diminished 29 per cent., while in diabetes it reduced the quantity of sugar. Rosenfeld concludes that alcohol acts in the body as a foodstuff, being oxidized completely, and has a tissue-sparing effect which is manifested either after the first doses or in the course of some days. The effect of alcohol upon the circulation is, he says, altogether unfavourable; it in no way deserves its reputation as a stimulant to the heart, it does not raise the blood pressure or change the tone of the small vessels, while its weakening effect on the heart is shown by the quickening of the pulse-rate after exertion and impairment of the power of the heart to regain its normal rate, while the intravascular friction is raised, probably in consequence of increased viscosity of the blood. In collapse and palpitation and the like it may, he thinks, occasionally be helpful by numbing the mind and the vasomotor centre, but its continued use leads to retention of lime in the body, and favours calcification of the arteries. In small doses it increases muscular power, but this rise is followed by a greater fall, while large doses are harmful from the first. Mental processes are slowed by it, and, if in habituated persons it stimulates loquacity, this is probably the result of removing the depression which follows

its use. Small diluted doses increase the secretion of hydrochloric acid, but not of pepsin, while concentrated alcohol checks the flow of gastric juice and excites the secretion of mucus. It diminishes bowel peristalsis, this action being aided by the presence of tannin in wines. Its indications in disease are therefore, according to Professor Rosenfeld, very limited, although it has been used in nearly every malady, either to stimulate the heart or to spare the tissues or to keep up the strength, to promote appetite, or to strengthen the nervous system. He admits that in septic conditions and influenza it lessens the feeling of illness, but he doubts whether it has any other effect; and he states that while no one believes it to influence the local processes in enteric fever and pneumonia, experiments show that it increases the virulence of infective poisons, diminishes the formation of antibodies and of phagocytosis, while clinical experience shows better results where these diseases are treated without alcohol, the results obtained at the Temperance Hospital in London being quoted in support of this last statement. Its only advantage in phthisis is to diminish the patient's consciousness of his illness; in heart disease it only does harm, in stomach diseases its indications are limited, and its effect in relieving the sense of repletion can only be due to its action on the nervous system. Its constipating effect may indicate its use in diarrhoea, but this advantage is only temporary. He believes that it relieves the tenesmus of the bladder in gonorrhoea, but increases the excretion of uric acid. It may be useful in advanced cases of diabetes, where there is great intolerance of carbohydrates. The only benefit that can be derived from it in nervous diseases is as a narcotic, and here, in accordance with the majority of the profession, Professor Rosenfeld prefers other means.

Finally, he concludes that by abstaining from the use of alcohol in the treatment of disease we shall be acting in accordance with the fundamental principle: *Non nocere*.

SNAKE POISONING.

SIR LAUDER BRUNTON has issued, in a volume entitled *On the Poison of Venomous Snakes and the Methods of Preventing Death from their Bite*,⁷ reprints of five papers written conjointly by himself and the late Sir JOSEPH FAYRER, with the co-operation in one case of Major LEONARD ROGERS, I.M.S. The earliest of the papers is dated 1873: the most recent—that on a method of preventing death from snake-bite, capable of common and easy practical application—in 1904. The earlier papers are classical, although we suspect that they are more often quoted at second hand than from the originals. In his preface Sir Lauder Brunton divides the writers of scientific papers into two classes—the “ten-year school,” who systematically neglect all work except that done within the last ten years; and the conscientious workers, who try to find out all that has been done in their own field of investigation, so that their observations may be rightly fitted in and help to build up a solid structure of knowledge. It is in the interests of these conscientious workers that he has published this volume, believing that it may now be difficult to obtain original copies of the papers, and that therefore observations of considerable importance may be overlooked. As an instance he states that Calmette has credited Lacerda with the discovery of the antidotal power of potassium permanganate, and to himself that of chloride of gold, whereas it appears that the first-named salt was used by Fayrer in 1869, the observations being recorded by him in 1872; while the similar action of gold chloride was published by Brunton and Fayrer in 1878. The volume in a way forms a small memorial to the late Sir Joseph Fayrer, and is all the more appropriate because the whole edition of several of his works were destroyed by fire some ten years or more ago.

NOTES ON BOOKS.

THE scope of the *Public Schools and Preparatory Schools Year Book*⁹ is sufficiently indicated by its title. The volume for 1909 is the twentieth. The main part of the book consists of a list of public schools, that term being

⁸ *Sammlung zwanzigloser Abhandlungen aus dem Gebiete der Verdauungs- und Stoffwechsels-Krankheiten.* Herausgegeben von Professor Dr. A. Albu. I. Band. Heft 5. Das Indikationsgebiet des Alkohols bei der Behandlung Innerer Krankheiten. Von Professor Dr. Georg Rosenfeld. Breslau, Halle a. S.: C. Mohrhold. 1908. (Med. 8vo, pp. 18. M. 1.20.)

⁷ London: Macmillan and Co., Limited. 1909. (Demy 8vo, pp. 174. 2s. 6d.)

⁹ *The Public Schools Year Book and Preparatory Schools Year Book, 1909.* London: The Year Book Press (Swan Sonnenschein). (Cr. 8vo pp. 703. 3s. 6d.)

accepted in a liberal sense; particulars as to governing body, list of masters, number of boys, general education, entrance examination, entrance scholarships, and other scholarships, and fees are given. The headmasters' conference last December recommended that this publication should be adopted as its official book of reference, and the next annual issue will appear with this semi-official recognition. There are short articles about Oxford and Cambridge certificate examinations, and on how to enter various professions, including the medical profession, and on Colonial openings; finally, there is a general list of preparatory schools. Altogether the volume will be found useful by any father of sons who has not yet made up his mind what school to select.

The ninth edition of *Saunders's Pocket Medical Formulary*⁹ has been revised by Dr. W. M. POWELL of Philadelphia, who states in the preface that by omitting formulae which had become out of date space has been gained for the introduction of others, illustrating not only the use of approved new remedies, but also the modern application of many old ones. The volume contains a set of prescriptions arranged under an alphabetical list of diseases. It has blank interleaves for additional formulae. A book of this kind will often be found useful by suggesting a new drug or new combination.

*The Year Book of Pharmacy for 1908*¹⁰ presents the usual features of this useful publication, and contains abstracts of the principal papers on pharmaceutical subjects which have appeared in British and foreign journals during the year; these abstracts are arranged under the headings Chemistry, Materia Medica, and Pharmacy. Those grouped as chemistry occupy 220 pages, or over one-third of the entire book; the papers of which a summary is given are of very varied character, dealing with identity and purity tests for a large number of medicinal substances, assay processes for drugs, newly-discovered active principles, etc. The abstracts under the sections Materia Medica and Pharmacy are much fewer in number; the last-named section includes a considerable number of galenic formulae published during the year. The second part of the book is the official account of the proceedings of the British Pharmaceutical Conference held in 1908 at Aberdeen, and includes the full text of the papers presented at that meeting, with the discussions upon them.

In *Analytical Notes, 1908*,¹¹ issued by Messrs. Evans, Sons, Lescher, and Webb, this firm publishes concise accounts of the tests applied in their laboratories to large numbers of commercial specimens of drugs and chemicals. Similar little books of laboratory records are now published by several of the larger firms, and form a very useful indication of the ordinary prevailing standards of purity in drugs. A good deal of importance is evidently attached to maintaining a sufficiently strict limit to the traces of arsenic and lead permissible in chemicals, and far greater purity in this respect prevails now than was the case a few years ago. Of forty-five samples of citric acid only four contained as much as 1 part of arsenic per million, and all but seven contained less than 10 parts of lead per million, the seven containing between 10 and 20 parts. Sodium sulphate contained as much as 4 parts of arsenic per million in four samples out of 100, and sodium bicarbonate conformed to a very similar standard. Figures are given for about 150 different drugs and chemicals.

⁹ *Saunders's Pocket Medical Formulary*. By W. M. Powell, M.D. Ninth edition. Philadelphia and London: W. B. Saunders and Co. 1909. (Casp. 8vo, pp. 315. 7s. 6d.)

¹⁰ *The Year Book of Pharmacy and Transactions of the British Pharmaceutical Conference, 1908*. Editor of the Year Book, J. O. Braithwaite. Editors of the Transactions, E. Saville Peck, M.A., and E. White, B.Sc., F.I.C. London: J. and A. Churchill. 1908. (Demy 8vo, pp. 606.)

¹¹ *Analytical Notes, 1908*. Liverpool: Evans, Sons, Lescher, and Webb. (Crown 8vo, pp. 48. Free on application.)

THE Belgian Government is making arrangements for the establishment of an Institute of Tropical Medicine at Antwerp.

THE annual report of the Trained Nurses' Annuity Fund for 1908 states that in view of the Old Age Pension Act the regulations have been revised, and it is hoped that in future the society will be more free to help younger nurses who become incapacitated. A candidate for an annuity must have had at least three years' training and seven years' subsequent nursing, have attained the age of 40, and be more or less incapacitated for work. There is, however, at present no vacant annuity. Further particulars can be obtained on application to Dr. A. Ogier Ward, 73, Cheapside, E.C.

MEDICINAL AND DIETETIC PREPARATIONS.

Tablets for the Production of Lotions.

UNDER the name "Soltabs," Messrs. Hewlett and Son, Ltd. (Charlotte Street, London, E.C.), are supplying a series of soluble tablets for the production of lotions. These are distinguished by their shape from tablets for internal administration. We have examined samples of nasal eucalyptol comp. which have been submitted, consisting of borax and sodium bicarbonate with several antiseptics, and find that they can be readily crushed or broken, and dissolve without difficulty to form a clear solution.

New Theobromine Compounds.

We have received from Messrs. Widenmann, Broicher, and Co. (33, Lime Street, London, E.C.), samples of two new derivatives of theobromine introduced by Messrs. Zimmer and Co., Frankfurt. The first of these is called Eustenine, and is theobromine sodium iodide $C_7H_7N_3O_5NaI$; the formula shows that it contains 36 per cent. of iodine, or 43 per cent. of sodium iodide. Eustenine is recommended for use in arterio-sclerosis and allied conditions. We found it to be a white powder of strongly alkaline reaction, soluble in water, the solution being stable with alkalis, but decomposed after a short time by acids, theobromine being deposited in crystals. The other new theobromine derivative, Theolactin, is also alkaline in reaction, but its solution is less stable: it must be dissolved in warm water, and on cooling the solution theobromine gradually separates unless additional alkali is added. This compound is theobromine sodium lactate, and therefore very similar in constitution to diuretin. It is a granular white powder, very hygroscopic in nature, and is recommended as a diuretic free from injurious action on the heart, which may be employed alternatively with other compounds when it is desired to change the diuretic administered in any given case.

Evaporating Skin Lotions.

We have received samples of a number of lotions prepared by Messrs. C. J. Hewlett and Son, Ltd. (Charlotte Street, London, E.C.), intended for use in cases of eczema in which fatty bases are undesirable. Various formulae are employed, including sulphur, zinc oxide, resorcin, solution of coal tar, and ichthyol. The lotions are of a slightly gelatinous consistency, and when applied to the skin, the vehicle, which is partly alcoholic, evaporates fairly rapidly, leaving the medicaments in a dry film, which is not readily rubbed off.

Tablets of Glycerophosphates with Haemoglobin.

In spite of the doubts that have been cast on the superiority of glycerophosphates to inorganic phosphates, these compounds continue to find much favour, and the number of ready-made combinations in which they are supplied is continually increasing. A useful form for their exhibition is provided by the tablets of compound glycerophosphates with haemoglobin, prepared by Messrs. C. J. Hewlett and Son, Ltd. (Charlotte Street, London, E.C.), a sample of which we have examined. These are sugar-coated tablets containing glycerophosphates of calcium, potassium, sodium, iron, and magnesium, with caffeine, strychnine, and haemoglobin. There are obvious conveniences in the tablet form for such a medicine, which is likely to be ordered for patients who are following their ordinary occupations.

MEDICAL AND SURGICAL APPLIANCES.

Tablets for Testing Urine.

VARIOUS devices have been introduced from time to time for the purpose of simplifying the clinical testing of urine, especially for sugar and albumen, and perhaps the most successful of these is the employment of tablets of known strength for preparing the respective agents at the moment when they are required. Mr. E. Merck (16, Jewry Street, London, E.C.) has submitted samples of a number of such tablets which he has recently placed on the market, and our examination of these has shown them to be very satisfactory for the purpose. They include tablets for the preparation of Fehling's solution for the detection of quantitative determination of glucose, and tablets for the production of Esbach's Reagent, Riegler's Reagent, and acid-ferricyanide solution, for the detection of albumen; the first named of these three can also be used for its approximate determination by means of an albumino-meter.

Nova et Vetera.

CALENTURE.

EVERY student of English literature must have come across in it many allusions to a strange malady called "Calenture," a term which appears to have been introduced into our language at the end of Elizabeth's reign, when our seamen came into communication with the Spaniards. The word is derived from the Spanish *calentura*, fever, and this from the Latin *calere*, to be hot.

One of the earliest reference to this malady is to be found in Nashe's *Christ's Tears over Jerusalem*, 1593: "Then (as the possessed with the Calenture) thou shalt offer to leave." Another occurs in the *London Prodigal*, 1605: "Such men die mad as of a calenture." In Hawkins's *Voyages in the South Seas*, 1622, we have evidence that calms at sea were thought to be favourable to the production of the disease: "To avoid the calmes, which . . . breed calentures, which we call burning fevers." Apparently the fever was supposed to have some effect on the liver, for in Massinger's play, *The Fatal Dowry* (Act. III, sc. 1), 1632, Charalois is made to say:

Thou dost strike
A doubtful coldness to my heart's high heat,
And shrink'st my liver like the calenture.

Defoe has made us familiar with the word "calenture" from our boyhood. In *Robinson Crusoe* we read, "Yet even in this voyage I had my misfortunes too; particularly that I was continually sick, being thrown into a violent calenture by the excessive heat of the climate." The disease was believed especially to attack sailors in the tropics and and to cause a delirium in which the sufferers fancy the sea to be green fields, and desire to leap into it.

So by a calenture misled,
The mariner with rapture sees
On the smooth ocean's azure bed,
Enamelled fields and verdant trees.

Soon after Swift wrote these lines, Pope and Theobald were in hot dispute over the meaning of a sentence in *Henry V* (ii, 3) describing the death of Falstaff. In the folios we read, "and a Table of green fields," but Theobald in his edition of the play altered the words to "and a' babbled of green fields." This interpretation was rejected by Pope, who maintained that the words were part of a stage direction, which had crept into the text from the margin, Greenfield being the name of a property man. Theobald, in defence of his correction, remarked: "It is certainly observable of People near Death, when they are delirious by a Fever that they talk of moving; as it is of Those in a Calenture, that they have their Heads run on green Fields." Wordsworth in his poem, *The Brothers*, gives an imaginary description of a sailor who on a voyage looks over the side of the vessel and sees in the deep the verdant hills of his native country and sheep grazing on them. In a footnote, it is stated, "This description of the Calenture is sketched from an imperfect recollection of an admirable one in prose by Mr. Gilbert, author of *The Hurricane*." Somewhat recently, in a magazine now defunct, the following curious story was told as a fact. During a dead calm at sea a boy on a ship who had been remarkable on the voyage for his high spirits and love for practical joking was observed one day to be despondent, listless, and apparently in a state of ill-health. He would not own, though, that he was unwell, and when spoken to appeared to be inattentive to what was said and preoccupied in mind. On one occasion, when asked how he was, he burst into tears, moved away from his interrogator, and gazed intently into the sea. An old sailor advised that he should be taken below, saying, "The calenture has come upon him." Almost at that instant, the boy flung himself into the sea. He was rescued, however, and the contact with the cold water seemed to have a beneficial effect, for he shortly afterwards regained his cheerfulness. "He told us," says the narrator, "that he had all that day been

thinking of home, until he had persuaded himself that he saw his mother's cottage in the waves, and the trees and green fields glittering in the sunshine around it, and that he could not resist the desire to leap to them again!"

According to old medical writers, calenture is a species of phrenitis—a term which has been used in the past to signify phrensy, delirium, brain fever, and encephalitis. An account of the complaint is given by Bonetus, and also by Oliver and Stubbs. Oliver says: "In the month of Aug., 1693, I was called upon about four a Clock in the morning to see a Sailor on board the *Albemarle*, Man of War, in a violent Calenture. . . . When I saw him first I found him in the hands of 3 or 4 of his Comrades, who were hardly able to manage him, because of his strugglings and constant endeavours to get from them. I observed he very often cried out he would go into the green fields, his looks were as furious and wild as those of a Lyon, and every now and then he would heartily curse those that held him." It is then related how the man was bled, and recovered with some weakness from loss of blood. "This was the only Calenture," the writer adds, "I saw all the while I was in the Fleet for near three years, two summers of which I served in the Mediterranean, and this happened in the Bay of Biscay, in the Latitude of 47, in the month of August. They are, I hear, more frequent in warmer climates, tho. very often undiscovered."

"The reason I imagine to be this. When they are seized with the violent Heat and Disorder which for the most happens in the night, they steal privately overboard into the Sea, imagining they're going into green Fields. . . .

"This Distemper I am of opinion is what we call a Phrenitis, occasioned by a more than ordinary Effervescence and Heat of the Blood, which distracting and confounding, if not inflaming the Animal Spirits, the proper and immediate ministers of the mind, is the cause of all those irregular motions, violent explosions, and convulsions." (*Philosoph. Trans.*, vol. xxiv.)

Calenture, when the term was not employed in the general sense of fever or ardour or zeal, seems to have been what is now called thermic fever or sunstroke occurring in sailors at sea. In bygone times, when there were no steamboats sailors were much more exposed to the burning heat of the sun than they are now, especially during calms at sea. Their sufferings must have been terrible, and it can easily be conceived that they frequently became delirious and were subject to sensory illusions. Indeed, it has been said that sailors becalmed under a vertical sun in the midst of the wide ocean have listened in trembling wonder to what they imagined to be the chimes of their own village bells. In such solitude and distress it would be likely for home-loving English sailors to crave for a sight of their native country, and if delirious their "heads" to "run on green Fields."

There may be some truth in what Keats has observed that when we are ailing we are more sensible of the beauties of Nature. While suffering from consumption, he remarked to a friend, "Like poor Falstaff, though I do not 'babble' I think of green fields."

Again, it must be remembered that ships in former days were often ill-provisioned, so that sailors suffered much from hunger and thirst. Shipwrecked mariners, it is well known, either from the effects of want of food or water, or both, get delirious, have illusions, and sometimes throw themselves overboard. The captain of a wrecked vessel, who suffered from starvation but not from thirst, told Goldsmith that "when his health was almost destroyed, a thousand strange images rose upon his mind, and every one of his senses began to bring him wrong information." Intense thirst also induces great nervous excitability and delirium. Experiments made by Harless in Munich showed that the nerves gain an extraordinary increase in their excitability as their proportion of water decreases.

It would be interesting to know if sailors ever now, as the result of heat upon the body, or hunger, or thirst, manifest a desire to cast themselves into the sea, believing it to be green fields. The present writer has been unable to find out from seafarers that they have any knowledge of a fever at sea producing such a peculiar form of delirium as is ascribed by old authors to calenture.

EDWARD KNIGHT, L.R.C.P. and S.Edin.

THE TWENTIETH CENTURY DISEASE.

ANTINEURASTHIN, A BRAIN AND NERVE FOOD.

READERS of daily or weekly papers or magazines who allow their eyes occasionally to travel over the advertisement pages of these journals can hardly fail to have seen somewhat frequently a lengthy advertisement of a preparation called Dr. Hartmann's Antineurasthin. The advertisement is usually headed "The Twentieth Century Disease." This, it appears, is neurasthenia, and the various stages of its manifestations are set out in a sort of table, beginning with "Sensitiveness" and ending with "Suicidal Tendency." Antineurasthin, referred to as "this marvellous twentieth century brain and nerve food discovery," is put forward as a specific for the cure of neurasthenia.

Dr. Hartmann's discovery is one that should personally and very deeply interest brain-workers in all walks of life. Every day are heard and seen all too serious evidences of the undue strain of their intense work on the vital power of the body. And now, on the highest possible authority, it is heralded that science has proved equal to the stern necessity which demanded the discovery of "Antineurasthin," the brain and nerve food.

For greater convenience "Antineurasthin" is compressed into small tablets, and although its beneficial effect on the brain and senses is so immediate, yet there is none of the depressing reaction that follows the administration of artificial drug stimulants, "Antineurasthin" being a special brain and nerve nutrient, and not a brain and nerve drug-irritant. No longer need the brain-worker struggle on under the cloud of fear of failing powers of brain and body. He or she may, by including "Antineurasthin" as an article vitally necessary in the daily diet, build up and maintain that perfect balance of mental and physical power which alone can uphold health and happiness.

It appears that this article was sold in Germany before being introduced here, and it was included in the series of proprietary preparations analysed by Dr. Zernik, whose results have been quoted from in our columns from time to time. According to Zernik's analysis¹ it consists of dry yolk of egg, milk sugar, a small quantity of starch, dextrin, and an aromatic substance.

A detailed quantitative analysis of "Antineurasthin" as sold in this country gave the results described below. A 4s. 6d. box contained twenty-four tablets, having an average weight of 30½ grains each. The directions are:

"To be taken when and as required, particularly before or after great exertions (bodily and mental); in all cases of nervous disorders and mental affections, general debility, etc."

Usual dose 3-4 tablets a day between meals. Antineurasthin contains no injurious ingredients, and is therefore absolutely harmless to the most delicate, even if taken in large quantities.

Analysis showed the presence of:

Proteid...	...	...	26.4 per cent.
Fat	...	...	2.5 "
Sugar of milk	...	...	32.8 "
Ash	...	...	5.7 "
Water	...	...	8.3 "
Gum	...	about	2.0 "
Aromatic substances	...	...	traces "
Potato starch (by difference)	about	22.0	"

The material of the tablets is nearly white, with yellow particles like dried egg-yolk distributed through it; extraction with appropriate solvents proved a fair trace of lecithin to be present; if the whole of the fat present were derived from egg-yolk it would represent 3.8 per cent. of dried yolk, equivalent to 7.7 per cent. of fresh liquid yolk in the tablets; this accounts for 1.3 out of the 26.4 per cent. of proteid. Sulphur in organic combination was found to be present to the extent of 0.09 per cent.; sulphur is practically absent from the yolk, but occurs in the white of eggs, and the amount found corresponds to 5.4 per cent. of dried, or about 38.6 per cent. of liquid, egg-albumin in the tablet; a further 5.1 out of the 26.4 per cent. of proteid is thus accounted for. This leaves 20 per cent. of proteid, and this stands in about the same ratio to 32.8 per cent. of milk sugar, and about 5 per cent. of ash (deducting the ash of the egg and gum), as corresponds to the composition of a dried separated milk. The ash consisted principally of calcium phosphate, like the ash of milk. The aromatic substances appeared to include a trace of vanilla and of some other substance that could not be identified; these are probably added to serve at the same time as flavouring agents and preservatives.

The starch was seen by the microscope to be very abundant, corresponding in appearance to the amount required by difference. On the above assumptions the composition of the tablets would be approximately:

Dry yolk of egg...	...	...	3.8 per cent.
Dry white of egg	...	...	5.4 "
Dry separated milk	...	...	57.8 "
Gum	...	...	2.0 "
Potato starch	...	...	22.7 "
Moisture	...	...	8.3 "
Aromatic substances	...	...	traces.

The daily dose of four tablets, or 122 grains, would, according to this formula, contain the equivalent of 10 grains of yolk and 43 grains of white of egg (not dried); the ratio between these is about the same as exists in an average egg, and the two may be put together and regarded as about a teaspoonful of fresh egg; in addition, the daily dose would represent about 2 oz., or a quarter of a tumblerful, of separated milk and a little starch.

THE BRITISH MEDICAL BENEVOLENT FUND.

At the February meeting of the Committee twenty cases were considered and grants amounting to £190 made to sixteen of the applicants. Appended is an abstract of the cases relieved:

1. Widow, aged 57, of L.R.C.P. Edin. No income; endeavours to support herself by letting lodgings, but has great difficulty in making ends meet. Only child unable to help. Relieved six times, £70. Voted, £12.

2. Widow, aged 84, of M.D. Aberd. Quite unprovided for at husband's death sixteen years ago and dependent on two daughters who are governesses. Voted £18.

3. Widow, aged 50, of L.R.C.P. Irel., L.R.C.S. Edin. Ought to receive £40 a year from property in Ireland, but tenants refuse to pay the rent. Three children unable to help. Voted £12.

4. Daughter, aged 48, of L.R.C.P., L.R.C.S. Edin. Has maintained herself for several years by teaching, but has recently been operated upon for malignant disease, and is now practically destitute. Voted £18.

5. Daughter, aged 47, of M.R.C.S. Eng. Used to be fairly provided for, but, owing to great depreciation of her investments and unavoidable expenses due to ill-health and two surgical operations, is now obliged to seek a home with a relation who can ill afford to help. Voted £10.

6. M.D. Glas., aged 70. Has been incapacitated for the last nine months, and is now at an end of his resources. No children. Voted £12.

7. Daughter, aged 41, of late M.R.C.S. After father's death took to nursing, but contracted blood poisoning and has never recovered; is now permanently incapacitated and quite deaf. Voted £12.

8. Daughter, aged 57, of M.D. Edin. Since father's death 40 years ago has supported herself by teaching, but finds it increasingly difficult to do so, and is now broken down in health and ordered to take a rest. Voted £12.

9. M.R.C.S. Eng., aged 66. Quite incapacitated for the last year; income less than £1 a week, derived from sickness allowance and a small Poor Law pension. Three daughters, but only one self-supporting, the other two being chronic invalids. Voted £18.

10. Widow, aged 67, of F.R.C.S. Eng. Only income, £20 a year; no children, health failing. Relieved five times, £40. Voted £5.

11. Daughter, aged 61, of late M.R.C.S., L.R.C.P. Income £30 a year, derived from two charitable institutions. Is quite blind and in bad health. Relieved four times, £32. Voted £10.

12. Widow, aged 69, of M.R.C.S., L.S.A. Since husband's death several years ago supported herself by acting as nurse-companion, but now finds increasing difficulty in obtaining cases, and has exhausted her small savings. No children. Relieved four times, £33. Voted £10.

13. Widow, aged 40, of M.D.R.U.I. Quite unprovided for at husband's death ten years ago. Now acts as a housekeeper, receiving a home for herself and boy (a candidate for Epsom College) in lieu of salary. Relieved ten times, £119. Voted £12.

14. Daughter, aged 52, of late M.R.C.S. Was left an orphan, quite unprovided for, when 5 years old, and now acts as a companion but receives no salary and requires a little help for unavoidable expenses. Relieved once, £5. Voted £5.

15. Widow, aged 47, of M.B. Durh., M.R.C.S. No income; lets lodgings. Two children, one a boy at Epsom College. Relieved once, £12. Voted £12.

16. Daughter, aged 57, of late L.S.A. Endeavours to support herself by letting lodgings; no other source of income. Relieved once, £10. Voted £12.

¹ BRITISH MEDICAL JOURNAL, November 3rd, 1903, p. 1223.

REPORT

OF THE

Royal Commission on the Poor Laws and Relief of Distress.

[SECOND NOTICE.]

We gave last week (pages 479-484) an account of the general scope of the Majority and Minority Reports of the Royal Commission on the Poor Laws and Relief of Distress.* In particular full details were quoted with regard to the suggestions of both reports as to medical relief; there remain, however, many other matters in these very voluminous reports to which we propose to refer as occasion serves. Many evils in the present system are disclosed, and far-reaching changes are suggested in both reports. Indeed, as we have already pointed out, the majority and minority agree to a very large extent as to the evils existing, the chief differences being as to the remedies which should be suggested. The task of stating the points of agreement is considerably simplified if we accept the statement put forward by Mr. and Mrs. Sidney Webb in the volume entitled, *The Break-up of the Poor Law*: it is the first of two volumes "edited with introduction by Sidney and Beatrice Webb,"† and consists of the first twelve chapters of the Minority Report, without the notes and references, but containing an introduction nine pages long, which is an expression of the views held by Mr. and Mrs. Sidney Webb. In this introduction we find the following observations upon the points of agreement:

Although the Majority Report is flanked by half a dozen dissenters—of which the longest is here republished—the members of the Commission are remarkable in the extent of their revolutionary unanimity. All the Commissioners, without exception, agree that drastic changes in the Poor Law and its administration are urgently required: all agree that the "principles of 1834," whatever they once were, are now hopelessly antiquated and inapplicable to the present state of things; all agree even in discarding the very terminology of the Poor Law, to which administrators and paupers alike have grown accustomed, in order to mark the completeness of the break from the past; all agree that the boards of guardians in town and country alike must imperatively and immediately be replaced by some other authority; all agree in condemning, and in recommending for abolition, the general mixed workhouse, which has been for seventy-five years the characteristic feature of the English Poor Law administration; all agree that the treatment of the children, the sick, and the aged needs to be greatly improved. Similarly, all but two out of the eighteen agree that the union area, which has dominated English administrative geography for more than half a century, must disappear from the map; that the future unit of local administration must be the county borough and the county; and that the county borough councils and county councils must add to their other functions those hitherto discharged by the boards of guardians. There has, we think, never been a representative Royal Commission, constituted of members of such diverse opinions, dealing with a subject of so great an extent, and of far-reaching importance, which has, after three years' investigation, found itself agreeing with so much unanimity to conclusions of such sweeping character.

Authors' Footnote.—"The administrators of the Poor Law," we are told in the Majority Report, "are, in fact, endeavouring to apply the rigid system of 1834 to a condition of affairs which it was never intended to meet. What is wanted is not to abolish the Poor Law, but to modify, strengthen, and humanize the Poor Law" (par. 537 of Chapter I of Part VI of Majority Report).

The rest of the introduction is devoted to a critical review of the recommendations of the Majority Report. The minority resent the reflections made upon the personal shortcomings of the Poor Law guardians, and appear disposed to defend them on the ground mainly that some of them are actuated by the best motives, and have given much time and energy to the work, and that all have been hampered and interfered with by the creation of other authorities whose duties overlap those of the guardians.

The minority declare that the recommendations of the majority propose the setting-up again of what is practically the same sort of Poor Law relief with new members under another name.

The majority, as was stated last week, propose to place the county council in supreme control in each county, and to require it to appoint special committees for dealing with Public Assistance. The minority propose very much the same thing, that is to say:

"That the boards of guardians in England, Wales, and Ireland, and (at any rate as far as Poor Law functions are concerned) the parish councils in Scotland, together with all combinations of these bodies, should be abolished.

"That the property and liabilities, powers and duties of these Destitution Authorities should be transferred (subject to the necessary adjustments) to the county and county borough councils, strengthened in numbers as may be deemed necessary for their enlarged duties; with suitable modifications to provide for the special circumstances of Scotland and Ireland, and for the cases of the metropolitan boroughs, the non-county boroughs over 10,000 in population, and the urban districts over 20,000 in population."

OVERLAPPING OF AGENCIES PROVIDING MEDICAL ASSISTANCE.

The Majority Report refers to the want of co-operation and consequent overlapping of effort of the various agencies supplying non-institutional medical treatment to the poorer classes; such treatment is supplied by the guardians, sanitary authorities, education authorities, out-patient departments of voluntary hospitals, free dispensaries, provident dispensaries, medical clubs, and friendly societies. It is stated that, except to a very limited extent, there is no real or effective co-operation between the Poor Law and other agencies providing medical assistance, and the Commissioners recommend that there should be co-operation.

Out-patients.

With regard to out-patients the report has the following observations on the right sphere of the voluntary hospital in regard to out-patients:

This problem, in our opinion, lies at the very entrance to any radical reform of the system of medical assistance. In the metropolis, as we have shown, the out-patient departments of the hospitals steadily and enormously enlarge their sphere. Much of this increase is due, rightly and properly, on the one hand to increase in population, and the increasing facility with which the poor in country districts can travel to London, but chiefly to the expensive equipment for dealing with special diseases which science has now placed in the doctor's hands. But these valid grounds for an increase in the work of the out-patient department render it all the more necessary to save them from certain abuses of which we have had ample evidence.

In the first place, the out-patient departments are dealing with a large number of cases for whose treatment the Poor Law authorities are, or should be, responsible. Thus, our special investigator, Miss Roberts, concludes that, if the three hospitals selected for her inquiry be fair samples, "at least 11 per cent. of out-patients at the voluntary (general) hospitals in London are actually Poor Law cases, being in receipt of some form of Poor Law assistance either at the very time they are treated, or within a half year of treatment." Under a co-ordinated system, it might be expedient to refer certain pauper cases to the out-patient department for a second opinion, or for special treatment, but this does not appear to be done to any great extent at present. Accordingly, it may be said that the out-patient departments are performing a great deal of work which should properly be done by the Public Assistance Authorities.

In the second place, it is for consideration whether the Public Assistance Authorities should not also deal with the two following classes of cases, which at present receive treatment from the out-patient departments:

- (a) Persons who are suffering from chronic ailments.
- (b) Persons whose home conditions will not allow them to reap any commensurate benefit from such treatment.

In the third place, the benefits of the out-patient departments are being extended to:

- (a) The well-to-do who can afford to pay private practitioners.
- (b) Persons sufficiently able to join a provident institution.

189. Until, therefore, the work of the out-patient department is delimited in such a way as to prevent overlapping between its sphere and that of the Public Assistance Authority, and to leave full scope for private practice and provident effort, any endeavour to reform the system of public medical assistance will be locally thwarted. Indeed, all attempts to create order out of the present chaos will be disappointing. Even in the interests of the out-patient departments themselves a reform

* To be purchased, either directly or through any bookseller, from Wymann and Sons (London), Oliver and Boyd (Edinburgh), and E. Poysonby (Dublin). Gd. 4s. 6d., Fwd. 5s. 6d.

† Vol. I, *The Break-up of the Poor Law*, Vol. II, *The Public Organization of the Labour Market*. Containing the remainder of the Minority Report. London: Longmans, Green and Co. 1908. Demy 8vo, pp. 613 and 359. 7s. 6d. and 5s. respectively.

appears to be expedient in order to secure the greatest benefits from the treatment which they so lavishly bestow, and to prevent those benefits from being abused by the well-to-do. Suggestions for remedying the abuses of the out-patient department have been laid before us by many witnesses, but by none more fully than the representatives of the British Medical Association. We are convinced with them that a strenuous effort should be made to circumscribe the work of the out-patient departments. They should be used almost exclusively for:

- (1) Casualties.
- (2) Consultations.
- (3) Cases requiring expensive equipment for the treatment of special diseases and defects.

To this end the "letter" system should be thoroughly reformed or abolished, and, except for casualties, the recommendation of a medical officer or private practitioner substituted.

190. We recommend, therefore, that the work of the out-patient departments of the voluntary hospitals should be re-organized on these lines; that they should be protected from abuse by the well-to-do; and that a strong endeavour should be made to bring their work into co-operation with that of the new organization of medical assistance which we propose to set up.

Education Authorities.

The Majority Report calls attention to the fact that under the Education (Administrative Provisions) Act, 1907, the education authorities have far-reaching powers for providing medical assistance to children out of the rates. On this subject the report contains the following observations:

We desire also to draw special attention to the position created by the Education (Administrative Provisions) Act, 1907, to which we have already referred. Under that Act the Education Authorities have far-reaching powers of providing medical assistance to school children out of the rates. Unless their work in this respect is co-ordinated with that of the Public Assistance Authorities, the evils of overlapping and consequent waste of effort and money will be accentuated. For example, we have recommended that there should be more medical inspection of all children under the Public Assistance Authorities. Of the 38,000 children of school age who were, on January 1st, 1907, being maintained in Poor Law establishments, about 18,000 were attending public elementary schools. In addition, out of the 171,000 children in receipt of out relief on that date,¹ it may be said that practically all who were of school age were attending such schools. In the absence of co-operation, therefore, it is conceivable that all these children might, simultaneously, be the subject of medical inspection on the part of both the Public Assistance and the Education Authorities, and a large proportion of the children might, likewise, be receiving simultaneously two kinds of medical treatment.

Such a contingency would be regrettable, even if it were to obtain in only a modified degree. We are, however, hopeful that it may be possible to avoid it altogether. We are pleased to observe from the Board of Education Memorandum, dated November 22nd, 1907, explaining to the Education Authorities their duties as to medical inspection and treatment of school children, that the principle of co-operation with other local authorities is not lost sight of. For example, it is recommended that "the work of medical inspection should be carried out in intimate conjunction with the public health authorities, and under the direct supervision of the medical officer of health." Again, as regards the treatment of children by the Education Authorities, it is recommended that it be done, meantime, "through such agencies as are conveniently available."

192. We have here an opportunity of establishing at the outset, an effective method of co-operation, or division of labour, in the performance of a public duty. The medical inspection of pauper children attending public elementary schools may, no doubt, be effectively carried out as recommended in the Board of Education Memorandum, but any treatment for diseases required by such children would, we think, be provided through the agency of the Public Assistance Authorities.

Further, we think that this principle should be applied to all children attending public elementary schools. Thus, the Sanitary Authorities, whose functions are mainly concerned with the prevention of infectious disease, would be responsible for the medical inspection of all the children. On the other hand, the Public Assistance Authority, whose functions would be to provide medical treatment, would provide such treatment for all school children, so far as they require to be treated at the expense of the rates.

VACCINATION AND REGISTRATION OF BIRTHS, DEATHS, AND MARRIAGES.

The Commissioners recommend that the duties of boards of guardians in relation to vaccination and registration should be handed over to committees of county and borough councils dealing with kindred matters. They point out that these duties are altogether extraneous to the work of public assistance. These suggestions will meet

with less opposition and adverse criticism than many others. It has long been contended that the administration of the Vaccination Acts by Poor Law guardians is an anomaly. Whatever becomes of boards of guardians in the legislative measures which it is to be supposed will follow the issue of this report, the administration of these important matters will now almost certainly be undertaken by the authorities more intimately concerned. In the case of vaccination it cannot be doubted that the public health department is that upon which the duties of administration naturally devolve. It is certain also that benefit would follow the change, inasmuch as the public would be more favourably impressed by measures of preventive medicine controlled and regulated by the properly constituted health authority.

The Commissioners have drawn up a list of complaints against the Poor Law system, which they describe as the leading defects of the system. Clause IV of the summary of these defects refers to "The lack of intelligent uniformity in the application of principles and in general administration." The manner in which guardians have carried out their duties in relation to vaccination gives strong support to this view of the Commissioners. Absence of intelligent uniformity was a marked feature quite recently when the question of the remuneration of public vaccinators was considered by guardians throughout the country. The result is variation amounting in many instances from 50 to 100 per cent. in the fees paid for precisely the same work under similar conditions. The removal of the administration of vaccination to a committee not concerned with Poor Law relief or "public assistance" will prevent the future use of vaccination fees as an excuse for and set-off against absurdly inadequate payment for medical services to the necessitous poor.

Regarding the registration of births, deaths, and marriages, the Commissioners state that the Registrar-General considers that a closer relation between the sanitary and registration districts is highly desirable. Every one with any knowledge of the subject will agree with this. Registration districts should be coterminous with sanitary areas. The duties of guardians in connexion with registration are very limited. They simply appoint and pay the officers. Thus the duty is largely one of patronage. The suggested change will make the returns more useful for comparative statistics. The better selection of suitable officers for the work is another advantage which the change is calculated to effect, for mere personal and local influences would be less in evidence. In both these instances the desirability of the suggested change does not depend merely on the manner in which the duties have hitherto been performed by the guardians. Time was when the Poor Law guardians had among their duties the suppression of nuisances, the administration of sanitary measures, and the treatment of infectious diseases. The changes contemplated in regard to vaccination and registration are in natural sequence and are demanded by the same considerations which brought about the previous alterations. A public assistance authority for each county or county borough taking over the present duties of boards of guardians will not be weakened in any way by the transference of vaccination and registration to their proper spheres.

INFANT MORTALITY IN POOR LAW INSTITUTIONS.

It will come as a surprise to most persons to learn that more than 8,000 children are born every year in Poor Law institutions and remain for a shorter or longer time as inmates. Up to the year 1907 no accurate information on the death-rate of these infants was forthcoming. It was perhaps assumed that if the maternal mortality were not excessive that of the infants would follow the same law. This hypothesis has been tested by a private inquiry instituted by a member of the Commission. Forms were sent out to all the unions in England and Wales, and 450 of these gave a voluntary response. They did so in perfect good faith, and it would be manifestly unfair to single out from these returns any particular institution for either praise or blame, but the total figures which are given in the Minority Report, when classified after the manner of the Registrar-General for the population at large, throw a light on the condition of the children in these places that is both unexpected and unwelcome. We have not discovered any mention of these returns in the Majority Report, but until an index has been published it is a little

¹ Thirty-sixth Annual Report of Local Government Board, 1906-7, pp. cxxiii-v.

difficult to prove the negative; independent investigations have, however, led us to a reluctant acquiescence in the truth of at least the general statements made, which are of a nature to call for immediate action on the part of every right-minded person, no matter what political or other views he may hold as to the general question of Poor Law reform.

The scope of the inquiry is indicated by the remarks in the Minority Report (p. 781):

We were, therefore, interested in the mortality statistics of the 8,483 infants who were born during 1907 in the workhouses of the 450 unions responding to the inquiry made by one of our members. Out of these 8,483 infants no fewer than 1,050 actually died on the premises before attaining 1 year. The Registrar-General, as is well known, gives, for the whole population, the number of babies, out of every 1,000 born, who die before the expiration of certain days, weeks, and months of the first year of life. Similarly, there has been worked out for these 8,483 babies born in 450 of the Poor Law institutions in England and Wales during 1907, taking only the deaths actually occurring in the institutions, the proportion dying within corresponding periods of their first year—making the assumption, for the purpose of comparison of death-rates, that those who left the workhouse within the year had a death-rate equal to those remaining in the institution.

The shorter table gives the result at a glance.

TABLE II.—Infantile Deaths out of every 1,000 born.

Ages at Death.	Workhouses outside London.		London Workhouses.		England and Wales, 1906.	
	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.
Under 1 month	72.6	78.2	85.5	66.7	41.9	37.0
1 to 3 months	72.8	85.9	57.1	116.2	25.7	24.6
3 to 6 "	76.8	56.4	70.9	107.6	27.0	27.3
6 to 9 "	30.8	28.7	48.9	72.2	20.8	21.7
9 to 12 "	58.7	19.4	57.2	29.3	17.1	19.3
	311.7	268.6	319.6	392.0	132.5	129.9
Number of infants on whose experience from birth the above rates are based.	1,479	4,421	1,002	1,581		

This result appears to us somewhat startling. The infantile mortality in the population as a whole, exposed to all dangers of inadequate medical attendance and nursing, lack of sufficient food, warmth, and care, and parental ignorance and neglect, is admittedly excessive. The corresponding mortality among the infants in the Poor Law institutions, where all these dangers may be supposed to be absent, is between two and three times as great. Out of every 1,000 babies born in the population at large, 25 die within a week and 132 are dead by the end of the first year. For every 1,000 children born in the Poor Law institutions, 40 or 45 die within a week, and, assuming the mortality among those who are discharged to be the same as those remaining, no fewer than 268 or 392 will be found to have died by the end of the year, the number varying according to whether we take the experience of the Poor Law institutions for legitimates or for illegitimates, in the metropolis or elsewhere.

In the very few Scottish and Irish workhouses that gave returns, the mortality was, on the whole, greater than in England and Wales. It is interesting to compare these figures with those of other institutions in which women are delivered. On this subject the report states:

We have not been able to obtain exactly corresponding statistics for the infants born in voluntary maternity hospitals. But their annual reports give the total number of births and infantile deaths within the institution, and the stay in those of the metropolis is so very generally a fortnight, that these statistics may be compared roughly with the deaths in the Poor Law institutions during that period after birth. The proportion of infantile deaths to the births during 1907 was, in the City of London Lying-in Hospital, 20.49 per 1,000; in the East End Mothers' Home, 21.07 per 1,000; in the Queen Charlotte's Lying-in Hospital, 26.1 per 1,000; and in the General Lying-in Hospital, 59.3 per 1,000; or, taken together, out of 3,414 births, 30 per 1,000—to be compared with the 46 to 53 per 1,000 recorded of the Poor Law institutions as a whole. In the well-known Rotunda Hospital at Dublin, out of 2,262 births in 1906, there died in hospital only 30 infants; in 1907, out of 2,318, only 21 infants. The usual stay in hospital is, however, apparently only seven

days, so that the extraordinarily small proportion of infantile deaths—13, or 9 per 1,000—must be compared with the 25 per 1,000 for England and Wales, and the 40.1 to 44.9 per 1,000 of the workhouses for the first week.

A still more interesting comparison is to be found in the death-rate of infants born in their own homes, even in a very poor district. No one can claim that West Ham is an ideal residence. Yet the report says:

One of our members obtained, for the purposes of comparison, exact statistics of all the babies born during the same year (1907) under the care of the Plaistow Maternity Charity, an organization for providing gratuitous midwifery attendance at birth, and for the first fortnight afterwards, in the mother's own home, in one of the most poverty-stricken districts of West Ham.

Statistics were thus obtained for no fewer than 3,005 infants, all of them born in households having incomes of no more than 21s. a week. Of these, there died within the first fortnight only 47, or 15.33 per 1,000 births. In the four large voluntary maternity hospitals in the metropolis of which we had statistics the infantile mortality taken together was, for the first fortnight, 30 per 1,000 births. This, too, was nearly the infantile death-rate for the first fortnight among the whole population (namely, 31.1). In the Poor Law institutions of the metropolis the corresponding death-rate was, among legitimate children, 47.2, and among illegitimate children 46.1 per 1,000 births. In the Poor Law institutions of the metropolis the corresponding death-rate was, among legitimate children, 47.2, and among illegitimate children 53.6 per 1,000 births. The 3,005 infants attended to in their homes, poor and wretched as were these homes, by the competent nurses of the Plaistow Maternity Charity had therefore a death-rate, during the first fortnight after birth, considerably less than that in the most successful of the voluntary hospitals, and less than a third of that in the Poor Law institutions.

To return to the table we note in the first instance:

It is interesting to observe that these heavy infantile death-rates in the Poor Law institutions do not seem to bear any exact relation to legitimacy or illegitimacy. Taking particular ages or particular districts, the death-rate among illegitimate infants is sometimes below and sometimes above that for legitimate children. . . . The variations in this respect as between the different ages, whether in London or elsewhere, are apparently quite without connexion with legitimacy. It would seem as if the protection and food enjoyed by the infants in the workhouse, legitimate and illegitimate alike, removed the presumption against the survival of illegitimate infants.

Certain further considerations are mentioned which begin to give some idea of the cause of this high mortality.

Equally interesting is it to notice that the excess of infantile mortality in the Poor Law institutions is actually greater at the ages between 1 and 6 months than during the first month of life. Whatever allowance should be made for the fact that the Poor Law institutions received many cases in which the mother has been exposed to adverse conditions, it is impossible to avoid the conclusion that the arrangements of the workhouse nurseries—to which Dr. Fuller so pointedly drew our attention—need serious examination.

This inference seems to receive some confirmation from the fact that the excessive infantile mortality in the Poor Law institutions is not universal; and that some have apparently a much higher death-rate than others. We do not wish to attribute too much importance to the statistics of particular institutions for so short a period as one year; but it cannot be right that there should be workhouses in which 40 per cent. of the babies die within the first year. We find that out of the 425 infants born in 10 workhouses (having each not fewer than 20 births in the year) there were only 14 deaths in the year, or 3 per cent., whereas out of the 333 infants born in 10 other workhouses (having each not fewer than 20 births in the year) there were as many as 114 deaths, or 33 per cent., we think it is high time for systematic inquiry.

Personal inspection of certain workhouses served to emphasize these remarks. In some unions the conditions can be fairly described as very good; in others the conditions are not such as would be tolerated under any effective system of supervision.

If the children succeed in passing the first twenty-one days of life, the conditions under which they are placed become in too many instances worse instead of better.

We regret to report that these workhouse nurseries are, in a large number of cases—alike in structural arrangements, equipment, organization, and staffing—wholly unsuited to the healthy rearing of infants. It is in vain that the Local Government Board has for more than a decade laid it down that: "In every workhouse where there are several children too young to attend school a separate nursery, dry, spacious, light, and well ventilated, should be provided. . . . In no case should the care of young children be entrusted to infirm or weak-minded inmates. . . . Unless young children are placed under responsible supervision they cannot be said to be properly taken care of." The boards of guardians have not obeyed. . . . We have visited many workhouse nurseries in the different parts of the kingdom, and we have found hardly any

can possibly be regarded as satisfactory places in which children should be reared.

Pauper imbeciles cannot be said to be proper guardians for young children, and even paupers who are not imbeciles are not the persons that any one except a Government authority would choose for this purpose. When to this is added the primitive nature of the sanitary appliances, and the usual absence of any quarantine arrangements for infants entering from outside, it is not surprising that epidemic disorders are sometimes officially described as "very troublesome."

And, finally, the report states:

In the great palatial establishments of London and other large towns, we were shocked to discover that the infants in the nursery *seldom or never got into the open air*. We found the nursery frequently in the third or fourth story of a gigantic block, often without balconies, whence the only means of access, even to the workhouse yard, was a lengthy flight of stone steps, down which it was impossible to wheel a baby carriage of any kind. There was no staff of nurses adequate to carrying fifty or sixty infants out for an airing. In some of these workhouses it was frankly admitted that the babies never left their own quarters (and the stench that we have described), and never got into the open air, during the whole period of their residence in the workhouse nursery.

It is not surprising that infants brought up in such surroundings should show a high rate of mortality. This of itself is sufficient to any medical man to indicate the serious loss to the community that follows such arrangements. But if it is necessary to instruct the lay person, to whom the death of infants may seem a small matter, the remarks on p. 777 may be quoted:

"The infantile mortality question," says a high medical expert, "is one, therefore, of extreme importance . . . in regard to the physique of the nation. While thousands perish outright, hundreds of thousands who worry through are injured in the hard struggle for existence, and grow up weaklings, physical and mental degenerates. A high infantile mortality-rate, therefore, denotes a far higher infantile deterioration-rate, and this unwelcome fact must not be lost sight of."

There can, therefore, be no doubt as to the necessity for ending such a state of affairs. The problem of thorough and complete reform is too complicated and difficult to be discussed in an offhand manner. It may be that it is further inquiry will show that it is not possible to herd children in a wholesale manner in any nursery no matter how well managed. But the immediate remedy for the worst of the abuses disclosed is not difficult to find. Medical men do not need to be told that if children are cooped up together, without fresh air, proper food, proper sanitation, and efficient supervision, that the results will be bad. It should not be impossible, pending the radical cure of the present disorders, to bring the local authorities to a sense of their duties even in the face of the obstinately self-satisfied attitude of the boards of guardians and the cheerful optimism of the official stepfather at the Local Government Board.

MEDICAL MEN AND THE LAW OF RATING.

ELSEWHERE we deal with the situation which has arisen at East Ham as a result of the action of the local rating authorities in increasing the valuations of nearly all the houses occupied by medical practitioners in the borough. In view of the importance of the matter to members of the profession, we believe that a brief statement of the principles of the law of rating, so far as they affect the assessment of practitioners' houses, will be of interest at the present time. For a more comprehensive exposition of the law reference may be made to the excellent treatise of Mr. W. C. Ryde on the *Law and Practice of Rating*, to which work we are indebted for many of the statements that appear in this article.

The Union Assessment Committee Act, 1862, provides for the making by the overseers of every parish of a list of rateable hereditaments in the parish, together with the gross estimated rental and the rateable value of each hereditament. By gross estimated rental is meant "the rent at which the hereditament might reasonably be expected to let from year to year, free of all usual tenant's rates and taxes, and tithe commutation rate charge, if

any. . . ." The net annual (or rateable) value is defined by the Parochial Assessments Act, 1836, and is, in effect, the gross estimated rental, less the "probable average annual cost of the repairs, insurance, and other expenses, if any, necessary to maintain" the hereditament "in a state to command such rent."

The amount on which any person is liable to pay rates depends on the rateable value of the property occupied by him, and, therefore, it is of the utmost importance to a ratepayer to see that the rateable value inserted by the overseers in the valuation list is not excessive.

From the above definitions it is manifest that in estimating the rateable value the overseers have to consider the rent at which the property may be expected to let from year to year. They are to have regard not only to the rent which an actual tenant may be paying, but also to the rent which a hypothetical tenant may be expected to be willing to pay. The term "rack rent," which is not found in the Rating Acts but is a convenient expression taken from the Income Tax Acts, will be used in this article to indicate this full or maximum yearly rent which a hypothetical tenant may be expected to be willing to pay. The rent which is actually being paid by a tenant for a short term frequently amounts to a rack rent, and if known to the overseers usually forms the basis of the calculation of rateable value. Actual rent is, however, not necessarily the measure of rateable value, because such rent may have been fixed a considerable time before the making of the rate, and the value of the property may have increased or diminished in the interval, or, for various reasons, as, for instance, a personal relation between lessor or lessee, or the payment of a premium, the rent may never have represented the full letting value of the property. Speaking generally, it may be stated that if a rent payable under a yearly tenancy has been fixed recently, without payment of any fine or premium, such rent is *prima facie*, but not conclusive, evidence of value.

Where there is no tenancy—that is, where a person occupies his own house—the rule for fixing the rateable value is the same, but as no rent is being paid, other evidence has to be relied on. This evidence may take various forms, such as the amount of a previous rent, the price paid for the property, a comparison of the property with similar properties situate in the same neighbourhood, etc. None of these would be conclusive, but they would be factors which might properly be taken into consideration in estimating the rent which the hypothetical tenant might be expected to be willing to pay.

It has been held that property must be valued as it exists at the time when the rate is made, with all the then existing circumstances. This point is very important. In *R. v. Grand Junction Railway Company*, Lord Denman said: "The house must be valued as it stands, a dwelling-house must be valued as such, and not at the higher value which it would possess if converted into a shop; and the supposition of a tenancy is only a mode of ascertaining the existing value to the existing occupier."

The next question for consideration—a question which has been very prominent at East Ham—is whether the houses occupied by professional men, or, for the purposes of this article, by medical practitioners, are to be valued simply as private houses, or are to be assessed as business premises. As a general rule, premises which are used for trade purposes command higher rents than similar buildings which are occupied simply as private houses, the obvious reason being that the profit which a trader expects to make by carrying on his business in a particular building is a factor in determining the amount of rent he can afford to pay. How far, then, is the rateable value of premises to be measured by the amount of profit made by the occupier? Mr. Ryde points out that in no part of the law of rating has there been more confusion than in dealing with this question. "Great part of the difficulty will disappear if it be remembered that the ascertainment of rateable value depends upon the construction of a statutory definition, and that the precise words of that definition must be the sole criterion." Now the definition of rateable value, which has been quoted in this article, makes rent, and not profit, the measure of value. The word "profit" does not appear in the definition, and, therefore, it is clear that rateable value is not measured by profit.

*This statement was actually made by a person of some scientific standing.

It is, however, equally clear that the amount of profit which a tenant expects to make, or, in the case of a continuing tenancy, the amount which he has already made, may affect the rent which he is prepared to give for a house. If the occupation of a particular house is necessary in order to enable him to make, or to continue to make, a given amount of profit, this profit will affect to a very material extent the rent he is willing to pay. If, on the other hand, there are a considerable number of houses almost equally well suited for his purpose, he will be inclined to pay little or no more rent for a particular house than a person who wishes to occupy it merely as a private residence. Mr. Ryde considers that "if the profits depend upon the personal skill of the tenant, and can be made in any other premises quite as well as in the premises in question, then the expected amount of the profits will not affect the rent that tenant will give. But if the profits can be earned only on the premises to be rated, and can be earned there by any ordinary tenant, then the expected amount of the profits will affect, and affect very materially, the rent which a tenant will be willing to give." He submits that the true rule is as follows: "As a matter of law, profits must be regarded as affecting rateable value, just so far as those profits would, as a matter of fact, affect the rent which may reasonably be expected."

The principles laid down in the foregoing statements may now be applied more directly to the assessment of medical practitioners' houses. In valuing these it is clear that the overseers and the Assessment Committee have to apply themselves solely to the question, For what rent may the property be expected to let from year to year in its existing condition? The production of a lease or agreement of recent date showing the actual rent paid is ordinarily the best answer the practitioner can give to this question. If there are no special clauses in the lease, if the value of the property has not altered materially since the rent was fixed, if no premium was paid on the granting of the lease, and if the lessor and lessee were at arm's-length when making the bargain, the rent is a rack rent, and would generally speaking be accepted as representing the gross estimated rental. If these conditions are not present, the rating authorities may properly decline to take the rent as conclusive and may require other evidence of value. But what is the exact bearing of the words "in its existing condition"? It may be argued that in its existing condition the house is a house occupied by a medical practitioner, and therefore that the use to which he puts the house—and, incidentally, the profit he makes therein—are factors to be considered by the rating authorities as affecting the value. This contention—which is the real point at issue at East Ham—admits of a twofold answer. In the first place, the profits of a medical practitioner depend upon his personal skill, and can be made in most houses of a convenient size in a given neighbourhood. It may therefore be asserted with confidence that the profits he expects to make do not materially affect the rent he will give for his house. But, secondly, even if the profits do affect the rent which he is prepared to give to some small but appreciable extent, still the rating authorities have neither cause nor power to go behind the rent, provided always that it is really a rack-rent. Any special value which the particular premises may possess for the purposes of profit-making has had its effect in determining the rent which the practitioner will be willing to pay; that special value, therefore, is included in the rent, and nothing further can be added thereto by reference to possible profits. This, it is submitted, is the state of the existing law. So far as we are aware, there are no reported cases which decide the exact point at issue with regard to a medical practice.

When the rent at which a house may be expected to let from year to year has been determined, the "gross estimated rental," one of the two values to be inserted in the valuation list, has been ascertained. The rateable value, upon which the rates are actually levied, remains to be calculated. This calculation, however, is a relatively simple process. It is made by deducting from the gross estimated rental the "average annual cost of repairs, insurance, etc." It is not the practice of the overseers to enter into an inquiry as to the actual sums spent on repairing a particular property. The deduction is usually

made according to a settled scale, which varies to some extent in different parts of the country. A common allowance is one-sixth of the gross estimated rental for larger houses and one-fifth for smaller properties. In London, the scale of maximum deductions is fixed by statute, and is as follows:

If the gross value is under £20—one-fourth	} Of the gross value.
If the gross value is under £20 and under £40—one-fifth	
If the gross value is £40 and upwards—one-sixth	

Reference must now be made to the procedure under the Rating Acts, and particularly to the method of preferring objections and appeals. The valuation list of a parish outside the metropolis—and the borough of East Ham is outside the metropolis—is corrected from time to time either by revaluing the whole of the property in the parish, or by making a supplemental list containing only new properties and properties which it is deemed necessary to revalue. There are no provisions for compulsory periodical revaluations, and in some rural districts the same valuation has remained in force for many years.

The procedure in making a valuation list, or a supplemental valuation list, is as follows: The list is prepared by the overseers, and is deposited by them for not less than fourteen days with the rate books of the parish for inspection by the ratepayers, public notice of the deposit being given on the church doors. The list is then transmitted to the Assessment Committee (a committee of the guardians of the union in which the parish is situate) who revise it, hear any objections of which notice has been received, and correct the list as may be necessary. If any alterations are made the list is re-deposited with the rate books for further inspection and objections, after which it is again returned to the Assessment Committee, who deal with the further objections and finally approve the list.

As soon as the list is deposited by the overseers every ratepayer has the right to inspect it and to take copies of or extracts from the list. Under Section 18 of the Union Assessment Committee Act, 1862, any person aggrieved is entitled to give notice of his objection, specifying the grounds thereof, within twenty-eight days after notice of deposit has been given. The Union Assessment Committee Amendment Act, 1864, however, empowers a ratepayer to give notice of objection "at any time," and not only within the twenty-eight days just referred to. The objection must be heard by the Assessment Committee at one of the meetings which they are required to hold for hearing objections to the valuation list. The objector need not appear in person, but may be represented by an agent.

If an aggrieved person fails to obtain relief from the Assessment Committee two courses are open to him: (1) He may appeal to special sessions, on giving twenty-one days' notice in writing previous to the sessions and stating the grounds of his appeal, and may appeal thence to quarter sessions. Appeals to special sessions may, however, be made only on the grounds of "inequality, unfairness, or incorrectness in valuation." (2) He may appeal direct to the next practicable quarter sessions on giving notice in writing twenty-one days previous to the commencement of the sessions, and specifying the grounds of appeal. The justices at quarter sessions have power, *inter alia*, to amend the assessment "in such a manner . . . as shall be necessary for giving relief," but they cannot increase the assessment of the person appealing. They may make such order as to costs as shall appear just and reasonable. The justices may give judgement absolutely, or subject to the opinion of the King's Bench Division of the High Court, on a special case to be stated by the sessions. A case is usually asked for during the hearing or immediately after judgement is given, and it is entirely within the discretion of the justices whether to grant it or not. An appeal lies by leave of the Court from the King's Bench Division to the Court of Appeal, and, apparently, thence to the House of Lords.

In connexion with any appeal to quarter sessions in which a point of law is involved, it is usually of importance to the appellant to have accurate information as to the principles on which the rating authority has acted in making or confirming the assessment which is the subject of the appeal. Accordingly, it may be useful to quote the provisions of the Union Assessment Committee Act, 1862,

as to the inspection of the minute books of the Assessment Committee. Section 11 of that Act runs as follows:

The committee shall cause a minute of their proceedings . . . to be duly made from time to time in books to be provided for that purpose, which shall be kept by their clerk under their superintendence . . . and all such books shall at all reasonable times be open to the inspection of every person rated to the relief of the poor in any parish or place in the union, without any fee being demanded for such inspection; and all such persons shall be entitled at all reasonable times to take copies or extracts from the said books, without paying any fee for the same; and if, on request made for that purpose, the clerk of the committee refuse to permit any such person to inspect any such books, or to take copies or extracts therefrom, as aforesaid, such clerk shall for every such offence be liable to a penalty not exceeding five pounds, upon a summary conviction for the same before two justices of the peace.

The system in force within the metropolitan area differs considerably from that applicable to the rest of England and Wales, but can be referred to here only in the briefest manner. Within the metropolis a revaluation of all property is made quinquennially, in accordance with the provisions of the Valuation (Metropolis) Act, 1869. The last revaluation was made in 1905, and the new valuation list came into force on April 1st, 1906. Another revaluation will consequently be made in 1910. The current valuation list is subject to revision in years which are not years of revaluation in case of "alterations in any of the matters stated in the valuation list." The procedure for objections and appeals resembles that applicable to the rest of the country, but differs on points of detail.

The foregoing outline of the law and procedure will be sufficient to convey to the reader a general idea of the measure of liability for rating purposes, and of the course to be followed in order to obtain relief from excessive charges. It should, however, be observed that if an appeal to quarter sessions is determined upon (and sometimes if it is intended to prefer an objection to the Assessment Committee), it is, as a rule, desirable to seek legal assistance.

LITERARY NOTES.

The Walter Scott Publishing Company, Limited, is about to issue a new and enlarged fifth edition of Dr. Albert Moll's work on hypnotism in their "Contemporary Science" Series.

The Oxford University Press has nearly ready *Experimental Embryology*, by J. W. Jenkinson, M.A., D.Sc., Lecturer in Embryology in the University of Oxford. The author deals with the origin of form, and in particular with its origin in the individual. The book is abundantly illustrated.

In connexion with the Poe Centenary, the Oxford University Press is issuing Edgar Allen Poe's Poems and Critical Essays in the Oxford Press series. The volume has been edited by Mr. R. Brimley Johnson, who contributes a life of the poet.

The first number of a new quarterly periodical entitled the *Eugenics Review* will appear on April 15th. It will be published under the auspices of the Eugenics Education Society. The review is said to have for its purpose to give expression to the eugenic movement, to place eugenic thought, when possible, on a strictly scientific basis, and to impress on all classes the dignity, privileges, and duties of parenthood. The society endeavours to secure authoritative treatment of eugenic questions. Its honorary president is Mr. Francis Galton, F.R.S., who initiated the science of eugenics, defined its principles, and started and endowed the Eugenics Laboratory of the University of London. The *Eugenics Review* will comprise amongst other things: (1) Articles by responsible writers. (2) Editorial notes upon such of the topics of the day as illustrate eugenic teaching and demand eugenic comment. (3) Notices of recent books which bear upon eugenics. (4) Official records of the work of the society. The aim of the *Review* will be to make known the results of all seriously-conducted eugenic investigation without bias in favour of any particular school. Its range will include—biology, in so far as it is concerned with heredity and selection; anthropology, in so far as it throws light on questions of race and the institution of marriage; politics, in so far as it bears on parenthood in its relation to civic worth; ethics, in so far as it promotes ideals that lead to the improvement of racial quality; religion, in so far as it

strengthens and sanctifies the sense of eugenic duty. The *Review* will be published at the offices of the society, 6, York Buildings, Adelphi, London.

In the February number of *Travel and Exploration* Dr. C. G. Seligmann relates his experiences among the Veddas of Ceylon, one of the few existing wild peoples of India, who probably represent the remains of the original primitive South Indian stock of short jungle men who led a wandering life. Their attitude towards death is remarkable. Although there is no clearly formulated idea of a death contagion, the rapidity with which all Veddas leave the place where a death has occurred and avoid it for years shows that some evil quality is associated with dissolution. According to most Veddas, the spirit of every dead man, woman, or child becomes a "yaka" (plural "yaku") within a few days after death. Some Veddas, however, say that when ordinary folk die they cease utterly, and that a surviving part, which becomes a yaka, exists only in the case of especially strong, energetic, or skilled men who have shown their strength of character in this world, or who have had the power of calling the yaku during their lifetime. Since each Vedda community consists of a small number of families, usually related by blood and marriage, the yaku of the recent dead—called collectively the Ne Yaku—are supposed to stand towards the surviving members of the group in the light of friends and relatives, and only if neglected will show their disgust and anger by withdrawing their assistance or even becoming actively hostile. Hence, it is generally considered necessary to present an offering to the newly dead, usually within a week or two of death. This offering must consist of cooked rice and cocoanut milk, the food that every Vedda esteems above all others, but betel leaves and areca nuts are often added. In each community there is one man, called "kapurale," or "dugganawa," who has the power and knowledge requisite to call the yaku, and this man calls upon the yaku of the recently dead man to come and take the offering. The yaka comes, and the kapurale becomes possessed by the yaka of the dead man, who speaks through his mouth in hoarse, guttural accents, stating that he approves the offering, and will assist his kinsfolk in hunting, and often definitely indicating the direction in which the next hunting party should go. One or more of the near relatives may also become possessed, but this is not necessary. Soon after the spirit leaves the kapurale the rice is eaten by the assembled folk, usually, but not necessarily, on the spot where the offering was made. This account represents the simplest, and probably a degenerate form of death ceremony, but usually the matter is complicated by the invocation of certain other spirits besides the Ne Yaku.

Messrs. John Wright and Sons, of Bristol, will publish on March 7th, a work entitled *Health Morals and Longevity*, by Drs. George Gresswell and Albert Gresswell, of Louth. In the preface it is stated that the book is put forth merely as a sketch of the important subject dealt with—healthy and vigorous life, how best to ensure and maintain it, a mysterious problem bristling at every point with well-nigh baffling questions. In regard to these the authors have tried to give what may be said on various sides, to throw some additional light, and present some fresh points of view.

In a recent number of the *Archives Provinciales de Chirurgie*, the editor, Dr. Marcel Baudin, gives an extract from a document in the Bibliothèque Nationale of Paris (M.S. fr. 17187, fo. 321), relating to an exploratory laparotomy performed in 1475 on a criminal condemned to be hanged on the gibbet at Montfaucon. He had suffered from pain in the side, stone, colic, *passio iliaca*, etc., and the King's physicians asked permission to open his belly in order to discover the exact state of things. The leave was granted, and the operation is described as follows:

Laquelle ouverture et incision fut faicte et dedans icelluy quis et regardé . . . Et après qu'ilz eurent esté vus fut reconu, et ses entrailles remises dedans. Et fut par l'ordonnance du Roy fait très bien guery, et tellement qu'il, dedans XV jours après, il fut bien guery et eult remission de ses cas, sans despens, et si luy fut donnee avecque argent.

[The which opening and incision were made and the parts within were inspected and looked at . . . And after they had been seen, he was stitched up again and the guts replaced within him. And by order of the King he was very well dressed, so that within fifteen days after, he was well healed, and obtained remission of his sentence, together with a sum of money.]

It is not stated whether the man's consent was asked and a free pardon promised in case he survived, but one may hope this was the case. At any rate, we suppose the physicians would be forgiven by antivivisectionists, as there is no evidence that they made experiments on any animal other than this condemned man.

Medical News.

The Russian Government has decided to establish a new university at Saratoff, and the duty of organizing it has been entrusted to Dr. Rasumowsky, Professor of Surgery at Kasan.

The late Dr. Charles E. Beevor, of London, President of the Neurological Society, left estate of the gross value of £41,439 16s. 2d., of which the net personality was sworn at £41,037 10s. 1d.

We learn from the *British Journal of Nursing* that the Right Hon. R. B. Haldane, Secretary of State for War, will address the International Congress of Nurses, which is to be held in London in July next, on the nurse as patriot.

We regret that from the list of specially-invited guests who were present at the Hunterian Oration delivered at the Royal College of Surgeons of England on February 15th the name of Sir Richard Havelock Charles, K.C.V.O., was inadvertently omitted.

MR. LEONARD MATHESON has been elected president, Mr. A. Clayton Woodhouse and Dr. Edward Bogue (New York) vice-presidents, and Mr. Douglas P. Gabell one of the honorary secretaries, of the Odontological Section of the Royal Society of Medicine.

THE COURT of Appeal, on February 22nd, upheld the decision of Mr. Justice Joyce, given in July last, that the legacy of £25,000 left by the late Mr. Alfred Beit to the Institute of Medical Sciences Fund, University of London, should be repaid to the executors of Mr. Beit.

THE annual debate before the Chelsea Clinical Society will be held at the Chelsea Dispensary, Manor Street, King's Road, S.W., on March 9th and 16th, at 8.30 p.m., the subject selected being the diagnosis and treatment of tuberculous glands in the neck.

At the meeting of the Harveian Society of London to be held at Stafford Rooms, Tichborne Street, W., on Thursday next, at 8.30 p.m., a discussion on the early diagnosis and treatment of cancer of the stomach will be opened by Dr. W. Hale White and Mr. B. G. A. Moynihan.

THE Royal Sanitary Institute offers the Henry Saxon Snell prize for 1909 for an essay on the principles of heating and ventilating public buildings, with descriptive details and illustrations of the best systems. Particulars can be obtained on application to the Secretary, Margaret Street, London, W.

A SESSIONAL meeting of the Royal Sanitary Institute will be held at the Parkes Museum, Margaret Street, London, W., on Wednesday, March 3rd, at 8 p.m., when a discussion will be opened by Dr. D. A. Carruthers on the control of infectious diseases in schools. The chair will be taken by Mr. A. Wynter Blyth.

MESSRS. HARRY W. COX AND CO., 47, Gray's Inn Road, London, W.C., have issued a catalogue of x-ray, electro-therapeutic, and other apparatus. It contains useful notes on interruptors, charging accumulators, and other practical points, and a number of excellent skiagrams of pathological conditions.

THE National League for Physical Education and Improvement has arranged for a course of five lectures to be given on Thursday afternoons, at 3.30 p.m., at 56, Queen's Gate, by kind permission of Lady Samuelson. The first lecture will be given by Dr. F. E. Fremantle on Thursday next, the subject being the medical inspection of school children.

THE Orient Company will open their pleasure cruise season next month with the dispatch of their ss. *Ormus* on a twenty-five days' cruise to Lisbon, Tangier, Palermo, Catara (for Cetinje), Gravosa (for Ragusa), Spalato, Syracuse, Malta, Port Empedocle (for Girgenti). An Easter cruise will be made to Greece, Constantinople, Asia Minor Sicily, Algeria, Gibraltar, and Portugal.

SIR ROBERT BOYCE, F.R.S., Dean of the Liverpool School of Tropical Medicine, has been invited by the Colonial Office to visit the West Indies for the purpose of looking into the present methods of dealing with sickness in those colonies, and recommending what reforms, if any, can be made with a view to promoting the physical welfare of the people in the Caribbean Islands. He will arrive at Barbados on March 2nd.

THE tax on all medicines containing alcohol has been raised by the Hungarian Government.

THE fifth meeting of the Departmental Committee appointed by the Lord President of the Council to consider the working of the Midwives Act was held on Wednesday, February 24th, at the Privy Council Office. Mr. Almeric FitzRoy presiding. The following witnesses attended and gave evidence: Dr. Hugh Woods, on behalf of the London and Counties Medical Protection Society; Miss Amy Hughes, on behalf of Queen Victoria's Jubilee Institution for Nurses; and Sir William J. Sinclair, M.D.

THE annual general meeting of the London Medical Graduates' College and Polyclinic will be held at the College, Chenies Street, on Monday next at 5 p.m. The annual report shows that there was a deficit on the working of the college in 1908, but that it had not been necessary to carry out the proposal to discontinue the college, owing to a generous offer from Sir Jonathan Hutchinson. The report refers with regret to the resignation from the office of medical superintendent by Captain Hayward Pinch, on his appointment to be director of the Radium Institute.

A BILL providing for the establishment of a Children's Bureau in the United States Department of the Interior has been introduced into the House of Representatives. Its duties will be to investigate and report upon all matters pertaining to the welfare of children and child life and especially the questions of infant mortality, the birth-rate, physical degeneracy, orphanage, juvenile delinquencies and juvenile courts, desertion and illegitimacy, dangerous occupations, accidents and diseases of children of the working classes, employment and legislation affecting children in the several States and territories, and such other facts as have a bearing upon the health, efficiency, character, and training of children. The chief of the bureau shall from time to time publish the results of these investigations. He is to be provided with a full staff of assistants, statistical experts, clerks, messengers, and special agents.

THE first annual dinner of the London School of Clinical Medicine was held at the Savoy Hotel, London, under the presidency of Mr. P. A. Nairne, Chairman of the Committee of the Seamen's Hospital Society, on February 19th. The Chairman, in proposing the toast of "The London School of Clinical Medicine," explained in detail how it came about that the Committee of the Seamen's Hospital, Greenwich, considered that it was the duty of the hospital to afford an opportunity to the medical men to continue their professional studies under the most favourable circumstances. It was felt that in doing this work the Committee was entitled to appeal to the public for funds to carry out the scheme. Sir William Bennett, who replied, said that the plan was not a doctors' scheme to benefit doctors, but was instituted for the good of the public, as all post-graduate schemes should be. The addition to the facilities for post-graduate teaching was demanded, for, in spite of the institutions previously established, such facilities were defective. The London School of Clinical Medicine had now been in existence for nearly three years, and had had about 300 students, and, from a financial point of view, was almost paying its own way. The school was not instituted in any way for the purpose of rivaling any other similar institution; in fact, the work of the school might be described as complementary to other teaching centres for post-graduates. Dr. Guthrie Rankin, who proposed the toast of "The Guests," said that the hospital was devoted to the relief of seamen, and that gave the school a special claim upon the sympathies of the public. For that reason also it could be claimed that the school was in some degree a national asset, so that the appeal for public assistance was well founded. Lord Ridley, in replying, said that the school was a value to the profession, and thereby of service to the public. Sir William Church, who also responded, explained that it was impossible for the ordinary medical schools to teach students the kind of work in which post-graduate schools were well fitted to give instruction. The hospitals with medical schools attached were always glad to see their old students visiting them again, but post-graduate schools were now accepted as a necessity in the education of medical men. Sir Malcolm Morris, in proposing the toast of "The Chairman," said that one object of the meeting was to bring before the public the enormous importance of post-graduate teaching from the point of view of the interests of the public, and Mr. Nairne in acknowledging the toast mentioned that though it was quite true that old students were welcomed back to the wards, nevertheless that was not quite the same thing as the instruction they received at a post-graduate school, for it was evident that the post-graduate student at an ordinary medical school was in the nature of things apt to be crowded out.

British Medical Journal.

SATURDAY, FEBRUARY 27TH, 1909.

MEDICAL PRACTITIONERS AND LOCAL RATES.

MEMBERS of the medical profession practising in East Ham are up in arms at what has the appearance of arbitrary action on the part of the local rating authorities. East Ham is one of the less wealthy districts immediately outside the metropolitan area. The financial position of the borough at the present time is distinctly, if not singularly, unfortunate. The rates have already reached a high level, but, as is the case in many other towns, the expenditure for public purposes shows a constant tendency to increase. At the same time, it is stated that property generally is diminishing in value throughout the borough to such an extent that it is becoming increasingly difficult to let houses, even at considerably reduced rents. It is said that there are a large number of unoccupied houses, and that these tend to remain vacant for considerable periods. This appears to have been the state of affairs last autumn, when the borough council had to consider how best to meet the growing demands upon them in the immediate future. Two alternative courses presented themselves. One was to increase still further the rate in the pound of the existing levy, with the knowledge that a public outcry against the high rates was almost certain to be raised. The other was to increase the valuations of certain properties, and in this way to render a given pound rate more productive of revenue. The authorities at East Ham adopted the latter plan, and accordingly a supplemental valuation list was prepared by the overseers in August, and approved by the Assessment Committee in October, 1908.

Now it is obvious that if all classes of property are valued on a common basis, so that the occupier of every rateable subject bears a fair share of the aggregate burden, the effect of a general revaluation is small, as far as the total amount of the rates payable on any particular hereditament is concerned. But if the members of a particular class or profession are singled out for attack, and the assessments upon their houses are raised while those upon other properties are left untouched, the distribution of the total burden is altered, and the action of the authorities calls for the immediate attention of that section of the ratepayers which is adversely affected. The information we have received goes to show that at East Ham the houses of members of the medical profession have been selected for the special attention of the rating authorities, for it is asserted that the valuations of doctors' houses have been raised, while those of other residential premises and of shops in the same streets have been left undisturbed. We understand that there are some forty members of the medical profession practising at East Ham, and that more than three-fourths of these lately received the unpleasant intimation that the ratings on their houses have been increased. The amount of the increase of course varies in different cases, but in some

instances the ratings are said to have been doubled. The importance of the matter, however, is due not to the amount in dispute but to the principle involved. There is no reason to suppose that the houses of medical practitioners have hitherto been generally undervalued, as compared with houses occupied by other classes of the community, and therefore it is difficult to discover any justification for the action of the overseers. In East Ham, as is well known, wealthy residents are conspicuous by their absence, and medical fees in the borough are, on an average, so low as to render the making of more than a very moderate income a practical impossibility. Indeed, the pecuniary reward to be derived from a medical practice in the borough is so extremely moderate compared with the value of the practitioner's services to the community that he may reasonably expect to receive considerate and sympathetic rather than harsh and arbitrary treatment at the hands of the local authorities.

The ostensible reason for the increased valuations is that it is contended that a doctor's house should be valued, not as a private residence, but as a house occupied for business purposes; and it is on this contention that the local members of the profession have joined issue with the rating authorities. The action of the latter may at first sight appear to be not altogether unreasonable, for a medical practitioner does unquestionably carry on his profession in or from his private residence, which may therefore be said to be his place of business. Moreover, in making his income-tax return, he is allowed to deduct from his gross profits the rent or rental value of so much of the premises as is used for professional purposes. Too much stress, however, must not be placed upon this parallel, for, under the Acts relating to another imperial tax—the inhabited house duty—the residences of medical practitioners are charged at the higher rates applicable to private houses, and not at the lower rates levied on shops and other trade premises. The action of the East Ham rating authorities accordingly requires further examination, seeing that a departure from long-standing practice is justified only when made for reasons whose weight and validity are fully established.

We print in another column an article dealing more particularly with the legal aspects of the question. We have there endeavoured to show that the profits which a medical practitioner expects to make in a particular house do not influence materially the rent he is prepared to pay, and we have asserted that, if this be so, his use of the premises for profit-making purposes is not a factor to be considered by the overseers in estimating the rateable value. We are here concerned mainly with more general considerations.

The situation which has arisen at East Ham is undoubtedly serious, and the question at issue is one of considerable importance to the medical profession at large. It is the common belief that the action of the overseers represents the beginning of a movement which has for its object the raising of the valuations of all houses to the doors of which brass plates are affixed. If this be true, architects, solicitors, and all other professions will be affected, as well as many people in more humble circumstances. Moreover, the question may, ere long, be raised in other places than East Ham. If no attempt be made to resist the alteration in the basis of assessment, other boroughs are pretty certain to follow the lead given them, with the result that the valuations of houses

occupied by professional men may be the subject of a general increase throughout the country. The evil would not stop even here. It is well known that the valuations for income tax, Schedule A, and for inhabited house duty are based to a considerable extent on the local assessments, and, therefore, an increase in the Poor Rate valuation would be followed sooner or later by an increase in the King's Taxes. Within the metropolitan area the same valuation is made to serve both for local and for imperial purposes, and an increase in Poor Rate assessment would there be accompanied by an automatic increase in the assessment for King's Taxes.

At East Ham there is a widespread opinion that if the higher valuations are maintained the saleable values of medical practices will be seriously affected. Local feeling is, therefore, strong, and has been thoroughly aroused. Individual members of the profession have objected to the assessments upon their houses, and in some instances they have already succeeded in obtaining redress. It is felt, however, that an organized movement is likely to be of greater and more permanent value than isolated efforts, and a "Medical Reassessment Association" has been formed with a view to concerted action. A number of meetings have been held, and legal advice has been obtained as to the steps which should be taken. Valuations of the houses of which the ratings have been increased have been made by an independent valuer. The aggregate of these valuations is stated to be only a few pounds in excess of the aggregate of the old assessments, and is far below the aggregate of the increased valuations made by the overseers and approved by the Assessment Committee. The result is therefore abundantly to justify medical men in the locality in the course they have determined upon.

A meeting to hear further objections to the valuation list was held at Leytonstone on February 19th, when the valuations of a number of doctors' houses were reduced, to the satisfaction of the applicants. In other cases the relief obtained is considered insufficient, while the hearing of several objections was adjourned to a meeting to be held on March 5th. It does not appear that the principle on which the opposition to the assessments is based was specifically admitted by the Assessment Committee. The different statements which have been made as to the exact lines on which the rating authorities have proceeded in making their valuations are, however, to some extent conflicting, and the Medical Reassessment Association would do well to depute one of its members who is a ratepayer to exercise his statutory right of inspecting the minute books of the Assessment Committee with the view of obtaining full and reliable information on this point.

It is considered likely that a test case will be taken to quarter sessions with a view to the determination of the point at issue. The cost of an unsuccessful appeal to quarter sessions is expected to be between £30 and £40, while, should the appeal succeed, the Assessment Committee would in all probability be ordered to pay the costs of both parties. A guarantee fund sufficient to cover the probable cost of a test case has been raised.

The importance of the principle which is at stake renders it in the highest degree desirable that the case which is to be the subject of the appeal to quarter sessions should be carefully selected, with a view of bringing clearly before the court the exact point at issue. The object should, of course, be not merely to obtain a reduction in the particular assessment on

which the appeal is based, but also to secure a pronouncement that the local authorities have acted on an erroneous principle in making their revaluation. If this point can be established—and a reference to our article on the legal aspects of the question will show that there are good grounds for supposing that it can be established—a victory will be won which will be of lasting service to the medical profession at large. We congratulate the practitioners of East Ham on the public spirit they have shown, and wish them complete success in the fight that lies ahead.

SLEEP AND HYPNOTICS.

THIS, if one may judge from the number of cases of suicide attributed to want of sleep, and from the frequency with which the complaint is heard of sleeplessness in milder forms, is an age of insomnia. It is, we suppose, one of the symptoms of the neurasthenia which is too much with us. We are keenly aware that this explanation explains nothing; indeed, it is a case of *obscurum per obscurius*, for insomnia is a very definite thing, while neurasthenia is a pathological shadow. It is, however, useful for clinical purposes, as the term "Italy" was when Napoleon described it as not a country but a geographical expression. Dr. Farquharson, in the interesting paper which we publish this week, tells in simple language nearly all there is yet to be said about sleep. He thinks, and in our opinion rightly, that the physiological causes of sleep must differ, and he asks for information. Alas! we can find nothing newer than Landois's description of sleep as "the consumption of potential energy in the nerves, principally in the central organs, which renders restitution necessary. Perhaps accumulation of decomposition-products in the body (lactates) induces sleep." This really means that we sleep when we are weary, and carries us little further than Corin's knowledge that "the worse one sickens, the worse at ease he is," and the like elementary facts, which led Touchstone to call him a "natural philosopher."

We are, perhaps, rather in the habit of assuming that everything in this era of light is new, even our diseases. But insomnia, like neurasthenia, and its more formidable congener hysteria, must be almost as old as man. No one has described insomnia better than Shakespeare, who makes King Henry the Fourth, when he cannot lure that sleep "that knits up the ravel'd sleeve of care" to his pillow, exclaim:

How many thousands of my poorest subjects
Are at this hour asleep! O Sleep, O gentle Sleep,
Nature's soft Nurse, how have I frightened thee,
That thou no more wilt weigh my eyelids down
And steep my senses in forgetfulness?
Why rather, Sleep, liest thou in smoking cribs,
Upon uneasy pallets stretching thee
And hush'd with buzzing flies to thy slumber,
Than in the perfum'd chambers of the great
Under the canopies of costly state
And lul'd with sound of sweetest melody.

But after all Dr. Farquharson is, perhaps like most of us, more interested in finding a remedy for the disorder than in discussing its causes and nature. We agree with him that the old advice to count imaginary sheep leaping through a gap and such like devices are of little avail in most cases. Reading is often successful, but the book must be judiciously chosen. It must not be so dull that it cannot be read at all: on the other hand it must not be exciting, or it will murder sleep as effectually as *Machbeth*. Sir Henry

Holland found poetry an admirable soporific; the particular form which served best for the purpose was in his case the sonnet. In other cases the epic is more efficacious. Lecky found comfort in rehearsing poetry which he had learnt by heart; and Döllinger in his old age committed some books of Homer to memory for the same purpose. But what is to be done when none of these things will relieve the maddening monotony of telling the weary footfalls of the hours through a long night? Here we come to a point where opinions and practice will differ, and where even practice may sometimes be divorced from opinion. Sir James Paget says that a person will sleep all the better for a night of wakefulness. But then he tells us that he had only had two sleepless nights in his life—and "he jests at scars that never felt a wound." And what if it be not one night, but several in succession with days of heavy work between?

Dr. Farguharson does not shirk the thorny question of hypnotics, and he frankly gives us his own experience. Modern science has placed in the hands of the physician a large number of sleep-compelling drugs, the effects of which have been carefully observed. A summary of recent work on this subject may be useful.

At the invitation of the Berlin Medical Association. Professors Thoms and Ziehen not long ago read papers on modern hypnotics, the former treating the subject from the standpoint of the pharmaceutical expert, and the latter from that of the clinician.¹ Professor Thoms stated that the study of chemical constitution and physiological action has materially advanced our knowledge in regard to hypnotics, and the continued study in this direction, controlled by clinical results, must bear good fruit. Brunton, he said, gives as the essentials for the onset of sleep: (1) That the flow of blood to the brain must be checked as much as possible, which can be attained either by deflecting the blood from this organ or by quieting the activity of the heart; and (2) that the functional activity of the brain must be diminished. It is well known that stimulating medicaments increase the blood pressure, whereas it is diminished by narcotics. Hans Meyer pointed out a curious fact relative to chemical substances which induce sleep. Narcotic substances are fat solvents, and experiments made by him had led him to the conclusion that all chemically indifferent substances which dissolve fats and fatlike substances must act narcotically on protoplasm. The action will be strongest on those cells, such as nerve cells, in which fatlike substances are contained. The comparative strength of the action of narcotics must be dependent on the mechanical affinity to fat-like substances on the one hand and to the other constituents, such as water, on the other. The coefficient of its distribution between fat and water was therefore proposed as an index of the narcotic activity. In discussing the actual chemical constitution of various hypnotics, he deals first with the group of substances containing one of the halogen elements, of which chloral and its derivative are the chief representatives. Chloral has been shown to owe its action to the reduction compound tri-chlor-ethyl alcohol. This body is paired with glyconic acid, and is excreted in the urine as urochloric acid. An important division of this group is found in the halogen acid amides. Neuronal (di-ethyl-bromine-acetamide) and bromural (mono-

bromine iso-valerianyl urea) probably owe their hypnotic action to the hydroxyl groups, though the bromine in both undoubtedly exercises a sedative effect. The second group consists of those narcotics whose hypnotic action is supposed to depend on an alkyl group; of these the first is ethyl alcohol, which is only hypnotic in large doses. Amylen hydrate (tertiary amyl alcohol) is the most interesting of this group, as it belongs to a series of methyl carbonol compounds. The tri-methyl carbonol is twice as weak as the dimethyl-ethyl carbonol or amylene hydrate, while the tri-ethyl carbonol has a still more powerful hypnotic effect. The next subdivision consists of the methan derivatives of the sulphones, and is represented by sulphonal, trional, and tetronal. Applying Meyer's theory to these compounds, it is found that the coefficient of trional is 4.46, that of tetronal 4.04, and that of sulphonal only 1.59. As a matter of fact, this proportion is approximately that of the hypnotic activity of the three substances. The third subdivision is that of the substituted carbonic acid amides. Urethan and hedonal owe their action, no doubt, to ethyl groups. The urea derivatives also come into this group, and of these di-ethyl malonyl urea (veronal) is a stronger hypnotic than the corresponding methyl compound, while in this group the maximum hypnotic activity appears to be possessed by the di-propyl compound which goes by the name of "propanol." The third great group consists of the aldehydes and ketones, of which paraldehyde and acetophenon (hypnon) are representatives. In these, again, the ethyl group plays an important part.

Professor Ziehen discussed the subject from a totally different standpoint. Regarding chemical medicaments as one means of inducing sleep in patients suffering from nervous affections, he analysed the conditions calling for the application of special drugs. He said that in certain cases of mild sleeplessness, sedatives were the best hypnotics, while in more severe disturbances, the selection of the proper drug must be determined by a consideration of several circumstances. Bromine given in the form of sodium bromide in doses of 30 grains for several days might eventually yield satisfactory results, and though it was necessary to exercise the virtue of patience, the feeling of safety often more than counterbalanced the slowness with which the effect was produced. In neurasthenia, especially when there was marked excitability, it was necessary to employ a stronger drug, and under these circumstances the choice lay between neuronal and bromural. The former acted more strongly than was accounted for by its bromine content. The ordinary dose of 15 grains might be increased safely up to 22½ grains. It did not seem to produce unpleasant subsidiary effects, a habit was not easily induced, and the drug did not readily lose its power. Bromural, the dose of which for an adult was 10 grains, was useful and its administration was rarely accompanied by disturbing secondary effects, and was particularly valuable in children. In neurasthenic insomnia the valerian preparations also were at times useful; hyoscin and duboisin acted promptly and powerfully when there was marked motor excitability, but neither was always well tolerated, and it is necessary to exercise care and to continue their use only in cases in which they proved to act well.

In spite of the great chemical difference between them, amylen hydrate and paraldehyde acted very similarly. Both were useful in practically all forms of sleeplessness. They acted rapidly, but the effect

¹Deut. med. Woch., April 2nd, 1908.

soon passed off, so that their chief value was in cases of nervous sleeplessness in which a prompt action was desired, and a delayed action would be likely to distress the patient. The dose of each was 40 to 60 grains. Both were certain in their action and practically free from danger, for, although he had used them largely, he had never met with any toxic effects. In one case a patient took 20 grams of paraldehyde by mistake (about 5 drachms), and awoke after eighteen hours' deep sleep, without having presented any threatening symptoms. Ziehen considered that chloral should be expunged from the list of hypnotics, its only advantage being its cheapness. Chloralamide was more useful; it did not act so well as veronal or trional, but was less dangerous, and did not engender a habit. He gave it in doses of from 45 to 60 grains. Isopral, though a very active drug, acting rapidly, was dangerous, as it had an injurious effect on the heart. Chloretone was a homologue of isopral, but Ziehen said that his experience with it was too limited to justify him in forming an opinion as to its value. Dormiol, on the other hand, was practically without bad effect on the heart, and was a good hypnotic, which might, he thought, well be used in alternation with other hypnotics. With regard to the group consisting of sulphonal, tetronal, and trional, Ziehen expressed the opinion that the two first named might be neglected, since sulphonal frequently produced serious subsidiary symptoms, and tetronal also was too dangerous for ordinary use. Trional produced a prolonged sleep, but the action often took a considerable time to develop; the plan of giving the drug some two or three hours before the sleep is desired might be successful, but as the interval between the taking of the drug and the falling to sleep varied even in the same individual, this method was impracticable. The dangers associated with the exhibition of trional were comparatively slight. It had no undesirable action on the heart. Haematoporphyria and similar results which had been observed could be avoided by careful dosage. The combination of trional with paraldehyde, recommended by Pouchet, had great advantages, for the doses could be materially diminished, and the sleep, in response to the paraldehyde, set in rapidly and, thanks to the trional, lasted long. Ziehen next dealt at length with veronal, expressing himself as being very sceptical about the dangers of this drug, though admitting that unpleasant secondary effects were not uncommon. He usually gave $7\frac{1}{2}$ grains to start with, and increased the dose, if necessary, to 15 or 22 $\frac{1}{2}$ grains if the drug were well tolerated. Its action, however, might be delayed for a considerable time, amounting even to several hours, and, unlike trional, the delay could not be prevented by combining it with other hypnotics. Veronal often lost its power after it had been given for a time. He pointed out that when this had taken place, it was found that trional no longer acted well, and similarly when trional lost its effect, veronal no longer acted well. With regard to the urethan group, he said that he had not convinced himself of the therapeutic value of urethan itself, while bedonal given in doses of from $7\frac{1}{2}$ grains, rising to 30 or even 45 grains, was useful at times. It was not so good a hypnotic as veronal or trional, but it did not lose its effect readily, and was more or less free from secondary consequences. Propanal had a more prompt action than veronal, was quite reliable and did not, like veronal, produce drowsiness during the day following

the dose. Its chief disadvantage—a very serious one—was the narrow margin between a therapeutic and toxic dose; to give $7\frac{1}{2}$ grains was to approach the danger zone, while from 5 to 6 grains was the hypnotic dose. Hypnone, according to Ziehen, had not proved useful, but he thought it still too early to speak positively about hypnal, viferral and some others.

THE NEW ROYAL COMMISSION ON UNIVERSITY EDUCATION IN LONDON.

THE new Royal Commission on University Education in London has before it a task which will put to the test the statesmanship even of its most distinguished members. The Commission is to inquire into the working of the present organization of the University of London, and into the facilities which already exist in London for advanced education—general, professional, and technical—and to consider what provision ought to exist in London for university teaching and research. It is to make recommendations as to the relations which should exist between the university, its incorporated colleges, the Imperial College of Science and Technology, and other schools and public bodies concerned, and to recommend the necessary changes in constitution and organization.¹

To no department of higher education in London ought the results of the inquiry to be more important than to medicine. There are very many matters affecting medical education, and the relation of the medical schools to the university, which require adjustment. They may be summarized in two general propositions: first, that the university should be so constituted that it shall stand in such relation to the medical schools, and shall conduct its examinations in such a manner as to attract at least the large majority of medical students in London to become undergraduates; and secondly, that it should be in a position to maintain or encourage advanced medical education and research. When the Senate, as we announced some months ago, expressed the desire that a Royal Commission should be appointed, the medical schools of London addressed a joint letter to the Prime Minister asking specifically that the Commission should deal with medical education. This letter pointed out that of those medical students who took the whole of their professional course in London, less than 30 per cent. were undergraduates of the university; that in no other university town did the great body of medical students remain outside the university; and that in London they so remained, not because they did not want a degree, but owing solely to the difficulties which the university put in their way. We venture to say, as we have said before, that these difficulties do not arise with regard to the medical curriculum proper; they are not due to special exactions with regard to medicine, surgery, and midwifery, or pathology, nor to any unreasonable difficulty in the examinations in these subjects. They arise at an earlier stage, and are due more especially to the character of the matriculation examination, which is essentially inappropriate, since it should be the object of matriculation to ascertain whether the candidate has had a sufficient grounding in general principles and is possessed of sufficient natural intelligence to benefit by the instruction which it ought to be the duty of the university to give. As it

¹ The full terms of reference are given at page 574.

is, the regulations of the matriculation examination are founded on a wrong principle, are badly conceived, and are still more badly carried out. By a large proportion, if not by the majority of those who pass the examination, it is looked upon as an end in itself—as a certificate entitling them immediately to proceed to earn their living as school teachers or in other capacities. It is true that the university accepts a large number of other examinations in lieu of its own matriculation; but this is an admission of failure, and the University of London cannot afford to continue to fail.

The second point—the encouragement of higher scientific studies and original research—is very largely a question of endowment, and we venture to believe that if the university improve its constitution it will not fail to attract benefactions. The pious founder is still with us, but he is not attracted by a body which has not yet achieved a condition of stable equilibrium.

The composition of the Commission has, perhaps, been affected by the circumstance that the original object with which its appointment was proposed was to inquire into the relations of the university to the Imperial College of Science and Technology. This may perhaps account for the absence from the list of any representative of medicine, or, indeed, of the biological sciences, unless exception is to be made for the distinguished Chairman, whose philosophical studies may perhaps entitle him to that designation. The Medical Faculty has been, from the beginning of the university, numerically the most important, and until the Imperial College of Science and Technology is incorporated into the university, when it will have at least a worthy rival, it will remain the most distinguished and the most renowned. We regret, therefore, that no representative of medicine finds a place on the Commission; at the same time, it must be confessed that it would be difficult to find any such representative in London who was not more or less committed to a particular view, or who might not be thought to be so committed by those of an opposite school of thought. It would not perhaps have been easy, but it would not, we believe, have been impossible to have found some member of the profession not directly connected with London whose impartiality would have commanded respect, and whose technical knowledge would have been of great advantage to the Commissioners in sifting the evidence which they are to hear, and in drafting recommendations which it is to be hoped will at length fairly launch the university on a career which shall be as generally useful to the cause of higher education, both general and professional, as its best friends could wish.

THE PROFITABLE "PROPRIETARY."

THE prospectus which lies before us of a limited liability company, newly formed with a capital of £100,000 to develop the sale of certain proprietary medicines, furnishes an illustration of the profitable use which the owners of such preparations make of the fact that the public loves to dose itself. In this prospectus it is stated that "among the numerous patent medicines which have made fortunes for their owners may be mentioned 'Pink Pills,' the proprietor of which left about £1,600,000, though he had advertised the remedy extensively for only about sixteen years, while the

owners of Beecham's Pills and Holloway's Pills, though widely known for their generous benefactions during life, gave or bequeathed enormous fortunes"; and, as regards the company now formed, "without giving full expression to their expectations, the directors confidently predict that the profits will be sufficient to pay handsome dividends, beginning with from fifteen per cent. to twenty per cent. the first year, and rapidly rising." The proprietary articles which are to be taken over are five in number, consisting of "Capsuloids," "Mother's Advice" (formerly called Cicfa), "Haemogalloles," "Figuroids," and "Sciaticine." An analysis of Capsuloids was published in the BRITISH MEDICAL JOURNAL of April 4th, 1908, page 833, which showed the principal constituent of this preparation for the hair to be haemoglobin. "Mother's Advice" formerly called "Cicfa," and before that known as "Tablones," figured under the latter name in trade-mark litigation in 1906, and was then stated in court to contain pepsin, diastase, and other ingredients. Figuroids appeared among other nostrums for obesity in an article in the BRITISH MEDICAL JOURNAL, November 21st, 1908, page 1566, and the analysis there given showed its principal constituents to be phenolphthalein and hexamethylene-tetramine. Sciaticine and Haemogalloles appear to be new, and both of them are stated to have received much medical support; it is not necessary to comment on the latter statement. The excellence and merit of all the preparations are, of course, vaunted in the prospectus: but no uncertainty is shown as to the part played by advertising in making the sales. An accountant's certificate is reproduced showing that the Capsuloid Company and the Figuroid Company have together spent £101,000 in advertising in five years, and have in the same time made a net profit of £52,500. No doubt the promoters of the new company are justified in saying: "It is evident that such increased advertising as is made possible by 'the additional capital will result in an enormous increase in business'; but the further statement may be doubted: 'In these days of increasing intelligence on the part of the public the continued success of any remedy is largely dependent upon its merit,' success being, of course, taken to mean commercial success, and not curative efficacy."

THE COMING CHANGE IN THE MEDICAL PROFESSION.

AN address on The Coming Change in the Medical Profession, recently delivered by President Charles W. Eliot, of Harvard, is published in the *Boston Medical and Surgical Journal* of February 11th. After speaking of the great advances in medical science during the past half-century, he went on to ask if it was possible to foresee in any measure the changes in practice of medicine as a money-earning and livelihood-yielding profession which these advances would bring about. He said he had heard that medical practice had been rather seriously affected in many of the large cities of the United States by the increased attention—"often an ignorant, crude attention"—given to the relation of the mind to the body. He heard, too, of serious reduction of fees resulting from the widespread mastery of the various exquisite skills involved in surgical practice to-day. He was persuaded that many of the operations which used to be regarded as justifying high fees were now often performed for low ones, and that this tendency had not yet exhausted itself. He added that the great scientific powers which had been brought to bear on preventive medicine would strongly affect private medical practice as a

means of livelihood and the prospects of the profession as a whole. President Eliot went on to ask: "Must we not therefore give a new attention to preventive medicine as the stronghold of the medical profession hereafter? We see signs of it already developing a considerable capacity of earning a livelihood, and that capacity is necessarily at the root of every liberal profession, as of every trade. It is good to see how the salaried places are multiplying in preventive medicine, and how good the salaries have come to be in many of our cities, and they are better still in Europe." He proceeded to say that the practice of medicine would be seriously affected if preventive medicine becomes successful on a broad scale. "The very source of the livelihood," he said, "will be dried up if preventive medicine succeeds. We might perhaps imagine that surgery would on the whole escape from this result of the well-directed expenditures of society for protection against disease, and that surgery would remain a better field for the acquisition of a livelihood than medicine." But even that, he thought, might be doubted, because almost all the discoveries in bacteriology and pathology and other contributory sciences tended to prevent the internal injuries and disorders for which surgery now so often supplied a remedy. Not even the surgeon, in President Eliot's opinion, can rely on private practice fifty years hence as the means of yielding the livelihood that it yields now, and as a means of livelihood surgery has already been somewhat impaired. Inspired, apparently, by the dismal outlook which he sees for surgery, the orator suddenly asks: "Shall we not welcome the coming change? Is not the function of the medical profession regarded as preventive, higher, better, happier than the function of the medical and surgical profession regarded as curative?" One great consolation he offers us in regard to the future of the profession: we have a great deal of truth still to learn and to acquire, and we may well be grateful for that prospect. This is about the only thing in this distinguished layman's address which seems to afford to doctors matter for gratitude. There are several points in his address which calls for comment, but we need only mention one. It is doubtless true that the medicine of the future will be to a large extent preventive. But we should like to hear something more definite about those "good" salaries which are paid to the guardians of the public health. We confess we do not look for them in more than a few places in our own country, and we see no hint of them even in the Minority Report of the Royal Poor Law Commission, the recommendations of which, as far as they affect doctors, may be summed up as the apotheosis of the medical officer of health. President Eliot has evidently a high opinion of the self-sacrifice of the medical profession, but he does not put the case strongly enough. He does not point out the remarkable fact that the progress in science which is to change the healing art into preventive science has been the work of the doctors themselves. The fact was surely remarkable enough to deserve mention, for it is the one example of a profession striving to abolish the reason for its own existence and to dry up the sources from which it draws its livelihood. And what is its reward? Hatred and all uncharitableness on the part of fanatics who, if they could, would stop all progress; carefully measured encouragement from the State and from public bodies, and indifference from the people at large, who, owing to the extinction of the scourges from which they have been delivered, cannot appreciate what has been done for their welfare.

NEWSPAPERS AND CANCER CURES.

OVER and over again we have pointed out the immeasurable harm that is done by the publication, in sensational form, by newspapers of statements as to "cures" for cancer, consumption, and other diseases. No editorial censorship seems to be exercised in such matters; with one or two honourable exceptions, the papers appear to act on the principle that in matters medical any unsifted rubbish is good enough for their readers; and it must be owned that the public which reads these accounts of marvellous cures is only too eager to be deceived. As far as the ordinary person, who is well himself and "bath no friend or brother in the fray," is concerned, one might say *decipiat*. This readiness to swallow whatever is put into his mouth by ignorant and irresponsible scribblers will doubtless continue until, possibly three or four centuries hence, the diffusion of scientific knowledge has created an intellectual atmosphere wherein belief in such things cannot live. In the meantime it is the duty of the medical profession to keep on protesting against the hideous cruelty of raising false hopes of cure by statements made, like the razors of which Peter Pindar sings, to sell. It is not only cruel but dishonest, for it is aiding in the diffusion of falsehood. This would be bad enough if the untruth were of the speculative order; but the announcement of illusory cures must always have the most disastrous practical effects. A recent example of this evil is to be found in the case of Dr. W. T. Bull of New York. That distinguished surgeon, whose death we regret to see reported, was said, a short time ago, with the greatest positiveness to have been cured of a cancer in the throat. The American newspapers, of course, eagerly seized on the opportunity for a "boom," and their statements were considered of sufficient importance to be telegraphed to leading newspapers in this country. Yet the true state of the case must have been known at least in New York nearly a month before his death, for on January 27th the following bulletin was issued by his medical attendants: "Owing to the continued erroneous and misleading reports concerning Dr. Bull in certain newspaper articles and to the fact that these reports are arousing false hopes in the minds of many sufferers from cancer throughout the country, it seems wise to issue the following statement: "Dr. Bull's general condition and the rheumatic complications have improved sufficiently to warrant his departure for the warmer climate of Savannah in the near future. The original growth which was the real cause of his illness has never been cured." Nevertheless, we saw no contradiction of these "erroneous and misleading reports" till after his death. It is a too familiar story. Some temporary improvement of health takes place, and this is forthwith trumpeted to the world as a cure. It is natural that, the wish being father to the thought, any arrest, however passing, in the development of a cancer, and any relief from complications, whether dependent on it or accidental, should be hailed by the patient and his friends as warranting the hope of recovery. All doctors know that these things may happen without influencing the final issue of the case. It is important that the public also should understand that improvement in the general health for a time is often unconnected with the local disease, and that the cancer itself is liable to fluctuations in its outward and visible signs, which may deceive the inexperienced. In rare cases the disease may die a natural death, and to the elucidation of this process research is now being directed. We are inclined to think that

in that line of inquiry lies the hidden path which ultimately will lead to the solution of the mystery which still hangs around the disease.

THE UTERUS AND INGUINAL HERNIA.

INGUINAL HYSTEROCLE (the presence of the uterus in the sac of an inguinal hernia) is rare, but is of interest to the surgeon on account of its relatively frequent association with hermaphroditism. The ovary and Fallopian tube have often been discovered in an inguinal hernia, and many surgeons have diagnosed ovarian hernia before operation. In hysterocle strangulation is rare, as the neck of the sac is never very narrow. A valuable monograph on inguinal hysterocle, including a useful epitome of reported cases, has been published¹ by Dr. D. J. Cranwell, Professor of Clinical Surgery at Buenos Aires, in a case which occurred in his own practice. The patient was an Italian emigrant of weak intellect. The hernia had been observed for seven months. Three days before the operation symptoms of incarceration developed, and a hard irreducible tumour was detected in the left groin. A thick cord ran from the tumour into the inguinal canal. The operator's knife laid open an inguinal sac, which contained a deep red, doughy mass. It proved to be a haematoma in the broad ligament, and when drawn out of the sac was found to be attached to an infantile uterus, the thick cord running into the inguinal canal being the cervix. This was divided and the uterus removed. The corresponding Fallopian tube and ovary, both ill-developed, were attached to the uterus, but apparently the right appendages were absent. As the patient recovered, and as the abdominal cavity was not opened during the operation, the precise extent of malformation of the uterus and appendages was not determined. The vagina was a blind sac, 2 in. long. Cranwell has collected reports of 2 cases of femoral hysterocle, 1 of obturator, and 2 of umbilical hernia of the kind under consideration. As many as 45 cases of inguinal hysterocle have now been reported; 31 were without doubt congenital. Malformation of the uterus was markedly frequent, and may have been occasionally overlooked for the reason explained above. In 3 there was double inguinal hernia, each sac bearing a more or less ill-developed uterine cornu. The frequency of hermaphroditic conditions is astonishing. Klotz's patient, aged 24, a reputed male, had hypospadias and two scrotal sacs. One sac held a cystic ovary, a Fallopian tube and part of a uterine cornu; in the other sac lay a testis and epididymis. In 5 cases the patients were to all external appearances males, and the author adds a sixth case published when his monograph was already on its way to the printers, Cornil and Brossard being the reporters.² Kellock's case³ is included in the series, and we can add a seventh example of hermaphroditism associated with inguinal hysterocle, recently reported by Arnolds of Dusseldorf.⁴ Inguinal hysterocle is often congenital, and it is in this variety that hermaphroditism is so often detected. Acquired inguinal hysterocle is mostly found in multiparae, and may be primary like a hernia of the caecum, or may follow an ovary already in the sac. In 9 cases of inguinal hysterocle the uterus was gravid, usually in association with an old enterocle. Hysterocle is rarely reducible, as the uterus, like the caecum, is seldom entirely invested by the peritoneum involved in the sac. Strangulation was observed in only 5 of the 45 cases of inguinal

hysterocle, whilst Lejars noted this grave complication in as many as 5 out of 9 instances of ovarian and tubal hernia. The symptoms of hysterocle are not uniform, as the uterus is so often malformed or not completely involved in the hernia. It is also true that during sexual life characteristic and periodic pains are the rule, but they are absent when the malformation is great or the patient old. A hysterocle in the groin never fails to cause discomfort greater than is experienced by patients with inguinal hernia of a commoner type, and a truss cannot be tolerated. Diagnosis is often very difficult, and, especially when strangulated, an inguinal hysterocle is often supposed to be an epiplocele. A radical operation is always necessary, as a hysterocle causes much distress, and exposes the patient to great peril from strangulation or from a present or future pregnancy. When gestation is present the surgeon may wait until term if there be no severe symptoms. The uterus does not always lie entirely in the inguinal sac; in one instance the herniated segment contained the placenta and the legs of the fetus only (Nores): the patient died two hours after spontaneous delivery through the vagina. Scanzoni induced abortion with good results in his case; spontaneous delivery occurred in Rosanoff's patient, the uterus was then reduced, but removed eleven weeks later; the patient had borne eleven children. In 5 cases Caesarean section was performed, four of the children but only one mother being saved. All these operations, however, were done before the days of thorough aseptic operating. In inguinal hysterocle, where the herniated uterus is not pregnant, the surgeon will still, as a rule, find hysterectomy the only safe course, the hernial gap being treated by a radical operation.

THE MEDICAL INSPECTION OF SCHOOL CHILDREN.

IN THE BRITISH MEDICAL JOURNAL of February 20th, p. 493, we ventured to give a gentle hint to educational authorities that it would be well for their officials to exercise a reasonable amount of discretion in regard to the use which they make of the reports of their medical officers. We pointed the moral by quoting a letter addressed to a parent not long ago by an education official of the London County Council. In that letter, what purported to be an extract from a report stating the results of the medical examination of a child was given. The extract represented the opinion of a specialist on a case of ear disease, and was, of course, expressed in technical language, which would naturally convey little meaning to an ignorant parent, and would therefore be all the more likely to cause alarm. Moreover, the specialist had thought fit to reflect on the handiwork of a surgeon who had previously operated on the child. This may be right enough if the document had been treated as confidential; our point is that the conveyance of such a report to a parent is wrong from every point of view. We are glad to learn that our remarks have had an immediate effect. At a meeting of the London County Council held on February 23rd, Dr. Beaton referred to the matter and asked the Chairman of the Education Committee whether he would see that in future letters from the medical department should be written so that they might be easily understood by the parents of the child and free from unfair criticism of members of the medical profession. Mr. Cyril Jackson replied that in his opinion the letter ought not to have been sent, and he would endeavour to see that such letters were not sent out again. In this case it was written by a clerk without check by a superior officer, and the clerk had since left the service of the Council. This explanation

¹ *Revue de Gynéc. et de Chirurg. Abdom.*, vol. xii, 1908. September-October, p. 777.

² *Ibid.*, March-April, 1908, p. 135.

³ BRITISH MEDICAL JOURNAL, March 21st, 1908.

⁴ Report of the Niederrheinische-westfälische Gesellschaft für Gynäkologie, *Monatsschr. f. Geb. u. Gyn.*, October, 1908, p. 465.

is satisfactory, as it seems to show that the letter was sent on his own initiative by a clerk. But it is highly desirable, if the machinery of school inspection is to work smoothly, that care should be taken in handling such delicate matters that subordinate officials be not allowed to magnify their office.

TEARS OF BLOOD.

THE belief that certain individuals are able to weep tears of blood is of such antiquity that the German equivalent for "bitter tears" is *blutige Thränen*, "bloody tears." As far, however, as we are aware, no authentic instance has been quoted in which it has been established beyond doubt that the blood was actually secreted by the lacrimal gland. Micas¹ has published a very interesting article, Real and False Tears of Blood. It is a clinical study on conjunctival hæmorrhage. Some years ago the author was consulted about a boy aged 12 years, who from the slightest cause, such as laughing, or sometimes apparently for no cause whatever, wept tears of blood—an occurrence which was often repeated several times a day. The lad was pale and enervated from constant hæmorrhage. The source of the bleeding was the tarsal conjunctiva, which was covered with fine papillae, and light cauterization with the galvano-cautery resulted in a cure. This case led the author to study the literature of the subject. He found that de Wecker was profoundly sceptical as to the existence of real tears of blood, whereas Panas seemed to admit the fact that in certain rare circumstances the lacrimal gland secreted a sanious fluid. George Seyer recorded a case of an infant whose eyes were closed from birth by severe blepharospasm. They were perfectly normal, but when the child cried tears of blood rolled from the lids. A simple collyrium of rose-water cured the condition. Mazars de Layelles reported two cases; one, a delicate anaemic, phthisical girl, began to weep in his presence tears, first blood-stained, and then real tears of blood. Micas cites other similar examples, but, as he says, in none of them is it certain that the blood did not come from the conjunctiva or from the lacrimal passages. He feels that it is unwise to deny the possibility of a sanguineous secretion from the gland, but that examples in which other sources cannot be shown to be present must be exceedingly rare. He divides cases of conjunctival hæmorrhages into subconjunctival and extra-conjunctival. The first, ecchymoses, are in the aged said to be a warning that the arteries are diseased, and that apoplexy may be feared, but Trousseau thought there was little connexion between the two. In 85 cases of subconjunctival ecchymoses in persons over 55 years old which he followed up, only 4 became paralytic, and in one of these the condition of the eye followed a fall. Micas argues that Trousseau was too optimistic, as he himself knows of at least one case where a violent cerebral hæmorrhage carried off an old lady who had had a succession of subconjunctival ecchymoses. The author then discusses extra-conjunctival hæmorrhages, and points out how fatal they may be to babies, giving several instances in which infants have died from the anaemia resulting from bleeding from the eye. Micas finds that protargol is the best drug to use in cases of extra-conjunctival bleeding.

A FURTHER report which has been presented to the General Medical Council by the Committee of Reference in Pharmacy bears testimony to the steady work which is going on for the purpose of embodying

in the next *British Pharmacopœia* the well-sifted results of current research and criticism. The present report is on similar lines to its predecessor published in December, 1906, and includes the results of work down to the end of October, 1908. The report is necessarily concerned mainly with matters of detail, in which the characters and tests to be officially prescribed for drugs and chemicals figure largely; in several cases new monographs are proposed to be substituted for those at present in the *Pharmacopœia*.

WE regret to have to record that Emeritus Professor D. J. Hamilton died on February 19th at his residence in Aberdeen. Professor Hamilton had suffered from a long illness which compelled his resignation last October of the Chair of Pathology in the University, to which he had been appointed in 1882.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

THE Debate on the Address usually occupies a week or more at the beginning of the session, and enables members to discuss certain urgent questions before the real work of the session is entered on. After the address in reply to the King's Speech had been moved and seconded on the first day of the session the debate covered general questions, and some interesting speeches were delivered, notably those by the Prime Minister and Mr. Balfour. On Wednesday the first amendment was moved, namely, that on unemployment, and was opened on behalf of the Labour members by Mr. Barnes. It led to an animated discussion, in which the Government and the Local Government Board were roundly taken to task for not having done more to meet a pressing problem. Mr. John Burns made a spirited defence of his department, and indicated certain directions in which he was prepared to advance. His speech did not satisfy his critics, and after a reply by Mr. Churchill on behalf of the Government a division was taken, and the Government had a majority of 104. On Thursday and Friday the Tariff Reform amendment was debated and rejected, and on Monday Mr. Ponsonby raised the question of the House of Lords and the intentions of the Government. His amendment occupied the whole day, and after closure was defeated by 225 to 47. In the Lords the address was voted last Thursday after two days' debate on the state of Ireland. The same subject occupied the Commons on Tuesday and led to a lively debate which lasted till Wednesday evening. Other amendments on the paper should be disposed of by Thursday night and the Address voted. In this case the Scottish Temperance Bill will occupy Friday as the first private members' day.

Private Members' Bills.—These bills have, as usual, been decided, as to priority of introduction, by the ballot. This year a protest was raised against this system by Mr. R. Pearce, who condemned the present haphazard system for obtaining precedence, and argued that bills on which time had been spent in previous sessions should have a better chance on their reintroduction. He put forward an elaborate plan for the purpose, and Dr. Rutherford supported his proposal. It was opposed, however, by the Chief Whip of the Government, and also by Mr. Balfour and the Prime Minister. In the face of this opposition, the proposal was withdrawn, and the ballot took place as usual. There were 353 members who balloted. The result was to give Mr. Dobson the first place, and, oddly enough, he introduced on Friday the Daylight Saving Bill, which Mr. R. Pearce fathered last year, and fixed the second reading for March 5th. Mr. John Briggs, who drew the next place, introduced a bill to prohibit or regulate the sale of intoxicants on Sundays, and fixed the second reading for March 12th. Mr. Howard, who came third, introduced a bill to amend the law of the repre-

¹ *Recueil d'Ophthalmologie*, November, 1908.

sensation of the people and to remove the electoral disabilities of women. The second reading was fixed for March 19th. Mr. Hills introduced a bill for a minimum wage in certain sweated industries, and fixed March 26th for the second reading. Mr. Dunn devoted his place in the ballot to the amendment of the Education Acts as regards Administration and the Provision of Meals Act of 1906 and named April 23rd for second reading, while Mr. R. Pearce, lucky in spite of his complaint of the ballot, drew seventh place and introduced a bill to amend the Coal Mines (Checkweighers) Act, and selected May 7th for the second reading. Sir Luke White introduced again the Coroners' Bill which nearly passed last year, and Mr. Pirrie, who drew thirteenth place, introduced a temperance bill for Scotland, and selected Friday, February 26th, for the second reading in the hope that the debate on the address might be concluded on the previous day. At the most only eleven Fridays are expected to be available for private members' bills this session, and therefore a large crop of private legislation cannot be anticipated. The bill dealing with unemployment is in the hands of Mr. Hodge and is backed by the Labour Party. It will come on for second reading on April 30th. The Irish members have three bills down, but were not so successful as usual in the ballot. There is one Public Health Bill dealing with water rights in the hands of Mr. Leif Jones, and the second reading is fixed for Friday, April 16th, a speculative date as it is the Friday after Easter, and the House may not have finished the holidays.

Vivisection.—The ballot did not favour the antivivisection members, and so Sir F. Banbury introduced his bill on Monday to prohibit experiments on dogs, commonly called the Dogs Protection Bill. It is backed by Sir F. Channing, Mr. Ellis Griffith, Mr. Swift MacNeill, and Sir Henry Cotton, and is put down for second reading on Friday, May 14th.

Irish Poor Law Reform.—In reply to Captain Craig, Mr. Asquith said it was true that early last year his right hon. friend the Chief Secretary expressed the hope that he would be able to introduce this session a Poor Law Reform Bill for Ireland. But he subsequently suggested that the whole question of Poor Law reform in the United Kingdom generally would have to be considered when the Royal Commission had reported. The report of the Royal Commission, which had now been issued, intimated that a separate report would explain in detail the application of the suggested reforms to Ireland. Until that report had been received and considered in conjunction with the main report, it would not be possible to say whether separate legislation in regard to Ireland would be necessary or desirable. He might add, however, that supporters of Poor Law reform in Ireland need have no apprehension that the recommendations of the Viceregal Commission would be ignored. In reply to a further question, Mr. Asquith said he did not know when this separate report would be issued.

Medical Relief.—Mr. Joynton-Hicks asked the President of the Local Government Board on Monday whether he would issue amended instructions to the pension officers that temporary medical relief, either outdoor or in an infirmary, did not disqualify an applicant for the old-age pension. Mr. Burns said that instructions had already been issued that temporary medical relief should not be a disqualification. He was not aware of any one being disqualified owing to the receipt of such relief.

Legislation for the Feeble-minded.—In answer to Sir George Kekewich, Mr. Gladstone stated on Monday that the question of legislation on the report of the Royal Commission on the Feeble-minded must be subject to Parliamentary exigencies, but he might point out that Section 62 (2) of the Children Act of last session already dealt with feeble-minded children and young persons who were guilty of offences.

Vaccination Exemption.—Mr. Lupton asked the President of the Local Government Board if his attention had been called to the fact that vaccination officers had shown

vaccination exemption declarations to the agents of the trustees of dwellings erected for the public in order that pressure might be brought upon tenants who had made such declarations; and whether he would issue an order directing vaccination officers in future to vouchsafe no information whatever upon the subject of exemption declarations to any persons other than the official superiors of the vaccination officers. Mr. Burns said that he had received a complaint on this subject, and he was making inquiry with regard to it. He might, however, state that under Section 24 of the Vaccination Act, 1867, as amended by Section 6 of the Vaccination Act, 1871, it was the duty of the vaccination officer to allow searches to be made in his Vaccination Register. Any such search would disclose the fact that a statutory declaration had been received by the officer in respect of a child whose name was entered in the register, and in these circumstances it did not appear to him that he could make an order of the kind suggested.

Vaccination in the Navy.—Mr. Lupton asked the First Lord of the Admiralty on Tuesday if a paper written by Surgeon N. Howard Mummary, R.N., was submitted to the Director-General of the Navy Medical Department; if the Director-General sanctioned the reading of the paper at the annual meeting of the British Medical Association last summer; if he was aware that the paper suggested that in the near future all men joining the service should be vaccinated against syphilis with matter obtained through the syphilization of monkeys; and if he would give an assurance that no man on entering the navy should be subjected to voluntary or compulsory syphilization by the surgeons of the navy or others in authority over the men. Mr. McKenna said that he must express his regret that in replying to a previous question in December last from his honourable friend he was unaware that any ground existed for such definite statements as he now made in his present question. On inquiry he found that a lecture was allowed by the Medical Director-General to be read on the subject referred to on the understanding that it represented only the author's own private views. The lecture was not delivered with the authority of the Board of Admiralty, nor was it in any way endorsed by the Medical Department of the Navy. He was making further inquiry into the matter. He could only now add that the suggestion contained in the lecture and complained of by his honourable friend was as repugnant to the Board of Admiralty as it was to himself.

The Housing and Town Planning Bill of the Government has been issued, and may be expected to be put down for second reading on an early day. As it was elaborately discussed in Committee last year, it is hoped that it may pass its second stages in the Commons with rapidity this year. Mr. Hart Davies has given notice that he will raise the subject of the taxation of site values on the second reading.

The Pure Milk Bill.—Mr. Burns informed Mr. Courthope on Monday that he hoped to introduce this Bill early this session, but he could not fix the date at present.

Kissing the Book.—In reply to Sir W. Collins, Mr. Gladstone stated on Tuesday that it was desirable that the form of oath administered in court should in no case require the act of kissing the book. He would consider whether legislation was necessary for this.

At the International Congress on Leprosy which, as already announced, is to be held at Bergen on August 16th to the 19th of the present year, three official languages will be recognized—German, French, and English. The following is the official programme of questions to be discussed: 1. The various clinical forms of leprosy and their diagnosis. 2. The causes and mode of propagation of the disease; pathological anatomy, treatment: the means to be employed by public authorities for checking as quickly as possible the ravages of the disease, and of definitively exterminating it with the least possible inconvenience to those afflicted with leprosy.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND DISTRICT.

OVERCROWDING OF THE PROFESSION.

SINCE the issue of the Educational Number of the BRITISH MEDICAL JOURNAL last summer, the Joint Committee of the Manchester and Salford Divisions has been considering whether some further means might not be adopted to warn young men who might be thinking of entering on a medical career. It appears that some such methods have already been adopted in France where things are, if anything, in a worse condition than in England. A large number of medical associations in France have combined to issue letters of warning, pointing out among other things the large amount of pensions and allowances that have to be made to needy medical men or their widows. In 1891 the Association générale des médecins de France paid out for this purpose 39,490 francs, while in 1903 it was necessary to pay out 170,030 francs. The total sum spent in helping the families of doctors in distress by all the societies in 1904 was 518,000 francs, and the appeals for assistance were constantly increasing. The chief causes of this state of affairs are said to be: (1) The great and uncontrolled increase of illegal medical practice. (2) Overcrowding of the profession itself. In the great centres of population there is one doctor to every 900 inhabitants, while in the rest of the country there is one to every 2,000, the average being for the whole country 10.4 per 10,000. (3) The great increase of clubs, which means a decreasing income for medical men. (4) The lessened amount of illness that exists. In Paris, in 1886, the death-rate was 24.3 per 1,000, and the number of cases of illness was estimated as 243 per 1,000 inhabitants, while in 1904 the death-rate was only 17.6 and the cases of illness 176 per 1,000.

It is further stated that 45 per cent. of the medical men in France do not realize annually £100 in fees. The fact that overcrowding is still on the increase is shown by the fact that while only about 530 medical men fall off the list per year through death or other causes, there are about 1,200 fresh diplomas granted annually. The circular setting forth these facts concludes with an earnest appeal to young men to consider them carefully before embarking on a career that offers so few chances of success in France.

It was felt by the Manchester Divisions that the condition of the profession in England, even if not quite so bad as in France, was sufficiently alarming to justify some similar measures being taken. Accordingly the following circular letter was drawn up, and a copy has been sent to the head masters of all the public schools and the grammar schools in Lancashire, as it was known that many head masters are in the habit of advising their senior boys to take up a medical career:

The Medical Profession as a Career.

February 8th, 1909.

Sir.—We are instructed by the Committee of the Manchester and Salford Divisions of the British Medical Association respectfully to call your attention to the following considerations:

The increase in the number of students this year entering the medical school in Manchester is evidence that there is a complete ignorance on the part of the parents of the economic crisis in the profession of medicine.

In general practice, to which nine-tenths of the entrants are destined, the field of work, and therefore the income, has been contracting, and is bound to contract as disease becomes more and more preventable. A single instance—Dr. Davy, in his presidential address to the British Medical Association, said: "My predecessor told me that fifty years ago his average income from attendance on cases of typhoid was £300 a year. For the past few years my income from that source has hardly averaged 5 guineas."

The BRITISH MEDICAL JOURNAL says: "The average income of the practitioner has been estimated at £200—£250 a year. The chances of being able to save even to the extent of the capital expended in education are in a large proportion of cases slight; while reasonable provision for old age, after family expenses are met, is difficult and too often impossible." This is after a training lasting seven years and costing £1,000—£1,200, and even this pitance is only gained by working seven days a week and being "on duty" twenty-four hours a day, with the natural result that the death-rate in the medical profession is higher than in any other, the army not excepted.

In France and Germany it has been found needful to issue "letters of warning" to intending students, as the results of practice are equally unsatisfactory there.

We would therefore ask you to urge intending entrants to inquire further before joining so overcrowded a profession.

The letter is signed by the Honorary Secretaries of the two Divisions.

THE MIDWIVES ACT IN LANCASHIRE.

At the end of the year 1908 there were 949 midwives on the Lancashire county register, and of these no less than 725 were in bona-fide practice in July, 1901. As 78 of the total are temporarily out of practice, that leaves 871 in actual practice at the end of the year. Some difficulty has been found in getting the midwives to comply with the section of the Act that requires them to give notice in January of their intention to practise, a considerable number each year failing to send in notice. During the quarter ending December 31st 128 stillbirths were recorded, and in 20 cases death of either the mother or the child occurred before the attendance of a medical man. There were 331 cases recorded in which a medical practitioner was sent for in accordance with the rules of the Central Midwives Board, against 263 in the same quarter of 1907. Of these, 143 were for obstructed labour or uterine inertia requiring instrumental assistance, 43 for unusual presentations, and 27 for ruptured perineum. The county has made no provision for the payment of practitioners summoned to the assistance of midwives, and only in very few cases have boards of guardians made any arrangements, mostly extremely unsatisfactory, and limited to purely pauper cases. The circular issued by the Local Government Board in July, 1907, has, in fact, been largely of no effect. Puerperal fever occurred in 42 cases, with 15 deaths, against 36 cases with 19 deaths in the same quarter of 1907, and 21 cases with 10 deaths in 1906. There has thus been a considerable increase in puerperal fever. In 12 instances midwives did not comply with the rules as to forwarding a copy of the record of sending for medical help in cases which subsequently developed into puerperal fever, nor did they report the cases when diagnosed as "fever." In all such cases the midwives are required to answer charges of neglect, while other charges of negligence or misconduct have been made against 3 midwives. The records of sending for medical help have steadily risen in number during the last four years, the numbers being 428 in 1905, 875 in 1906, 1,069 in 1907, and 1,543 in 1908, the increase being due partly to the greater efficiency of inspection, and partly to the midwives realizing more fully their obligations. The two trained nurses appointed to give their whole time to the inspection of midwives report that, though on the whole the records are better kept, and there is a distinct improvement in the mode of practice and in general cleanliness, a certain number of midwives give a considerable amount of trouble by evading the rules, by want of cleanliness and general unsatisfactory conduct; some of the most illiterate hardly seem to have intelligence enough to grasp the present requirements, and through want of education many of them cannot correctly keep their registers. "As a result of continued instruction, some of the midwives who previously had not the faintest knowledge are now able to take the temperature sufficiently well to be able to realize when medical assistance is necessary and a number can already count the pulse." One cannot help thinking that such a report shows a woful defect in the quality of many of the midwives of Lancashire. The Lancashire Education Committee offers annually five scholarships of £30 each for the training of midwives. The proportion of bona-fide midwives compared with the fully certificated is very large, 725 out of 949, and there is some ground for fear that there may be some shortage of midwives after April, 1910. It is said to be possible that attempts may be made to get over this by unqualified women taking cases nominally under the charge of medical men. This is, of course, a dangerous procedure, unless the greatest care is taken, for not only would there be a risk of a charge of employing an unqualified assistant, but unless the oversight by the medical man is actual and not merely nominal, and is strictly and carefully carried out, the lot of parturient women would be no better, if, indeed, it would not be worse, than it is at present.

MANCHESTER ROYAL INFIRMARY.

At the annual meeting of the trustees of the Royal Infirmary, held on February 14th, the Earl of Derby, who was elected president, thanked the meeting for electing him in place of his father, and was pleased to think that he was the fourth member of his family in succession to occupy the position of president. He expressed a confident hope that the King would be able to visit the infirmary when he came to review the Territorial Forces in July.

The Chairman of the Board, Mr. Cobbett, in moving the annual report, drew attention to the serious state of the finances of the infirmary. About £9,000 still remained to be raised in order to open the new building free from debt. In addition to this, the annual expenditure was a matter of great concern. It was calculated last year that by removal into the new building there would be, in the absence of an increased subscription list, an annual deficiency of between £7,000 and £12,000. The subscription list had been increased only to the extent of £1,600, so that the position in which the Board stood was that it might have to spend £10,400, and must spend at least £5,400 more than the income, unless the infirmary was to be carried on in a way which would not give the public the full benefit of its resources. In this condition the Board felt serious anxiety about the future of the institution. Mr. Cobbett, in alluding to the question of women doctors, announced that the Board had considered the question and decided to appoint a committee to inquire into the subject of the appointment of medical women to resident positions in the infirmary and to report in writing to the Board.

Lord Derby said that what the medical women wanted was not remuneration, but experience, and those responsible for the management of the infirmary wished to give them that experience, but they could not do what they had been asked to do on the spur of the moment; he was sure that the wisest course had been taken in appointing a committee to consider the question thoroughly.

PROFESSOR RUTHERFORD AND THE NOBEL PRIZE.

The Council of the Manchester University has shown its appreciation of the achievements of Professor Rutherford by entertaining him to dinner in the Whitworth Hall to celebrate the award to him of the Nobel prize for physics. The Vice-Chancellor, Dr. Hopkinson, was in the chair, and there was a distinguished company to welcome Professor Rutherford, who was accompanied by Mrs. Rutherford. After the loyal toasts had been honoured, the Vice-Chancellor called upon Sir J. J. Thomson to propose the toast of the evening, and reminded those present that Sir J. J. Thomson himself was an old student of Owens College, a governor of the university, himself a winner of the Nobel prize, and the teacher of the guest they were specially met to honour.

Sir J. J. Thomson said that Professor Rutherford owed the Nobel prize to Manchester, for he had already done some remarkable work in physics before he went to Cambridge. He had never really received the recognition he deserved for what he had done in what is now known as wireless telegraphy, for he took with him from Manchester an electrical instrument by which as early as the year 1895 he was able to signal over two miles by means of this wireless telegraphy. At Cambridge he had devoted himself to the investigation of the remarkable properties of gases exposed to the influence of Roentgen rays. He was glad that the Nobel prize had come to Professor Rutherford while still in the full vigour of his faculties, and it would certainly stimulate him to still greater discoveries.

Professor Rutherford, in reply, said he felt honoured by being a member of the staff of the university. He had spent twenty-three years in New Zealand, then passed to Cambridge for three years under Professor Thomson, and then spent eight years in Montreal. As a new arrival in Manchester, his first impression was the strength of its staff not only in the direction of teaching but of research. In no instance had fortune favoured him more than when he was invited to fill the place of Professor Schuster in the Chair of Physics. The history of science showed that it was the professors in the universities that supplied the greater part of the scientific facts. If they took the subject of wireless telegraphy, they found that all the properties of electric waves known to-day were known at Cambridge long before the inventive power of Marconi

brought them to perfection. A complete department of science had been added to our knowledge since 1895, and he felt that the advance of the future would be mainly along the scientific course, and if universities were to hold their place in the national life, they must be the centres of national research.

Professor Rutherford's reticence about his own great achievements was very striking, and at the close of his reply he was accorded a most enthusiastic reception.

NEWCASTLE-UPON-TYNE.

GLASGOW UNIVERSITY CLUB.

LAST week, in the College of Medicine, the annual address to the members of the Glasgow University Club was delivered by Sir Hector C. Cameron, Professor of Clinical Surgery in the University of Glasgow. The subject dealt with was mammary cancer. As the paper is to be published in due course in this JOURNAL the opportunity will be afforded to all of reading it. For the present it is sufficient to say that the address, which bore marks of careful preparation and thought, and which was extremely suggestive, from the point of view of late recurrences of the disease, was listened to by the audience with close attention. Mr. Rutherford Morison, in an able speech, proposed a vote of thanks to the lecturer.

In the evening Sir Hector Cameron was entertained to dinner by the members of the club. On this occasion there was a new departure. Sir Thomas Oliver, in recognition of the knighthood recently conferred upon him, was also a guest. In the absence of the President of the Club, the Rev. Mr. McGonigle, the chair was occupied by the ex-President, Dr. Johnstone Weir, of Jarrow. Between sixty and seventy gentlemen sat down to dinner; among the number were the Lord Mayor and the Sheriff of Newcastle-upon-Tyne and Sir Isambard Owen. In an appropriate speech Dr. Napier Burnett proposed the health of Sir Hector Cameron, who, on rising to respond, was most cordially received. Becoming reminiscent, Sir Hector alluded to the fact that since his student days several of the Chairs in the University had been filled three or four times; but however such events might be a cause of sadness, there was no occasion to be pessimistic, for there was constantly coming on a race of new men capable of filling the vacancies as they arose. To the great advances being made in education Glasgow University was contributing, under the able principalship of Sir Donald MacAlister. Dr. Johnstone Weir, his fellow student, in a delightful speech, proposed the health of Sir Thomas Oliver, who acknowledged the compliment. To Dr. Mearns of Gateshead was entrusted the toast of "Other Universities and Seats of Learning," which was responded to by Sir Isambard Owen in a speech at once racy and full of information.

NEW COLLIERY ACCIDENT STATION.

At the invitation of the owner of the colliery, Mr. Cochran Carr, and in presence of a large number of mine managers and officials, medical men and friends, Sir Thomas Oliver opened an Accident Station at Benwell Colliery. In doing so he alluded to the value of such a station for the reception and treatment of men brought to the surface when injured in the pit, and observed that the early application of the antiseptic treatment to wounds received in coal mines materially shortened the duration of the illness. Sir Thomas paid a high compliment to Dr. G. H. V. Appleby, Surgeon to the Colliery, to whose suggestion as well as to Mr. Carr's generosity the accident station was due. He concluded by expressing the hope that ere long colliery proprietors and mine managers throughout the country would follow the example set them by Benwell Colliery.

MR. HALDANE AT NEWCASTLE.

Mr. Haldane, Secretary for War, in an address to the undergraduates of Armstrong College, made an appeal to the College for officers, and said that his aim was to organize the Territorial Army on scientific lines identically the same as those of the regular army. So far as recruiting for the army of home defence was concerned Newcastle and the northern districts had done remarkably well.

WEST YORKSHIRE.

BRADFORD AND TUBERCULOUS MILK.

THE Medical Officer of Health for Bradford (Dr. Arnold Evans) has issued an interesting report on tuberculous milk and the veterinary inspection of cows, in which he calls the attention of the Health Committee of the Bradford Corporation to the following points: (1) That Bradford milk, probably to the extent of 8 to 10 per cent., may be infected with tuberculosis. (2) That there is considerable danger to human beings from the consumption of this milk. (3) That no direct action other than the application of the regulations under the Dairies, Cowsheds, and Milkshops Order is being taken to abolish this source of human tuberculosis. He suggests that a systematic inspection of all cows in the city should be made and that advice should be given to the owners of infected animals on the importance of separating the tuberculous from the healthy ones. Dr. Evans recommends:

1. That the town clerk be instructed again to advertise the provisions of the model clauses contained in the corporation's local Act of 1900, which has become practically a dead letter.
2. That an arrangement should be made with the Pathological Department of the Leeds University for the examination of milk by the inoculation of guinea-pigs and the provision of a report to the medical officer of health.
3. That the regular inspection of milking animals be made and a veterinary surgeon appointed for the purpose.

These recommendations, if carried out, would certainly tend to lessen the danger from tuberculosis in Bradford, and we trust Dr. Evans will have the support of the Health Committee and the Corporation.

MEDICAL INSPECTION OF SCHOOL CHILDREN IN BRADFORD.

Some reference was made in this column last week to this subject and a hope was expressed that means would soon be found to remove the friction between the medical practitioners and the school medical officers. We are happy to think that a solution of the difficulty is probable. At a meeting of the Bradford Division, held on February 17th, the question was thoroughly threshed out. Dr. Crowley, the Medical Superintendent of the Bradford Education Committee, was present, and very frankly stated his views. He was able to show that the indiscriminate treatment of disease had not been attempted at the school clinic and that there was no intention of doing so. Only the children of very poor parents would be attended to. Children would always be referred in the first instance to their own doctor for medical attendance. The treatment of ringworm and running ears was on a rather different plane. These Dr. Crowley looks on as diseases of a peculiarly dangerous character to the schools themselves and ought to be treated, if necessary, at the school clinic. Certificates that the child was not in a fit state to attend school, if given by a medical practitioner, would be accepted without demur by the Education Authority.

BIRMINGHAM.

ACTION OF THE BIRMINGHAM WATER UPON LEAD.

At the inquiry which is being held in Birmingham with regard to the tinning trade danger and Home Office regulations, Dr. Robertson, M.O.H., said that the soft water with which the city was supplied had an effect upon lead; if a lead-lined kettle filled with the water were allowed to stand on the hob all night, as was common, and then boiled in the morning, the water would contain lead. There would be practically no risk if people would empty their kettles, and if, before using the water in the mornings, they allowed the tap to run a short while. The City Council had memorialized the Home Secretary on the subject, because it was anxious about the number of the common kettles that were being sold in Birmingham.

HEALTH OF BIRMINGHAM.

The death-rate for the year 1908 was 15.9 per 1,000, which is the lowest ever recorded. Comparing the four-yearly period 1905-1908 with previous four-yearly periods at intervals of ten years, it will be seen that there has been a marked improvement in the death-rate:

	Average Death-rate.
1875-1879	24.5
1885-1888	19.8
1895-1898	20.2
1905-1908	16.2

The birth-rate was 28.4 per 1,000, as against 28.3 in 1907 and an average of 31.5 in the ten years preceding 1908.

LIVERPOOL.

PAY WARDS AT THE ROYAL SOUTHERN HOSPITAL.

At the annual meeting of the Royal Southern Hospital, held at the Town Hall on February 8th, a remarkable discussion took place, which has been followed by an animated correspondence in the daily press, and has led to a resolution being passed by the Association of the Honorary Medical Officers of the Liverpool Medical Charities.

At the annual meeting of the hospital Dr. Charles W. Hayward, Operating Surgeon at the Hahnemann Hospital, said he wished to call the attention of the trustees of the hospital to a matter which he thought had not presented itself to them in what he and others conceived to be the true light. There were, he said, at the Southern Hospital one or more private wards into which patients were admitted and treated on payment to the hospital of 2 guineas a week for board and maintenance; but the doctors who attended these cases were not allowed to receive anything for the attendance they gave. These patients, he said, were all, or nearly all, perfectly willing to pay. He quoted an instance in which, he said, the patient was not only able to pay, but had actually arranged to pay a surgeon for an operation, and was about to go into a nursing home, when the friends were advised to send the patient to the hospital, where the operation would be performed for nothing. This was done, to the pecuniary loss of the surgeon who was originally consulted and of the home to which the patient had arranged to go. Dr. Hayward said there were plenty of people who had been in the private wards, several with good names in Liverpool, who were all under the stigma of receiving charity from the medical officer if not from the hospital. Other hospitals in Liverpool had private wards, but their view was that if a patient entered these private wards, it was not fair that the doctor should not be paid if the patient could afford it. He said there was one phrase in the statement of Mr. Adamson, the President, with which he quarrelled, namely, that great care was taken to secure that only the right class of case was admitted. He did not like to use harsh words, but that was not correct.

Mr. Adamson said that the case specially referred to by Dr. Hayward was that of the wife of a ship's officer who in reality was not in a position to pay adequate fees for the operation (amputation of the breast) which was required. He said that the circular, which was sent to every applicant for attendance in the private ward, read as follows:

The private wards at this hospital are for the use of poor persons who can pay 2 guineas per week towards their nursing and maintenance, but who are unable to pay the specialists' fees for the treatment necessary for their cure. Persons who can pay these fees for treatment at home or at a nursing home are not eligible for admission.

Every patient admitted into the private ward was introduced by a member of the honorary staff or by a resident officer by arrangement with an honorary officer. It would be a crying shame, continued Mr. Adamson, if the medical men who used the hospital's theatres and implements, and took up the time of the nurses, should make any charge to the patients. Whenever a vacancy occurred on the honorary staff there was a struggle among medical men to get in. A London man had said the other day that it was worth £10,000 a year to get into a London hospital, and in the case of a Liverpool hospital it must be worth at least £5,000.

In the newspaper correspondence which followed the question was discussed from various points of view. Needless to say, medical practitioners exposed the absurd exaggerations uttered as to the pecuniary value of hospital appointments, and showed that they were sought not so much from their monetary results, but because it was necessary to hold them if men desired to carry out special

lines of clinical work or practice. As regards the question whether adequate means have in the past been taken to limit the use of the pay ward to persons unable to afford fees for operations and other special treatment, it appears that the inquiry form now in use was only adopted on January 4th, 1909. The paying ward has been established since 1892. With regard to the general question of whether honorary medical officers of hospitals should have the right to charge for the services rendered to patients who occupy pay wards and who are in a position to pay professional fees, the Association of Honorary Medical Officers of the Liverpool Medical Charities passed the following resolution at a meeting held at the Medical Institution on February 15th:

That, in the opinion of this association, any honorary medical officers attending patients in hospital who are occupying private wards should be at liberty to charge for their services. That the association does not, however, by this resolution express its approval of the existence of private wards in the general hospitals.

LEEDS.

THE GENERAL INFIRMARY.

An examination of the tables of statistics for the year ending December 31st, 1908, which have been prepared for the annual report, shows that the amount of work done by the various departments remains about the same, and this, as has been pointed out on former occasions, must be taken as an indication that the infirmary with the present number of beds is not capable of dealing with a larger number of patients. The daily number of in-patients during 1908 was 365, as compared with 368 for 1907. During 1908 there were admitted 6,802 patients, which, with 335 remaining in at the end of 1907, shows a total of 7,137 treated during the year, or 51 more than in 1907. The average number of days each patient was resident was practically the same as in the former year, being 18.7 as compared with 18.9. The number of deaths in the infirmary was 531, a percentage of 7.4. Of these, 163 occurred within forty-eight hours of admission, and if these are deducted from the total the percentage falls to 5.2. Of the in-patients 1,240 were admitted into the medical wards and 3,371 into the surgical wards, exclusive of 705 accident cases, and exclusive also of 839 eye cases, 287 ear cases, and 360 gynaecological cases which were admitted into the special wards of these departments.

In the out-patient department an increase of 1,953 in the number of new patients, which reached the large total of 42,371, must raise in the mind of any one acquainted with large hospitals the feeling that a great many patients with trivial ailments and quite able to pay for advice must have attended. In the out-patient maternity department 501 cases of confinement were attended. The work of the two semi-convalescent homes is shown by the number of patients drafted from the infirmary to the Ida and Robert Arthington Hospitals, for this is the only way these institutions are filled. The number for 1908 was 1,154. These hospitals had a daily average of 84 patients, and the average number of days spent by each patient in them was 24.9. The total amount of alcohol—including in this both wine and spirits—consumed in the infirmary during the year 1908 was 6,428 oz. (2,021 being wine and 4,405 spirits). This means about 18 oz. daily, and, when one considers that the average number of patients was 365, the amount used is surprisingly small. Last year, with 368 patients, the amount used daily was 27 oz. In 1905, with about the same number of patients, the amount was rather more than double that used during 1908, but, as was pointed out, this larger figure represented only one-tenth of an ounce per patient per day.

BRISTOL.

TERRITORIAL FIELD AMBULANCE.

UNDER the Territorial Force scheme, the medical part that was allotted to Bristol was the raising of a field ambulance to be attached to the Gloucester and Worcester Battalion of the South Midland Division. After a few preliminary meetings, at one of which Colonel Russell, R.A.M.C., explained the general scheme, recruiting was started, and

on May 17th, 1908, a sufficient number having been enrolled, the corps received official recognition, under the command of Lieutenant-Colonel A. W. Prichard, V.D. At the time of the annual training, 98 men and 7 officers went into camp for a week at Swanage, followed by a second on Salisbury Plain, a no mean muster for a corps only formed a few months. Since that time to the present recruiting has been most satisfactory, resulting in the corps not only being up to its establishment, but, owing to its having a certain number of special reservemen in the ranks, being at least 10 above. Both before and since camp lectures founded on the *Manual* have been given by the officers, and parades for recruits and company drill have taken place twice or three times a week. Unfortunately the corps is as yet without its own head quarters, and is at present obliged to share the drill hall of the 4th (City of Bristol) Gloucester Regiment, and though there is little prospect of a drill hall of their own being provided by the County Association, it is still hoped that some more commodious place will be found soon. As it is almost impossible to parade the whole corps at once, but as the summer comes on the cricket ground of the Bristol Grammar School will be kindly lent by the head-master, Captain Norwood. The corps is no better off than the London ones seem to be as regards wagons, etc., and all the stretcher drill so far (with the exception of work in camp) has been done with stretchers lent by the Marine Ambulance, a civilian corps in Bristol. Instruction in the care of horses, in harnessing, etc., is now being undertaken, and the officers will begin again their weekly rides, which were only stopped by the dark days and pressure of professional work in the winter. As a special mark of approval the corps was in August last permitted by the War Office to wear gold ornaments. The school of instruction for officers is now being held by the Adjutant, Captain Stephens, R.A.M.C. It is believed that the 3rd South Midland Field Ambulance is the first in the United Kingdom, other than a cavalry ambulance, to attain its full establishment of men. It is true that two more officers are required, but this deficiency will probably be soon made good.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

INDIAN MEDICAL SERVICE DINNER.

We are requested to intimate that the annual dinner of the Indian Medical Service in Edinburgh will take place, as formerly, in the Caledonian United Service Club, Shandwick Place, on the last Friday in May next, under the Presidency of Sir Alexander Christison, Bart.

This early intimation is given so that it may reach those officers who contemplate taking furlough previous to their departure from India. Those wishing to be present should write to Brigade-Surgeon James Arnott, 8, Rothersey Place, Edinburgh.

ROYAL EDINBURGH ASYLUM FOR THE INSANE.

The annual meeting of the Corporation of the Royal Edinburgh Asylum for the Insane was held in the City Chambers, Edinburgh, on Monday, February 22nd, the Lord Provost presiding.

Dr. G. M. Robertson, the physician superintendent, submitted his first annual report for the year 1908.

At the beginning of the year the total number of patients in Craig House and the West House, the two establishments which form the Royal Edinburgh Asylum, was 743 (including 10 on probation), and on December 31st it was 752 (including 11 on probation). The admissions were 239 (106 men and 133 women). The total number of patients under treatment was, therefore, 982. The number discharged was 166 (89 men and 77 women). The number of patients who died was 64 (29 men and 35 women). The average number of patients resident during the year was 733 (356 men and 377 women).

The admissions were 78 less than in 1907. During the last three years the admission-rate had been steadily falling, owing to the fact that the Parish Council of Edinburgh had every year been sending a larger number of its mental cases to Bangour Village Asylum and fewer to the West House. Edinburgh patients still continued to be admitted to the West House, as the managers were under an obligation to find accommodation for 105 patients belonging to that parish till the year 1914.

The number of private patients admitted was 132, or 3 less than last year, which was the highest in the history of the institution. These admissions were chiefly to the intermediate department of the West House, where accommodation and treatment were provided at the standard rate of £45 a year. This department was one in which the managers had always taken the greatest interest. They had dealt with the patients undergoing treatment in it in the most generous manner, and it was calculated on that account that there was a loss sustained in its management last year of £3 a head. This special interest was due to the fact that this department provided accommodation of a comfortable character for the afflicted members of families of the educated and professional classes of only moderate means. These families were quite unable to afford to pay the considerably higher rates charged at Craig House, and patients of this class would suffer in many ways if placed for treatment among rate-paid patients of a different social position. Separate accommodation to meet this want was only found in the Royal Asylums of Scotland, but up to the present time the extent of this accommodation had not been sufficient to meet the demands. Owing to the removal of the patients belonging to the parish of Edinburgh, adequate space was now available for this purpose at the West House, and this was proving a benefit to a most deserving class who were promptly taking advantage of the available accommodation. In providing this accommodation the managers felt that they were locally carrying out what was one of the primary objects of the founders of the institution—"to extend the benefits of the institution to such persons as are in circumstances of indigence," but who are above pauperism. The managers were anxious that the existence of this accommodation should be as widely known as possible throughout Scotland to those whom it concerned.

With regard to the character of the cases admitted, Dr. Robertson made the following observations:

There were sixteen men and ten women admitted who were diagnosed by the medical officers to be suffering from alcoholic insanity, being 10.8 per cent. of the total admissions, a proportion which compared favourably with previous years. A more remarkable feature was the fact that eleven persons were admitted suffering from post-influenza insanity, being nearly 5 per cent. of the total admissions, and 42 per cent. of the admissions directly due to alcohol. The poison produced by the influenza microbe was recognized by mental physicians to have most injurious effects on the functions and tissues of the brain and nervous system. As a rule these effects were not immediate, as the poison acted slowly by impairing the health and nutrition of the nerve cells, and after the patient had been out of sorts for a fortnight, a month, or even much longer, the mechanism of some nervous function or other broke down. These nervous after-effects were legion, and fortunately in only a few cases did they result in complete mental derangement. The extent of the mental, physical, and material damage, indirect as well as direct, sustained by the nation as the result of influenza could only be realized by comparing it with that produced by excessive indulgence in alcohol. For one patient sent to the asylum there were scores who were incapacitated, and the ill-health of these was a source of misery to themselves and, if they were breadwinners, of consequences for their families as serious as would have been the case had the head of the household been a drunkard. It would have been better for the country had an epidemic of cholera passed as a scourge through the land and then left it, than that it should be afflicted as it was by recurring outbreaks of influenza.

The percentage of recoveries was 31.3 of the total admissions—considerably below the average. Since 1900 the total number of deaths was 64, which was less than for twenty years. The percentage on the average number resident was 8.7. The treatment of consumption was being carefully carried out on modern lines. It was a disease that could be kept thoroughly under control in an asylum. General paralysis caused 18 deaths—14 men and 4 women.

Reference was made to the general history of the institution, the retirement of Dr. Clouston, that enduring monument of his régime, the Craig House. The inception of the idea to build a great mental hospital designed on modern lines for the accommodation of patients able to afford high rates of board, and desirous of getting the very best care and treatment that could be obtained, showed great boldness as well as remarkable foresight. The manner in which this idea was carried out was even more remarkable. The resignation of Mr. Gregory, head attendant on the men's side, had allowed the new arrangement of a lady superintendent undertaking the responsibility for the supervision of the nursing and domestic arrangements of the institution.

Miss Wise, lately matron on the ladies' side, had been appointed to this. A nurse's home was to be arranged at the West House. The work being done at the laboratory of the asylum was referred to. Dr. Winifred Muirhead had been appointed Pathologist. The lactic acid bacillus treatment had been employed in treating those chronic cases the result of a faulty chemistry in the disease, and more frequently produced by micro-organisms which have invaded the body. In association with Dr. Dods Brown, Dr. Ford Robertson, the pathologist of the Scottish asylums, had obtained further support for his hypothesis of the causation of general paralysis.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

ROYAL COLLEGE OF SURGEONS.

THE annual dinner of the Royal College of Surgeons in Ireland was held on Saturday, February 20th, when the chair was occupied by Mr. J. Lentaigie, the President. His Excellency the Lord Lieutenant honoured the proceedings by his presence, and there was a distinguished general company. The occasion was made specially interesting by the presentation to Professor Alec Frazer of a silver box containing a handsome cheque from the college staff, in commemoration of the completion of twenty-five years' work as teacher of anatomy. The President said he was the trusted friend and counsellor of the students, and had a wonderful gift of imparting knowledge and of controlling and directing his pupils. Professor Frazer was enthusiastically cheered in acknowledging the honour. Many toasts were proposed, and among the speakers were the President, His Excellency Lord Aberdeen, Mr. R. H. Woods (Vice-President), Mr. Justice Kenny, the Provost of Trinity College, Rev. T. A. Finlay, S.J., Sir Arthur Chance, and the President of the Royal College of Physicians.

Canada.

TORONTO MILK COMMISSION.

A COMMISSION has been appointed by the Academy of Medicine, Toronto, to obtain, if possible, a supply of milk of a high standard of purity, to be known as certified milk; the requirements for this standard are as follows:

1. The herd milk shall contain 12 to 13 per cent. of total solids, of which 34 to 43 shall be of butter fat.
2. It shall contain no colouring matter, preservatives, or other foreign substances.
3. It shall be free from blood, pus, or disease-producing organisms.
4. It shall be free from all disagreeable odours and tastes.
5. It shall not have been heated in any way, nor frozen.
6. It shall be derived only from cows which have been tuberculin tested by the veterinarian of the Commission before entering the herd, and have been found healthy, and which shall have been so tested every six months thereafter.
7. It shall have been cooled to 45° F. within one half-hour after milking, and shall be kept at not higher than 45° F. until delivered.
8. It shall not be more than twenty-four hours old when delivered to the consumer.
9. It shall not contain during the months of June, July, August, and September more than 10,000 bacteria per cubic centimetre, as shown by a forty-eight hour culture on nutrient agar medium at 37° C., nor in the remaining months of the year more than 5,000 bacteria per cubic centimetre as demonstrated by the same tests.
10. The veterinary inspector and the physician of the Commission shall each month inspect the herd, the health of the employees, and the hygienic conditions of the dairy generally.
11. All bearers of a physician's prescription for certified milk shall be deemed preferred customers.

A circular of recommendations has been issued to the dairymen of the city and vicinity, pointing out the method to be followed to meet these requirements. The stables and barnyard are to be kept clean, light, and well ventilated, with a constant supply of good water; the cows are to be groomed, and the inside of the thighs and the udders washed before milking; all milk from cows twenty-one days before and seven days after calving is to be rejected. The milkers are to be personally clean, and in case of illness in the person or family of any employee, he

must absent himself until he procures a doctor's certificate that it is safe for him to return. The hands are to be well washed and dried before milking, and light-coloured, washable garments are to be worn; children under 12 years of age are to be excluded from the stables, owing to their liability to contagious diseases; also cats and dogs, which may frighten the cows. The first few streams are to be discarded from each teat, and the milk pails shall have a diameter not exceeding 8 in. at the opening. All dairy utensils, including bottles, are to be cleaned and sterilized by washing in hot water and soda with a brush, and then sterilized with flowing steam for one hour or with steam under one atmosphere for fifteen minutes. The sterilizing room is to be separate from the bottling and cooling room. The bottles, after filling, are to be capped with a sterilized paper disc, bearing the seal of the Commission and the date of production.

In order that the dealers and the Commission shall be kept informed of the character of the milk, specimens will be taken at random from the day's supply once a month or oftener, and subjected to examination by the experts of the Commission. The Commission will make inspection of certified farms at frequent intervals, and reserves the right to change its standards in any reasonable manner upon due notice being given to the producers.

The Commission is ready to certify to the milk of any producer who fulfils the above standard to its satisfaction, and already two large dealers have accepted the responsibility. The Academy of Medicine in appointing the Milk Commission, is actuated by a desire to obtain for the children and patients under their care a milk beyond suspicion; the motives of the Commission are disinterested, and its members forbid to themselves any pecuniary reward.

Special Correspondence.

VIENNA.

Scarcity of Water.—Conditions in the Army Medical Corps.—A Hospital Strike.—Teaching of Social Medicine and Medical Ethics.

The abnormal conditions of weather and climate which have prevailed in this country since September, 1908, have had a very unpleasant effect on the water supply of the capital. In normal times Vienna requires about one and a quarter millions of hectolitres of water, or about thirty millions of gallons, per day. This quantity of water is supplied by a number of mountain springs coming from the group of the Schneeberg, about 6,000 ft. high. An aqueduct, some 78 miles long, brings the water to Vienna. To this abundant supply of fresh, cool, and healthy water the absence of typhoid in Vienna is ascribed. In the months of September to December the rainfall for this particular district was not even a third of that coming down there as a rule, and when frosts set in at Christmas time the water supply was still more interfered with. The store of water in the reservoirs in Vienna had to be drawn upon; the water pipes in the houses had to be throttled; the use of water was diminished as much as possible, so that the daily requirements were brought down to about 50 per cent. of the normal. But now even this amount does not flow into Vienna, so that the city is suffering from a water famine. The water necessary in hospitals and other similar institutions was not cut off, but in many houses and in industrial buildings this had to be done. Luckily the weather has within the last forty-eight hours turned very warm, so that the reservoirs and the houses will soon get their full share of water again.

The recent warlike rumours turned public attention to the fitness of the army, and the complaints against the administration of the Army Medical Corps have been publicly discussed in a very animated way. The object lessons taught by the war in Eastern Asia have shown sufficiently that fitness for war includes also fitness of the medical provisions. But in the army racial and religious prejudices have been allowed to interfere with promotion, so that within the last seven years 747 surgeons have decided to throw up their commissions. On the other hand, the pay of the medical corps has remained stationary for twenty years notwithstanding the increase in the cost

of living. Private practice and appointments offer greater attractions to the young doctor than the military career does at present. The result is that there is a lack of medical officers in the army, believed to amount to 500 or more. Every effort is now being made to remedy the disgraceful and dangerous state of affairs.

A "hospital strike" lately gave rise to much comment in medical circles of the city. In one of the smaller public hospitals the medical staff had complained several times to the managing board about the administrative work and the non-medical duties they were expected to perform. Lately the quality of the food had also become, on account of the cheeseparing policy carried out by order, rather of a low kind, so that the whole medical staff refused to continue their work and "struck." This had the desired effect. The public scandal and the indignation at such a method of economy quickly put things right, and the food will in future be controlled in the kitchen by a doctor. The strike has shown once more the good effect of co-operation amongst medical men.

In one of the latest meetings of the Vienna Medical Council (Aerztekonferenz) Dr. Grün proposed that a petition should be presented to the Government asking for the establishment of special chairs of social medicine at the Vienna University. He suggested that the student should be instructed (1) in the relations between the doctor and the general public, the authorities, and the legislature; (2) the importance of medical organization and the duties of the practitioner towards it. The main subjects should be: Physician and patient; the rights and duties of the physician in regard to his patient and the public; the duties of the physician in regard to his brethren in private practice (instruction in medical ethics); rights and duties of the doctor in relation to contract practice and sick clubs, insurance companies, and accidents; the relations between old-age and invalid pensions and private practice. Special care should be devoted to medical testimonials and examinations; the duties of the practitioner towards the State in infectious diseases and occupation or industrial diseases. The important subject of social hygiene should also form part of this study. The latter would comprise the history of social hygiene, social statistics, and special hygiene (of schools, of building, of food, of epidemics). The suggestion was received with great applause, and will be made the subject of general discussion.

Correspondence.

THE BIO-CHEMISTRY OF CYTOLYSIS.

SIR,—In the interesting account published in last week's *JOURNAL* of the Morison Lectures, by F. W. Mott, M.D., F.R.S., F.R.C.P., on the Pathology of Syphilis of the Nervous System in the Light of Modern Research, a passage occurs in which Dr. Mott rightly draws attention to the great importance of the cell lipoids, not only in the normal life of the cell, but in the bio-chemistry of such reactions as the Wassermann test for syphilis and in the neutralization of cobra venom by lecithin, which is here the active constituent of the lipid.

While subscribing in full to this opinion, I should like to be allowed to point out that there is an alternative view to that which supposes that the lipoids owe their activity to the formation of an osmotic membrane, consisting of a mixture of lecithin and cholesterolin around the cell, which conserves the cell contents and preserves a different composition from the surrounding plasma.

It has been shown in detail by Moore and Roaf (*Bio-Chemical Journal*, vol. iii, p. 55, 1907) that any such inert membrane cannot give rise to the distribution of salts and colloids within and without the cell, which naturally occurs; that it can only prevent passage of dissolved substances to and fro, but cannot explain accumulation of cell products in higher concentration within the cell than in the plasma.

The alternative view, for which evidence is given in the paper quoted, is that cell proteins and cell lipoids are unsaturated bodies capable of entering into a labile equilibrium with the other cell constituents and with each other. The amount of such loose physico-chemical combination varies up and down with the cellular activity

and changes in the environment from moment to moment, and there is thus a flux of chemical energy going on all the time in a system which is stable though all the time undergoing change.

This view is far more compatible with the reactions shown to occur with the isolated lipoids and cobra venom, or of the lipoids, such as lecithins and oleates, and the antigen of syphilis, than any membrane hypothesis, for here there is no doubt whatever of the existence of chemical reaction.

The writer has shown by experiment that lipid matter as a membrane does not possess the osmotic properties theoretically assigned to it by Overton, and it is far more probable that the lecithin and other fatty bodies are distributed all through the cell substance, in combination with the haemoglobin forming a cement substance for it, than that they merely form a superficial stroma or membrane for the corpuscle. There is no doubt whatever that the stroma left behind when the haemoglobin escapes is not lipoidal in character, this other stroma of lipid character acting as an osmotic membrane is a theoretical myth which has never been demonstrated by staining or otherwise.

The part played by lipoids both in health and in disease is one of large importance, which is just now being gradually realized, but it is as active chemical constituents of the cell of an unsaturated nature and therefore capable of combining chemically with proteins, toxins, anaesthetics, drugs such as digitalin and saponin, and many other physiologically potent substances, and not merely as inert membranes, that this class of bodies exercise their influence.

This is shown by their similar chemical activity when entirely dissolved out of the tissues so that they cannot in any sense be acting as membranes, yet they still neutralize cobra venom or syphilitic antigen.

The nature of the reaction between these lipoids, the immune body, and the complement of serum is a biochemical problem of the profoundest interest.

Work which I have recently carried out on the nature of the reaction induced by the oxidizing ferments or peroxidases led me to the view that the lipoids might be reduced substances, and the complement an oxidizing body, and experiments conducted on this basis by Dr. F. P. Wilson and myself bearing on the haemolysis of blood corpuscles by reducing and oxidizing agents have yielded most interesting results, of which the following is a brief preliminary account:

All naturally occurring lecithides are unsaturated and capable of taking up oxygen, for all contain the unsaturated oleic acid. Also it has been shown by Sachs and Altmann that sodium-oleate binds complement in presence of syphilitic serum similarly to the antigen of syphilis; further, such oleins are set free in nervous lesions, and would be present in syphilis and in general paralysis.

Acting on this hypothesis we have tested the action of hydrogen peroxide as an oxidizing agent and ammonium sulphide as a reducing agent upon washed blood corpuscles, both reagents being used only in extreme dilution, and we have found that the oxidizing agent produces haemolysis, while the reducing agent inhibits and entirely prevents haemolysis even in presence of extremely active haemolytic serum.—I am, etc.,

BENJAMIN MOORE,

Bio-Chemical Department, University of Liverpool.

February 22nd.

THE SERUM DIAGNOSIS OF SYPHILIS.

SIR,—In connexion with Dr. Mott's remarks in his recently-delivered Morison Lectures on the Wassermann test, may I be permitted to point out that Dr. Porges, one of Professor v. Noorden's assistants, has, conjointly with others, devised a method of the serum diagnosis of syphilis which he claims to be an improvement on that of Wassermann? The test, as I saw it performed, was as follows:

1 to 2 c.cm. of blood are taken from the finger and transferred to a small test tube. The corpuscles are allowed to sink, and the upper serous portion is drawn off. This is then centrifugalized, and the serum again drawn off and heated in a water bath for half an hour to a temperature of 56° C. By means of a finely-graduated pipette, 2/10 c.cm. of the heated serum is transferred to a test tube A, and a similar quantity to a second test tube B (control). To test tube A is added 2/10 c.cm. of a

freshly-prepared solution of sodium glycocholate (1 per cent. of the salt in distilled water), the two fluids being mixed by carefully inverting the tubes a few times, and to test tube B is added a similar quantity of normal saline solution. The two tubes are kept at the ordinary temperature of the laboratory for about twenty hours. In the event of a positive reaction, at the end of this time a flocculent precipitate will be observed in test tube A floating in the upper portion of the fluid, the fluid in test tube B remaining, on the other hand, quite clear.

It is not maintained that the absence of a reaction (= negative reaction) is proof positive that the patient experimented on has never had syphilis; it is, however, contended that a positive reaction is definite evidence of past syphilitic inoculation: 60-70 per cent. of tabetics give a positive reaction and 80-90 per cent. of general paralytics. Dr. Porges kindly demonstrated this test to me, and I had the opportunity of seeing the characteristic flocculent precipitate in one of the laboratories of the Allgemeines Krankenhaus twenty hours after the initial processes had been completed. The occurrence of this precipitate was eloquent indeed, for here we had evidence, visible to the naked eye, that the blood of a syphilized individual many years after the primary inoculation differed from normal blood in a very definite way. Dr. Porges maintains that this test is not only simpler and more easy of application than the Wassermann test, but that it gives better results. I found, however, that the two medical residents in charge of the syphilis block at the Städtische Klinik at Frankfurt placed greater reliance on the Wassermann method.—I am, etc.,

London, W.

HARRY CAMPBELL.

PULMONARY TUBERCULOSIS IN CHILDREN.

SIR,—I have the good fortune to live in the district covered by Dr. Williams as Assistant Medical Inspector of School Children. Three of these so-called phthisical cases excluded by Dr. Williams from school have appeared with their mothers at my "out-patients" at the Kidderminster Hospital, bearing a letter stating that the child has tuberculosis of the lungs and needs medical attention, the mothers not unnaturally being in a great state of perturbation. In not one of these cases could I find any physical signs of tuberculosis of the lungs whatsoever, and I do not think that I belong to that class of medical men which from Dr. Williams's paper one infers exists, and which Dr. Walter Carr has boldly crystallized into words. These are the only three cases, so far, that I have seen that have been excluded by Dr. Williams for this so-called "consumption of the lungs."—I am, etc.,

BERTRAM ADDENBROOKE.

Kidderminster, Feb. 23rd.

SIR,—Dr. Mary Hamilton Williams, in her interesting paper on Pulmonary Tuberculosis in Children, in the BRITISH MEDICAL JOURNAL of February 13th, says: "The number of children on the rolls in the London schools examined was 165,915. Therefore, the probable number suffering from phthisis among these was . . . 7,164—that is, it is probable there were roughly 7,164 children suffering from phthisis in the schools examined."

But why "in the schools examined"? Why not in bed or at the hospitals? Not every child on the roll is "in the school." I have not got the London figures before me, but, in my own county area of Staffordshire, the children "in the schools" are commonly only 90 per cent. or 93 per cent. of those "on the roll." Thus, last month we had 81,341 on the roll but only 73,757 in the schools—a difference of 7,584. If Dr. Williams's statistical inferences are correct, and if, further, we in Staffordshire have the same proportional number of phthisical children as her figures seem to show for London—namely, at out 3,500—we should have an ample margin of absentees to account for them.—I am, etc.,

Stafford, Feb. 20th.

JOHN PRIESTLEY.

SIR,—In reading the paper on Pulmonary Tuberculosis in Children, by Dr. Mary Hamilton Williams, in the BRITISH MEDICAL JOURNAL of February 13th, I was so surprised to find that she considers phthisis is one of the most common diseases of children, that I immediately looked up my notes on the subject. I am quite convinced that it is one of the rarest diseases of childhood. Among my out-patients at the General Hospital, and at the Children's Hospital, Birmingham, I have taken the last

8,000 cases of children under 15 years of age, whom I have examined, and find that I have diagnosed phthisis in only 15 patients. Of these, 4 have already become quite well again, and another has greatly improved, so that I consider my diagnosis was wrong in all five; this reduces the number to 10, or 0.125 per cent. There were 11 others which I thought were doubtful cases of phthisis on my first examination. One appeared later to be a case of bronchiectasis, and all the others which I have not lost sight of completely recovered. There were other cases of tuberculosis of the lungs, but in them it was associated with tuberculous lesions elsewhere in the body, or the condition followed pneumonia which was tuberculous from the beginning.

There were about 12 cases of general tuberculosis, but I do not know the exact number, as they were admitted directly as in-patients; there were 2 cases of tuberculous peritonitis, which had undoubtedly tuberculous foci in the lungs; and 3 cases of bronchopneumonia which I considered to be tuberculous. Of course, a large proportion of these children whom I examined were below the school age, but, if so small a number appear to have tuberculosis of the lungs in children who are ill and are brought to a hospital, surely a much smaller number suffering from this disease should be found in school children of whom the great majority are in good health?

Naturally, errors in diagnosis may be made, and so I turn to my *post-mortem* notes for confirmation. While Pathologist at the General Hospital, Birmingham, I performed myself 244 *post-mortem* examinations on children under 15 years of age, and have attended many *post-mortem* examinations since. Of the 244 cases, there were 13 of general tuberculosis in which the lungs and bronchial glands were affected. In most of these the condition of the lungs was one of acute miliary tuberculosis, but in 4 there were many small cavities and caseating foci. There were 3 cases of tuberculous meningitis, in which there were caseating foci in the lungs and bronchial glands. In 1 case of cerebral tumour of tuberculous origin there was one caseating mass in the apex of the right lung, and the kidneys and the mesenteric glands were tuberculous. There were 2 cases of tuberculous bronchopneumonia, in both of which the bronchial glands were affected, and in one the mesenteric glands. There were, therefore, 19 cases of tuberculosis of the lungs, but in all except 2 the disease was disseminated widely in the body. I should add, however, that phthisis is not usually admitted into the General Hospital, but when we consider how frequently we find evidence of recent or past phthisis in the *post-mortem* examinations of adults, and that it was only in 2 cases out of 244 of children under 15 years of age that tuberculous lesions were found in the lungs only, and not disseminated over the body, we must conclude that phthisis is a most rare disease in childhood. The 2 patients with tuberculous bronchopneumonia were acute cases, and did not present the condition which is usually spoken of as phthisis.

Dr. Mary Hamilton Williams calculates that there were 165,915 children on the rolls of the London schools examined, and that among these the probable number suffering from phthisis was 7,164. This means that 4.318 per cent, or 1 in 23, of school children suffered from phthisis in these schools, whereas my figure is 0.125 per cent., or 1 in 800, for all children up to 15 years of age who attended the out-patient department of a general and a children's hospital. I therefore record my figures because they seem so contrary to the opinion of Dr. Mary Hamilton Williams, and because they appear to me to prove that phthisis as observed in the adult is one of the rarest diseases of childhood.—I am, etc.,

Birmingham, Feb. 20th.

JAMES E. H. SAWYER.

THE APPLICATION OF MENDELIAN RULES TO HUMAN INHERITANCE.

SIR,—“If,” says Dr. Drinkwater, “there had been no children born to the last abnormal . . . without doubt Mendelians would have considered Nettleship's chart as conforming to Mendel's rules.”

I do not feel in a position to say what Mendelians would have considered. Personally I should have said that this astounding association of the last abnormal with sterility was not in accord with any known law of Mendel,

and, until an explanation of it was forthcoming, that it was idle to talk of any proportion as near enough to that required by theory. It would have upset Mendelian theory by the simple fact that it postulated a special genetic constitution for the last abnormal.

Dr. Drinkwater asks me to furnish my explanation of what he terms the striking fact that of 98 abnormal parents nearly one-third had normal children only. My reply is that such a fact is only “striking” when you have demonstrated that it does not occur in other forms of pathological inheritance. It is necessary to remind Dr. Drinkwater that it was he, not I, who asserted that night-blindness closely obeyed Mendelian rules; that it was he, not I, who without any public acknowledgement of the fact calculated proportions by a non-Mendelian rule of his own; that it is he who is, not I who am, called upon to explain what he has but I have not yet termed a “striking fact.”

Dr. Drinkwater now agrees apparently with the view I thought he held from the beginning, namely, that prepotency may change not only with the mating, but even in the mating. There may, in my opinion, be much or little to be said for that view; all I would suggest is, that it is wholly incompatible with the theory of the pure gamete, and with the orthodox Mendelian's principles of dominance and quantitatively definite segregation which are hardly likely to be discarded by professed Mendelians. Above all from the standpoint of medicine, it would render Mendelism useless as a method of prediction.

Dr. Drinkwater tells us now with regard to this night-blind pedigree that there is no escape from the conclusion that some new factor must have come into operation where Mendel's rule begins to be inapplicable. I do not quarrel with this statement, but I ask why was it not distinctly stated in the original lecture (as printed in this JOURNAL), where the night-blind pedigree was described as giving the orthodox Mendelian ratio?

We are not at the bottom of the inheritance of night-blindness. There will, I feel quite certain, be other difficulties to be cleared up about change of dominance, when we have before us ten or a dozen pedigrees. Meanwhile I would return to my original standpoint—the urgent need to put aside controversy as to theory and patiently collect and publish raw material. In spade work of this kind Dr. Drinkwater has done excellent service, and as far as the inheritance of pathological characters in man is concerned this is the work which must precede all profitable analysis.—I am, etc.,

University College, London, Feb. 19th.

KARL PEARSON.

SIR,—Under this title a discussion has been recently proceeding between Professor Pearson and Dr. Drinkwater. I have followed it with some interest. Professor Pearson may not intend to mask the fundamental issues which arise from the discussion, but, none the less, that is what he has accomplished. Some day the mathematician will succeed in learning that living structures are not dead marbles, and that mathematical conceptions and formulae which may be legitimately applied to the latter have not always a valid application to the former. I will, therefore, meet Professor Pearson on his own battle-ground, and there I extend to him an invitation. He says: “In fact, the odds are several millions to one against Nettleship's material being a sample of a population obeying Mendel's rule.” No doubt it is easy to make such a statement and to create an imposing impression; and it is, doubtless, just as easy to believe that a faith in the infallibility of authority will cause it to be accepted without further question. But I am sorry to say that I am not one of the faithful. Indeed, I am very sceptical, and therefore I call for proof. I am acquainted with some of Professor Pearson's mathematical methods and conclusions, and I have learned that sometimes among the mathematical formulae there is hidden away a great deal of very un-mathematical assumption. Now, the outcome of any problem in probability depends upon the accuracy of our knowledge of the conditions and factors upon which the probable event depends. It will be of very great interest, therefore, if Professor Pearson will vouchsafe to let us into the inner sanctuary of those intellectual processes by which he arrives at a knowledge of these conditions. In

other words, we would all like to see and follow the various steps in this problem in probability by which this sweeping conclusion has been reached. It will require, I think, another mutational Laplace to evolve the needful processes of demonstration.—I am, etc.,

Geo. P. MUDGE.

Biological Department, London Hospital
Medical College, E., Feb. 17th.

THE COLD-BATH TREATMENT OF TYPHOID.

SIR,—In the JOURNAL of January 16th, p. 185, there is a letter from "X." which I have read with great interest, and wish to record my experiences with cold sponging of typhoid cases for the last ten years on Mount Lebanon.

I have never tried the cold-bath treatment on Mount Lebanon because I found the system so troublesome and impracticable in any ordinary private house. Although I cannot give your correspondent satisfactory statistics of all the typhoid cases I have met with, I am convinced to say that cold sponging does replace the cold-bath treatment of typhoid, and is efficacious in every way. Last month I had under my care fifteen cases of enteric fever; all were treated with cold sponging twice a day, and all recovered.

It may interest your correspondent to notice that my usual internal treatment for typhoid cases is tincture of iodine and salol or beta-naphthol.—I am, etc.,

Beirut, Syria, Jan. 21st.

A. J. MANASSEH.

THE DRAFT CHARTER.

SIR,—The letter from the Cape of Good Hope in Saturday's JOURNAL calls for strong protest from those who have been pressing for amendment of the draft Charter before it is accepted by the Privy Council. The writers have no right to charge us with a desire to wreck the Charter. We are as wishful as they are for the powers which they demand, and only claim that the rights of the individual member should be safeguarded, and in other less laudable objects that the voice of the Association should be tested by an efficient Referendum. With regard to the first claim, they forget that the postal vote is to be granted to the Colonial members and denied to us. Then, with regard to the second, let us recall the vote they gave almost unanimously against the proposals of the Representative Meeting in the Referendum of 1907. The Eastern Provinces at the Cape were solid against these proposals, and the Western Provinces did not vote at all. Only two of the ten Divisions in the whole of the Colonies supported the Representative Meeting. No fewer than twenty-two Divisions held no meeting, or recorded no vote. In these circumstances it is hardly reasonable that they should seek to hurry on legislation which they so recently condemned. It is also highly improper that they should fasten the charge of obstruction on those who are claiming privileges which they are to enjoy.

As usual, the threat of secession from the Association is again brought forward, as it was in July, 1906, and in May and July, 1907, as a reason for dispatch. We have never condescended to that line of argument, though the risk is far greater in our case. We have even been invited to fall away as "leaves," and almost threatened with expulsion.

Is compromise not possible? Dr. Taylor's letter of January 23rd, p. 247, deserves serious consideration. If the Charter is granted in its present form, there will be discontent in the Association, if not disruption. Without committing anyone else, I think his suggestion contains the germs of an amicable arrangement. There are subjects which demand discussion in Division meetings, and others which need none. If these questions were classified by mutual agreement, and the latter submitted to a postal vote, if a statutory quorum were fixed for all meetings at which delegates were elected or instructed, and if the Council were granted more unfettered power in taking the Referendum, the unanimity of the Association might be secured in favour of the Charter.

It may be that the members of the Association are prepared to accept the Charter as it is, but the vote of less than 10 per cent. is not decisive, and it is all the Representative Body has at its back, less the Divisions which voted against it in the 1907 Referendum. We believe, on

the contrary, that if the members were polled individually a large majority would support our demand. We desire to test the true feeling of the electorate, and it shows little confidence in the strength of their case that the demand was rejected by the Representative Body.

Even if it involve a little delay in the granting of the Charter it would be a momentous gain to the Association if we could arrive at an amicable compromise. We recognize the enormous amount of labour and skill in the drafting of the Charter, and in no way impugn the sincerity of its authors, and it would be far more in accordance with our wish to bless than to ban it, but we will not agree to the extinction of the right of franchise to the member who honestly is unable to attend the meeting of his Division, or the right of the Council to refer, with a fair prospect of success, any matter which it believes is not in accordance with the true interests of the Association.—I am, etc.,

Edinburgh, Feb. 22nd.

A. WALKER.

THE REPORT OF THE PUBLIC HEALTH COMMITTEE.

SIR,—The medical officers of health of small districts have been on public view now sufficiently long to judge of their efficiency and usefulness. By their works shall we know them. Statistical results tell their own tale. The health record of small areas compares most favourably with that of large areas. What advantage, then, would ensue from a public health point of view in doing away with the intimate local knowledge of the local medical officer of health? He is always on the spot, ready to deal promptly with infectious cases. A whole-time man cannot be in two or three places at once. Moreover, ratepayers are beginning to kick against the tendency of over-centralization, as they know that their local needs are best understood by the man whose daily round takes him all over the district, and whose interest is identical with the health and prosperity of the place wherein he earns his livelihood.

The bogey of the medical officer of health bagging other local practitioners' patients has long been laid to rest. This and the other delusion—that the medical officer of health is afraid to do his duty for fear of being unpopular—are mutually destructive. There may be general practitioners so morbidly jealous that they view with jaundiced eyes even the obituary notice of a fellow practitioner. But we need not legislate for envious freaks.

The British Medical Association will be doing a useful work if it helps to obtain greater security of tenure of office and automatic increase of salary, as obtains in all other public services and in most private employment. Let its work be constructive, conservative, consolidating, and strengthening, not destructive and disheartening to the local medical officer of health.—I am, etc.,

AUGUSTUS H. BAMPTON,

M.O.H. Ilkley.

February 16th.

THE CONFERENCE ON FRIENDLY SOCIETIES AND THE MEDICAL PROFESSION.

SIR,—Having always been intensely interested in the question of "contract" practice for medical men, I make that my excuse for putting pen to paper, as the recent conference appears to show that some members, at any rate, of our profession have the courage of their convictions.

The one fact that stands out as a source of never-ending astonishment to me is, that *any* medical man worth his salt should do *any* work on a contract basis. For what is a medical man? He is, I take it, a man who says in effect—You, or yours, sir, are unfortunately ill and suffering. Very well, I will use my utmost endeavours to get you well in the shortest possible time, bringing to bear upon your case thought and whatever knowledge I possess (nor did I acquire habits of thought, or knowledge, without very hard work and much money spent), and your good health—strange as it may seem—is my earnest desire. For this I expect, as every other man does who uses his brains, a reasonable fee in order to live.

But when a man (or body of men) comes to a doctor and says, "I will give you so much a year to attend me (or me and my family, or us), whether we are sick or not," in my opinion the doctor who accepts such an

offer forgets what he has been educated for, forgets that he and his friend are "human," forgets what the nature of a bargain is. The whole thing is so absurd that it really seems hardly worth while to labour the point. I am told, or have been told often, that the English working man stands as the exponent of "fair play." A fair day's work and a fair day's pay! I suggest, Sir, that he often fails to grasp the first principles of fair play. Now, what is the remedy for all this?

I see in your issue of February 13th a letter from "One Who Tries to Play the Game." (What does this signature mean, I wonder?) He is right. "Much talk and little treatment" is at present the trouble (and always has been). Then he hits the nail on the head when he says: "The education of the public may be achieved in time if we reform within the profession." Exactly! I have been wondering of late what precisely "a humble member of the rank and file" gains by belonging to the great British Medical Association? The discussion on the proposed "Royal Charter" has been somewhat entertaining, even if one has been inclined to whistle and stick one's tongue in one's cheek! There is certainly food for thought. In my own humble sphere I have always said to myself that I would rather starve or take up another profession than endeavour to increase a paltry enough income by accepting "contract" work. Are the body of the profession afraid, I wonder? I wonder also that they never even look at it in this light: That it is preferable to obtain a little more leisure—time to read, to think, to enjoy life, and last, but not least (most mundane and gross thought!), to eat—rather than accept a club or clubs to increase their income for work which they cannot possibly do well at such a price.

Finally, Sir, it may perhaps be worth while recording that I know of a branch club where recently it was proposed to pay the doctor on the principle of so much per visit and medicine. They agreed to try it on the doctor's terms. The first year of the experiment the club happened to benefit by the arrangement—but the doctor had less work.

One could say so many things on this subject; but I think I have said enough to show that it is we doctors who ought to "play the game," and gain a little respect in the eyes of the world by firm action. As Mr. Smith Whitaker rightly said at the conference, we want no favours; we want no money for work not done; nor is "money" everything.

Also, as a club secretary said to me once—not so long ago, when I was arguing the point with him—"As long as doctors are *fools enough*" (the italics are mine) "to be got to work for next to nothing of course we will get them to."—I am, etc.,

Brewood Staffs, Feb. 18th.

FRANCIS J. GEOGHEGAN.

THE VACANT POLICE APPOINTMENT IN LIVERPOOL.

SIR,—Mr. Maxwell's letter in the JOURNAL of February 20th is perfectly accurate as far as it goes, but as it does not traverse any of the statements published in the JOURNAL of February 13th, it is not apparent why he wrote it at all. He has, however, omitted all reference to one important particular, namely, that within a year of the present medical officer to the B Division being appointed, at the close of 1895, at a salary commencing at £60 per annum, he (the medical officer) represented to the authorities that the salary was inadequate, and the authorities, recognizing the justice of his representation, forthwith raised the salary to £80 to commence, rising to £100 after five years' service. Will Mr. Maxwell explain for the benefit of your readers why, when making an authoritative statement, uninvited, in his official capacity, he chose to make no allusion to this important fact, and further, will he state the grounds on which "a commencing salary of £60, rising by increment of £20 to £80 after five years' service" is offered as an adequate salary now, whereas the Corporation declared by their action in 1896 that at that time the salary of the medical officer of the B Division ought to be £80, rising to £100 after five years' service?—I am, etc.,

Liverpool, Feb. 22nd.

A RATEPAYER.

The seventh Italian National Congress of Midwives will be held at Bologna in September next.

Medico-Legal.

ACTION FOR ALLEGED NEGLIGENCE.

At the Sussex Assizes at Lewes on February 19th and 20th, an action in which Mr. Stranger and his wife, of Shoreham, sued Dr. C. Rawdon Wood, of the same place, for damages for the alleged negligence of the defendant in his attendance on Mrs. Stranger as her doctor was tried before Mr. Justice Bucknill and a special jury. Mr. E. E. Humphrys and Mr. J. Flowers appeared for the plaintiffs; and Mr. W. P. G. Roxall, K.C., and Mr. H. C. Dickens, instructed by Messrs. Hempsom for the Medical Defence Union, for the defendants.

The statement of claim set out that the defendant, although knowing a miscarriage was feared, so negligently and unskillfully treated the female plaintiff that he failed to observe the significance of a discharge to which his attention was called, and that he failed to observe that she had miscarried, and continued to treat her afterwards as though she were still pregnant. Evidence having been called on both sides,

Mr. Justice Bucknill, in summing up, said that what the female plaintiff was entitled to from the defendant was such care and skill as was reasonable or ordinary in the profession. The jury must put aside the fact that the defendant was brilliantly qualified, because, in spite of that, he might yet be negligent. The jury must be absolutely sure that the plaintiffs had made out their case before they could find in their favour; if they had a doubt or anything short of positive certainty the defendant was entitled to their verdict. The jury, after a short retirement, gave a verdict for the defendant, and his Lordship said he heartily agreed; it was quite clear that there was no negligence. Judgement was entered accordingly for the defendant, with costs.

PARTNERSHIP AGREEMENTS.

A CORRESPONDENT writes that his partner, aged 70, has been away from his work on account of illness for the last four months, during which time he has personally done all the work. According to the partnership agreement, in the event of illness of either partner the other may employ a locum-tenent at the expense of the absent partner, and if the illness is of longer duration than three months, notice may be given to the invalided partner to retire, and after such retirement he may not practise within a radius of five miles for a certain number of years. He wishes to know: (1) Whether, as he did all the work himself, he is not entitled to deduct from his partner's share £12 10s. monthly for having done the work without a locum-tenent? (2) If a dissolution takes place, who is responsible for legal expenses? (3) Would he be acting too hardly in giving notice to his partner under the circumstances? (4) If a dissolution takes place, would his partner be justified in continuing to practise just outside the stipulated radius?

*. (1) Our correspondent is not entitled to deduct anything for the cost of a locum-tenent not employed. (2) Each party should pay his own legal expenses. (3) If his partner is not willing to make any allowance to him for the extra work entailed by the illness, he is justified in exercising any rights he possesses under the partnership agreement. (4) After a dissolution the retiring partner would be entitled to practise outside the prescribed area.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

PUBLIC HOSPITALS AND PRIVATE NURSING.

THE Honorary Secretary of the Division in which the hospital referred to under this head last week is situated informs us that the circular letter was sent only to medical men in the neighbourhood, and that the error in its issue was that a rumour had got about that probationers were sent out from the private nursing staff.

CANVASSING FOR A MEDICAL AID SOCIETY.

P. M. G.—It is impossible for us to say what view the General Medical Council might take of the facts if a case were brought before it. The description our correspondent gives suggests that the company is sailing very near the wind, and that a charge of canvassing for the benefit of the three medical officers might be established.

CLUB VACANCIES.

STORAX writes that a medical neighbour has recently died leaving no widow or any one dependent on him. He wishes to know whether it would be in order "to approach one of the clubs lately held by the deceased with a view of succeeding him."

*. If the practice of the deceased is in the hands of his executors to dispose of for the benefit of his representatives, it would be more in accordance with medical ethics for our correspondent to wait till he was approached by the club, or an advertisement was issued for a successor.

Obituary.

JOHN LINDSAY STEVEN, M.D., F.F.P.S.G.,

PHYSICIAN TO THE WESTERN INFIRMARY, GLASGOW.

THE sudden death of Dr. John Lindsay Steven, on February 14th, came as a great shock to the medical world. It was known that he had been confined to the house for a few days, but no serious condition was suspected. Indeed, up to ten days before his death he had been actively engaged in clinical teaching at the Western Infirmary, but on February 11th he complained of feeling unwell, and absented himself from his infirmary work. Even then, however, he did not consider his illness serious, and refused medical assistance. Towards the end of the week he became acutely ill, and was found to be suffering from pericarditis, which had been added on to an old-standing though apparently unsuspected nephritis. The remedies tried unfortunately brought no relief, and early on Sunday he died.

At the time of his death he was in his 51st year. His father was a shipbuilder in Glasgow, and in due course the son went to the university. His college career was a long record of success, and on graduating in 1880 he headed the honours list, and was awarded the proud distinction of being the first recipient of the Brunton Memorial Prize, which is allotted annually to the most distinguished graduate in medicine.

Almost immediately after completing his terms as House-Surgeon and House-Physician in the Western Infirmary he was appointed University Assistant to the Professor of Clinical Medicine, and occupied this post for eight years, thus serving his apprenticeship as a clinical teacher under the late Sir Thomas McCall Anderson.

He early showed a fondness for pathological investigation, and for eight years he assisted the late Professor Coats during the summer session, in addition to doing clinical work in the wards. He was, therefore, well qualified in pathology when in 1890 he received the appointment of Pathologist to the Royal Infirmary, and became Professor of Pathology in St. Mungo's College. In addition, the University Court made him Lecturer on Pathology to the women students. The dual appointment brought with it much work, as he had to deliver two lectures each day.

But even when actively engaged as a pathologist Dr. Steven did not abandon clinical work. Since 1889 he had been attached to the dispensary staff of the Royal Hospital for Sick Children. In 1885 he was appointed to the dispensary staff of the Royal Infirmary, and continued to hold this position for ten years. After seven years of the arduous work as pathologist he was elected by the managers of the Royal Infirmary to be one of the Visiting Physicians. He then gave up pathology and devoted himself entirely to clinical work. He did not long sever his connexion with the university, as he was soon afterwards appointed Lecturer in Medicine to the women students at Queen Margaret College. He maintained the lectureship till 1903, when he gave it up on being appointed to represent the Faculty on the General Medical Council.

His success as a clinical teacher was great, and when, on the death of Dr. James Finlayson, he applied for the vacant wards in the Western Infirmary he was unanimously elected. During the short time for which he held office in the Western Infirmary he more than maintained his reputation as a clear and successful clinical teacher. He soon attracted large clinics, and during his last session he had the second largest medical clinic. He had a great power of organization, and, as his teaching was based on an extensive and accurate knowledge of pathology, he was able to marshal his facts in a clear, convincing way, which made his lectures models of lucid exposition.

During his career, Dr. Steven occupied a very prominent position in local medical affairs. He became a Fellow of the Faculty of Physicians and Surgeons in 1889, and soon became an important member of that corporation. Since 1894 he had been a Member of the Council of the Faculty. After serving a number of years on the Library Committee in 1901, he succeeded the late Dr. James Finlayson in the position of Honorary Librarian. In 1903 it fell to the

Faculty to elect a new representative to the General Medical Council, and, after a keen contest, the choice fell on Dr. Steven. Previous to this he had acted for seven years as one of the Representatives of the Faculty on the Committee of Management of the Scottish Conjoint Board. He was also very prominent in the local medical societies, and in 1905 was elected President of the Glasgow Medical-Chirurgical Society, and in the following year occupied a similar position in the Pathological and Clinical Society.

He acted as Examiner in Pathology and in Medicine at the University of Glasgow, and in Pathology at the University of St. Andrews. Recently he was an applicant for the Chair of Practice of Medicine in the University of Glasgow, and in support of his candidature submitted strong testimonials from many of the leading authorities in medicine. Throughout his whole professional career Dr. Steven was a prolific contributor to medical literature. He published an excellent work on *Practical Pathology* in 1887, and in 1892 wrote a book on *The Pathology of Mediastinal Tumours*, and in 1900 published his *Lectures on Clinical Medicine*. For eleven years he was joint editor of the *Glasgow Medical Journal*. His numerous contributions to that journal ranged over the whole field of medicine. In his application for the Chair of Practice of Medicine he was able to quote 102 articles contributed to various periodicals. Among the most important was that which in 1884 he submitted for his thesis for the M.D. degree. This work on the pathology of suppurative inflammations of the kidney attracted considerable attention, and obtained high commendation—the highest award conferred by the university.

Dr. Steven was a man of strong convictions. He was a lifelong abstainer and was keenly interested in anything connected with the movement in favour of temperance, and frequently appeared on public platforms as an advocate of total abstinence. His convictions sometimes brought him into conflict with those of others, but Dr. Steven enjoyed the warm respect of all who came into contact with him. He was a transparently honest man, and freely gave of his very best in whatever he attempted. He was an enthusiast and never spared himself. To those under him he was invariably kind and considerate. His loss will be deeply felt throughout Scotland. He was a man of wide learning, and enjoyed a well-deserved and well-founded reputation as a scientific physician.

Throughout his whole life he was a strenuous worker, and it seems cruel that he should have been taken away at the very time when he had attained the highest position in his profession and was about to enjoy the well-merited reward which his hard work had entitled him to. In him the West of Scotland loses a worthy representative, with an enthusiasm for his profession and a thorough knowledge of all questions and principles relating to it.

CHARLES HENRY FELIX ROUTH, M.D.LOND.,

M.R.C.P., M.R.C.S.

CONSULTING PHYSICIAN TO THE SAMARITAN FREE HOSPITAL.

THIS veteran physician, who qualified for practice sixty-six years ago and had been a Doctor of Medicine of the University of London for sixty-four years, died on Friday last at the advanced age of 87. C. H. F. Routh was born in Malta on January 4th, 1822, during the residence there of his father, Commissary General Sir Randolph Routh, K.C.B., whom he subsequently accompanied to Canada, where he began his education. It was not until his fifteenth year that he came to England. He entered as an arts student at University College, London, and in 1840 joined the medical faculty, so that at the time of his death he had been associated with medicine for nearly seventy years. In those days C. J. B. Williams, Anthony Todd Thomson, W. H. Walshe, Murphy, and the great Liston were his teachers. Amongst other prizes at the medical school, he obtained the Fellowes gold medal for essays in clinical medicine, which were published in the *Medical Gazette*, 1845-50. He qualified as M.R.C.S. in 1843, and graduated M.B.Lond. with honours in 1844, gaining the degree of M.D. a year later. He held several resident appointments, and when obstetric house-physician to Dr. Murphy he found that his tastes naturally inclined to obstetrics and diseases of women.

Routh studied for some time in the hospitals of Paris, Prague, and Vienna, and in the Austrian capital he became

associated with that great obstetrician Ignaz Philipp Semmelweis, whose researches, whose struggles, and whose quarrels played so prominent a part in conferring an inestimable boon on womankind—the establishment of aseptic midwifery in lying-in hospitals. Semmelweis was junior obstetrician in the General Hospital at Vienna under a perfunctory medical officer, Professor Klein, and the mortality was appalling. Patients on finding themselves among the inmates of the dreaded clinic fell on their knees and with clasped hands begged to be allowed to return to their homes. We all know of the criminal carelessness which permitted students fresh from the adjacent *post-mortem* and dissecting rooms to examine women in labour, and of the relative immunity of the neighbouring midwives' clinic. We know also the inveterate obstinacy of the senior officer and of other physicians who would not agree to Semmelweis's self-evident propositions as to the cause of mortality in the students' clinic. The man who first vindicated Semmelweis in England was Routh. On November 28th, 1848, he read before the Royal Medical and Chirurgical Society a communication on the causes of the endemic puerperal fever in Vienna, to be found in the thirty-second volume of the Society's *Transactions*. Semmelweis was ever afterwards profoundly grateful to Routh, acknowledging his English pupil's enthusiastic support of his views in his work *Die Aetiology, der Begriff und die Prophylaxis des Kindbettfiebers*, published in 1861. Four years after this monograph appeared Semmelweis died insane, as ill-fated as were the first anaesthetists. His British advocate had many years of useful life before him. The whole narrative of Semmelweis and his labours, and the support he gained from Routh in this country, is chronicled by Dr. Schütter von Waldheim in his work—*Ignaz Philipp Semmelweis, Sein Leben und Wirken*, issued in 1905.

In 1855 Routh was elected Assistant Physician to the Samaritan Free Hospital, together with Dr. J. S. Stocker and Dr. Graily Hewitt. That institution had been founded a few years previously by Dr. William Jones and Henry Savage. For many years, when he became full Physician, Routh attended the Dorset House Branch of the Samaritan Hospital, where vaginal and perineal operations were performed, the old Lower Seymour Street building being reserved for Spencer Wells's ovariectomies. Before Routh joined the hospital in 1855 he had been for a few years in general practice, but, becoming private assistant to his former teacher, Murphy, he ultimately decided to develop as a specialist. Routh was one of the founders of the Obstetrical Society of London; he spoke at its inauguration on December 16th, 1858, was elected at once member of council, and was fated to be, with Drs. Lloyd Roberts and Riallmark, one of the three original Fellows who survived that society when it became, in 1907, a section of the Royal Society of Medicine. It was then fused with the British Gynaecological Society, of which Routh was also an original Fellow. He took an active part in discussions and papers at both these societies, and in the Medical Society of London he was Orator in 1859 and Lettsomian Lecturer in 1864, when the subject he chose was the pathology, differential diagnosis, and treatment of fibrous tumours of the uterus. In 1875 he became President.

The best known of Routh's works published independently of societies is *Infant Feeding and its Influence, or the Causes and Prevention of Infant Mortality*, first

published in 1860; it ran through three editions, and was also issued in the United States and translated into foreign languages. Routh was associated with several philanthropic institutions, and received honorary titles from foreign learned societies.

Recently Dr. Routh suffered from the infirmities of age; he was attended in his last illness by Dr. C. Theodore Williams. He leaves a widow, to whom he had been married fifty-six years, two daughters, and three sons, two of whom, Dr. Amund Routh, Obstetric Physician at Charing Cross Hospital, and Mr. Randolph Routh, Surgeon to the Bridgewater Infirmary, are members of their father's profession.

Dr. Routh was interred in Kensal Green Cemetery on Tuesday, February 23rd, after a memorial service had been held at St. Paul's, Portman Square, at which several of his colleagues were present, as well as the inmates of the Cripples' Home for Girls, to which institution he was Consulting Physician.

GEORGE EDWARD WALKER, F.R.C.S. ENG.,

SENIOR HON. SURGEON, ST. PAUL'S EYE AND EAR HOSPITAL, LIVERPOOL.
We regret to announce the death of Mr. George Edward Walker, F.R.C.S., which took place at Las Palmas, Grand Canary, on February 15th.

George Edward Walker was born in Wigan in 1839, and was educated at Wigan Grammar School and at Chester. In 1859 he entered University College Hospital, London, and obtained the diploma of L.S.A. in 1862 and of M.R.C.S. in 1863. After holding resident appointments at University College Hospital, the Brompton Hospital for Consumption, and the Manchester Royal Infirmary, he obtained the Fellowship of the Royal College of Surgeons of England by examination in 1869.

While in London he was attracted to the study of diseases of the eye, and worked for some time at the Royal London Ophthalmic Hospital, Moorfields, where he was clinical assistant to Sir William Bowman. On settling in Liverpool in 1870 he began a general surgical practice, but while waiting for a vacancy on the staff of one of the hospitals he took two small rooms in St. Paul's Square for the gratuitous treatment of the poor suffering

from diseases of the eye or ear. The work grew rapidly, and soon, with the help of his father-in-law, the late Mr. William Nimmo, and others, the house was taken and turned into a public charity under the name of St. Paul's Eye and Ear Hospital. When the next vacancy occurred on the staff of one of the general hospitals he found that, as the only candidate holding the Fellowship, he was likely to be elected, but that under its rules he would not be allowed to hold two honorary hospital appointments. He was strongly tempted, therefore, to abandon his post at the newly founded hospital, but he refused to desert the committee who had shown their trust in him by founding St. Paul's Hospital, and he withdrew his candidature. He was rewarded by seeing St. Paul's Hospital, during his thirty-eight years' work there, grow from its small beginnings into a hospital of 50 beds, with a yearly attendance of nearly 10,000 patients. His heart was in his hospital work, and with the exception of brief holidays, he visited the institution daily until towards the end of last year, when ill-health compelled him to go abroad.

Other appointments which he held at the time of his death were those of Honorary Surgeon to the School for the Indigent Blind, and Honorary Consulting Ophthalmic



GEORGE EDWARD WALKER.

Surgeon to the David Lewis Northern Hospital. He was also sometime Honorary Ophthalmic Surgeon to the Royal Albert Edward Infirmary, Wigan; Honorary Surgeon to the Hospital for Skin Diseases, Liverpool; and Surgeon to the Southport Convalescent Home. He held the office of Vice-President of the Liverpool Medical Institution, and also that of Vice-President of the Lancashire and Cheshire Branch of the British Medical Association.

Always an original thinker, he disregarded fashion in surgery, and was often in advance of his time. He was one of the earliest advocates, if not the first, of the immediate ligation of the common carotid artery in intracranial aneurysm of the internal carotid; and in his book, *Essays in Ophthalmology*, published in 1879, he recorded a case successfully operated on in 1878. He wrote further on this subject in a paper on pulsating exophthalmos, in the *Ophthalmological Transactions*, 1887, and the *Lancet*, 1894; and in an address on Pulsating Exophthalmos, a Plea for Early Ligation, he recorded (with Mr. Chauncy Pacey) three more cases. He was a strong advocate of the free use of mercurial inunction in all deep inflammations of the eye, and recorded several remarkable cases of its efficacy in sympathetic ophthalmia.¹

He worked hard in his spare time at the physiology and pathology of the eyes, often rising at dawn to work at the microscope, and advanced original theories, founded on his observations, on accommodation and on glaucoma in his articles on the function of the ciliary body, *Lancet*, 1885, and on glaucoma.² He had a great respect for the iris, and was a constant opponent of indiscriminate iridectomy; in glaucoma he preferred his own operation of hyposepheral cyclotomy, which he described in a paper in the *Ophthalmological Transactions*, 1884. He devised operations for the release of synchiae, both anterior and posterior, of the iris, and described the former in a paper in the *Lancet*, 1885, but the operation in which he took the greatest pride was that for corneal ulceration, described under the name of kerotomy in an article in the *Liverpool Medico-Chirurgical Journal* for 1889. His operations have stood the test of time and are in daily use in the practice of St. Paul's Hospital. Kerotomy, in particular, has proved a most successful operation in the treatment of corneal inflammation.

Mr. Walker was a man of the highest integrity, who, under a somewhat severe and brusque exterior, carried a warm heart filled with generous sympathies. His home life was an ideal one, and he was a true friend. He was deeply interested in the School for the Blind, and the afflicted inmates were always the objects of his tender solicitude. In him they have lost a friend who was ever foremost in defending them whenever they needed a champion.

He married in 1870 Louise, daughter of William Nimmo, cotton broker, of Birkdale, and leaves his widow, two daughters, and four sons, of whom one is in the medical profession, and has been his assistant for the past seven years.

A memorial service was held on February 23rd at the Church for the Blind, Liverpool, of which he had been a warden for many years, and an eloquent and appreciative address was delivered by the Chaplain, the Rev. T. W. M. Lund, who had been closely associated for many years with Mr. Walker, both in the School and the Chapel for the Blind.

HENRY E. CLARK, C.M.G., M.R.C.S., F.F.P.S.G.,

FORMERLY PROFESSOR OF ANATOMY, ST. MUNGO'S COLLEGE, GLASGOW.

The death from pneumonia, after a short illness, of Mr. Henry E. Clark, formerly Surgeon to the Royal Infirmary, Glasgow, has removed a man who was prominent in the medical life of that city, and whose loss is felt by many as a personal bereavement.

Henry E. Clark was born at Wootton, in Warwickshire, in 1845, and received his early education in the Grammar School at Stratford-on-Avon. His medical studies were carried on in the old Andersonian University of Glasgow, and he took the Scottish Conjoint Diploma in 1870. One year later he became a M.R.C.S.Eng., and five years later joined the Faculty of Physicians and Surgeons of Glasgow. After acting as Resident Physician and

Surgeon he became attached to the Royal Infirmary as Dispensary Surgeon, and was appointed also to the Eye Infirmary as Assistant Surgeon. In due course he was promoted to full Surgeonships in both these institutions, but became more particularly associated with the Royal Infirmary, in which he served as Surgeon until he retired in 1906 on account of the age limit.

In the earlier stage of his career Mr. Clark was well known as a teacher of anatomy. He was appointed Lecturer on Anatomy in the old Glasgow Royal Infirmary Medical School in 1876, and taught that subject there as first Professor of Anatomy after it became the St. Mungo's College some twenty years ago. In 1892 the Surgery Chair in St. Mungo's College fell vacant, and at his request he was transferred to the vacant post, and commenced to lecture on surgery. This post he held with much acceptance until he retired under the age limit.

Mr. Clark made numerous contributions to medical periodicals, and edited the ninth, tenth, and eleventh editions of Wilson's *Anatomists' Vade Mecum*, one of the most popular students' textbook of its time. For some time he also edited the *Glasgow Medical Journal*.

He took great interest in the local medical societies, and was a constant and enthusiastic attendant, and frequently took part in debates. At various times he occupied the post of President in the three chief medical societies of Glasgow. He also filled with great acceptance the position of President of the Faculty of Physicians and Surgeons from 1903 to 1905.

At the time of the South African war he was requested to go out and take medical charge of the Scottish National Red Cross Hospital, which on its arrival at the seat of war was dispatched at once to Kroonstad, Orange River Colony. This hospital was the first medical assistance to reach this place after the town had been taken by Lord Roberts. The hospital did a great deal of valuable work, and for his services Dr. Clark was mentioned in despatches. On returning home he was gazetted C.M.G. Among other honorary posts which he held was that of Honorary Associate of the Order of St. John of Jerusalem, and in 1905 he was elected an Honorary Fellow of the Royal College of Surgeons of Edinburgh.

WILLIAM PARSON, M.R.C.S., M.S.A.,

GODALMING.

THE death on February 8th, in his 75th year, at his residence in Godalming, of Mr. William Parson will be the cause of great regret to a large number of friends and old patients. He was the third generation of the same family who occupied the house in which he died, the practice having been originally founded by his grandfather. He received his early education at St. Paul's School, Portsmouth, and afterwards entered the medical faculty of University College; he was a resident pupil with the late Sir William, then Dr. Jenner, and this association led to a lifelong intimate friendship. He obtained the diploma M.R.C.S. in 1855, and that of L.S.A. in 1856. He then held for some time the appointment of house-surgeon at the Hospital for Sick Children, Great Ormond Street, afterwards settling in Haslemere; in 1858, however, owing to his father's illness, which soon terminated fatally, he removed to Godalming, where he long enjoyed a large private practice. He was the first medical officer of health for Godalming and the neighbouring part of the county, a post which he held for twenty-seven years. He was for twenty-eight years Medical Officer to the Hambledon Union Workhouse, and Public Vaccinator, and was for some years Deputy Coroner for West Surrey. He entered the Town Council of Godalming in 1864, and in 1866 served the office of Mayor. Subsequently he was nominated Justice of the Peace for the borough. He took keen interest in the affairs of the Society of Apothecaries of London; having served as Junior and Senior Warden, he was elected Master in 1902-3, and, after passing the chair, maintained his interest in the affairs of the society, insisting upon attending meetings, even in inclement weather, at no slight risk to his health. Failing health induced him very largely to diminish his work in 1900, and shortly afterwards he retired altogether from practice.

Mr. Parson gave the whole of his energy to his profession, never shirking any call made upon him, though it might be at the loss of his own health and comfort. He

¹ *Ophth. Trans.*, 1884.

² *Ibid.*, 1887.

was a typical example of the high-principled, conscientious, kind-hearted, self-sacrificing country doctor, to whom the public owe so deep a debt of gratitude. His goodness to the poor was continuous and unassuming, and he was held in high esteem by rich and poor alike. He leaves a widow and two daughters to mourn his loss. The funeral, which took place at Godalming parish church on February 12th, was attended by the Mayor and other members of the Corporation, by many members of the profession, as well as numerous other friends, including representatives of the Society of Apothecaries.

THOMAS CARLYLE PARKINSON, M.D. (SYDNEY).

Born in this country and in his native land, Australia, the friends of Dr. Thomas Carlisle Parkinson will hear with deep regret of his untimely death, which occurred on February 4th.

Dr. Parkinson had recently been appointed a member of the Commission for the Investigation of Plague in India, and was working at the isolated laboratories at Elstree, placed at the disposal of the Commission by the Lister Institute. He was engaged upon an experimental inquiry into protective inoculation against plague, and in the course of his experimental work he unfortunately contracted an accidental infection, and died after a short illness from pneumonic plague.

Dr. Parkinson's death terminates a career which gave every promise of great distinction. He started his medical studies in 1901 at the University of Sydney, New South Wales, and in each of the five years of his course he gained first class honours and the premier place. He graduated in 1906, and was awarded the university medal for special distinction. During his undergraduate career he also obtained the Renwick Scholarship for Natural Science and Comparative Anatomy and the John Harris Scholarship for Anatomy and Physiology. In 1906 he held the position of Resident Medical Officer to the Royal Prince Alfred Hospital, Sydney; in 1907 he was Resident Pathologist to the same hospital, and in 1908 was for a time Junior Medical Officer at Callan Park Hospital for the insane.

Dr. Parkinson early showed his bent for scientific investigation, and both as a student and during his post-graduate work at Sydney contributed several papers to the *Journal of the University of Sydney Medical Society*. In April, 1908, he was awarded the James King Travelling Scholarship and came to this country to continue his studies, and worked at the Lister Institute until October, when he was appointed to a position on the Indian Plague Commission.

Dr. Parkinson was possessed of an amount of reserve which prevented him from making friends quickly. His acquaintances will remember him as a keen worker, but his comrades realize that they have lost a good and trusted friend. He lost his life striving in the interests of others, doing a man's work as a man should.

We have to record with much regret the death of Mr. ALFRED TEMPLE SPANTON of Birkenhead. Mr. Spanton was ill for a few days only, death being due to heart failure following pneumonia. He was the eldest son of Mr. W. D. Spanton, F.R.C.S., of Hanley, consulting surgeon to the North Staffordshire Infirmary, and for many years a member of the Central Council of the British Medical Association. Mr. Alfred Temple Spanton, who had just completed his 33rd year, was educated first at Cheltenham College, and then at Trinity College, Cambridge, where he graduated B.A. with honours in 1897, and M.A. in 1902. After commencing his medical education as a pupil at the North Staffordshire Infirmary, and also as a student at Addenbroke's Hospital, Cambridge, he entered the medical school of St. George's Hospital. He took the diploma L.S.A. in 1900, and that of L.R.C.S. Edin. in 1905. He was for some time Resident Surgeon at the Leeds Dispensary, and subsequently Resident Medical Officer at the Hulme Dispensary, Manchester. He began to practise in Birkenhead about eighteen months ago, and being thoroughly trained in his profession, and a man of gentle disposition, conscientious, and painstaking in everything he did, would undoubtedly have attained success had his life been spared. The funeral, which took place on

February 18th, afforded an opportunity for many tributes of respect to be paid by friends and patients. In the Potteries, where Mr. W. D. Spanton is so well known, great sympathy is felt both with him and with his family in his sad bereavement, and this feeling will be shared by all members of the Association who have had the advantage of knowing Mr. Spanton.

Universities and Colleges.

UNIVERSITY OF LONDON.

APPOINTMENT OF A ROYAL COMMISSION.

The King has been pleased to appoint a Royal Commission on the subject of university education in London.

The terms of the reference are:

To inquire into the working of the present organization of the University of London, and into other facilities for advanced education (general, professional, and technical) existing in London for persons of either sex above secondary school age; to consider what provision should exist in the metropolis for university teaching and research; to make recommendations as to the relations which should in consequence subsist between the University of London, its incorporated colleges, the Imperial College of Science and Technology, the other schools of the University, and the various public institutions and bodies concerned; and further, to recommend as to any changes of constitution and organization which appear desirable. In considering these matters, regard should also be had to the facilities for education and research which the metropolis should afford for specialist and advanced students in connexion with the provision existing in other parts of the United Kingdom and of His Majesty's Dominions beyond the Seas.

The Chairman of the Commission is the Right Hon. R. B. Haldane, K.C., M.P., and the members are:

The Right Hon. Viscount Milner, G.C.B., G.C.M.G.

The Right Hon. Sir Robert Romer, G.C.B.

Sir Robert L. Morant, K.C.B.

Mr. Laurence Currie, M.A.

Mr. W. S. M. Cornick, M.A., LL.D.

Mr. E. B. Sargent, M.A.; and

Mrs. Creighton.

The Joint Secretaries to the Commission are Mr. J. Kemp and Mr. H. F. Heath.

Mr. Haldane, it will be remembered, was chairman of the committee the report of which led to the establishment of the Imperial College of Science and Technology, and is not merely a politician who has shown an interest in science, but a statesman who is also a man of science. He has consistently supported the new university movement in England, and has shown particular interest in the organization of university teaching in Liverpool and Bristol; of the needs of London he gained some special experience while holding for two years the office of Vice-president of the University College.

Viscount Milner, who during his long and distinguished career as Under Secretary for Finance in Egypt, as Chairman of the Board of Inland Revenue, and as High Commissioner for South Africa, has displayed remarkable powers as an organizer, gave particular attention to educational problems while occupying the last-named office. He has a slight direct connexion with the University of London, for he was a student at King's College before proceeding to Oxford.

Sir Robert Romer, who was senior wrangler and Smith's prizeman in 1885, was for a short time professor of mathematics at Queen's College, Cork, before being called to the Bar. After holding a Chancery judgeship for nine years, he was for the next seven Lord Justice of Appeal, only retiring three years ago.

Sir Robert L. Morant, K.C.B., has been Permanent Secretary to the Board of Education since 1903.

Mr. Laurence Currie, M.A., is a member of the banking firm of Glynn, Mills, Currie and Co.

Mr. W. S. M. Cornick, M.A., LL.D., Secretary to the Carnegie Trust for the Universities of Scotland, was at one time Professor of English in University College, Dundee.

Mr. E. B. Sargent, M.A., was Educational Adviser to Lord Milner in the Transvaal.

Mrs. Creighton, who is the widow of the late Bishop of London, and herself a historian of distinction, has, no doubt, been appointed in consideration of the large number of women undergraduates and graduates of the University of London.

Of the joint secretaries, Mr. J. Kemp is a barrister having some experience in London government, and Mr. H. F. Heath, formerly Academic Registrar of the University, is now Director of Special Inquiries and Reports to the Board of Education.

DEGREES.

The following candidates passed the Preliminary Scientific Examination for internal and external students, January, 1909, in the subjects indicated:

PART I: INORGANIC CHEMISTRY, EXPERIMENTAL PHYSICS, AND

Inorganic Chemistry and Experimental Physics.—P. A. Dargan, King's College; F. R. Fletcher, London Hospital; S. A. Forbes, London Hospital; H. L. G. Foxell, University College; L. Kingston, King's College; E. D. Lindow, King's College;

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL
The offices of the British Medical Association and of the
BRITISH MEDICAL JOURNAL are at 429, Strand, London.

Queries, answers, and communications relating to subjects
to which special departments of the BRITISH MEDICAL JOURNAL
are devoted will be found under their respective headings.

QUERIES.

FOREST asks for a respectable home for a woman about 67
years of age who has cardiac disease but is able to go out.
A year or more has elapsed since she had a bad attack;
10s. 6d. to 12s. 6d. per week could be paid.

A CASE FOR DIAGNOSIS.

B.S. asks for advice in the treatment of a man, aged 35, who
has for seven years suffered from acute colicky pains and
slight abdominal distension, the attacks terminating with the
passage of large quantities of flatus. About four years ago
the appendix was removed, as the attacks were attributed to
appendicular colic; nothing abnormal was then found in the
abdomen. He still has an acute attack about every ten days,
lasting for about twenty-four hours, but is seldom really free
from pain. The attacks, which appear to be growing worse,
are not accompanied by diarrhoea or constipation, and he
passes little mucus—certainly not enough to justify the term
mucous colitis.

BOOKS FOR POPULAR LESSONS.

B. wishes to know of a suitable book or books dealing with
scientific subjects in a popular style, and suitable for
addresses to men attending Sunday morning adult school.

For the purpose of series of addresses to be developed to
a men's Sunday school we think the following would prove
useful: *Physiography: An Introduction to the Study of Nature*.
By T. H. Huxley. Revised by R. A. Gregory. 1904. 4s. 6d.;
Sir Robert Ball's *Story of the Heavens* (London: Cassell and
Co. 1893. 10s. 6d., but which can be obtained in sixpenny
parts); and Lord Avebury's (Sir John Lubbock's) books on
Ants, Bees, and Wasps, etc. Also *The Body at Work*, by A.
Hill, M.A., M.D., F.R.C.S. (London: E. Arnold. 1908. 16s.).

ANSWERS.

AUSTRALIAN.—There are a good many country places in
England where a man might live with care and get his
children well educated on the income mentioned. Our
correspondent's best plan would be to return home and look
out for himself.

REFRACTION TEST CASES.

S. T. B.—The usual full-size case for work contains
double sets of spheres, + and —, in quarters for 0.25 to 3.0,
then halves from 3 to 6, dioptres for 6 to 16, and two dioptres
for 16 to 20; cylindrical lenses, double sets, and + — in
quarters for 0.25 to 3.0, and halves for 3 to 6. Besides these
there are prisms, coloured glasses, diaphragms, etc., and
trial frames. All lenses should be mounted. Boxes containing
fewer lenses than those indicated are not to be recommended,
while unmounted lenses are constantly getting broken.

M.D. IN TROPICAL MEDICINE.

CAPTAIN I.M.S.—The scope of the paper in general medicine
at the examination for the degree of M.D. in Tropical Medicine
in the University of London is higher than that required
for the M.B. The candidate must pass in the paper on
general medicine as well as that on tropical medicine. The
practical examination is a searching one, on much the same
lines as the practical examinations at the tropical schools.
We believe that without a special course a candidate would
have little chance of success. Under certain circumstances
exemption may be obtained from a part or the whole of
the examination by presenting a thesis or published work
embodying an independent research in tropical medicine.
In addition to the works by Manson on *Tropical Diseases*,
Rogers on *Fevers in the Tropics*, Stephens and Christophers's
Practical Malaria, James and Liston's *Anopheles Mosquitos*,
and the second part of the second volume of *Albutt's System
of Medicine*, to which our correspondent refers, he might con-
sult the following: Scheube's *Diseases of Warm Climates*, trans-
lated by P. Falke, edited by J. Cantlie, F.R.C.S., second
edition (London: J. Bale, Sons, and Danielsson. 1903. 30s.);
Daniels and Stanton's *Studies in Laboratory Work*, second
edition (London: J. Bale, Sons, and Danielsson. 1907. 16s.);
Simpson's *The Principles of Hygiene in Tropical and Sub-
tropical Countries* (London: J. Bale, Sons, and Danielsson,
1908. 15s.); Hewlett's *Manual of Bacteriology*, third edition,
(London: J. and A. Churchill. 1908. 10s. 6d.); Emery's *Clinical
Bacteriology and Haematology*, third edition (London: H.
K. Lewis. 1908. 7s. 6d.); Theobald's *Monograph of the Culi-*

cidæ of the World (London: Longmans, Green, and Co. 1903.
21s.); and Austen's *Monograph on the Tsetse Flies* (London:
British Museum Natural History. 1903. 15s.).

LETTERS, NOTES, ETC.

X-RAY TREATMENT OF VENEREAL SORES.

MR. C. F. MARSHALL (London, W.): With regard to the treat-
ment of venereal sores by the x rays, described by Major
French in the BRITISH MEDICAL JOURNAL of February 20th,
I may mention that a case of severe phagedenic chancre
(syphilitic) was brought to me a few days ago after treatment
by the x rays. The patient had seven exposures in the course
of two weeks. In this case the phagedenic had destroyed a
considerable portion of the glans penis and had caused a
urethral fistula behind the glans. As mercurial and local
treatment was producing no effect, the x rays were recom-
mended by another surgeon. The only result was to cause
some increase in the pain; there was no effect on the
phagedenic process whatever. Considering that venereal
sores, whether phagedenic or not, usually yield to simpler
methods of treatment, I think that the use of such a ther-
apeutic agent as the x rays—the action of which is even now
little understood, and the effects of which are often uncertain
and sometimes harmful—in these conditions is contra-
indicated.

DR. H. D. McCULLOCH (London, W.) writes: In the note appear-
ing under "Memoranda," p. 464, of the BRITISH MEDICAL
JOURNAL of February 20th, Major H. C. French remarks that
he has no knowledge of x rays having ever been used in the
above class of cases. I beg leave to refer Major French to an
abstract in the EPITOME of the JOURNAL of February 16th,
1907, Paragraph 89: also to a paper contributed by me in the
JOURNAL of October 17th last, in which an attempt was made
to elucidate the bio-chemical action resulting in the induction
of a specific immunity when the x rays are caused to influence
the lymphoid or lymphatic structures which are functionally
involved.

MEDICAL FOOTBALL.

COLD weather during the past week prevented the playing of
any medical fixtures of importance. Among the matches
postponed was that between Middlesex and St. Thomas's
which was to have been replayed last Monday. The following
table shows the positions of the various hospitals in the Cup
Tie:

First Round.	Second Round.	Semi-final.	Final.
1.—London St. Mary's, London			
2.—Charing Cross University	Charing Cross	London	Guy's
3.—Guy's Westminster	Guy's†		
4.—Middlesex St. Bartholomew's	Middlesex†	Winner†	Winner
5.—St. Thomas's King's College	St. Thomas's		

Scratched. † A bye.
: This match, played and drawn, to be replayed on March 1st.

The Prince of Wales was present on Wednesday at the
Richmond Athletic Ground, when the London Hospital met
Guy's, to fall to the latter by a goal and a try (8 points) to
nothing. The captains of the fifteens, Mr. L. B. Stringer
(Guy's) and Mr. J. M. Mehaffey (London) were presented to
His Royal Highness, and the teams lined up and gave three
hearty cheers. Excellent play on the part of both hospitals
followed, and Guy's victory was due to superior organization.
Their backs played a splendid game, and to Stringer in the
three-quarter line the first score was due. Batchelor, the
London back, had relieved with a punt far down the field,
only for the ball to fall into Stringer's hands. As soon as he
got in his kick he followed up keenly, and, relying on his
speed, retrieved the ball and raced over the line. During the
second half Guy's were hard pressed and owed their immunity
to the brilliant defensive play of their backs, who, by a master-
piece of combination, scored a clever try, Stokes touching
down about five minutes before time. The final will be
played between Guy's and the winners of Middlesex and
St. Thomas's.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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Eight lines and under	0 4 0
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An Address

ENTITLED

SOME CLINICAL FACTS REGARDING MAMMARY CANCER.*

BY

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GENTLEMEN,—I am very sensible of the great honour you have done me by inviting me to address you, but now, when I begin the task, I feel that many of you may be disposed to regard the subject which I have chosen as a somewhat trite and threadbare theme. It is true that worldwide attention is being devoted at present to all considerations regarding cancer, in the hope of its real cause being discovered, as has already been done in comparatively recent years in the case of tuberculosis, osteomyelitis, and many other infective diseases. In this respect the whole medical world is on the tiptoe of expectation. The researches conducted, however, largely concern the pathological aspects of the subject, and you will agree with me when I say that, in the investigation of any disease, fundamental and important truth is best sought by considering the results of pathological study along with the facts of clinical observation. Neither department of work is self-sufficient; each tends more or less to explain, sometimes to confirm or to refute, inferences drawn from the other. While, therefore, pathologists are hard at work, it is equally incumbent upon those whose experience has been wide to make known in some way such facts of that experience as may appear important, even although they may not be new. What has impressed itself upon the observation of one who, during a long and busy professional life, has always had under his care patients suffering from mammary cancer may at all events, I hope, arouse some interest in the minds of those of you whose familiarity with that disease has been neither so long nor so constant.

The present clinical teaching in regard to cancer of the breast may, I think, be fairly summarized thus: It is a disease which probably invades the body from without, and is at first strictly of local character and of local consequence. If removed at a very early stage—that is, when the tumour is recent and still small—by an extensive operation definitely planned and carried out, a satisfactory cure may follow. Should no return of the disease occur within a period of a few years—say three to five—this result may be considered as fairly assured.

To the general tenor of such doctrine no one is now likely to offer any great objection; but, at the same time, as I shall endeavour to show, experience proves that many of these statements are contradicted, from time to time, by the progress and issue of individual cases. The disease is one of the most contradictory of all diseases. In almost all respects there is apt to be want of uniformity in the behaviour of different cases, even when they strongly resemble each other in the first instance. These statements I shall endeavour to substantiate, entirely by reference to clinical experience.

CASE I.

In the end of July, 1900, Mrs. E., a lady 67 years of age, was sent to consult me by Dr. Sinclair of Bo'ness in regard to a small, rounded and hard lump under the pectoral muscle at some distance below the right clavicle.

History and Operation.

Twenty-seven years previously the right breast had been removed, when she lived at Berwick-on-Tweed, by Dr. Philip MacLagan and Dr. Allan Jamieson, on account of a hard growth which it contained. It was evident from the size and situation of the scar that the axilla had not been interfered with. Dr. Allan Jamieson (now of Edinburgh) has informed me that he remembers this patient's case well, and although he cannot recall whether any histological examination of the tumour was made after its removal, he can say that no doubt existed in their minds at the time that they were dealing with a cancer. The present little growth lay, as I found when I removed it, under the pectoral muscle and much nearer to the scar than to the clavicle. It was very movable, but on incising the skin

I found it was slightly attached to the under surface of the muscle, and so I removed a considerable portion of the muscle with it. The cellular tissue around it was quite loose, and I lifted out the growth with my fingers passed beneath it. I could feel no other nodule and no enlargement of axillary glands. Whether wisely or not, I contented myself with the removal of the growth, leaving the armpit still untouched. The growth was about the size of the distal phalanx of a finger, and had been growing since it was first noticed by the patient nine months before. It was very firm but not extremely hard.

Histological Examination of Tumour.

A histological examination of it was made by my friend Dr. A. R. Ferguson, at that time assistant to Professor Muir of our university, and now Professor of Pathology in the Government School of Medicine at Cairo, and he reported as follows:

"Ladly, aged 67. Amputation of mamma twenty-seven years ago for cancer (?). The nodule of tumour tissue in the situation of mamma proves malignant. It is so richly cellular as to cause difficulty at first sight in diagnosis between carcinoma and sarcoma. I believe it, however, to be carcinomatous."

After-History.

On inquiry recently made, I find that Mrs. E. survived my operation about five and a half years. Under date December 9th, 1908, her son-in-law, with whom she resided, writes, regarding her illness and death: "As far as we know, the disease did not reappear. The nurse told us that Mrs. E. spoke about a lump somewhere, but the information was not sufficient for us to say anything about it. She died two years ago from congestion of the lungs." I have since also heard from the medical man who attended Mrs. E. in her last illness—in the neighbourhood of London where she latterly lived. He states that he "occasionally but rarely saw her chest, as she had the greatest objection to any examination of the scars." "I think," he adds, "I should have found the suspected cancer had it been present to any extent."

It is possible that the chest ailment which proved fatal in the old lady's case may have been due to cancer, but, in the absence of *post-mortem* examination, one must remain in doubt.

Now let us consider what lessons may be learned, what speculations may reasonably be entertained, from reflections upon such a case as this one. And, first, let us ask, Is this late recurrence of cancer, nearly thirty years after the removal of the primary tumour, a fresh development of the disease and quite unconnected with the original growth, or was the nodule which I removed in 1900 an offspring of that contained in the breast amputated at Berwick-on-Tweed in 1873? In other words, Was the recurrence a reinvasion or a residue? The very long period of absolutely good health and freedom from any new sign of the disease is apt to make any one, who has not had repeated experiences of late recurrence, at once conclude that the fresh outbreak is an independent and new invasion. What is more likely than that a woman who has been affected by this disease at 40 years of age, and has been, as we think, completely cured, should again develop it before she ends a long life? It would not surprise us if one of her sisters or daughters were to become affected with the disease, and why not herself, who has already proved her proneness in that direction? That we do occasionally meet with examples of cancer arising a second time in the same individual, and where its later has clearly no relation at all to its earlier manifestation, no case could better illustrate than the following:

CASE II.

On September 28th, 1896, Mrs. B., aged 44, was admitted under my care in the Western Infirmary of Glasgow with a hard tumour of the right breast, and a few days afterwards I removed the breast and the contents of the armpit. On histological examination the tumour was found to be a typical cancer of the scirrhous type. She went home in three weeks quite well.

On August 19th, 1908, she was readmitted, having enjoyed perfect health from the date of her last residence in hospital until about six months ago—that is, for eleven and a half years. At that time she began to experience much constipation and also began to be troubled with frequent small stools containing blood and mucus, and appeared to be losing flesh. Digital examination of the rectum showed a hard prominent mass ringing from the right side and ulcerated on its surface. The tumour was not markedly fixed and was situated at about the level of the cul-de-sac of the vagina. In my absence on holiday, Dr. George H. Edington, one of the assistant-surgeons of the hospital, excised the tumour, uniting by suture the cut and apparently healthy ends of the bowel. Microscopic examination showed that the growth was an adenocarcinoma.

No one will doubt that this attack of cancer was an independent development, considering the irrelevancy of the rectum to the mamma, as regards the question of secondary infection. The determination of whether a

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late recurrence of mammary cancer after operative removal is to be regarded as directly connected with the first manifestation of the disease, or not is a much more difficult matter when the site of the recurrence is in so closely co-related an organ, in this respect, as the other breast.

CASE III.

In January, 1896, I was asked to see Mrs. D., a lady then about 50 years of age and of very stout habit of body, with a tumour of the right breast, which there was no difficulty in recognizing as a carcinoma. There was evident but limited cancerous infection of the lower glands of the axilla. Examination revealed no sign of the disease elsewhere. She had been conscious of the presence of this lump in her breast for at least a year. On January 29th, 1896, I removed the breast and axillary contents. Microscopic examination showed that the tumour was a scirrhus cancer, and that the disease had already reached some of the lower axillary glands.

She remained perfectly well for ten years and eight months, when she discovered a precisely similar lump in the remaining breast. This I saw with Dr. Roxburgh of Pollokshields on October 9th, 1906, shortly after its discovery by the patient. On October 16th I removed the breast and axillary contents.

I saw this lady recently (December 24th, 1908). I found her in perfect health, and could not detect, on either side of the body, any indication of recurrence.

Such a case as this I am inclined to regard as an example of a second invasion of the disease. I am well aware—too well aware—how very often, and sometimes how very soon, the second breast becomes infected from the first by way of the lymphatics, but almost always with evidence of recurrence in other situations—in skin, subcutaneous space, bone or cervical glands. But here we had the disease appear in the second breast, there having been an absolute immunity of more than ten years after the operation on the first breast. From that date it is now more than thirteen years, and the lady still continues in perfect health, and with no sign of cancer in any part of the body. In these two women cancerous disease appeared on a second occasion of their lives, but in both of them in a part of the body which is a most usual and well-known site of its primary manifestation—namely, in the rectum and breast respectively. It is quite otherwise in the case of Mrs. E., to whom I first referred; and the fact that the tumour grew under the pectoral muscle is quite fatal to the supposition that it originated there, or, in other words, that it was a primary growth. It must therefore have been a residue, probably in some lymphatic vessel traversing the subpectoral fascia. There it lay for seven and twenty years, obsolete and inactive, but not incapable of recrudescence and rapid growth under conditions and circumstances of which we have no knowledge. We neither understand its long sleep nor its awakening. But I shall narrate another case which illustrates the same power of dormancy and revival in a microscopic piece of cancerous epithelium or some germ of cancer in a situation in which the occurrence of primary cancer would be, if I may be permitted so to express it, still more impossible.

CASE IV.

In 1894 I removed the left breast of Mrs. F., aged 40, a patient of Dr. Anderson of Gt. Glasgow, on account of scirrhus cancer. This diagnosis was verified by microscopic examination. She was a farmer's wife, and remained in excellent health until 1903, performing all the duties of her household and of a large dairy. Early in that year she began to complain of rheumatic pain in the left hip and thigh. This became so disabling that she was compelled to take to bed in March and put herself under the care of her doctor. On getting out of bed one day the left femur fractured. She died four months afterwards.

At the time when the fracture occurred Dr. Anderson wrote to me as follows:

"I can discover no trace of cancer in the breast or elsewhere. The situation of the operation wound is marked by a soft and beautiful scar, and there is nothing in the way of disturbance of function anywhere to point suspicion."

Dr. Anderson has since further informed me that she died from gradual exhaustion, and that there never was any evidence which he could discover of further dissemination to lungs, liver, or bone, nor were there any nodules on the surface of the body.

In this case some fragment or germ of cancer—whether carried, as Handley believes, by lymphatic permeation or by the blood stream does not matter—obviously resided for nine years or thereby in the marrow of the femur and made no sign. Then, waking up to activity, it increased, until by quick growth it gave rise to pressure, to destruction of the bone, and to spontaneous fracture. Unfortunately, neither in this case nor in that of Mrs. E. was there any

post-mortem examination; but so far as clinical signs were concerned there was no evidence elsewhere of the disease.

A consideration of facts such as these leads us to recognize how unwise it is to regard patients who have been operated on for mammary cancer as permanently cured because they remain free of any indication of recurrence of the disease for three, four, or five years. Nor has the remote uncertainty of result, even when for many years the patient has remained in excellent health, been entirely removed by the more extensive operations which have obtained since, for instance, Mrs. E. was operated on. She had the breast, with some of its overlying skin, alone removed. Not even the axilla was interfered with, and yet she remained perfectly well for twenty-seven years. We are apt to forget that good results used to be occasionally obtained even by such a limited operative procedure, and the younger surgeons of to-day seem to believe that by no other than a very extensive operation is it ever possible to prevent an early recurrence. But I well remember, when a student of the old college in the High Street of Glasgow in the early Sixties, that Mr. Lister, no doubt keeping in view the experience of Mr. Syme, used to teach us that if the entire breast with the nipple and such overlying skin as seemed necessary were removed, freedom from the disease might, in certain cases, be long enjoyed and the patient live, perhaps, until some other disease put an end to life. Most other teachers were at that time, on the other hand, fond of declaring that every case of removal of the breast was necessarily followed by comparatively early recurrence and death, and they tried to dissuade patients from submitting to operation. In this connexion I was interested to read, in the *BRITISH MEDICAL JOURNAL* of April 15th, 1905, a letter by Dr. A. W. George, headed *Death from Cancer Twenty-two Years after Primary Operation*. The letter was as follows:

I have recently lost a patient whose case is, I think, worth placing on record. She was a maiden lady, one of a large family, in which a strong tendency to cancer seemed to exist. An elder sister, also unmarried, died from cancer of the uterus, while a younger sister, also single, died of this disease, primarily, of the stomach. At the age of 50 my patient had the right mamma removed by the late Mr. Durham; the axilla was untouched, and for seventeen years there was no recurrence. Five years ago a small nodule was discovered just below the scar; this was removed, and a microscopic examination showed it to be a true scirrhus cancer; a little more than a year later another nodule was removed. About the same time the inner end of the scar became gradually fixed to the chest wall by a deep growth too firmly fixed for removal; this slowly increased till it threatened to ulcerate. Somewhat later Roentgen rays were tried, and, for a time, seemed to check the rapidity of growth. Finally the skin ulcerated, the tumour sloughed, leaving a large malignant ulcer, which spread with a threatening of hæmorrhage occasionally, the patient emaciating and succumbing to exhaustion at the age of 72. At no time was there any sign or symptom of a secondary new growth, nor was it even necessary to administer sedatives, as the disease was painless throughout.

Here, then, are at least two instances of patients surviving for prolonged periods after cancer of the breast was removed without even the axilla being touched—Dr. George's patient for twenty-two, and Mrs. E., whose case I have detailed, for thirty-three years. I accentuate this fact not to deprecate more extensive procedures—very far from it—but merely to offer a contradiction to the belief that no good result is possible without them. Like all other surgeons, I have now for a great number of years in every case cleared out the entire contents of the armpit and removed the breast, with more or less of overlying skin, in one continuous mass. These complete operations have undoubtedly increased the number of our so-called "cures"; and it may be hoped that the still more extensive operation of removing also the pectoral muscles, and perhaps the upper part of the anterior layer of the rectus sheath too, as recommended by Mr. Handley, with the view of preventing epigastric invasion, may result in even more gratifying progress. My own experience and, I should think, all other experience is still too recent to admit of any positive conclusion in this respect. But I have been long satisfied that whether we operate, as we think, early, or whether we operate obviously late in the disease, whether by limited or extensive removals, we must remain uncertain of our results. If we escape early we may still have late recurrence. Our patients may live for

many years and die of some other ailment, and these are the only cases to which we are entitled to apply the word "cure," unless, indeed, we may safely do so to those who live for more than thirty years after operation and remain well. I was much interested to read in the *Epitome of Current Literature in the BRITISH MEDICAL JOURNAL*, October 5th, 1907, similar views quoted from a paper by Bircher in the *Zentralblatt f. Chirurgie*, No. 26, 1907. He there states that the hopes that by modern methods a permanent cure of malignant disease might be effected have been realized only to a slight extent. Instances have been recorded of cases remaining well for ten, twenty, or even more years, but even in cases of this kind there can be no certainty. Statistics prove that retarded relapses occur, in spite of Volkmann's assurance of definite cure after freedom from recurrence for three years. They occur most frequently in the first decennial period after operation—more rarely in the second—and in the third they have been very seldom observed. Hirsch has reported a case in which the patient remained free from recurrence during twenty-five years; while Boeckel and Vernetil each records a case of like freedom during a period respectively of twenty-nine and thirty years. Bircher himself details an interesting case in which the disease appeared again in the scar twelve years and eight months after operation. This was removed, but five months later death took place from metastasis in the liver. He raises the question whether such an experience is an example of real recurrence or of fresh disease, and is of the opinion that such an attack cannot be explained by the view of a local disposition to cancerous disease, as the sudden outbreak of local recurrence and of metastasis must have been due to the influence of some factor favouring the proliferation of latent germs.

But if the character of the operation performed in respect of its extent is not always the explanation of a subsequent prolonged freedom from recurrence, the statement that early operation will ensure success is equally fallacious, and that for a good reason—namely, because it is impossible to know when we operate early and when we do not. Every modern surgeon operates as soon as possible after he has been consulted, and we all desire that patients should consult us at once, when they have found the slightest hardness or tumour in the breast. But clinical experience teaches clearly that the small size of a growth and its recent discovery by the patient do not necessarily mean that it is of recent origin. Nay, more, some cancers of the mamma shed themselves freely into the lymphatic system while still too small to be discovered even by the expert touch of the skilled surgeon, while not very seldom growths of considerable size, and which have been known to the patient for months, have not yet been disseminated as far as the axillary glands, as may be proved when these glands are afterwards removed and histologically examined. In this, as in so many other clinical respects, different examples of the disease constantly contradict one another.

CASE V.

Some years ago I was consulted by a lady from whose armpit a tumour had been removed by another surgeon nearly a year before. I was told it had been found on examination to be of a cancerous character. She was sent to me on account of a small hard tumour of the corresponding breast, which she had recently discovered. She was quite clear that at the date of the former operation nothing of the sort existed or, at least, could be felt. On removing the breast and the contents of the armpit, examination proved that carcinoma existed in both. What the ultimate result was as regards recurrence or otherwise I do not know, as I early lost sight of the patient.

CASE VI.

In the autumn of 1904 an elderly lady, who was then on a prolonged visit to Scotland, consulted me on account of symptoms due to a pretty extensive local recurrence of cancer after removal of the left mamma. The history of her case was as follows: Towards the end of 1901 a tumour of the lowest part of the armpit was removed by a distinguished London surgeon. It had been in existence for a few months. The surgeon made a careful examination of the mamma, but found nothing amiss with it, and contented himself with the removal of the recognizable disease. In October, 1903, a friend of mine in the south of England, who is a well-known and experienced operator, removed a recurrence from the neighbourhood of the scar. The patient soon returned with a second recurrence, and he advised removal not only of that but also of the breast, although on neither occasion did a careful search detect any tumour in it. To this, however, she would not then consent, and, perforce, he contented himself with the removal of the recurrent nodule of

cancer. On March 17th, 1904, however, on her once more seeking his aid on account of return of the disease near its old site, he removed the breast and cleared out the axilla. A small tumour was contained in the breast. I saw her in the autumn of the same year, when there were present great oedema of the limb, scintillating subcutaneous and cutaneous nodules in and around the scars, with hard masses in the infraclavicular and supraclavicular regions. The particulars I have given of her case were communicated to me by my friend, who had recommended her to consult me, distance preventing her from having recourse to himself. In a correspondence which subsequently passed between us, he wrote, "I cannot explain the condition in the old lady; but there remains the fact that neither I nor I, later on, could feel any evident disease in the breast till recently I removed it."

CASE VII.

Quite lately (November 13th, 1908) a patient was admitted to my female ward in the Glasgow Western Infirmary, whose case illustrates the same clinical precedence in the observation of the secondary axillary cancer before the primary mammary tumour is large enough to be demonstrable. She was a woman of 56 years of age. About a year previously she noticed a swelling in the right armpit. She thought it was a "gathering," and some time afterwards the skin over it became discoloured and ultimately burst. It discharged no "matter," but bled very freely. Neither she nor her doctor discovered anything wrong with the breast. But about two months after this she observed a small but very hard "swelling" in the breast. It had since grown larger and become the seat of occasional shooting pain. On examination I found a very large, hard and fixed mass in the axilla, which had invaded the overlying skin, giving it a crumpled and puckered appearance. Three of these puckers or long creases in the skin ended in an ulcer attached to the glandular mass and covered with a dry scab. The tumour of the breast was very much smaller than that of the armpit. The supraclavicular glands also constituted a hard tumour.

These and other cases have convinced me that a mammary cancer may produce extensive involvement of the lymphatics even before it is of a size which renders it demonstrable. *A fortiori*, a tumour which is very small and has only recently attracted the patient's attention and caused her to seek advice must not be regarded as necessarily a very favourable one for operation. An early metastasis or local recurrence often follows operation in such a case, as I know by repeated experience, whereas sometimes a relatively large mammary tumour, whose existence may have been known to the patient for at least a year, may be followed after operation by a long immunity from recurrence, as in the case of Mrs. D. which I have narrated. This is only another instance of the contradictions which one observes in the clinical facts of different instances of the disease.

I was interested to find lately that another surgeon has been drawing attention to this same fact. In the *Transactions of the American Surgical Association*, vol. xxv, page 78, Halsted of Baltimore writes:

I have twice seen extensive carcinomatous involvement of the axilla due to mammary cancer, which later in neither instance became palpable or demonstrable for a considerable period after the axillary glands had attained conspicuous dimensions. In each case the axillary tumour had been removed, in one of them a year before and, in the other, perhaps two years prior to my first examination, which, though made in the most careful manner, failed to find the slightest evidence of cancer of either breast. In the course of a few months thereafter the mammary disease manifested itself in both patients.

Facts such as these prove that, in tumours of this character, small size and recent origin are by no means convertible terms. The little secondary cancerous tumour which I removed from the subpectoral space in the case of Mrs. E. was not bigger than the last phalanx of a little finger, and yet we know that twenty-seven years had passed before it attained to that size. How long a small primary tumour may have been in the making or how soon it may begin to disseminate itself, it is impossible for us to know. Every surgeon ought, therefore, to operate as soon after the discovery of a mammary tumour as he can, removing the whole contents of the armpit, and, if there be no serious reason to the contrary, one or both pectoral muscles as well. But it is equally his duty to remove the entire mamma when operating upon an axillary tumour which appears to be cancerous, or is subsequently proved to be cancerous by histological examination, even though he can discover no tumour in the breast.

I have narrated an instance of cancer of both breasts (Mrs. D.), the disease in the second occurring more than ten years after the removal of the first. The patient still continues well, two years and four months having passed since the second operation. I have expressed the hope, if not the definite opinion, that this is an example of a

primary tumour forming in the left breast, just as happened more than ten years previously in the right one. On one other occasion only have I met with any experience at all similar, and in that case the interval between the occurrence of the disease in the two breasts was a somewhat shorter one—namely, six years.

In all other cases in which I have seen both breasts affected, the appearance of the disease in the second breast has been only an episode in its progressive and continuous advance, even when that advance has been sometimes very slow. If no other evidences of dissemination are yet apparent, they immediately become so. Although I have in several cases removed the second breast under these circumstances, the procedure has always been followed by disappointment. The infection of the remaining breast, like that of the cervical glands, indicates a degree of generalized infection which seems to me to render further operative interference unnecessary and undesirable. And one is the more inclined to pursue this policy from the knowledge that a secondary dissemination of cancer in a breast is usually slower in growth and less likely to give rise to pain, ulceration, and other troubles than a primary tumour in the same situation. I shall shortly describe the disease as it occurred in two sisters, patients of Dr. Sloan of Catrine, since both cases illustrate several important points, and amongst others the secondary infection of the remaining breast.

CASES VIII AND IX.

In November, 1894, I excised the left breast of Miss I. S., aged 55, and cleared out the armpit. In January, 1896, I operated for recurrences in the neighbourhood of the scar; and again in October, 1898, and November, 1899. On November 7th, 1900, I removed the right breast and the contents of the right axilla, on account of disease in those parts. On April 3rd, 1901, another small nodule was found near the scar on the left side and cut out. On August 10th, 1901, I have it noted that the patient called to report herself, and on careful examination I could detect no sign of disease, locally or generally. Fourteen months afterwards, however, she developed signs of disease in the lumbar spine and elsewhere, suffered much pain, lost flesh and strength quickly, and died in January, 1903, thus surviving the first operation eight years and two months.

Her sister, Miss A. S., aged 62, was operated on (left breast) in May, 1904. Within a month or six weeks this was followed by a copious crop of cutaneous and subcutaneous nodules, then by disease of the remaining breast and a metastatic tumour of the liver, with deep jaundice. She survived the operation not much more than a year.

Here were two sisters, very like each other in personal appearance, affected in the later part of their unmarried lives with cancerous tumours of very similar character, so far as physical signs and microscopic examination showed, treated by the same operation, performed by the same surgeon, but with widely differing results. In both the disease proved fatal. In one it took more than eight years to accomplish the patient's destruction; in the other life was at an end in sixteen months.

In the first of these two cases we may believe—at all events it is pleasant to believe—that operation prolonged life; in the other, as all of us must have had occasion to feel in regard to such cases, it probably shortened it.

Up to the date of my operating upon the second sister, her tumour, the existence of which had been known to her for six months or so, made comparatively slow progress. Within a few weeks of my operating on it, there was a destructive dispersion of cancer with a rapidly fatal issue. I have too often in my life had the same sort of experience, and one cannot help, on such occasions, entertaining the feeling that the mere mechanical interference with the disease has caused its immediate and wide diffusion, and precipitated its fatal issue.

This sort of experience seems to bear a close analogy to what follows every now and again after operations undertaken for surgical tuberculous disease. It is one of several resemblances which clinically may be observed between the behaviour of mammary cancer and that of various forms of surgical infective disease. The violent stimulus and injury which is inflicted, for instance, upon a tuberculous ailment, whether of bone or of the soft parts, when it is operated upon, has been found pretty often to be quickly followed by dissemination of the tubercle to the lungs or the cerebral meninges, or even by a generalized miliary tuberculosis. Verneuil¹ and others have collected and published very many illustrations of this fact; and of such experiences I, like others, have had my share. Thus, upon the only occasion on which I ever ventured to apply

the sharp spoon, and that with much gentleness, to the interior of a tuberculous kidney, after evacuating a large abscess by lumbar incision, the procedure was followed, after a few days of relief and quiet, by violent headache, high fever, vomiting, squinting, convulsion, and coma. Death occurred ten days or so after the operation from tuberculous meningitis. The patient was a nurse 35 years of age. I have seen the same mishap follow castration in a patient suffering from tuberculosis of a testicle. The disturbance of tuberculous joints, whether undertaken for diagnostic purposes or with a view to rectifying displacements, constitutes a real danger in this respect. A good many years ago I saw, on more than one occasion, with Dr. Barr Pollock, a boy of about 12 years of age, who suffered from hip-joint disease. He had been kept at rest by means of the long splint, with weight and pulley, for more than two years, and was making excellent progress. Another surgeon, who was consulted at this time, moved the joint freely under an anaesthetic for purposes of better diagnosis, giving his opinion afterwards against any operative interference, and recommending a continuance of the treatment hitherto used. Within a week the boy developed the signs of a meningitis, of which he died in less than a month. I once had a girl of 18 or 19 years of age under my care with a caries of part of the tarsus which had existed without dissemination or serious effect on the general health for eleven years. I scraped it with the sharp spoon, and this was soon followed by tuberculosis of the sternum and the apex of one lung.

I might easily adduce other examples of this form of surgical calamity, but I mention these with a view of attracting your attention to the resemblance they bear to those distressing and quick explosions of cancerous recurrence which now and then follow the removal of the mamma. The clinical fact is enough to make us, as far as possible, avoid all undue pressure upon and squeezing of the tumour, whether during diagnostic manipulation or during the operation for its removal.

The other sister whose case I have referred to lived for more than eight years after operation, although she suffered throughout from the disease. The reason of this clearly was that, whereas in the rapidly fatal case an early metastasis to the liver occurred and precipitated death, in her sister the disease remained external throughout.

Here again we have a striking resemblance to the behaviour of certain cases of infective diseases. It would seem *a priori* almost incredible that a young child should develop in a few months dozens of tuberculous lesions on the surface of the body, thus proving the free circulation and movement of the tubercle bacillus, and yet escape all infection of peritoneum, meninges, pleura, lungs, kidneys, or other internal organs to which childhood is so very prone. And yet such an occurrence is almost a matter of everyday experience.

I lately treated, along with my friend Dr. Ferguson of Paisley, a child, whose case is a striking, but by no means rare, example of that to which I refer. Its only unusual feature, perhaps, is that the patient was the child of wealthy parents, such cases being most often seen amongst the poor. She was born in May, 1900, and was a singularly plump and beautiful baby. In February, 1901, a livid nodule formed in the skin of the left cheek. This, ultimately softened and was scraped, the resulting sore being about the size of a shilling. In May, 1901, two similar nodules appeared in the same cheek, and one in the right cheek. When she was 15 months old the edge of the malar bone near the outer corner of the left orbit became infected and gave rise to an abscess. Two months later a similar lesion declared itself on a similar spot on the other side of the face. Small sequestra ultimately separated from these situations. A month after this an abscess connected with the lower maxilla declared itself and was opened. Ultimately a considerable sequestrum separated. By June, 1902, she had developed fourteen other lesions—in metacarpus, proximal phalanges of the fingers, metatarsus, proximal phalanx of one great toe, and also in cervical glands. Many small subcutaneous cold abscesses formed after December, 1901, and one of considerable size showed itself in the left loin. This was treated, with most satisfactory results, by emptying it and injecting iodoform emulsion in glycerine. Most of the lesions of bone and the soft parts were treated with the sharp spoon, while sequestra were removed when loose, and one or two cervical glands were excised, in operations performed from time to time. The last of these was performed in June, 1903. In the beginning of 1904 every lesion was healed. During her long illness the child emaciated and looked ill, being fretful and peevish. The lesions in the external parts of the body numbered twenty-eight

in all. Never once, however, did she exhibit the slightest sign of disease in abdomen, chest, or head. Now she is a vigorous, healthy-looking child, nearly nine years of age, full of life and spirit, and not so much disfigured as might have been expected.

I can well remember cases of pyaemia in the Glasgow Royal Infirmary, in the dark days of surgery more than forty years ago, in which multiple abscesses, in the same way, remained confined entirely to the external parts, and in such cases—and they were the happy few—recovery often occurred. The surgeons of that day were not unfamiliar with them, and they were referred to as cases of "external pyaemia." In his *Illustrations of Clinical Surgery*, vol. i, p. 229, Sir Jonathan Hutchinson, referring to this matter, remarks:

It may be that the term "external pyaemia" is founded only on a few coincidences, but there is no doubt that amongst surgeons the opinion prevails that when with pyaemic symptoms abscesses develop in the cellular tissue, the case has about it an additional amount of hope.

Of course no case of disseminated mammary cancer, even when the lesions continue entirely external, can be expected to undergo cure, as may often happen with tubercle and pyaemia; but some of them live for a long period of years—some have been recorded who survived for twenty years—and in the case of others even disappearance and cure of individual cancerous lesions, quite apart from any treatment, have been observed. Of this fact of long survival, when for some inexplicable reason dissemination does not reach internal organs, I could adduce a good many examples. I shall mention only two.

CASE X.

One pursued its course from first to last uninterrupted by any operation. This was the case of a lady whom I saw many years ago with the late Dr. Paterson of Bridge of Allan. Several of her near relatives had been operated on for the same disease, and in all of them somewhat early recurrence and death had taken place. She therefore stoutly refused the suggestion of operation. I saw her again about thirteen years afterwards in her house in Glasgow, with her medical attendant, on account of a very severe haemorrhage from a spot in a large cancerous ulcer, which occupied the situation of the breast. All over that side of the chest there were scattered nodules of cancer. The upper limb on the affected side was greatly distended with oedema, and masses of cancer were obvious in the axilla and above the clavicle. Yet, though wasted and cachectic in appearance, this lady had not been confined to bed, did not suffer great pain, and in many ways had continued to enjoy her life. She did not die for some considerable time after my visit, being well over 70 years of age at the time of her death. She never resorted to the habitual use of any form of opiate.

The following case illustrates quite as strikingly the external character of the disease and the consequent comparatively long duration of life.

CASE XI.

In December, 1901, I was consulted regarding the case of Miss D., a patient of Dr. Arthur Mechan. She was then about 40 years of age, and, I was informed, had been operated on in 1898, two and a half years previously, on account of carcinoma of the breast; and now some nodules of the disease had appeared in the scar. These I excised, and repeated the procedure six months afterwards on account of a fresh crop of recurrent nodules. Before long others began to appear in and around the scar, while there were hard cancerous glands at the root of the neck and unmistakable signs of the disease in a dorsal vertebra, with slight angular curvature and pretty severe pain encircling the chest. Nevertheless, she continued going about till about a year ago, and appeared to enjoy life in spite of her disease, which continued to progress. By aid of the constant use of morphine, she accomplished the daily necessary household shopping, made calls on her friends, occasionally went out to dinner, and often attended concerts. At Christmas, 1907, she was present at a tea party given one afternoon, in my female ward in the Western Infirmary, by some ladies, to the patients, and evidently enjoyed the novel experience; but for a year past she had been much weaker. Later, when she was getting out of bed one day, one femur broke. Her weakness then quickly increased, and she sank and died, having survived the amputation of her breast about eleven years. At no time was there any indication of disease in thorax or abdomen.

Mr. Herbert Snow has remarked that "the 'favourable conditions' for long life in cancerous patients mean the induction of the most passive and vegetable existence that it is possible to secure, the aim being to procure and to sustain in such the utmost tranquillity of body and mind," and advises the free use of morphine. It is worthy of remark that this lady took morphine very freely throughout her long illness, using latterly as much as $1\frac{1}{2}$ grains of that drug by hypodermic injection every twenty-four hours.

The late recrudescence of the disease in a patient who has, for many years, survived an operation for cancer of the breast, and in regard to whom our anxiety has long ago been lulled to rest, instances of which I have already cited, may be regarded as illustrating another analogy or resemblance between the behaviour of certain cases of cancerous and of some other infective diseases. Paget drew attention, in a well-known essay, to the frequency with which lesions of tuberculous disease and of osteomyelitis, long ago healed, are apt to relapse and once more waken into activity. This essay was entitled *Residual Abscess*, and in it he wrote of inflammations and abscesses occurring in connexion with the residues of former attacks of disease. "Under the name 'residual abscess' I would include," he wrote, "all abscesses found in and about the residues of former inflammations. Most of them are found where pus, produced long previously, has been wholly or in part retained and become dry or in some form 'obsolete.' But some of them, it is probable, are formed in the thickenings, adhesions, or other lowly-formed products of inflammation long past."² This essay was written in pre-bacteriological days; and, in the light of more recent knowledge, the clinical fact must be explained rather by the reawakened activity of latent germs in the part than by any influence of the residual products of the former inflammations which, by their action, those germs originally furnished. Every surgeon has had cause to observe cases of relapse in after-life both of tuberculosis and osteomyelitis, the primary manifestations of which may have taken place in early infancy.

I conversed only a few weeks ago with a gentleman now in his 69th year, who suffered from hip-joint disease when 5 years of age. He was ill and confined to bed for many years, and all his boyhood was passed in great pain. His hip became dislocated and since continued to discharge till he was about 15 years of age. From that time, however, he continued fairly well, attending school and afterwards entering upon a business life. At 31 years of age he was laid up for a considerable time, an abscess forming and bursting at the old cicatrix. In six months it had healed. He remained in good health and actively engaged in business until he was 52, when he came under my care with a large abscess of the hip, which did not permanently close for more than three years. Once more, since then, he has enjoyed excellent health.

The same tendency to recrudescence is observed in staphylococcal infection of bone years after what seems a satisfactory and absolute cure.

A well-known citizen of Glasgow recently died, being over 60 years of age, who passed through a prolonged and dangerous illness under my care when he was about 20. When 7 years of age he suffered from osteomyelitis, with extensive necrosis of one femur, but, after a long illness, recovered. When I attended him he had great pain, swelling, and tenderness in the same part, with very high fever and delirium. Ultimately I evacuated an abscess which contained nearly a pint of pus. After recovery he once more led a strenuous life, building up an important and very extensive business. In addition, he was a member of Parliament for several years and the author of more than one literary venture. These facts show that he was able to lead an active life. Nevertheless, his old disease again laid him aside on two different occasions for a week or two with recurrent inflammations, without, however, any abscess formation. It had no share in bringing about his death.

Perhaps no more striking example of a recrudescence of latent organisms can be cited than that which is occasionally observed when a periostitis or osteomyelitis has occurred, say of a tibia, during convalescence from an attack of typhoid fever, and has once more subsided. Several years, it may be, after such a bone ailment (cases have been recorded where ten years have elapsed) inflammation may once more occur, and may end in abscess formation. On cultivation the pus is found to yield a pure culture of the typhoid bacillus. I have met with this experience both in connexion with bone and with the gall bladder.

One cannot help recognizing in such occurrences at least a superficial resemblance to those cases of late recurrence of cancer where residual fragments—or may it be resting germs?—of cancer wake up to activity long after apparently assured cure, bring about fresh proliferation and dissemination, and so accomplish the postponed death of the patient.

Our most favourable results, then, if my experience has not been exceptional, are not to be regarded as due necessarily and always to the form and extent of our operation or to the date of our interference relatively to the size of the tumour. They seem due rather to the

essential character of the individual tumour and the degree of invasion of the lymphatic system of the part in each individual case. If the upper axilla be involved as well as the lower, the prognosis is the more doubtful: if there be obvious infection of the skin, especially in the form of detached separate nodules near the seat of the disease, the prospect of long immunity from recurrence is very slight, however large an area of skin be sacrificed, while if the disease is apparent in glands above the clavicle, I always now decline to operate. Still the extent of the operation is, undoubtedly, a certain factor in our results. I have mentioned the fact that long-continued good health and apparently permanent cure sometimes, in former days, followed removal of the breast alone; but the much more frequent experience of such encouraging results after the more extensive procedure of also clearing out the armpit has been very marked indeed. While preparing this paper I have either personally seen, or communicated with the medical attendants of, ten patients who remain quite well after operations performed seven years ago and upwards for mammary cancer, verified after removal by microscopic examination. The list only includes one hospital patient, as such patients, for the most part, quickly disappear from one's view, and I have made no search at all amongst former patients, whether private or hospital. These ten to whom I refer chance to have remained within the area of my own knowledge and observation. The periods of time which have elapsed since operation in these cases are respectively thirteen years, twelve years and four months, eleven years and eight months, ten years and eight months, ten years and six months, nine years and one month, nine years, seven years and ten months, seven years and three months, and seven years. In all of these cases the contents of the axilla were removed, but in none were the pectoral muscles interfered with. I believe it would, at any time, have been impossible for a surgeon of thirty or forty years ago, who removed the mammary gland alone, to have made a statement similar to this. Nowadays there are large numbers of surgeons all over the world whose experience of results is of exactly the same character; and this, no one will dispute, is due to the more extended nature of the operation. Whether or not the routine practice of removing the pectoral muscles will mark a corresponding advance is doubtful; but I think it should be followed, in the absence of anything to contraindicate it, since we must do everything we can to be in advance with our operation of any existing dissemination of the disease; and, in any case, the removal of these muscles makes the clearing out of the axilla much more easy and satisfactory, while their absence is hardly at all disabling as regards the future usefulness of a woman's arm.

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A Lecture

ON

THE NATURAL CURE OF CANCER.*

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ON two previous occasions, when I had the honour of occupying this chair, I presented a view of the mode of dissemination of cancer which I had worked out in the laboratories of the Middlesex Hospital. Under the name of the permeation theory, this view met with wide acceptance. In America it has recently found distinguished advocates in Professor W. S. Halsted, Dr. W. B. Coley, and Professor Rodman, and it has been confirmed in the laboratories where it originated by the work of Dr. Victor Bonney and that of Mr. Cecil Rowntree.

My reasons for mentioning these facts are two in number: First, that, although the permeation theory has met with wide intellectual acceptance, its intensely practical bearing on the surgery of every variety of cancer has

not yet been generally realized. In the second place, much of what I have to say to-day is a corollary of the permeation view of dissemination, and it is necessary to show that I have warrant for assuming its truth.

Since the severance of my official connexion with the Cancer Research Laboratories of the Middlesex Hospital upon my appointment to the surgical staff of the hospital in 1906, my researches have been extended to stomach cancer, with the aid of a grant from the Imperial Cancer Research Fund. On a future occasion I hope to have the privilege of bringing forward my results in regard to gastric carcinoma.

In the literature of carcinoma there are embedded a number of scattered observations, usually referring to single cases, which show that under certain circumstances the disappearance of cancerous masses of macroscopic size may occur spontaneously. In a few cases all clinical evidence of the disease has in this way disappeared, and a natural cure seems to have been brought about.

Occurring in what is usually regarded as the type of a steadily progressive malady pursuing its undeviating course to a fatal event, these facts have appeared strange and anomalous to most of the authors who have recorded them. Their possible significance in respect to the cure of cancer, a significance which it would be difficult to overestimate, has been referred to by Mr. Pearce Gould, who, in a lecture on "Cases Illustrating Repair in Cancer of the Breast," pointed out that "we are justified in speaking of repair in cancer, even in its advanced stages," a conclusion which "justifies—nay, compels—a belief in the possibility of the cure of cancer, and gives us an indication of the direction in which a cure is to be sought."

In this lecture I propose to consider, as fully as time and a difficult and elusive subject will allow, the facts which bear on the natural cure of cancer.

I hope to show that, as I have stated elsewhere, "the progress of a cancer is normally accompanied by retrogressive or curative processes"; that the recorded cases of natural repair in cancer, far from being anomalous and exceptional, merely illustrate more strikingly than usual the natural laws which govern every case of the disease. The order of Nature admits of no real anomalies, and is often best brought to light by the close study of apparent exceptions.

AN UNRECOGNIZED LAW OF CANCEROUS GROWTH.

The unrecognized law of cancerous growth which I wish to establish may be stated as follows:

Every aggregation of carcinoma cells has a definite life-cycle, and, after increasing in size for a varying period and at a varying rate, tends spontaneously to undergo degenerative and fibrotic changes. These changes extend from the centre of the mass centrifugally to its periphery, lead to its shrinkage, and terminate in the replacement of the aggregation of cancer cells by a fibrous scar.

In other words, the natural history of a cancer is one of centrifugal growth followed by centrifugal death. It is obvious that the postulate thus stated cannot be completely proved, if only because at the time death occurs the life-cycle of many—and in some cases of all—of the deposits will be incomplete. The most I can hope to do is to produce a certain amount of positive evidence for my proposition, to meet certain possible objections, and, above all, to show that its acceptance drills into order a ragged regiment of apparently anomalous facts, provides a trenchant weapon of criticism for deciding the value of cancer cures, and offers an explanation of the vogue which almost any cancer remedy may for a brief space attain.

To avoid misconception it will be well at the outset to state that the natural cure in cancer is a local and not a constitutional process, and that as a rule it closely follows up, without overtaking, the centrifugal spread of permeation, and so fails to arrest the march of the disease. It is certain that in some cases its vigour is sufficient to strangle the growth in an early stage, or to reduce it to impotence for a long term of years, but as a rule the natural processes of cure go on contemporaneously with

* The permeation theory is beginning to gain adherents on the Continent. At the Congress of the International Society of Surgery, held at Brussels in September, 1908, Professor A. Doyage, in opening the discussion on breast cancer, said: "Les recherches récentes de Handley et sa théorie de perméation nous ouvrent en ce moment des horizons nouveaux."

the active advance of the disease in other parts of the body further removed from the primary focus.

Apparently Complete Spontaneous Cure.

Velpaen believed that the spontaneous cure of cancer never occurs, and although since his time several cases of the kind have been recorded, the disappearance of a cancer which has clinically reached its full development has never yet been absolutely demonstrated by a complete necropsy with a negative macroscopic and microscopic examination of the tissues for cancer. A few examples may be given.

CASE I.

The best known of these cases is that of Mr. Pearce Gould.² There is no need to repeat its details fully. In 1890 the patient had her left breast removed for a "typical scirrhus," microscopically diagnosed. In 1895 she was emaciated and dyspnoeic, with numerous secondary skin nodules, large axillary and supraventricular glands on both sides, and a cancerous fracture of the neck of the left femur. Between March and November, 1896, the skin nodules shrunk, and were converted into keloid scars, the glands disappeared, the fracture united, and all evidence of growth had disappeared. By 1899 all the scars had become soft and supple, and the general condition had further improved. Unfortunately the patient has not reported herself since about 1906.

CASE II.

Dr. G. Mackay⁴ records the case of a woman of 37, who had her breast removed for a microscopically-diagnosed scirrhus. Recurrence took place a year later, locally in the opposite breast, and extensively in the lymphatic glands. Double hæmorrhagic pleurisy, with dysphagia and severe dyspnoea, next came on. From this point improvement began; the pleuritic effusion was absorbed, and all the secondary growths disappeared. Dates, however, and subsequent history are not given.

CASE III.

A woman, aged 56, now in the cancer wards of the Middlesex Hospital, under the care of Mr. Bland-Sutton, had a portion of the right breast removed for cancer at Chichester in 1894. Operations for recurrence in the breast and axilla were performed in 1896 and in 1903. The nipple still remains, and, indeed, most of the breast appears to be intact. That the disease was not entirely cured by the operation was shown by the development of a brawny arm in 1905, two years after the last operation. No other evidence of cancer remains, and it seems fair to consider this case as much one of natural as of operative cure.

Atrophic Scirrhus.

The apparently complete disappearance of a cancer in the acme of its career of dissemination is one of the rarest events in medicine, but cases are by no means exceptional in which from the beginning the natural processes of cure oppose a stout resistance to the growth. Such appears to be the true nature of cases of atrophic scirrhus. These cases include the best examples of the complete natural cure of cancer. In the most marked form of atrophic scirrhus a puckered scar, to which the skin may become attached, slowly forms in the breast. The whole breast becomes somewhat shrunken and the nipple indrawn, but no definite tumour makes its appearance. The disease in this form is usually painless, and the patient's attention is only attracted by local puckering and adhesion of the skin. Two such cases have recently come under my observation. In such cases the patient may die of some other disease, or, after many years, local ulceration or dissemination may terminate the case. It is not improbable that certain chronic ulcers of the stomach, accompanied by great fibroid thickening, are really extinct carcinomata. For every cancer which reaches its full clinical development, even as an atrophic scirrhus, it may be that a hundred are strangled in the process of birth and while still in the microscopic stage. Cases of typical atrophic scirrhus pass by imperceptible gradations into what is known as "ordinary scirrhus."

I recently had the opportunity of seeing, with Dr. Lockhart Stephens, of Ensworth, a woman 80 years of age, still hale and vigorous, who was operated upon twenty-eight years ago by Dr. Snow for cancer of the breast, and at intervals since for local recurrence. The growth was in the left breast and a considerable portion of the gland still remains. No palpable growth can be felt anywhere. She suffers, however, at intervals from swelling and fullness of the supraclavicular triangles, probably due to difficulties in the circulation of lymph produced by partial obliteration of the lymphatic vessels. She also complains

greatly of pains in the head, and of rheumatic pains elsewhere. It appears certain that the process of permeation is still smouldering along her lymphatic vessels, for at intervals transient nodules appear in the scalp, and the subcutaneous tissues of the forehead are rough and granular to palpation, an indication of the fibrosis of the permeated lymphatics.

Without wishing to detract from the credit which is due to the surgeon, I think this case should be regarded as one of natural rather than of operative cure. More accurately it might be regarded as a kind of stalemate, in which the forces of the cancerous growth and the reparative processes are balanced with the utmost nicety, for the growth does not appear to be completely arrested even yet.

Leaving these cases of clinically more or less complete cure, we may now consider for a moment the records of partial or local cure, as evidenced by the disappearance of macroscopic deposits of cancer.

Subcutaneous Nodules.

The earliest observer of the spontaneous disappearance of skin nodules appears to have been Mr. Howard, the originator of the Middlesex Hospital cancer wards. In his *Notes and Observations*, published in 1792, he says, speaking of a case of bilateral breast cancer:

The tumours commence as small, reddish, slightly-elevated, shot-like indurations of the skin, which enlarge until they attain the size of a pea, when they ulcerate, and afterwards not infrequently heal. The mammae were formerly voluminous, but have dwindled down until they are perfectly flat over the chest.

In 1867 Mr. Charles Moore noted at the Middlesex Hospital that subcutaneous nodules can be destroyed by injecting them with glacial acetic acid, but that some weeks later they may reappear. In recent years the spontaneous disappearance of subcutaneous nodules has been recorded by observers too numerous to mention by name.

Even before the disappearance of skin nodules, and while they form little tumours still definitely raised above the surface, I find that the nodules may consist entirely of fibrous tissue, from which all trace of cancerous epithelium has vanished. This stage of fibrosis doubtless indicates approaching disappearance. Skin nodules frequently ulcerate in the later stages of the disease, and the ulcer may heal, as sometimes happens to an ulcerated primary growth.

Epitheliation of Cancerous Ulcers.

Mr. Pearce Gould in 1900 recorded two cases of partial healing of a cancerous ulcer by the spread of normal epithelium over it. In a third case a large ulcer, due to malignant disease of the right breast, completely healed up. The patient died a month after the process was complete, with deposits in the lungs and liver. It is to be noted that the cicatrization of cancerous ulcers does not seem to delay the fatal event of the case.

Union of Cancerous Fractures.

This is not a very rare, though doubtless an exceptional, event. Several cases occur in the records of the Middlesex Hospital for the last thirty years. In one case fractures of both humeri, of the left clavicle and the left femur, had united, while ununited fractures of three metacarpal bones were present.

The Shrinkage of Spinal Metastases.

Professor Osler⁵ has recorded two cases of spontaneous relief from paraplegia due to the pressure of spinal metastases.

The Shrinkage of Cancerous Lymphatic Glands.

This important question has never yet been fully studied, but there is reason to believe that the successful cancerous invasion of a lymphatic gland is frequently preceded by fruitless attempts at invasion, and that lymphatic glands possess considerable power of destroying cancerous epithelium. I have examined sections of enlarged glands in connexion with a primary growth of the uterus which consisted almost entirely of fibrous tissue. In a case of breast cancer in a late stage I have observed an intermittent enlargement of the axillary glands on the side opposite to the growth. On some

² Note, October, 1908: This patient has since died with internal secondary growths, the probable ultimate fate of most cases of the kind under consideration.

occasions these glands were as large as almonds, while on other intervening occasions they were quite impalpable.

Dr. Bonney has lately studied the precarcinomatous changes which occur in lymphatic glands. He finds that enlargement of the gland precedes the access to it of carcinomatous epithelium. Microscopically the enlarged gland shows abnormally large germinal areas, with a great increase in the number of lymphocytes present. Plasma cells appear in large quantities in the stroma and capsule of the gland. The exact significance of these important observations is at present doubtful.

So far I have brought before you the vestiges of repair in carcinoma as traced in the literature of the subject, but I have produced no evidence to show that this repair is a normal event. This gap in the evidence must now be filled in so far as it is possible to do so.

A.—THE MICROSCOPIC EVIDENCE FOR THE CONSTANCY OF REPAIR IN CARCINOMA.

Perilymphatic Fibrosis.

My investigations on breast cancer have shown that the permeation of a lymphatic is normally followed by a curative process of fibrosis. The cancer cells, which at first fill the lymphatic without distending it, by their continued proliferation finally burst the tube of endothelium within which they are enclosed. Around the split lymphatic some extravasation of blood usually takes place, and a dense aggregation of lymphocytes appears. Soon the lymphocytes are replaced by young fibrous tissue, which forms an adventitious sheath for the cylinder of cancer cells set free from the burst lymphatic. This newly-formed fibrous tissue contracts upon the degenerate cancer cells, and they ultimately entirely disappear. The original lymphatic is now represented by a solid thread of fibrous tissue, and the process of natural cure is locally complete.

Figs. 3 and 4 represent this change diagrammatically. Inside the microscopic growing edge G G G the lymphatic plexus is represented merely by a network of fibrous threads.

Perilymphatic Fibrosis in Stomach Cancer.

In stomach cancer the difficulty of following out the various stages of permeation is enormously increased by the unstable nature of the cancer cells. The cells of a gastric carcinoma exhibit the utmost readiness to undergo complete mucoid degeneration. This difficulty, however, has in the end proved to be an advantage. In breast cancer it was impossible, except by inference, to trace the process of perilymphatic fibrosis beyond the stage in which cancer cells clearly recognizable as such are still present in the new-formed fibrous tissue. In stomach cancer, however, I have succeeded in following up the process beyond the stage of the disappearance of recognizable cancer cells. Fortunately there exists a stain—mucicarmine—which dyes mucin a bright red, while it has little or no affinity for any other tissue or material. The use of this stain promises to be of the greatest possible use in the investigation of gastric cancer. So far I have only used the stain for investigating the spread of stomach cancer in the deep fascial lymphatic plexus of the abdomen, to which the growth often obtains access near the navel. The drawing which I show you represents a section of one of the minute areas of young fibrous tissue, evidently of new formation, present upon the deep fascia near the umbilicus. My belief that this and similar areas represented the complete fibrosis of permeated lymphatics would have remained an unconvincing speculation. But mucicarmine brought out minute points of granular debris, stained a bright red, in the centre of the young fibrous tissue, and guessing was thus replaced by the strongest evidence. For it is certain that none of the normal structures of the deep fascia contain sufficient mucus to give a reaction with mucicarmine.

Thus, although in stomach cancer it has hitherto proved impossible to demonstrate all the stages of permeation in a nicely-graded series, such as I have shown in breast cancer, yet a gap in the evidence has been filled. The latest stage of perilymphatic fibrosis, in which cellular destruction is complete, remains no longer a mere inference, but can be shown actually to occur. The vanished cells of stomach cancer, unlike those of breast cancer, leave for a time a characteristic residue which enables

their former presence to be shown by means of a definite micro-chemical reaction.

In this process of perilymphatic fibrosis there exists, therefore definite and unmistakable instance of the natural cure of cancer by purely local processes which form a normal part of the pathology of the disease.

The destruction of cancerous emboli in the arterioles of the lungs, first demonstrated by M. B. Schmidt, is another instance of the local cure of cancer on a microscopic scale, but time will not allow me to enter into the details of the process.

B.—THE MACROSCOPIC EVIDENCE FOR THE CONSTANCY OF REPAIR IN CARCINOMA.

So far the evidence brought forward to show the constancy of repair in carcinoma has been of a microscopic character. But a recent study of repair on its macroscopic side has driven me to the conclusion that reparative processes are just as active and normal in the primary growth and in its satellite nodules on a macroscopic scale, as on a microscopic scale in the blood and lymph vessels. In the large aggregations of cancer cells the process of repair is later in beginning, and longer in its completion. The patient may die while it is still in its earliest stage, so that in some cases it may be difficult or impossible to demonstrate any sign of it. Its primary cause is a degeneration of the cancer cells, the result of a breakdown in their nutrition.

In carcinomata whose cells possess a high degree of proliferative power, the life of the patient is destroyed while the cancer is still in the early stages of its life-cycle. At the other end of the scale, in carcinomata of low proliferative power, the patient may possibly survive the carcinoma. Between these two extremes all gradations are met with. Expressed in clinical language these gradations are known as:

1. Medullary carcinoma.
2. Scirrhus.
3. Atrophic scirrhus.

Medullary carcinoma is a carcinoma of high proliferative power, occurring in young subjects, whose connective tissues are vigorous and highly cellular. A large mass of growth is rapidly produced, and the patient dies in the early or evolutionary stage of the life-cycle of the carcinoma.

The typical scirrhus is a carcinoma of moderate proliferative power. The patient dies in the involutionary stage of the carcinoma, but before its life-cycle is complete.

Atrophic scirrhus is a carcinoma of low proliferative power, occurring in old people, whose connective tissue is poor in cells. In its perfect form the life-cycle of the carcinoma is completed during the life of the patient.

Ulceration of the Primary Growth.

Almost invariably a primary carcinoma undergoes ulceration in the later stages of the disease. The ulceration begins at the centre of the growth and extends centrifugally into its peripheral portion. These facts are among the very elements of cancer pathology, and perhaps for that very reason no explanation of them has been attempted. From my point of view the constant occurrence of ulceration is of deep significance as showing that the death of the oldest portion of the primary growth is a normal event, and that the duration of any local aggregation of cancer cells is a strictly finite one.

Macroscopic Repair in Cancer a Centrifugal Process.

We have already seen that perilymphatic fibrosis closely follows up the centrifugal spread of permeation—that is to say, it is itself a centrifugal process—starting at the infiltrative margin of the primary growth, and extending in the lymphatic plexuses after the fashion of a ripple. The destruction and repair of large aggregations of cancer cells obeys a similar centrifugal law. Both in the primary growth and in each of its satellite nodules degeneration and repair commence at the centre of the mass and spread to its circumference.

Centrifugal Repair in a Secondary Nodule.

In certain of the secondary nodules of carcinoma no intranodular stroma makes its appearance, and the nodules in consequence only attain a very limited size. Such nodules afford the best material for the study of

repair in secondary deposits. The first indication of repair is that the central cells begin to exhibit degenerative changes. The cell body swells and becomes vacuolated. The nuclei begin to shrivel and lose their power of taking up stains. The whole centre of the nodule may undergo liquefaction. The peripheral cells of the nodule, those which abut directly upon the connective-tissue cells, retain the appearance of full vitality.

The next change is the appearance in the centre of the nodule, among the degenerate cancer cells, of a lymphocytic infiltration, which, however, is not a constant event. Still later, when degeneration has extended to the circumference of the nodule, the lymphocytes give place to a mass of connective-tissue cells, vascularized by new capillaries. Umbilication of the secondary nodule now occurs, owing to the contraction of this central mass of fibrous tissue.

The nodule may continue to spread at its margin, but finally the whole mass of cancer cells, becoming degenerate throughout, is replaced by a fibrous scar in which no cancer cells can be seen.

By the courtesy of Dr. Haaland, of the Imperial Cancer Research Laboratories, I am enabled to show you that similar changes may take place in the secondary deposits of mouse carcinoma. This slide shows a secondary nodule

in the lung of a mouse, with advanced central degeneration, and infiltration of the degenerate portion by lymphocytes.

In the large secondary nodules, which present an intranodular stroma, the processes of repair cannot be so conveniently demonstrated, but they are essentially the same. Central degeneration is followed by fibrosis of the degenerate portion, and the nodule consequently becomes umbilicated like a sucked orange. In old metastases, such as this from the liver of which I show you a photograph, the central portion presents no evidence of cancer, and consists simply of dense fibrous tissue.

Centrifugal Spread of Repair as Affecting Groups of Secondary Nodules.

It has already been shown that the microscopic processes of repair in cancer spread in a regular centrifugal manner away from the point of origin of the primary growth. It might reasonably be suspected that, taking a group of macroscopic nodules, the same centrifugal spread of the process of repair would be noticeable, for the secondary nodules near the primary growth are necessarily older than those further away. Indications of the centrifugal spread of repair, as affecting groups of massive nodules, are not hard to find. For instance, in this photograph, which shows subcutaneous nodules round a breast cancer, the nodules in the immediate neighbourhood of the breast are large, confluent, and ulcerated, while those further away are smaller, and have not yet reached the stage of ulceration. But it is very difficult to obtain convincing evidence of the completion of this centrifugal process of repair in groups of nodules, owing to the anatomical complexity of the lymphatic system.

Conclusive observations can only be secured provided that it is possible to watch the spread of permeation and nodule formation in a lymphatic plexus of extensive area, accessible to observation and lying in a single plane, and provided also that the cancer obtains access to this plexus

at a single definite point from which its centrifugal spread commences.

In rare cases of stomach cancer these exacting conditions are fulfilled. In some cases of gastric carcinoma I find that the growth penetrates the abdominal wall at a point in the middle line just above the umbilicus. At this point permeation extends from the subserous lymphatic plexus to the deep fascial lymphatic plexus, and commences to spread centrifugally in the latter plexus. This invasion is followed by the appearance of a crop of subcutaneous nodules spreading centrifugally from the umbilicus. Such a case was recently under the care of my colleague, Dr. Essex Wynter, and on two occasions, the first a month before death, the second at the necropsy, I made careful drawings to show all the subcutaneous nodules present. I would add that the second drawing was made without any reference to the earlier one. The later drawing shows that the centrifugal spread of permeation in the fascial lymphatic plexus had made considerable progress. But this is not the point to which I would especially draw your attention.

In the earlier drawing (Fig. 1) the region immediately around the umbilicus is thickly sown with nodules. In the later drawing (Fig. 2) not a single nodule can be seen within a considerable distance of the point at which the fascial plexus was invaded. These sketches, therefore, afford a convincing and at present unique proof of the centrifugal spread of macroscopic repair as affecting, not single nodules, but groups of nodules.



Fig. 1.—A chart of the subcutaneous nodules, spreading from a point just above the umbilicus, present in a case of stomach cancer one month before death.

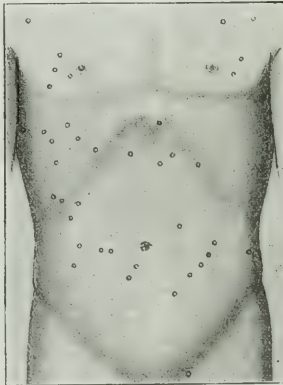


Fig. 2.—A chart showing the same case as at the time of death. The nodules have continued to spread, but they have vanished from the region where they made their first appearance.

CAUSES OF CENTRIFUGAL DEGENERATION IN CARCINOMA.

Why does a carcinoma cell ultimately degenerate and die? The phenomenon cannot be ascribed to the hostility of the phagocytes, for it is one of the most striking features of the histology of cancer that degeneration of its cells

precedes in point of time the access of wandering cells to the area of degeneration. Upon this point my observations have been confirmed by those of Bonney. Nor is the degeneration of the cancer cells due to the development of anticancerous properties in the fluids of the body, as Lomer is inclined to think. Beyond the area of degeneration the cells of the microscopic growing edge will be found actively spreading along the lymphatics and exhibiting a vigorous vitality, which sufficiently shows that no anticancerous bodies are present in the lymph. It would doubtless be true to say that failure of nutrition is the proximate cause of the degeneration which carcinoma exhibits.

We have seen that in any group of carcinoma cells the central cells—those furthest from the base of supply—are always the first to degenerate. But there is something special and peculiar about this failure of nutrition, for, as I have previously shown, immersion in the blood stream—the rich nutritive stock and common food supply of the body—is usually fatal to epithelial cells.

No doubt the excessive pressure produced by the active proliferation of the cancer cells is one cause of impaired vitality in the older deposits, and this pressure is increased by the contraction of the newly-formed cellular stroma in which the older foci of growth are embedded. There is, however, another factor to be taken into account, and one the importance of which I have only recently realized. If you look at this section of a permeated lymphatic, much distended and approaching the point of rupture,

you will see that a single layer of cells at the periphery, although necessarily subject to the same pressure as the more degenerate central cells, still preserves the appearance of vigorous life. The chief point of difference in the environment of the peripheral healthy layer of cells is that they, as contrasted with the central degenerate cells, are in immediate contact with a layer of endothelial connective tissue cells. In this section of a stomach cancer which I show you, the dependence of epithelium for nutrition upon actual contact with connective tissue cells is even more strikingly shown. The cancerous epithelium forms everywhere a single layer lining the distended lymphatics of the permeated subserous lymphatic plexus, and all the central cells have entirely disappeared.

The solution of the problem of centrifugal degeneration in cancer appears to be suggested by the two sections I have just shown you.

The Epithelial Cell an Obligate Parasite upon the Connective Tissue Cell.

Certain of the cells of the body—the leucocytes, for example, and probably the haemal endothelium—are nourished directly from the blood plasma. Others, including most, if not all, of the cells of the connective tissue, are fed by the diluted blood plasma which is known as lymph. But the epithelial cells, in the course of their specialization, would appear to have lost this power of taking up nourishment directly from the body fluids. Epithelium appears to depend for its nourishment upon the products of the connective tissue cell conveyed to it, either by actual contact, or at least by close contiguity. The inability of epithelium to nourish itself from the fluids of the body is not a mere theory. I have shown in previous lectures that immersion in the blood stream is nearly always fatal to cancerous epithelium. Veit's work upon the deportation of chorionic villi shows that the same thing is true for the normal chorionic epithelium. Moreover the chorionic epithelium, although specially designed to hang into the blood stream, exhibits by the imperfect segmentation of its cells and the formation of syncytium, a process analogous to that by which the toxin of the tubercle bacillus leads to the formation of giant cells. And I would here remind you that the so-called syncytium is not, as is so often thought, a structure peculiar to the chorion; it may occur in any carcinoma when its cells come into intimate relation with the blood stream.

It would take too long to marshal the facts of normal histology which support this view that the epithelial cell is an obligate parasite upon the connective tissue cell. The many-layered epithelium of the skin which appears at first sight to contradict it, in reality forms one of the best proofs of its truth. The deeper layers of the skin epithelium are penetrated by a network of branching processes, easily visible in the negro because pigmented, derived from the underlying connective-tissue cells. The superficial layers of the epithelium, from which these nutritive processes are absent, are continually dying and being cast off.

In his recent Hunterian lectures,⁶ my colleague, Professor Bonney, has established the new and very important fact that a local increase in the cellularity of the subepithelial connective tissues, accompanied also by a destruction of the elastic tissue, invariably precedes

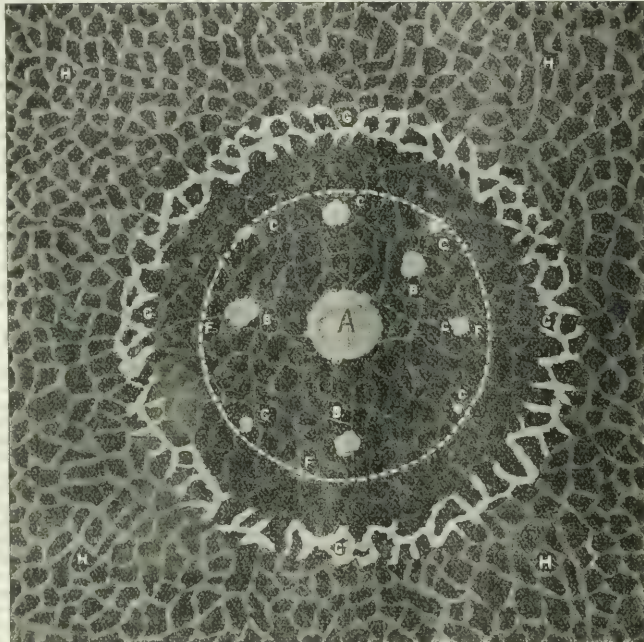
the appearance of a carcinoma. This increased cellularity is due to a precedent chronic inflammation. But if the chronic inflammation has progressed farther, and has reached the stage of fibrosis and diminished cellularity, he finds that there is little risk of a carcinoma originating in the fibrosed area. Dr. Bonney interprets the effect and mode of action of these changes as consisting essentially in the removal of various obstacles to the process of infiltration. He says:

The tissue cell proliferation results in a rarefaction of the connective tissue in front of the advancing carcinoma cells, in the course of which mechanically resistant structures such as fibrous tissue and elastic fibres become softened and destroyed.

From my point of view,

the precarcinomatous increased cellularity of the subepithelial connective tissues, which Dr. Bonney has demonstrated, acquires additional significance. If the epithelial cell, normal or cancerous, can live only as a parasite on the connective-tissue cell, an abnormal aggregation of connective tissue cells beneath an area of epithelium will obviously tend to promote epithelial activity, and will provide a body of hosts or caterers who will supply the needs of any epithelial cells which penetrate into the rarefied precarcinomatous connective tissue.

Thus Dr. Bonney's observations would seem to offer strong support to my view of the parasitic nature of epithelium. But newly-formed connective tissue, such as is found in the scar of a wound, and in the stroma of a carcinoma, does not maintain its cellular character indefinitely. It becomes more and more fibroid, until



Figs. 3 and 4 are schematic representations of two stages in the life-history of a carcinoma. The lymphatic plexus, *h h h*, and the microscopic regions of the carcinoma, are represented as highly magnified, while the primary growth and its naked-eye secondary nodules are reduced in size.

Fig. 3.—*A Carcinoma in the Evolutionary Stage.* The active primary growth, *A*, is surrounded by secondary nodules, *B B*, and by smaller and younger secondary nodules, *C C*. The circle *F F F* is an imaginary line, separating the clinically appreciable region of the carcinoma from the outlying microscopic region, in which is found *c c c*, the microscopic growing edge of permeated lymphatics. Beyond *c c c* is the normal lymphatic plexus, *h h h*, while inside *c c c* the vessels of the lymphatic plexus, represented as thin white lines, have been destroyed and converted into fibrous threads.

only a few scattered cells, represented by mere nuclei, can be seen within it. According to Dr. Bonney, senescence of the stroma and degeneration of the cancer cells advance *pari passu*. And this is exactly what would be expected from the nutritional dependence of the epithelial cell upon the connective-tissue cell.

If it be granted that the cancerous epithelial cell depends for its adequate nourishment upon contact with a connective tissue cell, the centrifugal processes of repair in cancer become easy to understand. Considering first any small group of cancer cells, their continued proliferation must necessarily remove the more central cells from contact with the surrounding connective tissue, and must therefore lead to degeneration of the centre of the mass. In the second place, newly-formed connective tissue, such as composes the stroma of a cancer, rapidly and invariably becomes senile; that is to say, its cells disappear and are replaced by fibrous tissue, poor in cells, and therefore ill-adapted to nourish epithelium. Such appear to be the factors on which the natural cure of cancer depends.

It will be objected, and with some force, that certain carcinomata, neither at the time of the patient's death nor before, show any evidence of the centrifugal reparation which follows centrifugal spread.

It is certain, of course, that a carcinoma may cause death while it is yet in the infiltrative stage, and before there is any evidence of permeation; that is to say, the primary growth may be the only focus of growth present in the body. But even in such cases, ulceration, commencing at the centre, and spreading to the circumference of the growth, is a practically constant phenomenon, which testifies to the presence of commencing centrifugal repair. The evidence of centrifugal repair may be incomplete and partial simply because the life-cycle of the carcinoma, which probably varies extremely in length, may be still in one of its earlier stages at the time of the patient's death. At any period in this life-cycle, invasion of one or more of the serous cavities may take place, and may cut short the evolution of the growth by producing rapid visceral dissemination and death.

THE LIFE-CYCLE OF A TYPICAL CARCINOMA.

From the facts which I have laid before you I think it is possible to work out a scheme of the life-history of a typical carcinoma.

Stage I.—The growth is infiltrating the tissue interspaces around its point of origin, but has not yet obtained access to the lymphatic vessels which open out of them.

Stage II.—The growth obtains access to the small lymphatic vessels near its point of origin, and permeation

commences to spread centrifugally from this point. At this stage cancer cells obtain access to the trunk lymphatics, and embolic invasion of the lymphatic glands occurs as a minor and subsidiary process.

Stage III.—The permeative growing edge, spreading centrifugally, is cut off from the massive primary growth by fibrosis of the intervening permeated lymphatics. The symptoms dependent on contraction or puckering (retraction of nipple, flattening and shrinkage of the breast) consequently begin to show themselves, and the carcinoma becomes clinically recognizable.

Stage IV.—The massive primary growth continues to increase in size by infiltration. Around it, in the area of perilymphatic fibrosis, small macroscopic satellite nodules begin to manifest themselves. The permeative growing edge is now reaching such a diameter that the verge of operability may be approached (Fig. 3).

Stage V.—Although the growth continues to spread, centrifugal degeneration of the massive or macroscopic deposits is now beginning. It affects first the oldest portions of the cancer. The primary growth becomes degenerate and fibrotic at its centre, and consequently if the growth is on a surface, ulceration begins. The ulcer spreads centrifugally. The secondary nodules nearest to the primary growth degenerate from their centre outwards, and disappear, while new ones spring up in the outlying area of lymphatic fibrosis left in the track of the still spreading microscopic growing edge.

Stage VI.—The proliferative energy of the massive or macroscopic primary growth is exhausted. It ceases to spread, ulcerates to its margin, and finally heals over, leaving a scar from which cancer cells have disappeared. The secondary nodules have disappeared from the area immediately round it, also leaving scars. The centrifugal spread of the permeative growing edge may conceivably at this stage be arrested, but it usually continues to spread indefinitely, leaving in its track fresh secondary nodules (Fig. 4). This cycle of events may be interrupted at any point after Stage II by invasion of the serous cavities, or in rare cases by successful blood infection, and by consequent rapid visceral dissemination shortly terminating in death.

CANCER THERAPEUTICS: A CRITICISM.

The literature of cancer therapeutics does not contain the record of a single fact which cannot be paralleled among the histories of untreated cases. How, then, is the value of any particular method of treatment to be determined? It is futile to bring forward a few isolated cases in which the shrinkage or disappearance of primary or

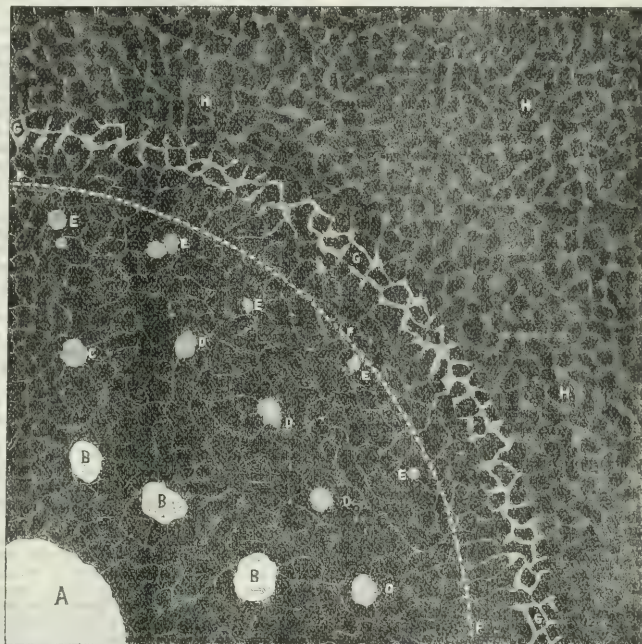


FIG. 4.—A Carcinoma in the Involutory Stage. The primary growth, A, and the oldest secondary nodules, B B B, have now become completely fibrotic and inactive, and are represented by puckered scars. Fresh nodules, D D D, and others, E E E, still younger and more remote, have made their appearance in the rear of the microscopic growing edge, G G G, which, continuing to spread, has now attained a very large diameter, and is still advancing into hitherto intact regions of the lymphatic plexus, H H H. Within G G G all the lymphatic vessels have been converted into fibrous threads. Other letters as before.

secondary growths has been observed, for these phenomena, as we have seen, belong to the natural course of the disease. Their occurrence as testimony to the value of a remedy would only be significant when they frequently and immediately followed upon its employment in a number of consecutive cases. But in any case where centrifugal spread has been rapid and regular and accompanied by a crop of secondary deposits, and where upon the application of a remedy no further deposits appear, the remedy may be fairly presumed to have exerted an influence. In this connexion it may be pointed out that cases of stomach cancer, with invasion of the fascial plexus at the umbilicus, and with a crop of skin nodules spreading from this point, afford the conditions for crucial experiment in cancer therapeutics which are absent in almost all other cases. The observer sees the growth, as evidenced by skin nodules, spreading from a definite point in a definite plane. With the patient's consent, local measures, such as x rays, might be applied to one half of the body, while the other half remains untreated as a control. The effect of constitutional measures might be determined by their effect on the observed rate of spread of nodules from the navel—a rate which can be determined from week to week, if not from day to day. More careful observation of these cases would give a precision to the study of the medicinal therapeutics of cancer which is at present conspicuously wanting.

It is not too much to say that a study of the processes of natural cure in cancer absolutely destroys the clinical evidence in favour of trypsin as set forth by Dr. Shaw-Mackenzie, the pioneer and introducer of this treatment. And the same thing is true of all other internal medicaments at present known, as judged by the published evidence, with the single exception of Coley's fluid in the treatment of sarcoma, a remedy which appears to possess distinct value. There would seem also to be no doubt of the effects of x rays in promoting the natural tendency to fibrosis in masses of malignant tissue which are directly accessible to the influence of the rays. But a very thin layer of normal tissue is sufficient to protect cancer cells from the action of the rays.

Fibrosis of the primary growth is often interfered with by the onset of sepsis, which necessarily produces increased local cellularity of the connective tissue. The beneficial effects of curettage and escharotics in advanced uterine cancer, perhaps also the temporary good effects of x rays and high frequency currents, are probably partly due to the antiseptic value of these measures. After their use the process of fibrosis of the primary growth is able to resume its normal course, and great local improvement occurs, without any arrest of the spread of the disease.

SECONDARY EFFECTS OF THE PROCESS OF NATURAL CURE.

One of the most striking facts brought out by my investigations is that the permeative spread of the cancer is followed by an almost coextensive destruction of the lymph-vascular system, and by contraction of the network of fibrous threads which replace the system of lymphatic vessels. The consequences are varied and important. They may be considered under the following three headings:

I.—*Contraction of the Tissues around a Carcinoma.*

The defensive process of perilymphatic fibrosis, and not the destructive processes of permeation and infiltration, is the cause of most of the symptoms by virtue of which an external cancer becomes clinically recognizable. In the case of the mamma, retraction of the nipple, flattening and shrinkage of the breast, adhesion to skin and fascia, all these symptoms are evidences of perilymphatic fibrosis, that is to say, of attempts at natural cure of the disease. Their absence is of no value in any given case as evidence against malignancy.

The tendency of a carcinoma to drag in towards itself a wide area of the surrounding apparently healthy tissues, a tendency which has never received a clear or adequate explanation, is an inevitable sequel of the process of perilymphatic fibrosis. If over a wide area round the growth the normal network of lymphatic vessels is replaced by a network of newly-formed, and, therefore, contractile, fibrous tissue, a general puckering and shrinkage of the affected zone is bound to follow.

II.—*Cancer en Cuirasse.*

The leathery thickening of the skin of the chest which is sometimes seen in breast cancer is not in its earlier stages accompanied by any cancerous infiltration of the integument. I have shown that the thin skin of the female breast may in these cases attain a thickness of 6 mm. before any sign of cancerous infiltration is manifest. The condition is primarily a pachydermia or lymphatic oedema of the skin, due to destruction of the fascial lymphatic plexus, and to consequent lymph-stasis. Only in the later stages is the skin actually invaded by cancer cells.

III.—*The Brawny Arm of Breast Cancer.*

According to Mr. Shield, the brawny arm of breast cancer is due to the pressure of a mass of growth upon the axillary vein. But excision of part of the axillary veins is not, as a rule, followed by swelling of the arm, which, moreover, is frequently seen in cases where no palpable axillary growth is present. My senior colleague, Mr. T. W. Nunn,* has pointed out that the axillary veins may be completely enveloped in a cancerous mass, and yet the arm may not be swollen. He believes that the oedematous arm is due to obstruction of the main lymphatics by growth within them, and, no doubt, this is a part of the truth. But ablation of all the axillary glands, which must involve complete interruption of the trunk lymphatics, is not, as a rule, followed by oedema of the arm, doubtless because a collateral lymphatic circulation is established. Some other factor besides obstruction of the axillary trunk lymphatics is evidently necessary.

The permeation theory of dissemination appears for the first time to explain fully the condition. Perilymphatic fibrosis, the sequel of permeation, destroys the affected lymphatics utterly, leaving only fibrous cords to represent the original vessels. The process is not restricted to the lymphatic trunks, but affects also the smaller lymphatics. As soon as lymphatic fibrosis has extended some little way down the arm the lymphatic connexions of the whole limb are entirely severed, and the lymph can only return partially and imperfectly by percolating through the tissue interspaces. A condition of lymphatic oedema results, which in time produces the brawny arm of breast cancer.

The brawny arm may be found fully developed in cases where no evidence of active cancerous growth remains. It is a pachydermia affecting the arm in consequence of lymphatic fibrosis, and is to be regarded rather as an evidence of the activity of the natural curative processes than as a direct symptom of cancerous growth.

THE OPERATION OF LYMPHANGIOPLASTY.

Pending the achievement of larger results by methods which are yet in their infancy, I am glad to be able to show you a minor instance of the immediate fruition of cancer research. I have been able to devise a simple operation by which, if it is permissible to judge from the strikingly successful result of a single recent case, the brawny arm of breast cancer may in future be prevented or cured with restoration of the usefulness of the limb. The problem to be solved was this: How to provide a new set of lymphatic vessels for a limb in which the normal lymphatics have been destroyed.

Without going into detail I may say that the permanent introduction into the subcutaneous tissues of a number of buried silk threads running from the wrist upwards to terminate in the loose areolar tissue over the scapula appears to have solved the difficulty. In the case where I performed this operation the excess of fluid was rapidly drained away from the arm by capillary attraction, and the oedema subsided in a few days, although the condition was of nearly three years' standing. The pain was completely relieved. The operation is, so far as I know, an entirely novel one, and it appears to deserve a distinctive name, for it is probably applicable in pachydermia of every kind, whether due to the filaria, to cancer, or to septic lymphangitis.

I would suggest for it the name "lymphangioplasty," and I confidently hope that its usefulness will not be restricted to cancer, but that it will remove elephantiasis from the list of incurable diseases.

This operation was the direct outcome of pathological

* The results of a number of other cases have since confirmed this expectation. See *Archives of the Middlesex Hospital*, vol. xii, p. 28.

investigations, which showed that the brawny arm of breast cancer indicates arrest rather than great activity of the cancer process, and is produced by lymphatic obliteration. Its success confirms the pathological conclusions upon which it was based, and shows that the more recent methods of pathological histology are full of unexhausted possibilities.

MEANS OF PROMOTING THE NATURAL CURE OF CANCER.

We have seen that the natural local cure of cancer is brought about by fibrotic processes which cut off the cancerous epithelium from that contact with connective tissue cells which is necessary to maintain its vitality. Superficially, at any rate, this process presents some analogy with the natural cure of tubercle, which also takes place by a process of fibrosis. And certain cases in which I have seen great apparent benefit to cancer patients as the result of a change of residence from town to country, or from a sea voyage, lead me to suggest that the open-air treatment, which has proved so successful in tubercle, may be worthy of trial in the more chronic cases of inoperable cancer. The treatment as applied to tubercle would require modification for cancer; the carcinoma patient, for instance, as contrasted with the tuberculous patient, would probably require less food and more exercise; but there would appear to be no very strong objection to the tentative treatment of cases of inoperable cancer side by side with cases of tubercle in sanatoriums. Under no circumstances whatever should the treatment be recommended as a substitute for operation, if operation is possible.

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THE TREATMENT OF CANCER BY THE USE OF POTASSIUM BICHROMATE.

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[A PRELIMINARY COMMUNICATION.]

THROUGH the courtesy and indulgence of the Editor of the *BRITISH MEDICAL JOURNAL*, I am permitted to lay before the profession, of which I have the honour to be a member, a number of cases of cancer successfully treated by the use of injections of bichromate of potassium into the substance of the tumour. The dose used is from 7 to 10 minims of

a sublimate solution; in some cases 15 minims are injected. In 1906 I submitted a paper on the treatment of rodent ulcer, which perhaps at that time was not of sufficient importance to claim publicity. Since then, however, about 25 cases of cancer treated by my method, with notes, were presented to the Académie de Médecine, Paris (November 29th, 1908). It is these cases, with notes, I herewith present for the unbiased and charitable criticism of my professional brethren.

CASE I.

L. A. R., aged 47. She had her breast taken off at the Victoria Hospital, Burnley, in August, 1907. In January, 1908,

she consulted me, having first consulted Dr. Jackson of Nelson, who informed her that the cancer had returned. There was a lump about the size of a hen's egg in the line of the cicatrix. I commenced treatment in January, and it was quite well in March, 1908. The result of the treatment is that there has been no further recurrence. She has lost the cancerous cachexia, and is looking quite well and feeling strong. This was a case of secondary scirrhus.

CASE II.

Miss N., of Nelson, aged 42. She came to me on May 21st, 1907, with a lump in the breast. This the Clinical Research Association, London, reported on as follows (May 30th, 1908): "This is evidently a malignant growth of a carcinomatous type. But the specimen is too small to say whence it has originated." She was not well until June, 1908, on account of my having been ill with rheumatic fever, and the treatment having been suspended. The photographs show the case when it began to slough, and when (on November 3rd) it was quite well.

CASE III.

Mrs. B., of Bristol, aged about 54. She came to me in June, 1906, with large growth in breast. The doctor in Bristol advised her to have breast taken off for cancer. On examination I found a large growth which had fastened itself upon the ribs just over the heart. She was under treatment about four months. When the slough came away a large portion of one rib came away also. Dr. Laurent, Professor of Operative Surgery at the University of Brussels, saw this case at my house. His opinion was that there had first been some tuberculous condition preceding the cancerous growth. I had a report from her on October 28th, 1908. She is quite well, with the exception of some peripheral neuritis. Her own doctor in Bristol is of opinion that the general neuritis is due to an exposed intercostal nerve—a nerve exposed by the portion of rib sloughing away. She put on 20 lb. in weight after treatment. She looks well and has lost the cancerous cachexia, which previous to treatment was well marked. Dr. Dymoke and Dr. Reynolds, of Bristol, both say it was a case of cancer.

CASE IV.

Mrs. K., of Blackburn, aged 82. She came to me in 1906 with a large tumour in the posterior triangle of the neck. The Clinical Research Association report, November 3rd, 1906, was: "This specimen is a portion of the integument. Its deep surface is invaded by a new growth, which appears to be an epithelioma. There are no cell nests, but the central cells in the processes have undergone granular degeneration. The lesion is evidently a secondary formation." The photographs (see p. 590) show the growth previous to treatment and the condition afterwards. This patient died about December, 1907, from some intercurrent disease; I think it was bronchitis.

CASE V.

T. S., of Accrington, aged 77. He had a rodent ulcer on right side of nose as large as a franc. He went to Dr. Frankish, who told him it was a cancer, and refused to attempt anything for him. He came to me on November 5th, 1907, and was well in seven weeks. I applied bichromate upon cotton-wool to the place, the cotton-wool remaining *in situ* until the following day. He had four applications. Slough followed, which separated in about three weeks, leaving a clean granulating sore, which healed up in a week.

CASE VI.

Mrs. McL., aged 52. First went to Dr. Reid of Preston, then came to me in February, 1908. The Clinical Research Association report, February 14th, 1908, was: "This piece of tissue is infiltrated by a carcinoma, which is spreading along the lymphatics in the cutis vera. The growth has the usual characters of a scirrhus carcinoma." She was quite well on November 3rd, 1908, as she was also at the last report on November 3rd. Accompanying are photographs (see p. 590).

CASE VII.

Mrs. P., aged 53. She saw Dr. Cran Duthie of Blackburn and Dr. Rawlins of Manchester—a cancer specialist—in May, 1907. Both advised her to have the breast off. She came to me the same month, and was quite well by October 20th, 1907. She



Fig. 1.—Case II. Cancer of breast beginning to slough.

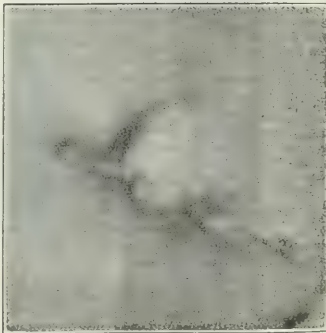


Fig. 2.—Case II. Cancer of breast. After treatment.

had about forty injections of 7-minim doses. She came to the surgery about every other day.

CASE VIII.

Mrs. G., of Blackburn, aged 65. She first consulted Dr. Taylor and Dr. Nutter, who told her she was too old to be operated upon. She came to me on May 9th, 1907, and was under treatment twelve weeks. The cancer was in the breast. The Clinical Research Association reported on May 13th, 1907: "This section of nipple shows at one end (marked with ink-line) a small area of tissue infiltrated with carcinoma. The growth seems to be of the columnar-celled type, such as would originate from duct epithelium." She had about twenty injections. She reported herself on November 3rd, 1908, as being quite well.



Fig. 3.—Case IV. Epithelioma of neck. Before treatment.

CASE IX.

A.P., of Blackburn, aged 42. He first saw Dr. Martin, senior surgeon to Blackburn Infirmary, and was operated upon for a growth in the root of the right ala of the nose. He came to me on November 26th, 1906. The Clinical Research Association reported on December 21st, 1906: "This growth is a carcinoma of the skin of the rodent ulcer type. It consists of branching, epithelial columns, possibly arising from sebaceous glands or hair follicles, and infiltrates the tissues with a characteristic rosetted outline." He had about forty injections, and was attending my surgery for about six months. He still keeps in perfect health.

CASE X.

J. H., of Lytham, aged 48. He first consulted Dr. Millan, of Lytham; then Dr. Sellers, of Preston Infirmary. He was operated upon by the latter at Preston Infirmary in November, 1905. He came to me in April, 1906, the growth having returned in four months. I gave him six injections, and he reports to me (November 3rd, 1908): "I enjoy the best of health, and have felt no effect of my lip since you treated it."

CASE XI.

Mrs. T., of Muswell Hill, aged 49. She came to me on June 9th, 1907, with cancer in the cheek, after having been eighteen months under treatment in London without any good result. The Clinical Research Association report of June 12th, 1907, was: "This specimen is a carcinoma of the skin, belonging to the rodent ulcer type. It consists of branching masses of small epithelial cells, and shows a tendency to cystic change in places from degeneration." In nine weeks she was quite well and returned home. I made nine to twelve injections.



Fig. 5.—Case VI. Scirrhus of breast. Before treatment.

CASE XII.

Mrs. B., of Blackburn, aged 57. In March, 1906, she consulted Dr. Bradley, of Blackburn, who advised her to have a lump cut out of her breast. She came to me and I found a lump as large as an egg. I commenced treatment in March, 1906. She had eighteen injections of bichromate (10 per cent. solution) of about 7 minims each, these being given every other day. A slough followed, which stank very much. In September she was quite well, and has kept well ever since. The later of the accompanying photographs (see p. 591) was taken on November 3rd, 1908.

CASE XIII.

Mr. E., of Harlepoolke, Burnley, aged 23. He had a growth upon the upper lip. He first consulted Dr. Marsden, of Burnley, who for eighteen months treated it in various ways. He declared it to be cancer, and advised him to have it operated upon.

The patient consulted me in July, 1906. I used about six injections. A report from him on November 3rd, 1908, says he is quite well and there has been no return.

CASE XIV.

Mrs. B., of Church, aged about 50. She had a lump as large as a duck's egg in the breast. Two doctors told her it was cancer, and advised her to have the breast taken off at once. Instead of having that done she came to me in January, 1906, and by May was quite cured. I have a photograph showing the



Fig. 4.—Case IV. Epithelioma of neck. After treatment.

tumour in the sloughing condition coming away from the previously unaffected skin, and another showing the result after treatment. In November, 1908, I saw her again, and the condition remained healthy. A soft white scar was left. The glands in the axilla, which had formerly been enlarged, had now resumed their normal condition, and the patient said she had never felt better in her life.

CASE XV.

Mrs. A., of Colne, aged 46. She first went to Dr. Doyle of Colne, who said she would need to have her breast off. She came to me on September 22nd, 1906. She had fifteen injections of about 7 to 10 minims of potassium bichromate of unusual strength. On January 21st, 1907, she was quite well, and has remained so up to date (November 3rd, 1908).

CASE XVI.

Mr. B., of Accrington, aged 61. He first saw Dr. Greenwood of Accrington, who told him he had cancer of the tongue. He came to me about June 15th, 1906. He had six injections, and was quite well on September 15th, 1906. Report on November 3rd, 1908: "Quite well."

CASE XVII.

Mrs. P., of Clayton-le-Moors, aged 44. She first consulted Dr. Clegg, Surgeon to the Victoria Hospital, who told her she had cancer of the breast. She came to me on October 19th, 1906. She attended me about three months and had about forty injections. She was quite well on November 3rd, 1908.

CASE XVIII.

Mrs. B., of Blackburn, aged 46. She was operated upon in March, 1896, for a lump in the breast. The lump reappeared in September, 1907. Dr. Steward of Liverpool and Dr. Walters of Manchester (both specialists in cancer) declared the growth to be cancerous in 1896, and its reappearance in 1907 appears to confirm the diagnosis. She came to me in October, 1907. She had twenty injections, after which the growth sloughed out, and she is now quite well. She was under treatment about six months. Reported to me, November 3rd, 1908, as quite well.

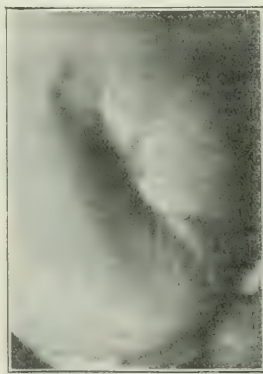


Fig. 6.—Case VI. Scirrhus of breast. After treatment.

CASE XIX.

Mrs. D., of Blackburn, aged 47. She saw Dr. Bowen and Dr. Shaw of Blackburn, who said she had cancer of the breast. She came to me in June, 1906, and was under treatment until November 20th, 1906. She had twenty-six injections, after which the growth sloughed out. The report to hand, November 3rd, 1908, says she keeps quite well.

I should like to call attention to two of the cases—namely, Nos. I and X—which prove to my mind that the treatment is superior to operation. Then, again, let me point out the important fact that in Case VII the result of the treatment is that, after the menses had been stopped

for some years, they were re-established, appearing regularly for five days every month without pain, just as in her early and healthy days.

Here, then, as the above cases abundantly show, is a treatment which can be carried out in every surgery. It is simple and inexpensive, within the means of the humblest patient, and I can conscientiously say in respect of rodent ulcer and epithelioma, which I have been treating for fourteen years, that it is a treatment that will be lasting in its effects, if carried out in the manner I will indicate in a future paper if permitted. There need never again be seen a case of rodent ulcer which has eaten away the eye or the frontal bones and exposed the brain. If any such case is seen again it will be the fault of the profession or the wilful neglect of the patient. If called upon for further or more detailed proof I will supply it with alacrity.

Cases Treated by Dr. Pilkington, of Philadelphia.

For the following three cases I am indebted to Dr. Pilkington, of Philadelphia, who came from America to my house in 1906, and stayed for a week in order to learn the treatment:

CASE I.

Geo. F., aged 68, painter, veteran of civil war. He first consulted me in July, 1907. He had an irregular lesion, about 4 cm. in diameter, just anterior to and on a level with the right ear, gradually increasing in size during the past six months, and with no tendency to heal. There had been no special treatment

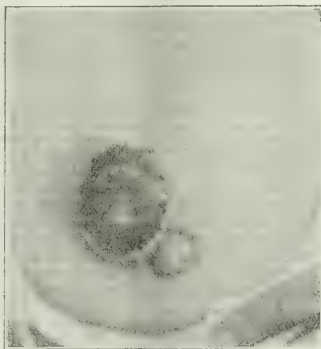


Fig. 7.—Case XII. Lump in breast. Before treatment.

for a malignant ulcer, it being treated as an ordinary one. The pathologist's report was that it was an epithelioma of a fibrous character. The edges of lesion were thickened and rounded, with a marked destruction of subcutaneous structures. There was no history of traumatism, but much exposure to the sun and weather. The patient gave a history of long bleeding following cuts or scratches, and this proved to be the case during treatment, bleeding from a needle puncture often persisting for fifteen minutes or more; and in August, 1907, he spent a week in the local hospital after a copious and unexpected haemorrhage from the lesion. There was difficulty in forming a firm slough, owing to a tendency for a haematoma to be formed after an injection; but when granulation set in healing was uneventful. After twelve months the cicatrix is soft and flexible and appears likely to be so permanently. Patient has recovered his health fully and is following his occupation.

CASE II.

Thos. G., aged 78, West Chester, U.S.A. Labourer. Veteran of war between the States. He said that for ten years he had had sore on left shoulder, which would respond but poorly to treatment. On examination I found a rather poorly nourished patient, general health much below par; a large pear-shaped superficial epithelioma over left shoulder, having its base at the spine of the left scapula and extending below the lower border of the clavicle, forming an ulcer the size of a man's hand, with a small island of undestroyed skin near the centre. From time to time the ulcer had been curetted, cauterized with nitric acid, and treated with astringent and mild caustic powders in an effort to heal it up, but never with more than slight success. On July 20th, 1906, I began to apply locally a saturated solution of potassium bichromate, repeated at irregular intervals, for although his treatment was entirely gratuitous, he never could be induced to report at regular intervals. In about five weeks a firm thick slough had formed, covering the entire ulcer, with the exception of the small island in the centre. After this he reported but once in two months, at the end of which time the ulcer was entirely healed to the centre point, where there was a firm scab; this is well shown in a photograph taken at that time. The newly-formed skin was very soft and pliable, well supplied with blood vessels, and more resembling normal skin than cicatricial tissue. He was ordered to report regularly to have this centre spot treated, but failed to do so. On my inquiry in November, 1908, he reported that this spot promptly forms a

dry scab, but that he daily knocks it off by carrying a shovel on that shoulder when following his occupation; the area of reformed skin retains its soft, adherent character.

I cite this case to show the penetrating properties of potassium bichromate, and the ease with which these rodent ulcers can be removed, without the patient's losing a day's work. I much regretted the intractable nature of this patient, for it entirely prevented me from observing the rapid growth of new skin over such a large area.

CASE III.) SCITAVANBO

Thomas F. G., of Philadelphia, U.S.A., aged 48; occupation, contractor. Father died at 52 years, heart trouble; mother living, aged 70, healthy; brother killed on railroad; six brothers and sisters living, all healthy. No known cancer in family on either side. Patient lost one leg in railroad accident. First noticed fever blister on lower lip about November, 1905, which did not heal up. In July, 1906, he went to the Samaritan Hospital, where his disease was diagnosed as an epithelioma, and was treated by x rays for three months. The surface healed up, but he had a hard callus underneath, which was sore much like a boil. On November 10th, 1906, he consulted a Philadelphia cancer doctor, who applied four plasters between that date and March, 1907; but the growth steadily got worse, half of the lower lip being now involved. Early in April, 1907, he entered a cancer sanatorium on the Upper Hudson, New York State, and was treated by plasters for six weeks; but the growth began to increase at an alarming rate, and the patient, becoming discouraged, returned home to consult his family. On May 22nd I saw him, in consultation with Dr. Macfarland, and found that the growth involved the whole



Fig. 8.—Case XII. Lump in breast. After treatment.

of the lower lip and the chin to the lower border of the jaw, also extending around the left angle of the mouth and upper lip for half an inch. In the left cheek, and firmly attached to the caudal-like mass on the lip, was a gland-like mass of about the size of a large grape. The discharge was extremely offensive, and it was impossible to prevent its entering the mouth.

At this time (December, 1908) the patient is in the best of health; the cicatrix is soft and pliable, and abundantly supplied with blood vessels, and there is but little deformity.

THE foundations of a medical institute for the education of women have been laid in Odessa.

A BILL has recently been introduced into the Pennsylvania State Legislature providing that a marriage licence shall not be issued until each of the applicants shall present to the clerk a certificate from an authorized practitioner stating that, to the best of his knowledge and belief, the person applying for the licence is not afflicted with pulmonary tuberculosis, epilepsy, insanity, imbecility, idiocy, or other hereditary disease.

THE SCIENCE COMMITTEE OF THE British Medical Association.

REPORT CXII.

OBSERVATIONS ON THE PHYSIOLOGY OF THE FEMALE GENITAL ORGANS.

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II.—MENSTRUATION.*

OUR work on menstruation has for the most part been taken up with investigations into the relationship existing between this function and the calcium metabolism, and we have used in our deductions facts and observations which we demonstrated in connexion with the general calcium metabolism—alluded to in Paper I—as well as those which we now present as the result of our experi-

First of all, then, we examined the systemic blood of three hens on consecutive days for about a week. We stipulated that one at least should be a non-layer for a control, but otherwise we were unaware of the eggs laid until the experiment was completed, although, of course, our charts soon gave us an inkling of what was happening.

From the charts which illustrate the results obtained it will be seen that the first, or control hen, showed practically no changes in the calcium index from day to day. The second hen, laying every other day, showed a marked drop after laying an egg, with a big rise the next day in preparation for the laying of an egg on the alternate day. The third hen was very interesting. An egg was laid on the first day and the index was low. This index remained low for several days, consequently no egg was laid, but finally the index rose and remained so high that an egg was laid on every day during the rest of the observation. The calcium content may have dropped for a short time after the laying of the egg, but the fall was of such short duration that it was not observed—a rapid rise, or maintained high index, being necessary for daily egg laying.

We should like to hazard the suggestion here that the well-known vaso-dilatation which occurs in the combs and wattles of laying hens is due to the drop in the calcium content of the blood whereby a sort of chilblain condition is produced.

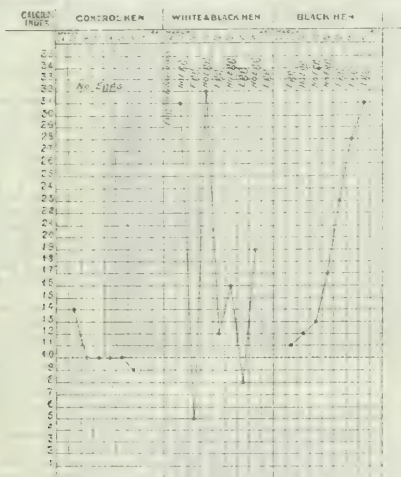


Fig. 1.—Systemic blood of hens—calcium indices.

mental and histological researches into the physiology of the function itself.

As one of us (W. B. B.) has already stated, the idea of some such relationship existing was engendered by morphological considerations in regard to certain egg-laying species, especially birds, which excrete lime salts in large quantities during this process from the calcium chamber, or lower part of the oviduct.

It has been asked why we used birds in these experiments. The answer seems so obvious that we are afraid we may have mistaken the point of the inquiry. Hens were used because we presume that no one will deny that they do excrete calcium in this way, and we thought that if we could prove certain histological and experimental analogies between the oviducts of hens when laying and human and other mammalian uteri when menstruating, we should have done all that could be reasonably required to prove the hypothesis we had set forth—apart from further evidence, of a more clinical nature, we are prepared to offer.†

* Based upon a paper read by W. Blair Bell before the Gynaecological Section of the Royal Society of Medicine, July 9th, 1909, "Menstruation and its Relationship to the Calcium Metabolism."

† We may call attention also to the fact that the lowest known mammal (*Monotreme*), the ornithorhynchus, lays calcium-coated eggs. Truly one can furnish us with a female specimen of this rare creature we shall be extremely pleased.

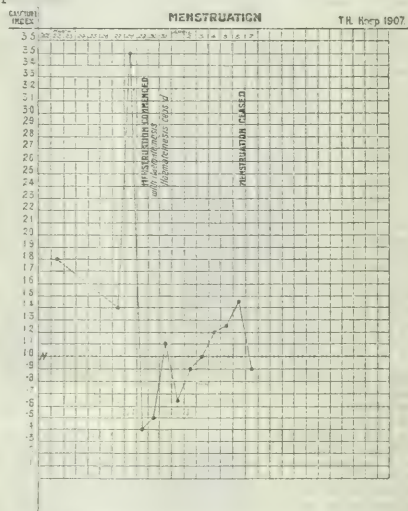


Fig. 2.—Systemic blood calcium indices during vicarious menstruation.

Now these experiments are very important, and we think that the result was only what one would be reasonably led to expect if the matter were considered at all.

It has been stated by Dr. Amand Routh when discussing the paper of one of us,† that he "could not see the force of the charts showing the variations of the lime in the blood of the hen which laid eggs on alternate days, for the time for any particular egg was required not on the day before it was laid, but several days before; and many eggs were in the process of development all the time." Now we cannot see where an explanation is required. Surely a comparison between Chart 2 and Chart 3 (Fig. 1) makes matters quite clear. If the hen is to lay every day, it must maintain a high index, with at most a drop for a few hours. If it cannot do this, it will only lay when it has the requisite high blood content which in Chart 2 occurred on alternate days. In these experiments the eggs were, as is usual, laid in the morning, and the blood estimated in the afternoon. Further, in reference to the statement that many eggs are in the process of development at the same time, we would point out that this is only true of the ovum and yolk sac, and that only one egg receives the further coverings of albumin and

shell at one time, these processes being completed in a few hours.

We will now deal with some facts and experiments which are of themselves just as convincing in regard to animals and the human subject. Having got the idea

tively, in that the content dropped to one-sixth of the previous amount.

It is not easy to obtain the chart of an absolutely normal menstrual cycle. We hardly remember seeing a woman who was without a single symptom at this period; but

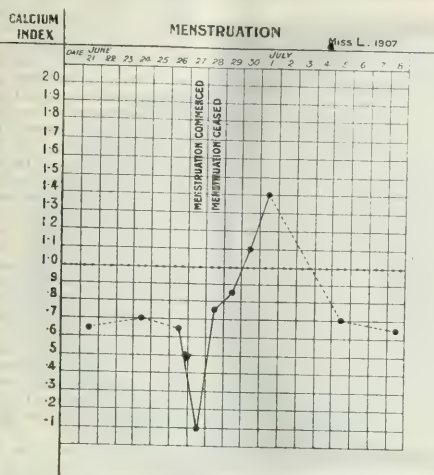


Fig. 3.—Systemic blood calcium indices during menstruation, with hystero-epilepsy.

in regard to the existence of some connexion between the calcium metabolism and the female genital organs it of course at once struck us how easy it was to explain on this theory the fact that menstruation is nearly always in abeyance during lactation, for we know what an important and physiologically predominant ingredient of milk calcium is. It was easy to understand, too, why menstruation should frequently be absent in the debilitated, since we had already observed the important part the calcium salts play in the repair of diseased structures,² and that this form of amenorrhoea is invariably cured by the administration of lime salts; and why this function only commences when the economy has lime salts to spare from the constructive claims of the body.

To come to the actual observations on women. First, in regard to the systemic blood. There is always a very marked drop in the calcium content just before the menstrual bleeding commences. Often this drop is preceded by a marked rise (compare Reference ²). The accompanying chart (Fig. 2) illustrates both of these points. It is the chart of a girl who is subject to haematemesis each menstrual period—a true case of coincident vicarious haemorrhage. We had her in hospital some time under observation.

The next chart (Fig. 3) illustrates the systemic blood content in another class of case. The patient was suffering from minor hystero-epilepsy, due to calcium deficiency, and was completely cured by the judicious administration of calcium lactate. Her premenstrual index was low. With the onset of bleeding, which only lasted for twenty-four hours, there was a marked drop. Though not so apparent as in the last case, it is almost as great rela-

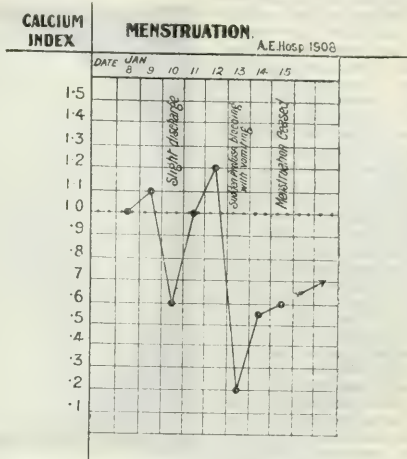


Fig. 4.—Systemic blood calcium indices during normal menstruation.

the third chart (Fig. 4) illustrates what we consider to be as normal a chart as it is possible to obtain from the human subject. In this one sees a slight rise followed by a drop—in some cases one sees two or even three abortive attempts, as it were—a further rise follows, then a big drop occurs with the onset of menstruation and any attendant symptoms the woman may periodically suffer from. In this case the patient suffered from pain and vomiting. As has been already pointed out elsewhere, it

is important that the blood should be taken for the estimation of calcium at the same time each day.³

There is, then, a marked drop in the systemic blood calcium content of the human subject, which is most marked just before the bleeding occurs. In the same way, the formation of an egg leads to a depletion in the systemic blood of birds; and in considering this we were next led to examine the excretion of the uterus during menstruation.

At the very commencement of menstruation the discharge is largely composed of leucocytes, and this local leucocytosis, which usually precedes the actual bleeding, is extremely interesting. For an examination of the discharge at this period by the method for calcium estimation mentioned shows that there are not only a

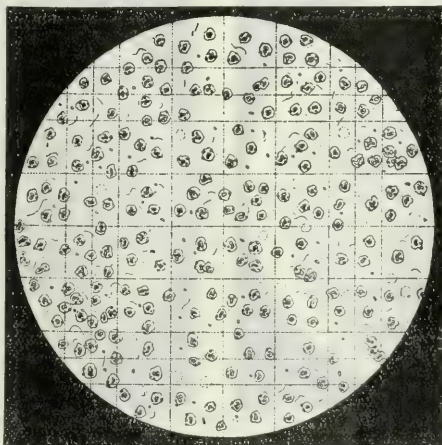


Fig. 5.—(x420). Menstrual discharge, first day; leucocytosis.

large number of free crystals, but also a far larger number precipitated within the white corpuscles themselves (Fig. 5). This was so surprising to us that we should have hesitated to give credence to what we saw, or thought we saw, or to have drawn deductions therefrom, had not other more authoritative observers than ourselves kindly examined the specimens and agreed with us. Professor J. E. S. Moore informs us that in some of the

lower forms of life excretion is carried out by means of leucocytes which may come to the surface and be thrown out, or even go back after discharging their contents.

Now this is probably an instance of what has been called pinocytosis.⁴ We have to thank Dr. R. J. M. Buchanan for calling our attention to this subject, which he did after one of us had stated elsewhere² that it was probable that the leucocytes absorbed the calcium in a fluid form, and carried it from the glands to the exterior, possibly preventing a free secretion of calcium compounds which might increase the coagulability of the blood *in utero*. We shall allude to this point again in a moment.

An examination for calcium salts in the menstrual discharge at a later period—third to fourth day—shows that there is still a marked excess as compared with the systemic blood; but the discharge is then sanguineous and contains the usual vaginal epithelial cells with but a few leucocytes, and it shows a marked tendency to clot (Fig. 6). Thus it will be seen that there is an excretion of calcium coincident with the fall in the blood of the calcium content.

Further, to prove these views we tied the uterine horns of rabbits and examined the contents. The fluid thus collected was found to be exceedingly rich in calcium—more so in the adult menstruating rabbit than in the virgin. In Fig. 7 is seen the fluid collected from a young

uteri of women and rabbits were next examined histologically.

We found, as others have done, that there is a marked activity in the glands at this time, with a diapedesis of leucocytes in the neighbourhood. In Fig. 9 is seen a section of the menstruating rabbit's uterus under a low power. In Fig. 10 a gland from the same section is shown under a high power. It is a gland in a state of activity. Leucocytes are seen outside the gland, and in the process of making their way between the gland epithelium. To this we would call special attention. It will be noticed that they become elongated and flattened. They were recently observed and figured by Marshall and Jolly⁶ in this condition, but these observers concluded that these elongated cells were merely gland epithelial cells in an actively secreting condition. Ernst Holzbach⁵ also mentions the same cells, and comes to the same conclusion as Marshall and Jolly.

Lastly, it will be observed that there is a collection of leucocytes within the gland lumen, embedded in the secretion of the gland. We believe that these leucocytes then carry some calcium compound with them to the exterior. Apparently the columnar epithelium that lines the interior of the uterus plays the same part as that lining the glands, which are formed by a process of invagination from the surface.

In Fig. 11 the same thing is seen happening in a gland from a menstruating woman's uterus. We have not space

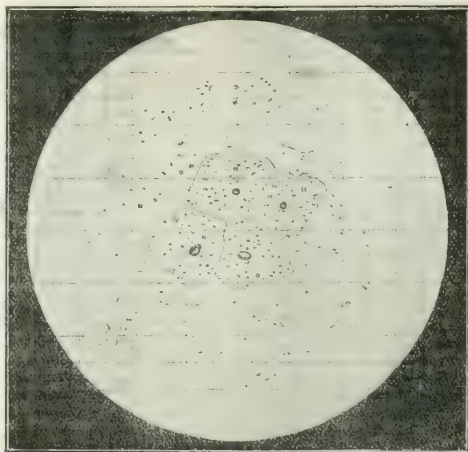


Fig. 6.—(×420.) Menstrual discharge, third day.

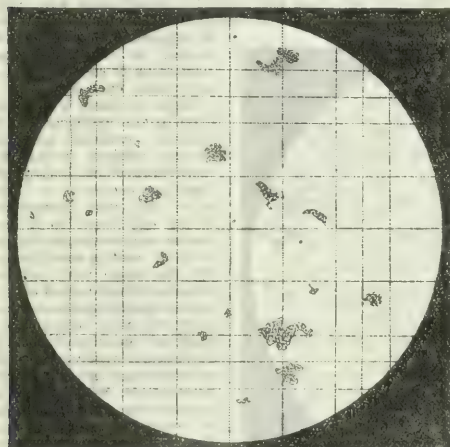


Fig. 7.—(×420.) Fluid from artificial hydrometra of young virgin rabbit.

non-menstruating virgin rabbit. Here one finds the calcium combined or mixed with mucin with which it is precipitated. In the older menstruating rabbit it exists in larger quantity, free, as well as with the mucin and leucocytes, as is seen in Fig. 8.

We may here mention that the secretion from the Fallopian tubes contains very little calcium in comparison with the quantity secreted by the uterus. We performed several experiments to test this point.

To complete the chain of evidence the menstruating

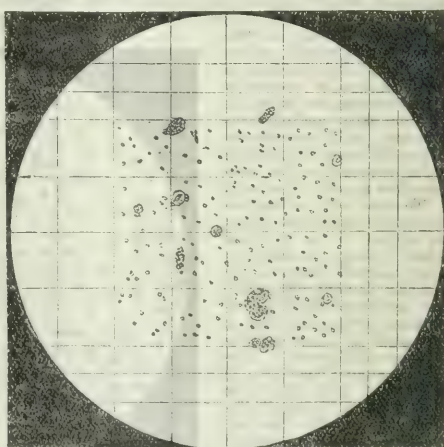


Fig. 8.—(×420.) Fluid from hydrometra of menstruating rabbit.

here to discuss the other points of histological interest, for they are many and somewhat controversial. But we cannot pass on without illustrating the histological analogies to be observed in the calcium chamber of the hen. In Fig. 12 is seen a section (low power) of the calcium-secreting chamber of a non-laying ("sitting") hen. In marked contrast with this is a section under the same power—shown in Fig. 13—of the calcium-secreting chamber of a laying hen. In the former the *rugae* or papillae are small, and the stroma underlying the epithelial

layer full of cells which have hardly any definite glandular formation (as is seen in Fig. 14). In the latter (Fig. 13)—from the laying hen—the *rugae* are large and there is a great regularity of actively-secreting glands, as will be seen in the high-power sections (Figs. 15, 16, and 17).

In Fig. 15 there are two points of interest to which we attach some comparative importance. At one spot is seen a rupture in the continuity of the epithelial surface, such as can be seen in one place in the menstruating rabbit's

considered in order to get on to *terra firma*, and into a region from which we can glean facts of importance from a clinical point of view. In the first place, let us briefly consider the periodicity of menstruation and its significance. From the very earliest times this periodicity has been the subject of much mystery, more speculation, and not a little unconscious humour. As a result the periodicity has been allowed to form the chief stumbling-block to a solution of the problem which has been so long *sub judice*.

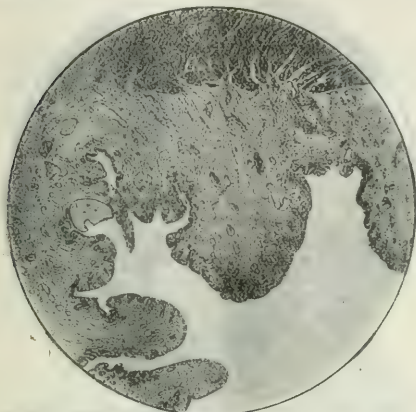


Fig. 9.—($\times 250$.) Menstruating rabbit's uterus.

uterus (Fig. 9), and directly opposite to this is seen the secretion collected and infiltrated with leucocytes outside the mouth of a gland, a condition frequently seen in the menstruating uteri of women and rabbits, and, we suppose, in other mammals.

Fig. 16 shows an invagination forming a superficial gland in the calcium chamber through the epithelial cells of which leucocytes may be seen passing. Fig. 17 illus-

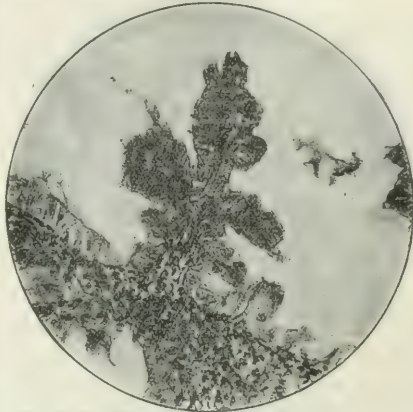


Fig. 11.—($\times 1200$.) Menstruating woman's uterus showing glandular activity.

And yet after all there is no mystery, nor is there anything supernatural or obscure about what regularity there may be in the appearance of the catamenia. We have ceased to wonder at the rhythm of respiration and cardiac contraction—we now know that the basis of all the causative factors is founded upon chemical changes—anabolic and katabolic in nature—and that these changes themselves are entirely dependent for their regularity upon the

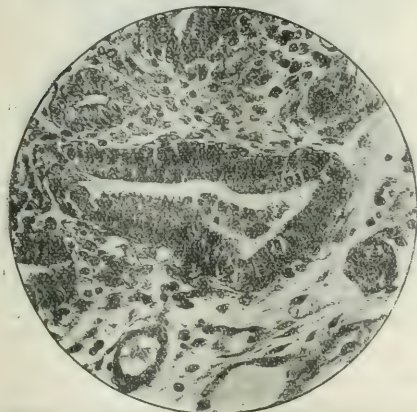


Fig. 10.—($\times 1200$.) Menstruating rabbit's uterus showing glandular activity.

trates the vascularity and diapedesis which is seen in these *rugae* when actively engaged. Figs. 15 and 17 were taken from a hen while an egg was in the process of being coated with lime salts.

Since it has recently been established by Heape⁷ and others that the pro-oestrus stage of the "rut" in animals is really analogous to the human menstruation, these facts are of considerable importance, and we think sufficiently demonstrate the cause and effect we wish to emphasize.

There are, however, a few other points which must be

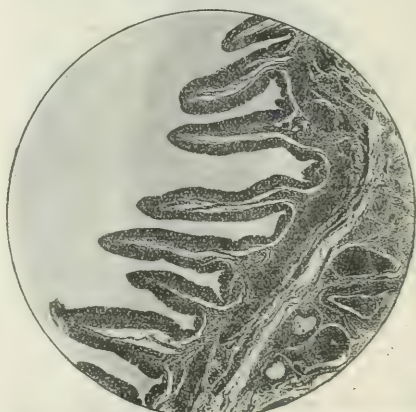


Fig. 12.—($\times 250$.) Calcium-secreting chamber of a laying hen.

general metabolism in whole or in part. However little understood or insufficiently explained there is little doubt that other factors are merely correlated.

The periodicity of the menstrual function—of the "rut" and breeding in animals—is exactly on the same lines. Merely a question of whether or not certain necessary articles—among them calcium—are at the disposal of the organs concerned for excretion at certain times. To some extent Stevenson⁸ argued on the same lines in discussing his "menstrual wave" theory in very general terms. This

periodicity has really no immutable law of a fixed time, as one might be led to think by the way some authorities have written of it. It is subject to many influences, for the individual has first claim upon all ingredients necessary for herself before she has any to spare for excretion—that is, for supplying a fresh individual (her embryo) or for menstruation. These influences, apart from pregnancy, are seasonal and climatic, dietetic and hygienic. How important they are can be gauged by the effect evolution

secretions of the ductless glands, and it may be worth while, therefore, to mention briefly the part which these secretions may play in the economy of this function. In the first place, let us point out that clinically we have used the calcium salts with very good results in the following classes of cases:

1. *Amenorrhoea* from general debility of a chronic nature, but more especially that resulting from acute diseases, such as influenza, in which the exhibition of

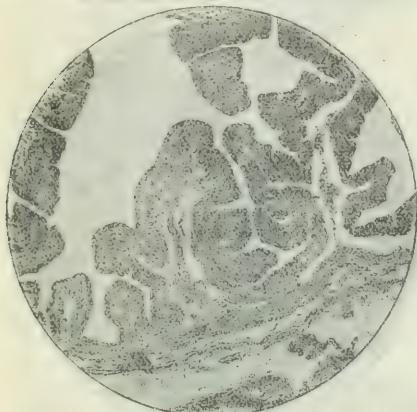


Fig. 13.—($\times 250$.) Calcium-secreting chamber of a laying hen.

has had, or even by the effect domestication has upon the habits of wild animals and civilization upon the human race.

The periodicity of the catamenia is, then, merely the result of a concomitant series of metabolic processes—such as are seen in other spheres of physiological activity—which may or may not allow of regular menstruation. We do not think we need go further into this point; it

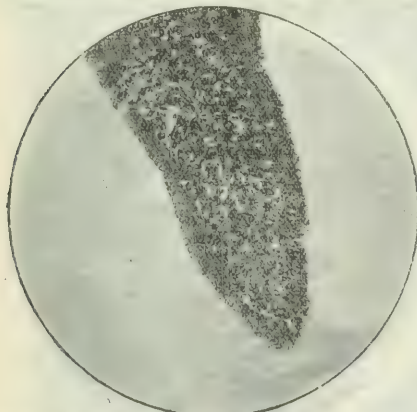


Fig. 14.—($\times 1200$.) Tip of ruse from calcium chamber of non-laying hen.

seems to us to be very obvious, and if viewed in this light makes a strong argument for our ideas concerning this influence of the calcium salts in particular.

As already mentioned, we have come to the conclusion that the calcium metabolism is largely influenced by the

*The interesting fact, which has been overlooked or underestimated by most students of menstrual periodicity, of repeated coitus (every fortnight in rabbits) in unimpregnated animals is surely comparable to the monthly menstruation of non-pregnant women. That this condition is not more frequently observed in animals is due to the promptness with which impregnation usually occurs.

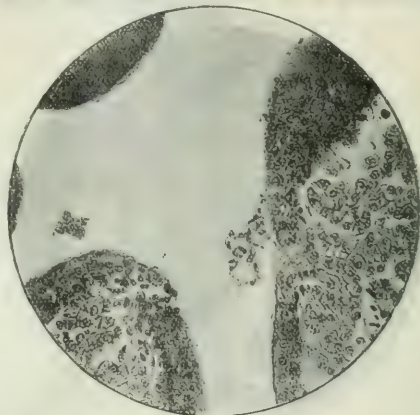


Fig. 15.—($\times 1200$.) Ruse from calcium-secreting chamber of laying hen.

calcium (in doses of 30 grains of calcium lactate every other day) not only relieves the amenorrhoea but also the symptoms ("nervous headaches," etc.) associated with the debilitated state of the patient.

2. *Menorrhagia* due to what are called "constitutional" conditions; that is to say, where there is no local pathological manifestation. We explain this paradoxical position in regard to amenorrhoea and menorrhagia in the

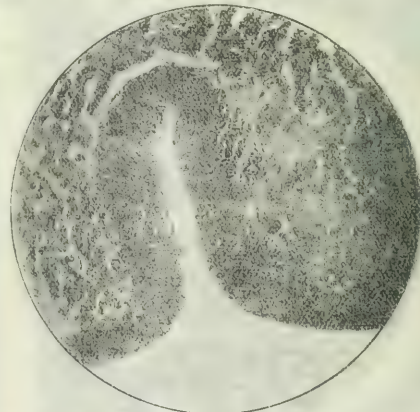


Fig. 16.—($\times 1200$.) Superficial gland in calcium chamber of laying hen.

following way: In the first class of cases there is not sufficient calcium at the disposal of the economy for menstruation, and in the second, that though there is enough for menstruation the blood content does not rise rapidly enough to stop the flow.

Now, it is a matter of common observation that, in young girls especially, the thyroid enlarges in the majority of cases just before the onset of menstruation—that is to say, when the blood calcium content is high. With the enlargement the onset of bleeding soon follows. Inci-

dently, it may be mentioned that a similar enlargement of the gland occurs early in pregnancy, when the menstruation is suppressed, and before the fetus can utilize the amount of calcium at its disposal in the blood. We have also observed this thyroid enlargement in artificial menopause.

The function of the thyroid secretion in this respect is to stimulate calcium excretion, which may take place from the uterus, or, failing that, from the kidneys or by the bowel. In this way thyroid may be a valuable drug—indeed, it has often been so used—in amenorrhoea.

In the same way, we believe that the internal secretion of the ovary has the property of depleting the blood and tissues of calcium salts, and possibly a special action in stimulating excretion by way of the uterus.

We have in opposition to these the secretion of the adrenals, and probably that also of the pituitary gland. Both, as will be shown in a subsequent paper, act in a similar manner upon the uterus, especially when in the pregnant state. But, as regards their influence upon menstruation, the extract of these glands assists in the production of uterine contractions which are marked at that time, and also in other more obscure ways from their relationship to calcium metabolism in general, and in particular that of menstruation.

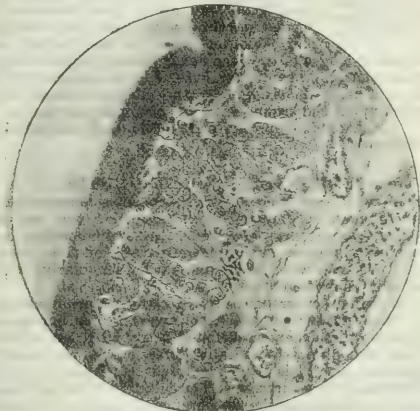


Fig. 17.—Vascularity and diapedesis in calcium chamber of laying hen.

Further, with regard to the secretion of the pituitary body—we have at present little direct clinical evidence in regard to the adrenals—it has been shown that tumours of, and in the neighbourhood of, the pituitary gland cause amenorrhoea, and that cessation of the menses is one of the earliest symptoms of acromegaly.⁹ It has also been shown that sexual infantilism with an absence of menstruation is a general complication in early disease of the pituitary gland.¹⁰ An analysis of about 150 cases of acromegaly recently made confirmed the above statement regarding amenorrhoea, and also that lactation hastens the progress of the disease.¹¹

CONCLUSIONS.

1. That menstruation is a periodic function only in so far as the calcium metabolism is in harmony with this periodicity, and that the function is dependent upon the calcium metabolism in all its ramifications.

2. That the haemorrhage into the Graafian follicle may be coincidental, and is probably the result of the lowered coagulability of the blood or vasomotor changes; but that rupture of the follicle is in no way responsible for menstruation.

3. That the bleeding from the uterus, while due to the lowered coagulability of the blood in part, is also dependent on the local changes in the capillaries from which the diapedesis of leucocytes and corpuscles occurs; and, further, that these leucocytes are an active factor in the conveyance of calcium salts from the glands to the exterior.

4. That the uterine glands excrete calcium and mucin, and that therefore the uterus is a "menstrual organ."¹²

5. That there is a correlation between the ovaries and uterus in reference to menstruation, but that the ovary is probably no more predominant than other ductless glands in this respect.

6. That menstruation *per se* is not a necessary adjuvant nor concomitant to fertility and reproduction.

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OBSERVATIONS ON PLEURAL PAINS AND ADHESIONS.

By JOHN T. MACLACHLAN, M.D.

ASSISTANT PHYSICIAN, GLASGOW ROYAL INFIRMARY.

EVERY physician is called sooner or later to treat cases of phthisis pulmonalis, which, notwithstanding all the methods of treatment introduced since Koch announced his brilliant discovery of the tubercle bacillus in 1882, still remains one of the most deadly diseases known. The disease is undoubtedly curable in its early stage; but that stage is only too frequently allowed to slip past, ere the patient, his friends, and perhaps his medical adviser, realize the exact position of affairs.

Clinical observation warrants, I think, the conclusion that phthisis pulmonalis may begin in one of three ways: Firstly, as pleurisy; secondly, as bronchitis; and, thirdly, as a caseating pneumonia, or the deposition of tubercle in the substance of the lung with bronchopneumonia. The second and third modes of origin are well recognized, but the first is not sufficiently appreciated.

Patients often complain of shooting or darting pains in the chest long before tubular breathing or expectoration reveals the presence of serious mischief in the lungs. These darting pains are too often ascribed to what has been called pleurodynia or intercostal neuralgia, because no physical signs have been discovered to denote the presence of pleurisy. I assert, after four years' careful observation, that the so-called pleurodynias are in reality localized patches of pleurisy, and I infer that they are mostly, if not always, of tuberculous origin. These sharp pains in the chest come on suddenly, without reference to wind or weather. I do not wish to deny that rheumatism may attack the pectoralis major or the latissimus dorsi; but the pains I refer to are not, in my opinion, of a rheumatic nature.

Of 300 patients who came to the Dispensary for advice, 50 complained of sharp pains in the chest. Their ages ranged chiefly from 20 to 40 years; although younger people and older people were not exempt. The pains were referred to certain well-defined regions, namely, where the lungs divide into their lobes, or the free margins of the lungs. Thus, the pains were often referred to the right nipple, either a little above it or below it; to the left border of the heart; frequently to the lower left axillary region, corresponding to the division between the upper and lower lobes of the left lung; and to points a little below the apex of each scapula.

The involved areas may be diagnosed by very delicate percussion, which may be called tactile percussion, as the sense of resistance is strongly appealed to. The ordinary stroke in percussion strikes through those areas of pleurisy patches and brings out lung resonance. The fingers of the left hand are placed flat on the chest. The tip of the middle finger of the right hand is the plessor, and it should not be raised above 1 or 2 in., and then brought down on the surface of the middle finger of the left hand. The percussing finger should be kept at an easy angle, and should move from the knuckle-joint, the wrist being kept steady. If this method of percussion be practised for several weeks or a few months, it will be

possible when percussing a patient's chest to detect or at least suspect areas of superficial dullness where there have been localized pleurisies which have left adhesions as a permanent memorial.

Sometimes patients can corroborate the diagnosis by remembering the sharp pains they felt at the involved sites, and sometimes they do not recollect having any suffering. From this, and for other reasons, I conclude that children often have attacks of pleurisy which are overlooked. Such vestiges of a bygone pleurisy seem to me to occur most frequently low down on the left side, over the axillary portion of the lower lobe of the left lung.

Auscultation is not nearly so valuable as percussion in diagnosing such superficial areas of dullness on the surface of the lung. Occasionally the affected area may not be much larger than a square inch, as I have once verified *post mortem* in a case in which the adhesion was in the vicinity of the right nipple. If the fibrinous exudation is recent, rubbing, grating, squeaking, or creaking sounds may be heard. If the dullness is considerable, the inspiratory murmur may be fairly distinct; and the expiratory murmur faint, and preternaturally short, as compared with that over sound pleura and lung. Probably this indefiniteness of the respiratory murmur may be due to the lung being adherent to the chest wall, and its natural recoil interfered with by the adhesions.

Inspection in well-marked cases of pleural adhesions may show deficient expansion and contraction. It is not practicable to diagnose adhesions in the scapular regions, or even in very obese subjects, except by inference.

The diagnosis of pleural adhesions should be regarded as a danger signal to warn the patient to take all precautions in his mode of life, diet, etc., to ward off the graver manifestations of tubercle in the lung.

The immediate treatment of fibrinous pleurisy consists in the internal administration of sedatives, such as opium, and the use of counter-irritants. These measures will not banish old adhesions, but they relieve recent attacks of pleurisy.

It does not follow because a patient has had an attack of pleurisy that he will fall a victim to phthisis pulmonalis. Indeed, were such the case, every fourth, or at least every sixth, patient would develop the disease. It is the exception rather than the rule. But the two conditions are so frequently found together that they appear to me to have a common origin; and phthisis pulmonalis develops after a history of localized pleurisy so frequently that the latter rises into great significance.

When a patient comes to the dispensary complaining of his chest, I always put the three following questions, and subsequently other questions that arise out of the answers given.

Have you a cough?

Have you any spit or expectoration?

Do you suffer from any sharp pain in the chest, referring particularly to the common sites indicated above?

It is necessary to be wary in inquiring about a cough, as consumptive patients are very shy of admitting a cough, while emphysematous patients are often silent about their morning cough, although desirous of being relieved of their shortness of breath. If a patient complains of having had for a considerable period a cough and spit, without ever having had any sharp stitches about the chest, he is probably suffering from bronchitis. If he complains of cough, spit, and sharp pains in the chest (not the pain at the pit of the stomach due to hard coughing), he has, almost to a certainty, got phthisis pulmonalis. Cancer of the lung, however, is one exception. The cough indicates the presence of a foreign element in the respiratory tract; the sputum, if it be purulent or muco-purulent, points to bronchitis or bronchopneumonia being present; and if the sputum contains little cheesy-looking particles, these will denote that caseation is going on in the lung or lungs; the sharp pains will point to pleurisy, so that the three cardinal signs or symptoms—cough, pain, and expectoration—will in all probability correspond to bronchitis, pleurisy, and tuberculous pneumonia, and, in a word, phthisis pulmonalis.

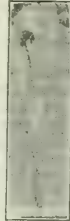
I have pleasure in stating that Mr. E. Wardman Wilbourne, medical student, who has been working with me at the dispensary, has frequently verified the above observations, and agrees with the conclusions drawn.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

AVULSION OF A FINGER.

THE following accident appears to me to be sufficiently remarkable, both in the manner of its production and its effects, to be worth recording. The patient, a young man, was indulging in a form of amusement euphoniouly entitled by the proprietor "swooping the swoop," a looped metal contrivance running by means of a



The finger, with its tendon, shown against a cardboard background.

wheel along an inclined cable. The amusement consists in grasping the horizontal bar of this loop and while thus suspended having an aerial journey along the cable. On reaching the lower end one lets go and drops two or three feet to the ground. The patient had a ring on the little finger of the right hand. On attempting to let go, the stone in the ring, which had slipped round to the palmar aspect of the finger, caught in the junction between the horizontal and vertical portion of the loop, with the result that he was momentarily suspended by the little finger, and the finger was avulsed in the following manner: The bone gave way at the joint between the second and third phalanges; the skin opposite the lower end of the first phalanx and the whole length of the deep flexor tendon, maintaining its attachment to the phalanx, was pulled completely out of the arm from its origin near the elbow, the finger being picked up off the ground with its accompanying tendon.

HORACE P. GODFREY, M.B., B.S. Melb., F.R.C.S. Eng.

Melbourne.

ACUTE INVERSION OF THE UTERUS.

I READ with some interest Mr. Holthusen's contribution to the JOURNAL of January 23rd, as during the past few months two instances of a somewhat similar nature have come under my care, being the only cases of this description I ever met with, occurring, rather singularly, within five months of each other.

One, which occurred in July, 1908, was in a primipara aged 23. The first two stages of labour were normal, but upon its expulsion the placenta was found attached to an inverted uterus, though not technically adherent. It was speedily separated with little or no haemorrhage. There was great disturbance of respiration and circulation, cyanosis, etc., in fact the patient had the appearance of imminent dissolution. On returning the uterus, which was effected with little or no difficulty, the alarming symptoms gradually subsided. The patient, who was a very healthy young woman, made a splendid recovery.

The second case happened in December, 1908, in the second pregnancy of a woman, aged 30, with hip-joint disease and a weak heart. Labour was tedious and recourse was had to instrumental delivery. On some amount of haemorrhage taking place, it was found that the vagina was occupied by the uterus as well as the placenta. The latter was easily removed, but the return of the former to its natural position was an affair requiring the exercise of some care and manipulation. What immediate after-effects there were seemed more attributable to haemorrhage, than to disturbance of the parts. The patient lived six weeks, then died from cardiac debility, anasarca, etc.

Birstwith.

H. G. HAROLD CLARESON.

TREATMENT OF OPHTHALMIA NEONATORUM.

A CHILD with ophthalmia neonatorum runs so many risks from the treatment it receives—at any rate when the treatment is not carried out by experienced hands—that I think the following remarks are in place:

As a rule the mother consigns her unfortunate offspring to the darkest corner of a dark and badly-ventilated room, and covers up its head with a cloth, which is soon contaminated by discharge. Blepharospasm confines the pus in the conjunctival sacs, and renders all manipulation not only difficult but dangerous. A strong solution of silver nitrate is swabbed on the everted lids, causing considerable pain, and perhaps injury to the cornea owing

to the blepharospasm and the desire to reach all the crannies of the conjunctival sacs.

The indications are clear. Light and fresh air must be let into the room, and the child should go out daily. The face must not be covered up; cleanliness must reign supreme. A towel should be kept behind the child's head to receive any discharge, and must be frequently changed. The nurse must wash her hands before and after the dressing. If the child's hands wander to the eyes they must be fastened down by a safety-pin through the sleeve.

To overcome the blepharospasm an external canthotomy should *always* be done. This simple operation is performed by inserting one blade of a blunt-pointed pair of scissors into the conjunctival sac at the outer canthus and with the other blade external cutting horizontally outwards. The orbicularis palpebrarum is divided, the palpebral opening enlarged, the lids can be easily and safely everted, and the conjunctival sac washed out.

Instead of silver nitrate solution I use argyrol in the strength of 25 per cent., and the nurse is instructed to drop one drop into each conjunctival sac every quarter of an hour during the day—once or twice during the night. Any discharge is washed away from the lids as soon as it collects with a weak antiseptic solution, such as solution of potassium permanganate (1 in 10,000), and three times daily the conjunctival sacs are washed out with the same solution, just sufficient lotion being used to remove any visible discharge. If there is the slightest haziness of the cornea, atropin is instilled once daily. The points to be emphasized are:

1. Cleanliness, fresh air, and light.
2. External canthotomy always to be done.
3. Argyrol, 25 per cent., one drop every quarter of an hour.

In Berlin the use of silver preparations has been in some quarters given up entirely in ophthalmia neonatorum, and a 10 per cent. ointment of aluminum acetate inserted between the lids hourly with good results, but I have as yet had no experience with this.

Oldham.

W. DUNCAN LAWRIE, M.D.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

FRENCH HOSPITAL, LONDON.

CARCINOMA OF CERVIX: HYSTERECTOMY, NEPHRECTOMY: RESECTION OF SMALL INTESTINE: RECOVERY.

(Reported by Mr. KENNARD, F.R.C.S. Edin., late House-Surgeon to the French Hospital.)

[Under the care of Dr. SUNDERLAND, Mr. EDMUND OWEN, and Mr. CLAYTON-GREENE.]

MADAME M. was admitted on October 3rd, 1907. She gave a history of a miscarriage three weeks previously and of occasional attacks of bleeding since then. She had had two children, the last two years previously.

On examination, a cauliflower growth of the cervix uteri was found invading the right fornix. The uterus was not enlarged, and it was freely movable.

Mr. Owen operated on October 15th, the patient being in the inverted position. The right ureter was involved in the growth and could not be separated from it. It was, therefore, cut across a little above the mass, and the lower end was taken away with the uterus and its appendages.

The renal end of the ureter was then drawn down and implanted into the side of the bladder, being secured to the fibro-muscular coat by several fine sutures. Further, in order to keep it well drawn down, so that there might be no strain on the point of union, it was fixed to the sheath

of the psoas by a couple of sutures. But in case of the implantation proving unsuccessful, a rubber drainage-tube was passed along the side of the bladder and brought out by the vagina. A gauze wick was left in the upper part of the abdominal wound. For five days everything seemed to be going well, but there was then an escape of urine on to the abdominal dressings, and next day urine was found passing by the vaginal wound. The woman seemed, however, quite comfortable. In due course the abdominal wound entirely healed. Except for the vaginal leakage she was in fair condition, and on November 10th she was sent to the convalescent home at Brighton, there being still a leakage by the vagina. On her return three weeks later she said that she felt quite well except for the leakage. Cystoscopic examination showed the left ureter working well, the right being absent. The removal of the right kidney was advised, but this she declined.

It was unfortunate that the implanted ureter failed to take up an attachment to the bladder. Everything was arranged towards this, but notwithstanding, after, apparently, a certain amount of hesitation, the ureter "carried away."

By the following March, however (1908), she had grown so weary of the leakage that she willingly came in for the nephrectomy. This was done, and an uninterrupted recovery was the result. The kidney was found soft; the pelvis and ureter were dilated. She made a rapid and complete recovery.

On April 11th the woman was readmitted, suffering from chronic intestinal obstruction, with marked peristalsis of the small intestine. It was thought that this was probably due to adhesions having formed between the small intestine and the uterine stump. The symptoms becoming very acute, and Mr. Owen being absent, Mr. Clayton-Greene operated on April 24th, making an incision through the right semilunar line. On exploring the abdominal cavity, a hard lump was felt in a coil of small intestine; this was brought up to the surface, and was found to be a mass of new growth of the size and shape of a moderate-sized Murphy's button. The intestine was much distended. It was not thought safe to excise the growth without providing efficient drainage. A lateral anastomosis between the two arms of the loop was therefore performed well away from the growth, and the mass was then protruded through a separate opening in the loin, the anterior wound being closed. The segment of bowel containing the malignant growth was then excised, and a Paul tube was inserted into the proximal piece of intestine, the distal end being closed. No enlarged mesenteric glands were discoverable. The intestine drained freely through the tube, and before long the lateral anastomosis became functional, and the discharge of faecal matter was reduced to an occasional stain on the dressing. The anterior wound healed by first intention, and the opening in the loin gradually closed.

The object in performing the operation in this manner was to avoid the risk of suturing the intestine while in a distended state, without at the same time providing adequate drainage; it was also thought better to complete matters, if possible, at one operation, rather than to be compelled to resect an artificial anus subsequently, having regard to the previous surgical experiences of the patient. The woman reported herself at the hospital in January last as being in perfect health and as having increased considerably in weight.

Histological Examination.—Dr. B. H. Spillsbury states that the growth is a squamous-celled carcinoma in the submucous coat of the intestine, "which is suggestive of its being secondary to the uterine tumour." This report is in accordance with the opinion formed at the time of the operation. It might have been expected that such a growth would have arisen rather by implantation on the peritoneal surface, but this certainly was not the case. The tumour in the intestine was freely movable in the abdominal cavity, and it bore no relation to the uterine region. The peritoneal coat was not involved, except where it was puckered at the actual site of the stricture. Moreover, the report states that the growth apparently started in the submucous coat of the intestine. Such a secondary growth, presumably the result of a vascular metastasis, must be of rare occurrence, and the fact that up to the present no other secondary deposit has been observed makes the condition still more interesting.

Reports of Societies.

MEDICAL SOCIETY OF LONDON.

Monday, March 1st, 1909.

Sir FELIX SEMON in the Chair.

Functional Disorders of the Stomach.

DR. SIDNEY MARTIN delivered the third of the Lettsomian Lectures for 1909. Dealing with the treatment of functional cases, he said that in cases of hyperchlorhydria it was essential to give rest to the stomach by prescribing a non-irritating diet, by giving bodily rest—in the milder cases only after meals, but in the severer cases the rest must be complete and in bed. The increased acidity must be counteracted by alkalis, the best of which was bicarbonate of soda in 15 to 20 grain doses given half an hour after meals. But that alkali acted best in such cases when given with sedatives such as diluted hydrocyanic acid in 3 minims doses, and liquor morphinae hydrochloratis in 5 to 10 minim doses. Extract of cannabis indica in $\frac{1}{2}$ -grain doses and glycerine of carbolie acid in 10 minim doses also acted as sedatives, but were not so useful as the two first mentioned. When the symptoms produced by hyperchlorhydria were severe, lavage once daily for a week was highly beneficial. In cases where there was a great deficiency of secretion the treatment was somewhat different from the foregoing. In those cases rest was essential, and in all of them rest in bed for a period of five, six, or seven weeks. Without that rest no other treatment was curative. The diet must be an easily digestible one, and it was best to begin the treatment with a diet of citrated milk, gradually increasing the food by bread and butter, eggs, fish, chicken, mashed potatoes, until an ordinary diet was reached. That graduated diet was highly beneficial in such cases. It might be considered that drugs to stimulate the secretion of gastric juice would be highly beneficial in such cases, yet it was very difficult to say what drugs did stimulate the secretion of gastric juice and what were beneficial in those cases. Bicarbonate of soda in 5 grain doses stimulated the secretion. Small doses of nitro-hydrochloric acid combined with nux vomica or strychnine certainly did good in many cases. Sometimes the acid mixture was best given with one of the gastric sedatives previously mentioned, but in many cases where drug treatment seemed to be of no avail, lavage daily for a fortnight, and then at longer intervals, appeared to be the best treatment. It acted in two ways: first, by preventing further damage to the stomach function by removing the retained food; and, secondly, by stimulating the mucous membrane to secrete. The best solution to use for lavage was water containing a drachm each of bicarbonate of soda and common salt to the pint, two pints being used and the lavage being done at night. Of the foods which stimulate the secretion, carbohydrates, proteids and meat extracts were the best; fats did not stimulate the secretion. In cases associated with rapid expulsion of food from the stomach, sedatives were the most useful drugs for treatment. In cases of dilatation, besides the general treatment above mentioned, lavage was highly beneficial. Strychnine was also a useful drug given in moderation, more, however, for its general tonic effect on the nervous system than for any special effect on the stomach itself. Both those modes of treatment were very useful with well-marked dilatation. Massage of the stomach from left to right helped in cases of dilatation, as well as exercises done regularly every day, but he had not himself found that the application of electricity had any beneficial effect in such cases. Cases of nervous dyspepsia were very often treated with success by regulating the diet and mode of life, and giving a sedative alkaline mixture alternatively with a stimulant such as strychnine. Potassium bromide and valerian were also useful. Patients, however, might be quite intolerant of drugs, and it was impossible to lay down any general rules for the treatment of such cases. They had to be treated on their own merits. One case might be benefited by rest in bed, massage, and diet—a treatment which in another case might lead only to an aggravation of the symptoms. Other cases were treated by removal to other surroundings and by leading an open-air life. The cases which showed extensive vomiting and flatulence were

often well treated by means of lavage, but even in cases of vomiting lavage might be unnecessary. The prominence of reflex symptoms demanded treatment by rest more than the predominance of stomach symptoms. One important point in the treatment was that no few weeks' treatment was of any avail in such cases, if pronounced. The treatment regulating the mode of life might have to be continued for two or three years for any real benefit to be obtained.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE.

Friday, February 19th, 1909.

Sir PATRICK MANSON, K.C.M.G., M.D., F.R.S., in the Chair.

Bronchial Spirochaetosis in India.

DR. H. G. WATERS read a paper on a species of spirochaete which he had found associated with a form of bronchitis in India. The first instance of the infection he had seen was at Tumla, in the United Provinces, where a European was admitted to hospital last year with a temperature of 104°, a cough, and a copious expectoration of bronchial mucus. No malarial parasites were present in the blood; and although a few rhonchi could be heard over the chest, no tubercle bacilli or other bacteria were found in the sputum. In looking for organisms, however, he discovered large numbers of what he thought a new variety of spirochaete. The temperature remained continuously high for three days, and fluctuated between 102° and 104.5°. He did not at first attach pathogenic significance to the spirochaetes, and attributed their presence to oral sepsis; but, on examination, they could not be found in swabs from the mouth, and there was no evidence of stomatitis, nor, in fact, any local condition to which the spirochaetes could be related. After three or four days the temperature fell to normal, and the spirochaetes disappeared from the sputum. Fourteen days afterwards, a relapse occurred with marked bronchial symptoms and similar spirochaetes reappeared in enormous quantities in the sputum. A single case, of course, furnished insufficient evidence on which to base a claim to pathogenicity; but its importance was very much increased by the fact that in the course of the next few days he saw seven more instances in the same district, in which the symptoms were exactly reproduced. The co-ordination of the clinical signs exhibited by each patient with the appearance of the spirochaetes in the sputum he thought was significant of a specific infection, and he submitted that a case for inquiry had been established. Dr. Waters's paper was illustrated by microscopic preparations of spirochaetes in sputum.

DR. C. W. DANIELS said that the important point about Dr. Waters's paper was the fact that the peculiar symptoms had been seen in a number of cases. One saw spirochaetes in so many non-pathogenic discharges and exudates that there was rightly a good deal of scepticism about their pathogenic function. It might well be that spirochaetes in sputum were accidental parasites of enlarged and unhealthy bronchi; but the fact that there was a definite type of illness, and especially that there was a series of cases in which they occurred, was interesting and suggestive.

DR. G. C. LOW agreed with the last speaker. The pathogenicity of spirochaetes was difficult of proof because they could not be reproduced in cultures. Had Dr. Waters looked for pneumococci as well as for other organisms associated with lung trouble?

DR. WATERS, in reply, said that he had found no pneumococci in the sputa. There were, of course, the usual septic bacteria, but in his cases the sputum was always characteristic so far as regarded the spirochaete, and the possibility of the organism being pathogenic he had accepted only after very careful consideration.

Endemic Disease in Barbados.

DR. T. FAUSSET MACDONALD communicated several notes on tropical diseases in Barbados, in which he said that for a tropical station the island was generally supposed to be exceptionally healthy. No doubt there was much truth in that statement, but there were elements of doubt. One important question was whether yellow fever ever occurred in Barbados. Medical opinion was divided about a class of cases in which there was high fever, occasional black

vomit, and other serious symptoms. Some considered the disorder to be true yellow fever, others thought it was epidemic icterus, while others again believed that it was nothing but severe influenza complicated with jaundice. Still another disease about which there was great uncertainty was an affection which was diagnosed by some authorities as sprue and by others as pellagra. It had been called *psillos pigmentosa*, but he himself believed it to be pellagra.

Dr. G. C. Low agreed that the cases spoken of by Dr. MacDonald were pellagra; they were certainly not sprue, and they had little resemblance to that disease. Yellow fever was notoriously difficult of diagnosis. It might be almost impossible to differentiate it from malignant malaria, which was often complicated by hæmorrhages from the stomach and intestines. Severe, and even fatal, cases of obstructive or idiopathic jaundice were common in the West Indies, but he himself had never heard of epidemic jaundice in Barbados.

Yellow Fever in Brazil.

Dr. E. RIBAS, Director of the Sanitary Department of San Paulo, Brazil, read a paper in which he stated that an extensive series of experiments at San Paulo had fully proved the accuracy of the work of the American investigators in Cuba. There could now be no further doubt that yellow fever was propagated by *Stegomyia fasciata*, in all probability by *Stegomyia fasciata* only, and that fomites or other agencies had no influence in disseminating the disease. In one experiment which he made he procured larvae of that mosquito at San Paulo, the city being then quite free from yellow fever, and sent them to a centre where the disease was raging. The mosquitos hatched from the larvae were allowed to suck blood from a patient there who was seriously ill with yellow fever, and were then brought back—360 miles—to San Paulo, where they were induced to bite six healthy persons, of whom he himself was one. In three instances there was no result, but in the other three typical symptoms of yellow fever developed. It was important to note that of the three people who resisted the disease successfully one was himself, and the other two were medical men who had been associated with him in dealing with many epidemics of yellow fever in San Paulo. The three patients in whom yellow fever developed were Italian immigrants who volunteered for the experiment, and happily their infections were not malignant. He believed that as they had just arrived from Europe they were, for that reason, less immune than old and seasoned residents. In all the cases there was an incubation period of sixteen days. Dr. Ribas illustrated his paper by lantern slides showing the mortality from yellow fever in various towns in Brazil, and proving that in every instance epidemics had been stamped out by the rigorous extermination of mosquitos and the simultaneous adoption of general sanitary measures.

Dr. LOUDON STRAIN said that he could personally confirm everything that had been said by Dr. Ribas. The mortality in Santos and San Paulo before mosquitos were known to convey the disease was appalling; but, since the campaign against yellow fever had been undertaken on scientific lines, the cities of Brazil had entered on a new era of prosperity. In Rio, Santos, and San Paulo—all of which were, formerly, terribly insanitary—the public health might now be described as satisfactory.

Dr. C. W. DANIELS said that these results were striking, but, although he did not doubt the influence of *Stegomyia* in the spread of yellow fever, he would point out that in British Guiana, where no systematic attempts had been made to exterminate mosquitos, yellow fever had spontaneously disappeared. General experience led to the belief that, during a period of about thirteen years, there was comparative immunity from epidemics of yellow fever, but at the end of that time the disease broke out anew, and raged for two or three years, until it exhausted the susceptible individuals in the community. He thought the same belief was current in Barbados and other West Indian islands.

Dr. C. F. HARRORD asked why Dr. Ribas classed as immune individuals who had not themselves suffered from yellow fever. Did residence in a city where the disease was prevalent confer immunity?

Sir PATRICK MANSON said that these facts possessed much

interest and importance. One peculiarity of yellow fever was the immunity of the Creole. We knew why natives of the tropics were immune to malaria: they suffered from the disease as children. Was this paralleled by yellow fever? If so, it followed that that disease must be endemic.

Dr. RIBAS said that the susceptibility of new arrivals was undoubted, but it was difficult to explain. Immigrants arriving at Santos in the yellow-fever days were hurried through the port so as to get them as quickly as possible to their destination; but a stay of four or five hours in Santos was often sufficient for infection. This preference might be accounted for partly by the fact that mosquitos bit blacks much less freely than new arrivals; but it was also true that the natives had no immunity as regarded other diseases. For instance, epidemics of cholera had generally been more fatal to blacks than to the European residents in Brazil.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

Tuesday, February 23rd, 1909.

T. H. GREEN, M.D., F.R.C.P., in the Chair.

Chloroma.

Dr. DE HAVILLAND HALL and Dr. HEBB presented a communication based on a case of chloroma which had been in the Westminster Hospital.

The patient was a girl, aged 4 years and 3 months. The illness commenced one month before admission with irritability and pain in the head. A fortnight later a lump developed on each side of the neck, the eyes became more prominent, and the veins over the temporal region were distended. On admission, in addition to the above, there was facial paralysis on the right side, and the patient was very anæmic. On December 12th, double optic neuritis was noted. The patient gradually became weaker and more anæmic and died on December 24th, 1907. The blood was examined on five occasions. On admission, red corpuscles 4,100,000, leucocytes 40,600, 85 per cent. of which were monomorphonuclears. Hæmoglobin 60 per cent. The day before death red corpuscles were 1,140,000, leucocytes 23,900, equally divided between polymorphonuclears and monomorphonuclears, and 12 per cent. of eosinophilous myelocytes. The hæmoglobin had fallen to 18 per cent. As was usual in these cases there was nothing characteristic about the temperature chart; there was usually slight pyrexia, the highest temperature recorded being 102.4° F. Arsenic and iron were given without influencing the course of the disease.

The diagnosis was based on the anæmic appearance of the child, the masses in the temporal region, which even during life had a greenish tint, and the protrusion of the eyeballs. The examination of the blood also helped to confirm the diagnosis, as there was a leucocytosis affecting the large lymphocytes. At the necropsy chloroma growths were seen in the ethmoidal region, in the middle fossa, near the end of both lateral sinuses, in the orbits, and in the dura of the vertex. In the trunk chloromatous tissue was found on the internal aspects of all the ribs, the innominate bones and sacrum, and on the external surface of both scapulae. The long bone examined was exempt. All the growths were of an olive-green colour. The liver, spleen, and heart gave a slight iron reaction. Microscopically the growth was a small to a medium-sized round-celled sarcoma. The effect of several reagents on the pigment was tested, but the only one which had a definite solvent or decolorizing action was 0.2 per cent. KOH, which was allowed to act for eighteen hours at 37° C. Special examination was made for the presence of bacteria, but none were detected.

Dr. A. E. GARROD said that cases of sarcomatous growth in the orbit in children associated with sarcoma of the suprarenal capsule presented features similar to those of chloroma. The pigment resembled the lipochromes rather than any derivative of blood pigment.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—At a meeting held on February 12th, Dr. E. SERGEANT, President, in the chair, Dr. F. H. COUTTS, on behalf of the North-Western Branch, presented to the society a framed portrait of Dr. Francis Vacher, who occupied the Presidential chair in 1895. Dr. T. H. C. STEVENSON read a paper upon the *Administration of school medical inspection*, with especial reference to county areas. After describing the routine provision which should be made for the actual inspection, he urged that it was important to interest the teachers in

the work, even though their assistance was not sought. He described the system recently adopted in Somerset for the inspection of the eyes of children whose vision was below $\frac{6}{6}$. A full-time officer had been appointed, who would undertake the ordinary routine inspection in a district, but his services would be available as "school oculist" for the whole county. The gentleman appointed had had considerable experience in ophthalmic work, and this fact was taken into consideration in determining his salary. Eye-testing centres were being established in different parts of the county to which it was hoped the children to be examined would be brought. The oculist, when he examined, would, if necessary, prescribe spectacles, and these were to be supplied at a low rate by the County Council, though in special cases no charge would be made. Dr. Stevenson recommended the provision of a separate weighing machine for each school, and he expressed the opinion that in the long run this would be less costly than paying for the cartage of a machine from one school to another. He considered that there was little or no necessity to duplicate the record cards, the individual normal card was of very little interest and not likely to be referred to. He urged the necessity for proceeding with the tabulation of the results steadily during the year, so that the annual report could be built up in sections and results could be obtained at shorter intervals with comparative ease. He suggested that the best place to keep a record of the infectious illnesses was in the school register. By the addition to it of five narrow columns the teacher could record with very little labour the illnesses which the children were known to have had. Dr. BARWISE said that it was a great advantage to have the children taught to breathe properly. In one district of which he knew, and where the children had been taught the proper method of mouth breathing, there was a noticeable absence of adenoids and of enlarged tonsils. Mr. F. E. FREMANTLE considered that it was important to record the presence of a parent at the inspection in order to know at a subsequent inspection whether directions had been given at first hand. He advocated the employment in each village of a nurse-midwife. Dr. J. T. C. NASH endorsed the latter suggestion, and thought funds might be provided for her support on the provident dispensary principle. Dr. BUTCHER said that he obtained a great deal of assistance from the teachers, especially as regards the clothing and cleanliness of the children, for the latter often came specially prepared for the inspector's visit. Dr. KERR hoped that the inspections would not develop into a mere collection of statistics, for if they did the work would not be worth doing. He considered that the inspectors must have assistance from the teachers, and he suggested the appointment in the infant schools of a person who would be more of a nurse than a teacher, but whose services would be available in the upper schools when the inspector made his periodical visits. Dr. W. BUTLER thought it would be a pity if any doubt were cast as to the necessity for the examinations. He agreed that it was quite unnecessary to duplicate the cards, and feared that the work might be handicapped by the unnecessary clerical work which was being adopted in some districts. The PRESIDENT referred to the insanitary surroundings of many schools, and thought that more attention should be paid to the lessening of the commoner preventable diseases.

CLINICAL SOCIETY OF MANCHESTER.—A meeting was held on February 16th at the Onward Buildings, Deansgate, the PRESIDENT (Dr. J. J. Cox) in the chair. Dr. CHRISTOPHER HEYWOOD opened a discussion on *Whooping-cough*. In the course of his remarks he laid great stress on the value of fresh air in the treatment of this disease, and expressed the opinion that but little reliance was to be placed on drugs. The following gentlemen took part in the discussion: Drs. HUTTON, MUMFORD, MARSDEN, VIVANT BROWN, WILKINSON, LAPAGE, P. R. COOPER, BROADBENT, LARKIN, PRICE-WILLIAMS, SAVATARD, and the PRESIDENT.

The next meeting of the French Congress of Medicine will be held in Paris in 1910, under the presidency of Professor Landouzy. The questions proposed for discussion on the official programme are: (1) Bradycardia. (2) the relations of the liver and spleen in the pathological state, (3) the treatment of symptomatic epilepsies.

Reviews.

PHYSIOLOGICAL PRINCIPLES IN TREATMENT.

AMONG older practitioners of medicine the complaint is often made that the elaborate researches in physiology and physiological chemistry of the last decade are of little service at the bedside. The application to the needs of the patient of the new knowledge acquired in the laboratory is often disappointing, but it is probable that the fault lies for the most part in its misapplication from want of thorough understanding.

In a useful work on *Physiological Principles in Treatment*,¹ Dr. LANGDON BROWN has sought to show to what extent the newer knowledge can be utilized with benefit and in what directions it still needs extension and confirmation.

Organotherapy first claims attention, and the physiological properties and therapeutic values of iodothyron and adrenalin and of extracts of most of the organs of the body are in turn examined. The term "hormone," as indicating a substance normally secreted by a healthy organ and destined to exercise a stimulating effect upon some other organ or system, must now be accepted in medical nomenclature, but among hormones there is none as yet known which exercises so powerful an influence upon the treatment of disease as the normal secretion of the thyroid. The limitations to the use of adrenalin and others are many, and their employment demands caution.

In the rational treatment of gastric disorder there is abundant scope for the application of recent knowledge. The convincing demonstrations of Pawlow have proved the immense influence of the mental processes over gastric secretion, and have opened the way to further discoveries as to the adaptation of secretion to requirement throughout the alimentary canal. The study of gastric and intestinal chemistry proceeds apace, but results must needs be incomplete so long as the psychic element remains unknown.

Purin bodies and their influence upon the healthy organism are closely considered, and the author deals gently with the anti-uric acid enthusiasts on the one hand, and those who attach little importance to it on the other. That the liver, and not the kidney, is the offending organ when the normal output of uric acid is disturbed has been abundantly shown.

The subject of occasional albuminuria is one of constant interest, and much space is devoted to it. Its cause is to be sought for either in defective vasomotor control or in haematogenous irregularity.

The vexed question of the cardiac rhythm is once more enunciated, and the opinions of many observers are quoted, but the practical difficulties of treatment remain as great as ever, since every case of heart disease is complicated in unequal degree by morbid conditions in other organs. An account of the part played by calcium in the body and of the work done by Sir A. E. Wright and his pupils, concludes a book which should be of special interest to those who desire to keep abreast of recent investigations and modern views. Being somewhat overlaid with references to inconclusive observations, it would doubtless gain in simplicity and clearness if the links in the chain of evidence were more clearly defined, and only such observations were quoted as have withstood the test of time or have been accepted by recognized authorities. As a refreshing proof of the vigour of modern energy and ingenuity in research and of its increasing influence upon practical medicine the book deserves a cordial welcome from those for whose enlightenment it has been written.

LOGIC IN MEDICINE.

DR. BIEGANSKI'S book on medical logic,² which Dr. FABIAN has translated into German from the second original edition, contains some suggestive bits of criticism. Protesting

¹ *Physiological Principles in Treatment*. By W. Langdon Brown, M.D., F.R.C.P. London: Baillière, Tindall, and Cox. 1908. (Cr. 8vo, pp. 351, 5s.)

² *Medizinische Logik: Kritik der aertztlichen Erkenntnis*. Von Dr. W. Bieganski. Autorisierte Übersetzung nach der zweiten Original-Auflage, von Dr. A. Fabian. Würzburg: Curt Kabitzsch. 1909. (Roy. 8vo, pp. 238. M. 4.50.)

against the abuse of the so-called scientific hypothesis in medical literature, he writes:

The confusion of hypotheses with facts and the exposition of the facts in the light of explanatory hypothesis is responsible for the rapidity with which our present textbooks and medical treatises become out of date. In science only facts and generalizations which are based upon them are stable; hypotheses change, and often very speedily. If we display our facts in the light of current hypotheses, the overthrow of the latter destroys the entire value of the book. It is for this reason that our modern medical textbooks often lose their entire value within a few years. This would not be the case if strict regard were paid to the difference between what constitutes a *de facto* advance in scientific achievement and what is merely a theoretical surmise; the significance of the work as a record of facts would then retain a permanent value. Take as examples the old textbooks of Stokes, Trousseau, and Griesinger: even at the present day these may be re-read with great profit, owing to their wealthy material of clinical facts.

Reviewers of current medical literature cannot fail to recognize that there is a good deal of truth in this criticism. There is far too much special pleading in favour of some arbitrarily-chosen hypothesis. Writers deliberately set out with the intention of accumulating data in support of some preconceived theory; the facts which are found to be corroboratory are emphasized; those which might be interpreted in an opposite sense are explained away; and the final conclusion is not an objective statement logically deducible from the facts themselves but a personal opinion, leaning upon facts for support but taking root from the author's own mind. The author's ambition is to gain recognition as an authority, to voice his own authority rather than to make the facts speak for themselves. The result is that, on taking a general survey of recent medical literature upon a particular topic, one generally finds a discordant jargon of authorities, each clamouring for his own particular hypothesis. Beneath this confusion it is often difficult to discover a current of steady progress; and, whilst recognizing that there is a legitimate sense in which the working hypothesis is an indispensable guide to scientific research, one cannot help feeling that the weakness of modern research is a tendency to distort the facts in order to support personal opinions. Take better care of the facts and the hypotheses will take care of themselves.

Another interesting chapter in Dr. Bieganski's book is that in which he discusses the use and abuse of medical statistics. Whilst appreciating the important services which have been rendered by statistical methods in confirming leading principles of medical science, he gives some excellent illustrations of the well-known fact that statistical data are often highly misleading. They are frequently accepted as proof of a causal relationship when a closer scrutiny of the basis upon which they are collected would reveal complicating factors which rob mere percentage calculations of the significance they are supposed to possess. About this danger of misapplied statistics there can be no dispute; but perhaps the author does not attach sufficient importance to the work recently done in the application of mathematical methods to the elucidation of general principles from biological and medical statistics. Attention may also be called to Dr. Bieganski's useful analysis of the logical principles involved in establishing a correct diagnosis.

Whilst finding much in this book which we can recommend, it is necessary to add that in some of the chapters—for example, those on clinical observation and the conception of disease—the author indulges in unnecessary verbosity, and is rather commonplace. He wears us with needless platitudes about matters of elementary common sense which are familiar to every medical student.

TEXTBOOKS OF PSYCHIATRY.

In a textbook of mental diseases recently issued under the somewhat comprehensive title of *Mind and its Disorders*,² Dr. W. H. B. STODDART endeavours to provide for the student a succinct account of normal and abnormal mental processes, the attempt being made throughout to relate the mental to the underlying physical or nervous series of events. The work, which contains forty-two chapters and two appendices, is divided into three parts: the first

dealing with normal psychology; the second with the psychology of the insane; and the third with mental diseases, treated methodically and in detail according to their clinical categories. In the first part, on normal psychology, which occupies only the first 97 pages, the author gives brief and practical descriptions of sensation; perception and ideation; affective processes; reflex, automatic, and voluntary action; attention; fatigue; sleep; expression, and so on, as far as is possible, from the physical—that is, from the anatomico-physiological—point of view. Dr. Stoddart excludes, as useless to the practical physician, what he terms in his preface "the transcendental psychology of modern schoolmen," and wisely does not venture into the fascinating, but, from the didactic point of view, unsuitable field of metaphysical speculation. His explanations of mental and neural processes are based throughout on the neurone theory, which, he says, "at the present day meets with almost universal acceptance," with the further support of the theory of the motility of the neurone—that is, the theory of the protrusion and retraction of dendritic 'gemmules.' It is not necessary to enter here into so controversial a question as that of the neurone theory. It is only right to mention, however, that this theory, even though the term "neurone" is in general use, has lost within recent years so many of its former adherents that, though it may be too much to say, with C. Golgi, that it is on its last legs, it is certainly now standing upon its defence. Also the theories of neuronal or gemmular retractility, and inter-neuronal "synaptic resistance," of which Dr. Stoddart makes much use in the subsequent chapters, are of so hypothetical a character—the histological features on which the retractility theory is based being, according to authoritative investigators, artifacts and producible at will by certain methods, notably by the unhappy Golgi method—that a suspended judgement is clearly called for. Passing to Part II, on the psychology of the insane, the author gives very clear and useful descriptions of the disorders of sensation, perception, ideation, the emotions, conduct, and judgement; mainly, and quite rightly, from the point of view of their objective recognition and appreciation by the medical man. In Part III, which takes up much the greater portion of the whole work, after a brief discussion of the causes of insanity and the physical stigmata of degeneration, the author begins his principal task of describing clinical types of insanity. In his classification Dr. Stoddart follows Kraepelin to some extent. Under "intermittent and periodic insanities (maniacal-depressive insanity), the author describes melancholia, mania, anergic stupor, and terminal dementia, and in discussing their pathology he outlines a theory of intraneuronal intoxication, according to which the maniacal phase is due to an irritating toxin, and melancholia to a paralyzing toxin within the cortical nerve cells, the author's explanations being based upon the view of Hughlings Jackson that large proximal-joint slow movements are innervated by large, and small peripheral-joint rapid movements by small cortical cells. Under dementia praecox Kraepelin's three forms are accepted and described with a fourth form, "simple dementia praecox," which is stated to be rare, and characterized by slow dementia supervening upon congenital imbecility. Paranoia, a classification which is steadily gaining wider acceptance in this country, is treated briefly, as are also psychasthenia—limited by the author to irrepressible thoughts, fears, and impulses—neurasthenia, and hysteria. The remaining classification and exposition fall into line with those generally accepted in this country. In the chapter on general paralysis a very good general account of the signs and symptoms of this disease is given, the main physical or neurological features, which have been greatly filled in during recent years, receiving careful consideration. In discussing the etiology of this disease, Dr. Stoddart, who, like the overwhelming majority of writers, considers previous syphilitic infection to be a *sine qua non*, remarks that in China, Japan, and Egypt, in which countries syphilis is rare, general paralysis is of rare occurrence. This statement has been frequently made by other writers, but it would be of value to know how far it rests on unimpeachable evidence. Adequate statistics from China and Japan are wanting, but so far as Egypt is concerned the reports of the Egyptian Government Asylum show that general paralysis accounts for 7 per cent. of the annual

² Lewis's Practical Series. *Mind and its Disorders*. A Textbook for Students and Practitioners. By W. H. B. Stoddart, M.D., F.R.C.P., Assistant Physician to Bethlem Royal Hospital. London: H. K. Lewis, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

admissions, and more than 25 per cent. of the deaths. In writing this book it is clear that Dr. Stoddard has had constantly before him the desirability of viewing symptoms and symptom-complexes with an eye to their neurological significance, and of laying emphasis on the physical signs accompanying the mental disorders treated. Although it is as yet impossible to attach the value of differential criteria to these physical signs as between one psychosis and another, such a mode of looking at them is of the greatest present value, and promises to be of still greater service in the future. The reader will find a great amount of valuable information in the book, even if at times the facts are somewhat baldly stated, and clear and admirable advice upon the treatment of the insane.

Professor WM. WHITE, of Washington, in the foreword to his *Outlines of Psychiatry*,⁴ modestly disclaims for his book any completeness or originality, and states that it is merely intended to afford a helpful guide to his students, so that they may follow his lectures more easily. After a critical perusal of this textbook, however, we cannot but conclude that it is bound to be used with profit by a much wider circle. It is a capital book, well and clearly written; broadly philosophical in its treatment of the nature of mentality; careful and impartial in its examination of the causes of insanity; definite and unambiguous in its descriptions of symptomatological features and clinical types, and thorough in the instructions given as to methods of examination. The author in his classifications follows in the main that of Kraepelin; references and footnotes have been avoided so as not to detract in any way from the continuity of the text, and extended notes of cases are not included for the same reason. The book has a paper cover, but deserves a more durable binding.

We have received the second edition of Professor POTTS'S *Nervous and Mental Diseases*,⁵ a textbook for students and practitioners, whose first edition was reviewed in the BRITISH MEDICAL JOURNAL of March 1st, 1902. The book has received large additions, numerous new illustrations and useful plates have been inserted, and the whole text is excellently illustrated and elucidated by diagrams, plates, and photographs. The chapter on mental diseases has been almost entirely rewritten. The second is a great improvement on the first edition, and forms a very satisfactory textbook for general use, which would be still further improved if the many references to authoritative articles, printed as footnotes, were collected in an authors' index.

A small and handy book, by Professor RÆCKE, tutor and principal medical officer in the Neurological and Psychiatric Clinic at Kiel, on the outlines of diagnosis in psychiatry,⁶ will be found of considerable use to foreign students of German psychiatrial literature, not so much on account of its brief and sharply-drawn pictures of the types of mental disorder, arranged by the author according to the classifications of Binswanger and Siemerling, but because this volume, being intended for students, contains extended definitions of neurological and psychiatrial terms in use in German textbooks, whose exact meaning is rarely given even in technical dictionaries.

Dr. L. PIERCE CLARK, Senior Physician to the Hospital for Nervous Diseases, New York, and Dr. A. R. DIEFFENDORF, Lecturer on Psychiatry at Yale University, the joint authors of a small manual entitled *Neurological and Mental Diagnosis*,⁷ say that the work is designed to aid the student and general practitioner to make thorough and systematic examinations in nervous and mental diseases. The book is composed of two parts, the first on "Methods

of Examination in Neurological Diagnosis," by Dr. Pierce Clark, and the second on "Methods of Examination in Mental Diagnosis," by Dr. Dieffendorf; a glossary and an index. The first part contains succinct and fairly complete directions to the student as to the points to be looked for and the manner of eliciting and recording the same, well illustrated by charts and photographs. Beyond this the author does not go, no attempt being made to describe types of nervous disease. The second part is more complete in plan, the first chapter containing short descriptions of the usual symptoms of mental disorder and the second consisting of clinical descriptions of the several types of mental disorder according to Kraepelin's classification. Each description takes the form of a simple clinical record of a particular case, without any subsequent discussion; differential diagnosis is not touched upon, and in each case only the specific and outstanding features are mentioned.

BACTERIOLOGY.

Dr. EMANUEL VON HIBLER'S researches on the pathogenic anaerobes⁸ form a useful contribution to bacteriology. The present volume deals with fifteen different species, including the bacillus of symptomatic anthrax, varieties of the bacilli of malignant oedema, the tetanus bacillus, and the bacilli associated with epidemics of meat poisoning. In the first part of the book the cultural characters of these various micro-organisms are carefully worked out, and diagnostic points of difference are noted. The remainder of the volume deals with the pathogenicity of the anaerobes and the anatomical and histological characters of the lesions produced. A few points of special interest may be mentioned, as illustrating differences in the virulence of these bacteria for laboratory animals. The bacillus of symptomatic anthrax produces fatal infection in guinea-pigs, rabbits, white mice, white rats, and sparrows, but not in grey rats. In contrast to this organism, the *Bacillus aerogenes capsulatus* rarely produces fatal infection in rabbits, this result being obtained only with young animals inoculated with a large dose of highly virulent culture. The author finds that the *Bacillus enteritidis sporogenes* of Klein may be distinguished from the nearly related bacillus of symptomatic anthrax by the fact that in contrast to the latter it produces progressive and fatal disease in grey rats, but not in white rats and not in sparrows. From an extensive series of microscopic investigations the author arrives at the conclusion that histological examinations of the lesions produced by these varieties of anaerobes do not afford substantial aid to differential diagnosis. The histological picture, in any given infection, is very variable, being largely dependent on the local conditions of the particular piece selected for examination; and even an extended histological study cannot afford justification for more than a general surmise as to the type of infection present; it does not add much to the knowledge which may be derived from the naked-eye appearances alone. In addition to his capacity for original research, Dr. von Hibler has the gift of writing clearly and concisely. His subject-matter is well planned out, and the summaries which he attaches to each chapter enable the reader to grasp the main points without wading through a mass of detail. There is also a valuable collection of plates illustrating the characteristics of pathogenic anaerobes.

Professor HEWLETT has carefully revised his *Manual of Bacteriology*,⁹ and the new edition may be recommended as an excellent book. Two of the best chapters are those on typhoid and plague. They give a good outline of recent research on these subjects, but do not overburden the student with too many minutiae or controversial issues. In this respect the chapter on diphtheria is perhaps rather less successful. Disputed points relating to distinctions between true diphtheria bacilli and various "pseudo" forms are presented fairly and temperately; but these matters are too difficult and complicated to be suitable for brief outline in an elementary textbook. The student to whom bacteriology is a new subject needs something more

⁴ *Outlines of Psychiatry*. By Wm. A. White, M.D., Superintendent of the Government Hospital for the Insane, Washington; Professor of Nervous and Mental Diseases, Georgetown University, Washington, etc. New York: Journal of Nervous and Mental Disease Publishing Co. 1908. (Med. 8vo, pp. 238, 2 dollars.)

⁵ *Nervous and Mental Diseases*. By Charles S. Potts, M.D., Professor of Neurology in the Medical-Chirurgical College of Philadelphia, U.S.A. Second Edition. London: Henry Kimpton. 1908. (Demy 8vo, pp. 570. Illustrations 133, plates ix. 12s. 6d.)

⁶ *Grundriss der psychiatrischen Diagnostik*. (Outlines of Diagnosis in Mental Diseases.) By Professor Dr. Ræcke, with a Preface by Professor Siemerling. Berlin: August Hirschwald. 1908. (Post-8vo, pp. 154. M. 3.)

⁷ *Neurological and Mental Diagnosis: A Manual of Methods*. By L. Pierce Clark, M.A., and A. Ross Dieffendorf, M.D. New York and London: The Macmillan Company. 1908. (Post-8vo, pp. 220. 5s.)

⁸ *Untersuchungen über die pathogenen Anaeroben*. Von Dr. Emanuel von Hibler. Jena: Gustav Fischer. 1908. (Roy. 8vo, pp. 438. 17 plates. M. 25.)

⁹ *A Manual of Bacteriology, Clinical and Applied*. By R. Tanner Hewlett, M.D., F.R.C.P., D.P.H. Third edition. London: J. and A. Churchill. 1908. (Demy 8vo, pp. 650; 24 plates. 10s. 6d.)

simple and categorical to begin with. In the chapter on tuberculosis there is a sentence which is difficult to understand: "It had been known that there are certain differences between the bacilli of human and of bovine tuberculosis, the latter being shorter and thicker, and more readily cultivated than the former." According to most authorities, it is the human and not the bovine bacillus which is "more readily cultivated."

Professor Pozzi-Escot's book on general microbiology¹⁰ is a reproduction of lectures delivered in 1907 before the National School of Agriculture and Veterinary Medicine of Peru. The lectures were intended to be an elementary course, introductory to the more specialized study of industrial or medical bacteriology. The first part of the work gives a popular account of the morphology, physiology, and cultural characters of micro-organisms. Bacterial secretions, toxins, antitoxins, and serumtherapy are also discussed in general outline. The second part of the volume is devoted to the description of the principal groups of microbes, with special reference to their industrial importance in the dairy and in the production of wine, spirits, and beer. There is also a chapter on the bacterial fertilization of the soil. The book is written in a style which will appeal to the general reader who desires a popular and readily assimilated account of what microbiology means. For students whose interests are of a more serious and commercial nature, the utility of the work will depend upon the temperament of the individual. Those who want to plunge at once *in medias res* will prefer a book with fewer preliminary generalizations and more comprehensive details; the student who likes to begin with a gradual initiation into the general point of view will find the author's method acceptable. For the benefit of persons specially interested in the preparation or consumption of alcoholic liquors, it may be mentioned that the author devotes particular attention to the requirements necessary for the production of a delectable flavour in the aromatic constituents of rum.

The *Manual of Bacteriology*, written by Professor WILLIAMS, of Buffalo, and revised by Dr. MEADE BOLTON, of Washington,¹¹ is a rather colourless production, fairly well up to the average, and not calling for much special comment in the way of either praise or blame. Dr. Meade Bolton, who has incorporated a good deal of his own work in the present edition, is well known in America as an expert on the bacteriological examination of water and milk. The chapter on these subjects is the best in the book, and, whilst not sufficiently detailed for the purpose of advanced students, gives the beginner a good general idea of this branch of practical bacteriology. The influence of pasteurization on the bacterial content of milk is a subject of great practical importance, upon which Dr. Bolton's personal experience justifies him in speaking with authority. His general conclusion, with which we agree, is that commercial pasteurization is in need of more rigorous inspection from the public health authorities. In the chapters on the pathogenic bacteria we are glad to see that special attention is paid to clinical diagnosis; the more theoretical aspects of the subject are treated more successfully in some of the students' textbooks by English authors.

Professor JORDAN's *General Bacteriology*,¹² which is based on lectures delivered to students in the University of Chicago, shows that the writer possesses the gift of presenting his subject in an interesting manner. He provides quite as much detail as the elementary student is capable of assimilating, and he makes free use of recent research, but he contrives to avoid the dry-as-dust method, and puts it all in an eminently readable fashion. In addition to the usual routine matter there are chapters on the bacteriology of milk and milk products, the nitrifying organisms, the use of bacteria in tanning, the curing of tobacco, and other industries, and

the bacterial diseases of plants. The last of these chapters is, perhaps, the most interesting. Upon the important question of the bacterial content in milk the writer does not attach sufficient importance to the practical difficulties in the way of reform. Referring to the very low bacterial standard (10,000 bacteria per cubic centimetre) adopted by some of the American Medical Milk Commissions for the production of "certified" milk, he says that "little difficulty has been found" in bringing the bacterial count down to this very low level. That is hardly the case; the number of farmers capable of conforming to this standard is very small, and the output of "certified" milk is extremely limited. Mention is also made of certain American cities which have "established," for the general milk supply, bacterial standards varying in different instances from 500,000 to 100,000. Professor Jordan fails to point out that the mere adoption, as a municipal regulation, of a bacterial standard, is a very different matter from enforcing obedience to such a regulation. Some of the cities which he mentions have found it quite impossible to prevent the sale of milk containing bacteria in excess of the prescribed limit.

In the third edition of *Pathogenic Micro-organisms*¹³ Dr. W. H. PARK, assisted by Dr. ANNA WILLIAMS, has carried out an extensive revision of the text and considerably expanded the size of the volume. In their excellent account of opsonins the authors call attention to a practical difficulty which is sometimes ignored. They find it is generally impossible to have the test of the opsonic power reported within twenty-four hours, and in the treatment of the poor in out-patient practice the interval between taking the sample for diagnosis and performing the vaccination may be much longer; in the meantime an important change may have taken place in the opsonic index. This impossibility of knowing the opsonic power at the moment of inoculation has been found by the authors to constitute a very serious difficulty. There is a useful chapter on the characters and distribution of the bacteria normally present in the intestinal tract. A good feature of the important chapter on the tubercle bacillus is that special attention is given to points of practical importance, such as the presence of tubercle bacilli in the milk of cows which have no other disease but react to tuberculin, and the occurrence of the bacillus in the faeces of cows with internal tuberculosis. The well-informed and thoroughly practical article on the general bacteriology of milk is also deserving of special praise. As we remarked in our review of the second edition (BRITISH MEDICAL JOURNAL, May 26th, 1906, p. 1225), the volume is well above the average of the ordinary student's textbook, and may be warmly recommended.

Dr. M. V. BALL's *Essentials of Bacteriology*,¹⁴ which has now arrived at its sixth edition, may find favour with students who like to acquire their knowledge from books prepared on the *mullum in parvo* principle. The author is particularly successful in packing a large amount of detail into a small space, and may be especially commended for introducing a chapter on various bacteria which are pathogenic for animals but not for man; the interest and importance of these micro-organisms is often overlooked by the average medical student. Speaking of typhoid carriers, Dr. Ball says: "Some individuals retain a culture of the bacilli in the gall bladder for years, and manufacture, or at least expel, true virulent bacilli through the faeces continually." The word "continually" is a little too strong, and may be misleading; the discharges of bacilli may be intermittent, and it may be necessary to examine the stools several times before obtaining a positive result. The methods of cultivating the tubercle bacillus are not described very carefully. It is said that glycerin agar is a much better medium than blood serum, and that it "is now almost exclusively used." On the contrary, blood serum is still used extensively, particularly for raising primary cultures; and most observers find that for this purpose it is a better medium than glycerin agar.

¹⁰ *Leçons élémentaires de Microbiologie Générale*. Par M. Emm. Pozzi-Escot. Paris: Jules Roussel. 1909. (Med. 8vo, pp. 536, figs. 106. Fr. 9.)

¹¹ *A Manual of Bacteriology*. By Herbert Hugh Williams, M.D., revised by Dr. Meade Bolton, M.D. Fifth edition, revised and enlarged. London: Rebmam, Limited. 1908. (Demy 8vo, pp. 460, 113 illustrations. 9s.)

¹² *A Textbook of General Bacteriology*. By Edwin O. Jordan, Ph.D. Philadelphia and London: W. B. Saunders Co. 1908. (Medium 8vo, pp. 557, 163 illustrations. 15s.)

¹³ *Pathogenic Micro-organisms including Bacteria and Protozoa*. By William Hallowell Park, M.D., assisted by Anna W. Williams, M.D. Third edition. London: Henry Kimpton's and Glasgow: Alexander Stenhouse. 1908. (Roy. 8vo, pp. 650; 176 engravings, 5 plates. 18s.)

¹⁴ *Saunders's Question-Compends, No. 20. Essentials of Bacteriology*. By M. V. Ball, M.D. Sixth edition. Philadelphia and London: W. B. Saunders Co. 1908. (Crown 8vo, pp. 390; 155 illustrations. 4s.)

Again, the student is told that "bouillon containing 4 per cent. glycerin is a very good nurture ground"; but he is not informed that, unlike most bacteria, the tubercle bacillus forms a pellicle on the surface instead of growing in the substance of the broth. Whilst admitting that Dr. Ball's book may serve a useful purpose, we think he is claiming too much for it when he says "it aims to contain the essentials of larger works."

The small book on simple aids to the performance of bacteriological investigations, by Drs. ANEL and FICKER,¹² may be found useful by medical practitioners who desire to equip a room for the purpose of making their own bacteriological diagnoses. The authors enter minutely into the practical details of laboratory furniture, the sterilization of apparatus, the preparation of culture media, and other matters upon which the beginner requires careful guidance. The advice is thoroughly sound, and those who cannot afford elaborate or costly equipment will appreciate the practical hints as to various ways in which expense may be saved.

NOTES ON BOOKS.

THE sixty-second volume of *Guy's Hospital Reports*,¹³ that for 1908, is edited by Mr. F. J. STEWARD and Dr. HERBERT FRENCH. It is an extremely valuable number; a few of the papers, all of which are interesting, have already appeared in other publications of more or less ephemeral form, but doubtless *Guy's* men will be pleased to have even these in an easily accessible position in the report of their hospital. Among the more valuable of the contributions appearing for the first time are one on gastro-enterostomy in gastric ulceration by Dr. H. C. Cameron (being part of a thesis for the M.D. degree of the University of Cambridge); one on myasthenia gravis, by Dr. A. S. Morton Palmer (also a Cambridge thesis), which includes a valuable abstract of 124 recorded cases; one on peritoneal adhesions in a series of 50 consecutive post-mortem examinations by Mr. W. M. Mollison and Dr. H. C. Cameron; and one on arterial blood pressure in health and disease by Dr. H. C. Mann. Besides these there is a learned paper by Mr. Richard Assheton on the blastocyst of *Capra*, with some remarks upon the homology of the germinal layers of mammals. The volume, especially as representing the clinical work of the younger men, is highly creditable to the school.

There is nothing exceptionally good in the fourth volume of the eighteenth series of *International Clinics* for 1908.¹⁴ Having said this, it may appear invidious to mention what appear to be the better of its twenty-seven short papers, but perhaps it would seem more so to mention the less good. Among those which promise to have permanent value are one on acute dilatation of the stomach, by Dr. A. G. Nicholls; one on splanchnoptosis, by Dr. T. R. Brown; one on paronychia lateralis, by Dr. C. G. Cumston; and one on the serum treatment of epidemic cerebro-spinal meningitis, by Dr. C. H. Dunn. An unusually large proportion of the papers, twenty-three out of twenty-seven, are by American authors.

The publication of a new edition of PENZOLDT and STINZING's handbook of therapeutics¹⁵ has been commenced, and the first fasciculus of the first volume reached us on February 26th. The first edition appeared fourteen years ago, and as a second and third have already been disposed of, the work, in spite of its large size and costliness, has clearly met the needs of the profession in Germany, and has become well known in other countries. The new edition will be enlarged by the inclusion of articles on surgical treatment, and on gynaecology and obstetrics. The list of contributors has been revised, and many new recruits have been enlisted. The first fasciculus of the new edition, which can be purchased as a specimen for 1 mark, contains an article on general prophylaxis of infectious diseases, by Professor Gärtner

¹² *Einfache Hilfsmittel zur Ausführung bakteriologischer Untersuchungen*. Von Dr. R. Anel und Dr. M. Ficker. 2. Auflage. Würzburg: Curt Kabitzsch. 1909. (Fcap. 8vo, pp. 57, M. 1.20.)

¹³ *Guy's Hospital Reports*. Edited by F. J. Steward, M.S., and H. French, M.D. Vol. lxi (vol. xlvii of third series). London: J. and A. Churchill. 1908. (Demy 8vo, pp. 238.)

¹⁴ *International Clinics*. Edited by W. P. Longcope, M.D. Vol. iv. Eighteenth Series. 1908. Philadelphia and London: J. B. Lippincott Co. 1908. (Roy. 8vo, pp. 318.)

¹⁵ Penzoldt and Stinzling's *Handbuch der gesamten Therapie*. Fasciculus I. 4th edition, in 25 parts, forming 7 volumes. Jena: G. Fischer. 1909. (Sup. roy. 8vo, pp. 80. M. 1.) The price of the complete work is M.100 in paper covers, or M.117.50 bound. The price of each fasciculus except the first is M.4.50.

of Jena, who was the author of the article on the same subject in the first edition.

The publication of the large work on the diet and dietetic treatment of children, edited by Professor AD. CZERNY and Professor A. KELLER,¹⁶ is proceeding in a most leisurely fashion. In December, 1907, we announced the publication of the first four parts, containing together some 320 pages; we have since received the fifth, sixth, and seventh parts, the last so recently as February 8th, 1909.

¹⁶ *Des Kindes Ernährung, Ernährungsstörungen und Ernährungs-therapie*. Von Professoren Ad. Czerny, of Breslau, and A. Keller, of Berlin. Abt. 5, 6, 1 and 2, Hefte, 1907, Leipzig and Wien: F. Deuticke. 1904-06 and 1909. (Sup. roy. 8vo, pp. 481-699 and 1-256. M.4.50, Abt. 7, M.3.60.)

MEDICINAL AND DIETETIC PREPARATIONS.

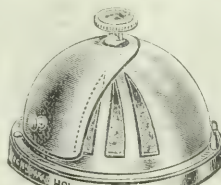
Extract of Malt.

OUR attention has been called to an extract of malt sold under the registered name of *Dia Malt*. It appears to be a pure extract of malt, free from any foreign ingredient, and of an unusually high diastasic power, inasmuch as the sample examined was found to digest practically fourteen times its own weight of starch in half an hour. The proportion of proteids was 5.8 per cent., which is higher than in many other extracts; it is a palatable preparation, and as it is also very active it is likely to be of use in the treatment of conditions for which malt extract is indicated. It is manufactured by the British Dia Malt Company, 11 and 13, Southwark Street, London, S.E., whose works are at Sawbridgeworth, Hertfordshire. The malting is carried out by an improved principle under an Austrian patent. One of the features of the method is that the malting is done in receivers and not on the floor. The barley, after undergoing a preliminary cleansing, is dried at about 110° F.; it is then steeped in receivers each having a capacity of 100 qrs., or 400 cwt., water is injected from beneath, and the grain is thoroughly cleansed by stirring in these tanks, where it remains from sixty-five to seventy-two hours. The water is then run off and the contents introduced into six large drums, which revolve slowly on a horizontal axis. These drums, known as pneumatic germinators, replace the older method of allowing the grain to germinate on flat floors where it was turned over by hand shovels. Each pneumatic germinator holds 50 qrs., or 200 cwt., and is traversed by a series of perforated tubes; from these tubes moderately cold air is forced into the grain, and in this way the temperature of the process of germination can be accurately controlled and the risk of contamination by mould obviated. The germinated grain is then malted, and the malt ground by roller mills; after mashing in ordinary mash tubs the liquid is drawn off into a receiving chamber and concentrated. The wort pans are made of tinned copper and have rounded corners, every attention being given to cleanliness.

MEDICAL AND SURGICAL APPLIANCES.

Cotton-wool Receptacle for Aurists and Rhinologists.

DR. L. HEMINGTON PEGLER (London) sends a description of a wool-holder made for him by the Holborn Surgical Instrument Company. A removable dome-shaped cover of bright metal encloses the wool by catching on to flat, heavy base of the same material. On one side of the cover are three fenestrations, through which the requisite



pledget can be detached by forceps, the weight of the receptacle keeping it quite firm. The wool is protected when not in use by a movable plate of metal, operated by a small button, and adjusted by a screw at the summit, which plate slides over the apertures, and also serves to alter their shape and dimensions if desired. The holder is best charged through the apertures, longish masses, about the

width of three fingers, being selected from a sheet of long fibre absorbent wool. The shape of the apertures can be ordered to take other forms than the figure shows—for example, parallel slits, inverted triangles, two triangles base to base separated by a cross-bar, or, better still, all of these in one cover. The figure is one-third the size of my own holder, but I have a larger one on my table at the hospital. The whole contrivance is sterilizable.

THE ROYAL COLLEGES AND THE UNIVERSITY OF LONDON.

The Royal College of Physicians of London and the Royal College of Surgeons of England appointed some time ago delegates to consider and propound a scheme for establishing a system of conjoint examinations in accordance with Statute 123 of the University. The delegates were:

Sir R. Douglas Powell, Bart., K.C.V.O., Chairman.	
Dr. Norman Moore.	Dr. H. A. Cayley.
Dr. Edward Liveing.	Mr. Henry Morris, P.R.C.S.
Dr. Frederick Taylor.	Mr. A. Pearce Gould.
Sir William Allchin, M.D.	Mr. H. T. Butlin.
Sir W. Watson Cheyne, Bart., C.B.	Mr. R. J. Godlee.
	Mr. H. H. Clutton.

The report of the delegates dated December 3rd, 1908, was approved and adopted by the Council of the Royal College of Surgeons on December 15th, 1908, and by the Royal College of Physicians on December 17th, 1908. The scheme proposed in this report was communicated to the University of London in a letter addressed to the Vice-Chancellor by the presidents of the two colleges on January 22nd, 1909, asking him to bring the subject before the Senate and expressing the hope that the Senate would see its way to appoint representatives to meet the delegates of the two colleges and discuss the proposals outlined in the report.

REPORT.

The delegates appointed by the Royal Colleges

To consider and draft a scheme which, if approved by the Royal Colleges, shall be submitted to the Senate of the University of London, with the object of establishing a system of Conjoint Examinations.

Beg to report as follows:

Taking into consideration the provisions of Statute 123 of the University of London, the existing conditions of medical education in the metropolis and the undoubted demand for a Degree in Medicine which shall be more accessible to the average London medical student, and assuming the existence of a general desire on the part of the University, the Royal Colleges, and the medical schools of London to unite in a concerted effort to provide such a degree, the delegates are of opinion that there should be little difficulty in arriving at an equitable and advantageous solution of the problem.

Statute 123 of the University of London is as follows:

The Senate may make arrangements with the Royal College of Physicians of London and the Royal College of Surgeons of England, or either of them, to conduct jointly with the Senate examinations in such portions of the subjects included in the course of study for a medical degree as may be agreed upon between the Senate and those colleges, or either of them, and may also make similar arrangements with other corporations and institutions holding professional examinations in subjects included in other courses of study.

At the present time, of the male students who obtain the M.B. or M.D. degree of the London University, 84 per cent. take the diplomas of the Royal Colleges, and of the graduates in medicine of the University of Cambridge 71 per cent. take the diplomas. Of the total number of diplomates of the Royal Colleges 20 per cent. take the degree of the University of London, 16 per cent. the degree of the University of Cambridge, and 15 per cent. the degrees of other universities, English, foreign, or Colonial. It is thus shown that, roughly, one half of the diplomates of the two colleges are also graduates in medicine.

During the four years 1903-6:

(1) Of Bachelors and Doctors of Medicine in the University of London *Calendar* for 1907-8 there are respectively 365 and 164 male graduates who obtained their degrees during these years. Of such graduates, 311 (85.2 per cent.) and 135 (82.3 per cent.) were at the time, or became subsequently, diplomates of the Royal Colleges. Therefore, of the total male graduates in Medicine—that is, 525—446, or 84.3 per cent., are also diplomates of the Royal Colleges.

(2) Of 253 men who obtained the degree of M.B. of the University of Cambridge, 181, or 71.5 per cent., hold the diplomas of L.R.C.P. and M.R.C.S.

(3) Of 1,704 candidates who obtained the diplomas of L.R.C.P. and M.R.C.S., 885, or 51.9 per cent., are also graduates of or candidates for the degrees in Medicine of the following Universities:

- (a) Cambridge, 274, or 15.1 per cent.
- (b) London, 347, or 20.4 per cent.

- (c) Other English Universities, 119, or 7 per cent.
- (d) Irish and Scottish Universities, 17, or 0.9 per cent.
- (e) Indian and Colonial, 103, or 6 per cent.
- (f) Foreign Universities, 25, or 1.5 per cent.

It is further evident that there is a general desire amongst those who intend to take university degrees or who already possess them to obtain also the diplomas of the Royal Colleges.

It is desirable that in London the system of teaching and examination should be co-ordinated in such a manner as to reduce the number of examinations.

In London the same representatives of medicine and surgery, midwifery, anatomy, physiology, and other subjects, teach for the examinations of the University and of the Royal Colleges. The organization of medical education in London, whether by the University, the Royal College of Physicians, or the Royal College of Surgeons, is largely controlled by the same individuals. Yet for the University and for the Royal Colleges there are separate boards of examiners in all branches of the curriculum, separate examinations involving considerable expense, and a re-examination of the student in the same subjects, frequently within a few months.

The general character of the examinations and the methods of conducting them by the University and by the Royal Colleges are very similar.

The University makes use of the Examination Hall of the Royal Colleges for the Intermediate M.B. examinations, for the *viva voce* examinations in Medicine, Midwifery, Forensic Medicine, Public Health, for the Clinical Examination in Surgery and the examination in Surgical Anatomy and Apparatus for the Final M.B., B.S., as well as for part of the M.S. degree. The rooms of the Royal College of Surgeons and preparations from the Hunterian Museum are placed at the disposal of the University for the pathological part of the Final Examination. The instruments, specimens, and other apparatus of the Conjoint Board are also utilized, and the officials of the Board assist to a considerable extent in the arrangements for some of these University examinations.

In considering such a scheme the delegates have taken as a basis of their deliberations the following principles:

- (a) That the University should retain all its existing rights as to the granting of degrees, but should consent to exercise them as regards pass degrees conjointly with the Royal Colleges so far as those students are concerned who shall have spent not less than four years in study at London medical schools and hospitals and who shall have complied with such conditions as the University and the Royal Colleges may determine.

It is assumed that the University will continue to grant, independently of the Royal Colleges, degrees in Medicine and Surgery, which might be called Honours degrees. The views of those who maintain that the present degrees of the University of London are of an Honours standard would thus be met.

- (b) That the Royal Colleges should retain all their existing rights, to grant diplomas to those who (1) are not eligible under the foregoing conditions; or (2) do not desire to come under such conditions.

It is thus assumed that the Royal Colleges will continue to admit to examination for their diplomas candidates from other universities, home, foreign, and colonial, as well as London medical students who are not students of the London University.

- (c) That the Royal Colleges should be associated with the University in conducting the Preliminary Scientific, Intermediate, and Final Examinations for the Pass Degree (M.B., B.S., M.D.)

This arrangement will secure—

1. That the average London student will be able to obtain the degree of Doctor of Medicine.
2. That medical education in London will become more systematized.
3. That there will be a reduction in the number of examinations to be passed by the student desiring to take a degree and the diplomas.
4. That a larger proportion of students would be encouraged to avail themselves of the great opportunities of clinical study afforded by the hospitals of London.
5. That the University and the Royal Colleges acting together with the same staff and equipment would be able to reduce the expenditure on examinations.

The delegates beg to state that, should the principle of an association between the University and the Royal Colleges be accepted, they are prepared to bring forward a working scheme for carrying the proposal into effect.

In view, however, of the fact that since the appointment of the delegates the Senate of the University has asked for a Royal Commission, the delegates beg to recommend that the Royal Colleges should take steps to secure the representation of their views on the subject of the present reference before any Royal Commission which may be appointed, and should at a fitting time ask the University to appoint delegates to discuss this question with the delegates of the Royal Colleges, so that if possible they may agree upon a joint representation to the Royal Commission.

R. DOUGLAS POWELL.

THE CREMATION SOCIETY OF ENGLAND.

The annual general meeting of members of the Cremation Society of England was held on Wednesday, February 24th, the President, Sir Charles Cameron, M.D., LL.D., being in the chair.

In moving the adoption of the report of the Council and the accounts for 1908, the President recalled the fact that at the last general meeting new rules were sanctioned under which the subscription for life membership of the society was reduced to five guineas. This carried with it the right of cremation, without further fees, in any crematory in Great Britain. This arrangement, he said, had already led to a large increase in the number of life members. The number of cremations in Great Britain in 1908 exceeded that in any previous year, and fell short only by 5 of the round number of 800. The experience of Germany induced him to take a very hopeful view of the present position. There cremation was introduced years before it was practicable in this country, and the cremations performed in Germany up to the present numbered about 20,000. In Germany during the twenty years succeeding 1878, when the pioneer crematory at Gotha was opened, the total number of cremations was only 3,111, giving an average for the period of 155 a year. It was not till 1902 that the number attained the point which had now been reached here. But by that time the movement had taken root, and since then in Germany it had progressed literally by leaps and bounds; the increase on the previous year in 1907 amounted to over 900 cremations, and the figure for 1908 again exceeded that of 1907 by 1,073. As human nature in Germany and in this country was very much the same, and as there were now 13 crematories at work in Great Britain against 16 in Germany, the President saw no reason why the progress of the movement here should not proceed on much the same lines as had been experienced in Germany. Here there was abundant evidence of a widespread and ever-increasing interest in the progress of cremation. During the past year some 500 applications for information of a propagandist character had been received. There had also been some 50 inquiries from municipal or public bodies and individuals at home and abroad regarding the construction and mechanism of crematories, the formation of local societies, points of law, and other technical details. The balance-sheet showed the healthy financial condition of the society. It was not a trading company, but in its future development commercial considerations would have to play a prominent part. He mentioned that an undertaker, who proposed to confine his work exclusively to arrangements for cremations, had started business in London. The President then referred to the security which the precautions required by law before cremation was permitted afforded for the detection of foul play. The investigations of a Parliamentary Committee had disclosed the scandalous laxity and inefficiency of the existing law on death certification. The committee recommended various self-obvious and much-needed reforms, but many years had since elapsed, and the state of the law with regard to earth burial remained as it was. It was very different in the case of cremation. There the requirements of the law were so strict as to render it practically impossible for any suspicious or doubtful case to escape a searching investigation.

After the report and balance sheet had been adopted

and the council and officers re-elected, the election of the following vice-presidents by the council was confirmed by the meeting: The Duke of Bedford, K.G., the Earl of Mayo, P.C., K.P., Right Honourable Sir Walter Foster, P.C., M.P., Right Honourable Robert Farquharson, P.C., Honourable Percy Wyndham, J.P., D.L., Sir G. Anderson Critchett, Bart., F.R.C.S.Ed., C.V.O., and Sir John Tweedy, F.R.C.S.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.

The annual general meeting of the Medical Graduates' College and Polyclinic was held at 22, Chancery Street, in London, on March 1st, with Dr. C. THEODORE WILLIAMS in the chair.

Dr. W. H. BAILEY, the new Secretary and Superintendent, read the notice convening the meeting.

The CHAIRMAN, in moving the adoption of the report and balance sheet, said that in regard to the falling off in the number of subscribers it must be remembered that the Polyclinic had to contend with rival institutions. There were the West London Post-Graduate School, the Tottenham and the Greenwich Schools, and in addition, there were some general hospitals, like St. Bartholomew's, where post-graduate courses were conducted. In the matter of lectures, however, the Polyclinic secured the best teaching, not only of London but of the United Kingdom; there had unfortunately been a general feeling during the troublous times of the Polyclinic that the place was not going on and that, therefore, it was no use joining, but he hoped that that impression would be corrected now that it had been agreed to carry on the Polyclinic. After referring to the excellent results of the laboratory work at the Polyclinic the Chairman announced that the institution had been admitted into the London Post-Graduate Association. In consequence of the generous donation from Lord Iveagh of £200, and the munificent offer from Sir Jonathan Hutchinson, the closure of the Polyclinic had been averted. He regretted that 245 of the members and subscribers to the Polyclinic had not returned any answer to the appeal for an increase of their subscription. He then announced that he himself had resigned the office of Chairman of the Council, and that the following resignations had also been received: The Treasurer, Dr. Cautley; the Chairman of the Finance and House Committee, Mr. Ernest Clarke; the Chairman of the Library Lectures Committee, Dr. Leonard Williams; and a large number of members from the Council.

Dr. C. O. HAWTHORNE, in supporting the motion, said that no one failed to recognize the generous and effective help of Sir Jonathan Hutchinson, and the medical profession felt a substantial degree of recognition and gratitude was due to that gentleman. It would not be wise for any of them to go home and think that the Polyclinic was in an absolutely safe position, for it must be remembered that Sir Jonathan Hutchinson had made his offer for two years only; and as a matter of fact, only twelve months would have to pass before the next annual meeting would have to contemplate whether the Polyclinic could be carried on then. He (Dr. Hawthorne) had always held that the wise policy to pursue was to adhere to the 1 guinea subscription; that view did not conflict with the invitation to members to increase their subscription, but it recognized that the chief function of the Polyclinic was to provide opportunities of clinical study to gentlemen who were engaged in practice in the metropolitan districts.

The resolution was put to the meeting and carried.

Dr. Dundas Grant was elected honorary treasurer, and the following gentlemen were elected members of council: Dr. H. Campbell, Dr. G. C. Cathcart, Mr. H. L. Eason, Dr. R. A. Gibbons, Dr. T. N. Kelynak, Mr. Cecil H. Leaf, Dr. James Mackenzie, Mr. Lockhart Mummery, Mr. Charles Ryall, Mr. Thomson Walker, and Mr. G. B. Mower White.

MR. FRANK MADDEN, F.R.C.S., Professor of Surgery at the University of Cairo, has had the honour of receiving from His Highness the Khedive the decoration of the Third Class of the Imperial Order of the Medjidieh on account of services rendered to His Highness's Government. Mr. Madden received his medical education in Melbourne and at St. Mary's Hospital, London. He has been ten years in Cairo.

THE

THERAPEUTIC APPLICATIONS
OF RADIUM:

METHODS AND RESULTS.

SOME OBSERVATIONS ON THE METHODS
AND RESULTS OF RADIUM TREATMENT
IN ENGLAND.

By JAMES MACKENZIE DAVIDSON, M.B., C.M.,

MEDICAL OFFICER IN CHARGE OF X-RAY DEPARTMENT, ROYAL LONDON
OPHTHALMIC HOSPITAL, MOORFIELDS; AND CONSULTING MEDICAL
OFFICER TO X-RAY DEPARTMENT, CHARING CROSS HOSPITAL.

PUBLIC interest in the therapeutic use of radium having been recently revived in this country in a rather sensational manner, it is not altogether a matter for surprise that many rather confused ideas on the subject have become prevalent. It may therefore prove of some service to give a short account of personal experience in the use of radium during the past six years.

As soon as the physical properties of radium became known, it was obvious, in the light of our previous experience of the beneficial effect of x rays and of the ultra violet light (Finsen method) in the treatment of various skin diseases, that this new substance would prove to be of some service in medicine. Indeed, seeing that radium gave forth x rays of extreme penetrability—the gamma rays—in addition to its alpha and beta rays—it seemed likely enough, *a priori*, that it might exceed the results produced by either the x rays or the Finsen method. And such, in fact, has proved to be the case.

Having been fortunate enough to secure some radium bromide of good quality early in 1903, I tried it in a case of severe rodent ulcer, which had resisted x -ray and other treatment, and had been sent to me at Charing Cross Hospital, from the skin department, for further treatment with the x rays. I used two sealed glass tubes, each containing 5 mg. of pure radium bromide, and applied them tentatively on the upper border of the ulcer which was encroaching on the lower right eyelid.¹ After five applications the ulcer, which was 1 in. in length and $\frac{3}{4}$ in. broad, was completely healed. There has never been any recurrence, and at the present time the patient is perfectly well.

This case, at Charing Cross Hospital, in May, 1903, is the first recorded in this country in which radium bromide was applied as a remedy. Since then I have treated a variety of cases in a similar manner, with equally astonishing success.²

As an impression appears to prevail that all the pioneer therapeutic work with radium has been done on the Continent, I should like to point out here that I am by no means the only medical man in this country to obtain very satisfactory results from its application at least two years before the Paris Radium Institute was founded. For example, the late Mr. J. T. P. Hartigan exhibited several successful cases before the Dermatological Society in January, 1904. In the same month Dr. Gerald Sichel reported a cure of rodent ulcer by radium.³ Two months later the BRITISH MEDICAL JOURNAL reported that radium was then being used in the treatment of cancer at the Middlesex Hospital, the Cancer Hospital in the Fulham Road, and other metropolitan hospitals. In April Dr. Colin Campbell reported the cure of 2 cases of tuberculous ulcerations, and Dr. A. J. B. Hammond the cure of yet another case of rodent ulcer by radium. In June, Dr. C. M. O'Brien exhibited to the Royal Academy of Medicine in Dublin two cases of lupus, one of which was greatly improved and the other completely cured by radium bromide. I might mention many more cases did time and space permit, but it must suffice to notice that between that date and the present time several British medical men have reported a number of cures of rodent ulcer, of naevus, and of hairy mole. It should also be put on record that in 1903 the

Royal Ophthalmic Hospital (Moorfields) was presented, by a patient of the present writer, with two tubes of radium bromide of medium quality, by the use of which some excellent results have since been obtained. Radium emanations have been injected hypodermically into patients suffering from malignant diseases, and even radium bromide itself, in solution, has been so injected by the present writer, without however, any definite beneficial effect.

In this connexion I may mention that in cases of carcinoma in which there occurred very small discrete nodules of this disease, and which therefore offered an opportunity of testing the effect of a small amount of radium, I placed radium in a glass tube directly in contact with these nodules; but even after being applied for varying periods, long enough to produce destructive effects, there was no destruction of the cancer cells. Consequently these must be immensely more resistant to the beta and gamma rays than are those of rodent ulcer and epithelioma.

A few words must be said as to the method I have adopted. The application of radium bromide in sealed glass tubes has the advantages that it completely preserves the radium salt from loss by moisture (a matter of the utmost importance in the present scarcity of radium) and that the glass filters out many of those rays which are most easily absorbed, which are therefore most dangerous to the surrounding tissues and which may lead to burning and sloughing. Moreover, as the radium preserved in this way is in a state of radio-active equilibrium, the dosage necessary is merely a matter of time—the length of application in any particular case being of course determined by experience. The range of action of the radium at the bottom of the tube can be seen by its effect on a photographic plate, or, in the dark, when held in contact with a sulphide of zinc screen, or with willemite. The area of action is much wider than might be imagined. One application to a small rodent ulcer is sometimes enough to effect a permanent cure. But in the case of a comparatively large surface the tube must be moved from point to point, which of course takes time, and is a somewhat tedious process.

As this method has recently been severely criticized in this country, it may be worth while pointing out, first, why this particular method was adopted: and, secondly, what it has been able to effect. As to the first point, it is no exaggeration to say that the glass tube method was practically forced upon early workers with radium in this country, on account of the necessity of avoiding the risk of losing so costly and precious a material, seeing that, if lost, it could probably not be replaced. At any rate, it was not from choice, but from necessity, that this method was adopted by me. I was quite familiar enough with the physical properties of radium to realize fully the advantages that would result if it could be spread over a large surface, with some covering material to hold it, which, while allowing free exit to all the radiations, would preserve the precious material intact. But how to do this is by no means so easy as it may appear to those who have never tried it, and few medical men in this country would feel disposed to lose £500 worth in the attempt. It is interesting to know that this problem of the safe spreading of radium has apparently been solved in Paris, where there exists an institute with over £10,000 worth of radium to experiment with.

But before saying anything about the admittedly great advantages of the spread method, it may be some consolation to those who possess radium bromide in sealed glass tubes, and who may not be able to get it safely spread, if I point out that, in this form, it is not so entirely worthless as they might have been led to believe. Applied in this way by me, it has undoubtedly cured extensive rodent ulcer that had resisted all other treatment; it has cured small epitheliomata; it has cured "spring catarrh" of the eyes (which had resisted other treatment for two years); it has cured recurring erosion of the cornea (Arlt) of one year's duration, and tuberculosis verrucosa.

In addition to these, there is one result obtained by this method of treatment which seems worthy of special record. In common with other early workers with x rays, my right hand has suffered from the ill effects of undue exposure, and some time ago an abrasion, produced by a slight injury, presented a rather alarming appearance.

¹ BRITISH MEDICAL JOURNAL, January 23rd, 1904, pp. 181-2.² BRITISH MEDICAL JOURNAL, January 23rd, 1904, pp. 181-2, and Transactions of the Ophthalmological Society, vol. xvi.³ Vide BRITISH MEDICAL JOURNAL, January 23rd, 1904, pp. 182-3.

A hard, thickened border, with a black crust, appeared, and when this had persisted for over two years it became somewhat disquieting. It occurred to me to try my glass tube of radium upon it, and the result has been that one application of a tube, containing about 29 mg. of radium bromide, for fifteen minutes led to its complete disappearance. The same favourable result has followed upon other similar applications. This experience may, I hope, be of use to those who have suffered from their work with x rays. At any rate, it will be important to know if they also find radium bromide act as a cure.

In the light of practical experience thus obtained I may perhaps say a few words concerning the method of treating skin diseases by means of spread radium in the *Laboratoire Biologique de Radium* at Paris. There are two great advantages in this method. First, it enables all the radium radiations to come into effective action on the surface to which they are applied. So that all the alpha, beta, and gamma rays may be used, or by the interposition of certain screens all the alpha rays may be cut off, and, if necessary, the beta rays also. A sheet of paper suffices to cut off all the alpha rays; the beta rays may be cut off by aluminium or leaden screens of varying thickness. The quantity and quality of the rays best suited to cure any particular disease can only be arrived at by trial, and much valuable work in this direction has been done at the Paris Institute.⁴ But it is a regrettable fact that the varnish used to protect the radium and the method of spreading it are kept secrets.

In all successful cases the remarkable effect is shown that by properly timed exposures the abnormal cells invading the human body are gradually destroyed and absorbed, while none of the normal healthy cells are destroyed. Such being the fact, two questions naturally arise: (1) Which of the radiations produce the beneficial results? and (2) What are the abnormal cells which are more resistant to the radiations than the normal body cells? These questions open up an enormous field for careful investigation.

It must be remembered that radium is not the only radio-active body giving off alpha, beta, and gamma rays. There are other substances which do so, such as thorium and actinium, and doubtless others which remain to be discovered. Another point which should not be forgotten, for it is one of great practical importance, is the fact that radium itself does not directly produce all the rays. It first produces what has been called an *emanation*. The disintegration of this emanation causes it to give out the three types of rays, and the therapeutic action of radium depends mainly on the amount of emanation which it contains. If this store of emanation is driven off by dissolving the radium in water, it proves to be a gas, which, when collected, gives out the same amount of alpha, beta, and gamma rays that it did when unseparated from the radium. But, while the de-emanated radium goes on slowly producing and storing up more emanation until in about one month's time it has regained its maximum strength, the emanation which has been thus separated from its parent, goes on decaying, losing about half its strength in about four days, and becoming in about sixteen days almost powerless. The important practical point to be noted is that the effect of the rays from a given quantity of separated emanation is as powerful as when it was contained in the radium, and that, consequently, it is possible to send a tube of the emanation to be used in the treatment of a case at a considerable distance without any risk of losing the precious radium itself in course of transport.

Should any extensive supply of radium become available, results may be obtained such as we little dream of to-day. At the same time, the hopes we entertain of its further utility must not lead us to outrun discretion by leading unscientific people to think that in this quite-sufficiently-amazing substance we have found a panacea for all the ills that flesh is heir to.

His Majesty King Edward (always thoughtful in promoting the best interests of mankind) has recently initiated a Radium Institute in England, and I trust that this institution, with its ample resources, will do excellent work in this wide field of research.

THE METHODS OF FILTRATION AND "CROSSED-FIRE."

[FROM OUR PARIS CORRESPONDENT.]

ONE of the most striking points in the use of radium is the multiplicity of action that can be obtained by the use of one or two apparatus—for example, with a rectangular apparatus 3 cm. by 4 cm., containing 12 cg. of radium (3 cg. pure salt), with A 500,000, therapeutic effects can be directed:

1. To the surface alone, causing violent irritation and destruction.
2. To the surface of the tissues alone without any irritation or destruction.
3. To a depth without irritating the surface or destruction.
4. To a depth, destroying the surface as well as the deeper parts.
5. To the surface and at a depth simultaneously with a strength about the same throughout, and without any destruction of tissue.

Therapeutic results are obtainable from each of these five modes of applications, and each has its utility. If the apparatus is employed without screens, actions 1, 2, or 5 are obtained according to the method used.

If screens are interposed between the apparatus and the tissues, then intermediary actions 3, 4, or 5 are obtained. Amongst these various methods, the most striking are those which produce results at a depth without any alteration of the tissues at the surface—for example, in actions 3 and 5.

The most interesting of the several techniques which give this result are the filtration through thick screens combined with the method named by Drs. Wickham and Degrais "Crossed-Fire."

Dr. Wickham, in 1905, began to filter the radium rays through compressed cotton-wool and then through aluminium, and with Dr. Degrais through lead and rubber. The x rays can only traverse thin sheets of aluminium, and are quickly stopped by denser metallic sheets—for example, of lead. The penetrating power of the hard beta and the gamma rays of radium is so great that they can act through a thickness of 3 or 4 mm. of lead. In January, 1907, Drs. Wickham and Degrais first employed the sheets of lead and rubber used in x -ray work to protect the operator and the healthy tissues. The case was an inoperable glaucoma, the two apparatuses being applied on the forehead and the temple, a sheet of lead and rubber of 1.28 mm. thickness being interposed between the apparatus and the skin. Thus, all the rays which acted on the surface were stopped, and those of great penetrating power had to traverse the bone to reach the eye. In this case the treatment had little effect on the disease, but was of interest historically, as it led the way to other applications, for soon after Drs. Wickham and Degrais treated in the same way a case of cancer of the breast most successfully; the breast was cured, and during the whole treatment there never appeared any irritation of the skin surface.

Filtration thus has the advantage of allowing the passage of rays which act at a depth without any alteration at the skin surface, but it has the disadvantage of diminishing the sum total of the rays in such proportions that, to obtain a therapeutic result, the applications must be of extremely long duration—from 50 to 200 hours, according to the results to be obtained. By this length of the periods of application the small quantity of very penetrating rays, produce in the end a very intense action. For the application of radium for these long periods the apparatus must be convenient, but once the apparatus has been sheathed in its lead casings and it has been ascertained that the radio-activity which passes does not exceed 4,000 to 5,000, then the apparatus can be left in contact with the skin for several days or nights in succession without the slightest inconvenience to the patient. These very penetrating rays (*surpénétrant*) consist of the hard beta and gamma rays, the lead filter having absorbed the alpha, soft beta, and medium beta rays. Dr. Dominici, the collaborator of Drs. Wickham and Degrais, gave the name "ultra-penetrating" to the

⁴ For full details see paper by Louis Wickham et Degrais, "Traitement des Angiomes (Tumeurs Vasculaires et Taches de Vin) par le Radium," Paris, 1908.

gamma rays, but has since recognized that a large number of the beta rays do also pass the filter.

The drawback due to the feeble quantity of these rays which pass the filter has been overcome by Drs. Wickham and Degrais by the adoption of the method of "crossed-fire," the action of the rays resembling a bombardment by batteries at two points facing each other. Thus if two apparatus are placed facing each other on opposite sides of a tumour, these very penetrating rays traverse the tumour in both directions and cross in the centre. The cells are thus doubly acted on, and are modified much more rapidly. If two powerful apparatus of activity 2,000 to 4,000, enveloped each in a sheath of lead 1 mm. thick, are applied, they can be fixed, without any risk or irritation, to the skin surface, and left *in situ* during five or six nights running; but the cells at a depth are acted on by an intense force, which Drs. Wickham and Degrais found was more than double the force of each apparatus taken alone, the "crossed-fire" having increased the intensity of the effect produced on the cells placed deeply, because during a short period the cell is attacked by the double force.

Conclusions.

1. The system of filtration devised by Dr. Wickham permits the separate action of the very penetrating rays.

2. The feeble quantity of these rays is compensated:

(a) By the long durations of the applications which are facilitated by the ease of the applications.

(b) By the method of "crossed-fire," which diminishes the duration of the necessary applications, because they considerably increase the action of the very penetrating rays.

3. These methods allow of action at a great depth without any alteration of the surface.

4. All affections which spread at a depth, as cancer, cheloids, angiomatous tumours, even if situated below the skin, can all be treated by these methods.

5. These results render radium superior to the x rays, which cannot act, either at such a depth or during such a lengthy period, or as conveniently, or with such security for the integrity of the skin surface.

Clinical Cases.

The following clinical observations illustrate the method of filtration combined with the "crossed-fire."

I. Case of an enormous cancerous tumour of the parotid, presented to the Société Médicale des Hôpitaux November 6th, 1908. The patient came to Drs. Wickham and Degrais on August 18th, 1908, the tumour making a projection of 4.8 to 5 cm. at different points, and spreading in width for a space of 9.5 cm. from the ear to the inner quarter of the cheek; its vertical measure was 11 cm. The surface was mammillated, and it was completely covered by the skin except at its most prominent point, where recent ulceration was started. The skin was red, violet in places, and stretched; it was impossible to fold it, and it looked like the skin of an orange; a rich venous plexus ran over the surface. The voluminous mass had raised the cutaneous covering, and presented at its margin a very distinctly accentuated demarcation; there was scarcely any transition between the diseased and healthy tissues. The tumour was firmly adherent to the subjacent tissues, and it was hard, like plaster. The tumour, in spite of its size (it enclosed the region of the facial nerve), and in spite of the extreme tension of the tissues, did not cause any pain; there was some glandular enlargement behind and below the angle of the lower jaw. Dr. Duprey, of Châteauneuf-Chinon, wrote that the patient, whom he had known for twenty years, had had a tumour of the parotid, which he considered a fibroma, for fifteen years, and that eighteen months previously it had suddenly developed rapidly, and taken on a malignant character. Microscopic examination by Dr. Dominici showed it to be a lobulated epithelioma, with cells with budding nuclei; numerous cells showed ordinary and multipolar karyokinesis; there was little production of horny substance. Treatment was begun at once, based on the principle of the "crossed-fire," by introduction of tubes of radium into the interior of the tumour; apparatus were also applied externally, so that the crossing of the rays was tenfold. By these methods, and by changing the position of the apparatus, Drs. Wickham and Degrais were able, while respecting the surface, to act with extreme force in the depth of the tumour. After eleven weeks' treatment the tumour had retrogressed so much that its thickness was only 4.5 cm., its vertical and transverse diameters being also much reduced. The tumour became quite mobile on the subjacent tissues and was no longer hard; the lymphatic glands, which had also been treated, showed no more threatening points. At the present time the patient is cured.

II. Cancer of the Breast.—Three cases treated by the same process. The apparatus were covered with 2 mm. of lead and placed on the breast to be treated to the number of four, two by two on opposite sides; they were left in place twelve hours each time on alternate nights. The activity of each apparatus was 2,000 to 3,000. Their size varied from 12 to 20 sq. cm. of surface. They were slightly changed in position at each application, so that the skin surface ran no risk. A first series of applications consisted of ten nights. After a month's rest, a fresh series of ten nights; again a month's rest, followed by a third series. From the first month there was great improvement, the supples returned, the tumours were no longer adherent, the regression was progressive. About the fourth month, nothing remained of the cancers.

III. Cancer of the uterus, with invasion of the lymphatic glands. An apparatus was fixed in the vagina against the uterus; four apparatus were placed on the abdominal wall, two to the right and two to the left side. The pains ceased quickly and the tumours retrogressed. The amelioration was evident, and towards the third month by abdominal palpation it was impossible to detect any hardness, and hæmorrhage and the discharge had stopped. The vegetations at the cervix disappeared and the uterus regained its suppleness. The cancer, which had been inoperable and was despaired of, became operable. The patient was operated on and has since remained in good condition.

IV. Carcinomatous tumour in the neck, causing compression of the nerves of neck, severe pains and immobilization of the head. During the first month the treatment caused cessation of the pains, and the head again became mobile. In the third month the patient could turn the head without discomfort, and the tumour, which had been inoperable and despaired of, had diminished by half. The treatment is still being continued, but the result already obtained is very interesting.

THE REPORT OF THE CORONER FOR THE CITY OF LONDON.

The report of Dr. Waldo, Coroner for the City of London, on his work during 1908, which was presented to the Court of Common Council on February 25th, presents several points of interest.

Inquests.

The total number of inquests held was 418, including non-fatal fire inquests. These were distributed as follows: For the City of London, 194 deaths (142 males and 52 females), or 4 more than in the previous year. For the Borough of Southwark, 221 deaths (146 males and 75 females). The Coroner also inquired into other deaths notified to him, but after preliminary inquiries decided that formal public inquests were unnecessary. In the City of London there were 20 such deaths, as against 12 during 1907; and in the Borough of Southwark 64 such deaths, as against 60 during 1907. In 136 cases the Coroner's jury were satisfied that death was due to an ascertained natural cause as against 141 in 1907, while in 279 cases the cause of death could not be described—that is, it was either proved to be not natural, or the evidence was not sufficient to show whether it was natural or otherwise. Of the 279 deaths from other than natural causes 199 are accounted for by accident, as against 212 during 1907. It may be noted that 37 fatalities were due to vehicles, of which 9 in the City and 13 in Southwark were drawn by horses, and 12 in the City and 3 in Southwark were motor drawn.

There was an increase under the class "Suicide," and a decrease under the class of "Children suffocated whilst in bed with their parents or others." Inquests were held on the bodies of 10 infants suffocated whilst in bed with their parents, as against 23 in 1907. During the year there were 29 verdicts of self-destruction while insane, and 10 of self-murder or *felo-de-se*, while in 1907 there were 22 verdicts of self-destruction and 6 of suicide or *felo-de-se*.

Of the deaths attributable to "neglect, exposure or excess," 9 in number, only 5 (2 males and 3 females) were found by the jury to be directly due to disease caused by excessive drinking. In 1907 the number of deaths attributable to that cause was 14. In a considerable number of "natural" and "accidental" deaths, however, there was ground for believing that intemperance was a contributory factor.

Deaths under Anaesthesia.

Dr. Waldo states that a tentative measure in the shape of a proposed General Anaesthetics Bill is now under the consideration of the Privy Council and Home Office, which

bill limits the administration of anaesthetics to registered medical practitioners, and requires that all candidates before presenting themselves for their final medical examination shall have received thorough theoretical and practical instruction in anaesthetics under the supervision and to the complete satisfaction of their respective teachers. He thinks it has been conclusively shown (a) that present available data as to deaths during anaesthesia are so imperfect as to be useless for the purposes of formal investigation, and that it is highly desirable to arrive at satisfactory conclusions regarding all deaths under anaesthesia, both for the safety of the public and for the furtherance of scientific knowledge. At the request of a jury he sent in a rider at the latter end of 1907 to the authorities of a large and important general hospital in South London concerning the death of a young married woman who died under an operation from heart failure due to the administration of an anaesthetic known as chloroform. The rider was to the effect that:

Whilst no blame is attached by the jury to the administrator considering his limited experience, they recommend (1) that in all operation cases of a serious nature anaesthetics should be administered either by a staff anaesthetist or by a resident under his immediate supervision; and (2) that full statistical tables as to anaesthetics should be kept by the hospital authorities.

The receipt of this communication (the Coroner continues) was followed by an inquiry at the hospital in question, and the fact may be noted that, whereas 11 deaths under anaesthetics were reported to him during 1907, only 1 such death from the same hospital was reported during the year under report (1908). He points out, however, that it would be unsafe to draw conclusions from small numbers and from a single year.

The actual figures for past years in this particular institution were as follows:

Year.	Deaths under Anaesthetics.			
1901 half year	2
1902 whole year	7
1903 "	2
1904 "	7
1905 "	2
1906 "	7
1907 "	11
1908 "	1*

* Inquest held January 7th.

With the view of lessening the numbers of what he regarded as unnecessary deaths under anaesthesia, the following recommendations were made by Dr. Waldo:

1. That no general or local anaesthetic shall be administered by any but a duly qualified medical man, except under most exceptional circumstances, which shall be duly reported to some recognized official authority.
2. That full details be reported by the anaesthetist of all administrations of anaesthetics, whether in hospital or in private practice, including date, name and address of patient, of operator and of administrator, nature of operation, the drug used, and other pertinent details.
3. That a register of all administrations of anaesthetics be kept in all medical charities, Poor Law infirmaries, and other public institutions.
4. That, so far as possible, special skilled anaesthetists be appointed to all hospitals and infirmaries, and that resident anaesthetists be provided in the larger institutions.
5. That when the administration of an anaesthetic is entrusted to a junior qualified man he should be supervised by a skilled anaesthetist, except where he can produce a certificate of special skill and experience as an administrator, or where a skilled anaesthetist is not available.
- * 6. That notification be made to the coroner of all deaths occurring at any stage of general anaesthesia by the anaesthetist or by others concerned.
7. That coroners be required to hold a public inquiry into all cases of death during anaesthesia, and that they make a detailed report to the Registrar-General, together with the verdict.
8. That a Royal Commission, with advisory powers, might with advantage be appointed to inquire into the present facts of deaths under anaesthesia, together with the official machinery available for registration.

The Departmental Committee appointed by the Secretary of State to inquire into coroner's law and practice, now sitting, is taking evidence on deaths under anaesthetics.

Poisons and Pharmacy Act.

Another point touched upon by Dr. Waldo is the working of the Pharmacy Act. He says that a new Poisons and Pharmacy Act, which passed during the last session of Parliament, will come into force on April 1st. By this Act restrictions are for the first time placed on the sale of poisonous substances, such as hydrochloric, nitric, and sulphuric acids—a reform often suggested to the Home Office by City juries. He points out, however, that no mention is made of the equally poisonous liquid ammonia or of bichromate of potash, notwithstanding the fact that cases of accidental poisoning by both these substances have been brought to the notice of the Home Secretary by Dr. Waldo, with recommendations from juries that they be made subject to regulation as scheduled poisons. A particularly sad case in point, that of a girl aged 15 years, was investigated by him in 1908. Her death was caused by eating a piece of the salt of bichromate of potassium in the belief that it was a sweetmeat.

Protection of Infant Life.

Dealing with the protection of infant life, the coroner refers to the Children Act, 1908, which will come into force on April 1st, 1909. Amongst other matters, it renders punishable the exposure of a child under the age of 7 years to an inefficiently guarded fire.

The importance of this matter may be at once seen, says Dr. Waldo, when the fact is known that he has held inquests during the past year on 24 children, as against 19 in 1907, under the age of 7 years who were burnt or scalded to death owing, in a large majority of the cases, to the child having been carelessly left alone in a room containing an open fire grate without guard. In a few of these cases the cause of death was due to the child having been left alone with matches lying about.

So far as overlying is concerned, he thinks the Act certainly does not err on the side of severity. The recommendation of the Coroners Bill was that mere suffocation of an infant in bed should be regarded as evidence of neglect, but the Act has made it punishable only when proof is obtained that the parent or guardian was under the influence of drink, evidence of which, so far as he can see, it will be almost impossible to obtain in any court of law.

Identification of Dead Bodies.

Dr. Waldo states that, as regards the better identification of dead bodies, the matter has recently been settled by the determination of the Court of Common Council to instal at the City mortuary an apparatus similar to that in use at Brussels for the preservation of bodies by the agency of formalin.

The fourth Latin-American Congress will be held this year at Rio de Janeiro. In connexion with the Congress there will be an International Hygienic Exhibition, which will be open from August 1st to September 30th. Communications relative to the exhibition should be addressed to the General Secretary, 7, rua Uruguanana, Rio de Janeiro.

DURING the year 1908 the total number of bodies disposed of by cremation in Germany was 4,050 as against 2,977 in 1907, showing an increase of 1,073, or 36 per cent. The figures for the crematories at Bremen, Chemnitz, Coburg, Gotha, Hamburg, Jena, Karlsruhe, Mainz, Mannheim, Offenbach-on-the-Main, Pönsbeck, Stuttgart, and Ulm are all larger than those in the previous year. At Eisenach, Heidelberg, and Heilbronn there was a slight diminution. Among those whose remains were cremated were 1,474 females. The classification according to religious creeds gives some interesting results: Lutheranism stands at the head with 3,236 cases: 299 are described as Roman Catholics, 35 as Old Catholics, 153 as Jews, 72 as "free-religious," 49 as Dissenters, while 9 are described as belonging to other sects. In 197 cases no mention was made of creed. From these figures it appears that while the enormous majority of persons cremated were described as Lutherans, there was a considerable body of Catholics, notwithstanding the prohibition issued, we believe, by Leo the Thirteenth. For some reason, in Germany, as in France, cremation does not seem to appeal to free thinkers. In 2,517 cases, all coming under the head of Lutherans the incineration was accompanied by religious rites.

Medical News.

THE "E. M. I." (Études Médicales Internationales) has arranged this year to visit the medical schools of England, Scotland, and Ireland.

DR. WEIR MITCHELL of Philadelphia, the distinguished neurologist, who has also won fame as a novelist, celebrated his 80th birthday on February 15th.

THE lectures arranged by the National League for Physical Education and Improvement to be given on March 4th and 11th have been unavoidably postponed.

THE Association Générale des Médecins de France will formally celebrate the fiftieth anniversary of its foundation in April. It came into existence on August 30th, 1858.

THE next dinner of the Irish Medical Schools' and Graduates' Association will be held at the Hotel Cecil, London, on Thursday, March 18th; Lord Ashbourne will be the guest of the evening.

THE direction of the Hygiene Exhibition, to be held at Dresden in 1911, has been entrusted to Dr. O. Neustätter, co-editor of the *Gesundheitslehre*, a journal which is largely devoted to the exposure of quacks.

ON Tuesday next at 8 p.m., Dr. A. Harden, F.I.C., of the Lister Institute of Preventive Medicine, will read a paper on the relations to pharmacology of some recent advances in biological chemistry, before the Pharmaceutical Society of Great Britain.

M. MESUREUR, Director of Public Assistance in Paris, has paid English nursing a remarkable compliment by arranging that four French nurses should have a short course of practical training at St. Bartholomew's Hospital.

THE annual conversazione of the West London Post-Graduate College will be held at the hospital on Wednesday, March 24th, at 8.30 p.m. All past and present members of the college are cordially invited, and an invitation will be sent to any medical man applying to the Dean at the hospital.

THE University of Edinburgh will, at the approaching Spring Graduation, confer the honorary degree of LL.D. on Emeritus Professor Alexander Crum Brown, till lately Professor of Chemistry in that University; and on Surgeon-General Sir A. Keogh, K.C.B., Director-General of the Army Medical Service.

ARGYLLS LIMITED, the company which makes the Argyll motor cars, has recently undergone reorganization, and proposes shortly to open a dépôt in London, which will be under the direct control of the management of the works at Alexandria by Glasgow, to which address for all present all communications should be sent.

THE Colonial Office has issued a revised edition of the Memorandum on Medical Appointments in the Colonies, and also of the pamphlet entitled Information for the Use of Candidates for Appointment on the West African Medical Staff. Inquiries should be addressed to the Assistant Private Secretary, Colonial Office, Downing Street, S.W.

AN ophthalmic exhibition will be held on Friday and Saturday, March 12th and 13th, from noon to 10 p.m. each day in the rooms of the Medical Society of London. Its object is to bring under notice the latest models and improvements and a number of optical firms of repute will show apparatus and instruments. Particulars can be obtained on application to Mr. Ernest Schofield, 11, Chandos Street, London, W.

A PROVINCIAL sessional meeting of the Royal Sanitary Institute will be held in the University, Sheffield, on Friday, March 12th, and Saturday, March 13th. On the first day a discussion on medical inspection and its relation to the home life of children will be opened by Dr. Ralph P. Williams, School Medical Officer, Sheffield, and on the following day inspections will be made of the Plenum system of ventilation, new sewage works, and a smoke prevention exhibition.

FOLLOWING out the line of action adopted by the North Northumberland Division of the British Medical Association, the members of the West Penwith Medical Society, Penzance, mainly composed of members of the British Medical Association, passed the following resolution at a meeting held on February 24th: "That this Society unanimously disapproves of midwives engaging to attend cases for whom a medical man has not been engaged to attend, and they desire to point out to all nursing associations in West Penwith that they have unanimously resolved that they will not hold themselves responsible for attendance on such cases."

SIR THOMAS R. FRASER AND DR. JAMES A. GUNN reported recently to the Royal Society the result of experiments made in the Pharmacology Laboratory of the University of Edinburgh on the action of the venom of the South African *Sepeodon haemachates*. Its primary and greatest effect was found to be upon the respiration. In mammals death was found to be respiratory failure produced by paralysis of the respiratory centre, the excitability of the phrenic nerve ends being practically unimpaired. The venom also had a marked enfeebling action on the brain and spinal cord, and little, if any, effect on the motor nerve endings. The effects of the venom on the circulation were found to be of minor importance compared with those on the respiration.

A WELL-ATTENDED meeting of the medical officers and dental surgeons attached to the Metropolitan Provident Medical Association was held at the head office, 5, Lamb's Conduit Street, on Tuesday. Mr. Francis Buxton, Chairman of the association, presided, and there were also present Sir William Bousfield, Mr. C. G. Montefiore, Mr. A. L. Leon, Mr. W. E. Darwin, and Colonel Fellows, representing the Executive Committee. A resolution was unanimously passed approving of the action of the association in bringing to the notice of the London County Council the work and aims of provident dispensaries. It was also resolved: "That in the event of the London County Council applying to the Metropolitan Provident Medical Association to undertake the medical treatment of school children through the provident dispensaries of London, the medical officers would heartily co-operate with the association, and would do everything possible to meet the requirements of the educational authorities." A medical committee, consisting of Drs. G. Michael, S. Wilson, H. H. Sturge, H. Taylor, J. A. P. Barnes, G. M. Bluet, and Messrs. C. N. Bayfield and H. A. Matheson, dental surgeons, with power to add to their number, was formed to assist the Executive Committee in arranging the details of any scheme of co-operation which may be suggested between the provident dispensaries and the London County Council.

THE usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on February 19th, Dr. de Havilland Hall in the chair. The accounts presented showed that the operations of the society in January were more than usually successful. The amount of new business obtained was not so great as in January, 1908; but last year was a record in this respect, and some diminution of numbers in this item was to be expected. On the other hand, the sickness experienced was less than the average expectation; the claims received were for the most part of short duration, and, as more than one of the chronic cases have lately been removed by death, the sickness was not so heavy as at this time last year. The threatened epidemic of influenza seems to have nearly, if not entirely, disappeared, and the claims on the society this year so far have arisen mainly from the throat and chest affections to which medical men are specially subject in severe weather. At the annual general meeting of the members, to be held at the rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square, London, W., on May 27th, at 4.30 p.m., a satisfactory report will be presented. It will show that in the year 1908, more new members were obtained than in any previous twelve months of the society's working; and that the sickness branch, in which alone new business is now transacted, obtained a substantial addition both to the number assured and the amount of the financial reserves. Prospectuses and all further information on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

LITERARY NOTES.

It is announced that it is proposed to publish a short life of the late Sir William Broadbent. Lady Broadbent will be grateful if any one who has letters from him of general interest will kindly allow her to see them. They should be sent to her at 9, York Terrace, Regent's Park, London, N.W., and will be returned as soon as possible.

To the March number of the *Cornhill Magazine* Mr. Leonard Huxley contributes an article on the author of the *Origin of Species*. In it he speaks of the occasional intractability of Darwin's pen, which called forth the following humorous criticism after a re-reading of the *Origin*:

Exposition was not Darwin's forte, and his English is sometimes wonderful. But there is a marvellous sagacity about

him—like that of a sort of miraculous dog—and he gets to the truth by ways as dark as those of the heathen Chinese.

We suppose this quotation is from Thomas Henry Huxley. An account of Darwin's method of composition may be interesting. In his life of his famous father, Mr. Francis Darwin says that in writing a book Charles Darwin would spend much time and labour in making a skeleton or plan of the whole, and in enlarging and subclassing each heading. In his *Life of Erasmus Darwin*, as it was first printed in slips, the growth of the book from a skeleton was plainly visible. The arrangement was altered afterwards, because it was too formal and categorical, and seemed to give the character of his grandfather rather by means of a list of qualities than as a complete picture. It was only within, says Mr. Francis Darwin, the last few years that he adopted a plan of writing which he was convinced suited him best—namely, writing a rough copy straight off without the slightest attention to style. It was characteristic of him that he felt unable to write with sufficient want of care if he used his best paper, and thus it was that he wrote on the backs of old proofs or manuscript. The rough copy was then reconsidered, and a fair copy was made. For this purpose he had foolscap paper ruled at wide intervals, the lines being needed to prevent him writing so closely that corrections became difficult. The fair copy was then corrected, and was recopied before being sent to the printers. Then came the work of revising and correcting the proofs, which his father found especially wearisome. It was at this stage that Darwin first seriously considered the style of what he had written. When this was going on he usually started some other piece of work as a relief. The correction of slips consisted in fact of two processes, for the corrections were first written in pencil, and then reconsidered and written in ink. When the book was passing through the "slip" stage he was glad to have corrections and suggestions from others. Mrs. Darwin looked over the proofs of the *Origin*. In some of the later works his daughter, Mrs. Litchfield, did much of the correction. After his sister's marriage, most of the work fell to Mr. Francis Darwin's share. Mrs. Litchfield says that her father did not write with ease, and was apt to invert his sentences both in writing and speaking, putting the qualifying clause before it was clear what it was to qualify. He corrected a great deal, and was eager to express himself as well as he possibly could. Perhaps, says his biographer, the commonest corrections needed were of obscurities due to the omission of a necessary link in the reasoning—something which he had evidently omitted through familiarity with the subject. Not that there was any fault in the sequence of the thoughts, but that from familiarity with his argument he did not notice when the words failed to reproduce his thought. He also frequently put too much matter into one sentence, so that it had to be cut up into two. On the whole, Mr. Francis Darwin thinks the pains which his father took over the literary part of the work was very remarkable. He often laughed or grumbled at himself for the difficulty which he found in writing English, saying, for instance, that if a bad arrangement of a sentence was possible he should be sure to adopt it. He once got much amusement and satisfaction out of the difficulty which one of the family found in writing a short circular. He had the pleasure of correcting and laughing at obscurities, involved sentences, and other defects, and thus took his revenge for all the criticism he had himself to bear with. He used to quote with astonishment Miss Martineau's advice to young authors—to write straight off, and send the MS. to the printer without correction, but in some cases he acted in a somewhat similar manner. When a sentence got hopelessly involved, he would ask himself, "Now, what do you want to say?" and his answer written down would often disentangle the confusion. His style has been much praised; on the other hand, at least one judge remarked that it was not a good style. Mr. Francis Darwin says of it:

It is, above all things, direct and clear; and it is characteristic of himself in its simplicity, bordering on naivety, and in its absence of pretence. He had the strongest disbelief in the common idea that a classical scholar must write good English; indeed, he thought that the contrary was the case. In writing he sometimes showed the same tendency to strong expressions as he did in conversation. Thus, in the *Origin*, p. 440, there is a description of a larval cirripede, "with six pairs of beavi-

fully constructed natatory legs, a pair of magnificent compound eyes, and extremely complex antennae." We used to laugh at him for this sentence, which we compared to an advertisement. This tendency to give himself up to the enthusiastic turn of his thought, without fear of being ludicrous, appears elsewhere in his writings.

As for ourselves, we think Darwin's style, with its simplicity and absence of "fine writing," almost perfect for the object he had in view. The pains he took to express his ideas clearly should be a lesson to all scientific writers.

THE RADIUM INSTITUTE.

OFFICIAL STATEMENT.

We have received the following official statement for publication:

His Majesty the King has been graciously pleased to become the Patron of the Institute.

The following additions have been made to the Committee: The Hon. Walter E. Guinness, M.P., as the representative of Lord Iveagh; Felix Cassel, Esq., K.C., as the representative of Sir Ernest Cassel.

A site has been acquired in Riding House Street, Portland Place, upon which the necessary building will be erected with as little delay as possible. The architect is T. P. Figgis, Esq., F.R.I.B.A.

In general terms, it may be said that the Institute will be conducted upon the lines of the Radium Institute in Paris. In addition to the superintendent, the assistant to the superintendent, and the director of the laboratory, there will be an honorary medical and surgical staff (not yet appointed).

The Institute hopes to acquire radium to the amount of 5 grams.

The treatment carried out in the Institute will be strictly limited to treatment by radium or other radio-active substances. Treatment of cases by the Roentgen rays, the Finzen light, and by electrical currents will have no place in the Institute, as such measures of treatment are already very amply provided for elsewhere.

The building will be in two parts, with separate entrances. One section will be devoted to necessitous patients, and the other to the well-to-do. The former will be treated free: the latter will be required to pay fees on such a scale as the medical and surgical staff may determine.

Necessitous patients must bring a certificate from a medical practitioner stating the nature of the case and the fact that the individual is unable to pay for any necessary treatment.

Well-to-do patients should, whenever possible, be accompanied by the medical practitioner under whose care they are. Failing such personal attendance, each patient must bring a letter, stating the particulars of the case, from his or her medical adviser.

Indeed, no patient, poor or well-to-do, will be treated in the Institute except upon the imprimatur of a qualified medical man.

It is hoped that medical practitioners will associate themselves with the specific treatment carried out at the Institute on their individual patients.

Demonstrations in the use of radium will be given, and medical practitioners can be advised as to the mode of employment and as to the radio-activity of their own specimens of radium.

Further particulars will be published at a later date.

British Medical Journal.

SATURDAY, MARCH 6TH, 1909.

THE TREATMENT OF CANCER.

THE scientific surgeon cannot yet sigh, like Alexander, for fresh realms to conquer. Since the principles of the treatment of wounds laid down by Lord Lister have been generally adopted, his knife has invaded nearly every part of the body, and has dealt successfully with many forms of disease which used to be regarded as inevitably fatal. But cancer still to a large extent remains the mere despair of surgery. Operations are, indeed, done for malignant disease which could not justifiably have been attempted in pre-antiseptic days; technical details have been perfected, and many satisfactory results have been recorded. But a cure that can safely be called definitive is extremely rare, and the causation of the disease, without which effective treatment is impossible, has not yet revealed itself to the many keen eyes that are eagerly striving to penetrate the mystery which surrounds its origin. The labours of the investigators engaged in the search have certainly not been fruitless; much has been learnt about the mode of development and dissemination of the disease, its manifold varieties, and the ultimate fate of its constituent elements. But even if it be assumed that there is a fallacy in the belief which often finds expression, that the prevalence of cancer is increasing, it must be admitted that no reduction in the death-rate from the disease has yet been effected. It is also still true as a general proposition that a diagnosis of cancer virtually means a death sentence to the sufferer. This fate may overtake him swiftly, or may follow him with the halting but untiring foot which the poet gives to justice: but, unless he has the good fortune to be cut off by some more merciful ailment before his enemy comes up with him, in the end the disease is pretty sure to run its quarry to death. In the meantime the victim lives under the shadow of a dark foreboding:

Like one that on a lonesome road
Doth walk in fear and dread,
And, having once turned round, walks on,
And turns no more his head;
Because he knows a frightful fiend
Doth close behind him tread.

While it is one of the worst forms of cruelty to delude those under the doom of cancer with hopes of cure, it is the duty of the medical profession to work steadfastly at the problem. It must not allow itself to fold its hands and acquiesce in failure. "Impossible!" Napoleon used to say; "never utter 'that fool of a word before me.'" The saying might well be the motto of those who give themselves to cancer research. There are signs which appear to indicate that, if we are not yet near a final solution, we are at last on a path that may lead to discovery of the secret so long and so jealously hidden.

It is in the hope of encouraging all practitioners of the healing art to fresh efforts in the struggle against cancer that we publish in the present issue

several papers in which the subject is dealt with from different points of view. Sir Hector Cameron rightly holds that while the pathologists are hard at work, it is equally incumbent upon those whose experience has been wide enough to make known the lessons which it has taught them. The publication of operations while the surgeon's knife is yet, figuratively speaking, dripping with blood, is not only misleading, but calculated to bring surgery into contempt. But the fruits of an experience extending over forty years and ripened by ever-growing knowledge, are beyond all price. Unfortunately this is just the kind of information which it is most difficult to procure. The profession, therefore, owes a debt of gratitude to Sir Hector Cameron for supplying such valuable material from his carefully garnered store. One point which must strike every reader of his address is that he has shaken himself free from the trammels of classical teaching as to what constitutes a cure. As he well says, cancer is one of the most contradictory of all diseases. It refuses to be bound by any formula in regard to the period of time beyond which recurrence may be regarded as unlikely. Some of his cases strikingly show the untrustworthiness of the three-year limit. In one of them the patient, after living free from the disease for twenty-seven years, was again attacked, but survived a second operation five and a half years. In another there was no recurrence for nearly twelve years, and then the disease appeared in an unrelated part of the body. In a third case no recurrence took place in the part first affected, but nearly nine years later the corresponding organ was invaded; more than two years have now elapsed without any further development. Other cases are cited by Sir Hector Cameron in which recurrence took place many years after removal. It may be a question whether in these cases the later outbreak of the disease was connected with its original manifestation. Not so long ago the surgeon would have thought the matter settled by saying that the patient had a cancerous diathesis. Sir Hector Cameron, with the modesty born of the true scientific spirit, does not think he has solved the question in this easy fashion. He admits the possibility of a second invasion, but in other cases—notably in that of the patient who lived nearly thirty-three years after the first operation—he thinks the later growth sprang from a residue of the first one traversing the subpectoral fascia. But, as he says, we do not know why it remained so long inactive; "we neither understand its long sleep nor its 'awakening.'" He uses these cases to point the moral that "whether we operate obviously late in the 'disease, whether by limited or extensive removals, 'we must remain uncertain of the results.'"

Another instructive point is brought out by Sir Hector Cameron when he relates cases showing that a mammary cancer may produce extensive involvement of the lymphatics before it is of a size which renders it demonstrable. He concludes that *a fortiori* a tumour so small that it has but recently attracted the patient's attention must not be looked upon as necessarily a very favourable one for operation. As he pithily puts the matter, "small size and recent origin 'are by no means convertible terms.'" Sir Hector Cameron discusses with commendable frankness another aspect of operation for cancer—that is to say, its possible effect in promoting what he calls "destructive dispersion" of the disease. There are cases in which this result seems to be fairly attributable to the operation, and as he says, "the clinical fact

"is enough to make us, as far as possible, avoid all "undue pressure upon and squeezing of the tumour. "whether during diagnostic manipulation or during "the operation for its removal."

Sir Hector Cameron's experience comprises a good many examples of the disappearance and cure of cancerous lesions quite apart from any treatment; he says that in these, for some inexplicable reason, dissemination does not reach internal organs. The key to the mystery here referred to by the distinguished Glasgow surgeon is, we think, furnished by Mr. Sampson Handley, in whose most interesting lecture on the Natural Cure of Cancer the doctrine that "the progress "of a cancer is normally accompanied by retrogressive "or curative processes" is elaborated and illustrated. The natural history of a cancer is, he says, one of centrifugal growth followed by centrifugal death. Unfortunately for the patient, in most cases the self-curative process fails to overtake the centrifugal spread or permeation, and so fails to arrest the march of the disease. In fact, the patient dies before the disease has time to cure itself. But this does not happen in all cases, and Mr. Sampson Handley shows that there is a gradation in destructiveness in cancers of different types, ranging from the medullary carcinoma of young people, in which the cells possess a high degree of proliferative power, to the atrophic scirrhous of old people, whose connective tissue is poor in cells and the cancer is of low proliferative power. The natural local cure of cancer is, according to Mr. Handley, brought about by fibrotic processes which cut off the cancerous epithelium from the contact with connective tissue cells which is necessary to maintain its vitality. As we understand him, it is this process of perilymphatic fibrosis which, if completed in time, prevents dissemination of the cancer. An attentive study of Mr. Handley's paper can scarcely fail to convince any reasonable person of the futility of most of the methods of treatment by which cancer has been said to be cured. As he says, "the "literature of cancer therapeutics does not contain "the record of a single fact which cannot be paralleled among the histories of untreated cases." He thinks, however, that the x rays have an effect in promoting the natural tendency to fibrosis in masses of malignant tissue. Mr. Sampson Handley has seen great apparent benefit in patients suffering from cancer, result from a change of residence from town to country, and he thinks the open-air treatment may be worthy of trial in the more chronic cases of inoperable cancer. But he warns us that in no circumstances whatever should the treatment be recommended as a substitute for operation when surgical intervention is possible.

The spontaneous disappearance of tumours in mice after successful inoculation has been recorded by Dr. Bashford, and examples occurring in the human subject have been reported by Mr. Pearce Gould, Mr. Langlow, Mr. H. J. Waring, Mr. Bruce Clarke, and others. Dr. Bashford has shown that the activity of cancer cells waxes and wanes, and that they are much more vulnerable in the negative phase through the increased resistance induced in the soil. Dr. Bashford foresees a still remote possibility that dissemination from the primary focus may be hindered, but he sees no probability that the primary focus will be got rid of by other means than early surgical removal.

The knife, used before it is too late, is still, therefore, the only method from which satisfactory results can be expected, unless it be in the very exceptional

cases in which Nature may heal without the help of surgery. These researches, however, seem to point the way to the discovery of some means whereby Nature may be assisted in working the "miracle of cure."

Holding to the principle that everything offering a reasonable prospect of alleviation in so intractable a disease should be made known, we publish some cases in which Dr. Fenwick of Accrington records good results from the use of potassium bichromate. The diagnosis in most of them is based on examinations made by the Clinical Research Society. We have satisfied ourselves that the cases are reported in good faith. They might with advantage have been related in fuller detail; but, such as they are, we think it our duty to present them to our readers.

THE LONDON UNIVERSITY, THE COLLEGES, AND THE MEDICAL FACULTY.

We are enabled this week to publish a report by a strong joint committee presented to the Royal Colleges of Physicians and Surgeons in London, and adopted by those colleges shortly before Christmas, propounding a scheme for establishing a system of conjoint examinations between the Royal Colleges and the University. The report would appear to have been drafted before it was known that the Senate of the University intended to ask for a Royal Commission, and it is therefore in the main directed to indicating the way in which the proposal might be carried out under the existing statutes of the University.

The report expresses the opinion that it is desirable that the system of teaching and examination in London should be so co-ordinated as to reduce the number of examinations, and points out that the general character of the examinations of the University and of the Conjoint Board is very similar. The suggestion is that the Royal Colleges should be associated with the University in conducting the preliminary scientific, intermediate, and final examinations for the pass degrees of M.B., B.S., and M.D., leaving to the Colleges the right to grant diplomas to persons ineligible or not desiring to obtain degrees, and to the University its existing rights as to the granting of degrees, while asking it to exercise them as regards its pass degrees conjointly with the Royal Colleges so far as students who have been at least four years in London are concerned. It will be seen that these proposals involve the assumption that the University will grant honours degrees in medicine and surgery, and there can be no valid objection to them on this score. The concluding paragraph of the report states that the Royal Colleges will lay their views before the Royal Commission, and also ask the University to appoint delegates to discuss the question, so that if possible the representations made to the Royal Commission may be joint representations of the Colleges and of the University. The scheme as set forth in the report is, of course, a mere outline, though it ought not to be very difficult to fill in its details; but we again venture to say, at the risk of wearying by repetition, that unless the University can be induced or compelled to substitute for its present matriculation examination one arranged on more practical lines, and in harmony with the conditions imposed on the public and other secondary schools by the regulations of other universities and of the public services, no scheme can be expected to succeed in placing within the reach

of the majority of London students a degree in medicine. Granted that sufficient attention is directed to this point in the representations made by the Colleges to the University and to the Royal Commission, it seems reasonable to hope that the long-desired co-operation which the existing statutes authorized the University to bring about, and which it has failed to bring about, may become an accomplished fact.

It was mentioned a fortnight ago that a memorandum was in course of circulation outlining a scheme for the formation of a Faculty Board to act as the representative committee of the Medical Faculty of the University. The text of this memorandum and of the resolution to be proposed at the meeting of the Faculty on Friday will be found on pp. 636, 637, and it will be observed that the resolution is to be proposed and seconded respectively by two members of the Faculty who may, perhaps, be said to represent opposing parties. When the University was reconstituted ten years ago, Boards of Studies composed of teachers were appointed with a view to carrying out one of the many objects of the reconstitution, which was to give to the teachers their due influence in the determination of the curricula and examinations, and so to make the University a teaching body. The general assemblies of the Faculty were given practically no power beyond that of electing to the Senate a certain number of members who were also members of the Academic Council. The recommendations of the Boards of Studies were not to be considered by the Senate until after they had been reported upon by the Academic Council in the case of internal students, as the vast majority of medical students are. The Academic Council consists of representatives of all the Faculties, and it has become customary to refer any matter affecting a particular faculty to a subcommittee consisting of the representatives of that Faculty—that is to say, in the case of medicine to three persons, who cannot, of course, be cognizant of all the aspects of all questions affecting the Faculty of Medicine. Moreover, the medical members form a small minority on the Academic Council, a body largely concerned with routine business.

Among the causes which have retarded the development of the University on its medical side has been the fact that the Medical Faculty is itself too large and unwieldy a body to utilize the only weapon put into its hands—the power to consider reports of Boards of Studies and offer advice to the Senate upon them. On the other hand, the Academic Council is too small, and the representation of each faculty upon it is neither adequate nor representative of the varied interests involved; moreover, it is overburdened with detail, and consequently has neither time nor energy for its proper charge, which is the consideration of questions affecting the whole University and all the Faculties. The Cowper Commission suggested the formation of Faculty Boards consisting of persons elected by the faculty in sufficient number to include representatives of the various branches of medical study. Under the present constitution it is not possible to appoint an official Faculty Board with executive functions, and the need for such an executive committee will no doubt be impressed upon the Royal Commission; nevertheless it will be possible for the Medical Faculty by general consent at once to delegate its advisory functions to such a committee, which might be called a Faculty Board, and the Senate might be requested to regard this Faculty Board as the delegate of the Faculty itself, and

therefore as the chief advisory body in medicine. The experience gained by the working of such an advisory committee would be a valuable guide to the Royal Commission in finally deciding the scope of the powers and duties of a statutory Faculty Board.

In order to obtain representation of all the different subjects of the medical curriculum it would be necessary to have a rather large Faculty Board; the memorandum suggests 24 to 30, about one-third representing the preliminary and intermediate medical subjects, and about two-thirds the final studies. It may be argued that the appointment of the Royal Commission renders the proposed action at the present time unnecessary, but the answer to this is that the Royal Commission cannot be expected to report for some considerable time, and that after it has reported there must be a further delay before its recommendations can be carried out. Meanwhile, the paralysis of the University on the medical side will continue, and as this paralysis appears to be in part, at least, due to an easily removable cause, there seems no ground for refusing this palliative treatment while awaiting the more drastic surgical measures which the Commission may be expected to apply.

THE MILITARY MEDICAL SERVICES.

MR. HALDANE, in his memorandum relating to the army estimates for 1909-10, has introduced a paragraph discussing the loss of the British army in the United Kingdom, India, and the Colonies, by death and invaliding. He has dealt with the matter fully this year because he considers that we are sufficiently removed from the disturbing influence upon normal statistics of the South African war to contrast the wastage from deaths and invaliding at the present day with that of the period preceding the war. In the memorandum the statistics for 1898 are contrasted with those for 1907, the last year for which returns are at present available, but we have thought it well to set out the figures year by year (see page 635). They show a remarkable diminution in the loss by disease, both loss of life and loss of service. The fall in rates of admission to hospital of constantly non-effective from sickness is partly to be attributed to an administrative improvement by which men with slight ailments are treated in barracks as out-patients. The true effect of the efforts at disease prevention which were redoubled and systematized as the result of the reforms in the Royal Army Medical Corps instituted in 1902 are best seen in the death and invaliding rates. The most conspicuous effect on the death-rate is to be observed in the Indian returns; in 1888 the ratio of deaths per 1,000 of strength in India was 15.20; in 1898 it was 20.31; a steady fall has been maintained since 1903, and the rate in 1907 was 8.38. The ratio discharged as invalids has followed a very similar course: in 1888 it was 12.43; in 1898 it was 19.94; and in 1907 it was 8.84. The decline in the death-rate among British troops serving in the colonies, including the force in Egypt, has also been conspicuous; it was 8.46 in 1888, and 5.16 in 1907. In the United Kingdom there has also been a decline both in deaths and invaliding, but the death-rate in earlier years was much lower in this country than in the colonies, and the scope for improvement therefore narrower. As Mr. Haldane points out, the improvement is not only welcome as indicating the increased wellbeing of the soldier, but as implying an all-round saving in the cost of the

army, since it means a reduction in the number of hospital beds, fewer men maintained in peace to produce the given number fit for war, and smaller annual drafts to be sent abroad.

The improvement is, we believe, to be attributed to a new spirit in the army, a recognition of the essential part which an efficient medical service can play in obtaining an efficient army, and in maintaining its efficiency both in peace and in war. We have said advisedly that a new spirit exists in the army, for we believe that the new conception has been accepted by officers of all branches who take a serious professional view of their calling. The fundamental principle is that the medical corps of an army is concerned with the maintenance of its fighting strength. The medical corps has, therefore, three classes of duties—therapeutic, military, and sanitary—using these terms each in its widest sense. The military medical officer of to-day after joining receives a very thorough training in his special duties, and the whole trend of this training is to impress upon him that his corps is an integral part of a great organization, all the branches of which are working towards a common end, which is to put and keep an efficient army on foot. He learns that in war his corps is responsible for the administration of the large army of non-effectives who are produced—and, it may be added, produced with such startling rapidity—in all campaigns; that his corps is responsible for the treatment of injury or illness which has rendered a man non-effective, for his removal from the fighting lines, his transmission along the line of communications to the base, and his final disposal either by return to duty or by return home as an invalid. The corps, therefore, is responsible for the details of the treatment, removal, clothing, and feeding of the non-effective; and the re-arming and reclothing of the man who recovers his health and can return to the ranks. Further, in peace he learns that it is through his corps that the soldier is enlisted, and through it in many instances discharged; that the selection of soldiers is a grave responsibility, and that the diminution of wastage by the prevention of unnecessary invaliding is a most important element in the economy and efficiency of an army. Both in peace and in war he is taught to realize that upon his knowledge, efficiency, and zeal must depend to a very large degree the extent to which the prevention of disease, and especially of such diseases as typhoid fever, which has always been the scourge of armies in the past, can be carried out. The success in the prevention of disease in an army is not a matter entirely in his hands; without the hearty and intelligent co-operation of military officers in all branches and grades complete success is not possible, but we believe that we have been justified in the statement that there is a new spirit in the army generally, and that it has resulted in an approximation of medical to general army administration. The relation of medical to general army work is studied by modern staff officers, and the co-ordination of combatant and medical duties is making satisfactory progress.

Mr. Haldane has told the country that what it wants is a small and efficient army, organized and administered on scientific methods, and ready for service abroad, and he, at least, clearly recognizes that scientific efficiency is impossible unless the multifarious duties which fall to the lot of the medical

corps are adequately discharged, and that they cannot be adequately discharged unless the staff of medical officers is maintained at sufficient strength, and unless these officers are encouraged, and required, to cultivate the special knowledge and experience which is necessary for the due discharge of their special duties.

If and when this country is involved in war the regular army will have to take the field, its place must be supplied by the Territorial Force; in that force the place of the Territorial Medical Corps will be not less important than in the regular army; in fact, it will be almost precisely the same. It will have the same administrative and scientific duties, the same obligation to protect the soldier from disease, and the same responsibility for his safe transfer when sick or wounded from the fighting line to the general hospital.

DEATH CERTIFICATION.

EVERY year brings fresh evidence of the necessity of legislation in connexion with the registration of deaths and the law relating to burials. We are, therefore, glad to see that Mr. George Greenwood has again introduced his Deaths Registration and Burials Bill. Last year it had no chance of passing into law, much as it is needed, but we hope that this year better fortune may attend it. The bill proposes to give effect to the recommendations of Sir Walter Foster's Committee of 1893. Under it no death could be registered without a certificate of death signed by a registered medical practitioner or the public certifier of deaths appointed under the Act, or a proper verification certificate of death signed by the public certifier of deaths. The bill provides also for the appointment of a public certifier of deaths in every Poor Law union, who must be a registered practitioner, and who would be responsible for the verification of the fact of death in all cases. The bill would also make it impossible for any body to be buried without a certificate from the registrar of deaths or from a coroner sent directly to the burial authority, which would have to be returned to the registrar endorsed after the burial. The bill also provides for the registration of stillbirths and the form of death certificate, and legalizes penalties for non-compliance with the provisions of the measure. In some quarters it may be held that this subject is under the consideration of the Departmental Committee now considering amendments on the law relating to coroners. Even if this be so, Mr. Greenwood's bill suggests to that Committee the directions in which the law can best be amended; and while the Government will no doubt await the report of their Committee before taking action, we would urge, in the interests of the public, that any great delay is unjustifiable. Legislation has been overdue for years, and the manner in which this subject has been neglected by successive Governments for more than fifteen years after an authoritative report on the evils of the present system, has become a scandal. Under the existing law crime often escapes detection. More than once this has been painfully illustrated in criminal trials. Even now over 8,000 deaths are uncertified every year, and the slow rate of improvement is illustrated by the figures for the last ten years for England and Wales. The uncertified deaths for 1897 were 11,103; for 1898, 10,441; for 1899, 10,745; for 1900, 11,257, and for 1901, 9,936. In answer to a question put in the House of Commons on Monday last by Mr. George Greenwood, the President of the Local Government Board has

brought these figures up to date in the following table:

Year.	Total Number of Deaths.	Number of Uncertified Deaths.	Proportion per 100 of Uncertified Deaths.
1902	535,538	9,654	1.80
1903	514,628	8,721	1.69
1904	549,784	8,882	1.62
1905	520,031	8,446	1.62
1906	531,281	8,114	1.53

These figures show, it is true, a slow improvement. In the first five years there were 53,532 uncertified deaths as compared with a total of 43,817 in the second quinquennial period. This is good so far as it goes, and has been produced by complaints made from time to time by the General Medical Council and by the British Medical Association. The Registrar-General has been braced up to stricter administration of a defective law. But the evil can never be adequately dealt with until a new and more strict Act has been placed on the Statute Book. Under the present, crime can escape detection, deaths are registered and bodies are buried under conditions that do not secure safety for the public or accuracy for statistical records. It is time that a loose and imperfect system was mended, and we urge upon the Government the necessity of dealing with the subject speedily and drastically.

THE WANING OF CONSCIOUSNESS UNDER CHLOROFORM.

DR. ELMER E. JONES, of Indiana University, has contributed an interesting paper to the *Psychological Review* on the waning of consciousness under chloroform. He gives the results of three introspective studies on himself during the administration of the anaesthetic. At the first inhalation, he says, there are marked sensations in the region of the heart, the contractions of which become violent and accelerated. Immediately accompanying these sensations a peculiar stupefying feeling pervades the whole body. In regard to the order in which the various types of consciousness disappear there are, he believes, two sharply defined stages: first, the complete damping down of all the sense organs, so that there is no communication with the outside world; secondly, the disappearance of memory, all types of imagery, associational processes, reason, and isolated ideas. In the very earliest stages of anaesthesia the visual sense was slightly stimulated, the colours in the spectrum appearing a little brighter, letters and figures somewhat clearer and the light in the operating room a little more intense. Hearing for the first few minutes was almost normal, save for a slight roaring which for a considerable time did not appear to interfere seriously with perfect audition. At this early stage various movements were made to test the kinesthetic sensations. For the most part these sensations appeared normal, though to innervate seemed difficult, and to initiate a movement seemed slightly fatiguing. There also appeared in the movements themselves two illusions: all movements made appeared to be much longer and much slower than they actually were. The tactile sense in the early stages seemed slightly dulled to the touch of the pointed instrument, yet it could be accurately localized. At the close of the first two minutes there was a general bodily stupor, accompanied by decidedly pleasant feelings throughout. Dr. Elmer Jones says that, in the three tests made by him, the

first sense to break down under the influence of chloroform was hearing; while vision was still perfectly clear, and the tactile sense only slightly blunted, audition had begun rapidly to wane. All the deeper conscious states were perfectly normal at that time. Memory was not impaired, the imagination was very active, and figures were added up with as much ease as under normal conditions. With the disappearance of the tactile sense and hearing the body had completely lost its orientation. It appears to be simply floating in space. Dr. Elmer Jones describes this as a most ecstatic feeling. His feelings corresponded very closely to Cardinal Newman's description of death in the *Dream of Gerontius*, when he says:

Down, down, forever I was falling, through
The solid framework of created things.

Closely following the disappearance of the tactile sense all muscular control was lost. But, after all movements had ceased, it was still possible to send the impulse to the proper muscles from the motor centres in the brain; at least, there was a distinct feeling of the impulse so moving. The last movements to disappear were the most highly specialized; the fingers could be moved for a considerable time after the biceps and triceps refused to contract; the organs of speech could be innervated to movement a considerable time after most other muscles refused to act, but, of course, speech was defective. The movements of the tongue and eyes were the very last to disappear. At this stage of the anaesthesia the sense element in consciousness had practically been eliminated, but there still remained an inner consciousness which for the most part was perfectly normal. At this point there appeared a pretty general disintegration of ideas, and all associations seemed considerably broken. Ideas disappeared very rapidly, leaving an entire blank. These lingering ideas were some of the very earliest gained in life. They were so vague and indistinct that they could scarcely be recognized, yet the fact that they remained so long as the residual of weakened cerebral activity shows how deep-seated they are in the mental constitution. Dr. Elmer Jones thinks his observations throw light on the psychology of death. But, after all, experiences under anaesthesia are such stuff as dreams are made of. From the sublime thoughts that came to him while under the influence of chloroform Oliver Wendell Holmes thought he would be able to solve the riddle of the universe. Placing himself in his arm-chair, with pen, ink, and paper at hand, he inhaled the anaesthetic. As drowsiness stole over him, the nature of things seemed revealed to him. By a vigorous effort he seized his pen and wrote, he knew not what, for before he had finished he fell back unconscious. When he awoke, with trembling anxiety he turned to the sheet of paper, on which he could read in scrawling characters, but quite legible, the secret he wished to know disclosed in the following oracular words, "A strong smell of turpentine pervades the whole!"

THE LIGHTING OF SCHOOL ROOMS.

THIS important question has been studied in America and Continental countries perhaps more carefully than in England. The city of Boston in 1907 appointed an expert committee consisting of three ophthalmic surgeons and two electricians to carry out experiments to determine the best method of lighting school rooms, and the chairman, Mr. Miles Standish, has published an account of its work and conclusions in *Ophthalmology*. It is not difficult to arrange the light for a single desk; it should be sufficient in strength, it should come from the left side, it should not be reflected from the paper into the eyes of the student

and, though the light upon the book should dominate, the general illumination of the room should be nearly as great as that upon the paper to avoid too great a contrast. In the school room the problem is more complicated, for from forty to sixty desks have to be illuminated. The first requisite is good general illumination, and this must depend upon the style of decorating and furnishing adopted. The best colour for the walls is a pale yellow-green, or buff, the latter being perhaps more suitable for both day and night work. The "window shades," which are, we fancy, what we should call "blinds," should be "hand-painted" grey-green, which is the best colour to exclude the direct sun by day and reflect the illuminant at night. The desks should be of light-coloured wood, but the surface should not be polished. In Germany an attempt has been made to secure a general diffuse illumination at night by throwing a powerful light upon a white ceiling and upon the upper third of the walls. This method demands a brilliant and therefore expensive light, and the absence of shadows has a bad physiological effect. The experiments were made in a room 23 by 28 ft., the walls were painted light yellow, the ceiling white. It was found that it was necessary to have at least nine stations; it was difficult to avoid concentrating the light upon the desks in proximity to these stations, and to eliminate conflicting shadows. A shade called the "Zalinsky," constructed of prismatic glass, coated on the inner or outer surface with white enamel, was found to be the best. Sufficient light penetrated it to properly illuminate the ceiling and walls, but the greater portion was projected downwards at a wide angle. Within these reflectors were placed incandescent bulbs, the lower third or less of the bulb being frosted to hide the filament. When the light stations were properly arranged, it was found that at no desk did the shadow of the pen fall upon the paper, nor did a head ever cause a shadow to obscure the work. With the correct lamp, the candle-power on top of the desk was 2.5. The 40 watt 36 candle-power tungsten lamp was the most efficient as regards illuminating power, and showed a net economy of 45 per cent. when compared with a carbon lamp. Attention is drawn to a report by Mr. Bishop Harman to the Educational Committee of the London County Council in 1907, giving an account of how best to illuminate a school by gas. Harman concluded that the shade of a mantle burner must have a spread of 90°; but with an alternating current allowing of a simple static transformer, and the use of high-efficiency metallic filament lamps, the cost of electric lighting should not be much more than that of gas.

THE FOSSIL MAN OF LA CHAPELLE AUX SAINTS.

PROFESSOR MARCELLIN BOULE, palaeontologist to the natural history museum, recently communicated to the French Academy of Sciences a note on the remarkable human remains found in a grotto near to La Chapelle aux Saints by three French abbés, MM. J. Bouyssonie, A. Bouyssonie, and L. Bardon. Professor Boule vouches for the archaeological competence of these gentlemen, and says that there can be no doubt that these bones were found in geological strata corresponding to the middle pleistocene period, and that their antiquity is attested also by their fossilized condition as well as by their morphological characters. The bones comprise a skull broken into numerous fragments, some vertebrae, and certain bones of the limbs. The last indicate an individual of the male sex whose height scarcely reached 1 m. 60 (5 ft. 4 in.). The skull has been satisfactorily reconstructed and shows striking human characteristics; it is dolichocephalic,

the cephalic index is 75; the bones are very thick, the cranial cavity flattened, the frontal bone retreating, and there is an enormous development of the superciliary ridges, which are as prominent as those in the famous Neanderthal skull, and are surmounted by a deep furrow, which extends from one orbital process to the other; the occipital portion of the skull is prominent but much depressed: the occipital foramen is placed far back, and the occipital condyles are flattened, while the mastoid processes are not well marked. The face shows considerable prognathism, the orbits are projecting and large, and the nose, which is separated from the forehead by a deep depression, is short and very broad. The superior maxilla, instead of being hollowed out below the orbits to form the canine fossa, as is the case in all existing human races, protrudes forward, to form, with the prolongation of the malar bones, a sort of snout. The teeth have disappeared, but the palatine vault is very long, and the lateral borders of the alveolar arcade are nearly parallel, as is seen in the anthropoid apes. The lower jaw is remarkable for the great width of the condyle, the slight depth of the sigmoid notch, the great thickness of the body, the obliquity of the symphysis, and the absence of chin. This skull presents all the characters of the crania found at Neanderthal and Spy, and as specimens of this type have now been found at places far removed from one another, it can no longer be contended that they represent merely a pathological condition, as was at one time thought by men of such eminence as Virchow, Carl Vogt, and Quatrefages; they must represent the type of a race of men inhabiting a portion of Europe in the middle pleistocene period. The type differs from any of the races actually in existence, and is much inferior to them. There is no question of any generic difference, but whether a specific distinction should be recognized must depend on what is meant by "species." If the cranium belonged to a monkey, a carnivore, or a ruminant, the characters are so marked that they would justify its classification as a separate species. Professor Boule thinks that such skulls occupy a position midway between the *Pithecanthropos* of Java and the lowest living human races, although he does not imply by this that there is any direct genetic connexion.

THE INTERNATIONAL OPIUM COMMISSION.

THE International Opium Commission which has been sitting in Shanghai has ended its labours and has drawn up a series of resolutions, the substance of which has been telegraphed by the correspondents of the *Times* and of Reuter's Agency. The first resolution recognizes the unswerving sincerity of the Chinese Government in its efforts to suppress the use of opium, the increasing body of public opinion among the Chinese by which these efforts are supported, and the real, though unequal, progress made in a task of the greatest magnitude. The second recognizes that the unrestricted manufacture and sale of morphine is a grave danger, and that the morphine habit shows signs of spreading, and therefore the Commission urges strongly upon all Governments the importance of taking drastic measures to control the manufacture and sale of this and other derivatives of opium. The third resolution, recognizing the importance of the scientific investigation of anti-opium remedies, and of the properties and effects of opium, recommends each Government to take such action in this branch of the subject as it may deem necessary. These three resolutions were submitted by the British delegates. Two other resolutions were

adopted on the recommendation of the American delegates: one of these had reference to the institution of reasonable measures at ports of departure to prevent the shipment of opium or its alkaloids, derivatives, or preparations to any country which prohibits their entry, and the other recommended each Government to apply its pharmacy laws to its subjects in the consular districts and settlements in China. Two other resolutions were submitted by the British and American delegates jointly: one, in view of the action taken by the Chinese and other Governments to suppress opium-smoking, recommended that each delegation should move its own Government to take measures for the gradual suppression of opium-smoking in its own territories, with due regard to the varying circumstances. The other, after stating that the use of opium in any form otherwise than for medical purposes is a matter for prohibition or regulation in nearly every country, and after referring to the fact that there are wide variations in the conditions prevailing in different countries, urges upon each of the different Governments concerned the desirability of a revision of its regulations. The two remaining resolutions, proposed by the Chinese and emended by the French delegates, urge upon all Governments having concessions or settlements in China the suppression of opium divans, and recommend the respective Governments to enter into negotiations with the Chinese Government to ensure the prompt adoption of effective measures in foreign concessions or settlements in China to prohibit the trade in anti-opium medicines containing opium or its derivatives.

MEDICAL MEN AND LEGACIES FROM PATIENTS.

A DOCTOR who benefits by the will of a patient who has been under his care is necessarily, however honourable his conduct may have been, placed in an awkward position. The charge of undue influence is easy to make, and it is one which disappointed relatives are usually eager to bring. It is one that from the very nature of the relations between practitioner and patient is difficult to rebut. It would save a good deal of litigation if the English law were assimilated in this particular to the French law, which treats all bequests to a doctor from a patient as null and void. But the law being what it is, there is no reason why a medical man should not be allowed to benefit by it, and it is the duty of those who administer the law to protect him against injurious imputations. These reflections are prompted by a case which was recently tried before Mr. Justice Bigham. Dr. William Dunn, now medical officer to Uppingham School, but formerly in practice in Battersea, had among his patients there a lady who, when she first came under his care, was living apart from her family in very poor circumstances. Besides advising her as to her health Dr. Dunn lent her money, and Mrs. Dunn tried to make peace between her and those from whom she was estranged. Later the lady inherited a considerable sum of money from a sister, and then she seems to have begun making a number of different wills, sometimes independently, sometimes with the help of various solicitors. The terms of these wills varied, but one feature stood out clearly in them all—the wish to benefit Dr. Dunn, who had befriended her in her evil days. There is no doubt, from the evidence given at the trial, that she was given to drink, but there was no proof that any undue influence was exercised either by Dr. Dunn or his wife in the matter of her testamentary dispositions. It is an important point in the case that Dr. Dunn ceased to have charge of her a considerable time

before her death, and did not see her after April, 1907. The will which was disputed was executed in September, 1906, and between that time and the date of her death, which occurred in June, 1907, she was under other medical care, and had independent legal advice. She had thus plenty of opportunity of changing the terms of her will if she had wished to do so. The trial lasted three days, when the parties came to terms, and the will of September, 1906, was pronounced for. The terms provided for the division of the lady's estate, which amounted to about £10,000. We congratulate all the parties on the settlement of a painful case, and we especially congratulate Dr. Dunn on the virtual acquittal from an odious charge which the settlement involves. We have purposely refrained from going into details of the case as reported in the *Times*. We may be allowed to say, however, that in our opinion Dr. Dunn is perfectly entitled to a legacy which was obviously intended by the poor lady to be a reward for professional and other services rendered by him to her at a time when she was poor and friendless.

THE PREVENTION OF FIRE.

THE great majority of the public is probably quite unaware of the existence of the British Fire Prevention Committee, but for a number of years it has been carrying on work of the utmost public utility. The object of the committee, which consists of experts, is the scientific investigation of the cause, prevention, and control of accidental outbreaks of fire. The committee's method is experimental, and for the furtherance of its ends it has established a testing station in Regent's Park. Here almost any kind of fire can be made under what may be called laboratory conditions, and various methods of extinguishing are regularly tested under the eyes of competent judges. An important part of the committee's work has been the periodic publication of reports in pamphlet form under the title of "Red Books." Two of the most recent of these are, perhaps, of exceptional interest to the public at large. No. 128 describes a series of tests undertaken to estimate the value of such ordinary apparatus as a hand-pump, buckets, jugs, pitchers, and even the humble tumbler, as applied to the kind of outbreak of fire that is usually met with in an ordinary dwelling-house. In each of these experiments the fabric tested was allowed to get "well alight," but was quickly extinguished by the simple means described. It appears, however, that it took generally less than two minutes for the materials used in the experiment to justify the application of the test, so that one is justified in assuming that even five minutes' start in an ordinary bedroom might render such a fire superior of ordinary domestic resources. The important point emerges, however, that the successful extinction of such a blaze depends not only on the quantity of water used, but on the force with which it is pumped or thrown on to the burning material. Pamphlet No. 133 is concerned with the extinction of burning petrol and other volatile and highly inflammable liquids and of celluloid by means of asbestos cloths, sand, and steam. It appears that the value of steam is proportioned to the degree of saturation which can be obtained in the room containing the burning material, and steam under pressure is not of course commonly available. But the extinguishing powers of suitable asbestos cloths are shown to be so remarkable, that it seems as though the provision of one or more such cloths should be made compulsory in garages, dye works, and other places where petrol or other such inflammable substances are stored.

These publications are admirable in their scientific accuracy, and deserve a wider recognition by the large public whom they immediately concern. They can be obtained from the office of the Committee, Waterloo Place, Pall Mall.

WE regret to learn that Mr. Wakley, Editor of the *Lancet*, has been seriously indisposed for the last two months, and that his condition at the present time causes his friends much anxiety.

AMONG the fifteen candidates selected by the Council for election into the Royal Society this year are Sir Thomas Barlow, Bart., K.C.V.O., M.D., Holme Professor of Clinical Medicine in University College Hospital Medical School; Dr. James Lorrain Smith, Professor of Pathology in the Victoria University, Manchester; and Dr. James Thomas Wilson, Professor of Anatomy in the University of Sydney, New South Wales.

AT a meeting of the business committee and the German members of the International Cancer Research Association, held at Berlin on January 4th, it was agreed, on the proposal of His Excellency Professor von Czerny to convene a conference on cancer at Brussels during the exhibition in that city. The final decision was left to the board of directors, which will meet during the session of the German Surgical Congress at Berlin, April 14th to 18th.

WHEN the late Dr. Thomas Peacock died in 1882 the large collection of abnormal hearts he had collected, which form the basis of his treatise on *Malformation of the Heart*, was presented to the Museum of the Royal College of Surgeons. These with the others added before and afterwards make the College collection one of the most extensive in the world. This collection will form the subject matter of three Hunterian Lectures to be given by Professor Arthur Keith, Conservator of the museum, in the theatre of the Royal College of Surgeons, on March 8th, 10th, and 12th, at 5 p.m.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Debate on the Address was concluded on Thursday in last week as anticipated. After the Irish amendment had been defeated there was an animated discussion on the imprisonment of British subjects in India, and a division in which the Government had a majority of 119. On Thursday the local taxation question was raised, and many references were made in the course of the debate to the increased expenditure caused by medical inspection of school children. General sympathy was expressed on both sides of the House with the view that local burdens required to be lessened. After a division a further amendment relating to the Congo came on and was withdrawn, and the debate finished with the alien question, which was made the occasion for a strong denunciation of Mr. Gladstone's administration of the Act. He, however, made a very vigorous defence of his action, and had the best of the argument, and after a division the Address was agreed to, and the Commons freed for general business.

The Supplementary Estimates occupied the Commons on the first three days of the week, and the time was mainly occupied with inquiries about the £910,000 required above the estimate for Old Age Pensions. The enormous preponderance of persons over 70 in Ireland as compared with Great Britain was the subject of much comment, and the Chancellor of the Exchequer said that an inquiry was being made into the matter. Many references were also made to the interpretation of medical relief. The vote was eventually agreed to, and a discussion on the estimate

for the unemployed followed. The Supplementary Estimates were not disposed of till Wednesday, and consequently the second reading of the Housing and Town Planning Bill could not be taken.

The London University Commission.—Mr. Ramsay MacDonald asked the President of the Board of Education whether, before nominating a commission to inquire into the London University, he had consulted representatives of London technical schools and polytechnics; and, if so, with what results? Mr. Runciman replied in the negative, and said that it was not considered necessary before nominating the commission to consult representatives of London technical schools and polytechnics on the personnel of the commission or on its reference. Mr. MacDonald then asked if it was not one of the chief purposes of this commission to determine the future status of the Imperial School of Technology? Mr. Runciman said that was distinctly within the terms of reference, and, in reply to a further inquiry as to whether the teachers had not asked to be represented on this commission, he stated that the decision arrived at was that they should avoid appointing a representative commission, but that it would be better to have a judicial commission. If a representative commission had been appointed, it would have been very large and unwieldy; and they had done their best to select a judicial commission.

The Cost of Medical Inspection.—Mr. Ramsay MacDonald asked the President of the Board of Education whether his attention had been drawn to the dissatisfaction of local education authorities regarding the burden which adequate medical inspection of school children would put upon rates, and the failure of the Board of Education hitherto to give what the local authorities considered to be fair financial assistance for this purpose; and whether he could now say what the Board of Education proposed to do, or when he intended to make a statement on the subject. Mr. Runciman replied in the affirmative, and said that many requests were constantly being made for increased grants in relief of local rates. Had either of the Education Bills of last session passed into law, increased grants for educational purposes would have been made to local authorities. He was not in a position to make any statement at present, but the Prime Minister and the Chancellor of the Exchequer had undertaken to receive a deputation on this subject on March 20th.

Pulmonary Tuberculosis.—Mr. Summerbell asked the Secretary of State for War if he was aware that the Local Government Board had issued a general order to local authorities in England and Wales setting out that, whereas tuberculosis was an endemic disease, and that form of the disease which was known as pulmonary tuberculosis was an infectious disease, new regulations were expedient with a view to preventing the spread of that disease; and, if so, could he state whether it was the intention of his department to act on such order in so far as the army was concerned, in view of the fact that some 350 men were discharged from the army each year suffering from this disease, and without receiving any consideration from the War Office, and by so doing give effect to the recommendations made some time ago on this subject by a Select Committee appointed for the purpose. Mr. Haldane replied that if his hon. friend would kindly refer to the order in question (No. 52,712) he would see that the new regulations amounted to instructions in regard to notifications to the medical officers of health of sanitary authorities of cases of pulmonary tuberculosis occurring among inmates of Poor Law institutions and poor persons in receipt of relief from the poor rate. Cases occurring among men discharged from the army had been similarly notified in the past to these officers.

Tuberculosis and Insanitary Schools in Ireland.—Mr. John Murphy asked Mr. Birrell last week how many schools there were consisting of only one apartment in which cookery and laundry work were taught; whether he was aware that there were many insanitary and overcrowded schools, and that a portion of the tuberculosis prevalent in Ireland was directly traceable to the defective atmosphere caused by rebreathed air in such schools. Mr. Birrell

answered that the Commissioners of National Education informed him that the preparation of a return of schools having only one apartment in which cookery and laundry work were taught would take a considerable time. The value of the return would not be commensurate with the labour involved in compiling it. There were many insanitary and overcrowded schools, but the Commissioners had no definite information as to the connexion between such schools and the prevalence of tuberculosis. The Commissioners regarded instruction in cookery and laundry work as a most important part of the ordinary curriculum of national schools, but teachers were not required to teach these subjects when suitable provision for the purpose could not be secured.

Indian Medical Services.—On Tuesday, in reply to Dr. Rutherford, Mr. Buchanan stated that there was no fusion of the two medical services in India in time of war; the services worked separately—the Royal Army Medical Corps with British field hospitals and the Indian Medical Service with native field hospitals. Suggestions for amalgamation had on several occasions received consideration, but they had not been thought likely to lead to reduction of establishment or expenditure, or, if they did, they might involve a risk of a breakdown of the medical organization in time of war.

Experiments on Cats.—Sir Frederick Banbury asked the Home Secretary last week whether a number of painful experiments had been and were being carried on on cats for the purpose of obtaining evidence to lay before the Departmental Committee on Lead Poisoning; and, if so, whether he would state under what certificates they had been performed. Mr. Gladstone replied that two licensees obtained certificates A and E last month to carry out experiments for this Committee. One of these gentlemen, who gave evidence before the Committee in December, had held other certificates (A and E) since 1905, authorizing experiments on cats in connexion with lead poisoning. The objects of the experiments included an inquiry into the channels of infection in chronic lead poisoning and the establishment of better methods of diagnosis—objects which he thought the House would agree to be of great importance. In answer to a further question on Monday as to the treatment and disposal of the cats Mr. Gladstone said that the accounts which he had seen showed that the cats used in the experiments which were brought to the notice of the Committee, but which were not specially performed for them, were killed, some at once, and others after the lapse of a few days. He was not aware that any of the series of experiments authorized on behalf of the Committee had yet been performed, but he was making inquiries.

Vaccination.—Mr. Lupton asked the President of the Local Government Board if he was aware that Albert Shaw, of 114, Sutherland Road, Longton, about 4 months old, was vaccinated about September 15th, 1908, by Dr. Allan; that the child became so ill that after three days Dr. Lefevre had to be called in; and that the child, after great suffering, died on September 26th; if this child was vaccinated with stuff supplied by the Local Government Board; and, if so, what steps he proposed to take to stop the distribution of poisonous vaccination matter. Mr. John Burns said that he had communicated with Dr. Allan, and was informed by him that a child named Albert Edward Shaw, of 114, Sutherland Road, Longton, died on September 26th last, the cause of death being stated in the death certificate as enteritis. Dr. Allan also informed him that he had vaccinated with calf lymph supplied by the Local Government Board a child whose name was entered on the birth register as Morris Shaw, but who seemed to be the child already referred to. The vaccination, however, took place on June 24th last, and not about September 15th as stated in the question. There did not appear to be any reason to connect the death from diarrhoea with the vaccination, which took place more than thirteen weeks previously.

The Story of a Tramp.—Mr. Cooper called the attention of the President of the Local Government Board and of the Home Secretary to the death of a tramp who died in prison from heart failure following pneumonia, and asked

if they were aware that Andrewes had been an inmate of the Croydon casual ward, and when his time expired said he was too ill to continue his journey; whether the officials of the Croydon Union refused to listen to his complaint; whether he was seen or examined by any medical officer of the Croydon Union; was he aware that Andrewes, after being turned out of the casual ward, broke a window so that he might get locked up to get proper medical treatment, and was sentenced by the Croydon magistrates to seven days' hard labour; whether the Croydon Board of Guardians had made any inquiry into Andrewes's statement; and, if not, what did he intend to do in the matter? Mr. Burns replied that he had seen a copy of the depositions taken at the inquest, and he had made inquiry with regard to the case. It appeared that on the day on which Andrewes's time was up for leaving the Croydon casual ward, he said that he did not feel well, and that he could not go on his journey. He was consequently examined by the workhouse medical officer, who did not find anything wrong, and thought he was fit to continue his journey. The medical officer told him he did not consider the case one for infirmary treatment, but if he wished to become an inmate he should apply to the relieving officer for an order of admission. It was the fact that almost immediately afterwards he broke a window in the workhouse, and was sentenced to seven days' hard labour for wilful damage. The medical officer stated that he attended the police-court and gave evidence as to the physical condition of the man, who made no complaint then of being ill, and did not appear to be so. The matter had been fully inquired into by a subcommittee of the Visiting Committee of the workhouse specially appointed for the purpose, and the statement of the medical officer appeared to be supported by the other statements made to them. Mr. Gladstone, in answer to a similar question, said that he had made inquiry into this case, and was informed that Andrewes, having complained when in the casual ward at Croydon that he felt unwell, was examined by the medical officer of the Croydon workhouse, who pronounced him to be fit to leave, and referred him to the relieving officer for an order if he wished to enter the workhouse. Upon this Andrewes broke one of the windows, and was therefore charged by the workhouse authorities. He gave no reason for breaking the window, and did not complain of illness either to the police or to the magistrates. Consequently there was no reason for the police to obtain medical advice. On admission to prison he was found to be so ill-nourished that the assistant medical officer put him in the infirmary instead of on ordinary cell, but no actual illness could be observed until a day later.

Destruction of Vermin.—Mr. Cowan asked the President of the Local Government Board if he had received representations from the Scientific Committee of the Incorporated Society for the Destruction of Vermin and from other sources, urging immediate investigation as to whether the various bacteriological preparations now on the market for the destruction of rats were, or were likely to become, pathogenic to man; and what action the Board proposed to take in the matter. Mr. Burns replied that he did not find that the committee of this society had made any such representations as were above referred to, but his attention had been drawn to the question whether some action should be taken with regard to various bacteriological preparations for the destruction of rats, with a view to preventing danger to man, and the subject was now receiving consideration.

The Deaths Registration and Burials Bill, to amend the law relating to the registration of deaths and to burials, was presented and read a first time on Monday last. The bill is in charge of Mr. George Greenwood, and is backed by Sir Walter Foster, Mr. John Robertson, Mr. Smeaton, Dr. Rutherford, Mr. Hart-Davies, Dr. Shipman, and Mr. Atherley-Jones. It is down for second reading on March 9th.

Private Members' Bills are set down for Friday in each week, and the debate on the Address being finished, Mr. Pirrie was able to bring on his Scottish Temperance Bill last Friday. It is a moderate measure, and although vigorously criticized, passed its second reading by a large majority.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

BIRMINGHAM.

EPIDEMIC OF MEASLES.

THERE has been for some weeks past an epidemic of measles among the infants in the Birmingham schools. An inspection of the elementary schools shows that the number of children in the upper departments who are away through measles is small, but in the infant departments the number is very large, so that the Education Committee has found it desirable to close twelve of the schools. The deaths from measles during last week numbered 31, and in the previous week 25. The increased mortality from measles raised the total death-rate of the city to 20.8 per 1,000, as compared with an average rate of 15.9 for 1908.

RESULTS OF MEDICAL INSPECTION.

Dr. G. A. Auden, medical superintendent of the inspection of school children, has issued a report concerning the examinations made between September 1st and December 31st, 1908. The report covers only a portion of the school area. He explains that the prime object with regard to the statistical aspect of the work is to obtain data for the estimation of the present physique of the nation, which is a more complex problem than is apparent at first sight. During the four months covered by the report 10,000 children were examined, equivalent to a rate of about 30,000 a year. The Board of Education estimated that the inspection of the 96,000 children in Birmingham would take three years. A large number of the parents attended the inspections showing that they took a lively interest in the welfare of their children. Dr. Auden states that the nutrition of the Birmingham children compared very favourably with that of children in other parts. Out of the 10,000 children examined, 2,271 were found to have defects of one kind or another; 1,033 had affection of the eyes, and it was suggested that defective eyesight was largely manufactured in the infants' schools by allowing the children to place their books too near their eyes, the focal length of which being still variable became too short in consequence. The officers of the Dental Hospital have examined the teeth of 2,053 children, and report that only 4 per cent. were found to be dentally perfect.

The number of children already reported as suffering in some stage of pulmonary tuberculosis was 31, and in addition there were 39 in whom the symptoms were doubtful.

NEW MEDICAL MAGISTRATES.

Dr. Robert Simon, honorary physician to the General Hospital and consulting physician at the General Dispensary, and Mr. Gilbert Barling, honorary surgeon to the General Hospital and Dean of the Faculty of Medicine at Birmingham University, have been appointed by the Lord Chancellor to the Commission of the Peace for the City of Birmingham.

MANCHESTER AND DISTRICT.

MEDICAL INSPECTION AND TREATMENT OF SCHOOL CHILDREN.

Two points have come out very strongly in the recent discussions by the Manchester Divisions on the medical inspection and treatment of school children. In the first place, there is the determination loyally to support the decisions which the British Medical Association has already arrived at, first, in regard to the remuneration of whole-time and part-time medical inspectors, and secondly, in objecting to the subsidizing of hospitals for the sake of obtaining hospital treatment of children. In the second place, there is a practical unanimity in demanding that if there is to be any medical treatment at all at the expense of the rates, it must be strictly confined by something like a wage limit to those children whose parents are unable to pay ordinary fees; and further, that the surgeries of all practitioners who are willing to undertake the work should be recognized,

vouchers being given to the children to be taken to any such surgery that the parents may choose, and each voucher being paid for by the education authorities on a fixed scale. No attempt has been made to suggest what the wage limit should be, but it is demanded that, whatever may be fixed, it should not be allowed to become a dead letter. There seems to be a tendency in some quarters, mostly official, to regard the voucher plan as impracticable. It is said that the authorities would not be able to exercise sufficient control over a large number of practitioners, each to a certain extent independent, and that there would be no guarantee that cases would not be kept on longer than necessary in order to obtain the certain fees. This all amounts to saying that medical men cannot be trusted to do justice to patients. It seems to be forgotten that Manchester already offers a good example of this very scheme. A fee is already paid by the Corporation to any general practitioner who answers the call of a midwife, what amounts to a voucher being given to the doctor, which is paid for by the authority according to a fixed scale. The same objections as stated above were made to this when it was first proposed, but the plan has succeeded so well in Manchester that probably in no town in the kingdom has the Midwives Act been so successful, for parturient women are practically certain of obtaining medical aid with the minimum of delay, while the cost to the Corporation in 1907 only amounted to £247 10s. in medical fees. As for the other suggestion, that some doctors might be tempted unduly to prolong their treatment for the sake of the fees, it is practically certain that, putting the matter on the lowest grounds, no man with a grain of common sense would risk his professional reputation by any such dishonesty. But there is this further safeguard, that it may be presumed that the children would all the time remain subject to the periodical inspection of the official medical inspectors, who would readily detect any case in which treatment was unnecessarily prolonged. In addition to this it is noteworthy that the Majority Report of the Royal Commission on the Poor Laws actually recommends this plan for general adoption in all cases of illness in patients unable to pay fees. It even suggests that district medical officers may gradually be done away with. There is nothing that will so gain the confidence of the people as the knowledge that they can choose any doctor they wish. With that knowledge they will willingly submit their children to treatment when advised by the medical inspectors, whereas they would often absolutely refuse if they were bound to go either to someone whom they did not know or did not trust. The further suggestion of the Majority Report, that people who are not paupers but who are unable to pay ordinary fees should be induced to join provident dispensaries, would only slightly affect the voucher scheme for school children much later, as it would be a gradual process. Meantime if there is to be any treatment at all of school children at the public cost, the Manchester Divisions are in favour of vouchers that may be taken to any practitioner.

A FAMINE IN DOCTORS.

The *Manchester Evening Chronicle* is responsible for the statement that "a mild famine in doctors is threatened in the United Kingdom, as the number of students registered in the universities is seriously on the decline." It is said that the number of students registered in the three kingdoms in the year 1891 was 2,405. The course of study was then lengthened from four to five years, with the effect that in the following year only 1,671 names were registered. After that the figures slightly increased for a year or two, but soon again decreased, until in 1900 there were only 1,538 registered, and in 1907 the low water mark was reached of only 1,346. The writer professes to find in these declining figures an explanation of the fact that public bodies frequently obtain only a meagre response to their advertisements for candidates for vacancies on their medical staffs. It is somewhat curious to find that he quotes the experience of the Chorlton guardians, who recently had only five applicants for the vacant resident medical officership. He might have added the experience of the Salford guardians, who had only one applicant for a similar post. He seems to be ignorant of the fact that there may be other reasons for the fewness of applicants for such posts. The fact is that in the

Manchester district resident medical officers under boards of guardians are so badly paid, so much overworked, and subjected to so much interference by individual guardians that the posts are only taken at all *en passant* to gain some hospital experience. No one dreams of such posts as permanencies. On the other hand, when the salary and conditions are at all reasonable, there is usually an excessive number of candidates. For the medical officership at the Langho Epileptic Colony, where the salary offered was £250, in spite of the responsibility and the amount of work which is attached to the post, there were 54 candidates, while for the three medical inspectorships of school children for Manchester there were over 30 candidates. The *Medical Directory* for 1909 shows that, after allowing for deaths and the removal of names from the list for various causes, there was a total increase of registered practitioners of 289 over the previous year. The absurdly cheap club practice that is undertaken in Manchester would, one would have thought, have been sufficient proof that the profession is overstocked; but, even if it become doubly overstocked, it is not at all likely that boards of guardians will ever have an excess of candidates for their resident posts so long as the guardians remain what they are, and the conditions of service under them remain unaltered. It is far more likely that the guardians themselves will have disappeared long before there is a "famine of medical men."

NEWCASTLE-UPON-TYNE.

THE ROYAL VICTORIA INFIRMARY.

At the annual court of governors of the Royal Victoria Infirmary, held last week, the adoption of the annual report for 1908 was moved by the Lord Mayor of Newcastle-upon-Tyne and seconded by Sir George Hare Philipson. The infirmary is now in full swing, and gives accommodation to 425 patients. The expenditure for last year amounted to £30,892, while the income was £25,552, of which upwards of £14,000 was contributed by workmen's subscriptions. Taken on the total ordinary expenditure, the cost per in-patient was £4 1s. 10.2d., and the cost of per occupied bed £78 11s. 5d. Arrangements are in progress for a reorganization of the pathological department whereby the officer appointed shall give his whole time to pathology in the infirmary and the College of Medicine.

The interest of the annual court, which was attended by nearly 600 governors, centred round the chapel question. For the last twelve months the chapel, which had been consecrated, was closed for religious services in accordance with the decision of the last annual court. For many years past at these annual meetings the chair has been occupied by the chief magistrate of the city, and last Saturday afternoon it was filled by the Lord Mayor of Newcastle, who on his own initiative brought forward a scheme which he hoped would secure peace and remove discord. He suggested that a committee should be formed composed of four members chosen from the House Committee of the infirmary, four by the Workmen's Representatives, and four by the Free Church Council to confer with him as to the best means of settling a dispute which has given no satisfaction either to Nonconformists or Churchmen, and which has deprived the inmates of the infirmary of the opportunity of attending religious services in the institution. The Lord Mayor promised to bring the decision of this conference before a court of governors within three months. At one stage of the proceedings there were evidences of disagreement and of a considerable warmth of feeling, which was rather hostile than friendly to the proposal unless in some ways amended, but in the end good sense prevailed. Meanwhile, Dr. Hume, who all along has taken a keen interest in the matter, asked to be allowed to withdraw from the agenda a proposal standing in his name. It was thought that nothing would be lost by adopting the proposal of the Lord Mayor.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

The banquet of the Northumberland and Durham Medical Society, announced for March 18th, and at which Sir Lauder Brunton is to be the guest, promises to be very successful. Those who have not intimated their intention

to be present should do so at once to Dr. Wm. E. Hume, Royal Victoria Infirmary. An address will be given by Sir Lauder Brunton in the afternoon in the College of Medicine, and to it all medical practitioners are invited.

THE WEST STANLEY EXPLOSION.

At the adjourned inquest on the West Stanley Explosion interesting evidence was given by Drs. Benson and Charles, of Stanley, in regard to the 168 miners who were killed. Those killed by carbon monoxide numbered 121, those killed by direct violence 25, while 19 died from other causes. The explosion must have been very violent judging from the mangled and disfigured appearance presented by the dead bodies. In eight instances the head was terribly shattered, in a few cases being almost blown off.

SHEFFIELD.

EDINBURGH UNIVERSITY CLUB.

The fourth annual dinner of the Sheffield Edinburgh University Club was held on February 6th, under the presidency of Dr. H. J. Clarke, of Doncaster, and was attended by about 120 members and guests. Emeritus Professor Crum Brown was the guest representing the University of Edinburgh, the other two guests of the club being the President of the British Medical Association, Mr. Simeon Snell, and Dr. Sinclair White, who had been Local Honorary Secretary at the recent meeting of the Association.

Professor Crum Brown made an interesting speech reminiscent of old Edinburgh days, referring, among other matters, to his acquaintance with Syme, and touching also upon what was uppermost in the thoughts of many of those present, the recent death of Dr. Argyll Robertson.

Mr. Snell, replying as President of the British Medical Association, referred to his friendship with Dr. Argyll Robertson extending over many years. He mentioned that among many great kindnesses he had received at his hands was the manner in which he early stated his intention of leaving his retreat in Jersey to come to Sheffield to support him when President of the Association. This he accordingly did, and was one of the most prominent figures at the meeting; no one then could have thought that he would be so soon removed.

WEST YORKSHIRE.

PROPOSED REBUILDING OF THE ROYAL INFIRMARY, BRADFORD.

The annual meeting of the donors and subscribers to this hospital was held at the Town Hall, Bradford, on February 26th, the Lord Mayor presiding. There was a large attendance. The Chairman of the House Committee, in proposing the adoption of the report, pointed out that the work of the infirmary during the past year had been of an exceptional character. The number of in-patients treated was 2,652, whilst the highest number treated before in one year was 2,500. Five years ago the number was 250 less, and ten years ago 500 less. The increase had been largely in surgical cases. The average duration of residence had been twenty-six days in place of twenty-five, and the daily average number of patients had been 188—seven a day more than in 1907. The average cost per in-patient had been £4 2s. 7d. as compared with £4 6s. 4d. The infirmary was overcrowded and really required rebuilding. The Lord Mayor emphasized the urgent necessity for a new infirmary. It seemed to him that it would be impracticable to erect new buildings on the same site.

Dr. Horrocks pointed out that major operations in 1887 numbered 173; last year the number was 1,512, although the number of beds was exactly the same. For the past six or seven years there had been almost constant over-pressure. There was always a waiting list of patients, and patients had frequently to be sent home before their wounds were quite healed. Many chronic cases had to be refused and palliative treatment had frequently to be curtailed. He strongly objected to any proposal for municipalization of the hospitals. "Every one," he said, "who paid rates would be eligible for admission, and the pushing and energetic would soon occupy the beds to the exclusion of the poor and needy. The staff, instead of

being voluntary helpers, would become officials, and as there were thirty-two doctors, it would be necessary to reduce the number, as it would be impossible to pay so many of them adequately."

The Lord Mayor, in replying to a vote of thanks, said: "I think this meeting has pledged itself to a new infirmary, and hope that subscriptions will come in thick and fast." We believe that this is a wise decision, and hope it may soon be realized. The difficulty, of course, is in raising the necessary funds. Trade in Bradford is bad, and it will require extraordinary efforts to raise a sum of, perhaps, £150,000 to £200,000, which will be necessary adequately to equip and build a new hospital.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

STATE REGISTRATION OF NURSES.

A MEETING to consider the advisability of promoting a separate bill for the registration of nurses in Scotland was held in Glasgow on February 27th. Lord Inverclyde presided over a large assembly, which was thoroughly representative of the nursing profession throughout Scotland, and included delegates from many public bodies and institutions. The Chairman explained the genesis of the movement in favour of a separate bill for Scotland. The chief objections to the English bill from the point of view of the Scottish nurses were: (1) that the entire control of the training and registration of nurses in Scotland would be handed over to a council sitting in London on which Scotland had no direct representatives; (2) the fees suggested seemed unduly large—namely, 3 guineas for examination and 2 guineas for registration, especially in view of the fact that the examination was to be held only at centres which would necessarily entail additional outlay for travelling and hotel expenses; (3) the English bill required a nurse to undergo special examination for registration purposes no matter what certificate she might obtain from her teaching school; (4) it was felt that the examining body might possibly consist of individuals who had no direct interest in maintaining the high standard at present held in Scottish nursing. To meet these objections special legislation for Scotland seemed advisable: a bill had accordingly been drafted by a small committee, and had been sent to all nurses in Scotland. The meeting had been convened to determine whether the Scottish nursing profession approved of the general principles laid down. They differed from the English bill in several points. The central council was to be thoroughly representative of the various nursing branches and medical authorities. The fees for registration were to be much smaller and were to be kept as low as was compatible with meeting the working expenses. The examinations were to be held at the various teaching centres, and were to be left as far as possible in the hands of the training school, with supervision by the Registration Council to maintain an adequate standard. It was claimed that this draft bill more adequately represented the recommendations of the Select Committee which reported to Parliament in 1905 on the question of State registration. To determine the feeling of the nursing profession in Scotland, a plebiscite had been taken and the opinions recorded were overwhelmingly in favour of the draft bill. Dr. Mackintosh, who spoke next, stated that the plebiscite showed 2,718 were in favour of the establishment of a separate registration council north of the border. Thereafter a number of ladies and gentlemen representing various branches of the nursing profession spoke in favour of the draft bill. It was noticeable, however, that the mental representatives, who have already had several years' experience of the working of the medico-psychological examination, approved of the proposed bill subject to the condition that the standard adopted for mental did not fall below that of the medico-psychological certificate. At the close of the meeting a resolution was passed, almost unanimously, that Parliament be solicited to pass an Act for the registration of nurses in Scotland. An amendment received only seven votes.

PREVENTION OF EXCESSIVE INFANT MORTALITY.

The Anderson Health Association, at the time of its inception, aroused considerable opposition among local

practitioners. Some aspects of the scheme, however, were above criticism. Thus, with the view of reducing infant mortality, a bounty scheme, with systematic visitation, on the plan of the Huddersfield experiment, was started. The funds for this scheme were given anonymously, and it was started in January, 1907, and came to an end on December 31st, 1908. The streets selected were among the poorest of the district. In all 137 births were registered under the bounty system. To enable a proper comparison of the effects of the bounty system to be made, the medical officer of health furnished official statistics of the birth-rate and infant mortality in the streets selected for the experiment. The total number of births was 462, with 97 deaths, showing a mortality of 210 per 1,000. The death-rate among the registered children was only 138 per 1,000. The corrected mortality of unregistered children thus amounts to 240 per 1,000. The registration bounty scheme has, apparently, lowered the death-rate by 102 per 1,000. The interesting experiment of a bounty scheme, therefore, proved very satisfactory in practical working, as the mortality had been reduced nearly two-thirds in the particular streets selected for the experiment.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

DUBLIN HOSPITALS TUBERCULOSIS COMMITTEE.

SIR JOHN MOORE presided on Monday last at the first annual meeting of the Hospitals Tuberculosis Committee, when the report of the year's work was submitted. This committee looks after the outdoor patients reported by the hospital staffs, and sends nurses to attend upon those who require their services. In this way 274 families were visited during the year, and 7,087 visits were paid; 35 per cent. of the patients had shown distinct signs of improvement, 10 per cent. had been able to resume their ordinary work, 81 persons had been admitted to sanatoriums, 110 rooms had been disinfected. Nutritious food had been supplied to 106 families.

IRISH IN THE NATIONAL UNIVERSITY.

The Gaelic League is not quite satisfied with the prospect of inducing the Senate of the National University to make Irish compulsory for entrance. It is known that many of the stronger members regard such a rule as dangerous to the future of the institution, and will vote against it. The Bishops have not altered their opinion, and so it is most probable that when the proposal comes up for decision, in some months, it will be defeated. The league, small as it is, is active, and it is now calling upon the various district and county councils to refuse to levy any tax for scholarships unless their demand in reference to Irish is granted. The Dublin Corporation and a large number of councils throughout the country have come to this decision, in the hope that the Senate may be starved into acquiescence.

TYPHOID FEVER IN DUBLIN.

In the autumn of 1908 there was an outbreak of typhoid fever in the Clontarf district of Dublin, where there is a population of some 5,000 persons. In a special report, which has just been issued, Sir Charles A. Cameron describes certain characteristic features of the outbreak, which point to a milk-borne origin. He was unable, however, to place his hand on the person by whom the infection was started. This being so, a difficulty arose as to what action could be taken with respect to the sale of milk from the suspected premises. In the absence of any knowledge of disease in connexion with any one in the dairy, the law agent of the Dublin Corporation was of opinion that the provisions of Section 4 of the Infectious Disease (Prevention) Act, 1890, could not be enforced, and this opinion was endorsed by Mr. Ignatius O'Brien, K.C. On the other hand, Mr. Vanson, K.C., the law adviser of the Irish Local Government Board, expressed a very decided opinion that the section was capable of being very widely construed, and he apparently considered that the Corporation possessed the power to stop the distribution of milk from the dairy in question. In the course of his investigations as to the cause of the outbreak, Sir Charles Cameron was on the alert for possible carrier cases, and he induced the proprietor of the dairy to submit

to bacteriological examination the excretions of the persons connected with the dairy. It is to be regretted that the results of these examinations have not been made public, though the responsibility for this does not lie with Sir Charles, who appears to have dealt with the outbreak in a thorough and vigorous manner.

Canada.

[FROM OUR SPECIAL CORRESPONDENT.]

THE MEDICAL CURRICULUM.

The Ontario Medical Council has decided that a two months course in electro-therapeutics shall be added to the requirements of the curriculum for admission to practice, and that in examination questions no proper names be used to designate diseases.

THE MEDICAL FACULTY, TORONTO UNIVERSITY.

Dr. C. K. Clarke, of the Toronto Hospital for the Insane, has been appointed Dean of the Medical Faculty of the University of Toronto in place of Dr. R. A. Reeve, who resigned after twelve years of arduous service.

THE NATIONAL SANATORIUM ASSOCIATION.

The trustees of the National Sanatorium Association have appointed Dr. Alfred H. Canfield, who was trained in the laboratory of Sir Almroth Wright and who has been recently resident pathologist to the Toronto General Hospital, as resident pathologist to the Muskoka Sanatorium and Free Hospital for Consumptives, where he will give all his time to the study of the problems of this disease.

Special Correspondence.

BERLIN.

Compulsory Vaccination.—Statistics of the Charité Hospital.—Rules for Hospital Administration.—A Tuberculosis Charity Kitchen.

AN important decision, bearing on the question of compulsory vaccination, has been given by the Prussian High Court of Administrative Law (*Ober-verwaltungs Gericht*). The facts of the case are shortly as follows: A number of Magdeburg mechanics had failed to present their children for vaccination at the age and within the limits of time stipulated by the Prussian Vaccination Act, and had been fined accordingly. Three years having elapsed without the children being vaccinated, the President of the District (*Landrath*) ordered the fathers to comply with the law without further delay, or the children would be forcibly vaccinated. Against this order the fathers lodged a remonstrance, setting forth that they had conscientious objection to vaccination as injurious to the constitution, and arguing that the Act, though it speaks of a fine to be inflicted in cases of non-compliance, nowhere makes mention of a power to enforce vaccination against the will of parents. The remonstrance was dismissed, and an appeal to the Supreme Court of Administrative Law met the same fate. The court based its verdict on the words of the Act, that—except in certain individual cases, where it would be fraught with danger to life and health—all Prussian children must submit to vaccination.

A set of very detailed, and therefore valuable, statistics have been published by the Charité State Hospital for the year 1906-7. The year began with 1,177 patients in the wards, and 14,485 more were received during the twelve months; 2,543 children were born in the hospital, and counting these, 13,889 persons were dismissed in good health or cured; 1,863 persons were dismissed uncured, 1,382 died. The 15,596 patients required 421,778 days of treatment, that is, the average was 27 days' stay in hospital per head; 9,855 days were gratis, 256,804 days were at the charge of the Berlin Municipality, 115,119 days at the charge of sick clubs and similar institutions. The medical staff consisted of 13 medical and surgical directors or chiefs, all of them Professors in the University, 55 medical and surgical heads of departments, head physicians and surgeons, and assistant physicians and surgeons—among these 20 military surgeons and 1 female doctor; 82 Sisters, 4 midwives,

96 male and 115 female nurses; 4 wet nurses had charge of the patients, and were assisted by 34 male servants and 25 housemaids; 19 men composed the service of the laboratories. The administrative staff consisted of a head medical and a head managing director, a professional lawyer, 25 cashiers and office clerks, 3 clerks for the food department, 4 clergymen, an organist, 4 druggists, 18 subordinate clerks, 146 mechanics and men servants, and 109 female servants.

For some time the Prussian Cultusminister has been occupied with plans for putting the medical direction of hospitals on a uniform basis. After consultation with the Representative Body of Doctors (*Ärztelkammer*) and its Central Committee, certain fundamental rules have been worked out and officially published. At the head of every institution for care of the sick there is to be a responsible medical administrator of independent powers who superintends both the general care of the patients and all hygienic arrangements. All larger hospitals—counting as such establishments with more than thirty beds—must have further a doctor-in-chief, responsible for the treatment of each patient, or head doctors or head surgeons for the various departments. This is to be interpreted without prejudice to specialists, who may be doing work in the hospital. In lesser public hospitals, especially in small towns, and likewise in private hospitals, sanatoriums, and private nursing homes, etc., outside doctors are to be allowed to treat patients of their own, or may assist the hospital doctors, always under the sanction and responsibility of the head medical administrator. The Cultusminister defines as "public" all hospitals or institutions for the sick worked without special concession.

It must have been gratifying to Frau vom Rath, a charitable Berlin lady of great experience and ability, to receive Robert Koch in her "model kitchen for supplying the tuberculous poor with strengthening meals," since this institution was founded and endowed solely by her without any appeal for subscriptions, and its work is carried on under her constant personal supervision. No less than 180 units—families and single persons—are supplied from this kitchen daily, at a cost of 40,000 marks (£2,000) per annum. Frau vom Rath keeps to a strict rule, which excludes from the benefits of the charity all who do not use their best endeavours to keep their homes clean and hygienic. Thus, and thus only, can she hope to do more than benefit single cases of the disease. Professor Koch inspected all the rooms of the establishment, examined in detail all the arrangements, and informed himself of the kinds of food provided and their mode of preparation, the transport appliances, and so forth. Everything he found so carefully and thoughtfully planned, and so conscientiously executed, that he could only express his warmest admiration, and his conviction that the "tuberculosis charity kitchen" would form a valuable weapon in the fight against the terrible scourge.

Correspondence.

THE POOR LAW COMMISSION.

SIR,—Your second admirable article dealing with the report of the Royal Commission on the Poor Law deserves more than passing attention. It brings out what the Minority Report has startlingly emphasized—namely, the exceedingly high infant mortality that prevails among the children committed to the care of the Poor Law institutions of the United Kingdom. If these figures are correct, then the death-rate is two or three times as high for Poor Law babies as it is for the rest of the infant population of the country. That there is something radically wrong in the way in which infants are dealt with in these institutions is shown by the unwholesome diet, the absence of the means for rest, air, and exercise, which were personally observed and recorded by members of the Royal Commission. If further evidence were needed, there is condemnation enough in the facts that legitimate and illegitimate birth-rates are about equal and that the mortality is actually higher between the end of the first month and the sixth month than in the first four weeks of life.

We see at the present time that, in order to combat the existing widespread physical unfitness of the population, public health authorities are making special efforts by

means of health visitors, infant milk dépôts, and the early registration of births to reduce the general infant mortality rate, whose height is a fairly good index of the health condition of the population generally. At the same time another department, staffed by officials paid out of public funds, and actually under the supervision of the Local Government Board itself, is responsible for a condition of things that is literally characteristic of the worst slum areas of the great towns!

We have here something more than an instance of the absurd overlapping of functions of two departments of local government. It is a clear demonstration of the fact that the proper authority to take charge of pauper infants is surely that to which the care of the general infant population is at present entrusted, namely, the Public Health Authority—the body whose knowledge and interest lie in the direction of taking special precautions to preserve life. At the present time one authority is spending money and time to reduce the infant death-rate while another is keeping it at a level which, if it occurred in an ordinary urban district, would result in an official inquiry by a medical inspector of the Local Government Board.

It is imperative, then, that in order to set the public mind at rest a searching official inquiry should at once be instituted into the question of the infantile mortality in all Poor Law institutions, and a report made on the general conditions of life in so far as they affect the destitute child population of the kingdom. We must know to what extent the figures of the Minority Report represent the prevalent conditions in workhouses. The burden of the present highly unsatisfactory system for the relief of the poor appears to be falling with peculiarly cruel severity on those who at least can claim no responsibility for their unhappy condition.—I am, etc.,

London, W., Feb. 28th.

F. LAWSON DODD.

FRIENDLY SOCIETIES AND THE MEDICAL PROFESSION.

SIR,—We must all be grateful to Dr. Pearce for his admirable speech at the conference, covering every point, extenuating nothing, setting down nought in malice, so admirable as almost to debar criticism or suggestion. Yet, since he declined to offer a solution, may I suggest that the solution will be found in the operation of the economic law of supply and demand?

Dr. Pearce said "he was persuaded that if nothing were done, an increasing number [of medical men] would decline to have part or lot in contract practice." I suggest that this opinion is unwarrantably optimistic, and that the friendly societies know as well as we do ourselves that whatever remuneration they offer, they will never lack competent doctors. As Mr. Moffrey (Oddfellows) said later: "A friendly society's practice was perhaps as important to the medical man as it was to the society . . . though it might be a mere pittance, the societies found that when a vacancy occurred others were ready to step in and carry on the work."

There is no doubt that the latter statement is correct, and if so the societies' position is unassailable: as long as there are more sellers in the market than buyers, prices must fall; that there is an excess of sellers who can doubt? In Bristol the other day for the school medical officerships thirty-seven of the best men in the city applied, and there were appointed two hospital physicians and three others at a salary 30 per cent. below the minimum fixed by our Association. A year ago the guardians received and accepted from a qualified man an offer to attend pauper children at 6d. a visit. The manager of a factory to which I am medical officer told me that at the time my predecessor sold me his practice another doctor (whom he named), hearing of the change of incumbent, actually applied at the factory to take on the penny-a-week sick club which formed part of the practice I had paid for.

What is the remedy, and where does the law of supply and demand come in? I submit that we accept contract work because there are too many of us, and that supply is here in excess of demand simply because of ignorance among the public as to what the practice of medicine offers as a livelihood. The middle and upper class public knows nothing of the general practitioner's financial worries; it judges the profession by the carriages of its own particular medical advisers, and does not realize that the

majority of doctors get their living by services rendered to the majority of the nation—the very poor. The teachers at our universities and colleges have never a word of warning for their students as to their prospects after qualification, and, as Dr. Pearce says, "many a man who began his work with enthusiasm finds his professional life embittered by the evils of the contract system, which blights his hopes, stifles his ambition, and destroys his love of work."

The contract system is far more extensive than any one has publicly remarked; in this large town there is hardly a factory without a sick club and medical officer, and from half to three-quarters of the population must get medical attendance in this way or through hospitals and dispensaries.

The remedy is to cut down the supply of doctors, and this can only be effected by being frank about our affairs. Give the public a sight of the annual report of our benevolent fund, with its pitiful list of widows and orphans needing assistance; let them note, also, the paltry doles of £1 a month, which is all we survivors can afford from our own precarious incomes: it could not fail. I should think, to affect adversely the matriculation of medical students at our schools next term. With the thinning of our ranks, our hands will be untied to carry on this "battle of the clubs" with success, and with a better income and freedom from worry, I am sure we most of us would be better doctors. I have always thought that medical practice demanded undivided thought, and that any worry, financial or otherwise, militated against my patients receiving the attention I desired to give them.—I am, etc.,

February 13th.

ECONOMIST.

PATENT MEDICINE AND QUACKERY.

SIR,—On February 25th the Home Secretary favourably received a deputation of newspaper editors and proprietors on the subject of newspaper lotteries and competitions, and promised to do his best to introduce legislation to provide a satisfactory remedy. If the Government can provide legislation to prevent foolish people throwing away their money, how much more should it promote legislation to prevent a still greater proportion of fools losing not only their health but even lives by the ingestion annually of hundreds of thousands of pounds' worth of patent medicines!

Only a few days ago a jury in Manchester, according to a Manchester evening paper, after being absent about twenty minutes, "found that the life of the deceased was shortened by his taking Dill's mixture (a diabetic 'cure'), and by his not continuing on the advice received from his Nottingham doctor."

The remarks of the Home Secretary relatively to newspaper competitions might have been truly spoken with regard to this subject: "These . . . were sometimes harmless. They were rarely useful, frequently mischievous, and not infrequently fraudulent. Taken on the whole, they were degrading to all concerned." Those who have read the reports of your analyses of secret compositions could vouch for the accuracy of these words as applied to them.

As you have previously pointed out, other countries—for example, Australia and Germany—are providing the necessary legislation to get as near as possible to the root of this canker. Would not this be a favourable opportunity for a deputation from the Association to approach the Government with regard to the whole question, the newspaper precedent acting as a lever should any hitch occur? The evidence at the disposal of such a deputation would surely be convincing enough for any Government to make a move.

The day on which the newspaper deputation account was printed I wrote on the subject to one of the London dailies which seemingly can move mountains with a stroke of the pen; but the letter has been ignored, probably because it was stated that, until the Government did certain things, "just so long will this great gullible public, which urgently requires State protection, swallow the rubbish, as it does the barefaced, lying assertions printed for its benefit (!) in the advertisement columns of every newspaper."—I am, etc.,

Manchester, March 1st.

G. H. GRANT DAVIE.

THE APPLICATION OF MENDELIAN RULES TO HUMAN INHERITANCE.

SIR,—Professor Karl Pearson, in his last letter, gives way on the two points under discussion, but again shoots off at a tangent more than once.

The essential points in dispute, as I have already explained—and I think clearly explained—are two, both concerning Nettleship's chart. I have divided it into two parts. The first begins with Jean Nougaret, and includes all the abnormals; the second part begins after the last abnormals.

The first part, I contend, is Mendelian—almost mathematically so—and could not be interpreted otherwise. Professor Pearson says that he does "not feel in a position to say what Mendelians would have considered" about it. Yet it seems to me so striking an example of Mendel's law that it might have been quite as suggestive to Mendel as were his results with peas, for even with peas he seldom, if ever, got the exact 50 per cent. required by his theory, the element of chance accounting satisfactorily for any discrepancy.

With regard to Professor Pearson's reference to assumed sterility of the last abnormals not being in accord with any known law of Mendel, I am not aware that any one has ever said it was. Certainly this idea has never been assumed in my previous correspondence. Professor Pearson surely can think of other ways by which the same result would be attained (by celibacy, prudential considerations, early deaths). But this matter does not concern the points in dispute.

The second point is that some new factor must have come into operation where Mendel's rule begins to be inapplicable. Professor Pearson says "he does not quarrel with the statement"; and this is surely a complete surrender. So that the net result is this: (1) He does not know what Mendelians would think about the first part of the chart; and (2) he does not quarrel with my interpretation of the second part.

How he can reconcile his applying, in his earlier letters, such caustic epithets to my suggested explanation of the second part of Nettleship's chart with his present surrender I cannot imagine; unless it be that he at last understands my views and sees their reasonableness. But Professor Pearson goes further, and says: "There will, I feel quite certain, be other difficulties to be cleared up about change of dominance." Here he explicitly admits that change of dominance is a definite factor, in spite of his previous ridicule of such an idea.

There is one more point on which I must put Professor Pearson right. It is Professor Cossar Ewart and Professor J. A. Thomson who seem to believe that prepotency may change in the mating. For my part I do not believe that it occurs in man, for I am not aware of any facts in man which support that view, though I certainly believe that prepotency may change with a change of mate, that is, it is relative.

There is one point, I am pleased to say, about which we are agreed, and that is the urgent need for the collection and publication of facts bearing on this subject. No one in this country has been more enthusiastic and diligent in this respect than Professor Pearson, and I would earnestly ask medical men to embrace every opportunity of constructing charts of hereditary disease or abnormality in the human subject, and to make their observations accessible to the profession at large.—I am, etc.,

Wrexham, March 1st.

H. DRINKWATER.

MR. GLADSTONE'S SLEEPLESSNESS.

SIR,—In his very interesting paper, *On Sleep and Want of Sleep* (BRITISH MEDICAL JOURNAL, February 27th), the Right Hon. Dr. R. Farquharson states:

"They say that the only time Gladstone went off his sleep was during his anxiety for Gordon during that anxious time at Khartoum."

That there has been at least one other cause which during his political career robbed him of his sleep I have heard from Mr. Gladstone's own lips. When I saw him on February 2nd, 1886, the day he had begun to form his third Administration, I found him very haggard and careworn looking. On my remarking that he seemed rather tired, he replied *verbatim*: "That Irish business does not let me sleep a single night."—I am, etc.,

London, W., March 1st.

FELIX SEMON.

ARTERIAL BLOOD-PRESSURE RECORDS BEFORE AND AFTER MUSCULAR EXERTION.

SIR,—If I understand correctly Dr. O. K. Williamson's remarks on arterial blood pressure, in the JOURNAL of February 27th, p. 530, he regards 160 to 170 mm. Hg as "the measurement which is probably near the limit of the reserve power of the normal heart," pointing to "the improbability that the heart in morbid conditions would be capable of overcoming pressures greater than this"; and therefore very high readings—200 to 300 mm. Hg—represent something more than the pressure of the blood itself.

Of course, I quite agree with Dr. Williamson that the resistance of the arterial wall must count for something, but I cannot follow him when he assumes that the heart in morbid conditions cannot overcome greater pressure than a normal heart.

In the *post-mortem* room it is not an uncommon thing to find in cases of arterio-sclerosis a greatly hypertrophied heart, the muscle of which is healthy both macroscopically and microscopically, and surely such a heart is capable of overcoming pressures much greater than normal; is it not, indeed, probable that the great hypertrophy of its left ventricle has been brought about by the demand for increased blood pressure, a pressure greater than that which a heart of normal size could produce?—I am, etc.,

Birmingham, Feb. 28th.

LEONARD G. J. MACKEY.

USE AND ABUSE OF ALCOHOL.

SIR,—In correction of the statement attributed to me on page 535, BRITISH MEDICAL JOURNAL, February 27th, that alcoholism was responsible for the diminishing birth-rate, I beg to point out that, in reply to one of the speakers who made that statement, I said that it might be one of the factors producing such a result, but that it must not be forgotten, as taught by Herbert Spencer, that genesis varies with individuation, and that the higher and more complex the organism the lower the rate of increase—savages breeding more freely than civilized people, and even amongst the latter it was the lower classes that had the most children.—I am, etc.,

G. T. COLLINGWOOD,
Fleet Surgeon, R.N.

London, S.W., Feb. 27th.

THE MEDICAL ASPECT OF DENTISTRY.

SIR,—My attention has been drawn to a statement in Professor Pickerill's most interesting and instructive article in the issue of February 13th to the effect that "Dr. Dauber, of the Hospital for Women, Soho, has recently come to the conclusion that septic teeth have a distinct influence upon uterine and ovarian conditions, and gives many instances in which the gynaecological lesion has only yielded to treatment after the oral conditions have been corrected."

My lecture, "Oral Sepsis and its Relation to Abdominal Disease," to which Professor Pickerill refers, was reported in *The Hospital* of February 8th, 1908, and reprinted in the *British Dental Journal* of April 1st, 1908, and there is no single sentence in it conveying this meaning. My actual words were these:

Strictly as one may attempt to limit cases coming here (the Hospital for Women, Soho) to those of purely gynaecological interest, yet patients are unable to diagnose their own complaints. A certain percentage attend who, either in conjunction with or apart from pelvic mischief, are suffering from conditions attributable to deficient nutrition, general septic absorption, toxæmia, or some form of inflammation or colic of one or other portion of the alimentary canal.

I then proceeded to demonstrate the frequent association of such cases with oral sepsis in one form or another, and said that:

My own out-patient experience leads me to believe that, if the mouths and teeth of the population were kept in a healthy state, we should seldom hear of gastric and duodenal ulcer, and the entire large class of dyspepsias. There would be far less malnutrition and emaciation resulting from toxæmia and the ingestion of insufficiently masticated food. Appendicitis would be less frequent, etc.

To associate diseased conditions of the digestive tract or constitutional sequelæ secondary to such conditions with sepsis of the oral cavity, itself the first part of the alimentary canal, is a very different matter to attributing uterine and ovarian disease to oral sepsis. The connexion

in the latter case must be very remote, and, except that all parts of the organism are inter-connected through the vascular and nervous systems, may, I think, be safely disregarded.

My point was that the uterus and its adnexa were often credited with being the cause of many complaints when, in truth, they were healthy, but the abdominal viscera at fault, and that these latter were thrown out of gear in the majority of cases by unhealthy conditions in the mouth. Professor Pickerrill, although he quotes my lecture, cannot have read it, and as his article deserves to be, and doubtless will be, widely read, I desire to correct his interpretation of my remarks.—I am, etc.,

London, W., Feb. 26th.

JOHN H. DAUBER.

TREATMENT OF RHEUMATIC AND RHEUMATOID ARTHRITIS BY RADIANT HEAT AND CATAPHORESIS.

Sir,—Dr. Gamblen raises a very interesting point *re* ultra-violet rays in his letter (p. 371), although it does not affect the view that better results in radiant heat treatment should be obtained by a very high candle-power lamp giving out a full-length spectrum (as like sunlight as possible), than from a number of low candle-power lamps with a limited spectrum. With this opinion his practical experience agrees.

The general belief with regard to all rays is that they are not at once abolished in passing through obstructive media, but are altered into rays of other wave lengths as they pass. It is possible, therefore, that, although ultra-violet rays may lose their distinctive character in the superficial layers of the skin, they may nevertheless pass on into the deeper tissues as other rays, which may be the real beneficial agents.

The blue fluorescence of quinine sulphate solution beyond the violet end of the spectrum is a case of change of wavelength. It has also been stated that although the ultra-violet rays when used alone only act superficially, they are in combination with other rays carried to greater depth.

Certainly chemical rays producing an effect on silver emulsion of a photographic plate must either have started from the sun as chemical rays, and been unaffected by their passage through great resistance, including the photographer's glass lens, or they began as other rays which have been gradually damped down until they arrive at the plate as chemical rays, and act upon it.

It is gratifying to hear that Dr. Gamblen has had many successes in the treatment by ionization, and I hope with him that other workers will send their opinions as to the value of the combined treatment.—I am, etc.,

Brighton, Feb. 7th.

C. FRED. BAILEY.

Public Health

AND

POOR-LAW MEDICAL SERVICES.

INFANTILE MORTALITY IN WANDSWORTH.

IN the annual report for 1907 of the medical officer of health for Wandsworth, which has just been issued, Dr. Caldwell Smith points with satisfaction to the decrease in the deaths among young children in the whole borough. The infantile mortality-rate of 101 per 1,000 births was lower than any rate ever yet recorded, though, as might be expected, in the poorer district of Tooting the rate (148) is still high, and shows little evidence of decrease. This lessened mortality is attributed partly to the low average temperature in July, August, and September, but it must also be due to the work which has been carried out since 1905 by the two female sanitary inspectors. In 1907 they visited altogether 1,603 infants, of whom it is satisfactory to find as many as 1,255 were breast-fed entirely, and 174 were fed on the breast together with some other food. The death-rate among these 1,603 children was only 30 per 1,000, an excellent record when it is remembered that they are the children of the poor. Illegitimate children in Wandsworth, as elsewhere, have a much smaller chance of surviving their first year than children who are born in wedlock. In the whole borough the infantile mortality-rate among legitimate children was 97 per 1,000, while among illegitimate it was 236. It is worthy of remark that in the poor district of Tooting the illegitimate rate was 290, but in Clapham, where a better class of residents is to be found, it was as high as 331 per 1,000.

HEALTH OF LANCASHIRE.

THE medical officer of health for the county of Lancashire reports that the death-rate for the administrative county for the quarter ending December 31st, 1908, was 14.4 per 1,000, as compared with 13.9 in the December quarter of 1907. The epidemic death-rate, excluding diarrhoea, was 0.86 per 1,000, which is slightly lower than last year. There have been no cases of small-pox, but scarlatina, diphtheria, enteric fever, and measles have each had a greater prevalence than in the preceding quarter. Measles especially has been very prevalent, the schools having had to be closed in no less than fourteen districts. In some districts as much as 58 per cent. of the children in infant schools have had the disease, and in many other places from 35 to 50 per cent. have been attacked. A special report has been found necessary on the extensive outbreak of enteric fever at Tyldesley and Atherton. At neither place has any fault been found with the milk supply. At Tyldesley, up to the date of the report (November 23rd), 54 cases had been notified with 8 deaths. In 10 cases there was a history of eating mussels or oysters. Some suspicion fell on the water supply, which is obtained from the Manchester Corporation, and three samples were submitted to Sir Robert Boyce of the Liverpool University. In each case the *Bacillus coli* was found in 10 c.c.m. but was absent in 1 c.c.m. At Atherton, between January 1st and October 13th, only 8 cases had occurred, but from October 19th to the end of the year 34 cases occurred with 7 deaths. In 13 cases the sufferers had partaken of mussels. The medical officer of health for Atherton says that the water supply, though not good, cannot be held responsible. In one sample the *Bacillus coli* was present in 50 c.c.m. but not in 40 c.c.m., while in another it was present in 40 c.c.m. but absent in 30 c.c.m. The coincidence of this outbreak with a similar one in Salford, which is ten miles away but receives the same water supply, ought to lead to a careful examination of the water coming from Thirlmere.

SETTLE DISTRICT INFECTIOUS HOSPITAL.

THE new Infectious Diseases Hospital erected by the Settle Rural District Council at Harden Bridge, near Clapham, was formally opened on February 15th. The hospital has cost £5,680, exclusive of the cost of site and furnishing. It comprises a commodious administration block, with matron's rooms and premises for a caretaker, a scarlet-fever block with accommodation for 14 patients; a double isolation block for 6 patients, so arranged that diphtheria or enteric cases may be dealt with at the same time; and laundry, disinfecting chamber, and mortuary.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Chelmsford Rural District.—Calculated on an estimated population of 20,650 persons, the birth-rate in 1908 was 23.9 per 1,000 and the death-rate 13.9. The infantile mortality-rate was equal to 69 per 1,000 births. Dr. Thresh states that although medical practitioners in the district were asked several years ago to notify to him cases of pulmonary tuberculosis occurring in their practices, he had only been notified of one or two. In the grounds of the union workhouse three tents have been provided and are occupied by patients suffering from tuberculosis, who are said to do well under these conditions. Dr. Thresh suggests that additional shelters should be erected. There were nineteen deaths from phthisis in the Chelmsford rural district in 1908.

DUTIES OF WORKHOUSE SURGEONS.

C. E. D. asks whether the extraction of teeth comes under the heading of surgical operations in an agreement with guardians as medical officer to workhouse?

* * Unless there is some special agreement with guardians which relieves the medical officer of a workhouse of this responsibility, he is expected to provide the *requisite treatment* for all dental cases.

MEDICAL CERTIFICATION OF WORKHOUSE LUNATICS.

R. R. A. asks: What is the recognized practice in union workhouses in reference to the certification of lunatics? Also, whether it is a professional or friendly act of a medical practitioner to enter a workhouse to certify patients at the request of a magistrate? Our correspondent adds that for fifteen years past the magistrates have employed the medical officers of the workhouse for this duty, but lately a new magistrate has changed the system.

* * The practice varies very much. We cannot regard it as a breach of professional etiquette for any medical practitioner to visit a workhouse to certify lunacy cases if requested to do so by the magistrate who is acting in the case, as many magistrates for their own protection prefer to call to their assistance a medical practitioner in whom they themselves have confidence. Notwithstanding this, we should regard it as unfriendly action for any medical practitioner to bring about any such change of system as that described by our correspondent by *soliciting* engagements for these special duties.

Obituary.

DAVID JAMES HAMILTON, LL.D., M.B., F.R.S.,

EMERITUS PROFESSOR OF PATHOLOGY IN THE UNIVERSITY
OF ABERDEEN.

The death of Dr. David James Hamilton, formerly Professor of Pathology in Aberdeen University, will occasion deep regret to a wide circle of former students and friends. As briefly stated in last week's issue, he died at his residence, Queen's Road, Aberdeen, on February 19th, after an illness extending over a period of nine months. From the first there was no hope of recovery, and at the comparatively early age of 60 years the science which he adorned has lost one of its most brilliant exponents and investigators.

David James Hamilton was a native of Falkirk, and

studied medicine at Edinburgh University. After graduating he became a House-Surgeon of the Edinburgh Royal Infirmary, and subsequently held the post of Resident Medical Officer to the Chalmers Hospital in that city. At a later period he was elected Resident Physician and afterwards Resident Surgeon to the Liverpool Northern Hospital. His tenure of these offices extended over a period of two years, and during that time he had full control of the pathological department of the hospital. Pathology had a strong fascination for him, and it was then he decided to devote his whole energy to it. It is said that some of his medical friends tried to dissuade him from this course, being doubtful of the wisdom of his attempting to carve a successful career in a subject which at that time held a minor position in the medical curriculum. The reply was characteristic of the man: "If I can I will, and if I will I can," and his whole career was a justification of the confidence he placed in his own judgement. His special aptitude for the science of pathology

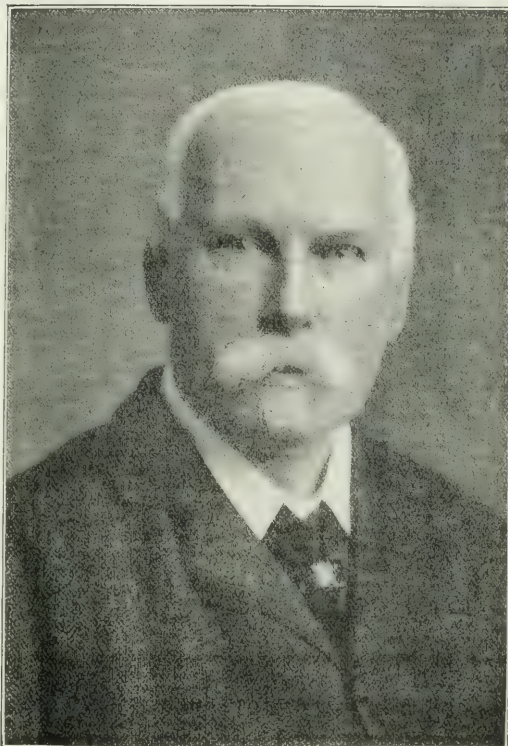
was recognized by the medical staff of Guy's Hospital, who awarded him the Triennial Astley Cooper Prize of £300 for his pathological researches on the diseases and injuries of the spinal cord—a prize open for competition to the whole profession. Two years were afterwards spent in visiting and working in the pathological departments of some of the best Continental schools, including those of Vienna, Munich, Strassburg, and Paris.

He returned to Edinburgh, and was appointed Administrator of Pathology in the University, and under the direction of the late Professor Sanders he organized a course of practical pathology, and gave much more prominence to the teaching of that subject than had hitherto been accorded to it. He was also appointed Pathologist to the Edinburgh Royal Infirmary, and on the death of Professor Sanders he was selected to fill a similar post at the Royal Hospital for Sick Children. During Professor Sanders's illness, Dr. Hamilton, at the beginning of the winter session 1880-81, was chosen to

deliver the lecture in General Pathology in the university, and he also organized a class of morbid anatomy and pathological histology in the School of Medicine similar to that which he had previously conducted in the university.

In 1882 came his appointment to the Chair of Pathology, which had just been founded by Sir Erasmus Wilson, in the University of Aberdeen. The task he undertook was no light one, but it gave him a great opportunity, of which he took full advantage. During the twenty-six years of his connexion with Aberdeen University he attained an outstanding position in the pathological world and won honour for himself and for the university. He organized and equipped the Department of Pathology both in the university and in the infirmary in such a manner as to make it a credit to both, and his conduct of the department on all its sides put the Aberdeen school of pathology in a leading position in this country. In the

practical application of his subject to public health he was deeply interested, and he brought into use in the North of Scotland the bacteriological diagnosis of diphtheria and typhoid fever, and the examination of water by bacteriological methods. For many years his *Textbook of Pathology* has been regarded as a most valuable work. His powers as a teacher gave him a unique position, and there was perhaps no one in this country who had so many pupils occupying important positions all over the world as teachers of pathology and scientific investigators. In a university which is fortunate in the possession of many distinguished lecturers Dr. Hamilton occupied a foremost position. His lectures were models of scientific exposition, delivered in a most fascinating and lucid style, with an accuracy of phrase and happiness of simile that could not be surpassed. He constantly kept before his pupils the value of experimental methods, and instilled into them some, at least, of his own thoroughness; by his lucidity and vigour and singular



DAVID JAMES HAMILTON.

individuality of character he had the faculty of arousing and sustaining the interest of his students and of inspiring them with his own enthusiasm. He did not believe in the ordinary set lectures, and latterly his course consisted of a series of demonstrations, during which he walked about. He made much use of chalk diagrams, many of them beautifully drawn in pastel, and of large models of such things as karyokinesis and other cell processes. There is no figure of an old teacher that the Aberdeen student can recall with greater accuracy than that of Hamilton in his daily march behind the rostrum in the lecture theatre, or in the practical laboratory or *post-mortem* room.

As to his many and notable contributions to the literature of medicine and science, it was said by the Dean of the Faculty, when presenting him for laureation as LL.D. in Edinburgh in 1907, that "the textbooks he had published, based as they are on data gathered through long years of study and observation, and reflecting, as they do,

the workings of a keen, unprejudiced, and independent intellect, deservedly enjoy a high reputation as illuminating and authoritative works." For two years he dealt with the pathology of bronchitis, catarrhal pneumonia, tubercle and allied diseases in the human being, in a monthly series of articles appearing in the *Practitioner*. He also conducted extensive investigations in connexion with the working out of the topography of the brain in relation to disease, the expenses being defrayed by a grant from the Royal Society of London. Dr. Hamilton was Morison Lecturer for 1882 of the Royal College of Physicians, and took as his subject the recent pathology of the central nervous system. To agricultural science Professor Hamilton had rendered services of inestimable value. He was indeed a tireless investigator in a wide range of subjects. Pleuropneumonia, tuberculosis, and other diseases which affect cattle were investigated by him, but

his reputation in that direction was earned in connexion with the discovery of the bacillus of "loupin' ill" in sheep. In the year 1881 he acted as chairman of a commission appointed by the Highland and Agricultural Society to make pathological inquiry into that disease and braxy. In 1897 he resumed the study of braxy privately, and subsequently received a grant from the Government for the purpose of carrying on his investigations. From an early stage good hopes of a successful termination of the researches were entertained, and in view of the truly national character and great importance of the work the Highland and Agricultural Society suggested that the inquiry should be taken in hand by the Board of Agriculture, and prosecuted to the fullest extent under the direction of Professor Hamilton. This was agreed to, and in 1901 he was appointed Chairman of a Departmental Committee, which presented its report in 1906. One result of these investigations was to establish Dr. Hamilton's discovery of the bacillus of "loupin' ill," the cause of which had not been known prior to 1901. The bacterial character of "braxy" was also established by him by researches, which confirmed the discovery of the specific bacillus by Ivan Nielsen in Norway in 1888. Another most important and interesting scientific inquiry with which he was also identified was that of the relation of human tuberculosis to that of bovines. The results of these investigations were published in 1903, and were directly opposed to those of Koch. The publication of subsequent reports has confirmed its conclusions. Professor Hamilton became a Fellow of the Royal Society last year. He was also a Fellow of the Royal Society of Edinburgh, and a Member of the Royal Medico-Chirurgical Society of Edinburgh, and of the Physiological, Pathological, and Neurological Societies.

A notable and striking tribute to his work was the issue in connexion with the university quatercentenary celebrations in 1906 of a volume entitled *Studies in Pathology*, consisting of contributions by his past students, designed

also to commemorate the fact that he had all but completed a quarter of a century's tenure of the Chair of Pathology. The volume was edited by Dr. William Bulloch, and among the contributors were Dr. Leslie Mackenzie, Dr. Arthur Keith, Dr. A. R. Cushny, Dr. George Dean (who succeeded Dr. Hamilton in the chair of Pathology), Dr. G. M. Duncan, Dr. Alexander Low, and Dr. J. J. R. Macleod.

Professor Hamilton was a man of culture and refinement. He loved art and music, and was a discerning critic of both. One of the features in the excellent pathological museum which he built up in Marischal College is the collection of models of pathological specimens, most of which were painted by himself. He was deeply interested in architecture, and his knowledge of its principles was wide and accurate. Many will recall his outspoken criticism of the scheme of decoration carried out in the restoration of King's College Chapel. Professor Hamilton frequently lectured in public on subjects connected with art, and the attractive and popular gifts which distinguished him in the classroom were equally present on the platform. His resignation of the Chair of Pathology was deeply regretted by his colleagues, and cordial recognition made of his great services to the university.

Professor Hamilton was essentially a generous-minded warm-hearted man, and his death, regretted by old students in all parts of the world, will be greatly mourned by all who enjoyed his friendship and knew him in the private relationship of life. He was twice married, and his second wife, a daughter of Mr. John Wilson, South Bantaskine, Falkirk, died in June last year. Professor Hamilton is survived by two sons and a daughter. Both sons are in the medical profession—one in Liverpool and the other in the navy. The daughter is the wife of Dr. Thomas Lumsden, London. Mr. Geo. G. Hamilton, until recently Surgeon to the Royal

Infirmary, Liverpool, was his brother.

The funeral took place on February 22nd from the university. The service was held in Marischal College, and the coffin, which was carried by four Shore Porters (a kind of guild), was preceded by the university senators, professors, and other members of the university in cap and gown, and followed by the chief mourners. The whole two miles from the college to the cemetery was lined by people, who doffed their caps as the coffin passed.

We are indebted to Professor ALEXANDER OGSTON for the following personal appreciation:

It will be many years ere Professor Hamilton be forgotten in his university or in Scotland.

He came to Aberdeen in 1882 to raise the subject of pathology from the degraded condition into which it had fallen and restore it to its proper place in the medical school of Aberdeen. A strong man, a determined man, a brilliant man was needed, and Hamilton was all this.

Framed by Nature in a fighter's mould, with the head, the face, the physique of a combatant, we were not long in learning Hamilton's energy and force of character. From the first day of his professorship it was felt that his conduct of the chair was to be on a level above what we had seen here, or indeed in almost any other school in the world. Some of us knew the teaching of Rokitsansky and the great Virchow, and our ideas were high-pitched; but Hamilton surpassed them. He started as a teacher far above the level of Virchow, and he continued his work to the end on a level that we could find nowhere else. A great defect was filled, and his colleagues as well as his students felt the benefit and responded to the stimulus.

Hamilton was not always right in his teaching. Who is? But at least his students left him knowing their pathology thoroughly, and it was better to know Hamilton's views well than to have drifted through the teaching of a feeble man. When he taught a thing he did it so that all his students understood and knew, and did not forget. A quarter of a century of strong men went out into the world well armed for their life-work and equipped with a goodly share of the energy and decision of their teacher.

But there was a softer side to our colleague. He was not all warlike. Once he knew a man to be straight and honourable, Hamilton showed him an unexpected aspect—that of the true, warm-hearted friend, who could be as kind and generous as brave and strong men are, and who never turned to the right or to the left in his straightforward friendship. In a school of medicine the tone of the teacher has vast power. If his nature be a low one it infects and destroys. Ideals are low, and the morale of the profession receives a blow that long echoes in its ranks. But Hamilton's influence raised all who came in contact with him. We loved him; his students loved after they had ceased to dread him, and I am sure no student ever went through our medical school without being a better man for having known Hamilton.

Of his scientific work I say nothing—it speaks its own tale; and this is a personal appreciation, solely. But it was worthy of him, as it was bound to be, for all his great heart was thrown into it. His department, the museum he created, influences us still, and will long do so. When the end comes for any of us, it is well, though it be given to few, to leave such a life-record behind as did Professor Hamilton.

The Right Hon. ROBERT FARQUHARSON, M.D., writes: I am glad of the opportunity of placing a wreath of cordial and heartfelt appreciation on the too early grave of my old, valued, and respected friend, the late Professor Hamilton. His death was not unexpected, nor, under the circumstances, to be regretted, for he suffered from an incurable and painful disease, made all the more sad by his own intimate knowledge of the lingering steps leading to the inevitable end. His was emphatically a life too short for friendship, not for fame, and his memory will always linger in the grateful affection of his numerous and attached pupils now scattered over the world, who will, I hope, erect some permanent memorial of their great master. Only a few years ago a distinguished foreigner, who visited Aberdeen, said, "If you want to learn pathology properly you must come to Aberdeen," and he was right, for he found there not only a perfect and complete laboratory installation, but the infectious enthusiasm, the wise dogmatism, and the breezy combativeness, which, whilst shattering old and worn-out beliefs, re-examined those which seemed to be finally established, and built up firmly on the ruins of what he destroyed. His interests were widely varied; he sang admirably, had more than a competent knowledge of art, and I cannot doubt that our mutual friend, David Murray, remembers a week-end at Finzean spent in a series of pitched battles between him and his formidable antagonist. Many of us will miss him long and deeply, and his premature removal will leave a distinct gap in the special branch of science to which he devoted all the energies of a vigorous and suggestive mind, and his excessive and continuous devotion to which undoubtedly impaired his strong physique. His *Textbook of Pathology* still holds the field, but what most especially interested me in my capacity of landed proprietor were the epoch-making researches he was carrying on into the varied dis-

eases of animal and plant life. These were beginning to bear good and useful fruit, and I deeply mourn the lost opportunity of suggesting some fresh lines of investigation in the interest of agriculture.

We quote, by the kindness of the editor, the following paragraphs from an obituary notice written by Professor Hamilton's successor, Professor Dean, which appears in the issue of the *Edinburgh Medical Journal* for March:

Professor Hamilton was undoubtedly one of the leading teachers of pathology of his period in Great Britain. He spared no pains in making his lectures models of scientific exposition, and constantly kept before his pupils the value of experimental methods. His manner of lecturing was vigorous, incisive, and effective, with the result that he left on the students a vivid impression of the subject-matter with which he had been dealing. His whole system was a practical illustration of the value of first-hand knowledge obtained by observation on the part of the learner.

His teaching of pathological anatomy and histology was particularly effective. He would have the students always to be seen, and even the weakest men in every class were forced to carry away a certain amount of knowledge which they had acquired by their own observation under his compelling guidance. He thus trained those under him to become observers, and enforced on them the necessity of accurate method. He had no toleration for anything slipshod, and many have greatly benefited by his influence in this direction.

We also quote the following paragraphs from the same journal, written by one of Professor Hamilton's pupils during the time when he taught pathology in Edinburgh:

Amongst the old Edinburgh pupils of Professor Hamilton there can be but one feeling at his comparatively early death—that of the profoundest sorrow. Although it is more than a quarter of a century since he left Edinburgh, the impression made by his teaching is still fresh in their mind. They remember how he returned from Vienna full of enthusiasm for his subject, and with a thorough acquaintanceship with the then modern methods of pathological investigation, and how he triumphed over the difficulties in the shape of the miserably inadequate accommodation and equipment of the laboratory allotted to him, and made the first courses of practical pathological histology taught in Great Britain a conspicuous success. In these days practical pathology was a voluntary class, not required for graduation, but the influence of Hamilton's teaching was such that he attracted not only university students, but men from the extra-mural schools in Edinburgh and from other universities in Scotland. He had a marvellous faculty of compelling one, even in spite of oneself, to take an enthusiastic interest in his subject. It was simply impossible not to be attentive to and not to learn from Hamilton. His enthusiasm and the influence of his personality dominated every member of his class. While we recognized that he might not be always right in his views, we were constrained to be directly interested in his subject in such a way as to make it a working part of our mental equipment. Every one of us is grateful for his inculcation of the method of personal observation and for the mental discipline it gave us—much to be desired in these days of "spoon-feeding."

In Aberdeen he has trained up a school of pathologists whose works have already done honour to their university. In Edinburgh he had begun to do the same, and more than one occupant of a pathology chair owes his position to the direction given to his studies by Hamilton. All over the world there are men who have carried into their daily work the habits of close observation and of clear thinking, for which they can never cease to be grateful to their old master.

PETER HORROCKS, M.D., F.R.C.P. LOND.,

SENIOR OBSTETRIC PHYSICIAN TO GUY'S HOSPITAL.

We regret to have to announce the death, at the age of 56, of Dr. Peter Horrocks, Obstetric Physician to Guy's Hospital. In the summer of 1907 he had some vesical hæmorrhage, and about Christmas time some growth was removed by operation; improvement was obtained, but there was a recurrence of the symptoms some months later, and their increase was such that a more extensive operation was attempted on Wednesday, February 24th, 1909, but unfortunately only partial relief could be obtained, and he succumbed on February 28th.

Peter Horrocks was the seventh son of the late Mr. George Horrocks, of Farnworth, near Bolton. He matriculated at the London University, and having passed the preliminary scientific examination from Owens College, Manchester, he entered Guy's Hospital in October, 1875. There he promptly made his mark, taking a prize for general proficiency at the end of his first year, and passing the First M.B. of the London University at the end of his second year, with Honours in Physiology. In his third year he obtained the second prize, and a year later he secured the Treasurer's Gold Medal in Medicine, and

followed this quickly by taking the degree of M.B. with the Gold Medal in Medicine, marks worthy of the Scholarship, and Honours in Obstetric Medicine. In the following year he obtained his M.D. degree. This successful career marked him out for a place on the teaching staff, and he became a Demonstrator of Anatomy in due course. His intention at that time was to apply for the post of Assistant Physician at Guy's Hospital when a vacancy should occur; and while waiting he undertook the charge of the Electrical Department of Guy's Hospital, and was appointed Assistant Physician at the National Hospital for the Paralyzed and Epileptic. He devoted himself there to the study of nervous diseases, and he entered upon a study of what was then a relatively new subject, and wrote for the *Guy's Hospital Reports* an article, Reflex Action in Diagnosis. He dealt fully with the matter, and supported his conclusions by original experiment. But this was not, after all, to be his life's work, for the impending resignation of Dr. Braxton Hicks led him to turn his attention to obstetrics, and he applied for and was appointed Assistant Obstetric Physician to Guy's Hospital, while Dr. Galabin was appointed to succeed Dr. Hicks as physician.

He threw himself into the duties of this post with the energy he had shown in all his other work, and soon attracted appreciative classes to his out-patient demonstrations and patients to his practice. Dr. Horrocks came into the field of obstetrics at the happy moment when the claims of the hospital obstetric physician to operate in any case of disease peculiar to women had been practically established, and he proved himself to be a bold and successful, at the same time careful, operator. He was a popular lecturer, for he had the faculty at all times, whether in consultation or *ex cathedra*, of putting what he had to say in a clear and emphatic manner, so that it was impossible to misunderstand either his meaning or his intentions: and the value of his opinion and of his manipulative and operative skill were such that his help was extensively sought for, and he comparatively early had a large practice, which he maintained until the end.

He was elected a Fellow of the Royal College of Physicians in 1889, was Honorary Secretary of the Obstetrical Society in 1890 to 1893, and President in 1901 and 1902, in which capacity he delivered two presidential addresses. He was not a great writer, but he made a few communications to the *Obstetrical Society's Transactions*, and delivered the Hunterian Oration before the Hunterian Society in 1898.

Horrocks was as full of physical energy as he was of mental activity. In his early days he was fond of boating on the river, but for some years he was devoted to alpine climbing, and in 1894 he had an experience in Switzerland which would have damped the ardour of most men effectively. While climbing a narrow ledge on the Zinal Rothhorn he was dragged from his steps by the slipping of a stone from under the feet of one of his guides. All three were hurled down the cliff. Horrocks was happily stopped by the rope catching on a projecting piece of rock; but one of the guides, from the breaking of the rope, was dashed down and killed on the glacier below. Horrocks and the other guide were luckily rescued by another party then on the mountain.

This hairbreadth escape did not prevent Horrocks enjoying the Alps on subsequent occasions: he did many climbs after this, and was among the mountains so recently as last year. He was a staunch friend; cheerful, genial, full of anecdote and reminiscence, with a keen enjoyment of an active, strenuous existence. He was unmarried, and his last year had been saddened, not only by his own threatening illness, but by the loss of more than one member of his family.

ACCORDING to statistics recently issued by the Austrian Minister of Education, the total number of students in the universities of Austria on December 31st, 1908, was 25,883: of these 4,324 were students of medicine. Vienna had 1,972, including 73 women; Innsbruck, 197; Graz, 361, including 4 women; the German University of Prague, 344, of whom 9 were women; the Czech University of Prague, 631, of whom 19 were women; Lemberg, 304, including 37 women; Cracow, 515, of whom 51 were women.

The Services.

ROYAL ARMY MEDICAL CORPS (TERRITORIAL).

EXAMINATIONS FOR PROMOTION.

WE have received the following communication:

I am a Lieutenant-Colonel in the R.A.M.C.(T.), and a few days ago I received a letter from the G.O.C. of my Division asking me when I was going to qualify for a Lieutenant-Colonel. I did not know until then I had to pass another examination, already having passed for Captain and Major. Upon looking up the subjects for examination, I found the following:

1. Army medical organization in peace and war.
2. Sanitation of towns, transports, and all places likely to be occupied by troops in peace and war, epidemiology and management of epidemics.
3. (a) The medical history of the more important campaigns, and the lessons to be learnt therefrom.
(b) A knowledge of the Army Medical Services of the more important Powers.
- (c) The laws and customs of war, so far as they relate to the sick and wounded.
4. Military law, as applicable to other officers of the Territorial Army.

In drawing up the above programme of examinations, it could not have entered into the heads of the Army Council that the men who have to pass in these subjects are senior men in large practices, with very little time for outside reading, and with the best will in the world few can afford to give the amount of time necessary to fit them up for examination. Take subject 3 (a), there alone is an enormous amount of reading, the medical history of the South African war is 400 pages, etc., what good can 3 (a) and 3 (b) do when a Territorial officer has passed in them? 1, 2 and 3 (c) are all right, and if they had kept to them no one could object. Numbers 1 and 4 are subjects already passed for a Major's examination: why put them in again?

I am writing this not to grumble, but to get the opinion of some more of the senior men of the R.A.M.C.(T.). No one could object to having all the officers as efficient as possible, but the authorities should consider that we have our livelihood to get outside the R.A.M.C.(T.) and are not allowed study time off. The only outcome I can see is that they will lose good men to the service who are willing to serve but have not the time to give for such stringent examinations.

THE ARMY ESTIMATES.

MR. HALDANE'S MEMORANDUM.

THE Secretary of State for War has issued the usual memorandum on the army estimates. The total for 1909-10 is estimated at £27,435,000, a decrease of £24,000 as compared with 1908-9, a result dependent upon considerable variations in both directions, the chief items of increased expenditure being the vote for the growth of the Territorial Force, which amounts to £355,000.

Recruiting for the regular army has been remarkably brisk, and at the present time fully-trained men are available to mobilize and maintain in the field for six months the cavalry division, complete with its due proportion of other arms, and the infantry of six divisions. The other fighting units of the six divisions can also be completed on mobilization, but there are still deficiencies in two divisions in the Army Service Corps and the partially-trained men required for medical units, and in the artillerymen required for ammunition columns and to supply the waste of war. The machinery for completing all these deficiencies has been organized and is at work.

Loss by Disease.

Under this head Mr. Haldane says:

"The time has come when we may gauge the results on the health of the army of the reforms in the Royal Army Medical Corps which were instituted in 1902. We are sufficiently removed from the disturbing influences of the South African war upon the normal statistics to be able to contrast the wastage from deaths and invaliding at the present day with that of the period preceding the war."

He gives a comparison of the hospital admission rates,

death-rates, rates of invaliding and constantly sick, rates of the first and last years of the decennial period 1888-1907 in India, in the United Kingdom, and in the Colonies, but we replace these by detailed statistics for each year from 1888 to 1907:

UNITED KINGDOM.

Average Strength for Period (1888-1907), 104,929.

Ratio per 1,000 of strength.

Years.	Admitted into Hospital.	Died.	Discharged as Invalids.	Constantly Non-effective from Sickness.
1888	740.9	5.52	15.91	44.45
1889	730.4	4.57	15.89	41.48
1890	810.6	5.53	16.72	44.29
1891	772.2	4.94	14.51	41.66
1892	761.3	4.38	14.38	42.75
1893	751.6	5.13	15.70	44.10
1894	655.9	3.70	17.06	40.91
1895	702.8	4.32	16.57	41.76
1896	645.1	3.58	21.20	33.52
1897	640.6	3.42	19.87	37.95
1898	649.6	3.59	17.99	37.84
1899	670.6	4.30	18.12	36.93
1900	655.1	6.62	32.85	34.24
1901	747.1	4.71	42.26	43.60
1902	711.2	4.18	36.67	41.65
1903	585.0	3.41	21.83	35.23
1904	505.7	2.96	21.59	29.26
1905	448.8	2.73	18.22	26.39
1906	446.7	2.92	14.40	24.86
1907	438.0	3.14	14.22	24.64

INDIA.

Average Strength for Period (1888-1907), 67,406.

Ratio per 1,000 of strength.

Years.	Admitted into Hospital.	Died.	Sent Home as Invalids.	Discharged as Invalids.	Constantly Non-effective from Sickness.
1888	1,385.7	15.20	22.85	12.43	72.34
1889	1,504.4	17.12	26.08	13.33	87.36
1890	1,517.1	14.45	25.42	16.99	86.96
1891	1,387.3	16.35	27.09	15.50	80.22
1892	1,514.7	17.59	24.41	12.40	83.88
1893	1,416.8	13.15	25.32	10.51	86.60
1894	1,506.9	16.81	25.37	15.17	91.71
1895	1,460.0	14.31	24.34	12.01	93.61
1896	1,386.7	15.29	27.89	12.48	95.85
1897	1,500.4	19.25	34.99	20.16	101.38
1898	1,454.0	20.31	39.45	19.94	90.75
1899	1,448.7	13.26	31.57	14.30	75.00
1900	1,143.2	15.36	33.46	11.18	71.71
1901	1,104.3	13.12	39.28	8.60	66.90
1902	1,078.4	15.36	37.23	13.55	66.00
1903	1,035.5	13.33	29.62	13.05	63.17
1904	897.0	11.28	35.59	17.20	57.14
1905	833.6	10.38	21.21	12.30	52.41
1906	871.0	10.81	28.37	9.39	51.47
1907	756.4	8.38	25.47	8.84	46.38

COLONIES.

Average Strength for Period (1888-1907), 90,744.

Ratio per 1,000 of strength.

Years.	Admitted into Hospital.	Died.	Sent Home as Invalids.	Discharged as Invalids.	Constantly Non-effective from Sickness.
1888	785.6	8.46	19.50	10.78	47.40
1889	762.3	6.94	23.42	11.85	48.04
1890	801.7	8.49	22.60	14.79	48.04
1891	778.1	7.33	20.86	13.65	48.67
1892	827.7	8.15	20.90	11.25	50.28
1893	923.4	8.15	21.57	11.58	57.03
1894	838.2	7.01	16.34	9.27	55.25
1895	894.2	7.73	17.00	10.29	57.72
1896	880.3	7.23	18.22	8.29	56.71
1897	904.2	7.99	21.34	10.45	57.11
1898	1,000.3	13.63	44.83	11.67	60.49
1899	846.8	7.91	29.20	12.68	50.66
1900	814.3	7.07	23.80	9.02	46.44
1901	801.0	9.77	47.10	12.99	48.35
1902	549.0	7.03	36.80	5.88	35.47
1903	740.0	8.47	33.04	19.45	51.24
1904	610.4	7.50	24.94	14.69	40.85
1905	565.1	6.21	27.57	10.72	36.26
1906	505.9	4.55	21.76	8.90	32.92
1907	502.3	5.16	19.83	9.01	32.77

These years were affected by the Soudan campaign.

In commenting on the statistics, Mr. Haldane says:

"It should be mentioned that the fall in the admission and constantly sick rates is not to be attributed wholly to diminished incidence of disease. It is partly due to an administrative improvement by which men with slight ailments are not removed to hospital, but are treated in barracks as out-patients. But the lowered death and invaliding rates show the true effects of efforts at disease prevention. The same results are shown, for specific diseases, in the curves published in the Army Medical Department Report for 1907-8.

"And this improvement is not only welcome as indicating increased well-being for the soldier; it also means reduction in the number of hospital beds necessary, less men maintained in peace to produce a given number fit for war, smaller annual drafts to be sent out by the home units; in fact, an all-round saving in the cost of the army."

The Territorial Force.

The Yeomanry and Volunteers on March 31st, 1908, numbered 9,174 officers and 241,085 men; the Territorial Force came into being on April 1st, 1908, and on December 31st, 1908, its strength was 8,623 officers and 199,059 men. Mr. Haldane states that since the work of administration has been handed to the county associations on April 1st, 1908, one of the largest questions engaging their attention has been

the provision of drill hall and other accommodation for the Force. This necessitated a large amount of new construction, and in many cases the adaptation or repair of what was already in existence. A number of new drill halls and head quarters have been approved, and in several cases riding schools for the use of the mounted branches have been sanctioned. Good progress is being made with this work, though it will take some time to complete.

The equipment of the force up to the standard required for training is being pushed forward, and it is intended that the necessary equipment shall be available for all units next training season.

There is every indication that the Territorial Force is making substantial and satisfactory headway in the country. Thanks chiefly to the efforts of the associations, it is receiving support from many who have not hitherto identified themselves with the military forces of the Crown. In particular, many large employers of labour, both public and private, are granting their employees the most generous facilities for attending camp. A general interest in the force has been awakened throughout the country; a considerable number of men whom the old volunteer organization does not appear to have reached are coming forward, recruiting is particularly brisk in consequence, and the class of men presenting themselves for attestation is exceptionally good.

Pay, etc.

The estimate for expenses of pay, etc., of the medical establishments and of medicines is £440,000; this is a net

decrease of £11,000, and as to this the estimates contain the following observations:

The return of medical officers and nurses from South Africa on reduction of the Garrison enables the numbers of re-employed retired officers and civil nurses to be reduced. There is also less provision for civil practitioners, owing to the increased number of officers of the R.A.M.C. available for duty.

ARMY MEDICAL CORPS (TERRITORIAL FORCE). ABERDEEN.

Head Quarters.—No definite decision has yet been reached as to where the permanent head quarters of the Royal Army Medical Corps and allied branches of the Territorial Force in the City of Aberdeen are to be, and it seems very doubtful whether the old West Poorhouse in Fonthill Road, which is at present being utilized as head quarters, will be purchased by the War Office as was expected and as is desired by the City Association. Since the R.A.M.C. has occupied these premises they have been found in every way suitable, being both commodious and central, and there is little doubt that those factors have counted very materially in the recruiting. Some few weeks ago the Chief Engineer for Scotland accompanied by the local officials of the City of Aberdeen Territorial Force Association, went over the premises, and also inspected the at present unused barracks in King Street. The old Poorhouse, although considered in every respect suitable for head quarters, was looked upon with disfavour on account of the cost involved in purchasing the building, and as there is still about twenty years of the lease of the King Street barracks to run, it has been suggested that these be permanent head quarters. This is viewed with much disapproval by the corps, not only because the place is in a bad state of repair, but also on account of its being so much out of the way for the great majority of the men. There can be no doubt that if the War Office eventually determines to make the barracks the head quarters of the R.A.M.C. this will have a very prejudicial effect on the strength and prosperity of the corps. Hopes are, however, still entertained that the representations of the association in regard to the purchase of the old Poorhouse may be favourably considered.

Recruiting.—Meanwhile the recruiting for the corps goes on very steadily and a good class of recruit is being obtained. For Nos. 1 and 2 Highland Division Field Ambulances and the General Hospital over 400 men have now been enrolled. The nursing staff of the General Hospital was complete some months ago—the first in the kingdom to attain this satisfactory position. The organization of the training school was completed many months ago, but as no funds are yet available for it little has been accomplished in the way of practical work. With suitable head quarters permanently agreed on there is no doubt that the corps would rapidly follow the Highland Division Artillery in completing its establishment.

Universities and Colleges.

UNIVERSITY OF LONDON.

FACULTY OF MEDICINE.

Proposed Formation of a Board of the Faculty.

THE Faculty of Medicine of the University of London, at its meeting this (Friday) afternoon, will have before it a memorandum by Professor Starling suggesting the formation of a Board of the Faculty, and draft recommendations and a draft resolution for the formation of such a board prepared by Professor Starling and Mr. Leonard Hill.

Professor Starling's Memorandum.

The main object of the reconstitution of the university in 1898 was to make the university a teaching body by giving the teachers a voice and an influence in the determination of the curricula and in the examinations. In the statutes of 1900 the method adopted to attain this object was the institution of boards of studies composed of teachers, whom the Senate were bound to consult on all subjects concerning the curricula and examinations. The recommendations of these bodies are considered by the Senate only after receiving a report on them from the Academic Council or External Council according as the recommendations affect internal or external students respectively.

To the Faculties the only statutory power accorded is the election of sixteen members of the Senate—members who also form part of the Academic Council. On the Academic Council there falls the task of co-ordinating the recommendations of the various boards within the purview of each Faculty, and of formulating definite recommendations to the Senate with regard to the Faculty as a whole. Since the Academic Council includes representatives from all Faculties, it has become customary for the affairs of each Faculty to be referred first to a subcommittee consisting of the representatives of the Faculty in question. The initiation of action in the internal affairs of the university so far as concerns medicine is therefore practically in the hands of the three representatives of the

Faculty. These three are not trained administrators. They are not cognizant with all aspects of questions which arise concerning the Faculty of Medicine. They only form a small minority in the Academic Council. Where there is general agreement between all the Boards of Studies they are able to advise the Academic Council accordingly. Where there is disagreement they have not the knowledge or power which would enable them to decide between the divergent views, nor, if they so decided, could they speak with the authority necessary to impress their views on the rest of the Academic Council or on the Senate. Moreover, their time and energies are so fully taken up with routine business, such as modifications in the curricula, recognition of teachers, course of study, etc., that no time or energy is left for the working out of schemes for the development of the University Faculty of Medicine, which have from time to time been put forward by the Faculty or the Boards. One of the weaknesses of the internal side of the University is the inadequacy of the Academic Council to perform duties which cannot possibly be carried out by any one body of men.

Is it possible to improve this condition of things? Any alteration in the mode of appointment of the Boards of Studies, or of the Academic Council, or in the reference to these bodies, would amount to an alteration of the schedule to the Act of 1898, which at present keeps the whole university in fetters. We cannot, therefore, expect any such alteration until the new Royal Commission has reported. It would, however, be possible to effect certain changes by consent (not by statute) which might bring about an improvement in the administration of the internal side of the university, and might be regarded as an experimental trial of a condition of things for which statutory authorization might be hoped for under a new Act.

We cannot expect the medical side of the university to make any substantial progress until its academic direction is determined by those who are mainly responsible for its welfare—namely, the members of the Faculty of Medicine. At the present time the Faculty itself is too large and unwieldy a body to undertake administrative functions. Any attempt to rule the medical side of the university by a direct vote of the Faculty would result in important questions being decided by small groups of men who had the energy or leisure to whip up the holders of some particular view. On the other hand, its three representatives on the Academic Council are too few in number and not sufficiently representative of the varied interests involved to be able to carry on the work which is laid upon them.

The solution of the difficulty is probably to be found by adopting the suggestion of the Cowper Commission, and by entrusting the affairs of the Faculty to a "Faculty Board," to be elected by the Faculty, sufficiently numerous to include representatives of the various branches of study involved in the medical discipline but not too large to act as a single advisory or executive body. It is to be hoped that such a body will in future be entrusted with actual executive functions in certain academic matters. At the present time all that the Faculty can do is to delegate its powers of advice to its representative board, and to request the Senate to regard its delegates as the Faculty itself and as the chief advisory body in medicine. The Faculty Board would thus in practice take the place of the subcommittee in medicine of the Academic Council, and would probably also render unnecessary the existence of the committee of the medical members of the Senate.

Method of Appointment.—At some future time, when the Faculties have more autonomy and are directed by their representative boards, the nomination of Boards of Studies, which might be practically committees of the several Faculties, would lie with the latter. At present the Boards of Studies are the most important academic bodies provided for by statute. The Faculty Board would therefore have to be, in the first place, representative of the various Boards of Studies in the Faculty, care being taken by the proper proportioning of the numbers of representatives from each board, and by the addition of members directly elected by the Faculty to ensure that the opinion of the Faculty Board should really represent the opinion of the Faculty as a whole. A board of twenty-four to thirty would be workable in size, and might have somewhat the following constitution:

One representative of each of the subjects, Chemistry, Physics, Biology, Pharmacology, Ophthalmology, Hygiene, Mental Diseases, Dentistry—8.

Two representatives of each of the subjects, Anatomy, Physiology, Pathology, Gynaecology—8.

Five representatives each of Medicine and Surgery—10.

This would give eight members of the board representing the Preliminary and Intermediate Medical Studies and eighteen representatives of the Advanced Studies. In a

body of this size it should be possible to secure representation on the board of every school of the university. The board would have to meet regularly at least once a month in order to get through the business, and it would therefore be essential to elect only such men as are able to devote this amount of time to the work of the Faculty.

The following series of resolutions are designed for the purpose of carrying these alterations into effect. It is important to remember that the Faculty, in carrying these or similar resolutions and making a bid for Home Rule in the Faculty, would be practically requesting the Academic Council to abrogate certain of its powers in favour of a board which is not recognized by the present statutes. The change, therefore, can only be carried out by consent of the Senate and its Councils, and if the recommendations of the Faculty are to have sufficient weight with the Senate to persuade this body of their advisability, it is essential that they should be carried by a large majority at a full meeting of the Faculty, and not, as usually happens, by a chance majority at a meeting which only just exceeds the necessary quorum. The question is vital for the future of the Medical School of London, and is much more important than the election of one or other individual as a representative on the Senate. It is hoped, therefore, that the members of the Faculty will make a special effort to attend the meeting at which these resolutions will be brought forward.

Draft Scheme Proposed by Professor Starling and Mr. Leonard Hill.

The scheme recommends that the Board of the Faculty of Medicine shall consist of:

- (i) The Dean of the Faculty of Medicine, who shall be *ex officio* Chairman of the Board.
- (ii) The Secretary of the Faculty of Medicine, who shall be *ex officio* Secretary of the Board.
- (iii) The Chairmen of the Boards of Studies in the following subjects:

Preliminary Medical Studies,
Intermediate Medical Studies,
Advanced Medical Studies,
Dentistry,
Hygiene and Public Health,
Physiology and Experimental Psychology,
Human Anatomy and Morphology.

- (iv) Representatives of the following boards appointed by the Faculty after report from the Board in question, namely:

Two representatives of the Board of Preliminary Studies,
Two representatives of the Board of Intermediate Medical Studies,
Four representatives of the Board of Advanced Medical Studies.

- (v) Four members to be elected from the Faculty by the Faculty.
- (vi) The three Representatives of the Faculty of Medicine on the Senate.
- (vii) The two members of the Senate appointed by Convocation on the election of the registered graduates in Medicine and in Surgery.
- (viii) All members of the Faculty of Medicine not included in the foregoing categories who are also members of the Senate.

The Board will thus consist of at least twenty-six members, and it is proposed to fix its quorum at ten.

It is recommended that the Board of the Faculty of Medicine be empowered to report to the Senate on any subject within the purview of the Faculty through the Academic Council, or through the Council for External Students, as the case may be, provided that, if any six members of the board, at any meeting of the board, request that a question shall be reserved for the consideration of the Faculty as a whole, no action shall be taken thereon until the Faculty has considered it.

Resolution.

The following is the text of the resolution which is to be proposed by Professor Starling, seconded by Mr. Leonard Hill:

That the Senate be requested to resolve that until further order no action on any of the following subjects be taken by the Senate until they shall have received a report thereon from the board of the Faculty of Medicine through the appropriate council or councils in accordance with the scheme set out below:

Subject.	Appropriate Council.
(a) Recognition of teachers and courses of instruction in medical subjects	Academic Council.
(b) Medical curriculum	Academic Council and External Council.
(c) Medical examinations, including appointment of Examiners	Ditto.
(d) Admission of schools in the Faculty of Medicine	Academic Council.
(e) Constitution of the Faculty of Medicine	Ditto.
(f) Organization of higher teaching and research in medicine	Ditto.

UNIVERSITY OF CAMBRIDGE.

The date of the Third M.B., Part II, in next Easter term, has been altered from Tuesday, June 15th, to Tuesday, June 8th, owing to the Darwin celebration.

R. C. Pannett, M.A., Gonville and Caius College, has been appointed Superintendent of the Zoology Museum.

Sir Victor Horsley will deliver the Lincace Lecture at St. John's College on May 6th, the subject of the lecture being the Motor Area of the Brain.

The following degree was conferred on February 25th:

M.B., B.C.—F. A. Julea, Trin.

UNIVERSITY OF ABERDEEN.

HONORARY GRADUATES.

At a meeting of the Senatus of Aberdeen University held on February 23rd it was agreed to confer the following honorary degrees at the April graduation:

The Degree of Doctor of Divinity—Rev. David S. Cairns, M.A. Edin., Professor of Domestic and Apologetics, United Free Church College, Aberdeen; Rev. James Riddoch Leslie, M.A. Aberd., Principal of the Episcopal Training College, Edinburgh; Rev. John Scott Lidgett, M.A. Lond., Warden of Bermondsey Settlement, London.

The Degree of Doctor of Laws—Allan Rannie Andrew, M.A. Aberd., Chief Inspector of Schools, Hamilton; Alexander Bruce, M.A. Aberd., M.D. Edin., Edinburgh; Donald Crawford, K.C., Sheriff of Aberdeen, Kincardine and Banff; Frederic Harrison, Philosophical Writer, London; James Pittendrigh Macgillivray, R.S.A., Sculptor, Edinburgh; Paul Sabatier, French Author.

Dr. Alexander Bruce had a brilliant career as a student at Aberdeen University. He was first Bursar in Arts in 1870, and graduated in 1874 with first-class honours in classics, and gained the Simpson Greek prize, the Seafield gold medal in Latin, and the Town Council gold medal as the best student of his year. He studied medicine in Edinburgh, and graduated in 1879 M.B. and C.M. with first-class honours, gaining the Grierson and Tyndal Bruce bursary and the Edlies and Leckie Macstair scholarship. Later he took his M.D. degree, gaining the gold medal for his thesis. For many years he was Lecturer in Pathology in the Edinburgh Medical School, and held the post of Pathologist in the Edinburgh Royal Infirmary and in the Royal Hospital for Children. He is now Lecturer on Practice of Medicine and Physician to the Royal Infirmary, Edinburgh.

UNIVERSITY OF BRUSSELS.

The following candidates were successful at the last examination for the degree of Doctor of Medicine:

Dr. B. J. Macaulay, Eastbourne; Dr. H. F. Briggs, Eastbourne; Dr. A. R. Rendle, Harrow; Dr. J. J. Bradley, Colonial Medical Officer, Seychelles.

TRINITY COLLEGE, DUBLIN.

FINAL EXAMINATION IN MEDICINE (PART II).

The following candidates passed this examination in Hilary Term:

J. H. Woodroffe, 'M. A. Diemont,' Hilgard Müller, A. K. Henry, A. C. Hallows, Beatrice M. Hamilton, C. H. Denham, R. H. Mathews, P. G. Leenane, J. W. Flood, J. E. Burgess.

'Passed on high marks.'

SOCIETY OF APOTHECARIES OF LONDON.

Gillson Scholarship in Pathology for 1909.—This scholarship has been awarded to Mr. P. N. Paton, M.A., M.B., (C.M. Camb.), M.R.C.S., L.R.C.P. Lond., of Cambridge University and St. Thomas's Hospital.

The following candidates passed in February in the subjects indicated:

SURGERY.—W. C. DeBath, Charing Cross.

MEDICINE.—N. B. Pensabedi (Sections I and II), University College Hospital; J. Bramley-Moore (Section D), University College Hospital; J. H. Clarke (Sections I and II), St. Mary's.

MIDWIFERY.—J. H. Clarke, St. Mary's; M. Graves, London; H. V. Humphry, Westminster.

Medico-Legal.

ACTION FOR ALLEGED NEGLIGENCE.

IN the Aberdeen Sheriff Court evidence was led last week in an action at the instance of the husband of a patient of Dr. J. A. Mearns and Dr. W. J. Bryce for £125 as damages from each of the defenders for alleged negligence in treating the pursuer during her confinement in February, 1908. She alleged that she was severely scalded by the use of hot water approaching boiling point. The allegations were denied.

In deciding the case, Sheriff Begg finds that the pursuer has failed to prove any fault or negligence on the part of the defenders, and he assuages them with expenses, finding, however, that no higher charges are to be allowed than would have been incurred if the defenders had lodged joint defences, and been represented by the same law agent. The sheriff remarked that this was a most painful case to decide on account of the mutual aspersions of the parties. On the one hand, he did not think there was any ground for accusing the pursuer of shamming or malingering. On the other hand, he could hardly understand how she suffered so severely from the application of water to her though he scalded the two doctors' hands, or how the

discoloration of the skin observed by Professor Stephenson developed into the raised scar tissue, upon which Dr. Wallace Milne required to operate. Various suggestions had been made to meet the difficulties, but none could be regarded as proved. In the absence of any proof of fault or negligence on the part of the defenders, he must regard the pursuer's scald as the result of accident, whether due to the abnormal sensitiveness of the skin of the pursuer, to the midwife allowing the sheet saturated with hot water to remain in contact with the skin, or to some unascertained circumstance. Even in hospitals, where patients had the advantage of the highest skill and the most scientific appliances, slight blisters had been known to result from the hot water treatment of hæmorrhage. He sympathized with the pursuer, but doubted whether she would have raised this action if she had known that in all probability the defenders saved her life by promptly applying the only available remedy while she was under chloroform. If desperate diseases called for desperate remedies, a doctor might be pardoned for taking the risk of the water being rather too hot for the patient's skin instead of allowing the patient to bleed to death. It was common ground between the parties that this particular part could stand much greater heat than the external skin. As regards their subsequent treatment of the case, the defenders seemed to him to have fully done their duty. Dr. Byres, having been called to assist, was quite entitled to leave the patient to the care of Dr. Mearns. As regards the latter gentleman, he could not hold that he was bound personally to dress the pursuer's sore, considering that the nurse was quite fit to do so.

It may be gathered from the foregoing account that this was a case of uterine hæmorrhage treated by the application of hot water: it shows how medical men may be worried by actions for damages, and, though they gain a verdict in their favour, are saddled with a bill for heavy costs.

WORKMEN'S COMPENSATION.

Alleged Psychical Paraplegia.

BEFORE the Hon. the Recorder of Dublin, John Delany, a labourer, claimed an award against Messrs. Richardson and Fletcher, manure manufacturers, for injuries sustained to his spine and back while engaged loading manure in barrows in the defendant's premises.

The Recorder had the assistance of Sir Charles Ball as medical assessor.

John Delany, who moved about the court with the aid of crutches, stated he had been for eight months in the employ of this firm, and up to the time of the accident in question he had never had an hour's sickness in his life. The circumstances of the accident were that a heap of manure, 7 ft. or 8 ft. high, fell upon him, and he was struck unconscious. He was treated in Sir Patrick Dun's Hospital, the Meath Hospital, and the South Union Hospital, but was still absolutely disabled.

Dr. McNamara, called for the applicant, stated that Delany was suffering from injury to the spine, and was not able to work.

Dr. Charles Preston Ball, called for the respondents, stated that the applicant was well able to work, but imagined that he could not.

Dr. Parsons, who had examined the applicant on two occasions, stated that the man was suffering from no organic disease, and had not sustained any serious injury to his spinal column, such as fracture or dislocation. In cross-examination, asked how he could account for the man's allegation that he could not walk, Dr. Parsons said he could not do so except to this extent: it had got into Delany's mind that his back was injured, and as a result of this fixed idea in his mind he could not move his legs. It being put to Dr. Parsons that the man had come unscathed out of Sir Patrick Dun's, Meath, and South Dublin hospitals, witness replied that it was very difficult to persuade a man he had the capacity to walk, particularly when an action in court was pending.

Sir Charles Ball, the medical assessor, then saw the applicant in his Lordship's chamber, and upon returning, communicated his views to the Recorder, who stated that Sir Charles agreed with Dr. Parsons. He did not think this man was malingering, but that he was in a nervous and hypochondriacal condition, and that he was not fit to work at present.

The Recorder said there was an important question involved as to how far an accident could be held to be accountable for the man's mental condition as distinguished from physical injuries. He suggested, however, that some agreement should be arrived at between the parties.

On the consent of both sides the Recorder made an interim order for the payment of an allowance to the applicant, and adjourned the case till next session to see how he would go on. The Recorder commented on the enormous advantage of the aid of an assessor in those particular cases.

FEES TO MEDICAL WITNESSES FOR GIVING EVIDENCE AT INQUESTS IN WORKHOUSES IN IRELAND.

DR. T. LAFFAN (Cashel) writes with reference to this matter to say that he has received fees for giving evidence at inquests or making *post-mortem* examinations on patients who have died in workhouses. He considers that the law on the point is well ascertained.

MEDICAL FEES AT INQUESTS.

H. G., F.R.C.S., inquires whether a medical man is not entitled to receive an extra guinea for attending an adjourned inquest.

* * The coroner is only empowered to pay one guinea for evidence and one guinea for *post-mortem* examination, including adjournments. This is the highest fee that he can allow by statute law. But occasionally, when a special analysis is required, extra remuneration is obtainable from the Home Office or the county council.

THE MEDICAL WITNESS AT AN INQUEST.

THA writes as follows: Is it usual or proper for a medical coroner, who is also engaged in private practice, to systematically employ his partner to make *post-mortem* examinations and give evidence in his court, to the exclusion of other practitioners?

* * We think the coroner should summon to give evidence at the inquest the medical man who last attended the deceased or was called in at the time of death, and this is the usual practice. The coroner who systematically employs his partner, to the exclusion of another practitioner, can hardly be said to be exercising the duties of his office with dignity and discretion.

SHARE OF A PRACTICE.

PARTNER asks what would be a reasonable sum to pay for the third share of a practice, established fourteen years, bringing in £1,500 per annum, and what would be a reasonable time to wait before being admitted to a further share?

* * From the data it would be impossible to form any reliable opinion as to the actual value of this practice. Speaking generally, such a share would probably be worth from a year and a half to two years' purchase. With regard to a further share, this should be settled at the time of the purchase, and by mutual agreement. It is impossible to say on the data what would be a reasonable time to wait.

CORONER AND MEDICAL PRACTITIONER.

H. C. S. writes us a long letter in which he complains that, although called by a police constable to view a dead man with the head on one side of the railway line and separated entirely from the rest of the body, he was not summoned by the coroner to give evidence at the inquest; and further he asks who is responsible to him for the payment of his fee when called by the police to see the body? It appears that our correspondent did attend the public inquiry and the coroner explained to him that it was optional on his part as to whether he called a medical man or not, but the jury had the power to do so if they wished for further medical evidence as to the cause of death. The jury in the present case did not require medical evidence and returned an open verdict, which our correspondent believes would have been one of suicide had he been requested to give evidence. He received no fee at the court, and after a passage of arms between the coroner and himself, he left much dissatisfied with the proceedings. We sympathize with H. C. S. in the matter, and we think that the inquest would have been more satisfactory if further evidence had been taken than that given by a constable only. The position of the deceased's hat and stick, and other things, observed by the medical man called, indicated that the act was contemplated; and he says that if he had given evidence probably a more correct verdict would have been obtained. But he was neither summoned to attend, or permitted to give evidence at the court. For services rendered at the time he was called by the constable to see the deceased a claim should be made to the Chief of the County Constabulary, or he might be remunerated by the railway company or by the relatives of the deceased. A coroner has no power to issue payment to a medical man except for giving sworn evidence at an inquest or for making a *post-mortem* examination.

BOOK DEBTS.

S. R. P., who has bought a practice without buying the book debts, wishes to know if he must hand over to his predecessor money paid by patients for his work done since he has been by himself, because he finds in the ledger that they owe his predecessor an account. Should confinement fees be handed over also?

* * The purchaser of a practice can, of course, refuse to collect his predecessor's professional accounts; and in that case the vendor would have to take steps to realize them at once, if necessary by suing. As this usually would do damage to a practice, it is customary for the purchaser to consent to collect them in the ordinary way by sending in accounts periodically with any fresh items added thereto. Under such circumstances it is only just that when part payment is made the amount received should be used to cancel the earlier part of the account rather than the later. With regard to confinement fees it is another matter; they are special fees paid at the time for work done, and would belong to the purchaser.

RECEIPT STAMP.

WITH reference to an answer given in the JOURNAL of February 13th, 1909, p. 443, "R. R. R." writes: Your reply re receipt stamp is wrong. Both the name (or initials) and the date must be written across the stamp. Also the payment of an account without the stamp being so written over can be obtained again. You might note this in the BRITISH MEDICAL JOURNAL.

* * Our correspondent is really a little too positive. Section 8 of the Stamp Act, 1891, indicates the method referred to as a proper and sufficient method of cancelling a receipt stamp, but it is not the only method authorized. For his benefit we quote Subsection 1 in full, the italics being our own:

"An instrument, the duty upon which is required or permitted by law to be denoted by an adhesive stamp, is not to be deemed duly stamped with an adhesive stamp, unless the person required by law to cancel the adhesive stamp cancels the same by writing on or across the stamp his name or initials, or the name or initials of his firm, together with the true date of his so writing, or otherwise effectively cancels the stamp and renders the same incapable of being used for any other instrument, or for any postal purpose, or unless it is otherwise proved that the stamp appearing on the instrument was affixed thereto at the proper time."

Our correspondent's statement that if a person fail to stamp a receipt or to initial the stamp he can recover the money which has already been paid to him is also incorrect, for the reason given in our previous answer. The question is entirely one of evidence, and a document not duly stamped would not be admissible as evidence of payment. Other evidence might, however, be admitted, and payment proved without the production of the receipt being necessary.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

RELATIONS WITH AN UNREGISTERED DENTIST.

X. writes that opposite his house lives an unregistered dentist, who recently sent him a patient whose jaw had been dislocated. He reduced the dislocation and claimed his fee, but the patient demurred and said that the dentist said X. would not charge anything. X. therefore let him off the fee. He wishes to know whether he was covering an unqualified practitioner.

* * We do not see on what ground X. excused the patient a fee if he was able to pay one. Whether the dentist was registered or not would make no difference in X.'s obligation to render aid to the patient or his right to be paid for it. By not charging a fee he has laid himself open to the suspicion of occupying some special relation to the dentist, and we advise him to let the dentist know that he must not look to him in future for any assistance in his practice.

RELATIONS WITH UNQUALIFIED DENTISTS.

J. P. R. writes: I have been asked by an unqualified man practising dentistry to report upon a former patient of his upon whom he has operated who is now suing him for damages. He asks whether he would be justified in seeing this patient, and giving evidence in court on behalf of the unregistered dentist?

* * While the position of an expert witness giving evidence on behalf of an unregistered practitioner is not a desirable one, it does not seem to involve a violation of the resolution passed by the General Medical Council on December 1st, 1898.

SCHOOL DOCTORS AND THE HEALTH OF SCHOOL TEACHERS

HON. SEC. F. DIVISION.—(1) The duties of a school medical officer are prescribed by individual education authorities, but we do not know of any authority which has included in the duties of the office the examination of members of the teaching staff. (2) A school medical officer, whether whole-time or part-time, unless requested to do so by the teacher himself, should not examine a teacher without communicating with that teacher's doctor. An obvious exception would be in the case of suspected infectious disease, but even then after making a diagnosis the teacher's doctor should be written to by the school medical officer.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL

THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL are at 429, Strand, London.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Athology*, London. The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate*, London.

TELEPHONE (National):—

2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.

2630, Gerrard, BRITISH MEDICAL ASSOCIATION.

2634, Gerrard, MEDICAL SECRETARY.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

F. M. would be much obliged for any information regarding the climate of San Luis Potosi, Mexico.

COST OF PETROL FOR MEDICAL MOTORING.

BOLTONIAN writes: The cost of petrol generally is assumed to be about 4d. per mile, or say, about 20 miles to the gallon, 1s. I should like the opinion of medical men if their running does not cost them more, as though not covering more than between 10 to 20 miles, taking three to four or more hours, the continual starting and stopping may make a difference.

HOSPITAL FLOORS.

B. G. M. writes from India: The new hospital here has been floored with marble slabs each about 18 in. square. Unfortunately the work has been badly done, and the joints between the slabs are open in many cases. The opening tends to the whole thickness of the slabs. The joints are wide enough to take the thin blade of a penknife. Would any of your readers kindly give me advice as to what should be done to fill up these openings in a way suitable for the requirements of a hospital floor? The best I can think of is plaster of Paris; but it is porous.

ANSWERS.

NEW ZEALANDER.—A New Zealand student, who has attended the University courses in Biology, Physics, and Chemistry (Inorganic and Organic), and has passed the examination for the degree of M.B. of the University in those subjects, is exempted from the equivalent examination for the diplomas of L.R.C.P. and M.R.C.S. Such a student, however, is not exempted from the Second Examination in Anatomy and Physiology for the diplomas of L.R.C.P. and M.R.C.S., unless he has passed the Final Examination for the degree of M.B. and has obtained that degree.

"BANDI'S LYMPH."

X. Y. Z.—Dr. Bandi, an Italian bacteriologist, has taken an active part in the vaccine campaign against various diseases, but, as far as we have been able to ascertain, he has not introduced any serum. His name is, however, associated with a plague vaccine, which, in conjunction with Dr. Terni, he described in the *Deut. med. Woch.*, January 19th, 1909, p. 465. This vaccine differs from Haffkine's method by precautions being taken to increase the virulence of the bacilli, and by taking the exudation from the peritoneal cavity of infected guinea-pigs and rabbits just before or just after death, and incubating this fluid for some time before sterilizing it by the fractional method. Priority was claimed by Dr. Bandi for the plague idea, when Hueppe and another worker dealt with this subject in 1907, and did not mention his name. He has also done work in connexion with diphtheria.

A CASE FOR DIAGNOSIS.

DR. H. J. THORP (Ipswich) writes: In reply to "B.S." in the *Journal* of February 27th, I would suggest the patient taking a minute dose, a grain, of calomel three times a day. The patient must submit to a strict régime of diet and exercise.

TREATMENT OF BRONCHIAL ASTHMA.

DR. F. P. BARTLETT (Ottawa St. Mary) writes: "A Medical Man" should try for his bronchial asthma Parke Davis 2-grain capsules of desiccated suprarenal gland. One taken three times a day and continued for some months.

LETTERS, NOTES, ETC.

THERMOMETER CASE.

MR. G. H. ZEAL (82, Turnmill Street, E.C.) has sent us a patent thermometer case with a clip to attach to the pocket, like the clip commonly used for carrying certain forms of fountain pen. The use of such a case may prevent some accidents.

THE SERUM DIAGNOSIS OF SYPHILIS.

DR. HARRY CAMPBELL (London) writes: It has been pointed out to me that in my letter published in the *BRITISH MEDICAL JOURNAL* of February 27th, p. 567, the phrase "the corpuscles are allowed to sink" is ambiguous. I ought to have said that "the blood is allowed to clot," and the supernatant serum drawn off.

TROPACOCAINE AS A SUBSTITUTE FOR COCAINE.

DR. GORDON SHARP (Leeds) writes: Some time ago the Pharmacopoeia Committee suggested the need for a substance having like properties to, but possessing less toxicity than, cocaine. It may be found that tropacocaine will answer the requirements, for present experience points to its being much less dangerous in use. It has one great advantage, in that it is not a proprietary preparation for it is found in coca leaves. Chemically it is a derivative of pseudopine and when hydrolyzed by boiling with a mineral acid it yields pseudotropine and benzoic acid. The commonest salt is the hydrochloride, and solutions can be boiled without undergoing decomposition. Cocaine, it may be remembered, is a derivative of eugonine, and when treated with baryta water it splits up into eugonine and benzoic acid. It has the disadvantage of being decomposed when boiled in plain watery solution. Three drops of a per cent. solution of the hydrochloride of tropacocaine instilled into the conjunctival sac produce anaesthesia in the same time as a like preparation of cocaine, enabling foreign bodies to be removed without pain, and a great advantage is that the pupil is not dilated, so that the patient is not troubled by double vision. Like cocaine, it appears to contract dilated blood vessels. I have seen a grain of the hydrochloride injected into the great toe of a girl of 15 with success, and without any disagreeable after-effects. Probably in spinal anaesthesia it might be used with safety. For many reasons it is worthy of more extended trial than has been given it in the British Isles. Merck's price for the hydrochloride is half a crown a gram (15.432 grains), but if it came into common use the price would no doubt be much less.

CREMATION.

M.D. F.F.P. and S.G. SLIGO, writes: Adverting to your article on cremation, nobody can deny that our present burial methods are the most unhealthy and revolting ever known to any people. You will remember that in a case of exhumation by Sir Thomas Stevenson lately, he found that two years after interment putrefaction was still active and intolerable. You have rightly pointed out that the opposition of the Catholic Church to the practice of cremation is an important factor which ought to be modified, if possible. As bearing on the subject it may be well to record the following excerpt from number 1, at a recent issue, of the *Catholic Times* of the current issue: "In conclusion, it must be remembered that there is nothing directly opposed to any dogma of the Church in the practice of cremation, and that, if ever the leaders of this sinister movement so far control the governments of the world as to make this custom universal, it would not be a lapse in the faith confided to her were she obliged to conform." This statement is the more important as being that of a writer in the *Catholic Encyclopedia*. It is a matter of grave moment that the Church was approached in the appropriate fashion. I would suggest that each Division of the British Medical Association should approach the bishop of the diocese with a statement of the great dangers to health caused in crowded communities by the present burial system—together with their views as to the sanitary value of cremation. It might also be pointed out that the ashes of the cremated could be preserved in the churches.

CAUSES OR CONSEQUENCES.

DR. ROBERT LEE (Pwllheli) writes: A few months ago I was consulted in a case that was diagnosed as "tuberculous meningitis." The infant was between 5 and 6 months old. The prognosis of the practitioner, a man of some experience and knowledge, was very unfavourable, and the family distress was great, as it was the first child. The usual symptoms were present—a condition of nervous prostration, semi-coma, the skin pallid, the eyes turned up and the left markedly inverted, the hands and legs slightly tremulous. I advised the old-fashioned treatment of a hot bath, large doses of calomel and small doses of Dover's powder, and cold applica-

tions to the head. My friend the practitioner smiled good temperedly at what seemed rather absurd treatment and the fully holding out any hope in such a case. Experience had taught me a good deal, and how very theoretical this tuberculous idea is in actual clinical work. Gradually the infant improved. In a week's time the brain inflammation subsided and things looked very different. In three weeks it was out of all danger and now is in perfect health. These forms of inflammation, which I see that Dr. Fisher and Dr. Card do not feel disposed to admit are tuberculous, are frequent in infants and children. The skin, the glands, the mucous membranes, the eyes, the ears, the joints, in fact all the tissues of the body in children, are liable to them, and they seem not to be caused by, or to be the consequence of, tuberculous infection. They do assume often a form of low and chronic character that led to such terms as the "King's evil," and scrofula. They look as if they are due to the constitutional conditions of the children, and are the consequences of any causes which lower their vitality and power of resisting the numerous agents that will attack the feeble and unhealthy.

A SANATORIUM CHART.

MESSRS. BAILE, SONS, AND DANIELSSON have published a chart for use in sanatoriums for consumptives which has the advantage of showing on a single sheet the records of temperature, pulse, respiration, weight, results of examination of sputum and blood, and the amount of rest and exercise for a period of three months. Though the temperature chart has, of necessity, to be closely ruled in order to get the thirteen weeks into a reasonable compass, it is clear and distinct. There is adequate space for all the other particulars of the case, including a weekly summary of progress. This sanatorium chart should prove of value.

THE COLD BATH TREATMENT OF TYPHOID FEVER.

DR. JOHN HADDON (Hawick) writes: Dr. A. J. Manasseh, in the *JOURNAL* of February 27th, p. 563, tells us that he has not tried the cold bath as a treatment of typhoid fever, but that cold sponging is efficacious. I tried the cold bath when it was first recommended by the Germans, troublesome as it was, and found that it did more harm than good; but, as if by accident, I discovered that the sudden shock of cold water thrown upon the patient had an excellent effect. On looking into the literature on the subject, I found that Dr. Currie, an Edinburgh graduate, who practised in Liverpool in the beginning of 1800, advocated cold effusion in the treatment of scarlet fever, and I found it was successful, but has found no treatment and well deserving to be resuscitated in the treatment of fevers generally. The shock to the nervous system which the cold water gives seems to stimulate some centre which is at fault when fever exists. It certainly does not act by cooling the body, as the cold bath was recommended to do, and as, I suppose, sponging is supposed to do.

MEDICAL FOOTBALL.

FOOTBALL has been suspended again almost entirely during the last week owing to frost and snow, and the match between Middlesex and St. Thomas's Hospital in the Cup Tie has been postponed. The only game of importance has been that of the London Hospital v. Harlequins, played in a blinding snow storm at Hale End on February 27th, and resulting in a win for the Hospital by a goal and try to nothing. Some of the credit in the victory to the London was lost owing to the fact that the absence of four of the regular players for the Harlequins necessitated a rearrangement of the back division. The Hospital, however, thoroughly deserved its victory, playing in fine form and passing and running very cleverly. The chief credit was due to Heale and Lindsay, who again and again saved almost certain tries by the spirited defence with which they prevented the attacks of the Harlequin forwards. Starting with the wind in their favour, the Hospital kept their opponents almost continuously on the defensive, and for minutes at a time there was no play. The Harlequins' line almost on the Harlequin's lines, but by half-time there had been no scoring. Within eight minutes after play was resumed, however, a bout of clever passing resulted in Palmer getting over the line by the corner. Then the Harlequins began to press, and the London had hard work defending until a smart kick by Lindsay gave Lloyd the looked-for opportunity and enabled him to touch down. The try was converted. The outstanding feature of the closing minutes was the series of brilliant but abortive runs by Lambert for the Harlequins.

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An average line contains six words.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

A Clinical Lecture

ON A

CASE OF HERNIA STRANGULATED IN THE FORAMEN OF WINSLOW;

AND THE

TREATMENT OF GREATLY-DISTENDED SMALL INTESTINE.

DELIVERED AT THE BRISTOL GENERAL HOSPITAL.

By CHARLES A. MORTON, F.R.C.S.,

PROFESSOR OF SURGERY IN UNIVERSITY COLLEGE, BRISTOL; SENIOR
SURGEON TO THE GENERAL HOSPITAL AND CHILDREN'S HOSPITAL.

GENTLEMEN,—The form of internal hernia, an instance of which I am about to describe—hernia into the foramen of Winslow—is a very rare form. There are only about a dozen cases on record (one was reported by Mr. Carwardine in the Infirmary last year), and there is only one successful case of operation for strangulation in this hernia. My own case was unfortunately not successful, but all the symptoms of strangulation were relieved by the release of the strangulated bowel from the foramen, and the patient seemed almost certain to recover, when, seven days after the operation, he died a few hours after developing serious symptoms, and we found *post mortem* some pelvic peritonitis, due to leakage at the attachment of the opened bowel to the parietal peritoneum, into the pelvic cavity. This certainly did not seem sufficient to cause his death, for he was a strong, middle-aged man, but nothing else was found *post mortem* that would account for it.

Mr. W. was seen in consultation with Dr. Burroughs at 12.30 on Tuesday, October 6th, 1908.

History.

Directly after defaecation about 9 a.m. on the previous Sunday, pain in the central and lower parts of the abdomen came on, and continued. It was paroxysmal and severe. Vomiting commenced the same evening, and had been frequent from that time. The vomit consisted of bile and watery fluid. No flatus had been passed since the onset of the pain, and only a very little hard motion had come away after an enema, and nothing after the administration of purgatives.

Condition on Examination.

The abdomen was moderately distended, and slightly tender just to right and below umbilicus, but not rigid. There was marked intestinal splashing. Nothing made out on rectal examination. No distended coils were seen. There was no history of any previous attacks. Dr. Burroughs told me he had not found his temperature raised above 99° at any time. Pulse was 88 and good strength. There was no external hernia. The symptoms of acute intestinal obstruction (mechanical) were thus obvious and the need for coeliotomy clear.

Operation.

He was admitted to the General Hospital in the afternoon, and operated at 4 p.m. On opening the peritoneal cavity considerable amount of blood-stained fluid escaped. The last two feet of the ileum were empty, but all the rest of the small intestine was red and greatly distended. On tracing the empty bowel I found it passed through a hole in some fixed structure, which from its position I thought must be the foramen of Winslow; but my incision did not allow me to see it. I drew out the intestine without much difficulty, and found I had withdrawn the junction of empty and distended gut, and on the latter was a groove of constriction.

The distension of the small intestine was so great I did not like to trust to spontaneous evacuation. I tried first to force on the contents through the empty coil into the large bowel, but could make very little progress. So I clamped off a few inches and tied on a very small Paul's tube. Through this, by a kind of "milking" of coil after coil outside the abdominal cavity, I was able to evacuate the intestinal contents in a moderate time, and replace the intestine within the abdomen in a nearly empty condition. The coils of intestine whilst outside the abdominal cavity were as far as possible covered with a sterile towel wrung out of quite hot saline solution. I finally fixed the portion of bowel into which the Paul's tube was inserted to the parietal peritoneum by several fine thread sutures, and closed the abdominal wound around it. A very thin rubber tube conveyed intestinal contents from the Paul's tube into a bottle. The pulse ran up to 140 during the operation and remained at that at the end, but it was a pulse of fair volume and strength.

After-history.

On the following day, October 7th, my note says that there had been no vomiting since the operation, but even anaesthetic vomiting, and that his abdominal pain had ceased. Some liquid faeces had been discharged through the tube. His pulse was good. Some moderate distension, with slight abdominal tenderness, was present. On the 8th his condition was much

the same. On the 9th he had much pain in the right loin, removed by a grain morphine. There was no vomiting, and his pulse kept good. On the 11th the abdomen was flat and not tender. On this date I noticed that his Paul's tube had not separated, but at one spot the parietal peritoneum, where it had been sewn to the bowel around the inserted tube, had become sloughed and left a funnel-like opening into the peritoneal cavity—that is, amongst some coils of intestines. This space seemed well shut off by intraperitoneal adhesions. However, I packed it with a little iodoform gauze. On the 12th the Paul's tube began to separate and was removed. The bowels were acting freely through the artificial opening and slightly per anum. On the morning of the 13th the patient complained of pain in the lower abdomen. There was no vomiting. He did not complain of this later in the day, and his pulse kept good. In the evening he was reading the newspaper. There was no pyrexia. But at 10 p.m. the night nurse noticed he was lying partly uncovered, and he must have looked worse, for she felt his pulse and found it very bad; and by 3 a.m. he was dead. It was almost like a sudden death, in a man apparently doing fairly well.

Necropsy.

The *post-mortem* examination showed that the union of the open bowel in the wound to the parietal peritoneum was easily broken down, and that leaking had occurred at the funnel-shaped opening referred to in my note of the 11th. The intraperitoneal adhesion around this had not been firm, and infection of the pelvic peritoneum had taken place. There was a little lymph on a few coils of bowel around this, and an extensive pelvic peritonitis extending from it, but the rest of the peritoneal cavity was free from inflammation. The heart muscle was not degenerated, nor was there any other form of cardiac disease. It was evident that the intestine must have been strangulated in the foramen of Winslow, for there was no other opening in which it could have been gripped. A careful search was made for such openings in the region of the duodeno-jejunal junction and elsewhere. The foramen of Winslow easily admitted one large finger—that is, it was about the usual size, but very often it is hardly open, as it was in this case, and is more of a slit, and in some cases it is closed by adhesion. In some of the cases of hernia into the foramen of Winslow some abnormality of the mesocolon or mesentery has been observed. Nothing of this kind was noticed in this case, but I did notice that it seemed quite easy for the small intestine to reach the oramen; possibly the mesentery may have been unduly long.

The most recent and exhaustive account of retroperitoneal hernia with which I am acquainted is in Mr. Moynihan's book on the subject, the second edition of which was published in 1906. In Sir F. Treves's work on intestinal obstruction you will also find very interesting information on the subject. As you can consult both these works, I will only very briefly refer to the subject.

Either the large or small intestine may be herniated through the foramen of Winslow, and when it has passed into the lesser sac of the peritoneum it may pass out through a rent in its wall, either the gastro-hepatic omentum or the transverse mesocolon, and in one case it was strangulated not by the foramen of Winslow, but by the rent in the transverse mesocolon. The symptoms are those of any form of strangulation of the intestine, with possibly the addition of a resonant swelling in the upper abdomen if a large amount of bowel is herniated into the lesser cavity of the peritoneum. In one recorded case the symptoms were those of subacute obstruction, the gut not being strangulated. Curiously enough, in this case it was impossible at the operation to reduce the large amount of intestine which had passed through the ring, but spontaneous reduction occurred soon after. That has been the difficulty in many of the cases of strangulation. It was so in Treves's own case. The ring is bounded by such important structures that it cannot be divided. Moynihan suggests that the difficulty of reduction may be due to the formation of a volvulus within the lesser sac of the peritoneum, and advises that a free opening into the sac shall be made through the gastro-hepatic or gastro-colic omentum, and that any volvulus should then be untwisted, and, if that is not enough to enable the surgeon to reduce the hernia, that the distended coils should be opened and their contents evacuated, and the opening sutured. Fortunately, in my case there was not the slightest difficulty in withdrawing the small strangulated coil of bowel. The only case of recovery after operation for strangulation in the foramen of Winslow is Delkeskamp's case.¹ The hernia was a very large one, and consisted of both colon and small intestine. The lesser sac was freely opened, and the contents of the herniated colon was expressed into the colon outside the ring, and thus it was possible to reduce the hernia.

As I have already stated, I noticed nothing abnormal about the intestines in my own case beyond the strangulation.

The foramen easily admitted a fairly large finger. In one recorded case there was a common ileo-caecal mesentery; in another the caecum was "undescented." The following conditions have been suggested by Moynihan as likely to allow of the hernia: (a) A common mesentery for the whole of the large intestine; (b) absence of the secondary fusion of the ascending colon to the posterior abdominal wall; (c) abnormally large size of the foramen of Winslow; (d) abnormal length of the mesentery and consequent undue mobility of the intestine.

In this case, when I had withdrawn the strangulated bowel from the hernial opening, I had removed the mechanical obstruction: and you may ask: Why was I not content with this? Why did I not leave the intestine to empty itself in the course of time? Probably it would not have emptied itself. The obstruction might have persisted though the mechanical obstruction of strangulation in the ring had been removed. When small intestine becomes greatly distended, it may fail to contract, because it is paralysed, and it may be unable to empty itself even if it can contract, because of the kinks in its course, due to the sharp curves of its over-distended, waterlogged coils. You must not think of distended small intestine as presenting gradual round curves along which the intestinal contents can easily pass, but of intestine with very sharp curves, with the coils pressed together, within the confined peritoneal cavity, by their own distension, and heavy with fluid contents. You will then understand why the gut may not be able to empty itself after the removal of such an obstruction as strangulation in a ring. Fortunately, in herniotomy, when the strangulating ring is divided and the bowel returned within the abdominal cavity, in the great majority of cases the bowel does empty itself, for operation is done before great distension has had time to come on, and, of course, in a case of internal strangulation, operated on early, there would be no need to empty the gut. But, if you relieve the obvious mechanical obstruction and leave greatly distended intestine within the abdomen, your operation may fail to relieve the patient. This is well recognized by surgeons. It may, however, be a difficult matter to decide how distended the intestines must be before we need empty them—that is, what condition of distension Nature can deal with. I will give you some details of a case under my care, some weeks before I operated on this case of hernia into the foramen of Winslow, which will impress on you the inability of Nature to deal with much-distended small intestine, due to such an obvious mechanical obstruction as strangulation under a band may cause.

The patient was a man 65 years of age, whom I saw in consultation with Dr. Cook and sent into the hospital and operated on on August 22nd last. I found the small intestine strangulated under a band, a short distance from the ileo-caecal junction, and the intestine on the proximal side of the obstruction considerably distended. However, it seemed to me at the time of the operation that the distension was not so great that the bowel could not slowly empty itself, and I therefore contented myself with pressing on some of the contents of the over-distended bowel into the empty coils, and did not make any opening for evacuation of intestinal contents. But faecal vomiting persisted and the distension increased. Twenty-four hours later I again opened the abdomen—as at the first operation mainly under stovaine spinal anaesthesia—and fixed a very small Paul's tube into the lower ileum, and almost emptied the intestines through this, in the same way that I did in the case of hernia into the foramen of Winslow. Even this did not relieve the symptoms, for next day offensive vomiting again recurred, and more distension than before. I removed the Paul's tube and passed a soft rubber tube as far up the gut as I could. This did not evacuate any intestinal contents, but a spontaneous evacuation of gas took place just after and the distension lessened.

I passed the stomach tube and removed 2 pints of what looked like bile, but was rather offensive. He did not vomit again, but no faecal discharge took place from the opening in the bowel for another forty-eight hours, and then the abdominal distension subsided; but by this time his strength had failed, and he died four days after the first operation. The *post-mortem* examination showed the upper jejunal coils still very greatly distended. The more

distal coils down to the original seat of strangulation were very dark and loosely adherent.

You very likely think that, if a case of mechanical obstruction of the bowel is operated on, the obstruction removed, and the bowel, if strangulated, is not too severely damaged to recover, the patient will do well, provided he has strength to stand the shock of the operation. I wish it were so. One of the great terrors of the surgeon is great distension of the small intestine. One of the most experienced abdominal surgeons of the past taught us how hopeless it was to leave a patient with greatly distended intestines, even though a mechanical obstruction had been removed. How best to deal with that greatly distended intestine is the problem which I have very anxiously considered, and about which I have something further to say. First, however, let me give you another example of the difficulties you may meet with in the treatment of this condition.

A boy, 12 years of age, was sent to me by Dr. F. Peake at this hospital on March 7th, 1902, with a greatly distended abdomen. I operated at once, and found all the coils of small intestine red and greatly distended, and removed a perforated appendix, and evacuated an abscess in connexion with it. The suppuration was quite localized. As the distension increased after this operation, I opened the abdomen again forty-eight hours later, and found there was a definite mechanical obstruction from matting in the wall of the abscess. Greatly distended and empty bowel joined in the matted segment. I released the adherent coils, and then evacuated the distended intestine, as I did in the case of hernia into the foramen of Winslow, but I did not use a Paul's tube, but evacuated the intestinal contents through a minute incision which I afterwards sewed up. The next day the distension was again very great. I applied cocaine to the sewn-up wound, removed some stitches, sutured a distended coil lying beneath to the skin, and punctured it with an aspirating trocar cannula. One rush of gas occurred, but nothing further, and the distension persisted. Nothing further escaped even after an interval. Clearly only one coil had been emptied up to the next kink above it. The boy died, and the *post-mortem* examination showed that this was so. It also showed that no mechanical obstruction persisted other than the kinks in the distended coils.

Although it is generally agreed that greatly distended small intestine cannot always—perhaps generally—empty itself, yet it has been frequently urged that the right thing to do is to make an opening in the distended bowel through which it may gradually empty itself—to fix a coil in some way in the abdominal wound and drain it. But what can we expect to gain by this? If the bowel is paralysed and kinked, and therefore cannot empty itself, how are you going to overcome these difficulties by making an artificial opening in it? The only way in which it is conceivable such an opening could help would be this. The empty coils within the abdomen, into which the contents of the over-distended ones would have to be discharged, would be under pressure within the peritoneal cavity, and it might not be as easy for the over-full coils to empty into them as through a direct external opening.

But there is a fallacy here. By making an external opening you may immediately empty one or two coils (probably only one): now that empty coil also lies within the abdomen subject to the pressure of the surrounding over-distended coils confined within the abdominal cavity, just as the empty coils below the seat of removed obstruction do, and it will therefore be as difficult for the distended bowel to empty itself into the coil as into the empty ones below the level of obstruction.

But if you have a direct external opening, what reason have you to expect that the partly paralysed and kinked gut will be able to empty itself through it? In one case I have related to you I brought a distended coil to the surface and opened it, and gas came out with a rush and the distended coil collapsed, but the coils above remained over-full and kinked just as if I had made no external opening at all. Again and again I have turned greatly distended coils of small intestine out of the abdomen, and opened a coil, but one never sees the one opening empty more than the one coil, up to the next kink above it. Yes, but you may say, you cannot expect coils of intestine protruded from the peritoneal cavity, even if covered up by a towel wrung out of hot saline solution, to contract and

empty themselves coil above coil, as they might do within the abdomen when anaesthesia has ceased. But even within the abdomen, I know from experience, they may not be able to empty themselves. Think of the pressure to which all those distended coils are subjected within the abdomen; how tightly they will be packed together, how waterlogged and kinked they will be—the more kinked the tighter they are packed together within the abdomen. If you try to return prolapsed, greatly distended coils within the abdomen you will then realize the tightness of this intraperitoneal packing. If you wish to make sure of getting your over-distended intestine empty (or nearly so) there is only one way of doing that, and that is to empty it yourself. You must turn the distended coils out of the abdomen, cover them with frequently-changed sterile towels wrung out of hot saline solution, make an opening in the distal end of the distended bowel, and then by passing the whole length of the intestine through your thumb and finger, empty it coil after coil. You must not begin at the proximal end or you will get too much fluid concentrated into the middle coils. You must first empty several coils near the artificial opening, and then work from nearer the proximal end into these. Finally you start at the proximal end and work all along to the opening. It is by no means easy to anything like empty the gut, though it is easy to get away a great quantity of fluid and gas. There is a constant tendency for the contents to escape your finger pressure and to pass backwards. It is therefore well to follow up the evacuating thumb and finger of one hand by the thumb and finger of another used as a sort of travelling clamp, or an assistant can take this part of the work. Rubber gloves, instead of being a hindrance, are really a help in evacuating the gut in this way—"milking the gut," as it is sometimes called—for they let the bowel slip through without the slightest friction. I have tried forcing the contents of the distended coils into the empty (and usually contracted) coils. It is easy to fill these up, and perhaps in time one might succeed in forcing the contents of the distended coils on through them into the large intestine, which could then be stimulated to empty itself by the administration of a hot turpentine enema. But it is a very slow and imperfect method, and I have never been able to get a sufficiently satisfactory evacuation of the distended intestine in a reasonable time by it.

But unfortunately all this manipulation of the gut is just the very thing most likely to bring on shock; indeed, the turning out of the intestine alone is likely to do this. We may then return the intestines empty within the abdomen, but the patient may speedily die from shock. If the patient is in a condition of collapse at the time of the operation, it is, it seems to me, useless to attempt it, for we shall only hasten the end by the shock produced. But if the pulse is fairly good I think it is the right thing to do. That it is the only way in which we can satisfactorily deal with greatly distended, partly paralysed, and kinked small intestine, I feel convinced, and I pointed this out in a letter which I published in the *Lancet* of April 11th, 1903. If you have greatly distended large intestine, every one knows it is quite enough to make an artificial opening, and it will empty itself. It does not lie in a series of loops which form kink after kink when over-distended and subjected to pressure. However distended the colon may be behind a mechanical obstruction, if you make an artificial opening it will empty itself in a reasonable time, and generally very quickly. This makes me sceptical whether over-distended small intestine is really paralysed, or even partially; whether it is not wholly a question of kinking at its flexures.

I have in this lecture spoken of it as paralysed, for this is the generally received view, and we might expect intestine as obviously congested as such distended intestine almost always is, to have its muscle contraction somewhat interfered with, at any rate. And when we do colotomy for a growth in the sigmoid, we must remember that the process has been slow, and there has been time for hypertrophy of the muscle of the colon to take place. Still, I must say it seems to me that if great distension can so little paralyse the large bowel, it is a question whether it can to any extent the small.

I have so far said nothing about the kind of opening that should be made in the bowel for the purpose of evacuating its contents. This must be so arranged that

there will be a minimum risk of soiling the peritoneum. I used to get an assistant to take a coil of bowel, and hold it over a basin well away from the other coils, isolate it and his hands with a towel, nick the gut, and let the contents flow out, then clean it up, and sew up the opening. I now adopt what I think is a safer method. I clamp a few inches of gut, and fix into this a very small Paul's tube, less than $\frac{1}{2}$ in. in diameter. To this tube several feet of very soft light rubber tubing, as thick as the rubber of an operating glove, is attached, and, as all the intestinal contents are conveyed through this to a receptacle removed from the area of operation, there is no risk of infecting the intestines, provided the gut and the hands are cleaned well after inserting the Paul's tube. A Carwardine's tube could, of course, be used for the same purpose if it was determined to remove it at the end of the evacuation and close the opening, but I prefer Paul's tube myself. But it seems to me a question whether one is wise in closing the opening. The condition of the intestinal wall is not the best for repair, and the stitching will take up time at the end of an operation already too long for the patient. My own feeling at the present time is that it is perhaps better to leave in the Paul's tube, and sew the coil to the parietal peritoneum in closing the wound. The faecal fistula thus formed ought to close before long with no mechanical obstruction on the distal side of it. If, however, the distension of coils only involved the upper portion of the small intestine, and the opening had to be near the middle, I should not make a faecal fistula so high, but would rather take the risk of leakage at my junction, and remove the Paul's tube and sew up the opening. Unfortunately in the case which I have made the subject of this lecture, even fixing the gut to the parietal peritoneum did not lead to a firm union at the end of several days, and leakage into the peritoneal cavity occurred. It was particularly disappointing, as the patient had really recovered from the obstruction.

We must realize that, given great intestinal distension in the small intestine in association with mechanical obstruction, the condition will be a very difficult one to deal with, and that its treatment will involve fresh perils, and that if the condition of the patient is such that obviously shock must be fatal, our chance of effectively dealing with it is small. I have not forgotten the use of spinal anaesthesia by stovaine in such cases. Anaesthesia of the upper abdomen by this method is always uncertain. It has seemed to me in some of my own cases of operation within the abdomen to prevent shock, and also in reports I have read of others (Mr. Barker's and others); yet it seems as if it did not wholly abolish shock in all cases, for I have been told by some one watching the pulse in some cases during my operation that it has shown signs of failure when I have been dragging on the abdominal viscera, though the patient felt no pain. How this can be I must leave the physiologists to explain. If the spinal cord is absolutely locked to sensory impulse, how can any impulse be conveyed to the vasomotor centre in the medulla, which would paralyse that centre? I think it will be wise to use stovaine spinal anaesthesia in these cases of marked distension and bad pulse, if the pulse is not so desperately bad as to make such an operation unwise, for even if it only acts on the lower two-thirds of the abdomen it may do very much to reduce shock in evacuating the intestine, even though a little general anaesthetic is required as well. In one of the cases related to you to-day you may remember I used it, but a little general anaesthetic was required as well. There was no serious shock in this case, though manipulation of intestine was considerable.

I have said that I think the only satisfactory way of dealing with the greatly distended, kinked, (?) paralysed bowel is to empty it at the time of operation. But alas! this is not always successful, even when it does not induce fatal shock. I have given you two instances in which the great distension present before such evacuation returned directly after, and vomiting also returned. Why should this be so? It may be that the manipulation of the gut sets up a very mild peritonitis (non-septic), and that to this is due the secondary distension. Adhesive peritonitis was found in both the cases, that is, a degree of peritoneal inflammation causing adhesion but no lymph or pus exudation. This condition was quite marked in the case of the elderly man who had had strangulation, but my

note of the boy only says that "the coils of small intestine had a tendency to adhere together."

The difficulties, then, with which the surgeon has to contend in dealing with the greatly distended small intestine are many. If he only makes an external opening, the kinked and (?) paralysed bowel may not empty itself; and if he empties it at the time of the operation, his manipulations may lead to fatal shock; or, if they do not, the intestine may soon fill up with gas and the obstruction continue. In the face of all this discouragement, what is the lesson to be learnt? I think it is the absolute importance of operating early before great distension can set in, and of operating in acute appendicitis before mechanical obstruction from matting around the diseased appendix can occur. One surgeon of large experience in abdominal surgery has recently written: "The surgery of acute obstruction is disheartening work," and that the mortality is far larger than it ought to be owing to delay in operation.

I have been speaking about greatly distended small intestine in mechanical obstruction. If due to peritonitis, I think the treatment must be the same and the risks will be the same. The uselessness of simply making an opening in a distended coil and expecting all the other over-distended coils to empty themselves through it, seems, if anything, more evident when the whole bowel is inflamed than when it is not.

I do not wish you to think that I consider that it is useless to open distended small intestine without oneself emptying the bowel by a manipulation in every case. It depends on the degree of the distension. There are some cases of mechanical obstruction in which this is the right thing to do. Not long ago I had to do colotomy for a large, fixed, irremovable cancer of the lower colon, and a few months later the man got further obstruction from fixation of small intestine to the mass. In this case, knowing I could not deal with the cause of the obstruction, I brought out a coil of small intestine and fixed a very small Paul's tube in it, and relieved the obstruction in this way. But, if this man's small intestines had been enormously distended and kinked, I do not believe they would have discharged their contents through the opening.

There is just one other matter to which I should like to call your attention. Some surgeons have recommended that we should empty the distended coils by pushing a long rubber tube into them, through the incision made for drainage (I am not now speaking of the method advocated by one surgeon of drawing many feet of small intestine on to a glass tube at the time the intestines are all exposed during the operation); but how can he expect to succeed in passing such a tube through coil after coil of kinked, overlaid small intestine? It is interesting that the recommendation has been made, because it implies the recognition of the fact that simply to open distended small intestine may not be sufficient to drain it. But I have proved in the *post-mortem* room how, instead of passing from coil to coil, the rubber tube simply coils up when it meets with the obstruction of the bend, as one might expect. You may think it curious that, if I have no faith in the use of a rubber tube, I should actually have used it in one of the cases I have recorded. I only used it to clear the coil just beyond the opening and had no hope of its doing more.

REFERENCES.

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THE AFTER-RESULTS IN A SERIES OF OPERATIONS FOR THE RADICAL CURE OF HERNIA.

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FOR some years I have paid particular attention to the subject of hernia, especially in regard to its etiology, and the more I study the question the stronger is my belief that the essential cause of all ordinary abdominal herniae is a congenital defect, the presence of a peritoneal diverticulum.

In several communications I have advanced evidence in favour of the sacular theory of hernia. I have pointed out how the same types of sac are met with in the infant and in

the adult, how clear the distinction is between the sac of a congenital and that of a traumatic abdominal hernia, and how impossible it is in the case of an inguinal hernia in an adult to distinguish between the so-called "acquired" and the congenital sac.

I have also considered the question from the point of view of comparative surgery; but perhaps the strongest point I have hitherto made in favour of the sacular theory was that, in 200 consecutive *post-mortem* examinations made upon persons in whom during life there was no history or evidence of hernia, in 47 bodies 68 peritoneal diverticula were found either in the inguinal, femoral, or umbilical regions. In many cases the diverticula were bilateral, and in one case occupied both femoral and both inguinal canals.

I now propose to bring forward clinical evidence in favour of the congenital origin of hernia by directing attention to the after-results in a series of operations performed for the radical cure of hernia upon persons whose ages varied from 1 month to 72 years. I have selected the years 1905-6-7 because during that time I adopted the same principle in operating, and also because the cases have now undergone a fair time test. I do not say all these cases are certainly cured, but as over 80 per cent. of recurrences take place during the first twelve months following operation, it is reasonable to believe that the vast majority of these persons have been permanently cured.

The figures include every case of hernia I operated upon during that period, whether in hospital or in private practice, except cases in which the bowel was strangulated.

I have been at considerable pains to ascertain the after-results, and as this is the chief point in the present communication I may say that any bulging at the site of operation was regarded as a recurrence; and, further, that in almost every instance the examination of the patient was made in the presence of other medical men.

In the accompanying tables (p. 645) I have grouped the cases according to the age of the patients at the date of the operation, and it is at once seen that up to middle life the probabilities of a complete and permanent cure are considerable.

As to children under 10 years of age, it is now so generally recognized that a radical cure follows complete removal of the sac that it is unnecessary for me to dwell upon the results obtained in this series, except to draw attention to the mortality, which, I regret to say, has been far too high.

One child, 4 months old, was operated upon in the summer of 1905, and died a week later from diarrhoea.

Another child, 2 years old, died two days after operation from delayed chloroform poisoning.

The third case, a child of 3 months, died suddenly and altogether unexpectedly two days after operation. No definite cause for the child's death could be discovered at the necropsy.

Although these deaths should certainly be attributed to the operation, still I am glad to be able to say that in no case was there anything wrong with the wound.

METHOD OF OPERATING.

As in the case of the adult patients the operations performed for inguinal, femoral, and umbilical hernia differ in some important respects from those generally adopted, I will describe them under the several varieties of hernia.

Inguinal Hernia.

Everybody is agreed, and for a great many years everybody has been agreed, that it is very important to completely remove the sac, and I have not the least doubt that any and every surgeon who has ever operated for the radical cure of inguinal hernia is perfectly satisfied that he did completely remove the sac. I very much doubt it. This is a matter of very great importance, for I am quite sure that the chief cause of failure after operation is incomplete removal of the sac. In examining patients in whom hernia has recurred I have been at once impressed by the position of the scar. The skin incision had been made far too low—in fact, it encroached upon the scrotum, and did not extend upwards further than the external abdominal ring. Through such an incision it is impossible to excise the sac completely. The lower end of the skin incision should not extend more than $\frac{1}{2}$ in. below the

The After-Results in a Series of Operations for the Radical Cure of Hernia Performed during the Years 1905, 1906, and 1907, considered according to the Age of the Patients at the Date of Operation.

Hernia.	Cases.	Satisfactory 12 Months and over after Operation.	Unaccounted for.	Relapsed.	Died.
Boys and girls under 10 years of age:					
Right inguinal	71	69	—	—	2
Left inguinal	17	17	—	—	—
Double inguinal	8	7	—	—	1
Umbilical	4	4	—	—	—
Linea alba	2	2	—	—	—
Females under 40 years of age:					
Right inguinal	4	3	1	—	—
Left inguinal	3	3	—	—	—
Double inguinal	1	1	—	—	—
Right femoral	3	3	—	—	—
Left femoral	2	1	1	—	—
Umbilical	1	1	—	—	—
Females over 40 years of age:					
Right inguinal	1	—	1	—	—
Left inguinal	1	1	—	—	—
Right femoral	2	2	—	—	—
Left femoral	2	2	—	—	—
Umbilical	6	6	—	—	—
Males under 40 years of age:					
Right inguinal	33	30	3	—	—
Left inguinal	17	15	2	—	—
Double inguinal	3	3	—	—	—
Right femoral	1	1	—	—	—
Left femoral	2	1	1	—	—
Direct inguinal... ..	1	1	—	—	—
Males over 40 years of age:					
Right inguinal	15	10	2	2	1
Left inguinal	10	8	1	1	—
Double inguinal	4	4	—	—	—
Left femoral	1	1	—	—	—
Direct inguinal... ..	2	2	—	—	—

external abdominal ring. I always open up the inguinal canal for about $1\frac{1}{2}$ in., and, having found and isolated the sac, make a point of pulling it vertically upwards, and at the same time brushing back with gauze the vas and other structures clinging to the neck of the sac. I continue to pull the sac upwards and push back the surrounding structures until I bring into view a marked thickening of the peritoneum. This thickening is to be found on the pubic side. I always look for it, and when it appears know I have reached the limits of the sac. By transfixing and tying the peritoneum through this thickened portion the limits of the sac have been passed, and when it is cut away the ligatured stump at once disappears from view beneath the internal oblique. This thickening of the peritoneum is physiological. It is present during infancy as well as during adult life, and when operating for inguinal hernia should always be looked for, as it is the only true indication the limits of the sac have been reached.

The sac being thus completely removed, I unite the divided aponeurosis of the inguinal canal. Formerly, I did this by overlapping, but more recently I have taken a double hold of the aponeurosis on either side with the needle, and so, with four or five stitches narrowed and

lengthened the inguinal canal. The cord is not interfered with, and, after tying several small blood vessels, the skin incision is closed.

On the seventh day the subcutaneous wire or stitches are removed, and, as a general rule, the patient is allowed to get up on the tenth day, and leaves the hospital on the fourteenth day, after the operation, not wearing a truss or support of any kind. He is advised not to return to work until at least two more weeks have elapsed. I formerly kept patients in bed for two weeks after operation, but by getting them up sooner I have added to their comfort and in no way retarded their recovery.

Such has been the routine treatment for inguinal hernia, and when it is remembered that my list includes all sorts and conditions of men—some young, healthy, and favourable subjects, others weather-beaten, beer-worn creatures, who for years had a large scrotal hernia containing omentum, it is extremely gratifying to me to find results so satisfactory following upon such a simple method of operating.

I would draw particular attention to the list of men under 40 years of age. Most of them were dock labourers, carters, or sailors, and many had been ruptured for years. From the time of operation they were off duty about six or eight weeks, and since resuming work have remained sound and well, not wearing a truss or support of any kind. It is really very encouraging not to have had a recurrence in any man or woman under 40 years of age; and the fact that this result has been obtained by an operation which aims at little more than the complete removal of the sac, is additional and substantial evidence in favour of the view that the presence of the sac is the essential cause of the hernia. It also emphasizes the point that, provided the whole sac is removed, it is not necessary to spend time and trouble in what is called "strengthening" the abdominal wall by transplanting the cord, or by adopting other more or less complicated measures. In the case of men over 40 years of age exactly the same method of operating was practised, but in such persons a permanent cure cannot be looked for with the same confidence as when the operation is performed earlier in life.

Many of these cases were men over 50 years of age; and would have been considered unfavourable for operation by any surgeon, some of them perhaps altogether unsuitable, owing to the age of the patient, the size of the hernia, and the length of time it had been present. However, the results are, on the whole, satisfactory, in spite of the fact that in three cases the hernia relapsed, and in one case death followed upon the operation.

Of the three cases that relapsed; two were 58 years of age at the time of operation, one suffered from a double scrotal hernia of some years' duration, the other man had a large inguinal hernia, for which he had worn a truss for twenty-nine years. Both these patients now have a distinct bulging at the site of operation, but a truss is worn with much greater comfort than before operation. The third case of failure occurred in a man aged 41, operated upon in 1906. Some months after he left the hospital. I heard indirectly that he was in hospital in Singapore on account of a rupture, but I am not quite sure whether it was a relapse or a hernia on the other side.

The case of the man who died was somewhat remarkable:

He was 58 years of age, and operated upon for inguinal hernia. All went well, the wound healed, and the man got up at the end of two weeks, but returned to bed owing to an attack of bronchitis. Four weeks after operation he was to leave the hospital, and was dressing himself when he had a sudden and remarkable seizure and died in a few minutes. At the necropsy no definite cause could be discovered to account for his sudden death.

Though I cannot directly attribute the man's death to the operation, still, as he died in hospital after operation, it is better to consider his death as in some way due to the operation.

Femoral Hernia.

All the cases of femoral hernia were operated upon in the same manner. A skin incision made over the sac and parallel to the fold of the groin exposes almost at once a structure frequently mistaken for the sac. It is not the sac, but a layer of fat concealing it, intimately attached to it, and, being enclosed by a thin fibrous membrane, closely resembles a thin hernia sac containing omentum. It should be thoroughly exposed

and isolated well up to the femoral ring; then, grasping it with one hand, I pull it outwards, at the same time brushing back with gauze the structures surrounding its neck. As a result of this firm but gentle pulling and pushing a marked alteration in the appearance of the fat surrounding the neck or mouth of the sac is noticed. At first it was of a reddish-yellow colour, but now it is pale yellow. This is due to the sac and surrounding fat being pulled outwards and the subperitoneal fat beyond the mouth of the sac exposed to view. I always continue to pull outwards and push backwards until the pale yellow subperitoneal fat is exposed, for the limits of the sac have thus been determined and a suitable level for applying the ligature reached. The fat surrounding the sac is now removed and a ligature applied at as high a level as possible. Nothing further is done except to close the skin incision. Complete removal of the sac, together with the fat surrounding it, is the essential feature of the operation.

I have never practised any of the more elaborate methods recommended for the radical cure of femoral hernia, and if, as would appear to be the case, a permanent cure can be brought about by little more than complete removal of the sac, surely this is strong testimony in favour of the view that in femoral as in inguinal hernia the presence of the sac is the essential cause of the hernia. Dr. A. J. Ochsner has used this method during a period of fourteen years, and is convinced that, barring unusual accidents, recurrence is out of the question provided the operation is properly performed. He has been able to get definite reports and to examine 30 cases of femoral hernia. In no case was there a recurrence.

Umbilical Hernia.

In every case the method of operating first described by W. J. Mayo was adopted. The hernial protrusion is included in two transverse elliptical incisions, clearly exposing the neck of the sac and the aponeurotic structures above and below it for several inches. The sac is then opened at its mouth, and any intestine which may lie in it returned into the abdomen. The contained omentum, usually adherent, is ligatured in sections and returned into the peritoneal cavity. The sac with all the adherent omentum, including the skin, is cut away. The entire thickness of the aponeurotic and peritoneal surfaces are then united by overlapping from above downwards. By adopting this plan the operation for the radical cure of umbilical hernia is much more simple than it used to be when the vertical incision and side to side union was practised and the after-results far more satisfactory than they ever were or could have been after the older methods. The operation is often formidable owing to the size of the hernia and the enormous abdominal girth of the patient. My six cases in women over 40 years of age were all very stout, one patient weighing 18st.

CONCLUSION.

It has often struck me as being somewhat discreditable to the science and art of surgery that for the cure of such a common complaint as inguinal or femoral hernia there should be so many operative procedures differing widely in principle. Clearness of purpose and simplicity in method should be our aim, and if results such as I have the pleasure in recording can be obtained by an operation which essentially and almost entirely consists in the complete removal of the sac, this surely is strong evidence in favour of the sac being the essential cause of the hernia, and is also an encouragement to surgeons to simplify their methods when operating, to pay less attention to repairing the abdominal wall, and more attention to the complete removal of the sac.

THE *Polietinico* has published a first list of members of the medical profession who perished in the earthquake at Messina. Among them are the following: Dr. Gaspare D'Urso, professor of clinical surgery; Dr. Antonio Zincone, professor of anatomy; Dr. Agatino Giovanni Barbera, professor of physiology; Dr. Giovanni Melle, professor of dermatology and syphilis; Dr. Antonio Cambria, lecturer on clinical pathology; Dr. Francesco Fonzi, lecturer on materia medica; and Dr. Carmelo Calderone, lecturer on dermatology and syphilis—all of the University of Messina; Dr. Tullio Mazzei, director of the Antinatal Institute; and Dr. Lorenzo Mandalari, lecturer on mental diseases in the Medical Faculty of Naples.

STRANGULATED HERNIA THROUGH THE FORAMEN OF WINSLOW: OPERATION: RECOVERY.

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THE occurrence of this form of internal hernia is sufficiently rare to justify the publication of the details of a recent successful operation. About 20 cases have hitherto been recorded since the first described by Blandin in 1823. Many of these were only recognized after death, and are therefore of interest mainly in reference to the morbid anatomy of the parts concerned. Seldom has the diagnosis been determined in life before operation as in the present instance, and it may therefore be of interest to state briefly the leading symptoms in this case.

In the example here described the diagnosis of this obscure form of internal hernia was made by Dr. Tate, Surgeon to the County Infirmary, Downpatrick, to whom I am indebted for the description of the earlier symptoms, as well as for his skilful assistance during the operation involved.

The patient was a gentleman aged 58 years, in excellent general health, who had been out shooting the previous day. No other intestinal trouble had ever been experienced, and he was accustomed to have a regular daily evacuation from the bowels.

History of Illness.

He had a sharp turn of coughing on rising on the morning of December 13th, and when shaving shortly afterwards was seized with violent pain in the upper part of the abdomen, the lower part of the chest, and the back. It was colicky and gripping in character and radiated into the interscapular region, and there was some retching. A reaction of the bowels followed at once upon this seizure. This emptied the lower bowel, but without relief to the pain. The patient then took Hunyadi Janos water, without result. Copious turpentine injections and further aperients, including calomel, failed. The constipation was absolute for faeces and flatus. His pulse was 70, and the temperature normal. Vomiting was neither frequent nor severe, being wholly absent on the third day of the illness, but hiccough supervened on that day. There was no rigidity of the abdominal wall, and no distension for the first two days, and it could not be said that any definite epigastric swelling existed. On the morning of the operation an ill-defined fullness, free from tenderness, began to show itself in this region. The temperature and pulse at this stage did not exceed 99.50 and 76 respectively. During the paroxysmal exacerbations of the pain, which was referred to the interscapular region and to the lower part of the thorax and epigastrium, the patient found most relief by turning on his face and pressing with his hand on the upper part of the abdomen. There was no pain in the umbilical region or below it at any time.

Operation.

Coeliotomy was performed on the third day, the abdomen being opened by an incision above the umbilicus in the middle line. The margin of the foramen of Winslow tightly constricted the gut, and was treated by gentle dilatation sufficiently to allow the constricted portion to be withdrawn. Two and a half feet of jejunum were withdrawn from the smaller sac of the peritoneum with comparative ease. The annular constriction was sharply defined and almost gangrenous, and the gut felt as if only the outer tunic of the gut remained. It was decided not to excise the damaged portion, but it was brought to the parietal wound and ultimately fixed behind it by two catgut sutures. The free border of the great omentum was carried round it, and fixed by sutures to it, and to the mesentery by several points of suture on either side, thus forming a loose protective sleeve, in order that, if perforation or rupture occurred, the extravasation might happily be retained in an omental compartment opposite the parietal wound. No abdominal complications arose, and the patient was about again within three weeks.

It may be remarked that of the 18 cases collected by Jeanbrau and Riche, coeliotomy was performed in 11 cases, with 4 cures. The same observers, after a series of experiments upon the cadaver, state their belief that the foramen of Winslow can be safely enlarged by an incision made through the peritoneum forming the anterior lamina of the gastro-hepatic omentum at the upper border of the first part of the duodenum (*Keen's Surgery*).

In this case, however, no incision was made, but a cautious dilatation of the foramen was practised with the tip of the little finger.

Certain points seem worthy of emphasis: (1) Notwithstanding the tight constriction, reflex vomiting was not an urgent symptom—which is all the more remarkable, when only $\frac{1}{2}$ grain of morphia was given hypodermically throughout the three days that the strangulation lasted; (2) the pain

in the interscapular region; (3) the instinctive adoption of the prone position, with leaning forward, to relieve the epigastric pain; (4) the absence of pain around the umbilicus and below it.

A CASE IN WHICH ENTEROSPASM WAS A PRONOUNCED FEATURE, NECESSITATING ABDOMINAL SECTION FOUR TIMES WITHIN TEN MONTHS.

By C. W. DEAN, F.R.C.S.E.,

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UNTIL I read Dr. Ashe's most interesting account of his case of enterospasm, in the *BRITISH MEDICAL JOURNAL* of March 2nd, 1907, I, like him, was ignorant of this condition as a recognized pathological state. As it was, the perusal of his paper and the clear and concise description of the symptoms and of the conditions found at the subsequent operation enabled me some months later to solve, without leaving much room for doubt, what otherwise would have been a difficult problem; and although the treatment adopted in my case of necessity differed from that followed in his, still the picture disclosed in the case I am about to describe at once told me that I was looking at a piece of intestine in a state of tetanic spasm, a sight I had never before beheld.

Since reading Dr. Ashe's paper, Dr. Herbert P. Hawkins has most kindly sent me a reprint of his commentary on *The Reality of Enterospasm and its Mimicry of Appendicitis*, which appeared in the *JOURNAL* of January 13th, 1906. This most able paper tells us practically all that is known up to the present time of spasm of the intestine and enteralgia—two conditions which seem to accompany each other in all the recorded cases. In Dr. Hawkins's paper one sentence specially impressed me as being pregnant with truth—how true no one can appreciate until he has been many years in practice; that is, "there is much abdominal pain which has no name and does not kill."

How often has the abdomen been opened for acute symptoms simulating gastric ulcer or obstruction, symptoms which were perhaps not classical, which did not quite fit in as they should with the description given in the textbooks, but which were too alarming apparently to admit of delay, in which laparotomy has been performed, and yet nothing has been found subsequently to justify the operation?

I know this has happened to me, and it must have occurred over and over again in the experience of other surgeons; but cases like these are not recorded—may they not in many instances come under the category of acute enterospasm? I venture to think so.

The notes of the following case may possibly be of some interest, for these reasons: laparotomy was performed four times in less than ten months, a cyst of the ovary was removed at one operation, enterotomy performed at another, 4 in. of small intestine removed at the third, and 7 in. of small bowel were resected at the fourth. The crowning point of the whole thing is that the patient is now in excellent health and expresses herself as "feeling better than she has done for years." On reading this account casually some people may be inclined to think that the aid of surgery may have been invoked perhaps somewhat too hastily, but I can assure them that such has not been the case in this instance.

The late Dr. W. Croft Helme, a man of much experience and knowledge, under whose care the patient was, asked me to see the case with him in consultation to decide as to the advisability of operation. The symptoms on each occasion, in our opinion, presented features of extreme urgency. The final operation, of course, admitted of no delay, being due to the fact that the patient was suffering from acute obstruction. A point I think of much interest is the prominent part enterospasm played in the case, and the fact that the spastic bowel was seen and handled, and its condition deliberately noted, and so adding another instance to those already recorded.

History.

A young woman, aged 29, of a singularly placid disposition, has had three children, of whom two are living; her previous illnesses have been an attack of influenza every year for the past five years. For about four years she has had attacks of what she describes as cramp in the bowels, always attended by

vomiting and difficulty of defaecation. These attacks came on at any time without warning, while engaged in household work or while in bed. After the attacks passed off constipation always remained, sometimes for quite a long time. In addition there was constant pain in the left iliac region. In December, 1907, a lump was found in this situation, presumably in the left ovary, but its nature at the time was undetermined; in all probability, however, it accounted for the above-mentioned pain.

First Laparotomy.

On January 1st, 1908, the patient aborted at three months, and as she did not progress satisfactorily she was admitted into the Royal Lancaster Infirmary on January 14th under my late friend and colleague, Dr. W. Croft Helme. After she had been for five weeks under treatment, the tumour getting no smaller (I may say that there was a suspicion in Dr. Helme's mind of gonorrhoeal infection of the tube), I was invited to see her in consultation, and we came to the conclusion that we ought to open the abdomen; this we did on February 20th, and removed a rounded dark cyst of the ovary together with the tube, after having had to separate many adhesions. The tumour was examined by Dr. W. Gough, and showed the typical structure of a multilocular cystic adenoma. On the day after the operation she had pain in the abdomen, but of a severe cramp-like character, accompanied by vomiting and inability to pass flatus; enemata were given, but without any result. Dr. Helme feared the onset of septic peritonitis, but there was little or no distension, no rise of temperature, and the pulse was not unduly quickened; tenderness was general, but not marked, and the patient did not seem poisoned.

Second Laparotomy.

As the symptoms continued all the next day, Dr. Helme again asked me to see her, which I did on February 23rd, and advised reopening the abdomen, the general condition of the patient being so good and there being no sign of toxæmia. We operated in the evening of that day and found absolutely no trace of peritonitis; the site of the previous lesion was healthy, in fact at first sight everything seemed natural, but on examining more closely we found what looked like a piece of collapsed bowel, and on bringing it to the surface it proved to be a portion of the ileum near to its junction with the caecum, about 6 in. long, flattened, with slightly concave sides very like a piece of thin rubber tubing from which the air had been exhausted; each end joined the healthy gut by a sharp line, the spastic portion was paler than the rest of the gut, but beyond this there was no sign of disease, no distension of the upper end of the bowel and no marked congestion. Having read the account of Dr. Ashe's case, I had little difficulty in believing we had a similar condition to contend with. As the patient's state demanded relief and as, unlike Dr. Ashe's case, the bowel could not be induced to relax, I opened the gut just above the contraction. The patient was much relieved and soon recovered perfectly, with the exception of the inconvenience caused by the enterotomy wound, and had no return of the spasm.

Third Laparotomy.

On April 2nd, six weeks after the second operation, we wished to close the opening by a plastic operation, but as the wound had stretched so much this was found to be impossible, so the abdomen was again opened and some 4 in. of bowel removed and the ends joined by a simple suture.

From this third operation the patient recovered without a bad symptom, a natural motion being passed on the third day. She remained in hospital until May 16th, when she went home and resumed her household duties. She had some little trouble with a stitch abscess, but beyond that she got on very well. She now tells me, however, that she was never free from a slight feeling of abdominal discomfort.

Fourth Laparotomy.

On December 7th, 1908, she sent for me late in the afternoon (my friend Dr. Helme had died during the previous September) saying she was ill again like she was before. I found her in bed with her legs drawn up, evidently suffering acute pain. She told me she was all right when she got up that morning, and had done her usual work until about 11 a.m., when while mangle some heavy clothes she felt a sudden pain in the abdomen; it had steadily got worse, coming on every now and then in spasms. She had vomited the contents of the stomach, and could not pass flatus. I of course thought of enterospasm as a probable cause of the trouble, but as the symptoms were so severe, and obstruction was evidently so complete, I advised her to come into hospital, telling her I might possibly have to open her abdomen again. She came in as soon as she could, and I saw her at 8 p.m. the same evening. The pain was now very severe and paroxysmal, and the whole abdomen exceedingly tender to touch and somewhat distended. She had again been sick, the vomit now being bilious in character, moreover she had not passed flatus in spite of the large enemata administered in the meantime. I determined to operate at once, and with the assistance of Dr. Parker I for the fourth time opened her abdomen. The cause of the mischief was at once found—a loop of small intestine was tightly strangulated by an adhesion which had formed after one of the previous operations; the loop was quite black, and had lost its lustre in places (distinct evidence of commencing gangrene can now be seen in the bottles and specimen). So for the second time within ten months I resected a portion of her bowel, this time about 7 inches, and united the ends by simple suture. From this operation she has perfectly recovered, as far as one can see. She declares she is quite well, and looks so; moreover, she has lost the feeling of discomfort she previously had.

THE DIAGNOSIS AND TREATMENT OF CHRONIC ULCER OF THE STOMACH AND DUODENUM.*

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NOTWITHSTANDING the number and excellence of the articles that have been written on this subject during the last few years, it does not seem that the profession as a whole has realized the practical importance of these affections, nor has it acquired the knowledge regarding them like that which it has attained, for example, in the diagnosis of lesions of the vermiform appendix. The difficulties are undoubtedly greater; when the appendix is diseased, it is always appendicitis in one form or another; when, on the other hand, there is a chronic affection of the stomach, there is a much wider field for mistakes, and a greater refinement of diagnosis is called for.

My contribution to the subject is the report of a consecutive series of 50 cases in which a chronic ulcer of the stomach or duodenum was not only diagnosed by clinical methods, but was demonstrated to those present at the operation undertaken for its relief. I may be said, therefore, to be speaking of facts and not of inferences.

The Site of the Ulcer.

The ulcer was situated in the pyloric ring or antrum in 16 (32 per cent.), on the lesser curvature in 12 (24 per cent.), and in the first part of the duodenum in 17 (34 per cent.). In the remaining 5 cases (10 per cent.) there was more than one ulcer, one of these being situated in the duodenum in all of them. This gives a total of 22 ulcers in the duodenum and 28 in the stomach. Bearing in mind that the so-called anterior wall of the pylorus and duodenum is really the right lateral wall, and that with which the acid contents of the stomach are first brought into contact, it is very striking that it is almost invariably the seat of the ulcer. It is true that ulcers on the posterior wall are more likely to escape recognition by the surgeon, because he is unwilling to extend or prolong the preliminary manipulations, but I am confident that the true proportion of anterior ulcers would be something like 95 per cent. When the ulcer is diffuse or affects both walls, the evidence goes to show that the disease commenced in the anterior wall. Ulcers of the lesser curvature specially tend to affect both walls, acquiring the saddle-shape first described by Mayo.

Sex.

There were 30 males (60 per cent.) and 20 females (40 per cent.). Ulcers affecting the stomach alone were equally divided between the sexes; the duodenal ulcers were distributed in the proportion of 18 males to 4 females.

Age.

The range was from 21 to 67 years, the average being 41; the age of the duodenal cases ranged from 25 to 67 years, with an average of 43. If the ages are corrected according to when the symptoms first appeared, the average age for the onset of gastric ulcer is 32 and for duodenal ulcer 38.

Duration and Remission of Symptoms.

The duration of the ulcer cannot always be determined with certainty, as in many cases there is an indefinite period of what is called ill health with indigestion before the onset of symptoms which may be regarded as due to ulcer. In the majority of cases there are periods of remission of weeks, months, and sometimes of years, during which the patient is actually or comparatively free from symptoms. These remissions are most marked in the cases of duodenal ulcer, and are sometimes quite as striking as those so commonly observed in affections of the gall bladder. The remissions tend to become shorter, and in many cases prior to application for treatment the suffering is practically constant.

Pain.

In 3 cases (6 per cent.) there was *no pain*; in one of these the ulcer involved the lesser curvature, the other

two the duodenum, but in all of them the ulcer was small, with little or no induration and a smooth peritoneal scar on the surface. In 3 cases there was *little or no pain*, and all of these involved the duodenum. In 8 cases there was more or less *constant pain*, and no less than 7 of these involved the lesser curvature; in all of them there was very extensive induration around the ulcer, and adhesions to the left lobe of the liver or to the anterior abdominal wall, and in 4 of them there was an hour-glass contraction. In 1 case in which the ulcer was located in the duodenum the pain occurred in definite seizures at intervals of about five days; these seizures closely resembled biliary colic, and necessitated the patient being put to bed with hot bottles and the exhibition of opiates.

Seat of the Pain.—The pain is almost invariably referred to the vicinity of the middle line, and frequently passes through to the back between the shoulders. It may be stated generally that in ulcer of the lesser curvature the pain is to the left of the xiphoid or below the left costal margin; in ulcer at or near the pyloric ring the pain is in the middle line; in ulcer of the duodenum the pain is to the right of the xiphoid or below or over the right costal margin. One cannot rely upon any particular case conforming to these general rules. I have observed patients with left-sided pain and found at the operation that the ulcer was situated in the duodenum, and conversely I have seen patients with right-sided pain and yet operation disclosed an ulcer in the vicinity of the pyloric ring.

Relation of Pain to the Taking of Food.—In 10 cases pain was relieved by the taking of food. In some cases this amounted to the well-known hunger-pain; in 6 of the 10 cases the ulcer was situated in the duodenum. Pain following the taking of food was complained of in 4 cases in which the ulcer was situated in the lesser curvature, and in these the pain occurred from half an hour to an hour after food; in 11 cases in which the ulcer affected the pyloric ring and antrum the pain occurred from one to two hours after the taking of food, and in 9 cases in which the ulcer was situated in the duodenum the pain occurred later than two hours after food, and in 1 case four hours after food. In the case of multiple ulcers the pain sequence is apt to be confusing. In the hour-glass cases the pain corresponds to that of an ulcer of the lesser curvature; it comes on soon after food, is apt to be constant, and is referred to the left side. Several patients, and more particularly those who were the subject of duodenal ulcer, were quite decided in saying that the nature of the diet had no influence on their symptoms. One intelligent man, for example, affirmed that he suffered just as much when he was on a restricted diet as when he took lobster salad and other supposed indigestible foods. In gastric ulcer, on the other hand, the nature of the diet has a considerable influence on the amount of suffering, and the majority volunteered that their symptoms were aggravated when this included butcher meat and potatoes. In cases of pyloric obstruction with butyric and lactic acid fermentation the diet naturally makes a great difference. It was quite the exception to be able to bring out any relationship between the attitude of the patient and the pain, such as would help in locating the ulcer. I should not diagnose an ulcer to be seated in the posterior wall because the patient obtained relief from lying on his face. The site of the ulcer is not to be inferred from any one symptom, but from all the features of the case. The onset of pain in the evening or during the night was a striking feature in at least 7 cases (14 per cent.). In 1 of these the ulcer was in the lesser curvature, in 4 at or near the pylorus, and in 3 in the duodenum. The night pain in the duodenal cases is a variety of hunger-pain: in the pyloric cases it was usually associated with stenosis and distension of the stomach and the accumulation and decomposition of the food taken during the day. If the patient vomited, either spontaneously or by putting his fingers down the throat, the pain was relieved and the patient was able to go to sleep again.

Tenderness in the epigastrium or over the lower ribs was observed in 16 cases (32 per cent.), and in the majority of these the ulcer was situated near the pylorus or lesser curvature. This association would appear to depend on the greater frequency with which gastric ulcer, in contrast to duodenal ulcer, leads to the formation of adhesions between the area of the ulcer and the parietal

* Read at a meeting of the Medico-Chirurgical Society of Edinburgh, March 3rd, 1909.

peritoneum. In the whole series of duodenal ulcers there were only two in which there was marked tenderness, and in both there were extensive adhesions to the under surface of the liver and to the parietal peritoneum. Along with the tenderness there is often rigidity of the corresponding rectus muscle.

The Causation of the Pain in Chronic Ulcer.

The pain of gastric or duodenal ulcer is usually ascribed to the contact of the acid contents of the stomach with the raw surface of the ulcer. I believe that hyperacidity is one of the essential factors in the production of an ulcer, but I do not believe it is the cause of the pain. When food is swallowed gastric juice is secreted at once, and therefore in an ulcer situated at the lesser curvature this should be at once exposed to its action, and pain ought to follow immediately. It is the interval which is difficult to account for. I believe that the pain is due to the movements of that part of the stomach in which the ulcer is situated—that is to say, the pain is due to peristalsis and not to contact of acid with the raw surface. We know that the exaggerated peristalsis which is visible through the abdominal wall is always associated with pain, and there can be no doubt of the influence of the taking of food in the production of peristaltic movements.

If pain were the result of contact with the acid contents of the stomach, one would expect that the recent acute ulcer with a raw surface and little infiltration of its base and margins would react most; so far as I can learn, this ulcer is usually insensitive. The ulcer which causes the greatest amount of pain is the chronic ulcer with widespread callous infiltration and peritoneal adhesions, precisely the type of lesion that would most interfere with the peristaltic movements of the organ.

In four of my cases the test-meal showed the complete absence of free hydrochloric acid, and yet in all of these pain was a prominent feature, another proof that the pain of ulcer is due to the movements of the viscus and not to the acidity of its contents.

The violent crises of pain which occur at irregular intervals in some cases of duodenal ulcer cannot be related to contact with acid contents; they are much more likely to be due to cramp-like contractions of the wall of the duodenum.

The explanation of the hunger-pain of duodenal ulcer more difficult. It is usually accepted that the pain of fasting is relieved by the taking of food, because this is followed by the shutting of the pylorus and the arrest of the passage of acid material into the duodenum. This has always appeared to me a fanciful explanation. It presupposes that during fasting acid material is passed into the first portion of the duodenum, which is obviously not the case. Is it not rather that as the stomach empties the pylorus tends to move towards or even to the left of the middle line, thus putting traction on the duodenum, and when it is the seat of an ulcer, there is pain, or at any rate a feeling of discomfort, which is relieved by the ingestion of food? Similarly, when a stomach with an anterior ulcer and with adhesions to the parietal peritoneum becomes distended, whether from accumulation of food or of products of decomposition, pain or extreme discomfort is brought about, because the stomach is displaced downwards and to the right; thus traction is made upon the indurated portion and upon any adhesions which may be present.

Vomiting.

This was present in 42 cases (84 per cent.), and therefore, next to pain, is the most constant symptom of ulcer. In 4 it was occasional; in the great majority it was a prominent feature. It is more constant in gastric than in duodenal ulcer, and attains its acme in ulcer at the pylorus with narrowing of the outlet. In these it is usually cumulative, the patient vomiting at night what has been ingested during the day. It is important to bear in mind that vomiting may be absent; in the present series there were six patients with uncomplicated duodenal ulcer who never vomited. It is more noteworthy that vomiting was absent in two cases of ulcer of the lesser curvature; in one of these there was a large, saddle-shaped ulcer with marked hour-glass contraction.

Haemorrhage.

In 29 cases (58 per cent.) there was haematemesis, and in 11 of these there was also haemorrhage from the bowel.

In 15 cases the patient vomited pure blood, and in 13 coffee grounds; 1 patient vomited blood and coffee grounds on different occasions. My records show that haemorrhage is most frequent in ulcers at or near the pylorus—13 out of 16 (81 per cent.)—while only one of these had melæna. It is next most frequent in duodenal ulcers—10 out of 17 (59 per cent.)—and it is in these that we have the highest percentage of haemorrhages from the bowel; there is therefore abundant corroboration of the current view that the combination of haematemesis and melæna is strongly suggestive of the ulcer being situated in the duodenum. Haemorrhage was less frequent in ulcers of the lesser curvature—5 out of 12—and in 2 of these there was melæna.

Test Meal.

This was carried out as a routine measure. The gastric contents showed the presence of free HCl, usually to excess, in all of the series except four. These four cases, therefore, merit special consideration; in all of them the ulcer was situated in the lesser curvature. In one case there was also an ulcer of the duodenum, and in one of them there was an hour-glass contraction of the stomach. In two of these cases the provisional diagnosis of carcinoma was made, and in the then state of our knowledge (1906) this sufficed to turn the scale in determining me to resect the affected portion of stomach, with the unfortunate sequel that one of the patients succumbed to what turned out to be a formidable operation, much more difficult than the average resection for cancer. In each of these cases microscopic examination showed the lesion to be a chronic ulcer and nothing more. In the third case the infiltration of the first part of the duodenum was so extensive that, in view of the absence of free HCl and the presence of lactic and butyric acids, one would have been inclined to regard the condition as malignant were it not that the discovery of a second area of induration in the lesser curvature presenting the typical crater of an ulcer to the fingers, turned the scale against the diagnosis of cancer, and enabled cure to be brought about by a simple gastro-enterostomy. The fourth case was one of hour-glass contraction of the stomach, and, in spite of the absence of free HCl and the presence of butyric and lactic acids, there was no doubt of the innocence of the condition, and a complete disappearance of the symptoms was obtained by anastomosing the larger proximal sac with the jejunum.

The presence of butyric and lactic acids along with free HCl is not of much significance. It is merely an indication of the stasis of the gastric contents, and does not support in any way the diagnosis of cancer. This combination was noticed in 2 cases of pyloric ulcer, in 1 hour-glass stomach with saddle ulcer of the lesser curvature, and in 4 cases of ulcer of the duodenum.

Constipation.

This is almost universal throughout the series; there are only three in which the notes record that the bowels moved every day without medicine. It was naturally much more marked in the cases with pyloric stenosis, but it occurs with sufficient frequency apart from any obstruction of the lumen to warrant the inference that the mere presence of an ulcer in the stomach or duodenum interferes with the onward propulsion of the ingesta.

Visible Peristalsis.

This was only observed in 5 cases—4 of pyloric ulcer and 1 of the duodenum. It affords a reliable guide to the degree of mechanical narrowing of the lumen brought about by the ulcer, and is to be regarded as a favourable indication from the operative point of view, as the hypertrophy of the muscular coat of the stomach with which it is associated enables the patient to derive the maximum advantage from a gastro-enterostomy.

The condition of the stomach as revealed by physical examination, distension with air, and other methods, was of service in affording information as to the shape, size, and position of the stomach, but it was only of indirect service in establishing the existence of ulcer, or its position when diagnosed.

The Diagnosis of Chronic Ulcer of the Stomach and Duodenum.

Enough has been said under the heads of the individual symptoms and signs to make it evident that in the great

majority of cases the diagnosis can be made with a reasonable approach to accuracy. There will always remain, however, a minority—and this will probably increase as patients apply for treatment at an earlier stage of the malady—in which the clinical diagnosis will be attended with uncertainty.

A *gastric neurosis*, or a gastric form of neurasthenia, which is met with in both sexes, but especially in women, is one of the affections most likely to be mistaken for chronic ulcer. The difficulty is more likely to occur in the exceptional cases, to which reference has already been made, in which there is no history of vomiting, and in which the pain is both indefinite in character and in location. This, which may be termed the latent duodenal ulcer, is particularly difficult to diagnose, and the records show that several of the cases in which I have operated and found a duodenal ulcer had been previously under treatment for neurasthenia. The risk of confusing duodenal ulcer with an affection of the gall bladder is well known, but the difficulty is usually cleared up under observation, especially by any one who is experienced in both maladies; and, in any case, in either affection a recourse to laparotomy would not be out of place.

Carcinoma of the stomach is not only liable to be mistaken for ulcer clinically, especially ulcer cases in which the test meal reveals the absence of free HCl, but also when the abdomen has been opened and the parts inspected. On looking back I think one is justified in saying that carcinoma, when present, is unmistakable. On the other hand, one is often inclined to look upon ulcer cases as malignant. One is helped in these doubtful cases when there are two apparent tumours, for these are much more likely to be ulcers than cancer. One is also helped if the duodenum is implicated in the tumour, as in gastric carcinoma this is very exceptional.

Carcinoma in the vicinity of the stomach—for example, one in the head of the pancreas—may project forwards and involve the duodenum or pylorus in such a way as to give the impression of a primary growth in one or other of these situations, and as there may be an absence of free HCl in these cases, the correct interpretation of the conditions found at the operation may be very difficult.

The Hour-glass Cases.

In my experience, hour-glass contraction is the most elusive of all the manifestations of gastric ulcer. The four examples in the present series of cases were met with in middle-aged women (38 to 49 years), who had over a period ranging from twelve months to twenty years presented the clinical features of an ulcer situated in the lesser curvature. The hour-glass constriction was only once diagnosed before operation. In this case there was peristalsis of the wall of the pyloric pouch, and the circumscribed, dome-shaped swelling thus formed was obviously too small to correspond to the whole stomach. In the second example an hour-glass contraction was considered and negatived because none of the recognized tests could be elicited; at the operation it was found that the isthmus had been drawn up behind the ensiform cartilage, and that the pyloric chamber did not even attain the size of a golf-ball. In the third and fourth examples the condition was not suspected before operation, chiefly because of the misleading histories given by the patients. It is noteworthy that one of them, a woman aged 49, had had attacks of colic-like pain in the upper and left region of the abdomen for a period of twelve months, and had never once vomited; and yet at the operation the pyloric chamber was found to be fused with the liver, the pancreas, and anterior abdominal wall, and the lesser curvature was the seat of a saddle-shaped ulcer.

Treatment of Chronic Gastric and Duodenal Ulcer.

Whatever difference of opinion may exist with regard to the treatment of the recent or acute ulcer, I expect we shall be unanimous in the opinion that the chronic ulcer can only be cured by surgical means. The histories of our cases furnish the basis for this opinion. Time, the important factor in so many cures, is apparently powerless in a chronic ulcer, judging by the periods of fifteen, twenty, and even thirty years some of the patients have suffered before they come to operation.

Restricted diet and, lavage, relieve the prominent symptoms for a time and give the ulcer a chance of

healing, which, however, it is apparently rarely, if ever, able to take advantage of. Many of our cases have been dieted and washed out for many years, and the ulcer, when seen at operation, appears as firmly established as ever.

Our reasons for recommending operation are, shortly, as follows: Because the ulcer will not get well otherwise; because the ulcer and its complications are the cause of considerable suffering, and prevent the patient from earning a living; and because the ulcer may become dangerous to life through starvation, hæmorrhage, perforation, or transformation into cancer.

The choice of operation lies between resection and gastro-enterostomy. The sphere of resection is very limited; it is often impossible—as, for example, in the diffuse ulcers of the duodenum. It is nearly always difficult, and is by no means free from danger. The resection may bring about narrowing of the lumen, and necessitate a gastro-enterostomy in addition; and, finally, as pointed out by Mayo, it does not get rid of the hyperacidity of the stomach contents, which is an essential factor in the production of the disease, so that, unless a gastro-enterostomy is added, there is the risk of the formation of a fresh ulcer in the future. The claim of those who advocate resection as the routine measure where feasible—Rydygier being one of the best known of them—is that if the ulcer is allowed to remain the risk of its becoming cancerous is considerable. So far as my own experience is concerned, this undesirable sequel has only happened once in 47 cases subjected to gastro-enterostomy. Gastro-enterostomy was performed on September 6th, 1904, for a chronic ulcer near the pylorus. When seen sixteen months later the patient was going downhill; free HCl had disappeared from the gastric contents, and an exploratory operation revealed cancer both in the stomach and in the liver. Personally I should not be influenced by the unfortunate sequel in this case to extend the sphere of resection, and that for the reasons already stated.

RESULTS OF OPERATION IN 50 CONSECUTIVE CASES OF CHRONIC ULCER.

Resections of Stomach.

Three cases with one operation death. Of the survivors, one is perfectly well three and a quarter years later; the remaining one is well two and a third years later, but has occasional pain and flatulence.

Gastro-enterostomies.

Forty-seven cases with three operation deaths = a mortality of 6; per cent. The deaths occurred in the early members of the series, before the technique of the operation was established. Two were due to a bad form of vicious circle and one to septic peritonitis.

Of those who survived the operation, 1, a tramp, was lost sight of; 5 died at various periods—1 of exophthalmic goitre, 1 of cancer of the stomach, already referred to, 1 of urinary sepsis associated with enlarged prostate, and 2 of what was reported by their doctors as acute enteritis. It is just possible that this may have been perforation of a peptic ulcer of the jejunum.

The remaining 38 are all under observation, and I am very greatly indebted to their doctors for the reports with which they have been good enough to furnish me on the subsequent history of these patients and their present condition. With a few exceptions to be mentioned presently, they all described in enthusiastic terms the benefits derived from the operation; there is an increase of weight, and in individual cases this amounted to 2, 3, and even 4 st.; there is complete freedom from the pre-existing gastric symptoms, a healthy appetite, a capacity of eating and enjoying everything, and, finally, a regular action of the bowels without medicines. There was no discoverable difference in the results, whether the operation had been performed for ulcer of the lesser curvature, for ulcer at or near the pylorus, or for ulcer in the duodenum. Even cases with extensive adhesions and the 4 cases of hour-glass stomach all fall to be included in this group of ideal results. Three of the women have since borne children; there was only a moderate amount of sickness during the later months of pregnancy. One of the male patients passed easily through an attack of typhoid fever.

In a proportion of the cases the gastric functions have been subsequently tested, in some cases years after the

operation. In those in which the stomach was previously dilated it was found to have returned to the normal, or nearly the normal size. If the stomach tube was passed from one to three hours after a meal, the food contents were found to be still present in the stomach, showing that the gastro-enterostomy opening behaves in the same way as the normal pylorus. The contents were usually found to be neutral in reaction, and showed traces of bile constituents, usually bile salts. If the tube is passed in the fasting condition, a small amount of bile-stained mucus is usually evacuated.

The exceptions to the above ideal results are comparatively unimportant; one, for example, has a ventral hernia, one is still a little anaemic, one has fullness after meals, one suffers from flatulence and occasional attacks of bile (the earliest operation case in the series), and one has a feeling of distension, and his gastric contents after a test meal show butyric acid and the absence of free HCl.

I beg to record my sincere indebtedness to my medical colleagues on the staff of the infirmary, and particularly to Dr. Francis Boyd, for their invaluable co-operation in the clinical examination of the cases here recorded.

PRIMARY DIFFUSE PNEUMOCOCCIC PERITONITIS: TREATMENT BY DRAINAGE AND PNEUMOCOCCIC VACCINE: RECOVERY.

By H. BETHAM ROBINSON, M.S.LOND., F.R.C.S.,

SURGEON TO ST. THOMAS'S HOSPITAL; CONSULTING SURGEON TO THE EAST LONDON HOSPITAL FOR CHILDREN, ETC.

Not many years ago pneumococcic peritonitis was an unrecognized disease, but of later years the attention of the profession has been drawn to its occurrence through the writings of Jensen, von Brunn, and others on the Continent, and by the paper of Annand and Bowen in particular in this country.

The comparatively limited number of cases so far recorded, and the uncertain recognition of the disease, call for the publication of any further experience. I therefore offer the following contribution, which was a case of diffuse and primary pneumococcic peritonitis with an acute onset simulating perforation of the appendix.

Dorothy W., aged 9, was admitted into the hospital on the evening of April 22nd, 1938, under the care of my colleague, Dr. Sharkey, and was transferred to me the next morning.

Personal and Family History.

The father was said to suffer from some chest trouble, and there was a history of tubercle in the mother's family.

She had always been a nervous child, subject to bilious attacks. Three years before she had had measles, and two years before influenza with symptoms very similar to those of the present illness, abdominal pain and vomiting. From the previous November to February she was kept from school on account of her eyes and headache. She had many times complained of abdominal pain, which was generally relieved by micturition; she had rather a habit of holding her water.

History of Illness.

On the day before admission she had been seemingly in perfect health. At 8.30 a.m. on the 22nd she was suddenly taken ill with free vomiting, faintness, and slight abdominal pain centred round the umbilicus; she was very thirsty and feverish. In the evening, fifteen hours after the onset, she was admitted looking ill and complaining of severe abdominal pain and vomiting. The face was very flushed, the eyes bright but not sunken, and the tongue furred generally but rather dry at the tip. The pulse was 130, regular and of small volume; temperature 103.8°, and respirations 36. The chest moved well and equally, and there were no abnormal physical signs detected in heart or lungs. Abdominal movement was restricted but not absent, especially below the umbilicus; there was definite distension, but it was everywhere resonant. Palpation proved an almost universal tenderness, more marked round the umbilicus and in the right lower quadrant; here there was some increased resistance, but no distinct lump could be felt. There was no alteration in the position or size of the liver; the spleen and kidneys seemed normal, and the urine was unaltered except for an increase of urates. Per rectum there was a boggy feeling, especially on the right side, as if there was something in Douglas's pouch.

I was asked to see the child at 11 next morning, her pulse then being 150 and temperature 103.4°. The abdomen moved fairly well on respiration except on the right side below; here and across the bladder region she was tender. There was a

little rigidity over the right rectus both below and above the umbilicus. An immediate operation was decided on, as her condition suggested a perforative peritonitis dependent probably on a gangrenous appendix.

Operation.

A vertical incision was made over the right rectus below the umbilicus, opening the sheath and displacing the muscle inwards. On opening the peritoneum a greenish-yellow fluid escaped, of gummy consistency, with a few flakes of dirty-white lymph in it. Although this was generally diffused through the cavity, and the intestines and omentum were smeared over with it, yet they did not otherwise appear to be in any way altered from the normal; the appendix was absolutely healthy. A good deal of fluid had collected in the pelvis and in the right kidney pouch. There was no sign anywhere of glueing together of the intestinal coils by early adhesions. The right Fallopian tube was very definitely injected. (Subsequent inquiry elicited no evidence, past or present, of any vulval or vaginal discharge.) The glands along the iliac vessels and at the bifurcation of the aorta appeared to be a little enlarged. The peritoneal fluid was quite odourless. Drains with wicks were placed down into the pelvis and up into the kidney pouch, and the main part of the wound was closed in layers. She stood the operation very well, and was put back to bed in the Fowler position, and given $\frac{1}{2}$ grain of morphine. Saline was ordered per rectum.

After-History.

After the operation there was a gentle drop in the temperature to 99° at 8 o'clock the next morning, with a corresponding marked reduction in the pulse-rate. She was feeling much more comfortable, and there had been very little pain and no vomiting. She was given milk and water frequently in small quantities. On April 25th her condition was very satisfactory, but both pulse and temperature had again risen a little. As her bowels had not acted, she was put on magnesium sulphate in the evening. The next morning there was a very slight result after an enema. The wicks were removed from the tubes, and a considerable discharge of turbid fluid came away. Calomel, 2 grains, given at night, followed by magnesium sulphate in the morning; this resulted in four actions during the day. On this day (April 27th) the temperature again began to go up, and, as the clinical report showed that the peritoneal effusion was a pure culture of the pneumococcus, it was decided to use pneumococcic vaccine (see chart). Beyond the variations in pulse and temperature there is now not much to report except her steady progress. On May 5th both drainage tubes were removed and gauze drains substituted. On the 6th, as on removing the gauze a fair amount of pus could be pressed up from the lower abdomen, Bier's cupping for ten minutes was started; this soon produced a marked diminution in the amount of discharge. This, however, did not cease altogether, and apparently came up from the loin, so on May 27th a counter-opening was made here and a piece of gauze pulled through from front to back. This soon had a marked effect both on the discharge and the temperature. On June 6th the front wounds were healed, and on the 10th the drain was left out behind. By this date her temperature had been normal for a week, and she was beginning to get up. She was able to leave the hospital on June 15th.

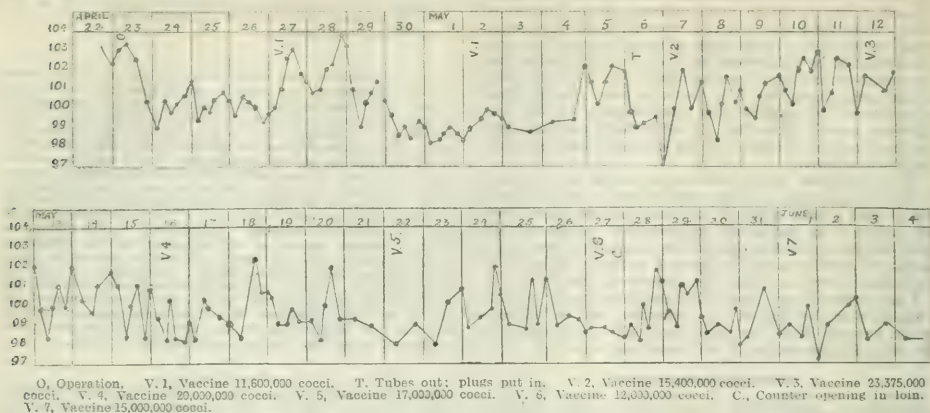
She was readmitted in capital health on October 19th to have a small ventral hernia through the drainage hole dealt with. Some adherent omentum was set free, the peritoneal bulging cut out, and the freshened fascia brought together in layers. She went out on November 5th with a sound scar.

The clinical types of this disease vary as to whether the peritoneal effusion becomes localized or is diffuse. The localized form starts with acute symptoms, and tends to become chronic; at the same time there is walling-in of the effusion, which usually occurs in the lower abdomen in the region of the umbilicus. This is the type of case which in the past was probably considered to be a tuberculous abscess, and, pointing at the umbilicus, ultimately burst or was intentionally opened, with in many instances recovery.

In the diffuse form the symptoms are more markedly acute and remain so, and the signs those of a generalized peritonitis. Jensen and others have commented on the similarity of the onset to acute perforative peritonitis dependent on the appendix, and this case is another example of such.

These clinical forms of peritoneal involvement are found again, whether the peritoneum is primarily or secondarily affected. In a large number it is secondarily implicated, the primary lesion being most often a pneumonia, or a throat or ear lesion, or a pneumococcal abscess elsewhere; the blood infection from these foci is responsible for the subsequent peritonitis.

In the primary cases of peritonitis the possible origin may be traced in a few cases to an appendicitis or to an enteritis, the initial intestinal symptoms, especially diarrhoea, supporting the latter; neither of these causes appeared to be responsible in this case. As stated before, there was in this patient very great congestion



of the right Fallopian tube, in marked contrast to the surrounding peritoneum. It has been thought that the infection may ascend from below, but here there had never been observed, nor was there present, any vulvo-vaginal discharge. A point that has been urged in favour of this possibility of origin is the curiously undue proportion of cases in females, but this excess is regarded by most as only accidental. The most accepted explanation, however, is that, as in the former group, the infection comes from the blood, and this is infected by absorption from a mucous surface without any discoverable lesion. No further pneumococcal lesion was found in this case, nor was the blood examined for organisms.

The symptoms of onset agreed with those described by previous observers. In a child of apparent good health there was a history of sudden severe abdominal pain, free vomiting, but no diarrhoea, with rapid development of peritoneal signs. The localizing of the pain, first about the umbilicus and then in the right lower quadrant with the most marked tenderness and some rigidity in the same region, seemed to point to the appendix as the probable source of the trouble; in fact, it is difficult to see how one could exclude this view, bearing in mind the many cases seen of a severe first attack and where there had been previously no warning that the appendix was not healthy. In this child there was some previous history of abdominal pain and vomiting, suggesting appendix trouble.

The character of the peritoneal fluid at the operation was quite distinctive; it was odourless and of a yellowish-green colour, of gummy consistency, and with a limited number of greyish-white flakes of fibrinous coagula in it. The fluid was very little turbid, and this is explained by the early period at which the operation was performed; it later became typically purulent, but remained odourless throughout.

The treatment employed was by incision and drainage. Whether it would have been wiser, after mopping out the fluid, to have closed the cavity, as recommended by some, must remain unanswered; there are not sufficient recorded observations to support one view or the other. It may certainly be urged that the closed cavity runs little or no risk of staphylococcal contamination from outside, which is very likely to occur, and did so in this case. If the fluid should re-collect, or circumstances should otherwise determine it, the wound could be easily opened again and then drained. In another early case I shall be disposed to adopt this line of action.

With the advice and assistance of Dr. Dudgeon, pneumococcal vaccine was employed in the treatment of the case, which was considered a favourable one for such a course. It was started on the fifth day after operation, when, after an initial reduction of pulse, temperature, and symptoms, there was a marked increase again of the pulse and temperature. The injections, eight in all, were given in increasing doses (see chart), at intervals of five or six days. The satisfactory influence of the first two is well shown in the chart; after that the pus became contami-

nated, and it was from this cause that the well-marked rises of temperature occurred, masking the effect of the vaccine. On counter-drainage in the loin the temperature rapidly subsided, and she made a speedy recovery. It must be considered, I think, that the use of vaccine contributed in a large degree to the successful issue of the case.

INCISIONS FOR OPERATIONS ON THE UPPER ABDOMINAL ORGANS.

By ALEXANDER DON, M.B., C.M., F.R.C.S., M.A.,

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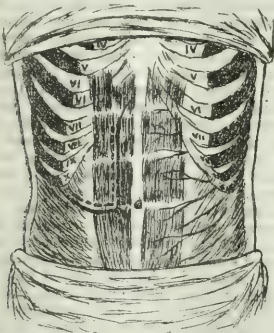
THE incisions practised for operations in the upper abdominal organs are numerous, which indicates that none of them are entirely satisfactory. Kocher's and Mayo Robson's are the most used in this country, and those described by Bevan, Kehr, and Czerny less frequently. The first three have the merit of giving very free access to the biliary apparatus, the duodenum, the pylorus, and the head of the pancreas, while similar incisions on the left side are available for gastric, splenic, and pancreatic operations. The objection to these incisions is that they cut off the nerve supply of the whole upper half of the rectus and overlying skin. A central quadrilateral area undergoes atrophy in consequence. The family doctor knows best that this is no imaginary sequel. It would be of little moment were the patients to remain invalids, but to an active man or woman the injury is serious. Hernia is not common, but the anaesthesia of the skin leads to abrasions, ulcerations, and other injuries, which are more serious from their being less painful, and therefore liable for a time to escape notice and treatment. Kehr's incision leaves a part of the rectus intact, and is in this respect an improvement on the others, but he cuts off more of the blood supply, while Czerny's merely produces another fibrous intersection in the rectus, and leaves a weak median scar.

The following incisions have no doubt been often employed by others, and there seems nothing against their universal adoption. They are anatomically correct, give ample room, and, when healed, produce a firm cicatrix. The blood and nerve supply is intact, the only vessel severed being the deep epigastric artery near its anastomosis with the internal mammary.

The first incision through the rectus is used by most surgeons for exploratory laparotomies. The skin and anterior sheath are divided a fingerbreadth to the right or left of the middle line from opposite the seventh costochondral junction to the umbilicus. The sheath is dissected off the muscle on the inner side, and the muscle freed by blunt dissection from its posterior sheath, and retracted outwards as far as possible. The posterior sheath and peritoneum are then incised as far out as

convenient, and parallel to the whole length of the skin incision. Through this opening the whole of the upper abdomen can be explored, and if operation on lateral organs is deemed advisable, the horizontal limb is then added. The best point for dividing the rectus is at its umbilical intersection, but it may be divided anywhere. This intersection is readily exposed by prolonging the vertical incision if necessary, and from the lower end of this a curved incision is made upwards and outwards to the lowest part of the costal margin. This divides skin and superficial fascia only. The muscle with the skin and anterior sheath is now raised up with the left hand, and the whole cut straight outwards through the middle of the fibrous intersection till the whole thickness of the rectus is divided. The deep epigastric, or a branch, may bleed and require securing. The posterior sheath is divided $\frac{1}{4}$ in. higher up for ease in suturing later.

In very fat subjects the ends of the skin incisions are prolonged and gradually shallowed out at their ends. This gives considerably more room, and does not weaken the cicatrix in the least. When turned up the base of this flap lies along Kocher's incision. The costal cartilages can be cut from the peritoneal side if necessary for operations on the spleen or cardiac end of the stomach. With the sandbag under the patient excellent exposure is got, and the edges of the opening are not too rigid. Only one



The thick line indicates incisions in skin; the dotted line, incisions in posterior sheath and peritoneum; the fine lines, prolongations of skin cuts for stout people; the shading shows ribs, cartilages, nerves, and muscles. (Diagrammatic.)

retractor is required, and when the liver and gall bladder are rotated upwards this, too, may be dispensed with. There is thus no danger of damage to the organs. This sickle-shaped wound is closed in layers with silk, cotton, or celluloid thread as follows: The sandbag is removed, and the vertical peritoneum together with the posterior sheath is closed first. Efficient drainage may be secured through the upper end of the lateral wound before the peritoneum and transversalis fascia are brought together. When the inner end is reached the rectus is sutured at the fibrous intersection, where the suture holds well. The anterior sheath is made to overlap a little, and the fibres of the external and internal oblique and transversalis muscles are gently approximated. The skin is closed by celluloid thread or Meckel's clips.

A more perfect cicatrix can hardly be obtained, and hernia need not be feared. Bevan speaks of the possibility of necrosis at the angle, but in my own cases the union has always been perfect. To round off the angle is more difficult, and can be done with the skin incision only. The exposure obtained need not be described, as the opening must be tried to be appreciated.

THE fifth International Congress of Medical Electricity and Radiology will be held at Barcelona from September 15th to 18th, 1910. The questions proposed for discussion are as follows: (1) The present state of electro-diagnosis; (2) measurements in radiology; (3) electricity as an anti-phlogistic agent; (4) the electrolytic introduction of medicinal ions compared with the therapeutic action of the constant current; (5) the use of the x rays in the examination of the abdominal segment.

INTESTINAL OBSTRUCTION PRODUCED BY AN ENORMOUSLY DISTENDED STOMACH.

By A. ERNEST MAYLARD, M.B., B.S.LOND.,
SURGEON TO THE VICTORIA INFIRMARY, GLASGOW.

So remarkable and exceptional were certain features in this case that it seemed to me worthy of being put on record.

I have met with instances of great gastric dilatation reaching even to the pelvis, but I have never encountered anything at all approaching the somewhat extraordinary symptoms presented in this instance, nor do I know of any precisely similar illustration in the literature of gastric disease. The patient was a man suffering from advanced carcinoma of the stomach with symptoms of apparently only three weeks' standing, and these of a nature to suggest that the trouble was in the large bowel rather than in the stomach. But before venturing upon any comment upon the case I will let his history tell its own tale.

R. S., aged 66 years, was admitted to the Victoria Infirmary on May 21st, 1908.

History.

He stated that up to two years ago he had enjoyed good health, but at this time he began to lose his appetite, was conscious of a sense of oppression and fullness in the stomach, and suffered from pyrosis. Under treatment these symptoms disappeared. He then continued to take his food as before, and remained actively engaged in his work until three weeks ago, when his bowels commenced to be very costive and he was conscious of distension and gurgling in his abdomen. As the difficulty in getting the bowels to move increased, he used enemata, and thereby effected the discharge of some "little round balls." Neither blood nor mucus was seen. He had had no crampy or acute pains in the abdomen, but merely a sense of great discomfort from extreme distension. He had also noticed internal movements, evidently peristaltic. Position seemed to have some effect on his symptoms. When he lay on his left side they were increased, but diminished when he sat up, as he was then able to belch up some gas. He had not vomited, but pyrosis had been a frequent symptom. He was conscious that he was losing flesh.

Condition on Admission.

When admitted to the infirmary he was noticed to be in a poorly-nourished condition. His face was pinched and drawn in expression. His tongue was coated with a dirty viscid fur, and the teeth were in a bad condition. His temperature was 97.6°F ., and his pulse 96. He complained of no pain, but only of an uncomfortable sense of distension. On examination of the abdomen, there was seen to be very marked bulging both in front and laterally, although it was more marked in the left iliac region. No peristalsis was observed; abdominal respiration was diminished. To percussion there was a tympanitic note in the epigastrium, becoming dull down towards the iliac regions and the flanks, and there appeared to be slight shifting with change of position. A suspicion of fluctuation seemed present in the epigastrium. By palpation, "splashing" was detected in the epigastrium, and resistance and tenderness existed in the left iliac region, where slight gurgling was also heard. The area of liver dullness was diminished. Neither the heart nor the lungs presented anything abnormal. The urine was normal. During the three hours that elapsed between his admission and the operation he did not actually vomit, but seemed to cough up a little dark fluid, and a 2-pint enema which was given returned with flatus and a few small round scybala of black colour.

Before continuing the report of the case, as told by my resident assistant, Dr. N. McNeil, which proceeds to describe the operation, I will add a few additional observations taken at the time of my visiting the patient in consultation with Dr. George Halket, under whose care he had been for a short time prior to my interview.

It was three days before the patient was admitted to the infirmary that I saw him in his own house with Dr. Halket. In his general condition he was remarkable, as, taken into consideration that he was pale and somewhat emaciated, he in no way looked like a man suffering from advanced malignant and fatal disease. His chief complaint was abdominal discomfort from inability to obtain a movement of his bowels. His abdomen was greatly distended, and all indications of normal liver dullness had disappeared. There was dullness in both flanks, but tympanicity in the epigastric region and well-marked "splashing." The patient remarked that he had once before had a similar attack, which had completely passed off, and that, although this had lasted longer than the original one, he was confident that it would likewise disappear if only his bowels could be got to move. Dr. Halket, from his previous observation of the patient, had been under the impression that he was suffering from some gastric condition. The symptoms, however, which he presented at the time of our conjoint visit were so suggestive of intestinal obstruction that the suspicion was aroused in my mind that possibly we had to do with a malignant stricture of

the sigmoid or upper rectum, and that the great distension was due to an enormously dilated colon. My advice was, therefore, to give a copious enema, to be repeated if the first attempt failed to have any satisfactory result, with the further instruction that if the symptoms were not relieved he should, without further delay, be transferred to the infirmary.

Operation.

The abdomen was opened by an incision in the left flank. The intestine was seen collapsed and pressed down by what appeared to be a large tense cyst. A second incision was then made into the abdomen in the middle line, when a bluish, thin-walled cyst, with blood vessels stretched over its surface, at once presented. It was punctured, and ink-like fluid, sour to the smell and containing whitish masses of solid matter, spouted out with considerable force. Eleven pints of this fluid were drawn off, and it was then discovered that the supposed cyst was the stomach, which rapidly contracted down, and presented the normal appearance of muscle parietes. The vessels, also, which had spread over the apparent cyst, were seen to be the normal branches proceeding from the two curvatures. On further examination a mass of scirrhus was found involving the lesser curvature and anterior surface of the stomach towards its pyloric end. Nodules were also found freely scattered throughout the mesentery and omentum. The stomach wound was stitched up and both the abdominal incisions closed.

After-history.

He was greatly relieved by the operation, and the next morning was reading the daily paper with very little concern about himself, and feeling comparatively comfortable. In the afternoon, however, the distension commenced again, and on the following day the abdomen was so swollen that the stomach tube had to be passed. By this means a quantity of fluid, similar to that removed at the operation, was withdrawn. The washing-out was then continued on the succeeding days, as much relief seemed to be afforded by it. On the evening of the fourth day he still seemed quite comfortable, but shortly before 2 a.m. on the 26th he suddenly collapsed and died.

Necropsy.

A post-mortem examination was made by Dr. John Anderson, who reported as follows upon the condition of the stomach: "The stomach is greatly dilated, and its wall remarkably thin, so that without very gentle manipulation it is easily torn. The cavity contains a quantity of dark grumous fluid. A malignant stricture exists at the pylorus, of the concentric type; it extends along the anterior wall and lesser curvature for about 2 in., causing the wall itself to be about three-quarters of an inch in thickness. An area of ulceration exists on the posterior surface of the growth. The tumour tissue is more evident on the anterior wall; the lumen of the pyloric aperture is still of fair size, admitting the passage of the finger." The liver contained no secondary nodules, and there was nothing of note in the other organs or tissues.

Perhaps the feature of most striking interest among the many perplexing problems which the case presented was the extreme paucity of symptoms, and their apparent want of gravity when considered in relation to the serious nature and extent of the disease. There was one very prominent fact, however, about the patient that served to mask what otherwise might have been much more in evidence and suggestive, and that was his possession of a remarkably buoyant nervous system. He made light of such symptoms as he had, and doubtlessly disregarded others that might have proved diagnostically useful. He never once took a gloomy view of his case, and always regarded his illness as merely transitory. As stated, he was reading the newspaper the morning after the operation, and was often making jokes with the nurses and the resident assistant. Attention is specially drawn to this particular aspect of his case, because, as already stated, it admits of the reasonable assumption that he probably belittled many of the early symptoms which, in a patient of a less optimistic and cheerful nature, might have shown that an organic complaint of the stomach had been in existence for some time. Irrespective, however, of the influence of the nervous system, it is a well-known fact that carcinoma of the stomach may reach a very advanced stage without giving rise to any marked symptoms, so long, apparently, as it is limited to the body of the viscus and does not involve the pyloric aperture. In this case, as ascertained at the post-mortem examination, the finger could be passed through the pylorus; and although the disease distinctly involved the pyloric region, the canal itself does not seem to have been markedly obstructed by it. It is, however, impossible to conceive that at the time of the great distension the contents of the stomach were able to pass into the duodenum. Probably the pylorus got kinked or displaced in such a way as to cause occlusion.

The absence of vomiting was somewhat remarkable, and must, I think, be explained on the ground that the hyper-distension had completely paralysed the gastric parietes. It had become little more than a flaccid sac with walls so thin that they must have very nearly reached the bursting point. As shown at the post-mortem examination, the greatest care was required not to tear the walls in the process of handling.

Believing the case to be one probably of obstruction in the large bowel, I opened in the left iliac region, deeming it likely that such enormous distension of the colon would hardly take place unless the obstruction was seated low down in the large intestine. It was with a sense of considerable surprise that I found the bowel collapsed, and apparently so as the result of the pressure of a very tense cyst. As the report of the case goes on to relate, I then opened the abdomen in the middle line, and my remark was, when seeing this uniform tense cyst, that had the patient been a female and not a male, I should have thought that I had an ovarian cyst to deal with. The true nature of the swelling, however, at once became evident on letting out the fluid, for the sour smell and the coagulated lumps of what were evidently the result of ingested milk revealed the fact that it was the stomach which had been opened. This became still more conclusive as the muscle parietes of the viscus contracted, and the vessels, which were so stretched over its surface, were seen to be the normal branches extending over the anterior surface of the organ from the greater and lesser curvatures. As gastric obstructive symptoms had never apparently been a feature in the history of the case, I thought it quite possible that, having relieved the great distension, the pyloric aperture might become sufficiently permeable. I did not, therefore, perform gastro-jejunostomy; and, still further, the marked evidence of widespread malignant disease did not render such a proceeding worth undertaking in view of the above possible competency of the pyloric passage. The nature of the fluid was somewhat striking. In appearance it was more like ink; but in constitution it was probably gastric secretion mixed with blood. From the large quantity removed at the operation—11 pints—and subsequently, it hardly seemed possible to believe that it consisted solely of altered blood, but that the major part of the fluid must have consisted of an excessive gastric secretion, for at no period did the patient seem to be suffering from any great loss of blood.

In reviewing the treatment of the case by that superior wisdom which is always derivable after the event, to have simply passed the stomach tube would probably as effectually afforded relief as did the direct incision into the stomach, for it was the method adopted during the four days that life lasted, and which always gave him comfort. But such treatment would have thrown but little light on the true nature of the disease, although it would certainly have aroused suspicions regarding its possible location in the stomach. An exploratory operation would, therefore, doubtlessly have been executed, supposing the patient's condition had been such as to admit of its execution being advisable. Death was evidently due to sudden cardiac failure, a result not unlikely either of the naturally enfeebled condition which, in spite of the patient's buoyant nervous system, was evident; or of possibly some interference with the action of the heart as the result of great gastric distension.

A REPORT on the malarial investigations in Mauritius from November, 1907, to February, 1908, by Major C. E. P. Fowler, R.A.M.C., who was associated with Major Ross in the recent work conducted in that island, has been issued. It contains details of the outbreak of malaria in 1866. This outbreak in an island supposed to be non-malarial forms one of the most interesting epidemiological facts in the whole history of malaria. The report contains recommendations as to prevention, and a permanent staff for antimalarial work has been already partly formed. It will not undertake major works, its duty being minor works and the keeping in order of the major works after completion. A series of most excellent photographs with which the report is illustrated indicate very clearly the tropical nature of the vegetation and the general type of scenery, which resembles that of the West Indian islands very closely. Leaving out of account altogether major works, the minor works will necessarily prove very expensive in such a place, but if the health of the island is to be improved they will have to be carried out.

THE SCIENCE COMMITTEE OF THE British Medical Association.

REPORT CXII.

OBSERVATIONS ON THE PHYSIOLOGY OF THE FEMALE GENITAL ORGANS.

BY
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III.—THE CORRELATION OF THE UTERUS AND OVARIES.

In this paper we shall give the results (for the most part histological) of several series of experiments which bear upon the correlation of the ovaries and uterus, apart from the metabolic relations existing between these organs in regard to menstruation, which have already been discussed.

The experiments performed consisted of :

- A.—1. Removal of ovaries and subsequent histological examination of the uterus.
2. Removal of ovaries during pregnancy.
- B.—Removal of uterus and subsequent examination of the ovaries.
- C.—Ligation of uterine cornua :
 1. Without removal of ovaries.
 2. Synchronous with removal of ovaries.
 3. Subsequent to removal of ovaries.

The animals operated upon were for the most part rabbits. Three bitches were also used.

Most of the above experiments have been carried out by Bond, Marshall and other observers, but, inasmuch as there have been to some extent conflicting statements made in respect to the results obtained, we have been tempted to carry out these experiments ourselves in order that we might make up our own minds on several of the contentious matters, and on those points concerning which, on

questions of the greatest importance, such as the effect of the removal of the uterus upon the ovaries, will only be settled by prolonged experiments upon monkeys, or by clinical observation on the human subject ; but of this we shall have more to say later. The fact, however, remains that the adult rabbit's ovary is of a very different histological structure from the dog's ovary or the human ovary. It has, however, been a matter of surprise to us that we have not come across adequate appreciation by those who have used rabbits in their experiments of the great difference between the histological structure of these ovaries and that of the human ovary. This difference only becomes marked in the adult rabbit, and may be summarized by the statement that in every normal rabbit—whether virgin or multiparous—the ovary is mainly composed of large cells, sometimes hardly to be differentiated from those which fill the corpora lutea, while there is practically no ordinary stroma. The ova themselves do not appear to be numerous, and are situated near the periphery. (See Fig. 1.) The adult rabbit's ovary, in fact, appears to be of an extremely glandular nature (see also Fig. 2), and in this respect entirely different from the dog's and the human ovary. (See Figs. 3 and 4 respectively.)

These large glandular "stroma" correspond, of course, with the "interstitial" cells which have been investigated by Miss Lane-Claypon.¹ In her opinion, based on careful histological work, these cells are derived from the germinal epithelium, as also are the ova and follicular cells. We have not conducted any detailed research into their origin, but it seems to us that this method of origin is a little strange, seeing that in the ovary of the young rabbit these interstitial cells are entirely absent or very few in number, while primordial ova seem to be more plentiful than in the adult (see Fig. 5).

Whatever their origin, there is no doubt that the presence of the interstitial cells makes the ovary a more glandular organ in the rabbit than in the human subject—the very friability of the adult rabbit's ovary being of itself evidence of a considerable difference of structure from that obtaining in most other mammals. Fraenkel² has recently made a long and important contribution on the subject of *la glande interstitielle de l'ovaire*, as it was originally called by Limon. After examining 45 species of mammals he concluded that these cells vary in extent in all, but are most marked

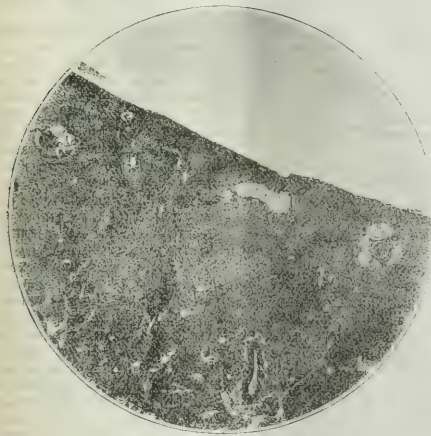


Fig. 1.—Adult rabbit's ovary. $\times 200$.

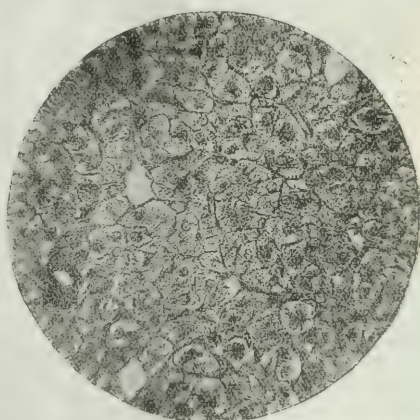


Fig. 2.—Adult rabbit's ovary showing interstitial (glandular) cells. $\times 600$.

theoretical and clinical grounds, we have held views contrary to the results generally obtained. We may say briefly that for the most part our results correspond with those obtained by other observers, but we have been forced to the conclusion that the rabbit is not the best animal on which to carry out experiments, the results of which are estimated by histological examinations of the ovaries, if we wish to compare these results with conditions obtaining in the human subject. Indeed, we believe that certain

in rodents. (We have found them constant in rabbits.) In his (Fraenkel's) experience he has found no trace of this glandular formation in the human subject. In view of these investigations by Fraenkel, and by ourselves in a very small way, we would suggest that the variation may be in proportion to the activity of the thyroid gland, which is notably inactive in rabbits.

Attention has already been called to the close relationship which exists between the ovaries and the thyroid

gland in regard to the menstrual function and to the calcium metabolism (see Papers I and II).

RESULTS OF EXPERIMENTS. SERIES A.

I.—Effect of Oophorectomy upon the Uterus.

In this experiment we wished to discover, if possible,

(d) Doe, full grown. Oophorectomy. Animal killed and uterus examined three and a half months later. The condition alluded to is seen in this case most clearly (see Fig. 10). The endometrium is quite thick, while the muscular layer is represented by a very narrow band. This animal was pregnant when the ovaries were removed.

It may be of interest to mention here the case of a patient, aged 35, from whom the uterus was removed by

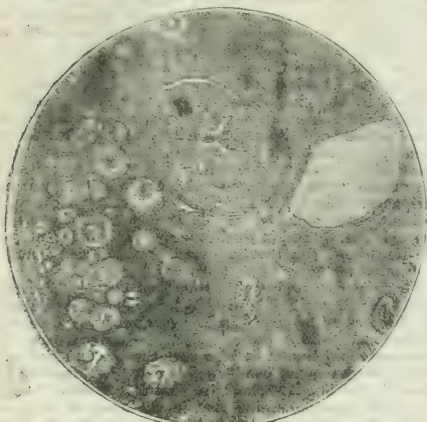


FIG. 5.—Bitch's ovary. $\times 200$.

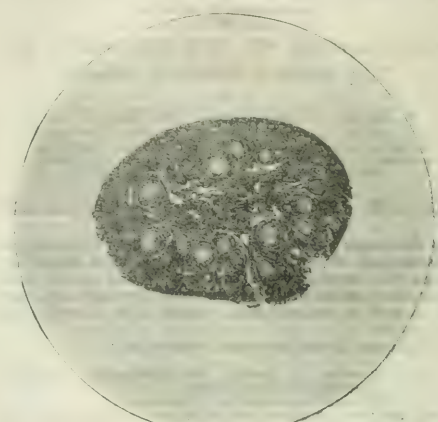


FIG. 5.—Ovary from rabbit a few weeks old. $\times 200$.

whether the atrophy which is known to occur in the uterus after removal of the ovaries affects more the endometrium or the muscular layer. For the experiment we used one bitch and rabbits. The following are illustrative of the results obtained:

(a) Sable mongrel bitch, aged 6 weeks. Oophorectomy performed. Animal killed and uterus removed nine and a half months later. It will be seen from Fig. 6 that there is a general arrest of growth which affects the whole uterus, and further that there is some degree of atrophy—most apparent in the muscle layer—which is readily seen on comparison with the uterus from a twin sister, removed on the same day that double oophorectomy was performed on this bitch (see Fig. 7). Had the uterus, shown in Fig. 6, which was 10 months old, remained *in statu quo* after oophorectomy, it should have resembled that shown in Fig. 7. There is, therefore, arrest of growth and then atrophy, and the latter most marked in the muscle layer.

(b) Doe, aged 6 weeks. Oophorectomy. Animal killed two months later and uterus examined. A section is seen in Fig. 8. The same condition of affairs is seen in this as was evident in the last case. There is some atrophy of the endometrium, but want of development and atrophy are most apparent in the muscular layer. At one point there is an area of exceptional thinning. This is most unusual and is difficult to account for. In connexion with these two cases it may be contended that, owing to the fact that the uteri had never become active (see Paper IV), the muscle layer had in consequence not developed. This point will be further alluded to presently.

(c) Doe, full grown. Oophorectomy. Animal killed and uterus examined three months later. A section of this uterus (see Fig. 9) shows that the changes which have occurred are most marked in the muscle layer, and that the endometrium is still apparently normal. This is better seen in the section than in the photomicrograph of it.

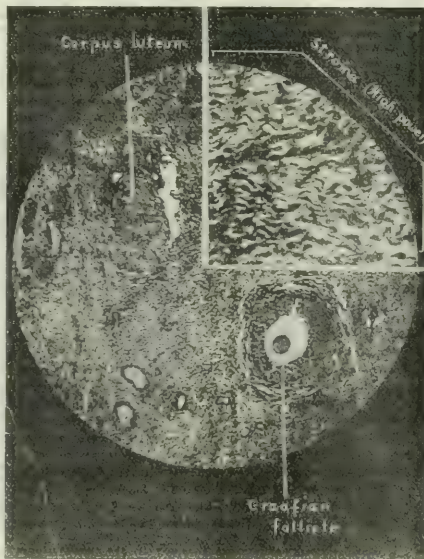


FIG. 4.—Human ovary (adult) $\times 200$, with segment showing structure of the stroma $\times 600$.

one of us by operation (owing to extensive adhesions to the appendix, etc.). The ovaries had both been removed (by another surgeon) for dysmenorrhoea four years previously, which of course influenced us in removing the uterus. The organ removed was examined microscopically (Fig. 11). The glands exist in large numbers and stain well. The delicate stroma of the endometrium and the muscle fibres are both replaced by fibrous tissue.

It would appear, then, that when the ovaries are removed in a young animal the uterus remains in an infantile condition, and undergoes slight general atrophy, which condition may be changed into one of general fibrosis of the organ after many years.

This condition of fibrosis is shown in Fig. 12, which is a section of an infantile uterus removed from a human adult. At the same time a rudimentary uterus may coexist with functioning ovaries, although this uterus may be a mass of fibrous tissue, as is seen in Fig. 13—a section of a rudimentary uterus removed by one of us from a hernial sac. (Owing to the extreme hardness, it was impossible to obtain a good section.) In this case the ovaries were proved to be active, or at any rate to contain corpora lutea on histological examination (Fig. 14).

tain corpora lutea on histological examination (Fig. 14).

Conclusions.

1. Removal of the ovaries in young animals causes the uterus to remain infantile—atrophic changes eventually occurring.

2. Removal of the ovaries in adult animals produces first of all an atrophic change in the muscular layers; and this

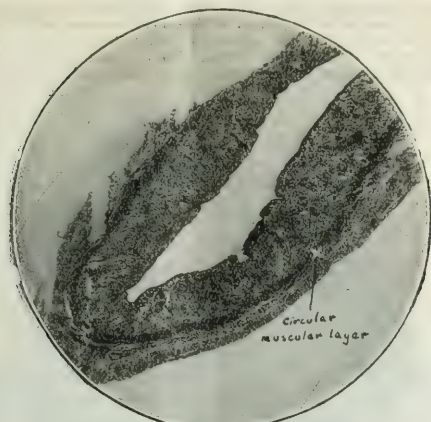


Fig. 6.—Young bitch's uterus nine and a half months after oophorectomy. $\times 200$.

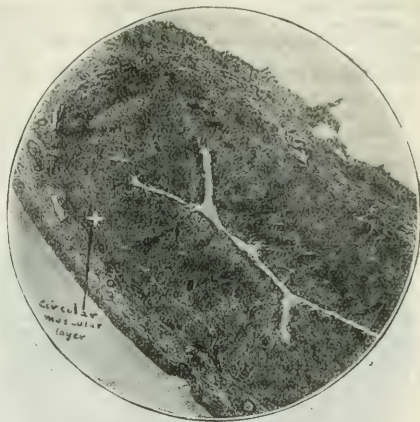


Fig. 7.—Bitch's uterus at age of 6 weeks. $\times 200$.



Fig. 8.—Young rabbit's uterus after oophorectomy. $\times 200$.

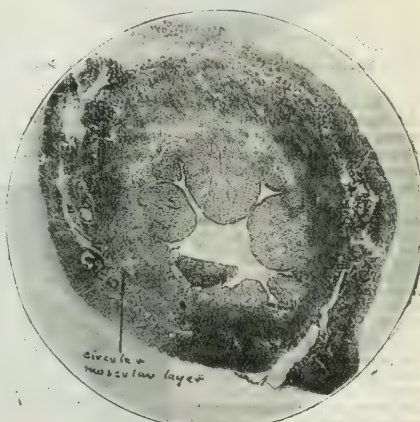


Fig. 9.—Rabbit's uterus after oophorectomy. $\times 200$.



Fig. 10.—Rabbit's uterus after oophorectomy. $\times 200$.

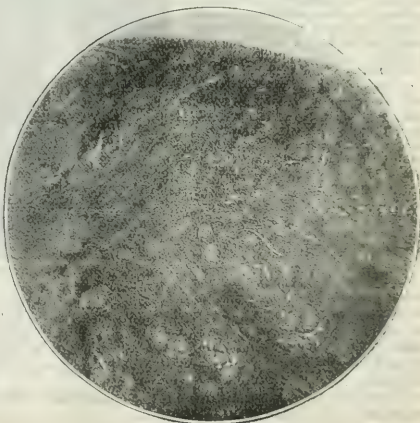


Fig. 11.—Uterus of woman four years after oophorectomy. $\times 200$

in time may cause atrophy of the endometrium, probably by interfering with the circulation, the whole organ becoming invaded by fibrous tissue after sufficient lapse of time.

3. Functional ovaries may coexist with infantile uteri.

the secretion of the corpus luteum was necessary for the implantation of the ovum. There are, however, still those who assert that the operative manipulations cause the abortion which usually occurs. We are inclined to think that it is not the operative manipulation altogether, in

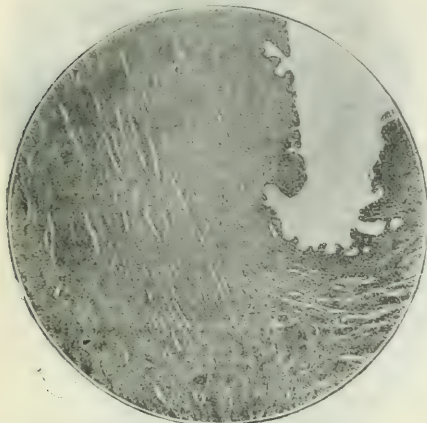


Fig. 12.—Infantile uterus from adult woman. × 200.

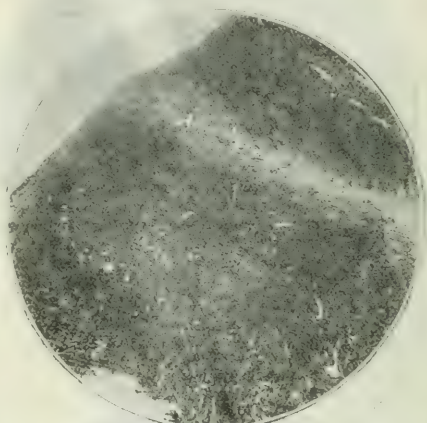


Fig. 13.—Rudimentary uterus from the hernial sac of an adult woman. × 200.

II.—Removal of Ovaries during Pregnancy.

In these experiments we endeavoured to remove the ovaries of rabbits at different stages of pregnancy as estimated from their connexion with the buck. The following are illustrative cases:

(a) Black doe. Opened in the anticipation that she was a few days pregnant. As pregnancy could not be detected, the ovaries and uterus were examined and handled and the abdomen closed. There was no further connexion with the buck. Twenty-three days later one young one was born alive. This case was therefore regarded in the light of a control experiment.

(b) Grey doe. Oophorectomy was performed on the seventh day. The uterus was enlarged and small nodules visible. No abortion was seen to occur. On the thirty-third day after operation the abdomen was opened, and the uterine cornua were found to be very small. Abortion had undoubtedly occurred.

(c) Black doe. Oophorectomy was performed on the fourteenth day of pregnancy. Abortion took place on the following day. The animal was killed twenty days later and the uterus found to be quite small.

(d) White and grey doe. Oophorectomy was performed on the twentieth day of pregnancy. Abortion occurred on the following day.



Fig. 14.—Ovary from hernial sac of an adult woman (same case as Fig. 13). × 200.

Other similar experiments were performed, with the invariable result that abortion occurred in every case in which oophorectomy was performed. Great care was taken in all cases not to expose the uterus, nor to handle it, and the operation was always completed in two or three minutes.

There has been much discussion in connexion with this question since ignipuncture was first performed upon the corpora lutea of pregnancy, and Fraenkel¹ claimed that

view of our control experiment; at the same time, we do not think that a comparison can be made between rabbits and the human subject in this respect, for there are undoubted cases on record in which the ovaries have been removed from women early in pregnancy (six weeks), and where there could be no doubt that the whole of both ovaries was removed, and yet the pregnancy continued to full time. A good example of this is the case reported by J. E. Gemmell,⁴ with the subsequent history of which he has kindly acquainted us.

It would be fair, therefore, to say that while the internal secretion of the ovary is favourable to the continuation of pregnancy (and this will be easily understood by a reference to what we have already stated in connexion with the relation between the ovary and the calcium metabolism), on the other hand, this secretion is not absolutely essential in that respect—at any rate, in the human subject. That our experiments and those of others on rabbits have given positive results may be explained by a consideration of what has already been said in this paper as to the structure of the rabbit's ovary.

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(To be continued.)

THE University of Geneva will celebrate the tercentenary of its foundation in July of the present year.

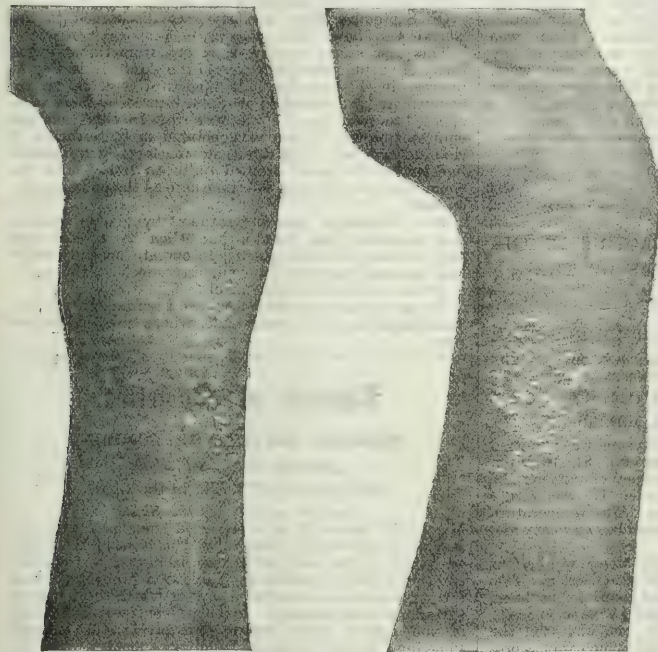
Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

THE SKIN LESIONS CAUSED BY THE MILLEPORA.

Among the many forms of dermatitis caused by various animal and vegetable agencies, one of the most severe is that inflicted by the hydroids of the hydrocoralline millepores. The stony colonies of these hydrocorallines are generally called "corals" by the dwellers on coral reefs, and the Malays have given them the name of "Karang gatal," or itchy corals. In most of their obvious characters these colonies closely resemble the harmless madrepora corals, which possess no power of causing skin lesions. In the case of the millepores, the injury is inflicted by numerous thread cells, whose spent threads may be seen waving over the surface of colonies kept under observation, and the injury that they cause may be very severe.

The immediate signs of contact with a colony are acute erythema and severe pain. In cases in which the contact



area is large, papules rapidly form and become pustular, and a very extensive desquamation follows.

In the case figured, the flexor surfaces of both forearms were extensively affected. The patient was a Chinaman, who, in his efforts to avoid being knocked down by a wave, had grasped a colony of the millepore. Large pustules formed later on the sites of the stings, and the desquamation was extensive. One curious feature of the lesion is its lasting nature, for the site of a sting will remain red, and will sweat profusely, for more than a fortnight after contact with the colony. It is of interest that the different facies of the species *Millepora* possess different powers of stinging, and the sting of the facies *Alaicornis* is more severe than that of *Complanata* or *Verrucosa*.

FREDERIC WOOD JONES, B.S.Lond.

THE TREATMENT OF PROLONGED CASES.

In a hospital resembling that built by the late Sir John Jaffray at Birmingham for the purpose of relieving the congestion of a large city hospital (an institution in which the patients require active treatment, which is neither a

convalescent home nor a hospital into which patients are received first hand), the question of the means of promoting a quick return to health of those who have missed the first period of their allotted time is not easy.

A number of the cases suffer from wounds which have not healed by first intention, the cause sometimes, but not always, being an invasion of the wound by micro-organisms; others are tuberculous cases which have required surgical aid. The crux of the treatment of these prolonged cases would seem to be a constant ringing of the changes in the use of the various methods to promote healing at our disposal.

Briefly, these are change of air, change of food, constant change of local treatment, treatment by vaccines, rest. Local treatment resolves itself into renewed stimulation by free drainage, congestion, depletion, immersion. With regard to drainage, rubber tubing gives a far better result than gauze wicks, which do not seem sufficiently cleanly in the treatment of sinuses, however narrow they may have become.

I have been singularly unfortunate in that I have scarcely ever seen a good result, either in my own cases or those of others I have been privileged to watch, following congestion treatment of a part by proximal constriction with a rubber bandage. The theory and simplicity of the method must appeal to every medical practitioner; but, personally, I have never materially hastened the return to health of any patient by this method as far as I am able to judge.

Cupping, on the other hand, has yielded splendid results in the treatment of surgical wounds which have not reacted as they should to the care bestowed on them. The local congestion produced by cupping, followed no doubt by temporary vasomotor paralysis and an active flooding of the part with fresh lymph, has led to rapid recovery; especially is this true in the treatment of empyemata. Of the many lotions in use, two seem to stand out rather more than the rest—namely, *izal*, which has a favourable action on tuberculous granulation tissue and tuberculous lesions of old standing; the other a solution of chloride and citrate of sodium. The action of these two salts is well known, and, when used in combination with citric acid given by the mouth in 30-grain doses thrice daily, the time of healing of sluggish wounds and tuberculous empyemata has been reduced by at least one-third. Severe compound comminuted fractures in long bones have shown gratifying attempts at throwing off sequestra and rapid union under the influence of these methods.

The constant striving after something new in the practice of medicine brings home most forcibly the consideration that we can after all only place the patient in the best position for the patient to help himself.

C. N. SLANEY, M.R.C.S.
Birmingham. Resident Surgical Officer, the Jaffray Hospital.

A CASE OF HYDROPHOBIA.

A MAN attended suffering from what appeared to be hydrophobia, but the length of the incubation period made one pause before pronouncing a definite opinion.

Sixteen years previously he had been bitten by a mad jackal, which sprang up at him and fastened on his face. He strangled it, but its grip was so tight that only with difficulty could it be removed after death. He used native medicines and the wound healed without causing him any further trouble.

Two days before coming to us he had some slight fever, and on the morning of coming awakened at 4 a.m. with violent sickness. On admission the temperature was 101° F., with quick, irregular pulse, and he complained of not being able to eat or drink though suffering from great thirst. We tried him with a little water, and he made a great effort to swallow, but in the act he had such violent spasms that we desisted. He stayed with us all that day and night, the spasms becoming more frequent and independent of food or water. His speech, too, became more difficult and his pulse weaker, and every now and then he had a respiratory spasm. We tried to feed him by nutrient enemata, but that also caused the spasms, and he besought us not to attempt it. With great difficulty he managed to swallow two or three grains of rice rolled up into small pellets and sucked a little bit of cloth which had been previously soaked in water.

The next morning, at his own most urgent request, he was allowed to be taken home, and died that evening. From one who was with him after he left us I learned that he retained consciousness to the end, and never became violent. He had always been a strong man, leading an open-air life as a gardener, with no tendency to hysteria, and there appeared to be no other cause to which one could attribute the symptoms. The marks of the wound were visible on his face, and the history given was corroborated by others. We could get no history of any fresh inoculation during those sixteen years, and were, therefore, forced to the conclusion that this was a case of hydrophobia with an exceptional incubation period.

N. M. GAYN, F.R.C.S. Edin.,
Irish Mission Hospital, Anand, Western India.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

EAST LONDON HOSPITAL FOR CHILDREN.

DOUBLE EMPYEMA WITH PNEUMOCOCCAL INFECTION OF THE
SKIN AND CONJUNCTIVAE.

(Under the care of Dr. J. A. COUTTS.)

[Reported by D. L. MORRISON, M.D. Edin.]

G. S., a fat healthy looking boy, aged 7 years, was admitted to the East London Children's Hospital, Shadwell, on August 9th last, with a one day's history of pain on the left side of the chest below the nipple. He was rather apathetic and inclined to be drowsy. The temperature was 103°, and the pulse 136. The breathing was easy and at the rate of 40 per minute.

Immediately below the left nipple there was slight dullness, harsh breath sounds, and pleuritic friction. Two days later the dullness had extended round to the back, and faint bronchial breathing was heard at the left base.

The complexion was of a healthy red, but soon the patient became flushed. The flushing, which was a prominent feature throughout the illness, presented a mottled appearance, extending down over the chest and arms.

By August 17th the breathing had become much distressed, the patient had assumed a very bloated look, and altogether he appeared extremely ill. There was absolute dullness and oegophony at the left base, with some impairment of resonance also at the right base. On the left base being explored, thin pus containing pneumococci was obtained.

Next day a piece of rib was resected, and 6 oz. of pus evacuated.

On August 23rd the wound was discharging freely, but the breathing was still very distressed. The temperature still kept up, the pulse-rate was 144, and the respirations 56.

On August 27th, as the dullness at the right base had increased, it was explored, and thin pus containing pneumococci found. Under cocaine, by simple intercostal incision, about 6 oz. of pus were then evacuated.

On August 30th both wounds were discharging freely. Around the one on the right side the skin had become

harsh and dry, and whitish blebs had made their appearance. There was also conjunctivitis of the left eye.

On the next and following days the whole surface of the skin of the face, arms, legs, and back became very harsh and dry. The blebs, which began round the wound on the right side, rapidly spread up the back on to the right shoulder, and on September 1st they had reached the right side of the neck and face. The blebs, which varied much in size, were of a white colour, and in about forty-eight hours after appearance burst, and the epithelium then peeled off. Their contents yielded a pure culture of the pneumococcus, as did the discharge from the conjunctivitis, which now affected both eyes.

On September 4th the patient began to improve; the discharge from the empyema wounds became less, and the skin of the back, face, and neck desquamated in large flakes.

From this date onwards the improvement continued. The discharge from the wounds became daily less, and on September 18th both wounds were quite healed. The epithelium of the entire body, including that of the scalp, desquamated, at first in large flakes, and later in small particles. The desquamation continued for quite three weeks after the appearance of the blebs.

On September 24th the boy was discharged to the convalescent home at Bognor.

This case seems worthy of record from the extreme rarity of pneumococcal infection of the skin. It is also of interest in showing the advantages of treating certain empyemata by the method of simple intercostal incision as opposed to resection of a piece of rib. In this case the empyema on the left side was operated on by resection of rib nine days before the right side was opened by simple incision, yet the latter drained quite as freely, and the wound had healed up on the same date as the one operated on first.

The advantages here of treatment by simple incision were therefore great, for at a time when the patient was very critically ill it was possible to operate speedily under local anaesthesia without the slightest shock to the child, and with a more favourable result.

For permission to publish this case I am indebted to the kindness of Dr. J. A. Coutts, under whose care the patient was.

Reports of Societies.

MEDICAL SOCIETY OF LONDON.

Monday, March 8th, 1909.

JOHN LANGTON, F.R.C.S., in the Chair.

Fracture of Base of the Skull.

MR. L. B. RAWLING, in a paper on some points in the surgical treatment of fracture of the base of the skull, said that profuse and continuous haemorrhage from the external auditory meatus suggested the probability that the surgeon had to deal with a case in which there was an extradural extravasation and an extensive fracture of the petrous bone, probably involving the tegmen. Plugging of the external auditory meatus was to be condemned, inasmuch as the free escape of blood was the one factor that prevented cerebral compression; and operative measures for the relief of the extravasation were to be seriously taken into consideration, even in the absence of all the classical symptoms of middle meningeal haemorrhage. Syringing of the ear was absolutely contraindicated, on the ground that the lacerated tympanic membrane and comminuted tegmen tympani exposed the patient to grave risk of meningeal infection. After investigating a large number of cases of fracture of the base of the skull—about 300 in all—during the past six years, he was enabled to classify the cases into three groups: (1) Where the temperature rose steadily and progressively to 103° or more, the reaction from the primary collapse stage being of a marked and forcible nature, and the patient dying with definite evidence of cerebral compression. (2) Where the temperature rose to 100° to 102°, and there "marked time." That was the "crisis" of the case, a further rise or fall almost invariably indicating death or probable recovery. (3) Where the temperature remained subnormal, the

patient remaining in a condition of severe cerebral shock and usually dying within a few hours. Venesection was a valuable means of reducing increased intracranial pressure. It was mainly of use in those cases that hovered between what one might call early or slight compression and the fully developed condition. "Decompression" operations might be carried out over the cerebellar fossa or over the temporal region of the skull. The temporal operation, more correctly known as the "intermusculo-temporal" operation of Harvey Cushing, often brought about the most satisfactory results. The advantages of the operation were the frequency with which the bony lesion occurred in the middle fossa of the skull, the fact that cerebral contusions were especially liable to involve the tip of the temporo-sphenoidal lobe, the exposure of the meningeal territory, and the ease of determining the presence of an extradural haemorrhage, the possibility of draining through a split muscle rather than directly through the scalp, the subsequent protective action of the muscle in case a hernia tended to form in consequence of traumatic oedema, and the subsequent absence of any deformity, the skin incision being carried out in the main through the hairy part of the scalp. With regard to lumbar puncture, he did not look upon that method as of any use in the treatment of injuries to the head. From a diagnostic point of view, the presence of blood in the cerebro-spinal fluid, as withdrawn by lumbar puncture, suggested the presence of intradural haemorrhage, nothing more. He had never seen the slightest benefit result from that mode of treatment.

Mr. G. TEMPLETON read a paper on a case of gastric dilatation associated with extreme cyanosis.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Friday, February 12th, 1909.

A. R. PARSONS, M.D., President, in the Chair.

Tumour of the Brain.

Dr. BEWLEY exhibited a specimen of cerebral tumour:

The patient, a railway guard, had five severe epileptiform fits at intervals between June and November, 1907. He complained of attacks of a tingling feeling in his left side, which was relieved by severe rubbing. He once in hospital had an epileptiform fit, beginning in the left arm. He never had headache throughout, nor did he ever vomit. He had no optic neuritis. Still, they could not help thinking that there must be a brain tumour on the right side of the brain, and from the frequency and pronounced nature of the attacks they thought it a cortical lesion, but the evidence as to localization was not great. Knee-jerks were absent. There was no paralysis; the man could walk very well, and was apparently in good health. He was admitted to hospital on November 14th, and went home for Christmas on December 24th. Four weeks afterwards he returned a good deal worse. There was almost complete paralysis of the left arm and incomplete paralysis of the left leg, anaesthesia of the left arm and leg, and great drowsiness. The left side of the face was slightly paralysed. The drowsiness continued and merged into coma, and he died on February 11th comatose. The brain was hardened by a method suggested by Dr. Leeper: A large aspirating needle was passed through the orbit and back into the subdural space, and through it a quantity of formalin was poured in. The brain preserved its shape exceedingly well, and the sections exhibited showed the tumour clearly.

The suspicion that it was a cortical lesion was not correct. It was an infiltrating glioma, and was interesting from the absence of the three cardinal signs of tumour and from the history of epileptiform seizures, and showed the difficulty of diagnosis in some cases of brain tumour.

Dr. LEEPER said the method to which Dr. Bewley had referred was taught to him by Professor Marie at Paris. He used it with satisfactory results in the case of insane persons who were a long time dying. He thought the epileptic seizures might have been due to multiple thrombosis. It was suggested that the blood of epileptics became more acid than normal, and that thrombi formed.

Septic Endocarditis starting from Congenital Pulmonary Narrowing.

Dr. BEWLEY related a case:

The patient was a man, aged 32, who since childhood had been told that there was something wrong with one of the valves of his heart. About July or August, 1908, he began to suffer from chills and rigors. These recurred from time to time, and about

September he got some pleuritic trouble on his left side. When in Cork he suffered from pain in his right side, and Dr. Pearson, of Cork, found some pleural trouble. He had a good deal of fever. Dr. Pearson found he had a loud systolic murmur heard all over the region of the heart, but specially loud over the second left costal cartilage. He thought he had a congenital narrowing of the pulmonary orifice. The patient was afterwards brought to Dublin and put under Dr. Bewley's care. He looked ill, and had some degree of irregular temperature. He had wasted a good deal. His liver was palpable, but seemed fairly normal in shape. A trace of albumen was present in the urine. He had a slight cough. Dr. Bewley thought the case was probably one of general tuberculosis, but no tubercle bacilli were found on examination. Another possibility was that there was a concealed focus of suppuration. The third idea was that it was a case of septic endocarditis. He did not himself think so, as there was no sign of emboli in the body. The patient became gradually weaker, and died in ten days. When the heart was removed he noticed that the two ventricles had approximately the same thickness, the muscular walls. The tricuspid orifice was slightly smaller than one would expect, and rather smaller than the mitral orifice. In the right ventricle he found a constriction about $\frac{1}{2}$ in. below the pulmonary valve. When they opened the pulmonary artery they found, starting from the constriction and growing up to the valves, which looked fairly healthy, an enormous mass of vegetations. There was also a small opening in the septum between the two ventricles. The left side of the heart and the aorta were perfectly healthy. They found scattered through the lungs a great many masses of infarcts surrounded by zones of inflammation; one or two were breaking down into little cavities.

The diagnosis was a slow form of septic endocarditis, grafted on a congenital narrowing of the right ventricle just below the pulmonary orifice.

The SECRETARY said the sections of the vegetations under the microscopes were crowded with micro organisms. There were present a diplococcus and a Gram-staining bacillus. Inoculations from a very mixed culture tube made from one of the infarcts killed two rabbits in the course of a few hours. He recovered two organisms from the animals. He was almost certain that the diplococcus was the pneumococcus, but he did not yet know what the bacillus was.

Dr. BEWLEY, in reply to Dr. KELPATRICK, the PRESIDENT, and Dr. HARVEY, said he only had charge of the case ten days, and during that time the patient was obviously dying. He could not find bacilli in the sputum, and he did not get any examination of the blood made. The condition might have been due to some roughness about the constriction and the increased force. He did not think there was any change of aeration. The pressure on both sides was probably much the same, so that there was evidently no free flow of blood between the two sides. All the other organs were healthy; he did not examine the brain. There was no trace of sepsis except in the lungs.

Duodenal Ulcer.

Dr. JAMES LITTLE exhibited a specimen:

The patient was of the age, about 60, when duodenal ulcers were in his experience, most frequently seen, and he thought that nearly all he had seen had been in men, and he had seen more in private practice than in hospital practice. The man was well nourished and healthy-looking, but for five or six months he had been subject to abdominal pain, which was in proportion to the solidity of the food he took. The pain was rather to the right of the navel. About ten days before admission to hospital he had two bleedings from the bowel, but he did not seem to think himself very ill. After three or four days in hospital he passed half a chamber vessel full of bright-coloured blood, which looked as if it had escaped from the intestine not very far up. No trouble was found, however, in the rectum or descending colon. He had a further bleeding, and later he suddenly vomited for the first time a large amount of blood. On the same evening he had another large haemorrhage, and died an hour or two afterwards. At the post-mortem examination they found a duodenal ulcer, and the cause of death was the rupture of an artery in the floor of the ulcer, which really was the head of the pancreas. He had never before seen death under the same circumstances. There was a second ulcer in the duodenum.

The PRESIDENT asked if the man had exhibited any symptoms of hunger pain.

Mr. WHEELER had had five cases recently: one was verified by post-mortem examination and four by operation. All were past middle life, but none of the age of 60. In four out of five duodenal ulcer was diagnosed chiefly on account of the hunger pain, which came on generally on the right side about four hours after food, and was relieved by eating something. Vomiting was irregular, and had no relation to food. In the fifth case the ulcer had perforated

when the abdomen was opened, and was not diagnosed; the duodenum was practically rotten and leaking.

Mr. STOKES said Mayo found that 69 per cent. of ulcers were duodenal, and in males the proportion was still higher. Gastric ulcer was rather commoner in females. The hunger pain was found in any lesion of the middle gut.

Dr. MOORHEAD said that of two cases of duodenal ulcer he had seen, one was in a woman aged 50, and typical hunger pain was present. The ulcer was found by operation, and a complete cure effected. The other case was a young man, aged 22, who never had the hunger pain. He had symptoms of perforation, and a perforated duodenal ulcer was found on operation.

Dr. CARILL said the age limit was probably the final crisis after a chronic trouble of many years, so that duodenal ulcer began much earlier than was usually thought. The hunger pain was found in several other conditions. A definite time relation could be found by giving the patient something indigestible, like pork, to delay the pain.

Dr. LITTLE, in reply, said he had no doubt that the hunger pain was clinically important, but it was certain that it was not so pathognomonic as it was supposed to be.

Tumour of Brain.

Dr. LITTLE also exhibited a specimen of cerebral tumour taken from a girl aged 17.

She had come to hospital about ten days before, having sickened and vomited on the Friday previous to the Tuesday on which she was admitted. On the Sunday she became unconscious. She was unconscious on admission, and appeared to have paralysis of both sides of the body. She had very strongly-contracted pupils, and, remembering a similar circumstance in a case many years ago, he made a diagnosis of a pons lesion. He made a *post-mortem* examination, and in the centre of the pons he found a hæmorrhage as big as a marrow-fat pea.

Professor SCOTT said it was a pure hæmorrhage, but not of an ordinary type. Nearly every artery appeared to have weakened walls, and the apparent tumour was made up of innumerable discrete hæmorrhages.

Stenosis of Tricuspid and Mitral Orifices.

Dr. COLEMAN exhibited a heart with stenosis of tricuspid and mitral orifices.

The patient was a girl about 24. She had a history of attacks of rheumatic fever. She was admitted to hospital about six months ago, and died in five months. The prominent symptoms were dyspnoea, cyanosis, and some oedema, and two or three weeks before she died she had embolism of the right femoral artery, and in the case of the brachial artery the nutrition of the limb was retained, but she got gangrene up to the knee in the right leg, and amputation was performed. He diagnosed mitral stenosis from the physical symptoms. An unusual point was that the presystolic murmur was heard over a more extensive area than usual. A thrill was present, but only over the mitral area. She was found at the *post-mortem* examination to have well-marked mitral stenosis. The mitral orifice was reduced to a mere slit, and she had considerable stenosis of the tricuspid. In addition, she had recent vegetations on the aortic cusps.

Dr. BEWLEY and Dr. LITTLE recalled similar cases.

UNITED SERVICES MEDICAL SOCIETY.

Wednesday, January 13th, 1909.

Surgeon-General Sir ALFRED KNOGH, K.C.B., D.G.A.M.S., in the Chair.

The Work of Medical Officers of the Territorial Force.

LIEUTENANT-COLONEL C. H. MELVILLE, R.A.M.C., read a paper on what can be done by medical officers of the Territorial Force in time of peace to prevent disease and promote physical efficiency in time of war. He divided this into three heads: Sanitary education, the collection of sanitary intelligence, and the encouragement of physical education. First: The necessity of educating the men composing the Territorial Army in the essentials of camp sanitation. The two great functions of sanitation—water supply and the removal of excreta—had up to the moment been performed for their benefit; the turning of a tap, or the pulling of a handle comprise all the individual effort demanded of the men in these two directions. If either the tap or the handle should fail to perform their proper duties, the plumber or the turncock were at hand to rectify matters. In camp he was individually responsible for preventing his excreta, which could no longer be removed automatically, from becoming a source of nuisance or

danger to himself or his comrades. The speaker emphasized strongly that the responsibility of the soldier with regard to his excreta and their proper disposal was absolutely and directly personal. The immediate burial of excreta was the first and leading principle of all camp sanitation. This was the first thing that the men and officers of the Territorial Army should be taught, and the burial of excreta must be done quickly. Men must also be taught moderation in drinking—not merely alcoholic drinks, but drinking generally. With reference to preventive inoculation against enteric fever, he thought that every young man who was going to be exposed to the risks of campaigning should be inoculated. As a practical measure extended to all ranks of the Territorial Army in time of peace (it would be impossible to perform the inoculation after a war had broken out) there were practical difficulties in the way. Still, of the benefits of inoculation there could be no doubt to anyone who studied the evidence; and if the prejudice against it was ever to be removed, the medical officers of the Territorial Army were in a better position to effect it than any other body of men in the country.

Sanitary Intelligence.

This was a matter in which not only the medical officers of the Territorial Army could help, but in which all the country practitioners of the British Isles could take a share. The information needed would comprise the situation and character of the best camp grounds, the nature of the water supplies of the county, and the buildings suitable for adaptation as barracks and hospitals and the local facilities for procuring the equipment necessary for such adaptation.

National Physical Education.

There was no doubt that ordinary men of the class from which the ranks of the regular army were recruited, and to a less extent, though still to a certain extent, the classes from which the rank and file of the Territorial Army would be drawn, suffered from a want of ability to get the best use out of their limbs. This could only be remedied by universal physical education in boyhood and youth.

Lieutenant-Colonel C. P. OLIVER, R.A.M.C.(T.F.), remarked that he had lately had personal experience of the light and airy fashion in which combatant officers of the Territorial Force treated the subject, and of the general apathy that pervaded the commissioned ranks in matters of sanitation. He felt convinced that there was a splendid opportunity for the Territorial medical officer to educate and also to gain the sympathy of the combatant officers in this direction. As to the physical deterioration of the recruit, he looked for a great improvement in the physique of the rising generation as a direct result of the medical inspection of children attending the public elementary schools. This was the class from which practically the whole of the recruits were drawn.

Lieutenant-Colonel J. HARPER, R.A.M.C.(T.F.), said the lecturer had pointed out the fundamental hygienic importance of the individual attending to his own excreta. The practical difficulty was how to teach the lesson to the officers and men of the combatant branches, who were the majority of the whole force, and were careless, probably through ignorance, on this point. As regards inoculation for enteric, inasmuch as the protective effect was only temporary, at which period of his service did the lecturer propose that the Territorial soldier should be inoculated so as to be ready for a war the date of which was uncertain?

Colonel ANDREW CLARK, R.A.M.C.(T.F.), mentioned the difficulty medical officers had in showing the combatant officer the necessity for sanitary care. He did not think combatant officers had hitherto really paid attention to the medical department of the volunteer army, but they had to see differently now, and he thought they were proceeding to do better with the point of sanitation.

Major W. S. HARRISON, R.A.M.C.(T.F.), said that as regards inoculation against enteric fever he thought they could safely say that the protection offered by inoculation would last at least two years, and, as a matter of fact, after examining the blood of men who had been inoculated seven years ago, he found traces of the result of their inoculation. He thought that if an army went into the field without being inoculated the amount of enteric would be very much higher than if it was inoculated.

Colonel W. G. MACPHERSON, R.A.M.C., said that military medical officers knew a great deal about camp sanitation, and the education was quite simple: there ought to be no difficulty in training the Territorial Force in the subject. Camp sanitation would not be the chief difficulty in this country. In case of war large standing camps would be avoided, and buildings would probably be the method of accommodating the Territorial Force.

Surgeon-General W. L. GUBBINS said there were three points: First, the inoculation of Territorials; secondly, the collection of statistics as regards camps; thirdly, their education and physical training. Regarding the inoculation of Territorials, he looked upon this as impracticable to begin with. In India, where he had spent the last five years, he often found much difficulty in pushing inoculation, though where there was a good commanding officer possibly some 75 per cent. of the regiment would be inoculated.

Lieutenant-Colonel J. COTTELL, R.A.M.C., alluded to the very excellent remarks as to drinking, and was of opinion that a man could march just as well for half a day without drink as he could with it. He did not think the men should be allowed much drink before they started the day, as it only caused increased thirst.

Major J. K. RITCHIE, R.A.M.C., thought that the education of the officers and men in the elements of sanitation was the most important duty of the Territorial medical officers. He also suggested that during route marches no water bottles should be carried and no men allowed to fall out to drink. They would soon learn how easy it was to do without drinking and how much better they would march.

Lieutenant-Colonel MELVILLE replied briefly.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.—At a meeting on March 3rd, Dr. EDWIN BRAMWELL, in a paper on the *Problem of the sane epileptic*, said that, according to the Poor Law, sane epileptics were epileptics not certified as lunatics under the Lunacy Act of 1890. The Royal Commission on the Care and Control of the Feeble-minded pointed out in their report (1908) that

sane epileptics include epileptics whose minds are feeble, but who will attend to advice; and praise or blame affects them; who are subject to control by friends or self-control.

The school education of the epileptic was often interfered with in such a way as to prejudice his chance in the competition of after-life. Difficulties arose when he left school. He was debarred from following certain occupations in the pursuit of which the occurrence of a fit might, from the special nature of his work, be attended with dangerous consequences. Again, even if he was endowed with the necessary mental and physical qualifications of the successful breadwinner, he was frequently precluded from earning the support necessary for his maintenance by the very fact that he suffered from this disease. It was still more difficult for the sane epileptic of under average mental capacity to support himself in any walk of life other than the lowest form of manual labour. A certain proportion of sane epileptics drifted into the workhouse. For instance, it was ascertained by the special investigator of the Royal Commission that there were 91 individuals whom he regarded as sane epileptics in the workhouses of the Manchester, Chorlton, and Prestwich area.

The great majority of which, all except thirteen, have been obliged to come to the workhouse as the result of the interference with their power of getting or retaining work which the fits entailed. Several had held fairly good positions and done distinctly skilled work before their affliction forced them to relinquish their work.

The speaker urged that the sane epileptic, especially one capable of and willing to work, was at least as deserving a subject of philanthropy as, for instance, the imbecile; yet, to use the words of Dr. Aldren Turner:

Unless he becomes insane, or is at the outset feeble-minded or defective, or becomes a pauper, neither philanthropy nor the State takes note of his condition.

The Royal Commission came to the conclusion that the proportion of sane epileptics in England might be stated at 1 to 1,000 of the total population. It was noted in the Blue Book that "there were no sufficient statistics of sane epileptics in Scotland." So far as the speaker knew, epilepsy was not less frequent north of the Tweed. He

had notes of between 60 and 70 cases of idiopathic epilepsy, the very great majority of which he would class as sane epileptics, and a number of which showed little or no mental deterioration, which he had seen in the out-patient room of Leith Hospital alone during the past six years. These cases were almost without exception resident in the town of Leith. It was rather remarkable that in Scotland, where the hospitals, asylums, deaf and dumb and similar institutions were rightly regarded with so much pride, nothing had been done for epileptics. The only explanation for this circumstance was that up to the present there had been no attempt to point out this deficiency by those who were in the way of seeing a large number of these cases. An epileptic colony in Scotland on the lines of the Chalfont Colony for the reception of epileptics belonging to the respectable working classes and lower middle classes is greatly to be desired. It would require to be founded by private enterprise, and the purpose of the paper was to emphasize the need for provision for such cases, in order that if the opinion of any of the profession was asked regarding the distribution of charitable bequests, they might realize the demand that exists for an institution of this kind. In the discussion which followed, the PRESIDENT, and Drs. AFFLECK, BYRON BRAMWELL, and BURN-MURDOCH and others took part.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on February 19th, Dr. ROBERT JARDINE in the chair, Sir GEORGE T. BEATSON opened a discussion on the *Treatment of suppurative appendicitis*. He said suppurative appendicitis was localized or diffuse, the latter comparatively rare. General peritonitis was not necessarily suppurative. It might be merely a sympathetic reaction of the unattacked portion of the peritoneum induced by the localized affection in the right iliac region. The intensity of symptoms was no reliable guide to the severity of local conditions. Pathological examination of diseased appendices by Professor Muir demonstrated that the initial mischief was not a general mucous catarrh, but a small lesion in the mucous membrane, by which infection had entered and made its way through all the coats of the appendix. He treated general suppurative peritonitis by rapid laparotomy with drainage rather than by flushing out or wiping out the abdomen. Continual rectal injections of saline were of great importance. In treating localized peritonitis, whether suppurative or not, peristalsis was to be arrested. It hindered the localizing of the inflammation. Thus all laxatives were to be avoided, a semi-starvation diet (albumen water), and an opiate (in the form of Dover's powder) given. Enemata were sufficient for evacuation of the bowels. Light poultices and the Fowler position should be used. Until acute symptoms had subsided this line of treatment should be carried out, and surgical interference not entertained unless the abscess point or other clear indication developed. When abscess formed time should be given for the formation of adhesions to the parietal peritoneum or for the pus, as invariably happened, to lose its virulence. Taking the statistics of the Western Infirmary for ten years: Between 1898 and 1907, cases of appendicitis, 1,007; cured, 869; died, 118; mortality, 11.7 per cent. Sir George Beatson was responsible for 147, of which 141 were treated by the expectant method and operated on afterwards by the interval operation. These 141 all recovered; 6 died, 2 without operation, giving a mortality of 4 per cent. Deducting his cases from the others, 860 cases were treated by the other surgeons. Of these 860, 748 were cured and 112 died, showing a mortality of 13 per cent. The statistics of the Glasgow Royal Infirmary gave an even higher mortality. He pointed out that perforation and gangrene of the appendix did not of themselves justify operation unless accompanied by general suppurative peritonitis, by no means a necessary sequela. Dr. T. K. DALZIEL described the ideal appendix as funnel shaped. This condition generally obtained in children, but, especially towards puberty, the development of the muscular tissue of the colon, together with the usual fold of mucous membrane, tended to cause an abnormal contraction, whereby secretion was retained. This explained the relative infrequency of appendicitis in children and its frequency at puberty. This increased tension

would either cause the obstruction to yield or a series of pathological changes would be set up which usually led to suppuration. He classified suppurative appendicitis as follows:

1. Suppurative catarrh, generally with inflammation of the walls and some fibrinous peritonitis, the cavity of the organ distended with pus.

2. Intramural, with small discrete abscesses scattered through the tissue.

3. Abscess round the appendix shut off by adhesions. The locality of the organ and previous attacks favoured the formation of adhesion. The constitutional disturbance might be remarkably slight. The abscess might burst into the peritoneum, the bladder, the ureter, or faecal fistula. The usual route was fortunately into the intestine. Such cases had prolonged convalescence and frequent recurrences. Another rarer danger was septic thrombo-phlebitis followed by septicæmia and pyæmia. During the past three years Dr. Dalziel had six deaths following localized abscess; in no case had death been due to peritonitis following operation.

4. General suppurative peritonitis. Prognosis could be best made from the pulse and from the general facies. The issue largely depended on the organism present. Streptococcal infection was usually fatal. Infection by *Bacillus coli* was hopeful, mixed infection with *Bacillus coli communis* and staphylococci was intermediate, and was frequently followed by delayed secondary localized abscesses.

5. Suppuration in the lymphatic glands, infection from appendix a rare condition. Complications result from bursting of the glands.

Regarding treatment, there was no question in the cases where pus was confined to the cavity of the appendix. Immediate excision was the only safe course. Immediate operation in suppurative peritonitis was also demanded. When abscess had formed, apparently localized, it might sometimes be left till adhesions had formed, but there was a considerable danger of general peritonitis, thrombo-phlebitis, septicæmia, injury to internal organs, and the removal of the appendix was more difficult, and so recurrences might take place. Pus, he thought, should be evacuated as early as possible, and, with care, the peritoneal cavity could be quite well protected. He made a fairly free incision, carefully protected the peritoneal cavity with gauze, and carefully swabbed out any remaining pus, concretions, or dead tissue. If necessary, the wound should be packed with gauze for four days. Regarding the statistics quoted by Sir George Beaton, there had been no mention of the stage of the disease. Probably many were cases of general septic peritonitis, the hospitals being the dumping ground for dying appendix cases. Dr. DONALD MAC PEARL said that appendicitis from the point of view of the hospital surgeon, who wrote about the disease, would appear to be an entirely different disease from appendicitis as it was met with in practice. To the former it was a dangerous and deadly disease, calling for prompt and heroic measures; to the latter, it was a very manageable ailment. The truth probably lay between these opposing views. During twenty-seven years of general practice he had had many cases of appendicitis. None had been operated on and none had died. No case should be treated light-heartedly. He had frequently seen cases—which he had regretfully left without surgical interference, because under the circumstances that was impossible—give very satisfactory results. Some would insist that opium should never be given. He thought this cruel, and provided it was given merely to diminish suffering, not to narcotize, it was not harmful. He gave small and frequent doses of liq. morph. with tincture of belladonna, combined with mag. sulph. also in small doses. The latter kept the bowel and its contents in a more healthy condition, preventing stasis and the formation of scybala, by encouraging both secretions and peristalsis within safe and beneficial limits. With Sir George Benson, he deprecated too much zeal and haste in operating, and thought that many cases would get well without even delayed operation. Mr. MAYNARD advocated early operation, provided all precautions were taken to protect the general peritoneal cavity. After opening the abdomen he carefully packed off the surrounding parts, wiping away the pus with pledgets of gauze as it oozed from its cavity, until the latter was quite dry; he sought for and removed the appendix, freely swabbed out the pus cavity with pure carbolic acid, dusted copiously with pure iodoform, and finally stuffed and drained. He emphasized the importance of thoroughly removing all pus before attempting to break down adhesions to liberate

the appendix. Early removal in all cases of acute appendicitis should be the usual practice, and they would then never hear of appendicitis with abscess. Dr. RENTON and Dr. KNOX also advocated early operation. Mr. PRINOLZ thought the time element was of great importance, and was another point in favour of early operation. He had found vaccine treatment useful in diminishing infection. Opium should not be used unless an operating surgeon was not available.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on February 18th, Dr. A. FORBES, Vice-President, in the chair, Dr. RALPH P. WILLIAMS, School Medical Officer of the city, read a paper on *Medical inspection of school children in Sheffield*. After describing the objects and history of medical inspection, the necessity for some organization of this kind was pointed out, resulting from (a) the inquiries of the various Royal Commissions which had recommended it, (b) the large amount of physical defects found in school children by the earlier investigators, and (c) the revelations in connexion with recruiting for the Boer war. The work done in Sheffield before the passing of the Education (Administrative Provisions) Act of 1907 was next described. The children then attending the schools were inspected (66,590 in number). Of these 5,475 were examined, and 4,741 letters were sent to parents suggesting that treatment should be obtained from the family doctor. Second letters were sent to those parents who had disregarded the first. As a result of the letters sent about 45 per cent. of the children obtained treatment. The conditions found included 2,066 cases of defective vision, 385 sore eyes and lids, 1,141 adenoids and enlarged tonsils, 130 discharging ears, and 151 rickets. The schedule being used under the new Act was discussed, it being found by experience that about forty children per day could be examined by a whole-time medical officer. The question of verminous children was fully dealt with. Three whole-time school nurses had been appointed, and their work was supplemented by the large staff of women sanitary inspectors. In cases where no improvement took place after two visits from the nurse the home was visited by the school medical officer and the parents warned, or if the state of the home was very bad the children were "removed to a place of safety" on a warrant obtained from the magistrate (Section 10, Prevention of Cruelty to Children Act, 1904). Five families of children had been so removed since last July, the parents being prosecuted for neglect, sentences varying from six months' to one month's imprisonment having been passed. The arrangements for treatment were mentioned. The Education Committee subscribe to the hospitals, and by this means "recommendations" were provided for children (after full investigation as to the parents' means). Mr. MILES H. PHILLIPS read the notes of a case of *Dystocia due to excessive development of the child*. The head was born unassisted, in the unreduced right occipito-posterior position. Delivery of the trunk was only effected after amputation of the head and both arms, evisceration, and the application of the cephalotribe to the spine. The child weighed 16½ lb. The excessive bulk was chiefly due to a deposit of dense subcutaneous fat, which was 1½ in. thick over the loins. Pregnancy had been prolonged three weeks over the calculated time. The child was living when the head was born. The mother, fortunately, had a large pelvis, and her previous children had been born naturally. Dr. ARTHUR HALL showed two cases of *Bronchiectasis*. One followed tooth extraction, the acute symptoms of septic bronchitis subsiding after a tooth stump had been vomited. The second was an old case of phthisis where the physical signs had remained the same for at least seven years. The cardiac impulse was in the axilla. In addition to the signs of cavity at the left base, there were crepitations synchronous with the heart-beat. He also showed a case of *Herpes zoster* of the second division of the fifth nerve.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—At a meeting held on February 19th, Dr. W. H. CHEETHAM, who was in the chair, read a paper on the *Medical inspection of school children*. Dr. E. F. TREVELYAN read a paper on *Birth palsy*, especially in reference to the distribution of the paralysis and prognosis. Mr. H. LITTLEWOOD

showed a *Columnar-celled carcinoma* growing from the anterior surface of the sacrum and invading that bone. The tumour was felt by rectal examination as a smooth elastic mass the size of an egg, and was entirely unconnected with the bowel. No other growth was recognized in the ovary and elsewhere, and the tumour was regarded as originating from the post anal gut. The patient was a woman, aged 63, who had suffered from agonizing sacral and coccygeal pain for several months, dating back to an injury—a fall upon the lower part of the back. Mr. W. THOMPSON showed (1) a specimen of *Subacute necrotic pancreatitis* from a woman aged 44. When seen there had been five months' history of abdominal pain and vomiting, and a transverse tumour could be felt in the lower epigastric region. At an exploratory operation the tumour was found to be pancreatic, fat necrosis was observed, and the gall bladder, which contained stones, was drained. There was considerable pyrexia. The patient died twenty-three days after the operation. At the post-mortem examination there was destruction of the head and part of the body of the pancreas, with suppuration burrowing into the root of the mesentery. The left half of the pancreas was apparently normal. (2) A patient, a man aged 46, from whom about three-quarters of the stomach had been removed. He was extremely emaciated, but was now improving, eating chicken, etc., fourteen days after operation. There was extensive malignant growth of the pylorus extending along both curvatures. There was massive enlargement of the subpyloric glands, those along the coronary arteries being also involved. (3) A *Recurrent myeloid sarcoma* from the region of the coccyx, the growth being the size of a small cocoon. The coccyx had been removed two years before; signs of recurrence were noted six months ago. Dr. E. F. TREVELYAN showed a man, aged 52, with a slight *Residual paralysis* in the left hand as a consequence of a total brachial plexus paralysis due to a dislocation of the left shoulder. As there had been no improvement for nearly a year, this paralysis was looked upon as permanent. Mr. A. S. GRÜNBAUM showed specimens of extensive *Idiopathic and traumatic pontine hæmorrhage*—one, from a man aged 65, setting in spontaneously during work, the other, from a man aged 71, the result of being knocked down by a tramcar. Dr. MAXWELL TELLING and Mr. J. F. DOBSON showed an infant, 12 months old, in whom a large *Pancreatic cyst*, noticed since the age of 9 months, had been drained successfully. Cases and specimens were also shown by Mr. JOHN W. HYSLOP, Mr. A. L. WHITEHEAD, and Mr. MICHAEL TEALE.

LIVERPOOL MEDICAL INSTITUTION.—At a meeting held on February 11th, Mr. T. H. BICKERTON, President, in the chair, Dr. W. B. WARRINGTON described a case of *Myasthenia gravis* in a woman aged 32 years. The ptosis often so readily seen was not marked, though it could be produced to some extent by fatigue. There was extreme weakness of the masseters, which gave the characteristic myasthenic electric reactions. In other ways the case was quite typical. Dr. GLYNN referred to a case which commenced with giddiness, double vision, and ptosis, the latter being transitory. There was considerable loss of voluntary muscular power of the legs after exercise or excitement, and death occurred in twelve months from bulbar symptoms, these developing and proving fatal in four days. Drs. MURRAY BLIGH and ERNEST GLYNN read a note on the *Diagnosis of typhoid fever* by bacteriological examination. Their method was based on lines suggested by Coleman and Buxton, of New York, particularly in the employment of sterilized ox bile medium. In 8 out of 15 cases of typhoid examined in the second and third week they obtained positive results. The method proved of distinct value in 2 cases in which the nature of the disease was obscure. Mr. MONSARRAT read a paper on *Cancer of the breast*. He discussed the difficulties of early diagnosis. He described the extent of the operation undertaken in 37 cases and their after-histories. There was no recurrence in 20 cases during a period extending from five years to one year. Recurrence had taken place in 14 cases during periods ranging from four years to within one year. Mr. PAUL referred to the importance of removing breasts affected with intractable involution mastitis before they became malignant, and the great value of rapid sections. He thought the modern operation gave decidedly improved results. Mortality from

the operation was very low. He had removed the breast over 200 times during the last five years without a death, and had no death since 1901. In thirty years he had had only four deaths from breast operations—two from sepsis and two from acute mania.

GLASGOW SOUTHERN MEDICAL SOCIETY.—At a meeting on March 4th, Dr. COWAN delivered an address on arterio-sclerosis, first describing the pathological changes which occur in the vessels and constitute this condition. With reference to the kidneys, he pointed out that arterio-sclerosis was most common where on post-mortem examination the small red kidney was found. It was also common with the small white kidney, but infrequent with the large. Renal disease might, however, be secondary to arterio-sclerosis. Another secondary condition of serious import was fibrosis of the heart muscle, which followed upon sclerosis of the coronary arteries. Emphysema of the lungs also occurred readily when the vessels were sclerosed. With regard to etiology, arterio-sclerosis resulted from long-continued high pressure in the blood vessels; in this disease all the vessels were affected and it thus differed from atheroma. Referring to the Riva-Rocci sphygmomanometer, he considered a single observation of the blood pressure of no value. A continuous chart of the patient's blood pressure was of value, but from this record alone the patient's general condition could not be estimated. For example, with a deterioration in the patient's general condition, the blood pressure might either be rising or falling. The symptoms resulting from arterio-sclerosis might be classed as either pulmonary, cardiac, renal, or cerebral. From pulmonary disease resulted dyspnoea, orthopnoea, or irregular breathing, and from cardiac insufficiency, oedema or dropsy. Headache, often associated with vomiting, was caused by renal inadequacy. *Petit mal* was one of various cerebral symptoms which might ensue. From arterio-sclerosis also continuous cardiac pain or attacks of angina pectoris might result. The aim of treatment should be to eliminate poison from the blood and prevent stress.

NORTHUMBRELAND AND DURHAM MEDICAL SOCIETY.—A meeting of this society was held at the Royal Victoria Infirmary, Newcastle-upon-Tyne, on February 11th. The first portion of the evening was devoted to an exhibition of medical and surgical cases, followed by two short papers by Mr. A. S. PERCIVAL and Mr. R. J. WILLAN. Mr. Percival's subject was a *Pathological suggestion, based on electrical analogy*: that of Mr. Willan was some *Practitioner's experiences with the urethroscopie, cystoscope, and catheterization cystoscope*. The following were among the cases shown:—Dr. DRUMMOND: Two cases of *Musculo-spinal paralysis*; three cases of *Hemiplegia and Myasthenia gravis*. Sir THOMAS OLIVER: *Innominate aneurysm*; *Lymphadenoma*; *Fibroid phthisis*; and *Aortic incompetence*. Dr. BEATTIE: *Locomotor ataxia*, with anterior tibial peripheral neuritis; *Syphilitic aortitis*, with fusiform dilatation of the arch and aortic regurgitation; *Splenomedullary leukaemia treated by exposure to x rays*; *Acute transverse myelitis in a boy 14 years of age*; *Hydrocephalus*; and *Catarrhal jaundice due to infective cholelithiasis*. Dr. W. E. HOME: *Splenomedullary leukaemia treated with x rays*; *Hodgkin's disease*; *Pseudo-hypertrophic muscular paralysis*; *General paralysis of the insane*; *Perniciou anemia*, showing great improvement by open-air treatment; *Syphilitic spinal meningitis in a man aged 56*, the infection being acquired six years ago. Dr. HORSLEY DRUMMOND: *Cases of Heart disease*. Dr. PARKIN: *Disseminated sclerosis*; *Mitral stenosis*; *Winged scapula*; *Charcot's hip-joint*; and *Fibroid phthisis*. Dr. BOLAM: *Pityriasis rosea*; *Scleroderma*; *Hydroa estivale*; *Favus* (two cases), and *Tinea barbae*. Mr. RUTHERFORD MORISON: An old man with a *Gluteal aneurysm* which was being cured by injections of tinctura ferri perchlori into the sac; and a case after the repair of a *Ruptured duodenal ulcer* followed by a gastro-enterostomy. Mr. JOHN CLAY: An elderly female with an *Obscure pulsating tumour at the root of the neck*, which was probably an *aneurysm of the first part of the subclavian artery*. Mr. W. G. RICHARDSON: A young female from whom he had removed a false palate and tooth from the gullet by *Oesophagotomy*. Mr. J. V. W. RUTHERFORD: Two cases where large areas had been successfully skin-

grafted by the Method of Thiersch. Mr. A. M. MARTIN: An *Epithelioma of the heel*; *Sarcoma of the leg*; and a huge *Intramascular lipoma of the thigh*. Mr. CLAY: Dislocation at the hip-joint reduced five weeks after injury; the patient was allowed to get up on the third day, and was now in full work.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.—At a meeting held at Liverpool on February 19th, Dr. J. W. MARTIN (Sheffield), the President, in the chair, Dr. J. J. O'HAGAN (Liverpool) showed a *Fibromyomatous uterus*, with bilateral ovarian dermoid cysts, which had been removed by total hysterectomy. Dr. J. E. GEMMELL and Dr. LEITH MURRAY (Liverpool) showed (1) *Myofibroma of the vagina*; (2) *Sarcoma of the great omentum*, which had presented a soft, solid, freely movable tumour in the left hypochondrium. It could be pushed into the pelvis and had simulated a dislocated spleen. It was easily excised. There was no ascites and the other abdominal organs were normal. Dr. D. LLOYD ROBERTS (Manchester) showed a specimen of *Cystic fibromyoma of the uterus*, and read notes of a case of *Cæsarean section*, performed, before the onset of labour, on account of a flattened pelvis (C.V. 3 in.). Craniotomy had been performed on three previous occasions. Involution of the uterus was slow, and on the eighth day symptoms of sepsis appeared. The uterus was explored and a large clot of blood removed. Recovery was then uninterrupted. In closing a discussion, Dr. Lloyd Roberts stated that he always, if necessary, dilated the cervical canal before suturing the uterine incision, that ergot was given during the operation, and that, in his opinion, the retention of blood clot was due to pressure of the lower uterine segment against the promontory. Dr. Lloyd Roberts also showed a *Recurrent tumour of the vagina*, enucleated piecemeal from a woman of 43. Microscopically, it consisted chiefly of fibromyomatous tissue, though one part suggested sarcoma. Dr. J. E. GEMMELL stated that, nine years previously, he had enucleated a vaginal growth the size of a Jaffa orange from the patient. Clinically he had considered it a sarcoma, but microscopically it had been described as a degenerating fibroid. Dr. G. W. FITZGERALD (Manchester) showed the specimen and read notes of a case of *Primary carcinoma of the vagina* occurring in a nullipara aged 26. The ulcerated growth, which occupied the left fornix, was freed from below, and then removed, together with the uterus, by the abdominal route. The patient made a good recovery. Section showed that the growth—an epithelioma—though invading the cervix, was not connected with the mucous membrane of the cervical canal. But it might possibly have arisen from the epithelial covering of the portio. Dr. H. R. CLARKE (Manchester), in a paper on *Cavernous conditions occurring in the uterus*, pointed out that the myometrium of the infantile uterus consists of a network of fibro-muscular tissue enclosing large cavernous spaces, which are lined with endothelium, and filled, in most of his specimens, with blood. During development arteries extend from the fibrous trabeculae into those spaces invading the venous wall, and producing, in the early stages, a condition which the author likened to the corpus cavernosum of the penis. The arteries grew more rapidly than the venous spaces, and so, by this process of condensation, the dense condition of the adult myometrium was reached, and the arteries of the adult uterus came to be surrounded by venous spaces. The author suggested that the angiomatic changes seen occasionally in uterine fibroids might possibly be dependent upon this developmental process. The paper was discussed by Dr. BLAIR BELL, Dr. LLOYD ROBERTS, and Dr. A. W. W. LEA. Dr. CLARKE replied.

ONE of the euphorbias in Queensland, the *Euphorbia pulchifera*, is commonly called the Queensland asthma plant; it has a local reputation for curing that disease, and several pharmaceutical preparations of the plant are sold in Australia. Recent chemical examination has shown that the green plant contains 79 per cent. by weight of water and 3 per cent. of ash, the amount of vegetable matter being therefore estimated at 18 per cent. The dried plant contains an alkaloidal substance, in the proportion of about 1 part in 1,000, and a glucosidal substance in a proportion of not more than 4 parts in 1,000; it is thought possible that one or both of these may have active properties.

Reviews.

DIABETES.

THE lectures which were delivered by Dr. PAVY¹ before the Royal College of Physicians during last November and December contain a lucid presentation of his theory of the physiology of sugar absorption. If we may venture to attempt to do justice to these views in a brief summary, it may be said that Dr. Pavy holds that when sugar circulates with the blood it escapes by the kidney, and that the normal quantity of sugar in the urine corresponds to the normal amount of sugar in the blood. It is true that the normal glycosuria is too slight to be revealed by Fehling's test, but its existence is hardly any longer disputed by competent authorities. When sugar is injected into the blood it appears at once in the urine. Dr. Pavy considers these facts inconsistent with the current doctrine that sugar is poured into the circulation as glucose and travels with the blood to the tissues, where it is normally assimilated. If this were a physiological process he holds that glycosuria would always occur, and he thinks the conclusion inevitable that the sugar must travel in the blood in some combined form. He supposes the molecule of bioplasm to be provided with innumerable arms for junction with suitably constructed foodstuffs, and that in this way it can carry both carbohydrate and protein to the tissues, where they are detached and utilized. He explains phloridzin glycosuria, in which, as is known, there is no hyperglycaemia, by supposing that the renal epithelium has the power of detaching the carbohydrate molecule from its side-chain attachment as the blood passes through the kidney. While admitting that the liver plays an important part as a storehouse of glycogen, he points out that the results of Eck's fistula, in which the portal vein has been successfully anastomosed to the inferior vena cava, where the liver is entirely excluded from the circulation without the occurrence of glycosuria, proves that the liver cannot be the important physiological barrier to prevent glycosuria which current physiological theories assume. He believes it must be admitted that sugar disappears during its passage through the intestinal wall, and we understand him to suggest that the theory outlined above affords an adequate explanation of its disappearance and its carriage to the tissues. But Dr. Pavy also points out that the enormous increase of lymphocytes in the intestinal epithelium and lacteals has never received the attention it deserves. He regards these as freshly proliferated rapidly growing bioplasm, formed in the presence of suitable pabulum, and he believes that it is in them that the foodstuffs travel to the circulation, where the lymphocytes disappear by a process of autolysis, having meanwhile effected by ferment action the conversion of the nitrogenous results of digestion into albumens and globulins. Glycosuria results whenever this process fails, and is in proportion to the extent of the failure. Thus there may be a larger supply of carbohydrate foodstuff than can be transported by the existing means, which may be normal as in experimental glycosuria produced by feeding with excess of glucose, or slightly diminished as tends to be the case as age advances, or decidedly and greatly diminished in the various degrees of diabetes. He thinks that the pancreas may secrete a substance which favours the taking on of the carbohydrate atom, or, to use the language of Ehrlich, the pancreas secretes the ambocceptor, and that in this way the relation of pancreatic disease to glycosuria is to be explained. We should not do justice to Dr. Pavy if we omitted to say that his lectures contain much more than the exposition of this purely theoretical doctrine. He has some exceedingly useful remarks upon the worthlessness of many so-called diabetic foods, and makes a decided point against Professor von Noorden, who has extolled his "oat cure" by comparing the results he obtained from it with those observed when patients were taking the bread made by Rademann of Frankfurt. Some of this maker's diabetic white bread examined by Dr. Pavy in June, 1900, contained 73.4 per cent. of starch, while "Zwieback," examined in March, 1898, contained 72.1 per cent. of starch, and another sample examined in March, 1902, contained 64.8 per cent. of starch. More recent examinations in the early part of last

¹ Lectures on the Pathology and Treatment of Diabetes Mellitus. By F. W. Pavy, M.D., LL.D., F.R.S.

year gave somewhat better results, but these figures show that no scientific conclusions should be drawn from any comparisons based on the assumption that these foods contained little or no starch.

Professor NAUNYN has written for the use of practitioners a small book giving the necessary data for prescribing diabetic diets,² and it would be well if some one would publish its equivalent in English, *mutatis mutandis*, as there are necessary changes to be made in dealing with English patients and with English articles of food. The first table gives the percentage of fat in different foodstuffs, such as meat, fish, butter, bacon, sausages, eggs, and cheese. The second gives the percentage of fat and sugar in milk, cream and milk preparations; and the third gives the carbohydrate percentage of various farinaceous substances, vegetables, and fruits. In the fourth section there is information, not in tabular form, on the sugar contents of alcoholic drinks. Then follows a table on the value, in heat units, of different articles of food; and a specimen diet, containing 2,700 heat units, for a patient weighing 150 lb. (75 kilos). In conclusion, a brief account of the principles upon which diabetic diets should be constructed is given, and a bill of fare arranged for each day of the week, with the quantity and the heat value of every item of the diet.

The fasciculus on diabetic coma in Professor Albu's System of Treatment could not have been entrusted to better hands than those of Dr. A. MAGNUS-LEVY,³ who has done so much good work in this and allied departments of medicine. The text opens with the following quotation from Frerichs: "Every diabetic must sooner or later, in consequence of loss of health and strength, run a risk of sudden and unexpected death. He is like a weary wanderer in a thick mist following a narrow path by the side of a roaring torrent, into which he is in danger of falling if he anxiously quickens his pace or strikes against a stone in the way." This by no means exaggerates a danger which cannot be foreseen or prevented by any care on the part of the patient or the practitioner in attendance. The author quotes a good illustrative case from Spitzer: A patient with slight diabetes under treatment at Carlsbad thought some one was coming into his bath-room, and in rushing to bolt the door fell and broke his collar-bone. He became very excited; the sugar went up to ten times what it had been; diacetic acid and acetone, which had been absent, appeared in large amounts, and in four days he died of coma. An even better illustration of the slight disturbance which may suffice is the case given by von Noorden of a merchant who presided for three hours at the general meeting of a large company; an hour later he became comatose. The treatment of diabetic coma upon which Dr. Magnus-Levy insists is the injection of sodium bicarbonate in 3 to 5 per cent. solution into the veins; the quantity of the injection should be about a litre, and it should be run in slowly, in from a quarter to half an hour. He thinks enemata are not so efficient, as they are not retained sufficiently long. If the patient shows any sign of recovery so that he can swallow, a teaspoonful of sodium bicarbonate dissolved in water or milk should be given every hour or half-hour, and he should be encouraged to drink large quantities of milk or soda water or mineral water. The great diuresis thus produced helps to clear out the acid. If the patient recovers, the diet for the first week should contain carbohydrates, and the quantity of sugar should be regarded as of secondary importance, but after this he must return to the diet on which he formerly was. Experience shows that it does not do to relax the dietetic treatment. The last part of Dr. Magnus-Levy's work discusses the diet to be used in severe cases of diabetes; he is emphatic as to the need for taking large quantities of fat, and he advocates the use of alcohol, 2 oz. to 3 oz. of spirits daily. He thinks von Noorden's oatmeal diet worth a trial, although it is difficult to find an explanation. He also urges that the patient should continue to use sodium bicarbonate regu-

larly. The result of the treatment recommended, it is admitted, is not very brilliant. Naunyn has had five recoveries, all in children, and Grube one case in a man over 50. No doubt numerous slight cases of threatened coma have recovered under it, but such have recovered under all kinds of treatment, and the diagnosis must always remain in doubt.

BIOCHEMISTRY.

The idea of issuing monographs or separate chapters on biochemical subjects is excellent, and if all of those promised are as good as the first, the editors of the series, Drs. ADERS PLIMMER and HOPKINS,⁴ will have no cause to regret their venture. It is a method of publication which might be followed with advantage in other rapidly growing branches of science, for each monograph can, if new editions are necessary, be issued independently of the rest, and the moderate price charged will enable those interested in one or more particular subjects, to get the most recent knowledge without having to pay for an expensive volume which may contain much of what is uninteresting to them, or which, owing to the scarcity of the demand, may not be fully up to date. Dr. BAYLISS's original work on enzyme action is of the highest character; it is therefore fitting that he should have been selected to write the first monograph of the series. Even the elementary student of physiology knows the important part played by enzymes in the chemical transformations which accompany vital activity, but it is only within recent years that the laws of fermentation have been understood, because it is only within that time that convincing proofs have been adduced that the laws they obey are those of catalytic phenomena. So exact is the increasing knowledge that has followed this discovery that it is now possible in many cases to treat the subject mathematically. This, however, need not deter the student from reading the book, for the subject is dealt with in an admirably lucid manner, and the book can be most warmly recommended to all those desirous of obtaining the latest information on a subject the importance of which it is not possible to overestimate.

The editor of the *Handbuch der Biochemie*⁵ is as good as his word, and the fasciculi of his book are appearing with great celerity. They are not published in the order in which they will subsequently be bound together, but the wise course is being pursued of printing the articles which are ready. The third fasciculus, for instance, begins volume ii, treating of the blood and lymph; the fourth and sixth fasciculi continue the first volume, although they do not complete it; and the fifth fasciculus starts the fourth volume, which deals with metabolism. It is unnecessary to repeat what we have already stated regarding the high standard aimed at, which is admirably maintained in the articles now before us. The later volumes deal with the more biological aspect of the question, the earlier ones with the more strictly chemical side. It may, however, be convenient for our readers and prospective purchasers of the various parts to enumerate the articles and their authors. In the fourth and sixth fasciculi Dr. F. SAUNELY completes his article on the proteins, and contributes three more on proteoses and peptones, animal ferments, and animal toxins respectively. Professor ABDEKHALDEN contributes an article on the hydrolysis of proteins, a subject which he of all others is qualified to treat authoritatively. The nucleo-proteins and their decomposition products are dealt with by Drs. A. SCHITTENHELM and K. BRAHM. The third fasciculus, which consists of the first 160 pages of the second half of vol. ii, contains six articles; the first is on the physical chemistry of the blood, by Dr. R. HOBER of Zurich; the second and third are written by Dr. P. MORAWITZ of Heidelberg, and deal with blood coagulation and plasma and serum respectively; the fourth is on lymph formation, by Professor R. MAGNUS of Utrecht; and the two last, on the chemistry of lymph, and on transudations and exudations, are from the pen of Dr. H.

² *Notwendigste Angaben für die Kostordnung Diabetischer. Zum Handgebrauch der Ärzte Zusammengefasst.* Von B. Naunyn. Jena: G. Fischer. 1908. (Rev. 8vo, pp. 18. M. 50.)

³ *Das Komma Diabetikum und Seine Behandlung.* Von Dr. A. Magnus-Levy. Berlin. Halle a.-S.: Carl Marhold. 1909. (Med. 8vo, pp. 54. M. 1.40.)

⁴ *Monographs on Biochemistry.* Edited by R. H. Aders Plimmer and F. G. Hopkins. *The Nature of Enzyme Action.* By W. M. Bayliss, D.Sc., F.R.S., Assistant Professor of Physiology, University College, London. London: Longmans, Green, and Co. 1908. (Royal 8vo, pp. 120. 2s.)

⁵ *Handbuch der Biochemie des Menschen und der Tiere.* Edited by Dr. Carl Oppenheimer. Fasciculi 3 to 11. Jena: Gustav Fischer. 1908. (Sup. roy. 8vo, pp. (L. 3) 521, (L. 4) 320-400, (L. 5) 1120. Pro. 1/6, M. 5.)

Gerhardt of Berlin. The fifth fasciculus deals with gaseous metabolism, and contains, in addition to an introductory note by Professor N. Zant, two articles on that subject by Dr. A. Loewy of Berlin. The seventh fasciculus contains and completes Dr. Loewy's article, Gaseous Metabolism, and contains also a chapter dealing with metabolism during inanition by Dr. Brugsch of Berlin. Fasciculus 8 brings us back once more to volume ii. It treats of the physical biochemistry of cells, and contains four articles—two by J. Loeb, one by K. Spiro, and one by M. Jacoby. The ninth fasciculus starts the first half of the third volume, and deals with secretory glands and their secretions. Thus F. N. Schulz deals with mucous glands, salivary glands, and saliva; J. Plesch with sputum, A. Bickel with the gastric juice, Th. Brugsch with the secretions of the small intestine, S. Rosenberg with the pancreas, and J. Wohlgemuth with the liver and bile. Fasciculus 10 contains a bit of volume ii and part of the second half of volume iii. Its articles are on the chemistry of transudations and of the blood-forming organs, by H. Gerhardt; on the connective tissues, by H. Aron and F. N. Schulz; on the chemistry of foods, by F. Tangl; and on digestion in the mouth and stomach, by E. S. Loudon. The eleventh fasciculus contains a batch of articles on metabolism, A. Magnus-Levy taking the carbohydrates, and, in conjunction with L. F. Meyer, the fats as well; whilst R. Rosemann deals with the much-disputed question of alcohol. Nine more parts are yet to come, but one can begin to see now the general plan of the book and admire the wide and far-reaching underlying ideas that have guided its editor.

CLINICAL DIAGNOSIS: NEW AND OLD.

DR. J. CAMPBELL TODD'S *Manual of Clinical Diagnosis*⁶ aims to present a clear and concise statement of the more important laboratory methods which have a clinical value and to be a brief guide book to the interpretation of their results. It is designed for the student and practitioner, not for the trained laboratory worker. It follows on the lines of the well-known textbooks of v. Jaksch and Simon, but, unlike them, it has the special virtue of shortness and compactness. The methods selected are the more practical, and of them preference is given to those which require the least complicated apparatus and the least expenditure of time. The value of the book is increased, and at the same time its shortness and simplicity assisted by a large number of excellent illustrations. The author claims that practically all the microscopic structures mentioned, all apparatus not in general use, and many of the colour reactions are shown in the pictures. The seven chapters include the use of the microscope, the sputum with the methods of its bacteriology, the urine with the use of the centrifuge, the blood with its research methods and coloured representations of stained films, the gastric and intestinal contents with coloured pictures of their test tube reactions, and animal parasites. The book may be heartily recommended.

A little less than two years ago we received the first edition of *Clinical Diagnosis*, by Dr. C. P. EMERSON,⁷ and now welcome the second, more especially as some obvious defects in the first have been corrected and much new matter incorporated. The volume is admirably adapted to the needs of the laboratory worker, and is well indexed. Moreover, the illustrations are not only very accurately drawn, but are most beautifully executed. As an indication of the change made in the second edition, it may be said that the author has found it necessary to rewrite fully half the work. Much new matter has been added, moreover, and we are pleased to note that this is concerned rather with the bacteriological investigations which have of late years made such rapid strides, than with the more refined investigations of chemical pathology. We had reason to complain of the overloading of the first edition with the latter to the neglect of the former, and are most willing to acknowledge that Dr. Emerson has corrected

what was an obvious blemish in an otherwise admirable work by the inclusion of the bacteriology of the sputum and urine. Moreover, two most useful sections are contributed by Dr. Wm. L. Moss, the one giving a full and reliable guide to opsonic investigation, and the other a short but nevertheless correct account of the new method of substantiating the reaction of the body to bacterial infection—namely, by fixation of the complement. If only by reason of the inclusion of these two sections, the second edition is a great advance upon the first.

Dr. JOHN C. DA COSTA, jun., has written a book entitled the *Principles and Practice of Physical Diagnosis*,⁸ which, having regard to the limitations of the ground covered, may fairly be called exhaustive. It is of set purpose limited to a consideration of diseased conditions of the thoracic and abdominal viscera, and hence takes no account of diseases of the nervous system, blood, skin, or urinary system. As he says, Dr. da Costa chooses to make it deal purely with the theory and practice of physical diagnosis at the bedside with reference to the study of thoracic and abdominal lesions alone. It is so full of material, and almost always very good material, that it cannot be discussed in detail. To classify its subject matter on an academic basis it may be said that it is mainly concerned with clinical anatomy, the origin, mechanism, and significance of normal physical signs, and with a really thorough discussion of applied pathology and of diagnosis. It consistently interprets morbid objective clinical facts on the basis of pathological cause and physical effect. Methods of physical examination, including the more important instrumental procedures, are clearly described. It may remind some of Dr. Gee's well known book, but is less sententious and much inferior in its literary style, which is often ponderous and involved. It contains many most excellent illustrations. It includes reference to recent methods, not only well-established ones like those of sphygmomanometry, but such as is called in the book "erioscopy"—the digestion *in vitro* of coagulated pleuritic fluid followed by centrifugalization and subsequent bacteriological examination, a recognized method in the diagnosis of tuberculous pleurisy. By way of adverse criticism it might fairly be said that the book is overloaded, that it contains too much reference to named varieties of signs—for example, on page 455 there are no less than four: to wit, Drummond's, Sansom's, Glasgow's, and Galvagni's, all in the space of eight lines—and at the same time that there is not enough of critical appreciation of their significance or validity or the lack of it.

The appearance of a third edition of Dr. LESLIE THORNE'S THORNE'S little book on *The Naheim Treatment of Diseases of the Heart and Circulation*⁹ is sufficient indication that it has proved useful. The chapters on the preparation of the baths and the administration of the exercises—that is to say, the whole of the practical and special matter—has been revised. The photographs illustrating the exercises are very helpful in following the description in the text, and with their aid it should be possible for any one to carry out the instructions. The record of some cases illustrating the success of the treatment completes the volume.

TUBERCULOSIS, TREATMENT AND PATHOLOGY. The practical results of the world-wide campaign against consumption cannot as yet be estimated, but the campaign goes on with vigour, and the series of lectures delivered by Dr. Louis RENOX at the Hôpital de la Pitié in Paris¹⁰ proves that the subject is being pursued with energy in the French schools. Essentially practical in their scope, they present the matured experience of their author, together with his shrewd analysis of contemporary teaching, expressed in clear and simple language, which, to the English reader at any rate, adds in no small degree to the

⁶ *A Manual of Clinical Diagnosis*. By J. Campbell Todd, M.D. Philadelphia and London: W. B. Saunders Company, 1908. (Post 8vo, pp. 319; 131 illustrations. 10s.)

⁷ *Clinical Diagnosis: A Textbook of Clinical Microscopy and Clinical Chemistry for Medical Students, Laboratory Workers, and Practitioners in Medicine*. By Charles Phillips Emerson, B.M., M.D., Associate in Medicine, The Johns Hopkins University. Second Edition. Philadelphia and London: J. B. Lippincott Company. (Roy. 8vo, pp. 535, 5 plates and 125 figures, some coloured. 21s.)

⁸ *Principles and Practice of Physical Diagnosis*. By John C. da Costa, jun., M.D. Philadelphia and London: W. B. Saunders Co. 1908. (Med. 8vo, pp. 548, 212 illustrations. 15s.)

⁹ *The "Naheim" Treatment of Diseases of the Heart and Circulation*. By Leslie Thorne Thorne, M.D. Third edition. London: Baillière, Tindall, and Cox. 1909. (Cr. 8vo, pp. 94, 58 illustrations. 3s. 6d.)

¹⁰ *Le Traitement Pratique de la Tuberculose Pulmonaire*. By Dr. Louis Renon, Physician to the Hôpital de la Pitié, Paris. Paris: Masson et Cie. 1908. (Fcap. 4to, pp. 250.)

pleasure of their perusal. The complete failure of all attempts to destroy the tubercle bacilli *in situ* has been followed by no less vigorous efforts to neutralize the poison which they produce by means of serum and tuberculin and certain drugs. For almost all of these an initial success of something between 60 and 70 per cent. has been claimed by those who have used them in the first instance, but it is only too obvious that not one of them has hitherto achieved such results in the hands of the profession at large as to justify their general adoption. This forms a striking contrast with the universal recognition that welcomed the introduction of the antitoxin of diphtheria. Dr. Rénon points out that the normal ratio of improvement under the simple hygienic treatment of consumption stands at nearly the same figure as that claimed for any specific method, and if the influence of the psychic element be excluded there remains a very small balance in favour of the antituberculous properties of any of the suggested remedies. After close examination of all those that have been recently introduced, many of them within the last twelve months, he does not speak enthusiastically of any. The tuberculin prepared at the Pasteur Institute would appear to be giving good results, but the author wisely maintains that at least four years' experience of it is needed before trustworthy conclusions can be drawn. Of the uses of psychotherapy he has much to say, and his close observation of the state of mind of the French consumptive at various stages of his illness is very interesting. Much attention is also paid to the question of personal hygiene, and the restrictive effect of rigid rules applied to all cases is condemned. The enforcement of a "time-table" is perhaps necessary in a large institution, but in private the personal needs of individual patients must be studied. In a lecture devoted to dietetic treatment the importance of co-operation between the doctor and the cook on the patient's behalf is demonstrated. This point is too little regarded in this country, where culinary matters are so seldom the subject of ordinary discussion. The growth of knowledge and of interest with respect to the phenomena of gastric digestion will doubtless bring the science of cookery more to the front in the near future. Dr. Rénon has no faith in the doctrine of excessive alimentation for consumptives, and, like some other recent authorities, throws considerable doubt upon the value of fat in the dietary, and, incidentally, upon the utility of cod-liver oil. He records an interesting and convincing series of experiments on guinea-pigs which go to prove that the addition of butter to a fixed diet caused marked lowering of their powers of resistance to the ravages of artificial tuberculosis, as against exactly similar experiments with sugar and gluten respectively. Of drug treatment he maintains that the primary consideration should be to do no harm. The value of calcium salts is extolled, and the uses of many drugs for the relief of symptoms are mentioned. Some of these will be unfamiliar to English readers. Faith in their efficacy both on the part of the patient and of the physician is regarded as the essential element of success. Climatic and other accepted lines of treatment are duly passed in review, and a chapter is devoted to the means of dealing with consumption when complicated by other morbid conditions. As a sound, common-sense account of the present state of the therapeutics of consumption we can cordially commend these very readable lectures.

Dr. BONNEY in *Pulmonary Tuberculosis and its Complications*¹¹ writes mainly from the clinical point of view, and primarily for the benefit of the practitioner rather than for the scientific inquirer. Colorado, where Dr. Bonney has gained much of his experience of the disease, furnishes good scope for clinical observation since it is much frequented by the consumptive in search of health. That Dr. Bonney has had much practical experience of the subject is apparent throughout the book, and gives it a special value. The illustrations are numerous and useful; by making use of photography to show the various types of chest conformation, and alterations in appearance due to disease, we get the idea of actuality which fits the text—the sense that we are sharing the results of the author's experience and not merely perusing a compilation from other writers. We may not always agree with the author's

views or accept all his deductions, but it is useful and interesting to learn what his experience has taught him. Though the major portion of the book is essentially clinical, the preliminary chapters are devoted to etiological considerations. The review of the differences between the human and bovine types of the *Bacillus tuberculosis* may be noted as particularly lucid. A large amount, as appears to us an undue amount, of space is devoted to a general review of the methods of physical examination of the chest. That there is much concerning physical examination of which the average practitioner requires to be reminded as a preliminary to the clinical study of chest diseases may be admitted, but in the sixty-three pages here devoted to physical examination there is much which belongs to the earliest training of the clinical student, and therefore somewhat out of place in a special work on tuberculosis. There is a very good chapter, illustrated with an excellent series of x-ray photographs, on the assistance to be derived from the Roentgen rays in defining the lesions in pulmonary tuberculosis. Dr. Bonney is evidently amongst those who do not look to the radiograph to obtain the earliest signs of commencing tuberculosis in the lung, for he says (p. 252): "A structural lesion sufficient to show a distinct shadow change is often preceded by such subjective and objective signs as will warrant an unqualified diagnosis." A large part of the book is devoted to the complications which may arise in the course of pulmonary tuberculosis; the treatment of the primary disease and of the various complications is fully discussed. In the section on the treatment of hæmoptysis, which is very sound in principles and very practical, we find with the more recent remedies which are advocated some traditional practices not now universally accepted. Amyl of nitrite is recommended—though in smaller quantities than we have found to be efficacious. On the other hand, the icebag applied to the chest and a strictly recumbent position for the patient in the routine fashion which used to be recommended have now been discarded by many practitioners. Dr. Bonney, however, notes that more importance may be attached to the position of the icebag over the cardiac area than over the supposed site of the hæmorrhage. In this section there is apparently a misprint in the extract which follows, the word which we have italicized being obviously not what was intended. On p. 715 we read: "Conversation in the room should be strictly enjoined, the patient being addressed only when necessary." As it is expressly stated on the previous page that it is essential that no person should be allowed in the sick room besides the nurse, it is evident that conversation is not "enjoined." Dr. Bonney's book is one which should soon reach a second edition: this is our justification for picking out from so large a mass of good work some small subjects for criticism.

The discovery of the tubercle bacillus in 1882, and the instant confirmation of its universality, carried all before it, and the views of the older observers as to the so-called inflammatory origin of the disease were swept away with more or less contempt. Time, however, has served to show that the bacillary theory is not all-satisfying, and the physiological aspect of tubercle formation has been found worthy of study from other than the bacillary standpoint. Dr. CHARLES CREIGHTON in a recent book¹² has put forth the results not only of a careful analysis of the works of others in the same field, but also an interesting account of his own experiments and observations, extending over a considerable period, and giving evidence of very careful thought and study. Although there is unanimity in acceptance of the tubercle bacillus as the primary cause of tubercle, the whole subject of the histogenesis of the morbid changes is "beset with difficulties and paradoxes." The changes of opinion on the part of Koch himself respecting bovine and avian tuberculosis, the experiments of Wooldridge and others to prove that substances such as tissue fibrinogen might produce lesions indistinguishable, histologically, from those produced by the bacillus, all tend to prove that the whole truth is not yet known, and that the subject calls for closer examination. In this handsome volume, illustrated by explanatory drawings of microscopic specimens, Dr. Creighton accordingly sets forth a full account of the histogenesis

¹¹ *Pulmonary Tuberculosis and its Complications*. By S. G. Bonney, A.M., M.D. Philadelphia and London: W. B. Saunders and Co. 1908. (Roy. 8vo, pp. 784. 30s.)

¹² *Contributions to the Physiological Theory of Tuberculosis*. By Charles Creighton, M.D. London: Williams and Norgate. 1908. (Roy. 8vo, pp. 252; 64 illustrations. 12s. 6d.)

of experimental tubercle, giving a historical epitome of the labours of the pre-bacillary pathologists, and a detailed account of his own observations on this part of his subject. He then considers the placental analogies of the tuberculous neoplasm as seen in the rodent, the third part of the work being devoted to an examination of human and bovine tuberculosis, especially in relation to its manifestations in lymph glands, serous membranes and meninges. The text of the whole may be found in the caustic observation of the author in relation to Koch's dictum that the discovery of the bacillus and not the histological conditions must in future be the criterion of tubercle. It is, he says, "a very simple criterion, much appreciated by those who have little time to think, or no great turn that way." That he has allowed himself plenty of time to think is evident throughout the work, but it is perhaps to be regretted that he has not found a simpler method of expression for his thoughts. The reader will need plenty of time to unravel some of them. To follow in detail the various steps of his argument is beyond the scope of an ordinary review, and it must suffice to record that the author regards the histological changes as being due primarily to the action of the poison upon the red blood cells. Thrombosis of minute vessels is the initial lesion, with plasmodial organization of the thrombi and a building up of a nuclear protoplasm from blood discs in the capillary walls and cavities of air cells when the disease affects the lungs. The neoplasm thus built up serves to get rid of the waste of disintegrated or reduced red blood corpuscles. The evidence upon which his arguments rest must be studied in the original work. Using the analogy of the placenta, he labours to prove that the histogenetic changes known to be produced by the injection of tubercle bacilli are the same as may be found under certain physiological conditions. Turning to the comparison of bovine with human tuberculosis, he emphasizes the histological peculiarities of the former and the initial occurrence of thrombosis—"but for the thrombosis there would have been no tubercle, and but for something in the blood there would have been no thrombosis." The whole work is worthy of the attention of investigators in the pathological laboratory, and although it may be thought that the accuracy of observations made so long ago as 1846 to 1889 may be open to question, still the specimens and drawings of that day remain in evidence, and modern observers cannot ignore the facts that they demonstrate, however much the interpretation may differ.

NOTES ON BOOKS.

THE *Minutes of the General Medical Council and of its various Committees for the year 1908, with fifteen appendices*, has been issued. It is the forty-fifth volume of the series, and contains 664 pages, being 242 in excess of that for the previous year. The minutes of the General Council occupy 150 pages, of the Executive Committee 75 pages, of the Dental Committee 18 pages, and of the Branch Councils 17 pages; the remainder of the volume is occupied by fifteen appendices, being reports of various committees. There has also been issued the *General Index to the Minutes of the General Medical Council, of its Executive and Dental Committees, and of its three Branch Councils. Vol. XL to XLV (1903-1908)*, which will be of great assistance in looking up references with regard to the procedure of the Council or its committees in any of the matters considered during the period. In 1903 an index of the Council's minutes for the previous years was published, and this proved so useful that it was decided to publish an index at shorter intervals: at the meeting of the Executive Committee on May 25th, 1908, it was resolved that the new volume should be kept in type and brought up to date year by year.

The *Schoolmaster's Year Book and Directory for 1909*¹ is the seventh annual issue. It consists of three parts. The first contains official particulars as to the administration of secondary education: a list of educational societies and organizations, including county education committees; condensed particulars as to universities, colleges, and medical and other schools; official particulars as to

examinations and inspections: a chronicle of the year, containing events of the year in chronological order and also classified under subjects; and a review of the year, which discusses many subjects of interest to masters of secondary schools. The second part is a directory of schoolmasters, and the third an alphabetical list of secondary schools. In the first part there is a short section on examinations preliminary to the professions, which, judging by the particulars given as to medicine, must be pronounced quite insufficient as a guide either to master or parent.

TEXTBOOKS OF MEDICINE.

DR. ARTHUR R. EDWARDS of Chicago has written an excellent *Treatise on the Principles and Practice of Medicine*.¹ In form and scope it corresponds very closely with other well-known American textbooks on medicine, but among the characteristics which the author has endeavoured to impress on it are the blending of causative pathology with the consecutive clinical features of disease, the subordination of exceptions to what is usually found at the bedside, and the discounting of typical clinical pictures and other dogmatic generalizations. An unusual amount of space has been devoted to treatment, acting on the excellent general principle that the final object of the existence of a book on practice is the application of knowledge to the cure or alleviation of disease. Leaving generalities, it may be especially noted that the book contains a really helpful chapter on septic affections, several good and comprehensive tables of the differential diagnosis of disease, of which that referring primarily to typhoid fever is a good example, and many new and useful illustrations, among which may be mentioned the clumping of typhoid bacilli, Koplik's spots—of course, in colour—stained pneumococci, crystals of phenylglycosazon, plates of blood films illustrating on one page some eight or nine different blood diseases, and drawings of changes in the fundus oculi met with in different diseases, all also in colour. Not only are pneumonia and tuberculosis classed with the acute specific fevers, but acute rheumatism likewise. That this textbook will rank with the better may confidently be predicted.

The short *Practice of Medicine*² by the late Professor CHARLES has reached a ninth edition under the editorship of Dr. F. J. CHARLIS. The original plan of the book has been maintained, but extensive alterations have been made so as to bring the book up to date. Several of the articles on fevers have been rewritten by Dr. A. Gray Banks, who has had special experience, and this co-operation is to the advantage of the readers of the book. In addition to substantial alterations in the old text, some forty morbid conditions have been for the first time included, such as mucous colitis, duodenal ulcer, heart-block, and fibrositis. These inclusions and other additions have naturally increased the bulk of the text, but by using a slightly larger page and by omitting the introductory chapter on general pathology the book is only some thirty or forty pages larger than the former edition, although its scope is so considerably extended. A feature of the book is an appendix consisting of a therapeutical index, a section on baths, one on vaccine treatment, one on prescriptions and prescription writing, and a series of formulæ for different medicines. Following these is a section on the method of performing post-mortem examinations and a glossary of medical terms. The book is obviously meant as a primer for men beginning the study of medicine proper, and as such it may be recommended.

After an interval of seven years appears a new edition, the sixth, of the late Dr. Husband's handbook on the *Practice of Medicine*.³ It is rather a rewriting than a revision that has been undertaken, but the well-known characteristics of the book have been preserved. Dr. ROBERT A. FLIMING has written the sections dealing with treatment and also all those dealing with diseases of the nerves; for the rest of the book Dr. R. F. C. LEITH is responsible. A sign of the times is that there is no separate section for diseases of the spleen. There is an excellent index.

¹ *A Treatise on the Principles and Practice of Medicine*. By A. R. Edwards, A.M., M.D. Edinburgh and London: W. Green and Sons, 1908. (Roy. 8vo, pp. 1328. 30s.)

² *The Practice of Medicine*. By the late M. Charlier, M.D. Ninth edition. Edited by F. J. Charlis, M.D. London: J. and A. Churchill, 1909. (Demy 8vo, pp. 704. 3s. 6d.)

³ *Husband's Practice of Medicine*. Sixth edition. Rewritten and enlarged by Dr. R. F. C. Leith and Dr. R. A. Fleming. Edinburgh: E. and S. Livingstone, 1908. (Cr. 8vo, pp. 1165. 12s.)

¹ London: Spottiswoode and Co. 1909. Price 6s.

² London: Spottiswoode and Co. 1909. Price 2s. 6d.

³ London: The Year Book Press (Svan Sonnenschein and Co., Limited). (Cr. 8vo, pp. 648. 7s. 6d.)

METHODS OF QUACKERY.

ALL THE ILLS OF HUMANITY.

ALTHOUGH it appears that persistent advertising and some ingenuity suffice to enable many makers of quack medicines to foist one preparation on to the public as a remedy for many and diverse diseases, the large possibilities in professing to treat all complaints, on the patient's own description alone, by medicines "specially prepared" for the individual case, have not escaped attention. We have before us a paper-covered book of some hundred pages, entitled "The Ills of Humanity by Dr. James W. Kidd, Fort Wayne, Ind.," together with letters from "The J. W. Kidd Co.," sent to an applicant for further information, which furnish a striking example of the variety of quackery we have referred to, and appear to merit publicity.

We commence with some extracts from an advertisement which appeared not long ago in a London weekly paper:

Free! Free!

To the Sick and Ailing Everywhere.
The Cure for your Disease—Delivered Free—Free for the Asking—Free to You.

To the sick—the suffering—to every man and woman victim of organic disease—local trouble or broken general health—Dr. Kidd's offer of free treatments is given in the absolute faith and sincere belief that they can and will stop disease, cure it, and lift you up again to health and vigour.

Rheumatism, kidney trouble, Bright's disease, diabetes, heart disease, partial paralysis, bladder troubles, stomach and bowel troubles, piles, catarrh, bronchitis, weak lungs, consumption, asthma, chronic coughs, nervousness, all female troubles, humpago, skin diseases, scrofula, impure blood, general debility, organic vital ailments, etc., are cured to remain and continue cures.

Will you let me do this for you—will you let me prove it—brother and sister sufferers? Are you willing to trust a master physician, who not only MAKES this offer, but PUBLISHES it and then sends the test and proof of his remedies without a penny of cost to anyone except himself?

My home office is at Fort Wayne, Indiana, U.S.A., but for the benefit of my thousands of English patients, I have established an office in London. Please address Dr. James W. Kidd, "Box" No. 104, 36 St. John Street, Clerkenwell, E.C.

The advertisement is accompanied by a cut of a man's head, presumably the "master physician" in question. In the book referred to above, a portrait of "Dr. James W. Kidd" is given, and the two seem to represent totally different persons. In the book there is an introductory paragraph on "Dr. James William Kidd"; in it we read:

His profound knowledge of medicine, his remarkable power over disease, the honesty and wisdom of his business methods are best proven by his wonderful success. The enormous practice which he has built up in a comparatively few years is without doubt larger than that of any single physician in the world to-day.

The first and most important reason why you should patronize Dr. Kidd is because he has had a long and varied experience and the most gratifying success in his practice. During the past two years alone he has expended over three hundred thousand dollars in advertising his now justly famous remedies.

... at the present time, Dr. Kidd has among his resources remedies that enable him to treat successfully many diseases that are generally considered incurable.

Unlike the majority of physicians, Dr. Kidd does not confine himself to the methods of any one school of medicine. He does not hesitate to take advantage of any method or curative agency that promises to benefit his patients.

The book is principally occupied with a series of paragraphs on different complaints, rather over a hundred being dealt with; in the majority of cases the description leads up to reference to Dr. Kidd's treatment, or medicines, etc.

It appears that persons writing to "Dr. Kidd," or the company, receive a "Self Examination and Consultation Blank." This commences with spaces for name, address, age, and occupation, and continues as given below. The words here printed in italics are the answers supplied by the hypothetical patient who has sent the Blank to us, and are supposed to refer to the case for which the medicines described below were sent:

1. Do you have rheumatism? *Yes.*
2. Do you have dropsy? *Yes for 2 years.*
3. Do you have scrofula or other blood poisons? *Yes.*
4. Do you have heart trouble? *No.*
5. What name do doctors give your disease? *Very difficult to diagnose.*

6. Is your hearing failing? *Yes.*
7. Does your nose discharge? *Yes.*
8. Is your sense of smell leaving? *No.*
9. Is there a dropping into your throat? *Yes.*
10. Do you cough? *Yes.*
11. Do you have pains in the chest? *Sometimes.*
12. Is your sputum (spit) streaked with blood? *No.*
13. Do you have asthma? *No.*
14. Is your appetite good? *Indifferent.*
15. Do you have a burning sensation in the stomach? *No.*
16. Do you have sour risings (belchings)? *Yes.*
17. Are you constipated? *No.*
18. Do you have diarrhoea? *No.*
19. Are you troubled with piles? *No.*
20. Is your liver torpid? *Yes.*
21. Do you have pain in the small of the back? *Yes.*
22. Do you have frequent desire to urinate? *Yes, very.*
23. Does your urine scald you? *Yes.*
24. Do you have pain in the region of the bladder? *No.*
25. Do you have to rise at night to urinate? *No.*
26. Have you any skin disease? *No.*
27. Of what nature?
28. Is your circulation poor (numbness)? *Yes.*
29. Are you troubled with neuralgia? *Yes.*
30. Are you nervous? *Yes.*

Further sections are added headed, "For Gentlemen only" and "For Ladies only," for information about disorders confined to one sex.

The answers given above were sent in, and the following was received in reply:

Diagnosis and Case Record.

By Dr. James W. Kidd, Fort Wayne, Ind.
For a complete description of your case, the probable results and my method of treatment, see pages 46, 99, 23, 13, 9, of the pamphlet "The Ills of Humanity," sent you under separate cover.

I find that you are afflicted with Rheumatism, Scrofula, Catarrh, Dyspepsia, and Gastritis.
Rheumatism MEANS an excess of uric acid in the blood.
Scrofula is a constitutional disease almost synonymous with tuberculosis.

Catarrh is an excreting inflammation of the mucous membrane.

Dyspepsia (Indigestion) MEANS impaired secretion of pepsin and consequent imperfect digestion.

Gastritis MEANS catarrh of the mucous membrane of the stomach.

TAKE THE REMEDIES ACCORDING TO THE FOLLOWING DIRECTIONS:

- One Tablet "A" before breakfast.
- One Tablet "B" before dinner.
- One Tablet No. 13 before supper.
- One Tablet No. 7 after dinner and after supper.
- One Tablet No. 45 on retiring.

This was accompanied by tablets marked "A," "B," and "13," three of each, four marked "45," and five marked "7"; also by a letter which is worth reproducing in full; this appeared to be lithographed, and although the name and address were in the same writing and the same ink, they showed evidence of having been added afterwards. It seems probable, therefore, that, although professing to be a personal letter, it is one in regular use. The "special interest in your case" is a familiar feature in quacks' letters.

Dear Friend:—

In compliance with your request received to-day I have prepared and forwarded to your address under separate cover, a sample of the remedies as promised. As the drugs are very expensive and we are required to send out hundreds of samples each day, it is impossible to send larger amounts. I trust, therefore, that you will take into consideration the fact that you cannot expect any remarkable results from the sample, but we desire mainly to call your attention to the neatness and elegance of our preparations, and their adaptability to the most delicate stomach, especially if you are one of the many who have had discouraging experience with the nauseating liquids, bitter and disagreeable powders, tablets and pills, usually found in drug-stores. I have taken special interest in your case, because I want a cured patient in your immediate vicinity. This is why I have gone to the trouble of writing you a personal letter.

After making a careful diagnosis of your case (see type-written copy enclosed in this letter) I find that it is very complicated and severe, and will require several special remedies to effect a cure. These special remedies are very expensive, but I have decided to quote you a very low price on the complete treatment.

Believing that you are anxious to be cured at the earliest possible moment, to avoid unnecessary delay, I have to-day selected and will forward to your address upon receipt of your remittance of £1 the complete course of treatment. Do not become discouraged if you have failed to obtain relief from local doctors or patent medicines. I am not a local doctor and the remedies I am offering you are not patent medicines,

but a course of treatment carefully selected to meet the requirements of your case.

I feel sure that I can restore you to health. In making this statement, I base my opinion on the results obtained in many similar cases that have come under my treatment. Much depends on taking the case in time. Every day's delay increases the difficulty of effecting a cure. I trust, therefore, that you will order at the earliest possible moment.

In ordering, please give me any further information concerning your case that you may deem important. If this develops the fact that any additional remedies are needed they will be included without extra cost.

Remember also, that you are entitled to my services entirely free while you are under treatment.

Awaiting your order and assuring you of my prompt and careful attention at all times, I remain,

Yours Very Truly,

DR. JAMES W. KIDD.

It would appear that the "personal attention" given to each case is of the most mechanical nature. It is not necessary to point out the utter inadequacy as a means of diagnosis of the "Self-examination and Consultation Blank" given above; the answers on the Blank quoted were filled up in a manner which negated the possibility of a diagnosis being made. This, however, presented no difficulty. Five diseases are specified to account for the symptoms, five headings in the pamphlet sent are referred to, and five kinds of tablets were sent. These tablets were analysed as completely as was possible with the small quantities sent, with the following results:

Tablet A (triangular) was coloured externally with a salmon-pink dye; the outer coating was of sugar, and below this was a rather thick coating of chalk, forming a very hard and resistant covering to the tablet. The decoated tablets weighed about 3½ grains each; they contained 52 per cent. of sodium bicarbonate, and the remainder consisted principally of a bitter extract agreeing in all respects with extract of gentian; small quantities of potato starch and a substance of resinoid nature which could not be identified were also present. No other medicinal substance could be found.

Tablet B (triangular) was coloured externally with a bluish-purple dye; the coating and the material of the tablets agreed in all respects with *Tablet A*, and the two were evidently identical.

Tablet 18 (circular) was white; the coating was of similar composition to that of *A*. The decoated tablets weighed about 3.8 grains each; analysis showed the presence of about 1 grain of sodium benzoate in each, together with a small quantity of a greenish, moderately bitter resin which could not be identified, and a trace of oil of wintergreen. Faint indications were obtained of a trace of an alkaloid, but not enough to amount to positive evidence. No other medicinal substance could be found; the remainder was of "extractive" nature.

Tablet 45 (circular) was coloured externally with a pink dye; the coating was of similar composition to that of *A*. The decoated tablets weighed about 1.1 grain each; the chief constituent was aloes, and there was also present a very small quantity of ginger extract, and a small quantity of resin, which was probably jalap or scammony resin; also a moderate trace of alkaloid which was not the alkaloid of *nux vomica*, belladonna, or hyoscyamus, but was not present in quantity sufficient to be identified; the only other ingredient found was a little potato starch.

Tablet 7 (circular) was not coated. The average weight of these was 6.5 grains each, and they consisted principally of charcoal, with some sugar and a very little saccharin.

"These special remedies are very expensive"! (letter above).

The reply which was sent to this letter was not satisfactory to "Dr. Kidd," and elicited the following in return. The anxiety for a remittance is rather apparent.

Dear Friend:

I am in receipt of your brief communication and while I am pleased to hear from you, I regret to inform you that I do not quite understand your letter. I wrote you fully regarding your condition and sent you a trial treatment also requested you to make remittance, so that I could prepare and forward a complete course.

Now dear friend, I trust that you will comply with my request and make remittance at the earliest possible date. I have made a speciality of treating diseases of this nature for a number of years and have been very successful and have every reason to believe, therefore, that I can bring about a cure for you.

Should it be impossible for you to make a remittance I wish you would write me to that effect perhaps I may be able to give you advice that may be of great benefit to you.

Hoping that you will make remittance at an early date, assuring you of my prompt and careful attention, I beg to remain,

Sincerely yours,

DR. JAMES W. KIDD.

CONSUMPTION.

In the *BRITISH MEDICAL JOURNAL* of August 22nd last (page 506), in the course of an article on certain secret remedies for consumption, the results of an analysis of "Stevens' Consumption Cure" were given. It was stated that it was a clear red liquid, and that analysis showed it to contain, in 100 fluid parts, 21.5 fluid parts of alcohol, 1.8 parts of glycerine, and 4 parts of solid substance, which contained about 1 part of a tannin and 0.2 part of ash, the remainder being extractive. No alkaloid was present, and no other active substance could be detected. The solid substance agreed in all respects with the solids of decoction of *krameria*, or a mixture of this decoction with a little tincture of kino.

Mr. Stevens, in one of the circulars which he issues states that:

"The African herbs which my Cure is prepared from, have never been used by any white Doctor or Chemist before I introduced same to civilization a few years ago. These herbs are original and have defied our cleverest Analysts to discover the active principals (*sic*) they contain."

In the same issue we also quoted (page 518) from a circular letter which Mr. Stevens had recently sent out to medical practitioners, asking them to treat consumptive cases which defied all the ordinary remedies, with his secret preparation. The circular continued:

"The great drawback to my cure, so far as the medical profession is concerned, has always been the fact that I would not reveal its formula. This is now done away with; its formula is 80 grains of umckaloabo root and 13½ grains of chijitse to every ounce, prepared to *British Pharmacopoeia* methods."

The publication of the article drew from Mr. Stevens a letter addressed to the proprietors of the *BRITISH MEDICAL JOURNAL*, in which he asserted that the component parts of the remedy were truthfully and correctly stated in his circular. We had failed to discover any reference to the two drugs with these remarkable names in any available work on pharmacy, and ventured to express the opinion that the formula was a farce. At the instance of Dr. Rayner, Dr. Porter, Medical Officer of Health for Johannesburg, kindly enlisted the assistance of Dr. G. A. Turner, who made inquiries from natives of several races, and from experts in native matters, without being able to ascertain that the names were known. Information was also sought from Mr. Charles F. Juritz, D.Sc., Senior Analyst in the Government Analytical Laboratory, Capetown, who was good enough to communicate with the Secretary of the Native Affairs Department. That department instructed the chief magistrate of the Transkeian territories to cause inquiries to be made into the question whether the native tribes there resident had any knowledge of "umckaloabo" and "chijitse," or of their reputed medicinal properties. The result of the inquiry was entirely negative. Nothing was known of any such plants, nor was it even possible to identify their names. Smith's *South African Materia Medica* contains no record of any such names as "umckaloabo" and "chijitse."

THE annual meeting of the Certificated Dispensers' Association held at the Apothecaries' Hall, London, E.C., was well attended. The financial statement showed a substantial balance to the credit of the association. The honorary secretary reported that the membership had steadily increased, the number at the end of the year being 325, and congratulated the members on the acceptance by the Government, through the kind offices of Sir William Collins, M.D., M.P., of an amendment securing the inclusion in Clause iv of the Poisons and Pharmacy Bill of holders of the certificate of the Apothecaries' Society. A register kept by the secretary had been the means of providing many members with temporary and permanent appointments.

BEER, AND THE MATERIALS USED IN ITS PRODUCTION.

It is a matter of common knowledge that beer, in its several varieties, is by no means the same thing to-day as it was a generation or less ago; the progress of chemical and biological knowledge on the one hand, and the keenness of competition on the other, have led to great alterations both in the materials used in its production and the methods by which it is produced. Exact or reliable knowledge about this, however, is far from being common; vehement assertions are made that all or almost all the changes are for the better, and also that beer is now a manufactured chemical product of deleterious nature, in which little or nothing of genuine material is used. Such statements are rendered unacceptable by the existence of self-interest on one side and prejudice on the other. A short account of some of the facts concerned may, therefore, be of service to the medical practitioner.

Chemistry of Brewing.

Beer is generally understood to be an alcoholic liquid brewed from malt and hops, the alcohol being produced in a fermentation process caused by yeast. In 1847 the use of sugar in addition to malt was permitted by law, and it was only so recently as 1880 that the employment of other substances was legalized. In its simplest form the production of beer is carried out as follows: Barley grain is steeped in water, then drained, and the moist grain kept for some days at a temperature of about 55° F., during which time germination commences; the grain is then kilned, or exposed to the heat from a slow fire, which stops growth, and the rootlets which had formed are removed; at this stage the grain constitutes barley malt. The malt is next ground, and is then mashed—that is to say, it is treated with hot water for some hours; the liquid is then run off, a variable quantity of hops added to it, and the whole boiled together for some time. The liquid is again run off and cooled, yeast is added to it, and the mixture is allowed to stand for some days; the yeast multiplies greatly, producing alcohol and carbonic acid, and using up the dissolved carbohydrate in doing so. When the fermenting action is at an end the liquor is separated from the yeast, and then constitutes beer.

The chemical changes involved in the process are many and complex; the principal are as follows: During the germination of barley two of the nitrogenous bodies known as enzymes—*cytase* and *diastase*—are produced; the former has the property of attacking and dissolving the delicate envelope of the starch granules, of which the grain contains a large proportion, and so rendering the contents of true starch accessible to the diastase; under the influence of the latter the starch assimilates water and becomes converted into soluble carbohydrates, principally dextrins and maltose (malt sugar). These soluble carbohydrates are required for the formation of the young barley plant; some of the proteid stored in the grain is also converted to soluble forms. When the germinating grain is kilned, its life is destroyed and these changes are arrested, but the *cytase* and *diastase* which have been formed remain in greater or less quantity, according as a lower or higher temperature is employed in the kilning. When the ground malt is mashed—that is, treated with water between 140° and 160° F.—these ferments resume their action on the starch, and at the end of the mashing the liquid (now termed the "wort") contains most of the carbohydrate of the grain in the form of dextrins and maltose, and a part of the proteid has also gone into solution; the residue left on running off the wort consists chiefly of the empty cell tissue of the grains. In the next stage, when the wort is boiled with hops, several changes occur; sterilization is effected, and part of the proteid is coagulated and precipitated; aromatic and bitter substances are dissolved out of the hops, which play an important part in giving the beer its flavour and also act as preservatives. During the several days' action of the yeast, most of the maltose is converted to alcohol and carbon dioxide, and the gradual increase of the alcohol and diminution of the sugars leads to cessation of the growth of the yeast, which separates either to the top or bottom. The beer can then be run off, and is ready for consumption; usually, however, it is

stored in casks for a longer or a shorter time, a further small quantity of hops being often added; during the storage a slow secondary fermentation is caused by the small amount of yeast remaining in it, improving the flavour and aeration.

Each stage of this process is capable of various modifications, causing variations in the product; also, almost every stage, as it has come to be understood, has presented the possibility of attaining the desired end, or some passable imitation of the desired end, by some other means than that originally employed, such other means either entirely replacing the original or being used as auxiliaries to it. To mention the variations first, the temperature at which the malt is kilned greatly influences the beer. Malt dried at a low temperature produces pale beer; that dried at a higher temperature gives a darker beer; the malt may also be roasted, like coffee, before mashing, and the very dark product then obtained is known as stout or porter. The quantity of hops boiled with the wort may be varied considerably, giving a less or a more bitter beer. The fermentation with yeast may be stopped while a good deal of saccharine matter still remains in the liquid, or may be pushed as far as possible, more or less "body" in the product being the result of such variations. When fermentation is conducted at a low temperature more sugar and dextrin will remain and less alcohol be formed; lager beer is produced in this way. The principal varieties of beer are thus as follows:

Mild ale, in which a low proportion of hops is used, and fermentation is continued until a low amount of solids remains.

India pale ale, which contains more hops than "mild."

Bitter ale, which contains more hops and also more solids than "mild."

Stout or porter, in which part of the malt is roasted; it contains a high proportion of solids, part consisting of caramel.

Lager beer contains more dextrin than English beer, and usually less alcohol.

The percentage of alcohol in beer varies considerably, according to the variety, and is usually between 4 and 7 per cent. by volume; but neither in regard to this nor to any of the properties just mentioned are there definite or binding limits, and the characters of any variety of beer or stout may differ considerably among the products of different brewers.

Substitutes for Malt and Hops.

As regards the employment of other materials than those mentioned above, it is not possible to condemn such a proceeding without qualification, while it is no less impossible to express entire approval of it. A Parliamentary Commission which reported on the subject in 1889 decided, after hearing the evidence of experts and others representing various points of view, not to recommend legislative restrictions on the materials used in brewing; a minority report, however, signed by only one member of the Commission, was in favour of restricting the name beer to a liquid brewed from malt and hops only. The employment of other materials is in many cases the normal result of a more scientific understanding of the processes in question, and a laudable desire to avoid the waste which occurred with the older empirical methods. But the desire to cheapen the production of beer by utilizing scientific knowledge has often led further, and, under the pressure of keen competition among brewers, has resulted in the employment of materials which do not yield the same product in a more economical manner, but which yield only a product not easily distinguished by the consumer from that of which it is an imitation. It is, then, at best highly debatable whether the cheaper imitation is as good as the older beer which it has displaced.

In answer to questions put in Parliament recently, the Chancellor of the Exchequer stated that the Board of Inland Revenue had refused its sanction to the use of malt and other materials containing arsenic in excess of the limit proposed by the Royal Commission on the subject, and also to the use of "heading" powders and liquids or other articles containing saponin, whether derived from quillaia or not, of flavouring essences, saccharin, sacrumine, and compounds containing saccharin. On the other hand, the following articles had come under the notice of the

Board as being used in the manufacture or preservation of beer, and had not been prohibited :

Rice, flaked rice, rice grits, rice malt, gelatinized rice, Maize, flaked maize, maize grits, maize flour. Oats—flaked, rolled, malted, and crushed. Torrefied barley.

Yeast foods.—These include solid and liquid preparations of peptonized yeast sold under various trade names, as nutriment, peptonide, dalline, etc., and mixtures of malt, flour and alkaline phosphates, common salt, etc., and preparations of malt combings, etc.

Preservatives.—Mainly sulphites of soda and potash, sold under various trade names, for example, kalium metasulphite (K.M.S.), sulphosite, etc. Salicylic and boric acids are also occasionally used as preservatives.

Burtonisers—(substances used for hardening brewing waters) are chiefly sulphates and chlorides of calcium and magnesium.

Neutralizers.—Mainly carbonates of potash and soda and sold under various trade names, as regenerator, acid neutralizer, antacid, etc.

Hop Substitutes.—Catechu or cutch, tannin, extrait de houblons d'Alsace, Davis's hop substitute, optanin, quassia, and preparations containing quassia.

Preparations used to precipitate albuminous matters from wort, mainly gelatine, Iceland moss, Irish moss, alginol, ibrite, etc.

Miscellaneous Brewing Materials.—Albumen, maltose, linseed, liquorice, amide syrup (ceramide), dextrin.

A few figures showing the extent to which some of these materials are used may be of interest. Brewers are required by law to keep full records of the principal substances employed in brewing, and the statistics so obtained are published annually. The figures here given are the most recent available; they refer to the year 1906-07, and are taken from Parliamentary Paper No. 32 of Session 1908.

Brewers who employ only malt and hops or hop substitutes constitute 44 per cent. of the total number of brewers licensed, but produce only 9 per cent. of the beer brewed in the country; of this quantity, over two-thirds—equal to 2,600,000 standard barrels—is the produce of a single firm; in 1900 the number of brewers in this class was 55 per cent. of the total of those licensed. The remaining 91 per cent. of the total beer produced is made by brewers who use malt substitutes as well as malt. Taking all the breweries in the country together, the total of malt and malt substitutes used is divided into:

Malt	76.55 per cent.
Unmalted corn	0.14 "
Rice, maize, and similar materials	6.46 "
Sugar and similar materials	16.82 "

In the hopping process the materials used are:

Hops	99.95 per cent.
Hop substitutes	0.05 "

The use of other materials than malt in the mash tun depends on two facts: first, the diastase of malt grain is capable of converting into soluble carbohydrate a larger amount of starch than is present with it in the grain; and second, yeast can act on other sugars than the maltose formed by the action of diastase on starch, and the two principal products of fermentation, alcohol and carbon dioxide, are the same, whatever the nature of the sugar employed.

The first of these facts permits of the use, in the mash-tun, of unmalted grain (which contains little or no diastase) of various kinds, the principal ones employed being barley, oats, rice, and maize; wheat, rye, sago, and potato starch are also used; when maize is used the germ is first removed, as it contains a good deal of oil which gives an unpleasant flavour to the beer and interferes with its brightness. The starch of any unmalted grain would not be acted on by the diastase of the malt unless the granules were previously burst, and unmalted grain must therefore be boiled before it goes to the mash-tun. This is often done in the brewery; but flaked rice, flaked maize, torrefied barley, and other materials consist of grain that has been moistened, heated sufficiently to gelatinize the starch, and again dried, before it is sold to the brewer. If the malt employed contains sufficient diastase, a very considerable proportion of rice or similar material can be employed; such "raw grain" may constitute 75 per cent. of the total taken for mashing. Most of the materials so used contain less nitrogenous substance than barley malt, and the wort is therefore poor in proteid

constituents; one result is that when the fermentation stage is reached the yeast will not grow well unless the deficiency is made good, and the "yeast foods" mentioned in the list given above are added for this purpose. A large proportion of rice in the mash-tun gives the beer a watery taste, unless more body is given by the addition of sugar or some other form of saccharine material. It is usual, therefore, to adjust the quantities of malt substitutes employed so that the deficiencies of one shall be counterbalanced by the excesses of another. The amount of malt grain used in the mash-tun may be further reduced by the addition of malt extract, which is supplied to brewers in large quantity for the purpose; this contains the diastase necessary for converting the starchy material, as well as proteid and sugars for use at the later stage.

The next process, that of boiling with hops, does not lend itself to the use of substitutes on the same liberal scale as does the mashing. The tannin which is extracted from the hops by boiling assists in precipitating the coagulable proteid, and tannic acid or other materials containing tannin are used to a small extent. The bitterness which hops impart can of course be obtained in other ways, and quassia is the substitute principally in favour for this purpose; the result, however, is not a satisfactory imitation, as the bitter taste on drinking hopped beer is evanescent, while quassia leaves a more enduring bitterness in the mouth. The only "hop substitutes" which will give the characteristic hop flavour are preparations of the hop itself, which are sometimes used; while the antiseptic and preservative property of hops may be replaced by the use of substances added as preservatives, which, however, are introduced at a later stage.

After the boiling, the wort is cooled and yeast added; as already stated, yeast can decompose other sugars besides the maltose formed in the mash-tub, and the addition of one or more kinds of sugar is very usual. A further quantity is also commonly added after the chief fermentation is over; most of this remains in the beer, but a small quantity is decomposed in the secondary fermentation in the cask. The sugar most employed is invert sugar, usually produced by the action of sulphuric acid on cane sugar; glucose (starch-glucose or starch-sugar), produced by the action of sulphuric acid on starch, is also largely employed; cane sugar, dextrin maltose (made by acting on starch with acid, but not carrying the action so far as the production of glucose), and caramelized malt extract are also used. The sugar may or may not be added to the mash-tun, but it is almost always added before boiling with hops, so that other organisms shall be destroyed and the yeast allowed a free field.

The colour of beer depends primarily on the materials employed in the mash-tun. Various kinds of malt, known as amber malt, chocolate malt, crystal malt, black malt, etc., are prepared by kilning at higher temperatures or for longer times than those employed when diastase is required, or by subsequently roasting the malt; the use of a suitable proportion of one or other of these in the mash-tun gives the desired colour. But considerations of cheapness lead to roasted barley and maize being substituted, or to the still simpler method of adding sufficient caramel (burnt sugar) to give the required depth of colour.

The addition of some antiseptic to beer is very usual; a sulphite or bisulphite of one of the alkali metals or of lime is most frequently employed, while salicylic acid (about $\frac{1}{2}$ oz. to the barrel of 36 gallons) is also used, and some other substances in small quantity. When too much acidity (principally lactic and acetic acids) has developed in the beer during the making or storing, it is neutralized by the addition of carbonate or bicarbonate of an alkali; these are commonly supplied to the brewer under proprietary names. Before bottling, clarification of beer is usually effected by the addition of an acid solution of isinglass or some other gelatine preparation or similar substance. This combines with a part of the tannin in solution, and the precipitate which is produced carries down with it yeast cells, traces of proteid, and other suspended matter.

The chief instance in which a deleterious substance has been found widely distributed in beer is that in which a few years ago arsenic, present in certain beer, produced a number of cases of arsenical poisoning manifested chiefly by neuritis; in this instance the arsenic had been intro-

duced in glucose, one of the malt substitutes employed. The thorough search for arsenic in all brewing materials resulted, however, in showing that malt itself was very commonly contaminated with arsenic from the coke fires employed in kilning, and could be the means of introducing quite appreciable quantities of arsenic into beer. The lesson to be drawn from this is, of course, that all the materials used in producing beer (and other articles of food and drink), whether "natural" or of the nature of substitutes, ought to be thoroughly examined by persons competent to judge them, before being used. The present freedom of the brewer to use practically any materials he pleases, subject to their being innocuous, by immensely increasing the field from which he can draw, certainly increases the risk of deleterious substances being introduced, as well as of the product being only a skilful imitation of what is really demanded; and although the restriction of brewers to the materials used in ancient times does not appear to be called for, and, as shown by the arsenical contamination of malt, would not of itself be an adequate guarantee of the quality of the product, it is certain that the prevailing practice of making beer from such a very wide variety of materials demands the utmost watchfulness on the part of the authorities.

LITERARY NOTES.

MESSRS. WILLIAM HODGE AND COMPANY, Edinburgh and Glasgow, are about to publish a new volume of their *Series of Notable Scottish Trials*. It deals with the William Douglas case, an eighteenth century trial which excited the greatest interest throughout the country. Readers of Boswell will remember that there are several references to the case in his *Life of Johnson*.

The same publishers have in the press a small book by the Rev. Father Power, S.J., of Edinburgh, entitled *The Alcohol Case: the Summing Up. A Medical, Legal, and Historical Sketch*. The author is a member of the London Society for the Study of Inebriety, and a well-known lecturer on intemperance.

We have received a descriptive catalogue of the medical and surgical works published by Messrs. W. B. Saunders Company. It is revised up to January, 1909. The specimen illustrations which accompany the titles of many of the books are admirably executed.

Among the many stories told of Rabelais some are undoubtedly apocryphal. The following is one of the authenticity of which we can give no proof, but which we could wish to be true. The Chancellor Duprat being for some reason annoyed with the Medical Faculty of the University of Montpellier, curtailed it of its privileges. The Faculty chose Rabelais to plead its cause. The difficulty was to get an audience with the irate Chancellor. Rabelais succeeded by stratagem where he would probably have failed by going about the business in a straightforward manner. Disguising himself in a green gown and a long grey beard, he walked slowly up and down before the Chancellor's house. His strange appearance naturally attracted attention, and among others who came to stare at him was the Chancellor's porter. Rabelais spoke to this functionary in Latin. On his answering in what little dog Latin he could produce to meet the situation, Rabelais replied in Greek. This brought a Greek scholar on the scene, to whom Rabelais spoke Hebrew. By this time the Chancellery was in commotion, and Duprat sent for the strange man who had exhausted the linguistic resources of his staff. He was so much amused by Rabelais's trick, and so interested by his conversation, that he forthwith granted him all he asked for.

The second number of the *Journal of the Incorporated Society for the Destruction of Vermin* contains an article on vermin by the editor, Mr. W. R. Boelter. He says that a study of the writings of ancient and mediaeval authors will yield thousands of recipes for the destruction of parasites. The searcher will also find how parasites themselves have in their turn been used in an endeavour to cure numerous ailments, a proceeding which, Mr. Boelter says, has in many cases been vindicated by the researches of modern chemistry. He goes on to point out that man in his fight against vermin has been singularly unsuccessful. One reason for this failure is man's inability to agree about what is and is not vermin. The

equivalent of vermin in the ancient languages and in mediaeval books was applied to everything of a noxious or loathsome nature. In the Ebers papyrus twelve species of *vermes* are mentioned. In the Middle Ages Meigenberg counted among *vermes* the bee, the spider, the toad, the silkworm, the gnat, the flea, the louse, the wasp, the caterpillar, and larvae of different species. This writer's zoology reminds us of that of the railway porter who, having to deal with a tortoise, delivered himself as follows: "Cats is dogs, and rabbits is dogs, but this 'ere's a hinsect, and must be paid for." Vermin in German is *ungeziefer*, that which is not fit to serve as an offering to the Deity. Hence vermin was thought to be associated with the devil, and played a large part in witchcraft. About the end of the seventeenth century two books on the destruction of vermin were published in Germany, one by a physician named Hobberg, the other by Abraham Friedrich Krafft. Mr. Boelter thinks that Krafft's book led to the formation of a society for the total extermination of all vermin. Willis, whose name is enshrined in the arterial circle at the base of the brain, discussed in a treatise entitled *De Anima Brutorum* the question whether vermin have souls, concluding affirmatively, and adding that, "although vermin are mostly of a cold nature and essence, their souls are, like those of the warmest and most perfect animal, heated and fiery, and consist of a sulphurous essence."

Writing in the *Boston Medical and Surgical Journal*, Dr. Charles G. Cumston says that for a long time he has searched in the writings of the ancient physicians with the hope of finding some description of appendicitis. Both Hippocrates and Galen are silent on the question. Celsus, however, appears to have been familiar with appendicitis, because, in speaking of colitis, he says:

The disease of the large intestine is principally situated in the cecal portion. Considerable swelling and violent pain are observed, particularly on the right.

He advises the application of hot, dry fomentations. Of the writers during the period of the Decadence, Dr. Cumston has consulted Aetius, Oribasius, Paul of Aegina, and Alexander of Tralles. In the *Tetrabiblion* of Aetius (cap. xlii, lib. ix) the following remarks are to be found, which, in Dr. Cumston's opinion, undoubtedly refer to suppurating appendicitis:

Occasionally abscess of the intestine occurs, whose rupture gives rise to purulent stools.

After stating that this condition is often erroneously diagnosed as dysentery, he goes on to say:

In abscess of the intestine there is a localized pulsating pain. There are no colics such as are observed as forerunners of an attack of dysentery. When the abscess has matured the temperature goes up and is more marked in the evening. When the stool has collected, the morbid phenomena diminish and the pain becomes less acute, only to recur when rupture of the abscess takes place. Sometimes there is obstinate constipation. Nothing like this is encountered in dysentery.

He advises the use of linseed-meal poultices to which is added some astringent, such as blackberry wine, etc. According to Dr. Cumston appendicitis was apparently unknown to Soranus of Ephesus, because Coelius Auresianus, whose writings are merely an abbreviated translation of the works of the former, gives no description of the disease.

Dr. W. G. Atchison Robertson, of Edinburgh, writes:

That the teaching of such authorities as Valsalva, van Swieten, Morgagni, and others (who believed in the infectious nature of phthisis) had been carried into practice in certain countries, is evident from the following quotations from John Howard's work on *The State of the Prisons in England and Wales, with an Account of some Foreign Prisons and Hospitals*, third edition, 1784.

Speaking of the Italian prisons, he says that at Civitavecchia "here is a spacious hospital on shore for the slaves. None were in irons. All was clean. In the centre of the great room in this infirmary was an altar for public worship. A particular room was appropriated for such as had cutaneous disorders, and another for consumptive patients. In this country the physicians are persuaded that the *consumption* is a contagious disorder. Patients afflicted with it in hospitals have a separate ward. The same precautions are used to prevent infection as in the plague. When this disorder has been in private houses the furniture is destroyed, and the rooms are scraped and fumigated, before they are again inhabited" (page 116).

He alludes to the same belief when describing the *Real Hospital General* in Madrid. "Here are likewise rooms (carefully separated for measles, for dropsical, and for consumptive patients. The contagion of consumption is supposed to infect

not only the clothes, bedding, and furniture of rooms, but also the walls and ceiling. Danger has been apprehended even from the horses of consumptive patients; and for this reason it was thought necessary, in an instance that was mentioned to me, to kill the horse of an officer who had died of this distemper" (page 158).

The doctrine of the infectivity of phthisis is much older than any of the authors mentioned by Dr. Aitchison Robertson. It was held by Aristotle and later by Galen. In the fifteenth century it was taught by Ballonius or Bailion of Paris, in the sixteenth by Cesalpinus, and by Paolo Zacchia and Nicholas Chesneau in the seventeenth, to mention only a few of the old writers who have dealt with the matter. Most stringent regulation as to the disinfection of the rooms in which consumptives had died in the eighteenth century were enacted in Spain and in Italy, and were in force in both countries till the nineteenth century was well advanced. That phthisis is communicable is an old belief, which was only partly given up in accordance with what was supposed to be more scientific medical teaching.

Medical News.

MR. ALFRED E. WILNOT, M.R.C.S.E., L.R.C.P.Lond., Burnham House, Burnham, Bucks, has been made a Justice of the Peace for the county of Buckinghamshire.

THE Lord Mayor of London and the Lady Mayoress will hold a reception at the Mansion House of the delegates and members of the International Congress of Nurses on the afternoon of the opening day, July 20th.

SIR JOHN CRAGGS having placed at the disposal of the London School of Tropical Medicine a fund to encourage investigations into the various causes of tropical disease, grants from this fund have been awarded to R. Howard, M.D., of the Universities Mission to Central Africa, and to B. M. Wilson, M.B., Ch.B., of Fiji.

THE members of the Glasgow University Club, London, have presented to Dr. C. O. Hawthorne a study table and microscope in recognition of his services as honorary secretary of the club during the past seven years. The presentation was made by Dr. Cunningham Grant on behalf of the subscribers, many of whom were present. The company was entertained by Dr. and Mrs. P. H. Abercrombie, who kindly placed their house at the disposal of the committee.

WE are asked to state that hospitals in the county of London or within nine miles of Charing Cross desiring to participate in the grants made by King Edward's Hospital Fund for London for the year 1909 must make application before March 24th to the Honorary Secretaries, 7, Walbrook, E.C. Applications will also be considered from convalescent homes and sanatoriums for consumption situated within the above boundaries or which, being situated outside, take a large proportion of patients from London.

A MEMORANDUM by the Medical Officer of the Local Government Board in England, on administrative measures against tuberculosis, has been issued, and can be obtained, price 2d., through any bookseller. It supplements from a medical standpoint the information contained in a circular letter issued by the Local Government Board to all sanitary authorities and boards of guardians sent out along with the Public Health (Tuberculosis), 1908, Regulations.

THE Departmental Committee appointed by the Lord President of the Council to consider the working of the Midwives Act held its sixth meeting on Wednesday, March 10th, at the Privy Council Office, Mr. Almeric FitzRoy presiding. The following witnesses attended and gave evidence: Sir George Foddham, Treasurer of the Central Midwives Board and representative of the County Councils Association; Dr. A. Robinson, Medical Officer of Health for the County Borough of Rotherham; and Mrs. Heywood Johnstone, President of the Rural Midwives' Association.

THE London County Council has issued an order renewing for a further period of twelve months from March 13th the regulation requiring the notification of cases of cerebro-spinal fever (epidemic cerebro-spinal meningitis). On the advice of a committee appointed by the president of the Royal College of Physicians the council has decided that for notification purposes the disease at present known as posterior basal meningitis shall be included in the term cerebro-spinal fever, but that the term is not to be interpreted as including cases of meningitis due to tuberculosis, middle-ear disease, or injury.

As already announced in the JOURNAL of December 26th, 1908, a convention which will include all branches of

medical electricity will be held in London from July 5th to 9th, 1909. The President is Dr. Lewis Jones; the Vice-President, Mr. Deane Butcher, President of the Roentgen Society; and the Honorary Secretary and Treasurer, Dr. Reginald Morton. The inaugural meeting, the general meetings, the demonstrations, and the exhibition will be held at University College, Gower Street. The exhibition will include all classes of electrical and physical apparatus for medical treatment. It will be held contemporaneously with the convention. Delegates will be present from America and the Continent, and representatives of the various foreign Governments will be invited to take part in a discussion as to the best means of providing apparatus and training for the army and navy. The papers and debates will be in English. Papers in French and German will be accepted provided a summary in English is sent. All papers will be reported either in *extenso* or in abstract in the *Archives of the Roentgen Ray*. The discussion on Roentgen and radium therapeutics will be under the charge of Dr. J. H. Sequeira, and medical men desiring to read papers or to take part in the discussion are requested to communicate with him at the London Hospital. The time required for the delivery of each paper should not exceed fifteen minutes. All other communications relative to the congress should be addressed to Mr. Ernest Schofield, Organizing Secretary of the Convention, 11, Chandos Street, Cavendish Square, London, W.

IN a paper on preparations of lactic-acid bacilli, read recently before the Chemists' Assistants' Association, Mr. W. H. Martindale, Ph.D., brought forward some interesting facts in regard to the production of sour milk and the preparations obtainable for the purpose. It has been stated that there are about 150 lactic-acid-producing organisms. The three bacteria which it appears most desirable to employ together for the production of sour milk for consumption are *Bacterium caucasium* (the Bulgarian bacillus), *B. gūntheri* (also known as *Bacillus acidi paralactici*), and *B. hūppe* (also known as *Bacillus acidi lactici*). Six preparations now on the market for this purpose were examined, after cultivating for ten and for twenty-four hours. All were found to contain *B. caucasium* and *B. hūppe*, but *B. gūntheri* was found in only one; one of them showed other organisms, and a second had developed cocci after twenty-four hours. Experiments were made on incubating milk after the addition of lactic or acetic acid, without bacteria; as was to be expected, if the milk was efficiently sterilized before beginning the incubation, no additional acid was produced, but when sterilization was omitted substantial amounts of acid were formed; in the milk so treated *B. hūppe* was identified, but no *B. caucasium*. A few experiments on the extent to which the casein was rendered soluble during the action of the lactic acid organisms pointed to such a change being effected to only a slight extent, but the matter was not conclusively dealt with; the proportion of the phosphate dissolved in the whey was found to be increased. Soured milk supplied by some dairy companies was examined in regard to the organisms present: *B. hūppe* was the prevalent form, *B. caucasium* being present in smaller quantity, and *B. gūntheri* also in half the samples examined.

CHELSEA CLINICAL SOCIETY.—The annual dinner of the Chelsea Clinical Society took place on March 4th at the Gaiety Restaurant, and was well attended. The chair was taken by Mr. A. F. Penny, the President of the society, who, in proposing the toast of the evening, described how the society had begun from a discussion held between Dr. Austin Cooper and himself twelve years ago. They then started the society at the old Chelsea Dispensary, with Dr. Foster Palmer as their first president. Societies like theirs, Mr. Penny added, contributed not only towards uniting the medical profession by the social influence of their meetings, but also aided the scientific advancement of medicine. Dr. T. Wright Parkinson, in replying, expressed the hope that medical men in Chelsea who were not members would attend their meetings and learn that it was not a mutual admiration society, but a society doing useful work. The Rev. Dr. Colisson, who also spoke, had a most enthusiastic reception, which was renewed on his singing, after repeated calls, "The Mountains of Moine." The toast of "The Visitors and Kindred Societies," proposed by Dr. Sevmour Taylor, was acknowledged by Colonel T. H. Hendley, the President of the West London Medico-Chirurgical Society. Dr. J. Blumfield, in a witty speech, then gave the toast of "The President and Officers of the Society." It was duly responded to by Mr. Penny, who expressed the obligations of those present to Dr. Collis Hallowes for his successful arrangements for the dinner.

British Medical Journal.

SATURDAY, MARCH 13th, 1909.

THE MARCHING SOLDIER.

It is astonishing that it should be necessary for a committee of the Advisory Board of the Army Medical Services to report in the year of grace 1908! "that it be an instruction to officers commanding that the order shall be given to men on the march in warm weather to open the jacket and shirt"; "that inefficiency and injury to health can be greatly lessened or abolished by allowing free evaporation of sweat to take place through the exposure of shirt and skin"; "that each young soldier should perform at least one march a week," and that "the load carried and the distance traversed in these marches should be progressively graduated."

The power to strike a decisive blow, the fate of a war, depend more than anything on mobility—on the marching power of the soldier—and this, as every schoolboy or girl knows who has been through a primer of physiology, depends on the training of heart and muscles, on the adequate supply of food and drink, on suitable clothing, and the proper provision of periods of rest. It is Gilbertian comedy to read the list of dignified names—Sir Alfred Keogh and Sir T. Gallwey, Sir Frederick Treves, and half a dozen colonels and lieutenant-colonels, with Drs. John Haldane and Pembrey as the *dei ex machina* behind this great reform—which allows Tommy Atkins to unbutton his coat when he is hot. The civilian is still to be left the advantage of being able to throw his off and carry it, rolled up, by a strap on a hot day's walk. The committee dare not go as far as that—yet. Let the poor sweating private be content with the buttons undone in front and his shirt open at the neck. Comic as it may be, there is tragedy behind—years of tragedy, of men commanded by officers who knew nothing of the elements of science or the simplest laws of health, officers who have handled the most perfect of machines, the living body of man, and have regarded it often from little other point of view than that of making it look smart and keep time like a wooden puppet dancing on a string. "All light infantry and rifles march with a quick short step; it is doubtful," says the committee, "if this is economical in a physiological sense" (or in boot leather), "and it is certain that it is opposed to efficient co-operation with men who have been trained to march at the ordinary pace." How many have been made to suffer and how many have been killed in times of peace by marches and reviews on hot days with stiff tunics buttoned up and the heavy loads of full marching order! "Free exposure of the shirt saved the body a loss of above a pint of water during a march of seven miles in two hours." "The loss of moisture produces a thirst which must be and is satisfied, and unfortunately not always from the most suitable source." "On a hot summer's day a march produced on soldiers in drill order as great an effect as a similar march in full marching order with 100 rounds of

"ammunition on a cool winter's day." "By frequent practice a man may develop his capacity to carry loads, but he can only raise to a limited extent his power of resisting the effects of a hot, moist, and stagnant air." "On a hot day, 79° dry and 67° wet bulb, five men during a march of seven miles in drill order lost by evaporation an average of over 3 pints of water."

The committee have found that the speed with which the pulse frequency falls to normal during a halt is the most valuable guide to the condition of the man. Training makes the return of the pulse to normal frequency very rapid. In the untrained and over-exhausted the pulse keeps frequent for a long time. We may note here that the recent work of Mr. Leonard Hill and Mr. Martin Flack has shown that the inhalation of oxygen brings down the pulse frequency, and sends up the blood pressure in the exhausted athlete; training consists in the development of cardiac power, so that the body obtains an ample supply of oxygen. The committee put forward some evidence that smoking lessens the efficiency, and recommend "that smoking in the ranks should be strongly discouraged," and there is reason to believe that cigarette smoking keeps the condition of the heart and vitality of the man below par. The few observations made on the drinking of water or beer on the march show no clear result; beer does not appear to be so great an offender as the cigarette; the latter escapes at present with comparatively little condemnation from the reformers. The committee, in their observations and recommendations, confirm the results obtained a decade ago in Germany by Zuntz and Schumburg, who in 1900 published a most valuable and suggestive monograph on the physiology of marching. They made very careful observations on young medical recruits, and determined the most suitable load, the distribution of the load so as not to interfere with the body movements, the length of march suitable for different conditions of the atmosphere, the effect of training, of a sore heel, etc., on the efficiency of the body as a marching machine, the adequacy of the rations, and so on. We may thank Heaven that the War Minister has a brother who is a distinguished and sound physiologist, and that he himself believes in the application of science to the affairs of daily life, and in the attainment of efficiency by science.

MYTHOMANIA.

WE are all familiar with the liar of the type of the Rev. Charles Honeyman in *The Newcomes* to whom Fred Bayham said: "Excuse the frankness of an early friend, but it is my belief that you would rather lie than not." Sometimes the tendency is constitutional as in the family of a famous historian—himself somewhat remarkable for inaccuracy—of whose daughters it was said that one lied because she could not help it, another because she thought it was right, and a third because she thought it was wrong! As lying is an ugly word, we are thankful to the inventor of the euphemism "mythomania." In the subjects of this disease lying may be unconscious. Charity makes us willing to believe that it is often this form which afflicts the people who make such wonderful statements about vivisection, vaccination, cancer cures, and the therapeutic virtues of certain methods of treatment—for we are sorry to say the mythomaniac is by no means unknown in the medical profession. The disease has its source partly in want

¹ Second Report on the Physiological Effects of Marching, by the Committee on the Physiological Effects of Training, Clothing, and of the Food of the Soldier.

of training in regard to accuracy of statement, for most children lie instinctively in self-defence, or out of vanity, just as those subject to authority lie to escape punishment or reprimand, and as artists lie *pour épater le bourgeois*. Partly it has its source in an overvivid imagination, partly in that "wish to believe" which is said to be the foundation of faith—the kind of faith that, in the too candid definition of the schoolboy, is the faculty whereby we are enabled to believe that which we know not to be true. This is probably the explanation of the strange disregard of truth which is often found in persons otherwise of the highest moral character. But it is not with the unconscious or half-conscious liar—or shall we say economist of the truth?—that we are here concerned, but with the conscious mythomaniac. This form of the disease the doctor has probably even larger opportunities of observing than the lawyer, although it was cynically said by Lord Justice Bowen—or some other judicial authority, for there are several claimants to the honour of the *obiter dictum*—that "truth will out, even in an affidavit." After all, for most people some sanctity hedges about an oath, and there is the possible penalty for perjury also to be considered. It would seem that, except in a few cases in which disgrace and perhaps something worse may attach to the confession of the cause of disease, a patient has no motive for lying to his doctor. That patients do lie, nevertheless, is within the knowledge of every one of us; but few perhaps realize the extent to which they lie.

The doctor who told Mr. Rudyard Kipling that "all patients were phenomenal liars where their 'own symptoms were concerned'" was evidently a man of wisdom ripened by long experience. Such a one, too, is Dr. Quintard, who not long ago gave the Société de Médecine d'Angers the benefit of what Iago calls his "own gained knowledge" of the subject. He makes all due allowance for shame, the dread of operation, and the loss of mental balance due to suffering. It is somewhat strange that he does not mention the *suppressio veri* practised by many who do not wish to have a secret fear confirmed; nor does he mention the lying which is one of the symptoms of hysteria or of the abuse of narcotics. Dr. Quintard, in fact, deals with the people who come to the doctor with the deliberate intent to deceive.

There is the gentleman who, with a breath reeking of alcohol, complains of cramps of the stomach, and swears that he drinks nothing but a mineral water even at meals. There is the lady who wishes to be sent to a fashionable health resort against the wish of her husband. There is the official who asks for a certificate that will get him a billet in the sweet South, which he covets on account of an asthma which has the awkward peculiarity of not manifesting itself by any outward and visible symptoms. There is the lady with a decayed molar who prefers that her suffering should be dignified by the name of neuralgia. There is the lady who wishes for a certificate that will give her a free passage to Lourdes to be cured of an appendicitis on the left side. There is the veteran with sciatica, which he attributes to a fragment of a projectile which has remained embedded in his gluteal region—not, surely, a noble part for a soldier to be wounded in—since he was hurt at Sedan, but who declines to allow the foreign body to be revealed by the x rays. There is the too common case of a widow who says she has already undergone an operation for fibroma, and pleads for another, but who is delivered from her

tumour in due course by a practitioner of the obstetric art. There are many more—but these are examples of the more ordinary varieties of conscious mythomania, and they are so common that many doctors in large practice are tempted to say in their haste that all patients are liars. They lie to excite sympathy, from the wish to pose as remarkable cases, to escape work, to impose on charitable persons, or for the mere pleasure of deceiving the doctors. We mention these instances not as exhausting the art of the mythomaniac, but for the edification of the young practitioner who may not have learned that for ways that are dark and for tricks that are vain the Heathen Chinee is a model of truth and honesty compared with many patients. It should be needless to insist that reliance should never be placed on the statements of a patient about another doctor, or about the opinions attributed to him, but, as we have too much reason to know, half the quarrels of professional life are due to this cause. As far as possible a doctor should form his opinion on things which he can see, or facts which he can discover by physical examination. Pediculosis may be the source of irritation on the skin of a duke's son as well as on that of a cook's son, and the most icy chastity does not exclude the possibility of syphilis.

INTERNATIONAL MEDICAL ETHICS.

THE subject of medical ethics has claimed a great deal of time and attention from the British Medical Association, and at the present moment the Central Ethical Committee has in preparation an index of ethical cases which may serve as the basis for a special ethical code. Many of the points raised are knotty ones, and there has been no little difficulty in arriving at a fair and equitable solution of some of the questions. It may, however, be stated that medical ethics are in a more advanced state in this country than in any other. We do not wish to imply by this that the German or French idea of what is ethical and what is unethical, because it may differ from ours, is either lax or unsound.

Ethics in medical conduct must necessarily depend on the members of the profession to whom the rules apply, and the views which they take as to the degree of protection upon which the individual members have a right to rely. The rules must also be influenced by the amount of protection which the law is willing to extend to regular medical practice; and it is probable that the chief reason why ethics in medicine are governed by stricter rules in this than in other countries is to be found in the fact that in no other country does the law of the land do less for the medical profession.

In medical ethics, however, there must be a certain number of fundamental points common to the conditions existing in all countries, and although these points have not yet been tabulated and formed into an ethical code, there is no doubt that such a code could be drawn up. About eighteen months ago, Professor Boas, of Berlin,¹ made a number of suggestions which he considered might serve as a basis for an international code. He has recently returned to the subject,² with special reference to an unfortunate difference between two medical practitioners in Pontresina and a doctor in Berlin. We do not propose to discuss this particular case, since according to our practice no judgement can be passed unless both

¹ *Berliner Aerztekorrespondenz*, 1907, No. 37.

² *Berl. klin. Wuch.*, 1908, No. 52.

sides have been heard and examined in such a way as to remove all doubt as to facts. But we wish to call attention to Professor Boas's suggestion, which seems to us wise and practicable. It is that at the forthcoming International Medical Congress, which is to be held at Buda-Pesth, the question of international medical ethics should be discussed in one of the chief sessions. It might not be possible to come to any definite conclusions which could govern international medical ethics, but, after various views had been brought forward, it would be competent for the meeting to elect a committee representing all European countries to consider the subject, to draw up a scheme or code, and to submit the same to the leading medical societies or associations of the various countries, which could either accept the code, or suggest amendments, or refuse it. The Committee could continue to act until a code could be produced which would prove acceptable to all countries, and after such approval had been obtained the code would be held to regulate the professional relations of foreign medical practitioners with one another. Professor Boas has chosen an opportune moment, and if his suggestion is taken up and developed along the lines indicated, thanks will not only be due to him, but will be freely given.

THE COMING ANNUAL MEETING AT BELFAST.

PREPARATIONS for the meeting of the Association in Belfast in July next are being vigorously carried on there. Nine subcommittees are at work in various departments, and every effort is being made to prepare for a large number of visitors from across the channel. The Lord Mayor has signified his intention of inviting the members of the Association to an evening reception in the fine new City Hall on Wednesday, July 28th. Several garden parties are being arranged, and it is hoped that those members who care for sailing may have an opportunity of indulging in that pastime on the waters of Belfast Lough, while enjoying the hospitality of one of the yacht clubs. Golfing members will be specially well cared for, as a large proportion of the local members of the profession are golfers, and some of them very successful ones. A special competition, of which particulars will shortly be published, is to be held at Newcastle, co. Down, which boasts of the most sporting links in Ireland.

THE REGISTRATION OF NURSES.

THE dissatisfaction felt by leading members of the profession in Ireland at the supposed exclusion of that part of the United Kingdom from the scope of the bill for the registration of nurses found expression at the annual meeting of the Leinster Branch held in Dublin on February 13th. As a matter of fact, however, the bill in its latest form does apply to Ireland (see BRITISH MEDICAL JOURNAL, February 13th, p. 419). Nevertheless, in accordance with the request of the Honorary Secretary of the Branch, we give the full text of the resolutions carried on the occasion, which he has been good enough to send us since the date of the first report:—Dr. Craig proposed, Sir W. Smyly seconded, and it was unanimously resolved: "That we do not approve of any bill dealing with the registration of nurses which does not contain clauses providing: (a) That the bill apply to Ireland; and (b) that the registration of a nurse confers no authority to practise any department of medicine." Sir W. Smyly proposed, Dr. Furlong seconded, and it was unanimously resolved: "That we think in future at least three years' hospital training should be

"insisted on in order to qualify a nurse for registration." Dr. Craig proposed, Dr. Furlong seconded, and it was resolved unanimously: "That in each country affected by the Act a register of hospitals should be kept by a Branch Council, who should be also empowered to examine and register nurses, uniformity of curriculum and of examination in the various countries being secured by the presence, when advisable, of inspectors or visitors. The register should be a general one, applicable to all parts of the United Kingdom." It may be added that another matter dealt with in somewhat summary fashion in the first report supplied to us was the Referendum and Charter. We now give the terms of the resolution passed, as officially reported to us by the Honorary Secretary. He states that correspondence with the South-Western Branch was read, and the following resolution was, on the motion of Dr. Kidd, unanimously adopted: "That, in the opinion of the Leinster Branch of the British Medical Association, it is necessary for the safe government of the Association that the Referendum be taken by a letter to every member of the Association, and on the requisition of half the Council." The Branch Secretary was instructed to forward a copy of the resolution to each of the Divisions in the Branch.

THE PRESS AND MEDICAL MATTERS.

A CORRESPONDENT of the *Times* takes it much amiss that we should have been made "the channel of information to the public and the medical profession upon a subject of great importance to both." The subject referred to is the Radium Institute lately founded on the personal initiative of His Majesty the King, as to the objects of which we obtained an official statement which we thought it our duty to circulate to the press. The writer in the *Times* hides his amiable personality under the pseudonym "F.R.C.S.," but we may say of his identity, what Sir Thomas Browne said of the name Achilles assumed when he hid himself among the women, that it is not beyond all conjecture. We confess we do not see the inconvenience either to the public or to the medical profession of which he complains. On the contrary, we hold strongly that a medical journal is the proper channel of information on medical matters. The information was obtained by us in response to several questions on the subject of the Radium Institute which had been addressed to us. It may be remembered that we alone furnished accurate information as to the institution at a time when most of the London daily papers allowed themselves to be misled by an inaccurate announcement. We do not seek to penetrate the motives of those who supplied that information, nor do we think it necessary to say anything as to the facility with which the newspapers suffered themselves to be beguiled into announcing to the public, with a journalistic *fanfare* of the most brassy quality, a communication which might have been easily recognized as coming from some doubtful source of inspiration. However "inconvenient," therefore, it may possibly be to individuals, we think that it is a very distinct convenience to the general public to have information on medical matters conveyed through a channel whose character carries with it a guarantee of the genuineness of the information with which it is its province to deal. We go so far as to say that the medical press should be the sole channel for the conveyance of information on such matters. As we have often pointed out, the mischief done by the publication of incorrect reports of scientific discoveries and imaginary marvels of surgery is beyond all computation.

SPIRITUAL HEALING.

SPIRITUAL healing is still receiving a considerable amount of attention. A meeting of the Church and Medical Union was held at Church House, Dean's Yard, Westminster, on March 8th, when Dr. Lullum Wood Bathurst read a paper in which, according to a brief report published in the *Times*, he seems to have "dealt faithfully" with those among the clergy who dabble in the unqualified practice of medicine, either in their own persons or by supporting persons who, whatever may be their spiritual gifts, have no medical training. He quoted from the *Church Times* significant statements to the effect that the movement within the Church had grown silently but surely, and that the records of its achievements were not known to the world, but were known to those who had a right to know. We may be allowed to remark on this that those who have a right to know are the public, and that the promoters of the movement are neither philanthropic nor wise in hiding their light under a bushel. Dr. Bathurst pointed out that, so far from any desire being shown on the part of the Church to co-operate with the medical profession in this matter, there was ample evidence of individual clergymen in responsible and even exalted positions actively supporting unqualified persons who, from the medical point of view, could only be looked upon as quacks and charlatans. One effect of the silent action on the part of the Church, referred to by the *Church Times*, was that the medical man was met with the difficulty, or the impossibility, of knowing what the Church proposed to do, the treatment its members intended to carry out, and the methods to be adopted. Still more vague were the qualifications of the "carefully selected persons" so often spoken of, to whose treatment patients were to be subjected. In conclusion, Dr. Bathurst suggested an inquiry and authoritative information from the Church on certain points, to enable an understanding to be reached between it and the medical profession. But we do not think the profession will be disposed to meet the Church unless she bates her pretension to the gift of healing the body. There is no doubt that in certain cases the clergyman can help the doctor, but he cannot, without danger to the community, be allowed to take purely medical functions upon himself. As showing the widespread interest felt in the Emmanuel Movement, it may be added that Dr. Henry Rutgers Marshall, of New York, has dealt with psychotherapeutics in the January number of the *Hibbert Journal*, and that "the healing power" forms the subject of an essay by M. A. Stobart in the *Fortnightly Review* for February, while Dr. A. T. Schofield discusses spiritual healing in the current number of the *Contemporary Review*. There is nothing, however, particularly new or illuminating in any of these articles. In an article published in the *North American Review* for February, Dr. Allan McLane Hamilton calls attention to a point which is generally forgotten or overlooked by the clergymen who are so anxious to co-operate with us in the healing of the sick. "In all this agitation," he says, "it would almost seem as if the intelligent physician had never made any use of psychotherapy, but that he was a mechanical giver of drugs and took little or no interest in his patients." He goes on to say, what has so often been said in this JOURNAL, that "if the new critics of the medical profession, who have been so active of late, would take the trouble to investigate, they would find among the great and successful men of all times and of to-day, that the human side is very strongly developed and that their patients are studied from every point of view and treated accordingly." We would add that the intelli-

gent application of the physician's knowledge of the influence of the body on the mind is a necessary condition of success in the difficult art of dealing with patients and reinforcing the curative power of Nature, or what comes to the same thing, enabling sufferers to work out their own deliverance from the thralldom of functional disease. All really great physicians have used this force, sometimes it may be unconsciously, but often with deliberate intent. It is the power of influencing the mind of the patient, or in other words, of exciting confidence in his "gift of healing" that makes what is called "personal magnetism."

FAILURE OF ANTIVACCINATION CAMPAIGN IN THE STATES.

THE petition for the abolition of compulsory vaccination in Massachusetts, backed by the State Antivaccination League, has failed to influence the Legislature, and "leave to withdraw" was reported by the Public Health Committee at a meeting of the Senate a few weeks ago. Last year Mr. Bonner, who was then the militant attaché of the Antivaccination League in this country, but whose services had to be discontinued for want of funds, entered on an American campaign. We have already recorded a glaring instance of misrepresentation by which his advent in Boston was heralded in the press. That misrepresentation was duly corrected in the Boston papers by correspondence from England. From a correspondent who has forwarded us press excerpts and particulars of the hearing before the committee, we gather that Senator Parker, as chairman, had a trying part to perform in an attempt to maintain order. The antivaccinators were allowed to consume much time, but instead of being grateful for this, they gave vent to their emotions, uttering groans or sneering laughter, at the statements by eminent physicians who came to oppose the petitions. Senator Parker attempted to treat them with courtesy, but it finally reached a point where the chairman had to threaten to dismiss the hearing. The correspondent adds: "Six of our most eminent physicians spoke from personal experience, and, as we say here, they put it all over the anti-vaccinationists." Mr. Bonner is stated to have announced to the committee his intention of becoming a citizen of the States as soon as the laws could permit. The provaccinists on the other side of the Atlantic are fully alert in watching the vagaries of this doughty agitator, and are ready to cope with his "platform facts." There is much boasting of what Mr. Bonner has done in this country in spite of the candid confession, officially made here by the Antivaccination League, of the almost complete failure of "our objects." The wild statements and grotesque theories propounded before the Massachusetts Senate Committee were such that the hearing is stated to have developed into a laughable affair at times. If the members of the Senate were familiar with the state of affairs in the House of Commons, they would know that whenever the subject of vaccination is mentioned by the leading antivaccination member it is a signal for peals of derisive laughter, and the complaint of the rabid antivaccinators in this country is that no responsible persons or authorities treat their remarks seriously.

RADIO-THORIUM.

PROFESSOR SODDY has contributed to *Nature* an account of radio-thorium. This body he assumes to be the same as that described recently in a telegram to the *Daily Telegraph*, on the authority of Dr. Bailey of Chicago, under the name of radio-thor or thor-rad X, and characterized as a very marvellous and remarkably efficient substitute for radium. After eliminating American hyperbole, it would appear that Dr. Bailey

has found that the body called radio-thorium exists in pitchblende from Colorado. The claims of Dr. Bailey to have made a new discovery are on the same footing as those of a miner who claims to have discovered a gold field. The results may be of great value, but it is impossible on this account to claim any scientific advance. Even the idea of using the active products of thorium as a substitute for radium is due to Professors Rutherford and Soddy, who have recommended that the manufacturers of the Welsbach gas mantles should first separate from the tons of thorium they require its radio-active portions. The products that could thus be obtained would be those claimed as a new find by Dr. Bailey. Radio-thorium is an extremely interesting body according to current views. Thorium changes first to meso-thorium, then to radio-thorium, and then to thorium X and a series of other products. Thorium itself emits alpha rays, meso-thorium emits beta rays only, radio-thorium gives out alpha rays, and thorium X gives out alpha rays. Meso-thorium, radio-thorium, and thorium X lose a half of their radio-active powers in seven years, two years, and four days respectively. There is a further extremely interesting chemical property to be noted. When thorium is precipitated by ammonia the precipitate consists of thorium and radio-thorium, which bear so close a chemical relation that they cannot be separated, while from the solution thorium X and meso-thorium can be recovered. As has been already stated, meso-thorium emits only beta rays, but from it radio-thorium giving alpha rays, is evolved in a comparatively short time, and it is possible to collect the whole of the radio-activity of large masses of thorium in minute quantities of matter. It is conceivable that pitchblende may prove to be a more convenient source than the Welsbach mantles for the production of radio-thorium, and it is probable that radio-thorium, from whatever source it can be best commercially obtained, will prove of very considerable medical value. The fact that it can be cheaply procured may render it to a large extent a substitute for radium.

AGGLUTININS, OPSONINS, AND LYSINS.

IN a second report on the haem-agglutinins, haem-opsonins, and haemolysins in the blood obtained from infectious and non-infectious diseases in man, made by Dr. L. S. Dudgeon to the Royal Society at its meeting on March 4th, it was stated that the blood in 14 cases of typhoid fever showed haemolysis on nine occasions. Those instances in which haemolysis occurred when the immune serum was added to normal red cells terminated fatally. In the remaining cases this action was demonstrated when normal serum was added to the immune red cells. Auto-haemolysis was proved twice, once during an attack of paroxysmal haemoglobinuria, once in a case of tertiary syphilis. Iso-haemolysis was found several times when normal serum was added to immune red cells, less frequently with immune serum added to normal erythrocytes. Auto-agglutination was an extremely rare phenomenon. In one instance spontaneous and auto-agglutination occurred, and in this case auto-haemolysis was also proved. Further experience showed that iso-agglutination occurred in normal blood, but not auto-agglutination. Haemolytic agglutinins were present whenever haemolysins could be demonstrated. The specificity of haem-agglutinins had been proved, and the absolute specificity of bacterial and haem-agglutinins had been completely demonstrated. The agglutination resulting from the interaction of a serum and certain red cells could be completely prevented by previously saturating this serum with the specific red cells heated to 60° C. for

one hour. Saturation of the serum with melanin failed to produce any effect. Haemo-phagocytosis was often well marked. The phenomenon usually resulted from the interaction of immune red cells, normal serum, and normal leucocytes. Haemolysins, agglutinins, and opsonins might be present together in a certain sample of serum, or the opsonins and agglutinins together, or opsonins singly. Usually, the agglutinins and opsonins had a distinct relationship.

TREATMENT OF SLEEPING SICKNESS.

THE report of M. A. Broden, Director of the Laboratory of the Belgian Colonial Society at Leopoldville, and of M. Rodhain, Director of the native hospital for trypanosomiasis there for 1907 and 1908,¹ deals chiefly with trypanosomiasis, as did its predecessors, though this part gives more details as to the treatment. Atoxyl, arsenic, the salts of antimony, atoxyl associated with strychnine, with mercury, with orpiment and with the salts of antimony, sublimate and methylene blue, have all been tried, but no more definite results have been obtained than by others, though they believe they have seen definite cure in 3 cases. The first was a lady who contracted the disease in 1903, the same case as has been reported on by Manson and others. She was treated with liquor arsenicalis (Fowler's solution); she remains in excellent health, and has had two children since then. The second case was that of Père D., treated solely with Fowler's solution; he had had no treatment since 1905, and in December, 1907, was in perfect health. The third case was Père R., who was treated first with Fowler's solution, then with atoxyl, and is now apparently quite well. All must allow that the first is an instance of cure, and as she and Père D. were treated with liquor arsenicalis alone, it might be well to go back again to this drug for routine treatment. In addition to the work on trypanosomiasis, the report contains notes on the treatment of syphilis and yaws, a paper on the *Poroccephalus moniliformis*, and remarks on leprosy, on filariae and on intestinal and other parasites. The laboratory is evidently doing useful work.

PLEVNA REVISITED.

THE famous siege of Plevna is not yet forgotten, although the thirty-two years which have passed have dimmed its memory. An interesting account reaches us through the Melbourne *Argus* of a visit recently paid to Plevna by Colonel C. Ryan, M.B., P.M.O. of the Victoria Military Forces, who served with distinction as a surgeon in the Turkish army throughout the Russo-Turkish war, and was the only Englishman present at the siege of Plevna. On his journey from Belgrade, he was reminded when passing Alexinat of a thrilling event. The Turkish position in the 1876 campaign was about a mile from the Servian army, and a certain Ahmed Bey, the strongest man in the Turkish army, overheard his commander-in-chief express a wish that a prisoner could be captured from the Servian lines. Ahmed Bey at once put spurs to his charger, and galloped straight off to the nearest Servian outpost. The Servian vedettes opened fire on him, but he kept to his course, marking down one sentry for his prey. The sentry fired, but missed him, and then, too late, started to run. Ahmed swooped down on him, grasped the man by the collar, and flung him easily across the saddle in front of him. Then he galloped back again, amid a rain of

¹ Rapport sur les travaux faits au Laboratoire de la Société Belge d'Études Coloniales à l'Hôpital des noirs et au Lazaret pour trypanosomies à Leopoldville (Congo, Belge). Bruxelles: Hayez Imprimeur des Académies Royales de Belgique. 1908.

pursuing bullets, and, untouched, delivered up his prisoner to his astonished commander-in-chief! Reaching Plevna, Colonel Ryan was struck by the change in the little town, which now looks prosperous, and where the inhabitants wear European clothes instead of the "frowsy national garb that the Bulgarians used to wear under Turkish rule." On the famous battlefield the old trenches can still be seen, though their sides have partly fallen in, and it was surprising to notice how close the range of fire was in those days, for the Russian guns were never more than 1,200 or 1,300 yards from the Turkish position. The Krishin redoubts were captured by Skobelev at the third battle of Plevna, and recaptured by the Turks the next day, amid scenes of frightful carnage: "these redoubts," he writes, "have been carefully kept in a condition of thorough repair, and they are still exactly as they were at the time of the battle. The No. 1 redoubt is three-sided, the open end when I saw it, a few minutes after the Turks had recaptured it, was filled with Russian dead, Skobelev's troops having utilized the dead bodies of their comrades to make a parapet, from behind which they fired at the charging Turks. This redoubt is now enclosed in a small reserve, called the Skobelev Park, where the memory of the Russian hero is kept green. A great mausoleum looks down upon the scene of the greatest of all the great fights of Plevna." The memory of Skobelev is still preserved with almost religious veneration, and a Bulgarian sentry stands on guard outside the little museum, with his bayonet fixed, protecting the relics of the hero, whose undaunted courage did so much to set Bulgaria free. Colonel Ryan succeeded in finding the house in which he had lodged during the siege, still inhabited by the same family, who gave him a warm welcome and recalled some wonderful adventures of the war. He asked them if they remembered how Skobelev took the redoubt while the bullets were pattering on their red-tiled roof and the family were crying all night; and in his turn he was reminded how he had found two Russian heads in a gooseberry bush in the garden which had been washed down by the flooded stream after the second battle, and how he had run into the house of a friendly neighbour and had eaten his hot dinner while the owner was hiding in a hole in the ground in terror of Russian shells. It will be remembered that Plevna, with between 50,000 and 70,000 men under Osman Pasha, resisted three attacks made on the town by the Russians, who, finding it impossible to take it by assault, determined to reduce it by siege and blockade. For three months the garrison held out, but by the end of that time it had reached the limit of human endurance. The short rations were telling on the men, and typhus, which had broken out with fearful violence, was threatening to annihilate not only the civilians, but the troops also. Thousands of unburied corpses were lying in the streets, the hospitals were overcrowded, and in a deplorable condition. As no assistance came, Osman Pasha determined to try and cut a passage through the Russian lines. Every able-bodied person accompanied the troops, even the doctors and hospital attendants marching with them; whilst 4,000 unfortunates were abandoned for more than three days in the hospitals and ambulances of Plevna, where very many of them died. The march was begun at night in a storm of sleet, but ammunition ran short, and after heavy fighting the Turks were compelled to surrender. The fall of the Bulgarian town decided the war, though it cost the Russians some 50,000 killed and wounded, and delayed the campaign nearly five months.

MINISTERS AND INFANT PRESERVATION.

THE Prime Minister, when he received recently a deputation which presented resolutions passed by the National Conference on Infantile Mortality, was accompanied by the President and Parliamentary Secretary to the Local Government Board, and by the President and Permanent Secretary to the Board of Education. Mr. Asquith, in a sympathetic reply, congratulated the conference on the fact that it had succeeded in obtaining recognition, in the form of legislation or administration, of no fewer than eleven out of the fourteen points stated by it as being of first-rate importance. The three points remaining were: (1) The teaching of girls in domestic hygiene; (2) infant foods; and (3) the extension of the Midwives Act of 1902 to Scotland. Mr. Asquith said that all would agree that in the evils comprised under these three heads were included causes co-operating to bring about bad results; there was the actual waste of child life, and the evil of the growth into womanhood and manhood of children who had never had a chance of developing into normal citizens. He was in hearty sympathy with the deputation, and any practical form of legislation which could be suggested would receive most serious consideration from the Government. Mr. Runciman said that the girls left elementary schools too young, and there was a difficulty in getting a supply of proper teachers of domestic subjects; the Board of Education was endeavouring to persuade training colleges to insist on their students possessing training in those subjects. He hoped that the teaching in the secondary schools would improve in this respect; he hoped much also from the evening schools, and believed that some impression had there been made on girls between 14 and 16 years of age. Mr. John Burns said that since the conference had commenced its labours two years ago there had been a saving of more than fifteen thousand children's lives in one year. The Local Government Board now had a department to inquire into the quality of foods, and he had directed a special investigation into the quality and character of baby foods. As it was found that infant mortality was greatest in houses where there was the largest number of children in one room, he hoped that two or three years' operation of the new Housing Bill, which must become law this year, would make a considerable difference; he also hoped that the Milk Bill would pass.

THE "SEX PROBLEM" IN A NEW LIGHT.

OUR readers need not be alarmed. We have no intention of discussing the eternal question of sex either from the matrimonial or the extra-matrimonial point of view. We do not feel that we have any mission to enlighten the world as to the inner mysteries of the erotic subtleties in which the modern novelist delights, or to find answers to the "obstinate questionings" of those to whom the relations between the sexes seem to be the centre of this universal frame of things. We are concerned merely with a question of nomenclature. Some time ago we were taken to task by a correspondent whom in an unguarded moment we had called a "lady doctor" and, by implication, a "female medical practitioner." "We don't call you," wrote our indignant correspondent, "gentlemen" or "males." She went on to say that a Frenchwoman once said to her, "We have got rid of 'distinctions zoologiques.' Have we? The French lady's—we beg pardon, woman's—remark reminds us of Johnson's old fellow student Edwards, who tried to be a philosopher, 'but cheerfulness was always breaking in.' In the same way we fear zoology will keep breaking in till some higher development

gets rid of sex altogether. In the meantime the difficulty of nomenclature must remain. If we could find equivalents to *medicus* and *medica* the problem might be solved, though even in these simple terms there is a sort of flavour of zoology that might be considered affronting by women who object to being described as female. The word, of course, has fallen upon evil days. Goldsmith wrote,

Where the poor houseless shivering female lies,

when he might just as well have written "woman." But, then, he was the author of a *History of Animated Nature*, and had not lost the sense of zoological distinctions. That "female" was regarded as the very reverse of insulting in Shakespeare's day is shown by Touchstone, when he says to his rival William, "Therefore, you clown, abandon—which is in 'the vulgar, leave—the society—which in the 'boorish is company—of this female, which in 'the common is woman." In the eighteenth century and in the first half of the nineteenth "female" was in constant use by persons who could not be suspected of any wish to insist on zoological distinctions. Fanny Burney, in 1786, described the Princess Royal as "the 'second female of the kingdom." The word "lady" has now, perhaps, suffered degradation from too indiscriminate use. We read the other day in the report of the trial of a "lady prisoner"; she was a mill hand, and should, we suppose, have been described in terms of zoology. When a distinguished lady—again we entreat forgiveness, woman—was elected to the chief magistracy of a borough, the newspapers evidently were in some difficulty about her designation. "Female mayor" would, of course, have been quite too zoological; "mayoress" appears to imply a male—the adjective excites in us no feeling of repulsion—mayor; "woman mayor" was, therefore, the description mostly used. But about our *doctoresses*: "Women 'doctors," which we see is used by a woman writer in an article kindly explaining why they fail, is too likely to be mistaken by the casual person for "woman's 'doctor," a specialist who to our forefathers would have been a "man-midwife." Therefore, as "lady doctor" is proscribed, the sole term left us is "medical 'woman," and we hereby renounce, abjure, and condemn with our whole heart and soul the use of any term in the slightest degree reminiscent or suggestive of zoology in describing those practitioners of the healing art who are not "gentlemen" or "males."

PROPORTIONAL REPRESENTATION.

In the February number of *Representation* attention is called to the progress of proportional representation in South Africa. The draft constitution prepared by the South African National Convention includes the adoption of proportional representation with the single transferable vote for all elections. The steps needed before the change can be introduced include the consent of the legislative bodies of the present colonies and the passing of an Act through the Imperial Parliament. The Proportional Representation Society does not hesitate to believe that the South African legislatures will ratify and the Imperial Parliament sanction the proposal. In the same issue of *Representation* is printed a very able article by Mr. Fischer Williams, the counsel to whom the bill of the British Medical Association for the amendment and consolidation of the Medical Acts has been entrusted, on the general aspect of proportional representation, with special reference to party politics. There is a note also discussing the terms of reference to the Royal Commission recently appointed

to examine the various schemes of election, with a view of advising the Government of this country in introducing a measure of electoral reform. Lastly, we may call attention to a pamphlet recently issued by the Proportional Representation Society dealing with the illustrative election held at Caxton Hall on December 3rd, of which a short account was given on December 12th, 1908. The matter is an extended reprint of the December number of *Representation*, but inasmuch as it places the whole method of the single transferable vote clearly before the public, we have no hesitation in recommending members who are interested in electoral reform to expend the sum of twopence on the pamphlet.¹

THE ROYAL NAVY MEDICAL SERVICE.

IT is understood that the First Lord of the Admiralty, in presenting the Navy Estimates, will make a statement with regard to the Committee which he has appointed to report on the Royal Navy Medical Service. We trust that the recommendations of this Committee may conduce to the welfare of the service, which, with the display of a little consideration and the exercise of a little common sense, might be made exceedingly popular. The extraordinary official secrecy which has been observed with regard to the very existence of the Committee which, it is an open secret, has been sitting for some months under the Chairmanship of Vice-Admiral Sir John Durnford, K.C.B., is a little disquieting, and has given the impression that Mr. McKenna has, perhaps, no very clear policy, and has not fully appreciated his own position in relation to the medical profession and to that not voluble section of the public from whose children all branches of the navy are recruited. The Committee may do good, but, on the other hand, it may do harm. The service is not popular, and its unpopularity is due to the blunders of First Lords who have not been at the pains to understand its problems. There seems some ground to fear that the present First Lord, misled perhaps by the titles borne by the junior ranks of the service, runs a risk of falling into the fatal mistake of supposing that the duties of a naval medical service are mainly surgical, whereas they are mainly medical and sanitary. We pointed out last week in commenting on the Army Estimates that a medical corps had three classes of duties—therapeutic, military (or administrative), and sanitary. If Mr. McKenna has not grasped this elementary principle, he will only add another failure to an already too long list. The First Lord should understand that young medical men of the type the navy wants are neither to be dictated to nor bribed, and unless he has the statesmanship and courage to resist the importunities of theorists unacquainted with the special needs of the navy, and faddists who would arrest all scientific progress by the muzzle and the question he will not succeed. The matter is not primarily a medical question; whether the number of young medical men who enter the Royal Navy Medical Service in any year is twenty or forty is not a question which seriously affects the economics of a profession with between thirty and forty thousand members. But Mr. McKenna's action in this matter is being closely watched by thousands of anxious parents, rich and poor, and it is no exaggeration to say that his decision will influence tens of thousands of votes at the next general election.

¹ The pamphlet and the journal are obtainable from J. H. Humphreys, Honorary Secretary Proportional Representation Society, 107, Algeron Road, Lewisham, or through Messrs. W. H. Smith and Son's bookshops.

FAYRER MEMORIAL PRIZE.

THE officers of the Indian Medical Service on the active list have subscribed a fund to found a prize in memory of the late Sir Joseph Fayrer, to be awarded at each half-yearly examination to the lieutenant on probation I.M.S. who obtains the highest number of marks in the subject of Pathology at the conclusion of the course at the Royal Army Medical College. The prize will consist of a medal with, in addition, a gift of books, should the proceeds of the fund permit. The memory of Sir Joseph Fayrer will always be honoured and cherished by those who knew him, and the prize will, it is hoped, assist in perpetuating his memory among the younger generation of officers who had not the privilege of knowing him personally.

THE Prince and Princess of Wales paid a visit, on March 10th, to the Royal College of Surgeons of England. Their Royal Highnesses were accompanied by Sir Frederick Treves, and were received at the College by the President, Mr. Henry Morris; the Conservator, Professor Arthur Keith; and the Secretary, Mr. S. Forrest Cowell. Their Royal Highnesses were conducted over the Hunterian Museum, and afterwards proceeded to the Council Chamber, where a special collection of specimens was displayed. The visit lasted about two hours.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Army Medical Department.—In introducing the Army Estimates last week Mr Haldane said: Now I wish to say a word or two about the health and well-being of the troops. I do not go into the figures of the wastage, though a remarkable diminution is shown in the statement which has been circulated. There is no department of the army to which we owe more than to the Army Medical Service. It was started by Mr. Brodrick in 1902, and has gone on continuously ever since, growing on the lines which he laid down, and the effect of it is that the wastage not only in war but in peace has diminished in the most remarkable way under the direction of Sir Alfred Keogh, to whom the army owes a great deal in this regard as the Director-General of the medical service in the army. There has been a very great improvement progressively in the last six or seven years in the health of the troops. For instance, there has been a very great decrease in the number of those invalided out compared to what it used to be. Then there has been a great decline in what I may call preventive diseases, and in places like the Mediterranean, largely owing to the work of men like Colonel Bruce and other officers in the Army Medical Service, Mediterranean fever and other diseases like that have almost completely disappeared. We have got to another stage, and that is inoculation against enteric. My honourable friend the member for Sleaford will be happy to know that our inoculations are all voluntary; but the result of that system, as far as it has gone, has been a remarkable diminution in the number of patients suffering from enteric disease, and very much brighter conditions for those on duty. The most recent changes that have been made in the case of medical development are the Malarial Commission, which is doing very good work, and the organization of the work of the Antienteric Inoculation Committee, and a very valuable Committee of Experts of very high standing, who have been sitting to inquire into the physiological effects with regard to the food and training and clothing of the soldier. They have remodelled the system of training under conditions which not only render it better, but get rid of the awful disease which we used to have in the army called soldier's heart, which was no doubt due to the stretching of the heart due to the somewhat exaggerated mode of training. There are other things that have been done. The question of sanitary training of officers is most important, so that going on the field there should be

officers who would know exactly what should be done in the way of providing conditions which would make disease unlikely. With that object examinations for sanitary purposes have been introduced for lieutenants on promotion. There are one or two minor matters which I may mention. A curious thing used to be the number of rejections of recruits because of the defective condition of teeth. We thought that that could be to some extent obviated. Some money was taken in the Estimate for seeing whether we could in the district treat recruits for their teeth so as to make them capable of passing the medical test. About 3,500 recruits who would have been rejected last year on account of defective teeth have had them put right at a cost of 6s. 8d. each, and have been able to recruit. We also succeeded in treating 3,500 other men actually serving at a cost of 5s. 9d. each to the taxpayer. I need not trouble the House with other details.

The Position of the Private Soldier.—A discussion on the social conditions of the private soldier's life was raised by Mr. Geoffrey Howard on going into Committee on the Army estimates. He advocated increased facilities for promoting temperance and more thorough training for employment in civil life after discharge from the army. In the course of his reply, Mr. Acland spoke of the improved facilities for education of young soldiers, and the improved sanitation of barracks, on which £16,000 would be spent this year. In referring to the sexual morality of the army, he said there had been a great change for the better during the last five or ten years. The result of the co-operation by chaplains, medical officers, and other agencies had been that whereas in 1897, of the six named groups of diseases which caused discharge from the army, the group of diseases due to this sort of excess came second (it was nearly the worst of all in 1897), in 1907 it had fallen to be practically the least of all. Putting it into figures, it amounted to this: That whereas in 1897 the discharges due to these diseases were 2.5 per 1,000 of strength, they had now fallen to 0.3 per 1,000. The admissions to hospitals were one-sixth of what they were ten years ago. Among other statistics showing evidence of improved health, there had been a decline of deaths from 1,336 to 1,091, and the number invalided had declined from 3,736 to 2,317. Towards the end of the evening Mr. Lupton made a protest against inoculation for typhoid fever, and concluded there was no justification for the practice. It was a degrading method, not a step in advance, but a retrograde step, taking us back 100 years. At this point the Prime Minister moved the closure, which was carried. The main question was then put, and the House went into Committee. On Tuesday night in Committee Mr. Lupton again raised the question of inoculation for typhoid, and referred to the proposal to inoculate for syphilis, which Mr. Haldane repudiated by an emphatic shake of his head. Mr. Lupton quoted some medical authority to the effect that soldiers inoculated for typhoid took twenty-nine days to recover, and the percentage of deaths was 6.5. With regard to Malta fever, he said the improvement was due to better sanitation. He also pleaded for vaccination to be voluntary, and ended by a denunciation of conscription. The vote for the men was then agreed to.

The Notification of Infectious Diseases.—Mr. Tyson Wilson asked the President of the Local Government Board if he could state under their separate headings the number of infectious diseases that it was compulsory to notify that were notified in England and Wales during 1908, with the number of deaths that occurred from each disease. Mr. Burns replied that the information obtained by the Local Government Board on this subject related to London and 256 boroughs and urban districts in England and Wales. Particulars with respect to the year 1908 were being collected, but the returns were not at present complete. The information obtained as regards the year 1907 was summarized at page xcii of the last annual report of the Board. In a later answer Mr. Burns said that he was informed by the Registrar-General that the only infectious diseases which were not ordinarily required to be notified for which he could state the number of deaths in England and Wales for any portion of 1908 were measles, whooping-cough, and diarrhoea. The figures for each quarter of

1907 and 1908, as published in the Registrar-General's quarterly returns, were as follows:

ENGLAND AND WALES.

	Measles.	Whooping-cough.	Diarrhoea.
1st quarter, 1907 ...	3,351	2,775	1,020
2nd " " " ...	4,219	3,036	1,077
3rd " " " ...	2,313	2,283	3,811
4th " " " ...	2,527	1,942	4,396
1st quarter, 1908 ...	2,460	3,804	1,011
2nd " " " ...	2,149	2,900	1,078
3rd " " " ...	1,129	1,593	11,119
4th " " " ...	2,172	1,257	4,689

Water Supply.—Sir George White asked the President of the Local Government Board last week whether his attention had been called to the condition of the water supply at Terrington St. Clement and other places in the district of Marshland, North-West Norfolk, where many families were dependent upon pit or pond water, with the consequent danger to health; and, if so, whether he was willing to grant a local inquiry into the circumstances. Mr. Burns said that his attention had been called to the condition of the water supply of this district, and he had been pressing on the rural district council the need of their dealing with the matter. The district council had within the last few days applied to him to direct a local inquiry on the subject, with a view apparently to the formulation of a scheme of water supply. The application was now under consideration, but he would point out that it was the duty of the district council themselves to take such measures as might be necessary to secure a proper supply of water for their district, and to determine in the first instance on the scheme to be adopted for this purpose. Mr. Leif Jones asked a further question as to legislation to obtain powers to take water rights, and Mr. Burns replied that if it were possible to get through this year a bill giving local authorities greater facility of access to water supplies he should be disposed to take that step.

Tuberculosis in Milk Cows.—Mr. Ellis Davies asked the President of the Local Government Board whether, in view of the report of the Royal Commission on Tuberculosis in Animals that the disease might exist in the living animal without detection save by the tuberculin test, the Board proposed to insist upon such test in the case of all milk cows; and, if so, whether the Government proposed to compensate the owners of animals which were proved to be tuberculous only by the application of the test, and were subsequently destroyed in the interest of public health. Mr. Burns said that he had in preparation a bill dealing with the better supply of milk and the regulation of dairies; but he could not undertake to say in anticipation of the introduction of that measure what proposals the Government might decide to make with regard to the matters referred to.

Carcasses Seized for Tuberculosis.—In answer to Mr. Courthope, who asked the number of carcasses seized, and how many were condemned for tuberculosis, Mr. Burns said that he was not at present in a position to give the information desired. The medical officers of health had been requested to include in their annual reports for 1908 information as to the action taken under Section 117 of the Public Health, 1875, or Section 41 of the Public Health (London) Act, 1891, as the case may be, and they had been also requested to state the number of carcasses and parts of carcasses condemned for tuberculosis. When this information was obtained he would be happy to grant a return on the subject.

Fibroid Phthisis in Quarry Workers.—On Tuesday, in answer to Mr. Ellis Davies, Mr. Gladstone said that the Committee on Industrial Diseases had reported that the incidence of fibroid phthisis in slate quarries had been established in some instances. In the case of the Cornish mines special rules were established after an

exhaustive inquiry, which showed extensive mischief owing to the use of machine drills. In the case of the slate mines and quarries, there was no evidence that the disease prevailed to a serious extent, and much of the drilling, he understood, was done by hand, involving much less exposure to dust. The question, however, of extending the precautions adopted in the Cornish mines to all cases in which dust of an injurious character might be produced by rock drilling had not been lost sight of, and the working of the existing rules was being carefully watched. The Royal Commission on Mines was, he believed, shortly to reach that part of its inquiry which had to do with conditions of health and safety in metaliferous mines and quarries, and it would be desirable that the matter should be considered by them.

Infant Mortality.—In answer to Lord Castlereagh, who asked about the death-rate of infants born in workhouses and workhouse nurseries, and how it compared with the ordinary infant death-rate, Mr. Burns said that he had seen the figures on this subject in the Minority Report of the Royal Commission. He did not think that these figures could properly be compared with the ordinary figures of infant mortality, for, as the authors of the Minority Report themselves recognized, it was never satisfactory to compare the mortality rates of institutions having only limited numbers of inmates placed under exceptional circumstances and having peculiar antecedents with those of the population at large. The subject was of much importance, and it was being carefully examined.

The Inebriates Acts.—Mr. Cecil Harmsworth asked the Home Secretary whether, before introducing a bill to amend the Inebriates Acts, he would consider the desirability of collecting evidence, whether by means of a Select Committee or otherwise, as to the efficacy of some of the methods of drug treatment in the cure of inebriety. Mr. Gladstone replied that the recent Departmental Committee advised that "no good purpose could be served by making a further or more extended investigation into the value of existing methods for treatment of inebriety by the use of drugs." He concurred in that opinion, and was not prepared to delay legislation, which was urgently required.

The Report of the Vivisection Commission.—Mr. Gladstone informed Mr. Gooch last week that the preparation of the report was being proceeded with, but owing to the large amount of evidence that had been taken and the technical nature of much of it, considerable labour was involved, and it was difficult to indicate exactly when the report was likely to be presented.

Street Accidents (Medical Fees).—Mr. Weir asked the Home Secretary if he would state the fees payable to doctors and veterinary surgeons respectively for attending accidents in the streets and for giving evidence thereon in police courts. Mr. Gladstone replied that the following were the fees payable: (1) To medical men: For attending casualties, 3s. 6d., if between 7 a.m. and 7 p.m.; 7s. 6d. if between 7 p.m. and 7 a.m. For giving evidence, 10s. 6d. for each case, if within two miles from residence, and for each additional mile 2s. 6d., with a maximum total fee of 21s. (2) To veterinary surgeons: For attending injured horses, 10s. 6d.; for slaughtering, if necessary, 5s., or, if a Greener's humane killer was used, 10s. 6d. He understood that veterinary surgeons never had occasion to give evidence in accident cases.

The Public Health Officers Bill to amend the law relating to the tenure of office of medical officers of health and sanitary inspectors, and for other purposes, was introduced by Sir Walter Foster on Tuesday last. The second reading is put down for April 16th.

New Bills.—The following new bills have been introduced and ordered to be printed: The Nurses' Registration Bill, by Mr. Munro Ferguson; the Nurses' Registration Bill (No. 2), by Mr. Findlay; the Asylums Officers' Superannuation Bill, by Sir W. Collins; Death Certificates (Charges) Bill, by Mr. Gill; the Oaths Bill to facilitate the administration of oaths by uplifted hand, by Mr. Bramsdon; and the Public Health (Provisional Orders) Bill, by Mr. George Thorne.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

LEEDS.

THE MEDICAL INSPECTION OF SCHOOL CHILDREN.

THE arrangements which have been made for the medical inspection of school children by the Education Committee of the Leeds City Council have excited a good deal of interest among the members of the profession of Leeds, and call for some comment. It will be remembered that the Medico-Political Committee of the British Medical Association circulated among all the Divisions a report dealing with many points arising in connexion with the medical inspection of school children, including the various methods and rates of remuneration. It was pointed out that the inspection might be carried out by a whole-time medical officer with junior or assistant medical officers under him. In this case it was suggested that the salaries should be not less than £500 for the senior and £250 for each of the juniors, travelling and other expenses being met by the Committee. In the event of payment per head being adopted, it was suggested that 2s. 6d. a head should be the minimum fee. For part-time officers the Association recommended a system of payment already in operation in London—namely, that the salary should be based upon the time devoted to the work, and that the minimum should be £50 per annum in respect of each school session of two hours per week. The opinion of each Division was specifically asked for as to the rate of remuneration, and at a meeting of the Leeds Division held on January 29th, 1908, a resolution was passed approving of these rates. It is indeed matter of regret that the Divisional meetings of the British Medical Association are not well attended in Leeds. On this occasion the attendance was only 22, the total membership of the Division being 155. The report had, however, been circulated and the business announced on the agenda paper, and so the opinion expressed must, especially as the meeting was unanimous, be regarded as that of the Division. After much deliberation the Education Committee recommended to the City Council the appointment of a medical officer to devote the whole of his time to the inspection of school children in Leeds at a salary of £350. They also recommended the appointment of medical practitioners to assist in the work; these to be prepared to devote one, two, or three half-days in the week to medical inspection at a remuneration of one guinea for each half-day's service of thirty examinations. When these recommendations came before the City Council, they were modified in this respect—that the appointment of the whole-time medical officer was negatived, and it was arranged that the general administrative work should be placed in the hands of the present medical officer of health. The number of part-time medical officers to be appointed was discussed, and though no actual number was decided on, it was generally understood that a large number would be appointed. The matter next came before the Executive Committee of the Division in this way. When the advertisement—which was inserted in the local press—was sent to the BRITISH MEDICAL JOURNAL, the discrepancy was at once noticed between the scale of fees formerly approved of by the Division, and the much lower scale of fees in the advertisement. The Medical Secretary therefore communicated with the Secretary of the Division, and a meeting of the executive, followed at the earliest possible date by a meeting of the Division, was held to discuss the matter. This meeting was held on January 20th. There was an attendance of twenty-two members. Dr. T. Wardrop Griffith was in the chair, and explained the reasons for the meeting being summoned. He also stated what was common knowledge—that the Leeds Education Committee during their deliberations had been approached by Dr. Hawkyard and Dr. Woodcock, the chairman and secretary of a newly formed association of medical practitioners of Leeds and district. Both these gentlemen, who are members of the Division, were present and spoke at the meeting. The general feeling of the meeting was that the pay was quite inadequate. If on the one hand an afternoon's work was to be regarded as two hours' work, then the examination of thirty children other

than in a perfunctory manner was not possible; if, on the other hand, the thirty children were examined in anything approaching a satisfactory manner the amount of time to be devoted to them would render the remuneration of one guinea absurdly small. It was confidently asserted by one speaker that notwithstanding the statement in the advertisement that the number of cases to be examined was thirty, if it was found—as Dr. Wardrop Griffith was certain it would be found—that this could not be done in two hours, the payment of one guinea for the afternoon's work would still be forthcoming, but he pointed out that this was certainly not what was said. It was understood that a large number of applications had been sent in, many of them by members of the Division. It was felt that it would not be right at the eleventh hour to call on members either to withhold applications or to withdraw them. There was no doubt that an adequate number of applications would have been received even if every member of the Division had loyally fallen in with such a suggestion. All that was done, therefore, was that the chairman, Dr. Griffith, along with Dr. Eddison, Dr. Hawkyard, and Dr. Allan, the Secretary of the Division, were appointed to seek an interview with the Education Committee as soon as possible and lay the views of the Association before them. This was done, and the deputation, which consisted of Dr. Griffith, Dr. Hawkyard, and Dr. Allan, went before the Committee on January 27th. When Dr. Griffith, who acted as spokesman, pointed out the impossibility of medical men examining thirty cases in two hours or two and a half hours, he was immediately met by the statement of one of the members, which was ratified by the chairman, that it did not matter within reasonable limits how long was taken over the examination; the essential thing was that one guinea was the fee for thirty examinations, and that if desired the medical men might spread these examinations over two visits. Dr. Griffith's obvious rejoinder to this was that in this case the amount of time necessarily and very properly devoted to the examination of thirty children was going to be very inadequately represented by the payment. The chairman then told the members of the deputation that the committee had not decided on the scale of remuneration without consultation with representatives of the medical profession—which, of course, they knew—and that no less than eighty-nine applications had been received. Dr. Griffith said he knew that this was the case, that the remuneration was, all the same, far too small, but that, fully acquainted as he was with the character and calibre of most of the men who were applying, he did not doubt the work would be conscientiously done. Though the two representatives of the new association doubtless did their best to obtain fair terms for the profession, yet one cannot help feeling that had the members of the Leeds Division of the British Medical Association attended the meetings in good numbers and regularly, an important question of this kind would not have been decided in the way it has, but in harmony with the legitimate and reasonable wishes of a united profession. The scheme as above described has not passed without criticism from other quarters, and it has had to be modified as the result of an interview with Dr. Newman, Chief Medical Officer of the Board of Education. The general supervision of school inspection will remain, as was suggested, in the hands of the medical officer of health; under him will be a part-time general medical practitioner, who will act as supervisor of the other medical inspectors; and, finally, the number of medical inspectors to be appointed is not to exceed twenty. The matter must for some time be in the experimental stage. It is confidently anticipated that the committee will become alive to the error of its ways, and raise the rate of remuneration. Indeed, it is by this expectation that many men have been influenced in their decision to send in applications.

MANCHESTER AND DISTRICT.

THE COST OF MEDICAL TREATMENT OF SCHOOL CHILDREN.

It is very evident that the education authorities in Manchester and the surrounding districts have a serious task to face if they really intend to prevent the whole cost of the medical treatment of school children falling on the

rates. They seem very properly to have made up their minds that those parents who can afford to pay for any treatment advised by the school inspectors shall be compelled to provide it at their own expense. Assurances have been given by the authorities of Manchester and Salford and other districts that only certain classes of cases shall be dealt with for the present, and that treatment shall be provided free only when the parents cannot otherwise obtain it. On the other hand, it is clear that many parents will take the ground that they, as the natural guardians of their children, have the sole right to decide when their children shall undergo treatment, and that if the authorities advise treatment of any sort the authorities must pay for it. If this contention were granted it would certainly result in many parents deliberately shutting their eyes to the necessity for treatment, and relying on the medical inspectors not only advising but furnishing any treatment needed, and unless the authorities are quite firm and resolute now at the beginning of the movement, there is danger that the whole of the treatment will fall on the rates. Another argument that is being used by people who are quite well able to pay is that in many cases treatment is advised not so much in the interests of the individual children as in the interests of the community, and in such cases the community should pay the cost. The free treatment of all cases of infectious fevers in the municipal fever hospitals has lent some force to this argument, as it is almost unheard of for the municipal authorities to ask even well-to-do people to pay for such treatment, except, of course, where private wards have been used. That the authorities are fully alive to the danger of a serious imposition on the rates by those who have no right either legally or morally to free treatment is shown by two cases which appeared in the law courts last week. At Eccles a man, described as a commission agent and presumably in a position to pay for treatment, was charged at the instance of the Eccles Education Authority with having unlawfully and wilfully neglected his daughter, aged 10, in such a manner as to be likely to injure her health. The Town Clerk stated that the charge was made under Section 1 of the Prevention of Cruelty to Children Act, 1904, which provided that any person over 16 years of age having charge of a young person under 16 years of age, who wilfully neglected a child in such a manner as to cause injury to its health, including the sight, was guilty of a misdemeanour; the Town Clerk added that this also implied the absence of reasonable care.

The Town Clerk and the Medical Officer of Health, who is also school medical inspector for the borough, showed that the defendant had received several notifications to provide his daughter with spectacles. The medical inspector said that he had examined the girl four times since last September, and that she was suffering from myopia of such a degree that it was quite necessary for her to have spectacles. The school teacher at the school where the girl attended said that she was suffering, both physically and mentally, from defective eyesight; that she could not see to read without placing the book close to her eyes, which caused great eye-strain; and could not distinguish figures on the black-board. As this was the first case brought before it under the Act, the bench inflicted a mitigated penalty of 20s. and costs. Another case, which is not exactly one of medical treatment, but will fall under the care of the school medical inspector, came before the Manchester County Bench. The Levenshulme Education Committee summoned a man for the cost of a number of meals supplied to his two children. Altogether the children had had thirty meals each, at a total cost of 10s. The defendant pleaded that he had not been able to provide meals, as he had not had a full week's wages for many months. The education officer, however, proved that in the last two months he had received £9 12s. 6d. in wages. The magistrates ordered him to pay 2s. 6d. a week till the amount was paid, together with the cost of the summons. While those cases may serve as warnings to other parents, it is to be hoped that the authorities will not allow their present good intentions to be gradually weakened and worn away by repeated attempts to obtain free treatment on the part of those who can well afford to pay private practitioners.

RETURN CASES OF SCARLATINA.

It was stated last week in the Salford Town Council that complaints had been received from Pendlebury that cases of scarlatina had been dismissed from the Salford Sanatorium before they were free from infection, and that as a result fresh cases had occurred. The chairman of the Health Committee promised to make careful inquiry into any specific case that could be brought forward. A short time ago, too, the Salford Corporation was threatened with an action for damages on the ground that a patient with scarlatina had been dismissed too soon from the sanatorium, with the result that other children had caught the infection. The greatest sympathy must be felt with the health authorities, and especially with the medical superintendent of the sanatorium, when any of these cases arise, as it is known that they cause the greatest anxiety, and that every possible precaution is taken to prevent them. Medical men of course know the difficulties; they know that it is impossible to say at any time that a particular patient is free from infection as the nature of the infection is quite unknown, and the demand of the public for an absolute statement cannot be complied with. The Salford authorities act on the presumption that desquamation has nothing to do with infection, and cases are sent out while still freely desquamating. The public, on the other hand, have a firm conviction, which not so long ago was encouraged by authorities, that the peeling is infectious, and on this account nothing is so common for doctors in Salford to hear as the statement that there has been carelessness in dismissing patients when really the greatest possible care has been exercised. As a matter of fact, it is stated by the authorities that since they have begun to neglect desquamation as a factor in infection and to pay special attention to nasal and other discharges there have been fewer return cases than formerly, when the cessation of desquamation was regarded as the test of freedom from infection. The total number of return cases in Salford is not stated, but in Manchester, in 1907, there were 86 cases notified as having possibly arisen from eighty patients discharged from Monsall Hospital. It should be stated that in reckoning these, no "time limit" was taken; all cases being included, however long the interval between the discharge of the first and the onset of the second case. If a month is taken as the time limit, as is done in some towns, the cases which were possibly infectious when discharged form 4.5 per cent. of the total number discharged. In 1906, when patients were only detained in hospital four weeks, the number of returns was much higher, and accordingly, in 1907, the medical superintendent thought it advisable to regard cases apparently free from infection at the end of four weeks with some suspicion, and to detain them a few days longer. On this account, probably, the return cases are much fewer. At Baguley Sanatorium the patients causing return cases are 2.36 per cent. of the total number discharged. There can be no doubt that secondary cases would have been far more numerous if all primary cases had been treated at home, that is to say, the existence of return cases cannot be taken as any argument against hospital treatment.

Far more serious is the question whether return cases are not more fatal; in other words, whether the fever hospital does not tend to maintain a more severe type of the disease. On analysis of the deaths in Manchester the Medical Officer of Health finds that return cases do actually show a higher case fatality, but the fact that they generally occur at a younger age than the average cases may partially account for this, as the disease is more fatal the earlier in life it occurs. After all there does appear to be a special infectivity derived from aggregation in hospitals, and Dr. K. Gordon agrees with Dr. Niven's suggestion that there is in each patient an intrinsic infection derived from the original ailment, and an extrinsic infection obtained from other patients, the nose and nasopharynx acting as a sort of incubating chamber for germs derived from other patients. This is supported by the fact that, by separating convalescent from acute cases the return cases have diminished. Dr. Gordon now goes even further, and, though it is quite impossible to have separate wards for severe and mild cases, tries to do everything possible to isolate bad types of the disease. Screens are placed round their beds hung round with sheets damped with izar, and the nurses attending the bad cases have to use special gloves which are kept in bowls of izar at each

patient's bedside. In view of this special hospital infection it is not desirable to urge removal to hospital of cases that can be properly isolated at home, but Dr. Niven does not think it reasonable to contemplate dispensing altogether with removal to hospital, though it has frequently been suggested of late years. It may be noted that at the present time there is a very extensive epidemic of scarlatina at Stockport, and the hospital has been so crowded with cases that several have had to be refused admission, and it has not been possible to provide proper accommodation for the isolation of cases of diphtheria and enteric fever.

LIVERPOOL.

THE HESWALL POOR LAW SANATORIUM.

At a recent meeting of the Liverpool Select Vestry it was decided to confirm a recommendation of the Finance Committee declining to sanction an extension of the Heswall Joint Hospital. The proposal was to add to the institution a bungalow, to cost £1,000, for the provision of twenty-five beds. The Vestry's share would be £400. For the extension, it was argued that it would materially reduce the average cost per bed of the entire establishment. The majority of the board, however, inclined to the opinion that the results of the treatment in the way of "cures" were not such as to justify any further expenditure. It was stated that this opinion was based on the view that the benefits conferred were not in any sense commensurate with the expenditure involved, which now worked out, it was stated, at £500 per bed. It was pretty generally admitted that the great drawback was that most of the patients who were sent to the Heswall Hospital did not come within the control of the vestry at a time when the disease could be successfully dealt with, but only sought assistance when they were in a state which was practically hopeless. It was stated that at the present time the Health Authorities of the city had under consideration the question of treating consumptive cases in one general scheme for the whole city, which would, of course, be more economical.

BIRMINGHAM.

BOVINE TUBERCULOSIS AND THE BANG SYSTEM.

The Health Department of the city of Birmingham has issued a report by Mr. Dexter, Deputy Chairman of the Health Committee; Dr. Robertson, Medical Officer of Health; and Mr. Malcolm, Veterinary Superintendent, on the prevention of tuberculosis amongst cattle in Denmark. These gentlemen visited Denmark with the special object of studying Professor Bang's method of eradicating the disease. The system employed aims at the gradual eradication of infection by segregation and isolation rather than by slaughter. The only animals destroyed are cows with tuberculosis of the udder and "wasters" which exhibit well-marked and extensive generalized tuberculosis, and are, therefore, manifestly dangerous to others. The essentials of the method are: (1) The application of the tuberculin test to entire herds; (2) the complete and permanent separation of all reacting from non-tuberculous animals; and (3) the gradual rearing up of a healthy stock from the reacting animals. This last object is attained by the separation, immediately after birth, of all calves born of tuberculous cows, and the feeding of such calves, either with normal milk or with milk heated to a temperature sufficient to kill any tubercle bacilli it may contain. The writers were very favourably impressed with what they saw, and report as follows:

1. Bang's method has proved itself in Denmark during the past sixteen or seventeen years to be a practicable and economical method of ridding herds of dairy cattle of tuberculosis.

2. We consider it to be a method which may equally well be introduced into this country with a probability of even better results ensuing than have been met with in Denmark.

3. The method is somewhat slow in operation but has the advantage of not being costly, and of causing little or no disturbance to the trade of the milk producer. (A warning is necessary against the indiscriminate slaughter of cows reacting to tuberculin on account of the cost which such slaughter occasions.)

4. The difficulties met with in practice are neither numerous nor serious, and, apart from those relating to accommodation and the labour involved, they are likely mainly to arise from

the want of appreciation of the fact that tuberculosis is an infectious disease, spread like other infectious diseases in a number of ways.

Amongst the examples of successful treatment by the Bang system the writers quote the experience of Sir O. S. Oxholm in South Zealand. He commenced the Bang treatment in 1895, and then found that, out of his total stock of 448 cattle, 350, or 78.1 per cent., reacted. In 1908, thanks to the continuous application of the Bang system, he possessed 784 presumably healthy cattle; all these were tested, and only 19, or 2.4 per cent., gave a reaction. The Birmingham deputation asked Sir O. S. Oxholm what it had cost him to eliminate tuberculosis from his herds, and were informed that, instead of there being any loss, he had derived considerable profit. The milk producer with a clean herd reaps a substantial advantage, inasmuch as he is allowed to sell his milk as "baby milk," which, by Government order, must be the product of cows certified free from tuberculosis; and the retail price of such milk is approximately twice that of ordinary milk. The authors conclude their report with the following recommendation: "Pending the introduction of a Government bill, very good results could, we think, be obtained by Birmingham, and at very little cost to the corporation, if dairy farmers supplying milk to the city were offered the necessary tuberculin and veterinary advice on the lines set out in the report of the medical officer to the Health Committee on May 11th, 1908." In the report referred to it is proposed:

That in the first instance dairy farmers supplying Birmingham with milk should have their herds tested at the expense of the municipality, and should have the benefit of the advice of the corporation veterinary staff, provided they discarded wasters, separated the infected from the non-infected, and carried out certain other simple precautions which would in due course eliminate tuberculosis from their herds at very moderate cost to the municipality, and probably at an equally small cost to the dairy farmers.

LEICESTER.

HOSPITAL SATURDAY FUND.

The report of the Hospital Saturday Fund for the city and county of Leicester for the year 1908 contains some rather striking figures. The fund has only been some eight years in existence but in that short time has made remarkable progress. Eight years ago the total subscribed by workpeople was little over £3,000, while last year this amount was more than quadrupled in spite of the fact that during that period Leicester was in the throes of serious trade depression. A sum of £12,000—approximately that collected—far overtops, in proportion to population, the collection of any other Hospital Saturday Fund. Furthermore, the expenses of collection and administration, which appear to be well under 4 per cent., compare most favourably with those of the majority of similar funds in other cities. Of the total available sum some 70 per cent. is annually allotted to Leicester Infirmary, and the rest spent on the maintenance of patients in the Fund's own and other convalescent homes. In view of this fact, the success of the Hospital Saturday Fund at Leicester may be regarded as in no small measure a testimonial to the infirmary, and as a sure proof of the esteem in which that institution is held by the population. It has been estimated, indeed, that in one way and another the infirmary receives an amount equal to one-half its annual expenditure from the working classes. If other Hospital Saturday committees could show equally good results there would be little fear for the continued prosperity of voluntary hospitals, and no room for even academic discussions as to the possibility of replacing them by rate-supported institutions.

WALES.

GLAMORGAN SANITARY COMMITTEE.

Midwives.—At the quarterly meeting of the Sanitary Committee of the Glamorgan County Council, Dr. Williams, county medical officer, reported that there were on the last published roll of the Central Midwives Board the names of 648 women residing in the administrative county. From replies received by him it appeared that 554 had signified their intention to practise, and there were 60 uncertified midwives practising in the county who could continue to do so until April, 1910. Of the 554 certificated practitioners, 457 had received their certificates on account of

having been in bona fide practice since July, 1901. The remaining 67 held certificates of training. The report stated that Nurse M. Evans, the inspector under the Midwives Act, had during the quarter visited 231 midwives, of whom 6 had attended the lectures at the University College, Cardiff, but had not presented themselves at the examination of the Central Midwives Board. On the motion of Dr. T. H. Morris, it was decided to recommend that a communication be sent to the Local Government Board calling attention to the number of women receiving theoretical training in midwifery, and expressing the opinion that only a small percentage of those receiving that education would be able to pass the examination, and that, inasmuch as many of those unable to pass were practising, and would probably continue doing so after 1910, it would be difficult for the inspectors of midwives to find out those who were legally practising unless the Local Government Board could see its way to ask the Government to put a column in the Register of Births, so that the person registering could give the name of the midwife in attendance, and thus enable her to be visited by the inspector. A report was also presented upon the training of midwives, in which it was suggested that the number of 45 free studentships in theoretical and 9 scholarships in practical instruction should be reduced, and scholarships awarded for complete courses of training, which would result in at least 25 fully-trained midwives being turned out annually without further cost, instead of 9 as at present. The report was referred to the Education Committee.

Health of the County.—Dr. Williams's quarterly report upon the health of the county showed that 295 cases of diphtheria had been notified, as against 209 in the previous quarter; 910 cases of scarlet fever, as against 610; and 112 cases of enteric fever, as against 110. Dealing in detail with the districts of the county, the report stated that the public slaughterhouse at Barry was much appreciated, but nothing further had been done in the matter of providing a public slaughterhouse for Briton Ferry, where it was urgently needed. The committee decided to inform the Briton Ferry Urban District Council that unless something was done by the next meeting of the committee the facts would be reported to the Local Government Board. It was also decided to send a similar communication to the Penarth Urban District Council. It was decided that no grant be made to the Barry Council in respect of its infectious diseases hospital until certain repairs, extensions, and additions had been carried out. It was reported that the negotiations between the Briton Ferry Urban Council and the Neath Rural Council for the provision of a joint hospital had ended, the latter council having decided upon an institution of their own. It was stated that the infectious diseases hospital at Penarth was the most appreciated public institution in the district; little or no trouble was now experienced in persuading parents to allow their children to be taken to the hospital for treatment. It was stated that Bridgend had been very free from infectious diseases of late years. In regard to the Garw and Ogmore infectious disease hospital at Blackmill, Dr. Williams stated that it was quite evident the hospital was beginning to be appreciated in the district for whose benefit it was intended. The committee, after considering the report, decided to urge the Gelligaer Urban District Council to proceed with the provision of an isolation hospital, and to ask the Caerphilly Council to open the hospital it had provided.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE REWARD OF MERIT.

AFTER a long illness, Dr. Winslow, Medical Officer of the Scrabby Dispensary District, co. Cavan, had some weeks ago to resign his appointment, owing to age and bad health, and asked the guardians for superannuation. There was a long wrangle at the board meeting as to what, if any, superannuation should be given him after his fifty years in their service. The majority at the meeting were in favour of giving him £80 a year, which was £20 less than he would have been entitled to under the Civil Service scale, but, owing to some informality, this decision

was held to be invalid by the Local Government Board, and another meeting of the guardians was called to consider it. The observations of sundry of the guardians at that meeting are instructive. Some of them were of opinion that, owing to the large salary—£120—paid him for so many years, he was not entitled to any pension, as he should have saved enough out of it to retire on. Others said that, as there had never been any complaint against him, he ought to get something, but certainly nothing like £80 a year. Still a third party would give him £80 a year, because he could not live more than a couple of years to draw it. Eventually, by a majority, they allowed him £60 a year as a special favour. How any Irish Poor Law doctor can desire to remain an employee of such people when he has the chance—if the members of the profession exert themselves—of being freed from such thralldom, it is not easy to understand, yet it would seem that many Irish Poor Law medical officers are opposed to a State service.

WOMEN'S NATIONAL HEALTH ASSOCIATION.

The annual meeting of the Derry branch of the Women's National Health Association was held in the Union Hall, Derry, on March 5th. The Mayor occupied the chair, and there was a large attendance. The report showed that there was a membership of over 1,100 women; a successful babies' club had been established, and several public sanitary measures had been considered, which were strongly supported by the speakers.

BANDON WORKHOUSE.

The Local Government Board has recently reported most unfavourably as to the general condition of the Bandon Workhouse. When the inspector went round he found the dormitories dirty, and on the majority of the beds the sheets were filthy, the matron acknowledging that she was unable to say when the sheets had been last changed, there being no regular time for doing so. There are practically no baths for the main part of the house, as the two baths which are in the tramp wards are unfit for use, and are never used by the inmates. The men are supposed to have washing basins, but they could not be produced on the day of the inspector's visit. There are no proper sanitary arrangements. The closets are old-fashioned and primitive, and very difficult to keep clean. The sheets in the hospital were by no means as clean as they should be. Proper baths, with hot and cold water laid on, should be provided for the hospital. The removal of lunatics to another institution was advised, as the cells used by five non-dangerous lunatics were not fit for human habitation, the remaining lunatic cells being occupied by a man with skin disease and an old blind pauper.

CORK JOINT HOSPITAL BOARD.

At the monthly meeting of the Cork Joint Hospital Board held on March 8th, a deputation on behalf of the United Trades Association made representations as to prepared joinery imported from England and intended for the new sanatorium works at Streamhill. The president of the United Trades Association told the committee that there was no necessity for the importation of such work, for there were plenty of competent men available to do the work in Cork. He pointed out that there was a clause in the contract that all the carpentry and joinery work should be done locally, and he considered that the importation of this work was not only helping to continue the want of employment in the city but it was a slur on the character of the Irish workman. After some discussion it was decided that the contractor must be made to abide by the terms of his contract and not to use any imported joinery. Mr. Creagh announced that it would be necessary to make formal application to the Board of Works for the loan of £12,000, to be drawn in sums of £1,000. A sinking fund had been created, as the 1d. in the pound was being raised throughout the county, and his firm conviction was that a considerable portion of the cost of the building should be defrayed out of the proceeds of the rate accumulating. That would leave a larger sum for administration when the institution was erected.

THE London Hospital Medical College Endowment Fund, to which an anonymous benefactor recently gave £20,000, has received a further gift of £100 from Miss N. A. Aiston for the advancement of research at the college.

Correspondence.

SLEEP AND WANT OF SLEEP.

SIR,—The BRITISH MEDICAL JOURNAL of February 27th contains a suggestive paper by Dr. Robert Farquharson on sleep and want of sleep and a leading article on sleep and hypnotics, giving a concise and very instructive survey of the principal hypnotics in use. I am no longer in practice, but I have been so during more than fifty-five years, and may, therefore, be allowed to say a few words on this subject.

Dr. Farquharson justly directs attention to the late Arthur Durham's almost forgotten researches, leading him to the inference "that the physiological condition known as sleep results from an anaemic condition of the brain." I wish by no means to contest the correctness of the experiments of him whose memory is dear to me as to all who knew him intimately; but I cannot say that anaemia explains all the phenomena connected with sleep, and Dr. Farquharson seems likewise unable to do so. I have repeatedly discussed this subject with Mr. Durham, and he quite agreed with me that it was impossible for him to assume that the results of his experiments were sufficient to explain the phenomena of sleep in man. Amongst the different points of our conversation was also the question specially mentioned by Dr. Farquharson, why "short naps of five to ten minutes, snatched in the middle of work, or even of play, are so extraordinarily refreshing?" It is not the momentary state of the circulation and supply of blood alone by which we can account for this; it is probably connected with peculiar changes in the nerve cells of the brain; but I am as little able sufficiently to explain it now as I was at the time when Mr. Durham and I discussed the question more than forty years ago.

I venture to add a few words about the use of remedies for want of sleep. I fully concur with Dr. Farquharson's remark as to the necessity of paying attention to idiosyncrasy, which exists to a greater or lesser degree with regard to all the hypnotics—most commonly, in my experience, with opium and its derivatives, but also with the apparently most innocent, such as bromides; these have caused, for instance, in a strong man, after a few ordinary evening doses, in a case of Mr. Arthur Durham's, of urethritis, symptoms like ataxia at two trials, once with the potassium, once with the sodium salt. On the other hand, many of us, I think, are inclined to condemn a remedy as useless and dangerous when a more careful trial, sometimes in combination with another remedy, would show it to be very useful. Thus, chloral hydrate is at present too sweepingly condemned, while I have used it with great advantage, sometimes alone in ordinary doses, but more frequently in small doses, combined with bromides and with morphine, in persons who could bear the latter. I have, for instance, prescribed very often, according to circumstances, 3 to 6 grains of chloral hydrate, with 10 to 15 of a bromide and 5 to 8 minims of liq. morph. hydrochlor. In most cases such combinations had a beneficial effect, and in none that I know of an injurious one. We must bear in mind that the combination of smaller doses of several remedies allied in their action has frequently a better action than the single remedies in larger doses, and that in this way unwelcome effects can be avoided. I need not say that in every case I have endeavoured to dissuade patients from continuing the remedy without the well considered advice of their doctor. Other hypnotics, too, I have often combined, such as bromural and chloral hydrate, trional and chloralamide, trional and paraldehyde, veronal and paraldehyde. Long experience, however, has convinced me that hypnotics are much more frequently given than is either necessary or useful, and, further, that many persons fall into the habit of taking them, and through this injure their nervous or circulatory or digestive system, or all three, and their resisting power to disease, and cause premature senility and death. I have generally prescribed hypnotics only in mental distress or bodily pain, or prolonged wakefulness from intrusion of anxious thoughts, and occasionally for night travelling and sea voyages.

A certain amount of sleep is necessary and is the "chief nourisher in life's feast," but many persons indulge in too much sleep and injure their nervous and circulatory systems. The difference in different people in the amount of sleep required is very great: children and growing persons require much sleep, while the majority of adults require much less. Experience has taught me at an early period, that there are many people who without injury to their health can do with comparatively little sleep (four and a half to five and a half hours), and need not on account of short hours of sleep, or frequent interruptions of it, fly to the use of hypnotics. I could give many instances and will mention my own case. I have never been a good sleeper, not even at school, and later on in active life, often from anxiety about my work, my hours of sleep were short and often interrupted; I was very seldom more than six hours in bed, and mostly woke literally ten to twenty times and oftener during the night, and only rarely had short naps during the day. My health in the 86th year shows that the limitation of sleep has done me no harm. Mostly when I was able to persuade my patients that lying awake part of the night, and frequently waking, did them no harm, they gradually felt that they could do with little sleep, and often began to sleep better.

I may add that I made many trials on myself with different hypnotics as they were introduced into practice, as well with each separately as also with several in combination; I did this, however, not to procure sleep for myself, but in order to learn their action and the advisability of using them in others.

I have also tried many other little helps to procure fair nights without hypnotics, but it would require much more space, and I have already trespassed in this matter.—I am, etc.,

Grasse, Alpes Maritimes, March 2nd.

HERMANN WEBER.

SIR,—I see by the discussion going on in the JOURNAL that the physiology of sleep is not much more settled than it was when I wrote about it in 1875, and I do not think the suggestion I then made has ever been discussed. May I, therefore, briefly repeat it for the consideration of those who are versed in the advances which physiology has made since that date?

In the introduction to the third edition of my book *On Winter Cough*, I attempted to explain the relation between certain cases of "spasmodic asthma" and of "sneezing asthma" and the phenomena of sleep. I discussed the subject at considerable length, but I will now only extract the passages in which my hypothesis as to the physiology of sleep is stated as follows:

The hypothetical explanation which I have suggested (of these cases) is an intermediate state common to all the given antecedents; and in answer to the question, What is this intermediate state? I suggest that it is distension of the perivascular system of canals with liquor sanguinis migrated from the red-blood vessels; that in the normal state an immediate return of fluid from the perivascular system to the red-blood vessels takes place on the return of normal circulation in them, and that the abnormal condition which exists in the peculiar cases under consideration consists in a derangement of this power of instantaneous change of place between the contents of the two sets of vessels (p. xxxii). . . . If this hypothetical explanation which I have suggested should prove to be correct, it would apparently involve the conclusion that, if a contracted condition of the red-blood vascular system of the brain is a necessary condition of sleep, this is coincident with the migration of liquor sanguinis into the perivascular canals, by which concurrence of circumstances the necessary element of equally-balanced cerebral pressure is maintained, while the element of functional excitability, due to the abundant circulation of red blood, is removed. Thus functional rest without arrest of nutrition is secured. If this reduction of red-blood circulation with the substitution of liquor sanguinis saturation is the cause of sleep, it will account for many of the phenomena of cerebral disease and their relation to sleep, and to ordinary causes of cerebral hyperaemia which are unexplained by the theory of cerebral anaemia without perivascular saturation (p. xxxiv).

I have been too long out of the arena of physiological discovery to be competent now to re-enter upon the discussion of this subject; but I think the hypothesis is worth the consideration of those whose knowledge is up to date, and who are now specially interested in the very important question of sleep.

In conclusion, to turn from theory to practice, let me give two prescriptions, which have served me "so many a

good turn" in procuring sleep for my patients, that I hope they may do the same for others. First, instead of *shutting* the eyes, as people generally do when they want to go to sleep, let the patient be ordered to *strive to keep the n open* to the last possible moment. It is surprising how often they will then *close in sleep* in spite of every effort to keep them open. The room should be feebly lighted, but on no account dark; darkness is often fatal to sleep.

Secund, R. Tinct. castorei 5j, tinct. chloroformi co. 5iv, tinct. lavandulæ co. 5j, spir. camphoræ 5iv, spir. etheris nit. 5j; Ft. guttæ 5iv. A teaspoonful in water when nervous or sleepless.—I am, etc.,

HORACE DOBELL, M.D. (retired).

Parkstone Heights, Dorset, March 5th.

A MEDICAL DEGREE FOR LONDON STUDENTS.

SIR,—The scheme for establishing a system of conjoint examinations between the Royal Colleges and the London University demands the closest scrutiny and the most careful safeguarding lest its results should be found as nugatory as those of every attempt hitherto made to provide a degree on fair terms for London medical students. As I understand the scheme set forth in p. 607 of your issue of March 6th, it provides as follows:

The London University is to continue to confer its degrees on the terms it now requires, but these degrees are to be termed "honours degrees."

The Royal Colleges are to continue to confer their diplomas as heretofore, under the conditions and titles that now obtain.

The University and the Royal Colleges are to combine to conduct examinations of students who shall have spent not less than four years in study at London medical schools and hospitals, and who shall have complied with certain other conditions, and those who pass these examinations will not receive a diploma from either college, but will receive a pass degree from the University.

The University will, therefore, in future confer two sets of degrees: M.B., B.S., M.D. (and query M.S.) Pass, and M.B., B.S., M.D., and M.S. Honours.

The Conjoint examinations will continue, but will henceforward be held by three conjoint bodies instead of by two; the number of conjoint examinations preliminary to qualification will be increased from two to three, or, including the preliminary general examination, from three to four; the reward for passing the conjoint examinations will be an M.B., B.S., instead of the L.R.C.P., M.R.C.S., and, on passing a further conjoint examination, the M.B., B.S. may be converted into an M.D. This is the scheme as I understand it, and it is open to the following criticisms:

The great obstacle to the attainment of the medical degrees of the London University by the ordinary student is not the difficulty of the professional examinations, high as the standard of these examinations is; the main obstacle is the matriculation examination. If the scheme is to be a practical success, it is essential that the University shall admit, to the conjoint examination, candidates who have passed, in lieu of matriculation, the entrance examinations now sanctioned by the existing Conjoint Board. Will the University consent to this? It is over the matriculation examination that it has shown itself most impracticable. If it does consent, are these preliminary examinations to stand as matriculation for the pass medical degrees alone, or are they to be homologated with the other alternatives to matriculation, or to serve as a portal of entrance to all the degrees of the University? If the former, will not the medical pass degrees be held in disesteem, and their holders to have entered the University by a back door? If the latter, the main obstacle to the attainment of the existing university degree will have been removed, a much larger contingent of London medical students will go for the honours degree, the necessity for the Conjoint pass degree will be diminished, and its reputation will be still more affected.

What are to be the facilities or difficulties of the holder of the pass degree in proceeding to the honours degree, should he desire to do so? If the entrance examination for the pass degree is a special examination, admitting to that and to no other degree of the University, then, in order to proceed to an honours degree, the M.D. pass must

go back to school and work up his preliminary subjects while he is in the middle of his professional career—precisely the barrier that keeps so many able men from attaining the University degree under the existing regulations. If, on the other hand, he may proceed to the honours examinations without suffering this indignity, then there will be one rule for the Medical Faculty and another for the other faculties, which will scarcely satisfy the University.

The substitution of three professional examinations for the two in the present curriculum before the Conjoint examinee can obtain his diploma is a handicap to the London medical student in comparison with the alumni of other universities. The grievance of the London medical student is that for the same expenditure of time, labour, and money for which a provincial student can obtain a university degree, the London student can obtain the Conjoint diplomas only, which, although well known in the profession to represent professional attainments equivalent to a university degree, are not so regarded outside the profession. What the London student wants, and what he is entitled to, is a degree obtainable on the same terms as those on which he now obtains his Conjoint diplomas. If he is offered a degree that cannot be obtained except on terms more stringent than those open to the provincial medical student his grievance is not removed. If this degree, obtainable on more stringent terms than degrees in provincial universities, is yet to be regarded as a one-horse degree, avowedly inferior to all the other degrees of the University and rendered specially easy to suit weaker brethren, his grievance will be not removed but intensified. Insult will be added to injury. He will still be giving more and getting less than his provincial compeer.

What will be the several standards of the four grades of degrees? Presumably the M.B., B.S., M.D. and M.S. Honours will stand at their present level, and the standard of the pass degrees will be lower. Presumably, also, the M.D. Pass will be a higher degree, and will satisfy a higher standard than the M.B., B.S. Pass, but what relation is the M.D. Pass to bear to the M.B., B.S. Honours? It can scarcely be adjusted to a lower standard. If so adjusted, or if adjusted to an equal standard, would not the M.B., B.S. Honours men have a legitimate grievance in that, having proved themselves of superior, or at least equal, attainments to the M.D. Pass men, they would be fobbed off with a degree titularly inferior? If, however, the M.D. Pass is to be a higher standard than the M.B., B.S. Honours, what will be the difference between the M.D. Pass and the M.D. Honours, and what will be the advantage of the whole arrangement?

What was the object of the Royal Colleges in referring the matter to the Royal Commission? Either Statute 123 of the University of London provides the necessary powers for the constitution of the scheme or it does not. The report of the delegates is made on the assumption that it does. Why, then, incur the uncertainty of convincing the Royal Commission? Why seek the delay inevitable in the presentation and effectuation of the report of a Royal Commission having such an immense scope of reference, a report that will require an Act of Parliament to bring it into effect? Is it that the delegates suspect that the University will not consent to the scheme except under the compulsion of an Act of Parliament?

Lastly, to my mind, the scheme as adumbrated exhibits one defect that seems to me capital. It makes provision for the future only. It offers no redress to the immense number of medical men who by taking the L.R.C.P., M.R.C.S., have proved that they have attained the standard of proficiency required for a university degree, but have not obtained that degree. I am of opinion that any powers the Royal Colleges may obtain for the conferment of a degree should be retroactive, and that the holders of the conjoint diplomas should be at liberty to exchange these diplomas for the new degree of M.D.

I do not say that the difficulties and defects that I have pointed out are enough to render the project impracticable, but it cannot be denied that together they are very grave. It is possible that the working scheme the delegates have in their minds may provide against most or all of them; but the views of the University have yet, it seems, to be ascertained, and the University has hitherto steadily

resisted every attempt to make its degrees more accessible to London medical students.

Looking to the inherent difficulties of the scheme; to the uncertainty of securing the consent of the University and the approval of the Royal Commission; to the likelihood that the scheme, even if accepted by these bodies, will first be so modified as to deprive it of much of its value; to the long delay that must of necessity occur before the report of the Royal Commission can be enforced by Act of Parliament—it seems a pity that the Royal Colleges did not take their courage in both hands, and apply for Charters which would give them the power themselves conjointly to confer a degree of M.D. without requiring any concurrence with the University. This I believe to be the best, if, indeed, it do not prove to be the only, practicable solution of the difficulty.—I am, etc.,

London, W., March 4th.

CHAS. MERCIER.

STATE REGISTRATION OF NURSES.

SIR,—We have read with much interest the account of the movement in favour of the State registration of nurses, which appeared in the *BRITISH MEDICAL JOURNAL* for February 13th—a movement with which we are in complete sympathy. We write, however, to point out that there is a large body of nurses—namely, fever nurses—which so far has been quite ignored by the various associations which have interested themselves in State registration. This has been due chiefly to the fact that, though it is a body of very considerable magnitude, it is only recently that its organization has been taken in hand. Nearly all the nurses to whom we refer are in the employment of municipal authorities, and they constitute a very distinct and important service. The Fever Nurses' Association has been formed for the purpose of organizing this service, furthering its interests, and raising and maintaining its standard of training. We are of the opinion that any scheme for the State registration of nurses which does not recognize the special training the fever nurses receive, will be incomplete. Nurses in fever hospitals consist principally of two classes—the one, of those who, after a three years' training in a general hospital or infirmary, spend some time in a fever hospital to gain special experience; the other, of those who enter the fever hospital without having undergone the previous general training. The latter often spend several years in fever work. We wish it to be clearly understood that we in no way advocate the establishment by the State, in connexion with the registration of nurses, of a separate register of fever nurses, such as it is proposed to institute for mental nurses. We hold, however, that those nurses who are eligible for enrolment on a State register should be definitely credited with the additional experience they have gained in the nursing of fevers, and, in supporting any endeavour towards the establishment of State registration of nurses, we shall at the same time do all we can to secure the due recognition of the fever nurse.—We are, etc.,

E. W. GOODALL,
President.

F. FOORD-CAIGER,
Chairman of Executive Committee.

JOHN BIERNACKI,

L. A. MORGAN.

Honorary Secretaries, Fever Nurses'
Association.

London, March 1st.

SOUTHWOLD LIBEL CASE.

SIR,—My attention has been drawn to an appeal in the *BRITISH MEDICAL JOURNAL* of February 6th, p. 353, asking for subscriptions to defray the "heavy expenses" which two members of the Association "have incurred as the result of the recent action which they were called upon to defend."

The appeal does not state upon what grounds we are asked to support these gentlemen, who have apparently been cast in heavy damages for a malicious libel upon a brother practitioner.

The appearance of this appeal in the columns of our *JOURNAL* would certainly appear to indicate that it is issued with the sanction of the Association, if not even with its official approval.

To the ordinary self-respecting medical man it would not appear to be a case in which much sympathy is re-

quired, as these gentlemen have been found to have committed what seems a very cruel offence, and not some heroic action worthy of a reward.—I am, etc.,

London, W., Feb. 6th.

FRED. J. SMITH.

THE REPORT OF THE PUBLIC HEALTH COMMITTEE.

SIR,—There seems to be a singularly extravagant development amongst the members of the medical profession, both individually and collectively, of that predatory instinct which is always on the alert to appropriate another man's "job."

It was seen a little while ago, in the endeavour to take away the public vaccinator's work and distribute it amongst all and sundry, regardless of the fact that the net result would have made it of very little benefit to anybody. And what has been the result? Well, soon there will be whole-time public vaccinators at £250 a year or less, and so much less will go to the emoluments of the general practitioners.

I have been struck recently with the extremely short-sighted policy of the general practitioners, as shown in the *JOURNAL* and at the Branch meetings, by trying to abolish all medical officers of health who hold any private practice. What will be the result? That all those general practitioners who are now medical officers of health, or nearly all of them, will have their appointment confiscated; for it is absurd to suppose that the salaries will be such as to tempt men to give up anything like a moderate practice; and the net result will be that some thousands a year will be diverted from the emoluments of the general practitioners of the country.

We have let the midwifery go; we have let school inspection go, and apparently we are trying to throw the health appointments overboard; and all that remuneration and prestige will be lost to the general practitioners, and there will be just as many of them left to "cut each other's throats" for what private practice is left.

Is it not patent to anybody who has eyes to see that the whole end and aim of the powers that be is to get all the practice out of the hands of private practitioners, and substitute a public service of "inferior" specialists, midwives, lady inspectors, oculists, school inspectors, public vaccinators, Public Assistance doctors, medical officers of health, etc.; in fact, a big staff of more or less junior officials who will be hidebound by red tape and sweated as much as the man with only one string to his bow can be?

Would it not be better for the general practitioners to try and keep as much of the work of this nature as they can, and as they are unquestionably better fitted for than "small specialists"?—I am, etc.,

A GENERAL PRACTITIONER WHO IS ALSO A
RURAL M.O.H.

March 9th.

RURAL M.O.H.

MUNICIPALIZATION OF HOSPITALS.

SIR,—Although not in favour of hospital municipalization, may I point out that the arguments quoted in the *BRITISH MEDICAL JOURNAL* of March 6th, p. 625, from the speech of Dr. Horrocks, are hardly those that will satisfy the Socialists.

"Every one who paid rates would be eligible for admission." This now obtains in the fever hospitals, and the paying of rates is no bar to admission in most general hospitals, which are open practically to all.

"The pushing and energetic would soon occupy the beds to the exclusion of the poor and needy." Here, in practice, the opposite occurs; for in general hospitals the better-off keep out the poor; whereas in municipal (fever) hospitals the poor get "relatively" vastly better value from their illness, and their cases have paramount care.

"The staff, instead of being voluntary workers, would become officials, and . . . it would be necessary to reduce the number, as it would be impossible to pay so many of them adequately." True, but the "officials" would then be mostly "whole-time" men, and would be paid. The staff of the fever hospitals, asylums, army, navy, prison service, infirmaries, public health service, School Board service, police medical service, clubs (&c.), limited companies, etc., do their work no less well because they receive salaries more or less adequate. Doubtless the personnel of the directors would be inferior socially, but in many

cases would not differ materially from what at present exists—for example, in Edinburgh the Lord Provost is at the head of both the infirmary and the municipal hospital (fever) management.

For the large endowed hospitals with traditions, municipalization is impracticable, as it would involve huge litigation over the moneys left in trust by the charitable, but I believe it would do in the case of smaller general hospitals about to be built in rising working-class neighbourhoods, and that the younger generation of practitioners would profit by the salaries, assuming always that the present declension in private practice continued on its apparently irremediable down grade.—I am, etc.,

Edinburgh, March 9th.

JAMES CAMERON.

THE METROPOLITAN PROVIDENT MEDICAL ASSOCIATION AND THE TREATMENT OF SCHOOL CHILDREN.

SIR,—There is an error in your note referring to the meeting of the medical officers attached to the Metropolitan Provident Medical Association on March 2nd. The meeting was not well attended by the profession; of the 114 doctors on the staff only about a dozen were present. In my remarks I stated that the poor attendance was probably due to the unusually severe weather causing so much extra work.

An amendment was proposed by myself to the second resolution—that the association would only undertake the treatment of school children whose parents or guardians were unable to pay doctors in the ordinary way. This would prevent the contemplated departure from the lines on which our provident dispensaries have hitherto been worked—namely, to provide medical attendance for those who cannot pay in the usual way. Moreover, the amendment would be in accordance with the views expressed by the British Medical Association in its report on provident dispensaries. Mr. Leon and Sir William Bousfield spoke in opposition to my amendment, which, I regret to say, found no second.—I am, etc.,

London, W., March 8th.

HENRY H. STURGE.

OPHTHALMIC SURGEONS AND SPECTACLE VENDORS.

SIR,—It is to be hoped that before long some rules will be made to regulate the relationship between spectacle vendors and ophthalmic surgeons, and in certain directions it is perhaps desirable that there were some means of enforcing a higher standard of professional conduct on a very few of the gentlemen who practise ophthalmic surgery. The following events will perhaps convince a casual reader that some change is necessary if irregular practice is to be held in check and properly qualified men are to have fair play. A nurse on holiday at a watering-place in Scotland advertised her address extensively in the local papers stating that she would be glad to see ophthalmic patients, particularly those requiring the testing of errors of refraction. It seems that this woman happened to be a nurse at an ophthalmic hospital in England, and was employed by the surgeons there for the purpose of testing such cases.

A somewhat similar incident was brought to light the other day—namely, that for one ophthalmic hospital an attendant in an optician's shop in the town in which this hospital is situated does a large portion of the refraction testing. I think that thereby the authorities responsible for this hospital simply help to propagate quack practitioners. A patient happened to come into my hands who had been tested in this shop, possibly by the attendant who was employed at the hospital. The correction which was given was for each eye cylinder minus 1, axis horizontal, the real correction was spherical plus 2.5 for each eye.

Ophthalmic surgeons should steadfastly, not only in their own interests but in the interests of the public, set their faces against practices of this sort. To some extent members of the profession are blameworthy in the matter. A child complains of some little difficulty of vision, and a large number of the medical fraternity do not send that child either to an ophthalmic surgeon or to an ophthalmic hospital, but recommend it to a shop to have its eyes examined. They do not seem to be aware of the fact that it takes even the best trained surgeons from an hour to an hour and a half to obtain accurate and trustworthy results,

and that any error in the correction may spell disaster for that patient so far as sight is concerned.

In other respects changes are needed. Thus, in a British ophthalmic hospital members of the staff have been known to admit, with full knowledge of the fact, so-called optologists to their clinics. It seems to me that such conduct is entirely wrong, and I hope that some day or other persons who in this way countenance irregular practitioners will be adjudged guilty of conduct infamous in a professional sense. One of the worst cases of the countenance of irregular practitioners occurred not long ago, when a member of an ophthalmic congress introduced to its meetings a spectacle vendor in such a manner that the gentlemen attending the meeting understood the man to be an ophthalmic surgeon.

There are other matters in the relationships of ophthalmic surgeons to spectacle vendors which ought to be put right. Some years ago an advertising spectacle vendor put in as a special bait in his advertisements that if he did not manage to fit the patients himself he would recommend them to have recourse to a skilful and experienced oculist. One general practitioner in the town sent a number of patients to this optician, and they were every one of them referred, with a card, to one particular ophthalmic surgeon. Would the General Medical Council regard this as canvassing for patients?—I am, etc.,

March 2nd.

SPECIALIST.

THE TREATMENT OF CANCER.

SIR,—It is interesting to contrast two papers which appeared in the JOURNAL of last week on the subject of cancer. Mr. Sampson Handley appears to look at treatment in a somewhat peculiar way. He says in effect that because cancer occasionally cures itself a cure for cancer cannot exist, but he somewhat illogically excludes Coley's fluid. He goes on to make this statement: "For every cancer which reaches its full clinical development, it may be that a hundred are strangled in the process of birth, etc." This is rather strange in a scientific paper when supported by not a vestige of evidence. Mr. Handley also suggests as suitable cases for experiment advanced cases of cancer of the stomach. Instead of doing this, I would advise trying any favourable line of treatment on an early case, say of ulceration of the tongue. The correct treatment at present is to operate after mercury and potassium iodide have failed to check the ulceration. Medicine is given to show if operation is necessary, then why not go a step farther and try something else for say two weeks? I did this successfully in a case five years ago. Whether the diagnosis of epithelioma of the tongue was correct or not I am not prepared to say, but I can state that had I not treated him for cancer empirically the man would have had half his tongue removed.

In contrast we have Dr. Fenwick's paper—simply a record of clinical facts. I would like to suggest that any one trying his treatment should keep a record of the condition of the blood, and especially of the differential white cell count. It would be especially interesting to know what happens to the white cells in the cases which suppurate.—I am, etc.,

London, W., March 9th.

GEORGE E. KEITH.

SIR,—The scientific and lucid exposition of the natural cure of cancer in the JOURNAL of March 6th is of great interest to all of us; but it is of especial interest to me, in so far as in the last paragraph Mr. Sampson Handley indicates a line of treatment advocated with emphasis by me six years ago—"the open-air treatment," with a reduced diet. In my argument I instanced the case of such treatment of tubercle, but did not push the analogy, because I did not know then as I do now that the natural cure of cancer is by the same process as tubercle—that is, fibrosis. That position being demonstrably established by Mr. Handley, the case in favour of my proposition is greatly strengthened, and all that remains is to put it to the test of experiment. I quite, however, disagree with his recommendation that "under no circumstances whatever should the treatment be recommended as a substitute for operation, if operation is possible."—I am, etc.,

London, E.C., March 9th.

HOPE GRANT, F.R.C.S.E.

SIR.—Mr. Fenwick, in his paper on the treatment of cancer by potassium bichromate, mentions my name as having refused to treat a simple small rodent ulcer. This is absolutely incorrect.

Before making such a statement, Mr. Fenwick might easily have communicated with me; but that does not appear to be his idea of medical etiquette.

In the only other case of mine where to my knowledge his treatment has been tried, my first and only intimation that he was in attendance was a message brought by a son of the patient, saying, "Dr. Fenwick says you will not be wanted at our house any more, as he will look after mother."

Shortly I was again called in to soothe the last hours and sign the patient's death certificate.—I am, etc.,

T. FRANKISH, M.B.

March 6th. Honorary Surgeon, Victoria Hospital, Accrington.

THE APPLICATION OF MENDELIAN CHARACTERS TO MAN.

SIR.—We have, I think, almost reached the limits of usefulness in this discussion, but it is desirable to sum up the stages of it, so that your readers may appreciate whether I have made a "surrender" or "gone off at a tangent."

1. In a public lecture given by Dr. Drinkwater a statement was made that Nettleship's nightblind pedigree was an illustration of Mendelism, and sensibly gave in the offspring of abnormals the required 50 per cent. of abnormals. There was no warning whatever that Dr. Drinkwater was calculating the offspring of abnormals in a hitherto unheard-of manner—namely, by omitting all those cases in which an abnormal chanced to have no abnormal children. Hundreds of returns have been made by the Mendelians, but not one before Dr. Drinkwater has adopted this remarkable method of calculation.

2. I pointed out in your columns that the hitherto accepted Mendelism showed that in the Nettleship pedigree there were 137 abnormals and 235 normals in the offspring of the abnormals (various other counts, ranging from 131 to 137, may be made, until several obscure points in the pedigree as at present constructed are cleared up, but such divergencies do not alter the matter). This is no approach to 50 per cent.; indeed, the odds against a deviation so large as this are more than 10,000,000 to 1.¹

3. Dr. Drinkwater wrote to the *BRITISH MEDICAL JOURNAL* explaining the manner in which he had calculated his percentages—namely, by omitting the offspring of all abnormals who had only normal offspring, and justifying it on the ground that he believes that dominance changes with the mating. He cited Ewart and Thomson as believing that it changed in the mating, not, apparently, because he held this view himself, but because it might confirm his view that it changed with the mating.

4. My reply was, and is still, that this change of dominance may be perfectly correct—or the reverse; but that:

(a) It is destructive of the first Mendelian principle of dominance;

(b) It renders the second Mendelian principle of segregation of small value, because the segregation will not take place in the recognized Mendelian principles.

(c) It would invalidate much Mendelian work which has included in calculating percentages the offspring of abnormals with only normal offspring.

(d) It renders Mendelism of no service to the medical profession, because it will be impossible to say until an abnormal has completed his family whether he is a true Mendelian abnormal or a Drinkwaterian spurious abnormal with a capacity for producing only normal offspring. Further, by a judicious change of mate, even if he had had abnormal offspring, he might improve matters, and have unaffected children!

Shortly, my contention is that Dr. Drinkwater's method of dealing with Nettleship's pedigree is destructive of Mendelism, which, whether correct or incorrect as a description of hereditary phenomena, is at least a logical whole. It is quite possible that a determinantal theory of alternative characters may eventually account for many such cases, and when this has been done the credit will lie largely with the movement dating from Mendel. But,

¹Those who wish to study whether their observations are in accordance or not with theory will find the determination of such odds fully explained in Westergaard's *Grundzüge der Theorie der Statistik*.

until it is done, I for one shall continue to protest against the current tendency among what I shall venture to term the free lances of Mendelism—as distinct from the staff corps—to drag into popular lectures and magazine articles as illustrations of Mendelism cases which can only be termed Mendelian if a method of counting *ad hoc* be invented, or if odds, which only a tiro in the science of observation would overlook, be disregarded.—I am, etc.,

KARL PEARSON.

Biometric Laboratory, University College, March 7th.

ARTERIAL BLOOD-PRESSURE RECORDS BEFORE AND AFTER MUSCULAR EXERTION.

SIR.—Dr. Leonard G. J. Mackey criticizes the conclusion I arrive at in the *JOURNAL* of February 27th when I point to the "improbability that the heart in morbid conditions would be capable of overcoming pressures much greater than 160 to 170 mm. Hg" (Dr. Mackey, in quoting my words, has, I feel sure, unintentionally omitted the word "much"), assuming that this measurement is near the limit of reserve power of the normal heart.

I venture to think that the point which Dr. Mackey overlooks is that the question is one of reserve power. It is, I believe, generally admitted that the reserve power of a hypertrophied heart is less (and less in proportion to the degree of hypertrophy) than that of a normal heart.

Of course every one recognizes the fact that a heart in a case of long-continued high arterial blood pressure becomes hypertrophied, and overcomes greater pressures than the normal heart usually does.

My point is that it is reasonable to assume that such a hypertrophied heart, although working at a higher average pressure than the normal one, is, owing to the fact of its having less reserve power, unlikely to be capable of dealing with pressures much greater than the normal heart can when this is working at near the limit of its reserve power.

—I am, etc.,

London, W., March 6th.

OLIVER K. WILLIAMSON.

PULMONARY TUBERCULOSIS IN CHILDREN.

SIR.—I am very glad to see that Dr. Fisher has drawn attention to the sweeping assertions of Dr. Mary Williams with regard to phthisis in school children.

After a large experience with children, I should be inclined to say that phthisis in school children is one of the rarest diseases. The conditions which are so often mistaken for phthisis are the non-tuberculous conditions of fibroid disease, often with some bronchiectatic dilatations.

The condition seems to arise chiefly from antecedent bronchitis from within and from pleurisy from without. I have frequently had typical cases of fibroid disease, with and without the cardiac displacement that so often accompanies it, brought to me as tuberculosis. I am inclined to think that if the majority of those inspecting children were asked how often they had seen fibroid disease in children the answer would be that it was practically non-existent, whereas I think that if reliable statistics could be obtained they would be found to vary very considerably from those of Dr. Williams.—I am, etc.,

March 8th.

ELWIN H. T. NASH.

RURAL NURSING ASSOCIATIONS.

SIR.—Among other subjects which are now calling for attention from the members of the Association is that of the local nursing associations which are rapidly being established throughout the country. Ostensibly introduced to assist the medical attendant, and to work under his directions in the interests of the sick poor, the nurse in many cases becomes a serious competitor for minor medical and surgical practice. The managing committee consists of a group of the usual well-meaning female busy-bodies, on which the local practitioner is often not in any way represented. A general canvass of the district is made, cases are sought for in all ranks of society, and touting is openly and avowedly practised. Not merely the poor, but the small farmers and tradesmen of the villages are entreated to employ the nurse and midwife, with the assurance that if anything goes wrong the doctor, who has always hitherto attended them, can be called in. In some cases I have been told the nurse makes a friendly call on nearly every case under medical treatment, the usual gossip

ensues, with a criticism of the diagnosis and treatment of the case, not always to the advantage of the medical attendant. In fact, in many parishes an active unqualified practitioner has been introduced, backed up by a body of ladies, whose interest it is to make the thing a success, and the unfortunate doctor finds that, although it is illegal for him to employ an unqualified assistant, he is met by the keen competition of an unqualified woman, not merely in midwifery, but in ordinary medical and surgical practice. In country districts a serious difficulty arises, and one equally injurious to the general public and to the medical profession.

The remedy, in my humble opinion, is to make the representation of the profession imperative on every nursing association, and no association should be recognized unless a medical man is placed on the executive and local committees. Touting should be discontinued, and no member of the British Medical Association should give assistance or sanction to any nursing association that does not loyally carry out these principles.

Least it should be thought I write from personal motives. I would say, "Our withers are unwrung." If the members of the profession will refuse to back up these unqualified practitioners, the difficulty will soon settle itself, but it must be by united effort and loyal co-operation.—I am, etc.,

Leckhampton, March 1st.

WM. MILLIGAN.

Public Health

AND

POOR-LAW MEDICAL SERVICES.

RESIDENT WORKHOUSE OFFICIALS IN THE DARTFORD UNION.

IN the BRITISH MEDICAL JOURNAL of December 19th, 1908, p. 1347, it was noted that the members of the nursing staff of the Dartford Union were at that time in a state of serious dissatisfaction owing to the treatment they were then experiencing under a fresh order of the board; the effect of this order was to deprive them of the sole occupancy of some of their own quarters, other officials of the house having been given permission to share the rooms; the nursing staff was thus deprived of the privacy they so greatly needed when temporarily free from duty with their patients. We now read in the *Dartford Express* that at a recent meeting the board of guardians, after further consideration, has rescinded its former order, and has thereby restored to the nurses the exclusive use of their own dining room. It may hardly be correct for us to assume that the opinion expressed in the JOURNAL in opposition to the views of the guardians has led to this change, but we cannot help thinking and even hoping that it may have accelerated the settlement of an unhappy difference on an important matter, which appears to have been somewhat suddenly sprung upon the nursing staff by the governing body. No doubt the nurses have expressed to the board their gratitude for its final decision, which appears to have effected a restoration to them of all their former comforts and privileges.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Thingoe (West Suffolk Rural District).—Between the census of 1891 and that of 1901 there was a decrease in the population in the rural district of Thingoe of 1,215 persons, but Dr. Scott Kilner bases his statistics upon the population recorded at the last census (14,528). The birth-rate on this basis was 22.9 per 1,000, and the death-rate 13.2. The infantile mortality-rate was equal to 75 per 1,000 births. The District Council will be well advised to take the advice of their medical officer of health and to utilize for cases of infectious disease, other than small-pox, the iron hospital which was erected some years ago. It was intended to be used only for small-pox patients, but has never yet been occupied.

Maldon (Essex Rural District).—The population of the Maldon rural district at the last census was 14,650, showing a decrease of 1,111 persons since the previous census, but the population at the middle of 1908 was estimated by Dr. Thresh at 14,800, and he thinks this is rather below than above the actual population. The birth-rate in 1908 was 24.4 per 1,000, the death-rate 12.7, and the infantile mortality-rate equal to 61 per 1,000 births. In his description of the methods of dealing with infectious disease in the Maldon district, Dr. Thresh states that after the removal or recovery of a patient the house is disinfected. On rare occasions bedding, etc., is removed and disinfected by steam, but the ordinary method of disinfecting by burning sulphur and the thorough cleansing of the infected house produced such good results that apparently no more complicated, troublesome, or expensive process seemed necessary. Comparing the localities in which he had insisted on steam disinfection in practically all cases with those in which such disinfection had not been insisted upon, he had not found the slightest reason to think that steam disinfection was necessary. His experience related to thinly-populated areas, and did not apply to towns.

Medico-Legal.

WORKMEN'S COMPENSATION CASES.

Compulsory Operations.

ON February 18th His Honour Judge Dodd heard an application made by Walter Hall and Co. for the suspension of the compensation paid to Joseph Charlesworth on the ground that if he underwent a slight operation he could resume work. It appeared that respondent was a blacksmith's striker, and on April 7th last year, whilst working in a foundry, got his finger caught under a steam hammer. The finger was seriously injured, and the man was now in receipt of 10s. per week compensation. The finger was bent, and the tendons were so involved that the bent condition must continue, and the application was for an order that Charlesworth should have his finger removed, which operation, he suggested, would place the man in a position to earn as much as before.

Judge Dodd: It is a serious thing to ask the court to say that a man shall undergo a serious operation.

Mr. Clegg, on behalf of the employers, observed that it was impossible for the finger to improve, and that the operation suggested was a simple one.

The Judge: The doctor's view of what is a simple operation is not quite sufficient. They are rather fond of operations.

Mr. J. Raley on behalf of Charlesworth said that his client was not unwilling to undergo an operation, and if the doctors were unanimous that it would do him good he would undergo it at once, but they did not agree. Mr. Raley added that he was going on the principle that a man could not be acting unreasonably if he was following medical advice.

Dr. J. H. L. Allott, of Barnsey, who had examined Charlesworth, gave evidence that he would be better with the finger off. In the course of cross-examination he admitted that there was some slight risk attendant upon the operation.

Dr. Martin, house-surgeon at the Beckett Hospital, said the man ought to have his finger taken off.

Dr. Harold Horne, asked if he advised the man to have his finger taken off, replied "Certainly not," and Dr. Wallis said he agreed with everything Dr. Horne had said, and disagreed with everything Dr. Allott and Dr. Martin had said.

His Honour, who was assisted by Dr. Fryer as medical referee, said it was not unreasonable that the man should desire to wait a little longer before undergoing an operation of this sort, and he therefore dismissed the application with costs.

GIVING NOTICE.

R. R. R. asks what is the usual notice given by a medical principal when he wishes to discontinue his assistant's services.

*. In the case of an indoor assistant, the usual notice given is one month. In the case of an outdoor assistant or the manager of a branch, a longer notice is not infrequently given. It is assumed in these cases that the assistant is paid monthly. Where the salary is paid quarterly or half-yearly, a longer notice would be necessary. The law requires a "reasonable notice," and in fixing what is reasonable the criterion usually is the time when the payments of salary become due. Many principals arrange with their assistants on engaging them what notice shall be given on either side.

MIDWIFERY NURSES' ENGAGEMENTS.

ASTOUNDED.—Our correspondent was unwise in acting as he did. It was his patient who engaged the nurse, and had a right to require her services at the time agreed. The action against him should fail, as the nurse was bound by her previous contract to come to his patient, but unless she explained to her former patient that she might be called away, she might herself be liable for damages. He should place the matter in the hands of his solicitor, if a member of a medical defence society, ask for its assistance.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

MEDICAL PRACTITIONERS AND DRUGGISTS.

R. T. J.—(1) It is generally recognized that it is not desirable for a qualified practitioner to have his consulting rooms at a chemist's shop, but we know of no rule forbidding it. (2) A qualified chemist who is also a qualified medical practitioner can, if he chooses, carry on both businesses, but it is not a desirable combination.

INTRODUCTIONS TO PRACTICE.

NR.—If no agreement was entered into by either party, and if Dr. A. has finally broken off all negotiations, our correspondent would seem to be free to do as he pleases.

BRANCH SURGERIES.

SANDY LANE complains that a medical competitor took away a good paying patient by establishing a branch surgery in her house; and now he finds that another patient, a midwife, has hung her framed certificate in the window, side by side with the hours of attendance of the doctor.

"* We have repeatedly drawn attention to the manner in which branch surgeries may be abused; but we are not sure that there is any just ground of complaint if a medical man becomes the tenant of the patient of another practitioner and in course of time the relationship of landlady and tenant is converted into that of doctor and patient. With regard to the second point, we agree that it would be better that the two notices should not be hung up side by side, as medical practitioners should be careful to avoid doing anything to suggest that they stand in any special relation to midwives.

MEDICAL PRACTITIONERS AND PROPRIETORSHIP
OF PATENT MEDICINES.

W. H. C. writes that a friend of his who is a member of the British Medical Association proposes to put on the market a proprietary medicine which will be advertised under a fictitious name from an address several miles distance from where he lives and practises, all traces of his connexion with it being kept concealed as far as possible. We are asked whether, if the facts become known, he will be liable to have his name removed from the *Medical Register*.

"* The General Medical Council has published no warning upon this subject, nor, so far as we know, has it ever had to express an opinion on such a case, but the rules of many of the licensing bodies prohibit the holders of their diplomas from having any interest in the sale of any secret remedy. We do not doubt that any one acting in the manner described by our correspondent would expose himself to the censure of any medical authority before which his conduct might be brought, and would either have to sever his connexion with the proprietary medicine, or be deprived of his diploma.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

The following degrees were conferred on March 6th:

M.D.—J. C. W. Graham, Trin.; H. B. McCaskie, Gonv. and Cai.
M.C.—T. H. Kellock, Emms.
M.B.—R. L. Ley, Pemb.; R. A. P. Hill, Gonv. and Cai.
B.C.—J. C. W. Graham, Trin.; R. M. Vick, Jes.

It has been decided, on the recommendation of the Special Board for Medicine, that a Certificate of Practical Instruction in the Administration of Anaesthetics will be required for the Third M.B. Examination, Part II, in December, 1909, but this regulation will not apply to students who have passed the Second M.B. Examination on or before December, 1908.

UNIVERSITY OF LONDON.

UNIVERSITY COLLEGE.

The Annual Report.

THE annual report for the year ending February, 1909, has been issued; the total number of students was 1,361, an increase of 170. In the Faculty of Medical Sciences there were 183 students.

Buildings.—Rapid progress has been made in the new buildings for the department of physiology; the bequest of £5,000 by the late Thomas Webb, of London and Cardiff, has been devoted to its completion and fitting. A special appeal is made for £70,000 for new buildings for the department of chemistry.

Research.—The organization of the arrangements for post-graduate courses and for research has been improved, and the number of such students has increased from 171 to 239.

Libraries.—The rearrangement of the libraries in consequence of the increased space available has made rapid progress, and the card catalogues are nearly complete; 3,580 volumes have been added during the year, of which 2,600 were bequests or gifts.

UNIVERSITY OF EDINBURGH.

UNIVERSITY COURT.

AT the February meeting of the Court the following additional examiners were appointed: Dr. John Gibson, Edinburgh (Chemistry); Dr. George Lovell Gulland (Practice of Medicine); Mr. William A. Brend, M.A., M.B., B.Sc., London (Forensic Medicine); Dr. A. Wallace Williamson, Medical Officer of Health for the City of Edinburgh (Public Health); Professor A. R. Cushny (London) and Lieutenant-Colonel Firth (Army

Medical Department) were appointed additional examiners in connexion with theses submitted for the degree of D.Sc. On the recommendation of the Senate it was agreed to recognize the Public Health Laboratory of the University of Liverpool for purposes of graduation in Science in the Department of Public Health.

On the recommendation of the Senate the Court granted leave of absence to Professor Chien on account of the state of his health, and approved of the arrangements which had been made for the discharge of the professor's duties during his absence.

Dr. Alexander James and Dr. Claude B. Ker were appointed University Lecturers on Infectious Fevers.

The Services.

ROYAL NAVY MEDICAL SERVICE.

THE GILBERT BLANE MEDAL.

THE gold medal founded by the late Sir Gilbert Blane, Bart., to be given biennially, has been awarded by the Medical Director-General of the Navy and the Presidents of the Royal College of Physicians and the Royal College of Surgeons to Staff Surgeon Charles R. Nicholson, for his Journal of H.M.S. *Egmont*, November 6th, 1906, to December 31st, 1907; and to Staff Surgeon Arthur W. B. Livesay, M.B., for his Journal of H.M.S. *Bonaventure*, April 2nd to December 31st, 1907.

ROYAL ARMY MEDICAL CORPS (TERRITORIAL).

FIELD AMBULANCES.

IN the note published in the JOURNAL of February 27th p. 564, it was said that we believed that the 3rd South Midland Field Ambulance was the first in the kingdom other than a cavalry field ambulance to obtain its full establishment of men. Lieutenant-Colonel H. G. Falkner, commanding the 3rd Northumbrian Field Ambulance, informs us that that ambulance having its head quarters in Hull has been full for some considerable time; on March 1st it had 224 men, and 8 officers, and 11 special reserve, making a total of 243. He adds: "We have laboured under the same disadvantages as the 3rd South Midland Field Ambulance, for we have no head quarters, some men having to be drilled in one part of the town, some in another; we have no wagons, nor harness, nor means of teaching the men their proper drill. We have also had the special mark of approval by being granted the permission to wear gold ornaments. I hope before long to be able to fill the two vacancies for officers."

SECOND LONDON DIVISION.

THERE are vacancies for officers in the second London Division, which the Administrative Medical Officer desires to fill up at an early date. The vacancies include two in No. 4 field ambulance, head quarters at Woolwich, three in No. 5 at Greenwich, three in No. 6 in London, three in the sanitary company, one in No. 3 general hospital, besides fourteen vacancies in the infantry battalions situated in various parts of the County of London, and six in the Artillery and Engineers. Full information may be obtained by application to the Administrative Medical Officer, Craig's Court House, Whitehall, S.W.

EXAMINATION FOR PROMOTION.

INSULA asks (1) what books to read for the promotion examination from Lieutenant to Captain in the R.A.M.C. Territorial, (2) whether there is any place that he could attend a course of practical instruction for the above, and (3) whether the R.A.M.C. (Territorial) has been granted the right to wear gilt ornaments.

"* (1) Our correspondent should purchase a copy of *The Regulations of the Territorial Force and for County Associations* (London: Wyman and Son, 9d.), where he will find particulars as to the examination for promotion. Books to read are *Royal Army Medical Corps Training, Manual of Sanitation in Its Application to Military Life* (2d.), *Regulations of the Army Medical Service* (6d.), *Regulations for Recruiting*, to be obtained through any bookseller or direct from Messrs. Wyman and Sons, Fetter Lane, E.C. (2) There is a Territorial school in each division where courses of instruction are given from time to time. An officer desiring to attend should put himself in communication with the Administrative Medical Officer of the division he resides in. (3) The R.A.M.C. (Territorial Force) as such has not been granted permission to wear gold instead of silver, but permission has been granted to a good many of the units which have asked for it.

Obituary.

THOMAS WAKLEY, L.R.C.P.LOND.,

EDITOR OF THE "LANCET."

THE death occurred, at his residence in Hyde Park Gate, on Friday last, March 5th, of Thomas Wakley, part Proprietor and Editor of the *Lancet*, and although it was widely known that he was in bad health, the fatal termination of his illness has come as a shock to his many friends, among whom we count ourselves.

Thomas Wakley was born on July 10th, 1851, and was therefore only 57 when he died, an age at which nowadays a man counts upon at the least one more decade of active work. He was the only son of the late Thomas Henry Wakley, who between the periods of 1837 and 1907 was the senior Proprietor and Editor of the *Lancet*, and throughout his father's life worked hand-in-hand with him in the conduct of that journal. Thomas Wakley was educated at Westminster School and Trinity College, Cambridge. At school he took a high position in his classes, as is shown by the fact that he was chosen for a part one year in the famous Westminster play, and he obtained a leaving scholarship on entering the University. He also represented Westminster both at cricket and football, and won the quarter-mile.

He entered the University with the intention of joining the medical profession, the further object being to follow in the footsteps of his grandfather and uncle, and devote himself to the conduct of the *Lancet*. He proceeded no further in the medical curriculum at Cambridge than the passing of the First M.B., and at this period of his life probably contemplated some other future. A serious fall from a bicycle compelled him, however, to relinquish all courses of study for some years. He was thrown violently from an old-fashioned high machine on to his temple, sustaining what was possibly from the symptoms some slight fracture of the base of the skull. For some days his life was in danger, but eventually a slow recovery of health was established, although he never recovered complete sight in his right eye.

The resolve to enter the medical profession, and to join his uncle, Dr. James Wakley, in the conduct of the *Lancet*, now returned; and he entered as a medical student at St. Thomas's Hospital, obtaining in 1883 the diploma of L.R.C.P. Immediately afterwards he entered the office of the *Lancet* to begin the working life of a journalist under the eye of his uncle and of Mr. H. A. Beckett, Dr. Wakley's competent assistant. He was thus enabled to get the benefit of three years' routine work under two thoroughly experienced medical journalists, and under also the eye of an informal sort of committee of reference who assisted Dr. James Wakley in the conduct of the *Lancet*, among whom may be mentioned Surgeon-General

Marston, C.B., Sir John Tweedy, and the late Dr. James Grey Glover. Dr. James Wakley during the last two years of his life was afflicted with a malignant disease of the tongue, and in September, 1886, he succumbed to his fatal malady, and the editorship of the *Lancet* passed to his elder brother, the late Mr. Thomas Henry Wakley, and to his son, the deceased. For over twenty years, therefore, father and son co-operated in the conduct of a paper founded by the father's father more than sixty years earlier, figures which constitute, we should think, a record in heredity applied to journalism.

It would not be exactly our province to estimate Thomas Wakley's career as a journalist further than to say that he worthily maintained the honourable traditions of the great journal whose fortunes he was called upon to direct. But there was one side of his work to which we desire emphatically to bear testimony. The fairness of mind for which he was so well known among

his friends led him into relations with ourselves of a particularly pleasant sort. As a result both journals came to recognize that while keen rivalry was the best incentive to enterprise, such rivalry in no way precluded the existence of cordial good feeling between those responsible for the two journals. He was a man who by speech and manner inspired absolute confidence in his straightforwardness, and longer experience only proved that this was the root quality in his character. His word was his bond, and he was constitutionally incapable of a mean action. He had a high ideal of the obligations of medical journalism, and of the services which it was capable of rendering to the profession in this age. When the International Association of the Medical Press was formed he took a warm interest in it, undertook the duties of Chairman of the National Committee, and on the two occasions on which the International Committee met in London he extended to the members (on the first occasion in asso-



THOMAS WAKLEY.

ciation with his father) most generous hospitality.

In private life Thomas Wakley was a very quiet and retiring man, and, although by a few intimate friends his excellent personal qualities were well recognized, in anything like society at large he was comparatively unknown. Few men, indeed, ever held so public a position to use it with so little attempt at self-advertisement or self-advancement. He rarely took long holidays, and when he did he seldom went further than to some riverside resort, generally somewhere on the Thames. He was particularly attached to the Thames, and in 1896 wrote an amusing booklet recording four or five trips taken with his cousin, Mr. Frank L. Playford, the famous sculler, in their boat. *The Log of the Wyvern* was only privately printed, but it forms an interesting record of several quiet holidays of a kind that are no longer quite possible.

Thomas Wakley was an enthusiastic Freemason, was the recipient of several Grand Lodge Honours, and a generous supporter of the Masonic charities. He also was

a keen numismatist, a Fellow of the Royal Numismatic Society, and the possessor of a valuable collection of coins to which he made regular and constant additions.

Wakley lived until middle age as a bachelor in his father's house, but in 1903, to the great pleasure of his friends, he entered upon married life. He married Gladys, daughter of the late Mr. Norman Baron, by whom he leaves one son.

The body was cremated at Golders Green on March 9th; the funeral service, held at St. Mary Abbots, Kensington, on March 10th, was attended by, among others, Sir Constantine Holman, Sir Shirley Murphy, Dr. J. F. W. Tatham, Dr. David Nicholson, C.B., Surgeon-General Marston, C.B., Surgeon-General H. Skey Muir, C.B., Dr. Danford Thomas, Dr. Buzzard, Mr. Edmund Owen and Mr. Guy Elliston, representing the British Medical Association, and Dr. Dawson Williams, Editor of the BRITISH MEDICAL JOURNAL. The interment at Putney Vale Cemetery was attended by the personal friends of the family.

The cause of death was a gradually progressive toxic anæmia.

SIR JOHN WATT
REID, K.C.B., M.D.,

FORMERLY DIRECTOR-
GENERAL, R.N.

By the death from pneumonia, which occurred in London on February 24th, of Sir John Watt Reid, the navy loses a man who was prominent in its medical service during the latter half of the last century.

Born in May, 1823, he was in his 86th year at the time of his death, and had retired from active service since 1888.

He received his medical education in Edinburgh, and took the diploma of L.R.C.S. in 1844, and graduated later at Aberdeen. Entering the navy in 1845, he served as Assistant Surgeon on the Mediterranean and North American Stations. As a Surgeon he again served on the Mediterranean Station during the war with Russia in 1854-5 in H.M. ships *Inflexible* and *London*, being stationed in the Black Sea until the fall of Sebastopol. For these services he received the Crimean medal with clasp and the Turkish medal. From 1857 to 1859 he served in China on board the hospital ship *Belleisle* during the war, and received the China medal.

From 1860 to 1864 he again served on the North American Station, and in 1861 received an expression of their Lordships' satisfaction at his zeal and attention to duties during a severe visitation of yellow fever at Halifax. As a Staff Surgeon, in 1874, he was employed on board the hospital ship *Nebraska* during the Ashanti campaign. He was mentioned in dispatches, received the medal, and was promoted to Deputy Inspector-General for his services. As Deputy Inspector-General he was employed at Bermuda and Haslar Hospitals. In February, 1880, he was selected for the appointment of Medical Director-General of the Navy, his promotion to Inspector-General being made at the same time. Almost immediately after his appointment—March 5th, 1880—a Committee on the Medical Officers of the Navy was appointed, with Rear

Admiral A. H. Hoskins as President and Sir John Reid as one of its members. His tenure of office as Medical Director-General was marked by the abolition of Netley Hospital for the instruction of naval medical officers on entry and the institution of a course of instruction at Haslar Hospital, the introduction of the payment of gratuities to officers wishing to withdraw after short service, and the first appointment of nursing sisters to naval hospitals.

He was appointed Honorary Physician to Queen Victoria in 1881, and on her death in 1901 he was made Honorary Physician to the King. He was created K.C.B. in November, 1882; in 1884 the honorary degree of LL.D. was conferred upon him by the University of Edinburgh; and shortly after his retirement he received a Good Service pension of £100 a year.

All who came in contact with him were struck by his genial manner and kind-heartedness; he was well known to and welcomed by all branches of the navy, and by his many acts of kindness helped to popularize the Naval Medical Service, with which he had so long and honourable a connexion.

JOSEPH HENRY
IRVIN,

M.R.C.S. ENG., L.R.C.P.I.
F.R.S. MEDICAL OFFICER,
ROYAL LANCASTER
INFIRMARY.

To the deepest sorrow of all his professional brethren, and every one, rich and poor alike, in the town and district around Lancaster, Joseph Henry Irvin passed away after a few days' illness on February 13th, in his 54th year. He was the second son of the late Mr. David Irvin, J.P., of Preston. He received his professional education first at the Manchester Infirmary, and afterwards at St. Mary's Hospital; took the diploma of L.R.C.P.I. in 1878, and that of M.R.C.S. Eng. in 1880. In 1880 he settled in Lancaster, and soon after joined Dr. William Hall in the partnership which lasted until his death.

His professional ability was of the highest order, his surgical knowledge such that his opinion was sought for and valued in the highest degree by every one of his colleagues in the district, and his manipulative skill and resource in moments of emergency were undoubted.

In February, 1882, he was elected an Honorary Medical Officer of the Lancaster Infirmary, now the Royal Lancaster Infirmary, and this office, together with that of Governor of the institution, he retained up to the time of his death. He was a strenuous worker, and to his younger brethren of the staff he was a tower of strength. He had an individuality of his own, only known to his intimate friends, and his place in the hearts of his colleagues in the Infirmary and in the town can never be filled. During his student days he was a resident pupil for most of his time in the Royal Infirmary, Manchester, and he there acquired that excellent grasp of surgical emergencies which bore such good fruit in later life. There he met many men who have since made their mark in the profession, and whose close

friendship he retained until the day of his death. The following extract from the *Times* some time in September, 1876, shows the plucky and unselfish side of his character; it describes an incident in his life known to very few, for his modesty in all things connected with himself was great.

HEROISM.—The Rector of Cheddle, Cheshire, writes to us: "Can you find space to record an unostentatious act of heroism? A poor factory operative had his leg recently amputated in the Manchester Infirmary. The loss of blood was so great that his case was given up as hopeless. He was all but dead, when the surgeon stated that nothing but an infusion of blood could save his life. One of the students (a Mr. Irvin, I believe) volunteered to be bled, and 25 oz. of his life blood were taken from him at his own most serious risk and infused into the dying man. Yesterday I saw the patient, who is now on a fair way to convalescence. Need we wonder that the noble band of English doctors on the battlefields in Turkey should reflect such credit upon their country?"

Transfusion in 1876 was a very different matter from the saline injection of the present day, and his volunteering at a moment's notice to perform an act whereby he knew his life might be placed in jeopardy (as it actually was for many weeks afterwards) proved that he was worthy of the best traditions of our profession.

Dr. Irvin was a good sportsman—a first-rate shot and a keen golfer; in his earlier life he was an excellent swimmer, and did much to encourage and extend a knowledge of this art among the boys and girls of the town. Good music was especially dear to him, and he was himself an excellent musician. He was an enthusiastic Freemason, and his presence at the meetings of his lodge was always a source of pleasure to the members of the craft.

For some eight years he was Acting Surgeon to the 1st Volunteer Battalion Royal Lancaster Regiment, but resigned his appointment in June, 1889.

Dr. Irvin leaves a widow and one son and daughter.

He was buried in Lancaster Cemetery on February 16th; the funeral was one of the largest and most representative ever seen in Lancaster. Every medical man for miles around attended and thus paid a last tribute of respect to the "straightest man in the profession," while all classes of society from the highest to the lowest showed by their presence the love they bore him.

ROBERT POLLOK, M.B., F.F.P.S.GLASG.,

PHYSICIAN, SAMARITAN HOSPITAL FOR WOMEN, GLASGOW.

His death took place on February 11th of Dr. Robert Pollok of Pollokshields, Glasgow, occurring quite suddenly, in the 54th year of his age. He was born at Tarbolton, received his early education in that locality and completed it at Ayr, whence he passed on to Glasgow University and graduated M.B., C.M., in 1876; some years later he received the diploma of F.F.P.S.Glasg. Meanwhile he visited various places of medical study on the Continent, and finally equipped himself for private practice by acting as assistant to various medical men of standing in the West of Scotland. Among these was the late Professor James Morton of Anderson's College, and it was owing, perhaps, to this circumstance that Dr. Pollok eventually joined the staff of the dispensary of Anderson's College. In Glasgow he soon established both a sound practice and an excellent reputation with the public and his professional colleagues. His work in connexion with Anderson's College he carried on up to the time of his regretted and untimely death, another appointment held by him being that of Physician to the Samaritan Hospital for Women. Dr. Pollok found vent for his activities in many directions, but professionally it was the subject of obstetrics, perhaps, for which he showed the strongest predilection. Some excellent contributions to the current literature of this subject came from his pen. Amongst them was one on 2,000 cases of delivery in private practice, dealing with the difficulties encountered and the fashion in which they were met. In another he considered abortion, its avoidance, and its treatment. He was a man, however, of far more than one intellectual bent. The Philosophical Society and the Natural History Society both owned him as a member, and he played, likewise, an active part in the affairs and debates of the Glasgow Obstetrical and Gynaecological Society and the Glasgow Southern Medical Society. Each of

these in turn did him the honour of electing him to the Presidential Chair. He was also medical referee to insurance societies, while outside purely professional and scientific occupations he took a great interest in the medical work of the auxiliary forces. Joining the Blythswood Rifles early in his career he evidenced his keenness in this connexion by volunteering to proceed to South Africa early in 1900. There he saw a great deal of service both at base hospitals and with moving columns, and returned with the Queen's medal and three clasps—including one for the hard fought action at Belfast—and an honorary Captaincy in the army. When the Territorial Force was instituted he showed the same patriotic interest in its success, and at the time of his death had not long been gazetted in charge of the 4th Scottish Hospital under the Territorial scheme. A man of such mental and physical activity and excellent professional and social qualities naturally attracted great esteem, and his death leaves a gap which will not rapidly be filled.

DR. JOHN MACDONALD MACLENNAN died suddenly in Glasgow on February 23rd. He graduated in Arts at the University of Edinburgh, and followed this up by taking the M.B. and C.M. degree in 1885. Owing to ill health he was never able to undertake the duties of private practice, and for several years he acted as Surgeon on board Allan, Castle, Clan, and other liners. His experiences in many parts of the world were varied and thrilling. He was shipwrecked off the coast of Chili and again at the mouth of the Ganges. Dr. MacLennan was possessed of a genial and kindly disposition, and made many friends wherever he went. He bore the misfortune of prolonged ill health with great fortitude, but of late years he became so seriously ill that he had to give up all work. He retired to Kingsley about three years ago; he subsequently went to Glasgow for further medical treatment, and remained there until the time of his death. Dr. MacLennan was unmarried.

THE death of Dr. EASTON, on March 4th, is a matter of deep sorrow and sincere regret to a large circle of personal friends as well as to those who were associated with him in his many public activities. Thomas Easton, the son of the Rev. Matthew George Easton, was born in 1859 at Girvan Manse. In 1862 the family migrated to Darvel in Ayrshire, where the most important part of Rev. M. G. Easton's work was done and where now in memory of his pastorate the Easton Memorial Church stands. Thomas Easton received his earliest education from his father and at the village school; later he was placed at the Ayr Academy, where he obtained an excellent classical training. From there, in due course, he proceeded to Edinburgh University, graduating M.A., and subsequently M.B. (1884). Before commencing practice he studied in Berlin and acquired an excellent knowledge of the German language, which proved valuable to him through the later portion of his life. On his return to England he spent some time in St. Thomas's Hospital, London, and in 1886 graduated M.D. Edin., his thesis on manual treatment of diseases being commended. After acting for some time as an assistant in London he succeeded to the practice of his uncle, Dr. David Easton, of Stranraer, in Wigtonshire, where he remained until 1899, living a life of strenuous and unremitting toil. He held many public appointments in connexion with the workhouse, the lighthouse, the reformatory, etc.; he was Medical Officer for the parish of Leswalt, and became a J.P. for the county. The strain of work caused a breakdown in health, and he resigned his many offices in Stranraer, seeking the much needed recreation and rest in Continental travel. The change was speedily beneficial, and Dr. Easton settled in practice in Southampton; he was appointed a Medical Officer to the Poor Law, and was elected to the Borough Council. He became a member of the Education Committee of the borough, and for a time was Chairman of the Higher Education Subcommittee. He was also a member of the Endowed School Governors and of the Council of the Hartley University College. All useful educational movements received his sympathy and support; he was one of the original members of the Southampton Record Society and of the Historical Association. His death at the early age of 49 is deeply deplored and much sympathy is felt with his widow and one daughter.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL
THE offices of the British Medical Association and of the
BRITISH MEDICAL JOURNAL are at 429, Strand, London.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

NEURASTHENIC ASTHENOPHIA.

Oculus asks for advice in the treatment of a case of neurasthenic asthenopia in a young man whose general condition is now practically normal, who is free from organic disease, and who leads a hygienic life. Errors of refraction have been corrected by an ophthalmic surgeon, and there is no doubt the appropriate correction has been arrived at. On some days he can read or write for several hours without distress, on others, after using his eyes for half an hour, an aching and strained feeling comes on, chiefly referred to the eyeball itself, which makes it impossible to continue. The position of his desk has been considered, as have also the nature and direction of the light by which he reads. Is there any form of eye massage or douche which could be applied?

ANSWERS.

HOSPITAL FLOORS.

DR. JNO. MILSON RHODES (Didsbury) writes: "B. G. M." will find Parian cement the best for filling up the cracks in the hospital floor, failing that, the next best is Portland cement.

A CASE FOR DIAGNOSIS.

A. S. M. writes in reply to "B. S." to suggest that the case should be regarded as one of dilatation of the stomach, and that it be treated by lavage, and phenol in pill form after food.

TREATMENT OF BRONCHIAL ASTHMA.

A. S. M. writes in reply to the query in issue of January 30th, re treatment of bronchial asthma, to suggest for trial the tincture of lobelia and glycerine (equal parts) in an Oppenheimer's Aerizer.

INCOME TAX.

C. E. A. A.—If the surveyor agreed with our correspondent to allow payment of the tax for the year 1908-9 to stand over until he should be in a position to render an account of his profits from May 1st, 1908, to April 30th, 1909, there is no reason why this arrangement should not be adhered to. In that case C. E. A. A. would not be required to send in his next return until after April 30th, 1909, and if he receives an earlier application for a return he should, for his own protection, draw the attention of the surveyor to the arrangement stated to have been made. Moreover, if the surveyor made such an arrangement, he is scarcely likely to insist now on payment of the original demand. No point of law appears to be involved, and our correspondent does not give any reason for supposing that the arrangement made will not be carried out by the surveyor.

BOYS' SCHOOLS IN FRANCE.

SOME weeks ago an inquiry was inserted from a correspondent who wished to hear of a school or tutor in France for a boy of 10, where he could receive a good English education and at the same time learn to speak French fluently. Several replies were received and their substance communicated to the inquirer, but it is suggested that the information may be of use to other parents. **Dr. A. P. Trinder** (Bembridge, Isle of Wight), and **Dr. W. Pitt Palmer, D.P.H.** (Babbacombe, Torquay), both recommend a school kept by the Rev. E. Owen Burbridge, B.A. Lond., 19, Route de la Hève, Sainte Adresse, Seine Inférieure, France. Sainte Adresse is a suburb of Havre, and there is sea-bathing in addition to hockey, football, and a gymnasium. Both Dr. Trinder and Dr. Palmer before putting their sons to this school inspected it with special reference to sanitary arrangements, both speak well of the surroundings of the house, and Dr. Trinder can guarantee the sanitation and water supply, the latter being, he says, one of the best in France. **Dr. O. Trafford Owen** (Blackburn) recommends a school information as to which can be obtained from Dr. Philip, 95, Grande Rue, Boulogne-sur-Mer.

LETTERS, NOTES, ETC.

SOUTHWOLD LIBEL CASE.

THE following additional subscriptions have been received by the fund opened to assist Drs. Mallock and Tripp in defraying the heavy expenses which they incurred as the result of the recent action which they were called upon to defend:

	£	s.	d.
Sir Victor Horsley, London	...	5	0
Dr. W. E. Baylie, Yorkford	...	3	0
Dr. W. M. Crowfoot, Beccles	...	2	0

Cheques should be made payable to Dr. H. P. Helsham, Beccles, or to Dr. W. Tyson, Lowestoft.

ACTION OF RADIUM ON CORNS.

DR. RALPH BROWNE-CARTLIEW (London, S.W.) writes: Some of your readers may be interested with regard to radium, that amongst its humbler possibilities is its power to remove corns. In this it is very effective, and gives a simple demonstration of its power of action where there is irritation and proliferation of epithelial cells.

A PROTEST AND AN EXPLANATION.

DR. H. SELFE BENNETT (London, W.) writes stating that he is informed that many members of the profession and the general public, friends of his and utter strangers alike, have recently received a type-written letter dated from his address and marked "Private, personal, and without prejudice," ending with a sentence which reads as follows: "I am happy to think that though I have come across many rascals in my time, you are still an exceptional specimen of humanity in the experience of (Sd.) H. Selfe Bennett." Dr. Bennett informs us that the letter thus purported to be reproduced was written six months ago to the defendant in a nullity suit in which he gave evidence. He desires it to be understood that the communication has been sent to the numerous persons who have received it without his knowledge or sanction, and that he is taking legal advice on the subject.

ANTIVIVISECTION AND THE POOR.

HIRUDO writes: In a leaderette in the JOURNAL of February 20th you quote with approval the remark by Dr. Mande that Henry Hunt was "a prototype of many Radical politicians of to-day who are fond of expressing very decided opinions on scientific questions of which they have little knowledge." May I venture very respectfully to suggest that the omission of the word "Radical" would not spoil the observation, and would be more in keeping with the supposed non-partisan character of the JOURNAL?

"* We in turn would venture "very respectfully to suggest" that there is no partisanship in the statement of a notorious fact. It is not a question of political opinion, but of temper of mind. Independence of thought exercised within its proper sphere makes directly or indirectly for progress; but in scientific questions the "great heart of the people" can scarcely be taken as a trustworthy guide.

HOSPITAL FOOTBALL.

FOOTBALL during practically the whole of last week was impossible as, even in London, the grounds were several inches under snow. Last Tuesday, however, after nearly three weeks' delay, Middlesex Hospital replayed St. Thomas's at Richmond, and defeated them in a hotly contested game by one try to nothing. Curiously enough, despite the fact that on the last occasion when the two hospitals met there was a keenly disputed if rather unscientific match, there was a very poor attendance. The ground was in terrible condition owing to the weather, and after the first few minutes of the game rendered anything like accurate football impossible. The hospital style is notoriously a game for the forwards, and this feature, thanks to the condition of the ground, was specially marked. The inevitable scrambling game resulted, one pack or other breaking through and dribbling the ball along until some one by a lucky kick managed to find touch. Despite these adverse conditions the superior qualities of the Middlesex backs told, for though St. Thomas's usually had the better of the forward game, the Middlesex halves again and again saved the situation by their smart tackling and their clever kicking into touch. Whenever they were able to pick up the ball and managed to start a run, their superior pace made itself felt, and in their combination they proved very much more than a match for the St. Thomas's men. During the whole of the first half the play was up and down the field, neither side showing itself markedly superior, and it seemed as if another draw would have to be declared. With the beginning of the second half, however, play was much livelier and brighter, and the two fifteens abandoned the defensive attitude adopted in the first half and a more open and a faster game was played. Middlesex succeeded in pressing St. Thomas's back, and O'Kane cleverly took advantage of an opening, slipped over the line and scored his try. Harrison took the kick but failed to convert, and time was called without there being any further scoring. For the winners Penny and Saunders were especially conspicuous, while St. Thomas's owed most to Warburton and Nicholson. As a result Middlesex enters the final round and it has been arranged that the match with Guy's shall be played on Tuesday next at Richmond.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Eight lines and under	...	0	0
Each additional line	...	0	6
A whole column	...	2	13
A page	...	8	0

An average line contains six words.
All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication; and, if not paid for at the time, should be accompanied by a reference.

N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

An Address

SOME INSUFFICIENTLY RECOGNIZED POINTS IN THE DIAGNOSIS OF DISEASE.

DELIVERED BEFORE THE EAST YORKSHIRE DIVISION OF THE
BRITISH MEDICAL ASSOCIATION AT HULL.

SIR DYCE DUCKWORTH, M.D., LL.D., F.R.C.P.

CONSULTING PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL; SENIOR
PHYSICIAN TO THE SEAMEN'S HOSPITAL, GREENWICH.

GENTLEMEN,—The title of this address may not improbably excite some wonder in the minds of my audience. It may appear to be a bold step to assert in these days, even tentatively, that there still remain any points which elude or fail to receive full consideration in matters relating to diagnosis. It is now a mere platitude to speak of the extraordinary progress that has been made in the science and the art of medicine in the course of the last fifty years, for this is recognized on all hands, and we know well that fresh fields of research are being opened up daily by skilled and assiduous cultivators. So much so is this the case that it has become well-nigh an impossible task for the hospital teacher or the most diligent practitioner to follow up and utilize the products of these investigators. Never in the history of medicine was the first aphorism of Hippocrates borne in upon us with greater weight and solemnity than in this twentieth century, and we may well ask ourselves, Who, indeed, is sufficient for these things? To illustrate my statement, I will only ask you to compare the classical treatise of Watson—which was the textbook in medicine of most of the greybeards now in our profession—with the outgoing new edition of Allbutt's *System of Medicine*, for this provides us at once with a standard wherewith to measure the progress that has been attained in our day. It is, indeed, startling and amazing, and I venture to think that no such advance can be placed to the credit of any other learned profession. I grant at once that the engineer, the electrician, and the astronomer may point to remarkable progress; but, if we regard the relation of their splendid efforts to the general welfare of our common humanity, I am bold enough to declare that our progress is distinctly the greater and more important.

Notwithstanding this notable advance in our knowledge, we appear to have arrived at a curious stage as regards medical doctrines at the present time. We hear it widely affirmed that our old medical and surgical books are now effete, and rather misleading than helpful. We witness a spreading wave of incredulity as to the virtues and value of many therapeutic measures which were practised and commended by our predecessors. We are inclined to ignore the preparations of our *Pharmacopoeias* and to employ the latest products of synthesis and many extraordinary combinations of food and medicines for our patients.

We lend a willing ear to the last declarations of the laboratory experts, and proceed to adopt their suggestions. I suppose this has to be to some extent, but I greatly fear that in such proceedings we run the risk of crowding out a good deal of soundly acquired and proved experience—it, indeed, this has ever been acquired—and of becoming medical scientists rather than expert medical practitioners.

Let me not be misunderstood. I am in no degree averse from the best and most necessary researches of all our laboratories. These must be prosecuted, and especially those which are carried on in clinical laboratories, of which we still have too few in our great medical schools in this country; but I maintain that in the best interests of our patients there are limits to the too ready employment of such measures as are now month by month foisted on our attention. Let us consider what is the meaning of experience in our profession. What is it that we call for, and fall back upon, in any grave crisis in our clinical work? Is it not the opinion formed by the man who has seen much of disease, who has watched it and pondered over it, and best conducted his patients through their maladies?

Is it in such crises that we instinctively appeal to the last experiences of the laboratory operator? Some of you will doubtless reply to me in the affirmative, and tell me of the hopelessness of treating diphtheria, tetanus, anthrax, and other toxic invasions on any other basis than that of the assured benefits derived from the laboratory, and, if so, I am entirely with you. And if you have come to regard all disease as the result of microbic or otherwise toxic intrusion into the body, your pathogeny is at once simplified, and you are henceforth the slaves of the laboratory, and have become administrators of serums and antivaccines. Well, gentlemen, I, for one, am not yet prepared to declare myself a convert to such extreme views. A long clinical experience bids me to keep my head clear, if I can, in these days (and it is no easy task), and to see all things medical with a *mens sana* and a *mens medica*. I have found that a large part of our best art is still founded on empiricism, and that we cannot give reasons for our practice which will satisfy the purely scientific mind. In daily practice, for the best interests of my patients, I am content to be a medical artist rather than a medical scientist, but I am ever ready to avail myself of the best science that comes to me with the approval of careful experience.

If we are to wait for a scientific explanation of every step we are compelled to take in our daily work, I much fear that our patients will also have long to wait for relief, and that we too shall have long to wait for reputation. This is, indeed, one of the great difficulties that beset us. It renders it hard, and in some cases an impossibility, for certain men in our profession to practise efficiently. They cannot rest content with mere empiricism; they want a scientific reason to justify every dose of medicine and to support every method they employ. Not finding it, they leave our ranks, and are tempted to scoff at our efforts as mediaeval, tentative, and uncertain. This is a clear indication, as I venture to think, of the absence in these men of the *mens medica*. No, gentlemen, the best practice of medicine is not yet altogether scientific, and if we are to help our patients, we must for the present do what carefully acquired experience justifies us in doing. Our art is, indeed, based upon many sciences, but it is not yet scientific. It is certainly becoming more so year by year, as we gratefully acknowledge. In the meantime we have carefully to cultivate the art of medicine, taking advantage gradually of every scientific fact which is of proved utility.

These considerations, preliminary indeed, bring me now to the topic on which I desire to speak this evening, namely, to urge the importance of a study of the patient no less than a study of his disease. I am strongly impressed with the belief that there is a tendency at present to pay rather too exclusive attention to the pathological process which is in progress, and to neglect the peculiarities of the individual and the conduct of his particular constitution in relation to the particular illness. In the case of a manifest toxic invasion, I think we are now rather too apt to be engrossed with the *microbe* and its delinquencies, and to forget the equally important matter of the *soil* in which these work out their mischief.

We are disposed to regard the soil, or tissues, of the patient as an indifferent medium, akin to the agar-agar of the laboratory, equally ready to react and encourage the development of such processes as may be expected to follow on inoculation. A little consideration of the matter plainly corrects this view, and clinical experience proves that the soil is commonly as much concerned in the process as is the seed. The personal factor in disease has always to be reckoned with at the bedside, and from the nature of the inquiry here this point cannot be solved in the pathological laboratory. This constitutes, indeed, one of our great difficulties in experimentation. I would illustrate this very simply by taking the case of the transmission of bovine tuberculosis to the human subject. As you are aware, there is a preponderance of scientific opinion to the effect that such transmission is not only possible but certain, in defiance of Professor Koch's strong view to the contrary. I am not aware that there are certain facts determined as to the direct infection by milk of tuberculous cows in the case of human subjects. We cannot deliberately administer obviously tuberculous milk to children to prove this, but we know that large quantities of such milk are daily partaken of by children and adults, since so many apparently healthy cows are found to be

good milkers, although obviously vulnerable to tuberculin when tested by it.

The experiment is thus being made for us in the homes of too many of our fellow-creatures, and if the results are not more serious than might be expected, we may explain the fact by assuming that there is often an inherited immunity which is protective, or by finding that the infection has been arrested in the mesenteric glands, and rendered inoperative for further development. Dr. Nathan Raw, of Liverpool, who has studied this question with much care, informs me that no actual proof exists of the production of tuberculosis in children, as no one has made the experiment of feeding with milk known to be tuberculous, but he believes that all the collected facts point in the direction that abdominal tuberculosis occurring in the milk-drinking period is due to infected milk, more especially as the bovine bacillus has been isolated from the mesenteric glands by both the British and German Commissions on Tuberculosis. He mentions further, that in those countries where raw milk is not taken, abdominal and milinary tuberculosis is practically unknown.

Professor Koch appears now to be wavering in his opinion. He agrees that bovine tuberculosis may be conveyed, but is not yet prepared to admit that pulmonary tuberculosis is produced by it. Our position, as clinicians, is quite clear in the matter for the present, and we must stand by the British view of the infection from a bovine source, and act accordingly, and without delay.

The personal or individual factor is probably different in the case of the lower animals as compared with the human subject, but in the former there are found to be differences of susceptibility, even in individuals of the same class.

Those who see much of family practice over long periods become aware of family and personal peculiarities which tend to modify the incidence and course of various diseases, many of which are not so manifest to those who, as Sir Andrew Clark used to say, "see sick people, but have no patients" in the ordinary sense. A knowledge of the antecedent history, both family and personal, is necessary to a full understanding of this matter, and this is not readily secured amongst the poorer classes. I think we often fail to make, or try to make, what is called a physiological diagnosis of our patient—that is, to judge promptly, by practice of it, as to the habit of body or diathesis of the individual. Here, again, we are apt to regard most individuals as alike in tissue proclivity and tendency, and to expect the varied processes of disease to act indiscriminately upon each of them. Yet we find that this is not the case, some reacting mildly and others gravely; a toxic dose being borne well and disposed of favourably in the one, and in the other rapidly proceeding to fulminant and death. Again, we meet with absolute immunity in certain individuals, a condition not yet fully explained. We note the greater liability to some diseases at certain developmental epochs, a matter of importance, not seldom, in difficult and puzzling cases. Thus, amongst those which present unusual symptoms in children and young adults, we may often find the explanation in tuberculosis; in adults up to middle life, many strange and untoward symptoms are found to be dependent on unrecognized syphilis; while, in the aged, we find that some of the most puzzling conditions are sometimes ultimately resolved by a sharp attack of acute gout. Let us consider next two of the commonest diathetic conditions we have to deal with—the scrofulous or strumous habit, and the arthritic, often called rheumatic, habit. The facies in each is sufficiently distinct; the former presents two main varieties, known respectively as the "ugly" and the "pretty" struma. The "ugly" variety is that commonly described in textbooks. Its characters are the full, big face, swollen neck, sallow complexion, tumid lips, with catarrhal manifestations. The "pretty" variety presents finely-cut features, with delicate complexion, fine hair, long eyelashes, and various qualities which clearly indicate both beauty and delicacy. These two types present us with features which are both vulnerable, and a ready prey to the onset and development of tuberculosis should infective intrusion occur. The "ugly" variety it was which first gave rise to the term "scrofula," from the full and short, porcine quality of the neck. Note, that neither of these may be called in the first instance tuberculous. They present a soil ever ready to lead to tuberculous infection.

The "ugly" variety, indeed, is a veritable forcing ground for every kind of vicious microbic intrusion, so that such individuals are the worst subjects for all infections, and have every ailment in a grave form. They succumb in early life to these, or manifest very indolent recuperative power. They rarely recover from nephritis, and in later life are the worst subjects of syphilis if smitten by it. This condition also modifies the course of many illnesses, and presents strange blends of morbid states when mixed infections occur. For instance, in the tropics, I am inclined to believe that such subjects are specially prone to suffer from hepatic abscess.

We now find these individuals described as tuberculous *ab initio*. This I regard as a grave error. They need never become tuberculous, although they are a ready prey for the infection. In the "pretty" variety, there is more particularly a tendency to mesenteric and pulmonary tuberculosis, and perhaps to articular disorders. I think we do not adequately recognize these facts at the present time. We may regard these subjects in respect of tuberculosis as the *ens in potentia*, and when definitely infected as presenting the *ens in actu*. The moral of it all is when detected as specifically vulnerable elements in a community to protect such subjects, even more than others, from tuberculous environment and infection.

Let us consider next the subjects of another habit of body—namely, the arthritic or so-called rheumatic. They present a peculiarity and delicacy of constitution very different from that of the scrofulous. We note in them an absence of the vulnerability of the lymphatic system which is so marked a feature in the subjects of struma. The facies does not suggest delicacy, there being neither timidity nor sallowness. There may be even in early life some vascularity of the face and a general good development. The tendency is to suffer from the various manifestations of rheumatic poison, whether developed in the throat, the skin, the heart, the joints, and the brain, especially during adolescence, the tendency to rheumatic infection passing off more or less after the third decade. Later in life some of these subjects become gouty, and are apt to suffer from myalgia, fibrositis, lumbago, sciatica, and neuritis, and many of them present examples of arterial sclerosis and contracting kidneys about the fifth decade. The physiognomy in the latter case is very different from that of the subjects of chronic parenchymatous nephritis. One of the most marked features of this diathesis is its resistance to tuberculous infection—a point little regarded. Even if tuberculosis is acquired it has a hard struggle to progress, and is either arrested or held in check for many years as a rule. It has been humorously asserted, indeed, that one way of avoiding tuberculosis is to grow gouty; and truly what is bad for gout is very good for tuberculosis—namely, full dietary, or what the French call forced alimentation. The prognosis in arthritic subjects, if no cardiac complications have occurred in early life, is good for longevity provided a suitable environment is secured, and if what Sir Andrew Clark termed "physiological righteousness" is observed.

I have been speaking of what may be regarded as pure specimens of these two habits of body; but, of course, we meet with many examples where there are blends of constitutions, intermixtures of diathesis, in which one condition may be more prominent than the other, yet potential for modification. Hence we find blends of struma and rheumatism, a bad conjunction; and blends of gout and struma, a rather less grave coalescence—less grave, I say, because the gouty element generally acts protectively, and permits of a better prognosis for longevity. Many of these arthritic subjects manifest a high arterial tension in middle life, and so, as Sir T. Clifford Allbutt suggests, we may be concerned for them should they fall victims to pneumonia, or, in later life, suffer from cerebral hæmorrhage. Such tendency, of course, puts us on our guard and demands attention to habits of life and diet. Yet another peculiarity pertains to arthritic subjects, and it is their singular susceptibility to the gonococcal virus. This infection is apt to be more serious in some than in others, especially in those of gouty proclivity, manifesting a special vulnerability in

I find that this point was quoted by W. Heberden at the end of the eighteenth century. "Struma et lues venerea nonnumquam eundem hominem simul occupant: quod ubi fit, altera alterius nocendi viam plurimum auget." *Commentarii de Morborum Historia et Curatione* (Cap. lxxvii, de Struma.)

their textures. In these subjects, too, we meet with Dupuytren's contraction and the curved little finger, known as "Landouzy's camptodactyly," which in my experience have no origin in purely rheumatic conditions. They are further liable to a hyperinotic state of the blood, whereby there is a special tendency to phlebitis and blood-clotting, a point to be remembered in the puerperal state in the case of gouty women, who are more than others liable to pulmonary arterial thrombosis. A due consideration of clinical facts such as these surely lends support to the doctrine of the diatheses which is at the present time too much discarded, and even denied and derided by some. I regard them as *fundamental* and amongst the certainties of medicine, and to disregard them is, I venture to think, an indication of the absence of clinical acumen in the disputant. This tendency to ignore the personal factor in diseased persons is probably to be attributed to our modern devotion to laboratory revelations, and our less assiduous observation in detail of the human patient actually before us. Being over-engrossed with the seed, we are neglecting the soil, and, as physicians, we have to take good heed to both in our daily duties.

There is much to be said in favour of a nervous or neurotic habit of body, where we find plain evidence of instability of nerve centres, with tendency to break down in various parts of the cerebro-spinal axis—a condition plainly inherited and transmissible, often blending with other diathetic proclivities. For an example, take the case of chorea, well termed "cerebral rheumatism." Here we have the distinct rheumatic infection, together with nervous erethism and instability. The rheumatic and choreic child is commonly the nervous child in a family, as pointed out by Cheadle. Other members may be infected, but they do not present vulnerable points in their cerebral cortex.

Neurotic disorders do not present gross textural change, but simply perverted nervous action. In the group of "family" diseases of the nervous system we find the inborn tendency to a breakdown of some nervous tracts, which may occur definitely in several members of a family, in one or successive generations, in early or late adolescence.¹

We may acknowledge a difficulty here, because we have in many cases no particular physiognomy to guide us in determining the subjects of neurotic tendency. We have, however, other features in abundance to observe, and especially the personal and family life-histories, so far as we can gather them, to throw light on individual cases. There may be a solitary case in a family, but antecedent histories may help us to find a clue to the particular infirmity which has cropped up.

Myxoedema and cretinism in an early stage may long remain unrecognized unless we are on the look-out for the peculiarities of the disease as disclosed by a change of physiognomy and of habits. The same may be said in regard to early phases of paralysis agitans before the onset of the tremors; thus, the mask-face, and the slow gait, with mental hebetude, may long precede the characteristic tremors, the piping voice, and the sweatings. If we pay too much heed to the disease, and neglect to study the patient, we may miss many indications of early phases of disease. Where a long report has to be made on a person under examination, say for a life assurance policy, it is possible to be so much engrossed in recording answers to questions that we fail to study the individual before us sufficiently, and so miss the fuller appreciation of the particular features of the case. Some of these insurance papers, especially the American ones, are so full of details that they are apt to lead to an inadequate appreciation of the examinee before us, and to occupy too much time.

The study of localized pain requires extreme care, and a minute series of inquiries and examinations which demands much time and thought if an exact diagnosis is to be made. A flippant diagnosis of "rheumatism," or "neuritis," or "indigestion," may be very wide of the facts before us, but we are expected to form an opinion with rapidity and certainty, and it may be a matter of days before we can trace a pain to its true source. The patient and his friends do not understand our proper hesitation and postponement of a satisfactory opinion on the case.

In cases of apparently simple anaemia, especially in males in middle life, we may sometimes discover the

reason of our inability to promote recovery by attending to the minute histology of the blood, and, finding an undue eosinophilic count of leucocytes, be led to the discovery of ankylostomiasis, which is perhaps more common than is generally believed, owing to the extended travels of our population at the present day.

The numerous varieties of skin diseases present us with a vast field for the study of constitutional states of body. They almost always bear on this question, and their removal commonly rests with a recognition of the particular personal habit, the strumous tendency to pus formation, the arthritic to serous effusion or scaling with pruritus, the bilious to xanthelasma, and the diabetic to vitiligoidea. Since the study of botany has been neglected in recent years in the medical curriculum, there has been, as I believe, a loss of discriminating power in our students, and less ability for accurate differentiation in common observation—a mental faculty greatly encouraged by early botanical study. The Edinburgh school has always recognized this, and insisted on its importance for the future physician, and, as I venture to think, with much benefit. Indeed, I believe that a little more botany and careful study of the *materia medica*, and a more assiduous observation of the action of some of our old approved remedies, would assuredly sharpen the clinical wits and acumen of our modern students and practitioners. Some measure of the over-elaborated studies in chemistry might well be curtailed to allow of this—certainly in the case of the average pupil, who has soon to make his way in general practice.

In my clinical teaching I have sometimes said to my pupils that there are almost certainly things that we are looking at to-day in our patients which, as yet, we do not see. Yes, looking at, without seeing, things which some one will some day see and recognize, and will wonder how we in our day failed to see and interpret them. This has been the case in the past, and it will assuredly be so in the future if we patiently carry on our physiognomical studies at the bedside. I find that Browning has put this idea in the following pregnant lines:

I tell you, men won't notice; when they do
They'll understand.

Lastly, allow me to hope that you will not regard these expressions of opinion as mere *obiter dicta*, suggestive of servile conservatism on my part, for I have come to these conclusions after a long experience and much thought. The views I have ventured to lay before you, imperfectly, as I well know, are not new. I think they are at the present time insufficiently recognized and applied in daily practice by many of us. At the end of the sixteenth century we find that they had not escaped the reflection of one of the greatest philosophers of all time, for in his *Essays on the Regimen of Health* (1597) we may note the following passage by Bacon (Lord Verulam): "Some Physicians are so regular in proceeding according to art for the disease, as they respect not sufficiently the condition of the patient." This is the moral of my words to-night, and I will leave it to your careful consideration.

REFERENCE.

¹ Dr. Omerod, *Harveian Oration*, 1908.

DR. F. W. TWTOR, in a paper on the influence of glucosides on the growth of acid-fast bacilli, presented to the Royal Society on March 4th, described a new method of isolating human tubercle bacilli directly from tuberculous material contaminated with other micro-organisms. Among 43 glucosides tested with acid-fast bacilli it was found that one—*crisol*—killed off a large number of species of micro-organisms, especially bacilli of the colon group and various cocci, but had very little effect on the acid-fast group of bacilli. By means of this glucoside, the isolation of tubercle bacilli directly from human sputum contaminated with other organisms became quite easy. A lump of sputum was placed in a 2 per cent. solution of the glucoside in distilled water, and kept at 38°C. for three-quarters of an hour to an hour. Pure growths of tubercle bacilli could then be obtained on Dorset's egg medium in fourteen to twenty-eight days. The tubes were sometimes contaminated with a few other organisms, chiefly tiny colonies of streptococci and slow-growing organisms of the streptothrix group, but they were so few that they in no way interfered with the tubercle colonies, which could be easily sub-cultured.

An Address

ON THE

DIAGNOSIS OF FEVER IN PATIENTS
FROM THE TROPICS.DELIVERED AT A MEETING OF THE WESTMINSTER DIVISION
OF THE METROPOLITAN COUNTIES BRANCH.BY
SIR PATRICK MANSON, K.C.M.G., M.D.,
LL.D., F.R.S.

I HAVE twenty minutes in which to speak about certain points which have to be attended to in attempting the diagnosis of fevers in patients coming from the tropics. The time is very short. I shall not waste it, therefore, in preliminaries, but proceed at once to my subject.

SOURCES OF FALLACY.

The first point I shall urge is a very important one. It is the necessity for the diagnostician to disabuse his mind of the very natural idea that because a fever has been contracted in or is occurring in a patient from the tropics it must necessarily be a tropical fever, symptomatic of some infection or condition peculiar to the tropics. This in my experience is one of the commonest and most misleading diagnostic fallacies. It so happens that my line of practice lies in great measure among patients from the tropics; but I am bound to say that half the patients from the tropics sent to me for an opinion or who come to me under the idea that they are suffering from tropical disease are not so suffering, although very likely they have fallen sick in the tropics or soon after return from the tropics. When you have dealings with a Scotsman you are apt to be obsessed with the preconceived idea of the national reputation for caniness, forgetting that, in the main, Scotsmen are very like other men, having the same physical, moral, and mental attributes. Just so, and perhaps even more so, in our contemplation of disease from the tropics. The major portion of a Scotsman's attributes is that of other men; only a very minor portion is peculiar. The major portion of disease in and from the tropics is ordinary disease; the minor portion special. Therefore when you encounter a fever in a patient from the tropics, think last and least (unless the diagnosis be glaringly obvious) of a tropical fever. Think first of and carefully test for those great and pandemic conditions—tuberculosis, syphilis, typhoid, malignant disease, and sepsis. If the seat and nature of the disease are not at once obvious, make it an inflexible rule to go over all the organs systematically, one after the other, beginning at the vertex and ending at the soles of the feet. I could tell many a story illustrative of the wisdom and necessity for this precaution—so obvious when stated thus pointedly, but, like so many other obvious things, so frequently overlooked or ignored. This is the first and perhaps the most important point I would make.

The next and equally obvious point I would impress on you is not to be misled by the diagnosis of malaria which in many instances the patient is nearly sure to volunteer. Patients' statements in this respect are apt to be very positive and correspondingly impressive. Such tropical cases come to you not so much with the idea of getting you to treat them on their own diagnosis. I have seen many cases of tuberculosis, of endocarditis, of liver abscess, of pyelitis, of syphilis overlooked for this reason. It should be an axiom with us never, without a thorough and independent examination, to accept another man's diagnosis, least of all a patient's diagnosis.

Having excluded as far as you can these sources of fallacy, then, and only then, you may conclude that the fever, let us suppose, you are trying to diagnose is probably a tropical one. Your next step should be to put to yourself the question, What are the tropical diseases likely to be brought to this country and which are associated with fever? Of course, we may safely exclude such acute and short fevers as yellow fever, dengue, and so forth; these need not be considered.

Tropical Fevers.

Let me enumerate what I might designate the important tropical fevers in the approximate order of the frequency with which they present themselves in practice here. First of all, of course, comes malaria; next, perhaps, hepatitis and liver abscess; then Mediterranean or Malta fever; next, and at a long interval, kala-azar, trypanosomiasis and sleeping sickness, relapsing fever, elephantoid fever, and probably other infections about which we as yet know nothing, but only suspect their existence. Each of the fevers I have mentioned has some feature or features by which it may be recognized, or, at all events, suspected.

Tests of Malaria.

Manifestly our first duty is to recognize or to exclude the commonest of them all—namely, malaria. Fortunately, this is easily done. Provided we set about it in the proper way and have a little time allowed us there is no disease so easily and so surely recognizable as malaria, for of this infection we have not one or two, but three absolutely pathognomonic tests. I am in the habit of describing these tests as, *first*, the clinical test of periodicity; *secondly*, the therapeutical test of the action of quinine; and *thirdly*, the microscopical test, the determination of the presence or absence of the malaria parasite or of its product, malarial pigment, in the blood.

There are other indications of malarial infection, such as leucopenia with relative increase of the large mononuclear leucocytes, enlargement of the spleen, and anaemia. These are only of relative value. Their absence is strong evidence against malaria, but their presence, seeing that they occur in other tropical diseases, does not prove the presence of malaria. They are not absolutely diagnostic in the same sense as are the three tests I have just mentioned, and need not be further considered.

The most important clinical test of malaria is *periodicity*—the periodic recurrence of the febrile or other phenomena. Practically all fevers, whether malarial or not, exhibit a periodicity. In tuberculosis, in typhoid, in sepsis, and so forth, there is a regular evening rise and morning fall of temperature, often quite as marked as in malaria. There is very definite quotidian periodicity. Quotidian periodicity is therefore not peculiar to, is no diagnostic mark of, malaria. We do meet with quotidian malarial fevers, especially in malarial countries. But quotidian periodicity, if taken alone, does not justify a diagnosis of malaria. So far from doing so, it is actually misleading. It is perhaps the most frequent cause of erroneous diagnosis in tropical patients. This you can readily understand. A patient from India, for example, comes to you with a story that every afternoon he has a shivering fit followed by a rise of temperature to 103°, and this again after some hours by a drenching sweat. He may mention no other symptoms. You may be in a hurry. You plump for malaria, and you prescribe quinine. The patient does not improve. You make a careful physical examination, and you discover signs of tuberculosis, or of liver abscess, or of some other form of visceral disease.

Quotidian periodicity, therefore, should be absolutely ignored in most cases as an indication of malaria. The periodicity characteristic of malaria, and absolutely diagnostic of that infection, is either a *tertian* or a *quartan* periodicity. These you find in no other condition, and are sure indication of malaria. The only circumstance in which quotidian periodicity may be a help in diagnosis is when the recurring fever sets in very late in the night, say after midnight, or before 12 or 1 o'clock during the day. Such a time for the commencement of a daily fever is almost peculiar to malaria.

The quinine test for malaria has usually been applied more or less intelligently before the case comes under the observation of the consultant. It is reliable if properly applied. Rarely does a malarial fever, in this country at all events, resist adequate dosing with quinine. Ten grains two or three times a day is almost sure in forty-eight to seventy-two hours to tell us whether we are dealing with malaria or not. But in employing this test we must be sure that the quinine is given properly, and that it is absorbed. Very often the quinine is given in adequate dose, but in some insoluble form, as in coated pill, flinty tablet, or insoluble sulphate. In catarrhal conditions of the stomach given in any of these forms the

drug may not be dissolved, much less absorbed, and cannot therefore be regarded as efficiently testing for malaria. When it is of importance that we should be certain of its action, quinine should be given in solution, or, in highly catarrhal or irritable conditions of the stomach, intramuscularly in doses of 7 to 10 grains. If no impression is made on a fever by quinine given in this way, do not blame the drug; revise the diagnosis.

Even more reliable than the clinical or the therapeutical tests of malaria is the microscopical test. If the malaria parasite or its product—haemozoin, or melanin, as it is usually called—is found in the blood, diagnosis is sure. The parasite of malaria is necessarily present at one time or another in the course of all malarial infections; it is always present in the visceral blood, nearly always in the peripheral blood, and, given certain conditions, can be readily demonstrated in the latter. It is necessary, however, to secure these conditions. In the first place the patient must not be under the influence of quinine, in the second place the person who searches for the parasite must know his business. Even a small dose of quinine—one, perhaps, quite insufficient to check the fever—may cause the parasite to disappear temporarily from the peripheral circulation. The possession of a microscope, and even skill in other departments of microscopy, do not always imply ability to recognise the malaria parasite. To do so satisfactorily requires experience—special experience—and long training. It is not a difficult matter, but, as with everything else, you must know how to set about it, and be familiar with the fallacies. It would be a conical list were I to enumerate all the various objects that have been brought to me as specimens of the malaria parasite.

I would warn you, therefore, to be careful about accepting a diagnosis of malaria from an inexperienced microscopist, but I would encourage you to have absolute confidence in the positive diagnosis, and in ninety-nine cases out of a hundred in the negative diagnosis of malaria from an experienced and conscientious microscopist.

Liver Abscess.

Assuming that we have to deal with a tropical fever and that by one or all of the tests I have enumerated we have excluded malaria, the question comes to be, which of the several tropical fevers I have mentioned are we dealing with?

Is the case one of liver abscess? The first and all-important question we put is—has the patient had dysentery or diarrhoea? If so there is, to say the least, strong presumption in favour of such diagnosis. We search, therefore, for local signs, for enlargement of the hepatic area, especially upwards, for local pain, oedema, or even redness. We inquire as to anaemia, progressive emaciation, for irritability and depression of mind; we look for a muddy complexion; we inspect the stools, looking for slimy or other indications of a former or an existing dysentery; we inquire for a dorsal or right dorsal decubitis, for shoulder pain, and we make a count for the white corpuscles in the blood—a leucopenia being against, a leucocytosis being in favour of, liver abscess. Finally, if the symptoms are reasonably suggestive we explore the liver under chloroform, being prepared to operate at once if abscess is discovered.

Mediterranean Fever.

We may suspect Mediterranean fever, more especially if the patient has come from Malta, although this disease is by no means unknown elsewhere—as in India, China, and even in Central Africa. The points in favour of a Mediterranean fever diagnosis are an undulant type of the fever, profuse sweats, the occurrence of marked rheumatic pains or of orchitis, and the absence of indications of other disease.

Apart from the symptoms mentioned the evidence for this fever is principally of a negative nature. The fever may assume all sorts of characters. Often it is undulant in type, but as often it is distinctly intermittent and quotidian, often of a low continued type, often a medley of all of these. The serum test is reliable under ideal conditions, but my experience of it in London is the reverse of favourable. When I employ it I usually send the blood to two different laboratories; as often as not I get "positive" from one and "negative" from the other. So I do not trust it here, although, where fresh cultures are

obtainable, it is quite as trustworthy as the corresponding test for typhoid, and even more delicate.

Kala-azar.

We have a patient from India, from China, from the Soudan, or from North Africa. He has a chronic fever, his spleen reaches to near his umbilicus, and his liver is very much enlarged. He has been ill for months; he is anaemic; his tongue is clean and his appetite and digestion are good; he has taken quinine by the pound, and he is gradually going downhill. Probably that patient is suffering from kala-azar—the disease produced by the Leishman body. To make sure of the diagnosis we study the fever chart—a four-hourly one; very likely we note that there are two distinct rises of temperature in the twenty-four hours. We examine the blood; there is a very marked leucopenia, more marked even than in malaria, and there is a relative increase in the large mononuclears. Possibly, though this is not likely, we may find a Leishman body or two, if we search long enough, in the white blood corpuscles. In the presence of such a fever and such a history we are entitled to puncture the spleen or liver and to search for the Leishman body in the juice or fragments of pulp so obtained. Such a procedure is not free from risk and must be done carefully, aseptically, and with a dry needle and syringe. I say "dry needle and syringe," for if a trace of moisture be present in these it will, by endosmosis, so distort the parasites that, though present, they may be hard to recognize. Of course, one must be familiar with the technique for their demonstration and also with the details of the structure of the parasite, for it is exceedingly minute and might be mistaken for a micrococcus or a blood platelet.

Trypanosomiasis.

The patient comes from tropical Africa. He complains of irregular fever, of great physical and mental lassitude, headache perhaps, tenderness of the limbs when he knocks them against any hard body. You suspect trypanosomiasis. You strip him and inspect his skin. You see great patches of erythema, many inches in diameter, usually having a ringed appearance and looking slightly puffy; you palpate the glands in his neck, axilla, or groin, and you find that some or all of them are enlarged—perhaps only slightly enlarged. The pulse, as a rule, is abnormally quick, and easily excited. That patient is almost surely the subject of trypanosomiasis, and may die of sleeping sickness. Examine his blood with a sixth objective, examining it especially during one of the recurring attacks of fever, and you are almost sure to find the trypanosome. It will not be found in every field of the microscope, and you may have to return to the hunt several times, but in the end you are almost sure to find it. If you fail to find it in the blood, puncture with a hypodermic needle one of the enlarged cervical glands, and examine the lymph so obtained; in it you have even a better chance of finding the parasite. The blood count is very similar to that of kala-azar.

Relapsing Fever.

The patient comes from India, from tropical Africa, from North Africa, or even from Gibraltar. He tells you that he has attacks of fever, perhaps violent fever, regularly about once a fortnight; that the individual attacks last from three to five or six days, that they subside nearly as suddenly as they begin, and that he is quite free in the interval. He may have had three or four or even eight or nine such attacks. What are they? The blood is negative for malaria; there is no marked leucopenia. Examine the blood during one of the fever paroxysms, and probably you will find the spirochaete of relapsing fever. In the African variety it takes some looking for. If you find it diagnosis is established. Such cases I have seen more than once in recent years in London. They were imported from Africa, from Gibraltar, and from India.

Elephantoid Fever.

Another patient may tell you he has attacks of violent fever coming on at irregular intervals of weeks, months, or years, that the attacks last for two or three days, and may be attended with severe rigor, delirium, high temperature, and be followed by profuse sweating. If he comes from the West Indies, particularly from Barbados, he will call this disease "fever and ague," but it is not

fever and ague as we understand it. It is not malaria; but elephantoid fever for the most part, and if we inquire as to the occurrence of inflammation and cellulitis of limb, scrotum, or acute lymphangitis, we are sure to find that such is the case. The patient is suffering from elephantoid fever, and is or has been the subject of filarial invasion.

The possibility of these various and very different infections should always be present to the diagnostician when he is called on to treat a tropical fever in this country.

Multiple Infections.

I began with a word of warning; I shall conclude with another word of warning, and it is this: Do not infer because you have found in your patient's blood or elsewhere the malaria or some other parasite, that you have the complete and full explanation of the case. In tropical disease malaria is apt to complicate everything, so that multiple infection of patients is rather the rule than the exception.

When you find the malaria parasite the patient has certainly got malaria, but that does not exclude other infections. I have sometimes been "caught" in consequence of ignoring this obvious precaution. Some years ago I was asked to see a patient just returned from Portuguese West Africa. He was said to be suffering from fever and dysentery. He had dysentery sure enough, and his spleen was enormously enlarged. He had taken much quinine; as it seemed to irritate his bowels I stopped it. At my first visit he had no fever. I found nothing in his blood. I left instructions that I was to be sent for should he have an attack of fever.

Some days afterwards I was sent for, his temperature being over 103°. I took a slide of his blood, expecting to find in it the parasite of malaria. Judge, however, of my horror when, instead of the malaria parasite, there was an unquestionable trypanosome staring me in the face! After a few days the fever disappeared, and, with the fever, the trypanosome also.

A fortnight later there was again a return of fever, and I again examined the blood, expecting to find the trypanosome. I found no trypanosome, but I found plenty of tertian malaria parasites. And so the case went on, every now and again a fever spell with trypanosomes in the blood, and every now and again a fever spell with malaria parasites in the blood. By the persistent use of atoxyl and of quinine both infections were finally expelled from the circulation. The patient is now, I believe, quite well.

Last year I had in hospital a patient from an African colony who carried about with him the malaria parasite, the trypanosome, the *Spirochaeta pallida*, the filaria, besides an assortment of intestinal parasites, including *Ascaris lumbricoides*, *Trichinurus trichinurus*, and *Ankylostoma duodenale*—a veritable museum, which, as long as it remained with us, we appreciated very highly at the Tropical School. He could always supply us with a subject for demonstration or for a clinical lecture.

I fear my exposition of the subject has been very sketchy and inadequate; it is necessarily so in consequence of the time limit imposed on me. I trust, however, I have given you the leading points for reliable diagnosis.

COMMON MISTAKES IN OPHTHALMIC PRACTICE.*

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In casting round for a subject on which to write a paper which would prove interesting and useful, the idea came to me that I should formulate my impressions, gathered from twenty-five years of eye work, of the mistakes most frequently made by the medical men who have seen, and usually treated, eye cases before they came under my notice.

I use the word "impressions" because I have no statistics to give you. I do not commit to paper any mistake that I may think another man has made; but

yet, when one sees, as one does see, a considerable number of cases wrongly diagnosed and indifferently treated, they in a way sort themselves and occupy separate pigeon-holes in the recesses of one's brain. I should be sorry if this paper led any one to think that I pass a harsh judgement on a man who makes a wrong diagnosis on an ophthalmic case. I have lived too long and made too many mistakes myself to do this, and, moreover, I know very well the limited amount of experience in eye work that in the ordinary run of work falls to the lot of the general practitioner; and so, if any one finds in this paper a cap that he knows fits him well, let him not think that it is specially designed for his head, but rather consider that his head is fashioned on somewhat cosmopolitan lines, and is therefore capable of being fitted at the first ready-made and reach-me-down hat shop that he chances to enter.

Refraction.

The class of cases that provide the most numerous mistakes are undoubtedly refraction cases. One would expect this because refraction work forms such a large proportion of eye work, but I should think that, taking mistakes in this branch alone, they are quite in the proportion of 9 to 1—that is, that in 10 mistakes in eye practice 9 are due to bad refraction work. Nor is it astonishing that so many mistakes are made in this department, for while it has always seemed to me that constant practice at it is essential to its satisfactory performance, the public, and not a few of our profession, seem to consider that any one who sells spectacles is qualified to advise upon refraction troubles. When I occupied—as I did for twenty years—the post of assistant surgeon at the eye infirmary, where the bulk of the work is refraction, I always found that when I returned from my summer holiday my work took me half as long again as it was doing when I went away. Moreover, accuracy comes with speed, and you decide without hesitation such points as whether you shall give full correction in a hypermetrope, or whether it is worth while to give this child cylinders, or wise to give that myope a second pair of spectacles for near vision. These, however, are minor points, though they have oftentimes an important influence upon the reputation of the man whose work is bettered. The gross mistake, and the one which one most often sees, is where ciliary spasm in a hypermetrope is treated with -2 D. spectacles or -1 D.

The type of this is a young dressmaker, or perhaps a tailor's apprentice, who comes complaining that after a few hours' sewing things become misty and her eyes ache. She gets some relief by holding her work nearer to her eyes; but now this manoeuvre fails to relieve, and she is sure she needs spectacles. You test her, and find that she can read perhaps $\frac{2}{3}$ distant vision. You try her with a -1 D., and she says, "Oh, that's lovely; that's what I want"; or "Oh, yes, the print is beautifully clear." You provide her with the -1 D. or -2 D., whichever she sees best with, and she goes away seeing better than she has done for months, while you proceed to your next patient with the satisfactory feeling that "that is a good case." Next day your patient goes to work with a light heart, and finds everything very nice for a few hours; then the eyes again ache and smart. She thinks that they are not yet quite recovered from the bad treatment to which she subjected them before she obtained the glasses from you, and perseveres with them. But she finds that the aching returns at an earlier hour each day, and that her headache, which used to pass off when she left work, now persists all through the evening, and that only sleep, and even that not always, cures it. She then seeks other advice, is put under atropine, found to have hypermetropia, given her proper correction, and is thereafter comfortable, and wonders why you ever gave her those spectacles, which make everything look so tiny. The explanation of course is that you were deceived by the ciliary spasm. She came to you on account of this spasm. Her ciliary muscles, irritated by months of overwork in focussing correctly in a shortened eye had got to a condition of "tonic spasm" and over-accommodation, producing temporary short sight. You had easily corrected this short sight, but by doing this had added to her hypermetropia by precisely the strength of the concave glasses you prescribed. This led to greater efforts of accommodation, and to results which neither the eyes nor the patient could possibly put up with.

* Read before the Devon and Exeter Medico-Chirurgical Society.

Always, then, be exceedingly chary of ordering low concave glasses for anyone under 25 years of age, unless you have been able to ascertain definitely by the use of atropine that it is not a case of hypermetropia with ciliary spasm.

Squint.

Closely allied to this condition is that of internal squint in children. We so often get cases of bad squint brought to us with the history that it came on many months or even years ago; and, when we inquire why the parents did not see about it sooner, the reply usually is that "the doctor said the child would grow out of it." Now I am very far off believing all that people tell me about their doctors and the opinions that they have given. I know full well, from personal experience of the way people have interpreted and distorted my own opinion, how extraordinarily inaccurate the ordinary man, and still more so the ordinary woman, is in these matters; but this is such an oft-told tale that I feel sure the opinion is frequently given.* There is also some truth in the statement that the patient will grow out of it. "May" grow out of it would be quite true as far as it goes, but the whole truth would be "May grow out of it but with grievous loss of sight in the squinting eye and probable loss of binocular or stereoscopic vision." An opinion which causes any delay in the treatment of a squint in a child is hopelessly wrong and should never be given. For all practical purposes squint in growing children is always the result of refraction error. The exceptions are, in my experience, so few as to be negligible for the purpose of this paper, and the exceptions are usually caused by some lesion which is obvious and difficult to miss, such as corneal opacity. The vast majority of these cases of squint are convergent and when they are convergent they are associated with hypermetropia. When divergent they are usually due to myopia, or not infrequently to something which is rendering the diverging eye useless and so depriving it of the normal stimulus to move concomitantly with the other eye.

Let me briefly remind you of the physiology of accommodation and the supposed cause of converging squint; but first let me say that the last annual report of the Eye Infirmary shows that we had 97 cases of converging squint during the year and 10 of diverging; and of those 10 it is probable that not more than half were due to myopia.

As a working theory of the etiology or physiology of concomitant converging squint, Donders's is as good as any, and I can give you the outline of it in a few lines.

1. There is hypermetropia, that is, a short eye.
2. The short eye requires more accommodating power to focus objects on the retina than the normal or long (myopic) eye.
3. Convergence of the eyes is always associated with focussing. You will remember that the normal eye at rest is accurately focussed for distant vision. When objects nearer the eyes are looked at the internal recti converge the eyes so that they look at the desired point. Focussing—that is, increasing the convexity of the lens—also becomes necessary for a clear image to be projected upon the retina. Thus, convergence and accommodation are always associated, and so it comes about that convergence stimulates accommodation and increases it.

4. A hypermetrope of 2 dioptres has to be always accommodating to that amount to see distant objects clearly, and usually the ciliary muscle, which does the accommodating, manages it all right; but if the child gets some debilitating disease, or if anything occurs to weaken its ciliary muscles, convergence is brought into play to stimulate accommodation. Suppose, for example, that this hypermetrope wants a clear image of an object 30 ft. away. He converges to a point, say, 20 ft. away, and so excites the required amount of focussing. But if both eyes converge to 20 ft. neither will be directed towards the object at 30 ft.; and so it comes about that one eye is steadied by its own external rectus so that it looks at the desired object, while the other eye does convergence for both and so comes to be looking at only 10 ft. There you have the squint. One eye, the better one, is fixing the object to be seen, and the other is pro-

viding the necessary stimulus for accommodation by excessive convergence. We now come to the serious part of the business. It is obvious that the child will, the first time he performs this manoeuvre, see double, and so it soon comes about that the image of the converging or squinting eye is obliterated, and thus you get in most cases—

5. Amblyopia or impaired vision in the squinting eye. I will not even mention the many theories advanced to account for this. It is sufficient to say here that it does occur, and occurs so rapidly that some authorities think that the amblyopia is the predisposing cause of the squint, instead of the squint causing the amblyopia. Amblyopia means loss of sight, and it also means, if it is present to any important extent, loss of binocular or stereoscopic vision; and so I urge it upon you that at the first sign of squint you see that proper treatment by glasses is at once adopted.

All the treatment that is required at an early stage is correction of the hypermetropia by suitable glasses, and an operation for concomitant squint ought never to become necessary.

Ocular Headache.

One does not see nearly as many headaches from this cause overlooked as one did fifteen years ago. Medical men and the public have become thoroughly alive to the fact that this is a frequent cause of headache; but it is worth remembering that slight errors of refraction more frequently cause headache than serious errors. This is probably due to the fact that people with serious errors have them corrected early because they are aware that they cannot see properly.

Foreign Bodies.

Passing now from refraction troubles to actual pathological conditions, I will first just mention that minute foreign bodies in the cornea are a not infrequent cause of severe neuralgia in the forehead and temple, not are these foreign bodies always easily discovered.

A man came to me recently with a story of frightful attacks of neuralgia, for which he had been treated by his doctor for a month, with no good result. He considered that the neuralgia was in some way due to his right eye, because bright light was the chief exciter of the pain. The attacks were becoming more frequent and more severe, and quite incapacitated him for his work. He could not remember anything getting into his eye, and the eye looked quiet and normal, save that there was slightly excessive lachrymation and a very contracted pupil. I suspected some corneal trouble and had herpes in my mind when I examined the eye, but, after a careful and minute search with a lens, I found two minute foreign bodies. They were very difficult to find and see, but their removal cured his neuralgia, though not immediately. I saw him a fortnight later, and he told me that he had had a few attacks, all of them shorter and less severe than formerly, but none for four days past, and he considered that they were gone for good. As I have not had another visit from him, I feel sure that he is cured.

There are, somewhat rarely, cases in which a foreign body has got into the upper sulcus of the conjunctiva, where it is reflected from the orbit on to the eyeball; these are easily missed, and it is not sufficient merely to evert the tarsal cartilage and look for the body on its inner surface. With a bent probe or a spatula you should, after everting the lid, lift it off the eyeball and look carefully along the whole length of the upper sulcus. Eyelashes are specially prone to lodge here and cause irritation with mucopurulent secretion.

Corneal Ulcer.

I now come to a more serious group of cases in which eyes are often lost for want of careful and vigorous treatment at an early stage. Ulcer of the cornea, with hypopyon, following an injury which is often very slight. Almost invariably these cases arise among the poor, underfed, and hard-worked labourer, and in my experience from one of two causes. The man has either been stone-breaking and his eye hit by a chip of stone, or hedge-trimming, when it has been flipped by a twig or scratched by a thorn. The apparent injury may be so slight as to elude detection even with a corneal microscope, but the eye is usually painful, angry-looking, and watering. If you do detect anything by careful examination, it is a small scratch, abrasion, or cleanly incised wound, the latter from a sharp chip of stone.

Many men err from not treating this apparently slight injury with sufficient respect. They give a boracic lotion

*In the discussion following the paper Mr. Stirr, the Medical Inspector of School Children for Exeter, said that he could corroborate this statement, that parents of squinting children had often told him that doctors, consulted about the squint, had said "the child will grow out of it."

and perhaps some weak cocaine drops for the pain, and think that the eye will be all right in a day or so when the cut or abrasion has healed. A great many eyes are thus sacrificed every year. We had 20 such cases at the Eye Infirmary last year, and I doubt if one of them recovered with any useful vision, and I am sure that they provided a proportion of the eighteen eyes which were excised during that time. Such an eye should be treated as though it were inoculated with a virulent septic organism, as indeed it probably has been.

My advice to you is to send such a case to the Eye Infirmary at once. There is no money to be made out of them, because they have no money; there is no credit to be got from them, because if they get well they say that it was such a trifling injury that "of course it got well"; and if it does badly they say, and with some truth, "It was your fault." I always insist, when these cases come to me first-hand, that they shall come into the Infirmary. They require most careful nursing, antiseptic treatment, rest, and good food, and I cannot recall a case that has "gone wrong" when placed under these conditions. On the other hand, they go home with their bottle of boric lotion, which they pour into a dirty saucer, sop up with a not too clean cloth or rag, and squeeze into the eye with thoroughly septic fingers, and the eye does not get better. Slowly the cornea gets hazy with the hosts of leucocytes which muster to limit and destroy the invading and multiplying host of germs. The battle-field becomes a mortuary for the destroyed blood cells and germs, and this mortuary we recognize as a tiny yellow spot in the cornea—a minute abscess, which slowly, and day by day, grows larger. It not only loosens and destroys the surface epithelium, forming a shallow ulcer, but it penetrates inwards and perforates the inner, Descemet's, membrane, and the highly septic pus is then in the anterior chamber, to the bottom of which it gravitates as what we call hypopyon.

The local treatment which I adopt in the early stage of these cases is a drop of atropine, cocaine, and quinine. The atropine dilates the pupil before iritis sets in—a very good start. The cocaine soothes the pain, and the quinine is an efficient, sufficient, and un-irritating antiseptic. I also use a little yellow oxide of mercury ointment, and these, together with rest, good food, and thorough, frequent irrigation of the eye by a good nurse, are means which I find effective, sometimes even in cases which have reached the stage of abscess, and even slight hypopyon. If the case is a bad one, or threatens to be so, I cauterize the ulcer freely with the electric canter, let out the hypopyon by an incision in the corneal margin, and thoroughly irrigate the anterior chamber with 2 per cent. boric solution or with normal saline. I am getting to use the canter earlier and oftener in these cases, because I am convinced that the resulting opacity of the cornea is far less dense than is that which follows the natural cure.

Therefore, in cases of corneal trauma, especially from stone-breaking or hedging, watch with care and treat with vigour and precision. If possible, send them to an eye hospital for skilled nursing, rest, and feeding. If the case does well, a week or ten days in hospital will cure it; if it does badly, it will have been placed under the best conditions, and will be under treatment for many weeks.

Irido-Cyclitis.

Acute iritis is not often overlooked, but the low plastic type of irido-cyclitis is often most inefficiently treated, because its seriousness is not appreciated. I have had several such cases in the last two or three years, which have been mismanaged before they came to me, with vision reduced to less than $\frac{1}{100}$, with pupils not properly dilated, and so forth. Many are misled by the apparent mildness of the trouble. The eye is only very slightly inflamed, scarcely pink. There is absolutely no pain, and usually the only complaint is that sight is failing. On examination you may find that the iris does not react to light, or only very sluggishly. After atropine, you find that it has dilated either irregularly or not at all. Perhaps, if you are early enough, it dilates regularly but not fully, and you see spots of uvea on the lens. If you look at the fundus you find that the view is not clear, because there are cobwebby opacities in the vitreous; and, finally, close examination of the cornea shows you a few or many minute pin-point specks on its lower segment—keratitis punctata.

Such an eye is the seat of a very nasty and intractable disease. It will take months, running very likely into years, to recover, and will almost certainly suffer visual loss as the result of the inflammation which permeates it. The mistake which is usually made is that the iritis is recognized and treated, very likely correctly, with atropine, salicylates, iodide of potassium, or what not, and that the case is given up as cured when active iritic symptoms have passed. Men forget that the iris is, though physiologically a separate organ, anatomically continuous with the ciliary body and choroid, so that inflammation can, and does, spread backwards by continuity of tissue. In a case of simple iritis I am always very diffident about leaving off atropine, and watch the case anxiously for a month or two after omitting it from the treatment.

Do not forget that the iris is only the anterior termination of the uveal tract, and that an inflammation of it may spread back and involve the choroid, retina, and vitreous. Look out for keratitis punctata.

It may impress it upon your minds if I tell you that this condition is practically the same as that which you all know and dread as sympathetic ophthalmia. One sees very few cases of that nowadays, and there is no one here who would not at once recognize it if it arose in his practice after injury to the other eye. That is sympathetic irido-cyclitis, and what I have been speaking of is simple or, if you like, idiopathic irido-cyclitis, and is often as formidable a disease.

Glaucoma.

I feel that you will expect me to say something about the diagnosis between iritis and glaucoma, and at the same time I am conscious of being quite unable to condense the subject into a paragraph. The mistake is still made of using atropine for a glaucomatous eye, and is made in cases in which ignorance is not only the excuse for it, but the reason. A typical case of glaucoma in the acute or subacute stage is like nothing else. The suddenness and severity of the onset, the hardness of the globe, the partial dilatation of the pupil and its immobility, the shallow anterior chamber, and the steamy cornea, together with the rapid loss of sight, form a very perfect clinical picture. In iritis the onset is more gradual, the tension is but little if at all increased, the pupil is contracted and immobile, the anterior chamber is not diminished in depth, the cornea is not hazy, and the loss of vision is neither rapid nor, at first, great. But these are the easy cases to decide upon. One occasionally sees cases which give rise to great difficulty in diagnosis, and I believe that when you are in such a difficulty the best thing you can do is to order cocaine drops for the relief of pain, and send the case to a specialist at once.

I remember once having to do iridectomy for an acute glaucoma produced by the application of a mydriatic, by one of the best eye surgeons in England, for the purpose of investigating the condition of the lens. He suspected and found cataract, but he did not suspect chronic glaucoma, which was undoubtedly present, and which was exacerbated by the temporary dilatation of the pupil. Men occasionally, and at some risk, use a mydriatic in middle-aged and older people for the purpose of examining the interior of the eye for some unexplained loss of sight. Before doing this they should satisfy themselves that chronic glaucoma is not the cause for which they are seeking, because, if it is, they are running a very great risk of producing an acute attack.

Before using a mydriatic in a person of middle age or over, satisfy yourself that there is neither subacute nor chronic glaucoma present.

Chronic glaucoma is an insidious disease and a dangerous trap for which you should be always on the alert. I have recently seen two very sad cases of this disease in which total blindness was present when they came to me. The cases had passed, by months or years, the period when good could be hoped for from treatment. When a patient past middle age comes to me complaining of failing sight and with a normal looking eye, if correction of the refraction does not produce normal vision I think first of cataract and next of chronic glaucoma. The thing to bear in mind is that the disease is usually far advanced when the vision has become seriously affected, and that there is no time to be wasted in improving the general health in the hope that the sight will improve. The diagnosis in the early stages when treatment may avail to save sight is not easy,

and when the diagnosis is plain and the case a typical one' such as textbooks describe, treatment is too often of no avail. It is not very uncommon to find a case of this disease in an advanced stage but able to read $\frac{5}{6}$ and I.J., but when one examines the field of vision one finds it contracted to very small limits. This is, of course, because the intraocular pressure operates first on the periphery of the retina, where the vascular supply is more easily compressed than it is in the central portion.

It is difficult to give any "tip" for the diagnosis of chronic glaucoma. It always attacks both eyes, I think, but not together, so that if one eye has been lost from it you may expect it in the other. If you can make out that the tension is increased, you are safe in diagnosing it; but you are not safe in saying that a case is not chronic glaucoma because there is no increase of tension, because the tension varies a great deal in some cases, though it is probably increased at times in all. Nothing less than a careful routine examination of the eye and its functional power will suffice for making a diagnosis in an early stage.

Cataract.

There is one silly little mistake which I have made dozens of times, but have not communicated to the patient, in diagnosing cataract by focal (or side) illumination only. In some elderly people the hardened lens reflects the light in such a way as to give the pupil a milky appearance, which is not unlike the pearly reflection of a mature cataract. There is not necessarily cataract present in such a case, and the diagnosis is not good unless you can confirm it with the ophthalmoscope. With a plane mirror at the usual distance for indirect examination throw a light through the pupil on to the fundus. If cataract is present in the pupil you will see the red reflex interrupted by black streaks or dots or spots; or, better still, scrutinize the lens by the direct and close method, and with a +25 D. lens in your ophthalmoscope. That will show you the most minute traces of lens opacity, but requires some experience. The former method is quite sufficient for all practical purposes, and extremely simple.

CONCLUSION.

I have not exhausted the category of mistakes, and I have not mentioned the question of fundus conditions which cannot well be discussed until they have been demonstrated.

It was not my purpose to deal with the rarer conditions of disease or traumatism, or to exhaust the possibilities of the eye as a field for making mistakes in. I have contented myself, and I expect tired you, with the common mistakes in ophthalmic practice.

THE VALUE OF SOME LACTIC ACID FERMENT PREPARATIONS FOR INTESTINAL THERAPY.

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DURING the course of an investigation upon faecal organisms it was found necessary to determine the inhibitory action of certain types of lactic acid bacilli. Some of the bacilli were isolated from ten commercial lactic acid ferments, and it was suggested to us that a statement of our observations might be of interest to those who use these ferments in everyday practice.

The majority of these ferments are sold in the form of dry tablets, obtained by inoculating the milk with an organism, evaporating, and then compressing the residue, or by mixing a dried culture of the organism with a suitable excipient. These tablets are directed to be added to milk which has been boiled for a short time and then allowed to cool; the milk is then to be kept at blood heat for six to eight hours. After this period of incubation the milk is said to be sufficiently "soured" for therapeutic uses. In a few cases it is advised to dissolve the tablets

in sweetened water before consumption. The object of these procedures is the introduction of lactic acid bacilli into the ileum and colon in order to inhibit the action of putrefactive bacteria.

The results of the simple experiments we have carried out tend to show that the ferments at present on the market do not achieve the end in view, and they suggest that until there is a decided improvement in the processes of manufacture the dangers attendant upon the use of these tablets outweigh their benefits. Whenever the treatment is specifically indicated it would be well to obtain young, active, and specially adapted (aerobic and anaerobic) cultures in a fluid medium from local public health or other laboratories, and to determine the efficacy of the organism by bacteriological examinations of the faeces. With suitable media and precautions, such a proceeding need not involve more than the outlay of a few shillings, and the ultimate expense will be considerably less than that occasioned by the longer haphazard medication with inert or inefficacious material.

Development of Acidity.

Since the ferments are used in connexion with milk, we first determined the acidity developed in raw, pasteurized, and sterilized milk during incubation at blood heat. It will be seen from Table I that in pasteurized and sterilized milk a considerable amount of acid is formed, and that it is necessary to sterilize the milk on two successive days in order entirely to free the milk from micro-organisms.

TABLE I.—The Acidity Developed in 25 c.c. of Milk during Incubation in Sterile Flasks at 37° C. (98.5° F.).

	Acidity when received, Deci- normal Alkali.	24 hours. Deci- normal Alkali.	72 hours. Deci- normal Alkali.	96 hours. Deci- normal Alkali.
Raw milk	12	25.0	96.0	—
Pasteurized milk	6	11.5	19.5	21.0
Pasteurized milk, the acid produced each 24 hours being neutralized	6	11.4	30.9	63.4
Pasteurized milk heated to 100° C. for 1 hour	6	13.0	29.0	36.5
Pasteurized milk heated to 100° C. for 1 hour on two successive days	6	—	—	—

These figures emphasize the observations of Robertson and Muir,¹ who found that:

Milk pasteurized at 70° C. for 30 minutes killed off cocci, lactic acid coli, proteus, and ordinary pathogenic bacilli.

Milk heated to 100° C. for 1 to 1½ hours killed off anaerobic spore-bearing bacilli, including *Bacillus enteritidis*.

Milk heated to 100° C. for 2 hours killed off subtilis group and aerobic spore-bearing bacilli responsible for summer diarrhoea.

As it rarely happens that the domestic heating of milk ensures complete sterilization, it is obvious that the addition of "ferments" to milk partly sterilized induces considerable antagonism between the added bacilli and the unkilld organisms, which, freed from the restraint of the ordinary milk bacteria, are multiplying more rapidly than usual. In summer time some of these resistant organisms possess pathogenic properties, and their free growth is not without danger. If this form of treatment demands the "souring" of milk, it is obvious that the process should be carried out with new milk collected under cleanly conditions. The slight bactericidal properties of fresh milk may then act upon undesirable organisms and the lactic acid bacilli outgrow other bacteria. As this, however, requires several days for completion, we are forced to the conclusion that the conditions of the collection and sale of milk in this country make it an untrustworthy vehicle for the administration of this medicament. It is better, apparently, to discard milk and to administer the cultures in a liquid sugar medium.

I.—The Acid Contents of the Tablets.

It appeared to be worth while to determine the acidity of each tablet in order to ascertain the activity of the medium from which the tablet was prepared. The figures

obtained show considerable variation (vide Table II). The smaller amounts are from those tablets which consist of a mixture of dried bacilli and sugar only.

TABLE II.—*The Acidity Obtained by Dissolving the Tablets in 25 c.cm. Distilled Water in Terms of Decinormal Alkali.*

Sample No.	7*	...	...	...	...	c.cm.
..	No. 4	...	...	...	...	0.5
..	No. 6	...	...	...	...	0.4
..	No. 8	...	...	...	...	0.05
..	No. 8	...	...	...	...	0.2
..	No. 5	...	...	...	...	1.8
..	No. 1	...	...	...	...	0.5

* The numerals are adopted for convenience only. They have no relation to the order in which the preparations are cited.

Morphologically the appearances of the organisms differ widely. Some tablets contain bacilli which accord with Metchnikoff's classic descriptions: in other preparations diplococci, sporulating bacteria, and streptobacilli, or yeasts are also present.

Speaking generally, there is no growth on McConkey's medium, but luxuriant cultures are obtained in peptone broth, nutrient broth, dextrin, glucose, saccharose, lactose, salicin, glycerine, and raffinose, and on nutrient agar. Sorbite, galactose, maltose, inulin, dulcitol, and malachite green broth rarely act as suitable media. Nitrates are only reduced by one or two types and indol reactions are not obtained.

II.—Variations in the Power of the Tablets in Each Sample.

The power of the tablets may be ascertained by incubating measured quantities in a 1 per cent. lactose solution. Their activity should be determined by incubation in a lactose solution to which carbonate of lime is added in excess. The capacity of multiplication is another factor for estimation, and from our standpoint one which is of prime importance. These factors often show considerable variations, so that they must be severally investigated.

In Table III are recorded the "powers" of the tablets. It will be seen that there are pronounced differences between the samples examined, and between individual tablets from the same batch. This may to some extent account for the complaints of irregular "souring." In some instances the acidity developed after twenty-four hours is not greater than when the original tablet is dissolved in distilled water.

TABLE III.—*Variations in the Power of the Tablets of Each Sample. Estimations of the Acidity Produced in Milk by adding One Tablet to 25 c.cm. of Sterilized Milk or 1 per cent. Lactose Solution free from Carbonate of Lime (in Terms of Decinormal Alkali). Incubation Period, 48 Hours at 37° C.*

	Tablet 1	Tablet 2	Tablet 3	Tablet 4	Tablet 5	Tablet 6
Sample No. 5	2.0	0.5	0.6	0.4	0.4	0.2
.. No. 1	7.1	6.1	4.2	2.8	2.8	1.8
.. No. 8	0.3	0.3	0.2	0.2	0.2	0.2
.. No. 4	4.0	3.6	3.6	3.4	2.8	2.8
.. No. 6	0.4	0.3	0.3	0.2	0.2	0.2
.. No. 7	0.7	0.6	0.6	0.6	0.6	0.6
.. No. 2	3.5	3.2	2.6	2.6	2.4	2.1
.. No. 3	0.7	0.6	0.5	0.5	0.5	0.4

It may be well, however, to point out that the best acidifiers are by no means the best multipliers and that the amount of curd is not an index of the capacity of the organism to pass through the alimentary canal.

III.—The Activity of the Ferments in Pasteurized, Partly and Fully Sterilized Milk, and in Lactose Solution.

The figures given in Table IV represent the activity of the ferments. It will be seen that pasteurized milk

without the addition of a tablet yields approximately the same amount of acid as that produced after the addition of the ferment. From Table V it appears that the ferments possess more power than the proliferating organisms of pasteurized milk. During the first twenty-four hours only three of the samples show any marked acidity; the others are not more acid than the pasteurized milk. Some of the ferments inhibit the action of the normal acidifying organisms.

TABLE IV.—*The Acidity Produced in 25 c.cm. of Pasteurized Milk by the Lactic Acid Bacilli after Daily Neutralization of the Acid Produced, and Incubation at 37° C.*

	24 Hours. Decinormal Alkali.	48 Hours. Decinormal Alkali.	72 Hours. Decinormal Alkali.
Pasteurized milk without addition of organisms	5.4	30.9	63.4
Sample No. 9 added to milk...	5.4	33.4	84.4
.. No. 7	5.6	27.1	72.1
.. No. 8	6.6	31.7	70.7
.. No. 6	5.6	26.1	64.1

TABLE V.—*The Acidity Produced in 25 c.cm. of Pasteurized Milk by the Lactic Acid Bacilli without Daily Neutralization. Incubation at 37° C.*

	24 Hours. Decinormal Alkali.	72 Hours. Decinormal Alkali.	96 Hours. Decinormal Alkali.
Pasteurized milk without addition of organisms incubated at 37° C.	5.5	13.5	15.0
<i>B. lactis aerogenus</i>	15.0	24.4	32.5
Sample No. 9	5.4	28.0	51.0
.. No. 7	5.6	21.5	45.0
.. No. 6	5.6	20.5	38.0
.. No. 8	6.6	25.5	38.0
.. No. 4	12.0	20.2	26.8
.. No. 2	8.5	24.2	25.9
.. No. 5	12.5	14.0	14.5
<i>B. coli communis</i>	7.0	10.5	14.0
Sample No. 1	5.0	13.3	13.2
.. No. 3	14.0	5.2	4.2

The manufacturers do not advise the use of pasteurized milk. According to the directions it is necessary to bring the milk to the boil—some go so far as to recommend the difficult task of keeping it on the boil for one hour—then to cool it, and after adding the tablets to keep it at blood heat for six to eight hours. In Table VI the results of an attempt to follow the instructions given are recorded, and they represent what would be obtained by a nurse or housewife. The figures show that the unskilled organisms are able to grow rapidly in the milk, and that the introduction of the lactic acid bacilli produces an antagonism leading to a minimal growth of both types of organism and a small amount of acidity. When inert, or almost inert, tablets are added to the milk, it is evident that the spore-bearing organisms of the milk have it all their own way, and as such bacteria sometimes act as intestinal irritants, the process cannot be considered as a safe one. Were it possible, however, for the "souring" to be obtained within six to eight hours this danger would be only trifling; but this time is far too short for the hibernating bacilli to regain their normal activity, and upwards of sixteen to twenty-four hours is the average period necessary. Table VII shows the conditions when the spores are all destroyed, and the tablets exhibit their maximal characters.

TABLE VI.—*The Acidity Developed in 25 c.cm. Pasteurized Milk Heated to 100° C. for One Hour and then Incubated at 37° C. after the Addition of Comparative Quantities of Various Lactic Acid Ferments.*

	24 Hours. Deci-normal Alkali.	96 Hours. Deci-normal Alkali.
Milk alone	13.0	36.5
Sample No. 6 added to milk ...	17.0	43.0
" No. 7	13.5	46.0
" No. 2	12.0	55.5
" No. 9	12.0	50.5
" No. 10	8.5	46.0
" No. 1	5.0	63.0
" No. 8	4.0	16.0

TABLE VII.—*The Acidity Produced by Lactic Acid Bacilli in 25 c.cm. Milk Sterilized at 120° C. for Fifteen Minutes on Two Successive Days. Incubation at 37° C.*

	24 Hours. Deci-normal Alkali.	72 Hours. Deci-normal Alkali.
Sterilized milk alone	—	—
Sample No. 4 added to milk ...	24.1	99.2
" No. 2	23.0	53.2
" No. 7	21.4	45.7
" No. 9	19.5	21.6
" No. 6	8.9	15.4
" No. 8	10.4	14.6

IV.—*The Inhibiting and Antagonizing Action of the other Organisms present in Milk.*

We have already remarked upon the inhibitory action of the milk organisms upon the lactic acid bacilli. The following table points the moral. When *B. coli* are present in milk they reduce the activity of any added lactic acid bacilli. In this instance comparative quantities of *B. coli* and *B. acidilactici* were added to a sterile lactose solution, and in many cases the acidity produced was less than that produced by the lactic ferments alone. We may fairly assume that with the ordinary "souring" of milk the conditions are more complex, and that it is too much to expect the dried bacilli to attain their dominating characters until the other organisms have developed a strong antagonism.

TABLE VIII.—*The Activity of the Lactic Acid Ferments in 1 per cent. Lactose Solution, and the Inhibiting and Antagonising Action of other Organisms.*

To 25 c.cm. of a 1 per cent. freshly prepared lactose solution $\frac{1}{2}$ c.cm. of a twenty-four hours' growth of the organism in nutrient peptone was added. The mixture was then incubated at 37° C. (58.5° F.).

	24 Hours. Deci-normal Alkali.	48 Hours. Deci-normal Alkali.
<i>Bacilli coli</i> comments	0.1	6.0
Sample No. 2	3.0	21.5
" No. 2 + <i>B. coli</i> comments ...	6.3	9.7
" No. 5	0.60	4.0
" No. 5 + <i>B. coli</i> comments ...	1.0	5.8
" No. 1	0.3	12.0
" No. 1 + <i>B. coli</i> comments ...	0.1	9.5
" No. 3	0.3	4.5
" No. 3 + <i>B. coli</i> comments ...	0.1	4.3
" No. 4	0.2	10.1
" No. 4 + <i>B. coli</i> comments ...	0.2	8.0

V.—*The Multiplication of the Lactic Acid Bacilli.*

During the passage of the lactic acid ferments into sugar and other media a good growth was invariably obtained in peptone water. Fournier² points out that with certain true lactic ferments the lactic acid output may exceed 100 per cent. in the presence of peptone, and this without giving rise to any simplified nitrogenous product, or to any putrefactive one particularly. It is evident, therefore, that peptone water is essential for the multiplication of the bacilli. Critchard³ has recently observed that the lactic acid bacilli grow best in an acid medium, and Coheny⁴ devised a medium composed of lacmus milk containing 35 grams lactic acid per litre. Palier,⁴ however, working lately in Boas's laboratory, finds that gastric juice kills bacteria with ease, and considers that the lactic ferments are devitalized before they reach the intestine.

As the lactic acid treatment aims at intestinal therapy it seemed advisable to subject the tablets to the action of an artificial gastric juice. After some preliminary failures a medium was found which was comparable with gastric juice and yet contained stimulating pabulum. This medium later proved to be a very useful means of isolating the organisms from the dejecta, and a valuable form of enrichment. Table IX shows that a proportion of the tablets did not survive this test. The small amount of acid contained in these tablets (vide Table II) suggests that the organisms were not prepared from a very acid medium, and that, in order to safely navigate the gastric sea, the bacilli should be trained to appreciate an acid medium; in other words, the medicament should be a culture grown and administered in an acid broth.

TABLE IX.—*The Growth of Comparative Quantities of Lactic Acid Ferments in an Artificial Gastric Juice Media.*

Samples No. 2, 6, 10, 3, 2	Good growth
" No. 7, 5, 4	Poor growth
" No. 1, 8	No growth

VI.—*The Action of Aerobic and Anaerobic Faecal Bacteria upon the Lactic Acid Bacilli.*

Tables X and XI contain the results of the interaction of normal and pathogenic bacteria and the lactic ferments. It shows that very few of the preparations are sufficiently active to overcome the faecal bacteria, and that an acid medium is an important factor in the process.

TABLE X.—*Activity of the Lactic Ferments in Presence of Aerobic and Anaerobic Faecal Organisms.*

Measured quantities of the organisms and of an emulsion of faeces were mixed together and incubated at 37° C. for varying periods. Cultures were then made in acid and neutral broth, and the organisms plated on agar and McConkey's medium.

	48 Hours.		96 Hours.		5 Days.	
Sample No. 6.	Number of Colonies.	Types of Colonies.	Number of Colonies.	Types of Colonies.	Number of Colonies.	Types of Colonies.
<i>Acid Broth.</i>						
Nutrient agar	24	2	25	1	38	1*
McConkey's medium ...	5	1	0	0	0	0
<i>Neutral Broth.</i>						
Nutrient agar	20	3	1	1	0	0
McConkey's medium ...	25	2	0	0	0	0

* Sample No. 6.

Sample No. 2.—Three colonies (one type) after 5 days in acid broth.

" No. 1.—No colonies after 5 days in either broth.

" No. 8.—No colonies after 5 days in either broth.

VII.—*The Passage of Lactic Acid Ferments through the Alimentary Canal.*

It is a generally accepted statement that the lactic acid bacilli appear in the faeces about five days after being taken by the mouth, and that the total amount of faecal

bacilli is at once diminished, the lactic acid bacilli being easily demonstrable in the dejecta for some time afterwards. We find, however, that with suitable doses of enriched cultures accustomed to live under anaerobic conditions, and administered in a specific acid medium, there is no difficulty in demonstrating the presence of the bacilli in the stool passed the following morning.

It is not an easy matter to recognize the various lactic acid bacilli in the faeces, and only when we adopted the acid "gastric" medium referred to did we find the procedure at all simplified. By this means, however, the recognition is neither difficult nor tardy, and the practitioner is assured of a practical demonstration of the object he aims at.

These lactic acid bacilli are not in their natural habitat when transferred to the colon, and it is curious that their life in the intestine is about the same as it is in artificial media—namely, about five to seven days. This seems to be the period when another dose is indicated. The fact suggests that we must not expect these bacilli to become acclimatized to the intestine easily, and must regard them rather as temporary interlopers, our object being to allow the normal flora to regain their sway as soon as the objectionable putrefactive anaerobes are overcome.

Passage of Lactic Acid Ferments through the Alimentary Canal.

Tablets from the various preparations were taken by the month. When the organism appeared in the faeces the ingestion was stopped, and the faeces examined daily until the lactic acid ferment could no longer be isolated.

TABLE XI.

Period of Ingestion.	First Appearance in Faeces.	Disappearance from Faeces.
Tablet (1), Feb. 1st to 10th ...	No appearance	—
Tablet (6), Jan. 30th to Feb. 3rd ...	No appearance	—
Tablet (3), Jan. 30th to Feb. 1st.	February 1st	February 4th
Culture, Feb. 1st to 2nd ...	February 2nd	February 8th
Culture (6), Feb. 3rd to 4th ...	February 4th	February 10th

It only remains to make the deduction that even the best present commercial preparations are not sufficiently and regularly active for routine use, and that freshly prepared fluid cultures should be employed when lactic acid therapy is indicated. The activity and power of the organisms in producing acids cannot be taken as an index of their multiplication and inhibitory action upon other organisms, and it is probable that no one organism can be regarded as efficacious in every case. When an organism fails to produce the desired result, certain laboratory tests may indicate the selection of bacilli possessing other characteristics. It should also be borne in mind that the lactic acid therapy is only indicated when the putrefactive anaerobic organisms are present in the faeces in excess, and that without such a guide this form of medication may aggravate rather than ameliorate the intestinal conditions.

REFERENCES.

¹ BRITISH MEDICAL JOURNAL, vol. i, 1904. ² FOURNIER, *Coombe's Intestinal Auto-intoxication*, p. 444, Rebbman, London, 1909. ³ CRITCHFIELD, *Comp. Rend. de Soc. Biologie*, 1908, p. 818. ⁴ FAHNER, *Boss's Archiv*, 1908, Bd. 14, p. 312.

MESSRS. HARVEY FROST, who are well known as the manufacturers of a very useful portable tyre vulcanizer, have issued a pamphlet, which they will present to persons interested, containing certain particulars of various motor tyres upon the market. No opinions are expressed upon their relative merits, but it contains some useful hints as to the management and repair of tyres. Specimens of all those mentioned can be seen at Messrs. Harvey Frost's, 27, Charing Cross Road, where they are not on sale, and therefore can be inspected and compared without any order being expected.

An Address ON MINING ACCIDENTS:

WITH
AN ACCOUNT OF THE USE OF OXYGEN IN A
COALPIT ACCIDENT.

DELIVERED TO THE STIRLING BRANCH OF THE BRITISH
MEDICAL ASSOCIATION

By JAMES ROBERTSON, M.B., C.M.

CLACKMANNAN; PRESIDENT.

GENTLEMEN,—I accept it as an honour to have been asked to address you, and I hope that what I have singled out of my scrapbook may be of interest.

COMPLETE DISLOCATION OF KNEE-JOINT.

In the following case there are three points to which I desire to call particular attention:

1. The free mobility of the limb at the knee-joint. One of the classical signs of a dislocation is no movement where there ought to be movement; in dislocation of knee-joint there is increased mobility, and mobility in every direction.
2. The floating patella, which simulated a patella in a case of acute synovitis with effusion; the difference being that upon comparison with the other limb the patella was 3 in. higher.
3. Was the entire absence of pain due to the amount of crushing and local stunning of tissue and nerves from the violence of the wrench?

J. M., a drawer, aged 20, was brought home from his work injured on February 19th. He stated that a hutch containing a load of coal—total weight 15 cwt.—was proceeding down an incline when it left the rail. He went in front to replace it, and when he had done so it ran away, catching his foot between the hutch and a sleeper, the toe of his boot being caught by the sleeper, his heel by the hutch; the hutch, moving on, carried his foot to extreme flexion, when the hutch broke and tilted upon his leg. He became helpless and was removed home.

Condition on Examination.

The limb was shortened and the region of the knee-joint enlarged; there were several bruises between the knee and ankle on the posterior aspect of the leg; the limb was freely movable in any direction at the knee-joint; neither crepitus nor any other sound elicited; there was no pain. Posteriorly the entire articular surface of the femur was felt, the rounded condyles and the notch between them. Anteriorly the patella was freely movable in any direction, and could be pressed down upon the anterior aspect of the femur. The rectus femoris was raised from the femur, and could be grasped easily with the fingers upon displacing the patella; the entire articular surface of the tibia could be felt; the cup-shaped depressions, with the spinous processes; the crucial ligaments could be felt torn; no pulsation could be felt in the tibial arteries at the ankle-joint.

Treatment.

I administered chloroform and set the joint by grasping the ankle with my right hand, placing the femur near the knee on my left thigh, and combining extension with flexion, the joint replaced itself with a loud snap. I again examined, and found the parts normal so far as the bones were concerned, the patella gliding normally over the condylar surfaces, and the replaced joint moving normally and without pain. The limb was wrapped in wadding and a posterior splint applied.

On the day after the accident the patient complained of severe pain round the ankle, and described it like a rope tied tightly there. He had been restless all night. The knee-joint was greatly swollen, and the patella floating, owing to great effusion into the joint; there was no pain, except upon pressure. The foot was bluish and cold, and superficial sensation was lost; deep sensation was present, but feeble; several patches of skin on the leg were ecchymosed, and there were three small blebs, containing dark serum, in the popliteal space. These I pricked and dressed; the foot was rolled up in flannel, and a hot iron, also rolled in flannel, kept at it; a saline purge was given.

On the third day the swelling in the joint was greatly reduced, the bowels had moved, and he had a good night, but complained of sharp shooting pains occasionally passing up the leg from the foot.

On the fourth day the knee was normal in size and looking well; the dressings were removed, and movement begun. Dry gangrene was starting in the toes; all sensation in the foot was lost, but there was hyperaesthesia round the ankle-joint. The gangrene gradually extended from the toes to the foot, until the patient was removed to the Victoria Hospital, Glasgow, for operation seven days after the accident—February 26th.

During the first four days' residence in hospital the patient became febrile and began to show the characteristic chart of septicæmia. The calf of the leg began rapidly to swell, and became boggy. This was incised on March 1st, when pus escaped, and at the same time the gastrocnemius and soleus muscles protruded out of the wound, showing that they had been torn at the time of the accident. The septic condition was the result of absorption of poisonous products from the gastrocnemius and soleus muscles were torn at the thickest fleshy part, and there was a great deal of tissue bruising. There were no blood clots in the veins, and no signs of any injury to vessels. The foot was black.

The limb was amputated at the lower third of the femur on March 4th. The patient made a slow but good recovery, and is now working at the pit head, using an artificial limb with freedom.

Examination of Amputated Limb.

The knee-joint was found to be as I have described; the gastrocnemius and soleus muscles were torn at the thickest fleshy part, and there was a great deal of tissue bruising. There were no blood clots in the veins, and no signs of any injury to vessels. The foot was black.

I have seen the record of five such cases in England, and one in Scotland, and in all the cases gangrene of the foot resulted and necessitated amputation of the limb.

FRacture of Cervical Vertebrae.

I have now seen several cases of spinal fracture; by that term I include cases of spinal dislocation, as it is impossible to distinguish between the two, when either is grave and involves pressure upon the spinal cord.

The spinal cord terminates at the lower edge of the twelfth dorsal vertebra, so that fracture of the lumbar vertebrae involves only the nerves, and when the pressure is removed paralysis usually disappears, but fracture of the dorsal or cervical, as a rule, not only causes pressure upon, but rupture of the cord, and in these cases death sooner or later results. In three cases I

have had of dorsal fracture death resulted during the third year. The higher the injury the more serious and the more rapid the case. In the following case the fracture was an exceptional and interesting one to study.

J. M., an inspector, aged 59, going his usual rounds, reached a coal face, where the miners were sitting at rest. He also sat down in the miners' usual position, that is by extreme flexion of knee-joints, almost sitting on his heels, with his back against the side of the workings. While sitting there a large stone, weighing about 1½ cwt., shot out from the roof above him; its edge struck him upon the forehead, causing sudden over-flexion of the chin upon the chest.

Condition on Examination.

There was no external injury beyond a slight graze on the forehead. There was great mobility of the head and of the cervical region, in any direction, giving a feeling of looseness; there was general paralysis and anaesthesia up to the level of the fourth rib; from the fourth rib to the clavicle there was slight sensation; the arms could be moved with great difficulty, and sensation in them was impaired; above the clavicle sensation was normal. The only movement to be seen was movement of the head with pain and movement of the diaphragm. The ribs were fixed owing to complete paralysis of the muscles of respiration, even of forced respiration, the breathing was Cheyne-Stokes type, the pulse was of low tension and feeble, and the heart sounds weak. The seat of injury was at the sixth and seventh cervical vertebrae.

The man lived sixty hours, the pulse and heart showing pro-

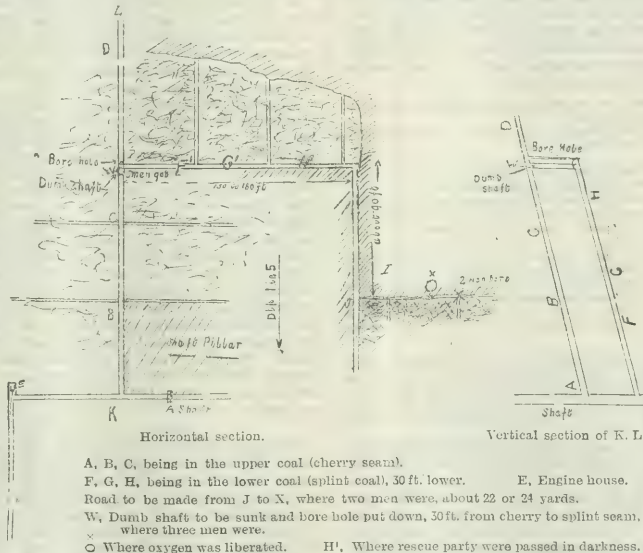
gressive weakening, until death resulted from extreme lividity and a great struggle for breath. The bladder and bowels had to be relieved.

The interesting points of this case are:

1. The brachial plexus arises from the fourth cervical to first dorsal; the fracture being between the sixth and seventh cervical involved the major part of this plexus, hence the partial paralysis of the arms and the diminished sensation, so that while movements of arms existed, they were a terrible burden (as the man expressed it), the nerve power of the fourth and fifth not being sufficient to carry the weight of the arms. This experience makes one think of the relation of the nervous system to the physical frame—the power of the nervous system, and the weight of the physical frame. If the nervous system of the individual is in proper working order, the physical frame has no conscious weight; if the balance is upset, then the physical system is a conscious burden.

2. Breathing was carried on by the diaphragm alone; one could watch the abdomen rising and falling as the man gulped the air, but the chest was absolutely still. Here the pneumogastric and phrenic nerves did their duty. The pneumogastrics, arising from the medulla and passing direct from the skull into the neck, escaped injury. The

phrenics, which arise from fourth and fifth cervical, pass down the middle mediastinum to the diaphragm. The laryngeal nerves, being branches from the pneumogastrics and supplying sensory and motor branches to the larynx and the muscles of the cord, the voice was natural. It is also worthy of note that the sterno-mastoid muscles were strained and out-standing, showing that the spinal accessory nerves were uninjured. They arise from the cord in the region of the fifth and sixth cervical, and passing up the



spinal canal appear in the neck through the foramen lacerum posticum, and supply motor fibres to pneumogastrics. The area of sensation was also limited to the distribution of the cervical plexus and the uninjured part of the brachial plexus. The cervical plexus is divided into three parts—ascending, descending, and deep. The area covered by the two former extends from the clavicle to the lower jaw; the sensation over this area was normal. The deep cervical includes the phrenics, which are the motor nerves of the diaphragm. The muscles of forced respiration have their nerve supply from the brachial plexus; they, therefore, were paralysed.

THE VALUE OF OXYGEN IN PIT RESCUES.

Pretoria Pit, situated about one mile from Clackmannan, is worked in two seams—an upper seam, 35 fathoms deep, and a lower seam, 40 fathoms; that is, there are 5 fathoms or 30 ft. of rock between the upper and lower seams; the gradient is 1 in 5. The pit is surrounded on all sides by old workings, containing water and foul air. Three-quarters of a mile to the west of the pit is a large unworked quarry, covering several acres of ground, and about 40 ft. deep, full of water; an old pit shaft opens into this quarry. The drainage of the surrounding district is led into this quarry. The water suddenly broke into the lower seam, and shortly

afterwards it was found that the water level of the quarry had fallen rapidly. After the flooding was complete the whole amount of air in the lower seam would be about 20,000 cub. ft., coming from all the various passages and openings of every description. All the men except five escaped. Three of these were in the rise of one road, two were locked up in another. The three had about 70 yards of road to creep about in. The two were locked up in a space 2 ft. 6 in. high, 3 ft. broad, and 18 in. from tail of water to coal face. They were sitting with their backs against the coal face and their feet in the water.

The sketch is a rough horizontal plan of the lower seam.

The men were discovered in the usual way. They scored the roof with a stone, and the sound was heard by the search party in the upper seam.

After ten hours' working with pumps it was found impossible to gain on the water, and it was decided to sink a dumb shaft from the upper to the lower seam, near the point where the men were heard knocking. Before starting the dumb shaft, a 3-in. bore-hole was rapidly put down, when it was discovered that there were only three men here, a father and two sons; another search was made, when the other two men were located, a father and son. The three men were fed and kept supplied with candles through the bore-hole until rescued. The pit chart showed the other two men to be in such a perilous position that nothing could be done from the upper seam to save them.

The study of the rescue resolves itself into two stages, in so far as the air island is concerned:

First Stage.—During the entombment of the five men prior to the shaft being sunk.

Second Stage.—During search and rescue of the two men after the shaft was sunk.

First Stage.—There would be about 20,000 cub. ft. of air kept in motion, as to be here described, and all available.

Second Stage.—The air space at once became limited to about 7,000 cub. ft. for all purposes, as now the air tended towards the dumb shaft, and left only the air of the passage we were actually in—500 × 3 × 4 ft.

Oxygen was liberated in a space 90 × 3 × 4 = 1,080 cub. ft., and gradually worked its way to the dumb shaft, oxygenating 7,000 cub. ft. of air, or an air area equal in size to that contained in an ordinary drawing-room, scattered throughout which were twenty men. It took three hours to complete the rescue, so that each man had roughly 2 cub. ft. of O₂ for three hours, which proved sufficient.

When the pit was suddenly flooded, on February 3rd, 1906, at about 9.30 a.m., the section where the men were entombed was completely isolated by water, and they were left in an island of air, which was compressed by the sudden roofing of the water.

This section was a main road with several side roads leading from it, the average height being about 2 ft. 9 in., the breadth about 5 ft., and the length about 70 yards. The contained air of this main road and the side roads was estimated at 20,000 cub. ft. The five men were breathing this air for four days, three of them also having a light burning, and thus causing an alteration of the component parts of the air, diminishing the oxygen and increasing the percentage of CO₂. The other two men were in darkness.

On February 6th at 8 p.m., when the sinking of the dumb shaft was completed, the compression was relieved, and exhalation at once began until air equilibrium was established. This exhalation of air diminished the amount of air in the lower seam. After the three men were removed twenty men now went down the shaft, and proceeded to effect communication with the remaining two men still entombed. In about three hours a stage was reached at which lights would not burn, and breathing was only possible with difficulty; work had to be suspended, and the rescuers were left in darkness. An interesting question here arises: (1) What is the lowest percentage of oxygen compatible with conscious life? (2) What percentage of CO₂ gas may be mixed with air and yet conscious life be supported, and for how long?

At this stage, which was midnight February 6th-7th, about 40 cub. ft. of oxygen was liberated at a point about 150 yards from the dumb shaft, and several feet from the two imprisoned men. This so altered the air condition that lights were got to burn, breathing became easy, and work, which had been suspended, again commenced. The oxygen supply was kept up as required until 4 a.m., when we all arrived at the upper seam.

EFFECT OF CHESTING WATER UPON AIR CONTAINED.

During February 4th, 5th, and 6th, while the dumb shaft was being sunk, and before the complete penetration of the rock strata, the air was confined and compressed between the tail of the water in the various roads on the one side and the coal face on the other. The tail of water was a movable, the coal face a fixed, quantity. The water chests, proceeding up and down the shafts, impinging against the water in the shaft before filling, and lifting each time about 1 ton of water to the surface, set up a movement along the water throughout the pit, thereby causing for each impingement a tidal move at the tail; this tidal movement communicated itself to the confined air at various points surrounding the places of entombment, and thereby kept the air in motion, causing a continuous mixing and aiding ordinary physical diffusion, thus preventing stagnation of CO₂ gas produced by the breathing and lights.

On the evening of February 6th, when the shaft was sunk, compression was relieved, exhalation took place, and although chesting was continued the movements now communicated from the water to the air became less effective, as all air movement at once tended towards the point of least resistance, the dumb shaft.

It follows: (1) That as the dumb shaft was a funnel from the lower seam to the upper, and the only opening, no air could be sent down that shaft. (2) That the twenty rescuers in the lower seam were consuming and burning the air oxygen, and liberating CO₂ gas at a point about 150 yards away from the dumb shaft.

The CO₂ gas rapidly increased, and any movement communicated from the water to the air simply mixed a highly poisoned air with a less poisoned air, as no fresh air could gain entrance; during this time also the water level was lowering, and there is no doubt that CO₂ gas, or black damp, was creeping on us from some old workings. At this stage, when lights went out owing to CO₂ gas, it mattered little whether water chests impinged on water or not, as all the confined air was highly charged with CO₂ gas, and all air movement was towards the dumb shaft.

The only thing now was to liberate oxygen as near as possible to the imprisoned men; a displacement of gases followed, and a diffusion of oxygen through the poisonous air; the oxygen effect beginning at the point of liberation, and gradually working its way backwards to the dumb shaft. This is what I expected, and what happened. During this final stage the rescuers were in an atmosphere of CO₂ gas in which no lights would burn for about fifteen minutes.

PROOF OF OXYGEN TRAVEL.

When proceeding down with the oxygen from the dumb shaft, the first few yards of our journey lights burned; as we went in they gradually lessened, and finally went out; about 80 yards in we passed some of the rescue party scattered and sitting in darkness; we proceeded about 60 yards in advance of them, and then gradually liberated the oxygen. The lights were soon set burning at the point of liberation, and some time afterwards the party of men we passed also got their lights to burn; and in both places lights burned until we all arrived safely at the upper seam.

LESSONS DERIVED.

1. In all cases of similar entombments it would be advisable, while sinking a large shaft for rescue purposes, also to sink a large bore hole at the far end of such a position. Had a 3-in. bore hole been sunk near the place of entombment of the two men a current of air would have been established, and the difficulties we had to contend with avoided.

2. The necessity under such circumstances of taking into account the amount of available air, and the number of men sent into it. If the air is limited, as in this case it was, then the number of men sent down should also be limited, and men not actually working ought to come to the upper seam, all reliefs being kept there, and sent down as required.

Here let me add that acetylene gas will burn in a percentage of CO₂ gas with air in which an oil wick light will not. Whether this fact has been proved by former experiments or not, I cannot say, but it was so in this case.

On the afternoon of February 7th I again went down the pit, and found the air in the lower seam so foul and

charged with CO_2 gas that no light would burn, even in the dumb shaft, and descent was impossible. On February 10th the water was reduced to the level of the roads, thereby allowing an air current which cleared away the island of CO_2 gas, and I travelled over that section of the pit with safety and with lights.

These facts prove also my statement that no air could enter the section where the rescue party were working unless a bore hole or other opening had been made as stated.

The first fact shows the dangers we all passed through, and establishes for all time the value of oxygen in all such cases. Had oxygen not been used, the two men would have lost their lives.

In conclusion, I should like to say:

1. That oxygen gas is an absolute necessity and a valuable adjunct to all pit plant.
2. That the men ought to be trained in its uses.
3. That its properties and uses should form a part of the examination for a manager's certificate.

A SIMPLE METHOD OF ESTIMATING AMMONIA IN THE URINE, SUITABLE FOR CLINICAL PURPOSES.

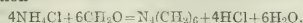
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A KNOWLEDGE of the amount of ammonia present in the urine has an important practical value in many conditions met with in everyday practice. Normally about 3 per cent., in disease as much as 50 per cent., of the nitrogen excreted in the urine is in the form of ammonia. In diseases associated with grave metabolic upset, particularly where gross changes take place in the functions of the liver, and in severe toxæmias such as those not infrequently seen during pregnancy, the amount of urea is usually greatly diminished and its place is taken by ammonia and allied bodies. In the condition known as acidosis the formation of acid products, such as aceto-acetic and beta-oxylbutyric acids in intermediary metabolism, necessitates the utilization of ammonia to effect their neutralization. The ammonium salts formed are excreted in the urine, and the quantity of these present, especially in its relation to the amount of urea, gives an excellent and early indication of the existence and extent of the metabolic perversion. The estimation of the organic acids excreted is a matter of very great difficulty; but since they are in combination with ammonia, the estimation of this body will afford information as to the quantity of these acids present. It is thus obvious that a simple method of estimating ammonia is greatly to be desired. It is only large quantitative changes in the output of ammonia that are clinically significant: in pathological conditions the nitrogen present as ammonia frequently constitutes 25 per cent., while it sometimes reaches 50 per cent., of the total. Thus the employment of an elaborate method of estimation in an attempt to obtain particularly accurate results is unnecessary.

The methods commonly employed¹ are either too inaccurate or too elaborate for clinical purposes. The best is probably the method of Folin,² which necessitates the employment of apparatus only found in a well-equipped laboratory, and the expenditure of several hours to perform; even this method, however carefully carried out, is not free from sources of error.

Malfatti³ has recently described a method that is admirably suited for clinical use, since it is simple and rapid, requires no special apparatus, gives consistent results, and possesses a sufficient degree of accuracy.

The method depends on the reaction that takes place when a solution of an ammonium salt is treated with formaldehyde. Combination occurs between formaldehyde and ammonia with the formation of urotropine, as shown in the equation



The acid previously combined with the ammonia is liberated, and can be titrated. The procedure is conveniently carried out as follows:

Twenty-five c.c.m. of urine are measured with a pipette into a clinical flask of about 250 c.c.m. capacity, and diluted with

about 50 c.c.m. of distilled water. Four drops of a 1 per cent. alcoholic solution of phenolphthalein are added, and decinormal sodium hydrate is run in from a burette till a definite pink colour that does not disappear on shaking is attained. The number of cubic centimetres of decinormal soda added gives the acidity of the urine. About 5 c.c.m. of commercial formalin that have been neutralized beforehand by adding an equal volume of water, a drop of phenolphthalein solution, and sufficient decinormal soda to produce a pink tinge, are now added to the urine. The pink colour at once disappears, since the acids previously combined with ammonia in the urine have been liberated.

More decinormal soda is added till the pink colour reappears. This amount of NaOH is chemically equivalent to the ammonia previously present as ammonium salts, now in combination as urotropine. The amount of nitrogen present as ammonia in the twenty-four hours' urine can readily be calculated, since 1 c.c.m. of decinormal soda is equal to 0.0017 gram of NH_3 —that is, to 0.0014 gram of nitrogen.

I have found that the accuracy of this method can be considerably increased by adding 15 grams of powdered neutral potassium oxalate to the urine and shaking for two minutes before titrating; the end point is rendered much sharper, partly owing to the precipitation of calcium, partly to a diminution of the influence of ammonium salts, both calcium and ammonium salts having a disturbing influence on the end point of the first titration.⁴

I have compared this method with Folin's, carried out under the standard conditions laid down by him, in a large number of urines. The following is a sample of the results:

Grams of Ammonia Nitrogen in 100 c.c.m. Urine.

Urine No.	Formaldehyde.		Folin.
	Without oxalate.	With oxalate.	
1	0.074	0.078	0.066
2	0.067	0.069	0.063
3	0.051	0.053	0.052
4	0.056	0.060	0.052
5	0.026	0.029	0.025

In all the urines examined the formaldehyde method gave higher results than the Folin method—usually about 15 per cent. higher. This represents about 1 per cent. of the total urinary nitrogen. What the causes of this discrepancy are cannot definitely be stated. None of the ordinary urinary constituents are affected, under the conditions of the method as described above, in such a way as to exert any influence on the titration.

Uric acid, for example, though affected by formaldehyde in the presence of excess of alkali,⁵ can be added to urine in large quantity without altering the ammonia value given by the above method.

Sorensen has shown that formaldehyde combines with the amino group of amino acids, setting free carboxyl radicals, which act as acids and may be titrated, affording a measure of the amino acids. It was found that the addition of glycocholl and several other amino acids to the urine increases the ammonia value as given by the formaldehyde method, so that possibly the difference between this and the "Folin" value represents amino acids. Whether these are present in normal urine is at present a matter of dispute, but in pathological conditions—usually those in which the ammonia output is high—large quantities of amino acids are excreted. These bodies have replaced part of the urea, and their significance clinically is similar to that of excess of ammonia. The fact that the formaldehyde method gives the sum of ammonia and amino acid value is thus rather an advantage than otherwise. If it is desired to estimate the amount of amino acids excreted in cases in which the output is high, an approximate result can be arrived at by subtracting the Folin from the formaldehyde values.

REFERENCES.

- 1 For a good review of the methods used for estimating ammonia in urine see Shaffer, *American Journal of Physiology*, vol. iii, p. 330, 1903.
- 2 *Zeitschrift für physiologische Chemie*, Bd. xxxvii, H. 2, 1902.
- 3 *Zeitschrift für analytische Chemie*, 1906, H. 5, p. 725.
- 4 Folin, *American Journal of Physiology*, vol. ix, p. 255, 1905.
- 5 Sorensen, *Biochemische Zeitschrift*, Bd. vii, S. 47, 1903.

THE SCIENCE COMMITTEE OF THE British Medical Association.

REPORT CXII.

OBSERVATIONS ON THE PHYSIOLOGY OF THE FEMALE GENITAL ORGANS.

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III.—THE CORRELATION OF THE UTERUS AND OVARIES.—Continued.

RESULTS OF EXPERIMENTS.

SERIES B.

Removal of Uterus and Subsequent Examination of the Ovaries.

On the whole, we have not been satisfied with the experiments we have conducted in this inquiry. We operated upon two bitches and twelve rabbits. All the animals were about 6 weeks of age at the time of operation. Unfortunately our bitches died of distemper within a few months of the hysterectomies, so that they never reached sexual maturity. We lost five of our rabbits, too, from an epidemic of pneumonia. The rest (about half) that reached sexual maturity were killed at different periods, the longest time that was allowed to elapse between the operation and the examination being eight months. In every case the uterus was removed and the Fallopian tubes as far as practicable. In several cases, when the animals were killed, it was found, however, that the whole of the Fallopian tube had not been removed. It will be understood how difficult it was to effect this in view of the small size of the animals.

In no case did we find any histological change which

corpus luteum. In Fig. 16 is seen a section of an ovary removed from a doe whose uterus had been removed eight months previously, and who had frequently been to the buck. Many sections were cut of this ovary, but nowhere could we find evidence of corpus luteum formation. Ripe follicles and degenerated follicles there were in abundance, but nowhere was there any evidence that a follicle had ruptured. The degeneration, too, of the follicles appears to be of a more cystic nature than in the normal animal. It will be noticed in Fig. 16 that the interstitial cells are as well marked as in the normal ovary. In Fig. 17 is shown a section of the ovary from another doe whose uterus had been removed five months previously. In this case also no corpora lutea can be seen, although in other respects the ovary appears normal.

Heape⁴ has produced evidence to show that the follicles in the normal rabbit's ovary do not rupture unless the doe has connexion with the buck. But in our cases the does that attained maturity had this connexion and apparently came on heat, but in spite of this there was no rupture of Graafian follicles. We must confess that we had fully anticipated that we should find marked changes in the ovary after hysterectomy in spite of the observations of others, and we based this belief on our own clinical experience and on the clinical experience of Abel, Zweifel, and others. But beyond the fact stated above—which may or may not be of importance†—we had no confirmation of our ideas. It is quite possible, however, that a much longer time must be allowed to lapse before changes become apparent, and once more we cannot refrain from saying that, in view of the structure of the rabbit's ovary, comparison with the human ovary is hardly fair. We consider, therefore, that our experiments are inconclusive in this matter, and we shall hope to return to the subject at some future time.

SERIES C.

LIGATION OF THE UTERINE CORNUA.

In this series of experiments we have made observations on (a) the nature of the uterine secretion, (b) the condition of the uterus which had undergone expansion, (c) the condition of the ovaries (in the first experiment).

I.—Ligation of the Cornua without Removal of Ovaries.

We performed a large number of these experiments, in order to collect the fluid secreted by the uterus, for exami-

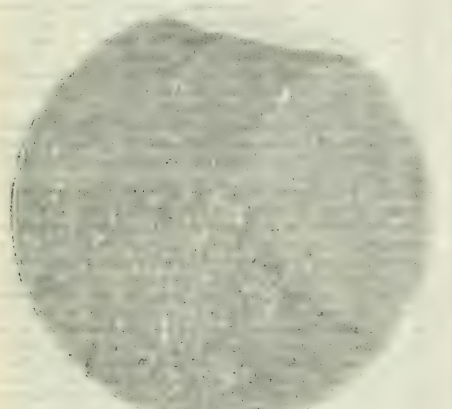


Fig. 15.—Normal adult rabbit's ovary with corpus luteum. $\times 200$.

could have been held to have occurred as the result of removal of the uterus. At the same time there appeared to be the negative effect that in no case could we discover the formation of corpora lutea,⁴ or any evidence that Graafian follicles had ruptured, in spite of the fact that the animals came on heat and had connexion with the buck.

In Fig. 15 is seen a normal adult rabbit's ovary with a

It is somewhat difficult to define what is meant by "corpora lutea" in rabbits' ovaries since there is no rupture of the follicle without connexion with the buck, but we may recognize three varieties (and we include all three in this term): True and false corpora lutea and the corpus luteum of normal degeneration.



Fig. 16.—Rabbit's ovary after hysterectomy. $\times 200$.

nation and experimental purposes. Consequently we were able to make a number of observations. In all cases we used silk as the ligature material, and usually we doubly ligated each uterine cornu, although it is not necessary to tie the ovarian extremity of the horn, as no leakage occurred in those cases in which we omitted to do so.

(a) *The Nature of the Secretion.*—This we have already dealt with in Paper II.

⁴ Especially in regard to lowered calcium content producing rupture of the follicle.—See Paper II. Compare also C. J. Bond, Experiment XXV (see references).

(b) *The Condition of the Uterus which had Undergone Expansion.*—A section of such a uterus is shown in Fig. 18. One observes a more or less even distension. The endometrium is flattened and thinned from pressure, but the muscular layers do not seem to suffer. It is probable that in those cases in which the muscular layers are well developed gradual distension of the uterine cavity leads to hypertrophy. This is a point of considerable interest,

resembled that from the virgin uterus, containing less calcium salts than that obtained from a menstruating uterus. We also noticed that in its physiological effect it was not as active as that obtained from the menstruating uterus. (This will be referred to again in Paper IV.) In regard to this inactivity there was a possible source of error, in that it had been kept, sealed in glass capsules, for some little time before being used. We mention this fact

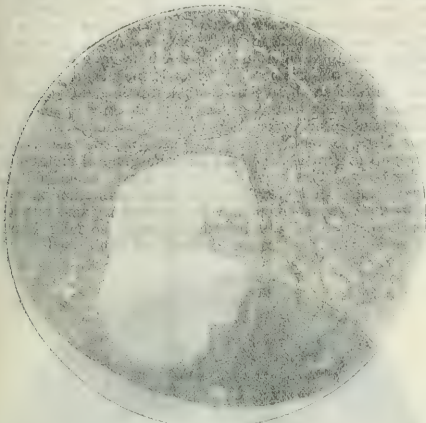


Fig. 17.—Rabbit's ovary after hysterectomy. $\times 200$.

and very suggestive of the muscular hypertrophy which occurs in pregnancy. We intend to follow the matter up further.

(c) *The Condition of the Ovaries.*—We have been unable to trace any changes in the ovaries as the result of this experiment—microscopical or macroscopical. Bond thought that there were changes, but the condition that he found is probably merely the ordinary result of Graafian degeneration, frequently to be observed in rabbits that come on

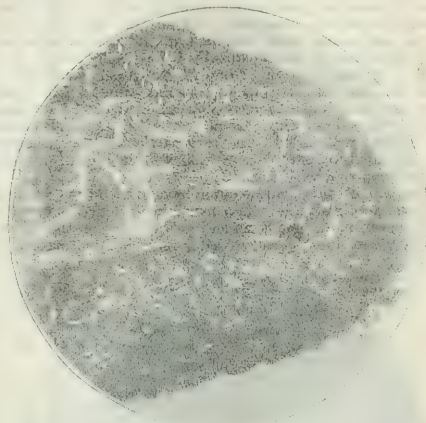


Fig. 19.—Ovary of young doe with hydrometra. $\times 200$.

though we are not ourselves convinced that it is one of any importance.

(b) In Fig. 21 is shown a section of a uterus the horns of which had been tied two and a half months previously, the ovaries having been removed at the same operation. In this particular case the rabbit had had young shortly before. Those experiments on rabbits that had not been recently pregnant gave the same results.

It will be seen from the section that a large hydrometra

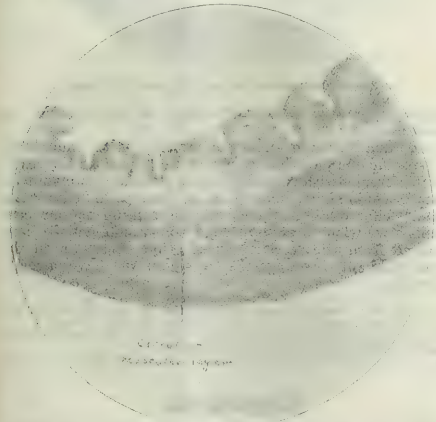


Fig. 18.—Hydrometra without removal of ovaries. $\times 200$.

heat but do not have connexion. (Compare Heape, loc. cit.)

Figs. 19 and 20 are sections of young and mature ovaries respectively, removed from does in which hydrometra had been artificially produced. It will be seen that they are quite normal.

II.—Ligation of the Cornua with Synchronous Removal of the Ovaries.

(a) Fluid is freely secreted, the removal of the ovaries making no difference to the quantity. The fluid collected

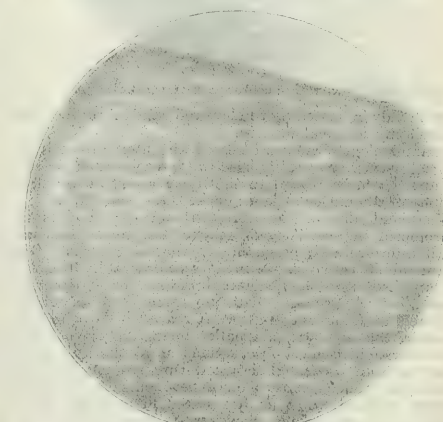


Fig. 20.—Ovary from young adult rabbit with hydrometra. $\times 200$.

was formed, and that in the process of expansion the endometrium has become much thinned from pressure. It is interesting to note that the muscular layer has not become atrophied to the extent it would have done had the uterine horns not been tied when the ovaries were removed. We think that this is to be explained by the fact that the muscle fibres are called into use to resist the increasing pressure. This view is in harmony with the idea we hold that atrophy of the uterus after removal of the ovaries is primarily due to the consequent inactivity of the uterine muscle, which is, as we have already shown, the first

portion of the organ to be a subject to degenerative changes. It is important to remember that this condition of muscular atrophy recurs seasonally in a physiological manner and degree in wild rabbits.

III.—Removal of the Ovaries followed by Ligation of the Uterine Cornua at a Subsequent Date.

(a) We found that the fluid secreted in these circumstances was as copious as in the last experiment, and closely resembled that secretion in its low calcium content and physiological inactivity. (This was also, however, as in the case of that obtained in the last experiment, kept some time in sealed capsules before being used.)

(b) A typical section of one of the uteri examined is seen in Fig. 22. In this case the animal had been pregnant, and had aborted after removal of the ovaries. Twenty days later the cornua were tied. A month later the animal was killed. In every particular the section of this uterus is comparable with that seen in Fig. 21. and in marked contrast with Fig. 10.

Removal of the ovaries, therefore, whether performed previous to ligation of the cornua or synchronous with that operation, does not affect the quantity of the secretion, while it does appear to alter the chemical nature of

examined the ordinary wild rabbits were breeding. Our examination every uterus was found to be in an inactive condition, and the ovaries were all small, and contained no ripe follicles.

It is, of course, possible, that captivity was the cause of this—of the fact that none were on heat; but we incline to the view that it was—in part at least—because the presence of the buck is an exciting factor in the case of wild does in regard to the onset of genital activity early in the year. We were quite unprepared for this result of our examinations, for we hoped to get inactive uteri in the first lot and menstruating uteri in the second, in order to estimate the total calcium in the ash of each lot of uteri. We give this observation for what it may be worth. The great difference between wild animals and domestic animals in their breeding habits is at once a source of wonder and information, and enables us more than anything else to realize how intimate is the association between the genital functions and the general metabolism of the body. The experiments we have described not only indicate that there is this close connexion between the general metabolism and the genital organs, but also that there is a definite interdependence (so long known and recognized, but never defined) of each part of the

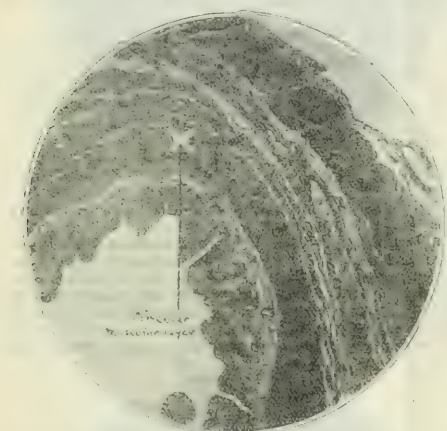


Fig. 21.—Hydrometra with synchronous removal of ovaries. $\times 200$.

it, as already indicated by the lowered calcium content and reduced physiological activity.

The histological appearances of the uteri are striking and suggestive, and readily bear the interpretation already put upon them in regard to the hypertrophy rather than atrophy of the muscular layer under these conditions.

We found also in the course of our experiments on hydrometra that unilateral ligation of a cornu does not at all interfere with pregnancy in the other cornu. One of our rabbits in which we made a unilateral hydrometra and stitched it to the abdominal parietes for satisfactory observation subsequently had two litters, both of which appeared at full time, and were reared. We thought, however, that the cyst got smaller during the pregnancies. This bears out Bond's observations as to the absence of secretion from a cornual fistula during pregnancy in the other horn. Indeed, many of our experiments here recorded confirm much of what he has stated in a recent publication. It is only right, however, to mention that our experiments were begun before his paper appeared.⁶

There is one more experiment (for the successful performance of which we are indebted to Mr. James Smith) to which we would like to allude:

One of us arranged with a keeper in Scotland to catch forty wild doe rabbits in February. Twenty of these were immediately killed and the genital organs examined. In every case the uterus was in the inactive or non-contracting state, and was flat and ribbon-like. The ovaries were small, and contained no ripe Graafian follicles. The remaining twenty rabbits were kept in captivity away from bucks for about two months, during which time two died. As far as possible the animals kept in captivity were allowed to lead a natural life, except for the presence of bucks. At the time these were killed and



Fig. 22.—Hydrometra after previous removal of ovaries.

genital apparatus—that is to say, of the uterus and ovaries.

And, finally, these experiments help us to understand the specific changes that occur in each part as the result of interference with the other, or in altered circumstances. They have, in short, enabled us to attempt to define what that specific relationship is, and in coming to our conclusions we wish to acknowledge the assistance we have received from the work of those other observers in the same field of investigation to whom we have already referred.

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- ⁵Heape, W.: 'Ovulation and Degeneration of Ova in the Rabbit. *Proc. Roy. Soc.*, Series B, vol. LXXIV, No. B 599, 1905. ⁶Bond, C. T.: 'Some Points in Uterine and Ovarian Physiology and Pathology in Rabbits, *BRITISH MEDICAL JOURNAL*, July 21st, 1905.

Memoranda: MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF MYCOSIS FUNGOIDES IN THE PRE-MYCOTIC STAGE.

R. F., aged 65, was admitted to Dr. Calwell's wards in the Royal Victoria Hospital, Belfast, on January 2nd, 1909. Fifteen months before admission he noticed the extensor surfaces of both forearms covered with reddish scales. During the succeeding four months this scaliness spread over the whole of his body, and was accompanied by extreme pruritus. Four months previous to admission large patches of brownish pigment appeared on his trunk and extremities.

On examination his body was found to be covered with cranny, desquamating scales, and he complained bitterly of the associated pruritus. The skin had a general reddish tinge, with large areas of brown pigment irregularly deposited on trunk and limbs. The skin was also greatly thickened, especially over the extensor surfaces of the knees and elbows, where the integument hung in thick, leathery folds. The lymphatic glands in both axillae and groins were enlarged, and there was an almost complete absence of hair from the body. He complained greatly of cold, nervousness, and general weakness. The differential leucocytic count showed 8 per cent. eosinophiles, but otherwise the blood was normal.

He was detained in hospital for five weeks, and calcium lactate internally with calamine liniment locally were tried, but no improvement was observed.

The following were given as the outstanding features of the premycotic stage of mycosis fungoides in the *Journal of Dermatology*, vol. iii, No. 3:

1. Spontaneous occurrence of attacks of inflammation of the skin; practically involving the whole body, each successive attack leading to thickening of the corium and subcutaneous tissues, so that permanent, thick, tortuous folds result.
2. Loss of the skin appendages.
3. Enlargement of all the lymphatic glands.
4. Frequent febrile temperature and progressive loss of strength, terminating in death from exhaustion.

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BEE STINGS AND RHEUMATISM.

The progress of the cases recorded in my note published in the *JOURNAL* of December 5th, 1908, p. 1678, has been since that date as follows:

CASE I.—A man, aged 76, tells me he has suffered not for ten, but fifteen years. He is continuing the treatment at the rate of twelve stings a week, and the pain which "left his hips and went into the thighs" changed its position to the knees on December 16th; on December 30th it returned slightly to the left hip, and on January 12th moved to the calves of both legs. He had only had fifty bees on the last date, having been shy at the pain in the commencement.

No. II still has some intercostal pain, but very much shorter in duration. She gave up the bees, but recommenced them after ten days.

No. III is coming to Birmingham again to have more bee stings, as he has been much freer from pain, which is much less, especially at night.

No. IV continues quite free from pain and is in excellent health.

The following cases are new:

No. v.—F. C., a mechanic, aged 34, suffered from sciatica for eighteen months. For four months he was under the care of a private medical man who ordered him to Droitwich, where he had the usual baths for fourteen days. He went there also for the next eight or nine week-ends, having on each occasion four baths. He returned little improved, and attended a hospital for fourteen days as an out-patient. After that for four months he was treated at the same institution by massage, and the galvanic battery, but without relief. On November 27th he commenced with twelve bee stings, which were repeated every week for six weeks. In five weeks there was marked improvement, and when I saw him last, on January 16th, he said he had been getting steadily better, so that he frequently did not know he had got sciatica. He had had, up to the last date, 100 bee stings.

No. vi.—K. H., a married woman, aged 36, had during the past three years suffered from rheumatism and arthritis in the jaws, hips, knees, feet, elbows, wrists, shoulders, and hands. The bees were applied first on December 1st, and she had twelve every week till January 4th, or sixty in all. "Results: Rheumatism nearly gone from the shoulders. Right wrists a little free. Right arm not quite set, but apparently released a little. Not so much pain generally. For the past two years there was incessant acute pain whether active or idle."

No. vii.—E. N., a single woman, aged 35, had suffered for three years and a half with rheumatoid arthritis in wrists and fingers, which are much deformed, and also in the ankles. She had been treated as an out-patient at a hospital and was an in-patient for ten weeks, when she says, she "received some relief from the rest from work." She commenced the bee stinging on November 21st, 1908, and on January 16th had had sixty-six stings. The grasp was much stronger, the wrists, fingers, and ankles more movable, stronger, and quite free from pain. Her nights, which had been frequently very bad, are much better.

No. viii.—H. D., a mechanical engineer, aged 54, was lame by a kick above the left knee when 10 years old, and had some bone removed. For the past thirteen years he has been gradually getting worse in the other leg from increasing sciatica. On January 8th and each of the following dates I applied eight

bees to the region of the sciatic nerve—for I am satisfied that the stinging is not only antitoxic, but also counter-irritant—and on the following day he told me that before stinging he had to hang on to various articles of furniture to assist his crossing the dining-room, but when he returned home, after being stung, he could do so without assistance. On January 11th his leg felt stronger and he could walk better. On January 15th he said he had less pain on leaving bed, and much better nights since January 8th, but followed by considerable pain in the day. He was better on January 15th and his nights were still good. Walking did not seem so firm. There was a large, circular, inflamed patch over the trochanter. The last application of bees was followed by severe inflammation along the thigh. On January 19th the leg was not so strong, and there was increased pain. On January 22nd he reported that he had had more pain in the day, but the nights were very much better. On January 25th the still severe, particularly in the femur. On January 29th pain followed in the right hip joint. On February 2nd there was great stiffness in thigh and knee-joint, and he was compelled to walk more slowly. On February 5th there was no improvement; but he was no worse. This gentleman seems to be losing heart, but, after thirteen years, cure cannot be expected under a month, and after only 100 bees have been used.

He is continuing the treatment. As to my own case, up to January 22nd my progress was most satisfactory. I continued to apply two lots of bees a week, and in all 271 to that date. I had slight twinges of muscular rheumatism of not more than a few minutes' duration, for which reason I persevered with the treatment. But on that day I contracted a chill, and suffered at night some pain in the glutei and right sciatic nerve. I at once put on eleven bees, and slept well, the pain next morning being much easier, and permitting me to work. On January 23rd, after a long harassing day, I got to bed tired at 10 p.m., and applied fifteen bees, and on January 24th only had slight pain in the glutei, none in the sciatic. I made a necropsy for the coroner at 6.30 p.m., in a fireless mortuary, with a glass roof, the temperature being below freezing. On January 25th I attended the inquest in a court with mercury at 70°; the external temperature being 25°. I applied twelve bees on January 24th, and eight on the following day. On January 26th I had great pain in the glutei on walking, and put on twelve bees at night. Next morning I was much easier, with only slight pain towards night, and had eight bees. On January 28th I still had pain in the glutei, and on January 29th this was increased on walking. I applied fourteen bees, and was better on January 30th, but still had some difficulty in walking. On Sunday, January 31st, I rested in bed all day, and applied eight bees at night. On February 1st to 7th the pain varied. On February 3rd and 4th there was much pain after walking, and I applied in six days forty-five bees. On February 20th I was entirely free from acute pain, but still continue the stinging. I am taking no other medicine, and, but for occasional transient pain, feel very it, and have, as one of my old ladies says, a very "avaricious appetite."

I regret to hear from several medical men that the bee-keepers, both here and in Scotland, will not take bees from their hives during hibernation, although the Editors of the *British Bee Journal*, 8, Henrietta Street, Covent Garden, stated, in reply to a letter from me in their issue of January 21st, "It is well known that there would be little or no trouble in obtaining a few live bees at any season of the year from any expert who could have access to a hive." I have ascertained that if the bees are put in a properly ventilated box, covered with cotton-wool, and enclosed in a second box, also ventilated, they will stand a long journey by post. They should at once be placed in a very warm position. I made a hole in the rim of a halfpenny tin plate, allowing the upright of an iron retort-stand to pass through it; the plate rests on the iron ring, or is fastened with wire to make it more secure. A spirit lamp with $\frac{1}{2}$ -in. flame is placed beneath, and the ring lowered to 4 in. or 5 in. from the flame. A cheap thermometer is wired to the top of the upright, the bulb resting on the plate. By this means a temperature of 76° can easily be maintained, and the bees, if supplied with candy, as they ought to be by the vendor, require only a few drops of water on their food each day, and will keep well for several days. The spirit lamp should be filled in the evening, or the bees may be found dead from cold in the morning. My bees are quite lively at the end of four days.

I have been asked frequently as to the pain of stinging. After the first three stings on myself, I find that the intensity of the pain is much less lasting than at first—in fact, is over in half an hour at the most. Some of the bees seem to cause greater pain than others, but I think this may be explained by a larger cutaneous nerve being wounded by the sting. I hope that shortly your readers will have, from his own pen, the experience of another Birmingham practitioner, who tells me he has found great relief to old-standing sciatica from this treatment.

Birmingham.

E. T. BURTON.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

YORKSHIRE BRANCH: LEEDS DIVISION.

Leeds, Tuesday, March 2nd, 1909.

T. WARDEOP GRIFFITH, M.D., F.R.C.P., in the Chair.

Venous Pulse in Neck.—Dr. GRIFFITH gave a description of the venous pulse in the neck by diagrams on the slate, and a demonstration of pulse tracings in cardiac arrhythmia by means of the epidiascope. Normally three waves could be made out in a tracing from the jugular vein. On comparing such a tracing with a radial artery tracing taken simultaneously, the second wave was found to occur $\frac{1}{2}$ second before the radial wave, and, as was known, the carotid pulse preceded the radial by $\frac{1}{2}$ second, it might be assumed the second venous wave was due to the impulse communicated from the arteries in the neck; the first wave must be due to the auricular contraction which came just before, while the third wave was due to the blood held up in the auricle and veins during the closure of the tricuspid valves. The three waves were found when the heart rhythm was regular, and acting in obedience to a stimulus starting at the sinus, and passing along the *a-v* bundle to the auricle and ventricle. Tracings from a case of mitral disease showed remarkable alterations of rhythm; the jugular pulse, after a sudden rapid irregular action of the heart, lost the auricular wave, and a steep wave synchronous with the ventricular systole appeared. This new wave was caused by an impulse sent through the tricuspid valve and the auricle to the jugular vein by the ventricular contraction. In order to effect this the auricles and the ventricles must contract together. In such a condition the stimulus for contraction was assumed to start at the node in the *a-v* bundle, and cause simultaneous action of the auricles and ventricles; this was named "nodal rhythm." The action of the *a-v* bundle might be impaired by disease, or the bundle might be weak and inactive. Disease might affect the sino-auricular junction and produce arrhythmia, or it might be so situated that the stimulus did not get beyond the auricle. In such a case the ventricle might beat with a rhythm of its own, and much slower than the auricle. Such impaired conductivity of the bundle tended to heart-block, and might sometimes be improved by the administration of atropine, while digitalis was contraindicated, for partial heart-block might be caused by digitalis.

Dr. GRIFFITH also showed specimens of disease of the heart.

Fracture of Ribs.—Dr. ALLAN read notes of cases of extensive fracture of ribs. Two men, one aged 56 the other 61, fell into the same clay pit, a distance of 50 ft.; both lived about two days, and in both the injuries were confined to the bones of the thorax. In the younger man all the right ribs were fractured, and all the left except the eleventh and twelfth; the other man had the fifth, sixth, eighth, ninth, eleventh, and twelfth right ribs broken, and all the left except the eleventh and twelfth; this man also had a fracture of the sternum. A man aged 81 and a woman aged 66 fell from windows a distance of 25 ft. The former was killed at once, the latter lived a few hours. In the man all the right ribs were fractured except the first, eleventh, and twelfth, and all the left except the first. In the woman, the second, third, fourth, fifth, and sixth right ribs were fractured and all the left ribs; here there were fractures of the pelvis and left forearm, while in the old man only ribs were fractured. A man aged 67 and another aged 52 had fracture of ribs, the former of six ribs the latter of seven ribs, due to fall down flights of steps, and in neither had the condition been diagnosed before autopsy. There were no other injuries.

Specimens.—Dr. ALLAN also showed various pathological specimens, and a lad with general ichthyosis.

Twenty members were present. Tea was provided by the Dean of the Medical School, Professor Grünbaum, to whose courtesy the Division is indebted for permission to meet in the University buildings.

Reports of Societies.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Thursday, March 11th, 1909.

W. H. H. JESSOP, F.R.C.S., Vice-President, in the Chair.

Congenital Anterior Staphyloma.

Mr. E. TREACHER COLLINS, in a paper on congenital anterior staphyloma, described the case of a child born with an opaque, vascular, staphylomatous cornea; it had never any discharge from the eye. When 15 months old he performed a Mules's eversion upon it, and subsequently made a pathological examination of the elliptical piece removed from the front of the eye. It was found that Descemet's membrane and the ligamentum pectinatum were absent, there was no stroma to the iris, and the lens was also malformed. Most cases of congenital anterior staphyloma had been attributed to intrauterine ulceration. The speaker thought that a case in which there was complete absence of Descemet's membrane and the ligamentum pectinatum could not be accounted for by ulceration, and must be attributed to some developmental defect. Possibly there had been a failure in the differentiation of the mesoblast which intrudes between the lens vesicle and the surface epiblast into its several layers. Normally there developed from it the substantia propria of the cornea, Descemet's membrane, its lining endothelium, and the antero-fibrovascular sheath of the lens. From this latter the fetal lens largely received its nutrient supply, and the stroma of the iris was to a great extent formed. A failure in the differentiation of the several structures or atypical development of the intruding mesoblast might, as in the case under consideration, lead to a vascularized, thickened, fibrous mass in place of the substantia propria, an absence of Descemet's membrane, of the stroma of the iris, and a malformed lens. He concluded by referring to several other malformed eyes, in which he had found defects in development of Descemet's membrane or the ligamentum pectinatum of a less extensive character.

The paper was discussed by Mr. PARSONS and Mr. G. COATS, who failed to agree with all that Mr. Collins had advanced.

Hereditary Cancer.

Mr. E. NETTLESHIP contributed seven new pedigrees of hereditary cataract: (1) 24 cases of lamellar cataract in four generations; (2) and (3) coralliform cataract, one of them containing 20 cases, in four generations; (4), (5), (6), and (7) pedigrees of senile and presenile (or juvenile) cataract in from two to four generations, some of them illustrating "anticipation," that is, the occurrence of disease at an earlier age in the younger generation. Two of the pedigrees showed the introduction of a second heritable disease from an outside non-cataractous stock, goitre in one instance, insanity in the other.

Temporary Colour Blindness.

Dr. F. W. BRIDGEMAN and Mr. C. DEVEREUX MARSHALL submitted a paper on so-called artificially produced temporary colour blindness. They stated that Professor BURN, of Oxford, had read a paper before the Royal Society, which was published in the *Philosophical Transactions* in 1898, giving the results of his experiments, in which he split up direct solar light with a spectroscope, and then collected the rays of the individual colours with a convex lens, and saturated his own eye with any desired colour. He then examined a spectroscope illuminated with diffuse daylight, and stated his results. He found that he could produce temporary colour blindness to any colour in this way. His most important point was that by saturation with light at the "D" line, red and green blindness supervened, and these colours could not be perceived, and this he held to support the complex nature of yellow light, the Young-Helmholtz theory of colour perception. The authors criticized these experiments. They thought that if direct sunlight were focussed in the retina, not only temporary, but probably permanent, blindness might be produced, and anyhow the eye would be incapable, after much treatment, of making accurate observations on a feebly illuminated spectrum. They produced fatigue in their

own eyes with a sodium light, and then found that yellow and orange became obliterated, and that red and green met in the spectrum, and that there was no diminution of those two colours. Other experiments were repeated with different colours, and in most of them they disagreed with Professor Burch's results, which they held were due to faulty methods of conducting the experiments. These facts were, they contended, only explicable on the psycho-physical theory of colour vision (Etridge-Green's theory).

ROYAL SOCIETY OF MEDICINE.

SECTION OF SURGERY.

Tuesday, March 9th, 1909.

MR. WARRINGTON HAWARD, President, in the Chair.

Urachal Cyst.

MR. ALBAN DORAN read a paper on a urachal cyst, simulating appendicular abscess. His patient, a girl aged 17, had an imperfectly formed genital tract; the uterus was bicornuate, with only the right corn functioning. After describing his procedure in this and in a former case, the author referred to the studies of Wutz and Binnie on the urachus: to the vesico-urachal valve; and to the question of a meso-urachus described by Keith, Thane, and Binnie. He recommended the classification of morbid dilatations into (1) urachal fistulae, (2) primary cystic fistulae, (3) pure urachal cysts, and (4) secondary cystic fistulae developed from pure cysts which have acquired communication with the bladder, or the surface at the umbilicus. He mentioned the spurious cases of Hoffman and Lawson Tait, which were really instances of encysted dropsy or tuberculous peritonitis. He thought there was certainly some connexion between the anomaly in the urachus and the arrested development of Müller's ducts. The asymmetry observed in his case, in which it had led to a diagnosis of appendix abscess, had been noted by other surgeons, and detected in incipient cysts by pathologists. Suppuration in a urachal cyst was by no means uncommon, and peritonitis around them quite common.

Mr. F. S. EVE described a case, and exhibited the specimen, of a large cystic sarcoma of the urachus. The patient was a man aged 33. When seen he was complaining of painful micturition, and was having rigors. Something like five pints of blood, dark and obviously infected, was let out; the bladder was opened in removing the mass, which was sessile, upon it. The patient died on the fourth day. In Wieser's collection of 89 cases it was notable that suppuration occurred in at least a third. Operative difficulties frequently rendered complete removal impossible. He interpreted the anterior peritoneal covering of his specimen as due to the expansion during its growth of a meso-urachus, or to involution of the peritoneum as it grew upwards and backwards. He thought it remarkable how seldom a surgeon came across remnants of the urachus in opening the abdomen. He had only seen one other case of urachal cyst, and that was brought from Clare market; it was attached to a pig's bladder.

Mr. W. G. SPENCER asked where the sepsis came from; did it reach by way of the bladder or from the intestine?

Mr. DORAN, in his reply, said that intestine was nearly always adherent at the back of these cysts, and hence infection was generally from this source.

Continuous Suction.

Mr. HERBERT T. HERRING demonstrated a portable apparatus for the employment of continuous suction in surgery. It consisted of a rotary pump, electrically driven, acting by means of thick-walled tubing through a "receiver," upon the wound or cavity under treatment. The mechanism was capable of utilization for irrigation or for the suction of viscid substances such as blood.

CLINICAL SECTION.

Friday, March 12th, 1909.

SIR THOMAS BARLOW, M.D., President, in the Chair.

Nerve Anastomosis.

MR. A. H. TUBBY showed (1) a man, aged 19, admitted to Westminster Hospital for complete extra-cranial paralysis of the branches of the facial nerve, resulting from an operation wound. Facio-hypoglossal anastomosis was

effected, and improvement in the orbicularis was noted a week later. In fourteen days the left angle of the mouth began to move. Progress continued until the whole left side of the face recovered. When shown there was only a little drooping of the left side of the mouth and very slight associated movements of the tongue and face. (2) A boy, aged 9, admitted to Westminster Hospital in October, 1905, for infantile paralytic talipes calcaneus of seven years' duration. The nerves to the gastrocnemius and soleus were separated from the internal popliteal and implanted on to the external popliteal trunk. The case slowly improved, and, though full recovery of power was not obtained, there was great amelioration of the original condition. (3) A man admitted with total paralysis of the right arm. He had been stunned on board ship, and at a hospital in New York was trephined as suffering from meningeal haemorrhage, without benefit to the paralysis. On admission under Mr. Tubby, the brachial plexus was dissected out from the spine to the lower part of the axilla. The upper part was lost in a dense mass of fibrous tissue, and in the fifth nerve was found a fibromatoma. This was excised and the distal trunk of the fifth cord inserted into the sixth on February 12th, 1906. Recovery of power began two years after the operation, and when shown the patient had a well-developed biceps, could flex the forearm well, and the deltoid action was returning. Sensation was still absent over the greater part of the limb, but was spreading down from the upper and outer part of the arm, and had nearly reached the middle of the outer surface. Further improvement was expected.

Mr. C. H. FARGE showed (1) a girl aged 10 in whom complete facial paralysis followed a mastoid operation, otorrhoea continuing. A radical mastoid operation was performed at the Evelina Hospital, and at the same time the vertical portion of the facial nerve was divided as high as possible, and its distal end grafted into the side of the undivided hypoglossal exposed by continuing the mastoid incision downwards into the neck. Electrical treatment was resumed, and within a few weeks the left facial muscles regained their tone and the power of reflex blinking returned. (2) A case of inflammatory facial paralysis treated by anastomosis between the facial and the trapezial portion of the spinal accessory; movements of the left side of the face were best carried out when the left arm was raised.

Mr. C. M. PAGE (for Mr. BALLANCE): A woman, aged 54, in whom, two months after a comminuted fracture dislocation of the upper end of the humerus, the internal and posterior branches of the brachial plexus were sutured, with the result that there was recovery of the function of the musculo-spiral nerve and of sensation in the distribution of the ulnar.

Dr. R. F. KENNEDY (for Mr. SARGENT) showed a case of successful nerve grafting of the fifth nerve of the brachial plexus into the sixth.

Mr. JAMES SHERRIN showed ten patients illustrating the results of treatment of various nerve injuries. They included (1) a man aged 36 who had injured the median nerve below the point at which its palmar cutaneous branch is given off, probably by a fall on the outstretched palm; trophic blisters resulted. (2) A man aged 24 who had sustained an incised wound of the wrist on October 28th, 1903, dividing the ulnar nerve below the point at which its dorsal branch is given off. Primary suture was performed the same day, and he was discharged to the out-patient department on November 18th, with the typical sensory loss. By February 11th, 1909, the loss of sensibility to prick had disappeared, but no change had taken place in the area of loss to light touch.

Miscellaneous Cases.

Among the other cases shown were the following:

Major G. C. SPENCER, R.A.M.C.: A case of *Sarcoma treated by Coley's fluid*. The patient was a man aged 33, who in August, 1906, had a large growth in the lower part of the abdominal wall, infiltrating the recti, attached to the pubic symphysis, and extending down in front of the bladder so that it could be felt per rectum. Since the end of March, 1907, he had not had any further treatment; the tumour had completely disappeared, and he had continued in perfect health.

Mr. LAWRIE MCGAVIN: A case of *Perineal hernia* in a woman aged 36. When the hernia was reduced, a gap

admitting two fingers could be felt in the central portion of the levator ani muscle.

Mr. STANLEY BOYD described a similar case in which the protrusion was found to contain fat.

Mr. A. E. BARKER also recalled a case of corresponding appearance which on operation turned out to be a lipoma.

Dr. A. E. WYNTER: Case of ascites cured by permanent drainage through the femoral ring.

SECTION OF ANAESTHETICS.

At a meeting on March 5th, Mr. RICHARD GILL, President, in the chair, Dr. DUDLEY BUXTON, dealing with the *Treatment of shock during anaesthesia*, said that the theory that the production of very profound narcosis abrogated shock had been proved by experiment to be wholly fallacious. If, on the other hand, the narcosis stopped short of the third degree—that is, the stage of anaesthesia—the higher centres, though dulled, were not wholly unresponsive of impulses, and dangerous reflexes might occur, the patient being liable to fatal syncope. Once the third degree was obtained and the anaesthetic evenly distributed throughout the tissues, the patient was comparatively safe, and the quantity of anaesthetic required subsequently was much less. The deep reflexes, such as those resulting from insult to sympathetic nerves and plexuses, could not be prevented by any degree of narcosis; they could not be abolished until life was extinct. It had been shown that these reflexes, acting upon the vasomotor centres, the heart, and the respiration, were dangerous in proportion to the depth of narcosis after the stage of anaesthesia was established. Treatment lay rather in prevention. The hygiene of the patient (preparation extending over several days), avoidance of violent purging or enemata given just before the operation, judicious feeding, warmth, attention to posture, and the use of regulating apparatus permitting the anaesthetist to control both the strength of the vapour and the quantity of the anaesthetic given were of the greatest importance. Oxygen should be given *pari passu* with the anaesthetic, and for nervous persons and those who were unable to sleep the employment of the morphine-scopolamine method was valuable, as it lessened the amount of anaesthetic required. Other alkaloids were less useful. Dr. SILK considered the long starvation often used before and after anaesthetics an important factor in producing shock. He ordered nutrient enemata to be given before operations in cases where shock seemed likely to be very severe. Once shock was established drugs were useless. Mr. LOCKHART MUMFERY thought the drug of the future in cases of anaesthesia shock was likely to be the infundibular portion of the pituitary gland. Morphine was valuable beforehand, at least in animals when anaesthetized by ether. Dr. BLUMFELD said the condition of the reflexes was helpful in distinguishing between surgical and narcosis shock. At the end of a long operation, such as that for excision of the tongue, the degree of shock, with pallor, was often extreme, but the brisk corneal reflex showed the low vitality was not due to the narcosis. Dr. BUXTON, in reply, said that cases in which a patient left the operation table in an apparently very favourable condition, but a few hours afterwards was the subject of extreme shock, were due to change of posture, and partly also to a fall of temperature on going from a hot theatre to a cold room. As for a routine treatment of severe collapse with failure of the respiration and circulation, he advised that the anaesthetic should be stopped, the patient inverted, the mouth opened with a gag, and Laborde's method of rhythmic tongue traction practised while oxygen was administered. If further treatment be required, artificial respiration by Howard's method should be performed, and saline solution infused by someone else while the anaesthetist was thus employed.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Friday, February 19th, 1909.

SETON F. PRINGLE, F.R.C.S.I., in the Chair.

Oesophageal Diverticulum.

Mr. WILLIAM TAYLOR read notes of a case of oesophageal diverticulum, which he had removed from a gentleman in June, 1908.

The patient was 54 years of age, and his symptoms dated back for about twenty years. The symptoms had been gradu-

ally getting worse. Food was usually regurgitated into the mouth just as it had been eaten, sometimes almost immediately, at other times after several hours. Not infrequently a portion of the previous night's supper was regurgitated next morning while in the bath. Pills taken at night were frequently regurgitated unchanged next morning. A feeling of fullness and discomfort after eating was generally referred by the patient to the right side of the neck, about the level of the hyoid bone. Attempts to pass bougies failed, their passage being arrested about nine inches from the teeth; but their passage seemed to be arrested more from spasm of the oesophagus than from encountering any other source of obstruction. There was no swelling to be detected on inspection of the neck. [A radiogram of the pouch filled with bismuth food was taken by Dr. Watson and shown, as well as the pouch itself. Through the "screen" before the photograph was taken, each bolus of food the patient attempted to swallow was seen passing into the pouch.] The pouch took its origin from the left side of the oesophagus just at its junction with the pharynx, and passed downwards behind the oesophagus, to terminate at a point just below the suprasternal notch. The diverticulum was removed through an incision extending from the hyoid bone along the anterior border of the left sternomastoid muscle to the sterno-clavicular articulation. The anterior belly of the omohyoid muscle and the superior thyroid vessels were divided. The lateral lobe of the thyroid gland, which was considerably enlarged, was displaced, after which the diverticulum was readily seen and withdrawn, there being no adhesions. Two small intestinal clamps were applied, and the diverticulum removed by dividing between them. The opening into the oesophagus was closed by three rows of fine silk sutures. A small tube was passed from the centre of the wound in the neck down to the region of the sutured oesophagus, and a piece of gauze loosely packed around it. About three-quarters of the neck wound was closed. The wound healed by first intention, except where the drainage had been applied, but even that was healed up by the end of twelve days. There was never at any time any sign of leakage from the oesophagus. All liquids by the mouth were withheld for four days. Rectal salines, with raw meat juice, were administered every six hours. Nourishment was given by the mouth on the eighth day, and gradually increased in amount and in consistency until a lamb chop was easily partaken of on the sixteenth day. The patient was now in perfect health, and had no difficulty in swallowing.

Mr. TAYLOR then briefly discussed the literature of the subject. After remarks by the CHAIRMAN,

Dr. MAGEE FINNY said the patient was under his observation for some years, and as far back as 1903 it was thought he had a pouch about his throat. It seemed reflexly to produce nervous irritation and dyspeptic phenomena. At his suggestion, Dr. Watson tried a meal of bread and milk for making a radiograph, and obtained excellent results. The same method had been tried on a patient approaching 80 years of age, and the radiograph which he exhibited showed a pouch corresponding to that in the former case. A later picture showed a lateral increase, and he would have another one taken shortly. They gave her the same mixture as Mr. Taylor used, and they could see it on the screen catching in the pouch and slipping down behind it.

Dr. McVITTIE referred to a case of dilatation of the oesophagus, brought about by spasm, in which the patient was dying of starvation. By the use of Russell's oesophageal stricture dilator, which he exhibited, the patient was completely cured.

Mr. L. G. GUNN said he had a case which seemed an ordinary case of carcinoma of the oesophagus. He did a gastrostomy, and did not think the patient would live long. Thirteen months afterwards he was looking well and had put on weight. He then thought there was a diverticulum obstructing the gullet. Dr. Woods examined the case with the oesophagoscope, and snipped away a small portion of the stricture, which proved to be a carcinoma.

Mr. R. A. STONEY mentioned a case in which the diagnosis lay between malignant disease and some simple stricture of a syphilitic nature. He opened the stomach, which was small and adherent, and fed the patient with a tube from the mouth to the stomach. Later he had to do a duodenostomy. He subsequently lost sight of the case.

Mr. TAYLOR, in reply, said he had not passed a bougie since the operation was done. Oesophageal pouches of a pressure type were met with always at the junction of the pharynx and oesophagus, and he was convinced that unless in extreme cases, the shadows in a radiograph would not extend below the pericardium.

Suprapubic Prostatectomy.

Mr. L. G. GUNN read a paper on complications following on suprapubic prostatectomy. He mentioned especially fistula, impotence, persistent cystitis, formation of stone,

persistence of some frequency of micturition, impaired power of the compressor urethrae muscle, and uraemia.

The CHAIRMAN said a fistula would close rapidly, but as soon as the catheter was taken out the scar tissue would re-contract. For a few days after operation he generally used suction apparatus. He had come to look on biccough in a prostatectomy case as a sure precursor of death.

Mr. WM. TAYLOR had recently been thinking whether they were not foolish in sticking to the suprapubic method, and not removing the prostate by the perineal route. Mr. Young's statistics showed 110 cases done in succession without a single death, and in 146 cases there was only one death. His own mortality was 8 per cent. to 10 per cent. He looked on the use of scissors as more or less unsurgical, even under one's eye, and to use them blindly did not appeal to him. Among the complications following the operation he had seen senile gangrene, arising, he believed, from a weak heart. He had also seen pelvic cellulitis follow, and he had seen a patient die apparently of haemorrhage and shock. He had found that cases in which he did not use suction apparatus did as satisfactorily as the ones in which suction was required. He now used nothing but a pad of wool, and the results were satisfactory. He looked on biccough as a sign of uraemia, and consequently a fatal omen.

Mr. GUNN, in reply, said it was hardly fair to take the statistics of one man, who was an expert at an operation and selected his cases carefully. American statistics were not so good as the general English statistics, and impotence and troubles of a similar kind must be more frequent after the perineal than after the suprapubic operation. He thought it was better surgery to pass a curved scissors and cut through the sutures, than to drag them with the finger. In two cases of Bottini's operation which he had seen the results were completely satisfactory.

LIVERPOOL MEDICAL INSTITUTION.

Thursday, February 25th, 1909.

T. H. BICKERTON, M.R.C.S., L.R.C.P., President, in the Chair.

The late Professor Hamilton.

THE PRESIDENT referred to the loss accruing to the institution by the recent death of Professor D. J. Hamilton of Aberdeen, Drs. G. E. Walker, J. Tawse Nisbet, of Liverpool, and Dr. H. W. King of Chester, and expressed sympathy with their families.

Congenital Recesses of Lower Lip.

Mr. R. C. DEN read a note on three cases of congenital recesses of the lower lip. The condition in each case was associated with double harelip and cleft palate. No family histories of congenital deformities could be ascertained, nor were any other children of the families affected.

CASE I.—Two symmetrically-placed recesses were present on either side of the middle line of the lower lip, which was thickened and everted. From them sinuses ran downwards in the substance of the lower lip, ending blindly under the mucous membrane on its inner aspect. The sinuses discharged a mucous secretion.

CASE II.—A similar condition was present, but with in addition papillae at the orifices of the sinuses. Movements of protrusion and retraction were seen in the papillae.

CASE III.—Most unusual, only one similar having been previously reported. Instead of two sinuses there was present a single slot-like cavity in the lower lip 1 in. in length and 3 in. in depth. This child also showed a deformity consisting of a fold of mucous membrane passing from the inner aspect of the lower lip close to the angle of the mouth on either side to be attached to the alveolar margin of the upper jaw. Misplaced testis and torsion of the penis were also present in this case.

Mr. DEN reviewed the various theories which had been advanced to explain the presence of congenital diseases of the lower lip. None of them would adequately account for the mode of origin of the three different types of the deformity which had been met with. The condition was a rare one, only 38 cases having been previously reported. The note was illustrated by lantern slides.

Mr. FRANK JEANS mentioned a case of congenital depressions, fistulae, in the helix. In the case of the auricle these "potential dermoids" had a definite developmental explanation.

The paper was also discussed by Mr. R. W. MURRAY and Dr. BLAIR BELL.

Spontaneous Rupture of Cyst-Adenomatous Ovarian Tumours.

Dr. BRIGGS read a paper on the spontaneous rupture of cyst-adenomatous ovarian tumours, in which he urged (1) that the primary cause of cyst rupture in cases of ovarian cyst-adenoma was tumour degeneration (necrosis); (2) that the rarity of cyst rupture in relation to the frequency of tumour degeneration was not inconsistent with the adequate vascular compensation almost invariably supplied by adhesions to the degenerated tumour; and (3) that these adhesions were simply reparative and not, as generally stated, the result of peritonitis. The innocent leakage through attenuated and thin cyst walls as a common and normal occurrence was excluded from the rare rupture; on the absence of clinical manifestations in the former and on their presence in the latter was based a working distinction. Cyst rupture as an appreciable clinical and pathological complication was one of the accidents in a case of an ovarian cystic tumour, and, just as in the case of accidental haemorrhage during pregnancy, trauma or violence in the history of its causation was almost invariably wanting. From the earlier and darker days of ovariectomy the records of sixty-six and eighty tapplings of an ovarian cyst left no doubt as to the healing power of the normal cyst wall. Dr. Briggs quoted from Meredith and Spencer Wells evidence as to the vital activity and resistance of the peritoneum and to the absence of adhesions after tapping. Where there were neither infective organisms nor loose particles of growth capable of implantation, he argued that intraperitoneal cyst rupture—at the time unattended by serious haemorrhage—was of itself a harmless, or almost harmless, pathological process. On the other hand, degeneration of the cyst produced a permanent opening and a continuous dribble of cyst contents without any barrier of defence, such as was provided by the haematocele sac around a chronic tubal drip in a case of tubal mole. Where adhesions were universal around both innocent and malignant tumours, and after torsion of the pedicle, hydro-peritoneum was invariably absent, and rupture was counteracted. Dr. Briggs narrated four cases of cyst rupture which occurred in his own practice, and submitted the following brief analysis from them:—In non-malignant cyst-adenomata the clinical manifestations were (a) of tumour degeneration: (1) impairment of health disproportionate to the size of the tumour, (2) abdominal pain, (3) variable distension of the abdomen, (4) irritability of the bladder, (5) irregular menstruation subject to the usual modifications of pregnancy, lactation, and the climacteric; (b) of rupture of the cyst: acute pain, recurrent pain, vomiting, the accumulation at a variable rate of free fluid in the abdomen. The diagnosis of cyst rupture by free intraperitoneal fluid could only be (1) positive when the partially filled cyst could be felt or when the previously firm cyst had completely collapsed; (2) presumptive when the clinical manifestations of degeneration and rupture had been obtained; and (3) occasionally and exceptionally when the free fluid was small in quantity and the rupture minute—both might escape detection before and during the operation of ovariectomy. The modern preference for removal of the tumour entire, if practicable, accounted for a long incision in Case iv, whereby both the 20 oz. of free intraperitoneal mucoid fluid and the dribble through the small aperture of rupture were exposed to view. The teaching of Matthews Duncan that, although the diagnosis of an ovarian tumour approached practical certainty, it was not one of scientific precision, applied also to the recognition of complications. The ovarian tumours of small size and the largest of only moderate size in the author's series of ruptured cysts had impaired the health of the patients to extents unusual for the size of each growth. Not one was malignant. The general peritoneum, so far as it was visible, was changed. Only in one—Case i—in which it was injected and thickened, but not shredded. Finally, Dr. Briggs compared the mechanical influence, the loss of fluid, and the degenerative changes in ovarian growths to their respective effects upon the general nutrition of the patient. He argued that the benefits the patient often experienced during temporary recumbent rest were more consistent with degenerative changes than with progressive tumour growth in cases where inflammatory complications were absent.

The paper was illustrated with lantern slides and specimens.

The paper was discussed by Dr. BLAIR BELL. He had operated on two cases, and he thought diagnosis should be easy and prognosis good. He regarded it as a rare condition. Degeneration of the cyst wall, traumatism, or violent exertion might produce it.

(Continued from p. 723.)

Kissing the Book.

Dr. F. W. LOWNDES read a paper on Kissing the Book. He gave personal recollections of forty-three years' experience in various judicial courts. He gave instances of the insanitary and dangerous nature of the English method of taking the oath, which had been clearly proved to have caused disease in two cases, while this was only an infinitesimal proportion of the real number, which it would be very difficult to trace. He urged the abolition of the use of the "Book" and the substitution of the uplifted hand. While discussing the paper the PRESIDENT proposed the following resolution:

"That this meeting is of the opinion that the custom of kissing the Book on taking an oath is insanitary and dangerous and should be abolished, and the form of administering the oath with uplifted hand be adopted."

The resolution was seconded by Mr. R. W. MURRAY, and carried unanimously.

The paper was also discussed by Drs. S. GILL, T. R. READSHAW, F. BARENDT, A. G. GULLAN, SULLIVAN, W. B. WARRINGTON, and Mr. DAMER HARRISON.

Dr. LOWNDES replied.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting on March 3rd, Dr. P. BOOBYER, President, in the chair, Dr. C. H. CATTLE read a paper on a case of *Landry's paralysis*. The patient was a colliery banksman, aged 23, and had taken alcohol to excess, as well as sat in wet clothes a week previous to the onset of the disease. This began with muscular pains, then he turned cold, sick, and dizzy, and complained of numbness at the tips of the fingers of both hands. The arms were next affected, and after them the legs and trunk. Then the eyelids and mouth muscles became weak; there was a little headache and a slight cough. The pupils were normal and the temperature practically normal throughout. The muscles were found to be weak or paralysed in whole groups, though not wasted. There was no reaction of degeneration, the reflexes were abolished, but everywhere sensation was normal. The muscles were extremely tender when grasped, and passive movements of the limbs were very painful. The bladder and rectum were not affected, and no bedsores occurred, although he was in bed continuously for six months. For a time the intercostal muscles were entirely paralysed, so that there was imminent danger of respiratory failure. Treatment resolved itself into strychnine and belladonna internally, and then strychnine alternately with sodium salicylate. Eventually he recovered sufficiently to be moved to an infirmary, where he now looked plump and well nourished, and could get about pretty comfortably with the aid of a wheeled chair. The paper was discussed by the PRESIDENT, Drs. R. WOOD (Ilkeston), F. H. JACOB, A. J. SHARP, and B. R. B. THURMAN. Dr. CATTLE, replying, pointed out that the clinical type known as "Landry's paralysis" comprised a group of symptoms which might have a pathological basis varying in different cases. The earliest symptoms were sensory and were succeeded by progressive loss of muscular power, usually beginning at the feet and spreading upwards. There was no marked anaesthesia till a later stage, and death usually occurred in one to three or four weeks from the onset. As Landry himself had pointed out, and as had been recognized by the late Dr. Ross, the march of the disease was sometimes centripetal rather than centrifugal. In this case there was some doubt whether the lesions were in the spinal cord or the peripheral nerves; it was certain, however, that the symptoms were not due to rapidly ascending myelitis. As the action of the poison was undoubtedly selective of the motor nerve fibres, the tenderness of the muscles was well accounted for by interstitial neuritis causing irritative and pressure changes in the sensory fibres adjacent to the motor ones. Dr. CATTLE also showed a printer, aged 26, the subject of *Peripheral neuritis* of uncertain origin

affecting the lower limbs, and now recovering under galvanic treatment, and, jointly with Dr. A. C. REID, showed (1) a man, aged 39, the subject of *Spinal syphilis*, partly asymmetrical and to a great degree permanent in its results. This case also bore some resemblance to syringomyelia, as Dr. Reid demonstrated. (2) A man of 62, exemplifying the later effects of syphilis in the shape of nuclear cerebral lesions, internal and external ophthalmoplegia, and neuritis of one leg.

HARVEIAN SOCIETY.—At a meeting held on February 18th, Dr. GRAHAM LITTLE read a paper on *Ionisation in the treatment of skin diseases*. Cases of lupus vulgaris, lupus erythematosus, rodent ulcer, epithelioma, and pigmented, flat, senile warts, had been treated with zinc ions by means of a galvanic battery of twenty cells; 6 to 10 milliampères had been employed, most patients easily tolerating 7 milliampères. The positive pole had been connected with a chemically pure zinc electrode, covered with four to five thicknesses of gauze, sterilized by boiling, soaked in a 2 per cent. solution of zinc sulphate. The currents should be introduced gradually, and the electrode pressed firmly on the skin; if this were indurated, salicylic plaster, 25 per cent., was previously applied for several days. Each treatment lasted ten to twenty-five minutes; no severe pain had been caused. In a case of lupus vulgaris, in a delicate woman, a preliminary subcutaneous injection of cocaine had been useful in checking pain. In rodent ulcer, especially of the ulcerative stage, the treatment had succeeded admirably in at least four cases, in which x rays had comparatively failed. In lupus vulgaris the indurated lupus patch was thinned, and a good scar resulted, but the number of sittings was greater. The best results occurred in lupus erythematosus. The danger of promoting the spread of invasion was small. A case of epithelioma, arising from a pigmented naevus near the eye, had been successfully treated by zinc ions, after failure with x rays; in this case the proximity of the eye favoured ionization rather than x rays. Dr. LANGMEAD read a paper on *Infant feeding by undiluted citrated milk*. He said it was generally recognized that infants could not digest unmodified cow's milk. Hitherto all their attention had been centred on the excess of casein in cow's milk, which had been made responsible for the formation of the tough curd. The other important factor of coagulation—namely, the calcium salts, which were also in excess in cow's milk—was ignored. Sir A. Wright had shown that a flocculent curd could be produced if the excess of calcium salts were thrown down by the addition of 2 grains of sodium citrate to the ounce of milk. This method of feeding obviated the necessity of dilution, and consequently of adding more cream and sugar. Whole milk possessed certain advantages over diluted milk, for it was less bulky, and so less likely to produce distension of the stomach, and no cream need be added. The method, moreover, was simple, and little manipulation was required. He had used undiluted citrated milk for three years for his out-patients at the Paddington Green Children's Hospital. About seventy infants, who were not progressing on other methods of feeding, had been so treated, and of each of these a chart had been kept, recording the weights. The milk was always brought to the boil, and 2 grains of citrate of soda were added to each ounce. The results had been entirely satisfactory. All the infants who had continued to attend had gained steadily in weight, and no evidence of rickets or other untoward symptoms had occurred. He considered this method of feeding the best which they possessed. It could not, of course, be regarded as a treatment of acute disease, like acute epidemic diarrhoea. The weight charts of some of the infants so treated were shown. The paper was discussed by Sir A. WRIGHT, Dr. DAVIS, Dr. MILLER, Dr. PAYNE, Dr. WILCOX, Dr. FINE, Dr. TURTLE, and Mr. LAMING EVANS.

THE following are the numbers of medical students in the various universities and faculties of France, as given in official statistics which bring the figures up to January 15th of the present year: Paris, 3,740; Marseilles, 347; Besançon, 31; Bordeaux, 825; Caen, 57; Clermont-Ferrand, 57; Dijon, 105; Grenoble, 82; Lille, 341; Lyons, 923; Montpellier, 586; Nancy, 353; Poitiers, 53; Rennes, 199; Toulouse, 452. The total number is 7,220.

Reviews.

THE PSYCHIC ELEMENT IN DISEASE.

If it be true, as many writers have asserted, that the English as a race are becoming more prone to nervous irritability than heretofore, the fuller investigation and study of such subjects as neurasthenia and neurosis are not only interesting but necessary. Hence, a review of the subject as seen through the eyes of a French physician¹ is worthy of note, more especially when the methods of treatment which he advocates are diametrically opposed in some respects to those which have been generally accepted at home.

Dr. P.-L. LÉVY's book is written as a complement to a previous work on the rational education of the will, and is intended to show how such education may be applied for the relief and cure of the neurasthenic and the neurotic. The original work was published some ten years ago, and the present volume contains many papers that have already seen the light in French medical periodicals. The work, which is divided into two parts, deals first with the theories advanced by the writer and with the lines of treatment founded upon them, accounts of a few clinical cases in which his methods have been proved to be successful being given. The keynote of his teaching is the complete re-education of the will of the patient without the aid of isolation or restraint. He claims that good results can be as well obtained without these aids as with them, and that the period of treatment both for patient and doctor is less irksome. The symptoms induced by indefinite disorder of the nervous system must of necessity be vague; but one of them, at least, admits of more precise analysis, namely, pain. It is always a difficult matter to assess the value of pain as a guide to diagnosis, and to determine the extent to which it may be due to actual physical change. Even where a gross physical lesion may be evident there must always be a nervous element which may be modified, if not altogether removed, by judicious treatment. The methods advocated by Dr. Lévy amount, in fact, to suggestion by the physician after the patient's confidence has been obtained and his will power to some extent subordinated to that of his mentor. Such conditions as sciatica, where exaggerated pain is felt in association with a definite pathological lesion, admit of relief more quickly by suggestion and graduated exercise than by continued rest and palliatives. Rest is not always needed for the relief of the morbid condition, but is induced by the fear of pain, and if this can be removed by suggestion the resumption of ordinary movements conduces to the restoration of health.

In dealing with hysteria, the author does not advocate the use of hypnosis, as the results of compelling the will of the patient are not so good as those obtained by gentler means, smoothing over mental difficulties and gradually re-educating the mind. The actual methods adopted are not unfamiliar. The attention of the patient has to be secured, sometimes by mystic manipulation, and suggestion made with due confidence on the part of the operator. Such proceedings demand a considerable expenditure of time and patience on both sides, and it is obvious that they must be applied by a physician with full belief in his own powers and with plenty of time in which to exercise them. For the family doctor, to whom such cases of neurosis and neurasthenia usually come in the first instance, it would be an impossibility, but it is of vast importance that he should be able to recognize at the outset the relative part played by the psychic element. Cases of pseudo-appendicitis and pseudo-malignant disease are for ever on the increase, and it is possible that a better knowledge of the psychic treatment would lessen the number of instances in which the appendix is found by the surgeon to be itself free from disease.

The latter part of Dr. Lévy's book is mainly occupied in combating the prevalent views as to rest and isolation from relatives and home surroundings. He would treat his cases without interfering with their ordinary round of life, although forbidding access to obvious exciting causes, but he does not appear to recognize that the home surroundings themselves are often the main cause of the

neurosis. The study of the psychic element in disease becomes more useful as life becomes more hurried and exciting, and the work before us should serve to stimulate study in that direction, whether the author's views be accepted or not.

FEEBLE-MINDEDNESS AND ITS CAUSATION.

In a well-got-up volume, *Mental Deficiency (Amentia)*,² dedicated "to all those persons of sound mind who are interested in the welfare of their less fortunate fellow-creatures," Dr. TREDGOLD has set forth an interesting account of the incidence, causation, pathology, mental and physical characteristics, social relationship, diagnosis, prognosis, and treatment of persons suffering from mental deficiency (amentia). The author, in his capacity of Research Scholar in Insanity and Neuropathology of the London County Council, as well as that of one of the medical investigators appointed by the Royal Commission to make inquiry in regard to the number of mentally-defective persons in certain districts (Dr. Tredgold's being Somerset), has had exceptional opportunities of studying the subjects of which his book treats practically, and much that appears in it is based upon original observations, which, however, he very fully compares with the experience of other workers in this field. For some of the statistical tables and illustrations he owes his indebtedness to such authorities as Dr. Caldecott of Earlswood and Dr. John Thomson of Edinburgh. An original drawing of types of brain cells occurring in amentia forms an appropriate frontispiece.

Limiting the connotation of "mental deficiency" to cases in which the mind has never attained normal development, the tables of the Royal Commission are quoted to show that its prevalence in sixteen selected districts of the United Kingdom ranges from a minimum of 1.1 in Cork to a maximum of 4.68 in Lincolnshire. By a series of calculations the author infers that in every 10,000 of the population of England and Wales there are (in whole numbers) 2 idiots, 7 imbeciles, 15 adults and 14 children designated feeble-minded, and 36 insane persons, such a prevalence showing that causation is a subject calling for the gravest consideration.

Dr. Tredgold prefers to classify etiological factors into: "(a) Intrinsic-Heridity," and "(b) Extrinsic-Environment," rather than to call them Congenital and Acquired. To nervous heredity he assigns the first place, finding evidence of it in 80 per cent. of over 200 cases he was able thoroughly to investigate. A pronounced history of family alcoholism he found in no less than 46.5 per cent., but he remarks that in five-sixths of these definite neuropathic heredity was present in addition. Tuberculosis, he considers, is rarely the direct and sole cause of amentia, though it often has "a very important indirect and contributory influence." To inherited syphilis he assigns comparatively small importance as regards mental defect, and to consanguinity of parents no more than is implied in accentuation of common morbid heredities. The importance of abnormalities of labour as a cause of amentia he considers to have been much over-rated. Some graphic charts of family histories serve to illustrate the relative influence of combined factors. As regards pathology, Dr. Tredgold states his conviction that "the essential basis of amentia is an imperfect or arrested development of the cerebral neurones," relegating gross anomalies and diseased conditions of the brain to a secondary place. Some useful tables of the clinical varieties of primary and secondary amentia in relation to their etiology and pathology, and of the anomalies associated with amentia, lead to a consideration of its physical, nervous, and mental characteristics, which are very systematically worked out.

Chapters follow treating of feeble-mindedness in children and in adults respectively, the definitions laid down and the statistics gathered by the Royal Commission being cited in this connexion. "Idiots Savants" are considered in a separate chapter, which is embellished with photographs of the handiwork of the "Genius of Earlswood Asylum." After a discussion of the social relations of

¹ *Neurasthénie et Névroses: leur Guérison Définitive en Cure Libérale*. By Dr. Paul-Emile Lévy, of Paris. Paris: P. Alcan. 1909. (Cr. 8vo, pp. 407. Fr. 4.)

² *Mental Deficiency (Amentia)*. By A. F. Tredgold, L.R.C.P. Lond., M.B.C.S. Eng., Consulting Physician to the National Association for Feeble-minded, and to the Littleton Home for Defective Children. London: Baillière, Tindall and Cox. 1908. (Demy 8vo, pp. 321 + xviii, plates xxix, figures 67. 10s. 6d. net.)

aments, methods of treatment and training are dealt with; and in the concluding chapter the problems of after-care, permanent segregation, and the prevention of propagation of the unit are studied in the light not only of prudence but of practicability.

From the account we have given of the contents of the book, it will be seen that Dr. Tredgold has made a very comprehensive survey of his subject, more especially from the scientific and social sides. We are glad to have the valuable research work of the author gathered together into a convenient volume which is easy of reference, and which will be found most helpful to those wishing to gain an insight into the complicated problems of mental defect.

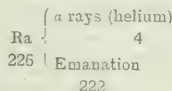
RADIUM AND RADIO-ACTIVITY.

MR. FREDERICK SODDY, Lecturer in Physical Chemistry and Radio-activity in the University of Glasgow, has published very opportunely, so far at least as the medical profession is concerned, a volume entitled, *The Interpretation of Radium*,³ consisting of the substance of six popular experimental lectures delivered at the University of Glasgow last year. Mr. Soddy begins at the beginning, and pursues at first the historical method, giving an account of the observations of Becquerel, Roentgen, and Madame Curie; he then discusses fully, with descriptions of illustrative experiments, the rays emitted from radium, their relative penetrating power, and their behaviour in the magnetic field. He explains the practical effect from the radio-active point of view of spreading a minute quantity of a radium salt over a large area, showing that for practical purposes a thin film of a pure radium salt can be used to give alpha rays essentially free from beta and gamma rays, since the beta and gamma rays from so small a quantity are so feeble as to be practically negligible.

After describing in a general way the characters of the three classes of rays, he discusses at some length the nature of the alpha rays, and gives the grounds for the opinion that they are flights of swarms of helium atoms expelled from the radio-active substance at the almost inconceivable speed of 8,000 to 12,000 miles per second. He describes briefly the experiments by which it was shown in 1903 by Sir William Ramsay and himself that helium was a product of the radio-active change in radium, and gives a fuller account of his own recent research for the purpose of detecting the production of helium from the primary radio-elements—uranium and thorium. Finally he sums up the position as follows:

"Helium has actually been found to be produced from the various radio-active substances—radium, thorium, uranium, actinium—which have in common the fact that they all expel alpha-particles. The mass of these particles has been measured and found to agree with the mass of the helium atom. All alpha-particles have been proved to have the same mass and to differ only in the initial velocity of expulsion, whether expelled from radium itself, from the emanation, from actinium, uranium, thorium, or any other of the bodies which expel them. Hence we are justified in concluding that the alpha-particle is an atom of helium, or at least becomes one after the velocity with which it is expelled is lost and it is brought to comparative rest."

He therefore considers that it is justifiable to write the first disintegration suffered by radium somewhat as follows:



And adds:

"There is a great deal of evidence going to prove that one atom of a radio-active body expels but one alpha-particle at each disintegration. Hence, since the atomic weight of radium is 226, and that of helium 4, the atomic weight of the emanation is presumably 222."

At this point Mr. Soddy harks back to uranium, the probable ancestor, but not the immediate parent of radium, and then traces the history of the "emanation." Radium

possesses the power of endowing objects with radio-activity, but this endowment of alpha, beta, and gamma rays quickly disappears. It is due to an invisible film or deposit on the surface of the object rendered radio-active, for, by sand-papery, the activity can be rubbed off, and then is found on the sand-paper. This "active deposit" is the product of the disintegration of the emanation. The atom of radium expels one alpha-particle (helium), and changes into the emanation, which is a gas, and the emanation expels a second alpha-particle (helium), and changes into a solid, or at least non-gaseous, form of matter. Then the active deposit itself passes through three changes with great rapidity, the bodies produced being known as radium A, radium B, and radium C. Radium B probably gives off beta rays; radium C, the final product of this stage, expels alpha, beta, and gamma particles. The beta and gamma rays or particles, therefore, do not come from radium itself directly, but from radium C, the end product of the change in the "active deposit."

Ra	Em	Ra A	Ra B — Ra C	Ra D
226	222	218	214	210
"Active deposit" rapidly changing.				
2,500 yrs.	5.3 days.	4.3 min.	38 min.	30.5 min.

Radium C after it has given off the rays becomes radium D, a comparatively stable body, which takes probably about seventeen years to change into radium E. Radium E, changes into radium E₂, and radium E₂ gives off beta and gamma rays and changes into radium F, the polonium of Madame Curie, an element which gives off alpha rays yielding another body, radium G, which is probably lead.

Ra D — Ra E ₁ — Ra E ₂	(β γ α)	Ra F	Ra G
210	210	210	206
17 years	9.5 days	7 days	203 days

We have endeavoured to give a general idea of Mr. Soddy's book in the hope that it may induce many to read it, because it affords by an orderly progression from the simple to the complex, and with as little mathematics as possible, a clear idea of the nature of the activity of radium, and the relation of that astonishing element to others which precede and succeed it in the process of disintegration or evolution—it is hard to know which term to use.

OSLER AND McCRAE'S SYSTEM OF MEDICINE.

THE fifth volume of Professor OSLER's *System of Medicine* deals with *Diseases of the Alimentary Tract*, and opens with a discussion on the diseases of the digestive apparatus by Dr. Charles G. Stockton.⁴ The chapter is thoughtfully written, but deals with a variety of questions which arise, and are more fully discussed under their special headings.

The second chapter, on diseases of the mouth and salivary glands, is by Dr. David Riesman. It is illustrated by several coloured plates, and, amongst other things, makes an attempt to deal with the changes of the tongue in disease, but this really important question is dismissed in a few lines. The peculiar tongue met with sometimes in persons who have been rickety in youth, described as like a map of France in departments, is not mentioned, nor is the exfoliating tongue seen in certain cases of hyperchlorhydria. Dr. John McCrae contributes a short chapter on diseases of the oesophagus, illustrated by three good photographs of pathological specimens.

The chapter on functional diseases of the stomach is by Dr. Julius Friedenwald, and in this group are included no fewer than twenty-four headings, which are dealt with in seventy pages, and consequently in a somewhat summary manner. As the phenomena presented by these neuroses are so multifiform it is difficult to give any description that

³ *The Interpretation of Radium*. By F. Soddy, M.A. The Progressive Science Series. London: J. Murray, 1909. (Demy 8vo, pp. 271. 6s. net.)

⁴ Oxford Medical Publications. *A System of Medicine by Eminent Authorities in Great Britain, the United States, and the Continent*. Edited by William Osler, M.D., F.R.S. Assisted by Thomas McCrae, M.D., F.R.C.P. Lond. Vol. V. *Diseases of the Alimentary Tract*. London: H. Frowde, and Hodder and Stoughton, 1909. (Roy. 8vo, pp. 903. 30s.)

will satisfy everybody, but we should have thought there was no doubt about the existence of a form of gastralgia occurring in anæmic women where the pain follows the taking of food, and the symptoms are not unlike those of gastric ulcer, and one in which the pain comes on from fatigue during fasting, and is relieved by a dose of alcohol or by a good meal and rest. Einhorn's division into cases of gastric, central, neurotic, constitutional, and reflex origin, seems to be of comparatively little value, as it includes conditions such as "gastralgia due to cancer of the stomach" and "the gastric pains of cerebral tumour and myelitis." Flatulence might have been discussed under the heading pneumatosis, but only excessive cases of "flatulent distension, with dyspnoea, collapse, rapid and irregular pulse, and cyanosis," seem to be thought worthy of description; whereas no symptom is more common in all conditions of stomach derangement, and none better deserves careful analysis of its causes, such as its relation to defective teeth or the bolting of food. Akoria is, in our experience, more often related to gout than to neurasthenia or hysteria.

The chapter on organic disease of the stomach is by Dr. Charles F. Martin. In the discussion of the etiology of gastric ulcer Dr. Katzenstein's experiments might have been referred to, but it is possible the chapter was written before his paper was published. In the treatment of gastric ulcer Dr. Martin is on the side of those who give little food; he thinks that starvation is "good and often well borne," and that enemata of normal saline solution may replace food for "days or even weeks"; he is at least twice as long as necessary before allowing the patient to resume solid food, provided that all the previous stages have been passed through without pain or other untoward symptom. He is disposed to regard gastro-enterostomy as the ultimate remedy for ulcer of the stomach, while practitioners in this country, in spite of statistics, believe that a large proportion of cases get well under medical treatment. The early diagnosis of cancer of the stomach is the most interesting and important question in connexion with it, and there is much need of a critical discussion of all the various means that have been advocated of recent years to help in diagnosis, but we note as omissions any reference to the value of absence of rennin or to the test suggested by Graefe and Roehmer of the hæmolytic present in the contents of carcinomatous stomachs. Speaking generally, the dietetic treatment is more that of Germany than of England. It is somewhat disappointing, in connexion with stomach dilatation, to find the writer speaking of the stomach as containing an "abnormally large quantity of food" after a test meal. Where dilated stomach with retention of contents is suspected, he presumably examines the stomach from six to eight hours after a test meal, when normally he should find it empty, and to speak of an "abnormally large quantity" suggests that normally there is a small quantity present, whereas there should be nothing but traces of mucus and a few epithelial cells. The importance of these small quantities as a means of diagnosing pyloric obstruction and of indicating the need for surgical interference can hardly be over-estimated, and we should have liked to have seen this more clearly stated.

The chapter on diseases of the intestines is contributed by Dr. Alfred Stengel. Considering the importance of feeding by the bowel, absorption in the large intestine was worthy of discussion, but is dismissed in seven lines. There is some confusion in the mode in which phantom tumour is described; there are, of course, two kinds, and both are mentioned, but as if they might coexist or were much the same thing, whereas they are essentially distinct. Confused ideas on this subject are frequently met with amongst students, for while nearly all know of the general distension of the abdomen described by gynaecologists as phantom tumour or pseudocystitis, they know nothing about the form described by Murchison due to contraction of the straight muscles of the abdomen. In the discussion of constipation, no reference is made to the distinction drawn by some authors between atonic and spastic constipation. The indications for surgical treatment in appendicitis are more conservative than might have been expected from what we know of American practice, but no definite rules are laid down to guide the practitioner.

The chapter on diseases of the peritoneum is by Dr. H. D. Rolleston, and contains an excellent account of all that should be included under this heading.

Dr. Thomas K. Brown has written the chapter on the various ptoses. He does not describe the narrow thorax and small costal angle, the *habitus enteroptoticus*, which has been so generally accepted in Germany as an important element in the production of these conditions. He repudiates the view that any general symptoms are dependent upon nephroptosis, and does not speak favourably of the results of surgical treatment.

Dr. Eugene Opie, who writes on diseases of the pancreas, does not, we notice, give any results of personal observations with Cammidge's reaction. He appears to over-estimate the importance of the state of the islands of Langerhans in diabetes, since Dale has shown that they are not permanent structures, but vary in number with the state of the digestion.

The liver and its diseases are described by Dr. O. A. J. Kelly. He accepts the view that jaundice is always obstructive, but says nothing about those cases in which, while there is a yellow discoloration of the skin and conjunctivæ, no bilirubin appears in the urine, the so-called "acholuric jaundice," while he repeats the old mistake of saying that the absence of bile causes constipation. We note that he believes with Dr. Hale White that ascites in cirrhosis of the liver is a terminal symptom, and that where the patient has survived to allow of repeated tapplings the ascites is due to chronic peritonitis.

It may be said generally that the several articles in this volume are well written and include most of what should be known at the present time upon the various subjects with which they deal. The main defect, inseparable apparently from modern textbooks, is the want of clear guidance on disputed points. A more dogmatic presentation of such questions would be more instructive, or, at least, more impressive, to the minds of students than this judicial balancing of views, which leaves them indisposed to trouble their memory with doctrines about which there seems to be so much doubt.

PUNCTURE FLUIDS.

AFTER introductory chapters on chemical and physico-chemical methods of analysis, Dr. GRUNER, in his *Studies in Puncture-Fluids*,⁵ discusses the characters of the various effusions encountered in clinical work. One of the points to which he calls attention is the differentiation of fluids presenting a turbulent, opalescent, or milky appearance. Where the turbidity is due to chyle, the discovery of fat globules under the microscope, or the fact that ether will render the fluid clear, makes the diagnosis easy. But in what the author terms "pseudo-chylous" ascites, the turbidity may be due to a variety of causes. Occasionally it is to be accounted for by the presence of enormous numbers of bacteria, even in non-septic effusions; the use of a Chamberland filter will then procure a clear filtrate. Sometimes the turbidity may be due to a molecular alteration of the globulins present, possibly associated with a combination of globulin and a fat, forming a lecitho-globulid. Excess of mucin, again, may give rise to a milky or opalescent appearance, especially if the electrolyte conditions do not allow of its complete solution. Sometimes it is found that after a first tapping has brought out a clear, translucent, typically straw-coloured fluid, a subsequent tapping reveals a decidedly milky fluid. The author investigated a case of this sort in which the only change found *post mortem* was extreme cloudy swelling of the convoluted tubules of the kidneys. As neither chyle, bacteria, nor lecithin were present to account for this phenomenon, he suggests that the change was due to an alteration in the physical properties of the colloids, explicable in the light of modern knowledge regarding the chemistry of proteids. "If a change in the electrical charge takes place by which the attraction between colloidal particles and ions is altered, then the former may form aggregates of a size sufficiently different from those in the first tapping to make the fluid turbid." At the end of the volume Dr. Gruner provides an interesting collection of cases in which his chemical and physical examinations of

⁵ *Studies in Puncture-Fluids. A Contribution to Clinical Pathology.* By O. C. Gruner, M.P. London: H. K. Lewis, 1908. (Demy 8vo, pp. 289; 111. 1s. 6d.)

pleural and peritoneal fluids are discussed in relation to the clinical and *post-mortem* findings. The chemistry of pathological effusions is very difficult and complicated, and, as Dr. Gruner remarks, the number of variable factors at work is so great that it is often impossible to establish a positive and certain diagnosis as to the nature and origin of the particular fluid investigated. But though his methods and his results may not always be of immediate clinical utility, they possess a high scientific interest, and we hope that his researches on this important subject will be continued.

PATHOLOGICAL HANDBOOKS.

THE *Textbook of General Pathology*, by Drs. BEATTE and DICKSON,⁶ is an attractive book, well written and well illustrated. The text bears the impress of original research, and the illustrations, which are new and specially prepared for the work, are a welcome change from the semi-diagrammatic, conventional pictures often handed down from one textbook to another. In so far as the book is intended for the average student, it may, perhaps, be objected that the authors give a little too much prominence to matters which they find important from their own point of view, and rather overlook ordinary examination requirements. We by no means recommend the cramming system, but authors of textbooks are bound to bear in mind the desirability of helping the student to assimilate readily all that he is required to know, and not overburdening him with details which are probably beyond his grasp. Take for example, pp. 20-25, on the composition of protoplasm. It is impossible for the ordinary medical student, with his limited knowledge of organic chemistry, to understand a classification of "proteins" into protomemins, histones, sclero-proteins, conjugated proteins, etc.; nor can he be expected to grasp the meaning of "mono-aminomonocarboxylic acids," "heterocyclic compounds," and the like. And in dealing with such subjects as inflammation and the classification of tumours, it must be remembered that the beginner requires a general outline rather than special emphasis on certain aspects of recent research or scientific controversy. Disputed points about "plasma cells" or Maximow's "polyblasts" are beyond his need; and there are possibly even examiners who might feel their omniscience rudely challenged by such terms as "epilepidomata" or "mesohylomata." The authors "propose to adopt practically in its entirety" what they consider to be "the most complete and scientific classification" of tumours; but unfortunately there are several other quite different classifications which are also considered by their respective inventors to be "the most complete and scientific." Until pathologists have arrived at some consensus of opinion on this question of classification, writers of elementary textbooks do not appear to be justified in inviting the student to adopt any one of these recently advanced theories. The omission of some of these disputed or highly technical points would have left the authors space to deal with other and more important subjects which the student expects to find discussed in a textbook on general pathology. There is no chapter on pyrexia; surely this is a serious omission. "Into the general subject of gout and the chemistry of uric acid metabolism we do not propose to enter." With regard to these and other important questions, which arise directly out of clinical work and are constantly raised in the examination room, we are compelled to point out that the student will find himself better catered for in other textbooks on general pathology. We hope that in a future edition the authors will see their way to giving fuller consideration to the student's point of view. What they have written is good; and, with a relatively small amount of cutting down in some directions and expansion in others, they might greatly increase the utility of their work.

In his book on the outlines of general pathological histology, Dr. JULIUS STEINHAUS⁷ provides a useful course of practical instruction in histological technique and

diagnosis. The methods of fixation, section cutting, and staining are carefully described, and the list of formulae for differential stains is particularly full and useful. The descriptions of the various pathological lesions encountered under the microscope are brief, condensed, and likely to be helpful to the student going through a laboratory course in pathological histology. Dr. Steinhaus attaches special importance to his photomicrographs, and considers that good photographs are of greater educational value to the student than drawings. We admit that his photographs are good, and that many of them are useful, but we consider that many important details of microscopic work need for their portrayal the work of a skilled artist, and cannot be reproduced adequately in the best of photographs. Though photographs are better than the fanciful, diagrammatic, and conventional drawings often handed down from one generation of textbooks to the next, they are less instructive than really good drawings which faithfully reproduce typical lesions as they are actually seen under the microscope.

Professor ORTH'S *Pathologisch-anatomische Diagnostik*,⁸ which has now attained its seventh edition, is of particular interest as representative of the teaching in the Pathological Institute of Berlin. The special feature of the book is that its aim is eminently practical. In the first chapter the technique of making a *post-mortem* examination is explained, and in all the succeeding pages the appearances found in the *post-mortem* room are taken as the starting point, every tissue being described in the sequence observed in making a systematic investigation of the dead body. This is an excellent plan, and might be imitated with advantage by the writers of English textbooks, many of whom give the student no instruction on the art of dissection in the diagnosis of disease. Professor Orth enters fully into the naked-eye appearances of morbid tissues, and also gives a good account of the microscopic details in so far as these are necessary for confirming a diagnosis. His descriptions are concise and clear, and the thoroughness with which he covers the ground is admirable. Students who assimilate Professor Orth's instructions may feel confident that they have nothing more to learn in the art of making an exhaustive and reliable *post-mortem* examination.

THE HISTORY OF SPECIAL HOSPITALS.

THE origin, rise, and development of special hospitals have recently found a historian in Mr. RICHARD KERSHAW, the Secretary of the Central London Throat and Ear Hospital.⁹ The story that he has to tell is of more than common interest, and might well have been extended beyond the narrow limits of seventy-eight pages.

Specialism has sometimes been described as a "modern tendency," but to the student of ancient history it must appear a revival. In the days of Herodotus the treatment of disease in Egypt was almost entirely in the hands of specialists, and, although much of it depended upon faith in the powers of the particular deity, there is abundant evidence in the papyri and in the bodies of mummies that physical remedies and manipulative skill were used by specialists with judgement and success. Mr. Kershaw traces, in an early chapter, the more important epochs in the history of medicine, and illustrates them by some interesting archaeological photographs, some of which have already appeared in the published lectures of Dr. Richard Caton at the Royal Institution and the Royal College of Physicians. One of these will demonstrate the fact that "balcony" treatment was even more fully utilized in some of the ancient Greek temples of health than at the present day.

A chronological record of the growth of special hospitals in the United Kingdom during the nineteenth century shows that, like so many of the general hospitals, they owe their foundation to individual medical enterprise. It cannot be said that philanthropy was in all cases the moving spirit, but there can be no doubt that the multiplication of such institutions has relieved much sickness and promoted the study of disease.

⁶ *A Textbook of General Pathology*. By J. Martin Beattie, M.A., M.D., and W. E. Carnegie Dickson, M.D., B.Sc., F.R.C.P. Edin. London: Tebman, Ltd. 1908. (Demy 8vo, pp. 491; 162 illustrations and 4 coloured plates, 17s. 6d.)

⁷ *Grundriss der allgemeinen pathologischen Histologie*. Von Dr. Julius Steinhaus. Leipzig: Akademische Verlagsgesellschaft. 1909 (Imp. 8vo, pp. 170, with over 150 photomicrographs on 25 plates, M.10.)

⁸ *Pathologisch-anatomische Diagnostik*. Von Dr. Johannes Orth. Siebente, durchgesehene und vermehrte Auflage. Berlin: August Hirschwald. 1909. (Roy. 8vo, pp. 789, 438 illustrations, M.16.)

⁹ *Special Hospitals*. By Richard Kershaw, Secretary of the Central London Throat and Ear Hospital. London: Geo. Pultman and Sons, Ltd. 1909. (Roy. 8vo, pp. 78.)

The London Fever Hospital was the first to be established, followed shortly afterwards by "Moorfields," and from their lead a series of special hospitals was started in each succeeding decade, until at the present time they number 167. In those of London alone there are no less than 3,171 beds. The influence of these centres for special study has been far-reaching. The better knowledge of fevers and their treatment, the more accurate study of dermatology and neurology, the scientific advances in the fields of ophthalmic, aural, and laryngeal surgery, may be cited, amongst other benefits, as directly due to the opportunities afforded by special hospitals. The names of Lawrence, Erasmus Wilson, Spencer Wells, Toynbee, Peacock, Charles West, and Elizabeth Garrett Anderson will always be held in remembrance as pioneers whose labours have paved the way to success for the present and future generations of specialists.

That the educative value of specialism has of late years been increasingly appreciated, is shown by the return, here recorded, of the attendance of students, post-graduate and other, at the chief clinics in London. A quotation from the memorable address delivered by Sir James Paget to the Congress of 1881 sums up the case in favour of specialism in terms as conclusive as they are eloquent.

Mr. Kershaw, true to his instincts as secretary to a special hospital, labours to prove that they can be worked more economically than general hospitals, but he admits that the data for exact comparison are not entirely trustworthy. He advocates the system of small payments by lower middle-class patients, and does not regard the liability to abuse by patients of a higher grade with any apprehension, so long as the services of an almoner endowed with common-sense are available.

The small work, admirably presented by the publisher, is concluded by a tabular statement of all the special hospitals in the United Kingdom, with some interesting statistics as to their value as educational centres.

PUBLIC HEALTH LAW AND BY-LAW.

THE object aimed at by the promoters of the Public Health Acts Amendment Act which came into force on January 1st, 1908, was to enable sanitary authorities outside London to obtain, when they so desired and without the expense of promoting a private bill, various additional powers which had been included in local Acts passed in recent sessions of Parliament. The Act is an adoptive one, and before it can be adopted by any sanitary authority the Local Government Board in England and Wales, or the Chief Secretary to the Lord Lieutenant in Ireland, must be satisfied that the adoption is desirable for the particular district concerned. An admirable explanation of the Act, with a very full commentary on the various sections, has been written by Mr. ARTHUR E. CLERY and Dr. J. McWALTER.¹⁰ The text of the Act is given, each section being followed by appropriate comments, explanations, or references suitable to it. The second half of the work includes a summary of recent decisions of the courts with respect to sanitary matters; this is very clearly and intelligibly written, and in each case precise references are given to the full reports. We believe that up to the present time only very few sanitary authorities either in England and Wales or in Ireland (the Act does not apply to Scotland) have taken steps to adopt any portion of the Act. If those who are responsible for advising such authorities will carefully read this explanatory volume, we feel confident that many of them will see the necessity for urging the adoption of the Act within the area of their districts.

The very handy little *Handbook of Sanitary Law* brought out by Dr. Burnett Ham nearly ten years ago has achieved popularity mainly on account of accuracy and ease of reference, two qualities which have been well maintained in the fifth edition, edited by Dr. R. KNOX BROWN and Dr. JOHN EVANS.¹¹ The sections upon dwellings and buildings and upon housing of the working classes are especially clearly written, and not the least useful chapter is that which deals with definitions, where the

bewildering terms "drain" and "sewer" are defined as lucidly as is at all possible in the present state of judge-made law. The Public Health Acts Amendment Act, 1907, is referred to in the chapter on nuisances, but the provisions of the Act which relate to common lodging-houses and infectious diseases are not given under these headings. The Infectious Disease (Notification) Act, and the Infectious Disease (Prevention) Act are, we believe, the correct titles of these two Acts, and not those used in the *Handbook*. The general arrangement of the book is excellent, and the printing leaves little to be desired. The editors seem a little uncertain whether to spell Mr. Wyther Blyth's name with a final "e" or not, and one of them does not appear to be quite sure whether his own name is R. K. Brown or K. W. Brown. We believe it is the former.

With the aid of a large number of well-executed diagrams, Mr. JENSEN, assisted by an unnamed collaborator, has succeeded in producing a most helpful work upon the by-laws of the London County Council as to drains and sanitary fittings.¹² In this second edition he has included the new by-law which deals with the giving of notices and depositing of plans before carrying out any proposed work made under the Metropolitan Management Acts Amendment (By-laws) Act, 1899. The annotations are clearly expressed, and give in clear language the reasons which have led to the adoption of particular regulations. The diagrams are not confined to illustrations of recognized appliances, but include a large number which are dangerous and therefore not permissible. References are freely made to by-laws in force in other large towns, including Liverpool, Manchester, and Birmingham. The necessity for adopting in the construction of drains some material which will stand the pressure and vibration caused by the modern methods of traction is becoming more and more apparent. The advocacy by Mr. Jensen of cast-iron drains in towns is therefore opportune.¹³ He discusses the matter very fairly, and although upon points of detail there may some ground for disagreement with his views, there can be no doubt that his general conclusions are correct. The initial cost of laying iron pipes would undoubtedly be greater than that of stoneware drains, but in the long run they would probably be more economical.

NOTES ON BOOKS.

THE twelfth volume of the reissue of the *Dictionary of National Biography*,¹⁴ edited by SIDNEY LEE, takes the work from Sir Gruffydd Llwyd, a Welsh hero of 1322, to William Mason, the Irish statistician. Among the longest biographies are those of Mary I, the first queen regnant of England; Mary II, the wife of William III; Mary of Modena, the wife of the father of Mary II; and Mary Queen of Scots. Close by is a short note on William Marwood, whose claim to inclusion is that he was the public executioner from 1871 to his death in 1833. Among the medical names we note Sir James Ranald Martin, who, born in Skye and educated in medicine at St. George's Hospital, spent many years as surgeon in the H.B.L.C.S., and finally enjoyed a large consulting practice in London; Sir Henry Marsh, a distinguished physician of Dublin; Dr. James MacKenzie, of Worcester, who helped Lady Mary Wortley Montagu to make known the uses of inoculation before the discovery of vaccination; and Sir James McGilgor, the chief of the medical staff of Wellington's army in the Peninsula, and afterwards, from 1815 to 1851, Director-General of the Army Medical Department, in which capacity he inaugurated the medical reports and returns from all military stations, which later resulted in the annual army medical report. The thirteenth volume, which made its appearance this month, comes down to John Myles, founder of Welsh Baptist churches, who afterwards (1663) emigrated to New England. Among the longest biographies in this volume are those of Milton, Sir Thomas More, and General Sir John Moore, the centenary of whose death at Corunna has recently been commemorated. But it contains a fair sprinkling of medical names—among others, that John Moore, the father of the General, who

¹⁰ *The Public Health Acts Amendment Act, 1907*. By Arthur E. Clery, LL.B., and J. McWalter, M.A., M.D., D.P.H. Dublin: E. Ponsonby, 1908. (Crown 8vo., pp. 395. 2s.)

¹¹ *A Handbook of Sanitary Law*. By B. Burnett Ham, D.P.H., M.D., M.R.C.S., L.R.C.P. Fifth edition. London: Ash and Co. (Fcap. 8vo., pp. 183. 2s. 6d.)

¹² *By-Laws as to House Drainage and Sanitary Fittings made by the London County Council*. Annotated by Gerard J. G. Jensen, Esq., and Another. Second edition. London: The Sanitary Publishing Company, Limited. 1908. (Cr. 8vo., pp. 147; 169 illustrations. 3s. 6d.)

¹³ *Cast Iron House Drainage*. By Gerard J. G. Jensen, C.E., London: The Sanitary Publishing Company, Limited. 1908. (Crown 8vo., pp. 228. 18 illustrations. 2s. 6d.)

¹⁴ *Dictionary of National Biography*. By S. Lee. Vols. xi and xii. London: Smith Elder and Co. 1909. (Roy. 8vo., 1,349. 15s.)

was for a time assistant surgeon to the Coldstream Guards, serving with them at Flushing and Poseda in 1748, but afterwards practised in Glasgow, where he graduated M.D. in 1770. He afterwards travelled with the Duke of Hamilton, visiting Voltaire at Ferney, and Frederick the Great in Berlin. He published an account of his travels, wrote the once famous novel, *Zeluco*, and corresponded with Burns. A greater name is that of Dr. Richard Mead. It is rather a Scottish volume, the Maxwells, the Melvilles, the Millars and Millers, and the Murrays claiming a good deal of space.

We received on March 3rd the volume of the Transactions of the first International Congress on Psychiatry, Neurology, Psychology, and After-care, held at Amsterdam in September, 1907.¹⁵ It is edited by Dr. VAN WAYENBURG, who was Secretary-General of the Congress, and contains the text in the original language of the various papers read in the general meetings and sections.

The thirty third volume of the *Transactions of the American Gynecological Society* covers the proceedings of that body at its annual meeting at Philadelphia in 1908. Altogether some twenty-five papers find place, most of them being of a decidedly practical character. The special feature of the volume as a whole is the number of papers devoted to the question of immediate versus delayed operation in cases of ruptured tubal pregnancy. They were followed by a good discussion. The President dealt in his address with the conduct of general anaesthesia, making charges against the profession which fortunately have little or no application on this side of the water. One would gather from his statement that the anaesthesia specialist has not yet been evolved in America; the selection of intelligent nurses for such work is spoken of as an advance to be fostered.

*The Frontiersman's Pocketbook*¹⁶ has been compiled and edited by ROGER POCCOCK on behalf of the Council of the Legion of Frontiersmen. The Legion of Frontiersmen is a civilian, self-supporting, and self-governing association, officially recognized in the United Kingdom, Canada, Australia, South and East Africa, and Bombay, as a means of securing for the service of the State men of good character, who have been trained in wild countries, at sea, or in war. The council registers such men in view of their individual usefulness to a field force as guides, scouts, craftsmen, and irregular mounted rifles. In each country throughout the British Empire, so far as the authorities permit, units are being raised for home defence, and, where men can be spared, for service in Imperial defence in time of war. The pocketbook consists of five parts: I, the training of frontiersmen; II, means of travel; III, collective training; IV, morale; and V, information as to simple medical and surgical treatment when no doctor can be obtained; finally, the book has an index, which might with advantage be fuller, and some blank pages for notes. The contributors to the first four parts are a numerous band, who, in various capacities, have had experience of frontier life, and have been forced by practical necessity to know how best to act in various emergencies, and how to utilize means which happen to be available when approved appliances are not at hand. The information ranges from cooking to the church service, and from the making of knots to the identification of a man-of-war, with, at the end, a short disquisition on camp manners. Part V is also the work of many hands; it is arranged alphabetically, and the information, illustrated by first-aid diagrams, is given in a highly condensed form. It seems, as far as we have tested it, to be thoroughly sound, but probably in another edition it would be thought well to give the Schäfer method of resuscitating the apparently drowned now adopted by the Metropolitan Police. The book is of a kind of dwarf quarto shape, bound in leather, and is convenient for the pocket.

¹⁵ Amsterdam: J. H. de Bussy. 1908. (Roy. 8vo, pp. 934.)

¹⁶ *The Frontiersman's Pocketbook*, Compiled and edited by R. Pocock, on behalf of the Council of the Legion of Frontiersmen. London: J. Murray. 1909. (Med. 16mo, pp. 483, 5s.)

MEDICINAL AND DIETETIC PREPARATIONS.

A Soluble Compound of Veronal.

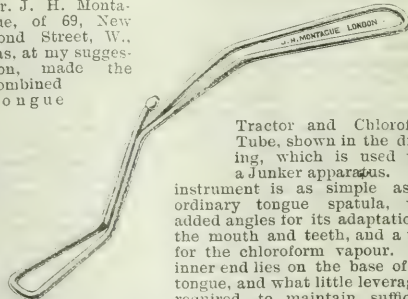
ALTHOUGH one of the most recently introduced of the many hypnotics prepared synthetically, veronal (diethylbarbituric acid) has attained to considerable favour, and is very widely employed. In common with other articles of this class, however, it is insoluble in water, and certain limitations are thus imposed on its use. To

meet this objection the soluble sodium derivative of veronal has been prepared by Mr. E. Merck under the name "veronal-sodium." It is a dry, white crystalline powder, soluble, according to our experiments, in about five parts of water at ordinary temperatures; the solution is almost tasteless, strongly alkaline in reaction, and the addition of acid at once produces a precipitate of veronal. Veronal-sodium appears well adapted for the administration of the drug by rectal injection; when given by the mouth the acid contents of the stomach would no doubt cause the precipitation of veronal, which, however, might then be more readily absorbed than if administered in the form of powder. Veronal-sodium is also supplied in tablets of 5 grains and 7½ grains each.

MEDICAL AND SURGICAL APPLIANCES.

Combined Tongue Tractor and Chloroform Tube.

MR. FREDERIC LONGHURST (Anæsthetist to St. George's Hospital and the Grosvenor Hospital for Women) writes: The task of controlling the patient's tongue, thus securing a free airway and at the same time avoiding interference with the surgeon's aseptic precautions, is, in certain operations requiring difficult anaesthetic positions of the head, less easy than it should be. In such an operation as that for goitre, in which the head has to be kept in the straight line and generally extended, the tongue in most cases causes difficulty by falling back against the posterior wall of the pharynx, and the general methods in use for obviating this complication are: (1) Levering the tongue forward with the flat of a tongue forceps, and at the same time administering the chloroform through the tube of a Junker inhaler; (2) getting the tongue forward by pushing the angles of the jaw; (3) tongue traction by means of a ligature. All these methods are clumsy, probably interfere with the operator, and leave no free hand to work the bellows of the Junker. These difficulties are greatly accentuated in patients of bad anaesthetic type, such as the short-necked plethoric, the overhung jaw, the adenoid, etc. With the object of trying to overcome these troubles, Mr. J. H. Montague, of 69, New Bond Street, W., has, at my suggestion, made the Combined Tongue



Tractor and Chloroform Tube, shown in the drawing, which is used with a Junker apparatus. The instrument is as simple as an ordinary tongue spatula, with added angles for its adaptation to the mouth and teeth, and a tube for the chloroform vapour. The inner end lies on the base of the tongue, and what little leverage is required to maintain sufficient

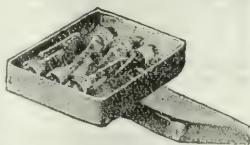
traction on the tongue is easily exerted by the thumb and forefinger on the handle, which will be opposite the patient's forehead. In my experience the tongue tractor appears to obviate the necessity of a gag or mouth prop; but should the latter in any subsequent cases be found useful in keeping the lips apart, it could, of course, be used in conjunction with it, though, for the reason given above, I have refrained from complicating the instrument by any such addition. The part of the tractor which lies against the teeth is covered with rubber. The tractor once in position, the mouth can be covered with sterilized gauze, and no interference with the surgeon's aseptic precautions should be necessary throughout the operation. There are, of course, many operations in which it is difficult to control the tongue without interfering with the operator, such as operations on the face, neck, ear, head, etc., and in all these cases the tractor will, I think, be found useful. I have found the administration of chloroform greatly facilitated by it, not only in the most difficult of these cases, but also in operations on other parts of the body remote from the head. The advantages claimed for the appliance are that: (1) It secures a patent airway in operations when the position militates against one; (2) it obviates the necessity of interfering with the surgeon's aseptic precautions; (3) the position of the head and neck need not be altered during the operation for the purpose of securing the airway; (4) it leaves one hand entirely free or working the bellows.

An Ophthalmic Vade-Mecum.

Dr. EDGAR WHITAKER (Diss) writes: I have designed an instrument to fill the want, so frequently felt by practitioners, of an appliance ready to hand for extracting a foreign body from the cornea, painlessly and quickly. It is made the usual size of a silver pencil (3½ in. long), and, as is seen in the drawing, the flat top serves as a seal, whilst the whole instrument lends itself to general purposes of various utility, without impairing its efficiency, and gives excuse for its constant presence. It consists of a small hollow barrel (A), on the top of which screws the cap (B). This barrel has a cavity which exactly receives a tube of ophthalmic tabloid cocaine. The lower part of the barrel is graded off into a fine, but firm, spatula (D) for the removal of the foreign body, whilst the cover (C) effectually prevents injury to this part of the instrument. Messrs. Burroughs and Wellcome have made it for me extremely well in silver and at a most reasonable price.

Anaesthetic Emergency Case.

Dr. A. DE PRENDREVILLE (Senior Anaesthetist to the London Throat Hospital, etc.) writes: The hypodermic case, shown in the accompanying sketch, has points of interest which, I venture to suggest, are worthy of special attention at the hands of practitioners generally and of anaesthetists in particular. Anyone who has, unfortunately, had occasion to face a sudden crisis during a surgical operation must have keenly felt the need of drugs ready for instant use. The case is fitted with nine "steriles" (sterile capsules), prepared with the utmost care. Each sterile contains a single dose of the required drug. The following selection from a list of some 100 formulæ in vogue is suggested, but may be modified at will to suit individual requirements: Adrenalin, camphor in ether, digitalin, ergotin, strychnine, and scopolamine-morphine. One or two of the special injections may be kept in duplicate. A metal syringe and a glass tube of Schimmel's needles are also contained in the case. It is unnecessary to emphasize the great importance of having clean, unused needles for separate injections. Mr. W. Martindale, 10, New Cavendish Street, W., has elaborated my original idea for me, and has, I think, produced a very useful and valuable outfit for hypodermic medication. All the fittings are of metal, and can, of course, be sterilized by boiling.

*A Lacrymal Cannula.*

Dr. G. F. C. WALLIS (late Bristol Eye Hospital) writes: Messrs. Weiss and Co. have made for me the lacrymal cannula as illustrated. It is bulbous-ended like a Couper's probe, and has the opening laterally, which obviates blunting the smooth olivary end, thus allowing of easy passage from the canaliculus into the lacrymal sac. The tube is of soft metal, and can be shaped to any desired curve.

Comedo Expresser.

Not being quite satisfied with the comedo expressers at present in use, Dr. Pernet has had a larger instrument made by Messrs. Mayer and Meltzer. It is in the shape of



a blunt fenestrated curette, slightly bent at the end, and altogether a little over 4 in. long. In the figure it is shown three-quarter size.

REPORTS ON THE ACTION OF NEW DRUGS.

At the last meeting of the International Association of the Medical Press a discussion took place as to the position of medical men who received fees from manufacturing chemists or chemical firms for investigations of the action of new drugs. A similar discussion had previously taken place in Cologne at the meeting of the German National Association. The chief chemical firms had at that time expressed themselves in sympathy with the association, and as prepared to lend their aid in any reasonable manner.

In the *Deut. med. Woch.* of December 10th, 1908, a "round robin," signed by the following firms, gives the details of the steps which they are taking in this matter:

Aktiengesellschaft für Anilinfabrikation, Berlin.
C. F. Boeringer and Soehne, Mannheim.
Chemische Fabrik auf Aktien, vorm. E. Schering, Berlin.
Chemische Fabrik Gustrow, Gustrow i. M.
Chemische Fabrik von Heyden, Radebeul, near Dresden.
Farbenfabriken, vorm. Fr. Bayer and Co., Elberfeld.
Farbwerke, vorm. Meister Lucius and Brünning and Co., Höchst.
Gehe and Co., Dresden.
Gesellschaft für Chemische Industrie, Basle.
F. Hoffmann-La Roche and Co., Grenzach i. Baden.
Kalle and Co., Biebriche a. Rhein.
Knoll and Co., Ludwigshafen a. Rhein.
E. Merck, Darmstadt.
Pearson and Co., Hamburg.
J. D. Riedel, Berlin.
Schulke and Mayr, Lysofabrik, Hamburg.
Dr. Theinhardt's Nahrungsmittel Gesellschaft, Cannstatt-Stuttgart.
Vereinigte Chinin-fabriken Zimmer and Co., Frankfurt a. M.

The Union of Chemo-Pharmaceutical Industrial Firms, of which those enumerated above are members, state that the union condemns the principle of paying fees for public reports on new drugs by medical men. The firms we have named realize that they must protest energetically against the unwarranted suggestion that they have any pecuniary interest in the publication of these articles. It is, however, to their interest that each pharmacological preparation should be subjected to a thorough and careful investigation by experts of good repute. Such an investigation is absolutely necessary to the advance of medicinal therapeutics. The firms in the list we have quoted do not consider that it is any concern of theirs to express an opinion with regard to the payment of medical men for undertaking these investigations. They are of opinion that no honourable member of the medical profession could be influenced in his judgement of preparations by the reception of a fee, and they add that the question should not be confounded with that of writing favourable notices on drugs for gain.

The condemnation expressed in the first sentence of the last paragraph will be greeted with approval by all who are interested in the matter.

MOTOR CARS FOR MEDICAL MEN.

TRICARS.

P. C. asks for information as to the suitability of tricars for medical use, and especially for the personal experience of any doctor who has used them. Our usual motor correspondent has neither personal experience in their use, nor any printed matter available to send to "P. C." for his information. Speaking generally, tricars have not attained to much popularity, and are not reputed to be very safe, especially in taking corners at any pace.

CAR FOR ROUGH ROADS.

MOTOR, writing from the Orange River Colony, asks if any of our readers have experience of the Holsman car or others of similar construction. These have a high clearance, are built for solid tyres, and have air-cooled engines. Solid tyres would probably be an advantage in the Colony provided that the car is built for them, and has appropriate springs. But, in the absence of actual experience, we doubt the advisability of an air-cooled engine, for it is when struggling with difficulties such as a steep hill with a bad road, or clambering out of a watersplash or a gully, that all engines get overheated and lose power. Since air cooling is largely dependent upon the car travelling rapidly through the air, it is just in such conditions that it would be least efficient.

LITERARY NOTES.

In the *Daily Graphic* of March 8th Mr. Herbert Sieveking gives an interesting account, with illustrations, of Tyburn, where so many unfortunate people, sinners and saints, suffered in the bad old days before Romilly cleansed our Statute Book of the blood which stained nearly every page, and before the growth of religious toleration made theological belief cease to be *un cas pendable*. Admirers of Hogarth will remember the ghastly print which brings the "Rake's Progress" to a close. Mr. Alfred Marks has shown in his book, *Tyburn Tree: its History and Annals*, which is based on exhaustive research, that Tyburn was a place of execution for nearly six hundred years. The first time the death penalty was exacted there was in 1196, the last in 1783. The London County Council has decided to erect a memorial at the junction of Edgware Road, Bayswater Road, and Oxford Street. This will take the form of a triangular stone with a representation of the gallows (which was triangular) in brass. The stone in the roadway will be surrounded by a 6ft. triangle with the inscription in brass letters, "Here stood Tyburn Tree. Removed 1759." The determination of the site of the gallows has been made possible by the discovery by Mr. Sieveking of a map of the parish of St. George, Hanover Square, dated 1725. Mr. Sieveking, who is a son of the late Sir Edward Sieveking, is a member of the medical profession.

Epilepsia is the name of an international quarterly journal devoted, as its title imports, to the publication of researches and observations on epilepsy and allied disorders. It will be published in English, French, and German. The founder of the new journal, which is published by Scholten and Holkema, of Amsterdam, and I. A. Barth, of Leipzig, is Dr. Julius Donath, of Vienna, who is also the editor. The Editorial Secretary is Dr. L. Muskens, of Amsterdam. The first number contains original articles by Professor Raymond and Dr. Sérienx, of Paris; Professor Binswanger, of Jena; Professor Redlich, of Vienna, and Dr. L. Muskens.

Dr. Ralph W. Leftwich writes:

I notice that the authors of the two able articles on exophthalmic goitre in the *JOURNAL* of February 13th use the synonym Graves's disease as is usually done in this country. In Germany it is always termed "Basedow's disease," his description, though five years later, being the more exact. A third claim has been set up in favour of Dr. Parry.

It is pretty clear, however, from the passage I am about to quote that the conjunction of the three symptoms—enlarged thyroid, exophthalmos, and mental soundness—was well known to the ancients. I came across it in Brachet's *Dictionnaire Etymologique*. "Goître du Latin *guttur* (autre forme de *guttur*). *Guttur* signifie proprement *gorge*, mais il a le sens de *goître* dans la latinité de la décadence; car on trouve son dérivé *gutturulosus* employé au sens de *goîtreux* dans Ulpian: 'Si quis natura gutturosus sit, aut oculos eminentes habeat, sanus videtur.' This, I suppose in contradistinction to the mental infirmity of cretins, the term "*sanus*" being evidently inapplicable to the body. Ulpian died A.D. 226.

It is certain that "*gutturulosus*" meant a person with a goitre. But we do not think that the passage quoted by Dr. Leftwich proves that exophthalmic goitre was known to the ancients. The whole text is as follows:

Digest, XXI: 1: 12. Ulpianus libro primo ad edictum aedilium curulum. Qui clauum habet, morbosus est: sed et polyposus. Eum, qui alterum oculum aut alteram maxillam inaequalem habet, si recte ita utatur, sanum videri Pedius scribit: ait enim inaequalitatem maxillarum oculorum brachiorum, si nihil ex ministerio prestando subtrahit, extra redhibitionem esse. Sed et latus vel cruris brevis potest adesse impedimentum: ergo et hic erit redhibendus. Si quis natura gutturosus sit aut oculos eminentes habeat, sanus videtur. Item sciendum esse scaevam non esse morbosum vel vitiosum, praeterquam si inebellitate dextrae validius sinistra utitur: sed hunc non scaevam, sed morbosum esse. Is cui est oleum in sanis sit quiescitum est. Probatus aut non esse morbosus ex alicui odore veluti hircosum, strabonem: hoc enim ex illius oris accidere solet, si tamen ex corporis vitio id accidit. Veluti quod iecur, quod pulmo aut aliud quid similiter dolet, morbosus est.

The technical meaning of *redhibere* is to throw back bad merchandise on the vendor's hands. It appears likely, therefore, that the passage deals with the purchase of slaves, and the reasons which justify the buyer in refusing delivery. Possibly it may refer to fitness for military service, but Ulpian does not give the text of the edict of

the Curule Aediles on which he comments. In any case we think the word "*sanus*" simply means "sound" or fit for service, and has nothing to do with the absence of the mental degeneracy of cretinism.

We have seen many complaints as to the irreligious teaching that is forced on the children in France under the present régime. It is said that history is deliberately falsified in the interest of Republican freedom and fraternity. It appears that in some textbooks, at any rate, scientific medicine and its professors are almost as roughly handled as what are called clerical prejudices. Dr. Good, of La Motte-Saint-Heraye, in a letter addressed to the *Concours Medical*, gives some instructive examples from a textbook on domestic economy written by a Madame Sage for the use of girls in upper primary schools. He says his daughter, aged 15, who is preparing for her certificate examination, had called his attention to the following remarkable statements:

The terms employed by doctors are sometimes strange; these gentlemen love to use peculiar and high-sounding language. They seriously speak of a footbath as a *pediluvium*; of lard as *axungia*, etc. Modern medicine should leave aside these quackish ways, and speak in common language.

Again:

Doctors do all they can to make their prescriptions as difficult to read as possible; a doctor who should write legibly would lose his prestige. Truly these are ways belonging to another age.

How the gifted authoress herself can talk in language understood of the people is shown by her advice to girls from 15 to 16 years of age. They are taught that the "expulsion of waste liquid matters should be made as soon as the desire to do so is felt in order to preserve to the muscles of contraction all their sensibility!" No mention seems to be made of gaseous products, but if the like Republican freedom is to be applied to the expulsion of these, a new edition of the learned work of "M. Ortiunus," mentioned by Rabelais as having been found by Pantagruel in the Library of Saint Victor at Paris, and entitled, *Ars honeste petendi in societate*, will be required. How modern are Madame Sage's notions of medicine are one gathers from statements like the following:

Corns on the feet are cured by the application of house leek.

When one is stung by an insect, it is enough in order to cure away the inflammation to rub the wounded part with the leaf of a leek; if the wounded part becomes inflamed, and swells, one must forthwith apply the actual cautery, either red or at white heat, put a bandage on the limb above the sting . . . and have oneself taken to a pharmacist!

Madame Sage's explanation of the intensification of itching in scabies at night, "surprise by himself," as Count Smolensk would say. The girls are told it is because the acarus takes care of its health by knocking off work during the day! The lady's knowledge of the character of the parasite is perhaps derived from familiarity with the ways of the modern working man and his careful limitation of output. Among other things the victims of Madame Sage's instruction are expected to learn is an *olla podrida* of pathology, in which microbes, ferments, toxins, etc., are mixed like the ingredients in the witches' cauldron in *Macbeth*. In a chapter devoted to preventable diseases cerebro-spinal meningitis finds a place. The way to safeguard yourself against this formidable affection is as easy as lying: "One must wash one's hand after having touched the various eruptions seen on the skin of patients suffering from the disease." The young girls are also taught about plague, cholera, psittacosis, and *puerperal fever*. Well may Dr. Good complain of having to pay for such a book issued by official authority. If Madame Sage's work is to be taken as a type of the textbooks put into the hands of the future mothers of France, one may look forward to a generation which will hold the doctor in the same contempt as it is taught to hold the priest. As in Lavoisier's day, *La République n'a pas besoin de savants*.

Messrs. John Bale, Sons, and Danielsson, Limited, are publishing a translation of the second edition of Bandler and Roepke's work, entitled *Tuberculin in Diagnosis and Treatment*. A coloured plate of the local tests is given, and eighteen charts illustrating the tuberculin reaction and the course of tuberculin treatment.

NOVA ET VETERA.

THE STUDY OF MEDICINE IN THE BRITISH ISLES.

DR. NORMAN MOORE is a many-sided man. In his youth he had the good fortune to come under the influence of Charles Waterton, who fostered in him a love of natural history. Later he attracted the favourable attention of Charles Darwin, whom to know was in itself a liberal education in biological science. He has earned distinction as a pathologist and a physician, and he is now Senior Physician to St. Bartholomew's Hospital, a position which must be peculiarly congenial to him for sentimental as for other reasons, for he has given much attention to antiquarian investigations. His well-deserved reputation in this field marked him as especially fitted to succeed Dr. Payne as FitzPatrick Lecturer to the Royal College of Physicians of London. We had the privilege of publishing two of these lectures at the time of their delivery.¹ Dr. Moore recently issued his FitzPatrick Lectures in a handsomely printed and illustrated volume.² In it is embodied a vast amount of original research among the records of the past, digested into a form easily assimilable by any one who has a taste for such studies.

We have often dwelt on the importance even to the self-styled "practical man" of a knowledge of the history of his art. Such knowledge would, for one thing, save him from rediscovering truths known to Galen, devising instruments and appliances described by Celsus and Paul of Ægina, and inventing operations performed by Hippocrates. But more important than this is the knowledge of the evolution of medical science, which shows how the art of recognizing and treating disease has been perfected, the obstacles that have stood in the way of pioneers, and the manner in which they have been overcome. The history of medicine is indeed an object-lesson in the method of furthering knowledge, indicating at once the misleading tracks to be avoided, and the path to be followed in the search for truth.

Dr. Moore carries the history of the study of medicine in this country onwards from the period where it was left by Dr. Payne, who dealt with medicine in Anglo-Saxon times. He shows us how the Norman influence for a time overshadowed that of the native mediciner. He cites the names of several physicians, both lay and clerical, who flourished in London in the twelfth and thirteenth centuries, and gives a kind of medical register of those practising in the reign of Henry III, collected from the writings of Matthew Paris. He thinks it clear that considerable attainments were required before a man was styled *medicus* or *physicus*. If his study was, as Chaucer said of a somewhat later type, "but little on the Bible," it was almost entirely on medical books compiled from the writings of the ancients, and on commentaries on those books by teachers in the universities. A smattering of medicine seems to have been considered a part of the equipment of a learned man, whatever might be his line of intellectual activity. The clergy not only studied but practised the art of healing. King John was attended on his deathbed by the Abbot of Crokestone, who opened his body after death, not, however, with the object of discovering the nature of his disease, but that the corpse might be more decently carried. Richard Grosseteste, the scholarly Bishop of Lincoln, was famous for his medical lore. Among the contents of the libraries of monasteries and cathedrals there were always books on medicine. The library of St. Augustine's Abbey at Canterbury contained ten of the fifteen writers who formed the library of Chaucer's physician, and the catalogue of Christ Church in the same city includes over two hundred and eighty medical works.

Although hospitals in the Middle Ages were mainly institutions for the shelter of the poor and for the accommodation of pilgrims, provision was also made for the care of the sick. In proof of this we have the testimony of Jacobus de Vitry, who, writing of France in the thirteenth

century, speaks of the many associations of men and women who had withdrawn from the world and lived according to the rule of St. Augustine that they might minister to the poor and to the sick. Dr. Moore points out that the frequent contrast in the statutes of these bodies between *sani* and *infirmi* shows that they cared for the sick as well as for the poor. He says that several ancient records indicate that St. Bartholomew's Hospital in London was arranged on the same plan as the French hospitals. In proof of this he quotes a passage from the Close Rolls of Henry III dated March, 1341, which shows that the hospital was intended for the reception of all sick poor until they got well of their ailments, and pregnant women till they had recovered from the effects of their travail. A passage in the will of Gilbert Chaumpneys, dated 1375, and preserved in St. Paul's Cathedral, seems to indicate that "the hospital of St. Thomas the Martyr in Southwark, which now flourishes in Lambeth under the tutelage of St. Thomas the Apostle," provided shelter for the sick.

Dr. Moore takes the writings of John Mirfeld as illustrating the nature and extent of the studies of a physician of the fourteenth century. Mirfeld was a resident in the priory of St. Bartholomew in Smithfield, which was established in the reign of Henry I by Rahere, the founder of the famous hospital which he placed under the patronage of the same Apostle. Mirfeld learned medicine from a master attached to that hospital, of whose practice he gives several examples; he seems also to have attended medical lectures at Oxford. His chief work is entitled *Breviarium Medicinæ*: a full account of it, with reproductions of pages of the two extant manuscript copies, is given by Dr. Moore. The book was compiled in the monastery of St. Bartholomew, and is divided into fifteen parts—the first dealing with fevers; the second with affections of the whole body; the third with affections of the head, neck, and throat; the fourth with those of the chest; the fifth with those of the abdomen; the sixth with those of the pelvic organs; the seventh with those of the legs; while the eighth is devoted to boils; the ninth to wounds and bruises; the tenth to fractures and dislocations; the eleventh to joints; the twelfth to simple medicines; the thirteenth to compound medicines; the fourteenth to purgatives; and the fifteenth to the care of health.

We cannot follow Dr. Moore through his interesting summary of all these, but we may note one or two points by the way. One is his ingenious explanation of the frequent injunctions that certain prayers should be said in making up and in applying remedies. Mirfeld, he says, wrote in a religious house at a time when clocks were scarce and watches unknown, and the recital of prayers or psalms, in addition to its appropriateness to the place, was useful as a fairly accurate measure of time. In treating of injuries Mirfeld expresses regret that medicine and surgery should have become separated, because a man cannot be a good physician who knows nothing of surgery, while a surgeon ignorant of medicine cannot be a master of his art.

In another work, entitled *Florarium Medicinæ*, Mirfeld anticipates some of the advocates of bedroom exercises at the present day. He recommends prelates to have a rope, knotted at the end, hanging from the ceiling of their study, and to swing and raise themselves on it. Dr. Moore sums up Mirfeld's professional character as follows:

In universal humanity towards the sick, and in the wish to alleviate pain and to consider the feelings of the patient, those essential parts of our profession without which the highest skill can never be attained, he was equal to the physician of to-day. He was imperfectly trained in the art of observation, and was inclined to accept without examination the dicta of great teachers of medicine. . . . (He was) a physician of wide reading, with a mind full of all that was known in his time, a laborious and high-minded man, anxious to do all in his power for his patients and to instruct others how to relieve suffering.

As for Mirfeld's medical knowledge, we are told that in medicine he was capable of recognizing the general condition of fever and of distinguishing clearly a few species of disease in which fever occurs—the plague, for example, and tertian ague. He could distinguish to some extent the manifestations of diseases which we call pleurisy and bronchitis. He knew that dysenteric symptoms were not all due to the same cause. He had names for several distinct skin diseases. He had some knowledge of enlarge

¹ See BRITISH MEDICAL JOURNAL, vol. ii, 1905, pp. 1332 and 1385, and vol. ii, 1906, p. 1404.

² *The History of the Study of Medicine in the British Isles*. The FitzPatrick Lectures for 1905-6. Delivered before the Royal College of Physicians of London. By Norman Moore, M.D. Oxford: At the Clarendon Press. (Pp. 202.)

ment of the lymphatics. He was as well acquainted with epilepsy as most physicians were up to the days of Trounseau. He had observed hemiplegia clinically. He could recognize gout. He knew something of dislocations and fractures. He understood the value of exercise and of rational diet for the preservation of health, and was certain of the ill effects of intemperance. He mentions "sour milk" among the preservatives against pestilential diseases. He was acquainted with some of the effects of opium, of turpentine, of sulphur, and of some other drugs. He understood the necessity of attention to the details of nursing, and was aware of the importance of remembering the effect of the mind on the body. From this it is evident that John Mirfield may fairly be taken as an example of the best type of English physician of the fourteenth century.

Next we come to Thomas Linacre, the founder and first President of the London College of Physicians, who played a considerable part in reviving a knowledge of Greek, and thus helped to bring about the Renaissance. He was, perhaps, more humanist than physician, but he did valuable service to medicine by translating directly from the original Greek works of Galen and other old writers, whose teaching, in the course of translation from Arabic versions into Latin, had become changed as much as Ménage's *Alfama* in its migrations from *equus*. In this way Linacre, though he did not shake himself free from the shackles of authority, helped others to do so by showing the method of observation practised by Hippocrates and the Greeks of the best periods of Hellenic intellectual development.

The translations of Linacre and John Caius opened the way to the study of medicine by the only method that can lead to the discovery of truth. At the beginning of the seventeenth century men began to turn again to Nature, and to look at her not through the spectacles of antiquity, but with their own eyes. The work of Harvey, Glisson, and others was the outcome of the new method; but Hippocrates and Galen continued to hold the minds of men in bondage till long after their day, and even the ridicule of Molière, one of the greatest reformers of medicine, did not kill the blind faith in the ancients which had stood in the way of medical progress for so many centuries.

As an illustration of the professional training of physicians in the seventeenth century, Dr. Moore gives an account of the education of Edward Browne, eldest son of the author of the *Religio Medici*. Browne was educated at Cambridge, where he had the advantage of being under the eye of Glisson. At Cambridge, and afterwards in London, he witnessed a few dissections of the human subject, and he dissected some animals with his own hand. He prosecuted his studies at Paris, Montpellier, and at Padua, where he worked mainly at anatomy. After travelling through many other countries he returned to London, where he became President of the College of Physicians. Summing up Browne's medical studies, Dr. Moore says:

He could write and speak Latin. After taking his M.B. degree he continued his anatomical studies, and worked practically at zoology, botany, chemistry, and pharmacology, and at medicine, parts of surgery, and morbid anatomy. He learned French and Italian, and could speak a little Greek. He used every opportunity of conversing with learned men, such as Swammerdam the zoologist, Glauber the chemist, and Lambechius the bibliographer. He had read widely. . . . Besides his university examination, which was a kind of disputation, Edward Browne was no doubt examined in this college for admission as a candidate in 1658, after he had been engaged in medical studies for about ten years. He took his M.D. degree at Oxford in 1667, when he had studied nine years, and in his own university in 1670. This degree was probably given on proof of study in the faculty. The studies were less regulated, and the practical work less precise than those of a physician in our time. There were as yet no organized schools of medicine in England, and except in this college there was no thorough examination of candidates.

In regard to clinical observation, Dr. Moore says that Caius was the first in England who described a disease from Nature. In his *Liber de Ephenera Britannica*, the preface of which is dated 1555, he gave an account of the sweating sickness. Harvey made notes of some of his cases, but the first writer in this country whose works bear evidence of close clinical observation was Sir Theodore Turquet de Mayerne, a Swiss who settled in London in 1611, and was appointed first physician to James I.

Mayerne left twenty-three volumes of notes of cases, which are among the Sloane Manuscripts in the British Museum. A selection from his notes was published in 1700 by Dr. Joseph Browne. Among Mayerne's notes is an account of the fatal illness of Henry Prince of Wales, who died in 1612, from which it is easy to gather that the illness which cut short a life full of promise was typhoid fever. "So excellent," says Dr. Moore, "are the notes of Mayerne, that it is fair to say that nothing but the pathology of his time prevented him from being the first recognizer of enteric fever." Mayerne also left an account of the health of James himself, which is not only interesting as a clinical record, but important as a historical document. We learn therefrom that the "Solomon of the age," as he was called by his flatterers, scoffed at medicine as made up of conjectures, and useless because uncertain, and had a mean opinion of doctors. In some points the "wisest fool in Europe," as he was described by his tutor George Buchanan, was, perhaps, more enlightened than his learned leeches. Thus he would never allow himself to be bled; it is possible, however, that this may have been due as much to his well-known horror of cold steel as to any reasoned objection. He disliked purging and for a long time would not allow the administration of an enema. In this he showed a stronger will than Louis XIV., who, as shown by the *Journal de la Santé du Roi*, kept by his physicians Valot, Daquin, and Faquin, was ruthlessly purged, drugged, and bled, throughout his life. James's low opinion of physicians may have been founded, like that of Molière, on the fact that he suffered from many infirmities from which probably he got little relief from medical art. He may, perhaps, have taken a pleasure in teasing his physician as Napoleon did with Corvisart. Mayerne has also left records of the health of Anne of Denmark and Queen Henrietta Maria, who evidently had great confidence in his skill.

Another clinician of note whom we can claim wholly as our own was Francis Glisson, author of the famous treatise on rickets which appeared in 1650. Then came Sydenham, whose name is a household word in medicine, and Morton, the author of *Phthisiologia*. In the eighteenth century the most famous names in English medicine were those of Radcliffe, who, though himself no scholar, showed his appreciation of learning by his munificent benefactions to Oxford; Garth, author of *The Dispensary*; John Arbuthnot, deemed by many the greatest, as he certainly was the most learned, of the wits of Queen Anne; Freind, Hans Sloane, Mead, Floyer, and Heberden, one of Samuel Johnson's physicians, whose *Commentarii de Morborum Historia* is the last important medical treatise published in this country in Latin.

Dr. Moore gives a brief but interesting account of medicine in Ireland and Scotland. He gives sketches, each with its characteristic touch, of Sir Thomas Molyneux, whom he calls the first great physician in Ireland; of Dr. John Stearne, one of the original Fellows of the Irish College of Physicians; and of Dr. Richard Helsham, Regius Professor of Physic in the University of Dublin, a friend of Swift, and a correspondent of Arbuthnot. Dr. Moore gives an account of the hereditary physicians of Ireland and of their manuscript literature, to the study of which he has brought the learning of a physician and the special knowledge of a Celtic scholar. In Scotland there were also hereditary physicians. The systematic teaching of medicine began at the University of Edinburgh in the early part of the eighteenth century, and its introduction was largely due to the efforts of Alexander Monro who had studied under Boerhaave. During the eighteenth century the influence of Boerhaave was dominant in Scotland. His teaching, as expounded by his disciples, laid the fame of the University of Edinburgh as a school of clinical medicine. Thus, while the study of clinical medicine among English physicians had its origin in the new learning of the Renaissance, in Scotland it was primarily imported from Holland.

This necessarily brief summary of Dr. Moore's book will, we hope, induce readers interested in medical history to study it for themselves. Only in that way will they be able to form an adequate conception of the recondite learning which forms its framework, and of the literary skill with which the dry bones of antiquarian lore are made to live in its pages. He has undone the work of

Time, which, as Sir Thomas Browne says, antiquates antiquities and hath an art to make dust of all things. The book is a monument of which not only the author but the college of which he is a prominent member may well be proud.

MALARIA IN ITALY.

THERE appeared recently in the *Times* an interesting letter by Professor Osler in which he justly described what has been effected in Italy towards the mitigation of the scourge of malaria as a lesson in practical hygiene. The Italian Society for the Study of Malaria was founded ten years ago, and the results of its work in that period are summed up in the following paragraphs from its decennial report just issued, which are quoted by Professor Osler:

The society has improved the prophylaxis of malaria, and has introduced into practice the new mechanical measures based on the defence of the habitation and the individual from the bites of mosquitos. This being a relatively expensive procedure, the society has occupied itself chiefly with the improvement of the antiparasitic prophylaxis—the administration of quinine.

For this purpose it has promoted and defended legislation for the gratuitous distribution of quinine to the poor and to all workers in malarial localities.

In order to render possible the prophylaxis and to prolong the treatment, it has prepared the quinine in its most agreeable forms, namely, that of comfits and chocolates, the latter containing a tamale of quinine, which has little taste, and is better tolerated by children.

The results have been that since 1902, when the law on State quinine was promulgated, while the consumption of quinine has been yearly increasing, the mortality from malaria has diminished from about 16,000 to about 4,000 yearly; and in the army, Custom House offices, and in some communes where the new laws have been better applied, the morbidity from malaria has greatly diminished.

By these measures, says Professor Osler, and "by means of the agricultural and agrarian transformation of the land and colonization, rather than by the destruction of mosquitos (a thing impossible to be done by us on a large scale)," Italy may be freed from the scourge. He goes on to give a sketch of the history of discovery in respect to malaria, in which he speaks of the "old suggestion" of Lancisi that the disease is transmitted by the mosquito. Lancisi did, indeed, in his book, *De morbis Paludum effluviis*, published in 1717, ask whether "among the living effluvia of marshes there are not some more minute than others which may find their way into the blood vessels and there multiply injuriously"; and he recommended that the blood drawn from persons suffering from ague should be examined with the microscope and the insects found therein (*si qua sint*) closely scrutinized. But the suggestion is much older than the eighteenth century. Varro, writing in the first century before Christ in his book on agriculture, in speaking of the choice of a building site, says that the neighbourhood of marshes is to be avoided, because there grow therein "certain minute animals, invisible to the eye, which gain access to the body through the mouth and nose." Columella, who lived in the first century after Christ, giving counsel on the same subject, says that marshes breed "animals armed with noxious stings, which fly at us in thickest swarms." Professor Osler goes on to speak of the Panama Canal zone, which he says is an astounding witness to the success of modern sanitary measures against malaria. The monthly reports of Colonel Gorgas give a death-rate (among nearly 50,000 work-people) lower than that of any large city; it has been as low as 12 per 1,000. The final establishment of the truth that malaria is transmitted by mosquitos is a notable triumph of the experimental method.

AT a meeting held at the Cultusministerium in Berlin on February 18th, under the presidency of Cabinet Councillor Dr. von Behr-Pinnow, which was attended by representatives of the district centre and the international bureau for the protection of infancy, it was decided to form a national committee for the care of nurslings. The committee is intended to be a central council for the consideration of the measures adopted independently by individual corporations. A German association for the care of nurslings has been founded and will hold its first general meeting in June of the present year.

Medical News.

A COMMITTEE for the investigation of hospital abuse is now in session in the Central Offices of the Assistance Publique, in Paris.

MR. HENRY PHIPPS, of New York, has given more than £200,000 for the purposes of the psychiatric clinic at Johns Hopkins University, Baltimore.

MR. EDGAR TAUNTON, M.B., F.R.C.S., D.P.H., Deputy Medical Officer of Health of Bethnal Green, has been called to the bar at the Inner Temple.

AN anonymous benefactor has recently given, through Dr. John H. Musser, £40,000 to the University of Pennsylvania for the establishment of a department of medical research.

THE Harveian Lecture of the Harveian Society of London will be delivered by Mr. A. J. Pepper next Thursday. It will deal with thirty years' practical experience and practice.

AT a meeting of the Medical Society of London next Monday evening there will be a discussion on the relation of medical men and coroners. It is to be introduced by Sir Victor Horsley.

THE Royal Mail Steam Packet Company has published an illustrated booklet giving particulars of the Easter pleasure cruises that can be made by its steamers to Spain, Portugal, Gibraltar, Morocco, Canary Islands, and Madeira.

THE epidemic of measles still continues in Birmingham, and twenty-three schools have been closed on account of it. In the week ending March 6th 42 deaths occurred from measles, as compared with 43 in the preceding week. No doubt the cold, snowy weather had a good deal to do with the large number of deaths.

A DINNER of a somewhat remarkable character was given to Dr. John B. Deaver of Philadelphia on February 14th. The peculiarity of the dinner is that it was given by more than 150 doctors who had been successfully operated on for appendicitis. A loving cup was presented to Dr. Deaver on the occasion.

IT is announced that by the beginning of the next school year in September the London Education Committee hopes to have established children's care committees for all elementary schools in London, in order to arrange for their apprenticeship or for finding them good permanent employment where there is a prospect of advance.

ARRANGEMENTS have been made for lectures on tropical subjects to be delivered to nurses at the London School of Tropical Medicine, Royal Albert Dock, E. Any qualified nurse may attend the course, whether she intends proceeding abroad or not. The first course will commence October 15th, 1909, and will be taken by Mr. Cantlie, Dr. Daniels, Dr. Andrew Duncan, Dr. R. T. Leiper, Dr. J. M. H. MacLeod, and Dr. F. M. Sandwith.

THE seventh meeting of the Departmental Committee appointed by the Lord President of the Council to consider the working of the Midwives Act was held at the Privy Council Office on March 17th. The following witnesses attended and gave evidence: Dr. E. W. Hope, Medical Officer of Health, Liverpool; Mr. G. H. Fosbrooke, Medical Officer of Health, Worcestershire; Mr. J. R. Kaye, Medical Officer of Health, West Riding, Yorkshire.

THE sixth National Periodical (French) Congress of Gynaecology and Obstetrics and Paediatrics will be held at Toulouse from September 22nd to 27th, 1910, under the presidency of Professor Kirmisson, who will also preside over the Section of Paediatrics. Professor Hartmann will be president of the Section of Gynaecology, and Professor Rouvier, of Algiers, of that of Obstetrics. The General Secretary of the Congress is Dr. Audoubert, Professor of Clinical Obstetrics at Toulouse.

THE German Congress of Internal Medicine will hold its twenty-sixth annual meeting this year at Wiesbaden from April 19th to the 22nd. Among the communications promised are the following: Dr. Magnus-Levy, the metabolism of mineral material in clinical pathology; Dr. Head, sensibility and the testing of sensibility; the same subject will be dealt with by Professor Schoenborn, of Heidelberg; Dr. E. Müller, of Breslau, antiferment of the

tryptic pancreatic and leucocytic ferment: and Dr. Plömes, of Dresden, on the relation between disturbances and diseases of the circulatory apparatus, with special reference to nervous disorders of the heart.

On January 1st, 1909, the number of medical practitioners in Norway was found to be 1,231, of which number no less than 38 are women. This is probably the largest percentage (3 per cent.) of medical women in any country. As the whole of Norway has only about 2½ million inhabitants, and the two largest towns, Christiania and Bergen respectively, about 230,000 and 70,000 only, it is difficult to see how so many medical women can find a living.

THE school of massage attached to the National Hospital for the Paralyzed and Epileptic, Bloomsbury, has proved so successful that it has now been decided to extend the teaching to male pupils. Hitherto only the male nurses of the institution have been taught, but, commencing with Easter Term, outside men students will be allowed to join the classes. The lectures on theory will continue to be in the hands of Mrs. Hawkins, and Mr. J. Richert has been appointed to give practical demonstrations to the men's class. The qualification for membership of the National Hospital Male Nurses' Association will still be confined to those who have obtained the hospital certificate, and the public can therefore, through the association, obtain nurses who are also masseurs.

THE annual meeting of the General Council of King Edward's Hospital Fund for London took place at Marlborough House on March 10th, the Prince of Wales being in the chair. The proceedings were of a formal character, consisting mainly in the presentation and adoption of the report and accounts for the year 1908. The leading events recorded in the report have all been already noticed in these columns. The total receipts for the year were £345,792 15s., and the total distributed £140,000. It is clear that the financial management of this Fund must be of the most admirable kind, for the total cost of administration up to date has been less than 1½ per cent. on the sums received, while when the capital invested in non-trust stock was valued last July it was found to be worth £100,000 more than the sum originally paid.

In our issue of February 27th, attention was drawn to the section of the Minority Report of the Royal Poor Law Commission which dealt with the infant mortality in Poor Law institutions. It was shown that the mortality among infants born in workhouses was extremely high. In the next issue some statistics of the Charité State Hospital in Berlin were quoted, and it was stated that 2,543 children had been born in that hospital in the year 1906-7. We have since ascertained that the number of infants who died in the Charité Hospital during the year under consideration was 152, and that there were 184 stillbirths. The ages of the infants dying in the Charité cannot be stated, so that the figures are not directly comparable with those for the English workhouses, but they certainly appear to indicate that the Berlin mortality is much lower. We are glad to observe that Mr. Burns stated that the statistics quoted in the Minority Report of the Royal Commission are being carefully examined by the Local Government Board.

THE 136th anniversary dinner of the Medical Society of London was held at the Hôtel Métropole on March 10th, with Mr. C. B. Lockwood, the President, in the chair. Covers were laid for over 150 guests, and the arrangements for the comfort of all concerned were admirably carried out by Mr. Bethell, the Librarian of the Society, under the direction of the Honorary Secretaries, Mr. T. H. Kellock and Dr. Leonard Guthrie. The Chairman, in proposing the toast of "The Medical Society of London," said that, though the society possessed admirable premises in Chandos Street, there was not quite sufficient room for its requirements: but the time was not far off when that defect could be remedied. In addition to its library, the society possessed valuable pictures and property. The financial position was so sound that, if it were necessary at once to liquidate, it could pay all its creditors at least eight times over. The toast of "The Guests and Kindred Societies" was proposed by Mr. J. Langton and replied to by Sir William S. Church and by Sir Alfred Keogh, Director-General A.M.S. Dr. J. K. Fowler submitted the toast of the Chairman, who, in concluding his reply, gave the toast of the Honorary Secretaries. After these gentlemen had replied, the company separated.

Two fasciculi of the *Bulletin de la Société Médicale de l'Île Maurice* which have reached our hands contain an

account of the proceedings of the principal medical society in this French-speaking British dependency during the latter half of the twenty-sixth year of its existence, ending December, 1908. Among the twenty or more papers contained are several of interest, and more particularly two dealing with the method of treating abscesses, originally described by Dr. Phillips, of Bradford, in the *BRITISH MEDICAL JOURNAL* on May 16th, 1908. The author of the longer of the two papers, Dr. F. Rouget, considers this treatment constitutes a great advance in surgery, and suggests that it be known as "tight packing." The second paper is equally favourable to it. Dr. Felix records some cases of persistent hiccup in old people successfully treated by subcutaneous injections of quinine, and suggests that in them malarial infection may betray itself merely by a very slight rise in temperature and gastric troubles accompanied by persistent hiccup. Also contained in the two volumes are some four or five papers dealing with the pathology and treatment of malarial fever accompanied by haemoglobinuria, the so-called blackwater fever.

THE second International Congress on Industrial Accidents will be held at Rome from May 23rd to 27th. The official programme of discussions includes the following subjects: (1) The organization of a medical and surgical service for the treatment and observation of the consequences of industrial accidents. (2) The organization of a medico-legal service to deal with industrial accidents and to establish rules for the guidance of doctors who have to examine such cases. (3) Determination and prognosis of the neurotic element in industrial accidents. Under this head is placed the estimation of working capacity before and after the accident. This includes: (a) Methods of examination for that purpose; (b) the importance of the condition before the accident (pre-disposition, previous illnesses, etc.); (c) anthropological and sociological data (race, age, sex, criminality, etc.); (d) the influence of circumstances connected with the accident (legal process, medical examinations, etc.); the influence of forms of compensation on the development of post-traumatic nervous affections. (6) Statistical data from the medical point of view as to the consequences of the application of the compensation law. (7) Functional adaptation of injured joints. Communications relative to the congress should be addressed to the General Secretary, via Borgognona 38, Rome. Papers, which may be written in Italian, French, German, or English, should be in the hands of the general secretary on or before April 1st. Reports introductory to discussions should not exceed sixteen papers should not exceed eight printed pages in length. In each case they should be accompanied by a summary of not more than thirty lines in length.

ON several occasions during the last few years allusion has been made in these columns to the lack of proper provision in the mortuaries of the metropolis for the preservation of bodies awaiting identification and *post-mortem* examination, and we showed as recently as last January that there was a strong case for the immediate filling of this gap in medico-legal machinery. It is with satisfaction, therefore, that we note that the Corporation of the City of London, whose coroner, Dr. Waldo, has been particularly active in urging this reform, has provided a Rechter apparatus, an appliance which works with formaldehyde gas, and affords, in the opinion of many pathologists, a better means of preserving bodies than a freezing machine. When drawing the attention of the jury to this new provision at an inquest on March 12th, Dr. Waldo mentioned that the net outcome of sundry recommendations on the subject which he had forwarded to the London County Council from juries in the other district of which he is coroner, namely, Southwark, was a letter stating that the Council did not at present see its way to provide any means of preserving bodies. It is a somewhat curious result, for the desire for an appliance to preserve bodies in a condition in which they may be identified or examined is no mere medical or legal fad. The value of refrigerators in connexion with public mortuaries has been recognized by the legislature, for a section intended to secure the provision of such aids to criminal investigation was introduced into the Public Health Act (London) of 1891. The cost of appliances which fulfil the purpose in question is not great, and as compared with their practical value is a mere trifle. It is to be hoped, therefore, that the London County Council will reconsider the question. In these days any important municipal authority which neglects to make at one or more of its mortuaries such a simple provision as a refrigerator or equivalent apparatus is guilty of an anachronism.

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RIGHT THINKING.

IN one of Goethe's conversations with Eckermann the importance of right thinking was discussed, and the great poet-naturalist somewhat startled his interlocutor by exclaiming, "The worst of it is, it is 'so hard to think!'" This is the common experience of pious persons who practise what is called "meditation"; they too often find, when they try to fix the mind on a given subject, that there seems to be a disturbing influence within the brain which makes the thought wander from the point proposed as its aim. Few, indeed, are those who, like Socrates, can stand forgetful of outward things, absorbed in the pursuit of a train of thought for many hours. Some men think quickly, while the mind of others works slowly. But it is certain that unless one can, in Newton's phrase, "intend" the whole power of the mind to the solution of a problem, the result will be confusion and error. Nothing has more retarded the progress of medical science than loose thinking. Even in men of wide reputation, we have often been struck by the looseness of thought, the carelessness in detail, and the apparent inability to appreciate the nature of proof displayed in matters of ordinary business. This inaccuracy of mind manifested in a sphere where its effects are plainly visible inevitably suggests some doubt as to the soundness of work for the correct estimation of which special knowledge is required. It must, we think, be confessed that medical research suffers from the lack of a proper discipline in the use of the reasoning power in many of those by whom it is pursued. Hence the readiness to assume what has to be proved, the wrong interpretation of facts, and the misuse of statistics which lead to erroneous generalizations and the erection of hypotheses on foundations too flimsy to support them, or even purely imaginary. The "wish 'to believe'" is sometimes as strong a factor in "scientific" investigation as it is in the field of theology.

The history of medicine is to a large extent a record of doctrines crumbling away at the touch of new truth, and of facts laboriously piled up into formulas and pulled down by later knowledge, like the blocks in a child's toy. Many of the greatest advances in medicine have been due to accident, and a harvest has been reaped from seed which the sower thought worthless, or intended for a different purpose. This is why it is so undesirable that research should be tied down to the search for results of immediate practical usefulness.

The study of medical science is in itself of extreme difficulty for the reasons embodied by Hippocrates in his famous aphorism. The uncertainty and elusiveness of the facts makes mistiness of thought concerning them inevitable. All the more, therefore, should we strive to attain at the correct thinking which is our only sure protection from the *ignes fatui* of fallacy that are everywhere about us luring us into the quagmire of error. In his Address in Medicine delivered at Exeter in 1907, Dr. Hale White dwelt strongly on the

all-importance of accuracy of thought in medicine. More recently, at a meeting of the Medico-Legal Society, Mr. Justice Walton delivered an address entitled "A Plea for Correct Thinking." Naturally the judge dealt with the subject from a somewhat different standpoint than that of the physician, but this makes his deliverance all the more valuable. Among other things he said that not long before, during a discussion upon the subjects to be included in a course of studies, when it was suggested that logic should be one of them, he heard a very eminent person ask why young people should be taught an elaborate process for doing that which every man endowed with the use of reason does for himself without thinking. In regard to this point, Mr. Justice Walton asks if the habit of correct thought is so universal as is implied by such a question, "Are we 'always quite sure that our instructors mean exactly 'what they say, or know exactly what they mean?'" He went on to say that of the work that has been done in the past, and still more of the work that is being done at the present time by the observers of Nature, as it discloses itself to them in the heavens above and the earth below, of their patience, their accuracy, their skill, their insight, he could only speak with the humblest respect and admiration. "It 'is only,'" he significantly added, "if and when the 'student of Nature, of the things, which can be 'observed, ventures beyond the ultimate limits of the 'observation and analysis of facts into inferences as 'to that which cannot be dissected and cannot be 'analysed and cannot be seen, weighed, or felt, that 'the lawyer-like instinct begins to prompt inquiries 'which in certain quarters are not unlikely to be 'resented as pedantic and out of date." He urged that he was to some extent justified in suggesting that the lawyer's experience in the practice of his profession afforded a discipline which might be very valuable in dealing with the larger issues involved in the regulation of human society and in the administration of the affairs of the State. We may add that, in our opinion, such training has a very decided value in making the careful sifting of facts and the weighing of evidence for and against a scientific generalization an automatic part of the intellectual process. The lawyer's special point of view arises from the habit, said Mr. Justice Walton, in the first place, of distinguishing facts from theory, of ascertaining facts exactly, and, by a careful examination of the best evidence, of considering the relation between the facts so ascertained and the theory or general rule.

All this is still more necessary in the search for truth in a sphere where the issues are more complicated, the facts more doubtful, and the evidence more difficult to appreciate than is the case in the matters dealt with in a law court. For this reason we have always opposed any narrowing of the preparatory training which should be required of those who wish to enter the medical profession. We need not put over the portals that give admission to it the intimation placed over the door of his school by the old philosopher, that no one but geometricians should enter. But we should insist less on a knowledge of facts such as was considered essential by Mr. Gradgrind, and more on proof of the possession of the power to reason upon facts. Logic is simply the analysis of the manner in which the mind travels towards right conclusions, as grammar is the analysis of speech; it cannot teach a man to reason, but it may show him how to avoid error, as grammar may save him from solecism. Even the despised scholastics might give men who think of scientific research, as

Dogberry did of reading and writing, that it comes by Nature, some useful hints in regard to clearness of definition of terms, accurate statement of the question and rigour of inference from premisses. All these things are too often unfortunately wanting in medical discussions and essays.

UNEMPLOYMENT.

THE subject of unemployment has been so prominently before the public during the last few years, and has come to assume so largely a political rather than an economic aspect, that the essay on unemployment¹ published recently by Mr. Beveridge is a refreshing return to the cooler atmosphere of facts and figures. One conclusion to be drawn from it is that unemployment has been greatly exaggerated and that it does not necessarily mean bad trade, nor could it under existing conditions be removed by making trade better. Further, most of the remedies which take the form of supplying additional employment of a temporary kind have failed to effect their object, and are not likely to succeed, as they do not touch the causes of the condition they seek to remedy, or even assist the class of men for whose benefit they were designed. The figures furnished by the Board of Trade week by week to show the percentage of unemployment are obtained from the books of a small number of trades unions which are in the habit of paying subsistence money to their members when out of work, and are therefore in a position to supply these statistics, but they represent only a small proportion of trades unions, and a still smaller proportion of the total number of labourers.

Mr. Beveridge thinks that the average of 5 per cent. is too high as an estimate of total unemployment, although the fluctuations of the figures from year to year give some idea of the general state of trade. It is somewhat remarkable that unemployment as shown by the trades unions' figures is present during the years when trade is at its best—that is, there is always a fringe of unemployment which must be attributed to personal causes, the less efficient or less industrious workmen most easily losing their employment. Investigation of the books of the trades unions shows that the same men come on the fund year after year. The most important cause of unemployment is the large amount of casual unorganized labour, which leads to the existence of an unnecessarily large reserve of workmen. Where men are employed from day to day every man thinks he has a chance of a job, and consequently an unduly large number of men apply.

Much benefit resulted from the better organization of labour after the great London dock strike, so that whereas before 1891-2 75 per cent. of the dock labourers were casually employed, the latest figures show that 80 per cent. are on the permanent staff, and only 20 per cent. casual. But in a great many trades, especially where there are numerous small employers, as in the building trade, there is a vast number of casual labourers, probably twice as many as can be regularly employed, who are consequently as a class working half-time, never earn full wages, and are always ready to drop into a state of destitution when trade gets slack or other unfavourable conditions arise. Mr. Beveridge's remedy is the creation of State or Municipal Labour Exchanges, worked with the co-operation of employers, who should be willing

to diminish the total number of men employed in their business as casual labourers. The effect of this would be to give certain men more steady employment, but it would diminish the number of men employed, and for the men thus thrown out work would have to be found elsewhere. It is contended that if the change were made at a time of good trade this would not create a serious difficulty.

It is reassuring to be told that investigation of the books of trades unions does not indicate that recent legislation has led to any reduction of the age to which workmen are able to continue their employment; the superannuation tables, in fact, show that the age of retirement is rising. It is not proved that the unemployed comprise a larger proportion of the unskilled workers than of the skilled, but probably they do, since the latter may sink from their position to that of the unskilled, from loss of character or other causes. There is a legitimate demand for unskilled labour, and, although the number of persons who are now seeking such work may be too large, it is not certain that the number of really efficient so-called unskilled labourers who must possess certain aptitudes to be of use is greatly in excess of the demand. At the same time, efforts should be made to direct boys and girls into channels which will lead up to skilled occupations rather than to those "blind alleys" which lead nowhere, and leave those who have followed them when they reach adult life stranded and compelled to join the army of unskilled workers. We may note here that this has in the past been the case with the army, and that it is a reproach which it is within the power of the military authorities to remove or diminish; but the accession of time-expired men is probably one reason why the tables show that the number of the unskilled rises greatly between the ages of 30 and 40.

While the existence of unemployables must be admitted, their numbers may easily be exaggerated, and Mr. Beveridge's remedy is "to abolish the social conditions which pander to idleness and irresponsibility." With regard to recent legislation in favour of the unemployed, the Act which is generally associated with the name of Mr. Long was designed to assist men temporarily out of work owing to dislocation of trade; its underlying idea was to supply them with a bridge which would carry them over the gulf lying between one period of good trade and another. The experience of the Distress Committees in London and the provinces shows the rarity of such persons among those who apply for help, and the impossibility of limiting assistance as directed by the Act to persons who are not in a chronic condition of destitution. Further, it has been found that relief work is not educational; it does not stimulate the industrial habit, the same men being found year after year applying to the committees for help. The relief works have failed to fulfil the laudable object of restoring those employed on them to the ranks of normal industry. Mr. Beveridge believes that such works are altogether in the wrong direction, and that no alteration in the mode of carrying them on can remove these essential defects; they generally imply, he thinks, something that is degrading to the name of work, and disregard the principles of relief.

In addition to recommending the establishment of proper Labour Exchanges and the decasualization of unskilled labour, Mr. Beveridge points to what is done by trades unions themselves to solve the problem of unemployment within their own organizations as showing that the principle of insurance can be suc-

¹ *Unemployment: A Problem of Industry.* By W. H. Beveridge, Stowell Civil Law Fellow, University College, Oxford. London: Longmans, Green and Co., 1903.

cessfully applied. This is admitted by the Imperial Statistical Bureau in Germany, which has considered the question, but the real difficulty is to determine the test of unemployment which should entitle the men to benefit. The value of the test used by the trades unions depends very much upon the local knowledge of the branches with regard to individuals, and, in the opinion of Mr. Beveridge, the practicability of insurance hinges wholly upon whether Labour Exchanges can be worked so as to embrace the whole of the working population concerned. He gives an interesting account of what has been done in Germany towards the perfecting of the system of Labour Exchanges. Much may be learnt by a study of German experience, as different methods have been followed in different parts of the country, and it is very striking that, whereas when they were started ten years ago, trades unionists were hostile, they are now almost entirely in their favour, and the extent to which they are being used, both by employers and employed, is growing rapidly every year.

The second part of the Minority Report of the Royal Commission on the Poor Laws¹ is mainly devoted to the discussion of the organization of the labour market, and its conclusions, though expressed in more flowery language, are not dissimilar from those at which Mr. Beveridge arrives. Both regard the unorganized state of the labour market as the principal matter to which the attention of reformers should be directed, and both urge the decasualization of labour and the organization of proper Labour Exchanges. In the historical account given in the Minority Report to the efforts of the Poor Law authorities to deal with unemployment the view is taken that in 1834 the Commissioners had their attention chiefly directed to unemployment in agricultural districts, and that their recommendations were directed to cure the evils then existing amongst farm labourers. The measures taken were successful, though to what extent they drove the excess of labour from the country to towns cannot be determined, but when it was attempted to apply the same methods to the unemployed class in the towns their inadequacy was at once apparent. From that time to the present local authorities have been complaining to the Local Government Board of their inability to deal with the numbers of destitute but able-bodied persons applying for relief without violating the Board's rules. Test houses, stone-yards, and the like, and, in a few places, special workhouses for their detention, have been tried without any real success.

One of the main recommendations of the Poor Law Commissioners in 1834, which was that the different types of persons requiring relief should be classified and cared for in separate institutions, has not been generally carried out. The Royal Commissioners are unanimous in recognizing this and in advising that classification is essential. It is comparatively easy to suggest means of dealing with the sick, the infirm, the aged, and the defective; it is more difficult to devise an effectual method of dealing with the unemployed and the unemployable. The Minority Report, as we have already stated, recommends the constitution of a Ministry of Labour, to have charge of labour exchanges, industrial insurance, the maintenance

and training of the inefficient, industrial regulation, emigration, and statistics. It appeals to the success that has attended the institution of the Mercantile Marine Offices for Seamen in support of the proposal of compulsory Labour Exchanges for casual labour. It suggests compulsory registration for men found houseless and requiring public assistance, and that inefficient workmen who are unable from want of training to earn their own living should be afforded residence and maintenance on condition that they submit to the necessary physical and mental training, and that penal colonies with power of detention and discipline should be organized for those who will not work. Public works at the public expense are approved provided they are so arranged as to afford additional employment in times when trade is slack; and it is maintained that, by spreading a programme of work over ten years, and borrowing money if necessary to carry out work during bad times, much might be done to diminish the effect of the fluctuations in trade. Such work, it is advised, should not be done by the "unemployed," but by contractors employing men in the ordinary way, who will do a fair day's work for a fair day's pay, and be dismissed if not efficient.

Most people will approve of the recommendations that all young persons should be compelled to attend trade schools and that the half-timer system should be abolished; and many will agree that all destitute mothers of families should have adequate relief—that is to say, complete support—on the understanding that they do no work except looking after their children. As we have previously pointed out, the differences between the majority and the minority do not justify the publication of separate reports. So much is admittedly desirable and is so urgent to be done upon which majority and minority agree that it is to be hoped these minor divergencies will not stand in the way of necessary reform. The reform should not be made a party question. Mr. Chamberlain, Mr. Walter Long, and Mr. Gerald Balfour have in the past shown their desire to grapple with the great and serious difficulties which have grown up in our great towns, and if Mr. John Burns will introduce a bill to found an adequate system of Labour Exchanges, we trust that its principle will be supported by the leaders of both parties in Parliament.

A MEDICAL TOUR.

MAJOR-GENERAL VESEY DAWSON, C.V.O., arranged a tour for the medical officers of the Second London Division Territorial Force extending over the last week-end. All the medical officers in the Division were invited to attend, and seventeen availed themselves of the opportunity of instruction afforded; twenty-five had signified their intention of being present, but owing to the large amount of illness now prevalent, eight had to withdraw. This difficulty is always apt to arise with medical men, and the administrative medical officer had fixed on this season because in ordinary years it is as good a time as any for a man to leave his practice for a couple of days. Among those actually present there were the administrative medical officer, Colonel Andrew Clark, V.D., as well as representatives of general hospitals, field ambulances, battalions, and the sanitary service, and the instruction was so arranged that each was employed in appropriate duty. The military aspect of the tour was directed by Colonel Maude, C.M.G., the general staff officer, and in order to

¹ Report of the Royal Commission on the Poor Laws and Relief of Distress. To be purchased, either directly or through any bookseller, from Wyman and Sons, London; Oliver and Boyd, Edinburgh; and E. Ponsonby, Dublin. (Cd. 4499.) Price 5s. 6d. The second part of the Minority Report has been published, under the title, *The Public Organization of the Labour Market*, edited with an introduction, by Sidney and Beatrice Webb, by Messrs. Longmans, Green, and Co., in an octavo volume of 350 pages, price 5s.

make the work as instructive as possible from a medical point of view, he had the assistance of Colonel Magill, C.B., staff officer to the A.M.O. On arriving at St. Albans at about 5 o'clock on the afternoon of March 12th, Colonel Maude explained the military situation and the scheme of operations which had previously been circulated. The next morning each medical officer proceeded to the point where he would be required, and, having thoroughly mastered the situation, wrote a report: these reports were handed in, and examined and criticized by the directing staff, and subsequently returned to the officers concerned. The next day the various situations were visited by the entire party and the military and medical conditions discussed on the spot. During the stay at St. Albans lectures were given by members of the directing staff on the medical service in the field in time of war, on the sanitary aspects of the present operations, and on the adaptability of buildings for medical services. Those who took part in the tour were unanimous in expressing their sense of the benefit they had derived and the practical knowledge they had gained; it is only to be regretted that more were not able to take advantage of the opportunity for instruction. At a staff ride of the officers of the Second London Division last November four medical officers were present, and five medical officers intend to take part in another staff ride of the division to be held next week.

INCOMPATIBLES AMONG ANTIBODIES.

The members of the Antivaccination League who attended the annual meeting recently held in London in diminished numbers must have dispersed, perhaps in a wiser, but certainly in a sadder mood. They were prepared for a depressing time by the particulars circulated in the annual report of declining interest and exhausted funds. To arouse the League from the condition of anergic stupor into which it had lapsed one of the most voluble leaders of the movement had prepared a wonderful serum with which he experimented on the assembly. He urged the extension of the objects so as to include "the legal prohibition of vaccination and of the intentional introduction of any diseased product into any living animal, either for prophylactic or curative or experimental or any other purposes." This was the panacea for the evils and troubles which confronted the League; but it did not act successfully. So far from acting as a remedy, the most strenuous opposition was aroused, and most of the speakers strongly protested against the scheme, which was wisely withdrawn. For some years, as we have pointed out in these columns, dissensions among antivaccinators have constituted a leading feature at these annual meetings, and on the recent occasion these were more pronounced than ever before. The *Vaccination Inquirer* for March refers to the "brisk discussion" on the paper, and mildly states that "this year's annual meetings will no doubt have produced somewhat mixed impressions on the minds of those who were present." Reference is also made to the "lull in the movement." A long letter of castigation, addressed to the League from one of the pillars of the cause, appears in the official organ. He regrets the decadent tendencies which he observes in the League, and which he avers, if not stopped, will work its utter downfall. One of these is "the attempt to procure prohibition of vaccination." Of this proposal he writes: "Our Advisory Committee will be appointed to the command of the home fleet long before there looms upon the horizon of practical politics any shadow of a shade of the possibility of the enact-

ment of such a law. . . . The thing is a nightmare: it shall never be realized, save after and against all that one man, at least, may do to stay so base a wrong." This declaration and determined attitude of Mr. Alfred Milnes, whose name is so well known to the antivaccinators, when read at the annual meeting, must have staggered those who heard it; we cannot believe it merely produced somewhat mixed impressions. No less forceful was the opposition hurled at the other "decadent tendency" by which it was proposed to kill two birds with one stone. The scheme to join issue and work hand in hand with antivivisection societies was resented and condemned. Altogether Mr. Swan, who contributed the paper, appears to have had a trouncing which must have made him wonder if by any chance he had wandered into the enemy's camp instead of being among his own friends. More interesting, though more depressing to the League, were certain statements made by Members of Parliament who were present. Mr. R. C. Lehman, M.P., is reported in the *Inquirer* to have been "rather despondent about further legislation just at present." Mr. Arnold Lupton, M.P., "thought it was a drawback to their movement that there were now fewer imprisonments. He felt the most sincere contempt for the new Act. As far as the present House was concerned he thought the best line was the anticom-pulsion line. He had little difficulty in getting many members to agree with him as to that, but when it came to the case of vaccination itself it was another matter." This candid confession of the failure of his efforts in season and out of season is refreshing and supports the contention of the pro-vaccinists that despite the machinations of the antivaccinators no advance has been made in the attack on vaccination *per se*.

BOXING A CHILD'S EARS.

At the Leeds County Court on March 12th an infant claimed through her father £9 6s. for personal injuries sustained through the defendant, a certificated school teacher, having boxed the ears of the child. It appeared, according to the report in the *Times*, that an abscess was caused, and the girl, who gave evidence, was still being treated for deafness. It was elicited that the plaintiff's head struck the back of the seat when her ears were boxed. The doctor who had examined the child attributed the injury to the ear to a blow. The judge referred to a case in which it had been decided that a certificated teacher had a right to do that which a parent had a right to do. He therefore found for the defendant. Taking the report as it stands, we venture to submit, with all respect to the judge's decision, that boxing a child's ears is a stupid way of inflicting punishment: the child is taken un-awares, and is afforded no opportunity of pleading for a mitigation of the punishment, which may be a life-long sentence. Granting that a certificated teacher has a right to do that which a parent has a right to do, then if the law permits a parent wilfully to do what is commonly acknowledged to be detrimental to his child's health the time is ripe for the amendment of the law in the interests of the offspring and of the country. We are glad to be in a position to state that the London County Council does not allow the boxing of the ears of children placed under its care in the elementary schools. We believe that in these schools when corporal punishment is called for under no circumstances is it permitted to strike the head. It is important to note that under this regulation the teacher's power of control has by no means been diminished. On the

contrary, we understand that the number of cases requiring punishment of a corporal nature has enormously diminished in the London County Council schools within recent time. It is probably no exaggeration to estimate the diminution in the number of these cases as 90 per cent. This happy result is explained by the power of inflicting punishment being placed in the hands of all teachers. Every case in which punishment is inflicted has to be recorded in a book. Formerly only the head master or the head mistress of a school was allowed to inflict punishment, with the result that a troublesome child, knowing full well that the teacher dared not hit her, when corrected would put out her tongue and make grimaces; and the teacher, on her part, also knew full well that if she were continuously sending up cases to the head teacher for punishment, the head teacher, not having witnessed the transgression, was apt to come to the conclusion, and to tell the teacher, that if she were not able to control the children without punishment then she was not competent for her post. Under the present system a child, knowing that the teacher can hit her on the hand, has no option but to abstain from making grimaces when corrected. On the part of the teacher who has not the right to inflict punishment it is only fair to state that the conduct of the children under her care must at times be most exasperating, but willfully to box a small child's ears seems to be an admission of a want of control of temper on the part of the teacher.

LONDON SCHOOL OF TROPICAL MEDICINE.

SIR FRANCIS LOVELL, C.M.G., Dean of the London School of Tropical Medicine, is making a tour through some parts of the tropics. As Hannibal went about endeavouring to stir up enemies against Rome, so Sir Francis Lovell, with rare devotion, is giving time which he might well spend in the enjoyment of well-earned rest to the attempt to enlist aid for the campaign against the invisible enemies of one kind or another which are the causes of tropical diseases. We are glad to learn from the *Ceylon Independent* that he has been cordially welcomed by the members of the British Medical Association there. On February 16th a dinner was given in his honour at Colombo. Dr. H. George Thomasz, President of the Branch, was in the chair, and among those present were Sir Allan Perry, P.C.M.O., Dr. Aldo Castellani, Dr. M. Sinnatamby, Professor Browning, and many others. Dr. S. C. Paul, who was in charge of the arrangements, acted as croupier. Dr. Thomasz proposed the health of Sir Francis Lovell, who, in responding, said the London School of Tropical Medicine was now entering on its tenth year of existence. From relatively small beginnings, its work had been gradually expanded, so that at the present time the school had an annual entry of from 90 to 100 students, and a staff of five salaried teachers, whose entire time was devoted to teaching and investigation, and of ten lecturers, each of whom delivered a course of lectures on his special subject three times a year. The large number of post-graduate students (816) who had passed through the school, and the fact that year by year the length of the average attendance of the individual student had steadily increased, indicated that the school met a want. In addition to teaching, the school had endeavoured to prosecute and encourage research in tropical medicine. With this end in view, through the assistance of the Government, special chairs had been established in helminthology, in protozoology, and in anthropology. Moreover, the staff of the school was prepared to continue to give help to workers on tropical subjects who could not take furlough to England. A museum illustrative of

tropical pathology and hygiene was gradually being formed, and one important branch of it was the collection of blood-sucking insects and other animals concerned in the transmission of disease. The collections were being arranged in such a manner that a student, about to proceed to the tropics, could see at a glance and easily study from actual specimens not only the disease germs, but the disease transmitters of the particular colony or protectorate in which he proposed to work. In addition to teaching and investigation carried on in London, the school from time to time had sent Commissioners to various places in the tropics to study special diseases. These expeditions had added materially to knowledge, and it was to be regretted that, from lack of funds, they had not been more numerous. Sir Francis Lovell went on to say that the principal object of his mission was not merely to raise funds for the school, but to bring before the residents in the tropics the advantages which they were likely to derive from the research work which had been done and which was likely to be done by the London School of Tropical Medicine. He was glad to say that since his arrival in Ceylon the Governor had very kindly consented to grant the school an annual subsidy of £100 a year for five years, subject, of course, to the sanction and approval of the Legislative Council and of the Secretary of State. This was the same course which had been followed in the case of the other contributing colonies. In addition to the subsidy from Ceylon he had been able to enlist the sympathies of the members of the Chamber of Commerce: an appeal would be issued on behalf of the school for support, and he had every reason to believe that the appeal would be favourably entertained. In addition to this, the matter had been brought before the Committee of the Planters' Association at Kandy and he had every reason to believe that the members of that association would also give a favourable response.

DISINFECTION BY STEAM.

IN so important a subject as the disinfection of objects in daily use, it is primarily essential that the processes which govern the life and death of pathogenic and non-pathogenic micro-organisms should be minutely studied and understood. When every fact concerning the tenacity of life of micro-organisms is thoroughly mastered, the germs will no longer be a menace to mankind. In the meantime we must content ourselves with discovering the laws which underlie these processes generally and giving practical application to this knowledge. Disinfection can be carried out in many ways, but for practical purposes the methods available are restricted to certain chemical substances, certain biological products, and heat. In practice heat can be applied only under certain restricted conditions. Professor S. Delépine has recently published¹ a very clear account of the conditions governing the use of steam both at low and high pressures. He points out that the following conditions must necessarily influence the resistance offered by the organisms: (1) The presence or absence of spores; (2) the amount of moisture; (3) the nature and amount of associated material, such as blood, etc.; (4) the nature and amount of material intervening between the bacteria and the source of heat; and (5) the temperature. Having disposed of these matters briefly, Professor Delépine describes the essentials of practical steam disinfection. He deals only with disinfectors working with current steam, and leaves it to the reader to adapt what is said to apply to confined steam disinfectors. The time required to heat and fill the disinfecter with dry, saturated steam

¹ *Medical Chronicle*, December, 1908.

varies, of course, with the construction of the disinfector; but he states that an apparatus of usual size would take at least thirty minutes, and that from ten to fifteen minutes should be allowed for the steam free from air to penetrate through 8 to 10 in. of mattress or blanket, so that in practice about three-quarters of an hour, therefore, must elapse before the bacteria at the centre of the material being disinfected are acted upon by the steam. Professor Delépine next considers the actual killing off of the bacteria, and taking as a standard a bacterium of a resistance not exceeding that of the spores of *Bacillus anthracis*, he finds that at ordinary atmospheric pressure, current steam kills within five to fifteen minutes. If it is required to kill the resistant spores of earth bacilli, at least two and a half hours' exposure should be allowed. He gives a table showing the time required for the three stages under certain conditions, and concludes that ordinary disinfection would occupy a period of from three-quarters of an hour to two hours, while sterilization would require from three to over nine hours. With steam under a pressure of 10 lb., that is, at 115° C., the reduction in time is only a few minutes. Under 20 lb. pressure, complete sterilization can be completed in from 45 to 130 minutes. Thin materials can be rapidly dried after exposure to dry steam above 100° C. by removing to a dry shed while still hot; but with steam at 100° C. drying is more difficult. In summing up the advantages of high compared with low pressure disinfectors, Professor Delépine relies chiefly on the time factor and the ease in drying. The cost of the low pressure apparatus is usually, although not necessarily, less than that of the high, and the same may be said of the weight. Low pressure disinfectors are frequently more simple and worked more easily.

THE CLAIMS OF DENTISTRY.

MR. MORTON SMALE, Consulting Surgeon to the Royal Dental Hospital in Leicester Square, made some good points in his address from the chair last week at the annual general meeting of governors. Speaking of the efforts of the staff to spare their patients all superfluous pain, he showed that nitrous oxide has been administered at the institution over half a million times without a single fatality. As for the excellent dental school which is carried on in connexion with this hospital, he indicated that whatever might be the case at hospitals of an ordinary type, dental work on a large scale could not possibly be carried on without the assistance of students. In its indebtedness to the student the Royal Dental Hospital does not really stand alone, for, as we have shown on sundry previous occasions, the presence and co-operation of students must necessarily be of immense importance in medical institutions of every kind. It may be conceded, however, that in any great dental institution students are not merely an advantage, but an essential. Hence the point is one which may fairly be made and wisely emphasized at a time when, under the influence of one or two verbose cranks, there is a certain tendency among the less well-informed section of the public to resent the utilization of hospital wards for teaching purposes. Mr. Smale also stated that at the Royal Dental Hospital 20 per cent. of all fees received from students is made over to the general funds of the institution. Unfortunately, however, these fees are but a drop in the ocean compared with the financial needs of the institution, which is seriously embarrassed by the necessity of early liquidating the heavy expenditure involved by the erection of its present buildings. As some £43,000 still remain to be paid, such a degree of economy has to be exercised in the

working of the institution that full advantage cannot be taken of many of those modern contrivances and arrangements by which efficient work is elsewhere facilitated. In spite of this fact, the work done is as excellent as its volume is great. That its value is amply recognized by the three great Metropolitan Hospital Funds, which make it their business to ascertain the precise merits of every institution seeking their aid, is not enough. It should be equally recognized by the general public, more especially at the present time, when the exceedingly important part which may be played by dentistry, in improving the health of individuals and in conserving the physical efficiency of the nation, has at length been realized.

DEATH BY LIGHTNING.

DR. D. CAMPBELL WATT, of Pietermaritzburg (in a letter published in the *Transvaal Medical Journal* for December, 1908), discusses the conclusions and generalizations advanced in a paper on Death by Lightning Stroke, read by Dr. Spencer, of Middelburg, before the Special Subject Section of the Medical Congress at Pretoria. Dr. Watt is qualified to deal with the subject by considerable practical experience, for electrical storms of terrific violence are common in South Africa, and deaths from lightning are frequent. While acknowledging the value of Dr. Spencer's "able" and "exceedingly suggestive" paper, Dr. Watt combats the view advanced therein to the effect that "lightning only burns the human body" "when it meets in its course some metallic object." Dr. Watt cites a case which he saw, where a horse and rider were struck dead by lightning, and where, "although the man was undoubtedly burnt" and singed, there was a total absence of fusing of any "metallic object worn on his body, and of any" "apparent connexion between the metallic objects" "and the burns." There are other points discussed or referred to in the letter, but we must content ourselves here with giving Dr. Watt's conclusions regarding the injuries and appearances which may be found on the body of a person struck by lightning. He says: "It seems to me that the following propositions may be advanced: (1) Lightning stroke may cause no "external injury to the body struck, or it may cause "extensive injury, both external and internal—" "including fracture of bones and laceration of soft "tissues. (2) Death may follow with no apparent "external injury, as well as often extreme wounding, "and is usually instantaneous. (3) Recovery may "take place, even with injury to the tissues. (4) Death is generally due to shock, or to de- "struction of vital centres. (5) Rending of clothing "has often the appearance produced by an ex- "plosion from within outwards—that is, the ragged "edges are everted as in a wound of exit; and the "clothing may be stripped from the body and hurled "away a distance. (6) These ragged edges may not be "scorched, even although in proximity to parts of "the body scorched. (7) Singeing of the hair and "burning of the skin may occur quite independently "of the fusing of metals or the clothing, or in con- "junction with fusing of metals and burning of "clothing. (8) The stroke may affect the skin and "clothing alternately in a zigzag course down the "body, or the damage to both may be at the same "spots. (9) A wound may be accompanied by burning "and singeing about its lips, or it may not. (10) The "body struck may or may not be hurled to a dis- "tance, and an appreciable interval may elapse before "it falls. (11) A red arborescent streak may be present "on the body, and, if present, is pathognomonic. "It should not be mistaken for tattooing. (12) Rigor "mortis does occur. (13) The blood does coagulate

"after death. (14) A *post-mortem* examination reveals "a contracted left ventricle, and congested lungs and "brain. (15) Symptoms in the living are: Some "degree of coma or confusion of mind, dilated pupils, "headache, feverishness, tingling, paresis, vomiting, "and other symptoms caused by shock, together with "others dependent upon any local injury. (16) The "amount of damage done, or of symptoms produced, "will depend, among other things, upon (a) the "strength of the current coming in contact with the "body; (b) the path of the current through or along "the body; (c) the susceptibility of the individual "struck to shock." The *post-mortem* appearances in a case of lightning stroke may be of great importance from a medico-legal point of view.

SMALL-POX AND THE BRISTOL GUARDIANS.

AN outbreak of small-pox is reported from Bristol. The facts are set forth in a letter to the *Times* of March 15th by Dr. D. S. Davies, medical officer of health, who says that an introduction took place in December which led to fifteen cases of small-pox. The last case was notified on March 1st from the country district outside Bristol. Another introduction took place into a public institution on February 16th; from this case seven persons in the city were infected, all of whom were removed to hospital and are doing well. During the week before the date of this letter only one notification of small-pox was received. A specially-summoned meeting of the guardians was held on March 10th. Dr. Sweeting, one of the medical inspectors of the Local Government Board, attended. He informed the guardians of the facts, which gave rise to anxiety, and suggested that increased facilities should be provided for the encouragement and promotion of vaccination and revaccination. Scant courtesy was accorded to Dr. Sweeting, and his proposals were rejected by a majority of 10. For the increased facilities 16 voted; against, 26 votes were cast. Those who spoke against the proposition appear to have been more concerned about the expense of extra vaccination than about the safety of the community. The proceedings, which lasted nearly three and a half hours, were of a most uproarious character. The rejection of the resolution is said by the local press to have been announced "amidst a scene almost approaching "hilarity." Now that the guardians have refused to put into force the statutory powers in regard to vaccination during epidemics, it is possible that they may be superseded by the Town Council, a course which will reflect little credit on the guardians. The members in the minority spoke sound words of common sense, and notice was given by one of the number to move the rescission of the resolution a fortnight hence. It is comforting in the circumstances to learn from Dr. Davies that, so far as the city and port of Bristol is concerned, there is at present no epidemic; but the special precautions as to vaccination and revaccination advised by the Local Government Board, and being actively adopted, are in order to anticipate any extension in the country districts and reintroductions into the city, and to prevent extension from the cases already introduced into Bristol.

INFECTIOUS DISEASES IN LONDON SCHOOLS.

THE Education Committee reported at the meeting of the London County Council on March 16th that during the period from August 24th to December 19th, 1908, 101 schools were under observation for diphtheria,

526 children were tested bacteriologically, of whom 38 were excluded on account of diphtheria or suspicion thereof; one department and three class-rooms were closed; 505 schools were under observation for scarlet fever, and seven class-rooms were closed; and 492 schools were under observation for measles, and two departments and twenty-four class-rooms were closed. Dr. Beaton, in commenting on the report, expressed his regret that the Committee should dismiss a subject of this importance in a report of five lines. In the course of a year over 50,000 children in the schools of London were infected, and over 1,000 deaths occurred. He asked the Chairman of the Committee whether something more could not be done to lessen this mass of preventable suffering. In 1908 the Medical Section of the Education Committee met twice, once in January and once in December. Surely more vigorous measures could be taken. Dr. Beaton urged that stricter attention should be paid to the cleanliness of the schools, and to thorough disinfection when an epidemic occurred. At present London schools were only washed once in three weeks and swept once a week. As to disinfection, an instance came to his knowledge recently where an epidemic of scarlet fever which had been going on intermittently for three months was entirely stopped when the school premises were thoroughly disinfected. But Dr. Beaton's was a voice crying in the wilderness. The subject interested neither party on the Council. The discussion was not continued, and the report was received.

PENSION FOR MOSQUITO BITES.

PENSIONS are given for wounds or disabilities contracted in military service. At the present day bacilli are more destructive to an army than battles, and recent research has shown that the mosquito disables more men than the rifle. It is, therefore, we think, only fair that a nation should express its gratitude in the same way to men in the employment of the State who face danger and contract illness in the course of experiments for the good of their country and of mankind at large. We are glad, therefore, to learn from the *Boston Medical and Surgical Journal* that John R. Kissenger, who, as a soldier in the army in Cuba, submitted in December, 1900, to the bites of yellow fever mosquitos in order to assist in the promotion of a knowledge of the mode of spread of the disease, and has been an invalid for a number of years, is to be rewarded for his devotion. A bill has been introduced in Congress providing for a pension for his relief.

MEDICAL MEN AND LEGACIES FROM PATIENTS

A COMMUNICATION has been received from Major Rawnsley, R.A.M.C., in which he complains that the paragraph published under this heading in our issue of March 6th, page 621, reflects upon him personally as one of the plaintiffs in the action referred to. We did not for one moment intend by this paragraph to make any reflection whatever upon him, nor do we see how it is capable of being so interpreted. We desire, nevertheless, at once to express our sincere regret that Major Rawnsley should have placed such a construction upon it, and we take the earliest opportunity of saying, unreservedly, that there is in fact no foundation whatever for any reflection being cast upon Major Rawnsley, or, indeed, for any imputation of any kind being made against him in connexion with the action in question.

At the meeting of the Medical Faculty of the University of London to consider the proposal to form a Board of the Faculty, the scheme published in the *JOURNAL* on March 6th, p. 636, was adopted in principle, and the suggested constitution approved, with the addition of the Representative of the University on the General Medical Council. The meeting was adjourned until March 26th, when the remainder of the scheme and the resolution to give effect to it will be considered.

THE PRINCE OF WALES paid a visit of inspection to University College Hospital on March 12th. His Royal Highness was conducted round the wards by Sir Thomas Barlow, Senior Physician to the hospital. The Prince, who, as is well known, has a special knowledge of hospitals, in which he takes a keen interest, expressed his approval of the arrangements at University College Hospital, and the cheerful and airy appearance of its wards. His Royal Highness afterwards visited the new buildings of the medical school, and the new nurses' institute.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Imported Meat.—Last week several questions were asked with reference to diseased meat sent from America. Mr. Godfrey Baring asked about diseased livers recently landed to which the official label of inspection was affixed, and which had been reported on by the medical officer of the Port of London. Mr. Burns said he had seen the report, and was aware of the statements contained in it to the effect stated. This particular case was receiving his attention, but he might state that the action reported by the medical officer of health was taken under the Public Health (Foreign Meat) Regulations, which he issued last year for the purpose of preventing danger to the public health from the importation of diseased meat, and which he had every reason to believe would be found effective for the purpose. In answer to another question, Mr. Burns said that the offal referred to in that report bore an official label indicating that the boxes containing it had been inspected and passed in the United States. The matter was receiving his attention; but he might point out that any label attesting official inspection abroad did not exempt meat of the kind referred to from inspection in this country, and that, under the regulations, if it was found to be diseased it must be either exported or destroyed. Mr. Courthope further asked whether in view of the statement that many cases of cancer had arisen in this country owing to this diseased liver, he would prohibit it in the future. Mr. Burns said he did not think there was any justification for the statement with regard to cancer. The regulations passed a year ago gave sufficient power to deal with any unsound meat attempted to be brought into this country, as had been discovered in this particular case. With regard to the importation of frozen carcasses from which the lymphatic glands had been removed to conceal the presence of tuberculosis, Mr. Burns said that practically it was only in the case of pigs that the entire carcass was imported as frozen meat. The new regulations dealt with cases where the carcass of a pig was imported without the head in its natural state of attachment and was without the lymphatic glands about the throat and any other part of the carcass in their natural position. In any such case the medical officer of health and the sanitary authority were required to take such action as would secure that the meat would either be exported or destroyed. The powers conferred by the regulations were, so far as he was aware, duly exercised, and they appeared to be sufficient to meet the object in view. In answer to Mr. Vincent Kennedy last Monday Mr. Burns said that he had no information as to the re-exportation during the years 1906-7-8 of meat alleged to be unsound. The new regulations did not come into operation until January 1st, 1909. Any destruction of foreign meat under them must

take place under the supervision of the medical officer of health, and after the importer had failed to comply within twelve hours with a notice from the sanitary authority requiring him to give a written undertaking to export the meat at his own expense or prove before a justice that it was not intended for human consumption. If the importer undertook to export the meat, it rested with the sanitary authority to satisfy themselves that the exportation took place. If within three days after the receipt of the undertaking the meat was not exported, the sanitary authority must cause it to be destroyed. The meat need not necessarily be dispatched to the place from which it was originally sent. It was not required to be marked in any way before it was re-exported. In the majority of cases it was taken to the local dust destructor.

The Milk Question.—Last week, on the motion for the second reading of the London County Council (General Powers) Bill, there was an interesting discussion on the milk clauses. Mr. Courthope moved the rejection of the bill in order to denounce the milk clauses and secure their withdrawal. He finally succeeded in his object by getting a promise of their withdrawal before the bill was read a second time. His main argument was that the eleven clauses dealing with milk gave too drastic powers to London as compared with other local authorities. They gave the London County Council power to interfere in any dairy county. A general enactment was wanted and not a special law. At present over 300 authorities did nothing, and in the interests of public health a general law was required. After the rejection had been seconded, Mr. Guinness defended the clauses as necessary for public health. Referring to infantile mortality, he said that in towns 22 per cent. of it was due to diarrhoeal disorders, while in the country it was only 15 per cent. In children fed from the breast or on specially selected milk this cause of mortality was greatly lessened. He quoted the medical officer of health of Islington to the effect that dung was found in 99 per cent. of the samples taken. The County Council wanted powers to take samples at railway stations so as to discover the farms from which impure milk came. Mr. Burns said the Government could not support the milk clauses of the bill because they only partially remedied the evils. The bill to be introduced shortly by the Government would do more and would give larger powers generally over the whole kingdom. He admitted the magnitude of the evils and appealed to the House not to deal with it piecemeal, but to leave out these clauses as the Milk Bill must be passed. He said the Commission on Tuberculosis had made a number of recommendations which could not be ignored. It had declared that human and bovine tuberculosis cannot be distinguished, that no doubt child tuberculosis is the direct result of the bacillus of bovine tuberculosis, and that cow's milk which contains bovine tubercle is clearly the cause of fatal tuberculosis in man. Mr. Guinness then agreed that the clauses should be dropped, but Mr. Dickenson pointed out that a strong Government bill was sure to be fought and possibly rejected or seriously modified. Mr. Cooper also strongly deprecated the dropping of the clauses. The President of the Local Government Board took upon himself a most serious responsibility in suggesting this course unless he could secure not only the introduction of a strong bill, but its passage into law. He argued that a strong bill must meet much opposition: for the moment London introduced strong clauses, twelve members representing agricultural constituencies put down amendments to destroy them. The question had been before the House for five or six years; nothing was done under the late Government, and so far nothing under this, except a promise of a bill which might not be accepted in the Upper House. In the end, after a characteristic outburst from Mr. Lupton—who declared his disbelief in children being killed by milk, or that there was any evidence that tuberculosis was conveyed through milk—the bill was read a second time, on the understanding that the milk clauses were to be dropped.

The Notification of Infectious Diseases.—Mr. Tyson Wilson asked the President of the Local Government Board whether, seeing that during the year 1907 the deaths occurring from three infectious diseases that are not

compulsorily notifiable were 30,249, while the deaths from ten infectious diseases that are compulsorily notifiable were only 8,629, he could see his way to include the three diseases that are not compulsorily notifiable in the list of those that are, or, otherwise, remove some of those diseases that had to be notified from the list. Mr. Burns said he was not empowered by the Infectious Diseases (Notification) Acts, 1889 and 1899, to adopt either of the courses suggested. It was, however, competent for the sanitary authority of any district, with the approval of the Local Government Board, to order that the Act of 1889 should apply in their district to any infectious disease other than a disease specifically mentioned in that Act, and the Board had given its approval to orders made by various sanitary authorities extending the Act to the three diseases referred to in the question. The Acts did not apply to London, but there were provisions similar to those contained in them in the Public Health (London) Act, 1891.

Death from Glanders.—In answer to a question last week, Sir Edward Strachey said that the Board of Agriculture was aware of the unfortunate circumstances concerning the death from glanders of Charles Edward Davis. The attention of the London Council Council was directed to the case, and the horses in the stables where the man was employed were at once inspected. Glanders was found to exist, and the necessary steps were being taken to deal with the outbreak. The County Council had taken the matter up with great energy, and the Board was satisfied that it was taking every necessary precaution.

Navy (Medical Branch).—On Tuesday Mr. Bramsdon asked the First Lord whether his attention had been called to the case of the four head ward masters who were the only warrant officers in the entire medical branch of the Royal Navy; was he aware that ordinarily they were unable to attain that rank until roughly 40 years of age, when nearing the end of their service, whilst all other branches of petty officers, with the exception of school masters, for whom special provision was made, were able to get promotion to the warrant rank from the age of 25 and upwards, but none after 35, and that their pay consequently was only equal to that of the young warrant officers of other branches; and whether he would give consideration to this class. Mr. McKenna replied in the affirmative.

The Committee on the Midwives Act.—In answer to Mr. Clynes, who asked if the Departmental Committee could be made to include a representative of the National Association of Midwives, Mr. Burns said that he had been in communication with the Privy Council on this subject, and he found that, in the opinion of the Lord President, the Committee was sufficiently large for the practical objects of the inquiry, and that these would not be served by the addition of representatives of special interests. Their views would be properly considered in connexion with any evidence that might be given.

Water Supply.—Last week, in answer to Mr. Courthope, the Prime Minister said that the honourable member was no doubt aware of the recommendations made by the Royal Commission on Sewage Disposal in their third report with regard to the waste of water and its abstraction from one district for distribution in another. These recommendations had received the consideration of the President of the Local Government Board in connexion with the bill relating to Rivers Pollution and Water Supplies which he hoped to introduce this session. In these circumstances, the appointment of a further commission, as suggested, seemed to be inexpedient.

Street Accidents (Doctors' Fees).—Mr. Weir asked the Secretary of State for the Home Department whether, having regard to the fact that doctors receive 3s. 6d. only for attending casualties in the streets, whereas veterinary surgeons receive 10s. 6d. for attending injured horses, he would take such steps as may be necessary to secure the more adequate remuneration of doctors. Mr. Gladstone said that the cases were not parallel. The fee of 3s. 6d.

(7s. 6d. after 7 p.m.) paid to medical men represented as much, or more, than the ordinary practitioner would receive for attending patients of the class whom he was called to attend by the police. For exceptional cases, a special fee was sometimes paid. Moreover, the majority of these fees were paid to divisional surgeons, who received them in large numbers, and were, besides, paid salaries from the Police Fund. Veterinary surgeons had far fewer cases to attend, and had generally greater distances to travel. He was satisfied that the medical men in question did receive "adequate remuneration" for the services they rendered.

Death-Rates in England, France, and Germany.—In answer to questions put by Mr. Lylph Stanley, Mr. McKinnor Wood said that the following were the figures for the year 1907:

Country.	Deaths per 1,000.
England and Wales	15.0
France	20.2
German Empire	18.90
City.	
London	14.6
Paris	18.5
Berlin	15.4

With reference to deaths of infants under 1 year, the following were the figures for the year 1907:

Country.	Deaths per Cent.
England and Wales	11.8
German Empire	17.6

In the case of France he had no later figure than that of 1906, which was 14.3.

City.	Deaths per Cent.
London	11.6
Paris	10.5
Berlin	16.3

Vaccination Prosecutions in Ireland.—Mr. John Robertson called Mr. Birrell's attention on Tuesday to a case of prosecution, and asked for some legislation to enable conscientious objectors in Ireland to avoid prosecution, as in Great Britain. Mr. Birrell answered that in December last the guardians' solicitor obtained an Order at Petty Sessions, under Section 147 of the Public Health Act, to compel Mr. Francis Irvine to have his two children vaccinated within a month. The Local Government Board had no means of knowing whether notice had previously been served on him. That was a point for the consideration of the magistrates. Having failed to comply with the magistrates' order, Mr. Irvine was fined 2s. 6d. and 5s. costs at Petty Sessions on February 19th, as stated. He was informed that legal proceedings were usually instituted against a defaulter under the Vaccination Acts before steps were taken under Section 147 of the Public Health Act, and this course was presumably followed in the present case. The number of conscientious objectors to vaccination in Ireland was very small, and they were not, he understood, generally subjected by guardians to repeated prosecutions. He could not undertake to introduce legislation on the subject.

The Island of Lewis.—Mr. Weir asked what was being done to improve the sanitation of the townships which had been reported to be dangerous to the public health. Mr. Ure replied that since the publication of the report in question there had been steady progress in the sanitary improvement of the crofters' houses. The construction of houses on new sites was a solution which presented many administrative and financial difficulties, and he had not found it possible to approach the Treasury on the matter; but this and other questions affecting administration in the Lewis were constantly before him.

The Oaths Bill to facilitate taking the oath with uplifted hand was read a second time late on Tuesday night, and will in due course be considered by a Standing Committee.

Vivisection.—Mr. Hodge introduced a bill for the total abolition of vivisection on Tuesday, and put down the second reading for May 29th.

India.

THE BOMBAY MEDICAL CONGRESS.

On February 22nd this great congress was opened by Sir George Clarke, F.R.S., the Governor of Bombay, who delivered an eloquent address reviewing the progress of medical research in India. The commemorative medal was then presented by him to several distinguished visitors, including Professor Ronald Ross, and Professor Musgrave of the Philippine Islands. At a later meeting a medal was also presented to Professor Shiga from Japan, who had not been able to be present at the opening meeting.

The five sections held both morning and afternoon sessions on three days, and in some cases a morning session on the fourth; the afternoon of that day the members were invited to visit the Parel laboratory. The number of members was very large, including over 100 I.M.S., a few R.A.M.C. officers, and numerous Parsee and Indian practitioners, leave having been granted to many assistant surgeons to enable them to attend. Every province of India and all branches of medical science were well represented; there was a good attendance at all the sections, while certain subjects attracted very large crowds, so that the proceedings were frequently quite enthusiastic. The meetings were all held in the magnificent University buildings, which form one of the main architectural features of this beautiful city, while immediately in front of them was placed the exhibition, a tent in which was accommodated the Sanitary Section. The whole of the arrangements were most admirably organized by the Secretary, Lieutenant-Colonel W. E. Jennings, I.M.S., to whom the thanks of all were due.

The Work of the Sections.

The great attraction on the first day was the discussion on antimalarial measures in India, introduced in an exhaustive paper by Professor Ronald Ross, F.R.S.; it was followed by other papers by Captain Christophers and Dr. Bentley on their investigations on blackwater fever, and by Major S. P. J. James, I.M.S., on the great prevalence of malaria in Mian Mir cantonment last year in spite of vigorous antimalarial operations. The latter paper in particular gave rise to a very keen discussion, during the course of which it appeared that the very heavy rains of last year had much to do with the admitted failure of the antimalarial operations, but that better results might be obtained if drainage operations were added to the previous programme. The generally expressed opinion was that in most Indian conditions quinine prophylaxis was more practicable than mosquito destruction. On the second day the papers on plague prophylaxis gave rise to an equally interesting and keen debate, the relative importance of recrudescence or reimportation as the cause of the repeated yearly outbreaks in the Punjab being the main subject of contention. In the first section the discussions on the treatment of cholera and on dysentery attracted considerable attention, and that on the treatment of snakebite was also of considerable interest. Another very important contribution was one by Dr. Row on the development of the parasite of Delhi boil into a flagellate stage, precisely parallel in its general characters to that of the *Leishmania donovani* of kala-azar, although it appeared to differ in some details, so that it will probably prove to be a different variety of the genus. In the Surgical Section the subject of operations for cataract was the most important dealt with, a number of papers being read in support of the intracapsular operation of Smith of Jullunder.

Pathological Section.

One of the most interesting and best organized of the sections was the pathological; the exhibition, which contained a large number of microscopical preparations, illustrating the more important researches in tropical medicine, including Row's Delhi-boil cultures, having been arranged. A number of coloured drawings of skin and bowel diseases were shown from the Calcutta Medical College Museum, and a good collection of snakes by Major Wall, I.M.S. Captain Cunningham, I.M.S., deserves great credit for the excellent collection he had got together from all parts of India.

Conversazione.

On the second evening a series of lantern lectures on medical subjects of twenty minutes each were given, and were attended by a very large number of the members and their friends. The subjects treated included the nascent treatment of leprosy, the parasite of Delhi boil, blood sucking insects, snakes and fevers, etc. This meeting, which was a great success, was held in the grounds of the exhibition, and intervals were allowed between each lecture, social and instructional opportunities being thus combined.

Indian Medical Service Dinner.

Well over one hundred officers and guests sat down to the dinner on the evening of the last day after the visit to Parel Bacteriological Laboratories. The Governor of Bombay was present, and Surgeon-General Sir Gerald Bomford took the chair. The speeches were few but good, the chairman pointing to the great advances in research work in India since the last congress in Calcutta fifteen years ago. Professor Musgrave, from the Philippines, returned thanks for the visitors, and struck the same note, while Professor Ross was also called on to speak.

The gathering has thus been a notable one in many respects, and it is to be hoped it will be repeated at a much shorter interval than the last.

Natal.

IMPORTED COOLIE LABOUR.

Two of the principal newspapers published in Durban, the *Natal Advertiser* and the *Natal Witness*, contain in their issues for the first week of February copies of correspondence between a medical officer lately in the employ of the Indian Immigration Board and the Chief Secretary to the Government relative to his dismissal from his appointment, and in each case the editors of these newspapers, after considering the facts, call for explanations from Government. These in one form or another will doubtless be given during the course of the approaching session of the Natal Legislature; but meantime, it may be said, that the facts revealed are sufficient in themselves to condemn the arrangements under which medical officers in charge of indentured coolies do their work. About eighteen months ago, by way of rendering them less subject to the caprices of those who are the common employers alike of themselves and of the coolies, these officers were given by the Legislature a right of appeal to the Governor in Council should their dismissal be proposed by the Indian Immigration Board. This right was exercised for the first time in the case which is the subject of the correspondence and comments mentioned, and the fashion in which the appeal was treated is instructive. The medical officer was at first merely informed that the Governor in Council had rejected his appeal, but subsequently extracted the information that what had really happened was that the Government made certain "recommendations" to the Indian Immigration Board respecting the proposed dismissal, that this board declined to fall in with them, and that the Government then subsided. The intention of the law was undoubtedly that the Government should impartially review the decisions of the board, and either confirm or set them aside, according to its view of justice; by merely making "recommendations" and allowing the board to fall in with them or otherwise, as it pleases, the right of appeal seems to be reduced to a farce. The circumstances of the case render the treatment of the appeal all the more striking. The officer in question was given six months' notice at the beginning of 1908, but before the six months was up the board withdrew the notice of dismissal and offered him a better-paid appointment of the same character in another district. This offer the officer did not see his way to accept, and thereon he was redissmised without explanation of any kind. It is clear from this sequence of events that any ground of complaint which the board may have had against this officer can scarcely have been of such character as to justify his dismissal, and consequently that the law conferring the right of appeal has failed in its object. This is the more important when it is remembered that

that right was accorded less in justice to medical men than for the sake of their coolie patients. It was tardily recognized, in short, that the latter were likely to suffer if the board could exercise an uncontrolled power of dismissal over any medical officer whose ways of dealing with coolies did not chime in with his employers' views of what was convenient to his interests.

The net outcome of the incident is to strengthen the hands of those who for a long time past have been anxious to see the status of medical officers in charge of imported labour completely changed. Finally, as a possible factor in the fate of this particular officer, it may be mentioned that he was conspicuous for his scientific zeal in tracing certain obscure maladies among the coolies to their true source. He was one of the first to show that this was ankylostomiasis infection, and that this grave disease was being imported into the colony by coolie-bearing ships and spreading among the general population. This revelation naturally caused considerable alarm, and was most inconvenient to the board and its estate-owning constituents, for, besides involving more or less expense, it helped on the movement in favour of appointing a Commission to consider the question of the propriety of allowing the importation of coolie labour to continue. That Commission is now sitting, and its terms of reference specifically include consideration of the medical arrangements for the care of coolies working on estates. It was, indeed, allegations made by a medical officer on resigning his appointment under the Immigration Board last autumn which gave the local press and public a weapon by which to force an inquiry upon Government. The party representing the interests of estate owners and in favour of imported coloured labour is powerful, so the final outcome of the inquiry is doubtful, but it is to be hoped that in future medical officers who look after coolies will do their work as Government officers and not as privately employed officials; or, in other words, that Natal in this respect will fall into line with all other British coolie-importing countries.

Since the Government of Natal does not enjoy a very desirable reputation as an employer of medical labour, medical officers of the Indian Immigration Board may possibly be not anxious to change masters, preferring the frying pan to the fire. There are, however, only some twenty of them in all, at least half being already Government officials as well as medical officers in the employ of the Immigration Board, and in any case, even should they prefer to remain as they are, general and not individual interests must necessarily be considered. When an important Government official, such as the Protector of Indian Immigrants, frankly condemns, as recorded in our issue for September 19th, 1908, the present system of appointing coolie medical officers as unsound in principle and detrimental to the coolies in their charge, and when, not regarding them as free agents, but as servants of the estate owners, he publicly declines to ask for any reports from them, it is clear that there must be a *prima facie* case for investigation. Furthermore, he has adopted the same course in reference to the year 1908, and meantime information received by this JOURNAL from a variety of sources all tends to show that the attitude which he has adopted—doubtless by way of bringing things to a head—is well founded, and that the view which he has expressed—namely, that to carry out their duties satisfactorily medical officers in charge of coolies should, as in all other colonies, be made independent of estate owners—cannot be controverted. When the decision of the Protector of Indian Immigrants was recorded in these columns at the date mentioned, note was also made of the case of a medical officer who, "finding his position intolerable," had recently resigned his appointment, and the opinion was stated that an inquiry into the general subject of the medical care of coolies ought to be held. This addendum has elicited the following communication:

We, the undersigned, being Indian Medical Officers of Circles in Natal, were surprised to find a statement in the BRITISH MEDICAL JOURNAL of 19th September, 1908, implying that we were dissatisfied with our positions under the Indian Immigration Trust Board of Natal.

We entirely object to this statement, and wish to protest against it. We have not found our positions "intolerable," but, on the contrary, we have always been treated with due consideration and courtesy.

This letter, which, curiously enough, was not sent off

until four months after the publication of the passage in question, bears the signatures of fifteen of the medical officers. The rest, it may be assumed, considered it somewhat foolish to "protest" against a statement which had not been made. Why the document was originally circulated for signature is another question, and in any case the contained expression of satisfaction does not outweigh the evidence as to the real feeling within the service which has been otherwise received; nor does it lessen our belief that a complete change of status in the case of coolie medical officers is desirable alike in the interest of the indentured labourers, the general public, and the medical officers themselves.

Sydney.

[FROM OUR SPECIAL CORRESPONDENT.]

NEW SOUTH WALES BRANCH OF THE BRITISH SCIENCE GUILD.

A MEETING was held last December to inaugurate the New South Wales Branch of the British Science Guild. The chair was taken by Dr. F. A. Bennet, who, after apologizing for the absence of Sir Normand MacLaurin, explained that the meeting had been called for the purpose of forming a science guild in Australia. The objects of the guild were:

(1) To bring together as members of the guild all those throughout the Empire interested in science, in order that, by joint action, they might convince the people of the necessity of applying the methods of science to all branches of human endeavour, and thus to further the progress and increase the welfare of the Empire. (2) To bring before the Government the scientific aspects of all matters affecting the national welfare. (3) To promote and extend the application of scientific principles to industrial and general purposes. (4) To promote and extend scientific education by encouraging the support of universities and other institutions where the bounds of science are extended or where new applications of science are devised.

The Chairman referred to the fact that for years it had been recognized that Great Britain was losing ground, while America and Germany were making great strides. England did not produce enough scientifically-trained young men to second the efforts of the scientific heads of industries. America was alive to the necessity of making science the basis of all industrial endeavour.

Dr. Walter Spencer submitted the report of the organizing commissioner. He referred to the enthusiasm which attended the formation of the British Science Guild when all the leading statesmen, scientists, philosophers, and manufacturers of the empire met together. He contrasted the Germany of sixty years ago with the great empire of to-day. The guild had granted £10 towards the expenses of formation of an Australian Branch. So far all the expenses of the Branch had only amounted to £5 10s. A special vote of thanks was accorded to Dr. Spencer for his work in organizing the Branch. Sir Normand MacLaurin was elected President, and several medical men were elected Vice-Presidents. Dr. Walter Spencer was elected treasurer and secretary, and also chairman of the sub-committees.

UNIVERSITY REFORM.

The Senate of the University of Sydney has recently been considering the question of university reform. Two proposals have been considered. The one is to do away with the principle of life tenure of office by senators; the other is that a rector should be appointed at a salary, his only duty being to govern the University. After considerable discussion of these two questions, it was resolved to appoint a committee to consider them further. The committee appointed was: Sir Normand MacLaurin (Chancellor), Dr. Cullen (Vice-Chancellor), Judge Backhouse, Professor MacCallum, Mr. Leverrier, and Mr. H. C. L. Anderson. The committee will probably bring within the scope of its inquiry the whole constitution of the University, and it is considered very likely that it will recommend some change in the life tenure. In consequence of the death of Sir Arthur Renwick there is a vacancy on the Senate, and two candidates have been nominated, Drs. C. Purser and Camac Wilkinson. Both candidates are strong on the need of university reform, and are in favour of a modification in the tenure of office by senators.

STATE CHILDREN.

The annual report of the State Children's Relief Board has been presented to Parliament. The President, the Hon. Dr. C. K. Mackellar, signs the report, which states that the total number of children under departmental control at the date of the report was 7,835, representing an increase of 786 over the number for the previous year. Of these, 4,202 were placed out apart from their mothers, and 3,633 with their mothers. The proportion of boarded out children to the population of the State was 4.95 per 1,000. The proportion of children boarded out apart from their parents stood at 2.65 per 1,000. For several years past this proportion had remained stationary, and represented the class which, under the barrack system, would be maintained in orphan schools. The proportion of children boarded out with their own mothers had risen unusually, being 2.29 per 1,000, as against 1.96 per 1,000 in the previous year. The increase was attributed to the greater cost of living—due to the tariff—compelling an additional number of mothers to apply for aid on behalf of their children. The expenditure for the entire services of the department was £75,910. Of this total expenditure, £37,685 was for maintenance, cost of clothing, medical fees, and proportion of travelling expenses for the children boarded out apart from their parents. Deducting the contributions by parents, the actual cost to the State of each child was £15 10s. 2d. During the year 418 boys and 304 girls were discharged from control, leaving under supervision at the end of the year a total of 4,202 children. The total admissions during the year exceeded those during 1907 by 204, and the total discharges was greater than that for the previous year by 160. These figures, to a very large extent, indicate the operations of the children's courts so far as the number of admissions is concerned; the increased number of discharges show the policy of the board, which is to send the children home again as soon as improvement has been manifested in their conduct.

Canada.

[FROM OUR SPECIAL CORRESPONDENT.]

MILITIA MEDICAL OFFICERS OF CANADA.

The annual meeting of the Association of Medical Officers of the Militia of Canada, held at Ottawa on February 25th and 26th, under the presidency of Colonel Ryerson, M.R.O., was well attended. Addresses were given by the president and by Major-General Sir Percy Lake, K.C.M.G., Inspector-General, and the following officers were elected for the ensuing year:

President: Lieutenant-Colonel H. S. Birkett, Montreal.

Vice-Presidents: One from each military district—Major Rankin, M.P.; Lieutenant-Colonel G. S. Rennie, Major Kilborne, Major E. R. Brown, Captain Williams, Major E. A. le Bel, Lieutenant-Colonel Murray MacLaren, Lieutenant-Colonel Currie, Lieutenant-Colonel Blanchard, Captain McTavish, Lieutenant-Colonel Jenkins, Captain S. W. Hewitson.

Secretary-Treasurer: Lieutenant T. H. Liggett, Ottawa.

The following resolution, of which Lieutenant-Colonel Jones, P.A.M.C., had given notice at the last annual meeting, was adopted:

That this Association of Medical Officers of the Militia of Canada expresses its approval of the scheme of forming in Canada an association having for its object the development of Ambulance and Red Cross work in the Dominion.

A number of papers were read, including one entitled, Impressions of a Month at the Royal Army Medical College, London, by Lieutenant-Colonel Fotheringham, P.M.O., M.D.; another on the Routine Work of the Sanitary Officer at Camps of Instruction, by Captain Clark, P.A.M.C.; and another on the Trek of a Field Ambulance, by Major T. B. Richardson, A.M.C.

The next annual meeting of the association will be held at Ottawa on February 24th and 25th, 1910.

PROPRIETARY DRUGS.

Under regulations adopted by the Government of the Dominion of Canada with regard to the manufacture and sale of patent or proprietary medicines, all such patent or proprietary medicines in the hands of manufacturers or dealers shall bear the stamp of the Department of Inland Revenue, but this stamp will not be provided for drugs or

medicines containing cocaine or its derivatives; under the Patent Medicine Act importation or sale of such after April 1st, 1909, is prohibited.

SPITTING IN RAILWAY CARS.

The railways of Canada have all, at the solicitation of the Montreal Board of Trade, been sent copies of the draft order of the Board of Railway Commissioners regarding spitting in cars, and will appear to submit their views. The draft order requires every railway company within three months—

1. To properly clean and disinfect and thereafter to properly keep clean and disinfected its passenger cars, stations, and waiting rooms, in order to prevent dissemination of tuberculous or other infectious or contagious diseases.

2. To cause printed notices to be placed and maintained in each of its passenger coaches, one in each end of the car, and in some conspicuous place in each of its stations and waiting-rooms, prohibiting the practice of spitting in the said cars, station, and waiting-rooms, except in proper receptacles provided for the purpose, and prescribing a penalty for violations thereof.

3. That every such railway company be liable to a penalty of a sum not exceeding fifty dollars for every failure to comply with the foregoing regulations within the time for their coming into force and thereafter.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND DISTRICT.

THE EPIDEMIC OF INFLUENZA.

THE epidemic of influenza is so widespread in Manchester at present that the medical officer of health, Dr. Niven, has thought it necessary to have large bills posted up all over the district, giving hints for prevention and treatment. Last week 8 deaths were notified as directly due to influenza, and the fatal cases of pneumonia were especially numerous. Last year the highest figure for deaths in one week from pneumonia was 47, but last week 57 were recorded. In many cases of influenza this year typhoid characteristics are prominent, and most patients are troubled with a constant tickling cough. The acute stage often lasts from ten to fifteen days, and is followed by considerable weakness and depression. Dr. Niven draws particular attention to the need for isolation, especially in the case of first attacks in the household. He says that persons attacked "should not on any account join assemblages of people for at least ten days from the commencement of the attack." There is fear that these directions about isolation will be largely disregarded, in spite of the fact that every one knows perfectly well how infectious the disease is, and nothing short of compulsion will procure proper isolation. Next to isolation, perhaps, the most important suggestion given by Dr. Niven is that "discharges from the nose and mouth should not be allowed to get dry on the pocket handkerchief or inside the house or workshop. They should at once be collected on paper or clean rag and burned, or, if this cannot be done, the paper or rag should be dropped into a vessel of water, while infected articles and rooms should be cleansed and disinfected." Other valuable suggestions for prevention are given which afford a good example of the way in which municipal authorities may proceed in preventive treatment for the whole community, in contrast with the so-called curative treatment for paupers only with which boards of guardians seem bound to be content.

A DOUBTFUL CAUSE OF DEATH.

A somewhat unusual case was investigated last week at Pendlebury which may have the effect of still further lengthening the list of occupation diseases for which compensation may be claimed. It appears that an elderly man who had been for twenty-one years a sexton at Pendlebury, while engaged in digging a new grave in the churchyard accidentally opened with his pick an old brick drain from which a most offensive effluvia came. He complained the same night of feeling ill, and soon began to suffer from severe diarrhoea. It was found necessary to call in Dr. David Owen, of Ilrams-o'-th'-Height, who found him suffering from diarrhoea and pneumonia, from

which he eventually died. Owing to the unusual circumstances, the coroner was informed, and thought it right to hold an inquest, with a *post-mortem* examination. At the inquest Dr. Wright, of Ancoats Hospital, said that he had made a *post-mortem* examination, and agreed with Dr. Owen that the cause of death was acute pneumonia. It was quite possible that the diarrhoea which commenced the illness might have been caused by the bad effluvia, and in favour of this was the fact that the deceased had had similar attacks before following exposure to similar exhalations. Dr. Owen said that on February 22nd he found deceased suffering from diarrhoea and pneumonia. After a few days the case seemed somewhat favourable, but another attack of diarrhoea set in, and he gradually sank. Dr. Owen had known the man for ten years, and had attended him before for diarrhoea. On one occasion he had called in the late Professor Leech of Manchester in consultation, and they agreed that there was some reason for thinking that the noxious emanations from old graves might have caused a malignant form of diarrhoea, and the man was advised to give up the occupation of gravedigger. Witness entirely agreed with the evidence from the *post-mortem* examination that the cause of death was pneumonia, but he referred to several authorities to show that cadaveric exhalations were recognized as a cause of disease and death. In the *Nomenclature of Diseases*, issued by the Royal College of Physicians, "putrid exhalations" were given in the list of poisons. A member of the jury said he thought that death had been caused by diarrhoea set up by the bad smells, but the coroner pointed out that the doctors' evidence only showed that that was possible, though it could not be proved, and the jury would be treading on dangerous ground; the *post-mortem* examination exactly tallied with what Dr. Owen had certified—that death might have been caused by the exhalations. Ultimately a verdict was returned of death from natural causes. The case is interesting not only from a medico-legal point of view but scientifically, and may be noted in connexion with an investigation that is now going on in Manchester as to the effect of sewer gases on the public health.

SMALL-POX INFECTION FROM COTTON.

The possibility that small-pox can have been conveyed to England from Egypt by means of raw cotton has been suggested by the medical officer of health for Bolton, where two sporadic cases have recently occurred. A cotton worker was found to be suffering a few weeks ago, and no definite source of the infection could be found after the strictest investigation. A second case, also in a cotton worker, occurred soon afterwards, and it is understood that the two cases had had no connexion with one another, and were employed at different mills. In Stockport also a case has occurred in a cotton worker. Three cases altogether have been found in Stockport, but it is known that two had been in contact with the first. As far as can be ascertained, no further case has occurred, and after the measures that have been taken, it is not likely that the disease will spread. In the year 1901 a sporadic case occurred in Stockport, and Dr. Meredith Young, then medical officer of health for Stockport, expressed the opinion that the disease had been conveyed in cotton. At that time it was found that there was a mild epidemic of small-pox among the natives employed on the cotton plantations of Texas and the Southern States where the cotton came from. There had been no case in the town for fully a year previously, and the man who was attacked was engaged in opening the bales and feeding the raw cotton into the machines. At the present time some of the cotton comes from Egypt, and it seems that small-pox is somewhat more prevalent there than usual. It is the custom of the cotton workers, in manipulating it, if a strand should get broken to piece it up by wetting it with saliva, and any infective material might thus readily get into the mouth. As no very effective means are taken to cleanse the cotton before arrival in England, and as many of the cases of small-pox may be slight and easily overlooked among the natives on the plantations, even if the present cases cannot be proved to have been actually caused in this way, it is evident that some danger may exist. The bales of cotton are so tightly packed, as a rule, that it is hardly likely that any infective material would be sufficiently exposed to the air to cause any great attenuation of the virus.

NEWCASTLE-UPON-TYNE.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

The increased work thrown upon Dr. George Foggan, the Medical Inspector of Schools, has rendered necessary the appointment of an assistant—Dr. R. Rutherford. Every facility has been afforded to these gentlemen by the Education Board as regards provision of office, rooms, and clerical assistance.

MATERNITY HOSPITAL.

At the annual court of governors of the Newcastle Maternity Hospital, presided over by the Lord Mayor of the city, it was reported that 1,108 outdoor cases were attended mainly by the students and nurses, while 227 patients were admitted into the hospital during 1908—an increase of 222 outdoor and 16 indoor cases compared with the numbers for 1907. Negotiations are in progress for the sale of the present site and the purchase of another for a new hospital, which is considered to be a necessity. During 1908 three examinations were held in the hospital under the regulations of the Central Midwives Board.

EDINBURGH UNIVERSITY CLUB.

The members of the Edinburgh University Club held their annual dinner in Tilley's Rooms under the presidency of Dr. W. S. Campbell on March 12th. The vice-chairs were occupied by Dr. James Smith, of Ryton, and Dr. Goudie, South Shields. The guest of the evening was Professor Francis M. Caird. Sixty gentlemen sat down to dinner. After the loyal toast had been honoured, the President in a happy speech proposed "Alma Mater," and in coupling with it the name of the guest, extended a hearty welcome to Professor Caird. Before sitting down the company sang "Gaudemus." Professor Caird had a most cordial reception, and to all assembled his reply, which was full of anecdote and of interesting reminiscences of Edinburgh professors, teachers, and infirmity officials, was a source of extreme delight, heightened when Professor Caird brought his interesting remarks to a close by his singing two verses of an old song. To Dr. Hume was entrusted the toast of "Sister Universities," and by none could it have been better rendered. Sir Thomas Oliver responded. In a very appropriate speech the health of the President was proposed by Dr. Bunting, who alluded to the important part Dr. Campbell had played in the foundation and development of the club. Under the genial guidance of the chairman a most pleasant evening was spent. The toast list was short, and this gave the meeting a distinctly social character, and allowed more opportunity for song and conversation. The musical part of the proceedings was much appreciated. To the pleasure of this Professor Caird, who was quite at home among friends and old fellow students, in no small degree contributed. Much of the success of the banquet was due to the excellent arrangements made by the honorary secretary, Dr. T. Gowans.

WEST YORKSHIRE.

THE SANITARY CONDITION OF HARROGATE.

The Sanitary Committee of the Harrogate Town Council has lately had under consideration a report by Dr. Spencer Low to the Local Government Board on sanitary matters as affecting the borough. As a result of this, certain recommendations have been formulated by the Sanitary Committee, which were brought before the Town Council on March 8th, and after considerable discussion were eventually adopted. These recommendations were:

1. That the corporation should take steps to appoint two additional men to assist the inspector of nuisances in an inspection of all house drains in the borough.
2. That the corporation should make application to the Local Government Board for an order putting in force in the borough Section 25 of the Public Health Acts Amendment Act, 1907, with respect to the forming, flagging, asphaltting, or paving of yards to dwelling-houses, for the effectual drainage of the subsoil, or surface of the yards, to a proper outfall.
3. That notices should be given to the owners of two disused underground cellars and warehouses that the premises must not be again used as backhouses.
4. That a subcommittee be appointed to seek a conference with subcommittees of the rural and urban district councils of Knaresborough with a view to the three authorities appointing

a joint meat, milk, and cowsheds inspector for the whole area of the three districts.

5. And that a subcommittee of the corporation inquire into the advisability of appointing a medical man to devote the whole of his time to the duties of medical officer of health and education medical officer for the borough.

Owing to the popularity of Harrogate as a residential and health resort, its sanitary condition is not only a matter of local but of national concern; it should be above suspicion.

THE TREATMENT OF PHTHISIS IN THE BRADFORD WORKHOUSE.

The Bradford Board of Guardians has recently had under consideration the danger to the general inmates of the hospital from the presence amongst them of cases of phthisis. The guardians on February 24th had 120 cases of phthisis and only proper accommodation for 79, so that 41 cases were in the ordinary hospital wards. They determined to erect a temporary structure near the present premises to accommodate these patients, but their plans have been vetoed by the Local Government Board for the following reasons:

1. Owing to the proximity of the proposed building to the boundary of the site and to the neighbouring dwellings.
2. To the impossibility of securing a favourable aspect.
3. To the impossibility of arranging a building on the limited area so as to secure sufficient cubic space for the number of occupants and of dividing the building into sections so as to form smaller groups of patients in the wards and of giving the benefit of some open-air treatment.

PHTHISIS AMONGST STONE WORKERS.

Dr. Edwards, M.O.H., at the meeting of the Southowram (Halifax) Urban District Council, held on March 2nd, submitted his annual report, and drew special attention to the death-rate from phthisis. Southowram, situated on the top of Beacon Hill, and considered one of the healthiest parts of Halifax, had a very high death-rate from phthisis. The population of the district is about 3,072, and the chief industry quarrying. Dr. Edwards attributes the prevalence of the disease to stone dust, and believes that the disease might be considerably diminished if the workers could be persuaded to wear some kind of respirator to prevent the inhalation of the stone dust. He recommends that pulmonary consumption should be included amongst the notifiable diseases.

LIVERPOOL.

A NEW MATERNITY HOSPITAL.

At the annual meeting of the Ladies' Charity and Lying-in Hospital it was pointed out that the present hospital, with about twenty beds, was inadequate to meet the requirements of a large city like Liverpool with its unusually large proportion of poor. Sir William Hartley, in speaking to the adoption of the annual report, announced his intention of erecting a new maternity hospital, to provide bedroom accommodation for seventy-five persons—say, fifty patients and twenty-five staff and pupil midwives. The cost is to be £15,000, including the building, furniture, and equipment in every particular, with passenger lift and suitable laundry. The committee is to provide the site, and a sum of £20,000 is to be raised as a maintenance fund, to be expended during the first fifteen years. It is expected that the construction of the hospital will take about eighteen months. Sir William Hartley expressed the hope that the hospital would become a great teaching centre, and that many medical students would get their maternity training there. He desired a medical woman to be included in the resident staff, and expressed the opinion that it was in the interest of the hospital and also of the community that the medical staff should retire at a somewhat earlier age than has been usual hitherto, and thus give an opportunity for a larger number of medical men to gain experience in the new institution. On this suggestion it may be observed that the retiring age has recently been fixed at 60, the limit which holds at the Royal Infirmary, the Northern Hospital, and the Stanley Hospital. Sir William Hartley's munificent support of the medical charities of Liverpool, and his enlightened interest in their welfare, are universally acknowledged, but there can be no doubt that by the present gift he has not alone done an

immense service to the poor of the city, but by providing a wider field and an adequate provision for the teaching of practical midwifery has conferred a great boon on the medical school and the university.

MEDICAL OFFICER TO THE POLICE.

It is a matter of great regret that the movement started in the local Divisions to induce the city council to grant better terms to the medical officer to the B Division of the police has not been successful. Dr. W. J. Bennett Jones has been appointed at a salary of £60 per annum, to be increased to £80 per annum after five years' service.

WALES.

THE EBBW VALE DISPUTE.

We learn from the *Western Mail* of March 16th that the dispute between the directors of the Ebbw Vale Workmen's Fund and the medical men employed under the fund entered on a new stage on March 15th. The various phases of the dispute need not be related here. Those of our readers who are interested in the matter have had abundant opportunities of following the sequence of events. It need only be recalled that when the medical men formerly employed under the fund were replaced by practitioners not members of the British Medical Association, a large number of workmen in the Cwm and Waunllwyd district, owing to their confidence in Dr. John Sullivan, one of the dismissed doctors, gave notice to the Ebbw Vale Company to desist from making any more deductions from their wages towards the Ebbw Vale workmen's doctor's fund, and Judge Owen ordered that the contributions during a period of six months should be refunded. This award placed the fund in serious financial difficulty. The liability altogether amounted to over £1,000. Mr. F. Mills was asked to intervene, and the following provisional agreement was proposed:

That, in view of the contents of Mr. Mills's letter of the 24th ult., wherein it was stated that Dr. Sullivan had decided to waive all claims that he might have against the doctor's fund entirely, in the interests of peace, the judge's award of £196 3s. 1d. in recent county court actions be dropped entirely. Further, that in settlement of the whole dispute, the fund section offered, and the Cwm section decided to accept, the sum of £150, being the estimated total of the present liabilities of the Cwm section. The whole of the above agreement is subject to the appointment of Dr. Sullivan.

This agreement was at first rejected, but after further negotiations, and after an independent ballot had been taken of the whole of the workmen of the Ebbw Vale and district, it was accepted by a majority of 252. We reserve comment on the matter till we are in possession of full information. In the meantime we wish it to be understood that the facts stated above are taken from the *Western Mail*, with which lies the responsibility for the accuracy of the statements.

SCHOOLS MEDICAL WORK AT BARRY.

At a special meeting of the Barry Education Committee held on March 8th, the head teachers of the various schools attended and discussed the proposals of the school medical inspector (Dr. W. Lloyd Edwards) to minimize the clerical work imposed upon head and assistant teachers in carrying out the new regulations. With a few alterations, the scheme adopted provisionally by the committee included the appointment of a school nurse (not necessarily a trained nurse) to assist the school medical officer at the medical inspection, in doing clerical work, such as entering details on cards, etc., the nurse to attend the schools in accordance with a time-table. Certain preliminary work, however, would still remain for the teachers to do; the resolution requiring the teachers to test the children's vision annually was rescinded, but the teachers agreed to report particularly bad cases to the school medical officer.

GOVERNMENT GRANTS TO EDUCATIONAL INSTITUTIONS.

The Civil Service Estimates just issued provide for an additional grant of £15,000 to the Welsh University and constituent colleges. The grant of £20,000 to the University College of North Wales building fund is not repeated this year. The £15,000 is to be apportioned between the

University of Wales and the University Colleges of North and South Wales and Aberystwith. The allocation of the particular amounts to the three colleges and the university will be made later. The estimates also provide for a grant of £4,500 to the National Library of Wales and £2,000 to the National Museum of Wales.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

UNIVERSITY OF EDINBURGH—HISTORY OF MEDICINE.

IN his third lecture, Dr. John D. Comrie dealt with the early Greek philosophers and physicians, health temples, and incubation. Between the fifteenth and fifth centuries B.C. Asiatic influence had gradually increased in Greece. Within this period the people seem to have lived with a richness to which Latin poets looked back in longing as the "age of gold," and they seem to have dwelt in well-built cities possessed of efficient storage and drainage systems. To this period Aesculapius belongs. His origin is shrouded in obscurity. Homer makes him a chieftain from Trikke in Thessaly instructed in the knowledge of healing herbs by Cheiron the Centaur on Mount Pelion. Homer gives him two sons who fought before the walls of Troy, both of whom were warriors first and then healers. Apollo was the reputed father of Aesculapius, and a goat his foster-mother. The cult of Aesculapius originated in Epidaurus. In early Greece physicians were not very clearly separable from philosophers. The latter took for their province the whole sum of human knowledge. Pythagoras (about 580 B.C.) was one of the earliest of these. He believed in the doctrine of transmigration, enjoined a rigid dietary, with abstinence from flesh, and forbade certain vegetables, especially beans. He valued music in the treatment of diseases, particularly in disorders of springtime and in affections of the mind. He introduced oxymel of squills from Egypt into Greece, and he strongly recommended onions, and exercise in the gymnasium. The earliest physician of whom there is any considerable record was a fellow-townsmen of Pythagoras, by name Democedes (born about 540 B.C.). His history is given by Herodotus (Book iii, 130 ff.). From this it would appear that the remuneration of the physician consisted chiefly of gifts, and that the various cities had public medical officers. He left his country and attached himself to Polycrates, who paid him two talents (£487 10s.) for his services. Then he went to Samos. Chiefly to him was due the high reputation of the physicians of Crotona. Democedes successfully treated Darius for a bad sprain of the foot, where the Egyptian physicians had failed. He cured the wife of Darius (Atossa, the daughter of Cyrus) of an abscess in the breast, and thus gained his freedom from slavery. Among the early philosophers who concerned themselves with medical subjects should be mentioned Alkmaeon of Crotona, a follower of Pythagoras, who dissected the eye and originated the theory that the brain is the seat of the soul. Also Empedocles of Agrigento (495-435 B.C.), who suggested the principle of evolution on which Darwin based his theory. Anaxagoras of Klazomanae, who announced views on sleep and breathing, and held that the chief acute diseases were due to the deposit of bile in the lungs, vessels, pleura, etc., deserves mention. A certain Ctesias, who had probably been a physician in the Greek army of Cyrus, and was taken prisoner at the battle of Cunaxa (407 B.C.), treated the wounds of Artaxerxes, King of Persia, and subsequently visited India. The question of how far Greek medicine was indebted to the medicine of India and how far Indian medicine was indebted to Greece was discussed. Probably Western and Indian medicine developed quite independently, though they derived something from each other in the time of Hippocrates. In his fourth lecture, Dr. Comrie said the famous medical schools of ancient Greece were in Kyrene, Kroton, Sicily, Rhodes, Knidos, and Kos. In some cases, as at Kos, the school sprang up near a temple of Asklepios, but general medicine was a branch of science taught by the philosophers or by the Asklepiad families, who retained their secrets with the greatest care. These ancient Greek physicians derived their surgical knowledge from accidents

in the gymnasiums and from their practice in their almost constant wars. In the Anabasis of Cyrus and Xenophon military surgeons accompanied the troops. Cure by rest, diet, cheerful surroundings, and suggestion was carried out at the numerous Health Temples throughout Magna Graecia. Epidaurus was the best known of these. Its theatre was capable of holding 12,000 persons, and outside the temple precinct was the Stadium capable of holding 20,000 spectators. Thus pleasure helped the return to health. There were sacred wells and baths and lying-in rooms near. Sophocles was in his youth a priest at Epidaurus. Incubation was practised. Various cures were described.

WESTERN INFIRMARY APPOINTMENT.

THE managers of the Western Infirmary have filled up the vacancy created by the death of Dr. Lindsay Steven by promoting Dr. Wm. MacLennan to be a visiting physician. Dr. MacLennan has served only a few years as assistant physician, but for the past year has been continuously acting in charge of wards, first as substitute for the late Sir Thomas McCall Anderson, and since his death he continued to take charge of the same wards during the prolonged interregnum consequent upon the proposal to transfer the clinical chairs to the Royal Infirmary. During these months Dr. MacLennan has proved a popular and successful teacher. His claims for promotion were felt to be so strong that the managers appointed him to the full physicianship without throwing the post open to competition.

RUCHILL FEVER HOSPITAL.

THERE seems to have been renewed friction at Ruchill Fever Hospital between the matron and the physician-superintendent. The first public indication of trouble was a recommendation by the Hospital's Committee that the physician-superintendents at Belvidere and Ruchill should change places, Dr. Johnstone going to Belvidere and Dr. Brownlee in exchange taking charge of Ruchill. This motion was adopted by a full meeting of the town council, but no discussion was permitted of the reasons which had led to such a step. Since then one of the town councillors has made a long communication to the press which indicates that there was serious friction between the matron and the superintendent. As the statements of the other side have not been published yet, it would be inexpedient to offer any comments, but some of the matron's entries in the logbook are couched in extremely autocratic and peremptory terms, which certainly did not make for peace

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE GENERAL ANAESTHETICS BILL.

WE have received from the Honorary Secretary of the Incorporated Dental Hospital of Ireland a copy of the following resolutions adopted at a meeting of the staff held recently in Dublin.

First Resolution.

THAT the members of the staff of the Incorporated Dental Hospital of Ireland, having had under consideration the General Anaesthetics Bill, 1908, as submitted by the Privy Council to the General Medical Council, do approve the general principles of the bill, but are of opinion that the clauses relating to registered dentists should be modified. They would respectfully point out that dental students, before they present themselves for their final examination, are required to produce evidence of having received instruction in general medicine, surgery, and physiology, as well as in the administration of anaesthetics; they are consequently of opinion that if the course of instruction in the latter subject were made identical for medical and dental students, the same privileges could with perfect propriety be extended to dentists as are given to medical men by Clause I of the bill.

In order to give effect to these proposals they would suggest the following amendments to the bill.

1. That Clause I should read as follows:

That any person other than a legally-qualified medical practitioner registered under the Medical Acts, or legally-qualified dental practitioner registered under the Dentists Act, 1878, who shall wilfully administer or cause to be administered to any other person, by inhalation or otherwise, any drug or substance, whether solid, liquid, vaporous, or gaseous, and whether pure or mixed with any other drug or

substance, with the object of producing a state of unconsciousness during any medical or surgical or dental operation, act, or procedure or during child-birth, shall be liable on conviction before a court of summary jurisdiction for such offence to a penalty not exceeding ten pounds, and in the case of a second or subsequent conviction to a penalty not exceeding twenty pounds, provided always that a person shall not be liable to a penalty under this section if in conducting such administration he was acting under the immediate direction and supervision of a legally-qualified medical or dental practitioner, or if the circumstances attending the administration were such that he had reasonable grounds for believing, and did believe, that the delay which would have arisen in obtaining a legally-qualified medical or dental practitioner would have endangered life.

2. That Clause 2 be amended as follows:

All licensing bodies in the United Kingdom recognized by the General Council of Medical Education and Registration of the United Kingdom shall require that all candidates, both medical and dental, before presenting themselves for their final examinations, shall have received thorough theoretical and practical instruction in anaesthetics, and shall have personally administered anaesthetics, under the supervision and to the complete satisfaction of their respective teachers.

3. That Clause 3 be deleted.

Second Resolution.

That no legislation which does not deal with local anaesthetics will adequately meet the mischief against which the General Anaesthetics Bill is aimed.

We are informed that the hospital staff comprises twenty dentists, of whom eight hold additional medical qualifications, and eleven medical men who are anaesthetists.

SANITATION IN NATIONAL SCHOOLS.

Mr. Kelly, Senior Inspector of the Board of National Education in Ireland, has again drawn attention to the deficient sanitation in national schools. In Belfast, he said, much had been done to improve the condition, but much still remained to be done. The accommodation, which should be 10 sq. ft. for each pupil, was insufficient in 27.7 per cent. of the schools. One school had floor space for 232 pupils, but 331 were present; in another there was accommodation for 18, while 39 were present. In eight schools the ventilation was deficient. During the epidemic of cerebro-spinal fever much more attention had been paid to sanitation by the authorities than would have been given if the epidemic had not occurred. Worse reports come from other parts of Ireland, and it is evident that a radical change is necessary in the control of the sanitation of elementary schools.

LISBURN SEWERAGE SCHEME: COMPLETION OF WORKS.

For some years past a new sewerage scheme for Lisburn has been under construction, and on March 12th the Urban District Council paid a formal visit of inspection, and found the working most satisfactory. The scheme allows for 50 per cent. increase of population. The rain-water from the street is collected into the old sewers, and led direct to the river or the by-wash; that from the roofs into the new, along with the sewage of the town. At the purification works the sewage is passed through two grit or detritus chambers, then through two settlement tanks having a capacity of 375,000 gallons, where the major part of the organic suspended matters are left; these solids are submitted to a septic action by which they are liquefied; the liquid is then passed into one or other of a series of ten contact bacteria beds, which are automatically filled and emptied once in the twenty-four hours. The purified liquid from the contact beds is automatically discharged on to the area of land in possession of the council. These works are considered among the best, if not the best, in the kingdom, and have been carried out very economically at a cost of £54,000, or about £3 a head of population, payable in sixty years. At a luncheon subsequent to the inspection much credit was given to the engineer in charge, and to Dr. St. George and all others who had brought the work to such a successful issue.

UNSATISFACTORY VACCINATION IN BELFAST.

At the meeting of the board of guardians on March 9th, a letter was read from the Local Government Board intimating that vaccination was not in a satisfactory condition in the union. In 1907, 4,269 defaulters were reported, and of this number 3,044 were returned by the vaccination officer as vaccinated. In 1908, 4,308 defaulters were returned, and up to February 10th, 1909, only 1,035 had been returned as vaccinated; the last figure referred

only to certain quarters of the year and certain districts. The medical officers state that many parents do not allow the proper number of marks and the child is removed, and subsequently inefficiently vaccinated. The result is that in many cases the protection against small-pox is not what it should be.

Correspondence.

SLEEP AND WANT OF SLEEP.

SIR.—The very interesting paper of Dr. Farquharson on sleep and want of sleep, which appeared on February 27th, has not provoked any immediate reply, such as it was intended to produce, from some up-to-date physiologist or pathologist. I am writing chiefly to emphasize his request for enlightenment. Of the numerous interesting practical points which he brings out, almost all are within my own experience or observation. The double action of tea is certain and important. I myself am usually put to sleep at once by a cup of warm if not too strong tea; whereas a cup of strong tea taken several hours before bedtime ensures me a bad night. With Dr. Farquharson, I suppose that in the former case the hot water has something to do with the result. People who habitually drink tea are kept awake by coffee, and vice versa. The hot (but not extremely hot) whole-bath or foot-bath seems to act in accordance with Durham's principle. Of hypnotics, I suppose paraldehyde would be among the best, but for its horrible taste. Urethane is little used now; but I have found it safe, agreeable, and moderately effectual. Sulphonal is good, and veronal better, though their comparative insolubility is troublesome. I see a soluble form of veronal advertised.—I am, etc.

JOHN BEDDOE, M.D., F.R.S., etc.

Bradford-on-Avon, March 10th.

THE PREVENTION OF DEATHS BY BURNING IN CHILDREN.

SIR,—There are in this country 1,400 deaths annually from burns and scalds in children under 5 years of age. The great majority of these deaths are, with a few simple precautions, absolutely preventable, and it is to this fact that I am anxious to call attention. Think of it—all these hundreds of babies lost unnecessarily each year; think not only of the dreadful waste of infant life, but also of the awful pain and agony of this terrible ending. In addition to those who lose their lives there are an enormous number who are injured in varying degrees, so that the sum total of suffering is appalling. The Legislature has recognized that some action was necessary, and a beginning has been made by Clause 15 of the new Children's Act, which comes into force on April 1st, and which enacts that—

If any person over the age of 16 years who has the custody, charge, or care of any child under the age of 7 years, allows that child to be in any room containing an open fire grate not sufficiently protected to guard against the risk of the child being burnt or scalded, without taking reasonable precautions against that risk, and by reason thereof the child is killed or suffers serious injury, he shall on summary conviction, be liable to a fine not exceeding £10.

The two most important contributory causes of this very large number of deaths and accidents from burning are (1) the wearing of inflammable garments, and (2) the absence of efficient fireguards.

The chief material used by the poor for the undergarments of children is flannelette. It has the great advantage of being warm and cheap, and the great disadvantage of being very inflammable. But there is no substitute for it within reach of the purse of the poor. I have made many inquiries amongst those who should know, and not one of them could suggest any fabric which could be used in its place. Those materials which will only burn with great difficulty, for example, good flannel, are much too expensive. The varieties of flannelette which are said to be non-inflammable are not really so. I have procured a very large number of samples of flannelette from drapers in the town, of all prices, ranging from 2½d. to 10½d. per yard, many of them declared to be non-inflammable, and with the single exception of one, to which I refer below, they all flamed on the application of a match, the dear ones almost, if

not quite, as readily as the cheap. The one exception is a patent material much advertised, especially by coroners, which certainly burns with great difficulty before washing, but which catches fire almost as readily as ordinary flannelette after repeated washing, and as the cheapest variety of this costs 6½d. per yard we can hardly expect the poor to pay this price instead of 2½d. or 3½d. for advantages which are so transient. The prevention of these deaths does not depend on the abolition of flannelette garments; this is a quite impracticable suggestion.

On examining the second cause, want of proper fireguards, I am much more hopeful. This fact was present in 85 per cent. of 1,600 inquests held on children dying from burns. The difficulty of getting the poorer classes to use these guards is, of course, their cost. It is the bounden duty of all district visitors, nurses, and others who come in contact with the poor to impress upon them on every possible occasion the great danger which their children run by being left in rooms with unprotected fires. But the best method of prevention that I can suggest is that an addition should be made to the building by-laws of every council rendering it compulsory to fix efficient fireguards to every grate in any new building under a rental value, say, of £26 per annum, erected in the town. I fix a rental value of about £26 because it would not be necessary to compel the fixation of guards in the better class of houses. This is already done voluntarily by the parents in almost all cases where there are children, and in addition they usually have nurses to look after them. As a matter of experience, it is practically always among the poor, where the parents cannot leave any one in charge, that the deaths from burning in children occur.

This by-law would add practically nothing to the cost of a house. I have consulted two expert practical builders in the town, and they tell me that the additional expense for a house costing £350 would be about 30s. to 35s., that is, less than ½ per cent.

My proposal is not merely an academic expression of an ideal. It is well within the function of a municipal council to do this, and I have ventured to write and suggest such an addition to the building by-laws to the Works Committee both of the Brighton and Hove corporations, with what result I cannot as yet say, but I trust they will see their way to adopt my suggestion, and so save many children from a dreadful death, and many more from pain and suffering.—I am, etc.,

Hove, March 9th.

L. A. PARRY, M.D., B.S., F.R.C.S.

COLLIERY ACCIDENT STATIONS.

SIR,—In the JOURNAL of February 27th the opening of a colliery accident station at Benwell Colliery, Newcastle-on-Tyne, is reported. I should like briefly to emphasize the necessity for such stations becoming universal at all pit-heads.

Over six years ago, on my initiative as surgeon to the colliery, and with the cordial co-operation of the management, such a station was opened at the Bowhill Colliery, Cardenden, Fife. Nothing elaborate was attempted. A large room was erected with tables on which stretchers could be laid; a hot and cold water supply was laid on, with electric hand-lamps, and cupboards for storing splints, antiseptics, and dressings. Opening off this room was the shed in which the ambulance wagon and the wheeled litter were kept, so that the patient after receiving first-aid treatment was under cover until removed to home or hospital as the case might be. The ambulance room was a useful centre for the meetings of the ambulance corps, and that it made for efficiency was shown by the fact that a team of pit head men in one year gained the Fife miners' ambulance cup, the Dunfermline Matheson cup, the Dundee silver challenge shield, and was second for the President of the St. Andrew's Ambulance Association's cup at Glasgow—as good a record, I should imagine, as any bona-fide working man's team ever had.

Failing a room of this sort, the patient has to be taken to an engine-room or similar place at a temperature of 65° to 75° F., with the inevitable discomforts of smell and noise.

Such stations should not fall to be provided by private philanthropy, but should be secured by legislative enactment. They are a necessity at every pit-head.—I am, etc.,

DAVID RORIE, M.D. Edin.

Culls, Aberdeenshire, March 15th.

OPHTHALMIC SURGEONS AND SPECTACLE VENDORS.

SIR,—In the JOURNAL of March 13th, p. 693, attention is drawn once again, by "Specialist," to the notorious amount of unqualified practice in eye refraction work. In addition to the optologist, pure and simple, the prescribing chemist has now added "sight-testing free" to his attractions.

I know of one optologist who from selling spectacles has taken to making them, and has, I believe, made himself competent to correct and estimate errors of refraction. If only he were allowed to paralyse accommodation when necessary I believe his results would be correct. Although he acts on his own, he has been taken under the wing of a qualified man who figures in the directory as consulting ophthalmic surgeon to the local infirmary. No doubt when nurses use ergot or administer chloroform he will use atropine, and forthwith blossom forth as a competent rival to his coadjutor in the department of refraction work.

To anyone who considers this matter from an outsider's point of view it is plain that it is the "free" test which draws. Many patients can ill afford guinea fees and yet would not of their own accord go to hospital if their own doctor would deal with them at, say, a half-guinea fee. Instead of doing so he sends them to the eye hospital or to the optologist if they declare their inability to afford the usual consultant's fees. If at the eye hospital they are handed over to a nurse they probably prefer the sumptuous room of the optologist, who, in spite of the free test, seems to be able to make a good profit out of the glasses he prescribes and sells to them. It really almost seems as if the profession were the culprit to a large extent, and especially the general practitioner.

Seeing that refraction work has to deal in most cases with a deformity rather than a disease of the eye, one does not quite see why the general practitioner should not make himself competent—at least, as competent as the optologist—to take many of these cases in hand. Certain cases, as in other departments of his work, he could send to a specialist. Must he send every case of displacement that requires a pessary to a gynaecologist? The general practitioner could afford to do the work at a half-guinea fee, and that without depriving the ophthalmic specialist of anything. Of course, if the rising young specialist is prepared to do such work at such a fee, the general practitioner would probably prefer to send the cases to him, and a little explanation would probably convince patients of the wisdom of going to him.

Governments in this free country are so apathetic, where only life or limb are concerned, about protecting citizens against themselves or their deceivers, that it is hardly likely the optologist will be restrained. He is more likely to be recognized as a benefactor of the people.

It rests, then, with the profession, both in its own interests and in those of the public, to checkmate unqualified practice, and I believe the general practitioner could, if he cared, successfully do this in this particular matter.—I am, etc.,

March 15th.

"G. P."

SIR,—I am very pleased to see the letter by "Specialist," as matters have now reached a point when something should be done. Not very long ago a well-known eye specialist used to see patients at a cutler's shop. A sight-testing optician advertises in the local papers that he works "in co-operation" with a well-known local and London oculist. Moreover, in several districts eye hospitals have appeared which are nothing more or less than an illicit method of advertisement.

Surely taking a house and putting in very large type "Eye Hospital" in front of it does not transform it into a hospital. Recently such institutions have issued reports and published the names of the members of the committee, but there appear no subscribers' list or list of donors, etc., nor are the accounts audited by a chartered accountant. Some of these reports are distinctly amusing and not unfamiliar to some of your readers.—I am, etc.,

March 15th.

ANOTHER SPECIALIST.

THE DIAGNOSTIC VALUE OF HUNGER PAIN.

SIR,—In a number of able and interesting articles on the diagnosis and treatment of ulcer of the stomach and duodenum by surgical writers, published in the BRITISH

MEDICAL JOURNAL during the course of the last few months, I notice that it is apt to be assumed that the presence of "hunger pain" is a sign pointing conclusively to the presence of duodenal ulcer. Now I believe this to be an error, for the following reason. The natural history of a case of duodenal ulcer is usually as follows: In early manhood the patient—for he is usually a male—begins to suffer from recurring attacks of dyspepsia characterized by pain in the later period of digestion when the stomach is getting empty (hunger pain). This is the stage of hyperchlorhydria. In the great majority of instances the case does not go further than this, but the attacks gradually cease, and all is well. In a few, however, the attacks of pain become more frequent, and finally almost constant. This is the stage of continuous hypersecretion. Even this may be recovered from with proper treatment, but in a certain number unmistakable signs of duodenal ulcer appear, and the case passes into the hands of a surgeon. The latter then seems to argue thus: "I find in this patient a duodenal ulcer: he gives a history of hunger pain, therefore the presence of hunger pain is always indicative of duodenal ulcer." The fallacy of this method of reasoning does not need to be insisted upon, but is perhaps not surprising in the mouth of one who does not have opportunity of seeing these cases in the early, or functional, stage, for the fact is, I believe, that the formation of a duodenal ulcer is usually only the terminal event in a case of hypersthenic dyspepsia, and the hunger pain is a sign, not of the ulcer, but of the over-production of hydrochloric acid which almost invariably accompanies it.

I know that Mr. Moynihan, for instance, deals rather contemptuously with this view, for in an article which appeared in your issue for November 28th last, he writes:

It is a very curious feature in connexion with this disease [that is, duodenal ulcer] that perfectly accurate accounts of its symptomatology are given by authors who do not seem to have the remotest conception that the condition they are describing is not, as they suppose, one of "functional" disorder, but one in which a demonstrable organic lesion is present. The vague terms, "hyperchlorhydria," "acid dyspepsia," "nervous dyspepsia," are given very generally as diagnoses; they are too often words without meaning, clinical synonyms for the pathological condition duodenal ulcer.

I feel sure, however, that all experienced practitioners will agree with me that in saying this he goes too far, and that functional hyperchlorhydria has a real existence and is infinitely commoner than duodenal ulcer, and that to advise operation in all patients who exhibit hunger pain would be to exaggerate the domain of operative surgery and would only tend to bring discredit on the surgical treatment of gastric disorders, to which we owe so much and to which Mr. Moynihan himself has made such valuable contributions.

I should not have troubled you with this letter, Sir, were it not that I feel, and no doubt many feel with me, that the time has come to reassert emphatically the conservative view that the great majority of cases of dyspepsia met with in practice are due to functional disorder and not to organic disease, and although for the purpose of this protest I have dealt with only one well-defined symptom it would have been easy, had space permitted, to have selected, from the writings of surgeons, others, the significance of which is just as much and as commonly exaggerated.—I am, etc.,

London, W., March 16th.

ROBERT HUTCHISON.

THE COLD-BATH TREATMENT OF TYPHOID.

SIR,—I do not know whether Dr. Manasseh in his letter of February 27th quite sees my point. Since epidemics of typhoid vary so much, the experience of single observers must be fallacious. All who have tried it agree that cold sponging is helpful and relieves many symptoms, but does it really reduce the average death-rate by anything like 7 per cent., as the Brand baths do? This can only be proved by extensive statistics gathered in many places and during outbreaks of varied virulence.

Few things seem better attested in modern medical history than the lowering of typhoid mortality where the bath system was employed in its essentials, but the validity of the proof depended on the great numbers of cases in different places and at different times which yielded the same results. Thus, at Brisbane before the baths were used the deaths amounted to 14.8 per cent. in

1,828 patients; afterwards there were only 7.5 per cent. in 1,902. Drasche in Vienna found his rate fell from 16.2 to 9.3. Osler reported that from 6 to 8 per cent. more lives were saved. In the Prussian army the rate fell from 25 to 8 per cent. Wilson and Salinger had a death-rate of only 7.5 in 1,903 patients thus treated. In short, many thousands of cases showed a mortality less by about 7 per cent. than that of others who were treated just the same except for baths.

I want to see similar statistics for cold sponging and packs. If the seven lives in each hundred are saved by this method, let us by all means adopt it as far easier and simpler. If not, what is the active agent in the bath system which saves life; how can it be applied in a less impracticable way? If the great hospitals where typhoid is treated would give statistics of mortality under cold sponging on a large scale, it would be possible to see where the life-saving element of baths comes in, whether it be the longer continued abstraction of heat or what else. Dr. McCrae, in Osler and McCrae's *System*, vol. i, p. 213, speaking of these substitutes for baths, says:

They have no marked influence on the general condition, and while they give comfort and are undoubtedly helpful, their effect is in no way to be compared to that which follows hydropathy in the form of baths.

He adds that we are unable to explain this, but that it is clear that baths have a marked effect on the course of the disease, and prevent many complications, and finally that the mortality is less than under any other system. He suggests, indeed, that baths cause a greatly-increased excretion of toxins, besides aiding the circulation and nervous system, and points out definitely that the reduction of temperature is not the main object of the baths.

If these are the views of one party, is there any means of testing them by a collective investigation committee; and, if they are true, what valid substitute for baths can be recommended for use in private and military hospitals in the field, where labour and time are wanting? The question is surely worth testing, since it involves a mortality of 7 per cent. in such large numbers of patients.—I am, etc.,

Clifton, Bristol, March 2nd.

G. PARKER.

THE REMEDIAL USE OF ALCOHOL.

SIR,—I have read with much interest the most excellent address on the above subject by Dr. James Macdonald, also Dr. Hill's letter of February 1st. Dr. Hill agrees that an ounce of practice is worth a pound of theory. Certainly Dr. Hill has not had much more than the ounce of practice, for 40 to 50 cases are very few to generalize on, and a great many medical men attend a larger number of cases of lobar pneumonia in twelve months. Dr. Hill surely has not read Dr. Macdonald's address very carefully.

The medical staff [that is, of the London Temperance Hospital] claim that the results they obtain without alcohol compare favourably with those of other hospitals. Whether that be so or not, the unwisdom of forming a broad generalization from a comparatively limited number of cases is obvious. And, besides, in a disease like pneumonia there are many contributory factors and side elements which have to be taken into consideration.

In spite of this, Dr. Hill mentions his 40 to 50 cases of pneumonia, and presumably generalizes from them. Is Dr. Hill quite certain that no alcohol was administered in any of his cases? It is not very clear what clay soil has to do with the mortality of pneumonia, unless it is that cases of pneumonia do better when the atmosphere is damp; some authorities, I believe, consider pneumonia more fatal when a cold dry east or north-east wind prevails.

It is difficult to comprehend what Dr. Hill means by "paralysing effect on the cardiac nerves." Does he mean that the cardiac muscle is paralysed by the action of alcohol on some nerves connected with the heart? and, if so, which nerves—the cardio-inhibitory fibres of the vagi or the cardiac fibres of the sympathetic, or perhaps the ganglia (and the nerve fibres proceeding from them) in the walls of the heart itself? Dr. Hill writes as if the innervation of the heart and the actions of drugs acting on it, either directly or indirectly, were fully understood.

We will take a case of lobar pneumonia with "over-distension of the right side of the heart, with the small, rapid, feeble, and irregular pulse, the embarrassed

breathing, the facial pallor, and the other symptoms of what has aptly been described as right heart misery: "alcohol is administered and dilatation of superficial blood vessels follows "through the influence of the drug on the vasomotor nerves. In this way the action of the heart is relieved and its efficiency is increased"; the left ventricle is able to contract more fully (because of less peripheral resistance), the left auricle then empties itself more easily, and this in its turn, working back through the lungs, relieves the right ventricle and auricle, and thus lessens the risk of cardiac failure.

There is also the "sedative, numbing action of which the physician makes use," extremely important in lobar pneumonia. Dr. Hill does not tell us how he procures "absolute rest"; perhaps he has also been lucky in having no delirious patients among his 40 to 50 cases of lobar pneumonia as in having no deaths.

Again, there is the disputed stimulating action of alcohol on the cardiac muscle itself, not a "paralysing effect on the cardiac nerves." Also "the widely-admitted fact that alcohol possesses a certain definite value as a food," and "is readily absorbed by the stomach when other nutriment cannot be retained," etc.

The last two paragraphs in Dr. Hill's letter are rather astounding. What could be more dogmatic than "... and the cause of the cardiac failure in 99 cases out of 100 is—alcohol"? It is a pity that Dr. Hill did not read through Dr. Macdonald's address more carefully before generalizing from his 40 to 50 cases.—I am, etc.,

L. C. V. HARDWICKE, M.B.

Assistant Medical Superintendent, Paddington Infirmary, W.

PIGMENT DISAPPEARANCES IN SKIN AND HAIR.

SIR,—In the *EPITOME in the BRITISH MEDICAL JOURNAL* of February 27th is a review of observations made by Schein upon "pigment disappearances in skin and hair." With his observations I do not agree.

He says that long hairs whiten before short ones, highly pigmented hairs do the same earlier than those of lighter shades, and that hairs whose follicles have produced hairs for longest periods whiten earliest. In the *BRITISH MEDICAL JOURNAL* of July 4th, 1908, I pointed out that the hair of the beard whitens in the whole of the mental nerve areas before any other part of the beard follows suit; and that sometimes the hair of the beard in the skin of the cervical nerve supply whitens before the mental nerve areas, a very distinct line of demarcation marking the delimitation.

The mental nerve area contains long hairs, short hairs, and hairs of various ages and pigmentary shades; in fact, there is a greater variety of all these kinds of hairs here than in any other region of the beard, and yet they all whiten before longer and more highly pigmented hairs elsewhere in the beard. This could not be so were Schein's observations correct. I also pointed out that some of the shortest as well as the longest hairs of the chin whiten before other parts of the mental nerve areas, and those particular hairs grow in that part of the skin at which the mental nerves become cutaneous.

My criticism of Schein's observations comes to this: that even in the limited state of our knowledge concerning pigmentation, a conception of the appearance or disappearance of pigment is imperfect unless it include the influence of the nervous system.—I am, etc.,

London, W., March 10th.

G. LENTHAL CREATLE.

APPENDICITIS AND RHEUMATISM.

SIR,—In connexion with the question of rheumatic appendicitis recently raised by Dr. Eustace Smith I think the following case very suggestive:

A lady, aged 40, for the last year has at every menstrual period had some manifestation of rheumatism, generally taking the form of a swollen and painful joint. In August, 1908, she had what appeared to be a definite and typical attack of appendicitis, though, as it occurred at the time of a period, there was a doubt whether it might be due to ovarian trouble. A few weeks ago, again at the time of a period, the patient had a second attack, which began with vomiting, fever (102°), and general abdominal pain and tenderness, which after a few hours settled down to the right iliac region, with its maximum intensity over

the appendix. Associated with this were painful joints, severe intercostal rheumatism, and a stiff neck. This led to my trying sodium salicylate, with the result that the appendicular symptoms, though they had promised to be more severe than in the first attack, cleared up with remarkable rapidity.

The question of rheumatic appendicitis seems to me of considerable practical importance, for, as far as my experience goes, sodium salicylate is not often given for appendicitis; indeed, in these cases the modern physician is for the most part content with watching for the right moment at which to call in his surgical colleague. Provided he does not allow its use to drug his vigilance, he might, perhaps, with benefit in the future more often combine sodium salicylate with his watching.—I am, etc.,
Shanklin, I.W. J. A. B. HAMMOND.

DISEASES MODIFIED BY CLIMATE.

SIR.—Your reviewer of Dr. Stoddart's book on Psychology, in the *JOURNAL* of March 6th, quotes the passage as to the rarity of general paralysis of the insane following syphilis in the East—India, China, Japan, etc.—when compared with European countries, and though not actually doubting this, seems at a loss for an explanation.

I have no doubt as to the accuracy of the observation, and have long held the following as the reason: In hot climes, the skin being more active is more liable to disease, just as kidney troubles are more frequent in colder zones, these two systems being complementary to a certain extent.

The virus of syphilis has a special affinity for the epiblast from which both the nervous system and the skin are developed, and it is notorious that when this disease is accompanied by a good skin rash, the victim is much less likely to suffer from locomotor ataxy or general paralysis of the insane in the future. This is exactly what happens in the East, on account of the greater susceptibility of the skin to disease, and the nerve centres escape.

The conditions and strain of life are of less moment in the East, whereas the struggle for existence in the West, being more acute, might be a factor in making the nervous system more prone to the disease. Of course this only applies to natives, and not to Colonials.—I am, etc.,

THOMAS JOHNSTONE, M.D., M.R.C.P.

Leeds, March 15th.

RURAL NURSING ASSOCIATIONS.

SIR,—In the *BRITISH MEDICAL JOURNAL* of March 13th, p. 694, Dr. Wm. Milligan calls attention to rural nursing associations. The Midwives Act has so frightened the women in country villages, not one of them dare help their sisters in distress. The excellent women, who were wonderfully clean, kind, and motherly, who would stay for nights and days with a woman in labour, nursing her, feeding her, and looking after the wants of the husband and his children, are now warned, threatened, and replaced by young unmarried nurses whose questionable knowledge of the efficient use of antiseptics and cleanliness is counterbalanced by their lack of motherly experience and the art of feeding and managing a baby. Alas! the splendid spirit among village women to help one another is being crushed out by this Midwives Act.

Dr. Milligan has in no way exaggerated the situation, for practically all that he has said applies to my district; the nurse is often driven upon her rounds from village to village in a smart dogcart, she visits every possible case, making friendly calls of inquiry, diagnosing and treating whatever case she may be called in to, and my patients are attended by her frequently without my knowledge and directions. The committee of ladies are anxious to make both ends meet, and touting for patients to pay subscriptions to the association is keen. One of the ladies once accidentally told me that "her nurse was as good as any doctor." I have been threatened with all sorts of penalties and disgrace if I do not rush off to the help of this nurse whenever summoned; but as she practises medicine and minor surgery, it is a question whether I may not render myself answerable to the General Medical Council for covering an unqualified practitioner.

The Midwives Act has introduced a class of practitioners who are proving disastrous to the public health and to the qualified medical practitioner.—I am, etc.,

March 15th.

PARISH DOCTOR.

THE MENTALLY DEFECTIVE IN PRISON.

SIR,—In the issue of the BRITISH MEDICAL JOURNAL of November 14th, 1908, Dr. Champneys replies to my letter on the above subject, which appeared in the number of October 17th.

Dr. Champneys takes exception to my having denied more than he asserted. If I erred in that respect, I ask him to accept my apology; but I was not aware that I had denied anything. I made statements which I will now substantiate. Dr. Champneys declines to accept my statements, but whether he objects to them *en bloc* or only in part does not appear. I observe that Dr. Champneys does not bring forward one title of evidence in refutation of my assertions. He does not even state whence he derived the "facts authoritatively published" that more than ever confirm him in his opinion. He quotes an opinion of the Duke of Wellington, but even the Duke had his limitations, and the opinion of a person, however eminent, on a subject he has had no experience of must be largely discounted.

With your permission, I will quote some figures from the Official New Zealand Year Book for 1908 in support of the statements made in my former letter. I stated:

I. "That from being, perhaps, the most drunken, New Zealand had become one of the most sober countries inhabited by the English-speaking race." I will quote the amount of alcoholic liquor consumed by the people of New Zealand (excluding Maories), the other Australasian colonies, and the United Kingdom:

Consumption of Spirits, Wine, and Beer per head of the Population for the Years 1901-6 (p. 293, Official New Zealand Year Book, 1908).

	Spirits.	Wine.	Beer.
	Gallons.	Gallons.	Gallons.
New Zealand	0.755	0.144	9.389
New South Wales	0.81	0.57	9.76
Victoria	0.70	0.85	12.04
Queensland	0.82	0.29	10.38
South Australia... ..	0.40	2.53	8.17
Western Australia	1.49	1.08	24.74
Tasmania	0.53	0.17	9.15

The average annual consumption in the United Kingdom, 1901-5, was spirits, 1 gallon per head; beer, 29½ gallons per head; wine, ¾ gallon per head.

It will be observed that our drink bill is lower than in any of the places mentioned with the exception of Tasmania and perhaps South Australia. The latter colony consumes much more wine but less beer and spirits. The wine is chiefly light and of local manufacture, so it is probable that the South Australians consume less alcohol than we do in New Zealand. Again, on page 232 I find further testimony of the sobriety of the Maorilanders proper:

Among the New Zealand population of European descent there is evidence of less drunkenness than among people who have come from abroad. At the census of 1906, out of a total population of New Zealand over 15 years of age, 55.75 per cent. were found to have been born here; while the proportion of convictions for drunkenness of New Zealand-born Europeans to the total convictions was in the year 1906 about 20 only.

II. "That crime, especially of a serious nature, had decreased under our system of education, the decrease being most marked amongst those who had been educated in our State schools." On pages 237 and 238:

The New Zealand-born formed at the last census 68 per cent. of the whole population; they contributed only 33 per cent. of the prisoners received in gaol. Of the New Zealand population, however, a large number are under 15 years of age, a period of life at which there are very few prisoners; and therefore another comparison is necessary. It is found that New Zealand-born over 15 years of age formed 56 per cent. of the total population above that age; but, as before stated, New Zealanders constituted only 33 per cent. of the total number received in gaols.

I will here remark that if the adult population who had passed through our State schools were winnowed out from those brought up in the Colony and educated in some of the other schools, the effects of our education system

would show better results, both as to sobriety and criminality.

III. "That illegitimacy is gratifyingly small."

Average of annual proportion of illegitimate births in every 100 births for ten years ending 1907 in New Zealand, Tasmania, and New South Wales (p. 249): New Zealand, 4.52; Tasmania, 5.65; New South Wales, 7.01.

The proportion of illegitimate births per 1,000 unmarried women, that is, spinsters and widows, at the reproductive ages, covering a period of twenty years, is shown to be:

Year.	Unmarried Women aged 15 to 45 years.	Illegitimate Births.	Illegitimate Birth-rate per 1,000 Unmarried Women.
1886	56,277	662	10.70
1891	68,980	638	9.25
1896	89,722	834	9.30
1901	105,420	937	8.89
1906	116,506	1,132	9.72

I would point out that 1877 was the commencement of our education system, and that it would not have borne much fruit by 1886, and that in the next quinquennial period there was a substantial drop, which has been fairly well maintained. On p. 250 I find, *inter alia*, that the rate in New South Wales for 1905 was 16.24 per 1,000 unmarried women.

Both Tasmania and New South Wales have religious instruction in the State schools, that of the latter being denominational.

I could quote other figures which would all support the truth of my assertions, but I must regard your "scruples."

I regret that I am not able to withdraw my statement—"It is unfortunate that so many persons holding positions that should entitle their opinions to weight, argue on facts as they imagine them to be instead of as they are." It is quite evident that if Dr. Champneys did not imagine his facts he must have accepted them from some one who did.

—I am, etc.,

Hastings, New Zealand, Jan. 1st.

FRED. DE LISLE,

Member British Medical Association.

TREATMENT OF SCHOOL CHILDREN.

SIR,—Although there have been repeated communications, discussions, and suggestions as to the most satisfactory mode of carrying out the necessary treatment of school children found on examination to be defective, the difficulty seems to have been to discover a means to compel parents and custodians to pay attention to the report of the school medical officer.

The Eccles Council has recently had recourse to the Prevention of Cruelty to Children Act, 1904, which does not sufficiently meet the case.

No notice, however, seems to have been taken of the following paragraphs of Clause 12 of the Children's Charter, which, as the Children Act, 1908, comes into force on April 1st next:

12. Punishment for Cruelty to Children and Young Persons.—

(1) If any person over the age of sixteen years, who has the custody, charge, or care of any child or young person, wilfully assaults, ill-treats, neglects, abandons, or exposes such child or young person, or causes or procures such child or young person to be assaulted, ill-treated, neglected, abandoned, or exposed, in a manner likely to cause such child or young person unnecessary suffering or injury to his health (including injury to or loss of sight, or hearing, or limb, or organ of the body, and any mental derangement), that person shall be guilty of a misdemeanour, and shall be liable—

(a) on conviction on indictment, to a fine not exceeding one hundred pounds, or alternatively, or in default of payment of such fine, or in addition thereto, to imprisonment with or without hard labour, for any term not exceeding two years; and

(b) on summary conviction to a fine not exceeding twenty-five pounds, or alternatively, or in default of payment of such fine, or in addition thereto, to imprisonment, with or without hard labour, for any term not exceeding six months;

and for the purposes of this section a parent or other person legally liable to maintain a child or young person shall be deemed to have neglected him in a manner likely to cause injury to his health if he fails to provide adequate food, clothing, medical aid, or lodging for the child or young person, or if, being unable otherwise to provide such food, clothing,

medical aid or lodging, he fails to take steps to procure the same to be provided under the Acts relating to the relief of the poor.

(2) A person may be convicted of an offence under this section, either on indictment or by a court of summary jurisdiction, notwithstanding that actual suffering or injury to health, or the likelihood of such suffering or injury to health, as obviated by the action of another person.

(3) A person may be convicted of an offence under this section, either on indictment or by a court of summary jurisdiction, notwithstanding the death of the child or young person in respect of whom the offence is committed.

(The italics are mine.)

It will be seen that defaulting parents and custodians will receive at an early date most drastic treatment at the hands of the State if they continue to neglect children and young persons committed to their charge. The intention of the Act seems to be, in the first instance, to throw the onus of providing for medical treatment on the parents and custodians and not on the State.

It is also instructive, as bearing on hospital reform and the questionable need to build any but cottage hospitals in the future, to note that by this Act parents and custodians unable to meet, by insurance or otherwise, the just fees of medical practitioners are expected to claim the use of the infirmaries at present under the control of boards of guardians. This procedure will in time compel these buildings, taken over by borough or county councils, to be properly staffed and organized, and once again to take their rightful position in the economy of the State. It is quite time that voluntarily subsidized hospitals ceased, on the one hand, to bear State burdens, and, on the other, to deprive registered medical practitioners of their legitimate livelihood by underselling.—I am, etc.,

London, S.W., March 13th.

E. ROWLAND FOTHERGILL.

A MEDICAL DEGREE FOR LONDON STUDENTS.

SIR,—In fruitless arguments over the quality of various degrees and diplomas I have repeatedly seen statements and implications such as Dr. Mercier makes under the above heading in your last issue. He says:

The substitution of three professional examinations for the two in the present curriculum before the Conjoint examinee can obtain his diploma is a handicap to the London medical student in comparison with the alumni of other universities. The grievance of the London medical student is that for the same expenditure of time, labour, and money for which a provincial student can obtain a university degree, the London student can obtain the Conjoint diplomas only, which, although well known in the profession to represent professional attainments equivalent to a university degree, are not so regarded outside the profession.

I beg to say that the implication he makes here does not apply to the Scottish universities, and if he says it does, he speaks in ignorance, or quite in face of the facts. For the past twenty-five years at least (I speak from personal knowledge, and of Glasgow University specifically) the Scottish universities have demanded four professional examinations from their graduates in place of three (not two, as Dr. Mercier says) required by the English Conjoint Board.

As regards time and labour they are nearly the same in the preliminary scientific subjects and in those of the second examination, save that at the University separate courses of zoology and botany take the place of one in biology, and that there have to be nine months spent at physiology and histology instead of six. In the more strictly professional subjects the University requires six months' systematic materia medica and therapeutics and six months' midwifery instead of three months in each of these subjects. Pathology gets six months' systematic study and three months' practical pathology and bacteriology, as against a combined three months' course required by the Conjoint Board. Diseases of women have three months' study (twenty-five lectures or clinical meetings) instead of a course of twelve meetings. At the University three years' hospital work are obligatory, but only two are required by the Conjoint Board. It may be said that few Conjoint men are satisfied with the minimum course of study, and the same is true of the University graduate. There the men do twice or three times the amount of anatomy obligatory, double the systematic medicine and surgery, and generally they spend four years at the hospitals instead of the three absolutely necessary.

Coming to the quality of the examinations, opinions

very well may, and, indeed, always will, differ; but, taking the fact that from 35 per cent. to 55 per cent. of the candidates are regularly rejected, the standard at the University can be no mean one. This will be granted by the most biased, as, in view of Scottish educational history, he will hardly attribute an essential want of brain to the North. If the course of study required and the examinations of the London University are no obstacle in the way of the Conjoint men, as Dr. Mercier says, then they are in a better position for acquiring a degree than are the Scottish students, inasmuch as their course of study may be pursued at any one or more of a large number of educational institutions, whereas the Scottish University man is compelled to study at least two years at the University.

I have only glanced at the requirements of the English provincial universities, and my impression is that their standard is much the same as the Scottish; but I shall leave the graduates of those universities to vindicate the status each of his own Alma Mater.

Let me assure Dr. Mercier that the general public "fashes" itself very little about our degrees and titles, the chief concern being to secure as much as possible from us for as little reward, in our senseless competition for clubs and underselling of each other in private work, as we, graduates and diplomates alike, are foolish enough to accept. It would serve us better to spend our energies in remedying these tangible matters than in the pursuit of vain degrees and phylacteries. Of the small public who take an interest in the different titles and qualifications, the well-informed appreciate each at its proper value. The ill-informed estimate a man's position by the number of letters he can append to his name, and, as the diplomate has more of the alphabet to play with than has the graduate, he is at no disadvantage in this respect.

Personally I have no objection to any body of men earning, begging, borrowing, stealing, or inventing for themselves whatsoever degrees or titles they may fancy; but, whilst they do so, I certainly deprecate all unwarrantable aspersions of other respectable corporations and their graduates.—I am, etc.,

JOHN DIVINE, M.D. Glasgow.

Gull, March 16th.

SOUTHWOLD LIBEL CASE.

IN order to remove certain misunderstandings that seem to have arisen, we are requested to draw attention to the exact words of the paragraph in which the opening of a fund on behalf of the defendants in this case was made known in the JOURNAL of February 6th, p. 353:

"Upon the suggestion of local members of the profession* who desire to give practical expression to their sympathy with Drs. Mullock and Tripp, of Southwold, a fund has been opened to assist them in defraying the heavy expenses which they have incurred as the result of the recent action which they were called upon to defend."

*The italics were not in the original.

By a printer's error, the date of Dr. Smith's letter published last week was printed February instead of March 6th.

Universities and Colleges.

UNIVERSITY OF LONDON.

MEETING OF THE SENATE.

A MEETING of the Senate was held on February 24th.

Appointment of a Royal Commission.

Attention was drawn to the announcement which had appeared in the press that a Royal Commission had been appointed to inquire into the subject of university education in London. It was reported "that the reference to the Commission had not been submitted or communicated to the University, and that the Government had, prior to the publication of the announcement, been informed that it should not be assumed, without opportunity for consultation, that the Senate would be an assenting party to any reference to a Commission in excess of, or inconsistent with, the resolution on the subject passed by them on December 2nd last."

D.Sc. Examination in Physiology.

The degree of Doctor of Science in Physiology has been conferred upon Dr. Frederick Hughes Scott, the subject of his

thesis being the relative parts played by nervous and chemical factors in the regulation of respiration. It was reported that, in addition, Dr. Scott had submitted other contributions to the advancement of science.

Laboratory of National Eugenics.

Mr. David Heron, M.A., and Miss E. M. Elderton were reappointed Research Fellow and Research Scholar in the Francis Galton Laboratory for National Eugenics for a further period of one year.

Grant from the Goldsmiths' Company.

A communication was received from the clerk of the Goldsmiths' Company intimating the renewal for a further period of three years of the Company's annual grant of £5,000 towards the maintenance of the Goldsmiths' College, New Cross. The cordial thanks of the Senate were accorded to the Company for their continued generosity.

Dates of Examinations for Medical Degrees.

It was resolved that in 1910 the second examination for medical degrees, Part II, should be held on the second Monday in March, and that the second examination for medical degrees, Part I, be held on the Thursday following the second Monday in March.

The B.Sc. (Pass and Honours) Examination in Physiology for External Students.

The Senate has resolved that in and after 1910 certain emendations should be introduced in the regulations for the B.Sc. (pass and honours) examination in physiology for external students (Blue Book, September, 1908, pp. 298-310).

Portraits of Former Vice-Chancellors.

The portraits of the following former Vice-Chancellors have been presented to the University, and have been framed and hung in the Vice-Chancellor's room: Sir John W. Lubbock, Sir John Shaw-Lefevre, Sir Edward Ryan, Sir George Jessel, Sir Julian Goldsmid, Sir John Lubbock (now Lord Avebury), Sir James Paget, Sir Henry Roscoe, Dr. A. Robertson (now Bishop of Exeter), and Dr. P. H. Pye-Smith.

Election of Representative.

Dr. Frederick Taylor has been appointed representative of the University on the General Medical Council in the place of Dr. P. H. Pye-Smith, resigned.

University Studentship in Physiology.

A university studentship in physiology of the value of £50 for one year will be awarded to a student qualified to undertake research in physiology. Candidates must be matriculated students or graduates of the University. Applications to be sent to the Principal by May 31st, 1909, from whom further particulars can be obtained.

EXTRAORDINARY MEETING OF THE SENATE.

An extraordinary meeting of the Senate was held on March 3rd, summoned by the Vice-Chancellor upon a requisition signed by six members, to consider the announcement which had appeared in the press regarding the appointment of a Royal Commission on the University, and to decide what action, if any, should be taken on behalf of the University. Eventually the Senate resolved to meet as a committee to consider the matter further on March 31st.

UNIVERSITY OF ABERDEEN.

UNIVERSITY COURT.

A MEETING of the Aberdeen University Court was held in Marischal College on March 9th, Professor Matthew Hay presiding, the Principal being still indisposed.

It was announced that Dr. William Day, late rector of the old Aberdeen Grammar School and at present a member of the Court, had intimated to the secretary the intention of himself and his brothers founding a scholarship, of the annual value of £100, in memory of their father, to be called the "James Day Scholarship in Education." Intimation was received that the committee in charge of the movement to erect a memorial to the late Professor George Pirie proposed that, subject to the sanction of the University authorities, the memorial should take the form of a stained-glass window in the antechapel of King's College Chapel. The Court, as well as the Senate, approved of the proposal, subject to the designs and plans being afterwards approved.

Gift to the Natural History Department.

Mr. R. Hay Fenton (London) has offered to the University, on certain reasonable conditions, his very fine collection of British birds' eggs. Four years ago Mr. Fenton lent the bulk of his collection to the Natural History Museum, Marischal College, and it has been of great interest and value to students and others. The collection numbers upwards of 7,000 specimens, and includes, as its greatest rarity, an egg of the extinct great auk. Mr. Fenton, in his letter intimating the gift, said: "In making this offer to the University of my native city, let me express the hope that it may be the means of stimulating Aberdonians at home and abroad, and especially graduates, to take an interest in and contribute specimens to the Natural History Museum, where, as a boy, I spent many a profitable and pleasant Saturday afternoon in the company of my father." The Court received the intimation with much satisfaction, and resolved to express its very cordial thanks to Mr. Hay Fenton for his most generous gift.

Resignation of Professor Ogston.

The following letter was received from Professor Ogston by the Secretary of the Court:

"As I feel that it would be in the interest of the University that its department of surgery should now be in the hands of a younger man than I am, I beg that you will submit to the University Court my regret that they will, under the provisions applicable to those professors who have attained the age of sixty-five years, be pleased to sanction my resignation of the chair of surgery, to take effect from the end of the present University year, by which time I shall have completed my sixty-fifth year and shall have held the chair of surgery for twenty-seven years. My object in thus early proffering my request is to ensure that my successor may have ample time to arrange his plans of teaching and be able to commence his duties at the beginning of the winter session 1909-1910."

This letter confirms the statement which Professor Ogston made to his class at the opening of the session in October. It is understood that among the candidates for the vacant post are Mr. J. Scott Riddell, M.V.O., M.A., M.B., Senior Surgeon, Aberdeen Royal Infirmary; Mr. John Maroon, M.A., M.B., Surgeon, Aberdeen Royal Infirmary; Mr. H. M. W. Gray, M.B., F.R.C.S., Surgeon, Aberdeen Royal Infirmary (all three are lecturers in clinical surgery to the University), and Mr. Alex. Don, M.A., M.B., F.R.C.S., Surgeon to the Dundee Royal Infirmary.

UNIVERSITY OF DUBLIN.

The following candidates have been approved at the examination indicated:

FINAL (PART II).—D. M. Moffatt, A. J. Stals, J. D. Kernan, H. R. Kenny, F. R. Sayers, C. G. S. Baronsfeather, D. J. Stokes, C. B. Jones.

* Passed on high marks.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MEETING OF COUNCIL.

At a meeting of Council on March 11th, Mr. Henry Morris, President, in the chair, Mr. F. Richardson Cross was appointed Bradshaw Lecturer for the year, and the Sir Gilbert Blane medals were awarded to Staff Surgeon Charles Rowley Nicholson, H.M.S. *Egmont*, 1906-7, and Staff Surgeon Arthur William Bligh Livesey, M.B., H.M.S. *Bonaventure*, 1907.

His Excellency Dr. Nicolas Weliainoff, Privy Councillor of State and Professor of Surgery at the Imperial Military Academy of Medicine, St. Petersburg, who was elected an Honorary Fellow of the College in 1901, was introduced and signed the Roll.

The Admission of Women to the College.

The following proposed by-law was accepted, but again referred to the Committee by which it was drawn up, for further consideration:

1. Pursuant to the powers conferred by the Medical Act, 1876, and subject to the provisions therein and hereinafter contained, women may be admitted as Members and Fellows of the College and may obtain Diplomas in Dental Surgery on the same terms and conditions as men; and so far as it is necessary to give effect to this By-law words in the By-laws and Regulations of the College which import the masculine gender shall also import the feminine gender, and all proper alterations shall be made in the form of the Letters Testimonial, Diplomas, Certificates and Licences granted by the College.
2. Women shall not be eligible as Members of the Council or vote at or take any part in any election of a Member or Members of the Council, or attend any Meeting of Fellows or of Fellows and Members (except Meetings convened for the delivery of Lectures or Orations), or otherwise take any part in the government, management, or proceedings of the College.
3. Women shall not be eligible as Members of the Court of Examiners or for any Examinerhip to which the Council appoints.

Election of Representative.

Mr. Henry Morris was re-elected for a period of five years as the Representative of the College on the General Medical Council.

The May Examination.

Mr. William Wright was appointed Substitute Examiner for the May examination, in place of Professor Young, whose resignation was accepted with regret.

The Charter of the British Medical Association.

A committee was appointed to consider the petition of the British Medical Association for the grant of a Charter of Incorporation.

The Services.

ARMY ESTIMATES.—MEDICAL SERVICES.

Classification of Cases.

COLONEL E. B. HARTLEY (retired), of Ilminster, Somerset (late P.M.O. Cape Colonial Forces), writes: "One cannot help feeling glad to see in your issue of March 6th that the admissions to hospital of the regular army have been considerably reduced by 'an administrative improvement by which men with slight ailments are not removed to hospital, but are treated in barracks as out-patients' (I am quoting Mr. Haldane's sentence). I have always been surprised that this system was not followed years ago, for undoubtedly in times gone by thousands of soldiers have been admitted into military hospitals who would only have been treated by civil hospitals as out-patients."

During my twenty-six years' service in the regular forces of the Cape Colony the Daily Sick have been marched to the hospital and the medical officers have classified them as follows: "Hospital," "No duty," "Medicine and duty." The "No duty" men lived in the barrack-rooms, and were excused parades, guards, drills, sentry duty, and fatigues. They were not allowed to enter the canteen, nor to walk beyond the precincts of the barracks. These cases would be lesser ailments, minor fractures of the upper extremities, contusions, certain stages of venereal disease (of course not all) and trivial complaints generally. It was found that much expense and trouble to all concerned was saved in this way. The patients got well quite as quickly when out of hospital as in, and the hospitals were not crowded with a lot of idle listless men, a weariness to themselves and a bother to everybody else.

Many commanding officers, I know, will say a man must be doing his duty or be in hospital, and that they do not want a lot of idle men leading about the barracks and cantonments, a bad example to their comrades and a blot upon the normal smartness of a station, etc. Such ideas are very excellent, but they will not help the British taxpayer, nor will they keep the hospitals empty. The other classifications "Hospital," "Medicine and duty," explain themselves.

I venture to submit that some such plan as I have endeavoured to explain might be considered for adoption in H.M. Imperial Army.

THE ROYAL NAVY MEDICAL SERVICE.

GENERAL EXPENDITURE.

THE First Lord of the Admiralty issued with the navy estimates for 1909-10, published on March 12th, an explanatory statement. The total expenditure is this year estimated at £35,142,700. The estimate for the medical services, including the cost of medical establishments at home and abroad, amounts to £258,700.

THE COMMITTEE ON THE MEDICAL SERVICE.

The statement contains the following paragraph:

"The recruiting of the Naval Medical Service has for some time been a matter of anxiety to successive Boards of Admiralty. I have now appointed a Committee to inquire into the naval medical service, composed as follows:

Admiral Sir John Durnford, K.C.B., D.S.O. (Chairman).
Inspector-General James Porter, C.B., M.D., M.A. (Medical Director-General).
Surgeon-General Sir Alfred Keogh, K.C.B., M.D.
Mr. J. H. Brooks, Principal Clerk.
Sir William W. Cheyne, Bart., C.B.
Deputy Inspector-General William H. Norman, R.N.
Mr. G. L. Chesdale, C.B., F.R.C.S.
Mr. J. S. Barnes, Admiralty, Secretary.

We hope, with the able assistance of these gentlemen, that we shall devise some means of putting the Naval Medical Service upon a more satisfactory footing."

ROYAL ARMY MEDICAL CORPS (TERRITORIAL). ABERDEEN.

THE paragraph published in the issue of March 6th referring to the position of the training school of the Highland Division was apparently open to misconstruction, and gave rise to a wrong impression of the state of training of the corps in Aberdeen. It was not intended to convey the idea that little practical work had been done in connexion with the field ambulances, as this would have been very contrary to the actual state of affairs. Instructional classes have been held in a wide range of subjects, and a much larger amount of work has been done in this regard than was ever accomplished under the old volunteer system. With regard to the finance of the training school, certain developments have quite recently taken place and certain grants have now been received for the school. Before these grants were made the work was being carried on from the funds of the field ambulances, so that the actual training of the corps has not suffered in any way.

SECOND LONDON DIVISION.

The organization of the field ambulances of the Division is practically complete. No. 6 Field Ambulance was recognized last week, and there are now enlisted 7 officers and 209 men. Both Nos. 4 and 5 Field Ambulances are seven or eight above strength.

Of the General Hospitals No. 4 is recognized; in addition to the staff *à la suite* which is complete, it has 3 officers and 26 men, 17 additional men being required to complete it.

FIELD AMBULANCES.

LIEUTENANT-COLONEL J. H. STACY, Officer Commanding 2nd East Anglian Field Ambulance (Norwich), writes: I see the 3rd South Midland and the 3rd Northumbrian Field Ambulances are claiming to be the first of these fresh units up to full strength. I may say that the 2nd East Anglian Field Ambulance was full up at the beginning of the year except for one officer and one sergeant compounder. I think that their popularity is due to the schools of instruction for the regular army making the recruit feel that on joining he is getting an education in itself.

Medico-Legal.

THE RESPONSIBILITIES OF MAGISTRATES.

MEMBERS are probably more or less familiar with the case in which Dr. Hodgson of Crewe was made defendant for certain remarks with which, as Chairman of the local Bench, he announced his decision in certain cases before it with regard to the nature of the agreements as to some public-houses at Crewe. In announcing the decision of the Bench, Dr. Hodgson stated that the then opinion of the Bench was that Messrs. Walker had misled the magistrates. Messrs. Walker commenced an action against Dr. Hodgson claiming £10,000 damages. Mr. Justice Ridley ruled that there was no absolute privilege, and the matter was arranged, Messrs. Walker offering to admit that Dr. Hodgson's comments were made bona fide if he, on his part, would publicly state what he had really already admitted, namely, that his remarks, in view of the facts which subsequently came to his knowledge, were not justified. Dr. Hodgson is an ex-mayor of Crewe, a member and Vice-Chairman of the Cheshire County Council, and Chairman of the Education Committee. The following appeal has been issued, signed by, among others, the Right Hon. Sir John Brunner, Bart., M.P., Mr. H. Lever, M.P., Mr. James Tomkinson, M.P., Mr. W. J. Crossley, M.P., Mr. A. J. King, M.P., and the Hon. A. Lyulph Stanley, M.P.:

We feel confident that there are many who will be glad to join in relieving Dr. Hodgson of the heavy costs for which he has become liable in his defence of the action brought against him by Messrs. Walker.

A great burden has been cast on Dr. Hodgson through the discharge of his public duties as a magistrate, and by his fight on a point which is of great public interest—namely, whether magistrates have an absolute privilege when sitting as members of a Licensing Committee.

It would be a fitting recognition of Dr. Hodgson's long, varied, and unsparring services to Cheshire, and of the esteem in which he is held, that he should be relieved from a personal responsibility which he has incurred from his action in a public and representative capacity.

The total amount of Dr. Hodgson's costs in the case will probably amount to £4,000. Subscriptions will be received by Aldermen McNeill, Herdman Street, Crewe (the honorary treasurer of the fund); and by Alderman C. H. Pedley, C.C., Westminster Buildings, Crewe (the honorary secretary); or they may be paid to the credit of the Dr. Hodgson Testimonial Fund, Parr's Bank, Crewe.

CONTRACT PRACTICE.

A CASE of considerable interest to medical men engaged in contract practice was recently decided in the Cheltenham County Court.

The plaintiff was the medical officer to a friendly society, and he sought to recover fees from a member of the society for seeing a fractured clavicle and affixing a splint. The plaintiff admitted having examined the defendant some years previously and certifying him as a fit person to become a member of the society, but he based his claim on the facts that he had no information as to whether defendant had in fact become a member, that defendant had omitted to produce his card of membership, as plaintiff contended he was bound to do, and that his payments were in arrears. For the defence it was denied that defendant was in arrears, and was contended that there was no obligation on him to produce his card.

Judge Ellicott held that the question of a member being in arrears or not was not a question for the surgeon, but as the rules of the society imposed certain duties on the surgeon, there was a correlative duty on the members to prove their title to his services. This the defendant had not done, and he accordingly gave judgement for the plaintiff with costs on the *a* scale, as the case was one that concerned a large number of people. The medical man concerned is to be congratulated on the result of the case and on his determination in fighting it.

CORONERS AND NECROPSIES.

A COLONIAL correspondent, who signs "Witness," asks: Is it in accordance with British usage and custom that a medical coroner should attend and witness the *post-mortem* examination he has directed to be made preparatory to an inquest, and that he should remark upon and discuss the pathological findings during the conduct of the necropsy?

* We are pleased to say that conduct described by our correspondent is not usual with coroners in England, and we think that, as he has afterwards to preside over the jury, with himself deliberate on the case in question, it would be wiser and more judicial if he brought his mind to bear upon the sworn evidence given before the court unprejudiced by observations he may have made at the *post-mortem* examination. We further are of opinion that, having issued his order for a *post-mortem* examination to be made, he should rely upon the report given in evidence at the inquest by the operator, and not present himself at the necropsy, as on the occasion in question.

FEES FOR MEDICAL EVIDENCE.

CHESHIRE SURGEON writes that he has been subpoenaed to give evidence as to the testamentary capacity of a deceased

patient, and asks the following questions: (1) Is he at liberty to charge any fee he likes, with travelling expenses? (2) Or is he compelled to accept the statutory fees and allowances? (3) Can he claim from the solicitors in the case fees for consultations, letters, etc.? (4) Is his evidence regarded as expert evidence or merely evidence as to facts?

(1) Yes; but, unless he gets a written promise to pay from the party who subpoenas him, he will be unable to recover more than the legal allowance. (2) In the absence of any binding agreement to pay more, he must accept the legal allowance. (3) He should stipulate for these expenses beforehand, otherwise he might have a difficulty in recovering them. (4) No, it is ordinary professional evidence. Expert evidence is properly that given by an outside witness who has nothing to do with the case personally.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

CIRCULARS TO PATIENTS.

X. X.—There can be no objection to the terms of the circular proposed, and no criticism is likely to arise so long as it is sent only to persons who are actually the patients of the firm.

CIRCULARS TO THE PROFESSION.

R. N. D. B.—We can see no objection to our correspondent sending such a circular to the medical men in his neighbourhood, but would suggest that references and not testimonials should be enclosed.

CONTRACTS NOT TO PRACTISE.

M. W. W. had better consult a solicitor, as everything depends on the exact terms of the bond. In all probability the contract is valid, but courts take into consideration the reasonableness of restrictions.

A QUESTION OF FEES.

HARD HIT.—Would it not be better to write a friendly letter asking for particulars, as no memorandum appears to have been kept of the number of visits? If this were known, the amount might be estimated, and we do not think the fees should exceed the rate of three visits for a guinea. Of course, the out-of-pocket expenses would have to be paid in addition, but many public authorities report on diphtheria swabs and supply antidiphtherial serum without charge.

A NEW FORM OF ADVERTISEMENT.

NO ADVERTISEMENTS complains that he has been worried by a representative of the "Court Something-or-other," who is collecting information from medical practitioners for a work which he says is "read by laymen."

"* We sympathize with our correspondent, but fear that all he can do is to close his doors, as far as possible, against impudent canvassers.

A DISCLAIMER.

DR. ARTHUR S. MORLEY (London, W.C.) writes: I have recently written certain articles on the medical aspects of accident insurance for the *Accident Year Book*. I regret to see that in their advertisements of the book in certain insurance journals the publishers have advertised my name and mentioned my connexion with a large insurance company. They have done this without my knowledge or consent, and I should be greatly indebted to you if you would publish this letter in order to free me from the suspicion of being a party to what might be regarded as a very objectional form of advertisement of myself.

MEDICAL ADVERTISING.

WITH reference to the paragraph under this heading, published in the *JOURNAL* of January 9th, we are informed by the practitioner concerned that as soon as he became aware that the poster and handbill had been issued he took effectual steps to prevent their further circulation, and as this fact was known to the secretary of the local Branch he complains that any notice should be taken of it in the *JOURNAL*. We are glad to know that the advertisements were issued without the consent of the practitioner concerned, but we would point out that in the case to which we referred the same plea was put forward. Ignorance on the part of the practitioner cannot absolve him from responsibility, as this would open the door to unlimited advertisements by club authorities. The officials of the society should know that they risk its existence, in so far as it is dependent upon the services of a registered medical practitioner, if they issue advertisements of the kind sent to us.

Public Health

AND

POOR - LAW MEDICAL SERVICES.

POOR LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

A council meeting of this association was held at 9, Cophthall Avenue, E.C., on March 11th, Dr. D. E. Baiding being in the chair.

Dismissal of Medical Superintendent.—The honorary secretary reported that the Local Government Board had asked to be allowed to send the memorial and papers of the dismissed medical superintendent, whose case was considered at the last meeting (*BRITISH MEDICAL JOURNAL*, February 20th, p. 559), to the board of guardians. After obtaining that gentleman's consent the request had been acceded to.

Audit of Guardians' Accounts.—In the case of Brand and the Driffield Guardians (see report of last meeting) the association had been represented by Mr. Jennings before the Local Government Board auditor, and the latter had surcharged the guardians £13 18s. 11d. It was likely that the surcharge would be increased at the next audit.

Medical Inspection of School Children.—Further evidence was brought before the council of extra work done by the Poor Law Medical Officers being put upon Poor Law medical officers in consequence of recent legislation. A communication had been received from a member, enclosing a letter from the clerk to his guardians, requiring him to visit and examine twenty children to ascertain whether they were properly fed. Some of the council thought that such an Order was illegal, but the honorary secretary pointed out that the district medical officer was bound to attend to any order issued by the relieving officer, or by the board of guardians in its corporate capacity, although complaint might be made afterwards to the guardians or Local Government Board. The clerk's letter amounted to an order from the Board. He thought this was a very proper case to bring before the Local Government Board, as the evidence was so clear, but the complainant would not give his permission for fear of losing his vaccination appointment if he made any complaints.

Royal Commission on the Poor Laws.—The council then considered the report of the Royal Commission on the Poor Laws. Satisfaction was generally expressed at the justice done to the Poor Law Medical Service, and the frank recognition of its valuable and unselfish public work in the past despite the glaring inadequacy of the remuneration; but exception was taken to the proposed abolition of that service in the future. In the opinion of the council the existence of such a service was absolutely necessary for the public good, and reform should be directed to making it more efficient. After much discussion the council decided that more time would be required to deal properly with the report, but it thought that some preliminary resolutions might be considered concerning which there would probably be practical unanimity among all Poor Law medical officers. The following resolutions were finally put and carried unanimously:

1. That this council desires to express its grateful acknowledgement of the unanimous testimony borne by the Royal Commission to the value of the past services of Poor Law medical officers, and its recognition of the disadvantages under which they have laboured and the inadequacy of their remuneration.
2. That, in the opinion of this council, it is impossible for Poor Law medical relief to be organized on a provident basis, as the only proper recipients of such relief are, by reason of their poverty, unable to contribute anything; that those able to contribute are proper objects for charitable assistance.
3. That the council views with disapprobation the proposal to draft the State poor law to provident medical institutions, that, in its opinion, it would result in converting the same into Poor Law institutions, mainly supported by the rates; that it would be disastrous to these institutions by driving away many, if not all, of that class of whom they were specially created. Further, that it would largely increase the number of the State poor by adding to them many of the poorer members of provident medical institutions, and by so doing would inevitably cause great injury to the whole medical profession, especially the practitioners in poor districts.
4. That the council strongly condemns the proposal to make every medical practitioner a Poor Law medical officer, and it does so for the following reasons:
 - (a) That it would be many times more expensive than the present system.
 - (b) That the value of the work done could never be properly tested, as no system of Local Government Board inspection could deal with so widely extended an arrangement for Poor Law medical relief.
 - (c) That it would largely tend to provide free medical relief to all poor persons, and to increase, rather than diminish, the pauperization of the nation.
 - (d) That the interests of the sick State poor would be far better attended to by a special service, the members of which were paid adequately, and whose work was capable of proper inspection.
5. That the council strongly disapproves of the proposal to allow a poor person to claim State medical aid without the intervention of a relieving officer or assistant relieving officer. If it were to be opened the door widely to gratuitous medical relief to all members of the poorer classes; that it is no part of the duties of a Poor Law medical officer to decide as to the right of a poor person to State relief; and, as in any widely extended system it would be necessary to pay for the items of work done by the medical officer, it would be a direct incentive to the latter to admit too readily the claims of poverty. That for the protection

of the ratepayer it is absolutely necessary that there should be a skilled lay officer to decide who are proper applicants for medical relief. That in thickly-populated areas there is no hardship in requiring applicants to get an order from an assistance officer, and that instances of the deserving State poor being deterred from applying to the Poor Law medical officer through having first to obtain an order, are in urban districts conspicuous by their rarity.

DISINFECTION.

BELFAST AND EAST ANGLIA.—Spraying with a solution of formalin is a very common and excellent method of disinfecting rooms after they have been occupied by scarlet-fever patients. The furniture should be sprayed with the solution, 1 part in 40 of the 40 per cent. solution, and should then be thoroughly cleaned with soap and water.

INFECTIOUS DISEASE IN HOTEL.

MIDLANDS.—(1) The manager of a hotel can insist, after giving suitable notice, upon any guest quitting his hotel. (2) In a county court action by an innkeeper to recover the cost of disinfecting rooms which had been occupied by a guest who had died from consumption while in the inn, it was held by the county court judge that the cost could be recovered on the ground that the law would imply a contract on the part of the guest to pay for any extra expense properly incurred by the innkeeper as a consequence of the reception of the guest. A claim for damages for the loss of use of rooms during the time of disinfection was not successful (*Law Times* (1899), vol. cvii, p. 101). No references or names of parties are given. Quoted in Copnall's *Infectious Diseases and Hospitals*.

MEDICAL CERTIFICATION OF WORKHOUSE LUNATICS.

H. C., who writes with reference to a short article on the above subject which appeared in the *British Medical Journal* of March 6th, p. 630, refers to several lunacy cases which he had himself attended, and which were removed to the workhouse and thereby passed altogether out of his hands, though subsequently sent to an asylum. In reference to a fourth case of somewhat similar character, he says that he wrote to the relieving officer asking whether it would not be possible for the lunacy of patients detained in a workhouse to be certified (if necessary) by their own previous medical attendants, with the result that he was called upon to certify this fourth. Later still another case cropped up, and our correspondent was asked by the relieving officer to call at the workhouse to certify to the lunacy, which he did. He further says: I should like your opinion on this matter as presented by myself, in view of the fact that you have expressed the opinion that soliciting engagements to certify to lunacy cases in a workhouse was an unwelcome claim." He adds: "Had I solicited to certify cases not my own I should have agreed with you."

"* If the account given is strictly correct, which we have no reason to doubt, namely, that our correspondent has only certified cases which had been previously under his own care, we cannot regard his going to the workhouse for this purpose and subsequently certifying as being in any way a breach of professional etiquette. Should any such cases recur, we think he would show a wise discretion by calling or leaving his card on the medical officer of the workhouse before visiting the patients, but as to this he really ought to be a better judge than ourselves.

Obituary.

SIR ARTHUR RENWICK, M.D., F.R.C.S.,

SYDNEY, N.S.W.

The death took place in Sydney on November 22nd last of Sir Arthur Renwick, M.D., F.R.C.S. Edin., in his 72nd year.

He was one of the first graduates in Arts in the University of Sydney, and as there was no medical school in Sydney in those days, he proceeded to Edinburgh, where he took the degree of M.D. and the diploma of F.R.C.S. He returned to Sydney, and soon acquired a leading practice. He was elected the first President of the New South Wales Branch of the British Medical Association. While he was still quite a young man he was elected to the Honorary Staff of the Sydney Hospital, and he remained connected with that Institution up till the time of his death, though not in the capacity of honorary medical officer, but as President. He also early became connected with the Benevolent Asylum, and the Institution for the Deaf and Dumb. He was President of the Medical Board for many years, and was always most regular and punctilious in his attendance at all the meetings over which he was accustomed to preside. He was also a member of the Senate of the University of Sydney, and had served in the office of Vice-Chancellor on several occasions.

Many years ago he entered Parliament, and represented the constituency of East Sydney. He was at different times Minister of Mines and Minister of Education. Later on he was elevated to the Legislative Council, and he was a member of that body up to the time of his death. In the year 1892 he was appointed Executive Commissioner for New South Wales to the Chicago Exhibition, and two years later he received the honour of knighthood for his services in that capacity.

Sir Arthur was attacked with influenza some months before his death, and this weakened his heart so much that he was never able again to take up his duties. His funeral was largely attended by members of the profession and representatives of the various charitable institutions with which he had been connected during his long and useful life. His death has removed one of the most active philanthropists of Australia.

JAMES HURD KEELING, M.D. Edin., F.R.C.S. Eng.,

CONSULTING SURGEON TO THE HOSPITAL FOR WOMEN AND
ROYAL HOSPITAL, SHEFFIELD.

DR. J. HURD KEELING, who had been in failing health for several years, died at his residence in Sheffield on March 15th, aged 77. He was the son of the Rev. John Keeling, a well-known Wesleyan minister, who at that time resided at Malta. The family returned to England while the boy was still young, and he attended a well-known Wesleyan school at Woodhouse Grove, near Leeds. He prosecuted his medical studies at Edinburgh University, which he entered in 1848; he took the degree of M.D. in 1852, and he afterwards visited London (where he took the diplomas of M.R.C.S. and L.S.A.), as well as Paris and Vienna, for purposes of medical study. He then became an assistant to Dr. Thorpe at Staveley, but when the Russian war broke out in 1854 he went as surgeon to the second regiment of the Turkish contingent, and his services in that capacity were rewarded by the decoration of Officer of the Order of the Medjidieh. After the war he returned to Staveley, but in 1858 settled in Sheffield; here he acquired the practice of Dr. Cheetham, settling at Crow Tree House, Broomhall Street, then a country residence in the midst of a big garden; there he lived with his sister until he removed to Glossop Road a few years later. In 1860 he was appointed Lecturer on Medical Jurisprudence at the Sheffield Medical School, thus beginning an association with the teaching of medicine in Sheffield which lasted nearly forty years. When he accepted this office he made the stipulation that toxicology should be taught by a chemist, and Dr. Allen accordingly undertook this part of the subject. Four years later he was appointed Lecturer on Physiology in the Medical School, the affairs of which at that time were in so unsatisfactory a condition that it had been proposed to close it. Dr. Keeling was one of those by whose efforts the school was reconstructed in 1865. Dr. Keeling then resigned the lectureship in physiology, and was appointed, in conjunction with Dr. Aveling, Lecturer on Midwifery and Diseases of Women, and continued to lecture on this subject for thirty-two years.

When the Hospital for Women was founded in 1864, Drs. Keeling, Aveling, and E. Jackson were appointed the medical officers, and afterwards, through the generosity of Mr. Thomas Jessop, the Jessop Hospital for Women was erected. Dr. Keeling took a great interest in the hospital, and not only himself gave generous financial assistance, but was instrumental in obtaining a considerable proportion of the funds required for its extension in 1902. The position attained by the Jessop Hospital as one of the leading medical charities of Sheffield was largely due to his efforts, and when he retired in 1906 the board elected him Honorary Consulting Medical Officer, and placed on record its high appreciation of his valuable and disinterested work. A proposal to present him on behalf of the medical profession with a public testimonial on this occasion was abandoned owing to Dr. Keeling's own objections. Dr. Keeling was elected Surgeon to the Royal Hospital, Sheffield, in 1862, an office he retained for twenty-five years. When the British Medical Association met in Sheffield in 1876 Dr. Keeling was associated with the late Mr. A. Jackson in the office of Honorary Local Secretary, and his friends would have been glad if he could have been persuaded to have accepted an honorary official position at the memorable meeting last year. For many

years Dr. Keeling took an active part in the work of the Sheffield Medical Society, and contributed many papers from time to time, although he does not appear ever to have published any of them. He was a man of marked ability, well versed in medical literature, and possessing a ripe and varied experience. In disposition he was reserved, delighting in secret kindnesses and self-sacrificing labour, but receiving any acknowledgement of his good deeds with characteristic brusqueness.

W. H. DAY, M.R.C.S., L.S.A.,

NORWICH.

THE death occurred, after a long illness, on March 15th, at the ripe age of 85, of Mr. W. H. Day, of Norwich.

William Hanks Day, who was descended from an old Norwich family, several of whose members had been very prominent in the life of the city, was born in 1824. He was a son of Mr. William Day, for over forty years clerk to the magistrates. He received his medical education at St. Thomas's Hospital, and obtained the diploma of M.R.C.S. in 1845, and that of L.S.A. in the following year.

After acting for a short time as surgeon to the Reading Dispensary, he entered into partnership in 1849 with Mr. W. P. Nicholls, then a well-known practitioner in Norwich. Eighteen years later, the partnership having come to an end, Mr. Day began to practise on his own account. For many years he was medical officer to the Lakenham district, and was also surgeon to the Jenny Lind Infirmary for Children, the Maternity Charity, and the city gaol. For forty-two years he was surgeon to the Girls' Hospital School. His practice brought him much into contact with the poor, and he discharged his duties with such solicitude and conscientiousness that he received the very unusual tribute of a testimonial got up by the parochial poor entirely on their own initiative. Mr. Day had at one time the largest obstetrical practice in the Norwich district, and had, it is said, attended as many as 8,000 confinements.

In his earlier years he was fond of amateur theatricals, and turned his capabilities in that respect to account to assist the volunteers, a service in which he took a great interest.

Mr. Day was Chairman of the Committee which raised the memorial fund to the late Mr. William Cadge, and his last public appearance was at the ceremonial of the unveiling of the memorial window erected from the proceeds of that fund in December, 1904.

Mr. Day married in 1849, and leaves five daughters, one of whom is the Matron of the Norwich Grammar School.

We are permitted to publish the following appreciation of Mr. Day, contributed by Dr. Michael Beverley to the *Eastern Daily Press*: The Dean of our local faculty, after a long and to him weary waiting, is gone to that rest which he has so earnestly anticipated. It is true that he found a solatium in his books and his facile pen, and to the last continued to take a keen interest in all the current topics of the day. His contributions to your columns were not infrequent, and often under a thinly-veiled anonymity his friends detected the well considered and pointed criticisms so characteristic of the man. But, in spite of this and the treasures of a well-stored mind and memory, I know of no one who felt so keenly his enforced inaction as William Hanks Day. To those of us—and but few now remain, who have pleasing reminiscences of Mr. Day in his prime—we remember him as one of the hardest-worked medical men in the city of Norwich, greatly respected by his colleagues, beloved by a large clientele of patients of all classes, a *persona grata* wherever he went, especially in Lakenham, where his name was a household word. At all times, day and night, in all weathers, he might be seen driving about with an old-world-looking coachman, whose face was as familiar to the man in the street as his master's. William Day was a fine example of the cultivated general practitioner of the old school. He was never known to commit a breach of professional etiquette or to be guilty of a mean action. *Noblesse oblige* found in him a true exponent, and this was felt and appreciated by his fellows. The last work in which, after his retirement, he engaged, to him a real labour of love, was the chairmanship of the committee by whose exertions a memorial

window was placed in the Cathedral to the memory of his old friend, Mr. Cadge. All of us who served under him can bear testimony to the enthusiasm which he threw into this very considerable undertaking, the accuracy of his artistic taste and judgement to which was due the splendid work of art which appropriately illustrates the life and work of a great surgeon. Nor can those who were present at the unveiling in the Cathedral ever forget the pathetic scene, and the deep feeling evinced by our octogenarian leader, when he read the dedication (composed by himself) in the presence of the President of the College of Surgeons, and his colleagues on the Council, of medical men from far and near, and a crowded congregation of his fellow citizens. The memory of William Day will ever remain green amongst all who were privileged to claim his friendship.

We regret to have to announce the death of Dr. ROBERT HENRY COALL, which took place at Cannes on February 20th last, from heart failure following pneumonia. Dr. Coall, who was the son of Mr. Talbot Coall, of Kingstown, Dublin, was born on February 20th, 1859. Educated at the Carmichael School, he took the diplomas of L.M. Rotunda Hospital (special certificate) in 1881, L.R.C.S.I. in the following year, and in 1884 L.R.C.P. and L.M. Edin. He was Resident Medical Officer to the City of Dublin Hospital, and afterwards commenced practice near Leicester. A few years later, his success having justified the removal, he settled in Bedford Square, London, and as practice increased removed to 65, Brook Street, Grosvenor Square, where the illness commenced from the effects of which he ultimately died. It is now some thirteen years since an attack of hæmoptysis warned him that the success which had attended his professional career had been bought at too great a sacrifice of strength, and he was obliged to relinquish to an increasing extent the large practice which he had gained in London, and spend more of each year in a warmer climate. Dr. Coall was an example of the cultured practitioner; his patients became his friends, nothing that he could do for their welfare was too much trouble, and although regular attendance of recent years was not possible for most, his yearly arrival in the summer was eagerly anticipated by them and his advice highly valued. Few who met him in recent years had any suspicion of the fact that he was an invalid; only his great strength of character and unselfish disposition, however, enabled him to go about as he did. His death has come as a surprise, therefore, to many, and to these it will be a consolation to know that although he died abroad, he had devoted friends with him during his last illness, and received every attention at the hands of Dr. Carr, of Cannes. We may add that he was also seen in consultation by Sir Dyce Duckworth, Dr. Osler, and Professor Lingard.

Dr. FREDERICK IRVING KNIGHT, of Boston, who died on February 20th, was one of the pioneers of laryngology in America. Born in 1841 he graduated at Yale in Arts and at Harvard in Medicine in 1866. Afterwards he studied in Vienna, London, and Berlin. In 1872 he was appointed instructor in the diagnosis of diseases of the chest and in laryngology at Harvard. This was the first clinic of its kind in New England. In 1886 he was made Clinical Professor of Laryngology, a position which he held until 1892. Dr. Knight was one of the founders of the American Laryngological Association and one of its early presidents. He was also President of the American Climatological Association, of the Boston Society for Medical Improvement, and of various other scientific bodies. He took a prominent part in the movement against tuberculosis.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Heinrich Brat of Berlin, well known by his writings on industrial hygiene, aged 41; Dr. N. Pravossud, Lecturer on Ophthalmology in the University of Moscow, aged 48; Dr. André Boursier, Professor of Gynaecology in the University of Bordeaux, and President of the Society of Anatomy and Physiology and of that of Medicine and Surgery of that city, aged 58; and Dr. Hugo Gnaindinger, for many years Director of the Crown Prince Rudolph Children's Hospital, Vienna.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL

THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL are at 429, Strand, London.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Articulate*, London. The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate*, London.

TELEPHONE (National).—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should send them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

ETIOLOGY OF SPLENIC LEUKAEMIA.

SCOTT'S asks: Is splenic leukaemia known to follow carbon monoxide poisoning? As for instance in these circumstances—where a man has been exposed to carbon monoxide poisoning three times in twelve months and dies within the following year from splenic leukaemia. Also can there be any connexion between splenic leukaemia and malignant disease of the spleen? What authorities can be quoted?

RESULTS OF THE "KNOCK-OUT" BLOW IN BOXING.

R. W. M. writes: In view of the great booming of boxing now, when we hear of matches and competitions, amateur and professional, on every side. Lamentous to inquire into the results, or rather the after-history of those men who have been "knocked out." Can any one tell the after-history of any of these men? Some are "knocked-out" by blows on the angle of the jaw, or rather I should say the point of the chin, others by blows over the heart, and a third lot by blows over the solar plexus. To me, this seems the most serious. I understand that Fitzsimmons "knocked-out" man after man by blows over the solar plexus, that the men fell groaning, and were carried from the ring in a state of more or less insensibility. Can any one tell the after-history of those men? Did they recover perfectly, or were there any evil effects left, and what were the after-symptoms? I have heard that many "never were themselves again," but as to that I do not know.

ANSWERS.

J. L. M.—(1) Messrs. Holloway and Webb, Limited, military camp outfitters, 347, Cable Street, E., inform us that a well-made military tent used, say, twice in each year, has a life of about five years. When stored it should be put away perfectly dry and in a dry place. (2) Berthou tents are used for cases of enteric fever. (3) A joint hospital board decides for itself which infectious diseases shall be admitted into the hospital under its control.

FRENCH MEDICAL PERIODICALS.

FRENCH.—There are a multiplicity of periodicals suitable to our correspondent's purpose. Of those published in Paris, *La Semaine Médicale* (53, Avenue de Villiers, foreign subscription 15 francs, subscriptions commence January 1st, back numbers being supplied) would perhaps prove most satisfactory at the present time. Among the few monthlies, the *Archives Centrales de Médecine* (25, Rue de l'Ecole de Médecine, foreign subscription 18 francs, commencing from any quarter-day stands highest. Other journals are *Le Progrès Médical* (46, Rue des Ecoles, 12 francs), *La Tribune Médicale* (152, Rue de Valenciennes, 12 francs), both weeklies; and the *Gazette Médicale de Paris* (1, Rue Casimir Delavigne, 7 francs) a fortnightly publication.

LETTERS, NOTES, ETC.

ERRATUM.—In the second line from the end of Dr. Horace Dobell's letter on Sleep and Want of Sleep (BRITISH MEDICAL JOURNAL, March 13th, p. 691), for "Ft. guttae 3iv" read "Ft. guttae 3iv."

AN APPEAL TO MASONS.

MR. SYDNEY GRAHAM, M.R.C.S., F.R.C.P. (Watchet, Somerset), writes: Will you permit me through the columns of your JOURNAL to make an appeal to all professional brethren who are Freemasons to give their assistance in the following case: Dr. John Henry Sharpe, aged 45 years, who was formerly in practice at Hantspill, Bridgwater, who held the office of Medical Officer and Public Vaccinator under the Bridgwater Board of Guardians for fourteen years, and a member of the Highbridge Lodge No. 291 (W.M. 1895 and Secretary for three years; also W.M. Mark Lodge No. 191, and P.Z. of Chapter 291), had, unfortunately, in 1904 to give up his practice owing to the development of ataxic symptoms. Since that time he has not been in a position to earn anything owing to the state of his health, and he has no private means. He has a wife and six young children dependent upon him, and by the kindness of his friends and craft he has been greatly aided in getting them educated, and he now ventures to make a further appeal to charitable Masons to help him to get his son, Edward Herbert, aged 10, into the Royal Masonic Institution for Boys. This appeal would not be made if there was any probability of an improvement in Dr. Sharpe's physical or financial condition, and in proof that the case is one thoroughly deserving of the brethren's sympathy and support, I am permitted to say that the application is supported by Dr. Vereker, Langport; Dr. F. C. Berry, Burnham; Dr. N. Burns, Highbridge; Dr. C. R. Ashop, Sherborne; and the Ebury Obsequy Society of Somerset. Any members holding votes in either of the Masonic charities are earnestly requested to forward them to T. F. Norris, Esq., Charity Delegate, Highbridge, Somerset, as soon as possible, as the election takes place in April.

BOYS' RACES.

MR. J. HERBERT FARMER (London, W.) in the course of reply to criticisms, writes: My critics carefully avoid or carelessly miss the point of the medical opinion to which I was privileged to give publicity. You will remember that five of the most eminent medical authorities Britain possesses—Sir Lauder Brunton, Sir Thomas Barlow, Sir Alfred Frigg, Dr. James F. Goodhart, and Dr. W. Hale White—speaking from their personal experience and that of their professional colleagues, emphatically condemned, in their letter to me, races exceeding one mile in distance for the average healthy schoolboy under the age of 19. Yet schoolmasters are so eager to do so, because they themselves have not known cases of injury through long-distance racing, such cases do not occur; whilst some persons evidently have failed to realize the essential difference between (a) a long-distance race for a prize in which the competitors will gamely struggle along till they drop in their anxiety to win the cup; and (b) road or cross-country runs, which are taken merely for purposes of exercise, and in which the boys can and do enjoy frequent restful "breathers" whenever they begin to feel the warnings of exhaustion.

DR. HERBERT.

IN its issue for February 27th the *West London Gazette* notes that on the 22nd of the same month the *Star* and the *Morning Leader* settled out of court, by payment of agreed damages, actions for libel brought against them by Dr. P. Z. Hebert of Marylebone. They had previously published expressions of apology and regret. A record is added of a large number of other papers which at earlier dates adopted a similar course. The libel consisted in the publication some two years ago of an account of an affair near Paris in which Dr. Hebert was wounded. It was alleged that the principals in this affair were a gang of swindlers carrying on a matrimonial agency. Dr. Hebert being their English confederate. The affair was the subject of very prolonged police inquiry, but eventually all charges against Dr. Hebert were dismissed.

THE DOMESTIC PREPARATION OF SOURD OR CURDLED MILK.

G. R. G. writes: A patient who has suffered from colitis has been taking curdled milk daily with much benefit. The milk has been curdled by the addition of lactic acid tablets at a temperature of 104° F. and from a pint and a-half to two pints has been taken each day. Latterly he has been in the habit of adding to the fresh milk along with the tablets a small quantity of the whey from the previous day's "brew," and he finds that this considerably hastens the curdling, which with the tablets alone takes from eight to ten hours. But it also makes the product much more sour and acid, and I have my doubts as to whether it is a wise proceeding, as I think it is likely that other acids and ferments may be present, which are undesirable. Can any of your readers who have had experience of the curdled milk diet give advice on this matter?

MR. JOHN G. HUNK (Duns) writes: It became my duty some time ago to provide a daily supply of curdled milk. Because of the difficulty which many find in providing the same, I think it worth while to detail the method used. The milk was just brought to the boil at any convenient time (say in the forenoon), and allowed to cool in the vessel in which it had been boiled. When sugar was dissolved in the milk this was done immediately on its removal from the fire. (At say)

10 p.m. the cooled sterilized milk was skimmed and gently heated up to 106°-110° F. in the original saucapan. (Rewarming cold sterilized milk at this stage is more convenient than boiling fresh milk and allowing its temperature to drop to that mentioned.) The milk was then inoculated with one of the various lactic acid bacilli preparations and poured into a Thermos flask, previously warmed. After corking and shaking, the flask was laid aside overnight. Incubation went on, with no further attention whatever, and the following morning the milk was curdled and in good condition for being used as an article of diet or as a therapeutic agent. At the temperature mentioned nine or ten hours in the flask was found sufficient. When sufficiently curdled the flask was thoroughly shaken and the milk poured into a jar, which was then kept in a cool place during the day till the milk was all used. This process was repeated daily, over a long period, and was found to be the easiest and best method of preparing curdled milk in the home reasonably free from contamination by extraneous organisms. By altering the hour and the temperature (within limits) at which the process is started the milk can be brought to its best condition at any desired hour. That hour is generally the breakfast hour. It is necessary to keep the flask and cork clean by means of alkaline water, when not in use during the day, but in the evening, before use, they must be thoroughly freed from alkali before the cycle begins again. I am encouraged to write this note because of complaints I have heard that curdled milk is difficult to prepare in the home. I find that by the method described above it can be prepared as easily as many other articles of diet, and that its preparation can be undertaken by any intelligent person. The milk used must contain no preservative whatever.

THE APPLICATION OF MENDELISIAN RULES TO MAN.

DR. H. DRINKWATER (Wrexham) writes: I am sorry that Professor Karl Pearson is again guilty of misrepresentation, though, no doubt, it is unintentional on his part. At the end of his last letter he refers to "popular lectures and magazine articles," and in the second paragraph of the same letter to "a public lecture given by" me on Mendelism. Now, I have not, so far, written any magazine article, and the lecture to which he refers was given as a presidential address to a medical society, and can scarcely be termed "public." The professor's conclusions as to the effects of the views I have expressed in previous letters may be quite correct, but they by no means prove that my views are wrong, and whatever theoretical considerations may be involved I can come to no other conclusion, and I do not see how any else can come to any other conclusion, than that that part of Nettleship's chart which includes all the abnormalities is as strictly Mendelian as anything with which we are acquainted, and containing the same amount of material.

LYNN THOMAS AND SKYRME FUND.

Twenty-Second List of Subscriptions.

MR. WILLIAM SHEEN, M.S., F.R.C.S. (2, St. Andrew's Crescent, Cardiff), Honorary Secretary of this Fund, desires to acknowledge the following subscriptions:

Subscriptions to March 11th.

	£	s.	d.
Barnstaple Division, British Medical Association, per Ellis Pearson	...	1	17 6
Maidstone Division, British Medical Association, per J. A. Gibb	...	3	18 6
H. G. Pesel, Pickering	...	0	5 0

IS CANCER CURABLE?

DR. ALEXANDER DUKE (London, W.) writes: The various vaunted cures for this terrible disease having all been found wanting, the interesting question arises, Which is most difficult, to diagnose the disease without doubt or cure the same when discovered to a certainty? I venture to ask the following questions: (1) Is cancer curable by operation? (2) If so, what time must elapse from date of operation till patient can be positively certified as free from the disease? (3) Can the diagnosis of uterine cancer be made to a certainty by any means at our disposal (including the microscope)? (4) Cancer being a constitutional disease manifested by local signs (somewhat like tubercle), how can the removal of the various local manifestations arrest the disease *in toto*, or prevent it showing itself by metastasis? Oral sepsis having been found contributory to the various forms of toxæmia, it might be interesting to make inquiry as to the state of the mouth in undoubted cancer cases. Probably when the real cure is found it will be doubted, reminding one of the old fable: "A wolf! a wolf!"

LIME: AN OLD SCOTTISH CUSTOM.

DR. J. A. WILSON (Cambuslang) writes: My maternal grandparents had a large family of sons and daughters, and on Sunday mornings the old lady assembled her daughters, and gave to each a glassful of lime water. In rotation each had to swallow the dose, while the boys, as if of a different order of beings, escaped. I do not know that the custom was widespread, but that it existed may be of interest in view of recent investigations into the relationship between menstruation and calcium metabolism.

SOUTHWOLD LIEB CASE.

THE following additional subscriptions have been received by the fund opened to assist Drs. Mullock and Tripp in defraying the heavy expenses which they incurred as the result of the recent action which they were called upon to defend:

	£	s.	d.
Dr. E. S. Moorhead, Winnipeg, Canada	5	5	0
Anonymous, Suffolk	2	2	0
Dr. J. Allnutt, Wangford, Suffolk	1	1	0
Dr. S. W. Woollett, Newmarket (late Southwold)	1	1	0
Dr. F. E. Rock, Winchmore Hill, N. ...	1	1	0

Cheques should be made payable to Dr. H. P. Hesham, Beccles, or to Dr. W. Tyson, Lowestoft.

MEDICAL FOOTBALL.

By twenty-one points, or by seven tries to nothing, Guy's Hospital defeated Middlesex in the final round of the Cup Tie, played last Tuesday at Richmond.

Despite the fact that the result was looked upon as a certain win for Guy's, there was a very fair attendance, and during the first half-hour of play the supporters of the Middlesex had the satisfaction of seeing the hospital hold its own against Guy's with complete success. After about twenty minutes of play, however, Gabe had to retire owing to an injured shoulder, and Harrison was brought out of the "scrum" to take his place in the three-quarter line. For ten minutes longer the Middlesex defence held, but at last they gave way to pressure, and as a result of some clever play between Sauer and Medlock, Lee succeeded in slipping over the line. A second try followed almost immediately, Stokes touching down. As before, he took the kick, but failed to convert. When half-time was called Guy's led by two tries to nothing, and the most interesting features of the game had been the excellent defence of the Middlesex backs, contrasting with the brilliant attacking qualities of their rivals. Even in this half the Guy's forwards showed their superiority, getting the ball in nearly every "scrum," and heeling it out to their backs. The Middlesex pack were only able to shine occasionally in the open, scoring several advantages by individually clever work.

The interval at half-time encouraged Guy's, but completely disorganized the Middlesex, who, it must be remembered, were playing with a man short. Almost immediately after play was resumed, Guy's pressed their opponents, their opportunity being due to the treacherous greediness of the turf. One of the backs fell, and there was a "scrum" almost on the Middlesex line, only relieved after a bout of keen forward play by Penny, who took the ball across the ground. The first score of the second half was due to a clever bit of individual play by Williams, who successfully passed the line. After the resumption of play, Middlesex, for the only time in the game, seriously took the offensive, and, circumventing Guy's, kept them hard at work defending within their twenty-five. The situation called for heroic measures. Stringer and Jones combined, took the ball up the field, gave Stokes his opportunity, and enabled him to score. Stokes failed to convert, despite the fact that there was no wind, this being the fourth attempt. For the rest of the game the Middlesex remained on the defensive, and the interest of the match centred in a debate among the lookers-on as to how many tries the winning hospital would have to score before they would be able to convert a single one of them. The game failed to answer the question, though a seventh try was scored before time was given. For the losing side, Penny was the most conspicuous, and to him Middlesex owed the flashes of brilliant play that mitigated their defeat. The winners owed most to Lee and Jones, who gave a capital display of unselfish combination. Sauer and Medlock, at half, proved extremely effective, and Stringer was very conspicuous. Medley did well as full back.

Including the result of Tuesday's match, Guy's have held the Inter-Hospital Cup twelve times, St. Thomas's once next to them with ten wins. The number of wins to the credit of the other hospitals are: London, five; St. George's, three; St. Bartholomew's, two; and St. Mary's, one. In 1890-1 the competition was unfinished.

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An Address

ON THE

NATURAL HISTORY OF ULCERATIVE COLITIS AND ITS BEARING ON TREATMENT.*

By HERBERT P. HAWKINS, M.D., F.R.C.P.,

PHYSICIAN TO ST. THOMAS'S HOSPITAL.

THE proved value of serum treatment in tropical bacillary dysentery makes it important that the active bacterial agents in ulcerative colitis should be known. It is the very type of disease which should yield to serum or vaccine treatment. The site of infection is localized, there is no general infection, and the symptoms are mainly local and exhaustive, though partly toxæmic. If it is not cured in an early stage, nothing remains as a rule but such crude measures as colostomy and ileo-sigmoidostomy. The necessity for bacterial treatment holds good, whether the primary organism concerned should ultimately prove to belong to the dysenteric, paratyphoid, *coli* or pyogenic group. Nothing can be done until the natural history of the disease is understood.

The pedigree of the disease can be traced back for nearly 300 years. It was then called dysentery, or bloody flux. In the seventeenth century epidemics were common in this country. There were sometimes 4,000 deaths a year from "bloody flux." These epidemics usually occurred in the fly season, but sporadic cases were met with also in the spring and winter. In the eighteenth century, probably through a safer disposal of excreta, epidemics became less common. In the nineteenth century they nearly disappeared in the open, except in Ireland, but they persisted in certain institutions, Millbank Penitentiary and various asylums being the chief offenders.

At the present time small outbreaks still occur in asylums. They still occur also on a small scale in the open, and the evidence is almost conclusive that both in these small epidemics and in asylum outbreaks the disease is spread by direct transference of infected material from person to person. Thus a small epidemic (Carver) arose in and around the Great Northern Central Hospital, in which children and adults were equally infected. In 1900 a small outbreak (Cantley) occurred in a London barracks. On one staircase lived 15 women and 30 children. Of the adults, 3 were infected and recovered; of the children, 6 were infected and 4 died. Both these outbreaks occurred in the fly season. In August and September of 1901 an epidemic occurred at Aldershot, and of the civilian population between 170 and 180 persons were attacked, of whom 38 died. All ages were affected, but of the 38 deaths 28 occurred under the age of 5, and 3 over the age of 65. This mortality-rate of about 27 per cent. is identical with that of Japanese dysentery before serum treatment was adopted. The reporting medical officer of health states that flies were very numerous at this time.

This same decline of the epidemic and persistence of the sporadic disease are to be noted all over Europe, except in the south-eastern fringe, where epidemics still occur. The sporadic case is still with us, just as Sydenham described it, and it has never altered its form. His description of the disease in 1669 may be applied word for word to the condition as we now see it. One sentence may be quoted, because I believe that a non-necrotic "dysenteric diarrhoea," such as he alludes to, is still to be recognized: "With these slimy motions appear streaks of blood, though not always; sometimes, indeed, there is no passage of blood whatever from first to last. Notwithstanding, provided that the motions be frequent, slimy, and attended with griping, the disease is a true bloody flux or dysentery." Though a few cases of dysentery are specified in the Registrar-General's report, this separate heading has only appeared in the last few years, and the bulk of our cases are probably buried with the 20,000 annual deaths from diarrhoea.

When the epidemic disease became insignificant, the sporadic case ceased to attract much attention, and it eventually acquired the new name of "ulcerative colitis." For the moment I think this is a better name than

"dysentery," and there should be no reversion to the original name, unless and until it has been shown bacteriologically that this disease belongs to the dysenteric group.

THE CLINICAL EVIDENCE.

This disease comes before us in varying guise, as a short severe illness, and as a long illness continuous or intermittent. To these three forms I think must be added a simple non-necrotic diarrhoea, often the precursor of a more severe attack. The difference between these various forms is not a matter of symptoms and physical signs. These are constant. The difference rests mainly on the duration of illness and partly on the mode of onset, and in both these respects this disease presents greater variation than does bacillary dysentery.

In considering a series of 85 cases (for about three-fourths of which I am indebted to my colleagues at St. Thomas's Hospital) one question is kept in view—namely, Are all these cases of the same nature, or are different diseases mixed under one name?

If an answer to this question can be given it will allow a definite though weak presumption, that an organism known to be causal in one case is the cause of all the others, and an attempt at appropriate treatment will follow. At the same time, the subsidiary question may be considered as to how far all or any of these cases resemble or differ from the bacillary dysentery of tropical countries. In all these 85 cases the disease was acquired in this country.

A.—The Acute Continuous Disease.

Among these 85 cases (of whom 41 died and 44 survived) we find instances both among the deaths and the survivals which, to my mind, so far as symptoms go, are identical with bacillary dysentery. I think, if the following cases occurred in a tropical country, no one would think twice about the diagnosis.

CASE I.

Man aged 59. Sudden onset of diarrhoea, with cramp in legs, and abdominal pain, mostly in right iliac fossa. Vomited three times. Stools five to six a day, much blood and mucus. Slight fever, 99.1° F. Hiccough. Tongue became red, glazed, and dry. Pulse 132, falling rapidly. Death on twenty-third day. *Post-mortem*: Colon ulcerated from end to end; ulcers ovoid with swollen rounded edges, separated by strands of sodden mucosa, sometimes confluent over large tracts, mostly extending down to muscular coats, a few to peritoneum. No disease elsewhere. From splenic blood, after death *Bacillus coli* and *Bacillus proteus* grown.

CASE II.

Woman aged 31. No previous attack. Sudden onset of rectal pain and passage of blood. Continuance of hæmorrhage and profuse offensive discharge, with little faecal matter. Slight fever. Death on thirty-eighth day. *Post-mortem*: Ulceration of whole colon and rectum; in caecum only a few polypoid islets of mucosa remained; no disease elsewhere.

Two similar cases ending in recovery may be quoted, in one of which the serum agglutinated Shiga's bacillus.

CASE III.

Man aged 25. No previous attack. Onset of diarrhoea slight at first, then more severe with abdominal pain; stools five to six a day, offensive, slimy, with streaks and clots of blood; genuine tenesmus; fever for one week. Treated with bismuth and Dover's powder. Apparently complete recovery; duration about six weeks. Subsequent history unknown.

CASE IV.

Woman aged 41. Sudden diarrhoea; stools every fifteen minutes at first, with straining and genuine tenesmus and pain on defaecation, most stools containing red blood. Tongue red and dry. Temperature normal. Treated with bismuth and opium and creolin irrigation; quickly improved, and was discharged apparently cured on the fortieth day of illness. Subsequent history unknown. Her serum id in 100 agglutinated Shiga's bacillus at once. It is highly probable that this was a case of bacillary dysentery. It is noteworthy (cp. later evidence as regards dysenteric diarrhoea) that she stated that she had a similar but slighter attack three months previously and recovered completely.

Out of this series of 85 cases, 20 may be described as being of this "short, continuous type," which so closely resembles bacillary dysentery. A picture of the condition in the British case comprises a sudden onset, sometimes with constitutional disturbance, diarrhoea (up to twenty or more stools a day), the passage of mucus and blood, the blood being red, in considerable quantity, or

mixed with inflammatory exudation to form reddish-brown or black liquid stools, severe gripping pain in connexion with defaecation, and in some cases true rectal pain and tenesmus, fever in nearly 50 per cent, and signs of toxæmia in the severe cases, dry tongue, parching of mouth, and rapid wasting.

B.—The Chronic Disease, Continuous and Intermittent.

As regards the remaining 65 cases, I think it may be said with truth that in all of them there occurred at one time or another a phase of the illness, during which phase this same close resemblance to bacillary dysentery was maintained. But it was a phase only (sometimes an opening, often a terminal scene), and if this phase is put on one side, it must be confessed that in their general course these 65 cases bear little resemblance to the acute cases already described and to the majority of cases seen in tropical countries. The mere duration of the illness might lead one at first sight to think that we are dealing with some disease which is met with only in temperate climates. If we look at a rough table of duration we see something in chronicity of disease that is rarely, if ever, met with in the tropics.

In 30 of these 65 cases the illness was continuous from first to last, with little or no tendency to intermission or improvement. In 15 of these (fatal cases) death occurred:

In the third month...	...	in 3 cases
In three to six months	...	in 2 "
In six to eight months	...	in 2 "
In eight to ten months	...	in 2 "
In ten to twelve months	...	in 2 "
In eighteenth month	...	in 1 "
In two to two and a quarter years	...	in 3 "

In the 15 patients who left hospital alive only the minimum duration of illness can be given, because though they survived it is doubtful if many can be said to have reached a cure. The duration was:

Two to six months...	...	in 3 cases
Seven to twelve months	...	in 4 "
One to one and a half years...	...	in 3 "
Nearly two years	...	in 1 "
About three years	...	in 2 "
Five to six years	...	in 2 "

But this wide departure from the usual type of bacillary dysentery becomes wider still when we consider the remaining 35 patients. In these the story is often of immense duration. These cases must be described as "intermittent" or "relapsing," or as "comprising a series of separate attacks" with a decided tendency to cure, but always falling short of a complete cure. Of these 35 patients, 11 who did contributed a history of twenty-one attacks of diarrhoea, generally (cp. Sydenham's description) but not always associated with the passage of blood previous to the final and fatal attack which brought them into hospital. The 24 who survived gave similar histories of great duration. Thus 18 contributed a history of thirty-seven previous attacks, 5 gave a history of "several" previous attacks, and 1 stated, I believe with truth, that she had had an attack nearly every August for sixteen years.

C.—Dysenteric Diarrhoea.

Thus we have the concept of a long, intermittent diarrhoeal disease running over many years (eighteen years in one case, over five years in many cases), and probably these 35 patients may be fairly stated to have had seventy or eighty previous attacks of diarrhoea between them. As a rule, these early attacks are less severe (cp. Cases v and xiii), and severity increases with recurrence. It is probable that in some of them there is no actual ulceration. They are analogous to slight cases of bacillary dysentery which proceed no further than a superficial catarrhal inflammation. If they are reckoned, as I think they should be, as part of the unit "ulcerative colitis," then this disease becomes much more common than is generally supposed. I think that any case of sudden violent diarrhoea in this country that runs into a second or third day, especially if there is no sign of affection of stomach or small intestine, should be regarded with suspicion, and if blood and mucus are passed I think the case must be put into this group.

An example of this recurring disease may be given

which shows how far we have travelled from the usual picture of a bacillary dysentery as seen in tropical countries. It shows also how the early attacks of dysenteric diarrhoea which often precede a final severe attack may be regarded lightly, and how a cure may be recorded under any kind of haphazard treatment which much later events may disprove.

CASE V.

Governess, aged 34, liable to diarrhoea (that is, several slight attacks) for eighteen months. Last attack was longer and more severe, she passed blood and mucus, had considerable abdominal pain, and was admitted into hospital in April, 1896. In two months she seemed to be cured, and she was discharged in June. She remained well till September, when the same symptoms returned, and she was again admitted in October. After one month of treatment she seemed to be well again, and she remained well till April, 1897, when the symptoms returned, hæmorrhage being severe, and she was readmitted in May. Treatment now had little effect, and in September left colostomy was performed without benefit. In January, 1898, ileo-sigmoidostomy was performed with success, but in April an attempt was made to close the colostomy wound, and she died three days later from general peritonitis. *Post mortem* there were found a large ulcer in the long axis of the splenic flexure, and a similar ulcer in the iliac colon, with some patches of grey scar tissue around it. No disease of colon past or present, above the splenic flexure. The total duration of illness was two years.

In another patient of this class who recovered, for a time at any rate, Shiga's bacillus was agglutinated.

CASE VI.

Man aged 31. Four years ago had several short attacks of abdominal pain, vomiting, and diarrhoea, sometimes with passage of blood. Then occurred an interval of three years of good health. In February, 1906, another severe attack, stools four to five a day, occasional blood, much mucus, great loss of weight, no fever, occasionally sick. He apparently recovered completely in three months, but the subsequent history is unknown. Shiga's bacillus was agglutinated by his serum, dilution 1 in 20 giving good diffuse clumping in one hour, 1 in 50 slight clumping in one hour, 1 in 100 no reaction.

D.—The Acute and the Chronic Disease.

We have now before us, then, the single attack proving fatal in three to six weeks, and the long continuous or recurring illness (or series of attacks) often tending to increase in severity, and spread over two to eighteen years. Are the short attack and the long illness separate forms of disease, or is this wide illness a single unit with great variation in duration?

To my mind the evidence, so far as clinical study can go, is in favour of unity. Between the temporary diarrhoea with or without bleeding, the short fatal illness, and the long recurring illness, clinical evidence shows no differentiating feature except the mere duration. They cannot be separated into two or more groups. There is a perfect gradation from the illness of thirty days to the long illness of many years, and there is no break. At any time in the long illness, as will be shown, there may supervene an acute attack which may rapidly prove fatal. The early attacks in the long cases are often severe enough in themselves. They differ in no particular from the short single attack which proves fatal except in their lesser severity, and in any one of them with a little less luck the patient might have died, and so have converted a potential long illness into an actual short fatal attack (cp. Case xiii).

If it is granted that we are dealing with a single unit, how does it compare with tropical bacillary dysentery? Is there anything in tropical countries which resembles our long-continued home-grown disease? It is clear that such a long-continued illness is at any rate not very prominent in the minds of experienced writers on tropical dysentery, but it is present. Of Japanese dysentery Shiga states that the duration is four to eight days in the light cases, and three to six weeks in the serious ones, and that in fatal cases death usually occurs in two to three weeks. But he adds, without any details, that the disease may become chronic, with a tendency to relapse, and he speaks of this as "a subsequent disease in which we cannot find the dysenteric bacillus." Davidson describes chronic dysentery as being a direct persistence of an acute attack, or a persistence by relapse, or a chronic disease from the first. As regards the ending of such a case, he says that "the patient after months or years of suffering dies of exhaustion or is carried off by some intercurrent disease."

I think we may take it, therefore, that the great variation in duration of the British disease is not without parallel in the experience of the tropics. There remains, however, the striking difference between the United Kingdom and tropical countries as regards the relative proportional frequency of the short case and the long case; the latter bulk largely with us. I expect they form 70 to 80 per cent. of our cases. In the tropics they form a small minority. But they may be more common than is generally supposed. As a matter of fact we often see such cases returned from the East, and they present just the same difficulties with regard to treatment, medical and surgical, as our native product.

Two examples of long-continued tropical dysentery for comparison with the British disease may be given:

CASE VII.

Soldier, aged 30. Went to India in 1895; dysentery there in 1898. For next four years liable to attacks of diarrhoea. In 1902 to South Africa, where second severe attack occurred. Liable to diarrhoea since. In December, 1904, having left the army and become a meat-porter in the Old Kent Road, he had a third severe attack, stools hourly, mucus and blood passed, tenesmus, prolapse of rectum, abdominal pain during and after defecation. Improved considerably, but in February, 1905, a fourth severe attack occurred, which continued off and on, till April, 1905, when he was admitted into hospital. He had lost 5 st. in weight in four months. Ulceration of rectum could be seen with speculum. Stools now two to four a day, containing abundance of polymorphonuclear leucocytes and generally visible blood. No amoebae found. Temperature normal. Under medicinal treatment and irrigation he improved considerably, regained a little weight, and left on June 23rd to resume work. Subsequent history unknown. Reckoning from the start (as with our British cases), the duration up to date is about seven years. He was certainly not cured when he left hospital.

CASE VIII.

Man aged 38. In 1898 he had his first attack of dysentery on board ship off the East Coast of Africa. In succeeding years in this country he had slight recurrences. In 1905 he had another severe attack in Rhodesia, and he has been liable to diarrhoea ever since, with passage of blood and severe griping. In April, 1906, he was admitted into hospital. A culture from stools yielded only *Bacillus coli* and an atypical bacillus of this group. With medical treatment and twelve injections of *Bacillus coli* serum he improved considerably, and left in August. Three weeks after discharge he was as bad as before, with constant pain and haemorrhage. He returned to hospital, and a right colostomy was performed. A period of comparative peace ensued, though a blood-stained discharge from rectum continued until August, 1907. A course of irrigation with silver nitrate was then tried; it was badly borne and proved useless. Two unsuccessful attempts at ileo-sigmoidostomy were made in 1908. There can be no doubt that at this date, ten years after the first attack of dysentery, the colon is still ulcerated.

E.—The Haemorrhagic Disease (Lower Segment Type).

From a study of the mode of onset a point is extracted, which is more likely to have a differentiating significance than the mere duration of the case. In 10 of these cases simple bleeding from the colon preceded the diarrhoea and all other signs of colitis. Of these 10 patients 6 died and 4 survived, though I doubt if they were cured. In 2 of the fatal cases there was actual constipation with the haemorrhage, so that aperients were necessary. In 2 cases haemorrhage continued off and on for about eighteen months, in another case for twelve months, and in the others for days, weeks, or a few months before diarrhoea began. In all of them, however, diarrhoea and all the symptoms with which one is familiar in the more usual form of ulcerative colitis, set in sooner or later, and the condition of the colon after death did not differ from that found in the patients who began their illness in the more orthodox diarrhoeic way.

I know nothing of such a stealthy haemorrhagic mode of onset in tropical dysentery, but I suppose it is possible that both this unorthodox beginning and also the large relative proportion of chronic cases as compared with acute cases in this country can be explained in the same way up to a certain point. The severity of the disease and the degree of toxæmia vary with the site of disease in the bowel. This is clearly the case in bacillary dysentery. Shiga speaks of an "ascending" and a "descending" dysentery. In the majority of tropical cases the disease begins in the rectum and iliac colon, and remains localized there or ascends thence. In a small proportion it begins in the caecum and descends. This latter form presents the more severe results, and a still graver intoxication ensues when the lower end of the ileum is also affected,

and the disease then as regards toxæmic symptoms may approximate to enteric fever. The higher the site of disease, the more severe and general are the symptoms; with a lower site they are milder, and the results are more local.

There is evidence to show that this variation in the site of the disease, with a corresponding variation in the severity of the symptoms, occurs in British ulcerative colitis as in tropical dysentery. In Case v a relapsing illness of two years occurred, but the patient was never gravely ill, and might have recovered. Post-mortem examination showed that the disease had never extended upwards above the splenic flexure. It was a lower segment disease from first to last, there was no great toxæmia, and death was accidental.

This may be contrasted with Case i, in which the disease was of the upper segment type, "pain in the caecal region" was the earliest symptom, the illness was grave from the first, intoxication was severe, and death took place on the twenty-third day.

Far apart as these two cases seem, I see no reason for thinking that they are not of the same nature, considering that in Japanese dysentery, a disease of known uniform causation, there is noted the same variation of severity with the segment of colon affected. If in Japanese dysentery, as is frequently the case, the infection remains limited to the rectum and lower colon, the symptoms are mild and the prognosis is favourable. The following three cases may be interpreted as examples of long continuance of lower segment infection with preservation of fair health, followed by sudden rapid extension to the upper segment ending in death:

CASE IX.

Woman aged 37. In 1902 she began to pass blood and slime with loose stools. The haemorrhage persisted with loose but not frequent stools, and in January, 1903, she was admitted into hospital. So local did the disease seem to be, that a shallow abrasion just above the sphincter was cauterized and an ulcer 2½ in. from sphincter on posterior rectal wall was excised. In March, 1903, she was again admitted for fissure in ano. All through this year and for six months of 1904 she continued to pass blood and mucus from time to time, but was never laid up. In the autumn of 1904, that is, at least eighteen months after the first appearance of blood in the stools, a sudden change occurred. Diarrhoea set in with considerable abdominal pain. She wasted rapidly. Stools up to sixteen a day. Slight fever. Colostomy was performed in November, 1904, irrigation employed, and she improved considerably. Pain and diarrhoea ceased, but as usual in such cases blood and mucus were attempted to perform ileo-sigmoidostomy resulted in fatal peritonitis. Post-mortem the colon was found to be uniformly ulcerated from end to end. I think it is probable that up to the autumn of 1904 her infection was limited to rectum and pelvic colon.

CASE X.

A solicitor's clerk, aged 22. Had never been out of England, and had had no previous illness. In 1902 a brother was invalided home from South Africa convalescing from enteric fever. Soon after his arrival this patient acquired enteric fever. He made a good recovery, but stated that he always had some trouble with his bowels afterwards, an irregularity with constipation predominating, and the passage of mucus. This may or may not have any connection with the subsequent illness. About a year later this became more marked, and he began to pass small quantities of dark blood in most stools. This bleeding continued from December, 1904, to May, 1906, but during these eighteen months his general health remained good, there was no pain or diarrhoea, aperients were often necessary, and he actually continued at work, though his weight gradually fell from 10½ st. to 8 st. On May 11th, in this case, I see two parts—(1) eighteen months of lower segment disease and haemorrhage; (2) six weeks of disease of upper colon not to be distinguished from tropical bacillary dysentery.

CASE XI.

A lady, between 50 and 60 years of age, noticed blood in her motions in May, 1890, but she had no pain or diarrhoea. This haemorrhage soon ceased, and she seemed to be quite well. In the following October, however, diarrhoea and abdominal pain set in. The diarrhoea was severe, over twenty stools a day being noted, a good deal of blood was passed, and there was great tenesmus. She died five or six weeks later. The colon was ulcerated from end to end, and the underlining was very

marked, some ulcers being spanned by bridges of surviving mucosa.

CONCLUSIONS.

I think (1) that the great variation in the duration of the illness, and the fact that in some few cases simple colic haemorrhage may for a long time be the only sign of disease, do not necessarily require that we should regard these cases as separate forms of disease, distinct from the dysenteric diarrhoea and from the short fatal illness, which so closely resembles bacillary dysentery, and (2) that both points may be explained on the ground of primary localization in the lower segment of the colon.

THE BACTERIOLOGICAL EVIDENCE.

From the clinician's point of view tropical bacillary dysentery is a unit of disease. So it will remain. It presents some differences as regards degree of toxæmia and duration, but these differences are small as compared with those noted in the British disease. Bacteriology, however, shows that it comprises several groups, each of which is dependent on a definite specific organism separable by agglutination and by sugar-fermenting reactions. Probably there are three or four such groups. The two varieties of Shiga and Flexner certainly account for the dysentery of Japan, China, the Philippines, and the West Indies. One or other of these varieties has been so often isolated from cases of dysentery and even of non-necrotic diarrhoea in temperate climates—for example, America (Flexner), Germany (Kruse), France, Austria, and Holland—that its general causal connexion is highly probable. But it must be noted that these observations have been mostly made in institutional epidemics, and not on the sporadic cases which we are considering. *B. dysenteriae* has, however, been found in sporadic cases in Philadelphia.

The range of *B. dysenteriae* has been recently extended. It seems to be proved that the ubiquitous Shiga and Flexner varieties are the chief cause of the diarrhoea of children in New York, both in summer and winter, the Flexner variety predominating, both varieties sometimes co-existing. To this pair Hiss and Russell added a third, which differs from Shiga's bacillus only in fermenting mannite. A fourth variety, such as was found in children by Wollstein, must be recognized, which ferments saccharose, maltose, and dextrin. Shiga tentatively adds a fifth variety.

Now it may be taken as highly probable that the small epidemics which still occur in asylums in this country are also dependent on *B. dysenteriae*. Eyre found Shiga's bacillus in 6 out of 10 cases. McWooney isolated Flexner's bacillus from 1 case. Boycott found Flexner's bacillus in 17 out of 19 cases. But investigation of our sporadic cases hangs fire and is inconclusive. From 1 case only, so far as I know (acute case of a child), has Flexner's bacillus been isolated in this country (Marshall). Sandby has reported 2 cases from which Hewetson is said to have obtained Shiga's bacillus, but as regards the first of these the identity must be disallowed.

Sporadic disease is more difficult to investigate than an epidemic. Cases commonly reach the chronic stage before examination is possible. Even in the acute asylum cases it is seen that the specific bacillus was not isolated from every case examined. Eyre states from his further observations that in cases of chronic asylum dysentery (which probably corresponds to the bulk of our sporadic cases) *B. dysenteriae*, if present, is so outnumbered by *B. coli* and other intestinal saprophytes as to render its isolation a matter of extreme difficulty.

Further, we have Flexner's observation that even in tropical bacillary dysentery the faeces do not contain *B. dysenteriae* in such numbers as to make it possible to recover them as readily as from the intestinal mucosa, and that a scraping from the rectal mucosa will yield *B. dysenteriae* when it has not been found in the faeces. This is confirmed on all sides. Once outside the crypts and substance of the mucosa, it is quickly overgrown by saprophytes.

Consequently the following results of examination of "faeces" in ulcerative colitis at St. Thomas's Hospital are of little or no value. In 6 chronic cases *B. coli* was thus obtained: Pure in 2 cases, with *B. proteus* in 2 cases, with *Streptococcus faecalis* in 1 case, with this organism and *B. pyocyaneus* in 1 case. In 4 other cases the stools were examined for *B. dysenteriae* with a negative result.

Now as regards scrapings from the intestinal mucosa, Dr. L. S. Dudgeon has kindly examined 2 cases for me.

CASE XII.

Man aged 34. In May, 1908, began to pass blood, with a continual ache about the sacrum. A week later diarrhoea set in, five or six stools a day, generally containing blood, with griping, fever, and loss of weight. He lost ground until November, when improvement began. In January, 1909, he had regained 14 st. in weight, and was passing one or two fairly well-formed stools daily without blood. Though he appeared to be convalescent, I doubt if he was cured, and his rectum remained very red and moist, and it bled unnaturally on gentle scraping. Broth was inoculated with the scraping, and after four hours' incubation this was plated on Drigalski's and Conrad's media and on MacConkey's lactose agar. *B. coli* was found on all plates. But the blue colonies on the former media and the white colonies on the latter consisted of bacilli which gave almost identical reactions. This bacillus was slightly but distinctly motile when emulsified in normal saline; it was agglutinated, dilution 1 in 20, in thirty minutes at room temperature by the patient's serum, but there was no reaction with dilution 1 in 50. It was Gram-negative. It fermented, with production of gas, glucose, maltose, mannite, glycerine, salicin. It did not ferment lactose, raffinose, cane-sugar, or dulcitol. No action on neutral red broth. Litmus-milk alkaline; no clot after several days. Peptone, no indol. Jelly, no liquefaction. Other colonies examined gave similar results, except that salicin was unaffected. In two rabbits inoculated intravenously and in two guinea-pigs inoculated intraperitoneally no results followed. This patient's serum did not agglutinate either standard typical Shiga's bacillus or the bacillus obtained from the next case, or *B. typhosus*.

CASE XIII.

Man aged 23. In June, 1903, he had his first attack. Sudden onset of violent diarrhoea, stools up to ten a day, some containing bright red blood, much slime, severe griping across lower abdomen. Under treatment this subsided; in three weeks he was beginning to improve, and in six weeks he was apparently well again, and his stools became normal and formed. In tropical countries this would have been called dysentery, but no bacteriological examination was made. On December 11th a second attack of the same kind began. Profuse diarrhoea, with blood and mucus, great rectal pain as well as general griping, vomiting, fever. This soon proved to be more severe than the first attack, and he began to lose weight. In January, 1909, his rectum was very red, granular, and moist, and it bled on the least touch. A high scraping was plated direct on to MacConkey's lactose agar gave the following results: The majority of colonies after twenty-four hours on two plates were white, the remainder red. These latter were true typical *B. coli*. The white colonies consisted of a bacillus, Gram-negative, non-motile. This bacillus fermented with production of gas, glucose, maltose, glycerine, mannite, and cane-sugar. It did not ferment lactose-broth (but formed acid and gas in lactose-jelly at 22° C.), salicin, raffinose, inulin, or dulcitol. No action on neutral red broth. Litmus-milk, very slight acidity, no clot, result permanent. With peptone, indol; jelly, no liquefaction. Patient's serum did not agglutinate either this bacillus, diluted 1 in 10, 1 in 50, or Shiga's bacillus. This bacillus was not agglutinated by serum of the preceding case.

In the next fortnight the patient went rapidly downhill, with great wasting, severe pain, raw tongue with aphthae, and parched throat. Right colostomy was therefore performed. A scraping made from the caecum and plated direct on to Drigalski's and Conrad's media and MacConkey's lactose agar, gave only *B. coli*, abundant growth of *B. pyocyaneus*, and *B. proteus*. In spite of the diversion of faeces and irrigation the patient died nine weeks after the commencement of his second attack. Only a small part of the colon could be obtained for examination—namely, the transverse colon and splenic flexure. Over the whole of this the muscular layer was exposed, only a few polypoid fragments of mucus and sub-mucous layers remaining. Such a fragment showed (1) infiltration of mucosa and submucosa, and to a less extent of the outer coats, with small and large mononuclear cells, some plasma cells, a few eosinophiles, no polymuclear cells or basophiles; (2) thrombosis of capillaries and small vessels; (3) haemorrhagic oedema of muscular coats; and (4) bacilli, short and fat, long and thin, throughout the whole intestinal wall, an infective condition which accounts for the toxæmia and the failure of treatment. Such a fragment was secured and incised, and a scraping was plated direct on to MacConkey's lactose agar. Here again *B. pyocyaneus* and *B. coli* were obtained. But the predominant growth was a white colony consisting of bacilli, having much the same characters as the organisms grown previously from this patient's rectum and from Case XII. Two such white colonies worked out gave nearly the same results. It was a short, Gram-negative bacillus, non-motile in one case on agar jelly, in the other case non-motile on agar but slightly motile on jelly. They gave no reaction with antidyenteric serum (Shiga). They fermented with production of gas, dextrose, mannite, maltose, cane-sugar, lactose, and dulcitol. They did not ferment inulin or raffinose. They had no effect on neutral red broth and did not liquefy jelly. They both produced indol. With litmus milk one produced acidity with slight clot after several days, with the other milk remained alkaline for five days and was then decolorized.

Turning now to the agglutination reaction, we find some evidence in favour of the identity of ulcerative colitis with bacillary dysentery. Foulerton obtained the reaction with Flexner's bacillus in 3 cases, dilution 1 in 40, 1 in 100. Vedder and Duval record the same results with Shiga's bacillus. Vaillard and Dopter found the reaction well marked, diluted from 1 in 20 to 1 in 300, in an outbreak at Vincennes. Hewlett obtained a positive reaction, with Flexner's bacillus in 2 cases of asylum dysentery. In Boycott's cases a reaction with Flexner's bacillus was noted, sometimes with dilution up to 1 in 200 and 1 in 500, but Shiga's bacillus was unaffected. A multivalent anti-dysenteric serum agglutinated the bacilli, which he isolated, with a dilution of 1 in 1,000, and when so examined even 1 in 10,000. The Shiga's bacillus obtained by Eyre was immediately agglutinated by anti-dysenteric (Shiga) serum with dilution 1 in 200, and by the serum of another patient in similar dilution. In a woman under my care (Case iv) Shiga's bacillus was immediately agglutinated by her serum. In Case vi also the reaction was obtained, though in less dilution. In 5 of our chronic cases, on the other hand, there was no reaction with Shiga's bacillus, though Flexner's bacillus was not tested.

The agglutination test, therefore, leaves us in the same doubt as does the search for a specific bacillus. The case is nearly conclusive for asylum dysentery, it is suspicious for the acute sporadic case, and it fails entirely against our common chronic disease. Yet I think the clinical evidence must be taken to mean that our long-continued case is directly related in some way to our short fatal illness, and perhaps also to the acute asylum case. In such an instance as Case xiii, where the patient tided through a short severe attack of three weeks, only to relapse three months later and die after a second illness of nine weeks, we must conclude that both illnesses were of the same nature. This instance is only one of many. Now it may be taken as nearly certain that *B. dysenteriae* was not present in this second attack, or at any rate during the last five weeks of it. Was it present in the first attack or in the first four weeks of the second attack?

If the clinical evidence is considered to be strong enough to warrant the belief that the short illness and the long illness own the same origin (perhaps one of the organisms of the dysenteric group), it is possible that the relation between them may be explained on the hypothesis of a concurrent or consecutive action of organisms of the paratyphoid or *coli* variety, or of pyogenic cocci. *B. pyogenes*, also, may be an important factor. In the analogous intestinal infection of typhoid fever there is considerable evidence indicating concomitant failure of the normal intestinal protection against *B. coli* and pyogenic cocci. It is known that from tropical bacillary dysentery in a chronic stage *B. dysenteriae* can no longer be obtained, and, in such examples of tropical disease as Cases vii and viii, one can hardly doubt that the perpetuation of the disease is the work of common non-specific organisms. It may be that the chronic British disease is similarly a secondary non-specific ulceration, in which case the prospect of a generally applicable specific treatment becomes remote.

TREATMENT.

Of these 85 patients 41 died. Of the 44 survivors, many improved, but I doubt if more than 8 of them were cured. These figures, being drawn from hospital and consulting work, naturally only include the severe and chronic cases. In all the fatal cases the colon was examined after death, and in all these, except one (Case xvi) the colon was extensively ulcerated, such ulceration not being due to typhoid fever, tuberculosis, or other recognized cause.

Until specific treatment can be provided I do not think any dogmatic rules of treatment can be produced. I have nothing useful to say; but, looking back on the cases for which I have been responsible, I feel sure that lives might have been saved by an earlier recourse to colostomy. As regards serum treatment, there is no doubt that immune serum has a specific agglutinating action on each member of the dysenteric group. Vaillard and Dopter, however, find that serum immunized with the Shiga-Kruse bacillus has a favourable influence on cases, whether they are due to Shiga's bacillus or to Flexner's bacillus. Shiga has made a serum covering three types. The Shiga-Kruse bacillus

alone is used by the Lister Institute for the manufacture of their serum. In France, Coyne and Auché have made a Shiga-Flexner serum, which is effective in infantile colitis.

I have used the serum of the Lister Institute freely in 5 cases, but I can offer no opinion as to its utility, for all the cases were chronic and various other methods of treatment were in force at the same time. The *coli* serum used in Case viii seemed to be beneficial. As regards *coli* vaccine, which was used in many cases, no obvious benefit can be noted. Case xiii had three doses of a vaccine of his own bacillus and of *B. coli* without benefit.

From the point of view of treatment, two classes may be considered.

(1) Dysenteric Diarrhoea.

A short, mild attack may yield to opium and bismuth, but in using these and such-like drugs we are only treating a symptom, and are relying on a natural resistance to the infection, which may or may not be forthcoming. It is clear that ipecacuanha has no specific influence on the disease. As regards Japanese dysentery, Shiga says of ipecacuanha that "it has a very poor place as a dysenteric remedy." In asylum dysentery, also, it appears to be useless. The general custom now is to use calomel, and I believe this to be the best line of treatment. Shiga gives 8 to 12 grains once or twice, or one dose of castor oil 3 to 5 drachms, or one dose of calomel followed by castor oil. In asylum dysentery also Gemmell found calomel beneficial. I prefer to give it in frequent small doses rather than a few heroic doses, and combine it with opium. Calomel, 1 or 2 grains, with opium, $\frac{1}{4}$ grain, can be given three or four times a day.

With the calomel treatment Shiga recommends simple enemata of 1 per cent. saline or soda solution for cleansing purposes (no astringent being permitted), with suppositories of opium, cocaine, or belladonna, and if there is much haemorrhage he applies an icebag to the abdomen and gives opium by the mouth.

Whatever temporary views we hold as to the nature of ulcerative colitis, I believe it is wise to use the serum of the Lister Institute in all acute cases. By its use Shiga states that "the course of the Japanese disease is shortened in those who recover, and lengthened in those who otherwise would die," and his figures show under its use a diminution of the mortality by about one-half (from 22 to 26 per cent., to 9 to 12 per cent.). The serum is bactericidal and antitoxic. I have given as much as 80 c.cm. in a chronic case in which recovery ensued, but it was combined with much other treatment.

(2) Acute and Chronic Necrotic Disease.

In the case which is severe from the first, and in which fever and toxæmia are considerable and widespread inflammation and necrosis of the mucosa are manifested by abundance of polymorphonuclear leucocytes and blood in the stools, the same line of treatment may be adopted. But if improvement is not quickly seen, we are face to face with a condition which may either prove fatal in the next few weeks or may tail off into the chronic and nearly incurable form. The question of local treatment, in addition to the use of serum, becomes imperative. It is easy to be too optimistic and to wait too long for cure. In genuine ulcerative colitis, as distinguished from the great functional and subinflammatory conditions of the colon with which it is often confounded and in which cures under any treatment are common enough, a deceptive appearance of health may be preserved for a time, while the disease extends upwards. Even a pure lower segment infection may quickly get out of control. We have to decide between irrigation per rectum, appendicostomy and irrigation, and colostomy with irrigation and the establishment of a free artificial anus. The right plan can only be settled by the degree of severity of the toxæmia and the probabilities as regards the extent of the disease in each individual case. From what I have seen, I have no high opinion of irrigation per rectum. I think irrigation by appendicostomy has advantages over rectal irrigation, but in no other respect has appendicostomy anything to recommend it. But looking back on many of these cases and on the condition of the colon after death, I believe that colostomy will prove to be the most life-saving proceeding

in the long run. It affords complete rest to the colon as well as efficient irrigation.

The irrigating fluids that may be used are innumerable. Silver nitrate, creolin, boric acid, argyrol, and tannin are often used. Among other things I have tried methylene blue (2 to 3 grains in a pint). In one stationary case under my care, milk, in which lactic acid bacillus had been incubated for twelve hours, was injected daily through an appendicostomy for a long time without obvious result. Similar milk I have given freely by the mouth and in large quantities by rectal irrigation without any apparent benefit. In my most successful case I used an emulsion of sulphur, 120 grains in 4 oz. of oil. This was thrown into the colon through an artificial anus every other day, and on the alternate days thorough sluicing with boric acid solution was carried out. This was employed for seven weeks. With the same idea of using something that will adhere to the mucosa, Shiga has used enemata of gum arabic mixed with bismuth, gallate of bismuth, or iodoform.

That there is some natural tendency to cure is seen from the following case:

CASE XIV.

Man aged 66. In addition to a large number of recent ulcers, large and small, there were several bands and patches of cicatricial tissue, and about these parts the colon was thickened and narrowed. He died on the thirty-fifth day of his illness, but there was a history of previous attacks of diarrhoea. Colostomy was performed, but only just before death, and at too late a period to have induced the healing, and the scars were probably attributable to the earlier attacks.

In two other cases (man aged 34, total duration of illness eight months; woman aged 24, total duration with intermissions five and a half years) the colon showed recent ulcers, healing ulcers, and scars of previous ulcers.

That this tendency to cure is increased by colon-rest is probably shown by the following cases:

CASE XV.

Man aged 39. Total duration of illness was two and a half years. Ileostomy was performed two years, and ileo-sigmoidostomy twenty months, before death. Death occurred from peritonitis arising from an attempt to close the artificial anus. Smooth white patches of scar tissue were found here and there in the colon, with active ulceration in pelvic colon and rectum—that is, below the point of anastomosis.

CASE XVI.

Man aged 34. His illness comprised a series of attacks (diarrhoea and haemorrhage), with intervals of fair health; total duration was two and a half years. Ileostomy was performed twenty months before death, and his death was due to peritonitis arising in an attempt to perform ileo-sigmoidostomy. The whole of the colon was much thickened and irregularly contracted, but no actual scarring could be recognized, and no ulceration was present.

The unpleasantness of an artificial anus can be mastered, and the patient who must use it is by no means a social outcast. The disadvantage lies in the fact that when the colon is out of use it undergoes progressive contraction, and it becomes surrounded by dense fibrous fat. So that after the lapse of a certain time (perhaps a year) both closure of an artificial anus and the performance of ileo-sigmoidostomy become difficult, dangerous, or impossible. A reference to the fatal cases in this series shows this.

In Case VIII, already detailed as an instance of long-standing tropical dysentery, in which colostomy was performed in August, 1906, two separate attempts at ileo-sigmoidostomy were made in 1908. Both proved impossible by reason of the small size of the colon, and its embedding in dense fibrous fat. In fact, at one spot the colon seemed to have no lumen whatever.

While there are these difficulties before us, it is clear that the premature attempt to close an artificial anus before the colon ulceration is completely healed will be equally disastrous. In some extreme cases I believe that the loss of tissue is so deep and extensive that the colon can never be used again, and that either an artificial anus must be used to the end of life or an ileo-sigmoid anastomosis must be established, as to the difficulties of which the instances mentioned above give abundant testimony.

The following case is an instance of such a permanent artificial anus. The case, moreover, is a good example of the lower segment haemorrhagic disease.

CASE XVII.

Schoolboy aged 18. In November, 1903, he noticed a little blood in motions, but there was no pain and no diarrhoea. All through 1904 he passed a little blood from time to time. In December, 1904, there was a sudden extension of infection upwards: he was seized with severe pain, straining and tenesmus, with frequent (hourly at first) passage of liquid stools of blood and mucus. From this time he was confined to bed. During the first six months of 1905 there was almost daily haemorrhage with wasting and profound anaemia. In July, 1905, right colostomy was performed. He gradually improved, simply as a result of the non-use of the colon. Irrigation was tried at times, but never for long and never thoroughly. In January, 1909, he has taken his degree at a university; he can play tennis and bicycle for forty miles, and goes to dances; he looks and feels in perfect health; the artificial anus has acted continuously and well. But twice a day he passes per anum a little blood and mucus, so that we may take it that ulceration is still present even in such a contracted colon as he probably now possesses. By the way it is interesting to note that, in consequence of this complete exclusion of the colon, the ratio of ethereal sulphates to the total sulphates in his urine is as low as 1 to 39.

In another similar case in a woman an artificial anus was established in July, 1906, after one year's illness. In January, 1909, she remains in good health, but washes her colon out daily through the opening.

The matter, however, is not quite so hopeless as would appear from these cases. The following case shows that it is possible to obtain a complete cure by means of an artificial anus:

CASE XVIII.

Woman aged 47. She had had numerous attacks of diarrhoea and bleeding for sixteen years, the attack generally occurring in August and lasting about six weeks. In October, 1907, a similar attack began, but it was more severe, with profuse diarrhoea and great pain. She came under my care in November, 1907. A month of medicinal treatment and rectal irrigation had no effect. In December an efficient artificial anus was established. She received in four doses 50 c.c.m. of antidyenteric serum. After trial of various other irrigating solutions she had 4 oz. of an emulsion of 120 grains of sulphur in oil injected into the caecum every other day, and a free irrigation with boric acid solution on alternate days. After seven weeks of this the result was rather flattering, and the discharge of blood from the rectum and "from the artificial anus" (the ulceration apparently extended up to the caecum) gradually ceased. In April, 1908, with the idea of re-establishing use of the colon, she was given small, steady doses of calomel. When formed stools were produced, in July, the artificial anus was closed successfully. In January, 1909, she remains well. In this case, and in some other equally chronic, I tried the effects of various diets, and I believe that if digestion is good a full mixed diet gives the best result.

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In spite of all the efforts of a powerful administration, the law of February 15th, 1902, for the notification of diseases in France has remained almost a dead letter owing to the passive resistance of the medical profession, which shelters itself behind the words of the Act imposing the duty on the medical practitioner of notifying the case as soon as he has "established his diagnosis," words which seem to be thought to leave the obligation so much a matter of discretion, that no serious attempt has been made by the authorities to secure the conviction of practitioners for failing to notify. The objection taken by the medical profession to the law as it at present stands is twofold—first, that it involves a violation of professional secrecy; and, secondly, that the obligation to notify is placed upon the doctor in the first instance instead of primarily upon the father or head of the family, with a secondary liability upon the doctor. The Prime Minister has stated in Parliament that he is quite willing to submit an amending Act in this sense, but only on the condition that the medical profession will "discontinue an abstention which is too general and mischievous to the common good." At present there does not seem much probability of the medical profession taking the initiative suggested by M. Clemenceau.

A CASE OF AMOEBIĆ DYSENTERY WITH ABSCESS OF THE LIVER

IN A PATIENT WHO HAD NEVER BEEN
OUT OF ENGLAND.

[WITH SPECIAL PLATE.]

BY

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REPORT OF CASE.

W., aged 42, cycle-rim maker, was admitted into the General Hospital on November 21st, 1908, complaining of pain in the stomach and at the bottom of the back, which had lasted a week. On inquiry from his wife and his brother it was ascertained definitely that he had never been away from the Birmingham district, but for some weeks he had complained of liver pains, by which he had not appeared to be much inconvenienced. He said his bowels were open freely two or three times a day.

Condition on Admission.

He looked extremely ill, and was perspiring freely. His face showed many dilated veins. Temperature 102.4°, pulse 104, respirations 28. His tongue was covered in the centre with a brownish glaze, but was moist at the edges; his abdomen was distended; his respiration was jerky, and on taking a deep breath he complained of pain below and to the right of the umbilicus. There was no eruption. The liver dullness was not increased; the spleen could not be felt; the heart was not enlarged, sounds normal. The left side of the chest was normal, except for some crepitations at the base; on the right side there was dullness with diminished breath sounds, and absent tactile vocal fremitus at the base; on exploration with a needle no fluid was obtained. Widal reaction negative.

After-History.

Four days after admission he passed a stool containing a considerable quantity of blood. The dullness and diminished breath sounds on the right side extended gradually nearly up to the spine of the scapula, and on November 27th, on exploring with a needle, some blood-stained serum was withdrawn and 15 oz. of fluid were removed. This fluid was blood-stained and contained pus cells. Pulse 120, respirations 32 to 36. There had been no more diarrhoea; in fact, the bowels only acted after enemata. On November 30th he became suddenly worse, and died in the afternoon.

POST-MORTEM EXAMINATION.

Heart.

The heart weighed 11 oz., and was enlarged, ovoid in shape; area of thickened epicardium on anterior surface of left ventricle; right auricle dilated, wall thickened. Right auriculo-ventricular valve admitted three fingers easily and appeared healthy. Right ventricle filled with yellow clot; its wall thickened. Left auriculo-ventricular valve admitted two fingers and showed chronic thickening. Aorta and coronary arteries healthy.

Lungs.

Right 23 oz., left 18 oz. Right pleural cavity contained 1½ pints of slightly blood-stained fluid. Right lung bound down to diaphragm by fairly recent adhesions; the lung was collapsed, and there was a calcareous nodule in the upper lobe. Left lung free from pleurisy; on section congested; two small calcareous nodules in the upper lobe; no tubercle in bronchial glands.

Abdomen.

No excess of fluid in the peritoneal cavity. Recent adhesions in the right iliac fossa which limited an abscess around the head of the caecum. Stomach and small intestine showed nothing of note. Caecum and large intestine distended and walls thickened. The blind end of the

caecum communicated by rupture with the abscess cavity in the right iliac fossa, but the opening was plugged by a slough. On opening the gut a large ulcer with black adherent slough was seen to occupy the caput caecum coli. Passing upwards along the ascending colon there were other smaller ulcers, most of which were about the size of a small pea; their margins were raised and overhanging, and their floors were occupied by firmly adherent sloughs (Fig. 1). There were also numerous small nodules in the submucous coat of the bowel opening by minute apertures on the surface. These appearances were visible throughout the transverse colon, but faded away in the descending part. The contents of the bowel were black and tarry. The appendix was enlarged but not ulcerated. The mesenteric glands were enlarged, pale, and firm.

Liver.

One hundred and two ounces. In removing the organ an abscess 5 in. in diameter was opened; it contained brownish-red pus and masses of necrosed liver substance. The abscess was bounded posteriorly by the diaphragm and the abdominal wall; it was about the size of a fetal head (Fig. 2). The liver in the vicinity was pale and necrotic.

Kidneys.

Right 7½ oz., left 9½ oz. Both organs were soft and flabby; the cortices enlarged and pale, but the capsules were non-adherent.

Spleen.

Nine and a half ounces, enlarged, pale, and soft. Cultures in broth and in agar were made from the ulcers in the large bowel and from the contents of the liver abscess. The former showed streptococci, the latter proved sterile.

MICROSCOPICAL EXAMINATION.

Sections of the large bowel show as their most conspicuous feature a uniform thickening of the submucous coat, which is partly due to the increase of the fibrous tissue, but in part also caused by exudation of fibrin and cells. There is diffuse catarrhal inflammation of the mucous membrane. The smaller ulcers represent flask-shaped excavations in the submucous coat (Fig. 3), their margins are raised and are formed by overhanging mucous membrane which is the seat of advanced catarrhal change; the floor is formed by the outer portion of the submucous coat, and the centre is occupied by a slough composed of necrotic tissue, inflammatory cells and exudate with occasional amoebae.

Other micro-organisms were not as a rule to be found in these ulcers except in the more superficial parts. The tissues around showed a considerable amount of infiltration with leucocytes and fibrin. Amoebae could be seen, but they were not numerous in the neighbourhood of the smaller ulcers. These ulcers seem to develop as a lesion of the mucous membrane, as in all the areas of necrosis examined by us we have invariably found a breach of the mucous membrane, although it might be scarcely larger than a pinhole. Dopter has described three stages in the process of the formation of these ulcers: (1) Stage of catarrhal inflammation; (2) pre-ulcerative stage characterized by necrosis of an area of the mucous membrane and submucous coat; (3) stage of ulceration. This description is in accordance with the facts as observed by us.

The larger ulcers extend, as a rule, to the muscular coat; their margins are formed by necrotic tissue containing the debris of inflammatory cells and fibrous tissue, with numerous bacteria and amoebae. Passing beyond the zone of necrosis amoebae become more numerous, and inflammatory cells of various kinds may be found. Many of the latter are large, round, and vacuolated, and are often difficult to distinguish from amoebae. Such cells are probably chiefly endothelial in origin. Another type of cell which is found in large numbers is oval, with branched processes and a single nucleus, its protoplasm containing large numbers of strongly basophilic granules.

The lymphatics and blood vessels in the neighbourhood of the ulcers were dilated, and the endothelial cells lining them were swollen.

The Amoebae.

The amoebae could be demonstrated by any staining method, but the following gave the best results: Stain section in carbol-thionin blue for eight or ten minutes

wash in water, then rapidly in 1 per cent. acetic acid in water; wash again in water, dehydrate; clear in xylol, mount. By this method the amoebae may be distinguished from other cells by their deeper purple colour, as in Mallory's method. When they are properly stained, the amoebae appear as circular or sometimes irregularly shaped cells with finely granular protoplasm containing numerous vacuoles (Fig. 4). They sometimes contain basophilic granules, but rarely show other inclusions, and, although some were in close contact with streptococci, we have never seen the latter inside them. The nucleus may or may not be visible, but when present it varies much in shape, size, position, and staining reaction. The amoebae were most numerous in the tissues immediately surrounding the ulcers in the submucous and muscular coats, in the tissue spaces, in the lymphatics and blood vessels. The truth that the amoebae were actually invading the tissues is demonstrated by the position in which they were found, and also by the fact that not infrequently they have been fixed in the act of projecting their pseudopodia (Fig. 5). They were also found in the sloughs, but, so far, we have failed to see them in the glandular acini. Numbers of other organisms—streptococci and bacilli—were found in the more superficial parts of the sloughs.

The enlarged mesenteric glands showed catarrh of their sinuses, and overgrowth of fibrous tissue, but no amoebae were found in them.

The liver showed a widely-distributed increase of fibrous tissue around the portal tracts, which are also infiltrated with inflammatory cells.

As the neighbourhood of the abscess was approached areas of necrosis were to be observed, but they were not especially associated with the central veins as described by Councilman; in these areas the place of the degenerated liver cells was taken partly by dilated capillaries, partly by young fibrous tissue, and they resembled very closely the red areas met with in acute yellow atrophy. Many of the vessels (chiefly the veins) were thrombosed, the thrombi being found in all stages of organization. In the neighbourhood of the abscess the columns of liver cells were flattened, and showed all stages of degeneration. Amoebae could be seen in close contact with fairly healthy liver cells (Fig. 6), and also inside the blood vessels and bile ducts (Fig. 7). The contents of the abscess consisted of strands of fibrous tissue, necrosed liver cells, leucocytes, both lymphocytes and polymorphs, and amoebae. Councilman did not find polymorphs in the liver lesions in his cases, and he considers that a pure amoebic lesion does not attract such leucocytes. Certainly at the spreading margin of the abscess these cells were not present in excess, and there was no evidence that amoebae were attacked by them, but deeper in the abscess, where degeneration and liquefaction of cells were in process, they were numerous.

The amoebae in the liver lesions showed characters similar to those in the ulcers, but cell inclusions were more frequently present. There were at least three types.

The first type consisted of fine granules fairly uniform in size, and not suggestive of pieces of ingested chromatin; it is not impossible that these may be the chromidia described by Schaudinn and by Lesage as the first step in the formation of a capsule for the resting stage of the organism. Schaudinn only observed the development of these resting forms in the living subject during the healing of the lesions, but doubtless they are also formed under disadvantageous conditions in the tissues at any time, although Wenyon has not observed them.

The second type of inclusion was a comparatively large round or sausage-shaped body, with well-defined margins (Fig. 8), which took on basic stains very deeply; these may possibly be chromatin or other products of cell

degeneration, but they have not the appearance of the usual chromatin inclusions of phagocytes.

Thirdly, we observed the thin rod-shaped bodies which have been described by Councilman as curiously like tubercle bacilli; we make no suggestion as to their nature.

In support of the view that resting forms occur, we may say that we frequently met with rather small amoebae with well-defined, darkly stained margins, which gave the impression of being enclosed in a somewhat opaque envelope (Fig. 9).

REMARKS.

The chief points of interest from a pathological point of view in the case are:

1. Ulcerative colitis, in which the smaller ulcers are circular and flask-shaped—*bouton de chemise* of French authors—with overhanging edges and relatively small circular openings into the lumen of the bowel and adherent sloughs; one of the larger ulcers had perforated into the peritoneal cavity.

2. The presence of an enormous abscess in the posterior part of the liver, the pus of which gave no growth on inoculating in ordinary media.

3. Lastly and most important, the presence of amoebae in the ulcers and the liver abscess and in the tissues around these lesions.

We believe we are warranted in concluding that the pathogenic organism in this case is the *Entamoeba histolytica* (Schaudinn), and that the case is one of amoebic dysentery with consecutive liver abscess, of the type which we are accustomed to call "tropical"

dysentery. The appearance of the ulcers alone is sufficient evidence of the nature of the condition. If this be admitted, and as the patient had never been out of England, or, indeed, away from the Birmingham district, the case presents a peculiar interest, inasmuch as, so far as we have been able to ascertain, it is the first observation of the kind which has been recorded in Great Britain. Jurgens has mentioned a case which occurred in Berlin, and

Caussade and Joltrain have recorded one from Paris, while Kartulis (1906) has stated that Scandinavia, Great Britain, Spain, and Portugal are the only European countries from which cases of amoebic dysentery have not been reported. Davidson (1908) remarks that the disease has not been recognized, but is, perhaps, not entirely absent from England.

The next point of interest is how did the individual become infected? The medium of infection in dysentery is, as with typhoid fever, usually water, less frequently food contaminated by dust or flies. Given a case of tropical dysentery—that is, dysentery acquired in the tropics—in the neighbourhood of the patient (and such cases are from time to time imported into England) we have a source of possible infection from which contamination of food or drink during warm weather is all that would be required for the communication of the disease.

The perforation of the caecum coli is worth noting, as Kartulis describes its occurrence, but indicates that it is infrequent. The distribution of the ulceration was probably that most frequently seen—that is to say, it was most marked in the caecum, extending thence as far as the descending colon, but becoming progressively less marked. The size of the liver abscess indicates that it had been in existence some time, and, in fact, everything points to the disease having run a chronic course without marked constitutional symptoms.

Owing to the latter circumstances, the clinical history is deficient. The nature of the case was not recognized during life; it was regarded as a septic fever of unknown origin with haemorrhagic purulent pleurisy. The patient made no complaint referring to the liver after his admission to the hospital, but the failure to recognize enlargement of the organ was probably due to the

DESCRIPTION OF FIGURES.

Fig. 1.—Transverse colon showing characteristic ulcers, small round, with thickened margins and adherent sloughs.

Fig. 3.—Section of small ulcer in transverse colon stained with haematein and van Gieson's stain. Shows flask-shaped appearance, thickened submucous coat, overhanging mucous membrane, slough in centre. Zeiss micro-planar, Series 1A, No. 1. Extension 30 cm. (the reproduction is reduced to one-half size).

Fig. 4.—Amoeba in margin of ulcer showing characteristic vacuolation. No nucleus visible. Stained with carbol-thionin blue. Zeiss $\frac{1}{2}$ eyepiece No. 4. Extension 45 cm.

Fig. 5.—Amoebae deep in submucous coat of large intestine, apparently in the act of making its way between connective tissue fibres. Stained with carbol-thionin blue. Zeiss $\frac{1}{2}$ eyepiece No. 4. Extension 30 cm.

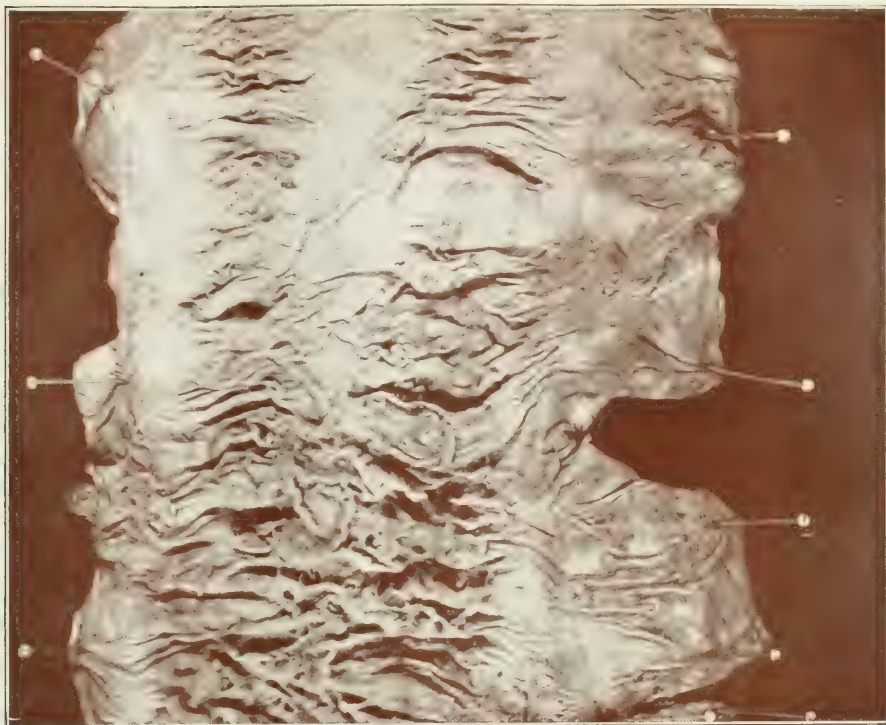


Fig. 1.

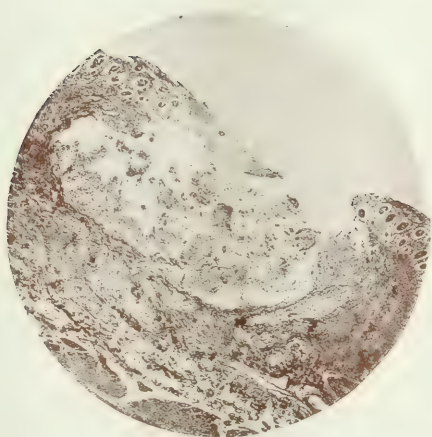


Fig. 3.



Fig. 4.

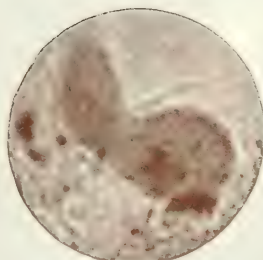


Fig. 5.

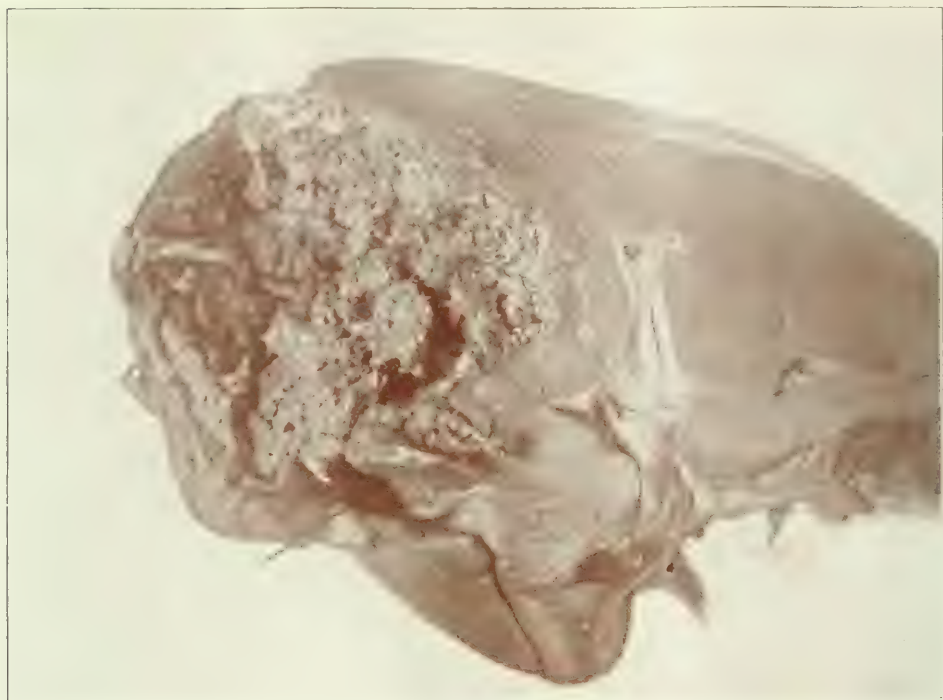


FIG. 2.

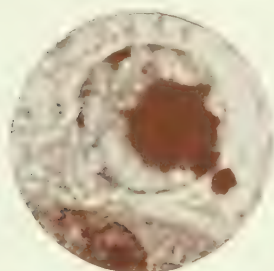


FIG. 6.

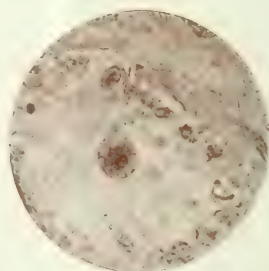


FIG. 7.



FIG. 8.

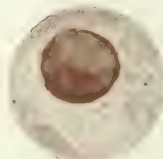


FIG. 9.

distension of the bowel. Although he gave a history of his bowels having been freely open before admission, he did not speak as if he had been troubled by diarrhoea, and after his admission the bowels only acted with enemas. Haemorrhage from the bowel occurred only once, but was profuse. Strong regards this symptom as a rare occurrence in dysentery, and in the cases in which he met with it he has, he says, generally found it associated with abscess of the liver. He speaks of it as being of peculiarly fatal prognostic significance, and in this case death followed in a very few days. He believes that the reason bleeding does not take place more often is because the arteries are commonly thrombosed or are the seats of more or less marked endarteritis. The immediate cause of death was no doubt heart softening, as there was no general peritonitis.

Although the connexion between abscess of the liver and dysenteric ulceration has been well known for many years, attention has been drawn in recent times to the want of harmony between the statistics of the two diseases. This is probably explained by the special connexion between the amoebic form of dysentery and hepatic suppuration. Bacillary dysentery is the more common, and more often occurs in epidemics, and is more likely to attack people whose habits and circumstances are insanitary, as is the case with natives in India, among whom dysentery is much more common than among Europeans. Yet, on the other hand, Europeans are more liable to abscess of the liver, as, according to Buchanan, the ratio was in natives 1 abscess to 628 cases of dysentery, and in Europeans 1 to 18. We have no figures that enable us to say what is the actual proportion of abscesses occurring in amoebic dysentery, because there are no statistics which distinguish between the two forms; if we had them we might be able to determine this point, but many observers have pointed out the relative rarity of abscess in bacillary dysentery. Any cause which gives rise to congestion of the liver would favour the occurrence of abscess, and therefore we may expect to see it in those persons who live sedentary lives, indulge freely in alcohol and in the other pleasures of the table; this in effect is the case. It is more common amongst Europeans than amongst natives, comparatively rare amongst European women and children, more often met with in rich natives than in poor, seldom met with in total abstainers, and according to Sandwith is only seen in those natives of Egypt who are addicted to alcohol. The patient in the present case had all the appearance of a man who had abused alcohol.

The occurrence of a case of amoebic dysentery in England must be accepted as a rarity and an event which must be only exceptional. As amoebae readily die at temperatures below 75° F. the conditions must be unusual which permit of their survival outside the body. Hence, in all probability, the disease, although no doubt imported into this country from time to time, rarely spreads; that it may do so, however, when circumstances favour it, seems to be established by the present case.

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BILHARZIOSIS OF WOMEN AND GIRLS IN EGYPT IN THE LIGHT OF THE "SKIN-INFECTION THEORY."

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IN THE BRITISH MEDICAL JOURNAL of October 31st, 1908, page 1355, Mrs. B. S. Elgood, Assistant Medical Officer, Education Department, Egypt, published a very interesting article on Bilharziosis among Women and Girls in Egypt. Whereas before nothing definite had been known, and many had even thought that bilharziosis was rare among the women in Cairo and other towns of Egypt, Mrs. Elgood proves the contrary. An examination of the urine of the girls of two middle-class schools in Cairo revealed the fact that, out of 40 girls aged 12 to 16 of one school, 11—that is, a percentage of 27.5—were infected. In the second school, attended by 79 girls aged 6 to 13, 39 girls were boarders; among them, 8—that is, a percentage of 20.5—showed bilharzia eggs and blood in their urine; the other 40 girls were day pupils; among them, 11—that is, a percentage of 27.5—were infected. After these results obtained from girls, the author was very much surprised to find an almost total absence of infection in adult women; among 62 female patients of the Kasr-el-Ainy Hospital, consisting of the respectable lower middle classes from all parts of Egypt, only 2, or a percentage of 3.2, were found to void bilharzia ova. In her own eight years' practice among women in Egypt, the author says that she has never been consulted by an adult for bilharziosis, and that in spite of frequent examinations of urine for other purposes, she only once accidentally found bilharzia eggs.

Thus far the results of Mrs. Elgood's investigations form indeed a very valuable addition to our knowledge of the distribution of bilharziosis among the inhabitants of Egypt. Until within the last few years the disease had appeared to be practically confined to the male population of the rural districts, for the most numerous and the most severe cases observed had all been peasants, among whom no age, except the years of early boyhood, seemed exempt. Infection of women was, to judge from the hospital records, comparatively rare, even in the country. With regard to the peasant women, the researches of Moh. Bey Talaat, undertaken *in loco*, elicited the interesting difference that the percentage of those affected was greatest among the poorest, whose women-folk work in the fields together with, and in the same fashion as, the men, and that it was lowest, or practically nil, among the best situated, whose women do not take any part in the field work of their male relatives. The native population of the towns had during all this time appeared to be generally free from infection, for no cases from towns had come under observation in the hospitals. Here, the researches of Engel, Kantsky, and others brought about a change; it was shown by these authors that in Cairo the adult men are indeed for the most part free, or show only traces of old infections, but that boys may have bilharzia eggs in their urine in as high a proportion as 80 per cent. of the cases examined. In many of these boys no external symptoms of the affection were noticed. This general picture of the distribution of bilharziosis among the native population of Egypt is completed, in a most instructive manner, by Mrs. Elgood's observations, which show that what had been known about men is to a very large extent valid also for the women of Cairo in particular, but undoubtedly of other towns of Egypt as well.

In addition to her actual observations, Mrs. Elgood makes some inquiries into the previous history of her cases, and thus collects a number of facts which she thinks throw light on the mode of infection. Since it

DESCRIPTION OF FIGURES.

Fig. 2.—Liver abscess with necrotic contents.

Fig. 6.—Amoeba showing vacuolation and dark-stained nucleus in close contact with liver cell. Stained as above. Zeiss $\frac{1}{2}$ eyepiece No. 4. Extension 45 cm.

Fig. 7.—Section of liver showing small bile duct containing dead uniliated epithelial cells and an amoeba. Stained as above. Zeiss D.D. eyepiece No. 4. Extension 35 cm.

Fig. 8.—Amoeba in liver abscess showing large, round and sausage-shaped inclusions. Stained as above. Zeiss $\frac{1}{2}$ eyepiece No. 4. Extension 30 cm.

Fig. 9.—Amoeba in liver abscess with dark outline suggesting encapsulation. Stained as above. Zeiss $\frac{1}{2}$ eyepiece No. 4. Extension 30 cm.

cannot now be doubted that water is the element by which infection is carried, she turns her attention to the water supply in the houses of the girls and the schools they attended. Inquiries revealed that the girls of the first school had, with one exception, lived all their lives in Cairo; that none had ever bathed in the Nile or a canal; nor had any (with two exceptions) ever run about bare-legged in fields or country roads. As far as they remembered, they had all worn shoes and stockings when out in the streets of Cairo. The water in their houses was supplied by the Cairo Water Company. It was usually stored before drinking in earthenware "Zirs" or "Gullahs" to cool it. At the schools the conditions were the same, only the water was first filtered through a Berkefeld filter into a non-porous glazed earthenware receptacle, from which it was drawn off as required for use into small earthen jars. Nothing could be elicited as to any special ablutions which could have led to the infection of the girls. The general water supply in European households in Cairo is about the same as that of natives. It differs in one respect, as Europeans, however poor, do not usually store their water in Zirs, but either filter it in a Berkefeld or charcoal filter, or use it straight from the tap. The primary water supply common to natives and Europeans has been frequently examined and found to be pure; Mrs. Elgood personally examined the water in the large receptacle and in the small jars used in one of the schools, but no bilharzia miracidia were discovered. There remains the possibility that the native habit of storing the water may favour contamination. The Zirs often stand in open courtyards; they are rarely, if ever, cleaned out in native houses, though in schools they require scrubbing every week. It seems possible, therefore, that these Zirs may be a source of infection.

The results of both observations and inquiries are embodied by Mrs. Elgood in the following conclusions: (1) Bilharziosis is common in young girls, even in those who do not bathe, and who use filtered water only; town children are frequently affected. (2) Bilharziosis is rare in adult women, who may, however, have suffered from it in youth. (3) European women and girls are not known to be sufferers from bilharziosis, though in the towns they drink and wash in water from the same source as natives use. Water, however, is not stored in European households. (4) The infection by bilharzia is probably not mainly due to bathing as has been suggested. It is possibly due to faulty storage of drinking water, or to the eating of raw vegetables and fruit washed in dirty canals or rivers.

In the discussion following the reading of this paper before the Section of Tropical Diseases, British Medical Association Meeting, 1908, Dr. Sandwith, among others, congratulates the Section upon Mrs. Elgood's valuable paper, and adds that it "threw considerable doubt upon Professor Looss's interesting theory of infection by the skin. . . ." It is this latter view—shared, perhaps, by readers of the printed article—which induces me to make the following remarks, for I may say at once that I do not see how Mrs. Elgood's observations, interesting and valuable though they are, can be construed into something like evidence against the theory of infection by the skin if only they are analysed logically and considered, not by themselves alone, but in connexion with the other facts thus far established with regard to the disease and the biology of its parasite.

I begin my discussion with a point which, though of fundamental importance, is yet very often overlooked by authors who formulate theories about the manner in which man becomes infected with parasitic worms. In the case of bilharziosis there is no doubt that the infection is carried to man by water; but the infective agent proper is not water, but the bilharzia miracidium. Any theory of infection is therefore open to objection from the very outset, if it does not equally account for both the passage of the living miracidium from water to the human system and the previous passage of the miracidium from the human system to the same water. On scrutinizing Mrs. Elgood's conclusions one cannot fail to notice that they appear deficient in lucidity, disconnected, contradictory. The reason is that the author totally disregards the first half of the parasite's life-circle. The miracidium is contained in the bilharzia egg, and the bilharzia eggs are voided from infected persons with the urine (or

the faeces). Any water, in order to become possibly infective, must, as an essential condition, previously come into contact, either direct or indirect, with fresh urine (or fresh faeces); under circumstances where such contact is precluded the water is, *ipso facto*, safe. We know, further, that the miracidia are extremely delicate and stand neither decomposition in their surroundings nor drying; old excreta, therefore, which have once become putrid or dry cannot deliver living miracidia to water; receptacles, even if they contained contaminated water, become safe again with completedesiccation. Experiments made with living miracidia have shown, finally, that these are not able to live, even in pure water, longer than thirty to forty hours after their evacuation from the human body. Contaminated water, therefore, loses its infective power again after having been protected from fresh contamination for one or two days.

If we duly consider these facts established by numerous experiments, it becomes obvious that water taken from the tap, either directly or after having been passed through a filter, must be safe; for there is no comprehensible chance for living miracidia to get into it. This non-infective character of the tap water is in full accordance with the absence of the affection in the European and the adult native populations of the town; it forcibly imposes the conclusion that the infection of the children must be brought about in some other way. I may here add in passing that when I first came to Egypt I myself took my drinking water direct from the tap for nearly a year, and occasionally even afterwards, but have never contracted an infection.

According to Mrs. Elgood, the storing of the water in the Zirs, etc., customary among the natives, may have something to do with the infection. To me this would seem utterly improbable from the outset, for the one reason that the adult natives, though they use the same water as their children, remain free from infection or reinfection, whilst the children are largely affected. Mrs. Elgood has examined the water contained in the receptacles and jars in one of the girls' schools, but failed to find bilharzia miracidia. After what has been said above this result was to be anticipated. If I had been asked, I would even have said that such examination was superfluous, unless it was previously shown that there was some positive possibility of the water or the receptacles coming into frequent contact with fresh human urine (or faeces). It is true that especially the lower-class natives are not conspicuous for over-cleanliness; but, so far as my personal knowledge goes, they always keep their Zirs and the various receptacles for drinking in such a way that their contact with urine or faeces is prevented. Thus, I am unable to see how the particular fashion of storing the water used in the Egyptian households should favour the spread of bilharziosis at all, and should in especial favour it among the children to the exclusion of the adults.

Mrs. Elgood finally suggests that the eating of raw vegetables and fruit washed in dirty canals or rivers might probably be responsible for the infection. This idea is not new, and in my view is even less tenable after Mrs. Elgood's observations than it was before. I may first submit that fruit or vegetables, while being brought to town after having been washed in dirty canals or rivers, become either dry, or are in town washed again in the water accessible there—that is, in tap water—at any rate, in water which is most unlikely to contain living miracidia. However, this objection is insignificant as compared with the other evidence, in part brought forward by Mrs. Elgood herself. The lower-class Greeks throughout Egypt, as is well known, have almost completely adopted, as regards food and drink, the habits of the Egyptians; like these, they are fond of certain vegetables, which they consume without further preparation. In many Greek restaurants of the town it is customary to serve, without special order, certain herbs still wet with water before every meal. In the case of the town population the consumption of these vegetables does not, of course, prove anything against the possibility of the infection being carried by the vegetables; for the absence of the affection among the Greeks in town may be due to the fact just pointed out, that vegetables washed in town water are most unlikely to contain live miracidia at all. However, we know that the affection is absent

also in the numerous Europeans (especially Greeks) living in the villages, where the male native population is severely affected. If the vegetables and fruit represented a conveyance by which the miracidia do reach their host, we certainly ought to find the disease about equally distributed among natives and Europeans. What had been known with regard to the male sex has to a great extent been confirmed with regard to the female sex by Mrs. Elgood. Women are rarely affected, in the town as well as in the country, and yet they partake of fruit and vegetables to about the same extent as the men and children. Fruit and vegetables, therefore, cannot be the source of infection.

We thus see that the author's suggestions as to the probable mode of infection would logically lead to consequences entirely different from what we actually know of the distribution of bilharziosis among the population of Egypt. Infection, both by drinking water and vegetables or fruit, are varieties of the "oral infection." I have, in previous articles, pointed out certain biological facts which throw "considerable doubt" upon the existence of this infection; new epidemiological facts elicited by Mrs. Elgood are, for me, apt only to decidedly add to these doubts. As a matter of fact, I contend that infection by the mouth does not exist.

Let us now see how facts, new and old, fit in with the skin infection theory. If we exclude infection by the mouth, infection by the skin remains the only possible; I, for one, cannot imagine a third possibility of infection. The idea that the miracidium might, during bathing, or during the ablutions customary among the Mohammedans, enter the urethra or the anus is utterly improbable for general helminthological reasons, and, in addition, contradictory to a number of biological and anatomico-pathological facts. For the sake of brevity, I will not enter into details. Speaking of the theory of infection by the skin in general, I may first recall the fact that it was almost simultaneously advanced by G. S. Brock and myself, but that we both arrived at our conclusions independently and from very different starting-points. Brock, investigating the previous history of his patients, found that a feature common to all was their predilection for bathing, and thus accused bathing in particular as the cause of infection; I, investigating the life-history of the parasite, found that the mode of infection by the mouth—a *priori* alone probable—met with some insurmountable biological obstacles, and was thus driven to the conclusion that infection must take place by way of the skin. I do not deem it necessary to mention details here; they may be found in my article quoted, but apparently not read, by Mrs. Elgood; at any rate, she does not allude to what I said in that article of the possibility that the affection of the children in particular might be accounted for by skin infection. She only points out that

If bathing were the sole, or even the principal, cause of infection, the women of the working classes in the villages and country towns should be the severest sufferers, for they stand for many minutes, once or twice daily, knee-deep in the canals and in the river washing their clothes and filling their waterpots, and yet they do not appear to suffer.

This objection, based upon an undeniable and well-known fact, may seem convincing to many, and yet it does not meet the case. It again entirely overlooks the important factor mentioned above, that water, though undoubtedly the conveyance of the infection, is not identical with the miracidium, the agent of infection. In order to render infective the water with which the clothes are washed and the waterpots filled, the women ought to urinate or to defecate into it. As far as I have seen myself and learned by inquiries they never do so, but even if one or two actually did so the act would not at once effect a contamination of the water. For we know from the statistics that bilharziosis is rare among the women throughout the country; assuming that 3 per cent. are infected, thirty-three women might soil the water without consequence, and only the thirty-fourth would produce miracidia which might attack her companions. The two circumstances here mentioned, if taken together, show, I think, clearly that the absence of bilharziosis in peasant women is due to factors quite independent of the mode of infection.

There remains the possibility that the water with which the women wash their clothes and fill their waterpots

may still contain some miracidia derived from an infected man who either had previously contaminated the water at the same spot, or who, at about the same time, had contaminated it at some little distance from the women. Such miracidia may certainly infect, but the probability of their doing so is very small; for it must be remembered (and everybody who is familiar with the habits of the miracidia will know) that when once free from their egg shells they speedily disperse in the water to all sides, and the chance of reaching a suitable shelter considerably decreases for the individual miracidium with time and distance. The more I think of this latter circumstance the more I become convinced that the chief foci of infection—that is, the place where strong and repeated infections are contracted—cannot be found in large bodies of water, as rivers, canals, ponds, etc., but must be sought in small accumulations of water, in which the miracidia, once introduced, cannot become widely dispersed. The fact that the large majority of peasant women remain free from infection, in spite of their old habit quoted by Mrs. Elgood, decidedly supports this view. Thus, the rarity of the affection among peasant women may be considered as evidence against bathing or standing in certain large waters being the cause of infection, but it is certainly no proof against the infection by the skin in general.

We will now see if the skin infection, supposing that it takes place as I conceive it, would be able to account for the peculiar distribution of bilharziosis among the population of Egypt. One of the most remarkable features of the disease is, in town, its almost entire limitation to native children; in the agricultural districts a very similar limitation to the male natives of all ages is to be noted. These facts enable us to formulate positively the conclusion that, quite generally speaking, the infection with the parasite must, in town, take place under conditions which are easily and often realized during childhood, but cease to be realized with the growing age; for reinfections do not take place in town, the adults are either free, or show traces of old infections only. These conditions must, further, be the same as prevail throughout life for the male native population of the country; for these reinfections are very common, and it is a frequent occurrence to find in *post-mortem* examinations of old people comparatively recent infections besides more or less conspicuous traces of old ones.

To render an infection by the skin at all possible we have seen that the following conditions must be realized: An infected person must urinate (or defecate) in a place where there is water, however small the quantity. The place must remain moist for some time, but not longer than thirty to forty hours. Within this period another person must bring some part of his skin for some time into actual contact with the moisture. If these conditions are fulfilled, the miracidia have the *possibility* of getting from man to water, and from water back to man; their life-cycle may be closed.

The probability of their bringing about a fresh infection is governed by the following facts: When in contact with water the miracidia leave their egg-shells without delay. It practically takes them a few minutes only if the weather is warm. They are, like the miracidia of other trematodes, ready at once to enter a new host, if there is one. The moist places thus become infective almost immediately after contamination. They also have at that time their greatest infective power, for the living miracidia are most numerous in them. As time goes on numbers of miracidia die, and thirty to forty hours after evacuation none are left alive. The infective power of the moist places thus gradually decreases, and is again nil at the end of one or two days, even if they remain moist. A recontamination must take place in order to render them infective again for a short period.

I have tried to show in previous articles that these conditions for infection are realized, almost throughout life, for the male peasants during their field work. They are not realized for the great majority of the peasant women and for the European population of the rural districts. The incidence of the disease thus coincides with what is theoretically to be expected from the point of view of the skin-infection theory. I may hint, in passing, at the interest the results of Moh. Bey Talaat gain in the light of that theory.

Turning to the affection of the children in town, we

will try to see if similar conditions exist to explain their infection to the almost complete exclusion of the adults. The moist places demanded for infection are to be found plentiful about town; in the streets there remain puddles for several days after each rain, or for several hours after each watering; the courtyards of the houses also are often watered, especially in the warm season; in the neighbourhood of the Zirs (whether they be placed in the houses or in the yards) the overflowing water impregnates the ground and keeps it almost constantly wet, etc. In many Arabic houses waterclosets are an unknown institution, or they are of the most primitive type. The calls of Nature are often obeyed in the streets, oftener in the courtyards, especially for urinating. There is thus sufficient occasion for the ground to become over and over again populated with live miracidia; their short life is of no consequence. There only remains the host to supply the miracidia, and another host to take them up again.

Owing to the peculiar restriction to children exhibited by the disease as seen in town, the suppliers of the infective material must be, first and foremost, children; in nine cases out of ten an infected child must have become infected from another child; adults can only play a minute part, if any, in the propagation of the germs, for they evacuate none. We are thus led to the conclusion that gatherings of children in moist surroundings (I am thinking here especially of the courtyards of their houses) must represent the chief occasion for their infection. I may repeat in this connexion that, in my opinion, the association of the peasants in groups, while at work in the fields, provides the most evidently favourable condition for their frequent reinfections. Nothing is thus far known about the age at which the infection of the children takes place. Judging from a purely helminthological point of view, the tenderest age would be the most favourable, for we know from numerous experiments made with different kinds of parasites that their germs develop easier and in larger numbers in young hosts than in old ones. It is not yet known either how long it takes the miracidia to make their way into the skin. They may require a few minutes only or they may require an hour; however, it is certain that their chances are the better the longer the skin remains exposed to their attacks.

In the poorer Arabic families the children are very little looked after; they are for the most part left to themselves. More or less scantily dressed, they sit, or creep about, or play on the ground, either in the house or in the yard. As might be expected, they are not in the least particular as to how or where the calls of Nature are obeyed. It is thus evident that during this early period of childhood bilharzia miracidia, if present in the ground, would have abundant opportunity of entering their bodies. When the children learn to walk this opportunity becomes lessened; it becomes more so the older they grow. If once infected they do not, however, cease to produce infective material for their younger brothers and sisters, or other children who may be with them. In this way the miracidia necessary for infection would be supplied. We would practically have the propagation of the disease from child to child, as is deduced above. It is difficult for the adults to become infected after this same fashion. They have their occupation about town. They do not sit or lie for hours on the ground more or less naked; they do not play with their hands in the mud, etc. The male peasants, on the other hand, while at work in their fields during the whole of the wet season, do stand for many hours daily with their feet in the moist ground, they do work with their hands in the mud, etc., and they do become infected and reinfected with bilharziosis throughout their lives. Thus, the other conclusion formulated above—namely, that the infection with the parasite must in towns take place under conditions which are easily and often realized during childhood, but cease to be realized with the growing age—would be verified. We also see the analogy between the habits of the children in town and those of the adult males in the country; the restriction of the affection chiefly to these two categories of the total native population becomes comprehensible.

As regards the European population, I am not familiar with the conditions in their houses; several things, however, are easy to observe. Thus, even among the poorest, one hardly if ever sees such neglected children as are often

met with among the poor native population. In the streets it is a rare occurrence to see European children, even of the lower classes, mix with the poor native children. I have never, in spite of special attention paid to the circumstances, happened to see a European child paddle in the street puddles as the native children are fond of doing. The lower-class Greeks, in particular, do not seem to be at all fond of water. The more the European children are looked after, the cleaner they are kept, the less they mix with native children, the more difficult it naturally becomes for any miracidia contained in the ground to get access to them. Since, furthermore, their relatives and playmates are generally free from infection, there are in the neighbourhood of the European children no miracidia either which might infect them. Under such circumstances, it becomes comprehensible that bilharziosis does not spread to any noticeable extent among the lower-class Europeans, although their food and drink is essentially the same, and derived from the same source, as that of the lower-class natives.

In Mrs. Elgood's article some stress is placed on the evidence given by the girls that they usually wore shoes and stockings when out in the streets; that they never bathed in the Nile or a canal; that they were never allowed to paddle; that their mothers never washed clothes or vegetables in the Nile, etc. Admitting even that all these statements are reliable, and that the girls of 15 and 16 still perfectly remembered what they had done when they were 5 or 6, the circumstances enumerated have, according to my view, nothing to do with the actual event of the infection of the children. After what has been said above, the early years of 1, 2, or 3 must be considered as those most favourable for acquiring the disease; for during this period of life the conditions necessary for infection are most often and most easily realized. So far as I can see from the literature, nothing positive is as yet known as to the occurrence of bilharziosis at that early age. The investigations of Mrs. Elgood do not throw light on this point. As a matter of fact the girls, at the time of their examination, were quite unaware of their suffering, nor would they admit that they ever passed blood either with urine or after it; none of them complained of pain or bleeding on micturition. There is thus nothing to prevent us from assuming that the girls had already been infected more or less long before they became able to think of themselves. The same may be said with regard to the boys that had been found infected by Engel, Kautsky, and others. The actual proof that children of tender age may already be suffering from bilharziosis is thus as yet lacking; I have, however, little doubt that it will be forthcoming as soon as observations in this direction are made.

The fact that children of 15 or 16 still pass numerous bilharzia eggs is no proof against the assumption that they were, once only, infected at the age of 1 or 2. We already know a number of cases in which adults still passed plentiful eggs fifteen and more years after they had left the places where infection alone seemed possible. It is not necessary, on the other hand, that every infection should last for so long a time. The duration of the suffering certainly depends to a large extent on the intensity of the infection; a feeble person may die off within five or six years, whereas a strong one lasts much longer. In addition, the point remains, that if an affection noticed, say, for five years really lasted only these five years, the evidence collected by Engel, Kautsky, Mrs. Elgood, etc., shows that children of both sexes may be infected for long years without becoming at all aware of the fact.

SUMMARY OF CONCLUSIONS.

1. Any theory about the mode of infection with bilharziosis, in order to be at all acceptable, must (a) account for the passages of the miracidium both from man to water and from water back to man; it must (b) duly consider both the habits of the host and the biological peculiarities of the parasite.

2. The theory of the infection taking place by the mouth (along with food and drink) must be refuted, because it is irreconcilable (a) with certain biological peculiarities of the miracidium, (b) with the general distribution of the disease among the population of Egypt.

- (3) The theory of infection by the miracidium entering the urethra or the anus is (a) utterly improbable for

general parasitological reasons; (b) in contradiction with a number of biological and anatomic-pathological facts (for example, the incapability on the part of the miracidium to resist the action of acids, even if very diluted; the part played in the infection by the liver, etc.).

4. The theory of infection by the skin is in accordance with all the facts thus far known (a) of the biology of the parasite, (b) of the distribution of the disease among the population (native and foreign, town and rural) of Egypt. It shows (c) how the chief sufferers—the children in town, the adult males in the country—live under conditions which, from the epidemiological point of view, are essentially the same, and give the miracidia (d) the opportunity of passing, within the short time of their life, from man to water and from water back to man.

THE SCIENCE COMMITTEE

OF THE

British Medical Association.

REPORT CXII.

OBSERVATIONS ON THE PHYSIOLOGY OF THE FEMALE GENITAL ORGANS.

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IV.—UTERINE CONTRACTIONS.*

SINCE uterine muscle consists of involuntary muscle fibres, one may take it as an accepted fact that most of those chemical substances which cause contraction of other involuntary muscle fibre throughout the animal body, whether produced by metabolic process normally or in specific circumstances or by experimental and therapeutic means, will also cause uterine contractions.

The object of our investigation was to discover what substance or substances, which might be said to exist in the blood normally, influenced the contraction of the uterus in respect to the ordinary contractions which are supposed to occur in the unpregnant uterus, and also those of the pregnant organ. In all our experiments we used rabbits, and our technique was as follows:

The rabbit was anaesthetized with ether, and, when fully under the influence of this anaesthetic, laid upon a heated table. The trachea having been exposed, tracheotomy was

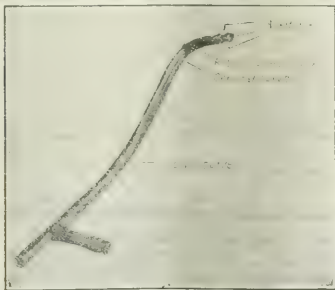


Fig. 1.—Uterine cannula.

performed, and a tube connected with an electric bellows tied in position. The skull-cap was then trephined and the rabbit pithed, the brain being entirely destroyed, and the cranial cavity packed with wool plugs saturated with hot saline solution.

The abdomen was next opened with a 1-in. incision and the uterus and vagina identified. A small incision was made in

a.* The experiments recorded in this paper were carried out in the Physiological Laboratory in the University of Liverpool, and we are much indebted to Professor Sherrington for the facilities afforded.

the posterior wall of the vagina, close to the insertion of the cervix, and a special glass cannula, with a rubber-covered neck (see Fig. 1), connected with a one-arm water manometer, was carefully passed through the vulva, up the vagina, through one of the cervixes, and into a uterine cornu. This was easily accomplished by directing the progress of the cannula through the small incision in the vagina. Before being passed into the uterus saline solution was allowed to flow through the cannula in order to prevent the entrance of air.

As soon as the head of the cannula was well in the uterus a soft worsted ligature was tied firmly round the cervix above the vagina, binding it against the rubber-covered neck. On one or two occasions elastic was used as the ligature material. The uterus was then returned to the abdominal cavity, placed in a normal position, and the abdomen closed. Enough saline was allowed to flow into the uterus to distend it slightly, but only so far as to support a column of saline solution 1 in. or 2 in. in height in the single-arm manometer. This manometer was next connected with a special bellows apparatus, very kindly made for us by Professor T. G. Brodie (see Fig. 2). This apparatus consists of a membrane finger-cot attached to a glass tube which is passed through a cork, the front of which is cut at an angle. To the lower end of this a card lid is attached to support the finger-cot. A card lid with a membrane hinge rests upon the protruding rounded end of the finger-cot. To the centre of this lid is fixed a piece of cork, to which a straw lever is attached by means of a needle. A glass writing point swinging from the distal end of the straw records the uterine contractions upon smoked paper revolving on a Brodie's kymograph apparatus, for it will be clear that as the uterus contracts the saline solution is driven up the manometer tube and the finger-cot distended. In all tracings the writing points were travelling from right to left, as indicated by the arrows below the blood pressure tracings.

The carotid artery was next connected with the mercury manometer, and the blood pressure recorded. The time was marked in seconds by means of an electric connexion with a clock.

The reagents used were in all cases injected intravenously, and the smallest doses compatible with a definite result employed. Control injections of simple saline solutions were frequently used.

It may be urged that pithing produces a condition of intense shock and low blood pressure. This, of course, is true; at the same time it is probable that the blood pressure is acted upon in much the same way, if in less degree, under these conditions by the reagents we employed, as would have been the case had pithing not been performed. Certainly pithing seems to have little effect on uterine contractions. On the other hand, we found it absolutely impossible to get satisfactory results under ordinary anaesthesia, owing to the variations in blood pressure, and the irregularity of uterine contractions—probably due to the impossibility of keeping the animal all the while in the same state of anaesthesia.

In regard to our method of recording uterine contractions, we consider it the most perfect yet utilized, in that alterations of the total uterine content only are recorded; and, further, that the uterus is acting under practically normal conditions—the slight stimulus of saline solution under a low pressure being negligible from a practical point of view. The methods used by Cushny,¹ Dale,² and others are open to the objection that the uterus is exposed—even though it be in a bath—and, further, that isolated muscular contractions only are recorded, instead of altera-

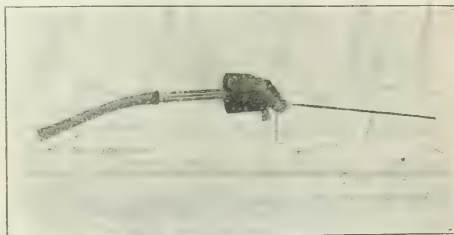


Fig. 2.—Recording bellows.

tions in the total content. Now we have found that contractions of the uterus may occur without the uterine content being altered at all. That is to say, the uterus may relax at one part while contracting at another. In our opinion the total alteration in the content, or, in other words, the expulsive force of the uterus, is the most important result of uterine contraction, and it was this we wished to measure; hence our employment of the method already described.

Before passing on to a consideration of the results obtained, we would like to point out, in addition to the fact just mentioned of peristaltic contraction, in which a relaxation compensates a contraction, that we have found the contractile power of different uteri to vary enormously according to the size of the rabbit and its age. In regard to the former point, it will be noticed that a great variation occurs in the size of the contractions in

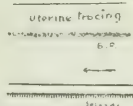


Fig. 3.—Inactive uterus showing no contraction. (Reduced about one-half.)

the different tracings. This is almost entirely dependent, subject to the conditions to be mentioned directly, on the size of the uterus, or, in other words, on the age and size of the rabbit. In addition to these factors, we must also point out, however, that the non-menstruating and non-pregnant uterus does not normally contract at all (see Fig. 3 and subsequent figures of inactive uteri). We have reason to believe that this applies to the uteri of wild

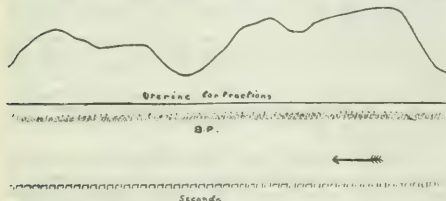


Fig. 4.—Menstruating uterus showing normal expulsive contractions. Note—Drum revolving faster than in Fig. 5 and in most of the other tracings. (Reduced about one-half.)

rabbits in winter months (see Paper III). We shall for the sake of brevity refer to these as "inactive" uteri.

The menstruating uterus appears to be in a state of more or less regular expulsive contraction (see Fig. 4), and likewise the pregnant uterus (see Fig. 5), once the uterus when in this condition is interfered with. Unfortunately it is impossible to measure contractions without some interference, but we obtained conclusive evidence in one instance, in which the sacs were unruptured, that leads us to believe that the pregnant uterus does not normally contract expulsively. That is to say, any contractions which normally occur are compensated by relaxation at the same time. Our tracings of the contractions of the pregnant uterus are, therefore, from those experiments in which the membranes had been ruptured.

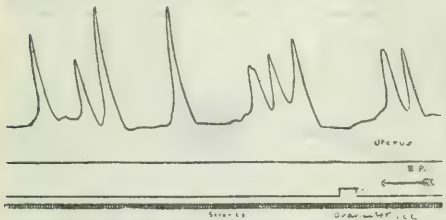


Fig. 5.—Pregnant uterus showing normal expulsive contractions. (Reduced about one-half.)

In our experiments we have used all three varieties of uterus: The pregnant, the menstruating, and the virgin non-menstruating.

We have tried the effect of the following reagents upon these uteri by intravenous injection:

1. Ovarian extract.
2. Thyroid extract.
3. Pituitary extract.
4. Adrenal extract.
5. Placental extract.
6. Uterine secretion.
7. Calcium salts.

In general, we may say that in some cases the virgin non-menstruating uterus was affected, but that in those

cases where any contraction was obtained it was more marked in the case of the menstruating uterus, and most marked in the pregnant uterus. That is to say, a uterus that can be caused to contract by any reagent reacts more readily and violently during menstruation and pregnancy.

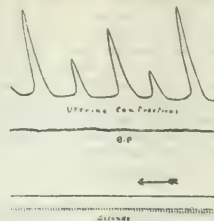


Fig. 6.—Menstruating uterus showing normal expulsive contractions. (Reduced about one-half.)

We have, in short, been unable to obtain those paradoxical effects, noted by some observers using different methods, of relaxation in the non-pregnant and contraction in the pregnant uterus. Such results seem foreign to what one would expect, and are not, as we say, borne out by our

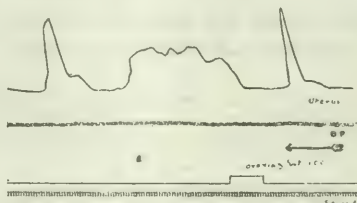


Fig. 7.—Menstruating uterus: effect of ovarian extract. (Reduced about one-half.)

results. In most of the experiments we were also able to note the effect of our reagents upon the blood pressure.

1. Ovarian Extract.

The ovarian extract used was kindly prepared for us by Mr. H. H. Dale, of the Wellcome Laboratories. It was made by extracting fresh sheep's ovaries with cold saline solution containing a little chloroform. The extract was filtered first through paper, and then under pressure through a Berkefeld candle. A crystal of thymol was added to act as an antiseptic; 1 c.cm. of this extract contained 0.25 gram of fresh ovary.

(a) This extract has no effect upon the inactive uterus.

(b) Upon the menstruating uterus the effect is well marked, as illustrated by the gradually increasing effect of

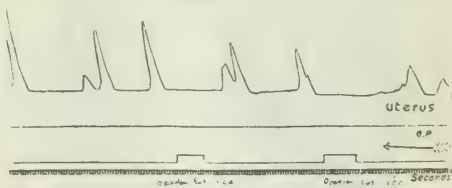


Fig. 8.—Menstruating uterus: effect of ovarian extract in repeated doses. (Reduced about one-half.)

a series of intravenous injections of 1 c.cm. of the extract. This is shown in Fig. 6. The action is not excessively energetic, but still it is quite evident. Fig. 7 illustrates the effect in another rabbit, whose uterus was also menstruating. In this case a more or less tetanic spasm was produced.

(c) The pregnant uterus is affected in a somewhat remarkable manner by ovarian extract. The strength of the contractions are in no way lessened, but the immediate effect of an injection appears to be the stopping of the

* Verbal communication, Dr. F. E. Taylor.

impending contraction. This is shown in Fig. 8, in which only one injection is illustrated. A subsequent injection produced the same effect, but with a slightly shorter interval, and a third injection hardly showed the effect at all, antibodies being probably formed in the blood by that time. We may say, however, that in the case of other

uterine contractions. In Fig. 9 this result is seen after one injection. The results of a subsequent injection into the same animal are illustrated in Fig. 9 *continued*, where a general convulsion was noted after the third injection.

(c) On the pregnant uterus the effect is the same as that upon the menstruating uterus, only more marked.

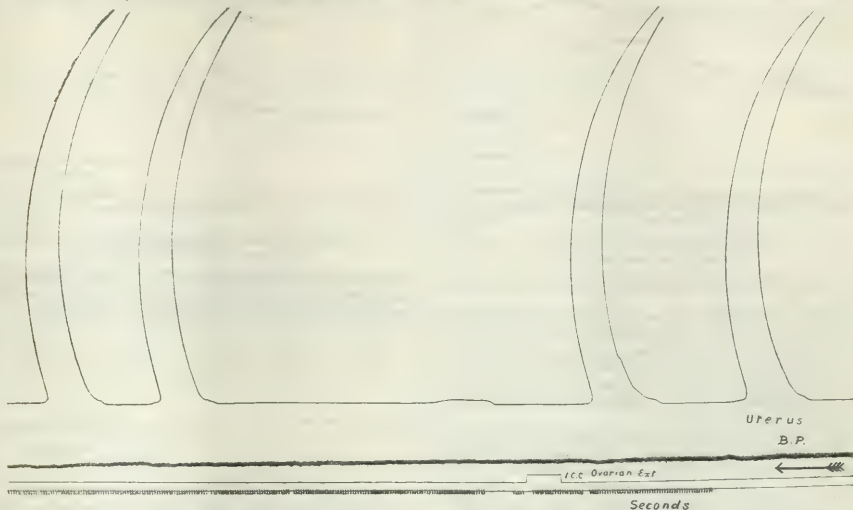


Fig. 8.—Pregnant uterus: effect of ovarian extract. (Reduced about one-half.)

pregnant uteri an increase in the strength of the contractions only was observed.

The effect of the ovarian extract upon the blood pressure is hardly noticeable; if anything, there is a tendency to a gradual, uniform decline, as is shown in the lessening of the force of the heart-beats, and gradual progression towards the abscissa in Fig. 8.

The effect of thyroid extract upon the blood pressure is shown in Fig. 9. There is always a distinct drop; this may be followed by a rise with the onset of a convulsion (see Fig. 9 *continued*).

3. Pituitary Extract.

The extract used was, in this case, also kindly prepared

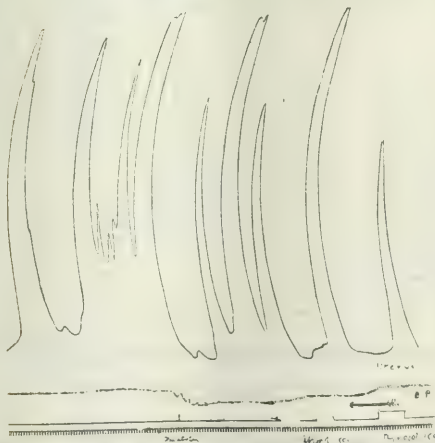


Fig. 9 *continued*.—Menstruating uterus: effect of thyroid extract. (Reduced about one-half.)

2. Thyroid Extract.

For these experiments we used a solution of thyrocol of a strength of 1 in 10 in normal saline.

(a) There was no effect upon the inactive uterus.

(b) Upon the menstruating uterus the effect of thyrocol was to cause an increase in the strength and number of



Fig. 9.—Note: The contraction marked *c* followed the injection, the uterine marker being a little behind the proper line in this figure and in Fig. 9 *continued*. (Reduced about one-half.)

for us by Mr. H. H. Dale, of the Wellcome Laboratories; 1 c.cm. of the solution contained 0.1 gram of fresh infundibulum. As previously stated (see Paper I), it is only this portion of the pituitary gland which is active in the respect shown here.

(a) Upon the inactive uterus pituitary extract will pro

duce a slight effect. This is shown in Fig. 10, where an evident wave of contraction is seen to occur in a uterus which had not previously contracted.

(b) Upon the menstruating uterus pituitary extract produces a very marked effect, causing much more powerful,

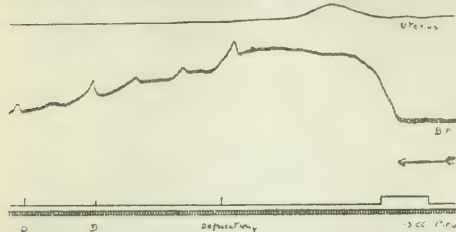


Fig. 10.—Inactive uterus: effect of pituitary extract (0.5 c.cm.). (Reduced about one-half.)

frequent, and prolonged contractions than those occurring normally.

(c) Upon the pregnant uterus the extract produces the same effect as upon the menstruating organ, with the qualification that the contractions are, as always obtains in this condition, more forcible because of the increase in the muscular structure in the walls, and the greater sensitiveness to stimulation which is exhibited during pregnancy. This effect is shown in Fig. 11.

In Figs. 10 and 11 the effect of pituitary extract upon the blood pressure is well seen. There is an immediate and extensive rise. This rise is maintained for a considerable time. In Fig. 10 secondary rises—three in number, with two less important ones—are very prettily shown. These occurred during the act of defaecation, brought about, no doubt, by the effect of the pituitary extract on the intestinal muscles.

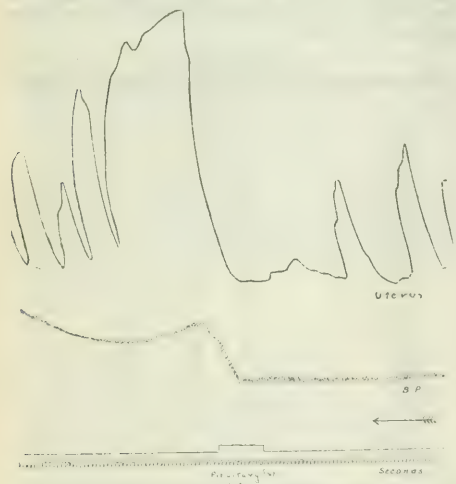


Fig. 11.—Pregnant uterus: effect of pituitary extract (0.5 c.cm.). (Reduced about one-half.)

Mr. H. H. Dale also has shown the effect of this extract upon the uterus, using a different method.

4. Adrenal Extract.

The solution of 1 in 1,000 adrenalin prepared by Parke, Davis and Co. was used.

The effect upon the pregnant uterus is well known, consequently we only tried the effect of the extract upon the inactive uterus. The result is shown in Fig. 12. A distinct contraction was produced, together with the well-known rise in the blood pressure. This tracing is, in fact, almost identical with that shown in Fig. 10.

5. Placental Extract.

The preparation used was that kindly supplied to us by Dr. F. E. Taylor, who, with Professor Dixon, has recently published the results of their work with the extract prepared by them from the placenta.

(a) Upon the inactive uterus this preparation, used

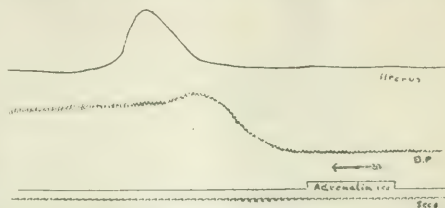


Fig. 12.—Inactive uterus: effect of adrenalin (1 c.cm. of 1 in 1,000 solution). (Reduced about one-half.)

according to the instructions of Dr. Taylor, produced quite a marked effect, as is seen in Fig. 13, where two distinct contractions occurred as the result of a single dose.

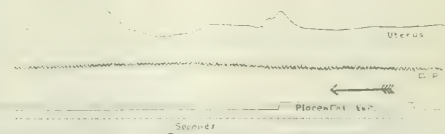


Fig. 13.—Inactive uterus: effect of placental extract (1 c.cm.). (Reduced about one-half.)

(b) Upon the menstruating organs there appears to be a marked effect. The contractions are prolonged, and recur more rapidly, but their total expulsive force is not increased. This is shown in Fig. 14. It is possible the

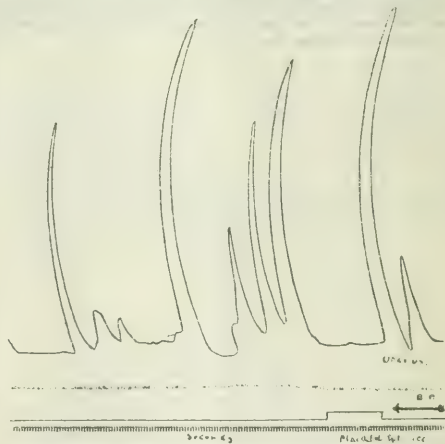


Fig. 14.—Menstruating uterus: effect of placental extract (1 c.cm.). (Reduced by one-half.)

dose used (1 c.cm.) was rather small to produce a very decided result. Upon the blood pressure the effect is not at all marked, but there is a slight tendency for it to rise.

(c) Our supply having run short, we did not test the action of this preparation upon the pregnant organ, but in view of our other experiences we have no doubt that powerful contractions would be produced.

6. Uterine Extract.

In order to obtain this extract it occurred to us to use the secretion obtained from the uterus by ligation of the

uterine cornua in rabbits. In this way we obtained, in a concentrated form, the secretion of the glands, and it may be taken for granted, therefore, that such a secretion would resemble in its action an active extract prepared from the whole organ. We found that the most active preparation was that obtained fresh and from a rabbit capable of menstruating. The secretion so obtained was very fatal

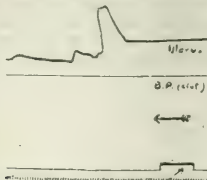


Fig. 15.—Inactive uterus: effect of uterine secretion. (Reduced about one-half.)

in its effect unless used dilute. We used it, therefore, in a dilution of 1 to 4: even then we could readily produce fatal effects. Our records only show, of course, those cases in which no bad result, beyond perhaps clotting in the blood-pressure cannula, was produced. We found this secretion the most powerful in its effect upon the uterus of any of the animal extracts used by us.

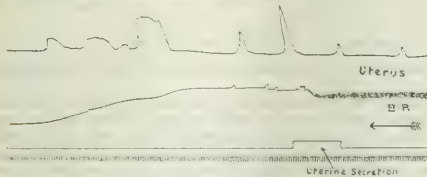


Fig. 16.—Menstruating uterus: effect of uterine secretion. Note clotting in the blood-pressure cannula. (Reduced about one-half.)

(a) In Fig. 15 is seen the result upon the inactive uterus. There is an immediate and marked contraction, followed by several smaller ones.

(b) Upon the menstruating uterus the effect appears to be that the contractions become prolonged considerably, and occur more frequently.

In Fig. 16 this is well seen, but apparently there is a slight delay in bringing about the result. This, however, may have been due in this case to fatigue.

(c) Upon the pregnant uterus, as one would expect, we obtained a very powerful reaction. The uterus was thrown into a series of violent and continuous contractions. This is seen in Fig. 17. There were no general convulsions, so that the effect appears to be specific.

Uterine secretion appears to raise the blood pressure, but owing to the marked rapidity with which clotting occurred in the cannula no very good tracings of the blood pressure were obtained. There was, however, no general intravascular clotting.

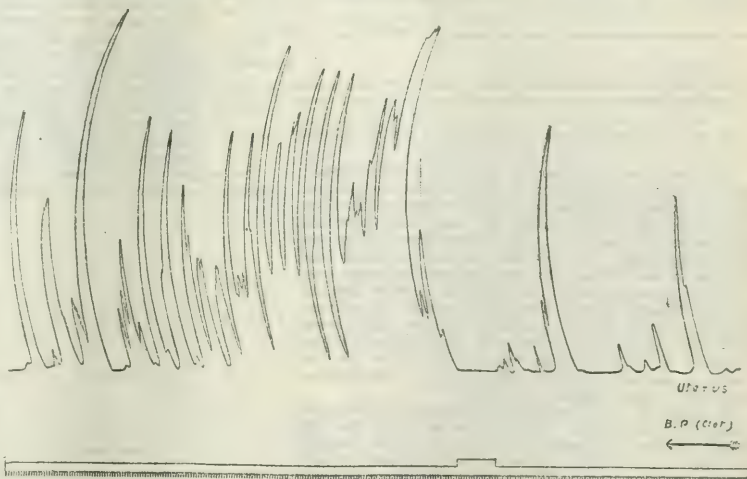


Fig. 17.—Pregnant uterus: effect of uterine secretion. (Reduced about one-half.)

in the calcium content of the systemic blood of pregnant women towards the termination of the intrauterine life of the fetus, and taking into consideration the important part played by the calcium salts in all processes associated with female genital activity (see previous papers), we thought that our work on uterine contractions would not be complete unless we endeavoured to show the effect produced upon these contractions by such an important normal constituent of the blood.

For the purpose of intravenous injection we found that a solution of 0.1 gram in 1 c.cm. of calcium chloride was the best suited to our purpose.

(a) We were unable to produce any effect upon the inactive uterus.

(b) Upon the menstruating uterus a marked effect was produced, as is seen in Fig. 18. From a somewhat weak and prolonged contraction the character was changed so that the expulsive contraction became more powerful and definite, without much loss in the length of the total contraction. We noticed, however, that when the uterus was tired the contraction was apt to be of a more prolonged and tetanic character in addition to being increased in force, and further that the effect was somewhat delayed after the injection. (See Fig. 19.) This delay we frequently noticed when trying the effect of calcium salts upon the uterus.

(c) Upon the pregnant uterus the effect is, as we should expect from our previous observations, very well marked. This is seen in Fig. 20. In some of the tracings obtained the effect was more violent than in the case illustrated.

Calcium salts cause the blood pressure to rise. This, though not nearly so marked as with pituitary and adrenal extracts, is often quite distinct, as is well shown in Fig. 20.

As we have said elsewhere, we have not found that injections of calcium salts cause intravenous clotting.

REMARKS AND CONCLUSIONS.

Such, then, are the results of the investigations which have occupied much of our time and exercised much of our patience. On account of limitations in the former we have not been able to carry out other experiments on the same lines as we had hoped. Some day we may be able to return to the subject; if so, we shall try the effect of extracts made from the whole uterus in order to see if a marketable extract can be made which will have the same definite effects upon uterine contractions as the uterine

secretion has without, possibly, the marked effect of the latter upon the coagulation of the blood, an effect possibly produced by nucleo-proteids.

We should like to test the action of fresh blood from a parturient rabbit upon one less advanced in pregnancy.

7. Calcium Salts.

One of us (W. B. B.) having already observed an increase

Also, if possible, to have discovered some substance circulating in the blood which definitely inhibits uterine contractions.

Our results, then, indicate that all those substances—most of them being extracts prepared from the ductless glands—which we have investigated appear to increase uterine contractions, and that most raise the blood pressure, some much more than others.

We do not know whether it is quite logical to come to such a conclusion, but it seems to us that probably those extracts such as the pituitary and adrenal—we will omit

been found to contain. We have ourselves no first-hand knowledge upon this point.*

Uterine secretion, we venture to think, however, must be specific to some extent, as we have used it straight from the living rabbit to the one under experimentation. Indeed, it seems only feasible that it should have some such action, and the fact that during menstruation, when this substance is being excreted, marked contractions are constantly in progress makes it a fair assumption that these contractions are caused by the direct stimulation of the compound substance we may call "uterin" which

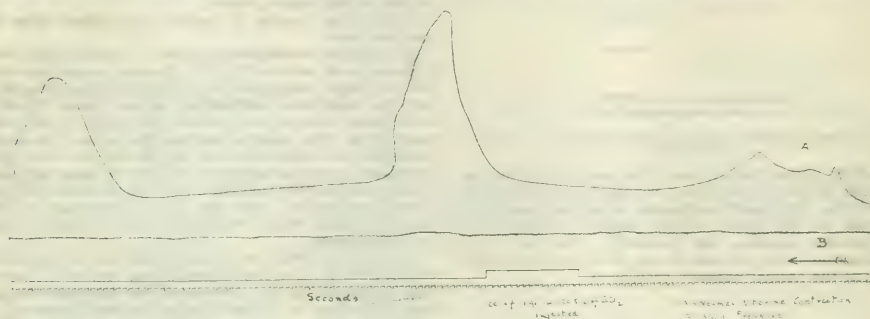


Fig. 18.—Menstruating uterus: effect of calcium chloride (0.1 gram in 1 c.cm.). (Reduced about one-half.)

placental and uterine extracts for the moment—which cause contractions in the inactive uterus act not specifically upon the uterine muscle, but upon involuntary muscle in general. In regard to these, their marked effect upon the blood pressure gives further proof of this.

Of the others, thyroid extract lowers the blood pressure but increases the uterine contractions. In this case, however, the contractions may form part of a general convulsion. Should this occur the blood pressure rises. We think, therefore, that thyroid extract may be dismissed from the competition for specific effect.

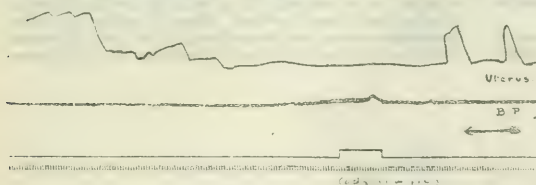


Fig. 19.—Menstruating uterus: delayed effect of calcium chloride. (Reduced about one-half.)

Next we have to consider the claims of ovarian extract; and we must confess at once that we wish we had been able to extend considerably our observations in this direction, especially in the matter of using more than one preparation of this organ. We should have liked to note the comparative effect of the extract prepared from rabbits' ovaries during the inactive, menstruating, pregnant, and lactating periods, for we should not be surprised to find different results would be obtained with preparations obtained in the different circumstances. That result in which delay in the contraction of the pregnant uterus occurred is full of significance, and it may be that the ovary of pregnant animals controls uterine contractions, especially in their expulsive effects.

In regard to the secretion obtained from the uterus we were much interested. That it has an effect upon the inactive uterus is undoubted, so that one might be tempted to class it with pituitary, adrenal, and placental extracts. It does not, however, raise the blood pressure in the way that the two first do.

The uterine secretion and placental extract are somewhat similar, then, in their action, and possibly may contain the same substance which effects uterine contractions. We are informed, however, that the specificity of placental extract has been disproved, and that its effects are produced by the products of decomposition it has

is in process of excretion, and which may in some forms exist in the blood.

Finally the calcium salts are shown to exert a definite influence upon uterine contractions, with a slight but definite rise of blood pressure. This action is well illustrated, both upon the heart and upon the uterus. A slow, forcible, and rhythmical contraction is produced—the very type that is seen in labour.

We admit that we have been unable in our experiments so far to show definitely that labour is produced by the action of calcium salts in the blood, but we have gone some way towards this, especially in that we have previously shown (see Paper II) that uterine secretion is rich in calcium salts. Consequently of the various substances used uterine secretion and calcium salts appeared to us to possess most points in favour of specific action.

This question of specificity in the matter of uterine contractions is, then, at once of considerable difficulty and of great importance. We do not think that until the further investigations indicated have been carried out it can be authoritatively stated that one reagent alone is responsible therefore—for the contractions in menstruation and labour.

So far as we have gone we incline to the belief that calcium salts circulating in the blood, or excreted by the

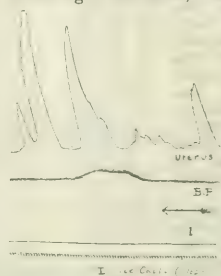


Fig. 20.—Pregnant uterus: effect of calcium chloride. (Reduced about one-half.)

uterus, play the most important rôle in this connexion. At the same time we are alive to the probability that they

*Since writing this we have been favoured with a letter from Dr. O. Rosenheim in which he confirms the above statement. This disposes of the claim put forward by Professor Dixon and Dr. F. E. Taylor in regard to the specific action of placental extract.

may act in conjunction with other substances elaborated by such glands as the infundibular portion of the pituitary, either in a harmonic or conjunctive manner. We feel assured, however, that the secret is not now deeply hidden in view of the observations already made.

Contractions of the Human Uterus.

From our observations upon the uteri of rabbits, we may assume that the contractions of the human uterus are governed by the following circumstances:

First, that the normal non-menstruating, non-pregnant uterus does not contract at all. Secondly, that the menstruating uterus is in a state of constantly recurring expulsive contractions. And thirdly, that the normal pregnant uterus contracts and relaxes in a complementary fashion, no expulsive force being exercised; but that during labour violent expulsive contractions occur.

Therapeutics.

In regard to any therapeutic suggestions we might make we feel that the subject is too big and too uncertain to do justice to here, so that we will content ourselves with one or two remarks only. Until a satisfactory uterine extract is upon the market or the specific (?) calcium salt synthesized, we think that we have a very efficient therapeutic product in the pituitary extract, which we have reason to believe Messrs. Burroughs and Wellcome will shortly put upon the market in hypodermic form. We have ourselves used this preparation clinically with satisfactory results. A dose of 2 c.cm. of the infundibular extract (0.1 gram in 1 c.cm.) should be given hypodermically and repeated if necessary. In addition to the effect upon the uterus it is most valuable in cases of shock in which the blood pressure must be raised, the protracted period during which the pressure is kept up adding considerably to its value.

We also think that it might be used in the place of physostigmine in paralytic distension of the bowel, its action upon the intestinal muscle being well shown in Fig. 20.

Lastly, we would call the attention of physicians to the effect of the calcium salts upon the heart as shown in the series of tracings made by us for Sir James Barr's paper on Mitral Stenosis (see BRITISH MEDICAL JOURNAL, December 19th, 1908, p. 1797). It appears to us that where it is necessary to slow the heart and strengthen the heart beat, calcium salts administered hypodermically or intravenously should form an ideal drug. In further connexion with this point our remarks on exophthalmic goitre in Paper I may be referred to.

While much remains to be learnt in regard to many of the problems upon which we have endeavoured to throw some light, we hope that the results we have already obtained, and summarized in these four papers, will not only justify the time, thought, and labour expended upon them, but also induce others to complete and extend the work we have so imperfectly performed in the much-neglected branch of gynaecological physiology.

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¹ Cushing, A. R.: On the Movements of the Uterus, *Journ. Physiol.*, vol. xxxv, Nos. 1 and 2. ² Barger, G., and Dale, H. H.: Ergotism and Some other Constituents of Ergot, *Bio-chemical Journal*, vol. ii, Nos. 5 and 6.

AN exhibition of flying machines and internal combustion engines intended for use in connexion with the same has been open at Olympia during the current week. It was promoted by the Society of Motor Manufacturers in conjunction with the Aero Club, and of the exhibits several were duplicates of machines which have already proved their capacity for actual flight and the carrying of passengers. Others were as yet in the model stage, and though they exhibit extreme ingenuity more perhaps is expected of them by their inventors than by any one else. Of the engines, a good many seemed to be the work of firms—such as the Wolseley Tool and Motor Car Company—whose names are already familiar in connexion with automobiles. The holding of this exhibition is an event worth noting as being the first of its kind. Otherwise the exhibition was not of special interest to medical men, as flying is not yet sufficiently popular to necessitate a new entry in the indexes of text-books on surgery on the lines of "golf elbow," "tennis wrist," or "back-firing fracture." Doubtless, however, such entry will presently appear—in connexion with the cervical vertebrae.

THE THERAPEUTIC COMMITTEE OF THE British Medical Association.

REPORT ON

THE LOCAL ANAESTHETICS RECOMMENDED AS SUBSTITUTES FOR COCAINE.

By C. N. LE BROcq, B.A., M.D.

(From the Pharmacological Laboratory, Cambridge.)

THE substances which have been investigated are: Stovaine, novocain, tropacocaine, beta-eucaine, alpin, beta-eucaine lactate, nirvanine, holocaine hydrochloride, acaine, orthoform (new), anaesthesine.

The points to which special attention has been paid are those laid down by Professor Braun as essential in estimating a local anaesthetic action. They are:

1. A lower degree of toxicity than cocaine in proportion to its local anaesthetic power.
2. Sufficient solubility in water. The solutions should be stable, that is, they should keep without deterioration and be capable of sterilization by boiling.
3. Absence of any sign of irritation. There should be no injury to the tissues; the local anaesthetic should be easily absorbed without causing any after-effects, such as hyperaemia, inflammation, infiltrations, or necroses.
4. Compatibility with adrenalin.
5. Rapid penetration of the mucous membrane, and suitability for medullary anaesthesia.

The only exception I would make to these postulates of Braun is that dealing with absorption. It is not obvious that easy absorption is desirable. If the drug is absorbed slowly it remains longer in contact with the nerve fibrils, and produces a more prolonged action. It has been stated that by delaying absorption, as by local vaso-constriction, we are giving the anaesthetic a longer time for action, and it is for this reason that adrenalin is injected with these substances.

If a drug can be obtained which fulfils the above conditions it can be safely said that it will supersede cocaine.

To arrive at a satisfactory conclusion it is necessary to deal with each drug separately, and to discover how closely each approaches the conditions specified by Braun.

Solubility in Water.

Solubility in water is essential for subcutaneous and intraspinal injections. If a drug is not soluble in water to the extent of forming a 2 per cent. solution, I have regarded it as unworthy of competing with cocaine. By examining the solubility of these drugs, the list is considerably diminished, for acaine, holocaine hydrochloride, anaesthesine, orthoform (new), beta-eucaine, are all more or less insoluble, and for this reason alone unsuitable for producing local anaesthesia by injection. Beta-eucaine is not completely soluble in cold water to the extent of forming a 2 per cent. solution, but if the solution is warmed a 2 per cent. solution is readily obtained. As dusting powders, these drugs may, of course, still prove useful, but I am not here concerned with that point.

Cocaine, stovaine, novocain, tropacocaine, beta-eucaine lactate, alpin, and nirvanine are freely soluble in water; their solutions are stable, and as a 2 per cent. solution they will keep for a short time without deterioration.

Sterilization of Solutions.

Cocaine cannot be boiled, as decomposition occurs, and the drug loses its activity and is gradually destroyed. Stovaine, novocaine, beta-eucaine lactate, tropacocaine, alpin, nirvanine can be sterilized at 115° C. if necessary, undergo no change, and the drug is as active after as before sterilization.

Local Anaesthetic Properties.

The determination of the local anaesthetic action is not easy, as it is not practicable to work with accuracy on the lower animals on account of the difficulty in determining when sensation is absent or merely blunted. The method

I adopted was to take cocaine as the standard and to compare each drug with it separately.

By numerous experiments on frogs, rabbits, and human beings, which will be described in detail elsewhere, I arrived at the following conclusions:

Stovaine has a more powerful anaesthetic action, weight for weight, than any of the other local anaesthetics. Alypin, beta-eucaine lactate, novocain, and tropacocaine have anaesthetic properties about equal to cocaine. Nirvanine as a local anaesthetic is inferior to cocaine.

Toxicity.

Having determined the relative anaesthetic action, it remained to estimate the toxicity of these drugs. The method employed was to find the minimal lethal dose—the smallest dose which will kill the animal—in frogs, mice, and rabbits.

All these drugs produce death by paralysing the central nervous system in mammals and the heart in frogs. When a toxic dose of a drug is injected into a frog, movements gradually cease; the animal soon lies still in any position in which it is placed, and becomes to all external appearances dead; respiration ceases, and there is no response to any sort of stimulus. If the dose has not been large enough to paralyse the heart, it continues to beat, and as soon as the effects of the drug on the nervous system pass off the frog recovers. The explanation of the recovery is, of course, that a frog can exist for a considerable time, even for many hours, without respiration. Thus in obtaining the minimal lethal dose in frogs it is necessary to give these drugs in doses which not only paralyse the nervous system, but which are large enough to paralyse the heart also.

Therefore the minimal lethal dose in frogs represents the action of the drug on the heart, and in mammals its action on the central nervous system.

Toxicity in Frogs.

The minimal lethal dose for a 20-gram frog, using a 2 per cent. solution, is for:

Alypin	...	...	6 minims (most toxic)
Cocaine	...	...	32 "
Stovaine	...	...	15 "
Nirvanine	...	...	17 "
Beta-eucaine lactate	...	...	20 "
Tropacocaine	...	...	20 "
Novocain	...	...	40 " (least toxic)

Toxicity in Mice.

The minimal lethal dose for a 23-gram mouse using a 2 per cent. solution, is for:

Alypin	...	...	4 minims.
Cocaine	...	...	5 "
Nirvanine	...	...	7 "
Stovaine	...	...	8 "
Novocain	...	...	10 "
Tropacocaine	...	...	10 "
Beta-eucaine lactate	...	...	12 "

Toxicity in Rabbits.

The minimal lethal dose for a rabbit weighing 1,000 grams, using a 10 per cent. solution, is for:

Alypin	...	between 18 and 23 minims.
Cocaine	...	" 24 " 30 "
Stovaine	...	" 35 " 45 "
Tropacocaine	...	" 44 " 54 "
Novocain	...	" 53 " 63 "
Beta-eucaine lactate	...	" 65 " 75 "

As the toxic action of these drugs is to paralyse the nervous system, and so the respiratory centre, the toxicity in mammals must be regarded as the correct reading, for when respiration ceases the animal dies.

If the toxicity of Cocaine be represented as 1, then

The toxicity of Alypin	...	will represent 1.25
" " Cocaine	...	" 1.0
" " Nirvanine	...	" 0.714
" " Stovaine	...	" 0.625
" " Tropacocaine	...	" 0.500
" " Novocain	...	" 0.490
" " Beta-eucaine lactate	...	" 0.414

Conclusions from the Above.

Alypin has anaesthetic powers equal to cocaine, but a higher toxicity, and so does not comply with the condition enunciated by Braun. Nirvanine has not the anaesthetic power of cocaine, and it is only slightly less toxic. As, however, we have four drugs equal to or stronger than

cocaine in anaesthetic power, and considerably less toxic than nirvanine, no further experiments with this drug were deemed necessary.

From this it will be seen that only four drugs, namely, stovaine, novocain, tropococaine, and beta-eucaine lactate, have complied with the first two conditions. With these four drugs further experiments were performed to discover how they fulfil the other conditions laid down for the "perfect local anaesthetic."

Irritant Action on the Tissues.

Very little is known of the action of the local anaesthetics on the tissues with which they come in contact. This effect is, however, extremely important, for it has been stated that gangrene and sloughing of the tissues have followed the use of certain of these drugs. It is well recognized, however, that they are all general protoplasmic poisons, that whilst having a special predilection for nervous structures they depress and ultimately destroy every form of living tissue.

In these, as in previous experiments, cocaine was taken as the standard. Cocaine is generally recognized as having a slight irritant action on the tissues, and occasionally, after instillation into the eye, produces considerable conjunctivitis.

For these experiments rabbits weighing about 1 kilogram were used. The abdomen was shaved and the skin washed and made aseptic, after which 10 minims of a 10 per cent. solution of the drug was injected subcutaneously. The drug was carefully sterilized, and all antiseptic precautions were observed.

After injection the part was kept under immediate observation for several hours, and then inspected daily for one week more.

Cocaine caused slight swelling and hyperaemia soon after the injection. The part completely recovered.

Stovaine caused intense hyperaemia and dilatation of the blood vessels, followed by sloughing of the part.

Beta-eucaine lactate caused swelling and thickening about the seat of injection, followed by sloughing.

Tropacocaine caused swelling and some thickening, followed by sloughing.

Novocain showed no swelling and no hyperaemia. The part was perfectly normal after injection, and remained so.

In the above experiments, where sloughing and necrosis occurred there were no signs of pus formation.

It is seen that a comparative investigation into the action of these drugs on the general tissue is of the utmost importance, for most of them possess a decided irritant effect; so much so, that they will produce sloughing and necrosis of the tissues with which they come in contact.

A 10 per cent. solution is a stronger solution than is generally used therapeutically, yet this strength is still employed; moreover, 10 minims of a 10 per cent. solution roughly represents 1 grain, a quantity which is far exceeded when weaker solutions are injected. And even if it be objected that it is not fair to infer from a 10 per cent. solution what will occur in a strength of 1 per cent. or 2 per cent., yet the present experiments still show the relative irritant action of these drugs. A drug which is only mildly irritant as a 1 per cent. solution, will presumably be the more irritant as a 2 per cent. solution, until, as the strength is increased, a stage is reached when destruction of the tissues and necrosis is obtained.

The irritant action of stovaine, beta-eucaine lactate, and tropacocaine is far greater than that of cocaine; novocain is the only drug which is superior to cocaine in this respect.

Compatibility with Adrenalin.

All the local anaesthetics are compatible with adrenalin if the solutions are fresh and kept only for a short time. After a day or two the adrenalin decomposes unless it is kept in stoppered opaque bottles.

CONCLUSIONS.

In determining which of these four drugs is the most suitable substitute for cocaine, it is necessary to compare them with one another.

If novocain and tropacocaine be first compared, their toxicity and anaesthetic properties are, roughly, equal; but the irritant action of tropacocaine is far greater than that of novocain; in other respects their actions are similar,

therefore novocain is a more suitable drug than procaine.

On comparing novocain with beta-eucaine lactate it is seen that while the anaesthetic value is roughly about equal, the toxicity of beta-eucaine lactate is slightly less than that of novocain, but the irritant action of beta-eucaine lactate is far greater than that of novocain. It appears, then, that while beta-eucaine lactate has only a slighter degree of toxicity to recommend it in preference to novocain, its irritant action far and away overshadows any such slight advantage, and novocain is recognized as undoubtedly the better drug of the two.

Finally, it only remains to compare novocain with stovaine. The former drug is less toxic and much less irritant; indeed, its specific action on nerve fibres is so great that it has practically no destructive effect on the other tissues; stovaine is more toxic and considerably more irritant.

The one definite advantage which stovaine possesses over all the other local anaesthetics is its greater injurious action on nerve fibres, as shown by anaesthesia. Nevertheless, the specific action of stovaine on nerve fibres is less than that of novocain, since stovaine destroys other tissues besides nerve fibres. If stovaine and novocain be given in doses so that their anaesthetic action is the same, both the irritant and toxic effect of the former drug, even in the smaller dose in which it is administered, are greater than the relatively larger doses of the latter.

I come to the conclusion, therefore, that of the drugs which have been investigated, novocain is most satisfactory for general use. Its anaesthetic action is equal to that of cocaine, and its toxicity and general destructive power on the tissues are very much less.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ACUTE YELLOW ATROPHY OF THE LIVER.

ON account of the rarity of the disease, the following notes on a case of acute yellow atrophy of the liver, which was under treatment at the Royal Naval Hospital, Portland, may be of interest:

D. L., aged 19, Private R.M.L.I. (Channel Fleet), was admitted to Portland Hospital on February 19th, 1909. He had been sick on board his ship since January 12th suffering from jaundice, which the man himself attributed to a chill caught from sleeping in a damp hammock.

On admission the signs and symptoms were at first obscure, and, during the earlier period of his illness, indistinguishable from an attack of catarrhal jaundice. Gastro-intestinal symptoms were well marked, the tongue was covered with a white fur, and there was anorexia, and occasional vomiting of partly digested food, with a little bile-stained mucus. Once, on January 29th, he had "coffee grounds" vomit. The bowels were constipated, and the stools pale and clay-like. From first to last he was deeply jaundiced, but this became more pronounced toward the end. The temperature all through was sub-normal. The pulse was slow at first (about 64), but during the last few days became very quick (130).

The liver was markedly diminished in size, liver dullness only measuring about 1½ in. vertically in the anterior axillary line. The urine contained much bile, and crystals of tyrosin were present in abundance; of leucin in very scanty numbers.

On February 3rd (twenty-two days after the onset of the jaundice) cerebral symptoms set in: headache was now very severe, with drowsiness, apathy, and side-to-side movements of the head. He soon lapsed from a semi-unconscious condition to a state of more or less deep coma, the pupils being widely dilated and not reacting to light; urine was passed under him. While in this condition the patient cried out loudly from time to time, tossing the head from side to side. The cry was typically meningeal. He gradually sank and died on February 8th.

At the necropsy the liver was much diminished in size, only weighing 28 oz. The capsule was wrinkled, and on section the liver was of a markedly yellow colour, with in

many places patches of bright red. The bile ducts were empty, as was also the gall bladder. Petechiae were found on the pancreas, kidneys, and great omentum. The spleen weighed 7 oz., and was normal on section. The kidneys each weighed 7 oz.; the cortex was a little congested. Sections of the liver showed the usual degenerative change on microscopic examination, and an extract showed crystals of leucin. A bacteriological culture from the liver on blood serum for sixteen hours at 37° C. showed Gram-negative diplococci in almost pure culture.

H. M. BRAITHWAITE,
Surgeon, R.N. Hospital, Portland.

LACERATION OF ABDOMINAL WALL, WITH PROLONGED PROTRUSION OF INTESTINE: RECOVERY.

LACERATIONS of the abdominal wall, accompanied by opening of the peritoneal cavity and protrusion of a viscus, may be reasonably considered accidents of extreme gravity, and the gravity is proportionately increased by the length of time a viscus has been protruded, and the conditions to which it has been exposed. The recent publication in the BRITISH MEDICAL JOURNAL of a case of this description suggests the recording of the following interesting instance.

On February 10th, 1906, a native who had been gored by a cow was admitted to the Swedish Mission Hospital. The patient was accompanied by his master, who told the following story: At 6 a.m. on the same day the injured native had let the cattle out of the kraal, and, while standing in the gateway, had been deliberately gored by a passing cow. The abdominal cavity was opened, and a large loop of intestine protruded. His master, who was present, at once replaced the intestine, fastened a broad calico binder round the abdomen, and brought the patient into hospital by the first available train. He arrived at 11.50 a.m., in very fair condition, and was attended to immediately. On opening the binder I was dismayed to find a large mass of small intestine intimately mixed with and adherent to the binder and to a very dirty blue calico shirt, and all cemented together with dried blood. Under continuous irrigation with hot boric solution I proceeded to separate the adherent mass by the aid of gauze sponges, and in doing this unavoidably stripped extensive areas of peritoneum from the intestine. This proceeding occupied two hours and twenty minutes, and only at its completion was I in a position to ascertain the actual conditions present. Fully 8 ft. or 9 ft. of distended and deeply congested small intestine were lying on the abdomen. The intestine was studded with particles of cow manure, grit, and dried blood, the removal of which was hopeless. The abdominal wound, irregularly circular, and about 2 in. in diameter, was situated 2 in. to the left and a little below the level of the umbilicus, and was blocked by the mesentery which had been drawn through the orifice by the protruded intestine. Up to this point the patient had not complained of much pain, and did not require chloroform, but now, as enlargement of the wound was necessary in order to return the distended intestine, this was administered, the wound enlarged about 2 in. upwards, the intestine returned, and the abdomen closed with three layers of sutures. The entire operation had lasted from 12 noon until 3 p.m., and the intestine had been outside the abdomen for approximately eight and a half hours. For three days the patient was kept under the influence of opium; on the third day the bowels acted with the aid of a soap and water enema; the wound healed by first intention: there was no rise of temperature, and he was discharged on the fourteenth day. I saw this man about six months afterwards, when he complained of abdominal pain after eating meat, otherwise he was in good health.

The interest of this case lies in the quantity of intestine protruded, the duration of the exposure, the exceptionally septic conditions, the unavoidable stripping of large areas of peritoneum, the return of the bowel studded with particles of organic matter, and the unexpected and uneventful recovery of the patient.

I have much pleasure in acknowledging the assistance I received in this case from Sister Gustava Perowne and Sister Amanda Skroog of the Swedish Mission Hospital.

Dundee, Natal.

H. TENER GALBRAITH, F.R.C.S. Edin.

Reports of Societies.

MEDICAL SOCIETY OF LONDON.

Monday, March 22nd, 1909.

CHARLES BARRETT LOCKWOOD, F.R.C.S., President, in the Chair.

Coroners and Medical Men.

MR. WALTER G. SPENCER, in opening a discussion on the relationship between coroners and medical men, said that the difficulties which had arisen between coroners and medical practitioners were due to many inherent causes, such as the difference in the education which formed the legal as distinguished from the medical mind, and which often made it so difficult to find a common ground upon which to argue. Moreover, there were the entirely different objects which the law had in view when the cause of a person's death was under consideration. The legal mind was fostered on authority and tradition, two ideas absent and even inimical to the medical mind of the present day, but the law, in spite of itself, was becoming more and more immersed in the flood of modern science and medicine. Death certification depended on medical nomenclature, upon medical nomenclature was based medical statistics, and upon medical statistics were built up the policies regarding public health and preventive medicine which constituted the most satisfactory work of modern statesmen. The correct findings as to the cause of death were linked up with the best Acts of Parliament. If one plunged into the middle of the subject one came at once upon that hoary institution—the coroner's jury, which public superstition held to be the supreme arbiter of facts, whilst it was evident that, to a very large extent, the members comprising the juries were ignorant of the meaning of the words they heard and used. It was needless to discuss verdicts arrived at by juries in the absence of *post-mortem* examination, or, it might be, without even a statement from the well-informed practitioner who had been acquainted with the case throughout. Under such circumstances the conclusions arrived at must be merely presumptive in character, and the medical profession could not be expected to regard those verdicts; also, from the point of view of modern public health legislation, statistics so registered might be erroneous. The recent Children Act was highly to be commended, but verdicts at inquests involving questions as to overlying, stillbirth, and infanticide were of no value for statistics in the absence of *post-mortem* examination. It was obvious that, whenever possible, necropsies must be carried out by those persons who had special knowledge and experience, for it was not a question of demonstrating one likely cause of death, but at any autopsy other points connected with and affecting public health might be laid bare. It followed, therefore, that advantage must be taken of special pathologists, such as were already connected with their hospitals, and who formed the nucleus of a body of men best fitted to draw up a preliminary report for a coroner arranging to hold an inquest; such a report would be a helpful guide to him when considering the best witnesses to call. Supposing the coroner chose to hold an inquest on every case of death, whether the result of operation, anaesthetic or other causes, there could be no valid objection, always providing that it was preceded by a *post-mortem* examination made by a competent pathologist. Indeed, if a *post-mortem* examination were made in every medical case there would be a likelihood of some interesting and useful finds, even more often than in the cases just mentioned. Of course the pathologists employed must be the genuine article. If the medical profession declared that a *post-mortem* examination by a skilled pathologist was the necessary preliminary to every inquest, then it might well leave the coroner and those members of the public concerned to settle when these should be held. A question of considerable complexity was that of the right and proper practitioner to be called to give evidence—there was the practitioner who had always attended the deceased, the one who had occasionally done so, the one who was called in just before death, or after death had occurred; there was the practitioner who saw the accident and the one who arrived upon the scene shortly after; also the house-surgeon at the hospital where the patient died.

By receiving an early report from the pathologist the coroner would be much assisted in the selection of witnesses to be called, and it could not then be said that he was guided in the matter by hearsay evidence picked up by the coroner's officer, or that he was prevented by prejudice from calling upon those who had treated the case in life.

Dr. LOVELL DRAGE said that in the country districts the present machinery of coroners' courts was perfectly suitable for the purpose. He thought that the rule in regard to "viewing the body" should be retained, but that the coroner should have discretionary powers in the matter.

Dr. F. J. SMITH said that a person should not be appointed a coroner unless his name was on the *Medical Register* and in the *Law List*. A suggested alteration in regard to certificates of death was that a medical man called upon to certify a death should, after seeing the body, either state fully the fact and cause of death, with such other information as might be required by law, or notify the death to the coroner on a separate form, and that such certificate or notification be paid for. He also advocated the holding of a preliminary inquiry by the coroner, in which investigation the results of *post-mortem* examinations should be considered. He further held that *post-mortem* examinations should be made by experts in this work. England might be divided up into twenty districts, and to each district there should be appointed a special pathologist.

After Mr. R. GILL had discussed the question from the point of view of the chloroformist, and Dr. BRNSTEIN had spoken, Mr. KELLOCK observed that if the coroner would give more attention to the difficult position of the medical man in giving evidence, and medical men would remember the onerous position and responsibility of the coroner, the relations between them would be more amicable. If a skilled preliminary inquiry were held into the cause of death, it would obviate the necessity of holding many inquests.

The CHAIRMAN said that throughout the country the coroners treated medical men with great courtesy and kindness and with every possible consideration, and only in a few cases the powers of the coroner had been occasionally exercised in an arbitrary and inconsiderate manner.

Mr. SPENCER, in reply, emphasized the point that the legal knowledge of the coroner must be constantly reinforced by the evidence of a specialist in pathology.

MANCHESTER MEDICAL SOCIETY.

Wednesday, March 3rd, 1909.

Mr. W. COATES, President, in the Chair.

Melancholia and Extradural Abscess.

Dr. J. ARNOLD JONES described the case of a spinster, aged 50 years, who was seized with symptoms of melancholia in October, 1907, and was sent to a private asylum in December, 1907. In February, 1908, she had acute auricular pain, apparently due to external otitis. This was treated by incision: copious discharge of pus followed and continued, but the mental symptoms rapidly cleared up, and in this respect she was quite well by May, 1908. In June, during the performance of a radical mastoid operation, a fistula was found leading to the sigmoid groove. Complete recovery followed.

Incontinence of Urine.

Mr. A. E. BARCLAY, in a paper on the electrical treatment of incontinence of urine in adult females, said the object of the treatment was to induce the sensation of the desire to pass water which the patient had to withstand—that is, to educate the brain centre to a sense of its responsibility for the action of the lower automatic reflex. One electrode was placed and moved to and fro past the sphincter, the other below the back. Of possible currents the sinusoidal was preferred. One severe case, a girl of 19, with both nocturnal and diurnal incontinence, on whom all other methods had failed, went into service after three months of treatment, and, after the lapse of a year, wrote to say that she had only been troubled once since she was under treatment.

Pleural Effusions.

Dr. R. W. MARSDEN, dealing with the treatment of apparently acute primary pleural effusions, said that too

much attention was commonly paid to the question of pleuritic adhesion occurring, and relatively too little to the condition of the compressed or contracted lung. Perhaps in a majority of cases the lung might regain complete expansion on withdrawal of fluid after a period of three weeks' compression; but when the temperature was maintained beyond the usual period without evidence of absorption it was advisable not to wait so long before tapping. To ensure complete expansion, as much of the fluid should be withdrawn as would be obtained without untoward signs or symptoms. Replacement of the fluid removed by sterile air was likely to increase the risk of having subsequently to deal with permanent contraction of the lung. If steady absorption did not follow the first tapping, the operation should be repeated at intervals, so long as expansion of the lung could be obtained. A period of two weeks was the maximum during which one should allow compression of the lung, whilst waiting for absorption of the fluid.

Dermatitis Artefacta.

Dr. G. H. LANCASHIRE, in a paper on dermatitis artefacta, pointed out the varying lesions which simple friction could evolve in a hysterical subject. In treating these cases the patient's secret should usually be kept from the knowledge of the rest of the family.

ROYAL SOCIETY OF MEDICINE.

PATHOLOGICAL SECTION.

Tuesday, March 16th, 1909.

Mr. S. G. SHATTOCK, President, in the Chair.

Portal Thrombosis.

Mr. T. W. P. LAWRENCE and Mr. H. CURTIS recorded a case of portal thrombosis in a case in which urethrotomy had been performed. The record was of interest in connexion with the pathology of portal thrombosis, especially as, being actually associated with operative measures, it might have been classed with cases of post-operative thrombosis, so well known to occur after abdominal, and even more frequently pelvic, operations. The *post-mortem* and microscopic evidence proved, however, that the portal thrombosis resulting in occlusion more or less complete, and fatal by hæmatemesis twenty-three days after admission, preceded by a considerable time the urethrotomy performed under local analgesia, there being found long-standing chronic pyelophlebitis but no cirrhosis of the liver. The cause of the pyelophlebitis was sepsis arising from the urethral disease.

The Pathology of the Spleen.

Mr. L. S. DUGGON and Dr. W. O. MEER recorded an investigation which consisted in a histological and bacteriological examination of the spleens of 87 subjects. The cases comprised examples of various acute and chronic infective and non-infective diseases. Out of 7 cases of pernicious anaemia streptococci were grown on only one occasion, and in this instance the patient had died with acute lobar pneumonia. In some instances streptococci and staphylococci were obtained in cultures from spleens which showed no excess of inflammatory leucocytes on histological examination. In the majority of instances of acute infective diseases the finely granular polynuclear cells were present in film preparations in excessive numbers. Endothelial cells were increased in numbers in most instances of acute bacterial infection. Nucleated red cells, both normoblasts and megaloblasts, were found in cases where anaemia was present during life.

Bence-Jones Protein.

Dr. F. PARKES WEBER and Dr. J. C. G. LEDINGHAM described the histology of a case of "myelomatosis" in a woman aged 65 years. At the *post-mortem* examination the bones examined were found converted into hard bony shells filled with a dark-red, opaque, jelly-like substance, and (in the case of cancellous bone) with the remains of cancellous tissue. The jelly-like substance in question was seen on microscopic examination to consist of plasma cells. In many of the cells the nuclei were in process of disappearing (karyolysis), and the cytoplasm contained spaces filled with a substance probably allied to, or an antecedent of, the Bence-Jones protein excreted during life in the urine. Good bony union was found to have

occurred at the site of a fracture of the humerus, which the patient sustained a few months before her death.

A communication upon tumour-like formations of fat, by the PRESIDENT, was taken as read.

MEDICAL SECTION.

Tuesday, March 23rd, 1909.

Dr. T. H. GREEN, Vice-President, in the Chair.

Auto-inoculation in the Treatment of Disease.

Dr. E. C. HOLT read a paper on auto-inoculation versus hetero-inoculation in the treatment of established infective disease, in pyrexial and in apyrexial conditions, as controlled by clinical observation and the estimation of the antitryptic index. Its purport was to submit that auto-inoculation afforded, with certain restrictions, a valuable and rational basis of the treatment of established infective disease, whether fever was present or not, mainly because its aim was the restoration of immunity against the action of enzymes and toxins, from damaged tissue cells in addition to those from bacteria, and that inoculation by tuberculin and other vaccines (hetero-inoculation), though of undoubted value, was not necessarily the best available treatment of such disease, inasmuch as its aim was solely confined to restoration of immunity to the action of bacterial toxins and entirely ignored the factor of non-bacterial enzymic infection. He endeavoured to show by illustrative cases that estimation of the antitryptic index afforded, in conjunction with clinical observation, a reliable gauge of response to immunization procedures of both kinds. By the term "antitryptic index" was meant the relation of the antitryptic power of pathological blood to that of normal blood. Dr. D. LAWSON said that in his experience there was no relation between the temperature curve and the opsonic index; in some cases even the pulse-rate was a better guide to progress of intoxication. Dr. F. PARKES WEBER alluded to the value of regular open-air exercise as a prophylactic against tuberculosis and in the way of producing autoinoculation from the very commencement of a comparatively trivial focus.

SECTION OF DISEASES OF CHILDREN.

At a meeting on February 26th, Mr. SYDNEY STEPHENSON in the chair, the following were among the exhibits: Mr. W. M. MOLLISON: A child of 2 years with *Absent abdominal muscles*. The abdomen was very pendulous and the walls thin and lax, the intestinal viscera being easily felt even when the child cried. The bowels kept regular, and there was no difficulty in micturition. No electrical response could be obtained from the abdominal wall. There did not appear to be any distension of the bladder or thickening of the ureters. Dr. LANGMEAD said that there were about 18 cases on record. Usually there was much distension of the bladder and thickening of its walls with palpable ureters. He believed that most of the cases had died in early infancy; the present one was an exception in that respect. Dr. O. GRÜNBAUM: A case of *Hirschsprung's disease*, or chronic dilatation of the colon. A child, aged 4 years, was admitted to hospital in August, 1908, for fits and constipation. The abdomen was enormously distended, the skin being tight and the superficial veins prominent. On administering an enema an enormous result was obtained, and on repeating this at intervals the child returned to a normal condition. He has been readmitted twice since with a similar condition. Improvement followed rapidly each time upon the administration of enemata. The risk of colectomy was so great that the exhibitor, having consulted with his surgical colleague, considered that so long as the child could be kept in a healthy condition with suitable treatment no operation should be done. Dr. G. A. SUTHERLAND said that all the cases he had seen had died. As the prognosis was so bad and the patient was now in such a favourable condition it would be well to operate now. Mr. LOCKHART MUMMERY said the mortality of colectomy in a number of cases in this condition which he had collected was 75 per cent. The only operation likely to give permanent results was excision of the dilated portion of the colon. This was a serious proceeding, but even if successful the colon might become redilated. He quoted four cases in which this had occurred. In a case which had gone on to adult life—a man, aged 23—he had done appendicostomy, the bowel being washed out daily.

It was now six months since the operation, and the man had had no obstruction. The meeting ended with a discussion on the medical examination of school children.

OTOLOGICAL SECTION.

At a meeting on March 6th, Dr. PETER MCBRIDE, President, in the chair, Mr. SYDNEY SCOTT, in a paper entitled *The Problem of Vertigo*, gave an account of an investigation of nystagmus and eye movement associated with giddiness in a large number of patients with diseases of the ear. He had adopted the caloric and rotation tests introduced into clinical otology by Robert Bárány, and had had opportunities of testing cases both before and after the internal ear had been destroyed by disease or operation. Various forms of nystagmus were recognized and the labyrinthine type fully described, together with the author's views of its mechanism. He had found on completion of his research, which extended over a long period, that his observations confirmed those of Mach, Breuer, and Bárány; he presented some new hypotheses to explain the phenomena observed. Some new data were presented in connexion with so-called ablation nystagmus—that is, persistent nystagmus of true labyrinthine type after removal of one labyrinth, the other labyrinth being normal. The author asserted he had been able to arrest this form of nystagmus by compression of the common carotid artery. The mechanism of the stimulus was accounted for on the assumption of impaction waves from the internal carotid artery in the carotid canal being transmitted to the labyrinth and ampullary apparatus of the semicircular canals. The hypothesis was put forward with a number of facts supporting it, and the author submitted that if his observations could be substantiated by competent observers, the hypothesis would have a much wider application than he had dealt with in his communication. The paper was illustrated by serial sections of the human labyrinth displayed by the epidiascope. A demonstration was given of glass models representing the human membranous semicircular canal and utricles. In the discussion which followed, Sir VICTOR HORSLEY said that in Mr. Scott's investigations and views he perceived a new basis for considering some of the many obscure features of vertigo. His own observations on monkeys were substantially confirmed by Mr. Scott's work on the labyrinth in children. In apes certain forced movements of the head followed operations on the labyrinth. He hoped Mr. Scott would give an account some time of head movements associated with nystagmus in human subjects.

THERAPEUTICAL AND PHARMACOLOGICAL SECTION.

At a meeting on March 2nd, Dr. CECIL WALL, in opening a discussion on *The treatment of spasmodic asthma*, said that in few diseases had theory played so large a part. There was little unanimity, save on the one point that during an attack the bronchial tubes were diminished in calibre, and that this diminution was probably effected through the agency of the central nervous system. Environment, the climate, and general hygiene were all important in preventing attacks. He had notes of 23 cases of asthma associated with definite nasal defects. After suitable treatment to the nose, in 14 there was marked improvement. In none was complete cure recorded. Of symptomatic remedies he had found most useful potassium iodide, arsenic, and stramonium. Of the last, the extract was better than the tincture. The pharmacopoeial dose was excessive, yet it should be given in doses sufficient to cause slight toxic symptoms. Most patients showed toxic symptoms on taking $\frac{1}{4}$ grain in twenty-four hours. Morphine was very valuable, but the fear of narcomania forbade its frequent use. Professor DIXON illustrated by tracings the supposed etiology of the disease and the action of drugs in inhibiting the spasm. For the production of an attack two things were necessary—a "neurotic" medulla, and a peripheral stimulus as the exciting cause. Dr. HERTZ emphasized the importance of urging the patient to combat the tendency by an exercise of will power. In his own case an attack could often be greatly lessened if he resolutely persisted in pursuing some mental work requiring complete concentration of mind. Dr. SERRIOS referred to details of 40 of his own cases. He found that patients who were entirely free between the attacks offered a prospect of successful treatment, whilst

those in whom the severe attacks altogether subsided giving place to a chronic dyspnoeic condition, were difficult to treat. It was surprising what benefit followed attention to simple hygienic measures, such as the abandoning of an evening meal, regular action of the bowels, and avoidance of fatigue. He had seen relief follow nasal treatment, and the reverse. In one case a series of most severe attacks were precipitated by the removal of polypi. It was important to recognize the neurotic form of asthma, in which the entry of air into the chest was not really impeded, as the superficial aspect of the patient almost exactly resembled asthma. He had also seen good results from respiratory exercises. For the relief of more severe attacks he had had good results with the injection of $\frac{1}{100}$ grain of atropine repeated in an hour if necessary. Dr. CARMALT JONES said he had recently isolated a micro-organism, which he believed to be the cause of certain cases of asthma. He had prepared a vaccine, and in many cases had seen great improvement in the dyspnoea. Dr. GRAY DUNCANSON emphasized the importance, especially in the young, of prescribing a course of breathing exercises, thoroughly carried out and supervised. Dr. CECIL WALL replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Friday, March 5th, 1909.

Dr. E. H. TWEEDY, President, in the Chair.

Fibro-cystic Myomatous Uterus.

Dr. ALFRED SMITH exhibited a large fibro-cystic myomatous uterus, taken from a patient 38 years of age. She had never felt any inconvenience up to some months before her admission to hospital, when she noticed she was getting rather stout. She was sent to him with a provisional diagnosis of ovarian cyst, and the clinical features were identical with the phenomena obtained in that condition. On opening the abdomen he thought he had to deal with an ovarian cyst, but found a fibromyoma which had undergone the degeneration seen in the specimen, giving a uniform pearly whiteness.

The President said the specimen illustrated the difficulty of gynaecological diagnosis. A big fibro-cystic tumour was indistinguishable from ovarian cyst in a great number of cases. In examining per the rectum they could occasionally feel an ovarian pedicle, and if it was absolutely distinguished the diagnosis of ovarian cyst was made, but the absence was no proof that they were not dealing with an ovarian cyst.

Dr. SMITH, in reply, said he did not make any rectal examination, as the case seemed perfectly simple and straightforward.

Cyst of Gaertner's Duct.

Dr. ALFRED SMITH exhibited a uterus with large cyst of Gaertner's duct attached. Twelve years previously he removed what was called an ovarian cystoma from the other side of the patient. She afterwards complained of another enlargement. He opened to remove the cyst, and found that when he was dissecting it out from the broad ligament it seemed to extend right down into the vagina. When he separated it as far as he could he found that the uterus had no support, and he removed it along with the cyst.

The President said he had operated on similar tumours, and had the greatest difficulty in enucleating them, as they not only went deeply into the pelvis and vagina, but climbed up under the peritoneum.

The Rotunda Hospital.

The President read the obstetrical and gynaecological reports of the Rotunda Hospital. Their discussion was postponed till next meeting.

UNITED SERVICES MEDICAL SOCIETY.—A clinical meeting of the society was held at the Royal Army Medical College on February 10th, Inspector-General J. PORTER, Medical Director-General Royal Navy, being in the chair. Major C. A. SPENCER, R.A.M.C., showed a man, aged 33, who in July, 1906, suffered from a large hard growth in

the lower part of the abdominal wall attached to the pubes and reaching nearly to the umbilicus. In September, 1906, an attempt to remove the tumour (which was found to be a *Small round-celled sarcoma infiltrating the recti muscles*) failed. Coley's fluid was then given, twelve injections being made into the growth at intervals of two or three days in doses of 1 to 3 minims. A month later, when the general health had much improved, a second series of fifteen injections of 1 to 6 minims was given. Two months later a third series of injections, nineteen in number, was given. Since the end of March, 1907, there had been no further treatment, health had remained perfect, the scar had kept quite firm, and no growth could be found on examination. Lieutenant-Colonel R. J. S. SIMPSON, C.M.G., R.A.M.C., read notes of a case of *Hepatic abscess* in the early stage, treated with 30 grain doses of ipecacuanha given in capsules. The man, an invalid from India, had suffered from enlargement of the liver and suspected abscess since May, 1906. On January 15th, 1909, when the treatment was commenced, a blood count showed whites 15,953, polynuclears 82 per cent. All symptoms rapidly disappeared, the treatment was stopped on January 25th, and on the date of the meeting the patient was perfectly well and had been discharged to duty. Lieutenant-Colonel C. BIRT, R.A.M.C., exhibited two cases of *Incipient tuberculosis* to illustrate the use of the eye and skin reactions. Lieutenant-Colonel Birt also showed the viscera of a man who had succumbed to *General tuberculosis of the lymphatic glands*, together with microscopical preparations and a culture of the tubercle bacillus. An erroneous diagnosis of Hodgkin's disease had been made. There was a mass of glands in the abdomen, weighing 500 grams, and one in the thorax, weighing more than 1 kilog. Tubercle bacilli were present in great abundance, and the lungs and spleen were infiltrated throughout with miliary tubercles. Captain H. B. FAWCOT, R.A.M.C., gave a demonstration on the use of a new medium for the isolation of *Bacillus typhosus* from excreta. Numbers of plates of the medium were shown to illustrate the inhibitory action on the growth of *Bacillus coli* and the distinctive appearances of the colonies of the micro-organisms which grow upon it. Captain J. C. KENNEDY, R.A.M.C., made some remarks on the chart of a case of *Mediterranean fever*.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—At a meeting on March 2nd, Mrs. STANLEY BOYD in the chair, Miss L. E. SAVILLE, in a paper on the *Medical education of Chinese women*, said that great difficulty was created by their very deficient preliminary education. Of late years there had been some improvement in that respect; the Chinese Government had now appointed an English medical woman on the staff of one of the medical schools for women. Miss IVENS gave the results of an inquiry into the incidence of *Gonorrhoea* in English hospital gynaecological practice among poor but respectable women, chiefly the wives of sailors and dock labourers. Out of 1,052 consecutive out-patients, at least 149 had gonorrhoea in either an acute or chronic form—that is, 14 per cent. of the total number. Of 157 in-patients, 39, or 1 in every 4, had gonorrhoeal lesions demanding operative measures, 30 requiring laparotomy. The speaker believed the extreme frequency of the disease was not fully realized by the mass of the medical profession, and that latent cases were sometimes regarded as simple leucorrhoea, cystitis, or chronic pelvic peritonitis. Life-long ill-health was often produced in women infected by the gonococcus; sterility was associated in 30 per cent. of the cases, and there was always the risk of ophthalmia neonatorum if the patients had children. Exacerbations not infrequently occurred where the disease had been quiescent for many years. Operative treatment was often required for women in poor circumstances who had hard household labour to perform. While fully aware of the difficulties, she believed the interests of a large class of women demanded prophylactic measures of an educational and legislative character.

THE quantity of unsound food surrendered for destruction at riverside wharves under the jurisdiction of the City of London from February 18th to March 6th inclusive amounted to 10 tons 14 cwt. 2 grs.; it consisted chiefly of condensed milk, fruit, and fish.

Reviews.

A NEW EDITION OF AN OLD MANUAL.

OF the making of new books on medical treatment there seems to be no end, and it is an ominous sign that they tend to increase, not only in number, but in bulk. The multiplication of new remedial measures proves the imperfection of those already in vogue. We have now to record the reappearance of an old book on the subject, also in an amplified form. Dr. BURNET YEO's well-known *Manual of Medical Treatment*¹ was first published some fifteen years ago, and its popularity has been fully attested by the call for fresh issues from time to time, up to the present fourth edition.

New light has been thrown upon the nature of many disease processes during the last ten years, and new ideas of treatment have arisen, and although they do not as yet appear to have justified the rejection of older methods, the author has done well to enlist the services of two competent representatives of modern medical thought to aid him in bringing the *Manual* up to recent requirements. The new edition is laid down on much the same lines as its forerunners, and aims at a full description of the rational treatment of disease rather than a condensed summary of actual methods. The rapid strides which surgery has made into the domain of medicine renders it needful to take into close account the conditions under which operative measures constitute the right and proper course to pursue in medical cases. The most recent views, gleaned from trustworthy sources, will be found duly recorded in their appropriate places. The digestive and nervous systems have been the subject of much study in this connexion, and many new ideas, especially those of German writers, are here represented. A general survey of the results obtained by animal extracts, other than thyroid, and of prepared vaccines and serum, is held not to give evidence of more than individual success, more convincing proof being needed to warrant their general adoption.

No pains have been spared to render the book useful to the active practitioner. Lists of prescriptions, of sanatoriums, and of special drugs, with accurate accounts of certain systems of treatment that have come into fashion of late, are ready to his hand to enable him to deal with the disordered action of the human machine. But we miss one aspect of the subject which has of late figured somewhat prominently in new works on therapeutic science. The influence of the mind in the causation of functional organic disorder, although fully recognized, has not been sufficiently utilized in treatment. Old-fashioned gout and new-fangled neuritis are well known to have been cured by removal of mental worry when the most subtle of synthetic drugs has failed to give relief, and it is probable that much functional disorder owns a mental rather than a physical cause. It is not impossible to minister to the mind diseased without throwing physic to the dogs.

THE EXAMINATION OF THE URINE.

WE are glad to welcome a second edition of *Physiology and Pathology of the Urine*,² by Dr. J. DIXON MANN, the first edition of which appeared five years ago. The book has been brought thoroughly up to date, and the same cordial welcome can be extended to it which it was our pleasant duty to accord to the first edition.

During the past five years our knowledge of the physiology and pathology of the urine has considerably advanced, and these advancements are faithfully recorded by the author. As he remarks, "Many substances which formerly were regarded as essentially abnormal are now known to be only relatively so; they are intermediate products of normal metabolism which are rendered abnormal by the inability of the individual who excretes them to utilize them in the ordinary way." Full justice is done to the recent work on the production of acetone, and its appear-

¹ *A Manual of Medical Treatment*. New edition by I. Burnet Yeo, M.D., F.R.C.P., Raymond Craufurd, M.D.Oxon., F.R.C.P., and E. Farquhar Buzzard, M.D.Oxon., F.R.C.P. In two volumes. London: Cassell and Co. 1909. (Cr. 8vo, vol. i, pp. 318; vol. ii, pp. 357. 21s.)

² *Physiology and Pathology of the Urine, with Methods for its Examination*. By J. Dixon Mann, M.D., F.R.C.P.Lond. Second edition. London: Charles Griffin and Co. 1908. (Demy 8vo, pp. 358. 16s. 6d.)

ance in the urine, and considerable additions have been made to the section on glycosuria. Many new and important methods of analysis are described, and, with them, a number of simplified processes by means of which comparative estimates of some of the commoner constituents of urine may readily be made.

The book can be confidently recommended to practitioners and students. It is, in every sense, worthy of the high reputation of its author as a physician and chemist.

DIET AND NUTRITION.

Is a small book on *Human Foods and their Nutritive Value*, Professor HARRY SNYDER, of the University of Minnesota, has contrived to embody a large amount of useful information. He tells us that since 1897 instruction has been given at the University of Minnesota on human foods and their nutritive value, but that no textbook existed which gave in concise form the composition and physical properties of food and discussed the main factors which affect their nutritive value. This book has been prepared to meet that need, but primarily for the author's class room. It is intended for students who have taken a course in general chemistry, but he has endeavoured to present the topics in such a way as to be understood by the average reader. The chapters deal with the general composition of foods and the changes that take place in them during cooking and preparation; the composition of various kinds of foods, such as vegetables, fruits, sugars, legumes and nuts, milk and dairy products, meats and animal foods, cereals and wheat flour. He describes bread and bread making, the purpose and composition of baking powders, the nature of vinegar, spices, and condiments and their action on digestion, the composition and uses of tea, coffee, chocolate, and cocoa. Having thus described the principal articles that form the ordinary diet of civilized man, he discusses their digestibility and nutritive and calorific value, their comparative cost and economical value, and shows how studies in dietetics enable us to construct dietaries which shall be adequate for people under various circumstances, giving the best results at the least cost. He makes no attempt to dogmatize upon the disputed question of the necessary amount of nitrogen, but he quotes with approval a passage taken from Dr. K. Hutcheson's *Food and Principles of Dietetics*:

While one freely admits that health and a large measure of muscular strength may be maintained upon a minimum supply of protein yet I think that a dispassionate survey of mankind will show that races which adopt such a diet are lacking in what for want of a better word one can only describe as energy.

There are useful tables of the nutritive and fuel value and composition of all common articles of food which should be of great assistance to any one desiring to construct a dietary. The book is also well illustrated by microphotographs and other plates. Teachers, moreover, will find a detailed account of laboratory practice and a large number of questions appended relating to each chapter of the book. There are a careful list of references and a good index. We cannot help wondering who constitute the members of such a class as this conducted by Professor Snyder. It would be very useful to medical students, but they get this information, if less concisely, somehow or other in the course of their studies, so we suppose that his class is made up mainly of young women. Nothing could be better as an introduction to a course of cookery than such instruction as that given in these lectures.

The little book on *The Essentials of Dietetics in Health and Disease*,* by Miss POPE and Miss CARPENTER, of New York and Saratoga Springs, is intended to meet the needs of nursing schools and of mothers of families who may wish to learn the scientific principles of dietetics. So far as the latter are concerned, the information given is elementary, yet it is more than those who are quite ignorant of chemistry would be able to follow. Although evidently compiled with care, it is doubtful if the authors possess sufficient knowledge of the subject, as the book contains many mistakes, pos-

sibly attributable to the printer, but which should have been corrected. In the early part of the book are some experiments intended for a class, but ordinary commercial cane-sugar commonly gives a precipitate with Fehling's or Trommer's test; in the experiment described on page 7 the expected point would not be made. On page 9, line 5, "glucose" is apparently written for "sucrose," as cane-sugar is apt to be irritating to the gastric mucous membrane, but glucose is not. On page 11 we are told that no digestion of starch takes place in the stomach—a statement which is of course incorrect, as the greater part of the action of the salivary ptyalin on starch takes place after the bolus of food has reached the stomach. On page 12 only the cellulose of young plants is said to be digested by man, but all kinds of cellulose are indigestible, though the cellulose of old plants is unfit for food. The writer of the first half of the book always spells farinaceous "farinacious," but this solecism disappears from the second part. The hydrochloric acid of the gastric juice is said to be 1 per cent. instead of 1 per mille (p. 22). In giving the causes of indigestion the writer omits the highly important process of mastication, and says nothing about defective teeth and the bolting of food. Cabbages do not cause flatulence because they contain sulphur, but owing to the amount of cellulose they contain, which undergoes fermentation; the sulphur is merely responsible for the production of a certain amount of H₂S, which makes the resulting gas offensive. The statement (p. 89) that various salads are easily digested is of course incorrect. Irish moss is described as an *algae* (*sic*, p. 92), while Iceland moss is said to be used for making bread for diabetics because it contains 80 per cent. of starch! The second part of the book deals in detail with the feeding of infants and children and sick persons; recognized lines are for the most part followed, but it is somewhat surprising to see ice cream and ices given as suitable articles of diet in heart disease. The section on weights and measures, and the table of equivalents, and the chemical symbols seem somewhat out of place in a book of this kind; ammonium is not the name of the gas or rightly described by the formula NH₃; aqua ammonia and aqua calio may be misprints. The last part of the book contains a number of recipes for cooking dishes not especially designed for the use of invalids, and much the same as those to be found in any cookery book; but they seem to be good of their kind.

In something under 400 pages of small octavo Dr. MOIN has tried to express, under the comprehensive title of *Digestion et Nutrition*,† his opinions upon an enormous number of subjects and to touch more or less superficially upon the whole range of internal medicine. He is apparently one of those who pose as superior to the rest of his profession: he indulges in fault-finding of the most varied kind so as to leave upon the reader's mind the impression that Dr. Moïn only is wise, he alone possesses the secret of discriminating what is useful in medical tradition and what is valuable among modern discoveries. He has the pen of a ready writer and the book shows considerable literary skill, but it is not at all a trustworthy guide. It is somewhat difficult to tell whether it is intended for the public or the profession, as, although we should hardly suspect the public of desiring to read a book on this subject, it is much too superficial and too dogmatic to be satisfactory to professional readers. He makes endless statements for the truth of which he affords no kind of evidence—such as, for example, the hereditary nature of gastric ulcer; although Soupault, the only modern author who notices the point, expressly says that "heredity seems to have no influence at all." He also speaks of nutrient enemata as exercising a soothing effect upon the stomach, and therefore directly helping the healing of the ulcer, although the generally received opinion is that the effect of an enema is to give rise to reflex stimulation of the stomach. He uses an immense number of drugs, most of them little known, or relegated to the shops of herbalists, but in other respects he is a follower of the "dosimetric" system. As an example of the style in which he writes we may quote the directions for treatment in cases of entero-colitis:

It is possible to overcome this condition (irritable debility) if one understands how to use *secundum artem belladonna*,‡ *Digestion et Nutrition*. Parle Dr. E. Moïn. *Aperçus de Médecine Pratique*. Paris: Vigot Frères, 1908. (Fcap. 8vo, pp. 376. Fr. 4.)

* *Human Foods and their Nutritive Value*. By Harry Snyder, B.S. London and New York: The Macmillan Company, 1906. (Cp. 8vo, pp. 378. 5s.)

† *The Essentials of Dietetics in Health and Disease*. By A. E. Pope and M. L. Carpenter. New York and London: G. P. Putnam's Sons 1908. (Post 8vo, pp. 253. 5s.)

hyoscyamus, Indian hemp, and Calabar bean. According to circumstances, we should give once or twice a day a pill containing 10 centigrams of extract of hyoscyamus, 3 of Indian hemp, and 5 of powdered Calabar bean; after some days of treatment it will always be found that the vasomotor innervation of the solar plexus seems happily modified.

He sneers at serums and vaccines and the followers of Pasteur thus:

Far better than all the cultivators of microbes and extractors of vaccinal quintessences the practical hygienist knows how to respond truly to all the needs of his patients who will willingly say to the theoretical follower of Pasteur (pastorion theïristant):

Eh! mon ami, tire-moi du danger;
Tu feras, après, ta lavange!

He is equally severe upon German pharmacology, of which he says:

All those gifts of German chemistry (to which should be applied with justice the ancient *timeo Danaos*) are hostile to vitality and become at times important agents in producing post-infectious complications and especially neuroses.

On the other hand, he is a strong advocate for the use of saline purgatives, and says:

It is because our medical era has ignored too much the importance of depurative and eliminative medicine that we now see arterio-sclerosis doing so much mischief.

Yet we should have thought that aperients of all kinds, and especially mineral waters, were never before so largely used. We have, perhaps, devoted an undue amount of space to Dr. Mouin's book, but only quotations are capable of doing justice to its characteristics.

CONSTIPATION.

DR. GUSTAV SINGER, in his article on constipation in Professor Albu's system of treatment,⁶ divides the cases into atonic and spastic forms. A typical instance of each form is described, and this is followed by a very complete discussion of the subject in all its bearings. In the treatment of atonic constipation he deprecates the use of drugs and advocates regimen, recommending regular exercise and a diet composed largely of vegetables and fruit, especially figs and brown bread, with fat in the form of butter, the quantity of meat being small. Some of the worst cases are better treated in a sanatorium. He regards as absurd the attempt to effect intestinal antiseptis by small doses of antiseptic drugs, and points out that Adolf Schmidt found constipated stools to be relatively sterile, and advocated giving agar-agar to aid the growth of bacteria; Dr. Singer cannot say much in favour of this plan, and does not believe that the lactic acid bacillus checks putrefaction, though he admits that it favours the normal functions of the bowel, and that kefir and koumiss act as aperients. He speaks favourably of mechanotherapeutics, and of massage, gymnastics, Swedish drill, and bedroom exercises. Cases of spastic constipation he divides into the symptomatic and primary, the former being the more numerous, as the condition may, he thinks, be set up by many lesions of the other pelvic and abdominal organs as well as by organic disease of the bowel itself, such as ulceration of the colon. He recognizes the fact, to which attention has recently been directed by writers in this JOURNAL, that reflex spasm may cause symptoms so closely simulating ileus as to lead to the abdomen being opened. Chloroform should be employed if necessary to clear up the diagnosis. In practice it is often difficult to draw a sharp distinction between the atonic and spastic forms, which may pass into one another; by the abuse of purgatives atonic constipation may become spastic, while continued enemata may cause spasm of the rectum. For the treatment of the spastic form he recommends sedative remedies, especially rest and warmth, physical and mechanical means being here out of place. The most useful drug, he thinks, is belladonna; he also recommends eumydrine (methyl-atropine nitrate) and an enema of warm oil (5 to 8 oz.) injected slowly and retained all night, the bowel being washed out in the morning with warm camomile tea. In some cases of spasm of the rectum he recommends dilatation with bougies or with a distensible elastic bag. The diet recommended is chiefly vegetable but soft and

free from cellulose. There is no mention of the use of bismuth meals and x rays in the diagnosis of the forms of constipation, which are somewhat serious omissions in a publication dated 1909.

The scope of Dr. GANT's work on *Constipation and Intestinal Obstruction*⁷ can best be indicated by the following quotation from his preface:

During the past fifteen years such flattering success has been mine with the non-medical and surgical treatment of these affections that I have thought it worth while to emphasize in this work the drugless management of constipation and obstruction. From what I have been able to find in the literature and from my conversations with medical men, in addition to my derived from psychotherapy, diet and physical measures such as bodily movements, massage, mechanical vibration, and electricity, have not received the marked attention they deserve by physicians in general when outlining a plan of treatment for the relief and cure of the different types of costiveness.

The greater part of the book is taken up with a description of the various causes of intestinal obstruction, apart from what is generally called constipation, and the surgical measures required for their treatment. Chapters XVII and XVIII deal with the treatment of ordinary constipation by diet and exercise, while Chapters XXVI and XXVII are devoted to a description of treatment by drugs and enemata. The author is apparently of opinion that constipation is much more common in America than on the continent of Europe and places America in this respect only second to England; he attributes this prevalence mainly to the abuse of purgatives, and he thinks the unrestricted sale of these is largely responsible for their abuse. Yet in France and Germany the sale of aperient medicines is practically unrestricted, and certain forms of them are widely advertised, so that if the habit of taking purgatives does not obtain to the same extent, it cannot be explained by the difficulty of procuring them. We are disposed to think that the author, like some surgical specialists on this side of the Atlantic, exaggerates the frequency of serious cases, and we believe that in England there are few which do not yield to treatment by far simpler means than those which he mainly favours; we notice, indeed, that he admits the success obtained in America by Christian Scientists in the treatment of these cases!

A DOCTRINAL RENAISSANCE.

The activity of the Montpellier School of Medicine has been manifested of late years by many important contributions to medical literature, and we have now to record the appearance of a very large work on the subject of the Diseases of the Respiratory Apparatus, from the pen of Dr. GERMAIN REY of Toulouse.⁸ His treatise is founded upon the medical doctrines of the Montpellier School, and it is ushered in by a veritable psalm to the glory of that seat of learning, in the course of which it is claimed that its professors have inaugurated a magnificent doctrinal renaissance by their recognition of the importance of the vital element in all morbid processes. It is maintained that the new light thrown upon the part played by the blood and its serum by Wright and others must reassert the position of the *vis medicatrix Naturae*, and restore to a great extent the views of our forefathers in medicine.

To what extent this renaissance of doctrine is due to the Montpellier School is not clearly manifest, but it may be defined as implying a fuller recognition of vital force resident in all living matter—for example, the force whose presence in the fertilized egg leads to the development of the chick, while its absence from the non-fertilized egg under precisely similar surroundings is followed by decomposition. Applied to the study of disease, the doctrine defines it as a lesion of vital force manifested by the evolution of abnormal action, sometimes detrimental and sometimes useful, resulting in a conflict between the vital unit and some outside cause which disturbs functional harmony. In most cases the disease of an organ so-called

⁶ Heft 6. Die Atonische und die Spastische Obstitution. Von Privatdozent Dr. Gustav Singer. Halle & S.; C. Marhold. 1909. (Med. 8vo, pp. 46. M.1.)

⁷ *Constipation and Intestinal Obstruction (Obstitution)*. By Samuel Goodwin Gant, M.D., LL.D. 250 original illustrations. Philadelphia and London: W. B. Saunders and Co. 1909.

⁸ *Traité Méthodique et Clinique des Maladies de l'Appareil Respiratoire*. Based on the Medical Doctrines of the School of Montpellier. By Germain Rey, of Toulouse. Montpellier: Coulet et Fils. 1909. (Roy. 8vo, pp. 912. Fr. 15.)

is only the local manifestation of a general condition, and it becomes the business of the physician to study the morbid state as a whole, and this can only be done satisfactorily by means of systematic analysis.

Dr. Rey's book is too large to admit of detailed examination, and it must suffice to record that every morbid condition of the respiratory apparatus, exclusive of the upper respiratory passages, which have now apparently passed out of the field of the physician into that of the specialist, is closely examined, discussed, and defined in accordance with the methods advocated by the author and his school.

The keynote of the method is analysis, not only of symptoms, but also of the various indications for treatment. The order of subject is that usually employed in textbooks, but every point in pathology, etiology, diagnosis, etc., is followed out with far greater minuteness than is customary, and although many of the assertions are somewhat dogmatic, a reasoned argument in their favour is always at hand to explain the train of thought which has led up to them. The psychic element in disease is closely regarded, and, although the value of modern research is fully recognized, it is obvious that the older clinical methods are held in high esteem as shown by the numerous references to the works of a date anterior to 1890. Although unable to rise to the point of enthusiasm attained by the author for his "doctrinal renaissance," we can cordially commend his work to the notice of those who are engaged in the clinical teaching of beginners in medicine. The acquirement of such a habit of clinical analysis as is here exemplified, cannot fail to be a precious possession to the clinician in after-life and at the present time, when theories succeed one another with breathless rapidity, it is of vital importance that they should be subjected to this test of clinical examination before they are allowed a prominent place among the accepted doctrines of the profession.

HYPNOTISM AND BUNKUM.

THE author of *Hypnotic Therapeutics in Theory and Practice*,⁹ whose name is QUACKENBOS, tells us that he has been engaged in the study of hypnotism for a quarter of a century, and the philosophy and material contained in the present work is based, he states, on "seven thousand separate experiences with the subpersonal minds of intellectual men and women." The book is typical of a large number of others coming from America, the land of Christian Science, Mentalcure, New Thought, and any number of others of the fantastic progeny of a disorderly imagination. The author writes with a genuine though perverid enthusiasm, and makes great use of strange, mystical, and high-sounding terms like "ethico-spiritual force," "psychics," "metapsychics," "pneumatic," and so on. "Pneumatic" perhaps furnishes the most apt description of the book, though perhaps not in the sense in which the author uses the term. For the author hypnotism is "the therapeutics of the transliminal," in which we are "capable of acting independently of a visible corporeity, . . . possess supernatural knowledge and wield ultra-normal power, and are gifted with a measure of prescience that on occasion forecasts what is to be." In the "transliminal" (which evidently does not correspond to the "subconscious" as usually employed) we can enter into communication, by the action of mind on mind, with other transliminal selves, human or "extra-human." Hypnotism is merely one means of reaching and modifying the transliminal self, which transliminal self is not only all-powerful but all-good. It is therefore impossible to suggest evil to an all-good transliminal self or to do harm by hypnotic means. Hypnotism, therefore, is always right, telepathy—which "no educated person will deny"—is right, veridical or "co-cognitive" dreams are right, and all is right as right can be—that is, so far as transliminal hypnotism is concerned. Dr. Quackenbos, however, disapproves of all other exploiters of the occult, and puts under the ban the Mind Curists, Viticulturists, Esoteric Vibrationalists, Christian Scientists, Venopaths, and so on—in fact, "the whole spawn of charlatans, impostors, faith-healers, seers, and other dabblers in hypnotism," who, he maintains, "ought to be buried out of sight in the bottomless bogs of their own ignorance and knavery."

⁹ *Hypnotic Therapeutics in Theory and Practice*. By John Duncan Quackenbos, A.M., M.D. London and New York: Harper and Brothers, 1908 (Demy 8vo, pp. 312, 7s. 6d.)

The author of a recently-published book on *Suggestive Therapeutics*,¹⁰ Dr. HENRY S. MUNRO, says in his preface that it is not intended principally or even mainly for the neurologist and psycho-therapist, but rather "to instill (sic) into the vast mass of the profession to whom this entire field is as yet *terra incognita*, those basic principles of physiological psychology upon which the scientific therapeutic application of suggestion in all its forms necessarily depends." A careful perusal of the book, however, fails to reveal any description or analysis of the "basic principles of physiological psychology," but instead we have an account of the method of inducing hypnosis employed by the author—who appears to have gone about from city to city giving demonstrations to medical men—with occasional and not always accurate references to elementary physiology and cerebral anatomy; a great deal of talk about the "subconscious mind," the "true ego," the "ideal man," "psychic influence," and so on, and statements with regard to numbers of cases of ill-described illnesses which had recovered under the author's hands. It is exceedingly difficult to follow the author in his meanderings, partly because of the lack of any sustained argument or methodical discussion and partly because of an extraordinary fashion of having a few words—apparently chosen at random—printed in large block type on almost every other line.

Another book recently issued on this subject is *The Marvels of Hypnotism*,¹¹ by Dr. GERAUD BONNET of Oran and Sidi-bel-Abbès in Algeria, whose *Traité Pratique d'Hypnotisme et de Suggestion Thérapeutiques* we reviewed not long ago. The last-named work was the first, and the present book is the third, of a series by Dr. Bonnet. A second book on the transmission of thought we have not received, and know nothing of it beyond its suggestive title; but whereas the first work was entirely practical in character the last book is largely theoretical, and, in so far as it gives an account of hypnotic phenomena, is an attempt to justify its title. Its author, who regards such things as telepathy and Blondlot's *n* rays as facts beyond dispute, believes also in "nervous force," the exteriorization of this nervous force—producing, for example, movements in inanimate objects—and action at a distance. He relates numerous observations of his own and experiments made by others in support of his conception of hypnotism. Notwithstanding this dubious mixture of mysticism and science, Dr. Bonnet's book is interesting, and contains a good deal of information of practical use, particularly as to the place of suggestion in medical practice, a matter treated with a moderation not always encountered in books of this kind.

PHOTOGRAPHIC OPTICS.

DR. G. LINDSAY JOHNSON'S *Photographic Optics*¹² is a textbook intended primarily for the professional optician, but is written at the same time for the guidance of those wishing to understand the scientific principles underlying the main facts of photography. In his preface Dr. Johnson has disarmed criticism by pleading guilty to the "poverty of explanation" in the work owing to the mass of theoretical and practical detail inevitably included, but it is to be feared that the resulting obscurity will prevent the book becoming popular with the elementary student. To those, however, who come to a study of optics with a thorough knowledge of elementary geometry, a slight acquaintance with the rudiments of trigonometry, and with the theoretical knowledge of light required at such an examination as the Preliminary Scientific of the London University, the book will prove an invaluable guide. It is thoroughly up to date, and includes an account of the principles of even so late a development of moving colour photography and projection as that accomplished by Mr. G. A. Smith, and shown a month or two ago at the Society of Arts. Considerable attention

¹⁰ *Suggestive Therapeutics, Applied Hypnotism, Psychic Science*. By Henry S. Munro, M.D. Second edition. St. Louis, U.S.A.: C.V. Mosby, 1908. (Demy 8vo, pp. 360.)

¹¹ *Les Merveilles de l'Hypnotisme, Considérations Théoriques et Applications Diverses*. By Dr. Geraud Bonnet. Paris: Jules Roussel, 1909. (Post 8vo, pp. 281, F. 3.50.)

¹² *Photographic Optics and Colour Photography, including the Camera, Kinetograph, Optical Lantern, and the Theory and Practice of Image Formation*. By George Lindsay Johnson, M.A., M.D., B.S., F.R.C.S., etc. London: Ward and Co., 1909. (Demy 8vo, pp. 314, 14 plates, 5 in colours, and 170 illustrations. 7s. 6d.)

has been paid to the theoretical side of the subject, and detailed explanations are given of just those difficulties which suggest themselves to the optician, and in a lesser degree to the photographer in the beginning of their careers. While, as has been said, parts of the book will inevitably prove obscure to those who come to it without the necessary preliminary training, it contains a quantity of material of very great interest even to the amateur. The special chapter devoted to colour photography provides an excellent instance of how a highly technical subject can be treated adequately in popular language. The most technical parts of the work are relieved with occasional flashes of humour. Thus, after several pages dealing with speed indicators, the author suggests that a policeman wishing to trap a motorist should carry a tuning-fork, vibrating forty-two times a second, and look past one of the vibrating prongs at the spokes of the wheel as the car goes by. The wheels would appear stationary if driven at the statutory speed. Other tuning-forks vibrating at slightly higher rates would decide the actual speed with accuracy; but, as the author remarks, "while any exceeding of the speed limit can be determined, it is highly improbable that it would be received as evidence in court." There are a considerable number of misprints, but the majority have been detected, and Messrs. Ward have printed a table of errata for those who have already purchased the volume.

ANTISEPTIC OR ASEPTIC.

M. LUCAS-CHAMPIONNIÈRE has published in a handy octavo volume¹⁸ a collection of lectures delivered at the Hôtel-Dieu.

The book is an important and valuable contribution to the literature of antiseptic surgery by one of its earliest apostles. Forty years ago he studied the subject under Lister, and was one of the first surgeons to adopt it and to introduce it in Paris, with the success which is well known throughout the surgical world. Many valuable lessons are to be learnt from the perusal of M. Lucas-Championnière's book, which may be recommended to the attention of the younger generation of surgeons who have been brought up in the aseptic school. Some of them have not yet fully realized the dangers of the absence of antiseptics in ordinary everyday surgical practice. In discussing the relative value of antiseptic as contrasted with aseptic surgery interesting statistics are given showing the certainty with which operations in what is perhaps the most dangerous branch of surgery—the surgery of the joints—has been carried out without a single case of death from septicaemia during a period of over thirty years. M. Lucas-Championnière has probably operated by suture for fracture of the patella on more occasions than any living surgeon; 1,135 cases of radical cure of hernia, without a single death attributable to septic infection, are also recorded, and the author states that he has never employed gloves or masks, as now used by many aseptic surgeons. M. Lucas-Championnière's experience in antiseptic surgery dates back to November 20th, 1874, when he performed the first operation under the antiseptic system in France, and probably one of the first in the world outside the British Isles.

The expressions of opinion contained in this book are founded upon temperate argument and sound judgement, whilst at the same time there is evident the fervent enthusiasm of a disciple who learnt the gospel from the lips and from the acts of the great master himself, and is wholly imbued with the invaluable blessings conferred by him on suffering humanity.

An excellent portrait of Lord Lister forms a frontispiece to the volume.

NOTES ON BOOKS.

THE *Medical Register* for 1909¹⁴ was issued on March 15th; it contains 40,257 names, as compared with 39,827 names last year, 37,878 names in 1903, and 35,836 in 1899. A part of the increase, not a very large part, is due to the growth of the Colonial list, which now contains the names of 219 Colonial graduates, of whom 79 register an address in this country. The foreign list contains 27 names; in

every case the degree registered is from an Italian university, and of this total 12 practise in Great Britain, all of them in London, and 6 in British colonies or dependencies. It appears that altogether 781 names were removed from the *Register* during 1908—572 on evidence of death, 3 under penal provisions, 3 on ceasing to practise, and 103 under Section XIV of the Medical Act, 1858, which empowers the Registrar to remove a name if no answer is received to a letter of inquiry. The *Dentists Register*,¹⁵ received on the same date, contains 4,994 names; 2 are those of Colonial and 22 of foreign dentists. The percentage of registered United Kingdom dentists who are now licentiates or graduates in dentistry is 58.29, and of the licentiates and graduates in dentistry 351 have registered surgical or medical qualifications in addition to a dental qualification.

The edition of the *Medical Annual*¹⁶ for 1909 is in external appearance identical with its predecessors of the last few years, but on turning over its pages seems more freely illustrated. There are, for instance, in the present or twenty-seventh edition, as many as 54 coloured plates, as well as some 160 engravings. Of the coloured plates a large number appear in connexion with articles on diseases of the eye, of which some are written by Mr. ERNEST MADDOX and others by Mr. J. H. YEARSLEY. The book as a whole is the work of some thirty-seven contributors, English, American, and Continental; with few exceptions they are men well known as authorities or writers on the subjects with which they deal. In connexion with many previous editions of this book we have drawn attention to its value, especially to those engaged in active practice: they will often obtain from it a hint as to the treatment of a puzzling case, and even if constant students of current literature they cannot fail to find utility in its summaries of papers which have appeared in various periodicals on special points in medicine and surgery and in the field of diseases covered by the various specialities. The latter, indeed, receive a generous amount of notice throughout the work. In addition, the volume contains abstracts of the more important legal decisions affecting medical men and the public health delivered during the preceding twelve months, and a very useful classified list of the principal medical works published during the corresponding period. There is a good general index, but reference to its contents would be facilitated if a list were given of the headings of each separate article.

The edition for 1907 of *Die therapeutischen Leistungen*, edited by POLLATSCHER and NADOR,¹⁷ was received on March 15th. It is a yearbook intended for the use of practitioners, and contains abstracts, under alphabetical headings, of papers published during 1907 deemed by the authors to be of more or less permanent importance. It is intended, of course, as a work of reference, and the editors have taken pains to provide an excellent system of indices, an alphabetical list of diseases, another of authors, general subject index, and, finally, a short index of drugs and other remedies.

The volume designated *The World I Live in*¹⁸ is by Miss H. KELLER, the talented American whose marvellous progress and proficiency in a literary education, in spite of being the subject both of blindness and deafness from infancy, were set forth in a previous autobiographical work (*The Story of My Life*, reviewed in the BRITISH MEDICAL JOURNAL of November 28th, 1903, p. 1409). The chapters of her new book are full of psychological as well as of physiological interest. Those familiar with the methods of education of the blind will perhaps be prepared for the statements made under the heading of "The Seeling Hand," but those comprised under such titles as "The Hands of Others" and "The Hand of the Race," evidence mental discrimination on the part of the perceiver of no common order. In fact, Miss Keller seems to be an expert "thought-reader," and is able to judge of the character, moods, and even tricks of speech of those with whom she is brought into contact. "Mark Twain's hand," she says, "is full of whimsies and the drollest humours, and while you hold it the drollery changes to sympathy and championship." Of the hands of our own profession she writes in complimentary terms, stating that "if the physician is a man of great nature,

¹⁴ *The Medical Annual: A Yearbook of Treatment and Practitioner's Index*. Bristol: John Wright and Sons, 1909. (Pp. 744.)

¹⁵ *Die therapeutischen Leistungen des Jahres 1907*. Bearbeitet von herausgeber. Med. und Chir. Dr. A. Pollatscher und Med. u. Dr. H. Nador. XIX Jahrgang. Wiesbaden: J. F. Bergmann; and Glasgow: F. Rannemeyer, 1908. (Roy. 8vo, pp. 374, 8s. 8d.)

¹⁶ *The World I Live in*. By Helen Keller. London: Hodder and Stoughton. (Ct. 3vo, pp. 27; 4 illustrations, 3s. 6d.)

¹⁸ *Pratique de la Chirurgie Antiseptique*. Par le Docteur Just Lucas-Championnière. Paris: G. Steinheil. (Roy. 8vo, pp. 473, Fr. 8.)

¹⁵ Spottiswoode and Co. 1909. Price of *Medical Register*, 10s. 6d.; *Dentists Register*, 3s. 6d.

there will be healing for the spirit in his touch. This magic touch of well-being was in the hand of a dear friend of mine who was our doctor in sickness and in health. His happy, cordial spirit did his patients good whether they needed medicine or not." The book is illustrated by four admirable photographs, one of which represents Miss Keller "listening" to the trees and enjoying the rustle of the leaves through the medium of fine vibrations conveyed along the trunks! Of the sense of smell she says "there is something of the fallen angel about it," though she proceeds to tell us that in her own experience she learns and remembers much from olfactory impressions. No less than three chapters are devoted to the subject of dreams, and these we may briefly epitomize in her own sentence: "My dreams do not seem to differ very much from the dreams of other people." Of the book we have said enough to show that it is a remarkable work by a remarkable author.

Dr. F. F. STRONG of Boston, in his book entitled *High-Frequency Currents*,¹⁸ comes forward not so much with an impartial survey of the whole subject as with an explanation and defence of his own methods as an American electro-therapist. He claims to rank as a pioneer of high-frequency therapeutics on the ground that since 1896 he has been employing the bipolar high-potential currents of Tesla, which, he says, possess considerable advantages over the better-known low-potential currents of d'Arsonval and the monopolar high-potential effects of Oudin. Dr. Strong's theory to account for the immunity of the human body is that high-frequency currents are simply forms of vibration, like sound waves, and their passage involves the transmission of energy and not of matter. He has treated pulmonary tuberculosis by high-frequency. The writing would have benefited by further revision, and there are some misspellings, of which "J. J. Thompson" is an example.

It has not hitherto been easy for individuals who wished to possess a general knowledge of man's structure, nature, history, and relationships, to gain that knowledge, except at the expense of considerable labour and extensive reading, for the data, though numerous, are scattered, and they are often given in extremely technical language. LUDWIG HOPF'S *Human Species*¹⁹ is an attempt to provide the general knowledge so many people require in compact form and in simple language. Commencing with a few general considerations, the author passes on to the distribution of man in space and time. Then in a very general manner he deals with the anatomy of the various systems and organs, which he compares with those of other animals. In a similar manner he deals with the physiology of the senses, with psychology, and social life, art and handicrafts and music; he brings his volume to a conclusion with a consideration of pathology and diseases as they affect man and his more immediate neighbours. The book will appeal to those who like to possess a superficial knowledge of many things, and it will probably induce some of its readers to dip deeper into many of the fascinating subjects upon which it touches.

¹⁸ *High-Frequency Currents*. By Frederick Finch Strong, M.D. London: Reisman, Limited. 1909. (Royal 8vo, pp. 309; 183 illustrations. 2s. 6d.)

¹⁹ *The Human Species*. By Ludwig Hopf. London: Longmans, Green and Co. 1909. (Med. 8vo, 477 pp., 216 figs. 10s. 6d.)

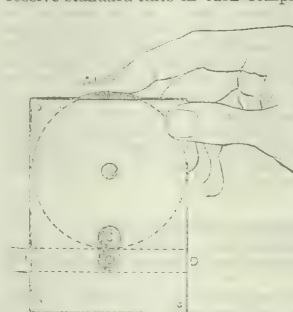
MEDICAL AND SURGICAL APPLIANCES.

The Rotary Haemoglobinometer.

DR. ARTHUR J. HALL (Lecturer on Practical Medicine, Sheffield University) writes: The value of a quantitative estimation of haemoglobin, either alone or as part of a complete blood examination, is generally recognized. So far, however, it is not made use of by the majority of practitioners in this country to the extent that it might and ought to be. One cause of this is, undoubtedly, the length of time involved in making such estimations. Any method which, while reasonably accurate and reliable, reduces the time and simplifies the apparatus required, is likely to increase its use in general practice. No method could be devised which would exceed in simplicity of apparatus and rapidity of performance that suggested by Tallqvist in the well-known form of the "haemoglobin scale" books. But, like other methods, it has its defects, and, according to some who have tried it, those defects render it unreliable. It is with the view of diminishing or removing some of the sources of error, in a method which presents so many clinical advantages to the general practitioner, that I bring forward the rotary haemoglobinometer

It is founded on the same principle as the haemoglobin scale of Tallqvist—namely, the saturation of a piece of absorbent paper with pure blood, and its comparison with a set of artificial standard tints representing normal blood and its dilutions.

Description.—The apparatus consists of a rotating metal disc, on the front surface of which the standard colour tints are arranged at intervals near the circumference, whilst the percentage numbers corresponding to each tint are similarly arranged on its posterior surface. The disc is encased between two rectangular plates of ebonite (size 2½ in. by 2½ in.), each of which has a small round hole (C in front plate) in it corresponding with that part of the circumference of the revolving disc upon which the colour tints and percentage numbers are respectively situated. When the disc is rotated by the forefinger (A) the successive standard tints in turn completely fill the hole in



the front plate, whilst on turning the instrument over, the corresponding percentage of haemoglobin which that tint represents, can be read off through the hole in the posterior ebonite plate. The accompanying illustration shows the general arrangement as seen from the front. Close beside the hole, C, there is a second hole in the front plate of the same size and shape (C'). By means of a narrow space between the two plates (D and D') a slip of absorbent paper can be pushed in, as at D', so as completely to occupy the hole (C').

Method of Use.—After pricking the finger or ear of the patient whose blood is to be examined, a slip of absorbent paper is torn out from one of the small books of slips provided with the instrument, and a good-sized drop of blood is carefully blotted up at one end so as to make a stain larger than the size of the opening at C'. The slip is then pushed into the slot D', so that the blood stain fills up the hole C'. The disc is then revolved by its projecting milled edge at A' until the tint is found with which it most nearly corresponds. The instrument is then turned over, and the haemoglobin percentage read off through the hole in the under surface.

The instrument can only be used in ordinary daylight.

Advantages.—The advantages which this instrument offer for the busy practitioner are:

1. Its small bulk.
2. The absence of all glass apparatus or liquids.
3. The ease with which the colours can be compared owing to:
 - (a) The exactly similar size and shape of the two areas of colour to be compared.
 - (b) The absence of any other colour from the visual field whilst making the estimation. This is obtained by having the upper ebonite plate of a uniform dull black.
 - (c) The absence of any knowledge as to the actual percentage of the various tints until after the comparison has been made.

This last advantage is a real one, for, as has been pointed out by Sahli, the unconscious influence which a knowledge of the percentages may have upon the examiner at the time of comparing the colours is not inconsiderable. Sahli has to a certain extent met this difficulty in his modification of the Gowers haemoglobinometer, but by means of the rotary haemoglobinometer, on account of the various tints being arranged in a circle, this particular object can be more completely attained than by instruments of other shapes. If an estimation has been made, and the percentage of any particular tint ascertained, it is only necessary to rotate the disc again out of sight, to be able to repeat the examination without in the least knowing the position of the scale.

The instrument has been made at my suggestion by Mr. T. Hawksley, 357, Oxford Street, London, to whom I am greatly indebted for the great pains he has taken in preparing an original standard set of colours, which seem very satisfactory, and for the neat and compact instrument which he has evolved from my crude suggestions. The whole case containing needles, rotary haemoglobinometer, and books of slips can be easily carried in the pocket.

THE COMPOSITION OF SOME PROPRIETARY DIETETIC PREPARATIONS.

I.

THE importance of the part played by diet in promoting health or causing disease has perhaps never been so widely recognized as at present; and although a vast field remains for researches into the intimate nature of foodstuffs and the exact changes they undergo in metabolism, a point has already been reached far beyond the empirical rules which governed medical regulation of diet at an earlier day. The process of preparing animal and vegetable materials for use as foods has been developed until the original materials are frequently no longer recognizable, and artificial foods are manufactured of heterogeneous materials in such a way as to secure the desired balance between the different constituents, either to furnish all the elements of a complete diet, or to produce a food suitable for use in various forms of illness.

As unfortunately too often happens, however, advancing knowledge has been applied not only to effect real improvements, but also sometimes for the skilful simulation of improvements, so that it is of great importance to be able to discriminate among the large numbers of dietetic articles either manufactured or modified in their properties for a particular purpose, and to distinguish those which possess real merit from those which do not, or for which a price is charged which is out of proportion to their merits.

With a view to assisting in the formation of correct judgements in this matter, it is proposed to publish in the BRITISH MEDICAL JOURNAL the results of careful analysis of a number of dietetic preparations.

I.—MEAT WINES.

Results of the examination of certain meat wines will first be given. There are several much recommended by the makers as tonics, to be taken during convalescence and in conditions of debility, and there can be doubt that very considerable quantities of wines are consumed in this way. In order that the use of or abstinence from such a wine may be advised, the medical practitioner requires to have some knowledge of its alcoholic strength and of the proportion of meat extract or other meat preparation contained in it; in some cases other constituents, such as iron, malt extract, cinchona preparations, etc., are stated to be present, and the dosage of these also should be known; information as to the general nature of the wine is, of course, also useful. In the following paragraphs the results of calculation from the percentage composition are given, showing how much of each of the principal constituents is contained in a wineglassful of the wines in question; "a wineglassful" is taken to be 2 fl. oz., which is the measure conventionally recognized as its equivalent, although the actual size of wineglasses varies very greatly.

To facilitate comparison, the following short table of the average alcoholic strength of ordinary wines, with the amount of pure alcohol in a wineglassful of each, is given:

Wine.	Percentage of Alcohol by Volume.	Amount of Pure Alcohol in a Wineglass.
Port	20	3½ fluid drachms.
Sherry	20	3½ "
Champagne	10 to 15	1½ to 2 "
Hock	10	1½ "
Claret	9	1½ "

It is not possible, without a complex analysis of a very large quantity, to determine positively whether meat extract only, or some other meat preparation, is contained in a wine. In some instances the makers state that meat extract is added, while in others the same addition is implied; in other cases, again, such terms as "beef essence," "beef jelly," and "pure meatnourishment (not extractives)"

are used. The total nitrogen found has accordingly been calculated into its equivalent of meat extract, assuming the latter to contain 8.9 per cent. of nitrogen, which is the percentage found by analysis in a well-known brand of high-class meat extract. This introduces a small error in favour of the wine; natural wine contains a small proportion of nitrogen, which may be from 0.01 to 0.1 part per 100 fluid parts; as it is impossible to say how much was contained originally in the wine used in a given case, no correction has been made for this, but the whole of the nitrogen has been treated as derived from meat extract; this should, therefore, be borne in mind in judging of the results given. The acidity of the wines is expressed in the usual way, the fixed acid being calculated as tartaric, and the volatile acid, or that portion which is lost on boiling down the wine, as acetic acid.

BOVRIL WINE.

This is prepared by Bovril, Ltd., London, E.C. No price is marked on the bottle; the usual retail price appears to be about 1s. 3d. The bottle held 9½ fluid ounces.

It is described on the label as

A nutritive tonic containing the properties of "Bovril," Extract of Malt, and Selected Port Wine.

Directions.—"Half a wineglassful may be taken three times daily."

Analysis gave the following results:

Alcohol	20.15 per cent. by measure.
Total solids	13.2 parts per 100 fluid parts.
Meat extract (calculated from nitrogen)	0.5 " "
Fixed acidity	0.34 " "
Volatile acidity	0.10 " "
Reducing sugar calculated as glucose	10.2 " "
Ash	0.5 " "

Glucose was identified by appropriate tests; a part of the sugar present may have been maltose, and if this were added as malt extract, as implied by the label, it would be accompanied by the nitrogenous constituents of the extract, and the whole of the nitrogen should then not be attributed to meat extract. According to this formula, a wineglassful would contain:

Pure alcohol	3½ fluid drachms.
Meat extract	4.4 grains.
Glucose	88.0 "

"LEMCO" WINE. LIEBIG'S EXTRACT OF MEAT AND MALT WINE.

This wine, prepared by Stephen Smith and Co., Ltd., Bow, London, E., is sold at the price of 1s. 9d. a bottle, containing 13½ fluid ounces.

Directions.—"A wine-glass full three times a day, children half the quantity."

Analysis gave the following results:

Alcohol	17.26 per cent. by measure.
Total solids	15.7 parts per 100 fluid parts.
Meat extract (calculated from nitrogen)	0.6 " "
Fixed acidity	0.31 " "
Volatile acidity	0.12 " "
Reducing sugar calculated as glucose	12.8 " "
Salicylic acid	trace. " "
Ash	0.4 " "

Glucose was identified by appropriate tests. According to this formula, a wineglassful would contain—

Pure alcohol	2½ fluid drachms.
Meat extract	5.2 grains.
Glucose	112.0 "

COLEMAN'S WINCARNIS.

This wine, prepared by Coleman and Co., Limited, Wincarnis Works, Norwich, is sold in bottles, containing 12½ fl. oz., and costing 2s. 9d.

Directions.—"A small wineglassful may be taken three times a day."

It is described on the label as

Made from Choice Wine, Liebig's Extract of Meat, and Extract of Malt.

Analysis gave the following results:

Alcohol	19.6	per cent. by measure.
Total solids	22.9	parts in 100 fluid parts.
Meat extract (calculated from nitrogen)	1.2	" "
Fixed acidity	0.26	" "
Volatile acidity	0.09	" "
Reducing sugar calculated as glucose	18.2	" "
Ash	0.4	" "

Glucose was identified by appropriate tests; a part of the sugar may have been maltose, and if this were added as malt extract, as stated on the label, it would be accompanied by the nitrogenous constituents of the extract, and the whole of the nitrogen should not then be attributed to meat extract.

A second bottle which was examined contained only 18.1 parts of total solids in 100 fluid parts.

According to the above formula, a wineglassful would contain:

Pure alcohol	3 fluid drachms and 8 minims
Meat extract	10.5 grains
Glucose	159 "

GLENDENNING'S BEEF AND MALT WINE.

This is prepared by W. Glendenning and Sons, Limited, Newcastle-on-Tyne, and is sold at 2s. a bottle, containing 12 fl. oz.

Directions.—"A wineglassful may be taken twice a day with food or after."

It is described on the label as

Made from Alto Douro Port, Beef Jelly, and Malt Extract.

Analysis gave the following results:

Alcohol	20.8	per cent. by measure.
Total solids	13.5	parts in 100 fluid parts.
Meat extract (calculated from nitrogen)	0.4	" "
Fixed acidity	0.31	" "
Volatile acidity	0.09	" "
Reducing sugar calculated as glucose	10.6	" "
Ash	0.3	" "

Glucose was identified by appropriate tests; a part of the sugar may have been maltose, and if this were added as malt extract, as stated on the label, it would be accompanied by the nitrogenous constituents of the extract, and the whole of the nitrogen should not then be attributed to meat extract. According to the above formula, a wineglassful would contain:

Pure alcohol	3½ fluid drachms.
Meat extract	3.5 grains.
Glucose	95 "

BENDLE'S MEAT-PORT NUTRIENT.

Two kinds of wine are supplied under this name by Sutton Bendle and Co., 148, Sloane Street, London, S.W. They are distinguished by a white and red capsule respectively, the latter being stated to contain twice as much "meat substance" as the former. The white capsule variety was taken for examination: no price is stated on the label, but the usual retail price appears to be about 3s. per bottle, containing 13½ fl. oz.

Directions.—"A wineglassful from three to six times a day."

This is described on the label as follows:—

A really genuine nutritive meat wine. Guaranteed to be made with the finest old tawny port (not tarragons), and to contain pure meat nourishment (not extractives) equivalent to seven per cent.

Analysis gave the following results:

Alcohol	20.3	per cent. by measure.
Total solids	10.9	parts in 100 fluid parts.
Meat extract (calculated from nitrogen)	2.5	" "
Fixed acidity	0.19	" "
Volatile acidity	0.03	" "
Reducing sugar calculated as glucose	8.0	" "
Ash	0.5	" "

Glucose was identified by appropriate tests, and no evidence was obtained of the presence of any other sugar.

According to the above formula, a wineglassful would contain:

Pure alcohol	3½ fluid drachms.
Meat extract	22 grains.
Glucose	70 "

"BIVO." BURROUGHS, WELLCOME AND CO.'S BEEF AND IRON WINE.

This is prepared by Burroughs, Wellcome and Co., Snow Hill, E.C. No price is marked on the bottle or package or the contained circular, but the usual retail price is about 2s.; the bottle contained 8½ fl. oz.

Directions.—"One tablespoonful or more, plain or diluted with water, thrice daily for adults, or as ordered by the physician."

Analysis showed the wine to contain 19.2 per cent., by measure, of alcohol. A small proportion of the nitrogen present was found to be liberated as ammonia on treating with alkali, and this was therefore determined and deducted from the total nitrogen, only the remainder being calculated as meat extract. The results obtained were as follows:

Alcohol	19.2	per cent. by measure.
Total solids	17.7	parts per 100 fluid parts.
Meat extract (calculated from nitrogen)	3.4	" "
Fixed acidity	0.75	" "
Volatile acidity	0.06	" "
Iron	0.23	" "
Reducing sugar calculated as glucose	11.5	" "
Salicylic acid	trace.	" "
Ash	1.2	" "

Glucose was identified by appropriate tests, and no evidence was obtained of the presence of any other sugar. According to this formula, a wineglassful would contain:

Pure alcohol	3 fluid drachms
Iron	2.0 grains
Meat extract	30.0 "
Glucose	100.0 "

"VIN REGNO." PEARSON'S LIEBIG'S BEEF WINE.

This is prepared by Liebig's Wine Co., Liverpool and London, and is sold at the price of 2s. 9d. a bottle, containing 13½ fl. oz.

Directions.—"Take a wineglassful three times a day and keep in a cool place."

On the label appear the words:

Chief Ingredients, Choice Port Wine, Essence of Beef, Malt Extract, and Quinine.

Analysis gave the following results:

Alcohol	16.05	per cent. by measure.
Total solids	13.45	parts per 100 fluid parts.
Meat extract (calculated from nitrogen)	0.3	" "
Fixed acidity	0.36	" "
Volatile acidity	0.12	" "
Reducing sugar calculated as glucose	7.4	" "
Ash	0.3	" "
Alkaloid	slight trace.	" "

Glucose was identified by appropriate tests; a part of the sugar present may have been maltose, and if this were added as malt extract, as stated on the label, it would be accompanied by the nitrogenous constituents of the extract, and the whole of the nitrogen should then not be attributed to meat extract.

Only a slight trace of alkaloid was present. The quantity extracted from nearly half a pint of the wine was too small to be weighed or identified, and did not show even such a delicate test for quinine as the formation of a fluorescent solution. The wine had no bitter taste. According to the above formula, a wineglassful would contain:

Pure alcohol	2½ fluid drachms.
Meat extract	2.6 grains.
Glucose	65.0 "

SUMMARY.

Speaking generally, it will be seen that all the meat wines examined are stronger in alcohol than claret or hock, and approach the strength of sherry or port. With regard to the amount of meat extract contained, an ordinary good teaspoonful of extract of meat—such as would be used for a breakfastcupful of bouillon—weighs about 130 to 140 grains. The quantities of such a bouillon represented by one wineglassful of the wines described above would therefore vary from about 4 tablespoonfuls down to about 1½ teaspoonfuls.

The percentages of alcohol, sugar, and meat extract, and the amount of pure alcohol contained in a wineglassful, may be tabulated as follows:

Wine.	Alcohol by Volume.	Sugar by Weight.	Meat Extract by Weight, corresponding to Nitrogen Found.	Pure Alcohol in a Wineglassful.
				Fl. Drachms.
Claret	9	0.25	—	1½
Hock	10	Trace	—	1½
Champagne(dry) ...	10 to 15	Trace to 2	—	1½ to 2
Sherry, dry	19	0.2	—	3 to 3½
„ brown... ..	23	1.0	—	
Port	20	2 to 6	—	3½
Bovril	20.15	10.2	0.5	3½
Lemco	17.26	12.8	0.6	2½
Wincarnis	19.6	18.2	1.2	3
Glendenning's ...	20.3	10.6	0.4	3½
Bendle's	20.3	8.0	2.5	3½
Bivo	19.2	11.5	3.4	3
Vin Regno	16.05	7.4	0.3	2½

THE THERAPEUTIC APPLICATIONS OF RADIUM: METHODS AND RESULTS.

ALPHA RAYS.

By FREDERICK SODDY, M.A.,

LECTURER ON PHYSICAL CHEMISTRY AND RADIO-ACTIVITY IN THE
UNIVERSITY OF GLASGOW.

In view of the fact that the feebly penetrating alpha rays possess at least ten times as much energy as the beta and gamma rays of radium together (Rutherford), it would be of great interest to know definitely whether they have ever been actually employed by medical men in their investigations. The alpha rays of radium are complex, and consist of four types, the most penetrating being absorbed by 3 in., and the least penetrating by 1½ in. of air and by other substances as a first approximation in proportion to their density in terms of that of air as unity. It will therefore at once be seen that it is an extremely difficult matter to employ any covering whatever over the surface of the radium salt if the alpha rays are to be effective. It is true that in France, by the use of certain varnishes, a very thin film of celluloid or collodion is used to cover the radium preparation, but in the absence of any definite physical tests proving that the alpha rays are able to get through this coating, the natural presumption would be that they were completely absorbed. This is one of the questions which it is to be hoped the new radium institutes will definitely and authoritatively deal with; that at Heidelberg specifically offers to medical men the co-operation of trained physicists.

Of the total radiation of radium about one-fourth—the least penetrating of the four types—of the alpha rays come from the radium itself, while the remaining three-fourths of the alpha rays and the whole of the beta and gamma rays come from the spontaneously-formed products of the radium, of which the gaseous emanation is the first in the series. The emanation being a gas and directly concerned in the production of the greater part of the activity of the radium, it is in the highest degree essential that radium salts, after preparation in their final form, should be kept hermetically sealed from the air, as otherwise, by the escape of emanation, much of the activity of the preparation is lost. After being kept for three weeks in a closed vessel, radium attains its maximum, or, as it is also called, its equilibrium activity. Attempts to use the alpha rays, therefore, of necessity involve the risk of loss of emanation, and of the serious

weakening of the activity of the preparation, for no coating thin enough to allow alpha rays to penetrate is likely to be perfectly gas and water tight.

Recently, when asked to prepare a film of radium for a medical man, I abandoned the attempt to utilize the alpha rays, and covered the film with a piece of microscope cover-glass cemented into an ebonite cell. It must be remembered that one of the types of beta rays given by radium are relatively feebly penetrating, and a great saving in efficiency can be effected with a very thin covering even although no alpha rays escape.

The following notes may, however, be of assistance to any one wishing to make the attempt to utilize the alpha radiation.

The first consideration is that the radium salt must be uniformly distributed over as large a surface as possible, as otherwise the greater part of the alpha radiation is absorbed in the salt itself. Radium bromide and chloride undergo a spontaneous chemical change on being kept, part of the acid escaping, with formation first of the hydroxide, and ultimately of the carbonate, insoluble in water, by the action of the carbon dioxide of the air. So that to get the salt into solution a little pure hydrochloric acid should be added to pure distilled water, and two or three drops of this liquid used to dissolve the salt. On evaporation the radium salt remains usually in the form of large crystals, and this defeats the purpose of the operation. But if the whole of the liquid is first evaporated by warming the film on a hot plate and the salt is then redissolved in a drop or two of pure water a second evaporation yields without difficulty a fine homogeneous film of the salt.

As a rough test, to see whether any alpha radiation escapes absorption when the film is curved or coated in any way, one of F. H. Glen's translucent screens of glass thinly coated on the one side with zinc sulphide may be used. On bringing the base-coated side of the screen in the dark immediately over the curved radium preparation, and then alternately inserting and withdrawing a sheet of notepaper, some idea may be obtained, even from commercially prepared radium films, as to whether any alpha radiation is present, for the paper would entirely absorb alpha radiation while allowing the beta radiation to pass with little loss. If the insertion of the paper makes a great difference in the luminosity of the screen it may be inferred that alpha rays are present.

The best time, however, to perform this test is not before three hours after the radium salt is dissolved in water, and within this limit as soon as possible after the film has been got into its final form. At this stage the beta and gamma rays are at their minimum and may, for practical purposes, be neglected, while the residual alpha rays are those of the least penetrating type. Hence, if alpha rays get through when the preparation is tested at this stage it may be concluded that when the radium has recovered its normal equilibrium—after about three weeks—a very considerable proportion of the alpha rays will escape.

The therapeutic action of the alpha rays ought certainly to be tested once for all with a radium preparation from which it has been proved by physical tests that alpha rays can escape. But until this has been done, perhaps the best advice that can be given is that while a covering as thin as is consistent with gas tightness—such, for example, as microscope cover-glass—should certainly be employed, it is better not to risk impairing the activity of the preparation by using a covering previous to the emanation in the hope, which may not be realized, of thereby utilizing the alpha radiation, which, again, may not be therapeutically effective or desirable.

RADIUM CONSIDERED AS A SPECIFIC AGENT.

[FROM OUR PARIS CORRESPONDENT.]

One of the most interesting points in the therapeutics of radium is most certainly its *specific* action. Drs. Wickham and Degrais, in their communication made to the Tenth Congress of French Medicine at Geneva on September 5th, 1908, defined "specificity" as the act by which radium transforms pathological cells and modifies morbid processes into healthy or new tissues no longer presenting any morbid character, and without the production at any

period of an added inflammation at the skin surface, or of the tissues treated.

If the cure of a lesion is obtained only at the cost of irritating it—of inflaming the skin which covers it—then the action has been, not specific, but destructive.

If, on the contrary, the pathological tissues are modified or cured without inflammatory action, then "specific" action will have occurred.

Radium, which has the power, as has been known for a long time, of destroying tissues, is also, according to these observers, capable of acting in a specific manner on certain pathological tissues. The importance of this theory is evident, since it implies that radium possesses the power of curing lesions without inflammation, the integrity of the skin surface being preserved. If, therefore, a lesion is deeply situated and covered with healthy skin, and if this lesion comes within the range of the specific action of radium, it will be possible to effect a cure without the necessity of destroying the skin.

Drs. Wickham and Degrais hold that the following affections are thus "specifically" modified by radium:

1. *Cancer*.—A "vegetating" epithelioma, a rodent ulcer, can be so modified that it disappears and is replaced by good cicatricial tissue, the process being a simple transformation without any added inflammatory action. Regression may be produced also in a cancerous tumour beneath the skin surface, for example, in the breast, without the skin being affected at any time during the treatment. They conclude, therefore, that radium exercises a *specific* action on cancerous neoplasms.

2. *Tuberous Angioma*.—They find that angioma tumours of the lip, tongue, and skin, and vascular tumours situated below the skin diminish and disappear by simple transformation without damage to the skin.

3. *Cheloids* are similarly affected, and may be caused to disappear without irritation.

4. In the same class of cases can be placed chronic pruriginous skin affections—for example, lichenoid eczemas and neuro-dermites; these affections can be modified and cured without added irritation.

The interest of this alleged specific action of radium on the four classes of cases just mentioned (there are others) is enhanced when the very different action of radium on many other affections is considered. As an example, pigmented naevi, tubercle of the skin, fibrous cicatricial bands complicating cicatrices, etc., are affections which, to be cured by radium, must be destroyed. In these conditions another property of radium equally interesting and valuable is called into play—its power of special destruction, a destruction effected without pain, and followed by repair, which cosmetically is satisfactory.

The desired specific effect of radium can be obtained only by the use of special technique and special doses. The first questions to be decided are as to the manner of the application and the dose which does not produce inflammation.

At one time it was thought that the power to act without causing inflammation was the property solely of the rays of great penetrating power, composed entirely of hard beta and gamma rays. It has been proved, however, that it is a mistake to suppose that irritation can be prevented with certainty by cutting off the rays of feeble penetrating power, and that such rays have the power to do no more than irritate, or that the rays of great penetrating power act without irritating or causing any inflammatory action.

In fact, though it is true that the radiations of great penetrating power, consisting of hard beta and gamma rays as obtained by Drs. Wickham and Degrais when they place metallic screens between the apparatus and the tissues, are suitable to produce modifications in the deeper tissues without causing any irritation of the surface, this result can only be obtained on condition that too strong doses are not used, and on condition that the apparatus is not left applied for too long a time. Irritation of the surface results even with these rays if exaggerated doses are used. On the other hand, rays of feeble and medium penetrating power, if applied in special doses, also produce therapeutic effects without irritation. Thus, for example, in chronic pruriginous skin affections, radiations of weak penetrating power produce an effect, and cures are, in fact, obtained without reaction, by the application of the apparatus bare, without filtering screens, using consequently rays of feeble and medium penetrating

power. It is therefore a mistake to say that some rays produce irritative reaction and that others do not. Burns—radium dermatitis—are not, therefore, dependent on this or that variety of radiations, but on the dosage of the radiations.

The following are a few examples to illustrate what has been said on the subject of the specific action of radium—that is, of its power to cure certain lesions without inflammation. The three examples chosen are taken from three different morbid groups, and each comprises the use of a different variety of rays.

I.—*Subcutaneous Cancer.*

This was a case of cancer of rapid evolution in a woman. The tumour, which was of the size of a pigeon's egg, was covered with healthy skin. An apparatus containing 5 cgm. of a radium salt of activity 500,000 was used; it was covered with a sheet of lead 2 mm. thick, ten sheets of paper and a sheet of fine rubber, so that the radio-activity passing through the lead was about 3,000 unities. This apparatus was placed in position on the cancer on alternate nights for twelve hours each time. The application was repeated for fifteen nights, so that in a month it lasted 180 hours. During the two months following the tumour not only stopped growing, but diminished and regressed. At the end of these two months it was only one-sixth of its original size; at no time during the whole period was the skin inflamed.

II.—*Angiomatous Tumour.*

A baby showed on the scalp a large angiomatous tumour raised 2 cm. above the surface. Two apparatuses were selected, and each enveloped in aluminium, $\frac{1}{8}$ mm. in thickness, six sheets of paper, and thin rubber tissue. Thus covered these apparatuses allowed about 20,000 metres to pass, composed of nearly all the medium beta rays, that is, rays of medium penetrating powers. The two appliances were placed on opposite sides of the tumour, facing each other, and applied ten days for twenty minutes each day. Three weeks later the tumour had diminished by a quarter, and the treatment was then begun again in the same way. The treatment was thus repeated three times with intervals of three weeks' rest; the cure was completed without any skin irritation at any moment.

III.—*Chronic Eczema.*

A man aged 30 had for several years suffered from numerous eczematous outbreaks. Until the attack in question the usual dermatological methods of treatment had brought about a cure, but after the last attack the tissues became lichenoid, thick, infiltrated, inflamed, and very pruriginous. For eight months no treatment produced any alleviation.

A varnished apparatus, 30 cm. square, containing 20 cm. of radium salt, with an activity of 500,000—that is, a fourth part pure radium—was used. This apparatus gave a radio-activity of extreme power; it was applied to the face bare without any filtering screen. It might seem probable that an apparatus of such extreme activity placed on sensitive eczematous tissues would cause very great inflammation. This would have occurred if this power had been fully applied—that is, if the duration of the applications had been too lengthy—but the apparatus was only left in contact for three minutes the first day, three minutes the second day, and three minutes the third day on each of the places affected. They then ceased treatment for eight days; then began again a series of three days with three-minutes' application each day, and a third series after another eight days' rest. Thus, during twenty-five days there were nine applications of three minutes on each place affected; not only was there no increased irritation or inflammation, but from the first week the pruritus stopped. In the second week the infiltration of the inflamed tissues diminished, and about the twentieth day there remained almost nothing of the obstinate inflammation from which the patient had been suffering.

If, *theoretically*, certain tissues which have been mentioned above are cured by "specificity," *practically* it is often expedient, in order to gain time, to act by destruction by giving stronger doses. For even if the nature of a lesion calls for "specificity," this "specificity" is only brought into play with certain doses, and if these doses are increased their destructive is added to their specific action.

THE MIDWIVES ACT.

PAYMENT OF MEDICAL MEN.

THE question of the payment of medical men other than Poor Law medical officers called in to attend maternity cases by the midwives has been recently before the Staines Board of Guardians. The attitude adopted by the board in the past has been that the midwives should only call upon the Poor Law medical officers. At the

meeting of the board held on March 16th Dr. W. H. HASKELL moved the following resolution:

That in cases of instrumental and abnormal labour this board, having ascertained on inquiry that the midwife acted in a bona-fide manner in sending for a medical man other than the Poor Law medical officer pay the former a fee not exceeding 1 guinea.

On the suggestion of Mr. GARLAND the words "was justified" were substituted in place of "acted in a bona-fide manner," and with this alteration the motion was carried unanimously.

TRANSMUTATION OF ELEMENTS.

SIR WILLIAM RAMSAY, in delivering his presidential address before the Chemical Society on March 25th, contended that recent experiments conducted in the laboratories of University College made it at least probable that thorium nitrate engendered carbon dioxide, or in other words, that one of the disintegration products of thorium was carbon. Carbon was also stated to have been produced from zirconium, but not from mercury or lead, and what is even more remarkable, from bismuth.

Sir William Ramsay summarized the various arguments in favour of transmutation. These were, briefly, as follow:

1. The subtraction from or addition to an atom of an element of one or more electrons, by virtue of which it is converted into an ion, completely changes the properties of that element.
2. The fact is incontestably proved that certain elements termed radio-active are losing electrons, and are thereby being converted into other forms of matter, which in our present nomenclature have equal claims to be considered elementary.
3. The influence of ultra-violet light on many, if not all, elements is manifested in causing them to part with electrons; it is not, however, thereby proved that they yield other elementary forms of matter.
4. The effect of chemical change is usually manifested in a gain or loss of energy. There is reason to believe that change from one elemental form of matter into another would be accompanied by an unusually large gain or loss of energy, for it is known that the "degradation" of radium is coincident with the loss of a relatively enormous amount of energy. This energy, moreover, is in a highly concentrated form; much energy is contained in small volume, or, what amounts to the same thing, in small mass, using the word in the sense of quantity of matter.
5. It appears that the irregular regularity of the numbers representing the atomic weights can be represented on the hypothesis that the addition or subtraction of definite groups of electrons is the cause of their divergence from a perfectly regular series.

Sir William Ramsay then discussed briefly the experiments of Mme. Curie and Mlle. Gleditsch and suggested as a possible reason why they had failed to transmute copper to lithium was that the conditions of his experiment had not been exactly observed. It was, of course, also possible that in presence of emanation and a copper solution, a trace of lithium was dissolved from the glass vessel which escaped solution in the absence of emanation. Passing from this point he detailed the results of Mr. Cameron's hitherto unpublished experiments on silver nitrate subjected to the action of radium emanation, and showed the results to be negative, the energy of the emanation having been largely expended in separating and depositing a relatively large quantity of metallic silver. He then described the experiments conducted on thorium nitrate. Successive experiments with this substance, undertaken to test the evolution of helium had failed to settle the question definitely, but 270 grams of acid thorium nitrate were found to produce in 173 days 1.08 c.c.m. of carbon dioxide. On the other hand, 300 grams of mercuric nitrate in a little over seven months produced only 0.015 c.c.m. of carbon dioxide.

On treatment of thorium nitrate with radium emanation carbon dioxide had also been found to be evolved. Zirconium nitrate treated with radium emanation had generated carbon dioxide, and a small quantity of the gas had also been obtained from hydro-silico-fluoric acid;

the treatment of lead nitrate with emanation had given a negative result.

A still more interesting apparent transformation was that obtained on treating bismuth perchlorate with emanation. Despite the fact that bismuth belonged to the nitrogen group, carbon dioxide had been generated in very appreciable quantity, but no nitrogen.

Sir William Ramsay described some of the precautions taken to ensure accuracy, and it may be mentioned here that the possibility of the carbon dioxide being produced from grease on the stopcocks of the apparatus was disproved; further, special precautions were taken to exclude the presence of even traces of air. Sir William Ramsay concluded as follows:

"Such are the facts. No one is better aware than I how insufficient the proof is. Many other experiments must be made before it can be confidently asserted that certain elements, when exposed to 'concentrated energy,' undergo degradation into carbon."

LITERARY NOTES.

THE forthcoming double section of the Oxford English Dictionary, which is by Dr. Craigie, contains the words from Ribaldric to Romanite, 3,161 in number. Of these words, 2,747 are illustrated by quotations, and altogether no fewer than 17,677 quotations are given. Comparison shows that the largest number of words recorded in any other dictionary which is at all comparable is 1,366, and of quotations 1,664. Some of the more interesting words are rick, ricketts, rifle, rigmarole, roam, roar, Robin Hood, rhodomontade, and rogue. This instalment will be followed by a portion of S by Dr. Bradley.

In *Chamber's Journal* of March 1st Mr. A. Stodart Walker continues an interesting series of articles entitled "Some Celebrities I Have Known." The present list includes Huxley and William Rutherford, the physiologist. Of the former he says that on hearing Robert Louis Stevenson's depreciatory estimate of the Edinburgh climate he said: "I quite agree with him. I now understand why Edinburgh people are so strong; your summer kills off all the weak ones." Rutherford, whose assistant Mr. Stodart Walker was, he describes as "genial if eccentric." We have no wish to revive the echoes of

Old, unhappy, far off things,
And battles long ago,

but we may be allowed to say that Mr. Stodart Walker seems to have been more fortunate in his personal relations to Rutherford than some other assistants of the distinguished teacher. The stories told of him are mostly "chestnuts" in more or less inept metamorphoses. But the stories told of his encounters with noisy students show that in that rough form of controversy Rutherford was quite able to hold his own.

In the *JOURNAL* of March 6th a summary of observations made by Dr. Elmer E. Jones on himself as to the waning of consciousness under chloroform was given. The following account (which we take from the *Guy's Hospital Gazette*) of the experience of a small boy while under the influence of gas in the dentist's chair may be interesting:

The sensation is very queer, but it is soon over. You dream very many things, and very funny things. I will just give a few facts of my dreams. At first I felt as if I were sinking down in the earth; then I found myself in a cave with 1,000's of little beings generally known as demons, which were very fat. Then one demon eat another, and that one another, and another one eat that one, and so on until only a few very fat ones were left. These turned very thin and very tall until they turned into strings, and then (somehow or other, a way which I can't remember) they multiplied until there were 1,000's of strings (very long). Then my head, which jumped off my shoulders, jumped on top of them, and then snakes appeared and hooked on to each other, and formed (altogether) a sort of large tassel. Then the tassel got smaller and came to a tassel of a railway carriage blind, and all of a sudden I was in a railway carriage. This, however, woke me up, and I was in the dentist's chair with the tooth extracted.

In a recent number of *Public Opinion*, which, by the way, gives week by week in a condensed form the cream of the best that is said by leaders of opinion of all shades throughout the world, there is the following story:

"Mr. President," said a United States Senator, speaking in the House, "I am confident that before our financial physicians

get through with the job they will have the country in the condition of the old man in my State who was very sick. The doctor examined him, and said, 'Old man, you're dying; have you any wish to express before you pass over the river?' 'Yes,' the feeble patient said, 'I wish I had got another doctor.'

Of course the story is secondhand; but that is the special attraction of *Public Opinion*—that one finds in it things one may not see elsewhere. It has been said that one-half of the world does not know how the other half lives; that is equally true of thought. It is the function of *Public Opinion* to let its readers know this with the minimum of trouble to themselves.

Professor Ebstein's *Jahresbericht für innere Medizin*, the first volume of which (1901) is now complete, will in future be issued by Dr. Werner Klinkhardt, publisher, of Leipzig. The second volume, dealing with the years 1902-3, will be ready in the spring of the present year. The volume for 1908 will follow, and the rest in due course. Authors are asked to send reprints of their papers, as far as they pertain to internal medicine, to Oberarzt Dr. Schreiber, 1, Beaumontstrasse, Magdeburg.

At a recent meeting of the Reading Town Council, a letter was read from Dr. Jamieson B. Hurry, in which he proposed to erect a memorial to Henry I. the founder of the famous Abbey of Reading. The proposed memorial is thus described in the *Reading Standard*:

The cross, composed of silver-grey Cornish granite, will rise to a total height of 20 ft., and is designed in such architectural style as is appropriate to the period. The ornamentation of the head consists of Early English foliage on the arms, and of the simplest form of dog-tooth ornament on the circle. Five projecting and carved bosses mark the arms and centre of the cross. The stem, with slightly sunk faces, is divided into sections by a simply-rounded moulding worked into a pattern at intervals. The massive base terminates above in three tiers, and rests on a broad platform of granite with steps on either side. Thus the memorial will rest on a broad foundation which gives a sense of stability to the whole erection. The treatment of the back of the cross will be similar to that of the front; but on the sides of the base will be placed two metal shields bearing the arms of King Henry I and those of Reading Abbey. The inscription will be in lead letters sunk into the granite, and record the foundation of the Abbey by King Henry I in 1121, and the burial of same King before the high altar of the splendid Abbey Church in 1136.

The Abbey received signal marks of favour from successive monarchs, enjoyed the special protection of the Holy See, was selected for great secular and ecclesiastical councils, and for several assemblies of Parliament. By all these and other means prestige, commercial prosperity, and wealth were brought to Reading by the great Abbey at its gate. The time came, however, when the burghers keenly resented the control exercised by the Lord Abbot. Their streams, their mills, their market, their land, were at his mercy, and for two hundred years the galling yoke of a powerful ecclesiastical corporation hampered the development of self-government. It was not until the last Abbot had laid down his life on the scaffold, and the Abbey had been dissolved, that the burgesses obtained from King Henry VIII the privileges they had so long striven for. By the Charter of 1542 the mayor and burgesses were constituted the governing body of the town, with full executive authority and jurisdiction.

MOTOR CARS FOR MEDICAL MEN.

TRICARS.

DR. L. E. PARKHURST (Brackley) states that he has had some years' experience of tricars, and is very satisfied with his present machine—a Phoenix Tricar. It is, he writes, fast, light, comfortable, a wonderful hill-climber, and very easy on tyres, and he has done a good deal of work by its aid since November, 1907. He would advise 'P. C.' to fit on the back-wheel a metal-studded tyre, and on the front wheels good stout, non-slipping tyres, either with a square tread or rubber studs, to avoid side-slip on greasy roads; also to specify copper tops and bottoms to the radiators. Careful driving round corners is absolutely necessary. His tricar is a single-seated vehicle, with bonnet in front to take midwifery and accident bags, and dressings, etc., and the bonnet can be made interchangeable with a front seat.

UNDER the will of the late Mr. Thomas Harris, of Calne, Wiltshire, which has now been proved, the London Temperance Hospital receives a bequest of £2,000.

Medical News.

MR. EDWARD D. MADGE, L.R.C.P., M.R.C.S., has been decorated with the Order of the Star of Roumania.

MESSRS. YEOWARD BROS. of Liverpool have arranged holiday trips to Portugal and the Canary Islands, one of these of twenty-five days' duration starting on March 31st, so as to include the Easter holidays. Messrs. Yeoward inform us that they are desirous of bringing the advantages of these trips to the notice of the resident medical staffs and matrons of hospitals in this country, and would be disposed to offer special terms to passengers from these institutions during the holiday season. Further particulars can be obtained on application to them at 27 and 29, Stanley Street, Liverpool.

THE eighth meeting of the Departmental Committee appointed by the Lord President of the Council to consider the working of the Midwives Act was held at the Privy Council office, on March 24th. The following witnesses attended and gave evidence: Miss Wesley, Matron of St. George's-in-the-East Infirmary, on behalf of the Poor Law Infirmary Matrons' Association; Dr. C. T. Parsons, Medical Superintendent, Fulham Infirmary, on behalf of the Infirmary Medical Superintendents' Society; Dr. Henry Handford, F.R.C.P., County Medical Officer of Health, Nottinghamshire, on behalf of the Health Committee of the Nottinghamshire County Council.

THE report of the Leper Home at Tungku, South China, for the year ending September, 1908, contains a variety of interesting references and photographs. The numbering of the lepers by the magistrate, which took place at the end of 1907, is first described and illustrated by a photograph. The magistrate decided to divide the subsidy equally between the lepers and their descendants, but sixty graduates and more than a hundred shopkeepers signed a petition of protest and in favour of giving the Tungku home the subsidy originally destined for the lepers. The numbering was not carried out without many useless comings and goings and wasting of time and energy, modes of doing business so dear to the governmental official mind, whether tortuously working within the skull-box of Mandarins or Far Cathay or of our own gentlemen with buttons and peacock feathers. The philanthropists in our midst will be interested to know that, in the words of the report: "The long hairy appendage of the Chinese being a great hindrance to cleanliness, a reward of 10 cents is offered to those who shave clean their heads. Fifty-six have already made the sacrifice of their cue." In the medical part of the report additional evidence, if that be necessary, is afforded that contagion is the factor in the spread of leprosy, and that heredity, as has been known for some time, plays no part. Nasta was tried in two cases, but the results do not point to anything worth noting here, as further trial must be made. The report is compiled by Dr. John E. Kuhne.

WEDNESDAY last week was St. Patrick's Day, and, in accordance with established custom, the Irish Medical Schools' and Graduates' Association duly recognized the festival by a dinner. This was held at the Cecil Hotel on Thursday evening, and the pleasant practice of including ladies among the guests was again followed. The assembly numbered altogether over 200 persons, Dr. F. A. de Thierry Mouillot, President of the Association, who was in the chair, being faced by Drs. J. J. Macan and Alexander Macdonald, Chairman and Vice-Chairman of Council respectively; Dr. M. J. Bulger, Honorary Treasurer; Drs. T. Hobbs Crampton, W. Douglas, and G. W. Dawson, the Honorary Secretaries; and Dr. Morgan Dockrell. The toast list was interspersed with songs, and the proceedings were prolonged until a late hour. "Our Defenders"—a toast habitually and naturally well received by members of an association so largely represented in the naval and military services—was welcomed on this occasion even more cordially than usual. The disquieting disclosures which had just been made in the House of Commons were fresh in mind, and of this circumstance Dr. J. A. Macdonald, the proposer of the toast, made impressive use. The special interest of the evening, however, lay in the presentation of the Arnott Medal to Lieutenant J. Smith McCombe. He is a Lieutenant in the Royal Army Medical Corps, and when stationed at Millbank last year made determined efforts to save a lad who had fallen into the river, diving and redvining in the muddy depths until thoroughly exhausted. Of this gallant feat an excellent account was supplied by Dr. J. J. Macan, who introduced Lieutenant McCombe to the Chairman, and also gave a brief history of the Arnott Medal and its earlier recipients.

British Medical Journal.

SATURDAY, MARCH 27TH, 1909.

NATURE HEALERS IN GERMANY.

HISTORY repeats itself. And it repeats itself not only out of the past, but by producing similar situations in several distinct directions in the present. The vagaries and peculiarities of our own antivivisectionists would appear to any one who does not know what is going on elsewhere as so extraordinary that no other group of human beings would be likely to have recourse to similar tactics. But as there are strange people among us, whose methods of reasoning appear to the ordinary mortal to be so illogical as to suggest some definite psychical defect, so are there in other lands persons whose sole and only reason for differing from the majority seems to be that the opinion to which they take exception is that held by those best qualified to arrive at a correct conclusion. This spirit of opposition, however, is often based on the chances of pecuniary gain which it offers, and the desire for notoriety. For several months the movements of the "Nature healers" have been chronicled in the *Gesundheitslehrer*, and we have been struck by the similarity between this movement and the one to which reference has already been made. It is not our intention to discuss the truth or fallacy of some of the doctrines preached by Pfarrer Kneipp or by "Prophet" Bilz; nor need we refer to an extraordinary novel, written by Bilz, styled *In One Hundred Years*, in which the author depicts, with a fine frenzy, the future generation of mankind, after the doctrines of Bilz have revolutionized the whole of hygiene, have banished disease, and have led to wonderful and far-reaching "reforms" of an ultra-socialist type.

These things are interesting from a psychological point of view, but of greater interest for the present is the method of attack which the Nature healers adopt. From the *Gesundheitslehrer* we learn that the number of Nature-healing societies has diminished from 908 to 878. At the same time the membership has increased from 130,909 to 134,995. In the case of the antivivisectionists the number of societies is still growing, but we doubt whether the total membership is also increasing. The German movement, however, exhibits greater union. In September, 1908, the various societies held a conference, and there determined to oppose a bill before the Reichstag for the suppression of quackery. A careful study of this bill shows that the means proposed to suppress the evil are so moderate as to be in the opinion of many not nearly strong enough. In any case, the Nature healers feel themselves hurt by legislation which attacks quack practice. The conference determined to canvass the members of Parliament personally; to heckle candidates at elections; to publish articles in the local newspapers; to conduct correspondences in "hostile" newspapers, fighting the cause; to collect the literature from the newspapers; to issue leaflets; to organize co-ordination between societies friendly towards quacks, and to train debaters. With these powerful weapons they will storm the Parliamentary

citadel. The societies have their own journals. The chief of these is the *Naturarzt*, a journal which the *Gesundheitslehrer* does not hold in high esteem. The *Naturarzt* has recently had a dire misfortune. It, or rather the union which it represents, was compelled to get rid of the editor, one Gerling, who, while preaching drugless treatment through the medium of his journal, was running quack remedies through other channels. His departure, it was considered, became necessary, when it was discovered that, while lecturing on "sexual instruction," he caused to be placed on each seat a copy of an advertisement of his book on a new method of treatment which recommended the use of a substance called ichtthyl-javol and other similar medicaments. He was once a trusted leader, a guiding spirit, but since his exposure his former friends can find no words too hard in which to condemn him and hold him up to derision. The Nature healers have their members of the Reichstag, as the antivivisection movement has M.P.s, and the reputation of these members among their colleagues is very similar. In criticizing the bill for the suppression of quackery a Nature healer attempted to show that medical men adopted methods which the bill is intended to prohibit, and of which the Nature healers are very fond, such as treatment by correspondence and by means of secret remedies. The *Gesundheitslehrer* states as the result of inquiry that three medical men in Germany out of a total of about 30,000 do carry out this practice of treating patients without seeing them, and using drugs of which the composition is secret.

A further striking similarity is to be found in the artificial demand for the institution of an independent, unbiassed investigation. One spokesman of the Nature healers, Herr L. vom Rheine, suggested that Nature healing should be allowed to prove its capabilities before a mixed lay and medical committee, patients being treated by "natural" methods in hospitals. It need not be supposed that he expected this suggestion to be accepted, but it is the kind of rhetorical flourish with the like of which we have become painfully familiar. Herr vom Rheine seemed to fear that if his test were not applied Nature healing would disappear; but, as the *Gesundheitslehrer* points out, there is unfortunately little chance of the movement disappearing, for the whole world of charlatans is too securely protected. The Nature healers, like their brothers the secret remedy quacks, grow rich by blatant advertisement, and the plucky attempts to check their sway on the part of journals like the *Gesundheitslehrer* are able to divert only a small stream of the torrent which sweeps away the hard-earned savings of the credulous middle and lower classes.

A THEORY OF HYSTERIA.

A FEW weeks ago we referred to the views held and eloquently expounded by Dr. Babinski with regard to the great and in his opinion incongruous mass of phenomena commonly designated hysterical. Dr. Babinski¹ quotes with approval an unpublished remark of Lasègue's, that "hysteria is the basket into which we throw the papers which we do not know how to classify." Doubtless there is even yet much truth in this, though with the rapidly increasing number of differential criteria—to which Dr. Babinski has himself made many notable additions—this somewhat ironical observation must

¹ Démembrement de l'hystérie traditionnelle, Pithiatisme. By J. Babinski. Paris: Leys.

become less applicable day by day. At the same time it seems possible that Dr. Babinski has carried his destructive criticism too far, and has constructed, under the term "pithiatism" (*πειθισμός*, persuasion; *élaros*, curable), a classification which, though undoubtedly suitable for certain groups of cases, is not only arbitrarily limited, but fails by not explaining the terms of which it is composed.

As we have already said, Dr. Babinski contends that the category of hysteria has been improperly extended by erroneous diagnoses—that is, either by subsuming under this head cases of organic disease, or by underestimating the part played by deceit, or by a confusion of hysteria with other functional neuroses. All of these statements may be accorded a ready acquiescence. There can be no doubt that in the past, inevitably, from the lack of important diagnostic signs, cases of organic disease have been classed as hysterical, just as cases of hysterical nature have often been considered and treated as of organic origin. It appears equally certain that medical men and their patients' relatives have often been imposed upon by conscious frauds and simulators, though this is with us much less a matter for self-accusation than amongst our neighbours across the Channel, to many of whose extreme views Dr. Babinski's teaching affords an admirable corrective. Incidentally, it may be mentioned that the difficulty of detecting the simulation of hysteria—almost impossible in persons who have gone the round of the hospitals and have been involuntarily trained by the medical men who have given clinical demonstration—is increased by the fact that many of the symptoms of hysteria are such as would naturally occur to one who wished to assume the disorder, and that to some extent the parts or functions of the body engaged are affected, not according to their anatomical relations, but in harmony with the ideal representation of these parts or functions in the minds of the subjects. To the generality of people, for instance the hand stops at the wrist, and thus it is found in hysterical anaesthesia of the hand that the loss of sensibility is determined by this popular conception and does not follow the nervous distribution.

Upon what, then, should the diagnosis as between true and deliberately malingered hysteria depend? Dr. Babinski says at once, "upon reasons of a moral order," and immediately adds, somewhat inconsequently, that "the failure of psychotherapeutic measures, carried out under good conditions and with perseverance, should incline one to the hypothesis of simulation." This latter opinion may or may not be true, but, for "reasons of a moral order," we would rather substitute the conformity or non-conformity of the symptoms in any case with the clinical phenomena which have been definitely ascertained to be characteristic of the disorder, and particularly with the laws which have been deduced from the manner and order of appearance of these phenomena. Take, for example, a typical hysterical phenomenon—that of retrograde amnesia following somnambulism. Here, as Janet has pointed out, the loss of memory bears not only on the period of somnambulism, but also on the event that gave rise to it and to the facts and feelings related to it. Obviously, no malingerer, unless expert in the matter, would assume symptoms in conformity with this observation, which furnishes thus a definite diagnostic aid. In a similar way the clinical characters of the varied signs and symptoms of this disorder—amblyopia, hemianopsia, anaesthesia, palsy, and so on—

supply, it appears to us, the essential criteria, and not, however useful in their place, reasons of a moral order, such as a desire for sympathy or other gain.

Doubtless, also, Dr. Babinski is right in maintaining that other so-called functional neuroses are frequently confounded with hysteria. This is only to be expected in a region so obscure that hardly any two authorities are agreed upon the first and all-essential step of definition. The number of discarded definitions of hysteria must already be considerable, but, whatever the fate of the awkward word "pithiatism," coined by Dr. Babinski, his definition of hysteria as "a well-defined neuropathic state produced by suggestion and curable by persuasion," has at any rate the merit, by restricting the connotation of the term to a definite group of cases, of excluding from the category of hysteria many neuroses often, and perhaps wrongly, included. Is this increased clearness of definition, however, an absolute gain, or is it not obtained, as suggested above, by fixing an arbitrary standard and by the sacrifice of other forms of disorder which, though neither produced by suggestion nor yielding to persuasion, are yet identical in their symptoms with the forms classed by Dr. Babinski under pithiatism? Dr. Babinski himself raises this question when he asks, "Is the symptomatic aspect of the phenomena to which suggestion gives birth specific, or may it not belong also to a functional malady having a different mechanism from that of suggestion?" It is, he says, "still impossible to resolve this question in a definitive fashion," and, in admitting his inability to answer this question, he admits also the conventional character of his classification.

Whilst classifications are often of necessity conventional, definitions of disease should always, if possible, be what logicians term real and essential; they should go to the root of the matter. It is evident that Dr. Babinski's definition is not of this order, but is purely nominal. Waiving here any discussion of the second term of Dr. Babinski's definition, which on the face of it is not explanatory but merely a definition by result, and regarding only the statement that hysteria is produced by suggestion, it is apparent that this statement, even if it be true, only shifts the ground of the problem, and does not settle it. For what is suggestion? What determines suggestibility? These questions Dr. Babinski does not explicitly discuss in the pamphlets in which he has set forth his views on hysteria, but it is important to recognize that for him the phenomena of hysteria and of suggestion—excluding, of course, conscious imposture—are the results of processes of unconscious simulation or "demi-simulation," and that the subjects of hysteria, as he seeks to define it, are actors under the influence, however dimly perceived by them, of interested motives; are, in fact, self-deluded, unconscious frauds. But if this be so, we may fairly ask why it is that hysterical aphasia is often accompanied by right-sided hemiplegia. And if, as Dr. Babinski teaches, anaesthesia and many other hysterical stigmata are suggested to the patient by the examining physician, why are they suggested in some and not in all?

One more point raised by Dr. Babinski cannot be passed over. For long it has been accepted that shock, and particularly violent emotional shock, is amongst the most important factors in the causation of hysterical disorders. Dr. Babinski in strictly logical harmony with his views, maintains that shock is a minor factor, playing an infinitely less important

part than imitation; and, conversely, that when a patient, functionally paraplegic, recovers under the influence of a fright—say of his house burning over his head—it is not the temporary emotion, but the ideas of recovery, previously suggested, which are operative at a moment when his attention, up to that moment concentrated on his paraplegic limbs, is temporarily distracted. When, later, the idea of his impotence returns, the knowledge that for some instants he has been relieved is sufficient to persuade him of his recovery.

This explanation of Dr. Babinski's—constructed, one may suspect, with a careful regard for his theory—is ingenious, but the attempt to reduce hysterical phenomena to imitation, unconscious or semi-conscious, to expunge their affective origin, and to give them not only an ideal content, but a solely ideal causation, is only to come back, as Janet says of Bernheim's remark that "the hysterical realizes 'his accident just as he conceives it,' to a kind of contemptuous accusation against the patient, and, it may be added, to rob the disorder of any reality. The toothache, however, which vanishes before the sight of the forceps, has none the less an actual basis: and, as MM. Mathieu and Roux have said of hysterical vomiting, the essential characteristic 'is less the fact of accepting some idea or other than the action 'exercised by the idea on their stomachs or intestines.' That is, as Freud has pointed out, there is an unduly heightened lability of somatic outlet, or bodily expression, of certain ideas which for the time being hold the mind. This feature, whose origin need not be discussed here, is characteristic, it is true, of both hysteria and hypnosis, but can hardly be considered to be satisfactorily explained by a theory of imitation or demi-simulation.

The inherent connexions of hysteria and suggestions are patent, and the light which the study of hypnotic phenomena has thrown upon hysteria must be gratefully admitted. But to concede this is not to accept the statement that hysteria and suggestion are always the same processes, at any rate, until "suggestion" and "suggestibility" have been explained and defined with a much wider significance than seems to be attached to them by Dr. Babinski. Still less is it to admit that hysteria and suggestion are identical in origin, whilst the term "pithiatism" does not appear happy in its application either to the wretched beings who were burned as witches in the Middle Ages because they exhibited the cutaneous anaesthesia known as the "Devil's Claws," or to many of their successors of to-day.

STREET AMBULANCE SERVICE FOR LONDON.

THE Committee appointed by the Home Office to recommend a scheme for the extension of the street ambulance service in London has reported in favour of empowering the Metropolitan Asylums Board to establish and maintain a non-infectious service of rapid ambulances for the conveyance of persons suffering from accident or illness. The Local Government Board is to make regulations to ensure complete separation of the new service from the existing service for infectious cases.

The subject was one in which the late Mr. Reginald Harrison took a great interest, and to which, as President of the Metropolitan Ambulance Association, he devoted much time and attention. The result of his experience in Liverpool, of his investigations of the methods employed in America and on the Continent,

and of his study of the special problems presented by London was to lead him to the conclusion that as the police are so intimately concerned with the immediate handling of street casualties it would be simpler to place the ambulance service in London under their direction. Many of those who have had practical experience in other cities, and have made themselves acquainted with the conditions existing in the metropolitan area have arrived at the same conclusion. The Committee has not adopted this view, mainly on the ground that it thinks that the system of rapid ambulances should be made available for emergency cases occurring in private premises among the poorer classes, not paupers; but it advises that the Asylums Board, in establishing and conducting the extended service, should act in consultation with the Commissioner of Police, especially with regard to the choice of sites for any new ambulance stations, and their staffing and equipment, and as to the provision of the requisite signalling apparatus. The difficulty created by the fact that the Metropolitan Police are concerned with a much larger area than the Asylums Board may, it is thought, be met by authorizing the use of the non-infectious ambulances outside the county of London on payment to the Board out of the Metropolitan Police Fund of reasonable fees. Further, any board of guardians that possesses a rapid ambulance is to be empowered to arrange with the Commissioner of Police for its use on agreed terms approved by the Local Government Board. The Committee also recommends that in selecting sites for ambulance stations regard should be had to (1) the number of accidents habitually occurring in the neighbourhood, (2) the probable distance between the scene of the accident and the nearest available hospital, and (3) the extent to which the locality is at present effectively served with wheeled litters.

It is thought that the rapid ambulances might be either horsed or motor, and that the number required should be determined by experience, being gradually increased as necessity is shown. The Committee does not recommend the extension to the whole of London of the special signalling system in use in the City, partly on the ground of cost and partly because it is believed that a proper utilization of the best available telephonic communication will suffice.

Sir William Church told the Committee that the experience at St. Bartholomew's Hospital proved that the first aid administered by the City police is excellent, and by the Metropolitan Police not bad. The Committee accepts this opinion, and recommends that a police officer should accompany the rapid ambulances, which should be reserved for serious cases, and that every police officer should attend the advanced course of instruction in first aid as part of the regular discipline.

The report is signed by all the Commissioners—Sir Kenelm Digby, the Earl of Stamford, and Sir William Collins, M.P.; but the last named adds a note recommending that the duty of establishing and maintaining the proposed service should be entrusted to the London County Council, which has framed a scheme and sought powers to carry it out. This may seem the more logical course, but there are administrative difficulties in the way, and certain constitutional questions might conceivably arise. The scheme recommended is, in fact, of the nature of a compromise, and is probably not such as would have been devised had the Committee had a clean slate; but, apart from other

considerations, it was bound to recognize the fact that, though the street ambulance service in London is very deficient, progress has been made in recent years, and that in particular there are some 400 wheeled litters now in use by the police. The Committee recommends that these should be kept in commission for the present at least, and superseded gradually by rapid ambulances as funds become available.

Of the need of the provision of rapid ambulances for the institution of a system generally more effective there can be no doubt. The number of street casualties in London is increasing—there were 10,540 in 1904 and 17,055 in 1907, an increase of 62 per cent. in three years; moreover, the number of serious accidents increased even more rapidly from 155 in 1904 to 283 in 1907, an increase of 80 per cent. At present cabs and vans are frequently used to remove persons injured or taken suddenly ill in the streets, and it is not surprising to read that in nearly a fourth of 427 cases taken to hospitals definite fault was found by the medical staff with the manner in which the patient had been brought to the institution, and in 57 cases the patient's condition was considered to have been prejudiced thereby.

MEATY WINES.

A GENERATION ago it was not uncommon for the benevolent practitioner of domestic medicine to prepare a tonic wine by putting a few grains of quinine into a bottle of cheap sherry or orange wine. The idea presented certain attractions, and as often happens with regard to other domestic remedies, it has been taken up by manufacturers, and at the present time there are a very large number of medicated wines and alcoholic preparations, bearing various fancy names, upon the market. In some cases the addition to the wine consists of a drug such as quinine or coca; in others, of meat or malt extracts, either alone or in combination. With regard to the meat wines, the chief objection on public grounds to their use is that persons who might not otherwise be disposed to take a glass of sherry or port at odd times during the day may be induced to take a wine containing as much alcohol because of the nourishing constituents which have been introduced into it by the addition of meat or malt, or both. Without labouring the question whether meat extracts can properly be called nutritious or not, it may be pointed out that by the use of these meat wines the alcoholic habit may be encouraged or established, and that it is a mistake to suppose that they possess any high nutritive qualities. Samples of seven meat wines, including, it is believed, all those most extensively used in this country at the present time, have been submitted to analysis, and the detailed results will be found at page 795. It will be seen that in all instances the percentage of alcohol present approaches that commonly present in sherry or port. Some are probably made from sherry or other wine of similar type, and others, as their vendors profess, from port. The addition of malt extract in the quantities indicated by the analyses would, of course, lower appreciably the relative percentage of alcohol in the meat wine as compared with that in the sherry or port from which it was made. The same remark would apply to the meat extract if, as is probable, it is first dissolved in a little water before it is added to the wine. The beef and iron wine contained about 2 grains of iron in a wineglassful. In the meat wine stated to contain quinine, the amount of that drug present must have

been very minute, for it was too small to be weighed or identified, or even to respond to so delicate a test as the formation of a fluorescent solution.

AUTO-INOCULATION VERSUS HETERO-INOCULATION.

IN an interesting and suggestive paper read before the Medical Section of the Royal Society of Medicine on March 23rd, Dr. E. C. Hort developed the conception that in an infective disease not only does the infecting bacterium elaborate toxins and other substances, but derivatives of the cells and tissues of the infected organism are also formed, the disease complex being due to both these factors. It is further suggested that the cellular and other derivatives of the infected organism may be as important as the bacterial products, both in the causation of the disease and for the induction of immunity thereto. With regard to the importance of the cellular derivatives in the causation of some of the phenomena of disease, an example is met with in the formation of a circumscribed abscess by a localized bacterial infection. The changes occurring in the tissues at the site of infection result in the degeneration, death, and disintegration of numbers of cells; and, from what we know of the results of the artificial injection of cells and cellular derivatives, the discharge of such cellular products must cause some form of response. The destruction of tissue ending in the formation of the abscess cavity is probably largely due to proteolytic ferments derived from the disintegrating cells. The products of cellular disintegration, which include various enzymes, may be pyrogenetic, for there is evidence to show that aseptic abscesses may follow burns, and may also be pyrogenetic, since the formation of an infarct, an internal hæmorrhage, and a simple fracture may all be followed by rise of temperature and general disturbance. Further, Welch¹ in his Huxley Lecture delivered in 1902, pointed out that in the process of infection various cytotoxins may be formed, the parasite contributing amoebotoxins, and either the parasite or the host contributing complements, for these cytotoxins. There is a great deal to be said, therefore, for Dr. Hort's contention that when Nature cures an infection, she converts tissues and bacteria into auto-inoculating agents, and thereby incites both cellular and bacterial restraint, and that to provoke the latter, as is done in vaccine treatment (hetero-inoculation), and ignore the former is too often to aim at half and expect the whole. On the other matters dealt with in the paper—the use of the evening temperature as a measure of the course of infection and of immunity, the advantages of artificial auto-inoculation, and the value of the antitryptic index,² etc.—we have no space for comment, but they are well worthy of study.

THE OPHTHALMIC SPECIALITY.

UNDER the title *Oculist and Aurist, or Oculist and Physician—Which?* Lucien Howe, the great American authority on the ocular muscles, discusses the vexed question as to whether ophthalmologists should take up the throat, nose, and ear as well, as often happens both in America and in many English towns, or whether it would be better for them to be expert in ophthalmic surgery and in general medicine (*Ophthalmology*, January, 1909). He urges that there is little connexion between the ear and the eye, and that life is too short for one man to master the enormous literature appertaining to any one of these organs. On the other hand, medicine and ophthalmology have much in common, and Howe thinks that if the ophthalmologist fails to cure a headache by correcting the ametropia and

¹ BRITISH MEDICAL JOURNAL, 1902, vol. ii, p. 1105.

² See the BRITISH MEDICAL JOURNAL, vol. i, 1909, p. 489.

heterophoria he should be prepared to examine the condition of his patient's digestion, to give a test meal, and determine the amount of free hydrochloric acid. He should also be able to enter fully into the subject of renal disease, and in this no doubt he is to some extent right. He must have a good knowledge of general medicine, and an expert knowledge of neurology, but he should most certainly refer the patients to a physician if in a hospital, or to their medical attendant if private patients, for the diagnosis and treatment of diseases outside his own speciality. On the other hand, although the ear and the eye have little in common, the eye and the nose are closely related, and during the last few years the closeness of the relationship has been more clearly perceived; so close, indeed, is it that it may be doubted whether a man who cannot make an adequate examination of the nose can reasonably be regarded as a fully qualified eye expert. In every case of lacrymal obstruction it is absolutely necessary to examine the nose, and in retro-bulbar neuritis and inflammatory processes in the orbit it is even more essential. The ophthalmologist need not treat nasal disorders, but he ought to be able to diagnose them. Howe also overlooks two facts, both bearing on the unpleasant truth that most ophthalmic surgeons have to make a living. One is that if he dabbles in medicine he cannot expect the support of the general practitioner. He should never even, if he can avoid it, write a prescription; if the patient require an antisyphilitic course, he should refer him to his medical man, and the same is true as regards tonics and other drugs. The other condition is that in many towns a man can make a living if he practise as an oculist, aurist, laryngologist, and rhinologist, but not if he confine himself to the throat, nose, and ear alone, or to the eye alone. So we should give the opposite answer to Howe's question. By all means, if he can, let the specialist be a specialist in one branch, but, if he must take up the subjects, let it be ophthalmology and oto-laryngology rather than the eye and general medicine.

OLD AGE PENSIONS AND MEDICAL RELIEF.

ON more than one occasion we have pointed out difficulties that might arise as regards the medical care of the aged poor when old age pensions came into force. From the beginning it was obvious to us that these State pensioners would of necessity require some kind of State assistance as regards their medical needs, and we pointed out that parochial medical officers would probably be called upon to attend these old people in their homes, whom under other conditions they might have treated in workhouse infirmaries. As time goes on this is pretty sure to entail an extra amount of work on the Poor Law medical officers, which the authorities must in justice recognize and reward by increased emoluments. When the Act was under discussion it was over and over again stated that medical relief would not disqualify for a pension, and consequently it ought to be generally known that such relief cannot by itself cause the forfeiture of a pension when applied for by a pensioner. This is not, however, generally understood, as is proved by a very pathetic case which has come under our notice this week, in which a poor old woman of 76 died at Warwick without medical aid. At the inquest it was stated that she would not send for the Poor Law medical officer for fear of losing her pension. The coroner added that he had known of other similar cases, in which this fear had prevented pensioners from applying for medical relief. There is no legal foundation whatever for this fear, as is shown

in our Parliamentary Notes by an answer given in the House of Commons on this very case. The fact that the fear exists is, nevertheless, a serious matter, and one which the Local Government Board and all local authorities should take steps to dissipate. There has always been a horror of Poor Law relief deeply engrained in the minds of many of the best of the poorer classes, and in the past tragedies from time to time have been recorded in which this kind of exaggerated self-respect on the part of poor old people has been wrongly persisted in to the end of life. Death has been preferred to the help of the Poor Law. This was always wrong. It is still more wrong now the State has created pensions for the old workers, that they should be deterred by an unfounded fear of loss from accepting the aid in illness which the State affords. The medical profession, never lacking in generous charity, will, no doubt, look after poor old people with the same readiness as in the past, and the members of the Poor Law Medical Service on which the duty is naturally thrown will, we are sure, equally meet the new demands that are sure to arise. On the authorities, however, rests the responsibility not only of making it known that medical relief is available without any risk of loss of a pension, but also of organizing the parochial medical service for this most humane and praiseworthy duty.

KISSING THE BOOK.

THE movement in favour of the use of the Scottish method of swearing witnesses—which in English courts first became legal in 1888—has been long and slow, but during the past few months has made very distinct progress. Carried on at first chiefly in the pages of this and other journals of like kind, it at length attracted general attention, so that many more people than formerly began to appreciate the force of the objections raised to the English form of oath, and to be interested in the success of the movement. Some three months ago, indeed, certain judges of the High Court, realizing the importance of the question, indicated their intention of facilitating swearing by the Scottish method in their own courts. It would be well that those specially interested in the matter should keep themselves informed as to the extent of the success which has been already attained. It is clear that this is not always the case, and, as an example of the kind of oversight in question, may be quoted a letter, dated from the Law Courts, which appeared in the *Times* on March 18th. Having quoted a resolution in favour of abolition of the English form of oath, recently passed by the Liverpool Medical Institution, on the motion of Mr. F. W. Lowndes, one of the earliest and most active of those who have moved in this matter, the letter urged upon all medical societies to take the same step, on the ground that this would be more likely than anything else to awaken some one who had the power and was in the position to initiate in Parliament the change required. The use of the word here italicized makes it clear that the writer, in spite of his interest in the subject, is quite unaware that there is no need for this matter to be initiated in Parliament, seeing that there is already on the statute book an Act legalizing the Scottish form, and that a bill, whose stated object is to make administration of the oath by the uplifted hand universal and to enable courts to administer oaths in this form to all persons who do not specifically object thereto, was introduced in the House of Commons at the beginning of the current session. Its sponsor is Mr. Bramson, other names which appear on it being Mr. Godfrey Baring, Sir George Scott Robertson, Mr. Gulland, Sir Thomas

Whittaker, Mr. Wedgwood, Mr. Younger, Sir John Baker, Sir Luke White, and Mr. H. G. Montgomery. It is a bill of four short clauses, and having already passed its second reading is now in the hands of the Standing Committee of the House of Commons. Whether it will become law is, of course, uncertain in the present state of public business, but at present all the presages seem in favour of the desired reform being effected within a reasonable period. Should it be brought about by this particular bill, "kissing the book" will certainly within a very short time become a rare event, even though the formula for administering the oath will not, necessarily, be absolutely identical with that employed in Scotland, where the words of the oath have to be recited by the witness himself. The bill apparently intends that this shall usually be the case in the English courts, but makes it permissible also for the court or its officer to recite the words of the oath, the witness holding up his hand and giving his assent thereto. Finally it may be mentioned that those who have hitherto not paid much attention to the subject will find a fairly complete review of the considerations involved at page 175 of the issue of the *BRITISH MEDICAL JOURNAL* for January 16th, 1909.

WESTERN MEDICINE IN CHINA.

A MEETING, attended by Sir Robert Hart, the Chinese Ambassador, the American Ambassador, and many other important people, was held at the Mansion House on March 16th, in furtherance of the objects described in a circular issued by a body called the China Emergency Committee; and a resolution was adopted calling for the provision of a sum of at least £100,000; that sum being, it is calculated, the minimum necessary for carrying out the following objects: (1) The establishment in four important centres of population in China of colleges for the training of Chinese students in Western medicine and surgery, the institutions uniting the Christian churches at work in China without sacrificing their various denominational principles; (2) the provision in as many centres as possible of "normal" training for Chinese school teachers and pastors on the same basis of unity as the medical colleges; (3) for the publication in Chinese of the best Western literature suitable for medical, normal training, and theological colleges, to assist the Christian literature and tract societies already at work in that quarter of the globe. If the eloquence and importance of the speakers to the resolution at this meeting are any criterion, there can be little doubt that the sum in question will be collected, and the project to that extent succeed. Whether it should really receive the support of the public at large is quite another question, and for our own part, as our co-operation has been invited, it seems right to observe that a fair degree of progress has already been made in the teaching of Western medicine to the Chinese without assistance such as that now in question. Apart from provision for men, there are even places at which medical women are educated. Hitherto, however, the success of these institutions has been retarded, as was pointed out by Miss L. E. Saville in a paper recently read by her at a meeting of the Association of Medical Women, by the lack of adequate preliminary education among the students of either sex who seek and obtain admission to these schools of Western medicine within the area of China. When the Chinese authorities have taken steps to secure that would-be Chinese practitioners of Western medicine are in a position to profit by the medical education already afforded, the progress made will doubtless be much greater. Mean

time, it may be observed that the sums received by missionary societies are so large, and the Chinese have on many occasions shown themselves so ready to assist by large sums any educational project which they deem of value to their countrymen, that it is not easy to understand why it should be necessary to make a special appeal to the public of these islands; its philanthropy is already being tested to the full by much more crying needs at its very door. At the present moment, if not always, the authoritative calls on that form of charity which does not commence at home should be scrupulously limited.

SLEEPING SICKNESS.

DR. MORRIS, Acting P.M.O. of the Nyassaland Protectorate, continues the diary¹ issued at intervals by that Protectorate. He quotes Drs. Kinghorn and Montgomery as stating for North-Eastern Rhodesia that the distribution of *Glossina palpalis* has been fairly well determined to be confined to: (1) A part of the Luapula river; (2) a small stretch of the Kalungwisi river about ten miles in length; (3) Lake Mweru, and for some distance up its tributaries the Luao and the Luchinda; (4) Lake Tanganyika, round the whole extent of the British shore, and up its principal confluent, the Lovu river, for a distance of from fifty to sixty miles of its mouth. They further report two interesting observations on the habits of this fly: (a) a certain degree of adaptability to its conditions—for example, the shores of the lake are formed of "rocky beaches with small scattered patches of 'bango' reeds, presenting a picture which differs very materially from what has been considered to be typical *palpalis* country—that is, heavily-wooded banks, affording abundant shade. The fly could always be found in even the scantiest collection of "isolated reeds, and was frequently seen basking in "the sun on rocks at the water's edge." (b) A certain degree of seasonal variation in its occurrence. The first observation is of great importance, and should be specially noted by those working in Uganda. Will the fly adapt itself to cleared areas there? The Sleeping Sickness Bureau also publishes a small pamphlet, on *How to Avoid Infection: With an Account of Glossina palpalis*. Diagrams of different flies (enlarged) are appended. It would be a great advantage to put pictures of the natural sizes of the flies beside the enlargements, as otherwise the reader gets a very erroneous idea of their real size.

POLICE SURGEONS AND CORONERS' INQUIRIES.

SOME well-merited compliments to police surgeons in London were paid by Mr. Schroder and Mr. Curtis Bennett on the occasion of the annual dinner of the Metropolitan Police Surgeons' Association. The former expressed a belief that it would be an advantage to the public if divisional surgeons were appointed medical referees in cases in which the coroner desired a professional opinion in addition to that of the medical attendant on the deceased, and Mr. Bennett dwelt on the high value of the assistance given him by these officers as witnesses at Bow Street. In the course of the evening the history of the association during the past twenty-one years was briefly related by its senior honorary secretary, Dr. Owen Fowler. Much of the good work done by its council dealt with matters of a confidential nature, and could not appear in the annual reports. No divisional surgeon should hesitate to send to the council a statement of any difficulties encountered, for it was always ready to assist members

¹ Nyassaland Protectorate: Sleeping Sickness. Diary Part VI. By the Acting Principal Medical Officer, Zomba. Printed by the Government Printer, 1908. London: Sleeping Sickness Bureau, Royal Society, Burlington House, W. 1909.

and to endeavour to improve their position. At the Departmental Committee now sitting at the Home Office the association intended to prove that when special experience in connexion with necropsies and giving evidence, either supplementary to that of the medical man in attendance on the deceased or where no medical man had been called in, was thought necessary by the coroner, a divisional surgeon should be appointed to act as medical investigator. As a matter of fact, such work was already being done by divisional surgeons all over the metropolitan police area. At times the services of a pure pathologist might be required in addition, but this was quite exceptional. This dinner, at which the retiring president, Dr. Spurgeon, took the chair, was preceded by the annual meeting of the association, when the following were appointed officers for the year: Mr. A. F. L. Dorin, president; Dr. C. P. Gallie, honorary treasurer; and Drs. Owen Fowler and G. N. Hanbury, honorary secretaries. Of 172 divisional surgeons in the metropolitan area, 154 are now members, and its finances are in a very satisfactory position.

SPLENECTOMY FOR RUPTURE OF SPLEEN.

Two operations of this kind, of deep interest to the general surgeon, have recently been reported at a meeting of the Société de Chirurgie de Paris.¹ In the first case Caplesco of Bucharest removed the left kidney as well. A boy aged 14 fell about 20 feet, his abdomen striking against the ground. There was no external wound, but the parietal muscles on the left side were rigid, and there was a lumbar swelling which increased, with hæmaturia and symptoms of internal hæmorrhage. Rupture of the left kidney was diagnosed, and Caplesco cut down on it from in front at once, after removing much blood from behind the peritoneum. The hilum was partly torn through, and there were several lacerations on both surfaces of the kidney which was removed. Then the spleen was found badly lacerated at its hilum, and was therefore also extirpated. As there was oozing hard to control, a sterilized gauze tampon was placed in the loin. Caplesco then sutured the posterior parietal peritoneum over the tampon, and closed the abdominal wound, a strange manoeuvre, much criticized when the case was discussed. For two days there was much fever, and Caplesco at length removed the tampon through a lumbar incision, which was drained for a few days. The patient recovered. Souligoux, Morestin, Tuffier, and Auvray favoured more conservative methods. The first-named surgeon stated that on two occasions he saved a lacerated spleen, and the patient as well, by suture of the damaged organ, and Auvray believed in conservatism even for lacerated spleens; as for the kidney, it bore very bad wounds very well. He admitted, however, that it was only in exceptional cases that a laceration of the spleen could be sutured, a conclusion justified by the study of statistical reports of splenectomy for traumatism. The British surgeon would, we suspect, support M. Caplesco as far as the removal of the spleen was concerned, and would probably think that altogether he took the safer course when he removed the much-damaged kidney. The sinking of the tampon was hardly defensible, but the operator was, it appears, not present to reply and explain matters. M. Baudet read notes of another successful splenectomy. A man, aged 23, fell from a parapet over 35 ft., the left side of the thorax striking a pile of stakes. There was much shock, yet the patient came to quickly, and complained of nothing except smart pain in the left loin. When he was admitted into hospital muscular rigidity in the

left hypochondrium was marked, and several characteristic attacks of syncope occurred. Baudet operated thirty-two hours after the accident. He found the spleen torn completely in half, and removed it. The patient recovered. Mauclore, in discussing this case, remarked that in lacerations without detachment of a portion of the spleen suture may be sufficient, yet he doubted if it were ever quite safe. When the laceration completely separated a part of the spleen, removal of the organ was the only justifiable course. Probably a general surgeon who is a bold operator, but not experienced in plastic abdominal operations, does wisest if he remove a badly lacerated spleen.

CONDITIONS OF PRACTICE IN AUSTRALIA.

WE commented recently on a letter received from a correspondent in New Zealand, which shed light on the system of sweating medical men which obtains in that country, and we have now received from Mr. Booth-Clarkson, of Ayr, Queensland, a copy of the *Australasian Medical Gazette*, containing an article from his pen on The Prospects of the British Medical Profession, and Suggestions for Improvements. Mr. Booth-Clarkson rehearses most of the injustices and grievances under which we in this country suffer, and takes a somewhat pessimistic view of the position as a whole, especially with regard to overcrowding, inadequate fees and the difficulty of recovering them, and the absence of "reciprocity with other countries." We fully sympathize with his plea for continued effort and more thorough organization throughout the empire. But much of Mr. Booth-Clarkson's pessimism is explained by a cutting which he encloses from the *Townsville Daily Bulletin*. This is a report of a monthly meeting of the "Townsville Friendly Societies' Medical Union." In the absence of any intimate knowledge of the local conditions, the questions in debate seem obscure, and it is difficult to follow the tenour of the proceedings. We note, however, that the majority of the speeches were characterized by that cynical disregard for the reasonable interests of medical men which is still unfortunately the rule in assemblies of this class in all countries. One fact, however, emerged clearly—namely, that Mr. Booth-Clarkson had severed his connexion with one of the affiliated clubs, and it was said had even gone so far as to hint that in future he would not attend the members without charging his customary fees. This difficulty was got over by the simple process of transferring his late patients to the other Townsville doctors' lists, and a resolution was passed to the effect that the members of the lodge in question "be advised that they should get 'on the doctors' lists through the medium of sister 'lodges.'" A subsequent speaker indicated the source of the trouble in saying that "Dr. Booth-Clarkson 'desired to have the right to say who he would 'admit to the Ayr lodges,' and added that 'they 'would not stand that at Townsville.'" We seem to scent in this remark the old difficulty of the wage-limit. But it is interesting to note that one speaker warned the meeting that "the medical profession had 'a strong union in the British Medical Association, and the medical board might be taking on a big 'fight for the sake of a handful of members.'"

THE MEDICAL PROFESSION IN GERMANY IN 1908. DR. F. PRINZING gives some interesting information with regard to the number of the members of the medical profession in Germany in 1908 as compared with former years.¹ The total number in 1908 was 31,640, while the total population was about

¹ *Revue de Chirurgie*, January 10th, 1909, pp. 181 and 185.

¹ *Dent. med. Week.*, December 31st, 1908.

63 millions. This gives 5.02 medical men to every 10,000 inhabitants. In 1901 the proportion was 4.92 per 10,000, while in 1905 the highest figure was reached, namely, 5.08. In Greater Berlin, with a population of over 3 millions, there were 12.3 practitioners to every 10,000; in the other large towns there were 9.2, while in the rest of Germany there were only 3.8 per 10,000. The increase was most marked in Greater Berlin during the preceding three years, while it was definite in Wiesbaden, Dresden, and Essen. In Kiel, Halle, Königsberg, Hanover, Stuttgart, Cassel, Dortmund, Chemnitz, and Duisburg there was a distinct falling-off, and in certain country districts there was an actual shortage of medical practitioners. Thus on November 1st, 1908, some 356 districts were without a medical man. Of the total number of medical practitioners, only 55 are ladies; Berlin has 17, Breslau 5, Frankfurt-on-Main 4, Munich 3, and Hamburg and Dresden 2 each. In 1908, of the practitioners in the large towns 34.6 per cent. followed some form of speciality. This does not mean that the individual was not practising as a general practitioner as well; and, indeed, Dr. Prinzing believes that the majority of the German specialists do general practice. It must be remembered that in Germany the specialist announces his speciality by affixing on his name-plate a description, such as "specialist for diseases of women." In all there were 4,375 specialists in Germany in 1908, which is an increase of 371 on 1906. The most striking feature of this account to the English medical man must be the comparatively small numbers. With a total population of England and Wales of approaching 35½ millions, there are more than 7 medical practitioners per 10,000, as compared with 5 in Germany. The number of lady practitioners, too, is very considerably larger here than in Germany, the percentage of women practitioners on the German register being 0.17, while 1.88 per cent. of the names on our *Register* are those of women.

A GENERAL meeting of laryngologists was held at the Royal Society of Medicine on March 5th to organize a testimonial to Sir Felix Semon on the occasion of his retirement, which takes place at the end of the coming June. Mr. Butlin was unanimously elected Chairman of the General Committee and Dr. Dundas Grant, President of the Laryngological Section, was elected Chairman of the Executive Committee, which consists of the following: Mr. Butlin (Chairman, General Committee), Dr. Dundas Grant (Chairman of the Executive Committee), Mr. Charters Symonds, Mr. Cresswell Baber, Dr. J. B. Ball, Dr. Law, Dr. McBride, Mr. Herbert Tilley, Mr. E. Waggett, Dr. Sandford, Dr. de Havilland Hall, Dr. Seanes Spicer, Dr. StClair Thomson (Honorary Treasurer, 28, Queen Anne Street), Dr. Watson Williams (Honorary Secretary, 4, Clifton Park, Bristol), Dr. H. J. Davis (Honorary Secretary, 8, Portman Street, London, W.). Subscriptions may be forwarded to the Honorary Treasurer.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Old Age Pensioners and Medical Relief.—Sir Walter Foster asked the President of the Local Government Board on Wednesday if his attention had been called to an inquest on an old age pensioner named Blackwell, at Warwick, who died from pleuropneumonia without having had any medical attendance because she feared that the attendance of the parish doctor would jeopardize her pension; and if he could take any steps to let old age pensioners understand that they might receive medical

advice and attendance from Poor Law medical officers without running any risk of losing their pensions. Mr. John Burns said that his attention had been called to this case. Medical or surgical assistance (including food or comforts) supplied by or on the recommendation of a medical officer did not disqualify a person for receiving an old age pension or for continuing to receive one which had been already granted. He had issued a memorandum for the information of persons desiring to make claims for pensions, in which it was stated that such assistance as was mentioned above would not disqualify a claimant. Probably his right hon. friend's question and this reply would answer the purpose which he had in view of giving publicity to the law on this subject.

Medical Attendance on Postmen.—Mr. French called attention on Tuesday to the case of a postman who was taken suddenly ill and had to call in medical assistance, for which the postal authorities refused to pay, and asked whether it was not the rule that when there was no doctor connected with a post office the authorities did not make themselves responsible for medical attendance. Mr. Buxton said, in reply, that the bills of private doctors called in by Post Office servants were not paid except in case of injuries sustained on duty. There was no rule in the postmen's rule book in the sense supposed. In view of the distance of Mr. Wallace's residence from the nearest Post Office doctor, he had been removed from that officer's charge, and was now being paid the usual allowance of 8s. 6d. per annum in lieu of free medical attendance.

Tuberculosis.—Mr. Hudson asked the President of the Local Government Board if it was his intention during the present session to promote legislation for the eradication of tuberculosis, human as well as bovine, on national and compulsory lines, or whether it was his intention to do so deal with this matter at a later period during this present Parliament. Mr. Burns replied that legislation on the subject of bovine tuberculosis was at present receiving his attention in connexion with the Milk Bill which he proposed to introduce. As regards human tuberculosis he did not at the moment contemplate legislation on the subject. He had recently issued an order providing for the compulsory notification of pulmonary tuberculosis when occurring amongst persons in Poor Law institutions or under the care of Poor Law medical officers, and this order has, he was glad to find, stimulated voluntary notification of the disease when occurring among other persons in the large number of districts where a system for that purpose was in force. He should by no means lose sight of the matter, but he thought that developments with regard to it must be gradual.

Cleanliness in Dairies and Cowsheds.—Captain Morrison Bell asked, on Tuesday, what were the regulations as to cleanliness and management of dairies from which imports of fresh milk and cream came; and Mr. John Burns replied that the information in his possession was not sufficient to enable him to say definitely what were the conditions as to cleanliness and management in the dairies and cowsheds abroad, or as to the extent to which foreign regulations were enforced in these places. He had caused inquiries, however, to be made last year regarding the methods adopted at the single creamery in France from which all the fresh milk imported into this country appeared to be obtained, and from which also a considerable quantity of cream was imported. The result was generally satisfactory, as was also the result of the examination of some samples taken in London. He had the subject in mind in connexion with the Milk Bill, and he regretted that on these matters the jurisdiction of the Local Government Board was only applicable to the United Kingdom. In connexion with this subject it was stated by the President of the Board of Trade that 156 cwt. of fresh milk, of a declared value of £68, were imported into the United Kingdom in 1907, and 953 cwt., of a declared value of £437, in 1908; 4,231 cwt. of cream, of a declared value of £16,920, were imported in 1907, and 6,862 cwt., of a declared value of £26,556, in 1908.

Influenza in the Commons.—Last week Mr. Pirie asked the First Commissioner of Works if he was aware that over forty members of the Commons were laid up by influenza, and if he would consider the adoption of a more natural system of ventilation for the House. Mr. Harcourt replied that he much regretted the melancholy state of affairs complained of, but he was sorry to find that the proportion of 6 per cent. of influenza was not uncommon in other buildings and professions which were subject to the most natural systems of ventilation. In answer to other questions as to an inquiry into the ventilation, he said that the inquiry had been held; a large number of recommendations had been made, all of which he had carried out.

Lead Poisoning.—In answer to a question as to the statistics of lead poisoning, Mr. Gladstone said that the total number of cases of lead poisoning reported during the four years ended December 31st last under the Factory and Workshop Act was 2,448, of which 114 were fatal. The number of these cases showing symptoms of paralysis was 548; of encephalopathy, 84. The number of persons disabled could not be stated. There were other sources of lead poisoning outside the scope of the Factory Act, of which the most important was house painting and plumbing. Five hundred and fifty-seven cases (including 147 deaths) were reported as occurring in these two industries during the same period, but these reports were made voluntarily, and the figures could not be taken as complete. As regards experiments showing that lead is more often inhaled than swallowed, the only experiments of the kind of which he was aware were some that were now being carried out for the Lead Committee in connexion with the pottery industry. These had special reference to the question of the channel of absorption, but were not yet completed. They had not, of course, had anything to do with the revision during the last two or three years of various codes of special rules for different industries in which lead was used; but these rules contained precautions which were effective against both channels of infection. There had been no single "decision" to revise these codes. It had been the general policy of the Department to bring the older rules, as occasion arose, up to a modern standard.

Small-pox at Bristol.—On Tuesday Mr. Burns stated, in reply to a question as to how many cases of small-pox occurred in vaccinated persons before any unvaccinated person was notified as having the disease, that there were 11 such cases. It should, however, be stated that 24 cases of the 31 of which at present he had received particulars took place amongst persons over 20 years of age; that 22 out of these 24 persons had not been revaccinated since infancy, whilst the remaining 2 had already contracted the infection of small-pox before they were revaccinated. No case occurred amongst vaccinated children under the age of 10, but there were 2 amongst children who had not been vaccinated.

Accidents to Railway Servants.—In answer to Mr. Ellis, the following tabular statement was given on Monday last by Mr. Tennant:

Table showing the Number of Persons Employed by Railway Companies on December 31st, 1907, as Goods Guards and Brakemen, Permanent-way Men, or Platelayers and Shunters, the Numbers Killed or Injured in Accidents to Trains or by the Movement of Railway Vehicles in the Years 1907 and 1908, and the Proportion per 1,000 of the Killed and Injured to the Number Employed:

Occupation.	Number Employed (1907).	Killed.		Injured.	
		Numbers.		Numbers.	
		per Thousand Employed.	per Thousand Employed.	per Thousand Employed.	per Thousand Employed.
		1907.	1908.	1907.	1908.
Goods guards and brakemen	16,786	41	29	2.44	1.73
Permanent-way men or platelayers	67,184	89	76	1.32	1.13
Shunters	13,158	39	34	2.97	2.58
				1,035	955
				62	57
				2.6	2.36
				76	69

From causes other than accidents to trains or the movement of railway vehicles, the numbers killed or injured were:

Occupation.	Killed.		Injured.	
	1907.	1908.	1907.	1908.
Goods guards and brakemen	—	—	438	513
Permanent-way men or platelayers	6	—	2,132	2,256
Shunters	1	—	220	276

Simple Continued Fever at Malta.—In answer to Mr. Lupton, on Monday last, Mr. Haldane stated that the number of cases of simple continued fever were 323 in 1907, and 303 in 1908; there were 1,275 cases in 1897 and 1,509 in 1898. The figures for the average strength of the troops at Malta for the same years were: 1897, 8,023; 1898, 7,300; 1907, 5,700; 1908, 6,030.

The Peabody Buildings, St. Luke's, and Vaccination.—In answer to Mr. Lupton, who asked the President of the Local Government Board if he had inquired into the action of the Peabody officials as regards vaccination exemptions, Mr. Burns stated on Tuesday that he had made inquiry on this subject, and he was informed that in any case in which it came to the knowledge of one of the superintendents of the Peabody Dwellings that a tenant refused to have his child vaccinated, notice to quit was served. He had no control over the trustees of the dwellings in this matter, but he found from the vaccination officer that in no instance had he shown the declaration exempting from vaccination to their agents or superintendents.

Food Wrappers.—Mr. Courthope asked the President of the Local Government Board on Tuesday whether he had power to regulate the packages, bags, and wrappers in which food was sold, and whether he would consider the advisability of prohibiting the use of old newspapers for wrapping meat and other articles of food. Mr. Burns answered that The Public Health (Regulations as to Food) Act, 1907, enabled the Local Government Board to make regulations authorizing measures to be taken for the prevention of danger arising to public health from the distribution of articles of food intended for sale for human consumption, but he had no information which on grounds of public health would justify regulations of the kind suggested in the last part of the question.

Lady Inspectors for Boarded-out Children.—Last week, in answer to Sir Walter Foster, the President of the Local Government Board said that the appointment of lady inspectors for children boarded out within the unions was under consideration, but that he had not at present arrived at a decision with regard to it.

The Dairies, Cowsheds, and Milkshops Order.—Mr. Burns stated last week that the number of boroughs and other districts in which regulations under this order were not in force was as follows: Boroughs, 14 out of 327; other urban districts, 71 out of 814; rural districts, 78 out of 666.

India.

[FROM A CORRESPONDENT.]

THE BOMBAY MEDICAL CONGRESS.

THE medical profession in India owes much to His Excellency Sir George Clarke for his initiation of a scheme early last year for the holding of a Medical Congress in Bombay. It has not only brought together a large number of the best class of workers in tropical medicine for purposes of mutual instruction, but it has also helped forward the whole medical profession in the peninsula. It has demonstrated to the world the vast amount of good work which has been done, and is being done, by the members of the medical services, and has shown also that the general body of the profession in India is anxious to avail itself of all opportunities for professional advancement, and is ready for that official recognition and status which it obtains in all civilized countries. It is to be hoped that the Medical Congress will be the means of pushing on the consideration of most important questions connected with the medical profession in India which have recently become the subject of legitimate agitation and discussion—namely, a proper Medical Registration Act, a Druggists Act, regulations for the suppression of bogus qualifications, and a scheme for the registration and organization of qualified nurses.

The Congress has aroused great public interest, as has been shown by the care with which the local press has followed the deliberations from day to day; and now that the interest of the Government and the public have been aroused in medical work, and the value of research has been recognized, it is to be expected that the hope expressed on all sides that the Congress may meet again in three or four years will be fulfilled.

The exhibition attached to the Congress has had a valuable educational effect; it has demonstrated the excellence of the products of those firms connected with medical work, many of them entirely Indian in their operations and administration, whose exhibits of surgical instruments and aseptic furniture, drugs and foods, and sanitary appliances and models have been carefully examined by crowds of educated native visitors.

The Congress was opened on February 22nd in the University Convocation Hall by His Excellency Sir George Clarke in the presence of a large gathering, who followed the Governor's interesting and sympathetic remarks with close attention. After tracing the most important achievements of the medical profession during the last few decades, step by step, His Excellency concluded with the following practical exordium: "The Congress, as Surgeon-General Stevenson tells us, has thrown its net far and wide. I earnestly trust that the papers read and the interchange of views thus arising will give a fresh impetus to medical progress in India. Germs of thought will surely be evolved, which will blossom into achievement. Our students may feel inspired to high aims, and will at least realize that their college training is only an introduction to the study of modern medical science. I am hopeful that the vernacular papers, many of which have helped to disseminate facts about the plague serum, will assist us in spreading knowledge of a general character, in which India is sadly deficient. Lastly, I am sure that this Congress will emphasize the essential solidarity of the noble profession of healing, which knows no distinction of race or colour, and unites all true workers as members of one great brotherhood engaged in combating suffering and disease throughout the world."

Section I.—Cholera, Dysentery, Enteric Fever, and Tropical Diarrhoeas.

Major Leonard Rogers, I.M.S., read a paper on cholera, with special reference to its treatment. The main point advocated was the use of intraperitoneal injections of hypertonic saline solutions, at the same time taking care to maintain the blood pressure. The author showed a special cannula he had devised for the purpose, which had been used with good results. Khan Bahadur N. Choksy followed with a paper detailing the general lines of treatment adopted in a series of 533 cases, in which rectal

injections of saline solution were used. A discussion followed.

Dr. Nicholls, of the U.S. Army Medical Corps, described experiments undertaken in the Philippines on coloured underclothing for soldiers exposed to the tropical heat.

Captain F. H. Hutchinson, I.M.S., described the method of preparing and storing calf vaccine in the Belgaum dépôt, and the difficulties connected with this storing during the warm seasons of the year. He discussed the relative value of glycerinated and chloroform-glycerinated vaccine, and on the whole gave his preference to the former.

On the second day papers on dysentery in Indian galls were contributed by Lieutenant-Colonel W. J. Buchanan, I.M.S., and Captain W. Forster, I.M.S., who has recently been deputed by the Government of India to study the subject. Captain Gordon Tucker, I.M.S., read a paper on appendicostomy in the treatment of intractable ulceration of the colon, giving notes of five cases of chronic dysentery in which this operation has been done, and indicating the type of Indian dysentery in which it was invaluable.

On the last day there was a discussion on enteric fever, including an interesting paper from Lieutenant Colonel Semple, R.A.M.C., on cases of recovery from typhoid acting as prolonged carriers of the infecting bacilli. Dr. Van Loghen read a paper on the experience of typhoid fever in Sumatra, sent by Dr. Schuffner.

Section II.—Malarial Fever, Plague, Etc.

In this section, presided over by Surgeon-General Hamilton, C.B., I.M.S., Professor Ronald Ross, C.B., F.R.S., in starting the discussion on malaria by a paper on the practice of malaria prevention, emphasized the economic effects of malaria on the community; he described the methods by which the amount of malaria in Mauritius was investigated, and laid down the following rules for sanitary officers in checking malaria:

1. All antimalarial measures are good and useful, and each should be employed in its proper place.
2. For stations where the population is great and dense, mosquito reduction should be the aim.
3. For scattered populations and villages the general distribution of quinine should be employed.
4. In the presence of severe malaria both mosquito reduction and parasite reduction should be employed together.
5. The sanitary officer should begin with those measures which can be immediately adopted, that is to say, as a general rule, with the cheapest ones.

Attention was directed to the necessity of parasite reduction in native children who were the principal homes for the malarial parasites.

The paper on the human factor in the spread of malaria, by Captain S. R. Christophers, I.M.S., and Mr. C. Bentley, dealt with a matter which has often been lost sight of in India; its consideration helps to explain the recent very serious epidemic of malaria in Bombay, where there has lately been an enormous congregation of labourers from all parts of the Presidency, on account of the great dock extensions which are in progress, and of the great impetus given to building in the island during the last four years. The same gentlemen also read a paper on the intimate pathology of malaria in relation to blackwater fever.

On the second day a discussion on plague was opened by a paper by Professor Kitasato, read by Professor Shiga, which showed that the Japanese investigators had arrived at the same conclusion as had been come to in India. Major Lamb described the facts connected with the etiology of plague, and Captain Liston indicated the lines on which plague epidemics should be dealt with. Essential measures were the removal of conditions favouring rat infestation, the prevention of importation into non-infected places, and, when these have failed, inoculation. In the "non-essential and doubtfully efficacious" measures he included isolation and treatment of the sick in hospitals, disinfection, and evacuation of plague-infected houses. The conclusions arrived at by Captain Liston were hotly contested. Unfortunately some of the speakers wandered from the subject in order to discuss the alleged shortcomings of the Bombay Municipality.

Major S. Browning-Smith, I.M.S., read an interesting paper on the recrudescence of plague in localities where no second infection could be traced, and gave the results of his extensive experience in the Punjab.

*Section III.—Animal Parasites and Disease Carriers,**Leprosy, etc.*

In this section Captain E. D. Grieg, I.M.S., gave a description of the work of the Sleeping Sickness Commission, and enumerated the facts connected with tsetse flies ascertained to date. The operations directed against the fly were, he said, on the lines of (1) destruction of the pupa of the fly, by the clearing of undergrowth; the destruction of the foodstuff of the fly, including an investigation into the suggestion that had been made that the blood of the crocodile was the main food supply of the fly. (2) The possible destruction of the fly by other animals which might prey on it. Papers were also read on the dissemination of disease by ticks and diptera, by Captain Carter, I.M.S.; on non-biting flies as carriers of disease, by Dr. J. T. Nash; and on Indian sand-flies, by Mr. Howlett, the Government Entomologist.

On the second day a paper on snake venom contributed by Sir Lauder Brunton was read, and Lieutenant-Colonel Buchanan showed some cases of lathyrism.

On the third day beri-beri and leprosy were discussed. The nascent treatment of leprosy appears to have given several workers, including Captain Beauchamp Williams, of Beshire, encouraging results.

Section IV.—Sewage Disposal, Water Supplies, Disinfection, etc.

This section, which met under the presidency of Lieutenant-Colonel Crimmin, V.C., C.I.E., I.M.S., discussed questions of water supply and purity of water. A paper on India, the Haj, and the International Sanitary Conventions, by Dr. F. C. Clemow, was read, and another paper on unhygienic Bombay by Drs. Cursetjee and Master, was a prolific subject for discussion.

Section V.—Surgery in the Tropics.

The meetings of this section attracted a full and interested audience. The principal subjects were cataract and vesical calculus. The extraordinary amount of clinical work done by officers of the Indian Medical Service was well illustrated by Major Smith, of Jullundur, speaking from experience of twenty thousand cataract extractions, and Surgeon-General Stevenson, from over five hundred litholapaxies per annum during a long series of years in Hyderabad, Scinde. Major Ashton Street, F.R.C.S., I.M.S., read a paper on the treatment of elephantiasis by artificial lymphatics, a method which is likely to help considerably in the treatment of a most troublesome group of cases. Captain T. S. Novis recorded his experience of the operation of epilepsy, which is also likely to be of great use in the treatment of malarial cirrhosis of the liver. Dr. E. F. Neve gave an interesting account of the etiology of one variety of epithelioma in Cashmir, due to chronic burns.

The Transactions.

It would be impossible to condense the many valuable papers presented to the notice of the various sections. They represent the very latest additions to knowledge in the many branches of tropical medicine and surgery. The *Transactions* of the Congress will form a very valuable book of reference to all interested in these subjects. The publication of this volume, which will contain from 300 to 400 pages, has been placed in the capable hands of the *Times of India* Press. Probably it would have been better if the papers to be read had been extended over five days. At any rate the medical profession in India has learnt much from this meeting, which reflects the greatest credit on the organizing powers of the General Secretary, Lieutenant-Colonel W. E. Jennings, I.M.S.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

JUBILEE OF THE SICK CHILDREN'S HOSPITAL, EDINBURGH. This is the jubilee year of the Sick Children's Hospital in Edinburgh, and at a meeting of contributors, held in Edinburgh on March 17th, reference was made to the gradual development of the institution, which, as the Chairman said, since its foundation in 1859, had been one of unchecked progress. A beginning was made in 1859, when

a house was purchased in Lauriston, which accommodated twenty children; this was extended in 1860, and the Lauriston Hospital was opened in 1863. The present hospital, which is one of the best-equipped in the kingdom, was opened in 1895 at a cost of £52,000.

Dr. Allan Jamieson, President of the Royal College of Physicians, in the course of a short speech, said that it was common knowledge that the rise of hospitals owed its inception to Christianity, but it might not be widely known that hospitals in their sense of the word took origin in the Holy City of Jerusalem itself. Dr. Jamieson also referred to the educative power of hospitals, and particularly of children's hospitals. Many of the patients were drawn from poor and often squalid homes. Then admission to hospital was for many the first glimpse they ever had of what true comfort was. Too many had not previously known what it was to have a clean bed to themselves; to have fresh, pure air; to be tended by gentle, loving hands; to be served with well-cooked, appetizing food, and to hear round them only kind, affectionate language. To many the change was almost magical, and at their receptive age the effects of their experience in the hospital was by no means so transient as it might seem. Hospitals, therefore, should not be regarded as merely institutions where the cure or alleviation of suffering was aimed at, but as very valuable moral, mental, and religious educators, and should consequently receive liberal support on these grounds alone.

STATE REGISTRATION OF NURSES.

A meeting in connexion with the promotion of the Registration of Nurses (Scotland) Bill was held in Glasgow on March 17th. Dr. Mackintosh reported that the committee formed at the end of last year to go carefully into the clauses of the English bill felt that a Registration Council, with head quarters in London, with practically no representation from Scotland, should be resisted in the interests of Scottish nurses, and they were unanimously of opinion that a separate Registration Council should be appointed for Scotland. After considerable discussion, it was formally agreed that the association should be known as the Association for the Promotion of the Registration of Nurses in Scotland. Lord Inverclyde was appointed president, Dr. Mackintosh honorary secretary, and Dr. Johnston honorary treasurer.

A ZOOLOGICAL SOCIETY.

A meeting of persons interested in the formation of a zoological society for Scotland was held in Edinburgh on March 18th. It was formally agreed to found a society, to be known as the Zoological Society of Scotland, for the purpose of establishing, in the first instance, a zoological garden in or near Edinburgh. A committee was appointed.

THE ONTARIO-CHIRURGICAL SOCIETY OF SCOTLAND.

The annual general meeting of this society was held on March 12th, at 3.30 p.m., Mr. C. F. Sutcliffe, L.D.S., President, in the chair. The Honorary Treasurer's annual statement showed that the financial condition of the society continued satisfactory, and that the membership continued to increase. The Curator-Librarian intimated the donation of various books to the library and of specimens to the museum, and described the manner in which the society's rooms had been redecorated and fitted up for the convenience of members. The following office-bearers were appointed for the session 1909-10:

President: J. Morris Stewart, L.D.S.
Vice-Presidents: J. Douglas Logan, L.D.S.; Peter Cumming, L.D.S.
Honorary Treasurer: L. Storrow Shennan, L.D.S., D.D.S.
Curator-Librarian: A. W. Greig, L.D.S.
Editor of Transactions: A. Shennan, M.A., L.D.S.
Honorary Secretary: R. Lindsay, L.D.S.
Council: C. F. Sutcliffe, L.D.S.; W. T. Finlayson, L.R.C.P. and S.E., L.D.S.; T. E. Johnston, L.D.S.; R. S. Sanderson, L.D.S.

Dr. Theodore Shennan read an interesting paper entitled, *Looking Backward in Dentistry*, in which he traced the history of dental practice from the earliest times, and showed that not a few of the more modern developments of dental work, such, for example, as the crowning of roots and teeth with gold, had been anticipated by those early practitioners. By means of a series of lantern

slides Dr. Shennan showed various forms of early dental instruments, and also exhibited several actual specimens.

The annual dinner of the society took place in the evening in the Caledonian Station Hotel. Mr. J. Morris Stewart, the newly-elected President, occupied the chair, and Mr. J. Douglas Logan acted as croupier. Among the society's guests were Dr. Theodore Shennan, Dr. W. Allan Jamieson, President of the Royal College of Physicians of Edinburgh; Dr. R. McKenzie Johnston, Secretary and Treasurer of the Royal College of Surgeons of Edinburgh; Dr. Rainy, Secretary of the Royal College of Physicians; and Mr. G. M. Stuart, Secretary of the Edinburgh Dental Hospital and School. The company included members of the society from different parts of Scotland, and a most enjoyable evening was spent.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

ROYAL VICTORIA HOSPITAL, BELFAST.

At the meeting of the board of management on March 17th the Vice-Chancellor of the Belfast University drew attention to the retirement, under their by-laws, of their chairman, honorary treasurer, and honorary secretary, and proposed a resolution embodying the deep regret of the board, and their high appreciation of the labours of those gentlemen. This was seconded by the Dean of Belfast, and warmly supported on behalf of the medical and surgical staff by Sir John Byers, who said that Sir William Crawford, the chairman, had taken the keenest interest in the creation of the new hospital, and laboured indefatigably in its behalf in its early years. He was thrown much in contact with the medical and surgical staff, and by none more than by them was his retirement regretted. He always showed warm sympathy and intelligent appreciation of their endeavours, and any project of theirs was sure of a reception marked by high courtesy and kindness.

STUDENTS' ANNUAL DINNER, QUEEN'S UNIVERSITY, BELFAST.

The students' annual dinner was held in the Great Hall of the College on St. Patrick's Day. The Chancellor of the University (the Earl of Shaftesbury), who was in the chair, was supported by the Vice-Chancellor (the Rev. Dr. Hamilton), and many of the professors, members, and friends of the college to the number of over a hundred sat down. As this was the first occasion on which the dinner was held under the auspices of a university, the speaking was both retrospective and prospective, and the prophecies of success were bright and cheering.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND DISTRICT.

MANCHESTER ASSOCIATION OF REGISTERED MEDICAL WOMEN.

On March 18th Mrs. Garrett Anderson, M.D., Mayor of Aldeburgh, was entertained at breakfast at the Midland Hotel by the Manchester Association of Registered Medical Women. Dr. Merry Smith, Chairman of the Association, in a few words of welcome, expressed her sense of the honour of having as guest one who in the past had overcome so many difficulties, and made the study of medicine so much easier for the women of to-day.

Mrs. Garrett Anderson, in reply, expressed her pleasure in meeting so many Manchester medical women, and said that medical women's societies fulfilled a distinct purpose which could not be met by existing men's societies. They permitted a freedom of social intercourse and interchange of ideas which was otherwise impossible. The secret of success was in part brain power, but much more was it due to personal character and loyalty to fellow-workers, combined with capacity for hard work.

THE MANCHESTER SURGICAL AID SOCIETY.

Judging by the statement just issued by the Chairman and Treasurer of the Manchester Surgical Aid Society,

this is one of those societies, by no means too common among medical charities, which is doing good work without encouraging improvidence. It was founded eleven years ago to supply artificial limbs, trusses, etc., to the suffering poor; in 1898 only 53 cases were assisted, while in 1908 the number was 314. Applicants are referred to the society by district nurses and medical men, especially those connected with hospitals, as none of the hospitals of the district supply free surgical appliances. Every recommendation is signed by a medical man, and the circumstances of the applicants are then investigated by the District Provident Society, and, wherever possible, patients are required to pay something towards the cost. The management expenses are under £50, and have tended to decrease somewhat in late years. The total subscriptions and donations last year were only £142, and there was a deficit on the year's working of £70, which, with a previous deficit, has caused a bank overdraft of £100. During the first five months of the current financial year the applicants were 70 in excess of the corresponding period of 1907-8, and, unless the work is to be much curtailed, the society must receive additional support. This is one of those charities that medical men can support without feeling that they are encouraging improvidence, and its work does not seem to be sufficiently well known to the profession in Manchester.

INEBRIATE HOMES.

Some time ago attention was called to the opinion expressed by the Manchester justices that the successful cures of inebriety by detention in inebriate homes were so few that the homes were hardly worth the great cost. This opinion led to considerable correspondence in the Manchester newspapers, and supporters of such homes gave their experience that the cures were far more numerous than were ever made public. Nevertheless, the justices defended their opinion, giving statistics in support. We now have a further defence of the Lancashire Inebriate Reformatory in the annual report of the medical inspector, Dr. Gill. It is said in the report that a fair proportion of successes can actually be pointed to, but Dr. Gill has to complain that there is often too great delay in committing inebriates to a home. They are allowed to degenerate till they have become prematurely senile and feeble and so almost irreformable. It would be far better that all inebriates, reformable or otherwise, should be segregated on account of their evil influence on the young, and in the interests of decency and good order among the majority. Habitual drunkards often become such from their environment and from association with other chronic drinkers. Dr. Gill holds that habitual drunken mothers should be removed from their children, and that it is unfortunate that inebriates are ever allowed to become parents. To commit irreformable inebriates to prison is an injustice, as they are only to a limited extent responsible for their offences. At the same time it is pointed out that reformatory treatment is cheaper than either prison, asylum, or workhouse. Therefore, it is maintained that on the threefold ground of economy, the interests of the present generation and the future welfare of the race, inebriates ought to be segregated. This line of argument was hardly considered by the justices several months ago, as they looked rather to the immediate effects on the patients themselves.

NEWCASTLE-UPON-TYNE.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Address by Sir Lauder Brunton.

On March 18th Sir Lauder Brunton delivered an address on the treatment of heart disease before the Northumberland and Durham Medical Society. Dr. Peart, of North Shields, president of the society, occupied the chair. The address, which was delivered to a large audience in the Library of the Royal Victoria Infirmary, was full of thought and suggestion, and those who heard it were unanimous as to its helpfulness to the physician and the general medical practitioner. On the motion of Dr. James Drummond, of South Shields, a hearty vote of thanks was given to Sir Lauder Brunton for his kindness in coming to Newcastle.

Banquet.

In the evening a banquet was held in the Royal Turk's Head Hotel. The President, Dr. Peart, was in the chair, and 113 sat down. The guest of the evening was Sir Lauder Brunton. After having honoured the toast of "The King," the President called upon Dr. Hume to propose the health of "Our Guest." It was most appropriate that Dr. Hume should have been invited to discharge this agreeable duty to his old fellow student and class-mate. Dr. Hume, becoming reminiscent, gave many interesting biographical details of Professors Goodsir, Bennett, Syme, and Sir James Simpson, and of the influence of the Edinburgh teaching of that period. It was in the Metropolis of the North and in the early years spent in St. Bartholomew's Hospital and its laboratories that the good work was done and the foundation laid of the reputation and subsequent distinction which Sir Lauder Brunton had achieved. In his reply Sir Lauder was not less happy than the proposer of the toast. Supplementing what Dr. Hume had said of Edinburgh days and their teachers, Sir Lauder Brunton went on to speak of the value of experimental research in medicine and of the relationship of physiological action and chemical constitution. The pioneers of this branch of the experimental methods were Professor Crum Brown and Sir Thomas Fraser, of Edinburgh. It was impossible to estimate the extent and the worth of the information which had been obtained by experiment. The activity of the antivivisection societies had called into existence the Research Defence Society, whose object it was to inform public opinion, to show that vivisection was not needless cruelty, and that any pain inflicted upon animals was a mere cypher compared with what was saved. The outcome of Sir Lauder Brunton's visit to Newcastle and his earnest pleading on behalf of the society will be to hasten the development of the branch of the Research Defence Society towards the creation of which steps had already been taken. To the Lord Mayor of Newcastle was entrusted the toast of "The Northumberland and Durham Medical Society." This was acknowledged by Dr. Peart, who is not only its president but the oldest member. Alluding to his long association with the society, extending over fifty-one years, Dr. Peart announced that in order to mark this circumstance and the two occasions on which he had been president he was prepared to offer a badge of office to the society for future presidents to wear. From the heartiness of the applause which followed the announcement there is not the least doubt that the gift will be gratefully accepted by the committee. Upon Dr. W. E. Hume was imposed the burden of the arrangements of the banquet. He is to be congratulated upon its success.

BIRMINGHAM.*BIRMINGHAM MEDICAL INSTITUTE.*

THE Birmingham Medical Institute has at present only 190 members. The list is very small when compared with the large number of practitioners within the radius of fifty miles of Birmingham who are eligible for election. The library contains 14,268 volumes; during the past year 146 volumes have been added, and of these 58 were gifts; 72 periodicals are supplied to the reading room. During the year 799 volumes were issued to 110 borrowers. The expenditure during 1908 was £505, and there was an excess of income over expenditure of £16. The sum of £100 has been bequeathed to the funds by the late Dr. Edwin Rickards, a former president of the institute.

WALES.*INSANITARY SHIPS.*

ACCORDING to the annual report of the Newport Port Sanitary Authority, 3,587 vessels arrived at the port last year. Of the 1,388 vessels entered from foreign ports, 226, or 16.2 per cent., had sanitary defects; of the 2,199 vessels entered from coastwise voyages, 307, or 13.9 per cent., were insanitary. The fact that 1 out of every 7 vessels arriving at Newport after short coast voyages from other British ports had sanitary defects showed the necessity for careful supervision. In previous reports Dr. Howard Jones has drawn attention to serious hygienic defects in

the accommodation provided on some new vessels, and now adds that the time has arrived when the whole question of the construction of crew spaces on modern hygienic principles should receive the thorough consideration of the Board of Trade. Inspector Roberts, in his report, refers to two part cargoes of tinned herrings in tomato sauce which arrived from New York. A considerable proportion of the tins were "blown." They came originally from a factory at another town, were consigned to a customer at New York, were rejected there as some were found to be "blown," and then conveyed to Newport. The cases were landed for inspection at the docks, and after being examined 8,436 tins out of 37,883 which formed the consignment were buried and the sound sent back to the factory.

THE MEDICAL OFFICER OF HEALTH FOR ABERDARE.

Many reasons have been put forward from time to time in favour of the abolition of the pernicious practice which prevails in the provinces of electing medical officers of health for short periods. One of the most convincing is the facility with which under it the electing authority can add to the duties of the officer each time he comes up for re-election. As a rule, these additions to his duties are such as he may legitimately undertake, providing that adequate remuneration is offered for their performance. The Local Government Board, however, always requires that no part of such additional remuneration shall come out of the county funds. About two years ago Dr. M. J. Rees was elected the first whole-time medical officer of health for the urban district of Aberdare, and when, in the ordinary course, he came up for re-election a few weeks ago, it was suggested that, in addition to his routine duties, he should periodically examine the milk supplied to the town, whether it came from local vendors or from other counties, and that he should make a periodical inspection of the cows that supplied the milk in the district. Dr. Rees very properly demurred to having thrust upon him these additional duties, and pointed out that the analysis of milk was a chemical and bacteriological process, which was, as a rule, carried out by the county analyst, while the examination of cows was the work of a veterinary surgeon. After some discussion, in the course of which one councillor inquired if it were possible to distinguish tuberculous milk by tasting, the question of reappointing Dr. Rees was referred back to the Health Committee in order that information might be obtained as to the precise duties which devolved upon him. As those duties have been very clearly defined by the Local Government Board in the Order of March 23rd, 1891, the committee should not have much difficulty in coming to a decision on the matter. In the event of difficulties presenting themselves, the question at issue is so simple and clear that it would readily be decided by reference to the Local Government Board, by whose decision we are quite certain Dr. Rees would loyally abide.

Special Correspondence.**VIENNA.***Jubilee of Eminent Surgeons.—Number of Medical Students.—Health of Vienna.*

A SHORT time ago two of the leading surgeons of Vienna celebrated their jubilee. One of these, Professor v. Frisch, a pioneer of kidney and bladder surgery, attained the age of 60 in full health, surrounded by numerous pupils, friends, and grateful patients. Professor Zuckerkandl, formerly one of his assistants, in a congratulatory address, pointed out the difficulties which at the outset had impeded modern surgery, and the pioneer work done by Professor v. Frisch. The other jubilee was that of Professor v. Eiselsberg, director of the second surgical clinic of Vienna, who celebrated the twenty-fifth anniversary of his graduation. He attained at a comparatively early age one of the highest positions which a surgeon can reach. After being a pupil at Billroth he went to Königsberg as professor of surgery, where he gained fame as scientist and surgeon. He was called to Vienna to succeed Albert. Here his clinic is the centre of modern surgery. A

Festschrift comprising all the important publications originating from Eiselsberg's clinics was presented to him by his pupils.

The decrease in the number of medical students is already making itself felt in medical circles. Not only are appointments in hospitals more easily and quickly obtained than even five years ago, but in many of the smaller hospitals salaries have to be paid to the physicians and surgeons to induce them to devote some of their time to the work there, whilst twenty years ago these posts were eagerly sought after by members of the profession. The increase of the population, the improvement of the material position, and the education of the general public has absorbed many doctors formerly doing nothing but walk the hospitals. The increase of the system of Krankencassen, or the compulsory contract practice, has also caused many practitioners to accept the post of club doctor for moderate pay, rather than to work in the hospital for nothing. On the other hand, the unsatisfactory condition of the ordinary practitioners, together with warnings issued by several medical corporations, have induced many students to turn their minds to other studies than medicine. If things do not change much in the next few years, the profession may, by sheer scarcity of doctors, attain a much better position than it now occupies.

The health of the capital has been remarkably good during the last winter months. In November, December, January, February, the weather was fairly equable, though cold. Thus the death-rate went down as low as 15 per 1,000, which is a record for this city during the forty years that regular reports of the health bureau have been published. Only lately, on account of some small epidemics of measles, scarlet fever, and influenza, the figures have gone up a little, but still they are below the average. The number of births has also decreased a little compared with the figures for the last five years, but this is quite insignificant compared with the saving of life due to the low death-rate. Hence the annual increase of the population by 2 per cent. will surely be more than maintained. Already Vienna has passed the second million of its inhabitants, and counts among the healthiest large cities, in spite of the phthisical cases which are believed to be so numerous here.

Correspondence.

DIAGNOSIS IN STOMACH SURGERY.

SIR,—I wish to support Dr. Hutchison's protest against the neglect of diagnosis by some of those who practise gastric surgery, but I would like to include in the complaint many practitioners who do not operate, but who are unable or unwilling to appreciate the value of careful preliminary diagnosis, and either hand a case straight over to a surgeon for an exploratory incision or persist in treating the case by medical means, in spite of continued failure, and the presence of symptoms which at least suggest the desirability of further investigation.

For example, a lady came some distance to see me on account of stomach trouble which had existed for twenty years. I found her stomach much dilated with visible peristaltic waves. I told her I thought there was sufficient reason to suspect pyloric obstruction, which would require an operation, but that before coming to this conclusion I should want to have an opportunity of making a further examination of the stomach. I wrote to her family doctor telling him this, and explaining the nature of the examination which I thought should be made. In reply, I got a letter to say that the lady was being sent to a physician in London, who, he hoped, would decide between us, as, in his opinion, she was suffering from nothing but functional disease. I wrote to the physician, enclosing a copy of my notes, but he decided that the lady should continue to undergo the medical treatment which had proved so ineffectual for so many years, and declined to sanction any further examination of the stomach. As this gentleman is considered an authority on stomach diseases, it is somewhat disappointing and shows that the difficulties in the way of intelligent management of stomach cases are great.

When a case of stomach disease has resisted ordinary medical treatment, I hold it to be our duty to proceed to

further examination, and this is so simple that there really is no excuse for neglecting it. A meal of any kind, perhaps the simpler the better, but which should certainly include twenty or thirty currants, as these are easily identified, is given; six hours afterwards, no other food or drink having been taken in the interval, the stomach should be washed out, and, if there are any remains of food, pyloric obstruction of some kind or another may be diagnosed, and the case should be handed over to a surgeon for gastro-enterostomy. These are the cases that by universal consent do best, and they are much more common than is generally supposed. There may be very serious pyloric obstruction without any dilatation of the stomach or any vomiting.

The other helpful means which may often indicate the desirability of an operation is by the examination of the faeces for latent blood. The best test is to add 10 drops of a saturated alcoholic solution of benzinid to a small portion of faeces in a test tube and then 20 or 30 drops of peroxide of hydrogen (20 vols.), if blood is present a persistent dark blue colour is developed.

I have used both these methods for a sufficiently long time and over such a large number of cases that I can recommend them with perfect confidence as not likely to mislead.

In addition to these, and such conditions as perforation, subphrenic abscess, impermeable oesophageal stricture, there is a residue of cases which do not get better in spite of medical treatment, and where neither of the above indications for surgical operations can be discovered, that is to say, there is no evidence of pyloric obstruction or of any bleeding ulcer, yet the patient suffers from recurrent attacks of pain and vomiting. I have under such circumstances sanctioned an operation as a *dernier resort*, and I shall probably do so again, although my experience has been that the operation does no good, and should not be recommended.—I am, etc.,

Birmingham, March 23rd.

ROBERT SAUNDY.

THE DIAGNOSTIC VALUE OF HUNGER PAIN.

SIR,—It has afforded me great pleasure to observe that Dr. Robert Hutchison is gravely concerned as to the diagnostic value of that symptom to which I have given the name "hunger pain." I feel sure that he wishes to elicit from me a reply to his letter in your issue of March 20th, since he specially quotes my view. I confess, therefore, that when writing the paragraph he reproduces from my paper, Dr. Hutchison was in my mind. I read, I think, everything which Dr. Hutchison writes upon the question of stomach derangements, and I am always convinced that the views he so ably expounds are fundamentally inaccurate. In all that he writes he seems to me to rely upon hypothesis and conjecture, when he should be guided by facts. In his letter he recounts the "natural history of duodenal ulcer" in various stages; the first, when recurring attacks of "hunger pain" are present, is, we are informed, one of "hyperchlorhydria"; the second is one of "continuous hypersecretion"; finally, he believes, "the formation of a duodenal ulcer is only the terminal event in a case of hypersthenic dyspepsia." I have operated upon a large number of patients who display the symptoms Dr. Hutchison describes, and I find that in the early as in the late stages a duodenal ulcer is present; in the early stages so small that it may sometimes be excised, in the latter stages so large that gastro-enterostomy is necessary. These patients have not always, or even usually, the variations in the quantity or in the condition of the gastric secretion which Dr. Hutchison holds to be the cause of their symptoms.

There are certain cases of "dyspepsia" in which attacks occur, attacks in which a definite group of symptoms, chief among them being "hunger pain," is present. The cause of these symptoms Dr. Hutchison believes to be an alteration in the quality or the quantity of the gastric juice; the condition, he holds, is one of "functional" disorder. As to the pathological conditions present in such cases, Dr. Hutchison offers no evidence. He does not see the stomach or duodenum, and he cannot therefore be a witness to their integrity. Whether an ulcer is present or not he has no means of telling. If an ulcer be present he cannot know where it lies. His pathological acquaintance

¹ See BRITISH MEDICAL JOURNAL, November 16th, 1907, for a description of "hunger pain."

with the condition does not exist. All is chemistry and make-believe. In patients who are referred to me with these symptoms I do not hesitate to diagnose duodenal ulcer, and I advise operative treatment. At the operation I am able to demonstrate the ulcer to an onlooker who before may have been sceptical. That, briefly put, is the difference between Dr. Hutchison and myself. We describe the same group of symptoms; he attributes these symptoms to a "functional" disorder; I have been able to demonstrate in over 230 cases that they are due to a structural lesion in the duodenum. And I know that duodenal ulcer can be diagnosed from the symptoms alone with a margin of error that is less than 5 per cent.

I state the position quite frankly, because it seems to me that it is hardly a matter to be settled by debate. There is need rather for patient and unprejudiced observation. If Dr. Hutchison will submit his cases to the surgeon, he will find a duodenal ulcer to be the cause of the symptoms I have described. If he is loth to do this, I shall be happy to give him the opportunity to see and examine my cases before operation, and at the time of operation I will accept his decision as to the existence and the position of any organic lesion. Dr. Hutchison does not tell us what knowledge he possesses as to the condition of the viscera of the patients in the early "stages" he describes. Before he can predict what is or what is not present he must enlarge his experience of the "pathology of the living." Then, and not till then, is he qualified to pose as critic: not until then can he speak with full authority. I shall consider it a privilege to equip him with this necessary experience, and to furnish him with the material upon which alone a sound opinion can be based.—I am, etc.,

Leeds, March 22nd.

B. G. A. MOYNIHAN.

SIR,—The diagnostic significance of hunger pain in chronic ulceration of the duodenum is of sufficient importance to render its probable cause worthy of some possible explanation.

As it is practically certain that the pain which is felt in chronic ulcer either of the stomach or the duodenum is associated either with the contact of food with the eroded surface or with the induced muscular contraction, there are a few well-defined physiological reasons why the differentiation of the two seats of disease should be easily made.

In ulcer of the duodenum pain is usually felt from two to four hours after food—that is to say, at that period when the pyloric aperture relaxes. The acid contents of the stomach escape into the duodenum, and the latter undergoes contraction. And here it may be stated that the more indigestible the meal, or the more solid the food taken, the longer are the contents of the stomach retained in that viscus, and, consequently, the greater the interval between ingestion and the appearance of the pain. Patients find that when the pain occurs it is relieved by taking food, hence it has come to be termed "hunger pain." The relief afforded is based on the simple physiological fact that when food is taken into the stomach the pyloric aperture is closed, and for the time being there is a temporary cessation of the passage of the food from the stomach and over the surface of the ulcer, and of any duodenal peristalsis.

Another peculiar and significant feature about pain associated with ulcer in the duodenum is the frequency with which the seizure takes place during the night. Here, again, the probable explanation lies in the physiological fact that when a meal is taken in the evening gastric digestion is delayed during sleep, and it is not for some hours that the stomach ejects its contents through the relaxed pylorus, and the patient is awakened by pain.—I am, etc.,

Glasgow, March 19th.

A. ERNEST MAYNARD.

SIR,—Whilst I have read with great interest Dr. Hutchison's letter, I do not think that he makes out his case. The theory which he has adopted of a regular sequence commencing with hyperchlorhydria, followed by continuous hypersecretion with ulcer as the terminal stage, was first enunciated by Robin in his classical treatise upon diseases of the stomach published in 1901. He also coined the term "hypersthenic dyspepsia" to designate this sequence. This hypothesis, never frankly

accepted by the majority of those working at diseases of the stomach, has recently been further discredited, as later work has shown:

1. It is quite an open question to what extent hyperchlorhydria really exists as such. It is obvious that the percentage of hydrochloric acid found to be present in the stomach contents after a test meal must be the resultant of three factors—the total bulk of gastric juice secreted, the amount of chyme which has passed out of the stomach, and the acid content of the pure gastric juice. It may thus be quite possible that from some abnormality in the pyloric reflex we may have an absolutely normal gastric juice, although the examination of the test meal will show hypochlorhydria. The converse is, of course, true. With modern methods of estimating the amount of gastric juice secreted, the whole question of the acidity of the gastric juice will need revision.

2. It is practically certain that in the cases which present what we know as symptoms of hyperchlorhydria, there must be some factor in addition to the excess of acid to account for the pain. The theory that the pain is directly due to the excess of acid is absolutely contradicted by known facts. In the first place, we often meet with cases which are absolutely without pain, although the hydrochloric acid content of the stomach contents is very high. Dutton Steele found acidity of over 70 in 3 cases without symptoms; Stockton has repeatedly found acidity of 100 in similar cases; Kauffman in 19 cases free from gastric symptoms found an acidity of over 70 in 10 and of over 100 in 2. Similar observations have been made by Gintli, Schule, Meyer, Brandeburg, and Illoway. In the second place, Soupault, Verhaegen, and Luigi Sansoni have recorded numbers of cases in which the hyperchlorhydria symptoms having been cured by appropriate measures, the hydrochloric acidity of the stomach was found to be just as high as ever. Thirdly, in many cases presenting the hyperchlorhydria syndrome, the hydrochloric acid content of the gastric juice was found to be subnormal.

3. If there is one thing more certain than another it is that when you find more than 50 or 60 c.m. of hydrochloric acid-containing fluid in the stomach before breakfast, together with food residues, there is practically always an ulcer close to the pylorus or some contraction of the pylorus from adhesions due to old ulceration. If this is associated with rigidity of the rectus muscle, with or without the characteristic tender spot and hyperaesthetic skin area, our confidence in the diagnosis will be correspondingly increased.

I think that, taking all the facts which I have mentioned into consideration, we are justified in concluding that the pain of hyperchlorhydria is not due to the amount of hydrochloric acid in the stomach, but to the presence of some other factor, which may be an ulcer or a hyperaesthetic condition of the stomach or even of the solar plexus. As regards the hunger pain, which is so characteristic of ulcer of the duodenum, Dr. Hutchison evidently confounds it with the hyperchlorhydria pain which I have been discussing. The hunger pain is *sui generis*, and comes on when the stomach is empty, and is probably of purely mechanical origin, due to the dragging of the retracted empty stomach upon the adhesions by which the ulcer is attached to surrounding parts. On introducing food into the stomach the tension is relaxed, and the pain ceases.

In conclusion, whilst cordially agreeing with Dr. Hutchison that the great majority of cases of dyspepsia met with in practice are due to functional disorder and not to organic disease, I think that there is much more chance of hyperchlorhydria being considered functional when the real cause is irritation from a gall stone or a duodenal ulcer than the reverse. It is so fatally easy to be misled by the latent periods which appear characteristic of these affections into deluding oneself that you have cured a functional disorder.—I am, etc.,

London, W., March 21st.

GEORGE HERSHELL.

DIAGNOSIS OF DUODENAL ULCER.

SIR,—Mr. Alexis Thomson, in his paper on the diagnosis of chronic duodenal ulcer, lays stress on the cause of pain as being due to peristalsis and not to the contact of the hyperacid residue of digestion with the ulcers.

It is difficult to reconcile the explanations he puts forward with personal experience.

As a sufferer for seven years I invariably obtained instant relief by neutralizing the hyperacidity; a strong saline draught would not stop the peristalsis of the stomach—if anything, it would rather stimulate it—and yet the pain disappeared without fail. Again, if the stomach be washed out during the crises of pain and freed from the acid-sour residue, pain will at once subside and be replaced by a feeling of comfort, and if the patient now takes a meal the pain will not return until two or three hours afterwards, when digestion is finished and the acid residue is again passing over the ulcer.

A symptom which I have observed in others and have experienced, but which I have never seen mentioned, is that at the time the pain and pyloric cramp is at its height there is often a copious flow of saliva; it will run from the mouth in a stream, if the patient swallows the saliva he will experience instant relief. This always struck me as being Nature's relief.

After operation the pain disappears long before the ulcers could possibly have healed; is not this due to the acid being neutralized, or, by passing through the new opening, not coming in contact with the ulcers? At the same time the patient is conscious of markedly increased peristalsis.

Hyperacidity might be a contributory pathological cause, but it would also appear that the presence of an ulcer in an organ would necessarily increase its secretion; such is the case in ulcers of tonsils or mouth and also in dysenteric ulceration of the bowels, etc. Therefore it is reasonable to conclude that a gastric or duodenal ulcer is the cause of hyperacidity.—I am, etc.,

Falmouth, March 25th. A. WRIGHT, Major R.A.M.C.

PULMONARY TUBERCULOSIS IN CHILDREN.

SIR,—In Dr. Walter Carr's letter in your issue of February 20th he states that my figures from foreign sources in regard to the number of children found at autopsies to have tuberculous lesions in the lungs correspond, in the main, to those from London hospitals.

The figures I gave were for children dying of various diseases, or from accidents, and Dr. Carr now admits that autopsies show that some 30 per cent. of children dying from various causes show tuberculous lesions in the lungs. But if these children are representative of the general child population, then it follows that 30 per cent. of children living have pulmonary tuberculosis.

Deaths certified as being from phthisis in children are far less than 1 per cent.

If these children are not representative, then we must hold that the existence of this pulmonary tuberculosis has been the determining factor in causing the deaths—that is, that children with pulmonary tuberculosis are specially liable to die from other causes. This is true to a certain extent for one or two diseases, such as measles, but cannot hold for deaths from diphtheria, accidents, etc. Let us grant, for the sake of argument, that it is a factor in so high a proportion as one-third of the cases. That only brings our percentage down from 30 per cent. to 20 per cent. Hence it appears clear that autopsies show that at least 20 in every 100 children have pulmonary tuberculosis. I say that we ought to be able to detect this disease during life in children; and if Dr. Carr would spend a few days examining school children I am certain he would do so. As it is, he probably only sees children seriously ill, and hence forms an erroneous conclusion.

My "rule of three" method of calculation has been much criticized. In my original paper I stated that the deductions were only meant to be very roughly approximate, and that it would not affect my argument if the results were halved or quartered.

I have only ventured to urge that we should diagnose this disease as soon as physical signs appear. Sir Clifford Albbutt would think I am deplorably behind the times, for he writes me that "the case in which physical signs have appeared without systematic treatment is a bungled one."

On referring to my notes on 65 autopsies in an asylum on persons found to have pulmonary tuberculosis (in 63 of which tubercle bacilli were found), I find that the existence of this disease was diagnosed as long as one month before death in only 10 cases. Is it not time that some one called the attention of the profession to our failure of diagnosis in this matter?—I am, etc.,

Droitswich, March 22nd.

MARY HAMILTON WILLIAMS.

INFANTILE MORTALITY IN POOR LAW INSTITUTIONS.

SIR,—The figures published in the Minority Report of the Poor Law Commission as to the Infantile Mortality in Workhouses and Poor Law Infirmarys obviously require careful investigation. There are, however, certain considerations which make it highly probable that the deductions drawn from them by the Minority Commissioners and by some writers in the public press are not justified. For instance, the whole of the figures after the first three weeks of life are obviously erroneous, because the report states that they have been obtained by assuming that the death-rate amongst the children discharged is at the same rate as amongst those detained in the infirmary. The fact is, however, that infants are not detained as a rule in the infirmary after the first three weeks unless the child is ill. Obviously, if the death-rate of these sick children is assumed to apply to the healthy children discharged, the death-rate so obtained will be very much greater than the real death-rate. Again, some of the figures are so extraordinary that they can hardly be accepted until verified and the methods of recording the births and deaths have been critically examined.

However, confining one's attention to the death-rate during the first three weeks of life, the figures given show that the death-rate is higher in infirmarys and workhouses than it is amongst the general population. The cause of this is fairly obvious. Amongst the women received into the maternity wards of workhouses and Poor Law infirmarys are many who have been underfed and overworked throughout the period of pregnancy and many who have been admitted to the infirmary owing to syphilis and other diseases: the majority of them are unmarried, and in the case of many, owing to disease or to deliberate interference on the part of the mother, the child is born prematurely. It is manifestly unfair to compare the infantile death-rate of such a population with the infantile death-rate of the general community. The same influences do not affect to anything like the same extent the voluntary lying-in hospitals or maternity charities; first, because the benefits of such charities are usually reserved to respectable married women, and, secondly, because pregnant women suffering from concurrent disease tend to be weeded out from the clientele of such charities and sent into Poor Law infirmarys and general hospitals. Nevertheless, one lying-in hospital, quoted in the report, shows a mortality-rate of 59.3 per 1,000 for the first fourteen days of life, as compared with a mortality-rate for the same period in Poor Law institutions of 46 to 53 per 1,000.

How impossible it is to find any certain conclusions upon the figures supplied is well shown by the returns obtained by the Minority Commissioners from the Plaistow Maternity Charity. In this charity only 15.33 per 1,000 of the children died during the first fortnight—that is, about half the infantile death-rate in the general population of that period. From this the writers of the report draw the conclusion that it is better the mothers should be attended in their own homes than sent into hospitals or infirmarys. On the same lines one could argue that, in order to reduce the infantile death-rate in the general population, all mothers should be confined in what the Minority Commissioners describe as the "poor and wretched homes" of Plaistow.—I am, etc.,

C. T. PARSONS.

Fulham Infirmary, Hammersmith, W., March 19th.

SIR,—With reference to Mr. F. Lawson Dodd's letter of March 6th concerning the high infantile mortality in workhouses, as suggested in the Minority Report, great publicity on this subject has lately been given in the public press (*Daily Mail*, March 3rd) by the Honourable Sydney Holland and others. But this paper apparently does not wish to publish any reply from the other side. In answer to these statements, and on behalf of one of the many people engaged in Poor Law work, I would like to point out that the high infant mortality complained of is not found in every workhouse. Of the 103 children born in Oulton Workhouse, Lowestoft, during the past ten years ending Christmas, 1903, there were only six deaths during the first year of life, and of these five died within the first fourteen days of life, death being due to some unnatural weakness present at birth, which could not have been influenced by the child's surroundings. This only deals

with very small numbers. But, nevertheless, it gives an infantile death-rate of 58.2 per 1,000 births, which is quite different to 330 per 1,000, as is stated to be the usual rate in workhouses. Further, it is less than half that for the population at large, which is 121 per 1,000.

The fact that most of the babies born in workhouses are illegitimate may account to some extent for the high death-rate in some institutions. Of the 103 children mentioned above, the large number of 97 were illegitimate. Again, in these cases, the mother has so often weakened herself by abortifacients and the anxiety caused by her condition, to which is often added venereal disease, that the infant has a poor chance to survive.

It is extremely difficult for anyone well acquainted with the conditions that exist in the homes of some of the poorer classes to believe that children living in these surroundings can have a better chance of surviving than children in an institution under the constant supervision of a Local Government Board inspector, a medical man, and trained nurses.—I am, etc.,

DUDLEY W. BOSWELL, M.D.,
Medical Officer to Oulton Workhouse Infirmary and
District, Lowestoft.

March 23rd.

THE TREATMENT OF SCHOOL CHILDREN.

SIR,—If one may judge from the newspaper reports of the meetings of various education authorities, it would seem to be urgently necessary for the members of the medical profession to realize that such developments are taking place as will vitally affect their interests in the future. At the present time many education committees are actually in the process of negotiations with lay hospital committees for the services of the medical staff of the hospital, and if any uniform action is to be taken by the profession it is necessary that such action should be organized at once.

There appears to be no reason why the existing charities should not be used for suitable poor cases discovered during medical inspection of school children, so far as is possible with their present funds and arrangements. In fact, the help afforded by medical inspectors in sorting out cases requiring attention should result in the prevention of a considerable amount of waste. Even this, however, is a matter that should be carefully considered. But it does not require much consideration to convince one that the medical profession should permit no extension of these charities by means of public money in order that these cases may be dealt with. All arrangements for the necessary additional treatment that is required should be made between the public authorities on the one hand and the medical profession on the other, without the intervention of any third party in the form of lay hospital committees.

Of course the whole problem is greatly complicated by the long association of the medical profession with charities and charitable institutions in a manner in which no other members of the community are associated. The fact that the medical profession has for so long given services instead of money to charities is the key to the situation, and the question naturally arises whether the present time is not opportune for the medical profession to cease to give services at these institutions as charity. It is doubtful whether any other step would effectually prevent the further exploitation of the profession by the public.—I am, etc.,

Winchester, March 2nd.

ROBERT A. LISTER.

INSURANCE AGAINST COSTS AND DAMAGES IN CIVIL ACTIONS.

SIR,—In consequence of the demand which has lately sprung up for insurance of medical practitioners against the risk of pecuniary loss when adverse verdicts, involving payment of plaintiff's costs and "damages," are returned against them in civil actions in their professional work, the Council of the Medical Defence Union has concluded arrangements with a company of the very highest repute—the Yorkshire Insurance Company—for such indemnity. All members of the Medical Defence Union can now, by payment of a yearly premium of the small sum of 7s. 6d., effect insurance up to the limit of £2,000, and for a payment of 9s. up to the limit of £2,500—in any case defended by the Union in this respect. For fuller particulars and

general conditions members are referred to the Secretary of the Yorkshire Insurance Company (founded 1824), Bank Buildings, Princes Street, E.C., to whom all applications by members of the Union for policies should be made.

The Medical Defence Union will, as heretofore, guarantee the legal expenses connected with the defence of their members in any case taken up by the council, and conduct such defence through their solicitor and counsel; the Yorkshire Insurance Company will, in addition, guarantee the costs ordered to be paid and any damages up to £2,000 or £2,500 respectively in any individual action in which a verdict adverse to the member defendant is obtained. Thus a complete guarantee against pecuniary loss, up to these limits, to an individual member of the Medical Defence Union is secured in this respect; and further, by effecting the insurance, the members of the medical profession will, I hope, no longer be harassed by appeals to their charity for defraying the expenses incurred when actions are recorded against the individual practitioner concerned, and this will undoubtedly be a great gain individually and collectively.—I am, etc.,

A. G. BATEMAN,
General Secretary, Medical Defence Union,
London, W.C., March 21st.

RURAL NURSING ASSOCIATIONS.

SIR,—Dr. Milligan's excellent letter in the *JOURNAL* of March 13th exactly illustrates the manner in which my "withers" were wrung, under a nursing committee, and I am glad that attention has been called to the matter in such an able manner. I have had the unfortunate experience of being so handled by a local committee of influential ladies that, though being on the committee, the nurse was always upheld on occasions when she interfered with my patients, and took upon herself to criticize my methods and to attend surgical cases without my consent. It is absolutely true that the nurse touted for patients, and in every way tried to make herself of much importance. Also the nurse would leave a case when she thought proper, and thus sometimes endangered the life of her patient, on some occasions, because the rules of the home from which she was sent were that she was not to stay longer than a certain time at one case. Thus the committee and the home controlled her, and the doctor and patients were without her help when it was really needed. I trust the British Medical Association will seriously give their attention to this matter.—I am, etc.,

March 19th.

VICTIM.

A MEDICAL DEGREE FOR LONDON STUDENTS.

SIR,—Graduates of the London University should be grateful for any adverse criticism of the extraordinary proposals of the Conjoint Board, and the inherent absurdity of the scheme could not have been more ably exposed than in Dr. Mercier's letter. I am sure, however, he is mistaken when he says that the crux of the matter is the matriculation examination. Many years' experience has taught me that a very considerable number of students matriculate, and even pass the preliminary scientific, and subsequently decline graduation at the University of London. The fact is that the scope and character of the professional examinations is such that graduation means in every case one, and in many cases two, extra years added to the curriculum. This price the average student will not pay, and his objections are often strengthened by the average parent. The present agitation for an easy London degree has arisen contemporaneously with the establishment of the new provincial universities, and the consequent depletion of the London schools. London has only two advantages to offer a student: One is its unrivalled clinical material and teaching, and the other is its highly considered degree. Post-graduate schools have practically destroyed the first advantage, and if the second is to be destroyed the number of London students is not likely to increase. Why should a provincial student come to London to work for a degree which will be no better than any other? The grievance of the average London student is no doubt legitimate and pressing, but little will be gained by degrading an old and valued degree to meet it. Robbing Peter to pay Paul is an ancient and attractive process, but results gained in that way have not in practice proved particularly satisfactory.—I am, etc.,

Wanstead Park, March 18th.

A. CAMPBELL STARK.

THE PREVENTION OF DEATHS BY BURNING IN CHILDREN.

SIR,—Dr. Parry, in his letter on the prevention of deaths from burning in children, omits to mention celluloid collars. These dangerous things are worn very commonly by children in the country, and I know of a case near here where a child was badly burned when wearing one, owing to the collar coming in close proximity to a candle flame.

There is no doubt an impossibility confronting the attempt to prohibit the sale of flannelette, and I suppose in a minor degree of celluloid collars, but it might be possible to legislate so that the dangers which attend both these substances should be printed and sold with them.—I am, etc.,

CHARLES W. EMLYN.

Culworth Hall, near Banbury, March 20th.

THE TREATMENT OF CANCER.

SIR,—Referring to Dr. Frankish's letter published on March 13th, p. 694, I had no reason to doubt the statement of my patient that Dr. Frankish had preferred not to treat him. I judged that this was in consequence of the nature of the case and the age of the patient. I had no intention of making any reflection or of being discourteous, and regret that through some misunderstanding I was misinformed.

As regards the other case, this is some four years old. I understood that Dr. Frankish's attendance had been dispensed with, and certainly cannot be responsible for what he was told. I was asked to try my treatment, and did so in company with another medical man. After treating for some time, I found the case in too advanced a stage to hope for a successful issue, and ceased to attend.

I have understood that I was on friendly terms with Dr. Frankish for years before and since this case, and it was not until I saw his letter in your issue that I found he considered himself aggrieved.

I at once wrote him expressing my regret that he should feel offended at anything I had unwittingly done.—I am, etc.,

Accrington, March 23rd.

JAS. FENWICK.

THE NATIONAL SERVICE LEAGUE AND THE MEDICAL PROFESSION.

SIR,—Now that the National Service League is seeking to explain and extend its principles throughout the country, it occurs to me that the medical profession have it in their power to render this excellent organization a most powerful help. It may, I presume to think, be taken for granted that the vast majority of the profession is in favour of those principles as enunciated by the league. The immense influence that can be exerted by them, collectively or individually, cannot be gainsaid. The profession is as directly interested in the defensive conditions of the empire as the rest of the community, and, I claim, is second to no other body in its loyalty and patriotism. With confidence it is, to the physical aspect of the subject and the application of those principles to the growing boys and youths, that I would specially make my appeal. The probable beneficial result by drill and other gymnastics is quite sufficient reason for substituting the word "shall" instead of "may" for a course of military training. I would, therefore, plead for the attention of every member of my profession to this subject, and at the same time ask also that the political, moral, and social features should not the less be a strong recommendation in its favour.—I am, etc.,

J. SELWYN COWLEY, J.P., M.R.C.S.

Upton-on-Severn, March 20th.

DR. LOUIS C. PARKES, Consulting Sanitary Adviser to the Commissioners of Works and Public Buildings, has been nominated a member of the Royal Commission appointed on March 23rd to assist the Board of Trade in the organization of exhibits illustrative of British arts, industry, and agriculture at the forthcoming international exhibitions at Brussels in 1910 and at Rome and Turin in 1911. As the result of the recommendations of a Board of Trade committee, a special branch of that Board has been established to deal with all matters relating to the participation of Great Britain in foreign international exhibitions in the future. The Royal Commission now appointed, with the Prince of Wales as president, and Lord Lytton and Sir Swire Smith as chairman and vice-chairman respectively, will co-operate with the Board of Trade in respect of the exhibitions named.

Universities and Colleges.

UNIVERSITY OF EDINBURGH.
IMPROVEMENT AND EXPANSION.

At a meeting of the committee appointed some time ago for the purpose of inaugurating a scheme for the improvement and expansion of the University of Edinburgh the convener reported that the total amount of subscriptions intimated was £47,970. With a portion of the money which had been so subscribed the University had been able to purchase the site of the old Royal Infirmary at a cost of £15,000, and the adaptation of certain buildings thereon to museums, class-rooms, laboratories, and other workrooms for the departments of physics and engineering had been met in most part by grants from the Carnegie Trustees. From Sir Donald Currie's munificent gift a capital sum of £20,000 had been set aside as a fund for the endowment of lectureships in various branches of university education. A special memorial fund had been contributed by Sir John Jackson, in memory of the late Professor Tait, for promotion of research in the physical laboratory. A considerable amount of money was still required to enable the committee to endow chairs of French and German.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary comitia was held at the College on Friday, March 19th, the Senior Censor, Dr. Norman Moore, in the chair.

Death of Lady Powell.

On the motion of Dr. Norman Moore, a resolution was passed expressing the deep sympathy of the Fellows with their President on his recent bereavement.

Licence.

The licence of the College was granted to Claude Edward Freer Fortin.

The University of London.

A report was received from the delegates of the two colleges appointed to consider a scheme of conjoint examinations under Statute 123 of the University of London.

The delegates begged to recommend that they be authorized by the Royal Colleges to confer with Representatives of the Medical Societies in London and other Bodies on the University Question.

After a discussion, in which Drs. Herringham, Payne, Mercier, and L. Shaw took part, the recommendation was adopted on the motion of Sir William Allchin.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved at the examinations indicated:

SURGERY.—J. M. Fiske, *J. A. Koch, *W. N. Pickles, *N. S. Shenstone.
MEDICINE.—J. Bramley-Moore, W. C. D'Eath, *H. A. Hancock, *F. O'Neill, *P. N. Pantan, *N. S. Shenstone, *S. H. Watton.
FORENSIC MEDICINE.—J. Bramley-Moore, H. A. Hancock, F. O'Neill, P. N. Pantan, N. S. Shenstone.
MIDWIFERY.—W. C. D'Eath, F. O'Neill, P. N. Pantan, G. S. Richardson, N. S. Shenstone.

The diploma of the society has been granted to Messrs. W. C. D'Eath, J. M. Fiske, W. N. Pickles, N. S. Shenstone, and S. H. Watton.

* Section I. | Section II.

Medico-Legal.

THE RESPONSIBILITIES OF FEVER HOSPITAL AUTHORITIES.

A CASE came before the Sheriff Court in Dundee a short time ago in which a woman acting as legal guardian for her son sued the Town Council for £40. She averred that the sum represented loss and damage sustained by her owing to the defenders refusing to admit her niece to the Fever Hospital while she was suffering from scarlet fever. She also averred that a doctor certified the child to be suffering from scarlet fever, while the medical officer of the Fever Hospital diagnosed the case as one of chicken-pox, and returned the child to her home. The Town Clerk said the contention was whether the municipality or hospital authorities had been at fault. He submitted that it was irrelevant to state they were bound to admit the child without giving chapter and verse for it. The pursuer's agent said his client alleged that the medical officer's diagnosis was the ground of his case. The Sheriff ultimately dismissed the action as irrelevant, and found the pursuer liable in expenses.

MAGISTRATES AND LUNATICS.

AN inquest was held recently at Paulton by Dr. Craddock, coroner for North Somerset, with regard to the death of a woman who committed suicide by cutting her throat. Dr. C. L. Ouseburn stated that he had attended the deceased since November 1st, and on February 23rd advised her removal to an asylum; the local magistrate, however, who made an examination of the deceased, had refused his signature. The coroner,

in summing up, commented very strongly on the action of the magistrate in refusing to sign the certificate, and pointed out the folly of his venturing to place his opinion against that of an expert. He had no doubt this person's life had been sacrificed through the neglect to accept the doctor's advice. The verdict returned was "Suicide during temporary insanity."

FEES FOR MEDICAL EVIDENCE.

DR. CHAS. MERCIER (London, W.) writes: Your definition of an expert witness in answer to "Cheshire Surgeon" (BRITISH MEDICAL JOURNAL, March 20th, p. 759) is new to me, and I venture to doubt whether there is authority for it. You say that his evidence as to the testamentary capacity of a patient would be "ordinary professional evidence. Expert evidence is properly that given by an outside witness who has nothing to do with the case personally." *Aliquando dormitat bonus Homerus*. I think this is a slip.

Evidence is either of fact or of opinion. Any one may be compelled to testify to facts within his knowledge which have a bearing on a litigated case. He cannot escape his obligation to assist the course of justice. If the facts are such as any one is capable of observing, he must give his evidence *gratis*. But if the facts are such as require technical skill to observe, the legislature recognizes that the evidence should be remunerated, and has fixed a statutory scale of fees. But no man can be compelled to give evidence of opinion; and if he consents to give such evidence, he is at liberty to charge for it anything he pleases. If the legal advisers of the litigant consider that the evidence of opinion is not worth what the witness charges, they need not call him; but if they do call him, they must pay him whatever he asks, provided he has named his fee beforehand. If he has not named his fee beforehand, there are certain customary fees for evidence of opinion, fees which are higher than those for evidence of fact, and the witness is entitled to charge, without agreement or no agreement. No doubt many medical men do give evidence of opinion for fees on the statutory scale, but this is because they do not appreciate their rights.

The expert witness is the witness who gives evidence of opinion on a matter on which he has, or is supposed to have, special knowledge; and the fact that he has had to do with the case personally, or even that he is interested in the issue of the trial, does not remove his evidence from the category of expert evidence. The vendor of a picture or of a snuffbox may give evidence of his opinion as to the genuineness and value of the article sold by him, and his evidence, if he is a dealer, is expert evidence. An engineer regularly employed by a mining or water company may give evidence as to the works of the company. So long as his evidence is of fact which any one might observe, he is an ordinary witness. If he gives technical evidence, of fact which no one but an engineer is competent to give, he is a professional witness; but the moment he gives an opinion on an engineering subject, he is an expert witness, and is none the less an expert because he has had to do with the case before.

If a medical witness is called to testify that he saw his patient fall, he is an ordinary witness, and is not entitled to charge a fee for his evidence. If he is called to testify that his patient dislocated his elbow, he is a professional witness, and entitled to charge a fee on the statutory scale; but if he is called to testify that, in his opinion, the patient will never recover free movement in the elbow, he is an expert witness, and may charge what he pleases.

"Cheshire Surgeon" cannot refuse to go into the box and testify to the symptoms he observed in his patient, and for this he is entitled to a fee on the statutory scale; but if he is called to give evidence as to his patient's testamentary capacity, he can charge what he pleases. If he has not yet given evidence, it is not too late to make his bargain. If he has given evidence, he could probably recover such fees as are customarily charged for expert evidence by practitioners of standing equivalent to his own. He is quite entitled to charge for consultations and letters; I always charge for them, and the charge has never been objected to. If his charges are objected to, he can refuse, when in the box, to give any opinion whatever, and no power on earth can compel him to give one; but if he refuses to give evidence of fact, he may find himself committed for contempt of court. He should therefore clearly discriminate beforehand between fact and opinion, and this is not always as easy as at first sight appears. He is much more likely, however, to mistake opinion for fact than for expert evidence.

Of course there are special circumstances which may disentitle a witness of opinion from charging the fees of an expert. A prison surgeon, for instance, cannot claim such fees for testifying with respect to a prisoner under his care. The practitioner who attended the deceased during life cannot claim an expert's fee for testifying in the coroner's court as to the cause of death. But ordinarily the rule is, I believe, as I have laid it down, and if there is authority to the contrary, it is important that it should be cited.

. Much of what Dr. Mercier says is doubtless true, and most professional evidence is really expert evidence. The distinction drawn in the answer referred to is between expert evidence that can be subpoenaed, and expert evidence that cannot. With regard to some of Dr. Mercier's legal opinions we are advised to the contrary. A professional witness sub-

poenaed to give evidence must answer all questions put to him with the approval of the judge. As most of his evidence will often be matter of opinion, it would be impossible in many cases to draw the distinction he apparently relies on.

A CORRESPONDENT, who is a resident officer at a general hospital, writes that he has received a note from a detective stating that the stipendiary wished him to attend at court to give evidence on a case he had attended in the hospital. Evidence was given, as desired, but a fee was refused, the stipendiary stating that he had no authority to pay. Our correspondent wishes to know: (1) Whether he is legally entitled to a fee in such a case. (2) Whether there is any class of police-court case in which he is not entitled to receive payment for giving medical evidence. (3) Whether, in the event of his not attending, unless subpoenaed, he can be compelled to give evidence in any case before being paid.

. (1) He is entitled to a fee if he has been properly subpoenaed. (2) In all cases where he has been subpoenaed he is entitled to a fee. (3) If he is not subpoenaed, he is under no obligation to attend; but if he attends without a subpoena, he may be compelled to give evidence and be unable to recover a fee. The moral of this is that he should refuse in all cases to attend without getting the proper subpoena.

DENTAL PARTNERSHIP.

EXCAVATOR.—Generally speaking it is safer to base a purchase price upon gross returns, say, one and a half years' purchase of gross returns, or whatever corresponds to two years' net returns. Questions may arise as to what is chargeable as expenses in arriving at net returns, but none can arise as to gross returns. Two years' purchase of net returns is a fairly good price, and it would be reasonable to agree that the second half (after the two years) should be sold at the same price. In the event of the senior slackening work this might even be to his advantage, and, in any case, it places the sum to be paid beyond dispute.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

PUFFING PARAGRAPHS.

OUR attention has been called to some paragraphs of an ostensibly puffing character which have appeared in the *Accrington Advertiser* relative to Dr. Fenwick's treatment of cancer by potassium bichromate as described in a paper by him published in the *BRITISH MEDICAL JOURNAL* of March 6th, 1909. We have made inquiries and have received Dr. Fenwick's "fullest assurance" that the articles referred to have been in no way inspired by him or by any one on his behalf with his knowledge or consent. Dr. Fenwick informs us that as soon as the articles appeared he called on the editor of the *Accrington Advertiser* and personally remonstrated with him on the subject. As we have repeatedly had occasion to point out, doctors have often to suffer much at the hands of injudicious friends. It is difficult to prevent editors of local newspapers inserting any matter that may seem to them likely to interest their readers; they do not understand the feeling of the profession in regard to such puffing. The tone and taste of the articles to be so inserted are certainly deplorable, and we hope that those responsible may be brought to realize that they are doing the practitioner whom they seek to glorify a serious injury.

COLLIERY AGREEMENTS.

ETHICS V. GROATS.—It appears to us from the case as presented, that, in regard to the earlier matter in dispute, as A. had been accustomed to do work for B., it would have been better for A. to allow B. to collect the fee. The matter is one in which an amicable agreement ought to have been come to between A. and B., because it seems hardly fair that A. should always or frequently be on duty for B. without some recompense, and it appears to us that B. expects a very great deal if he expects A. to be always ready to attend serious accident cases for him without a fee.

Coming to the matter of arrangement between the miners' union and doctors, it appears that by an agreement between the profession and the union, the accident work was thrown open to all the medical men in the district at a fee of 2s. 6d. a visit. Under this agreement A. was called to attend an injured collieryman; consequently the ordinary relations between patient and doctor exist. The patient and doctor, both informed B. of the attendance, B. also appears to have been made aware that the patient desired A. to continue, so that under the circumstances B. should hardly have allowed himself to be persuaded to attempt to undertake the case. B.'s best course would have been, if the owner desired him to see the case, to arrange a consultation with A.

We would suggest that this matter of agreement in regard to attendance on patients residing at a distance from the appointed colliery doctor should be brought before the Executive Committee of the local Division of the British Medical Association, and that a business-like contract be drawn up and signed. It would be a great pity that a small dispute, such as this, should be allowed to interfere with what seems hitherto to have been very cordial relations.

THE ADVERTISING OF LECTURES TO MIDWIVES.

C. G. C.—From inquiries we have made, the commendable practice seems to be to advertise such lectures only in the nursing and medical papers.

THE ASSUMPTION OF MEDICAL TITLES.

E. L. Cross.—Although the initial letters M.B.M.E. are of doubtful meaning, and might be misleading if they stood alone, as they are followed by the description "Masseur and Medical Electrician," the owner of the card does not seem to intend to assume any medical title.

MEDICAL CONDUCT.

SINEMAL asks: (1) Is it commendable for a registered medical practitioner to administer anaesthetics to a registered dentist (R.D.S.) who advertises extensively? (2) Is it permissible for a registered medical practitioner to have a financial interest and act in the capacity of expert and consultant to a commercial firm in a secret remedy for distemper for dogs, paying official visits to various kennels?

* We do not think a registered medical practitioner is called upon to act as judge of the professional conduct of a registered dentist. The British Dental Association is a very active body, and will bring suitable cases of objectionable advertising before the General Medical Council. (2) The combination indicated is in our opinion neither desirable nor commendable. As regards its "permissibility," however, we can only say that we know of no rule of any of the various licensing bodies which expressly forbids the practice of which complaint is made.

DOCTORS AND MIDWIVES.

A CORRESPONDENT sends us a cutting from the *Stafford Gazette*, February 27th, 1909, giving an account of the formation of the Billingham and District Independent Nursing Association, the object of which seems to be to import a maternity nurse who shall be independent of the Lincolnshire Nursing Association, and under the sole control of this local body. It is managed by a ladies' committee with a local Justice of the Peace as chairman and other residents as vice-chairman, treasurer, and honorary secretary. According to the rules published all recipients of parochial relief are to have the services of a nurse free of charge; subscribers requiring her must apply to a member of the ladies' committee, but the nurse is allowed to attend a case in an emergency without a special order. As "maternity cases" are named, it is inferred that the rules allow the nurse to attend other cases. Our correspondent suggests that, as it seems to be contemplated that the nurse shall act as an unqualified medical practitioner, he would be open to a charge of covering if he co-operates with her in her practice, and asks our advice.

* The rules are open to that interpretation, but we would suggest that our correspondent should wait and see how the nurse behaves before taking any further steps, and if he finds that she does not confine herself to the proper limits of her practice he can then use his influence to induce the committee to prevent her going beyond the proper work of midwifery and nursing, and only if the committee directly encourages her in her irregular practice should he refuse to co-operate. It is most important that the nurse should act in accordance with the following Rule 9 taken from the suggested rules and information for local associations employing village nurses affiliated to the Queen Victoria Jubilee Institute for Nurses: "In all cases of general sick nursing . . . the nurse may attend a patient on application or in emergency, but must not continue to visit without a medical man being informed. Should the nurse advise the patient to have a doctor and the patient refuse, the nurse may no longer attend this patient except in urgency. She must in any case report the matter to her secretary." Any midwife who takes advantage of her position to practise medicine and surgery should be reported to the Central Midwives Board, as we believe that the Board has no intention of encouraging midwives to become unqualified medical practitioners. Any medical man who co-operated with and aided a midwife to carry on business as an unqualified practitioner in medicine and surgery would be open to a charge of covering, but such a charge would have to be based upon clear proof of the midwife's improper conduct, and could not be inferred from construction of the rules under which she was engaged.

Public Health

AND

POOR-LAW MEDICAL SERVICES.

THE NOTIFICATION OF BIRTHS ACT IN LONDON.

AT the meeting of the London County Council on March 23rd the Public Health Committee reported with reference to the adoption of the Notification of Births Act, 1907, by the metropolitan borough councils. Last year the County Council asked the Local Government Board to consider the desirability of making an order, under Section 3 of the Act, requiring those authorities which had not adopted the Act to do so. The Board had not yet taken the action suggested, and the Committee thought the request should be repeated. There were still eleven metropolitan boroughs in which the Act had not been adopted, and it was essential that the County Council should receive notice of births in every part of London, as the complete information would be most valuable.

Mr. Stuart Sankey moved to refer the report back, on the ground that the borough councils ought not to be coerced into putting into operation an adoptive Act. They had considered their local circumstances, and no doubt knew what was best for themselves. In districts where the infantile death-rate was high the Act should be put into force, but not in others.

Mr. Hunt seconded, and other Moderates supported the amendment.

Mr. Donomey said Islington, which he represented, had no means of carrying out the Act, and added that the measure inflicted considerable hardships upon the medical profession.

Dr. Beaton mentioned the large number of deaths which occurred among infants of less than 6 weeks old, in many cases before their births had been registered. If earlier notification were the rule, health visitors could be sent to give the mothers help and advice.

Mr. Gilbert Johnstone, Chairman of the Committee, replying to the apologists for the borough councils, said that unfortunately the very districts where the Act had not been put into force were the districts with the highest death-rate. The notification of births not only provided useful statistics, but had the further advantage that what children had been born was known, and what midwives had attended the mothers. In cases of puerperal fever the Public Health Committee could take precautions to prevent the midwife from attending other patients and carrying infection. The cost to the boroughs was a trifle, but the result to the nation was of the greatest importance.

Fifteen members voted for the amendment, which was lost by a large majority. The recommendation of the Committee was approved.

HUMIDITY AND VENTILATION IN COTTON-WEAVING SHEDS.

This committee, presided over by Commander Sir Hamilton Freer-Smith, late of the Factory Department, Home Office, and of which Professor Lorrain Smith, Victoria University, Manchester, is a member, has issued its report. The committee was appointed in November, 1907, by the Home Secretary to inquire into and report upon the temperature and humidity necessary for the manufacture of different classes of cotton fabrics, the bodily discomfort arising when heat and moisture are excessive, the means of cooling humid sheds, and the special arrangements necessary for the proper ventilation of dry-weaving sheds. The committee met on forty-four occasions; thirty-seven of the meetings were held in Manchester. Several "humid" and "dry" sheds were visited, and ninety-six witnesses, including medical experts, medical officers of health, and general medical practitioners were examined.

It was no new problem that was referred to the committee, for many of the questions at issue go back thirty-six years, when Dr. (afterwards Sir George) Buchanan reported upon certain sizing processes used in the manufacture of cotton. It was in 1872 that the practice of infusing artificial humidity became common, although steaming had previously to this been in use. In 1882 the operatives complained that their clothes "were so damped by the warm moisture given off by the steam, that, after going out into the open air coughs, colds, and the whole train of lung diseases were contracted, and rheumatism and many other bodily affections. . . followed." This complaint called for a report, which was furnished

¹ Report of the Departmental Committee on Humidity and Ventilation in Cotton-Weaving Sheds. Price 2d.

by Dr. Bridges and Mr. Osborn, one of H.M. Inspectors of Factories, the conclusions being that neither excessive dust nor steam was inseparable from the process of heavy sizing, and that there existed an evil greater than dust or steam, namely, the lack of efficient ventilation in the sheds. All heavily-sized goods are manufactured by the aid of artificial humidity. Mention is made of the reports published in 1887 by Dr. Stephenson, M.O.H., Blackburn, and of the report following the special inquiry which was instituted by the Health Committee of the borough in the following year. These stated that the ventilation of the mills was unsatisfactory, especially in winter, and that while heavy and excessive "steaming" was injurious to the health of persons working in the sheds, light steaming accompanied by proper ventilation was not deleterious. The Cotton Cloth Factories Act of 1889 fixed the maximum limits of humidity permissible for different temperatures and stipulated a minimum of 600 cub. ft. of fresh air an hour for every person employed. Subsequently, owing to representations made by the Weavers' Association to secure total abolition of "steaming," a committee, composed of Sir Henry Roscoe, Sir William Roberts, and Dr. Arthur Ransome, was appointed. In 1897 this committee recommended, among other things, further attention to hygienic conditions in the sheds, purity of the water used for steaming, and as a standard of ventilation 9 volumes of CO_2 in 10,000 of air. Notwithstanding all that was done, so strong has been the feeling among cotton operatives as to not only the great bodily discomfort produced by "steaming," but also its injurious effect on health, that in November, 1906, a ballot was organized by the men's leaders at the request of the operatives, of which the following is the result:

For the abolition of "steaming"	68,154
Against	3,094
Neutral	1,221

These figures eloquently express the feelings of the operatives.

The evidence taken by the new Departmental Committee is said to be convincing as regards bodily discomfort, but so far as injury to health is concerned there is no proof of direct injury, although it is admitted that long-continued work under conditions causing bodily discomfort might possibly in the end be followed by ill health. The committee has not deemed it necessary to recommend the total abolition of humidity. The processes of weaving are facilitated by the use of artificial moisture. In no country other than Great Britain is there any direct legislation limiting the amount of moisture. For the particular class of cotton goods manufactured in Lancashire humidity will be necessary so long as the demand continues for low-priced materials made with inferior yarns.

One of the chief complaints made by cotton operatives is that on leaving the hot atmosphere of the sheds there is experienced a distinct chilling sensation, due to perspiration and absence of evaporation causing dampness in the clothing worn, and that there also result a sense of lassitude and want of energy. Interesting information of a high scientific value was given to the committee by Drs. Haldane, Leonard Hill, Pembrey, A. E. Boycott, and Professor Cadman. It was the opinion of several of the medical witnesses examined, including Dr. Alfred Greenwood, that since the introduction of improved ventilation and clearance of the air of dust the health of the workers had improved. The recommendations of the committee are thirteen in number, and refer, among other things, to fixing the limit of temperature on the wet bulb thermometer at which all admission of artificial humidity shall cease, the limit to be decided by early experiments; amendment of the present schedule of humidity, raising the standard of ventilation in humid sheds from 9 to 12 volumes of CO_2 in 10,000 during daylight, fixation of a standard of purity for the water used for humidifying, and the use of standard hygrometers.

THE HINCKLEY WORKHOUSE INFIRMARY.

THE end of the scandal of the continued existence of the Hinckley Workhouse Infirmary in its present condition seems at length in sight, and on this fact the poor in the neighbourhood of this midland town and all those who take an interest in its good name are to be congratulated. Practically fifteen years have elapsed since it first began, and during all that time the ratepayers have supinely allowed themselves to be represented by guardians consistently neglectful of their duty to the sick poor, while the supreme authority, the Local Government Board, though it is now taking strong measures, is only doing so many years after receipt from one of its own inspectors of a report showing how defective were all the arrangements made by these protectors of the poor. From this general condemnation

it is pleasant to be able to except the medical officer in charge of the workhouse and infirmary; he alone will emerge with credit from this long-drawn-out affair, for, in spite of difficulties and discouragement he has continued to do his best for the pauper patients in his charge, and has not failed to make representations to his authority in the matter. Among other steps, he included in one of his half-yearly reports an unvarnished statement of the real conditions prevailing, and, as recorded in our issue for October 26th, 1907, was promptly hauled over the coals by the guardians for making such unpleasant disclosures in a semi-public document. Towards the end of that year we made a strong appeal to the Local Government Board no longer to palliate the neglect and poor preparation of plans for a new infirmary. On one excuse and another, however, its erection was deferred, and recently the bolder recalcitrants among the guardians persuaded their fellows to defy the Local Government Board and to decide to pigeon-hole the matter again. Thereon the Local Government Board at length took decided action, the net outcome being that now not only the infirmary and the workhouse stands condemned while the union itself is under sentence of death. In other words, the Local Government Board has indicated a disposition, if not an irrevocable decision, to break the union up and form its parishes in new combinations. This has brought the board of guardians to its knees, and it is now ready to give effect to the plans for a new infirmary immediately. Whether this tardy penitence is a real remains to be seen. There seems some reason to believe that it would be better that Hinckley should remain the head quarters of a union, and that in particular it would be a mistake not to leave it as the seat of the workhouse infirmary of the neighbourhood. The town is very easy of access from the surrounding villages, and in addition, it has a good hospital of the cottage type. This latter circumstance facilitates the performance of any operations of comparatively simple nature by the infirmary, while for those of a more complicated character the gratuitous services of specialists in the neighbouring great towns can be secured. This is a decided advantage, and so far as we are aware it could not be secured in any rearrangement of the union which seems possible.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Borough of Ilkeston.—The population in 1908 was 31,512. The birth-rate was 37.7 and the death-rate 14.6 per 1,000, though in the latter no account appears to have been taken of the deaths of residents outside or of non-residents within the borough. The infantile mortality-rate was 147 per 1,000 births, amongst legitimate infants it was 139, and amongst illegitimate as high as 333 per 1,000 illegitimate births. The Medical Officer of Health (Dr. J. J. Tobin) is evidently fully alive to the necessity there is for dealing with this serious condition. While admitting that epidemic diarrhoea, of which disease no fewer than 46 children died in Ilkeston last year, is affected by climatic conditions he points out that it is after all a fifth disease which is bred and spread, not by the sun, but by the myriads of germs that cause the diarrhoea, filth and bacteria to the houses and to the food of the children. He urges more frequent and thorough scavenging with the immediate removal of all manure and decomposable matter. Privy-middens he considers should not be tolerated and tub-closets only if at a long distance from dwelling houses. It is a little disquieting to find that in a town of the size of Ilkeston there is no steam disinfecter and the corporation should seriously consider the advice of their medical officer of health and take steps to provide one. In the apparent desire to avoid a blank page the principal statistical table in the report is cut in two, one portion being on one page and the other on the next while in two instances the heading of a table is not on the same page as the table itself. Table II of the Local Government Board series is intended to give the statistics of wards or subdistricts, but as given in the Ilkeston report it is merely a repetition of five eighths of the information contained in Table I.

THE EMPTYING OF CESSPOOLS.

DR. SPIRO SPERO states that a village in which there is no drainage system, and where each house is provided with a cesspool, was brought within the administrative area of an urban district which it adjoined. It was understood that the urban district council would immediately proceed with the construction of a scheme of sewerage for the village, but instead of doing so some of the cesspools are emptied by the council's cart, and the occupiers of the houses concerned are charged for the service thus rendered.

The question whether the council is entitled to make this charge or not is dependent upon the district council exercising the power vested in it by Section 42 of the Public Health Act, 1875. Under that section a district council may undertake or contract for the cleansing of cesspools, and a fine can be imposed for any delay which occurs in carrying out the cleansing after reasonable notice from an occupier requiring it to be done has been given. If the urban council has not exercised its powers under Section 42, it devolves upon the individual owners of the houses in the village to empty the cesspools.

Obituary.

WILLIAM TILLINGHAST BULL, M.D.,

NEW YORK.

THE death of this distinguished American surgeon has already been announced in the JOURNAL. He had been operated on more than once for cancer of the neck, and a temporary rally was made the occasion of misleading statements in the press that he had been cured of the disease.

He was a direct descendant of Henry Bull, who was twice Governor of Rhode Island and the Providence Plantation, and was born at Newport in 1849. He graduated in arts at Harvard in 1869, and in medicine from the New York College of Physicians and Surgeons in 1872. After serving as interne in Bellevue Hospital, he spent two *Wanderjahre* in Europe, and on his return in 1875 settled down to practice in New York. He was for eleven years, from 1877 to 1888, Surgeon-in-Chief of the Chambers Street House of Relief of the New York Hospital. There he performed one of the earliest laparotomies for gunshot injury, and there he did most of the work which brought him fame as an abdominal surgeon. In 1880 he was appointed Surgeon to St. Luke's Hospital, and in 1883 to the New York Hospital. He also held the office of Consulting Surgeon to several other hospitals. After working for some time as Demonstrator of Anatomy at the College of Physicians and Surgeons, he was in 1887 appointed Professor of the Practice of Surgery in the college.

Dr. Bull was a born surgeon. In his graduation thesis he recommended operation for appendicitis. He was regarded as one of the ablest surgeons and most successful teachers in America; especially in abdominal surgery he had few equals. He was one of the earliest followers of Lister in America. He was somewhat sparing in the use of the pen, but he contributed valuable papers to societies and medical journals, and the *System of Practical Surgery*, by Professors von Bergmann, von Bruns, and von Mikulicz, was translated and edited under his supervision. He was a man of handsome presence, with a winning manner. His integrity of character and high standard of professional honour made him popular among his brethren, while his kindness endeared him to the suffering who came under his care. His loss is deeply regretted by those who knew him.

SURGEON-GENERAL THOMAS TARRANT, M.D.,
C.B., K.H.P.

THIS distinguished officer died at Queenstown on February 3rd, aged 78. He entered the Army Medical Service in June, 1854, and retired in 1890.

The early part of his service was chiefly in the Royal Artillery and 12th Lancers. He saw much war service in the Crimean, Indian Mutiny, and Zulu campaigns (1878-9), for which he had three service medals with clasps and the Turkish medal, and was mentioned in dispatches.

He was a kindly, genial man, very popular among his contemporaries, and the survivors of that generation will learn of his death with much regret.

Dr. THOMAS EVANS, one of the best known ophthalmic surgeons in Sydney, died in January. He was a native of England, and was educated at Guy's Hospital and took the diplomas of L.S.A. Lond. in 1872 and M.R.C.S. Eng. in 1873. Not long afterwards he went to Sydney, and early acquired a large practice. He was one of the founders of the Moorcliff Ophthalmic Institution, a branch of the Sydney Hospital, and was for many years the Senior Surgeon there. He was also Surgeon to the Australian Jockey Club. He was held in the highest esteem by the profession and the public. He died in the 59th year of his age. He was unmarried.

Dr. J. G. METZGER, formerly of Amsterdam, who played a prominent part in placing massage on a scientific footing, died in Paris on March 2nd at the age of 70. He began life as a teacher of gymnastics; then turned to medicine, and for many years had a very large practice as a specialist in massage. In 1888 he migrated from

Amsterdam to Wiesbaden with the intention of founding a sanatorium there. He next went to St. Petersburg, and finally to Paris, where he resided till his death, spending only part of the summer in Holland.

A WELL-KNOWN Hegelian philosopher, who was also a member of the medical profession, has died in Edinburgh, on March 19th. Dr. JAMES HUTCHISON STIRLING, who was a contemporary of Herbert Spencer and Bain, qualified in medicine in 1842, and for nine years practised in South Wales. In 1851 he inherited a modest fortune from his father, which rendered him independent of private practice, and he then devoted himself entirely to literature and philosophy. He lived on the Continent for several years, studying the doctrines of Kant and Hegel. In 1865 he published his work, *The Secret of Hegel*, and afterwards settled in Edinburgh. He wrote many articles on philosophical subjects, besides lecturing on his favourite subject.

The Services.

THE ROYAL ARMY MEDICAL CORPS.
COMMISSIONS FOR CANADA.

THE Army Council has decided that one candidate may be nominated each half-year for a commission in the Royal Army Medical Corps by the Dominion of Canada.

ROYAL ARMY MEDICAL CORPS (TERRITORIAL).
SANITARY SERVICE.

ARRANGEMENTS have been made by a committee of officers for a dinner of the officers of the Sanitary Service of the Royal Army Medical Corps (Territorial Force) at the Hotel Metropole on May 8th, at 7.30 p.m., at which the Right Honourable the Secretary of State for War, General Sir W. G. Nicholson, G.C.B., Chief of the General Staff, Surgeon-General Sir Alfred Keogh, K.C.B., M.D., and Lieutenant-General Sir W. H. Mackinnon, K.C.B., M.D., Director-General of the Territorial Force, will be present as guests.

Those who wish to attend should intimate their intention at once to Surgeon-Colonel William R. Smith, M.D., 37, Russell Square, London.

FIRST LONDON DIVISION.

THE prizes in connexion with the First London Division of the Royal Army Medical Corps (Territorial) were distributed on March 20th at its head quarters in Calthorpe Street by Sir Alfred Keogh, K.C.B., Director-General of the Army Medical Service. In his speech Lieutenant-Colonel J. Harper, the Head Quarters Commandant, recorded the fact that the field ambulance reached its full establishment in February; that two general hospitals which form part of this Division are also complete, and that the First Sanitary Company, though only recently recognized, already has its five officers, and 62 out of the 100 other ranks required. The proceedings ended with a cinematograph display.

Contract Practice.

THE MODERN SICKNESS AND ACCIDENT ASSURANCE
ASSOCIATION.

WE are asked to state that the Accrington and District Medical Society has considered the proposals of the Modern Sickness and Accident Association, Liverpool, and has expressed strong disapproval of the formation of such clubs. The association in question is, according to the printed statement issued, a tontine "run on co-operative and trade-union principles, no shareholders, members only participate in the profits, which are divided annually." It is formed to provide combined sickness and accident assurance, with free medical attendance, medicine, and lawyer, and old-age pensions. The premium rates vary from 2s. a month at ages 16 to 30, to 4s. at ages 50 to 55; members at the last named age are not entitled to old-age pension. The association seeks to obtain medical officers to act at the rate of 4s. per annum, payable half-yearly.

THE London County Council has adopted an order sanctioning the extension of the provisions of Section LXV of the Public Health (London) Act, 1891, with respect to the notification of infectious disease to glanders, anthrax, and hydrophobia in man, and the Local Government Board has expressed its intention of approving the order.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL

The offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL are at 423, Strand, London.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 423, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 423, Strand, London, W.C.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Articulate, London*. The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

TELEPHONE (National):—

2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.

2630, Gerrard, BRITISH MEDICAL ASSOCIATION.

2634, Gerrard, MEDICAL SECRETARY.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL *alone* unless the contrary be stated.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 423, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

COTTAGE HOSPITAL asks for advice in the treatment of obstinate conjunctivitis in a case of herpes frontalis; the ordinary remedies have been used with little benefit.

CAPILLA asks for suggestions for restoring the colour of grey hair which is turning yellow at the ends; the patient is a lady aged 40 who had rheumatic fever when 19 years of age, at which time the hair turned grey.

J. L. asks for advice in the treatment of profuse perspiration from the axilla. The patient is a healthy man engaged in an office, and the perspiration when anything occurs to excite him either in business or otherwise is troublesome.

E. O. S. asks for suggestions for the treatment of diabetes insipidus in a middle-aged female. The quantity of urine in twenty-four hours averages nearly 25 pints, and about 20 pints of liquids are taken by mouth in the same time. Ergot, valerian, bromides, and nitro-glycerine have not produced any marked effect.

CIGARETTE SMOKING.

NICOTINE, who is frequently consulted by youths and men suffering from the effects of excessive cigarette smoking with inhalation, asks for hints as to how to induce a distaste for the habit and to counteract its evil effects.

TREATMENT OF HERPES ZOSTER.

PUZZLED asks for suggestions in the treatment of a middle-aged woman who had an attack of severe shingles two years since. She has since suffered from almost continuous neuralgia of the side. The following remedies have been tried from time to time, but there has never been any improvement for a longer period than a week: The cautery, high-frequency current, tonics of every kind, analgesics, local and general. Careful physical examination has never revealed any signs of organic disease.

LETTERS, NOTES, ETC.

INTER-HOSPITAL FOOTBALL.

In summarizing the results of the Inter-Hospital Cup-ties in our issue of last week, the Middlesex Hospital was inadvertently omitted. The cup was won by the Middlesex for the year 1886-7.

A DISCLAIMER.

DR. N. WALMSLEY (Charing Cross Road, W.C.) desires to disclaim all responsibility for an article which appeared recently in a weekly paper; he is, in fact, exonerated in the course of the article, and the further sale of the issue has been stopped.

VENOUS PULSE IN NECK.

DR. T. WARDROP GRIFFITH (Leeds) writes: In a brief account (p. 720) of a paper I read before the Leeds Division of the British Medical Association on The Venous Pulse in the Neck, an account which, considering that it was written from memory by our excellent secretary, Dr. Allan, is very accurate, there is an omission so important that in justice to myself I should like to see it rectified. The text from which I preached was the pioneer work of Dr. James Mackenzie, and especially his graphic methods of recording the pulsations of the veins in the neck. Of course every one who has

followed cardiac literature at all knows the debt we are under to that distinguished observer, and it would ill become me to read a paper on this subject without a very full acknowledgment not only of his work, but of his personal help and encouragement to me in my attempts to follow up his investigations.

SLEEP AND WANT OF SLEEP.

DR. FRANCIS HARE (Medical Superintendent, Norwood Sanatorium) writes: None of your correspondents writing on the above subject has referred to acromorphone, first suggested as a hypnotic by Charles T. Douglas (New York Medical Journal, March 17th, 1900). Though generally useful in insomnia, it seems an almost ideal hypnotic in the clinical variety which consists in an inability to go to sleep. The dose need rarely exceed $\frac{1}{2}$ gr. given hypodermically; $\frac{1}{4}$ gr. is usually enough. The drug has displaced nearly all other hypnotics at the Norwood Sanatorium. Its use is dealt with in the last (third) annual report of that institution, which is sent post free on application to all members of the medical profession.

THE CAUSATION OF INGROWING TOENAIL AND THE LOCATION OF GOUT.

MR. EDW. C. MASSEY, M.R.C.S. Eng., L.R.C.P. Lond. (Natal), writes: In the BRITISH MEDICAL JOURNAL of January 16th an article by Dr. G. Arbour Stephens, stating or suggesting that the cause of ingrowing toenail is the position of the foot assumed during sleep, as against the orthodox teaching of the textbooks that it is due to the wearing of tight and badly-fitting boots. Should Dr. Stephens's view be correct, we should expect to find this painful affection quite as often in individuals who do not wear boots at all. Now I have had some years of experience in practice in the South Africa natives, principally Zulus, also of Indians, and I have never seen or heard of a case of ingrowing toenail amongst them. The Zulu rolls himself in his blanket to sleep, and, so far as I have observed, usually on his side; he lies on the hard ground in his kraal, which I should think would be more likely to cause the condition than the soft pressure of a bed.

I am fully aware that, especially in the towns, some of the natives wear boots; but it is more out of vanity and a desire to imitate the white man than either for usefulness or comfort. Even in boot-wearing natives I have never seen a case of ingrowing toenail; but this can be easily explained, as the native would promptly remove his boots if causing him pain or discomfort, and would walk without them, the sole of his foot being hard enough to take him anywhere. The Zulu is lower in the scale of evolution than the European, and as yet is not educated up to the point of enduring the agony of a tightly fitting boot simply for the sake of appearance or fashion. But one day he will; let us be patient!

I know that people who always go about with naked feet in the home country are somewhat difficult to find; but could Dr. Stephens say that he has ever seen the malady in question in a person who has never worn boots?

MEDICAL REGISTRATION.

DR. JOHN HARRIS JONES, M.D. Brux., L.R.C.P. Edin., L.F.P.S. Glasg. (Wilkes Barre, Pennsylvania), writes: I quite agree with Dr. Stanley Haynes, when he says, in the JOURNAL of February 20th, that "Section 14 of the Medical Act is most unjust to medical practitioners, and should be repealed." I was registered nearly thirty-three years ago, and have practised most of that time outside of Great Britain. In 1904 I returned to my native Wales, and engaged in practice there until the spring of 1906, when I returned to my present abode. Before leaving, however, I have almost a vivid recollection that I advised the Medical Registrar of my intended change of residence. I did not know that my name was no longer in the Register until I received an announcement last October from Messrs. Chubb, stating that they could not continue having my name appear in their Directory unless I re-registered. After receiving this intimation I immediately wrote to the Medical Registrar, and in due time received a reply, in which he said he had not received my advisement, and enclosed therewith were two long forms to be filled up, witnessed by two registered practitioners, and sworn to before a justice of the peace, to which declaration a £1. the prescriber restoration fee. It is singular and very unfortunate, to say the least, that that occasion was the only inquiry that had been made by the Registrar concerning me during the odd thirty years of my registration.

EXPLOSION OF AMYL NITRITE CAPSULES.

A LAYMAN writes that he has kept a small box of amyl nitrate capsules carefully done up in cotton-wool for some twenty years in a drawer among articles of clothing, the temperature of the room being about 50°. Recently an explosion took place, all the capsules with one exception being destroyed. Amyl nitrate is spoken of, but probably the nitrite is intended, as the former is not used in medicine and is not likely to be supplied in glass capsules. The explosion was no doubt due to slow spontaneous decomposition of the amyl nitrite, a gaseous product, chiefly nitric oxide, being formed; the gas would accumulate in the capsules with increasing pressure until the bursting point of the latter was reached. A similar explosion, after capsules had been kept for three years in a warm climate, is recorded in the BRITISH MEDICAL JOURNAL, March 30th, 1907, p. 787.

THE SEARCH FOR PATIENTS.

IN looking through some papers forwarded to a correspondent a few months ago by the director of the Weidhaas Hygienic Institute Limited, we have noticed a printed form which had previously escaped attention. This form is as follows:

R. B.

Have you Friends who need our Treatment?

If you know of anyone whom you think might derive benefit from the use of our Home Treatment, you will do them and us a great favour by noting herein their names, addresses, and the trouble you believe them to be afflicted with. Upon receipt of the names we will send them information concerning our method of treatment, but will not mention your name unless you desire it.

NAME. ADDRESS. AILMENT.

Please return to The Weidhaas Hygienic Institute, Burgess Hill, near Brighton.

This form affords an illustration of a system which appears to be followed, with variations, by other companies appealing to the sick. It may be remembered that about five years ago we reported that we had received a letter from a firm of pharmaceutical chemists in a provincial town enclosing a postcard received by them from a company, which offered £s. for the name of any patient suffering from diabetes, pointing out that "it is money easily earned." The pharmaceutical chemists who wrote to us expressed their indignation at the attempt to bribe them to commit a breach of confidence, but such a request might not be so regarded by a patient, more especially if the advertiser lays great stress upon his benevolent motives, and his anxiety to benefit as many persons as possible.

The proprietors of the institute referred to seem to hail from Germany; they issue a pamphlet with the title *Dum opus pro*, which is made up mainly of the usual testimonials, but contains also a sort of outline of the physiology of various organs, taken from medical works. The pamphlet does not differ from the ordinary productions of advertising quacks: the terms are said to be very moderate, the more so as it is the rule to make one charge only for the whole treatment. The proprietors taking the risk of its being of long duration. It would seem, however, that this arrangement is not always followed, for in a "Diet Table" headed "Direction for Weidhaas Home Treatment" we find the following:

It is absolutely necessary that all patients, while under my treatment, shall take the "Star Tonic" regularly. (This must be always taken in sips only.)

For Breakfast—Take the delicately flavoured Nutritive Salts Cocoa, boiled in milk (which, being specially prepared for invalids, on account of the great percentage of nutritive salts which no other cocoa contains, is most suitable in your case. . . .

Between Breakfast and Lunch take one or two tumblers of milk. If possible this should always be taken in the form of Kefyr, one of the easiest digestible nourishing and strengthening tonics. (Full particulars of this are enclosed herewith.)

Half an hour before mid-day meal. (From 1 to 2 o'clock) Sip one cup of Star Tonic.

For Mid-day Meal—Make it a strict rule to take regularly green vegetables of some kind, such as spinach, cabbage, lettuce, etc. A fair amount of these should be taken daily. To these may be added a few potatoes, very little meat or fish, and now and then, in the place of the latter, some pulses, such as lentils (Germans are best). . . .

At Tea Time—If absolutely necessary, take a cup of weak ordinary tea or health coffee; better still, take a cup of Star Tonic, some cold toast. . . .

For Supper—(Let this meal be not less than two-and-a-half, or, better still, three hours before going to bed.) Take either Cocoa or Kefyr. . . .

Before going to bed—Always make a point of taking one glass of Kefyr or cup of Star Tonic.

At the bottom of the diet table is a notice to the following effect:

"The above specially recommended articles can be had from the Sales' Department of the Weidhaas Hygienic Institute, Ltd."

In the circular referred to above as enclosed, Kefyr ferment is offered for sale.

We find in *Truth* (Cautionary List, 1909, the following note:

Paul Weidhaas Hygienic Institute, Burgess Hill, Richard Havel, director.—Advertises a home treatment for asthma, consumption, and a variety of other diseases, making the same pretence as the late Drouet Institute of diagnosing the case of applicants by correspondence.

THE TREATMENT OF CHOLERA.

AT page 832 of the issue of the BRITISH MEDICAL JOURNAL for September 19th, 1903, a method of treating cholera, which had proved most successful in his hands, was described by Dr. R. W. Burkill, of Sylhet, Lower Assam. Essentially it consisted in the early subcutaneous injection of morphia (4 grain to 1 grain), followed by careful abstention from promoting action of the bowels, administration of large quantities of water orally or intravenously, and by careful nursing and dieting should a typhoid condition supervene. This article has brought us a communication from Dr. E. Massart, of Moulle, who says that some thirty-six years ago he tried morphia injections of corresponding strength in some cases of cholera, and drew attention to the value of such treatment in a paper published in the *Union Médicale*, October 16th, 1875. The injections, he found, arrested promptly the vomiting, diarrhoea, and cramps, and power to retain liquids quickly returned. Thus his results in a limited number of cases long ago were on all-ours with the later but more extended experience of Dr. Burkill.

THE LIMITATIONS OF A PURIN-FREE DIET.

DR. R. H. BOTHAM (Stamford, Darlington) writes: "Middle-aged's" purin-free diet does not exactly recommend itself, and if there is an easier way of relief most patients, I think, would prefer it. At one time I used to suffer in the same way as he did, with the exception that dental troubles were not prominent. The febrile attacks resembling influenza were a special nuisance, because they incapacitated me for work, as in a lesser degree did the headaches. An ordinary cold in the head, too, was anything but a trifling ailment to me, and never got better under a month. After reading Dr. Leonard Williams's *Minor Maladies*, and especially the chapter on Goutiness, I thought I saw light, and I adopted the following plan with complete success. I gave up all alcohol and drank water copiously, finishing up at bed time with a pint of hot water. The water is that supplied by the Tees Valley Water Board, and is of the soft, peaty variety. This, I think, is a point in its favour for the purpose. I also gave myself about five minutes' deep breathing exercises every morning. This system was intended to aid excretion and to get rid of the gouty poison, or the collaemia, if you prefer that name. I did not alter my diet, except to increase the daily quantity in response to an improved appetite and a digestion that had become unconscious. I have had no more febrile attacks: I cannot remember when I last had a headache, lumbago has disappeared, constipation is no longer troublesome, and the only disgusting circumstance is that I have begun to put on weight at a rate that if maintained will make me quite a noticeable person in the early future. I think a patient could be more easily persuaded to adopt this plan than to restrict himself to the diet of "Middle Aged's" letter.

DR. JOHN HADDON (Denholm, Hawick) writes with reference to the letter of "Middle-aged" in the JOURNAL of February 20th, p. 512: It is, in my opinion, one of the most important articles that has appeared in the JOURNAL since I became a member. It testifies (1) that diet alone can banish many ailments; (2) that his diet takes away the desire for alcohol; (3) that others, seeing how he has improved, are following; (4) his example. From my experience, I believe he might be better with less variety, and, perhaps, a smaller quantity, for he does not give us the quantity he eats, and I feel sure that Dr. Haddon's quantity is "too much" for most people. It is hard to believe that one slice (say 2 oz.) of white loaf, with a cup of tea, is sufficient to maintain health and vigour in an adult, but I met a man who had lived upon that one meal in the day for three years, and went about doing light work, weighing 5 st. in his clothes, and in excellent health. I had discovered that one slice (2 oz.) of white loaf, with green vegetables (4 oz.) was sufficient to keep a man from losing weight who was not working, but that a working man I could not have believed. It is evident that we must study food more than we have, if we would lessen our mortality, which continues too high, in spite of all our medical officers of health have done, and remove those minor ailments which cause so much suffering.

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Remarks

ON THE

TREATMENT OF GASTRIC ULCER BY IMMEDIATE FEEDING.*

By EDMUND I. SPRIGGS, M.D., F.R.C.P.,

SENIOR ASSISTANT PHYSICIAN AND LECTURER ON PHARMACOLOGY AT ST. GEORGE'S HOSPITAL; PHYSICIAN TO THE VICTORIA HOSPITAL FOR CHILDREN.

In December, 1906, in a discussion at the Medico-Chirurgical Society,¹ and in the following year in the *Clinical Journal*,² I mentioned the favourable results which had followed the use of the Lenhartz method of treatment of ulcer of the stomach in a few cases under my care. Since then I have had the opportunity of observing more cases treated in this way, and propose this evening to lay the results before you. The cases here reported were unselected, of the ordinary types met with in hospital practice. For the purpose of comparison, a similar number of other cases, taken consecutively from the records of St. George's Hospital during the same period, are tabulated with them.

The essential features of Professor Lenhartz's treatment are:

(1) Complete rest in bed for four weeks; (2) feeding the patient from the beginning of the attack with small quantities of beaten-up egg and milk, the quantities being increased daily; (3) the application of an icebag to the epigastrium; (4) adding to the dietary boiled rice, mince, and other semisolid and solid foods after the first week; (5) the administration of bismuth and iron in suitable form. Of these, the complete rest in bed, the bismuth and iron, and the icebag are commonly advised by physicians; but the plan of allowing food to be put into the ulcerated stomach at the beginning of treatment is contrary to the usual practice.

The method is founded on the view that acid gastric juice delays the healing of an ulcer, even when no food at all is given by the mouth; and that the reparative process cannot proceed satisfactorily in an ill-nourished and anaemic person, such as the subject of this malady commonly is. Experimental researches are quoted in support of each of these propositions.

That the acid juice will irritate an open sore every one will agree. Mathes produced artificial lesions of the gastric mucous membrane in animals, and found that they healed rapidly except when exposed to the action of dilute hydrochloric acid. This result appears to show that healing was not delayed by the presence of a normal amount of acid but of an excess. In the subjects of gastric ulcer, however, it is the general opinion that the normal gastric juice, if secreted, will act prejudicially, and the treatment by nutrient enemata is intended to prevent the secretion of juice which appears when food is introduced into the stomach. But it must be remembered that gastric juice also flows on the thought of food in a hungry person, and it has been stated by Bourget, Winternitz, and Umber that when a nutrient enema is given a flow of gastric juice is excited, and pain is felt in the stomach. Ewald and Michael, however, were not able to confirm the occurrence of secretion. Pain is certainly felt by many patients, and is often referred to the stomach, though in some cases it may arise in the colon. Obviously, if either the thought of food or the irritation of an ulcer may be followed by a flow of juice, harm may be done, for the juice will flow over the raw surface, which is unprotected by the normal mucous membrane.

The second point—namely, that the reparative process cannot proceed so well in an ill-nourished and anaemic person—is self-evident; it is also clear that even if the patient is, as the subjects of gastric ulcer sometimes are, fairly nourished at the beginning of the attack, the treatment by saline injections and nutrient enemata will be followed by wasting, for all who have studied the subject of rectal feeding by means of accurate metabolism experiments are agreed that, although some energy may

be furnished in this way, nevertheless sufficient food to maintain the needs of the body cannot be supplied. Still less is the anaemia from which these patients suffer likely to improve on such a dietary. Quincke and Daettwyler, found that ulcers which healed quickly in normal dogs did not in those rendered anaemic. If food can be introduced into the stomach from the beginning, the recovery from the anaemic condition is likely to be more rapid than if the patient is subjected to a further period of subnutrition.

The objection to immediate feeding by the mouth is that work is thereby thrown upon a diseased organ which, it might be thought on rational principles, should be given a complete rest. Further, it is urged that the presence of food in the stomach necessitates the contraction of that viscus, to pass it on into the duodenum, and that such movement of the stomach walls is likely to dislodge a clot in an opened vessel and cause a recurrence of haemorrhage. To this Lenhartz replies that the danger of a clot becoming dislodged in this way is no greater than the danger of its being dissolved by gastric juice in an empty stomach, whilst if small quantities of protein food are supplied the hydrochloric acid of any gastric juice poured out is neutralized, because it combines with the protein. To this end teaspoonful doses of beaten-up egg and milk are prescribed. Egg albumen rapidly forms a combination with hydrochloric acid. Milk is a food that calls forth less secretive activity in the stomach than any other food. Fat, which is present in the yolk of an egg, is known to inhibit the secretion of juice. So that the particular combination of foods used is that calculated to excite the least possible secretion and to combine most efficiently with the acid of whatever juice is secreted. As it is given in very small quantities at a time, distension of the stomach is obviated and the necessary movements reduced to a minimum. It is probable that distension of the stomach is far more harmful to an ulcer than contraction. The food is swallowed and requires no mastication, and this again keeps the gastric secretion low, for the act of chewing is accompanied by a production of juice.

An icebag placed upon the epigastrium is intended to keep the stomach in a quiescent state. The application of cold has been observed by Rossbach³ to diminish the movements of the stomach. By promoting atonic constriction of the walls, gaseous distension, which might be a cause of haemorrhage, would be prevented. An icebag also relieves pain when present.

The routine of the Lenhartz method is as follows:—The patient is kept absolutely in bed for four weeks, for the first two of which she is not allowed to move from the supine position for any reason whatever. All mental excitement must be avoided. An icebag is kept upon the stomach almost continually for the first two weeks. The dietary consists of eggs beaten up with sugar, or in some cases with wine, and iced; and of milk. These two foods are taken in small quantities at frequent intervals from a teaspoon, the quantity prescribed being spread over the day, and not given at definite meal times. The first day 7 to 10 oz. of milk are given and one egg. The quantity is increased daily by $\frac{3}{4}$ oz. of milk and one egg until $\frac{1}{2}$ pints of milk and six eggs, or in some cases eight eggs, are reached. From about the third to the eighth day raw or almost raw mince is added, starting with an ounce in divided doses, either beaten up with the egg or alone; the next day, if the mince is well borne, 2 oz. are given; in these cases minced beef was used.

From the seventh to the eighth day boiled rice is added, followed by softened bread and later by a small quantity of bread and butter. One or more eggs may now be lightly boiled. The diet is then gradually increased by the addition of mince or pounded fish, with a corresponding reduction of eggs, until by the end of the fourth week the patient is on an ordinary mixed diet containing the common foodstuffs with the exception of indigestible solids such as peas or other seeds. The patient is instructed to masticate very slowly. On the twenty-eighth day the patient is allowed to get up, and discharged from the sixth to the tenth week.

For the first ten days bismuth subnitrate is given in doses of 30 grains in water without mucilage twice or three times a day. In these cases, however, the carbonate or the oxychloride was used. From the sixth to the

* Read before the Royal Society of Medicine.

tenth day sulphate of iron is prescribed in the following form:

Sulphate of iron	...	...	150 grains
Calcined magnesia	...	...	20 grains
Glycerine	...	...	1 drachm

Mix and divide into 60 pills.

Two of these are given two or three times a day. Lenhartz increases the dose gradually, giving three for three days, four for four days, up to ten for ten days, and then down again. In some cases arsenic is added. The bowels are not disturbed at all during the first week unless they are naturally opened. An enema is then given and repeated every fourth day during treatment. The mouth should be washed out and attended to regularly.

In my own cases I have usually begun with 3½ oz. of milk and one egg on the first day, and have seldom given the iron pill more than three times a day.

It is claimed for the Lenhartz method that it is suitable for all forms of gastric ulcer except, of course, those associated with mechanical deformities, such as stenosis of the pylorus, and those in which some serious complication, such as perforation, peritonitis, or subphrenic abscess, is present. It is said that the sour regurgitation, the vomiting, and the pains and distress after food disappear in from a few hours to a few days. The method is reported as having been found successful after recurrent hæmorrhages have occurred on rectal feeding.

The diet introduces an amount of food which soon becomes adequate to the needs of the body. A table is given by Lenhartz in which the calories given per diem are shown to reach nearly 1,600 on the seventh day, and 2,500 on the tenth. The actual figures for the first fourteen days are: 280, 420, 637, 777, 956, 1,135, 1,588, 1,721, 2,138, 2,478, 2,941, 2,941, 3,007, 3,073 calories.

It is important that patients should be kept in hospital some weeks after they have reached full diet, for a case cannot be recorded as cured until not only are there no symptoms, but the percentage of hæmoglobin and the weight are normal. Unfortunately it is difficult to keep the average hospital patient in after all symptoms have subsided.

Before attempting a new method it is necessary to ask whether the old is unsatisfactory. There is no doubt that the recognized method of treatment is in many cases extremely successful. It has, however, some serious disadvantages. In the first place, severe cases are subjected to a considerable period of starvation or semistarvation, and the less successful the treatment is the longer is the starvation period extended. The routine when fully carried out is extremely tedious. Dr. Hawkins describes for instance, a course in which four weeks after admission the patient is having only milk, plasmon, arrow-root, and thin bread and butter. Fish and chicken are started six weeks after the mouth-feeding has begun. There has been, however, distinct reaction among physicians against this extended period. During the stage of enemas the mouth may become very foul in spite of careful washing out, and parotitis has occurred (Rolleston and Tebb). Vomiting may be very troublesome in some cases, and it is interesting to note that Drs. Rolleston and Jex-Blake found in one case that on cautiously dieting with solid food and withdrawing the enemas it ceased. The prolonged period of subnutrition is accompanied by considerable acidosis, as evidenced by the excretion of diacetic acid in the urine, as Dr. Rolleston has shown, but stronger than even these objections is the unpleasantness of rectal feeding. In hospital practice this is not such an important point, although the patients and the nurses will take a view very different to that of the physician, who has nothing to do with the actual carrying out of the treatment. In private practice, however, the case is different. Even if the Lenhartz method is not superior to the ordinary method, if it is equally good and not less safe it will prove a boon both to the doctor and the patient when treatment is being carried out at home, where rectal medication is nearly always objected to, and very often inefficiently administered.

The present paper is based upon the details of 33 cases treated by the Lenhartz method, and 34 treated by the ordinary methods. I am indebted to my senior colleagues, Drs. Rolleston, Ogle, and Latimer, for permis-

sion to publish such cases as were not under my care, or were only under my care for a part of their stay in the hospital. The cases were taken *seriatim* and, with the exceptions mentioned below, not specially chosen. The 34 cases treated by other methods are taken consecutively from the hospital records. The exceptions that have been made in both series are those of patients in whom the diagnosis was, in my opinion, doubtful, on the one hand, because the symptoms were not severe enough to justify the diagnosis of ulcer, or, on the other, cases which were thought or proved to be due to carcinoma; and cases severely complicated by other diseases not directly connected with the gastric disease. A few cases have also been omitted in which the patients were treated by immediate feeding, but in a manner widely different to that advocated by Lenhartz. Some of these did well and some badly, but it would be difficult to decide in which series to put them. Five cases, however, are included in the second series in which there were no rectal injections, either saline or nutrient. On the whole, the two series may be taken as similar to one another in type and in severity.

Both series contain examples of the common accompaniments of gastric ulcer—namely, anaemia, carious teeth, and neurosis. The Lenhartz series includes 1 case with albuminuria and 1 with chronic alcoholism. The second series contains 1 patient with ulcer of the leg, 1 three months pregnant, and 1 with uterine displacement.

In considering the advisability of adopting the treatment by immediate feeding, the first question raised will be, is it dangerous? Is there a greater risk of the recurrence of hæmorrhage and perforation than by the usual method of nutrient enemas followed by a graduated milk diet? In the above cases in the first series twenty-five of the patients had hæmatemesis in the attack for which they were admitted, and one had had it in a previous attack. In the 25 cases there was one recurrence on the third day of treatment. The patient was not under my care, and the method was not being rigidly followed, inasmuch as no icebag was prescribed and the patient had moved from the recumbent position when the hæmorrhage recurred. The feeding was discontinued, the patient being put upon nutrient enemas, and a good recovery was made. In the 34 cases treated by other methods, 29 suffered from hæmorrhage in the attack for which they were admitted. There were four recurrences, two on the second and two on the third day. In one case there was bleeding on both the second and third day. As far, then, as these figures go the danger of hæmorrhage is certainly not greater, and apparently less, upon the Lenhartz diet, for hæmorrhage recurred in 4 per cent. of the cases on this diet and in 14 per cent. of the others. In 150 cases with recent hæmorrhage treated by Lenhartz there was recurrence in 10 per cent. whilst in 120 such cases treated by Wirsing with nutrient enemas the bleeding recurred in 18 per cent.

It may be objected that some of these cases were not cases of ulcer but of gastrostaxis, described by Dr. Hale White. This criticism, however, will apply equally to cases in both tables. The researches of Drs. S. Martin, C. H. Miller, and others indicate that the pathology of gastrostaxis and of gastric ulcer is identical, for each appears to arise in a mass of lymphoid tissue. Lymphoid tissue is more abundant in the stomachs of those who are subjects of dyspepsia; the absorption of irritating material from the stomach may cause a breaking down of the follicle, and through the action of the gastric juice an ulcer may result. We know that in the small intestine also the lymphoid patches are the most vulnerable areas. Dr. Hale White has demonstrated that symptoms formerly thought to be definitely indicative of an ulcer may arise from a minute fissure or a group of bleeding spots. These bleeding spots, however, are found frequently in that region of the stomach most prone to ulceration, and it is difficult to say that a group of such small lesions is not an early stage of an ulcer.

We may next consider the question of pain. On the Lenhartz diet the usual result is for pain to vanish entirely within forty-eight hours of the commencement of the treatment, and the diet is so graduated that the risk of recurrence of pain when solid food begins to be taken is, in my experience, less than that of the ordinary method of treatment, in which it is a common thing to

find the patient do well until the attempt is made to take fish or mince.

In the 33 cases treated by the Lenhartz method, in 8 cases pain is mentioned in the notes after the seventh day; 3 of these were transient recurrences; 1 was an extremely neurotic patient who appears in both series, and on both methods of treatment complained of pain during most of her stay in hospital, and another was the subject of nephritis. In 3 other of the 33 cases pain was complained of after the first week.

In the 34 cases treated by other methods, in 11 pain is recorded after the first week; 2 of these were neurotic women, one being the above-mentioned case; in 2 others haemorrhage had recurred; 1 was a patient upon whom gastro-enterostomy had been performed; and there were 6 others about whom no special note need be made except that the pain persisted. In this respect, therefore, the advantage again seems to lie with the Lenhartz treatment.

In none of the cases on this diet was it found necessary to give opium in any form. In one neurotic subject the pain complained of disappeared after the application of a blister.

Weight.—Of the patients on the diet who were weighed on entering the hospital, 8 put on an average of 4.2 lb. each, whilst 6 lost an average of 3.5 lb. each. The figures are of little value, however, as they do not reckon the increase of weight which took place at the convalescent hospital. Of the patients who lost weight, one was a patient who had nephritis, in whom the diet could not be fully carried out, and who lost 6 lb., and another was a case who yielded to neither method of medical treatment nor to operation.

Parotitis is liable to occur in patients being fed by the rectum, even when the greatest care is taken to wash out the mouth with cleansing fluid. It is recorded in 2 of the 34 cases treated by the other methods, but in none of those upon the Lenhartz diet.

The figures are too small to judge of the *mortality*, but it will be seen that no case died upon the Lenhartz diet. There was one death among the other cases.

The *length of stay in hospital* averages thirty-four days in both sets of cases. In this connexion it must be noted that many patients are sent from St. George's Hospital to the convalescent hospital at Wimbledon at a much earlier date than it would be possible to send them to their homes. This figure, therefore, cannot be compared with hospitals not having a convalescent branch of their own near at hand. Cases of gastric ulcer do uniformly well at the convalescent hospital, and almost invariably put on several pounds weight. Fourteen of each series were sent to Wimbledon at the end of their stay in the hospital.

Especially instructive is the comparison of the *number of days in the two sets of cases before the patient reached a diet containing meat or fish*. Among the patients treated on the Lenhartz system, 14 were upon the ordinary diet of the hospital, containing meat, fish, and potatoes, before leaving, the average time taken to reach this standard being thirty days; 11 cases left the hospital on a fish diet, which includes potatoes, having reached this diet in an average of twenty days from the commencement of treatment; 6 other cases were taking fish, but not the full fish diet, when they left the hospital. In the 34 control cases the result is very different; only 4 cases took the full ordinary diet before leaving the hospital, having reached this stage in an average of twenty-three days; the majority (namely, 22 patients) did not reach the stage of meat, leaving the hospital on a fish diet, which they reached in an average of twenty-two days after admission; 7 others were taking fish, but not the full fish diet. The average period before taking fish in these cases was seventeen days. From a consideration of these figures it is evident that the Lenhartz method of feeding enables the patient to take an ordinary diet without pain in a shorter time than treatment by nutrient enemata and a graduated milk diet.

In two of the cases in the first series, and two in the second, resort was had to *gastro-enterostomy*, which should be performed when medical treatment has repeatedly

failed. In one further case in the first series the operation has just been done on my advice in a quiescent interval, as, although the patient responds excellently to medical treatment, she has had several recurrences. A small ulcer was found on the lesser curvature, adherent to an indurated area of pancreas.

It is important to bear in mind that the medical treatment of this disease should be carried out with as much care and precision as is required for surgical treatment. If this be done it will be found to be more efficient than many surgeons appear to think. As I have pointed out elsewhere, any patient who has been treated on milk or upon nutrient enemata, and has not recovered, is regarded by some as a fit subject for surgical operation. Whilst not minimizing the beneficial results of gastro-enterostomy in intractable cases, it must be pointed out that this operation is not an infallible cure for gastric ulcer. In the present small series it will be noted that three of the patients reappeared for treatment after this operation had been performed; another reports that she is still suffering from pain and vomiting. I have also seen a number of others in the out-patient department and elsewhere with recurrence of symptoms. Whether cases of gastric ulcer are operated upon or efficiently treated medically, the majority, for the time being, do extremely well, and the mortality from the disease in nearly all the published series of cases is extremely low. Gastro-enterostomy is not a dangerous operation under ordinary circumstances, but, as Paterson has shown, it is a dangerous operation when performed for haemorrhage. I believe, therefore, that this operation should be done only—first, in cases which, after prolonged medical treatment, do not yield; and secondly, in cases which, having been repeatedly treated by medical means, recur. Perforation and mechanical deformities of the stomach must, of course, be treated surgically.

It will be seen in the tables that in many cases the diet was not carried through in its entirety. My own impression is that the more thoroughly the treatment was applied the better the results; but I need hardly add that no physician will treat even the commonest complaints by rule of thumb, or will have any hesitation in modifying the prescribed formula when it seems best to do so. I have found, however, in the patients under my own care, that the need of such modification is the exception rather than the rule. To a few patients the diet is objectionable. Some prefer the egg and milk mixed, and some alternate teaspoonfuls of milk and of beaten-up egg with sugar. The addition of a little wine to the egg is also recommended, but I have not found this necessary. If the beaten-up egg excites nausea to the point of vomiting, egg-white without the yolk may be used. Instances are reported, and similar ones have come under my own notice, in which, in spite of a strong dislike to the food in the first few days, excellent progress has been made. As a general rule, the patients are comfortable and happy and appreciative of the relief afforded them.

As regards the *subsequent history* of the patients, I have been able, through the lady almoner of the hospital, to hear from 21 of the first series and 16 of the second.

Of the 21 patients treated by the Lenhartz method who have been traced, 9 have been well since leaving the hospital, 9 have had a return of the symptoms of gastric ulcer, and 3 suffer from indigestion.

Of the 16 patients traced who were treated by the usual method, 6 have been well since leaving the hospital, 8 have had a return of the symptoms of gastric ulcer, and 2 suffer from indigestion.

The two series are not absolutely comparable in this respect, for ten months longer has elapsed since the last patient in the second series left the hospital than in the case in the first. As the figures stand, however, we may conclude that the results of the Lenhartz method are at least as durable as those of treatment by nutrient enemata and a graduated milk diet.

The frequency of recurrence in each series is to be attributed partly to the difficulty of keeping hospital patients under treatment long enough. Unfortunately if the patient return to the old conditions an ulcer is liable to recur after either medical or surgical treatment.

A few statistics and criticisms of the Lenhartz method have been published.

Wagner,⁶ in 1904, reported 60 cases, in 35 of which there was no pain from the beginning, and in only 6 did pain last beyond

⁶ Since writing the above I have seen a case in which an extensive chronic ulcer in an elderly woman perforated while under a modified Lenhartz treatment, with a fatal result. The patient had left St. George's Hospital free from pain after this treatment, a fortnight before, but relapsed. The perforation was undiagnosed.

the first week of treatment. In 1 case the pain continued during the whole stay in hospital.

Haberman¹ reported that, in 1906, 135 cases had been treated by Professor Lenhartz in Hamburg, with 3 deaths, each of these fatal cases being very severe or complicated. A recurrence of hæmorrhage took place in 8 per cent., as compared with 20 per cent. in 100 cases treated by the old method. Most were dismissed cured before the eighth week, and no unfavourable effects were produced.

Wirsing² reported 42 cases in 1906, 14 of which had had recent hæmatemesis. In one case hæmorrhage recurred. In 27 of these patients the acidity of the stomach contents was estimated; it was found that during the treatment the amount and percentage of hydrochloric acid was diminished, the latter on the average from 0.14 to 0.11 per cent. Some cases did not show this, and yet progressed as well as the others.

The method of Senator, which has some similar features to that of Lenhartz, may be mentioned here. It consists of the administration of gelatine, butter, and cream from the beginning. He (Senator) stated³ he has reported 50 cases fed upon this diet, of whom 2 died, that is, 4 per cent.

Ewald⁴ uses nutrient enemata for three days after a hæmorrhage, and then gives milk, butter, and eggs, followed by other foods, as in Lenhartz's plan. He reported 34 cases in 1906. The results, however, appear to be inferior to those of the Lenhartz method. In 14 cases death occurred either after operation or immediately after hæmorrhage, and there was a recurrence of hæmorrhage in 7 per cent.

Ewald considers that the Lenhartz method cannot be justified on theoretical grounds and is not worth the risk. The above facts and figures, however, do not support this view, and, so far as data have been collected, it appears to be less risky than other methods of treatment.

Lenhartz in 1906⁵ reported 140 of his cases, all with recent hæmorrhage by the mouth, or mælena. These include some of those reported by Wagner and Haberman. The mortality was 2.4 per cent. He recommends that in such cases great care should be taken not to increase the bulk of milk too rapidly, and in some instances quoted the eggs were given without the milk for two or three days. In one case, by the twelfth day only 17 oz. of milk per day was being taken. The stomach should never be distended. He reports that in two of his patients who died, on the fifteenth and eighteenth day respectively, the ulcer was found to be smooth and healed. He recommends the diet strongly for patients who have recently had a gastro-enterostomy performed.

Lambert⁶ in 1907 published 5 severe cases, all of whom did well on the treatment. One was a woman of 32 years, who, after seven days' rectal feeding and seven days' careful feeding by the mouth with peptonized milk, still had occult blood in the stools and a hæmoglobin percentage of 39, and the question of operation was being mooted. The Lenhartz treatment resulted in a cure. Another patient objected to the diet, even to the point of nausea and vomiting, but nevertheless, after the cessation of the diet for one day, did well. In another hæmorrhage went on until the thirteenth day, and the case was regarded as below the standard limit for surgery, and yet made a good recovery on this treatment. A fourth case, with signs of peritoneal irritation, leucocytosis, and a temperature of 103° to 104°, also recovered. In a fifth case, in which the hæmoglobin was reduced to 20 per cent., in spite of an attack of enteric fever upon the twenty-second day, the treatment proved successful. Lambert's fourth case resembles one which came to my notice after the figures which I have given had been collected. A young woman of neurotic temperament was treated by Mr. G. E. Friend for gastric ulcer on the Lenhartz plan. She had no pain for four days, when vomiting recurred, with rigidity of the upper part of the abdomen. Perforation was discussed; the patient was put upon enemata, and made a good recovery. It is a matter of conjecture whether she would or would not have recovered equally well if, as in Lambert's case, the treatment had been persisted in.

Berger,⁷ in a publication from the Hamburg school, points out that so efficient has the method of treatment been found in the *Spezial-Abtheilung für Magen- und Duodenal-Erkrankungen* that it has proved useful as a method of diagnosis, for in cases which fail to respond the diagnosis has, in many instances, been at fault. He quotes six cases in which the failure of the diet led to the diagnosis of cancer, which was confirmed by operation in four of them and in two by autopsy. In another case hæmorrhage was found to arise from dilated veins about the oesophagus due to cirrhosis of the liver. He says, further, that in cases of pain without bleeding which do not yield, nervous diseases may be suspected.

Schütgen⁸ mentions in 1907 that Lenhartz had then treated 231 patients, with a mortality of 3 per cent. This is about the same as the mortality in 195 cases treated by nutrient enemata by Leube, which was 4 per cent. Leube has altogether collected 556 cases, with a mortality of 2.2 per cent., but many of these were not of the hospital class.

It appears, therefore, that the death-rate of patients treated by the Lenhartz diet is not greater than that of those treated in other ways.

Finally, Mr. Langdon Brown⁹ in a recent paper mentions that he has treated 11 cases by the Lenhartz method with good results in 9 of them.

In conclusion, from an examination of these two series of cases, it may be said:

First, that the Lenhartz method of treatment is not

more dangerous than treatment by nutrient and saline enemata followed by a graduated milk diet. In these particular cases the recurrence of hæmorrhage was less frequent, and there were no deaths.

Secondly, that the pain suffered by the patient in the course of treatment is less on the Lenhartz diet.

Thirdly, the diet gives far more nourishment than can be introduced into the body by nutrient enemata, and is, therefore, more desirable in patients who have frequently been for a long time in a state of semi-starvation, or have suffered a loss of blood, or both.

Fourthly, that in cases treated by this method rectal injections may be entirely avoided. This is an advantage in a hospital, and a still greater advantage in treating cases at their homes, where rectal injections are not only regarded as extremely unpleasant, but are seldom efficiently administered.

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THE EARLY DIAGNOSIS AND TREATMENT OF CANCER OF THE STOMACH.*

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THERE can be no doubt about the importance of this subject. The stomach is a very common seat of primary malignant disease; indeed, in nearly half of all the cases of carcinoma seen in the *post-mortem* room the primary seat of the disease is in the stomach, and although figures from the *post-mortem* room indicating the allocation of primary cancer to different organs cannot be accurately transferred to the living, for many cancers—for example, of the breast—which can be easily observed are excised early, yet the *post-mortem* figures show that cancer of the stomach is terribly frequent. It causes 1.5 per cent. of all deaths at Guy's Hospital. The necessity—if we are to do any long-lasting good to these patients—of an early diagnosis is obvious, for we know of no medical means of successfully treating cancer of the stomach, and with our present knowledge we know of no other proper treatment for cancer than excision, but my experience is that almost invariably by the time a patient comes into the hospital, or by the time a consultation is sought in private practice, the disease is too advanced for excision.

There are many cases in which an early diagnosis is impossible, for the patient does not seek advice until secondary deposits have developed. Thus it is not uncommon for the patient not to consult a doctor until he has secondary cancer of the liver, and in some such cases the most careful examination and investigation of the history fails to suggest the seat of the primary growth. Still in some cases at least there might, I think, be some improvement in our early diagnosis.

The patient's history is of the greatest importance. Three-fourths of all the cases occur between the ages of 40 and 70, and that in spite of there being far fewer people alive then than at earlier periods. There are an enormous number of persons who suffer from dyspepsia unassociated with any organic disease, but such usually have symptoms of dyspepsia when they are young adults, therefore if symptoms of serious chronic gastric indigestion first appear after the age of 40, organic disease of the stomach should be strongly suspected, and if a comparatively short period of medical treatment does not effect a cure, it may be quite justifiable to open the abdomen to see if a growth is present, and, if possible, to take it away. In all cases of gastric carcinoma the utmost endeavour must be made to diagnose carcinoma of the stomach before the

* Remarks made in introducing a debate on the subject to which the paper relates at the Harveian Society of London.

growth becomes tangible, for usually by such a time the period during which the growth could be excised has passed. There is no doubt that sometimes a simple ulcer of the stomach becomes cancerous; precisely how often this happens is very difficult to estimate. A simple ulcer becoming cancerous may occasionally be seen in the *post-mortem* room, but it is only reasonable to suppose that statistics from the deadhouse would underestimate the number of simple ulcers which became cancerous, for by the time of death the mass of growth is often so great that it is impossible to say whether or not a simple ulcer preceded it. On the other hand, clinical histories are very fallacious; often a history strongly suggestive of a previous gastric ulcer may be obtained from patients who have never had an ulcer. Nevertheless, Dr. W. J. Mayo, out of a large number of operations on the stomach, found that a malignant growth had appeared on an ulcer in about half the cases of gastric carcinoma, therefore a history of previous symptoms suggestive of ulcer of the stomach is a help to the early diagnosis of cancer of the stomach; but I have known a confident diagnosis of this disease made in a patient who gave a long history of ulcer, and who had a considerable mass to be felt in the region of the pylorus, but it turned out that no growth was present; the mass felt was the puckering and adhesion in connexion with a large ulcer. However, in these cases the ulcer itself may demand surgical treatment, and therefore opening the abdomen would be justified.

The commonest symptom of cancer of the stomach is pain, therefore we should be chary of diagnosing this disease if it is absent; on the other hand, constant pain is a considerable point in favour of such a diagnosis. Although the general health of the patient may be misleading, for sometimes it remains good, even when the growth has attained considerable size, yet usually those with cancer of the stomach feel more weak, are much wasted and are more anæmic than those whose dyspepsia is not associated with a growth. The red cells may fall to 3,000,000, the colour index to 0.6, and there may be a small increase in number of polymorphonuclear cells. Loss of appetite, nausea, and repugnance to food are usually well marked quite early in cancer of the stomach. On the other hand, these symptoms are often absent when the indigestion is not due to growth. And we must always remember that the probability of cancer is greatly increased if any or all of these dyspeptic symptoms resist ordinary dietetic and other medical treatment.

Much attention has been directed to the amount of free hydrochloric acid present in the stomach of those suffering from gastric carcinoma. It is best after the fasting of the night to wash the stomach out with some water, then to give a test meal, such as a little bread and butter and milk, and an hour and a half after to siphon out the gastric contents. It appears that in a few cases of gastric carcinoma the free hydrochloric acid is not diminished, and it has been stated that this is especially likely to be the case when the carcinoma has developed on the site of an ulcer. Further, in many other gastric conditions, for example, atrophy of the gastric mucous membrane, and chronic gastritis, the hydrochloric acid may be diminished, although on the average not to the same extent as in gastric carcinoma. Carcinoma anywhere will diminish the amount of free hydrochloric acid—for example, in a case of carcinoma of the penis it was reduced to 0.00078 per cent. (the normal being 0.1951 per cent.). But the presence of carcinoma in other parts of the body is frequently easy of recognition. Therefore, in a case in which gastric carcinoma is suspected, the diminution of free hydrochloric acid is of help in diagnosis; but it must be a considerable diminution, for various diseases other than malignant disease will diminish it somewhat. These results are the outcome of work by Moore, Morton Palmer, and others. The observations must be made by competent chemists, for it is not an easy matter to estimate the percentage of free hydrochloric acid in the gastric contents.

It is hardly necessary to mention that these should be carefully examined under the microscope, for occasionally cancer cells may be seen. Sometimes, too, the presence of a few blood discs or blood pigment, as shown by the guaiacum test, will be of help in diagnosis; but before

relying on the guaiacum test we must be sure that the patient has not recently taken any meat. The occurrence of hæmorrhage for the first time from the stomach in a person past the age of 40, if he gives no history suggestive of ulcer, and has not an obvious cause—such as cirrhosis—for his hæmorrhage, is strongly suggestive of cancer. In 35 to 40 per cent. of all the cases of gastric carcinoma the vomit at some time or another contains blood visible to the naked eye.

In rather over 60 per cent. of the cases of carcinoma of the stomach the growth is at the pylorus, and in a considerable number of such cases there is a consequent obstruction to the exit of food from the stomach. Percussion without artificial distension is an uncertain means of estimating the size of the stomach, and a little succussion is fallacious; therefore these signs should not be relied upon in determining whether the patient has some gastric dilatation as a result of pyloric obstruction, but if a patient is given some bread and milk mixed with bismuth oxychloride and then examined in a vertical position by the x rays with a screen, delay in the passage of the bismuth through the pylorus may readily be seen; and indeed probably the bismuth method may sometimes help us to discover a growth in other parts of the stomach, for the passage of the bismuth in a normal stomach is such a regular uniform motion that, if any of it adhered to the growth or this impaired the regular contraction of the stomach, we might see the unusual movement of the bismuth on the screen. An examination by the x rays may be of great help in the diagnosis of cancer of the stomach, but too much reliance must not be placed upon it as a means of estimating whether the organ is dilated, for the position of the lower border of the stomach is very variable in health. Vomiting large quantities at a time of sour material is evidence of gastric dilatation, but we ought to try to diagnose these cases before the quantity is excessively large. Lactic acid in the vomit indicates pyloric obstruction, for it shows that the gastric contents have remained in the stomach long enough to decompose, and this too is the significance of the Oppler-Boas bacillus. Visible peristaltic movements of the stomach, generally best elicited by flipping the abdominal wall, are a valuable sign, for, as they indicate hypertrophy of the gastric muscle, if they are present we may often infer that the pylorus is obstructed. Dilatation of the stomach may, too, be made out by percussing the organ before and after the patient has swallowed a solution of bicarbonate of soda followed by some lemon juice. With regard to all these symptoms of dilatation of the stomach, it must be remembered that in order to diagnose gastric carcinoma from them we must show that pyloric obstruction is the cause of the dilatation; hence the value of the bismuth method and visible peristalsis.

Even when the growth cannot be removed, or secondary deposits render this undesirable, much benefit often follows a gastro-enterostomy if there are signs of pyloric obstruction. The vomiting ceases; the patient digests his food better and gains weight. Life will be prolonged partly for this reason, and probably because some of the gastric contents will no longer pass over the growth and hence it is less irritated and it will grow more slowly. It is, I think, clear that there are no means of infallibly diagnosing cancer of the stomach in its early stages; but I do believe that by carefully considering a number of points we might sometimes arrive at a diagnosis earlier than we do, and therefore give the patient the chance of excision, for medicines are powerless to cure him. Speaking generally, it is only in the early stages that excision can do any good, for secondary deposits usually form rapidly, and before subjecting the patient to an operation the whole body must be thoroughly examined to ascertain if any can be detected, and special attention must be paid to the liver and the left supraclavicular glands. Further, each individual case must most carefully be considered, for there is no doubt that many persons have had their lives shortened by excision of a gastric carcinoma; perhaps this, however, would not so often have been the case had the diagnosis been reached earlier. Lastly, even if it is decided that excision is impossible, consideration should be given to gastro-enterostomy, for the relief which follows this when the pylorus is obstructed may be very great.

THE EARLY DIAGNOSIS AND TREATMENT OF CANCER OF THE STOMACH.*

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A DEBATE upon the early diagnosis and the treatment of cancer of the stomach is most necessary, for the disease claims approximately 1,500 victims every year in England; it is seldom that we are enabled to do much to relieve those who suffer from it, and the cases that we have cured are so few as to be almost negligible. It is only by the close association of the physician and the surgeon, and by their united endeavours, that any hope of improvement in this lamentable state of affairs can be entertained. The opinions which I am about to express will probably not meet with the approval of all, may perhaps encounter the strong opposition of some, but they are views which I have been brought by degrees to hold firmly, and I am here to speak of the faith that is in me.

REPORT OF HISTORY (Anamnesis).

It has long been a practice of mine, in eliciting the anamnesis of patients referred to me with any abdominal disorder, to endeavour to disentangle their thoughts from the present phase of the disease, in order to concentrate them upon the very earliest departures from health of which they have knowledge. A little persuasion, a little patience, and constant encouragement are sometimes necessary before the whole story will be told, but the time is well spent, and the inaugural symptoms, which are of the highest significance, are then disclosed. If this course be followed with patients who are subsequently shown, by operation, or autopsy, or by the later developments of their disease, to be suffering from carcinoma of the stomach, all three different types of clinical history will be elicited.

In the first the patient stoutly denies, nor can any persuasion induce him to recall, any earlier illness or suffering in connexion with the stomach. He will say that his digestion has always been of the best, and that all foods have been alike to him, all have been taken with zest, and that "dyspepsia" or "indigestion" has never in the slightest degree troubled him. In this condition of good, even robust, health there has been a forcible and abrupt intrusion of symptoms hitherto unknown. A sudden hæmorrhage from the stomach may occur, one or two pints of blood being brought up, and from that moment there appear the symptoms indicative of a gross lesion of the stomach. The anaemia which follows so free a hæmorrhage persists unduly, and food, especially meats, fat or lean, becomes distasteful. A sense of uneasiness, distress, weakness (it is variously described) is felt in the epigastrium; vomiting may be repeated, weight is lost, and a palpable tumour rapidly develops in the stomach wall. As a characteristic example of this class I will quote the following cases:

Mr. F., aged 34. Sent by Dr. Mitchell, Oldham. Up to nine weeks before I saw him, on October 26th, 1908, the patient had been perfectly well. The closest examination failed to reveal any history of former trouble in the stomach. His father-in-law told me that he was "the heartiest man in Oldham." Nine weeks before he had begun to suffer discomfort one hour after food; there was a feeling of fullness and flatulence in the epigastrium and abundant eructation of gas, which at last was almost rampant in its offensiveness. There was never severe pain, only a sense of "weight and stagnation." The patient repeatedly said he felt as if there were "something in the stomach that would not move on"; and he felt that the food could not get away. Four weeks later he began to vomit, and did so every day for more than a week; then occasionally there was a day when he did not vomit, and when that was so he afterwards noticed food which had been taken the previous day in the vomited material. Vomiting had ceased for over a week before I saw him. There had never been hæmatemesis nor melaena. From the beginning, but especially during the last month, he had got weaker and thinner and very much paler. When I saw him he was profoundly anaemic; his face was of a white waxy appearance, and the mucous surfaces were almost bloodless. In the epigastrium I found a tumour whose upper margin was well defined, but whose lower was indefinite. The tumour moved on respiration; there was no dilatation of the stomach. The con-Boas bacilli were innumerable. I found on opening the abdomen there was a growth along the whole length of the lesser

curvature, and that throughout the stomach there were deposits of growth resembling boiled sago grains. Glands in all directions were enlarged, and there was a very large secondary growth in the liver. He died on December 23rd, 1908. The growth in the liver had increased considerably.

Mr. J., aged 65. Sent by Dr. Malin, Rochdale. Up to August, 1907, he was perfectly well. He was a man who had led a busy life, amassed a fair fortune, and had lived carefully. There had never been any indigestion nor any abdominal disorder of any kind. There was, in fact, as the patient said, "a clean bill of health." In August, 1907, he had a severe attack of hæmatemesis; he did not remember ever having vomited before, and he had never vomited since. After this he was weak and ill and very anaemic, but he gradually improved in appearance and returned to business. He had, however, lost all appetite; he could not take any meat, and soon gave up all solids. Weight was lost rapidly. I saw him on March 14th, 1908. He had the frame of a big man, but his clothes hung loosely upon him. He was very anaemic, and capillary vessels stood out prominently against the white background of his cheeks. He took very small quantities of soups and milk and tea. In the epigastrium a large, ill-defined tumour could be felt. Lavage and examination by test meal showed long stagnation of all the contents of the stomach, which contained blood, yeast, pus, and bacteria. At the operation I found a growth involving the lesser curvature near the pylorus, and, passing behind the stomach adhering to the pancreas, it involved the greater curvature also. There were several sago-like bodies on the surface of the pyloric portion of the stomach. I performed anterior gastro-enterostomy, with slight temporary benefit.

In the second class are placed all those cases in which a clear history of chronic gastric ulcer can be obtained. In some of these cases there has been only one attack, or possibly two or three attacks rapidly succeeding one another within the period of a single illness, followed by a complete abeyance, or at least a complete latency of all symptoms until the onset of the malignant disease. In other cases the patients have had a long series of attacks, in many respects closely similar to the present one, of "indigestion." These attacks have been characterized by pain, appearing always at a definite interval after food, the interval being longer or shorter according to the character of the food taken. After a solid meal the pain appears rather more slowly, but is unmistakably more severe; after a meal consisting of fluids only the pain comes more quickly, is less severe, and passes away more rapidly. The pain varies in its position, but is usually referred to the middle line, where a tender spot can generally be discovered. The left or the right costal margin may be tender, and the radiations of the pain may be to one side or another, or through to the back. Vomiting is not a frequent symptom; when it occurs it brings instant relief, and a habit of inducing it may accordingly be developed by the patient, who is confident of obtaining ease in that way. Attacks are prone to come more often in cold weather, or as a result of a chill, or by reason of increased work, worry, and anxiety. In some cases the evidences of stasis may develop, though they rarely become dominant. The patient, long accustomed to suffering, may be resigned to the restricted diet of a "chronic dyspeptic." One patient—a lady who celebrated her silver wedding a few days after I had operated upon her—had never, within the period of her husband's knowledge of her, eaten one solid meal. The foods usually taken are of the light, easily masticated, and easily propelled foods. In the history of many patients, however, there are "latent periods" during which food can be taken, if not with a keen relish, at least with better appetite and enjoyment than is usual. But after such a period there is again the breakdown, and pain in its characteristic form returns. An occasional indiscretion, even when the patient is quite well, may bring a reminder of the need for care, and certain articles of diet must be sedulously avoided at all times. Experience of repeated troubles has imposed upon the patient the necessity for care in the selection of a dietary. The "attacks" are without question due to a chronic gastric ulcer. When we operate to-day upon patients who recount these symptoms the chronic ulcer can always be found and demonstrated. After a history of repeated attacks, alike in onset, in character, duration, and relief, comes one attack at first so closely resembling all the others that it is with difficulty to be distinguished as having a special significance, but by degrees revealing a sinister importance and leading on by stages, presently to be described, to a condition clearly due to cancer. This group is indubitably the most common. Approximately, two out of every three

* Remarks made in opening a discussion at the Harveian Society of London.

cases in which carcinoma of the stomach is found in my series give a history of this kind. One or two examples may be given:

Mr. M., aged 48, sent by Dr. Wesley Smith, seen by me August 8th, 1908. The patient has been "bothered with indigestion for years." The pain has always been definitely related to the taking of food. His meals have often been hasty; he has "bolted" solid food, and the meal times have been most irregular. After special stress of work, he has often had to "give up entirely" because of an attack of indigestion. Pain has come usually 1½ hours after food, and the food has then begun to regurgitate, and a feeling of great oppression and fullness has been relieved by belching. About an hour after food he had "miserable discomfort," which a hot drink would often relieve. The present attack began about Christmas, 1907, and has continued ever since. He has lost over 4 st. in weight. Recently his discomfort has only been relieved by getting the food back. He is easy when the stomach is empty, and never at any other time. On examination, a tumour is palpable, and on slight inflation peristaltic waves are visible. Operation October 14th, 1908. A large tumour occupying the lesser curvature up to the pylorus, and extending down both surfaces. Partial gastrectomy. The growth was malignant, and had begun in a saddle-shaped ulcer.

Mrs. A., aged 45, sent by Dr. Horsfall, Slaithwaite, seen July 10th, 1907. The patient says that she has suffered from her stomach "all her life." When asked to be more precise she says that she remembers very well an attack when she was 20 years old, and that was not the first. In an attack pain came about one hour after food; the pain was worse after heavy foods, but came more quickly after liquids. Vomiting at first did not occur, has since been frequent, but has always brought relief. No blood has been seen at any time. In the intervals between attacks she feels very well; the longest interval was rather more than a year in duration. The last attack began at Christmas, 1906. The pain was of the same character, but became by degrees more severe. Diet was restricted to fluids, but pain persisted, and recently has been almost constant. Vomiting has been frequent during the last few weeks. Has lost in this attack 20 lb. Does not improve with the same treatment as before. I operated upon her on July 19th, 1907, and performed partial gastrectomy. There was a large prepyloric growth; a great many glands in both omenta, and the right suprapancreatic glands and the subpyloric group were especially large. The patient died in September, 1908, having had three "fits" on the two days preceding her death.

In 3 cases in my series perforation of an ulcer had occurred twenty-six, ten, and four years previously. In the first case the perforation had been of the "chronic" type, and a perigastric abscess had formed. In the others the history suggested that the perforation had been of the "subacute" type, and the conditions found at the operation lent strong support to this view.

Symptoms of Cancer.

This being the early history, what are the symptoms which are present in the final attack which proves to be due to malignant disease? The patient notices, by almost imperceptible degrees, that the relief which has formerly come for a brief period after a meal is curtailed, that pain comes more speedily or is not relieved at all. It is not long, therefore, before food is taken in lesser quantity, and becomes restricted to fluid forms alone. There is often a distaste for meat, especially for fat meats, as observers long ago noticed. The zest for food is lost entirely, and there is often a positive repugnance to it. While the ulcer is still simple there is rarely a distaste for food; on the contrary there is often a feeling of great desire for food, but experience has shown that indulgence is followed by distress or pain. I have commonly heard it said, "I could eat anything, but I dare not." In patients suffering from well-established cancer this is never heard; the cry is always that the thought of food is abhorrent, and it is difficult to persuade a patient to overcome his intolerance. There is, then, little or no freedom from pain, and a sense of uneasiness, or "sinking" in the epigastrium; yet the pain is never severe, is often not a matter of complaint at all. Food which has been taken "lies heavily" on the stomach, and regurgitation of it may occur, and a nauseous, bitter, but not acid, taste is noticed. There is often much flatulence and eructation of gas. There are times when the gas and the vomited matters are unendurably offensive. The lessening of the size of the stomach by the discharge of either gaseous or fluid contents always brings relief. Very early in the attack anaemia is seen; it is not, as it may have been before, the anaemia which can be attributed to a large and noticeable loss of blood; it is rather a gradually deepening pallor, the face seeming of a whiter colour than the rest of the body. It is not infrequent for the colour to be of the faintest yellow tinge, and the

resemblance to the hue of pernicious anaemia is very close. In all such cases there is a continuing loss of blood, as examination of the stomach contents, removed by the tube, or of the faeces, will show. Anaemia is, perhaps, the most striking of all the signs which indicate the onset of carcinoma in the stomach. The appearance of the patient with pallid, shrunken face, and features preternaturally sharp, the skin being dry and harsh and withered, will often rouse the first suspicion of the gravity of his disease. Loss of weight is continuous; at first it, perhaps, hardly attracts attention, but as soon as note is taken of it, a steady and unchecked wasting is observed. General weakness, indifference to many of the affairs of life which formerly held an absorbing interest, languor and lassitude are all seen in greater, than in less, degree. Such is the complete picture seen in the majority of the cases of carcinoma. A discrimination of two distinct types can usually be found in all cases where the pyloric half of the stomach is the seat of disease. These I would designate as cases of "pyloric" and of "prepyloric" growth. In the former the symptoms almost from the first suggest the presence of a hindrance at or near the pylorus. Vomiting is among the very early symptoms, and dilatation of the stomach, with stagnation, and the periodic return of the long-delayed food, occur. These cases are recognized early, owing to the inability of the patient to take food, either solid or liquid, with comfort, and to the overt character of the cardinal symptom, vomiting. The danger is in mistaking, as I have unhappily done, on more occasions than one, the growth for a chronic ulcer. A palliative operation, gastro-enterostomy, is then performed, when a radical operation, partial gastrectomy, is needed. In the "prepyloric" form the symptoms are such as I have already described; they are general and constitutional rather than local, and are, therefore, less compelling in their interest. The ulcer, and the growth which follows it, are found upon the lesser curvature away from the pylorus; the ulcer has probably been, and may often be shown to be, saddle shaped, and consequently a high degree of obstruction does not come till late. The mere presence of a growth on the lesser curvature—or, indeed, of an ulcer also—seems to do something to impede the passage of food onwards, possibly by entanglement of the nerve supply; a zone of muscle of lessened power offers obstruction in some sort, and causes both stasis and vomiting.

In the third group the patients, who are generally between 40 and 45 years of age, give a history which, in all its essential details, is identical with that in Group 2. But there is one significant omission. No history of any illness which can be referred to a structural lesion in the stomach can be elicited. The whole clinical course is comprised in the one sustained illness which, without haste but without pause, has brought the patient into a condition of serious ill-health. The symptoms in their earlier stages are pain, which appears sooner or later after food, and is worse after solid food to such a degree that liquids soon form the whole dietary; occasional vomiting, and possibly haematemesis or rarely melaena, and loss of weight. There is nothing alarming or particularly distressing in the symptoms, but it is their persistence rather than their prominence which finally attracts attention. Wasting anaemia and perhaps vomiting become conspicuous, and at last it is realized that the patient is probably attacked by some serious organic disease.

At the operation carcinoma is found, and, most important point of all, the growth, in my experience, is sometimes found to be in the site of a chronic ulcer. In this group of cases there is no suspicion, clinically, or only a very vague suspicion, that a chronic ulcer of the stomach has ever been present. It is the pathological disclosures which make it probable or certain that in many an ulcer has formed, an ulcer which at the moment of its full development has straightway become invaded by an insidious malignant process. The change which occurs in this ulcer is in every feature the same as that which is noticed in the cases in Group 2; but in these the change comes in the first life of the ulcer, in the others only after it has many times healed and as often broken down again. The following is a good example:

Mrs. B., aged 46. Sent by Dr. McLeod, Outwood. Seen by me October 10th, 1908. The patient had been perfectly well up

to six months before. She then began to suffer pain one to one and a half hours after food; vomiting occurred shortly afterwards, and always gave some relief. There was never hæmatemesis. The pain gradually increased in severity, and latterly had been much worse after solid food, especially meat. At first there were periods during which she felt quite well, but lately the suffering has been continuous, and weight has gradually been lost to the extent of 11 lb. On examination there was a dilated, visibly acting stomach, and a lump the size of a hen's egg was palpable at the pyloric end of the stomach.

Operation.—The palpable tumour was seen to be a mass of malignant glands ("subpyloric" group). On the anterior surface of the stomach close to the pylorus was a hard round scar, with radiating puckers from it. Partial gastrectomy. Recovery. An examination of the specimen showed a large chronic ulcer of the stomach, at the lower part of which the edge was raised into a mass the size of a Barcelona nut. This was malignant, as also were the glands underlying it.

Relation of Gastric Ulcer to Cancer.

In the remarks I have already made I have done something more than hint at the connexion between ulcer of the stomach and cancer. Are we entitled to say that there is any proved connexion between the two? If we are, then chronic ulcer of the stomach must be ranked among the "precancerous" conditions; and if, further, the connexion be proved to be of either moderate or large frequency, cancer of the stomach is surely robbed of some of its terrors, for it is doubtless then to be enrolled among the preventable diseases. What is the evidence? In a previous paper, read before the Clinical Society of London in February, 1906, I collected and analysed all the cases of cancer of the stomach (58 in number) upon which I had operated up to July, 1905.¹ In the last 22 cases a history of chronic gastric ulcer was clearly obtained in 16; in 1 case there had been a subacute perforation of an ulcer on the lesser curvature near the pylorus. In 1 case the "attack" of gastric ulcer had occurred twenty-six years before; in the interval the health had been good and digestion sound, though care had always been exercised in the matter of diet.

Almost identically the same proportion has held good for my later cases, numbering over 100, and I am therefore in a position to say that of all patients operated upon by me for cancer of the stomach approximately two in every three have had a history of previous gastric ulcer. In the majority of those who give this history there has been a constant succession of attacks, similar in all their chief manifestations and brought about by similar causes. In the last attack the symptoms have been of a graver nature, more protracted, not amenable to the treatment, nor relieved by the drugs, which proved successful before; and by degrees it has become unmistakable that this attack is likely to prove of a far more serious character.

From the clinical point of view it is, therefore, certain that we must look for the inaugural symptoms of cancer of the stomach rarely among those whose former health has been good, often among those whose anæsthesia tells sometimes of one, but, as a rule, of many attacks of "dyspepsia" or "indigestion," as they may be called. These attacks of pain come after food, are definitely related to the taking of food, are eased for a time by food, and there are also vomiting, inability to take or temporary dislike for solids, and loss of weight; the attacks, that is to say, are clearly to be referred to the presence of a chronic gastric ulcer. If, therefore, we are to concentrate our attention upon the early symptoms of cancer of the stomach, it is the patient whose stomach has long been a source of trouble to him that must chiefly engage our attention. But it is necessary to say that this patient, who is, so to speak, the most promising candidate for carcinoma of the stomach, can be prevented from developing this horrible affliction by a timely attention to the earlier simple disease. Cancer of the stomach, if it follows in the majority of cases upon chronic ulcer of the stomach, is so far, and in such numbers, a preventable disorder. In the surgical treatment of chronic gastric ulcer by the performance of gastro-enterostomy, or of Rodman's operation, may be the means of destroying the chances of a late malignant change from an early simple condition. It has often been said that "the onset and persistence of dyspepsia in a man over 40 years of age, who had previously enjoyed good health is a suspicious circumstance" pointing probably to the onset of carcinoma. I have found that in such cases the disease is more often simple

than malignant, and that the lesion found is more frequently duodenal than gastric.

I am only too well aware of the doubt, even perhaps of the hostility, with which the suggestion has been received that ulcer of the stomach and cancer stand often in the relationship I have indicated. But impartial inquiry into the history of a long series of cases will support, I know well, the views I have expressed. Clinically there can be no longer any substantial doubt of the connexion. Is there any valid pathological evidence to support the belief which clinical experience has stimulated? I have no hesitation in saying that the pathological evidence now available supports fully the contention I have stated. In what manner should we expect that evidence to be obtained? I venture to answer that it could only be obtained from specimens examined in an early stage of the disease, at a time when the primary simple disease and the later cancerous change can be seen together. It is, then, necessary also to show that the former condition is earlier than the latter. A moment's thought will convince one of the truth that a specimen of this kind is hardly to be found upon the *post-mortem* table in the body of one who has succumbed at last to the steady and unchecked extension of a malignant growth. The only specimens which are likely to furnish valid evidence must be obtained by operation. The best of these specimens are found when a chronic ulcer, as the appearance suggests, is removed by Rodman's operation. Though no suspicion of malignancy may have crossed the surgeon's mind, the pathological examination will disclose the undoubted evidence of early malignant disease in an area where the ancient marks of simple disease are plainly to be seen. In this connexion one cannot but offer a tribute to the remarkable work which has been done in the clinic of Dr. W. J. Mayo and Dr. C. H. Mayo at Rochester. I had the privilege a few months ago of seeing the specimens of partial gastrectomy removed by them, and of having the pathological conditions demonstrated to me. No one who has seen the evidence there produced doubts any more that cancer of the stomach is frequently the offspring of an early simple disease. Dr. W. J. Mayo² has recorded the fact that, in 180 cases of resection of the stomach, cancer was demonstrated to have sprung up in the base of an ulcer in 97, that is, in 54 per cent. My own experience supports this statement fully; indeed I have myself found the percentage even a little higher in my recent cases.

The connexion between chronic ulcer of the stomach and carcinoma I hold, therefore, to be established so far as Group 2 is concerned. Is there any relationship between the acute cases of cancer of the stomach, cases which seem to have in them something akin to an acute infection, and ulcer? There is no history of chronic ulcer in this class of case; the disease seems to begin acutely and to spread rapidly; in my own work no permanent relief has ever followed operative treatment, and the benefit obtained by the palliative operation of gastro-enterostomy is too often quite inconsiderable. Recently I have come to believe it possible that in these cases also an ulcer may be the starting point of the malignant process. The ulcer in such cases is of the "acute" type; one or more "haemorrhagic erosions" are present, and in these cancer is deposited and spreads there with the most intense rapidity.

If carcinoma should be conclusively proved to be the final change in the long series of changes which have led up to and established a chronic ulcer in the stomach, is it not in this case merely repeating the experience we have gained of its habits in other parts of the body? We know how frequently cancer of the tongue develops as a last change in a series of conditions all of which are simple. It is only the bare truth to say that cancer almost never develops in a tongue previously healthy; where a malignant ulcer is present other changes are seen around it, and these have been present, always for months, often for years. Cancer is there only a local exaggeration of or a later change in a condition of things distributed over other parts, or over the whole of the tongue. It is the same with the lip, and with the ulceration of old scars due to burns. The development of cancer on the cornea as a result of the irritation of smegma retained by a too-long and too tight prepuce was pointed out more than a century ago by the first William Hey of Leeds. In the breast the transformation from chronic mastitis to

maligancy is no longer doubted. In the gall bladder it is commonly seen. And instances might easily be multiplied. Surely the one thing of which surgeons feel sure in respect of cancer is that it seems most often to occur in those parts where mild irritation has long been present.

Exploratory Incision.

A review of the cases which have been under my own care has convinced me that though the history, especially in so far as it tells of former attacks of chronic gastric ulcer, may awaken a keen suspicion as to the presence of a carcinoma in the stomach, and though all the contributory evidence to be derived from the chemical examination of the stomach contents may go towards a confirmation of the diagnosis, there is only one means of making an assured diagnosis in an early stage. An inspection of the parts, and this alone, and that indeed not always, can give us the information upon which a probable diagnosis can be made. It is necessary for us to realize that by any other methods than this one a positive diagnosis of cancer in the stage when it is capable of successful treatment is almost impossible. If the patients who are suffering from this most insidious and most terrible disease are to have any fuller prospect of relief, or of cure, the use of the exploratory operation must be greatly increased. I depreciate more strongly, I believe, than most surgeons the adoption of the "exploratory incision"; but every argument and all experience show that in cases of carcinoma of the stomach no other method than this offers any slenderest hope for the betterment of the present deplorable condition of affairs. But before we are entitled to advise any patient to undergo this operation we must be confident that there is a well-grounded suspicion that some condition not admitting of remedy by any other than surgical means will be found.

Indications for Operation.

I think that an operation should be advised in the following circumstances:

(a) In all cases of chronic gastric ulcer. The recent experience of surgeons has shown that a diagnosis of chronic gastric ulcer can be made with great accuracy, and that not only the presence but also the position of the ulcer can be accurately predicted. When repeated "attacks" occur it is idle to consider any other than operative treatment, for nothing else can give permanent relief. In any attack occurring in a patient over 40 years of age the need for surgical intervention is becoming urgent.

(b) When gastric stasis is present. This is a condition the existence of which is easily determined. If there are symptoms suggesting structural disease in a stomach incapable of emptying itself completely in from ten to twelve hours, then the conditions which exist are mechanical, and can be remedied by none other than mechanical means.

(c) When a tumour is present. The tumour may be simple or malignant, but research is better conducted by inspection than by any other means at our disposal.

In these three conditions medical treatment may do something to relieve, it can do nothing to cure. There is accordingly no reason for delay in advocating operation. If this is done, and done early, many cases of carcinoma that now drift quietly into the inoperable stage may be saved.

The position seems now to be this—that there are no signs or symptoms clearly indicative of the presence of gastric cancer; there is no refinement of clinical inquiry nor any endowment of clinical acumen which will enable a confident diagnosis to be made in an early stage; inspection of the stomach during an operation carried out when definite faults in its working are known will permit of the early discovery, or of the prevention of a certain proportion of the cases of cancer. The surgeon must not ask the physician for a sign which will reveal the presence of this disease to him, but he can and should require that those conditions which are only to be remedied by operative measures should be referred to him not in their advanced or terminal stages, but at the earliest moment of their recognition. The success which has followed the surgical treatment of gastric disorders justifies this simple request.

Chemical Analysis of Gastric Contents.

A point which cannot be ignored in any discussion upon the early recognition of cancer of the stomach has reference to the condition of the stomach contents. Much has been written with regard to the value of a chemical examination of the stomach contents in cases of gastric carcinoma. It is my practice to have all stomach cases examined as a matter of routine, and I place some reliance upon the results so afforded. But it is necessary that more examinations than one should be made, and that the circumstances should be changed in some of the examinations. The fluids removed from the stomach after several hours of fasting, after a test meal preceded by lavage, and after a meal consisting chiefly of albumens should be examined. The characteristic result in cases of cancer shows absence of free HCl, a diminished total acidity, the presence of lactic acid, and the presence of Oppler-Boas bacilli. Briefly stated, my opinion is that the early diagnosis of carcinoma of the stomach receives only the slenderest help, if indeed it receives any, from those examinations; whereas, in the later cases, a suspicion of malignancy receives strong confirmation if the characteristic conditions I have named are found.

Conclusions.

I would endeavour to sum up my knowledge of cancer of the stomach, as revealed to me by a study of the cases which have come to me for surgical treatment, in the following propositions:

1. Cases of cancer of the stomach when examined in regard to their previous history may be divided into three groups: (a) Cases, generally acute, in which the symptoms appear suddenly and progress rapidly; the whole history may be confined within a space of four to nine months. (b) Cases in which there is a history of one ancient attack, or of repeated attacks, due undoubtedly to the presence of a chronic gastric ulcer. (c) Cases in which there is no previous history of gastric ulcer; in some of them a condition of "ulcus carcinomatosum" may be found.
 2. The acute cases are not seldom ushered in by an attack of severe hæmatemesis, with or without melæna. It is possible that such copious bleeding is dependent upon multiple hæmorrhagic erosions.
 3. The importance of a history of repeated attacks of indigestion, alike in their origin, course, and termination, cannot be exaggerated. Such attacks are due to a chronic gastric ulcer, which at last becomes malignant.
 4. Cancer of the stomach, in so far as it depends upon a chronic ulcer for its origin, is a preventable disorder. It is probable that two-thirds of the whole number of cases may be so classed.
 5. The final attack is distinguished from former attacks by its lingering character, its rebellion against the treatment, dietetic and medicinal, which has proved helpful before, but chiefly by the presence of a profound distaste for food, anæmia, and a progressive loss of weight.
 6. The chemical examination of stomach contents is of little or no value in so far as early diagnosis of carcinoma of the stomach is concerned. In the later cases, when a possible diagnosis of malignancy is made on the clinical evidence, the results of repeated chemical analyses of the stomach contents afford additional evidence of considerable value.
 7. Surgical treatment should be advised in all cases of stomach disorder where there is obstruction, stasis, or tumour, and in all cases of chronic ulcer; in this way early cases of carcinoma will be found, and radical treatment will be possible.
 8. There are no symptoms, and there are no signs which, individually or collectively, permit of an assured diagnosis of cancer of the stomach in an early stage. In cases where there is grave suspicion an exploratory operation should be advised. Such operations should be practised to enable a diagnosis to be made in an early stage, not to confirm an almost certain diagnosis in a hopeless stage.
- The surgical treatment of cancer of the stomach is now based upon sound principles, as a result of the work of many labourers in different fields. When the growth is seated at or near the pylorus, or along the lesser curvature of the stomach (and these are the cases we are chiefly considering), the anatomical and pathological investigations have indicated certain essentials to be observed in order that the whole growth, and the lymphatic area in

connexion with it, may be eradicated in accordance with those principles now generally held to be necessary in dealing with any form of carcinomatous disease.

After a study of all the factors, we are in a position to lay down the lines upon which an operation for the removal of a malignant growth beginning in the pyloric region of the stomach should be based. It is essential that the whole growth should be taken away, and such a margin beyond the visible and palpable tumour as shall ensure that the outlying nodules are within the lines of section; that all the lesser curvature, that one-half of the greater curvature, and that an inch at least of the duodenum should be removed; that all the "primary" glands at least should be taken (these are the lower and upper coronary, the right paracardial, the suprapyloric, the right suprapancreatic, the right gastro-epiploic upper and lower, and the retro-pyloric). The removal of all these parts is possible, and therefore the somewhat mournful view of the possibilities of the surgical treatment of cancer of the stomach taken by several writers are not justified. The difficulties to be encountered will chiefly lie in the removal of the right suprapancreatic glands, but that these difficulties are exaggerated is, I think, quite certain. In several cases I have, by using the "gauze stripping" method, removed the glands without any injury either to the hepatic artery or to the pancreas.

The following are the steps of the operation, as briefly outlined as possible:

1. The free opening of the abdomen in or near the middle line; the inspection of the parts; the packing of swabs around the area to be engaged in the operation so as to avoid any soiling of the parts. Nothing except the viscera at the moment engaged in the operation should be visible.

2. Preliminary ligation of the pyloric, gastro-duodenal, and left gastro-epiploic arteries (not the coronary), division of the gastro-hepatic omentum close to the liver.

3. Division of the duodenum between clamps, and the use, on the distal side, of a suture to close the duodenum by infolding. On the proximal side the exposed mucosa is well seared with the cautery, and a stitch taken round the clamp to prevent it slipping.

4. Ligation of the gastro-hepatic omentum below all glands in the greater curvature. The most important point is now to see that the middle colic artery is not wounded. The omentum is ligatured up to a point just beyond the middle of the greater curvature, so that all glands are removed.

5. The stomach is now turned well over to the left and the coronary artery ligatured at its origin from the coeliac axis. At once the lesser curvature is freed, and the stomach can be pulled lower. In this way all the coronary glands remain with the stomach.

6. Performance of posterior gastro-enterostomy. This is done before the stomach is cut away, being then far easier.

7. Division between clamps of the stomach from the oesophagus at its right margin to a point a little to the left of the middle of the greater curvature.

8. Cauterization of the exposed mucosa of the stomach and closure of the cut end of the stomach by a double suture.

9. Toilet of the peritoneum and closure of the parietal wound.

The size of the growth at or near the pylorus has no influence upon the extent of the resection. For the very smallest growth a resection to this extent is needed. If the growth invades the body of the stomach it may involve the removal of all of the stomach but the isolated area, after the manner described by me several years ago.

REFERENCES.

BRITISH MEDICAL JOURNAL, 1905, 1, p. 370. 2 *Annals of Surgery*, 1908, 1, p. 382.

A COMMUNICATION which has reached our hands records the aspirations formally expressed at the annual meeting on March 21st of a body entitled *l'Association médicale internationale pour aider à la suppression de la Guerre*. This, as we have mentioned on a previous occasion, is a peace society, claiming to be both international and medical, and having its head quarters at 25, Rue des Mathurins, Paris. The only "ven" of a novel character was a hope that the progress of science represented by aero-navigation will not be turned to the purposes of war.

ON THE SURGICAL TREATMENT OF GASTRIC ULCER, ITS COMPLICATIONS AND SEQUELAE.

WITH SIXTY ILLUSTRATIVE CASES.

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Of all the advances in modern surgery none is more striking than that which has taken place in the treatment of gastric ulcer. Patients suffering from this disease, or some of its dire results, need no longer drag out the miserable existence they used, for surgery holds out every hope of restoring them to good health. During the last seven years it has been my lot to operate upon 60 cases of gastric ulcer, its complications or sequelae, and it is proposed in the present paper to give some account of them. The various conditions met with have been:

- (a) Active ulcer of the stomach, with and without adhesions to neighbouring viscera.
- (b) Cicatrized ulcer, with and without adhesions.
- (c) Hour-glass contraction of the stomach.
- (d) Subphrenic abscess.
- (e) Tumour after perforation of the stomach.
- (f) Perforating ulcer of the stomach.

The operative procedures adopted for the relief of the above-mentioned conditions may be divided into two main groups, namely, deliberate operations and emergency operations. They will be dealt with in this order.

A.—DELIBERATE OPERATIONS.

The deliberate operations have been:

- 1 case of ligation of ulcer.
- 1 case of pyloroplasty.
- 1 case of excision of ulcer and suture.
- 2 cases of drainage of subphrenic abscess.
- 1 laparotomy for tumour after perforation.
- 54 gastro-enterostomies, alone or combined with other operations.
- 1 case of gastro-gastrostomy.
- 1 case of lateral anastomosis.

The case of ligation of ulcer occurred among the earlier operations, and was performed on November 16th, 1901, in a young woman, 21 years of age, in whom an ulcer the size of a sixpence was found on the posterior wall of the stomach, at the extreme cardiac end, close to the lesser curvature. Here the ulcerated surface was invaginated by two layers of Lambert sutures, after which an opening was made in the anterior wall. The invaginated ulcer seized with forceps, pulled up, and a ligature applied beyond the base of the ulcer, the opening in the anterior wall being thereafter closed. The case did remarkably well and remained so for several years, after which she was lost sight of. On account of the awkward situation of the ulcer, the method of treatment mentioned was deemed safer than excision and suture.

In one case of cicatrized ulcer of the pylorus in a female patient, also one of the earlier cases, a pyloroplasty was performed. Here, although distinct improvement followed the operation, the result I am satisfied would have been better had gastro-jejunostomy been done.

In a male patient it was found that an ulcer the size of a two-shilling piece on the anterior wall of the stomach close to the greater curvature had contracted an adhesion to the abdominal wall well down in the left lumbar region. On breaking down the adhesions it was discovered that the ulcer had eaten through the stomach walls completely, its base being formed by the parietal peritoneum. In this case the margin was excised and the gap on the stomach wall sutured. On the completion of this operation, the stomach receded up into the abdomen and lay so naturally that no further operative procedure was deemed necessary. The operation was performed in January, 1905, and I believe the patient has had no further stomach trouble.

Two cases of subphrenic abscess following perforation of a gastric ulcer were met with. The first, a young married woman, was so bad when put upon the operating table that the administration of a general anaesthetic was out of the question, and the drainage, which was by the transplurular route, was under local anaesthesia. Although she caused grave anxiety for a few days, she ultimately recovered.

* Read at the November meeting of the Aberdeen Medico-Chirurgical Society.

after a tedious convalescence. The second case is interesting and worth giving in more detail.

Suppurative Abscess following Perforation of the Stomach: Operation: Rupture of Abscess into Colon: Recovery.

H. R., aged 25, was admitted to the Royal Infirmary on November 9th, 1905. A month previously she began to suffer pain in the left epigastric region. This continued fairly constantly until 1 a.m. on October 22nd, when she awoke with exacerbating pain in her left upper abdomen which soon spread all over and was accompanied for a few hours by sickness and vomiting. After a few days, during which the symptoms gradually subsided in severity, she began to progress satisfactorily, but four days previous to admission to hospital her temperature ran up and she again developed general abdominal distress. On admission her temperature was 102.5° F., pulse 123, respirations 23. There was acute tenderness and rigidity in the left epigastric and hypochondriac regions. Four days later this tenderness became less pronounced, but she complained of pain in her left shoulder and arm, extending down to the hand. By and by an area of dullness could be elicited in the left hypochondrium at the site of tenderness, and extending round into the left axilla.

Operation.

On November 18th a longitudinal incision was made over the dull area and deepened until pus was struck. This had an exceedingly offensive odour, was small in quantity, and lay in a cavity bounded behind and below by the stomach and transverse colon, above and in front by the abdominal wall, liver, and diaphragm. A drainage tube was lodged.

Evidently by the time operation was performed, the abscess had almost penetrated the wall of the colon; for, on the following night, about 4 oz. of pus were discharged per anum. The subsequent history is that pus discharged from the tube and at intervals from the rectum until December 17th, when it ceased. The tube track rapidly healed, and the patient made a speedy recovery.

Doubtless in this case Nature alone, unaided by operation, would have effected a cure, although more slowly. In another case, with a history of acute abdominal symptoms grafted on to a chronic stomach trouble, a tumour developed in the umbilical region. On opening the abdomen this was found to be a mass of plastic exudate binding down nearly the whole of the posterior wall of the stomach to the upper surface of the transverse mesocolon. The abdomen was closed, and the tumour mass gradually disappeared. Dyspeptic symptoms developed after her discharge from hospital, I believe, but so far she has not sought relief.

The most gratifying cases have been those in which gastro-jejunostomy has been performed. They were carefully selected, all, with one exception, having definite gastric lesions. These lesions consisted of ulcers unhealed and cicatrized, either non-adherent or having procured attachment to neighbouring viscera. While the vast majority have done exceedingly well, those cases in which the operation was performed for stenosis of the pylorus stand out pre-eminent among the good results. Patients suffering from this distressing sequela of gastric ulcer at once cease vomiting after gastro-jejunostomy, become perfectly comfortable and put on several stones of weight in a surprisingly short time. A typical illustration of the good results of gastro-jejunostomy in pyloric stenosis is the following:

Pyloric Stenosis: Dilatation of Stomach: Posterior Gastro-jejunostomy: Recovery.

J. P., aged 52, a scavenger, was admitted to the Aberdeen Royal Infirmary on June 17th, 1903, with a history of stomach trouble of ten years' duration. Briefly stated his symptoms had been: pain commencing in his lower dorsal region, radiating round his right side to his epigastrium, and vomiting. The quantity of vomited material was sometimes exceedingly large, and not infrequently he observed in it food taken the previous day. Also on occasions the vomitus was either very dark brown or black. All sorts of medical treatment had been tried, and eventually lavage had been carried out with only partial relief. He was a thin, sallow man, weighing 9 st. 3 lb. The evidences of dilatation of the stomach were pronounced, but no tumour could be palpated. The gastric contents contained free HCl.

Operation.

On opening the abdomen (June 20th, 1903), a hard, rounded tumour at least 1½ in. in diameter was found at the pylorus, almost completely obstructing the orifice. There were no enlarged lymph glands. A posterior gastro-jejunostomy was performed. After operation his vomiting ceased, he put on 2 st. in weight in a few weeks' time, and he is now, after a lapse of over five years, pursuing his work in perfect comfort, and asserts that he can "eat anything."

This case also well illustrates the tumour formation often found in gastric ulcer. In old-standing cases the growth is due to fibrous tissue developed during cicatriza-

tion, and is permanent, but in recent cases it is to be accounted for to a large extent, in some instances wholly, by oedema, and when this is so, it is remarkable how quickly and completely it disappears after invagination, etc. Doubtless, the cases of so-called malignant tumour which were published as disappearing after laparotomy, were merely instances of inflammatory induration. In the example just given no tumour could be palpated through the abdominal wall. Tumours of the pylorus, in my experience, often escape detection on palpation, and the explanation is that the gastro-hepatic omentum becomes involved in the inflammatory process, or in the cicatrization, so that it is shortened, and the pylorus with its tumour is dragged up under the shelter of the liver and costal arch, and so escapes detection through the abdominal wall.

Ulcerated stomachs are very prone to contract adhesions to adjacent viscera, but exceptionally they go further afield for their attachments, as in the case quoted above, where the cardiac end of the stomach was anchored to the abdominal wall in the left lumbar region. These adhesions are at once the safety and the distress of the patient. But for the timely attachment of the peritoneal covering over the ulcerated area the patient would not seldom be plunged into the disasters of perforation and peritonitis. As it is, while preventing this complication, these adhesions give rise to much pain and interference with the mobility of the stomach, with all its disagreeable consequences. The following are illustrative cases:

Gastric Ulcer adherent to Liver and Diaphragm: Gastro-jejunostomy: Recovery.

J. P., aged 23, a domestic servant, was admitted to the Royal Infirmary on June 10th, 1905, with a history of indigestion for seven years. Her symptoms had been epigastric pain, sickness, and vomiting. She was high coloured, fairly well nourished, and complained of great pain in the upper left epigastric region, where also there was distinct tenderness and possibly slight fullness on palpation. No sickness and vomiting took place during the period of observation prior to operation, but her pain was so persistent and so consistently referred to the same spot that it was decided to operate.

Operation.

On opening the abdomen (July 1st, 1905) through the left rectus muscle in the epigastrium, the anterior wall of the stomach opposite the middle of the lesser curvature was found adherent to the under surface of the liver, anterior edge of the diaphragm, and abdominal wall in the left epigastric region, by a dense irregular mass of adhesions. These, which were evidently the result of old ulceration, were severed and a posterior gastro-jejunostomy performed. There was hardly any post-operative sickness, and convalescence was quite rapid. Before leaving hospital she could take ordinary diet and had no pain. When last heard of she had continued well and was able to work.

Gastric Ulcer adherent to Pancreas: Posterior Gastro-jejunostomy: Recovery.

J. C., a cattleman, aged 58, was sent to the Aberdeen Royal Infirmary on November 14th, 1905, suffering from what was believed to be malignant disease of the stomach. Ten years previously he had had an attack of dyspepsia lasting six weeks. He continued well after this illness until March, 1905, when again he began to suffer from epigastric pain, at first continuously, but later with daily periods of remission. There was no vomiting, and the taking of food did not intensify his pain. On several occasions he noticed melæna. After having been continued to bed for four or five weeks he recovered, and was well again until September 17th following, when he had an attack of pain and vomited a quantity of blood. After that he was never quite free from pain, but vomiting was infrequent. He was very thin, weighing 9 st., and markedly cachectic looking. He referred his pain to the epigastric region, where there was distinct tenderness, especially over the right half and at the umbilicus. No tumour could be felt, and the other abdominal organs appeared normal. The gastric contents showed a trace of free HCl.

Operation.

On November 18th, 1905, the abdomen was opened through the right rectus muscle, and on the posterior wall of the stomach, rather nearer the cardiac end and about 2 in. from the lesser curvature, was an ulcer about the size of a shilling with indurated margins. The ulcer and adjacent walls of the stomach had procured a tight adhesion to the pancreas, but below there was sufficient room to perform a gastro-jejunostomy, which was accordingly done. There was little post-operative vomiting, and convalescence was smooth. The patient left hospital on December 29th, 1905, feeling very well, and put on flesh every week for some time afterwards. He has, I understand, remained well.

Gastric Ulcer adherent to Abdominal Wall and Costal Arch: Gastric Ulcer: Posterior Gastro-jejunostomy: Recovery.

Mrs. J. G., aged 48, who was admitted to the Aberdeen Royal Infirmary on August 1st, 1907, had had good health until two

years previously, since which time she had suffered at frequent intervals from discomfort and pain in the epigastrium, culminating in sickness and vomiting, half an hour after meals. The vomitus consisted of the food taken at the previous meal, but occasionally she brought up dark-brown material. There was no distinct history of melaena. For six weeks prior to admission all her symptoms had become aggravated, and she had lost flesh considerably. She was thin and pale, and complained of pain in the left epigastric and hypochondriac regions. There was distinct resistance in the regions mentioned, and on deep inspiration an ill-defined rounded mass could be felt. The vomit contained abundant HCl.

Operation.

On August 3rd, 1907, the epigastrium was opened through the left rectus, and the stomach found anchored by a broad mass of adhesions extending from the anterior wall at the cardiac end near the lesser curvature to the left costal margin and adjacent wall of the abdomen. A posterior gastro-jejunostomy was performed, after which the adhesions were severed from the costal arch and abdominal wall. These were found to surround a funnel-shaped cavity leading down into the stomach, and were evidently the result of active ulceration. The pyloric structures and the ulcerated edges of the gap in the stomach were clipped away, after which the organ was closed by two layers of suture. There was very little post-operative vomiting, and her progress towards complete recovery was quite smooth. She left the hospital on August 30th, 1907, and up to the time of writing has been quite well.

Other examples of cases with gastric adhesions, as well as with simple ulceration at the pyloric end of the stomach, might be quoted, but the above may be taken as typical of what is often found and the relief experienced after operation.

Two cases of hour-glass contraction of the stomach have been operated upon.

The first occurred in a female patient, aged 31, in whom the symptoms of pain and vomiting had been so frequent and distressing for a number of years as to render her quite unfit to work for most of the time. At the operation the stomach was found divided into two pouches—a small pyloric and a large cardiac. As it was quite apparent that stagnation was taking place in the cardiac pouch it was decided that an anastomosis between it and the jejunum would best meet the necessities of the case. This was accordingly done, and has been followed by a completely successful result, for the patient has not had the slightest trouble since operation, which was done two years ago, has put on weight, and looks a different person.

In the other case I regret having to record a fatal result from haemorrhage on the sixth day after operation. Here the patient was 63 years of age, much reduced by pain and vomiting, which had troubled her for years. On opening her abdomen the stomach was found constricted by dense cicatrization, dividing it into two pouches about the same size. The pylorus seemed free. A gastro-gastrostomy was performed, an ample opening being provided. She did well until the sixth day, when she showed signs of severe internal haemorrhage, rapidly sank, and died. Post-mortem examination showed the constriction to have been due to old ulceration, leaving a passage between the two pouches just sufficient to admit an ordinary lead pencil. The haemorrhage was found to have come from a non-malignant ulcer on the posterior wall of the cardiac pouch, close to the lesser curvature, about an inch from the constriction. The anastomosis was found quite tight, with no sign of leakage or peritonitis.

Remarks on Results and Treatment.

No more gratifying results are to be obtained in surgery than those which follow gastro-jejunostomy in properly selected cases; but it seems to be all too true that it is an operative procedure which has been much "overworked." To perform this operation on neurotic patients with vague and indefinite gastric symptoms is calculated to bring discredit on surgery, for instead of being productive of benefit it may, on the contrary, graft very real and serious disability on to what was mainly an imaginary trouble. Further, the more recent developments of gastric surgery show that gastro-jejunostomy must not be looked upon as a universal panacea for all benign lesions of the stomach, better results being got from other operative procedures according as the lesion is at or near the pylorus, and so obstructing the passage of food, or further away towards the cardiac end. In malignant disease of the stomach also, gastro-jejunostomy has a very doubtful place, unless combined with the radical operation of excision. It is, however, by no means always an easy matter to decide between a benign and malignant lesion, but the presence or absence of free HCl in the vomitus, although not entirely reliable, has been found decidedly helpful. As regards the result of the 42 deliberate operations, all have been exceedingly satisfactory except 5. Of these 5, 3 died, 2 from haemorrhage after operation, and 1 from regurgitant vomiting. One of

the cases of haemorrhage is quoted above, and occurred after gastro-gastrostomy for an hour-glass stomach; the other took place in the case of a woman, 63 years of age, on the sixth day after a posterior gastro-jejunostomy for extensive ulceration of the posterior wall of the stomach, the base of the ulcer being formed by the pancreas. The pathological report was to the effect that the ulceration was non-malignant. The interest of these two cases lies mainly in the fact that fatal haemorrhage from a benign ulcer may follow operative interference even though the anastomotic openings are ample, as they certainly were in these cases, and although no mechanical appliance is employed. The death from regurgitant vomiting occurred on the eleventh day after posterior gastro-jejunostomy. Here the mesenteric side of the jejunum had become adherent to the opening in the stomach, dividing it into two, a small efferent and a large afferent opening. Thus kinking had occurred, and once more goes to prove that regurgitant vomiting is due to a mechanical obstruction at the efferent opening. In this connexion another case which came under my care in 1902 on account of regurgitant vomiting may be mentioned.

He had had an anterior gastro-jejunostomy performed in 1897 for a stenosis of the pylorus, but had been much troubled with vomiting of bilious material since the operation. His vomiting generally took place from half to three quarters of an hour after food. I found that the proximal loop was short, and ascended to the stomach almost vertically, while the distal loop likewise left the anastomosis, which by the way was quite large, in a vertical direction. A lateral anastomosis between the loops was performed, and for several months he did well. The vomiting again returned, however, and he seemed to be almost as bad as ever. Curiously enough, after persisting for a considerable period it ceased, and he has remained well for several years.

In another case, of a woman aged 27, who for eleven years had suffered from pain, sickness, and vomiting, and in whom a puckered pylorus with dilatation of the stomach was found, a posterior gastro-jejunostomy was done. The vomiting still goes on, but the pain she suffered from is relieved.

Lastly, at the urgent request of a highly neurotic patient with some dilatation of the stomach and complaint of "heavy feeling" after meals and who had been advised by an eminent physician to have a gastro-jejunostomy performed for his trouble, I did the operation. No definite lesion to account for the dilatation could be found, and the procedure, although it did not aggravate the neurosis, led to no improvement.

With one exception all the gastro-jejunostomies have been posterior. In none of these was a proximal loop left, but in the earlier cases the jejunum was not drawn quite so tightly towards its anastomosis. The site selected in the stomach has been always the most dependent part and as close to the greater curvature as possible. As the greater curvature of the stomach at its most dependent part runs often quite horizontal for a short distance, the part of this horizontal portion nearest the duodeno-jejunal junction—that is, towards the left, has been selected. This permits the anastomosed jejunum to maintain its natural direction—namely, vertically, or almost vertically, downwards. Moreover, mutual dragging, and therefore possible kinking, is obviated. Where the distal portion of the intestine after anastomosis seemed to turn more to one side than another, a supporting suture was always inserted so as to preserve this direction, also with the same object in view, that of avoiding kinking. Such supporting sutures seem to me to be essential when the anterior operation is performed. It is important also during the suturing not to embrace too much of the jejunal wall, otherwise the bowel is apt to become flattened against the opening in the stomach and the occurrence of vicious circle favoured.

B.—EMERGENCY OPERATIONS.

There are few intra-abdominal emergencies that appear with more startling suddenness than perforation of the stomach. It hurls its victim with a tragic swiftness from comparatively good health into a position of the greatest peril. Nor is its guise always certain, for although in the majority of cases it produces a clinical picture once seen never to be forgotten, in a certain number it simulates other abdominal disasters. The death roll from perforation must be enormous. Although Mikulicz was the first to suture a ruptured ulcer in 1880, it was not till 1892 that the operation was accomplished successfully by Kriege. Once the closing of a perforation was demonstrated to be a feasible procedure, many cases have been operated upon and many successful results published. In order to arrive at an estimate of the mortality after suture of perforated

ulcer, several investigators have collected large numbers of published cases, and drawn conclusions therefrom. But it is more than doubtful if these conclusions are to be relied upon, for the tendency has been to publish successful cases, while many unsuccessful ones are not heard of. The percentage of recoveries, therefore, in these collected cases is almost certainly too high. My own experience extends to all 18 cases, which are appended in tabular form. The first occurred in March, 1902, and the eighteenth in March, 1908. They are given in chronological order.

Table of Operations for Perforation of the Stomach.

	Sex.	Age.	Duration.	Situation.	Result.
1	F.	17	18 hours	Prepyloric	D.
2	M.	45	28 "	Prepyloric	D.
3	F.	19	4 "	Cardiac	R.
4	M.	33	30 "	Middle	D.
5	F.	28	9 "	Prepyloric	D.
6	M.	28	20 "	Prepyloric	D.
7	F.	19	23 "	Middle	D.
8	F.	39	8 "	Cardiac	R.
9	F.	46	3 "	Prepyloric	D.
10	F.	24	12 "	Cardiac	D.
11	F.	19	29 "	Prepyloric	R.
12	M.	23	12 "	Prepyloric	R.
13	F.	24	8 "	Prepyloric	R.
14	F.	29	22 "	Prepyloric	D.
15	F.	25	20 ½ "	Pyloric	R.
16	F.	24	3 ½ "	Prepyloric	R.
17	M.	30	5 "	Pyloric	R.
18	F.	21	5 "	Pyloric	R.

* Posterior wall.

The percentage of recoveries among all cases works out at 50 per cent. exactly. If, however, they are divided into two groups—namely, those operated upon twelve hours or less after perforation and those over that time, the percentage of recoveries in the former is 70 per cent. and in the latter 25 per cent. Then, again, it will be observed that among the first 9 cases only 2 recovered, while among the second 9 cases 7 recovered. This is to be accounted for in various ways. In the first place, the average duration of the perforation in the first 9 cases is greater than in the second 9, and there has been a very distinct and steady improvement in the type of case sent for operation, especially latterly, as the advantages of early interference are becoming more and more recognized. A greater share of the credit in the reduction of the mortality must be given, I believe, to the improved technique which has been employed during the last few years in dealing with the acute abdomen. Rapid operating followed by the Fowler position and proctoclysis have done wonders in acute abdomens of all types.

Of the 18 cases, 14 were 30 years of age or under. Among the males the average age is 30, while among the females it is somewhat lower—namely, 26. Then, again, the proportion of females to males is 13 to 5, bearing out the well-known proneness of young females to acute ulcer of the stomach.

All the perforations with one exception were situated on the anterior wall of the stomach. No less than 10 of these were prepyloric, generally about 2 in. from the pylorus and midway between the two curvatures, while other 3 were actually on the pylorus itself. Of the remaining 5, 2 were on the middle of the organ and 3 at the cardiac end, the perforation on the posterior wall being among the latter.

Except in Case No. 1, in which the perforation was ragged and irregular, all the ruptures have presented the characteristic clean-cut, punched-out appearance, and have varied in size from the head of a pin to a large split pea. Round the opening a variable amount of induration has been the rule, with friability of the tissues

—a friability which increases with the duration of the perforation. In one or two an ineffectual attempt to wall off the rupture by adhesions has been observed.

Symptoms, Diagnosis, and Treatment.

A study of the symptoms of these 18 cases brings out many points of interest. First of all, as regards previous history, 17 had chronic indigestion, the symptoms of which, however, were not always characteristic of ulcer. Only occasionally did one get a definite history of hæmatemesis. In 8 there was distinct aggravation of the pain prior to rupture. This period of aggravation varied in duration from three weeks to one hour, the average being about twenty-four hours. In one or two cases the symptoms seemed to have been entirely in abeyance, the patients apparently being in perfect health when perforation occurred. In Case No. 17 no chronic history of indigestion was present at all. His case is as follows:

Perforation of Gastric Ulcer: Operation Five Hours Afterwards: Recovery.

G. G., aged 30, a carter, had had absolutely no illness until January 12th, 1908, when he began to suffer from abdominal pain in the epigastric and right iliac regions. For three days this continued, and rendered him unfit to work, but it then subsided, and he resumed his occupation. Two days later, at 10 p.m., the pain recurred suddenly, and with such intensity as to cause him to roll about and groan with agony. The pain was felt sometimes in the epigastrium, sometimes over the area of the appendix. He was sent to the Aberdeen Royal Infirmary. When seen there, he lay on his back with his knees drawn up, and cried out with pain. His temperature was 96.4° F., pulse 80. Respirations 36, shallow and thoracic in type, the abdomen being quite still. The rigidity of the abdominal muscles was general, but most pronounced over the right half of the abdomen. Acute tenderness was present both in the right epigastric and iliac regions, more particularly the latter. The liver dulness was present and the flanks were resonant.

Operation.

Five hours after perforation the abdomen was opened over the appendix, and a quantity of thin, inodorous purulent material escaped, but the appendix itself seemed perfectly normal. The stomach was then explored through a central epigastric incision, and a quantity of gas and fluid escaped. A round, punched-out-like perforation, the size of a split pea, was easily found, situated exactly over the anterior aspect of the pylorus. This was invaginated, and closed by two layers of Lembert suture. A Keith's drain was lodged in the pelvis through a suprapubic incision, and then the abdomen flushed from the upper wound downwards, the saline solution carrying the purulent fluid with particles of food out at the Keith drain. He was propped up into the semi-sitting posture in bed, and his convalescence never caused anxiety.

The entire absence of gastric symptoms until five days before perforation in this case is certainly remarkable, more especially considering the situation of the ulcer. It is difficult to believe that the ulceration had not existed for some time in spite of the entire absence of symptoms.

The pain of a ruptured ulcer, as one would expect, is referred most often to the epigastrium. In 3 of my cases it was confined to this region, while in 5 others it radiated, in addition to (a) the lower part of the sternum and ribs, (b) between the scapulae, (c) the lower costal margin, (d) and (e) appendical area. In 5 cases pain was complained of away from the epigastrium, being referred to (a) the lower abdomen, back, and shoulders, (b) umbilical region, (c) appendical area, left shoulder, and arm, (d) and (e) appendical area. Thus it will be observed that in 5 out of the 18 cases the area of the appendix was implicated either in conjunction with other regions or alone. When the upper abdomen and the appendical region were both involved, it was found on careful inquiry that the pain began above first and then gravitated downwards to the right. The explanation which has been put forward of this is probably the correct one—namely, that when rupture takes place the extravasation is at first confined to the site of the perforation, and pain is referred there; but in the course of an hour or two, guided by the colon, the stomach contents, etc., track downwards to the right iliac fossa, carrying infection and inflammation to the peritoneum of that neighbourhood, with attendant pain. Why the pain of a perforation should from the beginning be referred to the right iliac region, as it was in 2 of my cases, is difficult to understand. In the following case (No. 5) the pain both prior to and after rupture was referred to this part of the abdomen.

Perforation of Gastric Ulcer: Operation Nine Hours Afterwards: Death on the Fourteenth Day from Pneumonia.

Mrs. K. E., aged 28, with a very indefinite history of several attacks of indigestion consisting of epigastric pain occurring about two hours after food, and accompanied by vomiting, but no hæmatemesis, was seized on November 29th, 1903, with pain over the region of the appendix. This pain remained of moderate severity until 2 p.m. on December 2nd, when suddenly it became intense, and she had to take to bed. Soon the pain radiated from the right iliac fossa over the rest of the abdomen, and she vomited several times, but no blood was observed in the vomitus. When admitted to the infirmary she looked pale and collapsed, her pulse was 123, temperature 38.4, respirations 36. There was general abdominal rigidity and tenderness, but the latter was most pronounced in the right iliac region.

Operation.

Nine hours after the sudden aggravation of the pain, the abdomen was opened over the appendix, and immediately there escaped a quantity of thin purulent fluid. The caecum and appendix were red and congested, and had small patches of exudate upon them. The appendix was rapidly removed, but it became evident on closer examination that it was not the offending organ—a conclusion confirmed by the inodorous nature of the pus. Immediate incision was therefore made in the epigastrium, and at once a circular punched-out-like perforation, about 2 1/2 in. in diameter, revealed itself on the anterior wall of the stomach near the pylorus, and equidistant from the greater and lesser curvatures. The area around the opening was cleansed and irrigated by two layers of Lambert suture. The abdomen was flushed, and then closed with drainage. Although the respirations continued fast she did well until December 7th, when signs of pneumonia developed over the left base. From this condition she never recovered, and died on December 14th, thirteen days after operation.

Vomiting, never a marked feature after perforation, was absent altogether in about a third of my cases. When it does occur, the presence of very minute particles of blood clot may occasionally be detected on minute inspection of the vomitus.

It is too widely believed that absence of the liver dullness is an early symptom of perforation. This is not so, for in every one of the above cases which was sent for operation before the rigidity of the abdominal muscles had begun to pass off liver dullness was found. In some it was diminished, while in others it was unaltered. So long as this protective muscular rigidity lasts, in some cases for many hours, the extravasation of air is more or less held in check, and the liver dullness is not obliterated. Later, with the spreading peritonitis, muscular relaxation, and commencing distension, the dullness vanishes, a sign that Nature is losing its power of resistance, and the patient is passing into the final stage of the disease.

Another point that perforative peritonitis teaches, and that is that a certain amount of fluid in the abdominal cavity is compatible with resonant flanks. Completely dull flanks, like the absence of liver dullness, is a sign of advanced peritonitis. In the earlier stages the fluid in the peritoneal cavity, moderate in amount and limited as it often is by adhesive peritonitis, fails to reach the flanks, or does so only to a small extent, and consequently the colon resonance is not interfered with or only slightly diminished.

The only disease with which perforation of the stomach was confounded in my cases was appendicitis. In 4 the appendix was explored in the first instance. In 2 of these, from the fact that the pain and tenderness were most acute over that region, a diagnosis of appendicitis was made, while in the other 2 it was found impossible prior to operation to differentiate between a rupture of the stomach and a perforated appendix. In arriving at a conclusion, too much stress cannot be laid upon the previous history. A chronic history of ill-defined dyspeptic symptoms preceding an acute abdominal crisis should always lead one to suspect the rupture of an ulcer. Then, again, I believe the pain of a perforation is more agonizing than that of a ruptured appendix. When pain is referred by the patient equally to the epigastrium and right iliac region, a good guide to the site of the lesion is, which of the two regions is the more tender. When the diagnosis is uncertain and the abdomen is opened over the appendix the odour of the purulent fluid is, I believe, of great diagnostic value. The appendix may share the general peritonitis and show patches of septic exudate and it may occasionally be difficult to decide from its appearance whether it is diseased or not, but if the pus is inodorous the stomach ought at once to be explored. The offensive odour of the pus in a case of ruptured appendix is rarely

absent, while in rupture of the stomach there is little or no odour.

As in all other acute abdominal cases, the earlier operation is undertaken the better the prognosis. This is well borne out in the table given, the mortality among those got within the first twelve hours being much less than among those got at a later period. But while the duration of the perforation is of chief importance, there are other considerations which have a bearing on the prognosis, namely, the amount and character of the food in the stomach at the time of rupture, the size of the perforation, the extent of the extravasation, and last, but by no means to be neglected, the resistance of the patient. As showing how the amount of extravasation may be limited, the following case may be quoted:

Perforation of Gastric Ulcer: Operation Eight Hours Afterwards: Recovery.

J. M., aged 24, a domestic servant, had for several years suffered from anaemia and frequent attacks of pain and vomiting about an hour after meals. She had never had hæmatemesis. For twenty-four hours prior to perforation she had more epigastric pain than usual, but it varied in severity until 1 p.m. on March 26th, 1906, when it became suddenly very intense and she had to go to bed. The pain now radiated through to the lower dorsal region and up to the left shoulder, and was accompanied by vomiting of a light brown material. Her physician ordered her to hospital, where her condition was found as follows: General appearance good, temperature 101 F., pulse fair in quality, 106, respirations 30. She complained of pain in the left epigastric and lower dorsal regions and over her left shoulder; abdominal respiration absent. Tenderness in the left epigastrium was most pronounced, and there was cutaneous hyperaesthesia in Head's triangle. The abdominal muscles were very rigid, especially the recti at their upper part. Percussion note all over the abdomen, including the flanks, was clear, and the liver dullness was not diminished.

Operation.

At 9.20 p.m. on March 26th, 1906, eight hours after perforation, the abdomen was opened in the epigastrium through the left rectus muscle; a small quantity of turbid fluid escaped, and on exploring the stomach a perforation was revealed on the anterior wall, 1 in. from the lesser curvature and 2 in. from the pylorus. This perforation was almost occluded by a small finger-like process from the gastro-hepatic omentum and by a partial recent adhesion of the ulcerated area to the diaphragm and edge of the liver, so that an opening only the size of a pin-head was left uncovered. On separating the light adhesions and lifting off the finger of omentum the full extent of the perforation became evident. It measured 3/4 in. in length by 3/8 in. broad, and its edges were clean cut. Round this opening was a small quantity of turbid fluid. After the surrounding area had been wiped clean, the ulcer, which was about the size of a shilling, with indurated edges, was irrigated by two rows of Lambert suture. The anterior surface of the stomach and upper surface of the transverse colon were wiped with normal saline solution, and as the rest of the abdominal cavity was apparently uncontaminated, the abdominal wound was closed without drainage. The patient made a completely smooth recovery, and was discharged well on April 23rd, 1906.

But for the purposeful-like action of the finger of omentum and the limiting adhesions of the ulcerated surface, this patient's condition would have been much worse. Later complications also may vitiate results which are immediately successful. Of the 10 cases which were operated upon twelve hours or less after operation, 3 died. These 3 recovered from the immediate effects of the operation, dying later of complications: Case No. 5, which is given in detail above, succumbed fourteen days afterwards to pneumonia, Case No. 9 twenty-seven days later to acute mental symptoms, Case No. 10 nine weeks later to pyaemia.

The treatment of perforation of the stomach resolves itself into the treatment of the peritonitis after removing its cause. The closure of the rupture can be effected either by two rows of Lambert suture or a purse-string overlapped by a Lambert suture. It is safer, I believe, to employ two layers of sutures, especially in late cases, where the affected area is oedematous and friable, and sutures are exceedingly apt to tear through. As a rule, it is not a difficult matter to find a perforation, but occasionally, as the following case shows, it is an impossibility, and then other methods of treatment must be resorted to.

Perforation of Gastric Ulcer: Operation Twenty-nine Hours Afterwards: Gastro-cutaneous Fistula: Recovery.

G. C. aged 19, a domestic servant, had a history of pain or discomfort after meals for an indefinite period. In May, 1905, she had an attack of rather severe abdominal pain, which incapacitated her for work, and one milder attack a little later. On November 23rd, 1905, at 4 p.m., she felt sick and vomited, and immediately afterwards was seized with very intense

abdominal pain in her right iliac region, left shoulder and arm. This pain diminished after a couple of hours but later again increased in severity. Pain remained agonizing during the night and extended from the right iliac fossa all over the abdomen. No vomiting occurred after the onset of severe pain. She was admitted to hospital at 8 p.m. on November 24th, 1905, when her condition was as follows: Temperature 38.8, pulse 120, respirations 35. Her appearance was good; she complained of general abdominal pain but most severe about the umbilicus. Abdominal respiration was fair over the upper half which was also somewhat retracted, less marked over the lower half which was rather distended. Abdominal tenderness was general, but most pronounced just above the umbilicus. The liver dullness was normal.

Operation.

In view of the pain having been first felt in the right iliac fossa, the abdomen was opened, twenty-nine hours after the commencement of the acute illness, over the appendix. This appeared normal. Immediate epigastric incision was then made and the anterior wall of the stomach was found drawn up and adherent to the under surface of the liver by patches of recent yellow exudate through the interstices of which was escaping turbid fluid containing numerous food particles. These adhesions were broken down by a search instituted for the perforation, but it completely defied detection. The turbid fluid came welling up from the pyloric end of the stomach, and this, combined with the patches of lymph on the stomach wall, so effectually obscured the field that the search, which could not be prolonged on account of the fact that the patient's pulse and general condition were rapidly running downhill, had to be abandoned. The whole area of the stomach affected was therefore packed over with sterile gauze, the end of which was brought out at the upper angle of the abdominal wound. This was then closed after the peritoneal cavity, the soiling of which was partial, had been wiped clean.

For the first three days the dressings had to be frequently changed, on account of a greenish saecage. At the end of this time, under an anaesthetic, the gauze tampon over the stomach was removed with difficulty. No sooner had the last of it left the wound than 6 to 8 oz. of bile-stained fluid, containing small masses of curdled milk and glairy mucus, escaped. No subsequent plugging was used, and for an hour and a half after removal of the tampon she complained of pain in the left shoulder. At first the saecage from the wound was considerable, but the abdomen remained perfectly quiet, and she soon expressed herself as comfortable. For six days she was fed per rectum, but after this minute quantities of milk and water were administered by the mouth and gradually increased. Some of the curdled milk appeared at intervals in the discharge from the epigastric fistula, but gradually the quantity diminished, and discharge ceased on December 15th, three weeks after operation. She was dismissed, able to take ordinary diet, on February 2nd, 1906.

In dealing with the resulting peritonitis my earlier practice in perforation cases was to flush the abdomen regularly; but latterly this procedure has been abandoned, wiping alone being employed, except in widespread soiling. In extensive extravasation where fluid and food particles have got well below the transverse colon, then flushing with sterile salt solution is still employed in the following manner: A stab wound is made above the pubes and a Keith's drain lodged in Douglas's pouch. The sterilized end of the rubber tube from the irrigator, the glass nozzle having been previously detached, is then, guided by the hand, introduced through the epigastric incision into the abdominal cavity, which is then flushed from above downwards, the fluid emerging through the Keith's drain. This is carried out, the flexible tube being moved about to special pockets, until the fluid from the drain comes away clear, after which the epigastric incision is closed, with or without drainage according to circumstances. It is of paramount importance that the irrigating fluid should be of a proper temperature, otherwise shock will certainly be induced. The Fowler position and proctoclysis have so revolutionized the outlook in the acute abdomen, and have met with such wide acceptance, that no further comment need be made on this excellent method of after-treatment.

The routine performance of gastro-jejunostomy, at the same time as the perforation is dealt with, has been recently advocated with plausible but by no means convincing arguments. The aim of operation on a perforation is to avert death, and I feel convinced that the additional time necessary to make the short circuit will turn the scale against many cases requiring every particle of strength to stand even a short operation. The more rapidly the perforation and peritonitis can be dealt with compatible with efficiency the better the chance of recovery; and to lay it down that the performance of gastro-jejunostomy is an essential part of the treatment of a perforation seems to me fraught with the greatest danger. True, in certain early cases, gastro-jejunostomy may be

added to the operative treatment with safety and advantage, but it should be employed with the greatest discretion. An operation which is theoretically ideal and academic may be far from a life-saving one. Moreover, it seems now clear that gastro-jejunostomy should not be performed as a matter of routine even as a secondary operation, but should be reserved for those cases in which the perforation is so situated that its closure leads to pyloric obstruction or marked interference with the motor function of the stomach. That invagination and suture may lead to the disappearance of an ulcer is corroborated by Case No. 10, which died nine weeks after operation of pyaemia. At the post-mortem examination the pathologist could discover no trace whatever of the ulcer. So far two cases have come back with gastric symptoms after operation for perforation. In both the perforation was pyloric, and both have been relieved by gastro-jejunostomy.

In some of the cases recorded the patient was almost moribund when put on the table; but there ought never to be any question as to the propriety of operation—no matter how remote the chances of a successful result are, the patient ought to have the chance, for without operation the outcome is certain.

INTUSSUSCEPTION CONTAINING A SARCOMA OF THE INTESTINAL WALL: ENTER- ECTOMY: RECOVERY.

BY

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THE following case presents some features so rare and interesting that we venture to consider the notes worth publishing:

History.

E. S., a boy aged 4½ years, was first seen at 9 p.m. on November 14th, 1908, when suffering from acute abdominal pain of a spasmodic character; between the spasms there seemed to be absolute freedom from pain—there was no vomiting, and nothing was to be felt in the abdomen; the attack lasted until 8 a.m. on November 15th. He was thin, pale and delicate-looking, and there was a previous history of abdominal pain and vomiting for two months, but otherwise he was quite well up to the time of this sudden attack.

On November 16th he was running about quite well.

On November 18th he had a similar attack, pain at intervals all day, vomiting frequently. Temperature, 100° F., pulse, 120. Nothing was felt in the abdomen. On November 19th the attacks of pain and vomiting continued; the temperature was normal, the bowels constipated. No blood, but a little mucus was passed with hard faeces without straining. Retraction of both testicles was marked throughout the attack.

From November 20th to November 23rd the patient was much better, having pain only at times; vomiting had ceased.

On November 23rd a lump was felt for the first time to the right of the umbilicus; the following day he was better and no lump could be felt.

On November 24th, at 5 a.m., he had another severe attack of pain with vomiting which was more or less continuous; for the first time he showed signs of being seriously ill; he was pale with anxious expression, tongue and lips dry, pulse rapid and feeble; examination of the abdomen was difficult, and the right rectus abdominis muscle was very resistant; the pulse was 132, and the temperature 98.4°; a small constipated motion was passed during the day. The pain was very acute and of a spasmodic character, the boy being literally doubled up with it. As the result of a surgical consultation an exploratory operation was performed.

Under A.C.E. a well-marked sausage-shaped mass was felt to the right of the umbilicus, freely movable, well defined, of doughy consistence, and just above and to the median side was another smaller mass.

Operation.

On opening the abdomen through the right rectus abdominis muscle a congested enteric intussusception was found, about 4 in. or 5 in. in length, with a tightly constricted neck, close to which a mass of enlarged mesenteric lymphatic glands was present. As reduction was impossible, and the patient's condition extremely grave, the whole of the intussuscepted gut was resected as rapidly as possible, one of the mesenteric glands removed, and a speedy end-to-end anastomosis of the divided ends of the gut by suture was performed. The abdomen was then filled with hot saline lotion and closed by through-and-through silkworm gut sutures.

After-history.

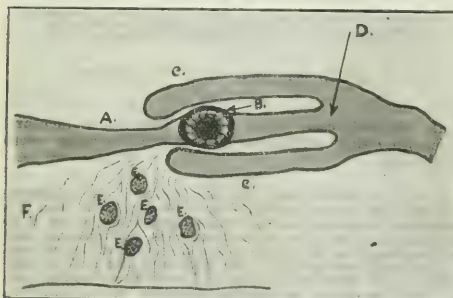
The patient rallied well from the operation, repeated saline injections into the bowel being administered. There was an action of the bowels on November 29th, at 10 a.m., after injection, and the pain was greatly diminished. The temperature rose to 102° F. shortly after the operation; the pulse remained at or about 130. The tongue was for several days dry and red, and the patient continued very restless and irritable, and slept badly. There was no further vomiting. Small quantities of milk and water were administered by the mouth after the second day, and gradually the unfavourable symptoms subsided. On December 6th alternate stitches were removed, and on December 7th, as he continued restless and crying for his friends, he was allowed to go home. After that his progress was uninterrupted.

Description of Parts Removed.

On examination of the specimen, the neck of the intussusception was found to be very tightly constricted, the cause being a puckered indurated growth, rather larger than a shilling, situated laterally in the wall of the small intestine just beyond the neck of the intussusception, effectually preventing any attempt at reduction. The total length of the gut resected was about 18 in. when unravelled.

On microscopical examination the growth proved to be (according to the report of the Clinical Research Association) a large round-celled sarcoma. The report reads as follows: "The mass is a malignant new growth invading the muscle coat of the intestine. It is composed of large round cells in a delicate stroma with very thin-walled vessels. We conclude that it is a round-celled sarcoma."

The mesenteric lymphatic glands were too deeply placed to remove *in toto*, considering the serious condition of the patient, which precluded any lengthy operative procedures. Added to this they had all the appearances of being tuberculous, and malignancy was unsuspected; nor was the



Diagrammatic representation of intussusception and growth. A, Neck of intussusception; B, growth in wall of intussusception; C, remnant of proctodaeal membrane; D, vagina; E, bladder; F, cavity of uterus; G, peritonium; H, os pubis; I, ext. sphincter. Dotted lines indicate portion from which sections were cut.

growth discovered until subsequent examination of the resected intussusception; this alone prevented easy reduction, as the condition of the gut wall was merely that of congestion.

The patient is at the present time in fairly good health, though a resistance can be felt in the situation of the mesenteric glands, and his recovery has not been quite as perfect as one would expect in an ordinary case. His digestive functions remain good, but the ultimate prognosis one must consider very grave.

A NOTE UPON THE EMBRYOLOGICAL AND PATHOLOGICAL SIGNIFICANCE OF CERTAIN FOLDS IN THE ANAL CANAL.

By J. BERNARD DAWSON, M.B., B.S., F.R.C.S.,

YORK.

In a recent paper Dr. Arthur Keith, discussing the development of the proctodaeum, stated that—

In two cases, both females, the epithelium of the proctodaeum had budded out irregularly, so as to form diverticula, some of which projected for some distance into the perineal tissue, and undoubtedly correspond to certain diverticula which are found in the anal canal opening under the folds which join together the upper ends of the columns of Morgagni.

He is good enough to attribute to me the credit of pointing out these said diverticula.¹ I, however, have to thank Mr. F. C. Wallis, of Charing Cross Hospital, for having directed

my attention to the existence of these strange test-tube-like projections.² He attributes certain cases of rectal discomfort to the fact that these valvular folds uniting the upper end of the columns of Morgagni and the diverticula become inflamed and painful, the sinus doubtless acting as an efficient culture chamber for micro-organisms.

Mr. Keith was good enough to permit me to carry out some research work upon the subject in his laboratory.

Morgagni's original description of the anal canal gave little or no help. The most complete description of the anal canal is to be found in *Traité d'Anatomie Humaine* of J. J. Jonnesco and Charpey. Of the columns of Morgagni they say:

They have a triangular base below, which inclines to either side and is continued into the free border of the valves of Morgagni. The summit tapers off, and is lost in the rectal mucous membrane.

There is, therefore, no mention of any folds uniting the summit of the columns.

My work, under Mr. Keith's supervision, consisted of cutting sagittal sections through the pelves of some six fetuses of ages varying from 2 months to full time. Without exception, in every specimen the columns of Morgagni were united by folds of mucous membrane both above and below. In other words, the anal canal was surrounded by a series of depressions which were bounded above and below by valve-like flaps of mucosa and on either side by elevated ridges, which were the columns of Morgagni. One series of sections from a hydrocephalic female fetus of 6 months seemed to offer some clue to the solution of the problem. In this I was fortunate enough to find a distinct

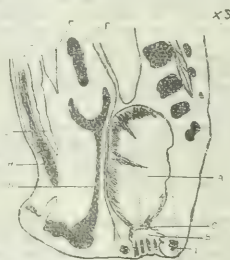


Fig. 1.—A, Rectum; B, anal canal; C, remnant of proctodaeal membrane; D, vagina; E, bladder; F, cavity of uterus; G, peritonium; H, os pubis; I, ext. sphincter. Dotted lines indicate portion from which sections were cut.

remnant of the proctodaeal membrane; 6 mm. from the skin margin was a perforate septum across the lumen of the anal canal forming a circular shelf, of varying width, around the bowel; it was clearly an imperfect proctodaeal membrane, which had persisted in a fetus that, save for the hydrocephaly, was perfect.

Had the septum been complete the condition would have been one of imperforate anus, in which the rectum ended blindly at the site of a fully-developed proctodaeum.

Below this imperfect rectal septum the anal canal was perfect, the columns and lower valves of Morgagni being well developed, the upper ends of the columns, however, disappearing under the membranous remnant. On microscopical examination it was seen that above the mucosa of the rectum was of the usual type, below the stratified epithelium of the anal canal is found. The septal shelf itself had different coverings above and below—the upper or rectal surface being clothed with the usual columnar rectal mucous membrane, exhibiting crypts and goblet cells, whilst the under or anal surface was covered with stratified epithelium. Between these two epithelia was fibrous tissue with a few muscular fibres, but no definite offspring from the regular muscle coats of the rectum. The circular muscular fibres of the rectum were aggregated to form the internal sphincter exactly at the level of the imperfect septum; below the circular muscular coat was continued, between the external sphincter and the anal submucosa, to the skin margin.

This fact is not easy to explain, for it is not easy to see why the internal muscular coat, a derivative of the splanchnic layer of the mesoblast, should come to occupy a position between epiblastic epithelium and the external

sphincter which is derived from the somatic layers of mesoblast. This downward continuation of the internal muscular coat of the rectum was present not only in my own sections, but also in some twenty sections lent me by Mr. Wood Jones. The longitudinal muscular coat and the external sphincter showed no variation from the usual description. One section showed that the depressions between the columns of Morgagni continued under the rectal shelf for some distance into the submucosa of the rectal wall, these diverticula being lined with stratified epithelium.

The conclusions which I have drawn from the above are as follows:

1. That there are commonly valve-like folds uniting the upper ends of the columns of Morgagni.
2. That these folds seem to represent remnants of the embryonic protodaeal membrane.
3. That the epithelium of the proctodaeum may be prolonged upwards, under these valves, into the rectal submucosa, and that these prolongations may persist as diverticula in the adult.
4. That where such diverticula are present it is an indication that the merging into one of rectum and proctodaeum has been imperfect to a greater or lesser extent.

The vertical measurement of the columns of Morgagni is marked by considerable variation, from 5 to 15 mm. being the average. It is known that the depth of the proctodaeum varies in like manner, so that it is reasonable to take the vertical measurement of the columns as some indication of the depth to which the proctodaeal



Fig. 2.—A, Rectal mucous membrane. B, Stratified epithelium of anal canal. C, Ingrowth of epithelium from proctodaeum. D, Remnant of protodaeal membrane. E, Longitudinal muscular coat. F, Circular muscular coat with internal sphincter. G, External sphincter.

depression extended before it became continuous with the rectum.

The Pathological Significance of these upper valves and the sinuses beneath consists in:

1. The occurrence of inflammation in and around them produces symptoms of painful defaecation.
2. The possible part they may play in the formation of submucous fistula.
3. The possibility that the occurrence of inflammatory mischief at a spot where there is partially buried epithelium may originate carcinoma of the squamous variety, such as is found in the anal canal.

REFERENCES.

¹ BRITISH MEDICAL JOURNAL, December 12th, 1908, p. 1741. ² *Lancet*, January 9th, 1909.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

TREATMENT OF "PORT WINE" STAIN.

I READ in the BRITISH MEDICAL JOURNAL of February 6th, in the paper on radium, by Sir Frederick Treves, the following:

It can cure "port wine" stain, and I would ask surgeons at the present day what measure they have available of which they can say the same.

In answer to this I would say that, in my opinion, the most successful method of treating such at the present day is by the x rays. It is five years since I first used this method for a "port wine" stain involving almost the half of the

face. The patient was shown at a meeting of the Glasgow Northern Medical Society. The result was extremely good, and was produced without noticeable scar. Since then I have been using the same method in other similar cases, and have found no method equal to it.

Glasgow.

JOHN DONALD.

RADIUM IN LUPUS ERYTHEMATOSUS.

THE great interest which has been aroused by the treatment of lupus erythematosus by radium has induced me to send you photographs and brief particulars of a case in which that remedy has been successfully used.

D. M., a girl aged 11 years, with tuberculous history on mother's side, was attacked by lupus on the bridge of the



Fig. 1.

nose in September, 1906. After undergoing treatment elsewhere, she came as an out-patient to the Chesterfield and North Derbyshire Hospital, and the x rays were applied. The disease was arrested, and eventually the part healed, with some loss of substance and consequent disfigurement. Whilst the nose was being treated, a second outbreak of the disease commenced a little to the inner side of the left leg, below the patella (Fig. 1). The x-ray treatment was applied, but this time unsuccessfully, and, as the disease

was spreading, it was thought advisable to send the patient to one of the London hospitals for the Finsen light treatment. As she would have had to wait a considerable time before admission, and the disease was rapidly increasing, I decided to try the effect of radium bromide, placed on a small disc and covered with mica. The ulcerated surface was covered with thin oiled silk, and the disc was moved slowly over the surface from twenty to thirty minutes, once or twice a week, as was thought requisite. The treatment was continued for a lengthened period, with the result as shown in the photograph.

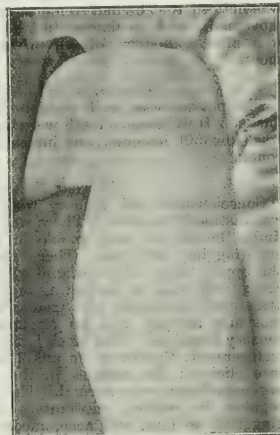


Fig. 2.

Geo. Booth,
Consulting Physician, Chesterfield and North Derbyshire Hospital.

MAMMARY CANCER RECURRING FOURTEEN YEARS AFTER OPERATION.

AFTER the address of Sir Hector C. Cameron, published in the JOURNAL of March 6th, the following notes of a case may be worth recording. In 1892 I persuaded a patient to go to the Royal Infirmary, Edinburgh, for operation. The left breast and all the lymph glands were

thoroughly removed. Her general health soon improved, and remained good till over two years ago. The disease appeared at both extremities of the old incision over the sternum and high up in the axilla, while the right well-developed breast remained quite healthy. The ulcer with its everted indurated edges and foul sanious discharge ate deeply into the tissues covering the sternum, and gradually, though slowly, extended upwards in the shape of a heart—apex downward—to the top of the breast bone. The skin over the trachea was affected, and frequent attacks of dyspnoea occurred. There was much stinging pain, with sleeplessness and emaciation. The sore in the axilla gave very little trouble, and for a wonderfully long time the right breast escaped. The poor woman was patient and resigned. All at once, however, the cancer, as if starved over the sternum, attacked ferociously the other breast, and quickly ate away from the sternal side a concave semicircle over the muscle beneath the gland.

The woman was now so weak, sallow, and emaciated that nothing further could be done, and she sank a few months ago, at the age of 64. In this case the woman was cheery and healthy for about fourteen years between the first and second attacks, instead of the two years we used to reckon upon.

The recurrence at the extremities of the primary line of excision points clearly to a residue from the first attack, and the attack on the other gland was very like a fresh and rapid outbreak of the disease, for there was no connexion between the dry, brittle sternum and the breast now attacked.

Kirkwall, N.B.

D. McNEILL, M.D.

ACUTE CEREBRAL PALSY IN A CHILD.

THE following case occurred recently in the Orphan Homes of Scotland, Bridge of Weir. It presented certain difficulties in diagnosis.

History.

A boy, aged 10, who had been a resident in the homes for four years, was admitted to the hospital on February 7th, 1909. For a fortnight previous to admission it was noticed that he had tremor, exaggerated on voluntary movement, and weakness in the lower limbs. There was also a history of his always having been dull mentally.

Condition on Admission.

The patient was well nourished; the face was rather flushed; Hutchinson's teeth were well marked; the pulse was slow (50), irregular, and intermittent; there was slight cough.

Nervous System.

Consciousness and memory were unimpaired. Speech was distinctly staccato. There was paresis of both lower limbs, the patient being unable to walk without support, and dragging both feet. There was volitional tremor of the upper limbs, which ceased when the patient was at rest; there was an oscillating movement of the head on attempted movement, and tremor in the tongue, but no muscular atrophy, and no apparent disturbance of the sensory functions. The knee-jerks were present, but not exaggerated; there was no ankle clonus; Babinski's sign was elicited; the reflexes in the upper limbs and the organic reflexes were normal. The pupils were equal and regular in outline, moderately dilated, and reacting sluggishly to light and accommodation. Lateral nystagmus was present. There were a few rhonchi in the upper lobe of the left lung; the spleen was not enlarged, and the other systems apparently normal.

A few hours after admission mental symptoms were noticed, such as occasional outbursts of laughter with no apparent cause, imagining brushes had been put in his bed, and attempting to get out of bed.

February 8th. There was no change in the condition, except that speech had become distinctly "slurring"; he had no difficulty in swallowing, and took nourishment well.

February 9th. His condition was much worse; there was pallor of the face; he appeared to be conscious, but was unable to speak, though he seemed to make attempts to do so when spoken to. He was unable to swallow, food

stuck between the cheek and gum, and saliva dribbled from the mouth. The features were immobile and mask-like, the mouth partly open, and the tongue protruded between the teeth. There was complete suppression of urine, and nothing was passed per rectum; he appeared to doze at intervals, and occasional jerky movements of the right arm and both lower limbs were noticed. The temperature was subnormal, and pulse 50. Some hours later there was rigidity of the left arm, which could not be fully extended, and both knee-jerks were lost. He gradually grew weaker, and expired at midnight.

Post-mortem Examination.

The brain was large and soft, and markedly congested, and numerous punctiform hæmorrhages were seen throughout the grey matter; there was no evidence of meningitis. Microscopic sections of the cerebral cortex (stained by the aniline-blue-black, Van Gieson, and Nissl methods) showed proliferation of neuroglia and thickening of the vessels. The nerve cells were markedly degenerated, and showed advanced chromatolysis. In some the cell outline was indistinct, the nucleus eccentric, absent, or in a few cases vacuolated; the processes, including the axis cylinder process, had sometimes entirely disappeared. The lungs showed numerous tuberculous nodules scattered throughout, most marked in the left lung; in the upper lobe of the latter was a fibrosed area. The mesenteric glands were enlarged.

The diagnosis evidently rests between disseminated sclerosis, acute ascending paralysis (Landry's disease), juvenile general paralysis of the insane, and cerebral syphilis. Before death the case presented features of bulbar paralysis, which was evidently the terminal cause of death. Attention may be drawn to the acute course of the illness—eighteen days.

ELEANOR A. GORRIE, M.B., Ch.B.,

ADA E. MILLER, M.B., Ch.B.,

Resident Physicians,
Consumption Sanatoria of Scotland, Bridge of Weir.

THE DEVELOPMENT OF THE PARASITES OF ORIENTAL SORE IN CULTURES.

It may be of interest to some of your readers to hear that I have recently received from Dr. R. Row, Fort Bombay, two communications, accompanied by sketches and preparations, describing the successful culture of Wright's bodies (*Leishmania tropica*) from Oriental sore, and their development into flagellate forms.

When cultivated in human blood serum at the temperature of the laboratory (25° to 28° C.), Dr. Row found the parasites to increase in size and multiply by fission, so that the culture after forty-eight hours contains clumps and masses of relatively large, banana-shaped parasites, each having the macronucleus near the middle of the body, and the micronucleus near one end which is slightly blunter than the other. At or shortly after forty-eight hours a flagellum grows out from the micronucleus at the blunter end, and each parasite becomes a *Herpetomonas*-like organism, which swims actively by means of its flagellum, and becomes free from the clump. At seventy-two hours the culture consists of numerous such flagellate individuals, occurring singly or in pairs or small groups.

It is thus seen that the Wright's body of Oriental sore undergoes in cultures a development very similar to that discovered by Rogers in the case of the Leishman-Donovan body of kala-azar. There is, however, an interesting difference in the mode of cultivation necessary to obtain development, since Dr. Row was only able to cultivate Wright's bodies in human blood serum, and failed to obtain any development when the parasites were planted in sodium citrate. The difference in the reactions to cultural conditions of the two parasites indicates that their modes of transmission and development are also different.

This is, I believe, the first time that the parasites of Oriental sore have been successfully cultivated up to the flagellate stage. I have sent Dr. Row's paper, with illustrations, to the *Quarterly Journal of Microscopical Science*, where I hope it will shortly appear.

E. A. MINCHIN,

Professor of Protozoology in the University of London.

Rovigno.

Reports of Societies.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE.

Friday, March 19th, 1909.

Sir PATRICK MANSON, K.C.M.G., President, in the Chair.
Kala-azar.

THE PRESIDENT showed a second case of apparent cure of kala-azar by injections of atoxyl. The patient, an officer in the Indian Army, who had been stationed on the North-West Frontier, fell ill in September, 1907, and in April, 1908, had all the clinical symptoms of kala-azar. Puncture of the liver revealed Leishman's organism after a considerable search. The patient was then put upon a course of atoxyl injections—3 grains every third day, soamin being afterwards substituted. There was little improvement for three months, but in August, for the first time in twelve months, the fever disappeared, and the patient gradually became quite well. Since then he had had no relapse, and was now apparently cured. *Post hoc, however, was not propter hoc*, and one or two cases did not justify absolute conclusions, but clinically the case was interesting and suggestive.

Work in the Philippines.

A summary of the work of a medical board which consisted of Major Ashburn and Captain C. F. Craig of the United States Army, embodying the chief results of their researches in the Philippines from March, 1906, to July, 1907, was read for Captain CRAIG. The writers stated that they considered they had obtained sufficient evidence to justify the differentiation of a new species of filaria indigenous to these islands. They based their conclusions on the fact that the embryos showed no periodicity, and that they were characterized by morphological features which distinguished them from those of *Filaria bancrofti*, and from all other filariae parasitic in man. *Filaria bancrofti*, however, as had recently been shown by Phelan and Nicholls, was, contrary to their original ideas, still the most common filaria in Manila, but these observers had also found one instance of infection by the parasite which it was now proposed to call *F. philippinensis*. Five cases of infection had been carefully studied by the writers, and in every instance it was found that there were practically the same number of filariae in the peripheral circulation during the day as at night. There was, in fact, nothing approaching periodicity, which had been always regarded as one of the essential characters of *F. bancrofti*. The morphological characters were also different, and the embryos possessed marked powers of progressive motion. Embryos also developed readily in mosquitos, but only in some species, *Culex fatigans* being the usual secondary host; they had not been able to obtain development in *Stegomyia*. A peculiarity to be noted about the ingestion of filariae by mosquitos was that a much larger number of embryos could be found in the stomach of the insects after feeding than were ever present in an equal quantity of peripheral blood; this apparent power of selection was difficult to explain. The time of development—until the metamorphosed embryo reached the labium of the mosquito and was ready for transmission to a new host—was fifteen days. With regard to the etiology of tropical dysentery, the results of their researches had been to confirm almost in every particular the work of Schaudinn; and they now regarded the differentiation of intestinal amoebae into pathogenic (*Entamoeba histolytica*) and non-pathogenic (*Entamoeba coli*) as fully proved. Infections by *Entamoeba coli* was extremely common in the Philippines, but that harmless parasite could be readily identified in the faeces and distinguished from its pathogenic relative without clinical observation. As to the etiology of dengue, the experiments of Graham, of Bayreuth, who showed that the disease was transmitted by mosquitos, were corroborated by experience gained in the Philippines. Both by filtered and unfiltered blood they had been able to transmit dengue from naturally infected soldiers to healthy men who volunteered for the experiment. There could be no doubt about the specific character of the infection, and they concluded that dengue was due to an ultramicroscopic organism (less than 4 μ) which could pass through a filter

that retained *Micrococcus melitensis*. They had also transmitted dengue by infected mosquitos, but their experiments were by no means always successful. Failure was probably due to the fact that a number of the men had already been infected during an epidemic of dengue, for it was shown that several of them were quite immune to the disease. Contagion could be absolutely inhibited by the use of mosquito curtains, and dengue could not be transmitted by fomites. Further inquiry into the etiology of rambosia had confirmed Castellani's views that the disease was caused by *Treponema pertenue*. That organism was morphologically indistinguishable from *T. pallidum*, and it had the same staining reactions. The average number of curves was eight, but as many as seventeen had been counted. In capillary tubes of serum *T. pertenue* remained alive for many days—in one instance thirty-four—and in these circumstances multiplication occurred by longitudinal fission. In tubes, agglutination was also a marked phenomenon. The commission had successfully inoculated five monkeys (*Cynomolgus philippinensis*) by serum from yaws tubercles taken from three different patients, and had recovered the treponema from all of the resultant lesions. Monkeys inoculated with heart blood and splenic juice did not develop yaws, nor did monkeys which had recovered from a previous attack of the disease. They had examined serum from many other varieties of tumour from many different sores, but they had found *T. pertenue* only in yaws.

Dr. G. C. Low said that, with reference to the filaria, there was much doubt as to how far it was justifiable to establish new species upon embryonic characters alone, although it was true that that had been done previously in the case of filaria. So far as he could see at present, insufficient evidence had been adduced by Captain Craig to justify the separation of *F. philippinensis* from *F. bancrofti*. The measurements were practically the same, the structure apparently identical, and progressive movements had possibly been due to the fact that the embryos had shed their sheaths. Nocturnal periodicity was not an essential specific character, and embryos of *F. bancrofti* were sometimes found in the peripheral blood during the day.

Mr. F. E. AUSTEN said that, with reference to the etiology of dengue, an epidemic fever which had recently appeared among the troops in the service of some of the Balkan States, and which was also prevalent in the Levant and in other places, had been asserted to result from the bite of an insect—*Phlebotomus papatasi*. This was a species of the large family of sand flies, and, so far as he could judge, the fever which it conveyed closely resembled dengue. Allied species of phlebotomus occurred in many of our own colonies. He had recently seen specimens from Timbuctoo and also from India, and it was probable that in the latter country a form of surra, which affected Tonga ponies, was conveyed by sand flies. Sand flies differed from mosquitos, in that they were much smaller, and that their cuticular coverings were hairs and not scales.

Sir PATRICK MANSON agreed with Dr. Low that more evidence was wanted to establish *F. philippinensis* as a new species. With regard to Entamoeba, Captain Craig's views appeared to be opposed to those of Musgrave, Strong, and other investigators who had worked in the Philippines, and the question of pathogenic function could not be regarded as finally settled.

Malta Fever.

Drs. G. C. LOW and ANDREW FOY read notes of cases of Malta fever which had been acquired in Northern Nigeria.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Friday, March 12th, 1909.

A. R. PARSONS, M.D., F.R.C.P.I., President, in the Chair.

Polyserositis.

MR. W. I. DE C. WHEELER showed specimens from a man aged 34, sent from Galway with a large ascites. He was fairly healthy and had no other symptoms. Two years previously he had had his right pleura tapped, and when he came to hospital a small left pleural effusion was found

and tapped. The ascites increased in hospital. Ten days after admission the abdomen was opened. Covering the liver was a thick capsule, and over it there were little dips as if peas had been pressed into the surface of it. The liver was not cirrhotic. There were adhesions between the great omentum and the abdominal wall. The Rutina-Morison operation was performed. No sign of tubercle was found, and there was no growth of any kind. The operation seemed to relieve the ascites, and he lived eight weeks. He was only tapped once after it, and a very small quantity of fluid was found.

Dr. HARVEY said that on opening the abdomen only a small quantity of fluid was seen, but a considerable amount was afterwards found shut off by intestinal adhesions. The peritoneum covering the intestines was everywhere thickened, and in places an abundance of comparatively recent fibrin was matting the coils together. The liver was covered with a thick, opaque white capsule, in which irregular pits were seen, giving somewhat the appearance presented by snow on which drops of water are sprinkled. The surface of the spleen was somewhat similar. The cut surface of these organs was scarcely, if at all, abnormal. The spleen was perhaps a little tough but not at all markedly cirrhotic. The kidneys were normal in macroscopic appearance; their capsules stripped easily. The thoracic viscera were densely adherent to themselves and to the parietes. It was found possible after some time to isolate the left lung, which, in addition to general adhesions, was firmly attached to the diaphragm by a dense, finger-like process. The pleura was enormously thickened, and the whole organ when removed looked rather like an enlarged spleen. It was not possible to separate the heart and pericardium from the right lung. The pleura was not so extremely dense as that on the left side, and the right pleural cavity contained a considerable amount of fluid. The pericardium was greatly thickened, and closely adherent everywhere to the heart. On section it had a dense cartilaginous appearance. The heart was somewhat atrophic, the endocardium normal. Inoculations were made from the centrifuged fluid in the pleural and peritoneal sacs into four guinea-pigs, but without result. Microscopic sections showed the organs to be remarkably free from cirrhosis except immediately beneath the thickened capsules. The organs themselves were fairly normal but for congestion and some parenchymatous degeneration to be seen in the liver and kidneys. Part of the left lung near the pleural surface showed collapse with fibrosis, while portions of the right lung were emphysematous. The organs, with the exception of the above-mentioned changes, were healthy, while their serous coverings were immensely thickened, and such serous cavities of the body as were not totally obliterated were distended with fluid. There was absolutely no evidence of tuberculosis either in the sections or as a result of inoculations.

Dr. KILPATRICK said he had seen the patient during life, and thought the multiple serous effusions were probably the result of tuberculous infection. He saw him after the operation, and he was perfectly comfortable and better, then he suddenly died. Both the pathological finding and the clinical history were very remarkable.

Dr. MOOREHEAD said he had seen an almost identical case two and a half years ago. Such cases were of very considerable interest from their rarity.

Mr. WHEELER, in reply, said it had occurred to him that tertiary syphilis might explain the case, but there was no history of such.

Dr. HARVEY, in reply, said the remarkable thing was not why the man died, but how he lived. He had seen nothing so dense as the mass of adhesions in his thorax, and it was wonderful how the organs could move at all.

ROYAL SOCIETY OF MEDICINE.

OBSTETRICAL AND GYNAECOLOGICAL SECTION.

Thursday, March 11th, 1909.

HERRBERT R. SPENCER, M.D., President, in the Chair.

Pernicious Vomiting.

Dr. DRUMMOND MAXWELL gave an account of a fatal case of pernicious vomiting of pregnancy in a primigravida aged 26. Diagnosis was difficult, since the patient, after admission to hospital, ceased vomiting, and there was only the history of severe vomiting at home, unassociated,

however, with marked wasting. There was no characteristic alteration of the urine, and no albuminuria; the only ominous signs on admission were drowsiness and a very rapid, weak pulse; there was no jaundice. The patient passed successively through stages of restlessness, delirium, mania, and final coma. Autopsy revealed hyaline degeneration and necrosis of the central cells of the hepatic lobules, the kidneys also showing a severe parenchymatous nephritis. The diagnosis, uncertain during life, was based finally on the *post-mortem* appearances.

Ovarian Actinomycosis.

MESSRS. FRANK E. TAYLOR and WELBY E. FISHER, recorded a case which they claimed to be one of primary ovarian actinomycosis. Only six other cases of ovarian actinomycosis were on record, and in these the ovary had been infected by extension of the disease from some other locality. Professor R. F. C. LARRA said that the specimen shown was a good example of ovarian actinomycosis, but caution must be exercised before accepting the contention of the authors that the disease was primary in the ovary. Of the recorded cases of ovarian actinomycosis—a not inconsiderable number—there were some in which the evidence favouring a primary incidence of the disease in the ovary was very strong, sufficiently so to convince their observers of their authenticity. In the case under consideration, the clinical history, both before and since the operation, lent considerable support to the authors' contentions, but the actual relationships of the ovary to all the neighbouring tissues were not fully revealed. In a case which he had himself investigated, the ovary and part of the tube were affected. The rectal wall was thickened, and in the dense fibrous adhesions binding it to the ovary there were plentiful actinomycoses growth. Colonies were also found in the rectal wall and in the wall of the descending colon. His interpretation of this case, though still *sub judice*, placed the primary disease in the intestine, from which it had spread to the ovary, the intestinal lesions subsequently cicatrizing and healing. He ventured to suggest that a similar interpretation might be placed upon the present case. The speculation of the authors that the actinomycoses had entered the body by some hidden path without causing a local lesion, and had been carried to the ovary by the blood stream, was scarcely probable. One of the chief characteristics of this disease was the formation of a local lesion at or near the site of entrance, and a spread therefrom by direct continuity of tissue. Spread by the blood stream did take place, particularly the portal blood stream, but this was characteristically a late method of extension. Dr. T. G. WILSON remarked how difficult it was to be quite sure that a condition like actinomycosis was really primary in the ovary, and had not come originally from some part of the bowel, and described a case in point.

Primary Carcinoma of the Vagina.

Dr. HY. RUSSELL ANDREWS described the case of a multipara, aged 62, who had a carcinomatous ulcer, the size of a two-shilling piece, high up on the posterior vaginal wall. The cervix was free from carcinoma. The whole vagina was dissected out from below, and removed together with the uterus. At an early stage of the operation the vagina was converted into a closed bag by clamping with forceps bent at a right angle, with the object of preventing infection of the raw surfaces by carcinoma cells. The peritoneal cavity was closed by sutures, and the cavity between the rectum and urethra became obliterated. The patient was quite well when last seen, February, 1909, eighteen months after the operation. The President thought there was some advantage in the operation performed by Dr. Andrews, especially as there would appear to be less risk of the vagina tearing. Dr. F. J. McCANN said he had operated on a patient with primary cancer of the vagina by a different method to that mentioned by Dr. Andrews, and she was free from recurrence when last seen, four and a half years after the operation. He had seen five examples of primary cancer of the vagina. Dr. H. MACNIGHTON-JONES said that in view of the very few cases of primary carcinoma of the vagina recorded in British literature, he had sought for some statistics from abroad. From all these sources he had only been able to collect twenty-three instances of primary disease. In deciding the point of primary infection, it was absolutely necessary to exclude the portio and vulva. Dr. A. H. N.

LEWERS said he was surprised to find that some of those present considered this condition very rare. He had himself seen, speaking from memory, at least 15 or 20 cases of primary carcinoma of the vagina. In none of them, however, was the disease at a sufficiently early stage to induce him to attempt a radical operation, and he had therefore been obliged merely to scrape and cauterize the growth in such as had seemed to require some active treatment. Dr. RUSSELL ANDREWS, in reply, said that this was the only case of primary carcinoma of the vagina that he had seen. From what he had read he had considered that the condition was rare.

HARVEIAN SOCIETY OF LONDON.—At a meeting held on March 4th a discussion on the early diagnosis and treatment of *Cancer of the stomach* was opened by Dr. HALE WHITE and Mr. B. G. A. MOYNIRAN, whose papers are published at pp. 828 and 830. In the discussion which followed, Mr. D'ARCY POWER said his experience had been that hospital cases came for treatment in the late stages, and that private cases were unwilling to be treated for more than indigestion until hæmatemesis or secondary growths occurred. Carcinoma was nearly always secondary to chronic ulceration, developed slowly, and was localized for a considerable time to its point of origin. Secondary growths were unusual, and glandular enlargements in immediate neighbourhood might show no epithelial deposit. He had had no case under 30, and the majority of cases were between 50 and 70. Both sexes were affected equally. The symptoms were similar to those of chronic ulceration. No reliance could be placed upon the result of a single examination for free hydrochloric acid. A skiagraph after administration of bismuth had proved valuable in a case of advanced carcinoma; but his experience in early cases had shown that skiagraphs failed to reveal any thickening of the mucous membrane. Most reliance must be placed on an exploratory operation. If a thickening be found, a part should be removed and examined microscopically by a skilled pathologist whilst the abdomen was open. If the mass prove carcinomatous, a partial gastrectomy should be performed, together with a posterior gastro-entrostomy, an operation well borne by the patient. Irritation not only led to cancer, but increased the rapidity of growth. It was a mistake to allow a chronic ulceration of the stomach to continue indefinitely; a gastro-entrostomy should be performed in such cases, and thus produce anatomical rest. Further, in cases of carcinoma where complete removal was impossible a gastro-entrostomy would prevent further irritation. Dr. ROLLESTON said that very different pathological and clinical conditions were included under malignant disease of the stomach. Rare cases of diffuse lymphosarcoma, extending like a sheath along the alimentary canal, and possibly of infective origin, were obviously unsuited for the radical treatment of excision. The more ordinary forms of malignant disease fell into two main groups, which differed entirely in their clinical symptoms and as regards their possibility of cure by operation. The two groups were: (1) Carcinoma of the cardiac end, where the symptoms were mainly constitutional, namely, fever, anæmia, and debility, and suggested tuberculosis or infective endocarditis; (2) carcinoma of the pylorus, where the symptoms were mainly mechanical. As a subdivision of the second group might be included cases of carcinoma spreading from the pylorus and lesser curvature to the body of the stomach, and producing the leather bottle stomach. In Group 1 the growth was rapid, prone to necrose, to invade the left lobe of the liver, and set up diffuse suppuration on the adherent liver, a condition most unsuitable for operative measures. He quoted cases of carcinoma of the cardiac end of the stomach resembling pulmonary tuberculosis. One patient with fever and intestinal hæmorrhage brought up material containing acid-fast bacilli, but the necropsy revealed a gangrenous carcinoma containing acid-fast bacilli and no tuberculosis; the situation of the growth prevented vomiting. In another case a gangrenous carcinoma produced a subphrenic abscess, which in turn led to a left pleural effusion, which was the most obvious feature during life. In cases of carcinoma of the pyloric end, the diagnosis should be made before a tumour was palpable, for metastasis had occurred in many cases by this

time. In a patient with symptoms strongly suggesting gastric carcinoma, in whom a test meal shows an absence of hydrochloric acid in the gastric juice, exploratory laparotomy was justified to settle the question in the absence of tumour. It was important, when such an exploratory operation was undertaken, that the surgeon should, in the event of carcinoma being found without obvious metastasis, proceed to partial excision of the stomach, and not rest content with gastro-entrostomy. Mr. V. WARREN LOW said he had yet to learn how to make an early diagnosis in cancer of the stomach. He thought that a careful analysis of the symptoms, such as pain, increasing ill-health, etc., left a considerable degree of uncertainty in the individual case, especially in the class of case where the patient had suffered from stomach symptoms all his life. It was in every one's knowledge that constantly cases occurred where even the most experienced surgeons had been deceived at an operation by the similarity of an old ulcer to a malignant growth. He quoted a case in which in 1898 an anterior gastro-entrostomy was performed at St. Mary's for what appeared to every one to have been a hopeless case of stomach cancer. This patient was alive and well two or three years ago. As far as his experience had gone, he had learnt to rely very largely on the expert examination of the stomach contents. Dr. ARTHUR F. HERTZ attached great importance to two recent methods of examination in the early diagnosis of cancer of the stomach—namely, occult blood in the faeces and skiagraphy. Hæmorrhage from a gastric growth was rarely sufficient to give rise to obvious melaena, and blood was visible in the vomit in less than 40 per cent. of cases. Minute hæmorrhages were constantly occurring from the surface of every malignant ulcer, so that a small quantity of blood was constantly excreted in the faeces. Ewald first utilized this fact for diagnosis. Chemical tests were more satisfactory than microscopical or spectroscopic; the best were the guaiacum and the benzidine reactions made with ethereal extracts of stools after treatment with glacial acetic acid. Meat diet should be avoided for a few days prior to the first examination; 92 per cent. of 266 recorded cases gave a positive reaction. In no single case of gastritis, nervous dyspepsia, or pernicious anæmia had the test for occult blood in the stools been positive. In simple gastric or duodenal ulcer blood might be present in the stools, but always disappeared in two or three days under dietetic treatment. His experience with skiagraphy showed that information about the size of the stomach and the rate with which it got rid of its contents was not so reliable as that obtained by certain older methods of examination. Inflation of the stomach by carbon dioxide, produced by action of tartaric acid on sodium bicarbonate, gave constant results in sound individuals. Very slight dilatations could be readily recognized by this method. Traces of bismuth might remain in the stomach six hours after a bismuth meal sufficient to cause a shadow to x rays, and no evidence of pyloric obstruction was thus obtained. Traces of food residue, obtained by a tube at 3 a.m. after the last meal had been taken at 8 p.m., afforded almost conclusive evidence of organic stricture of the pylorus. After a bismuth breakfast x rays might show: (1) Obstruction at the cardiac end of the stomach, due to growth in this situation; (2) abnormality in the outline of the stomach caused by a projection of a growth into the lumen; (3) obliteration of the pyloric vestibule due to growth near the pylorus. Mr. CRISP ENGLISH said that the important early signs of cancer of the stomach should be given a more prominent place in textbooks on medicine and surgery; too much space was usually devoted to the classical signs, and patients suffering from the classical signs were usually in a hopeless condition. He referred to the difficulty which sometimes occurred during an operation in diagnosing a chronic ulcer from cancer, even after careful inspection through an opening in the stomach. If the possibility of a radical operation arises, the diagnosis must first be certain; his own practice in such cases had been to excise a portion of the diseased area for microscopical examination, and then to do a gastro-jejunostomy; if the excised portion proved malignant, a partial gastrectomy was performed later. He urged the more frequent performance of partial gastrectomy in preference to the palliative operation of gastro-jejunostomy.

SHEFFIELD MEDICO-SURGICAL SOCIETY.—At a meeting on March 4th, Mr. P. E. BARBER, President, in the chair, the following were among the cases shown:—Dr. G. WILLIAMSON: (1) *Partial Gastrectomy* and excision of about 10 in. of the transverse colon for carcinoma. About two-thirds of the stomach had been excised and posterior gastro-enterostomy performed. The transverse mesocolon was adherent to the posterior wall of the stomach and infiltrated with carcinoma. This necessitated resection of part of the transverse colon. The ends were closed by suture and lateral approximation performed. (2) *Double Frontal, ethmoid, and maxillary antral suppuration*, in which radical operations had been performed on all the sinuses. Submucous resection of the septum was performed to allow access to the left nostril. Dr. W. S. KERR: (1) A bilateral abductor *Paralysis of the vocal cords*. There was a feeling of fullness in the larynx externally and slight oedema of the arytenoid region. The inspiratory stridor was well marked. There was no dysphagia. The case was thought to be one of perichondritis of the cricoid. There was no disease of the chest or central nervous system. The case was improving under iodide of potash. (2) *Cases of Chronic maxillary sinusitis* treated by the radical operation. One was followed by a severe and extensive attack of erysipelas involving the face, scalp and neck. Slight oedema of the affected cheek still remained after six months. Dr. GILBERT MOULD, in a paper on the *Treatment of incipient insanity*, remarked that in spite of the diversity of mental diseases when fully developed there was at the commencement a great similarity of the symptoms. These included (1) changes in the circulation of the skin, loss of weight, loss of appetite, fetor of breath, constipation, amenorrhoea, and frequently headache; (2) excitement or depression, sleeplessness, alteration of character, alienation from friends and relatives, often bad dreams and noises in the head. The treatment of symptoms must not be neglected on the ground that they did not constitute the fundamental change, for in a disease of which so little was known it was quite rational to treat symptoms. As a rule patients were better treated away from home. Strict Weir Mitchell treatment was of limited utility; more recently rest in bed in the open air had been advocated. The old treatment of vigorous walking exercise gave good results in many cases. It did not follow that because a woman had broken down under the strain of tending a large family she required absolute rest in bed. It was sufficient in these cases that they had removed the strain. Nutrition was most important, administration of large quantities of milk being almost entitled to be regarded as a specific in the treatment of incipient insanity. Tobacco should be stopped, though there might be exceptions in the old. Most cases did better without tea. As small fluid intake meant irritability, plenty of fluid should be taken. Hypnotic suggestion in the hands of a gifted reputable practitioner might be of the utmost value. The greatest obstacle to the effective treatment of early insanity was the legal difficulties in the way of the medical man who wished to put his patient under proper care. Dr. GODFREY CARTER, in a paper on *Post-influenzal conditions simulating phthisis*, related four cases where following influenza there resulted a condition completely simulating phthisis. There was apical consolidation with well-marked signs associated with loss of weight, nocturnal temperatures of 100 and thereabouts, rapid pulse, but no tubercle bacilli in the sputum. All the cases recovered in the course of a few months, and the physical signs completely disappeared. In one case there was a large pleural effusion. Drs. F. WADY, G. SIMPSON, and A. E. BARFES joined in the discussion, and related cases where, following influenza, there had developed tuberculosis, and the bacilli had only been found after several examinations. Dr. CARTER, in reply, said that in his cases there had been such marked signs that if they were due to tuberculosis there would almost certainly have been bacilli in the sputum. Recovery was also so complete and rapid that tuberculosis was out of the question.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—At a meeting on March 12th, Dr. EDWARD SERGEANT, President, in the chair, a discussion upon *Amendments to the Midwives Act* was opened by Dr. KAYE. After giving some account of the conditions which were to be found in the West Riding prior to 1905, he referred to a large and

indefinite class of "handy women," who were ready to render assistance in any sort of illness among their neighbours, including confinements, with or without a doctor, payment being in money or in kind. In twenty-two sanitary districts in the West Riding there was no certificated midwife. In 1910 it would have to be decided what could be done for districts in which the work was at present being done by women who could not legally do it after that date. There would also be the probable failure of the supply of certificated midwives to fill the gaps made by the retirement or death of those now acting. After setting on one side as impracticable proposals that there should be a postponement of the penal sections of the Act, and that the handy women should be allowed special facilities for becoming enrolled, Dr. Kaye suggested that to meet the anticipated difficulties the Act should be so amended as to authorize local supervising authorities to grant to suitable uncertificated women a modified licence applicable only for a given period and within a well-defined area. The women so licensed should undertake to keep a list of the cases attended, and to observe certain primary rules. They should also be deprived of their licences in the event of a certificated midwife settling in the district. Drs. MCGRAVE, CRAVEN, and MEREDITH YOUNG were opposed to any proposal which had for its object the payment out of public funds of the cost of training midwives. Dr. BOWEN-JONES thought that the uncleanly habits of the handy woman was often the cause of serious mischief. Dr. TUBB THOMAS said that it was very difficult for a midwife to earn a living by her work in country districts. In Wiltshire there were probably not six who were doing so. He disapproved of establishing a second-hand set of midwives, and advocated the subsidising of county nursing associations. Dr. TEW considered that the demand for midwives would be met in good time, though if the rules were rigidly carried out a large number of those already on the roll would be struck off. Dr. MCCLEARY agreed that it would be most imprudent to postpone the carrying out of the Midwives Act at the proper time. If this were done a precedent would be set which might have most far-reaching results. Dr. F. E. CANE did not approve of the handy woman at all; he considered her a nuisance and an abomination. He also referred with dissatisfaction to the manner in which many women were trained as midwives. Dr. LYSTER said that, while the theoretical knowledge of their work had been so extended as to be almost farcical, the amount of practical knowledge was far too little. Dr. ARNOLD EVANS approved of subsidising existing nursing associations, and said that in Bradford the local authority gave to such an association £100 a year. The PRESIDENT said that he should be sorry to be connected with any supervising authority which had power to give secondary licences to untrained women. He looked forward with complacency to 1910 and did not anticipate there would be so much shortage in the supply of midwives as some people thought.

WEST LONDON MEDICO-SURGICAL SOCIETY.—At the meeting on March 5th Dr. E. FURNISS POTTER described the submucous operation for the removal of deviations and obstructive *Deformities of the nasal septum* as having revolutionized treatment in this direction. What were formerly regarded as purely ledge-like outgrowths of bone or cartilage were in reality the thickened angular summits of septal deflections, hence the sawing off of the obstructing spur was frequently disappointing, as only a small shaving was removed or else a large perforation made. In describing the technique of the operation the author laid stress on the necessity of cutting completely through the mucous and perichondrial coverings in order to ensure success in stripping the septum. If this were not done the elevator would be passed between the mucous and perichondrial layers, and considerable difficulties would be encountered. The operator should always make sure that enough bone and cartilage had been removed, otherwise the result was apt to be disappointing. Indications of sufficient removal were that the two mucous layers should hang plumb in the midline, and that the posterior wall of the pharynx should be easily visible. In conclusion, he claimed the following advantages for the operation: (1) The establishment with certainty of a free nasal passage, (2) no general anaesthetic necessary, (3) rapid healing, no splints or troublesome after-treatment needed.

Reviews.

DISEASES OF THE STOMACH.

THERE could not be a better account of the operative indications in diseases of the stomach than that recently published by Dr. A. DELANGRE,¹ who follows closely upon the lines laid down by Hartmann and Terrier. In his historical review of the development of stomach surgery he credits Mr. Moynihan to America, while "Macdonald" is included amongst distinguished British surgeons. The first part discusses the treatment of malignant diseases of the stomach in which the desirability of early operation and early diagnosis is urged, but nothing is added to our all-too-scanty knowledge on the subject. He considers that surgeons are somewhat prone to talk too optimistically about the cures that would result if cases were sent to them for operation earlier; he maintains that of reputed cures counted in surgical statistics, even among the cases in which early and complete removal was possible, those which have remained free from recurrence for three years do not constitute more than a third of the total. Without wishing to weaken the case for early diagnosis, and while advocating liberal recognition by the profession of the beneficial possibilities of surgical interference in cases of suspected cancer after the means of medical diagnosis have been exhausted, there is ground of complaint that some surgeons regard as suitable for operation all cases of chronic digestive disorder, and open the abdomen without troubling to investigate the stomach by the means which have been placed at their disposal by the labours of physicians. In illustration of the abuse of stomach surgery he mentions the case of a man who suffered from gastric crises whose stomach was opened four times by different operators before locomotor ataxy was diagnosed. The attitude assumed by Dr. Delangre on this question of chronic dyspepsia as an indication for operation is plain; he says that "surgical intervention if practised systematically in all obstinate dyspepsias can only have for its result an operative success followed by a therapeutic failure." According to Leriche's statistics the immediate mortality after stomach operations was in 1,239 cases 25 per cent., but particular operators have lowered this considerably, the Mayos, for example, to 9.5 per cent., and a series of 25 cases with only 1 death; the immediate mortality after gastrectomy is 39 per cent. Delangre follows Hartmann and Terrier in relying upon stasis as the chief indication for gastro-enterostomy, and in this he is right. Operation for ulcer of the stomach he considers is not justified until after prolonged and strict medical treatment has proved unsuccessful. He deprecates operating for hæmorrhage, but where there is constant small bleeding exploration is permissible to "see what can be done"; often all that can be done is to perform a gastro-enterostomy, which gives very satisfactory results. Perforation and pyloric stenosis due to cicatrix are recognized as indications for operation, but he omits to refer to duodenal ulcer. Resection of the ulcer is now seldom performed, and should only be done if cancer is suspected, or where it is on the anterior surface or great curvature; but Ricard speaks of it as a "useless and dangerous practice." The usual operation for chronic ulcer is gastro-enterostomy. Hochenegg found that out of 94 cases so treated 83 per cent. were completely cured and 12 per cent. underwent considerable improvement. His pupil Fibisch experimented on animals by making artificial ulcers of the stomach; one-half of the animals were subjected to gastro-enterostomy and the other half were allowed to remain as controls. The result was that the ulcers in the animals operated upon healed, while in the others they continued to increase in size. After the operation the diet should contain a considerable quantity of fat in order to diminish the secretion of hydrochloric acid, and oil should be given by the mouth. Dr. Delangre accepts the statistics of Lebert, which show that 9 per cent. of cancers of the stomach originate from ulcers; and he holds that where the surgeon suspects early cancerous transformation he is justified in resecting the ulcer and performing a gastro-enterostomy. Gastro-enterostomy is the operation for perigastric adhesions, for total symphysis of

the stomach if it is possible, and for all cases of non-cancerous pyloric stenosis with stasis whatever may be the cause. In non-malignant stenosis of the cardia the treatment should be dilatation by bougies through the œsophagus; if this is impossible, the stomach may be opened and the cardia dilated from below. Operations are not advised for simple atonic dilatation, and he speaks of the condition as one in which the knife has been greatly abused. He has no confidence in either gastrotomy or gastroplication. He mentions the exceptional case of severe ptosis with dilatation and intense gastritis treated successfully by Jönnesco by gastropexy, gastrotomy, and gastro-enterostomy. He approves of gastro-enterostomy in hourglass stomach and in tetany caused by dilated stomach. In acute dilatation of the stomach he recommends emptying the stomach by the tube and washing it out. We have not referred to the purely surgical conditions included in the book, as about these there is no difference of opinion. We cordially recommend Dr. Delangre as a safe guide on the matters with which he deals, and should be glad to believe that all surgeons accepted the principles laid down by him.

The monograph on nervous dyspepsia, by Dr. GEORGES L. DREYFUS,² is an attempt to summarize the somewhat discordant accounts that have been published by different authorities during the last thirty years, and to restate the case by showing that there are a good many different conditions which have been included under this heading. He defines nervous dyspepsia as a condition which does not depend upon any disease of the stomach, and is in fact not an independent condition, or to be regarded as a disease in itself any more than jaundice and dropsy. It is a group of symptoms made up of a combination of gastric and nervous ailments, but the latter are to be considered as primary. They may belong to various neuroses or psychoneuroses. It is of course possible that organic disease may develop in association with an undoubted psychosis, it is therefore necessary in all cases to make a careful examination of the stomach, and to exclude organic disease by the use of all the diagnostic means in our power. Such an examination is essential, and can do no harm. The prognosis depends upon the cause. Local stomach treatment is generally out of place. If it does good at all it can only be by suggestion. Strict diet is useless, as it only tends to confirm the belief that the stomach is really at fault, but we may suggest that it is often necessary in the treatment of these cases to begin by giving the simplest food. Pawlow's experiments indicate the close relation that exists between psychical impressions and digestion, and Dr. Dreyfus suggests that this connexion may be even closer than anything we at present imagine. He believes that in all cases of nervous dyspepsia psychical symptoms may be found if they are looked for carefully, and he is disposed to say that where they do not exist the case is not one of nervous dyspepsia, but a true stomach disease. He gives an interesting but somewhat one-sided historical account of the disease, and divides the cases into four groups. The first includes psycho-pathological conditions developing in degenerates with dyspeptic symptoms, and this group he subdivides into four varieties: (1) Where the psychopathy is the cause of the nervo-dyspeptic symptoms; (2) psychical dyspepsia; (3) hysterical dyspepsia; (4) "cyclothymic" dyspepsia. The second group includes acquired neurasthenia with dyspeptic troubles; the third, cases dependent upon changes in the innervation of the stomach; and the fourth cases depending upon alterations of the internal secretions. It is notable that he has very little to say about Groups 3 and 4. As may be inferred from this classification, and from what has been said above, he utterly repudiates the position maintained by some writers, that the nervous symptoms are secondary to and depend upon stomach derangement, and in this we think he is upon solid ground.

HEART DISEASE.

In a series of lectures delivered in 1901 Professor PAWLINOW of Moscow brought prominently forward the somewhat neglected observations of Duroziez on congenital narrowing of the mitral valve and its results upon the whole

¹ *Indications Opératoires dans les Affections de l'Estomac.* Par Dr. A. Delangre. Paris: Vigot Frères. 1903. (Roy. 8vo, pp. 188. Fr. 5.)

² *Ueber Nervöse Dyspepsie.* Von Dr. Georges L. Dreyfus. Mit einleitenden Worten von Professor Dr. L. Krehl. Jena: Gustav Fischer. 1908. (Roy. 8vo, pp. 108. M. 2.50.)

most rapidly rejuvenated whilst we are most rapidly growing old, for our nuclei are rapidly increasing in number so long as we continue to grow rapidly. Surely rejuvenation depends not upon the increase of nuclei, but upon the cause of the increase of nuclei; that cause is not known, and Professor Minot throws no light on it, but we know that the increase, in all bisexual and some unisexual animals, follows the union of two cells, both of which are old of their kind, and one of which, as it consists in many cases of very specially differentiated protoplasm, would, in Professor Minot's sense, be markedly senescent, according to his second law. Moreover, the first phase of rejuvenation, as we see it in the higher forms, is associated with a diminution, not with an increase, of nuclei, for it is initiated by the fusion of two nuclei to form one. The first law is not in accord with facts, and cannot stand. The validity of the second, which states the causes of senescence, depends very much on what is meant by senescence. If we are agreed that a cell is old because it has attained its maximum size and specialization, we may admit the conclusion the so-called law suggests, but in that case the nervous system must be nearly senescent when the child is born, though it is capable of doing seventy or more years of good work. Capability would appear to be a better criterion of age than structure or size, but if the point is waived, the deduction that natural death is the consequence of cellular differentiation is not necessarily admitted. On the contrary, it is obvious that the cells of the muscular and nervous systems may exist for many years after their growth and specialization is completed, and there is no reason to believe that they cease to function because they have achieved their complete size and differentiation. Professor Minot's book will stimulate thought, even if his conclusions do not secure acceptance; but he himself will probably admit that he has neither found the key of the door of life, nor pierced the veil which guards the secrets of death.

NEURASTHENIA.

In a very readable book on the psychology of neurasthenics¹ Dr. PAUL HARTENBERG describes and classifies the various states of consciousness commonly met with in cases of neurasthenia. Before doing so, however, and in order to explain the underlying unity of mechanism producing symptoms so varied as those exhibited by this disorder, the author exposes his own theoretical conceptions of the nature of neurasthenia. This may be put in one sentence: Neurasthenia is, for Dr. Hartenberg, the expression of a diminished activity of nervous matter, variously produced. It is a nervous disorder of which fatigue is the essential stigma and criterion. Dividing the symptoms into physical and psychical, the author considers under the latter heading not only simple psychical asthenia and states of mental and emotional depression and volitional insufficiency, but psychic complications, including phobias, tics, impulses, obsessions, sexual perversions, hypochondria, and melancholia. To all of these mental complications Dr. Hartenberg attaches a certain importance, but he is careful to point out that, notwithstanding their frequent appearance, neurasthenia is not a mental malady—that is, the mental troubles are neither primitive nor essential, but are only the conscious reflection and appreciation of disordered working of the entire nervous system, neurasthenia being thus the expression of a diffuse disorder of neural activity and not a disorder of ideal association or a *maladie par représentation*. Neurasthenia is thus sharply defined from hysteria, which is a *maladie par auto-suggestion*, and also, for the same reason, differs in nature from psychasthenia and melancholia. In these latter states the physical condition is the objectivation of a mental state; in neurasthenia the mental condition is the reflection of a physical state. In applying the general principles of neurasthenia to the appearance of phobias, obsessions, etc., the author assumes in each of these cases a constitutional cerebral defect—that is, that psychasthenia is the “neurasthenia of the degenerate.” Though somewhat of a misnomer—for the book is by no means a thorough psychological study—we can commend Dr. Hartenberg's work as an interesting exposition of the symptomatology of neurasthenia.

Dr. BÉNI-BARDE, who is the author of several works on hydrotherapy in the treatment of diseases of the nervous system, has composed a work of considerable size upon neurasthenia,² which is to form the first of a series of clinical works, the subsequent volumes to deal successively with hysteria, exophthalmic goitre, psychasthenia, etc. After examining the numerous causes of neurasthenia, and after giving a general description of its symptomatology and the three classes—essential, peripheral or reflex, and prodromal or symptomatic—into which he divides this disorder, Dr. Béni-Barde, at great length and with an infinity of detail, discusses the individual bodily disturbances which appear to act as immediate exciting causes; their relation to the neurasthenic condition, and the indications afforded for treatment, with particular reference to hydropathic treatment, of which he is a strenuous and eloquent advocate. In conclusion, after reviewing and criticizing the whole of the various theories—nervous, nutritive, toxic, traumatic, and so on—which have been advanced to explain its pathogenesis, the author gives his own conclusion in the very general statement that “neurasthenia consists of a perturbation of the function devolving upon encephalic zones,” which, at first indefinite in its effects, begins by disturbing the “functional irritability” inherent in the divers tissues and zones, and ends by injuring the “nutritive irritability” on which depends cellular regeneration. Which form the neurasthenia may take depends on the combination and interplay of inherent or constitutional and extrinsic or environmental conditions, these deciding the essential, cerebral, or psychic form (cerebrasthenia or psychasthenia); or the cerebro-spinal form; or the cardio-vascular, or gastro-intestinal forms, etc., as the case may be. In all cases the author praises the advantages of hydrotherapy, in particular when combined with psychotherapeutic measures, but otherwise his book is not very enlightening.

RADIO-ACTIVITY.

THE public interest taken in radium and in the group of phenomena classed together as radio-active serves as a sufficient excuse for the appearance of Mr. C. W. RAFFETY'S introduction to the subject.³ Its chief claim to merit is its striking sanity. The author has been particularly careful to eliminate all matter that is sensational and disputed, and he has carried this principle so far as to exclude from his account of the subject the transmutation of copper into lithium that has been claimed to be an effect of the action of radium. For several other reasons besides its sanity the book will prove popular. It contains a clear, straightforward account of the subject, explaining how the discoveries have been made, what is their bearing on modern theories as to the constitution of matter, and how the phenomena may be observed. In dealing with the spintharoscope, the highly suggestive remark is made that the instrument affords the observer probably the only distinct existing opportunity of watching for himself directly the action of the individual atom. Clear expression is given to the differences existing between the various rays, and readers will be grateful to Mr. Raffety for having added for reference a short appendix summarizing their properties and giving tables of the periods of the radio-active elements. The closing pages of the book are taken up with a description of some of the simpler experiments feasible with inexpensive apparatus. Hints are given to those who wish to lecture on radium as to the precautions they must take to ensure success. The book, in fact, without being brilliant, is a sound and most readable popular treatise on radio-activity. But why will Mr. Raffety interpose adverbs between the constituent parts of his infinitives?

PHYSIOLOGICAL CHEMISTRY.

ALTHOUGH it is only about two years since Professor EMIL ADBERHALDEN published the first edition of his *Lehrbuch*, the second edition⁴ is now to hand. One tribute to the

¹ *La Neurasthénie. Les vrais et les faux neurasthéniques.* By Dr. Béni-Barde. Paris: Masson et Cie. 1908. (Roy. 8vo, pp. 500. Fr. 8.)

² *An Introduction to the Science of Radio-Activity.* By Charles W. Raffety. With illustrations. London: Longmans, Green and Co. 1909. (Post 8vo, pp. 220. 4s. 6d.)

³ *Lehrbuch der physiologischen Chemie, in zwei und dreissig Vorlesungen.* By E. Aderhaldden. Second edition. Berlin and Vienna: Urban und Schwarzenberg. 1902. (Sup. roy. 8vo, pp. 384, 12 illustrations. M. 24.)

⁴ *Psychologie des Neurasthéniques.* By Dr. Paul Hartenberg. Paris: Félix Alcan. 1908. (Cr. 8vo, pp. 288. Fr. 5.00.)

excellence of the book is the fact that it has been translated into English; the early appearance of a second edition is another. We need say no more about it than that the work is thoroughly up to date, and that its author is eminently well qualified to write an authoritative textbook; the matter, moreover, is presented in a clear and readable form.

Another work from the same pen is also before us.¹¹ It deals with recent researches in the chemistry of proteins, in which region of science we owe so much to Professor ABDERHALDEN himself. It does not treat of all the problems concerning proteins, but merely of their pure chemistry. The booklet is a reprint of the chapter Professor Abderhalden contributed to the more ambitious textbook which is appearing in fasciculi under the editorship of Dr. Carl Oppenheimer, and which has been already noticed in these columns. In that publication other aspects of proteins (biological, etc.) are contributed by other authors. Many readers, however, will find it convenient to have Professor Abderhalden's excellent article in separate form.

But it is not only Germany which is prolific in publications of this kind just now. Three more of the monographs on biochemistry which Messrs. Longmans are publishing have just made their appearance. Two of these are written by Dr. R. H. ADERS PLIMMER, and both deal with the *Chemical Constitution of the Proteins*.¹² Part I with their cleavage products and Part II with the attempts made to synthesize them from their cleavage products. The work traverses much the same ground as in Abderhalden's smaller book just noticed, and those that buy the one will not require the other. Dr. Plimmer has also the gift of clear exposition, and the work is fully abreast of recent advances in science. It is particularly well suited for English-speaking students and researchers, and we note with satisfaction that the terminology adopted is that recommended by the Protein Nomenclature Committee of our physiological and chemical societies acting in conjunction with a similar committee in America.

The third monograph deals with *The General Characters of the Proteins*, and is written by Dr. S. B. SCHRYVER.¹³ The characters included are physical (solubilities, crystallization, optical activity, heat coagulation, and the like), chemical (tests, protein compounds, oxidation products, distribution of nitrogen, etc.), and biological (precipitin reactions). The whole forms a useful and lucid contribution to protein literature.

The French contribution before us deals with the synthesis and constitution of proteins,¹⁴ but is not more than a pamphlet. It gives in outline an account of protein constitution, dealing mainly, of course, with the more recent acquisitions to knowledge on this subject, the importance and interest of which is manifested by so many publications in different languages relating to it.

Furthermore the twelfth and thirteenth fasciculi of OPPENHEIMER'S *Handbuch*¹⁵ are just to hand. Dr. Franz Müller deals in several articles with animal pigments (of blood, bile, urine, etc.); Professor von Fürth with melanins and similar pigments; F. Samuel with various products of protein cleavage; and Wolfgang Ostwald with the general characters of colloids.

THE CAUSATION OF SEX.

In a monograph entitled *The Causation of Sex*,¹⁶ Mr. E. RUMLEY DAWSON claims to have solved the problem of sex

causation and to have formulated a new theory. The theory consists of two parts; the first is that sex is not due to the male but to the female parent, and the second that the right ovary produces male and the left female ova. So far as the first part of his theory is concerned the author may claim priority, for he put it forward in 1900, but in urging this point he does not stand so entirely alone as he seems to imagine, for in a paper entitled, *The Determination of Sex in Animal Development*, which appeared in 1902, Dr. J. Beard makes the following statement: "The determination of sex for the next generation thus lies with germ cells of the female metazoan organism," but the data on which he bases the opinion are quite different from those upon which Mr. Rumley Dawson depends. The second part of the theory had practically been stated, before Mr. Rumley Dawson's first communication on the subject, by Dr. Tuckey. Mr. Dawson insists that Dr. Tuckey did not dissociate the male parent from any part in sex causation, but when he came to the conclusion that boys were derived from the right and girls from the left ovary he could scarcely have ascribed much potency in sex production to the father. A further point upon which Mr. Dawson insists is the alternate action of the two ovaries, and as regards this he is in conformity with the opinion of Negrier, and the idea has also obtained support from the observations of other inquirers. If the contentions that the ovaries produce ova of opposite sexes and that the ovaries act alternately are well founded then it might be possible to foretell the sex of a coming child, the sex of the previous child, the date of its birth, and the reappearance of menstruation in the mother being known. The plan Mr. Dawson adopts is to go forty weeks back from the last child's birthday to find the month in which the ovum was fertilized which yielded the child. The sex of that child being known, proceed alternately from the month in which the ovum from which it grew was fertilized to the tenth ovulation period prior to the expected month of the birth of the coming child, allowing an extra or thirteenth ovulation between December and the January of the following year, because there are thirteen ovulations per annum. Using this rule, Mr. Dawson claims to have had 97 per cent. of successes, and the 3 per cent. of failures he attributes to the inability of the mothers to forecast correctly the month of confinement. If other observers, using the data, are equally successful, there will be much to be said for his theory, but it is certainly not proved by the anatomical, physiological, and pathological data Mr. Dawson uses to support it, nor is his case strengthened by the one-sided way in which he uses the evidence at his disposal.

NOTES ON BOOKS.

DR. PRICE-BROWN is a physician of Toronto who finds relaxation from the strenuous life of a practitioner of medicine, who has to battle with facts, in wooing the Muse of Fiction. In *The Fan*¹⁷ is a pretty story of a wife's devotion. The scene is laid in Canada during the war of 1812 between England and the United States, and the plot is merely the story of the foundation of an English military settlement on the shores of Lake Huron. Helen Manning, the wife of a young Peninsular officer, insists upon accompanying her husband when his regiment is ordered to America, and though she is the only lady in camp she follows the men in the long march from Halifax to Georgian Bay on Lake Huron, and braves all dangers and discomforts to remain by her husband's side whilst the fort is being built. The tale is told partly in the form of Helen's diary, and is principally an account of her adventures whilst in camp and on the march, when she cheers the men and wins all hearts by her sweetness and courage. A second story, the love story of a girl hesitating between her two lovers, a Canadian and an Englishman, is introduced, but the plot is very slight. Dr. Price-Brown seems more at home when he is writing of his native forests and lakes and describing the terrors of a Canadian winter than he is when telling a story. The chief interest of the book lies in the descriptions of Canadian life and scenery, which are excellent. The character drawing, on the contrary, is not so good, and the language is a trifle too modern, not to say slangy, for the early days of the last century; ladies of that time did not speak of something being "just lovely." or

¹⁷ *In The Fan; or, The Builders*. By Price-Brown (Eric Bonn), author of *How Hartman Won*, etc. Illustrated by F. H. Bridgen, O.S.A. Toronto: McLeod and Allen. (Pp. 352.)

¹¹ *Neuere Ergebnisse aus dem Gebiete der speziellen Eiweisschemie*. By E. Abderhalden. Jena: Gustav Fischer. 1909. (Sup. roy. 8vo, pp. 128. M. 3.50.)

¹² *Monographs on Biochemistry*. Edited by R. H. Aders Plimmer and F. G. Hopkins. *The Chemical Constitution of the Proteins*. By R. H. Aders Plimmer. In two parts. London: Longmans, Green, and Co. 1908. (Royal 8vo, pp. 112 and 78 respectively. 3s. and 2s. 6d. respectively.)

¹³ *Monographs on Biochemistry*. *The General Characters of the Proteins*. By S. B. Schryver, Ph.D., D.Sc. London: Longmans, Green, and Co. 1909. (Royal 8vo, pp. 86. 2s. 6d.)

¹⁴ *Les Achivités chimiques et biologiques*. No. 10. *Synthèse et Constitution des albuminoïdes*. By M. E. P. Pozzi-Escot. Paris: Jules Roussel. 1909. (Frost 8vo, pp. 110. F. 1.50.)

¹⁵ *Handbuch der Biochemie*. Edited by Carl Oppenheimer. Twelfth and thirteenth fasciculi, concluding Vol. I. Jena: G. Fischer. 1909.

¹⁶ *The Causation of Sex*. By E. R. Dawson. London: H. K. Lewis. 1909. (Demy 8vo, 208 pages; 21 figs. 6s.)

"awfully jolly." But there is a charming sketch of a French Canadian, Bateese, whose broken talk and quaint old songs, half-English, half-French, are delightful. It is a pleasant story pleasantly told, and it points a useful moral. It brings home to the present-day English people what our colonies have cost us in the past, and what English men and women have suffered in helping to found and to retain them.

In his little book on the *Cure of Rupture by Paraffin Injections*,¹⁸ Dr. MILLER describes the method of injecting paraffin into the loose tissue surrounding the sac. The author fails to convince us that this method is destined, as he thinks, to play an important part in the surgical treatment of reducible hernia. Most readers will be disposed to regard it as crude and uncertain, and an impression that it is by no means simple nor, indeed, quite free from danger, is suggested by the statement that "only the operator who is thoroughly acquainted with the manner of disposition of paraffin should attempt the injection of hernia." The clinical report at the end of the book is far too scanty and incomplete to warrant any definite conclusions on the results of this treatment.

The pains taken by Dr. BRICKNER and his colleagues to extend and to improve still further their *Surgical Suggestions*,¹⁹ will, there can be no doubt, secure for their work a continuance of the favour it has hitherto received from American surgeons. This handy volume is truly, as is claimed, "packed full" of information, and this, though to English readers it may seem here and there to be strange and somewhat erratic, will, on the whole, be found very useful and in accordance with the latest principles of surgical practice. It is essentially a work for experienced surgeons, and not a mere collection of hints on elementary matters.

We have received the new edition of Mrs. Beeton's *Cookery Book*²⁰ printed from new type, and revised throughout. English cookery has always been strong in plain sweets and weak in vegetables, and the editors of the new edition have endeavoured to improve the recipes for the cooking of vegetables without prejudice to the recipes for puddings. The book, which is still moderate in price (1s.), has been enlarged, and contains a number of coloured illustrations.

¹⁸ *The Cure of Rupture by Paraffin Injections*. By Charles C. Miller, M.D. Chicago: Oak Printing Co. 1903. (Cr. 8vo, pp. 81. \$1.00.)

¹⁹ *Seven Hundred Surgical Suggestions*. Practical Brevities in Surgical Diagnosis and Treatment. By Valter M. Brickner, B.S., M.D., Assistant Adjunct Surgeon, Mount Sinai Hospital, New York; Eli Moschowitz, A.B., M.D., Assistant Physician, Mount Sinai Hospital Dispensary, New York; and Harold M. Hays, M.A., M.D. Third Series. New York: Surgery Publishing Company. 1909. (Cr. 8vo, pp. 158. 1 dol.)

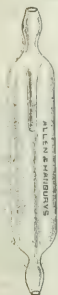
²⁰ *Mrs. Beeton's Cookery Book*. New edition. London: Ward, Lock and Co. 1903. (Cr. 8vo, pp. 368. 1s.)

MEDICAL AND SURGICAL APPLIANCES.

Saline Infusion Indicator.

MR. R. DOUGLAS LAURIE, M.B., Ch.B. Edin., House-Physician, Royal Hants County Hospital, Winchester, writes: In the administration of saline continuously either per rectum or beneath the skin, the great difficulty lies in knowing whether at any given moment the fluid is flowing, and if so, at what rate. To overcome this I have made the indicator, which is put in circuit with the rubber tube leading from the saline reservoir to the patient. The tube is so constructed that it encloses a volume of air which can neither escape upwards to the reservoir, nor downwards to the patient, but does not hinder the flow of the fluid. It consists of a narrow glass tube sealed into the upper end of a larger tube, and projecting towards the centre of the latter. As the saline flows, drops are formed on the end of the inner tube, and the fall of these indicates the rate of flow. The inner tube is of such a size that each drop is approximately one minim, and by thus counting the drops per minute the rate of flow can readily be estimated. (The number of drops per minute divided by 8 gives the rate in ounces per hour.) The indicator should be connected with the rubber tubing shortly after it leaves the reservoir, and in such a position that it can hang vertically. A clamp (preferably a screw clamp) is placed

on the rubber tubing just above the indicator, and the flow regulated by this. The indicator is of glass, and can readily be sterilized in carbolic. Messrs. Allen and Hanburys, Limited, supply the indicator at 12s. per dozen.



An Auto-Gloving Machine.

In connexion with the exhibition of new appliances at Sheffield last year brief allusion was made to an auto-gloving device on view. Since then the makers, Messrs. Hoefftcke, of 21, Woodstock Street, W., have made a material alteration in its manufacture, with the result that it is now in every respect an admirable piece of theatre furniture. As will be gathered from the accompanying woodcut, it consists of a vertical cylinder, with an opening just large enough to admit of ready insertion of the hand and wrist. The sterilized glove is hung in the opening with its wrist-piece turned over the edge of it. The operator presses a foot lever, which action results in the instant formation of a vacuum in the cylinder. The



glove responds, and, thanks to its elasticity, dilates evenly in all its parts, so that the hand slips in without difficulty. The hand in place, the lever is released; the vacuum disappears, and in a flash the hand is neatly gloved. The whole operation, whether the hands are wet or dry, hardly takes five seconds. Though the whole apparatus takes to pieces and can be sterilized, the makers have thought it well to protect the gloves from all possible contact with the interior of the machine by providing a bag which hangs down inside the cylinder from a false collar at its upper opening. This, of course, can be taken out, sterilized, and replaced as often as desired. The apparatus shown in the engraving is to glove both hands simultaneously, but single gloving machines are also supplied.

RURAL AND COUNTY NURSING ASSOCIATIONS.

We have published recently several letters under the general heading of "Rural Nursing Associations" in which the writers have given instances of defects in the organization and administration of rural nursing associations. The matter is at present under the consideration of the Medico-Political Committee, which we understand will report at an early date; meanwhile it appears to be advisable to print for the information of members the new rules which the Queen Victoria's Jubilee Institute for Nurses suggests for the guidance of local rural nursing associations. We may add that Rule 9 has been formulated largely in consequence of representations which

have been made to the Queen Victoria's Jubilee Institute Nurses on behalf of the medical profession.

QUEEN VICTORIA'S JUBILEE INSTITUTE FOR NURSES.

SUGGESTED RULES AND INFORMATION FOR LOCAL ASSOCIATIONS EMPLOYING VILLAGE NURSES.

1. The Association includes the parishes of and is in affiliation with the County Nursing Association.

2. The nurse will work under the Committee of the Association, and will be under the supervision of the County Superintendent. If a midwife she will be also under the inspection of the local supervising authority as laid down by the Central Midwives Board.

3. The services of the nurse may be secured by payment of an annual subscription on the following scale:

Labourers (wages not exceeding 20s. per week), 2s. per annum. Artizans and small tradespeople, 3s. 6d. to 4s. per annum.

Tradespeople and farmers, 5s. to 10s. per annum.

or, Working people may secure the services of the nurse on payment of 2d. per month for single people, and 4d. per month for a family including aged relatives living with and dependent on the family.

Tradespeople and farmers may employ the nurse for a subscription of 5s. to 10s. per annum, except for midwifery.

4. Subscribers of less than 5s. per annum may engage the nurse as midwife at a fee of not less than 5s. (arrangements as to the nurse taking midwifery work are subject to the wishes of the Committee of each Association.)

Monthly nursing is (free) or (subject to an extra charge of 2s. to working people earning under 20s. a week).

A charge for monthly nursing of (3s. 6d. to 5s.) is made to those subscribing 5s. and under to the Association. Notice of (2) or (3) months must in any case be given to the (nurse) or (Honorary Secretary) and the charge prepaid.

Other charges by arrangement.

5. Night duty is not expected of the nurse, except in critical cases, when a small charge (4d. to 1s. 6d.) may be made, or in maternity cases, which are free.

6. The nurse's services, if not required for subscribers, may be supplied to non-subscribers, but only at higher rates (to be fixed by the Committee).

7. The nurse will attend cases daily when necessary.

8. The nurse will not attend infectious cases. The County Association will, when possible, arrange to supply a nurse on terms to be arranged between the County and local Association for any case of emergency or special difficulty, and also for holiday work.

9. In all cases of general sick nursing the attendance of the nurse must be sanctioned by the medical man, it being understood that her attendance on such cases does not interfere with her engagements to lying-in women. When she has anything to communicate to the doctor she shall do so in writing, and it is hoped the doctor will do the same to avoid leaving verbal messages with patients or their friends.

The nurse may attend a patient on application or in emergency, but must not continue to visit without a medical man being informed. Should the nurse advise the patient to have a doctor and the patient refuse, the nurse may no longer attend this patient except in case of urgency. She must in any case report the matter to her Secretary.

10. The nurse when on duty will wear the uniform dress and no ornaments. No presents or beer, wine, or spirits of any kind may be accepted by her.

11. The nurse is strictly forbidden to interfere in any way with the religious opinions of her patients or their friends, and she shall consider as strictly confidential all matters which shall come to her knowledge concerning her patients. She is not allowed (except in cases of immediate necessity, which should be reported at once to the Honorary Secretary) to provide nourishment or relief.

12. It is the nurse's duty to do all that concerns the person and bed of the patients, and she is responsible for their personal cleanliness. She must see the room is ventilated and cleaned, and do her best to improve the general surroundings. When the relations of the patient can be taught how to keep the room in nursing order they should be encouraged to do so.

13. The nurse shall not, as a rule, be required to be on duty more than eight hours daily, and on Sundays she will only attend urgent cases. She is entitled to (one month's) or (three weeks') holiday yearly, the date to be fixed by the Committee.

14. The nurse will keep a register of her patients for the Committee and send a report of her own work as required to the County Superintendent on the forms provided. It is suggested that one of the Honorary Secretaries with one of the ladies of the Committee should see the nurse and inspect her books one afternoon each week.

15. The nurse shall be responsible to the Committee for all appliances and garments lent to patients being returned in good order.

16. The nurse must be punctual in going to her work, keeping a register of her times in the book provided for the purpose. She must leave word at her rooms (on a slate provided for the purpose) where she is likely to be found in case of emergency, and the approximate hour of her return.

17. Applications for the services of the nurse may be made to her. Applications for the nurse's services should be made as early as possible in the day.

PISTOIA GOUT POWDERS.

THERE was a powder for gout known to an earlier generation under the name of the "Portland Gout Powder." This, according to the prescription given by Jourdan in the *Pharmacie Universelle* (1826), consisted of Gentian root, round birthwort root (*Aristolochia rotunda*), ground pine root (*Teucrium chamaepitys*), the tops of germander (*Teucrium chamaedrys*), and of the lesser centaury (*Eriotheca centaurium*), of each equal parts to be ground separately to a fine powder and mixed; dose, half a teaspoonful. Jourdan gives of this three variants, in one of which the gentian is replaced by guaiacum.

For some years past a good deal has been heard about the Pistoia gout powders. A pamphlet entitled *The anti-gouty powders of the R.R. Benedictine Mothers of Pistoia for the treatment of a gouty source* (Rome, 1904) presents a curious resemblance to the advertising pamphlets issued by ordinary nostrum dealers. There is a short disquisition on gout written in very old English; this is followed by a translation of a large number of testimonials to the virtues of the powder, and this again by the following "Warning to our Customers":

Having known that in some towns of Italy, and even in Pistoia, some anti-gouty drug circulates under the name of "Vegetal Anti-gouty Powders of the Cloister" or under other names alike, making every body trust that they come from our Monastery, we think ourselves, in duty bound, to remember to our Customers that no deposit of our Anti-gouty Powders is to be found neither in Pistoia nor in other towns or places in Italy or abroad, and that we have accorded to nobody the faculty of preparing or selling them.

Consequently every anti-gouty remedy which in any way should be made known as coming from this Monastery, must be considered as a product of vulgar falsification and adulteration.

The label on some boxes of the powder states that it is based on gentian and Indian wood which is one of the synonyms of guaiacum.

The pamphlet, which has already been quoted, states that the powders do not contain colchicum, belladonna, or any other poisonous substance, but

are a composition of medicinal grasses, none of which can ever have a pernicious effect upon the health, whatever may be the state of the person who uses it.

It is asserted that "often many miraculous cures are obtained," but it appears that the treatment must be a prolonged one, for the pamphlet further states that:

When it is question of a first affection or of a light gouty attack, the treatment of a whole year without interruption can in general be sufficient; because it is necessary for the blood to stay under the action essentially depurative of the drug during four seasons.

But when the illness is old, a year of treatment cannot of course be enough to extirpate entirely the distempore, and the use of the drug must be protracted till necessary.

MM. Guignard, Collin, Chastaing, and Barillot give the following formula for the Pistoia gout powder:

I.			
Colechicum corn	...	...	10 parts
Bryony root	...	...	10 "
Betony (root, stem, and leaves)	...	...	50 "
Gentian root...	...	...	10 "
Camomile (chiefly stem, leaves, a little root, and flowers)	...	...	10 "

M. Collin is one of the leading authorities on the microscopic characters of powdered vegetable drugs, and on examination of a specimen of the powder which recently came into our hands it showed characters consistent with this formula; such small differences as were observed were only such as might be expected between specimens grown under different conditions of soil, climate, etc.

Another formula which has been published for the powders is as follows, but the sample we examined agreed more nearly with No. 1:

II.			
Colechicum corn	...	...	20 parts
Bryony root	...	...	10 "
Betony root	...	...	40 "
Gentian root...	...	...	10 "
Camomile	...	...	10 "

"THE CHILDREN'S CHARTER."

The Children Act, 1908, which came into force on Thursday last, has been well called "the children's charter." The Act extends, and to some extent codifies, previous Acts dealing with children, and repeals many clauses in other Acts. The new Act is divided into six parts:—

1. Infant life protection.
2. The prevention of cruelty to children and young persons.
3. Juvenile smoking.
4. Reformatory and industrial schools.
5. Juvenile offenders.
6. Miscellaneous and general.

INFANT LIFE PROTECTION.

Under the Infant Life Protection Act, 1897, only foster parents who received more than one infant under the age of 5 years were brought under inspection. The new Act applies to an infant in single care and extends the age to 7 years. Its first clause is as follows:

1. Where a person undertakes for reward the nursing or maintenance of one or more infants under the age of 7 years apart from their parents or having no parents, he shall, within forty-eight hours from the reception of any such infant, give notice in writing thereof to the local authority.

The foster parent who changes his or her residence must give notice to the local authority within forty-eight hours, and within the same period must give notice of the death or removal of any infant previously under his or her care, and within twenty-four hours must give notice of death to the coroner. Any person failing to give due notice in any case will be guilty of an offence, and if the maintenance of the infant has been paid for in whole or in part by a lump sum, it or any part of it will be liable to forfeiture. Statutory obligation is laid upon every local authority to provide for the execution of this part of the Act, and if on inquiry it appears that there are any persons who undertake the nursing and maintenance of such infants the local authority must appoint infant protection visitors, who shall satisfy themselves as to the proper nursing and maintenance of the infants and give necessary advice or directions. The visitor will have authority to apply either to a justice or to the local authority for an order directing him to remove an infant to a place of safety if it appears that the infant is being nursed in overcrowded, dangerous, or insanitary premises, or by a person who by reason of negligence, ignorance, inebriety, immorality, criminal conduct, or other similar cause, is unfit to have care of it. Foster parents are forbidden to insure the life of a nurse-child, and an insurance company which issues a policy on the life of such an infant will be guilty of an offence. Persons guilty of an offence under this part of the Act will be liable on summary conviction to imprisonment for a term not exceeding six months, or to a fine not exceeding £25. The local authority may exempt from inspection institutions maintained by a philanthropic society or any particular premises within their district which appear to them to be so conducted that it is unnecessary that they should be visited.

PREVENTION OF CRUELTY TO CHILDREN AND YOUNG PERSONS.

The first section of the second part of the Act applies to any person over the age of 16 years who has the custody, charge, or care of any child or young person. If such a person assaults, ill-treats, neglects, abandons, or exposes a child or young person, or allows a child or young person to be treated in a manner likely to cause unnecessary suffering or injury to health, including mental health, such person shall be guilty of a misdemeanour, and shall be liable (a), if convicted on indictment, to a fine not exceeding £100, or to imprisonment, with or without hard labour, for any term not exceeding two years, or to both penalties; or (b), on summary conviction, to a fine not exceeding £25, or imprisonment for a term not exceeding six months, either or both. It is further provided that a parent or other person legally liable for the maintenance of a child or young person shall be deemed to have neglected him in a manner likely to cause injury to his health if he has failed to provide adequate food, clothing, medical aid, or lodging, or, if unable to make such pro-

vision, if he fail to take steps to procure the same under the Poor Law. A person may be convicted of an offence under the section notwithstanding that the actual suffering or injury to health has been obviated by the action of another person, or notwithstanding that the child has died. If it be proved that a person convicted under this section was directly or indirectly interested in the insurance of the child or young person, the penalties are increased to a fine of £200, or penal servitude for five years on conviction on indictment; in the case of summary conviction, the court, in determining the sentence, shall take into consideration the fact that the person was interested in the insurance.

SUFFOCATION OF INFANTS.

The following is the clause with reference to overlying:

Where it is proved that the death of an infant under 3 years of age was caused by suffocation (not being suffocation caused by disease or the presence of any foreign body in the throat or air passages of the infant) whilst the infant was in bed with some other person over 16 years of age, and that that other person was at the time of going to bed under the influence of drink, that other person shall be deemed to have neglected the infant in a manner likely to cause injury to its health within the meaning of this part of this Act.

BURNING.

If a person in charge of a child under the age of 7 years allows it to be in any room containing an open fire not sufficiently protected to guard against the risk of burning or scalding without taking reasonable precautions, and the child is killed or suffers injury, he or she is made liable on summary conviction to a fine not exceeding £10.

BROTHELS; PROSTITUTION.

A person having the custody, charge, or care of a child or young person between the ages of 4 and 16 years who allows it to reside in or frequent a brothel is liable to a fine of £25, or imprisonment for not more than six months, or to both penalties. Any such custodian who causes or encourages the seduction or prostitution of a girl under 16 is liable to imprisonment for any term not exceeding two years, and he shall be deemed to have encouraged such seduction or prostitution if he has allowed her to consort with or enter or continue in the employment of a prostitute or a person of known immoral character.

A constable may take into custody without warrant any person who within his view commits an offence under this part of the Act, or who the constable has reason to believe has committed such an offence, and the constable or any person authorized by a justice may take to a place of safety any child or young person in respect to whom such an offence has been, or there is reason to believe has been, committed.

HABITUAL DRUNKARDS.

If it appears to the court before which any person is convicted of an offence of cruelty under the Act, that he or she, being the parent of the child or living with the parent of the child, is an habitual drunkard, the court, in lieu of sentencing the person to imprisonment, has power to order his or her detention in a retreat under the Inebriates Acts, provided that the person consents.

A board of guardians, and in London a local authority, is given power to institute proceedings under this part of the Act.

JUVENILE SMOKING.

The sale of cigarettes or cigarette papers to a person under the age of 16 years is rendered illegal, and the seller is subject to a penalty not exceeding £2 for the first offence, £5 for the second, and £10 for a third or subsequent offence. A court of summary jurisdiction may direct the removal of an automatic machine supplying cigarettes. A person will not be guilty of an offence for selling tobacco other than cigarettes to a person under the age of 16 years if he did not know and had no reason to believe that it was for the use of that person; but the Act will apply to smoking mixtures intended as a substitute for tobacco in like manner as to cigarettes.

REFORMATORY AND INDUSTRIAL SCHOOLS.

The object of this part of the Act is to enable courts to deal with youthful offenders without sending them to prison. A youthful offender between 12 and 16 years of age may be committed by the court to a certified reformatory school. The court will also have power to

send to a certified industrial school any child apparently under the age of 14 years who is found begging, wandering without home or place of abode or destitute, under the care of a parent or guardian of criminal or drunken habits, or who frequents the company of any reputed thief. A parent unable to control a child may take advantage of this section to obtain his committal to an industrial school.

JUVENILE OFFENDERS.

A court of summary jurisdiction, when hearing charges against children or young persons, must in future sit either in a special building or room, or on a different day to that on which ordinary sittings are held. A court is given very large discretion in dealing with a charge and inflicting punishment in the case of a child or young person. In future no child or young person—that is to say, no person under 16—can be sentenced to death. No child—that is to say, no person under 14—shall be sentenced to imprisonment or penal servitude, and no young person—that is to say, no person under the age of 16—shall be sentenced to penal servitude.

ALCOHOL.

Section 119 runs as follows:

If any person gives, or causes to be given, to any child under the age of 5 any intoxicating liquors, except upon the order of a duly qualified medical practitioner, or in case of sickness, or apprehended sickness, or other urgent cause, he shall, on summary conviction, be liable to a fine not exceeding three pounds.

Section 120 excludes children from the bars of licensed premises, and imposes a penalty of forty shillings for the first offence, and £5 for any subsequent offence, not only on the licensee, but also on any person who causes or procures, or appears to cause or procure, a child to go to or to be in the bar of licensed premises during such hours as the bar is open.

VERMINOUS CHILDREN.

Section 122 empowers a local education authority to direct its medical officer or any person deputed by him, to examine the person and clothing of a child in a public elementary school, and if such child is found infected with vermin, or in a foul or filthy condition, the parent or guardian may be ordered to cleanse the person and clothing of the child within twenty-four hours; if the parent or guardian fail to obey the order, the medical officer or his deputy may remove the child, and cause its person and clothing to be properly cleansed.

DETERMINATION OF AGE.

While a court is required to take such evidence as may be forthcoming with regard to the age of a child, it is given power to presume the age.

APPLICATION TO SCOTLAND AND IRELAND.

Sections 132 and 133 are concerned with the modifications necessary to apply the Act to Scotland and Ireland.

THE COMPENSATION ACT AND MEDICAL REFEREES.

DURING the course of an interesting discussion of the Workmen's Compensation Act, which recently occupied the members of the Medico-Legal Society, certain interesting points were brought out as to the present law relating to medical referees. Dr. R. J. COLLIE observed that as the Act now stands a county court judge may only refer a matter to a medical referee on application to the court "by both parties." He suggested that the words "either party" should be substituted. In his view this change would be followed by "a huge slump in bogus cases, in hard swearing, in prolonged litigation, and in the degradation of the working classes." According to Dr. Collie, it is the man who has a bad case who refuses to allow it to be referred to a medical referee. He cited many instances in which, by the astuteness of the medical examiner, the fraud and the malingerer had been detected. One of these was particularly amusing. A man complained of an injury to his back caused by an accident. Accompanied by his wife, he visited a medical man retained by his

employer, and told him that he had no feeling over a particular area of his back. The examiner applied a slight charge of electricity to the area in question. The patient said he did not feel it. The charge was gradually increased until the malingerer, unable to bear the pain any more, uttered a loud cry, and curled up on the floor. His wife rushed into the room to see what was the matter, when the doctor said, "See! I have cured your husband by electricity." This the patient did not deny. He went back to work at once.

Dr. MORLEY, too, instanced one striking case to show how easily fraud on the part of a workman may be detected by a medical man. A dock labourer alleged that, owing to a blow on the head, he had become totally blind. The employer's medical man was given permission to see him in the robing room of a county court, whither the applicant was "led" by his wife. For the purposes of examination, the doctor asked the patient to remove his collar and tie. While the man's attention was distracted, the doctor knocked his stud on the floor. He then, with the ostensible object of testing the man's eyesight, dropped a match on the carpet, and asked the patient to pick it up. The patient professed to be unable to do so, but subsequently, when his attention was off the matter, he picked up his stud with the greatest ease! Needless to say, his application for compensation was dismissed.

With regard to the appointment of medical referees and assessors, it seems to be thought, both by lawyers and doctors, that the law requires amendment. At present a judge may, if he thinks fit, appoint a medical assessor to sit with him. Dr. COLLIE would so alter the Act as to provide that the judge shall, on demand of either party, summon a medical assessor to sit with him. At present some county court judges seldom or never make use of the power which is vested in them. One member of the medical profession said that he had been a medical assessor for nearly ten years, and had never yet been called on to act.

Three county court judges who took part in the discussion made various suggestions on the subject.

His Honour Judge SMYLY said:

It would be a great assistance in every case if a medical referee were present. . . . I have suggested that medical questions should go to the medical referees before they come to the judge at all.

Judge BRAY said:

There are cases in which I am not sure that the medical assessor would be of much assistance, and where it would be a farce to disregard the medical evidence and accept absolutely the opinion of the medical assessor. There is, however, a great deal of untruthful medical evidence given which the judge is really not in a position to appreciate at its true value.

Judge HOWLAND ROBERTS said:

I have derived the greatest assistance from having a medical assessor sitting with me, but it does not do for the judge to lean entirely on the medical assessor, because he ought to be guided to some extent by the medical evidence.

It would seem from these expressions of opinion that the county court judges themselves take the view that assessors should be more frequently appointed. How is the judge to know that there are medical issues until the case is actually before him? If he then decides that the question is one which an assessor should help him to solve, there must be an adjournment at the expense of the parties. It is difficult to understand the attitude taken up by a judge who refuses to call in an assessor when occasion demands. An assessor can detect the medical witness who is "prepared to stretch a point" when the judge cannot.

It is hoped that should the Medico-Legal Society make representations to those in authority with regard to the amendment of the Compensation Act, it will call particular attention to the position of the medical referee.

THE Congress of French-Speaking Alienists and Neurologists will hold its nineteenth meeting this year at Nantes under the presidency of Dr. Vallon. Among the subjects proposed for discussion are chronic forms of chorea, to be introduced by Dr. Sainton, of Paris; and lunatics in the army from the medico-legal point of view, to be introduced by Drs. Graujoux of Paris and Rayneau of Orleans.

REPORT

OF THE

Royal Commission on the
Poor Laws and Relief
of Distress.

REPORT BY DR. J. C. McVAIL.

Dr. J. C. McVAIL, county medical officer for Stirlingshire and Dumbartonshire, undertook at the request of the Royal Commission to inquire into and report on the methods and results of the present system of administering indoor and outdoor Poor Law medical relief in certain unions to be selected from a list drawn up by the Commission.

The inquiry, which began at the end of April, 1907, and terminated at the end of that year, was confined to England and Wales, and with regard to certain inspections Dr. McVail had the assistance of Dr. Joseph William Gill. The rural unions visited were chosen from different parts of the country, and in eleven instances both indoor and outdoor medical relief were studied; in four other rural unions only the workhouses were visited. The urban unions in which both indoor and outdoor inquiries were conducted were King's Norton, in the Birmingham district; Pontypridd in South Wales; Salford; and Hull. Barry Docks, St. Helens, Camberwell, and Edmonton were also visited; and the Whitechapel Infirmary, the Chelsea and Kensington Guardians' Children's Cottage Homes, and the West London Children's (Barrack) Schools were inspected. Dr. McVail deputed Dr. J. R. Currie to visit nine Poor Law dispensaries in the metropolis, two in King's Norton, and four in Salford. The visits to the unions were paid without previous intimation to the guardians or their officers.

Questions of medical relief and other relief are so closely related that Dr. McVail in reporting on medical relief found it impossible to keep clear of references to some other questions. The recommendations and suggestions he makes are of a twofold character, being based, first, on the assumption that the present local organizations will remain but be improved in detail; and, secondly, that there may be a fundamental change in the local authorities, or a transference to county or municipal administration of medical work at present done under the Poor Law, with the object of developing the preventive as distinguished from the curative or palliative side of medical treatment.

Dr. McVail concludes his report by two memoranda. The first one adumbrates a scheme of medical provision institutions maintained partly by members' contributions and partly by public funds, and indicates the possible relation of such a system to the Poor Law, to the great friendly societies, to the present system of free hospital dispensaries (out-patient departments), and to the work of the medical profession. The second memorandum deals with home medical inspection.

The appendices to the report contain notes on the various unions visited, and Dr. Currie's report on the Poor Law dispensaries visited by him.

INADEQUACY OF THE POOR LAW MEDICAL SYSTEM.

We may turn at once to Dr. McVail's general conclusion and quote it in full, drawing particular attention to the truth of the picturesque phrase with which it opens:

Poor Law medical relief, both urban and rural, is a cripple supported on two crutches—the general hospitals on one side, and gratuitous medical work on the other. The general hospitals supplement the workhouse infirmaries, whilst the unpaid work of the district medical officers and other medical men supplements outdoor medical relief. The fact is that the whole system would break down if it were not thus assisted. But it is obvious that such charitable contributions in supplement of the Poor Law cannot be uniform throughout the country. Medical men are not all alike in their willingness to work for nothing, private charity does not equally abound everywhere, general hospitals are not equally well supported everywhere, and are not within convenient distance of every part of the country. At present there is nothing at the same time systematic and complete in the provision made. The systematic part is the Poor Law, whose operations, though national, are

incomplete and insufficient. The completing part is local, and consists in the gratuitous work of the doctors and the assistance of private charity and the general hospitals; but these are not systematic. And I have already given facts to show that medical relief is inadequate in its dealings in respect of paupers, with the most important medical problems of the time, the healthy up-bringing of children, the control of phthisis, and the early preventive treatment of disease.

Dr. McVail condemns a public policy under which an authority representing the community confers personal benefits without any accompanying requirements as to good order or obedience, and maintains that it is not worth while to enter on any reform of the Poor Law unless this policy is changed. In expressing this opinion he specifies the following familiar conditions as among those which he has in mind:

Lazy, drunken loafers are taken into the workhouse to be cleansed and fed, and tended during their recovery from a debauch, or are sheltered and boarded through the inclement weather of winter, and let out again to revert without restriction to their life of misconduct in summer. Prostitutes come in to be treated for the foulest diseases, and go out again to resume their old career. Persons suffering from the most serious and transmissible maladies are afforded relief without prevention of opportunities to inoculate the healthy or contaminate the next generation. Weak-minded girls or dissolute women enter the workhouse to be delivered of illegitimate children, and go away again to return time after time in the same condition. Phthisis cases are maintained in crowded, unventilated houses where there is unrestrained facility to convey the disease to their own offspring. Diabetes cases live on the rates and eat what they please. Infirm men and women unsupported by the Poor Law are allowed to dwell in conditions of the utmost personal and domestic uncleanness. Widows get money for the upkeep of their family without any advice or requirement as to the spending of it or as to the healthy rearing of their children. Outdoor medical attendance is freely and unconditionally provided by the guardians for the drunken and the immoral.

Dr. McVail then makes two sets of recommendations, one to apply if boards of guardians are continued, and the other if they are to be replaced by a comprehensive system for the prevention of disease and the relief of sickness and destitution.

REFORM.

If the guardians are to remain, Dr. McVail advises that the Local Government Board should possess and exercise much greater authority, and should have the power and will to enforce the observance of the rules and regulations which it issues from time to time. He considers:

1. That the administrative areas of most boards of guardians should be greatly enlarged, so that each would have under its control multiple institutions capable of being devoted to separate charities.

2. That both indoor and outdoor medical relief should be under regular and systematic inspection by medical inspectors of the Local Government Board, who should in their reports include a reference to the kind and quality of the work done by medical officers and nurses, indoor and outdoor; to the size and convenience of the areas in which the work is done; to the salaries paid and the sufficiency of the medical and nursing staff provided by the guardians.

3. That the salaries of medical officers should not cover the supply of medicines, and that the minimum fees paid to medical officers, indoor and outdoor, for attending midwifery cases should be increased, and no extra payment made in respect of difficult cases.

4. That the management of phthisis should receive much more attention than at present, and that the sanitary supervision of paupers' houses in which cases are being treated should be regular and thorough, and that to this end the district medical officers should intimate to the medical officer of health all phthisis cases coming officially under their notice, as is now being done in England under the recent order of the Local Government Board; that the boarding-out of suitable cases in country cottages should be arranged for, and that reasonable and properly designed provision should be made in Poor Law sick wards and infirmaries for cases of phthisis which cannot be otherwise dealt with.

5. That epileptics should be treated in separate institutions or colonies, and imbeciles partly by boarding out and partly in special institutions.

6. That readily curable forms of mental derangement, including delirium tremens, should not be certified as

insane until opportunity has been given for recovery in special wards in Poor Law infirmaries or workhouses.

7. That rural boards of guardians should be obliged to contribute to accessible general and special hospitals and convalescent homes, and to use them for suitable cases; but that if general hospitals are not within reach or are not open to paupers, rural boards should, either separately or in combination, provide infirmaries of their own or contribute towards the erection of general hospitals.

8. That in urban areas, so far as cases are received in general hospitals or relieved at public dispensaries, urban boards of guardians should make contributions to the authorities, that urban Poor Law dispensaries should be improved and systematically inspected by the Local Government Board, and that as little restriction as possible should be put on the use of maternity wards by married women not ordinarily receiving Poor Law relief.

9. That all observed unhealthy conditions in houses occupied by paupers should be reported by the district medical officer to the medical officer of health, and all ordinary nuisances by the relieving officer.

10. That the district medical officer should report to the guardians all cases in which his instructions are not obeyed by patients, and that in the event of persistent disobedience Poor Law relief should be withdrawn or the patient compulsorily removed to hospital.

11. That, in determining the conditions under which pauper children should be reared, institutional life should be avoided as much as possible, and that when the mother is a widow she should receive money-relief sufficient to enable her to feed her children and keep them and the dwelling clean; but that if the mother is drunken, immoral, or incompetent, the children should be taken from her.

RECONSTITUTION.

Dr. McVail describes, and obviously prefers, a scheme for the reconstitution of Poor Law medical relief under an authority which should not only give medical relief in destitution, but would also take charge of all other public medical duties, so that its primary object would be not relief of destitution, but preservation of bodily and mental health and the prevention and cure of disease. He would reorganize the whole sanitary service in rural England, constituting local authorities with larger areas, whose main policy it would be to maintain the health of those committed to their care and to diminish the need for the cure of disease and the prescribing of drugs, but in whose functions the treatment of disease in paupers would be included. In addition to the duties now ordinarily discharged by a public health authority, it would have under its direction district medical officers whose duty it would be not merely to cure or palliate, but to prevent disease. Such an authority would have a principal medical officer, but Dr. McVail does not suggest that all such officers should be medical officers of health, believing that "for much of the supervising work a clinician might be better than a sanitarian." He, however, thinks that it would be necessary to require the district medical officers to possess an acquaintance with the preventive side of medicine. In favour of this scheme he argues: (1) That the healthy rearing of pauper children from their earliest years is a duty more suited for a health than for a Poor Law body, and that, as the officers directly engaged in this work would be the district medical officers, "supervision over them could best be exercised by a health authority having the benefit of skilled medical advice." (2) "That the control of pauper phthisis and phthisical families and their houses should certainly lie with the health authority." (3) That "almost every disease can be dealt with from the standpoint of prevention," and that "the early stages of disorders of all organs of the body—heart, lungs, kidneys, digestive system, brain, and the rest, often furnish indications for preventive measures." (4) That if the care of sick paupers were handed over to a health authority, some of the rural workhouses might be converted into hospitals for acute diseases, or surgical hospitals, into which persons requiring institutional treatment would be more willing to enter than into a workhouse.

There would then be left to the Poor Law authority only the relief of destitution, and Dr. McVail asks whether this also might not be handed over to the new health authority he has imagined.

MEDICAL PROVIDENT INSTITUTIONS.

In his memorandum on this subject Dr. McVail first discusses the advantages and disadvantages of a free medical service. The chief advantage is, he says, that "free access to, and acceptance of, medical advice on the part of the general community would certainly result in great improvement in average physical health and great diminution in the prevalence of disease," but he rejects the suggestion for reasons which had best be given in his own words:

If free medical attendance should be provided out of the rates because in itself it would be useful in improving the health of the community, medicines, of course, should be similarly provided. But in the treatment of disease it is hard to distinguish between food and medicine, so that an individual requiring the one out of the rates would similarly be provided with the other. And good clothing also has a bearing on health, so likewise has good housing and suitable employment, and a regular holiday in summer, and freedom from worry of all kinds. In short, the vista which is opened up by the suggestion of free medical service is practically endless.

He recommends in place of this the institution of a system of universal medical provident institutions. To these institutions the State should contribute, and thereby acquire a right to take part in their management and prevent abuses. He suggests that a list should be formed of medical men attached to each institution; and although the points are not specifically mentioned, would seem to assume that every medical man in the district should be eligible to serve, and that each member of the institution should have the right to select his medical attendant. He suggests that the controlling body of each provident medical institution should have the right of revising the list of medical men from time to time, and that the payment of the doctor should be by an annual fee for each member on his list. While admitting the impossibility of making membership compulsory, Dr. McVail considers that the inducements to voluntary membership would be threefold:

The State subsidy would be a direct attraction. Intelligent people of limited means would be very willing to contribute their moiety in order to get the benefit of the State's moiety. In the second place, the adoption by the new health authorities of a firm policy of refusal to grant medical relief to persons able to maintain themselves would indirectly promote the success of medical provident institutions. In the third place, the inherent value of the institutions would be apparent even at the beginning, and would quickly become more apparent as the result of experience.

He believes that if a general system of State medical provident institutions were established the friendly societies might discontinue medical attendance and medicines during illness, and that sooner or later outpatient departments of hospitals, except certain special departments requiring the use of expensive apparatus, would disappear.

The great difficulty, of course, comes when it has to be suggested how to deal with the person who will not voluntarily become a member of a provident institution. Upon this point Dr. McVail makes the following observations:

Supposing that a casual labourer, owing to illness and unemployment, required for himself and his dependants money relief from the Poor Law, and required, at the same time, medical attendance to be provided by the health authority, it might be arranged that the latter relief be given through the agency of a medical provident institution, the services of one of its officers being obtained, and a payment in respect thereof being made to the funds of the institution by the health authorities responsible for the medical attendance. If the patient were better removed to a hospital or infirmary, and if the health authority possessed such an institution of its own—say a transformed workhouse—the man would be sent there. Otherwise he might be sent to a voluntary hospital, and his treatment paid for by the health authority.

HOME MEDICAL INSPECTION.

The final memorandum contains a justification of the frequent references to preventive medical work in relation to the individual and the family. After enumerating the duties which, under this conception of the scope of the medical profession, Dr. McVail would assign to the district medical officer, he sums up as follows:

The medical man, in short, would be the family physician, not merely attending on acute illness, but taking charge of the general physical health and well-being of those who had placed themselves under his care. The prescribing of drugs would be the merest incident in his work, instead of, as is too often the case at present, its principal feature; and the time, both of the doctor and his clients, would be far more profitably occupied in the former way than in the latter.

MEDICAL INSPECTION AND AFTER.

LONDON.

MEDICAL INSPECTION.

THE London Education Committee, at its meeting on March 17th, adopted and referred to the County Council a report on the medical inspection of school children, stating that it had adopted a modified scheme. The Education (Administrative Provisions) Act, 1907, imposed the statutory obligation to provide for the medical inspection of school children immediately before, or at the time of, or as soon as possible after, their admission to a public elementary school, and on such other occasions as the Board of Education might direct.

The modified scheme adopted by the London Education Committee provides that the complete inspection of every child admitted to or leaving school shall be carried out in a limited number of schools (40 schools), while in a further limited number of schools (40) every child admitted for the first time, or who is about to leave school, shall be inspected; the records taken in these schools will not be so elaborate as those prescribed by the regulations of the Board of Education. In the remaining schools—that is to say, in the large majority—individual examination will only be made in the case of children presenting some abnormality, by which we understand that only those children will be medically inspected as to whom the teachers or other officials of the school suspect that they are abnormal. This modified scheme for medical inspection has been submitted to the Board of Education, and the Board in giving its approval refrained from insisting upon its full requirements being carried out in respect of every child at present, but added it must not be forgotten that, in considering the adequacy of such proposals, the Board will not be able to adopt the same standard of efficiency as they feel justified in applying to a scheme of an initiatory character.

With regard to communicating the fact of the necessity of medical treatment to parents, and to inviting their attendance, as well as that of teachers, at the inspection, the Committee made the following recommendations:

We propose that, in cases where the school doctor is of opinion that medical treatment is necessary a notice shall be sent to the parents or guardians informing them of the nature of the affection from which the children are suffering and advising them to consult a doctor; and that the parents shall be encouraged to attend the inspection in cases where individual children are examined. We think also it would be an advantage for the teacher of the class concerned to be present on these occasions, as the teacher would be in a position to give the school doctor helpful information, and the doctor would be able to give useful information to the teacher. We have accordingly had a form prepared notifying parents of the date of the visit of the school doctor and inviting their attendance. We have also approved the following letter to be sent to the teachers:

The Council is required by Section 13 (1) of the Education (Administrative Provisions) Act, 1907, to arrange for the medical inspection of children attending public elementary schools at such times as the Board of Education may direct. Each child admitted to school for the first time or who is about to leave school is to be medically inspected. For this purpose the school doctor will visit your department on the _____, and I shall be glad if you will grant him the necessary facilities for carrying out the work. Will you be good enough to place the following information in regard to each child on a medical record card: Name, address, date of birth, school department.

Before the doctor's visit a copy of form M 64 (inviting parents or guardians to be present) should be sent to the parent or guardian of each child to be examined. After the examination the doctor will supply you with a card M 49 (treatment card), for each child requiring treatment, to be forwarded to the parent or guardian. It is hoped that you will be able to arrange for the class teacher to be present at the examination in order that he may be able to obtain as much information as possible about his pupils.

The London County Council had this report before it at its meeting on Tuesday last, and its rejection was to have been moved by Mr. Jephson.

Mr. JEPHSON, however, withdrew his amendment, contenting himself with a protest against the "insufficiency" of the scheme.

The report was thereupon received.

MEDICAL TREATMENT OF SCHOOL CHILDREN.

The County Council also had before it the report, with appendices and notes, of the special committee appointed by the London Education Committee to inquire into the

question of the medical treatment of children attending public elementary schools in London.¹ In accordance with the Standing Orders of the Council, the report and recommendations had been considered by the Finance Committee of the Council, which presented the following report:

Report of Finance Committee.

"The Education Committee are submitting to the Council certain recommendations with reference to the medical treatment of school children. The report of the Education Committee treats the subject in a general way only, and no estimate is given of the probable expenditure to which the Council will be put in the event of a scheme being formulated on the lines indicated in the report. The only reference to cost is the statement that 'no provision has been made in the maintenance estimates 1909-10, but a sum of £5,000 has been included in provision money for the financial year in question.' The sum mentioned cannot, of course, be taken as any indication of the cost which the Education Committee anticipate would be involved in giving effect to the proposals which they indicate. The Education Committee are not, in fact, asking the Council to adopt any specific proposals, but only to express its opinion upon important questions of principle—obviously as a preliminary to taking further action and presumably formulating a more definite scheme. It is clear that the possibilities of expenditure for medical treatment of children in the elementary schools are great, even if limited to the specific classes of ailment to which the Education Committee specially call attention—namely, affections of the teeth, eyes and ears, ringworm and favus. It is quite impossible for us to give any information as to the cost of the proposals which are foreshadowed by the recommendations of the Education Committee. Full estimates must be laid before the Council before any definite scheme for the treatment of children is submitted, and we have communicated to the Education Committee a list of the points upon which, in our opinion, information should be furnished in connexion with any such scheme.

"The question of medical treatment has been under consideration for some time, but the position has, in our opinion, recently undergone a considerable change. The Prime Minister, on March 18th, 1909, received a deputation from local education authorities of England and Wales, together with members of Parliament invited by the local education authorities within their respective constituencies, with reference to the cost of national education and the necessity for an increased grant from the Imperial Exchequer. On that occasion the Prime Minister, dealing with the further educational burdens recently imposed upon local authorities, said:

As regards the last two, medical treatment and feeding of children, as you all know, they are optional and not compulsory burdens... that is to say, it rests entirely in the discretion of the local authority, having regard to local conditions and local requirements, whether or not they shall be incurred.

"Moreover, no hope was held out by the Prime Minister or by the Chancellor of the Exchequer, who also addressed the deputation, of any increased grant being made at present from Imperial funds in connexion with medical treatment.

"It seems to us, therefore, that the first question which the Council is called upon to decide is the broad question of principle whether or not, having regard to the Prime Minister's statement and the present and prospective burdens on the rate, the Council should, in the absence of any grant in respect thereof from the Imperial Exchequer, undertake the optional duty of medically treating school children; and the Council should, in our opinion, take the opportunity afforded by the Education Committee's recommendations to settle this general question. A further subsidiary question is whether or not the Council should undertake the duty of supplying medical treatment in any form unless power is given to the local education authorities to recover the cost of treatment from the parents except in cases where it is shown that the parents are not in a position to pay. Such power already exists in connexion with the feeding of school children, and no difficulty ought, we think, to be experienced by the Government in passing a short Act giving similar power to local education authorities in connexion with medical treatment.

¹ See BRITISH MEDICAL JOURNAL, December 26th, 1908, p. 1563; and January 9th, p. 96.

"In connexion with the general question whether the Council should undertake the medical treatment of children it should be borne in mind that the education rate is rising, and that it must, under present conditions and in the absence of increased Government grants, continue to rise, this being due amongst other things to the automatic increases in teachers' salaries, the cost of feeding necessitous school children, the new duty imposed on the Council of the systematic medical inspection of all children in elementary schools, and other matters to which the Council is committed. It should also be remembered that pressure is being brought to bear upon the Council to increase its expenditure in connexion with education in various other directions, amongst which the question of a complementary superannuation scheme for teachers may be mentioned. The question which naturally arises is whether there is not a limit to the burden which the ratepayer should be called upon to bear in connexion with education, and whether, as between the many objects desirable in themselves, which go to make that burden unduly heavy, it will not be necessary for the Council to make a selection."

Mr. CYRIL JACKSON, Chairman of the Education Committee, in a speech which was listened to with close attention, emphasized the seriousness of the problem. It was to be regretted, he said, that so small a number of hospitals and institutions had replied to the inquiries of the Special Subcommittee, but he thought the hesitation was natural when the Council asked such questions for the first time. It was hoped to have shortly a conference of hospital chairmen and secretaries to discuss what could be done by the hospitals and what the Council could do to help them. He was bitterly disappointed that the Prime Minister had received their request for increased Exchequer grants for medical treatment so unsympathetically, but failing that, they must make a start and provide some treatment. He could not advise the Council to undertake full treatment, important and necessary as it was. Dental treatment was the more expensive, and the Council should take in hand ringworm, suppurating ears and eyes. Figures received that day went to show that there were 2,706 cases of ringworm in London schools. Mr. Jackson concluded with a word of commendation of dispensaries, which he thought were often unfairly attacked, and also said he hoped the Council would extend its interest to the benefit societies, which had done so much for the sick poor.

Mr. HAYES FISHER moved a long amendment which practically embodied the report of the Finance Committee, of which he is chairman. The amendment declared that the Council is of opinion that certain diseases of children should be treated, and referred it to the Education Committee to report as to the cost of treating each of the affections mentioned in their report, and as to the steps necessary to be taken to amend the Education (Administrative Provisions) Act, 1907, to enable the Council to recover the cost of medical treatment from parents able to pay. Mr. Fisher urged that if the Council knew what it would cost to treat each disease, it could make a selection. He did not say the Council would never treat the children's teeth, but it ought to wait until it had power to recover the cost from parents.

Mr. ERNEST GRAY seconded, and, in spite of cries of "Time," continued his speech until the hour when only unopposed business is taken. The Moderate Whips did not follow the course which is often taken, of moving "that the sitting be continued until the matter under discussion shall have been dealt with," so the debate was adjourned until the last meeting before the Easter recess. If the instruction is then carried the Education Committee will not meet to consider it for a month.

WARWICKSHIRE.

Dr. A. Bostock Hill has prepared a report to the Education Committee of the Warwickshire County Council upon the results of the medical inspection of school children during the last three months of 1908. The inspections were carried out by Dr. A. Hamilton Wood and Dr. W. H. Davison, the former examining 2,124 children and the latter 1,051. Of the total, 1,327 were found to be suffering from defects which necessitated

advice being given. In 342 cases bodily uncleanness was present to a marked degree, and in 592, or 16.7 per cent., verminous heads led to cards being sent to the parents. There were 626 children of whom each suffered from four or more serious teeth. The following defects were found: Enlarged tonsils, 291; adenoids, 129; defective vision, 265; defective hearing, 41; various ear diseases, 66; defective speech, 37; "murmurs" of the heart, 81; anaemia, 94; incipient consumption, 14; tuberculous disease other than consumption, 4; epileptics, 4; bronchial catarrh, 82; ringworm, 37; impetigo, 17; and other cases of disease, 63. Fifty-five mentally defective children were discovered. Dr. Bostock Hill describes the gratifying work done by the health visitors under his direction in seeking to remedy some of the worst cases revealed by the inspection.

LONDON WATER.

THE Third Report on Research Work presented by Dr. A. C. Houston, Director of Water Examinations, to the Board on Friday, March 26th, deals with the Storage of Raw River Water antecedent to Filtration. In the introduction he points out that the medical advisers of the Local Government Board have long held the view that "time" is to be regarded as an important element among conditions that in Nature combine to annul the vital activities of particulate matter causative of disease. In no direction, perhaps, is this "time factor" of higher practical importance than in the case of storage of impure river water. The work of the water examination staff of the Metropolitan Water Board has been largely devoted to investigating the question anew, with special attention to those tests which gauge the viability of excremental bacteria in water. It is now thought that the merely mechanical effect of storage—that which results in the sedimentation of many of the microbes originally present in water—is of far less importance than certain de-vitalizing processes which occur under storage and which involve the ultimate extinction of specific bacteria in the water *plus* its sediment. A practical outcome of experimental work on this subject is that dependence is now being placed more and more on experimental proof that the water reaching the filter beds is, as the result of adequate storage, in a reasonably "safe" condition antecedent to filtration. When the stored water results are satisfactory, this really constitutes a new and important element in the "safety" of the London water supply, for it means that, even if a breakdown in the filtering arrangements occurred, the quality of the water distributed to consumers, although possibly open to criticism on physical grounds, might yet be relatively (if not absolutely) innocuous. Systematic observations on the effect of storage of raw water were commenced in August, 1907, and the report under review deals with the twelve months ended July 31st, 1908. After consultation with the engineering staff of the Board, the following waters were chosen for study:

A. Raw Lee river water above the "intake" for waterworks purposes at Ponder's End. B. Lee stored water—that is, water fairly representative of the above raw Lee water after storage in the eastern district reservoirs in the Lee valley. C. Raw Thames river water at Hampton not far distant from the "intakes" for waterworks purposes of most of the Thames derived supplies. D. Chelsea stored water—that is, water fairly representative of the above raw Thames water after storage in the Chelsea reservoirs. E. Lambeth stored water—that is, water fairly representative of the above raw Thames water after storage in the Lambeth reservoirs. F. Staines stored water—that is, water fairly representative of the above raw Thames water after storage in the Staines reservoirs.

RESULTS.

The following is a summary of the results:

Thames Water.

About 50 per cent. of the samples of raw Thames water contained typical *B. coli* in one-tenth of a cubic centimetre. Of the Staines, Chelsea, and Lambeth stored water samples about 34, 43, and 16 per cent. respectively, contained no typical *B. coli* in one thousand times as much water, namely, in 100 c.c.m. Thus, the Lambeth stored water was about one hundred and the Staines and Chelsea stored water between one hundred and one thousand times less impure than the raw Thames water.

Lee Water.

Over 50 per cent. of the samples of raw Lee water contained typical *B. coli* in one-tenth of a cubic centimetre. As regards

the Lee stored samples, actually as many as 67.4 per cent. yielded negative results with 100 c.cm., and only 32.5 yielded positive results in that amount. Thus, the Lee stored water was over one thousand times less impure than the raw Lee water.

These results, says Dr. Houston, remarkable as observed facts, are still more remarkable in their indirect bearing on the question of the "safety" of stored water. For the harmless, or comparatively harmless, *B. coli* is, like the highly pathogenic typhoid bacillus, of intestinal outcome. Moreover, *B. coli* is more resistant to unfavourable surroundings than the virulent microbe of typhoid fever. It follows, therefore, that processes which lead almost to the extinction of *B. coli* should operate more powerfully still on less robust germs of disease. Further, it is hardly conceivable that in any set of circumstances the typhoid bacillus would ever be present in any considerable bulk of the raw river water in anything like the same proportion as *B. coli*. In a previous report it was shown that if typhoid bacilli are added artificially in large number to raw river water, the great majority of them die within one week; and in a forthcoming report Dr. Houston says it will be shown that the death-rate of the cholera vibrio is, under parallel conditions of experiment, still more rapid. Further, in a separate report it has been shown that a prolonged search for the typhoid bacillus in the raw river waters yielded negative results. Hence, although we are without proof of the absence of the typhoid bacillus from these raw river waters, there is a strong presumption that it cannot be uniformly present in them unless in extremely sparse numbers.

It has been pointed out in previous reports that, apart from the question of the actual number of typical *B. coli* in the raw and filtered waters, there is a wide difference between the proportion of typical and non-typical *B. coli* in the two kinds of water. Thus, on the average, and dealing with the twelve months ended March 31st, 1908, out of every 100 coli-like microbes isolated from the raw and filtered waters 81.6 and 54.4 respectively proved to be typical.

The salient points resulting from the inquiry are summarized as follows: Taking the Lee results (averages) as an example, it may be said that the advantages of using stored Lee water as compared with raw Lee water would be: Over 97 per cent. reduction of the total number of bacteria capable of growing at blood heat, and of the bacteria able to grow in a bile-salt medium (chiefly excremental microbes). A one thousand-fold reduction in the number of typical *B. coli*. Dr. Houston's inferences thereon are: That a raw water which has uniformly undergone such a remarkable metamorphosis is almost certainly incapable after filtration, possibly (perhaps even probably) antecedent to filtration, of causing epidemic disease. Nevertheless, he regards storage of water as a prefiltration precaution of the utmost value, but not as a substitute for filtration.

ALTERNATIVE MEASURES TO STORAGE.

After discussing the results of chemical examination and the shape, size, depth, construction, and method of working storage reservoirs, Dr. Houston briefly considers measures for the improvement of London's water supply that may be regarded as alternative to storage. On biological grounds the only possible alternative to storage would, in his opinion, be sterilization. Having regard to the necessity of storage (for purposes of quantity apart altogether from questions of quality) to filtration in utilization of existing plant and to the epidemiological history of the metropolis, the wholesale sterilization of London water seems to him to be, on available evidence, economically out of the question, and therefore impracticable.

DISADVANTAGES OF STORAGE.

Although it would be wrong to infer that storage often, or habitually or necessarily, creates conditions inimical to filtration, there is inevitable danger that prolonged storage, especially if the water remains stagnant, may lead to the abnormal development of vegetable growths, materials harmless in themselves, but resulting in the deterioration of the water as judged by chemical and physical standards, and causing practical difficulties with its filtration. A possible disadvantage of using stored water is that the "blanket" or "skin" which forms on the surface of the sand in the filter beds may not

prove so effective a bacterial filter as that resulting from the use of raw river water. There may, Dr. Houston thinks, be an element of truth in this contention; but it is certain that sometimes the "stored-water skin" errs on the side of being too impervious, and it is obvious that it is much less important to have a microbe-tight blanket when using comparatively safe stored water than when using potentially dangerous raw river water. His experience since 1905 of the quality of filtered water supplied to East London from the East London (Clapton) Works, which deals, after prolonged storage, with the initially unsatisfactory Lee river water, does not lead him to think that this question of "stored-water skin" versus "raw-water skin" need necessarily be of vital importance.

ADVANTAGES OF STORAGE.

By far the strongest plea in favour of storage is based on the belief that adequately stored water is probably incapable of causing epidemic disease. No supersession, however, of filtration is suggested by Dr. Houston; his plea is for storage plus filtration. Assuming that an adequately stored water can be accepted as epidemiologically "safe," he would be satisfied if such water were passed through mechanical filters at an exceptionally rapid rate with a view to sending the water thus dealt with directly into supply. These mechanical filters, unlike sand filters, can be rapidly cleaned and put into operation again, which would be a great advantage in such circumstances. Another strong plea in favour of storage is the establishment of a continuous sense of security. If the results of the examination of such samples showed, from time to time, that the water had undergone the "changes" which in Dr. Houston's opinion point to "epidemiological safety," a lasting sense of security would as a consequence be established, and this irrespective of subsequent or final filtration. Another argument in favour of storage is that it tends to wipe out the gravity of the charge that London's water supply is derived chiefly from sewage-polluted rivers.

The chief points in favour of the storage of raw river water are summed up by Dr. Houston as follows:

- (1) It reduces the number of bacteria of all sorts.
- (2) It reduces the number of bacteria capable of growing on agar at blood heat.
- (3) It reduces the number of bacteria capable of growing in a bile-salt medium at blood heat, chiefly excremental bacteria.
- (4) It reduces the number of coli-like microbes.
- (5) It reduces the number of typical *B. coli*.
- (6) It alters certain bacteriological river-water ratios—for example, it reduces the number of typical *B. coli* to a proportionately greater extent than it reduces the number of bacteria of all sorts.
- (7) Storage, if sufficiently prolonged, devitalizes the microbes of waterborne disease—for example, the typhoid bacillus and the cholera vibrio.
- (8) It reduces the amount of suspended matter.
- (9) It reduces the amount of colour.
- (10) It reduces the amount of ammonia and nitrites.
- (11) It reduces the amount of oxygen absorbed from permanganate.
- (12) It usually reduces the hardness and may reduce or alter the quality of the albuminoid nitrogen.
- (13) It alters certain chemical river-water ratios—for example, the colour results improve more than the results yielded by the permanganate test.
- (14) It has a marked "levelling" effect on the totality of water delivered to the filter beds.
- (15) Storage tends generally to lengthen the life of the filters.
- (16) Under exceptional conditions is the converse true.
- (17) An adequately stored water is to be regarded as a "safe" water, and the "safety change" which has occurred in a stored water can be recognized by appropriate tests.
- (18) The use of stored water enables a constant check to be maintained on the safety of London's water antecedent to and irrespective of filtration.
- (19) The use of stored water goes far to wipe out the gravity of the charge that the chief sources of London's water supply are from sewage-polluted rivers.
- (20) The use of adequately stored waters renders any accidental breakdown in the filtering arrangements much less serious than might otherwise be the case.
- (21) The habitual use of stored water would lighten the grave responsibilities of the Water Board as regards the safety of the London water supply, and would tend to create a sense of security amongst those who watch over the health of the metropolis.

CONCLUSION.

After discussing in detail the length of time a water should be stored, Dr. Houston's final conclusion is that raw river water should be stored antecedent to filtration, preferably for thirty days. The question of whether the thirty days' storage should be fixed on a maximum or on a minimum basis must be left unanswered; but, if the former alternative be chosen, the desirability of employing supplementary processes of water purification to tide over emergencies is worthy of consideration.

The Water Examination Committee, in presenting the

report, stated that in its opinion the results of these investigations clearly proved that the policy of storing all raw river water antecedent to filtration was sound, and they felt that the habitual use of stored water lightened the grave responsibilities of the Water Board as regards the safety of the London water supply, and tended to create a sense of security amongst those who watched over the health of the metropolis. The desirability of considering whether supplementary processes of water purification, such as mechanical filters, precipitation tanks, etc., should not be employed to tide over emergencies was, however, a matter which merited attention in the future. The Board regarded the researches as not only of high scientific importance but also of great practical utility.

The report was adopted.

BRITISH MEDICAL BENEVOLENT FUND.

At the March meeting of the committee twenty-three cases were considered, and grants, amounting to £185, made to nineteen of the applicants. Appended is an abstract of the cases relieved:

1. Daughter, aged 45, of late M.D. Lond. Underwent serious operation about a year ago, and is unable at present to earn a living. Income only a few shillings a week. Relieved once, £5. Voted 25.
2. Widow, aged 54, of M.R.C.S. Eng., L.R.C.P. Edin. Quite unprovided for at recent death of husband. One child, 44 years. Hopes to obtain a situation as housekeeper, but health has suffered greatly from nursing her husband during the two years' illness which preceded his death. Voted £10.
3. Widow, aged 55, of L.S.A. No income; eight children, but only able to give slight help. Proposes to move, so as to decrease her rent. Relieved ten times, £115. Voted £5 for moving.
4. Widow, aged 62, of L.F.P.S. Glasg. No income; four children, but none able to help at present. Used to let lodgings. Voted £12.
5. Widow, aged 38, of M.P., Ch.B. Left quite unprovided for a few months after marriage, and lives with her mother, aged 72, who can ill afford to help. Health at present too indifferent to allow of permanent occupation. One child, aged 4 years. Voted 25.
6. Daughter, aged 50, of late M.D. Aberd. Has supported herself for many years by giving music lessons, but finds increasing difficulty in obtaining pupils. Is in bad health, and ordered to take a rest. Voted 26.
7. Daughter, aged 44, of late L.R.C.P. Edin. Used to be a dressmaker, but employers retired from business, and applicant has found it impossible to get regular work since. A little help from a friend, and earns as much as possible by sewing. Relieved four times, £40. Voted 26.
8. Widow, aged 60, of L.R.C.S., L.R.C.P. Irel. Lost everything through the failure of a bank, and is now in a very precarious state of health. No income; helped by a sister, who herself has to earn a living. Relieved twice, £24. Voted £12.
9. Widow, aged 59, of L.S.A. Lets lodgings; five children, but only able to give very slight help. Relieved seven times, £80. Voted £10.
10. Widow, aged 51, of L.R.C.P., L.R.C.S. Edin. Quite unprovided for at husband's death a few years ago. Obtains shelter as a caretaker, but receives no remuneration. No children. Relieved five times, £46. Voted £12.
11. Widow, aged 64, of M.D. Glasg. No income, and for several years has been practically dependent on this Fund and the Ladies' Working Guild. Relieved nine times, £104. Voted £10.
12. Widow, aged 50, of M.R.C.S. Eng., L.R.C.P. Edin. Kept a boarding-house and nursed her husband for several years previous to his death, but is now in such bad health that she is entirely dependent on her friends and a couple of sons who are only just self supporting. Relieved six times, £82. Voted £10.
13. Widow, aged 44, of M.R.C.S., L.R.C.P. Has a small annuity, but is in such bad health that it is insufficient for unavoidable expenses. Two children, aged 14 and 12. Relieved five times, £72. Voted £12.
14. Daughter, aged 54, of late L.F.P.S. Glasg. Unable to obtain regular employment on account of ill-health. Only income £10 a year from the Scottish Indigent Gentlemen's Fund. Relieved twice, £24. Voted £12.
15. Widow, aged 48, of M.R.C.S., L.S.A. No income; endeavours to support herself by needlework and receives a little help from friends. Two children, aged 22 and 15. Relieved six times, £71. Voted £12.
16. Daughter, aged 52, of late M.R.C.S., L.S.A. No income and is in very feeble health. Receives a little help from a sister. Relieved eleven times, £125. Voted £12.
17. Widow, aged 68, of M.D. Aberd. No income. Children unable to help; a little assistance from friends. Relieved eight times, £102. Voted £12.
18. Daughter, aged 60, of late M.R.C.S. Had a post as companion but was obliged to give it up to nurse two sisters who have since died. Hopes to obtain boarders and is made a small allowance by a relation. Relieved twice, £30. Voted £12.
19. Widow, aged 51, of M.D. Edin. No income; children help as far as possible and applicant earns a little by needlework. Relieved three times, £30. Voted £10.

LITERARY NOTES.

In an article in the *Cornhill Magazine* for April, the Rev. P. H. Ditchfield discusses the mind of the rustic with the insight born of knowledge mingled with sympathy. His experience of the tendency of the countryman to fall into the toils of quacks will doubtless be confirmed by many of our readers. He says:

In spite of his shrewdness, his cleverness, and accurate calculations of the amount due to him for wages, the rustic often falls an easy prey to quacks and impostors. The good gentlemen who undertake to cure all manner of diseases find agricultural labourers some of their best customers. Quack remedies, patent medicines, wonderful oils for curing rheumatism, the bane of the rustic, are eagerly bought, and large sums are wasted out of scant earnings for the purchase of these amazing remedies. I have just seen a most insidious letter written by an American quack to a poor woman who was anxious to obtain a cure for her sick son. This quack has an agent in London who advertises remedies for the disease from which this boy suffers, as well as for many others, and sends a free bottle of medicine. This is followed by a long letter from the American, promising to cure the complaint, the cost of the treatment being £3, but he is obliging enough to say that he will only charge one pound in her case. The sample bottle, he states, was only a tonic, and was not part of the cure, but that if the money be paid, a complete cure will be effected. A ticket for the county hospital happily solved the difficulty, and one pound will not be added to the American quack's receipts. But quacks of other sorts exist nearer home, and some years ago in a neighbouring village a herbalist and astrologist gained a considerable reputation among the poor whom he duped as a "very clever man." A poor widow who was suffering from a simple form of ophthalmia had implicit confidence in him, until, getting no better and her funds being exhausted, she reluctantly fell back upon the parish doctor. She told him that she had got the black crab cancer in her eye, and that it was sucking her sight out, and that the wise man had informed her that the stuff to kill this monster would cost £2, and that what he had done already had much weakened him. A short time and simple remedies put her quite right; but she always maintained that "twas the wise man as first poisoned the black crab cancer." The poor folk had generally a firm belief in his powers, though it would have been difficult to find a single cure that he had effected.

A second edition of Professor Karl Pearson's Robert Boyle Lecture on the Scope and Importance to the State of the Science of National Eugenics, which was delivered before the Oxford University Junior Science Club on May 17th, 1907, has recently been issued as No. 1 of a series of papers dealing in non-technical language with the problems of eugenics. It is an introduction to the science of eugenics for the study of which Mr. Francis Galton founded a laboratory at University College, London, with the objects that it should serve as a storehouse of statistical material bearing on the mental and physical conditions in man, and the relation of these conditions to inheritance and environment; as a centre for the publication or other form of distribution of information concerning national eugenics; and as a school of training and assisting researchers in special problems in eugenics. Among the publications that have so far appeared are *The Inheritance of Ability*, by Dr. Edgar Schuster and Miss Ethel M. Elderton; *A First Study of the Statistics of Insanity and the Inheritance of the Insane Diathesis*, by Mr. David Heron; *The Promise of Youth and the Performance of Manhood*, by Dr. Edgar Schuster; *On the Measure of the Resemblance of First Cousins*, by Miss Ethel M. Elderton, assisted by Professor Karl Pearson; and *The Treasury of Human Inheritance (Pedigrees of Physical, Psychological, and Pathological Characters in Man)*. Two other publications which will appear shortly are *Influence of Parental Occupation and Habit on the Welfare of the Offspring*, by Miss Ethel M. Elderton, and *Influence of Unfavourable Home Environment and Defective Physique on the Intelligence of School Children*, by Mr. David Heron. The Eugenics Laboratory Publications are issued by Messrs. Dulau and Co., 37, Soho Square, London, W.

Thomas Dover has long figured in medical history as a doctor who, finding the practice of medicine too unexciting for his taste, sailed the Spanish Main as a buccaner. In an interesting article which appeared in the *Eristol Medico-Chirurgical Journal* for March, Dr. J. A. Nixon endeavours to show that this is a legend, and that Dover was not a buccaner but a merchant adventurer. He says the expedition in which Dover sailed was not of a piratical nature; it was one of those adventurous trading cruises of which Hakluyt in *Principal Voyages of the English Nation* gives many instances. Men who embarked on such

enterprises at the beginning of the eighteenth century had indeed to be ready to defend themselves against attack by Spanish or French vessels, and fighting was a common experience. The voyage round the world of two privateers, the *Duke* and *Duchess*, under the command of Captain Woode-Rogers, was a properly accredited enterprise of the merchant adventurers of Bristol. Dover, who was a man of means, had a share in the risk, and was selected to represent the Owners' interest, and sailed on the *Duke* as second captain under Woode-Rogers and captain of the mariner. He presided over all councils in which he had two votes; and his share of all profits was calculated in thousands to the hundreds of the other senior officers. Ample provision was made for the medical welfare of the expedition. In addition to Dover, there sailed John Ballet, rated third mate, but designed surgeon in case of need (he had been Captain Dampier's doctor in his last unfortunate voyage); James Vigor; James Wasse, surgeon; Charles May, his mate; and John Lang, assistant. Then there was an apothecary, Samuel Hopkins, Dover's brother-in-law. Nevertheless, Woode-Rogers says the surgeons complained of the want of sufficient medicines. Dover's interest in the undertaking seems to have been commercial rather than medical. He was an extremely cantankerous member of the expedition, and when a prize was taken claimed, as second in command, to take command of her. Against this the navigating officers protested, on the ground that he was utterly incapable of the office. He had his way, however, as far as the titular command was concerned, but he was forbidden to interfere in any way with the navigation of the ship. As a physician Dover had been well trained. He was a B.A. of Oxford and M.B. of Cambridge. He practised for a time at Bristol, being the first medical man who offered his services gratuitously on behalf of the poor under the care of the guardians of the city. This was in 1696. In 1709 he sailed as Captain Dover on his famous cruise, in the course of which he discovered Alexander Selkirk, the original of Robinson Crusoe who had been marooned on the island of Juan Fernandez. At a later period Dover resumed the practice of his profession in Gloucestershire and finally in London. From his belief in the sovereign virtues of mercury he was known as the "quick-silver doctor," and he was the inventor of the *Pulvis Ipecacuanhae Co.* which bears his name. His violent temper made him unpopular among his brethren, whom he amiably described as "a set of gentlemen, who, likewise, work underground, lest their practices be discovered to the populace." He was the author of a popular work, entitled *The Ancient Physician's Legacy to His Country*, which "made a great noise in London, and was the subject of almost every Coffee-house." He hated apothecaries almost as heartily as Gui Patin, and accused them of inflating bills for treatment of a fever to forty, fifty, or sixty pounds. Whether Dover was a buccaneer or a respectable "adventurer," it appears to be certain that he returned from his expedition, which lasted from 1708 to 1711, a wealthy man. The expedition sacked the two cities of Guayaquil, Dover leading the van. They took several prizes and cruised about the coast from Peru to California on the look-out for treasure ships. But this, according to the ethical standard of the day, was legitimate commercial enterprise.

Medical News.

A PROPOSAL that immunization against typhoid by vaccination should be introduced is said to be under consideration by the United States Army authorities.

MR. JAMES CANTLIE, F.R.C.S.Eng., has been promoted from Honorary Associate to be Knight of Grace of the Order of the Hospital of St. John of Jerusalem in England.

THE Orient Steam Navigation Company's new twin-screw steamer *Otranto* (2,000 tons), launched at Belfast on March 27th, is to go three pleasure cruises to Norway in July and August before being placed on the mail line to Australia.

At the sessional meeting of the Royal Sanitary Institute to be held at the Parkes Museum, Margaret Street, W., on Wednesday next, Mr. W. D. Scott-Moncrieff will open a discussion on river pollution, its ethics, aesthetics, and

hygiene. The chair will be taken by Sir Francis Sharp Powell, M.P., at 8 p.m.

AN appropriation of £2,000 for the care of tuberculosis patients has been approved by the New York Board of Aldermen. The money will be used to fit up two old ferryboats so that they may be used as general tuberculosis hospitals.

SIR GEORGE KING, K.C.I.E., M.B., F.R.S., LL.D., formerly Superintendent of the Royal Botanical Gardens, Calcutta, who died on February 12th, has bequeathed a bronze medallion portrait of himself to the University of Aberdeen. Similar medallions are left to the Linnean Society, London, and to Colonel D. D. Cunningham for life, with remainder to the National Portrait Gallery, Edinburgh.

THE eighth international Conference on Tuberculosis will, as already announced, be held at Stockholm from July 8th to 10th. The programme includes the following questions proposed for discussion: (1) Precautions to be taken in tuberculous families, especially for healthy children. (2) Report of the Sanatoriums Commission. (3) The use of specific agents in the diagnosis and treatment of tuberculosis. (4) Tuberculosis in schools. (5) Miscellaneous addresses. (6) Report on the progress of the campaign against tuberculosis in various countries.

DR. F. W. MOTT, F.R.S., will give two lectures on the brain in relation to right-handedness and speech at the Royal Institution of Great Britain on April 20th and 27th; Dr. W. H. R. Rivers, F.R.S., will give two lectures on the secret societies of Banks' Islands on May 22nd and 29th; Dr. F. Gowland Hopkins, F.R.S., two lectures on biological chemistry on June 1st and 8th; and Dr. F. F. Blackman, F.R.S., two lectures on the vitality of seeds and plants on June 5th and 12th: all these lectures will be given at 3 p.m. At the Friday evening meeting on May 7th Major Ronald Ross, C.B., F.R.S., will deliver a lecture on the campaign against malaria, at 9 p.m.

DR. P. MACRY DEAS, who has been for twenty-five years Medical Superintendent of the Wonford House Hospital for the Insane, Exeter, and who before that was for fifteen years Medical Superintendent of the Parkside County Asylum, Cheshire, is about to retire, and will carry with him the good wishes of his colleagues, and in particular the gratitude of the members of the profession in the south-west of England, whom he represented for many years on the Central Council of the British Medical Association. Dr. Deas will be succeeded by Dr. W. Britain Morton, who for the last twelve years has been the chief medical officer of Brislington House, Bristol, and was formerly assistant medical officer at Wonford House.

THE ninth meeting of the Departmental Committee appointed by the Lord President of the Council to consider the working of the Midwives Act was held at the Privy Council Office on March 31st, Mr. Almeric W. FitzRoy, the Clerk of the Council, presiding. The following witnesses attended and gave evidence: Sir Shirley F. Murphy, Medical Officer of Health of the County of London, on behalf of the London County Council; Mrs. Swinton, Matron of the Buckingham Palace Road Workhouse of the St. George's (Hanover Square) Union, on behalf of the National Association of Workhouse Masters and Matrons; Dr. Edward Sergeant, County Medical Officer of Health, Lancashire, on behalf of the Incorporated Society of Medical Officers of Health, and of the Midwives Act Committee of the Lancashire County Council.

THE usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on March 19th, Dr. de Havilland Hall in the chair. The record of the business of the society during the early part of this year is satisfactory. The number of sickness claims received has been large, but this is expected at this season of the year, and so far, the amount of sickness experienced compares favourably with the records of the same period of last year. The number of new entrants has been much above the average though not quite equal to the record of 1908. The rapidly-growing number of those members who have increased the assurances they originally effected with the society shows how useful the sick pay is found to be. Numerous letters are received showing how valuable the sick pay, usually £4 4s. a week, is to those who are only temporarily incapacitated, while to those who have no hope of ever recommencing professional work and who for the most part draw an allowance of one hundred and four guineas a year, this continued sick pay is in all cases a valuable assistance and, in some instances, the only bar to actual privation. Prospectuses and all further particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

British Medical Journal.

SATURDAY, APRIL 3RD, 1909.

ADMINISTRATIVE MEASURES AGAINST TUBERCULOSIS.

As already stated briefly, the Memorandum by the Medical Officer of the Local Government Board on Administrative Measures against Tuberculosis, 1909, which was issued recently, is intended to supplement from a medical standpoint the circular letter issued by the Local Government Board with the Public Health (Tuberculosis), 1908, Regulations. It explains and to some extent amplifies these regulations, for though the order was primarily intended only for patients under the care of Poor Law medical officers, the suggestions contained in this Memorandum are of wider application. It is pointed out that all public health administration in relation to tuberculosis, whether in poor persons or others, is concerned with similar problems, and as "poor" persons frequently pass outside the scope of the Poor Law, and as the regulations will in many districts be worked alongside a system of voluntary notification of tuberculosis, it is undesirable to limit the scope of the Memorandum strictly to poor patients.

The Memorandum briefly summarizes the preventive measures desirable in all cases of pulmonary tuberculosis, and indicates the lines to be followed in order to achieve the results aimed at. The question is discussed in a temperate and judicial manner, and the necessity for tact in carrying out administrative action is wisely insisted upon.

In considering the characteristics of tuberculosis which furnish the key to preventive measures, emphasis is laid on the limited sources of infection and the ease with which these may be controlled, as also on the comparatively slight susceptibility of healthy human beings.

The Memorandum lays it down that tuberculosis must be looked upon as a disease of ignorance, and much stress is therefore laid on the importance of educational measures against the disease. As instruction of the patient is essential for the prevention of tuberculosis, it is the duty of the doctor immediately the disease is recognized to inform the patient, or his friends, as to the nature of the complaint, and to give instructions to the patient. He may also be acting in the interest of his patient as well as in that of the public health, in notifying the case to the medical officer of health under a voluntary system of notification, even though the case is not one which is compulsorily notifiable. In this way the medical officer of health may be enabled to furnish supplementary aid in disinfecting rooms or in other ways.

The importance of early diagnosis is insisted upon, and the value of bacteriological investigation as an aid to diagnosis is pointed out, though its limitations are also noted. When notification is made, the visit to the case reported may often afford an opportunity of procuring the examination of others who have been in close and continuous contact with the patient, and in this way cases may be discovered at an early stage.

The possibilities in this direction which the systematic examination of school children presents is also pointed out.

One very important feature of the Memorandum is that dealing with the procedure in official investigations; its tone will be widely appreciated, for it points out that inquiries should be tactfully made, and that the advice offered must not interfere with that given by the doctor in attendance. Above all, care must be taken that nothing shall be done that may prevent a consumptive from continuing to earn his livelihood. In certain cases repeated visits may be necessary to ensure that the patient is carrying out instructions. If the spirit of this Memorandum is fully carried out, the co-operation of the medical officer of health would frequently be of great assistance to the doctor in attendance and of benefit to the patient.

The Memorandum concludes with a summary of the chief aids to preventive measures, in the institutional treatment of consumptive patients, dispensaries for consumptives, sanatoriums, and homes for advanced cases.

As a whole the Memorandum is a valuable summary of the measures necessary in the prevention of consumption, and should prove of value to many beyond those who have to treat patients under the Poor Law.

THE DIAGNOSIS OF FUNCTIONAL PARALYSIS.

ANY aid to the differential diagnosis of functional paralysis is to be welcomed in the present day, when recent legislation has placed a premium upon malingering and medical men are asked to express opinions on cases which are not under the most favourable conditions for close observation, and cannot always be subjected to the rough tests by which it is sometimes possible to demonstrate the unreal nature of alleged paralyses. Babinski has shown that if a patient with organic hemiplegia is placed upon a high seat so that his legs hang freely, the paralysed leg is extended on the thigh when he folds his arms tightly, or if he is lying down and tries to raise himself into a sitting position with the arms crossed on his chest, the thigh is flexed on the pelvis and the heel is raised from the ground. Finally, if the patient lies down with his legs hanging over the end of the bed, and then tries to raise himself into a sitting position the paralysed leg is extended on the thigh and the thigh is flexed on the pelvis. All these phenomena are absent in hysterical hemiplegia, and are exclusively observed in cases of organic origin. Three years ago Grasset and Gausse drew attention to another sign, which is, that when a patient with organic disease is able to raise the paralysed leg from the bed, he yet cannot raise both lower extremities simultaneously. This is due to the need there is for fixing the pelvis in the movement of flexing the thigh. This fixation must be furnished by the healthy leg, and when the latter is raised, this is no longer possible, and the paralysed limb drops.

Dr. C. F. Hoover of Cleveland, who has studied this phenomenon from another standpoint,¹ says that when one leg is raised from the bed in a patient with an organic lesion the heel of the other is pressed hard against the mattress; this is very perceptible if a hand is placed under the heel. Conversely, if the patient presses the heel of the foot hard against the mattress, there is a slight raising of the opposite leg.

¹ *Journal of American Medical Association*, August 29th, 1908.

In cases of organic hemiplegia or crural monoplegia due to organic causes this "complemental opposition" on the side of the sound leg is never absent. In two patients who complained of a crural monoplegia following an injury Dr. Hoover was able to demonstrate by the absence of these symptoms that there was no real paralysis. When the patient was asked to raise the paralysed limb there was no pressure of the heel on the sound side, but when asked to raise the healthy leg, the paralysed limb contracted and pressed strongly against the bed. The same absence of the sign was noted in a case of hysterical hemiplegia when the patient was told to raise the paralysed limb.

Dr. P. Zenner of Cincinnati has confirmed² the observations of Dr. Hoover. In a young man with organic right-sided hemiplegia from a tumour of the pons, when the patient raised the left leg there was no movement of the other; but when he was told to try to raise the paralysed leg it did not move, but the left heel was dug into the bed. The second case was that of a woman, aged 23, suffering from hysterical hemiplegia and hemianaesthesia on the right side following a shock. When she was asked to raise the paralysed right leg there was no movement either of that leg or the other, but when she raised the sound limb the right heel was pressed into the mattress.

These observations have been further confirmed by Dr. J. Lhermitte.³ Having looked for the sign in normal persons and found it constant, he examined fourteen cases of organic hemiplegia in the Salpêtrière. At first he thought that it was absent in some old cases, but further investigation proved that this was due to the patients being too lazy to make the necessary effort, and on persisting he could always obtain distinct movement on the sound side. This movement seemed to be in proportion to the extent of the hemiplegia, and in those who had nearly recovered it was present to about the same extent as in healthy persons, while it could be made more manifest by resisting slightly the elevation of the paralysed limb. On the paralysed side the movement is naturally less developed than on the sound side and is always absent when the hemiplegia is complete; if it is spastic the sign is generally equal on both sides. Dr. Lhermitte examined two cases of hysterical hemiplegia, the first being a young woman, aged 21, who without apparent cause complained of a pain in the left hand which was soon followed by stiffness of the fingers and complete contracture of the left arm; a month later similar phenomena showed themselves in the lower extremity, the foot assuming a position of forced equino-varus, the leg being extended on the thigh and the thigh extended on the pelvis; the great toe was hyper-extended and its second phalanx flexed; the patellar reflexes were lively on both sides, but rather more on the paralysed side; the plantar reflex was flexor on the right but on the left tickling the sole of the feet determined no change in the position of the great toe. When the patient was told to raise the spastic limb, the movement being slightly resisted, there was energetic counter-pressure by the sound heel, and when the sound leg was raised there was exaggeration of the rigidity, and the heel was pressed firmly into the bed. This result pointed to an organic cause, but Dr. Lhermitte does not accept this conclusion, as he thinks the spastic condition interferes with the sign. In another case, where the hysterical paralysis was

flaccid, the test was valid; this was a patient aged 54, the subject of major hysterical attacks, in whom, hypnotic sleep having been induced, a right-sided hemiplegia was developed by suggestion. When lying flat the patient could easily raise the left leg, while all movement of the right side was impossible; if she was told to raise the paralysed limb there was absolutely no contraction in the muscles of the left leg, while, when she raised the left leg, the hand placed upon the right thigh perceived slight movements in the biceps and semimembranosus. Lhermitte meets the objection that hysterical hemiplegia so induced is not identical with ordinary functional paralysis by quoting Babinski's authority for the statement that hysterical paralysis may be reproduced by suggestion in some subjects who are hypnotisable, and that the identity of these two kinds of paralysis seems to show that the paralysis which occurs in hysteria has its origin in suggestion or autosuggestion.

The method of examination is easy, but wider experience is needed to show to what extent the test can be relied on as a basis for an opinion in medico-legal cases.

POSTAL OFFICIALS AND VACCINATION.

AN announcement has appeared to the effect that the Postmaster-General has modified the regulations of the service as regards vaccination. It is stated that in future candidates for Post-office employment who have conscientious objections to revaccination may be allowed exemption therefrom on making a statutory declaration to the effect that they conscientiously believe that revaccination would be prejudicial to their health. The Postmaster-General has refused to grant exemption from primary vaccination. If this accurately states the decision, a most unsatisfactory, and scarcely comprehensible, state of affairs is created. The antivaccinators who have clamoured for the removal of vaccination as a condition of employment will not be silenced or appeased by this change as a departmental answer to their deputation pleadings. This concession, even if it be regarded by the antivaccinators as a real concession, will be to them most unpalatable, since vaccination still remains a condition of employment. To those who are familiar with the evidence in favour of vaccination and revaccination, the decision will seem unfortunate, and the principle on which the ruling is based requires explanation. Evidence of the special risks of infection to which postal officials are exposed, and the protection afforded by revaccination, was given before the Royal Commission on Vaccination. The Final Report of the Commissioners states (par. 340) that Sir Charles Dilke, speaking in June, 1883, made the following statement about those employed in the postal service in London: "In the case of persons permanently employed in the postal service in London, averaging 10,504, who are required to undergo vaccination on admission unless it has been performed within seven years, there has not been a single death from small-pox between 1870 and 1880, which period included the small-pox epidemic, and there have only been 10 slight cases of the disease. In the telegraphic service, where there is not so complete an enforcement of vaccination, there have been only 12 cases in a staff averaging 1,500 men." The Commissioners, commenting on this, draw attention to the fact that many of the persons so employed become subject, in a degree exceeding that of the population at large, to the risk of contagion, and emphasize the fact that the period referred to in the evidence above given includes that of the epidemic

² Ibid., October 17th, 1908.

³ La Semaine Médicale, 1908, p. 565.

in London of 1870-2, when there were so many attacks and deaths from small-pox. "It is noteworthy," continues the report, "that, in the year 1892, 12 officers were absent from duty on account of the presence of small-pox in their homes; in 1893, 44; and in 1894 as many as 53." Possibly the Postmaster-General thinks the exemptions may not be sufficiently numerous to constitute a serious risk to the service, for it must be admitted that the presence of evidence of primary vaccination in the candidates for employment who are themselves healthy should tend to destroy the argument that revaccination would be prejudicial to their health.

THE INFLAMMABILITY OF FLANNELETTE.

THE question of the inflammability of flannelette has aroused a good deal of discussion lately among the public and in the press, and is at the present moment occupying the attention of the officials at the Home Office, who are carefully investigating the alleged dangers attached to this material. Flannelette, which is, of course, a cotton fabric, and not woollen at all, has the great advantage of being cheap and warm. It is an undoubted boon to the poor, who find it impossible to buy flannel on account of its cost. There is no substitute for it which gives the same amount of warmth, within reach of the purse of the poor. But it has the great disadvantage of being very readily inflammable. Methods have been suggested to minimize or do away with this dangerous quality of flannelette. The first of these is to soak the material in various chemical substances before it is sold, and the manufacturers claim that flannelette is rendered permanently flame-proof by this means. As a matter of actual experiment it is found that the chemical which impregnates the material is washed out, or loses its efficiency after a very few washings, and the fabric burns much more readily than it originally did, and in some cases as readily as ordinary flannelette. The cheapest variety of patent material costs 6½d. a yard; a cheap flannelette can be purchased for 2½d. or 3½d. a yard. Is it, then, reasonable to expect the working woman, whose income is reckoned in shillings, to pay this increased price for advantages so very fleeting and questionable? The second method, and one which is just now being much recommended, is to impregnate the material, at each time of washing, with chemicals which render it non-inflammable. Various substances are now on the market for which it is claimed that, for a very small sum and with very little extra trouble, the flannelette washed in them is rendered non-inflammable. Among the materials employed are borax, alum, oxide of tin, and patent preparations such as Flameoff, etc. The results of experiments with these various preparations show that some of them—for example, Flameoff and borax—are certainly effectual in very considerably reducing the inflammability of flannelette, others—such as alum—make very little, if any, difference. But the most serious objection to all these various chemicals is the fact that it is necessary to use them with each washing, and this alone—involving as it does extra trouble and expense—is sufficient to prevent their general employment among the poorer classes, where practically all the burning fatalities occur. Much more important than any special treatment of flannelette by chemicals or otherwise, useful as this may be as an additional precaution in diminishing deaths from burns in children, is the employment of some method for preventing fire reaching their garments, for *all* clothes, of whatever material, are inflammable—some, of course, like flannelette, much

more so than others. It is found that in about 85 per cent. of inquests on deaths from burning in children the absence of fireguards was a direct cause. In the new Children Act, which came into force on April 1st, there is a clause which imposes a specific penalty on a person in charge of a child under 7 years if, owing to neglect of reasonable precautions to guard an open fire, the child is seriously burned or scalded. It is to be hoped that this enactment may lead to the more universal adoption of protective fireguards and so save the lives of many valuable future citizens.

LIABILITY OF HOSPITALS.

THE question whether the governors of a hospital can be held liable at law for injuries sustained by a patient is by no means easy to answer. It must be shown, of course, that the injury sustained was the result of negligence, and that the act or omission which occasioned the injury was the act or omission of some person in the employment of the hospital authorities. The fact that the treatment is gratuitous does not appear to affect the question. In a case which is reported elsewhere in this issue, an action was brought to recover damages from the governors of St. Bartholomew's. The plaintiff, a medical practitioner, suffering from sciatica, went to the hospital to be examined under an anaesthetic. The examination was conducted by a member of the staff. It was alleged that while the patient was on the operating table his left arm was scalded by being brought into contact with a hot-water tin, and that his right arm was injured by pressure, and that in the result paralysis supervened to such an extent that he would never again be able to practise his profession. At the conclusion of the opening of the plaintiff's case it was submitted that the action did not lie against the governors, inasmuch as it was not shown that the injuries (if any) were caused by any one for whose acts they were responsible. Counsel for the plaintiff conceded that the governors were not responsible for the surgeon who conducted the operation, as he was not their servant. Mr. Justice Grantham decided to hear the evidence of the plaintiff and his witnesses, and having done so, came to the conclusion that there was no case to go to the jury. His decision was for the most part based upon the inconclusive nature of the evidence. He pointed out that there was no proof of negligence on the part of any one in particular, and he also dwelt on the fact that the patient was predisposed to the injuries sustained owing to the sciatica from which he suffered. The interesting legal question was not therefore authoritatively decided. There is no English case which throws any certain light upon it. In a recent work entitled *The Law of Hospitals*, by A. T. Murray, the author states that "a hospital is responsible to the patient for the negligent acts of its doctors or nurses in the course of their treatment of any such patient." He admits, however, that this is a mere expression of his opinion based upon cases relating to analogous points. In one case (Evans v. Liverpool) Mr. Justice Walton held that the authorities responsible for a rate-supported hospital were not liable because a member of the staff had allowed a scarlet fever patient to leave the hospital so soon that he communicated the disease to other children of the plaintiff. That decision was mainly based on the principle that a corporation which owns a hospital does not undertake the duties of medical men, or to give medical advice, but that the patients in their hospitals shall have competent advice and assistance. It was admitted that the doctor responsible for the discharge of the patient was a competent medical man.

There are certain American cases on the question, but as they conflict one with another they are of little value to an English lawyer.

SPIROCHAETES AND MOUSE CARCINOMA.

THE record of negative results is often of considerable value, for not only does a negative result, if confirmed, narrow the problem down, but it not infrequently indicates the direction in which further research may prove successful. Negative results have other uses. In a hopeless disease, the nature of which is still shrouded in darkness, the unfortunate victims too often catch at any straw, no matter how frail, which may be held out. The public is at all times credulous about remedies which have not obtained the support of the profession, and whether the reputed remedy is a secret quack preparation or a discovery of one day, the average patient suffering from such a disease as cancer will pin his faith on it, and allow the last hope—the hope of getting rid of his disease by surgical means—to fade away. But it is not only the devising of alleged cures which may be mischievous, but the supposed discovery of the cause of cancer, which has been made about once every two months for some years past, may be almost equally mischievous, for before it can be shown that the discovery is based on a false observation, either the discoverer or someone else builds up a treatment on this unstable basis. It is therefore of great value to learn of distinct negative results with regard to the possible causation of cancer. Professor Gaylord found a spirochaete in primary and transplanted carcinoma of the breast of the mouse in 1907. He now¹ comes forward in true scientific spirit and shows that this spirochaete has no etiological connexion with the malignant disease. The spirochaetes were found by Tyzzer in mouse tumours, and Deetjen has also found them in something approaching regularity in mouse carcinoma. Since his original publication Gaylord has examined a series of 48 tumours. In 4 of these the disease had advanced so far that contamination with other micro-organisms rendered the search fruitless. In 4 further tumours no spirochaetes were found, while in the remaining 40 they were found at the periphery of the tumour. He then turned his attention to other mice in the same breeding-places as the cancerous mice had come from, and found that out of a series of 10 no fewer than 7 harboured spirochaetes in their blood. In a second series of mice received from Columbia, 11 out of 15 showed spirochaetes in the blood. Other series yielded similar results. He was therefore able to determine that the spirochaetes were present in about 70 per cent. of apparently normal mice. He adds that the absence of spirochaetes in human cancer and in cancers of other animals, and the fact that several strains of transplantable mouse tumour have been examined in vain for spirochaetes, justify him in concluding that the spirochaetes are not the cause of mouse carcinoma. This conclusion appears to be sound, and may be advanced as a further argument against the parasitic theory of carcinoma.

PRIMARY PERITONEAL OR ABDOMINAL PREGNANCY.

ECTOPIC gestation is of special interest to the profession in general, rather because it is a cause of internal haemorrhage than on account of its peculiarities from an obstetrical or pathological standpoint. The labours of Lawson Tait and his experiences as an operator taught us that the Fallopian tube undergoes changes prejudicial to the

patient when it becomes the seat of pregnancy, and that in early pregnancy the bleeding or ruptured tube may be removed without much difficulty and with little risk. Tait believed that all ectopic pregnancies were originally tubal, from which it followed that early diagnosis and removal of the sac would save every case, though operations late in such pregnancies were, and remain, very hazardous. Kowler and Van Tussenbroek, followed by Anning and Littlewood, Octavius Croft, and others have shown on evidence accepted by leading authorities that ectopic pregnancy may begin in the ovary. The surgery of primary ovarian pregnancy, however, is little different from that of primary tubal pregnancy, for when early rupture occurs in either form both tube and ovary have to be taken away. The possibility of a primary peritoneal or abdominal pregnancy remains doubtful, and much further information is required, for while the amputation of a Fallopian tube with its fetal sac is not very difficult or dangerous in early pregnancy, a fetal sac sessile on the peritoneum would, theoretically, be very dangerous to remove almost from the first, as the operator could hardly feel sure how to control its blood supply. A case recorded recently by Gröné, of Malmö, Sweden, seems to show that primary peritoneal pregnancy may occur, and—what is of equal importance—that in its earliest stages at least its removal is neither difficult nor dangerous.¹ A woman aged 23 was admitted with symptoms of internal haemorrhage following colicky pains fourteen days earlier. The periods had been quite regular for four months, yet she had not weaned her last child, who was 7 months old. The physical symptoms indicated right tubal gestation. Prag of Malmö operated with the assistance of Gröné. The peritoneal cavity contained over a pint of recent blood and clot, and the bleeding was seen to issue from a sharply-defined raw surface as big as a shilling, on the pelvic peritoneum just below the brim of the pelvis; it was bounded anteriorly and on its median aspect by the right round ligament, and posteriorly and to the right by the caecum. This raw tissue was excised, together with a narrow tract of the surrounding peritoneum, and the serous membrane closed by suture. The haemorrhage ceased at once and for good. Two small, red bodies were found lying loose in Douglas's pouch. The left Fallopian tube and ovary were to all appearances absolutely healthy, and so were the right appendages, but it was thought safer to remove the latter. The patient made a speedy recovery. The parts removed were carefully examined in the Pathological Institute, Lund, Sweden, and Gröné publishes macroscopic drawings and photomicrographs. The raw surface in the peritoneum was made up of tissue, including villi, syncytium, and other elements peculiar to the fetal membranes, implanted on the serous membrane, just as such tissue is found implanted on the tubal mucosa when the Fallopian tube is the seat of pregnancy. The two bodies in Douglas's pouch were without doubt products of conception. The right tube was cut up into sections, none of which showed, under the microscope, the slightest trace of recent relations with an ovum. No trace of a fetus could be detected, as is the rule when an ectopic gestation is interrupted in its earlier stages. Gröné, who has reported the case with great care, seems justified in maintaining that it was a genuine primary abdominal pregnancy. If so, it seems clear that at the beginning this condition may not present any very formidable difficulties; it is remarkable how easily Prag succeeded in what is the first aim of the operator, the stopping of haemorrhage.

¹ Ein Fall von primären Peritonealschwangerschaft. *Zentralbl. f. Gynäk.* No. 2, 1909, p. 45.

¹ *Berl. klin. Woch.*, December 28th, 1908.

PETER OF SPAIN, THE OCULIST POPE.

The thirteenth century has been described as the greatest of centuries, partly because the foundation of some of the chief universities, including Paris, Pologna, Oxford, and Cambridge, may be assigned to it. It witnessed also a remarkable development of architecture, and to it we owe some of the most famous castles and municipal buildings, and the beginnings of many of the finest cathedrals of Europe. This epoch saw the rise of a great national literature in nearly every country in Europe: the Cid of Spain, the Arthur legends in England, the Niebelungen and the Meister-singers and Minnesingers in Germany, the Romance of the Rose and the Troubadours in France, and Dante in Italy. It is no surprise, therefore, to find the first origin of ophthalmology in this century. Bernard Gordon, the Scotsman, teaching medicine at Montpellier, had advised the use of spectacles for presbyopia, and in the same century Pope John XXI, Peter of Spain, produced a little volume on diseases of the eye. In the current number of *Ophthalmology*, Dr. Walsh gives a short account of this book, which is of great interest to students of medical history. It possesses great literary value, because it is one of the earliest books written in the Italian language, and is frequently referred to in the dictionary composed by the Accademia della Crusca. It commences with the usual invocation, "*In nomine Dei Amen.*" Then we are given an account of the anatomy of the eye, which is said to be composed of seven tunics and three humours. The humours are the albugineous (aqueous), the crystalline, and the vitreous. The first tunic is the retina, and Peter seems to have had some vague notions of its importance in vision. The choroid he calls the secundine tunic, and then he mentions the scleros (*sic*). The fourth tunic is the *tela aranea* (the spider's web), by which it is believed the iris was intended. The fifth tunic he calls the uvea, and the last two have their present names, the cornea and the conjunctiva. Peter recognizes eight ocular muscles, the four recti he calls *lacerti*—that is, reins. He had a good knowledge of many diseases. Squint he attributed to an affection of the eye muscles, but this, he said, was due to a defect in the brain, thus anticipating Worth's theory of the congenital absence of the fusion centre. Pterygium is described as ungula, from its fancied resemblance to a nail; it was to be cured by an application of eel's blood. Blepharitis was to be treated by epilation. Lacrymal fistula is said to be very difficult to cure, so difficult, indeed, that it must be excoriated. Peter describes cataract, calling it "water which descends into the eye." This is but a translation of the Arabic term for the disease, *al ma an-nazil fil ain*. The modern *fellaheen* in Palestine call it "*moje zerka*," or blue water. He does not mention couching, but this operation may have been described on some of the lost pages of the manuscript. The eye, he says, may be affected by two kinds of hardening—*petrositassor petrosezza* or *tenebrosité* seems to refer to orbital phlegmon, while *dureté* may be glaucoma. For further details of this most interesting book the reader is referred to Walsh's very readable article.

THE CONDUCT OF COURTS.

HUMAN brains being as they are, it is almost inevitable that on most subjects there should be more or less marked difference of opinion; hence it is natural that all judges should not be of one mind as to what kind of conduct on the part of the president of a court is best conducive to the ends of justice and to the preservation of his personal dignity. Equally natural is it that those who are not judges should form some-

what varied opinions on the same points. Thus some rather despica judges whose fashion it is to treat witnesses appearing before them with unvarying courtesy, to receive their statements, however remarkable, without open betrayal of disbelief, and carefully to refrain from expressing opinions based neither on the evidence before them nor on any real knowledge of the subject of their discourse. Others, on the contrary, admire such judges, and regard those who browbeat willing witnesses, and constantly air their own views, as persons mistakenly placed in a position which is always one of authority, and should also be one of immovable dignity. Clearly, if one of these views is right, the other must be wrong; but to the non-legal mind it is not altogether easy to decide between them. Doubtless, on theoretical grounds, a good case could be made out in favour of the one method or the other, but no practical weight would attach to any decision not based on a careful comparison of the net results in an equal and sufficiently large number of cases. Such a comparison is at present quite impossible, because ever since the disappearance of judges of the type of Judge Jeffreys or Lord Braxfield the vast majority of cases have been tried by persistent adherents to the first-named method, which may be described as *suaviter in modo, fortiter in re*. Nevertheless, the difficulties in the way of a really scientific and satisfactory solution of the problem are not insuperable. In the course of time an industrious searcher might amass, say, 100 complete records of cases tried on the other or witness-bullying and inane-observation principle, and thus secure the lacking factor for a comparison of the kind desired. It would be a laborious task, but the researcher might get a useful hint as to promising prospecting grounds from those already well acquainted with the methods of different judges. The newspapers likewise occasionally furnish what seem like useful clues on the subject, as, for instance, in the case of one particular trial at the last Dorchester Assizes. If correctly reported, this was an admitted case of attempted suicide, and the prisoner's friends, deeming him a sufferer from melancholia, seem to have instructed counsel to endeavour to secure for him treatment conducive to his recovery. To this end a medical man who had treated the patient for some weeks after his attempt to cut his throat was put into the witness box, and in answer to a question on the subject gave a clearly worded and appropriate reply. It does not, however, seem to have pleased the presiding judge, for his lordship at once broke in with a flat contradiction; the statement was nonsense, and he himself knew much better. On the witness replying that he had only given his opinion, the judge said he did not care for his opinion, and ordered him out of the box. Practically the opinion expressed by this witness was to the effect that the recovery of a patient suffering from melancholia would best be ensured by his treatment in a civil asylum, prison environment in the circumstances being undesirable. This would seem in itself a sound view to take; but of course, after the dictum of this learned judge, we must believe that it is not so. As it is never pleasant to a man to have his statements aspersed as nonsense by a person to whom he cannot safely reply, it seems possible that this medical witness may have been rather annoyed by the incident. All medical men, however, are more or less philosophers, so it is to be hoped that he consoled himself by the reflection that this judge must be one of those who deem elevation to the Bench a diploma of omniscience, and ordinary courtesy as inconsistent with the due administration of justice.

DEATH CERTIFICATION AND CORONERS' JURIES.

A BILL, at present awaiting consideration by Parliament, proposes to relieve coroners' juries of the duty of viewing a body before proceeding to their inquiry; but Mr. F. W. Lowndes, surgeon to the Liverpool Police, who has had a wide experience in medical jurisprudence, seems disposed to believe that the best thing to do with coroners' juries would be to abolish them altogether. The suggestion is notable, and to some minds may seem anarchical, since the coroner's quest is an institution of such hoary antiquity that it now appears to be an essential part of the British constitution. Coroners' juries, indeed, have had their share in the administration of justice for so many centuries that their origin is not easy to trace. Possibly they date back to the days when the High Court of Justice, from the inquest room to the Court of Appeal, was entirely represented by a word and skin clad village headman and his elders; still, in spite of its novelty, the suggestion is one for which, at first sight, at any rate, there would seem much to be said. It is, for instance, by no means clear that the finding of a coroner's jury is an essential wheel in the machinery of justice. There are many British colonies whose legal procedures are based more or less on those of England, but which nevertheless get on perfectly well without coroners' juries; and north of the Tweed no summons to act as a jurymen at an inquest has ever been issued. Even in England the part played by a coroner's jury would seem much more prominent than important. In the majority of inquests there is no room for real doubt as to the responsibility for the death of any persons connected with it. There are other cases, of course, in which criminal issues are involved, and there may be room for doubt as to the category in which the crime should be placed, and as to whether the name of any particular individual should be specifically coupled with the verdict; but even in these the points raised would seem at least as likely to be properly decided by one intelligent and experienced man as by twelve men of no particular education and no special experience whatever. Furthermore, the fact that coroners' inquiries and magisterial trials may often be seen proceeding side by side would seem to indicate that even now the part played by coroners' jurymen is in a measure superfluous. The police, indeed, are in no wise bound by any conclusions a coroner's jury may reach, and it would be possible to secure the trial and conviction of a man for murder or manslaughter in a case in which a coroner's jury had failed to return a verdict of any kind. There is room, of course, for two opinions as to the value of the work done by coroners' juries, but it seems clear that a good case might be made out for relieving citizens of the duty of taking part in inquiries of this order. The whole subject is in a measure bound up with that of death certification, the main theme of Mr. Lowndes's paper. On that there is no room for difference of opinion. As we pointed out a few weeks ago, more than fifteen years have passed since a special committee of the House of Commons made a series of recommendations on the subject. They have been generally accepted as perfectly sound, and it is lamentable that there should be such delay in giving any effect to them.

MEAT WINES.

WE have received from Mr. D. Innes Smith, Managing Director of Bendle, Ltd., a letter protesting against the application of the term "meat extract" to the meat substance contained in the "Meat-Port Nutrient" sold by the company. Mr. Innes Smith in his letter

refers to the material in the wine not only as "meat substance" but also as "the digestive products of meat or proteins," and states that all authorities admit that such products are available for immediate nutrition. We are very glad to allow Mr. Innes Smith to make the correction, but we may point out that in the article it was distinctly stated that it was not possible, without a complex analysis of a very large quantity, to determine positively by analytical methods whether meat extract only, or some other meat preparation, was contained in the wines. But in calculating the amount of the substance derived from meat in the wines examined from the amount of nitrogen found, it was, for the purpose of comparison, calculated in each case as meat extract, and this was distinctly stated in the article. If, on the other hand, the nitrogen be calculated into its equivalent as protein the result reached is 1.4 per cent. in Bendle's Meat-Port Nutrient. It might be added that one of the main objects with which the analyses were undertaken was to determine the alcoholic strength of meat wines which are largely advertised. The fact shown by the analyses which is of special interest to the medical profession is that the meat wines examined were found to contain approximately the same quantity of alcohol as is ordinarily found in port wine.

HEART STRAIN AND OVERSTRAIN.

THE Marathon race, and the object lesson which it has afforded as to the limitation of the powers of human muscle, will in all probability demonstrate in time to come the truth of warnings recently uttered as to the possible overstraining of the powers of the human heart. This latter aspect of the question has been already investigated by Dr. Theodore Schott at Naheim, and in a fourth enlarged edition of his pamphlet on the overstrain of the heart he has recorded some further observations carried out by the aid of X-rays and the orthodiagraph. While every one recognizes the fact that over-exertion produces an excessive heart beat and a varying degree of dyspnoea, the exact condition of the heart under such circumstances does not appear to have been very closely studied, if we may judge from the references to the subject in the English textbooks. It is assumed that a certain amount of distension of both ventricles must ensue during great muscular exertion, and that the occurrence of dyspnoea is a measure of the extent to which the latent reserve of heart force is being drawn upon. It is known that dyspnoea is all the more likely to occur if the ventricular wall is weakened from any cause; but it has been shown that a very marked thinning of the ventricular wall may be present without any *post-mortem* evidence of dilatation. Dr. Schott's endeavour is to show that actual acute dilatation takes place under stress whenever the symptoms of excessive palpable heart-beat and marked dyspnoea are present. He rightly accords to Dr. Peacock the distinction of having first pointed out the danger of heart strain, but he shows that much more attention has been paid to the influence of infective disease as a cause of myocarditis and endocarditis and subsequent dilatation, than to the more immediate influence of overstrain from excessive exertion. Experiments carried out upon healthy subjects after vigorous wrestling, with and without the support of a waistbelt, are carefully recorded, and many cases are quoted in detail to prove the occurrence of acute dilatation of the heart under different conditions, and especially in cases where some previous cause of heart weakness has been present, although unsuspected by the patient

or his friends. The dangers of excessive dancing while wearing tight stays are emphasized and illustrated by some striking cases. The use of *x* rays and the orthodiagraph would seem to have fully confirmed the accuracy of previous observations by percussion alone, but it is clear that orthodiagraphic demonstrations are attended with so many sources of fallacy that too much reliance must not be placed upon them.

SUMMER COURSE OF OPHTHALMOLOGY AT OXFORD.

THE sixth annual course in the department of ophthalmology of the University of Oxford will begin on Monday, July 5th, and terminate on Friday, July 16th. The main idea of the course is to demonstrate on actual patients, as far as possible, the whole range of ophthalmology, in order to make the reading of a textbook more profitable than can be the case when reliance has to be placed on pictures alone. The first part of the course will be concerned mainly with the practical examination of eye patients, the use of the ophthalmoscope, and the estimation of refraction. During the second part the work will be more specialized, and the lectures will be delivered by various ophthalmic surgeons. As on previous occasions, the last two days will be devoted to addresses, special demonstrations, and the examination of interesting and unusual cases. The fee for the course is five guineas. Further particulars can be obtained from Mr. Robert Doyné, M.A., F.R.C.S., Margaret Ogilvie Reader in Ophthalmology in the University of Oxford, 30, Cavendish Square, London, W.

DISTRIBUTION OF DIPHTHERIA ANTITOXIN IN NEW YORK.

THE New York State Health Department is about to begin the distribution of diphtheria antitoxin in syringes, as provided for by the legislature last year. The syringe to be used has been especially devised for the purpose, and as this form of distribution is expensive, on account of the cost of the outfit, and as it is quite possible to prepare a syringe once used for use a second time, the distribution of these syringes will be made on the express understanding that medical practitioners receiving the package of antitoxin containing the syringe shall return the outfit immediately after the employment of the antitoxin to the State Hygienic Laboratory. The postage for such return will be provided. The directions for the use of antitoxin have been carefully revised, and these, with blanks for making reports of results, to be filled out and returned to the department on the termination of the case, will be sent out with each package.

DEATH OF PROFESSOR GAMGEE.

WE regret to announce that Dr. Arthur Gamgee, Emeritus Professor of Physiology in the University of Manchester, died in Paris on Monday morning last, at the age of 67. He had travelled over to Paris on March 22nd, intending to pass two or three days with his old friend Professor Kronecker, of Berne, and to return to England with him on March 26th. It seems clear that Professor Gamgee had already contracted influenza before leaving London, for on taking his temperature in the train to Newhaven, he found that it was 103; nevertheless he went on by the night boat, but grew progressively worse; the immediate cause of death was congestion of the lungs.

DR. S. SQUIRE SPRIGGE has been offered and has accepted the editorship of the *Lancet*. Dr. Sprigge, who has held for a good many years a responsible position on the staff of our contemporary, is the author of the well known and very interesting *Life and Times of Thomas Wakley*.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Anaesthetics.—On Thursday in last week Dr. Cooper introduced a bill to regulate the administration of anaesthetics. It proposes that on and after January 1st, 1911, no person shall be registered by the General Medical Council unless he submits satisfactory evidence that he has received instruction in the administration of anaesthetics, and that after that date any person not a registered general practitioner who shall administer to any person any drug or gas vapour, etc., with the object of producing unconsciousness during any operation, examination, or procedure or childbirth, shall be liable on conviction to a penalty of £10, and on second conviction £20, provided that no person would be liable if acting under the immediate personal supervision of a registered medical practitioner, or believed delay would endanger life. Power is given to the General Medical Council to make the necessary regulations; and the bill would further enact that a registered medical practitioner shall not give a certificate of death in the case of any person who has died during the administration of an anaesthetic, under a penalty of £5. There is a proviso to the effect that nothing in the Act shall prohibit a person registered under the Dentists Act before the commencement of this Act from administering an anaesthetic during a dental operation or procedure. The bill is backed by Sir Walter Foster, Sir William Collins, Dr. Rutherford, Sir John Benn, Mr. Acland Allen, Mr. Barnes, Mr. Bertram Straus, and Mr. H. Carr-Gomm. It is most probable that the bill, if read a second time, will be referred to a Select Committee to inquire into the whole subject.

Vivisection.—There are four Bills before the Commons dealing with experiments on animals. One, the Dogs Protection Bill of Sir F. Banbury, exempts dogs from all experiments under penalties; a second, called the Cruelty to Animals Bill (No. 2), has been introduced by Mr. George Greenwood and ten other members, to restrict and regulate all experiments on animals, to provide for licensing persons to experiment under very strict conditions, and to increase powers of inspection. Two other bills, standing in the names of Sir George Kekewich and Mr. Hodge, called respectively Prohibition of Vivisection and Vivisection (Abolition) Bills, aim at the suppression of experiments on live animals altogether. None of these bills have a good place, but they require to be watched, as attempts may be made to get one of them read a second time late at night if occasion offers.

Nurses' Registration Bills.—There are two bills before the Commons dealing with the Registration of Nurses, the one promoted by Mr. Munro Ferguson and a number of other members, and the second introduced by Mr. Findlay, Mr. Claude Hay, and others. As business stands, neither of these bills has much chance of passing unless the Government decides to give facilities to one of them. The Prime Minister is to be asked to do this by the promoters of Mr. Munro Ferguson's bill, and he is to be asked to receive a deputation to urge the claims of the subject to legislation at an early date.

Small-Pox at Bristol.—Mr. Cave asked the President of the Local Government Board last week whether an outbreak of small-pox had occurred at Bristol; whether, in spite of the advice of the Board's inspector, the board of guardians refused to make special arrangements for the vaccination of unvaccinated children and for revaccination; whether, on the Local Government Board themselves instructing the vaccination officer to provide special facilities, the health committee refused to permit the issue by their medical officer of bills notifying the names of the vaccinators and the places where they would attend for vaccinations; how many cases of small-pox had already occurred in the city, and how many had proved fatal; and what steps the Local Government Board proposed to take in the matter. Mr. Burns said that the answer as regards the first two points in the question was in the affirmative. He understood from a newspaper report of the meeting of the Health

Committee on March 16th that the Committee resolved that no further bills should be issued by the medical officer of health, but that if necessity arose the Committee should be called together. Bills to the effect stated in the third part of the question had already been issued by the medical officer of health. Up to the morning of March 20th 31 cases of small-pox had occurred in Bristol and its vicinity. Three deaths were known to have occurred up to March 17th. He had caused one of the medical inspectors of the Local Government Board to pay two visits to Bristol and the neighbourhood owing to the outbreak, and he had conferred with the authorities and officers concerned as to the precautions which should be adopted, and various measures had been taken accordingly.

Vaccination.—On Tuesday Mr. Robertson put several questions, in the absence of Mr. Lupton, with reference to vaccination. The first referred to the death of a child named Lomas at Hanley, who was vaccinated in January by Dr. Clare, the public vaccinator; about a week after a rash appeared, and an abscess formed under the arm. The abscess was lanced, and the child suffered a great deal and died in February. It was asked whether the President of the Local Government Board would stop the issue of vaccine matter until he had a supply that would not produce such disastrous results. Mr. Burns said that his attention had not been called to this case prior to the question. He had made inquiry about it, and was informed by the public vaccinator that in his opinion the abscess was not due to vaccination, that Dr. Phillips and Dr. Browne, his assistant, who attended the case, were of the same opinion, and that he believed Dr. Read was so too, but he was absent from home. The public vaccinator added that eleven other children vaccinated by him from the same lymph did well. He saw no reason to interfere with the issue of lymph by the Local Government Board. In a subsequent question Mr. Robertson called attention to an alleged death from vaccination at Enniscorthy. Mr. Cherry replied that in December last year the Guardians of Enniscorthy Union requested the Local Government Board to hold an inquiry with a view to ascertaining whether the death of Ellen Cullen was due to vaccination. The board communicated with the doctor who had performed the vaccination in September last, and were informed by him that shortly after vaccination the child got chicken-pox, which was at that time prevalent in the neighbourhood; that when nearly well she suffered from a very severe attack of eczema; that the combined trouble and resulting exhaustion proved fatal to her; that she had been vaccinated with lymph obtained from the board's vaccine department, and that the vaccination was normal and had nothing to do with the subsequent complaints. The board had forwarded a copy of the doctor's explanation to the guardians, who took no exception to the opinion he expressed. He saw no reason for holding an inquiry. With reference to the lymph used in Ireland, Mr. Cherry said that the Local Government Board informed him that the glycerinated calf lymph procured by them under contract from the National Calf Vaccine Institute, Sandymount, Dublin, was, before issue from the board's vaccine department, tested as to its efficiency and subjected to careful bacteriological examination. Its purity was thus insured. The dispensary medical officers throughout the country being aware of these arrangements to secure proper lymph, a further certificate of the purity appeared to the board to be unnecessary.

Tuberculous Cows.—Mr. Tyson Wilson called the attention of the President of the Local Government Board to a case in which cows condemned for tuberculosis of the udder had been sold, and asked him to inquire whether the cows had been killed and the meat sold to the public, or whether they were still being used for dairy purposes. Mr. Burns answered that he had made inquiry on this subject. He understood that on January 26th last the veterinary inspector of the London County Council certified three cows on this farm to be suffering from tuberculous disease of the udder, and that Mr. Goulding undertook not to use the milk from these cows. He also understood that the cows were afterwards sold, and that they eventually found their way to Salisbury Market, where they were

again sold, and that from that time they were lost sight of. He had not been able to obtain any further information with regard to them.

Sanitary Sleeping Quarters for Seamen.—Last week Mr. Lewis Haslam called attention to the report of Dr. Howard Jones, of Newport, relating to the insanitary condition of the seamen's accommodation in many ships, and asked the President of the Board of Trade to take steps to improve the conditions. Mr. Churchill replied that on the receipt of the report in October last the Board of Trade at once made inquiries into the particular case referred to by the medical officer, and the defects which had been observed were made good. Similar action was always taken when particular cases were reported by the local sanitary authorities. The Merchant Shipping Acts gave full power to secure that crew spaces on British ships should be in all respects available for the proper accommodation of the men who occupied them. These provisions did not apply to foreign ships.

The Factory Surgeon at Horwich.—On Monday Mr. Tyson Wilson asked the Secretary of State for the Home Department whether he had received a petition against the appointment of Dr. Rigby, of Adlington, as factory surgeon for the Horwich district; whether he was aware that the gentleman appointed lived a considerable distance from the district in which his duties were, that there were six medical men resident in Horwich who were all fully competent and qualified to perform the duties, and that inconvenience had been caused by the appointment; and whether he would reconsider it, with the view of appointing a resident medical man to the position. Mr. Secretary Gladstone replied that he had received two letters from the urban district council of Horwich on the subject. The facts were: Horwich and Adlington were contiguous districts, and, prior to the appointment referred to, had each a certifying surgeon. As, however, there were few factories in the two districts—thirty in Horwich and seventeen in Adlington—and the area was small, it was decided, in accordance with the usual policy of the department, on the recent retirement of the Horwich surgeon, to amalgamate the districts; and the appointment for the combined district was given to Dr. Rigby, who was already surgeon of Adlington. Dr. Rigby lived only a short distance from Horwich (about two miles), and visited Horwich (where he had a room) at least twice a week, and oftener if necessary. He had not been able to hear of any inconvenience caused to employers by the arrangement; but the district council stated that complaints had been made of inconvenience caused to children in cases where they had to attend at the surgeon's room, and he had asked the council for further particulars.

West Bromwich Medical Referee.—Mr. Wardle asked the Secretary of State for the Home Department whether he was aware that Dr. Langley Browne, of West Bromwich, who was the medical referee under the Workmen's Compensation Act, was also a director of the Birmingham and Midland Assurance Company; and whether he would say what action he proposed to take with a view to avoiding prejudice in cases in which Dr. Langley Browne was called upon to give an opinion. The Under Secretary for the Home Department reported that the Secretary of State had not previously had this matter brought to his notice. Dr. Langley Browne, who was a practitioner of considerable standing, was a medical referee under the Act of 1897, and was reappointed under the Act of 1906. The matter would have the Secretary of State's consideration, and he would let the hon. member know the result.

Pleas of Insanity, Scotland.—Last week Mr. Watt referred to the number of serious cases in Scotland in which pleas of insanity were being accepted, and asked whether in view of the fact that such pleas depend on expert evidence, the Lord Advocate would take steps to see that the poor man suffered no disadvantage. Mr. Ure replied that his attention had not been called to the number of these cases. Where a plea of insanity was tendered, he was not aware that a poor man suffered any disadvantage as compared with a man who could afford to pay for expert evidence.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND DISTRICT.

EFFECTS OF THE POOR LAW COMMISSION.

It will be interesting to see how the Chorlton Board of Guardians will receive a motion, of which notice has been given by a member of the board, to the effect that any person requiring medical relief in the union should be able to choose his own doctor and that the board should pay for such relief on a scale to be fixed. This has, no doubt, been suggested by the recommendation in the Majority Report of the Poor Law Commission, though the motion goes beyond what the commissioners actually suggest. The proposal of the report is not that paupers who have made no self-provision against sickness should be able to choose their own doctor, but that strong inducements should be offered to get all the working classes with an income below a fixed wage limit to join some provident dispensary, and only then when they have become members of a dispensary shall they have a choice of the doctors on the dispensary staff. The commissioners express a hope that in course of time it will be possible to do without the district medical officers, but evidently that is looking forward to a time when all, or nearly all, the working classes will have been induced to join some provident society, and in the meantime, until that is accomplished, the district medical officers would have to be retained as at present. Choice of doctors for those persons who make no self-provision is not suggested by the commissioners. There may be a good deal to be said for the motion which is to come before the Chorlton Guardians, but it should be perfectly understood that it is much out-bidding the Majority Report, and it would be a pity if the majority scheme should be prejudiced by an impression that it proposes such a radical change as the Chorlton Board is asked to consider.

POOR LAW MEDICAL OFFICER AND PUBLIC VACCINATOR.

At the fortnightly meeting of the same board the resignation of Dr. Mumford as district medical officer for Chorlton-cum-Hardy was accepted, and it was also decided to terminate his contract as public vaccinator for the district. It was stated that the salary paid to Dr. Mumford had been £30 a year, and that for this he had had to do a great amount of work. The position of public vaccinator which had been held in conjunction was supposed to compensate in some measure for the small salary, but last year the vaccination fees only amounted to £31. The clerk of the board said he thought a salary of £30 was totally inadequate. It may be noted that Mr. Francis Chandler, one of the Poor Law Commissioners who signed the Minority Report, is an ex-chairman of the Chorlton Board of Guardians, and in signing the report he subscribed to the following sentence: "The conditions under which district medical officers carry out their duties is as unsatisfactory as their remuneration is demoralizing." Possibly the guardians took to heart this and other similar remarks of both the Majority and the Minority Reports, for in a fit of magnanimity they resolved to advertise for a district medical officer for Chorlton-cum-Hardy at the increased salary of £40 per annum.

THE MANCHESTER PORT SANITARY AUTHORITY.

A memorial has just been presented to the Manchester Port Sanitary Authority by about a score of leading shipping firms in Manchester, complaining that the methods of food inspection adopted by the authority are having the effect of hampering the trade of the port. While the memorialists approve of the principle that only sound food should be allowed to enter the port, they submit that until the inspection at other ports is made as strict as it is at Manchester, the interests of the traders of the port will be damaged. They therefore ask the authority to use its influence with the Local Government Board to have pressure brought at other ports in order that the methods of inspection may be made uniform. Dr. Dearden, the port medical officer, said that, besides Manchester, London was the only other port where the rules for inspection were properly carried out. Hull and Newcastle have also begun to put in force the regulations, but other ports show a considerable amount of laxity. As showing the necessity for

strong action, it may be noted that during the past month nearly 3 tons of oranges and 5 tons of onions have been seized, and altogether 11 tons 4 cwt. of food were condemned in addition to voluntary surrenders. For some time the Liverpool Port Sanitary Authority refused to meet the Manchester authority to consider the subject, but it is now announced that a conference has been arranged. The memorial is to be sent to the Local Government Board, which is already considering how to secure a general uniformity, and it is hoped that other ports will be brought up to the standard set by Manchester and London.

CAMBRIDGE.

MEDICAL INSPECTION AND THE TEETH OF SCHOOL CHILDREN.

THE municipality of Cambridge is in some respects one of the most progressive in the kingdom in regard to public health. Some years ago the Cambridge Town Council appointed a medical inspector of school children, and the members were actually surcharged by the Local Government Board's auditor for doing what the Education (Administrative Provisions) Act, 1907, so soon after made compulsory. This surcharge was afterwards remitted by the Board, which however pointed out that the council's action had been illegal. Following on this, the council took advantage of the new Act to appoint in 1907 a dental inspector at a salary of £50 a year, and through the generosity of Mr. Sedley Taylor this work of dental inspection was supplemented by dental treatment, and so the first dental clinic in connexion with elementary schools in this country was established. The report of the work thus done during the year ending October 28th last has recently been published, and the results are so satisfactory that the town council unanimously decided to continue the work at the expense of the rates. The estimated cost is about £410 a year, which represents 1d. in the £. No one nowadays will question the fact that this is a wise outlay of public money, and one which will bring a large return in the way of increased health and efficiency in the rising generation. The experiment is one that is certain to be closely watched by other authorities throughout the kingdom. Cambridge is to be congratulated on the generosity and enlightenment of Mr. Sedley Taylor, who made the experiment possible, and the members of the Town Council on having so heartily taken it up.

RESULTS OF THE SEWERAGE SCHEME.

Another proof of the town's progressive spirit is furnished by a paper on "Cambridge To-day: its Health, Life, and Social Conditions," by Alderman Dr. Dalton, Chairman of the Public Health Committee. Dr. Dalton is able to show that the result of the sewerage scheme carried out in 1895 has been a material lowering of the level of the subsoil water and a remarkable concurrent improvement in the health of the district. Thus, in the period from 1891 to 1905, while the general death-rate of England and Wales has decreased by 9 per cent., that of Cambridge has decreased by 14.66 per cent.; the phthisis death-rate has declined by 20.3 per cent., as compared with 15.3 per cent. in England and Wales generally; while the cancer death-rate has declined by 22.3 per cent., although it has actually increased by 14.9 per cent. in the rest of the country during the same period. These figures are very encouraging, and are quite conclusive of the wisdom of the very costly scheme which was carried out in 1895.

ADDENBROOKE'S HOSPITAL.

The committee of Addenbrooke's Hospital found itself last September under the necessity of making another special appeal for increased annual subscriptions. In response, about £2,000 has been received, but of this amount only £500 represents new or increased subscriptions which will recur this year. The deficit is expected to amount to £1,300 or £1,500, and in order to place the hospital on a sound financial basis the committee consider that the annual subscriptions should be increased by £2,000 a year; at present, excluding a grant of £300 from the university, they amount to £2,344, while the income from investments was in 1907 £1,829, the expenditure was over £10,000, and the difference has been made up partly by means of collections and donations, and partly by

rising legacies for current expenses. Any curtailment in the work of the hospital would be a serious matter, not only for the town and county, but also for the medical school, and it is therefore hoped that non-resident members of the university may show themselves ready to help the hospital by becoming annual subscribers.

BIRMINGHAM.

THE MEASLES EPIDEMIC.

DURING the three months ending February 27th, 2,351 cases of measles have been reported by school teachers, school attendance officers, and health visitors, and it is estimated that there have been altogether nearly 8,000 cases of measles during these three months. The number of deaths during some weeks was very large; as many as 45 have been recorded in one week. Dr. Robertson, M.O.H., considers that the present method of reporting cases is, from the point of view of prevention, probably as satisfactory as compulsory notification. Both forms of notification are insufficient, as they do not let the health department know of the existence of every case in its earliest stage, when effective advice could in a great many instances be given. There is evidence that the incidence of the disease and the liability to attack was not so great in infants' schools which were well ventilated as in those where teachers and scholars were accustomed to a close atmosphere. Some time ago the Education Committee instructed the teachers in four of the large infants' departments to issue notices to the parents of all the children in any class in which a case of measles had occurred. This notice indicated the symptoms to be looked out for, and recommended that the affected child should be kept in a warm room. This scheme worked so smoothly that the Education Committee has recently adopted it generally in all the infants' departments. Dr. Robertson has pointed out in a recent report that the lessening of the mortality from measles is mainly to be expected from the attention given by the health visitors and others to the instruction of parents in the methods of warding off dangerous complications. While it might be possible to delay epidemics to some extent, yet the infection of measles is so extremely diffusible—since one child will infect a larger number of susceptible children than in any of the other infectious diseases—that epidemics must, he thinks, of necessity occur. The mortality of the disease can better be reduced by means of the warning notices than by attempts to delay the epidemics.

WALES.

A MEDICAL BLACK LIST.

THE account given in the *Western Mail* of a letter read at the meeting of the Cardiff Board of Guardians last Saturday, from the Poor Law medical officer for the Penarth and Dinas Powis district, and of certain interviews with local medical men practising in Penarth, throws a curious light on the economic position of the district, which lies on the south side of Cardiff Bay, and is practically a suburb of Cardiff. Dr. T. F. Roche, Poor Law medical officer, in his letter to the board of guardians complained of the considerable increase in the number of poor persons now applying to him for parochial medical attendance; he attributed this to a system adopted by the combined junior medical profession at Penarth of jointly "black listing" their debtors and boycotting them. He alleged that there were 600 to 700 poor families already on the list, and that they could not get a visit from a local doctor without first producing a fee of 3s. 6d., on the understanding that if on the first visit the case proved to be likely to overtax the patient's capabilities of finding ready money, the fee was to be handed back and the case declined. Dr. Roche added that if he also refused, the only course open to them was to apply to the relieving officer or overseer of the poor for a medical relief order. Rather than undertake the obligations

which an official order entailed, and the burden of reporting on all these cases weekly, he had been giving them the attendance they required without the intervention of the relieving officer. From the statements made to our contemporary by local medical men interviewed in Penarth, it is a mistake to say that it was only the junior members of the profession who were concerned in the matter, for all the doctors in Penarth, with one exception, had come to an arrangement about fifteen months ago under which each was supplied with a list of the names of people who had contracted debts and failed to discharge them after a period of over twelve months. This action was not directed against the poor of the town, and all the doctors in Penarth attended poor people, knowing that they could not pay, and not expecting them to pay. The action was really directed against people who could afford to pay for medical attendance—people who drew good salaries and owned the house they lived in. There were about 600 names on the list, the majority being those of people owing money to as many as three or four medical men; a name was only put on the list when twelve months had elapsed from the time of sending the account.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

EDINBURGH SCHOOL BOARD ELECTION.

ON April 2nd the citizens of Edinburgh have to elect twenty-one members to serve on the new board. Dr. James Smith, of Brunton Place, Edinburgh, is one of the candidates. Under Section 4 of the new Education (Scotland) Act power is given to the board to "supply medical officers or nurses, and to provide appliances or other requisites" to carry out the medical examination and supervision of the pupils. It is very desirable, therefore, that there should be one or more members of the medical profession on the new board. Other sections of the community look after their interests in getting representatives elected, but the medical profession is generally rather apathetic. It is hoped, however, it will rally round Dr. Smith.

LOCAL GOVERNMENT BOARD FOR SCOTLAND.

Mr. J. Patten MacDougall, C.B., is about to retire from the Vice-Presidency of the Local Government Board for Scotland, and the position has been offered to Sir George McRae, M.P. for South Edinburgh, who it is stated, has informally intimated his acceptance. The salary is £1,370. Sir George McRae is a member of a firm of balters in Edinburgh, and he was at one time the highly successful treasurer of the city. A few weeks ago it was rumoured that Sir George McRae had been offered an appointment in connexion with the Scottish Prisons Board, at a salary of £1,100, but that statement was officially denied. Sir George McRae's appointment will necessitate a by-election in South Edinburgh, where he had a majority of 4,174 at the last general election.

EDINBURGH ROYAL INFIRMARY RESIDENTS' CLUB.

A meeting of this club was held in the large clinical surgery theatre of the Royal Infirmary on March 23rd. Dr. Alexander James in the chair. The president referred to the death of Professor D. J. Hamilton, who was the president of the club for the current year. Dr. Byrom Bramwell was nominated by the committee and elected by the club as president for the remainder of the term, and he will preside at the annual dinner in June. The constitution of the club was altered. According to the new constitution, each resident physician or surgeon on being appointed by the managers of the infirmary becomes *ipso facto* a member of the club, to the funds of which he is invited to pay an entry fee of 5s. The treasurer, Dr. W. Macrae Taylor, submitted proofs of the new edition of the list of members, and requested all present to notify to him any change of address of any member of which they might be cognizant.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE CRIPPLES' INSTITUTE, BELFAST.

The annual meeting of the Incorporated Cripples' Institute, People's Palace, and Bangor Homes of Rest, was held in the Institute, Belfast, on March 24th. The chair was taken by the Lord Mayor. Mr. Norman Barnett presented the surgical report on the institute, and drew attention to the fact that nearly all the cases were due to tubercle; considerable improvement followed the prolonged care rendered possible by the institution which would not have been received at the patients' own homes. Dr. Gorman presented the medical and surgical report of the Homes in Bangor, where 40 children were in residence at the beginning of the year and 80 had been since admitted, many of whom required medical or surgical treatment.

NATIONAL SERVICE LEAGUE.

The importance of the principles of the National Service League, more especially in their influence upon the physical health of town populations, has been fully recognized by the medical profession in Dublin. A branch of the league has been established, consisting of 270 members, of whom 36 are medical men. At the annual meeting held recently the Presidents of the Royal College of Physicians and the Royal College of Surgeons both spoke in favour of the league's principles. The president of the Dublin branch is the Earl of Meath, K.P., and the honorary secretary is Dr. John B. Story, 6, Merrion Square, Dublin, from whom further information can be obtained.

Correspondence.

HUNGER PAIN AND DUODENAL ULCER.

SIR,—Mr. Moynihan's letter obliges me to trouble you again. He takes up the position that because he has performed gastro-jejunostomy for so many cases in which he had diagnosed duodenal ulcer, therefore the duodenal ulcers must have been there. What is the proof of this? All my surgical colleagues tell me that it is not possible to know in many cases whether there is a duodenal ulcer or not. This point ought to be cleared up. Mr. Moynihan tells us he operates with no other ground but the history of the case, and he contends that that is sufficient, and appeals to his operations as proof of the correctness of his diagnosis. I want to challenge the validity of this appeal and to affirm that a surgeon who performs a gastro-jejunostomy for a supposed case of duodenal ulcer is not, in a large proportion of cases, in a position to say whether there is a duodenal ulcer or not.—I am, etc.,

Birmingham, March 29th.

ROBERT SAUNDREY.

P.S.—It has been pointed out to me that six hours, the interval of time after the test meals given in my letter last week, is shorter than in my previously published writings. Up till a short time ago I allowed eight hours, and it would be better for experimenters to stick to this for the present, as it is with that period that I can claim a lengthened experience, but I have lately used six hours, and have not, so far, been misled by it. It is clear that the shorter the interval the stronger the evidence of the absence of obstruction.

SIR,—I have read with the greatest interest Mr. Moynihan's letter in the JOURNAL of March 27th. I think it right to add the evidence obtained in my more limited experience to that given by him. During the past eighteen months I have operated on 50 cases of duodenal ulcer (perforative or non-perforative) in which the diagnosis of the locality of the ulcer, based mainly on the presence of this symptom, either by myself or by the physician who submitted the case to me for operation, was absolutely confirmed at the time of operation. As stated by Mr. Moynihan, there was not the slightest difficulty in recognizing and demonstrating the presence of an ulcer or its results. The condition which in my experience is most likely to simulate this symptom is one of

cholelithiasis, in which the gall stones are limited to the gall bladder, and are small, multiple, and smooth.

In such cases I have found that the contractions of the gall bladder associated with the demand for a supply of bile when the food enters the duodenum, may give rise to a type of pain very like the so-called hunger pain. It is, however, neither so persistent nor so regular in its recurrence after each meal, and is very frequently associated with nausea or vomiting, which are generally absent in duodenal ulcer.

The suggestion that the cases under consideration should be submitted to a surgeon for "exploratory operation" is repugnant to every operating surgeon. The operation is not for diagnostic purposes but for the treatment of a pathological condition which can be recognized with great accuracy by the expert physician.—I am, etc.,

Belfast, March 27th.

A. B. MITCHELL, F.R.C.S. Ire.

SIR,—After reading the recent correspondence on the diagnostic value of "hunger pain," I find it difficult to accept Dr. Hutchison's theories in face of Mr. Moynihan's operative experience in over 230 cases of duodenal ulcer. Mr. Moynihan states that his operations reveal that he is mistaken in less than 5 per cent. of the cases, in which he has diagnosed a duodenal ulcer on account of the occurrence of the symptoms, including hunger pain, which are generally regarded as due to a functional condition called "acid dyspepsia" or "hyperchlorhydria." He appears therefore to have proved that this disease, which has been diagnosed for years as acid dyspepsia or hyperchlorhydria, is really duodenal ulcer. But every hospital physician who sees out-patients, and every general practitioner knows how common this condition is. He also knows how amenable it is to treatment, how the symptoms can be instantaneously relieved and in time be caused to disappear completely.

Between 1826 and 1892 *post-mortem* examinations were made on 17,652 cases at Guy's Hospital; in 62 of these an unhealed duodenal ulcer was discovered, but in only 20 was it the direct cause of death by perforation, haemorrhage, or stenosis of the bowel or common bile duct. The presence of an ulcer can be recognized with more certainty by a thorough examination of the inside of the duodenum after death than by examination of its outside at an operation, so that our records of the pathology of the dead are probably even more reliable than Mr. Moynihan's observations on the "pathology of the living."

We can thus draw the following conclusions from clinical experience, *post-mortem* records, and the observations of Mr. Moynihan, the Mayos and other surgeons: (1) Duodenal ulcer is an exceedingly common condition; (2) it is easily cured by medical treatment and is fatal in an extremely small proportion of cases, as in less than ten years Mr. Moynihan has proved the existence by operation of nearly four times as many cases of duodenal ulcer as were found unhealed in 17,652 consecutive autopsies, and more than eleven times the number which proved fatal in sixty-six years at one of the largest hospitals in the kingdom.

It is thus obvious that the proper treatment of duodenal ulcer is medical and not surgical. Mr. Moynihan should rest content with having taught us a most valuable lesson in the symptomatology and prognosis of duodenal ulcer, and should cease to perform what his own work has clearly demonstrated to be an unjustifiable operation in the vast majority of cases. If, however, he decides to continue his researches on "the pathology of the living," I should be most grateful to him if he would give me an opportunity, such as he has offered to Dr. Hutchison, of personally observing some of his cases, and of seeing on what evidence he bases his diagnosis of duodenal ulcer at the operation as well as before it.—I am, etc.,

London, W., March 28th.

ARTHUR F. HERTZ.

THE TREATMENT OF SCHOOL CHILDREN.

SIR,—I should like to add my word of warning to that of Dr. Lyster published in the BRITISH MEDICAL JOURNAL of March 27th, p. 817, as to the urgent need of common action on the question of treatment as a consequence of medical inspection.

It is quite clear that many education authorities are blindly feeling it the obvious way, and the simplest thing in the world, to make an arrangement with the existing

hospitals to render services in return for a subscription. What is, perhaps, more surprising is that hospital managers are tumbling headlong into the same morass. Neither body seems to see that municipalization lies that way. And yet a moment's reflection will make it clear.

If once hospitals accept subsidies from the rates voluntary subscriptions will cease; wealthy people will not pay both ways. When once it is clear that children whose parents can well pay are being sent to the hospital under the "recommendations" of the education authority, the medical staff will resent it. Thus the hospitals are between the devil and the deep sea. No one who knows anything about hospitals will dispute the statement that only a slight turn of the screw is necessary to make every hospital in the kingdom insolvent. At first the evil day will be staved off by larger and larger subsidies, but municipalization is the inevitable end. This may be good or it may be bad, but it ought to be clearly foreseen.—I am, etc.,

Stafford, March 29th.

JOHN PRIESTLEY.

RATIONAL DRESS FOR THE SOLDIER.

SR.—With reference to the leading article in the JOURNAL of March 13th on the "Marching Soldier," may I point out that about ten years ago, in an article on "Rational Dress for the Soldier" published in the *Indian Medical Gazette* of November, 1899, I advocated "a coat that could at all times be worn loose and open."

I had for some years observed that a great amount of suffering, disablement, and disease (especially heat apoplexy) were caused by the dress of the soldier in India, and I advocated that the common-sense style of dress adopted by the civilian workman should be used by the soldier, but I looked in vain for any recognition of my observations, or any approbation of my recommendations from the official world, from which I should have expected them.

The dress was warm and nearly waterproof, buttoned up and strapped down by belts and putties. It gave rise to overheating and exhaustion. My chief recommendations were that no putties should be worn, and no belts over the coat. I also advocated a shirt cooler than the present woollen one. I desired that the dress of the soldier on duty should be assimilated to that worn by officers and civilians when engaged in severe exercise, such as hunting or shooting. The present dress seemed to me unscientific, cruel, and wasteful of the men's energy.

I shall be glad to send my essays to any one interested in this important question. My remarks apply chiefly to hot climates.—I am, etc.,

Kingstown, co. Dublin, March 21st.

C. J. MCCARTIE,
Lieut.-Col. I.M.S.

DISINFECTION BY STEAM.

SR.—In the note on Disinfection by Steam, published in the JOURNAL of March 20th, 1909, p. 741, some references are made to an article which I have recently published on The Essentials of Disinfection and Sterilization by Steam (*Medical Chronicle*, December, 1908).

To shorten statements which I had tried to condense to the utmost, some sentences have necessarily been omitted by the writer of the note, and these omissions alter very considerably the meaning of my text. I would therefore be much obliged to you if you would reproduce verbatim the passage regarding which I think misunderstandings are likely to arise. I do not think that I could discuss here the facts and experiments upon which the conclusions are based; these, however, will be found explained in my paper.—I am, etc.,

SHERIDAN DELÉPINE.

Public Health Laboratory, Manchester, Mar. 22nd.

Practical Disinfection and Sterilization.

From the data given in the preceding paragraphs it is possible to deduce the conditions which have to be fulfilled in order to ensure the disinfection or sterilization of infected articles.

In discussing these points reference will be made to current steam disinfectors only. When confined steam is used, arrangements must be made for the expulsion of air by special means, and time must be allowed for the working of various devices. It would be inconvenient to introduce details of this kind in a general statement.

1. The time necessary to heat and fill the disinfecter with dry

steam at the desired temperature depends on the method of heating and on the size and weight of the disinfecter. On the supposition that the disinfecter and its contents are cold at the beginning and that the weight of the load is about 100 lb., the time required to fill the disinfecting chamber with steam (steam free from air) at 100° C. will vary (according to the machine used) between 20 minutes and 1½ to 2 hours. Disinfectors of usual size would require at least 30 minutes.

2. For the penetration of current saturated steam free from air through 8 to 10 inches of mattress or blanket, 10 to 15 minutes should be allowed; this time may be reduced when current steam under a pressure of 10 to 20 lb. is used, provided always that some space is left between the articles.

3. With current steam at ordinary atmospheric pressure, 5 to 15 minutes' exposure is required to disinfect products containing pathogenic bacteria of a resistance not exceeding that of the spores of the *Facillus anthracis* (the variations in the time are due to variations in the amount and kind of associated material), but if it is desired to secure complete sterilization of products containing resistant spores of earth bacilli, at least 2½ hours' exposure should be allowed, and sometimes more than eight hours would be required.

The time necessary for ordinary disinfection and for complete sterilization respectively would therefore be as follows:

A. Operations with Current Saturated Steam at 100° C.

	Time taken for Disinfection. Sterilization.	
	Minutes.	Minutes.
For heating and filling disinfecter with steam at 100° C. ...	30 to 90	30 to 90
For penetration of bulky articles such as large mattresses ...	10 to 15	10 to 15
For actual disinfection ...	5 to 15	150 to 480

Total time required from the beginning to the end of the operations, the disinfecter being cold at the beginning ... 45 to 120 ... 190 to 585

Therefore the time necessary for ordinary disinfection by current saturated steam at atmospheric pressure would vary from 2 to 2 hours, and for sterilization from 3 hours to over 9 hours.

B. With current steam at 10 lb. pressure (115° C.) the time necessary for ordinary disinfection would be reduced by a few minutes only, but complete sterilization would be effected much more rapidly than with steam at 100° C. The earth bacilli spores would be killed in from 15 minutes to 30 minutes by steam at 115° C., so that the duration of the whole process of sterilization would take from 55 minutes to 145 minutes (or by deducting the preliminary period of heating 25 minutes to 55 minutes).

C. With current steam at 30 lb. pressure (126° C.) the time necessary to obtain complete sterilization would be from 45 minutes to 130 minutes (or by deducting the preliminary heating period 15 minutes to 40 minutes).

BEER AND THE MATERIALS USED IN ITS PRODUCTION.

SR.—Our attention has been called to an article in the BRITISH MEDICAL JOURNAL of March 13th entitled "Beer and the Materials used in its Production." With that portion of the article which has reference to the practice and science of brewing we are not now concerned, but there are several statements touching on the "purity" and wholesomeness of beer, which are, in our opinion, calculated to mislead your readers, and on these we ask your permission to make the following brief observations:

On reference to the brewing returns for the year ended September 30th, 1908, which is a later one than that referred to by your contributor, it will be seen that 34,953,274 bulk barrels of beer were produced during the year in question, in the brewing of which were used 50,960,923 bushels of malt and 4,196,406 cwt. of grain materials (chiefly unmalted barley, maize, and rice) and sugar. Calculating from these numbers, it will be found that 82 per cent. by weight of the total brewing materials used during the year in question consisted of barley malt. In regard to hops, it may be pointed out that the substitutes employed amounted to only 0.007 per cent., which is obviously an utterly insignificant and negligible quantity. The grain materials used other than barley consisted almost entirely of maize and rice prepared with the utmost skill, and generally of a much higher degree of purity than the same cereals in the condition in

¹ It must be borne in mind that in the above table the times given include the time necessary to heat a cold machine, as a rule, the disinfecter is already hot before the articles to be disinfected are put into it. Therefore, in actual practice, the time required for penetration and disinfection is about 15 to 30'. With regard to sterilization, the times given in the above table would, in the great majority of cases, be excessive, the most resistant spores are not often present in articles which have to be disinfected.

which they are used in the kitchen for the preparation of puddings and other dishes. The sugar consisted chiefly of cane sugar, invert sugar (the main constituent of honey), and starch sugar, with a small quantity of caramelized or burnt sugars, used for their special flavouring and colouring properties. These are all absolutely unexceptionable in respect of purity and wholesomeness, and, it may be added, are largely used in the manufacture of confectionery and other food products. With reference to preservatives, we may point out that these are not, and cannot, be used in substitution of any proportion of the hops, but are employed in minute proportions in certain beers for well-defined technical reasons which it is difficult to deal with in a letter such as this, but which we should be pleased to place before your readers in another communication if you will be good enough to afford us that opportunity. In any case they are present in beer in very much smaller quantities than in a large number of "temperance" beverages and other food products which command a large sale, and the wholesomeness of which is never called in question.

Your contributor speaks of the occurrence of arsenic in certain beers some years ago as being the "chief" instance in which deleterious substances have been found widely distributed in beer. As a matter of fact this is, so far as we know, the *only* instance in which anything deleterious has been discovered in beer, and your contributor must surely be aware that the lamentable consequences to which he refers were the result of a serious and unfortunate oversight on the part of a single firm, and that the same consequences might quite well have happened to a number of other industries.

In reference to the statement that all materials used in producing beer ought to be thoroughly examined by persons competent to judge them, we may point out that this is actually done; and we venture to assert that there is no brewing material used in this country at the present moment which has not been carefully examined by some skilled expert, either on behalf of the manufacturer, or of the brewer, or of both. In addition to this, we may point out that the materials used in brewing are subjected to continual supervision by the officers of the Inland Revenue Department and their expert scientific advisers. Brewers are quite as anxious as your contributor appears to be that the beers they brew shall be wholesome and free from any injurious material whatever; and our large experience of the practice, both of the leading and also of a very considerable number of the smaller brewers in this country, justifies us in asserting that no such materials enter into the composition of beer. On those who assert the contrary lies the onus of substantiating their charge.—We are, etc. (for the Institute of Brewing),

ALFRED CHASTON CHAPMAN, F.I.C.,
Honorary Secretary to the Society of Public
Analysis and other Analytical Chemists.

E. R. MORITZ, Ph.D., F.I.C.,
Scientific Adviser to the Brewers' Society.

ALFRED GORDON SALAMON, A.R.S.M., F.I.C.,
Past President of the Institute of Brewing.

JULIAN L. BAKER, F.I.C.,
Secretary of the Institute of Brewing.

The Institute of Brewing, Brewers' Hall, E.C., March 23rd.

*—The figures quoted above from the latest official brewing returns, which had not appeared when the article in question was written, show that malt formed a larger percentage of the brewing materials used in the year 1907-8 than in 1906-7. We may point out that there was no reference in the article to the presence or absence of preservatives in "temperance" beverages, which cannot affect the fact of the addition of such substances to beer. It will hardly be maintained that the use of glucose containing a deleterious proportion of arsenic afforded evidence that all materials used in brewing were "thoroughly examined by persons competent to judge them" in 1900; no doubt greater stringency prevails at the present time, and, in insisting on the importance of such examination, negligence was not in any way imputed to those on whose behalf our present correspondents have written.

MEATY WINES.

SIR,—In your article on "Meaty Wines" you draw attention to what in my judgement is becoming a grave social danger. The specious and ingenious advertisement

of alcoholics under the guise of harmless medicaments is introducing drinking habits into numberless households. Hardly a day passes in which I am not asked my opinion of some drugged or otherwise sophisticated wine; and this occurs to an alarming extent in families hitherto practising total abstinence.

The utter absurdity of the claims made on behalf of these nostrums is of course known to every medical man; but to the public at large the "damnable iteration" of their therapeutic merits in every newspaper and on every hoarding is dangerously seductive, and calls for authoritative condemnation on the part of the medical profession. —I am, etc.,

Brookley, S.E., March 23rd.

J. S. BOOTHROYD.

THE COLD BATH TREATMENT OF TYPHOID.

SIR,—Being solely responsible for the Brisbane typhoid statistics referred to by Dr. G. Parker (p. 754), may I be allowed a few remarks on the above subject?

The effect of a single cold bath on the circulatory system is manifest; the pulse becomes small and hard, its rate reduced. We now know that these changes concur with a rise of blood pressure of from 15 to 40 mm. Hg.¹ The effect of a systematic course of cold bathing is hardly less manifest; the progressive softening (loss of vascular tone) and acceleration of the pulse which occurs to some extent in all cases is lessened and deferred. Formerly these circulatory changes were ascribed to progressive febrile degeneration of the cardiac muscle; increased rapidity was regarded as compensatory of diminished force. And a strong *a priori* case was made out against cold bathing in that it threw extra work on the enfeebled organ. This was difficult to answer except by appeal to experience. Now, however, the advocates of Brand's system are in an entirely different position. Recent work (Crile, Romberg, Passler) has shown that "it is the vessels that are paralysed, not the heart that is damaged." Langdon Brown: The increased rapidity of the heart's action is an attempt to maintain the necessary blood pressure in a vascular system which is unduly dilated; and this undue dilatation is checked and deferred by systematic cold bathing.

The view that the progressive circulatory failure of typhoid fever is an index of progressive vasomotor paresis is consistent with—indeed, explains for the first time—many clinical observations in the hydrotherapy of fever. In my monograph² I pointed out that the influence of cold bathing on the temperature is inversely correlated with its influence on the pulse. Early in the fever the temperature is resistant, and prolonged bathing in comparatively cold water is essential in order to obtain a satisfactory reduction; in the later stages the body temperature is readily reduced, and baths of short duration, or comparatively high temperature, are all that is required. The reverse is true as regards the pulse. Early in the fever the cutaneous vaso-constriction and reduction in pulse-rate is marked; in the later stages both these responses to refrigeration are modified.

All these observations are easily explained on the view that an increasing vasomotor paresis is the dominant factor in the circulatory failure; and so, too, is the conclusion—arrived at by all who have had much practical experience of cold bathing in typhoid—that body temperatures which are readily reduced by refrigeration are for the most part of bad prognostic significance.—I am, etc.,

London, S.E., March 23rd.

FRANCIS HARE.

¹ Janeway, *Clinical Study of Blood Pressure*, p. 218.

² *Physiological Principles in Treatment*, p. 291.

³ *Cold-bath Treatment of Typhoid Fever*, 1898.

THE United States Treasury Department has recently issued a statement giving all the items of expenditure in connexion with the last illness of President McKinley, under the appropriation of £9,000 for this purpose made by Congress on July 1st, 1902. The payments to the physicians, as the records appear on the Treasury ledgers, follow: Dr. M. D. Mann, £2,000; Dr. H. Mynter, £1,200; Dr. C. McBurney, £1,000; Dr. Roswell Park, £1,000; Dr. C. G. Stockton, £300; Dr. E. G. Janeway, £300; Dr. H. G. Matzinger, £150; Drs. W. W. Johnston, E. W. Lee, and H. R. Gaylord, £100 each; Dr. N. W. Wilson, £50; Dr. G. McR. Hall and Dr. E. C. Mann, £40 each.

Medico-Legal.

HILLIYER V. THE GOVERNORS OF ST. BARTHOLOMEW'S HOSPITAL.

This case, which was heard by Mr. Justice Grantham and a special jury on Friday and Monday last, raised a question as to the liability of the governors of a hospital for negligence.

Mr. J. B. Matthews was for the plaintiff; Mr. McCall, K.C., and Mr. Norman Craig for the defendants.

It appeared that the plaintiff, a medical practitioner, was admitted to St. Bartholomew's Hospital on March 28th, 1907, in order that he might be examined under an anaesthetic. It was alleged in the statement of claim that, for the purpose of the examination, the plaintiff was placed on an operating table in such a position that his arms were allowed to hang over its sides; that his left arm was in contact with a hot-water tin projecting from beneath the table, and the inner part of his right arm was bruised by the operator or some other person pressing against it during the operation; and that the result of these injuries was traumatic neuritis and paralysis of both arms, and he had ever since been unable to exercise his profession as a medical man. It appeared that the examination was undertaken gratuitously, as the result of representations made by the plaintiff that he had come to the end of his resources. The defendants denied the alleged negligence, and pleaded that if they owed any duty to the plaintiff, it was to exercise reasonable care in the selection of the hospital staff, in which duty they had not failed.

After the plaintiff's case had been opened, it was submitted by Mr. McCall, on the part of the defendants, that no action would lie against the defendants being the governors of a charity which was defined by the 22 Geo. III. c. 77. Moreover, it had been held in a very similar case, *Hall v. Lees*, 1904, 2 K.B. 602, that the duties of a nursing association were satisfied by the supply of duly qualified nurses, and this association was not liable for their negligence. In the present case it was not even alleged that the defendants had failed in taking due care to provide a qualified staff.

To this Mr. Matthews replied that he alleged that there was an implied promise on the part of the defendants to provide that the operation should be conducted with due care, and that they would provide fit and proper persons to place and maintain the patient in a safe position on the table, and a breach of those promises or warranties.

Mr. Justice Grantham decided that the evidence had better be heard.

Dr. Risien Russell said that when he saw the plaintiff in April, 1907, after his visit to the hospital he was suffering from paralysis of the left arm and partial paralysis of the right arm. It was caused by neuritis. Witness had not heard that plaintiff suffered from malarial fever in West Africa. He never knew of a case in which a burn caused by a hot-water tin resulted in paralysis.

Sir Isambard Owen gave evidence for the plaintiff.

The plaintiff in his evidence said that he went to West Africa in 1904 as medical officer to a mine, and returned in February, 1905. In June, 1906, he had an attack of sciatica, but he got better, but in September, 1906, the attack recurred, and he was then treated by Dr. Gardner. In March, 1907, he was examined at the hospital. The day after the operation the warden and the house-surgeon told him that his arms had not been supported whilst he was under the anaesthetic, and that they could not account for the burn on the arm, unless it came in contact with a hot bottle or some hot apparatus. The witness admitted that when the sciatica became acute he began to inject morphine, and that he took a certain amount of alcohol when in West Africa.

At the conclusion of the evidence for the plaintiff, counsel for the defendants again submitted there was no case.

Mr. Justice Grantham, in giving judgement, said that it was impossible for him to allow the case to go to the jury. It was involved in doubt as to the facts. When he was 40 years of age the plaintiff went to the West Coast of Africa. When there he took two or three whiskies and sodas a day. That was the worst thing he could have done. It was not much to be wondered at, that on his return he "took it easy." According to the case as it was opened, he was really employed as a locum tenens; but it appeared that he was really employed only a short time. He was then struck down by sciatica. He had a good friend in Dr. Gardner; but he did not tell Dr. Gardner about the morphine, and continued to take alcohol in spite of his advice. The sciatica forced him to go to the hospital. An examination took place. As to the cause of his suffering after the examination his lordship said he did not understand it. It was suggested that it was caused by a hot-water can; but he could not understand what evidence there was on the point. Nor was there anything to account for the alleged pressure on the right arm. He apparently got bad after some weeks; and as to the right arm the predisposition to neuritis made it become worse. It was clear that the plaintiff had suffered very much before going to the hospital. Against whom was the negligence alleged? If there was any negligence it was that of the surgeon; but it was admitted that he could not make the hospital liable as he was not its servant. Now he had been asked to hold the Lord Mayor and Corporation of London liable. It was said that as a matter of policy he should let this case go to the jury, but he thought it would be a fatal policy to the public to allow a case to go to the jury under these circumstances, because, if he did so, everybody

who happened to have a grievance against the hospitals would be bringing an action "on spec," and raising all sorts of questions which would be disastrous to those who controlled these institutions.

His lordship accordingly entered judgement for the defendants, with costs.

THE BARTITSU LIGHT CURE.

WE learn from a report in the *Daily Telegraph* that the creditors and shareholders met under the winding-up order made against the Bartitsu Light Cure Institute (Limited) on March 23rd. The company was registered in March, 1906, to take over and develop the business of the Bartitsu Light Cure and Electro-Therapeutic Institute, carried on by Mr. E. W. Barton Wright. The company carried on business in Bedford Row and Albemarle Street, apparently at a loss throughout. The directors attributed the failure to lack of funds consequent upon a judgement for a large sum being recovered against the company by a former medical assistant at the institute. A receiver had been appointed on behalf of the debenture holder, and he was now in possession of the assets. The liabilities were returned at £3,260, which is expected to rank against assets £435, after payment of the claim on debentures. The deficiency as regards shareholders is £21,794. The liquidation was left in the hands of the Official Receiver.

RELATIONS OF MEDICAL MEN WITH UNREGISTERED DENTISTS.

WE have received a copy of the *Coatbridge Express* for February 17th, 1909, containing an account of an action brought by Bethia C. Dickson against "The Hygienic Institute" of Glasgow and Coatbridge, claiming damages for serious injury alleged to have been caused to her mouth by an operator in the employment of the defenders when extracting her teeth. Mr. Dunn, L.D.S. (Glasgow), gave evidence in support of the pursuer's case, and said the condition present would have to be treated by a surgical operation. Dr. James Monie of Airdrie proved that previous to the extraction the pursuer was in a healthy condition, and he attributed her present weakly state of health to the extraction. The pursuer said she was called on by an agent of the defenders, who told her that for a certain period his firm would give painless extractions free, and she, thinking it a good chance to get her teeth out, gave him her order. She seems to have paid 16s. in all. The operations were repeated on several occasions, but on one that took place in August, 1908, the operator is alleged to have injured the gum and the jawbone. J. L. Dalziel, junior, of 156, Main Street, Coatbridge, said he was in the employment of defenders as an operator. Owing to the difficult nature of the case, Mr. Miley was selected by the head office to operate. He arranged with Dr. Martyn to be present, and, in fact, he was present, and the witness paid him a fee of one guinea. The doctor was present in the next room. Asked why he was not present in the operating room, witness said Dr. Martyn gave no reason, but could easily have been summoned if wanted. Witness was not a dentist, but he operated and administered local anaesthetics; he admitted having administered anaesthetics that were not local, and denied that the doctor was present in order to supervise the administration of anaesthetics. William Miley, the actual operator, said Dr. Martyn was present in an adjoining room, and within call if necessary. Mary Dalziel, daughter of John Dalziel, senior, manager of defenders at Coatbridge, said that Dr. Martyn was there, and she sat with him in the next room during the operation. David Dunbar, operator in the employment of defenders, gave evidence for the defence, but denied having done any extractions for the pursuer in this case. Dr. David Beaton stated that he had examined the pursuer's mouth, and did not see anything to show that there had been anything improper in the extraction of the teeth. The advocate for the defence put in a citation of Dr. Martyn and closed his case. The case was adjourned to March 15th, when the sheriff took the case to avizandum, and on March 15th delivered judgement, as reported in the *Airdrie and Coatbridge Advertiser* of Saturday, March 20th, 1909, to the effect that the defenders were under obligation to supply the ordinary skill and competence of persons practising the dental art, and that they had failed in this obligation, and were liable in damages to the pursuer, and the damages were assessed at £30, with costs.

At the Grimsby County Court on March 9th, a young woman, a draper's assistant, claimed £3 damages against the Hygienic Institute, of Berne House, Beverley Road, Hull, for the careless extraction of two teeth. The plaintiff had arranged to have a number of teeth extracted and replaced by artificial ones for an inclusive charge of £6. The defendant's representative, a Mr. Brown, extracted eleven teeth after injecting some fluid into the gums. Subsequently there was profuse bleeding, and Dr. Jeffs was summoned. He eventually stopped the bleeding by plugging. He stated in his evidence that, in his opinion, the forceps had been too deeply inserted, and had torn the gum. In answer to the legal representative of the defendant, Dr. Jeffs stated that no fault could be found for the way in which nine teeth had been taken out. The bleeding was accounted for by the cavity produced by the extraction of two front teeth. If the teeth were very bad such a cavity might be caused, but, in his opinion, the operation could not be said to have been skillfully performed. It was stated on behalf of the defendant that the man, Brown, had now left his employment. The plaintiff was awarded £3 damages.

The Hygienic Institute is described in *Truth's Cautionary List* (1909) as being one of the businesses carried on by a Jew of Roumanian origin, named Oscar Farkasch, in association with "J. L. Rosensheim and J. J. Sallmeyer," and is said to have a head office in London, and branches at Glasgow, Hull, and Newcastle. In the Grimsby case it was of course proper that the medical man sent for in the emergency should apply suitable treatment to arrest the hæmorrhage, but in the Coatbridge case some explanation appears to be required as to the allegation that a Dr. Martyn, a registered medical practitioner, was present in an adjoining room during one of the operations, and was paid a fee for attendance. Although he took no part in the proceedings, such conduct, if proved, might be held to come under the terms of the resolution passed by the General Medical Council on December 1st, 1899: "Any registered medical practitioner who knowingly and wilfully assists a person who is not registered as a dentist in performing any operation in dental surgery either by administering anaesthetics or otherwise, will be liable on proof of the facts to be dealt with by the General Medical Council as having been guilty of infamous conduct in a professional respect." It seems probable that the words "or otherwise" in the above resolution would include such conduct as that alleged against Dr. Martyn.

ALLEGED MALPRACTICE.

AT Bow Court Court on March 9th an action was heard, in which the wife of a solicitor at Leyton claimed £250 damages for negligence and careless treatment from a Walthamstow medical man. According to the claim, the medical man treated a fractured femur as merely a dislocated patella, with the result that one of the plaintiff's legs was now 2 in. shorter than the other. After evidence, which showed, among other things, that no malpractice had been alleged until the medical man threatened to sue for his fees and that the patient had caused her servant to remove nightly part of the bandages applied, Mr. Arthur Bryan, the counsel for the defence, claimed that the evidence could not be taken as proving either negligence or careless treatment. On the contrary, the treatment, both as regards the patella and the femur, had been shown to be what it should have been. The presiding judge took the same view, and the case ended in judgement for the defendant with costs.

MOTOR CAB DRIVERS.

THE death of the driver of a taximetric motor cab, found insensible at the Bank Station of the Central London Railway, was the subject of an inquiry at the City Coroner's Court on March 22nd. A representative of the cab company concerned gave evidence to the effect that applicants for employment as driver were medically examined with a view to eliminating as far as possible all risk to the public through the sudden death or other incapacity of a driver when on duty. The deceased when engaged had been examined in this fashion. The medical evidence furnished showed great enlargement of the heart and vegetations on some of its valves; an opinion was expressed that the man's heart must have been perceptibly diseased when he entered the service. The jury returned a verdict of death from natural causes.

PARTNERSHIP AGREEMENTS.

BIRMINGHAM.—(1) Partnership agreements prove too often unsatisfactory because the terms are not fully understood at the time they are entered upon, and each side should consult a solicitor. It is, above all things, desirable that there should be equitable terms of release, so that if the bond becomes intolerable it can be broken. Two years' purchase is a good price to pay by an assistant who is succeeding to only a third of a partnership, unless he is also to be paid his salary as assistant during the two years. The question, how long he should wait before obtaining a larger share, is not easily answered, as the senior partner may be a comparatively young man, and be unable to agree to his income being reduced, but, on the other hand, there ought to be a prospect of the total income of the practice being increased under the partnership, and the greater share might be made contingent upon the total income reaching a certain figure. (2) Equal annual holidays for each partner is the only equitable arrangement.

DISTRICT COUNCILS.

W. A. E., a candidate for the rural district council, does not hold any appointment under the Local Government Board. He asks whether the fact of accepting fees under the Notification of Infectious Diseases Act would debar him from accepting nomination for the office.

* * The acceptance of such fees is no disqualification for the office of district councillor.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

AFTER-ATTENDANCE OF SUBSTITUTE.

Zeno propounds the following query: A. is called to attend a case of fracture, owing to the sudden illness of another, B., being away from home. A. attended to the case, and on B.'s return offered to hand over the patient to him. B., however, declines, and advises A. to continue in charge of the case.

A. does so, and on the completion of his attendance is asked to advise the patient's parent on another matter connected with the patient's health. Is A. by reason of the mode of his introduction to the family debarred from further attendance?

* * In the circumstances of the case A. would do well to consult B., and be guided by his advice.

PRIVATE DISPENSARIES AND CLINICS.

ENQUIRER writes to say that he proposes to open a dispensary for diseases of women at which he would attend on two days a week from 11.30 to 1.30, his object being to give advice and treatment gratis to women unable to pay who suffer from gynaecological complaints, and he asks whether it would be in accordance with medical etiquette if he were to send a letter to this effect to the medical practitioners in the neighbourhood, and further, whether he might enclose with it a copy of his testimonials.

* * If there is any need for a dispensary for diseases of women in the city where "Enquirer" lives he may try to establish it with the aid of the medical profession and other influential citizens, but it must be controlled by a properly constituted committee, and the staff must be elected in the recognized way. The establishment of a private dispensary cannot be approved.

The Services.

ROYAL ARMY MEDICAL CORPS (TERRITORIAL).

LAST YEAR'S TRAINING.

THE Army Council has intimated to general officers commanding that the working of the Territorial Medical Service in last year's training season reflects great credit upon all concerned, for its thoroughness in face of the many difficulties inseparable from the early stages of reorganization. The reports of administrative medical officers have been examined under the heads of the Medical Service with regimental units, camp sanitation, the training of field medical units, and general hospitals; and suggestions are made for future guidance.

MIDLAND DIVISION.

The First Mounted Brigade Field Ambulance, First Field Ambulance, and Second Field Ambulance of the South Midland Division, and First Southern General Hospital held their first church parade on Sunday, March 28th. The units, under the command of Colonel Whitcombe, marched from the R.A.M.C. head quarters at Witton to St. Martin's Church, Birmingham. They then marched to the drill hall in Thorp Street, where General Raite inspected the parade.

FIRST LONDON DIVISION.

With reference to the prize distribution in connexion with the First London Division, R.A.M.C. (L.F.), recorded at page 822 of our issue for March 17th, Lieutenant Colonel Harvey has sent us a communication, from which it is to be gathered that the premises in Calthorpe Street are not, strictly speaking, the head quarters of the Division. The Division has six units, and though four of these have their head quarters in Calthorpe Street, the other two have separate premises for their head quarters. The units of the First London Division having their head quarters in Calthorpe Street are the Third London Field Ambulance, the First London Sanitary Company, and the First and Second London General Hospitals. On the other hand, the First and Second London Field Ambulances have their head quarters in Bunhill Row, E.C., and Shaftesbury Street, E.C., respectively. It is hoped that eventually a new head quarters will be established for the whole of these units together.

Public Health.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Torough of Bacup.—The estimated population of Bacup in 1903 was 24,600. The birth-rate was 21.8, the death-rate 15.2, and the infantile mortality-rate equal to 104 per 1,000 births. We are glad to find that it is the intention of the corporation to push forward the conversion of pan-closets to water-closets. To encourage this conversion, part of the cost is to be paid by the corporation, and no charge is to be made for water supplied to one water-closet in each house. The medical officer of health (Dr. John Brown) draws attention to the house fly as a cause of diarrhoea, and urges that, with a view to lessening their number, every effort should be made to remove horse manure from the proximity of houses. He suggests that fowls should be kept, "for they eat the flies and the larvae before they develop into flies." The increasing number of exemptions from vaccination which is occurring in Bacup is a distinct menace to the district. In 1902 there were 560 births, and 51 exemption certificates were granted; whereas in 1903, with 537 births, there were 220 exemptions. There are probably at the present time in Bacup between 600 and 700 unvaccinated children under 5 years of age.

Obituary.

PATRICK BLAIKIE SMITH, M.D.

CONSULTING PHYSICIAN TO THE ROYAL INFIRMARY, ABERDEEN.

It was with much regret that we have to announce the death at San Remo on March 24th of Dr. Blaikie Smith. The immediate cause of death is understood to have been influenza, but his death will occasion no surprise, as Dr. Smith for some years back had been in feeble health, and those of his friends who saw him last summer noticed that he did not look so well as usual; the loss of his only son at San Remo last year was a sad blow to him.

Patrick Blaikie Smith was born in 1849 in Aberdeen, where his father was City Architect. He studied at Aberdeen University, and took the degrees of M.B. and C.M. in 1870, with highest honours, and that of M.D. in 1878. After graduation, he proceeded to London, and was for some time one of the residents at Middlesex Hospital.

He returned to Aberdeen in 1872, and started private practice; in 1873 he was appointed Assistant to the then Professor of Chemistry, Professor Brazier; this post he held for three years, and old students of the university will remember the help he was to them in the practical chemistry class, being a worthy demonstrator to one of the neatest experimenters in chemistry the university has ever had. About this time he was one of the dispensary physicians, which position he held for eight years. His connexion with the Royal Infirmary began by his being appointed Anaesthetist, which post he held until his appointment as Assistant Physician in 1886; in the following year, on the death of Dr. Beveridge, he was raised to the full Physicianship, and was one of the Lecturers on Clinical Medicine. He was an able lecturer; he gave much attention to clinical teaching in the wards, instilling into the students the importance of strict accuracy in the observation of all symptoms. In 1889 Dr. Smith was appointed Examiner in Pathology in Aberdeen University, which post he held for several years. On the death of Professor Smith Shand he was a candidate for the vacant chair. He held, while in Aberdeen, appointments as Physician to various institutions in the city. He was very successful in private practice, and gained the esteem and regard of his many patients by his devotion to his work. A keen volunteer, he held the rank of Surgeon-Major to the 1st Volunteer Battalion Gordon Highlanders, and was one of the first medical officers to take up the teaching of ambulance work to volunteers.

In 1895 Dr. Smith's health broke down, and the cold east winds of his native city during the winter months compelled him to reside in a more congenial climate; this he found in San Remo, where he spent the winters, returning to Nairn for the summer months. In both places he built up a good consulting practice. Among articles contributed by him to the medical journals were papers on Tumours of the Brain, one on the Treatment of Acute Pneumonia by Ice Cradling, published in the JOURNAL in 1895, and on Peripleuritis.

While practising in Aberdeen, Dr. Blaikie Smith was a well-known figure, of spare build, scorning the wearing of an overcoat, even on the coldest day in that "east-windy" city. He got through an enormous amount of work connected with his private practice and public appointments, and was a great favourite with his patients, and it was with much feelings of regret that they received the news that he had to leave them on account of ill-health. With the students he was exceedingly popular, both as an examiner and lecturer; in the former capacity he was, while searching in his methods, exceedingly fair, never worrying the student with unnecessary questions. Methodical and punctual in all things, he tried to inculcate these virtues into his students, in whose welfare he took a keen interest, and by his old students, all over the world, the news of his death will be received with much regret.

Dr. Blaikie Smith is survived by a widow (a sister of Sir Patrick Manson) and two daughters. As already stated, his only son died at San Remo last year.

LIEUTENANT-COLONEL TUOHY, M.D., M.Ch.,

M.A.O.R.U.I., I.M.S. (RET.).

LIEUTENANT-COLONEL TUOHY, who died at Brighton, in his 54th year, on February 22nd, was a distinguished officer of the Indian Civil Service, having taken part in the last

Afghan campaign, for which he held the medal. He was stationed for a year at Kandahar after its occupation. He held the position of Police and Civil Surgeon for seventeen years under the Government of the North-West Provinces, and was the first Superintendent appointed to the Ramsey Hospital, Naini Tal, the largest hospital for Europeans in Northern India. Here he held the post of Police and Civil Surgeon, which he also filled at Allahabad, Agra, and Saharanpur. At Agra he was Superintendent of the Medical School and the Colvin and Lady Dufferin Hospital, being a member of the North-West Provinces Committee of the Lady Dufferin Fund. On many occasions he received the official thanks of the Government for the manner in which he performed the duties of civil surgeon. Of late years, after his retirement from the service, he followed private practice at Hove, Brighton.

During his service in India he earned for himself a high character for his administrative abilities, to which on several occasions testimony was given by the heads of the Indian Medical Department. His unexpected death occurred after a comparatively brief illness, and has been greatly regretted by all his old colleagues in the service and by a wide circle of friends, for he was a man whose personal character endeared him to all who knew him. He was, in the words of one of the chiefs of the Indian Service, "a thorough gentleman, conscientious, and tactful in his dealings with others."

FREDERICK HALLAM HARDY,

CAPTAIN, ROYAL ARMY MEDICAL CORPS.

CAPTAIN FREDERICK HALLAM HARDY, of the Royal Army Medical Corps, died at Aden on March 8th. He was one of three medical officers engaged in investigations on Lake Nyassa with the view of checking the spread of sleeping sickness in Nyassaland. It was found last December that Captain Hardy had become infected with trypanosomiasis, but in what way is not precisely known.

Captain Hardy, a man who long since proved his claim to the esteem of the profession to which he belonged and his value to the country which he served, died on his way home, and his name must be added to the honourable roll of those who, courageously facing obvious dangers, have finally succumbed in the cause of scientific progress and useful human knowledge. Captain Hardy, though he had reached the age of 36, was a comparatively junior member of the Royal Army Medical Corps, for he joined it only when he had already seen plenty of active service in other capacities, and had established a reputation as an energetic and scientific observer.

His general education Captain Hardy received at Shrewsbury, proceeding afterwards to Guy's Hospital. In 1896 he obtained the diplomas of M.R.C.S., L.R.C.P., and some two years later received appointment from the Foreign Office as Surgeon in British Central Africa. Proceeding to his post he was told off almost immediately on arrival to take part in the expedition in Southern Angoniland, and from these operations issued with a medal and a clasp. The following year again saw him engaged in a military capacity in connexion with the operations against Nkamba, which won him a second medal and a second clasp. In 1900 he was gazetted to the Royal Army Medical Corps, and in view of his experience of tropical conditions was appointed to the King's African Rifles, and with this corps took part in the expedition on the West Coast of Africa. On this occasion he again proved himself a valuable officer, and his name was mentioned in dispatches and a clasp added to his medals. By this time he had in four short years taken part in as many as three distinct expeditions in the field against more or less savage tribes, and in conditions infinitely trying to his own health and to those of the men in his charge. This would have been a good record for any man even if spread over the total period of an officer's career, but it did not complete Hardy's work and experiences in this direction. Only a year later he was to be found once more on active service—this time on the East Coast—as one of those engaged in the wearisome, dangerous, and exhausting operations in Somaliland. They did not end for two years, and Hardy, having been present at the action at Jubbelti as well as in the field throughout, received two more clasps. When the Colonial Office took over British Central Africa it secured him for service in that locality, and got him seconded from the Royal Army Medical Corps

in 1906. From that date onwards until shortly before his death he was engaged in carrying out scientific researches on the general subject of tropical disease and was doing most excellent work. When the fact of his infection with the organism of sleeping sickness became obvious it was decided that he should be sent home to England for treatment, in charge of Dr. Kinghorne of the Liverpool School of Tropical Medicine. The list of deaths from sleeping sickness among Europeans is at present but a short one, and it is a notable fact that two contributions to it should already have been made by the Royal Army Medical Corps. The first was that of Lieutenant Tulloch, the circumstances of whose death were of a kind closely corresponding to those now recorded. On the other hand, Captain Hardy is probably by no means the first of his family to die in the service of his country, for he comes of a military stock, his father, General Hardy, being an old Mutiny veteran, and four of his brothers holding commissions in the army and navy.

The death occurred on March 23rd of Dr. CHARLES COATES, of Bath, at the age of 85. He qualified in 1851 and obtained the degree of M.D. Aberd. in 1856. Dr. Coates was a Fellow of the Royal College of Physicians of Edinburgh and of that of London. He settled in Bath soon after obtaining his degree and had resided there ever since, being actively engaged in practice until about ten years ago. He was for many years one of the honorary physicians of the Royal Mineral Water Hospital, and at the time of his death was the second oldest governor of that institution. He had also been physician to the Royal United Hospital, and when he resigned in 1882 he was appointed consulting physician. He rescued the Blue Coat School in Bath from a position of serious difficulty by a timely gift of £1,000, and recently presented a similar sum to the Royal College of Physicians of London to found a prize.

Dr. ARTHUR ROBERTS, whose death at Eltham on March 19th is announced, practised for many years in Kensington. He was born in 1838, entered St. George's Hospital at the age of 17, and obtained the diploma of M.R.C.S. in 1859; in 1861 he took the diploma of L.R.C.P. Lond., and in the same year entered into partnership with the late Mr. J. J. Merriam of Kensington, with whom he continued to work for twenty years. Dr. Roberts was Surgeon to the Kensington Dispensary, and earned the gratitude of the patients there by his kindness and skill. He had a house at Ramsgate, where he sought change and relaxation from the heavy calls of a large practice in Kensington. After his retirement he took a house at Eltham, spending his time between that suburb and Ramsgate. Last November he suffered a great bereavement in the death of his wife, and within four months was laid to rest at her side in the churchyard of the parish of St. Lawrence, under the shadow of the old church he loved and in which he was a constant worshipper.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are: Dr. Vittorio Liebmann, Physician to the Civil Lunatic Asylum at Trieste, aged 49; Professor Paulin, President of the German-Chinese Medical School at Shanghai; Dr. Berendi Vedeler, a well-known gynaecologist at Christiania, aged 72; Dr. Karl Seggel, of Munich, an ophthalmologist of considerable reputation; Dr. Prawossud, Lecturer on Ophthalmology in the University of Moscow; Dr. Ugolino Mosso, Professor of Materia Medica and Experimental Pharmacology in the University of Genoa; Dr. D. W. Brower, Professor of Neurology and Psychiatry in the Rush Medical College, Chicago; Dr. Paul Mannoix, one of the leading surgeons of Geneva, and author of numerous contributions to surgical literature, aged 73; Dr. Thaddeus Asbury Reamy, formerly Professor of Gynaecology in the Medical College of Ohio, now the Medical Department of the University of Cincinnati, aged 79; Professor Rudolf von Renvens, Director of the Moabit Municipal Hospital, Berlin; Dr. Ludwig von Thanhofer, Professor of Descriptive Anatomy in the University of Buda-Pesth, and author of various works on subjects connected with his speciality, aged 64; and Dr. Anton Friedlidsky, formerly assistant to Hyrtl of Vienna, and an intimate friend of that famous anatomist, aged 75.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL.

THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL are at 429, Strand, London.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

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2530, GERARD, BRITISH MEDICAL ASSOCIATION.
2534, GERARD, MEDICAL SECRETARY.

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CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

AD REM asks for suggestions in the treatment of a woman aged 50, who had been suffering from "noise in the head" for some months, following what appears to have been an attack of influenza of a gastric type. Bromides, cannabis indica, and ichthyol are among the drugs tried hitherto, but without effect.

ANAESTHESIA IN MIDWIFERY.

CHLOROFORM asks as to the safest form of anaesthetic and the best method of application to use in country midwifery practice, when called upon both to give the anaesthetic and to apply forceps, etc., when far removed from medical assistance. Is Junker's apparatus widely used for this class of case?

*. A good way is to crumple up a handkerchief, put it in a tumbler, sprinkle chloroform on it, and bid the patient hold it over her mouth and nose. As soon as her muscles become relaxed the tumbler will fall away.

gentle red red PEDICULI CAPITIS.

5677 asks respecting the chances of nits in the hair coming to life or otherwise. Parents often say they are "dead" nits. Does the use of, say, white precipitate ointment kill the nits? or only the lice?

*. The chances are that a good many are not dead. To a great extent the idea of parents that the nits are "dead" is a survival of an old belief handed down from Aristotle—namely, that nits are sterile. This notion was exploded by the Dutch naturalist, Leeuwenhoek, the father of bacteriology (1632-1723); but, his crucial experiment notwithstanding, both the people and the medical profession held on to the dictum of Aristotle. Even unto the present day people still hold that some persons "breed lice," as they term it. The use of white precipitate ointment does not destroy the nits, but only the lice. Any sticky oily preparation suffices for the latter purpose, the respiratory tracheae of the insects being in this way obstructed, with asphyxia as a result.

ANSWERS.

5690.—A regimental medical officer (T. Force) who has not transferred to the R.A.M.C. wears the same uniform as the other officers of the regiment, except that he wears the medical belts instead of the regimental.

W. G. J.—The name of Professor Carl Spengler of Davos is associated with the treatment of pulmonary tuberculosis by means of a mixed human and bovine tuberculin. It was described by him under the title "Ein neues immunitäts erzeugendes Heilverfahren der Lungenschwindsucht mit pelsucht Tuberculin," in the *Deutsche medizinische Wochenschrift*, No. 31, 1904, and No. 31, 1905.

THE DESTRUCTION OF FLIES.

JOHANNESBURG.—It is more or less useless attacking flies in their adult stages, for they are no sooner destroyed than others come and take their place. The only effectual measure is to abolish their breeding places, which, in the case of flies that come into houses, are manure heaps or smaller faecal collections. In dealing with towns this must be seen to by the sanitary service, as it is practically useless for one person to take action if others do not. Fumigating, provided the windows of a house are all shut, will of course destroy the flies present at that time. McDougall's or the X-L-A-I fumigators used for destroying insect pests in vinerias are efficacious for common flies as well. Of course, servants, children, and animals must all be made to leave the rooms during the fumigation. With proper ventilation next day any small soon disappear.

CLEANING DENTAL PLATES.

COONOR writes: With reference to the note on p. 444, of the BRITISH MEDICAL JOURNAL of February 13th, very many years ago I found great difficulty in cleaning my plate, even when using soap, powder, and a hard nailbrush. Accidentally, I found that by using a cleaned boiled rag and a little soap in a basin of water I could clean it perfectly and quickly with the greatest ease. The rag must not be folded up as a sponge, but as a single layer between the plate and fingers. I then found that I could clean my teeth with a wet rag held between the finger and thumb, much better than by using a toothbrush. I am told that natives of India always clean their teeth with the forefinger and then polish them with a chewed twig. Also they invariably wash out the mouth and clean the teeth immediately after eating. If European children could be taught to clean their teeth (each time after eating) in this manner, their teeth would soon improve.

ARTIFICIAL RESPIRATION.

WHEN Professor Schäfer first described his method of performing artificial respiration on persons apparently drowned, he directed that a folded coat should be placed under the lower part of the chest, but in his latest directions—those which formed the appendix to a report made by a special committee of the Royal Society of Medicine in 1908 to the Commissioner of Police—this instruction does not appear. There seems reason to believe that the folded coat was never intended to be regarded as an intrinsic part of the system, and that its object was merely to make it easier to prevent entry of air being obstructed by contact of the patient's mouth with the ground. By the method as now practised, this object is effected by leaving the patient's head flat on the ground, but turned at right angles to the body. It is believed that the use of the coat has been abandoned in order to reduce the system to its simplest and most essential features, and to ensure commencement of the movements by which respiration is induced at the earliest possible moment. To this end it is also directed that no time shall be lost by removing or loosening clothes.

LETTERS, NOTES, ETC.

ANOTHER APPEAL TO MASONS.

DR. WILLIAM WILSON (Secretary, St. Luke's Medical Lodge of Instruction, 184, Goldhawk Road, W.) writes: May I once again appeal to medical men, and medical Freemasons in particular, for votes for the Masonic Charities? At the forthcoming elections in April there are two medical candidates for the Royal Masonic Institution for Boys. Votes for either institution are equally valuable, and will be gratefully received and acknowledged by me.

A CORRECTION.

In an account of the meeting of the Clinical Section of the Royal Society of Medicine on March 12th, note was made of a case of ascites shown as cured by permanent drainage through the femoral ring. The exhibitor of this case was Dr. W. E. Wynter, not A. E. Wynter as previously stated.

A DISCLAIMER.

DR. J. DULBERG (Manchester) desires to disclaim any responsibility for the circulation of a testimonial to a vacuum cleaner which appears to have been issued in Manchester. He gave the testimonial to the company as a member of the public, and enjoined upon the company's representative that the testimonial should not appear as emanating from a medical man, and particularly directed that no initials should appear after his name. The latter part of the injunction was kept, but the testimonial issued as a circular is headed, "Striking testimonial from a prominent doctor and J.P. of the city of Manchester." Dr. Dulberg is taking steps to ensure that the circular shall be withdrawn until the objectionable words are deleted.

SPIRITUAL HEALING.

DR. ARTHUR KING (Faucesmith, O.R.C.) writes: An able and expositive sermon, by an Anglican priest, on Faith or Spiritual Healing, quickened an interest in me, which your last article (January 9th, 1909) on that subject has further reinforced, since the matter was presented at the consulting-room door, instead of at the study. Christian Science (like hypnotism formerly) has become discredited, because whatever spark of truth it possesses has become overlaid and obscured by ignorant clap-trap and fraudulent quackery. Few medical practitioners will be inclined to dispute the power as good or evil agents, within certain limits, of auto-suggestion,

faith, external influence, surroundings, spells, etc., on health and on the course of disease. The very real existence of such influence will be mostly admitted as a fact. I shall avoid all pretence at scientific discussion of the subject, involving as it does the complexities of super-sensual psychology, and content myself with superficially touching on the practical aspect of the movement as it affects us. The question before us as a profession is as to our attitude toward the proposed partnership or co-operation of medical practice with the Church or allied societies, such as the Church and Medical Union and Society of Emmanuel. We need not consider as to whether it would be to the material interests of its members or the profession corporately, since we owe our first duty to our patients, to which consideration the issue is narrowed. It seems doubtful if the invocation of spiritual aid by or with the medical attendant would—suggesting the idea more of division than addition—strengthen the faith of the patient in his own recuperative powers, or in the material or spiritual forces at work outside of him, and so conceivably rather lessen than enhance the powers of "mental healing," to use the title of Dr. Chandler's book. Divided responsibility, like the two stools, introduces an element of precariousness into the situation. Should the patient have a happy issue out of affliction, the most valiant and glorious practitioner would scarcely take all credit to himself, but on the other hand, should the termination not be so favourable, it might lead to bitter recriminations and mutual undervaluation between the parties concerned. The very old story about the sinking ship and the prelate seems a propos, and I may be allowed to repeat it. The prelate asked the captain if all was being done to save the ship, to which the skipper replied that all the pumps were working and that nothing remained but to "trust in Providence." The prelate merely said: "Has it come to that?" Might not our patients in comparable circumstances take a similar hopeless view of their condition were we as a profession to indulge in more than a nodding acquaintance with this latest propaganda?

DR. DAVID A. ALEXANDER (Clifton, Bristol) writes: Your discussion of recent attempts to establish ministries of healing recalls a passage in the writings of Stokes of common interest to all who have a regard "as well for the body as the soul." In his work, *Diseases of the Heart and Aorta* (1854), he describes in detail (p. 23) a case of what he regarded as pericarditis with pneumothorax; and, upon its protracted convalescence, throws into a footnote this comment:

"There is a circumstance connected with this case worthy of being recorded as illustrative of the influence of the depressing emotions in retarding the processes of cure in disease. After the disappearance of the signs of air, I was in hopes that the patient would be speedily restored to health; but day after day elapsed, and no progress seemed to be made in the organizing process. The rubbing sound remained unchanged, notwithstanding all the means I could devise to bring the case to a successful issue. I observed that the patient was depressed and melancholy, and, on inquiring from his wife whether he had any mental suffering, I was told that he had great fears as to his spiritual state, and was full of doubts on many points of his religious belief. Under these circumstances, I asked a clergyman, distinguished for his talent and eloquence, to visit my patient. This interview was followed by the best results. Next day the rubbing sounds had become softer; the visit was repeated, and on the third day all morbid signs had disappeared. That the process of organization in this case was prevented or delayed by the depressed condition of the patient's mind there can be no doubt. The recovery of the patient was complete."

There are not a few clinical histories in which might be included the factor which Stokes authenticates.

THE CAUSATION OF INGROWING TOENAIL AND THE LOCATION OF GOIT.

DR. G. ARBOUR STEPHENS (Swansea) writes: Mr. Edward C. Masser's letter (p. 823) loses some of its interest from the fact that he did not see for himself in what position the South African native places his toes, when he is lying on his side. The question, "Why do not bootless natives suffer from ingrowing toenail?" may be answered by another question: "Why does not every lady who wears tight-fitting and pointed boots suffer from toe trouble?" My experience has been that it is people who are nervous or who are in an irritable state of mind that dig their toes into the bed; highly-strung children are also inclined to the same habit.

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Remarks

ON

PARALYSIS OF THE MOVEMENTS OF
THE TRUNK IN HEMIPLEGIA,

AND THE MUSCLES WHICH ARE AFFECTED.

BY THE LATE CHARLES E. BEEVOR, M.D., F.R.C.P.,

LATE PHYSICIAN TO THE NATIONAL HOSPITAL, QUEEN SQUARE,
AND TO THE GREAT NORTHERN CENTRAL HOSPITAL.

This paper is intended to show that in some cases of hemiplegia—let us say left—the trunk muscles of each side act weakly when they take part in left-sided movements, and the same muscles act normally when they take part in right-sided movements; also that the movements of the trunk requiring bilateral action of muscles are very little, or not at all, affected. The question is discussed of the change in representation of one and the same group of muscles from one hemisphere to the other accordingly as they act in right-sided or left-sided movements; and also the question of the representation of movements requiring bilateral action of muscles in one or both hemispheres.

The condition of the muscles of the trunk in hemiplegia and the question whether the movements in which they take part are paralysed or not has always presented considerable difficulty. In this paper I propose to describe a case of hemiplegia in which certain movements of the trunk were defective, so that, amongst other defects, the patient fell towards the hemiplegic side in trying to sit up; to analyse the muscles which take part in these defective movements; to compare these voluntary movements with those produced by morbid conditions in man, and with those elicited by cortical electric stimulation in animals in reference to representation of the movements in one or both hemispheres; and to describe the methods of ascertaining these defective movements in man.

The patient was under my care at the Great Northern Central Hospital. According to the notes of Mr. Clayton, the house-physician, he was aged 52, married, a confectioner, but twenty years ago was a soldier in India. He had had gonorrhoea, but there was no history of syphilis and no history of alcoholism. He had a fall from a bicycle a week before the onset, which was sudden, without loss of consciousness, and he lost power in the left arm and leg. On admission, there was no facial paralysis, the ocular movements were normal, the tongue when protruded deviated slightly to the right, but he had more difficulty in putting the tip against the left cheek than the right. There was complete loss of power in the left upper and lower limbs, and the joints in the left lower limb were rather rigid. Sensation over the whole of the left half of the body and face and the left limbs was diminished to tactile and painful stimuli. The deep reflexes were about equal on the two sides, while the superficial abdominal reflexes were diminished on the left side, and the left plantar reflex gave extension of the big toe when the sole of the foot was stimulated on the outer side, and flexion on the inner side. There was reduplication of the first cardiac sound at the apex of the heart; the blood pressure was 200 to 215 mm. of Hg; urine 1016, no albumen. There was no optic neuritis.

In sixteen days from the time of onset he began "to recover movement in the left upper limb, but there was no return in the leg till after another five days. In about twenty-eight days after onset he had recovered all movement of the upper limb, including those of the hand and elbow, and he could advance and abduct the shoulder, but he had no power to elevate the left shoulder girdle. In voluntary coughing the left latissimus dorsi contracted much less than did its fellow on the right, though in adduction of the humerus the left latissimus dorsi acted almost normally.

When put on the sitting position in bed the patient fell over to the left side, and when he had fallen to that side he was unable to raise himself to the vertical position again; but if he was inclined to the right, so that his centre of gravity fell to the right of the spine, he could keep himself in that position. On testing the recti abdominis when lying on his back, by making the patient flex the head and neck, the muscles contracted with equal strength, but the right rectus began to contract before the left, also, on testing the erector spinae in extending the spine with the patient lying on his face, both muscles contracted equally, but the right moved first. When lying down lateral abduction of the trunk against resistance was noted to be stronger towards the right than to the left.

In another week he had recovered almost normal power in the left limbs with the exception of elevation of the left shoulder; also in forced inspiration elevation of the left shoulder was less than on the right.

On further testing the movements of the head and neck, it was found that in lateral adduction of the neck to one shoulder the trapezius (clavicular fibres), splenius capitis, levator anguli scapulae, and sterno-mastoid of that side took part, but the movement to the right shoulder was stronger than that to the left. In rotation of the head and neck to one side, the rotation to the right, in which the left sterno-mastoid and trapezius act with the right splenius capitis and levator anguli scapulae, was stronger than rotation to the left. Therefore the left sterno-mastoid and trapezius take part in the parietic left-sided movement of adduction of the head and neck to the left shoulder, the same left-sided muscles take part in the strong normal right-sided movement of rotating the head and neck to the right side.

About two months after the onset he could sit up without falling to the left, and the strength of the lateral movements of the trunk on the two sides was measured. The patient was seated on a stool and the thighs were fixed by an assistant so as to have a horizontal base line. A jack-towel was passed over the patient's left or right shoulder, and was connected to a traction dynamometer, which was fastened to a fixed point. Starting from the vertical position, lateral traction to the left by the patient gave 13 kilograms and to the right 18 kilograms, and in a second trial 18 and 22 kilograms respectively.

The patient was then inclined to the left with his trunk at an angle of 45° to his base line, and he made traction on the dynamometer to the vertical position. On the second trial the grams, while from the right inclination towards the vertical line the force was 22 kilograms; on a second trial the figures were 12 and 20 kilograms respectively.

The difference between the two sides (4 kilograms) in the first set of observations was not great, but the measurement was made two months after the onset, when the patient had considerably recovered. In the second set the difference was much more (8 to 9 kilograms), and to avoid the error of the difference being due to a left-sided movement, a healthy man was tested, and it was found that the movements on the two sides gave the same strength.

With regard to the pathology of the case, the lesion was probably a syphilitic arteritis, causing thrombosis of the branches from the anterior choroid artery to the posterior limb of the right internal capsule, so that the lower limb was affected more than the upper limb, which recovered first, the trunk muscles were unusually severely affected; there was also some slight left hemianæsthesia. The movements of the face were unaffected, and this would be due to the fibres near the genu of the internal capsule, which on electric stimulation give movements of the face, being supplied by the posterior communicating artery, which in this case was apparently not involved.

The severe paralysis of some of the left-sided movements of the trunk, the loss of elevation of the shoulder, the slight affection of the hand movements, and the more complete paralysis of the leg as compared with the arm, are exactly the symptoms given by Horsley and Schäfer after removal of the right marginal gyrus; and it would seem that the fibres of the internal capsule, which come from the marginal gyrus, must have been especially involved.

The patient was treated with potassium iodide. The patient recovered all the movements of the limbs and trunk, with the exception of the elevation of the left shoulder, which was still deficient three months after the onset.

In considering this case it is desirable first to ascertain the muscles which take part in the defective movements and are responsible for their proper performance.

The patient fell over to the left side when he was put into the sitting posture in bed. Also when he had fallen over to the left side he was unable to raise himself from this position on his left side to the vertical mid-line.

A patient in the sitting position falls to the left, because the muscles which should counteract the action of gravity are paralysed, for in every unopposed movement in the direction of gravity it is the antagonists which act, and not the muscles which are the prime movers.

In the supine position, when the lateral movements are not influenced by gravity, the prime movers in the movement of the spine from the mid-line to the left are the left erector spinae and rectus abdominis, and the antagonists to this movement are the right erector spinae and rectus abdominis. Therefore when the trunk is in the vertical position, to prevent the spine falling from the mid-line to the left, owing to the action of gravity, the right trunk muscles (by which is meant the erector spinae, the rectus abdominis, and perhaps the oblique externus and internus) should contract, and their inability to do so shows that they are paralysed. In the same way, when the patient has fallen over to the left side, the muscles which should raise the trunk from that position to the vertical mid-line—that is, adduct from the left to the mid-line—are the right erector spinae and rectus abdominis, but in this case the patient was unable to perform this movement, owing to paralysis of these muscles for this particular movement. From the above it is seen

that the same muscles—that is, the right trunk muscles—take part in the unopposed movement in the direction of gravity, of abduction from the mid-line to the left, and also in the opposite movement against gravity of adduction from the left to the mid-line. The difference in the action of the muscles is that in the first case the muscles contract and gradually elongate to let the trunk fall to the left, and in the second case the muscles are elongated to start with and in contracting they gradually shorten and draw up the trunk to the vertical position. The simplest example of these two opposite movements is that of the elbow-joint. If the humerus be placed horizontally and the forearm be put vertically upwards at a right angle to the humerus, and if then the person be told to extend the elbow slowly, the triceps starts the movement, but as soon as the vertical position is passed and the forearm is acted on by gravity the triceps ceases acting, and the biceps and other flexors contract to prevent the forearm falling rapidly, and the muscles elongate gradually to their full extent. If then the elbow be flexed against gravity the same muscles, biceps and other flexors of the elbow, will contract and carry the forearm to the vertical position.

It is a question whether these two opposite movements are represented in the same part of the "motor" cortex, or whether the extensor movement is represented in the cortical extensor area of the elbow and the flexor movement in the flexor area; but as in the extensor movement in the direction of gravity the first action of the muscles is that of flexion to neutralize gravity, it seems that though the idea in the person's mind is that he is performing an extension movement, the movement is really being produced by gravity, and the rôle of the "motor" cortex is to cause just so much contraction of the flexors as will prevent gravity acting too quickly. To test this question in the arm it would be necessary to have a case of hemiplegia in which there was recovery of the movement of flexion, and paralysis of the movement of extension of the elbow, and then observe whether the movement of extending the arm in the direction of gravity could be performed slowly. In the case of left hemiplegia here described the inability of the *right* trunk muscles to prevent the trunk falling to the left under the influence of gravity was in marked contrast to the power with which the *left* trunk muscles could bend the trunk against resistance in the same direction. In fact, the weakness in the former movement corresponded to that in the movement of adduction from the left to the mid-line. In other words, when in the early stages the patient fell over to his left side and had not the strength to lift himself up again, he could carry the trunk from the mid-line to the left against resistance with very fair force, although normally the ratio of power of adduction from the left to the mid-line is to that of abduction from the mid-line to the left as 3 to 2, owing to the muscle being elongated and working at a greater advantage in the first case. This would make it probable that unopposed abduction of the trunk towards gravity to the left and adduction from the left to the mid-line against gravity were represented in the same part of the "motor" cortex.

The next question is, Are these movements of letting the trunk incline to the left and of drawing it from the left to the vertical position, which are accomplished by the right trunk muscles, right-sided or left-sided movements? It seems to me that they must be looked upon as left-sided movements, as they take place in the field of movement situated to the left of the middle line of the body, just as unopposed lateral inclination of the spine to the right and drawing of the spine from the right to the mid-line, that is, adduction from the right to the mid-line, must be looked upon as right-sided movements though they are performed by the left trunk muscles, which in this movement acted normally.

The fact that the loss of these two movements in the left field of action occurred in a case of left hemiplegia is strongly in favour of these movements being left-sided, and consequently of their being liable to be paralysed in a lesion of the right hemisphere.

The other movement which was deficient was that of abducting against resistance the spine from the middle line to the left, which was found to be weaker than the movement of adduction to the right. This movement from the mid-line to the left is performed by the left trunk muscles, especially the left rectus abdominis and erector

spinae, while the corresponding normal movement on the right side is performed by the right trunk muscles.

We have, therefore, in this case of left hemiplegia the *right* trunk muscles (1) acting weakly, or not at all, in the unopposed *left-sided* movement of preventing the trunk falling from the mid-line to the left, and in the *left-sided* movement of abducting the spine against resistance from the left to the mid-line, and (2) acting strongly and normally in the *right-sided* movement of abducting the spine from the mid-line to the right against resistance. Conversely we have the *left-sided* trunk muscles (1) acting strongly and normally in the *right-sided* movements of preventing the trunk falling from the mid-line to the right, and in adducting the spine from the right to the mid-line, and (2) acting weakly in the *left-sided* movement of abducting the spine from the mid-line to the left against resistance.

If it should seem anomalous that the right trunk muscles should be paralysed in a left hemiplegia, depending on a lesion of the right hemisphere, for left side movements and not for right, it must be remembered that we have examples in other muscles of a similar condition.

The right sterno-mastoid takes part in the right-sided movement of adduction of the head to the right shoulder as well as in the left-sided movement of rotating the head with the face to the left, and it was found in this case that there was weakness of the left-sided movement of rotation with preservation of the right-sided movement of adduction.

The above apparent anomalies disappear if in dealing with hemiplegia we always remember Hughlings Jackson's dictum, that the brain knows nothing about muscles but only of movements, and all that we have to take into account is, whether the movement takes place in the field of action on the right or the left of the antero-posterior mid-line of the body.

It might be thought that if a person in the sitting position starts from the extreme left lateral position and moves the trunk to the vertical position and thence to the extreme right lateral position against resistance, which might be applied by the hand of the observer acting against the right shoulder, he would perform one movement, as the same muscles—that is, the right trunk muscles—are acting throughout the movement. But from what was found in this case of left hemiplegia this movement cannot be looked upon as one movement. In this case the patient was quite unable to perform the first part of the movement from the extreme left to the mid-line, but he could perform the second part from the mid-line to the extreme right. We must therefore consider the first part as a paralysed left-sided movement and the second half as a normal right-sided movement. If this be correct, then the movement from the extreme left to the mid-line—adduction from the left—must be represented in the right "motor" cortex, and that from the mid-line to the extreme right—adduction to the right—must be represented in the left "motor" cortex.

Therefore if this movement be made continuously from left to right, there must be a change of the representation of the movement from the "motor" cortex of the right hemisphere to that of the left, when the mid-line is passed.

If this be so when the mid-line of the body corresponds to the vertical line, what would happen if the mid-line were inclined 30 degrees to the left of the vertical plumb-line? Will the presumed change of hemisphere take place when the spine reaches the mid-line (in a line with the sacrum) or when it reaches the vertical line—that is, will the whole of the movement from the extreme left to the vertical line be represented in the right hemisphere, or will the part of the movement between the mid-line and the vertical line be represented in the left hemisphere?

The following procedure will put the matter more clearly: A normal person sits on a plane inclined 30 degrees to the horizon, so that the right ischial tuberosity is an inch or two higher than the left, and the pelvis is consequently tilted to the left, and the mid-line of the sacrum and the spine is inclined 30 degrees to 45 degrees to the vertical line. The trunk is then placed in a position inclined laterally as far as possible to the left, and the person raises the trunk against gravity to the vertical position without altering the tilt of the pelvis. The right trunk muscles will then be felt to contract

throughout the movement, and we have to determine whether it is a right or a left sided movement. The movement from the beginning to the point where the spine is in a straight line with the sacrum—that is, the mid-line—must be considered to be a left-sided movement, and to emanate from the right cortex, while from the mid-line to the vertical line the movement must be considered right-sided, and to emanate from the left cortex.

We have, therefore, the same muscles producing an apparently similar movement throughout, but when this movement crosses the mid-line there must be a change of impulses from one hemisphere to the other, and the question arises—how is this change accomplished?

The advantage in the above procedure of tilting the pelvis and putting the mid-line of the trunk at an angle to the vertical line is that in the whole movement to be performed the weight to be raised remains constant—namely, lifting up the weight of the trunk against gravity; whereas, if the pelvis were on a horizontal plane, the first part of the movement, even if made against resistance, would be against gravity, and the second part in the direction of gravity, and this change would give an indication when the mid-line was passed. When the pelvis is tilted no such indication is present, and if the person closes the eyes, the only information which is sent to the cerebrum is that of the afferent impressions from the joints and muscles, and from the semicircular canals.

In every voluntary movement the mechanism is sensorimotor, and it is presumed that the cerebral hemispheres are kept informed by the afferent impressions concerning the relation of the spine to the fixed point of the sacrum and pelvis, and it would thus be determined, according as the movements required are left-sided or right-sided, whether the impulses should come from the right or the left hemisphere—for example, a movement required to carry the spine from the mid-line to the right would be, so to say, registered as a right-sided movement to be put into action by the left "motor" cortex. If this be correct, it would be another instance of how completely muscular movements are under the control and domination of afferent impressions from the muscles and joints, as is seen in locomotor ataxia, and in the important experiments of Sherrington and Mott,¹ who produced complete paralysis of the upper limb in a monkey by dividing all the posterior roots coming from it.

In the case of left hemiplegia here described it is important to note that the paralysis of the movements of the trunk was confined to those which were unilateral—that is, adduction and abduction of the spine—and it was found that in the movements of flexion and extension of the spine no difference in the strength of the rectus abdominis or of the erector spinae of the two sides could be made out; the only difference seen was that the muscles of the right side started the movement sooner than those of the left.

What light does experimental physiology and clinical observation throw on this subject?

From experimental physiology we have the movements which have been obtained in monkeys and in the anthropoid apes from electrical stimulation of the cortex and of the internal capsule. According to Sir Victor Horsley and the writer,² from stimulation of the internal capsule in the monkey no movement was ever seen in both recti or obliqui abdominis, but invariably movement restricted to the muscles of the opposite side, notably the rectus, was seen. From the result of excitation or ablation of the "trunk areas" in the marginal gyrus, Horsley and Schäfer³ considered that the same unilateral representation existed. Also in Grünbaum and Sherrington's⁴ experiments on the anthropoid apes the same unilateral result was obtained.

The movements of flexion or extension of the spine have not been obtained from electrical stimulation of one hemisphere. According to the experiments of Mott and Schäfer,⁵ who stimulated simultaneously the identical motor centres in both hemispheres for the movement of rotation of the head and eyes to the opposite side and upwards or downwards, upward and downward movement of the eyes could be obtained, and also presumably of the head, though no mention is made of the movements of the head from this bilateral stimulation. What holds good with regard to flexion and extension of the head, would probably apply to the movements of flexion and extension

of the spine, and this would postulate that impulses would have to emanate from the centres of both hemispheres to produce a bilateral movement. This might also explain why, in the case of left hemiplegia here described, the contraction of the left rectus abdominis and of the left erector spinae occurred later than on the right side in the movements of flexion and extension of the spine. If these bilateral movements are represented in those cortical centres of both hemispheres which preside over the unilateral abductor movements of the spine, it is necessary to assume that the impulses subserving bilateral movements take a different course in the internal capsule to that followed by impulses subserving unilateral movements; otherwise a lesion of one internal capsule, say the right, would block not only the latter but the former set of impulses, with the result that impulses subserving bilateral movements from the left hemisphere only would succeed in passing, and a bilateral movement would be converted into a right unilateral movement. In the present case, although the unilateral abduction to the left was weaker than to the right, in flexion and extension of the spine there was no difference in strength of the two recti and erectors, but only a delay in time of the left-sided muscles.

On the other hand, there seems no doubt that some bilateral movements are represented in each hemisphere, so that they are produced by stimulation of the centre in each hemisphere alone. An example of this class of movement is bilateral action of the vocal cords which are put into action by stimulation of the cortex of either side.

In favour of both the recti abdominis muscles being represented in each hemisphere so that the movement of flexion of the spine could be brought about through impulses emanating from one hemisphere is the observation made by Dr. S. A. K. Wilson on a case under the care of Sir W. Gowers at the National Hospital, in which both recti abdominis were seen to be convulsed in fits, which were otherwise unilateral. This might be accounted for either by both recti abdominis being represented in each hemisphere, or by the connexion through the corpus callosum between the "centre" for each rectus in each hemisphere being so intimate, that a fit starting in the "centre" of one hemisphere would easily pass to that of the opposite side.

Against the recti abdominis muscles being both represented in one hemisphere is the fact that only the muscle of the opposite side has been caused to contract by electric stimulation of one hemisphere.

The evidence as far as it goes seems to be in favour of both hemispheres being required to produce the action of both muscles, but at present it is not certain.

Taking the movement of the vocal cords at one end of the scale, and of the upward and downward movement of the eyes, or of flexion and extension of the spine at the other end, I would suggest the following explanation why the latter movements may require both hemispheres to produce action of both sets of muscles. The vocal cords have no movement which is independent of each other or is stronger on one side than on the other, the movements are either abduction, adduction, or shortening, and to ensure that they shall never act otherwise than together, the movements of both cords are represented in a centre in each hemisphere, and each hemisphere can act without the other. On the other hand, in upward and downward movement of the eyes there is every gradation through an arc of 90° between vertical upward movement and horizontal movement to one side—say the left—so that in vertical upward movement the centres in both hemispheres would act equally, but as the upward movement takes place more to the left less impulses would come from the left than from the right hemisphere, till finally, when the movements become horizontal the movements would be entirely from the right hemisphere. Also in the spine between flexion in the mid-line and pure abduction to the left against resistance there is every gradation of lateral flexion, and I have found, in performing the movement of flexing the spine against resistance, starting from the mid-position and flexing more and more to the left, that both recti contract, but the right less and less till, when the spine is flexed laterally in a plane which is 45° to the mid-line, the right rectus ceases to contract, and the left erector spinae

begins to act. It is a question, therefore, how much of these lateral movements is represented in both hemispheres: the movement of flexion in a vertical plane of 45° to the left of the middle line, where the right rectus ceases to act, is probably represented only in the right cortex, but it seems probable that the other movements between mid-line flexion and lateral flexion at 45° are represented also in the left cortex in diminishing degrees.

I would therefore suggest that while the bilateral movements of the vocal cords are represented in the motor cortex of each side, and can be made to contract by the impulses from one hemisphere only, the bilateral movements of the head and spine would require impulses from both hemispheres for their performance.

The movements of the tongue appear to be intermediate. For though from the observations of Sir Victor Horsley and the writer⁶ on the monkey, no difference between the actions of the two halves of the tongue in the movement of protrusion straight could be detected from stimulating the cortex of one hemisphere, yet the frequency in hemiplegia with which the tongue deviates to the paralysed side, when the patient tries to protrude it straight, is in favour of the movement being represented in each hemisphere, but with the muscles of the opposite side being more strongly represented than those of the same side, and not equally in each hemisphere, as in the case of the vocal cords; and although the tongue has lateral movements, the protrusion to one side has a different localization to that of protrusion straight, and the action of the two halves of the tongue in protrusion to one side—say, the left—consists of advancing of the right half and retraction of the left and is quite different to protrusion of the tongue straight, and is, perhaps, in a different category to the antero-lateral flexion of the spine to the left against resistance, where both recti abdominis have an action similar to that of flexing the spine straight, but with the left muscle acting stronger. Other bilateral movements which might be cited as imperfectly bilaterally represented are those of closing the eyelids and of elevation of the soft palate. In the paper already quoted,⁶ we found that in both these movements the closure of the opposite eyelids and elevation of the soft palate on the opposite side could be obtained without the movements of the same side by stimulation of one hemisphere; but as occasionally the movements of both sides were obtained from one hemisphere, we must look upon them as not pure causes of unilateral representation, but that the two sides are unequally represented in each hemisphere. An interesting point is that it is not possible to voluntarily elevate one half of the soft palate, and also that many people cannot close one eye without the other.

In reference to other clinical observations, I would refer to a case of double athetosis now under my care in the National Hospital, in which the movements are much more marked on the left side. On the left side there is frequent clonic contraction of the left trunk muscles, and especially of the left rectus abdominis and the left erector spinae; but there is no movement at all of the right rectus abdominis, and only a much less marked movement of the right erector spinae.

These clinical cases show that contractions of the abdominal muscles, limited to one side, can be produced by cerebral disease, and are thus in harmony with the results of electrical stimulation of the cortex of one hemisphere.

With regard to previous observers, Dr. Hughlings Jackson⁷ has expressed the opinion that in cases of hemiplegia—say the left—there is some very slight weakness of the lower part of the erector spinae muscle on the right side, the side of the cerebral lesion.

Of the other points of interest in this case, I might mention the action of the latissimus dorsi as a voluntary muscle and as an expiratory muscle of coughing. I have elsewhere⁸ shown that in hemiplegia, as a rule, the latissimus dorsi will act with its fellow of the other side as a muscle of voluntary forced expiration, when it will not act in the unilateral movement of adducting the humerus. In this case, however, the left latissimus did not contract so well on voluntary coughing as the opposite muscle, even when the left latissimus had recovered its power as an adductor of the left humerus. This case, therefore, differed from the majority of hemiplegias in this action of the latissimus dorsi, as well as in the arm recovering before the leg, in the elevation of the shoulder being the last move-

ment to recover, and also in the extensive degree in which the left lateral movements of the trunk were affected.

Another point of interest related to the question whether individual muscles or movements are represented in the "motor" cortex. The condition met with in this case of left hemiplegia, of the trunk muscles of each side acting strongly in right-sided movements, and weakly or hardly at all in left-sided movements, makes it very difficult, if not impossible, to explain how individual muscles could be represented in the cortex—a theory which has been upheld by some observers.

CONCLUSIONS.

In this case the patient in sitting up fell over to the left, and when over to the left he was unable to adduct the spine to the vertical position, but when in the vertical position he could push to the right more strongly than to the left. The muscle movements required for the prevention of falling to the left, and for adduction of the spine from the left to the mid-line are considered to be left-sided movements, and to be performed by the *right* trunk muscles; and adduction of the spine from the mid-line to the right against resistance is considered to be a right-sided movement, and also to be performed by the *right* trunk muscles. Therefore the right trunk muscles were paralysed or weak when they acted in left-sided movements, and were normal when they acted as right-sided movements. Conversely the left trunk muscles acted normally in right-sided movements (adduction from right to mid-line) and weakly in left-sided movements (adduction against resistance from mid-line to left). The movements of slow unopposed adduction of the spine from mid-line to left (that is, letting the trunk fall to the left), and of adduction of the spine against gravity from the left to the mid-line are probably localized in the same part of the "motor" cortex.

In making the lateral movement of the spine against resistance from the extreme left through the vertical position to the extreme right, the first half of the movement from the extreme left to mid-line is a left-sided movement, and the second half from mid-line to extreme right is a right-sided movement, and on the mid-line the cortical representation must change from the right to the left hemisphere. It is probable that this change is brought about by the afferent impressions from the joints and muscles of the spinal column.

The movements of the spine which were paralysed or acted weakly were unilateral; two sides taking part in the movements of flexing and extending the spine acted equally strongly though the muscles on the hemiplegic side acted later than on the other side.

From the above observation and that the movements of the trunk obtained by stimulation of the cortex or internal capsule are always unilateral, it seems probable either that the muscles of both sides are represented in the "motor" cortex of each hemisphere, or that the muscles of each side are represented in each opposite hemisphere, and that the association between them through the corpus callosum is very close. In bilateral movements generally the first arrangement is probably that of the representation of the vocal cords, and the second that of the flexors and extensors of the spine, while the bilateral movements of the tongue, of the soft palate, and of closing the eyes are intermediate, and muscles of both sides probably are represented in each hemisphere in varying degrees.

The method of testing and the movements which we should direct the patient to make are most important. It cannot be too strongly emphasized that it is not a question of which particular muscle is weak, but, in the first place, which particular movement is deficient or impossible to perform, and, secondly, which muscles take part in, and are paralysed for, this particular movement.

It has been shown in this case of left hemiplegia that the right rectus abdominis and erector spinae were paralysed when they acted as adductors of the trunk from the left to the mid-line, but they contracted normally when they acted as abductors of the trunk against resistance from the mid-line to the right. It would, therefore, be quite misleading to say that the right trunk muscles were paralysed unless we specified the particular movement, in which they took part, which was deficient.

The movements which we must ask the patient to perform must be unilateral, as the bilateral movements,

from reasons already given, are less liable than the unilateral movements to be paralysed in hemiplegia. The unilateral movements consist in abduction from the mid-line to the right and left, adduction from the right and left to the mid-line, and rotation of the spine with the face turned to the right and then to the left. All these movements should be tested with and without resistance, which should be applied by the hand of the observer against the patient's shoulder, and also both in the position of lying down and in that of sitting up in bed when this is possible, and particular notice should be taken in the latter position whether the patient is unable to prevent himself falling to one side.

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A Clinical Lecture

ON

TRAUMATIC HEART DISEASE

AND

COMPENSATION FOR "ACCIDENTS."

DELIVERED AT GUY'S HOSPITAL.

BY

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EVERY now and then some great discovery in pathology or in therapeutics leads us to change the point of view from which we regard certain diseases, in respect of either diagnosis or of treatment.

Recently there has been a social development, not a scientific discovery, which has led us to consider the causation of many diseases from a somewhat altered standpoint. I am referring to the tendency that there is now for all sorts of people to be insured against the results of accidents. In consequence of this habit, the possibility of an injury being the cause of any disease is much more before us as a profession now than it ever was before. The growing prevalence of insurance against accidents is probably responsible for what was to me a novel experience. Just before Christmas there were lying in adjacent beds under my care in Addison Ward two patients suffering from heart disease, each of whom attributed the symptoms from which he was suffering to an accident. This exceptional occurrence led me to choose as my subject for lecture to-day traumatic heart disease. And in introducing to you notice the question of traumatic heart disease by relating to you some of the particulars about these two patients, I propose to take the opportunity of offering for your consideration a classification of traumatism of the heart generally, then to draw your attention to some of the difficulties by which the profession which you are about to enter is assailed owing to the spread of insurance against accidents, and finally to ask you to consider some possible means of avoiding some of these difficulties.

I.—TRAUMATISM OF THE HEART.

There are three very different conditions in which injuries to the heart occur. First, there are the conditions in which gross and obvious injuries to the heart result from external violence. A man is cycling with his machine out of control; he meets and collides with a cart; the shaft penetrates his thorax and causes immediately fatal results. Other examples are those in which the buffer of a train breaking the sternum and the ribs leads to the heart being seriously injured by the bony fragments. Bullet wounds and stabs of the heart are also in this section—conditions, perhaps, of more interest, because they may afford an opportunity of surgical treatment if the injuries are not too extensive. Another interesting injury to the heart due to external violence is worthy of your consideration, inasmuch as you

may yourselves be responsible for causing it in attempts to aspirate the pericardium.

The essential feature of this group of cases is the obvious external violence. The patient seldom survives to present symptoms of heart disease.

The second group consists of cases in which there is a disruptive lesion of the heart, which is certainly not due to any external violence. The patients are found dead, and the muscular wall, generally of the left ventricle, is torn across, and the pericardium is full of blood. In such cases, as a rule, you would find obvious disease of the muscle of the heart, fibroid or fatty, which explains its rupture on such slight provocation. Every now and then it will not be quite clear that there is any obvious antecedent disease, although it seems almost certain that a muscle must be diseased before any internal pressure resulting from the ordinary circulation of the blood would cause it to rupture.

These may prove very interesting cases, because questions may arise as to whether the relatives of a person found dead under such circumstances are or are not entitled to receive compensation on the grounds that he has died as the result of an accident. Certain it is that in some of these cases the patient is found dead in bed, which makes it unlikely that a violent strain is necessary to produce such a rupture. At other times this condition has been found in the case of a man who was exerting himself to his utmost immediately before his death.

I come now to the third group, to which, perhaps, the title "traumatic heart disease" is alone properly given. Introducing you to this group, I will mention the few salient features about 4 cases which have come under my observation.

CASE I.

A young tram conductor, several years before admission, had had rheumatic fever, but believed himself since to have been in perfect health. One night two drunken passengers had to be expelled from his car. He struggled severely in throwing them out, and when he got home a little later, feeling rather exhausted by his efforts, he noticed a curious noise in his chest, and, calling his wife's attention to it, she also was perfectly certain that she could hear a loud noise in his chest which she had never heard before. He came the next morning to the hospital, and was found to have an extraordinarily marked musical murmur, diastolic in rhythm, all over the precordium. He was not suffering from any marked cardiac symptoms beyond that. Here was definite aortic regurgitation, apparently produced or increased by violent struggling; and we imagined that in the struggle he had torn or detached one of the semilunar aortic valves, and was consequently suffering from aortic regurgitation, at present thoroughly compensated.

CASE II.

A painter, 50 years of age, who at the age of 20 had syphilis, and a few years later rheumatic fever, believed himself to be in perfect health from that time until a few weeks before admission. When painting something high up, he slipped, fell, saved himself with a great effort as he fell, and immediately had cardiac pain and breathlessness. When admitted to the hospital, we found that he had aortic stenosis—a well-marked systolic thrill all over the right of his sternum—and distinct evidences of cardiac failure. In his case we imagined that his hypertrophied heart, which resulted from his aortic stenosis, to which he had done its worst extremely well for many years, was suddenly dilated as a result of the violent effort which he put out.

In both these cases you will see there was pretty clear evidence that the patient had already chronic endocarditis, and that the alleged injury was an injury to a diseased organ.

CASE III.

A sea cook, a little over 20 years old, perfectly well as far as he knew, and telling us that he had never had a day's illness in his life before, was on a voyage from London to Hamburg. Lifting a canldron of soup off the fire, the ship gave a sudden lurch, and, desperately afraid that the soup might upset and scald him, he put out all his effort to prevent this. He saved it, but immediately suffered from a very severe pain in his heart, and extreme condition of syncope; so that he was laid flat on his back, was kept on his back until the boat reached port, was immediately carried to the hospital at Hamburg, and remained there for many weeks, until it was thought safe for him to travel to England, when he came to the out-patient department at Guy's Hospital.

In his case we assumed, quite wrongly, as I shall show you in a moment, that his tremendously violent effort had ruptured a healthy aortic valve; and, under this impression, this case was shown at the Clinical Society. Years afterwards I met this case again in the hospital as an in-patient; and he then told me that, after my careful

inquiries about his previous health—which, you remember, I thought established the fact that he had not had a day's illness in his life before—he went home, and, inquiring from his mother, he was told that he had a bad attack of St. Vitus's dance as a small child, which he had quite forgotten. This case, therefore, is strictly analogous to the other two. I was wrong in assuming that it was an example of the rupture of a healthy valve. There can be little doubt now that this man's valve was affected by his chorea, and that his great exertion ruptured a diseased valve.

CASE IV.

A former pupil of mine was unwisely touring with a heavy motor car in a very hilly district when his car stuck on the middle of a hill. Still more unwisely he took an undue share in pushing the car to the top of the hill. He felt that it was an exertion such as he had never put out before in his life, and wished that his car were lighter. When he got to the top of the hill there was nothing for it but to lie down; and from that day for several weeks he was on his back seriously ill. When I saw him some months later he had recovered, and his heart was perfectly normal; but the history of the case suggests, I think, that he did seriously and acutely dilate a normal ventricle.

So with regard to traumatism of the heart, you will recognize that the difference between the cases in this third group and the cases in the former groups is that these latter patients survive the injury, which is some sort of fierce strain, and have time to suffer from symptoms of actual cardiac disease. Please recognize that there are two forms of injury in this class of case, laceration of a valve and great distension of a cavity, and that there are two classes in which these injuries occur, one with antecedent disease and one without antecedent disease.

One of the difficulties of a clear appreciation of the frequency with which the rupture of a healthy valve occurs is due to the fact that if the patient survives the accident for even a few weeks, when death ensues chronic inflammatory changes will have taken place in the valve even though before the rupture it was perfectly healthy.

Another difficulty in establishing, even by pathological evidence, the existence of traumatic heart disease, is due to this fact: that rupture of a diseased valve—perhaps I had better not say rupture—detachment, or separation of a diseased valve may take place as the result of ulceration apart from any severer strain than is naturally taking place in every heart in which blood is circulating.

II.—PROFESSIONAL DIFFICULTIES IN RELATION TO ACCIDENT INSURANCE.

I now come to the second part of my lecture, and propose to speak to you of some of the professional troubles which are connected with this increasing tendency of the community to insure against the result of accidents. I would have you recognize that this habit is putting upon the profession a totally new class of work—a class of work for which no courses of instruction have been laid down, to which no compulsory lectures are assigned, and which, as far as I know, is not dealt with in any of your too numerous examinations.

Let us look for a moment at what are the existing branches of professional work. First of all, there is our duty to seek out the causes of disease and methods of alleviation and prevention. That is the branch of work which is always being carried on by the medical scientist, whether he be a mere physician striving in his laboratory—which is his ward—or whether he be a special pathologist working under more fortunate circumstances, with proper assistance in his endowed laboratory. The second branch of our work is that of endeavouring to persuade a reluctant public to put into effect the methods of prevention of disease which we have discovered. This falls to the lot of the medical officer of health. The third function of the profession, and hitherto the last, is to cure the patient. This is the duty of the great body of the profession, be they general practitioners or consultants. But now we have a fourth duty, a totally new duty, put upon us. This is, to hold the balance even between conflicting pecuniary interests, the just settlement of which can only be determined by medical knowledge. It is a thing we have not bargained for, and a thing that we are not at present very skilful at performing. It becomes our duty to decide, for example, when a man is insured against the results of accidents and becomes ill, whether it is fair or unfair for him to receive the benefits of his insurance. The

difficulty of deciding this, I think, may already have been made clear to you from the cases which I have related of traumatic heart diseases. Let me give you a few other illustrative cases which have recently come under my notice.

CASE V.

A butler, fully insured by his master against the results of accidents occurring in his occupation, is endeavouring to perform his special duty for his master of uncorking for him a special bottle of port. Very anxious not to break the cork—I think that is the right expression—but finding the cork extraordinarily tight, he put out great force, and just as the cork came out he felt a severe pain in his right iliac fossa. Within a day or two he was operated upon for gangrenous appendicitis.

Is that a case in which it is fair for the insurance company to have to pay the insurance money? Is that a case in which it is fair for the employer to be deprived of the advantages of having insured his servant against the results of "accidents"?

CASE VI.

A labourer was digging on a plot of land. It was 5 o'clock on a winter afternoon. His work was over. He walked home, had his tea, and, while sitting down after tea, suddenly had a violent pain in his head, and in twenty-four hours was dead from cerebral haemorrhage.

Was that an accident resulting from the heavy strain of digging in the ground? Is it fair that the insurance company should pay for the death of this man, or is it fair that this man's dependants should be deprived of the advantages of his insurance?

CASE VII.

A factory hand was taking part, as he often did, in moving a piece of iron. He felt a pain in his back, but took no notice of it, and went on moving other pieces of iron. He was not quite so well the next day, but went to work. The following day he had pins and needles in his toes, and in three days was lying in a London hospital with all the symptoms of acute myelitis.

CASE VIII.

A gardener was walking along, pushing a mowing machine in front of him. He suddenly stumbled, and, in trying to save himself, "ricked his back." From that day forth he was a wreck from neurasthenia. He thought he had all sorts of diseases and pains everywhere. There could be no doubt that he had neurasthenia.

Was the neurasthenia the result of the accident? Was it not rather the result of the fact that the law provides that his master shall compensate him for illness produced by accidents?

CASE IX.

A hunting man had influenza. He was recovering from it, and his wife entreated him "not to hunt to-day." He did hunt that day, and when so doing was thrown, soon scrambled up again, went on, and finished the run. Next day he was not so well. The day after he had a rigor, and in three days he was dead of acute pneumonia.

Was his acute pneumonia the result of accident? Was it fair that the insurance company, restricting its policy to the direct results of accidents, should have to pay?

Now, gentlemen, why I ask you carefully to consider this question is because it seems to me to be likely that if this work of deciding these pecuniary interests is carried on as it is carried on at present, it must lead to a degradation of the profession in the eyes of the public.

A lay authority in the insurance world frequently consults me on such subjects as I put before you to-day. He says, "Do you think that such and such a condition was due to the accident?" "No, I certainly do not." "Do you think any medical man of repute can be found to go into the witness-box and say that he thinks it was the result of the accident?" "Yes," I say; and he shrugs his shoulders with an expression which shows what he thinks of the medical profession. But he does not understand the position. He does not know how difficult it is for us; how impossible sometimes to estimate which of the numerous possible causes of any disease is the dominant one in an individual case. He is accustomed to legal decisions which are made upon authority, and not to medical decisions, which are often necessarily indefinite. My friend thinks when he extracts from me the fact that other members of the profession will swear to an opinion different to that which I have expressed, that this is an indication of the fact that the members of the medical profession will accommodate their opinions for the purpose of sale. Of

course there are black sheep in every fold. But the striking differences of opinion that may be held by honourable men are inherent to the nature of the cases. Nevertheless, the fact that it is constantly happening, that one medical man is giving evidence on one side, and another man is giving directly opposed evidence on the other side, is in my opinion having a very deleterious effect upon the high regard in which the profession is held. Not only so; the present method of settling these cases is causing a most unnecessary expense to the community.

REMEDIES.

Now let us consider possible methods of reforming this uncomfortable position for the profession. The first one I should like to urge upon you is this, that we, as members of the profession, should insist that in this matter we will be arbitrators and not advocates. I have the highest possible respect for the legal profession, and am certain that it is in every particular as honourable a profession as that of medicine; but I am convinced of the fact that the unfortunate necessity which compels members of the legal profession to act as advocates, and to defend people against charges which they know to be true does, in the eyes of an unscrupulous public, somewhat lower the esteem of the profession generally. We do not want to be advocates. We, as a medical profession, if we are called upon to perform this new function of seeing fair play between different pecuniary interests, should take the position if we can of arbitrators and not advocates.

It should not be impossible to set up a special tribunal to deal with these questions in which independent medical men with special experience should act in a judicial capacity as arbitrators or assessors to a legal arbitrator. Before such a tribunal, medical evidence should be restricted to questions of fact observed by medical men actually in charge of the patient.

But there is another means whereby we might possibly lessen the complexity of the problem to be arbitrated upon in many cases. The problem in most cases now is how far has the traumatic element anything to do with the condition? Cannot we persuade the insurance companies; cannot we persuade the Government; cannot we persuade the people generally, that while they are about it, insuring against the result of accident, they should, instead, insure against invalidity of all sorts? It is not often, though no doubt it is sometimes, a difficult thing for a medical man to say definitely that this man has a disease and that man has not a disease, but it is constantly a very difficult thing to say whether the disease from which any man is suffering, or has died, is due to a specific cause or not. If the hunter, for instance, is insured against death and not against death from accident, it does not require extraordinary skill on the part of a medical man to certify that he is dead—a duty, by the way, which under existing circumstances is imposed upon us by the State without remuneration.

That insurance against invalidity from all causes is much needed in the case of nearly all breadwinners none can doubt. If the medical profession in a desire to deprive itself of unnecessary work helps forward this movement, its action will be entirely in keeping with its best traditions. We are always working hard to add the whole profession to the ranks of the unemployed.

There is another professional difficulty raised by this habit of insurance which is deserving of your careful attention. It seems right that we should recognize that as a profession our pecuniary relations are necessarily somewhat different to persons who are insured to those who are not.

In the days before insurance became common any breadwinner who met with a serious accident which incapacitated him was at once in the eyes of the profession probably a suitable subject for charity, and his presence in a hospital passed without question. But when the breadwinner is definitely insured against the results of his accident, or can claim compensation covered by insurance, it becomes a very doubtful question whether the medical profession should give their services without payment in order to save the insurance companies from the responsibility of paying their agreed liabilities.

This is, however, a complicated subject on which I have not time to enter now, except to say that, like the other professional difficulties to which I have already referred,

it can only be wisely dealt with after prolonged discussion and careful action.

And now one or two words as to what steps you individually can take in order to meet these difficulties. I want you to appreciate that no amount of the highest possible individual professional uprightness will really enable you to do much in meeting these and many other difficulties which are assailing, or are likely in the near future to assail, the profession.

The recently issued report of the Poor Law Commission indicates the possibility of social changes which may profoundly alter the relations of the profession to the State.

All our professional difficulties become less the more careful we are that each of us shall always be actuated by the highest professional motive, that is to say, that in all our dealings we shall have an absolutely single eye to the advantage of the patient and no regard whatever to our own personal interests. But this will not enable us entirely to meet the collective difficulties of the profession.

It can only be by concerted action of the profession as a whole that such modifications in procedure as I have been suggesting can be carried out. You are doing your little part at present; you are paying fees to universities and to examining bodies to whom you may look in the future, perhaps, for some help in organizing the affairs of the profession. Later on you will pay a fee to the Registrar of the General Medical Council, and you may then look to the General Medical Council, perhaps, to secure such reforms as the future may make necessary. But I think that after some experience you will have to admit that neither the universities, the examining bodies, nor the General Medical Council can do much for you, because even if they had time to spare from their special duties, they have no recognized means of determining what are the wishes of the profession. As soon as you are qualified it becomes your duty to enrol yourself as a member of some of the many societies which are formed amongst medical men in order that they may together discuss concerted action to enable the profession in the most effective way to carry out its high mission and to maintain its worthy reputation.

And here may I suggest that of the various societies that you will have the opportunity of joining, perhaps the British Medical Association is one most deserving of your attention, from the fact that whereas while taking part in the local work—social, scientific, and political—of your own Division, you will, through the central organization, be brought into contact with Divisions all over the British Empire. If you recognize the limitation of your individual effort you will appreciate the great advantage of belonging to a body which is in touch with your professional colleagues all over the world.

You will be told by some, perhaps, that you will find in the Association a narrow spirit of trade-unionism. On the contrary, I believe you will recognize in it, as I have certainly done, the high ideals of a professional guild endeavouring to maintain in each of its members the best professional traditions.

Join the British Medical Association in the same spirit as many of you are now joining the officers' training corps of the Territorial Army, not for what you can get out of it, but for the opportunities it will give you of serving your profession, and, through your profession, the public. Be actuated by the motto of the hospital, "Dare quam accipere."

AN open-air school for tuberculous children has been established on an old ferry boat which was recently turned into a day camp for tuberculous patients by Bellevue Hospital, New York. The school is maintained by the Board of Education, and at present there are thirty-five pupils in attendance, ranging in age from 6 to 15 years. The children are carefully protected from the cold, and work at their desks in all kinds of weather. The school hours are short, as the main object is to make the children well. A record is kept every day of the weight and temperature of the children, and milk and eggs are given to them at odd intervals. The improvement in some of the children has, according to the *New York Medical Journal*, from which the account of the school is taken, been remarkably rapid.

A Clinical Lecture

ON

THE TREATMENT OF A CASE OF EXTENSIVE INFANTILE PARALYSIS BY OPERATION AND APPARATUS.

DELIVERED AT GUY'S HOSPITAL,

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ASSISTANT SURGEON AND SURGEON IN CHARGE OF THE ORTHOPAEDIC
DEPARTMENT.

The prevalent treatment of infantile paralysis is not always satisfactory, for several reasons. It calls for a great deal of care extending over a long time. Deformities develop so insidiously that they may appear to be inevitable, whereas they are mostly preventable. The value and importance of suitable instruments designed to prevent these contractures are not sufficiently recognized, and there is a current idea that instruments of all kinds do not aid but hinder the restoration of function. The advantages of well-planned exercises are little understood, whereas much faith is placed in comparatively useless massage and electricity. The parents expect quick results, get tired of tedious methods and discontinue them. The value of timely operations designed for the restoration of the balance of power around joints and for the firm support and equilibrium of the body is not yet thoroughly appreciated.

It is, therefore, common to see patients at hospitals and in the street whose condition could have been much improved by rational treatment at an earlier date. Too often surgical aid is not sought until such grave deformities have developed that ideal results are impossible. In a few cases the permanent paralysis is so extensive that all treatment seems to be useless. The following account may help to show that something may be done even for some of these apparently hopeless cases.

A girl, aged 17, was referred to me at the orthopaedic department, Guy's Hospital, by Dr. Spurgin, who had recently taken an interest in the patient, but had never attended her.

History.

On August 6th, 1894, when the child was only 3 years old, she had a chill, and cried a good deal during the night. In the morning both her legs were found to be completely paralysed. For two or three days she had retention of urine, relieved by a catheter. There were no other children struck with paralysis at the time, either in the house or neighbourhood. Rubbing and electricity were tried at various times without any appreciable effect, but time gradually brought a little return of power of moving the hip joints. No instruments or splints were ever used.

Condition on Admission.

When I first saw the patient, in October, 1908, her condition was pitiable, her lower limbs being paralysed and terribly deformed. (See Fig. 1.)

Both knees and hips were flexed and the lumbar spine was arched. It was impossible to get the legs any straighter

than is shown in the figure, without increasing the lordosis of the lumbar spine.

Standing and walking were impossible, but the patient could shuffle along by grasping and moving her feet with her hands (Figs. 2 and 3). Consequently the arms were remarkably well developed. Both lower limbs were greatly withered and abnormally short. Their circulation was poor, the pulse being small, and the feet and legs were mottled blue and cold.

The paralysis appeared to be complete below the waist except for the power of:

1. Very weak extension and abduction of the right hip.
2. Weak flexion and adduction, with very weak abduction and extension of the left hip.
3. The peroneus tertius and the flexors of the toes on the right contracted a little, and the calf muscles on the left were not completely paralysed.

Both ankles were flail, and when the patient crawled about they assumed the valgus position. The hips were not dislocated but were firm. The reflexes were abolished in both legs, but sensation was not impaired. The bladder and rectum acted naturally and menstruation was normal.

Treatment.

On October 29th, 1908, under general anaesthesia the following procedures were carried out on both sides at one sitting lasting nearly an hour. The right limb being the

most contracted was dealt with first. The femoral artery was felt pulsating just below Poupart's ligament, and the left index finger was constantly kept over the anterior crural nerve, and

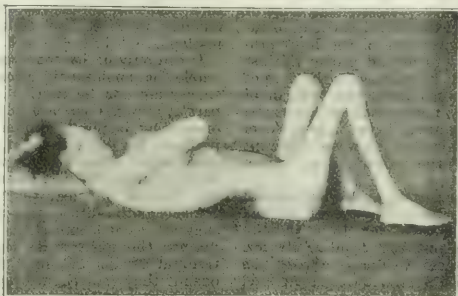


Fig. 1.—Showing the patient lying down. The flexion of the hips and knees and the lordosis of the lumbar spine are shown.



Fig. 2.—Showing the degree of progression and the talipes valgus. Note the length of the arms.



Fig. 3.—Showing the mode of progression and the permanency of the lordosis.

external to the artery, as a guide to prevent any injury of the main artery or of the nerve by the tenotome, which was never passed as far in as the finger. A curved, long tenotome was introduced about 1 in. below and outside the anterior superior spine between the skin and the contracted anterior structures, which were gradually divided, while an assistant pressed the knee backwards. Similarly, through the same puncture, the blade was passed backwards towards the buttock, and the shortened fasciae and abductors were severed while the knee was pressed inwards. In spite of vigorous manipulations it was not possible to straighten the hip until the anterior tissues had been divided down to the very neck of the femur. The external finger held outside the large vessels and nerves was of considerable value during this operation. The knife was not removed until the thigh was extended to the full degree, and remained in this position when all pressure was removed from the lower end of the femur. Remarkably little bleeding into the tissues followed the extensive cutting that was necessary.

A tourniquet was applied around the middle of the thigh, which was protected with lint. The shortened tendons behind the right knee were divided simultaneously, care being taken to avoid injuring the external popliteal nerve. It was not thought necessary to divide any tendons behind the left knee.

The knee-joint was opened through a curved incision passing across the ligamentum patellae, which was divided. Half an inch of the lower end of the femur was sawn off, and a quarter of an inch of the upper end of the tibia, but this did not allow the knee to be straightened. Consequently more bone had to be removed from the femur. The last section was just below the adductor tubercle and the epiphysal line. Thus each limb had to be shortened about $1\frac{1}{2}$ in. before it could be straightened without exerting too much tension upon the contracted popliteal vessels and nerves.

The high section of the femur had the advantage that it left a raw surface only a little larger than that of the tibia. Usually the bones do not fit so well. The experience gained from the right knee was valuable when dealing with the left. The necessary amount of bone was removed without delay upon experimental sections, and thus time was saved.

So much bone had to be removed that it was no use sewing the upper half of the patella to the front of the tibia with the idea of preventing flexion. Therefore the kneecap and a good deal of pendulous skin was removed and the wound closed.

A sealed dressing was applied to the punctures upon the hips. Antiseptic gauze and wool were bound round the knees, and the tourniquets were removed. Perforated tin splints were incorporated in the dressings to stiffen the knees, and the patient

at once fixed in a double Bryant splint without extension. Very little shock followed the operation, and the wounds healed perfectly, but there was a good deal of pain in the right leg, due to temporary obstruction of its circulation and stretching of the popliteal nerves. The foot became blue and insensitive, and the pulsation of the posterior, tibial, and dorsalis pedis stopped.

These symptoms were relieved by allowing the knee to bend a little for a few days, and by removing a constricting gauze bandage which, having been applied wet, had contracted in drying. The circulation and sensation soon returned, but some of the epidermis peeled off.

Twelve days after the operation the knees were fixed in Bavarian plaster splints, and the double Bryant splint discontinued. The hips were extended daily to prevent contractures. Three weeks after the operation the patient was able to flex both thighs a little, and she tried to move the hip in all directions.

The apparatus shown in the photograph (Fig. 4) was applied five weeks after the operation, and the patient was instructed and helped to learn diligently the arts of balancing, standing, and walking. Gradually she became more and more proficient, and quite used to her instrument. She was very pleased with

the exalted position of her head, and much impressed by the increased range and different point of view.

She went out well satisfied on January 5th, 1909, nine weeks after the operation. The knees were firmly united, and all the movements of the hip were increasing. She could flex both thighs about twenty degrees, so that she could walk on the level with the aid of a little support from crutches. She could stand alone without these, and she will slowly be able to dispense with them for walking. (See Fig. 4.)

DIAGNOSIS.

The rapid onset of the disease during early childhood, the extent of the paralysis and its irregular and capricious distribution, are characteristic of acute anterior poliomyelitis, but the persistence of such complete paralysis and the temporary loss of power of the bladder are unusual features.

That the lesion is one affecting the lower neuron is clear from the extreme wasting and want of growth of the legs, the reaction of degeneration and the abolition of the reflexes.

The extent of the paralysis points strongly to the lumbar cord as the site of the disease, and the absence of anaesthesia shows that it did not extend into the posterior columns. Therefore, transverse myelitis and other affections of the lumbar enlargement of the cord are excluded. Peripheral neuritis does not lead to such a lasting paralysis, nor does it select the motor and leave the sensory fibres unaffected. No primary disease of muscle develops so suddenly, nor do any of them have the same distribution as in this case. Therefore the diagnosis was easy, and nearly all the interest of the case is centred in the treatment. But please remember that rational treatment depends on accurate diagnosis; and that in these cases the diagnosis is not completed until you can tell which muscles are affected, or, as in such an extensive case as this, which muscles or movements have not been completely paralysed or abolished. About the hips it is not easy to tell which muscles are damaged, but lower down it is fairly easy.

In any case, movements are more important than muscles. You may remember

that my patient had practically no muscular power below the hips, and that only the feeblest movements of those joints were possible. These facts were of great value in deciding upon the treatment. When the natural relations and the normal range of movements of a joint are restored, any weak muscles acting upon the joint are capable of increasing growth and power.

It was of supreme importance to ascertain that the heads of femora were firmly articulated in the acetabula, for if the hip-joints had been dislocated or unstable, the value of the ilio-femoral ligament would have been reduced to a minimum, so that balancing and standing would have been difficult or impossible without lessening the mobility of the hip-joints.

TREATMENT.

With deformities, as with other evils, prevention is better than cure. Much can be done to prevent contractures even in extreme cases of infantile paralysis. It is very desirable to do this whenever possible, because the deformities are not only bad in themselves, but they also



Fig. 4.—Showing the patient wearing the apparatus after operation.

interfere with the nutrition and development of any muscles that may have escaped complete paralysis. The stretching of weak muscles and the contracture of their stronger antagonists lead to progressive wasting of both, because a free range of movement is essential to the healthy circulation and growth of all muscles.

It is obvious that the actions of muscles must be imperfect when the joints and bones upon which they act have lost their natural mobility and shape.

It is of vital importance, therefore, to prevent contractures, and incidentally to avoid the need of operations whenever possible. A good deal can be done by:

1. Regular and vigorous stretching of the muscles, which tend to retract.

2. Developing their antagonists as far as possible by active and passive movements, massage, and electrical stimulation.

3. And lastly, by the use of suitable instruments, especially at night.

For instance, in this patient, contractures of the knees and hips could have been minimized by passive extension of these joints several times daily, by encouraging voluntary contraction of the extensors, and especially by the use of a double Thomas's hip splint at night. Then an apparatus, such as she now wears, could have been used in the day, without any need for a preliminary operation. In these ways the mobility of the knees and the normal stature could have been preserved.

It is interesting that the patient herself unconsciously prevented the development of talipes equinus by putting her weight upon her feet during her endeavours at progression.

OPERATION.

After carefully examining this patient and realizing the extreme severity of the contractures and the extent of the paralysis, I was inclined to advise against operation. But the patient, who had come all the way from Newcastle, was very anxious to have something done even at a considerable risk. Above all, her plucky endeavours to move about induced me to change my mind. The girl was so keen to help herself, that it seemed worth while to give her a sporting chance of learning to stand and walk with the aid of instruments. I did not dare hope that the result would be so good as it has already become in the short time that has elapsed since the operation. I have been greatly surprised to watch the development of so much power of moving the hip-joints. The most I expected was progression by rotary pelvic movements, but there is now no need of this ugly method, for the patient can flex the hips sufficiently to enable her to walk. These are some of the points which make me consider this patient a good subject for my clinical lecture.

Division of Contracted Tendons and Fasciae.

It was evident that these procedures would be insufficient to overcome the extreme contractures which had taken years to mature in this patient.

The vessels and nerves were also so greatly shortened that the simultaneous straightening of the hip and knee would throw an excessive strain upon these vital structures, which were unusually small in these withered limbs. The hips could have been first extended, and then the knee straightened after an interval of some weeks, during which the vessels and other structures behind the knees could be gradually stretched.

In this way slighter contractures of the knee and hip can be corrected without excising the knees and shortening the stature; but in my patient this method did not appear hopeful, on account of the degree and rigidity of the contractures and the withered condition of the limbs. Moreover, the bony and articular changes at the knees from long malposition and the total absence of muscular power made it certain that the knees could not be brought quite straight. In any case they would be frail.

The initial cost and ultimate expense of an instrument under these circumstances would be much greater, which is an important point for poor people.

Arthrodesis was unsuitable because the knees could not be extended without free removal of bone, and the union is not so likely to be firm as after excision. I therefore decided to undertake a more radical operation which could be completed at one sitting. I have generally dissected away the shortened fasciae for severe contractures of the

hip to lessen the risk of recurrence, but in this patient, in order to save time, I was content with subcutaneous but very free division. Recurrence of the contracture can be prevented by passive movements and instruments. When the hip was fully extended the tension of the hamstring was somewhat relieved, so that the flexion of the knee was diminished to some extent. Tenotomies, however, made but little difference, and a very free excision of bone was necessary.

Instruments.

The day instrument and a posterior night splint prevented bending of the knee at the union and at the epiphyseal lines.

The apparatus shown in the photograph (Fig. 4) is provided with toe-lifting springs and T valgus straps. There are no joints at the knees, which are kept firmly fixed by straps. The side-irons take some of the weight off the legs, and the whole apparatus, including the pelvic girdle, adds to the stability of the body.

For making the instruments I am much indebted to Mr. Pengeley, of Catherine Street, Strand. My best thanks are also due to Mr. Perkins, my late House-Surgeon, and to my dressers, for their help during the operation and after-treatment.

THE NERVE SHEATH IN THE CAUSATION AND TREATMENT OF NEURALGIA.

BY ROBERT M. SIMON, M.D., F.R.C.P.

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THE influence of pressure as the cause of neuralgia, especially in the case of the branches of the brachial and sciatic nerves, is so abundantly recognized, that it seems unnecessary to labour or illustrate the point. It is not, however, sufficiently recognized that this pressure upon the sensory elements of the nerves may arise, not only from causes entirely outside the nerve bundles, but also from changes in the perineurium, that is, the nerve sheath.

These changes may be due, firstly, to an extension of inflammation from surrounding tissues, as in the cases of brachial neuralgia, in which one can frequently, in my experience generally, elicit a history of bruising of the muscles or fibrous tissues surrounding the nerves; secondly, to such toxic conditions of the blood as have a tendency to cause proliferation of the connective tissue in the immediate neighbourhood of blood vessels, for example, chronic alcoholism; and thirdly, to acute congestions of blood vessels in the sheath of the nerves. This form of neuralgia is apt to occur in influenza, or as an after effect.

Morphologically, there is, I am told, no such thing as a nerve sheath—that is, no separate structure which can be clearly defined and exhibited; but, while this is no doubt true, and nerve elements cannot be found lying loose in a nerve sheath as a nut in its shell, it is true enough for all practical purposes that there is a distinct nerve sheath. The connective tissue which forms a nerve sheath is continuous externally with the connective tissue outside it, and from its inner surface fine trabeculae of connective tissue extend to form a protective covering between and round the myelin and axis cylinders of the nerve elements. Blood vessels are carried in all these connective tissue structures, and it is, I believe, upon the congestion of these vessels that the occurrence of pain depends. There is no lymph space between the sheath and the nerve elements proper, and for this reason any material overfullness of the vessels of the sheath, or a very slight oedema around them, or exudation into the lymph spaces in the interstices of the sheath will of necessity cause an amount of pain altogether out of proportion to the pain which would be caused by an equal or vastly greater effusion outside and round the nerve sheath itself.

If this theory of the cause of pain is correct, the failure of many methods of treatment in some cases of sciatica and brachial neuralgia will be explained and the reason for the success of other methods rendered probable.

To some of these methods I will revert later, but will now give details of two cases that seem to illustrate the truth of the proposition that it is often the condition of

things inside and not outside the nerve sheath that is the cause of pain.

CASE I.

J. W. O., a miner, aged 32, was admitted to the General Hospital in Birmingham under my care on February 29th, 1908, complaining of sciatica.

In March, 1907, he had a good deal of pain in the left buttock; this gradually got worse and extended down the leg. It soon became so severe that he had to give up work, and, failing relief from medicinal treatment, he went to Droitwich to try brine baths. He improved somewhat, but soon got as bad as ever, and in February when he was admitted to hospital was unable to walk on account of the pain. I am sorry to say I wasted a month of his life in trying to relieve him with drugs and local applications.

As he was unrelieved I asked my colleague, Mr. Barling, to cut down upon the sciatic and open the nerve sheath. This was done on April 1st, and numerous tough red adhesions between the sheath and the nerve were found. These were broken down and the nerve stretched inside the sheath.

Next day he was fairly comfortable, except for some pain due to the incision.

Three days after the operation it was noted that all pain had gone, and that the patient had not enjoyed so long a freedom from pain for months.

Ten days later he was discharged, free from pain, and able to walk with perfect comfort. He has remained quite well since.

CASE II.

A gentleman, aged 65, recovered very slowly from a severe attack of influenza.

During his convalescence I was asked to see him again on account of intolerable pain down the arm, and especially in the distribution of the musculo-spiral nerve. This pain was most marked about the middle of the upper arm, where the nerve is most superficial, and was associated with exquisite tenderness. No drug treatment made the slightest difference to him, except large doses of antifebrin, which gave him moderate, if transitory, relief. Radiant heat gave more freedom from pain than anything else. Leeches, blisters, and all sorts of local applications were tried, but ineffectually.

Very slowly and gradually the pain lessened, but never entirely left him, until one day it suddenly became worse than ever, and the temperature, which had been normal, began to vary from 99 to 100.5. I told him that there was probably inflammation inside the nerve sheath, and urged operation, thinking that there might be adhesions also between the nerve and the periosteum.

He would not entertain the idea, but after a week of misery consented to anything being done.

Mr. Barling cut down on the musculo-spiral nerve at the point of maximum pain, and found it adherent to the periosteum. The adhesions were broken down and the nerve sheath opened.

The same treatment as in the case of sciatica was adopted. Immediate relief from pain followed, and tenderness gradually disappeared.

It seemed certain that no other treatment would have been so immediately useful in either of these two cases; indeed, no other treatment had done more than give temporary relief.

Nerve stretching, from which so much was expected in the treatment of severe long-standing cases of neuralgia, has been abandoned on account of the disappointing results; and, indeed, it is not easy to imagine how any amount of pulling a nerve could influence the inflammatory condition of the inside of the sheath.

It is in the hope that this method of treatment may be criticized that this paper is being published. Of the success of the procedure there can, I think, be no doubt, so far as the relief of pain is concerned. I would only urge that it should be adopted before trophic changes occur, as Dr. Fleming, of Edinburgh, and others have pointed out that, even if a nerve is healthy to begin with, continued pressure will ultimately end in disorganization of the axis cylinder and the production of trophic troubles.

In the *Practitioner* of 1886 the late Sir Joseph Fayrer published a case in which what was believed to be a swelling of the nerve sheath was opened and about a couple of drachms of clear fluid evacuated, with immediate relief to the severe sciatic pain which had been complained of. I have had an equally good result in a case of severe neuralgia of the ulnar nerve in which a similar course was adopted.

Many instances of the cure of sciatica by acupuncture have been recorded, due doubtless to the setting free of fluid accumulated between the nerve sheath and the myelin of the nerve; but though this method may be, and often is, successful, it cannot compare, any more than can the procedure adopted by Sir Joseph Fayrer, with the more thorough operation of cutting down on and opening the nerve sheath and the separation of internal adhesions.

AURAL VERTIGO.*

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SINCE Ménière's description in 1861 of a case of the disease with which his name has been since associated, this title has been extended to include a variety of cases bearing more or less resemblance clinically to that properly called Ménière's disease. Yet, viewed from the pathological standpoint, the great majority of these have no right to be thus included, and, on the other hand, there are other cases in which similar changes have taken place in the ear, and which, nevertheless, have been considered quite distinct and unassociated with aural disease. Some authors have attempted a compromise by limiting the name to the rare variety first described and grouping the others under the title "vertigo with aural lesions and Ménière's symptoms," obviously a makeshift, but probably as good as was possible owing to the limited knowledge of the actual pathological changes in the ear, and especially in the labyrinth.

DEFINITION.

The result of the researches of many observers, both in this and other countries, during the past few years on the changes in the middle and internal ears consequent on disease, suggests the advisability of a thorough overhauling of our terminology. Indeed, the application of the name of any man, however distinguished, to a disease cannot be regarded as scientific, and is, in fact, likely to hamper the study of its details. There is no doubt that this has been the case with reference to the subject of this communication. In aural disease, as in disease of other parts, the only scientific nomenclature is that based on pathological findings, and in this way only can cases be relegated to their proper category. So that, as Lermoyez remarks, the time has come when the name "Ménière's disease" should be abandoned and our nosology revised in the light of the conditions found *post mortem*. For the present, however, we may retain the title to denote the condition actually described by the original observer.

As a matter of fact this is a very rare disease, an observation which, I have no doubt, will occasion surprise in view of the frequency with which the name is used. The case described by Ménière before the French Academy of Medicine was that of a young woman who during her menstrual period was suddenly and without evident cause affected with deafness, accompanied by vomiting and severe vertigo. Five days later she died, and on *post-mortem* examination the only lesion found was hæmorrhage into the semicircular canals, and to a less extent into the vestibule, while the cochlea was not affected. (It may be remarked here that a fatal issue to Ménière's disease is unusual.) Cases presenting the same clinical symptoms had previously been reported, but they were considered to be due to hepatic, stomacic, renal, cerebral, cerebellar, or other cause, and their connexion with an aural lesion was not suspected. From this case Ménière concluded that these previously reported cases, and others resembling them in showing the symptoms of sudden deafness, loud subjective noises, severe vertigo—the three cardinal symptoms as they have been called—taken in connexion with the well-known results of experiments on animals, were due to hæmorrhage or acute inflammatory exudation into the semicircular canals. Unfortunately, as I have said, the generic term "Ménière's disease" has been used to include all cases in which these symptoms have presented themselves, in whatever degree and in whatever manner of appearance. Hence the confusion of thought which has arisen. We may, however, use the parent disease as a guide to describe the various aural conditions which give rise to vertigo.

ANATOMY AND PHYSIOLOGY.

Let me rehearse in little detail the anatomy and physiology of the internal ear, for it will aid us in understanding the phenomenon under consideration. It must be looked upon as a double organ, dealing both, and to a certain extent separately, with the sense of hearing and with the sense of position in space—the static or, better, the spatial sense.

* Read before the Border Counties Branch of the British Medical Association.

The terminal organs of these two senses are delicate membranous structures, comprising together the membranous labyrinth enclosed in firm bony chambers, the osseous labyrinth. Though anatomically connected, the functions of these two main parts of the membranous labyrinth are distinct, and, though the nerves which supply them enter the internal ear together as the auditory nerve, they have distinct and separate central connexions and courses. The cochlea is the organ of hearing, and has its own nerve, the cochlear nerve, while the vestibular nerve, the nerve of the spatial sense, passes to the semicircular canals and the vestibule. The osseous labyrinth has two openings in the wall contiguous to the middle ear, the fenestra rotunda and the fenestra ovalis, the former leading to the cochlea, and closed by the membrane of the round window, and the latter leading to the vestibule and closed by membrane and the footplate of the stapes, the inner termination of the chain of ossicles. The fenestra ovalis is, as we shall see, of importance in reference to the question of vertigo. As regards the position of the canals relative to the tympanic cavity, the horizontal or external canal has the closest relationship, lying immediately beneath the inner wall of the aditus, where during the performance of the radical mastoid operation its external service can be seen separated from the fenestra ovalis by the prominent Fallopian canal containing the facial nerve. The superior canal comes to the surface in the upper part of the inner tympanic wall above the fenestra ovalis. The posterior canal is not contiguous in any part to the middle ear. From its position we are prepared to find that the external canal is the one most liable to be affected by the extension of middle-ear disease. Between the osseous labyrinth and the membranous labyrinth is the perilymph, and inside the latter the endolymph. The perilymph is in communication with the arachnoid cavity. The arterial supply comes from the auditory artery, a branch of the basilar, and the veins empty into the lateral and superior petrosal sinuses. There are, however, communications between the blood vessels of the inner and middle ears through the outer wall of the labyrinth or the inner wall of the tympanum.

The physiology of the internal ear is not by any means clear even yet. We are not at present concerned with the auditory part, though that presents unsolved problems, but in connexion with the spatial portions their exact relation to the maintenance of equilibrium of the body and to the appreciation of motion in different planes is still a matter largely of speculation, while their connexion with ocular movements and, it may be, with muscular tone requires further study. Since the classical experiments of Flourens on pigeons there have been many workers in this field—notably Weber, de Cyon, Loewenberg, Delages, Helmholz, Crum Brown. When, however, we come to details, we find conflicting and contradictory results. Indeed, from the nature of the case this must be so, for, as Hartmann says, it is impossible to determine whether the results are due to stimulation or to depression of the functions of the vestibular nerve. There is, however, practical agreement that the semicircular canals perform an important function in the maintenance of equilibration, and probably we may accept Crum Brown's theory that the canals on either side in their action balance those in similar planes on the other side.

The mode of action of the canals is, as I have said, still the subject of much discussion, and, as with experimentation so with the action of diseased and degenerative processes, it is difficult to decide whether we have to deal with a condition which excites or depresses the peripheral terminations of the vestibular nerve. Looking, however, to the results of destruction of the labyrinth, to the action of pressure on the nerve itself or on its pathway in the brain, and remembering that we are dealing with an efferent nerve, we may say that irritation of the canals leads to a tendency to fall towards that side, or to a sensation as if surrounding objects were moving in that direction, in which case there may be, as Dundas Grant remarks, an involuntary and, as it were, compensatory inclination to fall towards the other side; if only one canal is the seat of irritation, the direction of the vertiginous phenomenon varies with the canal affected. Increased excitability of the canals or of one of them on one side causes the movement of the eyes in that direction which is

translated by the opposing force of the opposite set of muscles into a nystagmus towards the ear involved. On the other hand, the sudden destruction of the canals or of the vestibular nerve on one side leads to deviation of the eyes to the opposite side and to a tendency to fall in that direction. After a time, a few days as a rule, when the destruction is at once complete, the eyes return to their normal position and the body equilibrium also comes again under control. In a case shown before the Otological Section of the Royal Society of Medicine in June, in which the vestibule and canals on both sides had been destroyed some time previously, there was only slight nystagmus and the patient could walk quite straight and with the eyes either open or shut. In deaf-mutes, too, who have afterwards completely or partially lost their sight, as happens sometimes in congenital syphilis, or in blind people who become totally deaf, equilibration is maintained, at any rate to a fair degree. So that de Cyon's contention that the loss of the spatial sense is made good by the sense of vision is not accurate. The patient referred to was, however, quite unable to recognize that she was being rotated when placed on a revolving table, and this fact has also been observed in certain deaf-mutes. In the interesting case of division of the auditory nerve for distressing tinnitus recently reported by Ballance, the deviation of the eyes to the opposite side lasted for only forty-eight hours. We may, therefore, take it that the canals are not essential to normal progression and equilibration though in health they do perform a most important function. The same may be said, though not quite so definitely, with regard to the action of the canals on the eyes, for where the vestibular apparatus on both sides is destroyed, as in the case quoted, or as in certain cases where this has followed disease, a fine nystagmus may remain. The function of the canals with reference to equilibration may be illustrated by the see-saw. When the weight on one end is equal to that on the other, equilibrium is maintained; if the weight on one side, in this case the stimulation of the canals or of the vestibular nerve, is increased, the plank goes down on that side; if the weight on one end be suddenly removed, the plank goes down on the opposite side. In the first case in which Lake destroyed the labyrinth on one side for severe vertigo there was noticed for a short time after the operation a tendency to fall to the opposite side. The direction of the vertigo can sometimes be ascertained only by careful examination. The patient should be instructed to look up, to close the eyes with the feet placed together, to walk along a straight line with the eyes directed forwards or upwards, to jump backwards, to stand on an inclined plane, and to make the examination more thorough the inclination may be varied. The vertigo may only make its appearance on looking quickly towards the diseased side or towards the healthy side if one labyrinth is destroyed. In the same way the direction of the vertigo may be brought out by turning the patient round several times in a revolving chair. In disease I have not found that the direction of the revolution affects the result. Syringing the ear or even the introduction of a speculum may bring on an attack of vertigo. By experimenting on the healthy ear Babiniski found that the positive pole applied to the labyrinth caused a rotation of the head to that side, whereas with the negative pole applied a more violent rotation toward the other side was obtained. No result was got after destruction of the labyrinth nor under chloroform narcosis.

The question of nystagmus is more difficult. Without going into the complex anatomy of the subject, we can state that there are important central connexions between the vestibular nerve and the nerves which supply the muscles concerned in the movements of the eyeballs, and especially with the sixth nerve of the same side. It would appear that the steadiness of the eyes is maintained—in part, at any rate—by the action within normal limits of the canals on both sides. If there is over-stimulation of those on one side, the eyes tend to move in that direction, but by the action of the opposing muscles what would otherwise be a deviation is turned into spasmodic contractions of an intensity varying with the amount of stimulation. In the milder forms the nystagmus only appears when the eyes are turned sharply towards one side or the other, more markedly, as a rule, when turned towards the affected ear, though frequently there is also nystagmus,

less in degree, when the eyes are turned in the opposite direction.

Wittmack and other observers have thought that in the non-suppurative ear affections the nystagmus is usually worse when the eyes are turned towards the healthy side. It is probable that with over-stimulation of the muscles which move the eyes in one direction there is also a reflex increase in the stimulation of the opposing set, so that on both sides we get a condition where complete and normal relaxation does not occur. Experiments seem to show that the direction of the nystagmus depends not only on the side on which the labyrinthine affection is, but also on the plane of the canal chiefly involved, so that we may get a double movement in which the eyes tend to move, say, to the left and downwards, and so on. If sudden destruction of the vestibular apparatus or of its connexion with the brain takes place, we get, as we have seen, strong deviation of the eyes to the opposite side. If the destruction is slow, we may get neither vertigo, nystagmus, nor deviation.

Before leaving this part of the subject, let me say a word about the function of the vestibule with regard to orientation—that is, our knowledge of the position of the body, or, rather, of the head in space. As stated by Horsley, "inclination of the head in any direction is recorded by the corresponding vertical canals according to the plane of movement, and the all-important rotation of the eyes, of the head, and, later, of the whole body, is made known to consciousness by the horizontal canals." Though this function has, of course, a distinct connexion with the maintenance of equilibration, it has primarily to do with our recognition of the position of the head and of the space traversed by it. If we look upon the maintenance of equilibration as the active function of the vestibule, we may consider this the passive. Except as regards the complete destruction of both labyrinths, to which reference has been made, I am not aware that disease of the labyrinth has been studied specially with reference to the knowledge a patient may have relative to various movements.

PAEHOLOGY AND DIAGNOSIS.

Let us now look at this question from the clinical point of view, discussing at the same time the pathological conditions on which it depends, and at the outset let me say that it must be a question of great difficulty in many cases to decide whether we are dealing with a case in which the function of the vestibule is depressed, or is unduly excited by the irritation of early pathological changes, such, for instance, as increased tenderness of an inflamed cutaneous surface. A careful examination of the case in all its bearings must be made, the amount of hearing, the tuning-fork reactions, the appearance of the vertigo with reference to the tinnitus and deafness. Vertigo may be sudden and severe, occurring in a subject previously free from any aural affection. This was the case with Ménière's patient. Such a case is due to traumatism, hæmorrhage, acute inflammatory exudation, or embolism. The severity of the phenomena will depend on the amount of destruction. If the labyrinth is completely destroyed we shall get complete deafness on that side, severe vertigo, tinnitus for a time, vomiting, and, it may be, a period of unconsciousness. In this case, after the vertigo has passed off, we would not expect to get a recurrence. In cases of incomplete destruction, however, though the immediate symptoms are not so severe the patient is liable to have recurring vertiginous attacks. Irregular movements of the eyes occur, and in some cases, as Launois and Chavanne state, there has been noticed facial paralysis, and more rarely paralysis of other cranial nerves. A fatal issue is rare, though it did occur in Ménière's case.

In the large majority of cases of aural vertigo there has been a pre-existing pathological condition of the ears, either of the inner or middle ear, more rarely of the external auditory meatus. This aural condition may have been unrecognized even by the patient, and as we may, and do, of course, have affections of the auditory part of the internal ear leading to deafness, but without any vertigo or giddiness, so it is reasonable to suppose that we may get the static portion affected without any deafness resulting, but giving rise to vertigo or dizziness, whose dependence on an aural affection it would, under the circumstances, be difficult to establish. Careful tests would probably bring out this connexion if it should be sought for; hence there are some who state that all vertiginous

phenomena, except those due to intracranial conditions are dependent on labyrinthine affections; indeed, even Sir William Gowers says that 90 per cent. of the cases of vertigo are due to ear disease. In this connexion it is interesting to note that, *post mortem*, changes have been found in the static portion of the internal ear while the auditory portion has appeared healthy.

As I have said, the trouble in the ear may be in its external, middle, or internal part. The simplest case is that in which a collection of cerumen has given rise to dizziness, or even to vertigo. The cause of this is somewhat difficult to decide. It may be due to increased pressure acting through the membrana tympani, and then through the fenestra ovalis, or the plug of wax may lead to some congestive condition of the labyrinth by the interference with an abnormally free intercommunication between the veins of the internal ear and those of the tympanum and posterior wall of the meatus, or it may be altogether a reflex action. In the same way, water getting into the ear, even with the tympanum intact, has caused vertigo; and it is an interesting speculation whether some cases of drowning may not have been thus caused—a hypothesis far from unlikely when the person has been the subject of middle-ear suppuration. A foreign body—a fly, and so on—may in the same way cause vertigo. The prognosis in these cases is, of course, quite favourable.

Coming now to the middle ear, we may say that all affections of this part may lead to changes in the labyrinth. In the great majority of chronic non-suppurative diseases of the middle ear the internal ear becomes secondarily involved. As a rule, this takes place on both sides so gradually that nothing in the nature of vertigo beyond a very slight feeling of dizziness is complained of. In cases of one-sided middle-ear affection this freedom is not so usual. Moreover, when the protective power of the tympanic membrane and ossicles is weakened, causes which would otherwise do no harm may lead to severe damage to the labyrinth. A loud noise, as the firing of a gun, a band, especially in an enclosed place, and so on, has brought on a vertiginous attack, and the injury in such a case to the canals—it may be congestion, laceration, or hæmorrhage—may be the beginning of recurring and severe vertigo. Apart from these sudden attacks, we do often get vertigo dependent on non-suppurative middle-ear affections. What the actual condition in the canals is it is difficult often to determine. Probably in most there are degenerative changes. Horsley states that we do not get true forced rotation from pure middle-ear disease, but only when the labyrinth or vestibular nerve is involved. In some the attack may be due to increased pressure exerted through the footplate of the stapes. An examination of the hearing by the various tests will in some show that the deafness is definitely of labyrinthine origin. In some, however, the middle-ear affection itself is the cause of the deafness. In many the condition is evidently of a mixed nature. In acute catarrhal and in acute suppurative conditions of the middle ear temporary vertigo is common, but passes off with the improvement in the tympanic disease, though in a certain number the damage to the internal ear is of a permanent character, and may show itself by complete or partial deafness of a labyrinthine character with or without recurring vertigo or dizziness. In children especially we must be on the look-out for an acute labyrinthitis such as described by Voltolini. The attack begins with meningeal symptoms, but consciousness is retained. Deafness comes on quickly, and usually becomes absolute in a day or two. Giddiness is observed if the child sits up, and may be severe. In a few days the attack subsides, but the child remains as a rule permanently deaf, and, depending on its age, deaf-mutism results. I need only mention that secondary changes in the labyrinth occur sometimes in meningitis, basic, tuberculous, or cerebro-spinal. In such cases there frequently remains a fine nystagmus, but vertigo is not a prominent feature.

We now come to a most important question, namely, the relation of vertigo to chronic middle-ear suppuration. Dizziness is by no means an uncommon accompaniment of this affection, and in many cases actual vertigo can be made manifest by the application of various tests, and the same holds with reference to nystagmus. In the great majority of these cases the vertigo is of mild degree, and

is probably dependent on the same conditions which give rise to it in the non suppurative middle-ear affections, that is to say, it and the nystagmus will have the direction got in irritation of the vestibular nerve. At the same time, it is a symptom which deserves very careful attention, and, whether it increases in severity or not, if it is associated with rapid decrease in the hearing and with a loss of bone conduction and of perception for the higher notes it is a danger signal which should not be disregarded. If, in addition, on alterations of pressure within the meatus by the airbag or by a pneumatic speculum, or if on gently syringing the ear an attack of vertigo with or without nausea is caused, then the demand for the performance of the radical mastoid is imperative. If the vertigo should change in type with a tendency to fall towards the opposite side or with a sensation of surrounding objects moving in a direction contrary to that in which they had previously appeared to move, and if the nystagmus should change in direction or if deviation of the eyes to the opposite side should show itself, then one would be right in suspecting the destruction of the labyrinth by the suppurative process. It must be stated, though, that infection of the labyrinth going on to destruction of the membranous contents has been not infrequently found without a history of either vertigo or nystagmus. In such a case the probability is that the membranous labyrinth has been destroyed by a slow inflammatory process in advance of the suppuration. It need hardly be said that it should be our aim to anticipate by operation the spread of the suppurative process to the internal ear with the great risks of intracranial infection which thereby follow. During the performance of the radical mastoid operation the inner wall of the tympanum should be carefully examined for carious points or for a sinus leading into the labyrinth, and this advice applies especially to the region of the external canal and to the oval window. In the great majority of cases, where a timely operation is performed, nothing will be found to make it necessary to open into the internal ear, and the symptoms will slowly subside after the middle-ear cavities have been efficiently dealt with. Such a case, however, should be carefully watched.

Now we come to a question of differential diagnosis. It is a matter of much difficulty at times to determine whether we have to deal with a suppurative labyrinthitis or with an intracranial complication, especially with a cerebellar abscess, in which not unusually the route of infection is via the internal ear. The difficulty is increased in that the cerebellar abscess may be situated in the middle or lateral lobe, or even, as rare cases have shown, in the lateral lobe of the opposite side. It has been said that one is more likely to find a cerebellar abscess at a distance from the primary infection than is the case with cerebral abscess. By far the most usual, however, is an abscess in the lateral lobe of the side on which the ear disease is. Moreover, in the early stage, at any rate, and before complete destruction of that lobe takes place, the lesion, as regards the vestibular nerve, is an irritative one, and, as Horsley and Ballance have shown in the case of extra-cerebellar tumours, and Stewart and Holmes from experiments, an irritation of the vestibular nerve in its course or in its cerebellar connexions leads to a tendency to fall to that side, as is the case with irritation of the labyrinth; whereas in labyrinthine destruction, as by suppuration, the vertigo is in the other direction. At the same time, it must be remarked that, as a rule, cerebellar abscesses are not seen in the early stage, and in reported cases the direction of the vertigo is rarely remarked. Macewen states that vertigo occurs in the early stage of cerebellar abscess, but he also remarks that there are few localizing symptoms at this period. In one of his cases, a child of 3 in whom the right internal ear was destroyed by suppuration, and in whom ultimately a superficial abscess was found in the roof of the fourth ventricle, with also thickening of the dura over the right side of the cerebellum, there was a tendency to fall to the right side when being sat up in bed by the nurse. Macewen Smith states that intracranial complications of aural suppuration, such as thrombo-phlebitis of the lateral sinus and extra-dural abscess, may cause vertigo towards the diseased side. With reference to nystagmus in cerebellar abscess, Whitehead observed in a case successfully treated by operation that this symptom was obtained on extreme

rotation of the eyes to the side of the disease. An adaptation of Barany's test may prove of help in differential diagnosis. He found that cold water poured into the ear is followed by a tendency to fall towards the other side, and that water above the temperature of the body has the opposite effect. Nystagmus, too, in similar direction is caused. If the labyrinth on one side is destroyed, cold water poured into that ear will have no effect in producing vertigo towards the opposite side or in controlling or overcoming a vertigo in the direction of the diseased ear which may be present, nor will nystagmus result or a present nystagmus be affected. I have frequently used Barany's test in patients, and in those in whom the tympanic membranes have been destroyed by disease, so that the fluid could get into contact with the inner tympanic wall on both sides, the results have confirmed his claims; in patients with intact membranes the results in my hands have been inconclusive. In differential diagnosis this test will give valuable help.

Apart from intracranial affections, and especially cerebellar abscess, occurring as complications of middle-ear suppuration, we shall sometimes have to decide between the possible aural or intracranial origin of vertigo where there is no suppuration. The case may be one of cerebellar tumour causing irritation or destruction of one of the lobes of the cerebellum or of the vestibular nerve. Again, the condition may be really of the nature of epilepsy, or we may have to deal with some affection of the nervous system, such as locomotor ataxy or of some general disease, such as Bright's disease or severe anaemia. Ocular defects, too, may give rise to dizziness or vertigo, which, as a rule, disappears on closing the eyes. I have also seen vertigo associated with disease of the sphenoidal sinuses. In all cases of difficulty a diagnosis can be made only after a most thorough examination of all the symptoms; of the eyes for optic neuritis and for the degree of neuritis, of the general muscular system for the presence of paralysis, and, of course, of the ears by the various tests at our disposal. It is so usual to find alterations in hearing and changes in the ears that it must not be concluded from these that the vertigo is necessarily dependent on the aural condition. In few affections is co-operation between the specialist and the physician likely to be more helpful than in this.

COURSE.

As I have before said, if the destruction of the vestibular apparatus is at once complete the first attack of vertigo will be the last. In cases in which the effect on the labyrinth is temporary the vertigo passes off, and the ear may return completely to normal. In many cases, however, a constant dizziness remains, with recurring attacks of severe vertigo, or indeed there may be constant vertigo of such severity that the patient is quite incapacitated from work. There may be accompanying tinnitus and nausea, or these may usher in an attack. In most cases the auditory part of the internal ear is also the seat of pathological changes showing themselves by increasing deafness. Indeed, the only termination that one can hope for in many cases of severe vertigo is complete disorganization of the internal ear when this distressing phenomenon disappears, but complete deafness results. In the recurrences of vertigo it is not always possible to decide on the exciting cause. Certain it is that anything which leads to cerebral congestion may bring on an attack. In cases in which unabsorbed blood pigments or the results of exudation remain in the labyrinth the attack may be referred to a summation of stimuli.

TREATMENT.

As regards treatment, this naturally has reference especially to the underlying aural affection, and in giving a prognosis one has to take into consideration the possibility of the amelioration of this condition, and also the period of association of the deafness and vertigo. In non-suppurative affections of the middle ear in which the vertigo has shown itself much later than the deafness or tinnitus, it has seemed to me that the treatment of the aural condition was more likely to lead to its improvement or disappearance. In treating the symptom itself the drug of most efficacy is quinine. Charcot instituted this treatment on the principle that it gradually destroyed the hearing, when, as we have seen, the vertigo disappears. On the other hand, Urban Pritchard reports a case of severe

vertigo from a poisonous dose of quinine. It is, however, not necessary to give it in such large doses. Given a grain at a time, it seems to reduce the irritation of the vestibular nerve, probably by overcoming congestive changes. On the ground that vertigo is due to anaemia of the labyrinth, which, however, is probably not as a rule well founded, Lermoyez suggested the use of amyl nitrite. We are all aware, of course, that in conditions of severe anaemia vertigo is common, but whether this is an aural phenomenon or not, even when associated, as it often is, with tinnitus, is a doubtful point. At the same time it is quite possible that the actual cause of vertigo is not so much either congestion or anaemia as the alterations in the pressure of the endolymph which may be brought about by either of these states. The bromides and iodides are sometimes useful, and pilocarpine, especially in patients in whom the aural condition is dependent on congenital or tertiary acquired syphilis, has sometimes seemed of value. Repeated lumbar puncture has been used with some, though probably only with temporary, benefit. Patients should be advised to eschew alcohol, tea, coffee, and tobacco, to avoid as far as possible mental excitement and loud noises, and to keep the bowels acting well. During a severe attack the recumbent posture should be enjoined, with ice to the side of the head. When all other measures fail, and when life is made practically intolerable, the advisability of destroying the labyrinth—at any rate the static portion of it—should be entertained. I am referring now to cases of non-suppurative ear diseases. This has been carried out in this country by Milligan, Lake, and Yearsley; or, as Ballance suggests may yet be possible, the vestibular nerve, as distinct from the auditory nerve, may be divided before it enters the internal auditory meatus.

ON LEAD POISONING IN CHILDHOOD.*

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THOUGH lead-poisoning is practically unknown among adults in Queensland, except among those specially exposed to it by occupation, such as painters, yet lead-poisoning among children is not uncommon in every township in Queensland. By not uncommon I mean that every medical man practising among children should probably see several cases every year. The causation of the disease has been ascertained, and that similar cases must occur in all those parts of Australia in which similar conditions may happen to prevail.

The symptoms of lead poisoning in children differ from those found in adults in certain important particulars, which have not yet found their way into the textbooks, and as a consequence the real nature of the affection is very frequently overlooked or misunderstood.

ETIOLOGY.

My experience is confined mostly to Brisbane. I see cases rather commonly in private practice, more commonly since I have come to recognize the milder cases and earlier stages. A few of these cases have come from other towns. The records of the Children's Hospital show that 262 cases have been treated as in-patients since 1891, and at present some 20 cases are being admitted every year.

The cause of lead poisoning among Queensland children has been most convincingly demonstrated by Dr. Lockhart Gibson.¹ Nearly all the dwellings in Queensland are built of wood, and in the towns the wood is covered by paint consisting largely of white lead. Exposed to our hot summer sun this paint rapidly withers and becomes

reduced to a powdery condition. This is particularly noticeable on verandah railings. The verandahs are favourite playgrounds for young children, who clasp the railings with their moist hands, which become covered with poison. Thence it finds its way to the child's mouth, especially in children who suck their fingers or bite their nails. Dr. Gibson's investigations explain:

1. Why the disease is found in children from all towns in Queensland, but appears to be unknown in the country, where the houses are of wood but not painted.
2. Why it is most prevalent in the summer months.
3. Why it frequently picks out one child only in a family, attacking the one who bites his fingers or sucks his thumbs, or who plays habitually on the verandah, etc.

Similar cases must occur in any districts of the other States, if such exist, where the dwelling houses are similar, even though such cases may have never been recognized.

I do not mean to deny that lead poisoning may occasionally but rarely occur among Queensland children from other sources than that here given, but I have no doubt whatever that this is the cause of the endemic prevalence of this form of sickness.

SIGNS AND SYMPTOMS OF LEAD POISONING IN CHILDREN.

There are two signs of lead-poisoning in children that are not, properly speaking, morbid symptoms, but which are of great value as indicating the presence of lead in the tissues.

First, the so-called "blue line" on the gums. A continuous line is rather exceptional in children; what we usually see are small blackish dots at the extreme edge of the gum opposite some of the teeth, more particularly those that are not so clean as the rest. They are frequently minute, and need to be looked for in a good light, and sometimes with the aid of a lens. I repeat, they have to be looked for; on a casual inspection they will certainly be missed. Where there is actual pus exuding from the gum I have seen a dark black line on the edge of the sinus, and even discoloration of the cheek opposite to it, but this is rare. A discoloration of the base of the tooth itself is no sign of plumbism; and doubt as to the site of the blackness may be at once removed by inserting the edge of a piece of stiff notepaper between the gum and the tooth. These dots in the gum are pathognomonic. But they may occur in the absence of symptoms. When a child exhibits symptoms of plumbism an examination of the teeth of its brothers and sisters will sometimes reveal the presence of the dots in them, though they are in apparently good health. This *stigma* of plumbism may, as I have observed, be followed later by the usual symptoms. On the other hand, the complete absence of lead dots is of no importance in diagnosis. The lead dots are particularly likely to be absent if the child has a clean set of teeth.

The second *stigma* of plumbism is the presence of lead in the urine. The detection of traces of lead in this fluid should be the task of a trained analyst. Lead is by no means constantly present in the urine of these children, therefore little weight, if any, should be given to a single or even several negative findings. On the other hand, the presence of lead in the urine is positive proof that the metal has been absorbed



into the system. For clinical purposes an analysis of the urine is, I think, seldom necessary.

1. Gastro-intestinal Symptoms.

These correspond to the lead colic of adults, but are less defined. The child complains of abdominal pain, which is often plainly of a colicky nature. There is no abdominal tenderness, but pressure frequently gives relief. Vomiting, often persistent and lasting for several days, is a usual accompaniment. During this time all food is often rejected, with complete impartiality. The bowels are

* Presidential Address delivered at the Section of Diseases of Children of the Australasian Medical Congress held in Melbourne, October, 1908.

usually constipated, but this is not invariable; sometimes there are rather frequent small stools containing much mucus.

If these symptoms are accompanied by dots on the gums the diagnosis is easy. If the latter are absent it may be difficult, but may often be made with a high degree of probability.

One feature of these attacks is that they are independent of the nature of the food the child has taken, and another is their periodicity. If a child is brought with a history of attacks at intervals of a few weeks or months, during which it is continually vomiting and complaining of abdominal pain, while in the intervals it eats everything without suffering, plumbism should be strongly suspected. If pain in the legs accompanies that in the abdomen, plumbism may be safely diagnosed; and when the child—perhaps after several attacks—begins to drop its toes when walking, there is no longer any room for doubt.

In doubtful cases the fingers should be inspected to see if the nails are bitten, and if the house is visited the condition of the paint on the verandah railings and other parts, together with the habits of the child as to play, etc., should be inquired into.

2. Paralysis of the Muscles of the Limbs.

Lead poisoning and wrist-drop are so closely associated in the mind of the profession that it is necessary to say at once that wrist-drop is *not* the most characteristic paralysis in childhood. It is frequently absent in children under 12 years of age. When present it is never the first paralytic symptom. The feet are invariably affected first, and are invariably the last to recover. This is so in my experience at least.

The earliest muscles to become paretic or paralysed are the tibialis anticus and extensor longus digitorum pedis. The child drops its toes in walking, and the nature of its ailment can be recognized as it walks into the consulting room. There are, of course, other causes of this form of paralysis, such as arsenical and alcoholic poisoning and beri-beri; but I have not so far met with any instance in which these have complicated the diagnosis. The peronei are also frequently attacked and occasionally suffer worse than any other muscles. In the forearm the extensors of the fingers are attacked before those of the wrist, as is the case in adults. Paralysis of the small muscles of the thumb, accompanied by wasting, is often seen in severe cases, and the interossei may be similarly affected. In the muscles of the hand paresis and wasting appear to be simultaneous, and in this respect they differ from the muscles of the forearm and leg.

A very common symptom attending the onset of the paralysis is pain in the muscles of the legs. This comes on especially at night, when the child frets and cries and cannot go to sleep. The pains are usually accompanied by tenderness of the muscles, but may be relieved by warm fomentations. When severe they are accompanied by evident cramp, affecting particularly the calf muscles. I have seen extremely painful cramps of the back muscles, and of other muscles, also, as in a case of which I made the following note during an attack: "The child lies on its face, embracing a pillow with both arms. When the pain comes on the head is thrown back by spasmodic contraction of the back muscles, the muscles of the arm are in tonic spasm, the legs are flexed, and hamstrings forcibly contracted. The legs are tender, and the slightest touch causes the child to cry out. The abdomen is not tender, and stands firm pressure well. The mind is perfectly clear; the child is very intelligent." This was an extreme and very unusual condition.

If the child is removed from the source of the poison, the forearm muscles usually recover in a few weeks, those in the hand more slowly. The leg muscles are much more slow to recover; three months may suffice in recent cases, but some take much longer. Talipes equinus may persist after the anterior muscles have regained contractility, and it is then necessary to divide the tendo Achillis. Complete recovery is usual. In old cases with relapses—in some the history had spread over several years—I have seen apparently incurable paralysis, but in the light of recent advances in the treatment of paralyses I am not sure that any case should now be regarded as hopeless.

3. Diaphragmatic and Cardiac Paralysis.

One of the less frequent symptoms of plumbism is paralysis of the diaphragm, of which I have seen a fair number of cases, but only in patients suffering from the usual paralyses of the legs. In itself it is not a serious symptom, for this paralysis gives rise to no embarrassment of respiration in a child lying in bed, and will, indeed, escape observation unless carefully looked for. Most of my cases were old-standing cases of plumbism, but I have seen diaphragmatic paralysis in a first attack. When it comes on acutely, I regard it with grave anxiety, for two or three times I have seen it accompanied or followed by fatal cardiac weakness. This is characterized by excessive weakness and rapidity of the pulse, intense general depression, and vomiting, without any intellectual disturbance; death occurs usually within twenty-four hours. I am unable to explain these symptoms, but they are very similar to some fatal cases of poisoning by diphtheria toxins, which occur in a late stage of that disease.

4. Remote Effects: Anaemia, Albuminuria, Nephritis.

Old-standing cases of plumbism are frequently distinctly anaemic, with sallow complexions. This is not so in recent cases.

Transitory albuminuria is not uncommon. Chronic interstitial nephritis is, I believe, an occasional but rare complication. A case which ended fatally has been reported by Dr. T. E. Green.²

5. Eclampsia.

Now and again children suffering from chronic plumbism develop eclamptic seizures. These do not differ symptomatically from convulsions due to other causes, but are of a severe type and not infrequently fatal, even when treated with the greatest skill from the onset. I believe that a good many cases of fatal convulsions in Brisbane are the effect of undetected plumbism. A few months ago I was called in consultation to see a boy dying from protracted convulsions. Careful inquiry failed to elicit any exciting cause, but an examination of the gums revealed the typical appearances caused by the deposit of lead sulphide.

6. Acute Optic Neuritis associated with Oculo-motor Paresis.

The far-reaching effects of plumbism in childhood are not yet exhausted. The most insidious and most damaging I have not yet mentioned. There is a totally distinct clinical complex, first recognized by myself long before I had any idea of its causation, and described at the Inter-colonial Medical Congress of 1892 as "a form of cerebral disease characterized by definite symptoms, probably a localized basic meningitis." I mention this purposely, as it is with meningitis and cerebral tumour that this form of lead poisoning is most likely to be confounded. This mistake has been made frequently in the past, and will no doubt be repeated in the future. Nevertheless, the diagnosis of this condition is not as a rule difficult to those familiar with it.

These cases are usually brought to us complaining of headache, which may be severe and persistent, and may be accompanied by vomiting. We observe at a glance that they have an internal squint. Sometimes the squint is the symptom for which they are brought, but on the other hand it may be so slight as to have escaped the mother's observation. On inquiry we learn that the squint is recent, and on examination we find that it is due to paresis of one or both external recti. This ascertained, we proceed to examine the optic discs, and discover optic neuritis, so intense in most cases as to be evident even to the tiro in ophthalmoscopy. This symptom complex is due to lead poisoning. We proceed to verify our diagnosis. In default of any corroborative evidence of lead, we must remember that a cerebral tumour, cerebral tubercle, or cerebral syphilis, might produce exactly these symptoms and no other; but it has happened in all the cases of tumour or cerebral syphilis that I have seen, that other symptoms not characteristic of lead have been present; so that the probability of a case such as I have described, occurring in Brisbane, or any town similarly painted, being due to any other cause than plumbism appears to be very small.

In more severe cases, which are less often seen, the cerebral and ocular symptoms are more pronounced. We

see these children usually in bed. In addition to headache, there may be severe pains in the back of the neck running down into the arms. The head may be retracted. Both external recti are completely paralysed, and some, or all, the muscles supplied by the third nerve (except the levator) may be paralysed also. There may even be immobility of the pupils. These cases are frequently confounded with meningitis. It is a natural, perhaps an inevitable, mistake, but inspection of the gums may save even the inexperienced from error. If the gums are clean the bitten finger-nails may arouse his suspicions. The course of the case is not that of an ordinary meningitis. The child almost always makes a perfect recovery except as to vision. I can remember only one of these cases that proved fatal, unless convulsions supervened, but there is almost always some loss of sight, which may be total.

Blindness due to optic atrophy, and therefore permanent and hopeless, is the unfortunate consequence of a large percentage of these cases of plumbic ocular neuritis. It may occur in the milder cases in which only the optic and sixth nerves are involved; when the third nerve is implicated, escape from at least partial loss of vision is rare. In many cases the blindness is absolute, in some there is only great impairment of vision. The suddenness with which this is lost has struck me forcibly. One day there may be nothing to suggest defective vision, within the next two days the child may be found apparently quite blind. Fortunately the great majority of the milder cases recover perfect vision if they come under treatment early.

It is a remarkable thing that children who suffer from ocular neuritis do not suffer from limb palsy. I have never seen the conditions combined. Dr. Lockhart Gibson has once observed wrist drop in a child suffering from ocular neuritis, and two or three cases in which the limb palsy had preceded or followed ocular neuritis at an interval of many months. Cases of the two forms occurring in the same family are not so rare.

A large proportion of lead poisoning in children take on the form described in this section. Of 89 cases of plumbism admitted during the last four years into the Children's Hospital, Brisbane, 20 were of this variety, that is, 22.5 per cent.

7. Chronic Optic Neuritis and Atrophy without Paresis of Sixth Nerve.

These cases are much less often seen than the preceding. I have no experience of them, and Dr. Lockhart Gibson has only recognized them within the last three years. The symptom complained of is loss of sight, and the ophthalmologist is most likely to be consulted. The course is slow, and they respond well to treatment, if not too advanced. Diagnosis can only be made by finding evidence of lead in the system, or of exposure to the causes of plumbism.

PREVENTIVE AND CURATIVE MEASURES.

There may be, and doubtless are, other conditions attributable to lead than those recognized, but those I have described are sufficient to show that lead poisoning among children is a serious evil. Prevention is easy. Paint containing lead should never be employed on outside surfaces, such as fences, walls, and particularly verandah railings, in places where children, especially young children, are accustomed to play. Zinc-white, or some other paint free from lead, should be substituted. Unfortunately we in Brisbane still from ignorance, no longer excusable, allow our houses to be poisoned traps for children's fingers, and every year furnishes its quota of ill-health and suffering, crippling, hopeless and permanent blindness, and occasionally death as the consequence. This is certainly a matter which calls for legislative interference.

The curative treatment consists essentially in removing the child from the source of the poison. We adopt also other measures calculated to encourage the elimination of lead from the system, but to what extent these are efficacious must be a matter of doubt. By themselves they are useless. Removal of the child into a hospital is a short way of taking it out of danger. But after its discharge it will surely relapse if the home conditions remain the same. We must find out exactly where the child got the poison, and warn the parents to keep him away from

it, remembering that lead paint is only dangerous (1) when it is fresh and sticky, or (2) and more especially when it is dry and powdery. It is also well to break the child of the habit of nail-biting or thumb-sucking, which by the way is no easy task. The most effectual method is to put straight splints over its elbows. This may seem harsh treatment, but milder methods usually fail.

REFERENCES.

1 *Australasian Medical Gazette*, 1904. The Transactions of the Australasian Congress. See also *BRITISH MEDICAL JOURNAL*, 1908, vol. ii, p. 1488. 2 *Australasian Medical Gazette*, October, 1897.

A CASE OF CROSSED PARALYSIS.

By GORDON LAMBERT, M.D. CANTAB.,
SELSEY, SUSSEX.

The following case, though not very unusual, presents, I think, certain features of interest:

W. J., aged 59 years, farmer and dairyman, had been very "irritable" for some days before February 7th. On that day he got out of bed at 4 a.m. to pass urine. Immediately after doing so, he became very giddy and fell down; but he did not lose consciousness. He returned to bed, with assistance, and afterwards insisted on making several attempts to walk. I was summoned to him at 8 a.m., and I found the following physical signs:

Nervous System.—Upper segment paralysis of the face on the left side, partial paralysis of the right motor oculi nerve, ptosis, slight divergent strabismus, limitation of movements of the eye (chiefly upwards), diplopia. On my arrival the right eye was completely closed; but the patient persisted in making voluntary efforts, until he completely raised the upper eyelid. The pupils were equal and reacted to light and accommodation. The left arm and leg did not show any loss of motor power; but the knee-jerk was distinctly brisker on the left side.

Heart.—Apex beat not palpable. Apex localized by percussion and auscultation in fifth left interspace, nipple line. Heart sounds faint and distant; aortic second sound not accentuated. No bruit.

Pulse.—Regular, 90 odd, of small volume, moderate tension. Radial arteries tortuous and uniformly thickened; no discrete, nodular thickenings.

Urine.—Specific gravity, 1018. No albumen. (Urea not estimated.) Patient has passed urine during the night for several years, nearly every night. He estimates that he passes from three to four pints per diem.

Previous History.—The patient had been a temperate man, and had done a great deal of heavy manual work. He had had one severe illness only, an attack of influenza 16 years ago, during a severe epidemic.

Progress and Result.—Motor power was rapidly regained during the first week, and on February 22nd the facial paralysis was no longer evident. Diplopia persisted; but the limitation of movements of the right eye was distinctly less. The ptosis had quite disappeared. The pulse was regular, 82, of moderate volume and tension. The physical signs in the heart were as before. The urine-specific gravity 1018—contained no albumen.

The case is clearly one of crossed paralysis due to a lesion in the right crus cerebri, involving the fibres of the motor oculi nerve and the facial fibres of the pyramidal tract. It is justifiable to assume that the nucleus of the motor oculi is not involved.

The chief interest centres on the nature of the lesion. Is it a very limited hæmorrhage, presumably from one of the deeper small arteries (of the "ganglionic system") or thrombosis of such a vessel? Arterio-sclerosis is certainly present; but the condition of the heart and pulse, taken in conjunction with the history of severe influenza, seems to make the probability of hæmorrhage doubtful. The onset is interesting. The giddiness and falling are, of course, not unusual after evacuation of the bladder—the splanchnic vessels being rapidly filled with blood and transient ischaemia of the brain established. There is no evidence that the act of micturition is accompanied in this patient by any special effort of straining, which might produce a hæmorrhage, that is, by raising tension, in spite of the upright position and the evacuation of the bladder. The involvement of the facial fibres and the escape of the arm and leg in a lesion of the crus cerebri is also interesting, as indicating very limited damage.

The Committee on Legal Affairs of the Massachusetts Legislature, to which the Antivivisection Bill was referred this year, has reported leave to withdraw. This, it is said, is the eleventh or twelfth time that such a bill has been presented to the legislature and has met with the same fate in committee.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ACUTE ASCENDING PARALYSIS.

THE case of acute ascending paralysis reported by Dr. Dean in the BRITISH MEDICAL JOURNAL of February 27th, p. 529, reminds me of a case which occurred very early in my professional career, fifty-three years ago. I had joined the Indian Medical Service the previous year, and had proceeded to Kurrachi, in Scinde from Bombay, on general duty, as it was termed, before being definitely attached to a regiment as medical officer. In 1856 I was temporarily placed in charge of the civil medical duties of the station, which included the members of the staff of Government House, and whilst so serving General John Jacob, Commandant and Political Officer of the Frontier, came down to act as Commissioner in Scinde during the absence of Sir Bartle Frere in England. I was called to see a native officer on his establishment who had been seized with paralysis. I found that he had but recently recovered from an attack of choleraic diarrhoea, when symptoms of loss of power over the lower extremities had set in, commencing with the feet, and rapidly—that is, within a day or two—had extended upwards.

When I saw him the paralysis of motion was complete as high up as the diaphragm, and respiration was becoming difficult, but the arms were only slightly affected. I learned that the symptoms had very rapidly extended during the past few hours. It occurred to me that this was a case in which strychnine might be of signal service, and I proceeded at once to administer it in full doses, and pushed it in my youthful zeal to an extent which in later years I might have hesitated to adopt. The treatment was entirely successful; within a few hours the upward ascent of the paralysis was stayed and improvement began and progressed downward as steadily as the attacking symptoms had done in the opposite direction, until he was, in the next twenty-four hours, able to sit up in bed, then regained the use of his legs, and within a few days had recovered from any symptom of paralysis.

This was ten or twelve years before Landry published his notable paper on this disease, and although I have since had great opportunities of watching disorders of the nervous system I have never personally met with another case. It may possibly have been a case of spontaneous recovery, but the sequence of events did not suggest this to my mind at the time. I may, perhaps, be allowed to add that the case proved a stepping-stone in my career, which led to a series of kindly acts of good fortune whose influence I can trace through a long period of service.

HENRY COOK, M.D., F.R.C.P.,
Surgeon-General (retired).

Lee-on-the-Solent.

ETIOLOGY OF OXALURIA.

IN this part of the Sylhet district of Eastern Bengal there are several races—Bengalis, Manipuris, Tipperas, Kookies, and Coolies, the last imported natives of the Central Provinces.

None of these races suffer from renal gravel in any form except the Manipuris, among whom it is very common. The Manipuris, the Tipperas, and the Kookies are all tribes of Mongolian origin, closely related in manners, customs, and language, and in appearance are the same people.

All the afore-mentioned races live under more or less the same circumstances, being agriculturalists. They have all more or less the same habits, with one great difference—namely, the Manipuris live on nothing but vegetables and fruit; they eat nothing in the nature of flesh, not even eggs, except one caste amongst them, which eat sometimes putrid fish. The gravel they suffer from is calcium oxalate. The urine is always very acid, contains blood and enormous quantities of oxalate of lime crystals, ranging in size from those requiring a one-sixth objective to a stone large enough to temporarily stop a normal urethra.

These urines when looked at fresh contain no other crystals. They complain of the ordinary symptoms of renal gravel. The symptoms and the pathological condition of the urine entirely disappear on the administration of arotropine and potassium citrate.

All the water in this part is prominently deficient in calcium salts when examined chemically. The soil is peat for about 20 ft. deep, and underneath that is yellow clay for huge depths. Man, clinically speaking, suffers greatly from the want of lime. He gets covered with boils, carbuncles, etc.; he suffers from conditions clinically allied to scurvy. Imported Australian horses suffer from similar diseases. All these ills in man and horse are quickly cured by liberal doses of calcium chloride, and are also prevented by regular doses of this salt. If imported horses are given slaked lime in their water they remain healthy. This clearly shows that for the animal economy there is a great deficiency of calcium in both the water and vegetation of this neighbourhood. Therefore, for the formation of calcium oxalate crystals excess of calcium is not required; some other factor or factors must be the cause.

Considering the above remarks on the similar habits and surroundings of these different races, and of three which are of the same blood, and that only the purely vegetable-eaters suffer, and that those who eat along with their vegetables a certain amount of animal food do not suffer, and also considering the great deficiency of lime here, one is driven to the conclusion that a purely vegetable diet is here, at all events, the cause of oxaluria.

Chandkila P.O. R. W. BURRITT, F.R.C.S.I.

ERYTHEMATOUS ERUPTION FOLLOWING NITROUS OXIDE ANAESTHESIA.

NITROUS oxide gas was administered in the usual manner (valves) to a young man aged 21, perfectly healthy and free from organic disease, but of neurotic temperament. At 10.45 a.m. six teeth were extracted, and the operation calls for no comment; the patient was perfectly quiet throughout it. Recovery was normal without excitement, and haemorrhage soon ceased. The patient rested for an hour and a half, and then went home some few miles by tram.

On arrival at his destination, he felt some slight pain in the jaw with some vertigo, and in consequence lay down again. About 3 p.m. a dusky red patch appeared on the right cheek, in colour resembling a birth mark; the margin was sharp but irregular, not raised, and unattended by any sense of heat or itching. This faded in about one hour, and the patient partook of a little bread and milk. At 6 p.m. there was a feeling of slight nausea, and he vomited once. Almost concurrent with this a rash appeared all over the face. It had the same deep-red appearance as the former; at first mottled, it slowly became uniform. Circumoral and nasal pallor, with a well-defined irregular margin all round, was marked. The discoloration involved the ears and forehead, but did not extend on to the neck or scalp. There was no rash else where. It faded completely in two hours, and has not recurred.

I have been unable to find any other factor to account for this, and there had been no previous attack. The patient was in my company from 6 p.m. the preceding evening, till the final fading of the rash, so I can vouch personally for all the circumstances. I am unaware of any similar instance of an eruption following nitrous oxide.

T. W. S. HILLS, B.A. Cantab., L.S.A. Lond.

London, W.

ACUTE RHEUMATISM WITH UNUSUAL SEQUENCE OF COMPLICATIONS.

THE following case is remarkable, owing to the occurrence of so many separate complications in one patient at one time, and yet all appearing at short though well-marked intervals.

On December 8th I was called to see E. W., aged 18; he had rheumatism in both wrists and knees and at times in the ankles; the tonsils had been "sore" for a day or two. The temperature was 100°. These symptoms yielded in the course of a few days to the ordinary treatment by milk diet and sodium salicylate. The temperature was down to normal in three days, and on December 21st the patient got up without leave.

On the evening of December 23rd I was sent for and found him out of bed, with a very flushed face, dry skin, and rapid and painful respirations. The temperature was 102.6°. There was tenderness over the outer half of the left thorax, which was dull on percussion; on auscultation,

a slight pleuritic rub was heard, but no riles or rhonchi anywhere; the heart sounds were perfectly normal. Next day the pleurisy had extended slightly, and there was now a well-marked triangular dullness over the cardiac region and a distinct pericardial rub. The temperature was 102°. The same evening slight crepitations were to be heard over the right base behind.

On December 25th the pleuritic pains were less, but there was pain over the heart area and riles, loss of tactile vocal fremitus, and dullness over the entire lower lobe on the right side behind.

On December 29th pleurisy had nearly cleared up, but riles and dullness appeared over a small patch of the left lower lobe behind. The temperature remained very steady at 102°. The patient was now taking *sod. salicylate* gr. x every four hours, and from this day started brandy $\frac{5}{8}$ every four hours; the precordial area was painted with *linimentum iodi* fort.

On December 31st the pericardial rub had almost gone, but in its place appeared loud presystolic and systolic mitral bruits.

On January 1st, 1909, the patient was put on *tinct. digit.* and *tinct. nuc. vom.* with *sp. aeth. nit.* There was pain over the heart, and the impulse was now outside the nipple line.

On January 7th the temperature came down to 101°. The ears were very blue, but breathing was not very difficult.

On January 9th the temperature was 99° and the pain had nearly gone. From this date the patient made an uninterrupted recovery, except that after his first walk outdoors on January 25th he had a slight return of rheumatic pains in the knees which quickly yielded to *sodium salicylate*. On January 22nd the heart's impulse was in the nipple line, and by February 2nd the impulse was normal and all bruits had entirely disappeared.

The point chiefly noticeable in this case is the well-marked sequence of rheumatism, pleurisy, pericarditis, and pneumonia of first one and then both sides, and finally rheumatism again. The delayed crisis was due to the onset of pneumonia in the left lung five days after its appearance in the right lung. The excellent effect of brandy was very apparent.

Lowestoft. C. M. L. COWPER, M.R.C.S., L.R.C.P.

UNNA'S METHOD OF TREATING ULCERS OF THE LEG.

I was very interested in Dr. Pernet's paper (p. 463), as I have for some time past been carrying out a modified form of Unna's treatment.

When I was in South Shields Hospital we added, at Dr. Hunter's suggestion, some charcoal to the paste we were then using. This addition causes the paste, or "splosh," to be of a porous nature, and the occluded oxygen helps to keep the ulcer sweet.

Formula.

Charcoal	...	...	18 parts
Zinc oxide	...	...	6 "
Boric acid	...	...	6 "
Gelatine	...	...	16 "
Glycerine	...	...	20 "
Water	...	...	50 "

Soak gelatine and portion of glycerine and water for twelve hours. Make paste with all remainder. Mix together and heat on water-bath, stirring. Pour into shallow vessel.

The method of using also varies. A carbolie (resin) bandage is wound tightly round the leg covering the ulcer, and going a handbreadth above and below it. The "splosh" is painted well over the site of the ulcer. If much discharge is feared, it may be dabbed with cotton-wool.

An ordinary bandage is wound round all. If the ulcer is much punched out, I have been in the habit of putting a small piece of the carbolie bandage, cut to size, on its bed. This avoids leaving a space in which pus might gather, which I take it is the object of the flattening of the edge Dr. Pernet describes.

To begin with, I generally order boric fomentation for a week or so to clean the ulcer, or if it tends to be sluggish I find red lotion helps. At first the paste is left on for a week; later, when healing well, it can be left a fortnight.

The waxy nature of the bandage prevents it adhering and tearing off the epithelium. The method has not only

been the means of much saving of time and labour, but many ulcers of years' duration have quite healed up, and that usually while the patients were on their feet.

It is advisable in chronic cases which have healed to bandage the leg firmly for a considerable period to prevent recurrence. If ulcers are recent (and not haemorrhagic) simple dressing, venous congestion combined with rest in bed, appears to me to be the quickest method of obtaining healing.

Lambeth Workhouse.

HUGH BARR, M.B., Ch.B. Glas.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

CHRISTCHURCH HOSPITAL, NEW ZEALAND.

PERFORATION OF INTESTINE BY PLUM STONE.

(By P. CLENNELL FENWICK, M.D.(N.Z.), F.R.C.S. Ed.,
Honorary Surgeon to the Hospital.)

H., a very fat woman, aged 38, was admitted under my care on February 8th.

On admission she was in a state of semi-collapse, cyanosed, with feeble pulse (144), subnormal temperature, and cold, clammy skin. She was quite conscious, and gave her history clearly.

History of Illness.

She had been in good health until February 5th, when she had severe pain in the lower part of the abdomen, and vomited. The bowels were not opened on this day, and remained unopened till admission. The vomiting returned on February 6th and continued till the day of admission. The vomit was foul-smelling, yellow, but not distinctly faecal in character.

Condition on Admission.

The abdomen was not markedly distended; it was soft, and palpation was painful. A large area of hardness was felt, chiefly on the right side. There was no sign of fluid in the abdomen. The patient was so fat (weight 15 st.) that examination was difficult. The rectum was empty. Vaginal examination, which was painful, was negative.

Operation.

As the patient was not then in a condition to undergo operation, I decided after consultation to wait for a few hours to see if she would rally. At 9 p.m. she had rallied enough to bear an anaesthetic, and I opened the abdomen. A great quantity of most foul-smelling pus escaped, and I found intense peritonitis of all the small intestine. The coils were matted together, and in some parts were black and lustreless. I could not find the appendix, and, not wishing to delay, I put a Paul's tube into one coil of the intestine, which seemed less inflamed than most of the rest, and drained by a tube pushed down into the pouch of Douglas. The patient died some hours later.

Necropsy.

On *post-mortem* examination by Dr. Crooke, R.M.O., a condition of extremely severe peritonitis was revealed. The entire small intestine shared in the inflammation. In parts the gut was almost gangrenous. The large intestine was normal but very distended; the appendix was normal. Twelve inches above the anus a gangrenous patch was found measuring about 2 in. by 4 in. In the centre of this area was a perforation which admitted the tip of the finger, and lying in the gut just underneath the perforation was a large plum stone.

REMARKS.

Neither my colleague, Dr. Nedwill, jun., nor I had met with a similar case, the perforation being so near the anus that it seemed curious that the stone had not been passed in the ordinary way after having travelled so far.

Reports of Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

(Continued from Section of Surgery.)

Friday, March 19th, 1909.

Mr. E. H. TAYLOR in the Chair.

A New Voice Machine.

Mr. R. H. Woods exhibited a patient fitted with a new apparatus for voice production. Owing to the discovery of an extensive squamous carcinoma, the whole larynx had been extirpated. The trachea was sutured to the skin, and the sac of the pharynx completely cut off from communication with the respiratory tract. Thinking how to enable the patient to speak, it occurred to the speaker to try to convert the sound made by a reed into speech. Accordingly, he fixed a reed in a tube. By putting it into the nose and dropping it over the soft palate, and by putting the other end into the trachea the patient was able to blow and make the reed vibrate. A valve was used to take in the air, and when he had his chest full he put his finger to the end, and the air was pressed into the tube. The method of inserting the appliance was then shown, and the patient after a salutation to the section, counted from one to ten.

Mr. DEMERSY said the case showed the results that could be obtained in laryngectomies when the pharynx was cut off from the respiratory tract. The real success of such a case was due to the avoidance of the danger of pneumonia, which killed 9 out of 10 patients formerly. Professor Gluck had performed 21 complete laryngectomies in the past year or two, and had not had a single death. It was too soon, however, to judge of the question of recurrence.

Mr. W. L. MURPHY suggested the trying of a smaller tube.

The CHAIRMAN said he was much struck by the comparative ease with which Mr. Woods was able to close the pharyngeal tube.

The SECRETARY inquired as to the effect of the operation on the man's hope of life. Horses which were tracheotomized improved for a time, but after a while went rapidly to the bad.

Mr. STOKES asked if the patient could cough.

Mr. Woods, in reply, said there was no trouble in getting a pharyngeal wall; even after the larynx was taken away there was plenty of wall to complete a very good tube. Before doing the extirpation he thought it wise to give the patient an antistreptococcus vaccine so as to raise his opsonic index, and his temperature only rose to 100° for two days and then fell to normal. This was, under the circumstances, remarkable, and he thought some of the credit was due to the preliminary vaccination. The tube was sufficiently small to pass through the nose, and a smaller one would require a smaller reed, which would give less power to the voice. He had had a case of tracheotomy about fifteen years ago, and the man was in the best of health though still wearing a tube. The man before them could make a respiratory effort capable of clearing off any secretion in his windpipe. He was fed after the operation by a tube through his nose. This was kept up until he was able to swallow, about ten days afterwards.

Hydronephrosis and Appendicitis.

Mr. E. H. TAYLOR exhibited an ectopic hydronephrotic kidney removed from a young woman about a fortnight before. The clinical symptoms were strongly indicative of appendicitis. On palpation over her right iliac fossa he was able to determine deep fluctuation, and as she appeared to be very ill he decided to operate that evening, and to cut down over the fluctuating area with local anaesthesia. He was surprised to reach the parietal peritoneum without any evidence of pus. When he opened it his finger passed over a surface that was bigger than a normal caecum, and he thought it might be an ovarian cyst with a twisted pedicle. He extended the incision under chloroform, but found no pedicle. He punctured a large swelling which was fluctuating and tense, and a quantity of fluid escaped. The tissue at the edge of the opening was evidently renal. He put a tube into the

kidney and drained the hydronephrosis, and after ten days removed the kidney, having previously satisfied himself that the left kidney was healthy. The case showed that even where all typical features of appendicitis were present, they might be dealing with a case that had nothing whatever to say to either the caecum or appendix.

Dr. PEACOCK said he saw the girl only three days before he sent her into hospital, and he never was more positive in his life that he was dealing with appendicitis. He had great hopes, from past experience, that the girl would live a long life with only one kidney.

The SECRETARY said the frequency with which appendicitis was met with made them tend to come to the conclusion that most right-side pains were due to it; but he had seen a fair number of cases which proved to be otherwise. He had operated on somewhat similar cases as regards the pathological findings, though the symptoms were not the same. In one case there were oxalate of lime stones, which had probably excited a considerable amount of inflammatory reaction, and led to narrowing of the ureter.

Mr. TAYLOR, in reply, said the strength of novocain used in Berné was 1 tabloid dissolved in 10 c.cm. of sterile water. He had used it approximately at that strength, but often weaker. When getting down through the muscles towards the parietal peritoneum he always injected freely, and tried to produce oedema of the extra-peritoneal tissue. There was some pus mixed with the urine in the distended pelvis. After the operation the temperature rose to 100°, but the morning after the pain had gone, and the temperature fell to normal and remained so. The wound had practically healed, and the patient was perfectly well.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting on March 19th, Dr. T. K. MONRO, Vice-President, in the chair, Mr. FREELAND FERGES showed a number of photographs of cases and a patient on whom he had performed his operation for *Ptoxis*. The operation consisted in the resection of the tarsus and of excision of a large part of it, with the suturing of the remaining portion to the occipitofrontalis muscle. With this operation the patient had considerable power both of shutting and of opening the eyelid. He pointed out that the operations of Worth and Harman were essentially good, but that they ligatured the lid permanently open. The operation of Hess, although differing in principle from these operations, also permanently fixed the eyelid in an open position. Pagenstecher's operation was one which he considered should never be performed. Cicatricial contraction by the introduction of thread sutures could, in his opinion, only take place when the sutures were not perfectly sterile. Dr. W. S. SYME made a communication on some points in the surgery of the sphenoidal sinus, based on an examination of 155 adult skulls. The average distance from the anterior nasal spine of the maxilla to the opening of either sinus was 2½ in., the extremes being 2½ to 2½ in. To the posterior wall the average on the right side was 3½ in., and on the left 3½ in., the extremes 2½ to 3½ in. In only one-sixth of the skulls was the posterior wall distant less than 3 in., and in none was the opening distant as much as 3 in. As a rule, the posterior ethmoidal cell did not extend beyond the anterior wall of the sphenoidal sinus. Well-marked osseous septa within the sinus were found in 13 cases. Suppuration in these cavities he considered was much more common than was generally supposed. Mr. J. HOGARTH PRINGLE, in a paper on the treatment of *Fractures of the long bones*, advocated Bardenheuer's method of extension by very heavy weights, sometimes as much as 35 lb., applied so as to correct lateral displacement and rotation as well as shortening.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.—At a meeting on March 4th, Dr. DAVID RENNET, President, in the chair, the following were among the exhibits:—Mr. H. M. W. GRAY: A case of chronic obliterative *Lymphangitis* of right leg, which had come into hospital for amputation owing to the pain and distress caused by the swelling of the leg. Sampson Handley's operation was done, the strands of silk being passed subcutaneously from the ankle to above the knee by means of a Babcock's vein extractor. Great relief had followed and almost entire disappearance

of the swelling, though the patient had not so far used the leg very much. As organisms are frequently found in the fluid in these cases, and as the operation is liable to be followed by inflammation, injections of streptococci and staphylococci was done before operation, and no inflammation had followed. Mr. Gray also showed a case after operation for traumatic deformity of foot, and a case of tumour of lower jaw, probably gumma. Dr. GEORGE ROSE: A number of cases of *Congenital dislocation of the hip* in patients of various ages treated by Lorenz's method, where very good results had been obtained. Dr. ASHLEY MACKINTOSH: A case of *Ulnar paralysis*, purely motor and probably traumatic; also a case in which the probable diagnosis was early stage of *myasthenia gravis*. Dr. HENRY PETERKIN: A case of *Rodent ulcer* inside the external auditory canal; he could find no record of a tumour of this nature in this region. Mr. J. SCOTT RIDDELL: (1) A case of *Double talipes equino varus*, apparently congenital. The left foot had been operated on with excellent result. Patient had now returned to have the other foot done. (2) A case of extensive *Necrosis of lower jaw*, with the sequestra which had been removed. (3) A case of *Caries of cervical vertebrae*, with a peculiar dislocation forwards of the atlas on the axis; there were no pressure symptoms then, and, after being in hospital for treatment from March, 1908, till June, he resumed his occupation as a clerk. In November he had a fall in the street and had to be carried home, and was admitted to hospital three weeks later with almost complete loss of power in his limbs; cranial nerves and sensation unaffected. He could with difficulty lift his arm as high as the shoulder, and his grip was very feeble. He could move his legs about when in bed, but could not stand or walk. Knee-jerks plus ankle-clonus present, and slight sluggish Babinski. There were marked arm-jerks and wrist-jerks; sphincter control unaffected. No reaction of degeneration was found, but responses of right arm were feebler than those of left. The patient slowly recovered, and had now almost full control of limbs. (4) A patient who, after a difficult labour in November, developed *Pneumonia*, and later a tumour was discovered in the right flank apparently connected with the uterus, though exactly how could not be determined. She had considerable pain and tenderness in the region of the tumour, which was about the size of a large cocoa-nut and of indefinite outline. Percussion over it was dull, and liver dullness was continuous with it, but the note between the tumour and the pelvis was distinctly tympanitic. A sort of pedicle could be felt running down from the tumour into the pelvis. Temperature and pulse were high at first, but came down as the chest condition improved. Blood count after pneumonia had cleared up was: white cells 12,000, with 79 per cent. polymorphs. Urine normal in quantity, acid, trace of pus; no vomiting, slight constipation, no vaginal discharge. On January 16th abdominal section was done, and it was found that the uterus, along with right ovary and tube and appendix, were fixed in one mass to the under surface of the liver and the abdominal wall, and all were in a state of suppuration. Hysterectomy, salpingo-oophorectomy, and appendectomy were performed; the wound was drained, and the patient was shown with the wound practically healed and in good condition.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting on March 17th, Dr. P. BOOBYER, President, in the chair, Dr. A. STANLEY GREEN (Lincoln) showed a series of lantern slides and photographic prints illustrating the value of *Röntgen examination* in some conditions of diseased bone. Amongst the examples shown were instances of osteitis due to injury, tubercle, syphilis, etc., besides Charcot's disease of the joints, rachitic changes, and several cases of sarcoma in close relation to bones. A most instructive case was related and illustrated, in which an examination of the foot by Röntgen rays showed the scaphoid bone to be the seat of two abscesses. Guided by this, the surgeon was able to reach both abscesses through a single opening drilled in the bone without implicating in any way the neighbouring joints. Dr. R. P. PURVES (Lincoln), in a paper on cases of *Gall stones*, described one in which 273 stones were removed by him at an operation; the gall bladder was of an hour-glass shape as the result of omental adhesions. This patient

always seemed better when following Dr. Haig's diet, and relapsed if it was not adhered to. In a second case four large stones were found in the common duct, but jaundice only appeared at quite a late stage, three weeks before operation. A third case illustrated the fact that gall stones gave rise to indigestion and vague pains after meals. Besides jaundice and tenderness, there were referred pains and marked wasting in this case. At the operation, the hepatic, cystic, and common ducts were all full of stones. A fourth case, in a man of 50, with a history extending over several years, was specially interesting as haematemesis occurred after the operation and retinal haemorrhages. Despite these complications he recovered. In discussing this haematemesis the author argued that its real cause was almost certainly of an infective, septic nature. In reply to the discussion, Dr. PURVES laid stress on pain referred to the post-hepatic region in gall-stone cases. It was distinguished from that of lumbago by being confined to this level on the right side.

CLINICAL SOCIETY OF MANCHESTER.—At a meeting on March 16th, Dr. J. J. COX, President, in the Chair, Dr. P. R. COOPER reported a case of *Eclampsic coma* occurring three weeks after delivery, and cured by lumbar puncture. The patient was seen in her first pregnancy. Albumen was found in the urine at the sixth month; she had eclampsic seizures at full term, and was delivered of a living male child, after which the fits ceased, and the albuminuria disappeared. The second pregnancy terminated at seven months, and she was delivered of a stillborn child. No albuminuria and no fits. Nine days after the patient had some paresis, and her mental condition was not quite clear. Three weeks after confinement she came downstairs, when she vomited and became drowsy. Later albuminuria set in, and she became comatose. There was no improvement in spite of the usual treatment. Lumbar puncture was performed, 2 to 3 drachms of cerebro-spinal fluid being drawn off, and saline injected under the breasts. Two days later lumbar puncture was repeated, and further 2 to 3 drachms of cerebro-spinal fluid withdrawn. After this the fits ceased, and the patient made a gradual recovery. Dr. REYNOLDS, in some observations on the diagnosis and treatment of *Migraine*, drew particular attention to the less common varieties of auræ that might precede the typical headaches. Numbness and tingling in the fingers occurred not infrequently. Transient paralysis of the muscles supplied by the third nerve was a rare form described by Charcot, and a case was cited illustrating this variety. As regards treatment, the synthetic drugs were of paramount importance, antipyrin was usually the most valuable, but some patients responded better to phenacetin, aspirin, or pyramidin. The drugs must be exhibited early in the attack to be efficacious.

MANCHESTER PATHOLOGICAL SOCIETY.—At a meeting on March 16th, Dr. MILLIGAN, President, in the chair, Dr. WILKINSON described a case of *Acute Hodgkin's disease*. The patient was a man, aged 28. The illness began early in September with fever, some vomiting and diarrhoea, and slight delirium. After four weeks he had recovered sufficiently to go away for a holiday, but a week later the illness recurred with more severe symptoms and enlargement of the glands of the neck. There was marked anaemia. He spent the last week of his life in the Manchester Royal Infirmary—December 15th to 22nd—in a typhoid state; continuous temperature, 101° to 103.4°; pulse, 120 to 150; respirations, 40 to 50; chain of glands behind sterno-mastoid and glands under lower jaw enlarged on both sides, spleen and liver palpable, some abdominal discomfort and diarrhoea. Widal reaction negative. Blood-count: reds, 4,432,000; whites, 8,000; haemoglobin, 58 per cent.; marked polychromatophilia. The *post-mortem* appearances were described by Professor Lorrain Smith. The case showed a moderately soft and partly necrotic tissue replacing the lymph glands, affecting (a) the coeliac group, and forming a large tumour-like mass in and behind the smaller curvature of the stomach; (b) the glands along the aorta throughout its entire length; (c) the glands of the neck; and (d) the glands of the groin. The enlargement of the coeliac glands was the most conspicuous change. There

was very slight enlargement of the mesenteric glands. The liver was studded with minute white rounded masses of tissue of the diameter of a small pea. Amongst these were a number of larger masses up to the size of a walnut, and one or two of them showed umbilication. The white tissue formed in definite masses closely simulating deposits of malignant new growth. The spleen was moderately enlarged, and studded with large nodules closely resembling tumours of secondary origin. The lungs, heart, kidneys, stomach, and intestine were not affected. The microscopical examination of the new tissue showed the characteristic proliferation of large endothelial cells, but there were very few giant cells and eosinophile cells. Dr. EUGENE YONGE, in a paper on the association of *Deformities of the jaws* with nasal obstruction in children, referred to some of the difficulties in connexion with the usual theory that mouth-breathing, due generally to the presence of adenoids, was the cause of the deformities. Dr. R. W. MARSDEN mentioned 2 cases of *Calcareous degeneration* of the middle coats of the medium-sized arteries. In both instances the degeneration had reached a high degree, the men being of the poorer class, aged 49 and 67 years, and suffering from pulmonary tuberculosis. Attention was drawn to the distribution of the disease, the arteries of the limbs being chiefly affected. In one case the small vessels of the hands and feet were healthy, but in the other both palmar and plantar arches were affected. In both cases the cerebral vessels were practically free from degeneration. The author suggested that the particular form of the toxin producing the affection might play an important part in the peculiarity of distribution.

LIVERPOOL MEDICAL INSTITUTION.—At a clinical meeting on March 25th, Mr. BICKERTON, President, in the chair, the following were among the exhibits: Dr. STOFFORD TAYLOR and Dr. R. W. MACKENNA: (1) *Farus* affecting the thighs and legs of a steward from an emigrant ship—the scalp and other parts of the body were free; (2) rodent ulcer treated successfully with zinc ions; (3) psoriasis of the face occurring in women; (4) psoriasis in a man accompanied by syphilis; (5) dermatitis following the use of a proprietary ointment; (6) wax casts modelled from their own cases, illustrating the cutaneous lesions of syphilis. Dr. LOGAN: A case of *Bilateral asymmetry*, which he regarded as hypertrophy of the whole of the right side. The child was 15 months old, and the difference had been noticed since birth. During the last five months the right limbs had grown more than the left, but the head had become more symmetrical. Dr. C. E. P. FORSTH read a note on the presence of *Tubercle bacilli in the blood* in tuberculosis. The blood of twelve patients was examined. Ten of these were undoubted cases of pulmonary tuberculosis, and in all the organism was found in the blood. The blood was drawn from a vein in the arm. In one case phagocytosis was noticed, and only in one was there any evidence of mixed infection. None of the cases were rapidly progressing cases, or cases of general tuberculosis. Of the two cases in which no bacilli were found, one was probably not tuberculous, and the other had physical signs of phthisis, but no bacilli in the sputum. These cases went far to confirm Rosenberger's observations—for example, as to the use of vaccine therapy in this disease. Dr. HENRY CLARKE read a note on three years' experience in *The use of tuberculin*. His conclusions were: (1) That tuberculin was best administered by the German intensive method, the dose being given at short intervals of one to two days, and rapidly increasing up to 1 to 2 c.c. of the original solution; (2) that doses given by the mouth had the same effect as when given subcutaneously; (3) that the temperature and clinical conditions were as delicate a guide to treatment as the opsonic index; (4) that new tuberculin (bacillus emulsion) was the most effective preparation; (5) that it should be prepared from human bacilli in dealing with disease produced by these bacilli; (6) to determine the variety of bacillus he recommended von Pirquet's cutaneous reaction; (7) he considered tuberculin a useful drug but not a substitute for good food and fresh air. Dr. HILL ARNAB referred to a case which he reported ten years ago which completely recovered under treatment with tuberculin TR; subsequent experience,

however, had not confirmed him in its use. He did not consider that inoculation experiments had established a vital distinction between the bovine and human varieties of tubercle bacilli. He advocated a further trial of tuberculin treatment on the German intensive lines.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.—At a meeting in Newcastle, on March 11th, the following were among the exhibits:—Dr. DAVID DRUMMOND: (1) A typical case of *Acromegaly* in a coalminer aged 40. Up to 19 years of age he was quite normal, and since the age of 21 he has observed comparatively little change. He suffered from headache, but was without vomiting or visual defect. There was no sugar in the urine. (2) A male child, aged 7, who had a *Chronically-distended bladder*, which occupied the greater part of his abdomen. Dr. R. A. BOLAM: A case of *Lupus erythematosus* of face and hands complicated by psoriasis. Dr. BEATTIE: A case of *Osteo-arthritis* due to the gonococcus, the infection dating back nine years. There was a typical osteo-arthritis of the knee-joint. Mr. H. B. ANGUS: (1) A man after recent removal of the scapula for sarcoma. The operation left the acromion and coracoid processes, which he thought was an improvement. (2) A patient with an old fracture of the femur with an unreduced sciatic *Dislocation of the hip-joint*. An attempt was made to reduce it three months later, but the bone was again broken. An open operation was carried out, but it was found to be impossible to reduce the dislocation so that the head of the femur was removed. Mr. W. E. HOME: (1) A *Cretin*, aged 16, who presented the appearance of an infant of 2 years. The administration of thyroid extract improved it as regards its limited intelligence and the condition of the skin. Mr. JOHN CLAY: Specimens of excised gall bladders. He took a very moderate view of the operation of *Cholecystectomy* and thought the main indication was a gall bladder which had a stone impacted in the duct with the presence of clear mucus. He also urged the importance of not removing the gall bladder if there was any chance of a permanent obstruction of the common bile duct. Mr. A. M. MARTIN: A case in which a *Splenectomy* had been performed for wandering spleen. Mr. N. G. RICHARDSON read a paper on post-operative tetanus.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.—At a meeting held at Sheffield on March 19th, Dr. J. W. MARTIN (Sheffield), President, in the chair, the following were among the exhibits and communications: Dr. A. J. WALLACE (Liverpool) showed a glass *Vaginal nozzle* which he had removed from the bladder by the vaginal route. The nozzle was 5½ in. in length and ¾ in. in diameter. It had slipped into the bladder, seven weeks previously, during the process of vulval douching, by a nurse, of a recently confined woman. Mr. ARTHUR CONNELL (Sheffield): A case of complete *Torsion of the internal genitalia* with a large interstitial fibroid. The patient, a spinster of 50, had suffered, on several occasions during the previous five weeks, from subacute attacks of abdominal pain and vomiting, which had always commenced during defaecation. Her medical attendant had found an abdominal tumour of about the size of a six months pregnant uterus. The last attack was the most severe, and had lasted three days when Mr. Connell first saw her. She was then desperately ill. He diagnosed a fibroid with torsion of its pedicle, and advised immediate operation. The uterus and its appendages were rapidly removed, after preliminary enucleation of the large interstitial myoma. The uterine and ovarian vessels were thrombosed, and did not require ligaturing. The patient made a good recovery, though a transient hemiplegia commenced on the day after operation. The cavity of the uterus was distended with blood clot, and the uterus, with its appendages, and the tumour were in a state of infarction. Dr. A. CUFF (Sheffield): Specimen from a case of bilateral malignant *Papillary cysto-adenoma* of the ovaries. There was considerable ascites, and the peritoneum was studded with papillary growths. Three months after operation there were no signs of recurrence. Dr. J. E. GEMMELL (Liverpool), in a

short paper on fibro-myoma uteri as a cause of *Puerperal toxæmia*, related 3 cases which illustrated different methods of puerperal infection dependent upon such growths: (1) Strangulation of the pedicle, leading to sloughing and general septic peritonitis; (2) toxæmia from necrosis of the growth itself; (3) sapraemic infection from the placental side, together with necrosis of the growth. The first 2 cases were successfully treated by subtotal hysterectomy. In the third case a sloughing submucous fibroid was removed piecemeal on the sixth day of the puerperium. Immediate improvement followed, but death, from pulmonary embolism, occurred a few days later. He advocated, in the absence of symptoms of toxæmia, that the tumour should be left until involution is completed, and then dealt with by any operative method which is deemed most suitable; but when toxæmia arises, from any cause whatever, complete or subtotal hysterectomy is the operation of choice, and the safest.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—At a meeting on March 10th, Dr. SOLLY (President), in the chair, Dr. MANTLE (Harrogate), reopening the discussion on *Intestinal lavage*, Plombières system, said there must be no underrating the diagnostic value of mucus in the stools; mucus normally secreted was invisibly mixed with the faeces. In colitis nervous manifestations were usually striking, but how much as a result and how much as a cause was difficult to say. With the disturbed nervous system there was an unbalanced circulation—hence a condition favourable to congestion of the whole alimentary canal. This explained the frequency of gastric symptoms. There could be no doubt as to the value of intestinal lavage in colitis. Combined with the immersion bath, which reopened the peripheral circulation, the results were brilliant. Mr. LOCKHART MUMFERY said there were many cases of chronic colitis unimproved by lavage or medical treatment. In most of these there was some obstructive or other lesion in the colon which must be removed. A careful examination aided by sigmoidoscopy should be made in all cases of chronic colitis. Appendicectomy gave excellent results in suitable cases, and was much to be preferred to caecostomy, but correct diagnosis was the first essential, and the indiscriminate performance of any single operation was to be deprecated. Dr. FORRESQUE FOX said that serious disorders of the colon were quite exceptional in health resort practice, whilst conditions of constipation with more or less colon irritation were extremely common. The term “muco-membranous colitis” applied to such cases was a misnomer. There was sometimes a deficiency of mucus in the colon (as in the pharynx), and membranes were seldom met with. He had employed lavage in those cases for many years, combined with diet, baths, and exercise. Dr. PARKES WEBER thought that delayed circulation in the bowel, connected with want of exercise and constipation, played a very important part in the commencement of chronic colitis. Treatment in early stages by regular open-air exercise, abdominal massage, and the use of Zander’s mechanotherapy was what was chiefly required. Dr. LEONARD WILLIAMS deprecated the newborn enthusiasm for the Plombières douche at the British health resorts. Colitis was not a new disease, nor was the Plombières douche a new method of treatment. It offered no advantages over an enema properly applied. Mr. PENDLEBURY discussed the surgical points raised by Mr. Mumfery. Dr. PRESTON KING (Bath) pleaded for moderation in the use of Plombières lavage. Dr. HERTZ said that constipation, whether produced by neurasthenia, chronic appendicitis, or weak abdominal muscles, which made defæcation inefficient in visceroprosis, was the chief cause of colitis. Treatment consisted in keeping the bowels empty. Diet, exercises, and drugs generally sufficed; sometimes enemas, and especially the Plombières douche, were required. Appendicectomy was never indicated, as the faecal delay was always in the periphery, so that injections were more effective through the anus than through the appendix. Dr. PAGAN LOWE (Bath) considered that colitis, like appendicitis and neuritis, was a product of influenza, and could usually be treated satisfactorily without intestinal lavage. Dr. REBOUL, of Châtel Guyon, and Dr. BERGOUIGNAN, of Evian, described the treatment as carried out in those resorts. Dr. BUCKLEY, who first introduced the discussion, and Dr. MANTLE both replied.

Rebiletz.

DEEP ANAESTHESIA IN TABES.

PROFESSOR GRASSET, of Montpellier, has published in a small book a series of lectures delivered early in 1908.¹ It is mainly devoted to the consideration of the various forms of deep anaesthesia or deep disturbances of sensation that may occur in tabes dorsalis, and to contrasting them with the better-known superficial disorders of sensation commonly held to be so characteristic of that disease. Deep anaesthesia of the rectum and bladder, and diminution of the sensitiveness of those viscera to distension, have long been recognized in tabes, while Déjerine and others have observed anaesthesia of the vagina and of the os uteri during parturition in tabetic women; but the careful study of such deep anaesthesia was first undertaken methodically by Pitres, of Bordeaux, and has done much to enlarge the semeiology of tabes. Anaesthesia of the testis on pressure is present in about half the cases, and partial anaesthesia in more than half the remainder; an analogous insensitiveness of the breast is often present in tabetic women. Anaesthesia of the epigastrium—the pit of the stomach—on sudden pressure, without loss of the abdominal reflex and without any corresponding cutaneous anaesthesia, has been observed in over 40 per cent. of the cases of tabes examined, and is attributed by Déjerine to pressure-anaesthesia of the solar plexus. Analgesia of the trachea when that organ is pressed backwards in the middle line by a finger, or of the eyeball when it is compressed through the eyelid (deep anaesthesia), or of the cornea and sclerotic to the touch (superficial anaesthesia), or of the tongue to pinching between the finger and thumb, or of superficial nerve trunks to pressure, may all occur in tabetic patients in a percentage as high as 50. Grasset lays particular stress on the analgesia to pressure noted in the tendons of tabetics, first noted by Abadie in 1905. This anaesthesia can be tested in any tendon that can be pinched between the finger and thumb, and is present to a greater or less extent in 80 per cent. of tabetic patients: it is one of the early symptoms of tabes. Analgesia of the bones on percussion, quite apart from superficial anaesthesia of the skin over them, is often found in tabes, and is further brought into evidence by the painless nature of the spontaneous fractures met with in tabetics. Analgesia of the heart is often a striking feature in patients with tabes who are the victims of morbus cordis as well, as frequently happens. The analgesia causes the heart trouble to lie latent until it is accidentally discovered when a physical examination of the patient is made; this is all the more striking, because the lesion common in tabetics is aortic, and aortic disease is so very frequently associated with severe precordial or other pains. Grasset remarks that loss of reflexes and deep anaesthesia of the tendons do not go hand in hand, and discusses at some length the connexion between deep sensations (from the tendons, muscles, etc.), and “muscular sense” and the sense of orientation. He next considers what part of the nervous system it is that controls the deep sensation that is disordered in tabes, and concludes that it is the sympathetic—or rather the vago-sympathetic—nervous system. He does not believe in the division of the whole nervous system into two distinct parts, one the cerebro-spinal, the other the sympathetic, but holds that the sympathetic nervous system is a mixed cerebro-spinal nerve just as much as any other nerve is. He quotes a number of recent writers who have found microscopical changes—atrophy of myelinated fibres leading from the sympathetic ganglia into the posterior nerve-roots of the cord—in the sympathetic system of tabetic patients, and discusses the constitution of the vago-sympathetic chain and its functions.

In conclusion, he repeats that certain cases of tabes dorsalis exist in which many of the classical signs and symptoms of the disease may be absent, while various of the deep anaesthesias mentioned above are present, and make the diagnosis certain. The object of his book is to draw attention to these deep anaesthesias, and it may be warmly recommended to the notice of all neurologists.

¹ *Le Tabes, Maladie de la Sensibilité Profonde. Traçons et Miroirs* de Montpellier. Série Scientifique V. By Professor J. Grasset. Montpellier: Coulet et Fils. 1909. (Med. 8vo, pp. 124.)

ARTERIO-SCLEROSIS.

THE treatise on arterio-sclerosis, by Dr. O. JOSUÉ,² is published at an opportune time, as the subject is one to which considerable attention is being given. The book has a preface by Professor ROGER, who speaks of it and of the work of its author in the highest terms. Dr. JOSUÉ is known as an experimenter who claims to have produced lesions exactly similar to atheroma of the aorta in rabbits by intravenous injections of adrenalin. He did not succeed in obtaining the same results by hypodermic injections or by injecting the solution into the nares, and negative results followed also the intra-peritoneal injections by Erb and intramuscular injections by Kulbs: the latter, however, succeeded with injections into the trachea. The rapidity with which these results were produced is somewhat remarkable. The duration of the author's cases was about five weeks, Erb's twenty days, Kulbs's ten days. Similar results have been obtained by the injection of other substances, such as methyl-aminoketone (Starli), pyrocatechine (Gouget), and, although not mentioned in this book, Adami of Montreal has produced similar lesions by swinging rabbits by their hind legs! Josué answers the objection that spontaneous atheroma is common in rabbits by stating that he only found it once in "a considerable number" of examinations, that Secard did not find it at all in 250, and that Gouget estimates its occurrence as at most 3.7 per cent. He does not accept the ordinary view that the lesion is caused by the hypertension produced by the action of adrenalin on the arterioles. He prefers to believe that it is caused by a specific action on the arterial walls, as J. Teissier and L. Thévenot found that the addition of choline which neutralizes the hypertensive action of adrenalin did not prevent the appearance of the atheromatous lesions. The results of these experiments led him to look to the adrenals as the cause of arterio-sclerosis (which he regards as identical with atheroma), and he claims to have found that the cortex of these bodies is generally hyperplastic in these cases, and although he admits that the medulla rather than the cortex secretes adrenalin he alleges that the cortex also contains a hypertensive substance. It would seem that as he had previously rejected hypertension as a cause of the arterial changes it would have been more to the point to have shown that it contains a substance which has a specific effect upon arterial walls. He relates the results of experiments with many other substances to produce lesions of the aorta, for example, nicotine which gave him negative results, though others have found the opposite, with lead, extract of putrefied meat and red pepper his results were positive, with alcohol negative, with acids, phloridzin, iodide of potassium and sodium, digitaline, ergotine, and several other drugs, microbes and toxins positive, in fact the successful results seem to have been so common as to diminish their value and we hesitate before accepting them as conclusive.

The experimental is after all only a portion of Dr. Josué's book. He gives an excellent and detailed account of the histological changes and of the symptoms associated with arterial disease as well as of the principles of treatment and the remedies now generally in use. The illustrations are good, and by modern methods of staining he is able to demonstrate clearly the presence of fat droplets in the coats of the thickened arterioles. He considers arterio-sclerotic changes to be degenerative, not inflammatory. He enters into an interesting discussion of the relation of arterio-sclerosis to interstitial nephritis, based upon the examination of twenty-three cases, and concludes that there is no strict correspondence between the alterations of the great and medium sized arteries of the kidney and the amount and distribution of the renal disease, but, on the other hand, he finds a close relation between the renal lesion and fatty degeneration of the walls of the arterioles and capillaries of the kidney substance. He describes the changes in the blood vessels in a great many organs, and it appears to us that he to some extent confounds cases in which the changes in the vascular walls are shared with the tissues around and due to a common cause with those in which the arterial change is primary. Of course, it is difficult to distinguish between them, but the author is predisposed to see primary arterial disease

everywhere. This is much the same as the mistake made by Gull and Sutton, who in their illustrations of arterio-capillary fibrosis showed vessels from all sorts of inflammatory patches where the ordinary interpretation would be that the walls of a vessel shared in a change which was common to all the connective tissue in the neighbourhood.

Dr. Josué does not share the distrust of the Riva-Rocci sphygmomanometer entertained by some clinicians, but he proposes the adoption of a somewhat complicated formula instead of taking the simple readings of the height of the systolic pressure.

The book is no mere compilation, and will be read with interest by all who are paying attention to this subject.

SEXUAL PSYCHOLOGY.

*The Sexual Life of Our Time*³ by Dr. Bloch, of Berlin, ran, we are told, into a sixth edition within nine months of its first publication in Germany, so that Dr. ERNEST PAUL had some justification for making a translation into English. Dr. Bloch has spared nothing in approaching his professed aim, which was:

To write a complete encyclopædia of the sexual sciences based upon my own experiences and observations, and embodying the definite opinions I have formed regarding all the important principles involved. I have written this book for all earnest men and women who wish to form well-grounded views regarding the problems of sex and to enlighten themselves concerning the results of the multifarious researches in this province of thought. The immense importance alike to the individual, to the State, and to human society at large of a truly critical knowledge of the relationships of the sexual life is a matter upon which I repeatedly insist in the following volume.

This appeal to all earnest men and women was re-echoed in England by the translator in the following words: "It must be clearly understood that this is a work belonging to the category of 'adult literature.'" With this reservation we may commend the book, which appeals especially to members of the learned professions, medical, legal, and clerical, and next, perhaps, to responsible persons engaged in the instruction of youth, the final appeal of the work being to all those who hold that "the proper study of mankind is man." The sale of the volume being limited, as is customary with such works in this country, to members of the learned professions, it is likely that a much longer period than nine months will elapse before the birth of the sixth English edition. The treatise is a valuable addition to those especial shelves of the library of physiology and frenzy which are already groaning under the weight of Krafft-Ebing, Albert Eulenburg, Magnus Hirschfeld, Havelock Ellis, and other introspective philosophers. The language of the translation is well chosen, the type is excellently clear, and there is a complete and convenient index both of names and subjects.

Professor AUGUST FOREL, formerly Director of the insane asylum at Zurich, is well known to English students of psychology, and especially of psychiatry, by his many works upon these subjects, several of which have been translated into English. His recent volume, *The Sexual Question*,⁴ reflects credit upon the fineness of the adaptor, Dr. C. F. Marshall. It is thin ice, in connexion with which these sexual specialists call a skate a skate, and Dr. Forel himself proclaims serious difficulties for his Anglican adaptor:—

In the domain with which we are concerned (says he) the French public are too much afraid, I think, of crudities and of calling things by their proper name. By veiled words and by indirect locution one may say anything, but I have decided not to employ such subterfuges in treating of such a vital social question with the seriousness that it requires. It seems that there is a fear of young people hearing the sexual question spoken of freely and openly; but it is not taken into account that in hiding these things under half-understood words one only excites their curiosity, and, owing to their being blindfolded, they are delivered into the snares and surprises of debauchery.

² *The Sexual Life of Our Time in its Relations to Modern Civilization* By Ivan Bloch, M.D., Physician for Diseases of the Skin and for Diseases of the Sexual System in Charlottenburg, Berlin, etc. Translated from the Sixth German Edition by Eden Paul, M.D. 1908. London: Rebanan Limited.

³ *The Sexual Question. A Scientific, Psychological, Hygienic, and Sociological Study for the Cultured Classes.* By August Forel, M.D., Ph.D., LL.D., formerly Professor of Psychiatry at, and Director of, the Insane Asylum in Zurich (Switzerland). English adaptation by C. F. Marshall, M.D., F.R.C.S., late Assistant Surgeon to the Hospital for Diseases of the Skin, London. London: Rebanan Limited.

⁴ *Traité de Psychiologie-Sexuelle.* Par le Docteur O. Josué. Préface de M. le Professeur Roger. Paris, J. B. Baillière et Fils, 1909. (Demy 8vo, pp. 416; figures 20. Fr. 10.)

We do not propose to offer a judgement as to whether or no a copious supply of plain-spoken pages upon sexuality is desirable as literature for adults and experts, but we feel inclined to protest against the pose of the author of *The Sexual Question* when he claims to be the instructor of youth. We are reminded of the lines of Horace:

Favete linguis. Carmina non prius audita
Virginibus puerisque canto.

For Dr. Forel in his preface insists upon quoting:

Among several others of the same kind a letter which I have received from a young girl aged 21 years, intelligent, virtuous, educated, and well brought up, but without restraint—

Of whom he says: *Indolence, timidity, and ignorance.*

I begged her to criticize me without pity, for I wished above all things to be clear on the effect produced by my book.

The momentous verdict of this young lady is, by request, anonymous; it is also bizarre, and we need scarcely say, in favour of the appellant, who records his satisfaction in the following phrase: *in my opinion, I have won you.*

I think that the candour, the loyalty, and the maturity of judgement of the sentiments expressed by this young girl are of much more value and are much more healthy than all the prudishness and false shame of our conventional morality.

A work which professes to defy the fear of the French public "of ordurities, and of calling things by their proper names," might almost be regarded as taboo in England—at any rate, for kindergarten use, and we are not yet satisfied that the suggestions of Dr. Forel that youth is to be taught to be surprised at nothing in the way of sexual phenomena are more valuable than the words we have before us of the Master of Trinity College, Cambridge, Dr. Butler, the great Head Master of Harrow School, who wrote: *sexual phenomena are not virtuous nor are they vicious.*

"Precautions should be taken as far as possible to keep vicious or polluting literature out of young boys' ways. I include under this head, and have a reason for each entry, articles in medical or scientific dictionaries. . . . Those who make light of the danger of such books, those who misquote such passages of Scripture as 'To the pure all things are pure,' do not know what they are saying. It is a solemn duty not to put temptation in the way of the young.

Maxima debetur pueris reverentia."

It may be that some of our readers may share the opinion that works of this kind are more fitted for the top shelves of the library of an insane asylum than for the hands of an intelligent, virtuous young girl, aged 21 years.

Les Eunouques a Travers les Ages, by Dr. R. MILLANT, is issued by Vigot Frères, 23, Place de l'École de Médecine, Paris. This postal address in itself suggests that the work should be of scientific interest to the faculty. But, somewhat greedily, the publishers spread their net wide, and hint that the work should have its place in the library of the curious as well as in that of the man of science and the man of letters. It has become the custom of French publishers to supply with each copy of a book sent out for review a printed slip for the use of the reviewer suggesting and, in fact, supplying exactly the notice that the publishers would desire to read. This, too, with the heading *Préface d'insérer*. Now with all respect for a system which tends to promote the enterprise of the publisher and the proverbial indolence of the reviewer, we must protest against this system. An argument which will appeal to the publishers most strongly is that by adopting this method they run a grave risk of forfeiting the sympathy of even the most indolent of critics, who, in a spasm of indignant industry engendered by this suggested slight to his self-respect and independence of thought, is tempted to seek material for censure rather than adopt the laudatory inspiration with its preliminary *Préface d'insérer*. It was in a somewhat carping spirit of resentment at the masquerade of pornography in the guise of science that we perused *Les Eunouques*, which we find to be a reasonably complete treatise on the subject, more interesting, we hope, to the philosopher than to the curious. The author discusses the possible motives which can have induced so many races of mankind in so many ages to submit a proportion of their male population to this mutilation, but the discussion is not illuminating. Dr. Millant gives an interesting account of that strange sect of Russian origin whose head quarters now seem to be in Rumania, the Skoptzys. These people make a virtue of emascu-

lating their males, inspired by a strong religious motive in some obscure way associated with the fundamental principle of their faith, that the Messiah will appear among them as soon as their population has become sufficiently numerous. If the arrival of the Messiah is a consummation devoutly to be wished by the Skoptzys, and if that arrival is to be hastened by increasing the population, we marvel at their craze for castrating their most eligible males—seemingly a check upon population which might cause bones, even those of Malthus, to turn in their grave. The drastic code of the Skoptzys prescribes that the mutilation of males may take place in boyhood; but should any escape this fate and achieve the privileges of matrimony, there must hang over the temporarily happy home the dreaded shadow of the castrator who is to be called in after the second visit of the stork. For upon the birth of a second child a Skoptzy father must be added to the list. By proselytism, sometimes associated with bribery, and also occasionally by violence, the Skoptzy castrators are kept fully occupied over this special work, and it is no uncommon occurrence—so we read—for an earnest Skoptzy to play the part of Shylock to an entire man with a view to exacting the physical penalty for financial default. We are not surprised to read of this strange sect, that they are tighty, well-nourished and shrewd men of business, leading peaceful lives and amassing considerable fortunes, chiefly by horse-dealing and the letting of carriages. In the concluding passages of the book the author sums up the physiological changes following castration, laying especial stress on those observed in the bones, and briefly discusses the hypothesis of an internal testicular secretion. In this chapter lay the chance of the justification of the book as a treatise of service to medical readers; and we regret to find it is totally inadequate. To our mind the most wholesome passage in the book is an echo from Ovid: "La castration aurait dû être le châtiment de celui qui l'inventa."

NERVOUS DISEASES.

Gowers has pointed out that *tabes dorsalis* does not always deserve the epithet of "progressive," formerly applied to this symptom complex, for arrest is frequent and considerable improvement not uncommon. Oppenheim says in the third edition of his textbook that it usually runs a course of ten to twenty years, but may last from twenty-five to thirty, and Marie goes so far as to say that *tabes* does not essentially shorten life. These opinions have led on more than one occasion to the discussion of the question whether this disease may not have undergone a change in character and be now more benign than formerly. As is indicated, however, in a pamphlet by Dr. von MALAISÉ, dealing with the prognosis of *tabes dorsalis*,⁵ it is probable that with the finer diagnosis of to-day, and particularly since the discovery of the Argyll Robertson pupil phenomenon, cases which would at one time have escaped detection are now included in a category which contained formerly only examples of the graver kind. Dr. von Malaisé, who at the time of the preparation of his monograph was assistant in the polyclinic of Professor Oppenheim, of Berlin, was enabled with the help of the Police Intelligence Department of Berlin to trace and examine ninety sufferers from *tabes dorsalis* who had formerly been patients of the polyclinic, and whose first examination dated back at least eight or ten years. Naturally, these patients, coming from the poorer classes, do not give results admitting of general application, for in *tabes dorsalis*, more than most diseases perhaps, the efficacy of treatment, and consequently the prognosis, depends very largely upon a favourable environment. Disregarding, therefore, Dr. von Malaisé's statistics, and only considering a few points of particular significance, we note that, in opposition to Gowers, the author finds that a rapid development of symptoms, and particularly an early appearance (that is, within six years) of symptoms after syphilitic infection, are of unfavourable augury. He agrees with Marie that the greater the variety of symptoms the worse the prognosis; but his results show only a partial agreement with the opinion of Collins that marked sympathetic nerve disorders are of bad omen, for he finds that cases with early and severe gastric

⁵ *Die Prognose der Tabes Dorsalis*. By Dr. E. von Malaisé. Berlin: S. Karger, London: Williams and Norgate, 1906. 32 pp. (5vo. pp. 51. 1s.)

crises often undergo great improvement, thus supporting Benedikt's statement (Ueber Aetiologic, Prognose und Therapie der Tabes, *Wiener Med. Presse*, 1881, Hft. 1, 2, 4, and 5) that prodromal gastric crises and optic atrophy should be classed together from the prognostic standpoint as often marking the commencement of arrest. The author found that in those who showed optic atrophy it occurred in the preatactic stage in 73 per cent., and that in the great majority—that is, in three-quarters—arrest set in with visual failure. On the other hand, late appearing optic atrophy was not in any way related to the progress of the disease. On many points of importance Dr. Malaisé's material was too scanty to be of decisive value, but we may mention, finally, that in the large majority of cases running an unfavourable course the symptoms were first noted in the age period 22 to 36.

That Dr. PURVES STEWART'S *Diagnosis of Nervous Diseases* has met with the wide acceptance it deserves is proved by the fact that the second edition has now been published⁶ although less than two years have elapsed since we reviewed the first. The new edition is considerably larger than the first. The extended table of contents has been omitted, but many new diagrams and illustrations have been added, and the whole subject matter, in a department which is continually undergoing revision and addition, has been brought carefully up to date. Professor Marie's views, about which so much has been written, on aphasia—according to which diagrammatic visual, auditory, and speech centres are denied, and aphasia referred to intellectual deficiency from disintegration of some part of Wernicke's zone—are compactly described and opposed. Under cranial nerves there are brief accounts of Bárány's aural or vestibular nystagmus; of "jaw winking" (lid opening in congenital ptosis during certain jaw movements—for example, in mastication), and Harman's explanation of the phenomenon; Mendel's view of the innervation of the orbicularis is discarded. Amongst the upper neurone palsies the differential points between the upper, corticospinal or supranuclear, and the lower or nuclear or infranuclear paralyses are most lucidly discussed, and in the lower neurone group many new illustrations—for example, of ischaemic paralysis, Landouzy-Déjerine myopathy, etc.—are introduced. The chapter on the cerebro-spinal fluid and lumbar puncture has been brought up to date; and, finally, two new chapters—one on sleep and the last on intracranial tumours—have been added. So far, we have mentioned only the facts of which the author treats. It remains to be said that he has the happy gift of giving the gist of a matter in a few pregnant sentences, and of seeing clearly what is wanted, and consequently of being singularly lucid in expression. We can warmly commend this book to our readers.

THE CHEMISTRY OF THE CARBOHYDRATES.

THE work Professor EMIL FISCHER has during recent years been performing on the proteins and polypeptides has no doubt overshadowed his untiring energies in other directions. To those in danger of forgetting Professor Fischer's services to biochemistry in relation to subjects other than the proteins, his thick volume of collected papers will come as a useful reminder.⁷ It is convenient for workers on the same or allied subjects to have the published researches of any prolific worker under one cover, and this is the *raison d'être* of the present volume, as it was that of a similar volume issued a year or two ago on the proteins. To attempt even a superficial review of the great mass of information contained therein is an impossible task. It will be sufficient to remind readers that Fischer's work on the carbohydrates was pioneer and epoch-making, rendering clear their constitution, and making their synthesis an accomplished fact. Each paper is a brick in the edifice of this knowledge which was finally reared. The volume contains 103 papers, mostly by Fischer himself; a few emanate from his pupils, or were written in collaboration with colleagues; 99 of these relate to the carbohydrates directly, and of the remaining

ten which come under the heading ferments, the greater part deal with carbohydrates indirectly. When one remembers that this work extended over about twenty years, and that the same twenty years were occupied with equally important and difficult and illuminating research in other directions, one cannot but be filled with admiration for the great master in Berlin to whom chemists and biologists alike are indebted for so much he has done in the exploration of Nature's secrets by the method of experiment.

PHYSIOLOGY.

THE *Student's Handbook of Physiology*,⁸ begun by the late Dr. ARTHUR CLARKSON, has been completed by Dr. DAVID FARQUHARSON, and published by Messrs. Livingstone. Dr. Farquharson has contributed the chapter on the central nervous system and some of the sections on the special senses. The book is a careful and very well illustrated compilation, but lacks the breadth of modern physiology and that value which the views of a writer would have who was in close touch with the researches of the last few years. For example, we miss any account of the recent work on the regeneration of nerve, and the striking experiments of Langley and others on the grafting of one nerve to another; likewise of the influence of posture on the circulation, an omission which leads to a most insufficient account of the principles which underlie the circulation of the blood; again, the important effects of changes of barometric pressure on the body are dismissed with insufficient notice. An old classification of the proteins is given, and the word "proteid" retained which has been given up by the general agreement of English physiologists. The cause of aphasia is placed in Broca's convolution, as if no Marie or Monikow had arisen to upset the old traditional localization. The book strikes us as mainly a rehash of older textbooks, and to have no features of its own which make it especially commendable to the student. It contains, however, in a clear and concise form as much as he needs to get up to pass his examinations.

We have received the third part of the second volume of the handbook of physiological methods⁹ which Professor TIGERSTEDT is editing. The earlier parts of this useful work have already been noticed in these columns. The present part contains articles on muscle physiology. Dr. K. BÜCKER deals with the thermodynamics of muscle, giving at most inordinate length all the different methods of a dozen workers. The general mechanics of muscle are dealt with by Professor von FREY; the mechanics of special muscular movements by Professor O. FISCHER; the electrophysiology by Dr. S. GARTEN. Professor v. Frey compresses his information into 30 pages, the other three authors manage to fill the rest of a large volume of 488 pages. The whole deals with the duller part of physiological science, and one which is furthest removed from practical medicine, but experts on these particular branches of study will find here full information by thoroughly qualified men.

The instructions for the practical course of general physiology conducted at Glasgow have been published by Professor NOEL PATON in conjunction with Mr. HERBERT CLARK.¹⁰ There is, as far as we can see, little new in the course or any freshness in form which particularly invites the use of these Glasgow syllabuses by other schools of physiology. The whole teaching of experimental physiology urgently wants remodelling in this country. The older experiments on frogs' muscles, etc., can now be replaced largely by a most interesting series of experiments on the circulation, respiration, etc., of the student himself, and amplified by work on the pithed rabbit, the organs of which can be maintained alive by artificial respiration. The student can thus be made familiar with those important problems of the respiratory and circulatory organs which he has to face in his clinical work.

The tables drawn up by W. BEHRNS for the use of microscope workers have proved so useful that they have

⁶ *The Diagnosis of Nervous Diseases*. By Purves Stewart, M.A., M.D. Edin., F.R.C.P., Physician to Out-patients, Westminster Hospital; Physician to the West End Hospital for Nervous Diseases, etc. Second edition. London: E. Arnold, 1908. Demy 8vo, pp. 660, 15s.

⁷ *Untersuchungen über Kohlenhydrate und Fermente* (1884-1908). By Emil Fischer. Berlin: Julius Springer, 1909. (Roy. 8vo, pp. 920, M 24.)

⁸ *The Student's Handbook of Physiology*. By the late Arthur Clarkson, M.B., C.M., and David A. Farquharson, M.B., C.M. Edinburgh: E. and S. Livingstone, 1908. (Post 8vo, pp. 810; 47s. figures, 12s.)

⁹ *Handbuch der physiologischen Methodik*. Edited by Professor R. Tigerstedt. Band 2: 3 Ab. Leipzig: S. Hirzel.

¹⁰ *A Practical Course of General Physiology*. By Noel Paton, M.D., F.R.C.P., and G. Herbert Clark, M.B., D.P.H. Glasgow: G. Maclehoose and Sons, 1908. (Demy 8vo, pp. 39, 1s.)

appeared in a fourth edition, enlarged and improved by E. KÜSTER.¹¹ A number of distinguished workers in Germany, in each branch of the subject, such as Apfathy, Paul Mayer, Schieffedecker, P. G. Unna, Czapski, have contributed to the preparation of these tables. The tables contain all the required information as to weights and measures, specific gravity of and percentage of dissolved substance in solutions of reagents employed, solubilities, refraction coefficients, magnification and apertures, fixing and hardening methods, injection masses, staining methods, culture media and methods of staining bacteria and protozoa, microchemical reagents, microscopical methods for investigating crystals and minerals with the polarimeter, etc. The matter is arranged in a very clear way, so that the practical instructions can be found in a moment.

PHYSICAL CHEMISTRY.

In his *Theory of Valency*,¹² Dr. FRIEND has made a unique contribution to English chemical literature. Curiously enough, in Germany only a single monograph, written by Dr. Henrichsen, has hitherto appeared on the subject. The method adopted by the author has been to discuss a few of the earlier theories of valency, to treat in detail of the elements arranged according to Mendeleef's periodic law, and to conclude with a rather more elaborate review of current ideas. Considerable space has been given to the ingenious and convincing theories of Sir J. J. Thomson, and the author sums up strongly—as, of course, the evidence compels him to do—in favour of the electric view of valency. The juxtaposition of the conflicting explanations shows in a most striking way the difficulty of the whole question, and nothing need be said here further to emphasize the importance to chemical theory of the whole conception of valency being established on a firm foundation. Dr. Friend has done a most valuable service in collating and giving a clear expression to contemporary views. His work will prove of very great service to students in elucidating one of the most important chemical problems with which they are called upon to deal.

In his *Outlines of Physical Chemistry*,¹³ Dr. GEORGE SENTER has made a very valuable contribution to Messrs. Methuen's Textbooks of Science series. The volume has been rendered necessary by the rapidly-growing importance of the subject, and special attention has been devoted to those portions presenting the greatest difficulty to beginners, such as chemical equilibrium, electrical conductivity, and electro-motive force. The book is perhaps hardly suitable, as, indeed, it is not intended, for those who are studying the subject without direction, for the inherent difficulties are not surmounted, despite the trouble Dr. Senter has taken. But, suitably directed, the student will find the work an invaluable guide to the theorems of physical chemistry, which he has usually to study scattered up and down the pages of textbooks of chemistry and physics. A very considerable improvement would be made in the text if Dr. Senter could induce one of his pupils to read it critically, and point out those portions which require amplification. As seems inevitable in a book of this kind, there are a considerable number of misprints. For instance, a few lines from the bottom of p. 46 a bracket has twice been misplaced; on p. 55 a reference is made to the line 'FB' that appears nowhere on the corresponding figure, and so forth throughout the volume. These, however, will doubtless be corrected in a second edition.

NOTES ON BOOKS.

DR. WILLIAM ODELL, in a pamphlet entitled *Treatment of Pulmonary Tuberculosis with Ichthiol*, expresses a favourable opinion of the value of this drug, with which he has treated 123 cases out of the 165 under his care in the Western Hospital for Incipient Consumption, Torquay, since October, 1901. It must be borne in mind that all

these patients have been under "open-air" treatment in a particularly favoured part of England, and that, as Dr. Odell points out, their improvement may be due to the general treatment quite as much as to the ichthiol. However this may be, Dr. Odell's 123 patients showed arrest of the disease in 29; 47 were very much improved, 12 much improved, 18 improved, 5 were "incurable," 2 "unsuitable," 5 unimproved, 1 died, and 4 are still in the hospital doing well. Dr. Odell is convinced that ichthiol tends to diminish the amount of coughing and expectoration, and therefore to minimize the liability to hæmorrhage, and that it reduces temperature and increases appetite. He usually commences with 7½ minims in half a wineglass of water three times a day after food, and gradually increases to 10 drops thrice daily; though he has never gone beyond that dose, he has no doubt that larger doses would be tolerated in many cases. The nauseous taste of the drug can be obviated by giving it in capsules.

Volume xi, part 3, of the *Transactions of the American Ophthalmological Society* for 1908,¹⁴ published recently, contains, as usual, a large amount of interesting material by many writers, most of whom are well known in the whole ophthalmic world. It is a record of the forty-fourth annual meeting of the Society, held under the presidency of Dr. Riseley of Philadelphia. Among the contributors are Drs. de Schweinitz, Holloway, Kipp, Shoemaker, Derby, Millikin, Arnold Knapp, Pooley, Pusey, Bull, Howe, Byers, and Major Henry Smith, I.M.S., who is so well known as the champion of the extraction of cataract within the capsule. He here deals with the extraction of immature cataract by his method. The illustrations are numerous and well done, both the coloured and those in black and white. The subject list ranges over pretty well the whole extent of ophthalmology.

The *Pharmaceutical Pocket Book*, 1909,¹⁵ contains much useful information within a sufficiently small compass to justify the use of the term "pocket book." It is written primarily for pharmacists and pharmaceutical students, but much of the matter presented will be of service to any one interested in the preparation and supply of medicines. Articles on the analysis of water, milk, urine, and metallic salts, and on bacteriological examination of different kinds of materials, appear to be intended principally for those who have studied these branches of work and require a condensed account for handy reference, while the chapters on the science and art of dispensing and on volumetric analysis do not presuppose a knowledge of the subject, and should be of use to students. Much information is given in tabular form, as, for instance, particulars as to origin, constituents, etc., of all drugs in ordinary use, equivalents of metric and imperial measures of length, mass, and capacity, doses of official medicines, etc.; a fairly comprehensive dictionary of synonyms is another useful feature.

Volume I of *The Students' Pictorial Pocket Series*¹⁶ is a little book on somewhat similar lines, but more limited in scope. It contains tables of dose, therapeutic action, solubility, etc., of official and unofficial medicines, a tabular summary of the composition and mode of preparation of galenic compounds, and so on. Much information is condensed into small space, and the employment of abbreviations is carried to the verge of obscurity. As a summary for use in preparing for examinations and for reference in subsequent practical work it will doubtless prove useful.

Dr. GEORGE F. EDWARDS, of Maidenhead, has written under the title *Old Time Paris, a Plain Guide to its Chief Survivals*,¹⁷ a useful little book. Paris has to so large an extent transformed itself into a cosmopolitan city of pleasure that the inexperienced visitor, even if he has no particular desire to indulge in the distractions enumerated by the author in his first page, often finds it difficult to know where to look for old Paris with its old houses and characteristic life. Dr. Edwards tells him where to go and what to look for in a very systematic way, and his little volume will prove an invaluable companion.

¹¹ *Tabellen zum Gebrauch bei Mikroskopischen Arbeiten*. By Wilhelm Behrens. Fourth edition by E. Küster. Leipzig: S. Hirzel, 1908. (Roy. 8vo, pp. 253. M.7.)

¹² *The Theory of Valency*. By J. Newton Friend, Ph.D. Würzburg. Methuen's Textbooks of Physical Chemistry. Edited by Sir William Ramsay, K.C.B., F.R.S. London: Longmans, Green, and Co. 1909. (Cr. 8vo, pp. 194. 5s.)

¹³ *Outlines of Physical Chemistry*. By George Senter, Ph.D. F.R.S. London: Lecturer on Chemistry at St. Mary's Hospital, London, etc. London: Methuen and Co. (Crown 8vo, pp. 387. 3s. 6d.)

¹⁴ *Transactions of the American Ophthalmological Society*, vol. xi, part 3. 1908—fourth annual meeting. Hartford: Published by the Society. 1908. (Medium 8vo, pp. 457-756.)

¹⁵ *The Pharmaceutical Pocket Book*, 1909. Edited by John Humphrey. London: The Pharmaceutical Press. 1909. (Pott 8vo, pp. 416. 3s. 6d.)

¹⁶ *The Students' Pictorial Pocket Series*. By James P. McDonald, Vol. I. *D.P. doses, solubilities, therapeutics, preparations, and poisons tabulated*. Brisbane, Queensland: J. P. McDonald. 1908. (Fcap 8vo, pp. 108. 3s. 6d.)

¹⁷ *Old Time Paris, a Plain Guide to its Chief Survivals*. By George F. Edwards, M.D. London: A. Doubleday and Co., Ltd. 1908. (Fcap 8vo, pp. 158. 2s.)

Nova et Vetera.

THE FOUNDERS OF THE EDINBURGH BOTANIC GARDEN.

In a book called *Under Petraia*, to which people who care about Italy, and especially those who remember *In a Tuscan Garden*, may be glad to have their attention called, we come across a connecting link between Scotland and Italy which has not, so far as we recall, been noted before in this column. At Padua, where the Admirable Crichton as well as the more famous Harvey were students, there is a botanic garden said to be the oldest in Europe. Now, Mr. Francis Steuart in the *Scottish Historical Review* for October, 1905, in discussing the roll of the university to which many Scots students resorted, mentions the name of one George Sibbald, of whom he says, "He, it is interesting to note, was uncle to the Sir Robert Sibbald who founded the Botanical Gardens in Edinburgh in 1667, and one cannot help connecting this with the mention of John Evelyn, the diarist, of the Garden of Simples, rarely furnished with Plants, which he saw when he too was a medical student at Padua."

There seems to be some doubt as the real share of Sir Robert Sibbald in the foundation of this institution. The first botanic garden in Edinburgh was called the Physic Garden, and lay in the hollow to the east of the North Bridge, on ground now covered by the Waverley Station, in the very bed of what was once the Nor' Loch. The old Physic Gardens remained there, at the foot of the Calton Hill, till they were transferred in 1770 to a spot on the west side of Leith Walk, resting there till 1824, when the present Botanic Gardens and Arboretum off Inverleith Row were formed. The Physic Garden, according to James Grant,¹ owed its origin to Sir Andrew Balfour, the son of Sir Michael Balfour of Denmyne. "An eminent physician and botanist, he was born in 1630, graduated in medicine at St. Andrews, prosecuted his medical studies under the famous Harvey in London, after which he visited Blois to see the celebrated Botanical Garden of the Duc de Guise, then kept by his countryman, Dr. Robert Morison, author of the *Hortus Regius Bloisensis*, and afterwards, in 1669, Professor of Botany at Oxford. In 1667, Balfour began to practise as a physician in St. Andrews, but in 1670 he removed to Edinburgh, where, among other improvements, he introduced the manufacture of paper into Scotland. Having a small botanical garden attached to his house, and chiefly furnished with rare seeds sent by his foreign correspondents, he raised there many plants never before seen in Scotland. His friend and botanical pupil, Mr. Patrick Murray, of Livingstone, had formed at his seat a botanic garden containing fully a thousand specimens of plants; and after his death Dr. Balfour transferred the whole of this collection to Edinburgh, and, joining it to his own, laid the foundation of the first botanic garden in Scotland, for which the magistrates allotted him a part of the Trinity Garden, and then, through the patronage of Sir Robert Sibbald, the eminent physician and naturalist, Mr. James Sutherland, an experienced botanist, was appointed head gardener. After this Balfour was created a baronet by Charles II. He was the first who introduced the dissection of the human body into Scotland; he planned the present Royal College of Physicians, projected the great hospital now known as the Royal Infirmary, and died full of honours in 1694, bequeathing his museum to the University." The *Dictionary of National Biography* (iii, 48) gives us the additional information that Balfour visited both Bologna and Padua, where no doubt he saw the Botanic Garden.

Although Grant gives the chief credit of the foundation of the Physic Garden to Balfour, there is nothing in the whole statement to show that Sir Robert Sibbald—and possibly his uncle, George Sibbald, with his memories of the famous gardens at Padua—did not have a hand in the business. Sir Robert certainly appointed James Sutherland the superintendent of the garden. Sutherland was a gardener, and "seems," writes Grant, "to have been one of those self-made men of whom Scotland has produced so many of whom she may well be proud." In 1683 Sutherland published his "*Hortus Medicus Edin-*

burgensis, or a catalogue of the plants in the Physic Gardens at Edinburgh, containing the most proper Latin and English names," dedicated to the Lord Provost, Sir George Drummond. "In his little garden in the valley of the North Loch," continues Grant, "he taught the science of herbs to the students of medicine for small fees, receiving no other encouragement than a salary of £20 from the city, which did not suffice to pay rent and servants' wages, to say nothing of the cost of new plants, so difficult to procure in those non-travelling times."

In 1689, during the siege of the Castle, it was deemed necessary to drain the North Loch, with the result that the poor little Physic Garden was nearly washed away in the flood; it had at any rate all its precious plants covered with rubbish and mud. In his distress Sutherland appealed to the Privy Council, who, considering the good services he was rendering, "whereby not only the young physicians, apothecaries, and surgeons, but also the nobility and gentry, are taught the knowledge of herbs, and also a multitude of plants, shrubs, and trees are cultivated which were never known in this nation before, and more numerous than in any other garden in Britain, as well for the honour of the place as for the advantage of the people," awarded him a pension of £50 yearly out of the fines accruing to them. The Lords of the Scottish Treasury further aided him, and he was able to extend his operations to a piece of ground near Holyrood Palace, where, in 1695, he raised "a good crop of melons, other curious annuals, fine flowers, and other plants not ordinary in this country." James Sutherland had another hobby, for, in 1705, when he died, his collection of Greek, Roman, Scottish, Saxon, and English coins and medals was purchased by the Faculty of Advocates, and is still preserved in their library. In the *Edinburgh University Calendar* James Sutherland takes his place at the head of the list of the Professors of Botany, a list which ends with the name of Isaac Bayley Balfour, the present Professor and Regius Keeper of the splendid Botanic Gardens and Arboretum (covering about sixty acres) in Inverleith.

Little is heard of the Physic Garden for some years after the death of Sutherland. Probably, like many other things in the city, it suffered from the blight which fell upon Edinburgh after the union of the Scottish and English Parliaments. There were, however, Professors of Botany, Charles Preston and George Preston, and in 1738 Charles Alston became Professor of Medicine and Botany, the title which the chair bore until 1879, when John Hutton Balfour was succeeded by Alexander Dickson, who took again the old name of Professor of Botany. But the Garden became famous once more in 1761, when Dr. John Hope was appointed King's Botanist for Scotland, and when he was made by the Town Council Professor of Materia Medica and of Botany. Seven years later he resigned the professorship of the former subject in order to devote himself entirely to botany. He taught his students in the Physic Garden; but, finding that it was unsuited to the rapidly-advancing importance of the subject, he appealed for funds for a new garden, and succeeded in getting enough money from the Lords of the Treasury and the Town Council to acquire and lay out the new garden to the west of Leith Walk. Professor Hope introduced into Scotland the Linnean system, which had been opposed by his predecessor, Dr. Alston.

Hope, in his botanical garden, has been made a familiar figure to after-ages by Kay in his *Portraits*. A German traveller, named Frank, paid a visit to the new garden in 1805, and said, in praise of the plants: "I saw a beautiful *Ferula asafœtida* in full bloom; the gardens at Kew receive their plants from this garden." The present Botanic Garden and Arboretum in Inverleith, with its palm house, 100 ft. high, its rock garden, and its museum, all under the care of Professor Bayley Balfour, would indeed delight the eyes of that other Balfour who did so much, with the help of Sibbald and the example of Padua, to found its modest forerunner of the seventeenth century in the valley now given up to one of the largest railway stations in the world.

THE late Dr. Peter Horrocks, President of the Obstetric Society, London, left estate of the gross value of £40,207, with net personality £39,422.

¹ *Old and New Edinburgh*, vol. i, p. 362.

THE COMPOSITION OF CERTAIN SECRET REMEDIES.*

XIII.—INEBRIETY CURES.

PARTICULARS are here given of the results of the analysis of certain nostrums which are advertised for the cure of the drink habit. These form a somewhat distinct class from the "treatments" and "systems" in which, ostensibly at least, individual cases are dealt with according to their particular nature or peculiarities. The last of the remedies here described approximates to the class just referred to.

COZA POWDER.

Supplied by the Coza Institute, 76, Wardour Street, London, W., formerly 62, Chancery Lane, London, W.C.

Price 10s. per box, containing thirty powders.

This preparation is advertised with an offer of a free sample. An application for a sample brought a single powder together with a 10s. box to be paid for or returned, a book of 130 pages (which is referred to below), and a letter, from which the following is an extract:

Coza Powder has the marvellous effect of producing a repugnance to intoxicating drink of any kind, and may be administered in coffee, tea, milk, water, beer, whisky, brandy, or solid food without the partaker's knowledge.

Coza Powder does its work so silently and surely that any person interested in the intemperate can administer it to him or her without his or her knowledge and without him or her learning what has effected the transformation.

Coza Powder has reconciled thousands of families, saved from shame and dishonour thousands of men and transformed them into sturdy citizens and capable business men. It has led many a young man along the direct road to good fortune, and has prolonged by several years the lives of many individuals.

We particularly wish to draw your attention to the fact that we guarantee Coza Powder to be absolutely harmless.

The book which was sent, entitled *No more Drunkenness*, opens with the statements that

Coza Powder is one of the greatest discoveries of the day. There is nothing in the whole world to compare with it. It is the only powder to cure the craving for drink and drug habits.

The first few pages are devoted to a disquisition on drunkenness; then follow further claims for Coza Powder, such as

Coza is the name of a marvellous powder which possesses the quality of occasioning in him who takes it a dislike for alcoholic liquors and all intoxicating drinks. The drinker finds alcohol so detestable that even on the most tempting occasions it will be impossible for him to take a single drop.

A large part of the book is given up to what are called testimonials, with portraits stated to represent the writers; the large majority of these are dated from Continental countries. Those to which English names and addresses are appended are for the most part expressions of hopefulness, or records of little variations in drinking which are believed to be due to the powders; for instance:

My friend has been taking "Coza" this last two days, and he has had no desire for drink.

Enclosed you will find P.O. for which send me another box. I think the powders are doing my friend good. Send at once.

The last pages of the book are devoted to advertisements of Canexia Hair Elixir, Canexia-Brilliantine, and Canexia-Shampoo Powder, supplied from the Canexia Chemical Works, 61, Chancery Lane; and Anticelia Tablets for Obesity, and Brixia Tablets for Thin People, supplied from 62, Chancery Lane.

A visit to the address showed that the Canexia Chemical Works, the Coza Institute, and the offices of Anticelia and Brixia Tablets were all accommodated in three rooms on the second floor at 61 and 62, Chancery Lane, the double number representing one entrance of a large block of buildings containing hundreds of different offices. A photograph of the entire block, inscribed "Coza Institute," is given in the book just referred to. The address has since been changed to that given above.

The powders had an average weight of 1½ grain, the weights of single ones varying from ½ grain to 3 grains. Analysis showed them to contain sodium bicarbonate, 90.5

per cent., the remainder being a vegetable powder; microscopic examination of this powder showed that it agreed in all its characters with a mixture of equal parts of cummin fruits and cinnamon. No alkaloid was present, and no other ingredient of any kind could be detected. The formula is thus:

Sodium bicarbonate...	...	90 parts.
Powdered cinnamon...	...	5 "
Powdered cummin...	...	5 "

Estimated cost of ingredients for 30 powders, one-thirtieth of a penny.

DIPSOCURE.

Prepared by the Carlton Chemical Co., 43, Guildhall Buildings, Birmingham.

Price 9s. per box, containing 50 powders, 25 being white, and 25 tinted reddish-buff.

This article, like the preceding, is advertised with an offer of a free sample. Application for a sample brought also a stream of letters at short intervals, with abundant printed matter. A few extracts from the letters are here given:

Eminent medical men have over and over again declared that if a cure for drunkenness could be discovered both TASTELESS AND ODOURLESS, and placed in the hands of a devoted woman to administer SECRETLY, the greatest difficulty in effecting cures would have been overcome. "Dipsocure" IS TASTELESS AND ODOURLESS, and CAN BE administered SECRETLY: so that it has been our privilege and good fortune to have solved the problem. Whilst counteracting and freeing the alcoholic-laden system of the poison, it is soothing to the nerves and restores the health, and is harmless to the most delicate person.

No matter how great the drunkard, or how many years he or she has been so, "Dipsocure" will absolutely and permanently cure any ordinary case, and transform the drunkard into sober, kind, generous, and loving men and women.

... two packages have been usually found sufficient (and frequently one), in the most severe cases of confirmed drunkards, to bring about a speedy and permanent cure.

Most drunkards imagine they suffer from some ailment, such as rheumatism, indigestion, headache, constipation, etc. No matter what it is they complain of, administer Dipsocure as the ostensible cure, and be certain of the result. It cannot harm the most delicate constitution of either man or woman, of what-ever age, even if an overdose is taken: we guarantee this most distinctly. The preparation contains no poisonous or injurious drugs of any kind.

In a short time after use the sufferer will regain nerve power, improved appetite and health, and all alcoholic beverages will become absolutely nauseous to them—they will even shrink from the smell of them.

It acts through the blood, permeating every part of the system, disseminating (sic) and driving out the alcoholic poison, which cannot resist its action, completely restoring the patient to health, strength, and renewed vigour. IT KILLS alcohol. The cure is as complete as it is certain and the patient REMAINS PERMANENTLY CURED.

... when a cure has been effected we ask you to kindly acquaint us of the fact, and perhaps you will then consider our agency proposal, showing how a good income can be made by introducing the cure to others. To show you the ease with which it can be sold, if you remit us 10s. three packages will be sent, two of which you can readily dispose of to other sufferers at 9s. each, thus making 8s. profit and obtaining one packet quite free.

The directions for use are:

Give one powder three times a day, before meals, dissolved in half a tea-cup of Hot Coffee, Tea, Whisky, Milk, Gin, etc. Use either the brown or white powder, as the colour of the liquid may require.

The powders had an average weight of 4.2 grains, single powders varying from 2.9 to 6.0 grains. The composition of both kinds was found to be the same except for the trace of colouring matter contained in the tinted powder. Analysis showed the composition to be—

Acetanilid...	...	6 parts.
Potassium bromide...	...	35 "
Sugar of milk...	...	59 "

Estimated cost of ingredients for 50 powders, one-third of a penny.

ANTIDIPSO.

Supplied by the Ward Chemical Company, 205, Regent Street, London, W.

Price 10s. per box, containing 48 powders, 24 being white and 24 tinted pinkish-buff.

The statements made about this article, in circulars and

* Previous articles of this series were published in the following issues of the BRITISH MEDICAL JOURNAL:—1904, vol. ii, p. 1585; 1906, vol. ii, pp. 27, 1645; 1907, vol. i, p. 213; vol. ii, pp. 24, 160, 209, 393, 530, 1635; 1908, vol. i, pp. 833, 912, 1375; vol. ii, pp. 86, 565, 1022, 1110, 1153, 1285, 1566, 1691, 1875; 1909, vol. i, p. 31.

letters, are very similar to those made about the preceding one. A few extracts will suffice:

You will not forget that to insure an absolute complete and permanent cure for the craving, two boxes are invariably required. We have had data of cures effected with one box, but to make absolutely sure you will do well to immediately send us remittance, to the same value as the last, and get the second box of the specific.

Antidipso may be administered with or without the knowledge of the patient.

Should the patient be suffering from any trifling ailment such as indigestion, a rheumatic twinge, slight headache, or constipation, administer a powder in hot tea, coffee, or milk. No matter what the complaint may be, give Antidipso as the ostensible cure.

We enclose you a booklet showing our agency terms. Kindly give it your attention as we are confident you will be so surprised and satisfied at the cure which will be effected that you will either yourself want to take up agency with us, or get someone in your district to do so.

The directions are:

Give one powder, dissolved in half a tea-cup of hot coffee, whisky, milk, gin, etc. (using either Brown or White Powder as colour of fluid may require) 3 times a day before meals.

The powders had an average weight of 5.3 grains, single powders ranging from 3.7 to 9.9 grains. The white and tinted powders were made of the same constituents, with a trace of colouring matter added in the latter case, but in different proportions. Analysis showed the composition to be:

WHITE POWDERS.			
Potassium bromide	...	...	24.5 parts.
Sugar of milk	...	...	75.5 "
COLOURED POWDERS.			
Potassium bromide	...	...	35 parts.
Sugar of milk	...	...	65 "

Estimated cost of ingredients for 48 powders, one-third of a penny.

THE TEETOLIA TREATMENT.

Supplied by the Teetolia Treatment Association, 97, New Oxford Street, London, W.

The following are extracts from the advertisement of this preparation:

After Years of Drink and Drug taking—
Cured in 4 days.

... The Teetolia treatment acts so rapidly and so efficiently that within four days from the commencement of administration the insistent craving for drink is absolutely destroyed—so much so, that even the thought of alcohol becomes nauseating. ... Thousands have been cured by this treatment, and we guarantee to cure you. ... If you write to-day, addressing the Teetolia Treatment Association, 97A, New Oxford Street, London, W.C., you will receive by return of post a private consultation sheet, together with a valuable book on this subject, post free in plain envelope, and you will be a free man within a week.

On application being made for further particulars, a booklet of twenty pages, entitled *The Teetolia Treatment for Alcoholic Excess, Drug Habits, and Resultant Nervous Diseases*, was sent, together with a letter and a form to be filled up with particulars of the case to be treated. The following are extracts from the booklet:

It has at last become recognised that the craving for drink, with its subsequent gratification is a disease, and can only be combated and overcome, like all other diseases, by scientific medical treatment.

This is not the place to discuss or pass judgment upon the various Licensing Acts introduced and passed into law by successive Governments. Whatever their merits or demerits may be, we are faced to-day with the stern fact that the consumption of drink and, consequently, the number of drunkards, with the exception of temporary fluctuations, are increasing yearly—in other words, that this terrible disease is extending and widening, carrying with it wherever it goes havoc, misery, want, and the destruction of domesticity. Nor does the disease die with its victim: the mysterious law of heredity comes into operation, and from generation to generation the disease is passed on from father to son, until finally, owing to its degenerating and pernicious influence, the family becomes extinct.

The discovery of the Teetolia method and treatment for the permanent eradication of the crave for drink and drugs marks an era in medical science. It is the outcome of a life's study of the subject by one of our best known West End physicians.

You can, whilst undergoing the treatment pursue your ordinary methods of living. You continue to take your daily modicum of alcohol; but somehow about the third or fourth day

of treatment, without having made any physical or mental effort, you feel that you no longer want a drink; it holds out no attractions to you; its magnetic influence has gone. You can't understand it. You have not been actively resisting or fighting the craving, so far as you know; but Teetolia has been fighting for you. It has been producing its effect upon your nerve tissue, exercising its invigorating influence upon your brain, restoring healthy tone to your debilitated stomach, creating a normal, instead of a depraved, appetite, and so, not by the aid of any magic spell or philtre, but with the assistance of a discovery, purely scientific and rational, working in a natural way.

We are willing to supply you with sufficient medicine for eight days' treatment FREE of all charge. This will enable you to determine whether the treatment is acting successfully, for at the end of the fourth day an obvious and perceptible effect should be experienced. We impose no condition; we rely on your candour, honesty, and gratitude that at the end of the eight days' treatment, if you are convinced of the value of the Teetolia Treatment, you will forward to us the ordinary fee—£1.1s.—for same, but if you have derived no benefit from the treatment at the end of the same period, then you are under no obligation whatever to pay us one single penny.

The letters were on headed paper, at the top of which was printed, "All communications strictly confidential," and "Consultations with Physician by appointment." The first letter concludes as follows:

Please therefore fill in and return without delay the special statement sheet and upon our receiving it the Physician will go carefully into the case and will prescribe special medicine, which will reach you with expert advice in the course of two or three days in a perfectly plain sealed package.

The "special statement sheet," with the answers given printed in italics, was as follows:

CONFIDENTIAL PARTICULARS OF CASE.

Case No.

1. Age and Sex of Patient. *Male, 34.*
2. If married, what Family, if any? *Yes; two children.*
3. What class of stimulants is generally taken—Drugs, Beer, Wine, or Spirits? *Spirits.*
4. Has the habit been recently acquired; if not, how long established? *Nearly two years.*
5. Mention average daily quantity taken. *About a bottle of brandy.*
6. Is the habit persistent or intermittent? If the latter, mention ordinary duration of intervals. *Usually 2 or 3 days a week with very little drinking; and there have been two complete intervals of 3 or 4 weeks each.*
7. What are height and weight of patient? *5 ft. 9; 11 stone.*
8. Is the patient putting on flesh or otherwise? *No particular change.*
9. Is constitution generally healthy? *Yes.*
10. (a) Does the patient enjoy a good appetite? *Yes.*
(b) Is the digestion good? *Fair.*
11. Does the patient suffer from sleeplessness? *No.*
12. (a) As far as you know is the heart sound? *Yes.*
(b) Does the patient suffer from any organic malady? *No.*
13. Is temperament nervous or phlegmatic? *Nervous.*
14. Has patient ever suffered from any serious illness? If so, state nature of same. *Typhoid, fourteen years ago.*
15. Is there any family history of alcoholism? *One uncle is a drunkard.*
16. Has patient ever suffered from—
(a) Any form of epilepsy? *No.*
(b) Delirium tremens? *Once (perhaps more).*
17. Has the patient ever—
(a) Submitted to any other form of treatment for alcoholism? *No.*
or
(b) Been an inmate of an Inebriates' Home? *No.*

Fill in here any further information concerning case that the Physician should be in possession of—

Patients and their friends may rely with perfect confidence on all particulars of this case being regarded by the Association as strictly private.

The "expert advice," in a letter purporting to be from "The Medical Superintendent," sent with the medicine, contained these passages:

I want if possible, the patient to use his own endeavours to try and keep off alcohol during the first few days of treatment if this cannot be done, then the treatment must be commenced when the patient is not drinking, in order to give the medicine a better hold on the system. The dislike for alcohol, which we claim, does not come on all at once.

The eight days' treatment is enough to show you that it will do good, but, not sufficient in this case to effect a permanent cure. I would advise the patient to continue for at least a month to six weeks.

This is somewhat widely at variance with the statements quoted above, "You continue to take your daily modicum of alcohol" and "you will be a free man within a week."

The one-guinea "treatment" consisted of 2½ fluid ounces of a liquid of the nature of a vegetable fluid extract.

The directions were :

Half a teaspoonful to be taken in a little water every four hours during the day at 10, 2, 6, and 10 o'clock.

Analysis showed this to contain 29.3 per cent. by volume of alcohol, and 2.3 per cent. of alkaloid, which consisted principally of quinine. The liquid agreed generally with a diluted liquid extract of cinchona; the amount of alkaloid is just under half what is contained in the official liquid extract of cinchona. In addition, treatment with suitable solvents extracted a trace of a non-alkaloidal bitter substance resembling the bitter substances obtainable from quassia, chiretta, etc.; these substances, however, do not possess well-marked characters by which they can be identified like alkaloids, and it was not possible to ascertain the drug from which this was derived; a preparation of chiretta appeared to be the more probable. No strychnine was present, and no evidence was obtained of any other ingredient.

THE PERCENTAGE OF NICOTINE IN VARIOUS KINDS OF TOBACCO.

PROFESSOR DIXON MANN, in an article published recently in the JOURNAL (December 5th, 1908, p. 1673) on some of the effects of excessive smoking, pointed out that recent investigations have afforded strong evidence that, contrary to the view very generally held in the past, nicotine is by far the most important constituent in producing the characteristic effects of tobacco smoke.

One fact which seems to have been established by these researches is that only a portion of the nicotine of the tobacco passes unchanged into the smoke, the greater part being destroyed by the heat; according to two of the investigators quoted by Dr. Mann the ratio of the nicotine in cigar smoke to the nicotine originally present in the cigar is liable to vary widely in the case of different brands of cigars. But after allowing for such variations it would appear to be true as a general proposition that the more nicotine there is in a cigar or any other form in which tobacco is smoked, the more the smoker is likely to take into the system. It is, therefore, of some importance to know the relative amounts of nicotine contained in different kinds of tobaccos. Further, if the results of such an inquiry show that the percentage of nicotine rises and falls *pari passu* with the character of the tobacco as "strong" or "mild" when judged by a smoker, collateral evidence will be afforded of the correctness of the view that the effects of smoking are principally due to the nicotine.

In previously published determinations of the amount of nicotine in tobacco, the methods employed have varied considerably, and in some cases, at least, their accuracy is very much open to question. A discussion of various methods would be out of place here; but the process employed in the analyses, of which the results are given below, must be briefly described.

A known weight of the tobacco was mixed with slaked lime and distilled in a current of steam until alkaloid was no longer to be found in the distillate; a rather prolonged distillation was necessary to reach this point, giving a rather large volume of distillate. The latter was then rendered decidedly acid with sulphuric acid and evaporated to a low bulk; the nicotine was then liberated by the addition of fixed alkali, and extracted by shaking out with six successive portions of ether; the aqueous liquid was reserved for further treatment. The ether solutions were mixed, and freed from any adhering fixed alkali or ammonia derived from the tobacco, by washing with a small quantity of water; water was then added, and the alkalinity of the ether solution (due to nicotine) was determined by titration with standard alkali. Methyl orange was added to the liquid to act as indicator; but, as the end point of the titration is by no means well marked, litmus paper was also used as a subsidiary indicator, small drops being taken out and tested at intervals; from the result of the titration the amount of nicotine was calculated, but, in view of the unsatisfactory end point, this result was not relied on. The liquid, now containing the nicotine as sulphate, together with sulphate of any alkali used in checking the end point, and of any

ammonia from the tobacco that had not been removed by the washing, was evaporated to dryness on a water bath, and the nicotine sulphate dissolved out from the dry residue by means of absolute alcohol, leaving other sulphates undissolved. The alcoholic solution was evaporated to dryness, and the residual pure nicotine sulphate weighed; the corresponding quantity of nicotine was calculated from this weight, and was always found to be lower than the quantity calculated from the titration. The aqueous liquid which had been extracted with ether was found to retain a small quantity of alkaloid; it was accordingly acidified, and precipitated volumetrically by titration with Mayer's solution, the nicotine equivalent of which was ascertained by titrating a solution of pure nicotine in the same way. The end point is not well marked, so that it was only found possible to obtain approximate results; but, as the amount of nicotine determined in this way is only a small fraction of the total, the error so introduced is but small. The amount of nicotine found by this titration was added to the larger amount previously found. Control determinations made with pure nicotine showed that (after making this addition) the result deduced from the titration was rather too high, while that obtained by weighing the nicotine sulphate was too low, owing to loss of nicotine during the drying of the sulphate. The mean of the two gave a tolerably correct result, and the figures given below are such mean values.

PERCENTAGE OF NICOTINE IN PIPE TOBACCOS, CIGARS, AND CIGARETTES.

	Nicotine per cent.
<i>Pipe tobaccos :</i>	
A. Very mild honey dew ...	1.65
B. Smoking mixture, medium strength ...	2.04
C. Perique ...	3.29
D. Cavendish ...	3.83
<i>Cigars :</i>	
E. Havana, mild ...	1.09
F. Havana (same maker), strongest ...	1.58
G. Havana (another maker), "mild" ...	1.95
H. Indian, strongest ...	1.84
I. "Patent non-nicotinic" (German) ...	0.58
<i>Cigarettes (after removing paper) :</i>	
K. Egyptian ...	1.13
L. Turkish ...	1.30
M. Virginian ...	2.24
N. Common, five a penny ...	2.02

Of the pipe tobaccos, Perique and Cavendish are the strongest varieties obtainable, and are usually employed only for mixing with other kinds. The cigars taken for examination were all of good quality, and (except I) of well-known brands. G is the only case in which the result is strikingly at variance with what might be expected. This was a light-coloured cigar, and was supplied by a large firm of tobaccoists as the mildest cigar they kept in stock; but in the opinion of a smoker, although certainly mild in flavour, it produced more effect on the heart than most mild cigars. The cigarettes, except N, were of good quality and well-known brands. In view of the fact that ill effects from cigarettes are sometimes ascribed to the paper, this was separately examined. The fibre of which it is composed was practically the same in all four cases, and appeared to be a mixture of flax and hemp. None of the papers, however, consisted of pure fibre, and examination of the ash gave the following results:

	Percentage of Ash.	Metals found in the Ash.
Egyptian (printed with brand in bronze letters)	7.0	Copper (0.2 per cent. of weight of paper), aluminium, iron, magnesium, calcium.
Turkish (printed with brand in bronze letters)	10.7	Copper (0.8 per cent. of weight of paper), aluminium, zinc, iron, magnesium, calcium.
Virginian (printed but not in bronze)	8.8	Aluminium, iron, magnesium, calcium, sodium, potassium.
Common (printed but not in bronze)	8.8	Trace of lead; iron, magnesium, calcium.

THE THERAPEUTIC APPLICATIONS OF RADIUM: METHODS AND RESULTS.

A NOTE ON THE THERAPEUTIC APPLICATION OF RADIUM.

By J. M. H. MacLEOD, M.A., M.D., M.R.C.P.,

PHYSICIAN FOR DISEASES OF THE SKIN, VICTORIA HOSPITAL FOR
CHILDREN; ASSISTANT PHYSICIAN TO THE SKIN
DEPARTMENT, CHARING CROSS HOSPITAL.

The advances which have been made recently in radium-therapy have been the result chiefly of the improved technique of application adopted by our French colleagues, in which, instead of the radium salt being applied in a glass tube or aluminium box, it is spread by means of a varnish on a metal or stiff linen surface. The suggestion of varnishing the radium on to a flat surface is an old one, and was made in 1905 by M. Danlos. It is to M. Danne, however, that we are indebted for an efficient varnish, which, while firmly fixing the radium salt to the surface of the metal, is unaffected by the action of the atmosphere, moisture, and ordinary antiseptics. The composition of this varnish has so far been kept secret. It is the sulphate of radium, either pure or diluted with sulphate of barium, which is fixed by the varnish, this salt being chosen in preference to the bromide of radium as it is insoluble, while the bromide is readily soluble.

The advantages claimed for the French method of application are:

1. That by it practically all the rays from the radium are available, the less-penetrating rays not being intercepted by the glass, mica, or aluminium windows of the older "applicators," and

2. That with a given quantity of radium a much larger radio-active surface is obtained, over which the radio-activity is evenly distributed.

The first of these advantages would seem, as far as our knowledge goes at present, to be of considerably less account than the second, for by the mica or aluminium screen only the alpha rays and the softer beta rays are cut off, while the hard beta and gamma rays to which radium probably owes its selective action on diseased tissues are not intercepted. Indeed, doubts have been cast on the capacity of the alpha rays to penetrate even the varnish. According to Professor Soddy's opinion, as expressed in a recent issue of this JOURNAL, "in the absence of any definite physical tests proving that the alpha rays are capable of getting through this coating, the natural presumption would be that they were completely absorbed." On the other hand, Wickham and Degrais have repeatedly asserted that a proportion of alpha rays are emitted by the varnished surface. It is customary, however, to interpose a thin layer of gutta-percha between the varnished surface and the skin to prevent soiling the specimen, and this procedure effectively cuts off the alpha rays. Again, different screens of lead, aluminium, etc., are sometimes employed so as to intercept all but the highly penetrating gamma rays, as in the case recorded by Dominici and Bory, where an epithelioma of the lip, the size of a five-franc piece, was dispersed by radium, only the gamma rays being allowed to act upon it, so that, after all, the presence of the mica or aluminium screen in the old applicators may prove to have been no disadvantage.

The case is very different with regard to the second advantage of the French method—namely, the increased extent of radio-active surface. It has been estimated that when spread out 1 cgr. of a radium salt of an activity of 100,000 has approximately the same effect on the tissue as 5 cgr. of a salt of an activity of 600,000 collected in a small mass in a glass tube. To get the full value of a given quantity of radium salt it is necessary to have it spread evenly over a surface, and, within certain practical limits, the larger the surface the better. By means of Danne's varnish the sulphate of radium has been perfectly spread and fixed on metal surfaces of different shapes and sizes. It is a different matter, however, with the bromide of radium, for, being soluble,

it is unsuitable for varnishing. In this country those who have been using radium therapeutically during the last six years have chiefly employed the bromide, and they are presented with the difficulty of having it spread. I am aware that it is possible to have the bromide transformed into the sulphate, but there is a certain risk of loss in this process. There is another way, however, of dealing with the matter which is fairly satisfactory, and that is the simple expedient of having the radium bromide crushed down to a fine powder, and evenly spread and pressed in the thinnest possible layer between a metal back and a thin aluminium or mica window. I recently had 5 mgr. of pure radium bromide removed from an applicator, where it was in the form of small amorphous lumps, crushed down and spread in the above manner over a circular area 1 cm. in diameter. On examining it with a platino-barium-cyanide screen, the fluorescence was almost if not quite as great over the whole surface as it had been in the much smaller area presented by it before it was spread, and its therapeutic value was found to be proportionately greater than before.

In this way there is no great difficulty in constructing flat "applicators" of different shapes and sizes in which the radium bromide, either pure or mixed with a definite quantity of some inert salt, is thinly spread over a flat surface. For example, I have had a locket-shaped applicator made with a narrow frame and a mica window 2 cm. square, in which 1 centigram of pure radium bromide may be mixed with 3 centigrams of the inert salt, and the mixture evenly spread over an area corresponding to the window, so that each square centimetre contains 1 centigram of the radium bromide mixture of a radio-activity of 500,000.

By the use of such "applicators" one of the advantages, probably the main one, of the French method can be obtained in the case of the bromide, without having it exchanged for the sulphate, which at present is 25 per cent. more costly, or running the risk of having it transformed into the sulphate, and this can be accomplished in a manner in which the radium salt is completely protected by being fixed in an applicator, instead of being exposed to friction and possible loss, as it is when varnished on a metal surface.

TREATMENT OF ANGIOMATA.

[FROM OUR PARIS CORRESPONDENT.]

In two preceding articles in the BRITISH MEDICAL JOURNAL (March 6th, p. 609; March 27th, p. 797) the broad lines of the various methods employed by Drs. Wickham and Degrais in radium-therapeutics have been described; the results obtained in certain maladies will now be considered. The progress realized in the treatment of angioma is one of the most interesting. Drs. Wickham and Degrais, whose conclusions are founded on about 350 cases, state that the results are extremely favourable in the projecting, but more difficult to obtain in the superficial and flat forms. The following case is reported as one of the most extraordinary:

The life of a baby a few months old was in danger on account of the size and the number of vascular tumours which covered its face; one situated on the lower lip was very large, violet, and filled with blood, swelling up at the least exertion. It spread on to the buccal mucous membrane, and made feeding extremely difficult. The lip hung down, and was useless for suction; the child had to be fed with a spoon. There was another tumour on the upper lip, blocking the two nostrils to such an extent that the child breathed badly and incompletely. The right eye was completely hidden by two vascular tumours, one on the upper and the other on the lower eyelid, which touched and closed the right eye. These tumours affected the conjunctiva as much as the skin surface. The right ear was blocked by an enormous vascular tumour, which had developed in front of the ear, completely blocking the external canal, the meatus itself extending into it. These were the principal tumours, but there were others. All were raised above the surface; some were covered with normal healthy skin, in others the skin was violet. The child, then thin and puny, was brought in this condition two years ago to Dr. Wickham; treatment was commenced and the child was then transformed. The eye is freed, respiration takes place normally, the lip has almost regained its natural form, the violet discolorations have entirely disappeared and traces of the projecting tumours can be found only on looking very closely. The case shows the superiority of radium over all other methods of treatment, for neither surgery, x-rays, nor electrolysis could have attempted to cure a case of such gravity. The treatment

was simple, but required great patience. Each tumour, where-
 over possible, was treated by the method of "cross-fire," an
 apparatus being placed above and another below. In this case
 the apparatus chosen were of feeble intensity, and placed bare
 on the tumours, being left in contact with the tissues for a time
 shorter than could cause any surface irritation; for instance,
 knowing that a certain apparatus would cause irritation of
 the surface if applied for twenty minutes, it was only left in
 position for ten minutes. Owing to the "cross-fire," the
 tumour was thus affected in its interior as by a single applica-
 tion of twenty minutes. The applications were made each day
 for ten days, followed by ten days' rest. When it was not
 possible to employ "cross-fire" the apparatus was applied
 directly on the tumour for as long as was possible without
 causing any irritation. All the angiomata diminished in size,
 and the face was restored to a natural appearance.

This was an extreme case, but Drs. Wickham and
 Degrais have treated by the method of "cross-fire"
 numbers of patients who only had a single tumour, which
 was cured without any irritation of the skin.

When angiomatous tumours affect the skin proper, it is
 sometimes of advantage to produce a slight irritation of
 the surface, but not when the tumour is completely sub-
 cutaneous. The following case has a great practical and
 scientific interest from this point of view:

A young girl, 15 years of age, had a vascular tumour in the
 substance of the right cheek, without any violet discoloration
 either of the skin or of the mucous membrane; the swelling
 looked as if the girl had placed a nut between the jaws and the
 cheek; the face was deformed, and was quite asymmetrical.
 The diagnosis of a vascular tumour was made because the swelling
 was soft, was increased by exertion and diminished by pressure.
 In this case, as treatment by "cross-fire" was indicated, one
 apparatus was placed on the mucous membrane, and the second
 on the skin surface. The length of the applications was chosen
 so that neither of the surfaces was inflamed; the apparatus
 placed externally on the cheek was covered with a sheath of
 lead 2 mm. thick, so that only rays of great penetrating power
 were employed. The treatment was carried out in four series,
 each at two months' interval. Each series consisted of ten
 applications, one apparatus being applied to the skin surface
 for twelve hours each day, the other to the mucous membrane
 of the cheek for one hour each day; the latter apparatus was
 covered with lead 1 mm. thick. At the present time the
 appearance of the cheek is almost normal and similar to the
 other one. The calibre of the blood vessels has been reduced
 without the slightest irritation of the skin.

The superiority of radium over other therapeutic methods
 seems still more clearly shown in the following case:

A baby had a raised vascular tumour of the upper eyelid
 spreading over the eyebrow and a portion of the forehead. The
 tumour had been excised by a surgeon of undoubted ability but
 re-formed a month later, becoming even larger than before. It
 was then treated by cauterization, with the result that it
 became smaller but returned. This relapse was treated by
 electrolysis without any appreciable result. Radium treatment
 was then suggested, but the case was in a bad condition for
 treatment by radium, inasmuch that the operation had pro-
 duced hard, sclerotic, cicatricial tissue. In spite of that radium
 had quite a surprising effect, the tumour diminished without
 inflammation, and for the past year it has been level with the
 surface.

When port wine marks are superficial and not raised
 above the surface, Drs. Wickham and Degrais use
 apparatus of feeble radio-activity but of comparatively
 large surface; gradual discoloration is obtained by the
 repetition of the applications. They advise that the treat-
 ment should be specially applied to those forms that are
 deeply coloured and infiltrated. Up to the present time, at
 least, they do not advise treating those forms which are
 very superficial, and especially very pale in colour. The
 latter can be easily concealed by the use of toilet
 preparations, and the results of treatment are not
 sufficiently marked.

SANITARY APPLIANCES.

An Antiseptic Dust-Preventer.

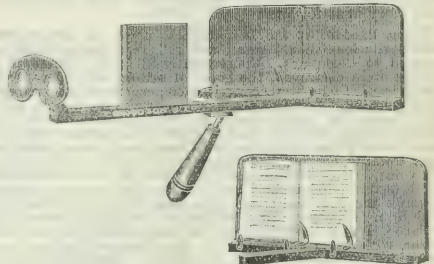
THE watering of roads with a solution of calcium chloride
 for the purpose of preventing dust rising appears to be
 meeting with considerable success, and a useful applica-
 tion of the same method for employment in sweeping rooms
 has been made by Dismo, Limited (West Ham Lane, Strat-
 ford, London, E.). This firm has submitted samples of
 two materials which they prepare under the names
 "Dismo" and "Lydus," respectively for use on carpets
 and on linoleum or boards, etc.; a line of the material is
 spread on the floor at the place where sweeping is to be
 begun, and this is then swept forward as the work pro-
 ceeds, the effect being to prevent dust rising, and to

retain it in close mixture with the sweeping material,
 where it is acted on by antiseptic constituents. Practical
 trials showed that the materials answered their purpose
 in a very satisfactory manner; examination showed them
 to consist of mixtures of sand and sawdust containing
 calcium chloride, together with a substance yielding
 formaldehyde on exposure, and fragrant terpenes. Such
 a material may prove of great use in hospitals and sick
 rooms, and possesses considerable value for ordinary
 domestic purposes.

MEDICAL AND SURGICAL APPLIANCES.

A Squint Reader.

THE Squint Reader illustrated is designed by Dr. Arthur
 Greene, of Norwich, to provide a strong and not expensive
 apparatus by which repeated and long-continued binocular
 use of the eyes may be ensured during the treatment of
 concomitant squint in children able to read, the vision of
 whose squinting eye has by exercises and the aid of appro-
 priate lenses been brought up or nearly up to that of the
 "fixing" eye. The general plan of the apparatus can be
 seen by a glance at the illustration. By placing a book on
 the bookholder, with the middle of the page to be read



(not the middle of the book) opposite the middle of the
 apparatus, the sliding "interruption block" can easily
 be moved to such a position that, on the child looking
 through the sight-hole end, it is impossible to read the
 lines of the book unless exercising true binocular vision.
 The features of the apparatus are: (1) its strength; (2) its
 portability—it can fold so as to be almost flat; (3) the book-
 holder is constructed to hold almost any kind of book or
 magazine; (4) it can be used with ordinary story books
 instead of fixed figures or letters, of which the most up-to-
 date child would soon tire; (5) its cheapness, enabling it
 to be used for hospital patients. The ideas of the designer
 have been faithfully carried out by Messrs. F. Davidson
 and Co., of 29, Great Portland Street, London, W.

LITERARY NOTES.

THE Boston Medical Library, we learn from the *Boston
 Medical and Surgical Journal*, has arranged a series of
 exhibitions illustrating various epochs in the history of
 medicine. The first includes collections of works of the
 Hippocratic era and the School of Alexandria; the second
 Roman Medicine and the Byzantine Period; the third
 Arabian Medicine and the School of Salerno; the fourth
 Monks and Scholastics and the Pre-Renaissance; the
 others the medicine of the sixteenth, seventeenth,
 eighteenth, and nineteenth centuries respectively. The
 Boston Medical Library possesses many rare volumes and
 manuscripts relating to medical science. We hail with
 pleasure the signs manifested in different countries of the
 awakening of an interest in the history of the development
 of medical science.

To the *Contemporary Review* for March Mr. E. L.
 Butcher contributes an interesting article entitled "The
 Exorcism of Hydrophobia." He prefaces it by the state-
 ment that hydrophobia was introduced into Egypt at the
 time of the British occupation by a dog belonging to an
 Englishman. This led to the revival of a custom in the
 Egyptian Church which implies that rabies must have
 been known in Egypt in early Christian Ages, and Mr.
 Butcher thinks it probable that the ceremony as now
 performed is the adoption and sanctification of what
 had been an attempt in ancient Egypt to treat patients
 suffering from hydrophobia by hypnotic suggestion,
 at the same time isolating and guarding them. The

ceremony, as described to Mr. Butcher by an Egyptian who had taken part in it, is as follows: The case was one of a child whose mother applied for help to the narrator's uncle. She was instructed to rise early on the morning of the next day, being Saturday, bake seven thin loaves of bread and prepare a handful of dry dates. Neither she nor the patient was to eat anything that day till the ceremony was over. On Saturday the narrator got up at five o'clock in the morning, and packed up in a small cloth bag a small censer, two phials—one full of the church wine, the other of anointment oil—and the book containing the ritual. He had also to collect six other children of his own age to take part in the ceremony. The rite began with the recital of the Lord's prayer: then incense was offered with the prayer of thanksgiving. Next came the prayer for the sick, after which the fifth chapter of the Epistle of St. James and the seventh of St. Luke were read in Arabic and in Coptic. After three short prayers had been said the Apostles' Creed was recited by all present. They then made a ring round the patient, and the celebrant, standing outside the ring with a silver cross in one hand, proceeded to read the story of the martyr Abu Tarbo and his encounter with a mad dog. The story is as follows:

When Theodosius the Just came to power he ordered that all persecutions should cease, and religious liberty should be granted to Christians. Consequently all the instruments of torture were destroyed, the gates of prisons were opened, and the prisoners who were convicted on account of their religion were released. Amongst these prisoners was the famous saint, Abu Tarbo. He was set free, and while he was on his way home a fierce mad dog rushed upon him, opening wide his jaws. Abu Tarbo trembling with fear, knelt down, lifting his eyes towards heaven, and without moving his lips or raising his voice, cried out unto the Lord; and the Lord heard him. By a sudden inspiration and courage he rose up, stepped towards the dog, and struck him dead with a stick that was with him. A moment after he heard a voice from above saying, "Tarbo, I give thee the power of healing all those who are bitten with rabid animals." He then thanked the Lord, and proceeded on his way again, repeating, "Thou shalt not be afraid for the terror by night, nor for the arrow that flieth by day, for the pestilence that walketh in darkness, nor for the destruction that wasteth at noonday. A thousand shall fall at thy side, and ten thousand at thy right hand, but it shall not come nigh thee." It happened that a few weeks after this incident the only son of a widow, who lived at the same village where Abu Tarbo lived, was bitten by a rabid dog. The widow took her son and went to him. Abu Tarbo performed this ceremony: anointed the child with sacred oil, sprinkled upon his face consecrated water, and gave him seven mouthfuls of unleavened bread and dry dates, telling him that he should take no more than one mouthful a day. After the lapse of seven days the child recovered from this terrible disease, and was able to come to him on the seventh day and thank him.

Mr. Butcher says that by Theodosius the Just no doubt is meant Theodosius the Spaniard, who became Emperor of Rome in 379 A.D. It is probable, however, that this curious practice is a survival from Pagan times, which may have been first sanctioned and adapted to Christian uses by the saint whom the story calls Abu Tarbo. The ceremony concluded with a long prayer. Whenever the word "dog" occurred in the prayer the celebrant struck a china bowl with a stick as if he was driving away an evil spirit. One of the children barked and howled as this was done. Then the children formed a fairy ring and circled round the patient seven times, reciting a spell consisting of verses from the psalms. They then sat down without breaking the ring. The celebrant thereupon took the towel with the unleavened cakes and dry dates off the child's neck, and after rubbing them with the sacred oil and wine made the children bite off pieces. Before biting, each child was told to walk on his hands and feet, and to bark and snarl as much like a dog as he could. Then portions bitten off the cakes were given to the patient to eat, one each day. He was then rubbed on forehead, chest, and wrists with oil, and the holy water was sprinkled about his bedroom. After seven days the child was back among his companions. The Egyptian says that he often took part in this ceremony, and it was always successful, but he judiciously remarks:

It may have been that the patients were bitten by animals that were not really mad, or, if they were bitten by rabid animals, they might have recovered by the effect of the action of the ceremony upon the patients' minds.

We may add that at the shrine of St. Hubert in Belgium, a method of treating hydrophobia by religious rites is, or

was till lately, practised. It is on the character of that saint as a mighty hunter before the Lord that his cult as a healer of rabies is founded.

MEDICAL INSPECTION AND AFTER.

LONDON.

MEDICAL TREATMENT OF SCHOOL CHILDREN.

At the meeting of the London County Council on April 6th the debate on the report of the Education Committee, recommending the subsidization of hospitals and dispensaries in order to provide medical treatment for school children, was resumed, but, on the ground that no estimate as to probable cost had been presented, the motion by the Chairman of the Finance Committee to refer the report back to ascertain the cost of treating each disease was accepted.

Dr. SALTER moved to add an instruction to the Committee to bring up a scheme for the establishment of school clinics, arguing that hospitals in London were so distributed that they could not provide medical treatment for the children in many districts. Medical opinion, as represented by the British Medical Association, and dental opinion also, were in favour of school clinics. Dr. Salter quoted Dr. Kerr's estimate that twelve clinics could be established for £20,000 per annum.

The CHAIRMAN interrupted further quotations by ruling that members must not quote from a report of an officer who had not been accepted by the committee concerned, and so it came about that the only figures which the Council had before it were contained in an estimate by Mr. A. A. Allen, M.P., who pointed out that medical men were employed by the Council at present for quarter time—nine hours a week—for £150 a year. From this he calculated that in twelve clinics 70,000 to 80,000 dental cases could be treated per annum, and about half that number of eye cases at a cost of about £25,000 a year. Mr. Allen thought the Council should consider very carefully before it introduced a system of rate-aid for hospitals. It was unfortunate, he said, that no estimates prepared by the medical officer were before the Council, for the wildest rumours were going about. One member suggested to him privately that the cost of treating teeth alone would be about £200,000 a year. Clinics in the long run would be cheaper and more efficient.

Mr. BRAY objected to the proposal to make grants to juvenile friendly and other benefit societies for purposes of medical inspection. The result would be, he said, that the Council's teachers would be canvassing on behalf of benefit societies and for the ultimate extinction of the private practitioner.

The Moderate view was expressed by Mr. C. U. Fisher and Mr. Ernest Gray.

Mr. FISHER looked with suspicion upon the employment of medical men and dental surgeons by the Council. If small fees were paid at first they always tended to increase. Mr. C. U. Fisher glanced back to the Education Act of 1870 as the first step in the direction of "undermining parental responsibility." This question of medical treatment should "only" be considered from the point of view of cost.

Mr. ERNEST GRAY seriously distrusted the estimates of cost presented by the medical profession. They had taken, he said, a very strong and narrow trades-union attitude in this matter. One northern borough sent an advertisement to a medical journal for an officer to carry out medical inspection, and the journal refused to insert the advertisement because the salary was not high enough. The sum offered was £300 and it was said that it must be £500.

The amendment was lost by 75 votes to 42.

Dr. BEATON moved a further amendment directing the committee to prepare immediately a scheme for medical treatment, taking advantage of institutions which existed, and for establishing school clinics where other provision was inadequate. He urged that if the two methods of dealing with the question were adopted the Council would be able to cover the whole need and find out from actual experience which was the cheaper.

This amendment, however, was lost and the report, as already stated, referred back.

THE new pathological block at St. Bartholomew's Hospital will be opened by the Lord Mayor, who will be accompanied by the Sheriffs, on Friday, May 7th, at 3 p.m.

British Medical Journal.

SATURDAY, APRIL 10TH, 1909.

MR. TROUTBECK AS THE SURGEON'S FRIEND.

LESS than a year ago we had occasion to comment—not for the first time—on the extent to which the Coroner for Westminster and the South-West District of London magnifies his office. In the JOURNAL of June 13th, 1908, we published a report of a case in which death had occurred in the Bolingbroke Hospital after an operation for the removal of a tumour of the cerebellum. The operation was performed by Sir Victor Horsley; it was done with the full consent of the patient; death would have been inevitable after a few months of wretchedness if it had not been performed; and the reputation of the surgeon gave assurance that it was done with the utmost skill. In the face of these facts Mr. Troutbeck insisted on holding an inquest, as the result of which he directed that a verdict of "Accidental death" should be returned. In commenting on the case we pointed out that in holding this inquest Mr. Troutbeck had gone altogether outside the powers conferred upon him by the Coroners Act, 1887. In Section 3 of that Act it is provided that an inquest shall be held "where a coroner is informed that the dead body of a person is lying within his jurisdiction, and there is reasonable cause to suspect that such person has died either a violent or an unnatural death, or has died a sudden death of which the cause is unknown." Mr. Troutbeck attempted to justify his arrogation of a right, which is not, as far as we know, claimed, and which is certainly not exercised, by other coroners, by the plea that "a death that has been accelerated by an operation cannot possibly be said to be a natural death." He went on to say that a considerable proportion of deaths which undoubtedly were in great part due to surgical operations were never reported to the coroner. They were certified, and owing to our system of certification the certificates were accepted. The registrars did not forward them to the coroners, as he thought they should, because they were not fully aware of the obligations of the Act of Parliament. He was convinced that the result was that throughout the country we were in a complete state of ignorance as to what proportion of deaths were accelerated by surgical operations. It was a serious matter and one for which a legal remedy was undoubtedly required. He regarded it as extremely important from the public point of view, and in these matters the coroner represented the public, on whose behalf such cases ought to be inquired into. They could leave these questions to no profession whatever, however honoured or however skilled. He expressed the intention of not letting the matter stand. These remarks, together with his general practice—as to which Lord Halsbury said that his impression of it was not favourable—were not unnaturally taken to show that Mr. Troutbeck, for some unknown reason, had thought fit to take up an attitude of hostility, or

at least of malevolent neutrality, in regard to the profession. But it appears that we have been mistaken, and that the coroner for the South-West District is in reality the doctor's friend, and in particular is anxious to shield the operating surgeon from blame, and to vindicate his ways to men through the medium of the enlightened juries whom he directs.

Mr. Troutbeck made his first appearance in this new character at two inquests held not long ago, reports of which are published elsewhere in the present issue. In one of the cases a patient suffering from cancer of the bladder was operated on by Mr. Sampson Handley. It was explained to the patient beforehand that the operation was extremely dangerous, but he elected to take his chance. Death took place shortly after the operation, which, if successful, might have prolonged the man's life for years; had nothing been attempted for his relief, the only prospect before him was a brief period of miserable existence. The coroner was pleased to express the opinion that there could be no doubt Mr. Handley was justified in undertaking the operation in the circumstances, and the jury obediently returned a verdict of "Accidental Death." The other case was that of a boy with peritonitis probably caused by appendicitis; the bowel was gangrenous for a length of 10 to 12 inches. As there was just a possibility of saving the child's life, Mr. Swainson operated. Death, however, took place soon afterwards. Here again Mr. Troutbeck came forward as the surgeon's friend, and decided that the operation was fully justified, whereupon the jury returned a verdict of "Accidental Death." In one of the cases he said that these inquiries were primarily for the benefit of the public, and he was good enough to add that they were perhaps of even greater benefit to the operators, who were given this opportunity of showing that they had taken the right course. He went on to say that it was a great satisfaction to them to hear a jury express approval of their efforts at a public inquiry! We fear that they, like ourselves, may have misconceived Mr. Troutbeck's friendly intention. But, indeed, it would seem that he has been wholly misjudged. The profession had not suspected that Mr. Troutbeck is a humorist. What has been taken for the insolence of office was humour. The idea that a leading surgeon should be gratified by the approval of his work expressed by a coroner's jury is truly comic. Now that we understand Mr. Troutbeck, we see that the absolution gratuitously bestowed by him upon surgeons who have done their best in almost hopeless circumstances is not impertinence but friendly fun.

Nevertheless, we take leave to think that he is not happy in his choice of occasion for his jokes, and that they are rather beneath the dignity of his high office. The surgeons may well pray to be saved from so over-zealous a friend. If, with the most benevolent intentions, inquiries are to be held on every case in which a coroner may think fit to assume that death has been hastened by an operation, a number of lives that might otherwise be saved will be sacrificed, and a still larger amount of suffering that might be averted will have to be endured. No surgeon will care to submit his highly skilled workmanship to the judgement of men utterly incompetent to form an opinion on its value. The art of surgery, too, will necessarily suffer, as we have more than once pointed out, if operations that must, from the very nature of the case, be more or less in the nature of desperate remedies for desperate diseases are to expose the

surgeon to the criticism of ignorance and, it may be, prejudice.

The points to be noted in both the cases reported in our Medico-Legal column, is that in each of them the patient was doomed to certain death within a short period of time. In one the operation may have accelerated the fatal issue by two or three months; in the other by about as many hours. In each case every consent that was necessary was given, and in each case the relatives were fully satisfied that everything possible had been done to save life and prevent future suffering. In each case, too, the operator was a surgeon of experience and proved skill and judgement, and there is probably not another coroner in the country who would have wasted public money and the time of busy men—to say nothing of the annoyance caused to the relatives—by holding an inquest. The inquiry was quite unnecessary, and did no good to any one, except to those to whom it was a source of profit in the shape of fees.

The point, therefore, to be determined is not whether the surgeons were, in Mr. Troutbeck's opinion, justified in operating, but whether the coroner was justified in holding an inquest when there was absolutely no reasonable cause to suspect that the death was violent or unnatural. Mr. Troutbeck, as we have seen, holds that if death is accelerated by an operation it cannot be called "natural." We should like to know by what legal casuistry such a death can be called "accidental." Inquests are held as a matter of course on cases in which patients have died after an operation performed to remedy the effects of an accident, but in such cases it is the accident, not the operation, that forms the object of inquiry. There is nothing whatever in the Coroners Act to justify Mr. Troutbeck's extension of the meaning of the words "unnatural death." If this interpretation of what constitutes an unnatural death is to be accepted, a coroner may assume that in any given case death was accelerated by medical treatment; and if he has Mr. Troutbeck's tender regard for the reputation of the profession, he will hold an inquest in order that the doctor may have an opportunity of showing that "he took the right course." On the other hand, inquests on deaths occurring among the Peculiar People, or under the hands of Christian Scientists and faith-healers, should be regarded as unnecessary, because they are in the strictest sense "natural."

It is to be hoped that the Departmental Committee now sitting will once for all settle the question of a coroner's authority in such cases. In a recent debate at the Medical Society of London, Mr. Walter Spencer, who was himself some time ago a victim of Mr. Troutbeck's high-handed procedure, pointed out that the difficulties which had arisen between coroners and medical practitioners were partly due to the difference in the education which formed the legal as distinguished from the medical mind, and which often made it difficult to find a common ground upon which to argue. This is true, and the only way to avoid the difficulty is that only men who have had a medical as well as a legal training shall be appointed to the office of coroner. If any further argument in favour of this proposal were required, it is to be found in the procedure adopted by Mr. Troutbeck. The profession would probably rather have him as an open enemy than as a friend in disguise. In any case a man with so eccentric a notion of humour is out of place as a judge of the serious and difficult work of operating surgeons.

THE "CURE" OF CANCER WITHOUT OPERATION.

WE have repeatedly found it necessary to deal with new suggestions for the treatment of cancer, and each time it has unfortunately been our duty to return a verdict "not proven." No excuse is needed for returning to this subject, for the terrible nature of the disease, its appalling frequency, and our helplessness in dealing with it, all render every attempt to discover a method of treatment which offers some hope to the patient without subjecting him to undue risk, not only laudable but necessary. It is the function of a medical journal to apply criticism of new ideas in such a manner that the profession, and through it the public, shall be safeguarded against risky procedures and false hopes. The busy practitioner has neither the leisure nor the opportunity to examine all the evidence available when a new cure of cancer is announced; but if a method of treatment that offers any serious prospect of efficacy is discovered, he should be enabled to apply it without loss of time and with the full knowledge of its action, its risks, and its limits of effectiveness. In dealing with a hitherto practically incurable disease, any new method of treatment must be accompanied with irrefutable proof, otherwise it cannot in the interest of the sufferers be accepted.

In the task of guiding the profession with regard to the so-called "cancer cures" Professor Zangemeister¹ has recently come to our assistance. In summing up the subject, the Königsberg professor says that if the matter be regarded critically we must come to the conclusion that no method has yet been suggested by which cancer can be cured with anything like the certainty of the knife. Improvements such as the modification of the growth of malignant tumours have been achieved by many and varied means. But although single cases of benefit from such means would suggest that cure could easily be obtained, more extended experience has proved this not to be the case.

There are three ways in which malignant disease might be cured. The first is the attempt to destroy the cancer cell. On theoretical grounds the difficulties in this direction lie in the fact that all agents so far discovered which exercise a deleterious action on the cancer cell exert a similar action on the normal cell, though it may be to a less extent. The means at our disposal at present include heat, cold, magnetic and electric waves, light, Roentgen and Becquerel rays, certain chemical substances, and a number of ferments. Of the physical means, radium has certainly produced the most marked results on superficial growths. Tesla currents (fulguration) are said by some to effect cures, but before this claim can be allowed more evidence must be forthcoming. Of the chemical bodies, arsenic, mercury, and other inorganic substances have been suggested. Zangemeister has tested the effect of injections of cholin, one of the organic compounds proposed, and states definitely that, although a certain amount of cell necrosis can be produced by its means, it does not exercise any curative effect. Of the ferments, he speaks chiefly of trypsin. The theoretical basis on which the trypsin treatment of cancer is built contains too many unknown factors to be accepted as sound. The results obtained in practice fall short of cure, and do not even hold out a promise of success in the future. He has nevertheless tested the effect of trypsin in a few

¹ *Dent. med. Week.*, November 15th, 1908.

cases, and found that no beneficial effect whatever could be discerned. Further, he raises the question whether the injected trypsin in one of his cases did not so injure the nutrition of the cancer as to render it an easy prey to a streptococcal infection, of which the patient died. Apart from the disappointing experience at the bedside, it has recently been shown by Achalmé, von Bergmann, Guleke, and Baumbert that injections of trypsin are immediately followed by the production of antitrypsin, so that an effect opposite to that aimed at is produced. The bile of oxen and other animals has also been tried with the same object, and, unfortunately, with the same negative result. As ineffective, in Zangemeister's opinion, are applications of nuclein and other drugs which produce leucocytosis. Bier's heterogeneous blood treatment has also not led to satisfactory results.

The second way of attacking the problem is to employ a medicament which shall have the effect of specifically dissolving the cancer cells. Cytolysins against carcinomatous cells have been produced by Schöne and others in mouse carcinoma. The difficulties in the way of applying this form of treatment in human disease depend on the uncertainty of the production of antibodies when heterogeneous antigens are employed. All the attempts in this direction have hitherto been unavailing, but the idea is not hopeless, and the future alone will show whether a passive immunization is not possible. Recently the author has attempted to use cancer cells of tumours removed from other patients, or even from the same patient, to overcome the heterogeneous nature of the antigen. The possibility of achieving success by immunizing monkeys has also been suggested, and must be followed out further.

The third way of dealing with the matter is by attempting to neutralize the products of the carcinomatous tissue. Apolant believed that the results obtained in mouse carcinoma by partial immunization, the type changing more and more to non-malignant adenoma, could be explained on the assumption that a gradual change occurred in the character of the cell owing to neutralization of the products. Many workers have determined that abnormal ferments exist in carcinoma. Neuberg considers that radium acts by destroying the cancer ferments. Hofbauer went so far as to suggest employing antitrypsin to inhibit ferment action generally. The weakness of this and similar theoretical forms of treatment depends on the impossibility of attacking cancer ferments alone without affecting the necessary ferments of the vital organs. A mass of hypotheses has been built up on these lines; but the groundwork is too insecure to pick out the sound from the imagined, and it is therefore premature even to hope that fruit will be borne on the branches of such a tree.

The conclusion of Zangemeister's discussion of a large number of proposals for the treatment of carcinoma is that up to the present no non-operative treatment of cancer has been devised which offers a patient a reasonable chance of cure. In other words, all the reputed cures have failed, and the investigators must continue to work before a cure can be found.

INSPECTOR-GENERAL JAMES PORTER, C.B., M.D., Director-General of the Medical Department of the Navy, has been appointed Honorary Physician to the King, in place of the late Inspector-General Sir J. W. Reid, K.C.B., M.D.

THE ANNUAL MEETING AT BELFAST.

AN inquiry has reached Belfast from an inland English county as to the possibility of visitors to the Annual Meeting having an opportunity of seeing the launch of one of the great steamships for which the shipyards of the city are famous. No doubt many others besides the member who made the inquiry will be interested to hear that the local executive has great hopes that such an opportunity may occur. A large vessel for the Orient Line is at present on the stocks in Messrs. Workman, Clark, and Co.'s yard, and is expected to be launched in July. The exact date cannot be settled so far ahead, but if the firm can make it coincide with the visit of the Association to Belfast they have courteously promised to do so. The Ulster Medical Society has arranged to present to the British Medical Association a cup, to be known as the "Belfast Cup," to be played for at Annual Meetings, and to be won out and out by any member winning it three times. It will be played for on the Friday of the Belfast Meeting, on the fine links of the County Down Club at Newcastle, co. Down, kindly lent for the day by the council and members of the club. The play will be by "bogey" score. The cup is designed after the famous Ardagh Cup, one of the finest examples of ancient Irish work, which is now in the Kildare Street Museum in Dublin. The original is composed of gold, silver, enamels, and jewels, and was, it is believed, meant for use as a chalice. The challenge cup will be of silver, about 9 in. high, with gilt panels and coloured enamel bosses; round it will be set stones representing the four provinces of Ireland—the black pebble for Leinster, the white or Carnmoney pebble for Ulster, the red stone for Munster, and the green Connemara marble for Connaught. The North of Ireland Cricket Club, the premier club of Ulster and one of the best in Ireland, has kindly offered to play a one-day match against a British Medical Association team. The beautifully turf-ed grounds of the club are only about five minutes' walk from Queen's College, where the Association will meet. The local executive will be very glad if some English cricketer will undertake to organize a team for the occasion; any one interested in the matter should communicate with one of the honorary local secretaries, whose addresses will be found in the SUPPLEMENT.

INSURANCE FOR MEDICAL MEN.

WITH a view to facilitating insurance by medical men against various risks, about two years ago a Medical Insurance Committee was formed to offer certain special advantages and concessions to medical men. Under an arrangement with the Guardian Assurance Company, Limited, an old-established office, policies of various kinds are issued, including the following: (a) Combined policy against fire, burglary, and the liability of the Workmen's Compensation Act in respect of servants; (b) liability of practitioners for accidents to persons employed in the practice; (c) personal accident and disease; (d) life assurance with or without profits, also endowment and partnership life assurance; (e) fidelity guarantee; (f) glass. A meeting of the committee to consider the annual statement of accounts for the year ending December 31st, 1908, was held last week, when it was reported that the life business had shown a marked and satisfactory improvement, and that there had been a steady increase in other directions, although in respect to employers' liability the improvement had not been so marked as had been anticipated, since it was largely owing to the provisions of the Workmen's Compensation Act, 1906, that the committee was constituted. When that Act became law it was at once perceived that its

provisions would affect medical men not only in the way in which all private members of the community were affected, but also in certain special directions in the exercise of their profession, and the committee, as has been said, insures medical men against liability for accident to persons employed in the practice. We believe that the terms offered by the committee are exceptionally advantageous; it is in a position to make an allowance of the nature of a bonus on the premiums, while the experience gained by the Secretary renders it possible to save the medical insurer a great deal of trouble. It is, we feel sure, desirable that the members of the medical profession both in town and country should more generally make provision against personal illness and accident. Experience proves that owing to exposure to infection and to inclement weather they are specially liable to certain types of disease which are apt to produce their incapacitating effects at that most inopportune moment when there is much sickness in the community. Further, whether he drives a horse-drawn vehicle or a motor car, or mounts the humbler motor or push-bicycle, the risk of personal accident can never be eliminated. Finally, there is probably no profession in which a man's earnings, and even his financial prospects, may be so seriously diminished by the enforced idleness caused by accident or illness. Further particulars can be obtained on application to Mr. Guy Elliston, Secretary, Medical Insurance Committee, 429, Strand, London, W.C.

THE EDUCATION OF MOTHERS.

A VERY novel legislative proposal, called the Necessitous Mothers (Assistance) Bill, was introduced by Mr. Robert Harcourt last week in the Commons. It proposes to empower local authorities to make provision for the assistance of necessitous women in contemplation of and after childbirth. The root idea of the bill is to reduce infant mortality by feeding, instructing, and supervising poor ignorant mothers. The bill is wholly permissive. The local authority can, if it likes, provide food, advice, or other assistance to a poor mother before and for six months after the birth of the child. As a condition for receiving help, it may insist on the mother nursing the child herself, or attending a class for instruction, or refraining from going to work. The municipal expenditure is limited to a penny rate. In an interesting article on the bill the *Manchester Guardian* points out that Mr. Harcourt's proposal is founded on experience gained at Ghent, where the infant mortality was very high on account of the mothers being mostly employed in the textile industry of that district. A local physician, Dr. Miele, started a school for mothers, where working-class women were given advice and instruction before and after confinement and encouraged to suckle their children. The municipality gave a grant of £60 a year to the work, and much good has resulted from the teaching that it is more useful to feed the mother and encourage her to suckle her child than to facilitate bottle feeding by the municipal supply of humanized milk. The Ghent idea was taken up a few years back in St. Pancras, and a school for mothers was founded. Dr. F. J. Sykes, the medical officer of health, earnestly supported the movement in face of the high infantile death-rate, and has had the satisfaction of seeing a great reduction in mortality from the crusade in favour of teaching and feeding the mothers and the encouragement of breast nursing. A similar movement is active in Manchester, but the expenditure is of necessity considerable, and it all falls at present on private philanthropy. Mr. Harcourt's bill would bring the municipality into the work, and we cannot conceive

a more useful expenditure of public money than this attempt to educate mothers in their natural duties and thereby reduce the terribly high infantile death-rate of many industrial centres.

THE MICROBE OF TRACHOMA.

NEARLY two years ago Professor Greeff published a paper¹ in which he stated that, working with the ophthalmic surgeon Dr. Clausen, and the bacteriologist Professor Frosch, he had, in the cells and secretion of the mucous membranes attacked by trachoma, come across small bodies which might possibly be the causal parasites of the disease, though more evidence on the point was required. With the financial support of the Prussian Ministry of Education, he has been able to continue the work on a large scale, and now² definitely asserts that the bodies are the causal parasites of trachoma. The importance of such a discovery is evident, and although Professor Greeff warns readers not to draw too sweeping conclusions, and asks the medical world to work patiently for further evidence with regard to the nature of the bodies in question, it is only reasonable to look a little ahead, and to anticipate the direction which the development of this research must take. In Berlin, Posen, Königsberg, Westphalia, Austria, Japan, and Russia, workers have found the same structures in trachomatous mucous membranes and secretion, and in these alone, and Professor Greeff states that a very extensive series of conditions other than trachoma has been subjected to rigid examination, and in not a single case have these little round coccus-like bodies been found. Dr. Leber has found the granules in 90 per cent. of the trachoma cases he examined in Bovigno. With regard to the suggestion that the bodies are not parasites but protoplasm granules or other forms of cell degeneration, or even the precursors of goblet cells, Professor Greeff says that this was considered from every point of view by him and his colleagues, and was amply disproved. He does not give the evidence in detail, but from the description and the illustrations of the structures, such an explanation does not appeal to the critic as probable. The structures are minute slightly ovoid bodies, considerably smaller than the smallest of the known cocci. At first these bodies are seen sparsely scattered in the protoplasm of the epithelial cells. They are surrounded by a distinct areola, and tend to group themselves in pairs. In the next stage they are seen bordering on the nucleus of the cell, and are accompanied by a sort of flake of protoplasm, not unlike von Prowazek's fibrin masses. When followed a stage further, collections or heaps of the bodies are seen. At first, these heaps are surrounded by a pale zone; later, this "mantle," as he terms it, disappears; lastly, the heaps burst through the mantle, and the small bodies escape into the surrounding cells or secretion. The structures are most easily recognized in the "heap" form. It is not easy, however, to demonstrate them until practice and patience have taught the observer how the specimens are best prepared. The staining is carried out by Giemsa's solutions, according to the following formula: (1) 12 parts of Giemsa's eosin solution (2.5 c.cm. of a 1 per cent. French solution of eosin in 500 c.cm. of water); (2) 3 parts of Azure I (1 in 1,000); and (3) 3 parts of Azure II (0.8 in 1,000). The secretion, together with some epithelial cells, are removed from the conjunctiva by means of some suitable instrument and spread thinly on slides. After drying in the air, the films are fixed for twenty to thirty minutes in absolute alcohol. They are then

¹ *Berl. Klin. Woch.*, June, 1907.

² *Dent. med. Woch.*, March 25th, 1909.

stained for six to nine hours at 37° C. in the solution, washed with distilled water, dried carefully with filter paper, and mounted in cedar oil. The same bodies have been described independently by Halberstädter and Prowazek, and these observers have confirmed the observations of Greeff and his co-workers. That, after a long search, the parasites should be found by two sets of independent observers simultaneously is not strange, since these bodies have been rendered recognizable by improved microscopical and bacteriological technique which is common property. One more fact is brought out in the article of Professor Greeff. After treatment with copper sulphate, long before the trachoma can be said to be cured, the bodies disappear from the superficial cells and secretion. Greeff suggests that they disappear into the deeper layers, where they are still capable of existing and giving rise to pathological changes. Culture of the parasites and reproduction of the disease still remain to be accomplished. We have therefore to determine whether the frequent—in fact, almost regular—occurrence of the bodies in trachoma cases, and apparently in these cases alone, can be accepted as sufficient evidence in support of a causal connexion.

NICOTINE AND TOBACCO.

At one time doubt was thrown upon the assumption that the characteristic effects of smoking were produced by the nicotine of the tobacco, but it seems now to be fairly well established that the nicotine is at any rate by far the most important constituent of tobacco smoke from the medical point of view, and it has, therefore, seemed worth while to analyse various smoking tobaccos, cigars, and cigarettes in common use in order to ascertain the percentage of nicotine in each. Speaking quite generally, it will be found that the judgement of a smoker as to whether the tobacco, cigar, or cigarette was mild or strong agrees very closely with the results of analysis; the agreement in the case of pipe-tobacco is, in fact, absolute. In the case of cigars, one called mild contained an appreciably larger proportion of nicotine than another, called strongest; but a third, also called mild, contained the smallest proportion of nicotine found in any tobacco examined except a German patent "non-nicotine" cigar, which contained little more than half the ordinary quantity in a mild Havana. The results of analyses of cigarettes are a little surprising, inasmuch as a Virginian of good quality proved to contain nearly twice as much nicotine as an Egyptian, and a common Virginian cigarette sold at five a penny, though it yielded less nicotine than a superior Virginian, contained a good deal more than either the Turkish or Egyptian cigarette. In comparing the effects of smoking pipes, cigars, and cigarettes, however, other factors besides the amount of nicotine present must be taken into consideration. When a pipe, cigar, or cigarette is first started, the smoke undergoes filtration in passing through the unburnt portion of the tobacco, and, in the case of a pipe, through the stem; as smoking proceeds, the percentage of nicotine in the shortening end of the cigar or cigarette must be much increased, and, when a holder is not used, this portion is in contact with the lips, and it is likely that some nicotine is absorbed directly in this way; whereas, with a pipe, filtration through the stem may, perhaps, become more efficient as smoking proceeds, as the smoke has to pass through a larger quantity of moisture; but it is not possible to say how far this advantage may be counterbalanced by the presence of an accumulation of nicotine from previous smoking of the same pipe. While habits, no doubt, vary as to the point at which a cigar or cigarette end is thrown away, it is probably

safe to assume that the end of a cigarette is usually a much larger proportion of the whole than is the end of a cigar, or of a pipe. The rate of smoking, too, is liable to vary, and it will probably be found that habitual and heavy smokers are considerably slower smokers than those who use tobacco less frequently. The weights of the cigars analysed varied from 60 to 100 grains; the five-a-penny cigarettes weighed 15 grains each, and the others about 21 grains each (without the paper); an average-sized briar pipe, filled with an ordinary smoking mixture, was found to hold about 75 grains. Observations on the time taken in the different forms of smoking showed that the same individual—a regular moderate smoker—took about fifty minutes for an average full-sized cigar, fifty minutes for a pipe, and twelve minutes for an ordinary cigarette. Taking the mild cigars, the mild tobacco, and the Egyptian cigarettes, and supposing four of the latter to be smoked in fifty minutes, the amounts of nicotine would be: Cigar, 0.9 grain; pipe, 1.1 grains; cigarettes, 0.9 grain. But, as already pointed out, it by no means follows that the amounts taken into the system would be in the same ratio as these numbers.

TUBERCULIN IN OCULAR DISEASE.

THERE can be now little doubt that certain ocular diseases present in so-called strumous individuals are often tuberculous in origin; among them may be included many cases of phlyctenular conjunctivitis, scleritis, and chronic irido-cyclitis. Many patients who present the typical ocular picture of interstitial keratitis associated with uveitis, but have not the other stigmata of congenital syphilis, are, there is good reason to believe, suffering from a tuberculous affection of the eye. It is unnecessary to assume the presence of actual bacilli; they are not found in phlyctenulae, nor do phlyctenulae often set up tuberculosis if introduced into a guinea-pig; the presence of tuberculo-toxin in the blood is sufficient to give rise to the lesions in the eye. This is quite obvious, for phlyctenulae frequently appear when tuberculin is placed in the conjunctival sac of a susceptible individual. The effect of appropriate tuberculin treatment is often so very encouraging that no effort should be spared to arrive at a correct diagnosis. This can only be done by the expert use of tuberculin. Derby and Török¹ have given most explicit directions for the use of tuberculin, both as a diagnostic and therapeutic agent. The first author states also that his experiences with the skin reaction of von Pirquet have been highly satisfactory. The papers should be read by all who wish to realize fully how common tuberculous eye disease is, and how best to treat it. A very interesting account, illustrated by two beautiful coloured plates of tuberculosis of the fundus oculi, has been published by Kraus and Brückner in the same periodical. In the two cases described test injections of tuberculin caused marked alterations in the fundus picture and rendered the diagnosis certain.

TOO OLD AT FORTY-FIVE.

THE voluntary retirement of the public vaccinator a few months ago created a vacancy in the Hounslow district. In their advertisement for candidates to fill this post the guardians of the Brentford union inserted a clause fixing an age-limit of 45 years for applicants. This imposes a penalty for being in the prime of life and medical experience, for which we see no justification. A petition was addressed to the guardians by local practitioners, pointing out that the restriction would deprive nearly every medical man practising in the district, and asking the guardians to

¹ Archives of Ophthalmology, September, 1908.

reconsider their decision. It was urged that the stipulation was unusual and unjust. To this petition the guardians replied that they were unable to alter the terms of the advertisement. An effort was also made to obtain the opinion of the Local Government Board by means of a letter addressed to the Secretary. This elicited a mere official acknowledgement of the letter. The matter was regarded by the local practitioners as a grievance. Two applicants withdrew, but the third declined to support the action of the local profession, and was elected to the post. Where united action is called for, success can be achieved only by unselfish loyalty on the part of every practitioner. The promotion of the social side of the life of the Divisions of the British Medical Association is doing much in the direction of securing more of this spirit of loyalty. In this way the chief hindrance will be surmounted to the removal of hardships and the establishment of just and equitable terms and conditions of service. On the question of age, there can be no doubt that boards of guardians have to some extent taken fright owing to the adoption of the Superannuation Act for district medical officers. Where too much regard is given to this, to the exclusion of other and more important considerations, false economy may be secured and efficiency sacrificed. The fallacy of too old at 45, adopted by the Brentford guardians, is not capable of explanation on this score, as public vaccinators are not entitled to superannuation. It may be, however, that the guardians in this union anticipate an early change by the authorities in the direction of superannuation for public vaccinators, and are anxious to take timely measures to safeguard themselves against the liability that would be created by such a contingency.

LORD LISTER.

LORD LISTER completed his 82nd year on April 5th. Though recognition of the value of his work did not come quickly, his name now marks an epoch in the history of surgery of which it may truly be said that there is *nil simile aut secundum*. His collected papers and addresses will shortly be issued in two volumes by the Clarendon Press. The profession throughout the world will join in wishing increased length of days and happiness to the man who has been the means of saving more human lives than have been destroyed by all the conquerors that have been the scourge of mankind. There is, moreover, this vital difference between his work and theirs—that its beneficent action will continue, ever extending its area, as long as civilization lasts.

CENTENARY OF OLIVER WENDELL HOLMES.

THE hundredth anniversary of the birth of Oliver Wendell Holmes falls, like that of so many other famous men, this year. He was born on August 29th, 1809, but the Historical Society of Cambridge, Massachusetts, where he was born and where he lived during his early manhood, proposes to celebrate the event somewhat earlier. To this it will devote its regular spring meeting, which occurs on April 27th next. Dr. Charles W. Eliot, President of the University, will preside, and other speakers will be: Dr. Edward Waldo Emerson of Concord, son of Ralph Waldo Emerson, and an associate of Dr. Holmes in the famous Saturday Club; Colonel Thomas Wentworth Higginson, an intimate friend of Dr. Holmes; Dr. David Williams Cheever, who was his assistant when he was Professor of Anatomy in the Harvard Medical School; and the Rev. Samuel M. Crothers, D.D., of Cambridge, described by Mr. Frank Gaylord Cook, secretary of the society, as "one of our foremost humorists." Several selections will be sung by the Harvard Glee Club, and Mr. Charles Townsend

Copeland, instructor of elocution in the university, will read two poems by Dr. Holmes—namely, "The Last Leaf" and "The Chambered Nautilus." The celebration is in honour of Holmes in his poetical literary character; but the medical profession will not forget—that he himself never forgot—that he was one of our body. It may be that he was as proud of having written "The Chambered Nautilus" as he was of having called attention to the contagiousness of puerperal fever. Fine as much of his literary work is, however, we think that his most enduring title to fame is the service he did mankind by that famous essay.

BERLIN PROFESSORS AND RUSSIAN PATIENTS.

A FEW days ago the daily papers reported under "scare" headlines that a gross violation of medical ethics on the part of certain professors in Berlin had been brought to light in a libel action. Since the charges made have not yet been proved, and since these charges rest so far on the evidence of a few witnesses, we must content ourselves with briefly stating what has happened, deferring all discussion of the position until the investigation which is being made has brought the facts fully to light. It appears that a Dr. Levin accused Professor Moll of bribing certain persons to induce rich Russian patients to place themselves in his hands. The latter instituted a libel suit, and obtained a nominal verdict with 30s. damages, while the judge stated that evidence on oath had revealed that it was the practice of certain professors to pay money to third parties for bringing them patients. Among those implicated is Geheimmedizinal-rat Professor Senator, who is President of the Berlin Medical Society. On learning of the charges he at once resigned his presidency and demanded a full inquiry into the charges. Rumours have long been current in Berlin that some consultants have been guilty of the practice referred to, but the matter has now for the first time been sworn to in open court. We can only express the hope that men holding a prominent position like those whose names have been mentioned in the press, will have little difficulty in dispersing the cloud which threatens to burst over the consulting quarter of the capital of the German Empire.

MEMORIALS of great men are not always suitable, the worst, of all, we think, being the useless and too often inartistic statue. An instance of a peculiarly appropriate mode of commemorating a man who rendered service to his fellow men is the institution for surgical research which it is proposed to endow in memory of Dr. William T. Bull, of New York, an obituary notice of whom appeared in the JOURNAL of March 27th. The institution will be connected with the College of Physicians and Surgeons, Columbia University, where Dr. Bull took his degree in 1872, and where he was for many years professor of surgery. It is further stated that Mrs. Bull proposes to erect a memorial hospital for the treatment of tuberculosis.

THE National Association for the Prevention of Consumption has arranged to hold a tuberculosis exhibition at the Art Gallery, High Street, Whitechapel, in June. The exhibition will illustrate the extent, cause, spread, prevention, and cure of tuberculosis, and will have a special section devoted to tuberculosis in children. It is expected that the exhibition will be opened by the President of the Local Government Board on June 2nd, and it is proposed that after it has been shown in London it should be taken to various provincial cities and towns in England. Further particulars can be obtained on application to Dr. H. Hammond-Smith, 20, Hanover Square, London, W.

Medical Notes in Parliament.

The Housing and Town Planning Bill came on for second reading on Monday, and gave rise to a very interesting debate.

Mr. Burns, in moving the second reading, gave a short history of the fortunes of the Bill last year, and said it had now been introduced according to the pledge of the Government in the shape in which it had passed the Standing Committee last session. The points raised on the notice paper did not touch the principle of the Bill, and as regards commons and open spaces there was no desire to attack or filch them for the purpose of erecting working men's dwellings. The Bill made Part 3 of the Act of 1890 compulsory instead of adoptive, and gave increased facilities for acquiring land for housing the working classes. It strengthened the law for closing orders, and threw upon the landlord the responsibility of keeping the house reasonably fit for living in. It dealt with town planning in a liberal and comprehensive spirit, and in the third portion of the measure medical officers of health were dealt with. There were sixty-two county councils in England and Wales, and up to recently only half of them had medical officers. He did not think that this country, which, for the last hundred years, had led the world in public sanitation, should remain longer under the reproach of not having in every county of England and Wales a whole-time medical officer. And they had decided that every county council should have a whole-time medical officer, devoting all his abilities and services to public health and sanitation. Bearing in mind the special provisions of this bill, this in itself, especially when the terms and conditions under which the medical officer serves are to be approved by the Local Government Board, should give some satisfaction to the members of a useful and honourable profession, which has a right to be protected against, at times, the capricious local interference which prevents them from doing their duty to the body politic as well as they otherwise ought to be allowed to do it. After referring to the abolition of cellar dwellings, he spoke of back-to-back houses, and said where they prevailed we had this remarkable result: Whereas the average age at death of the gentlemen and the professional classes was 44, amongst the tradesmen it was 27, and amongst operative labourers and their families it was 19; that is, 44 as against 19. His medical advisers advised him that the back-to-back houses were responsible in the day of this report for a death-rate of 431 per 1,000 over the town as a whole, and an infant mortality of 570 per 1,000 of children under 5 years of age. It was represented to him, on the responsibility of Dr. Tatham, Dr. Niven, and Dr. Sykes, and other well-known medical men, that where all causes were responsible for 27 per 1,000 of deaths, it was 38, and not 27, in back-to-back houses; infectious diseases were 4.5 in through-ventilated houses and 8.7 in back-to-back houses; consumption stood at 2.8 in through-ventilated houses and 5.2 in back-to-back houses. In the ordinary houses occupied by the labouring classes in regard to lung complaints the percentage was 6.6 in through-ventilated houses and 9.2 in back-to-back houses. Where the children die from diarrhoea it was 1.4 in through-ventilated houses and 3.4 in back-to-back houses. In a town that had recently expressed its desire to be allowed to continue these back-to-back houses, he found this very suggestive comment made by one of the best authorities on housing (Mr. Dewsnap) in one of the best books on the subject recently written. He said, speaking of Leeds back-to-back houses:

Newly built houses may look attractive, but what will be their condition after years of wear and tear? More than a probability that the conclusion of Manchester will be justified.

England was not so destitute of land upon which to house its poor that they should be housed in working-class tenements without a back yard in which to chop the wood and put the coal, and in which the children could play whilst the mother was able to keep a friendly eye on them through the washhouse window, and at the same time continue to carry on her domestic duties. All this was impossible in back-to-back houses, where the children had only got a stuffy room for a playground; and in the days of rapid

traction they had no right to relegate children to play in a small front garden, or in the road or street, when the community was rich enough to provide the humblest garden in the majority of cases, and some measure of a back yard in which the youngsters could play whilst the domestic duties in the house were being carried out. This could be done better in through-ventilated houses with a back yard and a garden than was possible in the case of back-to-back houses.

Mr. Lyttelton followed in support of the second reading of the bill, which he criticized in a friendly spirit. He especially objected to the clause which provides for a quinquennial census of all houses as expensive and unnecessary. He doubted the fairness of the bill as regards compensation to landowners for land to be taken for housing purposes, and he concluded by pointing out with much force that if the bill was to be properly worked a large additional staff would be necessary at the Local Government Board.

Sir Walter Foster followed, and strongly supported the suggestion that the bill would require the Local Government Board to be largely reinforced, so that the work of inspection in the counties could be efficiently carried out. He could not, however, agree with the opposition to the quinquennial census of houses in all districts. He had some small share in inserting the clause in the bill, and he regarded it as a most valuable provision for educating public opinion by a publication of the facts concerning every district. It was true that powers of inspection existed in another clause; but hitherto such powers had been very imperfectly carried out, and there was a vast difference between a simple inspection and a published record accessible to every one of the results of the inspection of every house. It would not only educate the locality but would be invaluable to the county council if that body had to interfere in case of local default. As regards the powers of forcing small local authorities to do their duty, he had great confidence in the county councils; he believed they would supervise their whole areas and stimulate district councils to take up this work. As regards the powers resting ultimately with the Local Government Board, he had less faith in the mandamus than many people. It generally proved a feeble weapon, but inspection from the central authority would do much good. One of the best things in the bill was the compulsory appointment of a medical officer of health for every county. With reference to housing, the very root of all power to act was in the interests of public health. It was the only logical basis for interference with private property. Bad housing increased the death-rate, and the county medical officer would be always anxious to improve this in order that record of his work might appear good. Under the bill medical experts, assisted by sanitary inspectors, would look after not only the rural, but the neglected urban parts of the county, and in time search out and improve every black spot. These county medical officers could do their work fearlessly, for they were given a position of security which every health officer ought to have. The bill provided that they were not to be dismissed except with the consent of the Local Government Board. One of the great difficulties in this country on this question had been the system of allowing medical officers of health for small areas to receive £10, £20, or £30 a year, and be appointed annually by small local authorities. They had heavy work to do, and if these men could be given a security of tenure much good would result. Take a case in point—a small town, say, of 10,000 inhabitants. It had an urban district council. A medical officer of health was appointed at a salary of £25 or £30 a year. He did what he could to improve the sanitary condition of the district, but at the end of twelve months he was dropped. Why? Because he had been a little too zealous. He knew, and the President of the Local Government Board knew, cases in which men, after twelve months' active service in connexion with the housing of the people, were not reappointed by the district councils, and were dropped because they did their best to bring about a better state of things in the poorer districts. That was a scandal which ought to be removed. It could be removed if the Local Government Board would give the right of appeal on the part of these medical officers to itself. Even in watering places of 15,000 or 20,000 inhabitants men were dismissed

for being too active in looking after the public health. These men should be made independent in their very difficult and serious duties, so that they might look thoroughly after the habitations of the poor.

The debate was continued by Mr. Lane Fox, who moved an amendment (afterwards rejected) to prevent the cost of housing falling on local rates, as it should be a national burden. Mr. Hicks Beach, Sir J. Dickinson Poynder, and others spoke, and finally, after a conciliatory reply from Mr. Masterman, the bill was read a second time, and referred to a Committee of the whole House.

Public Health Acts (Consolidation).—In answer to Mr. Rees, the President of the Local Government Board said last week that he appreciated the advantages there would be in consolidating the Public Health Acts, though it would probably be found necessary in the first instance to amend them in some respects. He should be glad to take steps in the direction indicated when opportunity offered, but he did not think it would be practicable to deal with the matter during the present session.

The Local Government (Scotland) Bill has been again introduced by Mr. Cathcart Wason. It proposes to protect outdoor medical officers in Scotland from arbitrary dismissal by parish councils by giving them the same position as their English and Irish brethren in a right of appeal to the Local Government Board. The bill is influentially backed on both sides of the House.

The Asylum Officers' Superannuation Bill.—Late on Thursday night last week this bill passed its second reading without discussion, and on the motion of Sir William Collins was referred to a Select Committee. Its prospects will now depend on how it fares before the Select Committee, which will probably also have the Scottish bill for the same object before it, but it is quite possible both bills may pass this session.

The Oaths Bill has passed through the Standing Committee, and now has every prospect of becoming law. It has been strengthened in Committee, and every oath is to be administered as prescribed by the bill in the Schedule, which reads as follows:

The officer administering the oath shall address the person taking the oath in the following form: "You swear by Almighty God that," and then proceed with the words of the oath prescribed by law, omitting any further words of imprecation or calling to witness; and the person taking the oath shall, with uplifted hand, say "I do."

If the oath is an oath which is customarily taken by the words of the oath being read or repeated after the officer administering it, the words shall be read or repeated with uplifted hand in the form following: "I do swear by Almighty God that," and then proceed with the words of the oath prescribed by law, omitting any further words of imprecation or calling to witness.

New Bills.—Several new bills have been recently introduced which are of medical interest. First may be mentioned Mr. Dickinson's Metropolitan Sewers and Drains Bill, which seeks to amend the law relating to combined drainage. There are two kinds of combined drain—the "combined drain" which in law is a "drain," and the "combined drain" which in law is a "sewer." The former is repairable by the private owner, the latter by the public authority. The consequence has been great confusion in the interpretation of the law, and this bill seeks to remove it, and give the metropolitan local authorities the same powers that have already been given to several provincial authorities. The Registration of Nurses (Scotland) Bill, introduced by Mr. Cleland, seeks to establish and make regulations to provide a register for nurses in Scotland. It is drawn on the same lines as the bill of Mr. Munro Ferguson for England. Sir John Jardine has introduced a bill to provide for the grant of superannuation allowances to officers and servants of public and district asylums in Scotland. Lord Robert Cecil keeps up his interest in infant life protection, and has presented a bill to prevent the destruction of children during birth. The Local Education Authorities (Medical Treatment) Bill, introduced by Mr. Walter Guinness, proposes to provide for the recovery by local education authorities of costs for medical treatment of children attending public elementary schools in England and Wales. In the Lords the Bishop of Hereford has

introduced a Bill to prevent Cruelty to Animals. It has nothing to do with vivisection, but seeks to make it an offence to hunt, shoot, or course an animal which has been kept in confinement and is released for such spurious sport.

Escapes from Asylums.—Mr. Chiozza Money asked the Home Secretary how many imbeciles and lunatics had escaped from public asylums in the United Kingdom since January 1st, 1909. Mr. Gladstone said that the Commissioners in Lunacy informed him that there had been 67 escapes from asylums in England and Wales this year. He was not in possession of the figures for Scotland and Ireland. In reply to a further question he answered that a report from the Commissioners in Lunacy of an inquiry which, at his request, they had made into the escapes of lunatics from the asylums in the neighbourhood of Epsom, and matters connected with the supervision of patients both within and beyond the asylum boundaries, had been recently presented to Parliament; it gave also the views of the Commissioners, with which he concurred, on the general question of exercising patients outside asylum boundaries.

Vaccination (Exemption Certificates).—In reply to Mr. Armitage, the President of the Local Government Board stated last week that the total number of certificates of conscientious objection received by the vaccination officers in 1907 was 57,671. The returns for 1908 were not quite complete, but the total number of certificates and statutory declarations with respect to conscientious objection received by the vaccination officers during that year might be stated approximately as 163,000.

Deaths from Burns and Overlying.—In answer to Mr. Alfred King, the Home Secretary stated last week that a supplementary table giving the number of inquests held in cases where death was caused by burns and scalds was inserted in the Criminal Statistics for 1904. In that year, according to this table, the deaths from burns at unprotected grates and stoves numbered 988, while the deaths from scalds at unprotected grates and stoves numbered 134. These were distributed between the County of London and the rest of England and Wales, as follows:

	Burns. Scalds.	
County and City of London ...	104	20
Elsewhere in England and Wales ...	884	114
Total ...	988	134

The great majority were children, but the exact numbers could not be given. No later figures had been collected. The following were the deaths of infants caused by overlying in the last three years for which figures were available:

	1905.	1906.	1907.
County and City of London ...	405	335	344
Remainder of England and Wales ...	1,060	1,118	1,129
Total ...	1,465	1,453	1,473

The 1908 figures were not yet ready.

Uncertificated Deaths in the Highlands.—Last week, in answer to Mr. Weir, the Lord Advocate stated that the number of uncertificated deaths in the Highland crofting counties was as follows:

County.	1903.	1904.	1905.	1906.	1907.
Shetland ...	156	136	123	86	100
Orkney ...	52	55	39	49	46
Caithness ...	45	41	41	34	44
Sutherland ...	92	72	90	81	98
Ross and Cromarty ...	327	298	304	233	307
Inverness ...	337	279	258	251	261
Argyll ...	137	99	82	93	100

Easter Holidays.—The House of Commons on rising on Wednesday adjourned till Monday, April 19th.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

WOMEN STUDENTS AT ST. ANDREWS.

A significant fact in connexion with the graduation ceremony at St. Andrews University on March 31st was the number of women students who received the degree of Master of Arts—out of 50 graduates 38 were women. In connexion with this matter, at a meeting of the general council of the university held on April 1st, a communication was received from the Students' Representative Council regarding the relative number of men and women students. It was pointed out that whereas the number of women students was rapidly increasing in the four universities of Scotland, and without as yet any indication of slackening in the rate, the number of men students, while also growing, was growing very slowly. This great increase in the number of women students was confined almost entirely to the Arts Faculties in the universities, in which they now formed 46 per cent. of the total number of students. These facts had peculiar significance to St. Andrews University, not only because its strength was in its Arts Faculty, but also because the proportion of women students in that faculty was much higher than in the Arts Faculties of any of the other three universities, forming 61 per cent. of the whole. The report proceeded to point out that this extremely high percentage of women was a possible source of danger in the near future to St. Andrews University, and it was therefore advisable to avoid that danger by keeping the percentage of men students as far as possible above that of women. The report recommended that St. Andrews University might, as a corrective, turn its attention to the development of its science and medical schools, and also encourage the department of military subjects.

GRANTS TO SCOTTISH UNIVERSITIES.

The Treasury has appointed a committee to consider the statement of claims to additional State assistance submitted by the Scottish universities, and to report what assistance, if any, should be granted from public funds in the interests of the development of the work of the universities, with due regard to the co-ordination of their work with that of other institutions in Scotland giving instruction of a university standard. The committee is composed as follows: The Right Honourable the Earl of Elgin and Kincardine, K.G. (Chairman); Miss Haldane; Sir Kenelm Digby, G.C.B., K.C.; Principal Sir Harry Reichel, LL.D.; Mr. Charles Mackinnon Douglas; Professor Andrew Russell Forsyth, Sc.D., F.R.S.; and Professor G. Sims Woodhead, M.D. Mr. Hubert Warre Cornish will act as secretary to the committee.

THE GLASGOW ROYAL INFIRMARY SCHEME.

For some time there has been little news about the course of the negotiations to found new university chairs at the Royal Infirmary. Last week some remarks made by the President of the St. Mungo's College at the half-yearly meeting indicated that considerable progress has been made. He was able to state that the negotiations between the college and the university were so far completed that the governors of St. Mungo's College had been able to instruct their Parliamentary solicitors to proceed with a draft provisional order which will, in due time, be submitted along with similar orders from the university, and it is believed, also from the Muirhead trustees. The university authorities do not seem to be quite so far advanced as the St. Mungo governors, but it is understood that there is now little doubt that the proposed scheme for instituting chairs at the Royal Infirmary will eventually be adopted after it has been in turn submitted to the discussion of the Medical Faculty, and then to the Senate. Owing to the prospect of a new Chair of Pathology being instituted in the Royal Infirmary, more than ordinary interest is attached to the filling up of the vacant post of pathologist. It is understood that the infirmary directors will reserve to themselves the power of revising the appointment on the institution of the new chair. As some of the strongest likely candidates for the chair are applying for the present vacancy of pathologist, it is

felt that the successful candidate will stand a very good chance of eventually becoming the new professor.

GLASGOW WESTERN INFIRMARY.

Last week the managers of the Western Infirmary appointed Dr. J. Carslaw and Dr. J. S. McKendrick assistant physicians to the hospital. In connexion with these appointments an innovation was made, as these appointments are for ten years. In this way promotion will be accelerated.

NOTIFICATION OF BIRTHS IN GLASGOW.

In a report to the Health Committee of Glasgow Corporation Dr. A. K. Chalmers makes some interesting points. During 1908, out of 23,733 births, 86.3 per cent. were notified. The smallest proportion of notifications was in the Kelvinside Ward (63.3 per cent.), while in Cowcaddens Ward the maximum ratio of 99.3 per cent. was obtained. In eight other wards the percentage of notifications was also over 90 per cent. of the births; in five wards it was between 80 and 90, and only in two wards below 70. Of the 20,485 births notified, 45 per cent. were attended by medical men, while 55 per cent. were attended by midwives or handy women. The lowest proportion (24.3 per cent.) of medically attended births was found in the Cowcaddens Ward, and in two other wards the proportion was below 30 per cent. Using the notifications, it was for the first time possible to compare on a fairly reliable basis the incidence of puerperal fever in medically and non-medically attended cases. Of the 117 cases recorded, 32 had been attended by medical men and 85 by midwives, corresponding to a rate of 3.4 per 1,000 births attended medically, and 7.5 per 1,000 of those births attended otherwise.

MEDICAL EXAMINATION OF SCHOOL CHILDREN.

The Scottish Education Department has issued a memorandum, with a covering letter, on the subject of the medical examination and supervision of school children. The memorandum draws the attention of school boards to the principal provisions of the Education (Scotland) Act, 1908, as regards medical inspection of children, and urges them to proceed at once to the elaboration of a scheme that shall be as near as possible uniform. The department regard it as fundamental that the proposals should provide for the appointment of a single responsible inspecting officer, presumably a holder of the Diploma of Public Health, who should not be a private practitioner, and who should be furnished with as much assistance as may be necessary to enable him to perform his duties satisfactorily. Judging from the experience of England, it is obvious that in ordinary circumstances the assistants of the school medical officer ought to be, like himself, specialists, expressly debarred from engaging in private practice. Apart from other considerations, it is easy to foresee that complications may arise, in the event, almost inevitable in a populous district, of one medical practitioner being called on to examine his brother practitioner's patients. The whole-time medical inspector would be only necessary in the large towns, such as Edinburgh, Glasgow, Dundee, Aberdeen, and Leith. Elsewhere the ideal just described must be kept no less steadily in view, and a system of grouping adopted. Normally each county, along with the towns and villages not otherwise provided for, will be regarded as a single area, to be placed under the charge of a single responsible officer, who will be assisted to such an extent as may prove to be necessary. In some rural parishes it may conceivably be found practicable in the absence of conflicting interests to utilize the services of the local practitioner as assistant. There are districts in which the employment of nurses will be almost indispensable to success, and it should be understood that their employment generally is favoured by the department, although it does not for the present seem necessary to stipulate that they shall form an integral part of the scheme in all cases. The department considers that in certain parts of Scotland, notably in the Highlands, the scattered character of the population and the difficulty of communication may render it difficult to institute in the immediate future a comprehensive system of medical inspection, and in certain cases, a committee may deem it prudent to refrain from formulating a scheme until it can draw upon the experience of committees dealing with populous districts.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

AN INTERESTING APPOINTMENT.

HIS EXCELLENCY THE LORD LIEUTENANT has appointed Miss M. A. MacDonnell, R.R.C., to be a member of the Board of Superintendence of Dublin Hospitals. The function of this body, under Act of Parliament, is to inspect and report upon the various hospitals which receive aid from the parliamentary grant. Miss MacDonnell has just resigned her position as Lady Superintendent of the Richmond Hospital after twenty-one years' service, and has received from the sisters and nurses an illuminated address and a handsome gift. She served in the South African war as matron of the Irish Hospital—500 beds—and received from the King the Order of the Royal Red Cross. She is the first lady member of the Board of Superintendence, and the appointment will be universally approved, not only on personal grounds, but because of the precedent established.

PROPOSED ENLARGEMENT OF BELFAST OPHTHALMIC HOSPITAL.

The annual meeting of this hospital was held at the institution on March 29th. Dr. Cecil Shaw, honorary secretary to the surgical staff, read the medical report for the year, which showed a large amount of operative and general work, and increasing popularity of the institution. The surgical staff again pressed for the comparatively modest sum of £500 to bring the theatre and wards up to date. Dr. J. Walton Browne, senior surgeon, said they could not refuse admission to some urgent cases without jeopardizing the eyesight and hearing of the applicants. He had himself raised about £100 of the sum required, so deeply impressed was he with the gravity of further delay. An apology was received from Earl Shaftesbury, the president, for his unavoidable absence, and he also expressed his sympathy with the movement.

SALARIES OF BELFAST CORPORATION OFFICIALS.

On the resignation of Sir Samuel Black, the ex-Town Clerk and Solicitor to the Corporation, a retiring allowance of £2,000 a year was granted. The post has now been divided and a new Town Clerk (Mr. Meyer), at £1,000 a year, has been appointed, and the post of Town Solicitor, also at £1,000 a year, created. Large as these sums may appear, few, if any, will grudge Sir Samuel Black his well-earned pension, or Mr. Meyer, one of the most popular and able of officials, his well-earned promotion. The humour of the situation is that a few years ago the City Council refused to allow the new medical officer of health a higher salary than £600 a year, although most citizens and an association whose duty is to promote civic economy, advocated £800 to attract first-class applicants for the post.

THE WOMEN'S NATIONAL HEALTH ASSOCIATION OF IRELAND.

Her Excellency the Countess of Aberdeen inaugurated yet another branch of this popular and energetic Association on March 24th, at Tandragee, co. Armagh. There was a large attendance, and Sir John Byers, M.D., in moving a resolution in support of the Association, gave an admirable address on tuberculosis from the point of view of the farmer. Dr. Taylor, of Tandragee, cordially supported the formation of the branch.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND DISTRICT.

LIMITATION IN MEDICAL INSPECTION OF SCHOOL CHILDREN.

THE announcement that the Board of Education has sanctioned a scheme for London under which only abnormal children will as a general rule be medically examined will doubtlessly lead to application for similar sanction in Lancashire. Several medical officers of health in Lancashire have freely expressed the opinion that it

would be a waste of public money to insist on a full examination of all children in elementary schools, and as a matter of fact only a few authorities are attempting it. The statement that in London it would cost 5s. a child for full inspection of every case, and that the cost would be reduced to only a few pence a head on an all-round calculation if only abnormal cases are examined, will go far in the overrated Lancashire towns to restrict the scope of examination. The question, however, arises, How will the children for examination be chosen? Will only those with perfectly obvious defects be picked out for fuller examination? If so, many cases which really need medical attention will be overlooked. Or will the teachers be expected to make a preliminary examination and to pick out those needing full medical examination? Opinion as to the advisability of imposing such duties on the teachers is nearly equally divided in the Manchester and Salford Divisions of the British Medical Association. On the one hand, it is said that a short course of instruction to teachers in the early symptoms of the common diseases of childhood would be useful in many ways. With this knowledge they would often be able to detect defectives and put them aside for examination by the medical inspector, and would save the time of the inspector and the consequent cost to the rates. On the other hand, it is argued that to add to the already onerous duties of teachers is inadvisable, and that it is not fair to put on them the responsibility of detecting diseases which if not attended to in an early stage may be more serious. It is evident, too, that there is a similar difference of opinion among the education authorities. In some of the schools near Manchester the teachers are supplied with Snellen's test cards, and are instructed how to make rough tests for myopia and hypermetropia. In other schools they do nothing but point out those suffering from ringworm, scabies, or pediculosis. What is generally being done is that the teachers point out the obvious cases needing attention, and the inspector gives a rapid glance round the classes, and picks out a few children for further examination. This is useful as far as it goes, but it cannot be said to be an ideal system of medical inspection.

TREATMENT OF CONSUMPTION IN MANCHESTER.

Some idea can be formed as to the extent to which consumption prevails in Manchester from the report presented at the annual meeting of the supporters of the Manchester Hospital for Consumption and Diseases of the Throat and Chest. The meeting was held in the Lord Mayor's parlour, Manchester, and was presided over by Mr. W. J. Crossley, M.P. The Chairman pointed out that in connexion with the out-patient department in Hardman Street, Manchester, the institution possessed a hospital at Bowdon with 50 beds and the Crossley Sanatorium at Delamere with 90 beds. Both these hospitals had been continuously filled during the whole year, and he did not know how the expenses could have been met if the plan of having private patients had not been adopted. From this class last year £3,905 was received. He had recently visited Delamere, and, though it was at a great altitude, he found more than half the patients sitting out in the sunshine. Mr. C. Behrens, Honorary Secretary, said the system adopted at Delamere was the open-air method, together with a very liberal diet. The average stay of the patients was about three months; no doubt a longer time would be beneficial, but, owing to the demands for admission and the large number of patients always waiting, the board had been compelled to fix a limit of three months. The patients remained the whole day out of doors, except at meal times, and at night slept with their bedroom windows wide open. The 50 beds at Bowdon had been fully occupied during the year, and it is distressing to know that a considerable number of applicants are at all times waiting. All the patients here belong to the working classes, and an appeal was made for warm clothes, as many of the patients often went insufficiently clothed.

Dr. Moritz presented the report of the out-patient department. The total number of cases during the last year was 11,443, as compared with 11,163 in 1907. The attendances were 35,243, which was far in excess of any previous record. A large number of cases are sent in a stage too advanced to permit of their admission to the sanatorium or to warrant hope of any successful treat-

ment, and the Medical Board desire it to be made known that it is preferable to send doubtful cases for consultation, and even to admit to the sanatorium cases that are only suspicious, rather than wait till the disease is too extensive to allow of any hope of recovery. During the year the need of some in-patient accommodation in closer connexion with the out-patient department in Manchester for urgent throat cases and acute chest diseases has been greatly felt, as patients have come whose condition demanded immediate admission to hospital, not simply for relief, but in some instances even to save life.

The financial position of the hospital is a source of anxiety, since if it had not been for an anonymous donation of £1,000 there would have been a large deficiency on the year. The total income was £13,704, and the expenditure £13,516, and the year closed with a balance due to the bank of £782. Further, no additions have been made to the endowment fund of the Crossley Sanatorium, and £34,000 is yet wanted to make up the £100,000 needed to put it in a sound financial position.

WESTMORLAND.

MEATHOP CONSUMPTION SANATORIUM.

The ninth annual report of the Westmorland Consumption Sanatorium (January, 1909) shows that the institution continues to flourish, and that improvements have been carried out which will add still further to its efficiency. A wing has been added to the main building, providing improved accommodation for the domestic staff; the patients' dining-room has been enlarged, and four new chalets have been erected, bringing the total accommodation for patients up to 52 beds. Electric lighting has been installed; a disinfecter for clothing and bedding, and an apparatus for sterilizing and cleansing the patients' sputum cups, have also been provided. Plans have been prepared for dealing with the sewage effluent of the sanatorium on a bacterial system of septic tanks and filtration beds. It is evident that nothing is overlooked which is required to make the Meathop Sanatorium thoroughly efficient.

It is proposed to establish a home for advanced consumptives in connexion with the sanatorium, and a considerable proportion of the required sum for this has already been raised.

The medical report shows that 147 patients were admitted during the year, the average number in residence throughout the year being 42.59. Although the proportion of severe and advanced cases admitted is very greatly in excess of what is desirable, the result of the year's work is encouraging. A table showing the family history, as regards consumption, of the patients admitted supports the view that heredity is of no more importance in tuberculosis than in any other bacterial disease, such as measles, pneumonia, typhoid, or influenza, and emphasizes the importance of endeavouring to improve environment in the home, etc., as a preventive measure. A very interesting table shows the subsequent history of all the patients who have left the sanatorium since 1900 and who can be traced.

BIRMINGHAM.

HOSPITAL SATURDAY FUND.

The annual report of the Executive Committee stated that the thirty-sixth annual collection amounted to £20,632, which was made up as follows:—Collections in manufactories and industrial establishments, £20,516; interest allowed by bankers, £116. This total is the highest yet obtained in the history of the fund, and is £523 in excess of the previous year's collection. The firms subscribing numbered 2,153 as against 2,149 in 1907. The number of patients treated at the various convalescent homes supported by the Hospital Saturday Fund were as follows:—At Tyn-y-Coed, Llanrhos, near Llandudno, the convalescent home for men, 1,199 patients were admitted during 1908 as compared with 1,088 in 1907; at Marle Hall, Llanrhos, the women's convalescent home, the number of patients was 1,209, against 1,188 in 1907; at Red House, Great Baar, the convalescent home for children, 566 children and 98 women were admitted, as compared with 400 children and 94 women in 1907. The total number of patients in 1908 was 3,072, as against 2,809 in 1907. The

committee has also assisted the Crippled Children's Union by sending during the year to the Red House 59 of that society's children, free of cost. Since the establishment of the fund in 1873 £400,000 have been collected, and the expenses have been under £20,000, or under 5 per cent. for the whole period.

WEST YORKSHIRE.

THE BRADFORD MEDICO-CHIRURGICAL SOCIETY.

A SPECIAL general meeting of this Society was held at the Midland Hotel, Bradford, on March 31st, when Mr. H. Percy Dean, surgeon to the London Hospital, gave an address on Spinal Anaesthesia, with special reference to Abdominal Conditions. On account of the prevalence of influenza in Bradford and the absorption of the medical men in their work the attendance was unfortunately not as large as it would otherwise have been. Mr. Dean's address was of the greatest interest, and was followed by a discussion in which many of those present joined. At the annual dinner of the society, which took place the same evening, between forty and fifty members and guests were present. Some excellent speeches were made and some songs and recitations given by members.

South Australia.

RHODES SCHOLARS.

THE Committee of Selection for the Rhodes Scholarship, which is annually allotted to South Australia, has for the second year in succession chosen a medical graduate. Last year, William Ray, M.B., B.S. Adelaide, went to Oxford, and the Regius Professor (Dr. Osler) speaks of him as a most promising student. This year, Henry Kenneth Fry, B.Sc., M.B., B.S., will join him there, having, like Ray, carried off every possible prize during his undergraduate career.

THE SOUTH AUSTRALIAN BRANCH.

The Branch flourishes, even if it does not increase very rapidly in numbers. The annual meeting in June was a great success, and Dr. J. H. Evans, in his valedictory address, dealt with the important subject of "school hygiene" in a very able and interesting manner. In the absence of Dr. A. M. Morgan, the newly elected Vice-President, Dr. W. A. Verco took the chair at the annual dinner which followed; this is the first occasion on which these posts have been filled by graduates of the University of Adelaide. An arrangement has been made with the council of the university, whereby a room will be placed at the disposal of the members of the Branch, and a medical library maintained, the Branch guaranteeing a subsidy of £50 for ten years. To meet this liability, the subscription of members residing within twelve miles of the metropolis has been raised from two guineas to £3 a year, whilst country members will have certain privileges if they care to increase their subscription to £2 10s. a year.

THE HOSPITALS.

Dr. Anstey Giles has resigned, and Dr. C. E. Todd succeeds him as full surgeon to the Adelaide Hospital, Dr. Newland taking the junior position. Dr. R. S. Rogers has also resigned, and has been appointed a consulting physician to the same institution. Having come in recently for a windfall of something like £80,000, the hospital is spending a very considerable amount on a nurses' home, about £30,000 it is said; and though the grounds are quite spacious, the home is being built just where it will prevent any expansion of the out-patient department, which may be necessary in the future; such luxuries as costly marble baths, which few of us can afford in our own homes, are mentioned amongst the conveniences with which it is to be replete. At the Children's Hospital, Dr. Newland has been promoted to be surgeon to in-patients, vice Dr. Morgan resigned; and Dr. Harold Evans, a former resident medical officer, becomes Surgeon to the out-patient department. Dr. Morgan, who spent some months in England last year, is now devoting himself to ophthalmology, and is acting as locumtenent for Dr. Symons at the Children's Hospital.

India.

[FROM A CORRESPONDENT.]

ASSOCIATION OF MEDICAL WOMEN IN INDIA.

A NUMBER of medical women were present at the Bombay Medical Congress, the committee having very considerably reserved front seats for them in the Lecture Hall. The first general meeting of the Association of Medical Women in India was held on February 24th, at the house of Dr. Annette Benson, Physician in Charge of the Cama Hospital. Forty-two members were present, representing medical aid given to women and children in Government, mission, Dufferin, and native State hospitals. Miss Benson, M.D. (President of the Association) took the chair, and opened the proceedings in the following speech:

I offer all present a hearty welcome. With this meeting we inaugurate the Association of Medical Women in India, and it is with the greatest pleasure that I see such a large gathering of the association which only began to be organized two years ago. In few words I will describe the first object which we have before us to-day. Looking at the medical profession in India, we see men organized in a service offering worthy careers to its members, with fair rules of pay, promotion, leave, and pension. We see women a nondescript, scattered number of isolated units, at the mercy of chance employment and still more chance conditions of service, and almost all in subordinate positions. Yet the majority of better-class women of India have no one to look to for help in sickness and childbirth but these same isolated units. For the good of this large factor of the population, and therefore in the name of the public weal, we aim so to improve the conditions under which medical women work as to make their work efficient and their reward fair. When you have amended and confirmed the constitution proposed last August, you shall have laid before you a scheme for the organization of medical women in India.

The constitution and rules with amendments were then read. Miss Staley, M.B., described on behalf of the council a scheme for the organization of a women's medical service for India. This scheme was referred to a subcommittee to report to the council.

Dr. Baumbler spoke on the improvement that had taken place in women's hospitals in the last twenty years. Dr. Brown on the training of dais, and Dr. O'Hara against the training of indigenous dais as now conducted. Letters from various members were read.

The President mentioned various members of the association who had done good work for it during the year—the honorary secretary, the editor, members of council, and the member who had conducted the information bureau so successfully during the past year.

LADY MINTO'S INDIAN NURSING ASSOCIATION.

This admirable institution, whose object is "to provide and maintain a regular service of fully trained and experienced nurses throughout Northern India and Burmah," has been in existence for two years, and the report for 1908 gives evidence of growing appreciation and increasing success. The organization consists of a central committee in Calcutta, whose president is the wife of the Viceroy and whose secretary is the Viceroy's surgeon, and nine provincial branches. The central committee selects, pays, distributes, and discharges nurses, and the provincial committees control the employment and upkeep of the nurses and collect subscriptions and fees. Subscribers pay according to salary, and are entitled to a first claim on the services of the nurses and at lower rates than non-subscribers. Firms and regiments are permitted to join the association on special terms. Three lady superintendents and forty-four nurses constitute the staff, and 338 cases were attended during the year, of which 103 were cases of enteric fever. The income of the year amounted to Rs. 107,267, of which Rs. 33,172 were fees earned by the nursing sisters. Rs. 43,650 were invested. There is a home committee which, under the title of the Up-Country and Punjab Nursing Association, used to carry out on a more limited scale the same purposes now subverted by Lady Minto's association. The report, which is written by Surgeon-Lieutenant-Colonel W. R. Crooke-Lawless, C.I.E., honorary secretary, and Mrs. E. Davies, chief lady superintendent, is illustrated by several excellent photographs of the homes.

PLAGUE IN CALCUTTA.

Dr. T. Frederick Pearce, who exercises control over the special plague establishment in addition to his duties as health officer of Calcutta, has submitted a report of the prevalence of plague in the city during the year ending June 30th, 1908. This includes a "quiescent" period, July–December, 1907, and an "active" period, January–June, 1908. During the former, 313 deaths were registered, and during the latter 1,495, giving a total for the year of 1,808. This is the smallest aggregate since 1898, the year in which plague was introduced into Calcutta. The epidemic of 1908 was therefore exceptionally mild; it developed more gradually and later, reached a climax earlier, and declined more slowly. It is remarkable that the proportion of bubonic cases is higher in the active than in the quiescent period: in 1908 it was not so high as usual, also the case-mortality was less. The number of inoculations performed was 1,979, and no attack of plague occurred among these; 122,069 rats were destroyed, at a cost of Rs.16,036. Observations made by Drs. Hossack and Crake, special plague officers, indicate that, as in Bombay, the "rat-flea season corresponds with the plague season"; but "the comparative absence of fleas in Calcutta houses, and the practically complete absence of fleas on man," are held to cast doubt on the rat flea being the chief or only agent of infection.

Correspondence.

HUNGER PAIN AND DUODENAL ULCER.

SIR,—Mr. Moynihan evidently remembers the old legal adage, "If you have a bad case abuse the plaintiff's attorney." Having ventured, in quite temperate language, to express the opinion that hunger pain does not always point to the existence of a duodenal ulcer, I find myself denounced by him as a person whose views are always "fundamentally inaccurate," who trusts in diagnosis to what he patronizingly terms "chemistry and make-believe," and who is totally unacquainted with that peculiar variety of pathology which he calls "the pathology of the living." I venture to think, however, that a little more argument and a little less abuse of one who ventures to differ from him on a scientific question might have impressed your readers more favourably with the strength of his case, for, after all, we are both merely trying to get at the true meaning of a symptom, although we approach its study from different points of view, and I am perfectly ready to be convinced by Mr. Moynihan if he can show me that I am wrong.

Perhaps some misapprehension would have been avoided if, in my first letter, I had defined what I mean by "hunger pain." Dr. Herschell, for example, evidently distinguishes between hunger pain and the "pain of hyperchlorhydria." Now, I wish to make it quite clear that I, at least, recognize no such distinction, for the pain of hyperchlorhydria corresponds accurately to Mr. Moynihan's definition of hunger pain, inasmuch as it "comes on when a patient should be beginning to feel hungry for his next meal." Granted this definition of the term, I think Dr. Herschell would agree with me that hunger pain does not necessarily imply the existence of an ulcer in the duodenum. I know that this does not affect Mr. Moynihan's position one whit, for he evidently does not believe in the existence of hyperchlorhydria as a separate disorder at all, but regards it as a figment of the imagination, a product of "chemistry and make-believe," and so long as he pooh-poohs all evidence except that obtained by operation I do not see how I can hope to convince him. This only I would say, that if hunger pain really be always associated with the presence of an ulcer in the duodenum, then (1) duodenal ulcer is one of the commonest causes of pain during digestion, (2) it is quickly and easily curable by medical treatment, and operation for it is usually unjustifiable (as Dr. Hertz very cogently points out), and (3) the scars of healed duodenal ulcers ought to be amongst the commonest phenomena of the post-mortem room. Ten years' experience in the London Hospital out-patient department fails to show me how these propositions can be denied.

¹ Vide his article in the JOURNAL for November 15th, 1907.

As regards the evidence afforded by operation I am, perhaps, not so ignorant as it pleases Mr. Moynihan to imagine, for I avail myself very freely of the help of my surgical colleagues in gastric cases, and often witness their operations. I have hitherto supposed, however, with Dr. Saundby, that it is by no means always easy to say for certain whether there is an ulcer present in the duodenum without opening into the latter, and in this belief I have been confirmed by the statements of my surgical friends. On this point, however, I freely admit that I speak with no authority, and am content to leave Mr. Moynihan and his surgery to *confères* to settle it amongst them.

One word more. Mr. Moynihan has been kind enough to point out in detail the defects in my equipment which make my opinions on this subject (in his estimation) not worth serious consideration. So perhaps he will forgive me if I suggest in my turn that what he lacks is the sense of proportion which only comes from an extensive acquaintance with dyspepsia in all its forms and in all degrees of severity such as can only be obtained in a large medical out-patient clinic. When he has extended his experience in this direction it will be time enough for him to dogmatize, for "not till then"—if I may borrow his own language—"is he qualified to pose as critic; not until then can he speak with full authority."—I am, etc.,

London, W., April 5th.

ROBERT HUTCHISON.

SIR.—The reply to the question which so strangely puzzles Dr. Saundby is quite simple. The proof that a duodenal ulcer is present is the seeing it. A duodenal ulcer which has caused attacks of "hunger pain" can be seen, and felt, and displayed. If there is any doubt whatever as to the presence of an ulcer, in my opinion it is certain that no ulcer exists; and no operation upon the duodenum or the stomach is then permissible. The cause of the symptoms must forthwith be sought elsewhere; and, as Mr. A. B. Mitchell says, the gall bladder demands a special scrutiny, for cholelithiasis is responsible for the closest mimicry of the symptoms of ulcer. I would ask Dr. Saundby not to believe in the existence of a duodenal ulcer that he cannot plainly see, and neither to urge nor to sanction the performance of gastro-enterostomy in the absence of an obvious demonstrable lesion. It is not true that "in a large proportion of cases the surgeon who performs gastro-enterostomy is not in a position to say whether there is a duodenal ulcer or not." The surgeon can and must know, in every case without exception, that an ulcer is present before he undertakes this operation. There is no such thing as an invisible or impalpable duodenal ulcer. The intangible duodenal ulcer is usually a gall bladder full of stones, or an inflamed or tuberculous appendix.

I regret to find myself in profound disagreement with the views of Dr. Hertz, to whom I am very grateful for the work he has done in other directions than this. He tells me that the symptoms of duodenal ulcer "can be instantaneously relieved and in time caused to disappear entirely." I agree. That is one of the characteristics of duodenal ulcer to which I have repeatedly called attention. But what of recurrence? The most authentic feature in cases of duodenal ulcer is the recurrence of the "attacks"; an attack can be "cured," the ulcer remains, to cause fresh attacks in the future. It is true that the out-patient treatment of any large hospital relieves the symptoms in such cases, and the patient ceases then to attend. Dr. Hertz concludes, therefore, that "duodenal ulcer is easily cured by medical treatment." The evidence does not justify the conclusion. The relief of an attack is confused with the cure of the disease. Many of the patients upon whom I operate tell me that they have been "cured" repeatedly; and one of them, a medical man, told me with a smile that he had been pronounced "cured" fifteen times. Medical treatment relieves an "attack" due to a chronic duodenal ulcer; nothing but surgical treatment can cure the patient.

Dr. Hertz quotes the well-known statistics laboriously collected from the *post-mortem* records of Guy's Hospital by Perry and Shaw. They are absolutely irrelevant. I cannot conceive that the frequency of the fatality of any disease is to be measured by the number of bodies in which evidence of it is detected in the *post-mortem* room. Does a patient not suffer during life from any disease unless at last he dies in hospital from it? In forty years at Guy's

Hospital only one case of obstruction of the common bile duct by a stone was seen on the *post-mortem* table; and during twenty-five years only 333 bodies were found to contain gall stones. Do these numbers bear any sort of proportion to the frequency of these diseases, or can any just inference be drawn therefrom as to their fatality? Perry and Shaw also say (p. 203) that in the years 1826-92 there were 7 cases of perforating ulcer of the duodenum on the *post-mortem* table at Guy's Hospital. Does that represent the frequency or the mortality of the condition? Mr. Mitchell of Belfast operated upon 12 cases in 1907-8¹ with 12 recoveries (a record creditable alike to him and to the medical men who so quickly recognized the nature and gravity of the cases). Is doubt cast upon Mr. Mitchell's record by the fact that in sixty-six years only 7 patients died in Guy's Hospital with a similar condition? Surely all that can be said is that there is no correspondence in this, as in so many other cases, between clinical and mortuary experience. It is really time for the fetish worship of *post-mortem* statistics to be suppressed. They have their value; that no one denies; but that value must be tested constantly in the light of increasing clinical knowledge. If we are for ever to fix idolatrous eyes upon the pages of these ancient inspection records, and to ignore the lesson which the living can daily teach us, we are smitten with the intellectual blindness, and we are returning to the methods, of the Middle Ages.

It is not surprising that with false premises the false deduction is drawn by Dr. Hertz that "in the vast majority of cases" operations upon duodenal ulcer are "unjustifiable" (was that word weighed, I wonder?). I am not concerned, however, to convict Dr. Hertz of logical error. He has expressed his desire to see the work we are doing, and his record as an original observer is so distinguished that I am content to leave him to form his own judgement upon the material he will here investigate. He will find that the patients who have been so often cured by medical treatment embrace gladly the opportunity of that relief from their repeated sufferings which operation confers. And he will, I hope, be satisfied, as others in the like doubt have been, that surgical treatment is not only justifiable but compulsory, if the patient is to be freed from his sufferings, and to be relieved of the danger to his life with which hæmorrhage and perforation threaten him.—I am, etc.,

Leeds, April 5th.

B. G. A. MOYNIHAN.

ARTERIAL BLOOD PRESSURE BEFORE AND AFTER MUSCULAR EXERTION.

SIR.—In reference to the figures published by Dr. Oliver Williamson on blood pressure after enforced exercise,² the following observations reported by myself and Mr. Martin Flack to the Physiological Society on January 23rd last may be of interest.

We made a number of observations on the pulse, blood pressure and respiration which show that oxygen inhalation by maintaining or restoring the vigour of the heart, increases the lasting power and lessens the after-fatigue of athletes. The fatigue which follows an athletic feat seems to be mainly cardiac in origin, and due to want of oxygen. Want of oxygen lessens the nervous resolution of the athlete and his muscular power.

The blood-pressure observations were taken on the radial artery with the new Leonard Hill sphygmometer. This sphygmometer allows readings to be taken quickly and accurately.

In administering oxygen we used a wide mouthpiece fitted with valves, and a soft nose clip. The oxygen (or air) fills a bag holding 3 cub. ft. Between the expiratory valve and the meter an anaesthetic rubber bag is placed to act as an elastic cushion and prevent the meter being overrun.

The tests were both on boxers and on students, who ran up and down stairs as fast as possible a given number of times with or without oxygen before and after each run. The boxers were given air or oxygen in the intervals of the fight. The subjects breathed from a bag through a Zuntz metre, and did not know whether air or oxygen was in the bag. Blood pressure, pulse frequency, respiratory frequency, and breathing volume were recorded. Results show that time of the run is lowered, pulse frequency

¹ Reprint from *Trans. Ulster Med. Soc.*, 1907-8.
² *BRITISH MEDICAL JOURNAL*, February 27th, 1909, p. 530.

lowered, and blood pressure kept up by breathing oxygen; breathing volume and frequency are not definitely changed; being dependent apparently on the rate of work and the CO_2 production, but a feeling of relief is given by the oxygen. The subject breathes easily, and with his belly rather than his chest. The breathing of the exhausted runner or boxer is thoracic, and this changes to belly breathing on inhalation of oxygen. The respiratory pump is allowed to fill the heart, and the pulse becomes full.

The figures (which will be found in the *Journal of Physiology*, vol. xxxviii, Nos. 2 and 3, February 9th, 1909) show that blood pressures may rise much higher than Dr. Williamson found. In hot baths we have found pressures as low as 60 mm. Hg. So the range under these extreme conditions in a student may be from 60 to 220 mm. Hg.—I am, etc.,

LEONARD HILL.

London Hospital Medical College, March 25th.

HUMAN AND BOVINE TUBERCLE BACILLI.

SIR,—With great interest I read in your issue of October 10th, 1908, a paper by Mr. Nathan Raw, M.D. Durl., etc., on Human and Bovine Tuberculosis.

The author states that bacilli of the *Typus humanus* produce pulmonary tuberculosis, tuberculous laryngitis, secondary intestinal ulceration, whilst bacilli of *Typus bovinus* produce tuberculosis of (1) mesenteric glands, (2) peritoneum, (3) lymph glands, (4) bones and joints, (5) meninges, (6) lupus, (7) genito-urinary apparatus, (8) middle-ear and acute military tuberculosis.

Hereafter Mr. Raw says that pulmonary phthisis is caused by the bacilli of the *Typus humanus*, which do not attack the other viscera, and that practically all other tuberculous lesions are the result of infection, generally in infancy, through the digestive intestinal tract, by milk and other food products containing bovine bacilli.

These statements have much interested me. Since three years I am now working in Chungking, Western China, as Surgeon to the Imperial German Consulate of the Province of Szechuan, and may be allowed to state that the most prevalent disease here is tuberculosis of every description, attacking every tissue and every organ of the native people. If Mr. Raw's opinion be right, the cause of these most frequent tuberculous lesions of bones, joints, glands, etc., must be the bacillus *Typus bovinus*. The carriers of bovine bacilli must, however, I should think, for the most part be bovines, suffering from *Perlsucht*, which propagate the bacilli by their milk and flesh. But in this part of China cow's milk is very scarce, and certainly in no way a staple food of the people. The children are suckled by their mothers for two and even three years, besides taking other food. If the Chinese of the better classes drink milk at all, it is the imported condensed milk. Beef, which next to milk would be the chief propagator of the bovine bacillus, is also hardly eaten, as Mohammedans are not very numerous here, and the followers of other faiths prefer pork.

Surely under these circumstances infection by bacilli of the bovine type on a large scale is not very likely, and I must think that the occurrence of such very numerous tuberculous affections of bones, joints, glands, etc. in such a country is somewhat contradictory to Mr. Raw's statements.

As to the route and time of infection I agree with Mr. Raw. Only to me it seems hardly possible that the food is the only carrier of the infection, at least, here in Chungking. The Chinese are very careless in matters of cleanliness. They spit wherever they stand and go, in streets and houses (they spit even on the foreigner's carpets!). The little children crawl on the ground, soil the fingers and faces with dirt containing bacilli, and swallow the latter. Flies may also carry bacilli to foodstuffs; or the phthisic grandfather wipes his own bacilli-infected mouth with his hand and feeds with the same hand, which is never washed, his beloved grandchild. In this and a hundred other ways bacilli are conveyed to the mouth and reach the intestinal tract. As dust, owing to the constant dampness of the air, is conspicuous by its absence here, I may tender the opinion that phthisis pulmonum also is caused by bacilli introduced by the intestinal route.

I am sorry to say that by want of accommodations and outfit I have as yet been unable to ascertain the presence

of both types of bacilli or of only one or the other by inoculation in animals. Microscopically I have found only bacilli which I diagnosed as belonging to the *Typus humanus*.—I am, etc.,

Dr. ASSMY, Staff Surgeon, German Army,

Attached to the I.G. Consulate,
Chungking, West China.

February 25th.

PULMONARY TUBERCULOSIS IN CHILDREN.

SIR,—Deductions from figures and statistics are notoriously dangerous, and I think a little reflection will convince Dr. Hamilton Williams that she has fallen into a serious fallacy when she makes the alarming statement that, because nearly 30 per cent. of those who die in London hospitals for children have tuberculous lesions in their lungs, therefore 20 to 30 per cent. of living children have pulmonary tuberculosis. If it were true, the race would soon become extinct. It may be instructive to apply the same method of reasoning to another common disease—cancer. Of all women who reach middle life, one out of eight will probably die of cancer; therefore, of all women past middle life, one in eight is suffering from cancer, which, as Euclid would probably have said, is absurd. Yet cancer does not kill, as a rule, nearly so quickly as does pulmonary tuberculosis in children, so that there is more time for cases to accumulate. The fact is, of course, that these serious diseases soon bring about a fatal issue, and consequently no such accumulation of cases as Dr. Hamilton Williams assumes can possibly occur.

After all, we must start from the solid basis of pathological anatomy, and this confirms the general belief that the ordinary so-called chronic phthisis of adults is rarely met with in childhood. In 100 autopsies on tuberculous children I only found it in three instances, and two of these were girls of 11 and 12 respectively, in whom the conditions were approximating to those of adult life. In the vast majority of cases of pulmonary tuberculosis in early life the disease spreads rapidly and very irregularly through the lungs; it not uncommonly invades them from the bronchial glands, in its course and physical signs it frequently simulates bronchopneumonia, other organs become involved at an early period, and in a large proportion of cases life is brought to an abrupt termination by general tuberculosis or tuberculous meningitis.

The essential difference between Dr. Hamilton Williams and myself is that she assumes that pulmonary tuberculosis in childhood runs a similar course to that which it usually does in later life, so that children suffering from it may continue to go about for a more or less prolonged period, just as adults commonly do. On the other hand, both from clinical and pathological experience, I regard it as usually an acute or subacute disease, which soon incapacitates a child from attending school, and generally proves fatal in a very few months at most. I fully admit that even when the disease is active and advanced the physical signs in the chest may be most ambiguous, and I have frequently come away from the *post-mortem* room in a chastened spirit, after finding that lungs in which I had just suspected the existence of tuberculous disease were riddled with caseous masses. The difficulty is the greater because children generally die before cavities have formed large enough to give rise to recognizable cavernous signs.

I am sorry that the simple question I asked at the end of my last letter has not elicited a single reply. May I urge some one who regards tuberculous milk as a very common source of pulmonary tuberculosis to explain why it is that tubercle bacilli of the bovine type are not more commonly found in ordinary cases of phthisis?—I am, etc.,

London, W., March 29th.

J. WALTER CARR.

SLEEP AND WANT OF SLEEP.

SIR,—With reference to Dr. Farquharson's article on Sleep and Want of Sleep in the *JOURNAL* of February 27th, p. 522, it may be noticed that, of the expedients for inducing sleep, the contemplation of memorized percepts is the most successful. The contemplation in memory of objects perceived by the senses, principally (indeed, practically entirely) by sight, is to be aimed at, without considering their qualities or relations to each other, or

any attributes of them other than some one sensation which evidences their existence. The contemplation of mixed sensations, such as sight and taste, is not desirable—as, for instance, in a fruit. The percept contemplated must not be allowed to run on into a concept; the attributes or mutual relations of the objects so perceived must not be thought of.

Enumeration is useless as a device for procuring sleep, for we do not get this contemplation of simple concrete percepts, of objectivity, in dealing with numbers; there is no sense memory, but only contemplation of the relationships of abstract ideal entities. This is why counting or any consideration of numbers cannot be successful, for, to procure sleep we want to fill the mind with sense perception to the exclusion of ideation. The effort of contemplating motion as an attribute of the object perceived has also to be excluded; reading is worse than useless.

The higher phenomena of the scale of consciousness—emotion, ideation, etc.—have to be eliminated and set at rest. This is a form of the autohypnosis practised in the East. Contemplation of the memorized percept of a familiar locality—apart from any concept of attribute or incident—is a successful autohypnotic which becomes easy with practice.

Take, for example, the device of procuring sleep by contemplation of the memorized percept of the interior of Westminster Abbey, let us say, by one who is fairly familiar with it. In visual memory—not in imagination—he enters at the north transept and sees the rose window of the south transept as a blur of colour without detail. He sees statues—knowing them as Beaconsfield, Gladstone, etc.—subconsciously (a bad word but understood) without recalling them by conscious memory of detail. He advances to the centre and stands at the chancel steps, taking in the blurred percept of the Sanctuary and surroundings; turning, he has the vista of the choir and the west window over the screen; he then passes down the nave to the west door, and, turning, sees in the east the screen and organ, and beyond the clerestory lights of the apse. Then, slowly, up the aisle to the right of the choir to Poets' Corner in the south transept, without any conscious effort of memory to recall details. Then the South Ambulatory with into the chapels of St. Benedict, St. Edmund, and St. Nicholas, up to the Confessor's shrine—slowly, slowly—then to Henry VII Chapel to the flagstone marked Cromwell at the extreme east; to the aisle on the right, with the tomb of Mary Queen of Scots and tombs of Queen Anne and her husband, of Charles II, and of William and Mary; the aisle on the left with Queen Elizabeth's tomb, and that of the murdered princes; then to the North Ambulatory, and into the chapels of St. Paul, St. John the Baptist, and the Insipid Chapel.

The time occupied in memorizing all this mass of perception will be longer if one is intimately conversant with what there is to see, and shorter if there is only a slight knowledge of the place; but it may well occupy half an hour, by which time one would probably be asleep. Any other place may answer the same purpose—the Tower, St. Paul's, a provincial cathedral, or other interior familiar enough to be memorized without effort—a familiar highway from one town to another, the streets from one part of a town to another part, as long as motion and incident are excluded, and the percept kept from wandering into a concept. Emotions and ideas have, of course, to be quite excluded, and this is attained by practice.

One may have a *répertoire* of interiors or itineraries, and make a selection of a favourite one soon after he lays his head on his pillow; but having made a selection he must adhere to it, and not jump from one to another.—I am, etc.,

JOHN MARTIN,

London, W., Feb. 28th.

Lieut.-Col. late R.A.M.C.

THE NATIONAL SERVICE LEAGUE AND THE MEDICAL PROFESSION.

SIR,—I am glad to see Dr. Cowley's letter of March 27th. I have been a member of the Executive Committee of the league, and I speak for them whenever I can. I wish the members of our profession would support the league. In my opinion, no measure would do more for public health or for public morals than an Act which obliged young men to go through a few months of physical training and military discipline.

Let me remind you of the words of the *Spectator* after watching the six months' training under Colonel Pollock of its experimental company:

We have always believed that such training, could it be brought about, would be a great benefit to our population; but we now realize that the benefit is so enormous that every effort should be made to endow the whole of the youth of the nation with physical training of a kind similar to that undergone by the *Spectator* Company, and to make it as universal as the literary education imposed upon our children by the Act of 1870. . . . We think that we do not need universal service from the military side, but we have also come to realize that universal military training is, on the moral and physical side, so beneficial that we do not think it ought to be withheld from the young men of Great Britain (*Spectator*, September 15th, 1906).

I do not agree with the *Spectator* about our military needs, but his opinion on that point makes his testimony all the more valuable on the others.—I am, etc.,

London, W., April 1st.

W. P. HERRINGHAM.

RURAL DISTRICT NURSING ASSOCIATIONS.

SIR,—I can fully endorse the remarks contained in the letters of Dr. Wm. Milligan and "Parish Doctor" published on March 13th and 20th, on country district nursing associations. In one of the villages in which I practise the Lady Bountiful (of whom the inhabitants live in awe) insists on the poor and the small tradespeople subscribing to her pet hobby, the nursing association, in spite of the protests of some of her victims that in times of illness they are put to a double expense—the nurse, who comes in for a few minutes a day, and the neighbour, who is capable of, and really does, all the nursing of the patient, in addition to the work of the house and looking after all the other members of the family, as under the old régime.

This district nurse, who "practises" in four of my villages, has received six months' general training only, and is empowered and instructed by her committee, not only to attend any medical or surgical case on her own responsibility, but also to do her utmost to persuade patients not to call in a medical man, with the result that this unqualified practitioner attends cases of erysipelas, measles, and scarlet fever at the same time as she is nursing midwifery patients. Recently, in one week, two of her patients were "found dead in bed," without having been seen by a medical man. In both cases I was asked to give a certificate of death, which I naturally refused to do. On the first case, a single woman aged 60, an inquest was held, and I was ordered by the coroner to make a *post-mortem* examination. I found that the patient had been suffering from fatty degeneration of the heart, but only to such extent that with proper care her life might have been prolonged some years. Owing, I presume, to the fact that the jury was composed solely of strong supporters of the District Nursing Association, the nurse was not even called as a witness, and the fact that she had attended the deceased was afterwards hushed up. Upon the second case, not even an inquest was held, the coroner giving a certificate.

If two such flagrant cases as these can be thus treated, it is evidently hopeless for a medical practitioner to fight single-handed. Perhaps the fact that I have no near colleague to support me increases my difficulty; but truly she is a keen competitor to be reckoned with, and I myself have suffered, not only from her activity, but also the loss of several of my patients (who are members of the local nursing committee or their friends) because I refuse to support and cover this dangerous "unqualified practitioner."

It is certainly time that something was done by united action to safeguard both the public and the qualified medical practitioner, and I for one would gladly support any such movement.—I am, etc.,

March 24th.

COUNTRY PRACTITIONER.

THE MEDICAL PROFESSION AND LIFE ASSURANCE.

SIR,—My attention has just been called to an address on "The Medical Profession and Some Life Assurance Companies," delivered by J. Farrar, M.D., of Gainsborough, and reproduced in the SUPPLEMENT to your issue of November 28th, 1908. If it is not too late, I should like to make a few observations on some of the statements appearing therein.

Now, in the first instance, I have no wish to minimize in any way the importance of the work done by the medical profession for insurance companies. I admit, too, that it is done, with a few exceptions, conscientiously and with thoroughness. The real question is, Are the fees paid by life offices adequate and reasonable? It is to that I wish to address myself, and at the outset protest strongly against Dr. Farrar's suggestion that there is any attempt on the part of the life assurance companies to "sweat" the profession. I have had considerable experience of insurance companies, and I know that it is their practice to pay a fee of £1 ls. in the case of the larger insurances. In the case of small insurances of, say, £100 or £200, however, the fee is limited to 10s. 6d., and it is to this limitation, I presume, that Dr. Farrar objects. If he will look at the rates of premium charged by the average company he will find that the amount payable yearly by a proposer of, say, age 30, for a policy of £200 would be about £4; and when it is remembered that out of this first premium must be paid agent's and overriding commissions, policy stamp, head office and branch expenses, as well as the medical fee of 10s. 6d., it will be seen that there is very little remaining to cover the cost of the risk of death. But how much more difficult is it to adjust matters when, say, only a quarterly premium is paid on the assurance? This quarterly premium would amount, in the case of an assurance of £200, to approximately £1; in the case of an assurance of £100 to, say, 11s. Here, then, is nearly the whole of the first premium swallowed up by the payment of the medical fee, with the possibility that before three months have expired the assured may have changed his mind either as to the desirability of assurance generally or the company to which he proposed in particular, the policy lapsing as the result. It may be said that the cases I have taken are extreme examples, but the Blue Books issued by the Government will prove to your readers that the average amount proposed for is not in excess of £200.

If it is impossible to pay a larger fee in these cases, how much more so would it be in the case of small industrial assurances? Here the practice is to pay a fee of only 2s. 6d., and an examination is insisted upon in cases where the sum assured is £25 and the premium only 2d. or 3d. a week. Again, it will be seen that the medical fee exhausts the company's receipts in respect of that particular case during the whole of the first ten or fifteen weeks, and that the company is obliged to wait patiently until the expiry of that period before it has a chance of recouping itself for the money spent in expenses and on agent's and procurator fees, which are so much higher in the case of industrial assurances than in respect of proposals of £100 and upwards, with the prospect that the policy may lapse, as so many do, before even the medical fee is covered.

Dr. Farrar suggests that very frequently large sums are lost to the companies through early industrial claims which would otherwise be prevented by the expenditure of a guinea on medical examination. How much greater, and how much more certain, would the loss to the companies be if an expense of this kind were to be incurred in connexion with those cases! As a matter of fact the companies would all prefer to have a medical examination in every case, but the cost, as has just been shown, is prohibitive.

Instead of the profession being "sweated," I think it will be admitted by reasonable men that it is generously treated by the offices; and I would warn the members of the profession that if any change is instituted in the present state of affairs it will rather be in the direction of employing medical men for certain areas who will give their whole time to the service of the companies for fixed salaries, and thus perform more economically the work which is so widely distributed at present at such a considerable expense.

May I make one further remark—a reference to Dr. Farrar's suggestion that members of the profession, when asked by patients to give advice as to the best office in which to insure, should follow his lead and recommend only those offices which, in his opinion, pay adequate remuneration for professional service? Evidently his conscience, which he told his audience, in almost the same breath, would not allow him to perform half-heartedly the work done for those companies who paid him insufficiently,

was not alert enough to suggest to him that where advice was asked for by a confiding client it should be given solely with a view to the best interests of that client, and that the best company from a policy-holder's point of view should be selected, without regard in the slightest degree to whether the doctor was consulting in any way his own interests in making the selection.—I am, etc.,

Liverpool, March 12th.

A. A. SNODGRASS, F.C.I.S.

Universities and Colleges.

UNIVERSITY OF EDINBURGH. SPRING GRADUATION CEREMONIAL.

THE Spring Graduation Ceremonial took place on Friday, April 2nd, at 10 a.m., when the Vice-Chancellor, Principal Sir William Turner, presided.

The degree of Doctor of Laws was conferred on Mr. J. M. Barrie, Emeritus Professor Crum Brown, and Surgeon-General Sir Alfred Keogh, K.C.B., Director-General of the Army Medical Service, and the degree of Doctor of Science in the Department of Public Health on William Burney Bannerman, M.D., B.Sc. (Lieutenant-Colonel, I.M.S.).

Ordinary Degrees.

The following were presented by Professor Harvey Littlejohn, Acting Dean of the Faculty of Medicine, for the degrees of Bachelor of Medicine and Bachelor of Surgery:

C. R. White (*in absentia*), W. Rainbridge, J. H. Bell, J. P. Charles, W. C. Frango, K. Fraser, D. M. Grant, J. A. Harley, J. Hewat, V. D. O. Logan, A. S. Macbeth, D. McCarroll, G. M. Mackay, M. A. J. MacKenzie, A. C. McKillop, A. K. MacLachlan, W. M. Menzies, H. L. Morrow, W. G. Riley, Eleanor M. Thompson, N. J. Watt, W. C. Whiteside.

The degree of B.Sc. in the department of public health was conferred on J. R. Dickson, M.B. (*in absentia*); and the diploma in Tropical Medicine and Hygiene on S. A. McCintock, S. M'Naughton, and H. L. Sells. Professor Kirkpatrick delivered the address to the graduates on reform in the Faculties of Arts and Law.

Examination Results.

The following candidates have been approved at the examinations indicated:

FINAL M.B., CH.B.: *Forensic Medicine and Public Health*.—Janet Armstrong, J. G. Boal, W. Dunlop, T. R. Evans, R. V. Greatorex, R. R. Kerr, C. G. Kurien, W. G. M'Alae, A. C. McInzie, Mary Macmillan, R. F. Panton, H. R. A. Philp, S. P. Fenton, J. P. du Plessis, Ella F. Pringle, C. S. Sandeman, Welsch, J. M. Midwifery.—T. A. Adams, Janet Armstrong, Evelyn R. Benjamin, L. A. P. Burt, A. Campbell, J. P. Charnock, H. A. Cookson, J. Crockett, W. Dunlop, R. V. Greatorex, E. E. Guthrie, R. R. Kerr, C. G. Kurien, Lina Kurz, Janet Leiper, L. Leslie, H. Lipetz, W. G. M'Alae, R. B. Macfie, A. D. M'Kenzie, A. G. Macleod, R. J. A. Macmillan, G. M. Miller, J. M. Moyes, Rhoda M. Murdoch, W. J. Nisbet, F. H. Noronha, H. R. A. Philp, G. R. P. S. Panton, J. P. du Plessis, A. A. Reid, J. E. Renwick, Agatha M. Robinson, A. C. Russell, C. S. Sandeman, J. M. Scott, J. D. Skinner, Mary M. M. Turpie, T. Welsh, S. Williams.

Medicine and Surgery.—T. A. Adams, F. Armstrong, Alice E. M. Hamilton, B. A. T. H. Enfour, K. A. Holt, F. J. Brodzick, G. S. Brown, A. N. Bruce, B.Sc., W. F. Buist, O. S. Bulloch, W. L. Burgess, L. A. P. Burt, A. W. Burton, Sarah E. Buyers, J. Agvill Campbell, G. L. Cawthell, R. B. Chamberlain, A. D. Child, J. Crockett, J. E. M. Dickie, Adelaide A. Dracop, H. G. Felltham, G. F. Fismar, E. L. Galletty, Mary M. Gardner, A. W. Gill, W. E. Goss, W. T. Graham, A. G. M. Grant, A. G. Hamilton, H. F. Hamilton, R. C. Harkness, T. E. Harwood, B.A., J. Henderson, G. R. Inglis, Flora Jones, W. C. Jardine, A. M. Jones, G. E. King, J. H. Lawry, L. Leslie, H. Lipetz, W. R. Logan, Mary Low, M.A., H. F. Lumsden, D. C. Macaskill, M.A., A. J. McConnell, W. Macdonald, J. Mackail, M.A., C. E. G. Mackay, A. D. Mackenzie, A. G. Macleod, R. J. A. Macmillan, A. J. Macvie, J. Malloch, G. G. Marais, T. H. E. Mathewson, W. Messer, E. L. Middleton, A. F. W. Miller, A. M. Minford, L. M. V. Mitchell, S. P. Moore, W. Morrison, J. A. Mortimer, J. M. Moyes, R. M. Nicholson, W. J. Nisbet, H. R. A. Philp, J. Renwick, D. G. Robertson, W. S. Robertson, D. M. Ross, R. P. Rosser, C. M. Schaffer, J. M. Scott, J. J. M. Shaw, M.A., K. Simpson, G. H. Sinclair, H. F. Smith, B.A., T. C. Smith, G. S. Sowden, M.A., J. Spent, B.Sc., W. Stevenson, M. Stewart, W. Stewart, C. P. S. Stranghan, J. Stewart, A. L. Taylor, B.Sc., H. W. Teague, J. A. Thompson, W. S. Thomson, Mary M. M. Turpie, A. Watson, J. P. Whetter, J. Wilson, J. D. Wilson, M.A., Margaret C. Young.

UNIVERSITY OF GLASGOW.

THE following candidates have been approved at the examinations indicated:

FINAL M.B., CH.B.—J. Allan, J. G. Anderson, W. H. S. Armstrong, D. M. Borland, M. W. Browdy, J. A. G. Burton, J. Cameron, M. I. T. Cassidy, W. B. Cunningham, J. C. Dick, A. G. Gilchrist, G. S. Gordon, E. O. D. Graham, J. Harper, M.A., V. Howat, M.A., J. P. Kinloch, D. N. Knox, A. M. Macdonald, M. D. Mackenzie, G. Macleod, M.A., A. M'Pherson, T. Martin, H. N. Rankin, A. Roenemele, W. W. Rorke, W. Rutherford, J. J. Sinclair, A. Turnbull, M.A., B.Sc., J. B. Whitfield, J. A. Wilson.

UNIVERSITY OF LEEDS.

THE following candidates have been approved at the examinations indicated:

FIRST M.B., CH.B. (*Part I*).—C. M. Gozner, H. R. Knowles, M. Peto, H. P. Shackleton, H. A. Sinson, H. Symons, H. M. Taylor, C. Ward, J. Wilkinson, and J. Wright.

SECOND M.B. (Part I. *Anatomy and Physiology*).—A. L. Bastable, H. Chablin, L. Dunbar, C. J. H. Eadie, G. B. Macvicar, N. V. Milton, F. W. Nunnally, V. Robinson, J. B. Sinson, J. P. Walker, T. L. Walker, F. Wigglesworth, B. W. F. Wood. Part II.—H. N. Ingham, C. B. Richardson.

UNIVERSITY OF DUBLIN.

The following candidates have been approved at the examinations indicated:

INTERMEDIATE MEDICAL (Part I).—A. Chance, F. Crosbie, O. C. S. Tandy, G. G. P. Beckett, H. G. Goldbrook, W. A. Taylor, S. A. Lane, R. G. McEntine, L. Shiel, J. C. Kelly.
INTERMEDIATE MEDICAL (Part II).—H. L. W. Woodroffe, R. W. Murphy, A. F. E. Shier, H. J. Smyly, F. C. Crossle, J. M. Elliott, H. M. Fleming, T. G. Harpur, A. E. Malone, O. Brien, Mary G. Caskey, G. J. Meldon, E. N. Bateman, G. G. P. Beckett, F. Crosbie, M. C. Knight, J. Beckett, R. C. B. E. H. Hughes, C. P. Smyly, H. R. Kenny, W. P. H. Smiley, D. Drew, J. P. R. Poch, B. H. Moore, W. R. Allen, C. G. S. Baroness, P. R. Lemass, D. H. Stokes, W. D. Mitchell, H. S. Mitchell, J. E. N. Ryan.
* Passed on high marks.

UNIVERSITY OF DURHAM.

The following candidates have been approved at the examinations indicated:

FIRST M.B. (All Subjects).—W. S. Murray.
Elementary Anatomy and Biology.—R. E. Bell, G. A. Berkeley-Cole, G. Carse, H. C. Dodd, C. Duncan, I. D. Evans, R. A. Hooper, R. L. Kitching, Nora Murphy, Carina A. B. O'Neill, A. Patterson, L. G. Pearson, J. M. Phillips-Jones, E. Risson, D. G. Scott, C. O. Shackleton, A. Seidlitz.
Chemistry and Physics.—F. Balst, P. Gunn, F. W. C. Hinings, S. E. Murray, C. T. G. Pearce, S. Scott, A. Smith, H. J. Shanley.
Chemistry, Elementary Anatomy, and Biology.—J. S. Arkle.
Elementary Anatomy.—W. A. Elliott.
SECOND M.B. (Anatomy, Physiology, and Materia Medica).—S. P. Bedson, B. S. C. F. Chapman, W. L. Clements, H. Fairclough, L. E. Gelle, J. K. J. Havorth, N. J. Hickey, E. E. Lidd, W. G. Liddard, C. Morris, B. B. Noble, J. A. C. Scott, W. A. Slater, R. W. Smith, R. V. Steele, H. R. G. Vander Beken.
THIRD M.B. (Pathology, Medical Jurisprudence, Public Health, and Elementary Biology).—V. C. Bende, B. G. H. Connolly, R. Errington, F. P. Evers, E. L. Hancock, H. T. Hunter, Eva Lumb, E. P. Martin, A. T. Thompson, T. R. West.
Second-class honours.

VICTORIA UNIVERSITY OF MANCHESTER.

The following candidates have been approved at the examinations indicated:

SECOND M.B. (Ch.B.).—R. D. Beag, C. E. Butterworth, C. W. Fort, A. H. Howell, L. W. Howarth, W. H. Leech, W. H. Leech, T. W. Martin, N. Matthews, F. Oppenheimer, H. G. Penke, S. B. Radley, J. Rothwell, C. M. Stallard, W. Scirling, J. S. B. Stoford, D. L. Whiles.
THIRD M.B. (Ch.B.).—A. E. Ainscow, R. Brierefield, S. J. Clegg, J. Cowan, C. Davies, C. B. Davies, H. A. Dunkerley, E. R. Easock, A. W. Gave, E. Grey, H. Heathcote, R. C. Hutchinson, R. B. Jackson, G. Lapage, Mabel E. May, A. Reid, J. R. Rigg, J. B. Scott, W. A. Seacht, J. Walker, Charles H. Warner.
FINAL M.B. AND CH.B. (Forensic Medicine and Toxicology).—H. E. Allanson, Estelle I. E. Atkinson, G. M. Benton, C. G. Brentnall, W. A. Bullock, J. F. Cocker, D. I. Connolly, G. T. Cressan, F. H. Diggle, J. Gow, T. T. Higgin, R. A. Jackson, N. T. K. Jordan, N. McDonald, Edith M. Marsden, C. B. Marshall, G. E. E. Nicholls, H. Platt, A. Porter, A. A. Smailey, N. Tattersall, R. H. Titcombe, W. B. Wansley, J. F. Ward, F. G. Witley.
FINAL M.B. (Ch.B. (All Subjects)).—J. A. Bateman, N. Booth, E. Howe, M. C. S. Lawtance, T. M. Pople, J. Ramsbottom, F. B. W. E. Trevor-Roper, W. W. Utley, H. V. White, J. Whitehead.
* With distinction in one or more subjects. † University medal.
‡ Second-class honours.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

An extraordinary Comitia was held at the College on Monday, April 5th, the President, Sir R. Douglas Powell, in the chair.

University of Geneva.

The President announced that he had appointed Dr. Pasteur to represent the College at the commemoration of the 50th anniversary of the University of Geneva to be held in July next.

Presidential Address.

The President gave his annual address, in which he offered congratulations to the diplomates of the College who had gained distinctions, and referred to the lectures that had been delivered and the gifts accepted by the College during the past academic year. He gave brief obituary notices of ten Fellows of the College who had died during the same period, these being Drs. Cullingworth, Rickards, Bertram Abrahams, and Ashby, Sir T. Stevenson, Sir Henry Pitman, and Drs. C. E. Beevor, Horrocks, Cotes, and Arthur Gamgee.

Election of President.

Sir Douglas Powell then vacated the chair and voting took place for the post of President for the ensuing year. Sir Douglas Powell was re-elected by an almost unanimous vote.

Communications.

The following communications were received:

1. From the Secretary of the College of Surgeons, reporting

proceedings of the Council on February 11th and April 1st last.

2. From Miss Amy Maxwell, offering through Sir William Allchin for the acceptance of the College a photographic copy of a miniature portrait of her grandfather, Dr. Anthony Todd Thomson, a former Fellow of the College. The gift was accepted, and thanks returned to the donor.

Admission of Women to the Examinations of the College.

The following by-law was enacted for the first time:

Women shall be eligible for admission as Licentiate and Members of the College and for the grant of a Diploma in Public Health on the same terms and conditions as men, and so far as is necessary to give effect to this By-law, words in the By-laws and Regulations importing the masculine gender shall include females, and all proper alterations shall be made in the forms of the Letters Testimonial and the Licence granted by the College.

Provided always that women shall not be eligible for election as Fellows of the College, or be entitled to take part in the government, management, or proceedings of the College.

Anniversary of the Birth of Dr. Caisus.

The Harveian Librarian, Dr. F. Payne, announced that the year 1910 would be the 400th anniversary of the birth of Dr. Caisus, a former distinguished President of the College, and on his recommendation it was resolved to co-operate with Caisus College, Cambridge, in reprinting the works of Dr. Caisus to commemorate the occasion.

Report.

A report was received from the Committee of Management recommending that the University of St. Andrews be added to the list of institutions at which the complete curriculum of professional study required for the diplomas of the Royal Colleges may be pursued, and whose graduates may be admitted to the Final Examination of the Examining Board in England on production of the required certificates of study.

The recommendation was adopted.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY Council was held on April 1st, Mr. Henry Morris, President, in the chair.

The late Mr. James Hardie.

A vote of condolence was passed to the relatives of Mr. James Hardie, of Manchester, lately deceased, a past member of council.

Entozoa in the Museum.

Dr. R. T. Leiper, of the London School of Tropical Medicine, was appointed to revise and renovate the collection of entozoa in the College museum.

Jacksonian Prize.

The Jacksonian Prize was awarded to Mr. J. P. Lockhart Mummery, F.R.C.S., for his essay on Diseases of the Colon Relievable by Operation. The subject chosen for the next essay is Tuberculous Disease of the Urinary Bladder and Male Genital Organs.

Court of Examiners.

The vacancy on the Court of Examiners, occasioned by the retirement of Mr. Gould, will be filled up at the council meeting on May 13th. Mr. Gould is not applying for re-election.

The Geneva Celebration.

Sir Jonathan Hutchinson was nominated as the delegate of the College to the University of Geneva on the occasion of the celebration of the 50th anniversary of its foundation, from July 7th to July 10th, 1909.

Representative of Midwives Board.

The best thanks of the council were given to Mr. Ward Cousins for his very efficient services as representative of the College on the Central Midwives Board during the past six years. Mr. C. H. Golding-Bird was elected in Mr. Ward Cousins's place. In his annual report, Mr. Ward Cousins points out that the number of deaths attending childbirth has not diminished since the Midwives Act came into operation in April, 1903; no guarantee at present exists for the payment of medical practitioners who are summoned to assist certified midwives, in consequence of serious trouble in all parts of the country still exists; hence the Act requires considerable alteration. The details will be submitted to the Departmental Committee appointed by the Government, and, he reports, there is every reason to hope that the defects will be removed.

John Tomes Prize.

The John Tomes Prize was awarded to Mr. Arthur Swayne Underwood.

University of London.

Mr. H. H. Clutton was reappointed one of the two representatives of the College on the Senate of the University of London.

Election of Fellows.

The following Members of twenty years' standing were elected Fellows of the College: Sir Shirley Forster Murphy, Medical Officer of Health for the County of London; George Dancer Thane, Professor of Anatomy, University College, London.

Admission of Women.

The formulae for the alteration of Section XXI and for a new Section XXVI (Admission of Women) were approved, and the Solicitor of the College was instructed to submit the new by-laws to the proper authorities for sanction and ratification.

Medico-Legal.

INQUESTS ON CASES OF DEATH AFTER OPERATION.

THE following reports of inquests on cases of death after operation deserve, we think, to be brought to the attention of our readers. The inquests were held some time ago, but it is only recently that we have been able to obtain reports sufficiently full to show the mode of procedure adopted by the Coroner for Westminster and the South-West District of London. The reports, which are taken from the *South-Western Star*, have been in each case authenticated by the surgeon who operated. Mr. Sampson Handley informs us that the report of his case is quite accurate; Mr. Swainson has corrected the report of his case in one or two points.

MR. SAMPSON HANDLEY'S CASE.

The following report is abbreviated from the *South-Western Star* of January 1st, 1909:

Mr. Troutbeck held an inquest at the Battersea Coroner's Court on Monday (December 23rd, 1908) with reference to the death of Henry Fielder Trigg, a butcher, aged 53, late of 7, Eglantine Road, Wandsworth, who died at Boleingbroke Hospital on December 22nd, after a serious operation. Lionel Harry Trigg, mason, a son of the deceased, stated that his father had been in excellent health until three months ago, when he complained of internal pains. He was attended by Dr. Archer, of East Hill, for some weeks, after which he went to St. Peter's Hospital, Covent Garden, where he stopped a fortnight. Not getting any better he applied for and was granted admission to Boleingbroke Hospital. A week after his admission an operation was suggested, and the deceased agreed to it. Asked by the coroner if he understood that his father was in a serious condition, the witness replied in the affirmative. Asked further if he thought the operation would give him a chance of life, the witness said, Yes. Mr. W. Sampson Handley, M.S., F.R.C.S., surgeon at Boleingbroke Hospital and assistant surgeon at Middlesex Hospital, stated that when he examined the deceased the menses of the electric light he discovered a growth in the bladder. He cut open the bladder, thinking he could remove the growth, but found that it was irremovable, and that the only means was to remove the whole bladder. He knew this was an extremely dangerous operation, and explained this to deceased, who gave his consent for the operation to be performed. "I told him," witness said, "that I would not perform the operation except at his request." He was in a miserable condition. Asked by the coroner if that was an operation that was very often performed, Mr. Sampson Handley said it was performed sometimes. Continuing, he said that he performed the operation on December 22nd. He removed the whole bladder, and made an artificial one from a portion of the intestine. Deceased died shortly after the operation. The witness was not present when he died. Asked if the patient was under an anaesthetic, Mr. Sampson Handley said he was under a mixture of chloroform and ether. The cause of death, in his opinion, was partly due to the state of his health produced by the growth. The immediate cause of death was shock caused by the operation. "It was a cancerous growth. Asked by the coroner if he was able to form an opinion of the probable length of time the man would have lived if the operation had not been performed, Mr. Sampson Handley said "about two or three months, but he would have been in agony all the time." In reply to further questions, he said that if the operation had been successful it might have prolonged his life for years if there were no other growths in the body. Asked if there had been cases of a successful operation, the witness said "Yes; and the patient had been cured and has lived for years in comfort." Asked if he thought the anaesthetic affected the matter in any way, Mr. Sampson Handley replied that it was very hard to say. He did not think it did. Dr. Freyberger, who made the post-mortem examination, stated that death was caused by sudden failure of the heart in consequence of the shock of a prolonged operation, while deceased was suffering from the effects of cancer. In reply to the coroner, who asked "As far as the history of the case, if the operation is concerned, is it one that has been performed for any considerable time?" the witness replied: "About fifteen years I should say." The coroner (addressing the jury) said that there could be no doubt that Mr. Handley was justified in undertaking the operation in the circumstances. The jury returned a verdict of "Accidental death."

MR. SWAINSON'S CASE.

The following corrected report is abridged from the *South-Western Star* of January 25th, 1909.

On Wednesday (January 27th) an inquest was held at the Battersea Coroner's Court before Mr. Troutbeck on the body of James Arthur Searle, aged 8 years, whose parents live at 8, Winifred Grove, Battersea. On the previous Saturday deceased underwent an operation at Boleingbroke Hospital, and died soon afterwards. James Searle, a compositor, identified the body as that of his son. He had had fair health, but Dr. Wallace had attended him for about two years. On Thursday deceased complained of pain in the stomach, and witness

thought it was ordinary stomach-ache. The child had not eaten anything unwholesome as far as witness knew. That night he saw a doctor and described the symptoms. Some medicine was prescribed for him. Next day the boy seemed better. On Saturday morning he was very bad, and when witness had gone to work his wife called in the doctor. When he got home at dinner time witness found deceased was worse. The doctor came about 4 o'clock, and diagnosed the case as one of appendicitis, and advised removal to a hospital for operation. The boy was hurried off to Boleingbroke Hospital in a cab, and handed over to the doctors for the purpose of an operation. About 6 o'clock witness was informed that deceased had died, having been in the hospital about an hour. (The time was really about two hours.) In reply to the coroner, who asked when he handed the boy over to the doctors if he thought he was likely to die, the witness said he thought an operation was his only chance. Asked if he had anything else to say about the death, he said, No. He thought the hospital authorities did their very best, and did it well. All he complained of was the inquest. The coroner said: "It is a duty. I am afraid every one has to obey the law, even if it is disagreeable." Annie Marie Searle, the mother, agreed with her husband that the deceased was taken to the hospital as the only chance of saving his life. As a matter of fact, she thought he was dying before he was taken away. Dr. J. B. Vallar, 117, North Side, Clapham Common, said deceased was a very delicate boy, and of exceedingly poor physique. When the child was brought to him suffering from the stomach-ache he thought it was an ordinary bilious attack. When he saw deceased on Saturday afternoon he was in a state of collapse. The boy's condition struck him as that of appendicitis, and an immediate operation was the only chance of saving his life. Dr. Atkin, medical superintendent at Boleingbroke Hospital, said deceased was admitted shortly after 4 o'clock on Saturday. He was suffering from what was known as an "acute abdomen," which was swollen. He told the parents that an immediate operation was the only chance of saving the child's life. They consented, and the child was got ready. He was given chloroform with a slight mixture of ether. He took it very nicely and needed very little anaesthetic. The abdomen was full of blood-stained fluid. A gangrenous portion of bowel was removed and the bowel drained. The whole thing took twenty-five minutes, and the deceased died quietly at the finish. He was removed to the ward about 5.35 and died about 10 minutes to 6. Death was due to strangulation of the bowel and peritonitis. The operation shortened his life by a few hours. If he had remained at home he would have lived about six hours. Mr. Swainson, Surgeon to Boleingbroke Hospital, and Assistant Surgeon to the Westminster Hospital, said he undertook the operation. It was clear that deceased had peritonitis, which was probably caused by appendicitis. When he opened the abdomen he found it full of blood-stained fluid, which made the case very grave indeed. In his opinion death was due to peritonitis and toxæmia. After the child was admitted in a collapsed state he had reacted to restoratives, and it was hoped that after the operation he would again react to restoratives, which were applied, but with no effect. Therefore there was small chance of saving the child's life. Dr. Freyberger said death was due to failure of the heart in consequence of collapse caused by the gangrenous state of the bowel. He could not entirely dissociate from the death the shock caused by the anaesthetic. The coroner said that, although objection was sometimes taken by relatives and others to the holding of inquests, the law was perfectly clear on the subject, and the duty of attending inquests and giving evidence, although it might be disagreeable, was one which had to be faced. These inquiries were primarily for the benefit of the public, but they were, perhaps, of even greater benefit to medical men who had conducted operations, and who were given this opportunity of seeing that they had taken the right course. It was a great satisfaction to them to hear a jury express approval of their efforts at a public inquiry. In this case the operation was fully justified, and death could not reasonably be prevented. The jury returned a verdict of "Accidental death."

UNREGISTERED DENTISTS.

IN our last issue proceedings against the Hygienic Institute were reported in two cases in which damages were claimed and awarded.

At Bishop Auckland Petty Sessions on April 1st, Robert Smith, local manager of the Hygienic Institute, was summoned, at the instance of the British Dental Association, for having unlawfully represented himself to be a duly qualified and registered dentist, contrary to the Dentists Act, 1878. Mr. R. Luck, barrister, instructed by Mr. W. Wilkinson, Bishop Auckland, prosecuted; and Mr. Mundahl, barrister, instructed by Mr. R. S. Holmes, Newcastle-on-Tyne, defended.

Evidence was given by two police constables, who, disguised as workmen, visited the local branch of the Hygienic Institute, at the door of which was a plate bearing the inscription, "Hygienic Institute, Makers of High-class Artificial Teeth." On a landing inside the house was a board with the words, "Hygienic Institute. R. Smith, manager."

Constable Pakes said when he went in he asked for the dentist, when the defendant appeared. He said to him, "Are you the dentist?" the reply of Smith being, "I am." Smith examined his mouth and advised him to have a tooth drawn. Witness asked if it would cause pain, and Smith replied that he thought he could take it out absolutely painlessly, and that

the price would be a shilling. He was shown into a room marked "Private," where an operator named Macdonald assured him there would be no pain whatever, but added that he would inject some stuff into the gum as a precaution, as it would deaden any pain. Smith held his head while the extraction was taking place. Afterwards Macdonald asked him if he would have another tooth drawn, as there was one which ought to come out, but witness declined.

Constable Parkinson corroborated. He said the extraction took place under Smith's supervision. As to his own teeth, when Smith had examined his mouth, he said, "You are a case for the 'Hygienic,' you are all yours want to come out. I will cut in a full set, top and bottom, for £5." Witness said that was a lot of money, whereupon Smith said that he could pay a certain sum down and the remainder the collector could call for at the rate of 3s. a fortnight. He asked Smith what that stuff was that the operator had injected into his chum's gum, and Smith replied: "That is a trade secret. Any dentist in Bishop Auckland would give £100 to know what it is."

Mr. Jonathan Townend, Bishop Auckland, who laid the information on behalf of the British Dental Association, proved that neither Smith's nor Macdonald's names were on the *Dentists Register*.

Mr. Mundahl submitted that the defendant had not implied that he was a registered dentist. He contended that any one could supply artificial teeth. Defendant was not a dentist, but simply a business manager, and had never represented that he was qualified.

Defendant stated that he had never been a dentist, and had never drawn a tooth. He would never think of representing that he was a dentist. He did not tell the men that he was a dentist, nor did he say that the teeth would be drawn painlessly. He never supposed that what he did would lead to the supposition that he was duly qualified. In cross-examination by Mr. Luck, defendant said he had been in the service of the Hygienic Institute for about a year, and at Auckland since November. Before that he was a traveller. He appeared reluctant to say in what line of business he had travelled, but, when pressed, he admitted that he had represented a firm of wholesale fruit merchants. He declined, by advice of his counsel, to answer the question as to whether there was a registered dental practitioner on the premises at Bishop Auckland.

Mr. Luck: Is it part of the business of the institute to extract teeth painlessly and to use an anaesthetic?—Witness: We extract teeth and use an anaesthetic.

Is it part of the business of the institute to extract teeth painlessly?—It is our duty to give as little pain as possible.

If you had nothing to do with the operation, why did you stay in the operating room?—Because I had a right to be on the premises.

Why did you go there if you had nothing to do with it?—The operator is under my instruction with regard to his work.

The bench fined defendant £5, with £3 15s. costs, including the prosecuting counsel's fee, and declined to state a case for a High Court on the question of the defendant's representation that he was a dentist, having found it a fact that he had done so, but agreed to state a case on a question of law.

A second summons against the defendant in respect of P.C. Parkinson was withdrawn on payment of costs.

FEES OF MEDICAL WITNESSES.

N. F. writes that he is likely to be called in a divorce case as a medical witness to prove cruelty, but has not yet received a subpoena. He wishes to know whether there is a fixed scale for medical witnesses, or has the amount to be a matter of arrangement between the doctor and solicitors.

* * * There is a fixed scale laid down by the court, and our correspondent, if legally subpoenaed, could recover his fees on that scale. But it often happens that the fees allowed on this scale are insufficient to repay the medical witness for his time and labour. Where this is the case the medical witness should have a written agreement from the patient or his solicitors to pay him his charges when they are in excess of the authorized scale.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

COMMISSION TO ASSISTANTS.

ORNTS asks at what rate commission is paid to an assistant for extra work, such as midwifery, introducing fresh patients, etc.

* * * The salary of a medical assistant should be inclusive of everything. In some cases a small percentage is allowed by the principal on midwifery, but we have never heard of any commission being paid for the introduction of patients.

CONDUCT OF MEDICAL OFFICERS OF ACCIDENT INSURANCE COMPANIES.

J. C. E.—We have repeatedly drawn attention to the obligation which rests upon the practitioner sent on behalf of the employer or insurance company to give notice to the patient of his intended visit, so that the practitioner's attendance can be present. The omission to give this notice is to be deplored, as such unannounced intrusion invariably gives offence and wantonly disturbs the harmonious relations that should exist between members of the same profession.

THE ETHICS OF CONSULTATION.

M. S.—Our correspondent appears to have acted with courtesy and consideration, and we can only explain the medical attendant's failure to write by his misunderstanding his position in the matter. It is easy for a consultant to ignore the medical attendant on the ground that he did not know the patient was under the care of another practitioner; but if, when he follows the better rule, he does not meet with courtesy he will be disposed to agree with those consultants who urge that when a patient comes without an introduction from a doctor the question of any previous medical attendance should not be raised. This is deplorable, but for the fact that such a plea can be put forward, those general practitioners who refuse to co-operate when approached, and still more those who write indignantly complaining that their patient should be seen at all without their permission, are chiefly to blame.

SUPERSESSION.

TOXAEMIA.—A. had attended a patient for whom a slight operation was necessary, and who had consented to go into hospital for the performance of it, but she went to see her mother, who took her to B, the family doctor, without telling him that A. had seen the patient. B. recommended an operation, and offered to perform it at the mother's house. The mother called on A. to apologize. A. told her that B. should be informed that he had been in attendance for two or three weeks upon the patient. This was done, and B. then telephoned to A. to say that he had not known of his attendance when he offered to perform the operation. We are asked to say what B. ought to do.

* * * B. should explain that he ought to have been told, and cancel any arrangement already made, but the question as to where and by whom the operation should be performed must be left to the decision of the patient.

Obituary.

ARTHUR GAMGEE, M.D. EDIN.,

F.R.C.P. EDIN. AND LOND., F.R.S.

EMERITUS PROFESSOR OF PHYSIOLOGY, OWENS COLLEGE, MANCHESTER. PROFESSOR ARTHUR GAMGEE, whose death during a visit to Paris was briefly announced last week, was born in 1841, a younger son of Mr. Joseph Gamgee, a veterinary surgeon of Edinburgh, distinguished for his researches, particularly with regard to rinderpest.

Arthur Gamgee was educated at University College School, and at the University of Edinburgh, where he graduated M.D. in 1862, being awarded the gold medal for his thesis. He became lecturer on physiology at Surgeons' Hall, Edinburgh, and physician to the Royal Hospital for Sick Children. He was also assistant to the professor of medical jurisprudence at the University of Edinburgh from 1863 to 1869, and at this time began his researches on haemoglobin and the pharmacology of the nitrites.

In 1872 the Royal Manchester School of Medicine was incorporated with the Owens College, and in the following year Dr. Gamgee was appointed the first Professor of Physiology in the College, and set to work to develop the department with characteristic energy and enthusiasm. The number of students at that time was small, but Professor Gamgee was not discouraged by this circumstance; he proved himself an inspiring teacher, and among his pupils are many who have since attained to eminent positions. At the time when Gamgee became professor at Manchester there was a dearth of textbooks on physiology, and in 1875 he published a translation of Hermann's *Human Physiology*, which was very generally adopted as a textbook, and which reached a second edition in 1878. He was Dean of the Faculty of Medicine, and Physician to the Manchester Hospital for Consumption and Diseases of the Throat; he was President of the Section of Physiology at the annual meeting of the British Medical Association in Manchester in 1877, and delivered an address on recent advances in physiology, which was largely concerned with the then new observations on digestive ferments, especially trypsin, and with

the electric current in muscles. He early turned his attention to the chemical side of physiology, and in 1880 published the first volume of his important work, *A Text-book of the Physiological Chemistry of the Animal Body*, the second volume of which did not appear until 1893, and embodied investigations which he conducted in the laboratory of his friend Professor Hugo Kruonecker at Berne.

Soon after the appearance of the first volume of this work, Gamgee decided to relinquish the teaching of physiology and to devote himself mainly to the practice of medicine, and with this object in view he resigned the Brackenbury chair at Manchester and migrated to London, where he obtained the appointments of Assistant Physician and Lecturer on *Materia Medica* at St. George's Hospital. But in spite of some success in practice in London, he was compelled by ill health before very long to resign his hospital appointments and to seek opportunities elsewhere. After trying one or two localities in this country and in Switzerland he finally settled down in practice in Montreux, and it was here that most of the remainder of his life was spent. Three or four years ago, however, he was attracted by an offer from the Carnegie Institute of Washington to inspect on behalf of the institute the facilities for conducting researches in metabolism, calorimetry and allied subjects which were to be found in European universities, with a view to reporting on the best mode by which investigations might be carried on by the institute. He accordingly gave up his practice in Switzerland and spent several months in this, to him, congenial task. On the completion he was so deeply interested in the subject of animal heat and calorimetry that he set to work, with the aid of Mr. Horace Darwin and the Cambridge Scientific Instrument Company, to devise a means of continuous registration of the temperature of the human body, and upon this he was in fact engaged at the time of his death. An account of his apparatus together with some preliminary results, was published last year in the *Philosophical Transactions* (see also this JOURNAL of December 3rd, 1908).

But scientific investigations are not an adequate means of livelihood in this country, and Gamgee was constrained once more to settle down in practice in London, whilst continuing in Dr. Waller's laboratory at the University of London the work on temperature with which he had already achieved interesting results at Cambridge—a project which has been frustrated by his untimely death.

From 1882 to 1885 Gamgee was Fullerian Professor of Physiology at the Royal Institution of Great Britain. He was a Fellow of the Royal Society, and in 1902 delivered before it the Croonian Lecture on the chemical and physical properties of haemoglobin. He was elected Fellow of the Royal College of Physicians in 1896.

He was an honorary LL.D. of the University of Edinburgh, and last year received the honorary degree of D.Sc. from the University of Manchester. In the course of the observations with which he was presented for this degree, Professor Lamb said: "In Arthur Gamgee we welcome an old colleague who for many years illustrated the Chair of Physiology in the Owens College, and whose services in the establishment of the former Victoria University and in the securing of its medical charter are not lightly to be forgotten."

He was an accomplished linguist, and was selected by the Council of the Royal Society to represent that society at Berne last November on the occasion of the bicentenary celebration of the birth of Albrecht von Haller. The lecture-address which he presented on behalf of the society was composed by himself and delivered with the purest Italian pronunciation in a characteristic dramatic manner, which produced a great effect upon the large and distinguished audience which had assembled to do honour to the father of modern physiology.

Dr. J. G. McKENDRICK (Emeritus Professor of Physiology in the University of Glasgow) has written the following in response to our request: The foregoing account of the leading events in the life of Arthur Gamgee, accurate as it is, cannot convey an adequate idea of the singular versatility and brilliancy of the man. The writer became acquainted with him about forty years ago. He was then justly regarded as one of the ablest of the younger men connected with the Edinburgh Medical School. Imbued

with a love of science for its own sake, he attacked many questions with youthful enthusiasm and energy. He was one of the first in this country to recognize the importance of the chemical investigation of some of the phenomena of life, and he prepared himself for work of this kind by becoming an expert analyst, more especially in the obscure domain of organic chemistry. He saw that the methods of du Bois Reymond, Helmholtz, and Ludwig had their limitations, and that new vistas of discovery and new methods of investigation were opening up to the physiologist. The training he gave himself in physics, and in physical methods, was also varied and extensive. In those days he was in close touch with such men as Peter Guthrie Tait, James Dewar, and Matthews Duncan, and no doubt he was inspired by their zeal and example. He rendered a great service to physiological science by translating *Hermann's Physiology*, the first textbook of physiology that gave due importance to the laws of the conservation of energy as applied to living beings. That book was, in a sense, epoch-making, inasmuch as it presented to the student many of the phenomena of life in a new aspect. Gamgee was an excellent teacher. He had an easy flow of language, sometimes almost too exuberant, and he spoke with the fervor of one who was deeply interested in his subject. His career after leaving Edinburgh was marked by many vicissitudes and trials, and not a few felt that his devotion to science and his rare intellectual gifts did not always obtain adequate recognition. This was largely due to peculiarity of temperament, and especially to a restlessness not infrequently associated with genius. No one can doubt that Gamgee had not a little of the speculative daring of genius combined with an indefatigable industry in experimental work. Altogether he was a singularly gifted man. An accomplished linguist in at least four European languages, he was also an excellent classical scholar, and, as has already been pointed out, he had a grip of physics and chemistry, in their bearing on physiological questions, such as is possessed by few. But it was his fiery enthusiasm that was his most striking characteristic. In the privacy of domestic life, or in the street, he poured out his treasures new and old, and emphasized his points for or against the theory he was discussing, or the investigation in which he happened to be engaged. His meteoric brilliancy has now been quenched in the darkness, but there are many who will cherish it in their memory, and they will think of Arthur Gamgee as one of the most gifted men they have known.

Professor SCHÜTTER has responded to our request by the following appreciation: Having known Arthur Gamgee during the whole of my scientific life, I can say without reserve—and all his friends, who are legion, will agree—that to know him was to love him. Any faults he may have had were on the surface and so transparent that they never in the least concealed the real nature of the man, which was an embodiment of earnestness and sincerity. He was essentially impulsive and an enthusiast, and, like all enthusiasts, would for the time being become wrapped up in the matter in hand. In all probability it was this quality of mind which enabled him to work so successfully at the subject which might chance to engage his attention—witness his work on protagon, on haemoglobin, and on temperature. But enthusiasm has its disadvantages as well as its advantages, chief amongst the former being the tendency to overshoot the mark and arrive at a conclusion not always completely warranted by observation. If, however, this ever happened with Gamgee, he would himself be the first to acknowledge the error, for he was truthfulness itself. Gamgee was a brilliant conversationalist, possessed of erudition far above the average, and of an originality which might almost be said to constitute genius. His loss will be felt by physiologists all the world over, and his friends will long miss his striking personality and the sympathetic interest which he took in their work and welfare.

C. ERNEST BAKER, M.B., B.C. CAMB., F.R.C.S. ENG.,
RESIDENT.

On Sunday, March 28th, the death occurred of Dr. C. Ernest Baker under very sad circumstances. He died at 5, Gledhow Gardens, South Kensington, where he had been in practice for the last fourteen years. He had not for some time been a good sleeper, and was occasionally

much troubled with sleeplessness, but only very rarely, and under medical advice, did he take any narcotic drug. On Friday, March 26th, a medical friend strongly advised him to take a dose of veronal, but he did not do so that night. On Saturday, March 27th, on going to bed he took a tablet (5 grains) and a half of veronal, and slept all through the night. At 8 a.m. on the following morning it was impossible to rouse him. In spite of the untiring efforts of two medical friends, he never recovered consciousness, and died at 2.30 p.m. the same day. The news of his death came as a great shock to his friends, as up to the last he had been actively engaged in his practice, which had never been interrupted by ill health.

Charles ERNEST BAKER was born in 1864, and went up to Cambridge from Haileybury in 1883. He graduated B.A., taking a first class in the Natural Science Tripos in 1886. In 1886 he entered St. Bartholomew's Hospital, where, after a most successful career as a student, he held the office of House-Surgeon. He took the degrees of M.B., B.C. in 1890.

He held resident appointments at the Royal Free Hospital, the East London Hospital for Children, and the Royal Orthopaedic Hospital, and in 1893 took the diplomas of F.R.C.S. Eng., and the D.P.H. Camb. He married in 1895 Ada Marion, third daughter of Sir Thomas Smith, and began general practice at 5, Gledhow Gardens. Always eager to qualify himself as fully as possible for his life's work he worked as Clinical Assistant at the Royal Eye Hospital, Southwark, for four years whilst in practice.

Charles Ernest Baker was beloved and respected by all who knew him for his kindly, simple, and straightforward nature. These strongly marked characteristics, together with his ability, sound commonsense, and whole-hearted zeal for the welfare of his patients, made him an ideal general practitioner. His memory will remain with those who knew him as that of a man of the most lovable disposition, who took his profession seriously, and having sought strenuously to qualify himself for it, went straight forward in his practice of it with unflinching good judgement, probity, and kindness of heart.

MAJOR JOHN SIMPSON EDYE, late R.A.M.C., who died from cholera at Bengal on February 22nd, was the eldest son of Captain J. Ebye, C.B., R.N. He took the diplomas of L.S.A. in 1885, M.R.C.S. Eng. in 1886, and L.R.C.P. Lond. in the following year. Major Ebye entered the army in 1886 and retired in 1907; he saw active service in the South African war, receiving the Queen's medal and four clasps. He held the appointments of Special Plague Health Officer, and Senior Medical Officer at Cawnpore.

MR. JOHN KERSHAW, formerly of Royton, died on February 14th, in his 68th year, at his residence at St. Anne's-on-Sea, where he had lived since his retirement. He received his medical education at Manchester, and obtained the diplomas of L.R.C.P. Edin. and L.F.P.S. Glas. in 1867, and that of L.S.A. in 1868; in 1874 he became F.R.C.S. Edin. He was formerly medical officer of health for Royton and was a member of the British Medical Association. His will which has now been proved contains directions of general interest. Apart from a request that his remains be cremated without religious ceremony and that no outward sign of mourning be displayed at his house or by any of his relatives or friends, the will establishes a trust for a sum arising from the residue of his estate. This is estimated to be about £50,000, and is to be devoted towards the establishment and maintenance of a general hospital and infirmary in the township of Royton, and if possible on some part of the testator's Sunfield estate. The institution is to be free to all applicants, no inquiry being made as to their religious beliefs or practice. Furthermore, no clergyman or minister of religion, nor any socialist or person known to hold or profess socialist opinions, can at any time be a trustee, director, or manager of the institution to be established.

THE Turin Academy of Sciences offers a prize of £372 for the most important discovery or the best work in the domain of physics, natural science, or physiology. Intending competitors must send in their statement of claim on or before December 31st, 1910.

Public Health

AND

POOR-LAW MEDICAL SERVICES.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Borough of Richmond (Surrey).—The Medical Officer of Health (Dr. J. H. Crocker) states that the population in 1908 was 35,415, the birth-rate 17.2, and the death-rate 12 per 1,000. The infantile mortality-rate was equal to 106 per 1,000 births. Of the 65 children who died under 1 year old, as many as 56 were under the age of 6 months. In the last quarter of the year an outbreak of scarlet fever among children attending public elementary schools resulted in the notification of nearly 100 cases of the disease, of which number 86 per cent. were removed to the isolation hospital. Several schools were closed for short periods, but Dr. Crocker is of opinion that the chief cause of the spread of the disease throughout the district was the difficulty in getting hold of unrecognized cases. The disease was of so mild a type that the nature of the illness was not realized until the peeling stage had arrived. Appended to the report is a section dealing with the cleansing of schools. Dr. Crocker states very clearly how the school cleaners should carry out their duties, and the school managers will be well advised if they insist upon the work of the cleaners being carried out in the manner suggested by the Medical Officer of Health.

Borough of Keighley.—Calculated on an estimated population of 45,720, the birth-rate was 20.6, and the death-rate 14.5. The infantile mortality-rate was equal to 134 per 1,000 births. The most noticeable feature of the report is the record of the steady fall in the rate of infantile mortality. Ten years ago this rate was equal to 171 per 1,000 births. The medical officer of health (Dr. Scatterey) attributes the great improvement which has taken place in large measure to the employment of a woman health visitor, who has been assisted by voluntary helpers. Of the latter there are 6 superintendents and 30 helpers. Cards are sent each week from the Town Hall to the superintendents, giving particulars of the births notified. These particulars are distributed among the helpers, who visit the children as often as the circumstances of the case demand. Of the 648 babies visited, only 56 were bottle-fed from birth. The mortality of these was 22 per cent., and of the breast-fed children it was 10 per cent.

VACANT POOR-LAW MEDICAL APPOINTMENTS.

A. H. F. writes to ask what he is to do under the following circumstances: A medical practice seven miles away from him has been recently sold. The vendor of this practice had for many years past held two district medical appointments, and had been public vaccinator for the same two districts. All these appointments have now been given to the vendor's successor in practice notwithstanding the fact that our correspondent applied for appointment to the district in which he himself resides, and in which he is the only resident practitioner.

*. As our correspondent is the only resident in the district for which he applied to be appointed medical officer, we consider he had a prior claim to the medical appointment in question, and as no reason has been assigned for his not having been appointed, he might at once write to the Local Government Board before the appointment is confirmed, drawing attention to the application he made to the guardians for the district medical appointments and his reason for so doing.

The Services.

ROYAL ARMY MEDICAL CORPS (TERRITORIAL).

COURSE OF INSTRUCTION.

We are asked to announce that Captain Langford Lloyd, D.S.O., R.A.M.C., will commence an afternoon class of instruction for medical officers on Monday, April 19th, at 4.30 p.m. The course will extend over about six weeks, and at the first meeting the days and hour will be fixed upon. It will be held at 51, Calthorpe Street, W.C., and will be open to medical officers of both the First and Second London Divisions, and will be specially adapted for those who are about to present themselves for examination for promotion.

SOUTH MIDLAND DIVISION.

A review of the local Territorial units of the South Midland Division was held by General Sir Ian Hamilton, K.C.B., on Saturday, April 3rd. About 5,000 officers and men took part in the march past, the column being about 24 miles in length. The following units of the Royal Army Medical Corps took part in the proceedings: First South Midland Mounted Brigade Field Ambulance, commanded by Captain W. H. Stephen, 2 officers, and 100 men; Third South Midland Field Ambulance, commanded by Major A. R. Badger, 7 officers, and 100 men; Second South Midland Field Ambulance, commanded by Lieutenant-Colonel C. T. Griffiths, 6 officers, and 100 men; First Southern General Hospital, commanded by Major J. E. H. Sawyer, 25 men.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL.

The offices of the British Medical Association and of the British Medical Journal are at 429, Strand, London.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

TELEGRAPHIC ADDRESSES.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Atiology, London*. The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

TELEPHONE (National):—

2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.

2630, Gerrard, BRITISH MEDICAL ASSOCIATION.

2634, Gerrard, MEDICAL SECRETARY.

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CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

I.R.C.S.E. asks for experience of the Wolf motor bicycle (Wearwell Company).

ANSWERS.

STATISTICAL METHODS.

G. AUSTRALIS.—The most recent and best small book on statistical methods and their application to biology and medicine is *Frequency Curves and Correlation*, by W. Palin Elderton (London: Leyton Bros.), price 7s. 6d. Our correspondent might also consult the paper on Correlation by Mr. G. U. Yule published in the *Journal of the Royal Statistical Society* about 1900. Elementary proofs relating to probable errors and correlation will be found in the various volumes of *Biometrika*, i to vi, as well as a great number of tables useful in calculating which are not available elsewhere.

BOOKS FOR THE M.D.LOND. AND M.R.C.P.

P. C.—The following works on the subjects indicated might answer our correspondent's requirements:—For the M.D. (Medicine): Osler's *Principles and Practice of Medicine*. Sixth edition. (London: S. Appleton. 1905. 21s.) Frederiek Taylor's *Manual of the Practice of Medicine*. Eighth edition. (London: J. and A. Churchill. 1908. 16s.) Rolleston's *Diseases of the Liver, Gall Bladder, and Bile Ducts*. (London: W. B. Saunders and Co. 1905. 25s.) Goodall and Washburn's *Manual of Infectious Diseases*. Second edition. (London: H. K. Lewis. 1903. 14s.) (History of Medicine): Withington's *Medical History from the Earliest Times*. (London: Scientific Press. 1894. 12s. 6d.) (Pathology): Hewlett's *Pathology, General and Special*. Second edition. (London: J. and A. Churchill. 1907. 10s. 6d.) For the M.R.C.P.: Celsus should be read, but beyond this there is no special book.

LETTERS, NOTES, ETC.

SOUTHWOLD LIFE CASE.

THE following additional subscription has been received towards this fund, which is being raised to help Drs. Munlock and Tripp to defray the heavy damages and costs (amounting to £1,005) in the recent action which they were called upon to defend:

Dr. Kirby, Cairo £ s. d.
... .. 2 2 0

Three subscriptions have also been received from laymen, one for £5 5s., another for £5, and a third for £1 s.

Cheques should be made payable to Dr. H. P. Helsham, Beccles, or to Dr. W. Tyson, The Beeches, Lowestoft.

TAX ON NOSTRUM ADVERTISEMENTS.

M.O.H. writes: I would suggest to the Chancellor of the Exchequer a tax of 25 per cent. on the cost of all newspaper advertisements of nostrums purporting to cure or prevent any kind of disease. I have roughly worked out

that this would bring in £250,000 a year, and would be easily collected, as the newspapers would charge the advertiser for the tax and forward the amount to the Exchequer. Local authorities might be allowed to issue a stamp to affix to posters of similar advertisements. Possibly 1d. per sq. ft. would bring in enough money to pay for the proper treatment of the eyes and teeth of school children.

THE DEVELOPMENT OF THE PARASITE OF ORIENTAL SORE.

CAPTAIN W. S. PATTON, I.M.S. (Stoke St. Gregory, Taunton), writes: In the BRITISH MEDICAL JOURNAL of April 3rd, which reached me this morning, I note that Professor Minchin draws attention to Dr. Row's successful cultivation of the parasite of oriental sore, which has already been mentioned in the medical profession in this JOURNAL, March 20th, p. 746. Professor Minchin states in concluding his note that he believes "this is the first time that the parasites of oriental sore have been successfully cultivated up to the flagellate stage"; this is, however, not true. If Professor Minchin will refer to the *C. R. de l'Académie de Sciences*, Paris, tome cxi, April 15th, 1908, p. 482, he will find a paper by M. Ch. Nicolle entitled, *Culture du Parasite du Bouton d'Orient*, where he can read that this, or a very similar parasite, was cultivated a year ago by Nicolle from 3 cases of oriental sore contracted at Tebessa, Algiers. A summary of this paper was published in the *Bulletin of the Pasteur Institute*, No. 9, May 15th, 1908, by Professor Mesnil. Nicolle states he cultivated the parasites on a medium prepared in the following simple way: "Gélose 14 grain, sel marin 6, eau 9,000, reparti dans des tubes et stérilisé, on ajout 1/2 sang de lapin." Professor Minchin suggests that, as Dr. Row failed to obtain any development in sodium citrate, it indicates that their mode of transmission and development is also different. I presume that Professor Minchin here indicates that the natural development of this parasite is not likely to take place in a blood-sucking insect whose digestive juices are acid. I am assuming that Dr. Row used a slightly acid sodium citrate solution. This statement of Professor Minchin with regard to the natural development of the parasite is hardly justified from the limited number of experiments carried out by Dr. Row. It is quite obvious that the parasite of oriental sore must have a flagellate stage, but what we want to know is not so much whether it will develop in one particular kind of medium or another, but in what particular blood-sucking insect it takes place. In a recent paper (*Lancet*, January 30th, 1909) I pointed out that these cultural experiments are undoubtedly interesting, but they will not help us in discovering how these parasites are transmitted in nature. This can only be accomplished by carrying out a number of feeding experiments with suitable blood-sucking insects.

FOREIGN DRUGS.

SCOPARIUS writes: Is it not time that the fashion for it is, in the majority of cases, little more than the fashion of prescribing: synthetical remedies chiefly manufactured abroad gave place to a more extended use of wholesome home-grown and home-manufactured drugs? During the past twenty-five years I have carefully tried both, and have largely given up using the former; and I find that by using British drugs my patients do just as well if not better, the saving in the drug account being as much as 50 per cent. in some years.

PRIZE FOR ORTHOPAEDIC SURGERY.

THE second competition for the Umberto I Prize was officially declared open on January 1st. The prize, which is of the value of £140, will be awarded in accordance with the decision of the provincial council of Bologna, for the best work or the most useful invention in the province of orthopaedic surgery. Foreigners as well as Italians may compete. Intimation of intention of entering should be sent to the President of the Rizzoli Orthopaedic Institute at Bologna. The competition will close on December 1st. Three copies of printed or manuscript works, either unpublished or published within the five years preceding the date of closure of the competition, should be sent. Apparatus or instruments should be accompanied by explanatory notes subject to the same conditions. The notes may be written in Italian, French, German, or English. No works which have previously been awarded a prize will be admitted.

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S.R.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

An Address

ON

DYSMENORRHOEA.

DELIVERED AT A MEETING OF THE BATH AND BRISTOL
BRANCH OF THE BRITISH MEDICAL ASSOCIATION.BY G. ERNEST HERMAN, M.B., F.R.C.P.,
CONSULTING PHYSICIAN TO THE LONDON HOSPITAL.

I HAVE to make some sort of apology for offering to speak on this subject to-night, because I have so often put my opinions about it before the medical profession in my books, in the *Transactions* of the Obstetrical Society of London, and in the medical journals. I wish this evening to say more clearly and positively what I have already stated in print, and as emphatically to state my dissent from what is taught in many textbooks.

The teaching current in America and that of many books in this country is that dysmenorrhoea is a symptom which may be produced by many different causes, and that the first step towards its treatment is to find out its cause. In my work on *Diseases of Women* I have described genuine dysmenorrhoea, yet must plead guilty to having yielded to current opinion, and described more than one kind of dysmenorrhoea. Increased experience, and reflection upon experience, lead me to think that in this I was wrong. Matthews Duncan states at the beginning of his lecture on dysmenorrhoea that there are two forms—the inflammatory and the spasmodic. But in the rest of his lecture he describes only one, *dysmenorrhoea spasmodica*. In conversation I have heard him say that there was but one true dysmenorrhoea, and this proposition is implied throughout his lecture. Of all men who ever wrote upon gynaecology, Matthews Duncan was the most exact in the use of language, and the most learned in the literature of his subject. The last edition of his *Clinical Lectures on the Diseases of Women* was published in 1889. Since then surgery has marvellously advanced, so that the considerations upon which the family doctor has to base his advice for or against operative treatment are very different now from what they were when Duncan practised. But this is almost the only thing in which these wonderful lectures are unsuitable as a guide to the practitioner to-day. They contain a store of accurate pathological and clinical information that is to be found in no other book that up to then had been published. It is remarkable that this great work should have so little influenced American practice. In that great and progressive country the newest methods of cutting and stitching seem to be thought so important that no one who wishes to be thought up to date can stop to read a book twenty years old. Hence we have a report of an operation by the surgeon-in-chief of a gynaecological clinic in one of the largest and oldest cities of America, describing how he opened the peritoneal cavity, and found no disease within it, he being in complete and amazing ignorance of pelvic cellulitis, although he might have found in Duncan's twenty-year-old lectures an accurate description of its phenomena. And quite recently I opened a book on medical gynaecology by an American, who seemed as ignorant about dysmenorrhoea as the surgeon was concerning pelvic cellulitis.

This is a digression. The first thing I wish to say is that dysmenorrhoea is a disease, and not a symptom.

About one third of all women menstruate without pain. These happy beings also have, as a rule, good appetites; they sleep soundly, and they are not easily tired; they have healthy nervous systems.

There is before and during menstruation some increase in vascular tension and rise of temperature. In patients who are ill or weak, the effect of this is to reduce the strength of the nervous system, and to make them more sensitive to pain; and hence such patients have pain before and during menstruation. In most women this pain is only slight; they feel uncomfortable, but there is nothing in their appearance or behaviour to announce to their friends or acquaintances that menstruation is present or imminent. The degree to which the patient is incapacitated by this pelvic aching depends upon the strength of her nervous system—that is, upon her power of resisting

pain. If she is neurasthenic, she may feel so ill that she may wish to keep in bed. Whether she does so or not will depend upon circumstances. One patient of mine, a married woman with children, told me that she had always kept in bed for a day or two each month ever since menstruation began. I happened to know that before her marriage she had been a hospital nurse, and I asked whether she went to bed each month while she was nursing in the hospital. She said: "No; I had to keep up." I have no doubt there are numbers of young women earning their living in various ways—servants, shopgirls, barmaids, actresses, teachers—who, if circumstances permitted, would be glad to lie down; but they prefer to put up with the pelvic aching rather than run a risk of losing their situations. In these patients there is nothing the matter with any pelvic organ. The case is that the nervous system is weak, so weak that its power of resistance to pain breaks down under the stress of menstruation. One writer applies to cases of this kind the term "neurasthenic dysmenorrhoea." The objection to this term is that it suggests that the uterus is at fault, and that therefore the uterus should be treated. In these cases there is nothing the matter with any pelvic organ; the uterus is only fulfilling a physiological function, and no good, but possibly much harm, can come from meddling with it.

In nearly every local disease that causes pain this pain is worse about the time when menstruation begins. The dragging of prolapse, the sacral aching caused by a retroverted uterus, the pain of salpingo-oophoritis and pelvic peritonitis are all worse at this time. But the pain is not the acute spasms of dysmenorrhoea; it is the usual pain of prolapse, or retroversion, or pelvic peritonitis, as the case may be, rather worse than usual. We may explain it by saying that it is aggravated by the pelvic congestion which precedes menstruation, or that it is more felt, owing to the weakened state of the patient's nervous system. We may, it is true, meet with cases of painful pelvic disease who mention first, as the reason why they seek advice, the menstrual pain they suffer; but further inquiry will elicit that the menstrual pain is only one incident, and that there is, or has been, similar pain at other times also. It is true, also, that local disease confers no immunity against genuine dysmenorrhoea, and a patient may have real dysmenorrhoea as well as pain in the pelvis caused by a local morbid condition.

In many nervous diseases the symptoms are worse when menstruation is approaching or beginning. This is often the case in neuralgia, epilepsy, chorea, mania, migraine, etc. But aggravation of nervous symptoms by temporary lessening of the resisting power of the nervous system is not dysmenorrhoea. In a few cases some nervous disease may be complicated with actual dysmenorrhoea; but it is an accidental complication only. Such terms as "menstrual epilepsy," which imply dependence of disease on menstruation, have an ill effect, because they have led both doctors and patients to think that benefit in these diseases will follow the stoppage of menstruation. This is not the case. No benefit, in these diseases, follows removal of the ovaries.

Now I come to recant my own errors. I have written of obstructive dysmenorrhoea; but I think this would be better called by a different name. I have, like many others, written about "membranous dysmenorrhoea." The term implies that there is a resemblance, indeed an identity, between the pain caused by obstruction to the exit of the menstrual flow, or by the presence of a membrane, and the very severe pain of dysmenorrhoea.

If "dysmenorrhoea" be restricted to what I think should be its proper meaning, and is used to denote morbidly painful uterine contractions accompanying menstruation, then there is no such thing as obstructive dysmenorrhoea. There is sometimes obstruction to the exit of menstrual fluid, but if pain is caused by such obstruction it is only slight. I have seen more than once a vaginal portion with a circular external os so small that it would not admit the ordinary uterine sound, but the patient's menstruation was painless. After amputation of the cervix, the opening into the uterine cavity is sometimes contracted by scar tissue but menstrual pain, if present, is not severe. In congenital atresia of the genital passage leading to retention of menstrual fluid, although the history usually is of slight monthly attacks of pain, yet cases occur in which with

retention of menses lasting over years, and forming a tumour palpable by the abdomen, there has been no pain. I am not acquainted with any such case in which the pain has been anything like that of dysmenorrhoea. Therefore, I think these cases are better spoken of in language that denotes the anatomical condition present—namely, stenosis or atresia.

"*Membranous dysmenorrhoea*" is understood to mean pain caused by the menstrual decidua being shed in one or more pieces instead of in a pulp. I dare say most of us here are or have been under the impression that this is a disease both rare and painful. But I doubt its being either rare or painful. Those of us who have thought it so have formed that judgement from the observations of a few sensitive, intelligent, observant, and reflective patients. The patients have come to us because, being sensitive, they had monthly pain; because they had pain, being intelligent they examined their discharges; being observant, they perceived in them solid lumps; and being reflective, it occurred to them that these solid lumps might be the cause of the pain; and so they preserved the membranes and brought them to us. But those who have instructed nurses to thoroughly examine what passes from every menstruating woman have found that bits of membrane are passed far more frequently than is supposed. Scanzoni found them in two-thirds of women; Sir John Williams in three-fourths. Such a frequency suggests doubt as to whether the passage of membrane should be regarded as disease. The pain when membranes are passed is seldom great. When a miscarriage takes place the substance passed is bigger than the menstrual decidua; but, as every one knows, a doctor is not usually summoned to a woman who is aborting on account of the severity of the pain. Further, I have taken into hospital patients who came for treatment on account of menstrual pain, and who produced membranes which they had passed; and in the hospital, without local treatment, but only the benefit of rest, sound sleep, and good food, these patients menstruated, passed membranes as usual, but without pain. I draw the conclusion that most patients who pass membranes with pain, suffer pain not because membranes are passed, but because their nervous systems are weak; in other words, that pain in passing membranes is not dysmenorrhoea, but a manifestation of neurasthenia.

The disease to which, in my opinion, the term "*dysmenorrhoea*" should be restricted consists in painful uterine contractions which accompany menstruation. The pain has distinctive characters. Not all cases are alike in severity, but in the worst cases the pain is far more severe than any other kind of pain felt in the pelvic region without physical signs of disease. Acute peritonitis may cause severe pain. But in peritonitis there are physical signs—rise of temperature and pulse, and fixation of the uterus. In the worst cases of dysmenorrhoea the patient writhes, perspires, vomits, sometimes faints with the severity of the pain. The pain is not relieved by lying down. In pain due to inflammation or congestion of dependent parts of the body the patient feels better when she is lying down. But the pain of dysmenorrhoea not only is not relieved by recumbency, but if, as often is the case, in obedience to maternal advice the patient keeps in bed, she cannot lie still, she rolls, wriggles, and writhes with pain. Another feature of the pain, besides its great severity, is its short duration. The discomfort produced by the monthly congestion of the pelvic organs begins some days, sometimes even a week or more, before the flow appears, and it lasts until the flow is nearly or quite over. There are remissions in its severity, and the duration of the attacks and remissions is, usually two or three hours. The spasmodic pain of dysmenorrhoea only lasts a few hours, seldom longer than twenty-four hours, and the duration of each spasm of pain is commonly only a minute or two, about as long as a labour pain. It generally begins with the flow.

I know absolutely nothing of the cause or causes of dysmenorrhoea. I know of no criteria from which to predict that a particular girl who is approaching puberty when she menstruates will have acute spasmodic pain; nor is anything known to me from which I can predict that a young woman who has menstruated for a few years without pain will suddenly come to suffer severely when this function returns. As I am unable to predict that pain will occur, it follows that I am equally unable to

prevent it. Antelexion, smallness or conical shape of the vaginal portion, and smallness of the os externum are conditions regarded as morbid by certain practitioners. People who study disease as it is seen in the dead body never find any morbid effects from these conditions. If they were really malformations capable of setting up trouble in connexion with menstruation, that trouble would always date from the beginning of the function. The view that dysmenorrhoea depends upon a malformation is to me inconsistent with the clinical experience that in about one-third of the cases the pain suddenly begins after years of painless menstruation.

There are those who say that dysmenorrhoea is usually due to endometritis. This kind of endometritis is like the so-called malformations—a disease unknown to those who examine dead bodies. I do not believe that, except very rarely as a result of accidental infection or a new growth, endometritis exists in virgins. As in two-thirds of the cases the pain dates from the time of the first menstruation, the endometritic theory postulates that endometritis occurs not only in virgins but in girls at puberty. Of this there is no evidence.

There is a disease in which we know at least the immediate cause of dysmenorrhoea. I refer to cases in which the uterus contains a small fibroid, and the uterine contractions are forcing it, first out of the uterine wall into the uterine cavity, and then through the cervical canal into the vagina. In these cases the pain is often severe and of the dysmenorrhoeal spasmodic character. These cases, nevertheless, do not invalidate my statement as to our ignorance of the causes of dysmenorrhoea; for we know not why fibroids grow; we can neither predict nor prevent their growth, and if we find a uterus enlarged by what we take to be a small fibroid, which is not at present giving trouble, we cannot tell whether it will grow larger or not, whether it will be expelled into the vagina or not.

Some writers, who have not learned to recognize the disease that I am speaking of, begin their advice as to the treatment of pain with menstruation by telling the pupil that he "should improve the general health." This is a platitude that applies to every patient, man, woman, or child. The writer might as well go on to say that the patient should have enough to eat and sufficient clothing. I know no condition of the general health that has anything to do with the production of dysmenorrhoea. Like many other nervous symptoms, it is apt to occur in young women with highly-developed sensitive nervous systems; but I know of no signs distinctive enough to enable us to predict that a particular girl, when she menstruates, will do so with pain. When dysmenorrhoea arises after years of painless menstruation patients often have an explanation of their own for it—such, for instance, as some mental or physical shock or strain. There are few patients who, if they are invited to think of something that may have made them ill, and will search their memories hard enough, cannot find some occurrence in their lives which will suit. But I have not been able to elicit any incident which has preceded dysmenorrhoea as frequently as anything which was really a cause of the disease should have done.

With dysmenorrhoea there is often indifference or repugnance to sexual intercourse. This may be so although intercourse is neither difficult nor painful, and such patients are generally sterile. In such cases cure of the dysmenorrhoea will often at once produce sexual desire and enjoyment, sometimes soon followed by pregnancy. I cannot say to what proportion of cases the above statements apply, because the matter cannot be inquired into as a matter of routine, but I have been told of it often enough to make me sure that it is more than a coincidence. In one case the patient's dysmenorrhoea was cured at a time when her husband was abroad, and the patient told me that she looked forward to her husband's return with feelings different from any that she had ever before experienced.

This close association of dysmenorrhoea with imperfection of the reproductive function seems to me to mark this disease as one *sui generis*. There is no such association with any other kind of menstrual pain, or with any other morbid condition of the pelvic organs that I know of.

I have already said that one of the most distinctive

features of dysmenorrhoea, as contrasted with pains of other kinds made worse by menstruation, is the extreme severity of the pain. This terrible pain reduces the pain-resisting power of the nervous system. The consequence is that reflected pain is felt over the skin supplied with sensory nerves from the eleventh dorsal to the second lumbar segments of the spinal cord. Touch the skin over this region while a patient with dysmenorrhoea is menstruating and she winces at once. When dysmenorrhoea has existed for years, the result of the oft-repeated periodical reduction of the strength of the patient's nervous system is that this reflected pain comes to last longer and longer, until at length, after many years, it may be practically continuous. I have also mentioned vomiting as an effect of the spasms of pain. At first the vomiting only occurs when the patient is in pain; but as years go by the vomiting, like the pain, lasts each month longer and longer; and I have known and published elsewhere the details of a case in which a patient died exhausted by incessant vomiting and inability to retain food, for which vomiting no cause was discovered except dysmenorrhoea; but I must admit that no *post-mortem* examination was made.

Dysmenorrhoea has no tendency to spontaneous cure. The only cure other than by medical treatment is child-bearing. Although the co-ordination of the menstrual and sexual function are both imperfect, and consequently the meeting *in utero* of the germ cell and the sperm cell is not helped as it should be; yet, nevertheless, the germ cell and the sperm cell may meet, and pregnancy occur; and then, in most such cases, dysmenorrhoea is cured.

One cannot help having some theory of the disease. My own is that dysmenorrhoea exists because the centre in the spinal cord, or in the sympathetic system which should regulate the movements of the genital canal, is imperfectly developed. The vagina, uterus, and Fallopian tubes are muscular organs, like the intestine. During labour there is contraction of the uterus to expel the child. There are morbid kinds of uterine contraction which I need not here dwell upon. During the sexual orgasm, I believe there is a co-ordinated muscular action of the Fallopian tubes, uterus, and vagina, having for its object to help the ovum into the uterus, and also the spermatozoa into the uterus. In a normal painless menstruation there are contractions of the body of the uterus, and dilatation of the cervix, so that the menstrual flow is expelled without pain or difficulty. My theory is that in dysmenorrhoea this natural dilatation of the cervix is absent, and, in consequence, the contractions of the uterine body are morbidly violent and painful. The only physical sign that I think I have observed in cases of dysmenorrhoea is difficulty in dilating the cervix. I say "I think" because I have no way of measuring the amount of force used in passing each dilator; and my impression may not be correct. But every now and then one meets with a case in which the nature of the monthly pain is not clear, or a patient who has little or no monthly pain, but is sterile, and wishes to leave nothing undone that can possibly favour pregnancy. In such cases I have advised and performed dilatation of the cervix as a possible, rather than a probable, source of benefit. My experience has led me to expect that when the cervix dilates slowly and with difficulty the dilatation will cure the dysmenorrhoea; but that when one dilator after another slips in without more than trifling resistance, the object of treatment will probably not be attained. The disease is not from obstruction. Although I have conjectured that the pain is because physiological dilatation or relaxation, if that word be preferred, does not take place, yet the canal in its undilated, unrelaxed state is quite big enough to let the patient bleed to death through it. In fact, young virgins have bled to death through the cervical canal. Nobody has ever yet seen retention of blood in the uterine cavity as the result of dysmenorrhoea, even when the vaginal portion is supposed to be infantile, or long, or conical.

As to Treatment.—I shall not discuss the palliative treatment—that is, the relief of pain when it has arrived. It resolves itself into the local application of heat and swallowing of coal-tar analgesics. The cure is to prevent the arrival of the pain. Every case of dysmenorrhoea can be cured. The unfailing cure is to stop menstruation. The question is whether, in a particular case, this remedy

is not worse than the disease. Fortunately it is seldom that this extreme measure is required.

The first and simplest treatment is by a drug. There is one drug that will cure some cases of dysmenorrhoea. That drug is *guaiaicum*. I prescribe 10 grains of *guaiaicum* resin three times a day, begun a week before menstruation is expected, and continued until the time at which the pain usually occurs is past. It may be given in a mixture either with milk, as in the *British Pharmacopoeia*; or with gum tragacanth, as in the London Hospital pharmacopoeia; or mixed with malt extract; or in a cachet. In some cases this drug will prevent the pain from coming on, or lessen its severity when it does come. I cannot say what proportion of cases it cures, for it is so difficult to follow up the histories of this class of patient; but I have seen instances enough to make me sure that the relation between the drug and the disappearance of pain is more than coincidence. A patient consulted me in January, 1902, being then unmarried and aged 21. She had suffered from dysmenorrhoea for two years. The pain was paroxysmal, it was not relieved by lying down, and it was so severe as to make her vomit. I did not examine her, but prescribed *guaiaicum*. A few days ago she told me that since taking the medicine she had had no more of the old monthly pain. She had been now married three years, but was sterile.

If drug treatment fails, the next thing is to dilate the cervix. This is best done with metal bougies, and, when the patient is young and unmarried, under anaesthesia. As a rule, the passage of bougies up to No. 12 on the catheter scale is enough to cure the patient, but, if the patient is anaesthetized, it can be carried a little further without harm, and possibly greater certainty of cure. In the days of my professional youth it was the general practice to cut through the vaginal portion with scissors, in one or more places, and this was often successful. But dilatation is, I think, more certain, for it dilates the whole canal, and not the os externum only. If the os externum is very small and circular, I should still advise its division, to avoid, in case of subsequent pregnancy, slowness of the first stage of labour.

Most cases of dysmenorrhoea are cured by dilatation. The relief may last throughout the whole subsequent duration of the menstrual function. It may last only for a few months, and then a repetition of the dilatation may lead again to relief, this time probably of longer duration. I know no more of the cause of the relapse than of the original cause of the disease. If the patient is married, the dilatation favours pregnancy.

The natural cure for the disease is pregnancy. This involves the utmost possible dilatation of the cervix, the dilator being the baby's head. But this cure is not available for every patient.

Unfortunately, it must be admitted that there are cases in which all treatment fails, and the pain is very severe. I have already pointed out how each monthly storm of pain breaks down the resistance of the nervous system more and more so that the reflected pain comes to be more widely and severely felt, and lasts longer each month, until the patient becomes an invalid for many days each month. If when the patient is reduced to this condition she yet has no prospect of marriage, and is willing to renounce the potentiality of maternity, I think she is entitled, if she chooses, to be cured by having menstruation stopped—that is, by having her ovaries removed. Special circumstances may induce us to listen to this request from a young woman. If she has no relatives who can support her, if she cannot keep any situation because of the illness which each month prostrates her, and all other treatment has failed, what is to be done?

This brings me to the reason why the limitation of the term "*dysmenorrhoea*" is not a mere verbal quibble or pedantic futility. To so limit the word is to recognize that genuine dysmenorrhoea is a different thing from disease the symptoms of which are worse when the patient menstruates. In cases, for instance, such as what one writer calls "neurasthenic dysmenorrhoea," which means a patient with neurasthenia who feels worse about the time of menstruation, after stopping menstruation by removing the ovaries, the patient is no better, for menstruation is not the only thing that makes such patients worse; and very likely the disappointment of the relief she hoped for, and the sense of the value of

the potentialities she had lost, will make her worse. So with so-called menstrual epilepsy, neuralgia, etc., taking out the ovaries only removes an occasional exciting cause; it does not cure the patient, and may make her worse. But if the primary original disease was dysmenorrhoea, and the added neurasthenia has been produced by the severity of the pain with menstruation, the patient will be cured if menstruation is stopped. Before advising so grave a measure as oophorectomy the great thing is to be sure that the pain and the prostration spring from menstruation and from nothing else. The practitioner will be in an unenviable position who hastily proposes removal of the ovaries for a few attacks of colic due to flatulence or constipation. But careful observation ought to prevent such a mistake.

ON THE IMPORTANCE OF PAIN AND HAEMORRHAGE AS SYMPTOMS OF EXTRAUTERINE GESTATION.*

By THOMAS WATTS EDEN, M.D. EDIN.,

F.R.C.P. LOND., F.R.C.S. EDIN.,

SURGEON TO THE CHELSEA HOSPITAL FOR WOMEN; OBSTETRIC
PHYSICIAN TO CHARING CROSS HOSPITAL; PHYSICIAN TO
QUEEN CHARLOTTE'S LYING-IN HOSPITAL.

Few of the conditions which come under the notice of the gynaecological surgeon are of greater interest in diagnosis than extrauterine gestation. Occasionally cases occur which present features so striking and so characteristic that their nature is readily recognized. But this is not always the case, for the clinical features may be so complex as to puzzle the most experienced observers. And not only are the clinical features complex, they are also subject to extraordinary variation in character and severity, so that it may be difficult to believe that the same pathological condition has given rise to them all. The explanation of these difficulties lies in the fact that the symptoms associated with extrauterine gestation arise, not directly from the presence of the growing ovum in the Fallopian tube, but from certain secondary lesions, either traumatic or inflammatory, which supervene.

These secondary lesions may be briefly enumerated as follows:

1. Intraperitoneal flooding from tubal abortion or rupture.
2. Intratubal bleeding, leading to acute distension of the tube, the abdominal ostium being sealed.
3. Slowly progressive or recurrent haemorrhage, leading to the formation of encysted collections of blood—for example, *pelvic haematoma*, in the broad ligament; *pelvic haematocoele*, in the pouch of Douglas; *peritubal haematocoele*, around the abdominal end of the tube.
4. Infection of the gravid tube, or of an encysted collection of blood, leading to suppuration.

Until one or other of these secondary lesions is produced, extrauterine pregnancy gives rise to no more local or general disturbance than does an early pregnancy in the uterus. An important symptom associated with this phase—namely, a brief period of amenorrhoea—is a most useful aid in diagnosis, but it is by no means always present. When a healthy adult woman, who is usually regular, goes for two or three weeks over the expected date of her period, there is a strong presumption of pregnancy, but at this time there is nothing to indicate whether pregnancy is uterine or extrauterine. In the latter case, however, amenorrhoea is of very brief duration, seldom more than seven or eight weeks, and then gives place to haemorrhage. In something like 30 per cent. of the cases which have come under my own observation there has been no amenorrhoea at all, and I am satisfied that while this symptom forms a useful positive indication, no importance whatever can be attached to its absence. As it is quite unusual for an extrauterine gestation to continue undisturbed beyond the end of the second month, there is consequently no time for the appearance of other general symptoms of pregnancy. But occasionally morning sickness and early breast changes may be met with. When the course of the gestation becomes interrupted by any of the occurrences mentioned above, the clinical features

undergo rapid transformation, and symptoms appear which we are accustomed to regard as those of extrauterine pregnancy; they are, however, in reality those which result from the interruption of the pregnancy by injury to the developing ovum or to its containing sac.

These symptoms, which it is clear ought to be regarded as *secondary symptoms*, are subject to great variation in their character and intensity in correspondence with the nature of the lesion which has given rise to them. The occurrence which is the simplest and the most easily recognized is *intraperitoneal flooding*; the symptoms which attend it are uniform and characteristic, and when a clinical history of amenorrhoea can be obtained, and a careful pelvic examination made, mistakes are hardly possible. Perforation of a hollow viscus, such as the stomach, duodenum, or gall bladder, is the only condition for which it is at all likely to be mistaken, even under circumstances unfavourable for diagnosis. The following case, which is typical of its class, illustrates the remarkable simplicity of the diagnostic problem.

CASE I.

On May 6th, 1904, I was asked by Dr. Hooper, of Sutton, to come down at once to see a case which he believed to be one of ruptured extrauterine pregnancy. The patient was a tripara, 32 years of age, her last confinement having taken place fifteen months previously. In March, 1904, she had a regular period; in April she went six days over her time, when slight bleeding occurred and continued for eight days; after an interruption of twelve hours, it recurred, and continued unchanged up to May 6th. Owing to the haemorrhage, she was kept to bed from May 2nd onwards, and treated with douches and small doses of ergot. On the afternoon of May 6th, while using the douche, she was seized with sudden severe abdominal pain, accompanied with an urgent desire to relieve the bowels. She remained straining at stool and in great pain for some time, and then fainted. Dr. Hooper, when summoned two hours later, at once recognized the signs of severe internal haemorrhage, and I saw her about five hours after the onset of the acute abdominal pain. She had vomited several times, but her general condition had then begun to improve; the face was pale and drawn, the pulse was very small and its rate about 100, the temperature was subnormal, and the skin cold and rather moist. She complained of severe epigastric pain, but was not restless. The abdomen was not distended, but there was marked tenderness over the hypogastric and left iliac regions, which were also dull on percussion. On vaginal examination, a soft swelling was found in the pouch of Douglas, and a firmer, better-defined mass to the left side of the uterus. We had no difficulty in recognizing the case as one of left tubal pregnancy with intraperitoneal flooding, probably due to rupture. It was pretty certain that the bleeding had for the time ceased, and we therefore spent some hours in restorative measures, and operated the next morning, when her general condition had greatly improved. About 30 oz. of fluid and clotted blood were removed from the peritoneal cavity, and in the isthmial portion of the left tube was found a rupture with a small cuboid-shaped mole attached to it. An illustration of this specimen appears in the author's text-book of *Midwifery* (Fig. 60). The tube and ovary were removed and the patient made a good recovery, and has since then given birth to another child.

It is obvious that the diagnosis of a case of this class is a comparatively simple matter, but the symptoms which preceded and attended the rupture of the tube are of great interest and importance. In the first place, it is to be observed that slight haemorrhage, following a brief period of amenorrhoea, had been going on for three weeks before the tube ruptured. Haemorrhage from the uterus is a secondary symptom of extrauterine gestation which is constantly present. If no period of amenorrhoea has occurred it forms the initial symptom, if there has been amenorrhoea it succeeds it. In the great majority of cases it is the earliest indication of anything wrong, but as the same thing frequently occurs from disturbance of a uterine pregnancy, little importance is usually attached to its appearance either by the patient or her doctor. The haemorrhage is slight or moderate in degree, sometimes continuous, sometimes irregular; and, as the late Dr. Cullingworth pointed out, it is usually dark, thick, and syrupy in appearance. It may continue for several weeks if the patient is not relieved by operation. The bleeding is no doubt due to separation and discharge of the uterine decidua, sometimes complete, more often in fragments; but in the majority of cases the pieces of membrane do not attract attention, and are not detected by the medical attendant.

This attempt on the part of the uterus to throw off its decidua when the tubal ovum has been damaged is a most interesting phenomenon. Some reflex mechanism is no

* Read at a meeting of the Richmond Division of the British Medical Association, January 11th, 1909.

doubt initiated which excites uterine contraction sufficiently powerful to detach portions of the membrane from the uterine wall, and so give rise to haemorrhage, which continues until the whole of the decidua has been expelled. It is, however, possible that at the commencement some of the blood which escapes from the uterus may have made its way there from the gravid tube through the interstitial portion. In cases submitted to operation, the haemorrhage always ceases in a few days after the removal of the tube, and I know of no instances in which portions of decidua have been retained, giving rise to persistent bleeding, as is so often the case in uterine abortion.

It is interesting to note that the effects produced by the rapid effusion of a large quantity of blood into the peritoneal cavity were, in the order of their occurrence: (a) acute abdominal pain; (b) fainting and the constitutional signs of haemorrhage; (c) shock, attended by vomiting, and lasting for several hours. The quantity of effused blood was estimated at 30 oz., and the bleeding probably ceased spontaneously when the patient fainted. After an interval of eighteen hours, very marked improvement in her general condition had taken place. This improvement is an important point, and of itself serves to distinguish such cases from perforation of the stomach or intestine, in which the peritoneum is continuously flooded with highly irritant fluids, and the patient's general condition passes rapidly from bad to worse.

The sudden attack of intense abdominal pain in this case was produced not by rupture of the tube, but by the rapid inundation of the peritoneum with effused blood. Pain, equally severe, may result from sudden free bleeding in tubal abortion—that is, haemorrhage through the patent abdominal ostium—and there is no doubt that it is due to the intense peritoneal irritation caused by blood being brought into contact with a large area of this membrane. The actual laceration of tissue caused by the rupture is probably only an inconsiderable factor in the production of pain. The subsequent course of events—fainting, the development of constitutional signs of haemorrhage, and then the gradual recovery from shock—revealed the causation of the attack, but, as we shall see, the subsequent symptoms are not always of the same illuminating character.

No matter what may be the nature of the secondary lesions occurring in a case of tubal pregnancy, these two symptoms are common to them all—namely, uterine haemorrhage and pain. The pain which is met with has certain characteristic features which deserve attention. It is almost always sudden in onset, and usually spontaneous, although muscular effort, such as lifting something heavy or the act of defaecation, may appear to excite it; it is always severe, and often of the most intense character; it affects at first the whole abdomen, but later may become localized; it is frequently attended with vomiting and other signs of shock, sometimes with faintness or actual syncope; after lasting acutely for several hours it subsides, and thereafter may recur at varying intervals of a few days or a week, until several attacks have been sustained; sometimes continuous pain without exacerbation follows the first attack. The initial attack of pain is almost always due to haemorrhage; the subsequent attacks have a more complex origin, and this I shall endeavour to illustrate by relating a few cases. But pain bearing the broad characteristics above described is a constant symptom of extrauterine gestation, and I regard it as the most reliable indication of the existence of this condition.

In cases not immediately submitted to operation recurrent attacks of intense pain may occur from repeated intraperitoneal haemorrhages, as the following case shows:

CASE II.

This patient was sent to me at the Chelsea Hospital for Women by Dr. Maguire, of Kew, on October 20th, 1904. She was a woman 27 years of age; she had had no children, but a miscarriage had occurred in the previous February. Menstruation had been regular since this occurrence and during the course of an ordinary period which began at the expected time, on October 6th, she was seized with acute abdominal pain, which lasted with intermissions for three to four days. Then she improved, but slight uterine haemorrhage continued for eleven days, that is, till the 17th, when another similar attack of severe abdominal pain occurred.

Dr. Maguire then diagnosed extrauterine gestation, and sent

the patient into the hospital. When admitted she was complaining of great pain; she was pale and restless; her temperature was 100°, and her pulse 110; the abdomen was distended and tender. There was also slight uterine haemorrhage. Behind the cervix a soft mass could be felt, but the abdomen was too much distended to allow of a satisfactory bimanual examination being made. Having decided that it was not necessary to operate immediately, during the next two days the bowels were freely relieved by enemata, the abdominal distension subsided, and the patient's general condition improved. Three days after admission, although she had not been allowed to get up, another acute attack of abdominal pain occurred, and lasted for several hours. On October 25th I operated, and found a large quantity, estimated at 24 pints, of fluid and clotted blood lying free in the pelvic and abdominal cavities; there was no attempt at encapsulation by adhesions. Having removed this we found the left Fallopian tube dilated, and ruptured in its outer third. The damaged tube was removed, and the patient made a good recovery from the operation.

It will be seen that in this case the diagnosis was not quite so obvious as in the first case. There had been no initial period of amenorrhoea, for the patient's illness began during the course of what she regarded as a normal monthly period. Further, the prominent symptom was acute abdominal pain which lasted for three to four days with intermissions. Collapse and faintness were absent. Two similar attacks of acute pain occurred at further intervals on the eleventh and seventeenth days after the first attack. Signs of internal haemorrhage gradually developed, but at the onset of the illness they were not apparent. It is, I think, clear that in this case rupture of the tube led, not to a single profuse haemorrhage suddenly flooding the peritoneal cavity, but to a more moderate and progressive haemorrhage, which was arrested spontaneously, but recurred twice at intervals of eleven and fourteen days after the first bleeding. The total amount of blood lost was nearly double that lost in the first case, yet, owing to the slower rate of bleeding, the degree of constitutional disturbance was much less. There can be no doubt that each attack of acute pain coincided with an outbreak of fresh bleeding, and was due to the same cause—namely, peritoneal irritation.

It will be borne in mind that there was no attempt at encapsulation of the blood which had been escaping into the peritoneal cavity intermittently for three weeks. In such circumstances the pain attending the haemorrhages cannot be due to tension, but must be the reaction of the sensory nerves of the peritoneum.

Acute attacks of intense abdominal pain may, however, arise in extrauterine gestation under conditions quite different from those of Cases I and II.

CASE III.

Mrs. J., aged 50, unipara. She had had one child eight years previously, that is, in 1892, and in the second week of the puerperium a severe illness developed, which lasted for about a month. It was probably some septic complication resulting in pelvic inflammation. Since this illness she had never been well, and complained of nearly constant pelvic pain. She was quite regular up to March, 1900; the April period was missed, and about ten days later, on May 3rd, moderate haemorrhage set in, and continued for about fourteen days. On May 17th she was suddenly seized during the night with the most intense abdominal pain. So severe was the pain that she was placed under anaesthesia in order to make a satisfactory examination of her condition. The uterus was found to be retroverted, a soft swelling was detected on the left side of the uterus, and a provisional diagnosis of extrauterine gestation was made by her medical attendant, Dr. Maguire. I saw the case on the following day, and was inclined to think that the swelling on the left side was an abscess in the tube or ovary, and that the acute attacks of pain were due to escape of pus and resulting localized peritonitis. I was not as familiar then as I am now with the fact that escape of blood into the peritoneal cavity may cause pain quite as acute as the perforation of an abscess, or of a hollow viscus. At the operation we found many old and dense pelvic adhesions matting the uterus and its appendages together on either side, and isolating this part of the pelvic cavity. On separating these adhesions a few ounces of recent blood clot were found confined beneath them; the left tube was seen to be dilated, and was isolated from its attachments only with considerable difficulty. A tubal mole, the size of a goose's egg, was found among the clot, and on carefully examining the tube we came to the conclusion that the case was probably one of tubal abortion. The patient made an uninterrupted recovery.

In this case I believe that the extraordinary intensity of the pain was in great part due to the fact that the haemorrhage occurred into a confined space. The density of the pelvic adhesions quite precluded the possibility of their having been produced by the effused blood—that is, of

their being not more than twelve days old. The lower part of the pouch of Douglas, where the effused blood was found, was thus hermetically sealed, and the tension set up in it by the effusion of a few ounces of blood, while no doubt it intensified the pain, was probably of service in arresting the haemorrhage before any great amount of blood had been lost. It is obvious from this case that the amount of blood poured into the peritoneal cavity is not the only determining factor in the degree of pain produced. The absence of constitutional signs of haemorrhage was, of course, easily explained by the conditions found at the operation, but it was to their absence that I attribute my failure to correctly diagnose this case.

These three cases will serve to illustrate the symptoms which arise when *intraperitoneal* bleeding occurs in extrauterine gestation, and among these symptoms the predominance of pain and haemorrhage is so obvious that no comment upon it is necessary. But very similar symptoms may occur from intratubal haemorrhage, without any escape of blood into the peritoneal cavity at all, as will be seen from the following case:

CASE IV.

Mrs. A., 36, tripara, menstruated regularly from her last confinement in 1904 till November, 1907. The December period did not come when expected, and a week later, on December 25th, a little bleeding accompanied by a good deal of pain occurred and lasted for fourteen days. This was quite unlike her ordinary periods, which are painless and last only three or four days. After this she was fairly well for a week, when she was suddenly taken seriously ill in the street, with acute abdominal pain and faintness. When she got home she was seen by her medical attendant, Dr. Aphthor of Harrow, who found her suffering from shock, indicated by pallor, rapid breathing and rapid pulse, and complaining of abdominal pain, which was accompanied by general tenderness and some rigidity. After two or three days in the cottage hospital she improved sufficiently to return home at her own request; but she continued to suffer from severe internal pain, for which morphine was several times required, and her evening temperature was usually about 100° F. When the acute attack of pain occurred haemorrhage again set in and lasted for fourteen days. After an interval of ten days it again recurred and continued up to within a few days of her admission to the Chelsea Hospital for Women on February 21st, 1908. Her temperature was then 100.2°, and she complained of a good deal of abdominal pain and tenderness. There was no pallor, and the pulse-rate was under 100, so that it was evident there had been no serious internal bleeding. In the pouch of Douglas we found a firm elastic swelling of considerable size, which extended well over to the right side and displaced the uterus forwards and to the left of the middle line. These conditions, taken in conjunction with the history, clearly justified a diagnosis of right tubal gestation. At the operation we found, after separating some delicate omental and intestinal adhesions, that the swelling was an unruptured gravid right tube; there was no free intraperitoneal blood, but the tube, which was very thin-walled, was ruptured in separating its adhesions. The tube was removed and the patient made a good recovery.

The probable course of events in this case was that on December 12th an inconsiderable intratubal haemorrhage occurred, indicated by slight uterine loss and great pain for twenty-four hours. Fourteen days later a second and much more extensive intratubal haemorrhage occurred, leading to intense abdominal pain and shock, symptoms which we have just seen may be associated equally well with intraperitoneal bleeding. The amount of blood which can be thus effused into a sealed tube is comparatively small, consequently there were no constitutional signs of haemorrhage. As in Case III, the intensity of the pain was, no doubt, due to the effusion taking place into a confined space.

From these cases it is clear that acute and sudden abdominal pain is a characteristic feature of internal haemorrhage in extrauterine gestation.

The most frequent of all the secondary lesions which may result from extrauterine gestation is a pelvic haematocoele—that is, an encysted collection of blood in the pouch of Douglas. If bleeding is intraperitoneal, and plastic peritonitis occurs around the effused blood, resulting in the formation of a haematocoele above and around the condition is not at once relieved by operation, the distended tube, shutting it off from the general peritoneal cavity. Absorption and shrinkage take place very slowly under these circumstances, and the two symptoms which almost constantly attend pelvic haematocoele are readily explained by the internal conditions—namely, constant abdominal pain and slight to moderate fever. The pain is due in part to the presence of the

pelvic swelling, in part to the local peritonitis to which it gives rise; the fever is due in part to the local peritonitis, in part also to the passage into the circulation of the disintegration products of effused blood. The clinical history of such cases closely resembles that of the case last mentioned, the same predominant importance being associated with the pain.

CASE V.

Mrs. C., aged 40, quintipara. Her last child was born in 1892, and menstruation was regular up to October, 1907, when a regular period occurred in the first week of that month. The November period was missed, and fourteen days later fairly free haemorrhage set in and continued for a fortnight, when a large clot was passed. She went about all this time, but suffered some pain in the abdomen and breasts. The bleeding ceased after some fragments of membrane had been discharged. About four weeks after the onset of the haemorrhage she was suddenly seized with acute abdominal pain and faintness, lasting for four to five hours; severe and persistent vomiting followed, and she was very ill for a week, the evening temperature being about 100° F. More haemorrhage occurred at this time, and lasted several days. On January 24th, 1908, she was sent into the Chelsea Hospital for Women by Dr. Aphthor, and two days later I operated. We found a well-encysted collection of blood in the pouch of Douglas the size of a cricket ball; it possessed a complete enclosing membrane, which could be traced to the abdominal end of the left tube, where it was firmly adherent. It was, consequently, a *peritubal* haematocoele, and, along with the affected tube, it was completely removed. The left ovary and the right tube and ovary were healthy, and were not disturbed. The patient made a good recovery.

The probability is that in this case the commencement of the illness with haemorrhage and slight pain after six weeks' amenorrhoea corresponded with some damage to the ovum by intratubal haemorrhage, and possibly some escape of blood through the still patent abdominal ostium. The acute attack of pain, which did not occur until a month later, probably signalized a larger intraperitoneal haemorrhage with expulsion of the ovum (tubal abortion).

The tendency to the recurrence of internal bleeding in extrauterine gestation is one of its most distinctive characteristics, and as this case clearly shows, the recurrence of bleeding, even when inconsiderable in amount, produces well-marked and characteristic symptoms. This tendency to recurrence of haemorrhage provides one of the most powerful arguments against the expectant treatment of these cases, and in favour of the prompt removal of the gravid tube. The liability to progressive or recurrent bleeding is not by any means avoided by confining the patient to bed, as the following instructive case clearly shows:

CASE VI.

Mrs. J., aged 25, bipara, menstruated regularly after her last confinement up to November 22nd, 1907. Six weeks then elapsed without another period occurring, and on January 4th, 1908, she had an attack of abdominal pain, described as being not very severe, and slight vaginal loss of an unusual red colour, which lasted only for a few hours. She was immediately sent to bed by her medical attendant, Dr. Hooper of Sutton. On January 15th, when I saw her first, she was in bed and had every appearance of being in perfectly good health: her pulse and temperature were normal; she had no pain to complain of. There was a little uterine bleeding, and a soft, rather ill-defined swelling, the size of a large orange, was to be felt, behind and to the left side of the uterus. I thought it was a haematocoele arising from a left tubal gestation, but, owing to the extraordinary freedom from urgent symptoms, I hesitated to advise operation, and we decided to try the effect of expectant treatment. The patient was accordingly kept in bed and absolutely at rest for five weeks—that is, until February 17th—and during this time she had little if any pain; her pulse and temperature remained normal, and she constantly expressed herself as feeling perfectly well. But I found the haematocoele had increased very much in size, and now formed a swelling visibly bulging the lower hypogastrium, and extending right across the abdomen up to the level of the anterior superior iliac spines. The next day I operated, and found a large well-encysted haematocoele, and in the dilated outer half of the left tube was a typical tubal mole. She made a good recovery.

This tendency to recurrence of internal bleeding and of the urgent symptoms which indicate it, is not, however, always present, as is shown by the following somewhat unusual case:

CASE VII.

Mrs. P., unipara, aged 27, was sent up to Charing Cross Hospital under my care by Dr. Aphthor, of Harrow, in August, 1906. She had been regular up to December 27th, 1905. Then the periods ceased, and until the following June she was well, and believed herself to be pregnant, and noticed progressive enlargement of the abdomen and breasts. On June 4th, 1906, being then five and a half months pregnant, she was seized with sudden acute abdominal pain, and she fainted; she was kept in

bed, and the case regarded and treated as one of peritonitis, and no further acute attacks supervened. Two days later she passed a piece of membrane 3 in. long, and there was moderate uterine haemorrhage for a few days. Altogether she was in bed about three weeks, and then, on attempting to get up, the acute pain returned, and she had to go back to bed again. She now noticed that her abdomen was getting smaller, and her health remained in a very unsatisfactory condition, with constant abdominal pain, until her admission to the hospital on August 19th, two and a half months after the attack of acute pain. Her pulse and temperature were at this time normal, and her general condition good. An abdominal tumour was found, solid, hard, and tender; it lay behind the ovary, and therefore extended upwards to the right side, to a point half way between the pubes and the umbilicus. It appeared to be quite independent of the uterus, and the history was strongly suggestive of an extrauterine gestation. At the operation on August 24th it turned out to be pregnancy in the undeveloped left horn of a bicornute uterus; there was a fetus of about five months' development, and rupture had occurred with partial extrusion of the fetus, the placenta having been retained entirely within the dilated uterine horn. Omentum and coils of intestine were closely adherent to the gestation sac and the body of the fetus, and there was little free blood found in the peritoneal cavity. The damaged horn was removed, the patient made a good recovery, and has since borne another child.

It appears probable that the development of the ovum was arrested by rupture of the sac at the beginning of June, when the acute attack of pain and fainting occurred; the stage of development of the fetus corresponds roughly with the period of amenorrhoea which had then elapsed. The amount of bleeding caused by the rupture was comparatively trifling, because the placental site was not involved, and consequently the symptoms were not alarming when once the shock attending the rupture had passed away. For two and a half months the fetus and the ruptured sac remained in the abdomen isolated by adhesions, without further haemorrhage, and without infection from the bowel taking place. During the whole of this time the patient was ill, and in more or less constant pain. The rupture of the sac must have been complete, including the amnion, for, as Taylor has shown, the fetus will not be destroyed by rupture of the sac, if the amnion remains intact, and sufficient placental attachment is preserved. There is no doubt that this woman had a lucky escape of her life, for rupture of a cornual pregnancy at the fifth month is usually attended by profuse and often fatal internal bleeding.

Enough has now, I think, been said to show the regularity with which these two symptoms of haemorrhage and pain appear in cases of extrauterine gestation; even when the local conditions found at operation are widely divergent and the corresponding clinical histories show equal differences, these two symptoms are common to them all. And yet, in conclusion, I must warn you not to place a blind reliance upon them; as experience abundantly proves, there is no short cut to diagnosis; each case must be considered on its merits, and symptoms which we have been disposed to regard as reliable guides may at any time play us false if we trust them too readily.

I have quite recently seen a case where the symptoms seemed to justify a diagnosis of tubal pregnancy, and yet entirely different conditions were found at the operation.

CASE VIII.

Mrs. J., aged 22, unipara, was sent into the Chelsea Hospital for Women on January 24th, 1903, by Dr. V. Partridge. Her last regular menstruation had been on June 2nd, 1902. She said that she went a week over her time, and on September 27th severe bleeding set in, with passage of clots, and this continued for three weeks. There had been no very acute attack of pain, but she complained of a good deal of pain in the left side at the beginning of the haemorrhage, and one or two recurrences took place before her admission to the hospital. The bleeding never ceased for more than two days at a time until January 20th, 1903, a examination showed it to be a corpus luteum cyst into which considerable haemorrhage had occurred. The left tube was acutely inflamed and contained pus; the right tube was also much inflamed but not suppurating. On account of her youth I did not remove the right ovary or the uterus; both tubes and the left ovary were, however, removed and the patient made a good recovery.

This was in all probability a case of uterine pregnancy, terminating in an early miscarriage, and followed by infection which spread from the uterus to the tubes. The cyst in the ovary was an accidental complication to which the error in diagnosis was directly due. The weak point in the history was the trivial character of the pain which the patient had suffered and the severity and persistence of the haemorrhage from the uterus. These features ought to have put me upon my guard, but it is obvious that a correct diagnosis would have been practically impossible before opening the abdomen.

THREE RECENT CASES OF TUBAL PREGNANCY.

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THE three following cases were operated on by me at the Queen's Hospital recently; they all occurred within the space of three weeks, and, as they present some points of interest, I have ventured to record them.

CASE I.

L. D., aged 34, was admitted on November 12th, and operated upon on November 14th, 1903.

History.

She had been married nine years, and had had three children and one miscarriage, the latter occurring in June, 1907; since then she had not been pregnant. Two months before admission a period came on at the right time, the discharge was darker than usual, and, instead of passing off, it had persisted almost continuously until admission. A fortnight after the onset of the discharge she commenced to have pain in the lower abdomen, worse on the left side: this pain was very severe at times, and then subsided, but never left her.

Condition on Admission.

The uterus was enlarged, and there was a small, ill-defined, very tender swelling in the left fornix.

Operation.

On opening the abdomen, the left tube was seen to be enlarged, and there was some clotted blood around its fibrinated extremity.

Description of Parts Removed.

The specimen removed shows the Fallopian tube and ovary. The tube is dilated in its outer half; its lumen on cross section is about $\frac{1}{4}$ in. in diameter; it is filled with firm blood clots; lying loosely attached to its fibrinated extremity is a small firm blood clot, having precisely the retort shape of a distended Fallopian tube; this is apparently a mole which had been recently expelled.

CASE II.

H. R., aged 30, was admitted on November 26th, and operated upon on November 28th.

History.

She had been married four and a half years, had had one child three years ago, but no abortions. Six weeks previous to admission she had commenced a period at the time expected; this lasted two days and then ceased; three days later it recurred, and had continued, off and on, until admission. Ten days after the commencement of the flow she was taken with very severe pain, which began in the right shoulder, and then spread to the lower abdomen and perineum; three weeks later she had another attack of pain and a rigor. There had also been some difficulty in micturition and well-marked rectal tenesmus; the pain had persisted up to the time of admission.

Condition on Admission.

The lower part of the abdomen was tense and extremely tender; there was a distinct series of swelling above the pubes. On vaginal examination there was a distinct swelling in Douglas's pouch with very marked tenderness.

Operation.

On opening the abdomen there was a small amount of blood in the peritoneal cavity, and the left tube was greatly enlarged and lay behind the uterus; it was removed, and on subsequent examination it was found to form an oval swelling having a diameter of 2 in.; its walls were found to be thickened and its interior filled with firm blood clot.

CASE III.

E. C., aged 32, was admitted on December 3rd and operated upon on December 5th.

History.

She had been married nine years and had had one child seven years ago, and an abortion at the third month six months ago; after that, menstruation had been regular until October 1st, when her last period occurred; from that time until fourteen days before admission there was amenorrhoea and subsequently irregular loss. Eighteen days before admission there was a sharp attack of pain in the abdomen and back passage, and

there had been slight diarrhoea and rectal tenesmus, and the severe pain had recurred on four occasions, the most severe attack being two days previous to admission.

Condition on Admission.

The patient was very pallid and the pulse small and frequent, and on examination there was a large, tender, soft swelling behind the uterus, and the latter was enlarged and pushed forward by the swelling.

Operation.

On opening the abdomen a large mass was seen covered by omentum; on detaching the latter the tumour was found to consist of clotted blood, and this together with the tube and ovary was removed.

Description of Parts Removed.

The tube was found to have an extensive rupture on the upper surface of its ampullary portion. On cutting open the clots after they had been hardened in formalin one was found to contain a distinct amniotic cavity with a small embryo.

It will be noted that in only two of the cases did any interval of amenorrhoea precede the onset of symptoms, and, in my experience preceding amenorrhoea does not occur in more than 50 per cent. of cases of extrauterine gestation. The symptoms present in each of these cases were:

- (1) Irregular and unusual loss of blood per vaginam;
- (2) Intermittent attacks of severe pain in the lower abdomen;
- (3) The presence of a tender swelling in the pelvis;

and I believe that these are the most constant symptoms of extrauterine gestation after some disturbance of the ovum has taken place.

1. *Hæmorrhage*.—The loss is frequently found to be unusual and to differ from normal menstruation both in its mode of onset and continuance, and in its character; thus it is often described as being darker than usual, or as having a brown colour.

2. *Pain*.—In two of the cases rectal tenesmus was a well-marked symptom, and, if inquiry is made, it will be found that this symptom is frequently present, especially with the first onset of the pain. The pain in the shoulder complained of by one patient is an unusual symptom, but it has been noted by other observers in cases of intra-peritoneal hæmorrhage. It is worthy of note that the case with the most serious symptoms proved to be a tubal rupture, and in the two with less marked symptoms there was no rupture but hæmorrhage from the fibrinated opening. I believe that it will generally be found that the more severe symptoms are associated with tubal rupture and the milder with tubal abortion, but this relation is not constant and is not a safe guide to a differential diagnosis between the two conditions.

TREATMENT.

The first point to decide is whether surgical or expectant treatment should be adopted. There can be no doubt that a proportion of cases get quite well without operation, but the difficulty is to decide in any given case whether expectant treatment can safely be trusted. I should myself limit it to cases in which there are definite signs of hæmatocele but all evidence of active hæmorrhage has ceased—that is, pains have disappeared, and the pulse, temperature, and colour of the patient are normal. If adopted it is essential that the patient should be kept in bed and should be within reach of surgical assistance should further intraperitoneal hæmorrhage take place.

As regards "route," I would limit the vaginal to cases of well-marked hæmatocele in Douglass's pouch, with symptoms pointing to suppuration of the blood mass.

In each of these cases the Trendelenburg position was used; the slight risk of blood escaping into the upper regions of the abdomen is more than counterbalanced by the much greater readiness of access to the field of operation, and by the avoidance of handling of intestine which is possible in this position. I did not wash out or drain in any of these cases, and have long abandoned both washing out and drainage for cases of this kind. The abdominal wall was sutured in layers, the wounds healed by first intention, and each of the patients left the hospital on the nineteenth day after operation.

I am indebted to my house-surgeon, Mr. R. C. Allen, for many of the notes, and for much valuable assistance in the treatment of the cases.

THE SURGICAL TREATMENT OF THE UMBILICAL CORD.

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No obstetrician who gives a thought to the matter can ever feel that he has treated the umbilical cord in a surgical, not to say aseptic, manner when he has applied a ligature to it about 2 in. from the navel, divided it, and wrapped the stump round with a piece of sterilized gauze. Nevertheless, that is the method which is still almost universally employed, with the addition, in the practice of maternity hospitals and of certain obstetricians, of antiseptic applications on one or more occasions to the cord-stump. It may be said, in defence of the old-established plan, that it works very well, and that umbilical infection in the new-born infant is only an occasional occurrence; and it is quite true that in most cases neither septic nor sapraemic invasion of the tissues of the child takes place, or, rather, it ought perhaps to be said that if it does occur, it is not ascribed to the state of the funis.

Yet there are certain facts which ought to provoke reflection. C. Keller, for instance, in an article on the relation of umbilical infection to infantile mortality in Berlin,¹ has shown that 2 per cent. of the total mortality of children is due to umbilical infection during the first month of life; he has also pointed out that the results of the infection are chiefly sepsis, tetanus neonatorum, peritonitis, inflammation of the navel, omphalorrhagia, and intestinal disturbances. Keller, therefore, had adopted stricter antiseptic methods of dealing with the cord, such as drying and disinfecting it with pledgets wrung out of a solution of alcohol (96 per cent.). There is also evidence that umbilical infection is more likely to occur in premature infants; and I pointed out in a contribution to a short-lived journal² that there was reason to believe that delayed closure of the umbilical arteries and vein might account for this greater liability. In proof I instanced, among other things, the cases reported by the Audouins,³ in which systemic infection had apparently taken place through the umbilicus, and had been pre-disposed to by the persistent permeability of the umbilical vessels, and I stated that these cases should make us more careful in our inspection and treatment of the umbilical depression and the funic stump. Further, in an article on the Problem of the Premature Infant⁴ which I published in 1902 I attempted to distinguish between the risks of umbilical infection run by the mature as compared with the premature infant thus: In the former the umbilical route was effectually closed in part by the ligature of the cord, but more especially by the obliterative changes which took place in the umbilical vessels; but in the case of the premature infant the closure of the umbilical arteries and vein was apt to be incomplete, and septic and other pathogenic organisms found their way into the body on account of the persistent permeability of these vessels; the results of the infection were sometimes evident in the immediate neighbourhood of the umbilicus, in the form of peri-umbilical inflammation of an erysipelatos type, but at other times the umbilical vessels showed no morbid changes save permeability, and the pathological consequences of the microbic invasion might be found in the liver, the heart, or in some distant organ such as the brain. As I got a larger experience of hospital midwifery practice I was able to assure myself that the risks of umbilical infection in the premature infant (as stated above) were not exaggerated, and that even full-time children were not uncommonly the subjects of similar although less serious dangers. In fact, it seemed to me that many of the instances of so-called icterus, or jaundice of the newborn, might be ascribed to transitory attacks of hepatitis set up by microbes which had found their way to the liver by the umbilical vein from an infected umbilical stump or scar.

For all these reasons I was led to scrutinize closely the various methods of dealing with the cord which were being tried in a sort of sporadic fashion by different obstetricians in various places. There was Bacon's plan, for instance,⁵ by which the Whartonian jelly was cut at the base of the cord and the vessels tied with fine silk or catgut, after which the umbilicus had to be kept

perfectly sterile; there was Duke's method by means of a simple form of clamp, which reduced the portion of dead funic tissue adhering to the abdominal wall to a minimum;⁴ and there was the procedure recommended by Schell,⁷ in which the cord was first clamped and washed in an antiseptic lotion, and thereafter dealt with in detail, the covering being divided at the amnio-dermal junction, the jelly stripped away, and the vessels ligatured with catgut and cut off close. It was not, however, till the autumn of last year—when I was physician in charge of the Edinburgh Royal Maternity Hospital—that I had an opportunity of carrying out a series of experiments upon various modes of dealing with the cord which should more nearly attain to the standards of surgical asepsis than simple ligation of the whole thickness of the funis with thread or silk did. I am greatly indebted to Mr. J. Gibson Craig, M.B., Ch.B., F.R.C.S.E., one of the resident surgeons during the quarter, for carefully carrying out the different procedures now to be described; in fact, Mr. Craig's was by far the more onerous part of the experiment, for I simply proposed the various methods which were tried and supervised the results. In all, 16 experiments were made during September and October, 1908, and six different plans of dealing with the cord were used. I shall now describe the methods and the results.

CASE I (Method A).

A female infant, the second child of a married woman, 25 years of age, weighed 7 lb. 6 oz. at birth. The cord was cut through with scissors 1½ in. from the umbilical ring; the fetal end was grasped between the forefinger and thumb of the left hand while Wells's artery forceps were applied singly to the umbilical vein and the umbilical arteries; these vessels were then ligatured separately with No. 1 catgut; the sheath of the cord was stitched over the resulting stump and united with fine silk sutures. On the third day the child weighed 7 lb., on the fifth 6 lb. 14 oz., on the seventh 7 lb. 2 oz., and on the eleventh 7 lb. 6 oz. It never showed any jaundice. When the child left the hospital there was a dry, black scab at the umbilicus, closely resembling that seen when the cord is treated in the ordinary fashion—that is, by ligation.

CASE II (Method A).

A female infant, weighing only 5 lb. 14 oz.; it was the first child of an unmarried girl, aged 20 years. The cord was treated exactly as in Case I, and the result did not differ in any obvious manner from that obtained in ordinary ligation of the funis. On the third day the child weighed 5 lb. 9 oz., on the fifth 5 lb. 6 oz., on the seventh 5 lb. 12 oz., on the ninth 6 lb., and on the eleventh 5 lb. 15 oz. There was no jaundice.

CASE III (Method B).

A female infant, weighing 6 lb. 15 oz.; it was the first child of an unmarried girl, aged 21. The clamp was applied to the cord 1 in. from the umbilicus; it was then tightened as much as possible, crushing the end of the cord stump, and it was then removed, no bleeding following. By the pressure of the clamp the jelly had been expressed from the part of the cord in its grasp, and the covering of the cord formed naturally a hood over the stump. The sheath was then sewed over the stump with a continuous silk suture. Rather much pressure was applied in this case, with the result that a slight tear was caused in the epithelial covering of the funis running for about ½ in. in its long axis towards the umbilicus; this was covered with a continuous Lembert suture of silk. No ligation was applied to the vessels or cord, the pressure of the forceps having been sufficient to stop all bleeding. On the fifth day the infant weighed 6 lb. 9 oz., on the seventh 6 lb. 11 oz., on the ninth 6 lb. 10 oz., and on the twelfth 6 lb. 9 oz. There was no jaundice. When the child was discharged the cicatrization at the umbilicus was nearly complete and the result was better than in Cases I or II.

CASE IV (Method C).

A male infant, weighing 8 lb. 9 oz., the first child of an unmarried girl of 21. The sheath of the cord was cut through with a scalpel in a circular fashion about 1½ in. from the umbilicus, but the umbilical vein lay so superficially that it was nicked in the process. An attempt was made to catch hold of the wounded vein with the artery forceps, but this was unsuccessful, and so the cord was cut through with the knife; even then the vessels were so brittle that forceps applied to them tore off. Finally a silk ligature was applied round the whole cord 1 in. from the umbilical ring, and the cord was cut short immediately distal to it. The edges of the sheath were brought together with silk sutures. In this case, therefore, the attempt to treat the cord by stripping back the sheath failed, and the method adopted was really the ordinary one of ligation, with the addition of the sheath. The cord sloughed off on the eighth day, the process being quite dry. There was no jaundice. The infant's weight on the third day was 8 lb. 5 oz., on the fifth the same, on the seventh 8 lb. 6 oz., on the ninth 8 lb. 7 oz., on the eleventh 8 lb. 13 oz., and on the thirteenth 8 lb. 14 oz.

CASE V (Method C).

A female infant, the third child of a married woman aged 27. It weighed at birth 10 lb. 1 oz. The sheath of the cord was cut

through 1 in. from the umbilicus, and the attempt was made to strip it back on the fetal side of the circular cut, so that the vessels could be secured, and then it was intended to pull the reflected sheath over the ligatured vessels and stitch it there. Unfortunately it was found that Wharton's jelly did not lend itself so easily to removal as, perhaps, a more solid substance would, and although the purpose was attained after a fashion, it was far from being an easy or a neat procedure. The results did not differ from that obtained by the ordinary method of ligation, and the stump separated on the twelfth day. There was never any jaundice. The weight of the infant on the third day was 9 lb. 11 oz., on the fifth day 9 lb. 12 oz., on the seventh 10 lb. 1 oz., on the ninth 10 lb. 2 oz., on the eleventh 10 lb. 7 oz., and on the twelfth day 10 lb. 8 oz.

CASE VI (Method D).

A female infant, weighing 8 lb. 3 oz., the first child of an unmarried girl, 20 years old. The cord was grasped between the left thumb and forefinger close to the umbilicus; a circular incision with a knife was made through the whole cord 1½ in. from the navel, and the vessels were picked up separately with artery forceps and ligatured with catgut. The same difficulty was met with as before, namely, tearing of the vessels; and yet, if the attempt was made to tie the vessels with Wharton's jelly adhering to them, the ligatures always slipped. The sheath was stitched over the stump. There was no jaundice, the cord separated on the tenth day. On the third day the body weight was 7 lb. 8 oz., it was 7 lb. 9 oz. on the fifth day, 8 lb. on the seventh, 8 lb. 3 oz. on the ninth, and the same on the eleventh day.

CASE VII (Method D).

A male infant, weighing 5 lb. 12 oz., the first child of an unmarried girl, 21 years old. The cord was treated as in Case VI, and separation of the stump took place on the twelfth day. On the third day the child weighed 5 lb. 3 oz., on the fifth 5 lb. 3 oz., on the seventh and ninth 5 lb., and on the eleventh 5 lb. 2 oz.

So far our experiments with surgical methods of treating the cord showed very little advantage over the ordinary plan of ligation *en masse*. It could not be said that the weight of the infants had been beneficially affected; and, although there had been no jaundice in any case, it was doubtful whether this immunity could be ascribed to the method adopted.

CASE VIII (Method D).

A male infant, weighing 5 lb. 14 oz. at birth, the second child of a married woman, aged 31 years. The method of dealing with the cord was the same as in Case VI, save that the circular incision was made ½ in. from the umbilicus. There was no jaundice, and the cord separated on the eighth day. The body weight was 6 lb. on the seventh day, and 6 lb. 2 oz. on the eleventh.

CASE IX (Method E).

A male infant, the seventh child of a married woman, aged 28, weighed 6 lb. at birth. A circular incision was made with a knife through the sheath of the cord as near to the umbilical ring as possible without cutting the skin. A perineal needle was then used to transfix the cord in the way the ovarian pedicle is treated. A piece of catgut (No. 3) was pulled through on the needle, so that when the catgut was divided to release the needle two pieces of catgut were left transfixing the cord; the two pieces were now tied, each one constricting one-half of the cord. The funis was now divided just outside the ligatures, and the sheath was brought over the raw end and stitched there. On the twelfth day a little black scab of the size of a three-penny piece was found attached to the umbilicus. The child's weight on the third day was 5 lb. 6 oz., on the fifth day 5 lb. 7 oz., on the seventh 5 lb. 10 oz., on the eleventh 5 lb. 11 oz. and on the twelfth 5 lb. 12 oz. There was no jaundice.

CASES X, XI, AND XII (Method E).

Cases X and XI were female infants, weighing 8 lb. 6 oz. and 7 lb. 5 oz. respectively, the children of married women, aged 24 and 22 years; and Case XII was a male infant weighing 9 lb. 6 oz., the child of an unmarried girl of 18 years. In all of them the cord was treated as in Case IX, and in all a small black scab was left at the end. Dr. Craig was of opinion that the time this procedure required was too great for ordinary use, and that the method itself had no advantages to warrant its adoption. Further, it had some disadvantages: in the first place, there was the prolonged exposure of the child at least ten minutes, when everything went smoothly; second, there was the risk of ligatures slipping and consequent loss of blood; and third, the procedure could only be carried out with the assistance of two persons, one to look after the mother and keep a hand upon the fundus uteri, and the other to control the movements of the child.

CASES XIII, XIV, XV, AND XVI (Method F).

With these four infants—two boys and two girls, the children of three unmarried girls and one married woman—a new plan of procedure was tried: in all of them the cord was cut off flush with the skin of the umbilicus, and the skin surfaces were joined. With a scalpel a circular incision was made at the junction of the skin of the infant with the sheath of the cord; gradually the incision was deepened until the vessels were approached; then by careful dissection the vessels were cleared from the jelly and tied separately; next the cord was severed; and finally, the edges of the skin were rawed and united together, in one case with silkworm gut, and in the other three

with cauter. The time required for the operation was ten minutes. No jaundice occurred in any of these infants, and their weights were well maintained. With regard to the umbilicus, there was in these four cases a very remarkable result, as compared with all the others. On the fourth day in each case the umbilical stumps were quite healed, and the cicatrix was already retracted. The stumps had healed like ordinary surgical wounds kept aseptic. The good results were evidently due to the complete removal of all the dead structures and to the freshening of the cutaneous surfaces; no putrefactive changes took place and the surfaces united by first intention. At first it seemed to us that there might be apprehension of danger from ligatures so near the umbilical ring slipping; but, as a matter of fact, it was found that the supporting structures were firmer near the umbilicus than at a distance from it, and there was actually less risk of slipping and consequent hæmorrhage.

These experiments brought home very clearly to my mind the conviction that, if the umbilical cord was to be treated on strict surgical principles, Method F was the only plan which fulfilled all the requirements. All the other procedures left pieces of funic tissue to separate by putrefaction, and the process of cicatrization was apparently lengthened rather than shortened. It was certainly remarkable that none of the infants showed jaundice; but I cannot confidently affirm that their immunity was due to the unusual treatment given to the cords. It was also very satisfactory that none of the children had any morbid developments, and as a rule regained their original weight well; but, again, it can hardly be claimed that this result was the consequence of the various modes of dealing with the umbilicus, although they may have contributed to it.

The sixth plan (Method F) certainly gave very satisfactory results, for to obtain a cicatrized and retracting umbilical scar at the fourth day was something worth working for. The great objection to it which will at once come into the mind of the general practitioner, as well as into that of the maternity hospital surgeon, is the length of time it requires and the fact that it takes the medical attendant away from the mother at a critical part of the third stage of labour. The second difficulty might be got over by clamping the cord temporarily and treating it surgically after the third stage is over; and the first objection will, of course, become less formidable as the obstetrician acquires skill in the performance of the necessary manipulation. I am inclined to think that this method will find its greatest usefulness in cases in which at previous confinements there was evidence of umbilical infection of the new-born infant, more especially when such infection occurred in prematurely born infants, in whom we must suppose the umbilical vessels are more liable to remain permeable for a time. I do not think we can hope that it will yet be adopted as the routine treatment of the umbilical cord, but I trust that it will be found useful in cases where infection through the umbilicus is dreaded, and by obstetricians who are dissatisfied with the ordinary method of ligaturing the funis.

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A CASE OF CHRONIC INVERSION OF THE UTERUS.

WITH REMARKS ON THE MECHANISM OF REINVERSION.*

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THE following is a brief history of the case:

Mrs. M'C., a primipara, aged 24 years, was delivered on November 29th, 1903. Labour was slow, and forceps were used to complete delivery. The expulsion of the placenta gave some trouble, and was followed by copious loess. This was checked by hot douches, but slight hæmorrhage persisted during the whole of the puerperium, and a profuse bleeding occurred on December 25th. Other symptoms were obstinate constipation, and a "feeling of something coming down," which was only present during micturition while she remained in bed, but became constant on her rising at the fourteenth day.

I saw her on December 26th. She was very anæmic, and on

examination presented the typical signs of a chronic inversion of the uterus. The inverted organ was of about the size and shape of a large hen's egg, and was soft and elastic in consistence. I looked for the orifices of the Fallopian tubes, but failed to discover them. Attempts at taxis, both without and with an anæsthetic, made no impression on the displacement. We then decided to try repositors. I was unable to procure Aveling's, which are highly recommended, and had to take an instrument designed by a Mr. Lawson Tait. I inserted his largest repositr on December 28th, and as no effect had been produced used a No. 1 tightened up the elastic bands. Two days later the cervix was re-formed, and two days later still the apex of the inversion was flush with the external os. On the next day it had receded within the widely dilated cervix. Wide as the cervix was, Tait's smallest repositr could only have been inserted into it with considerable difficulty. I contented myself therefore with putting a small plug of gauze in the vagina. On removing this two days later, eight days after treatment had been commenced, the uterus could be felt bimanually in its normal position and completely reinverted.

One or two points in this case are worthy of a remark in passing.

1. Unskilful conduct of the third stage has been often assigned as the cause of this accident. The method employed in this case was a combination of expression and gentle traction on the cord, and has served the practitioner who was in charge of the case for twenty years, during which he has never had any trouble. If undue pressure on the fundus or traction on the cord are the causes of this displacement, why is it the rarest complication of midwifery? Dr. Athill has recently revived the view originally taken by Crosse that inversion is due to attachment of the placenta to the centre of the fundus, and on examining the inverted organ in this case I detected a rounded area about as large as a halfpenny on its apex. This area was slightly deeper in colour and less smooth than the surrounding mucous membrane. It may have represented the placental site, but, on the other hand, it may have been caused by inflammatory changes in the part most dependent and most exposed.

2. It is worth noting that the accident was quite unaccompanied by shock, which seems to be regarded as a constant symptom by all but the most recent authorities.

3. The last point to which I wish to direct attention is in connexion with the treatment of this case. The classical method of using repositors is, of course, to begin with the largest size and to end with the smallest, which is introduced into the cavity of the uterus, and remains there until reduction is effected, whereupon it is recovered, often with considerable difficulty if one may judge by reports. It will be noticed that in this case, as it was not easy to introduce the smallest repositr into the cervix, it was dispensed with altogether. This was done advisedly and on the following line of reasoning: Inversion occurs while the cervix is stretched and its muscular fibres paralysed. If the fundus be not reduced before this paralysis has been recovered from, the restoration of tone to the cervical muscular fibres effectually closes the cervical canal against the return of the uterine body, and this resistance can only be overcome by continuous elastic pressure, as with the repositr, or by forcible dilatation or section. But once the apex of the inverted uterus has come within the cervix the tone of the cervical muscle fibres, which has been overcome but by no means abolished by the pressure of the repositr, bars the way against subsequent extrusion of the fundus, and the effect of the muscular contraction of the containing shell of uterus on the contained partially inverted fundus must be to drive it upwards and to reinvert it. Cases of inversion due to tumour stand in a different category.

CONCLUSION.

The practical point which I wish to make is that in reducing inversion by means of repositors there is, on my theory, no need to use an intrauterine instrument, troublesome to introduce and to withdraw. I suggest that when the fundus has been reduced within the external os the use of repositors may be discontinued, and the uterus will reinvert itself, like an india-rubber cup, turned not quite half inside out. I am well aware that one case is quite insufficient to base a theory upon, but I think my suggestion is at least plausible, and I would ask those who may have an opportunity of testing its value to do so. The experiment can do no harm, and if it does not succeed one can still fall back on an intrauterine repositr and recover it afterwards by means of "elastic bands fastened to the foot of the bed."

*Read before the Ulster Branch of the British Medical Association.

INGUINAL HERNIA OF UTERUS:

HERNIOTOMY WITH RADICAL CURE: UNUSUAL COMPLICATIONS: RECOVERY.

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A LADY, aged 47, was brought to me in October, 1907, by Dr. Prichard, of Conway, for double inguinal herniotomy. The right hernia had existed many years, but had only been troublesome four or five, and had become constantly painful. During the past fortnight symptoms of obstruction had occurred, lasting three days. The left hernia had formed gradually, and had never given trouble. Both felt like, and were supposed to be, omental ruptures.

On October 19th, 1907, double herniotomy was performed in a home in Liverpool, with the aid of Dr. Prichard and an anaesthetist. The right hernia was found to contain an ovary, Fallopian tube, broad ligament, and a small, elongated uterus, which at the moment was taken for the right half of a "bicornis," all enclosed in a peritoneal sac. There was no means of reducing the contents, which were accordingly removed. In doing this careful search was made for a portion or trace of vagina, but none was found, either then or after dissection, of the specimen. But the finger was passed into the vagina, at this stage of the operation, without

obstacle, and without any discovery of note. The stump was stripped in detail with dissecting forceps and the shreds tied and returned into the abdomen. The hernial sac was stripped, closed with a Staffordshire knot, and cut off beyond. On the left side the contents were omentum, the narrow neck of which was tied and its stump returned. The hernial sac was closed as on the right side, the pillars of each ring closed, and the wounds sewn up. Both wounds healed by first intention in three days and the herniae continue

soundly cured. But the patient became uneasy as soon as she recovered from the anaesthetic—that is, the same afternoon—complaining of continual abdominal pain and inability to pass wind, with slight but increasing distension. She could not sleep, and got no relief from several doses of opium with abstinence from all food of any kind.

By the fifth day, October 23rd, she was so decidedly worse that median abdominal section was performed, and Dr. Prichard came over for the purpose. Attached to and blocking the sigmoid flexure there was found a hard lump resembling and taken for a small carcinoma, all the gut being distended above this point.

As a special precaution, and to avoid contamination of the parts before closure, a loop of bowel, with the lump superficial, was closely sewn to the peritoneum, and its contiguous sides attached to each other, in the middle of the opening; the abdominal wall above and below being closely sewn with detailed suture of the aponeurosis; and, finally, the gut opened above the growth, and a wide glass tube tied in, so that faeces were conducted away outside the dressings, without leaking into the wound. Before attaching the gut or in any way closing the abdomen, careful search was made in the pelvis for the left ovary and appendages, and for the left half of the supposed "uterus bicornis"; but nothing whatever could be found of such parts. On attempting a vaginal examination during this operation the finger could not be passed more

than an inch or little more, that tube being now tightly closed at that distance from the vulva. These discoveries were mysterious at the time, and have since not yielded any explanation.

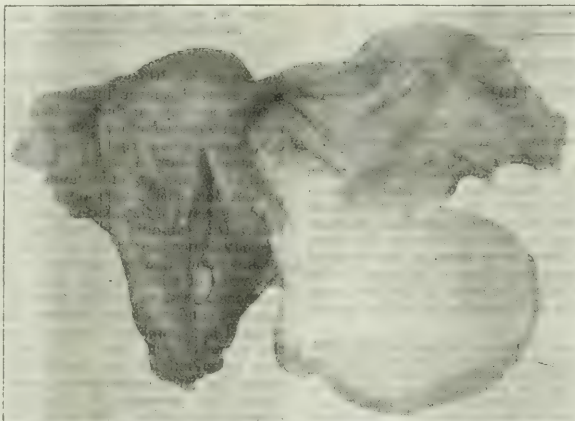
No further symptoms of bowel obstruction occurred; the patient became, however, very excited, and at times almost unmanageable, owing to restlessness and frantic complaints of pain. So hypodermic injections of morphine sulphate were resorted to, usually three times daily, but often less, in doses that had to be increased until the quantity would have alarmed me were it not that I could not manage with less, though frequently diminishing it secretly. The necessary relief was always obtained, although often postponed by cutting the doses short. Nobody but myself administered the drug, or knew the dose given, and it would serve no useful purpose to mention the quantities. No other drug was ever combined with it, and so its exact and real value were always perfectly clear. This process was kept up for four and a half months, not a week passing without many attempts by postponement and diminution to make her do with less. In a fluctuating way these efforts succeeded, but her suspicions were never aroused. The drug was only at first progressively increased. The maximum doses were quickly arrived at, and, once reached, had never to be exceeded.

In a very few days after this second operation the tube separated, and the faeces leaked from the fistula thus made, but were kept from the sewn parts of the wound by interposing folds of cyanide gauze plentifully smeared with eucalyptus ointment. These parts of the wound healed quickly and well, but still the faeces irritated portions of the skin around, and also caused a partial reopening of the right inguinal wound for a time. However, with firmer ointments, medicated with boric acid or eucalyptus oil as found convenient, these inconveni-

ences were gradually overcome, and the faecal odours counteracted, between the changes of dressing, by pads of odoriferous carbolized tow and sprinklings of lavender water.

Exactly two months after the colostomy a third operation was undertaken. As the patient had begun to hold her ground, though much reduced in flesh, and was becoming frantic at the prospect of a permanent faecal fistula, the parts were examined in consultation with Mr. F. T. Paul, with the view of removing the growth on the colon. Its situation had receded, and enemas given by the rectum immediately welled out of the fistula. After clearing the rectum, which had gradually accumulated faeces, enemas were given both ways, and the agreeable and unexpected discovery made that the finger revealed smooth bowel in both directions from the fistula, and no trace of tumour. There was a good spur of bowel behind its attachment round the fistula, so the future proceeding was evidently much simplified; and on December 23rd, 1907, the spur was compressed in a clamp which cut its way gradually through after tightening a screw on the handles, and came away in little over a week, and faeces were found to be reaching the rectum, though most passed by the fistula.

On January 9th, 1908, a fourth operation was done, bringing the edges of the skin by deep mattress sutures, and superficial stitches over the fistula. In three days



Contents of right inguinal hernia, consisting of small uterus (with fibroid in cervix), right Fallopian tube, broad ligament, and ovary flattened out and thinned by pressure while lying under other specimens. (Photograph in water, after 15 months in formal solution, by Fred. Halliday, Museum Attendant.)

faeces leaked out, but the stitches were left in for three weeks and the parts cleansed by daily irrigation. Five weeks later she passed a voluntary stool, in the sitting posture, and daily afterwards, when the leakage became obviously less in three more days. After six weeks she sat up daily, the morphine was much reduced, unknown to her, and less than a week later she volunteered to go without it, and it was then abruptly discontinued. A week later (March 13th) she went home, took her nurse with her, and final healing occurred by the end of that month. Gradual improvement took place, resumption of ordinary diet, carriage exercise, and open-air life in house or garden.

Some violent attacks of abdominal distension and constipation occurred, through reckless feeding; but were corrected by enforced fasting and rest in bed. It had to be impressed upon her that owing to the attachment and probable stricture or other deformity of the bowel, she would have to practise great frugality to avoid imminent danger.

By August, 1908, she was perfectly well, and at Christmas she went from home on a visit of several weeks, being in full health and vigour, with firm scars at all the sites of operation; and no impulse in the groins or any trace of hernia, but still a closed vagina.

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CAESAREAN SECTION WITH UNUSUAL INDICATIONS.

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ORDINARILY a Caesarean section is looked forward to as one of the possibilities of a particular case, and preparations for it are made in due course, but in the case which I am to narrate, until I was actually in immediate presence of the need, I had no thought that delivery in this form might be called for. As there were none of the classical indications and the ordinary conditions of election for its performance were all violated, the notes of the case may have interest for members of the profession not in special practice.

Mrs. M., aged 46, was seen by me on September 20th, 1908, with a view to her prospective confinement. She had had four previous pregnancies, the last three ending at term with rather large children ranging up to 9 lb. weight, and each requiring delivery by forceps. The last confinement was ten years ago. Her last period was in the end of March and she had quickened in mid-August. During this pregnancy she had felt unusual fatigue, and on examination she showed great abdominal distension. There was evident hydramnios and the uterus was almost as large as a uterus at term. The fetal length, however, corresponded to the assigned date of menstruation. Arrangements were therefore made for a confinement early in January. The patient's comfort was added to by a special bandage, but she had from this time mostly to keep her bed.

The nurse engaged for January got tired of waiting and took another case, and a second proposed for February had also to go, and it was not till I had decided on puncturing the membranes that the labour came on spontaneously. I had seen her frequently but never found any sign of engagement of the presenting head.

On February 19th, almost eleven months after the last menstruation, I was called at midday, and found that she had been in labour since the morning. The os was fully dilated, but the head not engaged. I ruptured the membranes to relieve the hydramnios, and then recognized that the fetus was an anencephal, and of large size. As this condition put delivery by forceps practically out of the question, I gave the patient chloroform and brought down the left foot, only to find that the breech would not enter the pelvis. I then brought down the other foot, and found that no amount of suprapubic pressure and traction on the legs which I could exert would bring the pelvis into the brim. At this deadlock, embryotomy was the next consideration, but it was evident that with legs corresponding to the size of the feet we saw protruding from the vulva it would be so difficult to reach the child's pelvis above the brim that with the subsequent necessary crushing of the shoulder girdle and skull base, embryotomy was to be a perilous process for the mother. I therefore asked and received the husband's consent for Caesarean section, and went to the telephone in search of an assistant and some catch forceps. I was fortunate in finding Mr. Price, who said he would bring both instruments and dressings. Pending his arrival at 5 p.m. I prepared the abdomen and kept the patient under light anaesthesia.

The operation, made with a vertical incision, presented no unusual feature except that the extraction of the child which I had so forcibly tried to bring through the pelvis was more than ordinarily difficult. After the child was extracted, the uterus was extruded, the placenta extracted, and the uterus sutured with catgut. The abdominal wound was sutured with silkworm gut, and dressed with sterile gauze.

Mr. Price and I were able to leave at 6 p.m., and the 60 c.cm. (2 oz.) of chloroform with which I started the afternoon were not exhausted. The puerperium was as smooth as after an ordinary confinement. There was no sickness. The temperature never rose over 99° F., and the wound healed normally. The patient was out of bed on the fourteenth day, and on the twenty-ninth day was able to go down town to see a play in which her children were engaged.

The child breathed for a few minutes. It measured 21½ in. to the skin border over the eyes, and 6 in. round the calf. It weighed 10 lb. The mother is a small woman but well developed, and has little if any pelvic contraction.

While I have no doubt as to the rightness of the management in this case, my expectation of performing Caesarean section in a practically normal pelvis is not high. The difficulties encountered seem to me such as are more likely to occur in general practice than in hospital.

TETANUS OCCURRING AFTER SURGICAL OPERATIONS:

IS THE INFECTION INTRODUCED BY CATGUT LIGATURES?

By W. G. RICHARDSON, M.B. DUNDEE, F.R.C.S.,

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ON September 30th, 1907, I operated upon an elderly lady, and removed a large number of gall stones from the gall bladder and cystic duct. After the operation the patient made most satisfactory progress in every way until October 6th, when some rigidity of the muscles of the neck appeared, followed rapidly by trismus and other well-marked symptoms of tetanus, from which disease the patient died within forty-eight hours of its onset.

I had heard of tetanus following upon surgical operations before this calamity overtook my patient, and I at once suspected that the bacilli of tetanus had been introduced in the catgut ligatures used at the operation, because in all the cases of which I had heard the same suspicion had been cast. Catgut was the material which I had used for ligatures and for deep sutures; the only other material which I had employed being silkworm gut for sewing up the wound in the skin. All the catgut in my possession was examined for me bacteriologically, and the report states that "the experiments made with this material to detect the presence of *Bacillus tetani* have proved absolutely negative. The catgut is absolutely sterile."

After receiving that report I was entirely baffled in the attempt to find a source from which the infection could have arisen, and I am still in the dark.

In January, 1909, I operated upon a middle-aged man for strangulation of the omentum in the sac of a right inguinal hernia. I used catgut for ligaturing the neck of the sac, for the blood vessels and for the deep sutures, and silkworm gut for suturing the skin. The patient did well and left the infirmary, with the wound healed, in fourteen days. A week later he was admitted with tetanus, from which he died two days later.

I have spoken to many surgeons upon the subject, and they all believe firmly that the infection is conveyed by catgut ligatures—not one of those with whom I have been in communication appears to have a doubt about it. One surgeon, who had two cases within eight weeks of each other, wrote as follows:

I had catgut and the pedicle from the fatal case examined both here and in London, with no particular result. No organisms were found in the catgut, and the cultures from the pedicle, though "resembling" tetanus bacilli, were negative in experiments upon animals. I am not sanguine of any more definite result being obtained, except in cases where tetanus bacilli are proved to exist in the catgut. I am morally certain that in my cases the catgut was responsible.

That accurately sums up the belief of those whose opinions I have obtained. It may be that such a belief is correct; indeed, in view of the fact that catgut was used in all the cases of which I have any knowledge, it would appear undeniable, and yet it must be confessed that no positive evidence has been adduced which entitles us to condemn catgut.

I have collected notes of 21 cases in which tetanus has followed a surgical operation; 20 of the cases have occurred during the past three and a half years and 1 occurred as long ago as 1884:

Of the 21 operations—

- 4 were for ovarian cysts
- 4 were for removal of the uterus
- 4 were for radical cure of hernia
- 3 were for gall stones
- 1 was for acute pancreatitis
- 1 was for acute appendicitis
- 1 was for ventral fixation of the uterus
- 1 was for carcinoma of the rectum
- 1 was for varicella
- 1 was for scirrhus of the breast

18 of the patients died.

In all the cases catgut was used for ligatures. In 14 of the cases the catgut was submitted to bacteriological examination with a view to the detection of the *Bacillus tetani*. In 4 a bacillus "resembling" the tetanus bacillus was cultivated from the catgut, but no animal has been infected with tetanus by means of the cultures in those cases in which the experiment was tried. In 1 case the catgut was found to be sterile, but cultures of a bacillus were obtained from the pedicle of an ovarian cyst, for which the patient had been operated upon, and which was removed after death, but it was not found possible to cause tetanus in animals by inoculation with the cultures.

Thus it appears that in spite of careful search there is no positive evidence of the existence of tetanus bacilli in the catgut.

Before going further into these cases, I would like to refer to the late Professor D. J. Hamilton's paper on the Alimentary Canal as a Source of Contagion. In it he dealt with a group of diseases, prevalent among sheep, of a nature closely resembling tetanus. The object of the paper was to call attention to the "relationship existing between these diseases of the sheep and many obscure diseases of man," and to the fact that these diseases of the sheep are caused by specific bacilli, whose habitat is the lumen of the intestine, but which, at certain periods of the year, pass through the wall of the bowel and are found in the peritoneal liquid but in no other part of the body. The result of their activity is the liberation of toxins which, when absorbed, produce in the sheep symptoms of a tetanic nature. The disease called "louping-ill" or "trembling" was used by Hamilton as the type of the group.

The points in that paper which have chief bearing upon the subject of post-operative tetanus are:

1. The similarity of these diseases in the sheep to tetanus.
2. The mode of entry of the bacilli.
3. The seasonal prevalence.
4. The geographical distribution.

1. The similarity of louping-ill and tetanus is most striking. The likeness is not only seen in the characters of the bacillus which produces the disease but also in the symptoms.

Of the bacillus Hamilton says "it is a large, coarse-looking rod, sometimes elongating into a thread, or it may be, a chain of rods. Its dimensions, like all the members of the group, vary considerably. The ends are rounded, and it is possessed of feeble motility. It has a considerable tendency to spore; the spore is located at its centre or at one end, and occasionally, especially after incubation in its native liquid, it assumes a drumstick configuration, indistinguishable from that of the *Bacillus tetani*."

Of the symptoms he says: "There are cases which assume quite a tetanic character. In these the muscles are in a state of rigid spasm, while, it is said, although I have never seen an instance of this in the natural disease, the muscles of mastication are in a like rigid condition, and, in most respects, the phenomena resemble those of idiopathic tetanus." "Certain instances of louping-ill have quite a tetanic character, and apparently tetanus itself can be aroused in the sheep by injecting subcutaneously the bacteriolysed organism of the disease."

2. The Mode of Entry of the Bacilli.—"On examining the carcass in this disease one of the most notable features is the absence of lesion which might serve to localize the peccant agent in any particular organ." "The abdominal cavity, as a rule, contains an excess of serous liquid, but this is not always the case." Sometimes the liquid is thick, muddy-looking, and it may be, tinged with blood, while at other times it is quite clear and limpid, or, at the most, a delicate coagulum separates from it. "In no case have I seen peritonitis or pleurisy accompany the disease, and hence the conclusion seems inevitable that the organism which causes it is not possessed of inflammatory tendencies." "The changes may be met with along the course of the intestine, but with this exception all the viscera may seem to be quite healthy. Nor have I seen any

evidence of meningitis or other disease of the central nervous system. The microscopic examination of the natural liquids or of the organs of the body proves equally disappointing. Thus the blood is free from any micro-organism which can be detected microscopically, and when cultivated aerobically or anaerobically remains equally barren. The cerebro-spinal liquid and nerve centres are devoid of any parasite which might be taxed with a causal relationship to the disease." "On microscopic examination of the turbid peritoneal liquid it was found to be teeming with a large, coarse-looking rod organism having a great tendency to spore, while in the case of that which was clear and limpid not a bacillus was to be detected. On incubating the clear peritoneal liquid, however, in sealed tubes, I found invariably that in the space of twenty-four hours it became turbid. On examination of the liquid microscopically it was now found to be swarming with the same large sporing rod present in the liquid which was turbid."

"Not only in the case of louping-ill but in that of all the other members of the group the intestine seems to be the portal through which the organism gains entrance, and the fact that the peritoneal cavity contains it more than any other cavity or any organ in the body is thus readily enough explained."

3. Seasonal Prevalence.—"One remarkable feature of these diseases is that they occur periodically—that is to say, at stated times of the year. Certain of them, such as braxy, prevail in the autumn and winter months, while others, and more particularly louping-ill, are diseases of the spring and summer months, the middle of April to the middle of June. All of them tend to vanish during the summer. They show themselves almost to a day, each in its season, and vanish quite as regularly and mysteriously."

4. Geographical Distribution.—"They prevail only in certain districts, and mainly along the West Coast and southern counties of Scotland and the northern counties of England, while the East Coast of the whole of Great Britain may be said to be almost exempt from their ravages. Draw a straight line from the North of Scotland down to the South of England, and you practically separate the infected districts from the non-infected." "The valley of the North Tyne is one of the most severely smitten areas."

With regard to tetanus itself, Professor Hamilton says:

"In the case of tetanus, the symptoms are induced by the absorption of a toxin secreted by the tetanus bacillus. The organism exerts its evil influences only when introduced into a wound: when administered by the mouth it is apparently harmless. So universally is the organism distributed in Nature, that we must be constantly swallowing it, and yet no ill-effects follow."

"There is a variety of tetanus which is known as 'idiopathic,' mainly because we know nothing of its pathology, and in which there is an absence of any wound of the surface, or other apparent point of entrance. It has always been assumed that the organism inducing this idiopathic variety is the same as that occurring in the traumatic form. In view, however, of the disease, 'louping-ill' of the sheep, being so closely allied with tetanus, both with regard to the organism producing it and in the character of the symptoms occasionally evoked, I would be inclined to pause before admitting the truth of this allegation. May it not be a disease caused by an organism of the same class as that producing louping-ill, but intestinal in its habitat, as are the organisms instrumental in producing all the members of this class of diseases of the sheep? and may it not happen that it is a common inhabitant of the intestine, but that only in certain susceptible individuals gets over from the channel of the bowel into the blood, becomes bacteriolysed, and so allows the toxins bound up in its protoplasm to escape, these again acting on the nerve cells with which they have a combining affinity?"

"Tetanus of the newborn is also a form of the disease of whose pathology we have no conception, and I would go so far as to suggest that it may be the result of the action of such an intestinal anaerobe to which the infant has not as yet become immunized."

When one recalls the fact that all the catgut which is used by surgeons is obtained from the intestine of the sheep, the bearing of Professor Hamilton's paper upon the subject of post-operative tetanus becomes apparent.

The questions arise:

1. Is it true tetanus, or some other member of the group of diseases so common amongst sheep, by which patients are apt to be attacked after undergoing surgical operations?

Answer may be sought in an investigation of the symptoms of those who have suffered, and in an examination of the bacilli from those cases in which cultures of material from the patient have proved the presence of drumstick organisms.

As to the Symptoms.

We surgeons who attended any of these 21 cases had no doubt in our minds that the patients suffered from true tetanus, but whilst accepting these diagnoses, we must bear in mind the fact pointed out by Professor Hamilton that the symptoms of all the group of diseases of which louping-ill is the type, are hardly to be distinguished from tetanus.

In the case of idiopathic tetanus, he makes the definite suggestion that it may not be true tetanus, but a disease caused by an organism of the same class as that which produces louping-ill.

As to the Bacilli.

The catgut used at the operations in 14 of the cases was examined bacteriologically, and bacilli were found in the cultures in four instances. Bacilli were found in the cultures from the ovarian pedicle in another case.

In one case the report from the bacteriologist was as follows: "From the cultures of this sample of catgut we have isolated a large anaerobic bacillus, of which some of the individuals show large terminal spores, giving to the rods the drumstick appearance characteristic of the *Bacillus tetani*. It will not be possible to find proof of the specific nature of this bacillus without animal inoculation." "Note.—We were not authorized to have an animal experiment made, so there was no further investigation."

In 2 cases the reports are to the effect that "a bacillus allied to the tetanus bacillus was found, but that experiments upon animals were negative."

In another case I have only the statement that tetanus bacilli were found in the catgut, which was "shop-prepared."

In another case no organisms were found in the catgut, but "the cultures from the ovarian pedicle, though 'resembling' tetanus bacilli, were negative in experiments upon animals."

The only answer, therefore, which can be given to the question whether or not it was true tetanus from which these patients suffered, is, first, that the symptoms were characteristic of a group of diseases closely allied to tetanus; and, secondly, that in the catgut used at four of the operations and in the pedicle from another case, a bacillus was found resembling in appearance the tetanus bacillus but similar to the bacilli of a group of diseases allied to tetanus, and that proof of its being the tetanus bacillus failed in experiments upon animals.

2. Is the Infection Conveyed by the Catgut?

The fact that catgut was used in every one of these cases is the most striking as well as the only apparent common feature. It tempts one to blame catgut offhand, but careful inquiry suggests some doubt.

At the outset we are met with a difficulty. If we blame catgut as the vehicle by which the disease is introduced, we assume that the tetanus bacilli are wrapped up amongst the strands of the ligature, in which they probably existed at the time of the manufacture of the catgut, and that they are liberated during the process of its absorption. Now catgut is made from the intestine of the sheep, which "is not an animal liable to tetanus as we ordinarily understand the disease." Therefore it would appear more probable that there should exist in the catgut the bacilli of one of the other members of the tetanic group of diseases, which are known to infect the intestine of the sheep, rather than the bacilli of true tetanus.

I have made inquiry of most of the business firms who supply catgut to the large hospitals in England, Scotland, and Ireland, and, with one exception, they tell me that the raw catgut is procured from Germany. If it is the vehicle of infection, tetanus should occasionally follow surgical operations in all parts of the United Kingdom, because catgut is used very largely by surgeons all over Great Britain. In most of the great hospitals, both in London and the Provinces, and in many private practices it is almost the only material which is used for ligatures, and yet the occurrence of post-operative tetanus appears to be unknown in the South of England and in the Eastern Counties.

Of the 21 cases—

- 11 occurred in Northumberland
- 6 occurred in Ireland
- 2 occurred in Scotland
- 1 occurred in South Shields
- 1 occurred in Manchester

That is to say, they were found in the same geographical area as that in which the tetanic group of diseases in the sheep is prevalent.

Professor Hamilton's observation about the geographical distribution of "louping-ill" applies exactly to the distribution of these cases of post-operative tetanus. It is

impossible to believe that German catgut, if infected with bacilli, will produce a disease when used in the North of England, in Scotland or in Ireland, and yet be innocuous when used in the South of England or in the Eastern Counties.

In view, therefore, of the common source from which catgut is obtained, its general and widespread employment, and the irregular geographical distribution of these cases of post-operative tetanus, it does not appear probable that catgut is the carrier of the bacilli which produce the disease. Enough has been stated to show that there is a legitimate doubt, first, as to whether the disease which we have been calling post-operative tetanus is really tetanus, and secondly, as to whether the disease, whatever it may be proved to be, is conveyed by the catgut.

On the supposition that it is not tetanus but some other member of the group of diseases so prevalent amongst sheep, it is interesting to see how far the facts of these 21 cases agree with the essential points laid down by Hamilton as characteristic of those diseases.

We have seen that the symptoms are of the same tetanic character and that the bacilli are indistinguishable; also that the geographical distribution is identical. There remain the seasonal prevalence and the mode of entry of the bacilli.

With regard to seasonal prevalence, of the 21 cases

occurred in January		3 occurred in July	
1	" February	2	" August
1	" March	3	" September
2	" April	1	" October
2	" May	2	" November
1	" June	None	" December

The Mode of Entry of the Bacilli.

When considering this point a feature of the cases presents itself which is almost as striking as is the fact that catgut was used in all—namely, that of the 21 cases, 19 followed operations in which the peritoneal cavity was opened. It cannot surely be a coincidence that over 90 per cent. of the operations involved the peritoneum. At the Royal Victoria Infirmary in the year 1907, as nearly as I can estimate, 4,377 operations were performed which required the making of an incision and the use of ligatures. Of these, 1,472 involved opening of the peritoneal cavity, and 2,905 were upon other parts of the body. That is to say, there were twice as many operations upon other parts as there were within the peritoneum. This may be taken as an average proportion of peritoneal to non-peritoneal operations. If, then, catgut were the guilty agent of infection one would expect to find that a majority of the cases of post-operative tetanus occurred after these other operations rather than after those upon the peritoneum, especially when one remembers the large amount of catgut which is left in the wound of such an operation as that for the removal of enlarged glands from the neck as compared with the small amount used in the radical cure of an inguinal hernia, or in an operation for the removal of an ovarian cyst. It would not be surprising to find that any of the bacilli of the spore-bearing nature referred to, so common amongst sheep, are frequent inhabitants of the human intestine, nor to find that the patient is himself the host of the bacilli at the time of the operation, because the gathering ground of the drinking water used in the districts from which these 21 cases have been collected is largely covered by sheep farms. This is especially true of Northumberland, in which county the majority of cases have occurred, and in which "louping-ill" is prevalent. Such an explanation would appear to hold good for sporadic cases, such as my own, which occur without any ascertainable cause, and in which the catgut is proved to be sterile.

It is possible that the catgut may have become infected with bacilli after its importation into the counties in which post-operative tetanus has occurred, but this would apply also to any other material, such as silk or linen thread, used in the same district. I do not know of any case having occurred in which any other kind of ligature than catgut has been used. Too much stress must not, however, be laid upon that observation, because it may be due to the fact that catgut is used almost universally in Northumberland to the exclusion of silk and other ligature materials.

Between some of the cases there appears to be a direct connexion.

In one house 2 cases occurred in the course of eight weeks.

In another house 4 cases occurred as follows: One in October, one in June, one in July, one in August. In that house the water supply from a new cistern was suspected, and an anaerobic bacillus was developed from the water; since attention to that no further case has occurred. Although a careful investigation was made, no bacilli were found in the catgut used at any of the four operations. They were all abdominal operations.

In the Royal Victoria Infirmary five abdominal sections were performed by the same surgeon in the course of one morning. The third operation was for gall stones, and the fourth for appendicitis. Both of these patients developed tetanus, and the gall-stone patient died. None of the other 3 cases developed symptoms, although catgut from the same store was used in all the cases.

I have ventured to publish this list of cases, large as it is when viewed as a series of surgical calamities, but small when used for the purpose of generalization, and to make the foregoing remarks, in the hope that others who can throw light upon the subject may be induced to do so.

It is a matter of the most serious nature. Not only is it horrifying to think that a patient should suffer from a deadly disease after a simple operation, such as the radical cure of an inguinal hernia, but it is a matter of the utmost importance that we who used catgut should know whether we will be justified in reverting to its use. It will be a great misfortune if catgut should be proved to be the agent, because it is without any doubt the ideal ligature and suture, having advantages over all other materials. If it is the guilty agent, it would appear as if its use must be discarded altogether, because, judging by the variety and thoroughness of the means which were employed in the sterilization of the catgut in many of these cases, it seems to be impossible to destroy the spores without at the same time ruining the ligature.

The methods were various, and I am unable to give the exact process followed in each case, but in my own cases it was as follows: Raw catgut was wound upon small glass reels and placed in ether for twenty-four hours. From this the spools were transferred to fresh ether for another period of twelve hours. They were then placed in a 1 in 1,000 solution of biniodide of mercury in methylated spirit for twenty-four hours, being then transferred to a fresh similar solution, in which they were kept for several days before being used. I had the catgut thus prepared bacteriologically examined on several occasions, and it was always found to be sterile.

In several of the other cases the catgut was prepared by boiling in absolute alcohol at 212° F. for one hour after it had gradually been raised to boiling point.

SUMMARY.

From the foregoing observations I have drawn no conclusion, as they do not appear to justify it, my object in writing this paper being to elicit from others information which may lead to a definite solution; but I would like to give a short summary of the facts and to offer a suggestion.

Hamilton pointed out that there is a group of diseases amongst sheep the symptoms of which are closely allied to tetanus and the bacilli of which cannot be distinguished from those of tetanus.

In these diseases the bacilli are normal inhabitants of the sheep's intestine, but at certain periods of the year they pass from the lumen of the bowel into the blood, where they become bacteriolized, and the liberated toxins give rise to the symptoms of the various diseases.

During these seasons the bacilli are found in the peritoneal cavity and in no other part of the body.

These diseases are endemic in certain parts of the British Isles.

The 21 cases of post-operative tetanus have occurred only in those districts in which the tetanic group of sheep diseases is endemic.

More than 90 per cent. of the cases of post-operative tetanus followed operations in which the peritoneal cavity had been opened.

Bacilli resembling tetanus bacilli have been found in the

remnant of catgut used for ligatures in 4 cases and in the ovarian pedicle in 1 case, but confirmation of the suspicion that those bacilli were tetanus bacilli has not been forthcoming.

The catgut used at these operations was obtained from the same source as that which is used in the South of England and the Eastern Counties.

I would suggest:

1. That the disease which we call post-operative tetanus is not tetanus at all, but one of the sheep diseases.
2. That it is not introduced by the catgut.
3. That the patient is, at the time of the operation, the host of the bacillus.

4. That we must look upon these cases of post-operative tetanus as cases of idiopathic tetanus, accepting Hamilton's suggestion that idiopathic tetanus is not true tetanus as we ordinarily understand the disease. By that I do not assume that these patients would have developed tetanus had no operation been performed. I would rather account for the sequence of events by supposing that the disturbance aroused by the opening of the peritoneum at the operation was of such a nature as to favour the activity of bacilli which, possibly, would have remained dormant had no operation been performed.

That the mere opening of the abdomen can affect the interaction of a patient and bacilli already present in the peritoneum is frequently demonstrated in cases of tuberculous peritonitis, when a small incision, without any other interference, is followed by immediate improvement of the local condition and ultimate complete recovery.

It may be suggested that the ligatures are infected at or before the time of the operation—that is to say, that post-operative tetanus is the consequence of faulty surgical technique. During the past five years some 350 patients have had loose cartilages removed from the knee joint, at the Royal Victoria Infirmary, without mishap. This, I believe, is a sure test of the efficiency of any surgical method, and would point to the sterility of the catgut, unless we are to believe that all other germs than tetanus bacilli may be destroyed and yet the latter may remain unaffected.

From such facts and observations as I have brought forward, it will be seen that many questions arise which I am quite unable to answer. As I have said before, this paper is written with the sole object of gathering information. Twenty-one cases are far too small a number to warrant the drawing of any conclusion. For instance, I have failed to find any cases of post-operative tetanus in the South of England, in spite of some diligence, and I have laid some stress on the identical geographical distribution of these cases and the group of sheep diseases, but it may well be that there have been many such cases in the southern counties. If that be so, my argument fails.

In view of the almost universal use of catgut, it appears to me to be a duty to publish my cases, and I hope that others who have had the misfortune to encounter similar experience may be induced to do the same. The problem as to whether the disease is really tetanus is interesting, and suggests many collateral inquiries. That, however, is not a subject with which I am able to deal, it being a matter for bacteriologists. The central point is to find out whether the infection, whatever it may be, is conveyed by the catgut, and I am not without hope that catgut may be acquitted.

FRACTURE OF THE THIGH IN THE NEWBORN.

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CONSIDERABLE interest has lately been aroused in regard to the treatment of fracture of the femur in the newly-born child. Various means are suggested for treating this difficult fracture, but, with the exception of Credé's original method, they are all based on the supposition that both extension and traction are necessary.

Credé recommended binding the limb in a flexed position to the abdomen. Unfortunately, this does not invariably give the best result, and an unsatisfactory union is a difficult thing to rectify. The unsatisfactory cases possibly result from the restlessness of the child, and a heaving abdomen which is sometimes distended

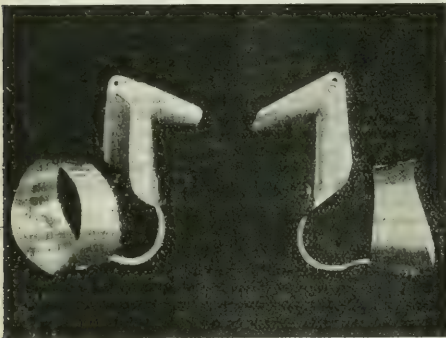
and sometimes relaxed. But the principle of flexion is correct, and the idea is supported by the fact that the newborn child naturally adopts the flexed position for some few weeks after birth, and always sleeps in this posture. On occasions the legs are stretched out, but they always return more or less to the flexed position. It is the child's position *in utero*, and we cannot expect it to alter suddenly. Hence we are right in assuming that flexion is the position of greatest muscular relaxation.

If further proof were necessary, it is to be found in a rapid examination of the fracture under an x-ray screen. This must be done very rapidly in a very dark room, for Roentgen rays can do small children no good. With the child in a horizontal position, the thigh is gradually flexed, and the fragments can be seen to come into line and apposition with each other when the limb is all but touching the abdomen. Professor John Cleland, Professor of Anatomy at Glasgow, says that:

When the spinal column is in its natural position in the newly-born, the hip-joint is in full extension when the femur is at right angles to the spinal column. If, then, the thigh be pressed down so as to bring it in a line with the trunk, the change is effected not at the hip-joint, but in the lumbar region by turning the pelvis backwards. This is not a natural position in the newly-born.

He further says:

"What happens naturally is up to the time of birth the cervical, thoracic, and lumbar parts of the vertebral column present a continuous concavity forwards.



At birth the head is thrown back and lies naturally on the mother's arm, the cervical convexity thus making appearance. When the child begins to try to walk it throws its pelvis back, and produces the lumbar convexity, and the stretched thigh is thus made to revolve a quarter of a circle or a right angle.

These observations he confirms by anatomical dissection. Surely this supports Credé's flexed position and the view that traction is not necessary. Hence, an apparatus that will keep the fractured limb flexed, and just a little off the abdomen, is all that is necessary.

The accompanying figure illustrates the splint. Roughly speaking, it is shaped like the letters Z O, the latter being attached to the Z at a right angle at the lower right-hand corner. The foot is not included in the splint, which reaches only to the tendo Achillis. A small trough-shaped piece takes the calf, and the trough is continued up the back of the thigh—two-thirds of the way is enough. A small bar clearing the buttock is attached at the upper end to a 2 in. wide loop surrounding the abdomen. The end of this loop or belt is fixed in a slot, so that the diameter can be readily altered. The whole is made of aluminium, and weighs, unpadded, 1½ oz. The splint is best padded with a few layers of lint, soaked in olive oil to prevent contamination, which at the most is but slight. Aluminium is not only very light, but practically pervious to x-rays, hence the fractured ends can be seen with the splint applied to the limb.

The sound limb, as a rule, is placed by the child in the same position as the fractured. This is an advantage, as one limb supports the other and makes it easier for the mother to hold and nurse the child. In fact, the child can be nursed just like an ordinary child, can be taken out into the open air, and need not be kept in its cot; it may also be taken into bed by the mother at night time. All

cumbersome appliances become unnecessary. When the child is clothed there is nothing to indicate the presence of the splint, and by the mother's arms the slight additional weight passes unnoticed.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

TREATMENT OF RHEUMATIC OR RHEUMATOID ARTHRITIS BY RADIANT HEAT AND CATAPHORESIS.

I HAVE no doubt as to the efficacy of the American apparatus, with its 500 candle-power lamp, referred to by Dr. Bailey (p. 13) and by Dr. Gamlen (p. 371), but, like Dr. Gamlen, I am uncertain as to which of the rays it emits one must attribute its superiority, or whether, indeed, such superiority be due to any special rays, or only that by its use free ventilation of the part under treatment is ensured and moist heat avoided. I have often noticed that during its application patients will perspire over the body generally, while the part on which the rays are directed remains dry and becomes red and mottled.

I always employ cataphoresis, but whether its good results are due as much to the introduction of iodine or other ions as to the passage of the current itself I am sceptical. I have used solutions of iodide, usually in the form of KI and have also used solutions of NaCl, and so far I cannot find a marked superiority of the one over the other. Whatever substance be used it is ionized through the skin, but I believe that the portion that reaches the region of lymph channels and blood vessels is at once swept away into the general system; and I question, in the case of a given joint, when two electrodes, moistened with the solution which it is desired to introduce by ionization, are placed one on either side of the joint, and the necessary current passed, whether the ions thus introduced directly reach the joint itself, or even if some do find their way there, whether their number is sufficient to have a therapeutical effect. I grant that they get into the circulation, but that is not the point.

This is no place to discuss at length the action of a constant current on living tissue. Suffice it to say that there is an alteration of metabolism and an improvement in nutrition, and it is this very condition of malnutrition that we are trying to combat.

I believe that in a large number of cases the joint changes are due to a trophoneurosis set up by an absorption of toxins from the alimentary tract. I therefore endeavour to put my patients on a suitable diet and course of medicinal remedies such as will tend towards the maximum of nutrition and the correction of any gouty or other tendencies, and I further order a systematic lavage of the large bowel on the Plombière system.

J. CURTIS WEBB, M.B., B.C. Cantab.,
M.R.C.S., L.R.C.P.

London, S.W.

LOSS OF HAIR IN EXOPHTHALMIC GOÏTRE.

ONE of the symptoms of exophthalmic goitre which is little mentioned is the loss of hair. If patients are carefully questioned on this point, I think it will be found in most cases, particularly in women, that this symptom is present. That has been my experience. One case in particular, of which I have the notes, was instructive:

The patient, a young lady about 23, complained of "palpitation" and weakness. She was anaemic, and a haemic murmur was recognized at the base of the heart. The thyroid was not enlarged, and there were no nervous symptoms. Under tonic treatment she recovered.

About two years afterwards the patient consulted me again, her chief trouble being loss of hair, which was going on rapidly. She complained of being easily upset and worried, and attributed this to the alopecia. Although anaemic she otherwise felt well. Both appetite and digestion were good, and she slept well. She was able to bicycle, but of late palpitation of the heart had made this difficult. She had been under medical treatment, but neither iron tonics nor local applications to the hair had done any good. I asked if any enlargement in her neck had been detected, and was told it had not. One medical man, whose name was mentioned, I feel sure would have certainly diagnosed the disease had the thyroid been enlarged or the other symptoms been present when he saw the case.

When I examined the patient the right lobe of the gland was increased in size, the eyeballs were slightly prominent, and

von Graefe's sign was obtained. Stellwag's and Moebius's symptoms were not present. The loss of hair was distressing. In addition to large patches of alopecia at the back and top of the head, the forehead became affected, and later the eyebrows and eyelashes commenced to fall off. The anaemic condition increased. The patient was of slender build, and emaciation was not marked. The hair was falling off so rapidly that I decided she should see a dermatologist in consultation. His opinion was that the alopecia was due to exophthalmic goitre and to no other cause.

With regard to treatment: at the time of which I write radogen was unknown. Thyroid gland tablets were first given, but I do not think they did any good, nor did the symptoms increase under their administration. Next thymus tablets were tried, without effect. Iodine was applied over the gland, and I think it was of use in preventing increase in size; it may, perhaps, have reduced it. Palpitation was treated with tincture of digitalis at first; the symptoms were relieved, but although the drug was exhibited for some little time it was evident that it had no effect in quieting the heart effectually. Tincture of strophanthus was next tried, and in a short time the pulse fell from 120 to 80.

I see that in vol. iv of the *System of Medicine* (Allbutt and Rolleston) Dr. Hector Mackenzie is of opinion that digitalis and strophanthus are of little or no use for palpitation in Graves's disease. Professor Murray of Newcastle-on-Tyne also thinks little of them. In the *Manual of Medical Treatment* (Yeo, Crawford, and Buzzard) I find "several trustworthy observers testify to strophanthus" in doses of 5 minims three times a day. In my patient strophanthus certainly succeeded after digitalis had failed.

As regards the administration of thyroid tablets for simple goitre, I can confirm the results of Dr. Murray and others. In a case which I saw last year—the lady having lived nearly all her life in Worcestershire—I tried the method recommended, I think, by Captain McCarrison, I.M.S., of giving thymol. It was continued for some weeks but had no appreciable effect. Since then thyroid extract in tablet form has been given. The gland has much diminished in size. The patient has removed to a more bracing place, and I am informed her health has much improved in consequence.

HERBERT W. G. MACLEOD, B.Sc., M.D. Edin.,

M.R.C.P. Lond.,
Physician, Western General Dispensary.

London, W.

CONGENITAL DISLOCATION OF THE LENS.

THESE two cases, occurring in a brother and sister, are interesting chiefly because the displacement is atypical and is different in each child, and also because the maternal grandmother had the same condition. Unfortunately she was not available for examination.

CASE I.—Frank McB., aged 9. His mother stated that the grandmother also had "dislocated lens." The boy's eyes had the normal appearance except for tremulous iris.

V. = $\frac{20}{20}$ e.e. + 12 D.sph. = $\frac{20}{20}$. Near vision = 2 D. Snellen; not improved by glasses. The boy uses his own lens in near vision. Both lenses were dis-

located up and to the left, leaving slightly more than half the dilated pupil uncovered. In the left eye were a few faintly visible membranous filaments running downwards and inwards from the lens, waving slightly on movement of the eye. There was nothing else abnormal in either eye, and there were no other congenital abnormalities.

CASE II.—In Nora McB., aged 5, the sister of Case I, the right lens was dislocated downwards and outwards, covering three-quarters of the dilated pupil. The left lens was dislocated down and out, covering less than half of the dilated pupil. No other abnormalities were detected.

In both children the visible edge of the lens is part of a perfect circle.

CYRIL SHEPHERD, M.R.C.S., L.R.C.P.,

Sydney, N.S.W. Assistant Ophthalmic Surgeon, Sydney Hospital.

DESTRUCTION OF SWEAT GLANDS BY THE ROENTGEN RAYS.

MAJOR F. J. W. PORTER's interesting memorandum in the *BRITISH MEDICAL JOURNAL* of January 30th, p. 277, giving

an account of a method of treating excessive axillary sweating by operation seems a very drastic method when a much less severe treatment, with no operation, attains the same result. My attention was called four years ago to the fact that the effect of x rays on the sweat glands was to destroy them. The first case that came to my notice was that of a joiner to whom I applied x rays for the treatment of a tuberculous condition of the skin over the hip. Some months after he was cured he volunteered the information to me that he no longer perspired on the part of his body on which the x rays had fallen. Since that case I have noticed the same condition in many others in which I have applied x rays for the treatment of tuberculous glands in the neck. Children lose permanently not only the downy hairs on the side of the neck by this treatment, but also the sweat glands. To destroy the sweat glands six efficient x-ray treatments is all that is necessary—one treatment a month, giving at each sitting the maximum dose that the skin will stand. The sweat glands are the most readily affected of all the glands in the body by the x rays, and the most readily destroyed. By efficiently x-raying the axilla in the way described, not only are the sweat glands destroyed but also the hairs of the axilla.

A. HOWARD PRIE, M.D.,
Chief Assistant, X-ray Department,
St. Bartholomew's Hospital.

ANEURYSM OF THE HEART IN WOMEN.

CARDIAC aneurysm is rare in the male, and even more so in the female. On that account it has been thought that this case is worthy of record.

J. D., aged 57, the widow of a seafaring man, had had no children, and there was no history of miscarriages. She had been a drinker of spirits to excess for some years, and was admitted into Newcastle City Asylum suffering from depression. During the eleven years of her life there she had various skin lesions, which were cured by potassium iodide.

On admission to the asylum a mitral murmur was noticed to be present. Though always a rather feeble-looking woman she never made any complaint of pain or distress in the cardiac region. She nevertheless had occasional syncope attacks. A fortnight before her death she fainted three times in one day, and was consequently put to bed. Nothing abnormal was detected in the heart sounds; the pulse was small, regular, and accelerated. She now had considerable pain and a feeling of tension over the heart.

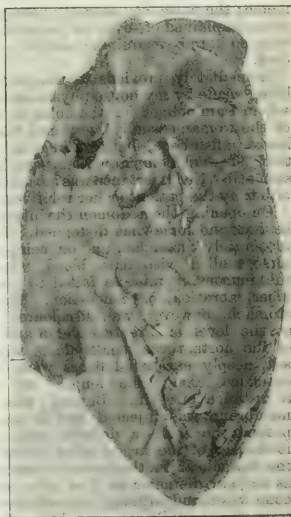
During the last week of her life a considerable pleural effusion developed. She became unconscious, and remained in that condition three days before she died.

The post-mortem examination showed a considerable pleural effusion, nutmeg liver, and cirrhotic kidneys. The heart weighed 540 grams. The aneurysm was situated in the middle third of the outer wall of the left ventricle; it was the size of a pigeon's egg. It contained a quantity of semi-organized clot. The myocardium covering the aneurysm was thinned and was fibrotic. Immediately above the opening of the sac the heart muscle had undergone distinct interstitial changes.

In all probability the condition was the result of a gumma, but it is difficult to say why the secondary lesion followed, as the woman was of sedentary habits, and never exerted herself.

Warwick County Asylum.

COLIN M'DOWALL, M.D.



Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ROYAL VICTORIA INFIRMARY, NEWCASTLE-ON-TYNE.

FATAL HAEMATEMESIS DUE TO PERFORATION OF THE THORACIC AORTA BY A FISH BONE.

(By Sir THOMAS OLIVER, M.D., LL.D., D.Sc., F.R.C.P.,
Physician to the Infirmary.)

ON December 20th, 1908, at 11.30 p.m., M. C., aged 40, married, was admitted, having at 5 a.m. suddenly vomited a large quantity of blood. She was four months advanced in pregnancy and had suffered much from sickness, but as this was usual to her when in that condition little attention was paid to the circumstance until, on December 20th, there had been several vomitings of blood.

On admission she was extremely blanched and looked ill; she was semiconscious and restless. The pulse was rapid and feeble and the temperature subnormal. There was no abdominal tenderness and no rigidity; there was extreme thirst.

The patient was kept warm in bed, morphine was injected hypodermically, saline and nutrient enemata were alternately administered with stimulants, all of which, however, were not retained, for part was returned; black, tar-like stools were passed. When I saw her on the following morning she was quite conscious but extremely feeble; the pulse was scarcely perceptible. There was no pain complained of, even on palpating the abdomen. She was too ill to be examined carefully. In the afternoon she died.

Immediately previous to the *post-mortem* examination being made by my house-physician, Dr. David Ranken, to whom I am obliged for the notes of the case, the husband of the woman casually mentioned that his wife had swallowed a fish bone, that of a ling, ten days previously, and that she had complained of pain in the region of the stomach. No importance was attached to the circumstance either by the patient or her relatives.

On opening the abdomen the intestines were observed to be dark and somewhat distended. The stomach, too, was moderately distended, and on being slit open was found almost filled with dark blood. Careful examination of the mucous membrane failed to reveal the presence of ulcer, abrasion, or congestion. The cardiac end of the stomach, however, was discoloured. In the oesophagus, at the level of the transverse and descending portions of the aorta, three small ulcers with congested borders and deeply excavated floors were found. These ulcers extended along the length of the oesophagus for a distance of $\frac{3}{4}$ in. Beyond this point the mucous membrane was injected and in places excoriated. On probing the ulcers a definite opening was found in the lower part of the largest ulcer which communicated with the thoracic aorta, the lumen of the connecting canal being as large in diameter as that of a small probe. No fish bone was found, although the whole of the gastro-intestinal tract was carefully searched, but under the circumstances, even if present, it would have been extremely difficult to have detected a fish bone. The heart was healthy. On examining the aorta a small irregular perforation was found on its inner surface, which corresponded in level with the ulcers on the oesophagus. Passed into this opening the probe readily emerged from the floor of the largest of the oesophageal ulcers.

Fatal perforation of the oesophagus and aorta by fish and rabbit bones is not unknown; indeed, the cases are probably more common than we believe, so that where the history of a patient having swallowed a bone is not given and there are conditions in existence at the time which of themselves might give rise to haematemesis, the real cause of the fatal vomiting of blood may be easily overlooked.

Reports of Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Friday, March 26th, 1909.

W. G. SMITH, M.D., President, in the Chair.

Gas in the Stomach.

In a paper on this subject Dr. CAHILL said the term "fermentation" was mainly applicable to the decomposition of carbohydrates, and "putrefaction" to the decomposition of proteids and fats. After classifying the causal factors in the production of gastric gas under various heads, he put in a plea for the more careful investigation of the causes of "flatulency."

The PRESIDENT took exception to the distinction drawn between fermentation and putrefaction. He looked on putrefaction as a mere accident of decomposition; it was simply fermentation *plus* smell. He thought the term were not susceptible of accurate definition in the sense in which Dr. Cahill used them. He was not hopeful of the possibilities of intestinal antiseptic treatment, as none of the things used had come up to expectation.

Dr. COX said it was a rare thing for an amount of air capable of causing trouble to get into the stomach by swallowing. He thought the troubles must be looked for within. They had seen cases where mental trouble or sudden shock had led to gas being formed by a process which was probably neither fermentation nor putrefaction, and in which a great amount of misery and depression was relieved by the expulsion of gas. In such cases he thought the subjective sensations were as much to be accounted for by the depression associated with mental causes as by poisoning of the blood by the by-products of digestion, or the uneliminated products of liver digestion.

Sir JOHN W. MOORE said that people with bad teeth, who could not masticate their food, swallowed with it very considerable quantities of air. They were familiar also with the connexion between cardiac and vascular lesions and gas in the stomach. It was exceedingly hard to disinfect either the stomach or intestines, but symptoms could often be relieved by attention to the toilet of the mouth.

Dr. CAHILL, in reply, said the distinction drawn between "fermentation" and "putrefaction" was only for clinical use, seeing that the processes exhibit no absolute line of demarcation. The stress laid on air swallowing by Sir John W. Moore was in agreement with the observations of the writer. An illustrative case of inflammable gas (CH₄) was quoted, a parallel to that noted by the President from the work of Sir Henry Marsh.

Haematoporphyria.

Dr. PARSONS described the case of a woman who came under his care early in June suffering from diffuse abdominal pain, vomiting, and constipation.

The urine, on standing, became of a deep port wine colour. It contained neither albumen nor blood. Neither trional nor sulphonal had been administered at this time. After ten days the patient improved, and went away for a change. The symptoms, however, recurred, and she was admitted to hospital towards the end of June. Abdominal pain was present. Sleeplessness was pronounced, and she was given on four consecutive nights 15 grains of trional. The urine was of a similar colour to that passed early in her illness. Towards the end of the first week after admission she complained of severe pain in her feet, and on July 7th her arms were almost powerless, and she was so ill and feeble that she could barely move in bed. On July 10th the rectal sphincter was relaxed and she commenced to pass under her. A few days later swallowing became difficult, and death took place in a little over two weeks after her admission to hospital, and in less than seven weeks from the onset of her symptoms.

Specimens of the urine passed shortly after her admission to hospital, and a day or two before her death, were exhibited. They were of a rich port wine colour, and, though nearly three years old, were acid in reaction and showed no evidence of decomposition. Though haematoporphyrin was probably present, the red colour was not due to this substance, and the exhibitor considered that the term "haematoporphyria" applied to urine of this class was misleading.

LIVERPOOL MEDICAL INSTITUTION.—At a pathological meeting on April 1st, Mr. BICKERTON, President, in the chair, Mr. NIMMO WALKER read a note on the application of bacteriology to eye surgery. He described the methods of bacterial examination of the conjunctival sac in (1) cases of purulent discharge; (2) clean cases previous to operation. At St. Paul's Hospital this examination was the routine practice, and he strongly emphasized the value and necessity of such. He illustrated his remarks by cases, films, and cultures. Dr. E. GLYNN read a note on hepatic cirrhosis with adenomata and carcinoma in a man aged 49 years, who died after eight months' illness. He had had all the signs of cirrhosis and slight jaundice; latterly the liver had been enlarging. The liver after death weighed 119 ounces, and showed (1) multilobular cirrhosis of the right lobe, with circumscribed green "adenomata," and microscopically many bile-containing tubules; also diffuse white growths, resembling spheroidal-celled cancer infiltrating the portal vein and causing enlarged spleen. (2) There was marked compensatory hypertrophy of the left lobe, with a few "adenomata." There were no growths in other organs. Dr. HILL ABRAM and Dr. GULLAN referred to three or four similar cases with which they had met. One of Dr. Abram's cases was associated with secondary growths in the anterior mediastinum.

GLASGOW SOUTHERN MEDICAL SOCIETY.—At a meeting on April 1st Dr. DAVID LAMB, in a paper on *Anaesthetics*, said the best results were obtained by a selection of anaesthetics based upon an experience of them all; for those unable to obtain this experience he advised the use of a mixture of chloroform and ether (C_2H_5O), as being safer than chloroform and as easily administered. Troublesome rigidity of the abdominal muscles was apt to occur, especially in stomach, gall bladder, and deep pelvic cases. This could usually be overcome by taking time to get the patient well under before beginning the operation, by maintaining as deep an anaesthesia as was consistent with safety, and by as gentle manipulation as possible on the part of the surgeon. There were cases, however, in which it was impossible at any stage to obtain complete relaxation of the abdominal muscles. He had seen on several occasions dangerous cardiac failure from chloroform at the moment the surgeon was complaining of abdominal rigidity. Very deep anaesthesia in the early stage was not without risk, but for abdominal work it was necessary and justifiable. In minor cases light anaesthesia was sufficient, and he had never had any serious reflex troubles under these conditions. As regards delayed chloroform poisoning, the exact cause of this had not yet been definitely determined. No case should be included in this group unless the symptoms were characteristic and verified by *post-mortem* examination. Sepsis must always be excluded. In recorded cases no relation had hitherto been established between the depth or duration of the anaesthesia and this complication. Speaking of local anaesthetics and spinal analgesia in major operations, he summed up thus: When to the pain of the preliminary puncture and the "creepy" effect which at the least must be produced upon the patient by a consciousness of his surroundings was added the possible risks of the procedure (which were certainly greater than those of a general anaesthetic when administered by a skilled anaesthetist), it must be concluded that, though they were methods to which the patient and surgeon might become accustomed, the cases would require careful selection before the best possible results could compare favourably with general anaesthesia. As a rule, also, it must be much more satisfactory for a surgeon to deal with an unconscious patient when anything unlooked for occurs or when some doubtful question arises.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting on April 7th, Dr. P. BOOBYER, President, in the chair, Dr. A. M. WEBER, in a paper on *Ante-partum haemorrhage*, classified its causes under injuries of the genital tract, disease of the cervix or vagina, and separation of the placenta. The last cause he again subdivided into accidental or unavoidable according to the implantation of the placenta. All these causes were illustrated by cases, the author reviewing the treatment of placenta praevia and urging the value of antiseptic douching in addition to

the usual precautions against maternal sepsis. The paper was discussed by the President, Drs. J. H. THOMPSON, T. GERATY, W. THIBLES, A. J. SHARP, and W. B. BLANDY, and Dr. WEBER replied. Dr. C. H. CATTLE showed a woman, aged 29, the subject of diffuse *Scleroderma*, a sequela of influenza four years previously. The whole of the upper half of the trunk with the exception of the hands and back of the elbows was affected as well as the head and neck. Dr. F. H. JACOB showed the characteristic spectrum of *Methaemoglobinemia* occurring in an elderly patient as the result of taking phenacetin to excess; and also a skiagram of the pelvis and hip-joints in an obscure case of double abnormality of the cervix femoris. Dr. A. M. WEBER showed a heart with patent septum ventriculorum fatal at the age of 8 years in a boy; the kidneys from this case were also shown and were in a state of advanced pyelonephritis as the result of congenital stenosis of the meatus urinarius.

UNITED SERVICES MEDICAL SOCIETY.—At a meeting on March 10th, Colonel D. WARDROP in the chair, Major W. W. O. BEVERIDGE, D.S.O., R.A.M.C., gave a demonstration of some recent methods of *Sewage analysis*, including one devised by himself for extracting the total gases in sewage. He prefaced his demonstration by remarks on the importance of the fact that when a sewage effluent was mixed with a tidal water, the more or less complete absorption of the oxygen dissolved in the latter took place. It was therefore necessary, in the case of any sewage, to know its purity or the degree of putrescible matter present by ascertaining, on the one hand, the amount of dissolved oxygen present in the sewage, and, on the other, by estimating the amount of oxygen it was able to take up, which might be termed its "oxygen appetite." In a tidal water, composed of equal parts of salt and fresh water, saturation might be represented by a volume of 6.20 c.c.m. of oxygen per litre, while the lowest limit to which it was safe to deoxygenate such a water was about 3.4 c.c.m. per litre. Below this point there would be danger of destruction to fish. Mr. N. BISHOP HARMAN demonstrated an apparatus giving a diaphragm test for *Binoocular vision*, founded on the fact that when a man with normal vision in both eyes looks through a hole in a diaphragm held at some little distance from him the eyes look crosswise through the opening, the left half of the field being viewed by the right eye, and the right half by the left eye. The test objects were of different natures—written type, pictures, or geometrical patterns for children and uneducated people, etc. The uses of the test were to determine the equality or otherwise of the vision in the two eyes, to determine the presence, absence, or any defect of binocular vision, to exercise the vision in squinting eyes, to detect malingerers feigning monocular blindness, and to demonstrate certain physiological phenomena connected with the perception and suppression of images.

Reviews.

BULLET WOUNDS OF THE VISUAL CORTEX.

Dr. T. INOUE,¹ of Tokio, who has had an unusual opportunity of studying the effects produced by bullet wounds upon the visual cortex, has recorded his observations in a volume written in German. By the employment of an exact method of determination of the position of the wounds in the brain and skull, and with the help of a cranio co-ordinometer, he has made a number of measurements, by which he claims that he has been enabled to represent the superficial surface of the occipital lobe in the cranium.

The author deals with the effects of the modern firearm on the skull and brain, and he remarks that, owing to the Russian bullets being of small calibre, they passed generally through the brain in a straight line, which could be determined mathematically if the point of entrance and exit were known; the injury to the brain structures corresponded to this line of transit.

The same bullets, however, may not always produce

¹ *Die Schöstörungen bei Schutzverletzungen der Korkischen Sehphäre.* Nach Beobachtungen an Verwundeten der letzten japanischen Kriege. Von Dr. Tatonji Inoue aus Tokyo. Leipzig: W. Engelmann. 1909. Sup. roy. 8vo, pp. 120; 39 figures, Taf. 2. M.6.)

penetrating wounds, but, owing to their glancing off the skull, the brain may be damaged beneath the point of reflexion. Most of the Japanese soldiers were wounded while lying on the ground in the position for shooting. The question arose after the war whether a pension should be granted or not; it was therefore necessary to ascertain the actual injury to sight, consequently the visual fields have in such cases to be carefully taken. Attention is also paid to the results of wounds due to splinters of shrapnel and shells. A number of cases are reported, a short but complete account of the main symptoms and anatomical conditions being noted. Excellent photographs of the head, showing the points of entrance and exit of the bullet, are given, also the perimeter charts which were taken in all the cases.

The author remarks that the patients often suffered with slight neurasthenic conditions, pain or peculiar sensations in the eyes or behind the optic bulbs, and he calls this condition "neuralgia optica," and considers that it may be explained by the law of peripheral projection of irritation; he assigns to it great importance for the diagnosis of lesion of the visual cortical area. Psychic blindness was observed in only one case; more often it was cortical blindness but always of a transitory character. The fundus was almost always normal; it was only seldom that there was optic neuritis and then it was but slight. The pupils reacted normally; the movements of the globes were often slow, but a true paralysis was not observed. It is of interest to note that in a case of lesion of the angular gyrus there was also a disturbance of the perception of depth, as is assumed to be present in monkeys after destruction of the gyrus angularis (Munk), and also, according to Monakow, such lesions in man will produce this result.

True alexia was not met with, although difficulties in reading occurred from the visual defects; there was sometimes disturbances of orientation. All possible forms of hemianopsia were observed, in the unilateral form there was preservation of macular vision on both sides, whilst in some cases of bilateral hemianopsia, superior and inferior, the dividing line passed through the point of fixation and there was no macular vision in the hemianopic fields.

The author deals with the projection of the visual area according to mathematical principles of corresponding surfaces; but in a review it is impossible to do more than recommend those interested to consult this valuable work. He is of opinion that the cortical visual field of Henschen is the principal visual area, but he considers that it is a little more extensive than Henschen admits. He would place it 1 cm. above and below the calcarine fissure.

However, it may be remarked that the striate area which corresponds to the cortical retina varies as regards its exact placement in different individuals; it may, as Elliot Smith and Mott have shown, come on to the external surface, although the superficial area of this cortex is practically the same in all individuals. For this reason the exact mathematical calculations made on the skull do not permit the same deductions to be made as to the extent, or even the exact location, of the cortical retina damaged in the same way that a careful microscopic examination of the brain in a fatal case permits. Consequently, although the methods adopted by Dr. Inouye are as near perfect as possible, we are unable to accept his deductions as conclusive in assigning to the posterior calcarine region the portion of the cortex concerned with macular vision, although his conclusions agree with the findings in the Schmidt-Laquer case. Most authorities would, however, accept the view of Monakow that clinico-anatomical evidence supports his deduction that there is a bilateral representation of the macula, although we are of opinion that its exact location has not yet been determined with accuracy.

This work has been carried out with great care, skill, and scientific accuracy, and should be of considerable value to army surgeons, ophthalmologists, and neurologists; it is based upon 28 cases occurring in 80,000 wounded soldiers, and offers another striking illustration of the efficiency of the Japanese medical service and the determination of their Government to utilize to the full extent scientific investigations.

HYPNOTISM.

In the recently-published sixth edition of Dr. MOLL'S *Hypnotism*,² being the translation of the fourth German edition, this standard work has been brought carefully up to date. Although, owing to the same and sober judgement which stamped the earlier editions, and the comprehensive basis on which their author worked, no revision of the plan or theory contained in the book has been required, very numerous additions have been made throughout the text, and several new chapters have been added. Among these are chapters on the general influences that hypnotism and suggestion have had on medicine, and a study of the salient features of psycho-therapeutics. Also the place and importance of suggestion in art, superstition, and ethnology are discussed much more fully than in the earlier edition, much invaluable information for those interested in folk lore and ethnology being given. The last section of the book, that dealing with occultism—animal magnetism, faith-healing, clairvoyance, telepathy, and spiritism—has been very considerably enlarged. This chapter contains a wide survey, and entirely just though temperate criticism of modern mystery-mongering in its popular forms, and also of the very diverse and subtler forms of the occult which have appealed to even such eminent men as Crookes, Wallace, and Lombroso, and to medical men like Schrenk-Notzing, Luys, and at one time Babinski. "When I come to look through the vast literature of occultism," Dr. Moll says, "I find that I am totally unable to discover even one series of experiments that carries with it a convincing proof of the reality of occultistic phenomena; nothing but casual observations or unchecked experiments."

As in former editions, the book opens with a careful account of the history of hypnotism, after which the author proceeds to such general considerations as the methods in use in inducing hypnosis; the relationship between hysteria and hypnotism; the influence of race, sex, age, etc., on hypnotizability, and general definitions. In reference to the growing trend of opinion that only the hysterical are hypnotizable, Dr. Moll considers that this mistaken notion, as he terms it, is partly due to the fact that most physicians have experimented with hysterical subjects only, and partly to a confusion of hysteria as theoretically conceived with the clinical conception of this disorder. If, as Mobius says, "all morbid bodily changes caused by ideas are hysterical," the psychological relationship of hysteria to hypnotism is apparent, but according to the author this theoretical conception of hysteria does not cover the cases clinically described as hysterical, a confusion of hysteria and hypnosis in consequence obscuring the whole question. After considering fully the symptoms of hypnosis; post-hypnotic suggestion; cognate states, such as sleep, dreams, etc., and the difficult question of simulation of hypnosis and its signs, Dr. Moll examines minutely and finally discards the various theories, psychological and physiological, which have been advanced to explain hypnosis. Particularly is he sceptical of physiological theories, including that which counts numerous adherents in France, based on the theory of sleep put forward by Duval, Lancette, and Pupin, which in its turn was founded on the now generally discredited "gemmular retractility" theory. All these theories, by their endeavour to explain mental processes by means of our present knowledge of the central nervous system, point, he states, to a disquieting tendency to over-estimate physiology. Dr. Moll's own explanation of hypnotic phenomena is only, he frankly admits, a limited one. The practical result of his inquiry is, perhaps, best summed up in his statement: "No new psychic law is to be found in hypnosis." One by one he takes the individual phenomena of suggestion: Voluntary movement; "positive and negative delusions of the senses"; *rapt*; the phenomenon of memory, and post-hypnotic phenomena; and shows how there are analogues of non-hypnotic phenomena. Beyond this explanation by analogy he does not consider it safe or even needful to venture, for "an explanation of hypnosis is not called upon to explain the real nature of the process by which an idea is aroused; that is a problem for psychology in general to solve." The

² *Hypnotism. Including a Study of the Chief Points of Psycho-Therapeutics and Occultism.* By Dr. Albert Moll. Translated from the fourth enlarged edition by Arthur F. Hopkirk. Contemporary Science Series. London and Felling-on-Tyne: Walter Scott Publishing Co., Limited. 1909. (Cr. 8vo, pp. 617. 6s.)

reader will therefore not find here any attempt at a uniform explanation of hypnosis, such being, in Dr. Moll's opinion, an impossibility; but, instead, fair and impartial criticism of over-venturesome and contradictory physiological theories and a cautious reasoning by analogy, which is meticulously careful never to overstep the limits of proved fact. In conclusion, it should be said that the legal aspects of hypnotism are not overlooked, and, as an evidence of the thoroughness with which this admirable work has been constructed, it may be mentioned that the bibliography, index of subjects, and index of names take up fifty-five pages.

The whole work is so packed with information that it is valuable if only for purposes of reference; it is characterized throughout by the moderation of statement which ensues when a calmly critical judgement is brought to bear on phenomena that appear marvellous to the eye of the uncritical, and has been excellently translated.

PATHOLOGY OF APPENDICITIS.

PROFESSOR ASCHOFF'S monograph on inflammation of the vermiform appendix³ has a subtitle denoting his purpose to employ histological descriptions in the solution of pathogenetic problems. Unfortunately the deductions he is bound to make from an "unbiased" interpretation of the histological findings lead him into a blind alley. What must have been the horror of his surgical colleagues, who have so generously placed all their material at his disposal, when they found him declaring his considered judgement against all surgical interference in a process unaided Nature manages so well that four-fifths of all those attaining the allotted span of years have endured it unscathed! Hence we have, between pages 102 and 104, something very like a *volte face*. Indeed, the author had only to look once more at the whole series of his very beautiful plates of microscopic appearances of the diseased organ in manifold states and stages to see that the riotous behaviour of his favourite diplococci, Gram-positive bacilli, and hypothetical spirochaetes must sooner or later let in the surgeon. Hence he comes suddenly but graciously to the concession that, if Nature does not seem to be successful in her attempts at dealing with an attack of appendicitis at the end of twenty-four hours, the wicked surgeon may be allowed a free hand. This, after all, is not far removed from submission to the dicta and deeds of the most hardened adherent of "early operation."

The value of the book lies, as might be expected, not in speculations as to pathogeny based on one set of data only, but in the painstaking care and industry with which serial sections of innumerable appendices, normal and abnormal, fetal and adult, have been examined and reproduced. A strong case is made out for enterogenous infection with primary lesion at the bottom of the crypts or fossae; all that is necessary is the smallest abrasion of epithelium by which the infective agent may gain entry. An abscess may form in the submucosa and eventually burst either way, to the serosa or to the mucosa, or both; in the latter event there is a "miliary" perforation. Or the process may be infiltrative, and ulceration of the local mucosa be accompanied by spreading exudation in the muscular and serous coat all the way to the base of the appendix, with mechanical or toxic effects upon the vascular supply. We do not find, however, any adequate description of the gangrenous processes, sometimes limited to the mucosa, sometimes involving the whole walls, so eloquently described in the great American monographs and so familiar to every operating surgeon in this country. There is a good deal to be written on the geography of appendicitis. A little too much space is devoted to the description of coictrial appearances after the various types of lesion; moreover, when the author has arrived at an interpretation of the appearances, satisfactory to himself, it only leads him to the absurd conclusion that four-fifths of us suffer and survive a serious attack practically without knowing it. What he does not say, and what is to us much more surprising, is how little evidence of anything abnormal there may be in the histological picture even of an appendix that has given great trouble, and

shown to the naked eye links, twists, adhesions, and so on. Aschoff makes a point of the frequency with which the mucosa over a faecolith, though stretched, is intact or but little changed, whilst acute infiltration and ulceration is going on beyond or even proximal to it. He thinks faecoliths have little influence in initiating acute inflammation, although admitting their deleterious action in determining perforation after infection of the walls. On the whole, it must be admitted that this work has greater value as a histological exercise than as a serious contribution to practice.

KEEN'S SURGERY.

THE first article in the fourth volume of *Keen's Surgery*⁴ is from the pen of Dr. W. B. Coley, and deals with hernia. Speaking from a personal experience of over two thousand operations for rupture, he emphasizes the view generally held by surgeons, but still unappreciated by the public and by the courts, that trauma has very little indeed to do with its causation. He does not consider it justifiable to operate in infants under three or four years. It is surprising to see that he admits the propriety of employing taxis for five minutes in the treatment of strangulation. Operative measures would seem to be successful in from 80 to 90 per cent. of inguinal and femoral cases. Another article of great interest is that on the surgery of the vermiform appendix by J. B. Murphy; there is nothing very new, of course, but he makes one definite pronouncement as to diagnosis. He says that the order of occurrence of symptoms—pain, nausea or vomiting, general abdominal tenderness, elevation of temperature, and, lastly, leucocytosis—is so invariable that any departure from this sequence leads him to doubt the diagnosis. There is also a page or two on the clinical course replete with refinements of diagnosis only possible to very great experience, and withal a shade too dogmatic.

The two articles on military and naval surgery, granted the propriety of their inclusion in a textbook of general surgery, deserve no little praise. The Russo-Japanese war, that in the Philippines, and the Boer war have provided material of which good use has been made. The illustrations of wounds met with in battleships under concentrated fire are instructive, and afford good warrant for the author's maxim that the duty of the naval surgeon during an action is "not to be a hero," but to keep himself in the safest part of the ship and "wait."

The European reader who turns with some curiosity to Professor Rodman's chapter on the influence of race, age, and sex in surgical affections, will, we suspect, find it disappointing. The writer is concerned chiefly with points of distinction between the immunities and susceptibilities of the negro and the white, with scattered references to the American Indian, no doubt exactly what is wanted by the practitioners and students in the States for whom it is written. He expresses his belief that "acute ulcer only of the stomach is more common in young women than it is in men. Chronic ulcers are more common in men, and are the ones which come to operation, as they are not amenable to medical treatment."

In the various chapters dealing with the examination of the urine and with disease in the urinary organs and tract there is a good deal of overlapping, together with some conflict of opinion. For instance, the views as to cryoscopy, expressed in successive chapters by Edsall and Ransohoff, are not quite harmonious. The former discounts its value very decidedly; he also rejects Cammidge's reaction. Professor Young writes a full and instructive account of the surgery of the prostate. He cannot restrain himself from a gibe at Frey's claim to priority in the matter of suprapubic enucleation. The sections on the surgery of the ear and of the eye are fairly satisfactory from the standpoint of the student preparing for examination, but suffer from limitations of space. Each would have been so much better in a separate essay, where operative measures would not have been divorced from the other remedial indications in defects of the special sense organ. It is hardly necessary to say that the illustrations to this volume are good; we have become accustomed to expect that. The photograph on p. 147 of the

³ Die Wurmfortsatz-Entzündung: eine pathologisch-histologische und pathogenetische Studie. Von L. Aschoff, Professor of Pathology in Freiburg. Jena: Gustav Fischer. Sup. roy. 8vo, pp. 120; 12 lithographs and 22 illustrations in the text. M. 35.

⁴ Surgery, its Principles and Practice. By Various Authors. Edited by W. W. Keen, M.D., LL.D., and J. C. De Costa, M.D. Vol. iv. Philadelphia and London: W. B. Saunders Company, 1908. (Royal 8vo, pp. 1194, 582 illustrations. 30s.)

clamp operation for piles shows an unsatisfactory method of application. The part of the blade adjacent to the hinge should be compressing the largest vessel—that is, the part of the mucous membrane farthest from the anal margin. The subjects of the coloured plates are hardly worthy of such conspicuous selection. Brief but good bibliographies are appended to the various chapters.

SCOLIOSIS.

CARL NICOLADONI died untimely in 1905, but his name lives, and is likely to live for a long time, as a surgeon of an original mind whose work lay specially in the province of orthopaedics. As the originator of the procedure known as tendon transplantation for the relief of paralytic deformities his fame is secure, but he was active in many other branches of orthopaedic surgery, notably in the study of the pathology of scoliosis. To carry out his last wishes, and as a tribute to his memory, his sister has now published a small book on the anatomy and mechanism of scoliosis,* to which Professor Julius Hochenegg of Vienna contributes an introductory note. Nicoladoni's great work on this subject, which was published in the *Bibliotheca Medica* soon after his sudden death, did not fulfil his intention, which was to make the knowledge of the results of his untiring energy and research easily available for a wide circle of surgeons and practitioners. This abbreviated work thus originated, and although, owing to a chapter of accidents, six years have passed since it was written, it is still, as Professor Hochenegg says, of much value. "Time does not alter anatomical truths. They remain for ever as firm foundation stones." The fifty pages of this book are devoted almost exclusively to a description and consideration of the changes which can be demonstrated in the vertebrae of scoliotics, both the alteration in outward form and in the internal structure or architecture of the bones, but a few pages are given to the changes which may be found in the form and position of the thoracic and abdominal viscera and the ligaments and the diaphragm. Setting on one side infantile rachitic scoliosis the author declares that he has never found any evidence of rickets in the vertebrae of those cases in which the onset of the deformity occurred after the tenth year. In these cases the microscopic structure was that of healthy vertebrae of the same age. Interesting as this morbid anatomy is, the departures from the normal appear to be merely the results and not the causes of the trouble. He says in summing up that scoliosis is a deformity produced through eccentric (unequal) loading (*Belastung*) of the vertebral column, which gradually deforms the bones affected. Despite the painful and exact researches of many pathologists into the minute anatomy of scoliotic vertebrae which have led to the establishment of facts in morbid anatomy of the various changes to be found in the bones, we seem to be as far as ever from a knowledge of the determining factor, whose presence in one here and there out of many young people decides the incidence of scoliosis, although they may be all in the same environment and may all use the two sides of the body asymmetrically. The book is embellished by a fine portrait of Professor Nicoladoni and is illustrated by means of an atlas of thirty-seven plates which is conveniently stowed in a pocket of the binding, whence it is easily withdrawn for reference.

BLOOD-EXAMINATIONS IN SURGERY.

*Blood-Examinations in Surgical Diagnosis*⁸ is the title of a little book described by the author, Dr. IRA S. WILE, as "a practical study of its scope and technic." It is intended for practitioners, and deals almost exclusively with enumerations of leucocytes. Cryoscopy, blood cultures, and investigations requiring elaborate apparatus, are briefly mentioned but are obviously considered beyond the realm of practical politics with those for whom the volume is written. After giving a simple account of the easier methods of dealing with blood films and counting instruments, and describing the normal and abnormal corpuscles,

the author goes on to enumerate the various blood pictures to be expected in the commoner surgical conditions in various stages, and states succinctly the diagnostic and prognostic indications of various findings. In this section the surgical limitation is not very clear, however, unless we are to take it that the patients of surgeons are as liable to measles, influenza, pneumonia, cardiac disease, variola, and so on, as other people, and of course it is well for the surgeon to know what effect all such conditions may have on the blood findings. As no references are given, the statements read a little dogmatically, but on comparing a good many of them with a standard work we have detected no discrepancies. The book is admirably printed and bound; the coloured plate is fair, but the pen-drawings of blood corpuscles hardly fulfil their intention. The book is useful; it contains much information surgeons want in a handy form, and if the evidence here set forth of the multitudinous conditions modifying leucocytosis at a given moment rather detracts from the usefulness of blood-counts in critical diagnosis, that is not the fault of the author.

PHYSIOTHERAPY.

THE third volume of the *Bibliothèque de Thérapeutique*, published under the direction of Professors A. GILBERT and P. CARNOT,⁷ deals with physical therapeutics, and is devoted to the subjects of passive movements, massage, and gymnastics, the special articles being contributed by Professor Carnot and Drs. Dagron, Ducroquet, Nageotte-Wilbouchewitch, Cautru, and Bourcart. This system promises to be most comprehensive, for it will consist of twenty-six volumes, of which one is on the art of prescription writing, fourteen are to be devoted to therapeutic agents, two to methods of administration, and nine to the treatment of special diseases. In all probability the last series will be the most generally popular with practitioners; while such a volume as this is more likely to be appreciated by those specialists who are engaged in the direction of institutions or other places in which treatment of this kind can be carried out, although there are chapters in it which contain information of use to every one who has from time to time to recommend any of these remedial means for his patients. The early chapters deal in an interesting manner with the physiological grounds for these methods, and a good deal of evidence is brought forward to establish the doctrine that structure is modified by function, one fact alleged being that the development of the temporal muscle of mastication, which is so large in the carnivora and in the anthropoid apes, opposes the development of the temporal region of the skull, and consequently creates an opposition between the development of the brain on the one hand, and the powers of mastication on the other! The author of the article on massage insists upon the need for gentle manipulation, and condemns many of the practices of empirics and all mechanical vibrators; but while he advocates the use of massage in a great number of local diseases, he says less than one would expect of the value of "general" massage in conditions of general debility. In the section on gymnastics a full description is given of Ling's Swedish system, which is highly praised for the production of the best results in the physical training of children and recruits. A description is given of the system of Lorenz in orthopaedy. The account of the various methods as applied to special diseases includes much with which we do not agree, especially that on massage of the pelvic organs, but it is, perhaps, necessary that the advocates of such treatment should be allowed to explain it.

Mr. EUGENE PAZ is a teacher of gymnastics in Paris, who is naturally and laudably anxious that the benefits to be obtained from properly planned and regularly carried out exercises should be widely known. He has, therefore, written a book, *La Gymnastique Raisonnée*,⁹ on the subject, of which a new edition is now before us. The

⁸ *Anatomie und Mechanismus der Scoliose*. Von weil Dr. Carl Nicoladoni o. ö. Professor der Chirurgie an der Universität Graz. Berlin und Wien: Urban und Schwarzenberg. 1909. (Roy. 8vo, pp. 62; mit 54 Figuren auf 37 Tafeln und dem Portrat des Verfassers. M. 5.)

⁹ *Blood-Examinations in Surgical Diagnosis*. By Ira S. Wile, M.S., M.D. New York: Surgery Publishing Co. 1908. (Post 8vo, pp. 161, illustrated. \$2.00.)

⁷ *Bibliothèque de Thérapeutique*. A. Gilbert and P. Carnot. *Physiothérapie, Kinésithérapie: Massage, Mobilisation, Gymnastique*. Par Drs. P. Carnot, Dagron, Ducroquet, Nageotte-Wilbouchewitch, Cautru, Bourcart. Paris: J. B. Baillière et fils. 1909. (Post 8vo, pp. 500; 356 figures. Fr. 12.)

⁹ *La Gymnastique Raisonnée. Nécessité du mouvement rationnel. Démonstré par le mécanisme du corps humain*. Paris: Jules Roussel. 1909. (Post 8vo, pp. 255; 120 figs. 4 plates. Fr. 2.)

preface has been written by Mr. JULES SIMON, who as a former pupil of Mr. Paz testifies that when well taught gymnastic exercises do not deserve the reproach which has often been made that, as compared with games, they are dull and uninteresting. All teachers, to be successful in the highest sense, should be enthusiasts, and especially is this true of those who would teach a somewhat monotonous subject, such as gymnastics, which involves the frequent repetition of movements which in themselves are apt to seem purposeless. Such enthusiasm is more often to be found, we think, in French teachers of physical development than in English. Those who remember the late Mr. Bertrand, who for many years was a *maitre d'armes* in London will allow his superiority in "esprit" over any native teacher. Something like this enthusiasm would seem to be possessed by Mr. Paz, but in his claims for a scientific basis of gymnastics his enthusiasm rather outruns knowledge.

About half the book consists of a treatise upon anatomy, physiology, and pathology. However desirable a smattering of these subjects may be, their details have but little to do with the somewhat empirical practice of bodily exercises, and a knowledge of the origin of the red corpuscles, even if it were as certainly known as Mr. Paz seems to think that it is, has no bearing upon the question of what are the best exercises for a person afflicted with anaemia. Nevertheless the book is a useful guide to such exercises as can be done without any apparatus but dumb-bells, clubs, and bar-bells; for Mr. Paz rightly deprecates the use of very heavy dumb-bells and the performance of dangerous exercises on the trapeze, etc., although he gives directions for the use of heavy dumb-bells for those who wish to employ them.

ODONTOLOGY.

THE book on the *Evolution of Mammalian Teeth*, by Professor H. FAIRFIELD OSBORN,⁹ is a full and complete account of the homologies and evolution of mammalian teeth, according to what may be termed the American school of palaeontologists. For, although the idea of the origin of mammalian teeth from a tricuspid ancestral form had been to a certain extent foreshadowed by some Continental writers, it is to the American naturalists that the credit of establishing a theory usually known as the tributercular theory of Cope must be given, and it is based to a very great extent upon the rich Mesozoic and Eocene fauna discovered in America. The theory may be briefly but somewhat inadequately described as the assertion that, where the ancestral forms of existing mammals are known, the earliest forms present molars either distinctly tributercular—the tubercles being arranged in a triangle—or teeth the derivation of which from a simple tributercular form is obvious. In the development of the theory the attempt is made to identify those cusps of more complex teeth which are homologous with the cusps of the primitive triangle, and to trace the order and method with which additional cusps are added. A vast amount of labour has been expended on these generalizations and their results, and the theory has obtained almost universal acceptance in America, whilst it cannot be ignored even by those who do not fully accept it. Professor Osborn has been a leader in the development of the theory, and so naturally the present work is devoted to its proof. But, notwithstanding this, the book is a model of writing in the truest scientific spirit, for the views and arguments of those who reject the theory or only partially accept it are summarized and presented with the most scrupulous fairness, so that, if the reader wishes to know in brief what their views are, he could not do better than turn to Professor Osborn's pages for the information. This is a rare merit in scientific works of an argumentative kind. It would take too much space to enter into the nature of the difficulties in the way of the complete acceptance of the theory, and it must suffice to mention that they are partly palaeontological, partly zoological, and partly embryological, the order of appearance of the cusps sometimes failing to correspond to the law of recapitulation in the development of the individual of the evolution of the animal. This book will go far to widen the acceptance of the theory,

and can be cordially recommended to all who are interested in homological studies.

The development of the teeth and their relation to one another have been closely studied by means of decalcified sections, and by models constructed ingeniously from serial sections, but as the amount of calcification increases, the difficulty of avoiding disturbance of the parts in cutting sections becomes very great, hence the *Atlas of Skiagrams Illustrating the Development of the Teeth*,¹⁰ prepared by Professor JOHNSON SYMINGTON and Dr. J. C. RANKIN, representing all the calcified parts *in situ*, and with no suspicion of disturbance, fills a much-needed want in the study of the relations of the developing teeth to one another and to the jaws. The method pursued was to divide the head in the median plane and to lay each half upon a photographic plate, the back part being slightly raised in order that the shadows of the incisors might not be superposed upon one another, and to place the tube 9 in. above the specimen. The figures are the same size as the negatives, and are only, from the divergence of rays, slightly larger than life size. The heads of eighteen children, ranging from birth to 18 years, and of one adult were used, so that, as the authors claim, a complete history of the calcification of each tooth and its position at various ages in the jaws has been produced. The skiagrams are excellent, and amongst other points show very clearly the relation of the calcifying tooth to its bony crypt and the large area occupied by the enamel organ during the early stages. One interesting skiagram is taken from a rickety subject, and though no retardation has occurred in the calcification of the teeth, deficient backward elongation of the maxilla has led to the second permanent molar, and, indeed, the first also, being displaced for want of room. The single skiagram taken from an adult displays a fine set of teeth in normal position, and brings out very strikingly the smallness of the areas of lateral contact between each tooth and its neighbours.

CHEMISTRY.

STARTING with the publication of Kekulé's first paper on benzene, Dr. STEWART in his *Recent Advances in Organic Chemistry*¹¹ has endeavoured to show the main lines along which the subject has been developing during the last fifty years. In an introductory chapter he describes the struggle between the static and dynamic theories of molecular constitution, and shows how nearly Pasteur arrived at the stereo-chemical hypothesis published twenty-five years later by Le Bel and van 't Hoff. Among the other theories dealt with as being of special value in the period considered are the "steric hindrance" idea of Victor Meyer and Bischoff and the application of physics, and especially of the spectroscope. The review concludes with a note of pessimism. Compounds, Dr. Stewart laments, are turned out day by day in the laboratories, and of the hundred thousand odd bodies prepared only some 30 per cent. have been of any material value. As he suggests, the relative barrenness of organic chemistry of recent years is probably due to the fact that many of the ablest workers have concentrated their energies on physical chemistry. The most dangerous tendency of modern work is, Mr. Stewart holds, that "while we are all sufficiently glib in describing how a reaction takes place, very few of us seem to give a thought to the problem of why the reaction takes that particular course rather than another." In the body of the work the author describes the Grignard reaction, asymmetric syntheses, the polyketides, the polymethylenes, the mono-cyclic, di-cyclic, and olefinic terpenes, the synthetic alkaloids, the polypeptides, and the chemical action of light. Addition reactions and the meaning of unsaturation are carefully considered. In the concluding chapter stress is laid on the fact that those who wish to make any material advance in the subject must take into account the

⁹ An *Atlas of Skiagrams Illustrating the Development of the Teeth*. By Johnson Symington, M.D., F.R.S., and J. C. Rankin, M.D. London: Longmans, Green and Co. 1908. (Demy 4to, 12 plates and 5 drawings of dissections made to illustrate the relations of the maxillary sinus at various ages. 3s. 6d.)

¹¹ *Recent Advances in Organic Chemistry*. By A. W. Stewart, D.Sc., Lecturer on Stereo-chemistry in University College, London; Carnegie Research Fellow, formerly 1881 Exhibition Research Scholar, and Mackay Smith Scholar in the University of Glasgow. With an introduction by J. Norman Collie, Ph.D., LL.D., F.R.S., Professor of Organic Chemistry in University College, London. London: Longmans, Green and Co. 1908. (Med. 8vo, pp. 311. 7s. 6d.)

⁸ *Evolution of Mammalian Teeth*. By Professor H. Fairfield Osborn. Edited by W. K. Gregory, M.A. London and New York: The Macmillan Company, 1908. (Roy. 8vo, pp. 260; figures 215. 8s. 6d.)

arrangement of atoms in space, the mode of linkage of atoms within the molecule, the influence which the two non-adjacent atoms in a chain can exercise upon each other, the difference between ionic and non-ionic reactions, and those physical properties of organic compounds which are due to electronic motions. Dr. Stewart's book will be read with interest and profit by all who wish to have a clear conception of the principles underlying organic chemistry.

Dr. JULIUS KISS has republished his prize essay on the periodic system of the elements and the action of poisons in the form of a pamphlet.¹² It is an attempt to systematize our knowledge of poisons in the light of the periodic law. The details are of a highly technical order, and are written in the new language of ions introduced by physical chemists. The action of ions on ferment processes, on haemolysis and cytotoxicity generally, are given at length, and Loeb's work on similar lines is subjected to certain criticisms. Work of this nature is breaking new ground, and the activity of atoms and ions will no doubt in time be found to follow natural laws; it, however, at this stage hardly calls for extended criticism, and we can only congratulate the author on the progress he has made in a difficult subject.

In *Theoretische Grundlagen zum praktisch-chemischen Unterricht der Mediziner*,¹³ by A. KONSCHG, an attempt is made to provide in small compass a handbook of practical chemistry for medical students who are following a course of work in this subject in a teaching institution. In so small a volume the subject matter is necessarily presented in too condensed a form for the work to be used as a textbook. Thus qualitative, gravimetric, and volumetric analysis of inorganic substances occupy together only sixty-five small pages, while the organic section is proportionately even less extended; much knowledge of general chemistry is assumed. For its particular purpose, however, the book is calculated to be serviceable to anyone familiar with the German language. The matter given is well chosen and clearly presented.

NOTES ON BOOKS.

A CHEAP *Pictorial Guide to Gardening*, prepared by the Editor of *Garden Life* and first issued about a year ago, has reached a fourth edition.¹⁴ About half the book is given up to flowers, and there are sections on plants, including creepers, on shrubs, on bulbs, on fruits, and on vegetables. There is a final chapter containing miscellaneous information on potting, on making and maintaining lawns and paths, and various other matters. The illustrations are black and white sketches, and, being severely practical, really add to the utility of the handbook.

Dr. J. MALCOLM FARQUHARSON, surgeon to the ear and throat department at the Royal Infirmary, Edinburgh, has prepared an abridged translation of the book on diseases of the pharynx and larynx published by Dr. E. J. Moure of Bordeaux in 1904. In making the abridgement, which is entitled *Elementary Practical Treatise on Diseases of the Pharynx and Larynx*,¹⁵ Dr. Farquharson has been careful to omit no essentials, and has not commented on Dr. Moure's opinions; the book, therefore, in its English dress represents the views of a French physician who has gained a high reputation in his speciality. In reviewing the French edition (*BRITISH MEDICAL JOURNAL*, vol. 1, 1905, p. 195) we said that the whole book gave evidence of the author's great experience in practice as well as in teaching, and that it would give great satisfaction to readers, whether practitioners or students; it cannot be doubted, therefore, that Dr. Farquharson has laid the English profession under a debt of gratitude.

¹² *Das periodische system der Elemente und die Giftwirkung*. By Dr. Julius Kiss, of Buda-Pesth. Wien and Leipzig: Alfred Holder. 1909. (Roy. 8vo, pp. 190, 6 illustrations. M. 5.60.)

¹³ *Theoretische Grundlagen zum praktisch-chemischen Unterricht der Mediziner*. Von Arthur Konschegg. Wiesbaden: J. F. Bergmann. 1903. (Glasgow: F. Bauermeister. (Demy 8vo, pp. 165. 3s.)

¹⁴ *Pictorial Guide to Gardening*. By the Editor of *Garden Life* Fourth edition. London: The Cable Printing and Publishing Company, Limited. 1909. (Demy 8vo, pp. 262. 1s.)

¹⁵ *Elementary Practical Treatise on Diseases of the Pharynx and Larynx*. By Dr. E. J. Moure. Translated and adapted by J. Malcolm Farquharson, M.B., F.R.C.P. (Edin.). London: Reisman, Limited. 1909. (Med. 8vo, pp. 415; 210 illustrations. 12s. 6d.)

SECRET REMEDIES AND PROPRIETARY PREPARATIONS.

(Continued from vol. 44, 1908, page 1377.)

IN continuing his descriptions of certain secret remedies and specialities, Dr. F. ZERNIK deals with a chemical substance known under the name of *hydropyrin*. According to the makers (Chemical Factory of Geodeon Richter, of Buda-Pesth), it is sodium acetyl-salicylate. The claims made for this substance are that its neutral reaction and the absence of all irritative action render it preferable to aspirin. It is more soluble than the latter. On analysing a sample some time ago, Zernik found that a considerable amount of dissociation had taken place. The preparations yielded an odour of acetic acid, and on dissolving the solid a residue remained undissolved of free acetyl-salicylic acid. The acetic acid caused a continuous dissociation; 10 per cent. of sodium acetate was found. The manufacturers considered that this sample was taken from some of the earlier preparations, and claimed that the more recent were non-hygroscopic, and do not dissociate. Zernik, however, found that even the new preparations were highly hygroscopic and that a certain amount of dissociation took place. This fact is of importance, since if the preparation is to be used therapeutically it must be stable, and capable of being kept for a reasonable time without dissociation.

Indoform, or as it is called in America *genoform*, is advertised as the newest discovery in the treatment of gout, sciatica, rheumatism, influenza, neuralgia, headache, and toothache. The prospectus goes on to relate that indoform is a salicylic acid preparation deprived of its damaging secondary effects. Besides the curative effects of salicylic acid, it is said to possess new and extremely valuable properties of its own. The chemical composition is stated to be a combination of salicylic acid with acetic acid and formaldehyde—that is, salicylic acid-methylene acetate. The dose recommended is 0.5 gram three times a day. Frerichs, however, has found that indoform is not a single chemical compound, but a mixture of about one-third salicylic acid and two-thirds acetyl salicylic acid, with a very faint trace of a formaldehyde combination. It is possible that faint traces of salicylic acid-methyl-ester are also present. It is difficult to gain any idea as to how this substance has been prepared, but it is denied that the mode of preparation which is given in the patent leads neither to the production of the suppositions combination or to the mixture determined by analysis. Zernik points out that it is a curious circumstance that several medical articles describe the excellent action of the formaldehyde in the preparation in, for example, dissolving urates, though the quantity of formaldehyde contained is far too small to have any therapeutic action at all.

Lain is praised by the Lain Company (Berlin) as an extraordinary medicament which cures eczema, herpes, skin eruptions, wounds, ulcers of the leg, ulcerated feet, burns, ulcers, inflammation, "stretched tendons," cracked skin, and similar affections, rapidly and with certainty. Itching and pain are said to disappear almost instantaneously. It is further stated to be an excellent remedy for gout, sciatica, and neuralgia. The substance is sold at the price of M. 3.90 (about 3s. 10d.) for a box containing about 35 grams of a greyish-white ointment in which zinc oxide and naphthalin sodium soap, or a sodium soap indistinguishable from this, and the distillate of an earthy oil, were found. The price is deemed much too high.

¹ *Deut. med. Woch.*, December 31st, 1908, article xix.

THE report of the Metropolitan Hospital Saturday Fund for the year 1908, which was submitted and adopted at the annual meeting on April 3rd, showed that the receipts from workshops and business houses had amounted to £29,830, as compared with £27,140 in the previous year. A sum of £27,332, or nearly £3,000 more than in 1907, was divided amongst 209 institutions. As usual, the fund received in return for its donations letters of recommendation for patients, and issued to collectors 49,115 of these. The 22 beds endowed by the fund at four sanatoriums for consumptives proved inadequate to meet the demands made by subscribers to the fund, the deficiency being specially marked in the accommodation for women.

LITERARY NOTES.

It is announced that Messrs. Maclehose of Glasgow will shortly publish the collected works of Sir William Gairdner. The volume, which is to be edited by Dr. George A. Gibson, Dr. Eric Gairdner, and Professor Lewis Sutherland, will contain a biographical notice of the author.

Sir James Crichton-Browne discusses the question, "How much should a normal human being eat?" in a book shortly to be published by Messrs. Funk and Wagnalls Company under the title *Parsimony in Nutrition*. He maintains that the most energetic races, both physically and mentally, have been those well nourished with a meat diet. The book will appear in the latter part of the present month.

Messrs. Robman, Limited, will shortly publish a novel entitled *The Romance of a Nun*, by Alix King, author of *The Little Novice*.

Some years ago the *Practitioner* proposed to publish a series of volumes containing the original accounts of the discoveries that had marked epochs in the progress of medical science. If we remember aright, the only volume in the projected series that saw the light was Edward Jenner's *Inquiry into the Causes and Effects of the Variolæ Vaccinæ*. The idea has since become more successfully "materialized" in America in the shape of a book entitled *Epoch-making Contributions to Medicine, Surgery, and the Allied Sciences*, which is published by the W. B. Saunders Company. It consists, as stated on the title page, of "reprints of those communications which first conveyed epoch-making observations to the scientific world, together with biographical sketches of the observers." These have been collected by Dr. C. N. B. Camac, of New York. In his preface he points out that it might perhaps be thought that to-day such writings would have only a historic value, "but on reading the articles the fact becomes evident that the work and observations were so thoroughly and accurately done in the first instance that the teaching, practice, and terminology of to-day are either the same as when first communicated or based directly on these foundations." Dr. Camac adds that "one may go further and say that some of the errors of to-day are the result of disregarding or misquoting the facts clearly set forth in these original treatises." Among the contents of the volume are Lord Lister's paper on the Antiseptic Principle of the Practice of Surgery, which was read in the Surgical Section at the Annual Meeting of the British Medical Association held at Dublin in 1867, and published in the *BRITISH MEDICAL JOURNAL* of September 21st of that year; a translation of Harvey's *Exercitatio Anatomica de Motu Cordis*; John Forbes's translation of Auenbrugger's *Inventum Novum ex Percussione Thoracis Humani ut signo abstrusus interni pectoris morbos delegendi*; Forbes's translation of Laennec's *Auscultation Médiate*; Edward Jenner's *Inquiry*, above referred to, and his later works, *Further Observations on the Variolæ Vaccinæ* (1799), and *A Continuation of Facts and Observations Relative to the Variolæ Vaccinæ or Cowpox* (1800); the articles of W. T. G. Morton and J. Y. Simpson, announcing the discovery of the anaesthetic properties of ether and chloroform respectively; and Oliver Wendell Holmes's essay on the contagiousness of puerperal fever. The book, which is dedicated to Lord Lister, is adorned with portraits of the famous men whose narratives of their discoveries are reprinted, with biographical sketches and lists of their writings. We congratulate Dr. Camac on having so successfully carried out a happy idea. We hope to deal more fully with the book in a further notice.

The Annual Report of the Library Committee of the College of Physicians of Philadelphia for 1908 states that the number of volumes in the Library is 77,603. The number of unbound *Reports and Transactions* is 9,115, of unbound theses and dissertations 22,681, and of unbound pamphlets 67,122. In addition to these there are 2,854 duplicates. The Library receives by purchase, exchange, and gift, 630 periodical publications—183 American and 447 foreign. Through the liberality and efforts of Dr. W. W. Keen there were added to the Library during the year to which the report relates thirty-three rare and valuable medical works, of which twenty-one were printed in the fifteenth century, and come under the head of *incunabula*. Among them are the following:—Arnoldus

de Villa Nova: *De arte cognoscendi venena*, n.p., ca. 1473, 4to; Petrus Egidius (Carbolensis): *Incipit liber magistri Egidii de pulsibus metrice compositus*, Paduae, 1484, sm. 4to; Mathaeolus (Perusinus): *Tractatus clarissimi philosophi et medici Matheoli Perusini de memoria*, Rome, ca. 1464, sm. 4to; Gualterus Birlaeus (Walter Burely): *Preclarissimi viri Gualteri Bureli anglie sacre pagine professoris excellentissimi super artem veterem Porphyrii et Aristotelis expositio*, Venetiis, 1497, fo.; Avenzoar (Abumonar): *Incipit liber theoricis dialismoda caliditadibz*, Venice, 1497, fo.; Hieronymus Brunschwig: *Liber de arte distillandi*, Strasburg, 1500, 4to; Petrus Tartaretus: *Totius philosophiae necnon metaphysicae Aristotelis*, vol. ii., Lyons, 1500, 4to. Doubtless this is a learned and valuable work, but the name of Tartaretus is probably known at the present day only to readers of Rabelais, who assigns to him a treatise, *De modo cacandi*, which figures among the books found by Pantagruel in the Library of St. Victor in Paris. There are two other works in the Library of the Philadelphia College of Physicians which, while not *incunabula*, are worthy of special mention, such as Avicenna (*Lébr V. Canonis medicinae*), Arabic text, Rome, 1593—this is described as an extremely handsome copy printed in Arabic on tinted paper, with the original parchment binding, stamped with the seal and crest of the Duke of Alenteuz; and Dioscorides: *Codex Aniciae Julianae*, described as a magnificent edition of the photograph facsimile of the Dioscorides codex, in two large folio volumes, published at Leipzig in 1906.

Our American contemporary *Science* of March 19th contains an interesting note by Mr. C. A. Browne on adulteration and the condition of analytical chemistry in old Rome. Most people, perhaps, would be inclined to deal with the subject as summarily as is done by Horrebow in his chapter concerning Snakes in Iceland, which Johnson boasted he could repeat by heart. It was not a difficult feat, as the whole chapter is as follows:

There are no snakes to be met with throughout the whole island.

Mr. Browne, however, says that, as a matter of fact, enough reliable practical chemical knowledge has come down to us in the writings of Pliny, Dioscorides, and others to form a very respectable treatise. The *Natural History* of Pliny, for example, is interwoven throughout with little digressions upon what is now termed the "chemistry of everyday life." For instance, one finds references to the use and efficiency of burning sulphur for fumigating and purifying the interior of dwellings, and to the lowering of a burning light into wine vats to determine whether or not it is safe for workmen to descend in order to remove the lees. Much of the matter which Pliny has gleaned in his *Natural History* was common knowledge centuries before his time. The use of burning sulphur as a disinfectant, for example, is mentioned by Homer in the *Odyssey*. Odysseus, after the murder of the suitors, cries out to his aged nurse:

Bring sulphur, old woman, the cleanser of pollution and baneful fire, that I may sulphur the chamber.

The application of specific gravity to the testing of various bodies, liquid as well as solid, seems to have been common after the time of Archimedes. Pliny alludes to the use of some form of specific gravity balance by which the purity of water could be tested. The adulteration of foods and other commodities of life was as common in the early days of the Roman Empire as it is to-day. Pliny repeatedly calls attention to the many frauds of his time. "It is the natural propensity of man to falsify and corrupt everything," he exclaims while writing of the adulteration of honey, and he complains of the use of gypsum, pitch, lime, rosin, wood ashes, salt, sulphur, artificial pigments, etc., for the sophistication of wines. He denounces the whole fraternity of Roman apothecaries with special bitterness. Many pages of the *Naturalis Historia* are, in fact, devoted to the disclosure of the dark secrets of the shops of the ancient druggists (*tenebrae officinarum*). In the long list of tests which Pliny enumerates for detecting the various forms of adulteration practised in his time, by far the greater number relate to the use of our simplest sense perceptions, such as taste, smell, colour, feel, brittleness, etc. The ancients, guided by such perceptions, were unquestionably better judges of the purity of many articles of food than we are to-day. Pliny, in fact, says Mr. Browne

makes such a fine classification of tastes and flavours, that the translator finds himself at a loss for suitable terms in which to express the meaning. Whether this indicates an over-refinement of the test perception among the Romans through the influence of a long line of epicures dating from Lucullus, or simply an atrophy of our present powers in this respect, it would be difficult to say. Professional tasters were in demand during the early days of the Roman Empire to determine the quality of wines; and, notwithstanding our advanced chemical knowledge of the score or more esters which give wines their characteristic bouquet, the final criterion in the judgement of a wine, now as in the days of Pliny, is the evidence of a skilful taster. But the ancients had many other means of testing the purity of their commodities of life than those of simple taste and smell. A good illustration of such tests is given under Pliny's description of balsams, which we give in Philemon Holland's translation rather than in the brief paraphrase quoted by Mr. Browne. The passage occurs in Book 12, ch. 25:

This is also called Xylobalsamum, and it goes into odoriferous compositions: for in default of the right Baulme liquor, the Apothecaries make a shift to serve their turn with the wood alone, called Xylobalsamum. As for the very bark, it enters also into many medicinale confections: no marvell therefore if it carries some price. But it is the liquor only that is so precious, the liquor it is which yields that most fragrant smell; then follows the grain or fruit in a second degree, the bark in a third, and the wood as it is last, so it hath least grace and credit. Of the wood, the best is that which in color resembles Box, and gives sweetest smell. But of the fruit, the greatest graines and the weightiest, be most esteemed: such bite at the tongue's end, and be hote in the mouth. Howbeit, this is adulterated with the seed of Hypericum, that comes from the cite Petra. But the deceit is soone detected and found, for that seed is not so big, so massie and full, nor so long as the true graine of Baulme: besides, it hath but a dull sauer or none at all, and in tast resembles pepper. The liquor is knowne to be right or good, if it be oleous and fat, thin, and sheere, somewhat inclining to red, and, if in rubbing between your fingers, it renders a pleasant sauer. The white Baulme may be raunged in a second place of goodnesse: the greene and thicke is not so good as it: but the blacke is worst. For Baulme as well as Oile, will be stale and worse for the age, if it be kept too long. This is moreover observed, that in every incision, that which flowed forth before the seed is ripe, is most precious. Ouer and besides, this Baulme may be sophisticated with the owne seed: and hardly can this counsaige be found out, but that it hath a bitterer tast than that which is natural. For the good Baulme should be pleasant and delicate in the mouth, not soure or tart at all: only in smell it should haue a harsh verdeur. Corrupted it may be otherwise with Oile of Roses, of Cyperus, of Lentisque, of Masticke, of Ben, of Terebinth, and Myrtles, also with Rosin, Galbanum, and Cyrian waxe, as occasion serues, and according as men list to sophisticate it. But the greatest knauiery of al, is to mingle gum among it: for being so handled, it will sticke cleane to the palme or inside of a mans hand, nay, it will sinke in water to the botome, which are two chiefe properties of the right Baulme. For the very true and perfect Baulme ought to cleane too: but when it hath gum mingled among, stick it will likewise: but it will gather soon a brittle rouse or crust upon it, which quickly cracks and breaks. Also this sophistication is found out by the tast. But in case there be any trumperie of Wax or Rosin, the fire will soone bewray it: for when it burnes, it will yeeld a more muddie and blacke flame. As for the sophistication made with honie, it may soone be knowne: for presently the fire will take it, and gather thicke about it. Ouer and besides, put a drop of pure Baulme into warme water: it will settle to the botom of the vessell, and congeale; but contrariwise, the counterfeite Baulme, will flote and swim above like oile. Again, if it haue Galbanum in it, yee shall see a white streak or circle round about it. To conclude, would you know in a word the right Baulme indeed? It will turne milke, and cruddle it, and it will not stain a cloth. In summe, there is no melchandise and commodity in the world, wherein there is practised more fraud and deceit, than in the traffike of Baulme. For a Sextare or wine quart of Baulme will cost a thousand Roman deniers by retails, which was bought for three hundred and no more at the hands of the factors vnder the Emperour, who sold it first. Whereby a man may see how gainful it is to increase this liquor by sophistications. As for the Baulme wood Xylobalsamum, the price of it is six deniers a pound.

The flame test is mentioned repeatedly by Pliny in connexion with the testing of drugs and chemicals. In some cases the colour and smell of the smoke were observed, in others the colour of the flame, or the property of decrepitating. The examples cited, however, show that the fragmentary records of ancient science preserved by Pliny, full as they are of inaccuracies and absurdities, contain a large amount of reliable chemical knowledge. As Mr. Browne says, if the 474 authors whom Pliny consulted in the preparation of his *History* had come down to

us intact we may be sure that our knowledge not only of historical, but also of practical, chemistry would be greatly enriched.

British Medical Association.

GRANTS AND SCHOLARSHIPS FOR SCIENTIFIC RESEARCH.

GRANTS.

THE Council of the British Medical Association is prepared to receive applications from members of the Medical Profession for Grants in aid of Researches for the Advancement of Medicine and the Allied Sciences.

The Grants are made subject to the following conditions:

1. That the work of the Grantee shall be subject to inspection by the Science Committee of the Association.
2. That each Grantee shall furnish to the Science Committee, on or before May 15th following the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report, to be renewed not later than the same date in each subsequent year until the final report is presented) containing:
 - (a) A statement, in a form satisfactory to the Science Committee, of the results arrived at, or the stage which the inquiry has reached;
 - (b) A statement of expenditure incurred, accompanied by vouchers as far as possible;
 - (c) A reference to any Transactions, Journals, or other publications in which the results of the research have been announced.

SCHOLARSHIPS.

The Council of the British Medical Association is also prepared to receive applications for Research Scholarships, as follows:

1. AN ERNEST HART MEMORIAL SCHOLARSHIP, of the value of £200 per annum, for the study of some subject in the department of State Medicine.
2. THREE RESEARCH SCHOLARSHIPS, each of the value of £150 per annum, for research in Anatomy, Physiology, Pathology, Bacteriology, State Medicine, Clinical Medicine, or Clinical Surgery.

Each Scholarship is tenable for one year, but is renewable by the Council, provided that the whole period of tenure shall not exceed three years.

The Scholarships are awarded subject to the following conditions:

1. That the work of the Scholar shall be subject to inspection by the Science Committee of the Association.
2. That he shall furnish the Science Committee, on or before May 15th following the grant of the Scholarship, with a statement of the work done by him.
3. That he sign an undertaking to abide by the above and other regulations affecting Scholarships, a copy of which will be supplied to him.

Applications.

Applications for Grants and Scholarships for the year 1909-10 must be made, not later than May 27th, 1909, in the prescribed form, a copy of which will be supplied on application to the Medical Secretary, 429, Strand, London, W.C.

Each application should be accompanied by a recommendation from the head of the laboratory in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

J. SMITH WHITAKER, *Medical Secretary.*

429, Strand, W.C.,
March, 1909.

Nova et Vetera.

A SEVENTEENTH CENTURY SPIRITUAL HEALER.

THE well-meaning persons who are now striving to gain a footing for "spiritual healing" among the recognized methods of treating disease are not only imperfectly equipped on the scientific side for the task they have undertaken, but seem to think they have made a new discovery. Yet, as has repeatedly been pointed out in this JOURNAL, the influence of the mind over the body is a commonplace of clinical experience, and has been used in one form or another since the beginning of recorded history. Eminent modern practitioners have employed it in suitable cases with success; among them we need only name Benjamin Brodie and Charcot. The former made hysterical women walk who had been bedridden for years, and whose limbs had wasted owing to want of use. Charcot sent many patients to Lourdes. Mrs. Eddy did not discover, still less create, a new force; she only had the shrewdness to discern how one that had been inherent in man since he developed into an *animal rationale* might be put to profitable use on a large scale. What she does had been done throughout the ages, and is still done by priests of various religions—Christian, Mohammedan, and Hindu—in temples and churches of the most diverse cults, at shrines and tombs of holy persons of every religion, and by living men and women who have the power of exciting the faith that "moves mountains." The present revival of faith healing presents absolutely no feature of novelty, unless it be the misty metaphysics and pseudo-scientific phraseology which form the cloud from which comes the voice of the oracle.

The "laying on of hands" is a very old therapeutic method, if we may call it so, of which the royal touch for the King's Evil practised for so many centuries is only one example. The ritual of this practice was described in detail in the BRITISH MEDICAL JOURNAL of May 13th, 1899.

But it was not only the Lord's Anointed who claimed the power of healing. One need not sweep aside as fables the miracles said to have been wrought by the saints of the Roman Calendar. A certain number is required to establish a person's claim to canonization and these are subjected by the *advocatus diaboli* to searching criticism. It is probable that many of them are true, but, without expressing any theological opinion on the question of miracles, we think it may be assumed with confidence that such cases are all instances of the operation of the mind on the body. Miracles of healing are not confined to saints whose names are written in the Roman Calendar; some sturdy Protestants have claimed the power of healing. Of these one of the most notable is Valentine Greatrakes who flourished—for a time—in the seventeenth century, and finally lapsed into obscurity. The little that is known of his life, and of the fruits of his gift of spiritual healing, comes to us mainly on his own authority.

He was the son of William Greatrakes of Affane in Waterford, and was born on February 14th (whence his Christian name) in 1628. His mother was the daughter of Sir Edward Harris, Knight Justice of the King's Bench in Ireland. He was educated at the Free School of Lismore till the age of 13, and it was intended that he should pursue his studies at Trinity College, Dublin, when the outbreak of the rebellion in 1641 led his mother, who had by that time lost her husband, to take refuge in England with an uncle whom he describes as "a saint in his life and conversation." He was for some years under the tuition of John Daniel Getsins, High-German Minister at Stock Gabriel in Devon, where he spent some years "in studying Humanity and Divinity." Returning to Ireland in 1647 he spent a couple of years at the castle of Cappoquin, where he meditated on the vanities and wickedness of the world. He then volunteered for service in Cromwell's army, and held a commission as lieutenant in the regiment commanded by the Earl of Orrery in Munster. When the army was disbanded in 1656 he was appointed a county magistrate, registrar for transportations, and a justice of the peace for County Cork. At the Restoration he was deprived of his appointments, and gave himself up to a life of contemplation. He lived at Affane,

where he says he got by his industry a livelihood out of the bowels of the earth, and employed himself in helping the poor.

It was in 1662 that the consciousness came to him that he possessed the gift of healing. His wife laughed at him, but Greatrakes took himself very seriously indeed. The following is the account of the matter given by himself in a letter to the Honourable Robert Boyle, described as "the Father of Modern Chemistry and Brother of the Earl of Cork":

About four years since, I had an impulse, or a strange persuasion in my own mind (of which I am not able to give any rational account to another) which did very frequently suggest to me that there was bestowed on me the gift of curing the Kings-evil; which, for the extraordinariness of it, I thought fit to conceal for some time, but at length I communicated this to my wife, and told her, that I did verily believe, that God had given me the blessing of curing the Kings-evil; for whether I were in private or in public, sleeping or waking, still I had the same impulse; but her reply was to me that she conceived this was a strange imagination; but to prove the contrary, a few days after there was one William Maber of Salterbridge in the Parish of Lismore (a Tenant of your brother's the Right Honourable the Earl of Burlington and Cork) that brought his son William Maber to my house, desiring my Wife to cure him, who was a Person ready to afford her Charity to her neighbours, according to her small skill in chirurgery; on which my wife told me there was one that had the Kings-evil very grievously in the eyes, cheek, and throat, whereupon I told her that she should now see whether this were a bare fancy or imagination as she thought it, or the Dictate of Gods Spirit on my heart; and thereupon I laid my hands on the places affected, and prayed to God for Jesus sake to heal him, and then I bid the Parent two or three days after to bring the child to me again, which accordingly he did, and then I saw the eye was almost quite whole, and the node, which was almost as large as a pullet's egg, was suppured, and the throat strangely amended; and to be brief to God's glory I speak it within a month discharged itself quite and was perfectly healed, and so continues, God be praised. Then there came one Margaret Macshane of Ballinechy of the Parish of Lismore, and a Tenant of your brother's the Earl of Cork, who had the Evil 7 years and upwards, which had spread itself from the bottom of her stomach upwards, all over to her throat, neck, and nose, and so all over her back shoulders and armpits, so that I could not see one place free from the Evil, where you might put a sixpence, and to speak the truth she looked so dreadfully and stunk so exceedingly, that she would have affrighted and poisoned any one almost that saw or came near her; whereupon I spoke to one Doctor Anthony (a famous physician then at my house) desiring him to take commiseration on her for Gods sake; His reply was that she was men out with the evil, and that she had a great deal of Ireland could do good; whereupon I said, I did believe that there was one that could do her good and cure her; the Doctor demanded who that man was; my answer was, that through Gods blessing I could; but he slighted the matter saying, if he saw the person cured, he would not question but I might heal all diseases; but I replied I was not of his opinion as to the latter part, but said, he should be convinced of the former; which accordingly I tell out (God be praised) for my hand augmented the nodes, and drew up and healed the sores, which formerly I could not have endured the sight of, nor smell, nor touched them without vomiting; so great an aversion had I naturally to all wounds and sores; so that the poor woman about six weeks afterwards came perfectly well to my house (and so continues) where Doctor Anthony was then also, to see my wife, and gave God praise and me thanks; who carried her to Doctor Anthony, and told him that he praised her for my hand, and could and did great things by poor and worthless instruments, and therefore he should not limit him for the future. After this many people infected with the evil came to me from several counties and I stroked them, and desired God out of his abundant mercy to heal them also who (blessed be His Name) heard my prayer and delivered them; so that few or none, unless those whose bones were infected and eaten, returned without their cure.

There is always a limitation to the faith healer's power, and it is not surprising to find that Greatrakes failed in the very cases which might have been described as "the mere despair of surgery." He did not long confine himself to "stroking" for the King's Evil. When "the Ague was very Epidemical whole Families being struck down with it," he found an impulse stirring within him to cure that disease also. He says:

This also I told my Wife, who could not be persuaded to it; and the next day there came to my house a neighbour's wife, who lived nigh Tallowbridge (a place well known to you) by name Bateman, the Naylor's wife that is there, who had a most violent ague, on whom I laid my hands and desired God Almighty to cure her, who in Mercy heard my prayer, and so the ague ran through her, and she went away perfectly cured; her ague, upon which her husband and children were afflicted with the same disease, applied themselves to me, on whom I laid my hands in like manner with the same success,

and so many more came to me afterwards, and were cured by Gods great and wonderful power in the like nature.

It was not long before the impulse came to him to display his gift in a larger sphere. He says:

This impulse I had the Sunday after Easter-day, the 2nd of April .65. early in the morning, the Wednesday ensuing I went to Cornet Deans (about some Occasions I had with him) to Lismore, where there came into his house to me a poor man, that with a violent pain in his loins and flank went almost double, and had also a most grievous Leg very black, wherein were five ulcers; who desired me for Gods sake that I would lay my hands on him and do him what good I could. (But by the way take notice, That as God gave me the several gifts from time to time, he always sent patients that applied themselves to me, for I never sought after any from the first moment to this very instant.) Whereupon I put my hand on his loins and flank and immediately run the pains from him, so that he was pleased, and could stand upright without the least trouble. Then I put my hand on his ulcerous Leg (which the chirurgeons after they had shewed all their skill on him told him it was perished at the bone, and so must be cut off, but that he wanted £3 to give one of them for his pains, as he informed me) which forthwith changed colour and became red, and 3 of the ulcers closed up, and the rest within a few hours afterwards: so that he went out well, that could hardly by the help of his staff crawl in, and within two days afterwards he fell to his Labour (being a Mason by Trade) and so continued several months afterwards to my knowledge, and to this instant (for ought I know).

Then Greatrakes went to see Colonel Phaire at Cahirmoney, in the county of Cork, who told him he was vexed with an ague. He proceeds:

My Reply was, that through Gods blessing I could cure him: He told me that I was welcome, and within an hour it would seize him, who thought it impossible for him to live two fits more, for after the cold fit his hot one continued for fourteen hours in that extremity, that no fever could be more violent: accordingly as he had said his cold fit arrested him, and then I bid him to give me his hand which he did, and it pleased God that from that time his Fit left him so that he had it no more: Then there came several People to his house troubled with several Diseases, desiring me for Gods sake to cure them (at which passage I was much amazed, not having told him nor anyone, but my Wife and brother, of the Impulse I had, which was but the Sunday before) some had the Ague, several others the Falling-sickness, others the King's-evil, one the Fever, some pains, some Aches and lameness, on whom I put my hands, little thinking that the pains would skip and fly from place to place till they did run out, but that the persons might be cured without any such notion by the laying on of my hands; and several, nay most of all Diseases were immediately cured, and those that came exceedingly lame, and so had continued for many years (by their own reports and others) went well home rejoicing and praising God.

To the reality of the cure of Phaire's ague there is said to be independent testimony in unpublished letters from the old regicide's son. We should like better assurance, especially as to the diagnosis. A more significant case is that of Flamsted, the famous astronomer, who in 1665, when a young man suffering from chronic rheumatism and other ailments, was "stroked" by Greatrakes with little or no benefit. Nevertheless, the fame of the "healer" still grew; and so many were the patients who resorted to him on the three days in the week which he set apart for healing that the Bishop and Dean of Lismore reposed him for practising medicine without a licence from his Ordinary. It need scarcely be said that Greatrakes considered himself above such carnal restrictions. At the suggestion of Henry More, the Platonist, Greatrakes was invited to England to treat Lady Conway for headaches. In her case, too, he failed; but many other persons in the neighbourhood of her Warwickshire home are said to have been healed. He was invited to Worcester, and then, by direction of the Secretary of State, Lord Arlington, to London, where he lived for some months in Lincoln's Inn Fields, exercising his "gift" with varying success. He failed in an exhibition given at Whitehall before the King and his courtiers. It may be conjectured that this was the beginning of the end.

Naturally Greatrakes's proceedings excited much interest. Henry Stubbe, a physician of Stratford-on-Avon, described him as the "Miraculous Conformist," and explained his "gift" by the following remarkable hypothesis:

That Mr. Greatrakes was possessed of some peculiar temperament, as his body was composed of some particular ferments, the effluvia whereof being introduced, sometimes by a light, sometimes by a violent friction, restore the temperament of the debilitated parts, regenerate the blood, and dissipate the

heterogeneous ferments out of the bodies of the diseases, by the eyes, nose, mouth, hands, and feet.

Stubbe's pamphlet brought a hostile critic, David Lloyd, into the field with a reply entitled *Wonders no Miracles*. To this Greatrakes retorted with the autobiographical letter from which we have already quoted. In that letter fifty-three testimonials are cited, among those testifying being Boyle himself, Andrew Marvell, Roger Cudworth, the philosopher, John Wilkins, afterwards Bishop of Chester, and other persons of note whose honesty could not be impugned, however much we may be disposed, in Touchstone's phrase, to disable their judgement. In the letter, which is dated 1666, Greatrakes says to Boyle that he has

Assumed the confidence to make this address to your Honour, whose Repute and Testimony to the World will be so powerful (knowing your Wisdom, Devotion, and Learning to be so great) that Truth may find Relief, God have glory and his poor instrument be justified before men, who hath no farther design in the distribution of that Talent which the All-healing God has entrusted him withal, then the honour of his Maker, and the good of his poor Fellow creatures, whose Distempers (many of them) neither Art nor Physick probably could reach; which caused him cheerfully (that he might not be found an unfaithful steward to all his worldly treasures and delights behind his back, to make his house an Hospital, and forsake his own interests and advantages; to labour day and night—and oftentimes run the hazard of his liberty and life by the crowds, pressings, steams and stinks of the multitudes and ulcerous persons (which you can well witness few men can brook or undergo) and what is worse than all this, the scandalous and false reports of lying tongues.

Of the way in which Greatrakes refutes these scandalous and false reports, the following may serve as a specimen:

Then he [Lloyd] charges me in page ibid with being a good fellow (according to his sense) and having converse with women notoriously scandalous; and also with many fallacies out upon poor people as to the place of my abode; and several other things as true as these. To which my answer is, that there is no person that knows me but will acquit me of being excessive either in eating or drinking; neither was I ever charged or suspected (till by this gentleman) who puts his name to nothing, nor seems to care what he says of man, woman or child, to be incontinent with women or to have to do with any (but my wife) in all my Life time.

He denies, further, taking, or allowing his servants to take, money from patients.

Dealing with objections which he says he had often heard from many, to wit, What need had God to cure diseases in this age of the world by any extraordinary means? Wherefore God did make choice of him for the purpose? and many such questions. Greatrakes says,

My reply was a smile, which was the best I could use in answering such fond enquiries.

It certainly was a diplomatic answer. Nevertheless, he proceeds to give two or three reasons:

The first is to convince this Age of Atheism,—who cannot yet believe Jesus to be God, when they see pains and diseases to vanish, and evil spirits fly his Power; as I have good cause to believe the Falling-sickness and other Distempers I have met withal sometimes to be. Next, God may, to abate the pride of the Papists that make Miracles the undeniable Manifesto of the truth of their Church make use of a Protestant to do such strange things in the face of the sun, which they pretend to do in cells.

To the argument, based on his failure in some cases, that "if this work were of God all would be cured," he answers:

That God may please to make use of such means by me as shall operate accordingly to the disposition of the Patient; and therefore cannot be expected to be like effectual in all. They also demand further, why some are cured at once coming and not all; and why the pains should flye immediately out of some, and take such ambuges in others; and why it should go out of some at their eyes, some at their fingers, some at their toes, some at their noses, others at their ears or mouths? To which I say: If all these things could have a plain and rational account given of them, then would there be no reason to account them strange.

His method is illustrated in the following curious passage:

Some will know of me why, or how, I do pursue some pains from place to place, and till I have chased them out of the Body by laying my hands on the outside of the clothes only (as is

usual) and not all pains. To which I answer: That I and others have by frequent experience been abundantly satisfied that it is so, though I am not able to give a reason why it should be so although I am apt to believe there are some pains which afflict men after the manner of evil-spirits, which kind of pain cannot endure my hand, nay not my glove, but fly immediately, though 6 or 8 coats and cloaks be put between the patient's body and my hand as at York house, the Lady Ramsloughs, and divers other places since I came to London (where many wise and learned men have been present, as well as frequently in Ireland), has been manifested.

Of course the Devil bulks large in Greatrakes's pathology, but in this he was not different from most people of his time. But the "stroker" was more than a match for the Evil One:—

I have met with several Instances which seemed to me to be Possessions of dumb Devils, deaf Devils, and talking Devils; and that to my apprehension, and others present, several evil spirits one after the other have pursued out of a woman, and every one of them have been like to choke her (when it came up to her Throat) before it went forth; and when the last was gone she was perfectly well, and so continued. There have been others that have fallen down immediately as soon as they have seen me, which the Mayor of Worcester, Colonel Birch, Mayor Wilde, and many hundreds both at Worcester, and here and other places, were eye witnesses of. Many when they have but heard my voice, and have been tormented in so strange a manner that no one that has been present could conceive it less than a Possession; as I will instance in one at York house (where Sir John Hinton, Colonel Talbot and many others were present) who had somewhat within her which would swell her body to that excessive degree on a sudden as if it would burst her; and then as soon as I put my hand on that part of her Body where it did rise up, it would fly to her Throat (or some other place) and then it would cause her neck to swell half so big again, and then almost choke her, then blind her, and make her dumb and foam, and sometimes fly into her hand, and so contract and fasten it, that neither Sir J. Hinton or any else that did try (as there were many could with all their strength open one finger of her hand; nor would it let fly his hand in the least nor any other person there, till I put my hand on it, or my glove; nay I often times brought it up into her Tongue (by running my hand on her Body, on the outside of her Cloathes, up to her Throat) which has swoln in an instant nigh as big again, and has been seen plainly to play from place to place, and at length with great violence of belching (which did almost choke her, and force her eyes to start out of her head) it went forth, and so the Woman went away well. Whether this were a natural Distemper, let anyone judge that is either a Divine, a Philosopher, or Physician.

He next proceeds to explain the *modus operandi* of his gift:—

Now, Sir, another Question hereon will arise (which I have often times heard from others) before I proceed; and that is, whether this operation of mine proceeds from the Temperature of my Body, or from a Divine Gift, or from both? Do which I say that I have reason to believe that there is something in it of an extraordinary gift of God; the Reasons and Arguments which incline me to this belief are, That I am very sensible of the particular time when this gift was first bestowed on me, before which time I had it not; because having my self for several years together been most violently troubled with the head-ach, though I have put my hand a thousand times to my head and held it, it would neither remove nor run out the pains but since God gave my hand this Gift, I have no sooner put it on my head where it was troubled but I have removed it and run it out. I have also oftentimes held my Friends heads formerly, when they have been in violent pains with the head-ach; but I never could hear them say their pain removed or ceased, which now immediately it do's in very many. . . I shall suggest to you an Experiment made at the House of that excellent Person your Sister the Lady Ramsloughs, where I tried (to satisfy the curiosity of some there) with a Napkin which I rubbed my breast withal, and with my shirt which I had pulled off, being very hot, whether that would remove the pains of a Woman which was in strange fits there (as my glove, being tried, did oftentimes) and it would not.

He admits his failure to cure Lady Conway, but appeals to Boyle as an eye-witness of the "remarkable cures" he had wrought in London. He says nothing about his failure at Whitehall.

We quote two of the testimonials which he adds as samples of the rest:—

Sir John Godolphin's Testimony. Anne Robinson, Servant to Major Wilmott next door to the Hand and Pen in Aldersgate Street, troubled with a Pthysick for the space of six years, was stroked 21 April, 1666, and the pain removed out of her stomach into her left side; thence at a second stroking it removed into her thighs and legs; and lastly into her right foot and toes, whereinto (her eyes being covered) a pin was thrust divers times, without her feeling or being sensible of it, till her foot and toes were stroked; but then she immediately stood at the first touch of the pin, and she declared her pains were gone, as

well out of her feet and toes, as out of all other parts. In the presence of J. Godolphin Knight; Alb. O. Faber, Med.; George Weldon; J. Fairclough, M.D.; Ed. Sleight; John de Bray. Note.—That no blood issued upon the pricking of this woman's toes, nor of divers others who have been pricked in the like case, before me, J. Fairclough, M.D.

Dorothy Pocock's Certificate. Dorothy, the wife of John Pocock of Chiveley in the County of Berks, aged 45, had a Tumour began in her breast about August 1666, which in the beginning of April 1666 was grown so big as a large Pullets Egge, and conceived by Sundry Physicians and Chirurgeons to be a Cancer, and no other way of curing it then by cutting out; was stroked Twice by Mr. Greatrak's and after the second time, the Tumour was grown softer, so that he opened it, and out thereof flowed a great quantity of concocted matter; and after that by gentle stroking Mr. Greatrak's brought forth the bag wherein the matter had lyen out of the small orifice; and she professes herself to be very well of her breast, and also to be freed of a great pain which she had had in her arm and shoulder for the space of 3 months last past. April 10. 1666. Dorothy Pocock. In the presence of Andr. Marvel; J. Fairclough; Tho. Alured; Tho. Pooley.

In 1666 Greatrakes returned to Ireland and led the life of a country gentleman, only occasionally practising his cure. He died in 1683. His meteoric course as a "stroker" recalls the proverb about the rocket and its stick. In this he resembled most "healers." There is a curious similarity in his method to that of some of those who at present are practising spiritual healing. The laying on of hands, and the feeling that virtue went out of him in the act, exactly corresponds with what we have heard described by faith healers as happening to themselves. In the absence of anything like scientific evidence any discussion of his "cures" is needless. Even assuming the truth of all his statements, there is nothing more in what he did than in the "miracles" of faith-healing which occurred in the early part of the eighteenth century at the grave of the Jansenist Deacon François de Paris, in the cemetery of St. Mard, Paris, which so excited the jealousy of the Jesuits that they procured an order that they should be stopped by the police. This order is enshrined in the famous epigram:

De par le Roi, défense à Dieu
De faire miracle en ce lieu.

THE POST OFFICE SANATORIUM FOR CONSUMPTION.

THE second conference of the Post Office Sanatorium Society held on March 27th in Manchester was attended by sixty persons, of whom forty-three were delegates. The Secretary reported that the total membership of the society was over 37,000, of whom 7,500 had joined during the last two years; about 42 per cent. of the members belonged to London, 51 per cent. to England and Wales, and the rest to Scotland and Ireland. The number of cases dealt with was 153, but of these 26 were still under treatment, while 39 had been either found unsuitable for treatment or had withdrawn, and 3 had died before seeing the referee. The treatment had been completed in 85 cases, and the disease had been arrested in 43 per cent.; improvement, sometimes almost amounting to arrest of disease, had occurred in 40 per cent.; no improvement was observed in 15 per cent., while 1 case had died. Thus about 83 per cent. had received great benefit from the treatment. Five female members had been treated, but as there was no accommodation for females at the sanatorium at Benenden, they had been treated at the expense of the society at other establishments. Taking all the cases together, the average length of treatment had been about twenty weeks, though 1 case had received sixty-six weeks' treatment.

The income from subscriptions in 1907 had been £3,227 and the amount paid for maintenance was £1,185. In 1908 the income had increased to £3,334, but the sum paid for maintenance had increased to £2,434, more than double the amount for the previous year. The balance standing to the credit of the society at the end of 1908 was £1,982, which the Treasurer considered was very satisfactory for so young a society. Mr. C. H. Garland, the Secretary, drew attention to the great leakage in membership from deaths, retirements, resignations, and other causes. In the past two years this leakage had amounted to 750 members each half year, which showed the necessity

spending pretty freely on organization work. He also drew special attention to the necessity of getting patients in the very first stages of the disease. With the help of the medical superintendent of Benenden he had been able to classify 80 cases which had received complete treatment, according to the stage of their disease or admission. The patients were divided into three classes: Class I, early stage, only one lobe of the lung affected, 33 cases; Class II, moderately advanced, two lobes affected, 25 cases; and Class III, advanced, three or more lobes affected, 22 cases.

Table showing in Percentages the Results of Treatment in Each Class.

Class.	Arrested.	Improved.	Unimproved.	Died.
I	78½	18½	3½	0
II	48	32	20	0
III	4½	54½	36	4½

Thus the arrested cases are far greater in number in the earlier stage, while failures are immensely increased in the advanced stage. The society had made a strong endeavour to get all cases in an earlier stage by publishing descriptions of the early symptoms. The result had been most gratifying, and had fully justified any expense incurred. An attempt had also been made to prevent the unjust ostracism of consumptives. They had found that there was an exaggerated idea of the infectiousness of the disease, and that consumptives were often treated almost as lepers. They wished it to be known that the infectiousness of consumption was quite different from that of fevers. In the first place, in the early stage it was not infectious at all. Dr. Bulstrode had pointed out in a recent report to the Local Government Board that from the records of consumption hospitals it was difficult to believe that phthisis is in any degree personally communicable. At any rate, it requires prolonged exposure and lowering of the resistance before it is communicated. Recently one patient whose disease had been arrested and practically cured returned to work in a town post-office where telephone work was done, and there was a strong protest by his colleagues in the office, who thought they were running some risk by using the telephone mouth-piece after him. The matter was referred to Dr. Wilkins, who had had charge of the patient, and he said the man was not infectious and could not infect the telephone. In any case the breath was not infectious except in extreme cases, and then the only fear was from coughing into the telephone. Dr. Lister quite agreed with Dr. Wilkins, and the secretary pleaded for a more charitable treatment of patients before, during, and after their residence at a sanatorium. Women members of the society had equal rights with men members, and five women members for whom the society had obtained treatment had cost the society from £40 to £76 each. He concluded by thanking the Post Office Department for the sympathy and help it had given to the society. After adoption of the reports of the secretary and the treasurer, a new rule was discussed and finally carried, to the effect that officers in the employ of the Post Office might become members of the sanatorium society by allowing a deduction of "one shilling or more" from their salaries every six months, which amount would go to the society. It was also arranged to hold a conference every two years subject to an annual statement. Mr. C. H. Garland was reappointed secretary and Mr. H. Trollope treasurer, and a committee of management was appointed containing representatives from the chief towns of the kingdom.

THE MIDWIVES ACT.

THE position of medical practitioners under the Midwives Act, 1902, was discussed at two recent meetings of the Midland Medical Union. Attention was called to the fact that during successive quinquennia from 1881 the birth-rate had declined as follows: 33.5, 31.4, 30.5, 29.3, 28.1, while the rate for the last two years was 26.3. The members of the Union, feeling strongly that it is the duty of the State to ensure that the highest and best care shall be given to those women who are producing the future race, adopted at their meeting on April 8th the following resolution,

which has been forwarded to the Departmental Committee appointed by the Lord President of the Council to consider the working of the Midwives Act:

That it should be illegal for a midwife to attend a woman in her confinement unless a medical practitioner is retained, so that he may be called in in case of abnormality or disease in connexion with parturition. When the wages are less than 18s. a week and 2s. per child under 14, the public assistance authority shall, if requested, issue an order requisitioning the services of a medical practitioner. This order shall entitle the medical practitioner to a fee of 5s. for a preliminary examination and advice on the preparation for labour, and to adequate remuneration in the event of his having to take charge of the case on account of abnormality or disease in connexion with parturition.

Medical News.

DR. ARRIGO TAMASSIA, Professor of Forensic Medicine in the University of Padua, has been created by the King of Italy a Senator of the Kingdom.

THE King has conferred the new Territorial Decoration on Lieutenant-Colonel John Daniel Lloyd, of Chirk. Dr. Lloyd has served for thirty years in the Shropshire Yeomanry.

THE Lord Chancellor has placed the names of Dr. John M. Cuthbertson, of Droitwich, and Dr. Cordley Bradford, of Acocks Green, on the Commission of the Peace for Worcestershire.

THE Hon. John McCall, M.D., who has been appointed Agent-General for Tasmania, is expected to take up his duties in London on May 1st. Dr. McCall graduated at the University of Glasgow in 1881.

DR. F. M. SANDWITH, Gresham Professor of Physic, will deliver four lectures at Gresham College, E.C., on April 20th, 21st, 22nd, and 23rd, at 6 p.m. on each day. The first three lectures will deal with cancer, and the fourth chiefly with certain tropical and subtropical diseases.

A MEETING of the directors of the International Cancer Research Association will be held at Berlin during the Congress of the German Surgical Society. Among the proposals to be considered is a scheme of international statistics as to the prevalence of cancer, and as to the results of operations for its cure.

At a special meeting in March the Brighton and Sussex Medico-Chirurgical Society passed a resolution to the effect that it was no part of the duty of a hospital staff to fill up medical certificates for out-patients, and that it was not advisable that such certificates should be given.

DR. A. S. BOSTOCK, on the occasion of his leaving Chichester, where he has practised for many years, was the recipient of a very gratifying testimonial signed by a large number of residents. The testimonial, which was accompanied by a cheque, was presented by Sir R. Turing on behalf of the subscribers.

WE are requested to state that forms of application for the admission of children into the Lord Mayor Treloar Cripples' Home and College, Alton, Hants, can be obtained from Sir William Treloar, 122, Mansion House Chambers, London, E.C. Special consideration is given to applications for the admission of children suffering from tuberculous disease of the bones and joints.

At a missionary exhibition to be held at the Agricultural Hall in June, a section dealing with outfits suitable for travellers in the tropics is to be provided by the Livingstone College, Leyton. It is desired to make a special feature of appliances intended to protect travellers and residents in hot climates from the bites of mosquitos and other insects; and Dr. C. F. Harford, the President of the College, will be pleased to hear from any one interested in the subject.

THE Shakespeare memorial service at Southwark Cathedral, which has been arranged by a committee of which Dr. R. W. Leftwich, 125, Kennington Park Road, S.E., and the Rev. Canon Thompson, D.D., Southwark Cathedral, London Bridge, S.E., are honorary secretaries, will take place at 3.30 p.m. on Friday next, April 23rd. After the anthem the Post Laureate will recite an ode to Shakespeare's birthday, and Mr. Forbes Robertson will give an address on Shakespeare. The service will conclude with the singing of a hymn specially written for the occasion by the Rev. Canon Rawnsley. The collection will be given to the fund now being raised for the erection of a Shakespeare memorial in the cathedral, the poet's old parish church; this it is expected will cost about £650. The decoration of the Shakespeare window in the cathedral with the flowers of Ophelia and Perdita has been undertaken by Miss Ellen Terry, with the assistance of other Shakespearian actresses.

British Medical Journal.

SATURDAY, APRIL 17TH, 1909.

CATGUT AND TETANUS.

We publish in another column (p. 948) an account by Mr. W. G. Richardson of certain cases in which tetanus supervened after surgical operation. On two occasions—in October, 1907, and again in January of the present year—this result followed operations performed by the author, who has in consequence been anxious to ascertain whether other surgeons have had similar experiences. He has been enabled to collect notes of 21 such cases, and finds that in 18 of them the patients died. All except one of the cases occurred during the past three and a half years, and in all of them catgut was used for ligatures. With the exception of two, the operations involved opening of the peritoneal cavity. Another point, on which the author lays stress, is their geographical distribution. Eleven occurred in Northumberland, 6 in Ireland, 2 in Scotland, 1 in South Shields, and 1 in Manchester. In 15 of the cases bacteriological examinations were made, and in 5 there were found bacilli "resembling" the tetanus bacillus; but in the 3 instances in which the bacilli were tested upon animals the experiments proved negative.

These, we take it, are the main facts, and we agree with Mr. Richardson that they do not warrant any categorical conclusion. In calling attention to the cases which he has collected, his main object has been to elicit further information from other sources. It is desirable to know whether other surgeons have recently met with tetanus following operation, and, if they have, what evidence they have obtained as to the mode in which the infection was introduced. To such information we shall be glad to give publicity, and we hope that it will furnish sufficient data for forming a definite opinion. In the meantime we confine ourselves to a few comments on the statements and suggestions which Mr. Richardson offers.

From their clinical aspects, the cases he records were, without hesitation, diagnosed as tetanus, and therefore there is a very strong presumption that they were caused by the tetanus bacillus. It is most probable that the bacilli were introduced during the course of the operation; and as catgut, notoriously difficult to sterilize, was used in every case, suspicion naturally fastens on this substance. The bacteriological examinations which were made were either negative or inconclusive; but some of them were admittedly incomplete, and the details given regarding the rest are insufficient to warrant us in assuming that all the resources of bacteriological technique were exhausted before a negative report was sent in. The tetanus bacillus is not an organism which multiplies and disseminates freely in the tissues, and therefore attempts to raise a culture of it from suspected tissue often fail. In the cases in

which the surgeon's disinfectant-soaked catgut was tested one would like sufficient details to justify the opinion that the examinations, when negative, were exhaustive enough to establish beyond reasonable doubt the absence of living tetanus spores from the substance of the ligature.

Mr. Richardson suggests that the large preponderance of abdominal cases may be an indication that the catgut was not responsible for the infection, his argument being that two-thirds of the operations in which catgut is used do not involve the peritoneum, and that therefore the abdominal cases followed by tetanus ought to be in the minority if catgut were the responsible agent. But it is dangerous to generalize about percentages when the total number of cases is so small; and there are other factors to consider, such as the relative resisting powers of different tissues against bacteria and the greater facilities for keeping surface wounds in an antiseptic condition throughout the healing process. If we are to follow Mr. Richardson's theory, we must place the two non-abdominal cases—a varicocele and a scirrhus of the breast—in a class by themselves, and seek for the other nineteen cases an explanation which would not be appropriate for these two. Such a separation of the total twenty-one cases into two distinct classes does not appear to be warranted by the evidence before us; the more plausible assumption, in the absence of definite reasons for a contrary view, is that all the cases were due to the same or similar causes.

Catgut, as every schoolboy knows, is made from the intestine of the sheep, and consists of the submucous cellular coat from which the mucous membrane has been removed by scraping. In its preparation for surgical purposes Lord Lister had in view three requirements: first, that it should be aseptic; second, that it should be sufficiently strong for the purpose for which it was to be used; and third, that it should not be absorbed either too soon or too late. Many ways of achieving these ends have been devised, but we may be permitted to doubt whether any one of them is superior to that first propounded, we believe, by Lord Lister in his address to the Clinical Society in 1881, and more recently minutely described by him in the note on "the preparation of catgut for surgical purposes," published in this JOURNAL last year.¹ The method is one which provides for the combined action on the catgut of solutions of corrosive sublimate and chromic acid. The bacteriological evidence advanced by Lord Lister seems sufficient to establish that the method destroys not only such organisms as the streptococcus but also the spores of anthrax—an observation which recalls the fact, noted by Lord Lister in his contribution to the *Virchow Festschrift*, that von Volkmann had seen anthrax result from the use of a catgut ligature, prepared no doubt from the intestine of a sheep that had died of that disease. Brown Miller, writing in the *John Hopkins Hospital Bulletin* in 1900, said that "anthrax in catgut has caused in more than one reported case a fatal infection. Within the past six months a Chicago surgeon has told me of two of his patients, who were operated upon the same day, dying of anthrax infection which was caused by the catgut used in the operation." Lord Lister, however, is careful to point out that, while the substance of the catgut thus prepared is "not only aseptic but powerfully antiseptic, its dry surface is liable to contamination by contact with septic material, and it is essential that, before being

¹ BRITISH MEDICAL JOURNAL, 1908, vol. i. p. 125.

"used, it was washed with some trustworthy germicidal liquid. My practice has been to put the catgut, like the instruments, in 1 to 20 solution of carbolic acid about a quarter of an hour before the operation is begun. Any of the catgut that remains unused upon the reel may be afterwards kept in a similar solution for any length of time without disadvantage. The essential precaution of purifying the surface of the catgut is, I fear, sometimes overlooked, the result being occasional suppuration attributed to defect in the ligature, while it is really the fault of the surgeon." With regard to tetanus attributed to catgut, Kuhn and Rossler² collected reported cases in which tetanus had been traced or attributed to catgut. We are informed that in all recent cases of tetanus after ligature of haemorrhoids catgut was the material employed. Recently Dr. Reuben Peterson of Ann Arbor, Michigan, recorded a case in which tetanus developed on the twelfth day after dilatation and curetting of the uterus, with shortening of the round ligaments, by Alexander's method.³ The patient recovered under the use of chlorotone. Suspicion was directed to the catgut used for the plastic operation on the round ligaments, but careful bacteriological examination by an expert failed to reveal the presence of any micro-organism. At the corner of one incision which had otherwise healed well there developed a minute blister which contained the staphylococcus, but the tetanus bacillus could not be isolated. It will be observed that Mr. Richardson in his paper attaches high significance to the late Professor Hamilton's work on "looping-ill" and other diseases of sheep. We have no wish to disparage that most genial and enterprising of pathologists; but when a pathologist, however eminent, endeavours to open up new ground, our first attitude must be one of caution, and we must wait full and independent confirmation of his data and his theories before accepting them as definitely proved. We do not think that the late Professor Hamilton's theories, interesting though they be, have gained sufficiently wide acceptance to substantiate the hypothesis, put forward by Mr. Richardson, "that the disease which we call post-operative tetanus is not tetanus at all, but one of the sheep diseases." However this may be, Mr. Richardson's paper raises a question of considerable practical importance. Such a sequence of events as he describes is distressing to the individual surgeon and disconcerting to all.

JEWS AND ALCOHOLISM.

THE abuse of alcohol has so much influence in determining the moral, mental, and physical deterioration of those who yield to it that it is not surprising to find that the tendency of various races in this direction has been found worthy of serious study. Dr Cheinisse⁴ has recently discussed the question whether the Jews of the present day may be considered immune from this vice. No statistics being available in any country which would enable the quantities of alcoholic liquors consumed by Jews and by the rest of the population respectively to be compared, Dr. Cheinisse sought to establish the greater temperance of the Jew by figures which prove his comparative immunity from those diseases and vices

most generally supposed to be connected with alcoholic excess.

The few figures which exist regarding the direct effects of intemperance are very significant, as far as they go. In this country it is rarely, if ever, that the death of a Jew is registered as due to alcoholism. In New York, where the number of the Hebrew population of Russian origin is very considerable, the deaths returned from alcoholism in one year formed 0.42 per cent. of the total deaths in that city, while among those who were children of Russian or Polish mothers the percentage from the same cause was only 0.13. The same proportion represents the ratio of cases of alcoholism and diseases directly due to it among total cases admitted into the chief Jewish hospital in New York, whereas in the Boston City Hospital, cases of alcoholism formed 3 per cent. of the total.

It seems, however, scarcely necessary to seek for definite statistics to prove that Jews are, as a race, peculiarly free from the vice of intemperance. It is a striking fact that of the many hundreds of Russian immigrants for whom situations have been found during the last fifteen years by a charitable organization in London not one has ever been dismissed for drunkenness.

It is to be noted that it is the excessive and not the moderate use of alcohol which is avoided by Jews, and while among them a dipsomaniac is a rarity, on the other hand a total abstainer is almost unknown. Indeed, the drinking of a special wine is a portion of the ritual in most of those domestic religious functions which form so large a part of the life of the observant members of the race. Therefore, in considering the influence which habitual temperance may have had on their physical condition, we are observing a people who are no fanatics for abstinence, who habitually consume wine in small quantities, and who unhesitatingly take alcohol in any form and quantity in case of illness or emergency.

The difficulty of estimating their number, and the consequent uncertainty of the statistics, makes it difficult to establish the truth of the general belief in the comparative longevity of the Jew; but all the evidence goes to show that the death-rate is distinctly below the local average. In Stepney, which is largely inhabited by Jews, the death-rate in 1907 was only 15.8, although the birth-rate was one of the highest in London. In the Abstract of the Twelfth Census of the United States the death-rate in cities for different classes of the population is compared, and that for children of Russian and Polish mothers (mostly Jews) is shown to be lower than that of any other group. Similar facts have been observed in those wards of New York where the Russian immigrants mostly reside. Again, in Prussia, where an estimate of comparative Jewish mortality was recently made, it was said to be little more than two-thirds of the average rate; but this difference is so great that it seems improbable that the figures are correct. In all the countries mentioned it should be noted that the death-rate varies most from that for the general population when persons under 15 years of age are considered.

It must always be remembered that alcoholism is responsible indirectly for many evils with which at first sight it would seem to have no connexion. Hospital practice shows so many cases of disease of nerve centres, of kidneys, liver, or arteries due to alcoholism that it seems to the student that all heavy drinkers must die at an early age, victims of their habits.

² *Deutsche Klin. Therap. Wochenschrift*, 1905, Nos. 46, 47.

³ *American Journal of Obstetrics*, April, 1909, p. 558.

⁴ *La Semaine Médicale*.

More extended experience convinces the practitioner that, perhaps unfortunately, this is by no means the case.

On the other hand, private practice, especially among the working classes, brings to light other, more insidious, evils which have a more profound influence on the health and well-being of the community than the mere death of the drunkard would produce. Greatest of these evils is the poverty which results when the wage-earner of the family spends a large portion of his earnings on drink; improper and insufficient food lowers the resisting power of the whole family, and renders every one of them an easy prey to many forms of disease. Thus it is to be expected that comparative sobriety would have for its chief result a greater general healthiness of the family, which would show itself in a lesser mortality in early life.

It is not possible to estimate the infantile mortality among English Jews in the absence of any figures showing the number of Jewish births, but all those having any knowledge of this community are agreed that the mortality is lower than the average. Some support for this may be found in the figures for Stepney, where the infantile mortality in 1907, 119 per 1,000 deaths, was the lowest of the Eastern London boroughs, though the general conditions of life afford no explanation. The large Jewish population in the United States offers a better field for investigation, and various calculations dealing with this subject made by Dr. John Billing were published as part of the Eleventh Census. The figures prove beyond doubt the lower mortality among Jewish children, it being estimated that out of 100,000 such infants 84,000 would be living at the age of 5, while out of the same number of the infants of Massachusetts only 73,000 would be surviving at that age. The same fact has been observed in Russia, where it has been noted that in the pale of settlement about 74 per cent. of Jewish infants survive their first year, as against about 60 per cent. of the children of the Christian population. The report of the Registrar-General for 1906 gives 9.2 per 10,000 living as the death-rate for London from the four principal infectious diseases of childhood—measles, scarlatina, diphtheria, and whooping-cough. The deaths from those diseases during the same year, as noted by the Burial Society of the United Synagogue, were 114, and after estimating the population of which the deaths are recorded by this society, the rate would appear to be slightly lower, although, of course, no accurate figure can be arrived at, as the estimate of population is only approximate. A small difference would, however, be important, for there is no doubt that the age distribution of the Jewish community varies greatly from that of the general population, there being a far larger proportion of children in the former group. The figures for New York show a much lower death-rate among Jewish children from diarrhoea and diphtheria, while from scarlatina it is almost equal to, and from measles rather higher than, that for the general population. For children under 15 years of age, those born of Russian and Polish mothers have the lowest mortality of any group of children in the United States.

It was recently pointed out in the BRITISH MEDICAL JOURNAL that the mortality from tuberculosis among Jews in both London and New York was far less than among the general population, the death-rate among the former being only about two-thirds of the estimated rate for this disease, in spite of the fact that in

both of these cities the Jewish immigrants are mostly living under most unfavourable conditions. The influence of chronic alcoholism in predisposing to consumption is so generally admitted that it is probable that the comparative immunity may be in some part due to greater temperance. At the same time, it must be mentioned that phthisis has become considerably more frequent among this portion of the population during the last few years.

There is no sufficient reason for thinking that cancer attacks the Semitic with any less frequency than the Anglo-Saxon race. Crude statistics would appear to give grounds for a belief that this is the case, but the fact, pointed out above—that the former population contains a far larger number of young and a proportionately smaller number of old persons—supplies the true explanation. In the United States children of Russian and Polish mothers give almost the highest cancer-rate for ages over 65.

The deaths from diseases of the circulatory system are in England proportionately fewer among Jews, but this does not seem to obtain in other countries; in the United States the mortality is apparently greater, while in some Continental countries for which comparative statistics are available the incidence of these diseases is about the same.

Jews appear to enjoy a certain immunity from diseases of the urinary system. The statistics for New York show that the Jewish population has a lower mortality than any other nationality from this class of disorder. The direct effect of alcohol in the causation of chronic nephritis is probably an explanation of the lesser prevalence of these diseases among the more temperate races.

No trustworthy figures exist to show the comparative frequency of syphilis, but all those who see much of this disease are of opinion that it is much less common among Jews. Their comparative temperance would obviously have no small influence in determining this immunity, though circumcision is probably an important factor.

On the other hand, the mortality among Jews from diseases of the respiratory organs other than pulmonary consumption is above the average. This may in part be due to deaths from bronchitis among children, of which the proportion is so large. It is probable, however, that there is a distinctly increased tendency to this form of disease.

Nervous disorder is, however, the form of malady to which the Hebrew is far more prone than the races among which he lives. This is marked, whether the graver forms of degeneration of the central nervous system be considered or the milder manifestations of neurotic disturbance. It is also remarkable that although alcoholism occupies the first place as the causative influence of insanity, and although it is rarely, if ever, that the admission of a Jew to an asylum is noted as being due to this cause, still the number of Jews certified as insane is far larger than their proportion of the population will account for. No doubt this may partly be traced to the fact that for generations they have suffered from persecution, and also, living in towns, have been obliged to gain a livelihood by occupations leading to mental rather than to physical exhaustion. Various other explanations may be suggested of this decided tendency to nervous disorders, which is not only evinced by statistics, but has been observed by all physicians who have a large Jewish clientele. The fact may serve to remind us how many are the influences

besides the one dealt with here which have combined to mould the destinies of the Jewish people.

The idea referred to by Dr. Cheinisse that suicide is rare among Jews is not quite in accordance with the facts at present, although in former times self-destruction was apparently less frequent among them than among the surrounding population. The comparative suicide-rate varies greatly in different countries, but it is high in most German states, the death-rate in Prussia from this cause being 32 per 100,000 Jews, as against 20 for the same number of the non-Jewish population. It is, of course, scarcely surprising to find that the curve of mortality from suicide follows the same line as that for insanity and for nervous diseases generally, and if temperance could not protect the Jew from the ravages of mental disease it could not be expected to have much influence in lowering the mortality from suicide.

In addition to diseases of the nervous system, diabetes and diseases of the digestive organs cause a disproportionate mortality. With regard to diabetes, this may probably be traced to the general nervous instability; it may, however, be noted that those who abstain to a great extent from alcoholic liquors often develop an inordinate taste for sugar; the love of sweets is very marked in Semites, but it would be dangerous to assume that this has any causal relation to the prevalence of diabetes among them. It should be observed also that Jews, as a rule, engage in sedentary pursuits and are not much inclined to active exercise, this may perhaps account for the prevalence among them of diseases of the digestive system.

It will be seen from the foregoing short analysis of Jewish vital statistics that the young of this race are more healthy and show a greater resistance to disease than the children of the surrounding population, and this is perhaps the most definite fact which can be connected with their habitual temperance. Other causes may have contributed to the result, but it is scarcely to be doubted that the sobriety of the parents has led to the development of a more healthy offspring. The constitution of the parents has not been impaired by the injurious effect of alcohol, and the comfort and happiness of the home has not been destroyed by the carelessness and disorder which is so surely produced by drink. When the attempt is made to trace the beneficial influence on the adult of temperance, as exemplified by the Jew, the problem becomes complicated by an infinite number of other circumstances which affect the lives of these people, and it is difficult, if not impossible, to decide how far any one influence has been the determining cause of any special immunity. Still more difficult is it to appreciate by how much other unfavourable conditions of life may have served to neutralize the beneficent effects which moderation in alcohol would otherwise have produced.

The Jewish population, both in this country and in the United States, is composed of two very unequal portions. The smaller part consists of those who have been born in the country, or have resided in it for many years; the larger part consists of recent immigrants, mostly in extreme poverty, badly fed, housed in overcrowded tenements, and the victims of sweaters, working under most insanitary conditions. The two classes differ in other respects, the recent immigrants being far more observant of their dietary laws and peculiar customs, while the older residents are more inclined to assimilate their mode of life to that of their neighbours. No doubt if separate vital statistics could be had for these two

classes they would be found to differ; but in the only figures obtainable the returns are swamped by the facts relating to the immigrants, and their unhappy condition is no doubt responsible for some of the unfavourable figures.

ANTIVIVISECTION AND WOMAN SUFFRAGE.

SPEAKING at Clifton on April 2nd, Mr. Stephen Coleridge (according to a report published in the *Bristol Mercury* of April 3rd) said that one thing which was very often forgotten by the vivisectioners of England and those who supported them was that they did not merely inflict long and painful suffering—is this a Coleridgian subtlety, or does he believe that there is suffering which is not painful?—on animals, but also an immense amount of untold suffering on human beings. There were, he went on to say, thousands and thousands of kind-hearted people in England to whom the misery that was going on at the present time in laboratories by the torture of poor defenceless creatures rose up between them and their happiness in life, and deprived them of a great deal of that to which they were entitled. He thought it was not improbable that the one really good thing that might come from "female"—in self-defence we wish to point out that the word is his, not ours—suffrage might be that the women of England would bring that suffering before the public and force upon Parliament a measure to provide for better protection of animals, not only in the laboratories but in other ways.

Mr. Coleridge's picture of the "painful suffering" and "torture" inflicted on animals does greater credit to his imagination than to his regard for truth. If the mass of evidence given before the Royal Commission on Vivisection by vivisectioners, and more especially by antivivisectioners, has not convinced him that these things are nothing more than nightmares of overheated minds, he is beyond the reach of argument. As for the sentimental sufferings for which he asks our pity, is it possible that any reasonable person can believe that they can be weighed in the balance against the incalculable amount of real pain from which sufferers from disease have been, and will continue to be, delivered by means of vivisection? Mr. Coleridge looks to woman suffrage to advance the cause which he champions. It is true that some of the militant suffragists are women of the type of Miss Frances Power Cobbe, who said she loved animals by nature, and human beings only by grace. But we doubt whether women in general prefer the welfare of animals to that of their children. When they are philofoists their sentiment is apt to express itself in strange ways. We have known a lady who was an ardent antivivisectionist, and who kept pet cats without regard to the comfort of her neighbours. Yet to keep them, as she said, from roaming, she had them castrated! Sensible women who wish to have a vote will scarcely be grateful to Mr. Coleridge for his suggestion that the really good thing that would come of their having it would be the promotion of a particularly silly and mischievous agitation.

In the same speech Mr. Coleridge dwelt on the inadequacy of the inspection of laboratories under the present Act. He is reported to have said that "in the recent Royal Commission, the evidence of which was now closed, the officials from the Home Office told the Commissioners in cross-examination, firstly, that they never made surprise visits to laboratories, and secondly, in reply to the question as to what were

"the instructions given to them when they took office, the answer given was 'not to act as detectives.'" The first of these statements is false, and the second is misleading. With regard to surprise visits, it might be inferred that he had got the information from the minutes of evidence given before the Royal Commission. But any one who will take the trouble to refer to these minutes will find that in the evidence of Mr. W. P. Byrne, Principal Clerk of the Home Office, it is implied—see particularly Questions 224, 225, and 226—that surprise visits are paid by the inspectors. Mr. Byrne's replies on this subject must be read together with those of Professor Thane, who said in reply to Question 441 that he paid visits of inspection almost always without notice; of Sir James Russell, who said in reply to Question 553 that he very rarely gave notice of his intention to visit; and of Sir Thornley Stoker, who said in reply to Question 779 that he paid surprise visits, and had never found anything irregular, or to complain of. The testimony of these officials is borne out by that of Professor Gotch, who said he was visited three or four times a year, and was often not in his laboratory at the time because he did not know the inspector was coming; and of Sir Victor Horsley, who said that for the last seventeen years the inspector had invariably paid surprise visits to his laboratories. With regard to the instruction, said by Mr. Coleridge to be given to the inspectors, that they were not to act as detectives, one would gather that this was a regular part of the administrative routine. How far this is from being the case is shown by Professor Thane's reply to Question 1085, that he remembered very well reading in minutes that were written once that the inspector was not a detective, but he had never had anything definitely of that kind given him as an instruction! Apart from this, however, it is surely natural enough that the Home Office, which is composed of gentlemen, should think it undesirable that those whom they appoint to inspect the scientific work of men who are fulfilling the highest duty to humanity should adopt the methods of the private inquiry agent. Mr. Coleridge would probably, like Sir George Kekewich, prefer to look through the keyhole; but he would learn nothing more there than he already has every opportunity of learning by a less dishonourable means.

THE APPLICATION FOR A CHARTER.

As already announced, the Privy Council gave notice on February 15th that it had referred the petition from the British Medical Association praying for the grant of a charter of incorporation to a committee of the Lords of the Council, and further gave notice that all petitions for or against such grant should be sent to the Privy Council office on or before April 3rd. The Privy Council has transmitted to the British Medical Association for its consideration copies of all petitions against the grant of a Charter, or asking for modifications in the draft as submitted, received by it on or before the date mentioned. These petitions are from the following eight bodies: the Royal College of Physicians of London, the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of England, the Royal College of Surgeons of Edinburgh, the Society of Apothecaries of London, the *Senatus Academicus* of the University of Edinburgh, the British Medical Benevolent Fund, and the Society for the Relief of Widows and Orphans of Medical Men. The Privy

Council has received in addition a petition from certain Branches and members of the British Medical Association, signed by the President and Secretaries of seven Branches, and another petition in very similar terms signed by certain members of the British Medical Association to the number of 603, resident in various parts of the United Kingdom. All the petitions have been referred by the Chairman of Council to the Organization Committee, and this Committee is preparing categorical replies for the consideration of the Central Council of the Association.

THE LATE SIR DONALD CURRIE.

SIR DONALD CURRIE, G.C.M.G., LL.D., who died at Sidmouth in the early hours of April 13th, was a man well known in the shipping world as the head of the Union-Castle Company. He was, however, not only one of the pioneers of the mercantile marine, but for many years represented West Perthshire in the House of Commons; and, moreover, was one of those philanthropists who, working unostentatiously, furthered many schemes for the welfare of his fellow-creatures. Of late years he had interested himself in the needs of the Universities of Edinburgh and Belfast, and only the other day defrayed the expense of restoring the Cathedral of Dunkeld. A little more than five years ago Sir Donald Currie lent his support to the movement which has resulted in the incorporation of University College, London, in the reorganized University of London. To carry out this scheme it was necessary to find funds for the erection of a school of final medical studies in connexion with University College Hospital, and for this purpose Sir Donald Currie gave a sum of £80,000. As if this act of generosity was not sufficient he added a sum of £20,000 for the erection of a nurses' home and a maternity students' house in connexion with the same institution, and gracefully added a further sum of £2,500 as a gift from his daughters to furnish the latter buildings. When we consider the straitened circumstances into which medical education in London has fallen, such generosity deserves the warmest thanks and approval. Sir Donald Currie, though well aware of the necessity for rich men to give of their wealth towards the maintenance of the hospitals of London and elsewhere—a duty to which he again and again responded—was none the less keenly alive to the necessity for providing support for the medical schools of the metropolis—institutions whose maintenance is so important to the public at large. Though, as he had stated publicly, there might be some reason to hesitate to provide funds for hospitals, which he considered should receive support from the rates, there could be none when the needs of the medical schools were considered. He looked upon these as technical institutes of the greatest importance to the capital of the Empire, and in the absence of Government subventions, he felt it was the duty of those who could give help to do so until the time came when the Government realized that medical schools, which form an important department of all universities, should, like every other technical institution, receive proper State support. Sir Donald Currie was keenly alive to the necessity for supporting movements which had as their object the advancement of medical knowledge; the problems of disease, no less than high finance and politics, were readily grasped by his acute intellect, and at once secured his sympathy and practical support. To him the present state of medical education in this country was a matter of serious concern, and he hoped that the time would soon come when the medical teachers, like those of any other department of learning, would

receive adequate salaries from endowments. His munificent gift for the advance of the interests of the University of London was a practical expression of his cherished views. To him it seemed a remarkable state of affairs that whilst on the Continent medical studies receive the support of the various Governments, whether monarchical or democratic, and in America almost fabulous endowment at the hands of its enlightened rich, in London, with its unequalled opportunities for the investigation of disease, medical studies were cramped, and the hospital and medical school teachers ruthlessly sweated in the interests of the public at large, by a system which left the support of the schools to the more or less fortuitous support of a comparatively few medical students. Sir Donald Currie's generosity will always stand as a protest against this state of affairs.

PREVENTION OF PAUPERISM.

DR. McVAIL, County Medical Officer for Stirlingshire and Dumbartonshire, the author of the Report on the methods and results of the present system of administering indoor and outdoor medical relief under the Poor Law system, an account of which was given in the JOURNAL of April 3rd, page 855, initiated a discussion in the rooms of the Royal Philosophical Society of Glasgow on the Report of the Poor Law Commission and "Medical Aspects of the Prevention of Pauperism." In the course of his remarks Dr. McVail said that in his inquiry, which was wholly confined to England and Wales, his investigations had largely related to the prevention of future pauperism, so far as such prevention depended on medical work. The four millions sterling spent annually on outdoor relief in England was entirely without medical supervision. As regards the medical relief of adults, every encouragement was being given to the spread of phthisis in pauper homes owing to the want of co-ordination of the Poor Law and public health work. The creation of larger administration areas was a fundamental requirement in any remedial scheme, and that reform, which was in accordance with the recommendations both of the Majority and Minority Reports, being once accomplished, some points in dispute between the reports became of less moment than the reports themselves would indicate. Whatever the new authorities might be, the prevention of pauperism should be the main object, and not merely the relief of existing destitution.

PERFORATION OF UTERUS AND LACERATION OF INTESTINE BY PLACENTAL FORCEPS.

AN instance of very grave injury inflicted during the emptying of a uterus for haemorrhages in the second month of pregnancy was recently recorded by Dr. Ralph Waldo at a meeting of the New York Obstetrical Society.¹ A woman, aged 24, the mother of a child a year old, ceased to menstruate in September, and was troubled with uterine haemorrhage during the third week in November. Her doctor determined to empty the uterus. The bowels were thoroughly cleared by a cathartic followed by an enema. The bleeding came on very severely before the appointed time for the operation, so that the patient was at once put under chloroform and the uterus emptied with the aid of a curette and placental forceps. The instrument was accidentally pushed through the uterus, and the doctor admitted that when it was pulled out 3 ft. of intestine came with it. There was profuse haemorrhage, and the bowel was pushed back into the uterus, which was packed with iodoform gauze. Dr. R. Waldo transferred

the patient to a hospital where at once, on November 20th, 1908, he opened the abdominal cavity, within five hours of the injury. A rent 2 in. long ran from the right round ligament towards the median line across the anterior surface of the fundus. It was bleeding freely, and was closed with four deep catgut stitches and a continuous suture. The large intestine was found torn completely across at the junction of the sigmoid flexure with the rectum, and three-quarters of the descending colon had been forcibly drawn through the rent in the uterus by means of the placental forceps. It had retreated entirely into the abdominal cavity and was beginning to slough. There was much blood, but only a little of the contents of the bowel, extravasated into the peritoneal cavity. The entire sigmoid flexure and about three-quarters of the descending colon were resected, the colon above being united to the rectum with a Murphy's button, reinforced by a continuous Lembert suture of fine silk. As the splenic flexure was not held up by its peritoneal connexions as firmly as usual, there was no strain on the united ends of the bowel. A Mikulicz drain was introduced and the abdomen closed with catgut and silkworm-gut sutures. The drain was removed on the fifth day, when the bowels moved spontaneously, and rather obstinate diarrhoea followed. The Murphy's button was extracted from the rectum with forceps on December 1st, and the patient was discharged from the hospital cured on December 22nd. This case teaches the value of promptness after the occurrence of an obstetric accident. There is reason to believe that this particular kind of accident is not so rare as medical literature would lead us to suppose. In the active discussion which followed the reading of the report, several American authorities admitted that the accident had occurred in their own experience, whilst two others related how they had been called in where abortionists had lacerated the uterus, and intestine lay in the vagina. In another case a doctor mistook prolapsed umbilical cord for small intestine. The alleged resemblance of intestine, twisted spirally, to umbilical cord, has been discussed before, and Dr. Von Ramdohr referred to a trial in England in 1876, where a practitioner perforated the uterus and tore off 6 ft. of small intestine. "The celebrated Dr. Duncan" (it was really another distinguished obstetrician who appeared as a witness) swore that such an accident could have happened to him, and the practitioner was acquitted by the jury. It stands to reason that we must be very careful when using the curette, dilator, and placental forceps after labour or abortion. Experts admit that they have perforated the uterus, and that it is not always easy to recognize prolapsed intestine; hence the distinguished British obstetrician was perhaps justified in making on oath the statement above quoted, although at the time many considered that he had perhaps gone rather too far in his anxiety to rescue a professional brother from a painful position.

MEDICAL TERMS IN THE NEW ENGLISH DICTIONARY.*

THE April part of the *Oxford English Dictionary* carries the alphabetical rubrics from *rib* to *rom*, and the words from *ribaldric* to *romanite*. Not many purely medical terms come between these termini; indeed the words which are listed by Gould in the *Practitioner's Medical Dictionary* and those in Green's *Encyclopaedia and Dictionary of Medicine*

¹ Sigmoid Flexure and 75 Per Cent. of the Descending Colon Excised for Injury produced by Placental Forceps in an Attempt to Empty the Uterus. *Amer. Journ. Obstet.*, March, 1903, p. 478.

* A New English Dictionary on Historical Principles. Edited by Sir James A. H. Murray. Ribaldric-Romanite (volume viii) by W. A. Craigie, M.A., LL.D. Oxford: At the Clarendon Press, London, Edinburgh, Glasgow, New York, Toronto, and Melbourne. Henry Frowde. Double Section, price 5s. April 1st, 1909.

and Surgery are nearly all eponymous expressions, such as Riga's disease, Rivolta's disease, Rinne's test, and Roederer's obliquity. Yet Dr. Craigie has managed, by the inclusion of some obsolete words, to make a fair show of medical terms, and that without noting eponyms of doubtful value or slender vitality; this is another proof, if one were wanted, of the extraordinary fullness and completeness of Sir James Murray's great undertaking. As an instance of the way in which Dr. Craigie has sought out every medical phrase as well as every separate word, we may refer to "rice-water," used attributively to describe the evacuations of cholera patients. The earliest quotation illustrating this special use of the expression is dated 1866, the last year in which London suffered somewhat severely from cholera; it would be interesting to know if the term took its origin during that epidemic. Passing by "ricin," "ricinic," and "ricinol" with their verbal aroma of castor oil, the medical man will naturally turn to the word "rickets." As is well known, its etymology is doubtful. The Dictionary has the following paragraph upon it: "Whistler (1645) states that the disease had first come into notice about twenty-six years before, and was said to have been named after one who tried to cure it empirically; but others derived it from the Dorset word *ricket*—to breathe with difficulty." Glisson (*De Rachitide*, 1650), from whom Whistler obtained his information, says the disease was first noticed in Dorset and Somerset, and had only gradually extended over the south of England. His own suggestion is that the word was a corruption of Greek *payrus* or *papyrus*, the former of which he adopted as the scientific name." It is of interest to remember that the disease was known abroad as the English disease. It is also interesting to find, from the illustrative quotations given by Dr. Craigie, that the word was soon employed in a figurative sense, for Fuller, in his *Worthies* (1661) has the sentence: "Hospitals generally have the Rickets, whose heads . . . grow over great and rich whilst their poor bodies pine away and consume." Let all hospital managers beware of this rickety end! Butler also, writing about 1681, affirmed that "Multitudes of Reverend Men and Critics Have got a kind of intellectual Rickets." Rickets, it may be borne in mind, is also a local name for staggers in sheep. *Rictus*, *rigor* (including *rigor mortis*), and *rodent ulcer* are defined and illustrated with sufficient fullness; and the editor finds room for a paragraph telling what *rider's bone* is, and another to illustrate the meaning of *ring finger* or "medicinnall finger." Another word now obsolete or used only dialectically is *rim* in the sense of a membrane, pellicle, or caul; thus, the *rim of the belly* is the peritoneum, as the reader of Raynalde's *Byrthe of Mankynde* soon finds out. Cooper, in his *Thesaurus*, published in 1565, defines ascites as "when betwene the rimme of the beally and the guttes is gathered . . . much watry humour." Shakespeare also says: "I will fetch thy rhyme out at thy throat, in droppes of crimson blood." The word "*rim-burst*" seems to have been in common use in Scotland and the North of England; it has the meaning of hernia or rupture. *Rim*, with this meaning, seems to have etymological relations with the old English word *reoma*, a leather strap or thong. The use of *ridge* with the significance of the back or spine in men and animals is referred to; this obsolete meaning serves to explain the word *ridgel*, an imperfectly castrated animal, especially a ram, bull, or horse with only one testicle. The explanation is that the testicle is supposed to remain near the animal's back instead of descending into the scrotum. *Ridge-bone* or *rig-bone* is the almost obsolete word for

the spine. Reference is also made to the obsolete meaning of *rift* as a crack in the skin or an eruption from the stomach. *Ringworm*, of course, is carefully defined and copiously illustrated by quotation.

CYTOLOGY.

THE number of new *Archives* which are now appearing in Germany shows the extraordinary and widespread interest in the progress of the medical sciences. Germany seems to be the publication place of scientific literature for the world; the German scientists possess the patient faculty of laboriously analysing and serving up the researches published in each subject, and the workers in other countries buy the German compilations, and we have reason to be thankful that there is a nation which will crush the quartz from which they can obtain the gold. The most recent of the *Archives* is one devoted to cytology and edited by Dr. Richard Goldschmidt. The object of this publication is to bring together the original work on the structure and life-history of plant and animal cells. The researches may be published in German, French, English, or Italian. In the first four numbers, which contain many excellent plates, we find, among others, articles on the new problems of the cell theory, by R. Hertwig; on the cause of sterility of hydrids, by G. Tischler; on experimental researches on cells, by M. Popoff; and on the development of the germ-cells in the parthenogenetic generations of certain insects. The tenor of most of these papers seems to be towards the microscopical examination of minute structural details in the cells, the arrangement of the nuclear chromosomes, etc. Such morphological examination will not by itself carry us far. What is wanted is the development of micro-chemical methods of study and the direct attack on those physico-chemical problems which underlie the structural arrangements seen in hardened and prepared specimens. The microscopist of the future must be a first-class physical chemist. The researches of M. Popoff have been conducted on physico-chemical lines. He has studied on certain infusoria the growth of cytoplasm and nucleus and the process of division, under varying conditions of temperature at 25° C. and 14° C. During the process of growth cytoplasm and nuclear plasm increase proportionately, then suddenly the volume of nucleus becomes larger in volume, and the division of the cell results. When Popoff experimentally cut off a mass of cytoplasm from the infusorium at this stage the division proceeded without change, but if he did the operation just before the nuclear enlargement this, and in consequence the division of the cell, were delayed. The experiments showed that the chromatin (nucleo-proteid) was increased by chemical changes in the cytoplasm before division.

MEDICAL AUTOMOBILISTS.

A BREACH of speed limit by a medical automobilist came under the consideration of the Kingston magistrates recently, and resulted in a decision that, although the police had acted with perfect correctness in the matter, the case should be dismissed. It was one in which the medical man concerned was returning in haste to London in response to a telephone message that one of his patients, an inmate of the wards of the London Hospital, stood in immediate need of his services. When giving evidence on behalf of his chauffeur, the medical man stated that had he not been stopped by the police he

¹ *Archiv. für Zellforschung*. Edited by Dr. R. Goldschmidt. Vol. I. Parts I, II, III, IV. Leipzig: W. Engelmann. 1908. (Roy. 8vo, pp. 1-622; 21 plates. M. 16, 21 and 11 respectively.)

would have reached the hospital in time to save his patient's life. This case, therefore, is a perfect illustration of the truth of what was said in these columns a year or two ago when a similar incident came under notice. We then expressed a belief that a medical man driving in such circumstances at an excessive speed would usually experience the truth of the old proverb, "More haste, less speed." Apart from the increased probability of his being arrested by an accident, he was liable to be stopped by a police officer, who could not always be expected to distinguish at sight the motor-car of a medical man from that of an ordinary individual. On the same occasion we expressed the view that in the general interest it was not desirable that medical men should be excepted from the speed regulations. There is an increasing number of medical automobilists, and if they received a general licence to drive at unusual rates, there would certainly be an increased risk to the general public quite incommensurate with any probable benefit to individual patients. The case just quoted is not an argument on the other side, for if the patient really died because the police stopped the surgeon, the fault was not that of the police, but of the hospital in which the patient was being treated. The fate of no patient in a large hospital in London should depend upon the presence of a medical man who has to be summoned by telephone from a place fifty miles in the country. Among other comments which this case has evoked is a letter of a remarkable character in the *Daily Mail*. The writer, in support of his contention that medical men should be excepted from the speed rules, says that on a recent occasion he was informed by his house-surgeon that he need not attend the hospital, as the patient whom he proposed to visit had ceased to breathe. It was a case of obscure brain inflammation, and, giving directions for artificial respiration to be performed, he started off in a taximeter cab forthwith. On arrival at the hospital he restored natural respiration by performing an operation which gave vent to a brain abscess; and he claims that although he travelled four miles ("in a little over ten minutes") to reach the hospital, he completed his journey and performed his operation within fifteen minutes of receipt of the information from his house-surgeon. The whole story, which is authenticated merely by initials, sounds apocryphal, and even if it were otherwise, we should not consider the general argument established by the incident.

DEMONSTRATIONS AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE series of demonstrations instituted in connexion with the Museum of the Royal College of Surgeons of England will be brought to a close for the present session by three to be given by Professor Keith in the theatre of the College, Lincoln's Inn Fields, on malformations of the face and neck. These demonstrations will be given at 5 o'clock on Friday, April 23rd, April 30th, and May 7th. The Hunterian Museum has a large number of specimens illustrating malformations of the face, mouth, and neck, including a collection presented by the late Sir William Ferguson. The demonstrations have been well attended, and evidently have met a want on the part of the medical public.

MEAT WINES.

MR. D. INNES SMITH, Managing Director of Bendle Limited, is dissatisfied with the form of the correction published in the *JOURNAL* of April 3rd, p. 867, with reference to the "Meat-Port Nutrient"

sold by the company. He desires that it should be stated that the 1.4 per cent. protein there given represents about 7 per cent. of raw meat, and this is the case. He also considers that the paragraph did not make it sufficiently plain that the meat-derivative contained in the preparation is not a meat extract but nutrient meat material, and he thinks that medical men may be misled unless this is categorically stated. We have no desire either to mislead our readers or to do any injustice to the company which Mr. Innes Smith represents, and trust that the point has now been made quite plain.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Apothecaries' Hall (Ireland) and Irish Universities Act.—

In reply to Mr. Jeremiah MacVeagh, Mr. Birrell said that he had received a year ago an appeal from the directors of the Apothecaries' Hall of Ireland for compensation for the losses which they anticipated, as a licensing body, owing to the operation of the Irish Universities Act. The appeal was not one which he could recommend to the consideration of the Treasury.

The Ambulance Service of the Metropolis.—

The Home Secretary stated, in reply to Sir W. Collins, that owing to the pressure of current work he had not been able to give the report of the Committee on the Ambulance Service for London the detailed consideration which it required. He would see whether he could not deal at once with certain of the recommendations by administrative action; but he was afraid he could not hold out much hope of dealing with the main recommendations, which involved legislation, in the present Session.

The Feeble-minded in Poor Law Institutions.—

Mr. A. H. Scott asked the President of the Local Government Board if he could issue an order upon all Poor Law authorities to remove or isolate when possible all feeble-minded epileptics, inebriates, imbeciles, and lunatics from other inmates of the workhouses, as recommended in the recent reports of the Royal Commission on Poor Law, and also in the Reports of the Royal Commission on Aged Poor in 1895. Mr. Burns said that to the extent to which existing accommodation or additions to existing accommodation in Poor Law institutions might suffice for the modification of present arrangements affecting the classes to which the question referred, the powers of the Local Government Board and of the Poor Law authorities could, no doubt, be exercised in the direction indicated in the question. But for any such comprehensive treatment of the matter as appeared to be contemplated in the Reports of the Royal Commissions legislation would almost certainly be needed.

Children Boarded Out.—

In answer to Mr. Whitehead, the President of the Local Government Board stated that according to the latest returns the number of children boarded out beyond the union was 1,941. There were three inspectors of children of this class. The number of children boarded out within the union was 6,664. The duties of the boarding-out inspectors did not extend to these children. With regard to the inspection of children boarded out within the union the matter was under consideration, and he had not at present arrived at a decision with regard to it.

Inoculation against Enteric Fever in the Army.—

In answer to Mr. Lupton, Mr. Haldane stated that in the last year arrangements had been made for the voluntary inoculation against enteric fever of officers, warrant officers, non-commissioned officers, and men of the regular army at all stations at home prior to their departure for foreign service. Similar arrangements had also been made for voluntary inoculation against typhoid fever being carried out on board all troopships and in all commands, including India, where enteric fever was prevalent. Statistics on

the subject were not yet available. No arrangements had been made for the voluntary inoculation of the Territorial Force in this country. These inoculations were performed by officers of the Royal Army Medical Corps. No payment was made for the operation. The antityphoid vaccine was prepared at the Royal Army Medical College, Millbank. The sum of £63 was spent on the preparation of the vaccine last year, the amount being charged against Vote 2, subhead D.

Deaths from Beri-beri in the Mercantile Marine.—Before the Commons separated for the Easter recess a number of questions were put to the Secretary of the Board of Trade regarding deaths from beri-beri of Asiatic seamen on the ships *Avala*, *Falls of Orchy*, and *Ocean Monarch*. Mr. Tennant in each case, in admitting the deaths, said that an inquiry was held at the port at which each death took place, that the men were examined medically before joining the ships, and that further inquiries would be held on the return of the ships to this country. That the cause of beri-beri had not yet been definitely ascertained, but it was probable that bad and insufficient food might predispose to the disease. In the case of the *Avala*, six previous deaths from beri-beri on board this vessel had been reported during the last three years, and care would be taken to ascertain, on the return of the vessel to this country, whether there was anything in the ventilation, food, or conditions of employment which might have conduced to such a serious loss of life.

Aliens and Trachoma.—Last week Mr. Rupert Guinness called the Home Secretary's attention to the fact that 90 per cent. of the sufferers from trachoma at the Royal London Ophthalmic Hospital during the six months covered by the last report were aliens, and asked if, in view of the suggestion of the chairman of the hospital that such persons should be prevented from landing in this country, and of the introduction of this disease by aliens who had not been inspected at an immigration port, he would lower the number of alien immigrants carried in a non-immigrant ship. Mr. Gladstone replied that he understood that the statement mentioned in the first part of the question was made by the chairman of the Royal London Ophthalmic Hospital at the recent annual general meeting of the governors. Without altogether accepting as correct the further statement made by the hon. member, he might say that he had the point under observation, and that he was asking for further and more exact information as regards the general statements contained in the question.

Fever in Malta.—In answer to Mr. Lupton, who asked for the number of cases of Malta fever and simple continued fever respectively among the troops at Malta from 1897 to 1905 inclusive, Mr. Haldane gave the following figures:

Year.	Malta Fever.	Simple Continued Fever.
1897	279	1,275
1898	200	1,509
1899	275	1,107
1900	158	1,153
1901	252	1,059
1902	155	981
1903	404	781
1904	320	1,350
1905	643	1,199
1906	161	508

Colonel Seely promised to try and obtain similar figures for the civil population, and Mr. Haldane, in answer to a similar question as to St. Elmo Barracks, stated that there were no figures available in the War Office previous to January 1st, 1905, for individual barracks at Malta.

The Sale of Tuberculous Cows in Hampshire.—Mr. Field asked the President of the Local Government Board whether he would arrange that proceedings should be taken against Mr. Goulding for selling three tuberculous cows in defiance of the order of the Ringwood District Council. Mr. Burns replied that he had communicated with the Ringwood Rural District Council, and he found that they did not issue any order forbidding Mr. Goulding to sell the cows referred to, nor were they empowered to do so. Two of the cows were sold by Mr. Goulding to a Mr. Lewis, who subsequently had them sold at Salisbury Market. He understood, however, that Mr. Lewis was not informed by Mr. Goulding of the condition of the cows. The third cow was still in the possession of Mr. Goulding. The warning given him by the District Council related to the use of the milk from these cows for human food, or to its use as food for swine or other animals until it had been boiled. So far as he was aware, no legal offence had been committed either by Mr. Goulding or Mr. Lewis.

The Importation of Diseased Meat.—Mr. Bowerman asked the President of the Local Government Board whether he had made any representations to the United States Government respecting a consignment of diseased meat sent to this country in boxes bearing the official label of soundness. Mr. Burns replied that particulars as regards this meat had been supplied to the representative in this country of the United States Department of Agriculture, at the request of that Department, for the purpose of inquiry by that Department. In these circumstances he had not thought it necessary that formal representations should be made to the United States Government on the subject, or to ascertain the name of the firm of exporters.

Escapes from Lunatic Asylums.—In reply to Mr. Chiozza Money, Mr. Gladstone stated that the following were the numbers of escapes and recaptures respectively in the last five years from asylums in England and Wales:

1904	367	327
1905	363	328
1906	396	349
1907	356	317
1908	364	308
Total	1,846	1,629

In answer to a further question respecting the 67 imbeciles and lunatics who escaped in the first three months of 1909, as to their classification, as to their degree of mental deficiency, their recapture, and the steps to be taken to prevent such escapes, the Home Secretary said that the Commissioners in Lunacy could not yet furnish him with the information referred to in the first part of the question. Fifty-seven out of the 67 who escaped were recaptured. The Commissioners considered, and he agreed, that asylum authorities generally in the country took proper precaution to prevent escapes. As they stated in the report which was presented to Parliament last week, public opinion would not endorse the retrograde step of making asylums once more in the nature of prisons.

X-ray Research.—A grant out of the Royal Bounty Fund has been made to Mr. H. W. Cox, who recently sustained serious and permanent injuries in connexion with x-ray research work.

Business after Easter.—When the House of Commons meets on April 19th the Indian Councils Bill will be considered in Committee and will probably occupy the whole of the sitting. On Tuesday the second reading of some more or less non-controversial bills will be taken, such as the Houses of Parliament Bill, and Trawling in Prohibited Areas (Prevention) Bill. On Wednesday the Welsh Dis-establishment Bill will be introduced and a full dress debate will take place, and in the evening there will be a motion on the inspection of mines. On Thursday there will be a debate on artesian drainage in Ireland, on the motion to go into Committee on the Civil Service Estimates, and on Friday a private member's bill (Education Administrative Provisions) will come on for second reading.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

LEEDS.

MEDICAL INSPECTORS FOR LEEDS SCHOOL CHILDREN.

ON March 13th some account was given in this column of the arrangements come to by the Education Committee of the City Council as to the examination of school children and as to the scale of remuneration of the medical men to be appointed. It will be remembered that the general supervision of school inspection remains in the hands of the medical officer of health, Dr. Spottiswoode Cameron. One half-time school medical officer has been appointed at a salary of £150 per annum. By the term "half-time" presumably is meant the devotion daily of some two and a half to three hours to the work during the school terms. To the position of part-time medical officers nineteen appointments have been made, two of these being filled by ladies. The scale of remuneration, it will be remembered, for these positions is fixed at one guinea for thirty examinations. All the appointments are made to terminate on July 31st, when the scheme will be reconsidered by the Education Committee.

ADMISSION OF WOMEN TO THE LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

The result of the special meeting of this society, which was announced in the JOURNAL of January 2nd as about to be held, was favourable to the recommendation of the committee that it should be specifically stated that women are eligible for admission to the society. The motion was proposed by Dr. Griffith and seconded by Mr. Moynihan, and, though there was some opposition, it was carried by a large majority. At a recent meeting of the society those who are in favour of the admission of women had the satisfaction of taking part in the election by ballot of a lady candidate. It may be mentioned that in the ballot one black ball in five excludes.

BACK-TO-BACK HOUSES IN LEEDS.

There are many people in Leeds who are greatly concerned with the special clause of the Housing and Town Planning Bill, which, if passed, will put an end to the erection of back-to-back houses. There are an enormous number of such houses in Leeds, but it is fair to point out that the local Act which renders the erection of this type of house possible contains some very stringent conditions as to the number of houses in a row or block, the width of the surrounding streets, the space between neighbouring blocks, and the sanitary arrangements. It is felt that the kind of back-to-back house which it is intended by the Act to prohibit is widely different from those which have now for many years been erected in Leeds. Many of these modern houses are in blocks of eight, and when arranged in continuous rows they abut on streets not more than 120 yards in length, and have forecourts of not less than 15 feet deep, while the streets themselves must be not less than 36 feet wide. Each house is provided with separate drains and ventilating pipes, and the accommodation consists of the following: In the basement is a wash cellar, pantry, and coal-place. On the ground floor is the living-room and scullery, with sink, bath, and cupboard. The second floor contains one large bedroom and one small bedroom; while there is a large attic above. Of course, the chief point against the back-to-back house is the absence of through ventilation. The working classes in Leeds have a strong objection to living in tenements, and have a laudable ambition to secure self-contained houses. The kind of house indicated above, with an average frontage of 20 feet, can be obtained at a rental of 5s. 6d. a week, while it is said that a through house, having a frontage of only 14 feet, cannot be erected so as to be let at less than 7s. 6d. a week. On the other hand, one hears these figures authoritatively called in question. An influential deputation from the City Council waited on the President of the Local Government Board to urge the omission or modification of the clause in the bill. The deputation pointed out that the death-rate of Leeds was the lowest of all the large towns, with the

exception of London, and the sanitary and financial arguments were dealt with. Mr. Burns seems to have been adamant and to have presented an absolutely unyielding front. He said the matter had been fully considered by the Committee and that the Government was not disposed to make any distinction between one kind of back-to-back house and another.

MANCHESTER AND DISTRICT.

THE MENTALLY DEFECTIVE UNDER THE POOR LAW.

A NOTEWORTHY letter appeared in the *Manchester Guardian* a short time ago signed by three well-known Manchester medical men and three laymen, drawing special attention to the facts given in the Minority Report of the Poor Law Commission with reference to the treatment of the mentally defective under the Poor Law. The total number of the mentally defectives now residing in the wards of the general mixed workhouses in the kingdom is over 60,000. The Minority Report says:

We have ourselves seen idiots who are physically offensive or mischievous, or so noisy as to create a disturbance by day and by night with their howls, living in the ordinary wards, to the perpetual annoyance and disgust of the other inmates. We have seen half-witted women nursing the sick, feeble-minded women in charge of the babies, and imbecile old men put to look after the boys out of school hours. We have seen expectant mothers, who have come in for their confinements, by day and by night working, eating, and sleeping in close companionship with idiots and imbeciles of revolting habits and hideous appearance.

It would seem that the principal reason for this state of affairs is that the labour of these mental defectives is useful, and in small rural workhouses actually indispensable to their administration on present lines. In workhouse after workhouse the Commission was informed reliance was placed on the imbeciles for practically all the manual work of the establishment; the Local Government Board refused to issue an order to put an end to this apparently because the President had been advised that without the mentally defective women in particular the general mixed workhouses in the rural districts could not be carried on. In face of such facts the letter urges that pressure should be brought to bear on the authorities to order the removal from workhouses of all imbeciles, including epileptics, inebriates, lunatics, and idiots of all ages, that they should be withdrawn from the destitution authorities, and that the entire responsibility for them should be entrusted to the county or county borough councils acting by statutory committees in which the asylums committees should be merged. The letter goes on:

It would be nothing short of a crime if these poor people, whose mental condition and not their poverty or their crime is the real ground of their claim for help from the State, were allowed to continue in their present conditions. . . . Our concern is to get the feeble-minded removed from workhouses and from the taint of pauperism.

The fundamental defect of the medical service under the Poor Law is, it is urged, the fact that prevention of disease is regarded as outside its scope; simple curative treatment is all the guardians, even at their best, aim at, but in the case of the feeble-minded even the veriest rudiments of curative treatment are neglected. Not only are both prevention and cure alike neglected, but it would seem, the writers consider, as if everything were done to foster the contagion of feeble-mindedness, and, altogether apart from the taint of pauperism, justice and humanity demand that the feeble-minded should be removed from the jurisdiction of boards of guardians.

COUNTY OF DURHAM.

SUNDERLAND INFIRMARY.

RECENTLY Mr. T. F. Hoggood retired from the post of honorary surgeon, which he occupied for the last thirty years. He has been appointed a consulting surgeon to the institution with the care of two beds. The committee presented him, as a mark of their esteem, with a large portrait of himself, a duplicate of which is now hanging in the reception-room of the infirmary. Dr. Ayre Smith has been elected an honorary surgeon in Mr. Hoggood's stead.

On the recommendation of the Medical Board it has been decided to appoint on May 13th for one year; as an

experiment, two honorary assistant physicians (one to take charge of the pathological and the other the electrical department) and two honorary assistant surgeons. Many candidates are already in the field, especially for the two last posts. The Children's Hospital (an annexe to the General Infirmary), on the outskirts of the town, is making satisfactory progress, and to it later an honorary physician and an honorary surgeon will be appointed.

TUBERCULOSIS.

A New County Sanatorium for Women.

Lord Barnard, the President of the Society for the Prevention and Cure of Consumption in the County of Durham, will open the New Sanatorium for Women at Wolsingham on May 1st. The institution will provide accommodation for twenty-eight females (above the age of 10 years), and the Stanhope Sanatorium, with its forty-five beds, will be reserved for males only. The latter institution was opened in May, 1900, and over 1,000 patients have been admitted to it; many hundreds have been restored to work, of whom a very large proportion are still at work. For some years the committee has felt, in view of the increasingly large number of applicants for admission, that it is desirable to acquire another building. With this end in view, the Leazes House, Wolsingham, a beautifully situated mansion standing in five acres of charming grounds, together with an adjoining field of ten acres, was purchased on October 16th last, and has been transformed and equipped as a sanatorium, a purpose for which it is admirably adapted. It is estimated that £1,000 will be required in order to defray the cost of the necessary alterations and furnishing. The ladies of the county have gracefully undertaken to provide this sum for their suffering sisters, (and about half the amount has been subscribed already. It is expected that the new sanatorium, like that at Stanhope, will be practically self-supporting by means of patients' contributions, annual grants from local authorities, and workmen's subscriptions.

Invitations to be present at the ceremony have been sent to the medical men of the county, to the various sanitary authorities, boards of guardians, and to representative workmen of the different shipbuilding yards, miners' lodges, etc. The committee has invited the various local authorities to co-operate with it in subscribing £75 a year for more beds in the sanatorium, and thus helping to carry out the recent recommendations of the Local Government Board, and so secure the best results in helping to make consumption as "rare as leprosy." Last year fifteen local authorities sent 66 consumptives for treatment.

Proposed Home for Advanced Cases.

As the advanced cases of the disease are the most dangerous to the community, especially when occurring in houses with insufficient accommodation, the committee is asking the sanitary authorities and boards of guardians of the county to support a movement to provide a home for advanced cases by giving a donation towards providing and equipping such a home by subsidizing beds on similar terms as in the two sanatoriums for early cases. It is to be hoped that this appeal will meet with an adequate response, so that the terrible evils of poverty and misery which follow in the wake of consumption may be diminished and the burden on the rates thereby entailed lessened. During the last ten years the death-rate in the county from consumption has been reduced from near 14 to near 11 per 10,000 persons. The Secretary of the Society is Mr. Fred. Forrest, 54, John Street, Sunderland, and Dr. Menzies of Wolsingham has been appointed medical officer to the new sanatorium.

WALES.

THE EBBW VALE DISPUTE.

In the JOURNAL of March 20th (p. 750) we gave, on the authority of the *Western Mail*, an account of certain negotiations which seemed to open a way to the settlement of the long-standing dispute between the directors of the Ebbw Vale Workmen's Fund and the medical men employed under that fund. According to the *Western Mail* of April 5th, however, the workmen are not satisfied

with the agreement previously accepted by a considerable majority. Our contemporary says:

A further complication has arisen in the Ebbw Vale Workmen's Doctor's Fund dispute. Recently the Victoria section of the payees refused to accept the result of the ballot which was taken to effect a settlement of the disagreement caused by the Cwm section dispute, and on Saturday the Ebbw Vale payees at a mass meeting took a similar attitude. A long and heated discussion took place upon the manner in which the last ballot had been taken, several of the speakers declaring that the issue had been so confused as to make it misleading, and that the result was not binding on either party. Several resolutions and amendments were submitted to the meeting, the one ultimately carried being:

That another ballot, arranged by the workmen themselves, should be taken, and that the plain issue be for or against the reinstatement, and that the conditions be made binding upon all parties.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

St. Mungo's College, Glasgow.

DR. DAVID McKAIL has been appointed by the Governors of St. Mungo's College, Glasgow, Lecturer on Forensic Medicine and Hygiene, in succession to Dr. Hugh Galt.

GLASGOW UNIVERSITY: PRIVAT-DOCENTEN PROPOSAL.

At a meeting of the General Council of the University of Glasgow held recently a report was received from a committee which dealt with the proposal to give a trial to a system of instituting lecturers having a status similar to that of the privat-docenten in the German universities. Dr. Kerr moved that distinguished graduates who make application to the University Court to teach classes in the University qualifying for graduation should, when the University Court is satisfied of their ability and fitness, be appointed Lecturers in the University, and should be granted class-room accommodation, in so far as that is possible. It was intended that the University should not pay these new Lecturers, but give them house room, and allow them to live on the fees they obtained. The motion was duly seconded, and after some discussion it was agreed that the resolution should be sent to the University Court for approval.

ABERDEEN GRADUATION CEREMONY.

As at St. Andrews University, the number of women who take the M.A. degree is increasing; out of 116 who recently graduated M.A. 46 were women.

Natal.

THE COOLIE QUESTION.

At a meeting of the Durban Division of the British Medical Association last November the position of medical men in charge of imported coolies was brought under discussion. Two of these officers were present, and protested that matters of this sort should first be discussed by Indian medical officers themselves, and only by the Division at a later date and at their request. Nevertheless, resolutions were passed authorizing the commencement of an inquiry on the subject. Little effect, however, seems to have been given to them, and the main result was to stimulate the formation or, rather, resuscitation of a body specifically representing the interests of the medical men in question. This was brought about by a circular inviting coolie medical officers to attend a meeting at Durban, and to dine with the medical superintendent officer of the Indentured Labour Immigration Board at its conclusion. Only seven out of a total of some twenty attended, but this was no doubt due to the great distance which many officers would have had to travel. The meeting was a success, and resulted in the establishment of the Indian Medical Officers' Association, with Dr. Bonnar as president. According to a report of the proceedings which has reached us,

The principal business before the meeting was the attitude to be taken by Indian medical officers in giving evidence before the Commission on Indian Immigration now taking evidence in Durban. All those present, with the exception of one member, who complained of inadequate salary, expressed themselves as

satisfied with the terms of their engagement under the board. The board had proved themselves courteous and considerate as employers, and the hope was freely expressed that they might have nothing to do with the Government. The secretary stated that he had received many letters from Indian medical officers unable to attend the meeting, expressing indignation at the statements made that, owing to their control by the board, they were unable to do their duty to indentured Indians. The general feeling of his correspondents was against any change. The treatment of indentured Indians by their employers was also discussed: all those present testified to the fact that, with very few exceptions, employers were humane and considerate. One Indian medical officer present, who has had considerable Indian experience, expressed very strongly the opinion that the condition of Indians in this country was infinitely better in every way than their condition in India. Members felt—and this was freely expressed—that undivided control by the board would be the best solution of present difficulties, and that control by the Protector of Indian Immigrants was impossible. At present certain matters had to be reported to the board, others to the protector or medical officer for the colony; this multiplicity of control makes the work of Indian medical officers very difficult. It was finally decided that Dr. Bonnar, the president of the association, be asked to give evidence, and that the matter be further considered by the committee. It was also decided to inform the Pietermaritzburg and Durban Divisions of the British Medical Association that an Indian medical officers' association had been formed, and to thank them for their interest and help in the past. Certain articles and paragraphs purporting to express current medical news in Natal, and which has appeared lately in the *BRITISH MEDICAL JOURNAL* and in the *South African Medical Record*, were then considered. It was freely stated that the news complained of was inaccurate and misleading, and the secretary was empowered to take such steps as might be necessary in order that the publication of statements injurious to the interests of Indian medical officers might cease.

From this it is clear that a surmise expressed on the last occasion the coolie question found place in these columns was accurate, and that many, if not all, the medical officers would prefer to remain under the Immigration Board. As, however, at least half of them already hold posts under Government as well as under the board, it is clear that they cannot all of them escape having anything to do with Government. We are glad to note that the service, so far as it was represented at this meeting, was able to say that it is courteously and considerately treated, and the opinion expressed that employers, as a rule, are humane to the coolies is also satisfactory so far as it goes. On the other hand, the treatment the topic received is not calculated to end the controversy, for it seems to have been forgotten that the terms on which medical officers in charge of coolies are employed is a matter, not of limited or individual interest, but of wide and general importance. There are at least five parties amply entitled to a say in the matter: (1) The estate owners who import the coolies and pay the salaries of the men engaged to look after them; (2) these medical men themselves; (3) the coolies; (4) the health authorities of the colony; (5) the general public. The difficulties of the health authorities in keeping up and improving the standard of health in the colony are materially influenced by the amount of care exercised in the selection of coolies for importation, and by the fashion in which they are dealt with on the estates; and the same points affect the public. Recently, for instance, it has been seriously alarmed by the revelations made as to the prevalence of ankylostomiasis among imported coolies, and as to its commencing spread among the white inhabitants. Furthermore, it is by permission of the public that coolies are imported, and the public is bound to see that the arrangements made for their care are of a thoroughly satisfactory kind. This is a point on which grave doubts were thrown some eighteen months ago by the Protector of Immigrants, the official charged to represent the public in the matter. As already stated, he recorded an opinion to the effect that the arrangements under which medical officers of the Immigration Board hold office are detrimental to the interests of the coolies. For the rest it may be noted that we are not aware of any instance in which the facts published in our columns have been either inaccurate or misleading, but it may well be that the opinions expressed thereon do not meet the views of some of those affected. This is much to be regretted, but it cannot be overlooked that the point at issue is not whether medical officers at present in the service are contented with their position, but whether the striking pronouncement of the Protector

of Immigrants is well or ill-founded. As at present advised, we share his view that control of medical officers in charge of the coolies should rest not in the hands of estate owners, but of representatives of the public. In other words, these officers should be Government officials and quite independent of the estate owners for whose coolies they are medically responsible.

Correspondence.

HUNGER PAIN AND DUODENAL ULCER.

SIR,—I shall write no more at present on the symptoms ascribed by Mr. Moynihan to duodenal ulcer, as I am quite prepared to be convinced that he is correct on this point, and I look forward to an opportunity of availing myself of his hospitality and seeing some of the brilliant abdominal surgery which has made the Leeds School famous the world over.

But I desire to protest most emphatically against Mr. Moynihan's remarks on the value of *post-mortem* evidence. He writes that he "cannot conceive that the frequency of the fatality of any disease is to be measured by the number of bodies in which evidence of it is detected in the *post-mortem* room." But why not? If a man dies as a result of a duodenal ulcer, the duodenal ulcer will surely be found at the *post-mortem* examination. Or does Mr. Moynihan believe that the bodies of people with duodenal ulcer, who have not received surgical salvation, go straight to another world without passing through the *post-mortem* room?

Mr. Moynihan repeats that nothing but surgical treatment can cure a patient with a duodenal ulcer. The ulcer must therefore still be present *post-mortem*, if no operation has been performed, whatever may have been the cause of death. Mr. Moynihan admits that "an attack" of the symptoms which he ascribes to duodenal ulcer can be easily relieved by medical treatment; the extreme frequency of these symptoms—if they are really always due to a duodenal ulcer—compared with the rarity of an unhealed duodenal ulcer in the *post-mortem* room shows that the relief by medical treatment is indeed a cure.

"But what of recurrence?" Mr. Moynihan asks, in speaking of the results of medical treatment. "And what of recurrence?" I ask, in reference to the results of surgical treatment. In the last fortnight I have seen three patients, who have, apparently as a last resource, come to a physician for the recurrence of symptoms, which temporarily disappeared after operations undertaken for the relief of supposed gall stones or gastric ulcer. Two of these patients had had two abdominal operations; one had had three; but there comes a time when even the greatest lover of operations wearies of them and ceases to return to the surgeon, who is no more justified in assuming that he has cured his patient than is the physician, who is satisfied with improvement, which has lasted during the comparatively short period he can keep a hospital outpatient under observation.

Mr. Moynihan wonders whether the expression "unjustifiable," applied by me in my last letter to the vast majority of operations performed on patients suffering from symptoms ascribed to duodenal ulcer, was weighed. It was. And after reading his second letter I cannot see the smallest reason for withdrawing it.—I am, etc.

London, W., April 13th.

ARTHUR F. HERTZ.

SIR,—It seems to me that there is some fear that in the multitude of side issues raised the real point, the causation of what is called hunger pain, may be overlooked.

The cause cannot be simply the presence of excess of hydrochloric acid. Acid of much greater strength and in much larger quantity than is ever secreted by the stomach may be swallowed without causing the least pain; and, as Lennander has shown, the walls of the stomach and of the bowel may be cauterized with acid without the patient even being aware of it; nor so far as this is concerned, does it make any difference whether there is an ulcer present or not. It is certain now that the pain of gastric ulcer is not due to the acid contents of the stomach irritating sensory nerves on the floor of the ulcer, for there

are no sensory nerves there, and the same thing is true of duodenal ulcer.

The real cause of hunger pain is cramp or spasm of the unstripped muscular fibre in the wall of the pylorus. The character of the pain, the time of its occurrence, and, above all, the peculiar means by which it is relieved, all point to this; and the severity of the pain which is caused by irregular or excessive contraction of unstripped muscular fibre in other organs, where ordinary sensory nerves are equally deficient, needs no mention.

Hunger pain may occur simply from the work being too great, from overstrain or overexertion in a patient whose muscular system (so far as the digestive tract is concerned) is unduly weak. There is a want of proportion between the work to be done and the force there is to do it; and whenever this happens in connexion with unstripped muscular fibre, pain results. It occurs more readily when the walls of the stomach and duodenum have been rendered over-sensitive by some disorder of digestion—a disorder in which, perhaps, an excess of hydrochloric acid is present.

"Hyperchlorhydria" is an unhappy term—one to be avoided. Whatever may be the facts in connexion with it, it is a mistake to designate what we, in our present state of ignorance, call a functional disorder by the name of a symptom which may not always be present.

But this pain is much more likely to occur, and is much more severe when it does occur, if the wall of the bowel has been made exquisitely sensitive by the action of some continuous irritation or slight degree of inflammation, such as is always present when there is an ulcer. Whenever there is an ulcer, either in the stomach or the duodenum, the contact of any foreign substance, acid or not, with the surface of the sore irritates it; and the irritation, persisting for hours together, spreads to all the tissues around, rendering them hyperæmic and making them infinitely more sensitive to every kind of stimulus.

It is not the occurrence of hunger pain that is diagnostic of duodenal ulcer, but its recurrence, its persistence, and its severity. When it comes back again and again in spite of all that is done to relieve it, and when it obstinately persists in the face of ordinary treatment, there can be little doubt that it is not the outcome of a mere functional disorder, but of some definite pathological lesion.—I am, etc.,

London, W., April 10th.

C. MANSELL MOUTRIE.

SIR,—My excuse for intruding on the present discussion of duodenal ulcer is based upon *personal* experience of (1) "indigestion" since boyhood; (2) duodenal ulcer for about ten years; (3) perforation of a duodenal ulcer, laparotomy; (4) duodenal stenosis; (5) gastro-enterostomy. A history of this kind ought to throw some light on one or two of the points at present in dispute.

To my mind the question of what is and what is not pain is a most important one here, and one which is exceedingly difficult of solution. Looking back on my own symptoms, it was only when the pain became very aggravated indeed that I was induced to admit that I did suffer. The question, "Do you ever have pain after food?" almost invariably in my experience calls forth such a reply as, "No, I have no pain, but I have always suffered from indigestion." When you come to close quarters you will often find that such a person has now and then been kept awake at night, and has had to take this or that homely remedy for "indigestion."

Leaving the subject of pain, there are in addition two main difficulties in the way of diagnosis. In the first place, we must decide whether or not the trouble is of peptic origin. That this is a real difficulty I have had proved in my own case, for amongst the various opinions of my ailments I have had: chronic constipation (by a senior physician to one of the largest of the London hospitals); neurasthenia (within six days of perforation, by a well-known physician); cholelithiasis, etc. However, into that side of the picture I do not intend to enter, for it is not the one under consideration at present. The discussion, as I understand it, aims at deciding what are the symptoms of duodenal ulcer, and whether such symptoms are pathognomonic. In discussing this question we must ask another, namely, Is there such a thing as a pre-ulcerative stage? And if so, is it possible to distinguish it by its symptoms from the fully-developed ulcer?

Judging by my own experience, I cannot remember when I began to suffer from "indigestion," but I should not have thought of describing the discomfort as "pain." Even looking back on it in the light of experience, it could not be described as pain. At worst it was discomfort, more or less severe, accompanied by fullness, pyrosis, and eructations of gas. In short, it was what is usually termed "heartburn." It always diminished as the stomach emptied itself, and I learnt by experience that some form of fairly violent athletic exercise was most effective for this purpose, and I am inclined to think that the appetite for the next meal was a trifle excessive. In short, these are the symptoms of "hyperchlorhydria," or "acid dyspepsia." This is the "preulcerative" stage of duodenal ulcer.

The second or "ulcerative" stage has very definite symptoms indeed. As exemplified in my own case they might have been written down in the *Practitioner* by Mr. Moynihan at my dictation, so accurately has he described them. Of the pain (though I did not at first call it pain) there is no doubt: it came on two to four hours after a meal, frequently during the night; was relieved by the next meal or by alkalis. The first attack of hunger pain lasted only a fortnight, when it gave place to the "usual indigestion." After a time it became practically constant, until just before perforation it lasted from about one hour after food till relieved by the next meal. It gave most trouble during the night, more than once preventing any sleep whatsoever. What I wish specially to point out is that the subjective sensations of this stage are as different from those of the preliminary stage as the pain of perforation is from either. And judging by symptoms *alone* one feels justified in concluding that there are two stages, the first or preulcerative, characterized by fullness and discomfort after meals, accompanied by pyrosis, but passing away as the stomach gets empty; the second or ulcerative stage, characterized by the "hunger pain," which is more severe, lasts longer, gets worse towards the end of digestion, and is especially apt to be troublesome at night. The symptoms of these two stages agree in the time at which the discomfort begins, and in the fact that both are relieved by the taking of alkalis, or alkaline food such as milk and soda. They disagree in the character of the pain. They disagree in the effect of ordinary emptying of the stomach via the pylorus, which lessens preulcerative but increases hunger pain. Preulcerative pain does not occur at night, whilst the pain of ulcer is then most troublesome. The two conditions are not, however, separate entities, but stages in a morbid process. They can be recognized and differentiated.

From my own experience, personal as well as professional, I should say there is ample room for both Dr. Hutchison's cases of acid dyspepsia, and for Mr. Moynihan's cases of duodenal ulcer, but there is a danger of Dr. Hutchison failing to recognize duodenal ulcer, as there is of Mr. Moynihan failing to recognize hyperchlorhydria. Of the two I should prefer to be one of Mr. Moynihan's mistakes.—I am, etc.,

Belfast, April 6th.

S. T. IRWIN, M.B., M.Ch.

THE MEDICAL PROFESSION AND LIFE ASSURANCE.

SIR,—Mr. Snodgrass's remarks in the *BRITISH MEDICAL JOURNAL* of April 10th about Dr. Farrar's address on this subject seem to me to show that Mr. Snodgrass is needlessly anxious to vindicate the attitude of life assurance companies in matters relating to the payment of fees to doctors by the companies. I fail to see on what grounds apology need be offered or explanation given on behalf of the procedure of those companies in this connexion. A part of the business of the companies is to buy in the cheapest market the services of the medical men they believe are equal to doing well the medical part of the business of life assurance. If the medical men do not think the fees paid by the offices are sufficient remuneration for the work done the remedy is very simple—decline to do the work. The companies must have medical guidance in the selection and classifying of proposers for life assurance; but so long as the companies believe they can get certain medical work well enough done for half-guinea fees they will not pay more than 10s. 6d. for that work. If they paid more their shareholders would have just cause of complaint. If

anyone is to be blamed because these half-guinea fees are to-day in common use, it is the doctors, not the companies, who are blameworthy.

To me it seems irrelevant and a sign of weakness to speak of "sweating" the medical advisers of assurance companies. These men are members of a great profession which, if it cannot take care of its own interests, is, I think, undeserving of either sympathy or consideration from those who profit by its services. So long as medical men tumble over one another, as they now do, in a struggle to secure for themselves poorly paid, and even unpaid, appointments, the poor pay and the no pay will, as a matter of course, remain just as they are. There is much that sorely needs mending in the business aspects of the work done by the medical profession in connexion with both public and private appointments, and in the latter I include such work as is done by the medical advisers of insurance companies. In forty years' personal experience of both public and private appointments I have, from year to year, heard and read of the same sorts of complaints by medical men. To-day we are, in my opinion, in such matters exactly where we were in the late Sixties of last century.

The remedy for all this is plainly to be seen by even the unobservant in our ranks. Were we united in one great organization what we could not then do for ourselves would be unattainable. Until we are in that sense a united profession we do but waste time and cause amusement to those who profit by the present state of our affairs by bemoaning our fate in the medical journals or any other section of the press.—I am, etc.,

London, W., April 12th.

G. A. HERON.

SIR,—The medical profession *cannot afford* to do the work of examination and report for insurance companies. The pay is absolutely inadequate, and to me has entailed heavy loss in fifty-one years.

If a life is rejected or extra premium demanded, the proposer and his friends put it down to the medical examiner, and resent it, and despitely use him.

The remedy. Let the companies raise their premiums, and take lives without medical report, for which they cannot or will not pay, or have a whole-time man. Good lives do not want a report; the shaly lives the profession cannot afford to report on at present payment.—I am, etc.,

Framlingham, April 12th.

GEO. E. JEAFFRESON.

SIR,—There is one paragraph at least in the letter of Mr. Snodgrass upon this subject, published in the JOURNAL of April 10th, p. 930, which should not be allowed to pass without comment, since it bears upon the face of it the strongest refutation possible of the very thesis Mr. Snodgrass wishes to propound. He says:

"Dr. Farrar suggests that very frequently large sums are lost to the companies through early industrial claims which would otherwise be prevented by the expenditure of a guinea on medical examination. How much greater, and how much more certain, would the loss to the companies be if an expense of this kind were to be incurred in connexion with those cases! As a matter of fact, the companies would all prefer to have a medical examination in every case, but the cost, as has just been shown, is prohibitive."

Surely Mr. Snodgrass must appreciate the fact that the expenditure of a guinea upon a *thorough* medical examination (even where the policy is only for so small a sum as £25) must be the wisest course, since if, on the one hand, it brings to light the fact that through some defect (for example, Bright's disease, phthisis, cardiac disease, sarcoma, etc.) the proposer's is an unacceptable life, the company is thereby saved the probability of having to pay nearly the whole of the £25 in the course of a year or two, which they would probably be called upon to do if such a life were accepted *without* any medical examination; whereas, on the other hand, if the proposer proves to be a first-class life, the company can well afford a guinea fee on the probability that they would not be called upon to pay the £25 until, at the earliest, the usual span of life had run. Hence the words, "how much greater and how much more certain" become of no effect, and the "cost" is not "prohibitive." Of course, if Mr. Snodgrass is so short-sighted as only to look "ten or fifteen weeks" ahead in the case of a first-class life it is easy to understand his

attitude, but in calculating the company's receipts he ought to look ahead to the usual span of such a life. And let not Mr. Snodgrass bring against me the well-worn accusation of quoting apart from the context, because his attitude has been considered from every contextual aspect.

I should like to point out clearly to Mr. Snodgrass that, if a given thorough fully detailed examination and report upon a life is at any time or in any instance worth a guinea fee, the amount of the insurance does not in any way affect such an examination and report, and it is a matter of indifference to the examiner what sum is at stake, since all he has to take cognizance of is the fact that an opinion upon a given life is required of him after he has made a thorough examination. Therefore, whenever a fully detailed examination and report is required the fee remains the same, quite irrespective of the sum to be assured, and surely Mr. Snodgrass would not suggest that the examiner should make the company a present of half the fee in order that their profits might be the larger, which is what the tenor of his argument entails.—I am, etc.,

Lichfield, April 12th.

F. M. ROWLAND, M.D.

KISSING THE BOOK.

SIR,—I was very glad to see your sensible little leaderette anent the dirty, dangerous, and unnecessary habit of kissing the book—dirty, because it can hardly be a pleasant thing for a clean and refined man or woman to imprint a chaste salute on a volume which has just been pressed by the literally foul-mouthed lips of some beer-drinking, tobacco-smoking, filthy ruffian; dangerous, because ethereal disease has undoubtedly been caught by direct contagion in this way; and unnecessary, because it is surely an insult to a truthful, law-abiding citizen to tell him that he cannot be believed except on his oath. If one has a natural taste for perjury, I hardly think he will be restrained from strictly economizing the truth by hearing some words rapidly gabbled over to him by an official, and I should like to sweep the whole stupid process literally out of court, bag and baggage.

I have had the great privilege of swearing myself six times into the House of Commons, and can never forget the indecent scene. Recently-elected members stood three and four deep round the table struggling for a corner of the book with the energy of a football scrimmage or a pack of hounds squabbling round their dinner trough for the best bones. Bradlaugh did a real service when he declined to take part in such a meaningless ceremony, which had as little binding effect upon him as on the other occupants of the green benches, none of whom, I guarantee, has the slightest notion what he is swearing about. Surely, if a man is fit to be a member of Parliament, he is fit to make and administer laws without being officially bound over to work within the limits of certain theological precepts. But as long as the law exists it must be obeyed, and it is well that people should know—and I am not sure that all judges are aware of the fact—that any one can claim the right to be sworn Scottish fashion.—I am, etc.,

Hyères (Var), April 6th.

R. FARQUHARSON.

THE TREATMENT OF CHILDREN.

SIR,—The report of the Education Committee of the London County Council on the medical treatment of school children has very rapidly confirmed the warning contained in my letter published in the JOURNAL of March 27th, page 817. This committee consider that under certain circumstances it is desirable to utilize existing institutions for the medical treatment of children, and that financial help should be given such institutions in return for special facilities. I have no doubt that this recommendation is the first of a series that will shortly appear from various education committees all over the country, and unless something is done at once the profession will certainly be caught napping. A general and vague consideration of the principle involved will not advance the position at all unless such discussions are at once followed by a practical and business-like consideration of the matter by joint meetings of men in practice and selected members of the local hospital staffs.

The influence of the profession and of the British Medical Association might well be directed towards

support of the suggestion that education committees should be given power to recover the cost of medical treatment of school children from the parents except in cases where it is shown that the parents are not in a position to pay, but I would urge the importance of observing the principle that it is not the business of the profession to direct public authorities how to carry out their legal obligations. Their part is merely to take up the position that all medical work performed for public authorities must be adequately remunerated. It would be well for us to stop here and to refrain from pointing out the possible and probable effects of subsidies to hospitals. Whether such would lead to municipalization or nationalization is not our concern so long as we maintain a sufficiently united front to secure to the profession adequate remuneration for all services rendered. In fact, it appears to me that the only solution of the difficulty was contained in my previous letter, which suggested that possibly the time had arrived for the medical profession to dissociate itself entirely from the principle of giving services to institutions as charity in any circumstances.—I am, etc.,

Winchester, April 6th.

R. A. LYSTER.

RATIONAL DRESS FOR THE SOLDIER.

SIR,—With reference to the letter on the above subject by Lieutenant-Colonel C. J. McCartie in the *JOURNAL* of April 3rd, may I be permitted to recall the fact that after the publication of my essay on Diseases of the Heart amongst Soldiers, in 1870,¹ in which I attributed this disease largely to tight clothing and accoutrements, permission was granted to me at the Horse Guards to have a tunic made at the Royal Army Clothing Factory after my own design. The main point of it was to remove all constriction round the neck by not allowing any fastening by hook or button above the chest wall.

A soldier dressed in such tunic was inspected by H.R.H. the Duke of Cambridge, then Commander-in-Chief, at the Horse Guards, and I was informed, approved of by him; but I heard nothing more of it for some time, when I was told, unofficially, by an official that it could not then be adopted owing to the thousands of collars already cut out, and to the fact that it would cost one halfpenny more per tunic!

I hope that, like others before me, I did some little good in dealing with the subject of tight clothing; but it seems curious that, after nearly forty years, attention has still to be drawn to the same subject.—I am, etc.,

A. B. R. MYERS,

London, S.W., April 6th. Brigade-Surgeon-Lieutenant-Colonel.

PLEURAL PAINS AND ADHESIONS.

SIR,—I read with much interest the article by Dr. MacLachlan in the *BRITISH MEDICAL JOURNAL* of March 6th, p. 597, in which he draws attention to the importance of pleural pains and their connexion with pleural adhesions, but I feel that he has hardly brought into sufficient prominence the fact that pleural pain not only indicates recent disease of the pleura, but in a large proportion of cases is due to pleural thickening and adhesions of long standing. Certainly, among the patients in sanatoriums, pleural pain is very common, and is met with in those who have a good deal of scar tissue due to healed or healing disease, perhaps more frequently than when pleural involvement is recent. Indeed, all patients with satisfactorily-healed tuberculous lesions in which there has been pleural involvement, are liable to attacks of pleural pain for years after a satisfactory cure has been effected.

What the exact pathological change in fibrous tissue may be which causes the pain is doubtful, but it is a peculiarity of all fibrous tissue of pathological origin; old adhesions in joints after injury or disease, old scars, corns, etc., are all liable to cause pain at times, and more especially, it would appear, during drops in barometric pressure. It is this peculiarity which is largely responsible for the idea that damp is bad for rheumatism. The character of the pain suggests neuritis, for in addition to the "dull aching pain" there are frequently sharp twinges, which radiate down the course of a nerve; moreover, there is nearly always some superficial tenderness over some point along the

course of the nerve. It is largely on account of this tenderness that the condition is so often looked on as muscular rheumatism or pleurodynia and the important condition inside the chest wall is overlooked. A very considerable number of persons, who later develop more definite signs of phthisis pulmonalis, give a history of having been treated some time previously for "rheumatism of the chest." It is probable that these pains were the early signals of the disease; a warning which may not be accompanied or preceded by cough, although patches of subacute pleuritis are frequently due to involvement of the pleura by extension of a small lesion near the surface of the lung.

Dr. MacLachlan seems to think that 1 out of every 4 or 6 cases of pleurisy is too high a proportion to be tuberculous. Some authorities have found that over 80 per cent. of cases of pleuritis are of tuberculous origin. It is probable that of "chronic" or "subacute" cases the percentage would be even higher than this.

It must be remembered that there is good reason to believe that the majority of persons, whose lungs have at some time been infected by tubercle, recover without the disease ever developing far enough to be recognized.

Besides the positions indicated by Dr. MacLachlan, a common complaint of phthisical patients is an aching in the supraspinous fossa, with pain radiating over the shoulder, down the inner side of the arm and up the neck to the occiput. This is associated, as a rule, with tenderness, and is frequently thought to be rheumatism of the trapezius muscle, but is generally found in those with a lesion, perhaps quite an old one, in the apex of the lung on that side. Some neuralgic pains down the arm may be due to involvement of those branches of the brachial plexus which come into intimate relation with the extreme apex of the lung, but are more frequently due to pressure caused by associated glandular enlargement.

In other parts the tenderness and pain are usually found at the positions at which the branches of the intercostal nerves pierce the deeper structures to become superficial. These positions are not, of course, necessarily the site of the pleural lesion, for the source of irritation may be anywhere along the course of the deep branch of the intercostal nerve.

I cannot agree that opium is necessary in the treatment of this condition. The large majority of cases are readily relieved by painting a large area with a mixture of liniment and tincture of iodine, and by giving 10 grains of aspirin internally thrice daily. When the pain is so severe as to cause considerable dyspnoea, pressure by the hand may be found to give instantaneous relief. In these cases it is better to strap the side at once.

There is one point with regard to the physical signs that is well to remember. Deficiency of breath sounds—a sign almost constantly found—is very largely due to the reflex arrangement by which a whole lobe, or a portion of it, can be put out of gear for a time in order to relieve pain or to give rest to a diseased portion.—I am, etc.,

Mundesley, Norfolk.

ARTHUR DE W. SNOWDEN, M.D.

RURAL NURSING ASSOCIATIONS.

SIR,—Attention has been drawn to the *BRITISH MEDICAL JOURNAL* of the 3rd inst., in which the suggested rules of the Institute for Village Nurses are printed.

The statement that these rules have been altered recently in consequence of representations by the medical profession is quite erroneous. Rule 9 referred to is merely an amplification of the former rule, and embodies the principles on which the Institute has acted from the beginning. The Institute invariably gives the fullest consideration to any authoritative statement of the views of the medical profession, but in the present instance these views cannot be said to have brought about any change in the policy of the Institute, as no change has been made.—I am, etc.,

London, S.W., April 8th.

A. MARTIN LEAKE,

Secretary, Queen Victoria's Jubilee Institute for Nurses.

THE INFLAMMABILITY OF FLANNELETTE.

SIR,—It has come to my knowledge that statements have been widely circulated which would seem to convey the impression that the flame-proof make of flannelette,

¹ On the Etiology and Prevalence of Diseases of the Heart amongst Soldiers. The "Alexander" Prize Essay. London: John Churchill and Sons.

called "Nonflam" and which bears my name, loses its property of resisting fire after washing, and is then as dangerous a material as ordinary flannelette. That this is not the case may be easily proved by any one who will purchase the material, or a garment made of the material, at any of the ordinary shops, and subject it to washings with hot soap and water in the usual manner.

It will be found that even after thirty or more washings the material still retains in a remarkable measure its reluctance to ignite, and that even when it is made to burn it burns with extreme slowness, and the flame goes out on the merest shaking. That such material is absolutely safe to wear—as much so as wool—is shown by the fact that, although millions of yards have been sold during the last five years, no accident has occurred to anyone wearing it: while during the same period an appalling number of burning fatalities have resulted from the wearing of ordinary flannelette.

The misunderstanding in connexion with the safe properties of Nonflam has been traced to the fact that many imitations are in the market, and the public buys these under the impression that it is buying Nonflam. There are short-nap flannelettes filled with soluble salts, and show some resistance to fire before washing, but as soon as these salts have been washed out the material burns with the same readiness and is as dangerous as ordinary flannelette.

It is important, therefore, that those who wish to purchase and test the material shall insist on being supplied with Nonflam, and not a substitute.

In order that this important point as to the permanent flame-resisting properties of Nonflam may be completely and clearly demonstrated, it is proposed to ask several gentlemen who have no interest in the trade to make exhaustive tests, and the results of these will be published from time to time.—I am, etc.,

Victoria University, Manchester, April 8th.

W. H. PERKINS.

*. We have made a comparison of the inflammability of ordinary and Nonflam flannelette. It was found that with ordinary flannelette once washed the slightest momentary contact with flame sufficed to set it on fire, and it burnt away with great rapidity. Another portion was washed with hot water and soap eleven times more, and tested at intervals; there was a very slight diminution of inflammability. In the case of Nonflam, once washed, moderately prolonged contact with flame did not set it on fire; if held in the flame for a considerable time, it smouldered away slowly, and on removal it continued to do so, but did not burn with a flame. It was then washed with hot water and soap and dried; when placed in a flame it behaved as before, but on keeping it in contact for some time and then removing it, it burnt with a flame, but very slowly, and it was easily extinguished. It was then further washed in the same way ten times, and tested at intervals; there was only the slightest variation in its behaviour. After the twelve washings it still required prolonged contact with the flame to cause it to take fire. When it burnt with a flame, but slowly; it left an ash similar in quantity to that given after only once washing, showing that the protecting chemicals were not washed out. It may be taken that it would be but little affected by still further washing. If the flannelette had had the amount of wear that would ordinarily correspond to twelve washings, the amount of the woolly "nap" would probably have been much reduced, and even ordinary flannelette would then be less dangerous. So that a flannelette which is safe after twelve washings may no doubt be regarded as quite satisfactory.

The Services.

ROYAL NAVY MEDICAL SERVICE. DISTRIBUTION OF PRIZES.

THE course of instruction of the newly entered surgeons at Haslar was brought to a close on March 30th by the distribution of prizes by the Commander-in-Chief at Portsmouth, Admiral Sir A. D. Fanshawe, K.C.B.

The gold medal was gained by Surgeon W. A. H. McKerrrow, of Aberdeen University. The microscope was awarded to Surgeon F. G. Hitch, of the London Hospital. The silver medal

and books were awarded to Surgeon J. Glaister, of Glasgow University.

The following list shows the places gained by the combined marks of the London and Haslar examinations:

	Marks.
1. Surgeon W. A. H. McKerrrow, M.B.	5,413
2. Surgeon F. G. Hitch	5,245
3. Surgeon J. Glaister, M.B.	4,765
4. Surgeon T. R. Lloyd-Jones	4,529
5. Surgeon F. G. Hitch, M.B.	4,575
6. Surgeon C. F. Bainbridge, M.B.	4,497
7. Surgeon A. V. J. Richardson, M.B.	4,428
8. Surgeon F. W. Quirk	3,838
9. Surgeon S. L. McLean, M.B.	3,381
10. Surgeon G. R. McGowan	3,880
11. Surgeon B. J. H. Garstin	3,745
12. Surgeon W. Meares, M.B.	3,384
13. Surgeon N. Barclay, M.B.	3,502
14. Surgeon A. C. Wilson	Absent.

THE ARMY MEDICAL CORPS (TERRITORIAL).

EXAMINATIONS FOR PROMOTION.

MAJOR.—The subjects for the examination of majors in the R.A.M.C. (Territorial Force) before promotion to the rank of lieutenant-colonel are enumerated on page 175 of the Regulations for the Territorial Force; they do not prescribe an examination in military law. The following books are recommended: *Regulations for the R.A.M.C., Standing Orders for the R.A.M.C., Training R.A.M.C., and Caldwell's Hygiene*. In Army Order 197 of 1908 it is stated that the "medical history" for the year 1909 is that of the Asiatic campaign (book recommended: A.M.D. report for 1873, pp. 206-259); and the "army medical service" that of the French army (book recommended: *Handbook of the Medical Organization of the French Army*, by Lieutenant-Colonel W. G. Macpherson, C.M.G., R.A.M.C.). There is a recognized school of instruction in each division of the Territorial Force, particulars of which can be obtained from the administrative medical officer of the division.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

THE DUTY OF A SUBSTITUTE.

A. is in attendance upon a patient whose condition he considers serious, but not hopeless; the patient has a relapse and A. is asked, for, but being out B., a neighbouring practitioner, is asked by the relatives to attend. B. considers the case hopeless, and the patient dies on the following morning. The relatives, who expressed general dissatisfaction with A., asked him to give a death certificate, but he referred them to B. A. has heard nothing from B.

*. It would seem that B.'s language should have been more guarded, and he ought to have left a note for A. The action of the friends in dismissing A. terminated his duty towards the patient; but if B. had not seen the case again A. might have given the death certificate, as the friends on reflection would probably admit that they had treated him unjustly and discourteously.

Contract Practice.

ATTENDANCE WITHOUT MEDICINE.

H. L. E. has been approached by the Mutual Property Investment and Accident Company to accept the post of medical officer to its members. The proposed payment is 3s. 6d. a member per annum without medicine, so that the members are apparently required to pay for their medicine extra. He asks whether a medical practitioner would be acting professionally in accepting such an appointment.

*. Although the payment proposed without the obligation of supplying medicine might prove to be more remunerative than the majority of ordinary club payments, it is inadequate for the services required. It has been more than once suggested in the past that the contract of club doctors should not include the supply of medicines, and that club members should pay a small additional sum for every bottle of medicine supplied to them, but we are not aware that it has before been proposed to put the plan into practice, and it will be interesting to see how the experiment succeeds. Such a system would be an improvement on the present.

Obituary.

CLAUDIUS GALEN WHEELHOUSE, F.R.C.S.,

HON. LL.D. MCGILL, HON. D.S. LEEDS,

CONSULTING SURGEON TO THE LEEDS GENERAL INFIRMARY;
EX-PRESIDENT OF THE BRITISH MEDICAL ASSOCIATION.

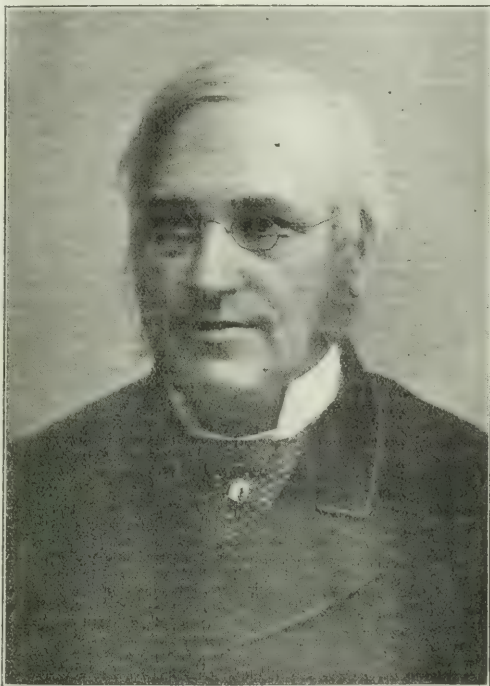
Mr. C. G. WHEELHOUSE, so well known for many years as Surgeon to the Leeds General Infirmary, as a devoted friend of the British Medical Association, and as Direct Representative of the profession on the General Medical Council, died on Good Friday at the home which he had made for his old age on the cliff at Filey, overlooking the North Sea and within the bounds of the county which he knew and loved so well.

Claudius Galen Wheelhouse was the second son of Mr. James Wheelhouse, surgeon, of Snaith, in Yorkshire, where he was born on December 29th, 1826. He was sent first to the Grammar School at Snaith, but at the age

of 7 entered at Christ's Hospital, spending three years at the Preparatory School in Hertford, and six years in London. When 16 years of age he was apprenticed to Mr. Ward, of Ollerton, Nottinghamshire, and the advantages he there enjoyed made him in after-years regret the abolition of the apprenticeship system. In his address as President of the British Medical Association at the annual meeting at Leeds in 1889 he discussed the subject at some length, and suggested a modified scheme in which the great field afforded by the county hospitals, work-house infirmaries, and public dispensaries might be utilized. "In pupillage in one or other of these in my humble judgment," he said, "a year, or even two, at the commencement of professional study would prove the very best beginning; and in following the practice to be there seen under the direct guidance and supervision of those who administer them, a youth would see work which in after-life would be of incalculable value to him, and would obtain opportunities for a groundwork which, under the present method of education, are wholly thrown away."

Young Wheelhouse entered the Leeds School of Medicine at the beginning of the winter session of 1846; he became M.R.C.S. in 1849, and L.S.A. in 1850. Shortly afterwards he acted as surgeon to Lord Lincoln, afterwards Duke of Newcastle, and Minister of War, who with a large party made a prolonged yachting cruise to Spain, Greece, Turkey, Egypt, Syria, and Palestine. Mr. Wheelhouse brought home with him a very fine collection of photographs which he had taken by the wax-paper process, the most difficult but the most excellent method which had been devised in the then infant art of photography; the exposures required were long, and the process of development tedious, but the results have hardly been surpassed by any modern process, and Mr. Wheelhouse would occasionally display his treasures to sympathetic friends.

On returning to England in 1851 he settled down at Leeds in partnership with Mr. Garlick, one of the leading practitioners in the town. In the same year he was



Photography by

Mr. C. G. WHEELHOUSE.

Chancellor, Dublin.

on that occasion to the Chancellor, said of Mr. Wheelhouse: "Himself one of the earliest at the Leeds School of Medicine, he was afterwards and for many years one of its most brilliant teachers; possessed of wide sympathies, he was for forty years a member of the staff of the General Infirmary, and an accomplished surgeon who acquired fame far beyond the limits of his native country."

In March, 1864, he was elected at the same time as Mr. T. Pridgin Teale and the late Mr. Nunneley, Surgeon to the Leeds Infirmary. In the same year he became a Fellow by examination of the Royal College of Surgeons of England, and the next twenty years was for him a period of great surgical activity. As an operator he was careful, exact, and thorough, qualities which indeed he displayed in all relations of life. It was the day of conservative surgery when the ideals which had produced the brilliant surgeons of the past who gloried in the speed of their operations were giving way to others having regard to the preservation of parts which under the older system would have been removed. In this new movement Wheelhouse was one of the leaders, but he could be daring on occasion, as is shown by his having performed paracentesis pericardii in 1866. He wrote also on median laparotomy, on perineal section, on the surgery of the epiphyses, and contributed to this JOURNAL in 1885 valuable clinical lectures on pent-up secretions, in which he discussed, among other subjects, the propriety of operating upon abscess of the lung, and on recent advances in abdominal surgery, in which he touched upon operations for gall stones.

Mr. Wheelhouse continued in partnership with Mr. Garlick until that gentleman's death in 1870, and though he did not thereafter give up family practice, his reputation as a surgeon caused his opinion frequently to be sought in consultation throughout the West Riding. It thus came about that during many years he lived a strenuous life, for to his many professional engagements in and around Leeds he added much public work for the profession, to which reference will now be made, although

it would be impossible even to enumerate all the directions in which his active interest in every movement for the advancement of medical knowledge and the maintenance of a high standard of professional honour and efficiency found opportunities.

We may take first his work for the British Medical Association, which he joined in 1859, at a time when its membership was small, and its financial position unstable. Although the membership continued to grow, the finances did not improve to a corresponding degree, and when Mr. Wheelhouse joined the Committee of Council in 1869 it was face to face with a very serious state of things. After debates extending over several years, in which Mr. Wheelhouse took an active share, it was resolved to remove the offices to London, and to replace the office of secretary, which had been held by a medical man, by that of general manager, who should be a man of business training and devote the whole of his time to the work. To this office the late Mr.

Francis Fowke was appointed in 1872, and when in 1881 Mr. Wheelhouse was elected President of the Council he found a very greatly improved state of affairs, to bring about which his own loyal work had in no small degree contributed. Before this, however, he had held the office of Vice-President of the Section of Surgery at the Annual Meeting at Sheffield in 1876, and two years later gave at the Annual Meeting at Bath the Address in Surgery, in which he passed in review the progress then recently made in the practice of surgery, dwelling particularly upon the surgery of the thorax, the abdomen, and pelvis, and upon the reunion and restoration of divided nerves; he took the opportunity also of paying a warm tribute to the great boon conferred on surgery by Lister. "The question," he said, "has recently been asked whether in adopting this principle of antiseptic surgery we 'may not possibly be encouraging a great delusion?' As a practical surgeon," he went on, "I emphatically answer, 'No! it is not a delusion, but a truth of the greatest value'; and in my mind I call up many cases in which, except or such 'delusion,' my patients would have lost their limbs, and oftentimes their lives also."

In 1889, when the fifty-seventh annual meeting of the British Medical Association was held in Leeds, Mr. Wheelhouse was unanimously designated President, although he himself, with characteristic self-effacement, had suggested the name of one of his colleagues, as is more fully related below by Sir Clifford Allbutt. The success of that meeting, which is still remembered by all those who had the privilege of taking part in it, was in no small measure due not only to the cordial welcome and genial hospitality of the President, but to his great executive ability in the ordering of the preliminary arrangements. Mr. Wheelhouse was always a good friend to this JOURNAL, and, fully recognizing the great qualities of the late editor, Mr. Ernest Hart, steadily supported every proposal for its improvement as a medical periodical. He was an occasional contributor to our columns, and we shall not now

be violating any confidence by saying that he was the "Old Member" who contributed to the Queen's Commemoration Number, published on June 19th, 1897, the short history of the British Medical Association from its institution to that time.

Mr. Wheelhouse's great services to the Association and to the profession at large as one of the first Direct Representatives on the General Medical Council were recognized in 1897 when the gold medal of the Association was presented to him. In acknowledging this honour Mr. Wheelhouse said that it had been his great pleasure to serve the Association under varying circumstances for upwards of forty years; through various administrations, through a great variety of circumstances, through poverty and impecuniosity up to wealth, he had been actively engaged in serving the Association, and whatever he had done for it had been done with all his heart and all his soul, for he looked to the advancement of the Association as being the first means of advancing the profession.

When in 1836 the Medical Act of that year brought into existence direct representatives of the profession on the General Medical Council Mr. Wheelhouse was one of the fourteen candidates who competed for the honour of representing England and Wales; he was elected at the head of the poll, his colleagues being Sir Walter Foster and the late Dr. J. G. Glover. He was re-elected in 1891, but did not again seek re-election when his second period of office terminated in 1897. In 1876 he was elected a member of the Council of the Royal College of Surgeons of England, and was thus among the earliest provincial surgeons to receive this distinction, in which he had been preceded only, we believe, by Mr. George Southam, of Manchester, and Mr. Alfred Baker, of Birmingham; his term of office terminated in 1881, and he did not then seek re-election.

Mr. Wheelhouse for over fifty years took a great interest in the West Riding Medical Charitable Society, which he joined in 1855, his then partner, Mr. Garlick, being the secretary. On

Mr. Garlick's death Mr. Wheelhouse assisted his successor, Dr. Chadwick, and was subsequently appointed Secretary, holding the office in conjunction with that of Treasurer for twenty-five years. Not long ago he was succeeded as Secretary by his son-in-law, Mr. Herbert Rowe, who had been associated with him in office for some twenty years. Mr. Wheelhouse continued to act as Treasurer up to the time of his death. A few years ago he compiled the history of the origin and early years of the society, which was established in 1828. During his long term of office as Treasurer the financial position was very greatly improved; and it is characteristic of the generosity and self-forgetfulness with which he gave himself up to all work for the good of the profession that for many years under his management two items, and two items only, appeared in the balance sheet under the head of expenditure—a bill amounting to about £20 for printing, and 10s. 6d. for the purchase of a copy of the *Medical Directory*. In 1902 three hundred of his fellow members presented him with an address

of thanks, accompanied by a gold watch and chain and a silver tea service. At the last meeting of the society which he was able to attend—that which took place at the end of December, 1907—Mr. Wheelhouse stated that the amount distributed since the foundation of the society to necessitous members of the profession, their widows, and families, had reached the gratifying total of over £44,000, and that the present financial position was sound, the income from investments amounting to about £1,100, and that from subscriptions to about £750.

While still resident in Leeds Mr. Wheelhouse was a member of the Leeds Philosophical Society, before which he delivered several addresses; he was also a patron of Leeds parish church, and his name was on the Commission of the Peace for the borough. After his retirement to Filey he continued to lead an active life, and was for some time President of the Filey Conservative Association; he was churchwarden of Filey parish church, and took a great interest in its welfare. He was a school manager and chairman of the Filey Lifeboat Committee, and in other ways took an active part in local affairs. He was also a magistrate for the East Riding, and habitually presided at the local bench. He attended a meeting of the East Riding magistrates at Beverley so recently as February last, and it was, indeed, on his return from that journey that his fatal illness began; he was then seized with an attack of angina pectoris, and, although he rallied and was able to attend to his duties for some weeks, he suffered other seizures, and was entirely confined to the house for three weeks before his death.

Mr. Wheelhouse married in 1860 a daughter of the late Rev. Joseph Cowell, Vicar of Todmorden, by whom and by three daughters he is survived.

The funeral took place at Filey on April 13th, and was attended by, among others, Mr. Littlewood, Professor of Surgery, representing the University and General Infirmary, Leeds; by Mr. L. R. Braithwaite, representing the resident staff of the infirmary, and by representatives of the county and local magistrates and the urban district council. The crew of the lifeboat acted as pall bearers.

Of the personal charm of Mr. Wheelhouse, of his genial, cheery manner, the expression of a genuine kindness of heart, of his loyalty to colleagues we need not speak, for we have the good fortune to be able to print the following tribute from his former colleague, and friend of forty years, Sir Clifford Allbutt, K.C.B.:

You invite me to add some words of mine to the biography of my old friend and colleague, Wheelhouse; and not unreasonably you request me to send them by return of post, which, as it happens, leaves me three hours. Three hours to reflect upon and to sum up the memories of forty years! An "impressionist sketch" indeed it must be. By the chances of our own generation, and of our almost simultaneous election on the honorary staff of the (old) Leeds Infirmary, Wheelhouse, Mr. Pridgin Teale, and myself were brought into close association, an association so close as to be fraught with happiness or unhappiness as the case might be. It was to be for happiness; for, taken all in all, we three were brethren in a sense that was as true for none others perhaps of our time. A Cambridge graduate of those days knew no surgery; he was taught none, nor examined in any part or lot of it. To the practice and circumstance of surgery I never became inured; but its problems had a new and absorbing interest for me—a personal interest, it is true—which I venture to touch upon now only so far as to indicate how intimately I associated myself with these two colleagues in hospital work. The loss which clings to all gain—one loss which aseptic surgery has brought with its prodigious gain—is the disruption of the old custom of co-operative surgery. What had made Leeds a great surgical school was this practice in common: the fixed operating days and hours, when, so far as engagements permitted—and they were generally forced to permit it—all the honorary surgical staff used to collect and to work together in mutual aid, mutual counsel, and, moreover, in that outspoken mutual criticism which is possible with loyal allies. Samuel

Smith, "Tom" Teale, and Samuel Hey were continuing and broadening down the great traditions of the place; Wheelhouse and Mr. Pridgin Teale were audacious juniors—Wheelhouse audacious by the breadth and security of extraordinary practical and theoretical knowledge, Teale by—but I must stop lest he overhear me; his friends know what I would say. And they also know that with these strong links that chain of great surgery was forged onwards in Leeds, which is growing as actively as ever to-day. On these operating days I was often an onlooker, and thus cemented a community of interests as well as a bond of affection with my two nearer contemporaries which never knew an hour's chill, never a breath of misgiving.

As illustrations of Wheelhouse's apparent audacity, the boldness of a man for whom all formal surgical knowledge was personal knowledge, I may refer to two operations—two out of many, and no doubt better, instances—but chosen because I was concerned in them; these were his often-quoted first paracentesis pericardii, and a suture of the great sciatic, a device now common enough, but in those days scarcely attempted. This patient, who, by sitting down upon a scythe divided his sciatic nerve, came to the hospital with a healed scar and a palsied limb. Wheelhouse promptly excised the scar, and repaired the nerve with complete success. In the other case, also in the old infirmary, I called up Wheelhouse—my surgeon of the week—suddenly in the night from his bed, and showed to him a young man with acute pericardial effusion, then in the jaws of death. All I had to say was: "Here is this man dying of a pericardial effusion. What you have got to do is to remove it. How you will do it is your affair." There was no time for questions or books, maps, or records; the steady hand had to strike, and to strike exactly with the right weapon and exactly in the right place. This was done unhesitatingly, and the patient's recovery, which began from that moment, was complete. At any rate, for some years later we saw him occasionally in the pursuit of his calling, and in good health. These are small matters perhaps in the brilliant light of modern surgery, but I am speaking of things now some forty years ago.

Wheelhouse's surgery was, as I have said, the sure practice of an anatomist and craftsman who learnt everything and forgot nothing; not only so, but of a man whose mind was so orderly and precise that every detail of that learning was continually before his eyes, and standing in its proper relation to other things. He advised or operated as a man may walk over mountains who had previously surveyed every inch of the country and had all the map in his head. To others it may seem audacity or magic, to himself just business. This orderliness and precision were no less manifest in all the work and engagements of his full and strenuous life; and, what was no less surprising—if I may venture for the moment to speak on behalf of the bad memories and disorderly minds—he seemed none, or but little, the worse for it. Your orderliness is apt to turn to primness and rigidity, your good memory to become a sort of beehive in which one bee is as good as another, and in which, indeed, a good deal of rubbish as well as honey is apt to gather. But if Wheelhouse's mind was rather comprehensive and instructed than original, yet, as was the case with Scattergood, whose qualities were not dissimilar, his ear was always open for progressive ideas, and he could always see over the top of his many careful rows of pigeon-holes.

We used to rally Wheelhouse on his adherence to some considerable part in general practice; and no doubt if he had discarded it, he would have made a bigger reputation as a surgeon. But for family and personal practice he had gifts too great, as he was probably aware, to be laid up in a napkin. His strong, sure, accurate, and kindly mind found expression in his manner and speech, in a somewhat formal but friendly, concentrated, trusty fashion of giving help and counsel.

How well we all remember his ways with a tiresome or sorrowful hospital patient, or with a tiresome colleague who did not happen to agree with him. How he would draw his chair nearer, fix one with his myopic glasses, lay a persuasive hand on one's shoulder, as if there were but one way in the whole world of regarding the matter; and as if, moreover, temperament temper, emotion, vexation,

* I do not forget our brilliant young colleague, Dr. Hardwicke, but swift death soon took him from us.

and so forth, did not exist; and then would not argue with us, not at all, but would just tell us, in slow-measured words, what we had got to do and even to think. And the worst of it was, the dear, kind, good fellow was always mainly, and, for the most part, altogether right. Such strong succour as this was precious indeed to his suffering or bereaved patients, and no man gave his services to them more generously or more unostentatiously.

Morning, noon, and night after night he laboured, making a rich harvest indeed, but not of money. Perhaps few men ever worked so loyally and so simply for others, and for so little pecuniary reward. Methodical in all else, he never seemed to lay any plans for money making; and when to his other engagements he added the office of Surgeon to the Midland Railway Company, even Wheelhouse's enormous capacity for work was tried to the full. How well I remember one day seeing his carriage forging slowly up a hill out of Leeds, with the horses half asleep, the coachman more than half asleep on the box, and Wheelhouse himself fast asleep inside. One foggy night, worn out with fatigue, he was called at a late hour to Wakefield. He fell asleep in the carriage, was taken to Wakefield and carried back again to Leeds, where the coach was shunted; later still it was made up into another train and returned to Wakefield, where the sleeper, hearing the call, stepped gaily out, to find it was 2.30 a.m., and no train home again that night. But next morning there was an early lecture, so he procured a cab, but, owing to the fog, had to walk most of the eight miles home, carrying a lamp to show the horse the way.

His Presidency of the Association at Leeds can scarcely pass without mention in these recollections. Ardent worker for the Association as he had been, he never schemed for the Presidency. In his own methodical and just way he informed me—yet, as I used to tell him afterwards, with a rather wistful look in his face—that by the conventional precedence of medicine before surgery, the office was mine. High-minded man as he was, he left it to me to recall his seniority in years and, far more than this, the long and loyal services he had rendered to the Association, services far greater than any other man in the Riding, and, furthermore, his gifts for business and organization, in which he surpassed us all. When I stipulated only for the office of proposing him for the Presidency he accepted the position frankly and gladly, and discharged its duties admirably, as we knew he would.

Nor, again, can I forbear to allude, if it can be no more than allusion, to the remarkable and perhaps unique West Riding Medical Charitable Society. If the task of nurturing this society in its early years belonged to others, to none more perhaps than to Chadwick—yet its earlier nurses handed it over to Wheelhouse as a wise and powerful guardian. How under his fostering care its growth and prosperity grew more and more was warmly testified to at a meeting of his colleagues a few years ago. We men of the West Riding who have seen the beneficence of this society fail to understand how it can be that other counties of the United Kingdom have not gone and done likewise.

Wheelhouse was too thoughtful a man to suppose that labours like his could be carried on into the autumn of life; with his habitual precision he had decided to retire at sixty, and it was only a few years after this age that he withdrew from practice and retired to his eyrie at Filey.

How there among the coastguardsmen and seamen he nevertheless made his great qualities felt, and became, after a fashion, in county business as necessary to his East Riding neighbours as he had been to us in the West, is well known, and is a story I am less well able to tell. What I can say is that my old friend—our old friend—lived to a ripe age, a simple and magnanimous, wise and courteous, useful and charitable, and, I believe, as he well deserved, a very happy life.

We are indebted to Mr. T. PRIDGIN TEALE, F.R.S., for the following note of appreciation:

My association with Mr. Wheelhouse began in 1856, when, on commencing practice in Leeds, I joined him in the teaching of anatomy at the Leeds School of Medicine. Our association in work for the school and infirmary was very close, constant, and cordial, and lasted until, at the end of our twenty years as colleagues at the infirmary, we accepted retirement as consulting surgeons, with the

privilege of using six beds each, when the need for our co-operation in teaching ceased. A few years later he retired to his charming cottage at Filey. It is not too much to say that Wheelhouse did more than any single individual to hold up the Leeds School of Medicine at a very critical time.

As a lecturer he was clear, accurate, and interesting, and able to command the attention of his class. He had a remarkable memory, and was able to work hard without worry. Few people worked as hard, as continuously, or for as long hours as he did during the greater part of his professional life.

Coming to Leeds an unknown youth with a widowed mother, and commencing his career as a hard-worked assistant in general practice, he achieved first his position as a Lecturer on Anatomy at the Medical School. He then became Surgeon to the Infirmary, was returned as one of the first Direct Representatives on the General Medical Council, was Chairman of Council of the British Medical Association, was elected to the Council of the Royal College of Surgeons, and finally President of the British Medical Association at its meeting in Leeds in 1889. Such a position is eloquent testimony to the high value set by his medical brethren on his professional acquirements, his personal integrity, and his exceptional capacity as a man of business.

On his retirement to Filey, in good health and mental vigour, he still devoted his trained energy and experience to good public work in his adopted town, and to the district as a county magistrate.

Dr. A. T. H. WATERS, who was President of the Association in 1883, the year in which the annual meeting was held at Liverpool, writes:

The death of Mr. Wheelhouse removes from amongst us a prominent figure in the Association and one to whom the Association is largely indebted. It must be nearly, if not quite, fifty years since I first met him as a member of the Committee of Council of the Association. We used to meet in Birmingham once a quarter, and no one was more active or took a greater interest in the welfare of the Association than Mr. Wheelhouse. He was a good speaker, a thoroughly good man of business, and he made an excellent President of Council during his years of office 1881-4. He was one of the group of men who during the Sixties and Seventies and later on devoted a great deal of time and energy to promote the progress and interests of the Association, and whose efforts were crowned with success. For many years I used to meet him at the annual and quarterly meetings, and it is a satisfaction to me, as a survivor of the group I have referred to, and one of the oldest members of the Association, which I joined in 1854, to give expression to my feelings on the loss we have sustained. Mr. Wheelhouse was a man of high principle, and he possessed great personal charm. His work deserves full recognition.

Universities and Colleges.

UNIVERSITY OF LONDON.

MEETING OF THE SENATE.

A MEETING of the Senate was held on March 24th.

Recognition of Teachers.

The following were recognized as teachers of the university in the subjects indicated:

Middlesex Hospital Medical School.—Dr. Reginald John Gladstone (Embryology).

London School of Medicine for Women.—Miss Helen Chambers (Pathology and Bacteriology); Mr. Leonard S. Dudgeon (Pathology).

Physiological Laboratory.

Dr. Waller was reappointed director and Dr. Mears treasurer of the Physiological Laboratory for the year 1909-10, and Sir Lauder Brunton was appointed a member of the Physiological Laboratory Committee for the remainder of the period 1908-9 in the place of Dr. Pre-Smith, resigned.

The annual report of the Physiological Laboratory Committee which was presented stated that three courses of eight lectures each had been delivered. The lectures on the therapeutics of circulation delivered by Sir Lauder Brunton, and on the intracellular enzymes by Dr. H. M. Vernon, had, with the authorization of the Senate, been published by Mr. John Murray. The report also contained a list of published papers, the outcome of work conducted in the laboratory.

Dr. Arthur Harden, D.Sc., Ph.D., was added to the panel of lecturers in physiology.

Reappointments.

Professor E. H. Starling, M.D., F.R.S., has been reappointed the representative of the Faculty of Medicine on the Senate, and the Faculty of Science has reappointed Professor Sir William Ramsay, K.C.B., M.D., F.R.S., as one of its representatives.

Sir John Williams, K.C.V.O., M.D., has been re-elected for a further period of five years as the Chancellor's representative on the Court of Governors of the University College of South Wales and Monmouthshire.

Exemptions in Regulations for Medical Degrees.

It was resolved that Section 5 (iv) of the exemptions from the normal course of study and examinations for internal students (Red Book, September, 1908, appendix to regulations in medicine, p. v) and Section 5 (iii) of the exemptions for external students (Blue Book, September, 1908, appendix to regulations in medicine, p. iv) be amended to read as follows:

Students who have passed or entered for the preliminary scientific examination, Part I, or the first examination for medical degrees, in or before July, 1910, will be permitted to enter for the third examination for medical degrees after a period of not less than two academic years from the date of their passing in anatomy and physiology at the intermediate examination in medicine or at the second examination for medical degrees, Part II, provided they satisfy the regulations in other respects.

Presentation Day.

The presentation of graduates will take place at the university at 5 p.m. on Wednesday, May 12th.

Studentships in Physiology.

Applications for the Lindley Studentship, of the value of £100, to be awarded to a student qualified to undertake research in physiology, must reach the university not later than May 1st.

The University Studentship, of the value of £50 for one year, will be awarded to a student qualified to undertake research in physiology, and will be tenable in the Physiological Laboratory of the university or of a school of the university. Applications must be received by the Principal on or before May 31st.

Advanced Lectures in Physiology.

The following courses of advanced lectures in physiology will be delivered during the third term:

Eight lectures on the Chemical Biology of the Yeast Cell will be given by Dr. Arthur Harden on Tuesdays, at 5 p.m., beginning on May 4th.

Eight lectures on Nerve Cells and Nerve Fibres, by Dr. W. Page May, at University College, on Wednesdays at 5 p.m.

Eight lectures on Recent Advances in Physiology, by Professor E. H. Starling, F.R.S., at University College, on Fridays at 5 p.m., beginning on May 14th.

Eight lectures on the Senses of Hearing, Smell, and Taste, by Dr. C. S. Myers, at King's College, on Fridays at 4.30 p.m., beginning on May 7th.

Four lectures on the Secretion of Urine, by Dr. T. G. Brodie, F.R.S., at King's College, on Mondays at 4.30 p.m., beginning on June 7th.

Four lectures on the Regulation of Respiration, by Dr. J. S. Haldane, F.R.S., at Guy's Hospital Medical School, on Thursdays at 4 p.m., beginning on May 6th.

Four lectures on the Accessory Factors of an Efficient Diet, by Dr. F. G. Hopkins, F.R.S., at Guy's Hospital Medical School, on Thursdays at 4 p.m., beginning on June 3rd.

Four lectures on Statistical Methods in Physiology and Medicine, by Mr. M. Greenwood at the London Hospital Medical College on Fridays at 4.30 p.m., beginning on May 21st.

Courses (1) (2) (3) and (4) have been recognized by the Senate as courses of advanced lectures which a candidate at the B.Sc. (Honours) examination in physiology may name for part of his practical examination.

Lectures by Professor of Protozoology.

A course of twenty-three lectures on protozoa will be given at the Lister Institute, Chelsea, by Professor E. A. Minchin, at 5 p.m. on Mondays, Wednesdays, and Fridays, during May and June, beginning on May 3rd.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.

Sir Patrick Manson will deliver a course of ten lectures on Tropical Diseases illustrated by lantern slides, on Tuesdays at 4.30 p.m., beginning on May 4th.

UNIVERSITY OF ABERDEEN.**DEGREE DAY.**

The following were among the degrees conferred on April 6th:

M.D.—W. Angus, R. Chalmers, H. W. A. Cowan, J. A. Davidson, R. E. Beffan, A. Skinner, M.A.

Ch.M.—J. Robertson.

M.B., Ch.B.—A. G. Anderson, M.A., W. Anderson, D. M. Baillie, J. A. Beattie, J. C. Bell, D. W. Bruce, A. J. D. Cameron, A. H. Dugiet, W. Dugiet, N. Dunn, M.A., J. Elder, J. D. Fildes, M.A., B.Sc., G. C. Grant, A. Gray, H. Hargreaves, J. Inkster, W. W. Jameson, M.A., H. G. R. Jamieson, J. Johnston, C. R. Macleod, J. McPherson, A. Macrae, C. A. Masson, M.A., J. L. Menzies, R. J. Menzies, H. S. Milne, D. C. Mitchell, D. C. Robinson, F. G. M. Ross, H. A. Smith, G. C. Souter, D. M. Spring, A. G. Stewart, M.A., R. Sturrock, C. C. T. Cwort, J. J. Williamson, M.A., A. Wilson.

On the same occasion Diplomas in Public Health were handed to:

Messrs. G. Davidson, J. Ferries, A. F. MacBean, M.A., R. McRae, A. J. Milne, W. G. Watt, T. C. McO. Young.

In medical colleges of Aberdeen honours for thesis.

1 Second class honours.

VICTORIA UNIVERSITY OF MANCHESTER.**DEGREE DAY.**

At a degree ceremony held in the Whitworth Hall on March 31st, Professor Stirling, as pro-Vice-Chancellor, admitted a number of graduates to the roll.

Professor Hickson presented for the degree of M.A. Mr. S. Saloman. Principal Reynolds presented for the degree of Master of Technical Science Mr. W. Crump and Mr. C. F. Smith. Mr. W. Sims presented Mr. A. Reuben for the degree of Bachelor of Dental Surgery. Sir W. Sinclair presented the following for the degree of Bachelor of Medicine and Surgery: B. W. E. Trevor-Roper (second-class honours), J. A. Bateman, N. Booth, J. I. Halsead, E. Howe, M. C. S. Lawrance, T. M. Pople, J. Ramsbottom, W. V. Utley, H. V. White, and J. Whitehead.

Professor Stirling expressed regret at the absence of the Vice-Chancellor, and hoped that his holiday in the East would enable him to recover his usual health. Professor Stirling said he thought that the menu of studies placed before the medical student was too elaborate and overcrowded. His mental digestion would be improved if some of the items were struck out or simplified. One wondered whether the products of his mental digestion were ever assimilated. Access to the profession of medicine was, perhaps, the most difficult of all, for the aspirants had to devote at least five years to arduous studies. Though medicine could not be considered an exact science, it was based on science, and every day its progress as a practical art was becoming more and more dependent on the advances made by the sciences on which it was based. In no department had the knowledge of causes produced such a revolution as in that of surgery. A similar success would be soon obtained in medicine if the public would only waken up to its responsibilities. Ague had disappeared, hydrophobia was almost non-existent, cholera and plague had been banished from our shores, and malaria and yellow fever were under control. Consumption, however, still claimed its victims in thousands, and the apathy of the public was extraordinary. Professor Stirling recommended to his hearers the cultivation of hobbies, and went on to speak of the serious nature of the medical profession. Manchester, he said, possessed almost unrivalled opportunities for the study of medicine and surgery in its numerous hospitals, and he thought that Oxford Road might well be renamed the *Boulevard des Hôpitaux*. He referred to the new Dental Hospital, and said that the day marked a new era in the history of the school of dentistry, as the degree of Bachelor of Dental Surgery had been conferred for the first time. In concluding, Professor Stirling referred to the deaths of Dr. T. Harris, Professor Dreschfeld, and Mr. Collier, and the retirement of Professor Young. He also gave expression to the regret caused by the death of Professor Gamgee, to whom the medical school owed so much.

THE UNIVERSITY OF LIVERPOOL.**DIPLOMA IN TROPICAL MEDICINE.**

The following candidates have been approved at the examination for the "Diploma in Tropical Medicine":

R. G. Abercrombie, J. R. P. Allen, H. P. W. Barrow, P. Carr-White, W. S. Clark, R. Cope, W. D. Hayward, W. P. Meldrum, J. C. Murphy, M. G. Samuel, M. H. Thornely, W. S. Webb.

UNIVERSITY OF DURHAM.**DEGREE DAY.**

At a Convocation on April 3rd the following degrees were conferred:

M.D. (ordinary)—G. I. Cumberlege, R. A. Morris, W. W. Stainthorpe, P. E. Turner.

M.D. (for practitioners of fifteen years' standing)—G. T. B. Ellick, A. A. Hill, B. W. G. Masterman, E. J. F. Moore, J. P. Oliver, W. J. E. Supton.

M.S.—B. Glending.

M.B.—K. B. Allan, Harriett A. R. Apps, E. C. Braithwaite, L. F. Browne, C. E. L. Burnman, L. W. Evans, J. R. D. Holby, H. F. Hewier, D. M. Johnston, Annie V. Mack, Jessie M. Murray, F. Rahnke, W. Rollin, R. H. Smallwood, T. W. Stallybrass.

B.S.—K. B. Allan, Harriett A. Apps, E. C. Braithwaite, L. F. Browne, C. E. L. Burnman, L. W. Evans, J. R. D. Holby, H. F. Hewier, D. M. Johnston, Annie V. Mack, Jessie M. Murray, F. Rahnke, W. Rollin, R. H. Smallwood, T. W. Stallybrass.

B.Hy.—G. R. East, J. T. Johnson, W. R. Macdonald, Elizabeth N. Neil, A. J. R. O'Brien, Gertrude E. O'Brien.

EXAMINATION RESULTS.

The name of Mr. Edward Phillips, of the London Hospital, was accidentally omitted from the list of successful candidates at various stages on the examinations for the M.B. degree, published at page 981 of our issue for April 3rd. He was one of the only two candidates successful in all four subjects of the First M.B. (elementary anatomy and biology, chemistry, and physics), and was awarded honours.

LONDON SCHOOL OF TROPICAL MEDICINE.

The following candidates were approved at the examination held at the end of the twenty-ninth session:

* J. A. Beamish, † T. Davenport Jones (Captain, I.M.S.), * G. M. Gray, † L. Gammie, † J. McDonald Major, † J. S. Winsor, † J. W. Archibald, Dora Watney, † M. E. Franklin, D. C. Master, R. Mortimer Johnson, † T. Hood Rankin, † C. W. O'Keefe, J. C. Spillane, † F. Lumb, † A. W. Grant, † G. B. Mason, A. H. Ezyee, R. C. Tilgner.

* Passed with distinction.

† Colonial Service.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL.

THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL are at 429, Strand, London.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Engineer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

TREATMENT OF RINGWORM IN SCHOOL CHILDREN.

DR. E. SCOTT GALBRAITH, D.F.H.Lond. (The Education Offices, York), writes: The treatment and cure of ringworm are engaging the attention of a vast number of medical men throughout the country at the present time. This disease is recognized as being one of the most intractable, if not the most intractable, with which the elementary school child is affected. It might be said to be the most prevalent disease amongst this section of the community. It is extremely contagious. It has a lengthy duration, at any rate when situated in the scalp, is never of itself fatal and it tends eventually to disappear. The seriousness of the complaint seems to lie in its contagiousness and the temporary disfigurement. It cannot give rise to much annoyance, as children attacked by it scarcely ever make complaint. It may have as sequelae thinness of the hair and baldness, but if this were always so one would expect to see a far larger number of bald children than is actually seen considering the huge number who are affected with tinea tonsurans. The fact of its prevalence and contagiousness makes it an efficient treatment a matter of most urgent importance, and it is this which has led me to write to you in the hope that some of your readers may be influenced in giving the results of their experience and thereby help in clearing up the doubt and difficulty under which some of us labour. Sabouraud, whose investigations are of the highest interest and whose knowledge of the disease is second to none, claims to have had marvellous results in the treatment of ringworm at the St. Louis Hospital, Paris, by the use of x rays. Likewise at the skin department of the London Hospital treatment by Roentgen rays has been attended with great success. The Metropolitan Asylums Board, the Bradford Union Hospital, and other institutions in England have been very successful in their electrotherapeutic treatment of ringworm. Notwithstanding these results there are many leading members of the profession who view with disfavour x-ray treatment. Dr. P. S. Abrahams, surgeon, West London Hospital, did not advocate its use in his post-graduate lectures delivered some months past. He prefers drug treatment. Dr. Dawson Turner has issued a warning against the decision of the Education Committee of the London County Council in favour of the treatment of ringworm by x rays, and the compulsory attendance of children for this treatment. I, for one, would like to know of a method of treatment by drugs which would show such good results as are claimed by some x-ray surgeons.

ANSWERS.

J. H. P.—We know of no ground for the statement that aspirin produces alkalinity of the urine. Aspirin has twice the alkalinizing power of the corresponding amount of salicylic acid, one equivalent of alkali being neutralized by the acetic and one by the salicylic acid.

BOOKS ON RADIOGRAPHY.

X-RAY asks for the titles of one or two elementary books on the theory and practice of x-ray work and the Finsen light.

*. An elementary work is the *Uses of Roentgen Rays in General Practice*, by Dr. Higham Cooper (London: Baillière, Tindall, and Cox. 1906. 2s. 6d.). It is not such a book as an expert would use, but it indicates in plain language the scope of x rays for general medical practitioners. A book which covers the ground very thoroughly is Drs. Arthur and Muir's *Manual of Radiology* (London: Rebbman, Ltd. 1909), published a few months ago. Finsen light literature is not so extensive. Dr. Sequeira's translation of Finsen's book, *Phototherapy*, is published by E. Arnold (1901. 4s. 6d.), and a small handbook on *Medical Electricity and the Light Treatment* has been issued by the Scientific Press. *Light and X-ray Treatment of Skin Diseases*, by Morris and Dore (London: Cassell and Co. 1907. 5s.), is a standard work on the subject.

LETTERS, NOTES, ETC.

DIPTEROUS LARVAE INFECTION.

DR. K. GRON (Municipal Infirmary, Ullevaal, Christiania) writes: The interesting communication of Mr. Stephen M. Laurence, in the BRITISH MEDICAL JOURNAL of January 9th, 1909, p. 88, on dipterous larvae infection, has caused me to remember that a few years ago I saw a case resembling it. The patient was an unmarried woman, aged 68 years, who, for cancer of both breasts (*cancer en cuirasse*), was attended at the Municipal Infirmary of Christiania from June 22nd to her death on December 28th, 1907. On December 27th a number of greyish maggots, about 1 cm. long, were observed moving vigorously in the patient's bed; the same thing had been observed by the nurse on an earlier occasion, and for a long time a remarkably large number of flies had been seen in the neighbourhood of the bed. On investigation it was found that the maggots had their dwelling place in the partly necrotic mass of cancer and had penetrated to some depth: they were especially numerous about the nipple of the left breast. In different places openings were found, and through these the maggots could be seen moving in and out. The case was treated with a 50 per cent. solution of lysol, which was changed thrice daily, and two days later the maggots disappeared, or at least could no longer be seen, although on the previous day two had been seen. I believe that the application of the lysol solution had destroyed the maggots, and considered the experience worthy of record on account of the relative rarity of such cases.

PROFESSIONAL SECRECY.

The following fine example of strict observance of the code of professional honour was reported in the *Evening Standard* and *St. James's Gazette* a short time ago. It purports to be taken from that trustworthy source, the *Petit (sic) République*. After some statements about the health of the Pope, it is added: "It is also affirmed that His Holiness is suffering from diabetes, but Dr. Lapponi preserves strict professional silence on the point." As Dr. Lapponi died some four years ago, and, we believe, is still dead, the report of his secrecy may probably be accepted. We say "probably," as before he passed beyond the veil he wrote a book on spiritism and hypnotism, and doubtless there are many ready to believe that he is still in a position to supply information to adepts in spirit rapping. It is all the more to his credit, therefore, that, being beyond the reach of any ethical tribunal, he has refused to break the seal of professional secrecy.

THE CAUSATION OF INGROWING TOENAIL AND THE NEMO (Edinburgh) WATER.

DR. J. JOHNSTON (Bolton) writes: From experience I am of opinion that ingrowing toenail is most liable to occur in those persons who are in the habit of taking hot baths in the morning or through the day. The toenails are "softened" by the hot water and may then be distorted by the use of tightly fitting boots. After a hot bath the toenails should be "hardened" by allowing cold water to flow over them for a time.

AURAL IMPLICATIONS.

DR. J. JOHNSTON (Bolton) writes: The case reported by Dr. Esslemont (BRITISH MEDICAL JOURNAL, February 20th, 1909), in which a cherry stone was impacted in the ear for twenty years, recalls a case of mine in which a foreign body has been impacted in the ear for thirty years. In 1879 a little boy of 7 was brought to me with a small glass bead which had been pushed right down into his ear. During my attempts to syringe it out he began to be violently sick, whereupon his mother, seeing what he was vomiting, exclaimed: "There's where my black currants 'as gone." An' then 'e said them 'adn't touched 'em." This unexpected development so upset the boy that he absolutely refused to permit any further treatment, and he has refused it from that day to this, and the bead is still there! But the curious thing is that its presence has had no effect upon his hearing. I saw him the other day, felt the bead with a probe, and he declared that he could hear quite well with that ear. He still declines further efforts for the removal of the bead by syringing.

ERRATUM.

In the obituary notice of Dr. Arthur Gamgee in last week's issue of the JOURNAL, page 934, col. 1, line 15 from foot, the words "lecture-address" should have been "Latin address."

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication; and, if not paid for at the time, should be accompanied by a reference.

N.B.—It is against the rules of the Post Office to receive letters at *Poste Restantes* addressed either in initials or numbers.

An Address

ON

GENERAL PRINCIPLES IN THE TREATMENT OF DISEASES OF THE HEART.

DELIVERED AT A MEETING OF THE HUDDERSFIELD
DIVISION OF THE YORKSHIRE BRANCH OF THE
BRITISH MEDICAL ASSOCIATION.

BY SIR JAMES BARR, M.D., LL.D., F.R.C.P.,
F.R.S.E.,

SENIOR PHYSICIAN, LIVERPOOL ROYAL INFIRMARY.

GENTLEMEN,—When I undertook to address a Yorkshire audience I at once thought it wise to select a subject which would appeal to their sense of practical utility, and, rightly or wrongly, I considered that, even by a non-emotional race, no subject would be more likely to receive an attentive hearing than that of the treatment of heart disease. Although you may not be very liable to emotional disturbances of the heart, I believe the common affections of that organ are not at all uncommon in this part of the kingdom, if I be rightly informed by a distinguished Yorkshire physician, Sir Thomas Clifford Allbutt.

In dealing with a subject I always like to look at it through my own spectacles, as I imagine they are specially constructed to take in a wide horizon, and in the treatment of disease I like to get ahead, and, when possible, treat the patient before the disease arrives. This is fortunately often possible in the case of diseases of the heart, though I do not wish you for a moment to think that I am one of those who say "that if they had only been called in an hour sooner they might have prevented the disease or saved the patient." I do not like to cut things quite so fine as that, though in some heart affections a few seconds are often of vast importance. The age of prevention is gradually dawning, and I have no doubt the time will come when questions of health will receive much more consideration than those of disease. When the millennium arrives all our huge hospitals will be empty, and remain only as relics of an ignorant age. The human species will devote as much attention to the production of healthy offspring as is now spent in the rearing of colts, and the human organism will know how to adapt itself to the environment.

No doubt the majority of sudden deaths arise from cardiac failure, but there are very few chronic diseases so amenable to treatment and so compatible with a long life of comfort if judiciously handled as those of the heart. In dealing with the prevention of diseases of the heart there are two very large and wide classes which will require our consideration, namely, those arising from or associated with some acute disease, such as rheumatism, and secondly, those degenerative lesions of the heart and vessels which are so common in later life. Regarding the prevention of congenital heart lesions, I shall at present leave that to those who are well versed in Mendelian laws, or who follow the biometric system, but I may be allowed to express the hope that the State will soon arrive at a sense of its duty, not merely in inculcating the teaching of eugenics, but that it will also adopt some salutary laws in preventing the propagation of the unfit.

Of all the acute diseases which give rise to heart disease rheumatism holds the first place, and shall therefore receive our primary attention. The young, and especially those with any hereditary tendency to rheumatism, should be warmly clothed; they should have daily ablutions, either temperate or cold, according to the susceptibilities of the individual; they should have an abundance of fresh air night and day; they should avoid all overcrowded rooms; there should be sufficient exercise in the open air; there should be at least one free evacuation of the bowels daily; all febrile disturbances, especially sore throats, should receive prompt attention; the condition of the digestive tract and the nature of the in-put require consideration. The family attendant should frequently inculcate the general principles of hygiene, otherwise he will not have much opportunity of preventing rheumatism, as perhaps the majority of parents are so callous, careless, ignorant, or unobservant that large numbers of cases of

rheumatism are passed over as "growing pains" until perhaps some serious heart lesion is developed. Preventive work is often very thankless and unremunerative, and those who attempt it are frequently described as faddy, meddlesome alarmists, trying to prevent diseases which might never occur, but you will always have the moral reward of having done your duty.

A wise man leaves as little to chance as he can help. He may undertake any dangerous occupation; but if working in a powder magazine it would be prudent to see that there is no naked light about. So parents who have transmitted a rheumatic tendency to their offspring should feel in duty bound to prevent any explosion. It would as a rule be more profitable for parents to pay their medical attendants for looking after the health of their families rather than for treating their diseases. This does not mean coddling, as a healthy child may undertake any game commensurate with its physical capacity, and, for the moral and physical evolution of a child, the more risky the game the better for the child's character. There should be due recognition of the risks, and all possible precautions taken to prevent accidents; but accidents will occur, and, if due precautions have been taken, even rheumatism might be treated as an accident. If you have failed to prevent the accidental occurrence of rheumatism, then you should be prepared to treat it energetically so as to prevent the subsequent occurrence of heart mischief. Treatment should as far as possible be dietetic and hygienic, because you cannot keep any patient for long periods constantly under the influence of drugs, and the action of drugs can be materially assisted by suitable diet.

In rheumatic fever there is a marked increase in the formation of sarcolactic acid, and all the excretions are very acid; I therefore think it advisable to omit all foods, such as starch and milk, which give rise to the formation of lactic acid in the digestive tract. There is also a great tendency to the formation of fibrin; hence, everything containing lime, such as milk, and all preparations of milk, cheese, gelatine, and animal jellies should be strictly interdicted. Lime also raises the blood pressure, and so increases the strain on the valves. I know that I am here running counter to the general advice of the profession, as with most medical men milk is their sheet anchor in their diet for this disease, but I condemned it in 1886, and I have consistently done so ever since. A great many medical men are like the Yankee, who did not know anything about measles but was death upon fits, so they make no attempt to prevent the rheumatism, or endocarditis and pericarditis; but when the latter occur they are all alert and quite prepared to give you a learned disquisition on the treatment of these two complications. One of the most recent evolutions in the treatment of pericarditis is to wait till there are some recent adhesions and then start with injections of fibrolysin, without any very convincing proof that it is able to resolve even recent scar tissue. Personally I prefer to prevent the adhesions by cutting the lime salts out of the diet, and making free use of decalcifying agents. Milk should not only be interdicted in acute rheumatism, but also in the subsequent treatment of the heart lesions.

An excellent diet for rheumatic fever consists of plenty of hot water, mincemeat and poached egg, pounded chicken, steamed sole, and other nitrogenous articles of diet. If any carbohydrate be required, well-boiled porridge may be given; the silicates in the oatmeal have a decalcifying effect. I am also very fond of syrup of glucose (free from arsenic), which is very palatable when administered with infusion of orange. This, unlike cane and milk sugar, does not readily undergo lactic acid fermentation. Oranges and lemons may be freely used. When the rheumatic attack is over, the diet may be more varied; there may be allowed a fair amount of farinaceous food, and plenty of fruit and vegetables, but milk should still be eliminated. There are two classes of rheumatic patients in whom you will find heart disease—the fat, flabby, lethargic, and somewhat phlegmatic individuals who like their food and do not care for much exercise, and, on the other hand, the very spare, active, rather neurotic individuals who do not over-indulge in the good things of this life; this latter class wears much better, and this knowledge should help you in directing your diet, which should be light and nutritious, with a fair allowance

of meat, fruit, and vegetables, and not much starchy food. The food should be merely sufficient in quality and quantity to maintain healthy nutrition; if the patient is laying on fat, the food is too abundant. I am in the habit of advising patients with mitral lesions to drink as little fluid as possible—not more than 2 pints a day—and if the tissues be at all flabby, or there be any venous engorgement, I frequently reduce them to half this amount. All fluids drunk have to pass through the right side of the heart before they are excreted (except what is carried off by purgation), and any excessive amount only handicaps it without producing any benefit. I know that some physicians like to drench their patients, with the view of washing away effete products, but it is a much wiser plan to keep the patient on a light dry diet, and not produce more effete products than can be excreted without flushing. The regular use of all alcoholic drinks should be strictly interdicted, tea and coffee with cream may be left to the discretion of the patient, except so far as the quantity of fluid is concerned. Lemon squash makes an excellent drink. Tobacco should be forbidden. If there be any tendency to oedema the salt should be cut down or eliminated from the diet.

HYGIENE.

During the endocarditis there should be prolonged rest in bed, and the blood pressure kept as low as possible. When the acute cardiac condition has passed and compensation is fairly established then a moderate amount of exercise is highly beneficial. The mode of life should be prophylactic against attacks of rheumatism. The patient should be warmly clothed with flannel next the skin, and he should avoid all vicissitudes of climate. When at any time the feet are damp or the body wet and chilled the clothing should be changed and the surface circulation re-established as quickly as possible. The action of the skin should be maintained, and for this purpose daily ablutions are necessary. A morning bath at a temperature from 60° to 90° F., according to the susceptibility of the patient, with coarse friction afterwards, will be found very advantageous. The combustion within the system should be as thorough as possible, and with this end in view the patient should avoid all close, heated atmospheres, and live as much as possible in the open air. A warm dry climate is best. He should not live at too great an elevation from the sea level so as to obviate the effects of a rarefied atmosphere, which leads to pulmonary congestion, and further tasks an overworked right ventricle. The life should be at a low level, not merely as far as the heart's surface is concerned, but in every other respect, and free from all mental worry and care. The patient should be enjoined to pursue the even tenor of his way in a happy and contented frame of mind, and simple pleasurable emotions should not be forbidden. Marriage cannot be recommended, and especially in the case of a female a timely counsel against wedlock and its usual results will be advisable. In my experience advice of this kind is very seldom taken, but at any rate I think the propagation of the species should be left to those more likely to improve the breed.

Short of actual fatigue, a fair amount of exercise, even to the extent of hill-climbing, will prove highly beneficial by favouring the circulation, increasing the combustion, and improving the general nutrition. The skeletal muscles contain about a fourth of the whole blood of the body, and exercise greatly increases the circulation through them and so increases the capillary area. On the other hand, if they be not used they require very little nutrition, comparatively little blood passes through them, as it tends to flow in the direction of least resistance; thus the capillary area is diminished and the general arterial tension raised. When, however, any indication of failure of compensation in the right side of the heart occurs, there must be no fashionable treatment by graduated exercise on a mountain side, but the excellent old-fashioned restorative of rest in bed must be at once adopted. If the disease be in the early stage, a few days' rest, a dry diet, and a cholagogue cathartic may be all that are required to restore the *status quo ante*. If a long stay in bed be deemed advisable, then massage should be substituted for the loss of muscular exercise. This improves the circulation in the muscles, increases the quantity of blood in the systemic vessels, and so indirectly lessens the pulmonary engorgement, and it hastens the

return venous current. The Nauheim treatment is best suited for patients with imaginary heart lesions and for those who have been gorging too freely.

REST.

During the acute stage of rheumatism and endocarditis absolute rest in bed is essential, but you must not imagine that because the patient's systemic muscles are resting therefore the heart has got very little to do. It is true that it has only got to pump the blood along the level, but if the blood pressure be maintained at a high level from the retention of effete materials or any other cause then the heart has got too much to do. Endocarditis attacks the valves of the left side of the heart much more frequently than those of the right, not because they are more vulnerable but because they are subjected to greater stress, and the parts of the mitral and aortic valves which are brought into most violent apposition during their closure are the parts first affected, hence the rows of beaded vegetations due to proliferation of the subendothelial layer appear on the auricular surface of the mitral valve and on the ventricular surface of the aortic valve. Rest in bed in a case of rheumatic fever is neither sufficient to prevent endocarditis nor to cure it, but if the blood pressure be kept at as low an ebb as is compatible with life, and no sudden strain be thrown on the heart the endocarditis may be prevented in numerous cases, and when it does occur the cure may be thus hastened or the ulterior effects may be very much mitigated. To keep the blood pressure low lime salts should be eliminated from the diet, decalcifying agents should be used, the skin and bowels should be kept freely acting, and of course the rheumatism should be treated. The rest in bed should be continued for a lengthened period—at any rate, until convalescence is well established—but there is no object in continuing it for an indefinite period, as, when the patient is feeling quite well, he is apt to chafe under the restrictions, and the heart is not undergoing the necessary training to fit it for the increased work of the future. The return to active exercise should be a very gradual process, and it is well at first to have the systemic muscles subjected to passive exercise, resisted movements, massage, and, perhaps, the Aix douche; respiratory exercises are useful aids to the right side of the heart. Moderate exercise has only a slight effect in raising the blood pressure, and it afterwards lowers it by increasing the circulation in the muscle. So when the acute stage is passed a gradual training of the systemic and cardiac muscles is an advantage. In going upstairs or making an ascent no doubt the work of the heart is increased, but the chief work has to be performed by the systemic muscles, and as there is a great demand for oxidation the chief stress is thrown on the right side of the heart, hence the necessity for a little preliminary training with respiratory exercises.

The heart mischief following diphtheria, and to a less extent after typhoid fever, is myocardial rather than endocardial. In both these affections the blood pressure is very low, and hence the valves are not subjected to any great stress. In diphtheria the heart's action may be slow when the myocardium is much involved, or it may be short, quick, and frequent when there is neuritis affecting the pneumogastriacs. In both these classes the heart may be much dilated, and in such cases cardiac tonics, more especially the lime salts, are demanded. In severe cases of typhoid fever the right side of the heart is very apt to become dilated, but owing to the usual large supply of milk in this disease the lime salts are not, as a rule, deficient, and this, I think, may account for the fact that dilatation of the heart is much less common than it is in diphtheria. The injudicious supply of milk after the necessity for its use has passed may also, to some extent, explain the fact that sclerotic changes in the blood vessels are not at all uncommon after typhoid fever.

Cardiac paralysis with great dilatation of the heart is a marked feature in muscarine poisoning. In scarlet fever there may be myocarditis with dilatation of the heart; but as a rule, when heart mischief occurs in this disease, it is endocardial and is associated with rheumatism or septic infection. In influenza there is often a disturbance in the innervation of the heart, and probably often a neuritis affecting the pneumogastric and cardiac nerves. In whooping-cough the right side is chiefly affected from

mechanical causes; cardiac tonics in this case should be combined with atropine.

Infective endocarditis may affect either side of the heart, and as a rule the organisms find a nidus in some old damaged valve; but this is not necessarily the case, and I have seen the infective patch on the right side of the septum-ventriculorum. If possible the pathogenic organism should be isolated and a vaccine prepared. In such cases embolic lesions are very common, and thrombosis may occur, though this is more frequent in old, degenerate vessels; in these cases the tendency to blood clotting should be lessened by the free administration of citrate of sodium, unless there be a tendency to petechial hæmorrhages, in which case lime salts should be administered.

In shock the blood pressure should be raised by saline injections and by small and repeated doses of adrenalin injected into the veins. Dr. Blair Bell has recently shown the great value of pituitary gland in such cases. In syncope the patient should be suspended by the feet, or at least the head should be lowered and the lower part of the body raised, so as to keep the brain supplied with blood and to raise the diastolic tension in the right side of the heart. Heat relaxes the peripheral vessels and lowers the blood pressure, while cold has the opposite effect; both agents can be used in treatment.

EXERCISE.

In the *Liverpool Medico-Chirurgical Journal*, 1888, in an article on the Oertel system, I dealt very fully with the question of exercise in the treatment of diseases of the heart, and, as I have in no way altered my views on this subject since, some of the conclusions at which I arrived may be here appropriately stated. I showed that the treatment was not new, except in the extreme rigour of its details and in the wide field of utility claimed for it by Dr. Oertel. Sir Dominic Corrigan, in his classic paper on Aortic Regurgitation, in the *Edinburgh Medical Journal*, 1832, recommended in this disease

a generous and sufficient diet of animal and vegetable food; at the same time, that an abstinence from those beverages, such as malt liquors, which increase much the mass of the fluids, should be enjoined. It is not at all necessary that the patient should be prohibited from attending to his business or profession, provided that he do not devote to it so much attention as to produce debility.

Dr. Stokes described his method of treating fatty degeneration of the heart as follows:—

1. We must train the patient gradually, but steadily, to the giving up of all luxurious habits. He must adopt early hours, and pursue a system of graduated muscular exercise; and it will often happen that, after perseverance in this system, the patient will be enabled to take an amount of exercise with pleasure and advantage which at first was totally impossible, owing to the difficulty of breathing which followed exertion. The treatment by muscular exercise is obviously more proper in younger persons than in those advanced in life. The symptoms of debility of the heart are often removable by a regulated course of gymnastics, or by pedestrian exercise, even in mountainous countries such as Switzerland or the Highlands of Scotland or Ireland. We may often observe in such persons the occurrence of what is commonly known as "getting the second wind," that is to say, during the first period of the day the patient suffers from dyspnoea and palpitation to an extreme degree, but by persevering, without over-exertion or after a short rest, he can finish his day's work, and even ascend high mountains with facility. In those advanced in life, as has been remarked, the frequent complications, with atheromatous disease of the aorta and affections of the liver and lungs, must make us more cautious in recommending the course now specified.

2. We should advise the use of such a régime as will tend to nourish without increasing the bulk of the system, and especially the growth of fat. The patient may use fresh meat of any kind freely, but should avoid taking an over-quantity at any particular meal. He should abstain from all articles of food which are oleaginous, and probably also the white meats. He must be forbidden the use of soups or much milk, and should partake of vegetables sparingly. His use of beer should also be as sparing as possible. The best drink would be water, with or without a little brandy or wine, but soda water or any alkaline drinks must be inhibited, and he should accustom himself to the daily use of the cold shower bath, followed by strong friction over the whole body.

3. We can do little in this disease by mere medicines, but great attention should be paid to preserve a free state of the bowels, and from time to time the patient may use a cathartic, followed by a warm and tonic cathartic. In young patients, who approach to the anæmic state, the preparations of iron, cautiously exhibited, will be found useful.

But in the confirmed cases of persons advanced in life, specially where the patients have never exceeded in the use

of alcohol, and, above all, where the pulse is slow, with a tendency to faintness or to attacks of pseudo-apoplexy, our great reliance must be in the free use of wine or brandy, for by such a proceeding alone can we hope to preserve or prolong the patient's life. Long fasting must be inhibited, and all fatigue or mental annoyance avoided. Such persons should always have some diffusible stimulant at hand to which they may have recourse on any appearance of syncope, or of the cerebral sensations premonitory of an attack. They should be much in the open air, and, if possible, reside in a locality which combines the bracing effects of mountain and sea air; and as it is above all things necessary that their attention should be diverted from the state of the heart, the routine and too often mistaken treatment of cardiac disease must be absolutely avoided.

This advice of Dr. Stokes is, on the whole, very sound, though I cannot admit that the free exhibition of alcohol which he recommends is ever necessary. His views afford a wonderfully hopeful contrast to the following *laissez-faire* advice culled from the most recent work on diseases of the heart:

In treating cardio-sclerosis it should always be borne in mind that the condition is progressive and we cannot stay it. It usually proceeds very slowly, so that a man may show signs of arterial degeneration and irregularity of the heart from the age of 50 to 60 years, but may live in fair health for twenty years afterwards, ending his days without any marked failure of the heart. The early stages are generally recognized in the examination of the patient for some other condition, when too distinctive changes may be found in the thickened arteries, high blood-pressure, and the occasional occurrence of an extra systole. Medical men often attempt to combat these signs by some treatment more or less energetic, and as many people are frightened by the evidences of advancing years they readily comply with the proposals that are supposed to put back the hands of time; hence the great variety of drugs, methods, and modes of life we find current.

Personally I entertain very hopeful views on the prevention and treatment of cardio-sclerotic changes, and I shall have to speak of the latter part of this subject later on; we are here not much more than considering the prevention of those degenerations of which Stokes outlined the treatment. Most practical physicians recommend moderately active exercise for cases of heart disease which are fitted for such. It is only the inexperienced who frighten their patients with the danger of sudden death. Of course, no case of heart disease must be looked upon lightly, or treated in the *laissez-faire* principle; its nature, prognosis, and treatment must be carefully studied, and our directions to the patient must be clear and intelligible. In dealing with a serious lesion we must not make the patient think that it is a matter of no importance, but rather impress him with the necessity of attending to our instructions. If medical men would generally adhere to this rule I am convinced there would be fewer sudden deaths. I have often heard "the fear of frightening the patient" given as a reason for trying to avoid or delay a consultation, but I have never yet met a patient who was frightened by his medical attendant taking an intelligent interest in his case, or wishing to share the responsibility.

Chronic heart lesions of all kinds are extremely amenable to treatment, and exercise which implies both physical and vital considerations is of great importance.

Functional activity is necessary for the well-being and healthy action of every part of the body, no less for muscular structure than for anything else. No doubt the heart has functional activity under all circumstances, but it is an activity which is frequently interfered with. Nothing leads more readily to arterial degenerative changes than a life of luxury and indolence, with the retention of effete materials in the blood. A life of activity, which leads to the oxidation of these waste products and accelerates their removal from the blood, rather tends to lessen the work of the heart by relieving the peripheral resistance. But, if the exercise be excessive, there is a demand for increased work on the part of the heart, which leads to hypertrophy of that organ as well as of the muscles generally. In the first case, by the retention of effete materials with the production of gout or granular kidney, you raise the arterial tension and increase the work of the heart, which leads to cardiac hypertrophy. In the second, the heart's energy is called forth, and the blood pressure is raised from a central cause. But however this undue hypertrophy is induced, it is eventually followed by degenerative changes. It is not your athlete or your hard-worked labourer, any more than your gouty

or kidney patient, who always lives the longest. You do not want to implant a "bullock's heart" in the human chest if you can help it; such compensation may be, and no doubt often is, necessary, but it is the lesser of two evils, and is certain, sooner or later, to work mischief.

I can strongly recommend to your consideration Dr. Oertel's work,² also my article on the same subject in the *Liverpool Medico-Chirurgical Journal*, July, 1888. The Oertel treatment was both vigorous and rigorous, and where there was no advanced degenerative changes in the cardiac muscle proved highly beneficial. Dr. Oertel says:

The immediate causes which induce these disorders lie either in the pumping apparatus itself, in the heart muscle, in its weak contractions and insufficient propulsive power, in imperfect closure of its valves and narrowing of its orifices, or else in one or the other tubular system, when, from restriction of its space, it can no longer take up the quantity of fluid that it should. Such causes are *weakness of the heart muscle, fatty heart, general obesity, and valvular failure of the left heart (mitral or aortic)*. To these may be added *derangement of the pulmonary circulation from emphysema, chronic interstitial pneumonia and bronchiectasis, various curvatures of the spine (scoliosis, kyphosis), and pressure of pleuritic exudations and tumours, either developing within the thorax or invading it from without*.

His theoretical indications for the restoration of the hydrostatic balance which is deranged in cases of cardiac failure arising in all forms of heart disease are:

Diminution of the blood volume, with increase of its albumen and general improvement; reduction of the cardiac fat and strengthening of the cardiac muscle; equalization of the arterial and venous systems; unloading of the kidneys and removal of their chronic hyperæmia and inflammation; unloading of the pulmonary vessels (checking the hyperplasia of the interstitial connective tissue, reducing the oedatæ alveolar capillary network, and increasing the breathing space); finally, removal of the fat deposited in the subcutaneous tissue and in the thoracic and abdominal cavities, and overcoming the tendency to excessive fat formation generally.

He effects his object by increasing the watery excretions and limiting the supply of fluid, so that the amount taken into the system shall be rather less than that excreted, and consequently the excess accumulated in the body will be drawn upon and gradually got rid of. For the removal of the water he depends chiefly on the lungs and skin, which he stimulates to active excretion by the hot-air bath, and especially by mountain climbing. He reduces to a minimum both the drink and the fluid portion of the food, while he gives a diet rich in proteins, so as to make up for the continued loss by albuminuria, and to facilitate the rapid combustion of the stored-up fat. When dehydration has taken place to the necessary extent, and the hydrostatic balance is restored, then this condition is to be maintained by long daily walks, and a limitation of the fluids taken to the minimum necessary for tissue changes. The reduction of the water improves the consistency of the blood and relatively increases its solids, and it is also improved by the highly albuminous diet. The unloading of the pulmonary vessels and the expansion of the lungs attained by mountain climbing favours the distension of previously collapsed air cells, and encourages the oxidation of the blood. The strengthening of the cardiac muscles and the reduction of its infiltrated fat are effected by similar agencies.

He deals very exhaustively with the methods of fat reduction, as obesity is a frequent source of circulatory derangement, especially when there is an accumulation of fat upon the heart impeding its functions. When the obesity is merely plethoric, without any circulatory disturbances, it is sufficient to put the patient on a prescribed diet, and order him to lead a life of activity and hard work; but where there is also derangement of the circulation, means to restore the hydrostatic balance and improve the cardiac nutrition must be adopted.

His diet for reducing fat, unlike the Harvey-Banting and Epstein methods, consists of limitations rather than exclusions in the supply, and he prefers carbohydrates to fats. He shows that work, so long as it is not so severe as to give rise to dyspnoea, does not increase the amount of albumen destruction, but, on the other hand, increased muscular function leads to hypertrophy, with consequent storing up of albumen in the muscular elements, and so there is a demand for an increased supply. In contrast to albumen destruction, fat destruction is considerably increased by work. Personally I should take very kindly

to one of his prescriptions: "Two or three times a year long, mountainous tours must be made, according to the patient's capacity for work, which must be neither over nor under-valued." Whatever one may think of the practical value of the Oertel treatment, we must admire the boldness of conception, and the indefatigable energy with which it was carried out, together with the enormous number of scientific observations which Dr. Oertel has placed on record. The first patient, Dr. N., undertook most arduous mountain ascents, frequently climbing mountains from 1,000 to 1,500 metres above the valley level in about the same time as these feats are accomplished by healthy individuals. The difficulty of this task may be easily surmised when it is stated that his vital capacity only ranged from 64.0 to 86.4 cub. in.

His pulse, once very frequent, 112 to 120 per minute, or sinking to 54 or even 48, irregular, jerky, and small, was now rhythmic, slow, regular (80 to 94 per minute), full, powerful and not easily compressed. Before treatment the patient's circumference was 49.6 in. and his weight 171.6 lb.; these figures were lowered after a year's treatment to 37 in. and 116.6 lb. The fat of the subcutaneous tissue was everywhere reduced to an insignificant layer, and the skin could be drawn in thin folds over the strongly-developed muscles, which felt hard and firm on each contraction.

Personally I do not care for any routine system, because you are apt to lose the individual in generalities, and in my opinion you should always treat the individual rather than his disease. It is here not a question of failing to see the wood for the trees, but of neglecting the proper care necessary for the individual tree. There is no doubt in my mind of the great value of exercise in heart disease, but it has its limitations, and there is no better training for the respiratory and cardiac systems than that of mountain-climbing. Golf, curling, and bowls are excellent restoratives, if not accompanied by too much Scotch whisky, for old gentlemen with not much reserve energy; but if you wish to improve the respiration and strengthen the right side of the heart take to mountain-climbing. In this form of exercise the precautions which I wish to emphasize are that the training must be gradual. You must produce no marked dyspnoea, and if the vital capacity be not up to the normal or there be any degenerative changes in the cardiac muscle, you had better not get higher than 4,000 or 5,000 ft. above the sea level. Cases with defective pulmonary capacity and an overloaded venous system are predisposed to dilatation of the right side of the heart. If, therefore, any one sends such patients to exercise in climbing steep mountain ascents without preliminary training, he may find, when too late, that his advice has been followed by irremediable dilatation of the right ventricle. Patients with degenerative changes in the cardiac muscle, which may even not have been previously detected, are very liable to fatal congestion of the lungs when suddenly transported to very high altitudes, even though there has been no exertion.

In a large proportion of cases of heart disease there is no marked disturbance in the hydrostatic balance until after failure of compensation—which may have been perfect for many years—subsequent to degenerative changes. The heart-muscle is not then in a condition to respond to any graduated exercises, and requires to have its work lessened to a minimum by complete repose of the body in bed. In some cases the nutrition of the body, and consequently of the heart, may be improved by massage, but there must be no acute straining of the exhausted ventricular walls by active exercise. In some cases of fatty infiltration there is no proper compensation; the enlargement of the heart is due to fat and not to muscle. In such cases we must get rid of the fat by increased oxidation, and improve the nutrition and effective force of the cardiac muscle by a highly nitrogenous diet and a small supply of liquids.

When a patient has got heart disease it is our duty to adopt such means as will maintain compensation for the longest possible period of time. This will not always, or even generally, be effected by trying to make him a powerfully athletic man. The compensation must be sufficient but not excessive, and there is no advantage to be gained by unduly testing its sufficiency, or placing the patient under conditions which would tend to its excessive development. The patient must be taught to live metaphorically, and in many cases physically, at a low level. He must be content with healthy existence

rather than active life. His life need not be that of the sloth or dullard, but it will not always be well to test to their extreme limits his physical or mental capacity.

The effects of mountain-climbing may be to a large extent summed up in the word "oxidation." Your obese man does not oxidize all the carbonaceous matter which he takes in. He may at first have normal oxidation, but the food supply is excessive. When the heart becomes implicated the oxidation lessens, and so the disproportion between the "input and output" increases. Your portly dame may owe her excessive corpulence to tight lacing in youth. With advancing years, when her marketable value has been determined or her matrimonial chances have lapsed, she removes the restrictions on diet which she formerly exercised, and then her small thoracic capacity is not able to supply sufficient oxygen to burn off all the hydrocarbons and carbohydrates taken in. In mitral stenosis and mitral regurgitation there are mechanical impediments to the onward course of the circulation, hence the tissues are not supplied with a sufficient amount of oxygen. The lung capacity may be at first perfect, but from damming back of the blood pulmonary changes gradually take place, and from the diminished vital capacity oxidation is further interfered with; and as imperfectly oxidized blood will not, under any circumstances, flow freely through the lungs, the task of the right ventricle is greatly enhanced. The same may be said where there is compression or destruction of lung tissue, as in scoliosis, kyphosis, great pleural effusion, emphysema, and intrathoracic growths. In all these cases great good may be effected by diminishing the supply of fluid, thus lessening the amount of blood in circulation, increasing its density, and relatively augmenting its oxidizable material. Breathing condensed air will also increase the amount of oxygen, but the same can scarcely be said of the atmosphere at high altitudes, where its rarity is not counterbalanced by any equivalent expansion of the chest. In obesity with fatty infiltration, where the thoracic capacity is intact, the respiratory activity induced by mountain-climbing will effect the necessary oxidation when the fluid is diminished. In anaemia the haemoglobin is defective, and hence the oxygen-carrying power of the blood is diminished, and there is a tendency to the deposition of fat. In the majority of these cases there is a great quantity of fluid in the system, with high arterial tension. These conditions can be relieved by diminishing the supply of fluid, and hastening its excretion by mountain-climbing. The enlarged flabby and fatty heart is frequently not able to respond to this demand for extra work. The early treatment of profound anaemia can usually be best carried out in bed, while we may reserve the mountain-climbing for the completion of the cure.

As to the details of treatment, we must first consider the limitation in the amount of fluid imbibed. This is an important element in the treatment of all forms of heart disease. Every drop of water, whether in liquids or solids, which is taken into the stomach, with the exception of that part which passes away in the faeces, must pass through the right side of the heart before it is excreted. Thus any excessive amount of fluid must increase the work of the heart, lessen the density of the blood, and relatively diminish its oxygen-carrying power. When the circulation is vigorous, and especially if there be inordinate high arterial tension, it is remarkable what an enormous amount of fluid can be consumed without any marked interference with the density of the blood, the excretion takes place almost as rapidly as the absorption from the stomach and bowels, and there is no retention of the fluid in the system. But even in health these two processes do not always go on *pari passu*, and there is a considerable retention of fluid in the veins, if not also in the tissues. The veins are capable of holding all the blood in the body, and so at any time a considerable augmentation of their contents may take place without this condition being noticed, or any increased transudation taking place into the tissues. The excretion of urine frequently varies from day to day, irrespective of the amount of fluid taken in, and anything which raises the arterial tension, such as hard mental work, will act as a powerful diuretic, without any additional fluid supply. To see what an enormous amount of fluid can be disposed of in health, witness the typical German at his lager beer. When these men keep on soaking after the central pump begins to fail, Oertel's

treatment will prove a valuable means of saving them from drowning in their own juice. Witness also the prescriptions of some physicians at mineral-water resorts to see the amount of fluid which may be consumed in cases of comparative health. These patients are treated as dirty sewers which require to be thoroughly flushed. When, however, a patient with a weak heart is exposed to this routine treatment the effects are not encouraging, though it is generally discovered that "the case is not a suitable one for the cure" before irremediable mischief has been done.

When we have to deal with a feeble heart, or when from any cause there is obstruction to the pulmonary circulation, then absorption takes place much more readily than the fluid can pass into the arterial system, and so there is a tendency to gradually-increasing disturbance in the hydrostatic balance. In these cases diuretics are comparatively useless: the difficulty is in getting the blood as far as the left ventricle, not in getting it through the kidneys. We keep the supply below the amount excreted by all channels, so as to restore the hydrostatic balance and maintain that condition when established. Whatever be the amount excreted, if the supply from all sources be still less dehydration of the body must take place, and the greater the disparity between these amounts the more rapid the dehydration. In cases of marked dropsy I have often seen the urine quickly increase when the supply of fluids was cut off. I have even kept such patients without any water, except that contained in a dry diet, for even a week with the most beneficial results. If there be any danger of the depletion of the veins going on much more rapidly than the absorption of the fluid from the interstices of the tissues, this can be obviated by the gentle pressure of an elastic bandage applied to the oedematous lower extremities. All watery excretions, with the exception of the exhalations from the lungs, takes place from the arterial rather than the venous blood. The water of the urine is excreted from the arterial capillaries in the Malpighian corpuscles. In purgation the water is excreted from the intestinal capillaries, and perhaps also from the small venous radicles. The sweat is excreted from the capillaries supplying the sweat glands and ducts. In general anasarca free perspiration is often difficult to induce, as the sweat glands and ducts are compressed and the blood driven away from the surface; before this effused fluid can be got rid of by sweating, it has to be absorbed into the veins, pass through the pulmonary and systemic circulations, until it reaches the capillaries supplying the sweat glands. From the foregoing considerations it follows that, when there is a disturbance in the hydrostatic balance, with accumulation of blood in the veins, any method to reduce the excess of fluid in the veins, except that of increasing the pulmonary exhalations and diminishing the fluid supply, must act indirectly. Even phlebotomy drains the blood in the course of the circulation directly from the arterial system, and only indirectly depletes the main veins and pulmonary circuit. Therefore, in all cases of disturbed hydrostatic balance our first object should be to diminish the fluid supply, and allow the excess to be disposed of through the ordinary channels. You should give a salt-free diet, as sodium chloride has a high osmotic equivalent, and holds the fluid in the tissues.

The dehydration should be carried sufficiently, but not too far. The amount of dehydration depends on the difference between the total supply of water and the amount excreted.

Pulmonary Exhalations.—Increased watery exhalations from the lungs primarily depletes the venous system. In order to increase this excretion the atmosphere breathed must be *warm and dry*, so as to be capable of freely absorbing moisture. The Turkish bath provides us with this kind of atmosphere in a prominent degree; but, on the other hand, the great heat of the Turkish bath does not favour oxidation or increase the respiratory activity, while at the same time it has an even greater effect in increasing the watery excretion of the skin than that of the lungs. Therefore the arterial system is depleted to a greater extent than the veins; this dehydration of the tissues, increases thirst, and the fluid supplied tends to maintain the previous condition of the veins. The depletion of the venous system through exhalation of the lungs is best carried out in a *warm dry* atmosphere, of a temperature

say, between 60° and 70° F., under such conditions of active exercise—say, mountain-climbing—as will augment the respiratory activity and increase oxidation.

Sweating.—Increased watery discharge from the skin depletes the capillaries, and through them the tissues; therefore its value will vary much in different cases. In general obesity with fatty infiltration of the heart, when there is a sudden condition of the tissues and no mechanical obstruction to the passage of blood through the lungs, it will prove of great service. In the big, dilated hearts of beer drinkers it is valuable, but cardiac tonics should also be employed. The Turkish bath may be used, but sweating is best induced by mountain climbing, which improves respiration and oxidation, and the exercise hastens on the circulation in the veins. Sweating can be recommended in all cases where there is a free pulmonary circulation, such as in cases of general obesity, fatty infiltration of the heart, and weakness of the myocardium, but it is of very little value where there is pulmonic obstruction, such as in cases of mitral stenosis and incompetency, emphysema, intrathoracic tumours, disease of the pulmonic or tricuspid valve, etc. Its value in the various forms of dropsy will be found fully discussed in my paper on The Pathology and Treatment of Dropsy, in the *Liverpool Medico-Chirurgical Journal*, July, 1886.

Purgation.—Profuse watery evacuations from the bowels is too depressing a method of treatment to be commended; moreover, it primarily depletes the arterial system, and any great and sudden lowering of arterial pressure in cases of weak heart might have a disastrous consequence.

Diuretics.—The renal excretion in these cases is very variable. In weak or fatty hearts it is scanty, owing to the feeble propulsive power of the central pump, with diminished velocity of the blood; in these cases it is useful to increase the discharge by such nerve and vascular tonics as caffeine and strychnine. In aortic and mitral stenosis and in aortic incompetency the arterial tension in the early stages is usually high, and the urinary excretion free; in the later stages, where there is failure in compensation, digitalis and squills may be given for short periods. In mitral regurgitation digitalis is, as a rule, the best diuretic. In affections of the pulmonic and tricuspid valves cardiac tonics are of much less value than in diseases of the left side of the heart. Here their use must be supplemented by great diminution in the amount of fluid supplied, and by *rest in bed*. Where the obstruction to the pulmonary circulation lies in the lungs, such as in emphysema, diuretics are comparatively valueless, and perhaps the best in these cases are those that act directly on the kidney, such as the caffeine and theobromine series. The presence of albuminuria, which is so common in all cases of cardiac failure, depends on the increased static pressure and diminished velocity of the blood in the Malpighian corpuscles. It is an indication of the state of the circulation rather than the condition of the kidneys, and need cause no apprehension. It is not the albumen which one excretes, but the effete material which he retains in his system, that works the mischief. Any treatment which restores the hydrostatic balance will lessen or cure the albuminuria.

Baths.—All kinds of baths tend to keep the skin clean and help to improve the peripheral circulation; warm baths lower and cold baths raise the blood pressure, at least temporarily. The electric light bath, especially if followed by massage or a douche, has a beneficial effect on the circulation in the periphery. The carbonic acid bath has a gentle stimulating effect; the Nauheim baths, with passive and active exercises, are often useful preliminary training for more healthful out-door work. These baths are not suited for cases with pulmonary obstruction. The Turkish bath, followed by massage and a limitation in the amount of fluid imbibed, is often beneficial where there is no advanced degenerative changes in the blood vessels.

MEDICINAL.

I do not intend to say much about drugs, because I think such remedies should only be used when necessary and always under strict medical supervision. Unfortunately for the public they have taken to drugging themselves with all manner of noxious tablets, and I know that an enormous amount of mischief is caused by the indiscriminate use of cardiac tonics. The con-

tinned high-arterial tension which is thus long maintained often works irreparable mischief in the aorta. It is better for a jaded horse to lighten his load than apply the whip, so remedies which lessen the work of the heart are often more effective than cardiac tonics. When the balance between the two sides of the heart is effectively maintained, drugs are, as a rule, unnecessary, except to regulate the blood pressure, and when this is high, decalcifying agents and moderate cathartics answer best. When there is cardiac failure, tonics such as digitalis, squills, strophanthus, caffeine, strychnine, and the lime salts must be used, as soon as compensation is restored their use should be discontinued. If there be any tendency to thrombosis or embolism, decalcifying agents, such as phosphoric and citric acids and their soluble salts, should be employed. In cases of cardiac thrombosis and pulmonic embolism where the symptoms are very urgent strong ammonia should be freely used; a mixture of 5 minims each of liquor ammoniac fort. and spiritus chloroformi in a wineglassful of barley water every hour or half-hour is an effective remedy. In mitral stenosis you not infrequently get a free hæmoptysis, which in this case is the best form of blood-letting, and should not be too quickly checked. In 1886 I condemned the use of all astringents in such cases, and strongly advocated the employment of nitroglycerine and atropine. It is rather amusing to me to see the rediscovery of this treatment recently in the medical journals. In all spasmodic affections, such as angina pectoris, the best remedies are nitroglycerine, morphine, atropine, nitrite of amyl, iodide of ethyl, and other preparations of iodine. When the blood pressure is very high, there are a whole host of remedies at our command in addition to those which I have mentioned for the treatment of spasmodic or painful affections, but we may specially specify decalcifying agents, the benzoates, the hippurates, iodine, and thyroid.

The Lime Salts.—So far as we at present know, the presence of free calcium ions in the blood and tissues is necessary for effective muscular contraction, and now that my friend, Dr. Blair Bell, has given us an excellent method for estimating the free calcium in the blood there is no reason for any one being ignorant on the subject. The calcium ions increase the force of the muscular contraction but diminish muscular irritability and (according to Loeb) inhibit the rhythmical contraction of muscle fibres, which he thinks does not depend on lessened excitability, but on some chemical combination of the calcium ions in the muscle which renders its rhythmical contraction more difficult or impossible. I am still of opinion that the calcium ions lessen irritability of the heart muscle, and Blair Bell has shown that when a solution of calcium chloride was injected into the veins of a rabbit the rhythmical contraction continued, the amplitude of the contractions increased but their frequency diminished, and when a poisonous dose was used the heart finally ceased in systole. In many febrile affections the calcium salts are readily thrown out of the blood, hence a frequently renewed supply is demanded; but unfortunately, long after the demand is satisfied the supply continues, owing to the indiscriminate use of milk in all the ills to which flesh is heir. Nowadays milk is not confined to babes and sucklings, but has been extended to those of riper years. This inordinate supply of lime salts increases the viscosity of the blood, raises the blood pressure, hastens the formation of scar tissue, and leads to degenerative changes in the vessels and heart. When there is an excess of calcium ions in the blood, the cardiac contractions are apt to become infrequent, slow, and effective, and owing to the greater muscularity of the left ventricle its irritability becomes less than that of the right, and the rhythmicity of the latter being greater it tends to act in advance; hence we get irregularities and intermissions. A similar inhibition is also often induced by digitalis, which seems not only to inhibit the action of the heart but also to disturb the balance of blood pressure in the two sides. When the pulse becomes very slow, as in Stokes-Adams disease, it is well not only to cut off the lime salts and use decalcifying agents, but you should also use such ions as stimulate rhythmical contraction, such as sodium, chlorine, and iodine with thyroid; strychnine is also valuable.

Alcohol.—There is no condition of the heart in which alcohol is beneficial, except in spasmodic and painful

affections such as angina pectoris, and even in such cases nitroglycerine, morphine, and atropine are better and more easily regulated remedies. Alcohol is a proto-plasmic poison, and under no circumstances can it strengthen the cardiac muscle. It lowers the arterial and raises the venous pressure, and increases the diastolic tension within the heart. In this way it acts as a cardiac stimulant, but as it has a paralysing effect on the cardiac muscle there is a loss of tone with tendency to dilatation of the heart; hence the large, flabby, fatty hearts of beer-drinkers, and the great retention of fluid in their vessels and tissues. Tobacco is a nervine sedative and cardiac depressant. Cases of heart disease do better without it.

CONCLUSION.

This address has already assumed such lengthy proportions that I must defer the treatment of that large class of cases of chronic degenerative lesions of the vessels, heart, and its valves until some future occasion. I have told you that a modern authority says that "cardio-sclerosis is progressive, and we cannot stay it," so I presume the other branch of my subject can afford to wait. On the other hand, I am inclined to think that if you follow in the lines which I have already laid down, you may not merely stay the progress of these degenerative lesions, but, what is infinitely more important, you may often prevent their occurrence.

REFERENCES.

¹ *Diseases of the Heart and Aorta*, 1884, p. 357. ² *Therapeutics of Circulatory Derangements*, by Professor M. J. Ortel, M.D. Translated by Edward J. Edwardes, M.D.

A CASE OF HEART-BLOCK, WITH FIBROUS DEGENERATION AND PARTIAL OBLITERATION OF THE BUNDLE OF HIS.

By BYROM BRAMWELL, M.D., F.R.C.P.E.,

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THE following are the notes of an interesting case of heart-block in which the auriculo-ventricular bundle of His was almost completely degenerated. The case is unique, inasmuch as a complete heart-block has not, so far as I know, been previously observed as the result of rheumatic fever; cases of slight heart-block after rheumatism have been described (see, for instance, Cases XVIII and XXII, pp. 324 and 339, Mackenzie's *Diseases of the Heart*).

Dr. James Mackenzie has kindly read over the case, and given me his opinion with regard to the tracings. Unfortunately the tracings which were taken of the radial pulse and some of the tracings from the neck, showing the venous and carotid pulses, have been lost.

A Case of Heart-block: very slow pulse; fibrous degeneration of the auriculo-ventricular bundle of His; calcareous nodule situated at the right end of the attachment of the anterior mitral flap extending into the septum, obliterating almost completely obliterating the bundle towards its auricular extremity.

Clinical History.

J. F., aged 29, married, formerly a worker on the railway, was admitted to the Edinburgh Royal Infirmary on April 14th, 1907, complaining of pain in the joints, chest, and region of the heart.

Previous History.

The patient has had six attacks of rheumatic fever, at the ages of 15, 17, 20, 22, 23, and 26 respectively; since the first attack of rheumatic fever, when the heart is said to have been affected, he has been short of breath on exertion.

Three years ago, when shunting on the Caledonian Railway, he fell in front of a train; his left hand was crushed, and the left arm had to be amputated. He has not worked since this date.

The present attack of rheumatic fever commenced fourteen days ago; up to that time he was feeling quite well.

Unimportant.

Family History.

Social Conditions and Surroundings.

Fairly good. Formerly a heavy smoker, has smoked much less lately; a teetotaler.

Condition on Admission.

Almost all the joints are swollen and painful. Temperature on the morning of admission 101.8°, on the evening of admission 103°; pulse 106; respirations 24.

Cardiac pulsation seen over an extensive area; apex beat in the sixth left interspace, 2½ in. below and 1 in. outside the mammary line (4 in. from the sternum); a long, loud, harsh systolic murmur and a soft diastolic murmur heard in the aortic area; a long systolic murmur in the mitral area. Radial pulse 106; tension medium; arterial coats not thickened. Lungs normal. Tongue furred; slight constipation; liver not enlarged. Complaints of some headache but sleeps fairly well. Urine: specific gravity 1014; no albumen; a heavy deposit of urates. The red blood corpuscles number 3,920,000, the haemoglobin equals 70 per cent., and the white corpuscles number 7,400.

Treatment.

Sodium salicylate 20 grains, three times daily; milk diet.

Progress.

Rapid improvement; disappearance of joint pains.

On April 7th the temperature was normal and the patient was feeling very well.

On April 10th the patient woke at 2 a.m. with severe pain over the region of the heart; at 6 a.m., while washing himself, he suddenly became weak and breathless. On examination the pulse was found to be beating at the rate of 30 per minute. The patient vomited after breakfast. When seen by me at 10.30 a.m. the radial pulse numbered 26 per minute; the temperature was 99.2°. The cardiac ventricles were contracting at the rate of 26 per minute. The right side of the neck looked full (apparently due to distension of the right internal jugular vein); the right external jugular vein was distended and distinctly pulsating; the venous pulse on the right side of the neck numbered from 80 to 90 beats per minute; the pulsation of the right common carotid artery was feeble and numbered 26 per minute. The right radial pulse was small and feeble. The apex beat of the heart was in the sixth interspace, 2½ in. below and 1 in. external to the nipple line. Pulsation could also be seen and felt in the fourth and fifth left interspaces; the pulsation in the fourth left interspace seemed to occur a little later than the apex beat. A very long and loud systolic murmur was audible in all the cardiac areas; it was perhaps a little louder in the tricuspid area than elsewhere. This systolic murmur was immediately followed by a short murmur and then (that is, after the short murmur) by a sound which seemed to be the second sound. I was not able at the time to interpret the meaning of the second (? diastolic) murmur and of the sound (? second sound) which followed it. I simply state the facts as I thought I heard them—the description was dictated to my house-physician at the bedside.

The pulse waves were equal and measured 2½ mm. in diameter. With each pulsation of the cardiac ventricle and slightly after it, a quick jerking movement of the head, sometimes double in time, occurred as a result of contraction of the neck muscles. This jerking of the head was a curious phenomenon which, so far as I know, has not been noted in any case of heart-block before, possibly it was due to reflex stimulation of the neck muscles through the vagus.

Some of the tracings, taken on April 10th and 11th, of the pulsation in the neck and heart's impulse are reproduced in Figs. 1 to 7.

Fig. 1, which is a tracing from the neck, shows both the venous pulse due to contraction of the right auricle and the carotid pulse. The small waves (a) in the tracing are chiefly

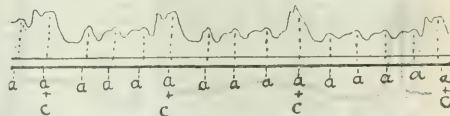


Fig. 1.—Tracing of the movements in the neck due to the carotid and auricular pulses. The small waves (a) are due to the auricle, and the large waves (c) are due to the carotid—an auricular wave in the jugular occurring at the same time as the carotid pulse (see diagram, Fig. 2).

auricular and are superimposed on the carotid pulse when it appears. The big waves are a combination of the auricular and ventricular (carotid) contractions (c + a). The other neck tracings also show the auricular waves. Fig. 2 is a diagram showing more clearly the independent rhythm of the auricle



Fig. 2.—Diagram representing the movement shown in Fig. 1. The perpendicular lines in the upper space represent the systoles of the auricle (A) as shown by the waves a; those in the lower space represent the systoles of the ventricle (V) as shown by the carotid beats. The relation of the V to the A is constantly varying, showing therefore that the systole of the ventricle occurs independently of the stimulus from the auricle.

and ventricle. Fig. 3 is a tracing from the left ventricle; it shows the rise characteristic of the ventricular systole. The small waves in this tracing are due to contraction of the left auricle. Fig. 4 is a tracing partly from the left ventricle (the

upstroke) and partly from the right ventricle (the fall). This tracing shows that both ventricles shared in the slow action.

In these four tracings (Figs. 1, 2, 3, and 4) there seems to be graphic evidence of the contractions of all four chambers of the heart. The small waves (a) in Fig. 1 are jugular waves, due to contraction of the right auricle; the small waves in Fig. 3 appear to be due to contraction of the left auricle; the contractions of the left ventricle are shown in Fig. 3, taken from the (left) apex beat; and the contractions of the right ventricle are shown in Fig. 4.



Fig. 3.—Tracing from the apex, showing the infrequent contractions of the left ventricle. The small waves between the large beats are due to the systole of the left auricle.

Fig. 5 appears to be wholly right ventricle and shows the inverted cardiogram in contrast with that represented in Fig. 3 from the left ventricle. Fig. 6 is, no doubt, left ventricle and shows the long pauses with auricular waves very distinct. Fig. 7 is a simultaneous tracing of the apex beat and of the pulsation in the neck; it was made on April 11th.



Fig. 4.—Taken over the right ventricle, showing a great fall during systole (the inverted cardiogram characteristic of the systole of the right ventricle); it also shows that the right ventricle participated in the infrequent action with the left ventricle.

April 11th. The patient appears to be slightly better this morning. The ventricular contractions and the radial pulse number 30 per minute. No change in the strength and character of the heart beats; a long, loud systolic and short diastolic murmur still present; the radial pulse is rather weaker. During this day the patient had several attacks of very severe angina

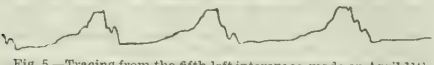


Fig. 5.—Tracing from the fifth left interspace, made on April 11th, 1907. This tracing appears to be wholly due to the right ventricle, and shows the inverted cardiogram in contrast to Fig. 3.

pain; he stated that he felt as if he were being crushed between two buffers. The radial pulse during the attacks of pain was almost imperceptible and somewhat irregular. The jerking movements of the head with the apex beats of the heart still continue. There has been a great deal of vomiting. Amyl nitrite inhalations, strychnine subcutaneously, and a menthol mixture were prescribed.

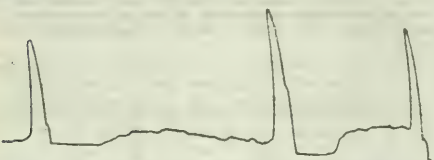


Fig. 6.—Tracing from the apex beat of the heart made on April 10th, 1907. This tracing appears to be due to contraction of the left ventricle, and shows the long pauses between the ventricular contractions with small auricular waves interposed.

April 12th. Much worse; very restless all day. Pulse down to 24 per minute. The pain in the heart has been very severe and distressing. Morphine has been given at frequent intervals. Towards midnight the pulse went down to 22. The vomiting has not been so bad to-day. The pupils now measure from 5 to 6 mm. in diameter. The patient is perfectly sensible.

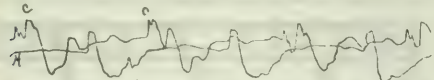


Fig. 7.—Combined tracing from the apex beat and neck made on April 11th, 1907.

April 13th. 2 a.m. The cardiac pain was so severe that morphine had to be given on several occasions. Pulse 19; respirations 17. An interval of 8 seconds was counted between two of the cardiac beats on one occasion. The radial pulse is very irregular. The patient died at 4.30 a.m.

Post-mortem Examination.

This was made by Dr. Shennan on April 13th, 1907. Both lungs were in places attached to the chest walls by old adhesions. The pericardial sac was obliterated as the result of old

pericarditis. The exterior of the pericardium was adherent to the thoracic wall opposite the apex of the heart.

The heart was injected with formalin in order that the auriculo-ventricular bundle might be carefully dissected out.

On passing the fingers through the auricles a large calcareous mass could be felt, on the upper border of the inter-ventricular septum posteriorly, apparently measuring about 1 1/2 in. antero-posteriorly by about 1 in. vertically and about 1 1/2 in. transversely. On further examination, after fixation, this corresponded to the anterior cusp of the mitral valve, which was extremely calcareous.

There was some bronchitis and congestion of the lungs, but no consolidation. The liver was enlarged, congested, and fatty. The kidneys were large and congested, with some swelling and fatty change. The spleen was firm, large, and congested.

Subsequent Examination of the Heart.

General adhesion of the pericardium to all the cardiac cavities; hypertrophy of the ventricles; old endocarditis with calcareous deposits in the aortic and mitral valves; the anterior flap of the mitral valve markedly calcareous; some narrowing of the mitral orifice; thickening of the tricuspid with some dilatation of the orifice; pulmonary cusps slightly but uniformly thickened.

Dr. E. B. Jamieson of the Anatomical Department kindly dissected out the auriculo-ventricular bundle. His report on its condition is as follows:

The auriculo-ventricular bundle of His has apparently undergone fibrous degeneration, and the few muscular fibres remaining on the surface are very pale. A calcareous nodule situated at the right end of the attachment of the anterior mitral flap extends into the septum, invades and well nigh obliterates the bundle towards its auricular extremity.

NOTE ON THE PULSUS BIGEMINUS.

By E. E. LASLETT, M.D., B.Sc.,

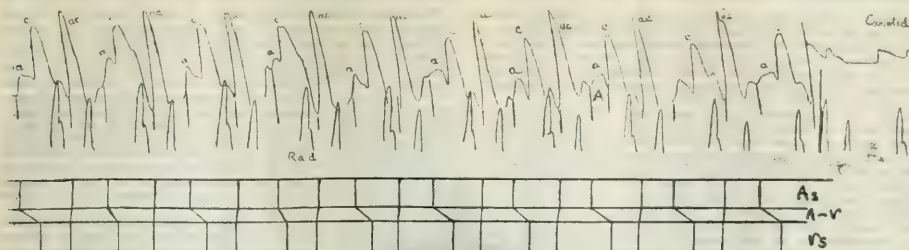
HULL.

My object in publishing this note is to draw attention to a curious, and I believe hitherto undescribed, form of jugular pulse associated with the pulsus bigeminus, which in itself is not a very uncommon phenomenon.

The patient, a man aged 40, was first seen on June 27th, 1906. He had been working at his trade as a painter up to a week before. He had had heart disease to his knowledge for seven years but had never been laid up on this account. At one time he weighed 16 st., but for some months he had been losing flesh. He had been temperate as regards both alcohol and tobacco.

He suffered greatly from dyspnoea, which necessitated his being propped up in bed. He was pale and flabby, and there was considerable oedema of the legs and trunk but no ascites. The pulse was 100, regular, with a large, markedly collapsing beat, and the marked throbbing of the arteries, characteristic of aortic disease, was very noticeable, and perceived by the patient himself. The heart was enlarged to the right, and to the left to 1 in. outside the nipple line. There were double murmurs at all areas of the heart but no thrill could be felt. It was obviously a case of failure of compensation in aortic disease. Tracings taken at this time showed that the pulse was quite regular, while there was a very large auricular wave in the jugular pulse, which was otherwise normal. He was much troubled at night with cardiac asthma, and the usual drugs were tried, without any but temporary relief to this symptom. In spite of treatment by rest in bed and cardiac drugs the oedema and other symptoms of distress persisted, and he died on July 31st. For the last fortnight he was taking 5-minim doses of tincture of strophanthus with citrate of caffeine.

A week before his death his pulse took on a bigeminal character, which was continuous, and persisted until the day before he died, when it became too feeble to detect its true rhythm. The tracing of the jugular and radial pulse when this condition was present is shown in the accompanying figure, from which it will be seen that at the extra beats which are the cause of the bigeminal rhythm, the auricles contracted during the ventricular systole, and there is one large wave synchronous with the extra beat in the radial artery. The increased size of this wave is due, as Mackenzie has pointed out, to the fact that the right auricle is unable to empty itself into the contracted ventricle, and therefore a larger quantity of blood than usual is sent into the jugular veins. The unusual feature in this tracing lies in the fact that the combined wave commences distinctly beyond the middle line—that is, nearer to the post-extra-systolic auricular wave than to the pre-extra-systolic. This puzzled me so much that I sent this and another tracing of two days' earlier date to Dr. James Mackenzie, who most kindly examined them.



The figure shows the character of the jugular pulse associated with the bigeminal rhythm in the radial pulse. The appended diagram explains the nature of the events. A-s signifies auricular systoles; V-s, ventricular systoles; and A-V, the conduction between auricle and ventricle.

for me. He confirmed the existence of this peculiarity, and kindly indicated the diagram appended to the tracing, which shows very clearly the nature of the events. Mackenzie divides extra-systoles into three types—auricular, ventricular, and nodal—the ventricular including the rare form of interpolated extra-systole. He has suggested that the probable origin of the extra-stimulus lies somewhere in the remains of the primitive cardiac tube, in auricle, ventricular bundle, or auriculo-ventricular node. In the nodal extra-systole the auricles and ventricles contract together, or nearly so, and usually prematurely. It may, however, happen that the combined wave appears at the normal period of auricular contraction, and it may then be difficult to determine whether the extra-systole is of nodal or ventricular origin. In the present instance, from the regularity and persistence of the bigeminal character, and the fact that the auricular wave is always synchronous with the ventricular, it is probable that the extra-systoles are of nodal origin. Although there is no time record in the tracing, it may be taken as certain that the *a-c* interval is increased. In an earlier tracing, in which the combined wave was nearer the middle point, the *a-c* interval was less. The increase of the *a-c* interval is no doubt due to the incomplete restoration of conductivity as a result of the short period between the extra-systole and the following normal auricular beat.

I am unable to explain this peculiar rhythm. It is evident that alternate auricular contractions failed to appear at the normal period, but whether the sinus rhythm remained regular or not it is impossible to say. On the day of death the pulse became very feeble and quick, and the patient was too ill to allow of a tracing being taken. It is consequently uncertain whether the heart in the final stage became continuously irregular (nodal rhythm).

THE INEFFECTIVENESS OF CALCIUM SALTS AND OF CITRIC ACID AS USED TO MODIFY THE COAGULATION TIME OF THE BLOOD FOR THERAPEUTIC PURPOSES.

WITH A DESCRIPTION OF A MODIFICATION OF MCGOWAN'S
METHOD OF ESTIMATING THE COAGULATION
TIME OF THE BLOOD.

By T. ADDIS, M.D., M.R.C.P. EDIN.,
CARNEGIE SCHOLAR.

By means of a more accurate method than Sir A. E. Wright's, I have shown that he was mistaken in his statement that soluble calcium salts and citric acid are capable of altering the coagulation time of the blood of people in health. The fact that this initial experimental result of his cannot be confirmed is sufficient in itself to throw great doubt on his later work in this connexion. Since 1893 he has published a number of papers on the use of calcium in the treatment of hæmophilia, and of hæmorrhage in many other conditions, and also in what he terms "serous hæmorrhages"—a group of conditions said to be characterized by an abnormally long coagulation time, which could be cured when the coagulation time was reduced by the administration of soluble calcium salts. Further, citric acid was recommended as a prophylactic against thrombosis in typhoid fever. Although clinical

reports as to the value of this method of treatment have been conflicting, the general idea that the coagulation time in disease can be shortened or lengthened at will, by giving the proper dose of calcium lactate or citric acid, has never been effectively disputed, and has been very widely accepted and acted upon.

It was not possible to test the accuracy of this belief by the method of estimating the coagulation time of the blood which I have described, since it is not applicable clinically because of the presence of a greater or less degree of auto-agglutination of the red blood corpuscles in very many pathological conditions. Another method was therefore necessary, and the modification of McGowan's method, which is described below, is one which is applicable clinically, and which yields results which can be relied upon within certain limits.

In reviewing the different methods I found that the means adopted by Sabrazès and McGowan of determining the presence of a certain definite amount of coagulation is more accurate than those employed in the other methods, although it is not possible to obtain constant or comparable results with either of their methods, because in the case of the former the means of maintaining a constant temperature is not sufficient, and in the latter is wanting altogether.

McGowan believed that for clinical purposes it was superfluous to have an apparatus to maintain his glass tubes at a constant temperature, since variations of temperature between 15° C. and 20° C. did not appreciably affect the coagulation time.

This, however, as I have already shown, is very far from being the case. With my method the following coagulation times were found to correspond with the temperatures between 15.5° C. and 20.5° C.:

15.5° C., 11 min. 46 sec.;	18.5° C., 7 min. 34 sec.;
16.5° C., 10 min. 10 sec.;	19.5° C., 6 min. 2 sec.;
17.5° C., 8 min. 7 sec.;	20.5° C., 5 min. 22 sec.

The necessity of the maintenance of a constant temperature is, therefore, fully apparent. The variable results which are obtained by these and other coagulometers are said by those who use them to indicate true variations in the coagulation time of the blood, but the coagulation time is found to be constant when a more accurate method is used, and those apparent variations are really due to experimental errors, of which the most important is a deficiency in, or a total neglect of, the maintenance of a constant temperature for all observations.

Description of the Method.

McGowan's method consists in partially filling a capillary glass tube, 6 in. long and 1.5 mm. in diameter, with blood under certain precautions, sealing up one end, and at intervals of a minute breaking off a small part until a fine fibrin thread is seen on slowly drawing the fractured ends apart. The coagulation time is the time elapsing between the filling of the tube and the first appearance of fibrin.

Undoubtedly the simplest and most accurate way to keep the tubes always at the same temperature would be to use a gas regulator. But in the wards of most hospitals there is no gas, and it is absolutely necessary that the whole procedure should be carried out by the bedside of the patient. An electrical thermostat would be sufficient, but is expensive, so it was better to dispense with any mechanical regulator, and to make use of the following device.*

When a closed cylindrical vessel is placed in the centre of a similar but considerably larger vessel, and both are filled with

* The apparatus can be obtained from Paul Altman, scientific instrument maker, 56, Lottisen Strasse, Berlin, for 36 marks.

water at a temperature of 20° C., a fall in the temperature of the water in the outer cylinder shows itself before any change in the temperature of the inner cylinder can be seen. If, whenever this is observed, a little hot water be added to the outer cylinder until the water is again at 20° C., the temperature of the water in the inner cylinder may, with a little care, be kept practically constant for any time that may be desired.

When the McGowan's tubes are introduced into the inner vessel their environment has thus a constant temperature of 20° C. This was chosen as the temperature at which all observations were conducted because it is a little above the ordinary ward temperature, which generally varies from 15° C. to 20° C. Usually the ward temperature is only slightly below the temperature of the water in the apparatus, so that it is only necessary to add a little hot water every half hour or so.

The outer cylinder is made of metal and is covered with asbestos. It is 9 in. high and has a diameter of 6 in. Piercing the lid there is on one side a tube leading down almost to the floor, so that where hot water is introduced it may enter below and gradually rise upwards. On the other side there is a thermometer, enclosed for protection in a brass tube, which is open below. The mercurial bulb lies in the water, about half-way between the floor and the lid, while the scale, which reads in half degrees Centigrade, is outside the apparatus. In the centre of the lid there is a circular opening into which the part designed for the reception of the McGowan's tubes is fitted.

The inner cylinder is of glass, 5 in. long and 1½ in. in diameter, and is so placed that it is nearly equally distant from the lid, floor, and sides of the outer cylinder. It is open at the end next the hole in the lid of the outer cylinder. Through these openings both cylinders can be filled with water at 20° C., the inner to the brim, the outer not quite to so high a level, so that when water has to be added it may not overflow into the place where McGowan's tubes are placed. These cannot be put directly into the water of the inner cylinder, because when a part of a tube is broken off to test for the presence or absence of fibrin the water would come into direct contact with the blood when it was replaced. This is avoided by having five brass tubes in the inner cylinder into which they can be put.

These open round the circumference of a brass plate which closes the inner cylinder. Another plate closes the opening in the lid of the larger cylinder, and through the centre of both plates runs a thermometer protected by a closed brass tube, the bulb lying in the centre of the inner cylinder, so that the reading indicates the temperature of the air in the tubes in which the McGowan's tubes lie.

Six small holes, 2 mm. in diameter, in the outer plate correspond in position to the openings of the six tubes in the plate which closes the inner cylinder. Small funnels are placed over these openings to facilitate the introduction of the glass tubes.

In obtaining the blood, a fairly large drop should follow the puncture immediately. This does not occur if the patient's hands are cold, and so it is often necessary to warm them first with a hot-water bottle. Then, if a slip-knot is tightened round the base of the thumb, an entirely painless puncture on the extensor surface near the nail will immediately produce a sufficient quantity of blood.

The best thing to use for pricking the finger is, I think, Jenner's vaccinostyles. One of McGowan's tubes, 8 in. instead of 6 in. long, is then taken and introduced into the drop of blood until about 4 in. have been filled. The other end is then closed with sealing-wax and it is put into the apparatus. The time at which the blood appears is noted. This is repeated with two more tubes, using each time a new prick and making a fresh puncture.

It is essential that there should be no contact with the blood from previous punctures. The apparatus contains receptacles for six tubes, so it is possible to fill and introduce three others from another patient before it is time to examine the first tubes for fibrin.

After eight minutes the first tube is taken out. It is held by the left hand in forceps covered with rubber in order to avoid contact with the fingers which would considerably raise the temperature of the blood. A slight scratch is made with a glass file about ¼ in. from the end. This part is then carefully broken off by the finger and thumb of the right hand, and the two fractured ends drawn slowly apart, holding them up against the light. If a fine filament of fibrin is seen, it is not to be taken as indicating coagulation, but only as showing that the end-point is near.

The reason for this is that the blood at the end of the tube is the part of the blood which has left the wound. This coagulates sooner than the blood which first appears, and as the amount of this acceleration is constant, it is better to disregard it, and to take as the end-point the appearance of a thread of fibrin only in the last inch of the blood. The tube is, therefore, broken a little higher up, and if, as often happens, no fibrin is seen, it is returned to the apparatus and the second tube is taken. The difference between the times when the three drops of blood appeared and the time when a fibrin thread was seen in the last part of the tubes, gives three coagulation times, and the average of these is taken as representing the approximate coagulation time of the blood in the case in question. This tends to reduce the error arising from the deficiency in delicacy of the end-point.

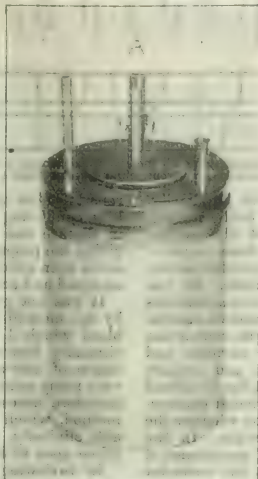
Of course a certain amount of error arises from the fact that the tube must be removed from the apparatus into a medium of inconstant temperature in order to test for the presence of coagulation, but as this time is short, and as there is not a great difference between the ward temperature and 20° C., it is not of great importance.

Altogether, I am convinced that, so far, this is the only method, clinically applicable, which yields results upon which reliance may safely be placed.

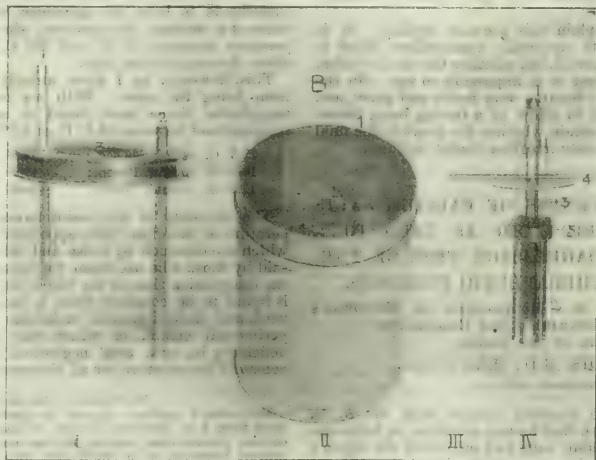
The limits of experimental error for this modification of McGowan's method were determined in the following way. I had already found, in observations with my method extending over several months, that my own coagulation time was constant from day to day. It was, therefore, fair to assume that any irregular

variations found in making daily determinations with this method were due to experimental error.

The average of three readings at 20° C. was taken as representing the coagulation time of my blood, and this was repeated daily for fifty days. The average of these fifty observations was 9 min. 50 sec., and the average



A. The complete apparatus with the McGowan's tubes in position.



B. The separator parts. 1. The lid of the outer cylinder. 2. The thermometer enclosed in a tube open at its lower end. 3. The opening through which the part designed for the reception of the McGowan's tubes fits. 4. The plate which closes the opening in the lid of the outer cylinder. 5. The plate which closes the inner cylinder.

variation from this mean was 34 sec.; while the possible variation is given by the longest and shortest times—that is, 11 min. 41 sec. and 8 min. 45 sec.; that is, 1 min. 51 sec. above and 1 min. 5 sec. below the average.

In a large number and variety of pathological conditions only a very small percentage of cases were met with in which the coagulation time overstepped these limits, and these were patients who were very seriously ill. In one or two of these daily observations disclosed variations so progressive and considerable that there appeared to be good reason to suspect a real change in the coagulation time of the blood, but further observations will be necessary to confirm this. In all the other cases daily readings gave slight irregular variations within the limits of experimental error, indicating that in all probability the coagulation time would have been found to be constant if a perfectly accurate method had been used.

The approximate accuracy of the method having been thus determined, the following plan was adopted in order to test the value of calcium lactate and citric acid. A period of about eighteen days was divided into three periods of six days, and during the whole time the coagulation time was taken every other day. During the first period neither calcium nor citric acid was taken, while in the second period calcium was given, and in the third citric acid, or vice versa. This was carried out in 8 cases, namely:

Two of thrombosis.

Advanced arterio-sclerosis with a failing heart and general oedema.

Marked jaundice probably due to cancer of the liver. Tuberculous peritonitis.

Lobar pneumonia.

Lead poisoning with chronic interstitial nephritis.

Dysentery.

Each coagulation time given represents the average of three observations. The calcium was given as calcium lactate dissolved in water. The total average of the coagulation times taken under these three conditions shows that neither the calcium nor the citric acid had any effect:

	Total Average Coagulation Time.
Period without calcium or citric acid	9 min. 39 sec.
Period in which calcium was taken	9 min. 31 sec.
Period in which citric acid was taken	9 min. 34 sec.

The following are the details by which it can be seen that in none of these cases was there at any time any indication of a change in the coagulation time during the administration of calcium or citric acid:

G. G., aged 59. Thrombosis of left internal sphenous vein.

1. Period without calcium lactate or citric acid:
First day, 9 min. 53 sec. Third day, 11 min. 20 sec. Fifth day, 10 min. 50 sec.
2. Period during which citric acid 30 grains was given 4-hourly:
Sixth day, 10 min. 0 sec. Eighth day, 10 min. 20 sec. Tenth day, 9 min. 35 sec.
3. Period during which calcium lactate 60 grains was given 4-hourly:
Twelfth day, 9 min. 40 sec. Fourteenth day, 10 min. 10 sec. Sixteenth day, 9 min. 10 sec.

J. C., aged 61. Thrombosis in veins of right lower extremity. Cause unknown.

1. Period without calcium lactate or citric acid:
First day, 10 min. 39 sec. Second day, 9 min. 40 sec.
2. Period during which citric acid 30 grains was given 4-hourly:
Third day, 9 min. 20 sec. Fifth day, 9 min. 40 sec. Seventh day, 9 min. 0 sec.
3. Period during which calcium lactate 30 grains was given 4-hourly:
Ninth day, 9 min. 20 sec. Eleventh day, 9 min. 55 sec. Thirteenth day, 10 min. 0 sec.

J. L., aged 48. General arterio-sclerosis, aortic and mitral incompetence, general anæmia.

1. Period without calcium lactate or citric acid:
First day, 8 min. 30 sec. Second day, 8 min. 15 sec.
2. Period during which citric acid 30 grains was given 4-hourly:
Third day, 9 min. 30 sec. Fifth day, 9 min. 40 sec. Seventh day, 9 min. 15 sec.
3. Period during which calcium lactate 30 grains was given 4-hourly:
Ninth day, 10 min. 15 sec. Eleventh day, 8 min. 50 sec. Thirteenth day, 8 min. 20 sec.

O. H., aged 65. Deeply jaundiced. Symptoms suggested cancer of the liver.

1. Period without calcium lactate or citric acid:
First day, 8 min. 50 sec. Third day, 9 min. 40 sec. Fifth day, 10 min. 10 sec. Seventh day, 9 min. 35 sec.
2. Period during which calcium lactate 15 grains was given 4-hourly:
Ninth day, 9 min. 40 sec. Tenth day, 9 min. 30 sec. Twelfth day, 8 min. 50 sec.
3. Period during which citric acid 30 grains was given 4-hourly:
Fourteenth day, 9 min. 10 sec. Sixteenth day, 10 min. 50 sec. Eighteenth day, 9 min. 30 sec.

N. I. T., aged 25. Tuberculous peritonitis.

1. Period without calcium lactate or citric acid:
First day, 10 min. 10 sec. Third day, 10 min. 35 sec. Fifth day, 10 min. 0 sec.
2. Period during which calcium lactate 30 grains was given 4-hourly:
Seventh day, 9 min. 15 sec. Ninth day, 9 min. 55 sec. Eleventh day, 10 min. 10 sec.
3. Period during which citric acid 30 grains was given 4-hourly:
Thirteenth day, 10 min. 45 sec. Fifteenth day, 10 min. 10 sec. Seventeenth day, 10 min. 30 sec.

F. W., aged 17. Lobar pneumonia. Crisis on second day.

1. Period without calcium lactate or citric acid:
First day, 9 min. 30 sec. Second day, 9 min. 50 sec. Third day, 9 min. 10 sec.
2. Period during which citric acid 30 grains was given 4-hourly:
Fifth day, 9 min. 10 sec. Seventh day, 9 min. 40 sec. Ninth day, 9 min. 15 sec.
3. Period during which calcium lactate 30 grains was given 4-hourly:
Eleventh day, 9 min. 30 sec. Thirteenth day, 9 min. 25 sec. Fifteenth day, 10 min. 30 sec.

G. O., aged 37. General arterio-sclerosis and chronic interstitial nephritis, the result of lead poisoning. Severe headaches, vomiting, and colic for the first seven days.

1. Period without calcium or citric acid:
First day, 10 min. 10 sec. Third day, 9 min. 25 sec. Fifth day, 11 min. 10 sec.
2. Period during which calcium lactate 30 grains was given 4-hourly:
Seventh day, 10 min. 20 sec. Ninth day, 11 min. 35 sec. Eleventh day, 10 min. 10 sec.
3. Period during which citric acid 60 grains was given 4-hourly:
Thirteenth day, 9 min. 55 sec. Fifteenth day, 10 min. 25 sec. Seventeenth day, 10 min. 0 sec.

W. W., aged 35. Dysentery.

1. Period without calcium or citric acid:
First day, 7 min. 45 sec. Third day, 8 min. 15 sec. Fifth day, 8 min. 20 sec.
2. Period during which calcium lactate 15 grains was given 4-hourly:
Seventh day, 8 min. 35 sec. Ninth day, 7 min. 35 sec. Eleventh day, 7 min. 20 sec. Thirteenth day, 8 min. 15 sec.
3. Period during which citric acid 30 grains was given 4-hourly:
Fifteenth day, 8 min. 15 sec. Seventeenth day, 8 min. 45 sec. Nineteenth day, 8 min. 45 sec.

Some observations were made on patients with typhoid fever, but the results are not comparable with those given above, because a less accurate and constant technique and one which tended to give shorter times was then used. So far as they go, however, they fail to show that any change was produced on the coagulation time, for in seven patients who were taking citric acid, the average of 27 estimations was 7 min. 57 sec., while the average of 39 estimations in two patients who were taking calcium was 8 min. 43 sec.

A well-marked case of hæmophilia with a characteristic family and personal history was admitted for hæmorrhage of four days' duration following on the extraction of a tooth. On the second day after admission, the bleeding still continuing, the coagulation time was 12 min. 35 sec. at 7.30 p.m. At 7.45 p.m. 60 grains of calcium lactate in solution were taken, but two and three hours later the coagulation time was 14 min. 30 sec., and no effect had been produced on the bleeding, which continued for four days more, and ultimately appeared to be stopped by the application of a pledget of cotton-wool soaked in the blood of another person.

A case of urticaria was found to have a coagulation time of 10 min. 15 sec. Calcium lactate was given 4-hourly, and on the two following days the times were 10 min. and 10 min. 15 sec. During these two days the urticaria gradually disappeared, but this was not because the coagulation time had been shortened by the calcium; the urticaria was due to another cause.

These results are, no doubt, few in number, and since no cases of chilblains or of physiological albuminuria are included, do not cover all the territory which Sir A. E. Wright claims for calcium and citric acid, but as in no single instance was any effect whatsoever found to follow their use I think that the general conclusion that they are unable to effect any change in the coagulation time of the blood is fully justified.

As I have shown elsewhere, the reason for this is that the increase or decrease in the content of the blood in ionisable calcium which follows their administration is far smaller than that amount of change which is necessary to produce an appreciable effect on the coagulation time.

I have to thank Dr. A. K. Gordon, of Monsall Fever Hospital, and Dr. Oscar Clark and Dr. Grosvenor, of Gloucester General Infirmary, for having kindly allowed me to make these observations on patients under their charge.

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THE late Mr. James Fletcher, of Nottingham, whose will has now been proved, made a bequest of £500 to the General Hospital in that city.

A CASE OF TYPHOID COMPLICATED WITH STAPHYLOCOCCAL SEPTICAEMIA.

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and E. E. GLYNN, M.A., M.B.CANTAB., M.R.C.P.,
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The clinical and bacteriological history of this case prove that it was one of typhoid fever, complicated at the end of the second week by a secondary generalized infection with *Staphylococcus albus* and *aureus*.

A nurse at the Liverpool City Hospital, Grafton Street, aged 29, after three months' typhoid work, was transferred to night duty in the scarlet fever wards. On October 31st, 1908—eleven days later—she complained of not feeling well, and was therefore taken off duty. Indefinite symptoms characterized the onset of the illness up to November 5th, when the probability of enteric fever arose, and this was the provisional diagnosis till November 13th. It is sufficient to state that, though the classic signs were not prominent, the weight of evidence was in favour of enteric. Pyrexia was fairly typical, there were two doubtful spots, the spleen was palpable, and Ehrlich's diazo-reaction was positive.

At 8 p.m. on November 13th—probably the fourteenth day of the disease—the patient had the first of a series of severe rigors, which recurred at intervals during the next nine days, giving an unusual clinical picture in typhoid. The rigors lasted from twenty minutes to half an hour, and were followed, as a rule, by a profuse perspiration (see Chart).

As the symptoms were associated with the development of a marked apical systolic bruit, and accentuation of the pulmonary second sound, and as on November 9th the Grunbaum-Widal reaction was negative, it was thought that the case might be one of infective endocarditis simulating typhoid at its onset.

On November 18th, therefore, a bacteriological examination of the blood was undertaken. The skin of the arm was sterilized; 10 c.cm. of blood were withdrawn from the median cephalic vein, and distributed among three flasks containing 100 c.cm. of broth and half a dozen slant agar tubes. After forty-eight hours the flasks contained staphylococci, and a Gram-negative motile bacillus with many flagella. This bacillus, after it had been subcultured for several weeks, was agglutinated markedly in half an hour with the serum of a convalescent typhoid patient in dilutions of 1 in 15, 1 in 30, and 1 in 60, but not with normal serum. The bacillus also behaved in a manner characteristic of typhoid in glucose, lactose, cane sugar and mannite broths, litmus milk, gelatine, and broth.

All the slant agar tubes, each of which contained only a few drops of blood, were covered with colonies of *Staphylococcus aureus* and *albus*, in about equal proportion, but the colonies were too numerous to count satisfactorily. No typhoid-like colonies were visible. Streptococci were absent in all the cultures.

The bacteriological diagnosis of typhoid was further confirmed by the fact that, although on November 9th the Grunbaum-

January 8th. The cardiac bruit had in the meanwhile completely disappeared.

The occurrence of intermittent pyrexia is common enough in the third and fourth week of typhoid, but one of us, who has seen over 3,000 hospital cases of this disease, cannot recall having met with such extreme and unaccountable variations in temperature, combined with repeated rigors, moreover, in the second week of the disease.

The source of the secondary infection with staphylococci could not be discovered though assiduously looked for, but it is worthy of note that the patient immediately before her illness had been nursing scarlet fever, a disease intimately associated with infective processes.

Another point of interest is the fact that the patient prior to the bacteriological diagnosis was treated with antistreptococcus serum, with apparently beneficial results, so it was deemed prudent to continue its administration, notwithstanding the absence of streptococci in the blood.

HOW MUCH FLUID DOES THE BODY REQUIRE?

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If a man living an ordinary sedentary life, not entailing visible perspiration, takes from 50 to 60 oz. of fluid per diem, then a weight of 150 lb. apparently requires about 50 oz. of fluid, this amount being passed each day through the kidneys. The question is, By how much may this quantity be reduced before physiological difficulties are encountered?

The teaching of the late Sir Andrew Clark on the importance of reducing fluid in cases of morbus cordis first arrested my attention, and I have followed his teaching in such cases with much benefit. In none have I seen urinary gravel induced by reduction of fluid in those who had not previously had gravel. Working at the circulation in high blood-pressure cases (for example, headache, epilepsy, and depression), I found that by lessening fluids I could lower blood pressure 20 or 30 mm. of mercury, this often sufficing to turn the balance.

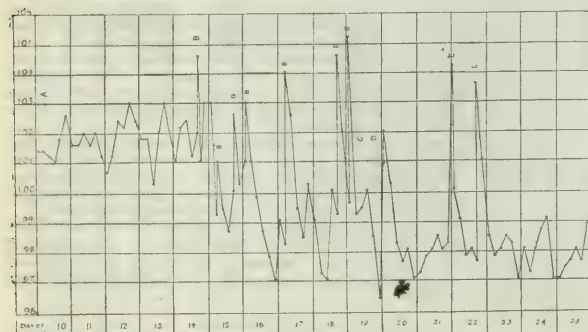
The above quantities of fluid are more a habit than a necessity, and most people can accustom themselves to do with less than 50 oz. a day. I generally aim at 30 oz. The gain to a diseased or dilated heart is obvious; the total fluids in the body are gradually reduced by several pints, and weight falls a corresponding number of pounds.

A dilated heart resembles a distended bladder, and the latter, we know, may lose all power of expulsion. A heart thus enabled to get a more complete grasp of its contents not only saves a great expenditure of force in twenty-four hours, but valves incompetent in the dilated condition may, even though diseased, become almost completely competent. It is no uncommon thing for the transverse area of the heart to diminish 2 in. in three weeks, even if no drugs are given and no other change made.

I wrote in 1903¹ on the washing out plan, mentioning that I had seen a number of cases in which an attempt to wash out an excess of uric acid had been quite unsuccessful, because uric acid controls the passage of water out of the body, while the water does not to any important extent control the excretion of uric acid. I there mentioned some cases in which excess of fluid had dilated the heart, leading to atrophy of its muscular tissues, and leaving little but a prospect of chronic invalidism.

On a dry diet I have seen astonishing recoveries from morbus cordis. In one case almost no fluid was taken except that in fruit, and the patient passed from hopeless invalidism to the power of bicycling fifty to sixty miles in a day with ease.

The relief from reduced blood-pressure alone is no small



A, Serum reaction—(1-15); B, rigor; C, blood cultured; D, serum reaction + (1-60); E, slight rigor.

Widal reaction, tested at the Municipal Bacteriological Department, was negative, on November 18th, unknown to us, it was reported positive in dilutions up to 1 in 60.

The patient, who was treated for the septicaemia with injections of antistreptococcus serum twice daily, had the last rigor on November 21st, and was discharged cured on

matter for an organ which has to work the whole twenty-four hours, and I have always agreed with the late Sir W. H. Broadbent that we do more good by diminishing the heart's work than by driving it on with tonics.

Consider the condition of the heart, placed in a practically unyielding investment (the pericardium); every dilatation means pressure, and pressure means at least defective circulation in the cardiac veins and capillaries, to say nothing of the influence of the defective action of the left ventricle on the cardiac arterial supply. Thus every dilatation of the right side, if it increases intrapericardial pressure, must mean defective circulation in every muscle fibre of the heart. This risk is removed by lessening fluids, and in morbus cordis this also diminishes the strain on the valves, and so the tendency to recurrent endocarditis.

On the heart the effect is not only to diminish work and aid its mechanical efficiency but also to improve its nutrition enormously. The pressure in the whole arterial system is diminished, and the importance of this in advanced cases of arterial disease or impending cerebral haemorrhage needs no demonstration. The capillaries and venules are no longer over-distended and liable to rupture. The veins previously visible and prominent, especially in the lower limbs, shrink and disappear, and the very texture of the tissues becomes firmer and harder. This was well seen in the case of morbus cordis above mentioned, where fluid was taken chiefly in fruit. In place of the flabby limbs of a beer-drinking butcher this patient developed the iron-wire muscles of our nearest frugivorous relatives. The frugivora, I believe, take little fluid, and that mostly in the form of fruit.

Such changes as I describe profoundly affect the whole vascular system. Several times lately I have been called to see cases of aneurysm in which, I know not why, no attention had been paid to the quantity of fluid. One of these patients was so bad with dyspnoea that I scarcely dared to move him for examination. I found that he was taking 2½ pints of fluid a day. Four weeks later, as the result of reduced fluids, he was walking about, and only sat down for examination. The aneurysm was not cured, but life, which was threatened by the distension of high blood pressure, was at least prolonged.

In the dilated and splashing stomach commonly found with chronic collaemia there is often in addition an increase of heart area, and a capillary reflux of 7 to 8 with a blood pressure of 130 or less, and a quick, often irregular pulse, with palpitation on exertion. A capillary reflux of 7 with a strong heart should show a blood pressure of 140, and one of 8 a blood pressure of 160; thus we can measure the extent of the heart failure. These conditions are commonly seen together, and collaemia is the central factor. When the heart is already overweighted by high blood pressure it is most injurious to give excess of fluids in the false hope of washing out excess of uric acid. Excess of fluid is slowly absorbed from the stomach; while there it dilutes the digestive juices and favours fermentation; when absorbed it dilutes the digestive secretions, diminishing their power, and favouring the increase of microbic putrefaction, malnutrition, and debility. Its tendency is to dilate the stomach muscles of which are, like those of the heart, in poor condition from defective circulation. As a result of such malnutrition and debility excess of fluid will eventually produce some oedema of the ankles, which is not infrequently accompanied by oedema of the cortical membranes, which lies at the root of brain-fag and debility, commonly called "nerves"; of bad temper, nervous excitement, hysteria, or of neurasthenia, depression, and lethargy up to the more fully-developed signs of uraemia—for example, twitching of muscles, headache and coma. Many of these conditions are often promptly relieved and may be cured by lessening fluids, strengthening the heart, and later on removing collaemia by a purin-free diet. I believe that no small part of the increase of such "nerve" troubles is due to increased consumption of fluids, especially where the increase of fluid is not accompanied by any measure to diminish the introduction of uric acid. As a rule collaemic sufferers dislike fluids. Their blood contains excess of fluid, and shows only small percentages of haemoglobin and cells, since the capillaries of all the organs of excretion (kidneys, skin, lungs) are blocked by collaemia. These patients are

easily persuaded to take less fluid, and generally have to be urged to take excess.

Albuminuria and Bright's disease are an additional indication for this treatment, for at least a part of the defective combustion, called Bright's disease, is due to cardiac weakness, and anything improving the condition of the central organ of the circulation improves the general combustion.

The treatment of collaemia with heart failure and its results is to cut down fluids but not to reduce the income of proteids—for no heart tonics will act if food is deficient; to rest the whole body as much as possible so as to lessen the work of the heart; to give heart tonics such as digitalis or nuxvomica in small doses long continued, till the pulse rate is normal and the natural ratio between capillary reflux and blood pressure re-established. I used to be puzzled by cases of neurasthenia and depression in which there were obvious indications for heart tonics, and yet the administration of such tonics made the mental condition worse. In these cases there is always high blood pressure, and to raise the pressure in the skull still more by tonics will do harm so long as there is cerebral oedema; but remove the oedema by diminishing fluids, and the tonics can then be given with benefit. The same applies to the heart—take off the work and improve its mechanical power by diminishing fluids, and the tonics will do treble the good in half the time.

What harm may be done by diminishing fluids? Uric acid gravel, or the presence of large quantities of urate in the ears, joints, and fibrous tissues, forbid diminution of fluid over a long period, for the excretion of such urate store is almost certain to give trouble in the tubules and pelvis of the kidneys if sufficient fluid is not taken. Yet when a patient is obviously dying of heart failure on the one hand, or cerebral oedema on the other, we must immediately cut down fluids and consider the excess of urates afterwards. There might be increased tendency to thrombosis, but, as the ultimate effect is a general improvement of the circulation, this does not seem important, especially if a purin-free diet is adopted.

Constipation is another possible trouble, and sufferers on an ordinary diet will not be better on diminished fluids. But what is the inconvenience of a little constipation if weighed in the balance against heart disease, or uraemia, or cerebral oedema? The use of common laxatives will counteract it while matters are critical, and later there will not be much trouble from constipation if fruit is used daily.

In serious conditions I take thirst as a guide, and I find that most patients can reduce their fluids to 30 oz. a day, and, with the help of fruit, to 25 oz., 20 oz., or less, at least for a time. If salts, salines, and diuretics are given more fluid will be called for, and then we have to decide whether most good is done by withholding drugs and water, or by giving both. As a rule, I am in favour of the former course, though drugs can be used at first, as it takes several days to reduce the fluids of the body. I order that 30 oz. be aimed at, but that fruit or extra water shall be given whenever thirst imperatively demands it.

REFERENCE.

¹ *Canada Lancet*, August, 1903.

THE OCCURRENCE OF TUBERCLE BACILLI IN THE BLOOD IN TUBERCULOSIS.

BY

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It appears to have been little, if at all, recognized that tubercle bacilli may commonly be found in the blood of tuberculous patients.

Very recently Rosenberger¹ published a remarkable series of cases which must bring the question of blood infection in this disease into prominent notice. The cases he examined included many different forms of tuberculosis, and he was able to demonstrate the bacillus in the blood of every patient, whatever the type of the disease, and however early the disease appeared to be clinically. It is

clearly of great importance that his conclusion as to the occurrence of blood infection in every case of tuberculosis should be tested. To mention one matter—if it be completely proved that living tubercle bacilli occur in the blood of practically every tuberculous patient, no matter how early or circumscribed the lesion appears to be, it is without doubt that our ideas as to the use of vaccine-therapy—tuberculin—must be considerably modified.

Using to some extent his methods, I have examined the blood in 12 cases of pulmonary tuberculosis. The method of examination is simple, and is, shortly, as follows:

Method.

The skin of the front of the forearm is thoroughly cleansed with liquid soap, alcohol, and ether. A tourniquet is applied, and, with a sterile syringe fitted with a platinum-iridium needle previously flamed, about 5 c.cm. of blood are drawn from any convenient vein. The blood is at once mixed with about an equal volume of sterile citrated salt solution. The mixture is placed in a swift-running centrifuge for twenty minutes, and some of the deposit taken up on a slide to form a thick film. This is dried in an oven at 60° C., and is then placed in sterile distilled water to lake the blood. Thereafter the film is fixed and stained in the usual way.

It is important to state that every precaution is taken against risk of contamination. A new pipette and new slides, kept in strong sulphuric acid, are used in each case. The centrifuge tubes and flasks are cleansed with caustic soda, pure sulphuric acid, and sterile distilled water, and similar care is taken with the syringe.

Out of the 12 cases, 10 had distinct physical signs and had tubercle bacilli in the sputum. Adopting Turban's classification, there were of Stage I 3 cases, of Stage II 6 cases, and of Stage III 1 case. This gives a total of 10, and all these 10 showed tubercle bacilli free in the blood.

The organisms were of the long or short forms, beaded or uniformly stained, and were acid-fast rods morphologically indistinguishable from the tubercle bacillus. There seems little possibility of doubting their identity with it; seen in the sputum they would be judged absolutely diagnostic.

In each case they were few in number; no groups were seen; usually the bacillus was alone in the field, or at most two appeared together. They were found with more or less difficulty. Often only one was seen after long and laborious search over a whole slide, and in a few cases two and three and four slides had to be examined before success. In one case phagocytosis was noticed, and only in one was there evidence of mixed infection in the blood. In this a diplococcus was seen in fair numbers, and it is being further investigated.

The result of cultures from the blood of these cases and the result of the inoculation of the infected blood into animals remain to be worked out.

One of the two cases in which no amount of search could show the bacillus was a patient with very indefinite symptoms and physical signs, and altogether of doubtful diagnosis. In the other case the physical signs were marked, but repeated examination had never revealed tubercle bacilli in the sputum.

Only 4 of the 10 cases giving a positive result had any fever at the time of examination of the blood. In the other 6 the temperature was normal, and had been so for many days or weeks, all of them getting about well, and showing, in short, the usual chronic course of the disease. I state this to draw attention to the fact that they were by no means rapidly progressing acute cases, or cases of general tuberculosis.

I have to express my thanks to Dr. Henry Clarke, Honorary Superintendent of the Research Laboratory, for kind advice and help, and to the other physicians of the Liverpool Hospital for Consumption and Diseases of the Chest, for the facilities they have given me in this matter.

REFERENCE.

Rosenberger, *American Journal of Medical Sciences*, February, 1909.

The fifth International Congress of Dental Surgery will be held at Berlin from August 23rd to 28th. The work of the Congress will be distributed among twelve sections. The General Secretary is Dr. Schaeffer-Stuckert, of Frankfurt-on-Main (Kettenhofweg, 29), to whom all communications relative to the congress should be addressed. In connexion with the congress there will be an exhibition.

CHRONIC NEPHRITIS TERMINATING WITH HAEMORRHAGE FROM THE BOWEL AND PERFORATION OF THE BOWEL.

By LEONARD G. J. MACKEY, M.D., CH.B. BIRM.,

PATHOLOGIST AND PHYSICIAN TO OUT-PATIENTS AT QUEEN'S HOSPITAL, BIRMINGHAM.

THE complications of chronic nephritis are numerous and for the most part well recognized, but the following case presents some unusual features, and calls attention to a dangerous complication about which very little appears to have been written:

A married woman, aged 27, was admitted into Queen's Hospital on account of profuse hæmorrhage from the bowel.

She looked very pale, ill, and thin, and said she had not been really well for three years; and that since the birth of a stillborn child about a year before, she had suffered from vague pains in the epigastrium and in the lower part of the abdomen. On examination of the abdomen there was neither pain, tenderness, nor rigidity. The temperature was normal and remained within normal limits till the day of her death; the heart was hypertrophied and the second aortic sound accentuated; the pulse 112 and of high tension. The urine showed a cloud of albumen and one or two granular casts.

For the two days following admission the motions were fluid and dark with blood; after that they became light in colour, but on several occasions small dark red clots were found. The patient remained quite free from pain, the abdomen was soft and flat and nowhere tender. Feeding was limited to nutrient enemata. Bacteriological examination of the faeces revealed nothing unusual.

Before admission she had been treated for gastric ulcer, and after admission the diagnosis of gastric or duodenal ulcer was considered, and with it the advisability of operation; but the site of the hæmorrhage was uncertain and the patient seemed to be improving, so it was decided to do nothing till she had been a little longer under observation.

On the seventh day after admission she became suddenly collapsed and complained of severe abdominal pain; she rapidly developed the signs of a perforative peritonitis and died on the following day.

Necropsy.

The peritoneal cavity contained a quantity of thin, blackish, offensive fluid, which had obviously escaped from the small intestine through three perforations, which could be seen in the lower end of the ileum. The lower 6 or 7 ft. of the small intestine and the caecum were blackened with numerous hæmorrhages into the wall of the gut, and on opening the bowel I found more than 100 small ulcers in the lower portion of the small intestine. The ulcers were all small, the largest being about 1 in. in diameter, and round or oval; each ulcer seemed to have originated in a patch of hæmorrhage, though there were many hæmorrhages which had not ulcerated; they varied in depth, many had reached the peritoneum, and three had perforated, while others were quite shallow and involved no more than the mucous membrane. The edges of the ulcers were not raised; Peyer's patches were not prominent. The remainder of the alimentary canal appeared to be healthy.

A careful examination of the mesenteric vessels was made and a microscopic examination of the wall of the intestine, but it threw no light on the immediate cause of the hæmorrhages, though it seemed clear that the ulcers were due to invasion of the hæmorrhages by micro-organisms from the bowel.

The kidneys were pale, granular, and contracted, and microscopically showed all the changes of a chronic interstitial nephritis and a great degree of endarteritis of the smaller vessels.

The heart was large and showed marked hypertrophy of the left ventricle.

Quite recently a similar case came under my notice:

A man aged 28, a lead worker, was admitted into the Queen's Hospital suffering from chronic nephritis and arterio-sclerosis, and died suddenly from a cerebral hæmorrhage. The autopsy revealed a marked hypertrophy of the heart and degenerated arteries, a large cerebral hæmorrhage, and an advanced interstitial nephritis, but in addition the lower 6 ft. of small intestine was blackened with numerous small hæmorrhages into its wall, exactly as in the previous case; and on opening the bowel I found superficial ulcers forming in many of the hæmorrhagic spots; but in this case there had been no hæmorrhage into the lumen of the bowel, I take it because the ulceration was not sufficiently advanced.

Thus two very similar cases, differing only in degree, have been seen within a few months of each other in the post-mortem room of a comparatively small hospital, so it is not likely that the condition is one of very great rarity, though it must be one which it is important to recognize.

Whether these two cases must be regarded as cases of hæmorrhage due to increased blood pressure, or whether we must look for some change in the mesenteric vessels, or for some toxin in the part of the bowel affected, I am

not in a position to say, but one cannot help feeling that there is some connexion between the lesion in the bowel and the condition of the kidneys. With a powerful heart and diseased arteries we expect cerebral and retinal haemorrhages and epistaxis as a matter of course. Why, then, should the vessels of the stomach and intestine remain intact?

I beg to thank Dr. Douglas Stanley and Dr. Foxwell, of Queen's Hospital, for permission to publish this note concerning their cases.

ROENTGEN CINEMATOGRAPHY AND ITS IMPORTANCE IN MEDICINE.

By Dr. FRANZ M. GROEDEL,

BAD-NAHEIM.

SCIENTIFIC cinematography has two chief aims—first, to represent a series of movements on the screen; and, secondly, to analyse movements.

Roentgen cinematography has the same two aims in view. As yet, however, no positive result has been achieved. A few investigators (I may mention Macintyre, Levy-Dorn, Eykman, and Alban Köhler) have indeed succeeded, by a skilful combination of views taken at different times, in projecting certain movements of the body on the screen. Apart from the great didactic value of this combination of views no real scientific importance can be claimed for them.

The analysis of a movement is of far more importance than its pictorial reproduction. We can watch the process of the movement on the screen with tolerable distinctness, though not demonstrate it so well as by a cinematographic projection, by which everything is reproduced on an enlarged scale. In many cases, however, it is almost impossible to distinguish the various phases of the movement, owing to the well-known slowness of the human eye, or, rather, of the retina. It will not be until we come to study heart, stomach, and breathing movements by means of cinematographic views that this question will be finally cleared up.

For the production of real Roentgen cinematograms the shortest possible exposure is requisite. The way pointed out by me¹ to attain this has since been followed by several investigators, and experience has confirmed my statements. With every good inductor it is possible, by employing a primary current of sufficient strength, to produce views of the thorax with film intensifiers in $\frac{1}{10}$ to $\frac{1}{20}$ second.

Having thus, a year ago, succeeded in fulfilling this first necessary condition, I immediately proceeded to construct an apparatus for taking a series of Roentgenograms. It soon appeared that there were very considerable difficulties to be overcome, a detailed account of which in this place would lead me too far.² It will suffice here to describe in brief the main principles of my Roentgen cinematograph. A number—for example, 24—of strong drying boxes, each containing a film between two intensifiers, are gradually moved forwards by means of a slide. Immediately in front of a leaden screen supplied with a corresponding opening, against which the patient leans, the drying boxes fall through a slit into a case, which is proof against Roentgen rays. The tube is attached behind the patient. In front of the tube moves a large leaden disc, 1 cm. thick, which contains two openings diametrically opposite each other. When one of the openings is in front of the tube, the foremost plate is exposed, and when the opening is just covered the drying boxes are pushed forward and the foremost plate is then thrown off. The whole apparatus, which weighs more than $1\frac{1}{2}$ cwt., is moved by means of an electric motor. It can take at least four views in a second.

If the apparatus is fixed for an exposure of $\frac{1}{10}$ to $\frac{1}{20}$ second, views of the heart in pulsation, or the diaphragm in motion, can be obtained with extremely sharp outlines. If it is fixed to $\frac{1}{10}$ second, the movements of the stomach can be distinctly reproduced. For joint movements the time of exposure varies according to whether the Roentgenogram is taken with plates or film-

intensifiers. The primary conditions will be found in the work above mentioned.

Thus we are now in a position to reproduce all the movements in the human body by means of Roentgen cinematography, to study the different phases and to analyse the movements, which the human eye itself is mostly unable to do. Much preparatory technical work has still to be done, it is true, but the way has now been cleared.

The question as to what practical use Roentgen cinematography will be to scientific research must at present remain unanswered. Certain motions, such as pulsation of the heart and the involuntary movements of the stomach, can now be examined with scientific exactitude for the first time. As regards other movements, such as breathing, we have yet to ascertain whether the views we have hitherto held were right or not. As has been repeatedly stated, the eye is not properly adapted for analysing a movement. Therefore we are perfectly justified in expecting revelations in quarters which have hitherto seemed perfectly cleared up. It is only necessary to call to mind what a revolution instantaneous photography and cinematography have produced in regard to the pictorial and plastic representation of moving objects.

We shall only be able duly to appreciate Roentgen cinematography from a practical point of view when we have studied cinematographically the changes of the movements in the interior of the body in a pathological condition. In this respect, to quote but a few examples, the study of the pathological state of breathing, the various abnormal forms of heart pulsation, the pathological changes in the movements of the stomach, etc., all afford an ample field for scientific research.

From the tests I have as yet made with this apparatus, I will here only mention that I have already succeeded in reproducing not only the movements of the joints, the stomach, and the breathing, which are comparatively easy, but also the pulsation of the heart, as I fully demonstrated before the Verein für innere Medizin in Berlin on March 1st, 1909.

REFERENCE.

¹ Groedel and Horn: Ueber Röntgenmomentaufnahmen mit den bisher gebräuchlichen Apparaten. *Munch. med. Woch.*, 1908. No. 11.

NOTES ON A CASE OF TETANIC SPASM

WITH REFERENCE TO THE DIFFERENTIAL DIAGNOSIS BETWEEN TETANUS AND STRYCHNINE POISONING.

By W. SINCLAIR STEVENSON, M.B., CH.B. EDIN.

HOUSE PHYSICIAN, ROYAL BERSHIRE HOSPITAL.

THE following case illustrates very well the difficulty which is occasionally met with in the differential diagnosis of tetanus and poisoning by strychnine:

L. H., a young woman of 24, unmarried, was admitted to the Royal Berkshire Hospital on a Wednesday suffering from intermittent spasm of the face and trunk. It appeared that she was a domestic servant, though she had left her last place a fortnight before, and had since been living at home. She said that she had twice recently fallen downstairs. There was no history of any other accident. Three days previously she noticed that the muscles of her face and lower jaw began to contract spasmodically. By the following day the muscles of the face were less affected, but the jaws were firmly closed, and could not be separated. On Tuesday her back became affected, and she assumed a position of mild opisthotonos.

Condition on Admission.

When seen on Wednesday evening she was in a very weak state. The pulse was rapid and compressible. Temperature 102°. Respirations 30. The muscles of the lower jaw, neck, and back were in a state of tonic contraction, the lower jaws about 4 in. apart, and it was impossible to separate them any wider without using undue force. The muscles of the face were unaffected, but the head was retracted in a moderate degree, and the trunk was arched backwards and was quite rigid. The abdomen remained soft and could be palpated without difficulty during the severest spasms. Her arms were affected to some extent, the elbows being firmly pressed in to the sides and the forearms flexed and supinated; the hands were flexed on the forearms. Her lower limbs were stiff and the feet flexed as a rule, but could easily be straightened. The rigidity of the legs was sufficiently marked to prevent the successful testing of the reflexes. Respiration was shallow and rapid, but regular. The spasms, as a whole, showed periods of exacerbation, but even during these the respiration, though more rapid, remained

¹ I leave a full description of the apparatus constructed for me by Messrs. Reinster, Gubbert, and Schell, in Erlangen, in the *Deutsche med. Wochenschrift*, 1909, No. 10.

perfectly regular, and there were no signs of dyspnoea. The urine was of high specific gravity and contained a slight trace of albumen. Unfortunately, no attempt was made to ascertain the presence or absence of strychnine in the urine.

After she had been kept quiet in bed the tonic contractions passed off to some extent. She remained in the position of opisthotonos and her head was retracted throughout, but all the other muscles relaxed considerably.

From this time onward she suffered from periodic tonic contractions of the muscles mentioned before at varying intervals; sometimes the attacks would come on every other minute, and then again she would have no attacks for a couple of hours. As the end approached they became increasingly frequent, and at last almost continuous, but in spite of this her breathing was scarcely affected.

She was able to take her fluid food well and could speak intelligibly, but scarcely moved her jaws in doing so. Discomfort was complained of during the attacks, but apparently she never had any actual pain. There was no vaginal discharge, and till an hour before her death she was in possession of all her faculties.

She was given three injections of tetanus antitoxin—chloral and bromides in large doses had been tried previously without effect—but her temperature rose to 104° F., and she died within forty-eight hours.

A few hours before she died I was informed that facts had just come to light showing that she had recently given birth to a full-time child which had just been discovered in an advanced state of decomposition in her trunk.

Such a state of things had not been suspected in any way, as she was afterwards proved to have given birth to the child without disturbing any one in the house, and to have performed her usual duties on the following day. She was also known to have bicycled about the country three days later.

Necropsy.

At the subsequent *post-mortem* examination very little positive evidence as to the nature of her disease was forthcoming. Rigor mortis was present in both lower limbs, but the back, upper limbs, and the head and neck were not affected.

The breasts were not noticeably enlarged, but milk could be expressed from the nipples. The nipples themselves afforded evidence of pregnancy, and the uterus was soft, enlarged, and typical of the third to fourth week after parturition. Internally, on the posterior wall of the fundus, was a small amount of soft, friable, purulent material, which, when examined bacteriologically for the presence of tetanus bacilli, proved negative. Both lungs were congested. The heart was in the state of systole, and contained a little fluid blood. The blood throughout the body was quite fluid. The bladder was contracted and empty. The brain and spinal cord showed no lesions, and beyond a few petechial hæmorrhages in the membranes of the cerebro-spinal system, and a curious "crimson lake" colour of the muscles generally, nothing further could be discovered.

Dr. Krater's experiments have demonstrated that strychnine is eliminated from the body by the kidneys within forty-eight hours, and as she had been under close observation for three days it was not thought advisable to have the viscera examined chemically.

The diagnosis in this case seems to lie between the poisons of strychnine and tetanus. Other conditions giving rise to similar spasms are tetany, lesions of the spinal cord or brain, hydrophobia and hysteria. Of these the last may, I think, be dismissed at once, as there was no evidence of hysteria in the girl's previous history, and her conduct at the time of her confinement was so cool and collected as to render the presence of such a condition extremely unlikely. Hydrophobia is disposed of by the history, by the presence of trismus and opisthotonos and by the absence of respiratory involvement.

Cerebro-spinal affections are put out of court by the presence of trismus, and the absence *post-mortem* of any pathological lesions in the nervous system.

Further, there were no other symptoms pointing to a cerebral lesion.

Tetany is more difficult to exclude, but the fact that her hands were not seriously involved, and that there were no complete intermissions of the spasms, are decidedly against it.

We are left, then, to decide between tetanus and strychnine, and I have tabulated the main symptoms, with reference to the way in which they favour one or the other.

Taking these in order:

Absence of a Wound.

There was no history of any wound, nor was any abrasion of the skin discoverable at the *post-mortem* examination.

On the other hand there was the purulent condition of the involuting uterus. Parturition must have taken place under conditions the reverse of aseptic. The fact that no

Patient's Symptoms.	In favour of Tetanus.	In favour of Strychnine Poisoning.
1. No history of any wound, absence of tetanus bacilli	No	—
2. No history of any poison having been taken	—	No.
3. Slow onset; prolonged course of disease (ten days)	Yes	No.
4. Early trismus	Yes	No.
5. Facial expression; risus sardonius absent	No	Yes.
6. Opisthotonos	Yes	Yes.
7. Muscles of abdomen unaffected	No	No.
8. Arms and hands unaffected	No	Yes.
9. Legs unaffected	No	No.
10. Persistent rigidity	Yes	No.
11. Lack of pain	No	No.
12. High temperature	Yes	Doubtful.
13. Absence of complete rigor mortis, especially of back	—	No.

tetanic organisms were found is not a matter of much importance, as it is comparatively common for those organisms to be absent from the seat of infection forty-eight hours after the onset of the disease.

Ingestion of Strychnine.

There was certainly no evidence that strychnine had been administered, but the circumstances of the case were such as to lead one to imagine that this state of affairs was extremely probable.

The first two points are therefore rather against tetanus

The Slow Onset.

The slow onset would fit in very well with the diagnosis of tetanus, and would be correspondingly against that of strychnine. I believe that the longest recorded incubation period between the ingestion of strychnine and the onset of the symptoms was in Dr. Macredy's case, where the time which elapsed was eight hours, and in this case laudanum had been taken at the same time as the strychnine. In these cases, however, there was a definite attempt to commit murder or suicide, or else the poison was taken accidentally, and in every instance fairly large quantities of the poison were taken. Is it not within the bounds of possibility that this girl had been taking strychnine in minute quantities for some time, perhaps with a view to the induction of abortion, and that some form of cumulative action took place, giving rise to quite atypical and prolonged symptoms?

Against this, however, is the fact of the rapid excretion of strychnine in the urine, and the impossibility of her having obtained further supplies of the drug while in hospital. Also, presuming that the drug was taken to induce abortion, she could not have taken any further doses for a fortnight before her symptoms appeared.

Trismus and Risus Sardonius.

The jaws were affected from the beginning, in marked contrast to strychnine poisoning, where the masseters are among the last muscles to be affected. The contraction of the jaws was not typical, as they were both actively and passively movable to the extent of a quarter of an inch.

Risus sardonius, supposed to be one of the most constant symptoms of tetanus, was entirely absent in this case from first to last.

Opisthotonos.

This is equally well marked in both diseases, though perhaps rather more violent in strychnine poisoning. In this case it was present but not to excess.

Contractions of Muscles.

The abdominal muscles were quite lax and unaffected throughout, and the lower limbs were but slightly involved. This condition would seem to be equally rare in both diseases.

The fact that the arms and hands were more or less involved is distinctly in favour of strychnine.

A point which was specially noticeable was that outside influences, noises, jars, movements of the bed, bright light, etc., had no effect whatsoever in causing or increasing the intensity of the spasms.

Persistent Rigidity.

The persistent rigidity and partial relaxation from time to time point strongly to a chronic variety of tetanus.

Pain and Temperature.

The absence of all acute pain, even during the severe exacerbations of the spasms, seems to be quite an unusual feature.

A high temperature used to be thought diagnostic of tetanus, but more recent researches have shown that strychnine poisoning gives rise to high temperatures as well. In both diseases the temperature is apt to rise in a marked degree after death. The presence of this *post-mortem* rise was not ascertained here.

Rigor Mortis.

In strychnine poisoning the back especially is generally rigid for a long time after death, and in a certain famous case it was found to be so two months after. It has, however, been known to pass off after twenty-four hours. It is usually present very shortly after death.

On the whole the balance of evidence seems to be slightly in favour of a chronic form of tetanus. The case was a remarkable one, for the balance between the two conditions, especially when she was first seen, was so evenly adjusted that each slight alteration in her symptoms seemed to incline it first in one direction and then in the other.

As time went on it became increasingly difficult to entertain the idea that the case was one of strychnine poisoning, especially when one considered that the duration of such a case from the onset of the symptoms averages two hours.

But even supposing that the spasms were due to a chronic form of tetanus, many of the symptoms still remain to be accounted for in some other way.

I am indebted to Dr. Francis Hawkins, under whose care the patient was in this hospital, for the permission to publish these notes.

PRELIMINARY NOTE ON THE HISTOLOGY OF EGYPTIAN MUMMIES.

By MARC ARMAND RUFFER, M.D.,

ALEXANDRIA.

SOME time ago my friend Professor Elliot Smith, F.R.S., gave me some fragments of mummies of the XXI dynasty (dating from 1000-1050 B.C.), and I endeavoured to examine these fragments by histological methods. As far as I knew then, this was practically the first attempt to study microscopically the minute structure of tissues mummified for about three thousand years; at any rate, I found nothing bearing on this subject in the literature at my disposal, but I was informed that Professor Looss of Cairo had shown the striation of mummified muscular fibres to his colleagues. I demonstrated some of my sections at the Sheffield meeting of the British Medical Association and at the December meeting (1908) of the Cairo Scientific Club. Quite lately my friend Mr. Shattock has read a paper on a similar subject before the Royal Society of Medicine.

METHOD.

It was found impossible to obtain good microscopical sections without first restoring, to some extent at any rate, their flexibility to the tissues, as their brittleness and hardness broke the edge of the microtome knives; even when a fair section was obtained, this invariably crumbled up when transferred to the slide. I need not describe the various methods tried and rejected, but it will be sufficient to note that, by combining an alkaline salt such as carbonate of soda with a hardening reagent such as alcohol or formol, the mummified tissue placed in the mixture gradually swells up and resumes its former shape.

The solution which has given me the best results is composed of alcohol 100 parts, water 150 parts, 5 per cent. carbonate of soda solution 60 parts. In many cases, however, such a solution softens the tissues too much, and more alcohol must then be added.

After a period of time, the length of which depends on the bulk and nature of the tissue, the solution is replaced by 30 per cent. alcohol, and more alcohol is added day by day. After two or three days the softened tissue is transferred to absolute alcohol, then chloroform, paraffin, and cut *secundum artem*. During these manipulations the tissue remains pliable, though it shrinks a good deal. Very thin sections do not present any particular advantages, and I generally use three divisions of Minot's microtome. Such preparations stain readily with the ordinary dyes, but for tissues such as muscular fibre teased preparations, after maceration in 1 in 10,000 caustic potash, give excellent pictures.

RESULTS.

I have prepared sections of muscle (voluntary, cardiac, and involuntary), blood vessels, skin, intestine, stomach, liver, kidney, bone, mammary glands and testicles, and the main characters of all these organs and tissues can be readily recognized. The striation of muscular fibre, for instance, the muscular coats, the submucous tissue, and occasionally even the glands of the intestines and the convoluted tubules, the straight tubules and glomeruli of the kidneys, the various layers of the skin can be identified with certainty. I have no doubt that coarse pathological changes, such as inflammation, cirrhosis, tubercle, or cancer, could be demonstrated by this method.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

NUTMEG POISONING.

NUTMEG poisoning itself is rare, and this case is especially interesting in that, although the amount taken was so small, it led to very definite symptoms and also to my hearing of two similar cases. I was sent for to see a man, aged 22, who had suddenly been taken ill after a midday meal of cold mutton and milk pudding. The pudding was a small one and he had eaten the whole of it himself. It was flavoured with about a quarter of a moderately-sized nutmeg. Within a few minutes he felt his face flush and he began to itch all over and went up to his bedroom. Here he was immediately sick and vomited his dinner, and at the same time his nose began to bleed. He then lay down on his bed and did not remember anything more till I roused him. I saw him about half an hour later. He was lying face downwards on the bed in a completely collapsed condition. His face was swollen, especially his lips and lower eyelids, and he was cold and markedly cyanosed. The pupils were contracted, but not pin-point. The radial pulse was rapid and scarcely palpable; the heart was thumping and irregular. On speaking to him he appeared dazed, but was able to give me a clear description of what had happened. His tongue was clean, slightly swollen, and he complained of a feeling of fullness in his throat. He also had some slight abdominal pain, but this soon passed off. About an hour later the cyanosis had disappeared and was replaced by a diffuse flush. His face was still swollen, and he still complained of slight itching. The pupils were now normal. There was no further vomiting, and beyond a feeling of drowsiness there were no further symptoms, and he awoke the next morning feeling perfectly well. The vomit obviously consisted of his dinner in an undigested condition. It did not smell of nutmeg. Careful inquiry elicited no other cause for what was evidently a case of acute poisoning. The patient was a healthy, well-developed youth.

The two other cases were described to me by his mother, a publican's wife. Some years ago two barmaids in her employ were awakened at night with abdominal pains, vomiting, and diarrhoea. Their faces were noticed to be swollen and blue. On going to bed they had each taken half a nutmeg in a glass of stout, as they had been assured that this would cure a rash they had. They recovered without further symptoms.

Holnedale, Parkstone.

K. MAYOR GIBBINS.

MÈNIÈRE'S DISEASE.

I READ with much interest the able paper by Dr. W. Syme, in the JOURNAL of April 10th, on aural vertigo. May I mention a few points noted in a personal attack, and gathered from cases that have come under my care?

Under the term "Mènière's disease" is grouped a class of cases, rare in occurrence and unique in character, in which vertigo is caused by perversion or abeyance of the labyrinthine function, the cause of which may be either of an irritative or destructive character, whilst there is always present coincident disease of the semicircular canals.

The vertigo occurring in Mènière's disease is its most prominent symptom, and is of a functional character, and may show itself in a person seemingly in good health, or the subject only of some slight neglected auditory disease. He finds he has a noise in one of his ears, and suddenly becomes giddy. Surrounding objects appear to be revolving; if in a room there may be a sensation as of walls and ceiling falling in upon him, or he may feel that he is going through movements of gyration, which have been compared to the sensation caused by long-continued rotary movements of the body. If the vertigo be slight, the patient may be able to walk unsteadily; if in a greater degree, walking is impossible, associated with inability to stand without support. In a severe attack the patient falls, or rather is suddenly thrown to the ground. If in bed when the attack comes on he may complain of the bed rising or sinking, or of rotation. There is no loss of consciousness, except, perhaps, momentarily in severe cases; nor do the facial or other muscles show any muscular spasm. In one of my patients, if sitting, the legs were thrown out violently, and the hands became blanched—the latter condition due possibly to some disturbance of the inferior cervical ganglion and brachial plexus. The attack is followed by a feeling of extreme prostration. The paroxysm may only last a few moments, may recur many times a day, or only at rare intervals. Tinnitus is commonly persistent, and before the onset of the attack may be found to be increased.

The mental anxiety is no doubt a reflex condition, and is often most persistent and distressing; the patient may be afraid to walk across the street, or to be left alone, although the general health may be good and a long time may have elapsed since an attack; this state of apprehension of a recurrence of the attack may last for months or even years. Successive attacks may recur at variable intervals, depending largely on the recurrence of any of its causes.

Common to the majority of cases will be found three cardinal associated symptoms—vertigo, tinnitus, and deafness. Vomiting may be present, but is not constant.

I think it may be granted that most of the cases seen are the result of some congestive or inflammatory derangement of the auditory nerve, usually of the nerve terminals of the labyrinth; if due to this condition, on placing a watch on the affected mastoid, it will be heard very imperfectly, or not at all, and, further, that all cases of functional vertigo are not cases of *vertigo ab auro laesa*.

Deafness, to a greater or less extent, is constant, but not an essential symptom. Clinically, we find a certain proportion of cases occurring in subjects with normal auditory conditions; when present, the deafness is in the internal ear, and as the deafness increases the tendency appears for the patient to improve. My experience leads me to agree with Trouseau, who called this affection stomachic vertigo—*vertigo a stomacho laeso*—that dyspepsia plays an important part in many of the cases seen. Gout and influenza are also well-known qualities in its production, particularly in patients where there may be overtaxing of the mental faculties and anxiety of mind.

With regard to treatment, we must endeavour to remove the exciting cause, be it gastric, gout, or neurasthenia. I avoid quinine and sodium salicylate owing to their well-known sequelae: I consider strychnine the remedy *par excellence*, alone or given in conjunction with dilute hydrobromic acid, with counter-irritation behind the ear by a stimulating liniment or blister, followed later by galvanism. In an obstinate case, on the advice of my friend the late Mr. H. Bendelack Hewitson, a seton was introduced behind the ear, and worn for some time with success. Irritating and painful as the wearing of a seton is, I should certainly recommend its trial before advising the more

radical operation of destroying the labyrinth, which should only be carried out as a last resource.

J. FLETCHER HORNE, M.D. St. And., F.R.S.E.,
Honorary Consulting Surgeon, Beckett Hospital, Barnsley.

MAMMARY CANCER RECURRING SIXTEEN YEARS AFTER OPERATION.

WITH reference to Dr. D. McNeill's case of mammary cancer recurring and causing death fourteen years after the primary operation (page 841), I lately lost a patient from the same cause, on whom the original operation was performed on October 9th, 1891; her death, from recurrence, took place at the age of 55, on June 11th, 1908, sixteen years and eight months! In my case subsidiary operations were performed in 1895, 1897, and 1898.

Old Elvet, Durham.

SELBY W. PLUMMER.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE
HOSPITALS AND ASYLUMS OF THE
BRITISH EMPIRE.ROYAL HAMADRYAD SEAMEN'S HOSPITAL,
CARDIFF.

APPARENT UNILATERAL DEVELOPMENT OF THE MAMMA
IN THE MALE.

(By JOSEPH H. WHELAN, M.D., R.N. (ret.),
Medical Superintendent.)

C. A., aged 26, A.B., a bright, intelligent Swede, presented himself at the hospital on February 18th, 1909, with a well-developed, apparently female type of breast on the left side, well shown in the photograph. He stated that eight years previously it was much the same as that on the right side, which is the usual rudimentary male organ. Since then—that is, practically during his sexual life—it had gradually and painlessly enlarged symmetrically. The areola was large and the nipple prominent. He said that he had felt no subjective sensations in the latter at any time, that it was not erectile, though at times it exuded a clear fluid; but he was naturally reticent on the subject of his peculiarity. He was very desirous to have the organ removed, as it was the cause of unpleasant attentions from his comrades on board ship. In other respects he was entirely a well-developed male.

On February 24th I removed the breast, which weighed in the fresh state just under ½ lb. It was perfect in form and appearance.

I sent the specimen to Professor David Hepburn, F.R.S. Edin., of the University College, Cardiff, who took a great interest in the case from an anatomist's point of view. The following was found on dissection: The superficial surface of the specimen was covered by subcutaneous fat, and on removing this layer it presented a convex surface with depressions suggesting lobulation, spreading from the nipple as a centre. The deep surface was smooth and fairly flat. On section the naked eye detected no appearance of cysts, and the colour of the mass was uniformly white. By the microscope the tissue was simple fibrous material, but scattered through it were dilated ducts lined by nucleated epithelium. It had been hardened and preserved in strong formalin solution.



Reports of Societies.

MANCHESTER MEDICAL SOCIETY.

Wednesday, April 7th, 1909.

Mr. W. COATES, President, in the Chair.

Excision in Suppurative Arteritis.

MR. J. E. PIATT related the case of a boy aged 4 years, admitted to the Royal Infirmary with a very extensive deep cellulitis of the forearm. Incisions were made on the day of admission, but two days later haemorrhage occurred and the brachial artery was tied. Eight days afterwards haemorrhage again occurred, and it was therefore decided to open up the wounds and search for the bleeding vessel. The upper part of the radial artery was found to be in a sloughy condition, and 2 in. of the vessel were removed, the divided ends being ligatured with catgut. The patient, although greatly exhausted at the time of operation, afterwards recovered well and the functional use of the arm was perfect. In a similar case which he brought before the Society fifteen years previously he had removed 4 in. of a sloughing brachial artery with complete success, the patient making a perfect recovery. He pointed out that this method of treatment was merely an extension of the ordinary rule for the treatment of secondary haemorrhage—namely, dealing with the vessel at the site of the bleeding—and that in the cases mentioned it was the only alternative to amputation of the limb. The method was more likely to be of use in the case of the arm than of the leg, owing to the freer collateral circulation.

Radiography of the Kidneys.

DR. W. J. S. BYTHELL, in a paper upon the radiography of renal and ureteral calculi, gave examples to show the advances made in x-ray work, whereby it was possible to distinguish the size and structure of the kidney itself, and thus to a large extent make out the pathological condition of that organ. Such cases included several of pyonephrosis and tuberculous kidney.

Chronic Alcoholism.

DR. GEORGE ASHTON, in a communication on the hypodermic injection of atropine and strychnine in chronic alcoholism, said he had tried this treatment in three cases, all confirmed alcoholics. The solution used was a mixture of liq. atropin. sulph. and liq. strychnin. hydro. in the proportion of 1 to 4. Five minims of this solution were injected twice daily into the outer surface of the calf of the leg. The first patient had seventy injections, the second had thirty-four injections, and the third thirty injections. The general health was considerably improved, but the underlying disease—the craving for alcohol—was unaffected. His patients strongly objected to the repeated pain of the injections and to the dryness of the mouth, caused by the atropine. He had reluctantly come to the conclusion that the treatment was absolutely useless.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE.

Friday, April 16th, 1909.

Sir PATRICK MANSON, K.C.M.G., President, in the Chair.

Beri-Beri: The Etiology of Beri-Beri.

A PAPER on beri-beri was read on behalf of Dr. L. BRADDON, of the Federated Malay States, who showed that the first noticeable fact in the etiology of the disease was that it attacked only rice eaters, and next claimed that only those were attacked who ate rice of a certain kind. If rice was husked, and allowed to remain lying in bags, it developed a poison which induced beri-beri. Tamils, of whom there were over 150,000 in British Malaya, never suffered from beri-beri, and this immunity he believed to be due to the fact that the rice they used—their staple article of food—was treated in a different way. While in the husk the rice was "cured" or parboiled and dried, and he believed that in this way the development of the noxious agent was prevented. In the endemic area 97½ per cent. of all cases of beri-beri occurred in

Chinese, who always ate uncured rice. Fletcher had shown at the Selangor Lunatic Asylum that of 120 lunatics who were fed on uncured rice 43 developed beri-beri, while of 140 who were fed on cured rice only 2 were affected. Still more conclusive were the experiments which had been carried out at Durian Tikus by the officers of the Federated Malay States Research Institute. A working party of 300 men were divided into two groups; half were fed on cured rice for a year, and half were fed on uncured rice for a year. Of the former none were affected; amongst the latter beri-beri was very prevalent. The diets were then reversed, with the consequence that those who had been free before were now attacked, and vice versa. Moreover, by moving the groups of labourers about the element of place infection was excluded. Not only was cured rice a preventive of the disease, but it was a powerful remedy for beri-beri when once established; and in the Singapore Lunatic Asylum, and in other places in Malaya, they had excellent results from this treatment. Fresh rice—newly husked rice—was innocuous, and this he thought indicated that when the husk was removed after some time an epiphyte developed on the outside of the grain and generated a nerve toxin. The conditions which had been described as beri-beri in non-rice eaters were not clinically allied to the beri-beri of the Eastern tropics; in uncured rice which had been husked for some time would be found the true cause of the disease.

A paper on the same subject was read for Dr. A. R. WELLINGTON of Sarawak. It detailed his observations in the mining and agricultural districts of that Dependency. He had carefully examined the theory that bed-bugs were carriers of infection, but he had been unable to find much evidence in support of that view, or, indeed, of any other theory of parasitic infection. Nevertheless, since bed-bugs in the General Hospital at Kuching had been exterminated, there had been no fresh cases there. Beri-beri was unknown amongst the Dyaks in their own country—the interior of Borneo—but if they came to Sarawak, they suffered as much as the Chinese. In Simanggang Gaol and in Baram the disease had been checked by feeding the inmates on fresh rice. On the other hand, at Brooketon coal mines, beri-beri was at one time rampant. Now there was none, although no change had been made in the rice which was used; this experience had been repeated in many instances, notably at Poak and at the Bidil Mines. Instances of apparent infection, mediate or contact, had been noted, and examples were given. There were also instances in which place infection seemed to be the predominant factor.

DR. CARNEGIE BROWN said that the theory that beri-beri was caused by some alteration in rice had been frequently investigated—especially in Japan—and had been rejected on the grounds that no change could be detected in the rice, and that it was not in accord with clinical facts. These conclusions, however, possibly went too far. Beri-beri had been eradicated from the Japanese navy by general sanitary measures and by the addition of considerable quantities of animal food to the dietary, and there had been no special treatment of the rice ration, which was still issued; but its amount must have been decreased, and Dr. Braddon's argument of diminished toxin was a reasonable one. Among the difficulties in the way of the rice theory were, first, that a disease indistinguishable from beri-beri was often seen in persons of whose diet rice formed no part; and, secondly, that the incriminated rice was the principal food of large communities who lived in the endemic area, and never suffered from the disease. The evidence supplied by asylum neuritis, ship beri-beri, and similar conditions could not be lightly brushed aside by the affirmation that they were not beri-beri. In Italian sailing ships, where rice was largely eaten, beri-beri was unknown; in Norwegian ships, where rice was never consumed, and the sailors preferred rye and wheaten bread to anything else, the disease was so common that a commission had been appointed to report on its prevalence. The most prominent clinical feature of beri-beri was that it was a disease of association. In the districts and towns with which Dr. Braddon dealt there were thousands of Chinese households who lived all their lives on the rice which was said to engender beri-beri, and

yet, so long as home life continued, not one member of the family was attacked by the disease. On the other hand, if a man from one of these houses went to work on a mine, or if he had the misfortune to get into gaol, or into an asylum or hospital, he was extremely likely to acquire beri-beri. The feeding experiments which had been detailed so clearly by Dr. Braddon were, however, very striking.

Colonel LEISMAN said that personally he had always been inclined to think that the epidemiology and the clinical features favoured the idea of protozoal infection, but the most careful researches appeared to furnish no support of this theory. Meantime there was good reason to think that there was some connexion between beri-beri and rice, and he believed that at some future time the association would be proved.

Dr. JAMES MAXWELL (Formosa) said that in that country they had a certain percentage of beri-beri, although the people lived in their own houses, and always husked their rice as they wanted it.

Dr. G. C. LOW thought that ship beri-beri could not be separated from tropical beri-beri. It was certainly not scurvy, and he fully believed that it was identical with the beri-beri of which Dr. Braddon spoke.

Dr. T. S. KERR said that since husked rice had been introduced into the asylums and hospitals of the Straits Settlements there had been no fresh cases of beri-beri amongst patients admitted for other diseases.

Sir PATRICK MANSON said that Dr. Braddon's theory was supported by a strong array of figures and facts; it was not, however, quite complete. One incident looked as if the infection was place-infection and independent of the diet. The questions raised were so important that the discussion would be continued at the next meeting.

ROYAL SOCIETY OF MEDICINE.

SECTION OF DISEASES IN CHILDREN.

At a meeting on March 26th, Dr. E. CAUTLEY in the chair, Mr. MACLEOD YEARSLEY showed a case of *Word-deafness* successfully treated. Originally the child could not appreciate heard speech, which she merely repeated aloud; when, however, she was able to see the speaker, and lip-read, the speech was immediately answered rationally. The word-deafness apparently prevented the higher centre being effective. After long practice heard phrases were now understood and answered without the motor response of repeating the question. The exhibitor thought it difficult to explain the case on any hypothesis other than that of weakness of the auditory centres. Dr. EDMUND CAUTLEY showed the brain from a case of *Cerebral diplegic spasticity*, which had been shown to the Section on February 20th, 1909. The whole of the frontal and parietal regions was converted into a bilateral cystic form, bounded medially by a wall containing a moderate amount of brain substance. According to the history, the child had been healthy till the age of 7 weeks, and then had an illness which could be accounted for as encephalitis or meningitis. The *post-mortem* appearance made it more probable that the condition was congenital and dependent on developmental error in the prosencephalon. Dr. LANGMEAD said that there was a specimen in the museum of Great Ormond Street Hospital which closely resembled the case. It showed some narrowing of the small cerebral vessels. Dr. G. CARPENTER said he had neither seen nor read of a case like it, but had seen a lobular cystic condition, which Dr. Ernest Jones reported was, in his opinion, syphilitic. During life the child had been spastic, with head retraction, and showed atrophic patches in its choroid. Dr. WHIPHAM showed a case of *Transposition of the viscera* in a girl aged 6. There was a mitral systolic murmur at the heart's apex. The child had had chorea twice. The CHAIRMAN thought that such cases were not so uncommon as one was led to believe in books. He believed that prognosis of life was just as good as if the heart were not transposed. Dr. F. J. POYNTON and Dr. LANGMEAD thought that if the heart was on the right side of the body there was greater liability to endocarditis. Dr. PARKES WEBER asked whether proposers for life assurance should be rated up if the viscera were transposed. Dr. WHIPHAM thought not. Dr. PARKES WEBER referred to cases in which several children of the same parents had had jaundice, some of

them having died. Dr. PORTER PARKINSON read a paper upon three cases of *Henoch's purpura*. In Case i the patient, a boy aged 8, was treated with two injections of horse serum without any improvement; he eventually recovered, but when discharged the urine was still albuminous. In Case ii the treatment was at first calcium chloride, and later three injections of horse serum. Two fresh groups of purpuric spots appeared while the child was taking calcium. In Case iii, a boy aged 6, as the abdomen became distended, it was thought that intussusception might be present. The abdomen was opened, but none found. The diagnosis then lay between measles and Henoch's purpura. The exhibitor inclined to the latter diagnosis, but the absence of blood and albumen in the urine was unusual. The case supported a suggestion of Mr. Hugh Lett that it was advisable not to operate for intussusception in a case of Henoch's purpura unless an abdominal tumour could be felt. Mr. HUGH LETT said the presence or absence of intussusception in Henoch's purpura was very important. He had reported a case in which intussusception had developed during the illness, and was reduced by operation. Seventeen days later another intussusception occurred, and the child died. He thought that the crucial feature to be relied upon was the presence of a sausage-shaped tumour, and that there should be no operation where a tumour was not felt. He had operated upon 23 cases of intussusception, in all of which he felt a tumour either from the abdomen or per rectum. In two or three of them he could not feel it without an anaesthetic. Surgical operation in Henoch's purpura was a very serious matter, and in some cases the patient had died of haemorrhage from the wound. If he saw another case of undoubted intussusception with purpura, he would be inclined to try injection before operation. Dr. LANGMEAD said that a tumour might be present simulating intussusception, but due to extravasation of blood; and Dr. E. I. SPRIGGS referred to another case showing this condition. The CHAIRMAN thought the term "*Henoch's purpura*" should be dropped, as the disease was simply purpura haemorrhagica with abdominal symptoms; and Dr. PERNET agreed.

THERAPEUTICAL AND PHARMACOLOGICAL SECTION.

At a meeting on April 6th, Dr. BURTON BROWN, President in the chair, Dr. GORDON SHARP, in a paper on *Heart tonics*, said that almost the only way of judging of the effects of digitalis or other heart tonic was an indirect one—namely, by observing whether the drug would remove a cardiac dropsy after rest in bed and nursing had failed. To credit any substance as a heart tonic because it appeared to tone up the pulse, lessen the area of heart dullness, or relieve palpitation was evidence of an uncertain kind, because there was room for so much divergence of opinion on these points. Digitalis acted much more quickly than was generally supposed. The tincture was the handiest preparation. If rejected the drug could be given in pill form. It acted quickest when it was given in doses as large as could be tolerated. Digitalis was the only real heart tonic. The diuretic action of strophanthus seemed to be direct, namely, on the secretory tubules of the kidney, as opposed to the indirect diuretic action of digitalis (and in part so in squill) through the circulation. Although it did not act in cardiac dropsy like digitalis it might by its stimulant action on the kidneys produce a certain amount of diuresis. Given in 20 to 30 minims doses of the tincture, it had in many cases of cardiac dropsy a general analgesic action but no effect on the dropsy. It gave comfort to the patient.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

At a meeting on April 2nd, Dr. E. H. TWEEDY, President, in the chair, Dr. PIERCEY showed a small uterus removed for *Recurrent haemorrhage* from a patient, aged 50, the mother of some children. She had been curetted in the first instance, and some thickened membrane had been removed. Some improvement was made, but the haemorrhage recurred. Atrocousis was applied, but after another violent recurrence the uterus was removed. The specimen showed enormously thickened uterine walls, and

the position of the endometrium indicated in section by a thin line showing almost complete absence of endometrium. Dr. HOLMES recalled a case of Sir Arthur Macan's in which the hæmorrhage recurred after atmocausis and hysterectomy was performed. The vessels of the uterus were distinctly atheromatous, and it was doubtful if atmocausis would cure in such a condition. Dr. JELLETT expressed great doubt as to the value of atmocausis in cases in which there was no endometrium. The hæmorrhages apparently came from blood vessels more or less diseased, and the superficial effect of atmocausis could not be permanent. He did not see how a second application of atmocausis would produce more than a temporary result, as in the first application. He thought there was nothing left in such cases but hysterectomy. Sir WILLIAM SMYLY said he saw a great theoretical difference between atmocausis and curetting. In the latter they removed the thickened membrane, and hoped that healthy membrane would grow. If not, they had to curette again. Atmocausis, however, destroyed the membrane and tissues of the uterus, and the depth of the slough depended on the heat of the steam and the duration of the application. If they did not get a sufficient slough the first time, they had to repeat the application. In an old woman the obliteration of the uterus, which atmocausis was apt to cause, was desirable. He thought it was a very good method, and it was not so severe as hysterectomy. Professor ALFRED SMITH said the effect of atmocausis was rather speculative, and in the great majority of cases they would find the best treatment to be removal. The President said that in two cases he "atmocaused" two young women twice each, after they had been curetted ineffectively. The atmocausis failed on the first application and succeeded on the second in each case. He seldom "atmocaused" for more than fifteen seconds. It was better to do too little than too much, and on the second occasion they might give twenty seconds with better results.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—At a meeting on April 6th, Dr. MAY THORNE in the chair, Dr. JULIAS HAMILTON spoke of the value of *Open-air professions for women* physically unable to earn their living in towns. As warden of a horticultural college she had noticed that delicate women improved enormously in health even after one term's work. She considered that horticulture in all its branches was very suitable as a profession for women suffering from weak eyes, bronchitis, dyspepsia, and various nervous complaints, and as the demand for women gardeners was much greater than the supply, they could be sure of earning a living when their training was completed. Miss SHEPPARD opened a discussion on *The examination of the eye in school children* by relating some of the early history of the movement. Several years ago she had examined the eyes of about 1,000 children in a school at Whitechapel, and found that about 33 per cent. had serious defects. The first effort at systematic examination of all children of school age was made in 1902 by the London School Board, who appointed six medical officers for that purpose. Miss LENEY said that she had examined 7,600 children, and found that 70 per cent. had some eye defect—generally an error of refraction; 5 per cent. had some external disease of the eye, and 2½ per cent. suffered from strabismus. Miss ROBERTS gave an account of the unsatisfactory condition existing in the large majority of the London schools at the present time. In Standards i to iv the teacher examined the vision, taking both eyes together, so that if one eye were blind this might not be discovered until the child reached the higher standards. If the vision were less than $\frac{6}{6}$ the child was examined by the medical officer, who also examined Standards v to vii. Even with this method about 10 per cent. of the children were found to have serious defects; only about one-half were treated, but now the Children's Bill had come into force an improvement might be hoped for in this respect. Miss MOFFATT commented on the difficulty of obtaining treatment for children in the country, where expense was incurred in taking them to the nearest hospital town. Miss THORNETT remarked that many of the slighter cases of defective vision depended on ill health due to the wretched conditions under which the children lived; in many cases fresh air was more needed than spectacles.

Rebiews.

OPHTHALMOLOGY.

THE charge is frequently brought against those who confine themselves to one particular line of practice that they look upon their patients as if they consisted solely of the particular part or organ to which they direct their special study, and there is no doubt that this charge is sometimes justified. The most successful practitioner is he who can take a broad-minded view of the condition of the patient himself, and who uses all the information he can gather for his patient's benefit. Possibly ophthalmic surgeons, whose domain in practice is so small an organ, are sometimes apt to overlook the underlying constitutional causes of some ocular manifestations of disease, and in order to prevent any one falling into such an error we cannot do better than commend to ophthalmic surgeons an excellent little book by Dr. MAITLAND RAMSAY on *Diatheasis and Ocular Disease*.¹ Three chief diatheses claim attention—the neurotic, the scrofulous, and the arthritic. The description of these three types is most lifelike, and when reading these interesting chapters, it is easy to conjure up in one's mind the exact type of person described. Take the neurotic diathesis for example:

Of spare build, restless and unwearied, with a mind so active that it allows neither him nor his immediate circle any repose, he feels pain very acutely, and consequently what may in reality be a very trifling ailment assumes to him very serious proportions. His nerves overdeveloped, tyrannize over his body, and his excellent memory makes him a terror to the young practitioner, whom he never allows to forget anything he may have told him.

How true to life is this description, which is quoted only as an example of the graphic manner in which the author portrays his types. The condition of the eyes is next described, Chapter V dealing with inflammation of the conjunctiva and sclerotic, and Chapter VI with inflammation of the uveal tract; here the author has a wide field, and discusses the various abnormal states of the system which give rise to iritis and choroiditis; kidney disease and glycosuria are considered in dealing with inflammations of the retina and optic nerve. With regard to toxic amblyopia and retrobulbar neuritis, the author does not look upon tobacco and alcohol as being so much the actual cause of the disease as rather causes of defective metabolism and excretion of the toxic products; in support of this view he cites the case of a woman aged 45 who had never smoked nor taken alcohol, and yet who had all the symptoms of toxic amblyopia with gouty iritis later on; she was of the sanguine arthritic diathesis, and quite recovered with careful dieting and an antigout treatment. This case tends to confirm the treatment of toxic amblyopia recommended by Charles Wray, who makes his patients drink large quantities of water and take a good deal of exercise; by these means he has even cured patients who would not give up tobacco, though those who will give it up and carry out the treatment are cured in a quarter of the time; Dr. Maitland Ramsay lays great stress on the condition of the urine which always contains oxalic acid crystals and an excess of urates. The final chapter, on glaucoma, contains some very sound advice for the general practitioner and for the ophthalmic surgeon. The book, like others by the same author, is lavishly illustrated. Several of the pictures are taken from his *Atlas of External Diseases of the Eye*, and all of them are produced as plates, of which there are seventeen. The book is well worth reading and studying; it is really original and calls attention to an aspect of ophthalmology which is only too frequently neglected to the great detriment of the patient.

Professor AXENFELD of Freiberg has so recently been the honoured guest of our Association that any work issued under his direction has for us a special interest. His new textbook² is a symposium, the various chapters,

¹ *Diatheasis and Ocular Disease*. By A. Maitland Ramsay, M.D., Ophthalmic Surgeon to the Glasgow Royal Infirmary, etc. London: Baillière, Tindall, and Cox. 1909. (Cr. 8vo, pp. 132; plates IV, 3s. 6d.)
² *Lehrbuch der Augenheilkunde*. Herausgegeben von Theodor Axenfeld. Jena: Gustav Fischer. 1909. (Sup. roy. 8vo, pp. 694. Brochüert M.14, gebunden M.15.)

written by eleven professors, being addressed not to the specialist, but to the general practitioner and the student. The work begins with a good account of therapeutic methods, by Axenfeld, who also writes the second chapter, on the objective examination of the eye. This subject is treated in a clear, masterly manner, and the chapter contains many hints and minutiae which the student is rarely taught and has generally to learn by experience. Ophthalmoscopic diagnosis, by Flschmig, is excellent, especially when he discusses and explains the various appearances seen at the nerve entrance—a subject to which he has given great attention—but the plates are very poor; that of the normal fundus is, perhaps, one of the worst, the macula being shown as a dark-brown oval surrounded by a white mass of exudate. In the chapter on subjective testing, by Heine, the elementary explanations of the optical properties of prisms and lenses, well known to every student, might have been omitted, and more space devoted to refraction, which is most inadequately treated. The cardinal value of retinoscopy is not insisted upon, nor are we told that this test can be carried out at arm's length as well as at a distance of over a metre. Lister's mirror, which greatly simplifies the process, seems to be unknown to the author. Maddox's rod is not mentioned, and Worth's work, which marks an epoch in our knowledge of squint, is barely alluded to. The statement that occlusion of the best eye to develop the vision of its fellow has been generally abandoned on account of the poor results obtained contains a double error: the method is being more and more widely used, and the results are often very good. Bielschowsky, who writes the chapter on squint and heterophoria, is obviously well acquainted with Worth's work; his views are diametrically opposed to Heine's, a curious example of divergent opinions in a book intended for the general reader! Von Hippel's description of trichiasis operations shows great want of practical experience; Waldhauer's operation, which always causes a secondary trichiasis, is praised, whereas the two best methods—van Millingen's and Snellen's—are not described. Nor do we imagine that any one else uses a keratome for these operations, as is shown in one of the diagrams. Schirmer not only gives elaborate instructions for slitting up the canaliculi and passing probes to cure dacryocystitis—an utterly obsolete, painful, and useless procedure—but states that the results of such treatment are very hopeful! The directions for extirpation of the sac are meagre and inadequate. We are advised to open a lacrymal abscess by an incision "at least 2 cm. long," and when the swelling has subsided not to excise the sac, but to use probes, and attempt to preserve it. Axenfeld on conjunctival disease constitutes a valuable monograph, and Flschmig treats corneal disease in a masterly fashion—in fact, all that is written by these two authors could hardly be improved. Krueckmann writes one of the best descriptions of iritis which we have ever read, while the highly artistic and yet accurate drawings make the condition very clear. But chronic irido-cyclitis is not mentioned, nor is oral sepsis alluded to as a frequent cause. We can find little or no information about central choroiditis; in fact, the important subject of macular disease receives very inadequate treatment. Operations are treated so badly that the subject had better have been omitted entirely: the directions are misleading, and the diagrams are in many cases poor. Perhaps the worst is Fig. 364; a cataract section is being made on a microphthalmic cornea with an almost blunt pointed knife. We are advised to make the incision 1 mm. from the horizontal diameter; this would often result in an unnecessarily large wound. Peters's chapter on glaucoma touches upon the theory of the disease but very inadequately. He still adheres to the notion that excavation is the result of pressure, and states that it is a slow process. He would appear to be unaware that Schnabel has seen total excavation of the disc develop in fourteen days. Taken as a whole, the book cannot be recommended as a guide to the inexperienced; it is very unequal, being in some parts really first class, in others mediocre or worse. In many respects the teaching is not in accord with modern practice, and many conditions are not even mentioned—as, for example, "retinitis pigmentosa albescentis." Many of the illustrations are most beautiful, and accurately show the disease, others indifferent, and some bad.

RETINAL HAEMORRHAGE.

THE monograph we have under review, which gives an account of the anatomical changes found in four eyes affected with retinal haemorrhages enucleated on account of secondary glaucoma, is a thesis for the degree of M.D. written and defended by Fraulien ANNA DAHLSTRÖM at the University of Upsala. The clinical material was obtained from, and the pathological work carried out in, Geheimerat Sattler's clinic at Leipzig. The thesis is illustrated by five plates of the most beautiful water-colour paintings of microscopical sections we have ever seen. They are perfect both as works of art and as clearly showing the changes described in the text.

The scope of the research is purely histological. The four eyes were hardened, imbedded, and cut in serial sections, and from a laborious and painstaking examination of the sections the pathological processes have been reconstructed. The author gives an exhaustive summary of the various theories which have been advanced to account for the onset of glaucoma, in which full justice is done to English ophthalmologists, including the recent work by Henderson of Nottingham. Each theory of glaucoma is criticized very fairly with reference to the changes found in the four eyes examined. For example, Miss Dahlström does not find the enlargement of the lens postulated by Priestley Smith to account for glaucoma. As far as the cause of the high tension found in these eyes can be explained by the result of a careful histological research it would appear to have been due to two factors: (1) An active hypersecretion from the diseased retinal vessels, and (2) an obliteration of the filtration angle, the result of senile changes, sclerosis of the ligamentum pectinatum, and in two at least of the eyes, due to the presence of iritis followed by extensive adhesion between the iris and lens capsule. But in no case were the histological evidences of irido-cyclitis very well marked.

The first cause suggested is open to the criticism that the classical researches of Leber and those of most modern investigators afford no confirmation whatever of the theory that any appreciable quantity of the interocular fluids transudes from the retina or choroid. The almost exclusive source is the ciliary body, which in the eyes examined was small and atrophic. But, in any case, the question is not of any great moment; for the examination of an eye which is extensively diseased, in which there are large haemorrhages and in which the high tension is only the final stage of a definite pathological history, cannot be expected to elucidate the difficult and obscure problem of the genesis of primary glaucoma. At present, no one hypothesis has been formulated which is entirely satisfactory and which accounts for all the observed facts. The truth probably is that many etiological factors are responsible for the disease, and that in any given case these factors participate to a greater or less extent. In one case a large lens may be the prominent feature, in another high blood pressure, associated with diseased arteries, may determine the onset of high tension.

SYPHILIS.

THE second volume of the *System of Syphilis* opens with a monograph by Mr. D'ARCY POWER on the surgery of syphilis, occupying 251 pages and illustrated by 35 plates, many of which are coloured. The title chosen must be taken in a wide sense, indeed as practically covering a great part of the field of syphilis. For it must not be forgotten that in this country syphilis was for a long time the appanage of the surgeon and was outside the province of the physician proper. Now that it is known, though frequently lost sight of, that the lues venerea is responsible for a large amount of visceral morbidity this monopoly no longer holds good. Mr. Power has confined himself to the parts of the organism which claim the attention of surgery, such as the bones, joints, teeth, rectum, and so forth. Altogether this part of the volume will well repay perusal. It will be remembered that a very complete historical account of syphilis appeared in Volume I, so that the

* *Anatomische Veränderungen in vier wegen Durchstichsneuritis exstirpierten Augen mit Neigung zum Glaucoma.* Von A. Dahlström. Leipzig: A. Edelmann, 1908. (Med. 8vo, pp. 148; Taf. v.)

† *Oxford Medical Publications. A System of Syphilis.* Edited by D'Arcy Power, M.B., F.R.C.S., and J. Keogh Murphy, M.D., M.R.C.S. London: H. Frowde, and Hodder and Stoughton, 1908. (Royal 8vo, pp. 395. Plates 35. 42s.)

historical survey which serves as an introduction to Mr. Power's article has led to some unnecessary overlapping. But it must readily be conceded that his short review makes very good reading. The unfortunate experiment of John Hunter is insisted on. This cannot be done too often, for such hasty generalizations as Hunter's based on limited evidence, however convincing it may appear to the observer, have led to dire results. There is, again, overlapping as regards the treatment of syphilis, a subject also dealt with by Colonel Lambkin. Mr. Power does not mention that sodium sosoiodate can be dissolved in water by the addition of a little ammonium iodide, and is employed in that form for intramuscular injection. Colonel Lambkin starts his paper with the question, "Is it necessary to treat syphilis?" Though admitting the possibility of spontaneous recovery, a categorical "Yes" must be given to such a question, and the author mentions the serious complications that may ensue when treatment has been omitted. It must also be emphatically pointed out how dangerous it is to be deluded by so-called benign syphilis. Colonel Lambkin refers to Fergusson's account of syphilis among our troops in Portugal, but this point has already been criticized in the BRITISH MEDICAL JOURNAL (Syphilis in the Uganda Protectorate, October 3rd, 1908, p. 1037), and need not be dwelt upon in this place. Colonel Lambkin is not quite correct in stating that Professor Fournier employs almost entirely the ingestion method. The outbreak of syphilis in Uganda forms the subject of another paper by the same author, which is instructive reading, but the occurrence and the various letters written on the point must be well known to our readers. Dr. W. J. Gow deals with syphilis in obstetrics in a satisfactory manner. He appears to lean towards the maternal origin of congenital or hereditary syphilis as opposed to the paternal. The evidence certainly appears to support the former very strongly indeed. The work of Matzenauer, reviewed in these columns some few years ago, should be read by those interested specially in the subject of the heredity of syphilis.

In his recent book on *Syphilis*,⁴ Mr. BEDDOES gives a very good and readable survey of the disease in its various forms and phases. The subject is dealt with in a clear and practical manner, so that the book may be recommended, but one or two points may be touched upon in passing. In the paragraphs on pathology plasma cells do not appear to be mentioned. As to differential diagnosis of the cutaneous manifestations, some diseases, such as pityriasis rosea, might, perhaps, have been a little more explicitly discussed. Although the author recognizes the utility of intramuscular injections in a general way in syphilis of the nervous system, it would have been desirable (p. 164) to insist on the value of the insoluble preparations in this respect. With regard to the marriage of syphilitics, a good deal depends on the opinion held as to so-called paternal heredity. To those who consider that paternal infection of the child may occur, the periods mentioned by the author will appear all too short. It must be borne in mind, however, that evidence distinctly points to congenital syphilis as being derived solely through a syphilitic mother, who indeed may present no sign of syphilis. Recent investigations in this direction by means of Wassermann's reaction have given positive results in instances of the latter description. Again Langbelet (cited by Matzenauer, *Die Vererbung der Syphilis*, 1903, p. 81) has recorded a case of a man with quite recent florid syphilis, who notwithstanding married. His wife did not contract syphilis, and bore a healthy child, which was subsequently accidentally infected from a syphilitic lesion of the lip of its own father. Again, a man suffering from recent syphilis may beget a healthy child, and subsequently infect his wife (von Düring, cited by Matzenauer, op. cit., p. 87; see also Discussion on Inherited Syphilis, Reports of the Society for the Study of Disease in Children, vol. viii, 1908, p. 52 et seq.). But to be on the safe side longer periods of prohibition of marriage are necessary, as the author admits. This important question, however, is one that cannot be discussed in this place.

The discovery of *Spirochaeta pallida*, since renamed *Treponema pallidum*, and the extraordinary amount of work connected with it, has quite thrown into the shade the various micro-organisms previously asserted to be the cause of syphilis. Among the latter, the bacillus of von NIESSEN,⁵ which has never been recognized by any other observer, as far as one knows, had, it was thought, quite disappeared into the bacteriological limbo, but its discoverer has never acknowledged defeat and now dons his armour once more, challenging any and every opponent of his syphilis bacillus. Unfortunately, the treponema appears to be now so strongly entrenched as to defy all competitors and to be adjudged victor. The industry and pluck of Dr. von Niessen must be acknowledged, especially in this country, where the sporting instincts are part of the national genius. One looks through the numerous plates and wonders at the enormous range of variation in the pleomorphism of the particular bacillus depicted. Polymorphism has in micro-organisms long been an admitted fact, but here the protean morphology recalls to mind the man who did not believe in ghosts because he had seen so many. From a note opposite Plate viii von Niessen appears to entertain the opinion that the spiral forms of his bacillus are identical with Schaudinn's *Spirochaeta pallida*—a point that Schaudinn did not admit when preparations were submitted to him by von Niessen. In addition to the photomicrographic reproductions of the bacillus, there are numerous illustrations of results of its inoculation in various animals, cultures, and so forth. The very complete bibliographical lists up to 1895 and from 1895 to 1908 may be found valuable. The work is excellently got up, and redounds to the credit of the publisher and the printers.

Dr. SPILLMANN's essay on syphilis of the bones⁶ is based in part upon information and specimens supplied by Fournier, whose name should be warrant for its quality. It cannot be said, however, that the book contains any serious contribution to our knowledge of the subject or that the author has devised any striking plan for guidance through the intricacies of its ramifications. It is surprising that in a book which is dated 1909, there should be no mention of the *Spirochaeta pallida*, even when an opinion is hazarded that the nocturnal incidence of the osteoscopic pains may bear some definite relation to the special qualities of the "causal agent" of syphilis. The predilection of the virus for lymphoid tissues and more particularly for the bone-marrow is noted, but there are no observations upon the recovery of the spirochaete therefrom. Upon the reaction of the central and superiosteal marrow—for the deeper layer of the periosteum is classed with the marrow proper—great stress is laid in considering the initiation of the early secondary manifestations in the bones, and in fact of all the sclerosing and protic changes.

The author does not surmount the difficulty of distinguishing histologically between the discrete and diffuse gummatous changes in the bones; he relies for explanation of the softening of the central parts, as also for the death of bone, too much upon the mechanical effects of pressure, and too little, if at all, on the changes in the vessels themselves; nor does he allow anything to the possible direct lethal action of the virus. Ricketts is mentioned, but only to dismiss it, as a factor in determining the special selection of bone by the syphilitic poison. To speak as he does of suppuration as an exceptional event is surely putting the case too strongly.

The account of syphilis of the spinal column and its simulation of Pott's disease is very good, both from the morbid anatomy and clinical points of view. In dealing with the suppurative complications of naso-cranial syphilis the occurrence of septic pneumonia and empyema might have been mentioned. It is an interesting clinical observation that the bone pains, when attacking the sternum and ribs, instead of the more commonly affected tibia, may be mistaken for an asthmatic crisis or for angina pectoris.

The chapter on diagnosis is as good as any part of the book, but, as might be expected, it would be easy to add to the list of conditions likely to be confused; there is no mention of the "guinea necrosis" described by Paget, which

⁴ *Syphilis: Its Diagnosis, Prognosis, Prevention, and Treatment*. By Thomas Fust Beddoes, M.B., B.C. Camb., F.R.C.S. Eng. London: Rebusan, 1909. (Cr. 8vo, pp. 232. 5s.)

⁵ *Der Syphilis-bacillus. Seine Geschichte, Lebensdauer, Kultur, und spezifische Pathogenität für Tiere und Menschen*. Von Dr. med. von Niessen. Leipzig: O. Neumann, 1908. (Double cr. 4to, pp. 84. Tafeln xxxv. M. 25.)

⁶ *Syphilis Osseae (Syphilis Acanth)*. Par le Dr. Louis Spillmann, Paris: G. Steinheil, 1909. (Post 8vo, pp. 134; 12 plates. Fr. 5.50.)

occurs, as Erichsen pointed out, after fevers; nor of osteitis deformans, which has been confused with chronic diffuse syphilitic osteitis. A little too much stress is laid on the presence of enlarged glands as serving to distinguish a sarcoma from a syphiloma of bone, and it is open to question whether radiography is quite the infallible touchstone it is here represented to be.

Dr. Spillmann excels in his descriptions of the appearances of gross lesions, and of dried specimens of the bones, which are here illustrated by some excellent photographs. The merit of the book lies in its usefulness as a compact essay on this particular aspect of a protean disease, and when it is mentioned that it forms one of a series dealing with many sides of the question it will be plain that the limited task essayed has been carried out with some success.

SURGICAL TEXTBOOKS.

The fifth and latest volume of the *American Practice of Surgery*,⁸ an encyclopaedic work, is the first of the series devoted to regional surgery, and fully maintains the high standard of excellence which has hitherto characterized the System. The volume is bulky, and a large portion of it is taken up by a very able contribution on the surgery of the head, by Dr. E. Archibald, of Montreal. In this and also in a supplementary article on the surgery of the cranial nerves, the author brings to bear on the discussion of many interesting questions the results of much personal experience and of a wide study of the literature. Here the reader will find full and most reliable instruction on the latest views on old problems in cranial surgery, and on modern development in diagnostic and therapeutic methods. The length of this section is fully justified, not only by the importance of the subject, but also by the rapid advance in so many of its branches. Under the heading of "Surgical Affections" are included, amongst other non-traumatic lesions, hydrocephalus, syphilis (both cranial and intracranial), chronic forms of meningitis, and even spontaneous cerebral haemorrhage. Much space, of course, is given to tumours of the encephalon, the radical removal of which, except in cases of infiltrating malignant forms, may, the author concludes from a review of recent statistics, be regarded as a legitimate operation. In his practical and well-illustrated article on the surgery of the face, Dr. de Nancrède deals very inadequately with modern methods of treatment by light, radium, and the x ray, which, in certain affections of this region, have certainly found much scope for beneficial action. The plastic operations on the face, which constitute so much of the surgical work on this region, have received full consideration in other parts of the System, and the subject of hare-lip together with a cleft-palate is discussed in a separate article by Dr. J. S. Stone. In the preparation of his article on the surgery of the eye, Dr. G. Harlan seems to have worked under rather unfavourable conditions, as the whole of this large subject is dealt with in little more than 100 pages. Though insufficient here and there in some important subjects—that of glaucoma, for instance—it is on the whole a useful, practical treatise and affords a good review of the present state of ophthalmology. The article on diseases of the ear, by Dr. R. Lewis, junr., is wanting in some points of both pathological and clinical information, but it contains a lucid and complete section on the mastoid operations indicated in acute and chronic forms of purulent otitis, which, together with contributions on sinus thrombosis and pyogenic brain disease of otitic origin, the former by J. D. Richards, the latter by Dr. Reik, add much to the practical value of the volume. The article in which Dr. F. Hartley describes the different methods of laryngectomy is a further reminder of the great attention that has in this volume been paid to operative surgery.

In preparing a fresh edition of his well-known *Manual of Operative Surgery*,⁹ Mr. Waring has carried out in a

⁸ *American Practice of Surgery*. A Complete System by Representative Surgeons of the United States and Canada. Edited by Joseph Decaut Bryant, M.D., and Albert Henry Buck, M.D. In eight volumes. Volume V. New York: William Wood and Co. (Imp. 8vo, pp. 973, illustrations 460. Subscription.)

⁹ Oxford Medical Publications. *Manual of Operative Surgery*. By H. J. Waring, M.S., M.B., B.Sc. Lond., F.R.C.S., Senior Assistant Surgeon, St. Bartholomew's Hospital; Consulting Surgeon to the Metropolitan Hospital; Examiner in Surgery, University of London. Third edition. London: Henry Frowde, and Hodder and Stoughton. 1909. (Cr. 8vo, pp. 782, 521 illustrations, 12s. 6d.)

very satisfactory manner the pleasant though onerous duties that are imposed on a successful author. This work, which is now in a third edition, has been carefully revised, and though much obsolete matter has been omitted, it has, unfortunately we think, been found necessary to enlarge the volume. A decided improvement has been effected by the addition of illustrations, which for the most part compare very favourably with many of the sketchy and diagrammatic drawings that have been carried over from previous editions. Although by its excellence and the wide favour it has gained it may fairly be regarded as beyond criticism, we still hold that this manual contains far too much superfluous matter. If it be considered that it was written as a textbook for classes in operative surgery, it is hard to conceive what service can be done, with this purpose in view, by the retention of the chapter on the methods of warding off wound-infection, and the addition of descriptions of operation which can only be performed on diseased and injured tissues.

The fourth volume of KÖNIG'S *System of Surgery*,¹⁰ written by Dr. OTTO HILDEBRAND, has now reached its third edition. It covers much the same ground as the first volume of Erichsen under the title "General Surgery," but deals less with treatment; and though, as is stated on the cover, "revised," it gives the impression that little has been added beyond short accounts of such matters as the *Spirochaeta pallida*, spinal anaesthesia, and so on. To give eight pages to hospital gangrene when less than one can be afforded for noma, and only ten for osteo-arthritis, is hardly in accordance with the relative importance of the conditions in the twentieth century. Again, to take random examples, to the account of phossy jaw no mention of its association with tuberculosis has been added; brandy is still advocated in the treatment of delirium tremens; and the section on glands recalls the writings of French army surgeons on the subject of fifty years ago rather than the cases from recent literature. At the same time there is an excellent description of tumours, and the chapters on injuries and diseases of the tissues afford all the information necessary for those reading for examinations. Our only quarrel with the book is that, instead of mere revision, some rearrangement was required to give it the full value it ought to have.

In its scope and the arrangements of its material, Professor KÜESTER'S volume on general surgery and surgical technique¹¹ differs to some extent not only from English but also from German textbooks on the principles of surgery. It is not a bulky and comprehensive treatise, but the result of a successful attempt to afford within the compass of a single handy volume a good foundation for general surgical knowledge, together with sound instruction on the practical details of modern surgical work. The needs of the advanced student who is engaged in clinical work, and also those of the busy practitioner, for instruction that is concise and yet full and useful, are met by this work, in which the disputable and dispensable are rigorously excluded in favour of subjects of decided practical importance. The first section deals, under the heading of General Surgical Technique, with the details of antiseptic and aseptic methods, with general and local anaesthesia, with the different procedures which in this country are classed as the details of minor surgery, and with the treatment of clean wounds. In the second section, which is devoted to general surgical pathology and therapeutics, there are chapters on morbid growths, on injuries of both the soft parts and bones, and a review of the important subjects of wound infections and general infective diseases. The remaining pages are taken up by a somewhat cursory survey of the surgical diseases of the different structures of the body. The book, of course, like other treatises on general surgery or surgical principles, contains few allusions to the surgical diseases of the

¹⁰ *Allgemeine Chirurgie*. Von Dr. Otto Hildebrand, Professor of Surgery in Berlin. Third edition. (König's Lehrbuch der Chirurgie, vol. IV.) Berlin: A. Hirschwald. 1909. (Sup. roy. 8vo, pp. 1008, illustrations 438. M. 20.)

¹¹ *Grundlege der Allgemeinen Chirurgie und chirurgischen Technik*. For the Use of Practitioners and Students. By Professor Dr. Freiherr v. Küster. Berlin. Berlin and Vienna: Urban and Schwarzenberg. 1903. (Sup. roy. 8vo, pp. 420, 291 illustrations, M. 10.)

different organs or regions. In his clear and thorough teaching of the latest developments in surgical technique and pathology, Professor Kuester is assisted by a profusion of good original illustrations.

GUNSHOT WOUNDS.

It may be reckoned to the credit side of the account that Major C. G. SPENCER has drawn largely on the writings of Mr. Makins, whose account of surgical experiences in South Africa has been used by every subsequent writer, for the purposes of his excellent little book on *Gunshot Wounds*.¹² The manual is intended to meet the need for a short introduction to the subject, and will satisfy the requirements of the young army surgeon. The peculiar conditions of naval warfare and the distinctive characters of the injuries, about which we know something since the Russo-Japanese sea fights, will necessitate a treatise of wider range for the naval surgeon; but the material in this book will be valuable to him so far as it goes. In a preliminary chapter on the mechanics of projectiles Major Spencer gives one of the clearest and simplest expositions of this by no means easy subject we have read. There follows an account of the general characters of gunshot wounds which is up to date and has the qualities naturally expected from wide experience. In discussing the "first field dressing," perhaps it would have been well to express boldly the feeling of incomplete satisfaction with the present pattern to be read between the lines. The American plan of having a light metal case sealed after sterilization, and the German and Japanese devices for securing aseptic handling, are improvements valuable enough to call for adoption. The succeeding chapters deal with regional and tissue injuries; that on wounds of vessels is notable in that the fogs of the old and occasionally incorrect nomenclature are not allowed to obscure the clear picture of immediate and remote consequences of injury. The author is no doubt in the right in not saying anything about recent methods of vascular suture, although in the future they may modify practice considerably. There is nothing very new to be said about abdominal injuries, but the routine adoption of masterly inactivity with discriminating resort to operative interference is well argued. It will not be long before the chapter on the surgery of the chest at base hospitals will have to include a description of positive and negative pressure chambers.

PUBLIC HEALTH.

CANDIDATES for the Public Health Diplomas are already well supplied with textbooks, most of which are revised at more or less frequent intervals, so that it requires not a little courage on the part of an author to put forward yet another. The reason given by Dr. GILBERT E. BROOKE for adding to the list is a desire to compress into one volume enough information to enable a candidate to obtain a sufficient knowledge of all the subjects required for the public health examinations. Although we cannot agree with Dr. Brooke as to the propriety of placing in the hands of a student a single volume purporting to contain all that is required for a particular examination, we consider that his *Essentials of Sanitary Science*¹³ may still serve a useful purpose. It is not by any means a cram book, though it may very properly be the only book, or almost the only one, to be studied during the month immediately preceding an examination. One of the fullest and most complete chapters is that which deals with geology, and upon this subject the public health student will find sufficient information for examination purposes. For the most part the statements made by the author are reliable and in accordance with present-day ideas. The chapter dealing with bacteriology might be expanded with advantage. There is no mention of the methods which should be adopted for

the bacteriological examination of air, water, or foods, while there appears to be some confusion in the author's mind as to the purely artificial distinction of the words "bacteria" and "bacilli." On page 185 he seems to use the term "bacteria" for non-sporing and "bacilli" for sporing organisms, but he does not consistently maintain this distinction, for on page 198 he speaks of the typhoid *bacillus* and on page 201 he refers to the Klebs-Loeffler *bacillus*. In future editions of this work the author should make it quite clear in his account of the technique of Widal's reaction that it is not a drop of blood taken from a suspected case of typhoid fever which is examined, but of the serum of the blood. He will no doubt also on revision add to the list of theories of acquired immunity from disease, and will not omit to mention Ehrlich's side-chain theory.

In a work written by an engineer upon the cause and prevention of typhoid fever we turn instinctively to that portion which deals with water supplies. Mr. WHIPPLE, in *Typhoid Fever: Its Causation, Transmission, and Prevention*,¹⁴ has shown much praiseworthy industry in gathering together records of the effects of contaminated water supplies upon the incidence of typhoid fever in a large number of towns in America, and he has come to the conclusion that generally speaking a very low typhoid death-rate indicates a pure, and a very high rate a contaminated, water supply. By the aid of diagrams he discusses the influence of public water supplies on the typhoid fever death-rates of cities, and claims to prove that when a city changes its water supply from a polluted river to that of driven wells or constructs filters to purify a contaminated water there then follows a lessened incidence of typhoid fever. Although we are not sufficiently sanguine to expect to extinguish typhoid fever by the abolition, if it were possible, of all bad water supplies, we are in entire agreement with Mr. Whipple in his crusade in favour of a pure water supply. His researches extend over a long period of time and over a large area of country, and he has put together his results and his conclusions in a very able and convincing manner.

NOTES ON BOOKS.

A WELL-KEPT lawn is a beautiful as well as a useful part of a garden, and a photograph of such a one forms the frontispiece to an inexpensive book on *Lawns and Greens: their Formation and Management*, by Mr. T. W. SANDERS,¹⁵ the editor of two gardening papers, and the author of several more elaborate works. The scope of his new book is indicated in the title, and it will be sufficient to add that the author gives special chapters to cricket grounds and golf greens. The latter contains some general observations about laying out a green which are, perhaps, rather too dogmatic, but the sections on the formation of teeing grounds and putting greens will be useful in this day of inland links. The last parts of the book deal with appliances and with miscellaneous data about seeds and manures.

In issuing the first two volumes of their *Scientific Primers—Biology* (Gibson) and *Chemistry* (Tilden),¹⁶ Messrs. Dent have given practical recognition to the acknowledged fact of the growing interest taken by the general public in scientific work. Different attitudes have been adopted by Professor Gibson and Professor Tilden in the two volumes. Professor Gibson has aimed rather at the general public, and has dealt especially with such features of biology as adaptation, sensitivity, and the larger ideas of the subject. He has a remarkable and original chapter on the skeleton from the engineer's standpoint. Professor Tilden has preferred to deal with chemistry as required by

¹² *Typhoid Fever: Its Causation, Transmission, and Prevention*. By G. C. Whipple, Consulting Engineer; with an introductory essay by William T. Sedgwick, Professor of Biology, Massachusetts Institute of Technology. New York: J. Wiley and sons; and London: Chapman and Hall, 1908. (Post 8vo, pp. 443, 50 figs. 12s. 6d.)

¹³ *Lawns and Greens: their Formation and Management*. By T. W. Sanders, F.L.S. London: W. H. and L. Collingridge. (Cr. 8vo, pp. 138, 1s.)

¹⁴ *Dent's Scientific Primers*. Edited by J. Reynolds Green, Sc.D., F.R.S. *Biology*, by R. J. Harvey Gibson, M.A., Professor of Botany in the University of Liverpool. *Chemistry*, by W. A. Tilden, D.Sc., F.R.S., Fellow of the University of London, Professor of Chemistry in the Imperial College of Science and Technology. *Botany*, by Dr. Reynolds Green, F.R.S., Editor of the Series. London: J. M. Dent and Co. (Fesp. 8vo, pp. 128 and 113 respectively. 1s. each.)

¹⁵ Oxford Medical Publications. *Gunshot Wounds*. By C. G. Spencer, M.B., F.R.C.S., Professor of Military Surgery, Royal Army Medical College, London; Henry Frowde, and Hodder and Stoughton, 1908. (Cr. 8vo, pp. 299, 5s.)

¹⁶ *Essentials of Sanitary Science*. By Gilbert E. Brooke, M.A., D.P.H., L.R.C.P. Lecturer in Hygiene and Examiner in Chemistry and Physics to the Medical Schools of the Straits Settlements. (Kimpton's Essential Series.) London: H. Kimpton. (Cr. 8vo, pp. 426; 62 illustrations. 6s.)

the elementary student in the laboratory. He starts with a gross example of the split infinitive in his first sentence, a defect that Messrs. Dent's reader might surely have expunged. Otherwise both volumes are admirably written and admirably produced. The third volume of the series is on *Botany*, and it is written by Dr. REYNOLDS GREEN, F.R.S., the editor of the series. He has dealt with the subject from the biological side, and has presented the study of a plant as the study of a living organism; in this way he has made his own book live, in contrast to the dry-as-dust catalogue of names by which a former generation of students was repelled. The remaining volumes of the series are to deal with *Astronomy*, *Geology*, *Physiology*, and *Zoology*.

The *Formulaire Consultations Médicales et Chirurgicales*, by Professors G. LEMOINE and E. GERARD¹ of Lille, the first edition of which was favourably noticed in the JOURNAL (1905, vol. ii, p. 388), has reached a fourth edition. In its new edition the book has been adapted to the new French *Code* issued last year, and in its preparation the authors have had the co-operation of M. Vanvert, Surgeon to the Lille hospitals. The changes rendered necessary are chiefly to be found in the first part, which deals with the various drugs in alphabetical order; the second part of the book is a therapeutic index with notes on treatment, which preserve the brevity commended in the first edition.

Formulaire Consultations Médicales et Chirurgicales. Par G. Lemoine et E. Gérard. Avec la collaboration de J. Vanvert. 4ème édition. Paris: Vigot Frères. 1909. (Fcap. 8vo, pp. 920. Fr. 7.)

MEDICAL AND SURGICAL APPLIANCES.

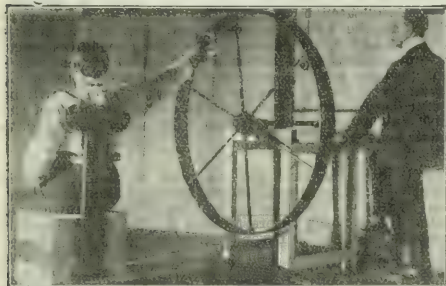
Carabosse's Improved Shoulder Exerciser.

WE have received the following description of the apparatus illustrated in the accompanying photograph for stretching the ligaments of the shoulder-joints.

It consists of:

1. A wheel fixed on a suitable stand; it is 4 ft. in diameter, and can be made to revolve in a vertical plane. The movements may be produced by hand, pedal, or otherwise. To one spoke a sliding clutch is attached, with which is connected a stirrup-shaped handle.

2. A chair, consisting of a seat capable of being moved up and down by a vertical screw support placed centrally. The back of the chair consists of a T-shaped structure, the vertical limb of which fits into brackets attached to the seat, and can be raised or lowered to suit the length of the back of the person using the apparatus. A belt is fixed to the stem for encircling the waist of the sitter. To each end of the crosspiece a belt is fixed for encircling the



shoulders. The sitter, when securely strapped to the chair, has the movements of his spinal column limited to a minimum, and the shoulder-blades are practically immobile when the shoulder-straps are securely fastened. The sitter, with his mesial plane parallel to that of the wheel, and a little further than an arm's length from it, grasps the stirrup-shaped handle, which is at first attached near the centre of the wheel. On bringing the wheel into motion, by the operator's hand or the pedal, the hand of the sitter is circumducted through a small circle at first. The circle of circumduction is gradually increased by shifting the clutch towards the rim. About sixty revolutions a minute is a desirable speed. The seat rotates on a platform, so that, without unfastening the sitter, his other arm can be subjected to similar exercise.

The Bournemouth Hydropathic Company is the owner of the patent rights attaching to the apparatus, and will on application supply it at little over net cost to any purely charitable institution.

THE PATHOLOGY OF INSANITY.

To whatever criticisms the London County Council may lay itself open on other sides, there is at least one on which its policy is unassailable. There are no diseases which more directly affect the welfare of the community, and which at the same time can be more successfully dealt with by enlightened administrative methods combined with proper medical treatment, than those which come under the head of insanity. It is therefore not too much to say that there are none as to which accurate knowledge in regard to causation and possible means of prevention is more urgently required. It is to the credit of the Council that when it took over the charge of the lunatics within the area of its jurisdiction it clearly recognized this necessity, and took steps to meet it by establishing a well-equipped laboratory for the study of the pathology of insanity. But the best-laid schemes may come to naught for the want of the right man to carry them into execution. The Council was therefore happy in finding ready to its hand for the purpose Professor F. W. Mott, who by the breadth of his scientific training, by his special knowledge of neurology and by his experience as a general physician, was peculiarly well fitted for the post. How fully he has justified the hopes of those who placed him at the head of the Claybury Laboratory is shown by the large additions to knowledge—in a region not many years ago a blank space on the map of pathology—that have been the fruits of the work done there by him and under his inspiration and guidance. The *Archives of Neurology* which have appeared from time to time under his editorship are a record of well directed and persevering research which is in the highest degree creditable to himself and to his assistants and pupils, and of which the body under whose auspices it is carried out may well be proud. The publication of the *Archives* is an event to which students of neurology and of mental disease throughout the world now look forward with well-grounded confidence that it will bring them pregnant suggestions and fresh facts throwing light on the problems in which they are interested.

The fourth volume, which has just appeared,¹ does not belie the promise of its predecessors; we can give it no higher praise. It may be noted that the title has been altered to *Archives of Neurology and Psychiatry*, a change indicating an enlargement of the scope of the publication, which seems to be warranted by the increasing readiness of medical officers of asylums to contribute scientific papers bearing upon the causation, treatment, and pathology of insanity. The hope is expressed that in this way the *Archives* may henceforth be a yearly periodical instead of appearing at irregular intervals. There can be no doubt that this would greatly contribute to the advance and spread of knowledge in regard to the subject to which it is devoted, and in the interest of humanity as well as science it is desirable that the hope will be fulfilled.

In the preface to the volume under review Dr. Mott refers to the hope expressed by him in the previous volume that the London County Council would see its way to establish in London a hospital for the investigation and treatment of mental disease still in the curable stage. The munificent offer made by Dr. Henry Maudsley, to which reference has more than once been made in the JOURNAL, has brought the foundation of such a hospital within the sphere of practical politics; and how fully the zeal of humanity which prompted the offer is according to knowledge is shown by an article from the pen of that distinguished physician which forms an appropriate introduction to the present volume. With that article

¹ *Archives of Neurology and Psychiatry* (with introductory paper by Dr. Henry Maudsley). From the Pathological Laboratory of the London County Asylums, Claybury, Essex. Edited by Frederick Walker Mott, M.D., F.R.C.P., F.R.S., Director of the Laboratory and Pathologist to the London County Asylums; Physician to Charing Cross Hospital; Fullerian Professor, Royal Institution; Corresponding Member of the Société de Psychiatrie de Paris; Foreign Associate of the Société Clinique de Médecine Mentale. Vol. iv, 1909. Printed for the London County Council, and may be purchased either directly or through any bookseller from P. S. King and Son, 2 and 4, Great Smith Street, Victoria Street, Westminster, S.W., agents for the sale of the publications of the London County Council.

and the proposal which forms its subject we deal elsewhere (p. 1020). Here it need only be said that we note with pleasure the fact that the Asylums Committee of the London County Council is favourably disposed to a scheme which is an essential part of Dr. Maudsley's proposal, and which has been repeatedly urged in the JOURNAL—that is, the removal of the pathological laboratory from its present home in the wilderness to London. It is unquestionable that the usefulness of the laboratory as a place of research, and still more as a centre of teaching, is greatly lessened by its comparatively inaccessible situation. The Pathological Subcommittee of the London County Council some time ago recommended that the laboratory should be removed to London, but, doubtless owing to economic reasons, the recommendation has so far remained the expression of a "pious opinion." While fully recognizing the difficulties that lie in the way, we think that the ultimate advantages of the proposed transfer would be so great as to outweigh any consideration of immediate cost.

A matter of great importance touched on by Dr. Mott in his preface is a proposal made by him some time ago that a special diploma in mental disease should be given by universities and licensing bodies to persons who have gone through an adequate course of training. This would tend to raise the standard of professional efficiency in lunacy practice, as the diploma in public health has raised it in the province of sanitary science. The suggestion, which was at first somewhat coldly received by those to whom the profession looks for guidance, has now, we believe, found favour in their eyes, and some steps have been taken to carry it into effect. We think the idea is thoroughly sound, and that its fulfilment would tend to the advancement of knowledge and thereby to the benefit of the nation.

Passing to the other contents of the volume, we find first the full text with illustrations of the Morison Lectures on the pathology of syphilis of the nervous system in the light of modern research, delivered by Professor Mott at the Royal College of Physicians of Edinburgh in January last, and published in this JOURNAL February 20th, p. 454, and February 27th, p. 524. In those lectures he brings the evidence of the Wassermann method of diagnosis to strengthen the thesis "No syphilis, no tabes," which he has already so powerfully advocated on the basis of statistics and observations relating to the etiology of the disease. The hypothesis that it is a bacterial toxæmia caused by a diphtheroid organism finds no support in the results of an elaborate bacteriological investigation of general paralysis made by Dr. J. P. Candler, Assistant Pathologist to the London County Asylums. Full details are given of the methods of investigation employed. We need only indicate his conclusions:

1. That diphtheroid organisms, some pathogenic and others non-virulent to man and animals, are extremely common organisms in Nature.
2. That they can be found with considerable frequency and representing several different species in all parts of the human body, but especially on serous and mucous surfaces.
3. That the genito-urinary tract affords a very frequent nidus for some varieties.
4. That diphtheroid organisms may be found either in pure culture or associated with other micro-organisms in diseases which have been proved beyond doubt to be due to another specific factor.
5. His own observations led him to believe that diphtheroid organisms cannot be isolated from cases of general paralysis with any greater ease of frequency than from cases unassociated with that disease.
6. That during the progress of general paralysis the impairment of tissue resistance facilitates the occasional entry of micro-organisms into the blood stream.
7. That the organisms which gain entry are not confined to any particular species, but may include several varieties, among which, according to the observations of others, the diphtheroid class must be included.

After discussing the grounds on which Drs. Ford Robertson and McRae base their contention that an organism of the diphtheroid species, termed by them *Bacillus paralyticans*, is the specific etiological factor in the genesis of general paralysis and tabes, Dr. Candler points out that neither his own researches nor those of Professor A. Marie, who has independently investigated the subject, support this view. That general paralytics, he adds, are liable to secondary infections and complications is not disputed; moreover, he admits the possibility that diphtheroid bacilli may play some part in these secondary infections and that the use of an antiserum prepared from

such bacilli may be followed by transitory beneficial effects. His opinion, however, is that the assumption that a particular group or groups of diphtheroid organisms act as the specific factor in the production of general paralysis is unwarranted and has not yet been substantiated by any published research.

Dr. Mott contributes interesting reports of a case of gummatous meningitis in a congenital syphilitic; of a case of localized syphilitic pachymeningitis cerebri, with speech affection; of the results of the examination of the nervous system in a case of chronic lead encephalitis; and of a case of embolism of the anterior division of the left middle cerebral artery. A paper of especial value is one on tuberculosis in the London County Asylums in which he has collected an immense body of carefully-sifted facts. The conclusions are so important that we give his summary of them:

1. The evidence adduced does not support the contention that infection is one of the *strongest* causative elements in the prevalence of tuberculosis in the London County Asylums; still less does it support the view that the causes of tuberculosis *inhere* in the asylums themselves and not in the character of the patients sent to them.
2. Notification during five years from all the London County Asylums does not show any ward incidence comparable with that shown by the notification of dysentery during the same period; therefore, if tuberculosis is communicable, it cannot be regarded as an infectious disease in the same sense as dysentery, small-pox, scarlet fever, etc.
3. The average proportion of living patients reported as tuberculous is 20 per 1,000 inmates of the London County Asylums, but the incidence of reported cases shows very considerable variations, the lowest being Cane Hill, 10.6, and the highest, Claybury, 40.3. The personal equation must largely contribute to these wide differences.
4. Association with mental disease of the cases reported during life indicates that young subjects suffering from melancholia, dementia præcox, and imbecility are especially prone to the disease.
5. Post-mortem statistics confirm this correlation, but, in addition, show that a large number of general paralytics die with recent active tuberculosis which is not diagnosed during life; this is especially the case in regard to female general paralytics.
6. In 14.8 per cent. of the autopsies made at the London County Asylums during the past five years active phthisis was found. Again, a great variation in the returns from the various asylums was noticeable, for which the personal equation must be held largely responsible.
7. It cannot be shown that the variation in the incidence of tuberculosis in the various London County Asylums depends on any measure upon the class of patient received, the parish areas from which they are drawn, the construction and age of the asylum, or the dietary or treatment. Cane Hill Asylum, situated on a high chalk down, has a comparatively lower death-rate and a lower tuberculosis death-rate than any of the other London County Asylums. The relatively higher death-rate from tuberculosis at Claybury may be explained to some extent by the fact that the necropsies are made by a skilled pathologist, but it might be attributed to the clay soil and cold, damp climatic conditions, although the total death-rate is lower than at most of the other asylums.
8. A comparison of the phthisis death-rate for 1907 at the several age-periods per sane living in London and per 1,000 of the total living insane population (48,372) resident in the London County Asylums show that the mortality from phthisis among the insane is highest at a much earlier age-period than among the sane. At the age-period 45 to 55, when it reaches its maximum among the sane, it is a question whether the incidence among the insane is much greater than among the sane pauper population.
9. The comparison also shows that the death-rate from phthisis for the insane between the ages of 15 to 35 is about fifteen times that for the sane for the same age-period. All things, however, must be made for the fact that the majority of the inmates of the asylums belong to the poorest classes.
10. The Jewish population at Colney Hatch (mainly aliens) show a higher death-rate (25.7 per cent. of total deaths) from tuberculosis than the Christians.

The following is the explanation of this fact given by Dr. Mott (p. 96): "It is generally acknowledged that syphilis is the cause of this disease, and the history of sterility, miscarriages, and stillbirths which is so frequently found in female general paralytics, together with other reasons, supports the contention that the reason that the female paralytics show a much higher incidence of active pulmonary tuberculosis than the males does not rest upon the fact that they are much less able to acquire the seeds of infection in the asylum, but that the social conditions under which a good number of them lived prior to admission, of exposure to cold and wet, of insufficient nourishment, poverty, overcrowding, and alcoholism, combined with an inborn mental and physical deficiency in a considerable percentage, produced a more suitable soil for the development of tuberculosis."

This, Dr. Mott thinks, is because the Jewish patients are largely composed of aliens who have not been long in this country; they come from Russia, for the most part, where they and their progenitors have lived in great pauperism and degradation, and, therefore, unlike the prosperous Jews, whose progenitors settled in this country several generations back, have already the seeds and soil of consumption in their bodies when they arrive in this country.

11. Evidence is not forthcoming to prove that the staff in the London County Asylums contract tuberculosis from the patients.

12. During the past ten years 1,982 necropsies were made at Claybury Asylum by skilled pathologists, and active phthisis was found in 416 cases (20.9 per cent.). Tuberculous ulceration of the intestines was found in 73 males (36.3 per cent.) and 115 females (53.4 per cent.) of the cases dying with active tuberculosis. Twenty-five per cent. of the deaths with active phthisis occurred within one year of admission, and practically 70 per cent. within five years of admission.

13. The *post-mortem* statistics for the past six years show that 51.6 per cent. of all the patients dying exhibited either obsolescent or active tuberculosis or both. It was inferred from the *post-mortem* examination that not more than 10 per cent. of the cases with active phthisis at autopsy could have acquired the disease in the asylum.

14. Infection with the disease depends upon dosage and resistance.

15. The prophylactic measures for the prevention of tuberculosis are good in the London County Asylums as regards milk, food, personal cleanliness, ventilation, clothing, warmth, and exercise in the open air, and the liability to infection from preventable causes is less than in the houses from which the majority of the insane are taken. The only further prophylactic measures consistent with proper and due economy appear to be (1) the earlier and more frequent diagnosis of active phthisis with a view to isolation and treatment; (2) the adoption of the verandah system of open-air treatment at all the asylums; and (3) the encouragement of patients suffering with phthisis to expectorate into proper receptacles, and thus possibly diminish the amount of intestinal tuberculous ulceration caused by autoinfection.

Among the papers published in the *Archives* are two by distinguished foreign investigators: one by Dr. Ariens Kappers, Director of the Neurological Institute, Amsterdam; the other by Dr. Giacomo Pighini, of Reggio Emilia. In neither case was the work done at Claybury, but the papers are included because they were offered as being connected with work that had appeared in previous issues. Dr. Kappers's researches on the evolution of the smell area, embodied in a paper entitled *The Phylogenesis of the Palaeo-Cortex and Archi-Cortex compared with the Evolution of the Visual Neo-Cortex*, correspond with those of Dr. Mott on the evolution of the visual area in mammals, published in the third volume of the *Archives*. The following is a summary of his conclusions:

The granular layer in the cortex is primary in character, and has originally receptive functions.

The infragranular layer, as already pointed out by Watson, has projection and intraregional associative functions. It increases phylogenetically after the formation of the granular layer and before the formation of the supragranular pyramids (Mott).

The supragranular pyramids—already proved by Dr. Mott to be the latest to appear—have chiefly associative functions of a higher order, and therefore are just as much dependent on the surrounding regions as on the region where they are found.

The first tactile neo-cortical centre (occurring in reptiles) belongs to the trigeminal sensibility. This is explained by the associative functions between olfactorium and oral sensibility.

The neo-cortex originates from the palaeo-cortex, and not from the archi-cortex. This explains why the corpus callosum (commisure of the neo-cortex) in the lower mammals originally runs ventrally together with the anterior commissure (commisure of the palaeo-cortex), and not dorsally with the psalterium (commisure of the archi-cortex).

Dr. Waldemar Koch and Mr. Sydney Mann contribute a chemical study of the brain in healthy and diseased conditions, with special reference to dementia praecox. According to the authors, analysis of the brain at different ages shows that with its growth there is a decrease in the amount of moisture, proteins, extractives, and ash, while the cerebrins, lipoids, and cholesterol increase. Comparison of brains from cases in which the causes of death were of an entirely different character showed no variations of importance. Analysis of the brain in nine cases of dementia praecox showed a diminution of the neutral sulphur. This variation appears to be independent of the cause of death, and so far has not been found in other forms of insanity. The authors therefore think it not unreasonable to suppose that the subjects of this disease may possess a general bodily inherent deficiency for oxidation processes. Five brains from cases of general paralysis were examined as controls; they did not show any marked changes in the neutral sulphur content of the brain. Compared with the normal, the results show that the destructive changes in this disease affect the brain generally, not one constituent in particular. Some support to the view that in dementia praecox there

is a general inherent bodily deficiency for oxidation processes is afforded by Dr. Pighini's observations on the increase of neutral sulphur in the urine in this disease. That investigator selected four typical cases of dementia praecox in the acute, and eight in the more advanced stage, and studied the metabolism of the various food elements by means of numerous analyses of the food administered and the excretions. He found that in the acute phase there is a negative balance of nitrogen (urea, uric acid, xanthin bases) and of phosphorus and sulphur, indicating a marked dissolution of the phosphorized and sulphurized proteins of the organism. In the advanced phase there is a proportionate retention of nitrogen and phosphorus, a loss of sulphur proportionate to these elements, and an independent loss of calcium. In both phases there is an altered water metabolism, and a relaxed excretion of chlorine.

Dementia praecox also forms the subject of a paper by Mr. G. H. Harper Smith and Mr. Rae Gibson, who give the results of a bacteriological examination of the cerebro-spinal fluid in the disease. They were led to the conclusion that the reported discovery of any organism in the cerebro-spinal fluid in dementia praecox should be regarded with great caution, and, in the light of the difficulties they have encountered, they suggest that any such organisms may be the result of external contamination.

We have no space to do more than mention the other papers contained in the volume. Dr. Candler reports a case of haemorrhage into the suprapneal capsule. The importance of this occurrence, he says, lies in the fact that such a lesion may occur giving rise to obscure abdominal or nervous manifestations difficult of diagnosis, and may even be a cause of death without any appreciable symptoms whatever. Dr. Helen G. Stewart gives notes and observations on forty cases of new growths, including eighteen intracranial tumours. She also contributes a description of the brain of an epileptic imbecile showing extensive heteropia of the grey matter, and a preliminary note on brain-weights and measurements in the insane. Dr. H. Devine reports and comments on an interesting case with impulsive obsessions of suicide and automutilation. Dr. Geoffrey Clarke gives a short account of the incidence at Long Grove Asylum from its opening on June 18th, 1907, to October 31st, 1908. The volume ends with the statistics relating to the percentage incidence of intracerebral and subdural haemorrhage and deposit in the insane by Dr. Mott.

Much of the work recorded in this volume of the *Archives of Neurology and Psychiatry* is necessarily of a highly technical character. But even those who have no time to study these abstruse investigations should be grateful to the patient workers who are labouring in dark mines which may at any time yield priceless gems of knowledge. It is only by such work that the hidden treasures of new truth can be gained.

The volume is abundantly and beautifully illustrated, and all concerned in its production are to be heartily congratulated on the result of their labours. To the London County Council special honour is due for the liberality with which it promotes the cultivation of a field of scientific knowledge which, but for such encouragement, could scarcely be reclaimed and put to profitable use.

THE International Congress of Psychology will hold its sixth meeting in Geneva this year from August 3rd to the 7th, under the Presidency of Professor Th. Flournoy. The programme includes discussion of general and special topics, questions of standardization, demonstration of apparatus, and individual papers. The general topics to be discussed are feelings—"sentiments" (by Külpe and Sollier), subconscientness (Dessoir, Janet, Prince), measure of attention (Patrizi, Ziehen), religious psychology (Höfding, Leuba). The special topics are the psychopedagogical classification of backward pupils (Decroly, Ferrari, Heller, Witmer), pedagogical psychology (Ioteyko), orientation at a distance (Thauziès), perception of position and movement of the body and limbs (Bourdon). Under standardization will be included terminology, standard colours, enumeration of errors in testimony experiments, notation of age of children, mathematical determination of numerical results of experiments. Communications relative to the Congress should be addressed to the General Secretary, Professor Ed. Claparède, 11, Avenue de Champel, Geneva.

LITERARY NOTES.

THE publishing business established at Edinburgh over forty years ago by Messrs. Edward and Stuart Livingstone has been bequeathed to Dr. Alexander Walker. Dr. Walker, who has retired from practice, is carrying it on with his son under the management of Mr. H. M. McKechnie, who was for some years assistant with Mr. Young J. Pentland. It is the intention of the firm to maintain the reputation it has gained for the production of high-class medical literature.

In a supplement to its March issue, the *Indian Medical Gazette* gives a report of the proceedings of the Medical Congress held at Bombay last February. It is well arranged, and summarizes without superfluous detail a large amount of good work.

The *Eugenics Review*, of which we have received the first number, is to be the organ of the Eugenics Education Society. In a "foreword" Mr. Francis Galton emphatically disclaims "rivalry in any form with the more technical publications issued from time to time from the Eugenics Laboratory of the University of London now located at University College." On the contrary, the purpose of the *Eugenics Review* is to supplement them. Elsewhere we are told that the new review is not like unto other reviews. "It has a definite plan and purpose, the noblest that can be imagined—the betterment of the Human Race." Among the contributors to the number before us are Mr. M. Crackanthorpe, K.C., the Rev. Dr. W. R. Inge, and Sir Edward Brabrook, C.B.

Another new periodical on our table is the *British Health Review*. The editor, Mrs. L. Hodgkinson, in an opening article, discusses the medical profession and the public. The writer foresees a great change in their relation to each other. It is comforting to be assured that the doctor's position must enormously gain in importance, "for, instead of relegating the medical profession to the ambulance service of humanity, we shall regard its members as the guardians of health, and generals in the battle with all the preventable diseases that decimate our ranks to-day. They shall teach us to out-general these evils, to use the weapons of precision with which they will arm us, to rally to our aid every friendly force, every natural advantage, until in this warfare also we may beat our swords into ploughshares, and 'the trumpet shall sound Release.'" One object of the *British Health Review* is, we gather, to dissipate the ignorance of the public in regard to the machinery of life and the processes by which health is maintained. Another is to create a better understanding between the medical profession and the public, "making it clear to the former that none of our old gratitude for their sympathy and humanity has deserted us in the new call we make upon their more intellectual qualities, and to the latter that the greater half of the responsibility for disease and degradation rests upon their own shoulders, and can in no wise be shifted or ignored." The editor has for this reason invited many well-known doctors and surgeons to put before the readers of the *British Health Review*, in a language understood of the people, what it is essential for them to know. The intention is excellent, but the trail of the diet faddist is over the periodical; and though it would, perhaps, be too much to say, from an inspection of one number, that it is written by cranks for cranks, we cannot honestly say we think it likely to fulfil its useful but somewhat difficult mission.

In a paper reprinted from the *New York Medical Record*, Dr. Herbert S. Birkett, of Montreal, gives a brief account of the history of medicine in Quebec from 1535 to 1838. Canada celebrated the three hundredth anniversary of the foundation of Quebec on July 3rd, 1908, but the history of medicine in that province began seventy-three years before, when Jacques Cartier built a rude fort on the banks of the St. Charles facing the Indian village of Stadaconé. Leaving his men to construct an abode against the coming winter, he sailed up the river St. Lawrence as far as the village of Hochelaga, the site of which includes a part of the grounds of McGill University. On his return he found his crew suffering from scurvy. Among them was a man who evidently had some knowledge of medicine, for he made a

post-mortem examination on the body of a young man named Rougemont, in order to ascertain the cause of death, and, if possible, save the remnants of the ship's company. The following is the record of the first autopsy performed in Canada:

He was found to have his heart white, but rotten, and more than a quart of water about it; his liver was indifferent faïre, but his lungs blacke and mortified, his blood altogether shrunk about the heart so that when he was opened, great quantitie of rotten blood issued out from about his heart; his milt towards the backe was somewhat perished, rough as if it had been rubbed against a stone. Moreover, because one of his thighs was very blacke without, it was opened, but within, it was whole and sound: that done as well as we could, he was buried.

The captain, having witnessed an apparently marvellous recovery from scurvy in an Indian, found that the specific used was the bark and sap of a tree called in the native tongue "Améda." This tree is known to-day as "l'épinette," or the spruce. The method of preparation was as follows:

To take the bark and leaves of the said tree, and boile them together, then to drink of the sayd decoction every other day, and to put the dregs of it upon his legges that is sicke; moreover they told us that the vertue of that tree was to heale any other disease.

The sailors were much troubled with the "French Pockes," but after liberal doses of the bark they were "cleane healed." This fortunate result led to such a demand for the remedy, that men were ready to kill each other in their eagerness to test its efficiency—

so that a tree as big as any oak in France was spoiled and lipped bare, and occupied all in five or six daies, and it wrought so wel, that if all the phisicians of Montpellier and Lovaine had bene there with all the drugs of Alexandria they would not have done so much in one yere as that tree did in six daies, for it did so prevaille that as many as used of it, by the grace of God, recovered their health.

When Champlain arrived in Canada in 1608 there was in his company a surgeon named Bonnerme, who however soon died of scurvy or dysentery. Among the earliest settlers in Quebec was Adrien Duchesne, a surgeon of Dieppe, who probably arrived in 1618. When Champlain surrendered the fort to Sir David Kirke in 1629, Duchesne remained and practised his profession under the English flag. His practice extended from Quebec to the post at Three Rivers midway between Quebec and Montreal. Another contemporary of Champlain was Robert Giffard, who went to Quebec in 1628 as surgeon to the company of "The Hundred Associates." He took a considerable part in inducing families to settle in the colony, and was a member of the Council, a body empowered to enact local laws and to adjust differences between private persons. He practised in Quebec and the surrounding country, and was visiting physician to the Hôtel-Dieu founded in 1639. In 1658 Jean Madry, a surgeon of Quebec, while on a visit to France obtained from Barnois, first surgeon in ordinary to the King and head of the College of St. Côme, "Letters of Surgeon" for himself, "with power to establish in all parts of Canada the authority of surgery in order that the sick might receive more efficient medical care." These letters were registered in the Sovereign Council at Quebec, but they do not seem to have been much service to the profession. Madry was elected the first Mayor of Quebec, but the office was abolished after five weeks. About this time the need of a larger number of doctors was felt by the growing community and Jean Martinet undertook to teach his brother-in-law, Paul Prudhomme, by the system of apprenticeship. A physician of note of this period was Gauthier, who discovered the wintergreen plant which bears his name (*Gaultheria procumbens*). Another important doctor of the time was Michel Sarrasin, head of the medical staff of the Hôtel-Dieu. He was delegated by the French Académie des Sciences to make a special study of animals and plants in Canada. He made anatomical researches on the beaver, the muskrat, the seal, and the groundhog, and discovered the pitcher plant known to-day as the *Sarracenia purpurea*. Even in the eighteenth and early part of the nineteenth century there was no means of learning the art of healing in the Province of Quebec except by apprenticeship. The first student who went abroad to study medicine was François Blanchet, born in 1776. He was an active politician and a journalist as well as a physician. As was natural in a country

where there was no provision for medical education and where the demand for medical assistance far exceeded the supply quackery was rampant. To remedy this state of affairs the Intendant Bigot in 1750 introduced an ordinance which may be considered the code of the medical profession in Canada. This provided that no one should practise medicine without passing an examination. Those wishing to practise in a city were to be examined before the Physician of the King in the presence of the Lieutenant-Governor of the Jurisdiction. Those wishing to practise in the outlying districts were to pass an examination before the Physician of the King and a subdelegate. This ruling continued until 1788, when the British Parliament passed an Act which provided that no one should practise physic and surgery within the Province of Quebec, or midwifery in the towns of Quebec and Montreal, without a licence. A licence was to be obtained by passing an examination conducted by capable persons appointed by the Governor or Commander-in-Chief of the Province. This ordinance had a radical fault. It placed the study and the practice of medicine absolutely in the hands of the executive power, and this opened the door to partiality, injustice, and administrative tyranny. The Ordinance of 1788 was repealed in 1831, and by an Act passed in 1847 the medical profession in Lower Canada was incorporated under the name of "The College of Physicians and Surgeons of Lower Canada," and was empowered under certain restrictions to frame its own statutes for the regulation of the study of medicine in all its departments, and by-laws for its own government. In 1849 an amendment to this Act was passed, which authorized the Provincial Medical Board to issue licences.

THE ANAESTHETICS BILL.

MR. NORMAN G. BENNETT, Honorary Secretary of the British Dental Association, has issued a letter calling the attention of the members of that body to the fact that a measure entitled the "Anaesthetics Bill, 1909," was presented to the House of Commons on March 25th. The object of the bill, he says, presumably is to protect the public as far as possible against deaths arising from the administration of anaesthetics by unqualified persons. The bill proposes to do this by the following provisions:

1. Prohibiting the administration of any general anaesthetic by other than a legally qualified medical practitioner. Dentists registered "before the commencement of this Act" are exempt so far as the administration of anaesthetics "during a dental operation or procedure" is concerned.
2. On and after January 1st, 1911, no person may be registered under the Medical Acts "unless he shall have produced evidence that he has received theoretical and practical instruction in the administration of anaesthetics."

Mr. Bennett states that the executive of the British Dental Association is of opinion that it is unjust and unwise to deprive dentists who may be registered after "the commencement of the Act" of the right to administer anaesthetics for dental operations; and that the omission of local anaesthetics from the prohibition enjoined is calculated to defeat the object of the bill. This opinion is based on the following considerations:

1. There is no evidence to show that the employment of anaesthetics by dentists for dental operations has been a danger to the public.
2. Registration in the *Dentists Register* gives the right to practise dentistry or dental surgery in all its branches. The administration of anaesthetics, as an integral part of the practice of dentistry, and of the privileges acquired by registration, has never before been challenged.
3. The curriculum of the dental student is of such a nature that the average dentist has more experience and skill in the use of anaesthetics for dental operations and the avoidance of dangers than the average medical practitioner.
4. In country districts the deprivation of the right of dentists to administer anaesthetics would be a great hindrance to practice, and react with great hardship on the poorer class of patients who cannot afford to travel to the larger towns, where the dentist and the doctor may be found in close proximity.
5. Whilst the bill would entail no hardship upon the very rich or the very poor, who, in the one case can well afford to pay fees to both operator and anaesthetist, and in the other can continue to attend at the hospital, it would press very hardly upon the lower middle class, who would be unable to pay the double fee.
6. The proposed measure, prohibiting the use of general anaesthetics by unregistered persons for dental operations, would

of itself defeat its own object, because it would inevitably lead to the exclusive use of local anaesthetics. Most preparations for the production of local anaesthesia contain cocaine, and the use of this drug is attended by considerable risk, because of its variable effect on different persons. If the object of the bill is to be attained, it is essential that local anaesthetics should be included with general anaesthetics in the prohibition enjoined by the bill.

Mr. Bennett invites members of the Dental Association to place these considerations, by way of a private letter, before their Parliamentary representative, and to ask his support for the amendment of the bill in the two essential particulars, namely:

- (a) That all dentists, registered before and after the commencement of the Act, should be exempt from the prohibition so far as the administration of anaesthetics for dental operations is concerned.
- (b) That local anaesthetics should be included with general anaesthetics in the prohibition.

The bill, it is said, will be brought forward for second reading towards the end of this month.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the weeks ended January 23rd, 30th, February 6th, 13th, 20th, 27th, and March 6th, 13th, and 20th, the deaths from plague in India numbered 2,306, 2,897, 3,076, 3,162, 3,087, 3,750, 4,100, 4,593, and 4,530, giving a total of 31,481 between January 16th and March 20th, 1909. In the Bombay Presidency during the nine weeks in question, the deaths from plague numbered 6,599 (580 first week, 1,061 last week); in Bengal the numbers were 4,732 (first week 205, last week 2,277); in Madras Presidency the deaths have been insignificant in number: United Provinces, 4,921 (first week 334, last week 1,047); Punjab, 6,541 (first week 334, last week 1,047); Central Provinces, 3,151 (first week 334, last week 250); Rajputana 2,322 (first week 335, last week 334); Burma 3,544 (first week 357, last week 233). The total number of deaths from plague in India between January 1st and March 20th, 1909, amount to 35,801, giving an average of 453 per day. It will be seen that the year 1909 is showing, as did 1908, a marked retrocession in the number of deaths from plague. In districts where plague has been especially severe, as in the Punjab, the population has been so markedly reduced in numbers that wages have increased considerably, owing to the scarcity of finding labourers. One effect of this difficulty of obtaining labourers is that machinery is being introduced into the Punjab to an extent unknown hitherto.

HONG KONG.

DURING the weeks ended February 23rd, March 6th, 13th, 20th, 27th, and April 3rd and 10th the fresh cases of plague numbered 4, 3, 4, 1, 5, 6, and 1; the deaths from the disease during the weeks in question amounted to 3, 2, 1, 5, 4, 5, and 0 respectively.

JAPAN.

BETWEEN December 17th, 1908, and January 20th, 1909, the cases of plague reported were 32.

STRAITS SETTLEMENTS.

One case of plague reported, February 1st, 1909.

MAURITIUS.

One case of plague reported during the week ended February 13th, 1909.

EGYPT.

FROM January 6th to March 12th the fresh cases of plague numbered 25, and the deaths from the disease 13. The cases are reported from Deirut, Mallawi, and Bahiava.

TURKEY.

IN Bagdad, from January 4th to February 8th, 12 fresh cases of plague reported, 7 fatal.

GERMAN EAST AFRICA.

On January 8th, a fresh case of plague was reported.

THE AZORES.

IN the island of Terceira, cases of plague still occur: during the two years, January, 1907, to January, 1909, the cases of plague numbered 232, with 112 deaths from the disease.

IN the island of Fayal, between July, 1908, and January 31st, 1909, the cases of plague reported were 19, of which 6 proved fatal.

SOUTH AMERICA.

Chile.—At Talta and Mejillones plague is reported.

Peru.—Plague occurred in several towns during 1908. In Callao and Lima, during January, 1909, several fatal cases were reported.

Brazil.—On February 1st, plague was epidemic in Bahia. IN Rio de Janeiro 57 cases were reported between November 16th, 1908, and January 17th, 1909.

Ecuador.—From Milagro and Tolté, between November 17th, 1908, and January 17th, 1909, 47 cases of plague were reported.

Medical News.

THE Duke of Northumberland, President of the Royal Sanitary Institute, will preside at the annual dinner to be held on May 11th at the Langham Hotel.

THE Road Club (Carlton House, Regent Street, S.W.) has recently arranged to provide free accommodation for the motors of country members visiting London at the club's garage in Jernyn Street.

THE Royal Mail Steam Packet Company has published an illustrated booklet giving particulars of the Whitsun pleasure cruises that can be made by their steamers to Spain, Portugal, Gibraltar, Morocco, Canary Islands, and Madeira.

ON April 14th Dr. Thomas Sellar, who has practised in Aberlour (Banffshire) and district for twenty-five years, was presented by patients and friends with a motor car. Nearly every family in the district was represented in the subscription list.

THE British Balneological and Climatological Society has chosen Torquay as the place for its provincial meeting this year, the date fixed being Saturday, May 8th. Arrangements have been made to allow of members remaining over Sunday to explore the neighbourhood.

It is announced that Dr. Tatham, who for the last sixteen years has held the office of Superintendent of Statistics of the General Register Office, will shortly retire under the age clause, and that he is to be succeeded by Dr. T. H. C. Stevenson, School Medical Officer, Somerset.

LECTURE and laboratory courses in tropical medicine, public health, and sanitation, including school and factory inspection, have been inaugurated at the New York Post-Graduate Medical School and Hospital, and will be given with the co-operation of the United States Army and United States Navy Medical Corps.

THE Spring meeting of the South-Eastern Division of the Medico-Psychological Association will be held, by the courtesy of Dr. E. S. Pasmore, at the Croydon Mental Hospital, Upper Warringham, on Tuesday, April 27th. Dr. Pasmore also invites the members to luncheon at 1.30 p.m. Dr. T. Clave Shaw will read a paper on the clinical value of consciousness in insanity.

A SERVICE for members of the University of London will again be held on presentation day in Westminster Abbey. It will take place at 6 p.m. on Wednesday, May 12th, when the sermon will be preached by the Rev. Canon Barnett. Further particulars can be obtained from the Honorary Secretaries of the Westminster Abbey Service Committee, 88, Gower Street, W.C.

A CONFERENCE of the Friendly Societies' Medical Alliance was held at Darlington on April 12th, when it was reported that the alliance comprised thirty-one associations with a membership of 283,983, an income of £49,649, and an expenditure of £49,222. A resolution was passed to the effect that the conference would not recognize any decision accepting a wage limit for medical attendance.

THE Lord Mayor of London will preside at a meeting on behalf of the National League for Physical Education and Improvement to be held at the Mansion House at 4 p.m. on Wednesday next. The Bishop of Ripon, Lord Ashbourne, and Lord Halsbury will address the meeting, calling attention to the work of the league and emphasizing the necessity for improving the physical welfare of the nation, whether for defence or commercial prosperity. Tickets of admission can be obtained from the Secretary, 11, Southampton Row, London, W.C.

A PROVINCIAL sessional meeting of the Royal Sanitary Institute will be held at the University, Birmingham, on Saturday, May 8th, when a discussion on tuberculosis and the milk supply will be opened by Mr. J. Malcolm, F.R.C.V.S., Veterinary Superintendent, Birmingham Corporation, at 11 a.m. In the afternoon a visit will be paid to the farm at Tyburn, where a herd of cattle is in the process of being freed from tuberculosis, and afterwards to the sewage purification works of the Birmingham Tame and Rye District Drainage Board.

THE Society for the Propagation of the Gospel in Foreign Parts has recently created a medical mission department, and the first public meeting in connexion with it is to be held at the Church House, Westminster, next Wednesday, at 8 p.m. The speakers include Professor Clement Cooper, of Shanghai; Dr. Hugh Weir, of Korea; Dr. Jane Walker, Dr. Champeys, and Sir Dyce Duckworth. Information respecting the new department will be gladly supplied to those interested by its Secretary, the Rev. W. P. Dott, 15, Tufton Street, S.W. For the meeting no tickets are required.

THE British Committee, of which the honorary secretaries are Mr. D'Arcy Power, 10A, Chandos Street, W., and Dr. Clive Riviere, has received a communication from the central office of the Royal Hungarian State Railway at Buda-Pesth stating that that office has been entrusted with the duty of finding accommodation for members attending the sixteenth International Congress of Medicine, to be held at Buda-Pesth from August 29th to September 4th. The accommodation is arranged in three classes, and the intending visitor must give notice and remit the price beforehand.

THE first portion of the Royal National Orthopaedic Hospital, the institution which represents the three orthopaedic hospitals previously existing, was declared open by Princess Alexander of Teck on April 20th. This is the outpatient department and nurses' home, and consists of a building of several floors. The lower part, entirely given up to the out-patient work, provides a waiting hall, six consulting rooms, an orthopaedic gymnasium, and massage and electrical annexes. The upper floors, which have been furnished by subscriptions from nurses and their friends, constitute a complete nursing home. The building has three entrances, those for nurses and for the medical staff being in Bolsover Street, and that for patients in Euston Road. Of the total anticipated expenditure some £25,000 still remains to be collected.

THE object of the Factory Girls' Country Holiday Fund is fairly well covered by the title. In its essence the fund is a kind of beneficent tourist agency for young women working in London factories; in addition to making arrangements with cottagers for the accommodation of factory girls, the fund pays a part of the expenses out of the money placed at its disposal by subscribers. This sufficed last year to enable it to send over 5,000 girls for a fortnight of fresh air and country life. The total expense was £3,925, of which £1,550 was paid by the girls themselves. The fund, which is managed on thoroughly business-like principles and well worthy of support, has for honorary secretary Miss Paget, 28, Camden Hill Square, W.

THE directors of the thermal brine springs at Oeynhausen Spa, Westphalia, issue an illustrated pamphlet giving full particulars of the chemical constituents of the springs, of the arrangements for the comfort and treatment of patients, and of the means of reaching Oeynhausen from this country, the routes being by Flushing, Hook of Holland, Ostend, or Calais. There are four springs rich in carbonic acid gas, and two simple brine springs. The bathing arrangements are good, and by mixing and heating the baths can be given at different temperatures and different strengths in salt and gas. The place is especially known as suitable for treatment of disorders of the nervous system, but its waters resemble those of Nauheim, and are used also for disorders of the heart and vascular system. There is an institute fitted with mechanical appliances suitable for use in disorders of the joints and bones. The waters have also been recommended in diseases of women, in affections of the respiratory organs, and in disorders of metabolism and digestion.

AT the Nursing and Midwifery Conference and Exhibition held last week in the Grafton Galleries, London, Dr. T. Outterson Wood, in the course of an address, said that the great want felt at the present time in the nursing world was one uniform system of training, examination, and certification, that a definite standard of proficiency might be reached which would entitle successful candidates to a qualification, not of this or that hospital—which might be a variable quantity—but of one great qualifying body. Nurses might broadly be divided into the following classes: (1) The general hospital trained, including medical and surgical; (2) the hospital nurse, who has in addition special training, such as fever, children, etc.; (3) obstetric nurses, or midwives; (4) the mental or asylum trained, including male and female. He referred to the several organizations that existed to register the above classes. There was the Royal British Nurses' Association, which was promoting legislation for the State registration of nurses. The Medico-Psychological Association of Great Britain and Ireland had already one uniform standard of training, examination, and certification. There was also the Asylum Workers' Association and Queen Victoria's Jubilee Nurses, while the midwives had their own association, known as the Midwives' Institute. Dr. Wood said that he was glad to see that in the bills before Parliament for the State registration of nurses the medical profession was well represented upon the proposed council. If State registration became an accomplished fact, the scale of fees would have to be arranged upon a reasonable basis, as otherwise many nurses would be deterred from registering, and the movement would be a failure.

British Medical Journal.

SATURDAY, APRIL 24TH, 1909.

A MENTAL HOSPITAL FOR LONDON.

IN the JOURNAL of February 22nd, 1908, there was published a letter addressed by Dr. Henry Maudsley to Mr. H. P. Harris, Chairman of the London County Council, in which he offered to contribute £30,000 towards the cost of establishing in London a properly equipped hospital for mental diseases. The outline of the scheme suggested in conference with Mr. Harris was that the hospital should be for 100 patients suffering from recent and mostly acute insanity; that some 60 or 75 of these should be of the poorer class, for whom the parishes would pay, as is the case now with those sent to county asylums; and that the remainder should be private patients who would pay a sum sufficient to prevent their being a burden on the ratepayers. An integral part of the scheme was that the hospital should be an educative as well as a curative institution, and that for this purpose, as well as for the conduct of research into the pathology of insanity, it should have attached to it a laboratory such as that at Claybury, where, notwithstanding difficulties arising from its remote situation, Dr. Mott and his assistants and pupils have done so much excellent work. Dr. Maudsley's offer was, on the recommendation of the Asylums Committee, gratefully accepted by the Council, which further voted a sum of £100 for the preparation of sketch plans of such a hospital as Dr. Maudsley had in view. These facts were announced in the report of the Asylums Committee for the year ended March 31st, 1908, where it was further stated that inquiry was being made for a suitable site. In the JOURNAL of December 19th we pointed out how fully the committee was in sympathy with the proposal to build a hospital for mental diseases, and how clearly it perceived the need of a central pathological laboratory in close touch with the hospital. So far, however, the scheme has made no visible progress towards concrete embodiment. We have reason to believe that the Council is moving in the matter, but we confess we should be glad to have fuller assurance that the hospital will not be allowed to remain, like a phantom *Dreadnought*, stranded on the rock of short-sighted economy.

In the circumstances we are fain to regard as a good augury the fact that Dr. Maudsley has contributed to the new volume of Dr. Mott's *Archives of Neurology and Psychiatry*, recently issued by the London County Council, an introductory essay in which he sets forth his views as to the aims and uses of a mental hospital. With his well-known lucidity and grace of style the distinguished writer discusses the factors concerned in the production of insanity and the different manifestations of brain disease. According to him, the varieties of insanity fall naturally into two principal classes. When the material element is damaged, either by direct injury or by toxins introduced into the body or engendered in it by some mishap in the processes of metabolism, its disordered energies are displayed in the in-

coherencies of delirium and acute delirious mania. In the other class of cases the disorder shows itself rather in a dissociation of the federal tracts or centres and in the steady organization of disorder. These "organized insanities" differ in symptoms, pathology, and mode of causation from the insanities of positive nervous deterioration. In them, says Dr. Maudsley, the question is not so much one of material injury to nerve element as of the steady development of a morbid character from the root of a bad constitutional inheritance. Nursed passion or prejudice ripens into bad habit of thinking and feeling, and bad habit grows into organized disorders. This leads him to the suggestion that part of the work of a mental hospital might be systematic instruction in mental hygiene in its widest sense; such instruction should be based on demonstration by actual examples of the natural and necessary effects of bad habits of thought and feeling.

Dr. Maudsley goes on to point out that as there are two different classes of insanity, so there are two different orders of inquiry to be pursued in the investigation of the disease. There is first a pathological inquiry into the physical and chemical causes of the mental derangement, and into the minute changes of structure associated therewith; for this purpose a well-equipped laboratory in the hospital is indispensable. In the next place, a more general inquiry should be made into the individual character, the hereditary influences which have wrought in its constitution, and the circumstances of life which have affected its development. Dr. Maudsley points out that it is not sufficient to consider the organism only as a physiological machine liable to derangement by subtle toxic matters; it is necessary to study the patient also as a social being. Broadly speaking, he says, insanity is such derangement of mind as prevents its victim from discharging his normal functions in the social body of which he is a member; therefore the nature of the social medium and his relations to it must always be well considered in a true exposition of its causation and character.

Passing to the consideration of the educative function of a mental hospital, Dr. Maudsley says that, alike in the interest of medical men who may be called upon to certify and are liable to an action at law for what they do, and of those who are liable to be certified and may afterwards be socially prejudiced by the fact of certification, it is most desirable that medical students should have a thorough knowledge of what constitutes a good and sufficient certificate of insanity, what certification involves, and in what cases it is justified. At present, we are told, it would hardly be an exaggeration to say that more than half the certificates signed are sent back by the superintendents of asylums for correction or amendment. Then a well-staffed mental hospital would supply clinical instruction to students such as would adequately fit them for their work when they go into practice. It would also supply a succession of trained medical men, interested in the special study and imbued with a scientific spirit, available to take office in the county asylums. A small hospital would also serve as an excellent training ground for nurses and attendants, who could afterwards go into the service of the large asylums efficiently prepared for the responsible duties they would have to discharge.

Dr. Maudsley strongly expresses the belief that a complete clinical and pathological study of insanity cannot be made without a thorough knowledge of all

the diseases treated in general hospitals and the morbid effects discovered in their pathological laboratories. A mental hospital should, therefore, be in close and constant touch with the medical work and thought of the general hospitals. On the other hand, these would in this way have the opportunity of enlarging the range of their work so as to include a study of the special mental features of the different bodily diseases. May not, Dr. Maudsley asks, every bodily disease perchance its special mental complexion? Every sound thinker must agree with him that the distribution of diseases, mental and bodily, into separate compartments, and the corresponding isolation of minds limited to the study of them, contradict the very principle of the unity of body and mind and form a most serious hindrance to the progress of medical science.

Passing to the question of treatment, Dr. Maudsley says that a small hospital filled with a constant succession of patients would evidently afford opportunities of such particular attention to individual cases as cannot well be given in a large asylum crowded with persons in all stages of mental disease for mere detention. Not only could more close and exact observations be made, but the attendance of physicians and students stimulating one another by constant intercourse, and occupied at the same time with the study of diseases in the general hospitals, would sharpen observation, suggest inquiries, keep fresh the interest, and prevent routine of thought, feeling, and treatment. The insane patient also could hardly fail to benefit by the surrounding atmosphere of sanity. On the purely practical side, he adds, it is hardly possible to overrate the good which may be done by individual treatment applied particularly to the susceptibilities of the individual character. He goes on to point out that another probable advantage of the close observation day by day of the individual patient would be a perception by physicians and nurses of the favourable psychological moment when at the dawn of convalescence the opportune removal from the asylum to a convalescent institution or to private care might save the tottering reason of the patient who, then awakening to the painful consciousness of his sad surroundings, and realizing the seeming hopelessness of the situation, might otherwise sink into despair, abandon hope, and drift into dementia.

That there are crowds of incurable cases of insanity congregated in large asylums is, according to Dr. Maudsley, undoubtedly due in some measure to the common neglect of early treatment when the malady is most curable. The longer the disease has lasted the smaller are the chances of recovery, and the time soon comes in some cases when, if neglected, there is no remedy. Here, as everywhere, the right treatment is to stop the beginnings of mischief. He thinks it may reasonably be expected, therefore, that besides the prevention of incipient insanity by wise counsel and treatment in its out-patient department, the early treatment of acute insanity in a special hospital will obviate the present necessity and perhaps lasting expense of placing some patients in a lunatic asylum—the very name of which is perhaps a terror, the remembrance a sort of nightmare, and the social consequences a lifelong prejudice.

We have given, for the most part in the author's own words, the gist of Dr. Maudsley's illuminating essay. Coming from a man of such knowledge, judgement, and experience, it will, we hope, stimulate the London County Council to vigorous action in carrying into effect, with the least possible delay,

a scheme as to the usefulness of which in the public interest there can be no possible doubt. Dr. Maudsley has not only shown those responsible for the care of lunatics in the County of London what should be done, but has offered to bear a large part of the cost. It now only remains for the Council to see that his benevolent intention is not defeated by the dread of interested or ill-informed criticism.

THE PREVENTION OF PUERPERAL FEVER.

THE last word as to the prevention of infection in the puerperium has still to be said, and, judging from the differences of opinion expressed by the professors of the obstetric art, that word will not be spoken for some time to come. In the meantime we have to face facts, and the two facts which affect the problem are, first, that puerperal fever is a preventable disease; and, secondly, that deaths from this disease still continue to take place. The introduction of antiseptics and later of asepsis has materially diminished the incidence of infection, but not to the extent which has been seen in surgery.

It is difficult to fix the blame in the proper quarter, for, on the one hand, we are assured that midwives are largely responsible for the infections, and that the practitioner is not free from fault, while, on the other, there are those who hold that the patient herself forms the source of danger through the bacteria which infest her external, and even her internal, parts, though there are others who regard the vaginal inhabitants as the chief safeguard against infection with pathogenic bacteria. We may therefore feel grateful to Professor Hofmeier for giving us the advantage of his experience of 10,000 births in the Würzburg obstetric clinic.¹ It must be recognized that certain difficulties stand in the way of obtaining the very best results in a German university clinic, since in the first place the students and pupil midwives examine the patient more frequently than can be quite good for her; and, secondly, the difficult cases which are referred to the clinic for treatment are frequently examined with but prefatory care outside by the practising midwife or medical man before being transferred. These factors apply equally to all clinics, and it is therefore interesting to compare Hofmeier's report from the Würzburg school with Professor Krönig's clinic at Freiburg, in Baden, where methods diametrically opposed to what is taught elsewhere are adopted.

Hofmeier's patients included abnormal cases in the high proportion of 15.36 per cent. The complications met with included all the conditions which give the obstetrician the most trouble and anxiety. The morbidity, calculated on the basis that every case which shows one reading of the thermometer of over 100.4° F. must be regarded as pathological, proved to be 11.48 per cent. The percentage of patients who had one or more rises of temperature as a result of the puerperal process was 6.35, but only 2.18 per cent. became seriously ill. Among the 10,000 women 56 died, 9 of puerperal infections. Of these 9, only 4 can have been infected in the hospital; but the brief records of these 4 cases show that only in 1 could it be definitely shown that the infection arose in the clinic, while the probability of an outside infection in the remainder was great, so that under the most unfavourable interpretation, 0.04 per cent. died of infection; among the last 7,000 patients not a single life was lost from this cause. The results,

¹ *Munch. med. Woch.*, September 15th, 1908.

therefore, may justly claim to be placed among the best obtainable. Kronig teaches that the genitals, both external and internal, should neither be washed nor disinfected, and that no vaginal examinations should be carried out, but that all should be made *per rectum*. Yet Hofmeier not only allows vaginal examinations, but trusts to a conscientious disinfection of the hands of the students and midwives and of the external parts of the patients.

Professor Max Henkel, of Griefswald, believes¹ implicitly in Ahlfeld's hot-water alcohol disinfection of the hands, but states that those who do not think this method trustworthy have in sterile rubber gloves a trustworthy means of preventing the introduction of bacteria from without. He states that among the bacteria of the vagina streptococci are often to be found, and is of opinion that the chief danger for the patient lies in the small scratches and tears, through which the virulent bacteria may enter. For this reason he objects to all unnecessary examinations, especially before the membranes have ruptured. He holds that in the majority of cases the presentation can be made out by external examination. Hofmeier, in replying to those bacteriologists who state that no hands can be rendered sterile, takes the different ground that the search for the last bacillus is a matter of indifference. Hands which have been well washed with soap and water and subsequently disinfected with a 1 in 1,000 solution of corrosive sublimate are sufficiently sterile for practical purposes. If these precautions are carried out, he contends that the number of digital examinations made is immaterial.

On the other hand, it cannot be admitted that an incidence of over 2 per cent. of serious febrile infections in childbirth is ideal, if these infections are to be regarded as really preventable. It is only fair, however, to the clinics and to the methods adopted in them to inquire what proportion of these febrile disturbances can be ascribed to faulty asepsis in examining. Seanzoni has given a reply to this question. He found that in a series of 157 "precipitate" births, of the 97 women who were not touched by any examining finger at all, 21.6 per cent. had a rise of temperature to between 102° and 104° F. Again, among 112 women who were delivered without any contact from without, 17 had fever which could be attributed to causes other than puerperal infection, and 11.5 per cent. a rise of temperature, up to 102.5° F., presumably from infection. Hofmeier regards these cases as proving that the parturient woman can infect herself. The doctrine of *noli me tangere* is therefore not trustworthy, and we have to consider in obstetrics the sin of leaving undone those things which we ought to have done as well as of doing those things we ought not to have done. Hofmeier teaches careful disinfection of the hands and cleansing of the external parts of the patients—things we ought to do. More difficult to determine is whether disinfection of the internal parts should be left undone. If the infection is due to the flora of the vagina, then internal disinfection should be recommended, but experience is scarcely encouraging. If the infection is due to the intrusion of external bacteria, then Hofmeier's experiment of applying a mercury perchloride compress to the external parts should have lessened the morbidity, but it did not. Practice and not theory must settle the point, and it is to the obstetricians that the profession must look for a method which will safeguard

women from all forms of puerperal infection. In spite of the excellent results *quoad vitam* which have been achieved, the fact that fever still continues to attack a certain percentage of lying-in women proves that the ideal conditions have not yet been discovered, but at present it would seem that the woman herself is her own worst enemy.

RESEARCH DEFENCE SOCIETY.

IT is just a year since we published a letter from the Earl of Cromer announcing the formation of a society whose function it should be "to make known the facts as to experiments on animals in this country: "the immense importance to the welfare of mankind "of such experiments; and the great saving of human "life and health directly attributable to them." At that time the society had been in existence for some three months, and already numbered more than 800 members. Since then its membership has increased to 2,270, and branches have been formed in Birmingham, Bournemouth, Brighton, Cambridge (University Branch), Dublin, Edinburgh, Leeds, Liverpool, Manchester, Norwich, Oxford, Shrewsbury, Torquay (Devon Branch), York, and in other places. A number of lectures have been delivered under the auspices of the society, which has also published pamphlets and leaflets giving information to all who ask for it as to experiments on animals and their results.

We congratulate the energetic secretary, Mr. Stephen Paget, on the work of the society, and especially on a new enterprise by which its activity is displayed. A selection of its publications has just been issued in book form.¹ The volume, which is beautifully printed, contains, in addition to a preface, the address given by Lord Cromer at the inaugural meeting of the society held on June 19th, 1908; a summary of the report of the Inspectors on Experiments on Animals made during 1907 in Great Britain and Ireland; and some facts as to the administration of the Act taken from evidence given before the Royal Commission on Vivisection. Professor Starling deals with the use of dogs in scientific experiments, showing that for a large number of important researches that animal is indispensable, owing to its size and the marked analogy of its digestive system to that of man. Practically the whole of our knowledge of the production of lymph in the body is derived from experiments on dogs. For our knowledge of the causation of the heart sounds and their interpretation, for the investigation of the pulse, of the work of the heart, and of the relations between the blood pressures and the heart, and the blood vessels respectively, we are also indebted to experiments on the same animal. Observations on dogs furnish the key to the laws governing the movements of the intestines. Our conceptions of the process of digestion, which must guide physicians in the treatment of its disorders, have been revolutionized by experiments on dogs. Professor Starling says that although he has been engaged in the experimental pursuit of physiology for the last seventeen years, he has never seen pain inflicted on a dog in a

¹ Publications of the Research Defence Society, March, 1908–March, 1909. Selected by the Committee. London: Macmillan and Co., Limited, St. Martin's Street, 1909. (Pp. 216.) It may be mentioned that four pamphlets, included in the volume, were not among the loose set of pamphlets sent to every member of the society last summer. These four pamphlets will now be sent to every member. (We are asked to state that the volume may be procured by members at cost price—1s. 8d., including postage—on application to the Secretary, at 70, Hayley Street, W.)

physiological laboratory in this country. He points out further how pain would defeat the purpose of the experimenter. As he tersely puts it, "A physiological experiment which is painful is thereby a bad experiment." The use of anaesthetics in experiments on animals is illustrated by the evidence given before the Royal Commission by witnesses of acknowledged authority on the subject. The evidence given by Lord Justice Fletcher Moulton before the same Commission, an abstract of which was published in the *BRITISH MEDICAL JOURNAL* of March 21st and 28th, 1908, forms a most important section of the book; coming from a man of legal training and judicial mind, it is perhaps the most striking testimony that has yet been given as to the value of vivisection. Professor Cushny shows how accurate knowledge of the action of drugs has been obtained by experiments on animals; and the value of antitoxin in the treatment of diphtheria is proved by the statistics of the Metropolitan Asylums Board Hospital and of those of New York City and Paris. Dr. A. Gardner Robb, of Belfast, gives a number of facts showing the value of antimenigitis serum (Flexner and Jobling) in the treatment of epidemic cerebro-spinal meningitis. The American figures show a reduction of mortality by more than one-half since the use of the serum. Dr. Gardner Robb's own experience has been that of 275 unselected cases under his care in the Belfast Fever Hospitals before the use of the serum, 72.3 per cent. died; while of 98 cases treated with the serum, only 29.6 per cent. died. An article by Dr. Bashford on advance in knowledge of cancer is reprinted from *Nature*. Professor Osler's evidence as to yellow fever and malaria is next given, and the book ends with an essay on the extinction of Malta fever by Sir David Bruce, in which the story of this triumph of the experimental method is told in a clear and convincing manner.

We strongly recommend this collection of facts as an antidote to the fictions sedulously propagated by the antivivisectionist societies. It should be carefully studied by all who wish to be well posted in regard to matters which, by many even of the household of medicine, are too often taken for granted or treated with indifference. Every one who stands for medical science within his own sphere, however small it may be, is liable to be called upon to give a reason for the faith that is in him; in this little book he will find the fullest justification of animal experimentation as applied to the art of healing, and an exposure of the fallacies of those who denounce that method of research. To those who take part in newspaper controversies or public debates on the subject it is indispensable. It appeals to the public perhaps even more than to the profession; the case for vivisection is put in a manner so simple and lucid that the book is especially suitable for the enlightenment of lay persons who are able to appreciate evidence, and whose mind's eyes are not blinded to plain facts by prejudice, or what theologians call "invincible ignorance." We commend it most earnestly to our readers, not only for their own edification, but as a means of helping them to dissipate error and spread the light.

THE Bristol City Council decided on April 20th to contribute, in the proportion of one penny in the pound on the rates, towards the support of the projected university for Bristol and the West of England. This rate will yield about £7,000 a year.

THE PRIEST AND THE PHYSICIAN.

At a meeting of the Church Medical Union held on April 19th, Mr. W. R. Fisher, who was in the chair, said that the movement which the Union had started might be defined as the co-operation of the Church and the medical profession in the healing of the sick. Mr. Geoffrey Rhodes, the Secretary of the Union, speaking on "Medicine and the Church," said that the discoveries of psychology showed that mind and body reacted on one another. In considering the question of mental healing, a sound conclusion was most likely to be reached if the lines of careful theological study and close scientific research were followed. These they would get in the deliberations of their spiritual leaders and medical men. There was a danger of people being led off the track by unqualified healers. They were not to neglect natural means in the hope of a miracle being performed. They were bound to consider themselves humbly as students, but they could express firm belief in the vital principle that the doctor of medicine and the clergyman should work in all cases in the closest consultation. From the general tenor of the speeches we get the impression that the main object of the Union is to show that the Church has a ministry of healing which can beat Christian Science on its own ground. The Union is especially anxious to reassure the doctors that it intends to work in co-operation with them, not to supplant them. We have no doubt of the excellence of the intentions of the promoters of the movement, but their notions of the end they have in view and of the means by which they are to reach it seem to be vague to the degree of mistiness. The discovery that mind and body react on each other, which Mr. Geoffrey Rhodes attributes to psychology, dates from a very early period in the history of medicine. Thousands of years ago the liver was believed to be the seat of courage, the spleen of depression, the bowels of compassion, and the heart of affection. The old physicians well knew the good effect on the mind of remedies that expelled the "black bile" which produced melancholy, and of laughter which "despopulated" the spleen. Modern faith healing has really added nothing to the knowledge of this kind possessed from immemorial antiquity. Enlightened practitioners of medicine will welcome such help as clergymen can give in ministering to a mind diseased; but it must be on the clear understanding that the care of the body belongs wholly to the doctor. We go further and say, with special reference to the "close consultation of the minister of the gospel and the doctor of medicine" which Mr. Rhodes thinks necessary, that the doctor may be willing to advise the minister when the circumstances of the case seem to call for it, but if he is to do his duty to his patient he cannot consent to meet a clergyman or a spiritual healer in consultation. The course of the Emmanuel movement in America is enough to show that there is a danger that the close alliance with the medical profession which the Church Medical Union professes to desire may easily be used as a means of "covering" unqualified practice.

POOR LAW MEDICAL OFFICER AND A CORONER'S JURY.

AN inquest was held at West Hartlepool by the Coroner for the Stockton Ward District of the County of Durham with regard to the death of a retired master mariner, 69 years of age, who after attending a football match was taken ill in the street and died in a few minutes. It appeared from the evidence given by the police, as reported in the *Newcastle Chronicle*, that as soon as possible after their attention had been directed to this case one of their own

officials took upon himself to communicate with the district Poor Law medical officer by telephone and request his attendance on the patient, but as he declined to be responsible for any remuneration his request was not met. This led to one of the jury remarking that the doctor had evidently refused his services on the question of pay. The jury, after hearing medical evidence, returned a verdict that the death was due to apoplexy—that is to say, from a natural cause—but this non-criminal verdict was accompanied by the following rider: "We desire 'to express our disapproval of the conduct of the 'parish doctor in refusing to attend this urgent case 'unless guaranteed a professional fee.'" How the coroner could have allowed such an opinion as this to be incorporated with the verdict we are quite at a loss to understand. We are not surprised at the jury, unacquainted as probably most of them were with the rudiments of the law bearing on the case, being anxious for this addition to the verdict—no doubt from a desire to be, or to appear to be, charitable, though not at their own expense. The coroner, however, must have known, or, at any rate, ought to have known, that any such censorious rider was no part of the duty of his jury, and that it ought not to have been recorded. It was the duty of the jury to return a criminal verdict if such was justified by the evidence given; but if this could properly not be done, their duty was then at an end. It is true that the coroner in his remarks attributed the incident to "the red-tape 'arrangements of the Poor Law system,'" but we see no account of the Poor Law medical officer in question having been present at the inquest, and therefore assume that he was unjustifiably censured in his absence, without having had any opportunity to defend his own action—a proceeding not sanctioned in any other court of justice, so far as we are aware, in any part of the United Kingdom. The jury, in fact, had no right to express their disapprobation of the conduct of any individual. To do so was unquestionably *ultra vires*, and it is quite possible that mischief or hardship may result from it elsewhere.

INTESTINAL BACTERIA.

PROFESSOR METCHNIKOFF¹ regards it as a settled point that amongst the inhabitants of the large intestine there are three important types of putrefactive bacteria—namely, *Bacillus putrificus*, *Bacillus sporogenes*, and *Bacillus welchii*. With regard to the pathogenic powers of these three types opinions differ, the bacillus of Welch, often known as *Bacillus aerogenes capsulatus*, being apparently the one with which disease is most frequently associated. In experiments on guinea-pigs Metchnikoff found that the *Bacillus welchii* presented remarkable variations. When freshly obtained from pus or from the intestinal contents, it rarely possessed a marked degree of infectivity, and the guinea-pigs usually resist considerable doses inoculated intraperitoneally. But the bacillus readily gained in virulence; after a few passages it acquires an extremely high pathogenicity, and produced death in the guinea-pigs within one or two hours after introduction into the peritoneal cavity. A young chimpanzee, however, was made to ingest large quantities of *Bacillus welchii* without suffering the slightest ill effects. With a view to investigating the production of toxins by the three types of putrefactive intestinal anaerobes mentioned, Professor Metchnikoff cultivated them *in vacuo* in a medium consisting of finely minced meat and water. Under these conditions toxins were produced, the effects of which were tested upon rabbits, generally by intravenous inoculations and sometimes

by introduction per rectum. The material introduced consisted of the filtered liquid portion of the culture medium; in some experiments the liquid was heated to 100° C., and in others it was not heated, but was passed through a Chamberland filter. The most markedly toxic effects were produced by young cultures, aged from two to five days. With older cultures the toxicity progressively diminished, probably owing to the decomposition of the toxins by the action of the bacteria themselves. This explanation is supported by the observation that the liquid which was freed from microbes by heat or filtration preserved its toxicity for a prolonged period. The intoxication manifested itself in a manner which varied according to the dose. When young or adult rabbits were injected with a dose of 7 or 8 c.cm. per kilo. of body weight, death was generally almost instantaneous; the animal fell, there were some clonic convulsions, and respiration and the cardiac movements ceased. With smaller doses the animals remained alive for three or four hours, and then died in the same condition as the former. When the less toxic liquids were employed the rabbits did not die for several days, and after small doses they remained alive for months, or even indefinitely. In the acute type of intoxication the liver, the kidneys, and the small intestine were very hyperaemic, and, like the heart, filled with non-coagulated blood. The results of the experiments emphasized very clearly the extreme variability in the toxicity of different putrefactive anaerobes. Of the three species studied the *Bacillus welchii* was found to be the most active. But the difference between its toxicity and that of the two other microbes was not very considerable. In one case the bacillus of Welch, isolated from a severe case of appendicitis, proved almost innocuous as compared with other cultures of the same microbe, derived from persons in good health, which produced rapid death in the experimental animals. Rectal injections of the toxic liquids produced most effect on small rabbits; those which received one or more doses of the bacterial products failed to develop like normal animals, and some of them died. Another point noted by Professor Metchnikoff is that the liquids obtained with faecal material inoculated in a meat medium are much more toxic than the liquids derived from a vegetable decoction inoculated with the same material. Professor Metchnikoff's observations on proteid decomposition by intestinal bacteria are of interest, but the data which he provides are not sufficient to enable us to express an opinion as to the precise significance, theoretical or practical, of his researches.

TREATMENT OF TETANUS.

REFERENCE has already been made to an instance reported from Ann Arbor, Michigan, of tetanus developing on the twelfth day after dilatation and curetting of the uterus, with shortening of the round ligaments after Alexander's method;¹ but some further particulars of the case and of the treatment successfully adopted will be of interest. The patient was an unmarried girl aged 19, subject to dysmenorrhoea, and Dr. Reuben Peterson operated in a private hospital with an aseptic technique. Stiffness and soreness about the jaws appeared during the twelfth day, and double parotitis with hysteria was suspected. For two or three days the stiffness was trifling, but on the fourth acute tetanus with marked opisthotonos developed. Dr. Peterson called in consultation Dr. W. H. Hutchings of Detroit, who had successfully treated 5 cases of tetanus by chloretone, 3 being

¹ Ann. de l'Inst. Pasteur, December, 1908.

¹ Amor. Journ. Obstet., April, 1909, p. 658.

had "Fourth of July accidents" from fireworks or pistol shots. Dr. Hutchings administered to Dr. Peterson's patient an enema of 60 grains of chloretone dissolved in hot olive oil. The spasms of the jaw and back relaxed, and the patient seemed comfortable but drowsy, as though under opium. Then Dr. Peterson administered 1,500 units of the antitetanic serum, the benefits of which to patients after the development of the spasms seem to him doubtful. Early next morning the spasms recurred. An enema of 60 grains of chloretone was once more administered, the dose of antitetanic serum was repeated, and the convulsions ceased altogether. The highest temperature reached was 100.2° in the rectum, the highest pulse-rate 114. After the second dose of serum and chloretone convalescence was uninterrupted. As already stated, Dr. Peterson failed to discover the origin of the perilous complication in his case. The catgut employed for the plastic operation on the round ligaments was tested by an expert with great care and found free from germs. A minute blister had developed at the corner of one incision, which had otherwise healed well. The serum in the blister contained the staphylococcus, but the tetanus bacillus could not be isolated. Dr. Peterson notes that this is the sixth of Dr. Hutchings's cases of tetanus, serious like all the others, and that, like them, recovery followed the administration of chloretone, which is trichlor tertiary butyl alcohol, sometimes called acetone-chloroform. Others may be inclined to award some of the merit to the antitetanic serum.

THE INFLUENCE OF HEREDITY AND ENVIRONMENT ON EYESIGHT.

In a memoir¹ recently issued, Miss Amy Barrington and Professor Karl Pearson deal with some interesting problems of inheritance in man. They find, by the use of exact statistical methods of analysis, that there is strong reason for believing that errors of refraction and keenness of vision are heritable characters, although the fact that most of the material is selected renders an exact evaluation of the statistical constants difficult. From the medical standpoint, perhaps the most interesting section of the paper is that dealing with the influence of school life on vision. In the course of a very careful examination of the evidence adduced in support of the popular belief that attendance at school is highly prejudicial to the eyesight of the rising generation, the authors point out that no such conclusion can be regarded as well established. They find that the coefficient of correlation between degree of myopia and age is 0.33 ± 0.019 , between degree of myopia and years at school, 0.244 ± 0.020 (Cohn's data). In commenting on these values they state that they show "that the associations between "degree of myopia and age and degree of myopia and "years of school life, while quite sensible, are not by "any means very marked. Further, whichever "test be applied it indicates that the relationship between age and degree of myopia is "closer than that between the latter and the "number of school years. In fact, a correlation of 0.8 "to 0.9 between age and number of years of school life "would make the association of degree of myopia and "years at school for a constant age practically zero. "Cohn provides no data by which we could determine "this correlation of age and school life for his material. "But in the London schools the children practically "rise a standard a year, and it has been found by "Mr. Heron that the relationship of standard and age

"is practically of the above magnitude. Accordingly, "Cohn's statistics seem to indicate that the moderate "association they exhibit between school environment "and degree of myopia is solely a secondary result of a "primary relation between age and degree of myopia. "This increase of myopia with age may be due to the "continued action of some environmental factor or to "a growth factor. Cohn's statistics, however, do not "demonstrate, as has been assumed by many "ophthalmological writers, that school is the hot "bed for the production of myopia." In view of the numerous imperfections of existing data, the authors are to be commended for their caution in drawing conclusions with respect to this important matter; we think that their results show that in the anthropometric school laboratories, that may some day be established, ophthalmological measurements should be collected with at least as much zeal as information regarding weight, height, and chest dimensions. Among other curious results, the authors find that normal vision is slightly correlated with overcrowding, bad economic conditions, and morally defective parentage. They ask: "Can it be that "these bad home conditions keep the children in the "streets, and so relatively away from the bad "environment and in relatively fresher air?" A perhaps equally plausible hypothesis is that with these unfavourable environmental conditions only the relatively fitter members of the stocks survive infancy, but we do not think the question can be solved from existing data. This memoir deals with questions of such interest, both to the medical man and publicist, that it deserves a wide circulation; and it can be studied with advantage even by those not versed in statistical methods, since technicalities of biometry are in it reduced to a minimum.

THE SUCKLING OF INFANTS.

THE complaint that mothers of the present day cannot nurse their babies has during the past few years been shown to be unfounded. Medical men know on the evidence of practical experience that attempts to suckle seldom fail if made in accordance with scientific teaching and carried out with a reasonable amount of perseverance. The work of the late Professor Budin in Paris clearly shows how great is the importance of proper attention to this subject, and those who are interested in the matter cannot do better than study a very able article by Dr. Janet Lane-Claydon which appears in the January number of the *Nineteenth Century and After*. In Germany the pioneer of the movement was Dr. Oppenheimer, and the consultations at which mothers are given advice and assistance with regard to the management of their babies have been instrumental in preserving the health of large numbers of babies. Dr. Vidal, of Darmstadt, has during the past three years followed the example of Budin and Oppenheimer, and has published recently a brief account of his results.¹ It is not, he finds, sufficient to instruct the mothers during the lying-in period to suckle the babies. As soon as the doctor's back is turned, the mother, the grandmother and the neighbours give their advice; all the scientific teaching is thrown away, and the baby gets a bottle. The amateur counsellors probably do not know that in the "good old time" 30 per cent. of their infants died. Dr. Vidal states that vanity and comfort are rarely taken into account by the German woman. Usually she is over-anxious, and believes that she has not enough milk to satisfy the infant. She complains that the child cries so much. The mothers are taught at the consultations that the act of sucking causes the

¹ *A First Study of the Inheritance of Vision and of the Relative Influence of Heredity and Environment on Sight*. By Amy Barrington and Karl Pearson. P.R.S. Eugenics Laboratory Memoirs V. London: Dulau and Co. 1909. (Pp. 61. 4s.)

¹ *Muench. med. Woch.*, January 12th.

flow of milk, and if a baby is given a bottle it will refuse after a time to suck at its mother's breast when it can get milk with less trouble. This is the chief danger of the so-called *allaitement miaté*. During the three years Dr. Vidal has only had to tell one mother that she had not enough milk. He was able to compare the infants brought to the consultations, who did well without exception, with those managed according to amateur advice, of whom no small percentage died. He gives examples of the advantages of the consultations to mothers who had lost child after child from diarrhoea before they were taken in hand. At times the first attempts to make the baby take the breast are difficult; an infant may even refuse to suck for a whole week, and the mother and the midwife are very apt to lose patience. The same answer which can be given to the assumption that the quantity of milk is insufficient may apply to the assertion that the milk is poor in quality. Neither the mother nor the midwife has any conception with regard to the normal quality of mother's milk, and the best proof that the milk is good and sufficient is to be found in the fact that the baby thrives on it. This Dr. Vidal has been enabled in each case to demonstrate to the mothers at his consultations. The results which he has obtained, therefore, tally with those obtained in Paris and elsewhere where similar consultations have been organized. The saving of life and the diminution of days, weeks, and months of sickness are so striking that we do not hesitate to say that one of the most important reforms in hygiene called for at the present time is the institution of places where mothers may bring their healthy babies for inspection and where advice and assistance in the matter of the proper management and care of the infant are provided.

WIRELESS TELEGRAPHY.

THOUGH no workers can point with greater pride to their results, it is the fate of legislative and scientific labourers in the field of occupational disease to be unable ever to claim for long a shrinkage in the extent of their sphere of action. Occupational mortality decreases steadily, no doubt, year by year, but the general mass of occupational disease exhibits something of the vitality of an amoeba. So soon as skilled investigation has diminished the risks of those engaged in one special trade and one evil is thus repressed, advances in scientific knowledge, and the occupations or manufactures which develop as a sequence, lead to the extrusion of a new pseudopodium and thus bring up the total amount of trade or occupational disease more or less to its former level. The latest claimant to consideration in this connexion is wireless telegraphy, its sponsor being a medical officer of the French navy, Dr. Bellile. During the recent troubles in Morocco wireless telegraphy was constantly being used on board his ship, and among the men under his charge he found lesions explicable only on the supposition that they were due to this new employment. For the most part, they consisted of conjunctival irritation, more or less intense in character, sometimes not easy to cure, and in one or two instances followed by corneal ulceration. One of the patients developed also a patch of eczema near the eye, another a patch of eczema on his wrist, and these skin troubles were, Dr. Bellile considers, not merely coincidental but of the same etiological significance as the conjunctivitis. In view of the intensity of the flashes emitted when wireless telegraphy is in progress, there is no difficulty in believing that conjunctivitis may be set up among the operators; fortunately, however, the remedy suggested by Dr. Bellile is equally easy—namely, the

wearing of blue or other glasses calculated to protect the eyes from the effect of the ultra-violet and other rays emitted. He is, however, much less convincing when he suggests that the emission of these flashes of electricity may have a general morbid effect on every one anywhere in their vicinity, and not merely be productive of occasional lesions on the exposed parts of the bodies of actual operators. Neurasthenia and allied nerve troubles he holds to be much more frequent in the French navy than formerly, and he suggests as a cause the increasing use of electricity. Far be it from any one to dogmatize on the capabilities of electricity, but it should not be forgotten that, though wireless telegraphy entails the launching into space of an immense amount of electrical force, this is taken up by the creation of Hertzian waves. Hence the analogy which he draws between wireless telegraphy and x-ray work would seem to be somewhat faulty. Much simpler reasons could probably be suggested for an increase in functional nerve troubles among men living and working on modern war ships than that of the introduction of this new use of electricity.

THE LEPERS OF MOLOKAI.

MUCH has been heard in recent years of the wretched conditions of life in places where lepers doomed to separation from their fellows are herded together, and appeals to popular feeling have been founded on such statements with the object of bringing about a reversal of the policy of segregation. It is satisfactory, therefore, to learn from an unprejudiced witness the actual facts in regard to one of the best-known leper settlements. Mr. Jack London, in a recent issue of the *Contemporary Review*, has stated, as the result of a visit to the place which must always be associated with the name of the heroic Father Damien, that the horrors of Molokai as they have been painted in the past do not exist. The settlement, he says, has been written up repeatedly by sensationalists who have never set eyes on it. The fact that a leper is unclean, however, should be insisted upon; and he gives it as his opinion that, from what little is known of the disease, the segregation of lepers should be rigidly maintained. In order to dispel some of the popular misapprehensions as to leprosy, he describes scenes which serve to show the relations existing between the lepers and non-lepers at Molokai. On the morning of his arrival, Mrs. London and he attended a shooting match of the Kalaupapa Rifle Club. Among the members of the club are Dr. Goodhue and Dr. Hollmann, the resident physicians, who live in the settlement with their wives. Lepers and non-lepers were using the same guns, and all were rubbing shoulders in the confined space. The majority of the lepers were Hawaiians, but in the stand directly in front of the visitors was an American who had fought on the Confederate side in the Civil War. He was 65 years of age, but that did not prevent his running up a good score. Strapping Hawaiian policemen—lepers, khaki-clad—were also shooting, as were Portuguese, Chinese, and *kokuas*, the latter being native helpers in the settlement, who are non-lepers. On the afternoon that Mr. and Mrs. London climbed the famous *pali*—a cliff from 2,000 ft. to 4,000 ft. high, which separates the place set apart for the lepers from the rest of the island—and looked their last upon the settlement, the superintendent, the doctors, and the mixture of nationalities and of diseased and non-diseased were all engaged in an exciting baseball game. Terrible and monstrous as was the treatment of the leper in the Middle Ages, it taught the great lesson of segregation. By its means leprosy was stamped out. And by the same means, according to Mr. London, leprosy is even now decreas-

ing in the Hawaiian Islands. But he insists that the segregation of the lepers on Molokai is not the horrible thing which has been so often exploited by Yellow writers. In the first place, the leper is not torn from his family. When a suspect is discovered, he is invited by the Board of Health to come to the Kalihi Receiving Station at Honolulu. His fare and all expenses are paid for him. His case is first adjudicated upon by means of microscopical examination by the bacteriologist of the Board of Health. If the *Bacillus leprae* is found, the patient is examined by the Board of Examining Physicians, five in number. If found by them to be a leper, he is so declared, and this finding is later officially confirmed by the Board of Health, and the leper is ordered to be sent to Molokai. Furthermore, during the thorough trial that his case is given, the patient has the right to be represented by a physician whom he can select and employ for himself. Nor, after having been declared a leper, is the patient immediately rushed off to Molokai. He is given ample time—weeks, sometimes even months—during which he stays at Kalihi and arranges his business affairs. At Molokai, in turn, he may be visited by his relatives, business agents, etc., though they are not permitted to eat and sleep in his house. Visitors' houses, kept "clean," are maintained for this purpose. When at Molokai, the declared leper has the privilege of re-examination. The settlement of Molokai has a far more delightful climate than even Honolulu, being situated on the windward side of the island in the path of the fresh north-east trades. The scenery is magnificent; on one side is the blue sea, on the other the wonderful wall of the *pali*, receding here and there into beautiful mountain valleys. Everywhere are grassy pastures, over which roam the hundreds of horses owned by the lepers. While not attempting to disguise the fact that leprosy is a terrible disease, Mr. London says that he would prefer to spend the rest of his days in Molokai than in any tuberculosis sanatorium.

CENSORSHIP IN RUSSIA.

THERE is at least one thing in regard to which Russia is in advance of any other country. The Government seems to be resolved that the people shall not be deluded by quackery. It is announced that advertisements of medicines are henceforth to be subjected to strict censorship in Russia. All advertisements concerning medicines, appliances (cosmetic and hygienic), the practice of medicine, dentistry, midwifery, massage, pharmacy, etc., and watering places and mineral wells, must be submitted to the Censor before they are inserted in a newspaper. Once passed by him, no modification will be allowed. It is forbidden to advertise abortifacients or preventives of conception, and to publish lying or exaggerated praises of medicines of any kind. The law also precludes the advertisement of products or preparations which can be sold only under a name that implies an indication of their use, such as "antibrigitin" or "antirheumatin"; these we think it well to state are, as far as we know, purely imaginary names which we use to denote the kind of thing we suppose to be meant. The advertisements of doctors must contain no comment. In doubtful cases the question must be referred to the principal medical inspector.

THE HEIGHT OF CREDULITY.

A GERMAN professional paper lately related an example of ingenious enterprise on the part of a former student of pharmacy aided and abetted by a friend. They inserted the following advertisement in a number of

journals: "At last means have been found to increase 'the height of the human body. We guarantee to all 'who will use our apparatus, *Werde gross*, that in 'two days' time they will stand at least 4 cm. higher. "We will pay 1,000 marks to every purchaser who has 'failed to obtain the promised result." The advertisement ended as follows: "Ladies and gentlemen, such "a guarantee is given only by him who can speak "with absolute certainty as to the result. The "price of the apparatus is 5 marks. Address," etc. A number of simpletons fell into the trap and sent their 5 marks, getting in exchange a pair of cork soles 4 cm. in thickness, accompanied, by way of adding insult to injury, by a bottle of hair lotion and a collyrium. We confess we do not see the special significance of the hair lotion, having no reason to believe that bald people are bigger fools than their neighbours. But there is a subtle touch in the collyrium which, it may be presumed, was intended to suggest that the eyes of the poor dupes required some attention. The advertisers may have taken a hint from Swift's lines on himself:

He left the little wealth he had
(To build a house for fools and mad;
Thus showed by one satiric touch
No nation wanted it so much.

Unfortunately for our adventurers, the police with its inquisitorial ways bestowed an inconvenient attention on their enterprise. The end of the affair was that one was fined 300 marks, the other 50. If they were of a philosophic turn of mind, however, they must have felt it cheap at the price to show once more the infinite gullibility of the average man.

DR. J. LUCAS-CHAMPIONNIÈRE, President of the International Society of Surgery, will deliver the annual address to the Cardiff Medical Society on Friday, June 4th. The subject selected by the eminent French surgeon is the modern treatment of fractures.

THE Prince and Princess of Wales will open the Edgar Allen Library of the University of Sheffield on Monday next, and will attend the Congregation in the Fifth Hall of the University at which the Chancellor, the Duke of Norfolk, E.M., K.G., will confer honorary degrees.

IN referring last week to the election of the late Mr. C. G. Wheelhouse to the Council of the Royal College of Surgeons of England in 1876, the belief was expressed that he had been preceded by only two provincial Fellows, Mr. George Southam of Manchester, and Mr. Alfred Baker of Birmingham. Mr. G. C. Franklin informs us, however, that Mr. Thomas Paget of Leicester was elected a member of the Council in 1862, and that he was the first provincial surgeon to receive that honour.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

THE House of Commons reassembled after the Easter holidays on Monday last. There was only a moderate attendance of members, and instead of the usual three score or more questions only six appeared on the paper, and of these only three were asked. Two related to the remarkable speech of Admiral Smith-Dorrien with reference to the body of the late Prime Minister, and the First Lord said in reply that the reference was not intended seriously, and he expressed regret on behalf of the gallant admiral that the reference had been made.

The London Elections Bill was then introduced by Mr. Lewis Harcourt, and after a speech in opposition from Sir F. Banbury was read a first time. The Indian Councils Bill was next taken in Committee, and occupied the rest of the sitting.

The Admission of Strangers.—It is now several months since the suffragette disturbances led to the closing of the galleries for men and women in the House of Commons. A Committee of the House was appointed to consider the course to be adopted in the future, and the bill, called the Houses of Parliament Bill, which embodied their recommendations, occupied the attention of the Commons for some hours on Tuesday afternoon. The bill proposed to make disorderly conduct an offence, for which any stranger could be arrested by an officer of the House, locked up, and on conviction before a magistrate be sentenced to six months' imprisonment or a fine not exceeding £100. In the course of the discussion, it soon became apparent that the members of all political parties disliked the police-court procedure, and felt that the House itself ought to be the guardian of its own order and comfort. There were also unmistakable signs that a large number of members were quite content to leave the galleries empty for the present. The bill was severely criticized by Sir E. Carson, and after the Attorney-General had said the Government would let members vote as they like, and not make the Bill a Government question, the Prime Minister finally settled the matter by moving the adjournment of the debate. This was carried *nem. con.*, and so for the present the bill disappeared, to the great satisfaction of the House. *Solvitur risu tabula.*

The Housing Bill.—Sir Walter Foster has put down amendments to Clause 67 of this bill, to give district and borough medical officers of health the same security of tenure as county officers, and to place all medical officers of health on an equality as regards the duration of their appointments.

The Anaesthetics Bill, or, as it is officially called, the Medical Acts Amendment Bill, is exciting a good deal of criticism in many quarters. The registered dentists as well as the unregistered dentists are very active against it. Registered dentists and students of the dental schools ask that properly qualified registered dentists should be allowed to give anaesthetics, and that the use of local anaesthetics should be included in the scope of the bill. The bill has been blocked by no fewer than seven members.

The Local Education Authorities (Medical Treatment) Bill of Mr. Walter Guinness (see SUPPLEMENT, p. 191) would enable Local Education Authorities to recover the cost of the medical treatment of children, where such treatment is provided under Section 13 of the Education (Administrative Provisions) Act, 1907. Local Education Authorities already have power to recover the cost of meals from parents under the Education (Provision of Meals) Act, 1906. Parents who neglect to provide necessary medical aid are liable to conviction under Section 12 of the Children's Act of 1908, but there is no power to enable the local authority to recover the cost of treatment.

The Asylum Officers' Superannuation Bill, which passed a second reading before Easter, and was referred to a Select Committee, had its Committee appointed at the commencement of public business on Monday last as follows: Sir W. Collins, Mr. Hazleton, Mr. I. M. Henderson, Mr. Horniman, Mr. W. E. B. Priestley, Mr. T. F. Richards, Mr. Walter Roch, Mr. Stanier, and Sir John Batty Tuke.

Milk Supply in Egypt.—Mr. John Robertson asked the Secretary of State for Foreign Affairs on Tuesday whether, in view of the high death-rate in Egypt, he would urge upon the Egyptian Government the necessity of establishing a system of inspection of cowsheds and dairies, and milk cans coming by train. Mr. McKinnon Wood said that it was a question of internal administration on which there did not appear to be grounds for interference on the part of His Majesty's Government.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND DISTRICT.

THE CHILDREN'S HOSPITAL PROBLEM.

ACCORDING to the annual report of the Manchester Children's Hospital recently issued, the pressure in the out-patient department on the staff and the accommodation has so increased of late as to constitute a serious problem. Altogether apart from the increase in the population of the area supplied by the hospital, there seems to be a growing tendency to resort to such institutions on the part of many who formerly would have made other provision. The fact is mentioned that the hospital was represented at the conference of hospital authorities convened by the British Medical Association in London about a year ago; as the outcome of the suggestion there made, changes have been introduced with a view to checking possible abuses of the charity by persons well able to make other provision for their sick children, for there was a strong feeling that such abuses had had the effect of deterring people from supporting the hospital as they otherwise would. The ordinary expenditure for the last year amounted to £11,079, which was £378 less than the income. The balance owing to the bank was £1,711 on the income account. The beds at the Pendlebury Hospital had always been kept well filled, while, as far as the dispensary was concerned, the past year provided the hardest and busiest year's work that the medical and nursing staff had ever had; even the new building with all its accommodation had on busy days been insufficient for their needs. The operations performed at the dispensary had risen from 486 in 1906 to 871 in 1907 and to 1,303 in 1908. This great and constant increase was due in large measure to pressure put upon parents by the school medical inspectors to have their children attended to. The report draws special attention to the deaths among children from diseases of the lungs, and continues:

The massacre of the innocents hangs over our city like a moral black cloud, and that it is in part due to the physical black cloud which also hangs over us no one will doubt who studies our statistics and sees the figures relating to deaths from diseases of the lungs. And it should be remembered that for every child that dies from bronchitis, fully a hundred are by it deteriorated in constitution and physique, and rendered less able to resist disease in whatever form it may attack them.

There can be no doubt that the hospital is faced by a difficult problem which will have to be solved in the near future. On the one hand, the education authorities are pressing more and more for specialist treatment for the school children which in many cases general practitioners will not undertake except at a fee which the parents consider to be prohibitive. Parents who could afford to pay ordinary fees for general medical treatment, and who would be ineligible for free hospital treatment of a general kind, profess themselves, not without reason, unable to pay two guineas for removal of adenoids with the necessary anaesthetic at home. Theoretically such cases are suitable for the hospital, but their great number is taxing to the uttermost the power of the staff and the accommodation of the hospital. The suggestion has been made, quite unofficially, that the Education Authority should subsidize the hospital for the extra work it is doing for the community. But two objections are raised against this—first, that it is on the staff itself that the extra work falls, and it would be unreasonable to impose public work on them without personal remuneration. If this be done, the payment for each case would necessarily be small, and the amount paid might gradually come to be regarded by the public as the standard fee. In the second place, seeing that the hospital provides the accommodation, the anaesthetic, and all apparatus, as well as the nursing assistance, the hospital itself would have a claim for a considerable part of the subsidy. But no sooner would it become known that the hospital was being subsidized than at once private subscriptions would begin to fall off. People would refuse to give twice, once through the rates and again by private subscription, and the last state of the hospital would be

more than the first. That all these difficulties are not merely theoretical is shown very plainly by the experience of Sheffield, where the experiment of subsidizing the hospitals has been tried for about a year, and has now been condemned as a failure by the Sheffield Division. Some time ago the Manchester Divisions expressed their entire sympathy with the Sheffield practitioners in their attempt—now likely to prove successful—to terminate the present system at Sheffield, and the object lesson ought to prevent anything similar in Manchester. Meanwhile, until the Education Authorities make some provision of their own, which they are under no compulsion to do, things will have to go on as at present at the Children's Hospital—that is to say, the honorary staff will have to consent to be overworked for the public good, and the hospital will have to continue increasing its rapidly rising deficit unless the subscriptions greatly increase. Another alternative is that the advice given by the school medical inspectors to parents shall be regarded as only the expression of a pious opinion.

LIVERPOOL.

NEW OUT-PATIENT DEPARTMENTS.

The preparations for erecting the new out-patient department of the Royal Infirmary are being rapidly carried forward, and during the last two months the houses which occupied the intended site have been demolished. Apart altogether from the cost of the upkeep of the new department, the destruction of these houses involves a loss to the infirmary of £250 a year in rents. The preparation of the ground is going forward, and the ceremony of laying the foundation stone will be fixed for an early date.

At the Royal Southern Hospital a new out-patient department is also in contemplation. This institution was founded in 1841 under the name of the Southern and Toxteth Hospital, was rebuilt in 1867-72 at a cost of about £55,000, and was opened in May, 1872, by H.R.H. Prince Arthur, Duke of Connaught, when it was named the Royal Southern Hospital. The present extension will occupy a site in Caryl Street immediately opposite the main buildings. The land was acquired and cleared by the committee some years ago in anticipation of the funds necessary for building, and these it is understood are now forthcoming. The cost of a building providing for 50,000 attendances a year will be £8,500, towards which the Corporation of Liverpool is empowered to vote £4,000. There will still be required a sum of £1,200 for furnishing. The new building will be completely separated from the hospital, and will stand on a site measuring 960 square yards. The waiting hall, placed in the middle of the building, will be carried up considerably higher than the surrounding offices, and so enable it to be lighted on the four sides and to have a through ventilation. The building is to be faced with red pressed bricks and stone bands. The construction will be commenced almost immediately, and will be completed in about a year.

TROPICAL SCHOOL EXPEDITION.

Dr. Kinghorn and Mr. Montgomery, who went out to Central Africa on behalf of the School of Tropical Medicine to inquire into the possibility of checking the spread of sleeping sickness in British Central Africa, have just returned to England after a sojourn of nearly two years in those territories. The expedition was the eighteenth sent out by the school, and covered some 8,000 miles on foot, principally in North-Eastern Rhodesia and Nyassaland. The country is mostly a plateau from 3,000 to 5,000 ft. above the sea level. The temperature was not excessively hot, and at times the nights were frosty. The health of Europeans is usually good, and with a little care it is quite possible to avoid the complaints usually found in the tropics, such as malaria, dysentery, and tick fever. The cattle tsetse fly is common and very destructive, but the species which conveys the organism of sleeping sickness has apparently a limited distribution. It does not occur in Nyassaland.

HULL.

PLAGUE AMONGST RATS.

SEAPORT towns in direct communication with tropical ports infected with plague are always liable to infection,

and in most instances this is brought about by the introduction of diseased rats. Dr. J. Wright Mason, Medical Officer of Health for Hull, in a report recently issued, gives an account of such an outbreak amongst the rats in Hull. Dead rats having been discovered in one of the sheds at the docks, some of them were examined bacteriologically by Dr. Thompson, Assistant Medical Officer of Health for Hull, and by Dr. Klein in London. The results were the same in both instances, bacilli resembling those of plague being seen in smears from the organs; these when cultivated and put through the various tests were shown clearly to be true plague bacilli. More dead rats found a fortnight or so later gave similar results, but these fortunately came from the same shed; and as inquiries had been made at all the other docks in port as to the discovery of dead rats, with entirely negative results, this indicated that the disease had remained localized to the original shed. The origin of the epidemic is not far to seek. From December, 1908, to the end of February, 1909, Dr. Mason states that six vessels from suspicious and plague-infected districts—namely, Alexandria and Karachi—had discharged cargo on the south side of that particular dock where the infected shed is situated. The escape of one infected rat from either of these vessels to shore would of course be sufficient. Disinfection of the shed and the destruction of rats has seemed to stamp out the outbreak, and fortunately no human beings have become infected. It will be well, however, to exercise special care for some months to come, as it is just possible that some disease-stricken rats have escaped, and these might spread the infection further.

DEVON.

RESEARCH DEFENCE SOCIETY.

A DEVONSHIRE branch of the Research Defence Society was formed last July. Its list of patrons and officers includes Earl Fortescue (Lord Lieutenant of Devonshire), Hon. W. F. D. Smith, M.P., Admiral Sir Wm. Acland, Sir Thomas Acland, and many other leaders of thought and action in the county. Mr. Eden Philpotts, the well-known novelist, is president of the branch. Mr. W. F. Meres, of Torquay, the honorary secretary, states that the branch has been chiefly recruited hitherto from Torquay and the neighbourhood, but it is his confident hope that he will obtain an accession of strength from all parts of Devonshire. The list of members grows steadily. The Committee has arranged a series of lectures in different centres explanatory of research, and one of these was delivered last week at Exeter, before a large audience, by Mr. Stephen Paget, under the chairmanship of Dr. H. Davy, acting-President of the British Medical Association. The lecture was illustrated by a number of beautiful diagrams. Several antivivisectionists were present and sought to place their views before the meeting, but Dr. Davy, after taking a vote on the question, refused to allow them to do so.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

MEATH HOSPITAL, DUBLIN.

SIR HORACE PLUNKETT, C.V.O., presided at the annual meeting of the Meath Hospital, Dublin, on April 19th. The report showed that the debit balance, which at the beginning of the financial year was £5,610 19s., now amounted to £6,241 6s. 3d. This continued deficiency is a cause of much anxiety to the managing committee, which fears that it may be necessary to close a considerable number of beds; 1,549 patients were treated in the wards. The average daily number of beds occupied was 115.03. The number of accidents treated was 7,890. Sir John W. Moore mentioned that subscriptions had fallen off during the past few years, and in that connexion said that the statement which had been made with regard to that hospital, in common with other Dublin hospitals, that vivisection was practised within its precincts, was a deliberate falsehood. Sir Lambert Ormsby, Mr. C. Lawler, J.P., Mr. W. S. Collis, Mr. P. C. Cowan, and Mr. Arthur Andrews, J.P., also addressed the meeting.

COUNTY CORK SANATORIUM.

The laying of the foundation stone of the new Sanatorium for Consumption on April 14th has caused widespread satisfaction throughout the county of Cork. Her Excellency the Countess of Aberdeen, who has done so much throughout Ireland to assuage the ravages of the "white scourge," travelled from Dublin, at some personal inconvenience, to be present at the ceremony. On arrival at the site, Her Excellency was met by Mr. Arthur McDonald, the Chairman, and the other members of the Joint Hospital Board. On behalf of the Conjoint Board Mr. McDonald presented an address to Her Excellency, in which the Board expressed its sincere appreciation of her kindness in coming to lay the foundation stone of the first county sanatorium in Ireland to be erected and maintained for the treatment of poor consumptives. The address recorded that the Cork Joint Hospital Board was brought into existence over three years ago by a Provisional Order, and was entrusted with the function of establishing and maintaining a sanatorium for poor consumptives of the County and City of Cork. Considerable difficulty was experienced in securing a suitable site that would embrace all the recognized requirements. A little over a year ago, Mr. Langley Brazier-Creagh, a prominent member of the Board, with commendable generosity, offered the site at Streamhill as a free gift, which the Joint Board unanimously accepted, and it met with the approval of the Local Government Board. The funds for the maintenance of the sanatorium were provided by the exertions and influence of the members of the Cork branch of the National Association for the Prevention of Consumption, who succeeded in the unique task of getting all the rural and urban district councils of the county to consent unanimously to levy a rate of one penny in the pound, yielding over £5,000 a year. This, the first county sanatorium in Ireland beginning under such favourable auspices, would, it was hoped, prove a powerful weapon in combating the scourge which had worked such havoc in the country. Her Excellency was then presented by the contractor, Mr. Harbrow, with a silver trowel, and, having duly declared the stone well and truly laid, delivered an encouraging address, commending the action of the County Cork Board to the other counties of Ireland, and urging them to take their share in a fight which was not unto death but unto life. The guests included representatives of the various public bodies of the county and city of Cork, as well as of the Cork branch of the National Association for Prevention of Consumption, and the various Cork branches of the Women's National Health Association. Her Excellency was accompanied by Sir William Thompson, M.D., and Dr. E. C. Biggar, Medical Inspector Local Government Board. A luncheon followed, at which Her Excellency's health was proposed by Mr. McDonald and received with acclamation. Her Excellency replied, and speeches followed by the Lord Mayor of Cork, Mr. Brazier-Creagh, Mr. William McDonald, and others.

The site is situated at the foot of Ballyhoura Mountain, four miles from Buttevant station and eight from Mallow.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

DEATH OF THE REV. DR. SCOTT.

The ecclesiastical history and the ecclesiastical differences in Scotland which have had such a dominating influence in forming the Scottish character are somewhat of a mystery to those who have not lived in that country. In 1843 and for many years afterwards the Church of Scotland was shaken to its foundations by the great disruption, and that it has recovered to its present position is due in great measure to the influence exercised by a number of eminent men. Among them no one in the present day was more highly esteemed than the Rev. Dr. Scott of St. George's, Edinburgh. He was the recognized leader, and to his wise counsel and sound judgement the Church owes much. Dr. Scott died on April 18th, after a long and painful illness due to malignant disease of the prostate.

One of the most conspicuous figures in the Church of Scotland, his death will be widely felt. It is but fitting that our profession, often so closely associated with the clergy, should express its sympathy with the sister profession in the great loss that Scotland has suffered by his death. Dr. Scott took an active interest in medical matters, and was at the time of his death a manager of the Royal Infirmary. Brought into intimate contact with the work of our profession and with many of its members, he showed on many occasions his appreciation of the work done by the medical profession and much sympathy with its members in the difficulties with which they often have to contend. He had the highest respect for the medical profession, and those among its members who knew him personally or by repute held him also in the highest respect, and recognized what a loss this eminent divine must be to the National Church in Scotland.

Hong Kong.

[FROM OUR SPECIAL CORRESPONDENT.]

THE PROPOSED HONG KONG UNIVERSITY.

HIS EXCELLENCY SIR FRANCIS LUGARD has now issued a memorandum setting forth the advantages to be gained by founding a university in Hong Kong, and stating that Mr. Mody, who has promised to erect the university buildings, has made it a condition that a sufficiently large endowment fund must be obtained before he begins the buildings. Mr. Mody at first stipulated that the endowment fund must be raised within six months, but has since signified his willingness to extend the time limit if necessary. His Excellency, in consultation with a committee of those interested in educational matters, has fixed the sum of \$1,000,000 (one million dollars) as the minimum amount necessary for endowing a university whose standard shall be equal to that of the British universities. An appeal asking for generous support of the scheme has been widely circulated, and a large and influential Chinese Committee, having Hon. Dr. Ho Kai as chairman, is at work, and already several large donations have been promised. If the Chinese are really convinced of the advantages of a university in Hong Kong, there is no doubt that the endowment will soon be forthcoming. His Excellency the Governor has worked strenuously in the interests of the proposed university, and it is hoped that his efforts will be successful. Should the university be established, the Hong Kong College of Medicine will cease to exist as a separate institution and become incorporated as the Medical Faculty of the university.

THE OPIUM QUESTION.

At a meeting of the Legislative Council, His Excellency the Governor made a statement in regard to the opium question in so far as it related to the Hong Kong opium divans. As the result of correspondence with the Secretary of State, it had been decided that all the opium divans should be closed by March 1st, 1910. On March 1st this year, twenty-six licences had not been renewed, and the gradual diminution of the licences would give time to provide for supplementing the revenue from other sources. The Imperial Government had promised to help the colony financially in meeting the loss which will result from carrying out its commands.

St. Bartholomew's Hospital and Finchley Cottage Hospital both benefit under the will of the late Mr. Ebenezer Homan, of Friern Hatch, Finchley, the former receiving £1,000 for its Samaritan Fund and the latter £1,000 for general purposes and £500 for its Samaritan Fund.

THE report presented to the annual general meeting of the Association of Medical Men Receiving Resident Patients showed that the number of patients placed during 1908 was nearly double that in 1907, but the applications received from patients were not commensurate with the high demand for membership. The financial position, which rendered it possible to lower the subscriptions last year, continued, in spite of increased advertising and clerical expenses, satisfactory. Further particulars can be obtained from Dr. Hubert Biss, Honorary Secretary, 56, Outer Temple, Strand, London, W.C.

Obituary.

SIMEON SNELL, F.R.C.S. EDIN., D.Sc. SHEFFIELD,
HONORARY OPHTHALMIC SURGEON TO THE ROYAL INFIRMARY,
SHEFFIELD; PRESIDENT OF THE BRITISH MEDICAL
ASSOCIATION.

WITH profound grief we announce the death of Mr. Simeon Snell, President of the British Medical Association, which took place at his residence, Moor Lodge, Sheffield, on April 17th. For upwards of a year the state of his health had caused anxiety to his friends, and those who were present at the annual meeting in Sheffield will remember that he looked far from well, and was obliged to delegate to others some of the rather arduous duties that fall to the lot of a President.

Acting on the advice of his medical attendants he took a long holiday immediately after the close of the meeting, and on his return to work relinquished some of the less important of his numerous engagements. For a time he appeared to be more than holding his own, and it was hoped that he might eventually make a complete recovery, but a sudden change for the worse set in about two months ago, and after considerable suffering, which he bore with heroic patience, the end came peacefully while he slept. He died of arteriosclerosis and consequent heart failure. He was attended in his last illness by his friends, Dr. W. J. Martin, Dr. W. Dyson, Dr. Duncan Burgess, of Sheffield, and Dr. E. Colbeck of London.

Simeon Snell was born in October, 1851, near Launceston. He came of a medical family, his father, the late H. H. Snell, and several of his brothers being doctors. He was educated at Mannamead College, Plymouth, and pursued his medical studies at Leeds, Guy's Hospital, and Moorfields. He became M.R.C.S. in 1872, and L.R.C.P. Lond. in 1893, and subsequently took the diploma of F.R.C.S. Edin. He was an honorary D.Sc. of the Sheffield University, and for many years a J.P. for the City of Sheffield.

He settled in Sheffield in 1874, and soon afterwards was elected Honorary Ophthalmic Surgeon to the Sheffield Royal Infirmary, a post which he continued to hold until his death. He was Ophthalmic Surgeon to the Sheffield School for the Blind, and Consulting Ophthalmic Surgeon to the Moxborough Hospital. Throughout his entire medical career he was closely associated with the Sheffield Medical School. He took the warmest and most energetic interest in the project for establishing a university in Sheffield. His services in this matter were thus referred to by the *Sheffield Inde-*

pendent in the course of a sympathetic notice of his career:

It can be safely said that no one in the whole of the city entered with greater enthusiasm than did Mr. Simeon Snell into the obtaining of a charter for the Sheffield University. He was foremost at the numerous meetings which were held in the East End and other works in the city on many days of the week to enlist the sympathy and support of the workers of Sheffield in a cause which he felt was vital to the future educational and industrial progress of the city. Any waverers who were sceptical about the utility of a university in the way of furthering Sheffield's industrial position were soon converted by Mr. Snell's modest yet convincing arguments. He was an active and enthusiastic leader, and it is not possible to overestimate the value of the services he rendered in bringing the scheme to a successful conclusion.

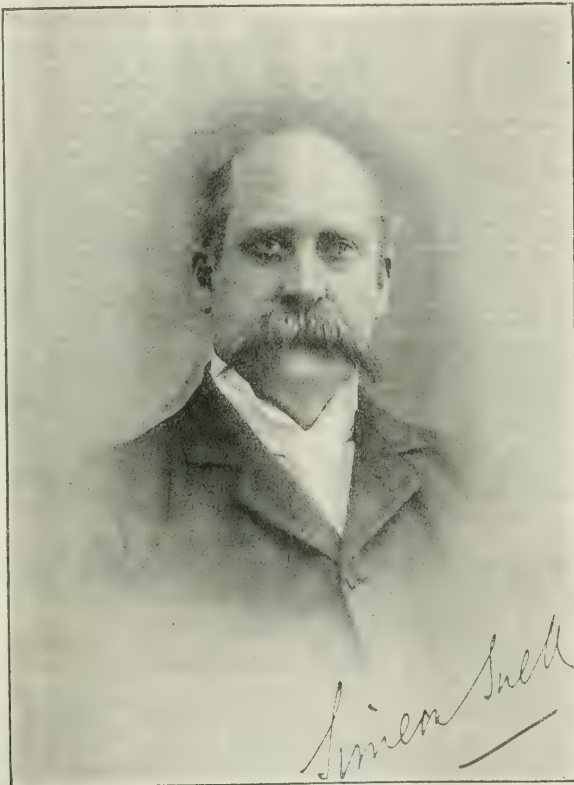
When the university was constituted and when the

Sheffield Medical School was merged in it, Mr. Snell was appointed Professor of Ophthalmology, and allotted a seat on the council.

Mr. Snell's connexion with the Sheffield Royal Infirmary extended over a period of thirty-two years, and until his last illness he made a point of personally superintending the huge clinic which twice a week filled to overflowing the large out-patient rooms. In this way he had unrivalled opportunities of becoming practically acquainted with the accidents and diseases of the eye which arise among workmen engaged in the trades for which Sheffield is famous, and in the coal mines the proximity of which has been so great a factor in the prosperity of the city. These opportunities he turned to admirable account, and many of his numerous valuable contributions to the literature of the profession dealt with trade diseases and accidents, in

the study of which, as affecting the eye, he was a pioneer. Among his writings mention may be made of papers on the electro-magnet and its employment in ophthalmic surgery; miners' nystagmus; school life and eyesight; practical examination of the eye; prevention of eye accidents in certain trades; Report to the Home Office on alleged dangers from using masks and eyeguards in aerated water manufactories; acquired nystagmus from occupations other than coal mining; inquiry into the causes of blindness. The last paper, which was read at the Exeter meeting, resulted in the formation of a Special Committee of the British Medical Association for the purpose of considering the prevention of ophthalmia neonatorum.

He deservedly enjoyed a high reputation as an ophthalmic surgeon, and patients from a very wide area flocked to his consulting rooms. The appreciation of his work by his contemporaries secured for him many



distinctions. He was a former Vice-President of the Ophthalmological Society of the United Kingdom, Vice-President and, later, President of the Ophthalmological Section of the British Medical Association, President of the Yorkshire Branch of the British Medical Association, and of the Sheffield Medico-Chirurgical Society. A pupil of Wheelhouse, Clifford Allbutt, and Pridgin Teale, he remained their lifelong friend.

The crowning honour to a distinguished career came less than a year ago when, on the unanimous recommendation of his local compeers, he was elected President of the British Medical Association. On the recommendation of the Science Committee the Council of the British Medical Association performed the graceful act of conferring on its newly-elected President the Middlemore prize for his distinguished services to ophthalmology.

In earlier years he did much and excellent spade work, and there are few organizations in Sheffield that have not at one time or another experienced his effective help.

He was one of the hardest-working secretaries of the Sheffield Medico-Chirurgical Society, and on vacating this post to become President of the Society, his services were suitably acknowledged by the presentation of a massive piece of plate.

It was not in the practice of his profession alone that his great abilities and wonderful energy found outlets. He founded, and for many years was editor in chief of, the *Sheffield Medical Journal*. The success of this venture was so great that in a few years it was found necessary to broaden its title to that of the *Quarterly Medical Journal*. He wrote an interesting history of the medical societies of Sheffield, and was joint author of the history of the Sheffield Royal Infirmary.

For many years he took a leading part in the management of the Sheffield Literary and Philosophical Society, and with his co-secretary and intimate friend, the late Professor Clifton Sorby, F.R.S., raised it to the high position it now occupies among similar institutions. Ever ready to help a professional brother in distress, he was an active supporter of the West Riding Medical Charity. He was a devoted husband and father, and leaves a wife, two sons—one of whom has just entered the profession—and three daughters.

His remains were interred in Fulwood Churchyard on Wednesday, April 21st. The Right Rev. the Lord Bishop of Sheffield read the burial service, and the funeral was attended by a very large number of the members of the medical profession in Sheffield and the surrounding districts, by representatives of the Sheffield Royal Infirmary, the University, the Sheffield Medico-Chirurgical Society, the Sheffield Division of the British Medical

Association, the Literary and Philosophical Society, the Blind Institute, the Sheffield Book Society, and by a host of former friends and patients, and by Dr. J. A. Macdonald (Chairman of Representative Meetings), Dr. Rayner (Treasurer), by Drs. Goyder and Sinclair White, members of Council, and Dr. Turner, President of the Yorkshire Branch of the British Medical Association. The Chairman of Council, who was abroad, was represented by Mr. Gny Elliston.

The Bishop of Sheffield in his sermon on Sunday last at St. Mark's Church, where Mr. Snell was a regular attendant, made reference to the loss which Sheffield had sustained. There was missed, the Bishop said, that day from the great and growing city one who during the last quarter of the nineteenth century and the first decade of the present had done more than most men to help forward

the interests of Sheffield, and to make it famous amongst eminent and scientific men. During that period the progress and expansion of the city had been remarkable. Dr. Snell had taken his part in it, and he had been one of the makers of modern Sheffield. It was given to few men, the Bishop went on, to make their mark so early in life as did Dr. Snell, and still fewer to be able to add fame and renown to their reputation even to the very end. As one of the pioneers of the university he associated himself with the educational progress of the city. He was honoured last year by having conferred upon him the degree of a Doctor of Science, the highest distinction of its kind. Yet it was not by his honours that he would be remembered, but for his services to mankind.

Dr. HENRY DAVY, of Exeter, Mr. Snell's immediate predecessor in the office of President

of the British Medical Association, writes:

No one has had a better opportunity than myself during the past eighteen months of seeing the keen interest which our late President took in the British Medical Association. When, during last January, Mr. Snell went to Torquay for his health, he asked me to visit him there to talk over the affairs of the Association with him, and only last week, in a letter dictated to me from his bedroom, he said he hoped soon to be well enough to discuss business again. Mr. Snell had a very high sense of duty, and his first consideration as President was to try and act for the good of the Association, whether his action would bring him popularity or not. In all my intercourse with him I was struck by his painstaking thoroughness and the straightforward way in which he spoke out his thoughts. His ancestors came from Newton Ferrers, near Plymouth, and he was educated at Plymouth Grammar School. Although he had resided so long in Yorkshire, he remained a Devonian at heart. He

was always at home in his native county, and never was happier than when residing at his house at Teignmouth, which he occupied every summer. I feel that by the death of Mr. Snell during his year of office the Association has suffered a great loss. No one was a warmer or truer friend of the Association, or had its best interests more keenly at heart.

Sir ANDERSON CLITCHETT, Bart., writes: Ophthalmologists have recently had cause to realize with sadness that "the Angel of Death has been busy in our midst." It seems but yesterday that Argyll Robertson was taken from us; and now, after brief interval, he is followed into the silent land by his devoted friend and former pupil, Simeon Snell.

I shall always remember the latter as one of the most strenuous and conscientious workers in the profession. Had he been less prodigal of his boundless energy we might perhaps have been spared his untimely loss; but his faculties were ever at concert pitch, and he seemed to realize to the full Elizabeth Barrett Browning's terse and forcible injunction, "Get work; be sure 'tis better than that you work to get."

From the foundation of the Ophthalmological Society of the United Kingdom, Snell was one of its most loyal and consistent supporters. He contributed numerous valuable papers, and at his own expense he on many occasions brought interesting cases from Sheffield. Whenever there was an important question for discussion, he made the long journey from the North, arriving just in time for the meeting, and then, at its conclusion, rushing off to catch a midnight train. It is a matter for deep regret that the penalty for such consistent devotion to duty has been so heavily and so prematurely paid.

The summit of his professional career was reached when he was elected President of the British Medical Association, an honour which till then had never been achieved by any English ophthalmic surgeon, and he devoted his last store of energy to the duties of that high office, with the result that the meeting last year at Sheffield was one of the most successful on record. But the handwriting was already on the wall, and those who knew him best recognized with pain the gallant struggle of the indomitable spirit against rapidly failing powers.

Much of his work deserved, and will, I am convinced, obtain, permanent record; and as an instance of his thoroughness I may mention that at some personal risk he made many descents into coal mines whilst studying those special types of nystagmus concerning which he has written so well and so voluminously. He was probably without a rival in his experience of foreign bodies within the globe.

We can ill spare from our ranks one who possessed such high qualities of loyalty, integrity, and intellectual capacity, and Simeon Snell will ever be held in most kindly remembrance by all who had the good fortune to enjoy his friendship.

A colleague of Mr. Snell writes:

I desire to offer my tribute to the memory of a truly remarkable man.

His character may be summed up in the qualities of extraordinary energy, indomitable courage, transparent honesty of purpose, and a profound belief in himself. When Snell took anything in hand it was sure to succeed, if success was possible. An exceedingly busy man, unsparing of his energies, he got through an amount of work which to many would appear incredible. This was achieved by methodical habits, and by virtue of the faculty he possessed of doing most things outright at once. It is needless to say that such a character occasionally evoked opposition, but though a keen fighter he always fought with legitimate weapons, and in the open.

He was a man of many parts, and contrived to stamp his individuality on everything he did. As an ophthalmic surgeon he took high rank. A rapid yet profound observer, with a wealth of material at his disposal in the huge ophthalmic department of the Royal Infirmary, it was inevitable that he should come to the front in his speciality, and for many years he was the acknowledged leader in ophthalmology throughout a very wide area, while his contributions to the literature of his subject gained for him a world-wide reputation. He was espe-

cially brilliant as an operator, and I have been repeatedly told by competent observers of his work that they had rarely witnessed its equal. He instinctively appeared to know the right thing to do, and did it with a celerity and delicacy of touch which marked him as an artist in his speciality.

THE LATE MR. C. G. WHEELHOUSE.

DR. WARD COUSINS writes: Permit me to add a few words to the interesting biographical sketch of my old friend, Mr. C. G. Wheelhouse, which appeared in the last issue of the JOURNAL. Many years ago at the meetings of the Committee of Council I had the pleasure of meeting him, and I well remember his energy in promoting all the interests of the Association, and how greatly his help and co-operation were valued by all his colleagues. When the constitution in 1883 underwent reconstruction by the introduction of Branch representation he expressed some anxiety about the future of the Association, but in a very short time he recognized the importance of the changes which had taken place at the vital centre. Mr. Wheelhouse long occupied a distinguished position as a surgeon, and I desire especially to record my appreciation of the great improvements he introduced in perineal surgery which will always be associated with his name. He was the originator of a great advance in the treatment of severe and impassable urethral stricture. Until then external urethrotomy was generally performed without a staff, and it was regarded as an operation of extreme difficulty and danger. The important modification which Mr. Wheelhouse introduced is to-day known as the "Leeds operation." He published a full description of the method in the BRITISH MEDICAL JOURNAL of June 24th, 1876, and it was at once recognized as a great advance on the old haphazard operation. After putting in a straight guide up to the seat of the constriction, he explored the urethra by a free incision, and looking into the angle of the exposed and dilated passage, he passed through the constriction a director into the bladder, and then divided freely and often subcutaneously the whole length of the diseased tissues. By this simple and ingenious method the performance of an old, difficult, and dangerous operation was rendered at once both easy and successful, and to-day "a Wheelhouse" is practised in every hospital in the kingdom. I feel confident that all the members who enjoyed the advantage of knowing our old and much-esteemed friend will never forget his kind and genial presence, and all his invaluable services in the development and progress of the Association.

CHARLES BELL TAYLOR, M.D. AND F.R.C.S. EDIN.

We have received through the Chairman of the Nottingham Division of the British Medical Association the following tribute from a friend to the late Dr. C. B. Taylor, of Nottingham, who died on April 14th, in his 80th year:

"Charles Bell Taylor was born at Nottingham, where his father and brothers were well-known veterinary surgeons; and to Nottingham came patients to consult him from all parts of the world to the end of his long career. He was a masterly operator, but it may be doubted whether it was mainly to this that he owed his fame. It was his personality which drew and held his patients. No one who had seen him would readily forget him. Tall and dark and commanding, his piercing black eyes looked out under his deep brows with an expression of peculiar intensity. Some of his patients were afraid of him, far more were attracted, and all were dominated by him.

"He was a great individualist, and all that interfered with the liberty of the individual met with his uncompromising and eloquent denunciation; and the opponents of compulsory vaccination, of the Contagious Diseases Acts, and of vivisection, found him a powerful ally on their platforms. Beyond this he took little part in public affairs, his own special work providing full occupation for the energies of an unusually vigorous mind.

"The amount of work he did was enormous. For many years, in addition to his private practice, he did a large proportion of the work of the Nottingham and Midland Eye Infirmary. He never had a qualified assistant; even the services of a trained nurse appeared to him a boon of

doubtful value. Until his last brief illness (influenza) he was never, even for a day, deterred by ill health from seeing his patients. Probably his abstemious mode of living combined with his great vitality to produce this result: he never had more than two meals a day, and he abstained altogether from alcohol, tobacco, and even from tea and coffee. Certainly it is given to few men to perform, as he did, at 80 years of age, the most exacting operations, with a hand as steady as in his prime.

"Perhaps the characteristic of his operating which struck one most was his entire imperturbability; the eyeball seemed as if it were clay in his hands, to be moulded at his will. He always operated by artificial light, and a striking picture might have been made of the curtained room, with its single lamp, its rays concentrated on the face of the patient by an enormous globe of water, giving something of the air of an alchemist's chamber to the scene, while above the patient's head loomed the strongly-cut features of the operator, and among the shadows flitted William, the attendant, with the instruments; and further back, perhaps, was a suggestion of the hushed figures of the patient's friends.

"His favourite operation was that for cataract, which he did, whenever it was possible, without an iridectomy, placing his rather large incision exactly in the corneoscleral junction, and delighting with the delight of an artist—in his work in the result of 'an operation without a scar.'

"In his choice of anesthetics, he was, as in many other things, peculiar; for, though educated at Edinburgh in the days of Simpson, he held chloroform in abhorrence, and used to rapidly smother his patients with ether vapour almost undiluted with air, and it is believed he never had a mishap. The writer has seen him extract a cataract without any anaesthetic, local or general, and without the flicker of a muscle on the part of operator or patient—a striking testimony to the magnetic influence of his personality.

"It is a truism to say that the surgeon must have confidence in himself before he can communicate it to his patients, and this Bell Taylor possessed in a supreme degree. It was said that the expression 'I can't' did not occur in his vocabulary.

"His great skill was as freely given to the poor as to the rich, and beneath all the peculiarities of the man was a nature of real simplicity and kindness."

HENRY STILWELL, M.D.

AFTER a short illness, Dr. Henry Stilwell, late of Moorcroft, Hillingdon, died, aged 73, on April 12th, at Eastbourne, where he had lived since his retirement in 1906.

After leaving Rugby School, he entered St. Bartholomew's Hospital in October, 1853, and, after spending a year at Edinburgh, obtained the degree of M.D. Edin. and the diplomas of M.R.C.S. and L.S.A., in 1857. After a visit to Australia, he assisted his father, the late Mr. James Stilwell, F.R.C.S., in general practice at Uxbridge for two years. He was then called upon to join his cousin in the management of the asylum in that district. For upwards of forty-five years he held the position of Medical Superintendent at Moorcroft, Hillingdon.

He was an old member of the British Medical and Medico-Psychological Associations, and until recently was a frequent attendant at their meetings. For many years he was the local Secretary of the Epsom Benevolent Fund. In his social as well as professional spheres Dr. Stilwell was always held in high esteem, being regarded by every one as a man of the strictest integrity. In his asylum life he was a successful organizer, and was much liked by his patients, to whom he gave much of his time and personal attention.

As an alienist his opinion was sound, although cautious as to prognosis. A man of many parts and fond of reading, he did not neglect to preach and practise the doctrine of physical exercise and outdoor life. In bygone years his chief recreation was hunting, and he was regarded as a good judge of a horse. Latterly he had taken to golf. He was well known as a member of the Edinburgh University Club, and he attended regularly the dejeuner dinners of St. Bartholomew's Hospital. Dr. Stilwell leaves his wife, son, and three daughters to mourn his loss. The funeral,

which was held at Hillingdon on April 16th, was attended by his son, sons-in-law, and many sorrowing friends.

WILLIAM GABRIEL ROCKWOOD.

CONSULTING SURGEON TO THE COLOMBO GENERAL HOSPITAL.

NEWS has been received of the death, on March 29th, of Dr. W. G. Rockwood, a Cingalese practitioner of much distinction, and one well known to many of his colleagues in this country. Dr. Rockwood, who was a Tamil by birth, was born in Jaffna, Ceylon, in 1843, his father being a Subcollector of Customs. He received his general education partly in Ceylon and partly at the Presidency College, Madras. At the latter institution he gained a scholarship, and passing on to the Madras Medical College in 1861 received the licence of the College after a five years' course. At a later date he obtained the degree of M.D. of the University of Madras; and still later was admitted to the Membership of the Royal College of Surgeons in England. Meantime he had returned to his native country, and obtained appointment in the medical department. He proved from the first a most excellent officer, his professional work attracting so much favourable attention that on the death of Dr. Koch he was appointed Surgeon-in-Charge of the General Hospital, Colombo, and the Lying-in Home. This appointment carried with it that of Lecturer on Surgery and Midwifery at the Ceylon Medical College, which he held for many years, finally retiring from Government service under the age limit in 1898. His professional services were then recognized by the creation of the post of Consulting Surgeon to the hospital and his appointment thereto, and a little later he was selected by the Governor to represent the Tamil community in the Legislative Council. It was a happy choice, for he brought the same industry and intelligence into play in his new duties as he had previously exhibited in professional connexions, and on the termination of his five years' period of office he was reappointed for a like term. Not long after this event his health unfortunately showed evidence of failure, and finally in 1906 an attack of paralysis led to his giving up both professional and political work altogether. During his active life Dr. Rockwood contrived to find plenty of time for social and professional intercourse, and took a keen interest in the affairs of the British Medical Association. At one time he was President of the Ceylon Branch, and on several occasions came to England to attend the Annual Meetings. His last visit was in 1902, when he attended the Meeting at Manchester as a delegate of the Ceylon Branch. His ability, industry, and sound judgement gained him a well justified reputation, and made him so useful a member of the community in Ceylon, that, despite the fact that he appeared rarely in public after his retirement, his services were not forgotten. Widespread regret was aroused by the news of his death, and was expressed on behalf of the Government by a telegram from Sir H. E. McCallum to his family, and by the attendance at his funeral of representatives of all sections of society. Dr. Rockwood was married, and is survived by several daughters and sons, two of the latter being medical men.

WE regret to record the death on April 5th of Dr. EDMUND WEARE CLARKE, of Chesterfield. He had been resident in Chesterfield for many years, and for long was so prominent a figure that his death at a comparatively early age leaves a much-regretted blank. It was due to heart failure and occurred quite unexpectedly. Dr. Clarke was a Cornishman by birth, but received his education in Edinburgh, which he left in 1885, after a student career of considerable distinction. During its course he devoted much more time to pure science than is common among medical students, and was rewarded for his pains by the B.Sc. Edin., as well as by the M.B., C.M. Edin. A year later he became M.R.C.S. Eng., and then went abroad to continue his medical studies, partly in Paris, partly in Germany. Finally, he presented himself for the M.D. of his old university, devoting his thesis to appendicitis, a comparatively new subject at that date. In Chesterfield he settled down some seventeen or eighteen years ago as successor to the late Dr. MacDonnell, whose practice he materially increased. Of late years, however, he had restricted his professional energies, and devoted a great

deal of his time to literary occupations. In addition to his knowledge of modern languages he was a good classical scholar, and at the time of his death was engaged in the compilation of metrical translations of some of the Greek and Latin writers whom he more specially favoured. Another matter in which he took special interest was first-aid work. As a lecturer to the local branch of the St. John Ambulance Association he was particularly successful, and his work for the corps had recently been recognized by his appointment as an examiner to the central body. He was also a member of the Royal Physical Society of Edinburgh, and for a good many years took an active part in the proceedings of the Sheffield Medico-Chirurgical Society, of which he was at one time President. Dr. Clarke was married, and is survived by his wife, the youngest daughter of Mr. Bowery Douglas.

DR. THOMAS CRAWFORD HAYES died on Monday, April 5th, at his residence in Clarges Street, W., after a long illness. He was the son of Frederick William Hayes, a mill-owner in county Down, and was born at Seapattrick, Banbridge, on October 18th, 1843, the youngest of nine children. His father died when he was 9 years old. At the age of 7 he was sent to Dr. Forrester's school in the Isle of Man, and was afterwards instructed by a private tutor until he returned to Ireland. He originally intended to enter the Church, but after becoming a student at Trinity College, Dublin, he found that he felt more fitted for the cure of bodies, and during his college career he spent much time in coaching younger and more backward fellow students. Precocious as a child at school he proved brilliant as a student at Trinity. He became a Senior Moderator and Gold Medallist at Trinity College; afterwards he studied at King's College, London, and became House-Physician to the hospital. He obtained the diploma of L.S.A. in 1870, that of M.R.C.P. in 1872, and graduated M.B.Dub. in 1873; he graduated M.D. in 1875, and was elected F.R.C.P. in 1889. In 1872 he was appointed Assistant Physician for Diseases of Women and Children, and Assistant Accoucher to King's College Hospital, and seven years later succeeded to the appointment of Physician for Diseases of Children, and Physician Accoucher to in-patients and out-patients; Dr. Playfair, holding a similar appointment, reckoned as senior. In 1893 Dr. Hayes became Physician Accoucher, the title given to the senior appointment, Drs. Playfair, Hayes, and J. Phillips working together at the hospital for several years. Dr. Hayes also held corresponding teaching appointments at King's College, beginning as Lecturer on Practical Obstetrics in 1889. He was appointed Professor on Practical Obstetrics in 1896, and Professor of Obstetric Medicine and Diseases of Women and Children in 1898. On his retirement in 1906, Dr. Hayes was made Consulting Physician to the hospital, and Emeritus Professor to the College. He was also on the medical staff of the Royal Free and other hospitals, and was for a time Examiner in Midwifery and Diseases of Women on the Conjoint Board. Dr. Hayes wrote little; he was, however, an active Fellow of the Obstetrical Society of London in the Eighties, exhibiting many specimens and reading clinical reports of considerable interest.

We regret to have to record the death of Mr. THOMAS WILLIAM NUNN, Consulting Surgeon to the Middlesex Hospital, which took place at his country residence, near Royston, on April 13th, after a very short illness. He was 84 years of age, and until within the last few years was a familiar figure in London. Several generations of students of the Middlesex Hospital will have pleasant recollections of him, as he was on the active staff from 1846 to 1879, when he was appointed Consulting Surgeon. Mr. Nunn received his medical education at King's College, of which he was a Medical Associate, and where for a time he assisted in teaching anatomy. In 1846, however, he was appointed Demonstrator of Anatomy at the Middlesex Hospital, to which institution he remained attached, and where he was often to be found for the rest of his life. He was appointed Assistant Surgeon in 1858, Surgeon in 1863, and Consulting Surgeon in 1879. He taught anatomy for sixteen years, and gave it up, much to the regret of his pupils, to teach practical and operative surgery, which he continued to do till 1873. He served for a time as a combatant officer in the Militia, but after a few years changed

this for a medical commission, and joined the West Middlesex Rifle Volunteers, from which he retired as Surgeon-Major after over twenty years' service, receiving the Volunteer Decoration. His chief publications were on the subject of cancer, particularly as to its treatment, but he also contributed papers on various subjects to the medical journals and the Clinical and Pathological Societies; of the latter he had been a Vice-President. He was twice married, and leaves a widow but no family. His funeral took place on April 19th in Royston Cemetery, and was attended by some of his old colleagues and pupils.

ON March 30th there passed away, in the person of GEORGE PERCIVAL HADLEY, of Lozells Road, Birmingham, a well known and highly respected practitioner of medicine. He was born in 1845, the son of John Joseph Hadley, who was for many years a general practitioner in Birmingham. He was educated at King Edward School, Birmingham, from whence he passed the matriculation of the London University. He commenced his medical education at Sydenham College and the General Hospital, Birmingham, and obtained the M.R.C.S. in 1867, and the L.S.A. in 1868. Afterwards he proceeded to the Queen's College, Belfast, where he obtained the M.D. in 1868. Shortly after this he purchased a practice in the Lozells district of Birmingham, and continued to practise there until a few years ago, when the condition of his health compelled him to retire. In his early life he was for some years a Surgeon in the Birmingham Rifle Corps, and shortly after settling in the Lozells became a member of the Aston Manor Local Board; he was one of the first members of the Free Libraries Committee, and took a deep interest in the work connected with that institution. As his practice grew Dr. Hadley was compelled to relinquish these public offices, but he continued to take a great interest in the work of the Established Church, of which he was an ardent member. He did much for his parish church (St. Paul's, Lozells), being first a member of the Building Committee, then for many years Vicar's Warden and Treasurer of the Home Mission Fund. He was a member of the British Medical Association and the Midland Medical Society, and one of the oldest subscribers to the Birmingham Benevolent Society. He was twice married, and leaves by his first wife a family of three sons and five daughters. One of his sons is following his father's profession, and is a graduate of the Birmingham University. His second wife survives him. Such is a short account of a man who was a firm friend and a conscientious adviser in all matters connected with his profession. His retirement was much regretted by his former patients, and he will now be greatly missed by his personal friends.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Theodor von Dunin, Physician to the Hospital of the Child Jesus in Warsaw; Dr. J. P. Barette, Professor of Clinical Surgery at the Medical School of Caen, aged 54; Dr. von Mangoldt, a leading surgeon of Dresden, where he had charge of the surgical department of the Olga Hospital, aged 50; Dr. N. S. Speransky, Lecturer on Dermatology and Syphilography in the University of Moscow; Dr. Phineas S. Conner, for forty years Professor of Surgery in the Medical College of Ohio, aged 80; Dr. Robert Raeburn of Washington, one of the surgeons who attended President Garfield on his deathbed, and was for some years Dean and Professor of Hygiene and Preventive Medicine in Howard University, aged 75; Dr. W. F. Wokressenski, Professor of Operative Surgery and Topographical Anatomy in the University of Charkoff; Dr. Theodor Haase, Member of the Austrian House of Lords, and a well-known sanitarian and promoter of the building of hospitals, aged 74; and Dr. E. Kufferath, Professor of Obstetrics in the University of Brussels.

TUNBRIDGE WELLS lost in March a much-valued inhabitant in the person of Dr. JAMES EISSHOPP, of Mount Pleasant. He was a cadet of a very old Sussex family, and received his medical education partly at St. George's Hospital, partly at Guy's. Entering the latter in 1846, he was a member of the Guyite Club, and at the date of its dissolution a year or two ago was one

of its only three survivors. There are now only two, Mr. Thomas Bryant, Consulting Surgeon of the hospital, and Dr. Samuel Knaggs, of Huddersfield. In Tunbridge Wells Dr. Bisshopp established himself in practice some forty years ago, and he had only given up work within the last ten years. He was over 86 when he died, but his work was not forgotten, and being a man of singularly cheerful, friendly nature, and until lately in comparatively good health, he continued to play a pleasant part in the life of the locality in spite of advancing age.

Correspondence.

THE PREPARATION OF CATGUT FOR SURGICAL PURPOSES.

SIR,—The interesting and suggestive paper in the JOURNAL of April 17th by Mr. W. G. Richardson on Tetanus after Operations, with the query, Is the infection introduced by catgut ligatures? and the able leading article in the same number, will, it is hoped, elicit further information on the mysterious "tetanus" side of this important question, to which I shall not further allude.

My object is to ask on the part of surgeons a more general and thorough appreciation of Lister's (1) perfected method of preparing catgut and (2) method of sterilizing skin and instruments before operation.

1. The method of catgut preparation is referred to in the editorial article to which I allude. It relates to the "green catgut," prepared by soaking twenty-four hours in sulphate of chromium, and was made known to manufacturers in 1894, but never published until January 18th, 1908, in this JOURNAL by Lord Lister himself. That brief account I venture to call a complete description of the simplest, quickest, and most durable form for all purposes, with perfect tests of its efficiency added.

I note that Mr. Richardson had some of his catgut soaked in ether, then placed in mercury biniodide dissolved in 1,000 parts of methylated spirit, other portions being boiled for an hour in absolute alcohol. Without disparaging these and other different methods of more or less efficiently "tanning" catgut for surgical purposes, and without prejudice to Mr. Richardson's modest and candid statement of his experiences, I now suggest that it can hardly be further advisable to depart from the methods, conclusions, and preference expressed by the author of antiseptic surgery. Those surgeons who, like myself, have from time to time for years blindly relied on this form of catgut, as issued in dry hanks from the shops, and made ready for use by steeping for a quarter of an hour in 5 per cent. carbolic lotion, have found it in every respect satisfactory. But among the many pitfalls of antiseptic practice, especially when complicated by great variations in ritual, catguts of various make have sometimes been accorded a bad name, and surgeons have resorted to their own methods of preparation, often excellent, in preference to risking that of the shops, for want of knowing that the green variety has all along been that of Lister. Even the publication on January 18th, 1908, must, if even only for a time, have been overlooked by some, as it actually was by myself.

2. On June 27th, 1908, Lord Lister published also in this JOURNAL Remarks on Some Points in the History of Antiseptic Surgery, constituting a wonderful epitome of the aims and methods of his antiseptic practice, in a space of less than two pages. In this is stated his invariable practice during forty years of relying on 1 in 20 carbolic solution in water for sterilizing the hands and instruments of the operator, and the skin of the patient, without previously removing the grease from the latter, or wetting the epidermis, much less scrubbing with soap and water. In this paper he says:

I cannot but think it a happy circumstance that this substance, which I employed first in endeavouring to apply the antiseptic principle, should have been so admirably adapted for detergent purposes. And it has grieved me to learn that many surgeons have been led to substitute needlessly protracted and complicated measures for means so simple and efficient. The fear sometimes expressed of poisonous effects from carbolic acid, as used in antiseptic surgery, is, so far as my experience goes, entirely groundless.

Probably the brief duration of Lister's exposure of the skin to carbolic lotion before operation protected his

patients from the poisonous symptoms that others have occasionally met with.

If these two brief papers, from one of the first and from the last number in this JOURNAL of vol. i, 1908, were mounted and hung up in every hospital and medical school for repeated study by all engaged in surgery, they would serve an invaluable purpose by spreading and simplifying antiseptic precautions among all concerned, and not least among those who are chiefly likely to encounter "minor" cases, for, when these "go wrong," much "major surgery" may result.

I well remember the interest aroused by the appearance in 1867 of Lister's communications "on a new method of treating compound fracture, abscess, etc.," and the excitement produced in myself and fellow-students and house-surgeons at University College and Hospital in 1868 and 1869 by the publication of his early "ligature of arteries on the antiseptic system," first by carbolized silk and then by carbolized catgut. To many it must be a welcome announcement, made in this JOURNAL on April 10th, 1909, that Lister's collected papers and addresses are shortly to be published in two volumes by the Clarendon Press.—I am, etc.,

ALLAN RUSHTON PARKER,
Professor of Surgery in the University of Liverpool.

HUNGER PAIN AND DUODENAL ULCER.

SIR,—Mr. Mansell Moullin has stated the surgical opinion concerning hunger pain with perfect clearness. Of the cause of this pain I am not sure that we know the correct explanation, and all that I am prepared now to admit is that the time of the onset of pain corresponds to the time at which the food begins to come in contact with the ulcer. And a similar statement may be made about the "prepyloric" ulcers on the lesser curvature, whose exact position can often be predicted before operation. I should be interested to hear if Mr. Mansell Moullin has considered the possibility of the peritoneum being the sensory surface; especially in view of recent work. The duodenal ulcer which has caused attacks of "hunger pain" has always reached the serous coat. The phenomenon of pylorospasm has, I am sure, symptoms different from "hunger pain." I think I know them now sufficiently well to be able to say in many cases that the lesion will be not in the duodenum, but elsewhere, and to forecast its nature and position. But I will presently return to this point after I have dealt with the fallacies of Dr. Hertz.

Dr. Hertz is troubled at my disbelief in *post-mortem* statistics, and, in wonder, asks me if I believe "that the bodies of people with duodenal ulcer go straight to another world without passing through the *post-mortem* room." Most certainly I do believe this of the vast majority. Does any one doubt it? Does Dr. Hertz suppose that anything more than a very insignificant proportion of bodies pass through the *post-mortem* room? The patients admitted to hospital are a very small fraction of the total number of sick people. Of patients so admitted about 5 per cent. (let us say) die. Not all the bodies of those who die are submitted to *post-mortem* examination. Of the bodies so examined, a lesion not immediately concerned in the death of the patient may well be overlooked, no matter where or by whom the inspection is made. Yet inferences drawn from these probably imperfect records of a very small, and in no sense representative, proportion of the total deaths are considered to have a strict numerical application to the diseases of the living. When the surgeons speak of the frequency and of the clinical features of duodenal ulcer or cholelithiasis, or pancreatitis, or of common duct obstruction, or of many other conditions, we are supposed to be answered, and to have our experience and conclusions tested and refuted, by a reference to the imperfect records made in the ancient days when little or nothing was known of these various diseases. It is worth while, then, to follow Dr. Hertz in his digression to shatter the idol which he and others have worshipped with such ecstasy. It is a poor dead doll.

I showed in my last letter that Dr. Hertz confused the relief of an "attack" in a patient suffering from duodenal ulcer with the cure of the disorder, and that he omitted to take note of recurrences. But, I am told in reply (a variant of the eternal *tu quoque*), recurrence also takes place after surgical measures have been practised. What is the evidence Dr. Hertz gives of this? It is that he has been

consulted by three patients for the return of symptoms after repeated operations undertaken for the relief of "supposed gall stones or gastric ulcer." The argument is that since in these three cases repeated operations whose nature is not mentioned were undertaken for symptoms whose origin was never determined, the conclusion must be drawn that the treatment of duodenal ulcer by operation is followed by recurrence. Is it necessary to answer that? Refutation of that kind of logic is too easy to be amusing. Dr. Hertz as a disputant delights me; but I could not persuade myself again to take him seriously.

Dr. Irwin's letter is a valuable record of a personal experience. The description of the second, or "ulcerative," stage in his history is, I think, that which corresponds to the "hyperchlorhydria" of Dr. Hutchison and others. My point is that recurrent "hyperchlorhydria" is duodenal ulcer; when I operate upon the patients who bring this diagnosis with them, I find they have duodenal ulcer. Hyperchlorhydria at first was used as a term descriptive of a chemical condition; it is now debased, and is given a clinical significance. To the description of their pain given to me by patients who were shown to have duodenal ulcer I attached the term "hunger pain." Dr. Hertz and Dr. Hutchison speak of the "extreme frequency" of this symptom. I suspect that they are including under this term some, at least, of those conditions in which "acidity" (occasional or persistent) is described by the patient. In these cases the apparently increased acidity of the stomach contents is probably to be explained in this way. A lesion exists beyond the pylorus; it may be in the gall bladder; it may be a tuberculous ulceration in the intestine, an inflamed appendix, etc. It may be, that is to say, in any of the derivatives of the mid-gut. The irritation of this lesion excites a pylorospasm, which, when the abdomen is opened, may quite plainly be seen. The spasm is probably protective; the lesion in the gut desires to be shielded from the harm caused by the passing food. As a result of this spasm the food in the stomach finds a difficulty in getting through the pylorus. The demand of the food for admission to the duodenum is usually made by the excitation of an acid reflex. As the demand receives no response, it is perhaps made more imperative by an increase in the acidity, or relief may be obtained by the belching-up of bitter fluids or of gas. This is a pretty story, truly; but the work of Pawlow, Starling, and Cannon shows that every detail in it is corroborated by experimental evidence, and the clinical evidence, which is interesting, I may some day lay before you.

"Hunger pain," as I have described it in all its attributes, is the symptom on which a diagnosis of duodenal ulcer will be proved by operation to be correct in almost every case. The mimicry of it in the conditions I have just referred to may be close; but when the abdomen is opened, gastro-enterostomy must on no account be undertaken unless the lesion is plainly to be seen by any onlooker. This discussion will have borne good fruit if only it sounds the death knell of "symptomatic" gastro-enterostomy.—I am, etc.,

Leeds, April 19th.

B. G. A. MOYNIHAN.

SIR.—Dr. Hutchison, in his letter of March 20th, gives very definite information upon the possible antecedents of duodenal ulcer. He states that recurring attacks of dyspepsia characterized by "hunger pain" mean hyperchlorhydria; when the attacks become more frequent and finally constant they denote continuous hypersecretion. This is delightfully simple, and we naturally look for equally definite directions from him of the presence of a duodenal ulcer, but in vain. He says, "in a certain number of cases unmistakable signs of duodenal ulcer appear, and the case passes into the hands of a surgeon." It is disappointing that he does not tell us what these unmistakable signs are. It is presumed by them are meant melæna or hæmatemesis, or both, accompanied by the tender spot beneath a rigid right upper rectus, possibly the presence of a palpable tumour, or, finally, the signs of perforation. The last named are unmistakable enough, but what of the others? Rather, of what value is their absence? The last three cases of perforated duodenal ulcer on which I have operated (all of them within the last nine months) supply the answer. I quote them not in the least by way of criticism of the

diagnostic skill or care of their medical attendants, but to emphasize the fact that our surgical acquaintance with the abdomen of recent years must compel us, in many instances, to place a different interpretation on symptoms and signs which have hitherto been associated with such terms as "acid dyspepsia," "atonic dilatation," etc.

None of these patients had ever suffered from naked-eye hæmatemesis, or, to their knowledge, from melæna. In none of them was a palpable tumour present, although all of them were found at operation to have very large and evidently very chronic ulcers; they had all been examined and treated for years by more than one physician, and in none of them had the diagnosis of duodenal ulcer been made; one of them, a few months previous to perforation, who had been a chronic sufferer for many years, had been examined by a London physician attached to one of our largest teaching schools, and had had the definite opinion from him that he was suffering from atonic dilatation of the stomach and had no ulcer. Yet, till he perforated a few months afterwards, there was no change in his symptoms. After recovery by operation from their critical conditions all of these patients gave the history of acid dyspepsia extending over many years, and all of them had been "cured" many times. In two of them "hunger pain" had been prominent; in the third it had not. None of them up to the time of perforation had had any "unmistakable" signs of duodenal ulcer other than these. My experience does not enable me to say that every case of acid dyspepsia accompanied by "hunger pain" means duodenal ulcer, but certainly suggests that when such symptoms persist (especially in men), are rebellious to treatment, or constantly recur, they should excite the suspicion of something more than a functional dyspepsia, a suspicion that, when the abdomen is opened, will usually be ascertained to have been well founded. It should be borne in mind that perforation is no more the time of election for the cure of a gastric or duodenal ulcer than is strangulation the time of election for a radical cure of hernia. With the progress of knowledge of diseases of the gall bladder and its ducts, of the appendix, stomach, duodenum, pancreas, etc., it seems that those often vague complaints "indigestion" and "liver" are gradually but surely being elbowed out of the field. In 80 cases of operation for gastric or duodenal ulcer my margin of error has been 5 or 6 per cent; in other words, in 6 per cent. of cases (all of them women) I have opened the abdomen expecting to find an ulcer, and have found none. Not one of these patients was the worse for the simple operation, and in fact the physicians attending them were by it placed in a far stronger and more confident position as regards their future treatment, so that in reality out of evil good came, and the clearing up of some of these cases, even at the expense of an unnecessary exploration, is not always without its advantages. However that may be, I maintain that it is better to make such a mistake occasionally than by medical treatment to go on relieving, as I have repeatedly seen, conditions which subsequent operation demonstrates conclusively were incapable of cure except by surgical means, or to diagnose a gastric or duodenal ulcer after it has perforated. I have at the present moment in hospital a patient who has been "cured" no less than six times during the last six years. I operated upon him on April 12th, and found a chronic indurated pyloric ulcer the size of a pigeon's egg, with numerous perigastric adhesions. I have not the least doubt, from an experience of many similar cases, that gastro-enterostomy will at last cure him—better late than never.—I am, etc.,

Portsmouth, April 19th.

CHARLES P. CHILDE.

ANAPHYLAXIS: A PROTEST IN NOMENCLATURE.

SIR.—The more advanced a science becomes, the more exact should be the use of its terms. Few impediments to the gain of real knowledge of fact thwart our efforts to such a degree as unmeaning words; and such phrases as "dry subceptant riles," "hypersthenic dyspepsia," and many others, positively handicap progress; we may each have a type of condition in our minds, but there is little to guide different members in associating the same term with the same phenomenon. A new language of medicine is being built up, and the necessity of accuracy and lucidity is clear.

"Anaphylaxis" is a term lately introduced to designate the increased susceptibility to serum after the first dose when introduced under the skin or into the peritoneal cavity. If an animal receive a dose of serum, after a latent period of ten days or so certain symptoms develop. If in the next few weeks the exact same dose is repeated, then there is much shortening of the latent period, even to minutes, and, to use the eloquent phrase of Professor Symmers, "there is an acceleration of symptoms which run a tempestuous course." This is called anaphylaxis.

The word recalls to us at once the term "prophylaxis." If diphtheria threaten in a household, we give to the untouched members a dose of diphtheria antitoxin (that is, horse serum plus diphtheria antitoxin); this is as a prophylaxis. Now, if in a few weeks we repeat the same dose of the antitoxin, there does not appear to be any "anaphylaxis" as regards diphtheria—indeed, probably there is increased "prophylaxis"—but there is "anaphylaxis" as regards horse serum, which in the human subject shows itself as a shortened latent period, oedema (chiefly of face), erythematous and urticarial rashes, and fever.

We have causes of "anaphylaxis" as regards specific diseases, such as starvation, exhaustion, exposure to cold, anaemia, to mention the most evident; it is, I think, yet to be ascertained whether the same conditions induce anaphylaxis as regards serum. On the other hand, it is said that the "serous diathesis" is a condition of anaphylaxis as regards serum; whether it holds also as regards one or any or all specific affections has practically not been entertained.

I would venture to suggest that before this new term becomes stereotyped by prolonged use it should be dropped in the somewhat vague sense in which it is used, or that some adjectival word or phrase be added to show what is meant. If "serum susceptibility" be of the same nature as diminished immunity to specific poisons, then we may very well use such phrases as "serum anaphylaxis," "diphtheria anaphylaxis," but then we cannot clearly understand how "diphtheria prophylaxis" gained by the use of the ordinary commercial antitoxin, when repeated in a few weeks, involves "serum anaphylaxis," but does not involve "diphtheria anaphylaxis." The experience from typhoid and vaccine inoculations in general is against the supposition that the two susceptibilities are the same in kind, but differ in degree. It seems thus rather a retrograde inexactness of language to use "prophylaxis" for one condition, and "anaphylaxis" for the other.

A recent admirably lucid and suggestive lecture by Professor Symmers on anaphylaxis has prompted this protest.—I am, etc.,

Belfast, April 2nd.

W. CALWELL.

INDIAN MILITARY INVALIDING.

SIR,—In the JOURNAL of March 6th some extracts from Mr. Haldane's statement on the Army Estimates and ratios per 1,000 from 1888 to 1907 of invalids sent home from India are quoted. For the last two of these years you give the figures respectively as 28.37 and 25.47 on an average strength of 67,406, and, comparing them with preceding years, you deduce much cause for congratulation on increased medical efficiency. Had you known the very latest figures, you could have multiplied that congratulation tenfold, and so could Mr. Haldane.

Let me explain that the invaliding season extends from October to March, so that to arrive at an estimate it is better to compare seasons than years. On this basis, then, and on the average strength given, the figures are:

1906-7	...	...	31.21
1907-8	...	...	15.8
1908-9	...	...	13.21

The actual number of invalids sent home in these three seasons was 2,105, 1,071, and 891 respectively. The strength, approximately, was some 3,000 higher than you put it, so that the ratios are even better than those quoted.

It would occupy too much of your space to explain the phenomenal decrease in the last two seasons. You will observe that we have saved rather more than a battalion in each year, and I venture to predict that in the future,

and under normal conditions, the Indian invaliding will not rise above 15 per 1,000.—I am, etc.,

Bombay, March 25th. Colonel, P.M.O. Bo, Brigade.

RURAL DISTRICT NURSING ASSOCIATIONS.

SIR,—I have read the correspondence re district nurses with much interest, and think that a pamphlet entitled *A Day in the Country with a Queen's Jubilee Nurse*, issued presumably with the authority of the Queen Victoria's Jubilee Nursing Institute, fully bears out the statements of your various correspondents who have experienced the drawbacks of the system.

To those who are dissatisfied with that system may I suggest that they should endeavour to form branches of the Cottage Benefit Nursing Association, formerly known as the Holt-Ockley system? To such of them as are unacquainted with this association I may briefly say that the point of the system is that a nurse takes care of only one case at a time, residing in the house and attending to the various duties that arise in the household as well as nursing the patient, and this, I think, is of greater advantage to both doctor and patient than the butterfly visits of the district nurse. The nurses are drawn chiefly from the cottager class, trained long enough, in a special manner among the poor, to enable them to note symptoms carefully and carry out the directions of the doctor intelligently, whilst not long enough to lead them to think themselves competent to go beyond the whole duty of a nurse, and take the place of the doctor. By the central rules of the Cottage Benefit Nursing Association every branch must have at least one doctor on its committee, and the nurses must work under the orders of the doctor whose case they are nursing. I enclose a copy of the rules of a branch that has lately been formed here, which are in every essential similar to those of a large branch in the Midlands, whose rapid growth and striking success are, I believe, attributable to the policy of hearty co-operation with the doctors of the district, pursued by the secretary from its foundation fourteen years ago. At first only one doctor approved of it, but now all in the neighbourhood avail themselves of the services of its nurses when they can get them, and other branches have been and continue to be formed around it. I have personally had many of its nurses working under me, and have found them thoroughly useful, and quite competent for most medical and surgical cases.—I am, etc.,

Stradbroke, Eye, April 13th.

J. A. BALL, M.B. Lond.

STRADBROKE BENEFIT NURSING ASSOCIATION,

For providing Nurses for the Sick in Country Parishes.

RULES FOR PERSONS REQUIRING A NURSE.

Price One Penny.

1.—Applications for Nurses must be made to the Committee Lady, to be transmitted by her to the Secretary. No Nurse can attend a case without an order from the Secretary or in case of emergency from the Committee Lady.

2.—Subscriptions and fees must be paid to the Committee Lady. If a subscription is in arrear the patient will be charged non-subscribers' fees. Board and Lodging for the Nurse must be provided by the patients or their family. The following is the scale of payment:—

	Yearly.	Fees per Week.
Class 1	...	2s.
Class 2	...	3s.
Class 3	...	5s.
Class 4	...	7s. 6d.
Class 5	...	10s.

3.—A double charge will be made for infectious cases to meet the cost of disinfection; also when a case has lasted six weeks.

4.—Non-subscribers may have a Nurse, if one can be spared, on condition that she leaves if the Secretary requires her. Class 1, 5s.; Class 2, 7s. 6d.; Class 3, 12s. 6d.; Class 4, 17s. 6d.; Class 5, 25s.

5.—No person will be allowed to join the Association when ill.

6.—Notice of not less than two months must be given by Subscribers when engaging a Nurse for a confinement. For Classes 1 and 2 the fee will be charged from the day the Nurse goes to the house; for the other classes will be charged from the date for which the Nurse was engaged. In maternity cases no Nurse will be allowed to attend unless a Doctor has been engaged. If the Nurse is urgently needed elsewhere, the Secretary reserves the right to recall her at the end of three weeks from the date of the confinement if the patient is well enough to be left. The Association does not undertake to nurse an unmarried woman in her confinement.

7.—Should the Association be unable to supply a Nurse and the Doctor considers one essential, a sum equal to the weekly fee will be allowed to the Subscriber until the Association can procure a Nurse.

8.—Classes 3, 4, and 5 will be asked to pay or provide for the Nurses' movements within the area of the Association.

9.—When night nursing is required the Nurse shall have six hours' rest during the day, and shall be off duty one night in three; she should be allowed some daily outdoor exercise; and to attend Divine Service.

10.—Forty-eight hours' notice must be sent to the Secretary before a Nurse is sent home.

11.—When attending a cottager's wife, the Nurse will be expected to do all that is required for the care of the patient's family, except the family washing.

12.—Nurses are forbidden to receive any gratuity, and do not expect beer or spirits.

13.—In cases of emergency, such as burns or accidents, a Nurse may be sent for without applying to the Committee Lady.

For further information apply to—

The Committee Lady for this District.

Sir,—To those of your readers who have the real interest of their profession at heart, the letters of Dr. William Milligan, "Parish Doctor," and "Country Practitioner," provide pabulum for serious reflection. It must be laid down once for all that a nurse can act only under the direct supervision of a medical man. I should like to ask these ladies, Who gave them power to create an inferior order of medical practitioner? The chairman of every nursing association should be a medical man in active practice. The fact is that medical men are afraid of offending ladies who have the power of procuring patients for them, or, on the other hand, advising patients to seek the advice of another colleague. Let us be more independent. If our duty demands that we shall act in opposition to some influential person, let us act fearlessly and care not for the consequences. Let us remember that by professional ability we do not mean the capacity to please some influential person, but our success in relieving or curing disease. We may lose a little financially at the time we oppose some pet scheme, but we shall gain the respect of our quondam enemies in the long run. Cases such as are cited should be discussed at the Divisional meetings of the Division in which they occur. Then a unanimously supported motion which could not be ignored should be sent to the offending committee. If the committee refuses to act in the matter, then a nurse who knows her duties should be imported into the district who would be supported by the profession, and the laymen or laywomen would soon see that they cannot ignore our profession.

The difficulty always is that there are always black sheep in the fold who are willing to suffer any indignity if they can gain monetarily by their actions. But it is quite time that we put down in a determined manner all these abuses. Can anything be more despicable than an educated medical man allowing himself to be controlled by a committee, and allowing an abuse to arise when he can plainly see that it is degrading to the profession of which he is a member? I think that in questions such as these we might make more use of the opportunity afforded by Divisional meetings for discussing these matters, and if we were only firm and united these abuses would soon cease. Let us fear no man, nor woman, remembering that *Magna est veritas et prevalebit*.—I am, etc.,

Bedford, April 9th.

S. J. Ross.

Sir,—So far your correspondents on this subject have been those who have found associations of this description a thorn in the flesh and objectionable. Perhaps the experience of one who has found them a considerable help and almost indispensable might now be recorded.

If the standard of the Queen Victoria's Jubilee Nurses be employed, the objections mentioned by your correspondents do not exist. A Queen's nurse may only work under the direction of a medical practitioner, and in the rules of the associations with which I have been connected it is distinctly stated that a nurse may only attend on receipt of a written order from a doctor, except in cases of emergency, and then only until a doctor can be summoned.

The three years' training makes the nurses extremely useful and also less inclined to take risks on their own responsibility.

There are now many county associations which are doing their utmost to raise all district associations to this standard, and by encouraging their efforts by every means at our disposal we have an effective method of remedying the evils complained of.—I am, etc.,

EDWD. P. FUEBBER.

Oxford, April 12th.

In addition to the numerous letters on this subject which have been published in full, we have received several others written in a large measure from the same point of view already stated with some fullness by others; we propose, therefore, to publish certain extracts only.

One correspondent, who signs himself "A Former Victim," gives an account of his experience of a local organization in connexion with a county association; it was managed by a committee of ladies; the local doctors were *ex officio* members having the privilege of subscribing a guinea a year, and of attending the annual meeting of the committee. To make any protest at this meeting, he says, was considered a hostile act attributable to mercenary and selfish motives. Our correspondent discussed the matter with the husband of the lady who took a chief part in the movement; this gentleman was a Tariff Reformer, and keen to defend his own business from unfair competition. In reply to an observation that though the loss of income to our correspondent through the association was a matter of no importance, yet to a poor man it would be serious, and that therefore, for the sake of the profession and for those who would come after him he protested, this gentleman answered that he could not consider the profession or posterity, but must make the thing pay. The nurse, though ostensibly engaged to attend the sick poor in their own homes, attended well-to-do people who had formerly employed a nurse from a nursing association, so that it came about that any one who paid 2s. a year obtained the services of the nurse. The local organization, therefore, competed not only with the medical but also with the nursing profession. In midwifery, our correspondent adds, no pretence was made of acting under medical supervision. Artisans, coachmen's wives, and many of the middle class who formerly employed the doctor had the nurse only. When the nurse attended, it was also necessary to employ some domesticated woman to look after the house during the lying-in. All parish midwifery fees soon disappeared; parish patients were advised to obtain orders, but not to use them unless the nurse failed to manage. The district was systematically touted by an army of female canvassers for support and subscriptions; the working classes paid 2s. a year, and looked upon it as a medical club. The only redeeming feature was the nurse herself. She was an exceptionally conscientious woman. I often wondered what would have happened if many other women had been in her position. She has gone now. The association is flourishing exceedingly, and pays well; it has helped to drive two doctors out of the district, and employs two nurses, who are "such a comfort."

Another correspondent writes from the south-west of England: "Here there are two nurses run under a kind of co-operative system, one a qualified midwife; there is a large committee, all women. I am allowed to subscribe to the funds but have no voice in their affairs. Touting is freely practised. The titled lady and the parson's wife survey would be promising cases of the small farmer's wife type, many well able to pay the guinea fee, saying: 'It is quite all right, you know. Nurse D—— is fully qualified; and, of course, if necessary you could call in the doctor if anything went wrong.' Something did go wrong a month ago. I was called at 3 a.m., during a pitiless fall of snow, about two miles out, to find a partially retained placenta easily removed. On the bed was a bulky volume on the science and art of midwifery. As I was driving off a dogcart drew up, the driver saying, 'I have come for nurse for Mrs. B.' Hearing this I re-entered the house, and proposed to attend this second case for the nurse. 'Oh, no, thanks very much,' she said; 'I'm off to it myself, and a neighbour can attend here very well now.' I may add I got 10s. and the husband's blessing."

A third correspondent, from the south-east of England, states that in his district one nurse left written prescriptions with her patients, and adds: "The Poor Law

guardians will subscribe to the nurse, but decline orders for midwifery to the district medical officer. Further, when a county nursing association was initiated, application was made that the question of remuneration to the medical men who were called in by the nurses should be considered. Needless to say, no satisfaction was obtained, and probably the matter was shelved. I finally resigned, on the ground, *inter alia*, that the association would not adopt any method to protect the nurse from attending on midwifery and infectious diseases at the same time. Moreover, it is distinctly unwise for any doctor to object to the nurse's methods, for should the association condescend to accept the doctor's word in preference to the nurse's, the only result, I apprehend, would be a reprimand for the nurse, and consequently the creation of a ceaseless enemy for the doctor. Recently a county court judge ruled that he would issue no commitment orders for rent where less than 5s. a head a week was coming into a house. Thus many a working man possessed of a wife and two children and a little cunning may practically never pay any rent at all. *A fortiori*, he need never pay the doctor."

ANTIVIVISECTION AND WOMAN SUFFRAGE.

Sir,—I notice in your article entitled "Antivivisection and Women Suffrage" that your modesty appears to preclude you from the use which I make of the word "female." What is the matter with "female suffrage" as English? "Woman" is a noun, not an adjective, and "woman suffrage" is not grammar. The Bible is good enough for me—"Male and female created He them," a text which is perhaps not inappropriate to the present controversy about female suffrage. However, while you blush at the word "female" your delicate taste does not prevent you from saying that a statement of mine is "false."

What I said at Bristol was that the inspectors were never instructed to make surprise visits, and my authority for that statement will be found at Q. 532 in the evidence before the Royal Commission, when Sir James Russell, one of the Government inspectors, was asked

"Have you been instructed to make surprise visits?" and he replied, "Never."

If it be true that as a fact some surprise visits are paid by the inspectors, the deduction I am entitled to make is that the inspectors have a better sense in their proper duty than the Home Office, which employs and instructs them; and my authority for saying that the inspectors were instructed "not to act as detectives" will be found at Q. 530, where Sir James Russell told the Commissioners that his superior officer "expressly said that I was not expected to act as a detective." No doubt you regard the only function of the inspectors to be to act as assurances to the public that nothing illegal takes place in laboratories; but the only way that can properly be achieved is for them to be present at every severe surgical operation, and to be diligent and alert to detect any infringement of the conditions of each vivisectioner's certificates.

Inspectors who decline to act as detectives manifestly can easily be deceived. Vivisectioners are not intended to be treated as above suspicion and as incapable of infringing the conditions imposed upon them; if they were, Parliament would not have enacted that there should be any inspectors at all.—I am, etc.,

Greywell, April 19th.

STEPHEN COLERIDGE.

* * * The word "female" in no way shocks the modesty which Mr. Coleridge is good enough to attribute to us. In the passage to which he alludes we took the liberty of referring to a little controversy in which he is not concerned. Would he be surprised to hear that he is not the only reader of the BRITISH MEDICAL JOURNAL? It is interesting to learn that he reads the Bible; this encourages us to hope that his scriptural studies may carry him as far as the precept, "Thou shalt not bear false witness against thy neighbour." He will thus learn, incidentally, that there is Biblical authority for the word which he thinks in bad taste. For our own part, we like to call things by their names, following in this the example of that recognized arbiter of literary taste, Boileau, who wrote:

J'appelle un chat un chat, et Rollet un fripon.

In regard to the real point at issue, which Mr. Coleridge as usual tries to evade, we refer him to the report of his Clifton speech as published in the *Bristol Mercury* of April 3rd, the accuracy of which he has not attempted to impugn. According to that report what he said was as follows (the italics are ours):

In the recent Royal Commission, the evidence of which was now closed, the officials from the Home Office told the Commissioners, in cross-examination, firstly, *that they never made surprise visits to laboratories*; and, secondly, in reply to the question as to what were the instructions given to them when they took office, the answer given was "not to act as detectives." It seemed to him that inspectors who were told *never to make surprise visits*, and also were specially instructed not to act as detectives, were practically inspectors appointed by the Home Office, whom they served, to be inefficient.

We showed that the inspectors stated in their evidence that their visits to laboratories were nearly always surprise visits, and that Mr. Byrne's replies showed that the Home Office took the fact that surprise visits are made for granted. Sir James Russell's statement that he had never been instructed to make surprise visits is a very different thing from Mr. Coleridge's assertion that the inspectors are told never to make surprise visits. We will not insult his intelligence by supposing that he does not appreciate the distinction; this leaves no room for any other conclusion but that his statements were made with the intention of misleading his hearers. In any case they are false. Mr. Coleridge's view that the proper function of inspectors under the Act is to act as detectives has already been dealt with, and it would be unprofitable to discuss it further.

"MEDICAL. AUTOMOBILISTS."

Sir,—I see that your issue of April 17th contains an editorial note in which you cite as "apocryphal" the history of a surgical emergency described by me in an unsigned letter in the daily press. I feel sure that you will be glad, as I now enclose my name, to correct this criticism in your next issue; for although the letter was for obvious reasons unsigned, it was clearly written by a surgeon, and you will agree that it will be a subject for serious regret should the public be led by your article to suppose that a member of the profession was prepared to press home an argument by romancing upon a point of fact. Allow me, then, to repeat that, thanks to the improved methods of highway transit, I had the opportunity two or three weeks ago of opening a cerebellar abscess, and of restoring the function of respiration, within some fifteen minutes of receiving a report of the case at a distance of over four miles from the patient.

The incident was of no great surgical interest, but it served to exemplify in rather a striking manner two points which the public and the authorities find it difficult to realize. It should, I think, bring home to the lay mind the fact, well recognized by all medical men, that a delay of a few minutes such as that occasioned by the interference of the police, may easily turn the scale between life and death. Secondly, it should disabuse the public mind of the erroneous idea (of the existence of which evidence has been shown by several letters and leading articles) that one doctor will serve as well as another in any particular case, and that if the surgeon in charge is absent, any one else who happens to be present will do as well. The incident in question exemplified the fact that whereas a highly-trained and unusually able house-surgeon regarded the condition as hopeless, another surgeon of wider experience took a more sanguine view and put it to the test.

I do not consider that I should have been doing my duty either by the patient or by the house-surgeon, had I requested the latter to undertake a somewhat perilous operation, under conditions calling for unusual expedition and without previous experience of the dangers which have to be avoided.

I am confident that any member of the community whose relative was in urgent danger of death would applaud the surgeon who travelled to his assistance with all available speed. I am equally confident (and I write as one who has himself driven a motor car about the streets of London many thousands of miles without an accident) in stating that the cab which carried me on this occasion at a speed averaging twenty-four miles an hour never for a moment put the public to the least danger.

I should perhaps add that the semi-suburban streets were at 10 o'clock on Sunday night more or less deserted.

We all agreed that the highway must not be rendered dangerous by the passage of motor cars at excessive speed; at the same time, many of us feel that public ends will be served if under special circumstances doctors' carriages are given a right of way such as that enjoyed by the vehicles of the fire brigade in this country and by ambulance carriages abroad.

Doctors are undoubtedly human, and should not be tempted to make use of a special privilege to serve their private convenience. I wish, therefore, to suggest that they should on occasions of urgency be empowered to make use of a distinctive sign, visible or audible, which will give them a right of way; that the use of this sign should in every case be reported by the police, together with the number of the car; and that the doctor should be bound to substantiate on oath the urgent character of his mission, *at a subsequent date*.

In a word, I think that the doctor should, in the interest of the public, be treated as a public servant, and that on urgent occasions his carriage should be afforded the same facilities, under the same restrictions, as those which it has always been thought politic to give to the vehicles of the fire brigade.

As your article and this letter may possibly be reviewed by writers in the public press, I will, if you please, enclose my name merely as a guarantee of good faith, and ask you to allow me to sign myself here—

E. B. W.

Universities and Colleges.

UNIVERSITY OF OXFORD.
Radcliffe Prize, 1909.

THE Master and Fellows of University College, upon the report of the Examiners, have awarded the Radcliffe Prize for 1909 to A. F. Hertz, D.M., Magdalen College, Assistant Physician, Guy's Hospital, for his dissertation upon the physiology and pathology of the movements of the intestines.

The College desires to call attention to a statement in the report of the Examiners to the effect that original work, in each case fully worthy of the prize, was submitted by the following candidates: A. G. Gibson, D.M., Christ Church; A. C. Inman, B.M., M.A., Wadham College. The next award of the prize will be in 1911.

Radcliffe Travelling Fellowship, 1903

At a meeting of the Radcliffe electors, M. W. Flack, B.M., M.A., Keble College. Demonstrator in Physiology at the London Hospital, was elected to a Fellowship under the Trust, on the report of the Examiners.

Oxford Graduates' Medical Club.

The summer dinner of the club will take place on Thursday, May 20th, at the Hotel Cecil. The chair will be taken by the President, Sir W. S. Church, Bart., K.C.B., and among the guests who have accepted the club's invitation to attend are the Chancellor of the University, the Master of University College, the Rector of Lincoln College, the Provost of Queen's College, and the two University Members of Parliament.

Lectures on the History of Greek Medicine.

Six lectures on the history of Greek medicine up to the age of Hippocrates will be delivered at the Examination Schools by Joseph F. Payne, D.M., Hon. Fellow of Magdalen College, on Wednesdays and Fridays at 5.45 p.m. :

May 5th.--The Background of Greek Medicine: Oriental systems.

May 7th.—Medicine in Homer: The Cult of Asklepios.
May 12th.—Greek Lay Medicine before Hippocrates: Public phy-

May 14th—Hippocrates and his immediate precursors: their relation to the Philosophers, etc.

May 19th.—The Hippocratic writings: more important of those now regarded as genuine.

March 21st.—The Hippocratic writings continued.

ROYAL UNIVERSITY OF IRELAND

THE following candidates have been approved at the examination indicated:

SECOND M.B.—S. R. Armstrong, T. P. Davy, N. B. Graham, E. A. O. M. H., J. J. Keirans, J. H. Mitchell, E. F. Moore, E. D. Staunton, W. F. Alges, J. Barragat, J. J. Barret, M. J. Cogran, S. H. Davison, B. Doyle, B. A. E. C. Fawcett, C. L. Gausson, J. M. Gibson, N. C. Graham, G. S. Harvey, G. H. Hayes, E. Heffernan, G. Jackson, James Lyons, John Lyons, S. McCoub, R. McCulloch, M. McGing, R. C. McMillan, I. W. Magill, E. W. Mann, R. Marshall, W. Megaw, A. G. Mitchell, H. R. Mulholland, J. O'Connor, P. Peol, J. M. Rowe, H. A. Skillen, J. Sweeney, W. B. Walker, W. B. White.

Upper Pass.

CONJOINT BOARD IN ENGLAND.

THE following candidates have been approved at the examinations indicated :

FIRST COLLEGE, (*Part I, Chemistry; Part II, Physics*).—G. Aspinall, Silvalva, C. H. B. Avarne, M. H. Barton, C. S. Baxter, W. A. H. N. Bell, J. H. Bennett, A. C. O. Brown, C. F. Burton, H. Chorley, G. Cock, G. R. Craig, T. H. Cresswell, R. W. Davies, H. R. Dive, A. J. Drew, H. Dudley, M. D. Evans, W. T. Floods, G. E. Francis, C. G. B. Fraser, J. L. Gibson, J. G. Smith, N. Hofmeister, G. G. B. Holroyde, E. L. Ivens, W. B. G. Jones, J. W. Kemp, T. R. Kenworthy, S. H. Keys, H. A. Kleberg, J. G. L'Etang, J. Lloyd, W. K. McKay, R. T. Macrae, D. D. Malpas, B. R. Mayman, A. D. Morris, A. G. Morris, P. Parker, H. H. H. Phillips, J. H. Pinner, J. R. Plenderleith, J. R. P. Penhale, G. S. Phillips, T. G. W. Pool, A. A. Prichard, C. S. Ramsay-Hill, S. W. G. Ratcliff, P. H. Rawson, J. G. Richards, G. M. Roberts, G. D. Robertson, J. W. Roe, H. A. Webb, J. P. Savage, A. G. Smith, J. H. Smith, E. A. Sutton, T. T. Taylor, E. R. Under, L. E. van Gelow, C. Wickless, G. H. D. Webb, E. R. Williams, F. Wilson.

FIRST COLLEGE Part II. *Elementary Biology*.—H. L. Addison,
E. D. Anderson, C. H. B. Avarne, J. D. Bangsay, M. H. Barton,
S. S. Beare, E. A. Brock, F. H. Cleveland, G. M. Coone, R. W.
Cotton, J. E. Deane, E. D. Edwards, E. E. Edwards, R. A. Evans,
S. P. Elphick, C. D. Emmergon, G. F. Fawc, L. E. Forster, J. W.
Gilbert, T. S. Greenaway, E. W. Griffith, H. Gywnne-Jones, R. J.
Harley-Mason, R. B. Hick, F. T. Hill, G. Jack, J. K. de Johnson,
J. Johnston, J. N. Jones, C. D. Keith, M. D. Kempson, J. L. King,
McGregor, W. K. McKay, K. H. McMillen, O. G. Maginness, D. D.
Malpas, C. J. D. May, A. D. Morris, J. Neal, H. Parker, W. P.
Penhale, C. S. Phillips, I. Rashid, J. S. Rawlinson, J. R. Reid,
R. C. H. Roberts, R. Savage, S. Simons, C. R. Smith, E. C.
Smith, G. H. Sparrow, W. A. Stewart, V. T. Styles, E. A.
Tutton, H. J. H. Symonds, A. H. Taymour, T. H. Thomas, M. L.
Thompson, A. R. Turner, J. H. Webb, K. C. Williams, J. E. Wood,
W. C. Williams, F. H. Woods, A. S. Wyborn.

SECOND COLLEGE (*Anatomy and Physiology*).—G. Aldridge, T. S. Allen, C. V. Anderson, C. N. Altie, H. F. Barge, W. R. Barlow, T. B. Batchelor, E. C. Bowdler, R. E. R. Burn, T. C. Butler, A. Clarke, P. Clarke, C. F. Constan, H. G. Crawford, J. H. C. Davis, A. E. L. Devonald, A. S. Disby, J. Ellis, A. H. Fisher, J. G. Foster, P. W. G. Gifford, J. H. Rojas, J. Radford, J. H. Haddy, E. R. Hart, H. Harvey, J. R. Harman, R. H. Heaton, E. H. Hodges, B. W. Howell, A. E. Huxtable, W. S. Hyde, J. C. Jefferson, S. Lal, M. Mackenzie, M. D. Mackenzie, P. C. Newman, C. J. Nicholson, B. A. Norman, J. P. Pennington, W. G. Orchard, C. C. P. Pease, C. E. Pearson, G. H. Pearson, H. H. Pearson, J. Pinder, C. H. G. Pochin, T. W. W. Powell, R. C. Poyser, R. F. Quinton, E. G. Reece, C. G. Reinhardt, E. U. Russell, A. Sabri, W. R. Sadler, H. K. V. Soltau, W. Steuart, H. Stott, W. E. Tanner, J. Taylor, K. S. Threlkeld, J. Vesselsky, V. D. C. Wakeford, P. J. Watkin, J. R. D. White, C. G. Whorl.

² Part foonly. 1 Part I only.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

ELECTION OF EXAMINERS.

A MEETING of Fellows will be held on Tuesday, May 4th, at 4.30 p.m., pursuant to the provisions of the supplemental charter, to witness the election of Examiners.

The candidates will be chosen to serve on the following Courts: Conjoint Licence, Diploma in Public Health, Preliminary, Fellowship, Licence in Surgery (for registered practitioners), Licence in Midwifery (for registered practitioners), and Licence in Dental Surgery.

Candidates are requested to lodge their applications in writing with the Registrar, at the College, on or before Tuesday, April 27th, at 10 a.m.

CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examination indicated:

FIRST PROFESSIONAL.—J. P. English, J. G. Atkins, J. B. Barry, W. D. Beamish, J. Cockburn, J. T. Dier, L. C. Dillon-Kelly, J. J. Elliott, D. J. Healy, D. Leahy, J. S. Lewis, J. D. MacCormack, D. A. MacElean, F. Murray, M. Murphy, J. A. O'Driscoll, T. J. O'Riordan, A. F. I. Patterson, A. T. Rhatigan, T. S. Smith.
* Honours.

LONDON SCHOOL OF TROPICAL MEDICINE.

MEDICAL ZOOLOGY.

ARRANGEMENTS have been made for the holding of advanced courses in Protozoology, Arthropodology, and Helminthology.

three times a year. The subjects will be taken by the following lecturers: *General Medical Zoology*, Colonel A. Alcock, I.M.S.; *Protozoology*, Dr. C. M. Wenyon; *Arthropodology*, Colonel A. Alcock, I.M.S.; *Helmintology*, Dr. R. T. Leliper. The courses in the other subjects will be given during the first, fourth, seventh and tenth week of each of the three annual sessions of the school. Students will be allowed to attend the lectures on all the subjects or to devote the whole session to one of them. The lecturers will give a practical character to the courses throughout, and will be giving the students the opportunity to enable them to pursue unassisted investigations abroad or elsewhere.

SOCIETY OF APOTHECARIES OF LONDON

THE following candidates have been approved at the examinations indicated:

PRIMARY, PART I (*Biology*).—J. F. Bourke, P. R. Cross, J. E. Kitchen, L. F. Pain, H. E. Rose
Chemistry.—J. F. Bourke, P. R. Cross, J. E. Kitchen, W. A. Oaten, H. G. Steel
Matéria Medica and Pharmacy.—P. R. Cross, F. I. G. Hunter, R. E. Laurent
 PRIMARY, PART II (*Anatomy*).—H. Cox, H. N. Eccles, C. de C. W. Fensholt, F. J. Montgomery, F. G. Norbury, H. Rimington, R. A. Robinson
Physiology.—H. Cox, L. S. Davy, P. J. Montgomery, F. G. Norbury, H. Rimington, R. A. Robinson

Medico-Legal.

CHRISTIAN SCIENCE.

AN inquiry into the death of a lady who was living with a family of Christian Scientists and was attended by a practitioner of that persuasion was concluded at Sutton on April 15th. The jury brought in a verdict to the effect that she died of phthisis and that there was no criminal neglect, the people with whom she was staying having done their best according to their belief. To their verdict the jury added the following rider: "We are of opinion that had the deceased received proper medical advice instead of trusting to Christian Science treatment her life might have been considerably prolonged."

The evidence showed that the deceased had been suffering from phthisis for some years, and until January, 1908, was under ordinary medical care. About that time she became a Christian Scientist, and, after receiving Christian Science treatment for some time in her own home, moved to Sutton. There she died about three weeks later, while still under the same form of treatment. The master of the house in which she died produced a letter from the deceased, which stated that she was at Sutton by her own request and wish, and at no one's solicitation; that she had been tenderly and carefully nursed by the lady of the house since the date of her arrival, March 8th, and without reward or remuneration, except that brought by good actions; and that when she came the master of the house proposed to call in a doctor, but she objected. The lady of the house said the deceased had told her that if things came to the worst she was to call in a doctor to save trouble.

Evidence respecting the case was given by three medical men. Dr. Hooper of Sutton stated that he was asked to visit the deceased on March 18th, and on arrival was informed in answer to his inquiries that he had been sent for in order that if those responsible might keep within the law. He replied that if that was the only object in sending for him they had sent for the wrong man. He found the patient's condition desperate, and hence directed that the doctor who last attended her should be summoned. Eventually he made a *post-mortem* examination. He had never seen a body so much wasted, and its condition convinced him that the feeding of the patient had been improper. The patient should have had a nurse. He had no doubt at all that, with proper care and treatment, her life would have been prolonged, possibly for years.

Dr. Bellamy of Kew, in whose hands the case originally was, said he had not seen the patient between January, 1908, and March 19th, 1909, when he was called in, and found her practically dying. If in the interval she had had proper medical treatment her life would certainly have been prolonged, and perhaps for many years. From her surroundings he saw that the patient was not having proper attention. The owners of the house told him that there was no such thing as pain and no such thing as death. He never argued with Christian Scientists because he knew it was useless, but warned the master and mistress of this house that the patient was likely to die in a few days, in which case there was likely to be trouble. On their replying that they had called in a doctor, he informed them that they would nevertheless have to get a death certificate, and that no doctor ought to give one. He himself would not give one.

Dr. F. S. Toogood of Lewisham in reply said he had not seen the deceased during her life but had been present at the *post-mortem* examination. He found no evidence of insufficient nursing but would not say that the food given was suitable.

The Christian Science practitioner in whose charge she was when she died said he had only seen her once after her arrival at Sutton. He treated cases daily, and charged for them. The treatment consisted not in physical measures but in prayers; God did the healing. He had no knowledge of disease, but God had. He had not failed in his treatment because he could not fail. It was not due to failure of treatment that the patient died, but to some other cause. If he explained what that cause was it would not help.

MEDDLESOME FRIENDS.

AT an inquest in Marylebone on April 20th Dr. Danford Thomas, the coroner, took an opportunity of throwing into relief by his questions and observations the folly of the parents or other relatives of a patient interfering with the treatment of the medical man in whose care the patient is. The case was one in which an inquest was held owing to a medical certificate being obtainable. A medical man had been in attendance for some five weeks, but had refused to attend any longer because the parents of the child, owing to the interference of friends, neglected to carry out his instructions, and did other things which they ought not to have done. Another medical man was summoned, but did not arrive until after the child was dead. In view of the possibility of a question being raised as to the correctness of the treatment, the coroner in this case called upon a special pathologist, Dr. Spilsbury of St. Mary's Hospital, to make the *post-mortem* examination. His evidence was to the effect that the child died of bronchopneumonia, and that the medicine which had been prescribed by the medical man in attendance was of a kind suitable to the case.

STATUS LYMPHATICUS.

AN inquiry was held by the Coroner of the City of London on April 19th on the body of a child, aged 5, which died at St. Bartholomew's Hospital shortly after the cessation of the

administration of chloroform. Evidence as to the cause of death was given by Dr. Spilsbury, Pathologist to St. Mary's Hospital, who stated that the child was suffering from status lymphaticus, a condition in which death from sudden cardiac failure was peculiarly liable to be brought about by any depressing cause. The jury found that the child died from syncope while partially under the influence of chloroform, and suffering from status lymphaticus, after undergoing an operation skillfully performed.

MEDICAL REGISTRATION IN AUSTRALASIA.

ANTIPODE.—(1) The M.D. degree of the University of Louisville, Kentucky, U.S.A., is not registrable in the United Kingdom. (2) Registration in a Colony gives in itself no right of admission to the *Medical Register of the United Kingdom*; but the degrees of most Colonial universities are registrable here. (3) According to the report on unqualified practice issued by the General Medical Council last year, the legal qualification to practise medicine and surgery in New South Wales is registration by the Medical Board of the Colony, and this is granted to any person who proves to the satisfaction of the Medical Board that he is a Doctor or Bachelor of Medicine of "some university," that he has passed through a regular course of medical study of not less than five years' duration in a school of medicine, and that he has received a degree which entitles him to practise in the country where it was obtained. This last condition checks the registration of persons possessing such degrees as our correspondent describes, but when the law was passed in 1898 exemptions were made in favour of practitioners who had passed through a due course of study at a recognized school of medicine and surgery, and had practised in a reputable manner in New South Wales during the five years previous to the passing of the Act; these exemptions were in accordance with the precedents established in this country when the Medical Acts were passed.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

SUPERSESSION.

T. K.—In the circumstances mentioned the choice of the dissentient attendant should rest with the patient, who cannot be compelled to accept the services of the practitioner to whom he had in the first instance applied; but if the patient had wished Dr. A. to attend, Dr. B. would have had no just cause of complaint although he was the first to see the case.

The Services.

ROYAL ARMY MEDICAL CORPS (TERRITORIAL).

OFFICERS AVAILABLE ON MOBILIZATION.

M. I. T. S.—In the event of the Territorial Force being mobilized the medical officers, whether "available on mobilization" (formerly called *à la suite*) or otherwise, would serve in the rank stated in the *Army List*, and take precedence and draw pay and allowances accordingly. The only officers with the rank of Colonel are the administrative officers of divisions. No demands are made on the time of officers "available on mobilization" during peace. In organizing for the first time the staff of officers "available on mobilization" it has been necessary to give the seniors high rank at once, but in future it is, we believe, intended that they shall be appointed and promoted as those on other lists. It is very unlikely that an officer changing from one unit to another would be reduced in rank. In all cases a Major would take precedence of a Captain.

EAST ANGLIAN DIVISION.

A VERY interesting and successful function took place in Cambridge on Wednesday, April 7th.

Colonel Howard Marsh (Master of Downing College), the Honorary Colonel of the East Anglian Division R.A.M.C.(T.), issued invitations to all the medical officers in the Division to a dinner in the Hall of Downing College. Thirty-five officers accepted, and were present at the dinner, most of whom spent the night in Cambridge, either with private hosts or in the College hall.

After the loyal toast had been proposed from the Chair, and highly honoured, a most instructive and interesting after-dinner speech was made by Colonel Macpherson, R.A.M.C., who dealt in a most clear and able manner with the whole of the organization of the medical department of the Auxiliary Forces, from the base to the firing line, including such important points as treatment at the front, transport, rest hospitals, general hospitals, and nursing. He alluded to several matters at present under consideration, including the fee for examination of

recruits, equipment of units, etc., and contrasted our system with that obtaining in some Continental armies. He also dealt at length with the sanitary side of the service, and ended with an earnest appeal to those present to do their best to bring about the success of the scheme.

An interesting discussion took place after the address, many questions being asked and answered by Colonel Macpherson.

A vote of thanks to the speaker of the evening was proposed by Lieutenant-Colonel Sims, seconded and seconded by Colonel Lyon, V.D., Cambridgeshire Regiment.

Among those present were Colonel G. S. Elliott, A.M.O., East Anglian Division; Major Freeman, R.A.M.C.; Lieutenant-Colonel Griffiths, R.A.M.C.(T.), commanding the 1st East Anglian General Hospital; Lieutenant-Colonel Bradbury, Lieutenant-Colonel Wherry, Lieutenant-Colonel Deighton, Lieutenant-Colonel S. Hoyland, and Lieutenant-Colonel Bindloss.

Public Health

AND

POOR-LAW MEDICAL SERVICES.

HOUSING, TOWN PLANNING, ETC., BILL.

THE general scope of Mr. Burns's bill to amend the law relating to the housing of the working classes, to provide for the making of town planning schemes, to make further provision with respect to the appointment and duties of county medical officers of health, and to provide for the establishment of public health and housing committees of county councils, was indicated in the report of the second reading discussion published in the JOURNAL of April 10th, p. 921, but a few additional details may usefully be given. It consists of three parts:

Part I contains chiefly a number of amendments of procedure of the Act of 1890, strengthening the powers of local authorities to deal with dwellings unfit for human habitation and in particular requiring the establishment by every local authority of a quinquennial survey and register of housing accommodation for the working classes within the area administered by the authority. Another important provision in this portion of the bill is the extension of lodging-houses for the working classes from inhabited house duty and the total prohibition of back-to-back houses.

Part II deals with town planning, and not only gives powers to local authorities to make schemes for the laying out of land in the neighbourhood but also has provisions to compel a local authority to make or execute a town-planning scheme where one ought to be made, or where one proposed by owners of any land ought to be adopted; the provisions of this part of the bill will seem calculated to effect great improvements in the present condition of affairs.

Part III is particularly interesting to the medical profession because it deals with county medical officers. The first section obliges every county council to appoint a medical officer of health, while subsection 3 prohibits part-time appointments in future. Subsection 5 enacts that a medical officer of health of a county shall be removable by the county council with the consent of the Local Government Board; and otherwise, and subsection 6 provides that a medical officer of health of a county shall not be appointed for a limited period only. These two sections, if they become law, will give permanency to the positions of medical officers of health. The bill also provides that a county medical officer of health will not be allowed to engage in private practice or to hold any other appointment. Clerks and medical officers of health of district councils are required by section 58 to supply county medical officers of health with any information which it is in their power to give, and which the medical officer of health for the county may reasonably require for the purpose of his duties. Section 70 compels every county council to establish a public health and housing committee to which shall stand referred all matters relating to the exercise and performance by the council of its powers and duties as respects public health and the housing of the working classes, but the London County Council is exempted from the application of this section. Section 71 permits county councils to promote the formation and extension of building societies having for their object the erection or improvement of dwellings for the working classes, and to assist such societies by making grants or advances or guarantee advances; the councils are given power to borrow money for these purposes.

OLD AGE PENSIONS AND RELIEF IN POOR LAW INFIRMARIES.

A CIRCULAR dated April 16th, issued by the Local Government Board to local pension committees and subcommittees, contains the following paragraph:

"The Board may also take this opportunity of stating the view on which they have acted in refusing applicants made to them in cases where the claimant has been an inmate of a Poor Law infirmary. The question whether maintenance in the infirmary comes within the provisions of Section 3 (1) (a) (i) or (iii) of the Old Age Pensions Act appears to them to depend upon the circumstances of the particular case. It is somewhat difficult to lay down exact rules for such cases, but the Board's view is, generally, that if a person suffering from an illness or an accident has been received in a Poor Law infirmary for cure or treatment, he is not thereby disqualified, such relief as he obtained other than surgical or medical assistance, being merely incidental to such assistance. If, however, he became a chronic inmate of the infirmary the medical character of the relief would cease to preponderate and disqualification would ensue. The same principles apply in the case of an inmate of the sick wards of a workhouse, the actual place where the poor person is lodged being of less importance than the nature of the relief afforded to him."

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL.

THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL are at 423, Strand, London.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 423, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 423, Strand, London, W.C.

TELEGRAPHIC ADDRESSES.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Atiology, London*. The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

TELEPHONE (National):—

2531, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.

2530, Gerrard, BRITISH MEDICAL ASSOCIATION.

2534, Gerrard, MEDICAL SECRETARY.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 423, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED. In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

DR. DRINKWATER (Wrexham) desires to hear of a home where a girl, aged 19, suffering from chlorosis and just recovered from phlegmasia alba dolens of both legs, would be admitted.

PETIT BREATH.

HEALTH OFFICER asks for information as to the usual cause of petit breath apart from such well-known conditions as dyspepsia, dental caries, and ozena.

* The probable cause of foul breath under the conditions named is slight catarrh of the cavity of the mouth, nose, or pharynx, associated with the presence of various aerobic bacteria, such as *B. mesentericus*, *B. pyogenes foetidus*, *B. lactis aerogenes*, *B. proteus fluorescens et septicus*, or with some less definitely known anaerobic organisms, but we know of no medical book in which these relations are discussed.

INCOME TAX.

E. M. C. asks whether the surveyor of taxes is within his legal right in demanding from him accounts for the years 1905, 1906, 1907, and 1908, and also whether he is correct in stating that no deduction can be made for the cost of additions to a practitioner's stock of instruments.

* The surveyor has no direct power to demand accounts. His functions, however, include the verification of the amounts returned by taxpayers for assessment, and it is doubtless in this connexion that accounts have been asked for. Our correspondent may refuse to furnish the accounts at this stage; but in that event the Commissioners would probably decline to accept his return, and would make an estimated assessment upon him in any amount they thought fit. In order to obtain a reduction of this assessment accounts would have to be produced, and therefore it is simpler for all parties if accounts are sent to the surveyor in accordance with his request. The cost of additional instruments is regarded as an outlay of capital, for which no deduction is allowed under the Income Tax Acts. This view is obviously open to criticism, but it is to be feared that individual protests are not likely to receive much consideration.

ANSWERS.

PRACTITIONER.—(1) A good anatomical atlas for use by a person who cannot attend a dissecting room is *The Edinburgh Stereoscopic Atlas of Anatomy*, edited by David Waterston, (Edinburgh: T. C. and E. C. Jack). (2) A good articulated skeleton costs about £3. Price lists can be obtained from Messrs. Millikin and Lawley, 165, Strand, London, and M. Trautmond, 9, Rue de l'Ecole de Médecine, Paris. (3) Gould's *Illustrated Dictionary of Medicine, Biology and Allied Sciences*, 1900, 4fs., and Gould's *Dictionary of New Medical Terms*, 1905, 2fs. (London: Baillière, Tindall and Cox), are good modern dictionaries of medicine and surgery.

SUICIDAL TENDENCIES.

G. P. W.—A satisfactory opinion could only be given after an examination of the patient. She may be a mental degenerate with a bad family history, or she may have had a decided attack of melancholia. She should be carefully examined to see whether her condition is such that she can be certified and placed in the county asylum. If there is any recurrence of the suicidal attempt, it might be a good thing to bring her before a magistrate, because the appearance in court is often of great advantage in hysterical cases by inducing more self-control. If the girl is not pregnant, there would seem to be even now some evidence of delusion; if she is pregnant, the case is probably one of melancholia of pregnancy, and she should be placed in an asylum, unless she has friends who will take her and be responsible for her safety. It does not appear that there are any homes or institutions which undertake cases of this description. Patients of this kind are always uncertain, and it is very risky to keep them as servants in families. She requires protection until her general health is re-established, and apparently this can only be obtained by her own friends or in some curative establishment. No hospital would be likely to undertake the case. There is no statement as to whether some small money payment could be made with the girl. If she could pay a little, it might be advisable, should it be possible to place her under certificates, to apply at the Handford Home for Feeble-minded Girls. Apply to Miss Jeffries, St. Helen's Lodge, Ipswich, or to the Secretary, National Association for the Feeble-minded, Denison House, 296, Vauxhall Road, S.W.; terms, 10s. a week.

PRACTICE IN CANADA.

M.D.—(1) In British Columbia a medical man can obtain registration on the strength of qualifications derived from Great Britain or Ireland only if he was registered in Great Britain or Ireland previous to June 30th, 1887, otherwise he must undergo an examination. There is a fee for registration which "must not exceed 100 dollars." Application for registration should be made to the Registrar of the Medical Council, Victoria, British Columbia. (2) In Manitoba the most recent Medical Act appears to make it permissible to admit to the Register any practitioner holding a qualification entitling him to registration in Great Britain or Ireland; but as there is some obscurity in the wording of the Act, inquiry should be directed to the Registrar of the College of Physicians and Surgeons, Winnipeg, Manitoba. (3) In Alberta a medical man desiring to obtain admission to the Register on the strength of qualifications derived from Great Britain or Ireland must, according to the Medical Act of the province, pass an examination "touching his fitness and capacity to practise medicine, surgery, and midwifery." The examination fee is 50 dollars, in addition to a registration fee of the same amount. The registration authority is the College of Physicians and Surgeons, Edmonton, Alberta. (4) In Saskatchewan the regulations are on all fours with those of Alberta, the registration authority being the College of Physicians and Surgeons, Regina, Saskatchewan. (5) In each case a statement of the candidate's qualifications and their dates should be submitted to the registrar of the authority in question, and precise information obtained as to the requirements he will have to fulfil. (6) In the older towns hospitals are staffed much as they are in England, but elsewhere they are sometimes administered in the same fashion as are cottage hospitals in this country. There is no one rule, and the conditions which will have to be dealt with on this respect are only determinable when the choice of a new home has been finally made. (7) There are plenty of medical men in all parts of Canada making incomes of the amount stated—namely, £500 to £1,000 per annum. Relatively these sums represent in most parts of Canada a somewhat smaller income than they would in this country, and whether any individual medical man proceeding from England could make either of them, even if "a fair surgeon" is a purely personal question. There are a good many medical schools in Canada, and these annually turn out a large number of excellently qualified medical men; nevertheless, the population is rapidly growing, and there is doubtless room for immigrant medical men of real ability and industry and possessed of sufficient capital to support themselves while making a position. In itself, however, the holding of a British qualification is no special advantage, and a practitioner born and bred in these islands would have to become socially acclimatized before he found himself on equal terms with his Canadian-born competitors.

LETTERS, NOTES, ETC.

JEWS AND ALCOHOLISM.

DR. C. F. MARSHALL (London, N.W.) writes: In your article on this subject in the *BRITISH MEDICAL JOURNAL* of April 17th, it is stated that "alcoholism occupies the first place as the causative influence of insanity." This statement is open to contradiction, for the researches of Mott and others show that the first place should be given to syphilis. If it is true, as stated in your article, that degeneration of the nervous system and insanity are more common among the Jews than other races: this tends to indicate that the alleged rarity of syphilis among the Jews has been exaggerated.

THE LONDON UNIVERSITY AND COLLEGE QUESTION.

DR. H. ELLIOT BLAKE (Bognor), in the course of a long letter on this subject, writes: In the latest discussion of this

question to again descend to the arena of alternatives is unnecessary. Dr. Mercier has yet one other solution—that of registering an M.D. for the collegiate licences by the aid of a special charter; but I fail to see how it applies to the last year's determinations to readjust the university and to hold a Royal Commission, which produced the College Committee of Inquiry. However, through a complex division of doubts he admits the difficulty of avoiding this much-talked-of exchange of title to an M.D. for the diplomats. What will be appreciated by Members is his recognition, as one of our leaders of the justice of the Members' claim to be considered on a parity with their university or "provincial colleges." But, as to the new solution, a new charter would simply retain the tattered pall and fenestrating furnishings of a decadent past and the continued ill-working of the collegiate system.

The difficulty Dr. Mercier quotes of the apparent stumbling-block of adapting the matriculation is not insurmountable, if only the half measure of adaptation be dropped and the necessity for a change be acknowledged. Thus, by accepting the existing colleges' preliminaries for, say, one or two years, and then introducing any agreed upon level for all acceptable preliminaries, that question would be solved. If a further arts course were required, at a future time, the university could well provide for it.

The colleges have been found fault with for splitting their own new committee's purpose and leaving action to be taken by the Royal Commission. I do not hold with such convenience or expediency, and think that the committee of the colleges should not abate one iota of their previous intention of entering into direct negotiations for any compact of agreement that may be decided upon with the University of London and with the authorities alone concerned on both sides. They are strong enough in the foundation of this reform, they have a practical senate as the only legal executive to deal with, and the medical faculty and other leaders are not at all adverse to treating them favourably. They should not forego the advantage of position after so long and strenuous fight. If the Royal Commission ratifies these agreements all the better.

[The remainder of Dr. Blake's letter deals with matters affecting the internal economy of the University of London, which we venture to think more suitable for discussion before the Royal Commission than in these columns.]

TREATMENT OF RINGWORM IN SCHOOL CHILDREN.

DR. HORACE MANDERS (London, W.) writes: As Dr. Galbraith (*BRITISH MEDICAL JOURNAL*, April 17th, p. 983) has asked help from the experience of others to clear up the doubts and difficulties under which he labours, I can refer him to the last report of the East London Hospital for Children. We do not claim anything marvellous, but we can show most excellent results by means of x rays. In the large-spored variety the cure is speedily effected, sometimes the small-spored variety gives a good deal of trouble. I may add that a great deal depends upon the general health of the individual children. I cannot call to mind any case that has not eventually become cured, neither have I seen any deleterious action upon the skin. I shall be very pleased to show him cases under treatment at any convenient time, and demonstrate the technique. Unless the latter is understood, and the treatment retained in the hands of those who have been trained to the work and duly qualified to interpret symptoms, serious mischief is bound to occur. Under proper conditions, on the other hand, my experience is that no other treatment can approach that of x rays in efficacy and in shortness of time. Our average number of sittings for each case at the East London Hospital is between six and seven.

"ANTIVIVISECTION AND THE POOR."

A DISGUSTED RADICAL writes: It is remarkable but depressing fact that the *Daily Chronicle*, which I for one have been accustomed hitherto to consider as the representative of sane Radicalism, should on a single page to-day contain a panegyric of homeopathy, by one of its leading practitioners: a ridiculous statement about the nourishing properties of spinach, in a letter by a correspondent of some social standing; and a still more preposterous glorification of H. C. Chadwick, at the expense of Edward Jenner, as the exterminator of smallpox, in another letter. The correspondent who also occupies some position in the commercial world. How can we wonder at the readers of newspapers falling victims to such misleading nonsense, when editors find it consistent with their sense of responsibility to give a place to it in their columns?

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An Address

ON

THE DUTY OF THE MEDICAL PROFESSION IN THE PREVENTION OF NATIONAL DETERIORATION.*

PRESIDENTIAL ADDRESS DELIVERED BEFORE THE MANCHESTER
MEDICAL SOCIETY.

BY WILLIAM COATES, C.B.

It is difficult in all countries to obtain statistical evidence which proves conclusively that a population has improved physically or the reverse. It is more difficult here, as detailed records are only available from army reports; and, as conscription does not exist, the measurements and weights taken only apply to a limited section of the community. But none of us who know the influence on health and strength of fresh air, good food, abundant light, and varied exercise, can doubt that—now more than 77 per cent. of our population live in big smoky towns, where dwellings are overcrowded and often densely packed together, with very little open space; where rapid transit is so easy and little exercise is taken; where the bad influences of drink and vice abound—degeneration is taking place. Those who oppose this view argue that a large proportion of the people classed as urban really live in wholesome suburbs, and that nutritious food is more easily obtained by the poorer classes than formerly. But there is a vast difference between a suburb and the country, and it is questionable whether our present dietaries are superior to the old. Mr. T. C. Horsfall, J.P., one of the foremost and most laborious workers in all spheres of social reform, has brought under my notice two valuable opinions bearing on this point. Dr. Grotjaun, after most exhaustive investigation, is convinced that the old diets of rye-bread and milk in Germany, and oatmeal, barley-meal, and sweet and butter milk in this country, gave better results than the tinned foods, bad fried fish, stewed tea, pickles, and other unwholesome and badly-cooked food upon which poorer parents often feed their children now. Admiral Bosanquet, who has been largely concerned with the training of boys for the Royal Navy, says that the finest boys come from the West of Ireland, where they have been mainly brought up on potatoes and fresh air. These boys hate the meat supplied to them in the navy, and often drop large portions of it into the sea. The same authority gives some striking statistics bearing upon physique. Owing to the popularity of the service and to the good pensions given, a large number of boys of classes higher than those that enter the army try to enlist. On an average 5,000 boys are needed annually; to get these 35,000 are rejected.

My own attention was first drawn to this subject twenty-five years ago by observing the poor physique of many young men who presented themselves for enrolment in our voluntary forces. During the intervening years I have had constant opportunities of observing not only our volunteer recruits but also the regular troops stationed at the Hulme Barracks, at which station from time to time I have had the medical charge of the hospital, and have conducted the medical examination of army recruits. Year after year the increasingly wretched physical condition of the majority of youths appearing for examination has deeply impressed me.

The standard for admission into the army is lower than in former years, and more men are examined and rejected before casualties are replaced. Statistics relating to the physique of recruits who have, in various years, tried to enlist into the British army cannot be regarded as conclusive, as a particular class of person must not be selected and relied upon to verify a universal truth, but in this country there is no other source where similar records have been kept.

Fifty years ago, as now, a recruit could enlist at the age of 18 years. The minimum height was then 5 ft. 4 in. It is now 5 ft. 3 in.; fifty years ago, however, a height of

5 ft. 4 in. would only admit a recruit into the army as an artillery or engineer driver, and the number required was small; 5 ft. 6 in. was the height for a line regiment; 5 ft. 3 in. will enter a recruit into any line regiment now.

Previous to 1883 a recruit could not enter the army unless his *minimum* chest measurement was 34 in. He can now enlist into some units with a chest of 31½ in., provided he has 2 in. expansion.

In 1862, 416 recruits per 1,000 weighed under 9 st. 4 lb.

In 1907, 657 recruits per 1,000 weighed under 9 st. 4 lb.

In 1862, 52 recruits per 1,000 weighed under 7 st. 12 lb.

In 1907, 83 recruits per 1,000 weighed under 7 st. 12 lb.

Fifty years ago, when the physical requirements for enlistment were much more stringent than now, 37 per cent. only of the recruits examined were unfit for service. In 1907, 39 per cent. were rejected by the medical officer; and General Sir Frederick Maurice considers that, when the numbers that are sent away by the recruiting sergeants and those dismissed as unfit after three months' service are taken into account, at least 60 per cent. are now lost to the army through physical unfitness.

This obvious deterioration of the class from which recruits are drawn is condoned by reference to unemployment and starvation; but these agencies have not been proved to be much more active now than in earlier times, taken over a series of years, and as the physical standard for admission into the army has been so often and progressively reduced, until it is now lower than ever before during peace, and as the population of the country is vaster by millions, the figures quoted should cause apprehension.

The foregoing particulars are given as evidence of physical degeneracy; but they are by no means relied upon to prove it; stress is laid rather on the mental than on the physical aspect of the case.

The previous figures do not apply to the whole population, but in Germany and other countries where conscription exists, the evidence is much sounder. It proves that the country places supply a much larger proportion of robust recruits than the towns, especially the larger towns.

You will not wish me to carry this question further. All will agree that there is at any rate deterioration enough to call for serious effort on our part to arrest its progress.

More Co-operation in our Profession Required.

The first point that I would submit is that more co-operation, more cordiality, is wanted in our profession if it is to become effective in its warfare against deterioration. All branches of the profession must be more closely welded together—the consultant, the teacher, the medical officer of health, the school medical officer, the general practitioner, all State-employed doctors. The work of each must be so interlinked with the other that broader views become possible, the corners of specialism rounded, the interest and special knowledge of the family doctor maintained and made use of; the collective experience of the whole co-ordinated.

At present no chain exists, only isolated links; some of them are strong, others weak. No serious attempt has been made to join them firmly together. The metal of most of the links has been well tried, and is sound, but a few of them contain flaws that can only be removed by reforcing. It must be remembered that the strength of a chain is that of its weakest link.

Some of you will say that race degeneracy is the province of the public health specialist, and that he is reducing the risk of disease every year. But he is not so much concerned with the strengthening of the stamina as he is with the preservation of the race. He is catering for a weaker constitution, one that in olden days would have died in infancy or early youth. This is the tragedy as well as the glory of the problem. Life must be preserved; it is not for us to consider at the moment the effect upon that life or others, that the prolongation of a life entails. If the health medical officer is to accomplish much, he must work hand in hand with the family practitioner, and remember his perplexities, and the latter should be ready to do more than simply accept the privileges which the former offers him.

Our teachers, too—I say this with great respect—are not blameless. They attach so little importance to public

* In printing this address some introductory remarks and also some passages in the earlier part have been omitted owing to considerations of space.

health and other kindred subjects. Nothing is done in the student career to teach "brotherhood" amongst the various branches of our profession, nor responsibility concerning the improvement of race stamina. Such matters are as seldom touched as those equally important ones of medical ethics and a practitioner's difficulties—problems which confront the latter so seriously during all periods of his career.

Increased Powers to Education Authorities.

Those interested in national health look for good results from the powers entrusted to the educational authorities by the Education (Administrative Provisions) Act, 1907. This gives authority to carry out a systematic inspection of all children attending the public elementary schools, and also to make provision for the benefit of their health and physical condition.

Until recently, with perhaps the exception of advice regarding vermin, and very minor ailments, all cases in which a child required medical advice have been referred to the family doctor, or in necessitous cases to a hospital. Under the extended powers that have now been given, the institution of school clinics for the treatment of medical and surgical cases is contemplated, and in some towns, notably Bradford, are already in operation. A perusal of the report of a Special Subcommittee of the London Education Committee on this subject, which favours such proposals, fails to convince me of any necessity for these clinics, nor of any need to subsidize general or special hospitals for the treatment of public elementary school children. It does, however, give grounds for apprehension that their adoption would seriously injure the rights of the profession, and that many children with parents well able to pay would receive gratuitous treatment. Ailing children should be referred to the family doctor, and cases requiring special treatment should be sent by him to a specialist, or in needy cases to a hospital. Hospitals exist for the poor; many are endowed for their service, and no more reason exists for the education authorities to make payments to hospitals than to private practitioners. The profession should appreciate the importance of this subject, and affirm their ability and readiness to co-operate. If the issue is left to chance the result will surely be serious.

Co-operation between the Medical Profession and Educationists.

Further steps should be taken to associate the whole profession more closely with those who control national education. If this were done the cultivation of sound health would be a more prominent feature and stronger generations would follow. Elementary teaching has been too much pressed forward and involved. Its form, length, and nature have been settled apart from any guidance by the medical profession. It is not contended that members of our profession are capable educationists, but I do maintain that by their experience and training they are specially fitted to lay down rules for the moral and physical training of the young. In our great public schools education is directed primarily to the training of mind and body—whereas, in our lower grade schools, the tendency has been to give the scholar the maximum amount of knowledge necessary to gain Government grants and local élat, at the expense of a training so necessary to the higher development, which now meets with no reward and but scant recognition. I submit that if the medical profession had been consulted *health and training* would have bulked larger and the imparting of actual knowledge smaller, in the elementary school system. "Learning" and "training" should go hand in hand. The value of each increases fourfold when incorporated with the other. It is not easy to differentiate between the two. It may not be strictly true to say that learning is represented by those things which we remember, and training by those which we have forgotten; but it will hardly be denied that our lives are more influenced by the many things we have heard, or read, or done, which we have forgotten, than by those we have been taught and remember.

Learning may be described as a definite substance, capable of being expressed in precise terms; it can be condensed into a textbook, it is encyclopaedic in character, and its conclusions can be demonstrated on a blackboard. It is an aggregation of units of knowledge; it is perception, and accumulated, no doubt, it is power.

Training is more difficult to define; it is a subtle amalgam subject to infinite and indefinite numbers and forms of influence and environment; it matures rather than increases, it becomes an integral part of the pupil, an instinct ever ready to assert itself in emergency, in fact, guide, philosopher, and friend through life.

It is not learning alone, but mainly *training*, which enables the British to control millions of alien races; and in my opinion we are justified in impressing upon the public that the training of the moral sense and physical capacity should be greatly extended in our educational system.

The higher aim of education should be to fit the young to become good and healthy men and women, husbands, wives, and parents; loyal citizens and patriots.

Value of Judicious Physical Exercise.

The value of well-ordered physical exercise, of athletic games, and gymnastics, must not be overlooked as remedial agents in physical deterioration. Improperly practised violent exercise does more harm than good, and will produce evils of heart, lung, nerve, and muscle. It is dangerous to allow weak and strong children to play together indiscriminately—without classification or superintendence. Not only in public elementary schools, but in all schools, private and public, the doctor should give individual advice on these points. The value of *progressive* Swedish physical exercises is now well known, and these are taught and practised in a modified form in many elementary schools. They should be given daily instead of once or twice a week, they should be practised in the open air and during school hours, and they should be regulated by the medical officer according to the condition of each individual child.

In the army, where every soldier must be made as strong, agile, and "fit" as possible, a new system of physical training was adopted in 1907, based largely upon a Danish modification of the Swedish exercises. The main principles are *progressive* exercise—an avoidance of overtax, the harmonious working of all parts of the body, and an awakening of the intelligence of the recruit. The tricks of the gymnast and acrobat and the practice of many difficult displays, useless from the point of view of general development, have been replaced by progressive training in Swedish movements, followed by boxing, wrestling, swimming, bayonet fighting, fencing, etc. The greatest possible development is aimed at without strain. Under the old severe system, which developed muscle as rapidly as possible, young soldiers were often permanently injured. Under the new system a great improvement in the development of the recruit follows, and the number discharged from the army as physically unfit after three months' service has been considerably reduced. But in the army these exercises are carried out under the immediate supervision of the medical officer, who, having himself been through the training, regulates its application to individual needs. It is equally, if not more, important that children of every class should be under medical supervision during school life so that individual weakness may be counteracted and overstrain avoided. It is not to supersede school games that these exercises are advocated, but to supplement them. Games are of the greatest advantage, and make boys fearless, alert, and strong; but harm is sometimes done which medical supervision would prevent. In the case of girls, too, sufficient care is not exercised. Contrary to the experience of the public elementary schools, I have been able to satisfy myself from a number of examinations of boys and girls of the better classes attending preparatory and public schools that growth in both height and weight and general development takes place to a greater degree during the school term than during the holidays.

Playing Fields.

Can we, as a profession, do nothing to encourage our civic authorities to provide playing fields for the youth of our city? The Education Committees of Manchester and other large towns have made a wise concession in throwing open the school playgrounds during the summer months until dusk and during holidays. But this is not enough. The child must be less confined—more in different and fresher air. The Education Act, 1907, gives extensive

powers, and if the importance of playing fields for children is brought forcibly to the notice of the authorities something may be done in this direction. In Manchester and Salford a "playing fields society" was started a year ago. A field of 33 acres has been acquired at Gorton, where the working lads of the city play their games under kindly supervision; 800 lads can be seen there every Saturday afternoon and summer evening. The profession should give its heartiest support to such a beneficial movement. Games have always been a distinctive feature of English life, and they should take a foremost place in child training. They ensure fresh air, they cause delight, they help to form character and public spirit, and they can be made a means of promoting good physical development. Public gymnasiums should be provided by the municipality in all large towns where out-of-door exercise and field sports are difficult to obtain.

Diminishing Birth-rate and Marriage.

The serious decrease of the birth-rate in this country is intimately connected with physical degeneracy on the one hand and with the responsibility of our profession in its prevention on the other. There is a decrease in both birth-rate and marriage in all the countries of the world except Ireland, some parts of Spain, of Austria and Russia. The exceptions are due to the stronger religious beliefs held in these places regarding marriage and its objects. The birth-rate per 1,000 of population in Manchester was in 1907 only 28.3; in 1871-75 it was 38.9; in 1881 35.9; in 1891 33.8 per 1,000. Manchester is by no means worse than other towns. In Nottingham during the last twenty-five years there has been a fall in the birth-rate of 30 per cent. There are two quotations bearing on this subject which have struck me. Gibbon, in his *Decline and Fall of the Roman Empire*, alluding to the condition of affairs in the Roman Empire in the days of Constantine, writes:

The horrid practice so familiar to the ancients of exposing or murdering their newborn infants was becoming every day more frequent in the provinces, and especially in Italy. . . . The less opulent or less industrious part of mankind, instead of rejoicing in an increase of family, deemed it an act of paternal tenderness to release their children from the impending miseries of a life which they themselves were unable to support.

The second is an extract from the report for 1907 of Dr. Niven, Medical Officer of Health for Manchester. He says:

There can unfortunately be little doubt that the continual descent of the birth-rate is due not merely to the prevention of conception, but also in no small degree to destruction of its fruits. If so, the effect both on natural selection and on the national habits must be injurious. The offspring must also be injured in many cases by the efforts made to bring on premature labour.

Is there no parallel between these two statements? The first was the practice in declining Rome; the second is a practice in this country to-day. There are two apparent differences. The Romans were brave enough to slay their children openly, and the male committed the crime; whilst now in this country the deed is done in secret, and the male expects or allows his mate to do the gruesome deed. The decline is not due to physical but to moral degeneracy. It is a deliberate act of the will, which is depriving the country of hundreds of thousands of babies annually. It is useless to hide these facts. Every practitioner is familiar with them; they are spoken of to him without a blush—nay, he is often tempted, and with no mean bribe, to be an accessory to the act himself. Ought we not as a profession to do something to check this waste, to restore the old pride and glory that parents originally felt in the propagation of their species? We have opportunities which no one else has. But there is no doubt of the fact that the parents who should be "stocking" the empire with healthy children—the more cultured, more prosperous, wealthier, and thriftier classes of the country—are shirking their responsibility, producing fewer children, and the country will soon be swamped by the children of the only people nowadays who procreate freely, namely, those who live in the slums, and our alien population. In former years these "possible undesirables" were swept away by epidemic disease, which science is now controlling year by year more and more. By reducing mortality, preventive medicine is the means of bringing to

maturity many weaklings who, in the absence of present-day knowledge, would not have got beyond early childhood, and who would not, therefore, have been able to hand on their shortcomings of weakly physique, with its want of power to withstand the strain of modern life. It is interesting in glancing through the obituary columns of old numbers of *The Gentleman's Magazine* of a hundred and fifty years ago, which was a sort of record of social and political events of any moment, to note the great number of people who died from small-pox, and to the number of women who died in childbirth. As, of course, only people of a certain standing in society would come into notice, the deaths throughout the whole population from these two preventable causes and other infectious ones must have been enormous. Many of these deaths are prevented now. Families of one, two, or three children are now the rule, and they are justified on grounds of thrift and health, when really in most cases the mania for pleasure and excitement, unwillingness to suffer inconvenience, and national irresponsibility, are chiefly the causes; this must result in national degeneration. Our plea is not necessarily for large families—these are sometimes potent as factors in the cause of deterioration—but that to regulate the size of a family by any other means than mutual self-restraint and self-respect must be demoralizing and productive of harm. It is where the children cause the most inconvenience that the decline is chiefly noticeable—where married women earn wages, and where social life is most interfered with.

It should be remembered that if marriage were regulated by the State a robust race could soon be raised; but this is not feasible, and any serious interference with the process of natural selection would rightly be regarded as sacrilege, and resented by all classes.

The subject is full of difficulties. How is it possible to limit the ever-increasing number of children born to the unfit in our slums? Can some system of race culture be made fashionable, so that the finer specimens of British humanity may take pride in producing a strong and noble race?

Should not the State give privileges to those with large healthy families, and try to make the rearing of children an attractive occupation to women of a fine type? Some graduation in the income tax, privileges in connexion with education, or facilities for entering the public services might appeal to the better-to-do, and some advantages in food and clothing and in municipal employment might be an inducement to the better working class. This generation might be the losers but later ones would benefit; and if those who pay taxes have the subject brought home to them, there will be a better chance of "curbing" negligent and thriftless parents.

It is a great waste that so many of the finer specimens of our race remain "bachelors," and fail to fulfil their natural obligations, when there are two millions more women in the country than men. Undoubtedly every bachelor over 30 should be heavily taxed according to his income, and this tax should be used for the benefit of parents producing large families of healthy children. It must be made easier for the best types of parents to bring up their children.

The Effect of Mentally Defective Children on Race Decay.

Time is pressing, or much ought to be said regarding the relation between defective and mentally deficient and feeble-minded persons and race deterioration. There are many weak-minded people of varying degree at large; they are a danger both to themselves and the State. Without sense of right and wrong, often ill-developed, they are a constant cause of anxiety. Weak-minded girls quite commonly bring illegitimate offspring into the world, and others marry, in both cases almost certainly reproducing and perpetuating the parents' lack of mental capacity.

The education authorities are gradually making provision for the training and comfort of afflicted children in their work. In addition, many blind and deaf children are maintained in various residential institutions, and others are taught in special day schools. Cripple children are treated and taught in residential schools. Mentally defective children are accommodated in special day schools, in which the training is directed towards learning some

useful occupation. *Epileptic children* are sent to epileptic colonies, where adequate provision is made for their school instruction.

But these are makeshift arrangements, chiefly the result of philanthropy, and admission to these institutions is quite optional on the part of the afflicted people, whereas in most cases it should be compulsory. There must be powers whereby such of these afflicted persons as cause danger to the State may be placed under *permanent restraint* in well-organized and supervised institutions, where they would be safe from harm themselves, and unable to inflict it upon others. Cannot our profession bring powerful influence to bear on this matter, and press for legislation?

Overcrowding and Housing and Town-planning Matters.

Overcrowding is answerable for much of our physical degeneracy, and our profession would do well to take a more active interest in the housing and town-planning questions in our larger towns. More than 77 per cent. of our population is now urban, and the same care evinced by the more advanced Continental countries in town planning has not hitherto been shown in this country. Reforms are urgently needed in the social conditions of the poorest of our fellow-citizens. It is impossible to have strong bodies, or fresh, joyful, clean minds, when the days and nights are spent in squalid streets, and overcrowded, gloomy, sunless, ill-ventilated, filthy houses, such as many of our poorer classes are compelled or content to dwell in. No wonder the low-class but brightly-lit public-house proves an attraction. No wonder there is a lack of discipline, self-respect, and patriotic feeling in a considerable class of the rising generation. Much is being done to remedy this deplorable state of things both in Manchester and elsewhere, but if there is to be any chance for a large town to have the conditions necessary for health and strength in all its districts, or even in only its new districts, it can only be attained by the active work of the whole profession in co-operation with our health medical officers, and with the various educating societies and persons who have been striving to enlighten the public, and to obtain compulsory powers to effect these objects. The local authorities, and even Parliament itself, must be constantly impressed with the nature of, and need for, conditions of health in our towns; and it is to be hoped that the more intelligent and public-spirited will succeed in interesting the ratepayers at large in the maintenance of the conditions essential for the health and strength of the whole community. If Mr. Burns's Town Planning Bill be passed next year, the town councils will be able to insist on the provision of playgrounds and other open spaces in all new districts and the limitation of the number of houses in a district; but the town councils are not likely to use their powers at all fully unless backed up by that public opinion which we as a profession, on a subject such as this, are so well qualified to form and influence.

Societies and Associations working at Social Reform.

The various health societies whose object is to improve the condition of the people should be supported by our profession. The Manchester and Salford Sanitary Association is the oldest of its kind in the country, and has had much to do with many of the reforms which have been effected here during the last half century. How many of us take any active part in its work? Here is a pleasant field of enterprise for any of our younger members willing to labour in the great cause of physical regeneration.

There are many other kindred societies, all of which deserve our cordial support.

The beneficial effects of living under the ideal conditions provided by garden cities are strikingly shown by statistics from three well-known places. At Letchworth the average death-rate per 1,000 is returned at 4.81 and the infantile mortality at 38.4 per 1,000; at Bournville the figures are 7.5 and 80.2; and at Port Sunlight 8.0 and 65.4 per 1,000.

What has been done in Sweden by Efforts to Regenerate.

One of the most encouraging facts with regard to the possibility of restoring the health and strength of a nation is to be seen in what has happened in Sweden. Seventy or eighty years ago the Swedes were fast becoming a degenerated race, but they appreciated their condition

before it was too late. They reformed their licensing system, planned their towns so as to secure much vegetation and ample open spaces, and gave the youth of the country a sound gymnastic training on the system which is now recognized to be the best. They are now the finest race in Europe, and, what is most remarkable, the men of the towns, owing to the excellence of the details that have been observed in their planning, are, as a rule, as robust and as strong as those of the country.

The Evil Effects of Impurity on Stamina.

How seldom the voice of our profession is heard in discussions concerning public morality and the remedies for checking impure habits and tendencies. These prevail in every section of society. They are all the more deadly because more secret, more insidious, more insinuating, more winked at, than any other vice. They are a cause of much immediate and future degeneracy. The strength of the race and its ability to hold its own depend very largely upon the ascendancy of the good over the bad, and the return of our people to a right moral standard. I would confidently submit that instruction ought to be given to boys and girls on sexual matters, preferably by their parents, but as this seems impossible amongst the poor, it should be done by the school medical officer. Parents are silent on this subject; it is wrapped up in an obscuring mystery, which only tends to arouse the curiosity of the child. The result is that the lessons regarding our common nature are learnt from strangers, servants, or erring and ignorant school companions. Boys and girls should be instructed on sexual matters before leaving home for school; their confidence should be invited on any point of difficulty; there should be a frankness and openness with them, so that their trust may be gained and their secrets revealed. We teach our children not to lie and not to thieve, both of which by nature they are prone to do, but regarding sexual feelings, difficulties, and sins, which as surely are natural to them, we are content to leave them in utter ignorance, without any guidance, prop, or safeguard. A tactful warning concerning the effect of bad habits on health, followed by lessons on self-restraint and the needs of others, and on the advantages of play and work, will do no harm, but will place them on their guard. "For if the youth be grafted straight and not awry, the whole commonwealth will flourish thereafter." Too great emphasis on these topics is of course to be avoided, or the very opposite effects to those aimed at may be produced, as for the attainment of the desired result love and faith on the part of the child are requisite. The prevailing notion that human passion cannot be repressed without harm is false. As practitioners of medicine we cannot be too insistent on this point, though from knowledge gained from patients it is to be feared that advice fraught with the gravest danger is sometimes given. In the classic clinical lectures by the late Sir James Paget occur the following words, which should be indelibly written in every practitioner's mind:

Many of your patients will ask you about sexual intercourse and expect you to prescribe fornication. I would just as soon prescribe theft and lying or anything else that God has forbidden. Chastity does no harm to mind or body; its discipline is excellent; marriage can be safely waited for, and amongst the many nervous and hypochondriacal patients who have talked to me about fornication I have never heard one say that he was better or happier for it.

Effect of Venereal Disease on the Decay of the Race.

Intimately connected with the subject of *natura*, deterioration is that of venereal disease, its prevention and cure. The prevalence of these diseases in their earlier stages is, to some extent, a gauge of the morality of the people; their ravages on men, women, and children subsequently are indications that effective treatment has not been adopted or carried out. Venereal disease is preventable; it is conceivable that it can be as surely stamped out as hydrophobia or plague, but this could only be effected with the assistance and whole-hearted co-operation of the profession, supported by the will of the people; but in adopting means to that end care ought to be taken that a definite deterioration of public morality is not involved. It is bad to have venereal disease, but it might be worse if it were escaped only by methods which rendered immorality safe and easy. Better far let us strive to eradicate it by effective

treatment on the one hand and by public education on the other, by the diffusion of the knowledge of what these diseases mean to the individual, the home, and the community, and how unnecessary it is to run the risk of acquiring them. The home, the school, the college, the church should be the media of this education. It is the prejudice against the frank discussion of these subjects, the unfortunate reserve and shyness that increase the difficulty. Venereal disease is much less prevalent in the army now than formerly. In 1860, for every 1,000 soldiers in the British army in the United Kingdom and India there were 1,053 admissions into hospital for venereal disease. In 1890 there were 196 admissions per 1,000 in the United Kingdom and 376 per 1,000 in India. In 1907 there were 71.9 admissions per 1,000 in the United Kingdom and 89.9 per 1,000 in India. This remarkable improvement is largely due to an increase in temperance in the army during recent years; but it is also due to better barrack accommodation, better clothing, better sanitation, more effective treatment. The army surgeon is more thorough, practical, and successful in his treatment of venereal diseases than is the civil doctor; it is, moreover, the custom for the former to deliver lectures to the troops under his charge on matters of personal hygiene, and concerning the dangers to himself and his country that a soldier incurs who practises illicit connexions. There are no statistics to prove, but there are ample reasons for believing, that there is no such striking decrease of venereal disease amongst our civil populations during recent years as has occurred in the army. It would be well if similar methods of diffusing knowledge could be adopted by civil practitioners.

It is interesting to note how foreign armies suffer in comparison from these diseases. In 1906 29.1 per 1,000 admissions took place in the French army, 18.8 in the German, and 158.91 in the United States army, whereas 68 per 1,000 admissions occurred in the United Kingdom. Thus in Germany and France, where legislation has provided for the supervision and examination of prostitutes, the number of admissions is three times less than in Great Britain and eight times less than in the United States. It is not, however, clear that this diminution in the disease is due so much to police supervision as to the methods of prophylaxis which are practised by German and French soldiers. In my experience the disease is so frequently spread by clandestine intercourse which no legal enactments would touch, that it is not to the official registration of prostitutes in certain towns for which the Contagious Diseases Act now repealed provided, that we can look with hope (for if legislation is to do any good it must apply to the whole community, and to men and women alike); nor is it to the notification of these disorders, which would only be an encouragement to "quacks," and hence to a greater inefficiency in treatment; but it is to the spread of information to men and women, youths and maidens, of all grades of society, about the prevalence and far-reaching consequences of such diseases; to the enforcing of the laws that already exist against solicitation in their application to both sexes, and in the provision of gratuitous treatment in general hospitals.

An international conference was held in Brussels in 1899 to consider prophylaxis in syphilis and other venereal diseases, and the foremost recommendation was a general dissemination of knowledge and information regarding the significance and prevention of these diseases—by giving instructional lectures to specially selected audiences, foremost of which should be university students, so that afterwards they could continue to spread sound knowledge on the subject.

With all respect, I would say that year by year more and more convincing facts come before me which prove that our medical schools are too sparing in their lessons on the treatment of venereal disease. The subject is regarded as a nasty one and not deserving much attention; there is no provision for the admission or treatment of these cases in the majority of general hospitals, from many of which they are excluded. And hence young practitioners are launched ill equipped to grapple with the difficult and interesting problems connected with these complaints, which have, perhaps, greater and more baneful influences on national health and upon fertility than any other diseases. Men are constantly passed as cured of gonorrhoea when still infective, and victims of syphilis

are assured of their immunity either because their symptoms have gone or because they plead to be told so. There is no royal road to the cure of these diseases, and the insistent appeals of the patient to be told he is cured and can marry must be resisted. It requires both tact and firmness to convince the patient of the necessity of and to carry out long-continued and effective treatment, but success can be attained. The happy results following the treatment of cases of syphilis under my care a quarter of a century ago, many of whom are now in happy homes, surrounded by healthy children, justify our assurance in the ultimate cure of all, except very exceptionally severe cases of syphilis, and amply repay any extra trouble that these cases often require. Twenty-two years ago I read a paper before this society entitled *The Evil Effects of Imperfectly Treated Early Syphilis*, and later experience has more than justified the conclusions that were advanced on that occasion. Imperfect treatment means increasing physical deterioration, an enormous loss of health, and a considerable mortality to the country—a mortality infinitely greater than statistics show, because, as you know, the reports of the Registrar-General by no means give an accurate statement of the number of deaths due to syphilis in this country.

There are gross men of repulsive habits who come before us with these diseases for whom little or no sympathy can be aroused; but oftener it is the young man or girl with the saddest history towards whom our hearts go out in boundless sympathy. The fitting of such as these to take their place again in life is no inglorious task, for although marriage must often be long delayed, it can take place with safety and with assurance.

Effect of Universal Military Service on the Stamina of the Race.

Before concluding, attention must be called to the immense advantage that would accrue to the health and stamina of the race if a system of universal military training were enforced. This is necessary for national security and independence, both of which in the last resort depend upon the possession of adequate power to resist hostile attack. It is desirable also from the point of view of national health, and national character. There must be something wrong with the "tone" and the sense of justice and righteousness of a nation, when, out of the millions available, it is impossible to find a paltry 300,000 men willing to undergo the limited amount of training in the Territorial Force that is considered necessary to enable them to take an effective part in the defence of their homes and country. The medical profession has responded splendidly to the call—but the majority of the men of the nation hold back. What a contrast there is between the "prating" and "screaming" about the glory of the British Empire, between the "jingoism" of Mafeking Day, and the abject appeals to be seen in the press every day to induce men to join the Territorial Army, which, though in existence a year, is little more than half its authorized strength. In this public apathy to the well-being of the country, in this indifference to national honour, is a latent sign of decay and degeneracy. The existence of a State depends upon the willingness of its citizens to prepare themselves for its defence.

In the days of Roman greatness, before signs of degeneracy appeared, every Roman was a soldier and every soldier was a citizen. It has been so in England, and when it was so the name of England was never more respected and feared abroad, nor, considering the period, were the liberties of Englishmen ever more secure than when every able-bodied man in England was trained to the use of arms and thus prepared to effectually defend his country from the enemy at her gates.

On every side we hear objections to *compulsion*, and to the cost that its adoption would entail. The estimates for the latter are grossly exaggerated, and compulsion is unfortunately necessary in many less important walks of national life. That its adoption would be likely to plunge our country rashly into war is absurd. If every man were both soldier and citizen, liable himself to be called out in case of need, no Government or nation would lightly incur such a grave responsibility. Untrained men talk glibly of the martial attitude they would assume should hostile invasion ever occur, forgetful or ignorant of the disastrous consequences that would result if as civilians they implicated themselves in any act of war. Owing to our insular position, many of the horrors of war have long

forgotten by the English people. It can be inferred, however, what would happen to our civil subjects, if foreign soldiers landed on our shore, by the behaviour of the German army to a hostile French civil population during the Franco-German war. No mercy was shown, but plunder, pillage, summary executions, burning of villages—in fact, the severest form of punishment was accorded, not only to civil offenders themselves, but whole communities were held responsible for individual actions.

The men who are so insistent on the necessity for compulsory training are not "alarmists," but calm, cautious, level-headed, experienced men, many of them England's most trusted sons. What is it they ask? It is simply this: that *all* our fellow-countrymen, physically fit, between the ages of 18 and 25, should be made to undergo four months' continuous military service, and subsequently to serve for four years in the Territorial Force, during which latter period two weeks' camp training only in each year would be necessary. What could be better for the physique and *morale* of the nation than this? It is proposed that the training should take place under canvas, not in barracks; that each man should be developed to his best by suitable exercise, food, and clothing; that he should be taught to shoot, to march, to ride; to think and act independently; to yield ready and implicit obedience to orders; to practise self-respect and good comradeship. During this time also each man would be under the care of a good doctor, specially trained, to look out for and correct the weaknesses which cause deterioration. A training such as this would have a striking influence on every class. "Duke's son and cook's son," by more intimate acquaintance, would learn a higher respect for each other. Our industries would flourish, because men engaged in them would be trained in habits of obedience, self-respect, and precision. "Overcrowding" and "our slums" would soon be gone, because, as a result of a couple of generations' training of our male population in the open air, a sounder public opinion would result, strong enough to enable our municipal authorities to remedy these crying evils.

I have watched over and over again the effect upon recruits of their first three months' service with the colours. It has been marvellous. The lank, ungainly, casual ill-developed loafer becomes an alert, strong, intelligent, orderly, self-respecting man. The good effect of even two weeks' training in camp on general health and physique is known to many of you. What would be the effect upon the character, the manliness, the physique, the patriotism of the nation if every able-bodied young man was compelled to train for the safety of his country in the open air for four months? England's sons now are of the same race as their heroic forefathers. The same blood runs in their veins as that which flowed on many a battlefield in the earlier days of Britain's history. The greatness of our country and its immense reserve of power is not denied. Will our sons prepare themselves to defend it or wait for defeat (which would mean destruction as a nation) to awaken them from lethargy? Cannot we influence the nation on the importance of this training, not only as necessary for maintaining the place and honour of Britain amongst other nations, but as essential for the improvement of our national health?

The vital question only remains: Can we as a profession take concerted practical steps to stem decay among our fellow countrymen on the one hand and to foster sound racial development on the other?

While sociologists discuss, the canker grows. While medicine works some triumphs, deterioration is spreading far and wide.

Must degeneration necessarily increase? Is our race so exhausted by the excitement and overstrain of the last few generations that she cannot recover? No; she can and will do so, as soon as the enlightenment of every class is seriously undertaken.

A lofty estimate of family life must be restored as a foundation for the re-establishment of our national life and strength.

In such an effort our part should be no ignoble one. The issue of a battle depends not alone on the intelligence of the commander, but to some extent upon the weapons he employs. In the great campaign against decay the profession of medicine should be one of the most formidable weapons. Her members have unequalled

privileges. They penetrate the closed door; they are the recipients of the secrets of many a forlorn and stricken heart. Their voices find thoughtful listeners, not only in the councils of the wise, but among those whose perplexed and troubled minds would be deaf to any other guidance.

Do we shrink from the task, because we are not invited to undertake it, because the public do not realize the danger, because the exigencies of life are such that we have neither leisure nor means to fight in the battle; or *are we afraid?* I think not. Once convinced that the work must be done, our profession will be true to her traditions and resolutely wage war against ignorance and vice, giving no thought to public estimate or gain. Nay, her members will, with inexhaustible faith in the power to right much that is wrong, join heartily with those already in the field, those who have thrown their influence and their service into the scales, so that by the weight of combined opinion and by strenuous effort the balance will be found on the side of such judicious thought and fearless action as shall eventually bring about a greater and more lasting strength in our national life, health, and habits.

May I sum up my simple reflections in a sentence? He does a great deed who heals the sick; but the watchful physician who inculcates sound habits amongst a people performs a nobler task.

A Lecture

ON

FISTULA BETWEEN THE STOMACH AND BILE PASSAGES.

WITH REMARKS ON OTHER INTERNAL BILIARY
FISTULAE.

DELIVERED BEFORE THE LONDON MEDICAL GRADUATES'
COLLEGE AND POLYCLINIC.

By A. W. MAYO ROBSON, D.Sc. F.R.C.S.

My reason for selecting this subject was a remark recently made by a medical friend at a consultation we held on a case of biliary fistula communicating freely with the stomach. When I told him that his was the fifth case of biliary gastric fistula that I had personally seen, he asked me why I had not reported the cases, seeing that the literature on the subject in the ordinary textbooks was so meagre that he had been unable to get any trustworthy information on it. As a matter of fact, however, there is a chapter on fistulae in my work on *Diseases of the Gall Bladder and Bile Ducts*, though it does not deal specially with fistula between the stomach and biliary passages.

Fistulae communicating with the surface, or so-called external fistulae, are so obvious that no skill is needed in their diagnosis, but the same cannot be said of the internal or intersisceral fistulae, which, though far from uncommon, are often exceedingly difficult, or at times even impossible, to diagnose. Though they may result from the progress and breaking-down of a malignant growth, from ulceration of the stomach, duodenum, or colon, or from hydatid disease, yet the most frequent cause of internal biliary fistulae is gall stones. It is not my purpose in this lecture to consider the question of external fistulae, or of internal fistulae due to growth, but to give some of my experiences of those occurring between the biliary channels and the gastro-intestinal canal.

The channel of a fistula may be either direct, in which the two organs immediately communicate, or indirect, owing to an abscess having formed and burst into contiguous hollow viscera, which then communicate indirectly through the abscess cavity.

The former, or direct fistulae, are for the most part due to gall stones producing ulceration in the gall bladder or bile ducts, and as the ulceration advances towards the peritoneal surface a local peritonitis ensues and causes adhesions to a neighbouring hollow viscus. The ulceration continuing, a communication is established between the two channels.

Although the formation of an internal fistula is at times

dangerous from perforation, or from extension of inflammation, in some cases it effects a cure by allowing the gall stones to escape into the intestinal canal and so to be passed. In other cases, the gall stones after passing into the intestines may set up secondary troubles—for instance, when they have passed into the intestine, intestinal obstruction; when into the stomach, violent vomiting; when into the kidney, symptoms resembling those of renal calculus.

In one of my cases a gall stone lodged in the ileum and formed the centre of a tuberculous deposit leading to a stricture, which I was able to treat by excising about 18 in. of the small intestine. The patient was well some years later.

Many internal fistulae, as will be seen by the appended classification, are mere pathological curiosities, quite undiagnosable, and only capable of being discovered at the time of operation or at necropsy.

Many must form and heal, leaving the patient cured, and thus not only are they undiscovered, but they are probably not even suspected; for, contrary to what one might suppose, fistulae between the bile passages and other hollow viscera in the majority of cases heal spontaneously, leaving only firm visceral adhesions; this accounts for the fact that internal biliary fistulae are comparatively seldom found *post mortem*.

Out of 10,866 necropsies made by Roth, Schroeder, and Schlotz, 43 biliary fistulae were found: 1 between the gall bladder and stomach, 19 between the gall bladder and duodenum, 16 between the gall bladder and colon, 5 between the common bile duct and duodenum, 1 between the biliary passages themselves, and 1 between the gall bladder and liver.

I do not think that any complete collection of all the published cases of fistulae has been made since the work of Courvoisier and Nannyn, but even that can only give a very imperfect estimate of their frequency, for the reasons I have stated.

Published Cases of Internal Biliary Fistulae (Courvoisier and Nannyn).

Fistulae between the biliary passages themselves	8
" " biliary passages and the stomach	12
" " stomach and the liver	4
" " stomach and the gall bladder	8
" " biliary passages and the duodenum	108
" " duodenum and common bile duct	15
" " duodenum and gall bladder	93
" " jejunum and the gall bladder	1
" " ileum and the gall bladder	1
" " biliary passages and the colon	50
" " colon and the gall bladder	49
" " colon and the common bile duct	1
" " biliary passages and the urinary organs	6
" " biliary passages and the thoracic organs	10
" " biliary passages and the abdominal walls	184
" " biliary passages and the retroperitoneal tissues	4
	384

Usually the ulceration leading to fistula proceeds quietly and painlessly, producing very few symptoms until, it may be, a gall stone sets up obstruction in its passage down the intestinal canal; or, after the formation of a fistula, all the symptoms pass away and the patient makes a complete recovery. If, however, other gall stones have been present and have not escaped through the fistula, but passed into the cystic or common ducts, the symptoms are likely to recur when the fistula contracts, as in the following case:

CASE I.

History.

Mr. L., aged 50, had been subject to painful attacks called indigestion from the age of 14 to 16, but he had been free from seizures for eighteen years—that is, until sixteen years ago, when acute pain was felt, followed by jaundice and associated with fevers and rigors. Since that time he had had similar attacks at varying intervals, but lately there had been rigors, continued fever, and increase of jaundice. When seen by me the liver was 1½ in. below the costal margin, but no tenderness could be detected anywhere. A slight icteric tinge was present in the conjunctivae. The attacks appeared to have been brought on by gastro-duodenal catarrh extending to the

common bile duct and to the pancreas. A diagnosis of gall stones in the common duct was made and an operation advised.

Operation.

On January 29th, 1905, the gall bladder was found firmly adherent to the surrounding structures, and was separated with difficulty. A fistula between the gall bladder and the duodenum was thus exposed, and after separating the gall bladder, the opening in the duodenum was closed by a purse-string suture. Two stones were felt in the pancreatic portion of the common duct, and there was also some swelling of the head of the pancreas. The stones in the duct were extracted by the scoop after incising the duct. No more stones could be detected in the ducts, and a probe readily passed down into the duodenum. The gall bladder was small and contracted, and the cystic duct was strictured at the junction with the common duct.

Cholecystectomy was performed, and the hepatic duct was drained by a tube passing through the incision in the duct, which was closed around it by a catgut suture. A gauze drain was passed down by the side of the tube and the wound closed. The patient made a good recovery, and is now well.

The sequence of events in this case clearly pointed to gall stones, then to the escape of some by ulceration. So long as the fistula remained freely patent, there was an absence of symptoms, as there was no back pressure in the bile ducts, but as soon as the fistula narrowed the gall-stone troubles returned.

CASE II.

History.

A similar sequence of events occurred in another case that I saw in September, 1903, where there was also a twenty years' history of gall stones, though during the previous four years the attacks had been more frequent, and for nine months there had been slight jaundice with symptoms of infective cholangitis.

Operation.

In this case not only was there found a fistula between the gall bladder and duodenum that had resulted from the ulceration of a gall stone into the duodenum many years previously, but there were also gall stones in the gall bladder and in the common duct. So long as the fistula was freely open, the patient had been free from jaundice, but as soon as the fistula contracted—for at the time it had become very small and would no longer allow the bile to escape—jaundice supervened, and the damming back of infected bile into the bile ducts was the cause of the infective cholangitis. The removal of the gall bladder and calculi, the closure of the opening in the duodenum, and drainage of the bile ducts resulted in complete and permanent recovery.

But the presence of gall stones is not necessary for a recurrence of the pain, as in the following case:

CASE III.

Miss H., aged 55, seen on November 23rd, 1904, on account of attacks of pain in the region of the gall bladder, which had been continuing off and on for ten years.

History.

The patient gave a history that about twenty years previously she had been very seriously ill with intestinal obstruction, and had passed some large gall stones, which fortunately had been retained, and which she showed me. For ten years she was well. She said that then she began to again suffer from occasional attacks of pain in the gall bladder region, which attacks had recently become more and more severe, though they were never accompanied by jaundice.

Operation.

On December 1st, 1904, I removed a contracted gall bladder, in which a cavity that would hold a large pea was communicating with the duodenum by a very minute channel that would only admit a No. 1 catheter. The cystic duct was completely strictured. After the removal of the gall bladder and closure of the duodenal opening she made a complete and satisfactory recovery.

The case is interesting from the fact that the gall stones had evidently ulcerated their way into the duodenum twenty years before my seeing her, that so long as the fistula was widely patent no trouble was experienced, but, as soon as the fistula began to contract, mucus collecting in the remains of the gall bladder gave pain in its passage into the bowel along the fistula, as the contents of the gall bladder could not escape into the common duct on account of stricture of the cystic duct.

Symptoms of Formation of Fistula.

Although the ulceration may at times occur quietly and without any serious disturbance to health, it is not always accomplished without symptoms, such as pain beneath the right costal margin, more or less continuous fever of an irregular type, possibly associated with rigors and other symptoms pointing to infection. On examination there will be found rigidity of the right rectus, distension of the

upper abdomen, owing to paresis of the stomach and colon, and possibly the presence of a tumour due to matted omentum and swollen and adherent viscera.

Haemorrhage into the stomach or intestines may occur from ulceration into a large vessel while the fistula is forming, or subsequently, and in one case reported to me by a friend the haematemesis proved fatal.

If the fistula occurs between the stomach and the gall bladder the stones may be vomited, as in two cases I have seen; but it does not follow that vomited gall stones come from a gall-bladder-stomach fistula, as in one reported case the patient died after the vomiting of gall stones, and at the necropsy a fistula was found between the cystic duct and the duodenum.

If the gall stone is of large size, as in a case that I will relate, it may remain in the stomach, producing great irritation with vomiting, and leading to symptoms of intestinal obstruction.

If the fistula is between the gall bladder and the duodenum (the most common variety), the whole length of the intestinal canal has to be traversed by the concretions, hence such cases are found to be more frequently associated with intestinal obstruction than when the fistula occurs between the gall bladder and the colon, for in the latter case the passage to the anus is usually accomplished without difficulty, though occasionally the concretions may lodge and cause trouble.

When a gall stone is impacted in the common duct just before entering the duodenum or in the ampulla of Vater, ulceration of the orifice of the duct is apt to occur, allowing the concretion to escape into the duodenum by an enlargement of the orifice of the papilla. There is also the possibility of a direct fistula developing between the common duct and the duodenum, instead of ulceration of the ampulla. Such gall stones are of moderate size, seldom larger than a filbert, and rarely give rise to any other trouble in passing through the intestine.

Intestinal Obstruction due to Gall Stones.

It must not be assumed that all cases of intestinal obstruction due to gall stones are dependent on gall stones ulcerating through the walls of the biliary tracts, though this is the ordinary explanation.

By intestinal obstruction from gall stones is usually understood the impaction of a large concretion in some part of the small intestine producing a mechanical block; but this is only one of the several varieties of obstruction of the intestines dependent on cholelithiasis. There are clearly four classes of obstruction depending essentially on gall stones:

1. Acute obstruction caused by local peritonitis in the region of the gall bladder leading to paralysis of the bowel. Of this variety I have seen several examples, all of which recovered without operation.

2. Volvulus of the small intestine, dependent either on the violence of the colic caused by the attack of gall stones or on the contortions induced by the passage of a large concretion through the small intestine. In two cases of this kind operation was performed, recovery following in each after simply untwisting the volvulus.

3. Mechanical obstruction due to the passage of a large concretion through the small intestine.

4. Obstruction coming on after the original cause has disappeared, and depending on adhesions left by local peritonitis due to gall-stone attacks, or on narrowing caused by the healing of a fistulous opening through which a large gall stone has made its way into the intestinal tract.

Gall-bladder-duodenal fistulae are not at all uncommon. I have operated on eight. There are a number of good specimens in the various pathological museums, for instance:

No. 2326, Royal College of Surgeons Museum, shows a gall stone in the act of extrusion, and it will be seen that the margins of the opening are ulcerating to allow of the passage. Death occurred after six weeks of suffering.

Specimens Nos. 2327 and 2328 in the same museum are also good examples.

No. 1399 in Guy's Museum shows a gall-bladder-duodenal fistula 1 in. from the pylorus, large enough to admit the finger; and 33 in. above the ileo-caecal valve is a large gall stone impacted in the ileum.

Nos. 2261 and 2262 in St. Bartholomew's Museum show gall-bladder-duodenal fistulae.

No. 1676 in King's College Museum shows a gall-bladder-duodenal fistula. Death occurred from peritonitis, though the gall stone had passed per anum.

No. 1595 in the Middlesex Museum shows a gall-bladder-duodenal fistula, through which gall stones passed. Death occurred from intestinal obstruction.

Specimens of gall-bladder-colic fistulae are much less common than duodenal fistulae, probably because they do not often cause death. I have operated on four. There are, however, a sufficient number of examples to show that even this method of passing gall stones is not altogether a safe one.

CASE IV.—Gall-Bladder-Colic Fistula.

Mr. G., aged 50, seen with Dr. W.

History.

There was no history of spasms; the first attack of gall-stone colic occurred in October, 1897, followed by jaundice; severe seizures in December, 1897, with jaundice lasting two months and associated with ague-like seizures; slight attacks for a year, and then one very severe in December, 1898, and again in January, 1899. During the whole of the period the icterus deepened after each attack, and occasionally rigors occurred—lost over a stone in weight; jaundiced, but not deeply; liver not enlarged; no tumour of the gall bladder; tenderness above and to the right of the umbilicus; well-marked dilatation of the stomach.

Operation.

January 28th, 1900, Fistula between shrunken gall bladder and colon discovered; cystic duct shrunken; common duct dilated to size of small intestine, and containing large floating gall stone. After excising the gall bladder an incision was continued down the shrunken cystic duct until it reached the dilated common duct; a gall stone was crushed in removing it and the fragments were removed; tube introduced into common duct; fistulous opening into colon closed.

The patient made an uninterrupted recovery and remained well for six years.

As showing the importance of recognizing the presence of even a small fistula when separating adhesions, I had the experience some years ago of missing a minute fistula into the colon when separating very dense visceral adhesions, the result being escape of the visceral contents and peritonitis.

Biliary gastric fistula is apparently less common than one might expect, seeing that the pylorus is not infrequently fixed to the gall bladder by adhesions. The following is the description of a chronic case:

CASE V.—Biliary Gastric Fistula.

A lady, aged 60, suffered from constant dyspepsia, with frequent vomiting and steady loss of flesh.

Operation.

The stomach was found firmly adherent to the gall bladder, and on separating adhesions a fistula between the gall bladder and stomach was found. The edges of the fistula in the stomach were pared and the opening closed with two rows of sutures, while the opening in the gall bladder was utilized for removal of the gall stones and afterwards for drainage. The patient made an excellent recovery, and is now in good health.

In this case the discharge of septic bile into the stomach proved a constant source of trouble, leading to nausea and vomiting and giving rise to chronic septic absorption and a suspicion of malignancy.

The proposal, therefore, in obstructed common duct to drain the bile passages into the stomach seems to me undesirable.

CASE VI.—Gall-Bladder-Gastric Fistula Operated on in the

Acute Stage.

On the evening of October 29th, 1906, I was asked by a surgical friend to see an urgent case with him about ten miles from town, the patient, a gentleman of 76, being very ill, with symptoms of acute intestinal obstruction.

History.

He gave a history of having been perfectly well up to October 26th, on which morning he went out for a walk. Later in the day he was suddenly seized with acute pain in the upper part of the abdomen, slightly to the right side, and almost immediately began to vomit, first the contents of the stomach and afterwards mucus and any fluid that he took. The vomiting was repeated frequently, but at no time did it contain bile. The abdomen became somewhat distended, though more markedly at the upper part. Acute intestinal obstruction was diagnosed, and all food by the mouth was stopped, as even a little fluid was rejected, and the patient was fed only by nutrient enemata. On October 29th the vomiting continued, and the nutrient injections could not be retained.

When I saw him on October 29th I found the abdomen somewhat, though not enormously, distended, and a distinct, hard swelling could be felt beneath the right costal margin. The stomach was dilated and the ascending colon and caecum were

also manifestly more distended than the descending colon. Examination by the rectum showed well-marked ballooning. The urine was scanty but contained no albumen. The tongue was dry and the pulse quick, but the temperature was only a little above normal. There had never been any symptoms of gall stones, nor had he been specially troubled with constipation up to the onset of the acute seizure. The bowels were slightly moved as the result of an enema on Sunday and a little flatus was passed on Monday, but no decided relief resulted.

A diagnosis was made of obstruction at the pylorus and also at the hepatic flexure of the colon, the cause being probably a growth in the region of the gall bladder involving at the same time the stomach and bowel. The possibility of a gall stone ulcerating into the bowel was considered, but not thought to be probable, as there had never been any history whatever of gall-stone attacks in the past. An operation was proposed, but for family reasons could not be carried out until the following morning.

Operation.

On opening the abdomen the stomach and hepatic flexure of the colon were found firmly fixed to the under surface of the liver, and beneath them could be felt a hard swelling. On palpating the stomach a hard lump the size of a small hen's egg could be felt in it, and as this could be freely moved in the stomach cavity it was evidently a concretion.

It at once became clear that the patient had been suffering from cholecystitis due to gall stones, that one had ulcerated through into the stomach, and that another was probably ulcerating into the colon. After packing off the abdominal cavity by sterilized gauze, the stomach and colon were rapidly separated from the under surface of the liver and gall bladder, the pus and mucus which escaped being mopped up by gauze swabs. A fistula was exposed passing between the gall bladder and pylorus of the stomach, the other was found between the gall bladder and colon. Through the former the large gall stone had passed into the stomach; in the latter the smaller gall stone was impacted, it not yet having effected its escape. The opening into the stomach had to be extended a little in the direction of the pylorus before the gall stone could be extracted, after which the stomach opening was closed by stretching open the sides of the fistula so as to bring the edges together, trans- versely to the pylorus, as in pyloroplasty. A No. 1 chromicized catgut suture was employed to bring the edges of the fistula together, and a Pagenstecher's suture brought together the serous surface. Attention was next directed to the opening in the colon, which was closed by a purse-string suture, after which the gall bladder was excised and the cystic duct ligatured beyond another small gall stone which was impacted in it.

After purification of the region of operation, the right kidney pouch was drained by a strip of gauze enclosed in an india-rubber tube and brought through a stab opening at the most dependent part. The abdominal wound was then closed by a continuous catgut suture, uniting the peritoneum and posterior aponeurosis, it being continued back along the anterior aponeurosis and sheath of the rectus, the union of the wound being strengthened by three silk-worm gut sutures transfixing all the layers of the abdominal wall. The skin edges were brought together by Michel's clips. Five minims of strychnine were given subcutaneously, and a pint of saline with an ounce of brandy was administered by rectum and repeated in two hours.

After-History.

The operation, which occupied about half an hour, was completed with the patient in good condition. After the operation he had no further sickness, and the pulse during the next day did not exceed 100, nor was the temperature above normal. Flatus was passed on the second day, and the patient took plenty of fluid nourishment.

On November 2nd the pulse became more rapid and slight delirium was reported. From this time, although the wound progressed satisfactorily, he became excited and restless, and for some time his mental condition gave rise to concern, but eventually, as he got stronger, the mind completely cleared, and at the present time he is in perfect health both physically and mentally.

The measurement of the largest calculus removed from the stomach was 3½ by 3 cm. in diameter, and that of the smaller one 2.3 cm. by 2.5 cm. The smallest crumbled after removal.

CASE VII.

Last year I was asked to see a very interesting case by an eminent surgeon who had removed gall stones from the common duct, and at the same time he had had to remove the gall bladder which was the site of phlegmonous cholecystitis. Silk ligatures had been employed, as is the custom I find with a number of surgeons. A biliary fistula followed, and after a time the fistula began to discharge some of the stomach contents very shortly after food or fluid had been taken. My explanation of the case was that a silk ligature had ulcerated its way from the biliary passages into the stomach, and that probably the fistula would close if the tube was left out, as from the small amount of bile that had been discharged all along it was quite clear to me that there was no permanent obstruction of the common bile duct.

I was gratified to learn a few weeks later that the patient was quite well, and that within a week of leaving out the tube the fistula had permanently closed.

I cannot but think that the use of silk ligatures at any operation on the biliary passages is fraught with risk of

subsequent trouble, as it is universally recognized that in nearly every case where gall stones are present the bile contains septic organisms. Thus, if silk is used, it is likely to become infected, and so form an infected centre until it is discharged; moreover, an ample experience of the use of carefully prepared iodized catgut has convinced me that it is both safe and efficient, lasting a sufficient time in the tissues to effect its purpose, but not remaining longer than necessary.

On two occasions in which I have operated for disease of the gall bladder I have found it distended with gas; this unusual phenomenon was in both cases dependent on a fistula between the intestinal canal and the gall bladder. I will give brief notes of one case.

CASE VIII.—Gall Bladder Distended with Gas.

On October 10th, 1906, I was asked to see a lady aged 59.

History.

In 1899, after years of suffering from abdominal pain, she had passed several large gall stones. Relief followed, but she never completely regained her health, and six months before I saw her she began to have pain in the upper abdomen, with partial obstruction of the bowels. The pain, which was paroxysmal, was followed by rigors, but without jaundice. There was marked tenderness and some swelling below the right costal margin, and distinct rigidity of the right rectus. Though there was a tumour to be felt on palpation, it was resonant on percussion. A diagnosis was made of cholecystitis with ulceration, and it was suggested that there might be a fistula between the gall bladder and bowel, through which infection had passed to the gall bladder, setting up chronic septicaemia. At the operation very firm adhesions were found binding the viscera together below the liver. The gall bladder had thickened walls, and it was distended with gas, there being a communication between it and the duodenum. Cholecystectomy was performed, and the wound in the duodenum was closed by a purse-string suture. The patient made a good recovery, and when heard of some time later was in good health.

On several occasions I have had the good fortune to catch gall stones in the act of forming fistulae. In one case I found a gall stone half extruded through an ulcerated opening into the peritoneal cavity. Had operation been delayed a fatal peritonitis must have ensued, as the distal extremity of the concretion was free in the peritoneal cavity and was firmly plugging the opening, behind it being a gall bladder distended with mucus. The patient, a middle-aged man, recovered after cholecystectomy, and was living some years later. In one case I found a gall stone ulcerating into the colon and plugging the opening between the gall bladder and the colon.

Double fistulae are occasionally found. I have related one case in which a gall-bladder-gastric and a gall-bladder-colic fistula existed in the same individual, and others have been recorded where at the same time fistulae between the various parts of the biliary passages and the duodenum and colon have been found.

The fistulae I have thus far mentioned have all had their origin in the bile passages, but I have also had experience of intervisceral biliary fistulae in which the origins have been from without the bile tracts—for instance, in cancer of the colon and stomach, and in hydatids of the liver bursting into the gall bladder and bile ducts—producing symptoms resembling in every way those of cholelithiasis.

I have also known ulcer of the duodenum and ulcer of the pylorus to perforate into the bile passages.

In the time at my disposal it is impossible to cover the whole of the ground; for instance, it would be interesting to relate examples of communications between the urinary tract and the bile passages, of which a number have been reported; in some of them gall stones had been passed by the urethra, and in others crushed in the bladder by the lithotrite or removed by lithotomy. Gall stones may enter the urinary tract either by direct ulceration into the pelvis of the kidney, or through a track extending along the round ligament to the umbilicus and then along a patent urachus, as in a case described and operated on by Krönlein.

Fistulae between the bile passages and genitals are also interesting, as, for instance, between the gall bladder and pregnant uterus, or between the gall bladder and an ovarian cyst, or between the bile passages and vagina, all of which examples have been recorded in literature.

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Again, fistulae have occurred between the common or hepatic duct and the portal vein; four such cases have been recorded. I have on several occasions seen and operated on communications between cavities in the liver and the pancreas and the bile ducts, the communication being through a fistula established by ulceration.

Nor will time permit me to describe, except briefly, that interesting class of cases in which communications have been established between the bile tracts and the thoracic organs, the pericardium, the pleura and lungs.

Courvoisier collected 24 such cases of fistula between the biliary tracts, pleura and lung. Very few have been submitted to operation. I had a very interesting case of this kind sent to me from South Africa in May, 1903, of which the following are brief notes:

CASE IX. History.

Mr. G., aged 28, was quite well up to April, 1894, when he had an illness accompanied by a cough, and on the third day he began to expectorate; shortly afterwards he coughed up a large quantity of pus and bile. Before this attack he had had no liver symptoms, except that on one occasion he had had pain in the gall-bladder region, which, it was surmised, might be due to gall stones. Since that time, for the period of nine years, he had regularly coughed up bile and pus. At first he was thought to be suffering from phthisis, especially as he lost flesh rapidly and had night sweats. During the year before coming to England he thinks he did not get thinner, though the amount expectorated did not lessen. When I saw him he was round-shouldered and old-looking, as if worn down by illness, and his fingers showed marked clubbing. An examination of the chest showed no positive sign of lung disease, though some breath sounds were diminished on the right side up to the level of the seventh rib. The liver was decidedly enlarged but not tender, and projected 3 in. below the costal margin. There was slight jaundice. From 1 to 1½ pints of extremely offensive bile and pus were coughed up in the twenty-four hours. The pus was crowded with bacteria but did not contain tubercle bacilli or elastic fibres, and was manifestly not from a bronchiectasis.

Operation.

Operation was performed on May 21st, 1903. No cyst or abscess cavity was discovered in the liver, which was enlarged, and showed signs of cirrhosis. After numerous firm adhesions between the shrunken gall bladder and the under surface of the liver, and the stomach, duodenum, and colon had been separated, a gall stone the size of a small nut was found impacted in the hepatic duct, and removed through an incision in the duct; numerous adhesions fixed the back and the dome of the liver to the diaphragm. Drainage of the hepatic duct was effected by a rubber catheter, and a gauze drain was passed through a split rubber tube to the neighbourhood of the incised duct. The expectoration of bile was immediately arrested but offensive pus continued to be coughed up. The expectoration of bile returned on the third day and then gradually lessened; the cough also gradually became less, and the purulent expectoration rapidly diminished. The wound healed by first intention except where the tube had been, this healing by granulation.

After-History.

Two months later the patient had improved very much, was gaining weight rapidly, and was only coughing up a small quantity of mucus-pus without any bile. There was no jaundice, and all the bile was passing into the bowel. The wound had been soundly healed for a month, and he had been able to walk several miles a day. He returned to South Africa in the third month, and has since reported himself well.

Mr. Rigby also reported an interesting case in the BRITISH MEDICAL JOURNAL of August 8th, 1903, which was dependent on impacted gall stones and cured by cholecystectomy. Out of 18 autopsies collected by Courvoisier, 10 were due to gall stones, 6 to hydatids, and 2 to ascariides. It may, however, also be due to tropical abscess or to abscess of the liver from other causes.

CONCLUSION.

It may be asked what purpose can be served by relating a large series of unusual cases. Quite apart from the interest attached to these cases, to the difficulty of diagnosis, and the possibility of their cure by operation, I should like to dwell on the fact I have so often mentioned before as to the serious responsibility of allowing gall-stone disease to pass on until complications such as those I have mentioned have supervened, since operation for cholelithiasis at a time before the gall bladder and bile ducts have become seriously damaged, and the neighbouring organs have participated in the trouble, is almost devoid of danger if the operation be performed by an experienced and careful surgeon; whereas, if operation is only done after the parts have become matted together, after fistulae have formed and the patient is run down by fever and other septic complications, the mortality will be greatly increased.

AN UNUSUAL CASE OF APPENDIX ABSCESS DUE TO THE PNEUMOCOCCUS AND BACILLUS COLI COMMUNIS.

TREATMENT BY DOUBLE VACCINE: RECOVERY.

By EDWARD HARRISON, M.A., M.D., F.R.C.S.,

HONORARY SURGEON TO THE HULL ROYAL INFIRMARY.

WITH OPSONIC ESTIMATIONS AND VACCINE TREATMENT.

By EDWARD TURTON, B.Sc., M.D., M.R.C.P.,

HONORARY PHYSICIAN TO THE HULL ROYAL INFIRMARY.

THE case seems worthy of record not only on account of the unusually serious surgical conditions which had to be dealt with, but because distinct benefit appeared to be derived from the vaccine treatment during the time that the patient was so desperately ill from toxæmia. It would appear also that, as has been frequently insisted on by one of us (E. T.), in order to effect most good by bacterial vaccines, it is advisable to use a vaccine prepared from the organisms isolated from the patient's own pathological discharge, even if, as in this case, separation of the organisms is by no means an easy task.

S. H., a woman aged 27, was admitted to the Hull Royal Infirmary on June 10th, 1908, under the care of Dr. Turton.

History.

She had been ill for three weeks, with abdominal pain, general malaise, and headache. A week before admission the pain had become more intense, and was accompanied with vomiting, which persisted until admission, but was said never to have been faecal. The bowels had been open quite regularly, and there had been no diarrhoea. There was no history of previous attacks of pain, and menstruation had been regular.

Condition on Admission.

The patient was obviously very ill; her expression was anxious and her complexion earthy. The pulse was 130 per minute and very feeble, tongue dirty and dry, and respirations 24 per minute. She complained of pain all over the lower part of the abdomen, which moved slightly on respiration. Palpation of the abdomen was difficult on account of the large amount of abdominal fat; a large mass could, however, be felt below the umbilicus somewhat to the right of the middle line. It was dull on percussion, tender, and appeared to be freely movable. Nothing definite could be made out vaginally or per rectum. A provisional diagnosis of ovarian cyst, with twisted pedicle, was made by Dr. Turton and immediate operation advised.

First Operation (by Dr. Harrison).

Chloroform being administered, the abdomen was opened by an incision in the middle line, the incision being a somewhat lengthy one, on account of about 5 in. of fat which had to be cut through. On opening the peritoneum, a large mass was seen occupying the right iliac fossa and pelvis, and an effort was made to free it from the coils of intestine which were extensively adherent to it. The patient was placed in the Trendelenburg position and the upper abdomen packed off. An attempt was then made to isolate the mass by separating the adhesions, and it was seen that the greater part of the tumour was made up of matted mesentery. On working down in the pelvis, a gush of offensive pus was observed; this was mopped out and the patient placed in the horizontal position again. Owing to the great thickness of the abdominal parietes, it was now necessary to make an additional transverse incision dividing the right rectus. On further separation of the coils of the small intestine, the caecum was found in the abscess, with the stump of a ruptured and gangrenous appendix. This was removed, and, together with some pus and a soiled swab, was placed in a sterile tube for bacteriological examination by Dr. Turton. Drainage tubes were passed into the pouch of Douglas and the wound closed. On recovering from the anæsthetic, the patient, who was in a precarious condition, was placed in the Fowler position.

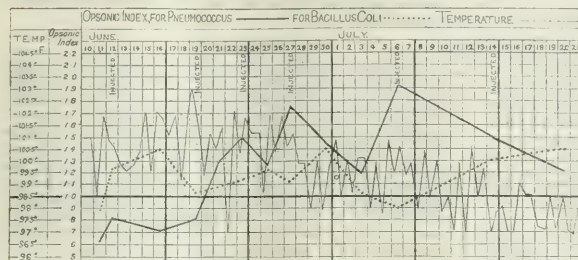
Progress.

The patient remained in an extremely critical condition for several days after the operation; the pulse was rapid and very feeble, and there was evidently severe toxæmia, although there appeared to be free drainage from the tubes. The result of the bacteriological examination had been to show the presence in the pus of the pneumococcus and *Bacillus coli communis*, and the opsonic index was estimated the day after operation and found to be 0.62 for the pneumococcus and 0.87 for the *Bacillus coli*. On the next day, June 12th, the indices were respectively 0.81 and 1.22, and a vaccine was given, consisting of 50 millions of *Bacillus coli*, made from a culture grown from the pus, and 10 millions of a stock vaccine of pneumococcus. There appeared to be very little improvement in the patient's condition, and the opsonic indices taken on June 16th showed the index for the pneumococcus to be still as low as 0.71, though the *coli* index was 1.4.

On June 18th there was found to be a reaccumulation of pus, and a counter incision was made above the crest of the right

ilium and a drainage tube inserted. Through this tube there was free irrigation with Wright's sodium citrate and saline solution.

On the following day, June 19th, the pneumococcal index was low, 0.81, and the coli index 1.05; a vaccine of 25 millions pneumococci and 50 millions *Bacillus coli* was injected, both organisms on this occasion, and subsequently, being isolated from the pus obtained at the time of operation. A rise in the opsonic power of the blood for the pneumococcus took place, and it was not again found below normal. Concurrently, the



patient's condition improved, the temperature became lower, the pulse less rapid though still very feeble, and the purulent discharge gradually ceased, though not before there had been a considerable amount of sloughing of the wound margins. On July 6th it was first noticed that a faecal fistula had formed, and the patient suffered great distress from the excoriation of the skin in the neighbourhood of the wound.

The range of the opsonic index for the two organisms can be well seen on the chart, and also the dates on which the injections of the two organisms were given, the amounts of which were as follows:

Date of Blood Examination or Injection.	Opsonic Index for Pneumococcus.	Opsonic Index for Bacillus Coli.
June 11th, 1908 ...	0.62	0.87
(June 12th)	0.81	1.22
.. .. .	Injected 10 millions	Injected 50 millions
June 16th	0.71	1.4
(June 19th)	0.81	1.05
.. .. .	Injected 25 millions	Injected 50 millions
June 21st	1.28	—
(June 23rd)	1.5	1.14
.. .. .	Injected 20 millions	Injected 40 millions
June 25th	1.27	1.22
(June 27th)	1.75	1.13
.. .. .	Injected 30 millions	Injected 60 millions
June 30th	1.46	1.4
July 3rd	1.19	1.14
(July 6th)	1.92	0.9
.. .. .	Injected 15 millions	Injected 30 millions
July 14th	1.5	1.3
.. .. .	Injected 20 millions	Injected 40 millions
July 20th	1.21	1.4

After the date of the last opsonic estimation the patient's condition was so satisfactory, except for the presence of the faecal fistula, that it was not considered necessary to give further injections of bacterial vaccines, and hereafter the treatment was of a surgical nature.

On July 26th she was taken to the operating theatre and the wound examined under an anaesthetic with the view of closing the fistula. The opening in the bowel was nearly the size of a shilling and as the patient was not in a condition to bear a prolonged operation, a purse-string suture was passed round the opening and a closure made. This, however, broke down again in the course of a day or so, and the condition was as bad as ever, except that the skin had improved around the wound.

Her general condition subsequently improved greatly. She took her food well and gained weight. Though the patient desired that the fistula should be closed it was wished to postpone this for a time in order to allow of absorption of adhesions.

Operation for Closure of Faecal Fistula (by Dr. Harrison).

On September 28th after chloroform had been administered, an incision was made to the left of the discharging sinus, after the opening in the bowel had been plugged with gauze. Except close to the faecal opening there were found to be few adhesions, so a transverse incision was made and the structures forming the abdominal wall divided with scissors round the opening in the bowel. The loop of intestine was then freed, and the opening, which was as large as a shilling, sutured in the transverse axis of the bowel with Lembert sutures. When this was completed the packing which had been placed round the site of the operation was removed, the part was then swabbed with carbolic solution, and the abdominal sutures were about to be inserted when a great gush of intestinal fluid was seen in the wound. When this was swabbed up it was found that there was a second, very large opening in another coil of bowel situated rather deeply in the right iliac fossa. Fresh packing was then inserted and the rest carefully examined, when it proved to be a much larger opening than the first, triangular in shape and involving almost the whole circumference of the gut. The opening being so large and irregular and so deeply seated it was with great difficulty that a double row of sutures were inserted to close it. The whole operation lasted nearly two hours and the patient bore it much better than had been anticipated, although saline infusion and strychnine injections were thought necessary.

After the operation the patient's progress was uninterupted. The openings in the bowel proved to have been satisfactorily closed and there was no further faecal discharge. The large wound filled with healthy granulation tissue, was quite healed when the patient left hospital on November 12th. The bowels were then acting quite regularly. She is at the present time quite strong and well.

THE INDICATIONS FOR NEPHROPEXY.*

BY

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This paper is the outcome of an experience of 150 cases upon whom I have operated for movable kidney during the past three years. First, it is necessary to refer to the surgical results, for these must be taken into account when discussing the indications for operation. The operation performed I have already described at length in the *BRITISH MEDICAL JOURNAL* of November 29th, 1907. In 96 cases one kidney only was fixed, while in 54 both were dealt with at the same time. Few changes have been made in the technique. I now use kangaroo tendon, medium size, instead of silk for suturing the capsular flap in place. This avoids the leaving of any non-absorbable material in the wound. Drainage of the cavity below the kidney by means of a strand of gauze is employed in every case. The gauze is removed in forty-eight hours. This prevents the accumulation of serum, and appears to diminish post-operative discomfort. At the end of the month, when the patient is allowed to get out of bed, a special belt is supplied. This belt is worn for six months. It is shaped to clear the hips and come down in front as low as the pubes. Just internal to each anterior superior spine are placed two soft pads covered with wash-leather. The object of this belt is to exert pressure over the lower abdomen in such a way as to push the intestines up towards the kidneys. The small pads give a little extra pressure immediately below the kidneys. The belt was made for me by Messrs. Salt, of Birmingham. The diagrams sufficiently explain its main features.

In my original paper I stated that where both kidneys are movable it is better to operate on one rather than both. My reasons for this statement were that the risk to life was less and the improvement which followed the single fixation was so marked that a second operation was rarely necessary. Extended experience has led me to correct this view, and I now know that when both kidneys are movable it is better practice to fix both. The double operation does not add materially to the risk, increases the prospect of complete cure, and spares the patient the possibility of a subsequent operation. It has been a surprise to me to find that double nephropexy is followed by no more shock or general disturbance than the single operation.

* A paper read before the Midland Medical Society.

The surgical results of nephropexy have been very satisfactory. Of the 206 kidneys dealt with, not one, to my knowledge, has become loose again. On one occasion, eight months after operation, I found a movable lump in the right side, which I thought was the right kidney. This opinion was confirmed by several observers. As the patient, though better, was not well, I decided to refix the kidney. On opening the loin, however, the kidney was found to be firmly tethered in its proper position, and the lump which was felt before operation was found to be a freely movable Reidel's lobe of the liver which was attached to the rest of the liver by fibrous tissue only. It was interesting to see that the capsular flap over the rib had become thickened into a strong band of fibrous tissue $\frac{1}{4}$ in. wide and $\frac{1}{2}$ in. thick. I have never had a permanent sinus of the back, a hernia, or weakness of the scar. Amongst the 150 cases there have been two deaths.

I have already recorded the first, which occurred in the case of a man operated on during an attack of mania. He went on very well for three days, but died on the fourth day in a state of collapse. There was no apparent cause for his death, and a *post-mortem* examination failed to show why he died.

The second case was that of a flabby woman who had been a semi-invalid for eighteen years. Both kidneys were found badly displaced. The wounds healed by primary union, and she was thought to be nearly well. On the fifteenth day, after a heavy sleep, she woke up complaining of pain in the chest and a feeling of suffocation, and died in a few minutes. The probable cause of death was cardiac thrombosis.

These deaths emphasize the fact that no major operation

because a kidney is movable so long as it gives rise to no trouble; in other words, simple mobility does not constitute an indication for operation. I would also at this point emphasize the fact that it is fallacious to suppose that the amount of trouble caused by a kidney is to be directly measured by the degree of its mobility. I have seen kidneys which were only slightly movable responsible for most severe symptoms, and, on the other hand, have seen the right kidney in the iliac fossa in people apparently in good health.

Group 1.

This group contains those cases whose predominant symptom was local pain. The pain is due to the perirenal inflammation resulting from recent sudden displacement of the kidney, to ureteral obstruction, or to obstructed venous return. I have known it simulate pain due to gall stones, to appendicitis, or to renal calculi. It may be so severe as to incapacitate the patient. The pain I am now referring to must not be confused with the dragging, aching pain in the back and sides which is much more commonly associated with movable kidney, but which is due to drag on surrounding structures, and is much more vague in character.

In August, 1908, I operated on a young woman who was sent to me by Dr. Garman of Great Barr. She had a very movable right kidney, and complained of "gnawing pain" in her right side. At times the pain assumed the characters of typical renal colic, and required morphine for its relief. Rest in bed was

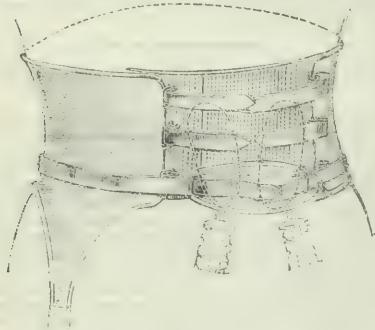


Fig. 1.

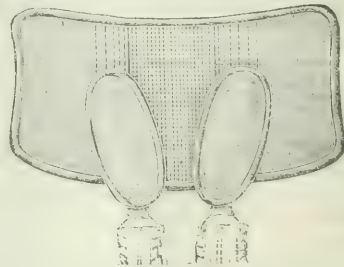


Fig. 2.

is free from risk. They might, however, have occurred after any major operation performed on the same individuals. I have had no mortality from shock, haemorrhage, sepsis, or uraemia, which may be regarded as risks special to operations on the kidneys. With a full sense of the responsibility attaching to my statement, I say that nephropexy is as safe and as satisfactory a surgical procedure as radical cure of hernia. If it can be shown that in properly selected cases nephropexy is followed by real improvement as regards the health and working efficiency of the individual, there are no surgical reasons why it should not be done. No surgeon would say that radical cure of hernia is absolutely safe, and yet no surgeon would refuse to operate in a suitable case in view of the functional gain the operation gives. All I claim is that the same view be taken in respect to nephropexy, provided it be shown that equal gain be obtained from it.

No useful purpose would be served by giving a long list of the symptoms that may be attributed to movable kidney. It is the clinical picture depending upon the association of several symptoms which is so characteristic, and not the presence of any particular symptom. My cases arrange themselves naturally in four groups. I intend to describe briefly the characteristic features of each group and the indications for operation in that group. A fifth group, where the predominant complaint has reference to the female pelvic organs, might be described, but of these cases I have had insufficient experience to speak definitely. Before, however, proceeding to discuss the indications for operation, I wish to state that in my opinion it is not necessary to operate

always followed by entire disappearance of the pain. Complete relief followed nephropexy.

I have also operated upon a girl who was sent to me by Dr. Tangye of Coventry. She complained of pain in the right side, which was so severe as to prevent her doing her work as a parlourmaid. The right kidney was very movable, but the situation and character of the pain were such as to render it doubtful whether the kidney or appendix was at fault. I examined the appendix at the time of operation and found it to be quite healthy.

Two years ago I saw a lady, who stated that some months previously, while laughing violently in a theatre, she was seized with intense pain in the right side. The pain persisted, and she had to stay in bed for several weeks. A diagnosis of gall stones was made, and this was supported by the presence of an ill-defined, acutely tender swelling below the right costal margin. The acute symptoms subsided with rest in bed, and the right kidney was then found to be movable and tender. The kidney was fixed, and since then she has remained perfectly well.

There is another type of case in which local pain is very marked. The pain is more or less constant while the patient is up and about, and is made worse by exertion and stooping. Lying down quickly brings relief. I have seen five men who were incapacitated for work on account of pain of this type. The right side was affected in each case. In four the right kidney could be felt, but was only slightly movable, while in the fifth case the kidney could not be felt. The pain is referred to the loin, and from there radiates forwards along the costal margin, and upwards to the shoulder-blade; only occasionally does it extend along the ureter to the groin. All my cases have been men, and all have been engaged in heavy work or had met with an accident. In several the urine has con-

tained a little albumen, but neither pus nor blood. I have operated on two cases, and in each found the kidney displaced a little downwards and forwards, with the lower pole rotated inwards and surrounded by numerous adhesions. In other respects the kidneys were healthy. I believe the pain is due largely to obstruction of the ureter as it passes over the lower pole of the kidney. The mechanism is sufficiently explained by the illustrations.

The result of operation for the relief of local pain is excellent, and I think every one agrees that renal pain in association with mobility of the kidney is a sufficient indication for nephropexy when the pain is so severe or so persistent as to cause serious inconvenience. With regard to the second class of case which I have mentioned, I would advise exploration of the kidney with a view to nephropexy, even though the kidney were only slightly movable, provided that the pain was sufficiently severe to prevent the patient following his occupation. The important point to ascertain in these cases is whether the pain is made worse by the upright position and by exertion, and is relieved by lying down.

Group 2.

In this group I have placed cases whose predominant troubles were associated with the digestive system. In almost all my cases symptoms referable to the stomach or colon have been present, but in some these have been the chief cause of complaint. The cases present quite charac-

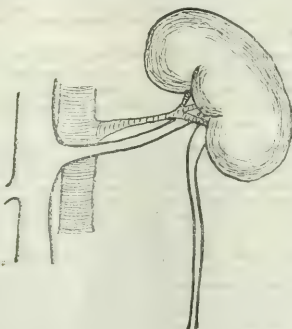


Fig. 3.—Normal kidney.

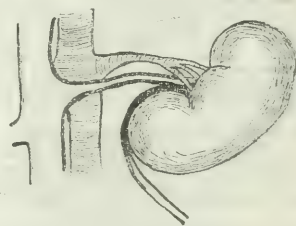


Fig. 4.—Rotated kidney.

teristic features. They complain of flatulent dyspepsia, vague abdominal discomfort, and constipation. Vomiting is not usual, but there may be paroxysmal attacks of sickness, when everything is vomited back. The symptoms bear no very definite relationship to the taking of food, and may be at their worst several hours after a meal. Colon pains of all kinds are common, and the colon may be distended and thickened. Twice I have operated when mucous colitis existed in association with right dropped kidney, with great benefit. Generally there is loss of weight, and, if the patient has had to lead an active life, there may be great emaciation. These symptoms are associated with more or less hypochondriasis, irritability of temper, and restlessness. The history in all my cases has been a long one, in some extending over eighteen to twenty years. All kinds of medicines and diets have usually been tried without benefit. The only remedy that gives real relief is prolonged rest. On examination, nothing definite can be found. Often the stomach is moderately dilated, but there is no evidence of pyloric obstruction. The colon may be thickened, and a little tender on firm pressure. Usually, it is the right kidney that is movable, but often the kidney is not tender, and there are no symptoms which can definitely be attributed to it.

In March, 1908, I saw a married woman, aged 36, a patient of Dr. Newton. For twenty years she had suffered with her stomach. This took the form of periodical crises of severe epigastric pain and vomiting. On several occasions she vomited blood in large quantities, but there had been no hæmatemesis for five or six years. For the last two years she had been much worse generally, and was unable to do any work

—the epigastric pain was severe, and she suffered much from flatulence and constipation. When I saw her she had just recovered from an attack lasting nine days, in which the pain was intense and large quantities of bile were vomited. Medical treatment was quite useless, rest in bed being the only thing that gave relief. She was a stout, pale, flabby woman. There was diffuse tenderness over the whole abdomen, but no special tenderness in the epigastrium. The stomach was of moderate size. The right kidney fell into the iliac fossa on standing up.

I advised fixation of the right kidney, for these reasons: (1) that the kidney was obviously displaced, (2) the symptoms, though severe, were periodic and induced by exertion, (3) there was no direct evidence of ulceration of the stomach or of pyloric obstruction.

For some months after operation all her troubles disappeared, and she was able to eat ordinary food and do her housework, and said that she felt better than she had done for years. After indulging in a heavy meal of pork chops she had a mild attack of pain and sickness, and since then has had to be careful with her diet. All acute symptoms have subsided, and she looks, and says she feels, much better than formerly.

In September 1906, I saw, in consultation with Dr. Suckling, a widow, aged 50. She had been ill for ten years with "indigestion." She complained of flatulence, fullness at the stomach, and pain at the pit of the stomach after food. No vomiting. She also suffered with frontal headaches, backache, and general weakness. During the last year she had been much worse. The patient was a short woman, and weighed only 6 st. 8 lb. She was very thin. The stomach was distinctly dilated, and waves of peristalsis could be seen crossing it from left to right. There was no tenderness in the epigastrium, and no lump could be felt in the neighbourhood of the pylorus. Both kidneys were movable, the right to a marked degree. The urine contained albumen. Right-sided nephropexy was

performed. She did very well, and is now much better than she has been for years.

Great care is necessary in this group to exclude gross lesions of the stomach and intestine and mistakes are easily made. In some doubtful cases an exploratory laparotomy may be advisable before performing nephropexy. When, however, other causes have been excluded there remain a number of chronic cases not relieved by general treatment in whom great benefit follows fixation of the kidneys. I have operated on 20 cases similar to the above, and have every reason to be satisfied with the results.

Group 3.

Cases suffering from spinal and cerebral neurasthenia. This is a large group. The leading symptoms are severe and persistent headache, backache, constant "tiredness," periodical fits of black depression, and absolute lack of the joy of living. The greater the necessity for work the more pronounced the symptoms. Married women cannot do their housework, teachers complain that the strain of standing and teaching causes complete mental and physical prostration, and business men state that they cannot concentrate their minds upon their work, lose their grip of detail and find that everything, even the writing of a simple letter, requires great effort. These people are irritable, restless, and miserable, a nuisance to themselves and all around. They are painfully conscious of their inefficiency in comparison with other people, are most anxious to do what they can, and generally go on working, until a complete breakdown occurs. They eagerly grasp at anything which holds out a prospect of relief, and have

usually tried all kinds of remedies and been under the care of many different medical men. Some of them complain of occasional insane impulses, usually of a suicidal nature. These form a link between this group and the next, in which I have placed those cases that were undoubtedly insane.

I cannot do better than refer to one or two cases to illustrate the simple neurasthenia and neurasthenia with insane impulses to which I refer.

In October, 1907, a married woman, aged 23, was sent to me by Dr. Duncan, of Hockley. She was suffering from severe neurasthenia, dragging pains in the abdomen when standing, and amenorrhoea. She was unable to do her housework or to walk outside without assistance. Latterly she had been compelled to stay in bed. Medicines and general treatment were useless. The right kidney, which was badly dropped, was situated in place. Since then she has been very much better, and, though not a strong woman, is about and doing her housework.

In March, 1908, a lady, aged 57, was sent to me by Dr. Snckling. She had not been well for twenty-two years. She complained of great weakness and aching of the back, which was so bad that she could neither walk nor sit with comfort. When visiting her friends or going to the theatre she took with her a board, against which to lean. She said that she could get no pleasure out of life, and as she could not get about, life was not worth living. Belts had been tried without much benefit. Both kidneys were down, but the left much more so than the right. As her heart was weak and there was albumen in the urine I decided to fix the left kidney only. She did very well and six weeks after the operation climbed to the top of the Herefordshire Beacon. She has enjoyed a great deal since and has led a far more active life than most women of her age and has done more and felt better than she has done for years.

In August, 1908, I operated upon a woman, aged 45. For many years she had suffered from depression, "funny feelings" in her head, constant tiredness, and flatulence. During the last year she had been worse, and had been compelled to give up her housework. A prolonged holiday in the country brought no relief. Lately she had developed symptoms of insanity, attempting suicide on three occasions, and threatening to murder her child. She was a flabby woman, talkative, excitable, and at times very depressed. Both kidneys were badly down. She began to improve at once after the operation, and a few days ago her husband informed me that she was a different woman altogether.

These cases are selected from amongst nearly 80 upon whom I have operated for very similar symptoms. The results have been surprisingly good, and in some cases difficult to credit. There have been failures, but I can honestly say that no case has been made worse by operation.

To Dr. Snckling belongs the credit of directing attention to the close connexion there is between certain types of neurasthenia and movable kidney. From my own experience I can thoroughly endorse his assertion that such patients are greatly benefited, and in some cases entirely cured, by nephropeky. My results amply justify me in saying that comparatively young and healthy people suffering from progressive neurasthenia who do not improve under medicinal and general treatment, or, having improved, rapidly relapse on returning to the ordinary conditions of life, should be examined for renal mobility. If the kidneys are mobile, and there are no conditions present which would render the operation dangerous the patient should be told that nephropeky would probably be followed by marked improvement. In such cases it is unfair to regard the condition as incurable until the kidneys have been fixed. Time must be allowed for improvement. I make it a rule never to estimate the results of the operation until six months afterwards. Some cases improve slowly, and the full benefits of the operation are not evident for many months. Further, rapid improvement may be deceptive and relapse occur later. If, however, judgement is withheld until six months have elapsed and the patient has returned to the ordinary conditions of life, results can be much more safely estimated. Relapse is exceptional, and one of my oldest cases, operated upon nearly three years ago, whom I saw a few days ago, assures me that she has been better in health than at any time in her life, in spite of the fact that she has passed through some exceptionally trying experiences since the operation.

Group 4.

In this group are placed cases of undoubted lunacy. I have operated on twelve people who were quite insane at the time of operation, and who would have been sent to an asylum immediately had not operation been advised. One of these cases died on the fourth day. Three have

been operated on so recently as to be of little value. One of these had been in an asylum eighteen months and discharged partially cured. She relapsed at once on returning home. A second suffered from profound melancholia, and would neither eat nor speak for twenty-four hours at a time. A third, a man, had been compelled to give up his business, had threatened to commit suicide and murder his wife, and on two occasions had given himself up to the police on imaginary charges. These three cases are improving, but insufficient time has elapsed to make it safe to say what the result will be.

The fifth case was a woman of 45, who suffered from active melancholia. She shouted for hours together, wept copiously, did not know her husband or friends, and was obsessed with the idea that her doctor was responsible for her trouble. She was wasted to a skeleton. Double nephropeky was performed, and for five weeks there was no improvement. The operation was performed on October 6th of last year, and she is still under observation in a home. She is very much better, sews and knits, helps in the cook, and takes great interest in all that goes on. Further time is needed before any conclusion can be arrived at.*

A sixth case, a lady aged 38, a patient of Dr. Stanley, of Coventry Road, was operated on in March, 1908. For six months she had been quite insane and had been sent away from home in charge of two nurses. She was suffering from profound melancholia and fixed delusions, and would take no notice of her husband, her children, or the people around her. Both kidneys, which were badly down, were fixed. For some weeks she made little or no progress, but on leaving the nursing home she began to improve. All symptoms of melancholia disappeared, and, except that she was excitable, she appeared well. Within the last week, as the result of the illness of one of her children, lack of sufficient rest, and excitement, she has become very excited and needs supervision. The probability is that with rest and care she will come all right, but she cannot yet be classed with those who are well.†

The remaining six cases were all well when last heard of. Two had suffered from mania, two from melancholia with suicidal impulses, one from mania complicated by delusions and homicidal impulses, and one from delusional insanity. I can only refer to three.

In May, 1908, I was asked to meet Dr. Berlyn in consultation upon a young lady, about 30 years of age. She had always been of a highly-strung nervous temperament, but remained in fair health until August, 1907. Then, after a mental shock, she became very excited and almost maniacal. Recovering from this she became very depressed. This ended in December in an attack of acute mania. In this attack she was seen by Dr. Stanley Barnes. She was sent to a nursing home, where she improved sufficiently to be sent to Torquay. While away she was practically well, but immediately on her return to Birmingham relapsed, and became maniacal again. In this attack I saw her. Both kidneys were moderately dropped. Learning from Dr. Barnes that no other treatment was likely to benefit her, I performed double nephropeky. After a time she began to improve, and now the friends say that except for absent-mindedness, and a rather dreamy disposition, she is well.

In June, 1907, I saw, in consultation with Dr. Lewis, of Perry Barr, a girl 28 years of age. She was full of silly ideas of all kinds, had escaped from her friends, and raced through the streets without her hat. To do this she had climbed over the wall into the next garden, and from there into the street. Amongst other delusions she had that of being the wife of a prominent statesman. She was so noisy and troublesome that a trained nurse declined to look after her. The right kidney was moderately prolapsed. I had a septic finger at the time and was unable to operate. At my request, Mr. Barling very kindly operated for me. For a while she was very bad, getting out of bed and at times being very violent. In six months she was quite well, and has remained so since.

In April, 1908, at Dr. Snckling's request, I operated upon a lady 33 years of age. She had been certified as a lunatic, and was on her way to an asylum when seen by Dr. Snckling. She was suffering from melancholia with marked suicidal tendencies, having attempted suicide on three separate occasions. Both kidneys were very movable, and at the time of operation were found on banded in dense perirenal adhesions. The capsules were thick and studded over with thick opaque patches. The wounds healed by primary union.

During the first few weeks she made little progress, being very quiet, introspective, and miserable, and was never left alone. For several months she was kept in a nursing institution. A few days ago I heard that she was quite well mentally and had improved greatly in general health.

I advance no theory; I merely state facts. I have operated on twelve lunatics, not one of whom is now in an asylum. Six are well, and of the remaining five still living I have every hope that time will complete the improvement that has already commenced. I do not assert that movable kidney is the sole cause of the insanity in these cases, but I do say that in a person of unstable mental equilibrium it

* This patient is now quite well and performing the usual duties of a housewife.

† Since this paper was written this patient has been sent to an asylum.

is sufficient to turn the balance. Removal of other so-called causes of insanity, for example, alcohol, business strain, etc., is followed by cure in a certain percentage of cases. I contend that removal of the baneful influence exercised by a loose kidney will also be followed by a definite percentage of cures. This, however, cannot be effected by general treatment, or the special treatment carried out in asylums, but by operation alone. My results surely justify the contention that where the kidneys are found to be movable in an insane person, in justice to the patient and the friends, nephropexy should be advised before the case is sent to an asylum.

GENERAL SUMMARY.

1. Nephropexy is a safe and satisfactory surgical procedure.
2. Renal mobility alone is not an indication for operation.
3. Local pain of sufficient severity to diminish working efficiency is an indication for operation.
4. Chronic functional disturbance of the digestive system may be caused by movable kidney. Such cases often resist all kinds of general and medicinal treatment, and are greatly benefited by nephropexy.
5. Nephropexy is indicated in progressive spinal and cerebral neurasthenia occurring in association with movable kidney, when other measures have failed to cure, or improvement is followed by rapid relapse.
6. Nephropexy is indicated when movable kidney is associated with insanity.

LIPOMA IN THE SITE OF A FEMORAL HERNIA.

By C. J. PATTEN, M.A., M.D., Sc.D.,
PROFESSOR OF ANATOMY, SHEFFIELD UNIVERSITY.

IN a young male subject, aged 25, I observed a tumour in the thigh occupying the position of a femoral hernia. To the touch it seemed pliable and to a certain extent reducible, though from the first I had my doubts as to whether it was a hollow knuckle of tube which I was manipulating.

I made this digital examination before the subject was injected with preservative fluid, and being undecided as to what the tumour was, I proceeded to inject the subject with formalin with a view of hardening the viscera for special purposes.

I was glad that I adopted this reagent, as it also proved most useful in hardening and fixing the shape of the tumour, which on further examination proved to be a lipoma. On dissecting down on it, I found that the saphenous opening had been much encroached upon, and it was only with the greatest difficulty that I could detect the remains of the much stretched

occupied the crural canal, and, moreover, blended with a well marked septum crurale, and that the long saphenous vein was pushed aside in an outward direction, were points which were made out with little difficulty. When the front of the mass was well cleaned and defined it was seen to be elongated in shape, its longest measurement being about 5 in., its broadest measurement 2 in. This surface was much lobulated, and two tongue-like processes could be seen projecting upward and inward. The inner of these burrowed between the adductor longus and adductor brevis; the outer between the adductor brevis and pectineus. On endeavouring to shell out the mass I found it to be anchored by several other processes which had burrowed their way through muscular strata. Thus a portion of the tumour passed outward under cover of the femoral vessels (and apparently outside—that is, behind—the femoral sheath) and vastus externus; another part proceeded upward and outward in the interval between the psoas and pectineus. These last two processes could not be seen until the tumour was partially dislodged, as they took origin from the deep aspect. On removing the tumour from its bed I found that its deep surface was much broader and flatter than its superficial surface, and was not studded with small lobules. The floor of the space occupied by the tumour was formed by part of the anterior surface of the adductor magnus. The fascial covering, which formed a very delicate lipoma-capsule, seems to have been derived from the fascial envelopes of the various muscles in the neighbourhood. The cavity in which the tumour lay was 2 in deep, and presented the following boundaries in a fairly definite manner:—Inside, adductor longus and adductor brevis; outside, pectineus and femoral vessels; floor, adductor magnus; roof, integument, superficial and cribriform fascia, and higher up the anterior wall of the crural canal; upper limit, Poupart's and Gimbernat's ligaments.

The circumscribed position which this mass of fat occupied renders this case interesting, though at the same time difficult to explain. Fat was not unduly collected together in other regions; in fact the subject was on the whole rather spare. The corresponding region of the other (right) thigh bore no evidence of fat deposit other than the ordinary layer of superficial fascia. The muscles of the body generally had not shown signs of having undergone fatty degeneration. There is just one suggestion which I would offer, namely that this aggregation of fat at the site of a femoral hernia may possibly have represented a hypertrophic condition of the septum crurale, which is mainly composed of extraperitoneal fatty tissue. Indeed the presence of a firm plug of fat, which quite filled up and even distended the crural canal, and which, on the one hand, was in direct continuity with the rest of the tumour, and, on the other hand, with the enlarged, fat-laden septum crurale, would seem to point to such an origin.

BILATERAL NEPHRO-LITHOTOMY.

IN WHICH THE KIDNEY WAS KEPT OUTSIDE THE WOUND FOR SEVEN DAYS BEFORE RETURNING IT TO THE LOIN.

By JOHN CLAY, F.R.C.S.

ASSISTANT SURGEON, ROYAL VICTORIA INFIRMARY, NEWCASTLE;
DEMONSTRATOR OF ANATOMY, UNIVERSITY OF DURHAM.

WHEN both kidneys contain stones, the mortality of the operation for the removal of the stones is very high, and any modification of the usual procedure which promises to diminish the risk is worth consideration. In the case given below both kidneys contained a large number of stones, the urine contained thick pus, and the patient was in a weak and exhausted condition. After removing the stones from the right kidney it was not, as is usual, returned to the abdominal cavity, but was kept outside the wound for seven days. By doing this, the possibility of losing our patient from hæmorrhage was reduced to a minimum, as bleeding points could easily be seen and dealt with. It also seemed that the place for an organ, dripping with decomposing urine and pus, was outside the abdominal wall, and not in its loose soft bed in the loin.

The following are the notes of the case:

Eliza S., aged 34 years, married, was sent by Dr. Spencer, of WallSEND, on April 15th, 1908, to the Royal Infirmary under my care.



View of the tumour from the loins, after removal of the cribriform fascia and the anterior wall of the femoral sheath. The lobulated character of the lipoma and two ascending processes are apparent. The long saphenous vein is seen displaced outward.

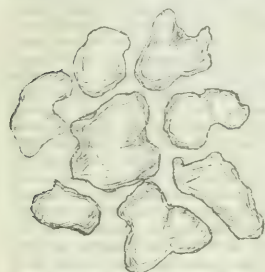
and thinned-out cribriform fascia which gave a partial covering to the anterior surface of the tumour. That a considerable upward prolongation of the fatty mass

History.—For nearly two years the patient had been in poor health, and had a dull aching pain in the small of her back. For five weeks she had noticed that her urine was thick and opaque, and that micturition was painful and frequent.

On examination the patient was very emaciated, and palpation showed the right kidney to be much enlarged and tender. A cystoscopic examination was attempted, but it was impossible to get the bladder sufficiently clear to see the ureters.

First Operation.

On April 16th, 1908, an oblique incision immediately below and parallel to the last rib on the right side was made. The kidney was exposed and found to be full of stones, occupying both the pelvis and calyces. The parenchyma was so disorganized by inflammation that nephrectomy appeared to be the best way of dealing with it. Before doing so, however, it was necessary to find out the condition of the other kidney. For



Stones removed from the pelvis and calyces of the left kidney, one-half natural size.

this purpose the peritoneal cavity was opened and the hand passed to the other side. The left kidney was then found to contain stones and to be in much the same condition as the right, making it not advisable to remove the latter, but to remove the stones from it. The right kidney having been brought out of the wound, the stones were taken from the pelvis and calyces. Haemorrhage was controlled by putting clips on the vessels, as, owing to the sepsis present, suturing the kidney substance was to be avoided.

The tissues were so friable that ligatures would not hold. For this reason, and for those given at the commencement of the paper, I determined to treat the kidney extraperitoneally, and keep it outside the wound well wrapped in gauze. The free haemorrhage showed that there was no tension on the pedicle.

The bed from which the kidney had been removed was packed with gauze, and the patient returned to bed. In the after-treatment proctolysis was employed. On the seventh day after the operation an anaesthetic was given, the gauze removed from the loin, and the kidney, which was now covered with healthy granulations, returned to its place.

On May 18th, 1908, the patient was sent home considerably improved.

Second Operation.

She was readmitted on August 6th, 1908, to have the stones removed from the other kidney. At the second operation, as the previous one had been so satisfactory, exactly the same course was followed, but this time the kidney was returned to its bed four days after bringing it out on to the abdominal wall.

She again made an excellent recovery.

On December 3rd, 1908, she was shown to the members of the Northumberland and Durham Medical Society. She had greatly improved in appearance and expressed herself in every way relieved.

After the first operation the patient was very ill indeed, and her recovery was largely due to the skilful manner in which Sister Mathewson managed the continuous rectal injection of normal saline solution.

Though the plan of keeping the kidney outside the wound was adopted on the spur of the moment, yet, as it diminishes the dangers of attempts to save lacerated or septic kidney, I think it is an addition to the conservative surgery of that organ.

REMOVAL OF A LARGE VARIX OF THE ORBIT.

By SIR WILLIAM J. COLLINS, M.S., M.D.,

B.Sc. Lond., F.R.C.S. Eng.

FURGERON TO THE ROYAL EYE AND LONDON TEMPERANCE HOSPITALS
OPHTHALMIC SURGEON TO THE HAMSTEAD AND NORTH-WEST
LONDON HOSPITAL.

Mrs. JANE W., aged 42, had had three children; the last was 7 years old. A fairly healthy woman, always had a high colour, more marked on the right side. Fourteen years ago—some three months after the birth of the last child but one—the right eye began to become prominent. Some large vessels began to show at the inner canthus. For the last three years the proptosis had become gradually more marked. The right eye was projected forwards and outwards on to the cheek, and large worm-like veins

formed a plexus at the inner side of the globe. The lids did not close over the eyeball, and in profile the whole mass projected in a repulsive and unsightly fashion beyond the line of the nose. She had sought advice, but an ophthalmic surgeon had said it was too dangerous to operate on. She was greatly distressed, and was unable to go about in consequence of the deformity. A loud *bruit de diable* was audible with the stethoscope over the orbital swelling. The vision of the right eye was reduced to J. 20; that of the left was 3 and J. 1. The fundus of the right eye showed the veins of the optic nerve rather larger than usual, otherwise nothing abnormal. The pulse was rapid (104); heart sounds normal. There was a large varix in the right thigh, and she had suffered from haemorrhoids. I admitted the patient into the London Temperance Hospital in November, 1905.

November 23rd. Under chloroform I tied the right common carotid artery just above the omo-hyoid. This



Full face before operation.

Profile before operation.



Full face one year after operation.

produced, however, no appreciable effect on the swelling or proptosis.

December 7. Under chloroform I slit the right external canthus freely so as to obtain easier access to the orbital cavity. I excised the eyeball. I found I could pass my finger round the plexus of veins, they being apparently encapsuled and easily detachable from the orbital perosteum. I passed a pair of bent clamp forceps down as far as they would go to the apex of the orbit and clipped the pedicle of the venous bunch. I tied the pedicle with silk after cutting the mass away on the distal side of the clamp. The orbit was then lightly packed with iodoform gauze. The bleeding was astonishingly little. Healing was uninterrupted. The mass proved to be a cavernous angioma, and contained a few phleboliths.

The appearance before and after the operation (a glass eye *in situ*) is shown in the accompanying sketch and photograph. There had been no return up to the end of 1908.

THE members of the first class of Filipino medical students trained under the American rule received their degrees from the Philippine Medical School at Manila on February 27th.

THE APPLICATION OF CONTINUOUS SUCTION IN SURGERY.*

By H. T. HERRING, M.B., B.S.,
LONDON.

THE use of continuous suction as a means of removing blood during operation, and of subsequently draining wounds and withdrawing secretions, has recently received some attention. Dr. R. H. Woods, of Dublin, published an interesting paper in the *BRITISH MEDICAL JOURNAL* of May 20th, 1905, On the Treatment of Purulent Cavities; and a second, entitled, On the Saliva Ejector as a Surgical Instrument, in the *Journal of Laryngology*, February 2nd, 1906. In the last mentioned paper he dealt with the subject as applied to nose and throat operations, and I wish now to endorse what he and others have said, and to advocate

a more extended trial of this agent in general surgery.

I have systematically employed continuous suction, as opposed to intermittent aspiration, for many years, and there can be no question of the benefits conferred on patients, especially after the operation of cystotomy, both as regard their comfort and their general well-being, for they are kept thereby quite dry, and thus relieved of the infliction of frequent dressings, which are imperative under ordinary circumstances. Dryness and the relief thus afforded undoubtedly enables wounds to heal more rapidly, and tends to a lower mortality from post-operative causes.

The chief obstacle which has up to the present prevented the more general employment of continuous suction is, I think, the want of some portable apparatus which can be used in any place, and which will easily maintain a continuous negative pressure without much attention. Neither Cathcart's pump, nor G. W. Richardson's modification, entirely fulfil these requirements.

My first endeavour to overcome this difficulty was with a modified form of Plunkett's well-known saliva ejector, fitted with a Royle's patent tap-union, by which it could be attached to any water supply (Fig. 1). This has proved most successful in many cases. I have used it for more than seven years, and others have tested its capabilities. It works well as a rule, if the water pressure is good, though its action is not very rapid and rather liable to variation. But the great objection to it is that the motive power—that is, the water supply by which it is worked—

is very frequently inconveniently situated with regard to the patient's room, thus rendering a long length of tubing necessary to bring the suction to the place where it is wanted.

With the appliance shown in Fig. 2 that objection is obviated. It consists of a rotary pump, which will mechanically extract air, and a small electric motor to drive it, both being enclosed in a portable box. As almost every house and room has now an electric installation, the motive power exists everywhere, and always close at hand.

Connexion between the motor and the nearest lamp holder has only to be established and the pump is ready to work. This apparatus is exceedingly efficient, extracting 10 to 12 cub. ft. of air an hour, and will produce a high negative pressure (over 29.5 in. of mercury). It will run for days, requiring only to be lubricated occasionally. The weight of the complete apparatus is about 26 lb., and the cost of running it does not exceed

a shilling a day, reckoning the B. T. electric unit at sixpence.

I may mention one or two other points which have to be provided for in order that suction may be successfully applied in surgery.

1. To prevent the blocking of the suction tube in the wound either by the tissues themselves, or by blood clot, mucus, or pus.

2. To provide for the drainage and removal of fluids collected in cavities, or dependent parts not actually reached by the suction tube itself.

The easiest method of draining is to insert the end of the suction tube into one of considerably larger diameter placed in the wound in the ordinary way. The latter acts as a caisson, or well, to collect the fluid, and from which the fluid is sucked as soon as it reaches the level of the aspirating tube. This plan has a disadvantage, for although it prevents overflow and succeeds in keeping the cystotomy patient perfectly dry, yet it does not

drain the cavity, and always allows a pool of fluid to remain below the level of the suction tube. If, however, the caisson is replaced by a porous or absorbent one, which I effect by tightly wrapping several layers of lint or gauze round the lower 3 in. of the suction tube, the result is much better. The fluid is first soaked up into the material, and is then gradually extracted from it and carried away by aspiration. The roll of material must of course extend beyond the lower end of the tube, and be long enough to touch the floor of the cavity and at the same time project above the surface of the skin; for otherwise atmospheric pressure will be unable to act on the cavity, and a negative pressure

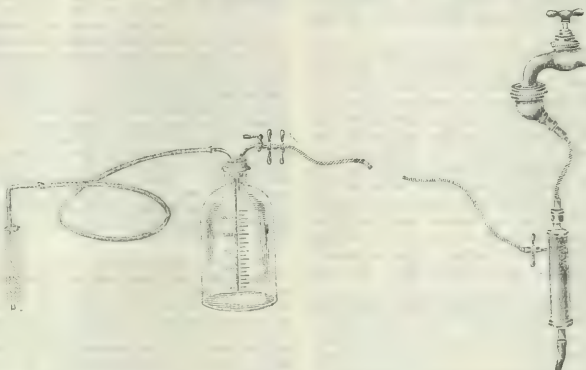


Fig. 1.

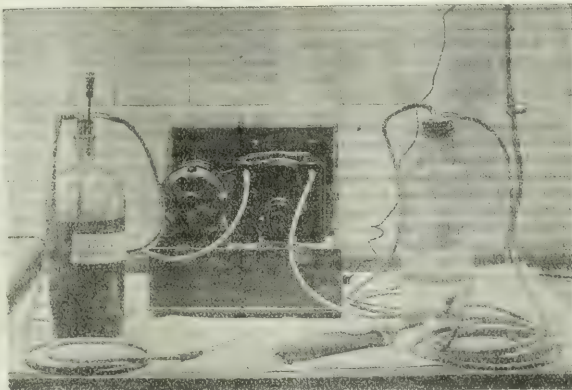


Fig. 2.

* A paper read before the Surgical Section of the Royal Society of Medicine.

will be established there, when extraction of fluid will at once cease.

Another application of this principle is simply to embed the end of the aspirating tube deeply among the dressings. By either means extraction continues as long as any part of the absorbent dressing touches fluid; so that secretions, etc., percolating into a cavity, are at once absorbed by the material and then extracted and carried away to the receiver by the suction action. The receiver of which I have just spoken is a large bottle interposed between the pump and the suction tube. It catches and retains all the fluids withdrawn, and prevents the blocking of the apparatus.

This pump may also be used to irrigate a wound with any solution desired. One end of a small tube is attached to the outlet of the pump, the other to the short arm of a Woolf's bottle filled with the irrigating solution. A second tube—that which is to convey the fluid to the wound—is connected with the arm extending to the bottom of the bottle. The action, then, of the pump is to force air into the bottle and create a positive pressure, which in its turn drives the solution along the irrigating tube to the dressings in the wound. If a small and continuous supply of solution is wanted, the irrigating nozzle must be quite fine and the pressure regulated by adjusting the escape valve connected with the Woolf's bottle. Thus, a wound may be drained and irrigated at the same time without discomfort to the patient.

Suction has been employed in draining the chest, the kidneys, the gall bladder, the throat and nose, and I think with this more convenient and powerful apparatus a further trial should be given, not only in these cases, but also in all where it is important to remove secretions and discharges.

With regard to the removal of large quantities of water—for instance, when a cavity is being flushed during an operation—the calibre of the suction tube must be considerably increased and provided with a tap which can be turned off, so that the receiver can be partially exhausted before being used. In this way very large quantities of blood and fluid can be rapidly withdrawn in a short space of time.

Messrs. Maw and Sons, Messrs. Allen and Hanbury, and other instrument makers will lend the apparatus to any one who may care to give it a trial.

A FATAL CASE OF LEAD POISONING DUE TO DIACHYLON.

By F. STRONG HEANEY, M.D.DUB., F.R.C.S.IREL.

THE series of cases of diachylon poisoning reported by Dr. Edmund Hay in the BRITISH MEDICAL JOURNAL for January 23rd, and the fatal case reported by Dr. Arthur T. Hall the following week, induce me to place on record a further case which proved fatal twenty-one days after taking diachylon. The case, which was under my care during the seven days preceding death, has not previously been reported. It is interesting as well for the train of symptoms presented and the *post-mortem* appearances as for its bearing on the efforts now being made to stop a widespread evil.

On January 21st, 1908, I was summoned to attend a married woman, aged 25, who was said to have suffered from gastritis for a long time, but to have become worse during the last fortnight. On entering the room I noticed an unusual sweetish sickly odour not to be described in words—a smell *sui generis*; and, on examining the mouth to find a possible cause in carious teeth, I observed a well-marked blue line on the gum margins. The patient was six weeks pregnant, and on being questioned admitted having taken diachylon a fortnight previously. I subsequently elicited the following history:

History.

She was the mother of two children, the younger being about 2 years old. Though in fairly comfortable circumstances, she had always been delicate and anaemic, and had a haunting dread of any further increase in family.

On January 8th, realizing that she was again pregnant, she bought, at the instigation of a friend, a quarter of an ounce of diachylon in mass. She rolled it into nine pills, which she took at short intervals in the course of forty-eight hours. Within a few hours of taking the last of the pills she began to have severe abdominal pains. Hot applications and hot drinks gave no relief, and after a day she began to vomit. Intermit-

ting pain and vomiting continued for four days, then the vomiting ceased, but pain continued as before. During this time the bowels remained constipated. They were slightly relieved by enemata; no magnesium sulphate nor other purgative was given, the patient's stomach being considered "too weak" to stand purgation. On the other hand, morphine was administered to relieve the pains.

About a week after taking the diachylon mental symptoms first appeared. She became sleepless, and at intervals imagined she heard bells ringing, saw herself sitting in snow-drifts, imagined she was falling out of bed, etc. She had occasional attacks of faintness, especially on trying to sit up or turn suddenly in bed.

Condition when First Seen.

I first saw her a fortnight after she had taken the diachylon. She was then very anaemic and emaciated. She lay on her back prostrate, slipping down from the pillows. The skin felt cold (temperature 97°) but not unduly dry or moist. The tongue was dry and furred, and the lips covered with sordes. With the breath was exhaled the peculiar odour referred to above. The pulse was 138, soft and full. The bowels had not moved once since taking the diachylon save as the result of an enema. In spite of this, however, and in spite of a dilated stomach subsequently discovered the abdomen was retracted and flaccid. Urine was being passed frequently in small quantities, and accompanied by pain and burning. Seven ounces, saved the day after my first seeing her, yielded on analysis the equivalent of $\frac{1}{10}$ gr. of metallic lead. The specimen was otherwise normal.

Treatment and Subsequent Progress.

Magnesium sulphate was administered, and seemed at first to relieve two pressing symptoms—the constipation and the delusions. Digitalis and strychnine were given to combat the attacks of faintness. Under their influence the pulse-rate fell from 138 to 120 but gradually rose again to 140. Potassium iodide seemed to be contraindicated having regard to the large quantity of lead already in circulation and being excreted.

On January 26th, seventeen days after taking the diachylon, she complained of severe pain in the left shoulder and upper arm. Next day the pains had disappeared, leaving the muscles of the limb almost completely paralysed. Feeble flexion and extension at the phalangeal joints were the only movements left. Sensation was diminished but not completely lost. On January 28th the same condition appeared in the right arm, and passed through the same phases—first pain, then palsy and partial anaesthesia.

On January 30th the pulse became very rapid and irregular, and on the 31st she died in one of her attacks of faintness. This last phase of "heart delirium" was evidently brought about by implication of the vagi, but up to the end there was no indication of interference with the innervation of respiration.

Necropsy.

The chief features of the *post-mortem* examination, made by Dr. Raw at the coroner's request, were (1) acute inflammation of the mucous lining of the stomach and intestine, extending in some places to actual ulceration, (2) acute fatty changes in liver and heart.

From the evidence at the inquest it would appear that the practice of taking diachylon to produce abortion is prevalent in both Lancashire and Cheshire. It was stated, moreover, that nowadays when a diachylon plaster is required as such it is almost always called for "ready-made"—that is, spread on calico, etc.; in other words, whenever diachylon is demanded in mass the inference is that it is required for an illegal purpose. Even apart from the ethical aspect of the matter, it is regrettable that the class of people who resort to the drug are unaware of its poisonous effects.

Memoranda : MEDICAL, SURGICAL, OBSTETRICAL.

ALCOHOL AS A SURGICAL DRESSING.

For some years it has been the custom in many surgical clinics to use methylated spirit as an agent for cleansing the skin previous to operation, and also for removing the inspissated debris from around the wound at the subsequent dressing. An antiseptic wash of some kind is usually applied to the wound itself. For some time now I have gradually found myself abandoning the use of any antiseptic wash at the dressings, and confining myself entirely to spirit, whatever the nature of the wound. It may temporarily smart, but it is only for the moment. But what I wish to state more especially is that spirit forms a most excellent dressing for wounds. For months I have used it alone in all freshly-incised wounds for whatever purpose—in many cases of radical cure for

hernia, in breast cases, in excision of veins, in three cases of displaced semilunar cartilage of the knee-joint, in abdominal sections, etc., and I find that I have had a larger series of continuous good results than from any other dressing. It is now my custom before closing the wound to bathe the tissues with the ordinary "industrial" methylated spirit, and, after closure of the wound, to apply plain white sterile gauze wrung out of spirit.

The benefit of this dressing is, I believe, due not so much to the antiseptic properties of the spirit as to the powerful affinity that alcohol has for water, thus removing, perhaps, the most essential factor of bacterial growth—moisture. It also lessens in many cases the necessity for drainage, and by its styptic properties shortens the time necessary for securing the smaller bleeding points. When the wound is looked at for the first time after the operation, the small quantity of blood which has oozed from each stitch hole will be found caked and clotted and quite hard.

I should very much like to hear if others have used spirit in this manner, and if they have obtained the same results.

It is well known that whisky and rum were used occasionally as a dressing for wounds before antiseptics were introduced.

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TREATMENT OF DYSMENORRHOEA.

IN Dr. Herman's paper (p. 937) on the above subject, he sets a definite limit to the meaning of the word "dysmenorrhoea." It would seem to me that he holds the view that I have for a long time past entertained, and have only seen set forth in one work on gynaecology (American)—namely, that *all* dysmenorrhoeas are really due to spasm—and hence, I think, a more expressive word would be "menorrhspasm."

I believe that true dysmenorrhoea, or menorrhspasm—whether in virgins or married women—arises through nerve causes: that from the consequences of some illness, from anaemia, from overwork, worry, or, perhaps, from a condition of the general nervous system, normally prone to over-excitability or want of balance, the nervous mechanism of the patient is functionally upset, and the generative organs are among the first to feel the strain, and a tropho-neurosis is set up, giving rise to a spasm of the uterine muscular fibre at the time of the period. What is required, therefore, for a rational plan of treatment is to co-ordinate these irregular spasmodic uterine contractions, and, accepting Dr. Herman's theory of imperfect development of the spinal or sympathetic centre, to adopt some method that will stimulate this centre to full function.

I know that to many gynaecologists the mere mention of electricity is "anathema"; but I can assure Dr. Herman or any other practitioner who has to deal with cases of true dysmenorrhoea that if they will try the constant current in conjunction, if possible, with the static wave current in the manner that I will describe, they will find that they will often obtain the most gratifying results. I am certainly not going so far as to say that *all* cases will yield to this treatment any more than to any other, but (especially in the case of unmarried girls) there is a natural and proper repugnance to any direct uterine manipulations, and it is well worth trying to relieve the intense pains that so many girls suffer at the times of the menses, when the attempt can be made without outrage to their feelings.

The method that has given me such satisfactory results on the whole that I think it worth bringing before the profession is as follows:

I first apply the wave current from the negative side of a static machine by means of a long metal electrode inserted into the rectum and pushed well forward in apposition with the posterior wall of the uterus. This procedure is perfectly painless—indeed, it is hardly uncomfortable—and treatment lasts for from ten to twenty minutes. I next apply the constant current, and here the method varies according as one is treating a virgin or a married woman.

In the former case two large copper electrodes (8 by 15 in.) are placed one over the abdomen and the other over

the lower lumbar region, with four thicknesses of moist Gangee tissue between them and the skin, and a current of from 20 to 60 milliamperes passed for ten to fifteen minutes. Three treatments a week for one or two intermenstrual periods will often entirely relieve the pain for many months, and, should there be any return, one or two treatments just before a period will be sufficient. In the case of a married woman, after employing the static wave, I apply the constant current by means of the same two abdomino-dorsal electrodes, only that now both are connected to the same pole of the source of current—usually the positive—while the negative pole is attached to a suitable electrode, which is passed into the uterine cavity. In these cases a current of 10 to 30 milliamperes for ten minutes three times a week will in nearly all cases give relief.

I trust that a fair measure of success in my own practice in relieving this most common cause of suffering will be considered a sufficient reason for advocating a form of treatment, not usually favoured by gynaecologists, to supplement those suggested by Dr. Herman.

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HIGH-FREQUENCY CURRENTS FOR INSOMNIA.

IN the papers and correspondence on the subject of Insomnia which have lately appeared in the JOURNAL, and especially those dealing with the treatment of this troublesome complaint, I note that no reference has been made to the very beneficial influence of high-frequency currents in producing sleep.

The value of high-frequency currents in the treatment of various functional and other diseases is, perhaps, not sufficiently recognized by the profession. Unfortunately, when this method of treatment was introduced several years ago, it was unwisely boomed. It was thought that these currents would be of service in all kinds of disease, and installations were introduced into hydropathic establishments and chemists' shops, where they were under the control of ignorant bath men and bath women, and shop assistants without any medical supervision. It was natural, therefore, that not only was no benefit derived by the patient when treated by those unskilled operators, but in many cases actual harm resulted. Consequently, the pendulum has swung the other way, and it is now common for many medical men to assert that high-frequency currents are of little or no use.

After years of experience and careful study by physicians who devote themselves specially to electrical treatment, it has now been determined in what forms of diseased and abnormal conditions high-frequency currents are found to give rise to good results. Among these varied conditions insomnia stands pre-eminent. We have no difficulty in producing sleep by the ordinary methods of drugs, but their results are not permanent; and they are frequently a source of danger to the moral of the patient. Further, while they promote sleep, they usually occasion unpleasant sensations on the day following the administration of the drug.

In happy contrast to the influence of medicinal treatment, the high-frequency currents, when administered carefully by a qualified medical man, induce a sleep that is pleasant in character and has no evil consequences. Further, not only is sleep produced, but the patient derives general benefit from the influence of high-frequency currents. There is a feeling of well-being and of exhilaration produced, which is permanent in character. From personal experience I may state that very few patients who have come under treatment on account of insomnia have not derived great benefit from the treatment. Sometimes the result is immediate, at other times a more prolonged course of treatment is required. I may add, however, that I find it necessary to administer a large amount of milliamperage, reaching 700 to 800 m.a. This maximum is not attained at once, but, commencing with a small dose, one gradually increases the amount till the maximum is reached.

While undergoing this high-frequency treatment, not only is insomnia overcome and the patient placed in a better condition, which is easily recognized by himself, but from chemical analyses of the urine we have learnt that these currents produce an improved metabolism within

the human economy, and that a normal condition of bodily function is attained.

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'ULCERATION INTO AORTA DUE TO FOREIGN BODY IN OESOPHAGUS: FATAL HAEMORRHAGE.

ABOUT 10 a.m. on April 5th, 1908, I was called to see a boy of 8 years old who was vomiting blood and passing blood by the bowel. When I saw him he was sitting on his mother's knee. He looked extremely blanched, the lips were bloodless, and he complained of great thirst and pain in the epigastrium. Percussion and auscultation revealed no tenderness or anything abnormal in the thorax or abdomen. The temperature was 100°; pulse 146.

History.

Until the evening of April 3rd he was apparently perfectly well. At 7.30 p.m. on that date, while sitting in a chair, he commenced to vomit and brought up a small quantity of clear frothy fluid. He slept well that night, and got up apparently well the next morning. During the day he played about in the street, and his mother noticed nothing amiss, except that he did not take his food with his accustomed relish.

At about 7.30 p.m. on April 4th he expressed a wish to go to stool, but on the way he suddenly turned faint, and became very pallid. He was at once put to bed, and for the next few hours complained of great thirst. At 9 p.m. the bowels acted, and the motions were quite black. About 11.30 p.m. he vomited "more than a pint" of blood, the first that came being black, and the rest "bright red." The vomiting lasted a few minutes. After that he rested until 2 a.m. on April 5th, when he vomited two lumps of clotted blood, and had a slight action of the bowels, the stools in this instance being also black. At 6 a.m. he vomited a little "phlegm," but no blood. Four years ago, his mother told me, he swallowed a halfpenny, which had never been recovered.

Condition on Admission.

During the forenoon of April 5th he was admitted into the Batley and District Hospital. His condition on admission was one of great prostration. Pallor was very marked. He complained of great thirst and a slight pain in the epigastrium. He had a short dry spasmodic cough. The temperature was 100° F., and the pulse, feeble and thready, was about 150, but difficult to count. An x-ray examination showed a round opaque body in the upper part of the thorax in the middle line.

The diagnosis arrived at was that the haemorrhage was due to ulceration into the aorta, and that the case was inoperable.

He was fairly comfortable until 9 p.m., when he suddenly collapsed, and died in a few minutes, the collapse in this instance being accompanied by oozing of bright-red blood from the mouth and nose.

Necropsy.

A post-mortem examination was made two days later, and the following facts noted. The whole skin was

markedly pale, and there was no post-mortem staining. All the organs were healthy, but almost entirely bloodless. The heart and large arteries were nearly empty. The stomach and intestines were filled with dark blood.

The heart, aorta, trachea, and oesophagus were removed en masse, and a careful dissection made after hardening in formalin. A halfpenny was fixed transversely in the oesophagus. The neighbouring parts of the oesophagus, trachea, and aorta were matted together by fibrous tissue. The wall of the oesophagus at this part was about $\frac{1}{4}$ in. thick, and of almost cartilaginous consistence. The edges of the coin were securely lodged in two deep pockets in the oesophageal wall, and the edges of these pockets were drawn out into fringe-like projections (see drawing). At the bottom of the left pocket there was a small aperture not much bigger than a pin's head, with attenuated edges, communicating with the aorta, through which the fatal haemorrhage occurred.

The halfpenny was quite black. An attempt was made to polish it to find the date, but the figures 18— were all that could be deciphered.

With reference to the length of time the coin had lain in the oesophagus, the account of the mother was checked by that of the medical man who attended the patient at the time the coin was swallowed, and the period certainly fixed at about four years. During all that time the mother stated that the child complained of no inconvenience whatever.

THOMAS LOVETT, M.B., Ch.B.

A CASE OF ACUTE THYROIDITIS.

In April, 1908, at Hong Kong, a male Chinese, about 25 years of age, was brought to me for treatment. He complained of general malaise, of some stiffness and soreness of the neck, and of dysphagia.

He did not appear to be very ill; the temperature was 99.5° F. There was considerable chronic congestion of the pharynx, and many small granulomata on the surface of the mucous membrane. I ordered an alum gargle and some diaphoretic mixture.

He returned in three days, in accordance with instructions. He stated that he felt much worse, found great difficulty in swallowing, and his throat had suddenly swollen. The considerable increase in the circumference of the neck which had taken place was found, on examination, to be due to a general symmetrical enlargement of the thyroid gland. The tumour thus formed was smooth and tense, it did not fluctuate, nor was it pulsatile; there was no pain on pressure, and it was not freely movable under the skin. The symptoms were almost entirely dysphagic, but he complained also of loss of appetite, and his temperature was 100.5° F. I ordered the swelling in the neck to be painted with iodine liniment thrice daily, and potassium iodide in half-drachm doses, combined with a little aromatic spirits of ammonia, three times a day.

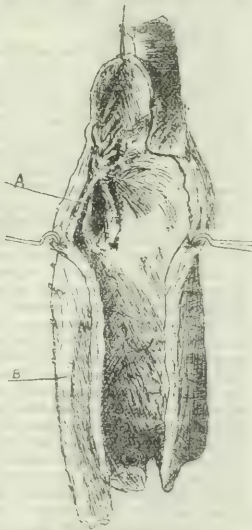
In the course of three days the swelling had greatly diminished, and the dysphagia was much relieved. At the end of a week all swelling had disappeared and the patient was feeling a little weak, but otherwise well.

This case is remarkable from its rarity and also from the rapidity with which resolution took place under the influence of potassium iodide, especially in view of the recently reported cases in which the exhibition of this and other iodides in large doses has caused sudden enlargement of the thyroid gland. It is also of interest to note that I had known this patient for some three years, during about half of which time he was in personal attendance upon me, and therefore I am certain he did not possess a small chronic goitre, such as sometimes gives rise to a sudden enlargement of the gland. I know also that he did not come from a goitrous locality. The man, who was very intelligent, assured me that no similar case had occurred in his family, nor were any of them afflicted with chronic goitre.

I would venture to suggest some temporary lesion of the vasomotor nerves which control the blood supply of the gland as the possible cause of such a sudden enlargement.

PORTSMOUTH.

KENNETH H. JONES, M.B.,
Staff Surgeon, R.N.



Posterior view of trachea, aorta, and oesophagus, the latter laid open from behind. A is the pocket in which the coin was lodged. The clear spot indicates the aperture into the aorta. B, Aorta.

THE TREATMENT OF GONORRHOEA BY IRRIGATIONS.

In the BRITISH MEDICAL JOURNAL of February 27th, 1909, page 551, Mr. J. J. Moore writes "a plea for more active treatment of acute gonorrhoea." He has treated, he states, "19 cases of acute gonorrhoea within the last four years," and the treatment adopted in these cases was the "daily repeated irrigation (potass. permang. gr. 1 to 10 oz. of boiled water heated to 99° to 100° F.) of the anterior portion of the penile urethra without the administration of any specific internally." Mr. Moore, writing from Sierra Leone, states that this treatment in his hands "has been rewarded with invariable success, the discharge disappearing even in the severest cases within ten to seventeen days, and no complications have arisen in the whole series of cases treated by this method." In large British military hospitals in recent years the irrigation treatment of gonorrhoea has been extensively carried out, and, speaking from a personal experience at Woolwich of 1,203 in-patients so treated in the past four years on the general lines (by no means new) advocated by Mr. Moore, I must confess to a certain amount of surprise at the duration of the disease in the cases cited by him. Were they Europeans? I conclusively showed in an article on the treatment of gonorrhoea, in the *Journal of the Royal Army Medical Corps* of November, 1908, in dealing with acute purulent gonorrhoea, that although the discharge may temporarily stop it commonly returns, and that six to seven weeks is about the average duration of urethral discharge even under the most favourable auspices with in-patient hospital treatment. In some cases gleet persists for months. The prolonged nature of the discharge is corroborated by independent military records in England and in India for fifty years past. Finger, of Vienna, is also of opinion that urethral discharge in gonorrhoea lasts six weeks despite all forms of treatment. The evidence of the Advisory Board Reports on venereal disease in the army, 1904, 1905, and the further valuable testimony of Major Blenkinsop, R.A.M.C., in an official report dated Simla, August, 1908, who visited sixty-four military stations to test these matters, amply endorses the prolonged nature of urethral discharge in many cases.

When a medical student, some twenty years ago, I heard (but never saw) of cases of gonorrhoea cured in three days. I did once, however, later see a case in which the discharge stopped within this period. The patient was an officer under orders for active service, who being naturally anxious to get rapidly well, and contrary to advice, underwent treatment at the hands of a prescribing chemist. The discharge stopped in three days, as the result of orchitis, and he travelled with me to South Africa nursing two enlarged testicles. He was left at the base, and is presumably impotent for life. It is cases such as these where a rapid cure is reported to have been effected that not infrequently develop gonorrhoeal arthritis or systemic infections at a later date. I commonly see a urethral discharge stop within less than seventeen days, and as commonly see it return, and this is the general experience of the medical profession. Microscopic examination of the centrifugized deposit in the urine will very soon demonstrate to the close observer that the case is not really cured, as the gonococcus in uncomplicated cases can be recovered up to six weeks or longer, and pus and epithelial cells for a longer period. If pus cells are present, relapse commonly occurs, although there may not have been any obvious urethral discharge for a period of fourteen days to one month, and marriage is contra-indicated. In cases of posterior urethritis and orchitis, however, the gonococcus can be recovered up to three months or longer from the urine, and the micro-organism lies latent and recrudesces; such cases might be described as ambulant gonorrhoea or gonorrhoea carriers, and in civil life the danger to women is very great. In the army such cases are kept in hospital, and at Woolwich under observation on discharge from hospital, with benefit to themselves and the civil population.

H. C. FRENCH,
Major R.A.M.C.

Royal Herbert Hospital, Woolwich.

A society for the prevention of venereal disease has been founded at Warsaw.

UNDER the will of the late Colonel Arthur Saltmarsh, of Sevenoaks, Kent, Guy's Hospital and the Gravesend Hospital each receives a legacy of £500.

Reports of Societies.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Friday, April 2nd, 1909.

Dr. W. H. CHEETHAM in the Chair.

Compensation for Accidents.

In a paper on this subject, Dr. T. CHURTON held that in a disputed case each of the medical witnesses should be required to state in writing the reasons for his opinion as to (a) the exact site of the lesion causing the symptoms; (b) its nature, considered as a distinct and separate problem; (c) its complete causation, with an estimate of the share taken therein by the injury, either directly or by its effects acting in their turn as causes. If, for example, one man asserted that there was in some defined part of the nervous system a chronic inflammation of traumatic origin, and another maintained that there was no inflammation but only (so-called) functional disorder, or no lesion of any kind, each should give his reasons in such a form that they could be submitted to a selected neurologist of judicial position and rank. In respect of the causation of accidents, he drew a distinction between essential, determining, and contributory causes. If in a mass of interdependent organs like the body a lesion produced by mechanical or other force gave rise to a succession of alternating effects and causes, the injury must be held responsible for all of them. As for the meaning of the word "accident," it was variously interpreted in their own interest by different contending parties, and the author doubted whether any condition or event which might be expected to occur in, and as a part of, the ordinary day's work, anything foreseen and certain to happen often or even occasionally, could properly be called an accident. Hence special terms and agreements should be made for hazardous occupations.

Bronchoscopy.

Dr. A. D. SHARP, in a paper on modern methods of examining the larynx, trachea, bronchi, and oesophagus, pointed out that unnecessarily strong solutions of cocaine were generally recommended, and that a perfect anaesthesia could be obtained by using a 5 per cent. spray for the pharynx, 10 per cent. application for the posterior surface of the epiglottis, and 10 to 15 per cent. for the trachea and bronchi. He attributed cases of temporary aphonia following bronchoscopy to faulty anaesthesia and indifferent manipulation. In order to get an extensive view within the trachea the distal end of the bronchoscope must be controlled so as to keep it in the centre of and parallel with the trachea, as there was a tendency for the end of the tube to direct itself against the anterior wall. Care must be exercised in withdrawing the tube as slowly as it was introduced, to prevent the end tilting against the trachea or against the cricoid and arytenoids.

MEDICAL SOCIETY OF LONDON.

Exhibition of Cases.

At a clinical meeting on April 26th, Mr. C. B. LOCKWOOD, President, in the chair, the following were among the cases shown:—Dr. F. J. POYNTON and Dr. W. L. SCOTT: Three cases of *Recurrent familial jaundice* in which the predominance of anaemia was striking, and jaundice, though at times marked, occurred only in definite attacks. Mr. V. WARREN LOW: A case of *Congenital dislocation of the hip-joint* treated by manipulation in 1905, resulting in the child walking without a limp, and being able to run and skip. Mr. T. H. KELLOCK: A case of *Traumatic meningo-encephalocoe* cured after lumbar puncture; slight pressure was also applied to the tumour. The child was now shown, more than two years after the treatment. Dr. F. PARKES WEBER: A case of *symmetrical Atrophy of hand muscles* with cervical ribs; skiagrams were exhibited showing cervical ribs in a younger brother and a sister of the patient without atrophy in the hand muscles. Dr. WILLIAM HILL demonstrated *direct vision laryngoscopy* on a female from whom a growth on one vocal cord had been recently removed by endoscopic surgery; also *tracheoscopy* on a female with laryngitis and tracheitis; *tracheo-bronchoscopy* on a

female with laryngitis, tracheitis, and asthmatic symptoms; and oesophagoscopy on a female with functional dysphagia. Dr. LEONARD GUTHRIE: A case of *Progressive muscular atrophy* in a man 39 years of age showing weakness and atrophy of the intrinsic muscles of both hands, of the flexors and extensors of both forearms and of both bicipital muscles.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—At a meeting on April 2nd, Dr. SEYMOUR TAYLOR in the chair, the following were among the exhibits: Mr. PARDOE: A case of complete extensor paralysis of the arm after *Excision of the elbow*. The scar was dissected out, and the musculo-spiral nerve found to be cut through just above its division. Anastomosis was performed by end-to-end suture. Dr. PALMER: A case of *Habit spasm* in which irregular spasmodic movements of the face, neck, head, and trunk muscles were markedly present. Mr. N. BISHOP HARMAN: A case of senile cataract with infantilism in a man of 50 years, with the physique of a fat boy and penis of a boy of 2 years of age; he had a well-formed scrotum, but no testes. Mr. E. ARCHIBALD SMITH: A painless *Tumour of the tongue* of ten years' duration in a young woman aged 18, probably a lymphangioma. Dr. SEYMOUR TAYLOR: The heart from a patient who developed a loud heart bruit which was thought to be caused by a torn aortic cusp. After death it was found to be due to an inflammatory thickening of the aorta wall itself. Dr. HALS DALLY (for Dr. ABRAHAM): A case of *Tricophyton endothrix* in a man aged 20, which he held to disprove the statement of Sabouraud of Paris that the disease did not occur in the adult.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—At a meeting on April 20th, Dr. T. JASON WOOD in the chair, the following were among the exhibits:—Mr. HORROCKS: Concretion from an appendix which had burst through into the bladder and become coated with phosphatic deposit. Mr. F. W. GOYDER: A case of serous meningitis treated by drainage through the posterior fossa of the skull. Mr. PHILLIPS, in opening a discussion on the surgical side of *Acute appendicitis*, divided the disease into three types. In the first, the "simple type," there was a certain amount of abdominal pain, tenderness in the right iliac fossa, some fever, and quickening of the pulse. The treatment should be: (a) Absolute rest in bed; (b) nothing except water allowed by the mouth; (c) clearing out the lower bowel by an enema; (d) if necessary a simple carminative mixture. The second type was Type 1 with the addition of swelling in the right iliac fossa. Cases could safely be left till things quieted down. Operation was not advisable at first, as, owing to adhesions and inflammation, it was usually a very difficult procedure. The third type was the gangrenous class—that in which the catastrophes occurred. Diagnosis was very difficult. It rested chiefly on the facial expression and the rigidity of the segment of the rectus muscle overlying the appendix. Immediate operation was the only treatment. The best incision was one just above Poupart's ligament. The pus should be mopped out and a gauze drain inserted. On no account should the peritoneal cavity be washed out. Dr. HONEYBURN, opening the discussion on the medical side, said the main question in any case was How much is the peritoneum involved? The main point in the treatment should be to keep the inflammation of the simple adhesive variety. This was to be done by absolute rest for the inflamed part, and not only should no food of any sort be given, but the bowel must not be disturbed by enemata or any other method of evacuation. A diagnosis established, morphine should be given in full doses, and continued as long as there was pain or tenderness. Operation was never required except in the gangrenous cases. In those, immediate operation gave the only chance. Mr. HORROCKS found that in Type 1, leeches and calomel in two-hourly doses of $\frac{1}{4}$ to $\frac{1}{2}$ grain, followed by an enema, were both useful. In the second type, where the swelling was to the inner side of the iliac fossa, careful watching was required, as the abscess was very liable to track down into the pelvis. Dr. RABAGLIATI said that, in his experience, if left alone the abscess frequently burst into the bowel, and Nature completed the cure. Dr. T. G. WOOD did not think Type 2 was always safe to leave untouched.

The most logical course was to operate in all cases as soon as diagnosed. In this way no harm was done in the cases classed as Type 2, and the gangrenous cases, being taken early, were given the best chance of life. Dr. CAMPBELL agreed that such a course was logical, but it was not always practicable.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting on April 21st, Dr. P. BOOBYER, President, in the chair, Dr. A. C. REID read a paper on the value of *Ehrlich's diazo reaction* to the general practitioner. In this he pointed out the diagnostic value of the test in early cases of enteric fever. The disease must, however, have reached a certain stage before the reaction was present. When this stage had been arrived at the reaction was in his experience constant. It was also constantly present in miliary tuberculosis, but the differential diagnosis of typhoid was not so difficult from that disease as from febricula, gastric fever, abdominal influenza, low bronchopneumonia, etc. The reaction did not merit the neglect it received from the general practitioner. As a negative test it occupied a foremost place, and as a positive reaction when taken in conjunction with other signs, tests, and symptoms it had considerable importance. The President and Drs. F. H. JACOB and O. KENTISH WRIGHT confirmed the value attached to this test by Dr. Reid. In opening a discussion on *The Notification of Births Act, 1907*, Dr. A. J. SHARP traced the changes brought about by the Act in the matter of time, of stillbirths, exemption of the mother, and penalty attaching to medical attendants. He discussed the question as to how far a new duty had been laid upon the medical practitioner. Explaining the object of early notification as the first step in a movement for the reduction of infant mortality, he reviewed the various measures which had already been put into operation. Amongst these were baby-shows, bounties payable on the child attaining a certain age, systematic visitation by voluntary or paid workers, mothers' and babies' welcomes, the encouragement of maternal suckling, day nurseries, milk depôts, school instruction in hygiene, and general sanitary progress. Tracing various objections to the Act, that on the score of professional secrecy was the most serious and persistent, but this had no basis of support in law when a duty became public and statutory. Indeed, as regarded children not born in wedlock, they were above all others the ones who most needed the strong arm of the law to protect them. Their death-rate was at least double that of legitimate children. Dr. S. E. GILL, continuing the discussion, emphasized the point that at the Nottingham Welcome no medical treatment of mothers or infants was attempted, but everything else that could be done in the way of encouraging the poor and inexperienced mother to feed, clothe, and tend her babe in a rational and hygienic way was done. In this way the more intelligent mother would act as a focus of knowledge and an example in her neighbourhood by which the general standard of infant hygiene and parental responsibility might be gradually raised. Indeed, the more aristocratic mothers might indirectly become more disposed to fulfil their natural obligations to their infants, which at present were apt to be shelved in favour of the theatre or playing bridge. The President pointed out that the Nottingham Welcome, although it had only been in existence about eight months, had already secured an average attendance of 200 babies per month. C. L. ROTHERA, Esq. (Nottingham City Coroner), agreed that the subject of infant mortality was one very vital to the health of the nation, and pointed out that the Children Act, 1908, laid down medical aid as a necessary which parents were compelled to provide for their children. He also drew attention to the elaborate system prevailing at Leipzig and elsewhere in Germany, by which children were examined weekly at a central depôt, so that any defect in the matter of health could be promptly detected and dealt with. The discussion was continued by Drs. J. WATSON, J. A. WARING, and W. HUNTER. Dr. W. TIBBLES showed a Siamese gentleman, aged 19, the subject of *Chronic oedema* of one hand and forearm of eighteen months' duration. The case had been carefully examined by Mr. James Cantlie, who had considered the possibilities of its being due to local irritation, synovial inflammation, filaria, ankylostomiasis,

and angio-neuroses, such as urticaria exaggerata, etc. A guess had been hazarded that it might be rheumatic, but there was no reason to attribute it to tubercle or specific disease. Blood examination had shown eosinophile corpuscles to be excessive, which rather suggested an intestinal infection. Indicanuria also existed, raising a suspicion of disturbed proteid metabolism. Treatment by bandaging the hand in thick wool, sour milk internally, and a mixture of ol. ricini cum ol. eucalypti had brought about some improvement, but a careful search in the stools had failed to reveal any parasite. Dr. R. B. PURVES (Lincoln) showed a myomatous uterus with the deflected cavity resulting; and Dr. F. H. JACOB showed microscopic specimens of *Diplococcus intracellularis* from a case of epidemic cerebro-spinal meningitis.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.—At a meeting in Manchester on April 23rd, Dr. J. W. MARTIN (Sheffield), President, in the chair, Dr. H. BRIGGS (Liverpool) showed two specimens of *Haematometra* removed by the abdominal route. In each case the retention of menstrual fluid was due to congenital atresia of the cervix. The patients were unmarried women, aged 32 and 35 respectively. Microscopic examination of the uterine wall showed a great excess of fibrous tissue and an absence of the glands of the endometrium. Dr. A. DONALD (Manchester) read notes of a case of bilateral *Abscess of the uterine appendages* occurring during pregnancy. Three weeks after spontaneous premature delivery each abscess was drained extraperitoneally through an anterior colpotomy incision. A marked improvement in the patient's condition immediately followed, but two weeks later symptoms of acute peritonitis appeared. On opening the abdomen a ruptured pyosalpinx was found and removed. Since then the patient had made a steady recovery. Dr. J. H. WILLETT (Liverpool) showed the specimen from a case of *Caesarean section* and abdominal hysterectomy for carcinoma of the cervix complicating a seven and a half months pregnancy. The patient was a multipara, aged 34. Irregular haemorrhage commenced at the end of the first month; later the discharge became offensive. The vagina was divided between clamps, but no attempt was made to excise the pelvic connective tissue. No enlarged glands were found. The mother made a good recovery, but the infant died when about 4 weeks old. Dr. W. BLAIR BELL (Liverpool) read the notes of a case of acute *Puerperal sepsis* with thrombosis of the ovarian veins, which were ligatured and excised without success. Death occurred sixteen hours after the operation. The details of a very complete bacteriological study of the case were given. Dr. Bell was of opinion that when septic thrombosis of the ovarian veins is diagnosed immediate ligation and excision should be practised. The President and Drs. BRIGGS, DONALD, and LEE argued that the operation in such cases was useless. Dr. A. DONALD (Manchester) read a note on the use of gauze drainage in certain cases of puerperal sapraemia in which retention of lochia occurs from sharp antelexion of the uterus with sagging of the body. Toxaemic symptoms due to decomposition generally arose, he said, on the eighth or ninth day or soon after. Immediate improvement followed intrauterine douching, but renewal of the retention and of the symptoms was apt to occur. This was best avoided by the use of a gauze drain.

A REPORT by Mr. Warburton, F.Z.S., to the Local Government Board (New Series, No. 2, price 2d.), on a preliminary investigation on flock as a possible distributor of vermin, contains some information on the life-history of the body louse. It appears that not only the eggs but the lice themselves may pass through a flock-making machine without being crushed; the lice, however, are incapable of surviving more than three or four days without food, so that it is extremely unlikely that any of them would be alive when the flock was converted into bedding. The eggs, however, may take any period from eight days to five weeks to hatch, so that it is possible that living eggs might be present in flock bedding. The period of development from larva to imago is eleven days, after which there is a non-functional mature condition lasting four days. Adult life has been shown to endure for three weeks in the male and four in the female.

Reviews.

IMMUNITY.

For several years Sir A. E. WRIGHT's work on vaccine therapy and the significance of the opsonic index has been the subject of much discussion and no little divergence of opinion. The title of his new work, *Studies on Immunization*,¹ led us to hope that here the author would clear up many difficulties which beset the subject by giving a full exposition of his present standpoint and meeting, fairly and squarely, the criticisms which many pathologists of repute have raised. We find, however, that the volume is less helpful than might be expected. It is a reprint of various papers published during the last twelve years, partly by Sir A. E. Wright, partly as the conjoint work of Sir A. E. Wright and various other pathologists, and, in a few cases, by Drs. Bulloch, Atkin, Western, and Keith. Only three of the papers have been revised; the rest have been reprinted without any change except the omission of detailed descriptions of technique. In expressing disappointment with this mode of presenting the subject we cannot do better than quote Sir A. E. Wright's own words. He admits that "no collection of separate papers, such as is here presented, can possess such an organic unity in its structural design as would enable the reader who is referring to the book to place his finger upon the place where the particular point he is in search of might properly be found." Careful examination of the contents of the book proves that the author's criticism is thoroughly justifiable. For this candidly admitted defect he has endeavoured to make amends by elaborating the index, which he describes as "something in the nature of an orderly synopsis." He relies on his index also as a means of silencing adverse criticism. "I have also found in the index an agency through which replies might be furnished to certain of my critics. By making use of the index as a finger-post, I have pointed these critics in each case to an impersonal reply inscribed in the text. It is a method of rejoinder which I would venture, with all submission, to recommend." This is a brilliant suggestion, revealing vistas of advance in medical literature. The *British Medical Journal*, for example, is constantly engaged in combating statements in conflict with its opinions previously enunciated; but it has not hitherto assumed that the task of direct comment upon these matters is rendered superfluous by the publication of a copious index every six months. The moment when Sir A. E. Wright has proved that adverse critics can be silenced by the publication of an index will be awaited on the tip-toe of eager expectation. The reprints in the present volume do not call for renewed criticism, but they form a very useful collection of important articles on agglutinins, bactericidins, opsonins, and the methods and results of vaccine therapy.

Studies on Immunity, by Professor MUIR of Glasgow, with the collaboration of Drs. BROWNING, FERGUSON, and MARTIN,² is another volume of reprints. In it are reproduced, with some alterations and a few addenda, articles which have been published in various journals during the years 1903-9. They deal with the properties of haemolytic serums, the deviation of complement, and the antibacterial properties of serum. To the select circle of pathologists who devote themselves to the study of immunity Professor Muir's investigations are already well known, but it will doubtless be a convenience to these workers to obtain in one volume a variety of important articles which have hitherto been distributed over various journals. It is disappointing to find that Professor Muir has not endeavoured to appeal to a wider audience. His reputation as an authority on immunity research stands so high that a general survey from his pen of the present position of the science of immunity would be accepted as reliable by a very large circle of medical readers, and would help to remove some of the confusion to which conflicting statements about the subject have given rise. Unfortunately, as the author

¹ *Studies on Immunization*. By Sir A. E. Wright, M.D., F.R.S. London: Archibald Constable and Co., Ltd. 1909. (Med. 8vo, pp. 506, 16s.)

² *Oxford Medical Publications. Studies on Immunity*. By Robert Muir, M.A., M.D., in collaboration with Drs. C. H. Browning, A. R. Ferguson, and W. R. M. Martin. London: Henry Frowde, and Hodder and Stoughton. 1909. (Demy 8vo, pp. 228, 7s. 6d.)

frankly confesses, in the present volume "no attempt is made to give a historical review of the whole subject; due reference is, however, given to the results of others, available at the time of first publication, in connexion with the various subjects discussed." That saving clause, "available at the time of first publication," provokes us to raise a word of protest. The volume before us is published and advertised as a new book, bearing the date 1909. Then why does it not undertake to give due reference to all such results as were available up to the date of going to press? The time of first publication of the articles now reprinted is a matter of relatively little importance to the reader; but recent contributions to the science of immunity are numerous, and the reader has a right to expect that what is published now should be thoroughly brought up to date. Among the many interesting essays in the volume special attention may be called to that devoted to the scientific principles underlying opsonic action—a subject where we are always glad to have the trustworthy guidance of Professor Muir's sound observation and shrewd criticism. His general conclusion is that in the case of normal serums the opsonic effect is usually due to the labile non-specific complement, which may act with or without a natural immune body. In this respect he finds a close parallelism between opsonic and normal bactericidal action. In the case of immune serums, he observes, the opsonic effect may be increased by immune bodies leading to the union of more complement; but there is, in addition, the formation of immune opsonin (bacterio-tropin), which produces an opsonic effect by itself, and possesses the constitution of an agglutinin.

TROPICAL HYGIENE AND PATHOLOGY.

Books dealing with questions of hygiene as applied to the tropics are not very common, so the volume entitled *The Principles of Hygiene as Applied to Tropical and Sub-tropical Climates*,³ by Professor SIMPSON, is very welcome. Many students of tropical medicine have listened to these lectures, delivered by the author at the London School of Tropical Medicine, and many have no doubt often wondered why they have never been put into book form. The treatise is a good one, and will supply a long-felt want. Its pages are filled with personal observations. Water supplies, purification and examination of water, take up four chapters, food and food supplies three, conservation or collection and sewage two; soil and drainage. Hygiene in relation to streets, houses, etc.; sanitation of gaols, communicable diseases, and village and town sanitation in relation to malaria and other diseases caused by mosquitos occupy each one. There is little to criticize adversely in the book. Perhaps more might have been made of the chapter dealing with diseases spread by mosquitos. Here there is no very definite distinction drawn between domestic or house and wild or forest and jungle mosquitos. As the means required to deal with these different varieties differs very greatly more detail would have been useful. The question also of the prevention of malaria in campaigns, and for single individuals travelling through the bush and living in tents, might well have had a chapter to itself. Still, space must be considered, and no doubt Professor Simpson had this in his mind when he refrained from a fuller discussion of the malarial question. The work is dedicated to Sir Patrick Manson—a fitting compliment. The book, which is uniform in style and shape with the *Studies in Laboratory Work* by Daniels and Stanton, and therefore of convenient size, ought to meet immediate success, and have a long life before it.

An epitome of exotic pathology⁴ is a recent addition to the series published under the general title *Précis Médicines*. It is written by Professor JEANSELME and Dr. E. RIST, of Paris, and the type, appearance, and general style of the

book at once recall the well-known manual on tropical diseases by Manson; the resemblance is enhanced by the presence in it of several diagrams and figures borrowed from the latter. Judging it from this standard it is seen to be fuller, diseases such as typhoid bilieuse (infectious jaundice), syphilis, intoxications, illnesses produced by climate, ocular manifestations, and cosmopolitan maladies such as pneumonia, rheumatism, tetanus, and tubercle, being included. Where it falls short of the standard is that its authors do not seem to have the personal acquaintance with many of the diseases which is necessary to enable them to write clearly about them. Such being the case, the information must be second-hand, and being often collected irregularly and not sifted thoroughly the summary becomes uninteresting, especially to those who know the subject and have worked at it. Examples are numerous throughout the book, but reference need be made only to kala-azar, beri-beri, yellow fever, sleeping sickness, and filariasis. The chapter on sleeping sickness (human trypanosomiasis) is specially poor; the clinical description of the disease is muddled, the blood changes find a minute place in the pathological anatomy, and the lymphatic changes are dotted into the diagnosis. The importance attached by Todd to enlarged glands as a means of diagnosis is condemned by the work of the recent French Commission; but if the authors had read the first clinical reports of the Royal Society's Commission to Uganda, they would have seen that this had already been demonstrated years before. There is a distinct tendency throughout the book to utilize recent French work to the exclusion of work done long ago in other countries; and though this can easily be understood, nevertheless it spoils the value of the book. In the chapter on *Schistosomum japonicum* the name of Catto does not once appear; as he discovered this parasite independently and was the first to bring the subject prominently before helminthologists in Europe, this is, to say the least of it, strange. Amongst the points worthy of notice in the book are the discussions on the differences between syphilis and yaws and between amoebic and bacillary dysentery. The authors, in accord with the general opinion of the present day, agree that these differences are real. After what has been said above, one would expect a very prejudiced or French account of sprue, and that is what we find. The disease is termed the chronic diarrhoea of warm climates, or Cochin China diarrhoea—both equally bad terms—and the account of the disease is very poor. The book, then, to sum it up, is written from a one-sided point of view, and though it is useful at times to see how others look at things, it cannot be recommended—certainly not to students in this country.

The pamphlet entitled *Malarial Fevers*, and described as "drawn up for the use of assistant surgeons, hospital assistants, and students," by Major S. P. JAMES, I.M.S.,⁵ admirably answers its purpose. Though couched in simple language the text is quite full enough to give a very good idea of the subject; scientific terms are carefully explained. In the part dealing with the diagnosis of malarial fevers (p. 65) no reference is made to the value, as a means of differentiating many of the different fevers, of blood counts—a method which should be within the reach of those for whom the book is intended; the estimation especially of the leucocytes in many cases at once makes the diagnosis clear. If leucocyte counts were more frequently made in ordinary home medicine as well as in tropical medicine fewer mistaken diagnoses would be made. A very useful chapter of the book is that on treatment and prevention. Properly applied treatment certainly has an extraordinary effect in reducing the mortality from malaria and has robbed the disease of many of its terrors. Prevention, however, is better than cure, and Major James's students will find this fully discussed as well. Short and to the point are the characteristics of this eminently useful and practical pamphlet.

³ *The Principles of Hygiene as Applied to Tropical and Subtropical Climates, and the Principles of Personal Hygiene in them as applied to Europeans*. By W. J. R. SIMPSON, M.D., F.R.C.P., D.P.H., formerly Health Officer of Calcutta, Lecturer on Tropical Hygiene at the London School of Tropical Medicine; Professor of Hygiene, King's College, London, etc. London: John Bale, Sons, and Danielsson, Limited, 1908. (Demy 8vo, pp. 403, 15s.)

⁴ *Précis de Pathologie Exotique*. Par E. JEANSELME, Professeur agrégé à la Faculté de Médecine de Paris; et E. RIST, Médecin des hôpitaux de Paris, Ancien inspecteur général des services sanitaires, maritimes et quarantaines d'Égypte. (De la Collection de Précis Médicaux.) Paris: Masson et Cie, 1909. (Post 8vo, pp. 821, 150 figures et 2 planches. Fr. 12.)

⁵ *Malarial Fevers—A Statement drawn up for the Use of Assistant Surgeons, Hospital Assistants, and Students*. By S. P. JAMES, M.D. Lond., D.P.H., Major Indian Medical Service. Third edition, rewritten and enlarged. Issued under the authority of the Government of India by the Sanitary Commissioner with the Government of India, Simla. Calcutta: Superintendent Government Printing, India. 1908. (Cm. 4to pp. 34.)

THE ACUTE SPECIFIC FEVERS.

To devote a volume of a hundred and fifty pages and nearly as many illustrations to the diagnosis of a single disease, suggests a superfluity of words and work. We cannot, however, accuse Drs. RICKETTS and BYLES of verbosity or waste of energy in their book on *The Diagnosis of Small-pox*.⁶ If there is a disease which is worthy of the distinction we have mentioned, it is small-pox. This loathsome, fatal, and highly-infectious disorder is never at the present day so continuously our companion as to accustom us even to its usual guises, yet its visits are sufficiently frequent to render us all liable to receive one, and evil is the day on which we fail to recognize the dangerous visitor. The most interesting and important portion of the book is contained in the second, third, and fourth chapters, which deal with the distribution of the eruption. Dr. Ricketts has previously told us that evidence from the distribution of the pocks is more valuable in diagnosis than evidence from their character. In these chapters, the theme that irritation of the skin largely determines the distribution is worked out in detail, and with such a wealth of illustration, verbal and pictorial, that the reader can hardly fail to carry the essential points in his memory. Another excellent chapter is the fifteenth, in which the differential diagnosis between small-pox and chicken-pox is discussed. The importance of this chapter will be recognized from the statement made on page 1, that "two-thirds of the errors in the diagnosis of small-pox arise from its confusion with chicken-pox." All the common, and most of the rare, diseases that are confounded with small-pox are amply reviewed, but we miss references to purpura haemorrhagica and acne varioliformis, diseases for which we have known small-pox to be mistaken with disastrous results. To discuss the pathology of the disease is outside the author's intention, but an expression here and there, hinting at a pathological hypothesis which we believe to be new, serves to whet our desire to have from Dr. Ricketts's pen a full exposition of his ideas on this subject. We are the more inclined to urge him to this task because it is some time since we have read a work by a new medical writer composed in a style so pleasant as the one under review. Of Dr. Byles's share of the work we have nothing but praise. The half-tone reproductions in black and white of his photographs, many of them stereoscopic, are a sufficient refutation of statements that have been made by some writers that photographs are of little, if any, value in the portraiture of cutaneous eruptions. The coloured plates, produced from triple negatives taken directly from life, are admirable, and are a feature of the book. Altogether this volume is one which, in places and times when small-pox is likely to be rife, no medical man who is unacquainted with the disease can afford to be without.

It is well known to those whose experience of the acute infectious diseases is at all extensive that during their course rashes, other than those which are distinctive of these diseases, not infrequently occur. They have been called by English writers "septic," "secondary," or "accidental," but little has been written about them either in this country or abroad, and that only in a desultory way. Dr. MARCEL POISOT has done good service, therefore, in collecting together in his book on erythematous eruptions of a severe nature⁷ the facts and hypotheses relating to them. The rashes in question are of various kinds; the commonest is a morbilliform erythema most marked upon, if not confined to, the extremities, but they may be scarlatiniform, urticarial, vesicular, purpuric, or varieties of erythema multiforme. Perhaps they are met with most commonly in scarlet fever, especially in scarlatina anginosa, but they are not rare in diphtheria and enteric fever. They have also been observed in outbreaks of sore throat due to milk. Amongst the various questions discussed by Dr. Poisot, the most interesting are those relating to the con-

tagiousness and pathogeny of the "syndrome," which usually consists of rash, vomiting and diarrhoea, ulceration of the lips, prostration, and a fall of temperature. The cases are sometimes observed to occur in small groups, a fact which suggests the infection of one patient by another. But the author easily disposes of this hypothesis. The pathogeny is by no means clear. Various writers have from time to time suggested that these cases are aberrant forms of the common infectious diseases, or drug rashes, or due to different bacteria or their toxins, especially streptococci, the *Enterococcus proteiformis* of Thierlein, the *Bacillus typhosus*, and the *Bacillus coli*. But here again Dr. Poisot has no difficulty in showing that the evidence in favour of these agents is by no means strong. The view of the cause of the syndrome favoured by the author is that which attributes it to insufficiency of action of the large glands, especially the liver and the kidneys, and that this insufficiency is dependent upon degenerative changes in the parenchyma produced by bacterial toxins. We doubt, however, whether this view explains all the cases—for instance, those in which the syndrome makes its appearance during the course of a slight attack of an infectious disease. The more probable view seems to be that the symptoms are produced in much the same way as are those of the so-called "serum disease," possibly by the circulation in the blood of some toxic body formed by the combination of the original foreign substance and its antibody. But we confess that this view is, perhaps, more speculative than those propounded by Dr. Poisot.

We regret not to be able to say very much in favour of Dr. R. W. MARSDEN'S *Practical Textbook on Infectious Diseases*.⁸ It seems to us neither to justify its title nor to come up to the reputation of its author. No one can accuse Dr. Marsden of lack of experience, and we can only suppose that he has been hampered in the production of this volume by want of time for revision and verification, and of space for explanation. Pathological matters are inadequately treated, and on the practical side lumbar puncture and intravenous injection are no more than mentioned, Widal's reaction is inadequately described, and methods of disinfection are not discussed. Even if we admit with the author that the larger books and the articles in the various systems of medicine are too full of detail to be useful to busy men except for reference, and that there is room for a small textbook which shall "briefly outline our newer conceptions of these diseases," we do not think that the volume before us carries out his idea of what such a work should be. Even for an outline it is too sketchy and indefinite.

Dr. LANGFELD'S *Infectious and Parasitic Diseases*⁹ was primarily intended for nurses, but on the advice of his friends he incorporated additional matter with the object of enhancing the value of the book for physicians and students of medicine. Apparently the account of the malarial parasite's life-history and the chapter on "the portals of entry and avenues of exit of micro-organisms in the various diseases" are examples of this desire to cater for the latter class of reader. The result is an unfortunate jumble. The introduction of a few highly technical details cannot possibly raise the book to the standard of the average textbook designed for medical students, whilst these matters are quite outside the sphere of a hospital nurse, and, from the nurse's standpoint, the less technical matter falls far below the standard of nurses' handbooks written by many English authors. The composition is slovenly, and there is far too much padding. A few examples may be quoted at random. "In this matter of the exit of micro-organisms from the body in disease we have the key to the happiness of families, the prosperity of nations, and to victory in wars." The common flea is described as "a minute red or dark-brown insect which is only parasitic upon man in countries where it is present in

⁶ *The Diagnosis of Small-pox*. By T. F. Ricketts, M.D., B.Sc., M.R.C.P. Lond., Medical Superintendent of the Small-pox Hospitals of the Metropolitan Asylums Board: illustrated from Photographs by J. B. Byles, M.B., B.C. Cantab., F.R.C.S. Eng., Senior Assistant Medical Officer of the Small-pox Hospitals. London: Cassell and Company, 1908. (Med. Rev. pp. 170, 21s.)

⁷ *Les Erythèmes Graves (Syndrome Erythémateux), principalement au cours de la Fièvre Typhoïde*. Par le Dr. Marcel Poisot, ancien interne des Hôpitaux de Paris, etc. Paris: Jules Roussel, 1908. (Suppl. roy., 8vo, pp. 210, with charts and one illustration.)

⁸ *A Practical Textbook on Infectious Diseases*. By R. W. Marsden, M.D., M.R.C.P., formerly Medical Superintendent, Mumps Fever Hospital. With a chapter on Puerperal Septic Disease by A. Knyvett Gordon, M.A., M.B., Medical Superintendent, Mumps Fever Hospital, Manchester. The University Press, 1908. (Cr. 8vo, pp. 324, 5s.)

⁹ *Introduction to Infectious and Parasitic Diseases*. By Millard Langfeld, A.B., M.B., Professor of Bacteriology, etc., Omaha, U.S.A. London: Rebusan Limited, 1908. (Post 8vo, pp. 276; 33 illustrations, 5s. 6d.)

great numbers. It is particularly troublesome in hot countries." "With one exception, that is, in consumption, the sputum is chiefly dangerous to those immediately surrounding the patient." "The modern method of food distribution is a marvellous development, that is comparable to other inventions of the 19th century." The author says in the preface to his book that most of it was written "during moments snatched here and there between urgent duties"; it certainly bears the impress of hasty writing, and we cannot compare it favourably with many books upon which more time and labour have been expended.

DISEASE AND INJURIES OF JOINTS.

In this recent work on *Injuries and Diseases of the Knee-joint*¹⁰ Sir WILLIAM BENNETT has dealt with his subject in the form, not of a systematic treatise, but of a series of clinical essays, devoted almost exclusively to questions of clinical and practical import. In this way some of the results of long and wide experience and of skilled observation are given to those who, though in active surgical practice, would be ready to welcome information which the eminent author himself, as he acknowledges in his preface, would have been glad to have had at his disposal some years ago. This information, it need hardly be stated, is very clear and definite, and is given in a style well adapted to afford sound and, in many respects, quite fresh instruction to practical men. In the fifteen chapters here devoted to a long list of traumatic and pathological conditions involving a large and complex joint the practitioner will find much help when confronted with doubtful questions as to the nature and the proper treatment of a perplexing case. Many useful hints are given on points of diagnosis; attention is directed to what seems to have been hitherto unrecognized, though, as Sir William Bennett shows, they are not infrequent, forms of articular effusion, and among other important suggestions on treatment objection is raised to indiscriminate use of retentive appliances in cases of injured or diseased knee. An introductory chapter on certain points in the normal anatomy of the knee, viewed from a clinical standpoint, is followed by a full and practical review of the different forms of intra-articular effusion. In these, and especially in two subsequent chapters on slipped cartilage, the author gives a lucid and helpful analysis of diagnostic signs, and very judicious teaching on the favourable and the doubtful conditions of active surgical treatment. Here and there the reader is reminded of the value of the Roentgen rays in diagnosis, even in cases in which such method of investigation is commonly thought to be futile; of the evils of prolonged immobilization in many forms of injury and disease; and the necessity before opening the affected joint for exploratory or therapeutical purposes, of inquiry into the general condition of the patient. The clinical teaching on most of the subjects is helped and not, as so often occurs, unduly encumbered by clinical records. A glance at the titles of the concluding chapters of this instructive book will show that Sir William Bennett has presented a full and comprehensive review of the modern surgery of the knee. In the chapter on injuries in and about this joint he deals with the operative treatment of fracture of the patella, and in the closing pages expresses a favourable though not unqualified, appreciation of Bier's method of induced hyperaemia, which he regards as being in certain cases a valuable adjunct to other methods of treatment.

THE seventh fasciculus of the *Nouveau Traité de Chirurgie* of Professors LE DENTU and DELBET is entitled *Maladies des Articulations*, and is written by Professor MAULAIRE and Dr. DUJARIER.¹¹ In this category injuries which have been already dealt with in the fifth fasciculus are not included, and although a great part of the seventh is devoted to tubercle, the whole of the eighth also, by Dr. Ganggolph, will deal with tuberculous arthritis. In this seventh fasciculus Professor Maulaire is responsible

for the articles upon infectious and non-infectious inflammatory arthritis and on ankylosis and articular tumours, and Dr. Dujarier for those on foreign bodies, arthritis deformans, and arthropathies of nervous origin. The authors take a broad view of their subject and discuss its many problems in pathology and treatment with moderation and judgement. While they hardly lay stress enough on the importance of conservative treatment, especially of tuberculous disease, they are not members of the impatient forward school, whose motto might be "Operate! Operate! and again Operate!" No such appalling list of (so-called) excisions of the hip as that recorded by König is to be found here, but at the same time hardly enough consideration is given to the ambulant treatment of tuberculous joints of the lower extremity, so ably advocated by H. O. Thomas and in America. The work of Thomas is so generally ignored on the continent of Europe, that we are not surprised to find no mention of it in a French treatise. No descriptions of operations or of apparatus are given, except in the chapter on ankylosis, possibly because such matters are to be treated in other volumes of the work. Generally speaking, more consideration and space is devoted to classification and etiology than to treatment. Professor Maulaire admits two forms of articular tuberculous arthritis, typical and atypical. The latter class he divides again into six other forms, and the last of these, the synovial form, is again subdivided into seven varieties. This classification is made from an anatomical point of view. From a clinical standpoint, the abnormal class is divided into eight varieties, several of which are subdivided again. Four forms of tuberculous rheumatoid arthritis are mentioned; this is a disease of which very little is heard in this country, and its claims to be considered a pathological entity are hardly admitted by British pathologists. "Growing pains," Professor Maulaire thinks, are an indication of bone or joint tuberculosis or osteomyelitis. Many pediatricians think that they are evidence of rheumatism. As to treatment, Professor Maulaire's personal experience of Bier's hyperaemic method has not been favourable. Immobilization is the most important principle. Injections of zinc chloride into the tissues around the joint, as recommended by Lannelongue, have, says Professor Maulaire, given remarkable results, especially in children. Failing expectant treatment, arthrotomy, arthrectomy, excision, and, as a last resort, amputation are to be the rule; but excision should be seldom done unless previous arthrectomies have failed to arrest the disease. The sections on syphilis and gonorrheal affections of joints are adequate, but here again we venture to think that there is an over-refinement of classification. Loose bodies in joints and their treatment are well described by Dr. Dujarier, but we think a little space might well have been spared to discuss the best incisions for their removal. Subluxations of the semilunar cartilages are not included in this section. The same writer treats of arthritis deformans, without finding it necessary to mention the name of Paget. He mercifully does not try to emulate Pribram, who named twenty-one varieties of Charcot's chronic rheumatism. The fasciculus concludes with an interesting account of arthropathies of nervous origin, which, however, offer little scope for surgery except orthopaedic; but this kind of palliative treatment is almost ignored by the author. For hysterical arthropathies massage in an early stage, and later anaesthesia, general or spinal, sham operations, and electricity, are recommended. Pilgrimages to Lourdes or some other shrines of healing are also, it is said, to be tried; but these are surely outside the domain of surgery! Like the other parts of the *Traité*, this fasciculus is printed in clear type on good paper, and is well illustrated, but the French compositor is often unhappy in his rendering of foreign proper names.

FRACTURES OF THE UPPER EXTREMITY.

DR. BORCHGREVINK of Christiania relates in his book on ambulatory traction treatment¹² some experiences which led him to abandon the use of fixation by means of plaster.

¹⁰ *Injuries and Diseases of the Knee-joint*, Considered from a Clinical Aspect. By Sir W. H. Bennett, K.C.V.O., F.R.C.S., Consulting Surgeon to St. George's Hospital, etc. London: James Nisbet and Co., Ltd. 1909. (8r. 8vo, pp. 256; 31 illustrations, 5s.)

¹¹ *Nouveau Traité de Chirurgie*. Publié sous la direction de A. Le Dentu et Pierre Delbet. VII. *Maladies des Articulations*. Par P. Maulaire et Ch. Dujarier. Paris: J. B. Baillière et Fils. 1909. 8vo, roy. 8vo, pp. 285; 83 figures. Fr. 6.)

¹² *Ambulatorische Extensionsbehandlung der oberen Extremitäten*. Von Dr. O. Borchgrevink, Chirurg. Oberarzt des Diakonershospitals zu Christiania. Jena: Gustav Fischer. 1908. (Sup. roy. 8vo, pp. 172; 93 Abbildungen. M. 4.50.)

of Paris, and to devise the splints which he here describes for the treatment of fractures and some other injuries of the upper limb. Fourteen years' surgical practice in Christiania have offered great opportunities, of which the author has made the most. Not only are injuries common in the factories of that city, but the sport of skiing, which is popular with persons of all ages, produces its quota of accidents. One of the chief difficulties in applying traction in fractures of the arm or of the forearm (when the latter is extended) has been the want of a suitable point of counter-extension. The axilla not only bears pressure badly, but is also an unstable point, varying as the arm is abducted or brought to the side. Yet it is the only available point for direct counter-extension. To meet the difficulty, Dr. Borchgrevink makes the splint end above in a loop or a U-shaped fork which lies round the armhole of the waistcoat or bodice, to which it is fastened. To prevent this garment being pushed up by the splint, it in turn is held down by an elastic perineal band. Such a method of counter-extension is obviously of no use when the direction of traction must be at an angle to the axis of the upper arm, as in many forms of injury it should be. In that case the bearing is taken on the front of the arm above the elbow-joint.

In all cases the lower end of the splint is provided with a pulley on a stem, which projects beyond the end of the wooden splint. Adhesive plaster is applied to the part below the fracture with great care, and by means of a stirrup of plaster and a cord round the pulley, leading to a piece of rubber tubing at the back of the splint, any desired amount of traction can be made. The limb is otherwise only very loosely fastened to the splint, so as to avoid constriction of the soft parts. There are four forms of this splint: for the upper arm, forearm, hand and fingers, and a combined splint, which may be either angular or straight. All these are fully described, as is also the means of improving them.

The advantages claimed for traction are that it overcomes the elastic contraction of the muscles, diminishes secondary reaction and pain in a marked degree, and corrects displacement better than any rigid method. The cases related and the Roentgen pictures reproduced in this book bear out these claims. As to callus formation, the author agrees with Bardenheuer that in an ideal union by first intention no callus is thrown out, and that callus is analogous to the fibrous tissue which results from suppuration in soft parts. Lucas-Championnière, on the other hand, claims the free production of callus as one of the merits of his method. Bardenheuer quotes 10,000 fractures of shafts of bones, and Borchgrevink 500 cases of fractures of the upper extremity without one case of pseudarthrosis. Besides fractures, this book treats of sprains, in which the effect of traction in relieving pain and preventing stiffness is as recorded most striking. The chapter on contracture and ankylosis is excellent. The author has not found electricity and massage of great value, and he cites the records of accident insurance in his support. He says: "The effort of will that brings a muscle into active contraction is better than all the electrical currents, and use maintains and restores muscle power better than any massage. Passive movements will overcome contracted antagonists, but the ground thus gained must be occupied by active movements, or it will speedily be lost once more." His rhymed motto may be rendered roughly, "Apparatus less, More success."

DIAGNOSIS AND TREATMENT OF MELANCHOLIA.

A PAMPHLET on the recognition and treatment of melancholia in practice, by Professor ZIEHEN of Berlin, formerly of Jena, was published in Parts II and III, vol. i, of the *Sammlung Zwangloser Abhandlungen aus dem Gebiete der Nerven- und Geisteskrankheiten*, edited by Professor Hoche of Freiburg. This small monograph is now deservedly in its second edition,¹² and, as one would expect from its source, forms a lucid, instructive, and practical guide to the diagnosis and treatment of this psychosis. Right or wrong in his conceptions, Professor Ziehen is always clear in his views and their expression, leaving no possibility of doubt as to his meaning. Melancholia is defined as a psychosis whose chief symptoms are

(1) a primary, continued, motiveless, or insufficiently motivated depression, and (2) a primary retardation of the course of ideal presentations or mental inhibition. The first symptom is never wanting, but the second may be transitory in certain circumstances. By "primary" it is meant that the depression or the inhibition, as the case may be, is not the result of other psychopathic symptoms—for example, is not, in the case of depression, the result of delusions, say of persecution; and in the case of inhibition is not produced by "fascinating" or engrossing hallucinations. Further, in melancholia the depression and inhibition are mutually co-ordinated, waxing and waning synchronously, even if, as a rule, the depression appears first and disappears last. Although Professor Ziehen's definition of melancholia would exclude many cases so classed in this country—melancholia forming only 16.4 per cent. of the female and 5.3 per cent. of the male admissions to the Jena asylum in the years 1886-1894—he does not agree with the growing Continental opinion that the term "melancholia" should be restricted to the depression of senile involution, and, indeed, shows that it may occur at any age, cases of true melancholia even in childhood having come under his observation. For the author's views as to the principal etiological factors of melancholia—its differential diagnosis, course, termination, and treatment—we would warmly commend this brief and admirable study to our readers. We may say, however, that Professor Ziehen considers that with proper asylum treatment over 90 per cent. of melancholics should recover, though this is without taking into consideration relapses which occurred in over 22 per cent. of his cases. Termination in secondary dementia is, he states, very uncommon, and occurs solely in the melancholia conditioned by arterio-sclerosis.

TREATMENT BY HYPERAEMIA.

THE second German edition of Professor BIER on hyperaemia as a remedy was reviewed two years ago. The American translation by Dr. BLECH of Chicago is made from the sixth German edition,¹⁴ a sufficiently remarkable testimony to the interest taken by Professor Bier's countrymen in the methods he has introduced into practice. A good many surgeons in this country have no doubt used the very simple means recommended, but they are not as popular or as widely known as they should be, for, although a good account of the method was published in English last year by Drs. Willy Meyer and Victor Schmieden, no translation of Professor Bier's book has hitherto appeared in English, and we hope Dr. Blech's translation will be widely read. The present volume contains only a few additional pages, including chapters upon the treatment of teno-synovitis crepitans and keloids. The hot-air apparatus, which Professor Bier regards as a very important part of his method, is very inexpensive, and in his opinion quite as efficient as the appliances for radiant heat, the use of which can only be obtained in large towns or public institutions or health resorts, while the very simple and economical method of treating tuberculous joints by elastic bandages is one which any practitioner, however situated, can carry out. The translation is in the theoretical parts rather obscure, owing probably to Dr. Blech being a German, and being therefore accustomed to think in the idiom in which the book is written, so that in this respect it is somewhat difficult for English readers to follow. It is strange to see in a book published in English the reference to John Hunter's work on *Inflammation* given only in the German translation published at Leipzig in 1797, four years after Hunter's death. We note "recocer" for "recur" (p. 10), and on p. 225 there is the word "doby," which at first looked like an American neologism of unknown meaning, but after consideration resolved itself into a mistake of the printer for "body."

THE ORIGIN OF PIGMENT.

WE have received a monograph by Dr. E. MEIROWSEY, of Breslau, on the origin of the melanotic pigment of the skin and eye,¹⁵ which contains an account of an interesting and apparently very accurate series of researches on the

¹⁴ *Bier's Textbook of Hyperaemia*. By Professor Dr. A. Bier. Translated from the German edition by Dr. G. M. Blech. London: Rebusan Ltd. 1909. (Demy 8vo. pp. 455. 12s. 6d.)

¹⁵ *Ueber den Ursprung des Melanotischen Pigments der Haut und des Auges*. By Dr. E. Meirowsky. Leipzig: Dr. W. Klinkhardt. 1909. (Roy. 8vo. pp. 122. plates 8. M. 75.)

¹² *Die Erkennung und Behandlung der Melancholie in der Praxis*. By Gen.-Med.-Rat. Prof. Dr. Th. Ziehen. 2nd edition. Halle-a.-S.: Carl Neubert. 1907. (Med. 8vo. pp. 67. M. 2.)

development of pigment after exposure of the skin to the Finson light. Pieces of skin were excised and submitted to microscopical examination. Coloured plates are given showing melanoblasts—branching connective tissue cells loaded with pigments—creeping in between the deeper cell layers of the epidermis, the cells of the epidermis loaded with pigment, pigment granules in the intercellular lymph spaces, and pigment in process of formation from the nuclear substance of the cells. The author adduces strong proof of his contention that the pigment not only arises from the melanoblasts of the cutis, but is also formed *de novo* in the epidermic cells; that it arises from the chromatic substance of the nuclei; that nuclear growth and activity precedes the development of the pigment; that a substance is formed in the nuclei which stains red with pyronin, and that this substance escapes from the nuclear plasma into the cytoplasm and finally becomes melanin; finally that two chemical processes are concerned, one, an autolytic process resulting in the setting free of the tyrosin group from the protein complex, and the other, the action of a ferment, tyrosinase, which changes tyrosin into melanin. This ferment is found widely spread in both the plant and animal world. The author gives an excellent account of the history of his subject, and adds a full list of references to the literature.

BRITISH JOURNAL OF DERMATOLOGY, 1909, 1, 1.

NOTE.—See also THE LANCET, 1909, 1, 1.

NOTES ON BOOKS.

IN his *Radiant Light and Heat* Dr. W. B. SNOW, of New York, has brought together some useful information regarding the practical methods of applying these agents and their value, principally in dermatology. He lays particular stress upon the effectiveness of combining two or more agents in physical therapeutics, and to this end he offsets the inhibitory action of somewhat massive doses of the Roentgen ray by means of the stimulating effects of radiant light or the static-brush discharge, thereby, he says, avoiding x-ray dermatitis. In a separate section he deals conservatively with the therapeutic possibilities of convective moist and dry heat in infectious inflammations and (when associated with other measures) in defective metabolism.

The twenty-fourth volume of the *Transactions of the American Climatological Association*¹ covers the proceedings of this body at its meeting in Boston in 1908, and is conspicuous for the number of papers devoted to a consideration of the administrative control of tuberculosis and its treatment by tuberculin in individuals. Another series of excellent papers deals with cardiac disease, one of them being a summary of a careful investigation into the question of whether the prevalence of diseases of the heart is increasing in the United States. The conclusion drawn is that the death-rate from cardiac disease is rising, in spite of the fact that the general rate shows a tendency to fall. The primary cause of this inconsistency is held to be the pressure at which all classes in the United States nowadays have to live, whether they inhabit great cities or rural districts, but the explanation does not seem very satisfactory.

¹ *The Therapeutics of Radiant Light and Heat and Convective Heat*, By William B. Snow, M.D. New York and London: Siegle, Hill and Co. 1909. (Roy. 8vo, pp. 119; 23 illustrations. 10s. 6d.)

² *Transactions of the American Climatological Association*, Vol. XXIV. Philadelphia, 1909.

MEDICINAL AND DIETETIC PREPARATIONS.

Caffeine-reduced Coffee.

IDIOSYNCRASIES with regard to coffee and tea are, as is well known, very common; there are people who, if they take coffee in the evening, cannot sleep well, others who suffer in a similar way after tea, and others who are equally unsuited to both beverages. These symptoms are no doubt due to caffeine or theine respectively. In other persons, again, coffee produces palpitation or other symptoms of cardiac discomfort, an effect from which tea appears to be more or less exempt. Our attention has recently been drawn to a coffee for which it is claimed that the greater part of the caffeine has been extracted. Examination showed that this coffee, which is called the "Life-belt" coffee, and is sold by a company of that name having offices at 71, Pastcheap, London, E.C., contains only about one-tenth or a little more of the amount of caffeine ordinarily present. It can, we believe, be obtained either in the roasted bean or ground, and the beverage made from it does not, so far as we are able to

judge, differ in flavour from untreated coffee made in the same way. This coffee will no doubt commend itself to persons who enjoy the flavour of coffee but do not desire its stimulating effects, or fear to suffer from insomnia or cardiac disorder as a consequence of indulging in the beverage.

MEDICAL AND SURGICAL APPLIANCES.

A Radium Applicator.

MR. W. H. MARTINDALE, Ph.D., has devised at the request of a client a small radium applicator in the form of a square locket: it has a mica window which cuts off the alpha rays while allowing the others to pass. A square



shape has been chosen, since it presents an advantage over a circle, as the surface to be treated when extensive can be planned out and treated at intervals, area by area, without the risk of covering the same part twice or leaving parts untreated. Radium

bromide is spread in a thin film on the square surface, either pure or mixed with an inert salt to yield a definite activity in uranium units, so that the operator may know exactly what strength he is using on a given surface. The locket applicators are made with an area of 1, 2, or 3 sq. cm.; nine carat gold is employed, and the price is stated to be reasonable. The appliance can be obtained from Mr. W. Martindale, 10, New Cavendish Street, Portland Place, London, W.

DRUG TREATMENTS FOR INEBRIETY.

A SOMEWHAT frequent constituent of preparations for the treatment of inebriety is atropine, while other preparations contain one or more of the alkaloids belonging to the same group, usually known as the solanaceous alkaloids, from the fact that they are all derived from plants of the nat. ord. *Solanaceae*. These alkaloids possess strong resemblances in their chemical nature and in their pharmacological properties; the principal members of the group are:

Atropine, $C_{17}H_{27}NO_3$, obtained chiefly from *Atropa belladonna* and *Scopolia carniolica*.

Hyoscyamine, $C_{17}H_{27}NO_3$, obtained chiefly from *Hyoscyamus niger* and *Scopolia* species.

Hyosine, or scopolamine, $C_{17}H_{27}NO_3$, obtained chiefly from *Scopolia* species, *Hyoscyamus niger*, and *Datura alba*.

The two following were originally described as separate substances, but have more recently been shown to consist of mixtures:

Duboisine, obtained from *Duboisia myoporoides*, consists chiefly of hyoscyamine and hyosine.

Daturine, from *Datura stramonium*, consists chiefly of hyoscyamine, with a variable proportion of atropine.

A certain preparation for inebriety is said to contain "stramonine"; as no alkaloid has been described and characterized under this name, it is probably only a variant of daturine, which, as has been said, consists of a natural mixture of hyoscyamine and atropine.

To the above may be added the artificial alkaloid homatropine ($C_{16}H_{25}NO_3$), which has not been found in a plant, but is prepared synthetically; in chemical constitution it is mandelyl-tropine, atropine being tropyl-tropine.

The differences in the action of the four principal solanaceous alkaloids are briefly as follows:

Atropine has a stimulant action on the central nervous system, especially on the motor area; it depresses and in large doses paralyses the nerve endings of secretory glands, plain muscle, and the heart.

Hyoscyamine is intermediate in its action between atropine and hyosine; causes less stimulation of the central nervous system than atropine, and is a weaker sedative and hypnotic than hyosine. It has the same action peripherally as atropine but is twice as powerful.

Hyosine resembles atropine in its paralysing effect upon peripheral nerve endings, the action being quicker, more powerful, and less lasting. It does not possess the stimulating effect of atropine upon the brain; depression of the motor area is marked from the first.

Homatropine resembles atropine in its action but is less powerful.

THE UNIVERSITY OF SHEFFIELD.

OPENING OF NEW LIBRARY.

THE Prince and Princess of Wales visited Sheffield on April 26th to open the University Library, the erection of which has been rendered possible through the gift of a sum of £10,000 for the purpose by Mr. Edgar Allen.

The university buildings occupy the slope of a hill on the verge of Weston Park, and the library has been erected on the highest point of the site, so that in approaching the university from the higher ground it is the most conspicuous building, and adds a very dignified note to the general effect. It is octagonal in form, of red brick with stone mouldings, in an ornamented Tudor style. There is a central hall, in the middle of which is a carved oak octagonal counter for the accommodation of the librarians, who from this central point will command a view of the entire building. Around the hall are eight richly moulded stone arches, leading into reading rooms with bay windows, fitted with tables and bookshelves, while above is a gallery with a similar series of rooms. Accommodation is provided for a hundred readers.

Two considerations have influenced Mr. E. M. Gibbs,

F.R.I.B.A., the architect of the university, in designing the library on this plan; one is that by making this series of rooms the classification of books will be facilitated, and the other that it will be easier to obtain quiet. The rooms have shelving for 25,648 volumes, and beneath the central hall is a lofty stock-room with a capacity for 97,696 additional volumes, making a total of 123,344 volumes. At present the library contains about 22,000 volumes.

Mr. G. C. Moore Smith, who was honorary librarian from 1895 to 1907, prepared for the occasion an interesting description of the library, in the course of which he predicts that if the university continues to receive benefactions at the rate which has so far prevailed, the library will in twenty or thirty years be famous in the North of England, and one of the chief glories of Sheffield. It is pleasant to note that those who are forming the library have not limited their ambitions to purely utilitarian objects. The committee puts forward a statement containing a list of the English printed or English written books down to the year 1640, and of foreign printed books down to 1600 which are already in the library; the committee adds with pardonable pride that whereas in 1897 the library possessed 5 of the former and 37 of the latter class, it now owns 191 of the former and 212 of the latter; of this total of 403 early books only 114 have been purchased, and it is to be hoped that citizens of Sheffield and graduates of the university who may not be able to rival Mr. Edgar Allen's splendid generosity may yet, acting in the same spirit, enrich the library by gifts of volumes which it still requires.

The Prince and Princess of Wales, who arrived at Sheffield a little before 2, drove to the Town Hall, where they were received by the Lord Mayor, and presented with an address from the city, in which reference was made to the earlier visit of the Prince in 1895 to open

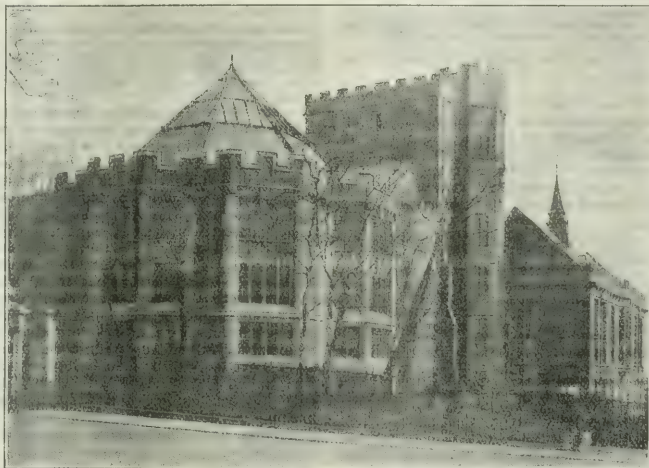
a new wing of the Royal Hospital, to the visit of Queen Victoria in 1897 to open the Town Hall, and to the visit of King Edward VII and Queen Alexandra to open the buildings of the university. The address went on to express the belief that the library would be of the greatest value to an institution of which the citizens of Sheffield are justly proud, for the university is already doing an immense amount of good in the higher education of the people of that great industrial centre.

The Prince, in his reply, expressed the special satisfaction with which he and the Princess had travelled to Sheffield to take part in the opening of the new library of the university, and the pleasure with which he learnt that the good results achieved by the university in the higher education of the people were thoroughly recognized by the citizens.

After lunching at the Town Hall the Prince and Princess proceeded to the university, where they were received by the Chancellor, the Duke of Norfolk, E. M., K. G., by the Pro-Chancellor, Alderman Franklin, and the Vice-Chancellor, Sir Charles Eliot; a procession was formed, and on reaching the Firth Hall the Chancellor made a number of presentations to the Prince and Princess. The Vice-Chancellor then read an address, in which the officers

of the university expressed the earnest hope and ambition that the Edgar Allen Library might worthily fulfil the purposes for which it had been erected, that all who taught and all who were taught in the university might find within its walls the means to acquire knowledge and the inspiration properly to use it.

The Prince of Wales, in the course of his reply, said that the great development of the university movement was



Photograph by]

THE NEW LIBRARY

To cut Pres

a remarkable feature in the march of education during the latter part of the nineteenth century. The important industrial centres now recognized that there were problems to be solved differing widely from those dealt with in the more ancient universities. Sheffield had been quick to see the necessity of adapting herself to the industrial needs of the people, and to realize that scientific and technical knowledge was indispensable to success in the strenuous commercial struggle amongst the nations of the West. Thanks to the liberality of the late Mr. Mark Firth, the college which bore his name was founded in 1879, and incorporated twenty-six years later with those other institutions which constituted the University of Sheffield, including among them schools of engineering and metallurgy which were famous throughout the land. A more important essential to a modern university than the addition about to be inaugurated, containing accommodation for 120,000 volumes, could not be imagined. He hoped that the shelves of the Edgar Allen Library would be stored with all standard and many rare works, which otherwise were beyond the reach of the individual student, thus furnishing him with an intellectual equipment which would help him to compete and triumph in the professional career to which he was called.

The Chancellor then conferred the honorary degree of Doctor of Letters on the Prince of Wales and Mr. Edgar Allen, and afterwards delivered a short address in which he thanked their Royal Highnesses for the interest they

had displayed in the university, and announced that Mr. Edgar Allen had presented £1,100 to a guild which has the charge of watching over the poor of Sheffield, had undertaken to give £5,000 to the Royal Infirmary on the condition that a ward or a wing in the institution should be called after the Prince, and £5,000 to the Royal Hospital on condition that a ward or wing should be called after the Princess.

Their Royal Highnesses then proceeded to the library, and Mr. Allen presented to the Prince a key, with which he opened the door. On entering the library the Bishop of Sheffield offered a brief dedicatory prayer, and the Prince declared the library open. Subsequently the royal party visited the physics laboratory under the guidance of Professor Hicks.

THE MILK PROBLEM IN AMERICA.

Dr. EASTWOOD's report to the Local Government Board on American methods of regulating and improving the milk supply¹ is introduced by a covering letter from Dr. Newsholme, Medical Officer to the Board, who, after describing the scope of the investigations with which Dr. Eastwood was entrusted, states that

The information collected by him and his personal comments thereon are interesting and instructive. They will be of value not only in relation to prospective legislation, but also as throwing light on administrative problems in this country.

The following is an outline of Dr. Eastwood's observations and recommendations.

BOVINE TUBERCULOSIS.

He has paid special attention to the methods adopted with a view to the eradication of bovine tuberculosis by the States of Wisconsin, Pennsylvania, Massachusetts, Minnesota, and New York. Whilst recognizing that the results obtained in some districts are encouraging, he considers that the general outlook for the country as a whole is not hopeful.

The disease is so widely disseminated, and the economic obstacles to its elimination are so excessively great, that it is impossible, even by a generous interpretation of the efforts which are being made, to put together tangible evidence of substantial success on the lines which have hitherto been followed. Tuberculosis progresses so insidiously, persists so long before manifesting its presence by physical signs, and has taken so firm a hold on the stock of the country, that there is not the least hope of being able to stamp it out by the application of any simple and drastic measures which have been effective in eliminating other infectious diseases.

Applying to our own country the lesson to be learnt from American experience, he considers that it is useless to attempt the formulation of any general plan for the complete eradication of the disease within a limited period. Ambitiously comprehensive schemes end in failure and the wastage of public money. The problem must be attacked piecemeal, and the first step to take is to secure the slaughter of cows with advanced or generalized tuberculosis or with tuberculosis of the udder. This raises the question, Ought compensation to be paid for cows coming under this description?

It is impossible to study American experience of compensation without forming a definite opinion on that point. When a herd contains animals broken down with tuberculosis, it practically always contains also other animals in a less advanced but progressive stage of the disease. The mere elimination of the former animals does not produce a clean herd; the other infected animals gradually develop the condition of those already slaughtered, and continue by their faecal and other discharges to pass on the infection to new arrivals. So the process goes on indefinitely, and the payment of compensation for broken-down beasts is a positive encouragement for its continuation. Public money expended for this purpose is worse than wasted; by rewarding the farmer who is unwilling or unable to adopt effective measures of control, it actually aids in the continued propagation of the disease, and so contributes to a further diminution of the food-producing value of the live stock in the community.

The next steps towards the eradication of tuberculosis are: (1) By means of the tuberculin test, applied to entire herds, to discover the total extent of infection; (2) to separate permanently the healthy from the reacting animals; and (3) to confirm the first diagnosis of freedom from tuberculosis by a repetition of the test some months

later. These measures are essential if freedom from the disease is to be secured. But tuberculin testing requires skill and costs money, and, as the average farmer cannot afford to pay for it out of his own pocket, the expenditure should come out of the public funds, with the exception of a small fee to be exacted from the farmer as evidence that he is earnestly desirous of obtaining the knowledge which will help him to eliminate tuberculosis from his cattle. The farmer will then have the opportunity of treating his cattle on the Bang system; and, in districts where there is substantial evidence that this system is appreciated, further assistance might be given to him. For example, in herds which become nearly, but not quite, free from tuberculosis, the community might take over the few remaining animals which react, on terms advantageous to the farmer; but this could only be done in districts where the value of the tuberculin test has become appreciated—that is, where farmers recognize that cows which have passed the test are worth more money in the open market than untested or reacting cows. Another important way of helping the farmer is to educate him by providing him with accurate information as to the financial loss which bovine tuberculosis involves, the economic advantages of getting a clean herd, and practical methods of obtaining one. And of all educative influences, it is urged, there is none better than the force of example.

The most effective way of teaching the farmer the way to success is to show him, in his own district, that success actually is being achieved. Local authorities, by establishing and maintaining clean herds for the supply of public institutions, would provide a valuable means of educating the farmer.

LOCAL MILK REGULATIONS.

The essential basis of authority in America resides in the right of the local board of health, by the exercise of its own unaided powers, to prohibit the sale of unwholesome milk. This right has been sustained in the law courts, and is supported by public opinion. But it must be understood that the American local authority does not usually enforce, or even attempt to enforce, every requirement which happens to be on its official code of rules and regulations. These codes are often drawn up on idealistic principles, setting forth what the health officer ought to endeavour to enforce; he accomplishes what he can, but his achievements usually fall short of the ideal. Aggressive regulations, demanding more than the producer can reasonably perform, do more harm than good; they are always evaded, cause much irritation, and satisfy nobody. But the medical officer usually learns by experience what rules he can enforce and what he had better allow to become a dead letter; and, using his powers with discretion, he is able to make appreciable progress.

Actual reforms are mainly due to the acceptance of reasonable recommendations offered by the medical officer, and are attributable to the recognition rather than to the exercise of this officer's right of direct intervention.

Theoretically, the medical officer has the right to withhold or revoke a "permit," that is, a licence to sell milk, for any and every breach of the municipal regulations; but in practice he exercises this right very sparingly, and only for very substantial cause, and therefore the system works well, and inflicts no hardship on the honest dealer. The advantage of the permit system is that it provides a more prompt and effective way for checking flagrant abuses than the clumsy method of prosecuting in the magistrate's court, and seeking the imposition of a fine. Closely connected with the permit system is the right of imposing conditions which must be fulfilled before milk can be permitted to enter a city. Here again, when the conditions imposed are reasonable, the exercise of this right is proving a very valuable aid in the endeavour to secure a wholesome milk supply. In short, the lesson which other countries might profitably learn from the measure of success which has been attained in America is that "it would be an advantage to entrust to the local health authorities reasonable and legally-defined powers of direct control over the production and sale of milk."

SPECIAL ASPECTS OF THE MILK PROBLEM.

The author's investigations into the production of pasteurized milk led him to the following conclusions:

Commercial pasteurization is firmly established, and cannot be abolished; but it seems both possible and desirable to institute a system of inspection which shall provide a guarantee

¹ Reports to the Local Government on Public Health and Medical Matters. New series, No. 1. London: Published by Wyman and Sons, 1907. To be obtained through any bookseller. 5d.

that the work is done efficiently, with regard to the interests of the consumer and in accordance with the standard of skill, care, and cleanliness already observed by the better class of firms. Whilst official encouragement or enforcement of pasteurization might be objectionable, it would appear useful and reasonable to insist that pasteurized milk shall be sold as such, in order to enable the consumer to choose for himself between the pasteurized and the raw article.

In many American cities the attempt has been made to establish a "bacterial standard" for milk—that is, a requirement that milk exposed for sale shall not contain more than a specified number of bacteria per cubic centimetre. Attempts to enforce compliance with these standards have generally failed, but nevertheless the interest which has been aroused in the bacterial contents of milk has served a useful purpose, and it is now recognized both by health inspectors and by many business firms that simple bacteriological tests are of practical utility as indications of the quality of a milk supply.

Routine bacteriological examination of samples for the guidance of the milk inspection service are valuable, and should be adopted. They afford the most reliable, the cheapest, and often the quickest means of discovering when milk has been improperly handled. Upon the pathogenic effects of many of the bacteria commonly present in milk further research is needed.

On the cooling of milk to a temperature not exceeding 50° or 55° F., much stress is laid in some American cities, particularly New York, but Dr. Eastwood does not consider that it would be possible to compel English milk sellers to comply with this requirement.

Attempts are being made in some American localities to grade milk according to its quality. These endeavours lead Dr. Eastwood to suggest that a useful purpose would be served in this country if some official restriction were placed on the fancy designations of milk at present in vogue, such as "pure," "nursery," "medically inspected," "from tuberculin-tested cows." He proposes that a regulation should be established requiring all milk to be sold under one of three designations—namely, "raw," "pasteurized," or "officially certified."

A brief description is given of the American "medical milk commissions," which aim at the production of thoroughly wholesome milk. The writer considers that these "commissions" are making slow but appreciable progress, and that they are worthy of imitation. In commenting on the limited degree of success which some of them have attained, he remarks that sufficient attention has not yet been paid to the employment of common methods of commercial enterprise in "pushing" this commodity. And, he adds, "municipal enterprise in the production of certified milk for the purpose of improving the physique, and therefore increasing the wage-earning capacity of the poorest classes, is also worth considering."

In many American localities the inspector fills up a report on each place he visits in the form of a "score card," assigning so many marks out of a given maximum for each detail on which it is his duty to report. Commenting on the practical working of this system, Dr. Eastwood says: "Given competent, honest, and tactful inspectors, the score card system works well, and is advantageous alike to the health authority, the producer, and the consumer. Its most important service is that it provides a steadily applied stimulus to voluntary improvement, where the conditions fall far short of the ideal but do not lend themselves to correction by coercive measures."

Discussing problems of milk transit and comparing American with English methods, he writes: "The fact that in the American trade milk is hauled in dust-proof receptacles demonstrates the absurdity of the notion that ventilation holes are necessary. On arrival at its destination by rail, milk should be in sealed cans bearing the name of the farm where it was produced. Promiscuous mixing of milk intended for sale without pasteurization is undesirable. If some mixing be necessary for the purpose of averaging the quality of milk sold as raw milk, the dealer should be saddled with the responsibility of labelling the mixture with the names of the two or more sources from which it was obtained. When milk is sold in bottles, official supervision is desirable to ensure the bacteriological cleanliness of the bottles and bottling apparatus."

BRITISH MEDICAL BENEVOLENT FUND.

At the April meeting of the Committee twenty-three cases were considered, and grants amounting to £204 5s. made to twenty of the applicants, two cases being passed over as unsuitable for help and one postponed for further inquiries. Appended is an abstract of the cases relieved:

1. M.R.C.S., I.L.R.C.P., aged 51. Has been incapacitated for some time by ill health and exhausted all his resources; is now better, and able to undertake a little light work, but requires immediate help to purchase a few necessary articles of clothing, etc. Voted £2 5s.
2. Widow, aged 38, of M.B., Ch.B. Glasg. Lost her husband soon after marriage, and is at present dependent on relations who can ill afford to help. Proposes to train as a maternity nurse, and friends promise to pay part of the expense. Voted £5 conditionally upon the balance of the money being found.
3. Widow, aged 60, of M.R.C.S. No income; endeavours to support herself by letting lodgings; children only able to give very slight help. Relieved three times, £34. Voted £18.
4. Widow, aged 61, of M.R.C.S. Quite unprovided for at recent death of husband, whose means were exhausted by a two years' illness. No children. Voted £12.
5. Daughter, aged 61, of late M.R.C.S. No means; has been given a home for some years past in return for services, but fears she will soon have to give it up. Voted £5.
6. Daughter, aged 64, of late M.R.C.S. No income; used to act as housekeeper to a brother, and after his death qualified as a maternity nurse, but now obtains so few cases that she is obliged to apply for help. Voted £12.
7. Widow, aged 56, of L.R.C.P., L.R.C.S. Edin. No income, and since husband's death twenty years ago has supported herself as children's nurse, etc., but has recently been incapacitated by a serious illness which has exhausted her small savings. Voted £12.
8. M.R.C.S., aged 70. Until a few months ago was in practice but had recently undergone an operation for gangrene, and is now quite incapacitated. Slight help from children. Voted £18.
9. Daughter, aged 59, of late M.R.C.S. Allowed 5s. a week by friends and earns about the same amount by needlework. Relieved twice, £30. Voted £12.
10. Daughter, aged 59, of late M.R.C.S. Is given a home in return for services, but requires help for dress and other unavoidable expenses. Health very indifferent. Relieved seven times, £108. Voted £12.
11. Daughter, aged 48, of late M.R.C.S. Is a confirmed epileptic and consequently unable to follow any occupation. Dependent on a brother-in-law, who can ill afford to help, and receives £10 a year from the National Hospital for the Paralysed and Epileptic. Relieved twice, £22. Voted £12.
12. Daughter, aged 43, of late M.R.C.S. For many years past has been obliged to nurse her recently deceased mother, an annuitant of this Fund. Hopes now to support herself by letting rooms, but requires a little help meanwhile. Relieved once, £5. Voted £5.
13. Daughter, aged 66, of late M.R.C.S. Has supported herself by teaching for forty-three years, but is now unable to do so. Health indifferent and sight failing; no means; earns a few shillings occasionally by knitting. Relieved once, £12. Voted £12.
14. Widow, aged 62, of L.F.P.S. Glasg. Only income £10 a year from a charity. No children. Lets rooms, but has great difficulty in obtaining lodgers, and is in a very bad health. Relieved six times, £60. Voted £10.
15. Daughter, aged 60, of late M.D. Aberd. Has given music lessons for nearly forty years, but finds increasing difficulty in getting pupils, and is in a very feeble state of health. Relieved twice, £20. Voted £10.
16. Widow, aged 49, of L.R.C.P., L.R.C.S. Edin. No income. Dependent on two sailor sons, both at present out of work. Relieved five times, £51. Voted £12.
17. Widow, aged 61, of M.R.C.S. Eng. No income. Slight help from friends; a son sends a few shillings occasionally. Is quite incapacitated by permanent ill health. Relieved three times, £36. Voted £12.
18. Daughter, aged 53, of late M.R.C.S. Is unable to earn a living, and dependent on three sisters who have to support themselves. Voted £5.
19. Daughter, aged 25, of late M.R.C.S. Health quite broke down after nursing her mother through a long illness, ending in death, and for some months past has been an inmate of different institutions. Relieved once, £5. Voted £6.
20. Widow, aged 66, of L.R.C.P. Lond. No income. Unprovided for at husband's death, about twenty years ago, and has supported herself by a boarding house, but now finds it impossible to make both ends meet. Relieved three times, £36. Voted £12.

Contributions may be sent to the Honorary Treasurer, Dr. Samuel West, 15, Wimpole Street, London, W.

LITERARY NOTES.

MESSRS. WITHERBY and Co. have in preparation a work entitled *A History of the Birds of Kent*, by Mr. Norman F. Ticehurst, M.A., M.B., F.R.C.S. Eng., who has for many years been well known among ornithologists as a close observer of the avifauna of the county. The work will be published by subscription, and only a limited edition will be issued.

In the *Periodical* for April we find some extracts from Wilson's *Art of Rhetorique* (1560), which has just been published by the Oxford University Press, with an introduction and notes by Mr. G. H. Maer. Two of these concern our profession, and may interest our readers. They are as follows:

When an vnlerned Phisitien (as England lacketh none such) had come to *Pausanias* a noble Gentleman, and asked him if he were not troubled much with sickness. No sir (quoth he) I am not troubled at all, I thanke GOD, because I vse not thy counsaile. Why doe yv accuse me (quoth the Phisitien) that neuer tried me? Marie (quoth *Pausanias*) if I had once tried thee, I should neuer haue accused thee, for then had I beene dead, and in my graue many daies agone.

An English Phisitien ryding by the way : and seeing a great companie of men gathered together, sent his man to know what the matter was, wherupon his man understanding that one there was appointed to suffer for killing a man: came riding backe in al post haste, and cried to his maister, long before he came at him: get you hence sir, get you hence for Gods loue. What meanest thou (quoth his maister). Mary (quoth the fernant), yonder man shall dye for killing of one man, and you I dare saie, haue killed a hundred men in your daies: get you hence therefore for Gods loue if you loue your self. . . .

It would be easy to give modern equivalents of these hoary-headed jests. The mind of man seems to be incapable of conceiving anything new in the way of jibes against doctors. They but change their dress with the time; the essence of the jest is ever the same.

To the *Caledonian Medical Journal* for April Colonel Kenneth Macleod contributes some interesting reminiscences of the Edinburgh Medical School as it was half a century ago. Speaking of John Goodsir, he says he has never been so impressed by the appearance of any man as by the person, mien, and manner of the famous professor of anatomy when he delivered his introductory lecture. Tall, spare, and bent, robed and clothed in black, with strong features, grave, thoughtful, earnest expression, eyes full of intelligence, which warmed and flamed as he proceeded, long arms, large shapely hands, slow gestures, and deliberate utterance, he presented the aspect of a scientific devotee. In his fourth year Colonel Macleod acted as prosector, and executed on a special subject a dissection of the pneumogastric and sympathetic nervous systems from end to end, with their distribution and intercommunications, which he believes is still preserved in the anatomical museum and used for demonstrations. While engaged on this work he was one day introduced to Goodsir by Professor Allen Thomson, of Glasgow, who was in search of a senior demonstrator. Colonel Macleod's youth and inexperience in teaching were against him, and Dr. John Cleland was chosen for the post. Colonel Macleod's anatomical work, however, stood in good stead when, many years afterwards, he was appointed Professor of Anatomy in the Calcutta Medical College. Robert Christison he describes as a strikingly handsome man, with a singularly strong, intellectual face. Colonel Macleod had the good fortune to serve under Syme as a dresser. He describes the great surgeon as follows:

A small, neat man, with a compact figure, shapely hands and feet, a plain but clever face, and a large head, he was dressed in a black dresscoat and tweed trousers, and wore a high collar with a large check stock. He drove in a big coach drawn by a pair of fine horses. He was a man of few words, but these were very much to the point. His voice was weak, feeble, and thick. When lecturing he sat on a chair in the well of the operating theatre, and had another placed beside him on which the patient, if able to walk, was seated. He generally saw him for the first time, and with a few pertinent questions and a rapid examination, he soon made his diagnosis, and explained the nature and treatment of the case in a few pithy sentences. When visiting the wards he made very few remarks. He was seen at his best when operating. He was collected, neat, quick, and resourceful. He knew what had to be done, and did it. He never changed his coat for an operation, but sometimes turned up his cuffs and sometimes his coat collar. His operations for traumatic aneurysm, by opening the sac and tying the artery above and below, were magnificent. He was a most kind, hospitable man, and devoted to botany and horticulture.

He concludes with a sketch of university life as it was in his day. The University Union was not in existence. The university was, in fact, a sort of big day school. There were, however, several literary, musical, and athletic societies and clubs which brought students pleasantly together. The Royal Medical and Hunterian Societies gave opportunities of mental improvement and agreeable association. The dissecting rooms and hospital were a common meeting ground, and good fellowship prevailed in all the classes, and mutual help and encouragement were cheerfully given wherever students assembled together. Medical students were a hard-working, well-behaved lot, and very few of them led an idle or fast life. Those best acquainted met in each others' rooms—generally of a Sunday evening—for a quiet chat over the "cup that cheers," and sometimes held a discussion or examination on the subjects of study.

To the *Bulletin of the Johns Hopkins Hospital* for January Dr. John E. Donley contributes an account of John James Wepfer, a physician of the period of the Renaissance, who specially studied apoplexy. Wepfer was born at Schaffhausen in 1620, and after studying at Basel and Strassburg, and afterwards spending two years in the universities of Italy, he returned to his native land and took his Doctor's degree at Basel in 1647. In the same year he was appointed physician to the city, and was granted the then unusual privilege of making *post-mortem* examinations. In 1675 he was appointed physician to the Duke of Württemberg, and shortly afterwards to Charles the Elector Palatine. He served with armies in the field at different times; when over 70 years of age he worked so hard in combating an epidemic fever which was ravaging the army of the Emperor Leopold that he died of the effects of overwork at the beginning of 1695. In accordance with his expressed wish an autopsy was made, and it was found that there was calcification of the aorta, a condition of which he had himself conjectured the existence. His chief work is a treatise on apoplexy (*Observationes Anatomicae ex Cadaveribus eorum quos sustulit apoplexia*) the first edition of which was published at Schaffhausen in 1658. It was reprinted at the same place in 1675 and at Amsterdam in 1681, 1710, and 1724. Wepfer gives the history of four cases of apoplexy with reports of the *post-mortem* examinations. He describes his method of opening the skull and removing the brain with its vessels. He gives a clear description of the vessels of the dura mater, of the vertebral and internal carotid arteries with their branches and their terminal ramifications coursing in the pia mater and entering the substance of the brain. He describes the arrangement of arteries at the base which is now known as the "circle of Willis." There is no allusion, however, to Wepfer's book in Willis's *Cerebri Anatome* which was published in 1664. Wepfer discusses the venous sinuses and expresses the opinion that the arteries of the dura mater as well as the internal carotids and vertebrals transmit their blood ultimately to the longitudinal sinuses whence it passes by way of the jugular veins back to the heart. His view as to apoplexy was that it occurred either because the afflux of blood was denied to the brain or because the efflux of animal spirits from the cerebrum and cerebellum was prevented, or, in certain cases, because both these causes acted together. Anything which prevents the influx of blood to the brain through the carotids or the vertebral arteries and its return through the jugular veins was, according to Wepfer, capable of producing apoplexy; and this influx to the brain might be hindered by obstruction of the internal carotid and vertebral arteries by compression of these arteries, or finally by blood extravasated within the brain. He observed that blood extravasated within the cranium would cause apoplexy if it was copious in amount and lay in the deeper parts, particularly about the base. Dr. Donley thinks that Wepfer probably gives the first systematic account of apoplexy in which the condition is explained in accordance with the new theory of the circulation of the blood. Wepfer was the author of researches on the effects of hemlock and other poisons and of several other works. He was a hard worker, seldom going to bed before 11 and rising at 4. He devoted the first part of the day to prayer and to the reading of the Scriptures, both in Greek and in Latin. He was never

idle throughout the day; even at meals he was busy with a book or with his correspondence. So great was his eagerness for knowledge that when the opportunity of investigating human bodies was lacking he studied the lower animals, his observations on which he frequently communicated to his professional brethren.

Medical News.

A SPECIAL meeting of the Dermatological Section of the Royal Society of Medicine will be held at 20, Hanover Square, on May 20th, at 5 p.m., when Dr. Louis Wickham, of the Radium Institute, Paris, will give a lecture-demonstration on the therapeutics of radium.

THE annual general meeting of the Medical Defence Union, Limited, will be held at the Medical Library, University College, Bristol, on Thursday, May 27th, at 4.30 p.m., when the annual report will be presented and the usual statutory business carried out.

WE are asked by Captain Montgomery Smith, the Honorary Secretary, to state that the annual meeting of the Volunteer Medical Association will be held at 20, Hanover Square, on Wednesday, May 5th, at 4 p.m., for general business and the election of officers.

A SPECIAL meeting of the Irish Medical Schools' and Graduates' Association will be held at Harrogate on Saturday, May 22nd. Arrangements have been made with the Majestic Hotel to allow of members remaining until Monday to visit places of interest in the neighbourhood. Full particulars may be obtained from the Honorary Secretary, 30, Myddelton Square, E.C.

THE summer post-graduate session at the Hospital for Sick Children, Great Ormond Street, W.C., will commence on Thursday next, May 6th, when Dr. Batten will give a demonstration on cases of cerebral tumour in children. On May 15th Mr. Corner will deal with selected surgical cases. The lectures are at 4 p.m. on each Thursday, and are free to all qualified medical practitioners.

DR. LEONARD HILL, F.R.S., Lecturer on Physiology in the London Hospital Medical School, is one of the wise hard workers who rides a hobby, and to such good purpose that a collection of his paintings in oil and water colour form an interesting little one-man show which will be open until May 11th at the Corner Gallery, so called because it is in the house at the corner of Old Bond Street and Piccadilly. Dr. Hill belongs to the impressionist school, and the most striking quality of his work is an appreciation of colour values well shown in what is probably the best piece in the collection, a black cock retiring vanquished from combat. There are several other brilliant animal paintings and a number of near landscapes, most of which show a love of sunlight, particularly a finished sketch of a woodland garden with daffodils. Altogether the show leaves the impression that Dr. Hill might have made another career for himself had he so chosen.

THE tenth meeting of the Departmental Committee appointed by the Lord President of the Council to consider the working of the Midwives Act was held at the Privy Council Office on April 28th, Mr. Almeric W. FitzRoy, the Clerk of the Council, presiding. The following witnesses attended and gave evidence:—Miss K. Stephenson, Honorary Secretary of the Wiltshire County Nursing Association; Miss Lilian Trendell, certified midwife, lately Inspector of Midwives for the County Council, and County Superintendent of the County Nursing Association in Herefordshire; Mrs. Elizabeth Miles, certified midwife, Hertford; Miss Alice Gregory, certified midwife, Honorary Secretary and District Superintendent of the Home for Mothers and Babies and Training School for District Midwives, Woolwich, Vice-Chairman of the London County Council Midwives Act Committee; Mrs. Messenger, certified midwife, Matron of the St. Margaret's Nursing Home, 30, Surrey Square, S.E.

THE first report has recently been received of an undertaking of some interest—namely, an institution for the training of children who are not only blind but mentally too defective to be able to profit by the tuition afforded in ordinary schools for the blind. It was established by Miss Meiklejohn a few years ago on the suggestion of Dr. Campbell, of the Royal Normal College, Upper Norwood, and last year was reorganized so as to be recognizable by the Board of Education as a registered special school. Its object is to endeavour to improve the mental condition of the children sufficiently to enable them to pass on to ordinary schools for the blind, and, failing this, to teach them to become decent and possibly useful members of an ordinary household. Children of both sexes are admitted,

and the school is permitted to receive not only children sent by public education authorities but also private cases. There are vacancies now for blind and defective girls belonging to middle-class families, but the managers of the school are specially anxious to have placed in their charge quite young children, as they offer the best chance of success. Children from any part of the country can be received, as, though the title of the school is the Hastings and St. Leonards Special School for the Blind, the connexion is merely one of locality. As far as we are aware, this school stands by itself among such institutions, for, though the London County Council makes special provision for defective blind boys, there is no school which caters specially for blind and defective girls. By the regulations of the Board of Education its accounts have to be audited and published in a prescribed form, and the children must be instructed by a qualified teacher and housed in accordance with the regulations of the Board of Education, to whose inspection it is at all times open. These are points of interest, for it can never be made entirely self-supporting, and, in default of assistance from charitable sources, it may prove impossible to keep it open for long. It has its habitation at 48, Kenilworth Road, St. Leonards-on-Sea.

A QUARTERLY court of the directors of the Society for Relief of Widows and Orphans of Medical Men was held on April 14th. Dr. Blandford, President, in the chair. Eleven directors were present. It was reported that since the last meeting three members of the court had died—Mr. T. Laurence Read, Vice-President, and Dr. Eastes and Dr. Chas. Baker, directors. Votes of condolence with the families of these gentlemen were passed. Two medical men were duly elected members of the society. One of the annuitants, an orphan, had died. Her mother, up to the time of her death, had also been in receipt of grants. The father had paid in subscriptions £14 14s., and his widow and orphan had received from the funds of the society £960. Five letters asking for relief had been received from widows of medical men, but had to be refused, as their husbands were not members of the society. Membership is open to any registered medical practitioner who at the time of his election is resident within a twenty-mile radius of Charing Cross. The subscription is two guineas per annum, and relief is only granted to the widows and orphans of deceased members. Full particulars may be obtained from the Secretary at the offices of the society, 11, Chandos Street, Cavendish Square, W. The invested funds of the society now amount to over £100,000. Thursday, May 20th, was fixed for the annual general meeting, due notice of which will be posted to the members on May 1st.

THE second International Congress on Industrial Accidents will be held at Rome from May 23rd to 27th, under the patronage of the Italian Government. Its programme of work was indicated in the BRITISH MEDICAL JOURNAL of March 20th, p. 736. For the benefit of any readers who may wish to take part in the proceedings, it may be repeated here. The subjects to be dealt with are: (1) The organization of a medical and surgical service for the treatment and observation of the consequences of industrial accidents, and the principles which should guide doctors who have to give expert evidence on the subject. (2) The diagnosis and prognosis of neuroses caused by industrial accidents. (3) The estimation of working capacity before and after the accident; this includes: (a) Methods of examination for that purpose; (b) the importance of the state of health before the accident (predisposition, previous illnesses, etc.); (c) anthropological and sociological factors (race, age, sex, criminality, etc.); (d) the influence of phases in the legal procedure, inquiries by magistrates, medical examinations, etc.). (4) The influence of the mode of compensation on the development of post-traumatic nervous affections. (5) Statistical observations from the medical point of view as to the consequences of the application of the compensation law. (6) Functional adaptation of injured limbs. Communications relative to the congress should be addressed to the general secretary, Via Borgognona 38, Rome: the subscription (Fr.20) should be sent to the treasurer, Professor A. Ascarelli, at the same address. Reports introductory to discussions should not exceed sixteen and papers should not exceed eight printed pages in length. The honorary presidents of the executive committee are Professor Baccelli, Deputy to the Italian Parliament, and Professor Durante, Senator of the Kingdom. A committee formed for the purpose is arranging a programme of festivities and excursions. Ladies belonging to the families of congressists are admitted to membership at a subscription of Fr.10.

British Medical Journal.

SATURDAY, MAY 1st, 1909.

SPIRITUAL HEALING.

WHATEVER else may be said of him, Mr. W. T. Stead has a keen eye for the sensation of the hour. Therefore it was inevitable that he should give us his views on faith healing. Christian Scientists, he says (in the *Review of Reviews*, February and March), Psychotherapists, Magnetic Healers, and Spirit Healers have discussed with him how they do their mighty deeds. That they do them, he adds, no one can doubt; and has not Dr. Schofield assured us that faith-healing is a reality? Impressed by this convincing testimony Mr. Stead has looked into the matter, and passes various types of "healer" in review.

First we have the late Father John of Cronstadt who, if his devotees are to be believed, has a long list of miracles to his credit. That he had the indefinable gift of exerting spiritual influence seems to be unquestionable, and no one who knows how such influence can act upon the body in certain conditions will be disposed to deny that he may have wrought cures of nervous disorders in some cases. But he was under no delusion as to the limitation of his healing power, and he was so far from taking up the attitude of most "healers" that he declared that "those 'commit murder who will not have a doctor to attend 'them, or another person who is ill and requires the 'doctor's help.'" He attributed whatever he did in the way of healing to prayer, a belief in which as a curative agent has been held and acted upon by the Church from the time of its institution. Father John was in fact a saint of the type of those who flourished in the "ages of faith," when whatever ill could not be traced to the action of evil spirits was regarded as a punishment or trial inflicted by God.

Next in Mr. Stead's collection of "healers" comes Mr. F. L. Rawson, of London, a consulting electrical engineer, who finds the key to the mystery of disease and its cure in electricity. Even prayer, if we understand him, is a form of electrical action. He believes that Mrs. Eddy has discovered the method by which Christ wrought His miracles and that Christian Scientists heal sin and sickness in the same way. But he explains her metaphysics in terms of natural science. The ether, he says, consists of lines of force at right angles to each other. At some of the places where these lines of force or high-tension electrical currents cross, the electrical tension rolls them up into a sort of knot. This is the electron, now recognized as the smallest particle of matter, and matter is simply a massing together of these electrons, or, in Christian Science language, it is a manifestation of thought; the lines of force being simply the natural science name for thoughts. By the action of the human mind, by strong, determined thinking or will-power, this electrical tension can be released and the matter then disappears, but the thoughts that caused

the trouble are still there, and roll up again in some other form of trouble. When a person prays in the right way the action of God causes these lines of force and the electrons as well to be short-circuited, as in the cases of instantaneous healing of cancer and tumour. Mrs. Eddy, says Mr. Rawson, describes the whole action and interaction of the ether in metaphysical terms; for instance, she speaks of error destroying itself, which means the short-circuiting action of the two ends of adjacent particles on each other, one end being positive and the other end negative. She calls these thought germs. The true natural science explanation of the action of thought and matter is merely Mrs. Eddy's metaphysical explanation expressed in terms used in natural science, and for the first time in the world's history we get religion, science, and metaphysics absolutely agreeing; only they have not yet discovered that this is so owing to their using different terms, and to one side being too busy and the other not loving enough. This lucid explanation should be sufficient to convince any one that Mr. Rawson can do wonders with words. Of the marvels of healing which he claims to have performed, Mr. Stead can scarcely trust himself to speak. He confesses, indeed, that he has not had the opportunity of collecting and sifting the evidence of those who have benefited by Mr. Rawson's treatment; this, we may hint, would be somewhat hard to do, as his power is said to extend to raising fallen cab-horses in the street by the power of "right thinking." Nevertheless Mr. Stead, who would seem to be as much above evidence as the Emperor Sigismund was above grammar, "can vouch for the fact" that he has done great good and achieved results in "cases which have baffled the efforts of the faculty" and all friends who have been sought to relieve "sufferers both by the mediation of the medical 'pharmacopoeia and by the conventional method of 'prayer.'" What does Mr. Stead consider the voucher of one who has had no opportunity of sifting the evidence to be worth? Mr. Rawson, we are told, is not without hope that he may be able to banish death from the world. In this, if we are to believe a witness quoted by Mr. Stead, his electricity is less potent than the metaphysics of the Christian Scientists, some of whom are said to have raised people from the dead. It is true Mr. Stead is inclined to believe that they were not really dead; but if there be no such thing as death, what difficulty can there be in conjuring away a mere delusion? We have, by the way, to thank Mr. Stead for a delightful phrase; he says the testimonies given at meetings of Christian Scientists "are 'enough to stagger the most credulous!'" No wonder they staggered him.

We have next brought before us a Mr. W. H. Edwards, a magnetic healer, who claims that he effects all his cures by the direct help of his spirit friends. With an apparent simplicity in which may, perhaps, lurk a grain of malice, Mr. Stead tells us that he introduced Mr. Edwards to Mr. Rawson, "but the two 'healers did not benefit each other.'" Perhaps, like the soothsayers of old Rome, they had to use up all their electric and magnetic force in suppressing a tendency to laughter.

Of Mr. J. M. Hickson, the President of the Society of Emmanuel, we hear that he casts out devils, heals the sick, and does everything short of raising the dead. From a list of "typical cases" Mr. Stead selects the following remarkable "cure." The patient "fell and 'injured the patella, which had previously been 'broken four times. Two doctors expressed the

"opinion that he would never have full use of knee again. It was very painful and quite callous (*sic*) at the time of first treatment by prayer, but in twenty minutes he was able to bend it without help, the following day to walk about the house, and after four visits to resume ordinary duties." This beats bone-setting.

Here a question may suggest itself to the profane mind. As we have so many persons among us endowed with such supernatural gifts, how is it that their beneficent activity makes no appreciable impression on the amount of sickness and death which the Registrar-General still has to record? Mr. Stead does not know what to think of the marvels he has heard, and ends with the sage reflection that "so long as mortal men are really healed, so long will they go to the healers, let the doctors say what they will." To which we are tempted to reply: "Let them go; if there is anything really the matter with them they will come back again." As an illustration we may mention a sad case within our own knowledge. A man with some slight symptoms of bladder trouble consulted an eminent specialist, who discovered a small growth which could easily have been removed. It was arranged that the patient should undergo the operation. In the meantime, however, he fell among Christian Scientists, who persuaded him that he was quite well. And, indeed, for a time the symptoms almost ceased. But the insidious disease remorselessly went on its way, till the unfortunate patient was past all surgery. We repeat that what is wanted is a complete and well-authenticated account of these spiritual, electric, and magnetic cures, with the fullest details of the cases and their ultimate results. We make bold to say that these would be "enough to stagger the most credulous."

NEPHROPEXY AS A PANACEA.

THE foible of popular and even of professional medicine is to run after panaceas; antimony, mercury, venesection, tar-water, have each played their parts; and in later times hydropathy, electricity, massage, radiant heat, and systems of diet have made bold bids for the same universal validity. The means used must be new and capable of creating a distinct impression, while they must not be demonstrably injurious, or at least their use must not be attended by a high rate of mortality, or they are scarcely likely to attain great popularity. Only in recent times have surgical proceedings been capable of entering as competitors for this position, unless we include trephining, which in a distant past appears to have been looked upon as a remedy for many diseases of very various etiology. But antiseptic or aseptic surgery has rendered it possible to recommend as remedies for all sorts of symptoms operations which would previously have been dangerous in themselves. The pioneers were the gynaecologists, and the cervix uteri was at first the favourite object of their operations; this part of the human body a few years ago was indifferently either split asunder or stitched up in order to cure identical maladies which were with more or less confidence declared to depend upon the presence of certain local conditions these procedures were designed to remove. With the improvement in surgical technique gynaecologists became bolder, and transferred their attention to the uterine appendages, which were removed to cure epilepsy, hysteria, and

even insanity, with sufficient success to give plausibility to the remedy for a time. Space will not allow us to detail every operation which could be quoted from the history of the last few years, but among the latest is nephropexy, which finds a strong advocate in Mr. Billington, of Birmingham. His experience extends to 150 cases upon which he has operated for movable kidney during the past three years, and he divides them into five groups—a convenient classification, as probably no one denies that there are cases of the kind for which the operation is not only justifiable but necessary. The cases constituting his first group, are those in which the prominent symptom is local pain made worse by the upright position and by exertion, and relieved by lying down. Unfortunately, Mr. Billington does not state the number of these cases on which he has operated, but we may infer it by subtracting those given under the other headings. He enumerates 112 in the second, third, and fourth groups, but gives no details about the fifth, so if we assume that about 30 cases were in his first group we shall not be far wrong, and if all were similar to the three examples given the treatment calls for no criticism. The second group was made up of those patients with symptoms associated with the digestive system, such as would be called nervous dyspepsia. Of the two cases given as examples, in neither can it be said that a cure was effected, and although Mr. Billington says he "has every reason to be satisfied with the results in the twenty cases" in which he has operated" the evidence he lays before us is inconclusive. In the third group the patients were suffering from symptoms of neurasthenia; and there, again, the examples given do not show complete cure, and Mr. Billington admits that "there have been failures." In Group 4 there were 12 cases of "undoubted lunacy," of whom 6 are claimed as cured; brief notes are given of 3 only, and of these 2 were instances of conditions of acute insanity from which spontaneous recovery might be expected; while of the third we should have liked more definite evidence of recovery than the hearsay statement quoted. Of the fifth group, which included cases in which the prominent complaint had reference to the female pelvic organs, Mr. Billington admits that his experience is limited, and he gives no details. He claims as the result of his experience to have proved that nephropexy is a safe and satisfactory surgical procedure, and while saying very properly that renal mobility alone is not an indication for the operation, he regards local pain of sufficient severity to diminish working efficiency as such an indication. This conclusion may be accepted, and it may be agreed that so far Mr. Billington has made out his case, but when he asks us to agree that chronic functional disturbances of the digestive system and progressive spinal and cerebral neurasthenia and insanity depend upon movable kidney and may be cured by stitching it in position, we remain in doubt.

Dr. Suckling has published a second edition of his book on *Movable Kidney*,¹ which contains an exposition of the principles upon which Mr. Billington's operative indications are based, and to which he refers. Dr. Suckling claims that the operation is a cure for insanity, neurasthenia, nervous dyspepsia, and many other conditions; and although there is no reason to doubt that in a certain number of cases improve-

¹ *Movable Kidney*. By C. W. Suckling, M.D. Simpkin, Marshall, and Co., Limited. 1909.

ment has followed, it is less easy to believe in the dependence of these nervous conditions upon the displaced kidney; the favourable results directly attributed to the operation may very well have been due to suggestion.

Sir W. Watson Cheyne has recently published* an address on movable kidney in which, while recommending a special method of performing nephropexy, he expresses his opinions upon some of the general questions we have been discussing. He is satisfied that the operation is a good one, and thinks that failures are due either to the fact that the loose kidney was not the main cause of the trouble of which the patient complained, to the organ not having been fixed in the proper position, or to its having again become loosened. In the causation of movable kidney he attaches most importance to congenital defect and to mechanical influences, but he doubts the importance of emaciation, as he says that in the *post-mortem* examination of patients with movable right kidney it has been found that the fatty capsule on the other side is "quite satisfactorily developed, and often remains in considerable amount even though the patient be emaciated." Hence he regards the treatment by keeping such patients in bed and trying to increase their fat as futile. He recognizes the direct effect of the mobility upon the kidney itself, which may become the seat of hydronephrosis or chronic atrophic nephritis, and also the production of such general symptoms as giddiness, anaemia, neurasthenia, and even insanity, quoting Dr. Suckling for this last statement.

With regard to the association of movable kidney with neurasthenia, Sir W. Watson Cheyne expresses the opinion that general enteroptosis is often present, and that when this is so the operation of nephropexy can only partially remedy the mischief, and is, therefore, contraindicated. General experience teaches that not only may no benefit result, but the state of the patient may be rendered worse, and he says that he has come across a good many cases in which this has occurred. He adds, however, that it is possible that the unfavourable opinion now entertained of the result of the operation in neurasthenia may have to be modified should Dr. Suckling's results be confirmed.

We do not understand why there should be any failures such as Mr. Billington admits, if the connexion between the displaced kidney and the nervous system is as close as Dr. Suckling believes. Mr. Billington says that he is now of opinion that where both kidneys are movable both should be stitched up, and that the double operation does not appreciably increase the risk. We recognize the logical nature of this conclusion; but if so, how does he explain the recovery of such a bad case as the second example of neurasthenia given under Group 3? In this patient both kidneys were down yet only one was fixed, but nevertheless at "the end of six weeks she climbed to "the top of the Herefordshire Beacon." Surely this case ought to be accepted as a splendid illustration of the excellent result of stitching up one kidney and of the harmlessness of the mobility of the other, and the only reason for rejecting this conclusion must be that it is totally opposed to Dr. Suckling's doctrine that renal mobility, even when slight and painless, is a cause of grave nervous disturbance, a doctrine which we believe to be not only unsound but dangerous.

VOX RECLAMANTIS.

THE most pushful politicians have what Sydney Smith called "flashes of silence"; controversialists sometimes cease from troubling, and even the popular preacher and the suffragette are occasionally quiet. But the voice of the quack is always heard in the land. This, of course, is the law of his existence, and we should be glad to pass him by with a *populus vult decipi*, were it not that he, his claims, and his testimonials are constantly thrust upon our attention by correspondents. If all the communications we receive on this subject were dealt with separately, there would be little room in the JOURNAL for anything else. We can mention only a few of them here. One correspondent has obligingly sent us a *Pocket Guide to Count Mattei's Medicines*. We fondly believed that this particular system of humbug had been exploded long ago. The pamphlet bears the name of A. J. L. Gliddon, who would seem to be the vendor of the remedies. It is interesting to recall that Mr. Gliddon was announced as the seller of a drink cure, the virtues of which were described in Mr. Stead's most flamboyant style in a letter which that inspired journalist contributed to the *Daily Chronicle* of October 30th, 1893. We note that Mr. Stead is quoted in Mr. Gliddon's pamphlet as saying that, if ever he had an attack of indigestion, he could always get rid of it in half an hour by using the Mattei remedies. Mr. Stead's eyes should have been opened to the real value of the Mattei remedies by his own experience as a member of a committee formed to test their use in the treatment of cancer. According to a report on the subject which appeared in the JOURNAL of August 13th, 1892, p. 369, Mr. Stead, who went into the investigation as a convinced Matteist, "expressed himself as thoroughly ashamed of his 'champions.'" But in the province of medicine Mr. Stead has what may be called an *anima naturaliter circulatoria*; by the temper of his mind he inclines to quackery. So far from being ashamed of this, he has, if we are correctly informed, been heard to boast of this mental peculiarity. In any case he would seem, in the matter of the Mattei remedies, to be even worse than the Bourbons in the matter of government: for whereas they learnt nothing and forgot nothing, he learnt something which he has since forgotten.

Another correspondent has sent us an advertisement announcing the discovery of a "breathing cure" for catarrh, adenoids, and nose breathing difficulties. The evil effects of breathing through the mouth are vividly described; we learn that the "pent-up catarrhal slime" finds its way into the liver and kidneys, causing all sorts of trouble. The cure has the simplicity of Columbus's famous egg demonstration; all that is required is that the nose should be freed by lifting the outer edges of the nostrils. As the learned doctor who communicates the discovery to the world raelly puts it, this "unstops the most stopped-up nose." But of course the matter is not quite so simple as this: "upon this first-step discovery has been built an 'anatomical-physiological cure, the details of which, 'are given fully in a book which can be obtained,' etc. In view of the far-reaching consequences which may be caused by neglected adenoids, it is a pity that persons who prey in this way on the credulity of the public, and the newspapers which aid and abet them in so doing, cannot be brought within the grasp of the law.

A third advertisement which has been brought

* *Lancet*, April 24th, p. 1155.

under our notice is chiefly remarkable for its extraordinary English. The advertiser, an Italian, complains bitterly of the "disloyal concurrence which is being made" to his product "by dishonest speculators 'although without the least initiative.' This, he says, 'constrains me, in the interest of Doctors as well as 'of consumers, to put them on the guard from the 'innumerable falsifications, imitations, and counterfeiting executed to a great extent by small as well as 'important vendors by illicit and dishonest means. 'Reserving the right to summon before the Criminal 'Court these audacious counterfactors, and awaiting serenely the results of the suits against those whom 'I have already denounced to the proper authorities, 'I beg to request Doctors to make use in their prescriptions of the phrase'—[here follows the name of his product]—'and the consumers to observe with 'diligence and care the existence of the specific indications of my firm, to which is due the merit of 'having enriched the Pharmacopoeia with a new potent 'drug approved and recommended by the Principal 'Italian and Foreign Scientists.' He goes on to say that "these Crystals, prepared with the greatest 'scientific care, represent the ideal cure in all the 'forms of arthritis, in Dispepsia, Intestinal Torpor, 'Uric and Biliary Litiasis, Urimia, Poliscarcia, and 'all other sickly forms dependent from the deviations 'of the material rechange." This catalogue of strange diseases almost persuades us to give the name of the remedy which cures them. On second thoughts, however, we refrain, lest the physician, who is slowly but surely being despoiled of his kingdom by ever-encroaching surgery, specialism, vaccine-therapy, and immunization, should find himself *roi en exil*. But while "urimiam" and "other sickly 'forms dependent from the deviations of the 'material rechange" remain, his occupation will not be entirely gone.

HOMES OF REST FOR DOCTORS.

It was announced not long ago that Mr. George Smith, M.R.C.S., L.D.S., of Newent, Gloucester, who died on December 19th, 1908, at the age of 77, and left estate valued at £11,669, had bequeathed the residue after the payment of sundry legacies to the Royal Infirmary, Manchester, and University College Hospital, London, in equal shares. The bequest is to be used for the benefit of one or more members of the surgical or dental staff of these institutions who may be disabled by infection from puncture, or who may have contracted blood poisoning whilst examining or operating on patients or after making *post-mortem* examinations. There is scarcely any other calling more exposed to physical danger of one kind or another than that of medicine. It is not uncommon to read of the death of a surgeon from septic infection contracted in the course of an operation, but comparatively few of these cases are ever heard of beyond the immediate circle of his friends. The amount of temporary disablement from this cause is very great. The public believes that the doctor bears a charmed life. This, as we know too well, is a mere superstition. From the threshold of medical study the student is constantly exposed to risk in the dissecting-room, in the deadhouse, in the hospital ward, in the operating theatre, in the sick-room; even in the laboratory invisible enemies encompass him around. If he escapes death, he is often disabled—it may be, permanently. Some of these risks dog his footsteps throughout professional life. Of exposure to weather,

of the ill effects of irregularity in meals, and of the anxieties inseparable from his profession which help to place the doctor almost at the bottom of the scale of longevity, we need not speak. Mr. George Smith's bequest will do something to relieve those who are incapacitated by a particular cause. But there remain innumerable other risks which bring about premature breakdown in medical practitioners, and the cases are too numerous in which disablement or infirmity overtakes them before they have been able to make any provision for their old age. There are, of course, the benevolent societies, in praise of which it would be impossible to speak too highly. But they are few, and their resources are insufficient to meet the demands made upon them. We therefore call attention to a scheme which has recently been set on foot in France with the approval and patronage of such men as Professor Landouzy, Dean of the Paris Faculty of Medicine; Professors Chantemesse, Fournier, Hutinel, Guyon, Lannelongue, Le Dentu, Lucas-Championnière; Dr. Roux, Director of the Pasteur Institute; Dr. Vaillard, Director of the Val-de-Grace; M. Mesureur, head of the Assistance Publique; M. Lépine, Prefect of Police; Professor Hugouennec, Dean, and Dr. Testut, professor, in the Medical Faculty of Lyons; Professors Mairot and Grasset, of Montpellier; and most of the directors and principal professors of the medical schools in France. The proposal is to create one or more houses of retreat, rest, and health for French doctors. The idea originated with Dr. Courtault, Editor of *Tablettes Médicales*, and Dr. Lucien Nass. In 1857 Orfila, the famous toxicologist, then Dean of the Paris Faculty, suggested a similar scheme, but death prevented his carrying it out. Dr. Courtault gives a distressing account of the present condition of the profession in France. The State, the department, the commune vie with each other in exacting more and more work at a lower wage from the doctor. To-day the provincial practitioner eats, sleeps, writes, and studies in his carriage. He early becomes rheumatic, and before long becomes unfit to compete with younger men. In the Department of the Seine, of a total of 3,500 doctors, 700 are in the receipt of assistance from various associations. When he is old, solitary, and disabled, the doctor is often compelled to migrate to some lonely spot that his poverty may not be known to his acquaintances. Of this we could cite various instances within our own knowledge in this country. We need only refer to the case of a famous teacher and hospital surgeon, long dead, whose name is in every textbook of physiology and surgery; yet he was rescued from actual starvation by the charity of his colleagues, to whom his condition became known by a fortunate accident. Nor is this by any means a solitary case. It is for such as these that the "Maison du Médecin," which it is proposed to found, is intended. It will belong to the whole medical body, and will be open to all—to those who can pay nothing as well as to those who can contribute a certain amount. It will be the aim of the directors to make the existence of the inmates as comfortable as in the best kind of boarding house. The charge will be £48 a year. In the case of those who have not sufficient means this sum will be paid by the Association or by the house itself; the council alone will know the terms on which the inmates are received. It will not be a poorhouse, but a refuge for honourable poverty, and above all a place of temporary rest for those who have been wounded in the struggle for existence. The first house will probably be situated on the borders of the forest of Saint-Germain. We should be glad to see something of the same kind established here.

ANTIVIVISECTION IN DUBLIN.

THE Irish Branch of the National Antivivisection Society held its annual meeting in Dublin on April 22nd. The report of the committee stated that the number of subscribers was 300. Mr. R. R. Cherry, K.C., Attorney-General for Ireland, who presided, after referring to the "horrors" of vivisection, said, with a humour which we hope was unconscious, that he did not wish to exaggerate. He went on to state that he knew that vivisectionists told them their experiments were carried out in so humane a manner by means of anaesthetics that really there was no degree of suffering on the part of the animals. He was good enough to add that, "if that was true," it was in a great measure true by reason of the action taken by that and similar societies in other parts of the United Kingdom. Of this statement Mr. Cherry vouchsafed no shadow of proof; and as it is part of the antivivisectionist case that animals are not in fact anaesthetized, it would be interesting to know on what ground Mr. Cherry made such a claim on behalf of these societies. If we may use a popular phrase, they cannot have it both ways. The Attorney-General for Ireland, who does not wish to exaggerate, proceeded to rehearse anew the old, old legend about the appalling increase of experiments, and how they were almost all done without anaesthetics. Really Mr. Cherry should leave this kind of thing to Mr. Stephen Coleridge, whose chief weapon in debate is to "ingeminate" the word "torture." Mr. Cherry says that under the existing Act a great amount of suffering is caused, "partly through callousness and partly through inattention to that Act." Clearly the learned gentleman had not got up his brief, and we should recommend him, before speaking on the subject again, to study the evidence given before the Royal Commission on Vivisection. We commend to his special attention the evidence of the antivivisectionist witnesses. A resolution was proposed by the Rev. J. Warschauer, in seconding which Dr. W. J. Cameron, according to a report which appears in the *Irish Times* of April 23rd, made the remarkable statement that in his student days he was in favour of vivisection, and performed many vivisections "after making sure that the animals were dead." This is, we suppose, how he learnt the art, in which antivivisectionist controversialists are so proficient, of flogging a dead horse. We have often had occasion to point out that the vivisection campaign is really a movement of perverted sentiment rather than humanity. Its essentially inhumane character is well shown by certain statements made by Sir John William Moore at the annual meeting of the governors of the Meath Hospital held in Dublin on April 10th. After acknowledging their indebtedness to the Distribution Committee of the Hospital Sunday Fund he went on to say that the subscriptions had fallen off within the last few years. He wished to state publicly that the charge which had been brought against that and other hospitals that vivisection was practised within the precincts of the hospital was a deliberate and unfounded falsehood. There was no such thing in connexion with any Dublin hospital, and it was a calumny to advance that statement. The statement had done harm to the Dublin Hospital Sunday Fund, as he had very good reason to know. Mr. Coleridge, writing in the *Irish Times* of April 23rd, professes to think that "it will afford sincere pleasure to all our readers to peruse these forcible repudiations of vivisection in connexion with hospitals," and he proceeds to improve the occasion by contrasting Dublin with London, as if vivisection were carried on in London hospitals. He has had every opportunity of learning that this is absolutely untrue. He

may, perhaps, remember that we ourselves helped to enlighten his mind on this point when he tried to make people believe that "clinical material" for the instruction of students meant living human bodies for the study of diseases by physiologists! If hospitals are not adequately supported, human beings must suffer. But what is that to the sentimentalists who shudder at the supposed "torture" of a guinea-pig which has undergone the prick of a needle?

THE RAT FLEA AND PLAGUE.

THE Commission for the Investigation of Plague in India, abstracts of the publications of which in the *Journal of Hygiene* have appeared in this JOURNAL from time to time,¹ adduced a mass of evidence in support of the conclusions (1) that in India human plague is conditioned by the epizootic among the rats, and (2) that the agent in transference from rat to rat and from rat to man is the common rat flea of tropical climates, *Pulex cheopis*. In the experiments carried out in Bombay the only means by which the Commission were able to produce epizootics amongst animals was by means of rat fleas. When precautions were taken to eliminate fleas from the houses in which the animals lived no epizootics occurred, notwithstanding the closest contact of infected animals with healthy ones. The massive infection of the floors of the houses with virulent cultures of plague bacilli was equally unsuccessful. The epidemiological observations of the Commission, both in Bombay and in certain Punjab villages, brought to light no facts in the least discordant with the animal experiments. All the epidemiological data collected could be adequately interpreted by the hypothesis that infected fleas transmitted the disease from rat to rat, and that when their natural host became diminished by the severe mortality of the epizootic, the insects sought man for a supply of nourishment, and so conveyed the infection in a percentage of cases. At the Bombay Medical Congress the discussion on plague in Section II was opened by a paper by Professor Kitasato, the Director of the Institute for the Investigation of Infectious Diseases in Tokio, and one of the discoverers of the plague bacillus. This paper was listened to with great interest, as only a few years ago Kitasato had stated his opinion that the rat flea played no part in the epidemiology of plague. The paper which was read by Professor Shiga, the Head of the Serum Department of the Tokio Institute and the Delegate of the Japanese Government to the Congress, gave a summary of some recent investigations made by Kitasato during a plague epidemic in a small town in Japan. The main facts elicited were as follows. In Japan as a general rule the common rat flea is not *Pulex cheopis*, but in the town in which the present epidemic took place *Pulex cheopis* amounted to 80 or 90 per cent. of the fleas taken on rats. The epidemic was accompanied by a severe mortality amongst the rats, and Kitasato brings forward evidence of the same nature as that accumulated by the Indian Plague Commission to show that the transmitting agent between the rat and man was the rat flea (*Pulex cheopis*). Guinea-pigs as traps were placed in plague houses, control animals being put into non-plague houses at the same time. The number of fleas caught in the former many times exceeded the number trapped in the non-infected houses. Again, a certain percentage of the fleas caught in the infected houses were found to contain abundant plague bacilli in their stomachs while none of those from the non-plague houses were shown to be infected. Further, animals in the laboratory were infected with fleas

¹ See 1906, vol. ii, p. 1045; 1907, vol. ii, p. 155; 1908, vol. i, p. 211, and vol. ii, p. 91.

from the infected houses, but none with those from the clean houses; and, finally, certain of the guinea-pigs let loose in the plague houses contracted the disease, while those placed in the control houses always remained healthy. In concluding the paper Kitasato stated that he had brought forward no new facts and that he had only confirmed the observations of the Indian Plague Commission, to the work of which he paid a high tribute of praise.

THE DEVELOPMENT OF TRYPANOSOMES IN TSETSE FLIES.

The Sleeping Sickness Bulletin for March, 1909, amongst other interesting papers, contains a notice of one by Professor Kleine from German East Africa, entitled, "Positive Infection with *Trypanosoma brucei* by *Glossina palpalis*." Dr. Bagshawe, the editor of the *Bulletin*, summarizes the conclusions obtained, and, if these ultimately turn out to be accurate, then a very important phase in the life-history of the trypanosomes will have been discovered. Professor Kleine fed tsetse flies (*Glossina palpalis*) for three days on sheep naturally infected with the parasite of nagana (*Trypanosoma brucei*), and after this from the fourth day onwards daily on fresh healthy animals. Up to the sixteenth or seventeenth day nothing seemed to happen, the blood of the experimental animals, though frequently examined, remaining free from parasites, but from the eighteenth to the thirty-ninth day and onwards trypanosomes appeared. The details of these experiments are as follows:—From the eighteenth day to the twenty-fourth the flies fed on the same sheep (No. 30) from the twenty-fifth day to the thirty-ninth on the same ox (No. 2); twelve days after the flies were put on No. 2 ox its blood showed trypanosomes, and so No. 30 sheep was then also examined and found to have parasites. All the previous animals remained healthy. From the fortieth to the fiftieth day the flies were fed on two goats, two calves, and two sheep; all became infected, the goats after eight and six days, the calves after six and five days, the sheep after seven and five days. These experiments seem to prove that flies which for many days after the ingestion of blood containing trypanosomes were not infective afterwards became so, and infected animals; and the most probable explanation is that the parasites underwent development in the fly analogous to that observed in mosquitos with the parasites of malaria and yellow fever. Dr. Bagshawe criticizes the experiment in some of its details, wild flies appearing to have been used instead of bred ones, and he asks the question, Were all the animals so placed that biting flies could reach neither the sick nor the healthy? The matter is so important that further independent experiments to confirm or confute Kleine's results are much to be desired, and we have no doubt they will soon be forthcoming, and will also clear up dubious points such as those mentioned above. The idea of a development of trypanosomes in tsetse flies is, of course, not a new one, most workers on the subject believing it probable: but until the present paper definite proof has not been forthcoming. The importance to sleeping sickness of the observation is that the life-history of the two trypanosomes, *gambiense* and *brucei*, is in all probability similar, and this will of course influence the prophylaxis of the human disease considerably.

ST. BARTHOLOMEW'S HOSPITAL.

In a detailed consideration of the future of London hospitals published in this JOURNAL on June 20th last year, note was made of the fact that the vast majority of all London hospitals were annually spending more

on ordinary upkeep than they were receiving in income, and were thus helping to pile up between them a vast burden of debt over and beyond that directly resulting from building operations. It was shown, too, that the oldest hospital in the metropolis, St. Bartholomew's, at one time a happy exception to the general rule, had at length put in an appearance among the debt accumulators. At that time the excess of its expenditure over its income was comparatively small, but reasons were given for anticipating that this balance on the wrong side would before long become as great in the case of St. Bartholomew's as in that of any of its fellows. This prophecy seems likely to be fulfilled with even greater speed than was anticipated, for a report by the new treasurer of the hospital, Lord Sandwith, shows that the excess of annual expenditure over annual income reached last year a sum of £8,000. In the case of many institutions the excess of annual expenditure on maintenance and administration over ordinary income is due to extravagance; not, perhaps, in the year in question, but at some recent period when schemes of enlargement have been adopted without sufficient funds to maintain the new beds, when provided, being either in hand or in sight. Many institutions, indeed, have multiplied their accommodation even though totally unable to maintain out of annual income the beds which they already possessed. The difficulties of such institutions are the natural result of forgetting the wisdom of cutting a coat according to the cloth provided. St. Bartholomew's, however, is not a case in point. It has never suffered from megalomania, and the number of its beds remains exactly what it was many generations, if not hundreds of years, ago. Its ambition, in short, has been, not to increase the amount of its work, but merely to perfect the fashion of its performance. Nevertheless, its balance on the wrong side is readily comprehensible. The expenditure of all hospitals not less than that of most householders is subject to what may be called a "natural" increase. This increase in the general cost of life, if scarcely perceptible at any given moment, is yet steady, and must in the course of time make a most material difference to any large institution. Hospitals, for instance, in spite of the work they do for the public, and especially for the poor, pay rates just like other people. Rates, as most of us know, tend constantly to increase, and many hospitals in London under this heading alone pay out upwards of £1,000 a year. This "natural" increase is comparatively unimportant at most institutions, since its effect is eliminated by the elasticity of income resulting from the multiplicity of the sources from which it is derived. In addition to receipts from invested property they annually receive large sums in the way of donations, subscriptions, and bequests, whereas St. Bartholomew's has hitherto practically depended on income from invested capital alone, and the net value of such incomes at the present day everywhere tends to decrease. The commencing difficulties of St. Bartholomew's are, therefore, perfectly comprehensible apart from any additional expenditure which may be thrown upon it by the improved fashion in which its work is conducted. The idea of St. Bartholomew's as an applicant for public support is somewhat of a novelty, for in a history of five or six centuries it made its first venture in this direction only some six or seven years ago, when, in accordance with the findings of an independent commission, it was decided to rebuild the institution and on its existing site. Unfortunately, the appeal then made threatened to coincide with a corresponding effort on the part of a very popular and

constant applicant for public support, and the most conspicuous net result was a crusade against St. Bartholomew's in the general press. Happily this onslaught failed in its professed object, but it had the effect of leaving an impression on the public mind that St. Bartholomew's was a very rich institution which stood in no need of donations, subscriptions, or legacies. Whatever may have been the case at that time, the position is now changed, and the institution, a magnificent example of hospital enterprise, should receive the same meed of support from the public as that accorded to kindred institutions, which are its rivals, it is true, but only in good works and scientific efficiency.

THE SLEEP CURE.

In these days of strenuous life, sleep shows more and more a disposition to follow Astraea and go back to heaven, from which, according to Elizabeth Barrett Browning, it came:

Of all the thoughts of God that are
Borne inwards into souls afar,
Along the Psalmist's music deep,
Now tell me if that any is
For gift or grace surpassing this—
"He giveth His beloved sleep!"

How many of those whose fate it is to spend themselves in the stress of a struggle for a livelihood would echo those words! The difficulty is that the gift comes not to all. Large towns with their various noises, —or what is in some cases worse, the intervals of suspense when the wakeful sufferer, like Carlyle, waits for the next crow of the importunate cock—murder sleep as effectually as Macbeth. Hence the large use of hypnotics at the present day, and the ceaseless search of investigators to find one that shall lap the weary brain in the Elysium of a refreshing sleep without leaving headache or dullness or other ill effect behind. High-frequency currents, massage by a skilled hand, and hypnotism, are not within the means of all, even if they could be depended upon to produce the desired result. We have often wondered why in these days of various therapeutic enterprise the idea which inspired Thomson's *Castle of Indolence* has not been applied for the treatment of the victims of sleeplessness. There all things tending to foster sleep were combined with subtle art:

A pleasing land of drowsyhed it was:
Of dreams that wave before the half-shut eye;
And of gay castles in the clouds that pass,
Forever flushing round a summer sky:
There eke the soft delights, that witchingly
Instil a wanton sweetness through the breast,
And the calm pleasures always hovered nigh;
But whate'er smacked of 'noyance, or unrest,
Was far far off expelled from this delicious nest.

The inmates there did not sit "and hear each other groan"; there were "no dogs, no babes, no wives to stun the ear"; "no curséd knocker plied by villain's hand"; but the soft music of the Æolian harp, and the soothing sound of falling waters brought sleep to tired lids. Even the howling of the wind was made into a lullaby:

And oft began
(So worked the wizard) wintry storms to swell,
As heaven and earth they would together melt:
At doors and windows, threatening, seemed to call
The demons of the tempest, growing fere;
Yet the least entrance found they none at all;
When sweeter grew our sleep, secure in massy hall.

We now learn from the *Gazette Médicale du Centre* that what may be called a castle of sleep has been established by Dr. Lemesle, of Loches, in Touraine—that province of so many joyous memories and associations, where the climate is mild and equable, and the air, as Duncan says, "nimble and sweetly recomends itself unto our gentle senses." Dr. Lemesle

uses physical agents, such as fixation of the eyes on a bright object, and the monotonous ticking of a clock, to lull the senses of his patients. If these means, with the surroundings in which the patient is placed, do not succeed, he uses blue light. It was observed by Lumière of Lyons that people employed in workshops illuminated by red light became nervous and were quickly tired; these effects ceased when blue light was substituted. Dr. Lemesle, therefore, keeps his patients in a blue atmosphere; the glass in the windows is blue, and all the decoration and furniture of the room is of the same hue. At night the electric light shines through blue globes. Absolute silence is enjoined throughout the establishment. Dr. Lemesle, in fact, has carried into effect, with modern improvements, the conditions of a restful life imagined by the author of the *Castle of Indolence*. His aim is to make his patients spend as much time as possible in sleep, waking up at intervals to take food. The sleep cure, we have no doubt, would be most useful to many—for a time. The pity of it is that it is beyond the reach of those who need it most.

M. LUCAS-CHAMPIONNIÈRE.

THE annual address to the Cardiff Medical Society will, as has already briefly been announced, be given this year by M. Lucas-Championnière. The subject of the address, which will be delivered at 3.30 p.m. on Friday, June 4th, is the Modern Treatment of Fractures. The annual dinner of the Society—to which it will be glad to welcome any member of the profession who desires to be present—will be held on the evening of the same day, and afterwards M. Lucas-Championnière will formally make the presentation of the Lynn Thomas and Skyrme Fund. To this fund, as our readers are aware, subscriptions have been received from medical men in all parts of the world, and it is therefore very appropriate that this presentation should be made by M. Lucas-Championnière, since he is President of the International Surgical Association. M. Just Lucas-Championnière was born in 1843 at St. Leonard, Haute Vienne, the birthplace also of Gay-Lussac, the physicist. The future surgeon began his medical studies in Paris in 1860, graduated M.D. in 1870, and became surgeon to the Paris hospitals four years later. In the interval he paid a visit to Great Britain at the time when Lister was organizing that revolution in surgery the full significance of which it was not given to every one of that day to perceive. The young French surgeon, however, saw clearly that facts were being established which would entirely change the whole attitude of mind of the surgeon, and when he returned to his own country he at once applied Listerian principles in his own work. In the face of criticism, opposition, and some little ridicule he practised and advocated antiseptic surgery, not only by example but also by precept, for the first edition of his work on the subject was published in 1876. As an original thinker his name is more especially associated with the immediate treatment of fractures by massage and mobilization, the subject which he has selected for his address at Cardiff. M. Lucas-Championnière has retired from active surgical practice, but he is honorary surgeon to the Hôtel-Dieu and a member of the Academy of Medicine, while his cosmopolitan reputation is proved by his election at Brussels last year to be the President of the International Society of Surgery, an office in which he has been preceded by Professor Kocher of Berne and Professor Czerny of Heidelberg. M. Lucas-Championnière was present as a guest at the Annual

¹ Tickets, price 7s. 6d., and all further particulars can be obtained from the Honorary Secretaries of the Society, Dr. F. P. S. Crosswell, 24, Windsor Place, or Dr. William Martin, 17, Windsor Place, Cardiff.

Meeting of the British Medical Association in Sheffield last year, and received the honorary degree of D.Sc. from the University. We feel sure that he will find as warm a welcome and will make as many friends in the Principality this year as in Yorkshire in 1908.

COAL MINE BATH-HOUSES.

It is no uncommon sight in a pit village in the Northumberland and Durham coalfields, and possibly in others, to see a coal miner, freshly returned from the pit, being scrubbed down in a hot bath by his wife, for in fine weather, at any rate, it is or was customary to go through these very necessary ablutions *coram publico*. They were very thorough with, so we are informed, the curious exception that they did not include the back; the collier, it seems, entertains the belief that if the back is washed it is weakened. How this superstition arose we do not know, but one consequence is that that part of the northern miner's person escapes soap and water unless he happens to be off work for a considerable time. The whole system seems a little primitive, but Mrs. Grundy, being accustomed to it, was not shocked. Recently, however, there have been some questionings, and proposals for establishing bath-houses at the pit heads, but, so far as we know, they have not materialized, and it has been left for the Fife miners to take the lead in this matter. The experiment, it is understood, is about to be tried in connexion with one of the Fife Coal Company's mines. The idea is to provide bathing accommodation for the miners, so that on leaving the pit after the completion of their shift they may be indistinguishable from other members of the community except, perhaps, for the added purity of their skin. The details are still under consideration, but it is stated that the accommodation will be provided on such a plan that it can readily be extended to meet any fresh demands. The baths will be of the spray description.

SUBTOTAL HYSTERECTOMY AND THE MENSTRUAL FUNCTION.

HOWARD KELLY¹ deprecates radical operation on the uterus as a routine measure. He not only practises myomectomy in preference to hysterectomy for fibroid, but also leaves portions of the body of the uterus in operations for fibroid tumours, where myomectomy would be unsafe, and for haemorrhagic uteri. He refers to the good results claimed by Zweifel, Spinelli, and Doran, where a portion of endometrium is saved, as well as one or both ovaries. Doran four years ago² reported the after-history of sixty cases in which he had performed subtotal hysterectomy, and showed that the physiological results were satisfactory. Kelly follows their practice, keeping a portion of the uterine body, with its mucosa, above the cervix in women who are still menstruating. It is sufficient, he insists, to retain a little pocket of the mucosa within the uterus big enough to lodge the end of the little finger, though more should be kept if possible; with the mucosa the corresponding portion of the muscular investiture is included. This end is obtained simply by carrying the knife through the uterine wall well above the cervix; the tissues thus preserved are sutured face to face, so as not to interfere seriously with the blood supply. It is absolutely necessary that in any case one or both ovaries be sound enough to be retained. Kelly practises two varieties of this conservative amputation. The first is horizontal resection, the operation performed by Doran; it is, Howard Kelly considers, the best in

cases of fibroid uterus. The second is vertical resection, a wedge being taken out of the centre of the uterine body beginning at the fundus and reaching down to the cervix, so that half or more of the uterine body with its mucosa is removed. The two raw surfaces are then approximated and closed with catgut sutures. Vertical resection is, he thinks, preferable in cases of subinvolved haemorrhagic uteri. A kind of utriculus is left after horizontal or vertical resection, which continues to menstruate moderately, and obviates the evils of an acute menopause. In conclusion, Kelly reports nine typical cases in which this conservative operation has been followed by the best physiological results, independently of recovery from the operation.

INTERNATIONAL CANCER RESEARCH UNION.

The Central Committee of the International Cancer Research Union held a meeting at Berlin, under the presidency of His Excellency Professor Czerny, on April 16th. The foreign committees were represented as follows: The Belgian, by Professor Willems of Ghent; the Danish, by Professor Fibiger of Copenhagen; the French, by Dr. Borel of Paris; the Japanese, by Surgeon-General Kawaschima; the Swedish, by Professor John Berg of Stockholm. Among the German members present were Professors Bumm, Kirchner, and Orth of Berlin. A report of the progress of the Union in various countries was presented. The question of establishing stations for the examination of preparations of cancer with the object of facilitating the early diagnosis of the disease was discussed. Another scheme which was considered was the foundation of museums for the promotion of cancer research. The commission for the investigation of cancer appointed not long ago by the King of the Belgians was affiliated with the International Union. On the invitation of the French Cancer Research Society, it was decided to hold the next meeting of the International Conference in Paris towards the end of September, 1910. At that Conference a report based on statistics collected from various countries and on the results of operation for cancer will be presented.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Education (Administrative Provisions) Bill gave rise to a very interesting debate on April 23rd. Mr. Dunn, in moving the second reading, said the bill proposed to amend the Act of 1907 dealing with the medical inspection of children, and the provision of meals provided for by the Act of 1906. By the first clause of the present measure the local education authority would be relieved of the final responsibility of saying whether a child was underfed or not, and the duty would be imposed on the school doctor, medical officer of health, or other medical official. Children supposed to be underfed would be examined by the medical inspector, and if they were reported as needing nourishment, it would be the duty of the local authority to feed them. If the halfpenny rate were not sufficient to cover the cost, the rate could be increased. In some districts the local authorities had refused to avail themselves of their powers under the Act of 1906. Mr. W. T. Wilson, a Labour member, seconded the motion for the second reading. He argued from the grave conditions that existed in some districts that it was the bounden duty of the State to undertake the work of feeding the children and concluded that the cost to the rates would be more than counterbalanced by the efficiency of the children. Sir Francis Powell moved the rejection of the bill, and, reviewing the work done under the existing Acts, argued that, considering the magnitude of the question, it was premature to reopen it. They ought to obtain more

¹ Amer. Journ. Obstet., April, 1909, p. 570.

² Trans. Obst. Soc. Lond., vol. xlvii, 1905.

experience, before opening the field of work, in many districts most satisfactorily done, to the boundless increase of the burdens of the ratepayers. Lord Morpeth seconded the motion for rejection, and argued against the powers proposed to be given to the medical profession. It would be dangerous, he said, to give the medical profession full power to order the feeding of children without the final check of the common sense of laymen. Sir William Collins, while sharing the sympathies of the supporters of the bill, was anxious that these important questions should be decided by the dictates of their heads rather than by the impulses of their hearts. He was inclined to think that the duties proposed by the bill would not add to the dignity of the members of the medical profession, and certainly not to that of the local authorities. While recognizing the obligation on the parent and on the State with regard to the children during their school life, he was not prepared to go beyond the great experiment in the Acts of 1906 and 1907. A great deal of valuable information was being collected under the existing law, and most difficult questions were arising on the results of medical inspection, as to medical treatment, and how it was to be afforded. The questions of feeding, inspection, and treatment all hung together, and he thought it would be unwise, without further serious investigation, to amend the recent legislation. The second reading was supported by Mr. Parker, Mr. Curran, Sir J. Duckworth, and in a very passionate and pathetic appeal by Mr. Crooks. On the other hand, Sir F. Banbury, Mr. Peel, Mr. Scott, Mr. H. Gooch, and Mr. Harold Cox opposed, and the last-mentioned speaker, in attacking the measure as an attempt to transfer the children from the care of their parents to that of the State, raised a sharp outburst of opposition from the Labour members, which was voiced by Mr. Ramsay MacDonald and Mr. A. Henderson. Mr. Runciman, as Minister of Education, opposed the second reading, and described the bill as a measure of public charity. It had not been proved that the Act of 1906 had failed; 193 local authorities said they had not found it necessary to put it into force, either because there was no local need, or because the children were otherwise provided for. Some eighty authorities had availed themselves of the statute. The bill would set up different, and possibly conflicting, jurisdictions, and did not limit the provision of food to children incapable of deriving advantage from education. In this respect the bill went far beyond the Act of 1906, and was really a Poor Law proposal, and would, if passed, embarrass the Government when, next session, they had to consider Poor Law administration. The bill was thrown out by 206 votes against 82.

The Local Education Authorities (Medical Treatment) Bill, which passed the second reading stage late at night last week, has been referred to Standing Committee A.

The Exclusion of Unvaccinated Children from Schools.—Sir Maurice Levy last week asked the President of the Board of Education a question as to the exclusion of unvaccinated children from endowed schools, schools assisted out of the rates, or schools entirely self-supporting, and Mr. Runciman replied that he was advised that governors of endowed schools regulated by schemes made under the Endowed Schools Acts and Charitable Trusts Acts were not as a rule prohibited by the scheme from excluding an unvaccinated child if they considered that so to do would promote the welfare of their trust. But in the case of schools, whether endowed or not, which received grants from the Board under their secondary school regulations, the Board would not regard the absence of vaccination as a reasonable ground for the exclusion of a day pupil, though they would be unwilling to interfere with the discretion of the governors in the case of boarders.

Local Government (Scotland) Bill.—Mr. Cathcart Wason asked the Lord Advocate if he was aware that practically all the Scottish members supported the proposal to put Scottish Poor Law medical officers in the same position as regards right of appeal as their brethren in England and Ireland; and if the Government would afford facilities for the second reading to the Local Government (Scotland) Bill in order that the case might be duly considered in

Committee. Mr. Ure replied that he was aware that the bill referred to received considerable support. Parish councils, however, were by no means unanimous in the matter, and without evidence of more general concurrence on their part the Government were not prepared to adopt the course proposed. Mr. Cathcart Wason then asked if the right hon. gentleman was aware that the Secretary for Scotland, in reply to a deputation a year and a half ago, promised that this matter should receive consideration when the Local Government (Scotland) Bill was before the House. Mr. Ure said he had given it consideration and found that the local authorities were not by any means in universal agreement on the subject.

Certification of Deaths (Scotland).—Mr. Weir called the attention of the Lord Advocate on Monday to the fact that during the years 1903-7 there were 2,915 uncertified deaths in Ross-shire and Inverness-shire and asked what action the Government intended to take to remedy this state of things. The Lord Advocate replied that no action can be taken without legislation, which was not at present in contemplation by the Government.

Consumptives from Canada.—Mr. Weir asked the President of the Board of Trade, having regard to the fact that under Canadian law emigrants from this country who developed consumption within two years after arrival in Canada were required to return, was he in a position to state what precautions had been taken by steamship companies, in vessels sailing from Canadian ports to the United Kingdom, to isolate consumptive passengers in such a way as to prevent other passengers running the risk of infection. Mr. Churchill replied that the steamship companies informed him that persons returning from Canada on account of consumption were carefully isolated during the voyage, and kept apart from the other passengers.

The Sale of Disinfectants.—Mr. Rees asked the President of the Local Government Board whether, in view of the promise made by him in June, 1907, and the statement of Professor Hewlett in the recent Milroy lectures, delivered before the Royal College of Physicians, to the effect that during the years 1905, 1906, and 1907, 28,000 gallons, 37,000 gallons, and 66,000 gallons of liquid were sold as disinfectant under the Privy Council Order of July 31st 1900, whereby grocers and oil and colourmen were prohibited from selling disinfectants containing more than 3 per cent. of carbolic acid, the result of which, as the leading authorities all agreed, was to place a premium on adulteration and inefficiency, he would now state what steps he contemplated taking to remedy this evil. Mr. Masterman, replying for the President, said, as he had stated in reply to a previous question, the Local Government Board was not empowered to fix standards of disinfectants, and it did not appear to him that he could usefully take action in the matter. He might add that there was little public advantage in the domestic use of disinfectants as deodorants. Where they were used to remove infection they were commonly employed under the advice of a medical officer of health or other medical man, who could be trusted to order disinfectants which were efficient.

The Metropolitan Ambulances Bill, to enable the London County Council to establish and maintain an ambulance service in London, was presented on Tuesday by Sir William Collins and supported by Colonel Lockwood, Sir Walter Foster, Sir William Bull, Mr. Dickinson, Mr. Corrie Grant, Mr. Steadman, Mr. Straus, Mr. T. W. Wilson, and Mr. Waterlow. The second reading was fixed for May 10th.

The Dogs (Exemption) Bill.—Last week Mr. Ellis Griffith presented a bill to exempt dogs from painful experiments. It is supported by Colonel Sandys, Sir F. Channing, Mr. Field, Mr. Weir, Mr. Tomkinson, Mr. MacNeill, Mr. Clement Edwards, Mr. Crooks, and Mr. Sloan. It was put down for second reading on Wednesday.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND DISTRICT.

THE PROVIDENT AND CHARITY ORGANIZATION SOCIETY.

In the annual report of this society just published a list of its aims is given, and it appears that besides the administration of several charities which are in its hands, including an old age pension fund and the Convalescent Home at Southport, the principal aim of the society is to encourage co-operation between individuals and charitable agencies so as to prevent misapplication of relief and the evils of overlapping. It invites the co-operation of all who are interested in any kind of charitable aid, and has a staff of officers whose business it is to inquire into the previous history of individuals and families, the means by which they maintain themselves, their liabilities, whether they have made any attempt to provide for times of want, and how far friends or relatives have assisted or are willing to assist them. Associated with it is the Manchester and Salford Provident Dispensary Association. Among other agencies which employ the society to make inquiries on their behalf are the Manchester Royal Infirmary, the Salford Royal Hospital, the Northern Hospital, and Ancoats Hospital, St. Mary's Hospital, the Victoria Dental Hospital, and the Manchester Midwives Supervising Committee. The total number of cases investigated by the society during the last year was 64,351, of which the first four hospitals mentioned above furnished no less than 52,595. In making its returns a general wage limit is taken, and persons in receipt of more than this are reported as not fit cases for free hospital treatment. The scale is 14s. a week for single men or women, 21s. for married couples without children, and 1s. 6d. extra for each child. This scale is adopted for all the hospitals on the list, and, as far as applicable, by the Midwives Supervising Committee. The report gives some interesting details of the cases investigated for the Royal Infirmary, the Salford Royal Hospital, the Northern Hospital, and Ancoats Hospital, in-patients and out-patients being taken separately, as shown in the following table:

Analysis of Cases Investigated for the Four Hospitals.

Belonged to other towns ...	In-patients ...	82
	Out-patients ...	6,540
Could not be found ...	In-patients ...	86
	Out-patients ...	2,131
Deserving free treatment ...	In-patients ...	1,697
	Out-patients ...	39,461
Able to join provident dispensary ...	Out-patients ...	2,275
	Out-patient ...	6
Able to pay a doctor ...	Out-patient ...	6
Able to make some payment	In-patients ...	317

Total number of cases received from the four hospitals ... 52,595

The most striking thing in these figures is that out of 50,413 out-patients, only 6 are returned as "able to pay a doctor," while 2,275 are returned as able to join a provident dispensary. The 6 cases able to pay a doctor are found all to come from the Salford Royal Hospital, which sent 9,808 cases for investigation. Of the remaining 40,605 out-patients, coming from the Manchester Infirmary and the Northern and Ancoats hospitals, not a single case is returned as able to pay a doctor. No one acquainted with these hospitals will accept this for one moment as properly representing the true state of affairs. It is evident that an extremely high wage standard must be taken in judging of ability to pay a doctor, and probably the majority of the 2,275 cases returned as able to join a provident dispensary ought to be regarded as able to pay a doctor. This figure would represent 5.46 per cent. of the total out-patients, but even this is no criterion of the amount of hospital abuse that goes on, as the following considerations will show.

Taking the out-patients only, which number 50,413, we find that no less than 6,540 came from other towns, and were not investigated at all. Presumably it would cost each of these a fair amount for travelling to and from the

hospitals, and in a large proportion of cases the cost of travelling would have been sufficient to pay a local doctor. Again, no less than 2,131 gave a wrong address, or at any rate could not be found. Here again, probably, a large percentage were afraid of investigation. Further, as a rule, cases are only sent for investigation after their first attendance, and probably only those likely to require a long attendance are given to the investigators. That something of this sort must take place is seen by comparing the total number of out-patients at the hospitals with the number sent in for investigation. In 1907 the out-patients at the Royal Infirmary numbered over 43,000; last year it was about the same. But of these less than 25,000 were given to the provident society for inquiry. It is difficult to believe that all the remaining 18,000 were beyond doubt suitable for free treatment without inquiry. Further, when the society has supplied to the hospitals with the results of its inquiries, its duties are finished. But it is quite certain that in very many cases the hospitals take absolutely no notice of the statements of the investigators. There may be some reason for this, for when a patient is found not to be suited for free treatment the investigators mark the hospital card with the letters "P.D." which unfortunately may stand for either "Private Doctor" or "Provident Dispensary." Most people, including the hospital authorities, take these letters to mean that the patient is able to join a provident dispensary, but no provident dispensary will accept a person who is ill at the time without an extra subscription which may be prohibitive at the time, and so little notice is taken of cards so marked and free treatment is continued as before.

Taking all these facts into account it is evident that the figures given by the society are no criterion of the amount of hospital abuse that takes place in Manchester and Salford. This may not be the fault of the society; its figures may be correct as far as they go. But if all the out-patients attending at the hospitals on any one occasion are taken into account, it would probably be more nearly correct to treble or even to quadruple the percentage, 5.46, which is supposed to represent the number of those not suited for free treatment.

Turning to the in-patients, 15.75 per cent. are reported as able to make some payment. Only 2,182 cases were given to the society for inquiry, and of these 168 were not followed up, as they either came from other towns or could not be found, while 317 were found to be able to make a payment. But it by no means follows that they are asked to do so, though some of the hospitals try to get something from them. Here again only a small proportion of the total in-patients were investigated. For instance, the Manchester Infirmary has about 5,000 in-patients a year, but only 945 were investigated, of whom 40 could not be found, and 165 were reported as able to make some payment. Thus the figure 15.75 per cent. is no criterion of the actual truth, though here again the society is not to blame. It may be noted that no in-patients were investigated for the Northern or Ancoats hospitals, though possibly some had been investigated as out-patients before being admitted as in-patients.

Of the cases sent to the society by the Midwives Supervising Committee no particulars are given, but from the annual report of the medical officer of health for the previous year, it is seen that out of 288 applications for payment by medical men for attending midwives' cases, 26 patients were found to have an income above the scale. The authorities refused to pay for these, leaving the doctors who did the work to get their fees as best they could.

Taking all things into consideration it is evident that the society is doing good work, but it is sorely hampered by the failure on the part of the hospitals to take full advantage of the facilities which it offers for preventing hospital abuse, and there is more than a suspicion that even the investigations which are made are not always utilized as they ought to be.

LIVERPOOL.

THE SLEEPING SICKNESS EXPEDITION.

At a recent meeting of the African Trade Section of the Liverpool Chamber of Commerce, Dr. Allan Kinghorn, a member of the sleeping sickness expedition of the

Liverpool School of Tropical Medicine, gave an address upon the investigation of sleeping sickness. He said that tsetse flies had a very wide distribution over the whole of the territory with which the expedition had been dealing, and cattle diseases, due to various varieties of trypanosomes, and referable finally to the agency of these flies, were abundant everywhere. The absolute safety to life ensured by European administration, the opening of markets for the sale of local produce, and the demand for a constant and abundant supply of labour had resulted in an unprecedented movement amongst the native population: and as until very recently no checks had been imposed on this, many new foci of sleeping sickness had been established, and the price was now being paid. Most Governments were taking action, but the harm was done before the cause and method of spread of the disease were known. It was formerly thought that only the negro race was affected. The comparative safety of the white man was due to his clothes and the other conditions under which he lived. Wherever the *Glossina palpalis* existed in the presence of an infected person there existed the danger of the spread of human trypanosomiasis. Whilst this species of fly, known as the river fly, was capable of transmitting the disease, some doubt existed as to whether it was that fly only which could do so. He considered it safer to hold the view that other species of tsetse fly might transmit it. In order to check the spread of the disease the indiscriminate movement of the native population must be controlled. Should any district be found to be infected the natives should not be allowed to travel beyond its borders until it had been shown that they were not suffering from this disease. The *Glossina palpalis* required shade, and could be got rid of by making clearances along water courses; the clearing, however, must be thorough. To deal with sleeping sickness was a matter of international importance, and could only be accomplished by international co-operation.

WEST YORKSHIRE.

BRADFORD ANTHRAX INVESTIGATION BOARD.

At a meeting of this board on April 19th, Dr. Enrich, Bacteriologist to the Board, reported that since the last meeting in February two cases of anthrax had occurred. During that period he had examined 111 samples contributed by thirteen firms, a great majority of which were blood-stained, but in only one sample—of blood-stained Cape mohair—had he found anthrax spores.

THE NOTIFICATION OF BIRTHS ACT.

At the annual meeting of the Liversedge District Council, held last week, it was determined to adopt the Notification of Births Act, 1907, complaints having been made that the infantile birth-rate in the district was excessive. The rate for the township is 135.8 per 1,000, compared with 121 for England and Wales. Some strong protests were made against the adoption of the Act, but they were of no avail, as the majority of members were in its favour.

NEWCASTLE-UPON-TYNE.

BARRASFORD CONSUMPTION SANATORIUM.

The annual report for the year 1908 shows that 113 patients have been treated at the Newcastle and Northumberland Sanatorium at Barrasford during the year. The sanatorium was opened in May, 1907, so that it is at present too early to judge of the continuance of the good results which are evident when the patients leave the institution. Even better results could, in the opinion of the medical staff, be obtained if the patients were able to make a longer stay in the sanatorium, but the charge of two guineas a week which the committee is obliged to make may have something to do with this. A limited number of patients can obtain admission to the Newcastle Corporation beds, and the workmen of Sir W. G. Armstrong, Whitworth, and Co. support five beds. The medical report shows that the institution is doing good work. From May, 1907, when the sanatorium was opened, until September, 1908, 90 patients—52 males and 38

females—were discharged, and the following table shows the general result in these cases:

Males.	Females.
22 are at work.	12 continue to improve.
2 ready to start work.	13 are in statu quo.
6 are in statu quo.	5 are not doing well.
6 are not doing well.	5 have not been heard from.
8 have not been heard from.	3 have died.
8 have died.	

During the year 1908 89 patients were admitted and 70 discharged; of these, the pulmonary condition was considered to be arrested in 12, much improvement in 29; in 20 there was some improvement, and in 10 none.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

WOMEN'S NATIONAL HEALTH ASSOCIATION.

HER EXCELLENCY THE COUNTESS OF ABERDEEN opened a tuberculosis exhibition in the Rotunda, Dublin, on behalf of the Women's National Health Association, last week. In the course of an address, Lady Aberdeen said the exhibition had visited about 100 places in Ireland, and last week it was opened in the Black Pitts District and Dolphin's Barn. She thanked the various medical men who had come to give demonstrations. In the evening Dr. Hope, Medical Officer of Health for Liverpool, gave a lecture at the Royal Dublin Society on "Public Health Work in Liverpool in Special Relation to Tuberculosis and Infantile Mortality." The chair was occupied by His Excellency the Lord Lieutenant. Dr. Hope said that in many respects the two cities had, independently of each other, been working on somewhat similar lines. The death-rate from phthisis in Liverpool had fallen from 1.9 in 1895 to 1.4 in 1907. In proof that improved dwellings produced good results, he stated that the mortality in former insanitary areas showed that the rate in a period of three years was 1.35 lower than the rate for the city taken as a whole—that is to say, was about half the rate which formerly existed amongst the same class of people in their old surroundings. No practical sanitarian would suggest that if, instead of demolishing insanitary dwellings, the money had been spent in private hospitals and sanatoriums for consumptives, the results would have been at all comparable. He then entered into detail as to the various methods followed in Liverpool in the treatment of tuberculosis, and the beneficial results which had been realized, and referred to the methods adopted in Liverpool for the diminution of infant mortality. He expressed his admiration of the methods followed in the Dublin Milk Dépot. In Liverpool the milk dépot cost the City about £2,000 a year, but the corporation did not grudge the money provided it could be shown that good was resulting, and that infant life was being saved. On the motion of Sir John Byers, seconded by Dr. Cox, a vote of thanks was passed to Dr. Hope.

The report presented to the second annual meeting of the association stated that there were now 172 branches. Thirty nurses had been appointed to as many branches which had collected funds for that purpose. Several branches had raised funds in order to obtain sanatorium treatment for patients. Cookery lessons formed part of the winter work, and demonstrations were given as to how cheap meals could be provided for consumptive patients. Prizes had been offered for well kept cottages. A pasteurized milk dépot had been established by the central association as an object lesson to demonstrate the saving of infant life which could be effected by providing pasteurized milk. The tuberculosis van, provided through the generosity of the Trustees of the Pembroke Charities Fund, had visited 103 places, where lectures were given to crowds of people. At the International Congress of 1908 held in Washington the first prize for effective work had been divided between this Association and the New York Association for the Prevention of Tuberculosis. The income for the year was £2,819 11s. 5d., and the expenditure £2,896 13s. 6d.

On the same evening Dr. R. W. Philip (Edinburgh) gave an address on the part to be played by the consumption

dispensary in the tuberculosis campaign. He said it was an error to suppose that the British Isles were pre-eminent as a tuberculosis centre. As a matter of fact, England and Scotland occupied the lowest place in the table of mortality from tuberculosis in the world, and Ireland, he had no doubt, would soon take its place beside the sister countries. Tuberculosis was much more common amongst school children below the age of 15 years than was generally supposed, and in support of this statement he mentioned, amongst other things, that out of 16,589 consecutive cases attending the dispensary in Edinburgh, he found that no fewer than 1,917 cases occurred in children below 15 years of age—that was to say, 11.5 of the whole. Much time and energy had been wasted on ill-considered and partial measures for the eradication of the disease. The factors in a well-organized and co-ordinated scheme were—first, a tuberculosis dispensary; secondly, notification; thirdly, a hospital for advanced and dying patients; fourthly, a sanatorium for the cure of early cases; and fifthly, a work colony for the further treatment of selected patients to whom a return to work meant a relapse. He was happy to say that in Edinburgh each one of these factors was at present in operation. He then dealt in detail with the work of the consumption dispensary, which was of first importance, and which, if properly worked, should be the centre of antituberculosis operations. The significance and strength of the dispensary lay in its close relationship to the other factors in the scheme. He was satisfied that the key of success in the campaign was to be found in the co-ordination of effort along those different lines.

Dr. Stafford, in proposing a vote of thanks to the lecturer, said that the county councils would have power after July 1st next, under the Tuberculosis (Ireland) Act, to establish consumption dispensaries, and carry out the whole programme indicated by Dr. Philip.

Sir John W. Moore, M.D., Chairman of the Dublin Hospitals Tuberculosis Committee, seconded the resolution, which was supported by Professor McWeeney.

Sir Charles Cameron occupied the second chair, and a vote of thanks to His Excellency the Lord Lieutenant for presiding was passed, on the motion of Mr. Lentaigne, President of the Royal College of Surgeons, seconded by Dr. Hearn, Armagh.

PUBLIC HEALTH IN BELFAST.

The Belfast Health Authorities and the Local Government Board of Ireland do not seem to be able to agree. Some few weeks ago public money was being spent in taking counsel's advice as to the liability of the City Council for part of the expenses of the late Belfast Health Commission; the lawyers of the City Council gave an opinion which differed from that held by the Local Government Board. At the meeting of the Public Health Committee on April 22nd a letter was read from the Local Government Board refusing to sanction the proposed increase of the salary of the medical officer of health of Belfast from £600 to £800 by four annual increments of £50, and saying that in 1906 the Board urged the Corporation to offer a salary which would attract candidates with high qualifications and extensive practical experience in the sanitary administration of a large city; that after full deliberation the Corporation offered only £600; that it was accepted by the present holder of the office, and that the Board, having regard to its usual practice of declining to consider proposals to increase salaries until five years have elapsed after appointment, on the ground that the fixing of a low initial salary would tend to limit competition and discourage eligible candidates, feels unable to concur in the present proposal of the Corporation. A strong resolution of protest was passed by the Committee.

EPIDEMIC OF SCARLET FEVER IN LURGAN.

A serious epidemic of scarlet fever broke out in Lurgan about April 10th. In a week it had assumed considerable dimensions, and soon some 50 cases were in hospital, and the empty small-pox wards were called into requisition. In addition to the fever there were a large number of septic throats, some of which proved fatal. The medical officer of health (Dr. Agnew) thought the spread of the disease due largely to giving out work from one or two factories, but many cases have followed the distribution of milk from one dairy. The utmost efforts have been made to cope with the trouble.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

VITAL STATISTICS OF SCOTLAND.

THE fifty-fourth annual report of the Registrar-General for Scotland, covering the year 1908, has just been issued. The more outstanding facts of the vital statistics of Scotland for the year are a low birth-rate, a low death-rate, and a low marriage-rate.

The forty-fourth annual report on vaccination is of special interest in that it shows the effect of the recent Vaccination Act, the Act which permits the conscientious objection of the parents to be a valid excuse for the non-vaccination of children. The result of the Act is found to be that a decidedly larger number of children escaped vaccination than was previously the case.

The population of Scotland at the middle of 1908 is estimated to have been 2,826,587 males and 2,538,258 females. The total population is estimated to have been 50,524 more at the middle of 1908 than at the middle of 1907, the male population being estimated to have been 26,351 more, and the female population 24,173 more. These estimated increases of population are based on the rates of increase observed in the last intercensal period, which rates are assumed to have continued since the last census. The natural increase of the population of Scotland, the excess of births over deaths from the middle of 1907 to the middle of 1908 amounts to 52,875. The difference between that figure and the estimated increase may be taken as the indication of the probable effect of immigration and emigration. The natural increase of the male population between the middle of 1907 and the middle of 1908 was 28,129, and of the female population was 24,746.

The total number of births registered in Scotland during the year 1908 was 131,337, which is 2,548 more than the number of births registered during the previous year, but is 329 less than the average number of births registered annually during the previous five years, and 242 less than the average number of births registered during the previous ten years. The birth-rate of the year is 27.21 per 1,000, a rate which is 0.24 above that of the previous year, but is 0.95 below the mean of the rates of the previous five years, and 1.69 below the mean of the birth-rate of the previous ten years.

The total number of deaths registered in Scotland during 1908 was 77,849, a number which is 572 more than that of the deaths registered in the previous year, 1,555 more than the average number registered annually during the previous five years, but 136 less than the average number registered annually during the previous ten years. Compared with the deaths registered in 1907, those registered in the principal towns show a decrease of 618, and those in the insular rural districts a diminution of 92; but those registered in the small town districts show an increase of 774; those in the large town districts an increase of 298; and those in the mainland rural districts an increase of 210. The death-rate for the year is 16.13, a rate which is 0.05 less than that of 1907; 0.18 less than the mean of the death-rates for the previous five years; and 1.01 less than the mean of the death-rates for the previous ten years. Marriages registered in Scotland during 1908 numbered 31,583, which is 167 less than those registered in the previous year. The marriage-rate for the year was 6.54 per 1,000 of the estimated population. It is the lowest rate of any year since 1888.

The combined statistics of eight of the principal towns show that in them the birth-rate was lower than that of the previous year, which was the lowest previously recorded for those towns; the death-rate being for the first time less than 17 per 1,000; and the marriage rate being the same as those of 1886 and 1887, which were the lowest previously recorded. The death-rates of the year in the towns of Edinburgh, Aberdeen, Paisley, and Greenock are found to be the lowest recorded.

The number of children successfully vaccinated during 1908 was 98,642, amounting to 75.14 per cent. of the total children, and to 82.98 of the children alive at the time of vaccination. The former percentage is 7.59 lower than that of 1907, and 8.91 lower than the mean percentage of the previous ten years. The latter percentage is 8.47 lower than the rate of the previous year, and 10.31 lower than the mean of the percentage of the previous ten years. Both the percentages are the smallest yet recorded.

UNIVERSITY OF EDINBURGH: HISTORY OF MEDICINE.

Dr. Comrie's fifth lecture was devoted to an examination of the works of Hippocrates (born 460 B.C., died about 350 B.C.). The "Corpus Hippocraticum," he said, was composed of sixty distinct parts, of which sixteen were authentic works; some were possibly written in the School of Cnidos. Galen made many commentaries upon it. An essay in the course of the writings was called "Ancient Medicine"; another refers to "Airs, Waters, and Places," and dealt specially with the climate of Libya. In the course of the latter Great Britain was called the tin islands, about which Hippocrates stated he knew nothing. The need for very accurate observations and descriptions was insisted upon in connexion with the medical arts. The classical quotation concerning the "facies Hippocratica" as a sign of death was adduced as a well-known example to be copied. Empyema following pleurisy was to be diagnosed by the indications of varying pain in the chest, persistent purulent sanguineous expectoration and fever, not marked, but greater in the evening than in the forenoon. The therapeutics of pleurisy comprised the use of hot barley water following thorough evacuation of the bowels; limited doses of oxymel of squills (an Egyptian remedy), with honey and hot water as a beverage; local applications of hot water on sponge, in a bottle or in vessel of bronze or earthenware, to soothe the pain and induce comfort. Wine seemed often to have been prescribed. Purgatives consisted of euphorbia or hellebore with anise, cumin, or asafoetida. In pneumonia hot baths were recommended, and soft sponges used to lessen risk of injuring skin surfaces. The patient had to rest and have everything done for him. The notes of methods of treating pneumonia and case-taking were of value in indicating how accurately observations were made.

"Epidemics" referred possibly to an outbreak of Malta fever occurring after the Peloponnesian wars.

The "Aphorisms" had been translated into many languages, and commented upon by many writers and speakers—for example, Life is short and art is long. Experience was fallacious and judgement was difficult. Symptoms rather than morbid anatomy were dwelt upon in diagnosis, and in treatment great objection was made to so-called fattening processes. Bronchitis, pneumonia, coryza, and pains in the chest were diseases of winter. Tetanus was common in Greece, and had two distinct varieties—a very acute and fatal, and subacute and non-fatal variety. Epilepsy beginning before the twenty-fifth year of age was curable. Phthisis was said to be more common in the young than in the old—a statement which might be compared with the modern dictum which was that phthisis killed at about the age of 40 years. Eunuchs did not suffer from gout or baldness.

All starting the study of medicine were supposed to subscribe to the "Oath of Hippocrates," which was read in full; its high level of idealism was carefully insisted on. Reference was made to the work called the "Law," or a "Standard of Medicine" (Hipp., *De Juristic*). Epilepsy, fractures of skull and of forearm (radius) were described; treatment was indicated and comparisons were drawn between former methods and the modern use of massage and bandages.

A lantern demonstration included photographic representations of a bust of Hippocrates, many ancient surgical instruments and splints, and ladder used in treating disease of the spine with deformity, and a flat bed made of boards capable of being moved in two directions parallel to fixed supports running at right angles to the boards, trephining instruments worked with bow and string, or Archimedian screw, scalpels, dissector, and aneurysm needle. Authorities for statements made were indicated, and a copy of a dissector depicted, which was made of brass and steel, was handed round for inspection.

PHYSIQUE OF GLASGOW CHILDREN.

At the last ordinary meeting of the Royal Philosophical Society, Dr. A. S. Macgregor contributed an interesting paper on the physique of children admitted into Belvedere Hospital in the year 1907-8. The inquiry dealt chiefly with children under the school age, and investigated certain aspects of the relationship between the physical condition and the standard of the home life. For this purpose the number of rooms in the house was chosen as a convenient economic standard. Each social class has its own standard of physique, and the difference

between the standards for the poor and better-off children was distinct at all ages, but was particularly marked during the period prior to school life. The influence of poor conditions of life was most noticeable between the ages of 2 and 4 years, and there seemed to be some recovering of physique about the period when school life begins. The chief criterion of physique adopted was the height measurement, as the weight tended to diminish during the incubation periods, especially in the younger children. Using the increase in height and weight during the residence of the children in hospital as a test of the capacity to respond to better surroundings, he found that the slum children were quite amenable to improvement. The prevalence of rickets was emphasized. It was found in 31 per cent. of male and in 26 per cent. of female children. It occurred almost as often among the dwellers in the top flats as in those on the ground floor, but the incidence markedly diminished as the population of rooms in the house increased. It was also noted that rickets seemed to be twice as common among Glasgow children as among those from other parts of the country, and seemed to be more common among the children of mothers born in Glasgow than of mothers bred out of Glasgow.

EDINBURGH POST-GRADUATE VACATION COURSE IN MEDICINE.

The syllabus for the Edinburgh post-graduate vacation course in medicine has been issued. The course will extend from Monday, August 30th, to Saturday, September 25th, and will comprise: (1) A general course; (2) a surgical course; (3) special courses; (4) each day a special lecture on some subject of general medical or surgical interest. The University Union will be available to graduates of any university during the month of September for a fee of 5s. During the past three years some 70 graduates have, on the average, attended the post-graduate courses. In order to prevent disappointment, graduates who wish to enter for the surgical course or any of the limited classes are requested to study the syllabus carefully, and to fill up the entry form at an early date to the Secretary. Places will be reserved only if applications are accompanied by the fees for the classes in question. The classes are open to women. Communications should be addressed to the Secretary, the Faculty Office, University New Buildings, Edinburgh.

ROYAL INFIRMARY, GLASGOW.

After a keen contest, the post of Pathologist to the Royal Infirmary, vacant by the resignation of Dr. Galt, has been filled by the appointment of Dr. J. H. Teacher, M.A., M.D., who for some time has acted as senior assistant to Professor Muir. Since 1905 he has been Assistant Pathologist to the Western Infirmary and to the Royal Infirmary for Sick Children, and for the past two years has held the position of Lecturer in Pathological Histology at the University.

CEREBRO-SPINAL MENINGITIS IN SCOTLAND.

The Registrar-General for Scotland reports that in eight of the principal towns of Scotland, during the month of March, deaths from cerebro-spinal meningitis numbered 12. This was 4 more than in February, but 15 fewer than in March, 1908. Of these 12 deaths, 9 were registered in Glasgow, 2 in Edinburgh, and 1 in Aberdeen.

NURSES' REGISTRATION.

The Central Council of the British Medical Association, at its meeting on April 28th, adopted resolutions expressing the opinion that it is desirable that the general principle of separate registration of nurses in Scotland, as embodied in the bill introduced into the House of Commons by Mr. Cleland to establish and make regulations for a register of nurses in Scotland, should be supported; and, further, that any bill which does not provide for reciprocity of registration within the United Kingdom should be opposed.

EDINBURGH INDIAN MEDICAL SERVICE DINNER.

This annual dinner will take place on Friday, May 28th, in the Caledonian United Service Club, Shandwick Place, Edinburgh, at 7.30 p.m. Tickets, 8s. each (exclusive), may be obtained from Colonel James Arnot, 8, Rothesay Place, Edinburgh. Sir Alexander Christison, Bart., will preside.

SCOTTISH DENTAL ASSOCIATION.

The annual meeting of the Scottish Branch of the British Dental Association was held in the Dental Hospital, Edinburgh, on April 24th, Mr. W. Taylor, L.D.S., Glasgow, in the chair. The following office bearers were elected for the ensuing session: President, J. Douglas Logan, L.D.S.; Vice-President, R. Keith Common, L.D.S.; Treasurer, D. Baillie Wilson, L.D.S.; Honorary Secretary, L. C. Broughton-Head, M.B., L.D.S.; new Members of Council J. P. Crichton, L.D.S., A. K. Finlayson, L.D.S., C. E. Page, L.R.C.P. and S., L.D.S., W. Taylor, L.D.S. The annual dinner was held in the Caledonian Station Hotel the same evening, under the chairmanship of Mr. J. Douglas Logan, L.D.S., Edinburgh. The toast of "The Royal Colleges of Physicians and Surgeons of Edinburgh and of the Faculty of Physicians and Surgeons of Glasgow" was proposed by Mr. W. T. Finlayson, L.R.C.P. and S., L.D.S., Edinburgh, and responded to by the Presidents of the respective bodies. "The British Dental Association" was proposed by Dr. McKenzie Johnston, and replied to by the President of the Branch, Mr. J. Douglas Logan.

British East Africa.

It is not often that we can accuse our Government departments—the Colonial Office, the War Office, or the Treasury, on which both are largely dependent—of erring on the side of generosity or liberality towards their employees; but for rank cheeseparing we can find nothing to equal a Colonial Office regulation recently promulgated which ruled that officials serving in British East Africa were to be limited to ten days at one time, and to twenty-eight days in the year on the sick list from illness, after which periods such officials were to be placed on half pay. We have it on very good authority that when the regulation was ordered to be incorporated in the Provincial Gazettes in British East Africa, the commissioner of at least one province (owing to its notorious unhealthiness) protested against the regulation, if he did not absolutely refuse to promulgate it locally. The regulation which was considered prejudicial to the interests of the officials employed was made the subject of a question in Parliament by the late Mr. Arnold-Forster, who asked the Colonial Secretary whether such a regulation had been issued and incorporated in the Provincial Orders throughout British East Africa. The reply by the Colonial Office was that such a regulation had recently been issued; but the Secretary of State has approved of its withdrawal, and in future a maximum of forty-five (45) days' sick leave per annum would be allowed.

Two points in regard to this regulation may be discussed: (1) Does the modified order go far enough—that is, is it fair or liberal? and (2) What can have been, or is, the reason for the action of the Colonial Office in this matter of sick list periods?

An official's illness may be due to his own negligence, stupidity, or excess, and not to climatic conditions. If the sickness be due to any of these conditions, cannot the Medical Board or the medical certifying officer who draws up the case be trusted to state the facts? As a rule—at all events in the War Office—both the authorized Medical Board and the medical officer drawing up the statement of an officer's case are called on to reply to specific questions dealing with causation; in the former case the Medical Board has to state whether the disease or disability is caused "*in and by the service*," while if the medical officer draws up the case he has to state what the "*habits*" (temperate or intemperate) of the officer are. It is thought that the recent order will make officials refrain from reporting sick, and thus increase the percentage of invaliding. As a matter of fact, officials are stopped 5s. a day every day they are in hospital, and this alone has tended to prevent their reporting sick. This tendency will become greater now that the recent regulation has come into force; though, let it be noted, officials in Northern Nigeria are deprived of the allowance of 5s. a day which was granted in their original appointments until officers were provided with brick houses. They paid 5s. a day when in hospital, and were provided with everything. The allowance of 5s. has been reduced yearly by 1s. and will cease altogether

next year; but officers will have to pay 5s. a day in hospital, and in stations where there is no hospital they have to pay for medical comforts. Most of the officials are living in mud houses. There should not be, we think, any charge for hospital treatment or for hospital comforts in non-hospital stations. The conditions of life in bush stations are much as they were eight years ago, and the climate has not altered.

Some facts with regard to vital statistics, hospitals, climate, public health, and sanitation in the East African Protectorate may not be out of place here. We find from the last report, 1906-7, presented to both Houses of Parliament, June, 1908, that a census had not only never been undertaken, but under present conditions would be quite impossible. An approximate estimate gives the population of the Protectorate at 4,000,000. Despite the mortality from sleeping sickness in the lake shore and an abnormally high infant mortality, the native population should tend to increase as internal peace is secured. The white population is roughly estimated at 1,600, including Government officials; it includes individuals to whom land, industrial, and mining concessions have been granted locally.

In 1906 the registration of births and deaths of Europeans, Americans, and Indians throughout the Protectorate, and of all deaths, including natives in township areas, became compulsory. The registration of native births is optional, so that the returns of births and deaths cannot be compared with a view to ascertaining the increase or decrease of population. Moreover, the native deaths registered form only a very small proportion of the total population. The returns, then, for 1906-7 show a total of births 190, deaths 1,347. It is unnecessary to give the figures for each province, but it may be stated that the province of Seyidie contributes 139 births and 770 deaths to the aggregate numbers.

There are European Government hospitals at Mombasa and Nairobi; in the former 23 patients were admitted, of whom 15 were cured, 5 relieved, and 3 died—that is, 13 per cent.; in the latter, of 52 admissions 26 were cured, 19 relieved, and 6 died (11.5 per cent.). There is no lunatic asylum in the Protectorate, but provision has been made for the erection of an asylum at Nairobi; natives are confined in the gaol and Europeans placed under medical supervision and sent home as soon as possible.

The description of the climate may be given by divisions of the Protectorate into three principal zones; but even thus there are considerable ranges in temperature and rainfall which have strong influences on health.

The coast region gives a temperature not excessive, but owing to the moisture of the atmosphere the heat is trying to Europeans. In the coast towns, however, during the monsoons a cool breeze blows constantly, particularly between May and November, when the south-west monsoon is prevalent. The hottest season is in January, February, and March; but the nights are generally fairly cool, though during the lull between the monsoons they are apt to be very oppressive. Most rain falls during April, May, June, and November. The climate of the coast stations for Europeans is apt after long residence to cause enervation, but on the whole is not unhealthy. Malaria and other tropical illnesses are not frequent. Inland the heat, being untempered by sea breezes, is less bearable.

The highlands of East Africa consist of ridges and plateaus ranging from 4,000 to 9,000 ft. high, one peak (Mount Kenya) reaching 18,000 ft. The climate here is generally speaking healthy. The sun so near the equator is powerful during the midday hours, but the air is brisk and invigorating and the nights cool, so that Europeans can exert themselves to an extent impossible at the coast. As this part of the country is considered suitable for colonization many settlers have made their homes in it. Children who have been born and brought up in it have a healthy appearance. The one drawback is the unduly great daily range of temperature and a prevalence of strong winds.

The third zone is the district round Lake Victoria. The shores of the lake are comparatively low-lying, and the heat consequently approaches and even exceeds that of the coast. Violent storms are frequent, and the climate is less agreeable than in any other part of the Protectorate.

Malaria is common, and, if not carefully treated, leads not infrequently to blackwater fever. Mummies and Kisumu have distinctly bad records in this respect, though some improvement in the accommodation and sanitary conditions of the latter station has rendered it less unhealthy. The general sanitary condition of the Protectorate falls short of modern ideas. Some improvement has been made at the Government stations as regards the control of water supply, clearing bush, etc., but progress is slow. The water supply from the lake (Victoria Nyanza) is very unsatisfactory, and has been the cause of a large increase in the number of deaths from dysentery. Steps have been taken to improve the supply by the erection of water tanks. Night soil at Nairobi is buried in trenches situated at some distance from the town. Drainage is insufficient. Kisumu has a similar system of conservancy to that of Nairobi. The public health has on the whole been good, though there was a marked increase in the prevalence of malarial and blackwater fever in the districts near Lake Victoria corresponding with an unprecedented rise of the lake level. Only one European official died during the year of the report, and two were invalided. The death was due to blackwater fever. The total mortality among the white population amounted to 13, or about 6 per 1,000. Sleeping sickness claims a large number of victims. Plague broke out at Nairobi during the year of the report, causing 26 deaths out of 31 cases. At Kisumu there was a slight epidemic. Three cases of enteric fever occurred at Nairobi, of which 2 were fatal. This proves the existence of the disease in the Protectorate; no authentic cases had previously been known. The most prevalent diseases (as in former years) were those of the respiratory organs, especially pneumonia and pleurisy, and of the digestive system, which showed a considerable increase over 1905-6. It must be noted that these remarks apply to cases dealt with in hospitals, and concern only a small proportion of the total population.

Special Correspondence.

BERLIN.

Discussion on Anaesthetics at the German Surgical Society. —The Care of Crippled Children.—The Board of Insurance and Tuberculosis in Workmen's Homes.

THE thirty-eighth annual meeting of the German Surgical Society, which took place in Berlin from April 14th to 17th, under the presidency of Professor Kümmel (Breslau), occupied itself with an immense number of subjects, for the most part highly specialized. One entire sitting, however, was given up to Narcosis, and the advantages and disadvantages of modern methods as compared with chloroform and ether. Neuber (Kiel) gave the result of the inquiry sheet sent to all German surgical specialists. Out of a total of 71,000 narcoses, 21 deaths were recorded, or 1 in 3,000. The number of cases in which chloroform was the anaesthetic used had gone down from 75 per cent. of all administrations to about 25 per cent. The outcome of his own experience, said Neuber, pointed to scopolamine and ether as the least dangerous of anaesthetics. Bier (Berlin) pleaded for spinal anaesthesia in cases in which general narcosis might be risky. His favourite local anaesthetic was novocaine-adrenaline. For short operations in cases in which local anaesthesia was out of the question, Sudeck (Hamburg) recommended ether combined with morphine. Rehn (Frankfurt) discussed the deleterious influence on the spinal ganglion cells and medullary fibres of the anaesthetics injected into the spinal canal. Kader (Krakau) had found spinal analgesia safe and successful if carried out with a full dose of tropacocaine. Erhardt (Königsberg) recommended a mixture of gum (arabinc acid) as favouring slower absorption of the anaesthetic by the medullary sac. Koehler (Berlin) was strongly opposed to the introduction of spinal anaesthesia into field surgery.

Much attention has been given of late to questions connected with the care and education of needy child cripples in Germany. Though private initiative has been active for many years, and though the different Federal States have made a certain amount of provision for these little

sufferers by establishing cripples' homes, polyclinics, etc., these measures have not been nearly far-reaching enough, and fully organized and general action is urgently necessary if the question is to be dealt with thoroughly. Accordingly, after the usual preparatory steps, an influential German Union for the Care of Cripples has been formed. It numbers among its members Ministerial-director Foerster and Geheimer Medicinalrath Dietrich (both of the Prussian Cultus Ministry), delegates from the Bavarian and other Federal State Ministries; orthopaedic surgeons of note, mayors, town councillors, clergymen, heads of schools, and some well-known philanthropists—forty-eight persons in all. The first meeting was held in the large hall of the Prussian Cultus Ministry on April 14th, and was attended by many of the German orthopaedic surgeons who had come to Berlin for the surgical congress. Broad general lines of action were arranged, special stress being laid on prophylactic measures. The work of the meeting was, of course, mainly preparatory.

New measures for the protection of working men and women against infection from tuberculous comrades have just been started by the Berlin Branch of the National Board of Insurance. In future all the Berlin sick clubs affiliated to the Board will report to it their tuberculous cases, and the homes will thereupon be visited by special medical officers. On their recommendation the homes will be disinfected or thoroughly cleansed, or rearranged in as hygienic a manner as circumstances permit. If the patient cannot afford the expense of a separate bed, one will be provided; a separate room even will be rented for the patient where this seems of vital importance. The uninsured members of the family, too, will be examined medically, and if found tuberculous will be put in communication with the city bureaux for the care of the needy tuberculous population. Onerous and expensive as these measures must necessarily be, they are primarily designed, and no doubt in the end will prove, to effect a considerable saving of money to the National Board of Insurance. No fitter illustration could be given of the great truth that national health means national prosperity.

Correspondence.

TETANUS OCCURRING AFTER SURGICAL OPERATIONS.

SIR,—I am able to add three cases to those recorded by Mr. W. G. Richardson in the JOURNAL of April 17th last.

CASE I.

A woman, aged 45, on whom I performed subtotal hysterectomy for fibroid growths on April 12th, 1908. The wound healed by first intention, and all went well till April 29th, when stiffness of the muscles of the jaw and throat, with rise of temperature occurred. Generalized spasms were absent, but local stiffness and spasm persisted, with inability to swallow and pyrexia, up to 102° F. The patient rapidly became weaker, and died on the fifth day of the illness. No post-mortem examination was obtained, and the wound having been completely healed, there was no discharge available for bacteriological examination.

CASE II.

A man of strong physique, a tram driver, was admitted into the South Devon and East Cornwall Hospital on April 21st, 1908, with a double bubonocoele of five months' duration, under the care of Mr. Whipple, to whom I was at the time assistant surgeon. I performed radical cure on April 25th, and all went well till 2 p.m. on April 30th, when the patient complained of difficulty in opening his mouth, and pain in the back of the neck. The symptoms increased rapidly in severity during the afternoon and evening, and at 12.45 a.m. 20 c.c.m. of tetanus antitoxin was administered hypodermically. The temperature was then 99° F., and pulse 112. No improvement followed, and the patient died in a spasm at 8 a.m. on April 31st. The wounds had healed almost completely.

CASE III.

A shipwright, aged 24, of healthy appearance, was admitted to the South Devon and East Cornwall Hospital on April 21st, 1908, under the care of Mr. Whipple, for a left inguinal bubonocoele of two years' duration. On April 28th I performed radical cure. The wound suppurated but was completely healed by May 10th, the temperature never rising above normal. On May 16th the patient complained of inability to open his mouth, and there was stiffness of the jaw and neck muscles. The disease developed fully, and ran a protracted course, the temperature rising to 103° and 104° F. for twenty-three days.

It then fell gradually, and was normal on the twenty-sixth day of the disease. The patient eventually recovered completely. Chloral and bromide mixture and serum injections were frequently used.

These three cases are very suggestive. In all both myself and my assistants wore boiled rubber gloves, and observed all other antiseptic precautions. In two of them union of the wounds occurred. At the time I suspected the catgut, which was in each case obtained from the same source, and prepared in the hospital by the same method—that known as the iodine spirit. On referring to the clinical pathologist's report of the examinations of catgut, I find that there is no record of bacteriological examination of catgut between March 14th and May 22nd, 1908.

In Case II (which died) cultures were taken from the wounds in the groins *post mortem*, and the result is noted as follows:

Culture from right wound shows growth of shortish thick bacilli, from left shows staphylococci. No tetanus bacilli seen.

I am much indebted to Mr. Richardson for his interesting paper.—I am, etc.,

H. W. WEBBER,

Plymouth, April 25th.

Surgeon to the South Devon Hospital.

ANAPHYLAXIS.

SIR,—Discussing the term "anaphylaxis" in his interesting letter published in the JOURNAL of April 24th, p. 1037, Dr. W. Calwell finds a difficulty in the fact that repeated injections of antidiphtherial serum lead to serum anaphylaxis, or increased susceptibility to serum, but do not at the same time induce diphtheria anaphylaxis, or increased susceptibility to diphtheria.

Serum anaphylaxis results from repeated injections of an antigen, or antibody-producing substance, which is present in normal and antidiphtherial horse serum alike. The other active agent in antidiphtherial serum is diphtheria antitoxin, which does not cause diphtheria anaphylaxis. In order to produce diphtheria anaphylaxis it is necessary to give repeated doses of diphtheria toxin. This was done, for example, by von Behring and Kitashima; an animal treated by these observers died as the result of a series of injections of diphtheria toxin, amounting in sum to $\frac{1}{100}$ of the minimum lethal dose.

The whole problem is somewhat complicated by the circumstance that toxin anaphylaxis is induced by material which is poisonous at the moment of injection, whereas serum anaphylaxis is elicited by substances which are bland when first introduced into the system. Doses of toxin act speedily; but horse serum when first injected into the human subject takes effect, as a rule, after the lapse of a latent period. The principle, however, is similar under both conditions. Briefly, both serum anaphylaxis and diphtheria anaphylaxis are produced by antigens, serum antigen in one case, diphtheria antigen, or toxin, in the other. Serum antigen and diphtheria toxin are substances of a different order from diphtheria antitoxin, which is an antibody. It is not, therefore, to be expected that antidiphtherial serum, which contains serum antigen and diphtheria antitoxin, should act as if it contained serum antigen and diphtheria toxin—in other words, should cause at the same time serum anaphylaxis and anaphylaxis to diphtheria.

The term "anaphylaxis" is in common use on the Continent. The word *Ueberempfindlichkeit* is also employed by von Pirquet and Schick, Otto and others. Writing in this country I have used the word "supersensitization" to denote the condition under notice, and this expression has also been adopted by Dr. E. W. Goodall. It is preferable to "hyperimmunization," a word which neither represents the facts of the case nor conforms to the canons of etymological purity.—I am, etc.,

Chester, April 26th.

J. R. CURRIE.

COAGULATION TIME OF THE BLOOD.

SIR,—Dr. Addis's observations in the BRITISH MEDICAL JOURNAL of April 24th, p. 997, on this subject have been so numerous, and are so uniform in their results, that it is difficult to withhold assent from his conclusion that calcium and citric acid respectively have no effect upon the coagulation time, but the estimation of this factor is so

extremely difficult that I venture to say a word of caution before the results are accepted as final. Some months ago I suggested in your columns a method of taking coagulation time, which is very simple, and appeared to be accurate. It did not include precautions against variations of temperature, which Dr. Addis shows to be very important, but this defect would not vitiate comparisons of times obtained at a single sitting. I have found that different portions of the same drop of blood may vary as much as 25 per cent. in coagulation time, and Dr. Addis has found some difference, for he warns us to reject the part last drawn, because it coagulates sooner than that which first appears. This does not agree with my results. I find that coagulation may begin in the part last drawn, or in the part first drawn, or in any intermediate part, and that adjacent parts do not by any means follow one another in order. Dr. Addis finds a difference of 33 per cent. in coagulation time among 150 trials on different days. I have found a difference of 25 per cent. in different parts of the same drop, a difference of 40 per cent. in different drops taken within half an hour of each other, and a difference of 50 per cent. in drops taken before, and half an hour after, a meal. Dr. Addis does not record the relation of his observations to meal times, but he is such a careful observer that we may take it for granted that this was considered. I do not wish to pit my method against his. It is quite possible that his is the more accurate—certain that it is more accurate in respect of observations taken at different temperatures; but the normal margin of error is so wide, even on his own showing by his own method, that one would expect a wider variation in his results, which are quite remarkably uniform. If they are confirmed they are of great importance, but they are scarcely yet conclusive. I should say that the results that I have herein recorded are founded on some hundreds of observations.—I am, etc.,

London, April 26th.

CHARLES MERCIER.

HUNGER PAIN AND DUODENAL ULCER.

SIR,—The "hunger pain" controversy interests me "too" much. I have "hunger pain," and am suffering from operative nightmare. At the same time, if I am to be promised relief from what apparently is duodenal ulcer, I shall gladly lay me down to be relieved by gastro-enterostomy. But there are one or two points that may interest your controversialists. Let me therefore be personal. I have suffered from "hunger pain" since I was 16 years of age; at least, the gnawing pain of then and that of to-day are indistinguishable. A drink of water, hot milk, or an apple or biscuit immediately relieve the pain. Sodium bicarbonate has an equally good effect. The tenderness is appreciable below the ensiform cartilage and to the right of the rectus muscles. I never have had sickness nor melæna. Pain ensues three and four hours after food. Tea in excess is certain to cause pain. After freedom from pain for a few hours, a cigarette (I inhale) will at once call the pain into being. When I am troubled with this "hunger pain" my sleep is seriously broken, and between 1 and 3 a.m. I am compelled to take soda and water. This stills me to sleep at once. I now and again swallow $\frac{1}{2}$ grain of morphine, but I hate the stuff. It acts like magic, and if I take it two days in succession the pain vanishes, and I have freedom for perhaps weeks. To look at me, I am the picture of health. I play golf, cricket, and love fresh air. I eschew meat and subsist on the sloppiest of diet. Yet this ore persists in reminding me that it is there about my pylorus.

If I have a few days of hyperacidity I know it is the danger signal of "hunger pain." If I go from home and accept food that I would never eat at home I may be attacked by biliousness. I become languid, my eyes become muddy, and in a few days on comes the "hunger pain." Clayey stools add to the list of my peculiar summary of symptoms. I am a busy man, and inclined to light-heartedness, but it takes the "stuffing" out of one to be tormented as I am. A friend of mine has recently submitted to the "knife"; he marvels at my patience since he feels a new man.—I am, etc.,

April 25th.

PYLORUS.

RESPIRATION AND FATIGUE.

SIR,—Dr. Leonard Hill, in his interesting letter on "arterial blood pressure before and after muscular exer-

tion," which appeared in the BRITISH MEDICAL JOURNAL (page 927), states that "the fatigue which follows an athletic feat seems to be mainly cardiac in origin, and it is due to want of oxygen."

Now, if the fatigue is due to want of oxygen—and Dr. Hill's many interesting experiments with that agent clearly prove this—inasmuch as it is through the lungs that the blood obtains oxygen, and as it is also by the aid of the respiratory movements that the normal endocardial pressure is maintained, a not unimportant factor in the adequate functioning of the heart, surely it is putting the cart before the horse to state that "the fatigue which follows an athletic feat seems to be mainly cardiac in origin."

That the acceleration of the heart-beat during exercise is not, as is pretty generally supposed, the primary cause of the distress, is proved, it seems to me, by the fact that after exercise, when distress is over and the respiratory act is performed rhythmically and easily, the pulse rate is still much in excess of the normal, and remains above the average for some time. So it is not unreasonable to suppose that the quickening of the circulation is an effort of Nature to aid in the oxidation and elimination of toxic products formed during exercise. In short, it is a protective measure. The process of oxidation would also account for the rise of temperature that is not infrequently associated with exercise.

The primary cause of distress following muscular exertion is due, I take it, to disorderly respiratory movements, which destroy the regularity of respiratory exchange; and the phenomenon of "second wind" bears out this view. The distress and more or less irregular, quick, shallow movements of the whole chest, which were before its advent a somewhat prominent feature, now give place to a feeling of well-being and regular, slower, deeper respiratory movements, which are chiefly confined to the lower zone of the thorax and upper part of the abdomen. A runner sometimes explains the loss of a race by the fact that he never got his "second wind." In other words, the mechanism upon which this phenomenon depends was not brought into operation. If the poor fellow had only known the muscular combinations which favour its development instead of trusting to luck, as only too often is the case, possibly the race might have been his.

It is true, Dr. Hill has pointed out, that the mechanism of respiration in an exhausted runner or boxer (and I may add also, in any one who suffers from failure of the respiratory powers, temporary or otherwise, be the cause what it may) is chiefly thoracic in character—a disorderly, vitiated type of respiration. Dr. Hill has also told us that in easy breathing the belly, rather than the chest, is used, which is a physiological necessity, seeing that the efficiency of the circulation is largely dependent upon the ability of the respiratory pump to keep the heart adequately filled, and the rhythmical squeezing to which the splanchnic area is subjected, when the diaphragm and abdominal muscles are properly used, makes for this most desirable end. But, it seems to me, he does not draw the logical and legitimate conclusion warranted by these facts—namely, that as long as the muscles governing the respiratory act efficiently perform their duties, other things being equal, breathlessness and fatigue cannot overtake one. In other words, given a sound heart, lungs, and other organs, the respiratory fitness of the individual is the true regulator of a work of muscular endurance. "There's the rub."

Those who have studied the subject find plenty of evidence as to the early deterioration of the respiratory powers in civilized man of to-day. Indeed, the evil is so widespread, that it is not at all uncommon to find signs and symptoms of it in those not yet out of their teens, and sometimes even in young children. This unfortunate state of affairs is not the result of civilization, but the consequence of the wilful rejection of the fundamental truths of physiology and hygiene. And medical men are as great offenders as the laity in this respect. Desires and customs, not necessity or reason, seem to be the principle upon which most of us plan our exercise, bathing, clothing, feeding, and other bodily arrangements.

However, even though man arranged to be guided by reason instead of whims and fancies and trained for an athletic feat in a rational manner (by "rational" I mean systematic practice in the correct use of the muscles

governing the respiratory act, in addition to training for the economical and efficient use of the other muscles concerned in the particular form of exercise), when the limits of individual endurance have been reached fatigue will necessarily supervene, but oxygen administered according to Dr. Hill's method will considerably delay its onset.

Athletes, as well as the medical profession, owe a debt of gratitude to the eminent physiologist for his researches on the use of that valuable agent, oxygen, which leaves the body better, unfatigued, unpoisoned by the unoxidized products produced in the excessive strain of great exertion. —I am, etc.,

R. F. E. AUSTIN,
Major, R.A.M.C.

Chatham, April 9th.

ARTERIO-SCLEROSIS.

SIR,—In the JOURNAL of April 10th, p. 904, in a review of Dr. Josué's work on arterio-sclerosis, I observe a statement that I have obtained aortic lesions similar to those following the intravenous injections of adrenalin "by swinging rabbits by their hind legs." In justice to my colleague, Dr. Klotz, may I point out that the experiments here referred to are his, not mine? I can only state that by periodic suspension of rabbits for a few minutes daily by their hind legs most advanced lesions can be produced, and that these observations of Klotz's will be found in detail in the *Centralblatt für Allgemeine Pathologie*, vol. xix, 1908, p. 535.—I am, etc.,

Montreal, April 19th.

J. GEORGE ADAMI.

RHEUMATISM AND APPENDICITIS.

SIR,—In the BRITISH MEDICAL JOURNAL of March 20th, Dr. J. A. B. Hammond records a case of appendicitis in a rheumatic subject which yielded rapidly to salicylic medication. Some months ago I had a case in which the clinical features were very similar to those described.

Miss S., aged 38, suffering from chronic rheumatism—"flying" pains, swollen joints, and stiff neck—came to me for a course of electricity and massage. Salicylates had been tried without much benefit, and I had it in my mind to place her on some form of intestinal antiseptic treatment, the breath being foul and the motions evil smelling. Within three days of my first seeing her, however, she developed what appeared to be a severe attack of appendicitis. A history of former similar attacks of a milder character was elicited, and so acute were the symptoms that it was deemed necessary to call in a surgeon. Immediate operation was advised, and the abdomen accordingly opened. The operator expected to find pus, or, at least, an ulcerated appendix on the point of perforation. Slight swelling and congestion was, however, all that was evident. In fact, the patient would almost certainly have recovered without surgical interference.

Now, the question arises, was the appendicular lesion due to the same cause as produced the joint troubles—that is, to the "rheumatic" toxin? In other words, was it of a kind which would never in any circumstances have gone on to suppuration? The marked effect of salicylates in Dr. Hammond's case would seem to indicate that such specific appendicitis may occur, but many similar observations are needed to establish its existence.

In any case, the association of appendicular trouble with chronic rheumatism is one more link in the chain connecting this latter disease with intestinal auto-intoxication. It is surely a plea for the treatment of arthritis deformans and kindred evils by a vigorous attack upon putrefactive organisms in the bowel, either by the exhibition of such drugs as creosote and guaiacol, or, better still in the opinion of many observers, by the introduction of suitable cultures of lactic acid-forming bacilli.—I am, etc.,

FRANCIS HERNIMAN-JOHNSON, M.B.,
Ch. B. Aberd., R.N.(ret.)

Bishop Auckland.

MR. JOHN DAVIDSON.

SIR,—Among the documents found since the disappearance of Mr. John Davidson was one in which he speaks of his inability to face the effects of cancer. His family wish, in the circumstances, to discover on what grounds he based his belief that he was suffering from this disease, and I write on their behalf to ask if you will allow me through your columns to request any medical man whom Mr.

Davidson consulted in the last few years to communicate with me at this address if he feels himself free to do so.—I am, etc.,

36, Roland Gardens, S.W., April 23rd.

GRANT RICHARDS.

HISTOPATHOLOGY OF THE VERMIFORM APPENDIX.

SIR,—On page 235 of the JOURNAL of January 23rd there is an editorial entitled Histopathology of the Vermiform Appendix, which is in the main an exposition of some of the more striking points contained in C. U. Maaløe's *Histopatologiske Studier over Processus Vermiformis*. (1908. Copenhagen: Lund.) Maaløe's work is not, unfortunately, available to me in Melbourne, and I am therefore unable to say whether this author has or has not acknowledged the work of his predecessors in this important field of science and surgery; but, as the general tendency of your note is to infer that Maaløe's points are something novel, I trust you will permit me, in justice to myself and to the school which I have now the honour to represent, to remind you that much of what you mention in your article has already been published by myself, both alone and in conjunction with others.

In April, 1906, I published, with Dr. L. A. H. Lack, nov of the Indian Medical Service, in the *Journal of Anatomy and Physiology*, page 247, vol. xl, an article entitled The Vermiform Appendix of Man and the Structural Changes therein Coincident with Age. This article is fully illustrated, and concluded as follows:

1. Lymphoid tissue is the characteristic feature of the true caecal apex throughout the animal kingdom, including man. As the vertebrate scale is ascended this tissue tends to be collected together into a specially differentiated portion of the intestinal canal, the vermiform appendix.

2. The amount of lymphoid tissue present at the caecal apex varies most probably, though not certainly, in accordance with the varying diet of the animal.

3. The vermiform appendix of man is not, therefore, either a vestigial remnant of an organ in a state of retrogression, but is an actively functional lymph gland. It is no argument against this view to state that because the appendix is frequently removed without any apparent functional disturbance it is useless, because the same argument might be adduced against the stomach, which is occasionally removed either wholly or in part, and with more or less success.

4. The appendix of man is not equally functional throughout the whole of life. At birth it contains practically no lymphoid tissue; within six weeks it has become a lymph gland, and continues as such during the first half of life, after which it progressively declines in functional activity. Lymphoid tissue is therefore a tissue of the growing animal.

5. Obliteration of the vermiform appendix is a pathological process.

6. The functions of the human appendix are the same as those of any other collection of lymphoid tissue in any other part of the body.

Of these six conclusions, the first three are the embodiment of my earlier work on "The True Caecal Apex, or the Vermiform Appendix; its Minute and Comparative Anatomy," published in the *Journal of Anatomy and Physiology*, vol. xxxv, p. 83, 1900-1. This paper was the result of an extensive examination on the caecal apex of the lower animals, and in due course was followed by the one already mentioned on the human appendix. In the interval between the publication of these two papers, Mr. C. B. Lockwood of London published some most important work on the minute structure and lymphatic drainage of the appendix, and this left Dr. Lack and myself free to investigate other points, which were precisely those which your article would lead one to infer are now first known as the result of Maaløe's work. Dr. Lack and myself demonstrated at Geneva in 1905, and published in 1906, everything that you now state Maaløe has done as regards the increase in the size of the follicles, their decrease, the individual variations in the same, the fact that the appendix is not an organ in process of disappearance, and the contravention of Ribbert's views as to obliteration.

At the request of the editor of the *Intercolonial Medical Journal*, I published in that journal in 1906 an epitome of my investigations on the vermiform appendix, a copy of which I now enclose; from this you will see that Ellenberger has also achieved similar views to Maaløe, but like myself at an antecedent period. A study of the chronological order of the publication of Ellenberger's, Maaløe's, and my own work will provide the reader with a singular example of scientific plagiarism, which, however

regrettable from the standpoint of mere personal vanity, is in the interests of scientific truth invaluable, as it proves most conclusively my contention of 1900 "that the vermiform appendix of man is not a vestigial structure, but is, on the contrary, a specialized part of the alimentary canal," to be absolutely correct.

You will, Sir, I feel sure, believe me when I say that I write in no carping or antagonistic spirit, but merely in the interests of truth and justice. The former, we are assured, is great and will prevail; the latter is not infrequently blind.—I am, etc.,

RICHARD J. A. DERRY.

Professor of Anatomy, University of Melbourne.

February 24th.

"ANTIVIVISECTION AND WOMAN SUFFERAGE."

SIR,—Of course, having the evidence in my hand at Bristol, I said that the inspectors "were never instructed to make surprise visits." To suppose and suggest as you do that I should misquote evidence all the world can procure and read for themselves for no reason whatever is simply silly. For what I actually said, or what I was reported to have said form an equally authentic basis for the conclusion at which I was inviting the meeting to arrive—namely, that the inspectors were instructed by the Home Office to be inefficient.—I am, etc.,

Greywell, April 25th.

STEPHEN COLERIDGE.

* * * We have furnished proof that Mr. Coleridge did in fact misquote the evidence as to inspection given before the Royal Commission; and he does not deny the accuracy of the report on which we founded the indictment. We are willing to believe that this may have arisen from a misunderstanding of its import; but even if Mr. Coleridge sees no distinction between his allegation that inspectors are "told never to make surprise visits" and the evidence of Sir James Russell that he had never been instructed to make surprise visits, it must be obvious to persons of clearer mental vision that there is a vital difference between the two statements. Mr. Coleridge says it is silly to suggest that he misquotes "for no reason whatever." We agree that this would be silly, but we have made no such suggestion. It would be as easy to give a reason for his misquotation of this particular phrase as it would be to give one for his suppression of the statement made by Sir James Russell—in reply to the very next question (533)—that he very rarely gave notice of his intention to visit. Mr. Coleridge is also careful to say nothing about the other misstatement with which we charged him—namely, that the inspectors told the Commissioners in cross-examination that they never made surprise visits to laboratories. For this also a reason could readily be assigned. As for the "detective" method of inspection which Mr. Coleridge blames the Home Office for not adopting, we should have thought that the experience he has had of it would have been sufficient to convince him of its unsatisfactory results.

JEWS AND ALCOHOLISM.

SIR,—I have read the article in the BRITISH MEDICAL JOURNAL under the above heading with considerable interest, especially the paragraphs referring to the infantile mortality among the Jews. I am in a position to add to the facts mentioned there a very striking one which came to my knowledge recently when preparing a paper on the subject. Whilst the infantile mortality in Manchester in 1907 was generally 147.4 per 1,000, that of Ancoats was 188, and that of Cheetham 91. The latter district is inhabited to a very large extent by Jews of the poorer class, whilst Ancoats has very few Jews. The two districts are close to one another; in fact, one ends where the other begins, and they have practically the same geological and climatic conditions, yet the one with the large Jewish population has an infantile mortality less than half that of the other. That this is not merely a coincidence is proved by the figures for the year 1906. They were respectively 169, 203, and 94. Dr. Niven, medical officer of health, thinks the cause lies largely in the fact that most Jewish mothers suckle their children, and I agree with him. One seldom sees bottle-fed children among the poorer Jews, but, on the other hand, mothers belonging to the well-to-do classes rarely suckle

their babies. I have no doubt that this fact more than any other accounts for the greater resistance to disease shown by the bulk of Jewish children, though the temperance of their parents and the rarity of syphilis are not altogether negligible quantities.

I have no statistics referring to the infantile mortality among the different sections of the Jewish people, but my experience makes me incline to the belief that, roughly speaking, it is comparatively higher among the well-to-do.—I am, etc.,

Manchester, April 20th.

J. DUBERG.

The Services.

ARMY MEDICAL SERVICE.

THE ALEXANDER PRIZE.

The Alexander Memorial Prize consisting of £50 and a gold medal is awarded every third year to the writer of the best essay on a subject connected with military medicine, surgery, or hygiene.

The competition is open to executive officers of the Royal Army Medical Corps on full pay, with the exception of the professors and assistant professors of the Royal Army Medical College during their period of office.

No prize has been awarded for the triennial period ending December 31st, 1908.

The subject for the next prize essay is the following: "Tropical Abscess of the Liver." It may be treated either from a clinical or an etiological standpoint, and the essay must bear evidence of original observations. No essays should exceed 20,000 words, exclusive of tables, which may be added as appendices. Essays should be sent in to the Secretary of the Prizes Committee, Royal Army Medical College, on or before December 31st, 1911; each essay to have a motto, and to be accompanied by a sealed envelope bearing the same motto, and containing the name of the competitor.

CLASSIFICATION OF CASES.

COLONEL R. H. FOREMAN, P.M.O., Bombay Brigade, writes: In the JOURNAL of March 20th, 1909, p. 758, Colonel E. B. Hartley expresses a wish that the out-patient system should be adopted in the Imperial Army. It has been, officially, for five years back, and unofficially in many places for a score of years.

ROYAL ARMY MEDICAL CORPS (TERRITORIAL).

THE SECOND HOME COUNTIES FIELD AMBULANCE. UPWARDS of 150 members of the Second Home Counties Field Ambulance took part in a field day on Easter Monday. The sections represented were those of Canterbury, Ashford, and Whitstable, respectively commanded by Lieutenants Hollis and Barford, Lieutenant D. L. Hamilton, and Lieutenant W. H. Flint. The proceedings, which in spite of rain and wind were a great success, were under the general command of Major A. R. Henchley, of Canterbury, while Lord Lucas, Parliamentary Secretary of State for War, paid a visit to the scene of operations in the afternoon. In the evening there was a prize distribution in connexion with the corps, at which Major Henchley, supported by the Dean of Canterbury, Lord Lucas, Mr. Henchler Heaton, the Sheriff, and other notabilities, presided. On the conclusion of the speeches, there was a fencing display, and some tableaux representative of ambulance work on the field of battle.

SECOND LONDON DIVISION.

About 50 of the medical officers of the Second London Division of the Territorial Force dined together at the Café Monaco on April 22nd. Representatives of all the medical units and many of the battalions, as well as of the officers available on mobilization, were present. Among the guests were Sir Alf. Keogh, K.C.B., Director-General A.M.S.; most of the staff of the Second London Division, including Colonel Magill, C.B., staff officer to the A.M.O., and Colonel Oughterson, Secretary to the London County Association. Lord Esher, Lieutenant-General Sir W. H. Mackinnon, K.C.B., C.V.O., and Colonel Giles, V.D., A.M.O., First Division, wrote regretting their inability to accept invitations.

After the toast of "The King" had been duly honoured, the Chairman (Colonel Andrew Clark, V.D., Administrative Medical Officer) proposed "The Medical Services," and in the course of his remarks stated that all the medical units in the division were now nearly complete; great difficulty, however, was experienced in giving the necessary instruction, for which the men were very eager, owing to the inadequacy of the head quarters. With the exception of No. 4 Field Ambulance all the units were quite dependent on the good will of others for a place in which to drill and get their theoretical instruction, and, although the necessary equipment for instructional purposes had been granted, it was impossible to draw it, as there was no place in which to keep it.

The Director-General replied, and spoke of the original formation of the R.A.M.C. (Vols.) and their reorganization into Field Ambulances. He eulogized the progress of the medical units, many of them having great difficulties to

contend with, chiefly owing to the absence of head quarters: this was felt more in London than anywhere else. He also spoke of the importance of enlisting men for water duties in the various combatant battalions.

Colonel Hart, V.D., proposed "The Second London Division," and mentioned how much the medical officers were indebted to General Vesey Dawson and his staff for the instruction and assistance they had afforded.

Colonel Maude, C.M.G., D.S.O. (till lately General Staff Officer of the Division, now Assistant Director of the Territorial Force), who replied, spoke of the various arrangements that had been made for instruction, specially remarking on the course of lectures on sanitation delivered by the Divisional Sanitary Officer, Surgeon-Colonel W. R. Smith, V.D., which he and the other divisional officers had attended and appreciated.

Colonel Stephenson, C.B., V.D., Honorary Colonel of the R.A.M.C.(T.) Second Division, proposed "The Guests," to which Dr. Dawson Williams replied.

The formal proceedings closed with the toast of "The Chairman," proposed in a felicitous speech by Lieutenant-Colonel Lloyd-Williams.

After the guests had left a discussion took place as to the desirability of forming a Second Division mess, or of making a dinner in London an annual function. It was finally agreed that there should be an annual dinner of the division; and also that the First Division should be approached with a view to making it a joint dinner of the two London divisions.

The meeting broke up about a quarter past eleven, and it was generally agreed that it had been most successful and enjoyable thanks to the energy of Captain Jorman, Mess secretary of the Fourth and Fifth Field Ambulances, who had so ably organized it.

VOLUNTEER LONG SERVICE MEDAL.

THE Army Council has decided that the Volunteer Long Service Medal may be granted to all officers of the late Volunteer Force who were serving on March 31st, 1908 (when the force ceased to exist), and had then completed a total of sixteen years' service. This decision will apply to all officers, whether they have joined the Territorial Force or not.

Medico-Legal.

A MILK WARRANTY.

IN the Croydon County Court on March 16th, Dr. Harold Bentley was awarded damages against a firm of dairy farmers at Mitcham, who verbally contracted to supply him with nursery milk for his infant child, such milk to be drawn exclusively from Mitcham cows, to be unadulterated, and to be free from preservatives. While taking this milk the child became ill, and the court held that this illness was due to the presence in the milk of lactic acid, introduced into it by the defendants in breach of their implied warranty. The child, born at the end of December, 1907, was breast-fed until March, 1908, when it was put on cow's milk. As the first source of supply was not found satisfactory, the plaintiff looked elsewhere for milk, and eventually a verbal contract, of the effect already indicated, was entered into by the defendants through their manager. This warranted milk at first seemed to suit the child, but after a few weeks the child ceased to finish its meals, and began to fall off in condition and to suffer from intermittent attacks of diarrhoea. In August it was sent to the seaside for about a fortnight, and during this absence improved in health. On its return, use of the defendants' milk, as also of cream obtained from them, was resumed, and again the child grew ill. Finally, in September a specialist in children's diseases visited the child, and came to the conclusion that the milk used was in fault. Owing to the warranty received, this was not deemed probable, but nevertheless a sample of the milk was sent to an analyst for examination, and was reported to contain 0.03 per cent. of boric acid—an amount equal to about 5 grains in each pint. It was shown that the milk was sent to the analyst as received from the defendants, except for the addition of a little sugar of milk habitually taken by the child with its milk, and that though borax was used in cleaning the child's bottles, none of it could have got into the sample. The court held it unreasonable to believe that the boric acid was, as suggested by the defendants, derived from the sugar of milk, and it accepted the view that the child's symptoms were those of boric acid poisoning, and not of summer diarrhoea, as argued by the defendants. Furthermore, in weighing the denial of the defendants that they were responsible for the presence of the boric acid in the milk, the court accepted and kept in mind Dr. Bentley's statement that the defendant's manager—a man engaged all his life in the milk trade—had alleged, when challenged on the point, that not only had he added nothing to the milk, but he was not even quite sure what boric acid was.

Evidence was given by four medical men. Dr. Forsyth said he had seen the child on three occasions. Its symptoms were such as would result from boric acid poisoning, and the course of its illness was not consistent with a diagnosis of summer diarrhoea. Dr. E. Spriggs, who had been supplied with a clinical account of the child's illness, was satisfied that it was caused by boric acid in its milk. The same view was taken by Dr. Adams, of Croydon, who examined the child and its clinical history in January, after its recovery. On the

other hand, Dr. Kempster, of Battersea, who, on behalf of the defendants, investigated the matter likewise in January, held that it had suffered from gastro-enteritis and that it was due to "a combination of circumstances," and not to boracic acid poisoning.

In dealing with the question of damages, Judge Harrington said that, though it was important that milk supplies should be pure, it was well recognized that boracic acid was commonly used for the preservation of milk, and in small quantities was not deleterious; nevertheless, it was expressly agreed in this case that the milk should be free from preservatives, boracic acid being specifically mentioned. The plaintiff could not recover damages for the great anxiety which had been caused him, but he was entitled to the expenses entailed upon him. The child, who appeared in the case as joint plaintiff with its father, was entitled to something for the pain and suffering endured; but suffering endured by a child could not be considered in the same way as that of a person of mature years. Moreover, it had now completely recovered, and Dr. Bentley did not ask for substantial damages. Hence a sum of £5s. would be held to meet the case, the judgement being for this sum, in addition to £5 16s. 6d. (the expenses entailed on the senior plaintiff) and costs on B scale.

BONDS NOT TO PRACTISE WITHIN AN AREA.

BETA writes that he is under a bond not to practise within two miles of "A's" surgery. He is now desirous of purchasing a partnership with "B," whose surgery is nearly three miles from "A." Is he debared from visiting patients living within two miles of "A's" surgery?

"* If our correspondent has signed a bond not to practise within two miles of "A's" surgery, how can he legitimately visit patients within that radius? Such a proceeding would be a violation of his engagement, and subject him to the usual penalties.

Universities and Colleges.

UNIVERSITY OF OXFORD.

THE following M.B. candidates have been approved in the subjects indicated:

PRELIMINARY EXAMINATIONS: *Mathematics*.—Sir W. E. T. Avery, Bart., University; E. L. Collins, non-collegiate; D. M. Ely, Exeter; C. G. Fannin, Exeter; E. H. Kennard, Exeter; W. R. Scott, New.

Mechanics and Physics.—L. H. D. Acland, Magdalen; Sir W. E. T. Avery, Bart., University; W. G. V. Blogg, Keble; R. B. Bourdillon, Balliol; R. A. Bull, Jesus; C. R. Bury, Trinity; C. H. Carlton, St. John's; F. B. Chavasse, Balliol; W. C. Collier, Balliol; W. J. Hart, Queens; E. F. A. Hay, Corpus Christi; J. W. Horan, Brasenose; J. A. Liddell, Balliol; J. M. D. Olmsted, Queen's; A. L. Parker, non-collegiate; N. M. Parsons, New; S. K. Ray, Exeter; G. T. Selby, New; R. G. W. Stark, non-collegiate; R. H. Sutcliffe, Merton; A. E. Swinton, New; H. A. Tozer, Jesus.

Physics.—H. E. A. Boldero, Trinity; R. W. J. A. Cushing, Marston's Hall; R. A. Fawcus, Oriel; L. Gameson, Queen's; F. C. Gladstone, Pembroke; J. J. S. Hill, Jesus; R. J. Inman, University; S. Jalland, Lincoln; E. R. Speyer, New; H. A. B. Whitehouse, Christ Church.

UNIVERSITY OF CAMBRIDGE.

C. L. BOULENGER, B.A., King's College, has been appointed Assistant to the Superintendent of the Museum of Zoology.

Application to occupy the University's Table in the Zoological Station at Naples should be made to Professor Langley before Thursday, May 20th.

Examination Results.

The following candidates have been approved at the examination indicated:

D.I.P.H. (Parts I and II).—J. H. Alkman, A. Brenner, H. J. Cates, H. S. Chale, T. A. Dawse, J. E. Eda, J. F. Gaskell, H. E. Gordon-Smith (Trin.), L. V. Hignett, W. Kirby, W. J. Lambert-Down, S. F. Linton, C. H. W. McCullagh, L. MacLachlan, Margaret S. Maclean, S. M. Naughton, Bona S. Matthews, J. H. Maund, J. Mitchell, B. R. Naidu, G. E. Oates, A. B. Olsen, A. W. Reid, J. R. Robertson, C. Rolleston, F. L. Stallard, S. Subba Rao.

UNIVERSITY OF LIVERPOOL.

THE following candidates have been approved at the examinations indicated:

SECOND M.B., Ch.B. (Anatomy and Physiology).—H. el Arcelli, F. Dallimore, T. B. Evans, H. V. Elsie, C. Henson, H. W. Jones, R. Kennon, R. H. Knowles, T. H. Martin, H. Neill, A. L. Oluwole, W. H. Parry, H. Pierce, J. P. Rafter, H. G. Roberts, A. Seddon, S. N. Wright.

Materia Medica.—G. S. A. Bishop, F. G. F. Browne, D. H. Clarke, P. Le F. Nortie, T. O. Williams.

FINAL M.B., Ch.B. (Part A).—A. Adams, T. C. Clarke.

Part B.—J. A. Donnellan, A. A. Rees, S. P. Sykes, "S. V. Tinsley." * Second class honours.

The Diploma in Public Health has been conferred on C. S. Brewer, H. M. Cargin, Katharine R. Drinkwater, B. T. J. Glover, C. O. Stallybrass, J. Teare.

The Diploma in Tropical Medicine has been conferred on R. G. Abercrombie, J. R. P. Allin, H. P. W. Barrow, P. Carr-White, W. S. Clark, R. Cope, W. D. Hayward, W. P. Eldrum, J. C. Murphy, M. G. Samuel, M. H. Thornely, W. S. Webb.

THE ROYAL UNIVERSITY OF IRELAND.

THE following candidates have been approved at the examinations indicated:

M.D.—D. Gillespie, W. R. Hayden, R. Johnston, W. I. Leighton, A. Leitch, R. McCarrison, J. H. Stewart.

M.B., B.Ch., B.A.O. Upper Pass.—E. Forbes, P. Keelan, A. Kidd, J. M. O'Connor, B.A., T. Taylor, V. Wiley, J. M. Williams.

Pass.—"T. P. Carroll, J. A. Clarke, B.A., E. M. Condy, W. T. Henderson, W. F. Hooper, Caroline V. Love, S. W. McComb, J. P. Moore, Newman, P. H. O'Connell, J. J. O'Keefe, B.A., E. O'Reilly, R. H. Robinson, W. H. Sheffield, M. Shipsey, W. S. R. Steven, S. J. Watson, B. A. West.

* Qualified to sit for honours in one or more subjects of the examination.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved at the examinations indicated:

SURGERY.—"H. A. Hancock.

MEDICINE.—"B. A. Keats.

FORENSIC MEDICINE.—B. A. Keats, S. H. Scott.

MIDWIFERY.—L. Ettinger, J. A. Koch, R. Lamort, B. W. Loewenbergs, S. H. Scott, T. A. F. Tyrrell.

* Section I.

† Section II.

UNIVERSITY OF DUBLIN.

THE following were among the degrees conferred at a meeting of the Senate on April 22nd:

M.D.—G. B. M'Hutchison, G. S. Thacker.

M.B., Ch.B., B.A.O.—A. K. Cosgrave, D. Drew, R. D. FitzGerald, H. R. Kenny, A. H. Laird, W. D. Mitchell, G. H. L. McCarthy, G. B. M'Hutchison, D. M. Moffatt, H. H. Ormsby, E. H. Sheehan, A. J. Stals.

CONJOINT BOARD IN SCOTLAND.

THE following candidates have been approved at the examinations indicated:

FIRST EXAMINATION.—S. Wright, C. A. Slaughter, J. H. Appoo, H. A. Topalia, J. Muller, W. Lessey, B. F. Limji, J. G. Lessey, H. G. Anderson, V. D. Nimbar, S. A. Anthoni, B. B. Galt, E. I. Parry, and W. Bird.

SECOND EXAMINATION.—R. H. Thomson, S. D. Large, A. E. MacKenzie, F. R. Lucas, J. R. Smith, A. Butterfield, O. W. Bateman, W. F. Gibb, T. R. C. Melrose, F. D. Johnson, K. Nath, V. T. W. Eagles, J. A. Frost, J. Ross, E. P. Ghose, H. Buksh, P. C. Banerjee, and W. W. W. Watt.

THIRD EXAMINATION.—J. Muller, C. G. Timms, R. M. McC. Wilson, B. G. Shirodkar, C. L. Jevors, R. Parry, J. K. Sharma.

FINAL EXAMINATION.—J. R. Le Touzel, C. L. Stewart, H. L. Batra, B. Nath, C. W. Gee, T. Mohan, H. W. Garcelon, W. R. Waddell, C. E. Watts, F. R. Watson, S. W. Hogg, J. McKelvey, H. H. Jackson, A. McMurray, A. E. Herat, W. Whitfield, B. G. Sherlock, J. McTurk, A. J. Brown, J. M. Mehta, J. M. Mody, T. C. Shand, R. H. Gray, E. N. Khory, M. L. Burke, T. M. George, J. E. Spencer.

CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examination indicated:

SECOND PROFESSIONAL.—J. C. Attridge, J. Barrett, W. R. Beeston, U. L. Bourke, F. C. Fisher, J. Good, A. F. C. Hogg, B. Malher, T. P. MacDermott, B. Murphy, L. J. O'Donovan, C. Petit, P. O'C. White, G. Wilson, G. Young.

Obituary.

THE LATE MR. SIMON SNELL.—From the list of persons representing the British Medical Association at the funeral of the late President the name of Mr. Smith Whitaker, Medical Secretary, was accidentally omitted.

THE International Milk Trade Congress will hold its fourth meeting, under the patronage of His Royal Highness the Grand Duke Joseph, at Buda-Pesth in June next (6th to 11th). The questions to be discussed are divided into three groups—legislative and administrative, hygienic and veterinary, and industrial. About 600 persons have already intimated their intention to take part in the congress, and some sixty communications are in the hands of the secretary.

Public Health

AND

POOR LAW MEDICAL SERVICES.

BACTERIOLOGICAL EXAMINATIONS IN THE PROPHYLAXIS OF DIPHTHERIA.

In an appendix to a reprint of a paper read before the Society of Medical Officers of Health dealing with the scientific control of diphtheria, Dr. W. G. Savage, of Colchester, gives an account of an inquiry made by him as to the extent to which scientific facilities established in aid of the control of diphtheria are commonly utilized. Having communicated with the medical officers of about 450 of the larger sanitary areas in England and Wales, he received 304 replies, and from an analysis of them he concludes that in most of these areas free bacteriological examination of smears is available. He found, however, diphtheria patients were bacteriologically examined before discharge from hospital in less than two-thirds of these districts, and only in 15 per cent. of the cases were three consecutive negative results deemed to be required. As for cases isolated at home, only in 25 per cent. of the districts were smears examined before the patients were released from quarantine. The neglect of bacteriological methods in respect of "contacts" he regards as still more striking. He found that only in 11 per cent. of the districts were "contacts" examined bacteriologically, and in 6 per cent. such examination was only partial. As for antitoxin, about half of the medical officers of health employed it prophylactically. The answers to his question regarding periods of detention were rather vague, but showed that where it was the practice to examine cases bacteriologically before discharge a considerable percentage of the cases were detained for three or four weeks longer than those discharged elsewhere on clinical evidence only. Many of the latter, therefore, must, he concludes, be sent out with living diphtheria bacilli in their throats.

SALARIES OF WORKHOUSE MEDICAL OFFICERS.

The Eastbourne Guardians have declined to accede to the application of Dr. James Adams for an increase of salary, but, while refusing his request, they have expressed high appreciation of his services. There are as many as 151 patients in the infirmary and 194 in the workhouse. At present the stipend is only £130. Drugs are supplied by the guardians, and are dispensed by the medical officer at a cost to himself of £20 per annum. The reasons given by the guardians for their decision are most unsatisfactory. One is that the salary is not smaller than those paid in other unions of the same size; and it was further stated that such posts were often held by medical men who were beginning practice and were prepared to accept very moderate remuneration.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Borough of Burton-on-Trent.—The population of Burton-on-Trent as estimated by the Registrar-General at the middle of 1908 was 53,936, but the Medical Officer of Health (Dr. J. M. Cowie), taking local conditions into consideration, estimated it at only 53,000. The birth-rate, calculated on the latter estimate, was 22.4 per 1,000, and the death-rate from all causes 12.9 per 1,000. The infantile mortality-rate was 112 per 1,000 births. Of the 133 children who died under 1 year old as many as 101 did not reach the age of 6 months. The illegitimate death-rate was equal to 243 per 1,000 illegitimate births. Dr. Cowie refers to the statistics given in the supplement to the sixty-fifth annual report of the Registrar-General, in which brewing as a trade is shown in a very favourable light from a health point of view. From figures which he has taken out covering a period of eight years with reference to the mortality amongst brewers and years of age engaged in the brewing trade in Burton, he shows that, although there is a greater mortality amongst brewers than among all males in the borough, the excess is not nearly so great as it is found to be in the whole country. From diseases of the circulatory system and of the respiratory system the Burton brewers suffer in a less degree than other men in the town.

Borough of Guildford.—Calculated on a population of 22,800, the birth-rate was 25.6 per 1,000 and the death-rate 11.0 per 1,000. The infantile mortality-rate was equal to 73 per 1,000 births. The deaths among young children were at one time unduly high in Guildford, but during the past five years they have been remarkably low. It would be of interest to know whether this decreased mortality is real or only apparent—that is to say, whether it is in any way connected with the enlargement of the area of the borough which took place in 1904. It is not possible from the report to ascertain whether any special parts of the town have a higher rate of infantile mortality than others, for Dr. Pierce does not include Table II of the Local Government Board among his statistical records. Some trouble has been experienced at the Guildford, Godalming, and Woking Joint Hospital with respect to return cases of scarlet fever. The following notice is therefore now given to patients on their discharge: "Although every care is exercised to ensure that

patients are free from infection before leaving the hospital it is impossible to guarantee this. Whenever practicable, the child should be sent to a house where there are no children, but when this cannot be done care should be taken for at least three weeks that the child does not kiss or come into close contact with any one, and it should on no account be allowed to sleep with others, especially in the same bed. The child should be taken into the fresh air as much as possible, but must not be sent to school or into any other assembly of children. It is also recommended that during this period the articles used by the child (such as handkerchiefs, towels, toys, cup, plate, spoon, etc.) should be kept distinct from those used by others."

Borough of Neath.—The annual report of the Medical Officer of Health on the vital statistics and sanitary condition of the Borough of Neath records 556 births and 288 deaths, including 17 non-residents. The birth-rate was 33, whilst the death-rate was 16 of the estimated population. The general health of the town was good, the weather conditions, excepting during the first two months, being favourable. The deaths from the principal zymotic diseases numbered 35, giving a zymotic death-rate of 2 per 1,000 of the population. The number of deaths of infants under 1 year of age was 75, equivalent to an infantile mortality-rate of 131, as compared with 121 for the whole country. The figure is considerably less than that for 1907, when Neath stood in the unenviable position of being at the head of the list for the county. The medical officer states: "At the same time, the figure for 1908 is not one that can be made cause for congratulation. There are far too many children brought into the world in modern times whose sole mission seems to be to suffer needlessly. The occurrence of 5 deaths recently within a fortnight of infants under three weeks old from the disease known as 'white mouth,' from which no healthy infant—there are extremely few infants unhealthy at birth—ought to suffer, but which practically every child of the working or poorer classes has to suffer from, is only an incident in what is nothing less than a scandal. I have frequently pointed out that whilst the untrained midwife, with her habits and superstitions, is allowed to foist herself on the community the present condition of things must endure. In this connection I think that it is more than 'worse than strange' that the women of notoriously drunken habits—and we have several of them in Neath—should be allowed to practise this profession. The law seems sufficiently explicit on the point, and I have more than once complained of it, with its tragic consequences to mother and infant, to the proper authority, but my complaints have hitherto had no effect. I am about to address a circular to the midwives, calling their attention to the means of prevention of 'white mouth,' and have secured the help of the National Society for the Prevention of Cruelty to Children, who promise to institute proceedings in case of neglect on the midwife's part." With regard to meat and food inspection, it is stated that the slaughterhouse was visited several times weekly by the inspector. The carcasses of eight animals were seized and destroyed, by order of a justice, for tuberculosis. In one case the slaughterman tried to "strip" the pleura, for the purpose of removing traces of the disease. Such attempts at concealment might be made ground for prosecution. There was one prosecution against a fishmonger for being in possession of a quantity of decomposed fish, and also one prosecution in regard of milk below the standard; both were successful. In regard to meat inspection, the medical officer of health recommends that power should be given to the local authority to prevent the bringing in of meat from outside the borough, sometimes from the boundary line, as to which there is no guarantee that it has been inspected. A localized outbreak of diarrhoea in October was traced to eating brawn made by a butcher, but by what means the brawn became infected it was impossible to say.

Croydon Rural District.—Some idea of the rapid growth of the Croydon Rural District may be gathered from the statement that in 1900 the number of occupied houses was 6,597, whereas in 1908 it was 11,362. There are within the district the Cane Hill Asylum and the Holborn Workhouse and Schools, and, omitting the inmates of these institutions, the estimated population in the middle of last year was 57,600. The birth-rate was 25.1, the death-rate 10.1 per 1,000, and the infantile mortality-rate was 84 per 1,000 births. The District Council places at the disposal of all medical practitioners the means of having the diagnosis of cases of infectious disease confirmed or otherwise, and also at the end of the illness for determining whether the patient is free from infection. With regard to diphtheria, it is the custom to consider each case infective until a bacteriological examination shows the throat to be free from the Klebs-Loeffler bacillus. Measles has been notifiable in the Croydon Rural District since 1890, and in 1908 there were 1,929 cases and 31 deaths occurred. Dr. Fegen (the Medical Officer of Health) has to confess that, in spite of all endeavours, no very successful means of checking an epidemic of measles has been discovered, for all prophylactic precautions have to a very large extent proved abortive. The main factors in the spread of the disease are, in his opinion, personal intercourse, school attendance, and the gathering together of children at entertainments.

The Southern District Medical Society of Chicago has, according to the *Medical Record*, recommended to the General Assembly of Illinois the enactment of "a law requiring the sterilization of habitual male criminals, imbeciles, incurably insane, and epileptic persons" in the State institutions of Illinois.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL.

The offices of the British Medical Association and of the British Medical Journal are at 429, Strand, London.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

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2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.

2630, Gerrard, BRITISH MEDICAL ASSOCIATION.

2634, Gerrard, MEDICAL SECRETARY.

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AUTHORS desiring republication of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

15. We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

CLIFTONIA asks for information as to the value of the formic acid treatment for rheumatism and as to its mode of administration.

"14" asks for advice in the treatment of one-sided subluxation of the jaw in a young lady; it occurs only during sleep and to prevent it she has to tie a bandage tightly round the head.

D. E. asks for information as to the most suitable resort in England or Wales to stay at during May and June for a sufferer from bronchial asthma.

FIBROLYSIN IN MIDDLE-EAR DEAFNESS.

SOUTH AFRICA asks for information as to an instrument for massaging the drum in cases of tinnitus and middle-ear deafness, to be used in connexion with hypodermic injections of fibrolysin, and as to whether the treatment is fairly successful.

*. Whilest the treatment of tinnitus and middle-ear deafness by means of hypodermic injections of fibrolysin has been advocated by some, it has been tried and abandoned by others. This form of treatment must therefore for the present be regarded as *sub judice*, if not as still in the experimental stage. It is therefore difficult to answer categorically in the negative or in the affirmative the second question.

For information generally on the subject, our correspondent is referred to Professor A. Lucæ's monograph, *Die chronische progressive Schwerhörigkeit: Ihre Erkenntnis und Behandlung*, pp. 316, 317, 318, published by Julius Springer, Berlin. The two following papers might also be consulted: Martin Sugar in Budapest, Ueber Thiosinaminbehandlung des chronischen Mittelohrkatarrhs. *Archiv für Ohrenheilkunde*, Bd. Lxii, S. 241. L. Hirschland, Ueber die Verwendung des Thiosinamins und "Fibrolysin" in der Otologie und Rhinologie. *Archiv für Ohrenheilkunde*, Lxiv, S. 107.

ANSWERS.

TREATMENT OF SYPHILIS.

ANXIOUS.—The ulcers noted in the lower part of the leg upwards of a year ago should probably be taken as evidence that the case of syphilis in question was then in an early tertiary stage. It is commonly held that once a diagnosis of syphilis has been established treatment of the case by mercury should extend to at least two years, even if no further symptoms of syphilis are observed; and it has frequently been maintained that no case can be regarded as cured until two years after the disappearance of the last

observed symptom. It is neither necessary nor desirable, however, to continue mercurial treatment uninterruptedly. The extent to which mercury is pressed must depend on the course of the individual case; but, whatever that may be, its administration should be planned on a definite system of rest, during which mercury should be withheld. As this particular case has hitherto done well on grey powder, a guide to further treatment may be afforded by the following table, which is copied from *The System of Syphilis* (by D'Arcy Power and J. Keogh Murphy. Oxford Medical Publications, 1908). It is there mentioned as the routine method of giving grey powder in the British army, in which treatment of syphilis by grey powder at one time reigned supreme. The pills in question each contain 1 grain:

	Months.	Pills.
First Course:		
One month taking six pills a day	1	180
Interval of three days without taking pills	—	—
One month taking four pills a day	1	120
Interval of seven days	—	—
One month taking three pills a day	1	90
Interval of one month	1	—
Second Course:		
Three months taking three pills a day	3	270
Interval of one month	1	—
Third Course:		
Three months taking two pills a day	3	180
Interval of one month	1	—
Fourth Course:		
Three months taking one pill daily	3	90
Interval of three months	3	—
Fifth Course:		
Three months taking one pill daily	3	90
	21	1,020

Aix-la-Chapelle is the spa best known for the treatment of syphilis. The course lasts three or four weeks or more, and consists in medical baths and hydropathic treatment. Its cost mainly depends on the hotel or boarding place chosen. A sum of six or eight shillings could probably be made to cover the cost of rooms and board. If, however, the patient has been free from all evidence of syphilis for upwards of a year, and is apparently in good health, there would not seem to be any advantage in sending him to any special health resort. Continuation of the present treatment for an adequate time should suffice to cure him, so far as syphilis can ever be regarded as absolutely eradicated from the system.

LETTERS, NOTES, ETC.

THE TREATMENT OF MORPHINOMANIA.

DR. S. RAMASWAMI AIYAS (Kottayam, Travancore) records the following case of morphinomania. The patient, a man aged 38, a B.A. of an Indian university and holder of a Government appointment, acquired the morphine habit two years ago as a result of a hypodermic injection given for an attack of dyspepsia; and was taking as many as eight injections a day, each containing injectio morphinae hypodermica 20 minims, and also gin to counteract occasional suppression of urine. He came under medical observation owing to the operation of a recently instituted law which made it difficult for him to obtain morphine himself. His symptoms were apathy, extreme restlessness, sleeplessness, aching pains throughout the body, and occasional clonic spasms of the muscles of the trunk and face. His appetite was poor, but, curiously enough, there was neither diarrhoea nor constipation. The patient, having agreed to attempt to abandon the habit, was first given 1-grain doses of opium by the mouth, with small doses of atropine, but as no effect on the craving was noted this treatment was dropped after a few days. To procure sleep a large dose of bromide was given on the first night, but as it did not act a 3-minim injection of morphine was given the next and following seven nights, sleep resulting in spite of the smallness of the dose. The next two nights hyosine hydrobromide was substituted, but, proving useless, morphine was again given for three nights and was then dropped altogether. Meantime the patient had been taking during the day cold shower baths followed by massage and gentle exercise. By the end of a fortnight all craving had passed away and it is not considered likely to return. Morphinomania, it appears, is rare in Travancore, though opium eating is common.

GASTROSCHISIS.

DR. A. R. JOHNSTON (Porfir, N.D.) writes to say that in February he delivered a primipara, aged 36, of a full-term male child, perfectly formed except as regards the abdominal wall. This was defective in the epigastric, umbilical, and right and left iliac and hypogastric regions, and totally lacking in the right and left lumbar regions, with the result that the whole of the upper surface of the liver and part of the intestines and other viscera were exposed to view. The intestines and other viscera were of normal length, spread out in the umbilical cord, which was of normal length, spread out in the fan-shaped fashion at its fetal end, and blended in the upper part of the gap with the capsule of the liver, and below with the mesenteric and visceral peritoneum. Similarly the skin of the abdominal wall blended at the upper

level with the thickened capsule of the liver (that is, the true capsule plus the amniotic covering derived from the umbilical cord) and in the lower part with the peritoneal covering of the viscera. The child lived twenty-nine hours, having meantime taken a few teaspoonfuls of sugar and water, and passed urine and meconium. It did not vomit, but occasionally some bloodstained froth appeared at the corners of its mouth. Before death the stomach became distended with gas, and thus brought the spleen into view, and the intestines grew red and congested. The liver was dark and exuded some blood, probably owing to breaches of surfaces being caused by the dressing applied sticking to it. The mother during the second month of pregnancy had a fright followed by a certain amount of dark-red vaginal discharge, and all through her pregnancy expected that the child when born would not prove healthy.

METHODS OF QUACKERY.

DR. JAMES W. KIDD, of Fort Wayne, Indiana, U.S.A., whose methods were explained in the *BRITISH MEDICAL JOURNAL* of March 13th, 1909, p. 671, is now offering to give to every person in the British Empire who has previously applied to him for treatment a complete course of treatment for ten shillings. This, he says, is not reasonable payment for the time he has spent on the case; and adds, "but I want a cured patient in your community. I must have a cured patient in every town and hamlet in your country. I have found by experience that I can afford to sacrifice all my profits to secure a cured patient in each community." He has, he adds, selected the case of a few people in each community whom he knows he can cure. The recipient is assured that it is "the chance of a lifetime to be restored to perfect health." The treatment consists of a series of tablets, and the result of their analysis will be found in the *JOURNAL* of March 13th, 1909, p. 671. The chief ingredients of these tablets appeared to be sodium carbonate, gentian, sodium benzoates, oil of winter green, and aloes.

DESTRUCTION OF SWEAT GLANDS BY THE ROENTGEN RAYS.

DR. H. G. ADAMSON (London) writes: In the *BRITISH MEDICAL JOURNAL* of April 17th, p. 955, Dr. Howard Price, in recommending x-ray applications for the treatment of hyperidrosis, states that his attention was first called to the action of the rays on the sweat glands four years ago. This treatment has, however, been used for a still longer period. Puzey in America is credited with having first employed x-rays in the treatment of localized hyperidrosis. He published a successful case in 1903 (*Journal of Cutaneous Diseases*, August, 1903, p. 355). Kingman, also in 1905, reported a case of axillary hyperidrosis (*Interstate Medical Journal*, July, 1905, p. 375). In 1904 Müller recorded a case of hyperidrosis of the hands cured by x-ray applications, and one of perianal hyperidrosis much benefited (*Munch. med. Woch.*, June 7th, 1904, p. 999). Glover in 1905 published a case of hyperidrosis of the axilla cured by this method (*Rev. Internat. d'Electrotherap. et Radiotherap.*, Nos. 10 and 11, April and May, 1905). Many other writers have recorded cases since then, and x-ray applications have now become a routine treatment for local sweating, while the method recommended by Mr. Price of maximum doses (4 Holzknecht units, or just short of a Sabouraud pastille dose) at intervals of one month is the recognized manner of employing them.

AURAL AND OTHER VERTIGO.

DR. W. G. WALFORD, of Finchley Road, N., in a letter relative to the article by Mr. W. S. Syme published on April 10th, informs us that last year ago he suffered from severe vertigo. After four months he suddenly discovered that it was due to wearing tight neck clothing, and on ceasing to do so recovered so rapidly that in a fortnight he was able to resume bicycling, although over 70 years of age. His general health also began to improve, and now after eight months he has regained his hearing, which before was defective. He does not consider his case one of pure aural vertigo, but of vertigo due to general cerebral congestion. He had a hard, full pulse, ecchymoses in the vitreous humours, and enlarged and congested ocular vessels. Cerebral congestion brought about by tight neck clothing lies, he believes, at the bottom of many cases of vertigo. Although no longer in practice, he has seen cases which have supported this theory, one being a boy who, sick, dazed, and complaining of toothache, had his pupils greatly dilated and unresponsive to light. All the symptoms passed off as soon as loose neck clothing was substituted for that which he was wearing. In former days, when chokers were worn in the army, apoplexy and sunstroke prevailed among soldiers to a very much greater extent than in the navy, the neck attire of sailors always being loose. Apart, however, from morbid conditions more or less obviously caused by defects in the circulation, he has found reason to believe that ill-health and cachexia of a general kind may be engendered by wearing from childhood upwards clothing which restricts communication between the heart and brain. In his own case it was not only the cerebral symptoms that passed away, but general health improved enormously, and similar improvement took place in two of his relatives—one a man past middle life, the other a young man of 26—when attention was directed to their neck clothing. This was not tight, according to ordinary rules; but, nevertheless, its further loosening was followed by great and rapid benefit to their physical condition. Furthermore,

all three of them found that their necks grew in circumference. In Dr. Walford's own case this growth was very marked, for it reached as much as 2 in.

THE PUPILAGE SYSTEM.

DR. THOMAS LAFFAN (Cashel) writes: The late Mr. Wheelhouse brought frequently before the medical public the immense advantages which would be derived from reintroducing the apprenticeship system into the training of medical students. He published an excellent pamphlet on the subject, which should be read by everybody. Of course, he did not propose to bring back the old system in its entirety. Nobody now suggests a return to such a waste of years. He did, however, propose that every young man should enjoy the advantage of that practical training which apprenticeship to a practitioner alone can give. The great enemies of this proposal are the schools and licensing bodies, though they well know that nine out of every ten of those who are now turned out receive no practical training whatever, except the veneering necessary to pass the examinations. English general practitioners so often expose in the columns of the medical papers the mere theoretical attainments of many of their assistants that further labouring of this cause is unnecessary. The young idea supplies want of practical knowledge by a superabundance of conceit. The Irish College of Surgeons have a unique opportunity now for saving their situation by doing that which they so blindly refused to do a few years ago.

A PRIESTLY FEBRIFUGE.

CAPTAIN HODGKINSON LACK, I.M.S. (Dr. Dufferin, Mandalay), writes: In your issue of February 13th, p. 444, there is a note by Dr. A. P. Lange on the subject of a herbal febrifuge used by him in Conva in the island of Trinidad, B.W.I. I think that I know the herb of which Dr. Lange writes, and I also know of one or two other shrubs used for medicinal purposes out in Trinidad. For example, the leaves of a certain shrub—known locally as "Cousin Maho"—are used, as a decoction, in cases of cardiac disease in which strophanthus would be the recognized indication. I remember its being used in the case of a member of my own family who appeared to be benefited after the known cardiac muscle tonics had apparently failed. Secondly, I am informed that, when I was about two years old, I had a severe attack of dysentery and was "given up" by the medical men in attendance—whereupon an old servant of my mother's took me in hand and gave me small doses of a decoction of the leaves of a shrub known locally as the "Bird Pepper." This appeared to produce the desired effect. Thirdly, there is a kind of weed known locally as the "English Plainain," which appears to be of some use as a collyrium. The broad leaf is placed over a tumbler, and a fairly hot flat-iron is placed on it; the leaf shrivels and at the same time exudes a few drops of clear liquid which are collected in the tumbler. Again, in my own case, after the failure of various medicaments to effect improvement in what I now recognize to have been granular conjunctivitis, this liquid was used and gave great relief and ended up by curing me of a rather troublesome ailment. Fourthly, it is, I think, fairly well known in Trinidad that cases of seborrhoea capitis (dry) will often yield to the application of the slimy exudate obtained on splitting the thick young stems of the wild aloe, when recognized therapeutic agents fail to do any good. Fifthly—the list would not be complete without such a one—there is a kind of weed (whose local name I have now forgotten) a decoction of which has a reputation as a sedative in cases of cholera. I have no personal experience of this! Might it not be of some use if members of the Association sent samples of such medicinal agents? If arrangements could be made to investigate such substances some valuable information might be obtained. Out here in India and Burmah, many such instances come to the notice of medical men.

PRIMITIVE POLITIZATION.

DR. E. M. SMITHS (Goombunge, Queensland) writes: While talking to an old settler here a few days ago I heard of a primitive method of politization. One of the old man's sons had become very deaf through diving in a water-hole. One day he found the deaf son laid on his back, while another son held his nose and mouth closed, and a companion thrust his whole weight on the deaf boy's abdomen. The deafness was cured by one application.

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A Lecture ON MYOPATHY AND SYRINGOMYELIA.

DELIVERED AT THE NATIONAL HOSPITAL FOR THE
PARALYSED AND EPILEPTIC.

By SIR W. R. GOWERS, M.D., F.R.S.,
PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—You may wonder why I have linked together two diseases so diverse in nature as the subject of this lecture. It is because they were connected by a link, the effectiveness of which you will at once admit, and also its

actual utility—the link of error. I will show you a case which is certainly one of syringomyelia, and was thought at first to be also the subject of muscular dystrophy. If you study your errors properly and do not yield to the natural temptation to push them hastily out of sight with your foot, you may learn much from them. But you will probably find it easier to give special attention to errors in diagnosis that are not your own.

You will not learn quite so much from them, but the habit, once acquired, will not be easily discarded. That which concerns one's self is naturally fixed more firmly in the mind and the memory.

You know that syringomyelia is a malady that presents many of the features which are produced by various diseases of the spinal cord. But of these two are the more common—loss of sensation of pain and often to temperature without loss to touch; and, secondly, muscular wasting. The case I will show you presents both these symptoms. The sensory loss is a symptom which has to be sought for. This patient was ignorant of its existence. It is very easy for any person to be unaware of that which is only shown by the absence of discomfort. These cases illustrate the fact that pain is a precious danger signal, by the injuries its loss permits. The muscular wasting is that which brought the patient into the hospital, and it happens to present peculiar characters which bear a resemblance to those presented by a man with true myopathy now in the ward, whom I will show you first.

The two maladies ought not to be confused, although they are both diseases of development. The one is defective structural formation in the spinal cord, whereby cavities are left in the process of its development or portions of embryonic neuroglial tissue fail to achieve their change into nerve elements, but remain as tracts of low consistence, which break down into cavities. These enlarge by distension and thus cause symptoms, or the residual tissue may increase by a slow process of growth. Myopathy, or muscular dystrophy, is a defect of muscular growth, not dependent on the nervous system, but inherent in the muscles, by which the fibres fail, sometimes early in life, sometimes later. The interstitial tissue grasps the nutritional influence and increases, but not enough to compensate for the defect in the fibres, unless fat forms among

them, when the bulk of the feeble muscles may be much increased. This is the case in the early variety, the pseudo-hypertrophic form, which you probably know best; in this the muscles vary in size, the calves being usually largest, the extensors of the knees often increase in size in the lower part, the infraspinati are large, the lower parts of the pectoralis and the latissimus dorsi are small, and often they seem almost absent. The face is free. This form affects chiefly males, females seldom; sometimes all the males of a family suffer, and all the females escape, but transmit the disease to their sons. The malady increases in degree and extent as its subjects grow up; it impairs the power of breathing until some pulmonary disease develops; or it may be some slight catarrh, which would be a trifle to a normal individual, ends the feeble life soon after adult age has been attained.

But there are other forms of myopathy which do not present the increased size of muscles. On the contrary, all or most lessen in size, though often not to the same degree as in spinal atrophy. A more abundant growth of the interstitial tissue takes place, but it does not become the seat of fat formation, partly perhaps because the change usually takes place after the period of growth is over. One of these forms, which is

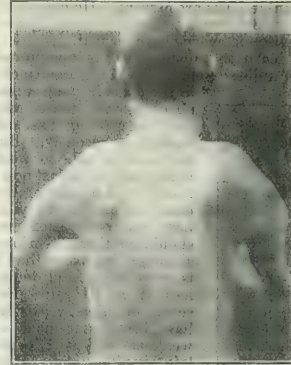


Fig. 1.—T. R., man with facio-scapular myopathy, showing abnormal elevation of the scapulae.

Fig. 2.—The same, from behind.

particularly well marked, is termed the "facio-scapular" form, from the groups of muscles which are constantly involved. It is also called after Landouzy and Dejerine, its first describers. It is to this form that the case belongs which I am now going to show you (Figs. 1, 2, and 3). The malady sometimes begins in early life, but more frequently not until growth is nearly over, and it may go on increasing and becoming distinct in fresh parts even for thirty years. If you observe the face and test the closure of the eyelids by opposing it, the least force is sufficient to keep them apart. In a moment I will point out other indications of this form. This man is 44 years old. His son is here,

who is likewise suffering, for this form of myopathy develops so much later than the pseudo-hypertrophic variety, that the subjects survive to an age at which they can transmit the disease. In the pseudo-hypertrophy, life usually terminates too soon for this, and the ability to pass it on to another generation is unknown. This facio-scapular form is eminently transmissible, as is shown by the family history of this patient. Of ten children in his family he is the only survivor. Three died in very early life, and of the six others all

are known to have suffered—two females who died at 19 and 26, and four males who lived only to 21, 22, 35, and 37. Their mother also suffered, and from her they received it, and so did her own mother. On his father's side there is no indication of the malady.

In the neck the sterno-mastoids are small, but act well. The upper part of the trapezius, which extends between the occipital bone and the shoulder, seems gone on each side; the rest of these muscles is small but present. You know that this upper part is usually the last to be affected in spinal atrophy, the *ultimum moriens* Duchenne called it; but it suffers often alone in myopathy. The deltoids are good; the triceps small and weak, and each biceps is changed in shape, small in the upper and lower parts, but



Fig. 3.—The same, showing contraction of the biceps.

full in the middle, standing out as a lump when put into firm contraction (Fig. 3). The forearm and hand muscles seem normal. The pectorals are irregularly affected; only small parts remain of the lower half. The serrati are gone, and the angles of the scapulae project, from the tilt of the bones; the erector spinae is small. The supraspinatus seems normal, and has not the prominence of the infraspinatus. This appears to be distinctly enlarged, and like most other muscles is the same on each side.

Wasting in the abdomen seems chiefly in the lower part of the oblique muscles on each side. The rectus is strong, but when he attempts to sit up the abdominal wall on each side bulges out, as you see, in a remarkable shape. In the legs, the muscles are generally small, but none are much affected except the anterior tibials and extensors of the toes, which are much wasted and have little power, so that in each leg there is foot-drop; but the peronei are good. The knee-jerks and ankle-jerks are present. He can stand on either leg and walk, but tends to catch his toes against any elevation. Sensation is everywhere normal.

It is not easy to learn the history of his symptoms, although he is not an unintelligent man. The impairment

in the arms became worse about seven years ago, and his walking has suffered more recently. But he has been able to work at his trade until just now; it consisted in stuffing the cases of mattresses with hay, an occupation we should not think laborious, although he avers that it is very tiring, and doubtless it is to him. For seven or nine years he has been conscious of weakness and pain in the left shoulder and upper arm, and later of pain in the lumbar region. Attacks of influenza, twice with pneumonia, have seemed to add to his loss of power. The weakness in the feet has been conspicuous during the last year or two. The pains led to a former diagnosis of neuritis, but were probably caused by the strain on the fibrous tissues which the muscles usually support in part. It is probable that the gradual muscular failure dates from early adult life, but for long it was unnoticed,

forward. The pectorales are not markedly atrophied, but they seem weak. On the other hand, the infraspinati are abnormally large, as they are commonly in the pseudo-hypertrophic form. There is no distinct wasting of the leg muscles, but the strength of the flexors of the ankle is small. All reflex action, superficial and deep, is of normal type.

I now show you the other case, a woman who has certainly syringomyelia and was at first thought to be the subject of myopathy; but more careful observation only justifies the first. She is 31 years of age and married early, having two healthy children. Nothing can be learnt that suggests any family malady, tubercle or myopathy, and she has never had any indication of syphilis; yet her past history presents one peculiar feature, which is of considerable importance in reference to our present question. In early life she possessed unusual muscular power, such as is rare in women. She was fond of its exercise, especially in swimming and gymnastics. When about 16 she gave public exhibitions in each of these. She could walk thirty miles without fatigue, until her strength failed, five years ago. Her performances necessarily entailed constant practice, and the muscular exertion, long continued, led to widespread hypertrophy of the



Fig. 4.—The son, with facio-scapular muscular myopathy.

because the muscles that were affected could be supplemented by others, at any rate to a large extent. Moreover, the parts that are not wasted are rather large, and are perhaps the seat of some true hypertrophy. The weakness of the face was unknown to the patient until he came here. It involves no conscious disability.

The great variations in the age at which this facio-scapular form begins and also the rapidity of its progress are sufficiently shown by the ages at which the affected brothers and sisters died, which I have mentioned. Other recorded cases illustrate the same fact, and in most of the families some of those who suffer have married and transmitted the disease, and this has happened, as in the family before you, with both sexes.

Our patient has a daughter and a son, but the daughter is only 11, and is said to present no sign of the disease. The sister who died at 26 was married, and left a daughter, but her state is not known. I show you our patient's son (Fig. 4). The orbicularis palpebrarum are conspicuously weak; they cannot overcome the gentlest hindrance to the closure of the eyes. The orbicularis oris is also feeble. The sterno mastoids are good. The trapezii are greatly wasted. You can even see the projection of the cervico-dorsal spines. The serrati also have little power; the scapulae project when the hands are put



Fig. 5.—Anesthesia—vertical lines, broken where incomplete. Thermo-aesthesia—oblique lines.

muscles, traces of which are still obvious, especially in the arms and calves.

That she is the subject of syringomyelia is evident from the extensive loss of cutaneous sensibility to pain, without loss, or with very limited and partial defect, of sensibility to touch. I show you the distribution of the loss to pain in this diagram (Fig. 5). Its degree is indicated by continuous lines where it is complete, and by broken lines where it is imperfect in degree. It is partial over the right shoulder and the upper half of the arm and on the right front of the thorax: on the middle of the abdomen it is complete, in an area narrow at the ensiform cartilage, broader below, ceasing above the pubes, where it is interrupted by a zone of normal sensibility, but it is renewed again by complete analgesia at the top of each thigh. It becomes partial at the middle of the thigh, and ceases a little above the knees. This loss passes to the back of the hips and outer part of the thighs, and it extends incompletely across the gluteal region, except in the distribution of the lowest sacral fibres, where sensibility is normal on each side of the anus. It passes, in a pyramidal form, up the lower half of the back. Temperature-sense is impaired only in the small regions marked by oblique lines; touch only in slight degree on the right thigh, marked by transverse lines. You will find those directions of lines generally advantageous for depicting the loss of the different forms of sensation—perpendicular for pain, transverse for touch,

oblique for temperature. It is distinctly convenient always to use the same system.

If you compare this diagram with one for the cutaneous distribution of the spinal segments, as shown by that of the nerve roots (which I may assume you know), you will see that there is very little correspondence. The chief correspondence is in the escape of the lowest sacral in the region on each side of the anus (these cavities usually cease at the lower extremity of the cord). Elsewhere little correspondence can be traced. The analgesia only occupies parts of the thoracic and lumbar segments. Yet the region affected is not irregular. Over the back it extends through a diminishing medial area, pyramidal in form, which ends upwards to a point about the ninth dorsal spine. In front a corresponding area is involved, which is continuous with the loss on the right side of the thorax. The loss on the abdomen is interrupted by the zone of normal sensibility, in the position of the twelfth dorsal segment, but larger, and the loss begins again in the higher part of the thigh in each leg and continues, to cease above the knee. Except on the thorax, there is considerable bilateral symmetry in the loss, although there is seldom correspondence with the spinal segments.

The explanation is that the cavities which chiefly interrupt the sensibility to pain are usually situated in front of the posterior horn, in the middle of the half-cord, and probably damage the path for pain, which seems to cross in the posterior commissure. They are often roughly symmetrical. The impressions conducted by the nerve roots seem to be soon rearranged in the cord for their upward conduction, and their interruption has thus an effect different in distribution from that produced by interruption of the nerve roots themselves. It differs also in nature, because touch escapes. Sometimes, however, a cavity occupies the posterior cornu, and may be so situated as to interrupt the root nerves after they have entered the cord. Then all forms of sensibility may be impaired, and the loss may correspond in distribution with one or more of the spinal segments. But the variations in the position of the cavities is so great that no generalization from the loss of sensation to the position of its cause seems yet to be possible.

Next to analgesia, muscular atrophy is the most common effect of syringomyelia. The cavities often occupy the region behind the anterior cornu, as I have just said. Their gradual enlargement may cause an invasion of the anterior horn with destruction of the nerve cells; the related anterior nerve fibres then slowly perish, and the muscles to which they are related. Thus a slow progressive muscular atrophy occurs very frequently in some parts, but the effect is not always slow. A cavity may increase rapidly; the erosion of the wall may expose an artery to influences which induce thrombosis, and sudden necrotic softening in the vicinity, or rupture. Then there is quick, even sudden, loss of power and acute degenerative changes in the electric irritability of the related muscles.

A sudden process evidently must have occurred in a cavity on the right side of the cord in this woman. She was not aware of any impairment of motor energy until it came, suddenly and gravely, five years ago. She was walking out with her child, and she fell, without cause. She could not rise again, but when helped up she did not fall, but managed, with care, to walk a short distance home. It is not easy to ascertain what had happened, but she could never again flex the right hip. The power of flexing the left hip is said to have failed slowly during the next year. Probably wasting came on at the same time in the higher part of the muscles in front of the thigh. Now both are weak and similar. The lower halves of the extensors of the knee are large and strong. When they are contracted they present a striking contrast to the upper parts, projecting just as does the middle part of the biceps in the man we first examined.

The extended legs cannot be raised from the couch on which she lies. We cannot see the flexors of the hips, the psoas and iliacus, or we should doubtless find them much wasted. I think that it is the condition of the thigh muscles, the extensors of the knees, with wasting in the upper parts and not in the lower, together with the large size of the calves, which suggested the presence of muscular dystrophy.

But another symptom seemed to confirm the opinion. If she sits on the floor, or kneels, she is unable to rise with-

out help. In the attempt she makes to get up, to achieve the upright posture, she adopts the same expedient that is so constantly seen in pseudo-hypertrophic paralysis, and hardly ever in any other condition. She puts her hands on the knees or on the lowest parts of the thighs. This is to aid the extension of the knees. The weight of the trunk rests on the hip-joints, at the upper end of the lever formed by the femur. The fulcrum is at the knee and the power, the extensor muscles, acts on the femur, between the weight and the fulcrum, the position of least advantage. By the transfer of much of the weight, by the hand, to a position near the fulcrum, the power is beyond it, and then acts to much greater advantage. The greater ease with which then the knees are extended, and the weight of the body raised, is the reason for the adoption of this device in pseudo-hypertrophic dystrophy. Some patients supplement this also by making the hand climb up the thigh and so aid the extension of the hip, but the patient has not enough defective power in the extensors of the hip to need this. I have often wondered that patients with other forms of loss of power in the extensors of the knee do not adopt the device. Probably it is only discovered by reason of the gradual onset of the extensor weakness in the muscular disease during the period of growth, when the expedient comes, as it were, naturally to the versatile muscles of the growing child. I have often looked for it in other cases, but I think I have never seen it until this case. It obviously seemed to support the idea that she was also the subject of muscular dystrophy, but it is not a symptom, as you see, on which any absolute weight can be placed.

You can now better understand why we decide that she is not suffering from muscular dystrophy, and yet we can perceive that the mistake was easy. The two diseases are not mutually exclusive, nor have they any mutual predisposition. If they occur together it would be simply as the consequence of what, in our ignorance, we call chance. Indeed, syringomyelia has been found, I believe, to co-exist with myopathy in 1 case out of more than 300 cases of the spinal affection which have been published, but the facts I have mentioned show how carefully such cases must be scrutinized, since in both diseases the muscles suffer.

In this woman the facts I have mentioned leave no doubt that syringomyelia exists, and also that a sudden lesion must have occurred in a cavity on the right side, extending its forward erosion into the anterior cornu, probably by thrombotic softening, with destruction of nerve cells, paralyzing the flexors of the right hip and the upper part of the extensors of the knee. The corresponding grey matter on the left side of the cord, according to the patient's account, did not then undergo damage, but this followed, in the course of the next year, by a process of more gradual character. Where the destructive process by which the nerve cells perished was rapid or sudden, so far as a group of cells is concerned, the electrical condition in the muscle supplied would be the "reaction of degeneration." You remember what this is; faradic excitability, which depends only on the nerve fibres in the muscle, fails rapidly, but the muscular tissue responds in increased degree to the slowly-interrupted voltaic current, and the kathodal closure contraction ceases to be the first, and is replaced by the anodal or positive. The time which has elapsed since the destruction, and the fact that this is not complete, prevents any evidence from the faradic response. The normal fibres that remain are sufficient to give a contraction to this. But on carefully examining the muscle in the upper part of the thigh with the voltaic poles, we find that the first contraction, on slowly increasing the strength of the current, is at the anode, not at the kathode. This shows that in the muscle are many fibres of which the nerves have undergone degeneration, although the fibres of the muscle have not wholly perished, and they still present this feature. It shows that there has been an acute process in the nerve centre. It is a feature never found in myopathy, and compels us to ascribe the state of the muscles to that of the spinal cord.

Thus it is clear that the condition of the muscles in this patient is not the same as in the man whom we first examined. Although they are similar in partial enlargement, the variation has not the same nature or the same distribution. The smaller part presents indications that it

depends on the state of the spinal cord, disease of which is proved by the presence of the change in sensibility of the skin, of which the patient was unaware, and which corresponds in greatest intensity to the region in which the lesion must lie which causes the wasting of the muscles. The remarkable size of those that are not wasted is explained by the patient's history in the rather distant past. At the time when the growth of all structures is most active her muscular system underwent a long course of systematic exercise, very unusual in degree, of which the remains are still distinct.

It seems strange that a girl with this congenital defect in the spinal cord should have been disposed to undertake such remarkable feats of muscular power without any family inducement to cultivate agility and energy. But her defect in the spinal cord is always chiefly in the posterior and medial parts, in the sensory regions of the cord. The change in the motor region is the result of a later extension, and it rarely occurs in early life. We may, perhaps, conceive that the motor processes, which so dimly affect consciousness, have not the normal afferent check from the sensory processes which should influence them. Of this the subject is quite unaware. Restraint may be effective before sensibility is subjectively lessened; we are often determined by influences which do not enter our consciousness. Some years ago a rather distinguished student was working here who was a really great cyclist. He had won many of the best cycle races in the country. Soon afterwards he came to me about some symptoms he felt in his hands, and on examining him I found such extensive loss of sensibility to pain as could only be explained by syringomyelia. I had to advise him to give up all severe exertion, including the races to which he was devoted. We must remember that the central motor nervous system represents the muscles, and all prolonged muscular effort has an influence on the spinal cord similar to that which it has on the muscles, and this disturbance of the circulation, and accumulation of the products of fatigue, resulting from severe exertion, must be of a nature to increase any morbid processes, the extent and progressive tendency of which we cannot safely estimate. I do not know what has become of him. But the history of this woman seems to show that severe exertion is unwise for such a sufferer. Hence it is very important to be familiar with the early symptoms of the malady, and to discover its existence, so that the life of the patient may be wisely regulated. The fact that a sufferer can generally feel well a touch, although pain is perceived dimly or not at all, explains the common ignorance of the malady, in spite of the frequency with which its presence is indicated by spontaneous pain. From this the patient whose case we have been considering was entirely free. It is often also accompanied by a sense of coldness, without any objective indication of the temperature which is complained of. These subjective sensations seem due to the irritation of the conducting fibres within the cord which are in process of destruction, and the pain may cease when sensibility is lost.

But tactile sensation is often impaired. It is very little affected in this patient, only in the front of the right thigh. Sensibility to temperature is lessened in the regions indicated in the diagram by oblique lines. Often the loss is almost as extensive as that to pain. The sensitiveness to pressure is often also lost, and that of the deeper structures may be impaired as well as that of the skin, although often not in corresponding degree. The cavities may extend higher up, into the medulla and pons (syringo-bulbi this is termed), and impair some of the cranial nerves, especially the sensory part of the fifth. The dissociated analgesia of this affection may remind you of the common loss in tabes, in which the perception of pain is so commonly lost and that of touch so rarely. When the analgesia involves the deeper structures an arthropathy may occur in syringomyelia, very similar to that of tabes. But this is most common in syringomyelia in the arms and in tabes in the legs. Other collateral consequences of sensory defect are also found which I cannot now even mention. I have brought the case before you briefly to illustrate the diagnostic difficulty, and to impress on your mind the fact that we must always beware of the significance of a superficial similarity, and remember that the resemblance may be due to very different causes, and may almost cease, on careful scrutiny.

Remarks

ON

ANTISPASMODICS AND THE CURE OF SPASMS.

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FOR the relief of spasm and the many distressing sensations which may be grouped under that head many kinds of treatment may be adopted. In the case of general convulsions and some forms of local spasmodic contractions we may act upon the nervous system generally, and make use of means which reduce its sensitiveness to morbid impressions. For this purpose we turn to the narcotics—opium, chloral, belladonna, the bromides, etc. But these remedies should never be used indiscriminately or without due consideration of the nature of the attack and the presence of a removable cause. They may form the main treatment of the case, or may be employed with the object of reducing general nervous excitement while special means are being used for the relief of local distress.

In certain forms of local spasm we may make use of remedies which are known to have a special sedative action upon the disturbed part, such as grindein in spasm of the respiratory tract; belladonna, chloroform, and codeina in intestinal cramps; valerian and asafoetida in the mysterious functional nervous derangements which are massed together under the head of "hysteria."

Again, we may seek to produce a tonic effect upon the system as a whole by the use of strychnine and nuxvomica, ergot of rye, sulphate and valerianate of zinc, quinine, arsenic, the stronger preparations of iron, and drugs of similar action. These, however, are of little value during an actual prooxysm, but exert their influence gradually by reducing the general nervous irritability, so that the system becomes less intolerant of morbid stimuli, and ceases to respond with such petulant activity to disturbing influences. Their action in this respect is deliberate, and rarely of more than passing value, unless persevered with for weeks or even months at a stretch.

The above may be said to include the special classes of drugs which are generally understood by the term "antispasmodic"; but they do not embrace the whole subject of the cure of spasm. The best and only satisfactory kind of antispasmodic treatment is that which strikes at the root of the evil and suppresses the irritant to which the disturbance is due. In many persons, especially in children and young women, the source of the ill is often a deranged condition of the digestive organs, and when this is remedied the spasm ceases. General and partial convulsions, tetany, and many kinds of tonic and clonic spasm, both general and local, may be induced directly by peripheral and especially by gastro-intestinal irritation. Children, with their immature and impressionable nervous systems, are curiously amenable to these influences, and in some such subjects any form of irritation seated at any part of the body may be capable by reflex mechanism of setting up automatic and irresistible contraction in voluntary or involuntary muscles. The tendency to such morbid response to stimuli is greatly enhanced by a lowered state of the general health. In the case of tetany, for example, the disorder rarely attacks a healthy, sturdy subject, but is met with almost invariably in children whose nutrition is temporarily at fault, either from natural delicacy or domestic mismanagement. The spasmodic contractions of this complaint seem to be the consequence, more or less direct, of toxic absorption from the alimentary canal. A poison is generated which shows a special preference for the motor fibres and ganglion cells of the anterior horn of the spinal cord; and, in cases of long standing, atrophy and sclerosis have been noted in these cells, combined with some thinning of fibres. More than this, however, is required to explain the mechanism of tetany, for autointoxication is common in children of all ages, while tetany is only an occasional consequence of gastric dilatation and decomposition of food. It seems

probable that auto-intoxication heightens the natural irritability of the nervous system, and prepares it to respond with exceptional briskness to reflex stimuli, but that the actual attack, like the convulsions of rickets, is the direct consequence of reflex mechanism, and cannot occur without it.

In the management of such a case the true antispasmodic treatment consists in putting a stop to the digestive derangement which is the cause of the symptom. We clear away fermenting food from the bowels by a full dose of rhubarb and soda, arrest excessive intestinal secretion, and by a careful diet, in which a judicious restriction of milk and other fermentable elements in the food takes a foremost place, seek to restrain the formation of toxins in the alimentary canal. These measures may have to be reinforced afterwards by tonic treatment and the use of the accepted antispasmodics in order to invigorate the nervous system and allay its irritability; but these remedies have little value at the beginning of the treatment, and begin to be useful only when the disturbed digestive functions have been attended to and brought into a healthy state.

But it is not only tetany which can be set up by the irritation of gastro-intestinal disturbance. In neurotic subjects—especially in neurotic children—general convulsions and even modified muscular contractions, which bear a close resemblance to those which are characteristic of the so-called "*petit mal*," may be induced by irritation arising from this source. It is far from uncommon to find the instability of the nervous system, which may be called a normal state in the infant, persisting in growing boys and girls to the age of 10 or 12 years. As a consequence, confused and purposeless muscular contractions and convulsive movements, such as are familiar enough in the rickety infant, may be met with at an age which suggests a graver view of the attacks than a truer conception of their real nature would be able to support. These cases are often called "epilepsy," and even treated as such with long courses of bromides. It is not for the first time that I venture to protest against the practice of lumping together all cases of convulsions in the growing child under this one misleading designation. I maintain that so long as the seizures occur only in the course of a digestive disturbance, or are accompanied by a rise of temperature, or happen in a child who is suffering from any form of peripheral irritation, or, indeed, in one who is not, to all appearance, in his normal state of health, we are entitled, whatever may be the age of the child, to indulge a hope that the seizures will cease when the cause has been removed and adequate measures have been taken to prevent its return. The term "epilepsy" cannot fitly be applied to such avoidable attacks as these, but should be confined to cases where the patient seems to be well, with nerves normally at rest and no sign discernible to lead to a suspicion of the onset of any such untoward visitation.

There are other forms of functional nervous derangement which may arise from digestive trouble and acid fermentation in the bowels. The fantastic muscular twitchings which go by the name of "tics" and "habit spasms" usually owe their origin to this cause. These movements by their persistency occasion much distress to parents, and are often the despair of the medical attendant, especially if he follow the prevailing method of attempting to control them by the use of nerve tonics and antispasmodics. Under such treatment they are, no doubt, intractable enough; but if the spasms are accepted as a significant sign of intestinal disorder, and treated by proper measures for its relief, no special difficulty is found in keeping them in check. Antacid and stomachic remedies, combined with a rigid diet from which sweets and fruit are carefully excluded, and starch allowed only in the form of bread and toast, soon give rise to a surprising change. Not only do the movements cease, but the general nervous unrest disappears; and there is a welcome return to a normal state of physical and mental tranquillity, which a recurrence of the morbid stimulus is no longer able to disturb. Early treatment on these lines is, however, of great importance, for if the movements have been allowed to continue for months unchecked until the habit has become confirmed, more difficulty is found in bringing them to an end. Still, even in these cases, diet and the administration of arsenic in good doses, combined with alkalis in a bitter infusion, will often produce very

encouraging results, especially if the patient can be induced by hopes of reward to bring his own power of self-control to our help. Punishments are useless.

Head shaking, again, and rhythmical rotatory movements of the head combined with nystagmus (the spasms nutans of infancy) are also commonly due to digestive troubles in a neurotic subject. The milder attacks often yield readily to a dose or two of rhubarb and magnesia, especially if it be combined with a restriction in the quantity of the fermentable element of the food. But in the severer forms of the complaint special tonic treatment will always be required in addition. When the digestive functions are working satisfactorily, iron should be given, and if the child be over 12 months old, a meal of pounded mutton or chicken should be included in his dietary. Spasmus nutans is, of course, a different thing from the "nodding convulsion" (cloniasia nutans). The latter is only seen in epileptic idiots, and is incurable.

Although it is the digestive tract which is most frequently at fault in cases of reflex spasm, it is not the only source from which the evil influence may spring. Any irritant, wherever situated, even a mild one if sufficiently prolonged or often renewed, may lead in a suitable subject to some such morbid response. A common example of this is seen in the nervous commotion which is excited in some children by post-nasal irritation due to adenoid vegetations. The growths themselves are probably concerned in the disturbance only indirectly. Alone they excite little irritation unless very numerous, but by their presence they render the naso-pharyngeal mucous membrane morbidly susceptible, so that it readily becomes the seat of a troublesome catarrh which exerts a curiously teasing influence upon the nervous system. General convulsions sometimes, and laryngeal spasm commonly, owe their origin to this source of worry. The more I see of laryngeal spasm, either in the form of laryngismus stridulus or stridulous laryngitis, the more convinced I become that in these cases the source of the irritation is the naso-pharynx. To me catarrhal croup has come to mean adenoids, and to suggest at once treatment by measures directed to the suppression of a post-nasal catarrh. The same thing may be said of simple laryngeal spasm without catarrh (laryngismus stridulus). Children who are attacked by these dangerous seizures are almost always sufferers from adenoid vegetations and post-nasal irritation. They are also often the subjects of rickets, but this is not always the case. It is a mistake to assume, as is commonly done by writers upon this subject, that laryngismus is a complication peculiar to the rickety state. No doubt in that phase of malnutrition there is a special irritability of the nervous system which so heightens its response to disturbing influences that the morbid rejoinder can be provoked by a comparatively moderate impression. But the occurrence or not of spasm depends less upon the constitutional state of the child than upon the nature and strength of the irritant. If the provocation be adequate, spasm may be induced in a neurotic subject at any period of infancy and childhood in rickety and non-rickety subjects alike. Repeated observation has convinced me that morbid contraction of the laryngeal muscles occurs almost solely amongst the sufferers from adenoids, and is to be ascribed directly to naso-pharyngeal irritation. Some time ago I recorded several cases of laryngismus affecting newborn infants, in whom the frequent spasms involved the gullet as well as the larynx, so that swallowing became almost impossible. All these infants were suffering from adenoid overgrowth and severe catarrhal obstruction of the nasal passages; and it was interesting to note that the force and frequency of the attacks varied in exact proportion to the greater or less intensity of the naso-pharyngeal distress. In cases such as these, then, as in tetany, the true antispasmodic treatment consists in measures which allay the local uneasiness and put a stop to the nervous commotion by removing the cause which has brought it about.

These measures consist in applying remedies locally to the naso-pharyngeal mucous membrane. This is done most easily in young children by dropping medicated fluids into the nostrils and allowing them to trickle down into the pharynx. One of the best of these is resorcin dissolved in normal saline solution (2 to 5 grains to the ounce). Of this a few drops may be instilled into the nostrils several times a day as the child lies on his back.

If the spasms are violent and repeated the local treatment must be reinforced by the internal use of special antispasmodics. In the case of the larynx, the best of these, beyond all comparison, is the liquid extract of grindelia—a drug which has a very decided sedative action upon spasm of all muscles connected with the respiratory apparatus. It may be given in doses of ten to thirty drops, in water flavoured with the liquid extract of liquorice and well sweetened with glycerine, every four hours. In the case of young patients grindelia is an antispasmodic of the utmost value. In asthma, in whooping-cough towards the end of the spasmodic stage, and indeed in all varieties of respiratory spasm, we may turn to grindelia with full confidence in its beneficial effect.

Another instance of reflex spasm is seen in the rigidity of the muscles of the neck which not infrequently occurs in cases of acute otitis. The child lies in a state of seeming stupor, but is not entirely unconscious and shows no sign of pain. He holds his head stiffly and slightly retracted, and whimpers if it is moved, especially if an attempt is made to bend it forward. The stiffness ceases at once when the purulent contents of the tympanum are allowed to escape by puncture or rupture of the membrane.

The above are the most prominent and persistent varieties of reflex spasm, the only rational treatment of which consists in measures which produce a direct impression upon the source of the nervous trouble. Other minor examples of spasmodic muscular contraction of similar mechanism are met with in daily practice. The severe nocturnal cramps in the limbs which are a common subject of complaint by the habitual dyspeptic are due to acidity, and can be put a stop to by an alkaline draught taken at bedtime. Acid collections in the caecum and the small intestine near by may set up cramp in the bowel by causing spasmodic contraction of its muscular coat, and so penning up flatus and preventing it passing away. The painful over-distension which is apt to ensue can be satisfactorily relieved by the administration of the insoluble alkalis, such as the heavy carbonate of magnesia, combined with a quarter or a third of a grain of codeine given several times in the day. Codeine is a valuable sedative in all forms of abdominal pain, and has the advantage over opium of interfering little with the regular action of the bowels. Under certain conditions, however, belladonna is to be preferred. Spasmodic contraction of the muscular coat of the intestine may induce an obstinate form of constipation which sometimes amounts to impaction of the bowel, and resists the action of strong aperients given again and again. In most cases of this kind the difficulty can be overcome by repeated doses of the green extract of belladonna, giving a $\frac{1}{2}$ grain every three hours until the pupils begin to dilate. This, the first sign that the system is beginning to respond to the remedy, is followed quickly by relaxation of the intestinal spasm and copious relief.

In every case, then, of spasmodic contractions, either of voluntary or involuntary muscle, especially in such as occur in children, before resorting for their relief to nerve tonics and antispasmodics, we should search carefully for some sufficient signs of local trouble to which the nerve disturbance may be referred. In young people, especially in rickety infants and rapidly-growing boys and girls, our first thought should always be of reflex mechanism, and it is only when a fruitless examination has shown our suspicions to be unfounded that we can venture to lay this explanation of the symptoms aside. We are then obliged to fall back upon plain antispasmodic treatment. But even in this case every attempt should be made to keep the nervous system at rest by avoidance of undue excitement, attention to the regularity of the bowels, and in the matter of diet a careful moderation, not only in red meats, but in acid and acid-making articles of food.

The kind of antispasmodic treatment to be employed is of importance. In the case of true epileptic attacks, excessive dosing with large quantities of bromide is, I believe, a plan of treatment which is better avoided. By such means, no doubt, we may lessen the frequency of the seizures for a time, but sedatives alone have little power to put an end to them altogether. These remedies are best used as aids to the action of nerve tonics; as a means of quieting undue nervous excitement, while the more slowly acting drugs are given time to produce their bracing effect. Of the latter I rely chiefly upon ergotine given in conjunc-

tion with strychnine. To be effectual the dose of ergotine must be pushed, and this may be done without fear of ill consequences; indeed, little effect can be expected until a good dose is reached. Beginning with 3 gr. every four hours given in conjunction with $\frac{1}{10}$ grain of strychnine, the dose may be increased gradually to 10 grains, and every evening at bedtime a draught containing 20 grains or more of bromide of sodium may be given with infusion of senna and aromatics. In the case of children the most satisfactory results often follow this method of treatment, especially if it be combined with a free country life in a healthy situation. The seaside, or, at any rate, the neighbourhood of the sea is to be preferred. It is wise to occupy the child's mind with light employments which interest and amuse; and if he can share these with young people of his own age, who may be trusted not to irritate or excite him, it will be distinctly to his advantage.

Another example of universal spasm which has to be treated with general nerve sedatives is chorea. In the management of this complaint it would be difficult to name a sedative which has not been employed with more or less success. I have obtained very striking results in obstinate cases with ergotine prescribed in large doses in conjunction with strychnine in the same way as recommended for epilepsy. Recently I have been giving chlorotone in doses of 3 to 5 grains three times a day and have been well satisfied with the results. The remedy is one which decomposes very quickly and should, therefore, never be prescribed in combination with another drug. It is best given in "cachet" or dissolved in water sweetened with glycerine. A dose of 5 grains three times a day often causes some drowsiness. If this be so, the dose should be reduced to 2 or 3 grains after the first twenty-four hours.

But cases, such as the above, in which we are forced to rely solely upon the action of pure antispasmodic and tonic remedies for the control of the morbid phenomena—form—in early life at any rate—but a small proportion of the examples of muscular spasm which are being continually brought under our notice. As a rule in the young the phenomena are purely reflex, the impulse being derived from irritative action at some point of the periphery. In all such cases the employment of general sedatives must be made subservient to the more pressing needs of local medication; but these remedies are still useful as aids to the treatment to reduce the general nervous susceptibility while special local measures are being employed to put an end to the primary cause of the nervous distress.

A Clinical Lecture

ON

AMAUROTIC FAMILY IDIOCY.

DELIVERED AT THE HOSPITAL FOR SICK CHILDREN,
GREAT ORMOND STREET.

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AMAUROTIC family idiosyncrasy is such a rare disease that it may seem hardly suitable for a lecture such as this, but I have chosen it because I happen to have met with four cases in recent years, and have one of them to show to-day; and also another of them, minutely investigated after death by Dr. Gordon Holmes and Mr. Herbert Parsons, stands as one of the most complete cases on record, for it was studied by recent neurological methods. This disease is, too, a very remarkable one, and, though you may never meet with a case, a short time given to its study can hardly fail to direct one's thoughts to some interesting points in the study of medicine.

I think, to begin with, it is interesting to trace the gradual recognition of the disease, because this illustrates how the specialist may sometimes point out to the general physician some fact in medicine which has been previously overlooked—just as the general physician may sometimes throw an entirely new light upon a subject which at first sight would seem to be quite a special one. In 1881 Mr. Warren Tay directed attention to peculiar macular

changes in the eyes of an infant. The title of his contribution was "Symmetrical Changes in the Region of the Yellow Spot in Each Eye of an Infant," and an excellent picture is given of the condition in this paper, which was published in the first volume of the *Transactions of the Ophthalmological Society*.

Knapp († New York in 1885 recorded a necropsy, and in 1887 Sachs (B.) of New York, who has done so much to elucidate this disease, described the changes in the brain in a case under the title of "Arrested Cerebral Development." In his later contributions he named the disease amaurotic family idiocy, and defined the chief clinical features. A valuable paper by Mr. E. C. Kingdon and Dr. Risien Russell was published in the *Royal Medical and Chirurgical Society's Transactions for 1897*, under the title of "Infantile Cerebral Degeneration with Symmetrical Changes at the Macula," and since that time various writers have contributed to the literature and further elucidated a disease which was, as you see, first recognized by an ophthalmic surgeon through one of the most striking of its symptoms. American physicians have in particular made valuable contributions to the literature, and among the more recent of them Spiller has been prominent. I believe that almost every case recorded which is undoubtedly an example of the disease has occurred in a Jewish child, although Mohr described a case in an American. In all my four cases both father and mother were Jews and not related. It is a disease of infancy, and shows itself in the first year, usually before the sixth month and frequently about the third, and it is almost invariably progressive, and ends fatally somewhere in the second or third year of life.

If it were not for its rarity it would be a disease of the utmost importance, and for those who have charge of numerous Jewish patients a knowledge of its chief features must be of some value.

It is interesting that my four cases have been sent to the hospital as cases of rickets, because they have shown loss of power and general feebleness. Extreme rickets, we know, does occur among the Jewish poor; but I think we must remember that the mothers generally nurse their children, and unless they are hopelessly poor I hesitate to hurry into the diagnosis of rickets with breast-fed children. As you will see, there are probably no two diseases more unlike than rickets and amaurotic family idiocy when well developed; but the error arises, no doubt, because the medical man is not acquainted with the rarer disease, and, finding himself driven into the corner where we all in turn crouch, falls back, for the need of a name, on that comprehensive and elastic one of "rickets."

The usual history that is given by the mother is to this effect: The child was healthy for some three months after birth, and during that time there had been no illness. Then she noticed that instead of going forward the child began to go back and the muscles of the back and neck were becoming feeble. The real gravity of these signs may not be realized for some months, and then the suspicion grows that the child cannot see well, and that the expression of its face is dull and the mental state feeble. As the disease progresses there is complete inability to raise the head or sit up, and even to turn when lying down, though sometimes the arms are thrown over the head in a wild, purposeless fashion. The limbs are also enfeebled, although at first no visible wasting will be apparent. A very interesting symptom present in all my cases, but I believe not invariable, is the survival of an acute sense of hearing, which, coupled with the general nervous degeneration, causes the infant to start at any sudden sound. The result is striking, for when the child is lying motionless it starts at a sharp sound, almost as if an electric shock had been applied. The sense of taste is preserved. There may sometimes be curious vermicular movements of the fingers and hands and a general drowsiness. In the last stage the limbs may become spastic, the muscles are wasted, and the reflexes increased.

Although some writers have stated that the temperature remains normal, this is not invariable, for in one of my cases the temperature rose shortly before death to 103°. There were screaming and head retraction, ptosis, and finally coma. Yet the anterior fontanelle was not distended, and no sign of meningitis was present after death.

There is, then, in this disease a slowly progressive paralysis, unmarked at first by any startling symptoms, but relentless in its steady advance unless death be accelerated by some intercurrent malady.

There is another very important feature in amaurotic family idiocy—its tendency to appear in several members of a family. The unfortunate mother of this child lost her first from the same cause, and will, I fear, surely lose this one also.

The history of Kingdon and Risien Russell's cases is, however, far more striking. The first child died of this disease; the second was healthy; the third died; the fourth was healthy; the fifth, sixth, and seventh all fell victims. The two healthy ones were a girl and boy respectively. More cases, however, have been reported in females than in males.

Ocular Changes.

The ocular changes are most interesting and important, and were, as I have already mentioned, the means of the discovery of the disease.

In most cases there is a primary optic atrophy, although Tay detected some neuritis in the earlier stage. I have never seen a case yet in which the ocular sign of atrophy has not been already developed and distinctive. Coupled with this atrophy there is in the position of the macula lutea, a white, hazy appearance of the retina, in the middle of which area there is a cherry-red spot of colour, closely resembling the appearance found in embolism of the central artery of the retina. In the case here to-day these signs are exceedingly well marked, and their presence enabled me to clinch a diagnosis which was at first not quite obvious.

The explanation of the changes is given briefly under the pathology of the disease, and they remain constant until death, with trifling modifications. The pupils are equal, and when the atrophy is well developed become widely dilated and inactive.

Pathology.

The pathology of this disease is at once interesting and obscure, and it is only in comparatively few cases that a complete investigation has been made.

Macroscopic changes in the brain are seldom evident. Sachs, however, described in two of his cases a low type of development of the cerebral convolutions, and in three cases the brain seemed unduly hard. In one of my cases there was the same unnatural hardness of the cerebral tissues. In other cases no change from the normal has been observed at all.

Microscopical changes were demonstrated by Sachs in 1887 and 1892, and in 1897 Dr. Risien Russell with Mr. Kingdon gave a full account of the changes they had observed in one case, and that account holds good at the present date, though it can be supplemented by additional observations which result from the use of other methods than staining with the aniline dyes. In 1906 Dr. Gordon Holmes and Mr. Herbert Parsons made a very careful and extensive investigation into one of my cases, which was published in detail in *Brain*, 1906, p. 180. This confirmed many of the previous observations, emphasized the statement of Spiller in 1905 that the disease of the nerve cells is general, and also elaborated the nature of these changes. I must refer you to that paper for the details, which are too intricate for this lecture.

The great fact to grasp in the pathological anatomy is the remarkable general and extreme disease of the nerve cells. It would appear to be a primary cell disease, and the changes in the fibres are apparently secondary. We may even go a step further and say that this disease is primarily a disease of the interfibrillar protoplasm of the cells, the changes in the neurofibrils being secondary.

The cell destruction may be most extensive; thus, in my case not a single normal cell was found by Dr. Holmes in any part of the central nervous system he examined, and the same was true also of the dorsal ganglia and ganglion cells of the retina. Spiller has found peripheral nerve changes. The tough consistence of the brain was the result of a secondary proliferation of the neuroglia.

It is also important to recognize that the disease of the nerve cells is not a result of inflammation, for there are no vascular signs of either acute or chronic inflammation.

The changes in the nerve cells are: Swelling of the cell body with frequently gross alteration in shape; disappearance of Nissl bodies, excentric position of nuclei, vacuolization of the protoplasm.

It may well be expected that the explanation of the cause of such a disease as this is beyond us. The very fact that, so far as I am aware, it is almost invariably met with in the Jews points at once, I think, to some very obscure disorder of metabolism.

The inevitable progress of the disease does not suggest an arrest of development but some active process. A bacteriological cause is improbable, for there are no positive facts in its favour, and my case was entirely negative, and the absence of vascular changes, the age, and racial nature of the disorder make such an explanation unlikely.

It does not appear from the microscopical evidence to be a pure atrophy, and I can get no further than the statement made by Holmes, Parsons, and myself in our paper that it is due "to some inherent bio-chemical property of the protoplasm of the cells." The only *post-mortem* examination I have seen showed no obvious changes in any of the viscera or internal glands which even suggested that they were at fault, but you will readily appreciate that a decisive statement on this point would be impossible with such a scanty experience. If there is some internal secretion at fault, at present no one, I believe, has discovered the gland that is to blame.

The explanation of the remarkable fundus changes comes next. Treacher Collins, Holden, Mohre, Shumway, and Mary Buchanan, and more recently H. Parsons, have written upon this point. There is profound disease of the ganglion cells in the retina, and at the fovea the disease may become so extreme that there is atrophy of the retinal tissue; and possibly this atrophy may even result in an actual destruction of the retina at this spot, as seemed to have occurred in my case. Whether this be so or not, you can imagine to yourselves the condition that results. We have the retina spread out over the vascular pink choroid, and where it is thinned by disease it is evident that this coloured background when illuminated by the ophthalmoscope will shine through with particular brightness and colour, and by contrast with the surrounding less diseased parts this greatly damaged area will appear as a bright cherry-red spot. The contrast is rendered all the greater because it would appear that the retina around the fovea may become oedematous, or, more probably, through swelling of the diseased cells, thickened, thus cutting off the colour of the choroid and forming around the cherry-red spot a whitish zone. The optic atrophy is due to the extensive disease of nerve cells and nerve fibres.

There are some remarkable cases on record which only in some details resemble amaurotic family idioey.

Spiller, whose name I have already mentioned, found changes in the nervous system which he believed to be identical with those of amaurotic family idioey in two children, one of which was 9 years of age, the other 8 years, who were not suffering clinically from this disease. These two children were mentally defective, but were not blind, and they would appear to be quite exceptional cases, which we must bear in mind when we dwell on the entity of amaurotic family idioey. This is the more needful, because Falkenheim mentions a case of this disease in which the ocular signs were not present.

I have never myself recognized any case of an aberrant type, all the four I have published were classical in their onset, symptoms, and course. There is one case (Peterson's) which had survived to the age of 5 years, but in the absence of a necropsy, one is obliged to suspend decision as to its exact nature.

In this country I am not aware of a single case published which has not occurred in a Jewish child, but I believe that this is not an invariable rule, although there can be no doubt that it is to a great extent a racial disease, and far more so than the condition diabetes, which at once occurs to one as also more prevalent in the Hebrew race.

When confronted with a case of this kind, which is so mysterious in its nature and so hopeless in its prognosis, it is only natural to attempt to add any fact one can, that is of the least importance. Dr. F. Mott, from his laboratory, has done this in the case you see to-day, for he kindly had the blood and cerebro-spinal fluid examined by Dr.

Candler by Wassermann's reaction, and has informed me that they both gave a negative result. This bears out so far the clinical experience of these cases that they are not a result of inherited syphilis, and is, I believe, a new observation on the disease.

Treatment.

It is quite useless for me to speak of the treatment. Russell and Kingdon tried numerous remedies of all kinds in vain in their series. I should not even follow Hirsch's suggestion that the mother should not nurse any child she might have in the future. One feels that this is but a faint hope. Further, should the child not show any sign of the disease, we must remember that not every member of a family need necessarily suffer whether nursed or not: Sachs, in fact, has already pointed out that it is of no avail.

I have tried one of the organic phosphorus compounds in this case, but I see no good result at all in consequence, and I think we need some much more subtle remedy than this.

Diagnoses.

You will readily understand that the great point in the diagnosis of these cases is really a knowledge of the disease. It is so rare that we never think of it, and perhaps have never heard of it, and then, of course, we must lose our bearings.

It has no resemblance at all to rickets, except in so far that the child is muscularly feeble, and I need not dwell on the extreme dissimilarity of the two diseases.

Cerebral diplegia is more likely to cause confusion, but the distinction is usually an easy one. For example, take such a case as this which I saw recently. A child of 7 months was brought for paralysis, which had been noticed by the parents soon after birth. The boy's head fell back from weakness of the cervical muscles, he snorted when asleep from weakness of the palate, and all four limbs were spastic, but there were no ocular changes. You will see that the spasticity was an original symptom, but it is not an early symptom in amaurotic family idioey. Then, again, he was no worse than he was at 2 months of age; in fact, he was a little better. There was no blindness and no curious starting at a sudden noise. The reflexes were greatly exaggerated.

In another case there was double optic atrophy and consequent blindness, but the disease was not advancing; there was the same spasticity, and an entire absence of the macular changes of amaurotic family idioey.

In some congenital syphilitic lesions of the brain there may be a progressive downhill course, or there may be a downhill course in which the steps are marked by sudden exacerbations of symptoms. In such cases epileptic attacks are common, and there may be other stigmata of congenital syphilis including choroidal changes, but not the characteristic ocular changes of amaurotic family idioey. The history of stillbirths, miscarriages, or syphilis in the parents is often met with in such cases, but this is not the experience in the disease we are now considering.

Whether or not there are cases of progressive idioey met with in asylums for children, which resemble this disease closely, I am not competent to state, but if they exist they must be very exceptional, I think, for even Spiller's cases did not show a clinical resemblance. Hydrocephalus can be at once excluded because that condition is not present in amaurotic family idioey.

Post-basic meningitis, although it may give rise to blindness and paralysis, is acute in its onset and associated almost invariably from the first with such symptoms as fever, retraction of the head, convulsions, and vomiting. There are no macular changes and the cerebro-spinal fluid obtained by lumbar puncture will at once differentiate the disease.

Possibly a cerebral tumour in an infant might show some resemblance, but I have never myself met with any case in the least resembling one of these.

Cretinism could not possibly be a cause of difficulty.

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AN EPIDEMIC OF TINEA CRURIS.

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RINGWORM of the scalp and body occurring in epidemic form in schools is familiar, but ringworm of the groin, fork, and axilla is not of such common occurrence except in tropical climates; its appearance in epidemic form during the last three years at the universities and in our public schools is my reason for publishing the following notes.

Tinea cruris has also been called *tinea marginata* or *eczema marginatum*. In the majority of cases I have seen the lesion starts in the fork or inner surface of the thigh, where it is touched by the scrotum. A red patch, looking like an area of chafing, appears, and rapidly spreads down the inner side of the thigh and backwards towards or behind the anus. The spreading edge is raised, dry, scaly, or papular, whilst the portion within the ring is moist and eczematous. Gradually extending from the margin, the lesion in the lower extremity may almost reach the knee, and in the axilla may reach the level of the nipple. There does not appear to be any tendency to a spontaneous return to the normal on the part of the skin within the growing margin. The hairs are not affected and do not fall out. Beyond slight itching, there are no subjective symptoms. On the trunk and limbs of infected persons there may often be found patches which can in no way be distinguished from ordinary ringworm of the body (*tinea circinata*).

On March 8th, 1907, a boy presented himself, suffering from a condition I diagnosed as *eczema intertrigo* affecting the scrotum and inner side of the right thigh. At the end of the term, about the first week in April, the condition showed no improvement, and he went under the care of his doctor at home, Dr. McLannahan, of Stonehouse, who very kindly wrote to me, saying that he regarded the case as one of *tinea marginata*, a condition he had met with amongst soldiers and amongst stokers in the P. and O. service. This boy was apparently well by April 21st, and he returned to school a few days later, and had no recurrence. On May 31st, 1907, a second boy from the same house was seen with *tinea marginata* of the axilla. An undress parade of the boys in the house led to the discovery of 9 other cases, 2 having the disease in the axilla, and the remaining 7 in the groin or fork. A second inspection of the house a month later led to the detection of 2 more cases; the fourteenth case appeared twenty-four days later, and the 21st cases were found thirteen and eighteen days after this. In all, there were 16 cases, all in one house of about forty-five boys.

Clinically, there was little to note about the cases. In a few, which were of old standing, the rash extended as low as the lower third of the thigh and backward behind the anus. Not uncommonly a few spots, the size of a three-penny-bit, were found on the thighs, calves, trunk, and more rarely on the arms. These isolated spots were drier and more scaly than the patches in the groin or axilla, and readily yielded to treatment. The rings gave rise to no symptoms beyond slight irritation. The average length of time under treatment was five weeks. Three cases recurred, two after an interval of six weeks, and one after the lapse of four months.

Scrapings from the growing edge of some of these cases were examined microscopically, both by myself and by a

local bacteriologist. In all, a large-spored ringworm fungus was found.

Treatment was alike in all cases. The superficial epidermis was removed first, and then an antiseptic ointment was applied. To remove the epidermis I employed a solution of 40 grains of iodine with 20 grains of potassium iodide in an ounce of methylated spirit. Two applications were generally sufficient; then the parts were treated morning and evening with an ointment containing half a drachm of precipitated sulphur and half a drachm of ammoniated mercury in an ounce of lanolin. A few boys were treated according to a suggestion of Dr. McLannahan: the affected parts were painted every other day with a camel-hair brush soaked in oil of terebinth. rect., and the following ointment rubbed in every night: Sulph. precip. ʒss, hydrarg. amm. ʒss, acid. salicyl. gr. x, lanolin and vaseline aa ʒiv. In both cases the applications sometimes gave rise to severe smarting, but this was of short duration, and relieved by smearing with vaseline. Cases seen early and treated by this method were well in three weeks; old-standing cases took, of course, longer.

The factors common to all the boys who suffered in the epidemic were as follows: With one exception, they were all senior boys, members of the First Fifteen, using the same lavatory and bathroom. They did not all belong to the same dormitory, and there was no suspicion that they wore each other's football or running togs; indeed, one boy who suffered was not allowed either to run or play football on account of a chronic cardiac lesion.

The precautions taken to prevent the spread of the infection were as follows: All the boys in the infected house were stripped and inspected about every three weeks. All who were detected with the rash were made to sleep in the same dormitory, which was reserved for this purpose: they also had the exclusive use of a separate changing and bath room and water-closet. For baths and ordinary washing purposes Parke Davis's germicidal soap was used. All towels from the infected changing room were disinfected, and also the underclothing and running kit. The walls of the changing room and lavatory were washed down with disinfectant at the termination of the outbreak. The infected boys were not withdrawn from school work nor from the common dining-room. When the rash in the fork was profuse they were not permitted to join in the school runs.

These precautions were entirely successful; no other house was infected, and no cases have appeared during the subsequent fourteen months. During the period covered by this epidemic I saw in other schools several cases of body ringworm (*tinea circinata*); 2 isolated cases occurred in a boys' school, 1 in a girls' school, and 7 in a school for junior boys. None of these cases assumed the type of *tinea cruris*.

In my own mind there is no doubt that the outbreak was caused by the common use of the hot bath, or by the boys using each other's towels. Probably the growth of the parasite was encouraged by the moist, hot atmosphere of the bathroom, while the vigorous rubbing which boys give to the forks, groins, and axillae decided the points of inoculation. It has sometimes been thought that infection is carried in clothing, and that chairs and water-closet seats may harbour the parasite, but in the outbreak under consideration these factors could be eliminated.

Tinea cruris resembles *tinea circinata* in that it attacks patients after the period of puberty; but it is probable that there are two distinct parasites causing these conditions, for in *tinea cruris* the hairs are never attacked. The parasite of *tinea cruris* shows a larger spore and a freer growth of mycelium than *tinea megalosporon*; it is also very much easier to find in scrapings taken from the growing edge of a ring. These differences may be due only to the site in which the fungus has grown. In order to settle this point it is desirable that scrapings should be taken and growth obtained on Sabouraud's medium.

THE annual general meeting of the Society for Training Teachers of the Deaf and for the diffusion of the German (pure oral) system will be held at 33, Cavendish Square, W., on Wednesday, May 26th. Sir Melville Beachcroft, Chairman of the London County Council, will take the chair at 3 p.m.

A CASE OF LANDRY'S (ACUTE ASCENDING) PARALYSIS: RECOVERY.*

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SHERWOOD FOREST SANATORIUM FOR CONSUMPTION.

For the following notes I am indebted to Drs. J. R. Edward and W. M. Sadler, house-physician and assistant house-physician, Nottingham General Hospital:

The patient, a collier, aged 23, employed on the "pit bank," was admitted to the Nottingham General Hospital on January 20th, 1903, having been ill about twelve days.

Previous History.

He had been addicted to an occasional indulgence in alcohol, but was not a constant "soaker." There was no history of syphilis, diphtheria, or lead poisoning. Some months back he had gonorrhoea. He had never been abroad. The family history was unimportant.

Present Illness.

A few days before the attack the patient had a drinking bout, got wet through, and sat for some time in his wet clothes. After this he complained of lassitude and general muscular aching.

On January 8th he felt "starved" and sick, and vomited slightly. The next day he had a numb feeling under the nails of both hands, as if the fingers had gone to sleep. By night the arms were involved as far as the elbows. Next day the arms and feet felt very cold and numb, and there was marked muscular weakness of all four limbs and of the trunk. Face not affected. He just managed to sit up once in bed, but could not dress himself or hold anything in the hands. The limbs twitched a good deal and ached. Drowsy in the day, wakeful at night. Appetite good. Bowels were moved by medicine. There was no loss of control over the bladder, except on one occasion, when he was being lifted on to a stretcher. About a week after the onset the eyelids and mouth became affected. He could only see through the slits of his eyes, and the drooped lids. No headache or other pain beyond aching in the limbs. Three days after the onset he began to be troubled with cough and phlegm.

Condition on January 23rd, 1903.

He is a man of healthy appearance, but is perhaps a little oppressed. Laid on back. Troubled with weak, ineffectual cough. Mouth dry (full doses of water being given). Mucous membranes of normal colour. Tongue moist, red, a little furred, gums normal. Pulse 100, moderate tension, regular. Respirations 23. Temperature normal. Double ptosis of upper lids, which cannot be raised above 4 in. Slight mucopurulent discharge from conjunctiva. Pupils equal, react to light and accommodation. Internal and external recti on both sides markedly weak. No nystagmus. Double weakness of facial nerve seen on trying to smile. Palate moves well. Tongue protruded straight. *Upper limbs:* No muscular wasting, but almost complete symmetrical paralysis. All muscles respond to faradism, except flexors of first and second fingers of right hand. No reaction of degeneration. *Lower limbs:* Knee-jerks absent. No ankle clonus or plantar reflex. No wasting of muscles, but great weakness. Some slight movements can be performed, others not at all. All muscles react to faradism and galvanism. No reaction of degeneration. *Sensation:* Everywhere normal. *Trunk:* The intercostal muscles are paralysed and respiration is carried on by the diaphragm. Superficial reflexes absent. The recti abdominis appear almost completely paralysed and the abdominal wall is lax. *Speech:* is blurred owing to weakness of the facial muscles; no hoarseness. *Heart:* Sounds normal, apex beat in fourth interspace just external to the nipple. *Lungs:* Slight dullness at bases, but no definite change in breath sounds. *Mental condition:* Bright when he is spoken to, drowsy at other times.

April 23rd: There is now free movement of the ribs in inspiration in respect both of expansion and elevation. The umbilicus moves upwards when he attempts to contract the recti. Facial and ocular muscles now normal. Great wasting of all small hand muscles, also forearm muscles, extensors more especially. Biceps wasted, but can be voluntarily contracted. All other muscles of upper arm are wasted and powerless. *Sensation normal.* *Lower limb:* Cutaneous sensation normal. Muscles tender on pressure or passive movement. Great muscular wasting in thigh, leg, and foot, with plantar flexion. He can slightly bend knee, move toes, and flex ankle. These movements cause pain. Slight glossiness of skin of foot. There is a general tendency to sweating.

July 23rd (six months after admission).—There has been considerable improvement in the arms, which he can raise so as to get hold of the bar at the bed-head. Can sit in a wheel-chair, but cannot propel himself. Patient discharged from hospital.

February 28th, 1906 (seven months after discharge from hospital).—Looks plump and well. The shoulder and arm muscles are in good condition, movements of shoulder and elbow well performed. The extensors of the forearms and the small hand muscles are atrophied, more so on the right side. There is permanent flexion of the two distal phalanges of the fingers, the proximal one being extended. He can propel himself in a

wheel-chair, but can do no useful manual work. There is wasting of extensors of the leg, consequently there is extreme foot-drop and plantar flexion of the toes. Knee-jerks not obtained. Can flex and extend the knee to some extent. Muscles moving the hip are very weak, and he cannot stand even when supported on each side.

Treatment.

He was at first given liq. strychnin. mv. with tinct. belladonna. mx, every two hours. Both these drugs are respiratory stimulants, and the only chance of recovery appeared to be in stimulating the respiratory centre. The belladonna was given also with the object of checking secretion into the bronchial tubes, where it tended to accumulate owing to lack of expulsive power. The belladonna after a few days' use caused a little noisy delirium at night, which was treated by a bromide and chloral draught. After the first ten days the strychnine alone was given. On March 2nd sodium salicylate was given on account of the muscular pains. To this bromide of potassium and hyoscynamus were afterwards added. The strychnine was retained. Massage and galvanism were regularly given during the latter part of the patient's stay, but were not well borne on account of the muscular tenderness.

The group of symptoms known as Landry's paralysis has been known since 1859, when the disease was first described by the observer whose name it bears. It is more correct to speak of a group of symptoms than of a disease, because it is quite possible that the "symptom complex" in different cases has a different causation and variable pathological basis. By Landry's paralysis we understand an illness usually ushered in by sensory symptoms such as tingling, formication, etc., and then characterized by progressive loss of muscular power, commencing usually in the feet, involving in turn the legs, thighs, pelvic muscles, abdominal wall, arm muscles, respiration, deglutition, facial muscles, etc. There may be considerable loss of sensation, but more commonly this is absent, or confined to slight blunting at the tips of the fingers and toes. Most cases end fatally, especially when the respiration is affected, death occurring usually about the end of the first week, if not earlier, or it may be deferred three or four weeks. In at least two respects this case is remarkable. First, it is distinctly stated in the notes that the arms were affected before the legs. This occurrence certainly runs counter to the commonly accepted notion that the paralysis invariably commences in the legs and ascends the body segment by segment, until its progress is either stayed, or life comes to an end by reason of the importance of the structures involved. But we are told on the authority of the late Dr. Ross² that Landry himself stated that the malady might commence in either pair of limbs, and that the march of the paralysis might be sometimes described as "centripetal" rather than "ascending." Occasionally both the arm muscles and those supplied by the bulbar nerves have been affected before the legs. In the second place, this case is remarkable inasmuch as, notwithstanding the almost complete paralysis, the patient recovered. When I first saw him he lay almost motionless, breathing rapidly, and of somewhat dusky appearance. When spoken to, he threw his head slightly backwards to enable him to see through the fissure left by his drooping lids. In fact, he seemed to be hanging on to life by a thread. Every time I visited the hospital I expected to hear of his death. When asked how he was he always said, "All right," and probably his calmness and pluck had much to do with his recovery. It is impossible to say why certain muscles and nerves were spared and others affected. The muscles of the legs, arms, and trunk, including intercostals, were absolutely powerless. The muscles supplied by the brachial plexus were all involved, yet the phrenics which arise from the cord immediately above were spared. The pneumogastrii, glosso-pharyngeals, and hypoglossals seem to have escaped, while the muscles supplied by the third, sixth, and seventh were affected. The temperature at first was normal. About the sixth week it reached 99° in the evening. This, practically afebrile course, conforms to the usual type.

Exposure to cold and excess in alcohol are well-recognized causes of Landry's paralysis, and both of these co-operated in the etiology of the case before us. It has also occurred during convalescence from small-pox, typhoid, influenza, measles, and diphtheria. It has occasionally supervened in connexion with the puerperal state, syphilis, septicæmia, and phthisis.³ It is three times as common in men as women.

As regards diagnosis, there is room for doubt whether the lesions in this case were in the spinal cord or in the

* Read before the Nottingham Medico-Chirurgical Society.

peripheral nerves. At any rate, it was not a case of ascending myelitis leading to rapid and extensive softening of the cord. This is shown by the preservation of faradic excitability, of the functions of the bladder and rectum, and absence of tendency to bedsores, or of anaesthesia. A certain mystery has always hung over Landry's paralysis because it has so frequently happened that no morbid changes in the nervous system have been discovered after death. The disease was capable of abolishing function and of destroying life, without leaving behind any lesion or demonstrable alteration of tissue to indicate in what manner those results had been brought about. There are doubtless cases in which the nerves and spinal cord have been examined by modern methods and no pathological changes have been found. In rapidly fatal cases the action of the poison on the nervous tissues may be sufficient to cause death before characteristic changes of structure have had time to develop. On the other hand, many of the earlier cases occurred before it was customary to examine the peripheral nerves, so it is probable lesions in some cases have been overlooked. When inflammation involves all the elements of a mixed nerve it is usual to find that both motion and sensation are affected. In the case before us we may regard the lesion as principally affecting the whole system of lower motor neurons. The axis cylinders of the motor nerves are outgrowths of the ganglion cells of the spinal cord, medulla, and pons. The chief stress of the destructive process would be found in some cases in the peripheral nerves, and doubtless most often there because of their distance from the centre, and in others in the ganglion cells themselves. And here we can see an explanation why motor power has been recovered in some parts of the body and not in others. So long as the nerve cells themselves are not destroyed, there is possibility of regeneration of axis cylinders and of recovery of muscular tone and motor power, while if the cells themselves undergo degeneration there is permanent muscular atrophy and motor paralysis. This has occurred notably in the cell groups innervating the extensors of the forearm and toes and the small hand muscles. Although the morbid process has exercised a selective action on the motor fibres of mixed nerves, it is probable there has also been interstitial neuritis, which by pressure would cause irritation of sensory fibres. In this manner the tenderness and pain in many of the muscles can be accounted for. Neither hyperaesthesia or anaesthesia of the skin occurred, which appears to show that nerves containing sensory fibres only were only slightly affected, if at all.

Dr. Michell Clarke, in an interesting article in the *BRITISH MEDICAL JOURNAL* for September 12th, 1908, would limit the term "Landry's paralysis" to cases in which the lesion is confined to the anterior cornual cells, degenerative changes being nowadays demonstrated by Nissl's method, but which would have been passed over by earlier pathologists, thus giving rise to the notion that Landry's paralysis caused no morbid changes of tissue. This proposition apparently assumes that true Landry's paralysis is always fatal, for the morbid anatomy of a patient who recovers must always be more or less a matter of speculation. In the clinical sense I think the case I have related is sufficiently near the type of Landry's paralysis to be included under that name. Dr. Clarke goes on to describe a case of ascending paralysis due to toxic polyneuritis. There was great muscular wasting, the reaction of degeneration was present, and the patient died after an illness of about three months. At the *post-mortem* examination the peripheral nerves showed a very advanced degree of neuritis. But this was not all, for many anterior horn cells, especially in the cervical and lumbar enlargements, showed degenerative changes, such as disappearance of the Nissl bodies, vacuolation, and disappearance of the nucleus.

The physical and chemical properties of the poison causing acute ascending paralysis probably vary, and its nature in different cases is but little known. In one published case¹ micrococci have been found in the ganglion cells of the cord. Whatever the nature of the poison, it probably circulates in the blood like alcohol and the diphtheritic poison, and exercises a selective action on the lower motor neurons, the peripheral portion of which frequently suffers most. Another example of the selective action of a poison is that of the late effect of the syphilitic poison on the sensory protoneurons or on the pyramidal

cells of the cortex cerebri, producing the diseases known as tabes dorsalis and general paralysis respectively. The notion that Landry's paralysis is associated with no morbid tissue changes of permanent character can no longer be maintained, or that no muscular wasting occurs in cases that recover. This question was fully inquired into by the late Dr. Ross, and he "clearly showed that many cases have been reported which in the early stages were clinically indistinguishable from cases of rapidly fatal ascending paralysis, in which, when convalescence was protracted, some of the muscles became atrophied, and gave partial or complete reactions of degeneration to electrical tests,"² *main en griffe*, and double ankle-drop being not uncommon distortions.

REFERENCES.

¹ For an account of a rapidly fatal case see *BRITISH MEDICAL JOURNAL*, February 27th, 1909. ² *Allbutt's System*, first edition, vol. vi, p. 701. ³ *Allbutt*, op. cit., p. 697-8. ⁴ *Allbutt*, op. cit., p. 702. ⁵ *Allbutt*, op. cit., p. 703.

ON THE USE OF CERTAIN NEW CHEMICAL TESTS IN THE DIAGNOSIS OF GENERAL PARALYSIS AND TABES.

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The diagnosis of general paralysis of the insane is for two reasons a more important matter than the diagnosis of most forms of insanity. On the one hand, thanks to the clinical observations of Pilcz, Kraepelin, and a host of other workers, with the pathological researches of Nissl and Alzheimer, we have a clearer picture and more exact knowledge of the course and nature of the disease than about almost any other psychosis, so that we can foretell what events are likely to occur in it, and take measures to guard against them. On the other hand, the prognosis is more fatal and the lethal termination more rapidly reached than in any other form of insanity, so that it is important to recognize the condition as soon as possible, and to get the patient's affairs arranged on the basis of that knowledge. Although in a pronounced case the clinical picture is one of the sharpest in the whole of medicine, yet in an early or non-typical case the difficulties in diagnosis are often exceedingly great. So much is this the case, that it is found in asylum practice that the majority of the patients are admitted either with an erroneous diagnosis, or else comparatively late in the course of the disease. Hence the additions to our knowledge that of late years have accrued from a study of the cerebrospinal fluid in the disease have been welcome and valuable aids to the practitioner. These newer laboratory methods of course can never replace accurate observation of the well-known physical signs of the condition, any more than Vidal's test has replaced the employment of physical examination in the case of typhoid fever, but a knowledge of them is of the utmost importance when we have to deal with obscure and doubtful cases.

Before detailing some personal researches it will be well to review very briefly present knowledge concerning the cerebrospinal fluid in general paralysis, and this is best done, perhaps, by mentioning the various points in the chronological order of their discovery.

The first step in this connexion, and still one of the most important, was the discovery, made in 1900 by Ravaut, Vidal, and Sicard, that lymphocytosis in the cerebrospinal fluid is one of the most constant accompaniments of both general paralysis and tabes. Many forms of cells are found, the most significant being large mononuclear lymphocytes and plasma cells. When in a non-febrile malady the lymphocytosis is very pronounced, then it may be regarded as practically pathognomonic of general paralysis. The cell increase is greater at the onset of the disease—a fact that obviously enhances its value in diagnosis.

A year later the discovery was made by Achard, Loefer, and Lambry that considerable quantities of proteid are to be found in the cerebro-spinal fluid in general paralysis and, to a less extent, in tabes. As the present paper is chiefly concerned with this question, consideration of it may be conveniently postponed for the moment, and it will suffice here to mention the well-established facts that in normal cerebro-spinal fluid the quantity of proteid is minimal, that in the diseases in question the increase is mainly an increase in globulin, and that this increase is not always parallel with the degree of lymphocytosis, tending on the whole to develop later than this phenomenon.

The next discovery was the startling one made by Wassermann in 1906, that the cerebro-spinal fluid in general paralysis contained substances which, when combined with the syphilitic virus, have the power of inhibiting haemolysis. It will be remembered that in 1900 Bordet demonstrated that in various processes, of which haemolysis may be taken as a type, three bodies are essential components. These are, first, the antigen, or substance that is being destroyed—bacterium, blood cell, etc., as the case may be; secondly, a non-specific substance, or complement, found in all blood serums; and, thirdly, a specific substance, or amoceptor, found only in the serum of an individual that has been previously injected with the corresponding antigen—the amoceptor being thus evoked as a response to the foreign body. It follows that if two of these three bodies are present in a fluid and cytotoxicity does not take place, it must be due to the absence of the third; thus, if the antigen is not dissolved on being added to its corresponding amoceptor, the complement must be missing. In this way we can test for the presence or absence of complement. Now Wassermann found that syphilitic virus obtained from a fetal liver in which spirochaetes had been demonstrated, when in the presence of the cerebro-spinal fluid of a paralytic, made a combination with it and the complement present in any blood serum. This complement was thus taken up or fixed, and was no longer free to cause haemolysis when added to red blood cells and haemolysis in the way just mentioned. For this test he first incubates for an hour the syphilitic liver emulsion with the suspected cerebro-spinal fluid and the complement containing serum of a guinea-pig; he then adds the mixture to an emulsion of washed red blood corpuscles of a sheep and some serum of a rabbit that has been several times injected with sheep's blood. If the blood cells dissolve—that is, if haemolysis or laking takes place—then the complement must have been free to do it, and could not have been fixed by the preliminary incubation. Wassermann maintains that this is due to the absence of any syphilitic antibody or amoceptor in the cerebro-spinal fluid. On the other hand, if laking does not take place, then the complement must have been previously fixed by the combination of the syphilitic antigen from the liver and syphilitic antibody in the cerebro-spinal fluid.

While Wassermann's observations have received the widest confirmation, his interpretation of the phenomenon has met with serious criticism, and is to-day practically discredited. It is quite true that the reaction just described is positive in over 95 per cent. of cases of parasyphilis, and negative in other diseases, so that beyond doubt there is some substance in the cerebro-spinal fluid which when combined with syphilitic virus has the power of fixing complement and thus inhibiting haemolysis. But the nature of this substance is a far more disputable matter. That it is not a specific syphilitic antibody seems to be certain from the observations made, first by Weil and Braun, that it shows the same power of inhibiting haemolysis when combined with other substances than syphilitic virus—for instance, lecithin. It is now known that the place of the syphilitic antigen can be taken by a number of substances, including lecithin, bile salts, brain emulsion, normal liver emulsion, etc.; and Benecke has recently brought evidence to show that the efficacy of the syphilitic liver in Wassermann's experiments is due to the presence in large quantities of a peculiar soap pellicle that surrounds the fat droplets characteristic of that lesion.*

Leaving, however, the theoretic aspect of the question, we have to note that all workers at the subject—notably Plaut, Morgenroth and Stertz, Marie, Levaditi, Yamanouchi, Weil, Eichelberg, and Neubauer—are unanimous as to the high practical value of Wassermann's discovery. It may be said at once that it is the most certain sign of general paralysis we at present possess. Its only disadvantage is the complexity of its application, and before it can be of much value in practice it will have to be considerably simplified.

Two other methods may be briefly mentioned. In 1907 Fornet and Scherschewsky stated that the serum of a luetic patient gives a specific precipitate with the serum of a paralytic. This observation has been received with much scepticism, and Plaut, who is perhaps the most reliable authority on the subject, says that this precipitate is just as common with normal serum. In 1908, Porges and Meier showed that the cerebro-spinal fluid of paralytics causes a heavy precipitate when added to the lecithin emulsion. This is of interest when one remembers the important part played by lecithin in the Wassermann reaction.

The theoretic interest that the increase in globulin has resides in the fact that most authorities agree in attributing to it the origin of the substance active in the Wassermann reaction. The trend of opinion is towards regarding this as resembling choline and nucleo-proteid in being katabolic products produced in the course of the disease. The relation between globulin and the substance that gives the Wassermann reaction becomes therefore a matter of great interest, and the phenomenon of globulin increase receives an accession of both practical and theoretical importance from these considerations.

Now, the experience of the past eight years has amply confirmed the fact of globulin increase in general paralysis and its very great value in diagnosis, and the object of the present communication is to consider two new methods for the precise observation of this increase, together with the results of our experience with these methods. The first of them was described some five months ago by Noguchi of New York; the second has not hitherto been described.

There are, of course, several methods in general use for the separation of globulin from albumen, but all of these leave much to be desired in reliability and delicacy. For the cerebro-spinal fluid the following are those that have been most employed. Guillaumin recommends that the fluid be saturated with magnesium sulphate and then heated; a precipitate indicates the presence of globulin. Nissl, Henkel, Nonne, and Apelt, who have all published extensive monographs on this subject, add to the fluid an equal quantity of a saturated ammonium sulphate solution. Cimbald adds a saturated zinc sulphate solution. In our experience, however, these methods sometimes fail even after twelve hours to give a precipitate with fluids that at once give one in the two tests next to be described.

We shall consider first the technique of these tests and then the results obtained.

Whichever test be applied, it is essential first of all to be sure that no blood or pus has contaminated the fluid to be examined; results are of little value even in cases in which there was a very high lymphocyte count, on account of the secondarily derived globulin. The test may be carried out at any date after the puncture, provided only that the fluid be clear.

The Noguchi reaction consists in the addition of 0.5 c.cm. solution of 10 per cent. butyric acid in normal sodium chloride solution to 0.1 c.cm. of the fluid to be examined, the application of heat, subsequent addition of 0.1 c.cm. of 4 per cent. sodium hydrate solution, with a further application of heat. The test tube should be read within three hours. A distinct opalescence is frequently found to occur even with the normal, but in cases of general paralysis and tabes a characteristic precipitate of a peculiar flocculent character forms. The flocculi tend gradually to fall, so that after twenty-four hours at the latest the bottom of the tube is occupied with a fairly bulky precipitate, whilst the supernatant fluid is clear. In performing this test care must be taken to ensure the absolute purity of the butyric acid. This was evidenced during the experiments by the following occurrence. We had finished the brand of butyric acid obtained from Dr. Makins, of New York,

* This subject was fully discussed by Dr. Mott in the second of the course of lectures on Syphilis of the Nervous System, published in the JOURNAL of February 20th.—Ed. B. M. J.

that had been found to be satisfactory, and on December 7th tried a new brand in 6 cases. To our surprise all of these gave negative results, a finding that was shown, by comparison with some that Dr. Noguchi kindly placed at our disposal, to be due to impure butyric acid.

The second test referred to is as follows: 2 c.cm. of a saturated solution of ammonium sulphate are placed in a test tube, and 1 c.cm. of the cerebro-spinal fluid is gently run on to the surface in the way done in the Heller nitric test for albumen. The formation of a ring at the junction of the two liquids constitutes a positive reaction. The ring is clear-cut, thin, greyish-white, and has the thickness of a thin piece of paper. It should form within three minutes, and within half an hour it may be observed that the surface of the ring shows a delicate mesh appearance resembling a fine cobweb. Indirect illumination must be used, or it may escape detection. For this purpose we have constructed a black-lined box into which the test tube can be inserted and viewed at right angles to an electric bulb which is fixed within the box a few inches away. In applying the test it is essential to see, first, that the ammonium sulphate is pure, so that the solution is neutral and not acid; and, secondly, that the solution is quite saturated, which is best ensured by the use of heat in its manufacture.

We come now to the question of results. Up to the present we have examined only 27 cases, but the paucity of our material is partly compensated for by the uniformity of our findings, which has encouraged us to believe that the tests in question will prove to be of considerable utility.

The Noguchi test was applied in 15 syphilitic cases and 12 non-syphilitic. It was negative in all of the latter except in 1 case of tuberculous meningitis. Among the negative cases were 5 of dementia praecox and 4 of tumor cerebri, conditions which are frequently very difficult to distinguish from general paralysis. Among the 15 syphilitic cases were 12 untreated and 3 treated cases. None of the latter gave a positive reaction, while all of the former did so. The 12 positive cases comprised 3 of tabes, 5 of general paralysis, 1 of tertiary syphilis, and 3 of syphilis of the nervous system. The test was thus positive without exception in all cases of syphilis or parasyphilis that had not had recent treatment, and negative in all other cases examined.

The effect of treatment was shown not only by the non-reaction of the cases under treatment, but also in the disappearance of the reaction seventeen days after initiating treatment in a case that had previously shown a marked positive reaction. It is known that there is an excess of proteid in the cerebro-spinal fluid in no chronic disease of the nervous system apart from syphilis, and that agrees with our findings. In cases of acute infection, on the other hand, there is often an excess of proteid present, whatever be the nature of the infection. This was so, for instance, in the only case of this kind—one of tuberculous meningitis—that we have been able to examine.

The ammonium sulphate ring test was applied in all of the above cases except two of tabes. The results agreed absolutely with those obtained by the Noguchi test, being positive whenever this was positive and negative whenever this was negative, so that the list of cases need not be repeated. The amount of proteid present in normal cerebro-spinal fluid is insufficient to give a ring with ammonium sulphate, though it commonly gives one with pure nitric acid. In general paralysis the amount is increased tenfold, and far exceeds that reached in any other disease, except of course acute meningitis. In the differentiation of general paralysis from syphilis with no nervous manifestation, we would rely not on the mere excess of proteid in the former, for that occurs in both conditions, but upon the striking extent of the excess. This can be roughly estimated with the ammonium sulphate ring test in three ways—by noting first the density of the ring, secondly the time that elapses before its appearance, and thirdly by the dilution with which it appears. The last point has greatly interested us, particularly, however, in connexion with the globulins of the blood serum in syphilis, a matter with which we are not here concerned. Our observations on the point are as yet incomplete, but it would seem that we have in the dilution test a means of readily estimating the amount of globulin present, and therefore the degree of certainty of the

diagnosis. We have several times, for instance, obtained a positive reaction in fifteen minutes after diluting the cerebro-spinal fluid eightfold, a phenomenon that certainly never occurs in the normal.

To sum up, we consider that we have in the Noguchi reaction and in the ammonium sulphate ring test two new methods of considerable value for readily recognizing an excess of globulin in the cerebro-spinal fluid, and thus for determining the presence of some parasyphilitic affection of the nervous system.

TREATMENT OF FACIAL PARALYSIS DUE TO MASTOID DISEASE OR TO THE MASTOID OPERATION.

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In the performance of a series of mastoid operations one is certain sooner or later to have the misfortune to divide the facial nerve during the course of the operation—it has occurred to me three times in over one hundred operations—as it may be found either completely exposed or surrounded by granulations, the cutting of which may completely sever it; or the paralysis may be present before operation, due to destruction of the nerve by the diseased process.

As far as I am aware, the treatment hitherto adopted has been facio-spinal accessory, or facio-hypoglossal anastomosis, the latter being the favourite. I have had two of the latter, and both were successful as far as recovery of the facial muscles was concerned; but the resulting disfiguring scar was objectionable, and the thought occurred to me of trying to join the two ends of the divided nerve in the course of the aqueduct of Fallopius at the site of injury. The following is a short summary of a case which was shown, together with one of my facio-hypoglossal cases, for the purpose of comparison at a meeting of the Stourbridge and District Medical Society on February 18th last:

John P., aged 5, admitted to the Walsall and District Hospital on May 12th, 1908, with chronic middle-ear suppurative and symptoms of cerebral irritation. The mastoid was opened on May 13th, and we found to be extensively diseased, a large part of the outer wall of the lateral sinus being covered with foul granulations. In following out the diseased bone the facial nerve was divided and recognized as such at the time of the operation, and upon recovery from anaesthesia the whole of the side of the face was completely paralysed. The operation was finished in the ordinary way, the wound being sutured up at the back, and the external meatus being thrown into the general cavity. The idea of uniting the severed ends occurred to me, and upon the second day after operation the child was again anaesthetized, the wound at the back reopened, the severed aqueduct exposed, and the proximal and distal ends defined, the distance between them being about from $\frac{1}{2}$ to $\frac{3}{4}$ in. As a scaffolding for the regenerating nerve silkworm gut was used, as it was thought it would better resist the phagocytic action of the tissues, and by its rigidity be more easily introduced into position, and retained there during subsequent dressings. A piece of gut, longer than the interval between the two openings in the bone was used, $\frac{1}{2}$ in. being inserted into each end of the bony canal. The case was dressed daily for a period of one month through the wound at the back, which was not again closed, mainly for convenience in dressing, but also for better drainage. The whole of the area of the anastomosis was carefully covered at each dressing with gutta-percha tissue to prevent any disturbance to the underlying silkworm gut, until the latter became covered with granulations. The battery was used from the first, but no movement of any kind could be produced by the patient for three months, when slight movements of the alae nasi of the affected side were observed upon forced sniffing, the other facial muscles afterwards gradually coming into use. The child was discharged on September 14th, with the wound epidermized and clean, a small fistula remaining behind the ear leading into the operation cavity. The boy has now recovered his normal expression when at rest, and when his facial muscles are thrown into action it is difficult to tell that there has been any facial paralysis at all.

I think I can lay claim to originality in this method of treatment, but I bring it forward for two reasons: first, because of the avoidance of an unsightly scar, which is no small matter in the case of a girl, and which is inevitable in the facio-hypoglossal method; and, secondly, because—as far as my experience of the latter operation goes—of the longer period of time taken for recovery of

the paralysed muscles, which, I think, is due to the fact that for union with the hypoglossal one has to wait until the operated ear has become quite clean and healed, as asepsis is here essential to success, whereas in the method above described repair of the nerve may commence at once.

The operation, also, is no more difficult than the facio-hypoglossal anastomosis; indeed, I believe it to be the easier of the two, for the recognition of the atrophied facial has been to me a matter of considerable trouble, and the difficulty of keeping the operated surface aseptic during the operation is also very great, the anaesthetist being necessarily more or less in the way the whole time the search is being made. The dissection of the hypoglossal nerve, however, is certainly easy, but the greater ease with which the already more or less exposed bony canal in the mastoid—much larger than the atrophied nerve in the substance of the parotid—can be recognized renders this procedure the simpler of the two.

EPIDERMOLYSIS BULLOSA.

THREE CASES: WITH HISTORY OF THE DISEASE IN FOUR GENERATIONS OF THE SAME FAMILY.

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EPIDERMOLYSIS BULLOSA, sometimes described as congenital traumatic pemphigus, though a somewhat uncommon complaint, is one of considerable interest.

It is characterized by an extraordinary vulnerability of the skin, so that on the slightest injury superficial bullae are produced, which are often of considerable size and occasionally haemorrhagic.

The condition is present at or soon after birth, and generally persists in varying degrees of intensity throughout life. It seems to be in nearly every case congenital, and usually, though not always, hereditary.

A case has been reported in which the development of the disease was apparently even antenatal.¹ There were at birth firm adhesions of various parts of the body, which had to be separated by operation, and on the sites of which bullae appeared within a few weeks, and continued to some extent throughout life.

In the *Lancet* of August, 1893, under the heading Congenital Traumatic Bullous Disease, Payne² sums up the characters of the affection thus:

1. Bullae, varying in size, are produced on various parts of the body by friction or any injury, but not otherwise.
2. The bullae are often haemorrhagic.
3. The nails are often affected by similar injuries, becoming deformed or even quite destroyed.
4. There is no disturbance of the general health.
5. The affection is congenital, or at least dates from infancy, and sometimes occurs in several members of the same family; and
6. It is quite unaffected by drugs or other treatment, though its severity seems to depend partly upon the state of the general health.

The etiology is uncertain. Tilbury Fox³ classed his cases with ichthyosis; Kaposi,⁴ Lustgarten,⁵ Norman Walker,⁶ and others with urticaria; and Crocker,⁷ in common perhaps with the majority of the more recent observers, described it as a form of pemphigus.

Various constituents of the skin have by independent observers been found to be altered, deficient, or absent. Engman and Mook,⁸ followed in this country by A. F. Savill⁹ and others, have found the elastic tissue in the papillary and subpapillary regions defective; Elliot¹⁰ an imperfectly developed stratum basale; and Bukovsky¹¹ a loss of continuity of epidermis and corium.

Petrini-Galatz,¹² and others favour a peripheral nervous origin, on the analogy of the changes in tropho-neurotic leprosy; whilst Blumer¹³ compared the affection with haemophilia, pointing out that both diseases are congenital and hereditary, and both due to defective formation of the blood vessels, "dysplasia vasorum," but that in the one bleeding occurs, whereas in the other merely exudation.

The fact that the bullae are always more prominent in warm, moist weather would seem to indicate an "acquired or hereditarily exaggerated irritability of the cutaneous

vascular system." The exudation appears to vary in position, not only in different subjects but in different parts of the body of the same subject.

Another interesting feature fairly constantly reported is the presence of small groups of milia—little yellowish, cyst-like bodies—round the edges of bullae or of scars from previous bullae. In none of my cases was this condition prominent, but detailed accounts, with diverse hypotheses as to their nature, may be found in reports of cases published by Darier,¹⁴ Grouven,¹⁵ Csillag,¹⁶ Petrini-Galatz,¹⁷ Beatty,¹⁸ Scott,¹⁹ and others.

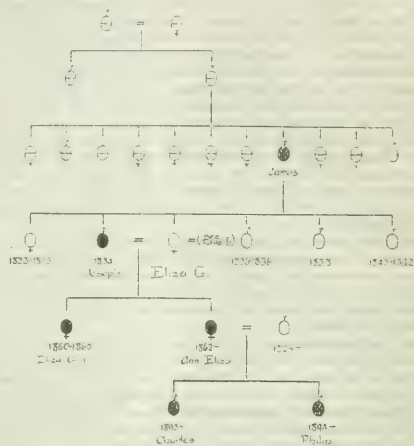


Table 1.—Showing the incidence of epidermolysis bullosa in the family.

The chief interest, perhaps, in the cases under consideration is the evidence of heredity. A definite history has been obtained of blisters lasting more or less throughout life in 6 persons, representing four generations in direct descent, of whom 3 are alive to-day, and form the subject of this paper.

The exact family record can be traced back through nearly two hundred years and embraces six generations, though in neither of the two earlier generations can any information, either positive or negative, as to its incidence be elicited.

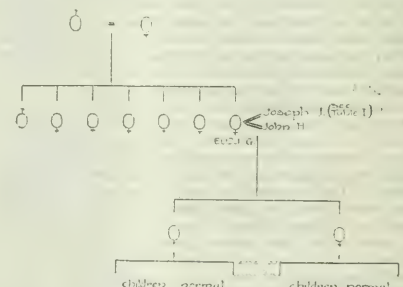


Table 2.—Showing that Eliza G. (the youngest of seven children married twice, but did not transmit the disease to her children or grandchildren by her second marriage.

In the "third" generation only one member is definitely known to have suffered from persistent blisters throughout life, and from him this weakness in the skin has been transmitted to the cases now recorded.

In the diagram the genealogy will be seen at a glance, the members definitely affected being denoted by black discs, those definitely free by the clear discs, and those about whom the evidence is doubtful or negative by the crossed discs.

Norman Walker⁶ states that the disease, like some other hereditary complaints, often affects only one sex in a family; but in this instance no such regularity is found,

the disease being twice transmitted from the father, once by the mother, and attacking four males and two females.

Another point of interest is the large size of some of the families, though as will be seen from the dates it is not, as might perhaps be suggested, the late children who were affected; indeed, the order of birth apparently has no influence on the occurrence of the disease.

The three cases are as follows:

CASE I.

Ann Eliza, aged 46, married; husband, aged 79, in fair health, with no history of blisters either in himself or in other members of his family.

The patient is a healthy, active woman, engaged in small secondhand clothes business; previous health and present general condition good.

Skin, except for occasional bullae and at sites of former lesions, is normal in appearance, with no apparent abnormalities in pigment, moisture, thickness, or elasticity.

On the backs of the hands, more especially at the bases of the fingers, are some small bullae filled with clear fluid, alkaline in reaction, and histologically indistinguishable from normal serum. On the feet larger bullae frequently appear, and there are also scars of previous bullae.

She states that when accustomed to wear tightly fitting corsets there were almost constantly present round the waist a number of blisters, some "about as large as a walnut." (Cf. cases recorded by Goldscheider¹⁹ and Wickham Legge.²⁰) They also appeared round her legs as long as she continued to wear garters. (Cf. Valentin's²¹ case and the second case reported by Elliot.¹⁰)

Menstruation.—Just before the menstrual flow, which is regular but always scanty, the bullae were invariably more pronounced, but improved again with the onset of the flow. This interesting fact, which has been noted also by Lesser²² and by Bulkley²³ in America, would appear to indicate that the exudation varies with the blood pressure. She states, also, that since her marriage, at the age of 29, she has been less troubled than before it; and that when pregnant she was less susceptible to their formation. "The blisters went into the child," as she puts it.

CASE II.

Charles, eldest of two sons of Ann Eliza (I), aged 15. General physical condition fairly good, though he says he is "always sleepy," and very easily tired by any exertion. The skin, except for the bullae and scars, appears quite normal in colour, moisture, thickness, and elasticity.

Bullae.—Several large bullae on both feet, especially on the soles and front of ankles. On the right hand there are now three small blisters on the back of the fingers, and one small one on the back of the left hand; but there have previously been many more on both hands.

Scars on sites of former bullae mark the front of both legs and the feet, the distribution being irregular, and not following the course of any particular nerve.

Blisters first appeared fourteen days after birth on the feet, and some have been present continuously since. Never any on the body, except when attacked by scarlet fever and measles; several once on the neck, where the collar chafed.

Nails quite smooth and in appearance normal. Teeth good. General health has been fairly good, though he is not strong and is very subject to "colds." He has never had chilblains or nettle-rash. When attacked by scarlet fever and measles bullae are said to have appeared on his chest, but to have rapidly disappeared—doubtless due to "scratching." Several rather indistinct milia have appeared at edges of one of the scars on his right palm.

The blood I have examined with the following result:

Haemoglobin	...	90.0 per cent.
Red corpuscles	...	4,105,833 per c. mm.
White corpuscles	...	6,800
(= 1 leucocyte to 641 red corpuscles.)		
Colour index	...	1.03
Relative count:		
Polymorphonuclears	...	72.4 per cent. = 4,634 per c. mm.
Eosinophiles	...	2.8 " = 179 "
Basophiles	...	0.8 " = 51 "
Hyalines	...	1.4 " = 93 "
Lymphocytes	...	22.6 " = 1,446 "
	100.0	6,400
Normoblasts	...	nil.
Poikilocytes	...	nil.
Myelocytes	...	nil.

CASE III.

Philip, youngest of the two brothers, aged 14. General physical condition fairly good, quite up to the average of boys in his neighbourhood. As in the other two cases, the skin generally appears normal in colour, moisture, thickness, and elasticity. Bullae of various sizes on both feet, one or two at the front of the ankles being as large as an average walnut. A number of smaller bullae also on both hands, chiefly, though by no means exclusively, on the backs in the neighbourhood of the knuckles.

Bullae first appeared when he was about 12 months old, on the feet, soon after he began to wear shoes; never on the hands until recently, when he began to work as a shoemaker's

apprentice. A number of superficial scars remain, chiefly on the shins and feet, at the sites of old bullae.

Nails.—On the left hand the nails are distinctly ribbed, especially the thumb nail. On the right hand also there are well-marked longitudinal ridges. The edges are somewhat, though not markedly, rough. Toenails rather thick, with rough, irregular edges and transverse ridges.

The Blood.—Bulkley²³ states that "eosinophiles are constantly found in abundance in connexion with certain eruptions of the bullous type, with an elimination of eosinophiles in the contents of the blisters of pemphigus, etc." In neither of these two boys was this condition found, the analysis in this case being as follows:

Haemoglobin	...	90.0 per cent.
Red corpuscles	...	4,960,000 per c. mm.
White corpuscles	...	6,800
(= 1 leucocyte to 729 red corpuscles.)		
Colour index	...	0.91
Relative count:		
Polymorphonuclears	...	78.4 per cent. = 5,331 per c. mm.
Eosinophiles	...	3.6 " = 245 "
Basophiles	...	0.8 " = 54 "
Hyalines	...	1.2 " = 82 "
Lymphocytes	...	16.0 " = 1,068 "
	100.0	6,800
Normoblasts	...	several.
Poikilocytes	...	nil.
Myelocytes	...	nil.

These three cases have also the following points in common:

The mucous membranes are not involved, a condition which Colcott Fox,²⁴ Dühring,²⁵ Blumer,¹⁸ and Tilbury Fox³ alone seem to have noted.

The condition is always worse in warm, moist weather, when the boys are frequently "laid up altogether."

At times there is marked hyperidrosis, especially in the feet. (Cf. Whitehouse,¹⁶ etc.)

The teeth are fairly good, quite up to the average both in number and quality. (Cf. Blumer's¹⁸ and Pernet's²⁷ cases, and those recorded by Dühring,²⁵ Colcott Fox,²⁴ and Galloway,²⁸ in which the teeth were markedly defective.)

The Eyes.—In none of these patients is there any defect in vision. Examination of the fundus revealed in each case a normal optic disc, healthy retinal vessels, and no evidence of exudation into the choroid or of previous choroiditis. Ocular tension was neither increased nor diminished. There is no evidence or history of phlyctenules or of any ocular disturbance.

In the vascular system there is no ascertainable disease of either the heart or blood vessels. The pulse I have examined digitally with care on many occasions, but have failed to find any appreciable difference in pressure either in the periods in which the patients were comparatively free from bullae or during those in which the condition of the skin was at its worst. Possibly with a sphygmometer some increase in pressure might be found to precede or accompany each "relapse."

Repeated examinations of the urine in these patients have revealed no abnormal constituent, nor is there at present any appreciable deposit. The specific gravity when last taken was 1020, 1014, and 1016 respectively, and the reaction acid.

In a paper by Bulkley²⁹ a number of cases is collected which relate to the altered state of the urine in no less than eighteen different cutaneous affections. The results, though not very conclusive, "indicate an impaired metabolism which lies at the bottom of the wrong nutrition of the skin, whereby it readily takes on diseased action from various causes, local and internal."

It is therefore possible that a series of analyses more thorough than those I have been able to make might reveal in these cases some abnormality.

DIAGNOSIS.

The diagnosis of epidermolysis bullosa should present few difficulties though its classification must still remain in doubt.

Crocker⁷ describes the disease as a form of pemphigus, but so long as the true nature of this itself remains open to doubt, there is but little profit in arguments either for or against such inclusion.

The limitation of the bullae to parts exposed to friction or injury, the fact that it but seldom if ever reacts to arsenic, and the many cases in which the general health remains unaffected, have been put forward as arguments against such inclusion; but, on the other hand, the general clinical appearance of the affected parts, the occasional implication of mucous membranes, and those cases in which

the general health has been impaired in consequence of the complaint, are all points in which it strongly resembles pemphigus.

From *urticaria bullosa*, with which it has been sometimes grouped, it presents the following points of distinction: The course is much more chronic, persisting often for months without apparent improvement; the bleb does not develop on a wheal; there is, as a rule, no accompanying itching, nor is its duration appreciably affected by any changes in diet. Walker⁶ states that epidermolysis "is sometimes responsive to treatment for urticaria." I have tried calcium chloride, 10-20 grains t.d., upon one of my cases for a considerable time, with detailed instructions as to diet, the regulation of the bowels, etc., but without the slightest noticeable effect upon the bullae.

From *bullous syphilides* most cases, including those under our consideration, are distinct in that there is no evidence or history of syphilis, either congenital or acquired, nor is the distribution of the bullae that commonly associated with that disease.

Dermatitis herpetiformis resembles it in the frequency of relapses and unsatisfactory response to almost every form of treatment; but the multiformity of lesions and paraesthesiae, which are such a marked feature of that disease, are in epidermolysis completely lacking.

From *leprosy* it is readily diagnosed by the general appearance of the bullae and the absence of either nodules or patches of anaesthesia.

Erythema multiforme, as the name implies, is characterized by the polymorphous nature of the eruption and by the inflammation which usually accompanies it.

Impetigo contagiosa and *varicella bullosa* are, of course, scarcely likely to be mistaken for epidermolysis, since the one is so readily amenable to treatment and the other to spontaneous cure within a definite time.

TREATMENT.

The treatment of epidermolysis bullosa is most unsatisfactory. Sir Malcolm Morris,²⁰ in the latest edition of his textbook, published in October last, states that "the disease appears to be incurable, but much good may be done by protecting patients from deleterious influences and attending carefully to their nutrition." Dr. Adamson,²¹ again, in a book published last year, writes: "Patients affected with this disease are only free from lesions when properly protected."

In my cases the treatment adopted has been to urge upon the patients the importance of cleanliness, and the application at frequent intervals of pieces of lint or linen soaked in some simple solution, such as glycerinum acid. carbol. glyc. ac. bor., or a calamine and lead lotion. The patients themselves are always careful to avoid, as far as possible, any source of irritation or friction.

Internally nothing except an occasional tonic can be said to cause any real improvement; such degree of success as has occasionally been reported to have followed the administration of various drugs having in all probability been due either to improvement in general condition or to climatic changes. It is somewhat remarkable how soon these cases react to slight changes in temperature, the bullae often disappearing almost entirely for several weeks or even months when the weather is cold, and returning again in the summer.

Since the condition in the two brothers is almost identical, I have, when making trial on either of any drug, refrained always from dosing the other, save occasionally with some inert solution to lessen the likelihood of his sharing his brother's medicine.

In almost every instance any improvement or relapse was in the two brothers simultaneous.

Of the remedies for pemphigus in children and young adults, arsenic has for long been considered almost a specific. For three or four weeks Philip was taking liq. sodae arseniatis three or four times daily, beginning with small doses, m. iij, and increasing by 1 minim every other day up to m. xv every four hours. After about ten days, had I not had his brother as "control," I should have probably attributed a beneficial reaction to the drug; but since the improvement appeared in the brother almost simultaneously, it was evident that a colder type of weather must have been a much more potent factor than the arsenic.

For another three weeks Philip was given particular instructions about diet and regularity of his bowels, and was taking calcium chloride gr. xx in solution three times a day, as recommended by Sir A. E. Wright and others for urticaria. The weather during this period was for the most part damp, and the condition of both brothers suffered in consequence, no appreciable difference being detected between their respective conditions.

The treatment which, hypothetically, should promise some degree of success is that recommended by Dr. A. F. Savill at St. John's Hospital for Diseases of the Skin.

The observations of Elliot¹⁰ that "the prime feature in the existence of the process is an acquired or hereditarily exaggerated irritability of the cutaneous vascular system": of Columbin¹² that "the papillae showed oedema and some infiltration, with dilatation of the blood vessels," and other writers, combined with the fact that the complaint is always worse in warm weather, when the capillaries are dilated, led Dr. Savill to direct attention to the improvement of the cutaneous circulation and the toning up of the small blood vessels by means of ergot. Her cases apparently received benefit from the drug, and are recorded in the *Lancet* for July, 1906. For some months, therefore, with occasional intermissions, Philip was taking ext. ergotae liquidum in increasing doses up to m. xx thrice daily. At one time he certainly showed some signs of improvement, but the occurrence of relapses was not prevented, nor did the improvement after patient trial seem to warrant the continued administration of the drug.

Under none of these remedies was the improvement more marked than that due to a short tonic treatment with syr. ferri phosph. co. or syr. hypophosph. co.

CONCLUSION.

These three cases, with history of three more in the same family, are interesting as showing the hereditary nature and intractability of the disease. They throw no fresh light upon the etiology of the complaint; but the brief review given of some of the literature will serve to indicate the diversity of views that have been put forward. Anyone sufficiently interested in the subject will find in the *British Journal of Dermatology* for August, 1897, a complete summary of all recorded cases up to that date, to which further additions will be found in the article by Dr. Agnes F. Savill in the *Lancet* of July 14th, 1906, and in an exhaustive article on The Inheritance of Certain Human Abnormalities, by Dr. A. M. Gossage, in the *Quarterly Journal of Medicine*,²² l. iii (April, 1908).

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THERE are at present 161 women acting as skilled assistants in scientific laboratories in Germany. Most of them are employed on microscopic, bacteriological, "serological," and histological work; some are engaged in Roentgen-ray and photographic work. The number of institutes and hospitals in which the women assistants are working is about 125. A registry office has recently been established in Berlin for women qualified to act as laboratory assistants. There is also an institute in which courses of instruction extending over four to six months are given in Roentgen-ray, photography, and histological technique.

SPIROCHAETA PALLIDA:

METHODS OF EXAMINATION AND DETECTION,
ESPECIALLY BY MEANS OF THE DARK-
GROUND ILLUMINATION.

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Now that it is very generally conceded that the *Spirochaeta pallida* is the cause of syphilis, its recognition, especially in the early stages of the disease, is a matter of considerable diagnostic importance.

I have endeavoured to describe briefly the method of taking the material for examination, the most approved methods of staining, and the method of examining the living organism by means of the dark-ground illumination.

I. TAKING THE MATERIAL.

Although the *Spirochaeta pallida* has been found in almost all forms and stages of syphilis, including even the gumma, the most usually selected lesions for examination purposes are:

- (a) The primary sore, either in its unbroken or papular stage or in the usual form, the ulcerative chancre.
- (b) Condylomata and mucous patches, which are so highly infectious, and in which the spirochaetes occur probably in the largest number.
- (c) The indurated glands.
- (d) The various forms of eruptive lesions, especially the papular and vesicular forms, more rarely in the roseola.

From the Primary Papule.

The surface of an unbroken papule should be thoroughly cleansed, and then gently rubbed or scratched with a scalpel. After a few seconds an exudation of a clear or slightly blood-stained fluid appears. Films or cover-glass preparations are made from this. The more blood present in this serous exudation the more difficult will it be to recognize the specific organism, and in these cases in which the rubbing has produced bleeding, it is well to remove the blood, and wait till the bleeding has ceased, before attempting to take the serum.

In the case of the ordinary specific ulcer it is important to realize that the spirochaetes are found in the deeper parts of the wound, and that the superficial layer consists of all kinds of bacteria, and contains the *Spirochaeta refringens* in large numbers, but very few of the *Spirochaeta pallida*. In a preparation made from the surface secretion of a sore, very great difficulty will be experienced in finding *Spirochaeta pallida* and also in distinguishing other non-pathogenic spirochaetes, which are present there in large numbers, from the genuine spirochaete, which may have undergone some degenerative changes. The non-success of many bacteriologists, in the early days after Schaudinn's discovery, was due very largely to the improper taking of the material.

The surface of a chancre should be thoroughly cleansed with water or saline solution, and then rather firmly rubbed with a little cotton-wool or gently scraped with a knife, needle, or sharp spoon, avoiding bleeding. The few drops of blood which first appear should be removed, and then, after waiting a few seconds, a quantity of clear or slightly blood-stained serum exudes. This may be somewhat encouraged by gently massaging the sclerosis. Films should then be made from this serum, either on slides or cover-glasses which have been very thoroughly cleaned. The slides should be slightly warmed first, so that the almost invisible film dries at once. Schaudinn found that, by exposing the slides to fumes of osmic acid for a few seconds before and after spreading the film, the spirochaetes were killed and fixed in a somewhat more natural position. Too long exposure of the still moist film to osmic fumes diminishes the staining properties.

Cover-glass preparations of the serum for the examination of the living organisms should be made on very thin and clean slides. Films made from the serum, "Reizserum, or serum of irritation," as Hoffmann terms it, generally contain large numbers of *Spirochaeta pallida*, few red blood corpuscles, and very little or no cellular

débris. There may be a little difficulty in focussing such thin films, but the presence of a few red corpuscles assists, and in stained preparations the spirochaetes, if present, are easily found. According to Hoffmann, films made from scrapings (*Geshabe*) contain the largest number of spirochaetes.

Some workers excise a small piece of the tissue, and rub this up with a little distilled water, and make films and cover-glass preparations from a drop of this fluid.

Condylomata and Mucous Patches.

Material suitable for examination is obtained in much the same way as from the primary sore. The serum which exudes after rubbing and scraping the surface of a chancre or condyloma may be collected in capillary tubes or blood capsules, the ends being subsequently sealed in the flame. Films and fresh cover-glass preparations may be made from this afterwards.

The Indurated Glands.

The *Spirochaeta pallida* may also be found in the nearest lymphatic glands, commonly those of the groin when the primary sore is situated on the genital organs.

Preiss,¹ who has been able to demonstrate the *Spirochaeta pallida* in nearly 100 per cent. of cases of syphilis in the secondary stage, says that gland puncture should be used in all cases in which the examination of the serum from an ulcer proves negative. This is likely to be the case if the ulcer is partially or completely healed, if it has been treated with caustics, or if it is disintegrated. He has never failed to find the specific organism during the period between the first typical hardening of the glands and the first eruption—six to ten weeks.

The skin over the gland is washed with an antiseptic, shaved, and then rubbed with ether. A syringe with a needle a little larger than that of an ordinary hypodermic is plunged obliquely into the long axis of the gland, which is firmly fixed with the left hand. That the needle is actually in the gland can be ascertained by moving it about, when the gland will simultaneously be felt to move. Whilst the piston is being withdrawn, the whole gland is massaged or squeezed with the left hand. In this way a few drops, probably only enough to fill the needle, are withdrawn. Cover-glass and film preparations are then made from this blood-stained fluid, and examined in the fresh and stained condition.

Syphilitic Eruptions.

The roseola presents the greatest difficulty. Mere pricking the spot and examining the blood affords very little chance of finding the organism. It is much better to scrape the surface gently, and, avoiding bleeding as much as possible, obtain a little clear or blood-stained lymph. Rosenberger, in order to avoid bleeding, pinches up the skin in a pair of forceps until it is pale, and then incises, and aspirates one or two drops of serum. Sometimes blisters are applied over the surface, and the contents of the resulting bulla examined.

In vesicular or pustular forms of eruption the serum or pus is aspirated in capillary tubes or films made directly from the fluid. Better results are, however, obtained by opening the vesicle, removing the contents, and gently scraping the base of the exposed lesion.

II. METHOD OF EXAMINING THE MATERIAL.

The material containing the *Spirochaeta pallida* may be examined by means of dry-stained films or in the living condition in cover-glass preparations.

Staining.

Films may be made either on cover-glasses or on slides, but owing to the nature of the staining reagents they must be scrupulously clean. It has been very generally believed that the *Spirochaeta pallida* was a very difficult organism to stain, that it required special stains, and that the staining process should be extended over a long period. Many of the early failures were attributed to the staining, whereas in some cases, at least, it was the method of taking the material which accounted for the absence of the organisms. It is now known that the spirochaete can be stained by many of the ordinary aniline dyes besides Giemsa's modification of Romanowsky's stain. A. Ehrlich

and Lenartowitz² find that the *Spirochaeta pallida* stains in:

- Ziehl-Neelsen and carbol-gentian-violet, in from half a minute to two minutes.
Carbol-methylene blue and carbol-dahlia, in from five to ten minutes.
Loeffler's methylene-blue and carbol-thionin, in from twenty-five to thirty minutes.
In saturated aqueous solution of Bismark brown and vesuvium and safranin, in one hour or more.

At the present time Giemsa's stain or some other modification of the Romanowsky stain is almost universally used, partly because it stains the organism better than most others, and partly because it imparts to the *Spirochaeta pallida* a more or less distinctive, but by no means absolutely characteristic, tint. Almost all the other spirochaetes are stained bluish with this stain, whilst the *Spirochaeta pallida* takes a reddish colour.

I have experimented with most of the stains recommended from time to time, especially Giemsa's, Leishman's, and Wright's, and find that all to some extent, depending on the duration of the staining and probably the cleanliness of the slides, tend either to cause a granular deposit, or stain the background of the preparation. Preferably I use Giemsa's or Leishman's stain, and on the whole I am inclined to agree with Leishman, who finds that his stain whilst staining the organisms well does not give as much deposit as the first named.

Leishman's Stain.

This can be bought ready prepared, or can be made by rubbing up in a mortar 0.15 gram of the powder with 100 c.cm. of Merck's analytically pure methylic alcohol. Burroughs, Wellcome have placed on the market a solid of Leishman's stain which gives excellent results. This stain can be used in two ways:

1. A few drops of the stain is poured over the air-dried film and allowed to act for about thirty seconds. At the end of that time double the amount of distilled water is added drop by drop, and the slide gently tilted, in order to mix the two solutions. The preparation is then left to stain for about twenty minutes, when it is quickly washed in distilled water, equally quickly dried in the air, but not by heat, and mounted in Canada balsam, or examined in oil.

2. Method.—Here the films are not fixed. One part of Leishman's stain is mixed with two parts of distilled water in a watch-glass, and this mixture is gently poured over the film, and allowed to stain for twenty-five minutes. After which the preparation is gently washed, dried, and mounted.

According to Leishman³ the advantages of the second method are greater freedom from debris, easier detection of the spirochaete, and the spirochaetes appear more numerous than in the fixed films, owing to their being more deeply stained.

I find that a method intermediate between the first and second gives the best result on freshly-made films.

The duration of staining may in either of the above methods be increased, but there is more risk of the background becoming coloured, or a granular deposit taking place. A very good plan is to stain the films for about fifteen to twenty minutes, then roughly but quickly wash, and stain for another fifteen to twenty minutes.

Prolonged staining is, in my experience, attended with a risk of a granular deposit, or a flocculent scum, which settles on the surface of the film and slide. In order to obviate this I have tried staining the slides in wide-mouthed bottles or tubes, but I do not think this is as successful as the following simple plan:

The Leishman stain is poured on the film, and after a few seconds—say ten—double the quantity of distilled water is added, and then the diluted stain is poured rapidly on to the surface of a slightly curved piece of glass, and the slides laid, inside downwards, on the stain. In this way any precipitate in the stain falls on the sheet of curved glass.

Giemsa's Stain.

This should be bought ready prepared from Grubler or from the agents—for example, Baker, 244, High Holborn.

For use the stain is prepared as follows: To 1 c.cm. of distilled water a few drops of 1 in 1,000 solution of sodic carb. are added, and then 1 drop of Giemsa's stain; mix. The air-dried films are fixed for five to ten minutes in methylic alcohol, or for one to five minutes in methylic alcohol, and then the above solution of stain is poured on and allowed to act for one hour. The preparations are then rapidly washed in distilled water, quickly dried, and mounted in Canada balsam or simply examined in oil.

Film preparations can also be stained without previous fixation, as in the second method of Leishman; the only point to attend to is to pour the staining solution on gently and very carefully wash, or otherwise the unfixed film will be washed off. Burroughs, Wellcome, and Co. have made "solids" of eosin-azur for the Giemsa stain, and as these are dissolved merely in

pure methylic alcohol the films need not be previously fixed. These give excellent results. The method and duration of staining are precisely the same as that mentioned for using Leishman's stain.

With all these staining methods there is a little compromise to be made, as the longer the duration of staining, the darker the organism and the thicker it appears, but the greater the tendency to a deposit.

THE EXAMINATION OF THE SPIROCHAETA PALLIDA IN THE LIVING CONDITION.

Hoffmann⁴ says that for the expert endowed with keen vision the easiest and most rapid method of detecting the *Spirochaeta pallida* is to examine it in its living condition. For this purpose he considers a good apochromatic $\frac{1}{2}$ in. objective, with compensating ocular 6 and 12, indispensable. He advises the use of cover-glass instead of hanging-drop preparations, which are rung round with vaseline to prevent evaporation. These are made from the serum alone or the serum diluted with normal saline solution, in which he found the spirochaetes still living for a week. Hoffmann states that Reuter could not see the living *Sp. pallida* with an ordinary Zeiss achromatic $\frac{1}{2}$ in. objective, but with an apochromatic Zeiss $\frac{1}{2}$ it was plainly visible.

My experience with regard to the visibility of the *Spirochaeta pallida* in the living condition in cover-glass preparations of the serum is rather interesting. Working with a magnificent $\frac{1}{2}$ in. achromatic objective of Leitz of N.A. 1.30, and also with Swift's $\frac{1}{2}$ in. apochromatic objectives of N.A. 1.40, and compensating oculars 6, 8 and 18, combined with an oil-immersion condenser of N.A. 1.40, using critical image and working in a dark room, I can say that I have seen three or four living spirochaetes after hours of search under these favourable conditions.

I have placed a freshly made cover-glass preparation on the microscope, and with a Zeiss $\frac{1}{2}$ apochromatic objective of N.A. 0.65 and compensating ocular 18, with the new dark-ground condenser of Leitz and with a Nernst lamp, I have found a field containing fifteen to twenty actively moving *Spirochaeta pallida*. Without moving the slide in the slightest, I have substituted the ordinary condenser, both oil-immersion and dry, have turned on the $\frac{1}{2}$ in. objective, and replaced the Nernst lamp by a paraffin lamp, and have been totally unable to see one spirochaete in the selfsame field, even after a considerable time.

Further, I have returned to the dark-ground method, and, having found a long or specially well-marked spirochaete, I have noted its exact position as regards, say, a red blood corpuscle. Retaining the slide in that position, I have replaced the existing apparatus by the $\frac{1}{2}$ in. objective, with the ordinary condenser, and have seldom, even after prolonged examination, seen that spirochaete.

In other words, I find that the *Spirochaeta pallida* is, under the most favourable condition, almost invisible, even when known to be present, when examined by $\frac{1}{2}$ in. objective with ordinary transmitted illumination. This does not imply that the organism is beyond the range of visibility owing to its small size, but that it is practically invisible owing to its very slight refractive index.

Examination by means of Dark-ground Illumination.

By means of the new dark-ground condensers, however, it is now possible not only to see, but to see easily, many organisms with comparatively low powers.

Such condensers, made by Reichert, Zeiss, Leitz, Beck, and others, vary somewhat in their principle and construction. I have tried all of them, and prefer that made by Leitz.

A brilliant source of illumination is absolutely essential in using any of these dark-ground condensers. Briefly, my outfit consists of the following:

1. A Leitz dark-ground illuminator.
2. Nernst $\frac{1}{2}$ ampere lamp.
3. A Nelson's splanatic bull's-eye condenser. Probably the new small air lamp recently introduced by Leitz would be better. It has a bull's-eye condenser fitted with it.
4. Slides of a given thickness (1 mm.), and cover-glasses preferably of known thickness.

Full directions are supplied with any one maker's condenser, and a short but good account is also given in Spitta's *Microscopy*, second edition, the best treatise on the microscope published in the English language.

The dark-ground condenser having been placed in the sub-stage and centred, the light from the Nernst lamp concentrated

by the bull's-eye thrown on the mirror, the slide holding the fresh serum preparation is placed on the stage and is oiled to the condenser.

I use Zeiss apochromatic $\frac{1}{2}$ objective with compensating ocular No. 18, which gives approximately a magnification of 500 diameters. Least $\frac{1}{2}$ in. oil-immersion objective may be used with his dark-ground condenser, provided its N.A. is cut down to 0.9 by a special stop which he supplies. This I find answers admirably.

The use of an immersion $\frac{1}{2}$ objective cut down by a stop to a N.A. of 0.9 has the following advantages: (1) Increased magnification, (2) the cover-glasses need not be of specified thickness, (3) the image is considerably brighter, and (4) the resolution is greatly increased.

It is not essential to use apochromatic objectives for this method of examination, an ordinary $\frac{1}{2}$ with deep eyepieces is suitable, but the achromatic dry lenses do not give as good a view as the apochromatics.

Spirochaeta pallida examined by this method appear as shining silver-like threads with corkscrew turns lying on a black or blackish background. They will be seen to possess three movements—namely, rotation about the longitudinal axis, forward and backward gliding motion, and flexion of the whole body.

Of these, the last-named is the most easily seen and the most characteristic. It is a slow bending motion. The rotation about a longitudinal axis is to be seen with the stopped $\frac{1}{2}$ in. objective, and gives the impression of a screw being turned. The forward and backward movement is—at least when examined in its natural fluid, the serum—very slight indeed. If there be streaming movement of the serum, which is often induced by evaporation at the margin of the cover-glass, the spirochaetes will be carried rapidly across the field, and it may soon be out of sight.

The actual movement of locomotion is under ordinary condition so slight that I should hardly expect to find that the organism had moved much from the exact spot at which it had been seen an hour previously. This is very different from what is met with in the other spirochaetes—for example, *Spirochaeta refringens* or *Spirochaeta balantidis*.

Eiter⁵ gives the following excellent description of the *Spirochaeta balantidis*, and I may add that, in the absence of a case of that disease, one can see all the movements he describes in the *Spirochaeta buccalis* by simply making a cover-glass preparation from the scrapings of one's teeth.

When seen by means of the dark-field illumination this spirochaete appears pale yellow to deep orange red, as compared with the delicate white of the *pallida*. The body is fatter, the windings are longer and flatter, and it is much more energetic than the *pallida*. It moves rapidly in jerks backwards and forwards, frequently crossing the whole field with one impetus. At times it moves with a wave-like progression, either like the movements of a snake or those of a caterpillar. The wave-like movement, which does not cause the spirochaete to move in its entirety, is seen in this form as in the *pallida*. Besides, one sees screw-like movements, by which the body progresses by means of a rotation on its long axis.

The *pallida*, on the other hand, moves in three ways: (1) Rotation around the long axis, (2) by bending its body, and (3) by jerks backwards and forwards. It seems, however, that the *pallida* do not move widely or energetically, and when a *pallida* spirochaete is seen crossing the field, it is always being carried in the current of the fluid medium.

So far as my experience goes no other organism could be easily confused with the *Spirochaeta pallida* when seen by dark-ground illumination, except the *Spirochaeta dentium*. This organism, which is found in small numbers in the tartar of the teeth, resembles the *Spirochaeta pallida* in its white silvery colour, its numerous turns and its movements, but it is much shorter, measuring on an average 5 to 8 μ with 6 to 16 windings.

As to the duration of the life of the *Spirochaeta pallida*, I found that in cover-glass preparations made from the serum taken from a primary sore, some of the spirochaetes were recognizable at the end of thirty-one days, and that they still possessed their characteristic bending or slight swaying movement.

Examination of Stained Specimens.

The *Spirochaeta pallida* in stained preparations is seen to consist of very fine spiral threads which measure on an average 6 to 15 μ long, although some reach 16 to 24 μ , and about $\frac{1}{2}$ μ wide.

It possesses a number of extremely regular, deep, and closely approximated spirals. They vary in number from

6 to 22 μ , and the width of the curves, or the distance from the summit of one convexity to that of the next, is very constant—that is, about 1 to 1.2 μ . This is a very important characteristic, and can easily be ascertained by measuring the length of the organism, and dividing that figure by the number of curves. If an eyepiece micrometer is not at hand, the curves may be measured with tolerable accuracy, as pointed out by Leishman, by comparing a spirochaete with a red blood corpuscle of which the average diameter is 7.5 μ , when it will be found that a spirochaete in this distance will have from six to seven turns.

Both ends of the organism terminate, as a rule, in a very fine point, or, according to Schaudinn, in a fine flagellum, which I have, however, not seen.

The whole organism looks, as Schaudinn described it, as if it were a spiral turned out of a lathe. This typical spiral form is seen not only when the organism is in motion, but also when at rest, whilst all other analogous spirochaetes of this type show the spirals only when they are actively moving; when they are at rest they become nearly straight, or have very long flattened-out undulations. Schaudinn points out that there is only one spirochaete, the *Spirochaeta dentium*, of which we have spoken before, which has smaller fixed spiral arrangement.

The great length of the sharply-pointed threads in proportion to its remarkable thinness, the depth, steepness, and regularity of its corkscrew windings, the slight variations in form, the relatively great elasticity, with slight deformation of the spirals, the slight refractiveness, the method of movement in the living condition, and finally the reddish tint that it stains by Giemsa's stain, are the diagnostic features (Hoffmann).

Most of the other spirochaetes are distinguished from *Spirochaeta pallida* by the greater thickness in proportion to their length, their markedly refractile character, the blunt ends, the much more active movements—eel-like—with greater change of position. The spirals are much flatter, more irregular, the organism more pliable, and therefore their form is more changeable, and when stained by Giemsa have a bluish-red tint.

The number of *Spirochaeta pallida* found in a cover-glass or film preparation taken from a primary sore varies enormously. In fresh films, examined with $\frac{1}{2}$ objective and 18 eyepiece, I have seen as many as ten to fifteen on one field; and in stained films made from the same preparation, and examined with $\frac{1}{2}$ objective and No. 2 ocular, I have found three, four, or even six organisms in one field, but this, as far as my experience goes, is very exceptional. Hoffmann says that the spirochaetes vary considerably in number even in the same lesion. Quite recently I had a good example of this in a primary sore from which I took two films made from the serum obtained by scraping the sore with a sharp spoon. In these films, taken at 10 a.m., I found very numerous *Spirochaeta pallida*; but when I took some twenty-four films (dry and moist preparations) from the same sore, from serum obtained by briskly rubbing the surface of the lesion, I found exceedingly few organisms, although these were taken only ten hours later in the day and the wound had not been touched in the interval. Hoffmann mentions, as an example of the unequal distribution of the specific organisms, a case with two primary sores on the abdominal wall, lying quite near one another; in the one he found the spirochaetes very numerous, in the other none, although the chancres were clinically indistinguishable.

EFFECT OF TREATMENT.

As to the effect of treatment on the spirochaetes, mercury given internally and mercurial wash or iodoforn ointment applied externally is undoubtedly associated with a gradual diminution in the number or an actual disappearance of the spirochaetes, and this takes place more rapidly in some cases than in others.

The following is an example of the rapid disappearance of the organisms in a case recently under my care:

February 5th. Case first seen; typical large indurated sore with enlarged inguinal glands. *Spirochaeta pallida* very numerous both in fresh films examined by dark-ground illumination, and in stained preparations. Gave hydrarg. a creta internally, and locally iodoforn.

February 12th. Sore beginning to heal; spirochaetes markedly diminished.

February 20th. Sore not healed. Spirochaetes only found with difficulty.

March 2nd. Sore not healed. No spirochaetes found in fresh or stained films. Gland juice obtained by aspiration of the lymphatic gland—entirely negative.

CONCLUSIONS.

1. The easiest, quickest, and by far the most certain method of detecting the *Spirochaeta pallida* is by the examination of cover-glass preparations made from the serum, by means of dark-ground illumination.

2. That the most important part of the whole procedure is the correct taking of the material, whether for fresh or dry film preparations.

3. That it is not essential to examine fresh films (which have been rung round with vaseline) at once, as the organism may be recognized some days later.

4. That the serum of irritation may be conveniently taken in capillary tubes or blood capsules, provided the ends are sealed, and cover-glass preparations made from it may be examined at leisure.

5. That whilst the finding of the *Spirochaeta pallida* indicates, as far as our knowledge goes at present, syphilis, a negative examination is of little value, at most it only justifies a suspicion that the disease is not present.

P.S.—I should add that the *Spirochaeta pallida* in stained preparations somewhat fade sooner or later. This fading of aniline stained preparations, blood or other films, when mounted in Canada balsam is a source of great disappointment. I have tried Gruber's neutral balsam, but with only moderate success. I should be delighted to hear of a mounting medium in which aniline stained preparations were permanent.

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¹Procs. Pester Med. Chir. Presse, November 8th and 15th, 1908; EPITOME, BRITISH MEDICAL JOURNAL, February 13th, 1909. ²Enchlich. Journ. Roy. Micro. Soc., December, 1908. ³Leishman. Journal of Venereal Disease, by Officers of R.A.M.C. ⁴Hoffmann, Die Aetiology der Syphilis, Berlin: Julius Springer, 1906; ⁵Eiter, Muench. med. Wochn., April 16th, 1907; EPITOME, BRITISH MEDICAL JOURNAL, June 13th, 1908.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

THE ETIOLOGY OF BERI-BERI.

I HAVE read with interest the report in the JOURNAL of April 24th, p. 1007, of the meeting of the Society of Tropical Medicine and Hygiene at which the etiology of beri-beri was discussed, and observe that it was suggested that after the husk was removed from rice an epiphyte developed outside the grain and generated a nerve toxin. In the JOURNAL of November 28th last there is an interesting note by Dr. Saldanha, in which he says that there is a fungoid disease of rice, the active principle of which he calls "arsin," and to which he attributes the disease. He points out that the Chinese cook rice with the dust on it as it comes from the sack and thus consume the arsin. It is perhaps worthy, therefore, to note that in Korea, where I have been for five years, beri-beri does not seem to be common, although rice is as exclusively the diet of the people as in China, and Dr. Saldanha's theory suggests a reason for this immunity. The Koreans are extremely particular about washing rice before cooking it, and though they often drink the water in which it is boiled, as do the Chinese, they very carefully mix it with several separate quantities of water, each of which is poured away before the cooking commences, the process lasting five to ten minutes. This serves to remove all dust and the arsin which Dr. Saldanha tells us it contains, and may account for the fact that I have not seen a single undoubted case of the disease in five years.—I am, etc.,

London, W.

HUGH H. WEIR.

SULPHURIC ACID IN CELLULITIS, BRONCHIECTASIS, AND CONSUMPTION.

AS we have received inquiries from different parts of the country as to whether we have used the treatment mentioned in our note in the BRITISH MEDICAL JOURNAL, p. 407, August 15th, 1908, on the use of acid. sulph. dil. in large doses (20 to 30 minims well diluted every four hours), for pathological conditions other than cases of furuncu-

losis, we may mention that we have used it with equal success in cases of acute cellulitis arising from an infected skin abrasion caused by bones from *high game* and also with great benefit in checking the profuse expectoration in cases of bronchiectasis, and in the sweating and expectoration in cases of pulmonary tuberculosis.

In a case of a suppurating dermoid which we are now treating in this way the result so far is not so successful as in the above-mentioned conditions, no doubt because the infected area is encysted.

J. REYNOLDS, M.D.

London, S.W.

RUSSELL J. REYNOLDS, M.B., B.S. Lond.

ACUTE ADDISON'S DISEASE.

H. Y., female, aged 33, was said to have suffered from chronic bladder and kidney disease for five years. When first seen on March 8th, 1909, she complained of increasing weakness and loss of appetite of three weeks' duration. She was thin and ill nourished, and the urine, of which she passed 2½ pints in twenty-four hours, was alkaline, and contained a considerable amount of mucus. Both kidneys were easily palpable, but not tender. Beyond this there were no physical abnormalities, and there was no pain and tenderness in the abdomen.

On the next day she commenced to vomit after any food, and even without food. Day by day she grew weaker, and the vomiting continued until March 16th, when she was given 5 grains of suprarenal extract every four hours. For twenty-four hours she became brighter, and the vomiting ceased, but soon the symptoms resumed their course, and on March 24th she died. During the last few days she lost the power of swallowing, and was fed by a nasal tube. Enuresis also set in. Consciousness was retained until the moment of death.

Permission for a post-mortem examination was readily given. The kidneys were in a state of advanced tuberculosis, very large, and riddled with cavities containing pus and caseous material. The capsules of the kidneys were studded with tubercles. The bladder was thick-walled, and there were numerous ulcers. The suprarenal glands were covered and permeated by milky tubercles. The remaining organs were not affected.

The diagnosis during life seemed to lie between hysterical vomiting and Addison's disease, especially as there was a definite history of former nervous attacks of a melancholic type, accompanied by difficulty in feeding. The marked though transient effect of the extract of suprarenal gland was of great interest.

London, N.

A. F. SHOYER, M.D.

TREATMENT OF RHEUMATOID ARTHRITIS BY CATAPHORESIS.

FROM the memorandum by Dr. J. Curtis Webb in the JOURNAL of April 17th, p. 352, I gather that in the treatment of rheumatoid arthritis by cataphoresis he is in the habit of applying the positive and negative electrodes moistened with the same solution on either side of the joint affected. I venture to suggest that he will get better results if one electrode and one solution be applied to the particular joint, while the other electrode is placed elsewhere on the body.

My method is to surround the joint affected with a large pad of lint of ten layers in thickness soaked in the particular solution, and to place round this pad a metal gauze electrode tightly bound to the limb and connected with the negative pole. By this means salicylic acid is introduced when a solution of sodium salicylate is employed; iodine when potassium iodide is used, and chlorine when sodium chloride is applied. The positive electrode, laid on a large pad of lint soaked in an ordinary salt solution, may be placed on another part of the body. I can speak from personal experience of the value of this treatment in reducing swelling, alleviating pain, and lessening rigidity of the tendons in cases of rheumatoid arthritis.

Glasgow.

W. F. SOMERVILLE, M.D.

UNDER the will of the late Mr. Alfred Midgley of Buxton, a Manchester merchant, the Huddersfield and Manchester Infirmarys each receive a bequest of £1,000.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF MEDICINE.

Tuesday, April 27th, 1909.

Dr. T. H. GREEN, Vice-President, in the chair.
Blood Pressure.

DR. O. K. WILLIAMSON read a paper on the influence of the vessel wall on (so-called) arterial blood-pressure readings. Observations by the method of circular compression were made on the leg and arm of each patient in 21 cases of high arterial blood pressure. In all of these cases in which the arteries of the leg and foot could be felt these were found to be abnormally resistant, and more so than those of the upper extremity; and in nearly all the cases there was also marked thickening in the arteries of the upper extremity. Ten cases of normal or low blood pressure, in which the arteries presented no clinical evidence of disease, were investigated in the same manner so as to afford a basis of comparison. The observations were made on the calf and arm, the patient observed being recumbent, and the part of the limb on which the observation was made at the level of the heart. Oliver's compressed-air haemomanometer was used with his 12 cm. armlet. These observations showed that the resistance due to the arterial wall might markedly influence the readings for the following reasons:

1. In the high blood-pressure cases the leg systolic readings were in nearly all cases markedly higher than the corresponding arm readings (average difference 32 mm.), and the cases of highest blood pressure yielded distinctly greater differences than the cases of somewhat lower blood pressure. On the other hand, the leg diastolic readings in these cases were, on the average, practically identical with the arm diastolic readings (average difference less than 2 mm. Hg.).

2. In the case of normal or low blood pressure the systolic arm and leg readings were found, on the average, to be identical (average difference less than 2 mm. Hg.).

3. Inasmuch as the blood pressure in the leg could not be higher than that in the arm (either limb being at the level of the heart), and seeing that the influence of the tissues superficial to the artery might (when a sufficiently wide armlet was used) be neglected, it necessarily followed that the difference between the arm and leg readings could only be due to resistance of the arterial wall.

4. The conclusion that the abnormal condition of the arterial wall was a direct result of the increased blood pressure would seem to be inevitable, for the only obvious difference between the conditions to which the arteries of the legs and those to which the arteries of the arms were exposed in daily life was that, owing to the action of gravity, the former were subjected to greater hydrostatic pressure from a higher column of blood than were the latter.

Dr. T. H. GREEN favoured the cultivation of unaided clinical observation in addition to instrumental methods.

Dr. W. P. HERRINGHAM had been lately experimenting with arteries removed and kept for three days in a solution of sodium fluoride and found that they, in many instances, gave high readings that were apparently due to the arterial wall. Also that in the same patient the leg arteries gave much higher readings than those of the arm. Also differences observed during life between the readings of the arm and leg were confirmed in the arteries after death. Dr. T. D. SAVILL referred to the greater change in the leg arteries of old people as compared with those of the arm, but thought the vital factor an all-important one. Dr. LEONARD HILL raised the question whether the differences between the arm and leg readings might not be due to error in instrumentation or the influence of muscular contraction. The readings in arm and leg should be taken simultaneously, and with the muscles relaxed, to be dependable. Dr. C. O. HAWTHORNE emphasized the variability of the strength of the cardiac systoles in producing variation in readings and the importance of comparing the blood-pressure reading with sphygmograms. Dr. WILLIAMSON replied.

CLINICAL SECTION.

Friday, April 30th, 1909.

A. E. GARROD, M.D., F.R.C.P., in the Chair.

Mongolian Imbeciles.

CASES of Mongolian imbecility were shown to the number of 14: 3 by Dr. G. A. SUTHERLAND, 4 by Dr. POYNTON, 2 by Dr. LANGMEAD, 2 by Dr. GUTHRIE, and 3 by Dr.

MORLEY FLETCHER. Dr. SUTHERLAND'S cases were aged 5½, 6, and 4 years respectively. In regard to the thyroid treatment of these cases he said that if a patient improved under that treatment it was probably not an instance of Mongolism. To deal successfully with this disease it was necessary to know the cause. In the majority of patients suffering from this malady death occurred in early life. In Dr. POYNTON'S cases thyroid treatment had been fully tried, and he said that the object of showing the cases was to raise the point as to the value, if any, of thyroid treatment in the condition of Mongolian deficiency. The cases were in themselves of the usual type, the oldest being of a comparatively mild degree. They were not related to one another. Twelve cases had been treated for prolonged periods with thyroid, but the results had not been encouraging. The poor circulation and severe chilblains were somewhat improved by this remedy, and it would appear that these cases were rather brighter and more responsive after commencing the treatment. There did not seem to be any specific action on the underlying constitutional deficiency. In his experience, considerable doses of thyroid soon induced in Mongols signs of excitement and disturbance of health as a direct result, and for that reason small doses only had been given for prolonged periods, such, for example, as 1 grain of the powdered gland twice a day for a child aged 3 years. In this series of cases some had been first-born, some last born, and others in the middle of a family. Some mothers had been young, some old, some neither young nor old. Dr. LANGMEAD pointed out that in one of his cases there was congenital morbus cordis, as evidenced by a loud systolic bruit, and an accessory auricle on the right side. In the other there was a congenital lesion of the heart, as shown by an increase of the cardiac dullness to the right, and an evident but slight murmur in the pulmonary area. One of Dr. GUTHRIE'S cases had extraordinary powers of imitation, mimicking all the technique of massage, feeling pulses, listening to chests with the stethoscope, simulating the walk of a hemiplegic patient, and pretending to carry on a conversation at the telephone. Dr. MORLEY FLETCHER said it was difficult for him to believe in the so-called typical hand of the Mongol, and pointed out that a more important peculiarity was the rough condition of the skin of the hand. Dr. SHUTTLEWORTH observed that there was still much confusion in the minds of medical practitioners as to the characteristic differences between Mongols and cretins. He also did not consider that thyroid improved the condition of Mongolian imbecility. He took a more cheerful view in regard to the results of careful training of these cases, especially in the better classes, where circumstances were more favourable for success. In his opinion a Mongol would be, however carefully trained, nothing but a hewer of wood and drawer of water to the end of his days, being only capable of imitation and doing that which he was in the habit of carrying out frequently. He agreed that the shape of the hand was not a universal characteristic in Mongolism.

Omentopexy.

Mr. JAMES SHERREN showed a patient, aged 34, who in April, 1903, underwent the operation of omentopexy for ascites due to cirrhosis of the liver. She had remained free from symptoms since. Mr. C. GORDON WATSON observed that in the majority of cases he had noticed the operation was a complete failure, and Dr. ROLLESTON said that cases suitable for this treatment were only met with occasionally.

Hereditary Defects.

Mr. H. B. ROBINSON and Mr. W. H. LLOYD showed a case of hereditary transmission of claw-hand and foot in mother and child. The child, 1 year old, showed claw-foot, and the mother had a similar deformity of her feet in addition to deformed hands.

Infective Gangrene.

Mr. W. F. FEDDEN read a paper on six cases of acute infective gangrene of the extremities. He considered that infective gangrene might be produced by a great variety of definite organisms—namely, the *Bacillus aerogenes capsulatus*, *Bacillus coli*, *Bacillus pyocyaneus* (vide Dudgeon and Sargent), *Streptococcus pyogenes*, and *Staphylococcus aureus*. It was a noteworthy fact that the bacillus of

malignant oedema did not find a place in any of the six cases. The prognosis of cases due to *Bacillus aerogenes capsulatus* was undoubtedly very much more favourable than in those due to streptococcal infections, whilst those due to staphylococcus appeared to hold an intermediate position. The period between infection and the appearance of actual gangrene in the first group was almost constant—namely, thirty to thirty-six hours, whereas in the group caused by streptococcus, this period might be as short as an hour. The incubation period of the staphylococcal group was very variable, but might be prolonged to several days. The importance of early amputation was self-evident, and was so urgent that the diagnosis must be made on clinical data, as the time for bacteriological confirmation could not be afforded.

SECTION OF DISEASES IN CHILDREN.

Friday, April 23rd, 1909.

Mr. R. CLEMENT LUCAS in the Chair.

The Vision of School Children.

MR. N. BISHOP HARMAN, in a paper on the effects of school-life upon the vision of the child, after reviewing previous statistics, communicated the results of the examination of 1,100 children seen at the Belgrave Hospital and the Middlesex Hospital. In all cases the eyes were under the influence of atropine, an ointment of 1 per cent. having been used four times a day for a week. Of every 100 children with defective vision, over 71 had hypermetropia, and less than 29 were myopic. These 100 children represent about 10 per cent. of the school children, hence the incidence of myopia amongst school children in London might be considered not to exceed 3 per cent. About 78 per cent. of the cases were girls. This he attributed to the girls having less outdoor exercise and not being in such a healthy condition, as well as to the fine needlework done by them. During the school age the incidence of hypermetropia increased, as might be expected from what was known of the growth of the crystalline lens. At the same time the curve of myopia rose upwards to the highest positions on the chart. Such a phenomenon led to the conclusion that the diminution of the hypermetropic astigmatism had been due to the transference of these cases to the myopic group. On the whole the condition of the eyes of London children was very fair, especially when compared with similar returns collected in Germany. The greater proportion of the cases of bad vision were due to natural conditions of the eye, that is, hypermetropia and hypermetropic astigmatism. Newborn infants were always hypermetropic. The incidence of "manufactured" bad vision—myopia and its associated astigmatisms—formed between a quarter and a third of the whole of the cases. The evidence of the deterioration of astigmatic eyes indicated the desirability of a special oversight of these cases. He did not think that a healthy school-life was harmful to the sight of the child population. In conclusion, he criticized adversely a paper on the inheritance of vision, recently published by Miss A. Barrington and Professor Karl Pearson. Titled to the conclusion that the increase of myopia was due to fate and hopeless, but in practice it was found that amelioration of school conditions and the relief of strain in ill-shaped eyes did stay the increase. Mr. SYDNEY STEPHENSON agreed that it was futile to examine children's refractions unless the accommodation had been paralysed by atropine. Some years ago he examined 6,000 eyes, under the Poor Law, in children ranging from 18 months to 18 years of age. In these he found myopia present in 6.68 per cent. That was not very different from Mr. Harman's figures when the different range of ages was considered. He agreed that among the poor children of this country myopia was not of serious frequency. In his own figures, the females were almost twice as much subject to myopia as were the males. He agreed in ascribing this to their employment in indoor work and lack of healthy exercise. Mr. ERNEST CLARKE said that although the subject was a tempting one, he would confine himself to reiterating what Mr. Stephenson had said as to the great importance of Mr. Harman insisting on the use of a cycloplegic. In default thereof, statistics concerning the refraction of young people, such as were commonly published, were useless.

LIVERPOOL MEDICAL INSTITUTION.

Thursday, April 22nd, 1909;

Mr. T. H. BICKERTON, President, in the Chair.

Amblyopia.

DR. A. A. BRADBURN, in a note on amblyopia ex anopsia, dealt with that type found in conjunction with high degrees of refractive error. He considered the cause to be a cerebral defect, and based his treatment on that theory. One of his cases, a boy aged 11 years, who had in six months' special training recovered vision from $\frac{5}{60}$ to $\frac{6}{60}$ or Jaeger 1. He considered that want of success in treatment was usually due to the defect being a complex one, the visual act depending on several centres. Mr. NIMMO-WALKER advocated the whole-time covering of the non-squinting eye until the vision of the squinting eye became equal to that of the other. This was possible in the majority of cases if taken early enough.

Intussusception.

MR. R. C. DUN, in a note on intussusception, based on an analysis of 73 cases, expressed himself as in favour of irrigation, which should be followed, if necessary, by immediate section. He had always used ether as the anaesthetic during operation.

Diagnosis of Syphilis.

DR. WILSON, in a paper on the serum diagnosis of syphilis, contrasted the value of Wassermann's and Noguchi's tests in a series of trials. Using Wassermann, 23 results were positive out of 30 cases. Of 20 controls 3 were positive, but in none of these could the possibility of syphilis be excluded. With Noguchi 40 out of 52 cases were positive, also 3 out of 25 controls. Out of 30 cases submitted to both tests, 22 were positive with both; 4 negative with both. Two were positive with Wassermann and negative with Noguchi. Two were negative with Wassermann and positive with Noguchi. The opinion expressed was that Wassermann, although the more complicated of the two, was the more reliable. Dr. ERNEST GLYNN referred to the fact that some cases of cancer growth gave the Wassermann reaction, and that guinea-pig's heart was as suitable an antigen as syphilitic liver. The serum principle has been successfully employed in the diagnosis of typhoid and gonorrhoea.

Thursday, April 29th, 1909.

Mr. T. H. BICKERTON, President, in the Chair.

The Treatment of Tetanus.

DR. LLOYD ROBERTS reported a case of tetanus which had recovered under treatment with injections of carbolic acid and of antitetanic serum. The disease followed an injury to the hand from a circular saw. Symptoms appeared ten days after the accident, and treatment was commenced on the sixth day of the disease. On the fourth and fifth day the symptoms had rapidly become more severe, and on the sixth day there was marked trismus, etc. The patient received 10 c.c.m. of serum every twelve hours, and 15 minims of a 4 per cent. solution of carbolic acid every three hours for one day, and subsequently every two hours. On the second day of treatment the disease appeared to be arrested, and the patient was well twenty days later. Twenty-six injections of serum and 236 injections of carbolic were given. The favourable result was attributed to the carbolic rather than to the serum.

Intraspinal Tumours.

DR. JOHN OWEN and Mr. DOUGLAS-CRAWFORD read a note on a case of intraspinal tumour which they had had under their care. It was localized at the eighth dorsal segment, and was successfully removed, the patient being shown at the meeting. They hoped to publish a full account of the case later. Dr. W. B. WARRINGTON discussed the rarity of these cases, and urged the importance of physicians having sufficient faith in their diagnosis to urge an operation.

Meningitis.

DRS. MARSH and O. T. WILLIAMS read a paper on meningococcal meningitis in children. They referred to the importance of lumbar puncture in the diagnosis of

tuberculous meningitis from other types of the disease. In the last 14 cases of tuberculous meningitis they had recovered the tubercle bacillus from the cerebro-spinal fluid. Four cases of tuberculous meningitis with secondary meningococcal infection were described in detail. The use of Flexner's serum had reduced the mortality from between 70 and 80 to 29.6 per cent. In children under 2 years the mortality was 42.4 per cent. in 59 cases, and in these the higher mortality was amongst those not treated until the seventh day of the disease. The serum was described and its effect both on the organisms and the cytology of the fluid; being bactericidal and only slightly antitoxic, the serum must be injected into the spinal canal. Fourteen cases of cerebro-spinal meningitis were considered. They varied in age from 3 months to 4 years, and 7 recovered. Three cases treated in the first few days of illness all recovered. The amount of serum used in each case varied from 10 c.cm. up to 130 c.cm., and the number of injections from 1 to 5. In infants they advised small doses of 10 to 15 c.cm. Dr. Flexner confirmed this view. In older children they followed Dunn of Boston, and gave 30 c.cm. on four successive days, the results upon symptoms and the fluid guiding their future procedure. They considered that this serum in early cases promised extremely good results, and even in later cases it improved the prognosis. Dr. OWEN referred to 1 case he had treated with Flexner with satisfactory results. Dr. GULLAN referred to 2; in 1 the fluid was not typical, nor was the diplococcus found. The patient recovered with Flexner. The second case, a girl of 13, had been ill a fortnight. After the first injection the patient passed into a state of coma, and, in spite of further lumbar punctures and injections, died. Dr. JOHN HAY referred to the occasional difficulty of differentiating in certain cases between acidosis and meningitis, and related a case illustrating the point.

GLASGOW SOUTHERN MEDICAL SOCIETY.—At a meeting on April 29th, Dr. PEDEN in the chair, Dr. ALEX. McLENNAN, in a paper on the newer methods of *Treatment of surgical sepsis*, described the present position of treatment by serums. Such serums, whether administered per os, per rectum, or per cutem, might be simple or antitoxic. As far as antitoxins were concerned, subcutaneous and intravenous methods in use were alike in efficacy, but this might not be so with reference to the other constituents of the serum. Oral or rectal administration was becoming more popular. Either method had been experimentally proved to be correct, as most of the known protective substances passed through the gastro-intestinal mucous membrane. Paton's advocacy of the oral administration of antiphtheria serum was now receiving support when employed for diphtheria and against sepsis. The serum might be dried, prescribed with other substances, or only partly concentrated. It might be given in pill form or in capsule. The uncertain action of the antiserum was probably due to the specificity of the antitoxin. Antidiphtheria serum contained, according to Paton and others, substances besides antitoxin which were antagonistic to a variety of pathogenic organisms. According to Paton, this was because the serum contained an antiproteolytic ferment, and, according to Metchnikoff, what he called "stimulin." Antidiphtheria serum was first employed locally by Paton. Ordinary serum concentrated was now applied to wounds or injected into abscess cavities after aspiration of pus. The action was explained on account of the antiproteolytic ferment contained in such serums. Ascitic and hydrocele fluids were rich in such antiferment. Cold abscesses, on the other hand, were wanting in proteolytic ferment, and here tryptic ferment could be used for injection. As regards the older methods, the cardinal principle was still the evacuation of pus and the drainage away of the exudate with its cause. The common mistake in the early stage of sepsis was to regard sedatives as treatment. The sphere of antiseptics was rather prophylactic than curative, so that the choice of such an antiseptic for dressing or douching was of minor importance. Dr. JOHN PATON, in a paper discussing the *Treatment of sepsis* by vaccines and Bier's hyperaemia, said he regarded the former as of little practical value, and pointed out that theoretically it should be able to cure typhoid carriers. A person's opsonic index also might be low as much because his

immunizing machinery had been used up by innumerable recurrent doses of vaccine from the source of his trouble as from any other reason. He had used Bier's passive hyperaemia in many cases of sepsis with excellent results. He strongly advocated this treatment as being simple, effective, and capable of being used in most of the forms of sepsis generally met with. Dr. ANDERSON considered that vaccines, though not of much practical value at present, were likely to be of greater use in the future. Dr. DUNLOP, in criticizing Dr. McLennan's paper, considered that the value of antidiphtheria serum was much overrated; personally he had no faith in it. Dr. PEDEN, in proposing a vote of thanks to the speakers, advocated a more general use of hyperaemia in septic cases.

ROYAL SOCIETY.—At an ordinary meeting on April 22nd, Sir ARCHAID GEIKIE, K.C.B., President, in the chair, Professor KARL PEARSON, F.R.S., read two papers: (1) On the theory of *Ancestral contributions in heredity*, and (2) on the *Ancestral genetic correlations* of a Mendelian population mating at random. The purpose of the two papers was to place in a somewhat clearer light the relationship of the biometric to the Mendelian standpoint. The law of ancestral heredity involved the following three points: (a) The linearity of the regression of offspring on any ancestor; (b) the diminution of the ancestral correlations in a geometrical progression; and (c) the determination of the probable character of the offspring when the mating was at random by the multiple regression formula. It was shown, in a memoir of 1896, that when the ancestral correlations were of the type $p, p^2, p^3 \dots$ then the character of the offspring depended only on the characters of the two parents and ancestry need not be considered. It was shown later that (a) and (b) held for a generalized Mendelian population, for the somatic characters, but that the somatic correlations were not of the type $p, p^2, p^3 \dots$ and accordingly that ancestry in the biometrician's sense did matter even in a population following the simplest Mendelian formula, providing the mating was at random. A recent paper in the *Proceedings of the Royal Society* might be interpreted as meaning that the law of ancestral heredity did not apply to a Mendelian population. In the first of the above papers Professor Pearson indicated how in a population originally consisting of p dominants, s recessives, and q hybrids, mating at random, the percentage of the number of dominants in the offspring increased with the number of dominants in the grandparentage, and this was true in the case of any grade of ancestors, whatever be p, q , and s . In the second paper he turned from the somatic to the genetic correlations, which were not discussed in the earlier memoirs, and showed that the genetic correlations form a series of the character $p, p^2, p^3 \dots$; in other words, a knowledge of the genetic character of the parents makes a knowledge of the somatic character of the ancestry unnecessary. Apart from symbols this must be a truism, because the offspring arises solely from the gametes of the parents. The Mendelian genetic correlations, whatever be the mixture of protogenic, allogenic, and heterogenic elements in the freely mating population, take the same values—that is, 0.5, 0.25, 0.125, etc., diminishing one-half with each ancestral grade. These genetic correlations were much nearer to the values obtained by biometric investigations for the somatic correlations, the theoretical Mendelian somatic correlations being considerably too small. It would thus appear that the Mendelian genetic correlations accurately obey the fundamental conceptions of the law of ancestral heredity, so that the only real outstanding antinomy lay in the principle of absolute dominance. The correlations found biometrically suggested that there was a closer relation between the genetic and somatic constitution—at least for certain characters—in the species investigated—than was represented by the first Mendelian principle of absolute dominance.

ON the initiative of Dr. Augagneur, Governor-General of Madagascar, a decree has recently been passed regulating the importation, sale, and keeping of opium in the colony. A decree was passed on August 31st, 1908, prohibiting opium-smoking dens, but it was found that without strict control over the introduction of the drug the enactment was likely to prove a dead letter.

Reviews.

A TEXTBOOK OF PATHOLOGY.

PROFESSOR ADAMI'S bulky *General Pathology*, which forms the first volume of his *Principles of Pathology*,¹ distinguishes itself from many books bearing similar titles by its independence of thought and originality of treatment. There is a refreshing atmosphere of personality about it all. The author takes up the problems of pathology as they present themselves to his own mind, sets out the facts which he finds important or interesting, and then presents the conclusions which appear to him to be warrantable. He is more interested in the elucidation of general principles than in elaborate accumulations of data, and by displaying the workings of his own mind in his effort to unravel fundamental laws he provides an example of how pathological problems ought to be studied, which will be particularly helpful to the reader desirous of seriously devoting himself to the science.

To understand pathology it is necessary to commence with physiological principles, and therefore Professor Adami devotes the first section of his book to the morphology, chemistry, and biology of the cell. This method of approaching his subject is undoubtedly correct from the scientific standpoint, though it adds greatly to the bulk of the volume. It makes us realize that we cannot hope to advance in pathology until we have mastered not merely the elements of physiology but its latest and most intricate developments. The minute details of cytological research, the organic chemistry of the complex compounds which form the basis of living matter, and the laws of development and inheritance, constitute three wide fields of knowledge, to each of which a man may well devote the whole of his energies; but the pathologist is expected to be familiar with them all, as part of his preliminary equipment for the investigation of morbid processes. Professor Adami's account of these "Prolegomena" to pathology is very condensed, but it is much more than a mere epitome of other people's work; it bears the impress of conscientious study and a matured capacity for appreciating the essentials of permanent value amongst a perplexing and almost overwhelming mass of experimental data.

Professor Adami conceives it to be his mission to bring about a closer union between physiology and pathology, and, in particular, to reinterpret pathological data in the light of recent research upon the properties of normal tissue. He says:

Physiology and pathology have for the last seventy-five years, at least, been divorced to this extent, that they have undergone development under separate influences. Under the influence more particularly of Ludwig and his pupils physiological research has been directed to the study of organs and tissues. The organ as a whole has been taken into account. . . . It is under the influence of another great master (Virchow) that modern pathology has been developed. His teaching was based upon exact study of diseased organs and the correlation between gross and microscopic appearances. It was largely histological, and, as a result, mass effects were followed back to the disturbances in the individual cells composing the tissue. In place of an organ, or tissue pathology, there was developed a "cellular pathology."

But it is recognized that the methods pursued by Virchow are insufficient for the requirements of modern pathology. Microscopic examinations of morbid tissues must be supplemented by experimental methods, for the initiation of which we are mainly indebted to the physiologist; the rapid advances of bacteriological knowledge have to be reckoned with, and, most especially, there is the vast field of work on immunity which has to be brought into perspective and correlated with other branches of pathology. To bring into focus the many and diverse aspects which are presented by the science of disease, to systematize them, and to unravel the underlying principles, this is the task which Professor Adami has set himself. It has not been a light undertaking; but the twelve years which, he tells us, he has devoted to the work have been well spent, and have resulted in the production of a work conspicuous for its broad grasp of general principles and comparable, in many respects, to

the pre-eminently philosophical treatise on physiology by the late Sir Michael Foster.

Commencing with the biology of the cell, this first volume goes on to consider the causes of disease, inflammation, the reactive processes associated with immunity, and the characteristics and classification of new growths and other tissue changes. In dealing with the causes of disease the author devotes much space, perhaps more than is necessary, to abnormalities of the fetus, and provides a very full collection of illustrations representing various types of monstrosities. His treatment of the subject of inflammation is excellent, but his opinions are too well known to require detailed discussion. His classification of new growths is very elaborate, and it may be doubted whether it will gain general acceptance; but it must at least be admitted that it is a serious attempt at scientific classification and in that respect preferable to the older, vaguer, and more familiar nomenclature. The various theories of neoplasia, including the author's "habit of growth" hypothesis, are impartially presented; and if the amount of new or important information to be elucidated from them is relatively small that is not the fault of the writer but is attributable to the obscurity in which the cancer problem is still involved.

APRAXIA.

DR. DROMARD² has written an interesting and in places illuminating book, which is not confined to the physiognomy of the insane, but includes also gesture, attitude and other forms of self-expression. The author discards for this purpose all the anomalies of conformation, asymmetries and other morphological characters so frequently exhibited by the insane and other so-called degenerates, and restricts himself to departures from the normal in intellectual, affective and volitional expression in the insane. The author does not, however, consider as abnormal in function—and this is of first importance in his treatment of the subject—the various characteristic expressive phenomena met with in insane people, so long as they are in harmony with, or equivalent to, the mental states from which they spring; that is, in all of the cases—and this, naturally, includes a large proportion of the insane—in which the modifications of expression result directly and strictly from modifications of the emotional life, the function of expression is considered to be intact. This, of course, considerably narrows the field, though what remains is still sufficiently great and, as Dr. Dromard's work shows, worthy of the most careful study. Thus, after showing how disorders of expression may depend upon defective adaptation—that is, when the play of face or the gesture does not adequately express the corresponding idea or emotion—or upon disordered function, where the expression in itself shows a lack of harmony and homogeneity in its constituent parts, the author considers under the head of disorders of voluntary or ideative expression: apraxia; the hypermimia of substitution; mannerism and puerilism; neologism; stereotypy and echokinesis; and under disorders of involuntary or emotional expression: paraminia; spasmodic expression, and dissociated expression. Taking apraxia (or the incapacity to perform a movement conformably to the end proposed, motility being preserved and presenting no obstruction to its proper performance) as paradigmatic of the author's exposition of his subject, this is considered under the heads of—

1. *Motor apraxia*, which may be brought about either (a) by the loss of kinesthetic representation in the senso-motorium; or (b) by the rupture of connexions between the senso-motorium concerned with motor innervation and the parts of the cortex involved in elaboration of ideas of movement (transcortical apraxia.)

2. *Ideational apraxia* (ideo-motor apraxia), when the disorder resides in the superior psychic function, attention, memory, association, etc., and

3. *Sensory apraxia*, or false apraxia, corresponding to the symbolic of Wernicke and the agnosia of Freud, due either to the loss of memory images or rupture of the connexions between these and new sensory impressions.

Obviously, in this last group the motor result may be correct in itself, responding adequately to perceptions which exist, however faulty; hence the use of the term "false apraxia" by the author. The term "apraxia" has.

¹ Oxford Medical Publications. *The Principles of Pathology*. By J. George Adami, M.A., M.D., LL.D., F.R.S. Vol. I, *General Pathology*. London: Henry Frowde, and Hodder and Stoughton, 1909. (Roy. 8vo. pp. 248, 322 engravings and 16 plates. 50s.)

² *La Mimique chez les Aliénés*. By Dr. G. Dromard. Paris: Félix Alcan, 1908. (Cr. 8vo. pp. 284. Fr. 4.)

thus for Dr. Dromard, a wide application. "Ideational apraxia," for instance, includes that due to failure of voluntary attention before the execution of any act, giving rise to many acts which have been variously ascribed to amnesic apraxia, "psychic blocking," "blocking of the will," etc., and also some forms of perseveration and flight of ideas. Another form of ideational apraxia is described by Dr. Dromard as due to interruption or to substitution during the course of execution of an act, and a third form as due to a faulty distribution of the representations of attention or the components of these representations. Ideational apraxia is thus entirely a disorder of intrapsychic processes whose diagnostic features it is important to recognize. The distinguishing features as given by Dr. Dromard are as follows: (a) Motor apraxia has a segmentary distribution, affecting particular motor levels and is rarely generalized; ideational apraxia, on the other hand, affects the movements of all parts of the body without distinction. (b) Motor apraxia is exhibited only in simple acts; ideational apraxia in movements somewhat complicated. (c) Motor apraxia appears generally in the imitation of movements; ideational apraxia in this form but rarely. (d) Amorphous movements and movements of substitution of a flagrant or a coarse character distinguish motor rather than ideational apraxia. Lastly, a detailed psychological examination of the patient, as a rule, reveals explanatory disorders in the case of the ideational apraxia but not in motor apraxia. The author's treatment of apraxia has been outlined here as an illustration of the method of psychological analysis sustained throughout the following chapters. The book is a valuable addition to the literature of expression in the insane. Its methodical classification furnishes many aids to diagnosis, helps to relate types of expression to corresponding structural cerebral disease according to the levels affected, and should undoubtedly facilitate the detection of the simulation and dissimulation of mental disease.

NEUROLOGY.

DR. R. T. WILLIAMSON'S book on *Diseases of the Spinal Cord*,⁴ dedicated to the past and present students of the Manchester Medical School, is based on notes of lectures delivered at that school during the last fifteen years. The main adverse criticism that suggests itself is that the treatment of the subject is slight; considering, however, that the work is not intended, as the author states, to furnish an exhaustive account of spinal diseases, and considering the form and scope of its fellows in the series of Oxford Medical Publications, that criticism may be really rather praise than blame. The book, then, is a really good one. It is well balanced and sound in its teaching. On controverted points—on pathogenesis, for example—it gives a fair statement of the conflicting views of different schools, and then, in what may be considered a too modest way, gives its own judgement, and, as many well able to decide will think, generally on the right side. It is thoroughly up-to-date, including not only recent advances in the clinical facts of cases of nervous disease, but also such matters as the use of lumbar puncture in diagnosis and Frenkel's method of treating ataxia. It is practical, giving ample space to differential diagnosis and to such treatment as nervous diseases are susceptible to, including the contribution of orthopaedic surgery to the matter. It is well and helpfully illustrated with clinical photographs, anatomical and physiological diagrams, and pathological microphotographs. It is plainly and well written. The minor errors it contains suggest somewhat rapid production of the printed page; a lesion of a spinal posterior root, for example, is said to cause anaesthesia in the distribution of that root, a statement combated, on the evidence of Professor Sherrington, on a subsequent page; peripheral neuritis is said to be easily confused in diagnosis with anterior poliomyelitis, a statement only true if multiple and not terminal neuritis is meant; a diagram is given representing cerebral anaesthesia in the form of a deeply shaded gauntlet, but the area shown could not, from its shape, be subcortical in origin, and if cortical, as the text suggests, it would not be absolute, and should be differently shaded. There is a welcome appendix dealing with the methods for the patho-

logical examination of the spinal cord. There are, in short, many textbooks on the same subject dealing more systematically with the subject, but there are few likely to be more practically useful to the medical practitioner.

DR. ALFRED GORDON, whose name is known in association with the recognition of the paradoxical plantar reflex—an earlier sign, it is claimed, of interference with the pyramidal tracts than Babinski's phenomenon—has written a short and thoroughly sound textbook on *Diseases of the Nervous System*.⁵ As he says, to both general practitioner and medical student neurology has always appeared a difficult subject, and their continuous complaint has been that they could not find any book which would give them a plain and practical account of diseases of the nervous system. Whether this charge be true or not, Dr. Gordon has written a book which, to a large extent, refutes it, though there may be several others equally good in the English tongue published, either in America or in this country. The book is a good one, and it may safely be used by the tiro. On the other hand, it and its fellows are of very little use, except in regard to cases which may be called typical, or, at any rate, which are capable of being pigeon-holed. Neurology, above all other branches of medicine, is largely concerned with atypical cases, and hence the special value of the larger book. It is only fair to say, however, that this book contains chapters on the anatomy and physiology of the central nervous system and on the methods of examination for the diagnosis of nervous diseases, so that it is, in a sense, complete in itself. It is a trustworthy book, and the most unfavourable criticism that suggests itself is that it is too large for a primer of neurology and not large enough for final reference.

PAIN IN VISCERAL DISEASE.

THE value of pain as a guide to diagnosis is always difficult to assess. It is probable that every practitioner of medicine or surgery forms his own opinions on the subject, and acts upon them without much reference to the written law. But the manifestations of pain are so extraordinarily varied, that a systematic examination of them recently issued by Dr. RUDOLPH SCHMIDT of Vienna, and translated by Drs. VOGEL and ZINSSER of Columbia University,⁶ cannot fail to be of use as a work of reference, and as a reminder of the diagnostic importance of pain, even to those who might not in all cases agree with the opinions of the writer as to its causation.

The book deals with the interpretation of pain produced by internal diseases, and is prefaced by some useful reflections upon pain in general, followed by chapters on the various influences such as position, motion, pressure, food, etc., by which pain may be modified. The topography of pain, and its quality and times of occurrence, are also examined, and special attention is then directed to the pains which may accompany disorder of the various systems—nervous, digestive, urinary, etc.

The book presents a very full account of most of the aches and pains to which humanity is liable, and errs only in its lack of simplicity of expression, and in its tendency to repetition of detail. It would gain in practical value by closer compression, and by the omission of much that can only be matter of indefinite speculation, but it contains a great deal worthy of careful reconsideration, particularly in relation to the pains of colic from various causes. The final chapter is devoted to an illustrated exposition of Dr. Henry Head's observations on cutaneous tenderness in visceral disease.

ANIMAL PARASITES.

BRUNN, in collaboration with LÜHE, has compiled a volume intended to serve as a guide to the examination of the animal parasites of man and domestic animals⁷ for

⁴ *Diseases of the Nervous System*. By Alfred Gordon, A.M., M.D. Paris. London: H. K. Lewis, 1908. (Roy. 8vo, pp. 499, illustrations 136, 12s. 6d.)

⁵ *Textb.* By Dr. Rudolf Schmidt, Vienna. Translated and edited by Dr. Karl Vogel and Dr. Hans Zinsser, Columbia University. London: T. Fisher Unwin, 1908. (Demy 8vo, pp. 326, 12s. 6d.)

⁶ *Leitfaden zur Untersuchung der tierischen Parasiten des Menschen und der Haustiere für Studierende, Ärzte und Tierärzte*. Von Dr. M. Brunn, O. O. Professor der Zoologie und Vergl. Anatomie und Direktor des Zoolog.-Museums in Königsberg i. P.R., geh. Regierungsrat, und Dr. M. Lühe, Privatdozent und 1. Assistent des Zoolog.-Museums in Königsberg i. P.R. Würzburg: Curt Rabitsch (A. Stuber's Verlag), 1909. (Sup. roy. 8vo, pp. 134, 100 Abbildungen im Text, M 5.20.)

⁷ *Diseases of the Spinal Cord*. By R. T. Williamson, M.D., F.R.C.P. Oxford Medical Publications. London: Henry Frowde, and Hodder and Stoughton, 1908. (Roy. 8vo, pp. 443, 15s.)

students, doctors, and veterinary surgeons. A glance at the general style, printing, diagrams, and text of the work show at once that it is based upon, or might even be termed a synopsis of, Brauer's well-known work on the animal parasites of man, with some additions. It is divided into three parts—(1) Protozoa, (2) Helminthes, (3) Arthropoda, Dr. Lühe being responsible for the first part and Professor Brauer for the other two. It is apparently fashionable now to change or invent new classifications for different groups of the animal kingdom, and Dr. Lühe keeps up to date by introducing considerable changes into the old and time-honoured classification of the protozoa. The most important of these are that he makes the haemoflagellates and haemosporidia the third order (binucleata) of the class flagellata, that he obliterates the class sporozoa as such, its place being taken by the class sporozidia with—in addition to the micro-, myxo-, and sarco-sporidia—one new order—the actinomycetozoa, and by the class telosporidia, containing the coccidia and gregarinida. These last changes are not so much to be quarrelled with, but how any one, protozoologist or other, can believe that the trypanosomes and malarial parasites are so near each other as to be properly comprehended in one order is past comprehension. Schaudinn's unconfirmed work on the haemoproteus (the old halteridium) is again no doubt responsible. It ought either to be verified once and for all or finally swept away. It has misled too many of the unwary already. The helminthological part of the book contains some useful information on the preservation of the different worms and their eggs, but many well-known and useful methods are omitted. Life-histories of the dog taenia, *T. marginata*, and others are valuable because good short accounts are in many instances very difficult to obtain. All things considered, however, the work, though interesting in many particulars, falls short of expectation; it is not full enough for advanced students of the subject, and as a mere narrative for non-helminthological and protozoological people it is too full and scientific. It is rather hard to understand the necessity for its publication, especially when it is remembered how fully the animal parasites of man have been dealt with by one of the authors. Still, as a guide or introduction to this larger work, it may prove of use.

TICKS.

THE subject of ticks had been little studied, at least by medical men, until it came to be established that these parasites might spread disease from animal to animal, or even to man. This fact having been proved, a book on these insects was clearly required, and Dr. NUTTALL, in conjunction with Messrs. WARBURTON, COOPER, and ROBINSON, has done well to provide *Ticks: A Monograph of the Ixodoidea*.¹ At first the idea was to publish a full account of the ticks as a complete volume, but for various reasons the authors have decided to bring the work out in parts: these will be complete in themselves, but are designed to form a volume of about 500 pages, when all have been published, and it is hoped that they will be ready in about a year. Part I deals with the Argasidae, and is divided into two sections: (1) the classification of the Argasidae; (2) the general biology of the Argasidae, the effects of their bites, their relation to the spread of disease, etc. For those unacquainted with the subject it will be sufficient to state that the ticks are classified as follows: Superfamily Ixodoidea: Family I, Argasidae. Family II, Ixodoidea. It is with the first of these, then, that the volume deals. Classification is always a tedious and difficult piece of work, and it seems uncertain yet how many genera the family Argasidae contains, but the usual plan of dividing it into Argas and Ornithodoros is maintained. Six well-established species, according to the authors, are found in the first,

eleven in the second. How long this will last no one can say, as it is probable that in the course of time as attention is directed to the subject, many more ticks will be discovered either specifically or generically distinct. Still it is to be hoped that the classification will never fall into the chaotic condition reached in the case of the mosquitoes. The part of Section II which deals with the relation of the ticks to the spread of disease is interesting; but again, the subject is largely in its infancy, and the same is true with regard to many points in the life-history. It is not quite clear when or where in the book the anatomy of these parasites is to be discussed, a note at the foot of page 8 simply stating that the internal anatomy will be considered in the general introduction to the completed volume. It might, perhaps, have been better to have taken up the anatomy, external and internal, first, then to have dealt with classification, and lastly with biological points, and the relation of the insects to disease, etc. When the work is complete, these matters will no doubt smooth themselves out, and too much praise cannot be given to Dr. Nuttall and his collaborators for taking up this difficult and somewhat thankless task.

DERMATOLOGY.

WORKS on diseases of the skin follow one another with such rapidity and have such a family likeness that it is difficult to deal with them in a critical as opposed to an expository manner. One of the latest books is by Dr. SCHAMBERG, of Philadelphia;² but in this case, following the example of the old Vienna school, the eruptive fevers are included, and their morbid cutaneous manifestations thoroughly discussed. Although the specific fevers are part and parcel of general medicine, yet it cannot be overlooked that a comparison of their rashes with skin diseases proper is of importance in practice. The first part of the book is devoted to diseases of the skin, the various conditions being dealt with in a very succinct, and, from the point of view of dermatology, in all too brief a manner. In the case of pemphigus acutus, the author does not allude to the severe febrile bullous eruption in butchers, which should have found a place in a work such as this, one which includes eruptive fevers in its title. The term "tubercular" as applied to certain syphilides and to a clinical form of leprosy is not so appropriate as "nodular." The second part, dealing with the eruptive fevers, is well done, and the discussion of differential diagnosis can be recommended, for not only are the specific rashes carefully described, but the aberrant forms and the various prodromal and intercurrent eruptions are also dealt with. The book is profusely and well illustrated, and reflects credit on the publishers.

Professor Dr. S. RÖSA, in a short work on dermatological propaedeutics,³ has attempted to give a preliminary outline of the processes at work in the production of diseases of the skin. The book consists of the substance of a course of lectures, and contains seven chapters. The first chapter, dealing with the various agencies causing damage to the skin, is clear and concise, but needs no special analysis. The chief interest and value of the book lies in the second, third, and fourth chapters, which deal with constitutional peculiarities and acute and chronic inflammation. Considering the difficulty of giving anything like a complete review of such a complicated subject within a small space, the author has certainly achieved a marked success. The principles of general pathology are well explained, and the opinions of such authors as Marchand and Maximow discussed. The last three chapters are devoted to the application of the knowledge acquired from the first four to the special domain of cutaneous medicine, and a careful perusal of the whole book would repay not only those commencing the study of dermatology, but also those whose early training was undergone before pathology had attained its present importance in medicine.

¹ *Ticks: A Monograph of the Ixodoidea*. By George H. F. Nuttall, M.A., M.D., Ph.D., Sc.D., F.R.S., Fellow of Magdalene College, Oxford Professor of Biology in the University of Cambridge; Cecil Warburton, M.A., F.Z.S., Christ's College, Zoologist to the Royal Agricultural Society; C. W. F. Cooper, B.A., F.Z.S., F.L.S.; and L. B. Robinson, A.R.C.Sc.Lond. Part I, Argasidae: October, 1908. Cambridge: At the University Press: London: Cambridge University Press Warehouse, and H. K. Lewis: New York: G. P. Putnam's Sons; Leipzig: Brockhaus; Berlin: A. Asher and Co. Bombay and Calcutta: Macmillan and Co., Ltd. (Imp. 8vo, pp. 150, figs. 116, pl. 3, 5s.)

² *Diseases of the Skin and the Eruptive Fevers*. By Jay Frank Chamberlain, A.B., M.D., Philadelphia and London: W. B. Saunders Company, 1908. (Med. 8vo, pp. 514, 204 illustrations, 12s.)

³ *Dermatologische Propädeutik*. Von Professor Dr. S. Rösa. Berlin: Julius Springer, 1909. (Dem. 8vo, pp. 151.)

RECENT BOOKS. NOTES ON BOOKS.

*Indian Plants and Drugs*¹ seem to be a favourite theme with Indian medical authors. Mr. K. M. NADKARNI, who has recently published a book on this subject, does not appear to possess a medical qualification; but from the statement that he has "cured cases with marvellous beneficial results in competition with the Western allopathic system," it is evident that he engages in medical practice. This treatise contains descriptions of 419 plants and drugs arranged alphabetically according to their botanical names. In each case the synonyms, habitat, properties, and uses of native Indian preparations are given. Some of the latter are marvellous faragoes, many of them covering half a page. The shortest we have met with is the direction that "as a purgative castor-oil is recommended to be taken with cow's urine." The article on cinchona is only one page long, and quinine is recommended to be administered in agues in doses of "1 to 2 grains three times a day." There is an "index of diseases and remedies," which is crude and complicated. "Fever" constitutes one entry, which includes about fifty references, among which "cinchona" is included. Under "Syphilis" no mention is made of mercury, and under "Dysentery" none of ipecacuanha or potassium sulphate. Altogether the compilation hardly redeems the promises of utility advanced by the author in his preface.

We have received a copy of a new edition of the *Students' Pocket Prescriber*,² by Dr. H. AUBREY HUSBAND. It is a book of vest-pocket size, containing some 397 thoroughly constructed prescriptions and a short preface dealing with the art of prescribing. The counsel given in this seems for the most part sound, but we are not sure that it is a universal rule that women require smaller doses of purgatives than men, or that the fact that in marshy districts people take large doses of quinine is really proof of the modifying influence of climate on therapeutic action.

¹ *Indian Plants and Drugs, with their Medical Properties and Uses.* By K. M. Nadkarni, F.S.Sc.L.A. London: Madras: Norton and Co. 1903. (Cr. 8vo, pp. 450.)

² *The Students' Pocket Prescriber.* By H. Aubrey Husband, M.B., F.S.C. Edinburgh: E. and S. Livingstone. 1903. Pp. 175. (1s. 6d.)

HYGIENIC AND SANITARY APPLIANCES.

Sterilizable School Boxes.

THE danger of allowing the indiscriminate use of pencils and other writing utensils in elementary schools has long been recognized, especially in connexion with the spread of diphtheria; it has led to the more or less complete abolition of school slates, and various devices have been suggested for keeping each child's apparatus separate. Dr. W. Lloyd Edwards, school medical officer to the Barry education authority, has sent us a sample of a box made for that authority by the South Wales Canister Company, Swansea. It is a long, thin, flat, tin box, with places for rubber, pencils, and brushes, and there is a depression on the lid, which is hinged, for a label with the child's name. The box is a very practical invention, and could, we presume, be supplied at a small cost.

A box with the same object and of a similar material is made by Mr. George W. Jeffs, Watkin Works, Bromsgrove, near Birmingham, and is known as the Watkin hygienic pencil-box. It has a sliding lid, and holds a 9-in. ruler, pencil, rubber, brush, and compass; the price is 3d. each net. A somewhat more ambitious contrivance is a scholar's material box made of tin. The lid of the box may be fixed to the under side of the desk by screws, for which holes are prepared in the lid. The top sides of the box are bent outwards and slide into grooves in the lid; the box may be opened and shut like an ordinary drawer, or, if preferred, the bottom of the box may be fixed to a shelf underneath the school desk by screws, and the lid then slides on and off. This material box, which is retailed at 1s. 6d. net, has separate compartments for reading books, exercise and drawing books, ruler, brush, pencil, etc. The same maker manufactures an adjustable book-cover of stout brown paper with a very glossy surface; it is not likely to collect dust, and when soiled can be burnt; the book-covers cost 12s. to 20s. a gross, according to size.

PROPOSED antivivisectionist legislation has had a set-back in New York State, as at Massachusetts. Two bills have been before the State Legislature; on one the Assembly Committee decided not to report, while on the other the Senate Committee took no action.

Nova et Vetera.

THE MEDICAL JOURNAL OF A HUNDRED YEARS AGO.

THE unreflecting reader of the periodical medical literature of the present day does not realize the richness of the possession which is his. In this month of May, 1909, let him look for a minute or two into the *Medical and Physical Journal* for the corresponding month of 1809. It consists of 88 pages octavo, and, as it was a monthly publication, these pages constituted the whole supply of mental pabulum given by the editors to their readers for May. The publication had been established in 1799, with T. Bradley and F. M. Willich as editors; and, as two volumes appeared each year, this was vol. xxi. It continued under its original title till 1814, when it became the *London Medical and Physical Journal*, and was conducted by Samuel Fothergill. The contents of the May number consisted of some thirteen original articles, most of which take the form of letters to the editors, are not preceded by any indication of the subject with which they are to deal, and carry the writer's name only at the end; these articles, which occupy 62 out of the 88 pages, are followed by 12 pages in which are analysed very fully the articles appearing in the recent number of the *Edinburgh Medical and Surgical Journal*; then comes an editorial of 5 pages on the "Trial of Mr. Angus and subsequent Pamphlets"; then a report (of 3 pages) of the diseases of Edinburgh for March, 1809; then a short Account of Diseases in an Eastern District of London from March 20th to April 20th, 1809; then some Udiometrical, Thermometrical, and Barometrical Statements, by Dr. T. Pole, of Bristol; then an angry letter to the editors, beginning, "Gentlemen," on the subject of vaccination; and the number is brought to a close with some paragraphs of Intelligence, including the statement that "Dr. Adams, having finished his *Inquiry into the Laws of Epidemics*, is at leisure to complete his edition of Mr. Hunter's *Treatise on the Venereal Disease*."

In these parts, which constituted the medical journal of a hundred years ago, the observant reader will recognize most of the departments of a modern periodical; to adopt embryological language, for the nonce, their *anlagen* were in existence in 1809, but, as one sees, they have developed wonderfully since then.

Let us look more in detail at one or two of the contents of this journal. The place of honour is given to a contribution from the pen of Robert Jackson, M.D., No. 3, Panton Square, London, dated March 26th, 1809. We may note in passing that the practice of adding the writer's address to his communication—which we are, perhaps, inclined to associate with transatlantic medical journalism—was common, if not general, among our medical ancestors in London a hundred years ago; we also observe that in those early days manuscript was not allowed to lie long wasting its sweetness in the editorial cupboard.

Dr. Jackson's article, which as usual is without a title, begins well. We read:

Gentlemen, As you seem always ready to put before the public such hints or suggestions on medical subjects, as you may receive from persons of credibility and good intention, I am induced to submit to your consideration a short notice of the effects of a remedy which some may perhaps regard as too vulgar to be admitted in the physician's catalogue, or which others may be disposed to disparage, as it is not brought from a foreign country, or does not find a place in the apothecary's shop.

The reader's curiosity cannot fail to be roused and his appetite whetted by these introductory remarks, and the writer does not long keep him in suspense. Dr. Jackson promptly reveals his secret; like an earlier writer, he has a "naked thought" for which he wishes at once to find suitable apparel.

The spider's web (vulgarily cobweb) is known to many of the common people as a cure for fever and ague; but I believe that few of the regular practitioners have yet employed it on that or any other account.

The secret is out! Then the writer proceeds to say that he got the hint in the year 1800 from the late

Dr. Gillespie of Edinburgh, "a man of great candour and sincerity of character," and that he had himself tried the remedy with the best effect upon "some intermittents" in the army dépôt at Chatham. A Sergeant Anderson's case is mentioned; his ague attacks yielded before the assault of the cobweb pill. Upon a soldier of the Buffs recently returned from the West Indies—it will be remembered that it was in 1809 that Britain captured Martinique and Guadeloupe—a cobweb pill had so marvellous an effect that "in less than a minute he was perfectly tranquil." Other remarkable successes are reported, and it is thought that the usefulness of the remedy may be extended to hydrophobia, "for its tranquillizing effects." There is to be no secrecy: "pure cobweb is to be procured and made into pills, each containing 4 grains." So we see that a hundred years ago the doctors of London were being counselled to fight malaria with the means employed by spiders to capture flies. Now, for the same purpose, we attempt to exterminate the *culex* with our mosquito brigades, or at least try to keep off the mosquitos with our nets. What verdict, we wonder, will the medical journal of 2009 be passing upon our 1909 methods?

The second article is on "Epidemic Measles," by Dr. Ferguson, of Aberdeen. In the course of the paper the writer refers to a personal experience he had. He was examining an abscess on the thigh of a patient suffering from small-pox: he became faint and ill, and in a few days was found to be affected with "violent scarlatina anginosa." He argues that, "from the putrefactive process of small-pox, contagion may be produced which will occasion other infectious diseases." The editors are not inclined to agree with Dr. Ferguson, and courteously but firmly tell him so, in a note at the end of his communication. They say:

In the interesting account Dr. F. gives of his own case, we should suspect that the disease in his throat, and subsequent efflorescence on his skin, was the effect of putrid matter applied by effluvia to that semicircular and highly sanguiferous part, the throat.

The observation is, at any rate, of interest (whatever be the explanation) in view of what is now known regarding mixed infection.

There are surgical as well as medical articles in the journal. "Verax" tells of "a nobleman of considerable importance in the State" who had an accident which produced a seriously contused urethra; the treatment, which was successful, is described. Regarding the pseudonymous "Verax," there is a footnote to the effect that the name of the author, "which is highly respectable," is in the possession of the editors. There are also articles on permanent stricture (by Dr. Robertson); on the use of stimulants in burns (by "Philanthropus"), illustrated with a plate showing a bed for nursing such cases; on wounds of the scrotum (by Mr. Scott); and on lockjaw and tetanus (by Mr. Howship). Midwifery is represented by an article on that fertile subject of articles, the use of the forceps; in it the author points out that there are difficulties in the application of the forceps when the child's head is on the perineum! An expression is used in this article which is evidently the equivalent of our modern term, the "caput succedaneum"; the writer calls it the "presenting cone of integuments."

Among the more general papers in the journal are two on the trial of Mr. Angus for murder and on the so-called Liverpool controversy which followed it. An explanation of this matter would occupy too much space; but it was a *cause célèbre* of the time, and we may return to it again. There is an unsigned letter on what the writer calls "A Fraud of Authors." The fraud consists in the publication of second editions of medical works with additions, corrections, and improvements, to the detriment of the purchasers of the first edition. The writer is indignant:

How, think you, do the purchasers of the first edition feel? Why, that they have been buying a work, and that perhaps at an expense (*sic*) which they could but just afford; and in the short space of a year, or year and half, it is become of scarcely any value. . . . Is this fair to the purchasers of the first edition, who have paid the first compliment to the author, and who by so doing, and by speaking of the work as it merited, (probably) have been the cause of the rapidity with which the first sold. Is it honourable? Is it just?

The writer gives some details, and closes with:

Pray, Mr. Editors, take up this matter in the behalf of such unfortunate men as myself. . . . I feel grievously hurt.

In a footnote the editors indicate that they publish the letter with hesitation; but as a similar one had appeared in a rival journal, they could not, "without the suspicion of great partiality," refuse it a place. Certainly there was a refreshing frankness and an almost childlike self-revelation in the letters and in the editorial comments on them of the medical journals of a hundred years ago!

THE COMPOSITION OF CERTAIN SECRET REMEDIES.*

XXIV.—RADIUM SALVE.

LONG advertisements have appeared recently in the daily papers of a radium salve stated to have been discovered by Dr. S. Saubermann, who gives an address in Berlin. The salve is sold in this country by a company which describes itself as "manufacturing chemists to the medical profession." We are told in a pamphlet issued by this company that Dr. Saubermann's formula has been embodied and improved upon in the radium salve they sell. It is stated further that the salve is impregnated with the "radium salt in the proportion of 1 in 500,000," a quantity which "must not be exceeded, as otherwise the absorption by the skin and the well-known action of the strong and penetrating rays will do more harm than good." It is described as a remedy for lupus, cancer, and all diseases of the skin, with a bountiful "etc."

The company also sells various other preparations: A medical soap, a blood purifier, and an elixir of life. A certificate purporting to have been given by Dr. Saubermann in December, 1907, states that the ore which the company has acquired was "uranium refuse concentrated from the mines at Joachimsthal." In the advertisement a list is given of "leading scientists on radium," but the advertisers do not go so far as to say that any of them have anything to do with the radium salve. There is also a quotation from our own columns, which we need hardly say had no reference whatever to the salve or its manufacturers.

The salve is "sold at 2s. 9d., 5s., 10s., 20s., and 30s., according to radioactivity." Mr. Frederick Soddy, M.A., Lecturer on Physical Chemistry and Radioactivity in the University of Glasgow, has been good enough to examine the salve for us, and the following is his report:

"I received the two pots of radium salve you sent me, and have examined the radioactivity of the stronger preparation—namely that marked 'Strong, 5s.' The alpha radioactivity of the preparation is just detectable, and is about one-hundredth part of that of uranium. The beta radiation is too feeble to be detected by a sensitive electroscope. For comparison I might mention that the residues from the uranium ore of Joachimsthal, which forms the initial raw material from which radium is extracted, have an alpha radioactivity about four times that of uranium."

* Previous articles of this series were published in the following issues of the BRITISH MEDICAL JOURNAL: 1904, vol. ii, p. 1588; 1906, vol. ii, pp. 27, 166; 1907, vol. i, p. 215; vol. ii, pp. 24, 160, 239, 393, 530, 1653; 1908, vol. i, pp. 833, 942, 1373; vol. ii, pp. 86, 255, 1022, 1110, 1193, 1285, 1556, 1697, 1875; 1909, vol. i, pp. 31, 929.

THE fifth International Congress of Medical Electrolgy and Radiology will be held at Barcelona on September 13th to 18th, 1910.

THE American Proctologic Society will hold its eleventh annual meeting at Atlantic City, New Jersey, this year on June 7th and 8th under the presidency of Dr. George D. Evans of Dayton, Ohio. Among the papers to be read are the treatment of pruritus ani, by Dr. W. M. Beach, and another on the same subject by Dr. T. Chittenden Hill; a consideration of the prophylaxis and treatment of cicatricial rectal stricture, by Dr. Alois B. Graham; the use of spinal anaesthesia in rectal surgery, by Dr. Collier F. Martin; intestinal auto-intoxication: its treatment by irrigation, by Dr. W. L. Dickinson; diseases of the colon and rectum as caused and influenced by pathological conditions of other abdominal and pelvic organs, by Dr. A. Bennett Cooke; the necessity for routine examination of the rectum in intestinal diseases, by Dr. Dwight H. Murray; naevus of the anal region, with report of a case, associated with internal haemorrhoids, by Dr. Lewis H. Adler, of Philadelphia, who is the Secretary-Treasurer of the Society.

THE ROYAL COMMISSION ON THE POOR LAWS AND RELIEF OF DISTRESS.

REPORT ON IRELAND.

THE Royal Commission on the Poor Laws and Relief of Distress issued its report on Ireland on May 3rd. As in the case of the report on England and Wales, it consists of a Majority and a Minority Report, the former occupying eighty-three pages and the latter two and a half. Dr. Downes refrains from signing either report, on the ground that his acquaintance with Irish affairs is insufficient to warrant him in so doing.

In some introductory paragraphs it is pointed out that at the date when the Royal Commission was appointed a number of inquiries by Royal Commissions and parliamentary and departmental committees had recently been conducted, or were actually proceeding, in reference to many subjects which came within the terms of reference of the Commission. It accordingly, while undertaking to consider any serious objections, invited no evidence in reference to the recommendations already made by other bodies, and decided to accept generally these recommendations and the evidence on which they were based unless they were considered to be inconsistent with any general principle advocated as a foundation of the Royal Commission's scheme of Poor Law reform. In this way it was possible to take full advantage of the exhaustive inquiries of the Vice-Regal Commission on Poor Law Reform, which it appeared to the Royal Commission had been received with general approval in Ireland. The Royal Commissioners, however, visited Ireland and heard evidence from Mr. E. Bourke, Senior Inspector of the Irish Local Government Board, in which Irish Poor Laws and their administration were fully explained, with special reference to differences in the system in England and in Ireland. The Medical Commissioner of the Irish Local Government Board, Mr. T. J. Stafford, C.B., F.R.C.S.I., supplied a memorandum on Poor Law dispensary medical relief in Ireland, and gave evidence which was found especially interesting "as the medical dispensary system in Ireland is a more comprehensive system of medical relief for the poor than has existed hitherto in Great Britain." Subcommittees visited various institutions in Dublin and its neighbourhood, and thereafter the Commission divided itself into three bodies to visit workhouses, hospitals, and other institutions, and to attend meetings of boards of guardians. Altogether, about one-third of the unions in Ireland were visited, and a report on these visits is promised in the twenty-eighth volume of the Report of the Royal Commission. The Commission also made enquiries with regard to distress arising from unemployment, a matter not included in the reference of the Vice-Regal Commission. A census of the persons relieved in Ireland on March 31st, 1906, classified by age and physical condition was made, and summary tables are to be printed in Volume XXXI of the Royal Commission's report. The arrangement of the report on Ireland is similar to that of the report on England and Wales, and the recommendations are generally similar.

RECOMMENDATIONS.

They include the abolition of boards of guardians and general workhouses; the appointment of public assistance authorities, the county or county borough being the area of administration and of rating; the continuance of outdoor relief under proper safeguards, and the creation of detention colonies or labour houses under the supervision of the General Prisons Board for the reception of persons not amenable to ordinary discipline, or who neglect or refuse to maintain themselves or their families.

Medical Relief.

With regard to medical relief, the following recommendations are made:

That the present dispensary medical service be a county service under the control of the Public Assistance Authority, and that the areas of the districts, where possible, be enlarged in view of present population.

That county infirmaries, workhouse, and other rate-aided hospitals be co-ordinated, and that medical relief generally be under the management of the Public Assistance Authority, and that a county ambulance system be established.

That a county medical superintendent officer of health be appointed, who shall also discharge the duties of bacteriologist.

That Public Assistance Authorities have power to appoint nurses for nursing in the homes of the necessitous, in the same way as boards of guardians at present appoint midwives.

Children.

The maintenance of children in workhouses should, it is said, no longer be considered a legitimate way of dealing with them, and the Royal Commissioners agree generally with the recommendations of the Vice-Regal Commission with respect to children, strongly advocating the extension of boarding-out, but deprecating any relaxation in the inspection of boarded-out children.

Aged and Infirm.

The Royal Commissioners further recommend that the necessitous aged and infirm be accommodated in a number of specialized institutions, preferably in small homes or almshouses, and that there should be powers of compulsory removal to institutions in the case of sick or feeble old people without friends to take care of them.

Defectives, Epileptics, and Lunatics.

The Royal Commission recommends that the Public Assistance Authority should be authorized to contribute to the maintenance of the deaf, dumb, and blind in institutions, and that a person should not be disfranchised on account of such assistance rendered to a dependant being deaf, dumb, blind, or belonging to any class of the afflicted poor, such as the epileptic, lame, deformed, etc.

Lunatics, idiots, and sane epileptics, it is recommended, should be maintained in asylums or institutions, as advised by the Vice-Regal Commission, and disused workhouses should be used as auxiliary asylums for the purpose.

THE MINORITY REPORT AND ITS OFFICIAL CRITICS.

The Minority Report signed by Prebendary H. Russell Wakefield, Mr. Francis Chandler, J.P., Mr. George Lansbury, and Mrs. Sidney Webb, in which they criticize the Majority Report mainly on the ground that it diverges from the recommendations of the Vice-Regal Commission.

In a memorandum the Bishop of Ross and Sir H. A. Robinson, the members appointed to the Royal Commission specially to represent Ireland, criticize the Minority Report, and after noting that the minority agree with the majority as regards the abolition of boards of guardians and the adoption of county rating for all Poor Law purposes, make the following damaging observations:

"The most important part of the minority's proposals, and that upon which the whole structure of their alternative scheme depends, is that outdoor relief should be taken out of the hands of the elected representatives of the ratepayers or their nominees and entrusted to salaried officers to be appointed by the county councils.

"The various committees of the councils will, it is true, be permitted to submit recommendations for outdoor relief to these paid officials—registrars, as they are styled—but the registrars are to be at liberty to act upon them or to disregard them as they see fit.

"We do not believe that committees in Ireland would be found to take any part in the administration of outdoor relief upon these terms; it would be too much to expect intelligent business men to spend their time investigating applications if they were powerless to ensure relief being given to those who they were satisfied were fit recipients.

"The number of paid officials in Ireland is already a heavy tax on the local ratepayers, and we strongly deprecate the proposal to flood the country with a new class of paid officer, even though the councils are to obtain the compensating advantage of paying for persons of the superior order of intelligence which will enable them to keep the committee straight and correct their blunders in the matter of outdoor relief.

"What would happen in the event of a council electing a registrar who was no better informed than the committee themselves on the subject the authors of the scheme do not appear to have considered.

"The only other point to which we must refer is the solemn warning uttered by the minority against our scheme of reform, on the ground of its being the result of an inquiry as hasty and perfunctory as that which they describe as Sir George Nicholls's 'celebrated scamper' through Ireland in 1837.

"This criticism comes somewhat badly when accompanied by an alternative scheme prepared by four members of the Commission, two of whom did not visit Ireland at all, while the time spent in the country by the only member who accompanied the Commissioners on their visits was even shorter than that occupied by Sir George Nicholls's visit, which on account of its brevity, has called forth such a severe condemnation from the minority."

THE WELLCOME RESEARCH LABORATORIES, KHARTOUM.

THIRD REPORT.

"THE third report of the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum, contains a wealth of material. The first report, it will be remembered, appeared in 1904, the second in 1906. The new volume is larger and fuller than its predecessors, owing, first, to the growth of the staff; secondly, to the incorporation in it of papers from Sudan officials who have for the most part worked from time to time in the laboratories. In addition, Dr. Leiper, Helminthologist to the London School of Tropical Medicine, describes the helminthes collected by Dr. Wenyon, the travelling pathologist for the year; Mr. Theobald writes on new mosquitos from the Sudan; Dr. Werner of Vienna names the reptiles and poisonous snakes of the Sudan; and Dr. Waterston adds an anthropological report on the late Dr. Pirie's work. Besides contributing papers on trypanosomiasis, piroplasmiasis, and spirochaetosis, the Director (Dr. Balfour) and his assistant (Lieutenant R. G. Archibald, R.A.M.C.) give in a supplement a review on some of the recent advances in tropical medicine. Dr. Balfour also gives, in his capacity of medical officer of health, interesting details of the sanitary condition and public health of Khartoum. Sleeping sickness is dealt with by Captain Howard Ensor and Mr. Archibald; kala-azar by Captains Cummins and Bousfield; protozoology by Dr. Wenyon, lent by the London School of Tropical Medicine; economic entomology by Mr. King; chemistry by Mr. Beam; and medical practices and superstitions among the people of Kordofan by Captain Anderson.

Amidst such a very large mass of material, it is impossible here to discuss more than a few points. Dr. Balfour, in his paper on trypanosomiasis, discusses somewhat tentatively a question which has been gradually forcing itself on the minds of those studying these special parasites. Is it justifiable to multiply species of trypanosomes indefinitely as has been done so much of late by Laveran? We say decidedly not, or at least not until there is better proof that they are really different; in this connexion Dr. Balfour notes (page 29) that "Ehrlich, quoted by Browning, does not think that the immunization and subsequent inoculation advocated by Laveran constitutes a sufficient basis." To the open mind it is quite likely that what have been recently termed *Trypanosoma dimorphon*, *T. pecaudi*, *T. soudanense*, and the supposed new trypanosome recently discovered in Zanzibar, are nothing more or less than varieties of or the same parasite as that of "nagana" (*Trypanosoma brucei*, Bruce's original trypanosome).

Another interesting point crops up in Dr. Wenyon's paper, namely, the interpretation of the changes seen in *Leucocytozoon neavei*, and similar parasites. Dr. Wenyon criticizes the description of the leucocytozoon of the

grey hawk of the Congo, given by Dutton, Todd, and Tobey, contending that they have been misled in following Schaudinn, who was mistaken in his idea of the relations of the several parts of the parasite and host cell. There is little doubt now that Schaudinn, hurrying on his work on the development of halteridium, and in some other directions, without controls, fell into some confusion, and did not recognize that he was dealing with several different parasites, instead of stages in the development of one. The tendency to hurry work, often to get it ready for a report, cannot fail to lead to disaster in the future, and Dr. Wenyon must be congratulated on his pluck in exposing these faulty conclusions.

The other papers, which we are compelled reluctantly to pass over, are all very interesting and useful, but note must be made of the frequency of kala-azar in the Sudan revealed in the articles on that subject; this is a very serious matter for the country, and will have to be reckoned with in the future.

The coloured plates illustrating the part dealing with economic entomology are disappointing. Why Mr. Wellcome did not have them done by Mr. Terzi is difficult to understand, especially when the beauty of that artist's work in the second report is remembered. The photographs are numerous and excellent. Dr. Balfour is certainly to be congratulated on his success in getting together such a series of valuable papers, and also on the very good work he has himself done at the Wellcome Research Laboratories.

A prefatory note states that the review of some of the recent advances in tropical medicine, hygiene, and tropical veterinary science, with special reference to their possible bearing on medical, sanitary, and veterinary work in the Anglo-Egyptian Sudan, by Drs. Balfour and Archibald, contained in the supplement, is intended primarily for medical and veterinary officers stationed in the Sudan; it should, however, prove equally useful to doctors in the other African colonies, and, indeed, in other parts of the world. The matter is arranged alphabetically to facilitate reference. Some papers are quoted very fully, others more briefly, and comments are made on several. To review a review is somewhat difficult, but in turning over this supplement we are struck by the amount of repetition of work that goes on with regard to many subjects, no mention being made of the person or persons who made the original observations. In this way not only are time, energy and opportunity wasted, but the secondary work often passes amongst the uninitiated as original, and is quoted as such. A good example of this is the quotation of Lebrede's work (1905) on the development of filariae in mosquitos. As far as can be judged from the abstract there is nothing new in his work, and his histological technique is a copy of that used years ago, and certainly not invented by him. Very much the same may be said about the paper by Ashburn and Craig on the development of a filaria termed by them *Filaria philippinensis* in *Culex fatigans*. There is no proof that this is a new filaria at all; it is the old story retold of the *Filaria bancrofti* developing in *Culex fatigans*. Drs. Balfour and Archibald ought perhaps not to be blamed, since they only quote the papers as recent, and the reader must judge for himself if he has the capability for so doing. The compilation of this review must have cost the authors much labour and time, but they have this to congratulate themselves on—that it will prove an immense boon to many less fortunately situated than themselves as regards the recent literature of the subjects dealt with.

THE executive of the sixth International Medical Congress, which is to meet at Buda-Pesth from August 29th to September 4th, has issued a comprehensive circular giving particulars with regard to the general sittings of the congress and also as to the proceedings of the sections. The lists of papers which it is proposed to read in the twenty-one sections are very long. Six general meetings of the congress to hear addresses will be held: one of these general addresses will be given by Dr. E. F. Balfour, Director of the Imperial Cancer Research Laboratory. The circular again points out that the hotels in Buda-Pesth will not be able to provide sufficient accommodation, and that it is desirable that those who propose to attend should communicate without delay with the Central Travelling Ticket Office, IV Vigadó-ter 1, Buda-Pesth, Hungary; the office of the Secretary-General of the Congress is at Esterházy-utca, 7, Buda-Pesth.

¹ Third Report of the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum. By Andrew Balfour, M.D., B.Sc., F.R.C.P. Edin., D.P.H. Camb., Director; Medical Officer of Health, Khartoum. London: Baillière, Tindall, and Cox (for Department of Education, Sudan Government, Khartoum). 1908. (Imp. 8vo, pp. 477, 25s.) Supplement by Andrew Balfour, M.D., B.Sc., F.R.C.P. Edin., D.P.H. Camb., Director, and R. G. Archibald, M.B., B.A., M.D., attached to A. A. Pathologist and Assistant Bacteriologist. (Imp. 8vo, pp. 251, 10s. 6d.)

THE

THERAPEUTIC APPLICATIONS
OF RADIUM:

METHODS AND RESULTS.

THE DESTRUCTIVE REACTION CAUSED BY
RADIUM.

[FROM OUR PARIS CORRESPONDENT.]

The destructive action of radium, employed with a therapeutic object, is well known, for when radium was first introduced this action alone was utilized. It is interesting, therefore, to note that Dr. Wickham tries to avoid this destructive action and to limit the cases in which this destruction is necessary. It has been found that in some cases long, even one or two years, after the treatment has ceased, the new-formed tissues have become the seat of telangiectases, a drawback which must be taken into account.

The destructive power of radium may be employed in those cases in which the aesthetic result is of secondary importance and in which, even if telangiectases supervene, the condition is still superior to what existed previously—cases, in fact, in which a destructive reaction is necessary, and when, as in lupus, radium has no selective specific action. In such a case the lesion is of so grave a nature that, if destruction brings about a cure, the few telangiectatic elements which might ultimately appear would be relatively of no importance.

In such cases Dr. Wickham does not hesitate to use strong doses—apparatus, for example, giving radiations of an activity of 500,000, which he leaves applied for five or six hours at a time. In the same way he does not hesitate to act energetically on pigmented naevi which form tumours.

The degree of the destructive action must be regulated according to the depth at which it is to operate. When superficial action is desired the apparatus is applied without a filtering screen, but to obtain a deeper destructive action a screen of medium absorbent power, from a tenth of a millimetre of aluminium to a tenth of a millimetre of lead, is interposed. By using the lead screen the rays of low penetrating power are cut off; those that remain act more deeply, but it is necessary to leave them in contact for a sufficient length of time to bring about destruction not only on the surface but in all the thickness of the tissue. At Dr. Wickham's clinic, at the Radium Institute, a large and fairly deep rodent ulcer was treated as follows: An apparatus, the utilizable activity of which was 500,000, was covered by a filtering screen of lead 1 millimetre thick; this was left in position for twelve consecutive nights from 7 p.m. to 7 a.m. Only a sharp inflammatory reaction was produced, a thick crust formed, and the entire rodent ulcer was involved in the reaction to the very penetrating radiations. When the crust fell off at the end of three weeks the healed surface was excellent and solid. This was a very good result, for the ulcer had previously resisted other methods of treatment; the cure also was very quick, because fifty days after the treatment was started nothing remained of the ulcer.

Drs. Wickham and Degrais have remarked that destructive inflammations produced in the depths of the tissues by the filtration methods, described in the preceding articles in the BRITISH MEDICAL JOURNAL, were repaired much more quickly than superficial destructions caused by the action of the alpha, soft and medium beta rays of weak-penetrating power.

Whatever destructive process is employed, the action must be carefully regulated to avoid the risk of causing radium dermatitis. When the reaction produced by radium is slight, the skin is sometimes restored to a normal condition; and even when this result is not attained, it is rare to have any depression or retraction, so that the method may be applied to the eyelid, nostril, or lip. The drawbacks are the production of a very smooth, uniform, whitish condition of the surface; the occurrence of pigmentation which eventually disappears; or the late appearance of some telangiectasis. The last is the greatest drawback. It would indeed be of small importance if the cure of cancer was in question, but when it is a question of a flat,

superficial, and not deeply-coloured naevus, it calls for careful consideration.

The following is a very striking example of the good effects of the destructive action of radium treated at Dr. Wickham's clinic:

A girl aged 13 had a large tumour of the class of pigmented naevi filling up the depression between the nose and the cheek. This tumour rose above the ridge of the nose, was of very dark colour, and gave the face a repulsive look. It was necessary to resort to the destructive action of radium in this case, since pigmented naevi are not specifically affected by it. A powerful apparatus was applied without any filtering screen, so that an inflammatory reaction with crust formation ensued. Two months later the inflammation had calmed down and the tumour had diminished by half. Two similar treatments were carried out at two months' intervals. The appearance of the face is now normal, the naso-malar depression is normal, and there is no projection above the surface, which is of the colour of *caffé au lait* with a whitish, smooth, cicatricial appearance in two places. There is no retraction of the eyelid which was affected nor of the nostril, so that the result, on the whole, is excellent.

To produce inflammatory reaction the duration of the applications of radium must be prolonged, and no tissue possesses absolute resistance to the rays. If with an application of duration x a certain tissue has resisted, it is sufficient to make an application of $x + x$ to produce irritation. The great difficulty in radium therapeutics is, in fact, to avoid causing destructive effects and to obtain cures without any, or with the smallest possible, inflammatory reaction.

INTERNATIONAL MEDICAL TEMPERANCE

APPEAL, 1909.

It is proposed to present at the twelfth International Congress on Alcoholism, to be held in July, 1909, in London, an international medical temperance appeal to the rulers, teachers, and clergy of all nations. Many of the Continental countries are already well represented by signatories. The promoters hope that Great Britain and Ireland may not be behindhand in the matter, and ask, therefore, that all who are willing to sign will intimate this fact not later than May 12th to Mr. W. McAdam Eccles, M.S., 124, Harley Street, London, W.

APPEAL TO THE MEDICAL PROFESSION OF ALL
NATIONALITIES.

The International Union of Medical Abstinents, founded at the eleventh International Congress against Alcoholism, held at Stockholm in 1907, invites medical men of all nationalities to unite for common action to break the bonds of alcoholism. This appeal is based upon the following main considerations:

1. Many of the physical ills we have to bear are, and will be, the result of the action of alcohol taken in the form of a beverage.
2. To the medical profession falls the special duty of instructing people on these matters.
3. The consequences of the continued use of alcohol, as shown by the history of the human race, are always the same: demoralization, degeneration of individuals, and decadence of nations.
4. Spirituous drinks of any kind are unnecessary for the healthy individual; a desire for them exists only where it has been created artificially.
5. All normal organisms perform their various functions better without alcohol, which is specially dangerous to young or growing tissues.
6. For the welfare and preservation of future generations it is necessary to discontinue the use of alcoholic beverages, as only by widespread abstinence can alcoholism with its consequences be met and restricted.

On these grounds we members of the International Union of Medical Abstinents call upon our medical brethren of all lands to unite with us in the struggle against alcoholism and to sign the following appeal:

APPEAL FROM THE PHYSICIANS OF ALL COUNTRIES.

To all rulers, Governments, representative assemblies, to all tutors, teachers, clergymen, and to all who have at heart the welfare of our race and of future generations:

We, members of the medical profession, believing that by our studies and opportunities of recognizing and estimating the nature and action of alcoholic beverages, we are qualified to offer an opinion, affirm it as our strong conviction that these beverages are not only unnecessary, but are extremely injurious, and that the evils which arise and are ever breaking out from the consumption of alcoholic beverages can, and must be, eradicated and prevented. We believe that young people especially should receive careful and as full instruction as possible, and should be trained by example, as well as pre-

tected by law, to abstain from the consumption of alcoholic beverages.

We are fully convinced that some such step must be taken in order to create a sober world and to promote and ensure the happiness, welfare, and progress of the human race.

(Signed)

Dr. RIDGE (the late) (Enfield).
Dr. OLRIK (Frederiksværk).
Dr. LAITENEN (Helsingfors).
Dr. HOLTSCHER (Pirkenhammer).
Dr. VOGT (Kristiania).
Dr. SANPESON (Stockholm).
Dr. STEIN (Budapest).
H. N. BARNETT, F.R.C.S. (Belfast).
T. H. BICKERTON, M.R.C.S. (Liverpool).
R. H. BLAIRIE, M.D. (Edinburgh).
W. CALWELL, M.D. (Belfast).
W. CARTER, M.D. (N. Wales).
J. G. CLEGG, M.D. (Manchester).
E. MACDONELL COSGRAVE, M.D. (Dublin).
J. DIXON, M.B. (London).
W. MCADAM ECCLES, M.S., F.R.C.S. (London).
Surg.-Gen. G. H. EVATT, M.D. (London).
A. P. FIDDIAN, M.R.C.S. (Cardiff).
R. H. FOX, M.D. (London).
A. P. GOULD, M.S., F.R.C.S. (London).
J. S. GREER, L.R.C.P. (Dublin).
T. W. HAY, M.B. (Newcastle-on-Tyne).
W. F. HAZEL, M.R.C.S. (London).
E. C. HEARNE, L.R.C.P. (London).
SIR VICTOR HORSLEY, F.R.C.S., F.R.S. (London).
T. N. KELYNACK, M.D. (London).
G. B. MCKENDRICK, L.R.C.P. (Glasgow).
J. G. MCKENDRICK, M.D. (Stonehaven).
R. PARAMORE, M.D. (London).
H. J. PATERSON, M.B., F.R.C.S. (London).
Surg.-Major G. K. POOLE, M.D. (London).
A. B. PROWSE, M.D. (Bristol).
V. H. RUTHERFORD, M.D. (London).
T. RUSHBROOKE, M.R.C.S. (London).
J. G. SHARP, M.D. (Leeds).
SIR A. R. SIMPSON, M.D. (Edinburgh).
E. CLAUDE TAYLOR, M.D. (London).
W. B. C. TREASURE, M.D. (Cardiff).
HEYWOOD SMITH, M.D. (London).
D. WALLACE SMITH, M.D. (London).
G. SINS WOODHEAD, M.D. (Cambridge).
J. MACKIE WHYTE, M.D. (Dundee).
H. WILLIAMS, M.D. (Northampton).

SIR ALMROTH WRIGHT AT THE AUTHORS' CLUB.

On April 26th Sir Almroth Wright was the guest of the Authors' Club at a dinner at which some fifty members and their friends were present. Dr. ROBINSON presided, while Mr. CHARLES GARVIE was Vice-Chairman.

SIR ALMROTH WRIGHT in his speech adapted his language and argument to his lay audience, apparently satisfying the minds of his listeners. Bacteria, he said, played the most formidable rôle in the world. They were responsible for epidemic disease, and some conception of the significance of this might be gained from the fact that 1,200,000 lives were lost last year from plague. Next he dealt with some diseases of which we had already got the better, for example, typhoid fever, small-pox, and others. He regarded the epidemic acute diseases as of comparatively small importance, while the chronic diseases which were due to bacteria were the most serious. The forces which acted in regard to these diseases were not yet under control. After some further remarks of a general character, he made an attack on surgery, with especial reference to bacterial disease, contending that the lopping off of a limb to get rid of an infection was as reasonable as it would be to free a garden of weeds by digging up a few spadefuls of earth from time to time. Drugs came in for their share of condemnation, but an exception in their favour was made in the case of malaria, syphilis, and sleeping sickness. Sir Almroth Wright next turned his attention to Nature's machinery for disposing of bacteria. Lady Mary Wortley Montagu in introducing inoculation of the virus of small-pox early in the eighteenth century, marked the first great step in immunization. Then came Jenner's discovery, and the effect of using attenuated microbes was discussed. The generalization of laws with regard to prophylaxis had marked the work of Pasteur. Lord Justice Fletcher Moulton had suggested that as "prophylaxis" was the word used to mean preventing the disease before

infection, the word "phylaxis" might be applied to that prevention which took place after infection, in which the length of the incubation period was made use of, as in rabies. Phylactic inoculations, however, were two-edged methods, and might be as dangerous as they might be useful. The next step was a comparatively small one. This was to attack a local infection before the bacteria had spread beyond a narrow limit, and the infection had been converted into a general one. He assumed that no one would doubt that local infections could be dealt with by immunizing means. He held that the same law must hold good for severe infections as did for mild infections of a local nature. Without describing the processes which produced immunity in detail, he briefly referred to phagocytosis, and stated that Metchnikoff's original claims in this respect had been disproved. In the fluid portion of the blood were chemical substances which formed part of the machinery of immunization. These substances were well defined, although he believed that the list of them was not yet complete. He dwelt on the function of the leucocyte as the wandering cell which picked up the bacteria and digested them. Having lightly outlined his conception of the natural process of immunization by the chemical substances which acted on the invading bacteria, he turned to his own method of artificially increasing the activity of the processes by means of vaccines. In speaking of the diseases to which this method could be applied he divided infective diseases into three classes. First, there were the acute septicæmic diseases, which either caused death or spontaneously ended in recovery. Immunity resulted as a natural process after the attack. Next, there were the localized infections with constitutional symptoms; and lastly, the localized infections without such symptoms. The process of immunity was not set to work in the latter, as was proved by the fact that lupus might last for forty years. These diseases did not cure themselves. They could not be dealt with by sanitation; they could only be properly treated by means of therapeutic inoculations. In concluding, he said that he believed that this method would be the proper one for the treatment of all diseases.

After some remarks by Dr. ALLEN,

Lord Justice FLETCHER MOULTON gave a layman's description of what nature did when the body was invaded by bacteria. Sir Almroth Wright had not troubled to satisfy the medical profession, and there were many members who differed from him, but he believed that in time Sir Almroth's views would be accepted. The swarms of bacteria appeared formerly to have it all their own way, but now it could be shown that myriads of friends were ready to encompass these enemies. It must have appeared to be almost hopeless to fight these numerous microbes, but inasmuch as they were all alive, it was certain that nature must have some way of doing it. This method must be automatic, or else it could not succeed. Nature had a funny way of pulling us through an infective disease such as typhoid. At first the bacteria were not numerous and the patient was not very ill. But later he became more and more ill, and the bacteria increased, until they literally swarmed; and, just when he might be expected to die, he suddenly got better. Nature did not prepare against invasion until the enemy arrived, which was a method not unknown in political life, but which must appear to be a curious method. It was the coming of the enemy which started the preparation. But nature was blind, even if she felt most acutely. She answered the call even of dead bacteria. In prophylactic measures, the countryside was awakened and fully alive; all the police were called out. In localized disease—that was, when there had been invasions of a small area—there were no policemen, and all the hooligans did what they pleased. Since the local force was beaten, vaccine therapy called out the police of other districts, and as these arrived in their masses the lawlessness was quenched and the invaders were thoroughly routed. The trick of offering nature a dead microbe to induce her to exert her protective forces was clever. The speaker concluded by bestowing great praise on the guest of the evening, and prophesying that vaccine therapy would replace the older methods some day.

Mr. BRUDENELL CARTER and Mr. F. GRIBBLE also spoke and Sir ALMROTH WRIGHT replied.

THE BUDGET AS IT AFFECTS THE MEDICAL PROFESSION.

To the average taxpayer the Budget of 1909 is not a little bewildering. This is due partly to the length and discursiveness of the Chancellor's speech—the delivery of which occupied no less than four hours and a half—and partly to the numerous additions which are to be made this year to direct and indirect taxation in order to provide for the huge and, in time of peace, unprecedented increase in the national expenditure. It will probably interest our readers if we attempt to unravel the skein, and to show how far the proposals of the Chancellor of the Exchequer affect medical practitioners, either directly as a class or indirectly as ordinary citizens.

INCOME TAX.

As for the income-tax proposals, so many members of the profession are affected by them that it may be well to explain briefly their purport and effect. By the successive introduction of a scale of abatements, differentiation between earned and unearned incomes, and now a supertax on large incomes, the calculation of the amount of income tax payable by any individual has become a somewhat complicated problem, which a change in the general rate of tax does not help to solve. The following tabular statement shows in the briefest form the effect of the proposals for the current year:

Amount of Total Income.	Abatement Allowed.	Rate of Tax Payable if the Income is—		
		Wholly Earned.	Wholly Unearned.	Partly Earned and Partly Unearned.
£ 160-400	£ 160			
400-500	150	9d.	1s. 2d.	9d. on earned and 1s. 2d. on unearned portion.
500-600	120			
600-700	70			
700-3,000	—	9d.	1s. 2d.	Ditto
2,000-3,000	—	1s.	1s. 2d.	1s. on earned and 1s. 2d. on unearned portion.
3,000-5,000	—	1s. 2d.	1s. 2d.	1s. 2d.
Over 5,000	3,000 at 6d. in the £	1s. 8d.	1s. 8d.	1s. 8d.

A few observations may be made in further explanation of the foregoing table. With regard to total incomes not exceeding £700 the appropriate abatements are allowable primarily from the assessment on the earned income—that is, at the ninepenny rate, and from the unearned income only to the extent, if any, to which the earned income is insufficient to permit the full allowance to be made therefrom. A few examples will make this point clearer:

Amount of Income.			Abatement Allowable.	Net Amount Taxable.	
Earned.	Unearned.	Total.		At 9d.	At 1s. 2d.
£ 200	—	£ 200	£ 160	£ 40	£ —
160	160	320	160	—	160
100	200	300	160	—	140
80	600	680	70	10	600

The placing of the limit of differentiation in favour of earned income at £3,000 was recommended by the Income Tax Committee of 1906, but this recommendation was not adopted in its entirety by the then Chancellor of the Exchequer when framing his Budget of 1907, the relief granted on earned incomes stopping at £2,000. Mr. Lloyd-George has now extended the relief to incomes not exceeding £3,000, but limits it by imposing a higher rate—namely, 1s., on incomes lying between £2,000 and £3,000, instead of 9d., the rate chargeable on earned incomes not exceeding £2,000. All relief on earned income ceases when the total income exceeds £3,000, and from £3,000 to £5,000 the general rate of 1s. 2d. applies to all classes of income alike. When the total income

exceeds £5,000 a supertax of 6d. in the £, over and above the normal rate of 1s. 2d., is to be imposed, the additional tax to be collected by means of a direct assessment on the person liable. This supertax is not to be charged on the total income, but every person liable is to enjoy an abatement of £3,000, and to pay supertax on the excess beyond this amount. Thus, an income of £5,001 will pay 6d. in the £ on £2,001, one of £10,000 will pay on £7,000, and so on.

Before leaving the subject of supertax it is desirable that a misapprehension which has caused needless alarm to many persons should be removed. It has been assumed that the supertax will apply not only to the incomes of individuals, but also to those of firms, companies, societies, etc., and fears have been expressed that the owner of a few shares in, say, a railway company, might in this way be made to bear a share of the supertax. This is a mistake. The Chancellor of the Exchequer has recently stated specifically that the supertax is to apply only to the incomes of individuals, and not to joint-stock companies and other bodies of persons.

This statement is of particular interest to medical practitioners who are carrying on business in partnership. Suppose, for instance, that the profits made by a firm of three persons amount to £5,400, and that each partner takes one-third of the total, and has no other income. Although the total profits exceed £5,000, the share of each partner, which, in this case represents his total income, is under that amount. In these circumstances not only will no supertax be payable, but each partner will be able to claim the benefit of the ninepenny rate, as his total income is less than £2,000. The rule is that the profits of a partnership must be assessed in one sum, but that the rate of tax to be charged on such profits depends on the respective total incomes of the individual partners among whom the profits are divided.

An unexpected but welcome feature of the Budget income-tax proposals, to which reference has not yet been made, is the allowance of abatements for children. These abatements will be granted only to persons whose total incomes do not exceed £500 a year, but subject to this limitation, it is proposed to make an allowance of £10 (tax, at 9d., 7s. 6d.) from the assessment, for every child under the age of 16 years. The effect will be that, together with the ordinary abatement of £160, one child will free an income of £170 from tax, four children will free an income of £200, and eight children one of £240. As this abatement is to be made in addition to all other allowances, a case may possibly occur of a person with an income of £300 having nine children, and paying £50 a year for life assurance premiums, who will be called upon to pay no income tax at all. It may be of interest to note in passing that abatements for children were allowed in Pitt's income tax of 1799. Mr. Lloyd-George's proposal, therefore, has not the merit of novelty.

MOTOR CARS.

In lieu of the existing licences the owners of motor cars are in future to pay according to a graduated scale, ranging from £2 2s. on cars of less than 6½ h.p. to £42 on cars above 60 h.p. "Doctors' cars," said Mr. Lloyd-George, "I propose to charge at one-half these rates," and few persons will be disposed to question the fairness of this differentiation in favour of the profession. The Chancellor also announced a tax of 3d. a gallon "on all petrol or spirits used for motor vehicles," with a rebate of one-half in the case of commercial vehicles. No special mention of the doctor was made in this connexion, and it is doubtful whether he is to be regarded as entitled to the rebate. As, however, the ground for charging him with licence duty on his car at half rates is that he uses it for the purposes of his profession, it would be highly anomalous if the petrol were regarded as used for other than "commercial" purposes.

In endeavouring to estimate the effect of the new tax, which for the purpose of calculation has been taken to be levied at the higher rate (3d.), the factors to be considered are the average distance travelled by the medical man every year, the average rate of fuel consumption by his car per completed mile, and the skill of its driver. As regards the first of these points, a distance of 5,000 miles is commonly assumed to be the mileage traversed by an average medical man in the course of his professional

duties. It represents about 16 miles a day, not including Sundays, and probably therefore does not err on the side of excess.

The amount of fuel required by engines varies very considerably with cars of different makes, and also of course with the horse-power employed. A car, however, of good make and not exceeding about 8 horse-power ought to travel at least 25 miles for every gallon of petrol, and as the majority of medical men who use cars strictly for professional purposes do not buy high-powered cars, an engine of this character is sufficiently illustrative. Of course, high-powered engines consume much more petrol than small cars, and there is no absolute ratio between horse-power and fuel consumption, even in cars of the same make; nevertheless, it may be assumed, for practical purposes, that if an 8-h.p. car of a certain make will travel 25 miles on one gallon, a 20-h.p. car of the same make will travel about 18.

Every item of expense involved by the use of automobiles is liable to be increased by unskilled driving, and fuel consumption is no exception; nevertheless the effect of bad driving is relatively so small that this factor may be left out of consideration and the additional expenditure entailed by the increased duty be put down as about £2 10s. in the case of users of quite small cars, and as about £3 3s. in the case those who use cars of between 16 and 20 h.p. It appears, however, to be intended to collect the tax not from the retail purchasers of petrol, but from the wholesale importers, and it is anticipated that these will increase the retail charges not merely by 3d., but by 4d. or 5d. so as to cover the expense in the way of bookkeeping and capital outlay in which it is alleged they will be involved. Hence the expense to medical automobilists will be considerably higher than the sum just stated, the figures being thus raised to about £3 10s. in the first case, and upwards of £4 4s. in the second. In other words, the price of petrol will rise from the low figure to which it has dropped during the last year or two to that at which it stood when motor-car driving first became at all general.

Medical automobilists have hitherto been taxed partly under the Inland Revenue Act, and partly under the Light Locomotive Act, the precise amount they pay being determined by the weight of the car they use. The new proposal is that the cost of a licence shall depend not on the weight but on the horse-power of the car to which the licence applies, the scale being as follows:

	£	s.	d.
Cars under 6½ h.p. ...	...	2	2
" " 12 h.p. ...	...	3	3
" " 16 h.p. ...	...	4	4
" " 26 h.p. ...	...	6	6
" " 33 h.p. ...	...	8	8
" " 40 h.p. ...	...	10	10
" " 60 h.p. ...	...	21	0
" over 60 h.p. ...	...	42	0

Medical automobilists will pay half these rates, but what these rates will work out to in the case of any given car is not easy to determine. Since one horse-power is merely a capacity to raise a weight of 33,000 lb. one foot in one minute, it seems at first sight as if it should be sufficiently easy to determine the horse-power of any given engine; but in practice this is by no means the case, and such numerous methods of calculating horse-power have been devised, that at present the term "horse-power" tends to be somewhat vague. Inasmuch as purchasers are usually prepared to pay heavier prices for high than low-powered vehicles, the tendency of vendors, if not of manufacturers, has perhaps been to exaggerate the power of the cars of which they have to dispose; but on the other hand, in the case of cars of the class whose claims have always been advocated in these columns, namely, those which have figured well in the reliability trials of the Royal Automobile Club, the horse-power in the case of small cars is commonly under rather than over estimated, owing to the club's rules in respect of trials. What method of estimating horse-power will be adopted for revenue purposes remains to be seen, but there is reason to believe that it will be that of the club in question. Its method has been reduced to the formula:

$$D^2N = H.P.$$

in which the divisor 2.5 is a constant, D the diameter of the cylinder, and N the number of cylinders. In the case

of a car with four cylinders, each 4 in. in diameter, the calculation would be:

$$\begin{aligned} H.P. &= 4 \times 4 \times 4 \times 0.4 \text{ (which equals } \div 2\text{)} \\ &= 64 \times 0.4 \\ &= 25.6 \end{aligned}$$

and such a car would be classed as under 26 h.p.

It has been objected that this formula leaves out of consideration the length of the piston stroke; but this is not truly the case, because it is based on the power output of normally-proportioned engines, and departures from the normal in point of stroke length are accompanied by so many disadvantages that in the long run they will not be adopted. The actual power of an engine may be increased by adding to the length of its stroke, but such increase causes jerkiness and vibration, and the aim of all constructors of high-powered cars is to eliminate vibration, and thereby increase comfort. On the other hand, abnormal length of piston stroke is not uncommon in small cars, because manufacturers desire to make them as speedy as possible in proportion to their size, and their users are prepared to put up with a certain amount of vibration. Hence it may very well be that those who possess cars of 10 to 16 h.p. may be pleasantly surprised when their cars come to be measured for revenue purposes.

In any case it would not appear that many medical automobilists are likely to pay more in the way of car licences under the new arrangement than under the old, and many of them may pay less. A car of 10 or 12 h.p. commonly weighs from 11 to 15 cwt., and the owner at present pays £2 2s. In future he will pay only 31s. 6d., or less than at present: while those using 16-h.p. cars will only pay the same amount as the driver of a brougham or victoria—namely, £2 2s. Above 16 h.p. the rise in the tax is considerable, but even those who own cars over 20 h.p. will only pay a guinea more than now.

OTHER IMPOSTS.

The death duties are to undergo revision, and the estate duty on all estates exceeding £5,000 will be considerably increased, estates of £1,000,000, and upwards paying the maximum rate of 15 per cent. Stamp duties on the transfer of real property will be doubled, and certain other stamp duties will be considerably increased. Taxes on spirits are to be increased by 3s. 9d. a gallon, and the tax on tobacco is to be raised 8d. a pound. Moreover, a beginning is to be made with a sweeping measure of land taxation. This proposal provides for three separate but connected taxes, namely, a duty of 20 per cent. on future appreciation in the capital value of land, a reversion duty payable when leases fall into possession, and a duty on undeveloped land. These imposts will directly affect the medical practitioner only in so far as he may be the owner of property and in his work of making provision for any family he may leave behind him. They are, however, capable of almost unlimited extension, and may ultimately lead to the shifting of the burden of local rates and Imperial taxes from houses and buildings to the land or sites on which they stand. It will be time enough to deal with this aspect of the question of land taxation when these wider proposals are about to become an accomplished fact.

It is somewhat unfortunate, too, that Mr. Lloyd-George, in his eagerness to find a "new hen-roost to rob," should have imposed an additional duty of 3s. 9d. per gallon on proof spirit, an increase which will materially affect the price of many medicines, especially tinctures. The matter is, we believe, under consideration of pharmacists' associations, who consider that the manufacture of medicine should be subject to a special rebate. The increase in the cost of medicines will, as is pointed out by a correspondent, make contract medical practice at anything like present rates all but impossible. In this, as in other ways, although the Budget has a socialistic basis, it is the poor on whom the burden of the new taxation will ultimately fall.

AN OMISSION.

In conclusion, we regret that in framing his Budget the Chancellor of the Exchequer has not availed himself of the opportunity to impose a tax on patent medicines of a much more onerous character than the existing impost. In our judgement there could scarcely be a fitter subject for taxation, while the enormous quantities of such medicines which are sold annually render it certain that

the Revenue would benefit considerably from such a tax. Mr. Lloyd-George, however, has elected to go elsewhere for his money, and it now remains for him only to obtain the consent of Parliament to his proposals for them to become law.

EGYPT AND THE SUDAN IN 1908.

The reports of Sir Eldon Gorst, British Agent and Consul-General, on the finances, administration, and condition of Egypt and the Sudan in 1908, were issued on May 4th. In the opening passages the administrative difficulties caused by the agitation against the British occupation are discussed, and must be borne in mind in estimating the rate of progress.

EGYPT.

The growth of the population of Egypt is greater than that of most European countries, with the exception of Germany, and exceeds that of India. The population enumerated by the census was 11,189,978; nomad Arabs could not be enumerated, but an estimate obtained from their chiefs placed their number at 97,381, giving a total population of 11,287,359. The growth of the population in Cairo and Alexandria has been specially rapid.

The project for the drainage of Cairo recommended by Sir William Garstin, formerly adviser to the Ministry of Public Works, and by the Director-General of the Public Health Department, has been approved, and the works will, it is anticipated, be commenced at an early date, but will take some years to complete. With regard to the water supply, a simple method of removing iron and manganese from the Rod-el-Farag supply has been found efficient, but the water still remains much harder than that of the Nile. The discussion on this point and also as to the permanence of the supply and its protection from pollution is still proceeding.

Hospitals.

The twenty-one general hospitals in Egypt contain 2,153 beds; the in-patients in 1908 numbered 33,241, an increase of a little more than 2,000 on the previous year. There were 181,580 out-patients, an increase of over 16,500. In order to bring medical aid within the reach of the more remote villages, the sanitary department is gradually instituting fully-equipped dispensaries and first-aid establishments under the direction of the local medical officer. There are now 48 such dispensaries, and the total number of patients attending them in 1908 was 38,000, an increase of 30 per cent. over the previous year. The wealthier inhabitants continue to show their interest in the foundation of hospitals, and during the year a considerable sum was subscribed to endow a hospital at Mellawi, in Upper Egypt.

EGYPTIAN OPHTHALMIC HOSPITALS.

The travelling ophthalmic hospitals instituted through the generosity of Sir Ernest Cassel have now become a branch of the Public Health Department. The number of patients treated during 1908 was 7,764, but 10,445 were refused on account of lack of accommodation. Sir Eldon Gorst considers it very desirable to institute an organized system for the examination of the eyes of school children, and calls attention to the statement of Mr. MacCallan, Chief Inspector of Ophthalmic Hospitals, that in one school he visited 22.6 per cent. of the pupils had their eyesight permanently depreciated, while 37.5 per cent. had such defective vision that they were unable to attain even the low standard required for admission to the clerical ranks of the Egyptian Civil Service. The permanent eye hospital at Tanta was opened last November. At Assiout the inhabitants have subscribed £E5,000 for the construction of an eye hospital, and at Mansourah a local notable has given £E5,000 for a similar purpose. The Government has undertaken to maintain all hospitals constructed by private subscription.

Lunatic Asylums.

The extension of the Abbassieh Asylum was continued, and a new prisoners' block, a female section, and other minor additions will be ready for use this year. Eventually the asylum will provide accommodation for 1,100 inmates. The asylum in the course of erection at Khanka, intended to be an agricultural settlement for chronic and mild cases, will, it is hoped, be ready in two or three years

to receive 300 inmates. Among the patients admitted to the Abbassieh Asylum, hashish was assigned as the cause of insanity in 8 per cent., as compared with 14 per cent. in the previous years. The police displayed considerable zeal in raiding hashish dens, gambling houses, and unlicensed liquor shops, and as a result 1,908 establishments where hashish was used were definitely closed, and it would appear that an efficient coastguard service, which is at the present time almost entirely occupied in preventing the smuggling of hashish, coupled with strict police measures in the towns, has materially limited the opportunities for indulging in this lamentable habit.

Plague and Cholera.

The number of cases of plague was 1,511, distributed over 142 centres of infection; the corresponding figures for 1907 were 1,253 in 107 centres. The infection was introduced nine years ago, but until 1906 was practically confined to the Delta and Middle Egypt and was of the bubonic form. When Upper Egypt was invaded the disease took the very fatal pneumonic form. Special measures were organized in the four southern provinces dealing with the outbreaks, and wherever early information was obtained cases were quickly controlled, as a rule within the limit of the period of incubation, but in villages where the occurrence of the disease was concealed much more energetic action was necessary. The most difficult task of the officers of the sanitary department is to overcome ignorance and prejudice with regard to giving early information.

Only a few cases of cholera occurred in the quarantine camp at Tor; Egypt itself was not invaded.

Village Barbers.

On this subject Sir Eldon Gorst makes the following observations:

The office of village barber is an institution of great antiquity in Egypt. Without going into this functionary's history, it may be said that his duties consist principally in performing vaccination and various minor operations, sending in returns of births and deaths, and furnishing other information to the district authorities. He obtains no remuneration from the Government, but receives small fees from his clients, and his interests are closely bound up with the goodwill of the village Omdeh. The functions and responsibilities which he exercises have not contributed to independence of character, or to a sense of duty to the superior authority which would be furnished but does not pay him. The rank and file of this class are consequently of indifferent quality, and really trustworthy men are few and far between. Last year the experiment was made of utilizing the village barbers in connexion with the special measures for dealing with pneumonic plague in Upper Egypt, and a small sum was devoted to paying a few selected barbers in each province, in order to obtain more speedy and trustworthy information than would be furnished by the villagers, and to encourage the early notification of suspicious deaths or illness in the barber's village or its neighbourhood. In most cases the offer of a small fixed salary was sufficient to obtain all that was required. Reports from the provincial authorities are unanimous in testifying to the advantage of the system, and in recommending its further extension on a permanent basis. It must be admitted, however, that, apart from financial considerations, the general mass of the barbers are not as yet worthy to be taken into the Government service. The majority are illiterate, many are inefficient, and in some cases men of indifferent character have been appointed, in the absence of more desirable candidates.

Egyptian University.

The Egyptian University was inaugurated by the Khedive in December last. The chief practical objects to which its efforts are at present directed are to form a professorial body capable of lecturing in Arabic on the principal sciences taught in Europe, and to bring before the Egyptian public the latest developments of science and literature in Europe. Of the 754 students originally entered 678 were Egyptians, of whom 503 were Mohammedans; among the students were 31 women. The income of the university during the year was £E27,000, of which amount £E16,000 was provided by private generosity.

School of Medicine.

During the past year 50 students joined the school, and 7 obtained their diplomas—4 in medicine and 3 in pharmacy. There are now 190 students in attendance. Owing to this large increase, the staff finds great difficulty in carrying on the work efficiently, and when the next budget is prepared this question will require careful consideration.

In 1903 two graduates of the school were sent to England to be trained as assistant professors, and arrangements were made for sending two others early this year. The importance of exercising great care in the choice of men who are to be trained in Europe at Government expense as future teachers at the School of Medicine is self-evident. The safest method it is considered is to test the most promising at laboratory work before a definite selection is made, and thus to make certain of their possession of such essential qualifications as the power to exercise authority over students, willingness to accept responsibility, and desire to acquire knowledge for its own sake.

SUDAN.

Though during 1908, the tenth year of the reoccupation of the Sudan, there has been unrest among the tribesmen, and fresh proof that Mahdism as a faith is not extinct, and in spite also of a deficit in the revenue, there is evidence of increasing prosperity. The population of the country is not known, but the significant fact is mentioned that the number of children of 10 years and under is very large, whereas there are comparatively few youths and girls between the ages of 10 and 20; this is held to prove that the inhabitants are naturally prolific, and that a period of continued peace will repair the ravages made by war and pestilence.

Public Health.

The Sudan was free from any serious epidemic of infectious disease during 1908, but Dr. Christopherson reports minor outbreaks of cerebro-spinal meningitis, infectious pneumonia, small-pox, chicken-pox, diphtheria, and dengue, and there have also been isolated cases of kala-azar, Malta fever, and blackwater fever. At least 5 cases of kala-azar have been treated in the Khartoum hospitals, and Sir Eldon Gorst records with regret the death of Captain Craik from this disease. A medical officer is to study the disease in Kassala, where most of the cases have originated.

The number of in-patients treated in all the institutions in the Sudan was a little over 7,000—about the same as last year. The number of out-patients was 121,214, an increase of over 27,000 as compared with the previous year. The new hospitals at Port Sudan and Atbara are practically completed, and the new Khartoum Hospital will be ready for occupation during the present year. Dr. Christopherson considers that attempts to train native women in nursing have so far proved a failure, and that Arab and Sudanese boys make better hospital attendants.

The system of selling quinine at the post-offices seems to be appreciated, as over 6,000 boxes were sold during the year.

LITERARY NOTES.

A MEETING of the Council of the Italian Society of the History of Medicine and the Natural Sciences was recently held in Rome. It was decided that the proceedings of the Congress of the society held at Faenza should be printed. This year the society will hold its annual meeting at Venice.

At the prize distribution to the 2nd Home Counties Field Ambulance Royal Army Medical Corps commanded by Major A. R. Henchley, for their first year's work under the new territorial scheme, on Easter Monday, the Mayor of Canterbury referred to the part taken by East Kent in national defence in former days. He said that in the days of the Armada, the levies of East Kent were hastily assembled at Northbourne. The city of Canterbury sent 200 of her own soldiers with twenty trained shot, all fully equipped at the city's expense, and led by one of her own aldermen. The records might still be read in the old Corporation books how the city also ordered new drums and two new "ensigns" of the old city colours, red and white, at the public charge of several pounds. It is interesting to note that the next heaviest payment was for unguents for the surgeon of the company and a "goodly chest to bestow his instruments of surgery." Fortunately they were not required, but it was probably not generally remembered, even in Canterbury, that it was this particular array which Macaulay had in his mind in his famous ballad of the Armada:

With loose reign and bloody spur rode inland many a post.
With his white hair unboughtened the stout old Sheriff comes.
Behind him march the halberdiers, before him sound the drums.

Later it was recorded that during the wars in the Low Countries Dr. John Golder charged £44 5s. for attendance on 42 English for 59 days, and the apothecary charged £83 18s. 7d. for medicines advised by Major Henchley's predecessor of that period.

H. K. Lewis has in preparation a new book entitled *Immunity and its Applications in the Diagnosis and Treatment of Infectious Diseases*, by Dr. D'Este Emery, the author of *Clinical Bacteriology and Haematology*, a work which has reached its third edition in Lewis's Practical Series. The book aims at giving a clear outline of the main facts and theories in regard to immunity, and is not written in support of the view of any particular school. It is intended mainly for students commencing the study of the subject, or for practitioners wishing to learn the scientific basis and exact mode of application of the modern methods of diagnosis and treatment of the infectious diseases. The book also contains a Glossary of Terms—a very important feature in view of the new vocabulary which the study of the subject has called into existence—and an extensive Bibliography. The same firm has almost ready for publication the lectures delivered at the University of London in February, 1909, by Dr. Louis C. Parkes, under the trust of the late Sir Edwin Chadwick. The official title of the course was "The Medical Aspects of Recent Advances in Hygiene as connected with Sewering," but Dr. Parkes has called the book *House-Drainage, Sewerage, and Sewage Disposal in Relation to Health*. Mr. Lewis has just issued a fourth edition of *Binnie's Operative Surgery*. The section on the extremities has been omitted, but in spite of this the revisions and extensions increase the number of pages and the illustrations as compared with the third edition.

Messrs. Rebman Ltd. will publish this month a work entitled *Progressive Creation*, by the Rev. Holden E. Sampson. It deals with the origin of life, of being, of nature and forms, of evil, and of the earth and heavenly bodies, as to which the author is said to propound a new theory.

The *Journal of Pharmacology and Experimental Therapeutics* is the title of a new periodical issued by the Williams and Wilkins Publishing Company, Baltimore. The editor is John J. Abel, Professor of Pharmacology in Johns Hopkins University, with the following as associate editors: A. C. Crawford, Pharmacologist, U.S. Bureau of Animal Industry; C. W. Edmunds, Professor of Materia Medica and Therapeutics, University of Michigan; D. L. Edsall, Professor of Therapeutics and Pharmacology, University of Pennsylvania; S. Flexner, Director, Rockefeller Institute for Medical Research; R. A. Hatcher, Professor of Pharmacology, Cornell University Medical College; C. A. Herter, Professor of Pharmacology, Columbia University; Reid Hunt, Chief of Division of Pharmacology, U.S. Public Health and Marine Hospital Service; A. S. Loevenhart, Professor of Pharmacology, University of Wisconsin; S. J. Meltzer, Head of Department of Physiology and Pharmacology, Rockefeller Institute for Medical Research; Franz Pfaff, Professor of Pharmacology, Harvard University; A. N. Richards, Professor of Pharmacology, North-western University; Torald Sollmann, Professor of Pharmacology, Western Reserve University; G. N. Stewart, Professor of Experimental Medicine, Western Reserve University; C. B. Wallace, Professor of Pharmacology, University and Bellevue Hospital Medical College. The journal will be carried on with the collaboration of the members of the recently organized Society for Pharmacology and Experimental Therapeutics. At least six numbers of the journal will be issued yearly, and will constitute a volume of not less than six hundred or more than six hundred and fifty pages. Among the papers that will appear in early numbers of the journal are:—John J. Abel and L. G. Rowntree: On the pharmacological action of some phthalins and their derivatives, with especial reference to their behaviour as purgatives. A. C. Crawford and H. V. Honn: Some convenient laboratory apparatus. G. Dock: Observations on the effect of ipecac on intestinal amebae. C. W. Edmunds and W. W. Hale: Studies in tolerance: nicotine, lobeline, and strychnine. W. W. Ford: On the toxicity of *Amantia spreta*, *A. strobiliformis* and other *Amantia* whose toxic properties have remained undetermined. W. W. Hale: The effects of caffeine and sodium bicarbonate upon the toxicity of

acetanilide. A. S. Loevenhart and W. E. Grove: On the pharmacological action of certain substances containing physiologically active oxygen, together with some therapeutic suggestions as to this class of substances. S. J. Meltzer: A study of the comparative toxicity of the chlorides of magnesium, calcium, potassium, and sodium. T. Sollmann and Paul J. Hanzlick: The absorption of phenol from the alimentary canal. G. N. Stewart: The mechanism of haemolysis in its more general aspects. C. Voegtlin and S. Strouse: Studies on the iodine-containing principle of the thyroid gland. I. Pharmacological action and therapeutic behaviour of diiodotyrosin.

Medical News.

DR. JAMES MACLACHLAN, Provost of Dornoch, has been for the third time re-elected Chairman of the Licensing Court of the County of Sutherland.

THE first of the course of eight lectures on the structure and functions of the central nervous system in the Physiological Institute of University College, by Dr. W. Page May, will be given on Tuesday next, at 5 p.m., and will be continued on subsequent Tuesdays. The lectures are open to students of the University of London and to qualified medical men on presentation of their card.

At the meeting of the Zoological Society of London on April 27th Mr. R. H. Burne, F.Z.S., exhibited a series of specimens from the Museum of the Royal College of Surgeons, showing (1) the different mechanisms for the movement of the nictitating membrane, (2) the coarse anatomy of the *Tapetum lucidum*, and (3) the organ for elevating the eyes in the plaice.

At a general meeting of the Medico-Psychological Association to be held at 3 p.m. on Tuesday, May 18th, at 11, Chandos Street, London, W., a resolution will be proposed expressing the view that legislation to amend the Inebriates Act is urgently necessary. Dr. John Turner will report his observations on the blood pressure and vascular disease in the female insane.

PROFESSOR TAAV. LAITINEN, M.D., Professor of Hygiene, and Director of the Hygienic Institute in the University of Helsingfors, and Chairman of the Finnish National League of Health, will deliver the Third Norman Kerr Memorial Lecture on July 20th in the lecture theatre of the Victoria and Albert Museum at 8 p.m. The subject will be "The Influence of Alcohol on Immunity."

THE Lord Advocate, the Right Hon. A. Ure, K.C., M.P., will take the chair at the dinner of the Glasgow University Club, London, at the Trocadero Restaurant, on Tuesday, May 25th. Members who intend to be present or to introduce guests are requested to give notice as early as possible to the honorary secretary, Mr. W. Craig Henderson, 2, Paper Buildings, Temple, E.C.

At a provincial sessional meeting of the Royal Sanitary Institute, to be held at the Guildhall, Norwich, on Saturday, May 22nd, at 11 a.m., Mr. A. E. Collins, City Engineer, will open a discussion on the special features of the Travis hydrolic systems of sewage tanks constructed for Norwich. In the afternoon visits will be paid to the isolation hospital and to the sewage tanks.

THE annual meeting of the Invalid Children's Aid Association will be held, by kind permission of Lord and Lady Newlands, at 16, Grosvenor Place, S.W., on Tuesday, May 25th, at 3 p.m. Field Marshal Lord Grenfell will preside, and the Bishop of Stepney, Sir Alfred Fripp, Mr. How, and Miss Tita Brand will be among the speakers. Tickets of admission can be obtained on application to the Secretary at 69, Denison House, Vauxhall Bridge Road, S.W.

A BILL has been introduced into the New York State Legislature providing for the appointment of a board of inebriety for the City of New York and the establishment of an inebriate hospital, with an industrial colony, in which persons arrested for intoxication may be detained and scientifically treated. The measure was framed by the standing committee on hospitals of the State Charities Aid Association.

THE eleventh meeting of the Departmental Committee appointed by the Lord President of the Council to consider the working of the Midwives Act was held at the Privy Council Office on May 5th. Mr. Almerio W. Fitzroy, the Clerk of the Council, presiding. Evidence was tendered on behalf of the British Medical Association by Mr. J.

Smith Whitaker, M.R.C.S., L.R.C.P., Medical Secretary of the Association; Mr. C. E. S. Flemming, M.R.C.S., L.R.C.P., Bradford-on-Avon; Dr. L. S. McManus, Wandsworth; and Mr. J. H. Taylor, M.B., Salford.

THE International Tuberculosis Society, the President of which is Professor Lancereaux, offers a number of prizes for essays on tuberculosis. One prize is of the value of £12, another of £5, and two of £2. The society also offers two gold, and three silver, medals, each with a diploma of honour. The awards will be made in May, 1910. The competition is open to persons of all nationalities. Essays must be sent in a sealed envelope to Dr. Georges Petit, General Secretary of the Society, 51, rue de Rocher, Paris, before January 1st, 1910.

DR. J. BISSET-SMITH, who is leaving Ashton-under-Lyne after practising there for over thirty years, was recently presented with a testimonial consisting of an illuminated album and a gold watch with chain and pendant, the watch being suitably inscribed; a silver purse and card case combined was at the same time presented to Mrs. Bisset-Smith. Councillor John Wilson said that Dr. Bisset-Smith's work in connexion with educational institutions, town council, police, and infirmary, was well known.

THE annual general meeting of the Poor Law Medical Officers' Association of England and Wales will take place on July 6th, at the Guildhall, London, and a conference will there be opened on the report of the Royal Commission with regard to Poor Law medical relief. The Lord Mayor has promised to open this conference at 11 a.m. in the Council Chamber of the Guildhall. All Poor Law medical officers in England and Wales are invited to attend, and the Honorary Secretary will be glad to hear from any desiring to read papers at this conference. Abstracts of such papers should be sent to the Honorary Secretary, Dr. M. Greenwood, 243, Hackney Road, London, N.E.

THE sixth annual report of the Knightwick Sanatorium of the Worcestershire Association for the Prevention of Consumption shows that this institution has now accommodation for 30 patients—16 men and 14 women—a number still below the requirements of the county; during the year 103 patients were treated. It is a significant fact that 20 per cent. of the candidates for admission were rejected by the medical referees as unsuitable, owing to the advanced or extensive nature of the disease. The results of the six years' work since the sanatorium was opened are satisfactory, in that of the early cases treated 88 per cent. remain in good health and 85 per cent. are at work.

THE usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on April 16th. Dr. de Havilland Hall in the chair. The records of the business during the spring show as usual a large number of sickness claims, but though very numerous they have been nearly all of short duration, and the total sick pay disbursements have accordingly not much exceeded the amount expected. The principal business of the committee was the examination of the drafts of the quinquennial valuation and the annual report. The figures of the latter show that the business of the society during the year 1908 was very satisfactory, a large increase having been made both in the number of the members and in the financial reserves. Prospectuses and all other particulars can be obtained on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

At the meeting of the Royal Meteorological Society on April 21st, Mr. Baldwin Latham, M.Inst.C.E., read a paper on percolation, evaporation, and condensation, giving the results of his observations at Croydon during the last thirty years. Two percolation gauges were used, both exactly a superficial yard in area: each contained a cubic yard of natural soil, one of chalk and the other of gravel. The average annual amount of percolation through the chalk gauge was 10.84 in. and through the gravel gauge 10.34 in. The average yearly rainfall was 25.46 in. It appeared that the rate of percolation was governed by the rate of rainfall, for when once the gauges had become sensitive by being thoroughly wetted, the rate at which rain percolated depended entirely on the quantity of rain immediately falling. The evaporator used for determining the evaporation was a floating copper vessel 1 ft. in diameter supported by a life-buoy ring, connected by four arms with the evaporating vessel, the whole being floated in a tank 4 ft. internal diameter containing about 3 ft. depth of water. The average annual amount of evaporation by this gauge was 18.14 in., and the average amount of condensation was 0.36 in.

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SATURDAY, MAY 8th, 1909.

OPHTHALMIA NEONATORUM.

It will be remembered that at the annual meeting of the British Medical Association in Exeter in 1907 the Section of Ophthalmology, having discussed a paper by the late Mr. Simeon Snell, relating the results of an inquiry into the cause of blindness in 350 inmates of a blind school, adopted a resolution expressing the opinion that the time had come for the British Medical Association to take action for the prevention of ophthalmia neonatorum. The Council of the Association accordingly appointed a special committee to investigate and report upon the subject, and subsequently, upon the recommendation of the committee, asked the Ophthalmological Society, the Royal Society of Medicine—through its Sections of Medicine and Gynaecology and Diseases of Children—and the Society of Medical Officers of Health to appoint additional members, while at the same time the co-operation of the Central Midwives Board was invited. The committee thus constituted, consisting of representatives of ophthalmology, obstetrics, public health, medicine, surgery, and pathology, with Mr. Sydney Stephenson as chairman, has presented a valuable and voluminous report, which with its appendices is published in the SUPPLEMENT for this week.

It will be at once seen in what a painstaking and thorough manner the committee has discharged its duties. Medical practitioners and well-trained nurses will not need to have pointed out to them that ophthalmia neonatorum is a terrible scourge, which even now accounts for upwards of 10 per cent. of all cases of blindness in this country, while at least one-third of the inmates of blind schools are there because of this disease. In spite of facts of this kind which have been published from time to time in the reports of institutions for the blind appearing in the daily press, the greatest ignorance still prevails among the general public. The committee will deserve the gratitude of the nation if it succeeds in making widely known the deplorable results which ensue when the disease is improperly or inadequately treated.

There can be no doubt that the first recommendation of the committee—to the effect that ophthalmia neonatorum should become a notifiable disease—ought to be carried out, for not only would it lead to proper treatment of cases occurring in the practice of midwives, but it should educate the local sanitary authorities to recognize that the malign influence of the disease is not one whit less grave in its social effects than that of many of the maladies now included in the list.

How often do we hear it said with justifiable admiration and pride that an elderly person has had sight restored through the successful removal of a cataract, for this is one aspect of blindness which specially appeals to the lay mind, although it only means that a person whose life is well-nigh spent is enabled to see for the few more months or years which remain. Of how

much greater importance is it for a child on the threshold of life to be saved from spending the whole of it in a world he has for ever been debarred from seeing! Every set of figures, no matter from what source they are collected, shows that ophthalmia neonatorum is responsible for a great number of cases of blindness, and the profession and the public alike must realize that it is a disease particularly amenable to treatment if only appropriate remedies are applied in time. Once let that short time pass and all may be lost.

The late President, whose death we have so recently had to deplore, and who was a distinguished member of this committee, found that in the Sheffield School for the Blind no fewer than 42.36 per cent. of the inmates were there from the direct results of this disease. In the London County Council schools for the blind Mr. Bishop Harman found that 36.36 per cent. of the pupils had lost their sight from ophthalmia neonatorum; and, as he added, were it not for certain fallacies the percentage would exceed 40. Others have recorded similar results.

With regard to the prevention of the disease, the methods to be adopted may be classed under two heads—administrative and medical. Obligatory notification is already adopted in many European countries, while in others, such as Great Britain, the machinery is all in readiness, and it requires little more than a stroke of the pen to include it among those which are already on the list. If this were done it would arouse public interest, it would secure proper treatment for the patient's eyes at the earliest possible moment, others would be safeguarded from infection, and exact statistics would become available.

It has been objected that notification would imply a slur on the parents' morality, and it is true this might be so if the gonococcus alone was responsible for all cases of ophthalmia in the newborn. This is not the case, for a fair number are due to other organisms; but even if this were the case, surely we have no right to neglect precautions which will certainly prevent blindness because we are afraid of casting a slur on the parents.

Every one should be instructed in the awful risk which is run when the disease is either not recognized or not treated adequately. No acute disease, perhaps, is so easily cured as is ophthalmia neonatorum. So much is this the case that an ophthalmic surgeon would consider it little short of a disgrace, either to himself or to those who were supposed to carry out his directions, if an eye were lost which had a clear and unulcerated cornea when he first saw it. In the case of children sufficiently robust to give them a reasonable chance of reaching adult age the eyes are saved in probably 99 per cent. or even more.

Whether Credé's prophylactic method of instilling a 2 per cent. or a 1 per cent. solution of silver nitrate in every child's eye directly after birth should be adopted in all cases is a matter which admits of some discussion. A large number of cases treated in fifteen Continental maternity hospitals before the introduction of this method yielded an average of 4.05 per cent. of cases of ophthalmia neonatorum, afterwards the percentage fell to less than 1. It is probably at the present time the best prophylactic measure known, and the committee states its opinion that in lying-in hospitals and departments maintained at the public expense the routine employment of a 1 or even a 2 per cent. solution of silver nitrate is amply justified, since the public has a right to protect itself against the burden of preventable

blindness. The committee also recommends that in extern hospital and Poor Law practice the same solutions should be employed as a matter of routine. With regard to private patients, the committee considers that some measure of prevention, be it aseptic or antiseptic, should be adopted in the case of every infant born alive, and that when earlier infants of the same family have developed ophthalmia the application of an efficient antiseptic to the eyes as soon as possible after birth appears to be unconditionally indicated. The committee states that "cases of ophthalmia without adequate treatment have been found to occur amongst cases attended by medical practitioners, as well as amongst those attended by 'midwives,' and it cannot be doubted that every possible means should be taken to ensure that all medical men, all nurses, all mothers, and in fact every one who is likely to be employed in attending a woman in her confinement, should be able to recognize the disease at once, and to know the importance and the nature of the steps which should be taken, without the least delay, so soon as any discharge is seen in the baby's eyes, or the fact that the mother has a leucorrhoea is recognized. There can be little doubt that this necessary knowledge would more speedily become general if the disease had to be notified. The result would be that hundreds and thousands of children would have eyesight who are at present doomed to permanent blindness, while the State and the charitable public would be spending pence where they are now spending pounds in keeping up institutions, and in keeping those who through blindness are incapable of maintaining themselves.

The valuable work done by the committee, under the able chairmanship of Mr. Sydney Stephenson, can be appreciated by any one who will read the report, which is full of interest not only to the medical profession, but to the public at large.

IMMUNIZATION AND RESPONSE IN INFECTIVE DISEASES.

In a paper recently read before the Royal Society of Medicine, and also published with additions in book form,¹ Dr. E. C. Hort discusses and criticizes the present treatment of infective diseases by means of bacterial vaccines. His thesis is that, whereas the production and maintenance of immunity to infection are generally considered to be questions of protection against the invading parasites and their products only, this interpretation ignores factors such as autolysis and other anomalies of cell metabolism, and the toxic products of those anomalies.

The direct methods at present employed for fighting bacterial diseases—the use of antitoxins, antiserums, and bacterial vaccines ("hetero-inoculations," as Dr. Hort names them)—are therefore on this hypothesis to be considered as partial measures; for the full defensive forces of the body to be called into operation, the preferable method would be to combine immunization to bacteria and their products with immunization to the products of altered cell metabolism and of tissue disintegration—"somatic products," as these may be termed. There can be little doubt that in spontaneous cure of infective diseases this actually takes place; in croupous pneumonia, for example, the autolysis of the exudate,

which is performed by somatic products, namely, enzymes, brings about resolution.²

Dr. Hort believes that by "auto-inoculation," in which the patient is inoculated with his own products, bacterial and somatic, Nature's methods may in many instances be more closely imitated than by hetero-inoculation. It has been shown by Sir Almroth Wright and his co-workers that in tuberculous disease for example, movement, active or passive, is accompanied by an auto-inoculation, as judged by alterations in the opsonic index. Wright admits that auto-inoculation presents some advantages over hetero-inoculation—for example, the correct vaccine must inevitably be employed, and the lymph at the site of a local infection impregnated with bacterial products is replaced by fresh lymph; but he considers that these advantages are outweighed by disadvantages, such as the impracticability of adjusting the dose of bacteria and their products, the possible dissemination of the infecting organism, etc.³ In these conceptions Wright considers bacteria and their products only, and does not appear to take into account the possibility that the somatic products derived from the tissues of the infected body play a part in the production of the disease syndrome.

The evidence that response in a bacterial infection is due both to bacteriotropic and to cellulotropic substances must necessarily be indirect, but a consideration of the following facts renders this view, to say the least, extremely probable. Various forms of cell degeneration are accompanied by the liberation of proteolytic ferments: albumosuria is not infrequent in extensive suppuration, in pneumonia, and in malignant disease in which the growths are undergoing softening and necrosis. The anaemia and cachexia of malignant disease in the early stage may with great probability be attributed to the action of the products of autolysis of the new growth. Ferments as a general rule give rise to pyrexia, and the intermediate products of ferment action are likewise pyrogenetic. In the autolysis of nerve substance choline is liberated, and may readily be converted into the highly toxic neurin. In extensive burns, in which death rapidly follows before the supervention of sepsis degenerative changes are found in the organs identical with those met with in acute infections,⁴ the cell destruction resulting from the burn being thus followed by the development of somatic products possessing toxic action comparable to that of a bacterial toxin. The fluid of an abscess is rich in tryptic ferments, and the normal antitryptic action of the serum has been shown to be increased in various infections indicating the liberation of tryptic ferment with a corresponding response, and the increased formation of antitrypsin. Therefore Dr. Hort is probably right when he maintains that the indications of response on the part of the body to an infection are indications of response not only to bacterial, but also to somatic products.

Conceding that vaccine therapy has achieved notable victories, at the same time it sometimes fails—how often we are, perhaps, not in a position to judge, as it is generally the successes, and not the failures, that are recorded. By vaccine therapy response to the bacterial part of the infection is alone evoked, and it therefore seems legitimate to conclude that in some cases at least, if response could also be evoked to the somatic part of the intoxication, increased benefit

¹ *Rational Immunization in the Treatment of Pulmonary Tuberculosis and other Diseases*. E. C. Hort, B.A., B.Sc., M.R.C.P., Bide, Sons, and Daniellson. 1909.

² Flexner, *Univ. of Pennsylvania Med. Bull.*, July, 1903.

³ See Hertel Lectures, *Lancet*, August 17th and 24th, 1907.

⁴ McCrae, *Trans. Assoc. Amer. Phys.*, xvi, 1901, p. 153.

would result. To achieve the latter by artificial means would appear to be a difficult task, but Dr. Hort believes it may be done by "auto-inoculation." The various measures that have been employed in the treatment of localized infections, such as poulticing, cupping, counter-irritation, and, more recently, Bier's methods of inducing hyperaemia and active and passive movement, act partly by determining a "flushing-out" action, partly by distributing the products, bacterial and somatic, throughout the body, so that they act as vaccines; in other words, these measures in part constitute a process of auto-inoculation. Time alone can show what method is the best for inducing reaction and response—whether hetero-inoculation or auto-inoculation, or a combination of the two; but Dr. Hort has made out a good case for a careful trial of "auto-inoculation."

It is desirable, whatever form of inoculation be employed, to have means of gauging the amount of response. Of these, the general condition of the patient, the progression or retrogression of the disease, as discerned by the clinician, goes for much, and cannot be neglected, in spite of the sneers sometimes levelled at it by the "laboratory" man. Opsonic determinations have also of late been much employed for the purpose, and, could they be relied on, might convey considerable information on the response—at least, to the bacterial part of the intoxication. It must be admitted, however, that the opsonic technique is laborious and extremely delicate; it often does not deal with the actual organism of the infection nor concern itself with possible variations in the phagocytic power of the leucocytes employed. Yet different strains of an organism do exhibit variations in their capacity for phagocytosis, and Shattock and Dudgeon⁵ assert that the leucocytic cells vary like the serum. Greenwood,⁶ from statistical considerations, estimates that opsonic determinations within the limits between 0.8 and 1.3 are probably unreliable for a count made on 25 cells, and doubts if samples of 50 or 100 cells give results of much greater accuracy. The fact that the opsonic index may alter as a result of movement—for example, walking to hospital—in consequence of auto-inoculation, and, lastly, the varying results obtained by different investigators working with the same serums, as recorded by Dr. Hort,⁷ indicate that very material uncertainty exists as regards opsonic determinations as at present carried out.

Dr. Hort places much reliance on the temperature curve, particularly a modified curve in which the evening temperatures alone are charted, as indicative of the response to auto-inoculation, and the illustrations he gives in his paper seem to bear out his contention. He moreover points out that in some cases of tuberculosis the absence of pyrexia, so far from being satisfactory, may indicate an absence of response and an actual progression of the disease.

Studies on the antityphoid power of the serum have recently been commented on in these columns,⁸ and variations in this factor may in future be of value both in the diagnosis of infective diseases and in the estimation of the amount of response to treatment.

This survey suggests that much remains to be elucidated before we shall be in a position completely to understand the nature of the disease

complex in an infection, that vaccine therapy by hetero-inoculation is not the final method of treatment, and that the indications derived from opsonic determinations must at present be accepted with a considerable degree of caution.

ANTITYPHOID INOCULATION.

THE current number of *Biometrika* contains a valuable study of inoculation statistics by Mr. G. D. Maynard of Pretoria.¹ By the help of biometric methods, Mr. Maynard has determined the relation between immunity from typhoid and inoculation and between the latter and recovery from the disease when incurred.

With respect to the first point, the result is that while the figures from the Transvaal show no association between immunity and inoculation, the correlation coefficients being actually negative, the figures for two sets of Indian data give an appreciable positive value (0.2395 ± 0.0118 , 0.2556 ± 0.0095) and the 17th Lancers (Indian experience) and Coldstream Guards (Cairo experience) yield a moderately high correlation (0.8502 ± 0.0593 , 0.4987 ± 0.0577). Material bearing on the problem whether inoculation modifies the disease if subsequently acquired was less extensive and the coefficients obtained were not significant, having regard to their probable errors. Mr. Maynard was also unable to find any evidence in support of the contention that the protection conferred by inoculation does not attain its maximum at once. The author discusses the possible causes of the discrepancy between the results obtained from Indian and South African material, and is inclined to attribute it to a relatively greater frequency of paratyphoid infections in South Africa. Although the difference between paratyphoid and true typhoid organisms is, at the most, specific and not generic, this source of failure may quite well have influenced the result; those who recall a controversy in these columns a few years ago will remember that still grosser causes of error were alleged to exist in some of the South African returns.

In a note to this memoir, Professor Karl Pearson criticizes adversely the evidence afforded by the 17th Lancers' experience, and concludes that: "Until a far 'higher standard of statistical observation and 'statistical reduction is adopted, we cannot possibly 'call, with Lieutenant-Colonel Leishman, the report 'of Lieutenant Luxmore a striking piece of evidence 'as to the protective effect of the inoculations."

Professor Pearson's criticisms, like everything which emanates from so distinguished a statistician, deserve careful study, but we have not been able to satisfy ourselves that the arguments he adduces warrant quite so sweeping a condemnation. Professor Pearson condemns the inclusion in the returns of officers and their wives, who form about 13 per cent. of the inoculated group, and "whose environment and 'average age probably differ much from those of the 'non-commissioned officers and men." This defect would have been of more moment in the case of a native regiment, the officers of which are generally senior men, than in that of an English regiment stationed in India. It would have been interesting if the correlation had been re-worked, using Mr. Maynard's table, with a deduction of 13 per cent. from the subtotal of inoculated persons not attacked by typhoid,

⁵ *Proc. Roy. Soc. Lond. B.*, vol. lxxx, 1908, p. 165.

⁶ *Proc. Roy. Soc. Med.*, II, No. 5, 1909, Pathol. Sect., p. 145.

⁷ *BRITISH MEDICAL JOURNAL*, 1909, February 13th, p. 400.

⁸ *Ibid.*, 1909, February 20th, p. 489.

¹ *Statistical Study of Antityphoid Inoculation*. By G. D. Maynard F.R.C.S.E. *Biometrika*, vol. vi, part 4, pp. 366-376.

so that we could form some idea of the magnitude of the error possibly involved. To test the matter quickly, we recalculated the correlation from Mr. Maynard's table as it stands and from the table modified as suggested above, by means of the approximation, Q_3 . We found in this way that to deduct the officers and their wives reduced the correlation only by a little more than 6½ per cent., but unfortunately, owing to the magnitude of "h" and "k," the value of Q_3 differs widely from the true correlation, and the approximation ceases to be so useful for comparative purposes.

Professor Pearson goes on to contend that "the so-called 'controls' cannot be considered as true controls until it is demonstrated that the men who are most anxious and particular about their own health—the men who are most likely to be cautious and run no risk—are not the very men who will volunteer to be inoculated; thus a spurious correlation may be produced between attack and absence of inoculation. The age frequency of both classes ought to be further given in every report. Clearly, what is needed is the inoculation of one half only of the volunteers, equal age incidence being maintained, if we are to have a real control." Since the valuable papers of Dean and the Ledinghams much attention has been directed to the importance of typhoid carriers. We believe that expert opinion in India inclines to the view that contamination of food in preparation and of sanitary offices by typhoid carriers is a much more important source of regimental typhoid than casual infection. Should this be a correct view, the personal carefulness of the men can be of little moment as a means of prophylaxis. It may be remarked that the ideal control proposed by Professor Pearson is hardly likely ever to be carried out, however desirable such a consummation might be. Any one placed in authority who, while believing that antityphoid inoculation afforded some measure of protection against so grave a disease, refused to confer such protection upon volunteers, would take on himself a somewhat grave responsibility.

THE BUDGET

THE Budget proposals as they affect the medical profession are discussed on page 1133. As will be seen, it is difficult even for an expert confidently to anticipate the full effect of the proposals as they will work out in practice. It is not a great Budget, it does not contain any original ideas, and is no doubt largely the result of compromise, but on the whole it shows a desire to be just or at least lenient to men whose chief asset is mental and physical health. It seems probable that the income-tax proposals will not alter the position of the large majority of the members of the medical profession, while the fact that the rate on the earned portion of incomes between £2,000 and £3,000 a year still remains at 1s. or less than the full rate, will be appreciated by those who in middle life are reaping the reward of early exertions, although it does not, owing to the increase in the general rate, directly benefit them. The fresh inroad on unearned incomes, often incomes derived from savings very hardly earned, will be felt as an injustice, and will tend to induce many men to postpone the hour of retirement, for they will not only feel the immediate pressure, but will dread that the fatal facility with which the tax can be increased may lead to fresh encroachments on the provision they have been able to make for old age. The Chancellor of the Exchequer was, however, confronted by a financial position with which it was not

easy to deal, and the total amount of the deficit was no doubt only realized at the last moment, for the Budget bears obvious traces of haste. Otherwise, we imagine it would not have contained such a proposal as that to increase the duty on proof spirit without a proviso to exempt spirit used for medical and scientific purposes. It does not seem possible at present to determine what will be the net result of the new imposts on motor cars and petroleum, but the tentative calculations we have made render it probable that the extra cost to medical motorists will not be large even if they have to pay for petrol on the higher scale. On the whole, as the bystander said to the man who was ridden over by a troop of horse and found himself unscathed, there is much to be thankful for.

"AN UNSAVOURY EAT."

UNDER this heading we had occasion to comment in the JOURNAL of December 19th, 1903, p. 1831, on the highly unseemly manner in which a certain "beef juice" was advertised in a French publication entitled *Chantecleir*. That periodical, though ostensibly a "bimonthly journal," is in reality a trade circular in which the "beef juice" referred to is pushed by the help of coloured portraits of well-known members of the medical profession. The one on which we felt it our duty to remark was of a character that can only be called disgusting. Now our attention has again been called to the issue for April, in which a Spanish professor in his official robes is represented as demonstrating on a half-dissected girl, who is smoking a cigarette and apparently enjoying the procedure. The figure occupies the foreground, and of course the undissected side is shown. Without being actually indecent the picture is suggestive, and the accessories—the arm and breast and the skin of the leg, lying on an ornamental couch in the background—are in the worst possible taste. What strikes us most about the thing is its extreme silliness as a means of inducing people to buy the "beef juice" which it is intended to advertise. It is impossible to imagine that it is intended to convey the suggestion that the "beef juice" is made of the *dissecta membra* of the subject. Yet it would be difficult to say what else can be meant, unless we assume that the nude figure, hideous as it is in its crude realism, is intended to attract attention. We are glad to learn from a correspondent that he has brought the fact that the circular is sent about in an open cover to the notice of the Postmaster-General. The official reply is that the circular would not have been delivered if its character had been observed; and it is added that instructions have been given for a watch to be kept in case any other circulars of the same description are received. We said in our previous note on the subject that the firm responsible for the issue of these circulars might amend the error of its advertising ways, at least in this country, if it could be brought to realize that even the most wonderful "beef juice" could not be forced on the medical profession by means which produce disgust. It has not chosen to take the hint, but now that it has come under the ban of the Post Office its eyes may possibly be opened. The thanks of the profession are due to the practitioner who took the trouble to communicate with the Postmaster-General on the subject.

THE STAGE OF ROYALTY.

It will be a bad day for royalty when people cease to take an interest in its comings and goings, its sayings and its doings, its joys and its sufferings. The publicity is no doubt often inconvenient; but it is

better than the indifference with which a nation would regard the "cast iron king" suggested by Jean Paul Richter as a useful substitute for a human sovereign. The people, indeed, may claim a right to know when a possible heir to the throne is born and when a ruler is in danger of death; this was admitted by Sir Henry Hafford in his well-known pronouncement about bulletins. There are royal personages who hate the notion that anything about them smells of mortality, like poor Lear's hand; there have even been some who took it ill that it should be thought that kings were subject to death. Did not a tactless courtier have to explain away an allusion to *le feu roi d'Espagne* by saying it was a title they assumed? We have it also on the authority of a court official of a bygone day that a queen of Spain had no legs. At the present day a royal personage has the unenviable privilege of learning every detail of any disease he may be believed to suffer from, and to read of himself, as the Emperor Frederick might have done in an English newspaper, as "rotting on his throne." They are not allowed to be under any of the illusions as to their state that may be cherished by their poorest subjects. They are born, they live, and they die in public; their coming into the world and their going out of it are performances that must be gone through with the whole of civilized mankind looking on. Quite lately, before the happy event which has gladdened Holland, speculation and suspicion, if we are to believe the newspapers, were rife. Special correspondents hung about the doors and invaded the backstairs of the palace at La Hague. One scribe wrote: "The situation here is of an extraordinary character: After a day of painful excitement, of wild rumours, and of tumultuous scenes in the streets, a strange quietude reigns in The Hague. All day long men and women have been talking together gravely, filled with perplexity and gloomy feelings. It seems as if the old apathy had settled down upon the people; as if, indeed, the old days of indefinite expectation and patient waiting had begun all over again. Yet beneath this quietude there is profound emotion, an uneasiness which is not expressed so much in words as in faces full of apprehension." People were inclined to take it ill because the Queen seemed to be a little longer than she should have been in going through her part! The public mind was in the same state of excitement and suspense about the young Queen of Spain's first baby, and there were headshakings and hints of doubt among the quidnuncs as to what was to happen or whether anything was to happen. And all this because no one except those in attendance on the august ladies who were about to enter on their time of travail was in a position to know accurately when the event was to be expected. Fortunately for the leading actresses in these dramas it may be surmised that they were not allowed to learn that they were keeping the public waiting. But on the physicians, had they been of nervous temperament, what may figuratively be called the cries for the lifting of the curtain might have a disconcerting effect. Sovereigns who know human nature well are careful to encourage the doctor. When Dubois was anxious about Marie Louise at the time of the birth of the King of Rome, Napoleon told him to treat the Empress exactly as if she were a woman from the Faubourg St. Antoine. When Louis XIII was born apparently dead, and the midwife was distracted, Henry IV asked her to treat the child in the way she was accustomed to do in such cases. To most of us dying in public would add incalculably to the unpleasantness of the situation. But kings have to go through the per-

formance almost literally under the public eye. The old Emperor William seems to have been troubled by this in his last moments, for among the mutterings heard just before he passed away were the words *Zu viel Menschen* (Too many people). Nevertheless royalty is less constantly on the stage than it used to be when the Grand Monarque held his levees seated on a close stool. This is due to the change of manners, which has brought with it some impairment of the sense of the dignity that hedges about a throne.

SEWER AIR.

SINCE the time when the construction of sewers became general there has always been a more or less wholesome dread of "sewer air." That dread found expression by Sir John Simon, when in one of his classical reports to Local Government Board he wrote: "Fifth does not only infect where it stands, but can transmit its infective power afar by certain appropriate channels of conveyance."¹ The belief that specific diseases were transmitted through the air of sewers was rather rudely shaken some twenty years ago, when Carnelly and Haldane published the results of experiments they had made on the air in sewers connected with the Houses of Parliament and in Dundee. The conclusions they came to, and which were subsequently endorsed by Parry-Laws, were that the air of sewers was much better than might have been expected, and that it contained a much smaller number of organisms than any class of house. Not many years afterwards, however, a contrary opinion was expressed by Dr. David Arthur,² and only within the past year or two Horrocks and Andrewes have by independent investigation demonstrated that characteristic sewage bacteria are to be found in the air of sewers. About two years ago the Corporation of Manchester asked Professor Delépine to investigate the influence of sewer air upon health, and for that purpose there was constructed for him in the vicinity of the Public Health Laboratory grounds an experimental manhole and experimental rooms. In one of these rooms experiments could be carried on with garden air, and in the other with sewer air. During the whole of last year Professor Delépine conducted his investigations with the assistance of Drs. Sidebotham, Sellers, and Fowler, and of Mr. Gaul and Mr. Heap. The report which he has just issued discloses an amount of painstaking research on the part of all those concerned which is beyond praise. The investigations included observations and analyses relating to the flow, characters, and composition of sewage, their hourly, daily, and seasonal variations; the bacteriological examination of sewage and of sewer air; the examination of sewer air for the purpose of ascertaining whether it was contaminated with gases not normally present in sewers, and, lastly, experiments on animals. The conclusion to which Professor Delépine has come as the result of his observations is that the air of a fairly well-constructed sewer carrying moderately dilute sewage of average composition is free from appreciable noxious properties. He is careful to qualify this opinion by saying that it is not applicable to the air of sewers where, owing to the formation of deposits, or for some other reason, the air has become loaded with an unnecessary amount of noxious gases not usually present under other conditions; nor does it apply to sewers receiving certain kinds of trade effluents or waste products, nor to the air escaping from foul drains or pipes, which air may be quite different from sewer air, or may

¹ Public Health Reports of John Simon. Edited by E. Seaton. Vol. II, p. 464.

² Journal of State Medicine, 1894.)

contain particles of dried material not to be found in sewer air. He considers that in all probability the bad effects which have at various times been attributed to sewer air should have been considered as due to changes in the sewage which need not have taken place, or to admixture with noxious products which might have been prevented.

FRIENDLY SOCIETIES IN THE CLUTTON DISTRICT.

IN September last the practitioners residing in the district of Clutton, which comprises the villages of Midsomer Norton, Radstock, Peasdown, Paulton, and Tinsbury, in the area of the Bath and Bristol Branch of the British Medical Association, made a request to the friendly societies of that district for increased remuneration. The rate asked for was 5s., instead of 4s. per annum, for adults, and 2s. 6d., instead of 2s., for juveniles. The district is a heavy one to work, and the collieries furnish a number of serious cases. The reasonableness of the demand may best perhaps be gauged by the modesty of the remuneration asked for juveniles, for it is not the experience of the profession that children require less attention than adults. The request was refused by the majority of the societies, and the local medical men, who are unanimous, terminated their engagements. The friendly societies have since started the Radstock and District Medical Institute, and succeeded in obtaining a medical man to undertake the duties from March 25th last. We hear that the usual difficulties incident to an institution of this kind are already being experienced, and that a new doctor is wanted by the institute. Carried on as it is under conditions disapproved not only by the medical men of the immediate neighbourhood, but by the Bath and Bristol Branch of the Association, representing the medical profession of those cities and of the surrounding districts, it is probable that the misguided members of the friendly societies will soon see reason to regret the establishment of the institute. Apart from the probability of a succession of new doctors, no institution of this kind can offer such good value in medical attendance as the profession of the Clutton district did, as for many years the medical work of the friendly societies has been "pooled," the members having choice of practically all the local doctors at a very modest rate of payment.

THE EUGENIC VALUE OF CRIMINALS.

AMONG the many points of view from which the criminal class may be regarded is that of the value to be assigned to it when drawing up a balance sheet of the physical assets of the nation, and this in effect was the text of a discourse delivered by Dr. W. C. Sullivan, of H.M. Prison, Holloway, at the April meeting of the Eugenics Education Society. As he stated, any attempt to assess the value of criminals from the point of view of eugenics involves the measurement of what is a purely sociological group by a biological standard, and hence fallacies and confusion must arise unless sociological data are rearranged on biological lines, sufficiently at any rate to permit of criminals being classified psychologically. While pointing out that as this step has not at present been taken it is not yet possible to determine the eugenic value of members of the criminal class on really scientific lines, Dr. Sullivan maintained that it might be argued in tentative fashion that all the phenomena of crime indicated a strong probability that criminals in their innate characteristics do not differ essentially from the average man. He suggested, too, that if

crime were roughly compared with some bio-social entity such as insanity, in which the influence of innate tendency was potent, the conclusion might be drawn that criminals were made rather than born; or, in other words, that crime was the direction given by environment to relatively normal aptitudes. Though criminal conduct is often associated with defective organization, Dr. Sullivan held that even then the criminal conduct was the outcome not of a specific tendency to crime, but merely of a general debility of mind most marked, perhaps, in the sphere of impulse and feeling. So far, therefore, as its negative indications are concerned, eugenicists need apparently concern themselves only with the minority of the criminal class, and with that merely as part of the general problem of feeble-mindedness. Nevertheless, the remainder—possibly a majority of the criminal class—still have some interest for eugenicists, for Dr. Sullivan was probably right when he suggested that in the conditions prevailing in the lower strata of society there is, perhaps, a tendency for some of the best physically endowed youths to be directed into criminal courses. From this it would follow that measures commonly taken by society to suppress crime may be operating in such fashion as to impoverish the race by discouraging stocks in which energy and initiative are most abundant. If this be the case, it is clear that any method of treating crime likely to prevent the development of criminal habits in adolescents who are physically well endowed but show a tendency to drift into an antisocial career, ought to have a distinct eugenic value. Such a system, Dr. Sullivan contended, is the Borstal system of treating young criminals, and on this account he holds it to have a special claim on all interested in the physical welfare of the race.

IN THE NAME OF THE PROPHET—SOAP!

IN the classic legend of the Great Panjandrum it is related that a great she-bear, coming down the street, popped its head into a window and exclaimed, reproachfully, "What, no soap!" If this devotee of cleanliness had only known the right place to go to, she would not have been disappointed. But perhaps *Nash's Magazine* did not exist at the time. At any rate, there would be no excuse for any one making the same complaint now. We know nothing ourselves of the periodical in question, but two or three correspondents have called our attention to the following advertisement which has appeared therein:

63, Harley Street, W.,
December 18th, 1908.

Messrs. ———.

Dear Sir,—Thank you for the samples of soap you so kindly sent me. I feel in honour bound to tell you that of all the ENGLISH SOAPS I examined by my Hydrolysis test as published in the *Chemical Trade Journal*, December 12th, 1908, your soap called "Buttermilk Complexion" was far and away the best of THE ENGLISH SOAPS, judged from the standpoint of slow and equal hydrolysis and copiousness and fullness and maintenance of "lather." This is not a testimonial, but a statement of sober fact which I feel bound to furnish you with in return for your courtesy. Please make a point, if you find this plain statement of any use to you, to beware of anyone being under the impression that I am in any way fiducially interested in giving you this statement. Please accept this as it is meant and believe me yours very faithfully.

F. W. FORBES ROSS, M.D., F.R.C.S. Eng.,
D.P.H., etc.

This "statement of sober fact" is evidently considered so valuable by the highly respectable firm which sells the article praised that it is reproduced in facsimile. The soap may, for all we know to the contrary, have all the virtues which the author "feels bound in honour" to set forth. His appreciation of the soap is evidently as genuine as it is

disinterested; he might, in fact, say of it what Montrose said to his mistress:

I could not love thee, dear, so much
Loved I not honour more.

Of course we accept the author's assurance that he is not in any way fiducially interested in testifying to the fine qualities of the soap which has had the good fortune to gain his esteem; this we do all the more readily as the expression seems to us to have no particular meaning. Still, "fiducially" is, like "accommodated" according to Bardolph, "a word of exceeding good command," and such as a writer of a testimonial—we beg pardon, of a statement of sober fact—may use. If Dr. Forbes Ross were asked to define exactly what he means by it he might answer, after the manner of Falstaff's comrade in regard to the word which won the approval of Justice Shallow: "Fiducially interested; that is when a man is, as they say, fiducially interested; or when a man is—being—whereby—he "may be thought to be fiducially interested; which "is an excellent thing." There are, to be sure, old-fashioned persons who, having regard to the dignity of the profession, may not look upon the publication of a letter by a medical man in praise of a soap in which he is not "fiducially interested" as an excellent thing. The hucksters of Constantinople used to cry, "In the name of the Prophet, figs!" But even a prophet of the Yellow press, if he happens to be a "Harley Street specialist," should not cry in the market place the soap of a firm which sends him samples out of mere kindness.

POISONING BY CARBONIC OXIDE.

DISUSED colliery workings are sometimes allowed to be on fire for months or years; when this happens the products of slow combustion accumulate, and as the surface of the soil subsides, find their way through fissures to the surface of the earth: in this way they may gain entrance to houses through cellar drains or imperfectly cemented foundations. An accident of this kind is reported to have occurred at Cradley Heath, near Birmingham, involving the poisoning of eleven persons living in a row of six cottages built in 1897 on newly-made ground. As is usual in these singular cases it was only the ground floor rooms that contained enough gas to produce serious symptoms, so that as the occupants were sleeping upstairs they were not affected until they came down in the morning. A man named William Lloyd got up to go to his work, and was found by his wife and daughter, when they came downstairs, lying on the floor in what they thought was a fit. Summoning a neighbour, he was carried up to bed and a doctor was sent for. Some hours later Lloyd recovered and shouted to his wife for something he wanted, but getting no answer he went down and was horrified to find his wife, son, and daughter lying unconscious on the kitchen floor. Medical assistance was obtained and an examination made of the adjoining houses, when it was discovered that seven other persons were either unconscious or more or less stupefied. The majority soon recovered, but Lloyd's wife and daughter had to be removed to the Guest Hospital. One of the medical men, Dr. Kelly, had a narrow escape from a serious accident, for while he was carrying a child from a bedroom he was overcome by the gas and fell downstairs, fortunately without sustaining injury. Dr. Tibbetts placed a bird on the steps of one of the cellars, and within five minutes it expired; a canary in another house died, and a dog was discovered to be unconscious. There are said to be signs of a subterranean fire close

to the property, and, acting on medical advice, the occupants have temporarily abandoned their houses, which have been taken charge of by the sanitary authority.

LONGEVITY AND SANITATION.

BULLETIN No. VIII of the Census and Statistics Office of Canada consists of two papers read by Dr. Archibald Blue at the McMaster University Convocation and the last annual meeting of the American Public Health Association at Winnipeg respectively. The first paper deals with the effect of modern sanitation, not merely in lowering the death-rate, but in raising the average age at death of the adult population of a country. The two effects, though of course closely connected, are distinct. By a careful collation of the figures derived from registration statistics and census returns, Dr. Blue arrives at some very interesting results. In 1871 the mean age of the living was 23.50 years; in 1901 this had increased to 26.79 years, representing for the population of Canada 17,618,000 more years of life than would have been lived had the average duration remained what it was in 1871. This great increase of life Dr. Blue claims to be "a gift " that Nature has bestowed on a people who have discovered "covered and who submit to her laws." Taking as one group males from 15 to under 65—that is, the wage-earning period of life, Dr. Blue finds that the members of this group increased from 5,422 per 10,000 of all ages in 1871 to 6,074 in 1901. Assuming a dollar a day for 300 days as an average annual wage, this increase in the adult male population represents an increase of \$53,146,200 in the year, which Dr. Blue rightly considers to be a strong argument for the economy of sanitation. Dr. Blue's second paper deals with the sanitary problems to be encountered in the development of the immense new provinces of Saskatchewan and Alberta, in which the population has increased in five years from 419,512 to 808,863, or 92.81 per cent. The need for sanitary education in such a population is exemplified by the fact that only a few years ago a "progressive town" in one of these provinces took its water supply from a river at a point below that at which its sewage was discharged into the same stream! Altogether this pamphlet contains a great deal of interest to sanitarians and statisticians.

DECLINING BIRTH-RATE IN AUSTRALASIA.

THE continued decline in the birth-rate in the Australasian Commonwealth is attracting the attention not only of moralists but of statesmen. We learn from the *Australasian Medical Gazette* that at a recent session of the Victorian Anglican Synod the matter was discussed, and it was decided to invite the co-operation of the Victorian Branch of the British Medical Association in endeavouring to induce the Government to take some steps in the following directions: (1) That the manufacture and sale of preventive or abortifacient drugs and appliances be prohibited by law. (2) That advertisements of such drugs and appliances be prohibited. (3) That accommodation houses, nursing homes, and the like be placed under the supervision of the Department of Public Health. (4) That the police be instructed to report all infringements and suspected evasions of the law. (5) That the Church of England invite all other churches to co-operate with her in a vigorous crusade against an evil which the law cannot cope with unless the moral force of religious belief and action is behind it. (6) That medical men and chemists (wholesale and retail) be urged to lend their assistance in crushing out of existence practices which must, if allowed to con-

tinue and grow, weaken the fibre and minimize the strength and vigour of our national life. (7) That careful and systematic inquiry be made as to the effect of modern athletic exercise on young women.

A MENTAL HOSPITAL.

THE need of a hospital for the observation and treatment of patients in the early stage of mental disorder is making itself acutely felt in New England. We learn from the *Boston Medical and Surgical Journal* that the Massachusetts Legislature having failed to act before the expiration of options on certain property in Boston and Lexington, upon which it was proposed to build hospitals for mental disease, the State Board of Insanity, through a special report, has asked total appropriations of £30,000 for a similar purpose. Plans for a five-story building have been drawn up, and the urgent need of the hospital is set forth in the report. We commend this example to the imitation of the London County Council, which surely has plenty of sites to choose from. The evil of delay is shown by the failure of the Massachusetts Legislature to take prompt action in a matter which should have been treated as urgent.

THE next session of the General Medical Council will be opened on Tuesday, May 25th, when the President, Sir Donald MacAlister, K.C.B., will take the chair at 2 p.m. The Glasgow Faculty of Physicians and Surgeons has appointed Dr. David N. Knox, late Surgeon to the Royal Infirmary, and Professor of Clinical Surgery, St. Mungo's College, Glasgow, to be its representative on the General Medical Council, in succession to the late Dr. Lindsay Steven.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Budget.—All last week was overshadowed by the introduction of the Budget, which occupied in its exposition some four and a half hours on Thursday. There are only a few points in it of medical interest. In conjunction with the proposed tax of 3d. a gallon on petrol used for motor vehicles there is the remission of half the new tax on motor cars in favour of the medical profession. The proposal to allow a reduction of £10 of taxable income as regards income tax for each child under 16 years of age for taxpayers whose income does not exceed £500 per annum is an interesting novelty. With a falling birth-rate in this country, the loss to the Exchequer may possibly be balanced by a great and national gain. The increase of the income tax from 1s. to 1s. 2d. will affect earned incomes over £3,000 a year and all unearned or partly unearned incomes. In all cases of earned incomes not exceeding £3,000 the tax will remain as at present—9d. in the £ up to £2,000, and 1s. between £2,000 and £3,000 per annum. The increased duty on proof spirit will add to the price of many medicines and so fall rather heavily on hospitals and some practitioners.

Antivivisection.—The opponents of vivisection show signs of activity in the House of Commons, and the Dogs Exemption Bill recently introduced gave evidence of the fact last week. The close of the discussion on mining accidents before 11, and the withdrawal of the second motion on the paper left some ten minutes on Wednesday night for private members' bills, and the Dogs Exemption Bill was moved without a word of explanation by its promoter, Mr. Ellis Griffith. For a moment or two it looked as if the bill might pass *sub silentio*; and then Mr. Samuel rose on behalf of the Home Office to oppose the second reading, mainly on the ground that the Royal Commission had not yet reported. While he was speaking, Mr. Whitley, who had been out to get a copy of the bill, rose and said that the bill which the House was

asked to read a second time was not yet printed! The Speaker, thus appealed to, ruled that the fact of the bill not being printed was not an objection which he could take against the bill, but was one which might very probably weigh with the House. Mr. Samuel then moved that the debate be adjourned, so that it might be resumed when members could make themselves acquainted with the proposals of the bill. Sir F. Banbury spoke against the adjournment, and asked for a division that night. Mr. John Ward said his opinions on this matter had been considerably modified by his experience on the Commission, and he supported the motion for the adjournment, which, however, was not put, as 11 o'clock struck and the debate stood adjourned. Thus the attempt to pass a bill without any explanation of its contents and before it was printed was happily foiled.

Medical Officers (Scotland).—Mr. Cathcart Wason asked the Lord Advocate, last week, if he could state what parish councils had opposed granting to Poor Law medical officers protection against arbitrary dismissal and the same privileges as were enjoyed by medical officers in England and Ireland. Mr. Ure answered that the proposal had not, so far as he was aware, reached a stage which had provoked an active expression of opinion on the part of parish councils; and on this point he could add nothing to the reply given recently. Mr. Wason then asked the Lord Advocate if he was aware that in several districts in the Highlands and islands the poor had suffered from the action of certain parish councils in their treatment of medical officers; and if, in view of this fact, and that the question had been brought up at every election during the last ten years and that candidates invariably had expressed themselves favourable to a proposal which would indirectly benefit the poor, he would reconsider the position. Mr. Ure replied that he was not aware of any case in which the poor had suffered through the action of a parish council in the treatment of their medical officer. If the hon. member would specify any such case, full inquiry would be made by the Local Government Board. He was not aware that the question had been brought up at every election during the last ten years, and that candidates invariably had expressed themselves favourable to a proposal which would indirectly benefit the poor. Mr. Wason pushed the matter further home by asking if the proposal in the Education Act of last year giving teachers the right of appeal against arbitrary dismissal had been opposed by any school board in Scotland, and on what grounds were medical officers to be refused the same position as teachers. The Lord Advocate admitted that he knew of no protests from school boards as regards rights given to teachers under the Education Act, but he would not admit that the two cases were parallel.

The Sewage Disposal Commission.—In answer to Mr. Carlile, Mr. John Burns stated last week that the Royal Commission on Sewage Disposal was appointed in 1898. The total cost up to March 31st last was £56,061, including the net cost of stationery and printing, but excluding the cost of accommodation. He understood that an estimate had not been framed of the future expenditure which might be required. The Local Government Board were acting on the recommendations made by the Royal Commission in its fifth report. It was the Board's practice to advise local authorities to carry out these recommendations, but it had not issued any regulations on the subject.

The Belfast Health Commission.—In reply to Mr. Devlin, Mr. Birrell said that the recommendations of the Belfast Health Commission were so varied and complex that it was impracticable to give a general answer which would accurately cover all details. The corporation had dealt with certain matters pending the issue of the report of the Commission, and had put other matters in train since its issue. The Local Government Board, moreover, after considering the reply of the corporation to the report of the Commission, had addressed the corporation on March 13th last with regard to such of the recommendations as did not appear to have received suitable attention.

Workhouse Maternity Wards.—Mr. Cooper asked a question about a patient in Hammersmith workhouse who was put to do manual work fourteen days after her confinement. Mr. Burns answered that he understood the question referred to the case of an unmarried woman who was admitted to the infirmary of the parish of Hammersmith on March 3rd last and confined on the following day. He was informed that it was not the fact that the woman was mounted on steps and set to wash the paint on the walls. The woman left the infirmary on April 3rd, and was believed to have been married two days afterwards. He did not understand that she was ill and under treatment other than for a normal confinement before leaving the infirmary. There were no rules of the kind referred to, and at the Hammersmith infirmary all work performed by the patients was stated to be purely voluntary and of a very light character.

Small-pox at Bristol.—On Tuesday Mr. Burns said, in answer to Mr. Lupton, that two nurses at the hospital, while attending cases of small-pox, had slight attacks of an illness which was thought to show the initial symptoms of small-pox. Neither had an eruption of any kind, and both were well within three or four days. They had been revaccinated within two years, but he was unable to say from what source the lymph used was obtained. In answer to another question, Mr. Burns said that any comparison between vaccinated and unvaccinated children in relation to this matter should be made in respect of those children only who had been exposed to infection. At Bristol the persons who suffered from small-pox or were in contact with them were so carefully supervised that few unvaccinated children were so exposed. Of the children under 14 who were exposed to infection 9 were attacked by the disease. Of these 9, 2 had been vaccinated. Both attacks were abortive. The remaining 7 children were unvaccinated, except that 2 of them were vaccinated during the incubation of the disease. Of these 7, 3 died, all of whom suffered from confluent or black small pox.

The Rats (Destruction) Bill.—A bill to provide for the destruction of rats has been introduced by Sir Charles McLaren, and is founded on similar lines to legislation now in force in Denmark, Hong Kong, Bermuda, and other States which has for its object to save the vast destruction of foodstuffs and other property caused by rats, which amounts to many millions of pounds sterling in every year. Private efforts have failed to reduce their numbers owing to the lack of proper organization and adequate resources. This bill is intended to arm public authorities with powers to cope with the evil, while protecting private interests from any resultant damage. The sanitary inspector or the inspector of nuisances will be the public ratcatcher under the bill unless the local authority appoints a special officer.

Sleeping Sickness in Nyassaland.—In answer to Mr. Rees, who asked what steps had been taken to preserve Nyassaland from sleeping sickness, Colonel Seely said that the agreement between England and Germany related only to Uganda and German East Africa. So far as Nyassaland was concerned, he was glad to say that the extensive investigations which were being made in that Protectorate had failed, up to the present time, to reveal the presence of the tsetse fly which transmits the disease. These investigations would be continued, but there was good reason to hope that Nyassaland was not exposed to the risk of an epidemic similar to that which had wrought such havoc in Uganda. In answer to a further question, Colonel Seely said that the fly did not, he thought, travel very far from its particular place. On the whole question, he would refer to the many reports which had been issued from the Colonial Office on the subject. The Government would do all they could in the matter, but there was not much fear at present of the disease spreading to Nyassaland.

Beri-Beri.—Mr. Cooper called attention last week to the views of Dr. Braddon on uncooked stale rice being the cause of beri-beri, and Mr. Churchill replied that he was

aware of the theory held by Dr. Braddon and other medical men that beri-beri was attributable to the consumption of uncooked stale white rice; and of the investigations into the question which were being conducted in the Federated Malay States. The Board of Trade were in communication with the Royal College of Physicians in regard to the steps to be taken for the prevention of the disease on board ship, and when their views had been received the suggestion requiring that only cured rice should be used for the food of Lascars on British ships would be considered.

Fever among Civil Population in Malta.—Last week Colonel Seely stated, in reply to Mr. Lupton, that the number of cases of Mediterranean fever and of simple continued fever among the civil population of Malta in the years mentioned was as follows:

Year.	Mediterranean Fever.	Simple Continued Fever.
1897	568	107
1898	510	125
1899	822	114
1900	642	89
1901	624	60
1902-3 (financial year)	595	63
1903-4	573	35
1904-5	663	25
1905-6	822	22
1906-7	714	42
1907-8	501	5
1908-9	495	11

The Opium Traffic in Ceylon.—Mr. Walter Roch asked the Under Secretary for the Colonies whether the Ceylon Government had postponed the closing of its licensed opium shops during the present year pending a reference to the Secretary of State; and whether a statement had been received by the Secretary of State from three non-official ex-members of the Ceylon Legislative Council protesting against further delay in carrying out the policy unanimously recommended by the local opium commissioners in their report at the end of 1907? Colonel Seely replied that the facts were as stated in the first part of the question, but he should explain that the reason for the delay was that a difficulty had arisen as to the regulation of the supply of opium for medicinal purposes to the Vederals, or native doctors, of whom there was a large number in the Colony. This difficulty had led to a further reference to the Secretary of State, who was now in communication with the Governor as to the best means of surmounting it. As regards the second part of the question, the Secretary of State had received the statement referred to, but for the reason already given had been unable as yet to take action in the direction suggested by the signatories.

The Death-rate in the Transvaal Mines.—In reply to Mr. Fell, Colonel Seely said on Tuesday that the death-rates were: Black, 31.601; Chinese, 6.788. The Chinese rates were habitually lower than the natives, but the native death-rate showed a considerable increase. Inquiry would be made as to the cause of this increase. He regretted to say that the increase in black deaths was considerable; the decrease in the Chinese deaths was obviously to be expected owing to the rapidly diminishing numbers of the Chinese. He should have thought it was sufficiently obvious that the number of Chinese persons liable to diseases connected with the mines must be much less. They must by this time be nearly all dead or returned to China. In answer to a further question, he said that it did not appear that the increase in the black death-rate could be attributed to the labourers having been drawn from a different area.

Sydney.

[FROM OUR SPECIAL CORRESPONDENT.]

NEW SOUTH WALES BRANCH.

THE annual meeting of the New South Wales Branch of the British Medical Association was held on March 26th, when the retiring President, Dr. G. H. Abbott, delivered his address. He rehearsed some of the important matters which had engaged the attention of the Branch during the past year, and sketched out a programme of work for the future. Naturally one of the most important matters referred to was the dispute at present in progress between the friendly societies and the British Medical Association (New South Wales Branch) with regard to the enforcement of the wage limit. At the meeting of the Australasian Medical Congress in Melbourne last year some resolutions were passed agreeing to the necessity of enforcing a wage limit in all contracts with the friendly societies, and fixing a limit of £204 per annum. At a general meeting of the members of the New South Wales Branch of the British Medical Association held on December 29th, 1908, the following resolutions were passed:

That the wage limit, as adopted by the Australasian Medical Congress and accepted by the delegates of the lodges of the Friendly Societies' Association in conference with the Council of the New South Wales Branch of the British Medical Association on December 31st, 1906, and February 28th, 1907, be enforced in the metropolitan area from January 1st, 1909.

That the members of the Branch pledge themselves to support all members who determine to enforce the model lodge agreement adopted by the Branch on May 10th, 1907.

This attitude on the part of the lodge doctors has aroused a good deal of opposition on the part of the lodges, and at a meeting of the delegates of the Friendly Societies' Association some strong language was used as to what should be done to bring the British Medical Association to its proper senses! Dr. Abbott, in his address, reviewed the position of affairs at present, and urged upon all the members the necessity of standing firm in their demands, as there was no doubt that in the end they would secure the recognition of the wage limit.

Another matter to which Dr. Abbott referred was the proposal to acquire a site in the centre of the city, and to erect on it a building for the Branch. It has long been felt that this step is necessary in the interest of the members of the Branch, as at present it has no building of its own suitable for a meeting hall, library, reading room, etc. The proposal has been taken up rather enthusiastically, though it is recognized that a large sum of money will be required to do all that is suggested. A site is now under offer to the Branch for £11,000, and it is estimated that another £11,500 will be required for the erection of the building. There is every reason, however, to hope that by the time the next congress meets in Sydney in 1911, the New South Wales Branch will have a building worthy of the Branch and of the Mother City of Australia.

At the same meeting Dr. Richard Arthur, M.L.A., of Sydney, was elected as the Representative of the Branch at the Annual Representative Meeting in Belfast next July, and Drs. Odillo Maher and Watson Munro were elected as delegates to the Annual Meeting of the parent Association. Dr. H. C. Hinder was elected President, and Dr. J. A. Dick, Vice-President of the Branch for the ensuing year. The Treasurer, Dr. W. H. Crago, presented his statements of the accounts of the Branch and of the *Australasian Medical Gazette*, which showed a very favourable financial position.

THE FRIENDLY SOCIETIES.

Some idea of the extent of the operations of these societies in this State may be gathered from the annual report of the Friendly Societies' Association, which was presented at a meeting of the association held recently. At the end of the year 1907 the membership of the friendly societies was 116,985, an increase of 10,307 on that at the end of the previous year. The number of societies was reduced to sixteen, owing to the absorption of the old Protestant Alliance by the United Ancient Order of Druids. There were 1350 lodges and 116,985 members. The

receipts were £434,000, making the amount of funds £1,171,343. The amount of sick pay was £96,239; the funeral benefits £24,336; and the medical benefits, £110,894. The average value of the funds per member was £9 10s. 2d. From these figures it is apparent that these societies made a profit on the year's transactions of £202,530, which proves conclusively that they could afford to pay their medical officers a considerable increase on the present rates and still make a handsome profit. But the lodge member who cries out loudly about the sweating of the labourer by the master dearly loves to sweat his medical officer.

PRECAUTIONS AGAINST PULMONARY TUBERCULOSIS.

It has long been recognized that the Blue Mountains in this State afford an excellent climate for persons suffering from pulmonary tuberculosis, and large numbers of patients resort thither every year. The Shire Council at its last meeting had under consideration a report from the clerk, in which it was pointed out that each year there seemed to be a greater influx of patients suffering from pulmonary consumption to the mountains, and as legislation to make this disease notifiable seemed as far off as ever, it was suggested that it should be dealt with under Section 6 of the Local Government Act. It was further stated that the present careless practices are causing great harm to this great Blue Mountain health resort. It was suggested that all property owners, agents, and others who were in the habit of letting cottages should be compelled to supply a list of such premises to the Shire Council for the purpose of inspection. Premises vacated, it was stated, should be properly fumigated. Eventually the council passed a resolution to the effect that consumption should be declared a notifiable disease, and that the Government be requested to take prompt steps to deal with the matter. A letter embodying this resolution has been sent to the Premier and to the member of Parliament for the district.

The Federal Minister of Home Affairs has approved of an official suggestion that all candidates for appointment in the Federal Public Service should in future be compelled to undergo examination by a Government medical officer. This action has been taken because of the number of medical certificates being sent in by Civil servants alleged to be ill. An inquiry has been made, and in one branch alone—the Melbourne Telephone Exchange—some extraordinary cases of prolonged sick leave were found.

The inquiry was limited to permanent officers of less than five years' standing. Several of these cases were found to be suffering from tuberculous disease, and it was pointed out that such persons rendered comparatively inefficient service, while the danger of contamination of the other officials was great. As it is not considered desirable that these persons should be in the service, the Minister has approved of the suggestion referred to.

THE CHRONIC PLAGUE.

Once again Sydney has been visited by an outbreak of the bubonic plague. Early this year some plague-infected rats were discovered on one of the wharves which has been the site of infection in previous outbreaks, and the Board of Health and the city health officials were alert, in view of the probable occurrence of cases of the disease in human beings. Some two or three weeks ago a case was reported from a flour mill in the city, and four other cases followed rather rapidly. The mill was inspected. It was badly infested with rats, and over two hundred dead rats were found under the flooring. Following on this discovery the Lord Mayor promptly suspended two of the city sanitary inspectors for neglect of duty, and proceedings were taken against the owners of the mill. Unfortunately two of the proprietors were infected with the disease, and both died from it. Two other cases were discovered on a steamer which arrived from the New Hebrides, and one of these patients has died. Towards the end of March two other cases were reported from amongst the employees of the City Mills in Sussex Street, in close proximity to one of the rat-infected wharves. These premises are reported to be structurally sound, but plague-infected rats have been discovered on the premises next door; and, as the business involves the handling of produce, it is supposed that infection has been conveyed in this.

FEDERAL QUARANTINE SERVICE.

A conference of the States Health Officials was held recently in Melbourne to discuss and report upon the details of administration of the new Federal Quarantine Act. A report was furnished to the Cabinet, and acting upon that the Cabinet has decided to call for offers from gentlemen who may be prepared to act as Director of Quarantine. The salary has been fixed at £1,000 a year, but it has not yet been decided whether the post shall be filled by a medical man or a layman, and it is said that this point will not be settled till the applications are before the Cabinet.

Scotland.

[FROM OUR SPECIAL CORRESPONDENT.]

DEATH OF PRINCIPAL MARSHALL LANG OF ABERDEEN.

THE announcement of the death, at the age of 75, of the Rev. John Marshall Lang, D.D., C.V.O., Vice-Chancellor and Principal of Aberdeen University, will be received with much regret. He had been ill for about three months, and after a temporary rally grew rapidly worse and died on the evening of May 2nd. The cause of death was anaemia of toxic origin. Previous to his appointment to the Principalship of Aberdeen University Dr. Lang held a leading position in the Church of Scotland, not only as the minister of one of the chief churches—the Barony Church, Glasgow, where he succeeded Norman Macleod—but also as an ex-Moderator of General Assembly and a great leader and debater in the Church courts. His appointment in 1900 to Aberdeen University by Lord Balfour of Burleigh, who was then Scottish Secretary, was the subject of much criticism at the time, and was received with considerable misgivings, not only in academic circles but by the general public. Affairs in Aberdeen University were not going in the smoothest way in 1900. The great extension scheme, when only half completed for want of funds, had practically come to a standstill, and there was a grave division of opinion as to the future of Greyfriars Church. These and other matters may have led Lord Balfour to introduce as head of the university one from outside its walls. However, it was not the appointment of an outside man that gave rise to the misgiving, but rather the doubt as to whether one who had up to the time of his appointment as Principal spent the whole of an already long life in the ministry of the Church, and who had never held a university office, would justify his selection at a time when the university affairs were in a notoriously troubled condition. Time proved, however, that the appointment was a wise one. In spite of a very hostile reception by the students on the occasion of his inaugural address, and at several graduation ceremonies thereafter, he ultimately gained for himself their sympathy and affection, for as time went on they realized the character of the man and his anxiety to promote their interests, so that in recent years even the rowdy enthusiasm of graduation day did not prevent respectful attention to his address as Vice-Chancellor at the close of the capping ceremony.

In regard to his position as head of the Senate, it has been stated that he was probably never quite at ease in the technical and complex work of university teaching under modern conditions, but that the Senate never enjoyed the services of a more helpful and conciliatory chairman, one who never failed to exhibit those qualities of impartiality, courtesy, tact, and knowledge of methods of debate which conduce so largely to fair and orderly discussion and to proper decision. In the work of the University Court Principal Lang had an opportunity of displaying his administrative capacity. He found the extension scheme languishing for want of funds, with a debt of over £20,000 on the extension already completed, and the Court stood committed to complete the extension by enclosing the front of the Marischal College buildings. How successfully the Principal devoted himself to the completion of the scheme is matter of recent history, fully demonstrated at the celebrations in 1906, in which he occupied a central position with striking dignity. Few who heard his address of welcome to the delegates from other universities and learned societies will ever forget

his great oratorical effort worthy of that unique occasion. Probably no Principal has enjoyed more popularity with the general community. Much of the ultimate success of the extension scheme was due to the way in which he enlisted the sympathy and services of the Lord Provost and town council and other corporate bodies in the interest of the university. He had not been long in Aberdeen before he gave ample evidence of his determination to be a working Principal of the university. His services were available for every scheme of social and religious organization and educational advancement. He responded to every call, and gave his services gladly. He enjoyed the social intercourses of life, and his after-dinner speeches—as, for instance, in Trinity Hall, of the Incorporated Trades, or in the Medico-Chirurgical Society Hall—were not less happily phrased than his more ceremonial deliverances. In many ways he was a remarkable personality, combining in a singularly attractive character a richness of genial humanity and grave dignity that well befitted the high offices to which he had been called, and all of which he adorned. In his public deliverances he was always appropriate, and few men could more correctly interpret the general feeling in saying the right thing at the right time in diction copious and polished, with fine rhythm and swing. There have been Principals of Aberdeen University more distinguished for scholarship and authorship, but there have been few of more varied culture and more eloquent, or who with more acceptance brought the university into vital connexion with the life of the city. His kindness, intense sympathy, affability and geniality were unfailing, and the whole bearing and quiet dignity of the tall, slightly stooping figure inspired respect. He possessed remarkable tact and capacity for dealing with men, and it was probably this feature of his character that made his principalship the success it has proved to be.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

POST-GRADUATE CLASSES, TRINITY COLLEGE, DUBLIN.

THE arrangements for the annual classes for medical post-graduates at Trinity College, Dublin, have been completed. As in 1908, two courses have been organized for this year. The summer course will be held in June, and the autumn course will be given in the later part of September and the first week of October. A new feature in the syllabus for 1909 is the announcement of the delivery of a special lecture on cancer of the rectum by Sir Chas. Ball, Regius Professor of Surgery. Instruction is given in medicine, surgery, gynaecology, diseases of the eye, ear, throat and nose, in x-ray work, and in cystoscopy. Classes of a practical nature are also to be held in physiology, pathology, and anatomy.

One of the attractive features of the courses in past years is still retained. Members of the class may obtain rooms in college and dine on commons at an inclusive cost of £1 ls. a week. As the number of rooms available is limited early application is desirable. Additional details can be found in our advertising columns, or the complete syllabus can be had on application to the Honorary Secretary of the Post-Graduate Classes.

CHURCH TUBERCULOSIS CLASS IN BELFAST.

A tuberculosis class has been formed in connexion with Elmwood Presbyterian Church, Belfast. A room has been rented in the mission district, where the class meets weekly. The membership is limited to six, as the work is experimental. A doctor and the nurse of the Women's National Health Association attend the class, and the nurse visits the patients in their homes. Discipline is maintained, and a member has been dismissed for disobedience to orders. The patients have to keep a record of their case, and help is afforded to the very necessitous. This class is said to be the first of its kind on this side of the Atlantic, but the plan has been tried with success in the United States. Details are given in the April number of *Slainte*, the journal of the Women's National Health Association.

A SAD STORY.

The board of guardians for Ballina received recently from Dr. Laing, the dispensary medical officer, a letter from which we quote the following paragraphs:

Gentlemen,—I beg to acknowledge receipt of a copy of the Local Government Board report on the late inquiry held to investigate charges against me.

The fact of my trying to cope with the impossible for years did not weigh one atom in my favour. I have worked day and night for the past seventeen or eighteen years till, in the discharge of my duties, I contracted blood poisoning (last July two years). Since that time my health has been indifferent, and again in June last I got sepsis from another patient suffering from diphtheria, which put all hope of my regaining my former sound constitution out of the question. This attack also left me with a useless finger, and left my heart in a condition which absolutely prevents me ever undertaking any duty which would entail much physical or mental fatigue. As a matter of fact, it was against my medical advisers I was working when those reports were made. I had consulted Dr. Swann in August, and he forbade me to do any work for six months; but owing to the attitude of the Board, or on account of the extra expense, I said on October 1st I would take up duty and work till I fell. I knew I was killing myself by doing so, but for the last few months I felt it was no use courting disaster, and in justice to the poor and to myself, I had made up my mind to resign. I now, with the greatest regret, beg to offer you my resignation.

Then follows perhaps the most pathetic part of Dr. Laing's letter, in which he appeals to the guardians for superannuation, which if granted on the most liberal allowance permitted by the Civil Service scale would only amount to twenty-seven sixtieths of his salary of £120 a year. Fancy a salary of £120 a year for attending to a population of 18,480 persons scattered over an area of 73,811 acres, the dispensary tickets amounting in a recent year to 1,066 and the visiting tickets to 466!

At the inquiry referred to Dr. Laing was charged with neglecting two dispensary patients. The inspector who tried him found him not guilty in one case and guilty in the other, but having carefully read all the evidence as published we do not think any jury of his countrymen would have convicted upon it. Even then he might have escaped with a reprimand, but that he had been guilty admittedly of the more heinous offence of neglecting to write up his dispensary records for some months—records which no one ever looks at except an inspector, who takes a glance at them perhaps once a year.

It was admitted by the guardians examined at the trial that for sixteen or seventeen years no man could have discharged the overwhelming duties of this dispensary better than Dr. Laing, and that only for one year he had neglected them, owing, as he states, to his broken-down health, and he was for that neglect promptly called on to resign.

Dr. Laing complains that the inspector had his mind made up before he opened the inquiry. We should be sorry to think such was the case, but such suspicions are inevitable when the Local Government Board imposes upon the inspector in charge of a district the duties of prosecutor, judge, and jury combined. It would make no difference to the Local Government Board, and would certainly conduce to public belief in its impartiality if such inquiries, which in many cases would be more appropriately styled criminal trials, having regard to the punishments inflicted, were held by an official on its staff with some legal training and unconnected with the district, leaving to the inspector of the district the sole duty of collecting and presenting the evidence for the prosecution. Owing to the great increase in the number of these inquiry trials since the passing of the Act of 1898, public attention has been more directed to them, and the dissatisfaction with the slipshod methods in which many of them are conducted more frequently expressed. At the end of its report to the guardians the Local Government Board says:

If the guardians are satisfied by medical testimony that Dr. Laing is physically incapable permanently of the effective discharge of his duty, the Board would not regard the decision now arrived at by them as a bar to the granting of a superannuation allowance to him.

From the promptitude with which the guardians accepted Dr. Laing's resignation, and the fact that Ballina Union is next door to Castlereagh, we feel rather doubtful of Dr. Laing's chances, but hope for the best.

There is one thing this inquiry has brought to light, and that is the shocking injustice of expecting any man to discharge such duties on such a salary. If an Act of Parliament is needed to prevent English employers from sweating their employees, it ought in justice to be extended to the Irish Local Government Board and to Irish boards of guardians, who are—our Irish readers can supply the hiatus.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

LIVERPOOL.

PRESENTATION TO THE MEDICAL OFFICER OF HEALTH.

On April 30th a meeting of the sanitary staff of the city was held in the Municipal Offices to do honour to the medical officer of health (Dr. E. W. Hope) on the occasion of his completing twenty-five years' service in Liverpool. Dr. A. A. Mussen, the assistant medical officer of health, who presided, presented Dr. Hope with an illuminated address and an antique silver tankard, and spoke of his distinguished services and the zeal which he showed for the highest interests of the staff. Not only were Dr. Hope's annual reports among the best of their kind, so that his position as an authority on public health was almost unique, but his evidence on sanitary matters was sought in the law courts and before Royal Commissions and Departmental Committees, while he was often consulted by Government officials. The prestige of his staff was now at the highest, and Dr. Hope was a chief who always gave credit to those who worked well for him.

Dr. Hope said that, while accepting the beautiful gift, it was difficult to realize that he was in his twenty-sixth year of service, while seeing present faces which had been around him all those years, and which were still so little changed. The most important duty of his early years as medical officer of health was to certify patients suffering from typhus fever. Within the first six months he certified more than a thousand such patients, but to-day typhus fever was looked upon as a rare disease, and as pointing to something which ought not to exist. Twenty-five years ago the city had no municipal hospital, and he had to depend on the good offices of the boards of guardians. Even when a city infectious hospital was opened in Grafton Street it was sometimes so difficult to induce a patient to go there that a magistrate's order had to be obtained and the patient compelled to enter the hospital. Nowadays, if the patient was not promptly taken to hospital, the relatives and friends wanted quickly to know the reason why. Twenty-five years ago there was no system of notification of infectious diseases, and his staff was only about a dozen. Since then, however, a series of Acts of Parliament, some originated by the Liverpool Corporation, had been put into operation, with a consequent increase of the health office staff, while the central growth and extension of the city from 450,000 to over 750,000 had been accompanied by an automatic multiplication of inspectors. The sanitary work of the port, through which as many as 400,000 emigrants passed in a single year, and the enormous importation of foodstuffs had led to increased work for inspectors, while the task of caring for the health of the children in the schools was only just beginning, and the notification of births would lead to still more duties being cast upon the health officer. What was there to show for all this sanitary zeal? The answer was that unhealthy conditions had been swept away which, if present to-day, would shock the public eye; so that on the negative side there was much to be credited to sanitation which was invisible. There was, however, one great fact to be proud of and to be seen—the remarkably improved health of Liverpool. It was by one continuous, united, concerted effort that improvement in the health of the city had been effected. The improvement had taken place not only in the old parish and parliamentary borough of Liverpool, but also in all the districts which had been absorbed in the municipal area. The Town Planning Act, which by the provision of wide streets and open spaces was to prevent a repetition of the errors of

the past, would result in a further great development of sanitation. Moreover, people were increasingly willing to listen to advice concerning their health and that of their homes, and he was glad to say the poor people were as amenable and as willing and as anxious to do what they could for themselves, in a sanitary sense, as any other class. In short, sanitary science had reached a stage after which the city and the nation would advance at an accelerated rate.

MANCHESTER AND DISTRICT.

THE REORGANIZATION OF POOR LAW MEDICAL RELIEF.

WHATEVER may be the ultimate outcome of the Poor Law Commission Report, there can be no doubt that boards of guardians throughout Lancashire and Cheshire have been roused by it to a remarkable degree. The more advanced and enlightened boards have been at some trouble to prove that they have already adopted many of the suggestions of the Commission, especially in discriminating and separating various classes of paupers, while even the less up-to-date boards are protesting as to what they will do as soon as possible. The Chorlton Board, however, has attempted to outbid the Commission itself by a resolution passed at its fortnightly meeting on April 30th. Armed with a resolution in his favour from the Medical Guild, Dr. Garrett, one of the board, proposed that the clerk be instructed to make representations to the Local Government Board that any person needing medical relief or free vaccination should be at liberty to select his own doctor, and that the fees should be paid according to a fixed scale by the guardians. Dr. Garrett said that it was a distinct hardship that poor people should be compelled, when they need medical relief, to go to the district medical officer, and it was specially objectionable in maternity cases. In addition, he thought it was unfair to general practitioners that they should be precluded from a share in the work. Such work ought not to be in the hands of a few members of the profession. The proposal was supported by Mrs. Lawson, a trained nurse and a member of the board, who said that the poor women viewed with horror the idea of having a strange doctor at their confinement. The resolution was passed unanimously, and it was further resolved to send it to all the local members of Parliament, the Poor Law Unions Association, and to all boards of guardians in the kingdom. The effect of this resolution would, of course, be to abolish the district medical officers, which, as the Majority Report suggests, would ultimately happen if the Majority scheme of medical relief on a provident basis were adopted. But the commission hardly goes so far as the Chorlton proposal, for in the Majority Report choice of doctor is not suggested for all paupers but only for those persons who have joined a provident dispensary. For the present, at any rate, non-members of a provident dispensary would presumably be limited to the district medical officers. Dr. Garrett's idea is that the difficulty under his proposal of having to compensate the district medical officers would be got over gradually by simply not appointing others when vacancies occur.

TREATMENT OF PHTHISIS UNDER THE POOR LAW.

At a Poor Law Conference of the North-Western District, held in Manchester on April 20th, at which about a hundred guardians were present, the report of a sub-committee on the treatment of phthisis was unanimously adopted. The report suggested that every effort should be made to form combinations of unions for providing sanatoriums, as was possible with the consent of the Local Government Board under the existing law. With regard to the outdoor poor it was suggested:

(a) That attempts should be made to secure active co-operation between the health authorities and the guardians in dealing with phthisical cases among the outdoor poor.

(b) That the guardians could do something to lessen existing evils by making additional grants of outdoor relief to phthisical patients conditional on such patients having separate sleeping accommodation.

(c) That leaflets containing instructions as to precautions to be taken, such as exercise, rest and ventilation, and advice as to the use of the most nutritious cheap foods, might be distributed by the relieving officers.

(d) That as the chief danger arises from the sputum, it might be lessened by the provision of pocket spittoons, paper handkerchiefs, and disinfectants.

(e) That hopeful cases should, where practicable, be sent to sanatoriums.

(f) That the guardians should provide their medical officers with facilities for obtaining, free of cost, bacteriological examination of sputum in suspected cases.

(g) That nurses with special knowledge of the treatment of phthisis should be provided periodically to visit and advise the consumptive poor.

As regards the indoor poor, it is suggested that special care should be taken to isolate all cases of phthisis, no consumptive patients being allowed in the general wards of the workhouse hospital, but that special wards with plenty of fresh air should be provided. In the smaller unions shelter-tents and temporary buildings might be erected in the workhouse grounds, while in the larger unions there should be special buildings of a more permanent character.

WALES.

THE EBBW VALE DISPUTE.

THE latest phase of the Ebbw Vale dispute may be gathered from the following paragraph, which we take from the *South Wales Daily News* of April 29th:

The first ballot on the Ebbw Vale doctor's fund question having failed to settle the vexatious controversy, a second ballot was taken, and the result was announced on Wednesday (April 28th). On the former occasion the ballot paper, it was contended, did not clearly state the issue. The result of this second ballot was: Against the reinstatement of Dr. O'Sullivan, 3,207; for reinstatement, 2,690; majority against, 517. The Cwm members of the fund, however, declined to fall in with the suggestion to take a second vote, and, it is said, will not abide by the result. Therefore, the protracted dispute promises to continue unless a mass meeting to be held in a few days comes to a decision.

WEST YORKSHIRE.

THE HYGIENE OF TRAMCARS.

IN fulfilment of a promise made by the Chairman of the Bradford Health Committee, Dr. Evans, M.O.H., has recently issued a report on the cleanliness and ventilation of the tramcars. Each car is washed at night with cold water and with soap and water once a month, and disinfected at regular intervals. The cars, however, are frequently overcrowded, but Dr. Evans does not consider this a fertile source of infection. The ventilating arrangements of some of the most recently constructed cars cannot be tampered with by the passengers, and this method will probably be adopted in future. Complaints are made that workmen in dirty clothing use the cars, and it is suggested that the Bradford Health Committee might urge the employers of labour to provide their workpeople with facilities for washing before leaving work. Complaint is also made that no effort appears to have been made to lessen the noise created by tramcars. In Bradford the tramcars, which run until after midnight and start again at 4.30 a.m., are a constant source of insomnia and nervous troubles. Why should not a concerted effort be made to try and run silent cars? Why not call together a conference of leading experts—engineers, electricians, tramway managers, and medical men—to consider means for lessening noise? In inviting tenders for the manufacture of tramcars, the silence of the running of the car might be made an important point. There is little doubt that this question of noisy streets is one of the problems of the future, but with foresight and energy it might before many years are over become almost a thing of the past.

COUNTY OF DURHAM.

WOLSINGHAM SANATORIUM FOR WOMEN.

ON May 1st the new Sanatorium for Women belonging to the Society for the Prevention and Cure of Consumption in the County of Durham was opened by Lord Barnard, the President of the Society, before a numerous company of the friends of the movement, amongst whom were representatives of local authorities and representative workmen of many miners' lodges, works, etc. Lord Barnard referred with gratification to the good work done at the sanatorium at Stanhope, and thought that the cult of the open window was beginning to spread to the masses. He stated also that at a meeting of a similar society at

Shrewsbury a little while ago the work and methods of the Durham Society had been most favourably referred to. The Rev. Dr. Randell, Rector of Sunderland, then offered a dedicatory prayer, and invoked a Divine blessing on the sanatorium. Dr. Robinson of Sunderland, the Chairman of the General Committee, gave a short account of the work of the society and of the Stanhope Sanatorium: already 1,100 people had been treated in it, and of these many hundreds had been restored to the ranks of workers. The society now had accommodation for 73 patients. He referred to the work of the sanatoriums as being a part of a wide and general programme to eradicate the disease from the county. He asked for assistance from the local authorities to establish, equip, and maintain a third sanatorium in which the advanced cases might be received, as from the point of view of the public health these cases were the most dangerous to the community. He concluded by stating that no risk was caused to the neighbourhood by a consumption sanatorium. During the nine years that the sanatorium had been at Stanhope, not a single instance had occurred of any of the staff having been attacked by the disease, but, on the contrary, they had all looked rosy and well. Neither had the death-rate from consumption increased in the district, and, as a matter of fact, last year there had only been one death from consumption in the Stanhope Urban District (population 2,006), and that occurred in a patient over 70 years of age. After a short speech from Dr. Mostyn, M.O.H. South Shields, a vote of thanks was moved to the Rev. Dr. Randell by Councillor Arthur Ritson, Chairman of the Sunderland Health Committee. Councillor Elliot of Gateshead moved a vote of thanks to Lord Barnard.

Correspondence.

COAGULATION TIME OF THE BLOOD.

SIR,—In your issue of April 24th, I am pleased to see that Dr. T. Addis, in his article on the "Clinical Methods of Determining the Coagulation Time of the Blood," quotes my method as being one of the most accurate. I regret, however, that he omits to say that the principle of McGowan's method, which he uses, is not only directly derived from, but the method itself is only a variation of the one which I described several years before McGowan published his. I first published the principle in a paper read at the congress at Lille in 1899. I further gave a demonstration of it at the International Congress of Medicine at Paris in 1900, in the presence of Sir A. E. Wright, who also showed his coagulometer. This method shortly is as follows:

The ear or finger is pricked, and the second drop of blood obtained is introduced into a tube 5 cm. long, and having an internal diameter of 1 mm., so that the column of blood occupies about 1 cm. of the middle of the tube. Two other similar tubes are filled with the third and fourth drops. These tubes are then placed in a glass box divided into two parts by a glass partition, in close proximity to the fine bulb of a special thermometer. This is graduated in tenths of a degree, and the temperature, 18.5° C, is marked by a red line. Contrary to what Dr. Addis says, it is not very difficult to supervise the box, and, by slightly warming or cooling, to keep it at a constant temperature, or with a variation of a few tenths of a degree.

The second and third tubes (containing the third and fourth drops), in which coagulation takes place in a slightly shorter time, serve to give warning of the approach of coagulation in the first tube (containing the second drop of blood), which it is then only necessary to examine every half minute in order to observe with ease the commencement of coagulation.

The coagulation time is indicated (1) by a tendency to adhesion of the column of blood to the walls of the tube. This indicates that coagulation is about to begin. (2) By the fine filament of fibrin, which is seen in the middle of the column of blood, when the tube is broken at the level of file mark made *previous* to the commencement of the experiment. It is also easy, if desired, by using the drops from a new puncture, to obtain an average coagulation time.

My method, therefore, is simple, does not require any expensive apparatus, and is exact, because the column of

blood is kept in close proximity to a sensitive thermometer beneath the eyes of the observer, who can easily maintain a temperature of 18.5° C.

Since 1900 I have perfected this method⁽¹⁾ by calibrating more exactly the tubes. The contents of tubes with an internal diameter of 1 mm. are brought to the same temperature as that of the receptacle with greater ease than when longer and larger tubes, such as Dr. Addis's, are used. Moreover, it would be exceedingly bold of any one to pretend that any of the methods used are absolute, since the blood is withdrawn at the temperature of the patient, who may be febrile, and comes into equilibrium with the external temperature with more or less ease, according to its physical properties. (2) By suggesting the use of short columns of blood in order to avoid the error caused by the unequal repartition of the fibrin in long tubes. (3) By making the method more sensitive by the use of the tubes which serve as indicators.

I have written this letter because the method which I have just described in brief has been borrowed by Drs. McGowan² and Addis, who have been satisfied with making a variation which is not only more complicated but more expensive, without even referring to my last work on this subject.

With apologies for transgressing at such length on the space of your columns,—I am, etc.,

SABRAZÈS,

Professeur Agrégé, Médecin des Hôpitaux de Bordeaux.
Bordeaux, April 28th.

SIR.—I think Dr. Mercier must be mistaken in his interpretation of the figures I gave in the paper on the relation between the administration of calcium and the coagulation time of the blood. I am unable to understand how he calculated that there was a "difference of 33 per cent, in coagulation time among 150 trials on different days."

What I said was that in 50 consecutive daily observations on the same person there was an average variation of 34 sec. from the mean, which was 9 min. 50 sec., and that the longest time was 11 min. 41 sec. and the shortest 8 min. 45 sec.

Again, he says "the normal margin of error is so wide, even on his own showing by his own method, that one would expect a wider variation in his results, which are quite remarkably uniform." But my results are not, unfortunately, so very uniform, and there is not much difference between the average variation from the mean in each case and the average variation of 34 sec. in the series of observations undertaken to determine the amount of experimental error. I have taken the trouble to work them out, and I find that they are 30, 25, 36, 26, 16, 26, 33, and 23 sec. That gives a total average variation of 27 sec.

I have constantly found that the blood which first leaves the wound is the last to coagulate. The reason, no doubt, is that fibrin ferment quickly forms and collects round the lips of the wound, and tends to shorten the coagulation time of the blood which follows. The results which are given were taken at all times of the day, and without any reference to meals, because when using another method more accurate than this modification of McGowan's, but inapplicable to clinical work, I found no difference between the coagulation time before or after breakfast, and the fact that the coagulation time is the same at all times of the day shows that food has no effect.³

Dr. Golla, working a modification of Buckmaster's method, has also come to the conclusion that the administration of calcium and citric acid has no effect on the coagulation time; so it seems to me that some other explanation must be given to account for the influence of calcium on certain cases of albuminuria, urticaria, chilblains, etc. There is a great deal of clinical evidence which goes to show that in many cases of such conditions the giving of calcium is followed by improvement. Netter⁴ has suggested that they may be due to a disturbance of the normal equilibrium between the amounts of the different inorganic salts in the tissues,

¹ *Folia Haematologica*, 1904, i, pp. 394-5; *ibid.*, 1906, iii, Nos. 7 and 8.

² *British Medical Journal*, November 30th, 1907, p. 1580.

³ *Quart. Journ. of Exper. Physiol.*, November, 1908.

⁴ *Compt. Rend. Soc. de Biol.*, 1907, p. 462.

the treatment of school children, with instructions to prepare an estimate of the cost of treating each of several diseases. The matter is thus left as follows: The Council has decided to treat the children by utilizing existing institutions and by making grants in return from the public funds. The latter, by the way, is in direct opposition to the almost unanimous opinion of the British Medical Association.

Following on the passage of this amendment, the authorities, permanent and other, of the Education Committee have approached the chairmen and secretaries of the London hospitals with proposals, and an informal meeting has been held at which a definite proposition was made, offering the hospitals 4s. 6d. a head for treatment. The response to this offer has, I understand, been of a varied nature, some agreeing to a definite remuneration per head, and others saying that if the Council subscribes special facilities shall be given.

In no case does it appear that anything has been said to the staff, or that they have been considered in the slightest degree.

As far as I can ascertain, they are in more or less complete ignorance of the matter. It seems to be taken for granted that the medical staffs will carry out any scheme that may be proposed by the committees and adopted by the boards of management. In fact, it was bluntly stated the other day: "The staffs are the servants of the boards of management, and if the boards say they must treat the children they must do so." Personally, I think it unlikely that the staffs will submit so easily.

In other words, many thousands, probably hundreds of thousands, of children are to be treated, as far as the medical profession is concerned, for nothing. There is no doubt that these children need treatment, but if they cannot afford to pay their own private practitioners, they should either be treated by the Poor Law or by means of special clinics officered by the medical staff of the Education Committee, who no doubt are able and willing to carry out the work in return for adequate remuneration.

Can there be a more flagrant example of exploitation than this proposal to utilize the services of the profession, without payment, to keep down the rates?

—I am, etc.,

London, W., May 1st.

H. BECKETT-OVERY.

PROFESSIONAL UNION AND THE BRITISH MEDICAL ASSOCIATION.

SIR,—I would like to offer my meed of praise for the valuable assistance rendered by our local British Medical Association. Twice within two years has it enabled me to uphold the dignity of the profession by resisting offers of remuneration inadequate for professional work.

In the first case the cordial support of my professional brethren enabled me to obtain 6d. a head more from a local club, and in the second case an insurance company offered me the position of local examiner—without, strange to say, ever suggesting I should take out a policy, but at the fee of half a guinea only up to a £500 limit. Again the services of the local British Medical Association were requisitioned, and, thanks to its support, the company have now agreed, less a trivial reservation, to pay a guinea fee for examination for any policy issued above £100.

These cases simply show what can be done by a little mutual co-operation.—I am, etc.,

Whitley Bay, May 3rd.

F. HORSEMAN.

THE EMMANUEL MOVEMENT IN AMERICA.

SIR,—During a somewhat brief stay in London it has been borne in upon the writer that a certain confusion exists between the principles and aims of the Emmanuel Society, of which Mr. Hickson is the head and chief exponent, and the Emmanuel movement which took its rise about three years ago in Boston, America, under the leadership of the Rev. Dr. Edward Worcester, Rector of the Emmanuel Church, in co-operation with some of the leading neurologists of that city, and which has spread rapidly through all the leading cities of the United States.

It should be clearly understood that the Emmanuel movement in America is not a faith-healing movement, as that phrase is commonly understood. It does not undertake the cure of any and all diseases, but only those of a

nervous or functional character. In this specializing of its efforts to alleviate suffering and cure disease it is not limiting the power of God, but attempts the humble task of learning His will as embodied in the ascertained facts known to medical science as the laws of health and disease.

Hence it does not act independently of, but in constant reliance upon and co-operation with, medical men. No case is taken for treatment unless first diagnosed by a competent physician, preferably a neurologist, who recommends it as likely to yield to the psychical and religious methods employed by the clergymen engaged in the work.

With very few exceptions the leading physicians everywhere in America have welcomed this movement, and given it their warmest support. No fees are charged by the clergy, who feel amply rewarded in the larger opportunity for service to their kind, and especially in the reconstruction of moral and spiritual character which the treatment almost invariably effects.—I am, etc.,

ALBERT B. SHIELDS, M.A., Harvard.
Superintendent and Chaplain of St. Luke's Hospital,
San Francisco, Cal., U.S.A.

THE BUDGET.

SIR,—Owing to the additional duty of 3s. 9d. per gallon on proof spirit, the price of many medicines is so materially enhanced that, in my opinion, it will, in many instances, be almost impossible for medical practitioners to undertake contract practice for sick clubs unless a proportionate increase—say of 1s. a year—is made in the capitation payments of members.

Rectified spirit has already been advanced 7s. a gallon, ether 1s. 9d. a lb., chloroform 1s. a lb., sal volatile 9d., sweet spirit of nitre 1s., and so on. Your readers are, unfortunately, only too well aware that the margin of profit from attendance on members of many sick clubs is so exceedingly small that it will be impracticable to meet this large increase in the drug bill save by an increased charge for attendance. I venture, therefore, to hope that the matter will be immediately considered by Branches of the British Medical Association and by medical societies generally throughout the country.

I am not, myself, in private practice, nor am I interested in any club.—I am, etc.,

Leicester, May 4th.

J. E. O'CONNOR, M.B., D.P.H.

RURAL DISTRICT NURSING ASSOCIATIONS.

SIR,—There is a nurse in this district who is supported under a provident system managed by a committee of ladies (wives of small tradespeople) and presided over by a lady in county society.

No medical man was ever invited to join the committee, or indeed to have any say in the management of the nursing club. We were, however, pestered to subscribe a guinea annually.

One nurse is kept; she is a certified midwife, and also does general nursing, but to all intent and purposes she is a general practitioner. She diagnoses cases and prescribes for them. Her fee for midwifery is 10s. She also poses as a kind of electrical specialist, patients being treated to a series of shocks from a small galvanic battery; for this quackery she charges from 2s. 6d. to 7s. 6d. a week. A vibrator also forms a valuable asset, chronic rheumatic joints being constantly "cured." She also specializes as a masseuse, treating dropsy by her "wonderful manipulations," to quote a patient's words.

As a gynaecologist she is second to none, and has prescribed and introduced a pessary for a patient of mine, a fee of 7s. 6d. being charged for her attendance. At midwifery she is "an expert," and I must be excused for quoting the following case. On a certain occasion she was engaged to attend the wife of a miller, a man in a position well able to afford to pay a fee of 2 guineas for a confinement. She proceeded to give the patient, a primipara, as far as I can ascertain, about half a wineglassful of ext. ergot liq., with the result that the labour was very considerably hurried. The child was born half dead, and the condition of the patient's perineum can only be described as "split" in all directions. She found she could not complete the third stage, so after pulling on the cord, which was torn right out, and getting away as much of the membranes as she could, she left

the case, and four hours afterwards had the audacity to call on me and tell me what had happened; and flatly refused to go back to the case when told to do so by me, saying that she was going out to spend the day with a friend, the lady president of the nursing club. I reported this case to the Supervisor of Midwives in this county. Unfortunately, this gentleman is a great friend of the lady president, and a reprimand only was obtained from the sanitary committee of the county council, the body which deals with such cases. I requested that I might appear before the committee, and place the facts before them; but the whole case was hushed up by the supervisor in a manner which speaks well for his ingenuity.

This practice of giving ergot in the early stages of labour is regularly followed by this nurse, and on several occasions I have been called in to complete the third stage of labour owing to a retained placenta from a semitonically contracted uterus.

I trust that this correspondence may lead to some inquiry into the conduct of the workings of these rural nursing associations, for some drastic legislation is sorely needed—I am, etc.

April 27th.

G. P.

Sir,—The kind, excellent women who would rush to their neighbours to nurse them with tenderness when in labour have indeed been crushed out by these young unmarried nurses who think themselves very clever and important about the use of antiseptics; but how many require the lysol for cleansing themselves rather than the patients? As one who has been at many beds of the sick poor and dying, and witnessed the dirty habits, hardness, unkindness, and flightiness of the nurses, I plead and ask for something to be done by the medical profession to condemn these associations. If only more ladies in the districts would do more acts of charity and interest themselves amongst the sick poor (not by trying to treat the cases for the doctor), but to see that they were cared for in the way of comforts and nourishment which the doctor orders, I feel far more good would be done in this way than all this so-called "nursing," which is not worthy of the name.—I am, etc.

A DEFENDER OF THE MEDICAL PROFESSION.

THE INTERMITTENT TREATMENT OF SYPHILIS.

Sir,—I have read with much interest your reply to "Enquirer" as to the treatment of syphilis, at page 1099. It is needless to say that the preference expressed for the 1-grain grey powder pill has given me lively satisfaction, coming as it does at the present juncture when several rivals are in the field. For most of your statements I have of course nothing but warm approval to express, but on one point I may beg to be allowed to put a question, and it is, I believe, a very important one. Why are interrupted courses recommended in preference to continuous ones?

It is suggested to give the constitution "periods of rest." Now I must contend that, with rare exceptions, if the course be well managed, there is not the slightest need for periods of rest. A two years course, begun at the earliest possible date and pursued without any intermission whatever, is, I feel convinced, the safest plan. The farmer is accustomed to give his grazing land intervals of rest by driving his flocks elsewhere for a time. His object is, however, to let the grass have a chance of growing. Do we not, in the treatment of early syphilis, effect much the same end in favour of the spirochaete by periods of "rest from mercury." I can think of no motive for intermitted courses other than the sportsmanlike instinct not to hit a man when he is down, whereas our object clearly should be to kill utterly.—I am, etc.

London, W.C., May 4th.

JONATHAN HUTCHINSON.

RESISTANCE TO PUERPERAL INFECTION.

Sir,—With reference to your leading article in the BRITISH MEDICAL JOURNAL of April 24th, commenting on the different views held by some of our leading obstetric physicians on the prevention of puerperal infection, a question I think worth asking is, Why is it that under the most adverse and dirty conditions of both bedclothes

and person, some women go through the puerperium with normal temperatures, whereas others not nearly so disadvantageously placed contract virulent sepsis, though all precautions have been taken? Is it not likely to be due to subnormal resisting powers of the individuals attacked? Would we not be likely to succeed in the stamping out of this scourge if we would combine with our efforts of asepsis efforts towards raising the opsonic indices of all our patients during the latter months of gestation, and trying to counteract the debilitating effects of prolonged labours?—I am, etc.,

Manchester, May 2nd.

MARTIN J. CHEVERS.

THE PATHOLOGY OF INSANITY.

Sir,—In your appreciative article on the Pathology of Insanity (p. 1014 of the BRITISH MEDICAL JOURNAL), and also in your leading article entitled "A Mental Hospital for London," you very properly, if I may venture to observe, recognize the credit due to the London County Council for its enlightened interest in the special investigation of insanity—a disablement which more than any other affects the welfare of the community, and which also, in regard to its proximate causation and prevention, still leaves accurate knowledge a desideratum.

It is hardly in accordance with such an appreciative criticism that the founder and originator of the pathological laboratory of the asylums of London should remain unnamed.

It is generally known in this country and acknowledged abroad that no individual occupying high public offices has done so much to encourage the modern study and investigation of mental diseases as Sir William Collins—not only as a medical man and a sanitarian in the best sense, but also as an administrator.

Alarmed by the increasing prevalence of insanity as demonstrated by statistics, sympathetic with the sad fact that the complaint itself precluded the sufferer from accurately complaining, and moved by an appreciation of the complexity and intricacy of the affected tissue, as also of the subtle chemical constitution of the underlying physical structure in cases of insanity, Sir William Collins, from the time he entered the London County Council in 1892, whole-heartedly associated himself with the project of establishing a scientific laboratory fully furnished for original investigation into the causes of insanity.

This laboratory—with its physical research room containing ophthalmoscopic, laryngoscopic, x-ray, and other electrical appliances; with its photographic studio containing photomicrographic apparatus; with its histological and pathological department containing a chemical and bacteriological equipment, with its spacious Museum and Library—was the outcome of great labour and careful inquiry. It was based upon information obtained through scientific experts in this country and abroad, special information from the Foreign Office through the various embassies, and from the Home Office through the Lunacy Commissioners being fully considered by Sir William Collins. How well the Director of the Laboratory has used his material is known to the world, and it would be an impertinence for me to refer further to it.

In the earlier days of neuropathology—less than twenty years ago—it was no small triumph to forecast the usefulness and value of this research work. It was no smaller triumph to convince lay colleagues in order to execute the scheme. The results which you have criticized reflect in an especial degree upon the statesmanlike qualities and upon the sympathetic zeal of a mind devoted alike to "alleviate the lot of the poor" and to stimulate "additions to natural knowledge."

If you will read the preface written by Sir William Collins to the first volume of the *Archives of Neurology*, you will, I know, readily admit the claims to public acknowledgement of so highly reputed and distinguished a member of our profession as are those of the founder of the London Asylums Pathological Laboratory.—I am, etc.,

Claybury, April 28th.

ROBERT JONES, M.D., F.R.C.P.

* * If Dr. Jones will read the illustrated article, published in the JOURNAL of February 18th, 1899, p. 420, in which we first brought the Pathological Laboratory of the London County Council under the notice of the profession, he will see that special mention was made of the share

taken by Sir William Collins in the foundation of the Laboratory. In our review of the first volume of the *Archives of Neurology*, which appeared in the *JOURNAL* of November 25th, 1899, p. 1483, reference was made to the fact that Sir William Collins had contributed a preface. Again, in our review of the second volume of the *Archives*, published in the *JOURNAL* of March 7th, 1903, p. 1555, we quoted from that preface. We have, therefore, already on several occasions done what Dr. Jones rather late in the day calls upon us to do. If the name of Sir William Collins was not mentioned in our review of the latest volume of the *Archives*, or in the leader entitled "A Mental Hospital for London," that was due, not to any wish to ignore the part which he played in establishing the Laboratory at Claybury, but to the fact that we were dealing with the work done at the Laboratory and with Dr. Maudsley's offer to the London County Council, with neither of which, as far as we are aware, was Sir William Collins concerned. The Athenians got tired of hearing Aristides called the Just. We hope that when Dr. Jones writes, "The results which you have criticized reflect in an especial degree upon the statesmanlike qualities and upon the sympathetic zeal of a mind devoted alike," etc., he said one of those things one would like to have expressed differently. We did not criticize the results, but simply tried to set them clearly before our readers. If Dr. Jones thinks that these results "reflect" in any way upon the statesman of whom he has come forward as the champion, that must be regarded as his opinion. It certainly is not ours.

URTICARIA.

SIR.—Heidenhain and others have shown that urticaria is due to poisons affecting the endothelial cells of the capillaries—lymphagocytes, he calls them—present in crayfish, mussels, etc. I should like to know what is the correct treatment in such cases. As several people may partake of the same dish and only perhaps one of them develop nettle rash, are we to suppose that an antilymphagogue is present in the blood or tissues of some people? and if so, what is this antilymphagogue? and would it be possible to separate it and use it as an antitoxin?

I had one patient who suffered most severely from nettle rash for some months, and no treatment seemed to mitigate it; there was no history of any poison. Are we to suppose that in her case the endothelial cells underwent some change and did not become normal for some months, or are we to suppose that some poison was retained in the system which continually acted upon the cells? Are we all liable to poisoning by lymphagogues? But, protected by the presence of an antilymphagogue, the product of, say, one of the ductless glands, there are, of course, several "internal secretions" the use of which is not exactly known. May this be one of the uses? The importance of these internal secretions probably cannot be overestimated; it may be that a deficiency in one or other of them may predispose an individual to tuberculosis or even cancer. It is impossible to keep up to date with all that is written on cancer or the like; but it might be worth while for those who are working on the subject and who have the material to study to hand, to ascertain whether the function of any particular organ is found impaired in association with cancer.—I am, etc.,

Leytonstone, April 23rd.

ARTHUR TODD WHITE.

ELECTRICITY IN INFANTILE PARALYSIS.

SIR,—Much has been written of late, both in this *JOURNAL* and elsewhere, as to the benefits to be derived from surgical measures in old-standing cases of infantile palsy. All who are interested in the subject cannot but welcome any fresh means whereby the ravages of this disease may be, to some extent, repaired. Unfortunately, however, contemporaneously with this advance, there has been a tendency to decry the well-established treatment by electricity in favour of graduated exercises; and this in cases in which the question of surgical treatment does not arise.

No one would be so foolish as to deny the value of medical gymnastics, but their field of application is strictly limited. They are, in common with massage, useful as an

adjunct to electrical treatment, but they can never take its place. The reasons are as follows:

(a) In many cases voluntary power is non-existent in the affected muscles.

(b) Where some control remains, even the mildest exercises cannot infrequently produce fatigue and aching.

(c) Infantile paralysis is primarily a disease of the cells of the anterior cornu and of their efferent nerves. Electric currents, especially those produced by the induction coil, have a specific effect in stimulating partially atrophied nerve centres into fresh activity, an effect which—at least so far as our present knowledge goes—it is impossible to produce by any other agency.

The good effects of faradic treatment on weakly muscles are almost too well known to need emphasizing; but it is true that other means, such as massage, may sometimes produce equal benefit. It must be remembered, however, that the function of the damaged cells is not only motor, but trophic; and it is in the stimulation of this latter power that electricity stands unrivalled. An arm or leg which for years has been blue and cold and shrunken takes on new life; its temperature rises and its colour improves. Nor is this all. In children who have not yet reached their full growth, the development is accelerated, so that the increase of relative shortening is checked, and the diseased limb ceases to lag behind its fellow.

Finally, we do well not to forget that the health of these subjects is usually bad and their vitality low. To treat the paralysis successfully without attending to the patient is scarcely possible; and there is no better means of raising the bodily tone than by general electrization in the form of baths.—I am, etc.,

F. HERNIMAN-JOHNSON, M.B., Ch.B. (Aberd.),

Bishop Auckland, April 19th.

(R.N. (ret.))

Universities and Colleges.

UNIVERSITY OF OXFORD.

Diploma in Ophthalmology.

CONGREGATION on May 4th approved a statute for a diploma in ophthalmology.

Examination for the M.Ch. Degree.

The examination for the degree of Master in Surgery will commence in the Medical Department of the Museum at 10 a.m. on Thursday, June 24th. Names must be sent in to the Assistant Registrar at the University Registry not later than 10.30 a.m. on Friday, June 4th. The statuatable fee (£5) and the required certificates must be given in at the same time.

Examination for the D.P.H.

The examination for the Diploma in Public Health will commence on Tuesday, November 16th, at the Museum. Both parts may be taken together at the same examination, or they may be taken at separate examinations; but no one will be deemed to have satisfied the examiners in Part II unless he has satisfied the examiners in the subjects of Part I. The fee for each part is £5. Names of candidates and fees must be sent in not later than 10.30 a.m. on Tuesday, October 26th, to the Assistant Registrar, from whom all particulars can be obtained.

UNIVERSITY OF CAMBRIDGE.

Degrees.

THE following degrees were conferred on April 29th:

M.D.—A. W. Wakefield, Trin.; S. Gooding, Joh.; E. E. Glynn, Cla.
W. F. Buckle, Govy. and Cai.; R. A. Clapham, Emu.
M.B., B.C.—M. W. B. Oliver, Trin.

B.C.—A. C. D. Firth, Trin.

Professor Woodhead has been reappointed Representative of the University on the Council of the Lister Institute of Preventive Medicine.

VICTORIA UNIVERSITY OF MANCHESTER.

The Students' Union.

THE Chancellor (Lord Morley) formally opened the new buildings of the Students' Union on April 30th. When first the Union began in 1861 it was little more than a debating society, using the college court room, but in 1893 it obtained the old house near the university, which has remained its head quarters until to-day, though for some time it has been much too small to meet the growing needs. The new buildings have cost about £23,000, which has all been raised except about £1,500. The university authorities provided the site and the whole cost of the refectory, and the late Mrs. J. Worthington gave funds for building the women's union. The men's premises have cost over £10,000, most of which has been raised by the students and old members of the university. The men's and women's portions are under the same roof but quite

separate. The buildings are of brick with stone facings, and shields carved with the coats of arms of families connected with the university are seen over doors and windows. Opening out from the entrance hall is a large reading room and some small rooms for various purposes, while a passage leads to the refectory, which will be used in common by men and women students and the teaching staff. A library, and a fine room for the debating society, occupy the first floor, while on the second floor is a billiard room. The women's portion has a drawing room with library and reading room, and small rooms for social purposes.

There was a crowded audience in the large debating-room to hear Lord Morley. Mr. Alfred Haworth, President of the Union, in welcoming Lord Morley, said that the Union formed not the least important part of the University. It was founded in 1861 by Mr. E. J. Broadfield, whom they were glad to have with them on the present occasion. The President raised considerable laughter by saying that he had been present on three occasions at least when the debating society had passed a resolution to mend or end the House of Lords. He took the opportunity to thank those who had contributed to the building funds, and especially the past students who had shown their loyalty to their *Alma Mater*.

Lord Morley said he would not spoil the occasion by what could be called an academic speech, nor would he open the great controversy touched on by Mr. Balfour and himself last year when they received degrees from the university as to whether literature or science were preferable; there might be preferences, but not exclusions. He then mentioned in a casual way one subject after another, lightly dismissing them all as too serious for the occasion, but incidentally he promised that later in the year he might have an opportunity of following up the subject of the rival claims of the old and the new universities.

Sir Frank Forbes Adams moved a vote of thanks to Lord Morley, which was supported by Miss McNicoll, Chairman of the Women's Union, and by Vice-Chancellor Hopkinson. When Lord Morley rose to respond he was received with a great burst of enthusiasm.

UNIVERSITY OF BIRMINGHAM.

The Ingleby Lecture.

The Ingleby Lecture will be delivered this year on May 27th by Sir Thomas Barlow, Bart., K.C.V.O., M.D., F.R.C.P., who has chosen for his subject "Raynaud's Disease and Erythromelalgia: A Summary and a Review."

Lectures on the History of Medicine.

A course of three lectures, commencing on May 6th will be given by Dr. David Fraser Harris, F.R.S.E., on "The History of Discovery of the Circulation," "The History of Knowledge of the Respiration," and "The History of Knowledge of the Nervous System."

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN ordinary quarterly Comitia was held at the College on Thursday, April 29th. The President, Sir R. Douglas Powell, in the chair.

University of Geneva.

Dr. Pasteur, who was appointed to represent the College at the forthcoming 350th anniversary of the University of Geneva in July next, finding himself unable to attend, Dr. Habershon was appointed in his stead.

Membership.

The following gentlemen were admitted Members of the College: Clifford Beards, B.A., M.B.Oxon., L.R.C.P.; Edward Alfred Cockayne, M.B.Oxon.; Donald Elms Core, M.B.Vict.; William Griffith, M.B.Vict.; Frederick Gowland Hopkins, M.B.Lond., L.R.C.P.; Leonard George Joseph Mackey, M.D.Birm., L.R.C.P.; Percy Whittington Saunders, B.A., M.B.Toronto, L.R.C.P.; Henry Charles Gustavus Semon, M.A., M.B.Oxon., L.R.C.P.; Arthur Stanley Woodwork, M.B.Lond., L.R.C.P.

Licences.

The Licence of the College was granted to 91 gentlemen. The quarterly report of the Examiners for the Licence on the results of the January examinations was received.

Fellowship.

On the nomination of the Council, the following gentlemen were elected Fellows of the College: John Edward Squire, C.B., M.D.Lond.; Theodore Stacy Wilson, M.D.Édin.; Charles John Macalister, M.D.Édin.; George Harold Arl. Leveton Harris, M.P., M.B.Cantab.; Robert Oswald Noon, M.D.Oxon.; Clive Riviere, M.D.Lond.; Oliver Key Williamson, M.D.Cantab.; Francis Arthur Bainbridge, M.D.Cantab.; John Shields Fairbairn, M.B.Oxon.; Otto Fritz Frankau Grünbaum, M.D.Cantab.; Joseph Shaw Bolton, M.D.Lond.; Charles Bolton, M.D.Lond.; Llewellyn Carotacus Powell Phillips, M.D.Cantab.

Communications.

The following communications were received: 1. From the Board of Trade, March 26th, on Beri-Beri, in continuation of previous correspondence in 1908. This was referred to the Standing Committee on Beri-Beri.

2. From Dr. Raymond Crawford asking permission to photograph the portraits of Sir Charles Scarborough and Sir Edmund King, and a similar request from Mr. Leveton Harris, M.P., with regard to those of Dr. Cadogan and Sir George Baker, in possession of the College. Both requests were granted subject to the usual conditions.

University of London.

On the nomination of the Council, Sir William Allchin, M.D., was elected a Representative of the College on the Senate of the University of London for a term of four years from May 11th next, in place of Dr. Pye-Smith, who had resigned.

Admission of Women to the Examinations of the College.

The following by-law was enacted for the second time: "Women shall be eligible for admission as Licentiates and Members of the College and for the grant of a diploma in Public Health on the same terms and conditions as men, and, so far as is necessary to give effect to this by-law, words in the by-laws and regulations importing the masculine gender shall include females, and all proper alterations shall be made in the forms of the letters, testimonial, and the licence granted by the College. *Provided always* that women shall not be eligible for election as Fellows of the College, or be entitled to take any part in the government, management, or proceedings of the College."

University of Sheffield.

Dr. Herringham was elected a Representative of the College on the Court of Governors of the University of Sheffield, in place of Dr. F. T. Roberts, who did not desire re-election.

Reports.

The following reports were received: 1. From the Committee of Management, dated March 22nd, recommending:

(a) That a revised syllabus of the examination for the diploma in Public Health be adopted.

(b) That the Grammar School, Cheltenham, be added to the list of institutions recognized by the Examining Board in England for instruction in Chemistry and Physics.

(c) That Merchant Taylors' School, which is already recognized for instruction in Chemistry and Physics, be also recognized for instruction in Biology.

These recommendations were adopted.

Library.

Books and other publications presented to the library during the past quarter were received, and thanks returned to the donors.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

ELECTION OF EXAMINERS.

At a meeting of the Council held on Tuesday, May 4th, the following examiners were elected for the ensuing year:

Court "A."

For Conjoint Licence, Diploma in Public Health, and Preliminary.

Anatomy.—A. Fraser, F.R.C.S.; B. C. A. Windle, B.S. Univ.Dub.

Surgery.—C. A. K. Ball, F.R.C.S.; A. Blaney, F.R.C.S.; F. Conway-Dwyer, F.R.C.S.; R. J. Harvey, F.R.C.S.

Physiology and Histology.—D. J. Coffey, B.S., R.U.I.; E. L'Estrange Ledwich, L.R.C.S.

Pathology and Bacteriology.—A. H. White, L.R.C.S. Midwifery and Gynaecology.—F. W. Kidd, L.R.C.S.

Biology.—J. J. Burgess, F.R.C.S.

Ophthalmology.—A. H. Benson, F.R.C.S.; H. C. Mooney; H. B. Cunningham, F.R.C.S.

Sanitary Law and Vital Statistics.—M. J. Russell, F.R.C.S., D.P.H.

Engineering and Architecture.—J. H. Fergusson, F.R.C.G.S., D.P.H.

Languages.—W. Kennedy, M.A., F.T.C.D.

Mathematics, Physics, Dictation, and English Essay.—J. W. Tristram, M.A.Dub.Univ.

Court "B."

Fellowship, Licence in Surgery (for registered practitioners), Licence in Midwifery (for registered practitioners), and Licence in Dental Surgery.

Anatomy.—A. Fraser, F.R.C.S.; E. P. McLoughlin, B.Ch.

Surgery.—C. A. K. Ball, F.R.C.S.; A. Blaney, F.R.C.S.; F. Conway-Dwyer, F.R.C.S.; L. G. Gunn, F.R.C.S.

Physiology and Histology.—D. J. Coffey, B.S., R.U.I.; E. L'Estrange Ledwich, L.R.C.S.

Pathology and Bacteriology.—R. J. Rowlett, M.D.Dub.Univ.; A. H. White, L.R.C.S.

Midwifery and Gynaecology.—F. W. Kidd, L.R.C.S.

Chemistry and Physics.—E. Lapper, F.R.C.P.; R. J. Montgomery, F.R.C.S.

Dental Surgery and Pathology.—G. M. P. Murray, F.R.C.S.; W. G. Story, L.D.S.

Mechanical Dentistry.—D. L. Rogers, L.D.S.; E. L. Sheridan, L.D.S.

CONJOINT BOARD IN SCOTLAND.

The following candidates have been approved at the examinations indicated:

FIRST PROFESSIONAL.—H. Shaw, A. M. Robertson, W. Laird, M. McCloskey, J. T. Kelly.

SECOND PROFESSIONAL.—W. Millerick, C. S. Owen, A. L. Edwards, J. Macrae, J. A. Hutchinson, F. F. Keravalla, H. R. Macnab, C. Hunter, A. Carnana.

THIRD PROFESSIONAL.—F. Williams, J. Blackburn, P. Valesh, G. A. O'Discol, J. W. Robertson, D. R. Gazdar, W. Browne, E. D. Shroff, F. P. Quirk, N. B. Mehta, W. M. Thomson, R. C. Fuller, S. N. S. Aizangar.

FINAL.—D. G. Lindsay, N. B. Mehta, J. McCall, V. G. Gokhale, H. E. Swan, Isabel Pulteney.

Public Health

AND

POOR LAW MEDICAL SERVICES.

LATEST PHASE OF THE CASTLEFORD DISPUTE. WHAT is described in the *Yorkshire Evening Post* of May 1st as "an acrimonious discussion" took place at the last meeting of the Pontefract Board of Guardians. It had reference to the question of the remuneration of the district medical officer for the Castleford District of the Pontefract Union. It is now evident that the Pontefract guardians are prepared to do the right thing, but in the wrong way. More than twelve months ago the two medical officers of the Castleford District represented to the guardians that the work was most inadequately remunerated, and asked for an increase of payment. The guardians not only declined to grant this, but practically forced upon Drs. G. B. Hillman and W. Kemp the resignation of their appointments.

On March 7th, last year, we published in these columns an article, *Seven Farthings for State Medical Service*, giving surprising details of the parsimony and niggardliness of the Pontefract Guardians. No self-respecting medical man could have been expected to continue to discharge the duties under the circumstances clearly placed before the guardians. By a misuse of its power the board dismissed Drs. Hillman and Kemp from the posts of public vaccinator simply because they declined to continue to serve the State in another department at such a miserable apology for remuneration. The warning published in this JOURNAL and the unanimous attitude of the profession in the immediate district resulted in the guardians finding it impossible to secure more than one person willing to undertake the duties. To accommodate this applicant the two districts were combined, although quite recently the guardians had held that it was in the public interest that two districts with separate officers should exist. Within a few months the guardians capitulated and admitted the validity of the only point at issue by raising the salary 33 per cent. This concession, as we predicted on October 3rd, 1908, did not end the troubles experienced by the guardians. The *Castleford Express*, April 23rd, in reporting the proceedings of the Pontefract Board of Guardians, publishes the following letter addressed to the board by Dr. Hall, whose disregard of the warnings and facts of the case deprives him of all title to any sympathy on the part of his professional brethren:

Will you kindly bring before the board my application for some substantial remuneration for my loss during the past year? The amount received is £419. In the advertisement the amount was stated to be £220; the increase of salary made it total £240. Medicines as supplied by Mr. Wainwright cost £57 1s., as per his bill. Surgical dressings, appliances, etc., cost £20. Dressings and instruments for vaccinations cost £10. Moving expenses £20. Amounts paid to other doctors for work done in my unavoidable absence, costs for assistance and loss in private practice. Consequently when these amounts are deducted there is very little left for my services. I will feel very grateful to the board if they will generously consider my request, as the only stimulus I have had since coming to Castleford is that the board have looked with kindness, sympathy and pity on me, through my troubled course here in Castleford. I would again assure the board of my earnest desire to carry out my duties allotted to me by them conscientiously and with as little trouble to them as possible. I feel I cannot close this letter without commenting on the numerous complaints made against me, and against me in the board's report, in each case. I will now and by again thanking the board for their past consideration.

This letter appears to have roused the board to a sense of what the chairman is stated to have considered to be "a matter of honour." Drs. Hillman and Kemp, in their manly and straightforward application over a year ago, found no such response. The letter from Dr. Hall provides a complete vindication of the action of the previous officers, and demonstrates to the point of absolute proof the statements upon which the application for an increase of remuneration was based. The combined remuneration was £60 per annum. It was contended that this involved an actual loss. Dr. Hall's letter shows that the cost of drugs, surgical appliances, dressings, etc., amounted in the year to £67 1s., or £7 more than the combined salaries concerning which the dispute arose. Powerless to controvert these facts, we should have thought that a board, with any regard for its honour, would desire to seek to make some reparation for the injury and persecution inflicted on the two former officers. That stage, however, has not yet been reached. They prefer to reward Dr. Hall for his demonstration of the folly and unreasonableness of their action by voting him a bonus or allowance of £25. If Dr. Hall has performed the duties with credit to himself and satisfaction to the board and the public, he may be entitled to more remuneration than he

has received; but as he entered upon the contract with the guardians knowing the circumstances, he seems to have little real ground for complaint for having made a bad bargain. The question of the legality of the "allowance" of £25 will surely engage the attention of the Local Government Board or the auditor, and it would not be surprising to find that members of the board who voted this consolation fee may have to pay for their sense of honour out of their own pockets. A surcharge might have the effect of causing the guardians to see the wisdom of doing what they ought to have done in the first instance, in which case many acrimonious discussions and wasted hours would have been avoided. Peace with honour is by no means secured by the latest phase of the Castleford Dispute. The guardians are beaten on the only point in dispute, and the simplest way to avoid further loss of dignity would be a frank and free admission that a mistake has been made.

LONDON MILK.

IN the course of a general discussion on the annual estimates at the London County Council on May 4th several questions relating to public health were raised. Dr. Beaton moved a reduction of the Parliamentary Committee's estimate in order to urge that when the Council's General Powers Bill comes back from the Lords the House of Commons should be asked to reinsert the clauses relating to pure milk. Dr. Beaton thought that with the introduction of so complex a Budget there would be little likelihood of Mr. Burns being able to fulfil his promise to introduce general legislation on the subject of milk supply. The Chairman of the Committee, however, preferred to rely on the Government pledge.

The Public Health Committee was subjected to criticism from both sides when it brought forward its estimates. The Progressives wanted to know why there had been a delay of eleven months in putting into force Part IV of the London County Council General Powers Act, 1907, relating to milk inspection, and to receive the reply that preliminary arrangements took some time. Then Mr. Easton, from the other side, condemned milk inspection, and said the whole of the money spent on it was wasted. Dr. Beaton in reply said that with the limited powers it had the committee were doing excellent work in preventing tuberculous milk from coming into London. Next came Mr. Thompson, the late Vice-Chairman of the Council, who moved the omission from the estimates of an item of £350 for the expenditure on the investigation of the Lister Institute into the causes of death from acute infection other than tuberculosis of guinea-pigs. Uniformed members laughed at this item, but Mr. Gilbert Johnstone (Chairman of the Committee) soon explained its significance. He said that of 1,025 samples examined by the Lister Institute, material from 167 samples caused the death from some acute infection, the nature of which was not ascertained, of guinea-pigs into which the material had been subcutaneously injected. Obviously this was a matter for careful investigation, for it might be that there was some worse danger than tuberculosis in the milk. The Lister Institute was prepared to continue the investigation for another twelve months, and the Public Health Committee felt that so large a percentage of deaths from an unknown cause was a matter which should be explained as soon as possible. The amendment was lost.

WATERY MILK.

IN a case decided recently in France a milk seller was fined 300 francs (£12)—a very considerable penalty as compared with those usually imposed at petty sessions in England—for selling milk which he proved to be deficient in solids and fat, but which was said by the defendant to be the genuine product of his cows without added water. The deficiency was held by the court to be due to feeding the cows upon watery food or giving them an excessive quantity of water to drink. The writer in *La Semaine Médicale* (April 28th, 1909), where the case is reported, quotes the passage from the *Georgics* of Virgil: *Ipse manu salassae fent praesepit agens*, "Hinc et amant *Ilvius magis, et mater ubera tendunt*," to show that it is no new discovery, and that the Latin peasants knew as well as the modern milkman how to increase the quantity of liquid given by their cows. The court rejected the defence, holding that if cows are fed on food which has this effect it is a dishonest proceeding, and the result is as much an adulteration of the milk as if the water had been taken direct from the pump. We do not know whether such a statement has ever been given in this country, but it seems to be sound in principle.

THE CONTROL OF DIPHTHERIA.

E. F.—IN the BRITISH MEDICAL JOURNAL for January 23rd, 1909, p. 219, a short account will be found of a discussion at the Society of Medical Officers of Health upon the scientific control of diphtheria. A fuller report is published in the *Public Health* for March, 1909, p. 139. It is often extremely difficult to get rid of the Klebs-Loeffler bacillus from the throat or nasal passages of contact cases, more especially when there are no clinical signs of the disease. We believe it is usual for medical officers of health to expect to receive notification certificates of persons who are found to be harbouring Klebs-Loeffler bacilli.

Obituary.

GERALD FRANCIS YEO, M.D., F.R.S.,

EMERITUS PROFESSOR OF PHYSIOLOGY, KING'S COLLEGE, LONDON.

We much regret to announce the death of Dr. G. F. Yeo at the age of 64 years. Gerald Yeo, as he was usually known, was the second son of the late Henry Yeo, J.P., of Howth, Dublin, and was born in the year 1845. He received his early education at Dunganon School, Tyrone, and subsequently he went to Trinity College, Dublin, where he graduated as M.B. in 1867 and M.D. in 1871. In the latter year he was awarded the Gold Medal of the Pathological Society of Dublin for his essay on the diseases of the kidney. He started practice in Dublin, and became a teacher of anatomy in the university of that city; a year or two later he travelled and pursued further studies in the Universities of Paris, Berlin, and Vienna, and in 1874 was appointed to the Chair of Physiology at King's College, London, where he succeeded the late Professor Rutherford who had received a similar appointment in Edinburgh University. At first he combined his work at King's College with that of Assistant Surgeon at King's College Hospital, but he soon relinquished the latter post, and devoted himself entirely to the duties of his Chair, which he held for sixteen years, resigning it in 1890. After his resignation the Council of King's College bestowed upon him the title of Emeritus Professor.

Gerald Yeo was an enthusiastic worker, and fully maintained the high traditions of his Chair. During his Professorship he held a good many examinerships, and produced his well-known *Manual of Physiology*, which became a popular students' textbook, passing through six editions in less than ten years. He was not a voluminous writer of original papers, but all that he published was carefully thought out, and rested on the firm foundation of sound work. He is best known for his work performed in conjunction with Dr. Ferrier on the subject of cerebral localization in monkeys, a research which may truly be described as epoch-making. His other published papers related to the bile, the blood pigment, tissue respiration in the heart, muscle sounds, the graphic record of muscular contractions, and other subjects, the enumeration of which shows his versatility. Those interested in the antivivisection controversy will remember the struggle in which he and Dr. Ferrier were involved by an abortive attempt to prosecute them for their experiments on monkeys.

Among other positions that Professor Yeo held we may mention that he was Vice-President of the Section of Anatomy and Physiology at the meeting of the British Medical Association held at Worcester in 1892; he was one of the Secretaries (the late Professor Roy being the other) of the Physiological Section of the International Medical Congress held in London in 1891, a post for which he was particularly suited not only on account of his capacity for hard work, but also because of his fluency in foreign tongues. The great success which attended this Section is to be very largely traced to his efforts.

He is, perhaps, best known outside his Professorship as the first Secretary of the Physiological Society. In its early days this society was mainly a mutual protection society against the intrigues of the antivivisectionists, but it gradually developed into what it is now, a learned society in the more usual acceptance of that term. Yeo was one of the founders of this society, and threw himself into its work with characteristic energy. He held the office of Secretary for a period of fifteen years. When he resigned the post in 1890 the society marked their esteem for himself and for his work which had always been carried through with unflinching tact, by the presentation to him of a beautiful silver tea service. It is to Yeo in conjunction with one of his greatest friends, Professor Kronecker of Berne, that we owe the inception of the international physiological congresses which have met every three years since the first, which was held at Bale in 1891.

But Gerald Yeo had hobbies outside of his science, and dearly loved the country and country pursuits; he was a keen gardener, fisherman, and yachtsman, and many of his physiological colleagues will remember their visits to him at his country home in Fowey, where he was able to let them share with him his love of the sea. After he

retired from King's College, he withdrew to Totnes, where he devoted himself almost entirely to country life, coming up to town only on rare occasions for meetings of scientific societies. He was elected a Fellow of the Royal Society in 1889.

He was twice married; first to Charlotte, the only daughter of Mr. J. Kitchen, in 1873, and secondly to Augusta Frances, second daughter of Mr. Edward Hunt of Thomastown, co. Kilkenny. He leaves a widow and several sons to mourn his loss.

A bare record of the career of Gerald Yeo such as the foregoing lines supply conveys little or nothing of the character and charm of his personality. Like most Irishmen, he was a fluent speaker and an attractive lecturer; he was a delightful companion, and the stories with which he garnished his conversation, and which were related in inimitable brogue, will long be remembered by his friends. He brimmed over with good nature and generosity, and with all this was a keen observer and judge of human nature, and all his actions were actuated with sound common sense. The world is the poorer by his loss, and keen regret will be felt by all who knew him, and sincere sympathy extended to those nearest and dearest to him.

JAMES LIMONT, M.A., M.B., M.R.C.P.

FORMERLY PHYSICIAN TO THE ROYAL VICTORIA INFIRMARY, NEWCASTLE-UPON-TYNE.

On May 1st James Limont, M.A., B.Sc., M.B. Edin., M.R.C.P., late of Newcastle upon-Tyne, died in Edinburgh. For the last three years Dr. Limont had been in failing health, and two years ago he resigned his appointment at the Royal Victoria Infirmary and left Newcastle to regain his health if possible. A son of the late Rev. William Limont, Presbyterian minister at Alnwick, Dr. Limont was born in this quiet Northumberland town on April 9th, 1856. After a distinguished career in Edinburgh University, and after holding residential appointments in the Royal Maternity and Simpson Memorial Hospitals, and the post of Senior Demonstrator of Anatomy at the Minto House School of Medicine, Dr. Limont proceeded to Glasgow, where for a period he was House-Surgeon and House-Physician to the Royal Infirmary. Twenty-five years ago he became Senior House-Surgeon and House-Physician to the Newcastle Infirmary. In 1885 he was appointed Physician to that institution, an office the duties of which he discharged with great ability and much acceptance to the committee and patients. On the establishment of a department for skin diseases, Dr. Limont, who had been specially preparing himself for the post, was unanimously appointed Physician-in-Charge, in addition to his other duties. As a consultant, his opinion was frequently sought, while as a clinical teacher he stood out prominently among his colleagues, his method of instruction being much appreciated by the students. In the early years of his professional life he showed considerable interest in the meetings of the North of England Branch of the British Medical Association, and at the local banquets was in much request, for he sang with great taste and effectiveness. A well-known golfer, the name of Milton under which he played was held in high esteem. By the death of Dr. James Limont Newcastle and the North of England have been deprived of the services of a highly-trained and most capable physician. Much sympathy is felt for Mrs. Limont and her family of one son and four daughters.

ROBERT HARRISON WILSON, M.D. DUN.,

GATESHEAD.

A LITTLE over a fortnight ago the grave closed over the cremated remains of the late Dr. R. H. Wilson of Gateshead. Dr. Wilson had reached the age of 82, and, although for several years he had suffered from recurrent attacks of bronchitis and asthma, which obliged him five years ago to relinquish practice, he was at the time of his death in fairly good health. He had gone for his customary walk that morning, but during the course of the day was seized with an attack of heart failure to which he succumbed. Until within the last few years Dr. Wilson was one of the busiest of medical practitioners. He simply lived in his brougham, working from early morning till late

evening. It has fallen to few medical men to enjoy and to retain the confidence of their patients of all classes as Dr. Wilson did.

Dr. Wilson first came into public notice during the third and last epidemic of cholera in 1853, when his efforts to check the ravages of the disease were unremitting; in the following year, when there occurred the "great fire" in Gateshead and Newcastle, no man, it is said, worked harder or gave of his time so ungrudgingly to the wounded as Dr. Wilson. Besides Dr. Gibb, of Newcastle, who was house-surgeon in the Newcastle Infirmary at this date, there are few of his medical compeers left in the North of England, but there are still many of a younger generation who remember the many acts of kindness they received at the hands of Dr. Wilson, and by them his death is much regretted. Although in all senses of the word a most successful and esteemed practitioner, Dr. Wilson had experienced considerable grief and sorrow through family bereavement in the death of two of his sons—one in a mine accident—and the death of a married daughter. A widow, three sons, and three daughters survive him. The body was cremated at Darlington.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

CIRCULARS TO PATIENTS.

J. M. McL.—In sending out circulars care must be taken that they reach only those who are bona-fide patients of the practice. If they are sent out with the quarterly or half-yearly accounts there can be no question of the bona-fides.

ADVERTISING BY CLUBS.

GEN. PRAC.—We do not think there is any objection to our correspondent accepting the appointment, provided that no further advertising of the club takes place.

Medico-Legal.

DENTAL MECHANICS.

W. F. G.—There cannot, we think, be any objection to a registered medical man employing a dental mechanic.

PROFITS DURING INTRODUCTION.

QUERENS asks: In the case of a short introduction (six weeks) of a successor to a practice (not preliminary partnership), is the purchaser usually paid as assistant, or does he receive a share of the receipts; if so, what ratio of them?

. This is a matter usually settled in the agreement of sale.

During a short introduction all the profits might be shared equally between the vendor and purchaser, or one of them might pay all the expenses, take the profits, and make an allowance to the other.

The Services.

ROYAL ARMY MEDICAL CORPS (TERRITORIAL).

LECTURES ON ARMY SANITATION.

A COURSE of six lectures on army sanitation will be given in the Department of Military Hygiene of the Royal Institute of Public Health, 37, Russell Square, W.C., on Wednesdays at 6 p.m. On May 12th Surgeon-General Evatt, C.B., will deal with the officer and his duties in respect of the well-being of the soldier under his command; on May 19th Lieutenant-Colonel R. H. Pirrh will lecture on practical sanitation in camps; and on May 26th Lieutenant-Colonel C. H. Melville will speak on the essential principles of sanitation in the field. On June 2nd Lieutenant-Colonel R. J. S. Simpson, C.M.G., will deal with hospital work in war; on June 9th Professor R. T. Hewlett will lecture on the bacteriology of diseases common to armies in the field, and on June 16th the course will be brought to a close by a lecture by Lieutenant-Colonel C. S. Monkton Copeman, M.D., F.R.S., on inoculation methods for the prevention of diseases to which the soldier is liable. All officers of the Territorial Force are invited to attend, and further particulars can be obtained on application to the Honorary Secretary, Mr. James Cantlie, M.B.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL.

The offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL are at 429, Strand, London.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London*. The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

TELEPHONE (National):—

2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.

2630, Gerrard, BRITISH MEDICAL ASSOCIATION.

2634, Gerrard, MEDICAL SECRETARY.

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AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

✉ Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

✉ We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

C. W. W. desires to hear of a quiet seaside place suitable for a young family, and where accommodation could be obtained for it at a moderate price, where facilities for bathing, golf, tennis, and excursions are available, and which is within two days' motoring of London.

HARD WATER AND ARTERIO-SCLEROSIS.

CALCIUM asks: Are there grounds for believing that the persistent drinking of hard water will lead eventually to arterial degeneration from presence of excess of calcium salts in the economy?

DISPENSING AND NON-DISPENSING PRACTITIONERS.

COLONIAL, now resident in England, is considering the conversion of a non-dispensing practice into a dispensing one. He would be glad of some idea of: (1) The salary required by a lady dispenser and bookkeeper; (2) what increase in the income may be expected in a practice of £1,000 per annum, mainly upper-class patients.

TAPEWORM IN NURSING MOTHERS.

HELMINTH asks for counsel as to the treatment of a case of tapeworm in a patient nursing a healthy infant aged 4 months. Segments of the worm have been passed at intervals ever since the third month of pregnancy, their diameter being $\frac{1}{8}$ in. But for the fact that the segments are seen, there is little or no evidence, subjective or objective, of helminthiasis. The treatment prescribed, if any, should be such as will not interfere either with lactation or with the health of the infant.

INCOME TAX.

URTICARIA subscribes to a friendly society, in consideration of which he has recently received a weekly money allowance during illness. He asks whether the amount so received must be included in his statement of income for assessment to income tax.

. So far as we are aware, the point has never been brought before the courts, and the Income Tax Acts do not specifically refer to it. In our judgement, however, sickness pay received from a friendly society is not assessable to income tax, and therefore we consider that our correspondent is not bound to include the amount received in his statement of income.

ANSWERS.

H. W. D.—Of the instruments mentioned, Oliver's latest compressed air haemomanometer is probably that best adapted for accurate observations.

M. S.—*Public Health*, the official journal of the Society of Medical Officers of Health, is published monthly, and deals with current public health matters. *The Sanitary Record* and *The Medical Officer* are each published weekly. The latter is styled "A Journal for Medical Men in the Government and Municipal Services," and a great deal of its space is devoted to sanitary affairs.

JOHN P. HAIG'S "CURE" FOR GOITRE.

Some information with regard to Haig's goitre cure is given in a paper by J. Kochs in the *Apotheker-Zeitung*, abstracted in the *Pharmaceutical Journal* for April 14th, 1906, p. 447. According to this the "cure" comprises: Powders, consisting of sodium bicarbonate, coloured pale red; ointment, consisting of a sodium soap with yellow soft paraffin; pastilles, consisting of sodium bicarbonate, aloes, and a little oil of caraway; pastilles, consisting of extract of hydrastis.

BOOKS ON CHRISTIAN SCIENCE.

The following might suit our correspondents' purpose: *The Faith and Works of Christian Science*, by the author of *Conscious Medici*, just published by Macmillan and Co.; *The Truth and Error of Christian Science*, by M. Carta Sturge (Moral Science Tripos, Cambridge), with an introduction by the Rev. H. S. Holland, M.A., Canon of St. Paul's, published by John Murray, Albemarle Street, London, 1903; *Christian Science: The Faith and its Founder*, by Lyman P. Powell, published by G. P. Putnam's Sons, New York and London. The Knickerbocker Press, 1907; *Christian Science, Medicine, and Occultism*, by Albert Moll, M.D., Berlin, only authorized translation from the German, by F. J. Rebman, published by Rebman, Limited, 129, Shaftesbury Avenue, W.C., 1902; *Faith-Healing and Christian Science*, by Alice Fielding, published by Duckworth and Co., 3, Henrietta Street, W.C., 1899; *Christian Science*, an Exposition of Mrs. Eddy's Wonderful Discoveries, including its Legal Aspects, by William A. Farrington, published by E. B. Treat and Co., 241-243, West Twenty-third Street, New York, 1900. But perhaps, after all, Mrs. Eddy's own book, *Science and Healing*, to the intelligent reader supplies the most convincing refutation of her doctrines.

LETTERS, NOTES, ETC.

DR. SIDNEY GRAHAM (Watchet, Somerset) desires on behalf of Dr. Sharpe and himself to thank those friends who supported the candidature of the son of Dr. John Sharpe, late of Watchet, but now of Berrow, Burnham, Somerset, for admission to the Royal Masonic Institution for Boys. The boy was placed thirty-fifth out of forty-nine vacancies.

THE TREATMENT OF ANKYLOSTOMIASIS.

DR. W. ROBERTSON (Durban, Natal) writes to say that some years ago he drew attention in the *South African Medical Record* to the utility of sulphur in bilharziosis. He has since tried it in ankylostomiasis with equally good effect. He suggests that possibly the ingestion of sulphur kills the parasites by increasing the percentage of H_2S in the intestines.

APPENDICITIS AND RHEUMATISM.

DR. ROBERT T. MORRIS (New York) writes: In the letter recently sent to the *BRITISH MEDICAL JOURNAL*, in which I commented upon the large proportion of cases of appendicitis of rheumatic origin in the practice of Dr. Alexander Haig, I had no intention of calling into question the accuracy of observation of such a renowned teacher of the profession, whose position is too responsible to allow of his making loose statements. It was simply a question of the relative proportion of cases of each one of the four kinds of appendicitis that would find their way to the offices of men engaged in different fields of practice. Dr. Haig would naturally see more cases of rheumatic origin. In my own practice at least half of the cases of appendicitis are apparently of mechanical origin. In the practice of the gastro-enterologist, on the other hand, it is probable that much more than half of the number of cases of appendicitis are of the fibroid degeneration type, and not infective or rheumatic. Fibroid degeneration appendicitis, occurring in the course of normal involution of the appendix, perhaps forms the largest class, and seem to present the most common single cause for "intestinal dyspepsia." One of my colleagues recently said that the reason why these appendices are often called "Morris's appendices" is because no one else can find them. As a matter of fact, almost any one can find them if he will make deep pressure over the site of the right group of lumbar sympathetic ganglia, about 1½ in. to the right of the navel. If there is hypersensitiveness at this point, and not at corresponding point at the left of the navel, the rest of the testimony bearing upon the point will have a good basis in evidence. Such appendices on removal will be found to be undergoing fibroid degeneration in the course of their involution. On microscopic examination they will be found to contain much hyperplastic connective tissue, and persisting nerve filaments will be surrounded by such groups of new cells that one can easily enough read the histiolytics as meaning that contraction of the connective tissue is producing an irritative lesion, sufficient in degree to excite the intimate ganglia of the bowel wall (Auerbach's plexus and Meissner's plexus), and to lead to perversion of intestinal function, with the symptoms of "intestinal

dyspepsia." Such appendices will be found more often in the practice of the gastro-enterologist. Rheumatic appendices will be found more commonly in the office of Dr. Haig. Appendices which are the site of acute infective invasion, with the mechanical feature dominant in the cause and effect relationship, will be found more often in the hands of the surgeon. We thus have a shield with more than one side, and one may perhaps be careful about generalizations when he speaks of appendicitis as a diagnostic entity, and without qualification as to kind.

FOUL BREATH.

THIS disagreeable infirmity is associated with a large number of pathological conditions, and in any given case the particular lesion must be sought out and effectively treated. In a paper read to the West London Medical Society last year (*West London Medical Journal*, April, 1908) Dr. Andrew Leslie summarized them very completely, and drew attention to one or two points not generally known. He pointed out that free discharges of the nasal contents may not occur, although there may be no real obstruction, owing to desiccation of the mucous membrane in roomy or wide nostrils, and this may be the result of too energetic treatment of the turbinate bones by the galvano-cautery, or be due to constitutional causes, such as anaemia. Chronic epistaxis in plethoric persons may be attended with fetor, as the blood adheres to the mucous membrane, soon becomes septic, and creates an unpleasant odour. But while it is undoubtedly the case that foul breath is commonly associated with definite pathological conditions, it is also true that any one of them may be present without giving rise to fetid breath, and, further, that the foul odour may be present apart from any pronounced disease. The fetor is not the direct consequence of the inflammatory condition or growth or deformity, but of local infection by one or more of the many feter-producing organisms, usually belonging to the groups of coliform, mesentericus, or putrefactive bacteria, which are only imperfectly known and are well deserving of special study. One of the difficulties in writing about them is that there are not only many names for the same organism, but it is not always certain that two writers mean an identical organism when they call it by the same name.

THE PREFRONTAL VEIN AS A MEANS OF IDENTIFICATION.

In the *Gazzetta degli Ospedali* of April 16th, Professor Tamassia, of Padua, who has recently been made Senator of Italy, suggests, as a subsidiary aid to identification, recording the disposition of the prefrontal vein or veins. If a vertical line is drawn from the glabella upwards the relation of the vein or veins to his line can be graphically recorded and form a means of identification. The vein may run strictly parallel to the vertical line, may form an angle with it, may cross it, may run in duplicate on either side or as two parallel veins on one side. In addition to the direction of the vein, note is made of its fullness, tortuosity, etc. The author has made many observations and believes that the variations in the disposition of the frontal vein are sufficiently marked to make this a useful addition to our means of personal identification.

INSURANCE APPLICATIONS

THE way in which application forms for insurance are filled up are often most amusing in their enlightening. As illustrations we take from the *Medical Examiner* of New York the following statements said to have been made in applications in the United States:

Mother died in infancy.

An uncle died of cancer on his mother's side.

Father went to bed feeling well, and the next morning woke up dead.

Grandfather died suddenly at the age of 103. Up to this time he bid fair to reach a ripe old age.

Applicant does not know anything about maternal posterity, except that they died at an advanced age.

Applicant does not know cause of mother's death, but states that she fully recovered from her last illness.

Applicant has never been fatally sick.

Father died suddenly; nothing serious.

Applicant's brother, who was an infant, died when he was a mere child.

Grandfather died from gun-shot wound, caused by an arrow, shot by an Indian.

Applicant's paternal parents died when he was a child.

Mother's last illness was caused from chronic rheumatism, but she was cured before death.

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An Address

ON

ACUTE RHEUMATISM, ITS ALLIES
AND ITS COUNTERFEITS.*BY F. DE HAVILLAND HALL, M.D., F.R.C.P.,
SENIOR PHYSICIAN TO THE WESTMINSTER HOSPITAL.

It is to be hoped that the time is coming when we shall be as successful in stamping out acute rheumatism as we have been in the case of malaria and typhus fever in this country, and as it would seem we are about to be in tuberculosis. It is difficult to estimate the amount of misery that would be prevented could we but limit the spread of acute rheumatism. Under 30 years of age I should estimate that four-fifths of all the cases of valvular disease of the heart are due to acute rheumatism, and I suppose that there is no more pitiable sight in a hospital ward than a patient gradually dying from heart failure resulting from the endocarditis of acute rheumatism.

I would lay especial stress on the importance of recognizing that in children slight pains, commonly described as growing pains, an attack of tonsillitis or erythema may be the only manifestation of the rheumatic diathesis, and yet quite sufficient to set up endocarditis with all its lamentable sequelae.

The whole subject of rheumatic fever has been much clarified since its probable microbic origin has been acknowledged, and there is much evidence in favour of the *Diplococcus rheumaticus* described by Drs. Payne and Poynton as being the specific organism. Just as the discovery of the tubercle bacillus cleared up many doubts and difficulties which formerly existed in tuberculous cases, so the recognition of the rheumatic organism will enable us to form a truer conception of its nature, and we shall be able to exclude many conditions which were in the past embraced under the head of rheumatism, but which we now have every reason to believe are of a widely different pathology. Time was when the joint lesions of acute rheumatism were thought to be characteristic, but we now know that they may be simulated by pyaemic conditions—as in a case to which I shall direct your attention later on—and by gonorrhoeal rheumatism, to say nothing of gouty arthritis. In children, moreover, as I have just mentioned, the disease may run its course with hardly any, if any, joint mischief, the heart bearing almost the whole brunt of the disease. We must, therefore, regard rheumatic fever as a general disease with localization in the heart and joints, and not a local disease of the joints with symptomatic fever.

It is quite unnecessary for me to enter into a description of the symptoms of an attack of acute rheumatism. To all present I am sure that these symptoms are only too familiar, as rheumatic fever is unfortunately very common in our damp climate. I would, however, like to make a few remarks on some of the chief complications of this disease. Among these, affections of the heart take the first place. It is difficult to overestimate the frequency with which the heart is affected in cases of rheumatic fever and the evil effect this has upon the life-history of the individual. Even as far back as the time of Sir Thomas Watson it was recognized that the chance of the heart being involved during an attack of acute rheumatism, which is very great before puberty, diminishes as life advances. He writes:†

I have known only two persons pass through acute rheumatism with an untouched heart prior to the age of puberty, and in these two I am by no means certain that the articular disease was genuine rheumatism.

Life Assurance.

The damage done to the individual is becoming more and more appreciated by assurance companies. For my part, I believe that the companies would save money if they declined to accept any applicants who had suffered from an attack of rheumatic fever. In my small book on

The Medical Examination for Life Assurance? I have laid down the following rules:—*Insurance life is dangerous to the patient in bed two or three weeks and to incapacitate him from his occupation for six or seven weeks, would require the addition of an equivalent to seven years at the age of 30, and three years must have elapsed since the attack.* If there has been more than one attack, the life would not be assurable until at least ten years after the last attack. An applicant with a rheumatic history had better not be accepted under the age of 25 years.

Increasing experience in life assurance has in no way tended to diminish my fear of acute rheumatism. Indeed, I am inclined to add a rider to the above rules and to suggest that cases with a rheumatic history should only be taken for an early endowment policy.

According to Sir William Churchill's statistics, 80.55 per cent. of the cases under 10 years of age had signs of old or recent endocarditis. The percentage gradually dropped to 34.64 in those over 40, with an average percentage of 57.50—that is, his figures show conclusively that more than half the cases of acute rheumatism have endocarditis—a truly formidable indictment against the disease, and a warning not to neglect the earliest indications of acute rheumatism.

Endocarditis of rheumatic origin may come on during fetal life, and be the cause of some of the varieties of congenital heart disease. Indeed, a fetal endocardial murmur has been recognized before labour. At the Lumsiean Lecture on March 25th, 1909, Dr. Norman Moore exhibited the hearts of a woman and her fetus, both showing signs of endocarditis. The mother had acute rheumatism.

It is more difficult to detect pericarditis than endocarditis, so that one need not be astonished to find that Sir William Churchill's statistics show that only 14.87 per cent. of men and 9.95 per cent. of women with rheumatic fever suffered from pericarditis. My late colleague, Dr. Sturges, insisted that in many cases we have to deal with a pancarditis—that is, that a myocarditis exists in connexion with the pericarditis and endocarditis, or even independently of either. It is probably to this myocarditis that we owe the sudden deaths from acute dilatation of the heart which occasionally take place during the course of acute rheumatism. The possibility of the myocardium being affected should be borne in mind during convalescence from acute rheumatism, and the patient should be kept in the recumbent position for at least two or three weeks after the temperature has become normal and the pulse quiet. Indeed, I think that to be on the safe side four to six weeks would not be too long. Unfortunately, with the demand on hospital beds, this counsel of perfection can rarely be carried out in hospitals, but more might be done to impress upon private patients the necessity of prolonged rest in the recumbent position after an attack of acute rheumatism. If this could be done much less would be seen of valvular disease of the heart.

While on the subject of pericarditis I would like to draw attention to a physical sign present at a very early stage of the disease, which I do not think has received sufficient attention—I mean cantering action of the heart; and by cantering action I understand the presence of three sounds in the cardiac rhythm. Two of the sounds being, of course, the first and second sound of the heart, and the third being due to the commencing pericardial friction, before it has sufficiently developed to give rise to the so-and-so friction rub.

Pleurisy.

Pleurisy is another complication which I have seen from time to time during the course of acute rheumatism. The fact that it chiefly affects the left pleural cavity would seem to indicate that it arises in connexion with some cardiac infection, and, indeed, that has been my experience. I have usually seen a pleural effusion in patients who have suffered also from pericarditis. It has been stated that 10 per cent. of all cases of acute rheumatism get pleurisy, but this seems to me too high a percentage. Possibly more cases would be detected if all patients were carefully examined, but the pain attending these examinations in rheumatic subjects is often a bar to the necessary investigation.

Tonsillitis.

I think that it is now generally agreed that pharyngitis is a very common complication of acute rheumatism;

[2524]

* A paper read before the Croydon Division of the British Medical Association.

indeed, it has been stated that sore throat is present in 80 per cent. of all cases of rheumatic fever. Owing, however, to the attention of the patient being concentrated on his arthritic symptoms, he will often omit to mention spontaneously the fact that his throat is sore, and this possibly accounts for the discrepancy in the percentage of cases reported by different authorities. The throat is usually affected a day or two before the onset of the articular pain, but occasionally there is no complaint of throat trouble until after the rheumatic affection has fully declared itself.

It has been suggested that the tonsils are the chief portals for the entrance of the poison of rheumatic fever, and there is much to be said in favour of this view. When sore throat is the chief feature of a rheumatic attack cardiac lesions are seldom seen, though cases do occur in which endocarditis and pericarditis are met with even when articular pains are entirely absent. Such a case I reported at the meeting of the British Medical Association in 1889, in the discussion on "Tonsillitis and its Relations to Rheumatism." The patient was a girl of 8, with a sharp attack of lacunar tonsillitis. As her medical attendant informed me before I saw the child, she seemed much worse than the throat condition would account for. On examining the heart I found pericardial friction and an apical murmur. It may be argued that the cardiac symptoms were not due to the poison of rheumatism, but arose from the absorption of a septic material from the tonsil, and that the symptoms were really of septic origin and not rheumatic.

Until we have some certain method of recognizing the *Diplococcus rheumaticus*, or whatever germ be the cause of rheumatism—and I most emphatically believe that it is a disease of microbic origin—we shall always be confronted with the difficulty of distinguishing between anomalous cases of acute rheumatism and septicaemia. In rheumatic sore throat the margin of the soft palate, the tonsils, and the posterior wall of the pharynx will be found of a deeper red colour than normal and somewhat swollen. In the more severe cases there may be some oedema of the mucous membrane and especially of the uvula.

The symptoms due to this pharyngitis are sometimes so slight that, as I have already stated, the patient will omit to mention them unless questioned on the subject, but in the more severe forms dysphagia, pain extending up to the ears, and difficulty in speaking occur.

As regards the different varieties of tonsillitis, the lacunar is the form which is most commonly associated with rheumatism.

Chorea.

Chorea has long been regarded as a manifestation of the rheumatic state. Indeed, Dr. Bright, of Guy's Hospital, as early as the beginning of the last century, clearly recognized the relationship, but it has required constant iteration to keep this fact before the profession. It has always been a matter of wonder to me how some able physicians could disregard the very strong evidence in favour of the connexion. My late colleague, Dr. Sturges, a man of a singularly well-balanced mind, did not believe in any intimate connexion between the two diseases, though he was candid enough to write as follows: "Cases in which chorea arises in the course of rheumatism are so striking and so similar that notwithstanding the comparative rarity of the conjunction it is difficult to resist the conclusion that the one affection actually gives rise to the other."⁴ When this conjunction takes place, in the great majority of instances in my experience the joint trouble has preceded the chorea, which came on either while the rheumatism was abating or during convalescence. If the chorea should make its appearance in the acute stage of the rheumatic affection, the patient is in a lamentable plight, the constant choreic movement aggravating the pain of the original disease.

As regards the way in which chorea is produced by the rheumatic poison, an analogy may be drawn between this disease and diphtheritic paralysis. We have very good ground for believing that the toxins produced by the Klebs-Loeffler bacillus give rise to the paralysis by acting on the peripheral nerves; we may therefore assume that chorea is probably caused by the toxins of the rheumatic bacillus affecting the motor areas in the brain. This is a much more reasonable suggestion than that chorea is brought about by a shower of minute emboli being carried

to the motor centres, which was the opinion at one time held.

The Skin Affections of Rheumatism.

Many cases illustrating the connexion between erythema multiforme and rheumatism have been placed on record. The varieties most frequently met with in rheumatic subjects are those known as erythema papulatum and erythema marginatum or circinatum.

The eruption of erythema papulatum consists of spots varying in size from a pin's head to that of a sixpenny piece, of irregularly rounded outline and slightly elevated. The colour is of bluish-pink; a slight hæmorrhage may take place into the spots, so that when they fade they leave behind them a faint mark resembling a bruise. The eruption appears in crops.

Erythema marginatum occurs in circles of various size up to the diameter of several inches. The circle is formed by a slightly raised pink ring with a central area of a livid hue.

Erythema nodosum is far less commonly met with in the course of acute rheumatism than the varieties just mentioned. With regard to the relation of erythema nodosum to rheumatism, Stephen Mackenzie came to the following conclusions: "(1) That erythema nodosum is frequently associated with definitely rheumatic symptoms—for example, arthritis, sour sweats, sore throats, etc. (2) That heart disease (endocarditis) may arise during an attack of erythema nodosum, both in cases in which arthritis is present and in cases in which there is no affection of the joints. (3) That these conclusions justify the inference that erythema nodosum is frequently, if not generally, an expression of rheumatism even when no other definitely rheumatic symptoms are present."⁵

Urticaria may also be one of the earliest symptoms of an attack of rheumatic fever. Hence the appearance of any of the eruptions which I have just mentioned, after exposure to cold and damp, with some concomitant feverishness, should suggest the possibility that it is the precursor of an attack of acute rheumatism.

Angio-neurotic oedema is sometimes met with in rheumatic cases. This occurs as puffiness of the face, hand, or other part of the body. Pain and itching are almost absent; at the outset there may be a little pricking when the patches begin to swell. Whether it is more than a mere coincidence in the rheumatic attack has yet to be settled. A scarlatiniform rash has been described; this is probably scarlet fever with joint symptoms.

Desquamation has occasionally been noticed in rheumatic cases. Sudamina and miliaria rubra occur when there is profuse sweating. Herpes labialis and herpes zoster have been described as complications of acute rheumatism.

"Peliosis rheumatica" is the term applied to an eruption of small bright-red spots, the size of a lentil, situated chiefly upon the legs below the knees, which gradually change in colour to brown or yellow. It is accompanied by pain in some of the joints, and valvular disease of the heart has resulted from it. It is a rare disease, and its exact relation to rheumatism is uncertain. Both purpura simplex and purpura hæmorrhagica have been met with in rheumatic cases.

Subcutaneous Nodules.

In Hillier's book on *Diseases of Children*, published in 1868, an account is given of a case in which subcutaneous nodules occurred, and various Continental writers have described cases in which nodules have been observed. It is, however, to Dr. Barlow (now Sir Thomas) and Dr. Warner that is due the credit of pointing out their frequency and importance as clinical evidence of the rheumatic diathesis. The paper presented by these authors to the International Medical Congress in 1881 gives an admirable account of the whole subject, and a *précis* of the 27 cases upon which the paper is based. Indeed, I may safely assert that nothing of importance on the subject has been added to their original observations. It was one of the best pieces of clinical work that was presented to the Congress.

These nodules vary in size from that of a mustard seed to that of an almond. They are, as their name implies, strictly subcutaneous, and are not connected with the skin. They are free from redness and pain, and only very slightly tender.

They most commonly occur about the joints, especially the malleoli, the back of the elbows, and the margins of the patellae. They are also met with on the pinna of the ear, the temporal ridge, the superior curved line of the occiput, the spinous processes of the vertebrae, the spine of the scapula, the crista ili and the extensor tendons of the foot and hand. These nodules are fairly common in children, but rare in adults. As they do not give rise to pain they require to be looked for—or should I not rather say to be felt for?—as they may sometimes be more easily recognized by the touch than by the sight.

They occur discrete or in clusters and in number from one up to fifty or more. Sometimes only a single crop appears; in other cases two or three crops occur. They last from a few days to four or five months. Individual nodules greatly increased in size while under observation, and on the other hand, some subsided and then grew again. They disappear after the rheumatic attack is over. None of the nodules became bony, or infiltrated with urate of soda, or suppurated. Dr. Barlow and Dr. Warner describe the growths as "round or oval semitransparent fibrous bodies, in appearance like boiled sago grains." Microscopically they are found to be composed of "wavy strands of fibrous tissue, with caudate, spindle-shaped, nucleated cells and abundant vessels."

As regards their anatomical site, they have been found attached to tendons, to the deep fasciae, and to the pericranium. They have been found in the pericardium after death. These nodules are without doubt evidences of rheumatism; they are usually associated with the severer forms of this disease, and the more numerous and the larger they are the worse is the prognosis. In all the cases recorded by Dr. Barlow and Dr. Warner some morbid condition of the heart was present, and eight out of the twenty-seven patients died from the result of the heart disease, a clear indication of the grave prognosis afforded by the presence of these nodules. Dr. Cheadle's experience is even more unfavourable than this. He regards the eruption of large nodules as almost equivalent to a sentence of death. "They mean persistent cardiac disease, generally uncontrollable, and marching almost infallibly to a fatal ending." I think that I have now said enough to prove the great diagnostic and prognostic value of subcutaneous nodules.

Dr. A. E. Garrod* has pointed out that nodules closely resembling those met with in young rheumatic patients are occasionally seen in sufferers from rheumatoid arthritis with no obvious rheumatic antecedents, and who have reached a period of life at which true rheumatic nodules are extremely rare.

A condition which seems to be intermediate between the erythematous and subcutaneous nodules has been described by Dr. Cayley⁹ under the title of Multiple Cutaneous Fibrous Nodules Associated with Rheumatism. Dr. Cayley pointed out that in his case "the nodules had all the characters of rheumatic fibrous nodules, except that they were situated in the skin as well as in the fasciae." It has been suggested that circumscribed scleroderma has a possible etiological relation to rheumatism.¹⁰

Diagnosis from Pyaemia.

One of the difficulties which occurs in the diagnosis of rheumatic fever is to distinguish it from that variety of pyaemia which comes on without any very obvious source of suppuration. A case of this kind was admitted under my care into the Westminster Hospital some years ago.

The patient was a man aged 21, who complained of joint pains and sweating. Eventually the pain became confined to the right shoulder. I had some doubt as to the correctness of the diagnosis of acute rheumatism, as the temperature chart was unlike that met with in this disease, but resembled the temperature chart of suppuration or malaria. It was not, however, until the day before the patient's death that I recognized the error in the diagnosis. At the necropsy one or two points of a sanio-purulent fluid were found in the right pleural cavity, septic abscesses in the base of the left lung, pus in the right shoulder-joint, and diffuse intermuscular abscess in the left hand and lower end of arm.

Now that we recognize that acute rheumatism should be classed among the diseases due to microbic infection, it can easily be understood that there may be considerable difficulty at times in distinguishing it from other forms of infection. In reference to this point, Fagge and Pye-Smith¹¹ write: "Sometimes, in spite of all care, diagnosis

is impossible till after death, and difficult even then." They mention a case which occurred to Dr. Moxon¹² in Guy's Hospital.

A patient was admitted who had nine days before been attacked with headache, sickness, and rigors, and in whom these symptoms were followed by profuse sweating and by pains in the joints. Salicylic acid was prescribed, but the temperature rose and delirium set in, so that cold baths were employed on several occasions. The question whether the disease could be pyaemia was formally discussed and negatively in favour of the diagnosis of acute rheumatism. He made no complaint of the thigh, as being more painful than other parts, when he was there moved into or out of the bath. Yet at the autopsy not only was there osteitis of the lower part of the shaft of the right femur and of the adjacent epiphysis, but the bone was denuded of its periosteum, and there was a large collection of pus beneath the muscles. There was also suppuration about the shoulder and pyaemic abscesses in the lungs and heart.

Dr. Moxon's case very closely resembles mine, and I felt that I was in very good company when I made the erroneous diagnosis. The moral I would venture to draw from these cases is that in cases of acute rheumatism presenting any unusual features, the possibility of pyaemia should be borne in mind, and careful search should be made for the source of suppuration. Especial attention should be paid to the state of the ears, as one of the most frequent primary lesions is caries of the petrous bone.

An important distinction between acute rheumatism and pyaemia is stated to be that in rheumatism the pain and swelling fly about, leaving one joint, and after a few hours attacking another. Now this is just what happened in my case, and it was this that determined me to adhere to my diagnosis of acute rheumatism. Failure to respond to salicylates should awaken suspicion that the case is not one of rheumatism.

Pyaemia most commonly affects boys and young men, and, as a rule, the skin is dry instead of sweating as in rheumatism; the joints are more frequently hot and of a deeper red colour.

Rigors are uncommon at the onset of acute rheumatism, their occurrence, therefore, should suggest pyaemia rather than rheumatism.

Diagnosis from Influenza.

The onset of influenza is sometimes very difficult to differentiate from that of acute rheumatism, more especially if the former be accompanied by arthritis. There is, however, little or no effusion into the joints in the influenzal cases, but the ends of the joints are tender and enlarged and the seat of most of the pain. In some of the cases the joint affections proved to be rheumatoid arthritis, and others developed into various forms of neuritis. It used to be held that influenza did not lead to valvular disease, but extended experience has shown that this is not true, as cases of endocarditis and pericarditis of influenzal origin have been reported. On the other hand, simple dilatation and various cardiac neuroses, such as bradycardia, tachycardia, and angina, are only too commonly the result of this disease.

It will be found that the salicylates usually relieve the pain and pyrexia of influenzal cases, but the after-history of these cases is different from that of rheumatic arthritis.

Infective Endocarditis.

Infective endocarditis may present joint affections, sweats, and purpuric rashes, and was formerly regarded as rheumatic in origin. In fact, the transition in the symptoms from septic cases to ordinary rheumatic endocarditis is marked by insensible gradations. Still, it is recognized that most malignant cases are produced by streptococci, diplococci, or staphylococci, though the presence of the lesions of former rheumatic endocarditis favours the outbreak of the disease.

Antitoxin Arthritis.

The arthritis which occasionally follows the use of antitoxin is certainly non-rheumatic. As regards the joint affections of scarlatina, at one time they were regarded as nothing more or less than a rheumatic manifestation. Recent investigation, however, has shown that these cases may be grouped under four heads:

1. A simple synovitis, which occurs about the sixth day, and is six times more common than all the rest put together.

2. Septic.
3. Tuberculous.
4. True rheumatism.

The last only occurs during a late state of convalescence, and is always subacute. The early type with which it is usually confounded never recurs, is not accompanied by sweating, does not fly from joint to joint, rarely if ever affects the heart or shows any other rheumatic sequelae, and is specially apt to develop in the tendons on the back of the hand rather than in the wrist-joint. The true rheumatic type is rarer even than the purulent forms, and appears in quite an insignificant proportion of cases.

Gonorrhoea.

The affection of the joints occurring as a result of gonorrhoeal infection is sometimes confounded with rheumatic arthritis. Gonorrhoeal synovitis is usually the result of a gonorrhoeal urethritis, but Mr. Clement Lucas¹² has recorded 23 cases of gonococcus joint disease in infants secondary to purulent ophthalmia, and a few years ago I admitted into the Westminster Hospital a nurse with arthritis due to purulent ophthalmia contracted by infection from an infant she was nursing. Gonorrhoeal arthritis of great intensity may occur in a newly married woman from an old gleet in the husband. I saw such a case in consultation a few years ago, and I had great difficulty in quieting the suspicions of the patient's mother, who was very insistent in knowing what was the cause of her daughter's shoulder and elbow being affected.

Gonorrhoeal arthritis usually comes on in early adult life—that is, more than half the cases occur between 20 and 30. When a patient has once suffered from gonorrhoeal arthritis a recurrence may occur as the result of passing a bougie, exposure to wet and cold, and excessive sexual intercourse.

Now that it is generally recognized that gonorrhoea is something over and above a mere affection of the urethra, we need a term to cover all the complications which may occur as a result of gonorrhoeal infection. I would suggest "gonorrhoeaemia"; and, just as we speak of pyaemia and pyaemic conditions, so we might talk of gonorrhoeaemia and gonorrhoeic states.

The symptoms of gonorrhoeal arthritis may come on at any period during the course of a gonorrhoea, most commonly between one week and three months. Generally the discharge has degenerated into a slight gleet, or even apparently disappeared, or there may be only the evidence of a stricture to excite suspicion. At the onset the patient is feverish, and suffers from malaise and anorexia. The tongue is furred. The patient is restless and depressed; sleep is interfered with by the pain. The pyrexia is almost always moderate, and in some cases the temperature remains about normal. Hyperpyrexia does not occur. Unlike ordinary acute rheumatism, there is little tendency, even in young subjects, for the heart to be affected, though some cases of malignant endocarditis due to the gonococcus have been recorded.

The inflammation is usually the lower extremities, the joints of the upper extremities being comparatively rarely attacked. The knee is the joint pre-eminently liable to attack. The plantar fascia is very frequently affected. The pains are worse at night, and are of an aching, grinding character. The lesion seems to affect the synovial membrane and ligaments of the joints. Any of the joints may become affected, and Mr. Brodhurst records a case in which finally ankylosis of every joint occurred. The temporo-maxillary joint is not infrequently attacked.

The joints of the fingers are very seldom attacked, a point of distinction from subacute cases of osteo-arthritis in young subjects. Each joint which becomes affected suffers for many days or even weeks, and there is not the rapid metastasis from joint to joint as occurs in rheumatic fever. Physical signs are well marked—that is, the joints are much swollen, both from intra-articular effusion and from exudation around. A very characteristic symptom of gonorrhoeal arthritis is the implication of the fibrous structures, especially of the loins, the plantar and palmar fascia, the tendo Achillis, and the sheaths of the nerves—for example, the sciatic. The muscles or their aponeuroses appear to suffer, so that the patient may complain of universal pain.

A peculiar form of inflammation of the eye frequently accompanies gonorrhoeal arthritis. Usually first one eye, then the other is attacked. There is injection of the small radiating vessels of the sclerotic which surround the cornea, that is, a scleritis, sometimes accompanied by iritis and catarrhal ophthalmia. As regards the diagnosis of the disease the presence of a discharge is obviously not sufficient to establish the point, for a man suffering from gonorrhoea may be attacked with rheumatic fever or gout. The chronicity of the disease, the implication of the fascia and other fibrous structures, the failure of salicylates to give relief, the moderate amount of pyrexia, the absence of cardiac complications and the presence of ophthalmia will usually suffice to determine the diagnosis. In doubtful cases a bougie should be passed in order to detect any stricture that may be present.

A gentleman aged 33 was sent to me on account of a painful and swollen knee, which was considered to be either gouty or rheumatic, but treatment directed to these conditions failed to give relief. It then occurred to me to inquire into the state of his urethra. The patient was found to have a stricture, the outcome of gonorrhoea contracted fifteen years previously. As soon as this had been thoroughly treated the patient lost his joint trouble, and has remained free from it.

Pneumococcal Arthritis.

Just as at one time gonorrhoea was regarded simply as a purulent inflammation of the urethral mucous membrane, so pneumonia was considered to be solely an inflammation of the lung substance. But even before the discovery of the pneumococcus it began to be realized that pneumonia was not infrequently associated with conditions that could only be explained on the ground of infection. Since Weichselbaum and Fraenkel in 1886 demonstrated the presence of the diplococcus in most cases of lobar pneumonia, we now know that the infection of pneumonia may be very widespread. As, for example, pneumococcal empyema, pneumococcal inflammation of the anterior mediastinum, of the meninges of the brain, of joints, and most important of all, the pneumococcus appears to be the most frequent of the micro-organisms giving rise to malignant endocarditis. On the present occasion, however, I must limit my remarks to pneumococcal arthritis. The cases of this disease hitherto reported have been few in number. I have only seen one myself, and that was in a child. On going over the *Transactions of the Clinical Society*—that storehouse of cases of unusual nature—I can find mention of only one case of pneumococcal arthritis.¹⁴

It is to be noted that in almost all the cases the arthritis followed the onset of the pneumonia at intervals varying from a few days to a fortnight. Therefore, if a patient suffering from, or recently convalescent from, pneumonia has any arthritic symptoms, the probability of this being due to pneumococcal infections should be borne in mind. In cases which occur independently of pneumonia the diagnosis can only be made by a bacteriological examination, though in a case reported by Mr. Barnard,¹⁵ where the knee-joint was opened, "the cavity of the joint was full of clots, which so closely resembled those seen in pneumococcal empyemata that a diagnosis of pneumococcal arthritis was at once made." This was confirmed by bacteriological examination.

The disease is one attended with a very high mortality. Of 31 cases collected and analysed by Dr. Cave,¹⁶ 23 died and 8 recovered. As a rule it affects adults or persons of advanced years, and males more frequently than females. The arthritis is commoner in the upper extremity than the lower, and in only about one-third of the cases was there a multiple joint affection. There is a very great difference in the clinical picture presented by these cases. In the mildest form there may only be slight pain and swelling limited to a single joint, whereas in the gravest cases there may be intense inflammation and distension of the joint and oedema of adjacent parts, going on to destruction of the ligaments and cartilages.

I do not pretend that I have by any means exhausted all the conditions which may simulate acute rheumatism. For instance, I have said nothing about gouty arthritis or rheumatoid arthritis; but I think that I have brought forward quite sufficient material to give rise to a good discussion, and it is very often the case that there is much more to be learned from the discussion than from the paper which opened the debate. I trust that this may be

the case on the present occasion, as I am only too conscious how sketchy my paper has been.

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An Address

ON THE

DIAGNOSIS AND TREATMENT OF MORBID CONDITIONS OF THE PLEURA.

DELIVERED AT A JOINT MEETING OF THE BURNLEY DIVISION OF THE BRITISH MEDICAL ASSOCIATION AND THE BURNLEY MEDICO-ETHICAL SOCIETY.

By T. R. BRADSHAW, B.A., M.D., F.R.C.P.,

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It is impossible in the time at my disposal to discuss adequately the morbid conditions of the pleura, and rather than touch lightly on them all I will pass over some in silence, so as to be able to deal more fully with the others.

INDICATIONS FOR PARACENTESIS IN PLEURAL EFFUSION.

If I were asked to state in a sentence the indications for paracentesis in pleural effusion, I should say that every effusion that was big enough to diagnose was big enough to tap. This would be with the obvious reservation that effusions apparently small and unattended by any special local or constitutional disturbance should be left for a reasonable time in the hope that they may undergo spontaneous absorption. When the physical signs point to a large effusion, or when the symptoms, such as dyspnoea, indicate serious embarrassment of the heart or lungs, the operation should be performed without delay. But the persistence of signs of a small effusion is no less an indication for paracentesis, as may be seen from various considerations. In the first place, the extent of the physical signs is not always proportionate to the size of the effusion, which may be much greater than it appears to be. In the second place, until we see some of the fluid, we can never be certain as to its nature, whether serous, purulent, or hydatid; and thirdly, the prolonged presence of a small collection of serous effusion in the pleura is not to be looked on with indifference. Apart from the mechanical compression which it exerts on the lung, if we accept the teaching of Sir A. E. Wright and his school, we must believe that a tuberculous effusion having a lower tuberculo-opsone index than the other fluids of the body favours the existence of the bacilli in the parts which it bathes, and so ought to be got rid of as speedily as possible.

THE PERFORMANCE OF PARACENTESIS.

Having decided that paracentesis is to be performed, we should select a trocar and cannula of sufficient calibre to allow pus to flow through it. I employ the medium sized cannula supplied with Potain's pneumatic aspirator. I find Potain's pneumatic aspirator the most convenient for general use, but good results may be had with a simple tube acting as a siphon. The practice of making a preliminary exploration with a syringe and a fine needle is superfluous and undesirable. If fluid is found, the practitioner proceeds to employ the aspirator, and so two punctures are inflicted where one would have sufficed. If the result is negative the operator is in doubt whether the small needle was not blocked. The accidental puncture of the lung with a clean needle is not followed by any serious consequences. Certain points need to be especially attended to. The apparatus must be tested with water each time it is employed. The trocar and cannula must be introduced far enough to

make it certain that the pleura has been reached, the flow must be slow, and not more than 50 oz. should be withdrawn at the first operation. The remainder will probably undergo absorption; if it does not, it is not a serious matter to repeat the operation. It is well to tell the patient or his friends that you have not taken it all away.

MALIGNANT DISEASE.

The presence of blood in such amount as to give a red colour to the fluid is not uncommon, and is of no special significance, but a brownish or chocolate colour due to altered blood suggests the possibility of the existence of malignant disease. Sometimes the character of the cellular elements may also suggest the same condition. Malignant disease of the pleura or of the lung in such a position as to cause signs associated with the pleura is, however, such a rare event in the experience of any one individual practitioner that it is difficult to construct a clinical type for the disease. In general I should say that we ought to suspect the possibility of malignant disease in any case of pleurisy which, as regards its signs, symptoms, and progress, does not conform to the types with which we are familiar. Signs of pressure on structures not usually involved in pleural effusion, or of pressure not relieved by the removal of the fluid, strongly suggest a new growth. In one case there was oedema in the mammary region, enlarged axillary glands, distension of one jugular vein, and a slightly brassy cough. The trocar was felt to enter a hard mass. In another case there was paralysis of one vocal cord. In a woman lately under my care one of the earliest circumstances to arouse suspicion was finding that the effusion was of the colour of strong tea, and it was found to contain epithelial cells. Hard glands were present in the neck and axilla, and there was distension of the jugular veins on both sides. In another case there was nothing to suggest malignant disease until the pleura was opened for what seemed to be an ordinary empyema. It was then found that the pus lay in a cavity in a conical mass of new growth which extended for a considerable distance into the lung. In some cases one remains in doubt up to the very last whether one is dealing with malignant disease or tubercle, and even at the *post-mortem* examination a skilled pathologist may be unable to distinguish between them until a careful microscopic examination has been made. This actually happened in the following case:

A medical practitioner, aged 57, had pneumonia of the right lung in 1902, and made a good recovery. On June 8th, 1904, he consulted me with a large pleural effusion on the left side, the dullness reaching up to the clavicle, and the heart being pushed over to the right side. During the following three and a half months he was aspirated eight or nine times. Latterly the effusion was blood-stained, and in the fluid made little or no difference in the physical signs, and there was evidently a solid mass in the lung or pleura. During this time he was almost constantly in bed, complained of pain in the stomach, often severe, and got thin and weak. Tubercle bacilli were looked for in the sputum, but none were found. The temperature was moderately raised. The liver was enlarged. Towards the close there was dysphagia and severe dyspnoea, and a pericardial rub was heard. I could not make up my mind between a diagnosis of tubercle and of malignant disease, though I inclined to the former. He sank gradually, and died of asthenia on September 24th.

At the necropsy the naked-eye appearances led to the belief that the case was one of malignant disease. The right lung was normal, but the left lung was collapsed, the pleura being from $\frac{1}{2}$ to 1 in. thick. The mediastinal glands contained yellowish masses, and there were nodules in the pericardium. Microscopically bacilli were found in the left pleura and in one of the glands, and miliary tubercles in the collapsed lung.

HAEMORRHAGIC EFFUSION.

A remarkable condition, of which I have seen two instances during the last eighteen months, is the presence in the pleura, without any obvious cause, of an effusion consisting of almost pure blood. I am inclined to think this may be dependent on some constitutional condition, allied to the haemorrhagic diathesis or the purpuric state, as seems to have been the case in the following instance:

A railway inspector, aged 57, fell against a fender and fractured one or two ribs on March 8th, 1908, and was treated as an out-patient at the Royal Infirmary. I did not see him at that time, but I was informed that no effusion was observed until about March 18th, when extensive dullness was suspected and a needle inserted. No fluid, however, was found. On March 27th—three weeks after the accident—exploration was again

performed, and 27 oz. of nearly pure blood were removed. This was repeated three times during the succeeding seventeen days, 107 oz. of practically pure blood being withdrawn altogether. It might be said that this was simply a case of hæmorrhage from a ruptured intercostal vessel, but the assistant physician, who first saw the case in my absence, is positive that there was no effusion of any kind there at that time. Further, it was evident that fresh blood was poured out after the earlier tapings. Now, there are two points—one in the past history, the other in the subsequent development of the case—which I think throw light on the cause of the hæmorrhagic effusion. The first is that on seven years before he brought up a large quantity of blood, and was told he had broken a blood-vessel; the other is that on June 15th last year he was again admitted to the infirmary, this time with painful anasarca in the lower extremities accompanied by a persistent recurring purpuric eruption.

To my mind it is reasonable to conclude that the bleeding seven years before, the hæmorrhagic effusion, and the purpuric eruption shortly after it had all a common origin. In the other case, a gentleman wintering in Egypt, the most probable cause was thought to be the rupture of some pleural adhesions.

EMPYEMA.

Passing to the consideration of purulent effusion into the pleura (empyema), I maintain that there are no signs or symptoms by which we can with any approach to confidence distinguish it from serous effusion until some of the fluid has been removed for inspection.

Hectic fever is common enough in cases of serous effusion, as might be expected from the frequent co-existence of tubercle, and cases of empyema are generally attended by only a moderate rise of temperature, rarely above 102°, and generally less. No doubt a leucocytosis, if proved by a competent observer to be present, will be a point in favour of suppuration, but it is seldom of practical application for diagnosis except in hospital.

The diagnosis of empyema being, then, only established on finding pus flow into the aspirator, we have to consider how we shall deal with the case, first at the moment, and secondly with a view to permanent recovery. Many of these cases are suffering from urgent distress from dyspnoea and toxæmia, and are in need of immediate relief, and my practice is to continue the extraction and remove a considerable quantity of pus, perhaps a pint. By this means the urgent symptoms are at once relieved for a time, the temperature becomes normal, and the patient will probably have a good night. We thus gain time to make our arrangements for performing the greater operation under the most favourable conditions, and to get the consent of the patient or his friends. After many years' consideration of the subject, I have come to the conclusion that there is only one line of treatment to be adopted in every case of empyema, and that is the establishing free drainage by incising the pleura and introducing a good size drainage tube. I know that authorities allege that cases of empyema in which the only organism present is the pneumococcus may recover after a simple aspiration, and a few cases are recorded in various works in which such recovery has taken place. At one time it was my ambition to try to get cases of empyema well by aspiration alone, but I never succeeded; they all had to come to a free incision: and when one saw the great masses of lymph which sometimes presented in the wound it was not surprising that the attempt to evacuate the pleura through a cannula had failed.

Finally, the results of free incision on the condition of the lung and the general health of the individual are so excellent, that I doubt whether a cure by aspiration would be worth aiming at even if there were any reasonable probability of its being attained.

The dread of a free incision into the pleura was largely the outcome of theoretical considerations. It was supposed that as soon as air was admitted freely to the surface of the lung there would be nothing to counteract the elastic contractility of the organ, which would remain ever after in a state of collapse. I confess that it is not altogether easy to understand the full expansion commonly met with after the operation for empyema, amounting in some cases apparently to a *restitutio ad integrum*, but there is one important consideration that is apt to be overlooked—namely, that at every forcible expiratory effort, whether coughing or singing, or loud speaking, the collapsed lung is fully inflated by air driven out of the sound lung.

The belief that permanent collapse of the lung, more or less complete, is to be expected to follow the free admission of air into the pleura has led to the expenditure of no small amount of ingenuity in the vain and pernicious attempt to drain an empyema in such a manner as to allow the pus to escape, while preventing or restricting the entrance of the air. The usual result

of such proceedings is that the drainage is not free, that septic organisms gain entrance to the pleura, that the discharge becomes offensive, and that after much useless suffering and delay resort has to be had to a free incision. Many of you may think that at this time of day it is like flogging a dead horse to labour this point; but unfortunately I have good reason to believe that the old fear of a free opening is by no means extinct, and that futile attempts to limit the access of air by valvular

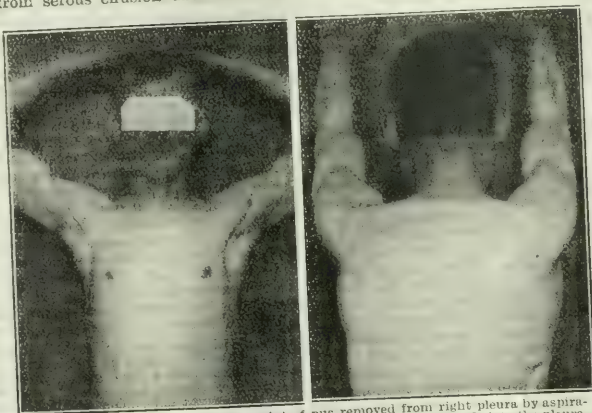


Fig. 1.—R. D. Five years ago a pint of pus removed from right pleura by aspiration, and next day a free incision, with removal of piece of rib, made into the pleura. Complete expansion of lung.

openings or other pernicious contrivances are still being made, with the most undesirable results.

Feeling as I do that these practices can only be due to a want of appreciation of the good results that follow the establishment of a free opening into the pleura I have tried to trace a number of cases of empyema which have been operated on for me during the last few years at the Royal Infirmary. I have written to thirteen and have got in touch with eight. Of these only one is what one might call a complete failure. The left lung appears mostly solid and collapsed, with falling in of the ribs and curvature of the spine. But I do not think we can attribute this to the operation, since it is stated in the notes that at the time of admission the left side of the chest was considerably deformed. Two pints of pus were removed. A second case is that of a tall strongly-built girl operated on in August, 1907, at the age of 17. At present the left (affected) side measures 1 in. less than the right, and the shoulder has dropped somewhat. The movement of both sides of the chest is poor and she evidently takes no trouble to expand it.

The third case, operated on December, 1904, I have not seen, but I hear he has been "all over the world" since, and for a time joined the navy of a South American republic as a cornet player. The other 5 cases have made a recovery so complete that I think that if it were not for the scar it would be impossible to recognize that anything had ever been wrong with the pleura or lung.

R. D., a painter, aged 37, was admitted on October 29th, 1903. By aspiration 20 oz. of pus were removed, and next day a free

incision was made. I saw him this month, after five years. The chest expands well and equally (Fig. 1); the breath sounds are heard well all over; there is no dullness on percussion. His general health is excellent.

W. W., a boy aged 25. Admitted March 20th, 1904, about three weeks after an attack of pneumonia. Left side of chest was distended, and about 2 pints of pus were removed through a free incision. I saw him again this month, nearly five years later. He goes to school, and is in good health. The left side shows slight flattening in front, but measures only $\frac{1}{2}$ in. less than the right. The movements are approximately equal on both sides and there is good expansion, and the breath sounds are normal. The lung seemed to descend a little during inspiration.

Joseph McE., aged 9. Admitted on October 7th last year with signs of a large pleural effusion. The usual operation was performed under eucaïne, and 4 pints of foul-smelling pus was removed. I saw him a few days ago. He looks well, feels well, and goes to school. The chest looks symmetrical; by measurement both sides are equal and expand equally, the total difference between inspiration and expiration being 2 in. Percussion and auscultation normal. The heart is not displaced. By percussion I determined that the lung border descends as it normally does during inspiration.

George K., aged 4, was admitted on August 31st, 1908, with signs of effusion in the left pleura. He had been treated elsewhere for pneumonia several weeks before. Pus was found, and a free incision was made, a piece of rib being removed. He made a satisfactory recovery, but shortly after being sent to a convalescent home he developed scarlatina, so I have not been able to obtain exact particulars of the condition of his lungs.*

The other case I will relate presently, but I will briefly refer there to one which I have met with in private.

A gentleman whose case I knew well had empyema at the age of 40. He was first treated by a tube on the siphon method, the discharge became septic, and two free incisions were made and a tube passed through from one to the other. Some twelve years later I examined him for insurance. Not only was there no falling in of the chest, and the movement of the side was good, but I determined by percussion that there was an actual descent of the lung during inspiration.

This observation, by no means an isolated one, seems, if correct, to imply that the pleural cavity may be actually restored after the closing of an empyema. I have never had an opportunity of investigating this point *post mortem*, but it does not seem to be beyond the bounds of possibility when we remember that surgeons who have

operated on a case of appendicitis or other condition attended by extensive peritoneal adhesions have found no trace of these when they have had to open the abdomen at some subsequent date.

I do not bring forward these few cases as proving that the prognosis in empyema is exceptionally good. In some cases the lung is permanently crippled, though I believe in these the damage has been done before the operation or results from causes, such as cirrhosis, unresolved

pneumonia, or tuberculosis, which are independent of it. My cases are enough to prove that a free opening into the pleura need not be followed by permanent collapse of the lung, nor by any serious interference whatever with its functions.

OPERATION.

The operation now generally performed at the Liverpool Royal Infirmary is the removal of a piece of rib by the subperiosteal method and the insertion of a wide tube with a broad flange. By the local injection of eucaïne or novocain the incisions are made almost painless, and the risk of giving a general anaesthetic is in most cases avoided.

SPONTANEOUS EVACUATION OF AN EMPYEMA.

An empyema overlooked and left alone will, like an abscess elsewhere, make a way out for itself. At the present day an empyema is hardly likely to be allowed to burst externally; the only instance I remember seeing was when I was house-physician twenty-six years ago.

But it is not so very uncommon for an empyema to discharge itself through the air passages. I have notes of 5 cases in my wards during the last eight years in which this accident seems to have occurred. The usual history is that after some acute illness the patient has coughed up a large quantity of matter, perhaps highly offensive to the smell, and the expectoration has continued. No doubt patients sometimes die asphyxiated before we can be called to them. When we find a patient with a his-

tory such as I have sketched and expectorating pus, we try to localize the suppurating cavity, and if we find dullness or other indications of pleural effusion or thickening, we make one or more explorations with the aspirator. If we find pus, a free incision should be made, a tube inserted, and the case treated as one of ordinary empyema. When this is done, the prognosis is no worse than in other cases of the disease, as is illustrated by the following:

P. H., aged 47, a railway worker, was admitted on April 6th last year. About six weeks earlier he had had a rigor, followed



Fig. 2.—George K. Empyema. Evacuated by free incision with removal of piece of rib early in September, 1908. Complete expansion of lung.

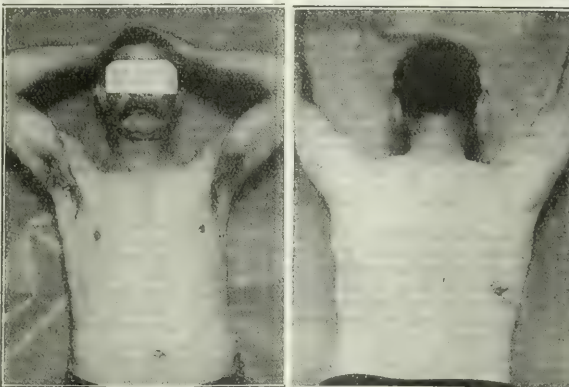


Fig. 3.—P. H. Empyema discharged through air passages. Intense fever. Free incision into pleura, with removal of a piece of rib in April, 1908. Complete expansion of lung.

* He was brought to see me on March 15th, when the photograph (Fig. 2) was taken. His appearance was that of robust health. He stood quite straight; the shoulders were level and not rounded. There was no sensible falling in of either side of the chest. The right side at the nipple measured 11½ in., the left 10½ in. Movement was equal on both sides, the percussion resonance and the breath sounds were normal. Except for the presence of the cicatrix it would be impossible to tell that anything had been wrong with the chest.

by cough (probably pneumonia), and after about three weeks copious very offensive expectoration came on. When admitted he was in great distress, coughing incessantly and bringing up purulent fluid. The fever was intense. There was dullness over the right side of the chest, and succussion splashing was heard. I at once removed nearly half a pint of stinking pus mixed with air from the right pleura, which at once relieved his urgent distress, and later in the day my colleague, Mr. Litter Jones, performed the usual operation for empyema. The patient made a good recovery, except that a small piece of rib necrosed and had to be removed at a subsequent operation. When he came to report himself a few days ago he was in good health and at his work. The two sides of the chest appeared equal in measurement and in movement (Fig. 3). There was no dullness on percussion, and, except for the presence of a scar, it would have been impossible to say that anything had been wrong with the chest.

Unfortunately, however, it is not always possible to locate the suppurating cavity. Apparently, after the abscess has burst into the air passages, it may contract into a mere sinus, which continues to pour out offensive matter indefinitely, but eludes the attempt to find it by exploration. How easily this may happen is illustrated by a case I saw in consultation several years ago:

A lady was expectorating offensive matter, and had signs pointing to an empyema at the right base. I made an exploratory puncture, being guided as to the spot by some very localized moist sounds, and found pus. Mr. Bickersteth was called in, and made a free incision and drained the cavity successfully. The cavity was found to be no bigger than a walnut, showing how easily it might have been missed.

It is well known since the time of Hippocrates that patients may recover without operation after evacuation of an empyema through the air passages, but it is only after much suffering and the risk of infecting the other lung, and they sometimes die; and if ever I meet again with such a case, and fail to find the matter by exploration with the aspirator, I shall feel it my duty to advise the making of a free opening and a thorough examination of the pleura and the surface of the lung.

DIFFICULTIES IN DIAGNOSIS.

I will now refer to some cases which serve to illustrate the peculiar difficulties which we may meet with in the diagnosis and treatment of cases with signs suggestive of effusion at the lower part of the pleura.

Suppurative Pericarditis.

Benjamin P., aged 7, was admitted to my ward after a week's illness. The right lung was in a state of pneumonic consolidation. The crisis took place the day after admission, but after the temperature had been normal a few days it became hectic. Dullness persisted, and the heart seemed to be pushed over towards the right. I suspected that an empyema had formed, and made an exploratory puncture over the left lung, and found some pus. The usual incision was made, but little or no matter was found and none came through the tube. Two days later I punctured the pericardium and found a little blood-stained serum containing pneumococci. At the autopsy we found contraction of the left lung. The pericardium was greatly thickened and the heart was adherent to the chest wall. At the back and towards the left of the heart there was a collection of pus, about 6 oz., lodged between the two layers of the pericardium. This I had evidently reached in my first puncture, which must have gone through a thin layer of lung. On operation it could only have been reached by turning the lung aside.

Such a case is probably impossible to diagnose. At the same time it serves to illustrate an important practical point—namely, that signs and symptoms pointing to empyema consequent on pneumonia may be really due to pus in the pericardium, and where exploration of the pleura is negative pyopericardium ought to be thought of. I had such a case only last week.

Subdiaphragmatic Inflammations.

Inflammatory or other diseased conditions below the diaphragm are likely to give rise to signs pointing to disease of the pleura, and these may for a time quite overshadow the primary disorder. Thus I have known the pleura to be opened for an empyema, and hydatids to be found in the pus, and on further exploration the hydatids were found to be merely a colony connected with a much larger mass growing in the liver.

The large single abscess of the liver may, if it points upwards, suggest effusion or suppuration above the diaphragm, and if it is actually attended with a serous effusion in the right pleura, as happened in the following case, the true nature of the case may be overlooked even on the operating table.

A Chinaman, aged 36, was admitted on June 8th, 1904, with signs and symptoms pointing to effusion into the right pleura.

I only saw him just at the end of my visit; his symptoms were urgent and I aspirated him at once and found a considerable quantity of pus. I directed that one of the surgical staff who was in the building should be requested to perform the usual operation for empyema. On my next visit I was informed that this had been done, but that only a serous effusion and not an empyema had been found. On seeing the patient again I found that the liver was enlarged downwards while the diaphragm was pushed upwards and lay against the operation wound in the chest.

I saw at once what had happened in this case. The needle I had plunged into the chest had traversed the lower part of the pleura, missing the effusion, and piercing the diaphragm had tapped an abscess in the liver. The surgeon, however, advancing by successive stages, had laid open the pleura, and finding there a copious effusion of some kind, thought he had done all that was required by evacuating it.

In another case a young woman aged 20, who had never been out of Liverpool, had an irregular temperature, with night sweats, for several weeks, and I suspected she was tuberculous. The only physical signs obtainable were some dullness on percussion and impairment of the breath sounds on the right side of the back as high as the angle of the scapula, and I made a puncture in this region, with a negative result. Two months later she returned to the infirmary with an oedematous swelling over the dull area. I was now confident of the existence of pus, and I explored, and on pushing the cannula deeply in, I drew off 2 oz. of fetid pus, looking like anchovy sauce, which had evidently come from the liver. Here all the indications pointed to empyema, and considering that the patient had never been abroad I do not think a correct diagnosis was possible before it was made. She did well after operation.

Dr. Samuel West alludes to the occurrence of fetid empyema in connexion with ulcer of the stomach, though I do not find any instance of its occurrence in his book. If the fundus of the stomach were a frequent seat of ulcer the association might be fairly common, but in point of fact it must be extremely rare. Only last week, however, I saw in consultation a case in which I believe the empyema had arisen from an extension through the diaphragm of infection and inflammation starting from a gastric ulcer.

Miss B., aged 24, had had gastric trouble for a considerable time, and a year ago was attended for what was thought to be gastric ulcer. At that time she had severe pain coming on directly after food; she had vomiting, though there was no haematemesis. She got better, but towards the end of November the symptoms returned. On the morning of December 26th, possibly not unconnected with the season's festivities, she had severe vomiting and pain referred particularly to the back of the left shoulder. Ten days later a practitioner was called in and found signs of left pleural effusion. The temperature became hectic and there were rigors, and oedema appeared over the left lower ribs. On January 14th, 25 oz. of fetid pus were withdrawn and a free incision made. In the absence of pneumonia or other lung trouble, and of tubercle, with the history suggestive of gastric ulcer and with the knowledge that effusion came on at a time when the gastric symptoms were severe, I feel justified in concluding that the empyema in this instance was due to extension of infective inflammation from an ulcer in the stomach.

In closing this review of the clinical aspects of morbid conditions of the pleura two considerations are especially brought home to me. One is the extent to which the physician has to resort to the surgeon or to the employment of mechanical means for the successful treatment of these cases. But behind all this lies the other and still more important consideration—the means which we possess of arriving at a correct diagnosis. For many years we, as members of a learned and progressive profession, have been more and more attracted to the new and fascinating studies of bacteriology, haematology, and pathological chemistry, and we are not without grounds for believing that if we are ever to arrive at a knowledge of the ultimate processes which underlie the phenomena of health and disease, it will be by pursuing investigations on these lines. But, though I should be among the last to belittle the value of the incubator, the microscope, and the test tube as means for extending our knowledge, I am convinced that in the daily routine of our work as medical practitioners they are of very limited application. Such practical results as they do yield are only of value when obtained by those who are constantly engaged in that kind of investigation, and in the case of the inexperienced they are likely to be absolutely misleading. It is on the physical examination and the careful study of the patient

* I am informed that this patient has made a good recovery. May 11th.

at the bedside, not on work in the laboratory, that we have in the main to rely in the diagnosis and prognosis of our cases; and we will all do well to beware lest, in our eagerness to employ the more recondite proceedings which are continually being offered for our aid, we neglect the first principles of clinical investigation—the training of the eye, the hand, and the ear.

A Clinical Lecture

ON A

CASE OF *BACILLUS PYOCYANEUS* PYAEMIA SUCCESSFULLY TREATED BY VACCINE.

DELIVERED AT THE BRISTOL GENERAL HOSPITAL.

By ERNEST HEY GROVES, M.S., F.R.C.S.,
ASSISTANT SURGEON.

GENTLEMEN,—The boy you see before you to-day, with bright eyes and fat cheeks, is so different from the wretched spectre whom some of you saw with me last autumn, that it may be difficult for you to believe that it is the same patient. But although he has emerged victorious from the struggle with disease, he has been left with lifelong scars of the strife, which afford a ready means of identification.

History.

There seem to be no facts in his past or family history which have any bearing on the case until November, 1907, when at the age of 8 years he developed two abscesses, one over the right Poupert's ligament, and the other on the inner side of the left thigh. He remained in bed for this condition and the right abscess quickly healed, but the left much more slowly; when it had healed he still remained with a painful stiff left hip-joint.

He first came under my care, at the age of 10, in August, 1908, for lameness, due to fixation of the left hip-joint. He had marked adduction of the thigh, which necessitated the pelvis being tilted up on the left side, so as to cause much apparent shortening of the limb. There was also about 1 in. real shortening—that is to say, that whilst the left heel was 3 in. off the ground when the boy stood upright, two-thirds of this was due to the tilting of the pelvis, and only one-third to loss of length in the hip. The left hip-joint was the seat of firm fibrous ankylosis, upon which weight extension had no appreciable effect. A skiagram showed thickening of the neck of the left femur, irregularity of the surface of the head, with a partial upward dislocation. The acetabulum was enlarged upwards—no doubt by a process of caries affecting its superior margin.

Operation.

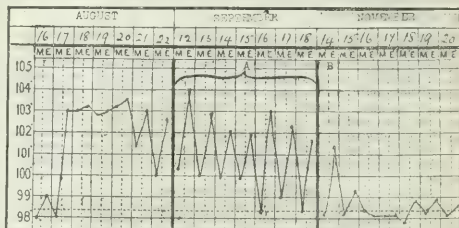
On August 17th, 1908, the left hip-joint was exposed through an anterior incision and the capsule opened. The head of the femur had not left the acetabulum, but the latter cavity had extended upwards and backwards. The head of the femur and the surface of the hip-socket were carious and divested of cartilage. The diseased bone was thoroughly scraped away and the adducted position of the leg corrected forcibly after tenotomy of the tendons of the adductor muscles. There was much oozing from bone and muscles, and a drainage tube was left in the wound. The aseptic method was used throughout the operation, the skin having been prepared with 1 in 500 spirit and biniodide lotion, and dry swabs with sterilized water for flushing were employed for cleaning the wound. The limb was put up in extreme abduction and with weight extension.

After-history.—Pyæmia.

The next day, in the evening, the temperature rose to 103° F., and it remained near this point for five days, after which it underwent those daily fluctuations characteristic of a hectic fever. The wound was opened up, but the discharge was scanty and more sanious than puriform. I need hardly remind you that this scantiness of purulent discharge from the primary focus of septic infection is always of ominous import, and indicates that the vital powers of resistance and reaction are overwhelmed and that the sepsis is spreading further. A urethral discharge often ceases when acute epididymitis occurs, and the stinking matter from the middle ear dries up when the mastoid or lateral sinus are affected.

The boy became noisy, delirious, and extremely ill, so that he had to be moved to the isolation ward. It was very difficult to get him to take even liquid food, and he became very rapidly emaciated. On August 21st he developed an inflamed swelling of the right thumb. This was opened and found to contain thick gelatinous pus in the last joint. Unfortunately, owing to the pathologist being away on his holiday, the swab taken from this abscess was not examined. During September and October other abscesses developed, and these were chiefly in the region of the pelvis, one very large one being over the right hip-joint. These occurred very rapidly and attained a great size in a very short time. He was treated with injections of various polyvalent antistreptococcus serums without any effect.

Very foolishly I imagined that it was a condition of mixed infection, and I thought, therefore, that vaccines or serums could not be expected to do much good. However, fortunately for the boy, this unwarranted assumption was not allowed to go unchallenged, and on October 25th I asked the pathologist, Dr. Dunkley, to see him. He took swabs from the original wound over the left hip, and from this, to my great surprise, obtained a pure culture of the *Bacillus pyocyaneus*. Now this is a germ which we are too apt to treat lightly. It is true that when it causes blue pus on the surface of an exposed wound it may do but little harm, but this is also the case with other pyogenic organisms—for example, streptococci or staphylococci—but when it exists in pure culture in the depths of the tissues it causes a most deadly septic infection. This has been demonstrated in the case of the peritoneum, for example, by Dudgeon and Sergeant.



A. This represents the actual temperature on the dates given, but it almost exactly represents the course of the temperature for twelve weeks—namely, from August 22nd to November 14th. B. Second injection of vaccine.

Dr. Dunkley prepared an emulsion of the very bacilli grown from the patient's wound, and this, having been heated to 60° C. for an hour, was used as a vaccine. On November 6th 40 millions of the dead bacilli were injected, but there was no appreciable result. On November 14th a further dose of 60 millions was administered, and the next day the temperature remained normal and has remained so ever since. On November 24th, December 8th, January 1st and 16th the injections were repeated, 100 million bacilli being used each time. From the date of the second injection the boy's whole condition has rapidly improved. He has slept quietly, taken his food well, become plump and well nourished, and all the abscesses and sinuses have healed except a small one on the inner side of the left thigh which is quite superficial.

A more striking example of the potency of vaccine-therapy could hardly be imagined.

One further point remains to be told. When his general condition had ameliorated and he could bear to be touched, it was found that the right hip was deformed and displaced. It was much shortened and adducted, and the head of the femur was felt in the buttock. Undoubtedly the joint had been the seat of a pyæmic abscess which by a distension of the capsule with pus had led to a dislocation of the joint. Curiously enough this one patient has exhibited three different varieties of pathological dislocation of his joints. They are:

1. Dislocation by destruction of bony surfaces; illustrated by the tuberculous left hip.
2. Dislocation by destruction of ligaments and the traction of muscles; illustrated by the right thumb.
3. Dislocation by distension of the capsule; illustrated by the right hip.

A skiagram showed the dislocation of the right hip into the sciatic notch, and also the fixation of the left hip in the acetabulum in a position of abduction, a position which compensates for real shortening by a tilting down of the pelvis on that side.

[Note.—The dislocated right hip was reduced by manipulation under an anaesthetic on April 2nd, and put up in a position of eversion and abduction.]

CONCLUSION.

I would summarize the points which I have learnt from this case as follows:

1. The danger of trusting to an "aseptic" system of surgery when dealing with the region of the groin. I now always use 1 in 2,000 biniodide of mercury as lotion for these cases when asepsis is doubtful.
2. The absolute importance of an exact bacteriological diagnosis in every case of suppuration.
3. The great gravity of *Bacillus pyocyaneus* infection.
4. The potency of vaccinal treatment of this infection.

A CASE OF TUBERCULOUS MENINGITIS WITHOUT TUBERCLES.

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(From St. George's Hospital and Clinical Laboratories.)

The following case of tuberculous meningitis seems worthy to be recorded, as it exhibited several unusual and important features:

C. M., a boy aged 8 years, was admitted to St. George's Hospital under Dr. H. D. Rolleston. The history obtained from the patient's mother was as follows: Onset gradual and indefinite. The child had "two severe frights" six weeks and two weeks respectively before admission to hospital. Since the latter the patient has been "morbid," and has complained of pains in the head and has vomited frequently. During the last few days it has been increasingly difficult to get the child to take his food. No history of any head injury. No previous illness except measles. History of tuberculosis in family of maternal grandmother.

Condition on Admission.

Child looks very ill. Lies quite listless, but cries when disturbed. Occasionally shows signs of understanding what is said to him. Some external strabismus of right eye. No voluntary movements of eyes performed. Edges of optic discs blurred, but no definite optic neuritis. Some paresis of left side of face. Occasional twitching movements of orbicularis oris, and clonic movements of the muscles of the upper extremities and of the hamstring muscles on both sides. No note of any head retraction or stiffness of neck. Muscles well nourished. No definite loss of power in any group of muscles. No hyperreflexia. The legs are kept flexed at hip and knee, but can be readily extended passively. No loss of pain sensation. Knee and ankle jerks absent. Plantar reflex gives flexor response on both sides. Superficial reflexes absent. Incontinence of urine and faeces. Respiration rapid (36 per minute). Pulse 128. Temperature 102.5° F. Urine acid, specific gravity 1020; no albumen; chlorides normal. No abnormal signs in chest and abdomen. Lumbar puncture was performed on the day after admission, and one and a half test-tube full (about 50 c.c.) of turbid flaky fluid was withdrawn. The patient became progressively worse, and died comatose two days after admission with temperature 100.6° F. and respirations 48. The bowels had acted normally once or twice a day while the child was in hospital, and no further vomiting had occurred.

Post-mortem Examination.

This was performed nine and a half hours after death. Fairly nourished body. Rigor mortis present.

Meninges.—Some excess of turbid fluid at the base of the brain. The membranes generally are hyperaemic and "sticky" in appearance. No exudate or tubercles on the convexity. A thick layer of fibrino-purulent exudate is present on the inferior surface of the pons. Similar exudate in rather less amount is present in the interpeduncular space. The superior surface of the medulla is adherent to the middle lobe of the cerebellum. There is also similar exudate to that at the base around the vessels in the pia mater deep in the Sylvian fissures. A careful search reveals no tubercles anywhere on the vessels of the meninges or in the exudate. Brain 47 oz., hyperaemic and rather soft. Moderate dilatation of the ventricles, which contain excess of slightly turbid fluid. No tubercles are visible in the choroid plexuses, which appear normal. The brain is not otherwise abnormal. There are no tuberculous foci in it.

Spinal Cord.—The spinal meninges contain a slight excess of turbid fluid, especially in the lumbar region. The cord itself looks oedematous but otherwise normal. No tubercles are visible in the spinal meninges and there is no fibrinous or purulent exudate thereon.

Thorax.—Pleurae normal. Lungs (right 10 oz., left 8 oz.) are congested. There are no signs of milary or other form of tuberculosis in them. Around the left main bronchus is an actively caseating tuberculous gland, the size of a Barcelona nut. Its capsule appears intact.

Larynx, trachea, and thyroid, normal.

Pericardium normal; heart 6 oz., normal, except for moderate dilatation of the right ventricle and tricuspid orifice.

Abdomen.—Peritoneum and mesenteric glands normal; no tubercles. Alimentary tract normal; no ulceration or tubercles. Liver and kidneys normal. Gall bladder and ducts normal. Pancreas congested. Spleen 2 oz., congested; consistence normal. Suprarenals normal. Bladder normal, distended; no obstruction to outflow of urine.

No surgical tuberculosis present. All the organs were searched for milary tubercles, but none were seen.

Microscopical Examination.

Sections of the cortex of the brain were made, showing also the meninges and exudate. Acute inflammation of the meninges and superficial brain substance was present. The meningeal exudate consisted of fibrin and round cells. The cells were mainly large and small lymphocytes, but some polymorphonuclear leucocytes were present. The cells were not spread uniformly throughout the fibrinous mass; in some parts they were thickly aggregated in large irregular clumps, while in other parts there was fibrin with comparatively few cells scattered in it.

All the arteries were surrounded by collections of round cells, and the arterial walls themselves were infiltrated with leucocytes, but no definite endarteritis was present. Many of the cells of the exudate took the stain badly, and appeared necrotic, but nothing suggesting milary tubercle formation was seen; there were no giant cells and no epithelioid cells seen in the sections examined. Similar sections stained by the Ziehl-Neelsen method showed the presence of a considerable number of tubercle bacilli scattered throughout the cortex and exudate (each field containing 12 to 20 bacilli).

The organisms were especially numerous in the close vicinity of the blood vessels.

The examination of the cerebro-spinal fluid removed a few hours before death (the report on which was not received until after the necropsy) showed that the cells were chiefly polymorphonuclear leucocytes, there being only a few lymphocytes. A considerable number of tubercle bacilli were found in the fluid after centrifugalization, and no other organism was present. The lungs and other organs were unfortunately not examined for isolated tubercle bacilli.

The unusual features of the case are: (1) The presence of tuberculous meningitis with much fibrino-purulent exudate at the base of the brain without any milary tubercle formation; (2) the absence of milary tuberculosis of the lungs and other organs; and (3) the great predominance of polymorphonuclear leucocytes over lymphocytes in the cerebro-spinal fluid.

The child only lived two days after admission to hospital, but a diagnosis of tuberculous meningitis was made from the history and physical signs. At the necropsy, however, doubt was thrown on this diagnosis, as, although there was an actively caseating bronchial gland to serve as a primary focus, there was no generalized milary tuberculosis and no tubercles in the meninges, which, moreover, showed much thick fibrino-purulent exudate, mainly posterior-basal in distribution. On the other hand, the general "stickiness" of the meninges and the presence of some exudate around the vessels in the Sylvian fissures favoured the diagnosis of tuberculous meningitis. The doubt as to the diagnosis was accentuated by the cytological examination of the cerebro-spinal fluid. The bacteriological examination of the centrifugized fluid and the sections of cerebral cortex settled the question.

The presence in the sections of cortex and meninges of "diffuse leucocytic infiltration, predominantly perivascular," as described by Delille, is noteworthy, as also is the presence of inflammatory cells scattered diffusely throughout the walls of the arteries. There was, however, no obvious tendency to the formation of circumscribed nodules consisting only of round cells without giant cells or epithelioid cells, such as is sometimes seen in milary tubercles in the lungs and elsewhere in the more acute cases of generalized tuberculosis.

A case reported to the Société Médicale des Hôpitaux de Paris by MM. Sireday and Tinel¹ is similar to the present case in that there was tuberculous meningitis without tubercles, and microscopically there were numerous tubercle bacilli with cellular exudate, "chiefly perivascular," but in their case there was little fibrinous or purulent exudate in the meninges, and "diffuse tuberculous granulations" were found in the lungs. Further, the cerebro-spinal fluid contained chiefly lymphocytes, as is usual in cases of tuberculous inflammation. The

absence of miliary tubercles in the meninges in tuberculous meningitis, though a recognized pathological occurrence, is comparatively infrequent, and especially so when associated with their absence also from the lungs and other organs; and the predominance of polymorphonuclear cells in the cerebro-spinal fluid is certainly rare in tuberculous.

With regard to the reason why tuberculous granulations are not always found in cases of generalized tuberculosis, it may be considered that while general tuberculous infection usually takes the form of a *pyaemia* it may occasionally be only a *septicaemia*, and that the primary tuberculous focus in the first case discharges into the circulation clumps of bacilli with tissue debris, and that these clumps, becoming impacted in the smallest arterioles, cause the formation of miliary tuberculous granulations or "tuberculous pyaemic abscesses" around the blocked vessels, but that in the second case separate bacilli only are discharged into the circulation in considerable numbers, and that these isolated bacilli do not get lodged in the small vessels. The diffuse leucocytic infiltration of the cerebral cortex and the cellulo-fibrinous inflammation of the meninges may be explained as being the result of the irritation of the toxins, and of the bacilli, which have found their way from the blood vessels into the cortical substance and into the cellular tissues of the meninges, these parts especially easily reacting to the tubercle bacillus.

I wish to express my thanks to Dr. H. D. Rolleston for permission to publish this case, and to Dr. Chas. Slater for furnishing the report of the bacteriological examination.

REFERENCE.
1 *Lancet*, April 15th, 1907.

OBSERVATIONS ON AN OUTBREAK OF MEAT POISONING AT LIMERICK.

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IN view of the economic and hygienic importance of the subject of food poisoning, I have thought it well to bring the leading facts revealed by my study of this disastrous outbreak (73 cases with 9 deaths) before a wider circle of the professional public than could be reached by the *Journal of Pathology and Bacteriology*, in which the fuller communication which I have prepared on the subject will appear.

I.—THE OCCURRENCE.

On Tuesday, November 3rd, 1908, at 6 p.m., an alarming attack of illness broke out amongst the inmates of an industrial school for girls at Limerick. The symptoms, ushered in by severe headache, were those of acute gastrointestinal disturbance—nausea, abdominal pain, uncontrollable vomiting and diarrhoea accompanied by tenesmus, and followed, in the severer cases, by the most profound collapse. By midnight, some twenty-eight of the girls were stricken down, and on the following day nearly fifty more became affected, though for the most part not so severely. The first death (that of S. K., aged 13) took place at 7 on the Wednesday morning, after little more than twelve hours' illness. Another child succumbed at 9 that night. On the following day, Thursday the 5th, no fewer than 7 more deaths occurred in rapid succession, the last (that of M. K., aged 13) ensuing at 6.55 p.m., about forty-eight hours after the commencement of the outbreak.

II.—CLASSIFICATION OF THOSE AFFECTED.

The pupils numbered 197, and were divided into four classes. The first or senior class comprised 67 girls between the ages of 13 and 17, and on it fell the brunt of the attack, with 55 illnesses and 8 deaths. The second class, 48 in number (ages between 10 and 13), yielded 10 cases with 1 death. In the third class there were 51 little girls between 7 and 10 years old, of whom 8 sickened—5 decidedly, 3 somewhat doubtfully. The fourth class comprised "babies" between the ages of 3 and 7. There were 31 of these, none of whom took ill. Nor were there any cases amongst the Sisterhood in charge, teachers in training, or servants. Of the 73 cases,

9 died as above stated, and the remainder rapidly recovered, after several days' mild fever, accompanied in several cases by herpes labialis, in others by desquamation of the cuticle, more especially of the fingers. There was no rash. All the recovered cases that were tested (over 20) had agglutinins in their serum, specific for the causative organism.

III.—PATHOLOGICAL ANATOMY.

Assisted by Drs. P. F. Graham (the medical attendant to the institution) and Dr. J. F. Shanahan, I performed, on November 6th, the autopsy of 3 of the cases—namely, S. K., aged 13, the first to die; L. O'D., aged 12½, the only second-class girl who succumbed; and M. K., aged 13, the last to die. The notes were kindly taken by Captain Elsner, R.A.M.C. Eliminating all non-essential details, the following were the chief findings:

Alimentary Canal.—Empty throughout, save for a little creamy fluid; not inflamed, nor ulcerated, nor even hyperaemic, save for a few streaks of capillary engorgement on the gastric mucosa. The mucous membrane of stomach and intestines presented a peculiar pale, swollen, velvety aspect, with here and there patches of white, prominent granules, each as large as a pin's head, projecting under the mucous membrane. They consisted of nodules of tumid lymphoid tissue. Peyer's patches were not tumefied.

The *liver* showed characteristic though not exactly obvious changes in all 3 cases. It was large, soft, hyperaemic, and sprinkled throughout with little, indistinct, pale-yellowish areas or spots. Microscopic examination of the fixed and hardened preparation revealed the most intense fatty degeneration of the liver cells at these places. In one case (L. O'D.) there were areas of haemorrhagic breakdown as big as a pea. The spleen showed no constant change. The kidneys were in a state of cloudy swelling.

The *cardio-vascular system* showed but little change. Endocardium and aortic intima not stained. The volume of the blood was much diminished and the clots were tarry in character. The *lungs* showed only some scattered patches of hyperaemia. The anatomical diagnosis was *cholera nostras* due to food poisoning.

IV.—BACTERIOLOGY.

From practically all of the viscera examined (for details, I would refer to the complete paper), as well as from the discharges obtained from the recovering cases, I succeeded in isolating, either by direct culture or after preliminary enrichment in malachite-green broth, a typical strain of the *Bacillus enteritidis* of Gaertner. The medium used for plating out was Drigalski's litmus-nutrose-lactose-crystal-violet agar. On it the Gaertner colonies were readily distinguishable by their bluish translucent appearance, vigorous growth, and marked tendency to become confluent. The same colonies were obtained from all three cases examined *post mortem*. Avoiding technical details, I will merely say that morphologically this organism is identical with the typhoid bacillus, and is quite as actively motile. It differs from the typhoid bacillus *inter alia*, in its more rapid growth on gelatine, its ability to clear up milk, and to ferment glucose with formation of acid and gas. It differs from an actively motile strain of *B. coli* in the delicate character of its gelatine colonies, its inability to coagulate milk, to ferment lactose, and to form indol. I could find no constant morphological or cultural difference between this strain of Gaertner's bacillus and the paratyphoid B. bacillus (two strains isolated by myself from Irish cases). Neither does it seem to differ morphologically or culturally from the bacillus of Ratn.

Serologically, however, it stands nearer to typhoid than to paratyphoid B., and by comparative agglutination tests I find it to belong to the true Gaertner type (that responsible for the outbreaks of food poisoning at Rumléth, Hanstadt, Morseele, etc., described by van Ermengem and his pupils) and not to the morphologically identical, but serologically distinct, "Flügge-Kaensche" or "Aertryke" type.

I reserve details as to its behaviour on the various coloured and other test media for the complete paper. As regards its pathogenicity for animals, the Limerick strain is very virulent for rats and mice, setting up in mice a fatal epizootic disorder accompanied by yellowish mucoid

or honey-like stools (?mouse-typhoid). Guinea-pigs appear to be immune, at any rate to infection per os, as are also dogs. Rabbits are highly susceptible, not merely to fresh but to old heated cultures administered subcutaneously. A calf, aged 4 months, was killed in seven hours by an injection of 20 c.c.m. culture fluid into the jugular vein. The symptoms were severe dyspnoea coming on in a couple of hours, followed by purging and collapse. I have to thank Professor A. E. Mettam, B.Sc., Principal of the Royal Veterinary College of Ireland, for giving the injection, having the animal watched by one of his pupils, performing the autopsy for me, and giving me facilities for the bacteriological study of the cadaver.

V.—MODE OF INFECTION.

From the first, suspicion was riveted on a certain stew which formed the dinner of the first or senior class only on Tuesday, November 3rd, at noon. Out of 55 girls belonging to the first class who partook of this stew, 53 sickened and 8 died. The serum of the survivors gave positive agglutination reactions with the strain of Gaertner's bacillus isolated. The serum of two of the first class who had their meal in another room, off different food, and who were not ill, gave negative results. It was found afterwards that one of the two girls who partook of the stew and were not ill, consumed only the gravy and potatoes. Their blood gave a distinct positive reaction with the specific bacillus, showing that infection—though unaccompanied by symptoms—must have taken place.

The peccant element in the stew was clearly proved to have been the remains of part of a fore-quarter of beef weighing 38 lbs., which was brought in on Saturday, October 24th. Part of this was cooked and eaten on the following Tuesday, and the remainder was roasted on the Thursday (27th). It was three or four pounds left over from this joint, and allowed to lie in the larder from Thursday till the following Tuesday, that caused the outbreak. This stale piece of roast beef was cut up and added to the stew which formed the dinner of 55 first-class pupils on that day. But how did some second and third-class girls become affected? Subsequent inquiry revealed the fact that four girls (members of the second class) had exchanged their own repast for some of the cold beef in question. All became very ill, and one (L. O'D.) died. Six other girls of this class took cold bacon, with or without a little of the beef. All of these were slightly ill. The bacon is stated to have lain in the larder on the same dish as the beef, and no doubt became infected by contact. The members of the third class to the number of 51 escaped with the exception of 8, only 5 of whom were at all seriously ill, the slight malaise from which the other three complained being ascribed—and no doubt correctly so—to a smart dose of castor oil. Of the 5 who were really ill, 4 received some of the fatal stew from the waitresses (senior girls) who shared their own repast with the little ones. The remaining third-class girl who was ill (A. F.) was found to have occupied a seat at the second-class table, and to have partaken of the cold beef and bacon that were responsible for the illness of members of that class.

VI.—HISTORY OF THE BEEF.

The animal from the carcass of which was cut the piece that occasioned the disaster was described at the inquest as a young Kerry heifer, purchased on June 29th by a certain butcher, who would seem to have attempted, but without success, to fatten it. This butcher seems to have killed the animal on his own premises, on or before October 19th, when he disposed of part of the carcass to another butcher who was the regular supplier of the institution. The contract prices paid by the institution for beef and mutton were 8d. per lb. for the "prime" cuts, and 5d. for the other parts. This piece was sent in at 5d. per lb. by the contractor. No reliable information was obtainable at the inquest as to the condition of the calf at, or shortly prior to, slaughter. From the low price at which the meat was sold to the contractor—3d. per lb.—it seems fair to conclude that the meat could not have been regarded as of "prime" quality. Moreover, the first butcher would appear to have sold the meat at a sacrifice. Two features typical of such occurrences were therefore present in the case. The meat was purchased ready killed by the contractor, and at an unusually low price. The fate

of the remainder of the carcass was not satisfactorily traced at the inquest. The piece sent to the school on October 24th was part of the fore-quarter, weighing some 38 lb. All of this save 12 lb. was cooked and eaten on Tuesday, October 27th, without ill effect. A piece of "ribs" weighing 12 lb. was not cooked, however, till Thursday, October 29th, when it was roasted and partaken of by the teachers without ill effects. Of this joint, about 3 or 4 lb. were left over from the Thursday's dinner, and kept on a dish (together with a piece of bacon) in the larder till the following Tuesday, November 3rd, when it was cut up, most of it put in the stew, and the remainder served out, with or without cold bacon, to girls of the second class. The stew, as already stated, formed the dinner of the first class, but was also obtained by some members of the third class. All who partook of it became ill, with two exceptions, and their serum proved to contain agglutinins specific for the causative organism. All who partook of the beef, as such, also became ill, and also some of those who partook of bacon that had lain in contact with it. The bone of the beef was put in the soup for the "baby" class, and seems to have been innocuous, doubtless because it was thoroughly boiled. As for the stew, that was expressly stated by the cook not to have been boiled, but only warmed up. It would have been most interesting to have examined the beef, but unfortunately when I arrived on the scene not a scrap remained. Despite the fact that it must have been very stale, it does not seem to have given rise to observation with regard to odour, taste, or appearance. Experiments which I carried out by inoculating cold beef with the strain of Gaertner's bacillus isolated from these cases showed that the meat became rapidly and completely pervaded with the organism, and yet exhibited no perceptible alteration. The bacillus would actually seem to have a special predilection for muscular tissue, for I have never failed to isolate it from the muscles of animals that had succumbed to experimental infection with it.

In the stew there was also mutton, but for various reasons, needless to detail here, that could not have been the *fons et origo mali*. Moreover, a large piece sent up to me for examination failed to yield Gaertner's bacillus, even by malachite-green enrichment.

VII.—SUMMARY AND CONCLUSIONS.

This severe outbreak of meat poisoning was caused partly by intoxication (cf. the short incubation period), and partly by infection (cf. the cultivation of the organism from the three fatal and two of the recovering cases). The causal micro-organism was the genuine *Bacillus enteritidis* of Gaertner, which must have been conveyed to the sufferers in the beef; and from the history it seems probable that the calf was sickly, and already harboured the bacillus at the time of slaughter. The escape of those who partook of portion of the same carcass on October 27th and 29th may be accounted for either by unequal distribution of the virus, or by thorough cooking which destroyed it. Some of the infective material must, however, have escaped the roasting of the 29th, and, multiplying rapidly, have rendered the whole piece intensely toxic and infective during the five days that elapsed before the fatal Tuesday when it was finally consumed. The practical lesson to be derived from the observation of this occurrence—the most disastrous of its kind hitherto recorded, so far as the writer knows—is twofold. First, it indicates the need there is for the abolition of the private slaughter-house, and for the inspection of all animals used for human food, both before, during, and after slaughter; secondly, it emphasizes the danger arising from the use of old stale scraps of meat, and especially of beef. If, on economic grounds, such left-over pieces must be used up, the only way of avoiding or diminishing the danger would seem to be very thorough and prolonged boiling. Ordinary examination of such meat may fail to discover any grounds for suspicion.

In the foregoing description I have purposely omitted many interesting points of detail, such as the agglutination reactions of the patients' serum, the distribution of the bacillus in the bodies of the victims, etc. These are reserved for the full paper.

In conclusion, I have to express my heartfelt thanks to the Sisterhood in charge of the institution for the full and complete information and other assistance which they

cheerfully afforded me during my investigation of the outbreak. My thanks are also due to Dr. P. F. Graham, physician to the institution, for his assistance and the trouble he took in collecting the patients' serum. I desire also to thank Dr. Shanahan for helping me at the autopsies and in other ways.

THE SCIENCE COMMITTEE

OF THE

British Medical Association.

REPORT CXIII.

THE CONDITION OF THE BLOOD IN EXPERIMENTAL RICKETS.*

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CONCERNING the condition of the blood in rickets there is much diversity of opinion. The majority of authors consider that there is invariably a certain degree of anaemia. Ewing¹ and Cabot,² in their textbooks on haematology, say that there is always a certain degree of anaemia proportionate to the severity of the disease. Cabot, in addition, mentions that examples of polychromatophilia, myelocytes, and nucleated red blood corpuscles are not infrequently observed. Holt,³ Cheadle,⁴ and Ashby,⁵ in their writings on rickets, express practically the same opinion. Not one of these authors, however, quotes any specific example, but merely the conclusions of other observers. Hutchison,⁶ on the other hand, states that severe rickets is often accompanied by no appreciable degree of anaemia; and Pfandl and Schlossmann⁷ say that in rickets there is nothing characteristic of the blood.

Considering the frequency with which rickets occurs, the blood picture has comparatively seldom been the subject of study. In the literature I have only been able to find three papers based on anything like extensive observations.

Morse⁸ in 1897 reported the result of an investigation into the condition of the blood in 20 cases of active and uncomplicated rickets occurring in children between the ages of 7 months and 2 years. He found the percentage of haemoglobin (as estimated by the apparatus of von Fleischl) to vary between 48 and 77, the red blood corpuscles to vary between 3,508,000 and 5,528,000 per c.m.m., and the leucocytes between 5,500 and 18,800 per c.m.m. He observed nucleated red cells in three of the cases, all of which presented some enlargement of the spleen, and in some of these, in which the spleen was greatly enlarged, nucleated red cells, both megaloblasts and normoblasts, were very numerous. In nearly all the cases mention is made of some variation in the size of the red cells, and occasionally poikilocytosis was observed. Morse concludes from his observations that most cases of rickets present some anaemia, which, as a rule, varies with the severity of the disease, and that there may or may not be leucocytosis.

Felsenthal (quoted by Morse⁸) investigated 12 cases of rickets, varying in age from 9 months to 2 years. Three of the patients were very markedly rachitic and had large spleens. He got practically the same result in all the 12 cases. The red blood corpuscles were not decreased in number, or only to a very slight extent, but the haemoglobin was always diminished. Nucleated red cells only occurred in the most severe cases.

Esser,⁹ in a recent paper on the etiology of rickets, discusses the condition of the blood—at least, so far as the number and character of the leucocytes are concerned. He asserts that there is almost invariably—at least, in the early stages—a marked leucocytosis, amounting in some instances to 30,000 per c.m.m., and that the nuclei of the polymorphonuclear leucocytes are more lobulated than normal. He does not, however, give any table of his results, nor does he make any mention of the percentage of haemoglobin or number of red blood corpuscles.

According to Cabot,¹⁰ Hock and Schlesinger found that in a considerable number of cases of rickets, with and without splenic enlargement, the number of red blood cells per c.m.m. was 2,500,000.

As for the rest of the literature, it consists of reports of isolated, or at most two, examples of rickets examined by

the one author. Not infrequently, too, some mention is made of splenic enlargement, and in not a few the blood picture was similar to that found in "splenic anaemia of infancy," so that these results are of very doubtful value. More especially is this the case when one considers that the degree of splenic enlargement in splenic anaemia bears no definite relation to the severity of the anaemia, and also that it is very doubtful, in view of recent observations,¹¹ if uncomplicated rickets is accompanied by any degree of splenic enlargement; and, finally, as Starck¹¹ has shown, that enlargement of the spleen is as common in non-rachitic as rachitic children.

Moreover, much of the diversity of opinion regarding the relationship of rickets to von Jaksch's anaemia is due, in my opinion, to the want of exact knowledge regarding the blood picture in uncomplicated rickets.

Owing to this scarcity of information regarding the condition of the blood in active and uncomplicated rickets I was led to conduct an investigation into the subject both from the clinical and experimental aspect. In this paper I intend to deal chiefly with my experimental results, but it will be advisable to give in addition a brief summary of the results obtained in the case of spontaneous rickets in children.

I examined 30 cases of active and uncomplicated rickets in children between the ages of 12 and 42 months. In order to control these observations I also investigated the blood of 12 children, who to all external appearances were quite healthy, and who most certainly did not present the slightest rachitic manifestation, and who, it may also be stated, belonged to the same class of society. In only 9 of the 30 rachitic cases was there any degree of anaemia. In 2 of these the amount of haemoglobin was only 5 per cent. below the accepted average, and the red cells in no instance were less than 4,100,000 per c.m.m. The majority of the cases, on the other hand, gave notably high blood estimations, so far as the amount of haemoglobin and number of red cells were concerned. For better comparison the cases were divided into five groups, each group comprising an age-period of six months, and the average of each group compared with the average of the controls and the reputed average of authors for corresponding ages. For each age-period the average amount of haemoglobin and number of red cells was in excess of the reputed average, and also of the controls, excepting in one series composed of children between the ages of 18 and 24 months, where the red cells, though still above the normal, were some 800,000 per c.m.m. below the average number as found in the controls. Nucleated red corpuscles were exceedingly rare, only being discovered on one occasion, and myelocytes were notable by their absence. In only 2 of these cases was there an unequivocal leucocytosis, the white cells numbering 20,000 and 30,000 per c.m.m. The child in one of these cases had been suffering for some days prior to the examination from diarrhoea. Of the other 28 cases, 9 gave a normal or subnormal estimation, and in 19 the leucocytes were moderately increased in number, the maximum being 19,000 per c.m.m. Differential counts failed to reveal anything characteristic.

As uncomplicated rickets in children is comparatively rare, I considered it important to corroborate the clinical findings with observations in experimental rickets.

Rickets was induced experimentally in puppies, and periodic examinations of the blood were made before and after the development of the disease. When the rachitic manifestations became very marked the animals were killed, and the histology of the haematopoietic organs studied. In the results recounted below, however, I have not discussed the histological findings in these organs in any detail, as I intend in a later communication to deal with that aspect of the subject.

The blood examinations were always made at about the same time of the day, between 3 and 5 p.m. The sample of blood was taken from a vein of the ear, after the part had been shaved, the haemoglobin estimated by Gowers's haemoglobinometer, and enumerations of the red and white cells made with the Thoma-Leitz haemocytometer. Gowers's solution was used as the diluent for the red cells, and a 3 per cent. solution of acetic acid, tinted with methylene blue, for the white cells, the dilutions being 1 in 100 or 1 in 200 and 1 in 10 respectively. Films were also made and stained with Jenner's fluid, and a differential

* From the Pathological and Physiological Laboratories of the University of Glasgow.

count of 400 to 800 leucocytes made. Films were also at first stained with Ehrlich's triacid fluid, but as it entirely failed to reveal any neutrophile granulations its use was early discarded. The best results were obtained in films stained for two or three minutes with undiluted Jenner's fluid, and then for about ten minutes with the diluted stain and thereafter washed thoroughly. Invariably the eosinophile granulations stained well, but the demonstration of the neutrophile granulations left much to be desired. They always appeared faint and very scanty, but in undoubted polymorphs were sufficiently definite to enable a diagnosis to be made. In no mononuclear cells, either in the blood or marrow, were neutrophile granules detected, so that it was found impossible to distinguish between myelocytes and hyaline cells. This absence of neutrophile granulations in the myelocytes of dog's blood I find is also mentioned by D. Noel Paton¹² in his work on digestion leucocytosis.

In the results of the differential counts I have classified the leucocytes under four headings:

1. *Neutrophile Polymorphonuclear Leucocytes*.—These cells are characterized by a variously-shaped and darkly-staining nucleus, and by the presence of faintly-staining and scanty neutrophile granulations throughout the protoplasm.

2. *Eosinophile Polymorphonuclear Leucocytes*.—These cells only differ from the preceding in the type of granulation, which is large, spherical, and markedly oxyphile in its affinity for dyes.

3. *Lymphocytes*.—Under this heading I have classified all cells, irrespective of their size, which have a relatively faintly-staining circular, oval, or slightly-indented nucleus surrounded by a relatively small amount of markedly basophile protoplasm.

4. *Hyaline and Transitional Cells*.—This class includes the large mononuclears, with fairly abundant clear protoplasm, and cells, which seem exactly similar in type, excepting for the markedly indented nucleus.

EXPERIMENT I.

Male pup. Born May 11th, 1906. This animal was weaned at the age of 4 weeks, and thereafter fed on porridge and milk and subjected to modified confinement. Rachitic manifestations were apparent on July 14th. The pup steadily increased in weight till July 31st, when it weighed 6,597 grams; but from that date until August 23rd it lost 420 grams. The following charts (Nos. 1 and 2) show graphically the results of the weekly blood examinations.

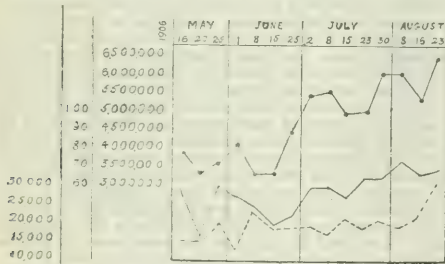


Chart 1: ——— Red cells; ——— haemoglobin; ---- leucocytes.

It will be seen that in spite of the development of severe rickets no anaemia supervened, but that the blood continued to improve steadily in quality. Nucleated red blood corpuscles were met with at almost every examination, but they steadily decreased in number from 1 in 20 leucocytes during the first week to 1 in 600 on the second last day of life. The leucocytes remained fairly steady throughout the development of the disease until just before death, five weeks after definite rachitic manifestations were observed, when there appeared a moderate leucocytosis. Chart No. 2, comprising the absolute counts of the different varieties of leucocytes, shows that the variation in the leucocytic picture depended on the polymorphs and lymphocytes, the other varieties remaining fairly constant. The polymorphs varied between 8,000 and 17,000 per c.mm. until the final observation, when they rose to 26,000 per c.mm. As regards the lymphocytes there was

a gradual rise until the animal was 5 weeks old, after which they diminished in number, and they continued to be scanty during the development of rickets, but during the last two weeks of life they increased again.

The animal was killed on August 23rd. Weight 6,577 grams. Bones showed marked rachitic changes. Heart and lungs were normal. The liver, which weighed 265 grams, was passively congested and the seat of fatty infiltration. The spleen weighed 44.7 grams, and, excepting some passive congestion, seemed normal. The thymus gland weighed 3.9 grams. Sections of the femur marrow, which was unduly abundant, showed it to be slightly more fatty than normal.

EXPERIMENT II.

Male pup, born May 11th, 1906. It was weaned at the age of 4 weeks, and thereafter treated by modified confinement and fed on porridge and milk. It showed undoubted rachitic symptoms on

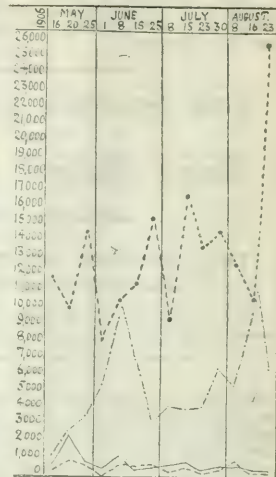


Chart 2.—Showing absolute number per c.mm. of the different varieties of leucocytes. ---- Neutrophile polymorphonuclears; ---- eosinophile polymorphonuclears; ——— lymphocytes; ——— hyaline and transitionals.

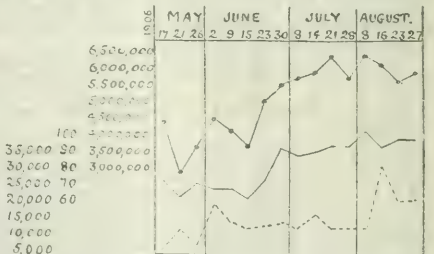


Chart 3: ——— Red cells; ——— haemoglobin; ---- leucocytes.

July 14th, but with exercise these in great part disappeared, only to reappear on again being confined. It steadily increased in weight till July 31st, after which it lost during four weeks 453 grams.

It will be seen from the charts (Nos. 3 and 4) that in this case also there was not the slightest evidence of anaemia. The leucocytes, too, remained fairly constant until three weeks before death, when there was a temporary leucocytosis, due both to a polymorphonuclear and a lymphocytic increase. There was also, as in the former experiment, a gradual rise in the number of lymphocytes from birth,

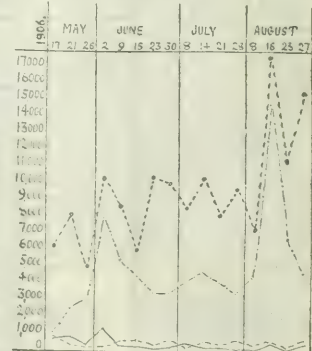


Chart 4.

with thereafter a fall, which persisted until the final rise three weeks before death.

Killed August 28th. Weight, 4,536 grams. Bones showed marked rachitic changes. Heart and lungs were normal. The liver weighed 155.9 grams, and was fatty. The spleen weighed 18.1 grams, and was slightly atrophied. The thymus weighed 12.1 grams. The axillary and mesenteric lymphatic glands were enlarged, and on minute examination were found to show some lymphatic hypertrophy. The femur marrow was more fatty and more abundant than normally.

EXPERIMENT III.

Female pup, born May 11th, 1906, and treated similarly to animal in Experiment I. This pup was distinctly rachitic by July 14th, and for the last twelve days of life could not walk. She increased steadily in weight until within two and a half weeks of death, during which time she lost 453 grams.

In this case, as in the two preceding experiments, the blood continued after the development of the disease to improve in quality (during the final two weeks of life the red cells averaged 6,400,000, and the haemoglobin 100 per cent.), and, unless on the occasion of the final examination (two days before death), there was no increase in the number of leucocytes: in fact, there seemed to develop a leucopenia after the onset of the rachitic manifestations. During the last week of life the lymphocytes increased enormously, rising from 3,000 to 20,000 per c.mm., but otherwise the differential counts revealed nothing characteristic. Nucleated red blood corpuscles varied from 1 in 25 leucocytes on first examination, when the animal was four days old, to 1 in 500 leucocytes during the last week of life.

Killed August 17th. Weight, 4,309 grams. The bones showed marked rachitic changes. Heart and lungs were healthy. The liver, which weighed 198.4 grams, was fatty, and the spleen, which weighed 8 grams, showed nothing abnormal on microscopic examination. The thymus weighed 3.9 grams. The lymphatic glands were normal. The marrow presented a slight degree of leucoblastic hyperplasia.

EXPERIMENT IV.

Female pup, born March 7th, 1907, and kept under observation from the age of 5 weeks. It was fed on porridge and milk and treated by confinement. Rachitic manifestations were apparent about May 14th. This pup increased steadily in weight till within two weeks of death, after which it lost 652 grams.

In this case there was during the last week of life a fall in the number of red cells, but not sufficient to be described as an anaemia, especially as the haemoglobin still maintained its former level (see Chart 5). The leucocytes throughout remained fairly steady. The leucocytic picture shows a tendency towards a gradual rise in the proportion of the polymorphs, with a corresponding fall in the lymphocytes after the development of rickets (see Chart 6). On May 7th there occurred a marked rise in the number of

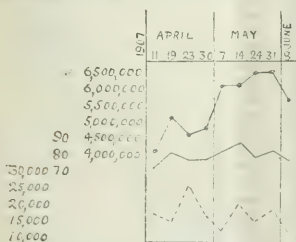


Chart 5: — Red cells; --- haemoglobin; . . . leucocytes.

On May 7th there occurred a marked rise in the number of

large mononuclears and transitionals, but with this exception the charts do not present anything abnormal. Nucleated red cells were observed on all occasions except the last three, and varied between 3 in 400 leucocytes on the day of the second examination and 1 in 400 on May 24th, fourteen days before death.

Killed June 9th, 1907. Weight 3,230 grams. The bones showed marked rachitic changes. The heart and lungs were normal. The liver weighed 170 grams; it was markedly fatty, and presented some passive congestion. The spleen, which weighed 14 grams, was congested. The thymus, whose weight was 6.5 grams, was markedly atrophied, the follicles being widely separated and much diminished in size; relatively the corpuscles of Hassall

were increased in number. The femur marrow, which was more abundant than normally, was gelatinous in type, and microscopic examination revealed extensive myxomatous degeneration.

EXPERIMENT V.

Female pup, born March 7th, 1907, of same litter as animal in previous experiment, and treated in a similar fashion. It showed signs of rickets on May 14th, and steadily increased in weight until within three weeks of death. During the last three weeks it lost in weight 793 grams.

The condition of the blood in this case simulated very closely indeed that found in Experiment IV. There developed during the last three weeks of life a slight degree of anaemia, the red cells falling from 6,270,000 to 5,100,000 per c.mm., and the haemoglobin declining from 85 to 75 per cent. A leucopenia, which appeared before the clinical manifestations of rickets, was noted during the last six weeks of life. The differential counts revealed that the leucopenia was mainly due to a diminution of the lymphocytes, the number of neutrophil polymorphonuclears, on the other hand, continuing throughout fairly constant. Nucleated red cells were observed on almost all occasions, and varied between 2 in 400 and 1 in 400 leucocytes.

Killed June 13th, 1907. Weight 2,568 grams. The bones showed marked rachitic changes. Heart normal. Both lungs showed patches of bronchopneumonia. The liver (weight 113 grams) showed numerous polymorphonuclear leucocytes along the portal tracts. The spleen, which weighed 9.5 grams, presented nothing abnormal, excepting for some diminution in the size of the Malpighian bodies. The thymus gland appeared unusually small. The mesenteric and axillary glands were hypertrophied: the lymph sinuses contained many catarrhal cells with blood pigment. The femur marrow presented a slight degree of leucoblastic hyperplasia.

EXPERIMENT VI.

Female pup, born March 7th, 1907, of same litter as two previous animals, and treated in a similar fashion. This animal was undoubtedly rachitic on May 14th. It steadily increased in weight till within seven days of death, but thereafter it lost 595 grams.

In this case also there is a tendency towards the development of anaemia after the appearance of the rachitic manifestations, but not what one would call severe (see Chart 7). There was a leucocytosis, which developed three weeks before death and persisted until the end. This leucocytosis, it will be seen, was entirely due to an increase in the neutrophil polymorphs (see Chart 8). It is most probable that the leucocytosis was due to bronchopneumonia, from which the animal died. Two nucleated red corpuscles were observed on first examination, while counting 500 leucocytes, but they rapidly diminished in number, and were entirely absent on the last three examinations.

The pup died suddenly on June 21st. Weight, 2,948 grams. The bones showed marked rachitic changes. The lungs were the seat of bronchitis with patches of bronchopneumonia. The liver, which weighed 212.6 grams, was congested and presented a slight degree of general

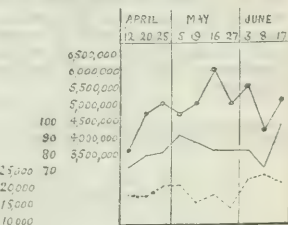


Chart 7: — Red cells; --- haemoglobin; . . . leucocytes.

fibrosis. The spleen weighed 14.17 grams; the Malpighian bodies were small, and

throughout the pulp were many endothelial cells, containing blood pigment.

No thymus gland was detected. The femur marrow showed extensive myxomatous degeneration.

EXPERIMENT VII.

A male pup, born March 18th, 1907, and kept under observation from the age of 4 weeks. This animal was treated as Experiments IV, V, and VI. By May 14th it was undoubtedly rachitic. This animal lost in weight 907 grams during the last two weeks of life, but before that had steadily put on flesh. It seemed ill for some time before death, which occurred on June 9th.

In this case there occurred a very slight diminution in the num-

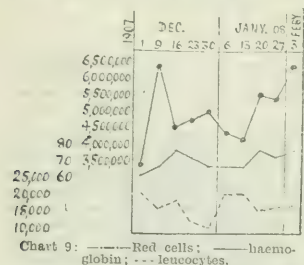
ber of red cells during the last four weeks of life and immediately after the appearance of rickets; the haemoglobin also during the same period showed a slight average decrease. For two weeks prior to the onset of rickets the red cells had averaged 5,600,000 per c.mm., while afterwards they averaged 5,250,000 per c.mm., and the haemoglobin fell from 90 per cent. to 80 per cent. The most striking feature in the condition of the blood, however, was the leucocytosis which appeared some fourteen days before death. The leucocytes until then had been fairly constant in number, averaging 22,000 per c.mm. Two weeks before death they rose to 56,200, but gradually fell again to 27,000 per c.mm. Differential counts revealed this rise to be due almost entirely to an increase of the neutrophile polymorphs, consequent most probably, as in the preceding case, on the development of bronchopneumonia.

Nucleated red corpuscles were only observed on two occasions: on day of first examination they numbered 2 in 500 leucocytes, and on third last examination 1 in 500 leucocytes.

Died June 9th. Weight 1,672.5 grams. The bones showed marked rachitic changes. The lungs were the seat of an extensive bronchopneumonia. The liver, which weighed 75 grams, was congested, and the spleen, which weighed 3.5 grams, had a normal appearance. The femur marrow was the seat of extensive myxomatous degeneration, with here and there patches of leucoblastic hyperplasia.

EXPERIMENT VIII.

Male pup, born October 2nd, 1907; kept under observation from age of 2 months, and subjected to similar conditions as



sequent to the diarrhoea, but on the animal's recovery this disappeared and in spite of the development of rickets the blood continued to improve in quality. (Chart 9.) Excepting for the fall in the number of leucocytes soon after the onset of diarrhoea, their number continued very

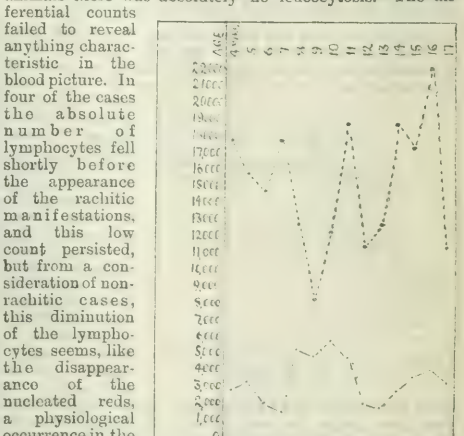
steady throughout. The differential counts revealed a fall in the lymphocytes, which took place shortly before the onset of rickets and continued until the end, and practically synchronous with this a relative increase in the polymorphs. (Chart 10.) Three nucleated reds were observed on the first examination while counting 500 leucocytes, but on no other occasion was a nucleated red corpuscle observed.

Killed February 4th, 1908. Weight 3,150 grams. The bones showed marked rachitic changes. The heart and lungs were normal. Spleen (weight 5.7 grams) showed nothing abnormal. The thymus was atrophied, weighing 3.7 grams. The femur marrow showed a slight degree of leucoblastic hyperplasia.

The following points emerge from a general survey of the above experiments:

In 4 of the 8 animals there was a steady rise in the amount of haemoglobin, and in the number of red cells, in spite of the development of marked rickets. In one case there was a slight fall in the number of red cells at the time of the last observation; in another of the cases the haemoglobin and red blood corpuscles remained constant. In two only did there develop a slight degree of anaemia, and one of these animals, it should be remembered, died from bronchopneumonia, but in the other no cause could be assigned for the anaemia. Nucleated red corpuscles were seldom or never seen after the development of the disease; all the cases presented a certain degree of variation in the size of the red cells.

A degree of leucocytosis appeared in two of the experiments after the rachitic manifestations were detected, but in both this was no doubt due to the bronchopneumonia discovered *post mortem*. On two occasions there developed as a terminal event a leucocytosis, but in four of the animals there was absolutely no leucocytosis. The dif-



ferential counts failed to reveal anything characteristic in the blood picture. In four of the cases the absolute number of lymphocytes fell shortly before the appearance of the rachitic manifestations, and this low count persisted, but from a consideration of non-rachitic cases, this diminution of the lymphocytes seems, like the disappearance of the nucleated reds, a physiological occurrence in the earlier weeks of life, and not a pathological phenomenon. Chart No. 11, which is compiled from the average number of neutrophile polymorphs and lymphocytes of five non-rachitic animals, shows that after the age at which the rachitic manifestations usually appeared, the lymphocytes are, as in the experiments, comparatively scanty.

In the earlier experiments (three in number) the lymphocytes increased somewhat after the onset of rickets, while in the later ones (five in number) the polymorphs underwent the increase, but in two of these latter cases a bronchopneumonia was discovered after death, and probably accounted for the leucocytosis.

Thus experimental rickets is not necessarily accompanied by any anaemia, and when anaemia does appear it is, as a rule, of minor degree, and may frequently be accounted for by some complication. There may or may not be leucocytosis, and this also when it occurs may be the result of some complication. It can at least be truly said that in the blood of animals suffering from rickets there is no marked pathological change and absolutely nothing characteristic.

It is thus seen that these experimental results are in entire accordance with those obtained in the cases of spontaneous rickets, and which I have briefly reviewed above. Of 30 children suffering from active and uncomplicated rickets, only 9 presented anaemia, in not one of which was the number of red cells less than 4,100,000 c.m.m. As a rule, however, the blood estimations were abnormally high. Nucleated red cells were exceedingly rare. In only 2 of the cases was there an unequivocal leucocytosis, 9 presented a leucopenia, and 19 a slight increase in the number of white cells.

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THE TREATMENT OF SLEEPING SICKNESS:

A SUGGESTION.

By ANDREW BALFOUR, M.D.,

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I HAVE read with much interest the account of the discussion on cerebro-spinal meningitis at the Sheffield meeting last August. More especially have I noticed the results obtained by Drs. McKenzie and Martin by their method of introducing locally by spinal puncture a highly immune serum which they obtained from the blood of patients who had recently recovered from the disease or, as in two successful acute cases, who were still running a course. These latter were injected with their own serum taken on the sixth and seventh day of their illness respectively.

It has occurred to me that a somewhat similar method of serum-therapy might be tried in cases of trypanosomiasis and sleeping sickness.

Although cerebro-spinal fever and trypanosomiasis differ very markedly—the one being a bacterial, the other a protozoal disease—yet there are certain points of resemblance between them. In both the organism producing the disease is found in the blood and in the cerebro-spinal fluid; at least, this is so in advanced cases of sleeping sickness. In both there is that "lymphatism" described by Westenhoeffer and Symmers in cerebro-spinal fever; and in both the mesenteric glands may show marked hyperaemia and haemorrhage. In both also the final stage of the disease falls on the cerebro-spinal system, and, though the one is an acute, the other a chronic disease, cerebro-spinal fever may run a very chronic course, producing an extreme marasmus which cannot be surpassed even in the closing scenes of typical sleeping sickness. At the same time this resemblance is of minor importance. The question is, if in sleeping sickness the cerebro-spinal canal is a *locus minimae resistentiae*, does the cerebro-spinal fluid show a marked lack of trypanocidal substances? So far as I can ascertain, this matter has not been fully investigated. We know that the blood of patients suffering from trypanosomiasis possesses trypanocidal bodies, and blood serum has been used therapeutically both by subcutaneous and intravenous injection. Why should it not be tried intraspinally?

In the past great difficulty has been experienced in attacking the trypanosomes present in the cerebro-spinal canal, and Kopko has made special efforts to overcome the difficulty when treating patients with atoxyl and other chemical substances. It is true that comparatively few cases of human trypanosomiasis recover, but a suitable serum might be obtained from the blood of patients subjected in the first instance to chemo-therapy. A combined treatment might prove useful, attacking the trypanosomes in the blood by some of the more promising of our present drugs, and attacking those in the cerebro-spinal fluid by performing lumbar puncture and injecting the patient's own serum, or the serum from a case which is improving, obtained by defibrinating and centrifuging the blood. The latest work on the cerebro-spinal fluid in sleeping sickness is that by Broden and Rodhain, but they do not approach the subject from this aspect. The cellular content of the fluid seems to vary, and Nattan-Larrier has reported a very severe case with cerebro-spinal symptoms in which the fluid was very poor in cellular elements. This may point to the canal being a *locus minimae resistentiae*, to employ once more the phraseology of Drs. McKenzie and Martin.

It would seem that, so far as the cellular contents go, the fluid in human trypanosomiasis may approximate to the conditions found in cerebro-spinal fever, a fact which is rather in favour of adopting the line of treatment indicated. I admit it is merely a suggestion, and one possibly based on none too stable a foundation; but in the present state of our knowledge, everything likely to prove beneficial should be tried in cases of sleeping sickness. I am sending a copy of this note to Sir David Bruce in Uganda for his consideration, and I propose to carry out experimental work in this direction here as soon as possible.

If the idea has been voiced beforehand, I can only plead the difficulty of getting at the full literature on the subject, and apologize for having, as one may say, "carried coals to Newcastle."

INJURY TO THE VESSELS IN DISLOCATION OF THE SHOULDER.

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THIS short account of a case of injury to the axillary artery and vein possesses considerable interest, serious injury to the larger vessels of the axilla in ordinary simple dislocation of the shoulder-joint being fortunately rare. When the vessels are torn local signs vary a good deal. In the less common variety a swelling appears a few days or weeks after the injury, and increases rapidly with pulsation; in the second kind a diffused fluctuating swelling forms immediately or within a few hours, without bruit or pulsation, and reaches a large size, pushing forward the pectoral muscles. If this tumour pulsates, the diagnosis of a ruptured artery may be made; if in addition the radial pulse is present, it is extremely probable that the injured vessel is not the main artery; beyond this it is not possible to go (Stimson).

E. M., a stout woman of 70 years of age, was admitted to St. Thomas's Hospital on November 26th, 1908. She stated that on the day before admission she had fallen down and hurt her left shoulder; previously she had been in good health. When examined in the casualty department, it was discovered that she had sustained a subcoracoid dislocation of the shoulder. This was reduced by Kocher's method without anaesthetic. Immediately after reduction, a swelling appeared in the axilla, which increased somewhat rapidly in size; it was also noticed that the radial pulse was absent on that side. When seen in the ward on the same evening, 9 p.m., the swelling in the axilla was said to be larger, and the left radial beat was still absent. She was suffering from shock; the right pulse was small and rapid, 124, and the temperature subnormal. There was, however, no proof that the swelling was rapidly increasing. On the following day the patient was placed under an anaesthetic and the axilla opened, both pectoral muscles being divided. A large tear in the axillary vein was found under the lower border of the pectoralis minor muscle. No wound was present in the artery, but all pulsation had ceased at a

point corresponding with the opening in the vein. The wall of the vein appeared thin, and the tear extended almost across it, so that no attempt to suture it would have been of any use. Ligatures were applied above and below the opening, and the axilla cleared of clot. The wound was closed with silk sutures, the muscles being reunited.

It was considered that in the patient's then condition, an amputation through the arm high up would have proved fatal, and that the better course was to wait until she had recovered from the shock, and there was some indication of the extent of the gangrene which was inevitable.

By December 8th a line of demarcation had formed below the elbow, the hand and forearm being dry and shrivelled; and on this date circular amputation of the arm was performed through the middle of the humerus. No Esmarch's bandage was applied and the only vessel requiring ligature was the superior profunda artery. She did not rally well after this operation, and on December 20th she complained of much pain in the right leg, which was colder than the left and tender to the touch. There was also considerable oedema of the left leg. Dry gangrene of the right leg gradually developed and spread up to the knee.

A similar condition began on the left side, but did not extend.

She suffered much pain in the right leg, and for several days before January 26th, 1909, when she died, it was necessary to give her morphine constantly to relieve it.

At the necropsy there was thrombosis of the popliteal vessels on the right side, and considerable atheroma of the arteries generally. The kidneys were contracted and granular. The left axillary artery was thrombosed, but the coats were not ruptured.

This case is important from a medico-legal aspect, as it shows the extent of the damage which may be inflicted by the dislocated head of the humerus in a patient with atheromatous arteries. There was here no question of injury by the house-surgeon during reduction, and the method of manipulation used was that of Kocher, which is regarded by Stimson¹ as the method of all others best calculated to avoid any risk of injury to the main vessels during the process of reduction. No anaesthetic was used nor was the reduction difficult. In the series of cases collected by Stimson, 44 in number, in only 4 had the axillary vein given way; in the remainder it was the artery or one of its branches. The formation of a thrombus in the axillary artery, with or without injury to the vein, had not apparently been recorded in surgical literature.

REFERENCE.

¹ *Annals of Surgery*, 1885, vol. II.

SURGICAL CONSIDERATIONS CONNECTED WITH THE ANATOMY OF THE MAXILLARY SINUS.

By A. S. UNDERWOOD, M.R.C.S.ENG., L.D.S.

SINCE the publication of my results in this direction last autumn¹ I have had opportunities of greatly extending those observations. The examination of a very large number of skulls of very varying races and of individuals of every age has left no doubt whatever in my mind that the normal relation of the antral floor to the roots of the teeth is what I then described.

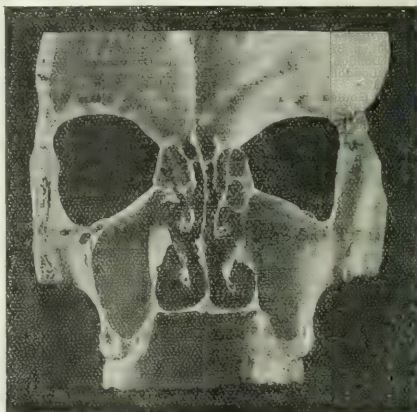
The accompanying figure shows one important fact which has some bearing upon the value of transillumination as a means of diagnosis. If the apices of the roots of the cheek teeth terminated below the antral floor or even protruded a little way into it, transillumination might show a darkness where a small amount of pus was collected in one of the basins between two septa; but if the roots of the molar teeth are embedded in the walls of the cavity, the buccal roots in the outer wall and the palatine root in the inner wall, the thickening of these regions would entirely prevent any transillumination, and the deep pocket of the antral floor descending between these roots might contain things quite undemonstrable by transillumination.

An x-ray photograph, on the other hand, shows such a condition fairly clearly. I have a photograph before me now of a right and left antrum—the right quite clear, the left obviously obscured in relation to the roots of a second or third molar. This left antrum had been pronounced quite normal after transillumination by two authorities.

The next point I wish to dwell upon is the fact that the third and second and first molars in order are most commonly in relation to the sinus, the third molar invariably. Further, the cavity extends a little behind the third molar roots. In the case alluded to above, all the teeth in front of the second molar had been sacrificed as far as and including the lateral, but the second and third molars had been left; their removal later produced a marked result.

I do not wish to suggest that teeth are very often the cause of antral trouble, I do not think they are; but when they are, the third, second, and first molars should be suspected in order, for the third molar is by far the most common offender.

The third point of surgical interest is that the bony septa which divide the part of the sinus embraced by the roots of the third molar from the part in relation with the second molar is generally a simple septum of bone, whereas the septa which are in relation to the front portion of the



cavity are very often traversed at their upper edge by canals in the bone, sometimes closed, sometimes partially open, which convey nerves and vessels across the cavity. I believe that surgeons who are in the habit of doing radical operations on the sinus from a large opening in front (Caldwell-Luc) do occasionally see nervous symptoms ensue consequent upon the breaking down of these septa: if so, these canals, which have not, as far as I know, been described before, may afford a clue to the cause.

The fourth point is that in very rare instances the whole of the third molar region of the sinus is entirely shut off from the rest of the sinus except for an insignificant hole very high up on the nasal side. I have only observed three such cases in the dried skull, but such a condition would in life be very misleading since it looks absolutely like the posterior wall of the sinus, while at the same time there may be a large pus-filled cavity behind it.

I have met with two cases in which the ethmoidal cells extended across the upper third of the maxillary sinus so as entirely to shut off a cavity above it, a cavity which looked at first sight like an attic chamber to the sinus itself.

REFERENCE.

¹ *BRITISH MEDICAL JOURNAL*, 1908, vol. II, p. 463.

THE newly-founded German Infant Protection Association will hold its first annual meeting at Dresden on June 19th, at the same time as the first congress for the protection of nurslings.

ON the initiative of the Belgian Minister for Foreign Affairs, six lazarettos for patients suffering from sleeping sickness have been established in the Congo State. They will be under the direction of Belgian medical men.

Memoranda :

MEDICAL, SURGICAL, OBSTETRICAL.

EPIDERMOLYSIS BULLOSA.

DR. LEONARD B. CANE states in his interesting paper on epidermolysis bullosa (p. 1114) that the eyes in his three cases were unaffected, adding that there was "no evidence of history of phlyctenules or of any ocular disturbance." I have now seen a good many instances of this affection, comparatively speaking of course, and with one exception I have never known the eyes to be involved. The exception occurred in the case of a boy of 15, shown by me at a meeting of the late Dermatological Society of London.¹ The patient, who came under observation in the Skin Department of University College Hospital, presented the characteristic features of epidermolysis bullosa (so-called congenital pemphigus), but I noticed the eyes were not quite right. On closer examination I found there was apparently a looseness of the anterior parts, and came to the conclusion that their state was analogous to that of the skin. This being a peculiar and rare feature, and one I had never seen before, I sent the patient on to the eye department of the hospital for Mr. Flemming's opinion. He was kind enough to report as follows:

Right Eye.—Cornea clear in centre, periphery hazy. The haze is superficial beneath the epithelium. Vessels run into the cornea a short way from limbus.

Left Eye.—Whole cornea hazy, but centre less so than periphery. Three large superficial vessels run over on to the cornea, and can be easily moved over the latter. These vessels are not derived from the anterior conjunctival vessels. The superficial parts of the cornea with these vessels slide upon the underlying deeper layers.

The eyes, I may add, were said to have become affected three months after birth. The ocular condition as here related is very rare. Indeed, I know of no case recorded in dermatological literature in which it has been noted, but the complication may have been observed in ophthalmological practice.

London, W.

GEORGE FERNET, M.D.

COMPLETE RETROVERSION OF THE UTERUS IN THE FIFTH MONTH.

Mrs. W., aged 26, was admitted to the Plymouth Infirmary in the fifth month of her second pregnancy. She was in a state of collapse, the extremities quite cold, the temperature 97°, the pulse 160; the abdomen was distended by a tumour which looked like a full-term pregnancy; the perineum was excessively distended by a large rounded mass, and the anus widely dilated. An oedematous mass (which proved to be the posterior vaginal wall) filled the vagina and projected from it. A catheter was passed with some difficulty and 4½ pints of normal urine withdrawn. This caused diminution but not disappearance of the abdominal tumour, which now assumed a somewhat triangular form with the apex near the symphysis. Strychnine, brandy, and hot-water bottles somewhat revived the patient, and, as soon as it seemed safe, ether was administered by Mr. Stephens Ward and an examination made.

I found it just possible to insert the forefinger between the symphysis and the tumour; the os uteri could not be reached. On examination by the rectum, it was evident that the mass which was bulging the perineum (exactly as a large fetal head does) was the fundus uteri, which was wedged below a well marked sacral promontory.

By careful manipulation it was possible to push the uterus up into the abdomen, when the os could be easily reached, and was found to be dilating. The patient now gradually rallied, and all went well until 5 o'clock the next morning, when she aborted. There was but little hæmorrhage, and the fetus and placenta were expelled in a normal way. Unfortunately she again became collapsed, and, in spite of everything that could be done, she died, apparently of shock.

Her friends stated that she had been for a fortnight at least in the condition above described, and had frequently complained of difficulty in walking.

Plymouth.

CHARLES J. COOKE, M.D., M.Ch., R.U.I.

¹ Brit. Journ. of Derm., vol. xvi, 1904, p. 225.

THE CAUSATION OF APPENDICITIS.

THE following account of what appears to have been an aborted case of appendicitis may prove of interest.

One morning in March, 1907, S. W., a male aged 36, felt, on rising from bed, some uneasiness in the right iliac region. This increased until by evening there was distinct tenderness over the region of the appendix, and rest in bed with the right thigh flexed was the only easy attitude. Hot fomentations were applied, and an aperient administered. Decubitus on the left side, with a pillow support, was tried. Two hours later, on waking, a surprising sense of relief of the local symptoms was felt, and there was a call to stool. During this act the concussion of some hardish body against the metal pan of the commode was noticed. This turned out to have been caused by the impact of a body which in size and appearance was not unlike a date stone. There were shreds of lymph adhering to it.

Thereafter recovery was uninterrupted, though a little tenderness over the region of the appendix persisted for a few days.

The specimen has, in the course of two years, become dry and cracked, disclosing a compact seedlike body enveloped by an outer covering, from which it is separate. Its composition has been ascertained.

REPORT BY THE CLINICAL RESEARCH ASSOCIATION.

This concretion is of elongated shape, and of a laminated structure, readily splitting up into concentric layers. After removing layer after layer so as to reach the centre of the mass, there is no organized structure to be found such as might have formed the original nucleus. Analysis of the concretion by chemical and microscopical methods shows its composition to be as follows:

It is to a large extent soluble in hydrochloric acid, leaving a considerable insoluble residue composed of faecal detritus, of which the more resistant vegetable structures, such as leaf hairs and spiral vessels, are readily distinguishable under the microscope.

Extraction of the mixture of acid solution and residue with ether removed a large quantity of fatty acids, which had existed in the original material in combination with calcium and magnesium in the form of insoluble soaps. We have not succeeded in detecting any cholesterol in this ethereal extract, or in an extract of the original material with boiling alcohol.

Further analysis now revealed the presence of abundant ammonio-magnesium phosphate, and a slightly smaller quantity of calcium phosphate, together with the magnesium and calcium which had existed in combination with the fatty acids. There is also a moderate quantity of material soluble in alkali solution but precipitable on the addition of acetic acid, which has the appearance and chemical behaviour of mucin. The analysis shows, therefore, that the concretion consists of calcium and magnesium phosphates, calcium and magnesium soaps, and faecal detritus inclusive of a small amount of inspissated mucus. From the shape of the mass and from its composition it seems very probable that it had been formed in the appendix.

Straits Settlements.

W. SIDNEY SHEPPARD, M.B.

TWO DEATHS CAUSED BY THE FUMES OF FERRO-SILICON.

HAVING seen an account of some deaths which occurred on board an emigrant steamer at Grimsby about Christmas time, which were attributed to the fumes given off from ferro-silicon, I now offer for publication the history of two similar cases which occurred in my practice in 1905.

On October 20th, 1905, I was called to see two children, aged 3 and 4 years respectively, who were lying ill on board a canal boat. On arrival I found one child was dead and the other lying in an unconscious state covered with a cold, clammy sweat, the pulse being hardly perceptible, the breathing slow and light, and the pupils somewhat dilated. On examining the chest, crepitations were to be heard all over; nothing else abnormal was found, but the child died soon afterwards.

I was told that the day after leaving Hull all the family suffered from a feeling of sickness and dizziness on getting up in the morning, which passed off during the day. On the following morning, however, the same symptoms appeared, only now they were accompanied by pain in the body, vomiting, and headache. Again on the third day (the day on which I saw them) there was a repetition of the two previous days' symptoms, but the effects were so pronounced in the case of the two little children that they were utterly unable to get up, and soon lapsed into the state in which I found them on my arrival. None of them,

so far as I could make out, ever complained of an unpleasant taste in the mouth either before or after vomiting, nor did they suffer from cough at any time; but the mother had noticed a peculiar smell in the cabin, which was very pronounced when I went on board.

As I was unable to certify the cause of death a *post-mortem* examination was ordered, but no further information was obtained regarding the cause of death, the only positive fact being some congestion in the lungs. Consequently certain viscera, along with a sample of the cargo, were sent to an analyst, who reported that no poison could be found in the viscera, but that the sample of the cargo proved to be ferro-silicon, a substance which, under certain atmospheric conditions, would give off poisonous gases, which, being inhaled in sufficient quantities for any length of time, would inevitably cause death. In this statement, then, lay the explanation of the symptoms, and of the physical signs found in the lungs during life and also after death.

I understand that deaths occurring with similar symptoms have taken place on boats trading between Sheffield and Hull during their passage up this canal, so that these notes may perhaps be of some interest and use to medical men residing in the vicinity of this canal, and along the banks of the Trent or Humber.

Althorpe.

J. F. ROBERTSON.

Reports

ON MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, CITY ROAD, LONDON.

A CASE OF FOREIGN BODY IN THE AIR PASSAGES.

(Reported by A. STROUD-HOSFORD, Senior Resident Medical Officer.)

THE following case, admitted to hospital under the care of Dr. Murray Leslie, presents points of interest.

The patient, a girl aged 4, was brought to the outpatient department on July 6th, 1908.

History.

Her mother stated that she had a troublesome cough, especially in the early morning, accompanied by copious, foul expectoration. This had been going on for two years, but for the last fourteen days the child had been getting worse. As bronchiectasis was diagnosed, the child was admitted and put to bed. There was no history of hæmoptysis, the child was taking food well, and was not losing flesh; no night sweating had been noticed. There was nothing definite in the family history; both father and mother were well, and the only other children were two brothers, who were in good health. The patient was said to have suffered from pneumonia two years previously, and from a second attack eight months before admission. There was also a past history of measles, but no history of ever swallowing a foreign body.

Condition on Admission.

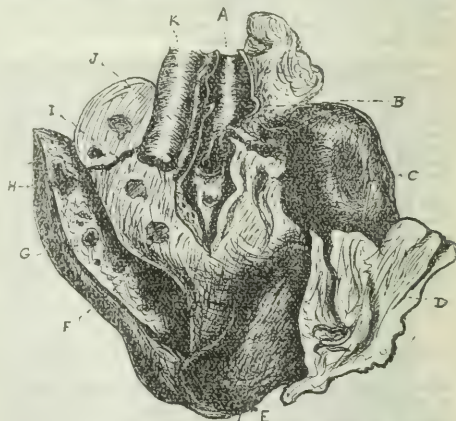
The child was well nourished, peevish and restless; there was some cyanosis of both cheeks, though she was not obviously short of breath. The temperature on admission was 99.8° F., the pulse varied from 124 to 130; the tongue was covered with white fur, and the bowels were regular; the fingers slightly clubbed; the heart was normal, except that the pulmonary second sound was slightly accentuated. The lungs in front showed nothing abnormal; over the left lower lobe behind, however, there was somewhat diminished movement, the vocal vibrations were increased in intensity, and there was marked dullness on percussion. Well-marked tubular breathing was heard in several places, and an increase of the vocal resonance. Some fine crepitations could be heard over the whole of the lower lobe. The sputum, which was examined on several occasions, never showed the presence of tubercle bacilli, but contained

pneumococci in varying numbers. The urine was acid, specific gravity 1019 to 1021, and did not contain any abnormal constituents.

The patient remained much about the same as regards physical signs, but the general condition improved.

After-history.

After remaining in hospital for a little over five weeks, she appeared so well that she was about to be discharged in a day or two, when on August 12th the temperature began to rise, and by August 15th had reached 103° F.; the pulse became very rapid, at one time reaching 180; at the same time the respirations varied from 36 to 40. On examination during this period pneumonic consolidation was detected in the left upper lobe, accompanied by the usual signs and symptoms of pneumonia, together with marked cyanosis. The patient, in spite of all treatment, went rapidly downhill, although the physical signs showed evidence of resolution by the presence of *redux* rales; meanwhile, however, the temperature was swinging, the pulse and respirations remaining rapid, and the patient died on August 22nd, at 6.30 p.m. Treatment consisted first of expectorants, together with creosote by the mouth



Left lung, looking from inner and posterior aspects. A. Trachea, opened on right side; B. bifurcation of trachea; C. left portion of pericardial sac; D. lower portion of pericardium; E. base of lung; F. gangrenous cavity, as seen on surface of lung; G. thickened and dilated bronchus; H. cavity; I. adhesions of lobes; J. nail at orifice of a bronchus; K. oesophagus.

and free diet; antiseptic inhalations were also used (oronasal), but later on the usual treatment for pneumonia was carried out.

Necropsy.

The left lung was bound down to the chest wall, to the upper surface of the diaphragm, and to the left half of the pericardium, by dense adhesions. As they were broken down, portions of the lung substance gave way, and greenish, foul-smelling fluid escaped. The lung was heavy (15 oz.), of a greyish-green colour, and there were scattered purulent areas which on section proved to be gangrenous. The bronchial tubes were thickened and dilated, and contained putrid fluid. At the apex there was a friable pneumonic patch of consolidated lung.

On opening up the trachea and bronchi, a large taintack, 3 in. in length, was found situated about 1 in. below the bifurcation of the trachea. The point of the tack was directed upwards, and the head was obstructing the orifice of one of the lesser bronchial tubes on the left side. A small area surrounding the tack was coated with black pigment.

The right lung was healthy, except for a little emphysema, and weighed 8 oz. The heart, which weighed 3 oz., was rather paler than normal, but otherwise healthy. The liver, kidneys, and spleen were slightly congested. All the other organs appeared to be healthy.

My colleague Dr. Leckie, the house-physician, was good enough to supply me with the drawing here reproduced.

Reports of Societies.

MEDICAL SOCIETY OF LONDON.

Monday, May 10th, 1909.

CHARLES BARRETT LOCKWOOD, F.R.C.S., President,
in the Chair.

The Treatment of Shock.

MR. JOHN D. MALCOLM, in a paper on the treatment of shock, quoted Crile to the effect that the arteries were empty, the tissues pale, and the veins dilated in shock. He said he agreed with that, but suggested that the arteries were tensely contracted, whereas Crile taught that the vasomotor centres were paralysed and the vessels relaxed. Crile's initial proposition that the blood pressure was lowered in shock had not been proved. Crile stated that the blood pressure was raised in the splenic vein. When the arterial pressure was lowered and the venous raised it was the sum of the changes that indicated the net results. A rise of specific gravity in the blood had usually been described in shock, indicating a contraction of the vessels and expression of fluids into the tissues. The importance of the flowing of the blood was insisted upon and attention was drawn to the fact that moving fluids were not subject to the law that pressure upon a fluid is transmitted with equal force in all directions to the surface of the fluid. By means of a tube it was shown that when water flowed through it narrowing of its calibre reduced the pressure of water in the narrowest part. Crile's explanation that the heart could not get sufficient blood because of the low pressure in the veins was unsatisfactory and irreconcilable with his previous statement that the veins were engorged. Whether the vessels were dilated or contracted in shock changes of calibre certainly occurred and the conditions necessarily returned to the normal during recovery. Hence it was necessary to divide the treatment of shock into two stages, first to prevent change and later to promote a return to the normal. Crile taught that the vessels dilated as shock progressed, and should be filled with fluid and contracted, if possible; but the speaker held that the vessels contracted in shock, that the fluids were squeezed out of them, and removed from the body as sweat. Hence vaso-dilators and sedatives should be given as shock developed, and the administration of fluids was necessary in the stage of recovery. In regard to this last view Crile was quoted to the effect that as shock deepened the quantity of fluid that could be taken into the veins became progressively smaller, and that in deepest shock fluid so injected escaped into the tissues almost immediately. On the other hand, in the days when fluids were rigidly withheld after operations patients often remained in a state of profound shock for many hours. Now it was known that a free administration of fluid was all that was necessary to ensure prompt recovery in an uncomplicated case. The employment of vaso-constrictors when the arteries were empty and would not dilate nor remain dilated was irrational, but alcohol was useful and undoubtedly improved the pulse in that stage. The action of strychnine had been condemned by Crile. The improvements of the methods of administering anaesthetics, the disuse of irritating antiseptics, the use of the Trendelenburg position and the anticipation of septic and inflammatory troubles by improved diagnosis and prompt treatment were important measures for preventing shock. The greatest danger arose in septic cases in which the vascular changes of shock were already partially produced. In such cases fluid was required and never less than during an operation. It should, therefore, be given subcutaneously during or even before a surgical procedure was commenced, to replace fluid lost and to fill up vessels whenever they tended to relax. Mr. C. R. B. KETZLEY denounced the use of strychnine injections for shock and observed that the use of ether instead of chloroform had lessened the number of cases in which shock occurred. Mr. A. PEARCE GOULD urged the importance of treatment of shock by warmth, rest, and morphine. Dr. ALEXANDER MORISON insisted on the necessity of quickening the action of the heart and suggested the inhalation of nitrite of amyl or the application of warmth. Mr. V. WARREN LOW recommended on the advisability of saline injections into a vein

in very severe cases of shock. Mr. LOCKWOOD mentioned the advantages of the administration of oxygen, and Mr. MALCOLM replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Friday, April 16th, 1909.

'A. R. PARSONS, M.D., President, in the Chair.

Spleno-medullary Leukaemia.

DR. ROWLETTE exhibited specimens from a case of spleno-medullary leukaemia in a woman, aged 58. For many years she had been in good health, but had been treated once for some condition of the heart. She was admitted to hospital in October last complaining of swelling of the feet. There was noticeable a very considerable swelling of the abdomen, and the whole of the left side was filled by a large tumour with a well-defined edge, reaching down to the left iliac region. Its greatest diameter was 16 in. The blood was examined on October 18th, a fortnight after admission, and showed the red corpuscles to be 3,600,000; white cells numbered 640,000, and were of the usual type, except that one saw a larger number of "mast cells" than usual. The haemoglobin was about 70 per cent. The condition of the blood left no doubt as to the diagnosis. The patient was treated with x rays, and showed some improvement. In February an examination of the blood showed haemoglobin about 80 per cent. The red corpuscles were considerably above the normal, and the white had fallen. The condition of the patient's heart was bad all the time, and she died in the beginning of March. The liver was very enlarged, and the heart showed mitral disease, which was responsible in most part for the extreme passive congestion of the liver. The spleen was enormously congested. It was an interesting feature of the case that the red cells increased in number towards the end of life. Professor WHITE said he had never seen a case of leukaemia with so little infiltration of the organs. On more than one occasion he had the opportunity of testing the phagocytic power of the blood, and, while the influence of the serum in this regard appeared to be normal, he was forced to conclude that the phagocytic power of the polymorphonuclear leucocytes was considerably less than normal, and steadily lessened as the disease progressed. Dr. ROWLETTE, in reply to questions, said the patient was exposed to the x rays about every second day, as a routine measure, from shortly after admission to hospital until shortly before her death. There was considerable diminution in the size of the spleen, but she was troubled with severe bleeding of the bowels, and the rays were suspended on a couple of occasions. He did not know that he could put down any definite condition to the rays. It was possible that the thickness of the capsule of the spleen might be attributable to them, but he would not say so positively.

MEDICO-PSYCHOLOGICAL ASSOCIATION: NORTHERN AND MIDLAND DIVISION.—At a meeting at the Grange, Rotherham, on April 20th, Dr. G. E. MOULD, who was in the chair, gave a sketch of the regulations affecting private asylums, and of the difficulties by which the law at present surrounded their work. Though at one time they bore a bad name, yet many good names, such as those of Tuke, Newington, and Hill, had been associated with their foundation. Of such men it was impossible to believe anything but good. The idea that patients were differently treated in private asylums, and that it paid proprietors not to cure them, was absurd. The reputation and prosperity of an asylum depended on its ability to cure the curable and to treat with kindness the incurable. Dr. W. J. VINCENT recorded a case of *Conjugal general paralysis*. The husband, who acquired syphilis after marriage, had no congestive attacks, while the wife had; but in both the concomitant physical signs were well marked. The husband was a commercial traveller, 50 years of age, undersized and somewhat ill-developed. He was happy, contented, and self-satisfied, and showed the usual characteristics of general paralysis. He gradually became demented, and died about two years after admission. The wife, aged 50, was admitted three years after the husband. She was depressed and apathetic, and became steadily demented. She had

several epileptoid seizures, and died about one and a half years after admission. In both cases the post-mortem examination showed the characteristic changes. Dr. KELLY (for Dr. FRENCH) read a paper on *Vagrants*. In his prison experience he had come in contact with the class. The general crimes committed by them were "sleeping out," "wandering abroad," "begging alms," but never any great criminal offence needing much brain work. Out of 194 cases under his observation 122, or 63 per cent., were found congenitally defective in mental power. His conclusions were as follows: (1) Three in every four beggars and vagrants are really feeble-minded. (2) Two out of every three, or 65 per cent., of those found wandering could be shown to be congenitally feeble-minded. (3) The chief causal factor in the condition of this latter class is parental alcoholism. (4) That this particular class is not as a class criminal. (5) That all vagrants and masterless men found to be wanting should be recognized as demented, segregated at special work, farm colony labour for preference, and thus made to defray to the State the cost of their maintenance.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—At a meeting on May 4th, Dr. MAY THORNE in the Chair, a discussion was held on *Cancer of the breast* with regard to its recurrence. Mrs. SCHARLIEB commented on the apparent capriciousness of recurrence. A patient with advanced carcinoma of the breast, involving skin and muscle, was still alive eighteen years after the operation: whereas another, with a small, freely-movable growth, died two years later from recurrence in the lungs. In view of such cases as the former, operative measures should be urged on all patients who could stand the actual operation. The speaker further emphasized the importance of careful adaptation of the operation to the needs of each individual case, of free removal of the growth, of avoidance of inoculation of the edges of the wound and needle holes, and of refraining from squeezing and cutting into the tumour. The wound should be closed by Mr. Barker's colloid method, after paring the edges with a clean knife. Miss ALDRICH-BLAKE said that among her own 36 cases, she had heard of or seen 9 instances of recurrence, 3 of these being in the scar or its neighbourhood. She thought that prophylactic treatment of the wound by x-rays might be of use in preventing recurrence. The PRESIDENT remarked that the growth had recurred in one-third of her cases operated on in the period 1900-7. She considered that all patients should be given x-ray treatment after operation. Dr. ESTHER CARLING, in a paper on the *Municipal treatment of tuberculosis*, described the system in Edinburgh, where all public and private medical and charitable agencies were co-ordinated. From the central tuberculosis dispensary patients could be sent to the sanatorium or Poor Law infirmary, or they could be referred for help to the Charity Organization Society, or the Citizens' Care Committee. There was compulsory notification. The patients and their families were also given instruction in the home as to what to avoid and what need not be feared. With regard to the establishment of municipal sanatoriums, the speaker said there would be much disappointment and wasting of public money if sanatorium treatment for one to six months was relied upon as the sole means of stamping out tuberculosis. Some system of after-care was necessary, and working colonies for discharged patients were much needed. The system of giving large numbers of patients one month's sanatorium treatment for purposes of hygienic education had much to recommend it.

THE centenary of the first ovariectomy, which was performed by Ephraim McDowell in 1809, was celebrated at the thirty-fourth annual meeting of the American Gynaecological Society, held in New York, April 20th, 21st, and 22nd. A banquet in honour of the occasion was held at the Waldorf-Astoria Hotel on April 22nd by the New York and Brooklyn Fellows of the Society. There will, we presume, be a further celebration later, as the centenary really falls in December. Dr. Riddle Goffe, President of the Society, has through the recognized diplomatic channels asked all foreign Governments to send representatives, who will be expected to present reports on ovariectomy in their respective countries.

Reviews.

HEREDITY.

THE inaugural lecture delivered by Professor W. BATESON, F.R.S., last October, on taking up the duties of the newly-founded chair of biology in the University of Cambridge, has been published in a small volume with the title, *The Methods and Scope of Genetics*.¹ The object with which the chair was founded and endowed for five years partly by an anonymous donor and partly by the university, is the promotion of inquiries into the physiology of heredity and variation (genetics). As Professor Bateson holds that the progress of such inquiries will chiefly be accomplished by the application of experimental methods, especially those which Mendel's discovery has suggested, he devoted his lecture to a description of "the outlook over this field of research in a manner intelligible to students of other parts of knowledge." The lecture is, then, a sort of brief introduction to Mendelism, and as such may be commended to those who desire to gather some general ideas on the subject as a preliminary to a more minute study of some particular part of the very wide field which that theory has opened up. It will bring comfort as well as enlightenment, because to some of us who have found the new doctrines in their most recent developments rather difficult of comprehension, there will be consolation in being told by Professor Bateson that we must not yet think of interpreting these complex phenomena in terms of a common plan. He says:

All that we know is that there is now open for our scrutiny a world of varied, orderly, and specific physiological wonders into which we have as yet only peeped. To lay down positive propositions as to the origin and inter-relationship of species in general, now, would be a task as fruitless as that of a chemist must have been who had tried to state the relationship of the elements before their properties had been investigated.

Any one who wishes seriously to pursue the study of the modern facts and theories cannot, whatever his linguistic acquirements, do better than read Professor ARTHUR THOMSON'S *Heredity*,² a volume to which the attention of readers ought to have been called before this. In it he will find a very comprehensive, careful, and impartial statement of the present position of the subject, and an ample collection of facts upon which to form a judgement. Indeed, the chief objection to which the book is open is that the author as a rule contents himself with marshalling the facts, and adding criticisms of theories advanced to account for them; this gives the impression that his own opinion is held in suspense, and though the words quoted above from Professor Bateson's lecture justify this attitude, yet in a book which is to all intents and purposes a textbook, it is rather disconcerting. A little dogmatism is very helpful to the memory, and if it imposes opinion upon the reader at a first perusal, it eventually stimulates a healthy tendency to question.

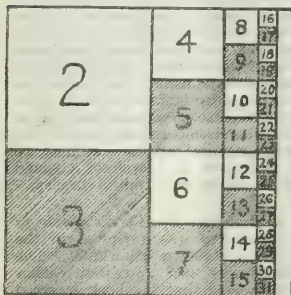
In his first chapter Professor Thomson defines heredity, and points out a fact so obvious that it ought to be a truism, but which is apt to be forgotten. This is its fundamental uniformity and continuity. Variation and mutation are established facts, and Mendel's law may be true, but the law is really only a statement of a particular case in which uniformity is displayed in variety, and even mutation is a quantitative rather than a qualitative departure from uniformity. Like begets like, and species breed true, though it is common knowledge that there are minute differences between individuals so that the shepherd knows each sheep. If we grant, as we must, that these small differences—continuous variations—occur, the important question with regard to them is: Are they variations about a mean which is always the same in every generation, or do they occur with greater frequency to one side or the other of the mean so that the species is tending to undergo modification in a particular direction? If we may speak in parables the question may be said to be: Is a species a sea with tides now setting in one direction and now in another, or is it a river slowly but certainly moving in one direction? The

¹ *The Methods and Scope of Genetics*. By W. Bateson, M.A., F.R.S. Cambridge: The University Press, 1908. (Ck. 8vo, pp. 52, 1s. 6d.)

² *Heredity*. By J. A. Thomson, M.A., Reader Professor of Natural History in the University of Aberdeen. The Progressive Science Series. London: J. Murray, 1908. (Demy 8vo, pp. 622, 9s.)

Darwinian hypothesis was that it was a slowly-moving river, that it was by a summation or accumulation of small differences all more or less in one direction that evolution of species occurred. The doctrine of mutation, which in its full development we owe to the botanist De Vries, does not negative the Darwinian hypothesis, but supplements it by directing attention to the occurrence of the sudden large variations which gardeners and breeders commonly call sports. From a pair of ordinary parents there arises a descendant which differs by certain marked characteristics from the parents, and the stock or strain to which they belong. The new stock breeds true, possibly, it may be, in conformity with Mendel's formula, and it is in this way, by carefully exclusive breeding, that the breeds of cattle and dogs, and some at least of the horticulturists' varieties, have been established.

Professor Thomson gives a very full and clear account of Weismann's hypothesis of the germ plasma, by which it is sought to explain some of the facts of heredity. Weismann supposed that in the development of each individual a portion of the specific germinal plasma, assumed to exist in the nucleus, is not used up, but is reserved unchanged for the formation of the germinal cells of the following generation. This very briefly stated, is the theory of the continuity of the germ plasma. In ordinary (sexual) reproduction the offspring has a dual inheritance made up, to begin with at any rate, of equal contributions from the two parents; but the contribution from the father is made up of contributions from his two parents, and that from the mother from her two parents, and so on upwards in the family tree. One of the best



sections in Professor Thomson's book is that in which he states and discusses Galton's law of ancestral inheritance, which it must be remembered rests on statistical considerations. To illustrate it we reproduce from *Nature* (January 27th, 1898, p. 295) a diagram given also by Professor Thomson. It was devised by Mr. A. J. Meston, of

Allen Farm, Pittsburg, Mass., U.S.A., and published in the *Horseman* (Chicago), the leading American newspaper on horse-breeding, in December, 1897. In Mr. Meston's original diagram the number 1 was assigned to the sire, and 2 to the dam, and so on. Mr. Galton modified this by numbering the subject of the pedigree 1, the sire 2, and the dam 3. In this way all male numbers in the pedigree are even and all female numbers odd. The diagram illustrates the law that the total heritage of the offspring is derived as follows: The two parents between them contribute on the average one-half of each inherited faculty, each of them contributing one-quarter of it. The four grandparents contribute between them one-quarter, or each of them one-sixteenth, and so on, the sum of the series $\frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \dots$, etc., being equal to 1, as it should be. It is a property of this infinite series that each term is equal to the sum of all those that follow: thus, $\frac{1}{2} = \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \dots$, etc.; $\frac{1}{4} = \frac{1}{8} + \frac{1}{16} + \dots$, etc., and so on. The prepotencies or subpotencies of particular ancestors, in any given pedigree, are eliminated by a law that deals only with average contributions, and the varying prepotencies of sex in respect to different qualities, are also presumably eliminated. Corrections for these can, of course, be made in any particular pedigree, taking care that the corrected series still amounts to 1 exactly. It should be borne in mind that the word "heritage" has a more limited meaning than "nature," or the sum of the inborn qualities. Heritage is confined to that which is inherited, while nature also includes those individual variations that are due to other causes than heredity, and which act before birth. Now,

individual variation in a race that is stable must have a destructive as often as a constructive effect. Consequently its effects balance one another in average results, and disappear from a law which deals only with these. The area of the square diagram represents the total heritage of any particular form or faculty that is bequeathed to any particular individual. It is divided into subsidiary squares, each bearing distinctive numbers, which severally refer to different ancestors. The size of these subsidiary squares shows the average proportion of the total heritage derived from the corresponding ancestors.

This regular mosaic of inheritance is, of course, disturbed by intermarriage of related ancestors. In the case of marriage of first cousins, for instance, 10 and 12, and 11 and 13, are not four, but two persons. It is obvious that if we are dealing with a nation or a community and go back many generations this "reduction of ancestors," as it has been termed, must become more and more influential. It is, of course, not easy to find family trees that go back complete for more than a few generations, but Lorenz and Richter have shown that in the twelfth generation the present German Emperor had at most 533 ancestors, whereas theoretically he might have had 4,096; the effect begins to become particularly marked in the eighth generation, where, instead of 256, there were at most only 116. Professor Thomson quotes, as we gather with approval, Mr. Yule's modification of the late Professor Weldon's statement of the law of ancestral inheritance: "The degree to which a parental character serves as a basis for estimating the character of offspring depends not only upon its development in the individual parent, but on its degree of development in the ancestors of that parent." Yule argues further that "Mendel's laws and the law of ancestral heredity are not necessarily contradictory statements . . . but are quite consistent the one with the other, and may quite well form parts of one homogeneous theory of heredity." Professor Thomson's own comment is that "Mendelian formulae apply to the progeny of known crosses or hybrids, while Galtonian formulae apply to intraracial heredity." It seems probable, so far at any rate as the present stage of the study of the subjects permits an opinion to be formed, that the law of ancestral heredity with its rider as to reduction of ancestors is of the greater importance in medicine.

Professor Thomson supplies a full and fair account of the facts and theories of Mendelism, and in concluding chapters discusses heredity and sex, and some social aspects of biological results. Finally he gives a bibliography, which, though he tells us that it "is simply representative, not in any way exhaustive," occupies nearly fifty pages, a subject index to the bibliography, and a general index to the text.

Professor BATESON'S very recent book, *Mendel's Principles of Heredity*, is a presentation of the observed phenomena, with a relatively brief discussion of their bearing on general conceptions of biology, and on practical breeding. On the latter point Professor Bateson sums the matter up in his preface by stating that though the principles already ascertained will be found of practical assistance in the formation of new breeds and may save many mistakes and waste of time, they cannot materially help in "the business of breeding winners in established breeds . . . for almost always the points which tell are too fine to be dealt with in our analysis." It appears to us that *mutatis mutandis* this last statement applies very exactly to any attempt to apply Mendelian doctrines to medicine in any broad way—the points are, as a rule, too fine to be dealt with in the analysis. In a very interesting passage towards the end of the book is discussed the relation of Mendelism and natural selection. The author begins by pointing out that increased knowledge of the physiology of heredity has abolished an old difficulty because Mendelism teaches that a character appearing in an individual is not in danger of obliteration by crossing with individuals lacking that character because so far as the character depends on factors that segregate no obliteration takes place. There is, he considers, nothing in Mendelian discovery which runs counter to the cardinal doctrine that species have arisen "by means of natural selection, or the preservation of favoured races in the struggle for life," the short definition of the doctrine given by Darwin himself.

The scope of natural selection is limited by the laws of variation, and after pointing out that Mendelian observations are helping us to perceive how precise and specific they are, Professor Bateson continues:

In the light of the new knowledge, various plausible but frequently unsatisfying suggestions put forward, especially by Wallace, Weismann, and their followers, as probable accounts of evolutionary progress must be finally abandoned. It cannot in candour be denied that there are passages in the works of Darwin which in some measure give countenance to these abuses of the principle of natural selection; but I rest easy in the certainty that had Mendel's paper come into his hands, those passages would have been immediately revised.

For Darwin, indeed, Mendelism would have provided sound reasons for a return to his own earlier views. In abandoning his belief in the importance of individual variations, which previously he had held in a form not incompatible with that now demonstrated to be right, he took a step in the wrong direction. The criticism before which he then gave way has proved invalid. To him, most of all men, would the knowledge have come as a delight that progress, even if in a direction unexpected by himself, had been made with that problem the solubility of which he was the first to make apparent to the world.

Professor Bateson prints in this volume translations of Mendel's papers on hybridization and on *Hieracium*, and gives a short biography of the monk and Prilut of the Königskloster of Brunn. It appears to be suggested in this, which is illustrated by three portraits, that Mendel embarked on his experiments with peas, because he did not find himself in full agreement with Darwin's views. If so, it is remarkable that he did not take care that a copy of his paper reached the great naturalist's hands.

Professor Bateson promises in another volume a fuller discussion of the theoretical bearing of the new facts on the general problem of biology; the volume now published is designed to be a textbook, and as such leaves nothing to be desired; it is complete, clearly written, and well illustrated.

NEUROLOGY.

PART I of vol. iii of the new edition of *Quain's Elements of Anatomy*⁴ is too extensive and too full of detail for a student's textbook, but as a book of reference for students and practitioners it is admirable, and will certainly take its place as the most complete account of those parts of the nervous system with which it deals which has yet appeared in this country. It comprises accounts of the general structure and development of the central nervous system, and descriptions of the special structure of the spinal cord and brain, leaving the nerves and special sense organs to be dealt with in Part II. In the last edition the sections on the nervous system were very good, but this volume is still better and more complete. The illustrations are numerous, clear, well executed and well arranged, and the text is crisp, definite, and lucid. As a whole the book forms an excellent survey of present-day knowledge, and the reader will find in its pages not only the author's opinions regarding disputed points, but hints which will enable him to refer to the opinions of other observers. A new departure has been made by the introduction of figures and descriptions of the brains of higher apes, which will prove not only interesting to students of comparative anatomy, but also useful to those who wish to study the records of experiments on apes' brains. Readers interested in the delimitation of the areas of the cerebral cortex will find a good summary of the delimitation work which has been done by means of developmental, histological, and macroscopical methods. The book will no doubt be greatly used as a reference book by teachers, but it is to be hoped that the fact that so much detailed knowledge is available will not induce examiners to expect students to become acquainted during the course of an ordinary medical curriculum with all the minutiae of so complicated a subject.

Ten out of the thirty-three sections in which the great French new treatise on surgery, by Professors LE DENTU and DELHER, is to be completed have already come out, and many of them have been reviewed in previous

numbers of this JOURNAL. The eleventh section to appear, which is the thirteenth of the whole series, is by Professor AUVRAY, and deals with diseases of the cranium and brain.⁵ It may be said at once that this section is fully worthy to take its place by the side of the other volumes of the *Nouveau Traité* that have preceded it. The first forty-five pages of Professor Auvray's work are devoted to the highly interesting history of cranial surgery and trephining, to cranial anatomy and topography, and to the general technique of operations upon the head. The succeeding chapters deal with all the varieties of the traumatic lesions of the cranium and their complications, new growths of the scalp and skull, infective lesions of all sorts—sixty-six pages are given to the complications of otitis media—congenital lesions of the head and brain, and, finally, diverse affections, such as epilepsy, that have not found a place for discussion elsewhere in the book. Diseases of the spinal column and cord are to be considered in a separate volume, which also is to be from the pen of Professor Auvray. A very extensive knowledge and great enthusiasm have been brought to bear on the writing of this volume, and it is large enough to enable Professor Auvray to deal exhaustively with his subject. His style is lucid and agreeable, and as easy to read as we have learnt to expect a French textbook to be. The illustrations are adequate, many of the figures being new and derived from photographs, others being reproduced from older surgical works or the more recent literature. The subject-matter is well arranged, so that the search for information on any particular point is not a matter of great difficulty, and it is also well up to date. The volume would undoubtedly gain by the insertion of more references to the literature, with which the author clearly has a good acquaintance; but extensive lists of references are, after all, a feature of the German textbook rather than of the French, and perhaps cannot fairly be looked for in the latter. The table of contents at the end of the book is so short as to be of little service, and there is no index. The volume is of handsome appearance, but by no means free from typographical errors. It may be warmly recommended to readers in search of a sound and up-to-date textbook of cranial and cerebral surgery.

The fourth edition of Professor DANA'S *Textbook of Nervous Disease and Psychiatry* was reviewed in the BRITISH MEDICAL JOURNAL of August 6th, 1898. The seventh edition is now before us.⁶ In that earlier review the opinion was expressed that the book deserved commendation on the ground of its practical and concise character and form. The same praise belongs to it to-day. That the book has the defects of its qualities will be obvious when it is noticed that the matter relating to all the diseases of the nervous system, central and peripheral, organic and functional, and to all the recognized diseases of the mind, is compressed into some 700 pages of type. Still, the root of the matter is in those 700 pages. Its greatest strength is, perhaps, shown in the chapters on neurasthenia, hysteria, and psychasthenia, the last subject receiving a degree of elaboration on original lines which might well entitle Dr. Dana to be considered an expert in the matter. For those who possess the sixth or earlier editions it may be said that much has been added on the subjects of neuritis, tabes, multiple sclerosis, brain tumours, the ties, and paralysis agitans. The comparison between its rivals that especially suggests itself is with the work on *Nervous and Mental Diseases* by Dr. Church and Dr. Petersen—comparatively recently reviewed in these columns—and, while it may be said that in several respects it is perhaps superior, particularly in its more thorough treatment of the anatomy and pathology of the nervous system, it is, on the other hand, not so pleasant to read, and from the clinical standpoint is probably rather less helpfully arranged. It is, however, well up to date and exact, and although its manner is necessarily curt, its matter is in good proportion.

⁴ *Maladies du Crâne et de l'Encéphale*. Par M. AUVRAY. Nouveau Traité de Chirurgie, publié sous la direction de A. Le Dentu et Pierre Delbet. Fascicule XIII. Paris: J. B. Baillière et Fils, 1909. (Sup. roy. 8vo, pp. 508; fms. 330. Fr. 10.)

⁵ *Textbook of Nervous Diseases and Psychiatry*. By Charles L. Dana, A.M., M.D., LL.D. Seventh edition. London: J. and A. Churchill, 1909. (Roy. 8vo, pp. 794. 25s.)

⁶ *Quain's Elements of Anatomy*. Vol. iii, Neurology. By E. A. Schäfer and J. Symington. Part I. Eleventh edition. London: Longmans, Green and Co. 1908. (Roy. 8vo, pp. 432; fms. 261. 15s. net.)

PATHOLOGY.

In their *Special Pathology*, which has made its appearance shortly after the issue of their *General Pathology*, Professor BEATTIE and Dr. DICKSON again claim special cause for consideration on the ground that their knowledge has been acquired in a particular university, the merits of which they describe in terms of enthusiastic eulogy. We cordially agree with the writers that this university is a most excellent institution, but we prefer to criticize a book on its intrinsic merits, regardless of the author's Alma Mater, and consider special appeals of this nature to be irrelevant. The majority of men take a loyal pride in their own particular university, but generally assume that its especial merits are too well known to need advertisement. This *Special Pathology* is evidently the work of men who are thoroughly experienced in lecturing and demonstrating to medical students. It lays special stress on the importance of studying museum specimens, and contains a large number of excellent illustrations depicting typical examples of pathological lesions. The only possible fault—if it be a fault—which might be found with this aspect of the book is that in many instances the nature of the pathological condition illustrated is so obvious that no student is likely to find any difficulty about it. In addition to assimilating this elementary knowledge, the student ought to receive some training in the differential diagnosis of conditions which he is likely, at the first glance, to confuse; and for this purpose it is well to call his attention to lesions which require a little thought before they can be interpreted correctly, and to teach him how to discriminate. The histological descriptions and illustrations are also good, and we note that the authors adopt the useful plan of introducing brief accounts of normal histological appearances as standards for comparison with the changes produced by disease. We are also glad to find that, wherever possible, they illustrate salient features under a low magnification; this will serve as a useful corrective to the student's common habit of resorting too readily to his high-power lens. At the same time the authors might have advantageously supplemented their instruction by entering more fully into the minute details of cellular morphology.

In Part I of his *Practical Bacteriology, Blood Work, and Animal Parasitology*,¹ Dr. SITT describes in a practical way the methods of cultivating and identifying bacteria, prefacing the description of each group of organisms with what he terms a "key"—that is, a scheme of the characteristics which must be elucidated in order to establish a differential diagnosis. This portion of the book concludes with a short and instructive chapter on immunity which is intended to simplify what the author terms "this bugbear of the medical student." Part II, which is concerned with blood work, is rather brief, and calls for no special comment. Part III, on animal parasitology, is the most useful portion of the book; it gives a concise outline of the many varieties of animal parasites which are of medical interest, and presents their zoological classification and diagnostic features in a convenient and lucid manner. Part IV, on the examination of pathological material in the clinical laboratory, is too brief to rank as an important contribution to this subject.

The *Frankfurter Zeitschrift für Pathologie*² of which we have received the first two volumes, is a publication devoted to the study of pathology in its widest sense. It was founded early in 1907 by Professor Eugen Albrecht, Director of the Pathological Institute of Dr. Senckenberg's Foundation at Frankfurt-am-Main, to commemorate the 200th anniversary of the birth of Dr. J. C. Senckenberg, to whose liberality the foundation owes its existence. In publishing this journal Professor ALBRECHT's intention has been to emphasize the relations and interconnections that

exist between his own science, pathology, and the kindred sciences of physiology, normal anatomy, embryology, biology, and practical medicine, and to give critical discussions of the problems that arise from time to time at the borderlands of these different kingdoms of natural and applied science. The character thus laid down for the journal by its first editor is maintained by the two score and more original papers, and by the critiques, that go to make up its first two volumes; they show so much good work that it is not possible to give any detailed account of their contents in the space at our disposal. An exception, however, must be made in favour of the several excellent articles and discussions from the able pen of the editor, whose sudden death in June, 1908, has robbed the younger school of pathologists of one of its most brilliant exponents. His place as editor has been taken for the time by Dr. A. Knoblauch. Both editor and publisher may be congratulated upon the appearance and get-up of the periodical, which is well printed and well illustrated.

INDIAN SNAKES.

To residents of India the recognition of poisonous snakes is of importance, and Major WALL, I.M.S., tells them how to do this easily in his little book, *The Poisonous Terrestrial Snakes of our British Indian Dominions and How to Recognize them*.¹⁰ The first edition of 2,500 copies was very quickly sold. This of itself is proof of its popularity, and it is equally certain that this new edition will meet with a success similar to, or even greater than, the first. There is some doubt as to how specialists may receive Major Wall's classification. Mr. Boulenger, one of the authorities on the subject, takes osteological peculiarities into account, and he and others will probably object to a classification based chiefly on scales; but, as Major Wall states that he does not disturb Mr. Boulenger's classification, which is the accepted one, harmony may, after all, still reign. The text runs smoothly, and has plenty of diagrams to explain technical terms; such being the case, even though the subject is by no means easy, an eager student should soon get a grasp of the chief details. As far as practical utility goes, it is impossible to tell a poisonous from a non-poisonous snake when only a glimpse of it is seen in the bush; but if the reptile is killed, then it is certainly of value to be sure that it is poisonous before injecting antivenere into any one who may have been unfortunate enough to be bitten. This good and useful little book sums up the matter in a nutshell.

SOME REFERENCE BOOKS.

AMONG a number of reference and other books which have reached us, the first place, perhaps, should be given to the edition of *Burdett's Hospitals and Charities for 1909*,¹¹ which in all its characteristics is precisely on all-fours with its nineteen valued predecessors. It contains somewhat fuller information, however, with regard to nursing homes in this country and the principal Continental cities, and the various chapters in which philanthropic enterprises of all kinds are annually reviewed have, of course, been brought up to date. In one way, perhaps, special interest attaches to this particular issue, as it attempts to present an analysis of hospital expenditure in 1907 made according to the plan introduced by the three Metropolitan Hospital Funds—the revised uniform system of accounts. This is a task which we ourselves performed a year ago in respect of a majority of hospitals in the metropolis, and when the investigation commenced it was intended to furnish simultaneously information of the same kind with regard to the more important hospitals in the provinces. The idea had, however, to be abandoned, as it was found that the moment had not come when the task could be effectively undertaken. It is clear from this volume that, despite the time which has meanwhile elapsed, the position has not greatly altered, for only in the case of a small proportion of the provincial hospitals are details as to the cost per bed supplied on the revised system, and even in these instances there are indications that the figures given have not been derived from books

¹ *Textbook of Special Pathology*. By J. Martin Beattie, M.A., M.D., and W. E. Carnegie Dickson, M.D., B.Sc., F.R.C.P. Edin. London: Reiman Ltd., 1909. (Demy 8vo, pp. 620, 191 illustrations, and 2 coloured plates, 17s. 6d.)

² *Practical Bacteriology, Blood Work, and Animal Parasitology*. By E. R. Sitt, M.D. London: H. K. Lewis, 1909. (Post 8vo, pp. 305, with 85 illustrations, 6s. 6d.)

³ *Frankfurter Zeitschrift für Pathologie*. Herausgegeben von Eugen Albrecht. Vols. i-ii. Wiesbaden: J. F. Bergmann, 1907-8. (Sup. roy. 8vo, pp. 1-220, 221-375, 1-224, 225-389. 7s., 5s., 7s., and 7s. 3d. respectively.)

¹⁰ *The Poisonous Terrestrial Snakes of our British Indian Dominions and How to Recognize them*. By Major F. Wall, I.M.S., C.M.Z.S. Second edition, third thousand. Bombay: The Bombay Natural History Society, 1909. (Roy. 8vo, pp. 78, Rs. 2.)

¹¹ *Burdett's Hospitals and Charities for 1909*. By Sir Henry Burdett. London: The Scientific Press Limited. (Pp. 522, 7s. 6d.)

kept strictly in accordance with its rules. The reform, therefore, has still to be carried through, but the leaven is working, and the remarks made on the subject by Sir Henry Burdett should help to hasten its completion. Nevertheless, the tables supplied by the volume are still of interest, though open to one criticism. They contain so much detail that even persons well versed in hospital accounts must find them difficult to follow, and we suspect that ordinary readers usually pass them over altogether. This is a pity, because it is greatly to be desired that such persons should be encouraged to take an intelligent interest in hospital accounts, and learn how to gauge the efficiency of the administration of institutions in which they are interested. The tables as they stand are a monument of painstaking energy, but it might be better in the interests of greater clearness to sacrifice some of their comprehensiveness, aiming, perhaps, at supplying nothing more than essential figures, such as those indicative of the size of the institution, and of the cost per bed and per outpatient attendance. It seems to us that in this way Sir Henry Burdett would quicker achieve the great purpose for which he has so long laboured.

The edition for the current year of the *City of London Directory*¹² was brought out at the beginning of May. This is a long-established practice in the case of this *Directory*, and has the advantage that the publication is thus free from the errors regarding names and addresses which are commonly to be found in directories finally revised at a time when Christmas and New Year's removals have not yet been completed. In a way the volume is to be regarded not only as a directory, but as a guide to the City of London, for it furnishes brief accounts of the histories of the various guilds, and gives complete lists of all the committees both of the Corporation of the City of London and of the London County Council. Among other useful features are the accounts given of the schools and other charities connected with the City, and an elaborate map. As a whole the work is invaluable to all those who have dealings either with City institutions or with business houses within the famous square mile.

Equally useful in its way is the *Year Book of the Scientific and Learned Societies of Great Britain and Ireland*,¹³ of which the twenty-fifth annual issue has now appeared. Its purpose is to supply information as to the habitation, object, and officials of all scientific bodies in Great Britain and Ireland, together with an account of the work they have done during the preceding year. The way in which it fulfils this end gives it also a value for all literary and scientific workers. One of its features is a list of papers read at each society; and a glance through these is eminently suggestive, for by taking up any volume of the series and studying the titles of the papers recorded it is possible to gauge the tendency and direction of scientific thought at the time. Complete lists of the papers read at the Annual Meetings of the British Medical Association are supplied, and information is given as to upwards of 180 other societies connected with medicine and its practice, apart from those which confine themselves to such subjects as biology, microscopy, and anthropology. We are sure, however, that the British Phrenological Society should not be included in the section devoted to medical societies, even if in a year book of scientific societies there is really any room for it at all.

NOTES ON BOOKS.

MENTAL NURSING.

A SMALL book on *The Care and Nursing of the Insane*, by Dr. J. BAILY, the Medical Superintendent of Hanwell Asylum,¹⁴ has recently been issued. It is a reproduction of the course of lectures which he has given for some years to his asylum staff, already published in serial form in the *Nursing Mirror*, and is divided into five parts, dealing respectively with anatomy and physiology, sick nursing,

the germ theory of disease, the symptoms of disease, and mind and mental diseases. The book is entirely practical in aim and treatment, and should be of great use to the class to whom it is addressed.

Another and much larger book on *Nursing the Insane*¹⁵ comes from America. The aim of the writer, Dr. CLARA BARRUS, is "to furnish special instruction and suggestions to students engaged in caring for the insane, to help new workers to the right beginning, and to aid the more experienced to greater efficiency." This aim the book more than fulfils. It is, we are bound to say, the best book on the subject we have as yet read. It is written by a woman for women, but in the main the instruction and advice given is as applicable to male as to female nurses and attendants. The book is somewhat bulky, but as against this it is exceedingly easily read; and, notwithstanding that it neglects no detail of the proper offices of the nurse, there is not a dry page from cover to cover. The general plan is excellent. It is of little use to nurses to know the comparative proportion of erythrocytes and leucocytes in the blood, or the functions of fibrinogen, or to receive instruction on brain patterns—or often doubtful—cerebral localization; but it is of the last importance that they should understand the therapeutic use and value of every part and minute detail of their work and duty; that they should be taught how and what to observe; should be encouraged to be quick, neat, clean, vigilant, and resourceful, and, above all, sympathetic and unflinchingly cheerful and optimistic. For this latter purpose we know of no better book than this by Dr. Barrus, which at the same time contains a wealth of useful and accurate information for the nurse, admirably arranged and most luckily expressed.

¹²*Nursing the Insane*. By CLARA BARRUS, M.D. New York and London: Macmillan, 1908. (Demy 8vo, pp. 426. 8s. 6d.)

MEDICINAL AND DIETETIC PREPARATIONS.

Lecithin-Agfa.

LECITHIN [has recently been stated to have a valuable effect in cases when administered by intramuscular injection. We have received from Messrs C. Zimmermann and Co. (9 and 10, St. Mary-at-Hill, London, E.C.) a sample of a sterilized solution of lecithin in olive oil, supplied by the Actien-Gesellschaft für Anilin-Fabrikation for the purpose. The lecithin employed, distinguished as lecithin-agfa, is stated to be prepared from pure yolk of egg; one part is dissolved in four parts of olive oil and the solution supplied in sealed ampoules. Some separation of the lecithin appears to take place on standing, but on gently warming the ampoule before opening this disappeared, giving a clear liquid, in which fresh lecithin was readily shown by appropriate tests.

Flavoured Sanatogen.

SANATOGEN, which is stated by the makers, the Sanatogen Company, 12, Chenies Street, London, W.C., to consist of 95 per cent. of casein in chemical combination with 5 per cent. of sodium glycylo-phosphate, appears to have attained considerable favour with the profession, but its use has been limited by the peculiar flavour of the original product, which many persons have found distasteful. The company has sent us a sample of flavoured sanatogen, the flavouring used being lemon oil; the result is, on the whole, very satisfactory, as the lemon almost completely covers the disagreeable flavour to which reference has been made. We have been supplied with an analysis made by Sir Charles A. Cameron, Medical Officer of Health and Public Analyst for Dublin, who found sanatogen to consist of 9.5 per cent. moisture and 90.5 per cent. of dry matter, including 7.35 per cent. of ash. It contained 83.13 per cent. of albuminoids (nearly wholly made up of casein, but including a little albumen), together with 2.2 per cent. of phosphoric acid, a small portion of which existed in the albuminoids, but the by far larger portion was in the form of sodium glycylo-phosphate.

A Compound Syrup of Creosote.

Messrs. J. Maitland and Son (10, Chester Place, Hyde Park, London, W.) have submitted a sample of their preparation "Sirop creophine." This contains creosote (1 minim in one teaspoonful) in combination with lacto-phosphate of lime, together with heroin hydrochloride and other drugs used in the treatment of cough. The presence of creosote is readily recognizable, but the syrup causes no burning taste, and is quite palatable, either alone or with water, with which it mixes freely, forming a bright solution; it is strongly acid.

¹²*The City of London Directory for 1909*. London: The City Press Office. (Pp. 126.)

¹³*Year Book of Scientific and Learned Societies of Great Britain and Ireland*. London: Charles Griffin and Co. (Pp. 352.)

¹⁴*The Care and Nursing of the Insane*. By Percy J. Baily, M.B., C.M.E.din. London: The Scientific Press, Ltd. 1908. (Cr. 8vo, pp. 270. 2s. 6d.)

THE INTERNATIONAL MEDICAL CONGRESS.

The sixteenth International Medical Congress will, as has already been stated more than once in the JOURNAL, be held at Budapest this year from August 29th to September 4th. The congress is under the patronage of the King of Hungary (the Emperor of Austria), who will be represented by his Imperial and Royal Highness the Archduke Joseph.

SECTIONS.

The work of the Congress will be distributed among twenty-one sections as follows:

- I. Anatomy, embryology.
- II. Physiology.
- III. General and experimental pathology.
- IV. Microbiology (bacteriology), pathological anatomy.
- V. Therapeutics (pharmacology, physical therapeutics, balneology).
- VI. Internal medicine.
- VII. Surgery.
- VIII. Obstetrics and gynaecology.
- IX. Ophthalmology.
- X. Diseases of children.
- XI. Diseases of the nervous system.
- XII. Psychiatry.
- XIII. Dermatology and venereal diseases.
- XIV. Diseases of the urinary tract.
- XV. Rhinology and laryngology.
- XVI. Otology.
- XVII. Stomatology.
- XVIII. Hygiene and immunity.
- XIX. Forensic medicine.
- XX. Military and naval sanitary services.
- XXI. Maritime medicine and tropical diseases.

GENERAL MEETINGS.

There will be six general meetings—"not contradictory," as is stated in the official circular, which, we presume, means that discussion will not be allowed.

The following addresses, among others, will be delivered at these meetings:

Professor Baccelli, of Rome: The administration of heroic remedies by the veins.

Dr. E. F. Basiford, of London: On cancer.

Professor R. Kutner, of Berlin (by request of the Prussian Central Committee of Medical Education): Medical education.

Dr. A. Laveran, of Paris: Tropical pathology.

Professor J. Loeb, of Berkeley (University of California): Artificial parthenogenesis and its bearing upon the physiology and pathology of the cell.

An address on representations of disease in the pre-Columbian era will be delivered on one of the days during which the congress is in session by Dr. E. Hollander, of Berlin.

COMMUNICATIONS BY BRITISH MEMBERS.

Among the communications promised by British members of the Congress are:

Section of Anatomy and Embryology.—Professor Anderson (Galway): (1) The occipital bone in primates, and (2) The race types on the Atlantic (Irish) coast; Dr. Fawcett (Bristol): (1) Communications on the development and ossification of the human skeleton, and (2) Models illustrating the development of the human mandible, maxilla, and the sphenoid, with remarks thereon.

Section of Physiology.—Professor Anderson (Galway): Some points of interest bearing on suggestion and nerve reflex.

Section of Therapeutics.—Dr. Bradbury (Cambridge): The causation and treatment of high blood pressure and arteriosclerosis.

Section of Internal Medicine.—Dr. Inman (London) will open a discussion on immunity in its relation to practical medicine.

Section of Surgery.—Mr. Mayo Robson (London) will open a discussion on the chronic form of pancreatitis. Among the communications promised in this section are the following: Mr. Tubby (London), Nerve anastomosis with some results; Sir William Macewen (Glasgow), (1) The development and reproduction of bone, (2) The surgery of the brain and spinal cord; Mr. Moynihan (Leeds), Duodenal ulcer.

Section of Orthopaedic Surgery.—Mr. Robert Jones (Liverpool) will open a discussion on Arthrodesis.

Section of Obstetrics and Gynaecology.—Dr. Thorne (London): On a series of consecutive laparotomies.

Section of Ophthalmology.—Mr. Jessop (London) will open a discussion on the serum treatment of diseases of the eye. Among the papers to be read are the following: Dr. Edridge-Green, Some curious phenomena of vision and colour vision.

Section of Diseases of the Nervous System.—Dr. Head (London) will open a discussion on sensory impulses in the brain and spinal cord. Among the papers to be read is one by Dr. Savill (London) on the influence of toxic blood states on the nervous system. Dr. Bond (London) will read a paper entitled A Description of Long Grove Asylum.

Section of Dermatology and Venereal Diseases.—Sir Malcolm Morris (London): On the treatment of lupus erythematosus. Dr. Whitfield (London): On some changes in the body fluids in relation to skin diseases.

Section of Diseases of the Urinary Tract.—Mr. Freyer (London) will open a discussion on total enucleation of the enlarged prostate, with a review of 600 cases of the operation; and another will be opened by Dr. Newman (Glasgow) on the early diagnosis and treatment of tuberculous disease of the kidney.

Section of Rhinology and Laryngology.—Sir Felix Semon (London) will open a discussion on the diagnosis and treatment of laryngeal cancer. Dr. Watson Williams (Bristol) will show models of the osteoplastic method of operation on the frontal sinus.

Section of Otology.—Mr. Cheate (London) will open a discussion on the infantile types of the temporal bone and their surgical importance; and Mr. Yearsley (London) will open one on the later stages of chronic catarrhal deafness. Mr. Cresswell Baber will read a paper on the treatment of otitis media non purulenta chronica. Dr. Gray (Glasgow) will deal with the relationships of the aquaeductus perilympathicus, the recessus perilympathicus, and the fenestra rotunda in reptilia, aves, and mammalia. Mr. Lake (London) will present a communication on the treatment of vertigo and tinnitus. Dr. Milligan (Manchester) will read a paper on the development of the auditory nerve in vertebrates; and Dr. StClair Thomson (London) will read one on the influence of nasal obstruction in chronic catarrh of the Eustachian tube and middle ear.

Section of Stomatology.—Mr. Goadby (London) will open a discussion on the present state of the scientific basis of the prophylaxis of dental caries; Mr. Turner (Edinburgh) and Mr. Waggett (London) will open a discussion on odontogenic suppurative maxillary and nasal sinusitis and their complications. Among the papers to be read are the following: Mr. Colyer (London): On the influence of the feeding of infants and of adenoids on the deformation of the dental arch. Mr. Hopewell-Smith (London): Some recent researches in dental and oral pathology. Mr. Payne (London): A note on the pathology of the so-called dangerous cyst. Mr. Turner (London): Normal movements of the remaining teeth after extractions. Dr. Wallace (London), the prevention of dental caries.

Section of Hygiene and Immunity.—Dr. Fowler (Manchester) will open a discussion on the sanitary uses of ozone. Dr. Sommerville (London) will read a paper on the teaching of hygiene.

Section of Military and Naval Sanitary Services.—Colonel Macpherson (London) will open a discussion on the necessity of uniformity in the use of diagnosis tallies in different armies.

Section of Maritime Medicine and Tropical Diseases.—Dr. Lamb (Kasauli) will open a discussion on the etiology and epidemiology of plague; and Drs. Rufer and Willmore (Alexandria) will open one on the annual epidemics of dysentery during the Mussulman pilgrimage.

The general secretary of the congress is Mr. Em. de Gross. Applications relative to the congress should be addressed up to August 24th to the Secretariate, VIII Esterhazy utca, 7, Budapest; after that date they should be addressed to the general offices of the congress.

EXCURSIONS.

Excursions to various places of interest have been arranged. Among the places to be visited are Kolozsvár, the ancient capital of Transylvania; Marosújvár, with its salt mines, lighted by electricity; the High Tatra, described as "the El Dorado of tourists"; the famous ice-cavern of Dobšina; Lake Balat, often called the Hungarian sea; the Lower Danube; Constantinople, Athens, Corfu, and Trieste; Bosnia-Herzegovina, Dalmatia, and the Hungarian littoral. Applications relative to lodgings and excursions should be addressed to the Central Travelling-Ticket Office, IV, Vigadó-ter, 1, Budapest, Hungary (Telegraphic address, Menetjegyiroda-Budapest).

OTHER MEETINGS.

The International Medical Press Association will hold its general meeting at Budapest before the congress.

The Permanent Bureau of the International Bureau for the Protection of Infancy will meet at Budapest on August 28th.

MODERN PATHOLOGY AS ILLUSTRATED AT ST. BARTHOLOMEW'S HOSPITAL.

PATHOLOGY has greatly broadened its horizon during the past two decades, and the new block now provided at St. Bartholomew's Hospital is striking testimony to the extent and significance of the change. The building was formally declared open on May 7th by the Lord Mayor of London, the brief ceremony concluding in the Great Hall of the hospital. A short address was there delivered by the Treasurer of the hospital (Lord Sandhurst), and a golden key presented to the Lord Mayor as a memento of the occasion by the architect (Mr. E. B. l'Anson). The new premises were then visited by the general company, and tea served at tables round the fountain in the quadrangle, where a band was playing. In his address Lord Sandhurst observed that exactly 700 years had passed since the date of the first recorded public transaction between the Lord Mayor of London and St. Bartholomew's Hospital. This was in the reign of King John, and took the form of a visit from the City representative of the time—Henry FitzAylwyn—to make arrangements with the hospital for the use of certain land near it as a burial ground for citizens who might die during the general interdict proclaimed A.D. 1208.

Another link with the past which Lord Sandhurst did not specifically mention is that the new building occupies the site of the house which Joanna Astley, nurse to King Henry VI, rented from the hospital on her retirement. It stood just opposite the Church of St. Bartholomew the Less—the church of the hospital and of the parish which it constitutes—on the right-hand side of the principal entrance of the hospital, commonly known as Henry VIII's Gateway. This house later on gave place to the row of shops, occupied by instrument makers and medical booksellers, familiar to so many generations of St. Bartholomew's students. Among them was a precursor of the modern tea shop—one which, even thirty years ago, when medical students were still esteemed "rowdy," was a formidable rival to "Bell's," "The Vi," and the College dining-hall itself. All of them have now disappeared, their place being occupied by the new pathological block, the library and museum, and the new out-patient entrance. With the exception, therefore, of the frontage of the new Post Office, the whole of the east side of Smithfield and Giltspur Street from Little Britain to Newgate Street is now faced by hospital buildings.

The new block is a building of six stories if the basement is included in the count, as it should be, since it is of an important character, has a separate entrance, and provides accommodation for the seemly keeping of the dead pending interment. Its arrangements include a waiting-room and a small mortuary chapel where bodies can be viewed by coroners' juries or friends of deceased patients. Communicating with this chapel by a short passage is a mortuary proper, this being provided with a refrigerating apparatus capable of preserving for an indefinite period as many as eighteen bodies, and a special lift by which bodies can be raised into the *post-mortem* department. This is on the highest story, its principal room being provided with top lights, six necropsy benches, and adequate supplies of water sprays and washing troughs. It is an excellent room which will both minimize the unpleasantness inevitably attaching to *post-mortem* investigations and facilitate accurate and informing work.

The other four floors of the building provide accommodation (1) for pathology in the old sense of the term, (2) for that clinical pathology which often nowadays helps so greatly to elucidate diagnosis and direct and assist treatment, (3) for chemical pathology which is still in its infancy, (4) for tutorial work and for conferences between members of the staff engaged in the general work of the hospital. The fourth floor communicates by a bridge corridor with the museum, and thence with the general library, the school buildings, the resident's quarters, and the out-patient department. In several of the rooms are tablets bearing the names of persons in whose memory they have been equipped, and one is appropriately dedicated to the pathologist Kankhack, whose death some twelve years ago was such a grave loss to St. Bartholomew's, to Cambridge, and to science in general.

Generous as are the proportions of the building, it is

evident nevertheless that the amount of space to be devoted to each particular object has been carefully thought out. For this reason the mere multiplicity of the rooms and their size is a striking object lesson in the extent of the work now expected of the pathological department of a great hospital. Better evidence still, perhaps, is afforded by the arrangements which have been made for the conduct of the work in this building. As a whole it is in charge of Dr. Andrewes, pathologist of the hospital, whose principal assistant is Dr. Mervyn Gordon. These two officers have as lieutenants six trained pathologists, two of whom will devote themselves entirely to investigations connected with clinical work of the hospital and researches necessitated by it, while the others will give part of their time to similar occupation and part to the training of students who have still to pass their examinations, or of those who require special pathological instruction in order to fit them for their duties in the wards. The general routine work will be done by pathological clerks, one of whom is attached to each physician and each surgeon and to the heads of special departments. Each of them is provided either with a special bench in a general laboratory or a separate room in which to prepare his reports on ward specimens, the results being tested and controlled by Dr. Andrewes's general assistants. Altogether, therefore, there will be some twenty-five men constantly engaged in pathological inquiry in this building, apart from general students. The fact that it is now considered necessary that every member of the treating staff of a hospital should be provided with a pathological clerk of his own brings out perhaps more vividly than would anything else the repute in which modern pathological methods are held, and the reliance which physicians and surgeons alike are nowadays disposed to place upon the information supplied to them by laboratory methods. It is not so long ago that the whole of such work was everywhere represented by a stand of urine-testing tubes and possibly a microscope on a side table in a ward. On this account, apart from its interest to pathologists in particular, the building is well worth a visit. For the general observer its outstanding features perhaps are the thoughtfulness of the arrangements for sparing the friends of deceased patients all unnecessary pain, and the mine of invaluable information represented by the room in which the clinical and pathological records of the hospital are stored and classified. Undoubtedly this building will do much to promote the chances of successful treatment in the wards, and go far towards ensuring the utilization of scientific methods among the general practitioners of the future.

The funds out of which it has been erected have been supplied, we understand, partly by friends of the hospital and partly by supporters of the school, while all rooms to be used mainly for tutorial purposes have been equipped entirely from the latter source. At one time it seemed as if the plan of rebuilding St. Bartholomew's piece by piece was not particularly wise, but it is now clear that by adopting it the institution as a whole will eventually be much more up to date than it would have been had all its parts been rebuilt simultaneously. It is to be hoped that the funds necessary to carry out the further changes in view will soon be forthcoming.

AN Egyptian League against Tuberculosis was formed at Alexandria in 1902. Beginning with one dispensary, it has now three, all of which are doing good work. Funds are being accumulated for the establishment of a sanatorium. The President of the League is Dr. J. Schiess Pasha. A movement for the formation of a similar organization in Cairo was suggested three years ago, but so far nothing has come of it.

MESSRS. SIEMENS BROTHERS AND CO., Caxton House, Westminster, have issued a supplement to their Electro-Medical Catalogue containing particulars of various types of switchboards for use in rapid and instantaneous radiography. The feature of chief interest about them is that they can be added to ordinary x-ray outfits, and by merely setting the time relay and closing the switch the apparatus becomes ready for rapid work. This will be appreciated by the medical man who, after using his tube for treatment or for screen observation, finds it necessary to make a short exposure. It is essential, however, that existing outfits, to be eligible for this additional convenience, should have at least a 16-in. spark induction coil, and a triple Wehnelt interrupter.

UTERINE CANCER.

APPEALS BY THE BRITISH MEDICAL ASSOCIATION.

At the Annual Meeting of the British Medical Association at Exeter in 1907 the Section of Obstetrics and Gynaecology adopted a resolution requesting the Council of the Association to appoint a committee to consider the best means of disseminating knowledge of the importance of the early recognition of uterine cancer. That committee presented a report which was considered and generally approved by the same Section at the Annual Meeting of the British Medical Association in Sheffield in 1908.

At its meeting on April 28th the Council of the British Medical Association approved the publication of the following appeals to the medical profession and to midwives and nurses respectively.

A.

AN APPEAL TO MEDICAL PRACTITIONERS TO PROMOTE THE EARLIER RECOGNITION OF UTERINE CANCER.

The attention of all Medical Practitioners is directed to the necessity of emphasising the curability by operation of uterine cancer in its early stages.

The adoption of a more extensive operation by the abdominal route has made it possible to deal successfully with cases hitherto regarded as inoperable, and to remove more of the pelvic cellular tissue as well as a portion of the vaginal walls; it is in these situations that recurrence is prone to develop.

Many patients now present themselves for examination and treatment when the disease is considerably advanced, and it is hoped that by a widespread and accurate knowledge of the early signs and symptoms the number of such patients will gradually diminish.

Special attention is directed to the following:

1. Cancer of the uterus is at first a local disease.
2. Cancer of the uterus is often a curable disease.
3. Operation is the only satisfactory method of treatment.
4. The earlier the disease is recognised the more hopeful are the prospects of treatment.
5. The risk of operation in early cases is slight, and the chance of permanent cure is good.
6. The recognition of early cancer is not usually difficult, and the disease should not be overlooked by the medical attendant.
7. A medical practitioner who fails to make a physical examination of a patient exhibiting any of the symptoms of uterine cancer incurs grave responsibility.
8. Treatment of symptoms without a physical examination is unjustifiable.
9. Early cancerous ulcers should not be treated with caustic; their appearance becomes masked, and valuable time is lost.
10. It is an error to wait and observe in order to arrive at a diagnosis.
11. In doubtful cases a diagnosis must and can be made in a few days.
12. To examine, to diagnose, and then to treat, should be the rule in all cases.

Symptomatology.

Uterine cancer is at first a painless disease which does not affect the general nutrition.

The early symptoms of cancer are:—Irregular bleeding of any description, even if there be only traces; bleeding post coitum; and watery, blood-tinged discharge. There may be no loss of strength or wasting, nor any condition to alarm the patient. Pain, wasting, profuse bleeding, and foul discharge, indicate advanced disease.

As the majority of cases occur between the fortieth and fiftieth year, the symptoms are too often regarded by the patient as due to "change of life." The medical attendant should not accept this assumption until he is satisfied that cancer does not exist.

Bleeding, however slight, occurring after the menopause, should give rise to suspicion that cancer is present.

Examination.

If a patient with any of the above symptoms comes for advice, a careful visual and bi-manual examination must be made before any treatment is recommended.

Should a patient refuse to be examined—and this is exceptional when the situation is explained—the medical attendant should decline any further responsibility, and no treatment should be advised. The examination should be made, even if bleeding is present, as valuable time may be lost by postponement until the hemorrhage has ceased.

It is most important to observe rigid aseptic precautions in all manipulations.

In the examination, the condition of the vaginal portion of the cervix and of the cervical canal should be carefully noted.

In the early stages new growth may be found on the surface of the vaginal portion of the cervix, in the lining of the cervical canal, or in the substance of the cervix. Any prominence on the surface of the vaginal portion or any ulceration, *i.e.*, a definite loss of substance, should at once arouse suspicion. A nodule or nodules, hard, inelastic, or irregular in outline, felt in the substance of the cervix, suggest the presence of cancer. If the whole cervix be affected, the relative hardness as compared with the soft elastic body is pronounced.

The detection of high-lying cervical cancers, and cancers of the body of the uterus, is only possible after curettage or digital exploration.

The signs common to the early stages of cancer of the cervix uteri are:—

- (1) The definite occurrence of new growth on the surface of the vaginal portion of the cervix, in the lining of the cervical canal, or in the substance of the cervix;
- (2) Friability;
- (3) Bleeding on manipulation.

(1) The definite occurrence of new growth on the portion vaginalis or in the cervical canal cannot fail to arouse suspicion. When, however, thickening of one lip or a portion of one lip of the cervix exists, the nature of the growth is difficult to determine if the mucous covering be still intact. It is then necessary to remove a portion of the affected tissue and examine it under the microscope.

(2) Friability is a sign of the greatest importance, and may be tested by the finger-nail, curette, uterine sound, or an ordinary long probe. Degrees of friability exist in early cases, depending upon the amount of interstitial tissue contained in the growth.

(3) The occurrence of free bleeding after the slightest manipulation is, when combined with friability, a valuable diagnostic aid.

Forms of Uterine Cancer.

Vaginal portion of the cervix.

- (1) *Infiltrating type.*—In this type, one lip, or a portion thereof, or even the entire vaginal portion of the cervix, is infiltrated with cancerous growth. Ulceration occurs early from the surface inwards, or necrosis may begin in the centre, and opening on the surface, lead to the formation of a deep ulcer, with undermined edges.

The growth is somewhat hard in consistence, but is still friable if tested with the probe, curette, or finger-nail.

- (2) *Papillomatous or polypoid type.*—This includes the so-called cauliflower excrescence, and is characterised by the growth from the margin of the os externum of a rounded or flattened tumour, varying in size, which may or may not have a definite stalk. It has a papillary surface, bleeds readily, and is very friable. More rarely it resembles a bunch of soft papillomata. Portions of the growth, pale red or greyish-yellow in colour, are easily detachable on examination.

- (3) *Superficial flattened type.*—This is characterised by a flattened growth on the vaginal portion which tends to spread over its surface. It is prone to early ulceration and is frequently seen clinically as an ulcer. The lip or portion affected is thickened

The ulcer has a sharply defined, raised edge, indented at places, yellowish-grey, finely granular surface, a moderate amount of loss of substance, and an infiltrated base. It bleeds readily on touch and the amount of hæmorrhage is entirely out of proportion to the amount of injury indicated. The finger-nail can detach small pieces from its surface.

Cervical Canal.

(1) *Superficial type.*—The inner surface of the cervical canal is lined by an irregular papillary growth which at first attacks the substance of the cervix superficially. As the growth increases portions of it may protrude through the external orifice of the cervical canal. When ulceration occurs the superficial portion of the growth is shed, with consequent hollowing out of the cervical canal, whilst the remainder of the periphery of the cervix is more or less thickened by infiltration. Where the external os uteri is narrow the process may be hidden, or patency of the os uteri may be produced by destruction of its margin, whilst in uteri where the os is already wide a crater-like cavity is formed.

(2) *Infiltrating type.*—The cancerous infiltration proceeds from the mucous membrane deep into the tissues of the cervix, and thus the whole cervix becomes thickened and enlarged, or the enlargement and infiltration may be limited to one or more portions of the cervical walls. Necrosis may commence on the mucous surface, or in the centre of the infiltrated area and may lead to extensive destruction of the cervical tissues.

Probably the majority of cancer cases which are overlooked are examples of disease affecting the lining of the cervical canal or the tissues of the wall of the cervix.

Cancer beginning in the cervical canal is not difficult to detect where the os uteri is dilated as in many multiparæ. The finger passed into the cervical canal feels irregular elevations or nodules from which portions may be removed. Free hæmorrhage follows this manipulation. Difficulty arises where the os uteri is not dilated and the disease is hidden. A sound carefully passed into the cervical canal may give the impression of impinging on an irregular nodular surface, or friable tissue may be removed by the curette. Free hæmorrhage following such manipulations is a suspicious sign. Thickening and hardening of the cervix may be detected by a rectal examination, which is most helpful in detecting cancerous nodules in the cervical walls, and should always be made in such cases.

Body of the Uterus.

If the vaginal portion of the cervix, the cervical canal and the cervical walls have been proved to be free from disease attention must be directed to the body of the uterus. The uterus may not be enlarged, although a cancerous growth exists in its interior. Usually, however, there is some increase in size, which in advanced cases may be considerable.

Microscopical Investigation.

In doubtful cases, if there be a suspicious hard nodule, or erosion, or ulcer on the external os uteri, a piece including a boundary of healthy tissue should be excised.

The vulva and vagina having been thoroughly cleansed, the posterior vaginal wall should be retracted by means of a speculum, and the cervix pulled slightly downwards with a volsellum. A wedge-shaped piece, the size of a pea or bean, including a margin of healthy tissue should be excised with a sharp knife.

The bleeding which follows this little operation should be stillied by the insertion of one or two sutures, or by firm tamponade with a strip of gauze. An anæsthetic is not essential. The patient should be kept in bed for 24 hours.

The tissue removed should be transferred to a small

stoppered bottle filled with absolute alcohol or methylated spirit, and forwarded without delay to an expert in uterine pathology.

Where the cancer originates in the body of the uterus or in the cervical canal, it is frequently possible by using the curette, to obtain a sufficient amount of tissue for examination without the aid of anæsthetics. If this cannot be done, it may be necessary under an anæsthetic to curette the whole interior of the uterus and cervix, special attention being paid to the region of the tubal orifices.* All fragments should be collected, including those which may have been washed out. The douche, if employed, should consist of sterilised water or a weak solution of corrosive sublimate (1 in 10,000), as carbolic acid and lysol interfere with the staining of the cells.

The fragments should be transferred to a stoppered bottle filled with absolute alcohol or methylated spirit.

If the expert's report is favourable the patient will be reassured, if unfavourable immediate operation is imperative.

The Operation.

The question of operation is best decided by the operator, who may require to examine under anæsthesia.

To Recapitulate.

- (1) Attend to all symptoms suspicious of cancer, and instruct the patient on their importance;
- (2) Examine immediately all cases of bleeding or abnormal discharge;
- (3) Make a definite diagnosis and do not wait for the disease to develop;
- (4) Urge immediate operation if the diagnosis is established.

The practitioner who diagnoses cancer in an early stage, when operation offers a probability of cure, renders a service to his patient as great as that rendered by the operator.

B.

AN APPEAL TO MIDWIVES AND NURSES IN ORDER TO PROMOTE THE EARLY RECOGNITION OF CANCER IN THE WOMB.

Cancer of the Womb is a very common and fatal disease in women, but it can be cured by operation when it is recognised early. A woman sometimes tells a nurse or midwife her ailments before she speaks to a doctor, and the nurse or midwife has then an opportunity of aiding our crusade against this terrible disease.

Cancer may occur at any age, and in a woman who looks quite well and who may have no pain, no wasting, no foul discharge and no profuse bleeding.

To wait for pain, wasting, foul discharge, or profuse bleeding is to throw away the chance of successful treatment.

The early signs of Cancer of the Womb are—

1. *Bleeding*, which occurs after the change of life.
2. *Bleeding* after sexual intercourse, or after a vaginal douche.
3. *Bleeding*, slight or abundant, even in young women, if occurring between the usual monthly periods, and especially when accompanied by a bad-smelling or watery blood-tinged discharge.
4. *Thin watery discharge* occurring at any age.

The nurse or midwife who is told by a patient that she has any of these symptoms should insist upon her seeing a medical practitioner in order that an examination may be made without delay. By doing so she will often help to save a valuable life, and will bring credit to herself and to her calling.

* Special care should be taken in using the curette as the cancerous uterus is easily perforated.

Nova et Vetera.

LEOPOLD AUENBRUGGER.

THE DISCOVERY OF PERCUSSION.

PERCUSSION as a means of testing whether walls were solid or covered hiding places, whether barrels were empty or full, and for a number of other purposes in ordinary life, must have been in use since the dawn of civilization. The whole art and mystery of the method as applied to tombs is expounded in *Edwin Drood* by Durdles to Mr. Jasper in the vaults of Rochester Cathedral:

"Now, lookee here. You pitch your note, don't you, Mr. Jasper?"

"Yes."

"So I sound for mine. I take my hammer, and I tap. . . I tap, tap, tap. Solid! I go on tapping. Solid still! Tap again. Hollow! Hollow! Tap again, persevering. Solid in hollow! Tap, tap, tap, to try it better. Solid in hollow; and inside solid, hollow again! There you are! Old 'un crumbled away in stone coffin in vault!"

It is surprising, therefore, that no one seems to have thought of using percussion of the human body as a means of diagnosis till its utility was discovered by Auenbrugger in the middle of the eighteenth century. The centenary of his death is to be commemorated by the University of Vienna on May 18th. A short account of the man is therefore opportune and may be of interest to some.

Joseph Leopold Auenbrugger was born at Gratz, in Styria, in 1722. His father is said to have been an innkeeper; however this may be, he was a citizen of credit and renown. Both he and his wife were held in high esteem for their blameless character and charitable disposition. They gave their son a solid education, and he had the advantage of growing up in a home atmosphere of the best kind. In due course he studied medicine at the University of Vienna, where he was a pupil of Van Swieten, who had sat at the feet of Boerhaave at Leyden, and on whom the mantle of that famous physician was believed to have fallen. After taking his degree, Auenbrugger settled in Vienna, but he does not seem to have been a teacher in the university. From 1751 to 1762 he was attached to the Spanish Hospital in Vienna, first as assistant, afterwards as physician. It was in 1754 that he noticed the difference of sound produced by striking the chest wall in various places. He pursued the line of clinical research thus opened to him for seven years, and in 1761 he embodied the results of his observations, "proved," in his own words, "again and again by the testimony of his own senses in the midst of labours and discouragements," in a work bearing the following title:

LEOPOLDI AUENBRUGGER

Medicine Doctoris
In Caesareo Regio Nosocomio Nationum
Hispanico Medici Ordinarii.

INVENTUM NOVUM

EX
PERCUSSIONE THORACIS HUMANI
PECTORIS MORBOS

Detegendi.

Vindobonae.

Typis Joannis Thomae Trattner, Caes. Reg.

Majest. Aulicae Typographi.

MDCCCLXII.

In the preface he says that he wished to call attention to a new method of detecting diseases of the chest which he had discovered. He goes on to say:

In making public my discoveries respecting this matter, I have been actuated neither by an itch for writing nor a fondness for speculation, but by the desire of submitting to my brethren the fruits of seven years' observation and reflection. In doing so, I have not been unconscious of the dangers I must encounter, since it has always been the fate of those who have illustrated or improved the arts and sciences by their discoveries to be beset by envy, malice, hatred, detraction, and calumny.

He confesses that there are still many defects in his work which can be remedied only by further experience and observation. After describing the sound produced by striking the chest of a healthy person in different parts, he gives a detailed account of the method of practising percussion. The thorax should, he says, be struck slowly and gently with the points of the fingers brought close together and at the same time extended. It may be noted that he recommends that while this is being done the

shirt should be drawn tight over the chest, or the hand of the operator should be covered with a glove of unpolished leather.

If the naked chest is struck by the naked hand, the contact of the polished surfaces produces a kind of noise which alters or obscures the natural character of the sound.

Had he but applied his ear as well as his hand, he would have anticipated Laennec. He proceeds to describe the dullness of the percussion note caused by the greater or less diminution of the volume of air in the chest due to compression of the lung either by effused fluid or solid growth. He proved the value of the method by experiments made with empty or partly full casks, and with a dead body, into the thoracic cavity of which fluid had been injected. He also closely compared the information yielded by percussion with the state of things found after death in cases of "scirrhus" of the lung (which he explains to be "the degeneration of the natural spongy substance of the organ into an indolent, fleshy mass"), vomica, empyema, pleural effusion, dropsy of the pericardium, extravasation of blood into the cavity of the pleura or pericardium, and aneurysm of the heart. He came near to the discovery of auscultation, for he says: "If the hand is laid over the situation of a vomica, as revealed by percussion, and the patient should cough, you will clearly distinguish the rattling of pus inside the chest. (*Streptum puris manifeste distingues in pectore interno.*)" Auenbrugger concludes with the wish: *Cedant haec miseris in solatium, veris autem medicinae cultoribus in incrementum artis: Quod opto.*

Auenbrugger's teaching fell on deaf ears; his discovery was ignored by those occupying the high places of medicine in his day, even by his own teacher, Van Swieten. The only physician of standing in his own day who appreciated the value of the discovery was Stoll, who succeeded De Haen as Professor at Vienna. The method was either confused with succussion, which is mentioned by Hippocrates, or not mentioned at all by contemporary writers. The lot which befell Auenbrugger's little book is an example of the attitude of the "superior person" towards anything new that does not emanate from his own lofty sphere, which has been one of the chief influences that have retarded the progress of medicine. It was not till the *Inventum Novum* was translated into French by Napoleon's physician, Corvisart, in 1808, that Auenbrugger's discovery obtained general recognition. But the fame thus gained by the author came too late, for he died on May 17th or 18th, 1809. It had previously been translated into French by Rozière of Montpellier, and went through two editions. But it was practically unknown till Corvisart stamped it with the impress of his great name, at the same time giving Auenbrugger the whole credit of the discovery. His wife had died a year before the French translation of his book appeared, and after that event he seems to have ceased to take any interest in the things of this life. He might have said as Johnson said to Lord Chesterfield when at the last moment that nobleman came forward as the patron of his *Dictionary*:

The notice which you have been pleased to take of my labours, had it been early, had been kind; but it has been delayed till I am indifferent and cannot enjoy it; till I am solitary and cannot impart it; till I am known and do not want it.

For notwithstanding the neglect of his *Novum Inventum* it must not be thought that Auenbrugger was either unappreciated or disappointed. His heart was in his professional work, and according to a biographer "his life was a model of honesty, philanthropy, genuine devotion to the science and art of medicine, and of kindly regard towards the poor as well as the rich." He had a large practice and was in favour with the Empress Maria Theresa and afterwards with the Emperor Joseph, who in 1784 ennobled him, bestowing upon him the title of *Elder von Auenbrugger*. This was not, however, on account of the discovery which gives him a lasting place in the history of medicine, but in recognition of his services to the public and his skill in physic. To the last he collected fresh proofs of the clinical value of percussion. He wrote some other treatises, but these are of comparatively little importance. The book on percussion was translated into English by Forbes in 1824.

He had a happy home life and had two accomplished daughters. He was fond of music and composed an opera

called the *Rauchfangkehrer*, which so pleased the Empress Maria Theresa that she asked him to write another. He declined, however, saying that he had something better to do than write operas.

Auenbrugger was interested in philosophy and general literature, and was the owner of a library which was considered large in those days.

As little is known about Auenbrugger, it is right that acknowledgement should be made of the assistance derived in the production of this brief sketch from Dr. C. N. B. Camac's *Epoch-Making Contributions to Medicine and Surgery, etc.*, and a paper entitled "Auenbrugger and Laennec, the Discoverers of Auscultation," by Dr. Edward O. Otis, of Boston, published in the *Boston Medical and Surgical Journal* of September 22nd and 29th, 1898.

INDIA IN 1907.

REPORT OF THE SANITARY COMMISSIONER.

THE report for the year 1907, which closely follows its predecessors in scope and contents, has been drawn up by Lieutenant-Colonel C. J. Bamber, I.M.S. Officiating Sanitary Commissioner with the Government of India, the statistical statements and tables, which compose more than half of the volume, being compiled by Major S. P. James, M.D., I.M.S. Certain changes have been made in the construction of these, which will be referred to below, and a few diagrams have been introduced illustrating the prevalence of plague in India and several provinces. The report consists mainly of a comment on the statistics collected during the year, relating to the general population, troops, and prisoners, with some remarks on the circumstances, climatic and otherwise, of which they are the representatives and effects. Information regarding the progress of research into the pathology and etiology of tropical diseases is scantier than in recent reports. Work done on enteric and paratyphoid fever is summarized at some length, and references are given to papers published on some other subjects. The report as a whole, while its methodical arrangement and lucid handling of figures are highly commendable, is more arithmetical and less expository than is desirable.

GENERAL CHARACTER OF THE YEAR.

The year presents a remarkable contrast to the preceding year. The main feature of 1906, as narrated in the *BRITISH MEDICAL JOURNAL* (vol. ii, 1908, p. 515), was a reduction in plague mortality, associated with an increase in the number of deaths due to fevers, bowel complaints, cholera, and small-pox, depending on conditions unfavourable to public health. In 1907, on the contrary, the excessive prevalence of plague raised the death-rates to a high level, while the ordinary causes of Indian mortality underwent considerable abatement. The climatic conditions were in some respects abnormal. The spring rainfall in Northern India was excessive, and caused damage to the early (*rabi*) crops. The monsoon rains arrived late, and were scanty in most provinces, causing shortage of the late (*kharif*) crops, which constitute the principal produce of the year.

This partial failure of crops resulted in general dearth of food, and gave rise to scarcity, almost amounting to famine, in many districts. The rains left off earlier than usual, and the months of October, November, and December were comparatively dry. The production of fevers and bowel complaints was on this account considerably diminished, and these ordinarily account for about 60 per cent. of Indian mortality. Politically the year was tranquil, and neither European nor Indian troops were employed on service either within or beyond Indian limits. Social conditions remained unaltered, and the year was exempt from catastrophes—floods, cyclones, or earthquakes—which sometimes occasion great loss of life.

VITAL STATISTICS OF THE GENERAL POPULATION.

Birth registration has been extended in Upper Burma. There are still areas in several provinces where registration has not been introduced. Registration by a professional agency has been experimentally tried in the district of Burdwan (Bengal), with the result that while the number of deaths recorded by the ordinary agency was found to be fairly accurate, the assigned causes were

largely erroneous. No change appears to have been made during the year in the agencies employed for recording births and deaths or testing the accuracy of the returns. There was a slight decline in the birth-rate of British India, from 37.80 to 37.65, the rate reckoned on the census of 1901 for the preceding quinquennium being 39.20. The highest rate (52.46) was returned by the Central Provinces, and the lowest (30.8) by Madras. The birth rate exceeded the death-rate in several provinces, and fell short of it in five, the defect in the Punjab amounting to 21.3. The death-rate of the year was 37.18, against 34.73 in 1906 and 32.91 in the preceding quinquennium. Excluding plague, the death-rate of 1907 was 32.02. The Punjab yielded the terrible rate of 62.10, nearly one-half of which was caused by plague. The Gujrat district had a mortality of 106.67, and one of its towns (Dinga) of 143.31. The lowest rate (24.3) was in Madras. Infantile mortality was somewhat lower—221.72 and 209.33 for males and females per 1,000 born, against 228.30 and 217.52 in 1906. This recession in a bad plague year would seem to suggest that infants under one year of age are not very liable to plague infection.

In all provinces the number of male infants born exceeded that of females, and in all except the Punjab the death-rate of male infants was in excess.

Details of registration in each province are given with great and, it must be remarked, unprofitable prolixity.

PREVALENT DISEASES.

Of the aggregate deaths, 53 per cent. were registered under the head of fevers, 14 of plague, 5 of cholera, 3 of bowel complaints, and 1 of small-pox, leaving 24 for all other causes. This rough classification is far from accurate, as the Burdwan inquiries and other special investigations show, but it is the best that can be got in India as yet. There was a slight rise in the mortality attributed to "fevers," but it is surmised that many fatal cases of plague found their way into this category. It is assumed that only about 25 per cent. of "fevers" are malarial. This is a conjecture founded on some inquiries conducted by Rogers and others. It is impossible to say with certainty whether in 1907 malarial fevers were in excess or defect, but the statistics of troops and prisoners indicate the latter. The highest fever rates were returned by the United Provinces (28.31), North-Western Frontier Province (27.44), Coorg (26.95), and Bengal (23.18); and the lowest, Madras (7.8), and Upper Burma (7.53). The mortality caused by kala-azar in Assam continues to decline. A report has been submitted by Captain S. R. Christophers, I.M.S., and Dr. Bentley, regarding malaria and blackwater fever in the Duars; but no information is given about the conclusions arrived at by these observers. A report has also been submitted respecting the relation between the prevalence of malarial fever and defective drainage in the Presidency division of Bengal, but the nature of it is not indicated. Reference is made to "antimalarial operations" carried out in some towns of Bengal, the Central Provinces, and Bombay, but the character and effect of them are not described. The distribution and sale of quinine in 7-grain packets is continued, but evidently on a limited and decreased scale.

The number of deaths attributed to plague rose from 356,721 to 1,315,707, the highest aggregate recorded since the introduction of the disease into India in 1896, the respective rates being 1.33 and 5.16. The Punjab heads the provincial returns with the enormous rate of 30.27; the United Provinces come next with 6.90, then follows Bombay with 5.06, and the Central Provinces with 3.18. In the remaining provinces the rates were smaller though none were entirely exempt. There was an increase of mortality in all the provinces except Eastern Bengal and Assam, Ajmere-Merwara, and Coorg, which suffered to a very slight extent. The immunity of Eastern Bengal and Assam is held to be remarkable, and worthy of special investigation. The report is silent as regards preventive measures, except that an outbreak of pneumonic plague in Darjeeling, introduced from Chupra and resulting in 7 deaths, is said to have been stamped out by "stringent measures," the nature of which is not stated. The Bombay Bacteriological Laboratory issued 620,923 doses of antipneumonic vaccine against 176,651 in 1906. Reference is made to instances of success attending the use of the prophylactic, but particulars are not given, nor of experi-

ments made in this laboratory regarding the use of rat and flea destroyers. The diagrams to which allusion has been made show the prevalence of plague in India, Bengal, the United Provinces, the Punjab, and Bombay during the years 1898-1907 inclusive. The remarkable seasonal phenomena of the disease are well brought out. A fall towards the close of the year is said to augur favourably for 1908.

There was a marked fall in cholera mortality in all provinces except Bengal, Coorg, and Lower Burma. The death-rate for British India as a whole was 1.81, against 3.05 in 1906. Bengal had a rate of 4.07, Eastern Bengal and Assam of 2.58. Madras of 2.2, and Lower Burma of 1.42; the remaining provinces were below the average. Statistical facts relating to the prevalence of the disease are given in great detail, but no additional light is thrown on causation, pathology, or treatment. There was a slight decline in the mortality caused by dysentery and diarrhoea, the death-rate for India being 1.25, against 1.35 in 1906. Small-pox mortality was also lower—0.46 against 0.48. The deaths of children under 10 years of age amounted to 69.70 of the total number; the high rate of 9.15 was recorded in the town of Barpeta, Assam, the head quarters of the Mahaparushiyas, "who on religious grounds object to vaccination." It is stated that their objections are yielding to persuasion, and that small-pox is diminishing. In the Punjab the death-rate of towns in which vaccination is compulsory was 0.93, compared with 1.72 in towns in which it is optional.

THE GAOLS.

The improvement in sickness and death-rates is progressive, and indicates an advance in "the arrangements for counteracting the influences of adverse climatic conditions and for preventing the spread of communicable diseases." The average number of prisoners was 107,675—2,407 less than in the preceding year. The death-rate, including the Andamans Settlement, was 18.51, the lowest on record. Excluding the Andamans, where convicts live under special conditions, and where the death-rate was 23.59, the rate for Indian gaols was 17.72, against 19.27 in 1906 and 21.12 in 1901-5. There was also a reduction in the rate of admissions into hospital—624 against 658. As usual, the chief causes of sickness were ague, dysentery, abscesses, ulcers and boils, and diarrhoea; and of deaths dysentery, phthisis, and pneumonia. There was a decline in the admission-rate of intermittent fever and a slight rise in the death-rate, the figures being 190.2 and 0.79, against 207.2 and 0.72 in 1902. The admission-rate and death-rate of remittent fever were unprecedentedly low, but the term does not indicate any definite type, and is to be supplanted in future reports by the entry "pyrexia of uncertain origin." Quinine prophylaxis is eagerly resorted to in all provinces, but the method employed varies considerably, and information regarding results is scanty.

Antimalarial measures are cursorily alluded to. Dysentery has never been less prevalent, and has never caused a lower mortality in the gaols of India than during 1907. The rates were 67.9 and 2.57, against 78.9 and 3.25 in 1906. There were fewer admissions and more deaths from diarrhoea, which is said to be more common and fatal among old and infirm prisoners. There was an increase in respiratory admissions and deaths, the mortality from pneumonia rising from 2.55 to 2.90. On the other hand, there was a satisfactory decline in phthisis prevalence and mortality, the rates falling from 8.8 and 3.21 to 7.5 and 2.74. Early detection and special open-air treatment are strongly recommended, and measures to this end are being adopted in many gaols.

The statistics of "anaemia and debility" are about the same as in previous years. There was a decrease in admissions and deaths from cholera (140 and 55 against 187 and 105), also from small-pox (65 and 6 against 82 and 9). There was an explosion of cholera in the Coimbatore Central gaol, in which 74 admissions and 32 deaths took place. The outbreak was considered to be water-borne. Plague, as might be expected, gave increased admissions and deaths (59 and 30 against 19 and 8). Most of the cases occurred in the prisons of the United Provinces, Punjab, Bengal, and Bombay. Sixty-five cases with 10 deaths were attributed to enteric fever, against 102 and 18. There was a reduction in the prevalence and mortality of influenza. Thirteen cases of cerebro-spinal

fever occurred, 11 of which were fatal. Only 2 admissions from Mediterranean fever were registered. Fifty-six cases of epidemic dropsy with 5 deaths were returned, and 107 cases of beri-beri with 12 deaths. These diseases were made the subject of special investigation, and considerable doubt still prevails as to the differential diagnosis. An inquiry was also carried out by Captain Foster, I.M.S., regarding the prevalence and mortality of dysentery in Bengal gaols. "A proposal has been made to establish at Kasauli a subsidiary gaol to accommodate prisoners bitten by rabid animals." The returns only show 7 admissions from dog and jackal bites, with no death. Thirty cases of snake bite were admitted, two of which were fatal. Over-crowding still exists in many gaols of all the provinces; but efforts are being made to remedy this and many other sanitary defects.

EUROPEAN TROOPS.

The strength of the European army in 1907 was 69,332. Of this number, 11,689 were located in hill stations, and 3,515 in hill convalescent depôts, 1,755 were marching, and 1,099 stationed at Aden. The health of the troops was excellent and the rates of admissions, constantly sick and deaths lower than in any preceding year. They were 756.4, 46.4, and 8.18, against 870.8, 51.4, and 10.43 in 1906, and 983.7, 60.7, and 12.11 in the quinquennium 1901-5. The invaliding rate was also lower. The decline in these rates was due to a decrease in all the chief causes of sickness and mortality. There has been a change in military administration. There are now two armies, northern and southern, in place of three commands and two divisions as formerly. This necessitates a recasting of health statistics, and renders a comparison with previous years difficult. This is the fourth alteration in the distribution of the army which has taken place since 1877, a circumstance which justifies the creation of definite and permanent geographical areas for purposes of statistical grouping and comparison. These, which are indicated on the map accompanying the report, possess the additional advantage of associating in the aggregate places similarly circumstanced as to physical and climatic characters.

There was a slight increase in the prevalence of influenza, which affected mostly troops stationed in the Indus Valley. Only 3 cases of cholera occurred, 2 of which ended fatally. This is the lowest number on record, excepting in 1899, when there were only 2 cases. There was also a decrease in small-pox, the admissions being 30 against 87, and deaths 1 against 4; 16 of the cases were in men who had not been successfully revaccinated. There was a great decrease in the prevalence of intermittent fever, the admission-rate having fallen from 176 to 152, and the number of deaths from 15 to 9. There was also a decrease in the admissions registered as remittent fever, a term which will not appear in future returns.

The admissions from "simple continued fever," though fewer than in 1906, were much more numerous than in previous years, owing to the more exact diagnosis of malarial cases. The term is to be discontinued, its place being taken by the formula "pyrexia of uncertain origin," which will include remittent fever as well. Antimalarial measures, including the prophylactic use of quinine, the use of mosquito nets, drainage, filling of hollows, destruction of larvae, "marching into camp" (the segregation of Europeans), sulphur fumigation, etc., are diligently carried out, and the intramuscular injection and prolonged administration of quinine undoubtedly minimize relapses. Only 5 cases were diagnosed as Malta fever. There has been a very satisfactory reduction in admissions and deaths from enteric fever, the rates being 13.1 and 2.77, the lowest recorded since 1888 and 1885 respectively. The subject is discussed at great length from the points of view of bacteriology, causation, and prevention. The importance of taking special action with reference to bacillus carriers is strongly insisted on. There is a standing committee on enteric fever which collects information and issues recommendations, and it is evident that every possible effort is being made to reduce the mortality caused by this disease in the European army of India. Only 8 cases of plague occurred with 3 deaths. A curious outbreak of multiple neuritis occurred at Poona, the causation of which is obscure. Dengue was much less prevalent, and bilharzia has nearly died out. The prevalence of phthisis was much the same as in previous years, and cases of pneumonia were

fewer, but deaths slightly more numerous. There was a decided abatement in dysentery admissions and deaths, and also in abscess of the liver. The fall in venereal diseases is progressive, and is attributed to moral influences.

There was less sickness and mortality among officers, the death-rate falling from 17.53 to 7.71. There was also considerable reduction in the sickness and death-rates of women and children. Altogether the record is one of improved health, due no doubt to the more favourable conditions of the year, but also, it is to be hoped, to more enlightened and strenuous sanitary efforts.

NATIVE TROOPS.

The strength of the native army was 126,392. Of this number 9,030 were marching, 1,509 in Aden and other places outside India but in the Indian command, 749 in Colombo, 734 in Singapore, and 3,050 in China; 22,710 were located in hill stations. The admission-rate, 628.9; constantly-sick-rate, 21.7; death-rate, 6.27; and invaliding-rate, 5.76, were the lowest on record. The death-rate does not include deaths on sick leave or furlough; if these be added, the rate is raised to 8.51, slightly higher than that of the European army. There was a reduction in all the principal causes of sickness and mortality. There was a slight rise in influenza, which was specially severe in Quetta. Cholera fell from 94 cases and 62 deaths, to 34 and 24, and small-pox from 79 and 4 to 48 and 5. There was a decrease in admissions and deaths from ague and remittent fever, also in admissions from "simple continued fever," many cases registered as such being probably malarial. Twelve cases of kala-azar occurred, the diagnosis being confirmed by splenic or hepatic puncture. Typhus fever is rare among native troops, but 24 cases were returned as such with 4 deaths. Of these, 23 occurred in three regiments stationed at Peshawar. The infection appears to have been derived from mule corps drivers, who contracted the disease in the surrounding villages.

Twenty-six cases of relapsing fever were admitted of which 3 died. The spirillum was discovered in all of them. There were no cases in the European army. There was a rise in admissions and deaths from enteric fever, which numbered 182 and 44. The cases occurred in 84 regiments located in 53 stations, and in only 10 were more than 3 cases admitted. The increase is held to be due to more accurate diagnosis. The number of recorded cases of Malta fever also increased; 62 were diagnosed as such with 2 deaths; of these, 30 occurred in Rawal Pindi—28 of them in the 35th Sikhs. The blood of 39 goats which supplied milk to the Sikhs was examined by Captain Brayne, I.M.S., in the Kasauli Institute, and it was found that that 11 of them agglutinated the *Micrococcus melitensis*. Notwithstanding the increased prevalence of plague in India there was a diminution of admissions—85, with 56 deaths against 147 and 83 in 1906. In 66 stations where the disease was present the troops escaped. The admissions from scurvy and phthisis were about the same, but the death-rate of the latter was lower, amounting to 0.33 against 0.20 in the European army, and 3.07 in gaoles. The death-rate of Gorkhas was 1.03. Efforts are being made to improve their barracks. Pneumonia and other respiratory diseases were more prevalent and fatal, especially in Upper India. Dysentery and diarrhoea were less prevalent, and there was a fall in the admission-rate from venereal diseases, which only amounted to 14.7. There were only 7 admissions for beri-beri, 6 of them in Aden. The admissions for guinea-worm (472) were mostly in Central India. There were none in the European army, but 438 in the prisons.

VACCINATION.

There was an increase in the number of vaccinations performed during the year; greater in revaccinations than in primary operations. The percentage of success in both classes was higher, as also the number of operations done by each vaccinator. The rate per 1,000 of census population was 36.07, a rise; and the ratio to estimated births 44.36 per cent. The cost of each successful case was about the same. Each province has its *dépot* for the manufacture of vaccine except the Central Provinces, where lymph is prepared at the head quarter stations of districts. Inoculation is still practised in some parts of Burma and Assam.

The prevalence of plague interfered in many places with vaccination. A machine invented by Major Entrican, I.M.S., for filling tubes has been used with satisfactory result.

SANITARY ADMINISTRATION AND WORK.

No change of importance took place during the year in sanitary administration. The appointment of a sanitary engineer for the province of Eastern Bengal and Assam has been sanctioned. A sum of Rs.6,000 has been sanctioned in Burma for the erection of model sanitary works. The details in the report indicate sustained effort in prosecuting and maintaining sanitary works, and local bodies are spending money freely on current sanitary purposes. There has been a falling-off in the sale of manure in the Punjab, and sewage farming in Madras has not been attended with success.

MISCELLANEOUS.

The number of pilgrims who left Bombay for the "Haj" was the largest on record. Special precautions were taken to prevent the exportation of plague. The disease broke out at Jeddah in January, but did not attain large dimensions or spread, and information regarding the health of the pilgrims is scanty. Interesting summaries are given regarding the work done in provincial laboratories, which have been reorganized and strengthened and are doing excellent work. A course of lectures with practical instruction has been arranged for hospital assistants in the Bombay bacteriological laboratory, and in the King Institute of Preventive Medicine instruction has been given to medical officers, sanitary inspectors, vaccinators, plague inspectors regarding the subject matter of their duties. Brief reference is made to special inquiries conducted during the year regarding plague, enteric fever, dysentery, malaria and blackwater fever, lathyrism, and gaol dietaries, and a list is given of scientific publications issued during the year. Mr. W. W. Haffkine, C.I.E., is now engaged in scientific research in the laboratory attached to the office of the Sanitary Commissioner with the Government of India.

LITERARY NOTES.

We regret to announce that the appearance of Lord Lister's *Collected Papers*, which were ready for publication, will be slightly delayed by a serious fire which broke out in the binding house of the Oxford University Press, near Aldersgate Street Station, on May 7th, and did damage estimated at £30,000. All the bound copies, except one or two, have been destroyed or damaged. Fortunately a number of unbound copies escaped destruction, but all the lithographic plates were burnt, and will have to be reprinted. We understand that special efforts are being made at the printing works at Oxford to replace the volumes that have been destroyed.

A new volume will be added this week to Messrs. Methuen's "New Library of Medicine." It is by Dr. Harrington Sainsbury, Senior Physician to the Royal Free Hospital, and is entitled, *Drugs and the Drug Habit: Chapters on the Dynamics of a Remedial Particle*.

The April number of *Janus* contains an article on malaria in Tropical America and among Indians by Dr. Otto Eftertz of the Isthmus of Tehuantepec, Mexico, which, apart from its scientific interest, contains some interesting anthropological and historical notes. He says the natives themselves recognize that they suffer from malaria in a far more malignant form than foreigners. This they explain by the assumption that the latter have "stronger blood." When told it is because the foreigners take quinine and they do not, they do not believe it. They refuse to take quinine except in extremely small doses, as they say it hurts them. Their own healers preach the same doctrine, the argument being "Quinine is hot, fever is hot." According to Indian pathology and pharmacology, the primary classification of diseases is into "hot" and "cold": in accordance with this remedies are divided into "hot" and "cold." The first law of Indian therapeutics is that the disease and remedy must be of different denomination—the opposite dogma to *Similia similibus curentur* of the homoeopaths.

Therefore they treat malaria with "cold" purges, cold drinks, cold irrigations of the bowels, and so forth. The favourite internal drug is a nut called *cedrón*, powdered and mixed with *mescal*, a native whisky which is supposed to be "cold," whereas other alcoholic drinks are hot. If they do take quinine, they go at once into cold water so as to counteract the heat of the quinine. A term of insult for a regular doctor is, "He is a quinine doctor." They have the greatest belief in patent "pills of life," "pink pills," "pills of health," etc.; quinine pills, however, they reject by whatever name it is attempted to disguise them. Indians do not consult regular doctors; they only buy from them patent medicines which most of the regular practitioners sell. On the general question of malaria, Dr. Effertz says that, limiting the observations to natives, it might be said Africa has practically no malaria while the disease is rife in America. On the other hand, if only Europeans are taken into account, it might be said that Africa is full of malaria while America is practically free. He suggests that the reason why American malaria is milder as far as Europeans are concerned than African is that up to comparatively recent times Europe was a great field of the disease and, therefore, Europeans possess a fair amount of hereditary immunity—not enough to protect them against the strong African variety, but sufficient to enable them to resist the mild American disease. He explains the greater relative malignity of malaria as it affects Indians by the fact that in America malaria has been introduced or at any rate generalized in comparatively recent times. In Europe malaria is younger than in Africa, but older than in America. This, according to Dr. Effertz, explains why the disease is to Europeans far more malignant in Africa than in America. It explains why Europeans die where Africans thrive, and why Europeans thrive where Indians die. Recent historical researches have shown that in the Old World malaria has been introduced or generalized in historical times in countries where it was thought to have always existed. Dr. Effertz argues that if in the Old World with its frequent wars and great movements of population malaria could remain comparatively localized for many centuries, it is reasonable to believe that in America, where such movements were very limited, malaria—if we refuse to admit its recent introduction—may have remained localized. The history of the Conquest shows that at least in Mexico, in the isthmuses of Tehuantepec and of Panama, and in Peru there was no malaria when the Conquistadores landed. Dr. Effertz holds that in a country where malaria was endemic the Conquest would have been equally impossible. It must not be forgotten that the Conquistadores had no quinine. In Mexico we read of fevers only in the expedition to Honduras, where Cortes nearly died. Nor can there have been malaria in Panama. No malarial disease is recorded among the conquerors of Peru, and in Peru itself there was no malaria. To discover the cradle of American malaria we must find a place where Indians resist malaria just as well as Africans and where Europeans resist it less than Indians. That place has not yet been looked for. Dr. Effertz further supports his thesis that malaria is of comparatively recent importation in America by the fact that, although quinine is extracted from a tree of American origin, native healers knew nothing of its febrifuge properties. These were discovered by European doctors. The native Indian healers are well acquainted with plants having medicinal properties. They discovered every plant which is of any use in syphilis, their remedies for that disease having repute even among the white. These remedies are generally family secrets; they are certainly some improved decoction of Zittmann. In Indians syphilis is extremely benign, whereas malaria is extremely malignant. It is the extreme benignity of syphilis in Indians which persuades Dr. Effertz that the disease is American in origin, and the skill of Indian healers in treating the disease is an additional argument for this view. On the other hand, the extreme malignity of malaria in Indians is a strong argument in favour of the recent introduction of malaria among them, and this argument is corroborated by the helplessness of Indian healers in dealing with the disease.

Surgeon Fernand L. de Verteuil, R.N., has kindly called our attention to an instance of false concord (*Treponema*

pallidum), which recently escaped our vigilance; it should, of course, have been *pallidum*. He goes on to say:

This organism was first called by Schaudinn and Hoffmann, its discoverers, the *Spirorhynchus pallidus*—the name by which it is still most generally known. They, however, on account of certain morphological and other characteristics, subsequently gave it the name of *Spironema pallidum*, which was finally changed to that of *Treponema pallidum*. As this is Schaudinn's last nomenclature, it should be the term used in referring to the specific germ of syphilis.

We take this opportunity of calling attention to the contempt shown by so many writers on parasitology for the elementary rules of etymology. They insist on writing *aclylostomum* or *aclylostoma*—for they are not consistent even in their heresies—and justify these atrocities by the fact that they are in accordance with the rules adopted by the Nomenclature Committee of the International Congress of Zoology. On this we need only say that the fact only proves that mixed congresses can produce monsters. The word is not only hideous to the eye, but has not a shadow of justification in the Greek language, from which it is presumably derived. The Greek word for something bent or hooked is *ἀγκυλος*, and there is no such word as *ἀγκυlostoma*. In the spelling adopted by the Congress of Zoology, *g* is a very bad transliteration of a *γ*, which would be nasal before *k* or *χ*, and the *ch* is wrong, because the Greek is *h*, and not *χ*. The proper form is *ancilostoma*, or *ankylostoma*. To lessen the risk of mispronunciation, the form adopted by this JOURNAL, after full consideration as to the best English rendering of the Greek original, is *ankylostoma*, and it may not be out of place to state that the word is neuter; therefore *Ankylostoma duodenalis* should find no favour with gods, men, or printers. According to Stiles, *aclylostoma* has been "emended" six or eight different times; we venture to say, in the words of Hamlet, that it should be reformed altogether.

In the sixth volume of the *Life of Richard Wagner* (Kegan Paul, Trench, Trubner and Co., Limited, 1908, pp. 452) Mr. William Ashton Ellis discusses the causes of the ill-health of the composer of *Tannhäuser*. Nordau bluntly writes him down a degenerate; but if we accept Lombroso's teaching, which of us will scape that stigma? Mr. Ashton Ellis accepts the theory of eyestrain, and quotes Dr. George M. Gould, who has included Wagner among his crowd of distinguished sufferers from astigmatism. Dr. Gould's view is that the composer's constant headaches, colds, and attacks of erysipelas were part of his disease, but his gloomy and pessimistic outlook on life and frequent longing for death were due to the same cause. His love of walking was but Nature's way of relieving the tired eyes. According to this theory we are all more or less sufferers from eyestrain. But in Wagner's case we have some definite clinical evidence from an ophthalmologist who actually saw the patient. This is Sir Anderson Critchett, whose testimony is as follows:

The great composer complained to my father that he was suffering from severe frontal headaches, insomnia and inability to work for more than short periods without distress. At my father's request I tested and examined Herr Wagner's eyes, and found that in each he had a dioptric of myopic astigmatism. He was both astonished and delighted when he saw music through the spherocylindrical glasses which corrected his error of refraction, for the notes, lines and spaces were seen with a cleanly cut definition which up to that time he had never known. After his return to Germany he sent us several kind and grateful messages, and the assurance that the unpleasant symptoms had been much relieved. In the ardour of composition the glasses not infrequently came to grief, and I was amused to receive a request that I would order *six* pairs to be sent to Bayreuth.

In another letter Sir Anderson says:

I feel sure that the degree of astigmatism was the same in each eye, but the vision of the two eyes was not identical, though there was no very marked difference.

Sir Anderson cautiously adds:

Expert opinion will doubtless vary respecting the extent to which the error of refraction exerted a sinister influence on the life of the great composer, but none can deny that it may have been an important factor in the troubles to which you allude.

Whatever may be thought as to the eyestrain explanation of Wagner's sufferings, Mr. Ashton Ellis's readers must be grateful to him for a very interesting addition to Wagner literature. The book shows abundant signs of careful study and research, and barring certain eccentricities of style, is eminently readable.

PRACTICE OF MEDICINE AND SURGERY BY UNQUALIFIED PERSONS.

THE following circular has been addressed to medical officers of health by the Local Government Board in England:

LOCAL GOVERNMENT BOARD,
WHITEHALL, S.W.,
23rd April, 1909.

SIR,

I am directed by the Local Government Board to state that their attention has been drawn by the Lord President of the Council to the following resolution adopted by the General Medical Council during its recent session:—

That the General Medical Council being of opinion that the present Medical Acts do not sufficiently enable persons requiring medical aid to distinguish qualified from unqualified practitioners, and that it is contrary to the interest of the public that medical and surgical practice should be carried on with impunity by persons holding no recognized qualifications, requests the Government to take steps for the appointment of a Royal Commission to inquire into the evil effects produced by the unrestricted practice of medicine and surgery by unqualified persons.

Before deciding what steps, if any, should be taken in the matter, the Lord President is desirous of obtaining some definite information on the points referred to in the resolution, and has approached the Board on the subject.

With a view, therefore, to assisting the Lord President, the Board would be glad if you would, as briefly as possible, state:—

(a) Whether the practice of medicine and surgery by unqualified persons is assuming larger proportions in the district for which you act as Medical Officer of Health; and

(b) The effects produced by such practice on the public health of the district.

The Board would be much obliged if they could be furnished with the information asked for at an early date.

I am, Sir,

Your obedient Servant,

S. B. PROVIS,
Secretary.

To the
Medical Officer of Health.

A correspondent informs us that to this communication he returned the following very pertinent reply:

In answer to your inquiry as to the practice of medicine and surgery by unqualified persons.

There is no unqualified practice in this district except by chemists who practise both medicine and surgery by prescribing and dispensing their own prescriptions and also by dressing or otherwise advising as to the treatment of various injuries.

Neither practice is for the good of the public health, and I have known cases in which the delay thus caused has been not only serious but even fatal.

Medical News.

MISS FLORENCE NIGHTINGALE entered on her ninetieth year on May 12th. She was made a member of the Order of Merit in 1907—the only woman who has received that honour—and received the honorary freedom of the City of London in the following year.

THE McGill University of Montreal intends to confer the honorary degree of LL.D. on Dr. George A. Gibson, of Edinburgh, at the Medical Convocations on June 9th. Dr. Gibson gave the inaugural address of the Medical Faculty of the McGill University on September 22nd, 1908, his subject being *The Limits of Knowledge*.

THE course of four lectures on statistical methods in physiology and medicine to be given at the London Hospital Medical College by Mr. Major Greenwood, jun., M.R.C.S., L.R.C.P., will commence on Friday, May 21st, at 4.30 p.m., and will be continued on June 4th, 11th, and 18th. The lectures are open to students of the University of London, and others on presentation of their cards.

DR. STUART McDONALD, F.R.C.P.E., who has been appointed Professor of Pathology in the College of Medicine, Newcastle-on-Tyne (the Medical School of the University of Durham), and Pathologist to the Royal Victoria Infirmary, Newcastle, has, since 1900, been Lecturer in Pathology in the School of Medicine of the Royal Colleges, and in the School of Medicine for Women, and Pathologist to the Royal Edinburgh Hospital for Sick Children, and to the Chalmers Hospital.

THE Harben Lectures of the Royal Institute of Public Health will be delivered this year by Professor R. Pfeiffer, Director of the Hygiene Institute, Breslau, in the Lecture Room, 37, Russell Square, W.C. The first lecture, on the

importance of bacteriolysins in immunity, will be given on Monday, June 21st; the second, on endotoxins and anti-endotoxins, on June 23rd; and the third, on the problem of virulence, on June 25th. Each lecture will be given at 6 p.m., and persons interested are invited to attend.

THE twelfth meeting of the Departmental Committee appointed by the Lord President of the Council to consider the working of the Midwives Act, 1902, was held at the Privy Council Office on May 12th, Mr. Almeric W. FitzRoy, the Clerk of the Council, in the chair. The following witnesses attended: Mr. Sydney Stephenson, M.B., F.R.C.S.; Dr. Sidney Barwise, County Medical Officer of Health, Derbyshire, on behalf of the Public Health Committee of the Derbyshire County Council, and on behalf of the Midland Medical Union; Mr. Walter Schröder, Deputy Coroner, County of London, Central District.

THE number of students who have entered at the London School of Tropical Medicine this session is 50. The rapid increase in the number is straining the accommodation of the school to its utmost limits. The committee is therefore unable to accept any more students for the present course; in special cases, however, application may be made to the director in case a vacancy has occurred. There is still room for students who desire to take out the advanced courses. The next session commences on October 1st. Among those who have entered for the present session are 12 officers of the Colonial Service, 7 of the Indian Medical Service, 1 of the Medical Service of the Royal Navy, 1 in the service of the Rangoon Municipality, and 1 in that of the Australian Government. There are 24 private students, besides 2 from the missions, and 2 medical officers of the United States Army.

ALMOST ever since its institution the Army Council has shown itself commendably anxious to secure co-operation between the military and civil branches of the medical profession, whenever such is likely to promote the efficiency with which the duties of the Army Medical Service are carried out. The latest instance of this policy is an appointment recently made at the principal military hospital, that at Millbank. This hospital is the head quarters of the Army Nursing Service, and in connexion with members of its staff, and in the case also of soldiers' wives, questions of gynaecology sometimes arise requiring expert advice. In consequence the post of Consulting Gynaecologist has been brought into existence, and has been filled by the appointment of Dr. W. S. A. Griffith, of St. Bartholomew's Hospital.

THE physician or surgeon approaches art so far as it affects the human frame from an anatomical standpoint, and in the Academy Exhibition this year the nude is a good deal in evidence. In some pictures it must be supposed the artist intends the figures to be looked at from afar, since the outlines are not definite. Many others display a very high standard of anatomical knowledge. In fact there are only two pictures the figures in which are seriously open to criticism from the anatomical point of view. In "Once Upon a Time" (339) the muscles forming the lower part of the neck are too prominent, while in "The Dragon Fly" (511) the lower limbs are much too long in proportion to the trunk. Mr. Benjamin Clemens's group, "The Expulsion" (1649), is an excellent example of how a correct knowledge of anatomy adds force to sculpture: by anatomy is meant not merely a correct knowledge of the distribution of the muscles of the body. Adam is represented with an expression of mingled apprehension, alertness, and determination. The whole pose of his body intensifies this expression; every limb is in a position of activity, every muscle stands out sharp and distinct under the skin ready to act at any emergency. In the figure of Eve by his side there is apprehension, but mingled in her case with a looking back rather than forward; her body, too, is in a position of activity, and the great skill that the artist has shown lies in his representation of this same position of activity in the two forms, male and female, side by side. In the woman the contraction of the muscles fails to disturb the smoothness of the skin, and it is only at the knees that they can be seen, while the joints are less acutely bent in contrast to the male figure. Many of the portraits of ladies in evening dress represent strained position of the shoulders, which are held somewhat high, the scapulae being pulled back so that their vertebral borders are almost touching one another. It is not a peculiarity of one artist or one sitter, for it occurs many times (24, 26, 148, 322, 404, 403, 720). This habit of position will be handed down to succeeding generations. One other point needs mentioning in a notice of anatomy at the Academy: it is the speaking likeness of Mr. William Pearson (612), the Prosector to the Royal College of Surgeons.

British Medical Journal.

SATURDAY, MAY 15th, 1909.

THE DOCTOR AS A VICARIOUS PHILANTHROPIST.

THE position in which medical men are placed when called to attend urgent cases of labour or street accidents, with the certainty that in most cases they will receive no remuneration, is fast becoming intolerable. Two cases that have recently occurred in the north have forcibly emphasized this. In the first case, that of Dr. Morgan of West Hartlepool, a medical man has been pilloried in the public press for not attending a street accident when called on, though he was not the police surgeon, and despite the fact that having been refused payment by the police authorities in other cases to which they had called him, he had notified them that he would not in future respond to their summons. No notice was taken of his explanation that he was not informed of the serious nature of the case, nor had he any opportunity of attending the inquest to rebut the statements made about him. The case, as will be seen from a report of a special meeting of the Hartlepoons Division published in this week's SUPPLEMENT, has excited a good deal of feeling in the local profession, and it is unanimous in protesting against the unjust criticisms of which Dr. Morgan has been the object. In the second case, Dr. Wright, of Tow Law, near Bishop Auckland, was called on late at night to go to a labour case. The husband of the patient stated that Dr. Wright demanded that his fee should be guaranteed, and sharp words ensued. Dr. Wright denies that he refused to go, and says that the husband deliberately turned away. Another doctor was summoned, and on his arrival found that twins had been born, but that the mother had died from heart failure through exhaustion. The coroner described it as a "lamentable case," but reminded the jury that the impression that a doctor is a public servant and bound to go when called was incorrect, as a doctor was entitled to be paid or to know when he would be paid. The jury returned a verdict that death was due to heart failure arising from exhaustion from want of proper attention at confinement, and a rider was added to the verdict that it was "unwise of doctors to raise the 'question of fees.'"

Two facts stand out prominently in these cases: In the first case it is clear that Dr. Morgan was grossly ill-treated in not being afforded an opportunity of being at the inquest where his conduct was in question; and in the second case, the coroner, though he correctly stated that the common impression was wrong, yet exceeded his duty in accepting the rider to the verdict. The wording of the rider is somewhat curious. It might bear the meaning that doctors would show more wisdom not to mention fees, but to give some other reason for not attending. That might, perhaps, show more worldly wisdom and might prevent some irritation, but it leaves out of account the element of conscience, of which medical

men are not quite devoid. What the jury probably meant, however, but hardly liked to say after the coroner's remarks, was that doctors ought to go to such cases whenever summoned without question, and trusting to chance for payment afterwards. That is the popular view, and seems to be the view of most municipal authorities, if not of Parliament itself, if we may judge by the Midwives Act.

Now, it may be conceded that if in a particular case the question were simply that a doctor, knowing that refusal to attend would involve suffering or danger which he might prevent, yet refused to go on the sole ground that his fee was uncertain, he would fairly be deemed guilty of inhumanity. In the words of the Poor Law Commission, "the physical condition of the patient should be the first consideration," and "neither the promptitude nor the efficiency of the treatment should depend on whether the patient can pay for it." That applies to a public medical service, and only perhaps in a second degree to private practice; still every member of the profession, including Dr. Morgan and Dr. Wright, will readily agree to it. So far the popular impression is right; so much common humanity demands; but when all this is granted, we have only faced half the question. For it is obvious that the primary responsibility for making proper provision for medical attendance in confinement cases rests on the patient or her husband; if they fail for any reason to make such provision the duty belongs to the community as a whole and certainly not to any one section of it, and it is neither reasonable nor just for the community to attempt to throw its own duties on the shoulders of any particular class, such as the medical profession. This is freely acknowledged in the case of paupers, who are clothed, housed, fed, and medically treated at the expense of the State, even though their poverty be their own fault. So far is this carried as regards medical treatment that paupers are actually better off in this respect than the working classes who, by dint of hard struggling, manage to keep themselves just above the level of pauperism. The anomaly is accentuated when we find that the State actually accepts a theoretical responsibility for the latter class but in numerous directions fails to make provision for practically discharging its responsibility. The Midwives Act is a forcible case in point. The whole Act is a practical acknowledgement that it is to the present and the future interest of the community that parturient women should be properly cared for. The conditions in which medical aid should be obtained are carefully prescribed, but the means for obtaining such aid are omitted. The State sets out to do a generous thing, but its generosity turns out to be a cheap generosity at the expense of the medical profession. It is not paupers who are in question; they are already fully provided for under the Poor Law. It is that large class just above the level of pauperism, women who can just afford by careful saving to lay by a midwife's fee, but if any emergency occurs, are totally unable to pay the doctor's fee in addition. For some time after the Act came into force it was thought that, though the Act itself made no provision for medical assistance, counties and county boroughs would arrange, with the consent of the Local Government Board, to pay medical fees in midwives' cases under Section 133 of the Public Health Act of 1875. More than six years have elapsed, and of the 62 administrative counties of England and Wales not a single one has availed itself of that section, while of the 74 county boroughs only 3, Cardiff, Liverpool, and

Manchester, pay such fees. Newcastle and St. Helens did actually commence, but they have ceased and left the duty to boards of guardians. The hardship suffered by this large and deserving class of women was fully recognized by the Local Government Board in its circular of July, 1907, in which boards of guardians were advised to pay a fee under the Poor Law Amendment Act of 1848 to any medical man attending a midwife's call under the Midwives Act. Of the 640 Poor Law unions, less than 100 have made any response, and even of these many have either refused to pay for any but paupers, or have attempted to restrict the work to their own district medical officers, or offer a totally inadequate fee of 10s. 6d. for operative interference, or else hedge round the payment with such conditions that it is practically certain that in most cases the doctor will be no better off than before. Thus the advice of the Local Government Board, which was followed up by similar advice from the Privy Council Office in February, 1908, has been simply ignored, and all the beneficent intentions frustrated by most boards of guardians. The Local Government Board seems absolutely helpless to do anything more, however much it might wish.

In this state of things what must medical men do? If they refuse to attend these cases without guarantee of a fee they are called brutal and inhumane. If they do attend, they are voluntarily taking on themselves a burden which the Local Government Board acknowledges ought to be borne by the community; they are doing State work without State pay, and, as experience shows, if they will do it they may go on doing it indefinitely. There can be no wonder, then, that in Essex, Norfolk, parts of the East End of London, Salford, and numerous other places medical men have notified the authorities and the coroners that they will refuse to attend until a fee is guaranteed, as they object to their feelings of humanitarianism being exploited by the local authorities. It is impossible to condemn this attitude in spite of its deplorable results, and even though the Midwives Act is thereby in danger of becoming a failure. The whole cost to the State, if all local authorities were compelled to pay a fee, would be trifling compared with the benefits to the community. In 1907 the cost in fees in Manchester only amounted to £247, but the result has been that parturient women in Manchester may be confident of obtaining medical aid with the least possible delay. It is not suggested for one moment that patients who can pay for themselves should not be compelled to do so, but the authorities must see to that: it has been done in Manchester, where a donation of a few pounds a year to the Charity Organization Society procures the needed information as to the ability of patients to provide for themselves.

The same state of affairs exists with regard to medical attendance in street accidents. In London, Manchester, Salford, and a few other places there are definite arrangements made for payment on fixed scales of fees to medical men called by the police to attend cases of accident or sudden illness occurring on the streets. But in by far the greater number of towns there is no provision at all. The authorities simply evade their responsibility by trusting that the humanitarian feelings of medical men will compel them to do the work for nothing.

It is impossible that this condition of things should continue. Humanity will always claim sacrifice, and will always get it from the medical profession. It is freely admitted that a man's responsibility for helping others increases with his ability to help, but it can

never be conducive to the welfare of the citizens that any one section of the community should be systematically exploited for the rest. Sydney Smith said that philanthropy in practice generally meant that Jones thought Smith should do something for the relief of people in distress, and this view is generally held by the public in respect of medical practitioners. It is high time that even coroners and their juries should realize that, however convenient it may be to be charitable at another man's expense, the doctor cannot live if he is to be regarded as a vicarious philanthropist.

THE PROBLEM OF UTERINE CANCER.

It is exactly a third of a century since Freund, on January 30th, 1878, removed by the abdominal route a uterus which showed "tubular carcinoma of the 'portio' with isolated carcinoma of the fundus" from a woman whom he was able twenty-six years later to present to a congress at Breslau. In the interval many technical problems have been debated and much experience has been accumulated by surgeons and pathologists, and both technical problems and experience have contributed to the general recognition of the fact that many cases of uterine cancer have been transferred to the category of curable disease. With cancer of the fundus the curability is even now almost universal, but with cancer of the cervix a large number of recurrences still arise. Of these recurrences, almost all are found to begin in the scar of the old operation, and are to be interpreted as due to the operation having been made through already affected tissue. The surgeon has learned that if women are to reap the full benefit of the wider range which the abdominal operation has given, the cases must go to him earlier.

Of the patients who at present reach the operator three in every four have passed through the hands of their family doctor, and of these a very appreciable proportion have been kept under treatment for some time without any local examination having been made. So long as this is the case the medical profession cannot divest itself of the charge of being responsible for some part of the incurability of cancer. The greater part of the delay in cases seeking our aid is, however, due to the folklore of the menopause, which makes irregular bleeding an ordinary and transitory phenomenon, and leads the woman herself to postpone a call for assistance. The problem of getting our cases of uterine cancer in an early stage is, therefore, substantially that of creating a new folklore among womankind, so that they shall no longer treat irregular bleeding as normal at the change of life, and shall not wait for pain and wasting before they come to seek assistance with the fear of a commencing cancer.

How the education of women is to be accomplished is a question which has for some time engaged the attention of gynaecological societies, and, on the recommendation of the Obstetric Section at the Annual Meetings at Exeter and at Sheffield, the Council of the British Medical Association appointed a special committee to report on the matter. Under the chairmanship of Dr. F. J. McCann, this committee has gone very fully into the matter, and has prepared a report whose recommendations were approved at the last meeting of the Council. In common with the other societies, the committee has recognized that there are two available channels through which women may be approached—the general practitioner and the two now

organized services of midwives and nurses, who, themselves women, have at times an earlier access to the ears of other women than the medical profession itself. To each of these channels the committee has prepared a special entrance in the form of an appeal which in these days can be made available through the professional press. Both appeals appear elsewhere in this issue, and copies were forwarded last week to medical and nursing papers throughout the British Empire.

The appeal to medical practitioners is a somewhat elaborate document, in which a detailed account is given of the symptomatology of uterine cancer and the methods of examination, special emphasis being laid on the uprooting of what is merely an ancient leechlore, that cancer is a condition to be recognized by pain, severe bleeding, and cachexia. One fact of which the full import may not at once be recognized is that in this appeal is laid down very distinctly a doctrine of professional responsibility which would make failure of the practitioner to insist on local examination almost a malpraxis.

The second appeal, to Nurses and Midwives, is much the most simple and direct document of the kind which we have seen prepared for circulation in any country. It would be no serious task to commit the whole of it to memory, and it seems well adapted to the knowledge which both nurse and midwife may be expected to acquire in the course of their training. The committee has ended each appeal with a just recognition of the essential merit of each factor in the course of a woman to the cure of her uterine cancer, the nurse who sends her to a doctor, the doctor who recognizes the condition, and the surgeon who removes it.

The growth of a folklore is slow like its decay, and it will be interesting to see how soon with modern ways we can adapt that of cancer to the new capabilities of its treatment.

THE BUDGET AND MEDICAL AUTOMOBILISTS.

IN the article dealing with the Budget last week the fear was expressed that the statement by the Chancellor of the Exchequer in introducing the Budget could not be held to imply an intention to make any rebate of the new petrol tax in the case of medical automobilists. This fear proves to be correct, for, in reply to a question put to him in the House of Commons by Dr. Cooper, Mr. Lloyd George said that medical men would not be entitled to the rebate. The profession, therefore, is now aware precisely how matters at present stand, and is in a position to take steps accordingly. Arrangements have already been made to ask the Chancellor of the Exchequer to receive a deputation representing the British Medical Association; and there are some indications which augur well for its success. Thus, a more recent question put to him by Mr. Joynson-Hicks (Manchester) Mr. Lloyd George met, not by a definite refusal to reconsider the point, but by a statement to the effect that he was at present disposed to doubt whether a rebate to medical men in respect of petrol as well as car licences would be justified. There have been indications, too, that the House at large would view a rebate with approval. Even from the Government benches, for instance, came a suggestion that in default of a rebate the tax on petrol would seem almost to amount to a special income tax on medical men. Furthermore, the case for a rebate is undoubtedly strong in itself. Since,

as has been already recognized by Mr. Lloyd George, there are considerations which make it right to put a lower tax on the cars of medical men, it would be unreasonable to cast those considerations aside when dealing with the article which is essential to the use of those vehicles. A great deal of support for the case for a rebate could doubtless, too, be derived from the individual experience of medical motorists. A good many instances in point are supplied in the letters published this week (p. 1208). The calculations in the notes on the subject last week were purposely based on an estimate of the minimum additional expenditure which the new taxes would throw upon medical motorists. As was there indicated, a distance of 5,000 miles is certainly not an overestimate of the distance annually travelled by a medical man on his professional rounds. There is no doubt, indeed, that far greater distances are often travelled by the very men who can least bear any additional expenditure—men whose net returns from practice are small and whose use of cars confers a great benefit on the scattered communities among whom they work. The distance of 5,000 miles, it may be said, was mainly adopted because in these columns and in motor journals it has frequently been used as a convenient unit on which to found estimates of the annual expenditure of medical men on motor cars. Similarly, as regards petrol consumption, it is undoubtedly true that medical men whose work lies chiefly in towns cannot expect to secure the same mileage per gallon as if they were running from point to point. Furthermore, by no means all medical men use, or should be expected to use, cars so small as those of the 8-h.p. type; nor are all cars of that description as satisfactory in respect of petrol economy as those on which the estimate of 25 miles was founded. Hence, apart from the natural objection of medical motorists to be handicapped by further additions to their inevitably heavy expenditure, it would be easy to show that unless a rebate is granted the tax may create hardships of a kind probably quite unanticipated by Mr. Lloyd George. These considerations will doubtless be borne in mind by the deputation which is to wait on him, but to ensure success it is absolutely essential that each man should also act for himself. There are points which constituents can bring out with much better effect in conversations with individual members of Parliament, or in private letters addressed to them, than by a deputation, and every medical motorist should lose no time in communicating with the member representing his district.

INSURANCE FOR MEDICAL MEN.

AS was pointed out a short time ago, the results of the work of the Medical Insurance Committee, established jointly by the BRITISH MEDICAL JOURNAL and the *Lancet*, prove how valuable such an agency is to medical men. The field covered by the agency established by the Committee is steadily widening, and it is clear that medical men are beginning to some extent to realize the advantages offered to them, especially in insuring against personal accidents. The agency is conducted on thoroughly business-like lines under the superintendence of Mr. Guy Elliston, 429, Strand, London, W.C., from whom full particulars can be obtained. With the exception of a small amount, absorbed by clerical expenses, the whole of the profit of the agency has gone to the insurers. The members of the Committee in giving their time to the work are actuated by benevolent motives, as it is intended, when the volume of the business of the agency has increased, as it ought to increase, that the surplus shall be devoted to the assistance of the benevolent agencies of the profession. Possibly

not every person who takes out an insurance policy of any kind is aware that there is a considerable difference between the sum which he pays by way of premium and the amount which enters the coffers of the company which insures him. In other words, there is, in the conduit between the pocket of the insured and the insurer, a leakage in the shape of agency fees. The ordinary insurer cannot avoid this leakage—this payment of moneys over and above the true equivalent of the risk accepted by the insuring company—but it is otherwise with the policy-seeker who deals with the Medical Insurance Committee. In his case the leakage is abolished, for a pipe is provided which conducts back into his pocket the greater part, while any surplus will be used for the benefit of his unfortunate brethren. The *modus operandi* is of the simplest kind: the Committee itself acts as an agent, hands out policies, and retains in its own hands the percentage of all the premiums received by it on behalf of the company for which it acts as agent. This percentage, however, it does not keep itself, but when expenses have been paid hands back a part to the insurer himself. The forms of insurance which the Committee undertakes at present are in respect of personal accidents, of fires, and of burglaries, as well as life insurance and insurance against that liability which was thrown upon the medical profession in common with all other employers of domestic and other labour by the Act of 1906.

UNQUALIFIED PRACTICE.

WE reproduce in another column a circular letter which the Local Government Board in England issued recently to medical officers of health. It will be remembered that at the last meeting of the General Medical Council a report from the Unqualified Practice Prevention Committee was presented by Dr. Langley Browne, chairman, and that on his motion, seconded by Dr. Latimer, the Council adopted a resolution pointing out that the present Medical Acts do not sufficiently enable "persons requiring 'medical aid'" "to distinguish qualified from unqualified practitioners," and that it is contrary to the interest of the public that medical and surgical practice should be carried on with impunity by persons holding no recognized qualifications, and requesting the Government to appoint a Royal Commission to inquire into the evil effects produced by the unrestricted practice of medicine and surgery by unqualified persons. The circular letter quotes this resolution, and states that the Lord President before deciding how to act desires to obtain information as to whether the practice of medicine and surgery by unqualified persons is assuming larger proportions and as to the effects produced by such practice on the public health. It may perhaps be assumed that the Local Government Board is already in possession of information establishing the notorious fact that the Medical Acts are ineffective to attain the expressed purpose of the Legislature, otherwise we would have been disposed to criticize the terms of the first of the two questions which it has addressed to medical officers of health; the point is far wider than the terms of the first question. It is not merely whether unqualified practice is increasing, but whether the Acts are ineffectively drawn to prevent it. The point is perhaps covered by the second question, because the words "such practice" should be taken to refer not to the matter of increase but to the effect of the practice as it exists, whether it be increasing or not, and no doubt medical officers of health will not have overlooked this distinction. As will be seen, one medical officer of health, who has already replied to the inquiry from the Local

Government Board, has drawn attention to the evils arising from the great prevalence of counter prescribing—that is to say, unqualified medical practice by chemists and druggists. There is reason to believe that the term "counter prescribing" does not adequately indicate the whole extent of the evil, for there are cases on record in which chemists have not only prescribed over the counter, but have paid medical visits to sufferers in their own homes. As the Local Government Board and the Lord President of the Council are in an inquiring frame of mind, it might perhaps be well that the Divisions of the British Medical Association should take the opportunity of laying before one or other office information in their possession as to the prevalence of unqualified practice and the injury which it inflicts on the public health.

THE DEVELOPMENT OF TRYPANOSOMES IN TSETSE FLIES.

AT the meeting of the Royal Society on May 6th, the Secretary announced that Colonel Sir David Bruce, who is in charge of the Sleeping Sickness Commission at present in Uganda, had telegraphed to the Society on April 3rd that the Commission had confirmed Kleine's observations on the period during which the tsetse fly is capable of transmitting a trypanosome infection. A letter was received on April 30th from Sir David Bruce, dated Mpumu Chagwe, Uganda, April 3rd, confirming the telegram, and stating that the Commission had "repeated Dr. Kleine's experiments with *Trypanosoma gambiense* and *Glossina palpalis*, also with a 'trypanosome of the dimorphon type and the same 'tsetse flies, and found the flies infective after sixteen, 'nineteen, and twenty-two days.' Thus confirmation quickly comes to Dr. Kleine's original work, and the fact that trypanosomes develop in tsetse flies may now be said to be established. This discovery must of necessity, as was pointed out in the JOURNAL of May 1st, have a considerable influence on the prophylaxis of the human disease, because once the cycle in the fly is completed, it may be capable of transmitting infection for long periods afterwards, just as with the *Stegomyia fasciata* and yellow fever. The *Bulletin* of the Sleeping Sickness Bureau, No. 6, to be issued this week, will contain an article discussing the significance of the observations and pointing out that they should lead to experiments to find out what species of tsetse flies can serve as true hosts for the various species of pathogenic trypanosomes, whether the trypanosomes contained in the blood of an infected person are able at all stages of the disease to infect *G. palpalis*, what is the nature of the cycle of development, and in what part of the fly it takes place. It is noted that in Kleine's experiment the trypanosome transmitted came from a country infested by *G. morsitans*, but yet underwent development in *G. palpalis*, a fact which raises the question whether, since more than one species of the tsetse fly can serve as true host for an animal parasite, why not also for *T. gambiense*, the parasite of man? We have no doubt that experiments of the nature indicated will shortly be undertaken, or have already been commenced. Dr. Kleine, who is director of the German organization against sleeping sickness in German East Africa, is to be heartily congratulated on the brilliancy of his original observations.

ALCOHOL AND PROPRIETARY REMEDIES.

TO many students of the minuter records of the doings at the Courts of mediæval monarchs it may seem that, so far as recorded conversations are concerned, the only wise men were the official jesters. They certainly had the advantage of being able to sail

safely somewhat nearer the truth in their conversation than other people; but in any case it is an old observation that many a wise thing is said in jest. As an instance in point we quote a recent saying of one of the professional jesters of the *Globe* with reference to the new imposts on alcohol.

"The public do not realize," says a doctor, "that in the production of almost all medicinal products alcohol is a *sine qua non*." Can it be that this accounts for the vast popularity of some patent medicines?

The right way to reply to the question would be to borrow an American phrase and say "Got it in once," for the position actually is precisely what is humorously suggested by the querist. Time after time it has been shown that where alcohol prohibition laws are in existence the consumption of certain proprietary remedies rises and falls automatically in precise ratio to the severity with which the prohibition laws are enforced. Nor is this difficult to understand, because though many proprietary remedies are by no means pleasant to take, some of the less unpalatable are little more than disguised alcohol. A proportion of the consumers are perfectly aware of their contents, and buy these concoctions because they provide an easy way of getting the alcohol which they cannot otherwise buy. Nor does this happen only in the prohibition States of America, for in other countries there are persons who would not like to be known as alcohol drinkers, while their constant reliance on a medicine bottle merely excites sympathy. On the other hand, the majority of purchasers of these remedies buy and use them in absolute innocence; they take them because they find themselves stimulated thereby, and are unaware that the stimulation is merely alcoholic. The fact that so many proprietary remedies consist mainly, if not entirely, of coloured, sweetened, or otherwise "doctored" alcohol is not, of course, the only objection to them; but it is one strong objection, and it would be a step in the right direction if vendors of proprietary remedies which contain a considerable proportion of alcohol were obliged to affix to the bottle a full statement of their contents in plain language.

THE ROYAL SOCIETY'S CONVERSAZIONE.

THE first of the two conversazioni given annually by the Royal Society was held at its rooms in Burlington House on Wednesday, and was, as usual, well attended. Several exhibits dealt with radium and the rare gases of the atmosphere. Mr. Francis Fox exhibited samples of pitchblende from Trenwith mine, Cornwall, and specimens of uranium bromide, uranium oxide, and other constituents. Sir William Ramsay showed the properties of liquid radium emanation. Professor J. Norman Collie had an exhibit of perfectly pure neon, which, when enclosed in a tube with mercury and shaken glows with a bright orange-red colour, even at ordinary pressures. If the gas is enclosed with mercury in a silica tube and the mercury boiled, the mercury vapour glows bright green at pressures almost as high as the atmosphere. The most interesting exhibit in this connexion, however, was Mr. T. H. Laby's demonstration of Professor E. Rutherford's method of counting the alpha particles—a marvel of ingenuity and accuracy. By an electrical method a deflection of an electrometer is obtained as each alpha particle, derived in this instance from uranium, passes into a cylinder. Dr. Bashford showed for the Imperial Cancer Research Fund a series of diagrams illustrating recent advances in knowledge of cancer, and a specimen of the kangri, the portable fire basket worn in Kashmir, the use of which leads to cancer of the skin of the abdomen. Dr. Waller

reproduced an experiment first shown by him in 1878 illustrating the electric conditions of the heart, and showing how the different orientation of the heart in man and in quadrupeds may be demonstrated electrically. The eccentric condition in man was illustrated by the fact that the electric phenomena were best shown by dipping the two hands into two beakers of saline, whereas in the dog the best results were shown by immersing a fore and a hind leg respectively. This method of studying the heart's action is not expected to have extensive application in medicine, but it is hoped that it may prove of value in giving additional evidence in certain cases. Mendelism was represented directly only by a case of *Abraxas grossulariata* (currant moth), illustrating sex-inheritance (Mr. L. Doncaster). An account of the results established by the study of the males and females of this variety is given in Professor Bateson's book reviewed in this issue. Incidentally the subject of heredity was touched upon by Professor Karl Pearson, Mr. E. Nettleship, and Mr. C. N. Usher, by some plates illustrating Mendelism and by some pedigrees of man contributed by the Eugenics Laboratory. Other exhibits of interest were some optical instruments, including a new form of optometer for the examination and measurement of defects of vision (Professor W. F. Bassett); the stages in the life-history of the tick, *Ornithodoros moubata*, responsible for the transmission of tick fever (Lieutenant-Colonel W. B. Leishman); and a microscopic section of the aorta of King Menephtah, traditionally regarded as the Pharaoh of the Exodus, showing senile calcification (Mr. S. G. Shattock). Two demonstrations were given in the lecture room, the one by Dr. A. E. H. Tutton, F.R.S., the revelation of crystal structure by polarized light, and the other by Dr. Hans Gadow, F.R.S., of a series of photographs of the scenery, animals, vegetation, and native tribes of Mexico.

THE LOCAL GOVERNMENT BOARD AND PUBLIC VACCINATORS.

EVEN those members of the profession who consider that too much regard is given by medical organizations to questions of remuneration cannot cavil at the action of the Association of Public Vaccinators in seeking an opportunity to be received in deputation by the President of the Local Government Board on the subject of grievances mentioned in the correspondence published in this issue of the *JOURNAL* (p. 1215). The deputation is refused a hearing because the "points" have been brought before the President's notice, and received his consideration. This is poor comfort for those who have received unjust treatment at the hands of boards of guardians, as the grievances remain unabated, and no assurance is given that any steps will be taken to prevent the recurrence of the harsh treatment narrated in the correspondence. If, as is stated by the Local Government Board, there is no power, under the existing law, to prevent the scandals mentioned, a speedy reformation or amendment of the law is strongly indicated. Public vaccinators are subject to the supervision and stringent inspection of the Local Government Board, and common justice demands that they should be protected from vindictive and spiteful treatment such as these cases demonstrate. The reply from the Local Government Board contains a repetition of a principle which the Board professes to recognize. It is asserted that where the offices of district medical officer and public vaccinator are held together the remuneration for each office should be proportioned to the duties of the office. In practice, however, appointments have been sanctioned by the

Board which violate and disregard this principle. Where the holders of these appointments have fought for the establishment of this principle their efforts have been in vain, and in some cases they have suffered dismissal, receiving no assistance or encouragement from the central authority. Concerning fixity of tenure the Board relieves itself from responsibility by shrinking behind the excuse—no power. It has, however, the power to seek such power. Moreover, the position is somewhat contradictory. By the simple process of an Order, known as the Dewsbury Order, the Board recently conferred fixity of tenure on the public vaccinator at Dewsbury. Right comes to all at last, though often slowly, and the battle with the apathy of the department where the just claims of medical officers are concerned must evidently be waged over and over again.

LONDON'S SMOKE PALL.

THE Public Control Committee of the London County Council has had under consideration the question of smoke abatement and the advisability of the Council's powers being strengthened in the matter. At present, apart from the special cases of locomotives on railways and on roads, the County Council has power to act only in default of a borough council. The borough councils, in their turn, find it difficult to obtain convictions under the Public Health (London) Act, 1891, because the sections which confer powers upon them contain so many qualifying words. The only provision of real value is that dealing with "black" smoke, and this limitation of an effective section is unfortunate, as very frequently smoke which is not black is emitted in such volume as to cause a serious nuisance. The Committee advises that legislation should be promoted next session to provide for the deletion from Section 24 of the word "black," to bring the premises of the Government, local authorities, and statutory companies under the operation of the Act, and to enable the County Council to deal with smoke arising from premises outside the boundary and drifting into London. The Committee points out that the million domestic chimneys in London are responsible in winter for probably one-half of the smoke nuisance. Some of the densest fogs have occurred on days when most of the business premises have been closed, and Dr. W. N. Shaw, of the Meteorological Office, states that London loses half its sunshine in winter and one-sixth in summer owing to the density of the smoke pall. A bank of smoke has been observed to rise to a height of 3,000 or 4,000 ft. and to be carried by the wind in a sunlight-obscuring trail for fifty miles. Abolition of the open fire in favour of the closed stove system while it would undoubtedly result in a purer external atmosphere, would sacrifice much of the fresh air within doors, for which open fires, by providing a good deal of ventilation, are largely responsible. The Committee looks for a reduction of domestic smoke from the adoption of firegrates which secure better combustion of coal, and to the growing use of gas and electricity for heating and cooking. The report concludes with the suggestion that yet another subject should be added to the day school curriculum—that instruction should be given to the children in the principles of combustion, so as to make them grasp the fact that smoke is not inevitable, but commonly results from the wasteful use of fuel. With the object of educating public opinion the Committee recommends that power be sought to spend not more than £500 a year in the advancement of measures for the abatement of smoke nuisance. The Finance Committee, however, places a check upon the reforming zeal of the Public Control

Committee. It "views with apprehension" any proposal for obtaining additional powers which might involve the Council in increased expenditure of an unascertained amount.

TREATMENT OF SCHOOL CHILDREN.

WE noted a short time ago that the London County Council had made arrangements with the Queen Victoria Jubilee Institute for Nurses for the treatment of school children suffering from suppurating ears. The scheme provided that there should be given to children found by the school doctor to be suffering from the affection cards intimating that treatment should be provided, the parents being instructed to obtain medical advice. The cards prescribed the form of treatment to be given, the medical practitioner being required only to sign the prescription. To this a footnote was added, as follows: "It must be distinctly understood that the London County Council will not be responsible for the treatment prescribed or given." We learn that the card has now been amended in consequence of a communication sent to the Council by the Metropolitan Counties Branch of the British Medical Association,¹ suggesting that the method of treatment prescribed on the card should be omitted and blank lines substituted, on which the full instructions of the medical practitioner in charge of the case could be inserted. The Branch also took objection to a request to the parent to "consult your own doctor, or take the child to a hospital for advice," on the ground that the children should not be referred to institutions founded and maintained by charity, but if not under the care of their own medical attendant should receive care under a regular medical service. The card was altered in accordance with both these suggestions, and the Council, taking warning from the case to which attention was recently called in this JOURNAL, has substituted words less calculated to frighten parents. The notice as it now runs reads as follows: "This child is reported as having discharging ears. As careful nursing treatment is often efficacious in such cases, the Council is prepared," etc.

THE PREVENTION OF MALINGERING.

A CIRCULAR has been issued recently by the Scottish Mine Owners' Defence and Mutual Insurance Association, Limited, which at first sight would appear to be quite uncalled-for, and apt to be construed as an interference with medical practitioners in the due performance of their duties. The circular referred to—which, we presume, is issued to mine owners insured with the association mentioned—states that its directors have agreed to appoint inspectors to supervise workmen in receipt of compensation for accidents, with the view of seeing that those who have received slight injuries should not remain idle longer than is necessary, and also to assist the medical officers—we presume of the association—in reporting as to the condition of workmen who have received more serious injuries. Three inspectors have already been appointed, all ex-police constables, and the directors propose to appoint others. The circular further states that the directors contemplate making arrangements for further medical supervision in Fife and Clackmannan. It will be noticed that the inspectors already appointed are to assist the medical officers in reporting on the condition of the workmen. One would like to know what is exactly meant by medical supervision by the inspectors. There is much to be said in favour of a system of inspec-

¹ Metropolitan Counties Branch. Medical Inspection of School Children. SUPPLEMENT, BRITISH MEDICAL JOURNAL, April 3rd, 1909, p. 155.

tion, provided it is judiciously carried out. Those medical practitioners who have had much to do with employees in railway companies and industrial works, and especially referees under the Workmen's Compensation Act, must come across many cases of slight accidents in which workmen go on drawing compensation pay long after they are able to resume work. In such cases we can see no objection to the system of supervision as indicated in the circular referred to. An intelligent and tactful lay inspector would prove of much assistance to the medical officer of companies or the official referee; he would be able to report what the medical man could not do, or even be asked to do—namely, the movements of the injured workman. This may seem a system of private detectives, but the matter must be looked at from the employer's point of view as well as from the men's. Workmen who take the advantage of the Workmen's Compensation Act for trivial injuries, which they are apt to magnify, and who, had this Act not been in force, would never think of absenting themselves from work, are a charge upon the industry of the country, which has to be paid out of the earnings of the industry concerned; that is to say, in the long run, partly out of the wages of honest workmen, and partly out of the profits of the employer. With reference to cases of more serious injury, we do not think the services of a lay inspector meet the case; in such cases nothing but skilled advice should be taken. For this purpose the association should employ medical inspectors.

SPIRITUAL MINISTRATIONS IN THE SICK ROOM.

At the annual meeting of the subscribers and friends of the Border Counties Home for Incurables, held recently, the Bishop of Carlisle, who presided, is reported to have said that the clergy were often hindered by doctors in their ministrations to the sick. He went on to say that he was one of those who were thoroughly persuaded that God worked by means in every department of life, and to neglect the means which He had provided in the way of surgical skill and medicinal remedies was really to get out of co-partnership with God in the matter of the art of healing. He was speaking in the presence of a tried medical friend, with whom he had never spoken upon the subject he was about to mention; but he most firmly believed that during the last thirty years a considerable part of the medical profession had been to blame for the development of what he thought was mis-called Christian Science. No doubt they had acted from the highest motives, but it had been quite a common thing for medical men to place difficulties in the way of the clergy and ministers of religion attending sick beds. He dared say that these medical men had met clergy and ministers of religion who had often seemed to be not wise, not calm, not helpful in the sick room, and had found that their ministrations had been medically injurious; and, therefore, on the ground of the medical injury which had been wrought by imprudent and unwise representatives of religion ministering to the sick, they had put great difficulties in the way of the clergy attending to the sick, especially when the latter were in a state of fever and high excitement. Now he was one of those who believed that there was no influence so wholesome, so quieting, so tranquillizing, so remedial, or so medicinal upon the sufferer as the influence of religion brought wisely and calmly to bear upon the sufferer. He was not talking in the air, but he spoke of what he knew, when he said that it was a very great wrong to put any hindrance in the way of an approach to true, calm, and deep religion at the bedside of the affected and suffering. Dr. Henry Barnes, who spoke after the bishop, said, with regard to

Christian Science, that he did not think that all the members of the medical profession were to blame in the respect that had been mentioned. Personally, he had never interfered between a clergyman and a patient, and whenever a patient had expressed a desire for a clergyman to be called in he had always been willing for the latter to come in and give that sympathetic help which the patient required. For our own part, while fully agreeing with the bishop that the influence of religion on those who have faith in its teachings is likely to be beneficial in sickness, we do not think that patients in "a state of fever and high excitement" are in a condition favourable to its operation. But on the general question we believe that the profession at large shares the sentiments expressed by Dr. Barnes. Spiritual ministrations are outside the doctor's sphere of action; his duty is to do the best he can for the bodily welfare of the sufferer under his charge. He has no right to keep the minister of religion out of the sick room unless either from the condition of the patient or from his knowledge of the personality of the clergyman there be reason to fear that his influence is likely to be the reverse of beneficial. There are tactless parsons just as there are inconsiderate doctors. If the patient is in danger of death, the consolations of religion should never be refused him if he or those about him wish for them. With such matters the doctor has as little right to interfere as with the arrangement of the patient's worldly affairs.

THE INDIAN MEDICAL SERVICE.

SOME recent events have produced a feeling of serious apprehension among the officers of the Indian Medical Service. The first of these events is a dispatch, dated December 11th, 1908, from the Secretary of State to the Government of India, stating—according to an abstract published in that country—that he has decided that the time has now arrived when no further increase of the civil side of the service can be allowed, and when a strong effort should be made to reduce it, gradually extending the employment of civil medical practitioners recruited in India. The Government of India is instructed to consider what appointments can best be filled in this way, and in future no appointment is to be made in succession which would involve an addition to the cadre of the Indian Medical Service. We have not had an opportunity of perusing the dispatch, the text of which has not hitherto been published in this country, but there is a fear that it may foreshadow a great reduction in the number of district civil officers. On the other hand, this is not what the abstract of the dispatch—which alone has so far been published—says, and it may not be the intention of the Secretary of State. We understand that his dispatch was a reply to one from the Government of India containing proposals for the building up of an independent medical service in India, to which the well-qualified and best class of native Indian university students should be appointed. It is hoped that this plan may be carried out without affecting the popularity or rights of the Indian Medical Service, but as we have said, we feel that judgement must be reserved until the text of the dispatch has been published. The other matter which has caused anxiety is the appointment of Lieutenant-Colonel C. D. Lukis, I.M.S., Principal of the Medical College in Calcutta, a very excellent officer of twenty-nine years' service, over the heads of all the administrative officers, surgeons, generals and colonels, and over several lieutenant-colonels selected for promotion, to succeed Sir Gerald Bomford as Director-General of the Indian Medical Service. There is a strong feeling that in the interests

of the service no officer should become Director-General who has not had at least a year of military administrative work, and a similar or even longer period of civil administration.

EXOPHTHALMIC GOÏTRE.

In a recent issue of *Ophthalmology*, Dr. Baker has discussed in a very practical manner the future of patients suffering from exophthalmic goitre. It had been asserted that as soon as the disease has been diagnosed the thyroid should be removed: and Dr. Park in a paper on the subject read at Cleveland, seemed to think that unless thyroidectomy were done the patient perished miserably. Baker at the same meeting said that the only fatal case he had seen had died under the surgeon's knife. This remark roused so much opposition that he was led to look up and tabulate all the cases at his disposal. Of 50 cases, 44 still lived and none of those dead died from the disease or its complications. Most of these cases had recovered completely. Baker expresses a strong opinion that the natural tendency of the disease is towards recovery. He finds that tinnitus aurium, though not a symptom, is apt to be aggravated in Graves's disease. Marriage and especially childbirth exerts a favourable influence. The exciting cause is a mental shock, the stress of modern life, or worry. Rest is by far the most important factor in the treatment, but hydrotherapy has proved useful. The medicinal treatment is symptomatic. The patients should be encouraged in every way to believe that they will get well.

THE LATE MR. H. L. BARNARD.

THE friends of the late Mr. Harold Leslie Barnard, whose untimely death at the age of 41 deprived English surgery of one of its most promising representatives, have resolved to publish as a memorial a volume which shall include all his contributions on abdominal surgery. At the time when Mr. Barnard joined the staff of the London Hospital in 1900, he resolved to publish such a volume, and engaged two of his former pupils, Dr. F. Wood-Jones and Mr. Stanley Beale, to prepare drawings of his specimens for the work. Death stepped in when the task was approaching completion, and his friends now propose to carry out his intention. The volume will be edited by Mr. Sherren, and his friend and pupil Dr. H. H. Bashford will contribute the biography. The drawings made are of great merit, and while they will much enhance the value of the work will materially add to its cost, which is estimated at £200. The committee which has been formed appeals to Mr. Barnard's friends and pupils to assist it liberally and promptly by forwarding subscriptions to the Honorary Secretary and Treasurer, Dr. Cecil Wall, 6, Cavendish Place, Cavendish Square, W. Should the response be sufficient, it is hoped to present a copy of the book to every subscriber, and in any case to give subscribers the benefit of a special subscription price of half a guinea; the published price of the book will be 15s.

"IN THE NAME OF THE PROPHET—SOAP!"

We regret that in a paragraph under this heading in the *BRITISH MEDICAL JOURNAL* of May 8th the "statement" of "ment of sober fact" which a medical practitioner felt "in honour bound" to make as to the virtues of a certain soap—sent to him, it would seem, by the manufacturers as a disinterested mark of kindness—the address from which the "statement" emanated was, by a copyist's error, wrongly given. It should have

been 53, not 63, Harley Street, as printed. We apologize for the mistake, but as the full name and qualifications of the grateful recipient of the soap were given, the error of a figure in the address cannot cause any confusion as to the identity of the writer of the "statement," which is published as an advertisement in *Nash's Magazine*. The complainant in this case says, "Let places, no less than persons, receive 'the credit which is their due.'" We assure our correspondent that we had no intention of robbing the highly respectable mansion from which he writes of whatever credit may be its due.

THE CREMATION SOCIETY OF ENGLAND.

THE report of the Council of the Cremation Society of England for 1908, which appears in the *Transactions* recently issued, states that the crematorium at Liverpool, which was built by the efforts of local friends of cremation, under the guidance of Mr. Alfred Holt, has been taken over by the Corporation. That body has appointed a subcommittee to manage it, of which Dr. Caton is chairman, and among its members are Mr. Alfred Holt and Dr. Nicholson, in whose hands the management, while it was a private concern, practically rested. It is further stated that the City Council of Nottingham proposes to apply for a loan to provide a new cemetery, which will include a crematorium. The hope is expressed that the proposal to build crematories which is under the consideration of other city and town councils, particularly those of Bournemouth, Bristol, and Cardiff, will shortly take definite shape. A large increase in the number of applications for membership of the society has resulted from the reduction of the subscription for life membership, and the extension of privileges to any crematorium in Great Britain. Among the persons of note whose remains have been cremated at Golders Green since 1903 may be mentioned W. E. H. Lecky, Herbert Spencer, Sir Leslie Stephen, Sir Henry Thompson (founder of the Society), Sir Henry Irving, Mr. T. H. Wakley, Mr. Thomas Wakley, Sir Richard Strachey, Sir William Randal Cremer, Archdeacon A. S. Aglen, D.D., Mr. H. O. Arnold-Forster, Madame Antoinette Sterling, and Mr. R. H. Boyce, C.B.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Medical Men and the Duty on Petrol.—On Friday in last week the Chancellor of the Exchequer stated in reply to Dr. Cooper that medical men will not be entitled to a rebate of duty paid on the petrol used in their motor cars. On Monday Mr. Joynson-Hicks asked the Chancellor of the Exchequer whether, having regard to the fact that he was proposing to place only half the additional tax upon motor cars owned by doctors for use in their profession, he would, on the same principle, give them a rebate upon the petrol they consumed. Mr. Lloyd George replied that he had already made a considerable concession to doctors in respect of the licences for their motor cars, and he was inclined to doubt whether there was sufficient reason for also granting them a rebate on petrol. In reply to a further question from Mr. Joynson-Hicks, Mr. Lloyd George said that he never liked to refuse representations from any of the interests affected by bills with which he was concerned, but it was a question of time. He would, if he could, certainly meet any deputation which was representative. Mr. Chiozza Money asked whether Mr. Lloyd George would give consideration to the fact that, as the doctor used his petrol in relation to his profession, the duty amounted to a special income tax; but no answer was returned. In reply to another question, Mr. Lloyd George declined to extend to veterinary surgeons a remission of duty on motor cars.

The Spirit Duty and the Cost of Medicines.—Mr. Lonsdale called the attention of the Chancellor of the Exchequer last week to the fact that one effect of the proposed increase of 3s. 9d. per gallon on the duty on proof spirit would be an advance in the price of many medicines, and asked whether he would consider the advisability of granting a special rebate on spirits used in preparing medicines. Mr. Lloyd George said that he had received a number of letters on this point to which he was giving careful consideration. He could not promise anything at present.

Tuberculous Milk.—Mr. Tyson Wilson asked last week with reference to a report by the Sanitary Committee of the Shropshire County Council on a complaint made by the Liverpool Sanitary Authority that tuberculous milk was being sent to that city from Market Drayton, where the cowhouses and cattle were found to be in dirty condition and one cow was affected with advanced tuberculosis, whether the cow was sold and lost sight of, and what steps would be taken by the Local Government Board. Mr. Burns replied that he had seen the report. According to that report the facts were as stated in the question. He found from the clerk to the Drayton Rural District Council that their sanitary inspector attended the auction at which the cow was sold. He had reason to suppose that it would be sent either to Stoke-upon-Trent or to Newport, and he communicated with the inspectors of both places. He subsequently received information showing that the cow had in fact been sent to Newport and slaughtered there, that it had been found unfit for human food, and had been given to pigs. He understood that the cow had been dry for a month or six weeks prior to its sale, and that as soon as it was found to be diseased it was kept isolated. After the sale the cowshed was thoroughly disinfected. There were, as stated in the question, defects in the cowshed, and the district council caused the attention of the agent of the property to be drawn to them. The defects were being remedied. The case did not seem to call for further action. The local authorities and their officers appeared to have taken all practicable steps to deal with it.

Diseased Meat.—Mr. Ffrench asked whether the inspectors at Hull found during the last quarter numbers of livers infected with parasites, such as immature tapeworms and flukes; whether out of ten plucks from Rotterdam six livers were seized in one ship, and six out of a consignment of twenty in another ship; whether, in addition, seven pig livers, one pig pluck, and calf liver were destroyed as unfit for human food; whether all this came in with the Danish Government label certifying it fit for human food; and, if so, what action it was proposed to take? Mr. Burns replied that the facts as to the articles condemned were substantially as stated in the question, except that the consignments appeared to have been contained in packages bearing labels attesting inspection by the Dutch and not by the Danish Government. He had asked to be informed of all cases in which it was found necessary to condemn certified meat such as was referred to in the question, with a view to communication being made to the foreign authorities concerned.

The Public Abattoir, Belfast.—In answer to a question last week, Mr. Birrell stated that the Belfast Corporation decided last autumn to proceed with the erection of a new abattoir, and the necessary plans had been completed. The Corporation deferred taking further action pending consideration of a report to be made by a deputation appointed to visit abattoirs in other countries. The Local Government Board understood that the report would shortly be laid before the Corporation.

Glanders in London.—In answer to a question put by Mr. Anstruther Gray with reference to the prevalence of glanders in London, Sir Edward Strachey said that the London County Council were and had been for some time past taking all possible steps to eradicate glanders in London, and it was hoped that the strict enforcement of the provisions of the Glanders Order of 1907 would prove of considerable service for the purpose. The disease was

not nearly so prevalent in London as it was a few years ago; in 1904, for instance, the number of outbreaks was 1,038, whereas last year the number was 495.

Beri-beri on the Steamship "Cardiganshire."—In answer to a question as to a death from beri-beri on this ship, Mr. Tennant said the man referred to died of beri-beri when ten days out on a voyage from Bangkok to Zandam. The cause of beri-beri had not yet been definitely ascertained, but it was probable that bad and insufficient food might predispose to the disease. He was, however, informed by the owners that the food supplied in the *Cardiganshire* was better and more abundant than the India Government scale required. The man was medically examined before joining the ship, and had been on board nearly three months; but as he developed dropsy four days after joining it was possible that he took beri-beri on board with him. He was not aware whether he had had previous sea service. No other death from beri-beri had occurred on board this vessel during the last three years.

The Cost of Vaccination in England and Wales.—In answer to Mr. Lupton, who asked for the details of expenditure on vaccination, Mr. Burns said last week that the following table gave the particulars desired, so far as it was possible to supply them. It was not practicable to apportion the salaries of medical advisers, inspectors, and other officers of the Local Government Board, who were only partly engaged in dealing with vaccination cases:

EXPENDITURE ON VACCINATION IN ENGLAND AND WALES.

Financial Year.	Remuneration of Public Vaccinators and Vaccination Officers, Costs of Prosecutions, and other Expenses Defrayed by Boards of Guardians.*	Awards to Public Vaccinators.	Cost of Production and Distribution of Vaccine Lymph by the Local Government Board.		
			Salaries and Wages of Staff.	Hire of Calves.†	Other Expenses.
	£	£	£	£	£
1834-95 ..	82,961	9,823	2,369	266	981
1895-96 ..	73,408	14,986	2,322	265	716
1896-97 ..	84,150	13,669	2,334	265	881
1897-98 ..	76,676	10,689	2,346	280	772
1898-99 ..	72,665	13,181	4,227	424	730
1899-00 ..	237,527	7,369	4,680	1,018	2,077
1900-01 ..	233,512	18,582	5,175	1,161	1,844
1901-02 ..	270,628	10,232	5,709	1,377	2,489
1902-03 ..	457,273	12,940	6,318	2,289	2,546
1903-04 ..	321,443	15,205	6,314	1,393	1,878
1904-05 ..	275,828	14,268	6,100	1,169	1,767
1905-06 ..	260,295	16,580	6,118	1,196	1,509
1906-07 ..	243,483	†	5,637	931	1,380
1907-08 ..	†	†	4,743	853	1,303
1908-09 ..	†	†	3,997	710	1,055

* The cost of primary vaccination and revaccination, the costs of prosecutions, and the other expenses referred to cannot be stated separately.

† Figures not yet available.

‡ The expenditure during 1906-7 by County Borough Councils cannot yet be given. The amount paid by County Councils was £16,127.

§ No calves are purchased.

Cregagh District Sewage.—Mr. Devlin last week asked a question as to the delay in connexion with sewage purification in the Cregagh district, and Mr. Birrell replied that the Local Government Board had made a provisional order in compliance with the petition of the Castlereagh Rural District Council for powers to acquire land compulsorily for the purpose of providing a system of sewerage for the Cregagh portion of the district, and this order would be submitted to Parliament for confirmation during the current session. The Board would regard favourably an agreement in the matter between the council and the Belfast Corporation, but it was not within the scope of its duties to effect such an agreement.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND DISTRICT.

MEDICAL AID IN STREET ACCIDENTS.

SOME recent events have shown that it is high time that some uniform arrangements were made throughout the country for the proper recognition of the services of medical men when called to accidents or cases of sudden illness in the streets. A few weeks ago, in answer to a question in the House of Commons, Mr. Asquith stated that in London a fee of 3s. 6d. was paid for cases occurring between 7 a.m. and 7 p.m. and 7s. 6d. between 7 p.m. and 7 a.m., and also that for giving evidence about such cases in the police courts 10s. 6d. was paid if within two miles of the doctor's residence and 2s. 6d. for each additional mile, with a maximum total fee of 21s. But it appears that there is no such arrangement in the great majority of our large towns, and practically nowhere in the country districts. Hitherto authorities have simply trusted to the humanitarian feelings of medical men, and it has very rarely happened that proper medical assistance has not been readily available, even though in most places every medical man knows quite well that in three cases out of four he will never be paid for his trouble. When an accident occurs everybody is ready to run for a doctor, but it often happens afterwards that everybody, even including the patient, denies any liability. It is a fact that the police in some towns have had instructions not themselves to send for a doctor; irresponsible bystanders may do so, and the police are then not liable. It is by no means uncommon for every doctor in the neighbourhood to be called, and in a short time three or four arrive on the scene only to find that the case was a trifling one or that some other doctor has already attended to it, and none of them receive anything for their trouble, though they may have been called away from a surgery full of private patients. The public has been educated to regard services thus voluntarily given without remuneration as a right which it can claim at any time. And though a doctor may have gone to half a dozen cases which have turned out to be trifling, and for which he has never been paid, if by any chance he fails to go to a case which proves serious, he is at once branded as inhumane, even by people who would pass by an accident on the other side of the street. That this is no imaginary picture is seen from a case which has recently occurred at West Hartlepool, where Dr. Morgan, a well-known practitioner, and the last man in the town who should be charged with inhumanity, has been pilloried in the public press for failing to attend an accident in the streets. It appears that he had no intimation that the case was of a serious nature, nor has it even been proved that it was possible for him to attend, and, what is far worse, he had no opportunity of attending at the inquest afterwards to rebut charges made against him. Several cases similar to the above have occurred in Manchester and Salford, and representations have from time to time been made to the authorities. It is satisfactory to state the joint committee of the Manchester and Salford Divisions has now been officially informed by the solicitor to the town clerk of Manchester that the scale of fees paid to the police surgeons "applies also to ordinary medical men when called in by the police to cases of accident or sudden illness in the streets." This scale is 3s. 6d. for attending by day and 7s. 6d. by night, with a fee of 21s. for attendance in the police court to give evidence. The official intimation however continues:

I may add that it very rarely happens that it is necessary for the police to call in ordinary medical men, as by an arrangement with the Telephone Company the police officers can use any telephone, and by this means obtain the services of the police surgeons and horse ambulances in which to convey patients to the infirmary quicker than they could obtain the services of other medical men.

For Salford, the Chief Constable writes: "The fees payable to medical men for attending street accidents in the borough or attending court are upon the same basis as those quoted by Mr. Asquith," that is, the same as given

above for London. Tramway accidents are in a different category, the arrangement being that the Salford Tramways Claims Department will pay 5s. for first aid in any tram accident, but the claim for the fee must be accompanied by a short report of the injuries and any statement the patient may have made with respect to the accident. For first aid alone 3s. 6d. has generally been paid.

It is evident that until some similar arrangement has been made universal throughout the country, there will be constant dissatisfaction; and nothing but an organized demand for the matter to be put on a business-like footing will prevent a repetition of the unfortunate event at West Hartlepool.

WALES.

THE EBBW VALE DISPUTE.

THE Ebbw Vale dispute seems to grow more and more confused. The following paragraph, which we quote from the *South Wales Daily News* of May 4th, describes what, as far as we know, is its latest phase:

The Ebbw Vale Workmen's Doctor's Fund dispute, having existed over three years, is now as far off settlement as ever. A meeting of the Cwm and Wainlwyd section was held at the Public Hall, Cwm, on Monday evening, May 3rd, when Mr. F. Griffiths presided over a large attendance. The chairman, in his opening remarks, gave a summary of the proceedings that had taken place since the signing of the original agreement, and said that the manner in which the second ballot was taken was unfair, and was an insult to the intelligence of the voters. The ballot boxes had been carried about by persons deeply interested in the result; and while he did not attribute any unjust motive, it was nevertheless not above suspicion. It was decided to instruct the solicitor to proceed for the recovery from the fund of the money awarded by Judge Owen in the county court to the Cwm section, and that, as far as the future was concerned, that matters be left in the hands of the committee to proceed in the best and most speedy way to recover what have been incurred since, and that an injunction be applied for.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

DUNDEE AND ITS SANATORIUM.

DUNDEE has missed an opportunity of honour. For some years it has, in dealing with phthisis, pursued a policy which has developed gradually through the stages of sputum examination, voluntary notification, and the establishment of a municipal dispensary. Last autumn the medical officer of health, in his report as a delegate to the International Congress on Tuberculosis, developed a scheme for the complete management of the phthisis problem. The main provisions of this were compulsory notification, municipalization and development of the Sidlaw Sanatorium, and segregation of incurable cases. The sanatorium with its forty beds was to be handed over as a free gift, but without endowment, and the financial burdens involved were estimated to require a rate of 2d. The Convener of the Health Committee met this scheme with enthusiasm and almost too great energy, and succeeded in carrying it through unmodified up to a point at which the transfer agreement had been signed, and the transaction could be closed by securing the sanction of the Local Government Board, which had been promised in advance, and the assent of the Scottish Secretary. Unfortunately, the matter had become complicated by personal questions, and by a proposal to redress an old grievance, due to the astuteness of an ancient official, which confers on Dundee the distinction of being the only place where the health-rate falls entirely on the occupier. The new rate was to be called the sanatorium rate, and was to fall equally on owner and occupier. This evoked the hostility of certain interests which were eventually successful in expressing so much public opposition that the town council which at first passed the scheme with only three dissentients, eventually at a special meeting asked the directors to cancel the agreement. That Dundee has thrown away the honour of being the first city in the kingdom to own a sanatorium for phthisis is a matter of less serious import than the unawakened public conscience it has revealed in the process. This seems to foreshadow neglect, as, of the two other ways in which the phthisis problem may be met, being more probable than a root

and branch method of improving the conditions of housing and employment which would afford appreciable results a generation hence. Any such method is even less likely to harmonize with the visible interests of the Chamber of Commerce and the House Factors Association who have been so successful in their present agitation. One unfortunate result of the present fiasco is that it has impaired the charitable support which was hitherto given to the Sidlaw Sanatorium. The results of treatment in early cases have been excellent, and it will be a catastrophe for Dundee if such relief as the Sanatorium at present affords to the phthisical of that community is withdrawn.

A WEST AFRICAN ARROW POISON.

At a meeting of the Royal Society of Edinburgh a communication was submitted by Sir Thomas Fraser and Dr. Mackenzie, Carnegie Research Scholar, on *Strophanthus sarmentosus*. It was one of the many species of the genus *strophanthus* found in Africa. A considerable number of years ago the seeds of another species came into Sir Thomas Fraser's possession, and were fully examined in regard to chemistry and action, but as the species from which the seeds were obtained was unknown the results were not published. Many efforts had been made to obtain the flower and other parts of that plant, but for a long time were unsuccessful. Specimens of several unexamined species, however, were collected, and among them was a complete and large collection of the fruit and flower of *Strophanthus sarmentosus*, and with the materials thus obtained investigations had been made. *Strophanthus* was found over a large part of West Africa—Gambia, Senegambia, Senegal, and especially in Nigeria. Most of the material had been collected by officers of the Colonial Medical Service. These gentlemen brought under the notice of the authors of the communication the prevalence in Nigeria of the use of poisoned arrows, the main ingredient of whose poison was derived from the seed of the *strophanthus*. A large number of these poisoned arrows had been obtained by the kindness of Sir Frederick Lugard. *Strophanthus sarmentosus* is a creeper or vine. The seeds are small. Sir Thomas Fraser said that the pharmacological investigation was made with an alcoholic extract from which had been removed a large quantity of fat and other inert substances. Because of the therapeutic interest which was attached to the seed of the *Strophanthus hispidus* in the treatment of cardiac disease, the action of the product was fully examined, and the result showed that the contractions of the heart were modified by it much in the same way as by the official drug. It might be expected, therefore, that *Strophanthus sarmentosus* would also become a remedy of much importance and value.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE PERMISSIVE PROVISIONS OF THE TUBERCULOSIS BILL.

A STRONG deputation from the local branch of the National Women's Health Association of Ireland appeared before the monthly meeting of the Coleraine Urban Council, and with statistics and arguments urged the adoption of compulsory notification and other clauses of the Tuberculosis Prevention (Ireland) Act of 1908, which is to come into force on July 1st. Several ladies spoke, and the Chairman said that the urban council had already anticipated much of the work, and was willing to bear its share of the expense of a county sanatorium; the work of the association had its strongest sympathy, and he advised the ladies to bring pressure on the county council.

When it is remembered that on both sides the discussion was carried on by the laity, and that one side was exclusively composed of ladies, the circumstance marks an enormous advance in the education of public opinion and in public health administration.

THE Japanese Government has decided to establish five leper colonies, in which at first about 1,000 patients affected with the disease in a severe form will be compulsorily isolated. The foundation of a leper hospital at Osaka and of a home in the island Kin-Sin is also under consideration.

Special Correspondence.

BERLIN.

Boy Suicides.—Sanitation of German Health Resorts.

GERMAN psychologists and German statisticians are giving much thought just now to the subject of boy suicides, and, indeed, it is time they should do so, for, in spite of the wide publicity given to these deplorable events by the newspapers—even, perhaps, by very reason of that publicity—the wildest notions on the subject seem to prevail. Not only are fantastically high figures circulated and accepted in other countries, but in Germany itself the general belief is that the evil is increasing at an alarming rate, and that overwork and brutal treatment at school are chiefly, if not exclusively, responsible for it. The Prussian Cultus-Ministry placed at the disposal of Professor Gerhardt, a theologian of mark, and himself a school teacher, its large and carefully sifted collection of material on the subject, embracing all the higher-grade boys' schools in Prussia, and covering the twenty-nine years 1880–1908. He has now published a pamphlet with well-arranged tabular information in which the correct figures can be read at a glance. If, in spite of endeavours evidently conscientious, he has not, in some of the inferences he draws from them, been entirely able to overcome certain prejudices inherent in his profession and position, still the figures stand there, and likewise the medical reports on a large number of cases; these speak a language impossible to misunderstand. The tables demonstrate that the average boy suicides, that is, the number compared with the actual number of pupils, though it has varied from year to year, has not increased during the last twenty-nine years. That in fact, except for the year 1908, the average of the last five years has been comparatively low. For instance, in 1883 the proportion was 0.013 per cent. (17 suicides out of 129,971 schoolboys), whereas in 1906 it was only 0.0077 per cent. (16 out of 205,883), these examples being taken at random. The highest proportion, 0.0146 per cent. (20 out of 136,908) was reached in 1889; the lowest proportion, 0.0037 per cent. (5 out of 131,836) in 1882. The figures for last year (1908) were again deplorably high, 0.0124 per cent. (28 out of 224,823). Unfortunately some families resolutely refused to furnish any data or information that could have thrown a light on the suicide, and in a few cases neither family nor friends nor doctor nor teachers were able to give any clue whatever. Undeterred by these blanks in his list, Gerhardt set valiantly to work to classify the information afforded by the cases of the last ten years, a total of 170, and found mental disease, oftenest a hereditary suicidal mania, fully proved in 31 cases. The surmise may be hazarded that the families who withheld all information may probably have done so for fear of disclosing to the world similar hereditary tendencies. In 47 cases no connexion whatever was traceable between school life and the catastrophe. These were none of them backward or (apparently) in any way abnormal, nor had they undergone punishment, or been worried by ironical remarks, or insulted in any way, nor did they go in dread of examinations. They were, without exception, satisfactory, steady pupils of average powers, a few of them distinctly above the average. In one group of cases miserable family dissensions (impending divorce of the parents, illegitimacy, etc.), in another early profligacy and venereal disease with fear of its detection drove the lads to their early death. Unrequited love, à la Werther, and the sudden death of parents gave the clue for the *taedium vitae* of a few others. A few killed themselves out of pure fanfaronade ("what a stir it would make," said one of these misguided boys to a friend), and three were the result of the mysterious contagion that sometimes goes out from dark deeds such as suicide. In conclusion, Gerhardt lays the blame more on the home than on the school, on the want of psychological watchfulness at home, whether it arise from ignorance or indifference. It is, at any rate, certain that his pamphlet will remove a great part of the odium that has rested on German schools so long. Still, the fact remains that the German matriculation, being a very difficult examination—far more difficult, as is believed in Germany, than the

matriculation of other countries—the less diligent or less gifted among the boys, who feel themselves bound to go through with it, or who are kept to it by their parents, are obliged to remain in school bondage at an age when they naturally long for a freer life—that they grow stale at school, in fact. No psychologist will deny the corollary that at so critical an age, and under such anomalous circumstances, terror of not being able to pass the examination after all may largely contribute towards bringing out inherited instincts which, but for such terror, might have continued dormant.

Two days' deliberations were given to the question of obligatory sanitary arrangements in German spas and health resorts by a special committee of medical and hygienic experts. The meetings were held in the hall of the Imperial Board of Health, and members of the Board, besides delegates from the Prussian ministries of trade, and of agriculture, and from the ministries of the various Federal States, were present and joined in the proceedings. The milk supply—especially at seaside places—was one of the chief subjects under discussion, and a schedule of requirements was drawn up. Further, a motion for the obligatory formation of a sanitary committee in every German health resort was carried. The establishment of a Central Balneological Bureau in Frankfurt-am-Main was suggested, and was warmly approved by the meeting. Proper steps towards realizing the project will, therefore, be taken.

Correspondence.

THE BUDGET.

SIR,—I hope you will permit me to criticize the article on p. 1133 of last week's JOURNAL, in as far as it refers to the new tax upon petrol.

Our motor cars are an expensive necessity, not a luxury. I need not advance arguments why we should be classed in common justice with other commercial consumers of petrol.

In my opinion the amount of petrol consumed per mile run, and consequently the gravity of the new tax, has been underestimated in the article. I am prepared to grant that the average mileage may be about 5,000 per annum; it is impossible to dogmatise, but I cannot admit that 200 gallons of petrol would be the average consumption for the above mileage of an 8-h.p. car.

It is conceivable that in a sparsely-populated country district, with good roads, few gradients, and comparatively few stoppages, an 8-h.p. car might average 25 miles to the gallon, but in the case of the ordinary city or suburban doctor every one will admit that the ratio of consumption will be increased by fully 40 per cent.

Take my own case, I have an 8-h.p. car. I practise in and around a large city. I use from 350 to 400 gallons per annum; I cannot give my exact mileage, but I fancy it is not more than the average. The large consumption is due to the frequent stoppages, startings, and turnings incidental to one's routine work, and further to the fact that the car is of low power, and therefore a considerable amount of the work has to be done on second speed in traffic and side streets. When I have had to make a long run I have averaged nearly thirty miles to the gallon.

The amount I am mulcted in at present for my small car as far as taxes are concerned is:

	Per annum.
Self and chauffeur's driving licences	£ s. d.
Chauffeur's Inland Revenue tax	... 0 10 0
Car under 1 ton, Inland Revenue tax	... 2 2 0

£3 7 0

In future it appears:

Self and chauffeur's driving licences	... 0 10 0
Chauffeur's Inland Revenue tax	... 0 15 0
Car over 6½-h.p., half tax	... 1 11 6
8 gallons of petrol per week at an increased cost of 4d. per gallon (3d. tax)	... 6 13 8

£9 15 2

From the information I have been able to obtain from several professional friends, such an estimate is well within the mark. One friend who runs a 10-12-h.p. car, and whose "round" is similar to my own, uses 2 gallons a day.

I hope, Sir, that the JOURNAL will stand by the members in this new imposition by offering a most strenuous opposition to the new tax. As you point out on page 1133, it would be highly anomalous if the petrol were regarded as used for other than "commercial purposes."

In the widespread agitation from all sources against the incidence of the multitudinous proposals contained in the Budget, lies the danger that we doctors may be overlooked.

Further, I hope all medical men—for practically all are motorists or potential motorists—will without delay write to their respective members of Parliament.

The Chancellor's remission of half the licence duty was greeted with a chorus of approval from both sides of the House, and I am convinced that the "petrol tax" is due to an oversight.—I am, etc.,

Higher Broughton, May 8th. W. BRUCE BELL, F.R.C.S.E.

SIR,—It is the ascertained opinion of the medical men residing in this district who use a motor car for the purposes of their profession, that the proposed tax of 3d. per gallon on petrol will be an unfair impost upon them.

That it will be a heavier tax upon them than upon the owner whose car is a luxury is indicated by the following considerations:

1. The doctor's mileage is largest in the winter, the other's in the summer.

2. The petrol consumption of the winter months is considerably greater (owing to heavy roads, etc.), than that of the summer.

3. The continual stops and restarts considerably increase the amount of petrol used.

4. It is admitted by those road surveyors whom I have consulted that the average doctor's car, unlike the heavy, high-powered, and rapidly travelling vehicle, is not responsible for appreciable damage to road surfaces.

These contentions, which can be supported by figures, seem to show that, even if the commercial rebate were allowed, the doctor would still be paying as heavy a tax as his neighbours.—I am, etc.,

J. C. NEWMAN, F.R.C.S., M.B., B.C.

Bishop's Stortford, May 10th.

SIR,—It is probable that the tax on petrol will press more hardly on medical motorists than would be indicated in your editorial on the subject. You assume that 5,000 miles is a fair average yearly run for a medical car and the expenditure at a gallon per twenty-five miles.

With regard to petrol consumption, it must be remembered that in our work, involving as it does such frequent stops, far more petrol is used than in making a non-stop run of the same distance. Thus I have an 8-10 car which on good roads and running straight will do more than twenty miles to the gallon, but which on ordinary roads in winter, and with about twenty stops a day will average only about fifteen miles to the gallon. Again, though your estimate of sixteen miles a day may be right for men in towns with some country practice, it is too low for the country doctor, who will average more nearly thirty miles, or between 9,000 and 10,000 miles per annum. This being so, the petrol tax will tell heavily on us. I know that for myself; I consume 60 gallons of petrol a month. At an increase of 4d. per gallon brought about by the tax that means £1 a month, or £12 a year, rather a big tax on a country doctor. When we learn that there is to be a rebate for "commercial" users of petrol, but that this is not to apply to medical men, I think we should make every effort to have this injustice removed in committee.

For an injustice it is. The "commercial" user, the trader who carries goods or passengers, will, it is quite certain, in the vast majority of cases get his money back at a profit. If not he has his remedy and applies it. With us how very different is the case! Many a time when we start out to see a distant patient we know that the fee, if ever paid, will barely recoup us for expenses, and that as frequently as not we shall never see a penny. It is not equity to give the trader a rebate and to withhold from those who may have to work at a loss from quite other than a commercial motive. I suggest that each medical man interested should write or see his member of Parliament and endeavour to get this injustice remedied.—I am, etc.,

Cupar Fife, May 9th.

C. E. DOUGLAS.

SIR,—Is it not proper for the British Medical Association to take action with reference to the proposed tax on the breathing spaces of towns—those, at least, that are in private hands? The proposal reminds one of the old window tax, in that it inflicts a penalty on the supply of fresh air.—I am, etc.,

Tunbridge Wells, May 10th.

P. C. SMITH.

SIR,—May I ask, Is it fair that doctors owning motor cars should pay only half the tax on their cars, while doctors using horse carriages should continue to pay the whole tax, as if they were used for pleasure and not as a means of earning a "mere living"?—I am, etc.,

May 10th.

AN M.D. WHO DRIVES A CARRIAGE.

SIR,—In regard to Dr. O'Connor's suggestion of making the increased Budget duties a ground for agitating for increased capitation rates for sick clubs, there are, I think, grave objections. That the average rates are too low is undeniable, but surely we have surer and firmer grounds for a higher remuneration than the occurrence of a temporary increase in the drug bill. The prices of drugs vary from time to time and Budgets are soon altered, and if we adopt Dr. O'Connor's suggestion we are forging a two-edged sword that may be used against us later on when the spirit duties are taken off or reduced and the price of drugs fall. To be logical we should then accept proportionately smaller club rates. Does Dr. O'Connor urge this? Such an arrangement can be of no benefit to the doctor, but only lead to friction and confusion.

We were mere retailers of drugs there might be some justification of this course. But I think there is no occasion for the profession to emulate the practice of the "trade," who appear to be making increased charges on spirits absurdly out of proportion to the proposed increased duty, and who (at present at any rate) are doing rather a profitable trade on the Budget.—I am, etc.,

May 9th.

CLUB DOCTOR.

PROFESSIONAL UNION AND THE BRITISH MEDICAL ASSOCIATION.

SIR,—I was interested to see Dr. Horseman's letter publicly acknowledging his debt of gratitude to the Association for what it had done in raising contract fees in his district.

As an incentive and encouragement for other Divisions to co-operate for their own internal and possibly eternal welfare, I should also like to mention what has been accomplished in my Division in that direction.

Some five years ago I was asked to organize, under the auspices of the Division, the union of practitioners in my district by calling upon and securing the signature of every medical man to a bond not to accept any new club without first consulting a committee that was appointed. In this way every man became a candidate on equal terms. The excellent results of this personal canvass are shown in the medical rates of three clubs being raised to 6s., in one case the former scale being just doubled. We have had one failure, a newcomer and non-member of the Association, who first agreed to act in concord with the other applicants for the higher rate, and then accepted the lower.

Last year a meeting was held in conjunction with a neighbouring Division, notice of which was sent to sixty-five general practitioners, and succeeded in obtaining their agreement to a minimum 6s. new club rate, and at our own last annual meeting a resolution was unanimously adopted, making it compulsory for no new club appointment to be accepted at a less rate.

I hope that other Divisions throughout the country will see their way to adopt such a scheme when clubs fall into the market, either by the decease or retirement of their medical officers. Six shillings may not perhaps be termed an ideal minimum at which to rest content, but it is in the right direction, and is certainly preferable to remaining for ever at the 3s. or 4s. rate which spells either slavery or quackery.—I am, etc.,

May 10th.

G. H. GRANT DAVIE,
Hon. Secretary, Manchester (South) Division.

HOME CONDITIONS AND EYESIGHT.

SIR,—With reference to Dr. L. F. Richardson's remarks upon the conclusions of Miss Barrington and Professor Pearson that "there is no evidence whatever that over-

crowded, poverty-stricken homes are markedly detrimental to the children's eyesight," it may be pointed out that generally when the homes are overcrowded the districts in which those homes are situated are also overcrowded, and that these conditions are distinctly detrimental to the children's vision—that is to say, to the acuity of vision.

Some time ago I examined the vision of 1,000 country-town children for the Board of Education and of 50,000 children for the London School Board, the London children being taken from every variety of district. These children for purposes of comparison have been divided into six classes or divisions, in whom the following variations in the quality of eyesight have been noted. (The figures denote percentages of defects):

- I. Jewish children residing in the East End and mostly of Russian nationality, 37.16.
- II. Children of poor working-class parents living in crowded neighbourhoods where there are no wide thoroughfares, 29.04.
- III. Same class as II, but not so much walled in and wide thoroughfares available, 27.0.
- IV. Country-town children, but mostly of poorer class than V or VI, 21.0.
- V. Children living in more or less semi-suburban localities, 19.01.
- VI. Children residing in more outlying suburbs and those attending higher-grade schools, 18.0.

With regard to the East End Jewish children, the organic defects are not greater than in the other children, but they are incapable of being corrected to the same extent as other children. Various theories have been put forward to account for this, but so far none has been found to explain the fact.

It may be mentioned that when children of Classes II and III are sent into the country at holiday times, many of them at a distance of 500 yards cannot distinguish a cow from a cottage, but their vision improves daily.—I am, etc.,

London, W., May 10th.

H. CRITCHLEY, M.D.

SIR,—Mr. Richardson quotes and seeks to explain Miss Barrington's and Professor Pearson's paradoxical statement that there is "no evidence whatever that overcrowded, poverty-stricken homes, or physically ill-conditioned or immoral parentages are markedly detrimental to the children's eyesight." The statement is not only paradoxical, but directly contrary to the experience of any one who has had much to do with an ophthalmic out-patient clinic. Apart from errors of refraction, by far the most common cause of defective vision is the presence of corneal nebulæ, resulting from phlyctenular keratitis, and this disease is undoubtedly associated with bad food, bad air, and parental neglect. How, then, does it happen that the total number of those with defective vision is not (if it is not) greater among these neglected children than among those who are better cared for? The explanation that I would suggest is that among the latter class the proportion of studious children is so much greater than among the former that they are more subject to school myopia, and that this factor, as far as the acuity of distant vision goes, is sufficient to balance the greater prevalence of corneal disease among the less cared for children.—I am, etc.,

London, W.

A. HUGH THOMPSON.

TETANUS OCCURRING AFTER SURGICAL OPERATIONS.

SIR,—I read with interest Mr. Richardson's communication¹ on post-operative tetanus, and enclose a brief note of two cases occurring in my own practice.

H. M., male, aged 10, was admitted to the General Hospital, Birmingham, April 20th, 1898, for tuberculous glands along the carotid sheath on the left side. These were excised on April 22nd, and a satisfactory convalescence followed until May 4th, on which day the boy was to be discharged from hospital. The sister of the ward then mentioned that the patient complained of a stiff neck, and on examination I found the head in a position due to spasm of the left sternomastoid. The patient swallowed with difficulty, but there was no stiffness of the jaw or pain on opening it, no definite twitchings of the muscles; the wound was healed except for a tiny place at the point of insertion of the drainage tube. The subsequent daily history showed a constant increase in the gravity of the symptoms, which became typically those of ordinary tetanus, and on May 7th breathing was very difficult, owing apparently to spasm of the

¹ BRITISH MEDICAL JOURNAL, April 17th, 1909, p. 948.

diaphragm. On May 8th the spasms were very bad, and the patient was given chloroform for a short time, and artificial respiration was performed. He died on the morning of May 10th.

Tetanus antitoxin was given six-hourly, beginning on May 5th and continued till the time of death.

The second case was in a private hospital. A lady aged 35, the subject of early carcinoma of the breast, was operated upon on Halsted's lines on October 31st, 1905. The wound healed *per primam*, and the patient was getting up, but on November 13th it was noticed that she was perspiring rather freely, and again on November 14th: on November 15th pain was complained of in the neck and jaw, and it was found that the muscles of those parts were definitely rigid. From this time onwards the symptoms of tetanus were well marked, and continued to increase until November 25th, when they began to abate slightly, but rigidity of the muscles of the back and to some extent of the abdomen continued until December 8th, when it finally disappeared. Tetanus antitoxin was administered every six hours from November 15th until November 26th, subsequently at less frequent intervals till December 1st, then once a day for three days, then every other day until December 11th, when the antitoxin was discontinued. An occasional dose of potassium bromide was also given, and from time to time morphine when severe pain was complained of and sleep seemed to be badly needed.

An interesting point in connexion with this case is that when I saw the patient's husband and told him of the grave condition which threatened his wife, he said that he had at once recognized the nature of her complication because some months previously he had lost one of his horses from lockjaw, and his wife's symptoms reminded him of those from which the animal had suffered.

Whilst all the elements entering into an operation which is followed by tetanus will naturally be closely scrutinized by the operator, I am bound to say that I had not particularly attributed blame to the catgut employed. My methods of preparing catgut have varied during the period covered by these two operations, but I have always periodically tested the gut by cultivation, and have had no reason to suspect that it was infected by any pathogenic germ at any time.—I am, etc.,

Birmingham, May 15th.

GILBERT BARLING.

SCHAUDINN'S OBSERVATIONS ON HALTERIDIUM.

SIR.—The importance of Schaudinn's work to scientific medicine is so pre-eminent that it would be extremely unfortunate were an impression to become current that on a material question of fact the accuracy of his observations had been successfully impugned. Two separate passages in the last issue of the *BRITISH MEDICAL JOURNAL* (May 8th, 1909) seem, however, to convey the idea that on a zoological point closely connected with the parasitic haematology of man the investigator was mistaken.

Most of Schaudinn's researches were so complex and technical that confirmation has necessarily been tardy; and, for the same reason, in none of them has it been so long delayed as in the case of his work on halteridium. In view of recent observations, however, these criticisms can scarcely be justified; and it now appears to be probable that Schaudinn's conclusions on the developmental changes of halteridium, as on questions of more immediate medical interest, will be fully accepted by zoologists. This agreement is clearly indicated in an article on nuclear dimorphism in halteridium by Dr. H. M. Woodcock,¹ in which, after referring to the work of Lühe and Miyajima on *protoplasma*, he says:

This feature (nuclear dimorphism) in halteridium, even regarded by itself, is, to my mind, most suggestive; and it is with very great pleasure that I bring forward what is, I believe, the first definite piece of evidence tending to confirm one, at all events, of Schaudinn's celebrated conclusions.

—I am, etc.,

London, W., May 10th.

W. CARNEGIE BROWN.

THE CAUSE OF DYSMENORRHOEA.

SIR.—In the *JOURNAL* of April 17th Dr. G. E. Herman returns to the consideration of dysmenorrhoea, and the expression of an opinion as to its causation by so eminent a gynaecologist must perforce command widespread attention.

Dr. Herman remarks that in about one-third of all cases the pain suddenly begins after years of painless menstruation. Thereupon he enunciates a theory of causation which assumes the presence of a centre in the spinal

cord or sympathetic system, having control over the movements of the genital canal. To the imperfect development of this hypothetical centre is ascribed the characteristic pain of spasmodic dysmenorrhoea.

What, then, may I ask, is the degree of development of this centre in the class of patients to which reference has just been made?

Their painless history of years' duration effectively debars any association with such a maldeveloped "sexual" centre, and yet the sequel to their period of normal menstruation, we are told, is dysmenorrhoea. In the course of his address, Dr. Herman again states his well-known objections to the "obstructive" theory of this disease. Nevertheless, in speaking of the normal dilatation of the cervix during menstruation, he adds, "In dysmenorrhoea this natural dilatation is absent, and in consequence the contractions of the uterine body are morbidly violent and painful." Save a mechanical stimulus emanating from the cervix, in what other way can the latter evoke these violent and painful movements from the musculature of the uterine body? Comparison with other viscera affords abundant proof of the fact that such movements of involuntary muscle constantly occur in the presence of some mechanical obstruction.

That "the canal in its undilated, unrelaxed state is quite big enough to let the patient bleed to death through it" may be true of an intermenstrual period, and of that alone; for I am not aware of any observations which have been made as to the patency or otherwise of the cervical canal during the acme of a dysmenorrhoeal spasm, and these alone would be apposite to the question of cervical obstruction. I submit that, during an attack, the lumen of the canal is temporarily occluded by spasm of the cervical musculature, and the consequent relative obstruction thereby produced evokes the painful spasms from the uterine body. Disappearance of the pain in a few hours follows upon dispersion of the cervical stenosis, and is accompanied by establishment of the menstrual flow.

Least the purpose of these remarks be misconstrued, let me hasten to add that I have penned them in no spirit of carping criticism, but with due appreciation of the exact statement and acute reasoning to be found in Dr. Herman's admirable and authoritative address.—I am, etc.,

Dukinfield, May 7th.

GERALD RALPHS, M.B.

COAGULATION TIME OF THE BLOOD.

SIR.—In a letter in your last issue, Professor Sabrazès states that I borrowed and altered his method of estimating the coagulation time of the blood.

Until I received a letter from him, two or three months after the publication of my paper, I did not even know that he existed, much less that he had written a paper on, or discovered a method for estimating, the coagulation time of the blood.

My method was suggested to me by independent observation during routine work on the Widal reaction for typhoid, where the samples are received for examination in small glass capillary tubes.—I am, etc.,

Edinburgh, May 8th.

J. P. McGOWAN.

SIR.—I think my deductions from Dr. Addis's figures are correct. As I understand him, he made three observations a day for fifty days = 150 observations. Of these, the shortest time was 8 min. 45 sec., and the longest 11 min. 41 sec. The longer of these times exceeds the shorter by 2 min. 56 sec., which is 33.5 per cent. of 8 min. 45 sec., and 25.1 per cent. of 11 min. 41 sec. I took the percentage on the smaller quantity because I am accustomed to do so, and find it on the whole more convenient; and on this basis it is, I think, correct to say that there is a difference of 33 per cent. among 150 trials. The variations in each case of his subsequent experiments are very much less than this, and are, in comparison, remarkably uniform.

I have found that the blood last drawn frequently, but by no means constantly, coagulates first. Dr. Addis finds that it constantly does so; and as a method which gives constant results is, *prima facie*, more accurate than one whose results are inconstant, it would seem that his method is to be preferred to mine. On the other hand, I have found in a very large number of observations that the clotting time shortly after a meal is constantly less

¹ *Quarterly Journal of Microscopical Science*, January, 1909.

than the clotting time shortly before a meal, while Dr. Addis has constantly found no difference in this respect. The difference may be due to a difference in the composition of the meals. It is clear that the clotting time is extremely sensitive to disturbance, and very minute alterations in the conditions in which the blood is placed have a very sensible influence upon the rapidity of coagulation.—I am, etc.,

London, May 7th.

CHAS. MERCIER.

TSETSE FLY AND GAE.

SIR,—The intimate association of tsetse fly with buffalo has, as your readers are no doubt aware, been much emphasized recently by Mr. Selous; and I now desire to bring to notice instances of what appear to be an unquestionably close association between tsetse fly and members of the *Suidae*, represented mainly by wart hogs and bush pigs in this country, and widely distributed here as in other parts of Africa.

Some time ago I was informed by one of our medical officers that he had seen *Glossina morsitans* settling on wart hogs he had shot; but I then thought nothing more about the matter. Lately, the resident of an adjoining district, writing on the subject of the distribution of tsetse fly in his neighbourhood, stated that he had observed these flies, which, on the captures being submitted, proved to be *Glossina morsitans*, settle on the carcass of a wart hog literally in hundreds.

I presume that these observations tend, at any rate, to indicate that where there are wild pigs, there tsetse also are present; and further, that the species, *Glossina morsitans*, apparently feeds voraciously on pig's blood.

Last week I received a report from a medical officer stationed at the north end of the lake (Nyassa) in connexion with measures directed against the entry of sleeping sickness into the Protectorate. *Glossina fusca*, a species of tsetse which, it will be remembered, has been shown experimentally to be capable of transmitting *T. gambiense*, had previously been located by two observers at the north end of the lake in a very restricted locality; and Dr. Davey, the medical officer here referred to, proceeded to this spot to ascertain whether the fly was still to be found there. His search proved fruitless, and after travelling about four miles he saw a bush pig, which he bagged. On approaching it he found that what appeared to be tsetse flies had settled on the carcass; but his boy, who carried a fly net, not being with him at the time, he killed two of the flies, and on examination found that they were *Glossina fusca*.

I submit these observations for what they may be worth, and refrain from making any deductions therefrom.—I am, etc.,

H. HEARSEY,
P.M.O., Nyassaland.

Zomba, March 12th.

AN APPEAL.

SIR,—We desire to bring under the notice of your readers the case of a registered medical practitioner of many years' standing, and in good repute in this city. Owing to circumstances of a family nature, not in the least degree discreditable to him, and to his indifferent health of late, he is in urgent want of pecuniary help to enable him to maintain his position. We therefore venture to appeal for that assistance to the members of his own profession, who are always willing to help their brother practitioners.

Any of the undersigned will be glad to receive any donations that may be kindly sent in response to this urgent appeal.—We are, etc.,

ANDREW J. HORNE,

President, Royal College of Physicians of Ireland.

JOHN LINTAIGNE,

President, Royal College of Surgeons in Ireland.

JOHN W. MOORE, M.A., M.D., D.Sc., F.R.C.P.I.,

40, Fitzwilliam Square, Dublin.

CHARLES R. CAMEON, Knt.,

51, Pembroke Road, Dublin.

May 11th.

SEWER AIR.

SIR,—I am glad to note in your annotation on sewer air¹ you mention the work of Dr. David Arthur, which has been somewhat overlooked. My own bacteriological ex-

periments² and topographical investigations corroborated Dr. Arthur's theses as to certain sewers or drains which Professor Delépine expressly excludes from the general application of the results of his valuable and laborious investigations.—I am, etc.,

Norwich, May 8th.

J. T. C. NASH.

Universities and Colleges.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The Admission of Women.

THE following memorial has, we are informed, been submitted to the Home Secretary in reference to the proposed new by-law concerning the admission of women:

[COPY.]

SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Right Honourable Herbert Gladstone, M.P., etc.,
Home Secretary.

SIR,

On behalf of this Society we desire to enter an emphatic protest against the mode of admitting women to the Diplomas of this College contemplated by the Council of the College in the By-law (Section XXVI) now submitted for your approval and sanction.

1. We wish to point out that the proposed procedure under the Medical Act of 1876 (39 and 40 Vict., c. 41) is totally gratuitous and unnecessary, since it is equally open to the College Council to admit women in the same manner as all previous changes in the constitution of the College have been made, namely, by means of an amending Charter.

2. The effect of admitting women under this Act of 1876 must be to create an inferior order of Fellows and Members who are unable to take any part in the government, management, and proceedings of the College. Although the whole property of the College is vested in the existing Members and they provide a very large proportion of the College income, it is unfortunately at present the case that they have no voice in the government or management of the College. Therefore the women Members under the Act of 1876 would not be in much worse case than their male colleagues are at present; but they will be debarred for all time by the Act from ultimately acquiring the same position as the men. The case of the women Fellows under the Act would be, however, different. In the Fellows of the College is at present vested the whole right of electing and sitting upon the Council; they therefore control the entire "government, management, and proceedings." The women Fellows, if this by-law is sanctioned, will be for ever prevented from sharing in this right.

3. We further submit that the adoption of this Act by the Council is a retrograde step in view of the position which women have attained in the profession since 1876. We believe that women are now admitted for degrees or diplomas by all the qualifying bodies except the older Universities (Oxford and Cambridge), but so far as we can learn none of these bodies have utilized the provisions of this Act nor made any distinction between their male and female graduates or diplomates. On the contrary in all the newer Universities provision has been made in the Charters for equalizing the position of the sexes.

4. It will be within your knowledge that a Royal Commission has been appointed to consider the whole question of University Education in London. The Royal Colleges of Physicians and Surgeons have appointed delegates to confer with delegates from the University of London, with the object of establishing a scheme for conjoint examinations between these three bodies, in order that a University degree may be obtainable by the average London student on the same conditions as at the provincial Universities. A joint representation is to be made on behalf of this scheme to the above-mentioned Royal Commission. The position of women graduates under this scheme if this By-law is sanctioned will be anomalous and unprecedented. It is well known that at London University there are no disabilities on the ground of sex. Therefore as regards one of the bodies co-operating in this scheme and granting a conjoint degree women will be admitted on the same footing as men, but as regards the others they will be placed in an altogether inferior position.

5. At the last Annual General Meeting of Fellows and Members the following resolution was carried *unanimously*: "That this meeting is of opinion that women when admitted to the Diplomas of the College should have equal rights with men." In par. I, Section XXVI, it is stated that women will be admitted "on the same terms and conditions as men," but in par. 2 totally different conditions are imposed under the Act of 1876.

6. Last year the Council took a poll of the Fellows and Members on the question whether women should be admitted at all. The result of this poll showed a majority against the proposal. The Council has therefore refused to abide by the result of its own poll. A supplementary poll was at the same time taken by this Society, asking three questions, which the Council

¹ BRITISH MEDICAL JOURNAL, May 8th, 1909, p. 1142.

² "Sewer air and its purification, especially from a bacteriological point of view," *Public Health*, 1902.

refused to include in their poll. One of these questions was: "If you desire that women should be admitted, do you consider that they should be admitted under Charter, with full Collegiate rights?" To this over 90 per cent. of the members replying did so in the affirmative. We therefore ask you not to sanction this By-law on the grounds:

1. That it is unnecessary;
2. That it places women in an inferior position under an Act not adopted by any other qualifying body.
3. That par. 1 is in that contradiction to par. 2.
4. That women will be invidiously treated under the scheme for a future London degree; and
5. That the Council have throughout this matter acted directly in the face of the opinion expressed by the Fellows and Members of the College. Should you require any further information, we very respectfully ask you to receive a small deputation from this Society.

Signed on behalf of the Committee of the Society,

W. G. DICKINSON,

A. S. MORTON,

Hon. Secs.

May 1st, 1909.

PROPOSED BY-LAW.

SECTION XXVI. Admission of Women.—(1) Pursuant to the powers conferred by the Medical Act, 1876, and subject to the provisions therein and hereinafter contained, women may be admitted as Members and Fellows of the College and may obtain Diplomas in Dental Surgery on the same terms and conditions as men; and so far as it is necessary to give effect to this By-law, words in the By-laws and Regulations of the College which import the masculine gender shall also import the feminine gender, and all proper alterations shall be made in the form of the Letters Testimonial, Diplomas, Certificates, and Licences granted by the College. (2) Women shall not be eligible as members of the Council and shall not vote at or take any part in any election of a member or members of the Council, or attend any meeting of Fellows or of Fellows and Members (except meetings convened for the delivery of Lectures or Orations), or otherwise take any part in the government, management, or proceedings of the College. (3) Women shall not be eligible as members of the Court of Examiners or for any Examinership to which the Council appoint.

UNIVERSITY OF LONDON.

KING'S COLLEGE.

Advanced Lectures on Physiology.

THE following two courses of special lectures will be delivered in the Physiological Laboratory, King's College, London, during the present term:

1. A course of eight lectures on the Senses of Hearing, Taste, and Smell, by Professor C. S. Myers, M.A., M.D., on Fridays (May 7th to June 25th), at 4.30 p.m.
2. A course of four lectures, with experimental demonstrations, on the Secretion of Urine, by Professor T. G. Brodie, M.D., F.R.S., on Mondays (June 7th to 28th), at 4.30.

These courses are free to all internal students of the University of London, and to all medical practitioners on presentation of their cards.

UNIVERSITY OF LIVERPOOL.

INSTALLATION OF THE NEW CHANCELLOR: HONORARY DEGREES.

ON Saturday, May 8th, the Earl of Derby was installed as Chancellor of the University of Liverpool, and a number of honorary degrees were conferred upon distinguished persons. St. George's Hall, in which the ceremony was held, was crowded. The handsome, massive mace presented to the university by Dr. Richard Caton, was used for the first time on this occasion.

The Earl of Derby, who succeeds his father in the office of Chancellor, was introduced by the Vice-Chancellor, who conferred upon him the degree of Doctor of Laws.

The new Chancellor expressed his sincere anxiety to follow the traditions of his house by taking part in the public life of the county.

Honorary degrees were then conferred as follows:

Doctor of Laws:

- The Right Honourable Arthur James Balfour.
- Admiral Lord Charles Beresford.
- The Right Honourable Augustine Birrell.
- The Right Honourable Sir John Tomlinson Brunner.
- Richard Caton.
- The Right Honourable the Earl of Crewe.
- Robert Gladstone.
- Sir Donald MacAlister.
- Guglielmo Marconi.
- Field Marshal the Right Honourable Earl Roberts.
- Paul Vinogradoff.

Doctor of Letters:

- Edward Meyer.

Doctor of Science:

- Francis Darwin.
- John Lancelot Todd.

Doctor of Engineering:

- The Honourable Charles Algernon Parsons.

Master of Arts:

- William Fergusson Irvine.

Professor MacCunn, in presenting Dr. Caton, introduced him as one to whom the university owed a far deeper debt than it could ever hope to repay. Eminent and honoured in his pro-

fession, his name would be enduringly associated with the rise and progress of the Medical School of Liverpool, with the arduous labours of the Chair of Physiology, with the philanthropic work of the Royal Infirmary, and with the enterprise of the Liverpool School of Tropical Medicine. To none more than to him did the university owe its translation from dream to conception, and from conception to accomplished fact. He had also carried the instincts and methods of the man of science into the School of Archaeology, and the public spirit of the citizen into the humane and imperious problems of public health and the housing of the poor. Nor, with the memorable tenure of the Lord Mayoralty of the city fresh in their minds, were they likely to forget that in honouring him they were rendering what was due to a citizen in whom lifelong academic ties, sympathies, and services had been united with all that was unselfish, strenuous, and honourable in the traditions of our municipal life. The students who greeted the honorary graduates with songs composed for the occasion and accompanied by the great organ, received Dr. Caton with the following lines:

He's a dear kind doctor,

As kind as ever could be;

He's a dear kind doctor,

For city and 'Varsite.

If you went to Caton,

And tinkled the town hall bell,

The moment he'd take your pulse,

You'd always feel quite well.

In presenting Sir Donald MacAlister, Professor MacCunn said that he was eagerly claimed by Liverpool as one of their most distinguished sons, since it was the privilege of one of her great schools to witness and to hasten the dawn of those commanding and versatile intellectual powers which had won such signal and widespread recognition throughout the length and breadth of the academic and scientific worlds. The University of Liverpool was particularly delighted to honour the distinguished Principal and Vice-Chancellor of the University of Glasgow, which was thrice fortunate in having called to its service the varied knowledge and experience which Sir Donald MacAlister possessed.

In presenting Mr. Francis Darwin, Professor Harvey Gibson described him as one of the foremost authorities in botany, a pioneer in experimental physiology, and the author of a model biography of his great father.

Professor Ronald Ross, in presenting Dr. J. L. Todd for the honorary degree of Doctor of Science, spoke of his distinguished and arduous labours in connexion with sleeping sickness. In 1902 Dr. Todd was recommended to the School of Tropical Medicine by Professor Osler and Professor Adams, and became assistant lecturer on tropical medicine, and afterwards director of the laboratories at Rancorn. Practically at his own expense he furnished the experimental research laboratory of the school. He especially distinguished himself by devoted research in Africa and in Liverpool with regard to sleeping sickness and spirillum fever. The gospel of the prevention of sleeping sickness by organized methods, which he constantly preached, had been accepted by the British Colonial authorities and by the Belgian officials on the Congo. He was engaged with the late Dr. James Everett Dutton, who fell a martyr to work on the Congo expedition of 1903-4-5 on sleeping sickness. On that occasion, working independently, they made discoveries which proved the discovery in British East Africa in connexion with the so-called tick fever made by Dr. Ross and Dr. Milne some time before. Largely owing to the work of Dr. Todd, and that of his collaborators, the Liverpool School had received an increased grant from the British Government. It was with great reluctance that the Liverpool School recently parted with Dr. Todd, but he felt that after six years' absence from his native land of Canada he must accept the post of associate professor in protozoology in McGill University—his own university—that had been offered to him.

EXTRAMURAL SCHOOL OF MEDICINE, EDINBURGH.
DR. JOHN KEAY, Medical Superintendent, Bangour Village Asylum, has been appointed jointly with Sir John Batty Tuke, Lecturer on Mental Diseases at the Extramural School of Medicine, Edinburgh.

CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examination indicated:

THIRD PROFESSIONAL.—C. E. Drennan, M. Drummond, R. A. W. Ford, G. J. Fraser, J. Gornley, P. Grace, F. J. Graham, L. A. Moran, F. H. Montgomery, J. McMullin, T. B. Newman, R. O'Connor, M. A. O'Callaghan, W. Rabby, A. A. Russo, H. C. Smyth, T. M. Thomson, F. W. Warren, R. H. Weir.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

CARDS TO PATIENTS.

W. F. C. W.—There is no objection to information as to a branch surgery being given to patients, but there is always a danger that cards may be handed about and will then be regarded as advertisements.

Medico-Legal.

CHARY JOHN wishes to know the best test for a case of feigned deafness and blindness on one side following a railway accident.

A DEATH FROM CHLORODYNE.

At an inquest held recently by the Coroner for the City of London, the jury brought in a verdict of accidental death from an overdose of chlorodyne. The case had been adjourned in order that an analysis of the viscera and of the stomach contents might be made, since one medical witness held that death was due to heart failure accelerated by alcoholism; while the divisional surgeon of police, Dr. Kearney, detecting the odour of chlorodyne, believed that death was due to this drug, as proved to be the case. The analysis was carried out by Dr. Womack of St. Bartholomew's Hospital, who said that the deceased appeared to have taken about 4 oz. of chlorodyne. Such an amount would contain 1 gr. of morphine, in addition to Indian hemp, treacle, extract of liquorice, and prussic acid. In response to the coroner's inquiries, it was pointed out that purchasers of chlorodyne were not obliged to sign the Poisons Register, because it did not contain quite 0.4 per cent. of prussic acid, or as much as 1 per cent. of morphine. The Coroner said he thought that the law ought to be altered, vendors of secret cures and proprietary remedies being obliged to state the contents on the bottles and wrappers used.

WORKMAN'S COMPENSATION CASES.

Serious and Permanent Injury.

A case (Shenton v. Stafford Coal and Iron Co.), decided by Judge Ruggs at Stoke on April 15th, is important as showing that it may sometimes devolve on a medical referee to decide whether an injury is "serious and permanent." In his judgement, the judge said that the applicant was a miner, and the defence set up was that he had been guilty of serious and wilful misconduct, and that that was the cause of the injury. After hearing the case, he came to the conclusion that the applicant had been guilty of serious and wilful misconduct, and that he came under the section of the Act which said that no workman who brought about his injury by his own serious and wilful misconduct could recover compensation, except in two cases. One exception was that where death resulted, and where compensation was claimed by the dependents, and the other exception was where the injury resulted in serious and permanent disablement to the workman himself. In the course of the case, he expressed the opinion that he was obliged to find on the facts that the workman was guilty of serious and wilful misconduct. Then the question arose, Was the injury of a serious and permanent character? There was a great conflict of medical opinion, and in the end it was decided that the applicant should be seen and examined carefully by an entirely independent medical man, who was one of the medical referees of the court. This had been done, and the medical referee reported to him that there was no doubt, in his opinion, that the injury was of a serious and permanent character. Consequently, the man was entitled to compensation. Workmen, particularly those engaged in mines, should know the great risk they ran of being deprived of their compensation altogether if they deliberately broke the rules of the mine, or if—as was in his opinion equally bad—knowing it was their duty to make themselves acquainted with the rules, they deliberately abstained, as in this case, from making themselves acquainted with them. It was only under very rare circumstances, when these facts existed, that workmen could recover compensation. Fortunately, in one sense, and unfortunately in another—because the plaintiff's injury had been declared to be both serious and permanent—the Act of Parliament, very liberally in the interests of the workman, declared that even where he had brought the injury upon himself by his own misconduct he should still be entitled to receive compensation. The judge said that he did not understand the Act of Parliament to mean that it was necessary for the injury to be lifelong. It must be an injury the effects of which would not be temporary, and it was an injury which might perchance last the man's life.

A Claim in Respect of Ringworm.

In the case of Millington v. Woodward, which was heard at the St. Helens County Court on April 22nd, the applicant had been employed as a blacksmith's improver. He was first employed in August, 1908. At the end of October he was sent to attend a horse which was suffering from ringworm, and in consequence he caught the disease. Judge Sand, after hearing the evidence of the applicant, said he could not see how it could be contended that Millington did not contract the disease from the horse. Dr. Officer said that the lad had suffered from most virulent ringworm. Dr. Jackson, who had examined the applicant for the insurance company, said that on January 25th the lad was perfectly recovered, but there was no doubt that he had had ringworm. The Judge gave an award in favour of Millington for 8s. a week from November 17th up to date.

Loss of a Hand.

In a case which was heard at the Bradford County Court on May 4th the applicant had been at work in the respondent's quarry. When loading a wagon a small piece of shale or stone

flew out and caused a cut on the thumb. Blood-poisoning in the right hand and arm followed, necessitating the amputation of the hand. The employers resisted the claim on the ground that there was nothing to connect the injury with the accident. Judge Graham, in giving judgement, said that he had thought during the argument that the poison might have been introduced into the system by reason of the applicant bandaging the thumb with a dirty rag. Dr. Horrocks, however, a medical man of great experience, had expressed the opinion that the poison entered the system through the wound. His Honour therefore held that the applicant had made out a *prima facie* case. The applicant would have 8s. 8d. a week.

PAYMENT TO MEDICAL WITNESSES IN THE CORONER'S COURT.

R. M. G., a member, makes inquiries into this matter, and many a time and oft we have replied to similar questions, especially those which related to the fees payable to medical officers of hospitals and workhouses, in which our correspondent is especially interested.

"* We would refer our correspondent to the BRITISH MEDICAL JOURNAL of September 14th, 1907, in which we published a full report on the subject, quoting various opinions and interpretations that had been expressed by various local authorities, and the results. The whole question turns upon the reading of Subsection 2 of Section 22 of the Coroners Act, 1887, with which all coroners are familiar. This section is somewhat ambiguous. We believe the coroners themselves are quite ready and willing to pay the medical fees if they were assured they would be reimbursed by the local authorities. It is quite open to "R. M. G." to sue the coroner in the county court, but we should advise him first to consult a solicitor. At the present time a Departmental Committee of the Home Office on Coroners Law is sitting, and a subcommittee of the Medico-Political Committee of the British Medical Association is preparing evidence for submission to it. A bill to amend the Coroners Act prepared for the Association some years ago contained a clause providing that every legally qualified medical practitioner who attended a coroner's inquest in obedience to a summons from the coroner should be entitled to receive remuneration at the rate of 1 guinea for every day such practitioner attended to give evidence.

Public Health

AND

POOR LAW MEDICAL SERVICES.

PUBLIC VACCINATORS AND POOR LAW DISTRICT MEDICAL OFFICERS.

On January 18th, 1909, the following letter was addressed to the President of the Local Government Board on behalf of the Association of Public Vaccinators of England and Wales:

1, Mitre Court Buildings,
Temple, E.C.

Sir,—

The Council of this Association has had before it on many occasions during the past 12 months complaints from Public Vaccinators, who are also District Medical Officers, that they are compelled to do the work of District Medical Officers for inadequate remuneration, the plea of the guardians being that such inadequate remuneration is amply made up by the fees received from Vaccination.

So far has this been carried that in several instances where a Public Vaccinator has resigned his District Medical Officership he has been immediately deprived of his Vaccination Appointment.

This appears to the Members of the Council most inequitable and they would like to lay their views upon the subject before you personally and with that object I am requested to write and ask you to favour them with an appointment when a small deputation could wait upon you for that purpose.

The Deputation would also like to be permitted to mention the question of fixity of tenure, as, in the opinion of the Council, that question is closely connected with the matter above referred to.

The Council will be meeting again on the 29th inst., and I should esteem it a favour if you could let me have a reply to this letter before that date.

I am, Sir,

Your obedient Servant,
(Signed) CHAS. GREENWOOD,
Organizing Secretary.

This letter was acknowledged on January 19th, and on January 28th the President of the Local Government Board asked to be furnished with a short statement in writing of the points upon which the Association of Public Vaccinators desired an interview. To this communication the following reply was sent:

March 31st, 1909.

To the Secretary of the
Local Government Board.

Sir,—

Referring to the Association's letter of January 18th last, and to your answer thereto of the 28th ultimo, and in compliance with the President's request, we now beg to submit the following short statement of the points upon which the Association are seeking an interview:

1. The complaints of public vaccinators who are also district medical officers are as follows:

- (a) That their work as district medical officers is inadequately paid for, because the guardians contend that a part of the remuneration they receive as public vaccinators must be regarded as payment for their work as district medical officers, and reduce their remuneration accordingly.

If this contention is correct, their contracts as public vaccinators are incorrect and misleading, as they are performing their duties as public vaccinators for remuneration below the statutory minimum, and consequently are at a disadvantage as compared with other public vaccinators who are not also district medical officers.

For Example.—(1) The Aston Board of Guardians recently proposed dividing their union into two districts and appointing a whole-time officer in each, but to pay them, in respect of their district medical officers' duties, on a different basis. In one district, with a population of 91,000, the salary as district medical officer was to be £200, whilst in the other, with a population of 114,000, it was to be only £100, and this despite the fact that when this latter district was originally formed your board insisted upon a minimum of £150.

The reason given by the guardians for this difference in salary was that the vaccination was more valuable in the latter district than in the former.

The Newhaven Board of Guardians, when applied to by one of the public vaccinators for increased vaccination fees, refused to grant same, because this public vaccinator, as district medical officer, was considered to be fairly well remunerated.

These two examples of the way in which the remuneration of district medical officers is set off against their remuneration as public vaccinators and vice versa are only samples of what is going on in many unions.

- (b) That in cases where public vaccinators who are also district medical officers resign the latter appointments because of the inadequacy of their remuneration therefor, their contracts as public vaccinators are terminated by notice.

Examples.—1. The Pontefract Board of Guardians peremptorily dismissed the public vaccinators for the Castleford District because they resigned their positions as district medical officers owing to the inadequacy of the salary, which worked out at seven farthings per attendance (which included medicines). The board accepted the resignations, although they admitted that the work was well done, and despite the fact that when the question of the vaccination fees was being discussed the board decided the two appointments were entirely separate, and the vaccination fees were reduced, and agreed upon, the vaccination contracts were forthwith terminated solely because the public vaccinators had felt compelled to resign the district medical officeships.

2. The Poole Board of Guardians in the same manner and for the same reason (namely, resignation of the district medical officership) put an end to the vaccination contract with Dr. M. Eden Paul.

3. Similarly, the Driffield Board of Guardians peremptorily dismissed Dr. A. T. Brand from his post as public vaccinator.

2. As to the question of fixity of tenure:

(a) The Departmental Committee of 1904 appointed to inquire into the subject of vaccination expenses—after pointing out (par. 57) that the position of public vaccinators was a serious one in view of the fact that, although they may have given up the greater part or even the whole of their private practices in order to devote their time to public vaccination, they are merely contractors and liable to have their contracts determined at twenty-eight days' notice—suggested (par. 95) that the law should be amended so that every public vaccinator might become an "officer," "and . . . have fixity of tenure," and "that public vaccinators generally . . . would regard such a change as some compensation for the reduction which we propose should be made in their fees."

(b) The Committee further suggested (par. 96) that when a public vaccinator was under contract for vaccination at the time when any new Act or Order affecting fees came into force he should have the option of remaining a contractor instead of becoming an "officer," in which case no reduction below the minimum fee payable under the Order of 1898 should be made.

Despite the reduction in fees by the board's order of 1907, the suggestions of the Departmental Committee that fixity of tenure should be given as some compensation for such reduction has not hitherto been acted upon.

We are, moreover, requested to inform you that there still exists a strong feeling of disappointment and dissatisfaction in regard to the amount fixed as a minimum fee for domiciliary vaccination, which fee, in view of the obligations entailed and the responsibilities incurred, is

considered under any circumstance at present existing wholly inadequate.

Upon these points, therefore, the Council of the Association are anxious to meet the President and discuss with him more in detail the position of public vaccinators.

We are, sir,

Your obedient servants,
(Signed) ARTHUR DRURY, M.B., C.M.,
President.
CHAS. GREENWOOD,
Organizing Secretary.

To this the following reply was received:

Local Government Board,
Whitehall, S.W.,
May 3rd, 1909.

Sir,—

I am directed by the Local Government Board to advert to your letter of the 31st March last, containing a statement of the points upon which the Association of Public Vaccinators of England and Wales desire an interview with the President.

The points referred to in that statement have been brought to the President's notice, and have received his consideration, and under the circumstances it does not appear to him necessary to trouble the proposed deputation to attend.

With regard to the combination of the offices of district medical officer and public vaccinator, the board recognize that in ordinary circumstances where these offices are held together the remuneration for each office should be proportioned to the duties of the office. But they think that where an officer is required to devote his whole time to public appointments the guardians may properly have regard to the total remuneration which will accrue to him in respect of those appointments. The board have no power under the existing law to prevent the guardians from giving notice to a public vaccinator to determine his contract where he has resigned office as district medical officer, nor are they empowered to give public vaccinators fixity of tenure.

I am, Sir,

Your obedient servant,
(Signed) JOHN LITHBY,
Assistant Secretary.

THE DIPLOMA IN PUBLIC HEALTH.

At a meeting of the Metropolitan Asylums Board on May 8th the Hospitals Committee reported having considered a letter from Dr. H. Kenwood, Professor of Hygiene at University College, London, in which he asked, on behalf of members of his course for the diploma in public health, whether the existing conditions under which the candidates are "signed up for the three months' attendance upon a fever hospital which is required by the regulations for the diploma" can be modified. The medical officer for the general purposes (Dr. Cuff) submitted a full report on the subject, giving in detail the steps which led to the adoption of the present regulations, and pointing out that the present scheme does not accommodate itself to the circumstances of the large majority of the candidates for the diploma in public health. The existing arrangements require candidates who wish to study administration in the board's hospitals to reside therein. The committee had gone into the matter very carefully, and while of opinion that the present arrangements involving residence should be retained unaltered, thought the steps should be taken as suggested by Dr. Cuff to supplement the facilities now afforded by instituting at two of the board's hospitals, as an experiment, classes at which candidates for the diploma might receive instruction in administration without being compelled to enter into residence. They recommended:

That, subject to the sanction of the Local Government Board, the existing facilities for the study of hospital administration afforded to candidates for the diploma in public health is supplemented by the institution at two of the hospitals, as an experiment, of classes for the instruction of candidates in hospital administration without requiring them to enter into residence, and that the Local Government Board be furnished with a copy of the report on the subject by the medical officer for the general purposes (Dr. Cuff). This was agreed to without comment.

CHARGES AT ISOLATION HOSPITALS.

J. L. M.—It is becoming more and more the custom for sanitary authorities to make no charge for patients admitted into isolation hospitals. There is nothing to prevent a charge being made.

EDUCATION AUTHORITIES AND MEDICAL TREATMENT.

F. T. T.—The Education (Administrative Provisions) Act, 1907, Clause 13 (1) (b), gives a local education authority "power to make such arrangements as may be sanctioned by the Board of Education for attending to the health and physical condition of the children educated in public elementary schools." Unless the local education authority has obtained the sanction

of the Board of Education to some special regulation giving the power to enforce treatment, which is exceedingly unlikely, and which would be open to challenge, it would not have a legal right to have a child's hair clipped on one side. It can, however, indirectly insist on treatment being provided by excluding the child and prosecuting the parents for its non-attendance should they fail to have the child properly treated.

Obituary.

CHARLES MACKENZIE MACRAE, M.D.,

STORNOWAY.

A VERY old, if not the oldest, member of the medical profession in the north of Scotland, Dr. C. M. Macrae, of Barvas Lodge, Stornoway, died, at the ripe age of 91, on May 4th. He retired from practice three years ago on account of growing infirmity, and resigned his public appointments at the same time: one of them—that of medical officer of health for Stornoway—he had held for over sixty years.

Dr. Macrae was an M.D. of Edinburgh University, taking that degree as well as the L.R.C.S.Ed. in 1848. He laboured all his professional life amongst the Lewis islands, by whom he was highly respected. For a long period of years he and his colleague (the late Dr. Roderick Millar) had the entire charge of 30,000 inhabitants of the Lewis, scattered over an area of 650 square miles.

Dr. Macrae took a deep interest in everything that concerned the welfare of the Lewis people. He was an Honorary Sheriff-substitute, a J.P., and for many years Chairman of the Stornoway School Board. In 1895, on completion of fifty years' practice in the island, he was presented with an illuminated address and purse containing two hundred sovereigns, along with a silver tray and a tea and coffee service for Mrs. Macrae. He was the author of an article on Lewis in the *Encyclopædia Britannica*, and had written also on the medical topography of the Outer Hebrides.

HERBERT MURRAY RAMSAY, F.R.C.S.EDIN.

It is with great regret that we record the death of Mr. H. M. Ramsay, which occurred on April 29th, at the Cotswold Sanatorium, near Painswick, at the early age of 45. The immediate cause of death was tuberculosis following on an attack of infective pharyngitis contracted in the early autumn of last year.

Mr. Ramsay was the son of the late Captain Douglas Ramsay, R.N., of Aldburgh, Suffolk. He received his medical education at St. Bartholomew's Hospital, and, after taking the diploma of M.R.C.S.Eng. and L.R.C.P.EDIN. in 1885, joined the Army Medical Service, serving with the 1st Battalion Scots Guards from 1888 till 1896, when he retired, and started private practice in Hertford Street, Mayfair. He practised there with great success until incapacitated by the onset of the illness which proved fatal. He was for several years Medical Officer of the Inns of Court Rifle Volunteers, retiring in 1906 with the rank of Surgeon-Major.

Mr. Ramsay was much interested in the welfare of the soldier, and was a prominent member of the Union Jack Club; he was one of the three founders of the Canteen and Mess Co-operative Society, which has for its object the supplying of all soldiers' requirements at the lowest possible price and of the best quality. On the formation of the Territorial Force he was gazetted Lieutenant-Colonel, and put in command of No. 1 General Hospital, but his illness prevented his taking up active duty. The funeral took place at Charlton, near Malmesbury, where he and Mrs. Ramsay were well known, as they were frequent visitors at Charlton Park, and had endeared themselves to the residents of the village and district. The church was completely filled, and among the congregation were many London friends, including several members of the medical profession as well as many villagers who desired to show a last token of respect. The coffin was covered with numerous floral tributes.

We have to announce the death, on May 2nd, of Dr. DONALD MURRAY, for many years a well-known practitioner

in Leith. A native of Stornoway, where he was born sixty years ago, Dr. Murray entered Edinburgh University as an arts student, but subsequently studied medicine and graduated M.B. and C.M. at St. Andrews University. After graduation he settled in Leith, where he very soon built himself a large practice. He was Admiralty Surgeon, and had also medical charge of the troops at Leith Fort.

WE regret to have to announce the death of Dr. D. S. MACDONALD, who for the past nine years had been practising in the island of Jura. His death was indirectly due to an attack of influenza contracted some months ago. A graduate of Aberdeen University, Dr. MacDonald, after making a voyage to Labrador, commenced practice in Inverness, where he remained a few years; from there he went to Sleat, acting as Parochial Medical Officer with much acceptance. Finally, he settled in Jura, where by his devotion to duty he gained the esteem and regard of the inhabitants of that lonely island. Practitioners on the mainland have little idea of the privations of their brethren who, under very trying circumstances, have to carry on their work, in many cases far from any of their brethren, for whose advice and help they would be only too grateful. Dr. MacDonald's practice was in one of these isolated islands, and he will be much missed by the inhabitants, in whose welfare he at all times took a kindly interest. Dr. MacDonald was a widower, leaving three sons who are resident in Canada and two daughters to mourn his loss.

A considerable circle of younger Edinburgh men will hear with sorrow of the removal by death of Dr. DAVID IONE ROBERTS, a gifted and attractive personality. Born in Wales thirty-one years ago, young Roberts studied medicine in Edinburgh with conspicuous success. He was a favourite both with teachers and fellow students. He possessed qualities which made him one of the most companionable of men; he was an accomplished musician, and had a cultured voice of large range; he was an artist to his finger-tips. Soon after graduation evidences of chest weakness showed themselves. Dr. Roberts made a noble stand against the enemy and, devoting himself to work in the field of tuberculosis, took office as medical superintendent in two sanatoriums successively. Only last year, although his strength was not what his friends would have desired, he succeeded in taking the D.P.H., with a view to promotion in public health work. A valuable post was almost within his grasp, when considerations of health prevented his pressing the advantage. Unfortunately, a serious aggravation of his illness occurred this spring, and after a last brave struggle he had to give in. He passed away in Edinburgh on May 4th. He leaves, with many fond memories which will linger long, a record of a beautiful and blameless life.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Professor Hang, Director of the Aural Clinic of the University of Munich, aged 49; Professor Ercole Galvagni, Director of the Medical Clinic at Modena, and author of various writings on clinical subjects, aged 73; Dr. Moissenet, formerly physician to the Paris hospitals; Dr. Richard Fleischer, formerly Professor of the History of Medicine in the University of Erlangen, aged 61; Dr. P. de Almeida Magalhaes, Professor of Medical Pathology at Rio de Janeiro; Dr. Laqueur, Emeritus Professor of Ophthalmology in the University of Strassburg, aged 69; and Dr. Frank W. Draper, Professor of Legal Medicine in the Harvard Medical School, Physician to the Boston City Hospital, and author of many papers on medico-legal subjects, aged 66.

UNDER the will of the late Mr. John Smith, a merchant, of Dundee, the Royal Infirmary in that city receives a bequest of £2,000, while the Royal Victoria Hospital for Incurables in Dundee benefits to the extent of £1,000, and the Gerard Cottage Hospital at Monifieth, where the deceased resided, receives £500.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL.

The offices of the British Medical Association and of the British Medical Journal are at 429, Strand, London.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Asticology, London*. The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

TELEPHONE (National).—

2531, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.

2531, Gerrard, BRITISH MEDICAL ASSOCIATION.

2534, Gerrard, MEDICAL SECRETARY.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

OMEGA asks for a remedy to remove brown spots on the skin produced by bromides.

GADUS asks for information regarding the use of formalin or any other preservative in keeping fish fresh for market.

BAFFLED asks for suggestions as to the treatment of pruritus pudendi, not due to sugar, nor to uterine trouble. Solution of silver nitrate, of tar, and of lead have been tried; also calomel ointment, carbolic lotion, borax and soda lotion, and cocaine ointment. All have given temporary relief, but none has been of any permanent benefit. Is radium useful; and, if so, how is it applied?

CONTRACTS NOT TO PRACTISE: HOUSE-SURGEONS.

DR. J. F. HODGSON (Honorary Secretary, Halifax Division, British Medical Association, Trafalgar House, Halifax) writes: Some provincial hospitals require their house-surgeons to sign an agreement restricting them from practising within a certain distance from the hospital and for a certain term of years from the date of appointment. Can any of your readers supply me with the names of such hospitals, together with the limits of space and of time insisted upon?

ANSWERS.

R.M.G.—The patient was apparently suffering from poisoning by carbon monoxide, which is given off when coke is burned in a cast-iron stove if the latter becomes red hot.

J. J. H.—The Secretary of the National League for Physical Educational Improvement, 11, Southampton Row, W.C., informs us that a list of the institutions where training courses are held for the examinations of the Sanitary Inspectors' Examining Board can be obtained from the Secretary of the Examining Board, Adelaide Buildings, London Bridge, S.E. Particulars as to the examination of the Royal Sanitary Institute and the opportunities of training for it may be obtained from the Secretary of the Institute, Parkes Museum, Margaret Street, W. Particulars as to examinations, certificates, etc., are given in *How to become a Lady Sanitary Inspector*, by a Lady Inspector (30 pp., London Scientific Press, 28 and 29, Southampton Street, Strand, W.C. 1908. 6d. net); and also *Women as Inspectors* (20 pp., Central Bureau for the Employment of Women, 9, Southampton Street, High Holborn, W.C. 1907. 3d.).

ACETYLENE IN PRIVATE HOUSES.

T. J. D.—We are not aware of any harmful effects upon persons living in houses lit by acetylene. Unlike carbon monoxide, acetylene does not enter into chemical combination with the haemoglobin of the blood. There is therefore no danger so long as there is a fair amount of ordinary atmospheric air. Acetylene has to be present in fairly large percentages to do harm, and even then, in animals which have been rendered unconscious by breathing acetylene, placing the animal for a few minutes in the open air is usually sufficient to bring about recovery. Acetylene is an explosive gas when present in atmospheric air to the extent of 5 per cent.

BORAX AND BOILED MILK.

FLEET SURGEON.—The best simple test for boric acid in milk is as follows:

Make about an ounce of the milk strongly alkaline with lime water, evaporate to dryness, and ignite the residue; add

half an ounce of water to the ash and sufficient hydrochloric acid to give an acid reaction, and then a further 15 minutes of the strong acid; dip a piece of turmeric paper in the liquid and allow it to dry. If boric acid or borax was present in the milk, the paper will have a characteristic red colour when dry. Ammonia changes the colour to a dark blue-green, the red being restored on again acidifying with hydrochloric acid. The same test may be employed for butter by mixing about a quarter of an ounce with lime water, evaporating and igniting.

Boiled milk may be detected by the following test:

Add to half an ounce of the milk two drops of solution of hydrogen peroxide, shake, and then add two drops of a 3 per cent. aqueous solution of paraphenylenediamine hydrochloride. With raw milk a blue colour appears at once, or in a few minutes; with boiled milk no blue colour appears even on long standing.

LADY DISPENSERS.

W. S. P.—(1) There are two ways of becoming a qualified dispenser: (a) To take the Assistant's Certificate of the Society of Apothecaries; (b) to take the Minor Certificate of the Pharmaceutical Society. Candidates for the former pass two examinations, the one a practical test of their ability to compound and dispense medicines; and the other an oral examination in materia medica, chemistry, pharmacy, and the translation of prescriptions. They must produce a certificate signed either by a registered medical practitioner or a fully-qualified chemist, or by an assistant of the Apothecaries Society holding a public appointment, that they have received instruction in practical pharmacy for six months. Examinations are held towards the end of the first month of each quarter throughout the year. The fee is five guineas. A syllabus can be obtained on application to the Clerk of the Apothecaries Society, Blackfriars, E.C. Candidates for the Minor Certificate of the Pharmaceutical Society have to pass a preliminary examination in general education, to be approached for three years, and attend regular courses of instruction in botany, materia medica, chemistry, and other subjects, and finally to pass an examination therein. Including examination fees, tuition fees, and the cost of living, the expense of this qualification must be put down as not less than £100.

(2) Holders of Certificate (a) are eligible for appointment at any of the institutions maintained by Poor Law authorities, including the Metropolitan Asylums Board, and are frequently employed at hospitals and dispensaries, and by medical men who conduct dispensing practices. The holders of Certificate (b), the Minor Certificate, are eligible for the same appointments, and also have the advantage of being entitled to registration as chemists and druggists, and of being able to open shops. Hence the prospects of those who hold Certificate (b) would appear to be better than those of the holders of Certificate (a), since the outlook before them is wider. Among the holders of these certificates are a great many women, and it is not certain that the supply does not exceed the demand. Nevertheless, women seem to be adopting pharmacy with increasing frequency, and last year the winner of the Pereira Medal at the School of Pharmacy was a woman student. There is also an Association of Women Pharmacists (Gordon Hall, Gordon Square, W.C.), which would doubtless be ready to supply further details with regard to this occupation.

LETTERS, NOTES, ETC.

"THE HEIGHT OF CREBULITY."

W. H. B. writes with reference to the paragraph under this heading which appeared in the JOURNAL on April 24th: Will you kindly allow me to suggest the reason why the recipients of the "cock toles" also received "a bottle of hair lotion?" No doubt they would be very wild, and the "lotion" would point out to them the advisability of "keeping their hair on."

* * * *Haare lassen* (to shed hair) may be used figuratively as equivalent to "being fleeced." This seems to supply an explanation of the hair lotion.

ERRATUM.

In line 16 of the leading article on Antityphoid Inoculation (BRITISH MEDICAL JOURNAL, May 8th, p. 1140), for 0.8502, read 0.4802.

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A Clinical Lecture

ON

THE EARLY DIAGNOSIS OF CARCINOMA OF THE PROSTATE.

DELIVERED AT THE LONDON HOSPITAL.

BY C. MANSELL MOULLIN, M.A., F.R.C.S.,
SENIOR SURGEON TO THE HOSPITAL.

ONE of the unexpected consequences of the work that has recently been done in connexion with the treatment of enlargement of the prostate is the discovery that malignant disease of the prostate is very much more common than was formerly believed. In the English textbooks of ten years ago cancer of the prostate is described as being of rare occurrence, and the chief symptoms noted are intense pain and profuse hæmorrhage. As a matter of fact, it is unhappily very common, and in many instances there is neither a severe degree of pain nor profuse hæmorrhage until the disease is far advanced. Of the last fifty cases of enlargement of the prostate in which I have been consulted, no less than ten were certainly malignant, and I am afraid two more will prove to be so, though I cannot say definitely yet. My experience may be exceptional, I admit. I do not mean that 25 per cent. of all cases of enlargement of the prostate are due to malignant disease, but only 25 per cent. of those which were brought under my notice. The majority of patients with enlargement of the prostate never consult any one at all, and probably most of the cases that were sent to me came because it was thought there was something unusual about them. Both considerations, of course, reduce the proportion; but, after making full allowance, cancer of the prostate cannot possibly be described as very rare. Others, too, have found the same. According to Young, cancer of the prostate is present in one-seventh of the cases of enlargement in men over 50 years of age. Lewissohn of Heidelberg found 13 cases of malignant disease out of 143, while Albarran and Hallé calculate that it is present in approximately 14 per cent. I have only met with one case of sarcoma growing in the prostate itself, and that was in a boy ten years old, so that the following remarks apply solely to primary carcinoma. Secondary cancer, which is also not uncommon, introduces so many complications that I shall leave it upon one side for the present.

Cancer of the prostate is always of the glandular type. It may be either hard or soft. The former is much more common. In fact, I have only met with three instances of the latter, and Young, in his monograph on Cancer of the Prostate, in the *Johns Hopkins Hospital Reports*, does not appear to have met with any. The growth may originate either in a normal gland or in one that has already been the seat of enlargement for years past. In either case, it rapidly infiltrates the tissue around, flattening the outlying parts to some extent against the inner surface of the capsule, and only penetrates the capsule itself at a comparatively late period. The direction of the growth is almost always upwards, along the course of the ejaculatory ducts—which may be found plugged with columns of cancer cells—filling up the intervesicular space, and spreading from there along the lymphatics into the trigone of the bladder. From thence it grows outwards towards the walls of the pelvis on either side. The urethra may be compressed at an early date, or not, according to the position and direction of the growth, but it rarely becomes actually involved until late. The soft variety is an exception, as this very soon spreads into the neck of the bladder, sprouting out as a fungating, more or less villous mass. Two of the three cases under my care proved fatal from the bleeding that arose from this.

The internal iliac and then the other pelvic glands are the first to become infected. As these can hardly be felt, even when they are considerably enlarged, and not at all when the infection is only recent, it is very difficult to ascertain when this takes place. In many instances there is reason to believe that it is not till very late. Metastatic deposits, on the other hand, are sometimes

found exceedingly early, while the original growth is still quite minute, and are especially common in the long bones and ribs. An excellent instance of this, not by any means unique, is recorded in the *Archives of the London Hospital Pathological Institute*, vol. ii. p. 175. Deposits of carcinoma were found in the lumbar, iliac, and bronchial glands, pleural lymphatics, marrow of right femur and lumbar vertebrae, secondary to a growth in the prostate, which was only discovered by making a microscopic examination. The gland was in no degree enlarged, and exhibited absolutely no naked eye change on section. Further, no signs of infiltration could be detected in the surrounding tissues. The patient, who had been admitted into hospital for excruciating pains in the chest and limbs—so severe as to prevent him from standing—never complained of any urinary trouble until ten weeks before death, when retention suddenly occurred, followed by incontinence of urine and faeces.

The microscopic appearances in cancer of the prostate may be characteristic, but in many instances they are so varied and so complicated by those due to pre-existing enlargement and chronic inflammation that a very exhaustive examination is required before a definite opinion can be formed. There may be a large amount of stroma, with only a few elongated slit-like alveoli between the bundles, so that the whole is as hard as scirrhus; or there may be very little, and that of the most delicate description. The alveoli may be of the most irregular shape and size, and filled with cells until the central cavity is obliterated; or they may be perfectly uniform, lined with a single layer of cells, and enclose a rounded space as regular in shape as if the section had been made through a normal tubular gland. The cells may be cylindrical with a nucleus of moderate size near the base, or cubical, or quite irregular with nuclei of all shapes and sizes. There may be great intra-alveolar growths, indistinguishable from the proliferating intracystic growths so common in the hypertrophied gland, and in the same specimen there may be every gradation between the two extremes. In short, while in some cases the diagnosis with the microscope is perfectly straightforward, in others it is almost impossible, certainly from a single section, to make sure whether the growth is carcinoma, or merely one of those rapidly growing adenomata that occur so frequently in an enlarged prostate. A very good example of this difficulty is recorded by Young.¹ He describes how, in a case in which the cancerous process had grown down into the prostate, probably from one of the vesicular seminales, it was only after a second series of sections and repeated examination that it became evident that what had been taken to be adeno-carcinoma of the prostate was in reality alveoli, packed with epithelial and polynuclear cells, a process of inflammation, and not carcinoma. In several instances under my own care I have found the same difficulty. In many parts the growth appeared to consist almost entirely of tubules, perfectly uniform in shape and size, with no appreciable difference from the normal ones, yet spreading into and under the trigone of the bladder, and even between the muscular bundles. Nor could I find any evidence of infiltration of the stroma by epithelial cells. Albarran and Hallé have applied the term "epithelioma adenoid" to some of these appearances which suggest the beginning of malignant formation in lobules apparently purely adenomatous. Whether such a borderland as diffuse adenoma is advisable or not, it is quite evident that at present a considerable number of cases occur which are very doubtful in character: and some of which the one described in the *Archives of the London Hospital Pathological Institute* is an instance, in which a positive opinion is impossible without a prolonged investigation. Unfortunately this detracts considerably from the value of Young's proposal, that in doubtful cases a section should be made and examined on the spot, while the operation for removal is proceeding; for it is in just those cases in which the clinical diagnosis is most difficult that the microscope is most likely to fail.

The age of my patients ranged from 45 to 79 years, the majority being between 58 and 65. The duration of the symptoms before they came to see me varied from less than a month to over twenty years. This, of course, depended on whether the cancerous growth originated in a gland otherwise normal, or, as more frequently happens,

in one that was already the seat of some degree of enlargement. Whether the growth was hard or soft, the symptoms were the same in character as those present in the ordinary non-malignant form of enlargement—increased frequency of micturition; delay at the beginning, dribbling at the end; a certain degree of urgency; pain, which in the later stages sometimes became very severe, and hæmorrhage. The distinctive feature was the rapidity with which these symptoms progressed when once they had set in, and the degree of severity to which they attained in a very short time, without there being cystitis or any similar cause to account for it.

Increased frequency of micturition was present in them all. In some it had been present for years, in others it had begun quite recently; but there was this feature about it—a feature the development of which one of my patients who had already suffered from increased frequency for some time himself noted to me—that the disproportion between the frequency during the day and during the night was not nearly so great as it usually is in cases of simple enlargement, and that the act of micturition did not give the customary degree of relief. As a rule, if there is no cystitis or calculus in a case of enlargement of the prostate, the act of micturition is followed by a period of comfort, which lasts for a longer or shorter time. In carcinoma it is not; relief is not complete. The desire is always there, though it may be less immediately after the completion of the act, and this naturally leads to a very rapid increase in the number of times. A patient with non-malignant enlargement of the prostate has often risen once or twice every night for many years before the frequency becomes so great as to suggest the propriety of seeking advice. In malignant disease, whether it originates *de novo* or is consecutive to enlargement, the frequency often becomes as great in as many months.

Another point of some value in connexion with this is the effect produced by passing a catheter. The passage of a catheter for the first time in a case of enlargement of the prostate is always a serious matter, but unless there is some exceptional feature present, such as unusual difficulty causing hæmorrhage from laceration of the mucous membrane, it is not followed by any local irritation. The patient has not to pass water more frequently. On the contrary, perhaps because the bladder has been emptied more thoroughly than usual, he can often wait a longer time. This is not the case when carcinoma is present. Nearly always it will be found that in these circumstances there is a definite increase in frequency afterwards which only subsides at the end of twenty-four hours; and if an attempt is made to treat such a case by the habitual passage of a catheter the last thing at night, it will very often be found that the symptoms are aggravated rather than relieved. Much, of course, depends upon the exact position of the growth, but in no case is it very long before the hyperæmia that surrounds a growing focus of carcinoma succeeds in reaching the urethra, and making its lining membrane more sensitive.

Pain, when it occurs in association with enlargement of the prostate, is always serious. In the ordinary form of enlargement there is no pain. When it does set in, it is due to the presence of some complication, such as cystitis or calculus. Sometimes under these conditions pain may be very severe, but whatever the degree it is always associated with the act of micturition, and almost invariably is described as shooting down the urethra to the end of the penis. When the enlargement is due to chronic inflammation, whether tuberculous or gonorrhoeal, pain is not uncommon, but this too is associated with micturition, and is only severe when there is ulceration at the neck of the bladder. In these cases, however, there is often besides this a sense of uneasiness and fullness in the perineum. The patient will volunteer the statement that he often has a certain amount of discomfort there, and that this is relieved by firm continued pressure, but it is rarely spoken of as actual pain. In cancer, so long as the growth is small and placed so that there is some thickness of normal prostatic tissue around it, there may be no pain. As, however, the growth enlarges and begins to stretch, or still more to involve the capsule, pain seldom fails to make itself felt. But this pain differs in many respects from that which is present in cases of cystitis or calculus. It is constant day and night, and is referred to something deep in the perineum, almost in the rectum, so that the patient

imagines there is something pressing forcibly against the wall of the bowel. It bears no relation to micturition, and though it may spread down the urethra even to the glans, it is not confined to that region, nor felt most severely in it. Later still, when the malignant growth has spread beyond the capsule, and has begun to involve the structures around, the pain may become agonizing, radiating down all the branches of the sciatic plexus. One patient came to consult me because of sciatica, which nothing seemed able to cure, and which was growing worse every day. It was bilateral, but worse upon the right side, and was continuous night and day. The prostatic symptoms from which he suffered he regarded as of no importance, but on examining him per rectum, the cause was only too plain. There was an extensive growth of stony hardness spreading up from the prostate, and firmly fixed to the wall of the pelvis on either side. Pain such as this is characteristic, but unfortunately when it occurs the diagnosis is usually already obvious, and the only treatment possible is palliative.

Hæmorrhage is not an early symptom of carcinoma of the prostate, and it is such a common occurrence in connexion with the simple form of enlargement, that it is only under special circumstances that it can be considered a symptom at all. In the hard variety of carcinoma, which is the most common, there may never be any hæmorrhage. It is usually present when the growth has ulcerated, but the quantity is rarely large. As usual when the source of the bleeding is at or near the neck of the bladder, the blood precedes, or more often follows, the stream of urine. It is not mixed with the urine, but this is equally true of many other lesions in the same locality. Hæmorrhage is only characteristic when it is causeless, frequent, and profuse, like that which occurs in villous tumour of the bladder. The soft form of carcinoma, when the growth has spread into the bladder, resembles this in many ways. It is quite as vascular, and the walls of the vessels are equally delicate. The least injury, even the contraction of the bladder wall around it, is sufficient to make it bleed. When the bleeding once begins, it is almost impossible to check it, for everything that is done only injures another portion of the growth, and makes that bleed. In two out of the three cases of soft carcinoma under my care, the hæmorrhage proved fatal, in one directly, in the other from loss of strength entailed by the continued drain of blood.

The physical signs in the early stages of carcinoma of the prostate are vague and ill-defined. If the growth originates deep in the substance of a gland that is enlarged already, they may be altogether wanting for a time. As in the case I mentioned before, it sometimes happens that they remain latent throughout. As a rule, however, by the time the symptoms have become sufficiently severe to induce the patient to seek advice, the physical signs are plain and well marked. The stony hardness of the prostate, when examined from the rectum, is the most striking feature of the ordinary variety of carcinoma. In the early days this may be limited to one or more areas, the intervals between which are still soft and elastic. Later, these areas fuse together, and the whole gland becomes intensely hard, inelastic, and unyielding. In chronic prostatitis, and in that form of fibroid enlargement which resembles it so closely, the gland is often harder than natural, but it very rarely attains the peculiar stony feel which characterizes the common form of carcinoma. The finger can make no impression upon it. The soft variety of cancer is entirely different. I have not met with any instance in which the growth was still limited to one portion of the gland. In none of the cases under my care was there any material increase in size on rectal examination. The surface was uniformly soft and pulpy, not elastic or fluctuating; and the margins were ill-defined, so that the upper border of the gland could not well be distinguished from the adjacent portion of the trigone. The gland was flatter than normal. It had quite lost its natural rounded contour, and instead of meeting the finger at once, as it entered the rectum, the prostate had, as it were, to be felt for. This, of course, is what might be expected from the growth of a soft carcinoma enclosed on all sides, except towards the bladder, in an unyielding fibrous capsule. The firm normal tissue of the prostate is replaced by a much softer substance, which spreads in the direction of least resistance, and leaves the capsule unsupported.

The shape of the prostate when it is the seat of malignant disease may be as characteristic as the consistence, but here again the same reservation must be made. The alteration may make its appearance early and be well marked, or there may be no alteration at all, even to the end. In the simple form of enlargement the gland, as it increases in size, pushes all the surrounding structures to one side. It swells out towards the rectum as an elastic rounded mass, very variable in shape, perhaps studded on the surface with bossy elevations, differing from the rest in consistence, but the contour remains well defined, even in the small fibroid variety. The upper border is convex from side to side, or, if concave from the extreme upward growth of the two lateral lobes, it is steeply cut and rounded off. At the sides the margins of the gland are clear and distinct. The trigone beyond is free, or if there is a growth spreading into it, it forms a defined invading mass, not a general infiltration. Malignant disease, on the other hand, infiltrates everything. Almost always the first part to become affected is the tissue surrounding the ejaculatory ducts, so that what feels to the finger like a horn of growth spreads upwards on either side towards the vesiculæ seminales, and at last spreads into them. Then the intervesicular space becomes thickened—this is much better appreciated when there is an instrument in the bladder at the same time. In a little while the change involves the tissues on either side and around the base of the prostate. The margins of the gland can no longer be defined. Hard cords can be felt running up towards the walls of the pelvis, and very soon the prostate becomes fixed and immovable. In the later stages of the disease, when it is advanced, the diagnosis is easy. In the earlier ones the difficulty may be very great; and, as it is imperative to make certain whether cancer is or is not present, it is always advisable to examine the patient under an anaesthetic in the lithotomy position, while firm pressure is being made over the pubes, so as to force the prostate down into the perineum.

The cystoscope is, unfortunately, not of much service in the early diagnosis, though it gives valuable information later. Much more can be learnt from the passage of a catheter, especially if a rectal examination is made at the same time, so as to form some conception of the condition of the intervesicular space.

It is always a matter for gravesuspicion if the characteristic symptoms of prostatic enlargement have made their appearance suddenly—within a twelvemonth, for example—and if on passing a catheter in expectation of finding a large amount of residual urine, an ordinary olive-pointed instrument slips in easily and only a few drops come away. It means that all the ordinary symptoms of prostatic enlargement are present without any overgrowth of the median portion or of the lateral lobes to account for them. Perhaps this—the disproportion between the symptoms of which the patient complains and the physical signs that are found on examination—is the most significant point of all in the early diagnosis of cancer. From what the patient says about himself, a well-marked case of prostatic enlargement with residual urine is expected. What is found is a very slight degree of enlargement with nothing that will explain the frequency of micturition. If in such a case the patient complains of a constant pain in the perineum; or if there is a nodule of stony hardness in the prostate, or an extension of the growth towards one of the vesiculæ seminales; or if when a sound is introduced into the bladder and the beak is reversed, there is definite thickening of the intervesicular space, the diagnosis hardly admits of doubt.

With regard to the question of treatment there is very little to be said. Suprapubic enucleation should never be attempted for cancer. Except by accident the whole growth cannot be removed in this way. The operation is not one suited to cancer. Recurrence *in situ* is almost invariable, and from thence the growth spreads to the suprapubic wound, or involves the orifices of the ureters. The only method that holds out any hope of success is that devised by Young, in which the whole of the prostate with its capsule intact, the vesiculæ seminales, and the adjacent portion of the neck of the bladder are removed *en masse* through the perineum.

REFERENCE.

¹ Johns Hopkins Hospital Report, vol. xiv, p. 233.

An Address

ON

THE DIAGNOSIS AND TREATMENT OF SOME COMMON INFLAMMATORY AFFECTIONS OF THE EYE.

FROM THE STANDPOINT OF THE GENERAL PRACTITIONER.

DELIVERED BEFORE THE STRATFORD DIVISION OF THE BRITISH MEDICAL ASSOCIATION,

BY E. E. HENDERSON, M.B., B.C., F.R.C.S.,

OPHTHALMIC SURGEON TO THE WEST HAVEN AND EAST LONDON HOSPITAL.

In discussing the differential diagnosis and treatment of the common inflammatory affections of the eye from the standpoint of the general practitioner, I propose to limit myself to three affections—namely, conjunctivitis, iritis, including cyclitis, and acute glaucoma.

All three are accompanied by at least two of the cardinal symptoms of inflammation—redness and pain—with the addition of one other, the peculiar property of the region affected, photophobia. This last symptom is probably somewhat inaccurately named, as the nerve affected is the fifth nerve, which is not sensitive to light. The shrinking from light displayed is due more to exposure to the air and variations of temperature than to any direct action of the light rays.

Well marked cases of these three affections should present little difficulty in diagnosis, but in the early stages, before some of the more characteristic symptoms have had time to make their appearance, a most careful examination of the affected organ may be necessary before arriving at a satisfactory conclusion, and it is to be remembered that any mistake in treatment may be followed by the most disastrous consequences.

Recognition of Ciliary Injection.

In the differential diagnosis between these three affections the presence or absence of ciliary injection plays a most important part, I therefore propose briefly to recapitulate the points that distinguish ciliary from conjunctival injection.

In conjunctival injection there is present a superficial network of larger and smaller vessels, readily movable with the conjunctiva. The colour of the injection is a vivid scarlet or brick red, and cannot, owing to the freedom of the collateral circulation, be made to fade on pressure with the finger. This form of injection is most intense on the lids, and diminishes towards the cornea.

Ciliary injection, on the other hand, occurs as a rose-red or pale-violet zone surrounding the cornea, in which it is impossible to recognize clearly the individual vessels, and which is not movable with the conjunctiva. In the more severe cases of ciliary injection a coarse network of vessels at a greater distance from the cornea is also visible; these may be distinguished from conjunctival vessels by their hazy appearance, violet colour, and immobility relative to the conjunctiva. Owing to the numerous anastomoses between both sets of vessels, severe inflammatory affections of the uveal tract are always accompanied by a certain amount of conjunctival injection, but the essential point is to recognize the existence of the ciliary injection, as this always indicates inflammation of some structure deeper than the conjunctiva.

Symptoms and Treatment of the Ordinary Forms of Conjunctivitis.

The subjective symptoms will naturally depend on the severity of the case, but it may be stated that severe pain is only met with as the result of some complication, such as ulceration of the cornea. Complaint will be made of discharge from the eyes, with itching and burning sensations, generally becoming worse towards night. Vision is interfered with by the passage of flakes of discharge in front of the cornea. The discharge tends to glue the lids together during sleep.

On examination the surgeon finds that conjunctival injection is present, confined at first to the palpebral surface, and most marked in the lower cul-de-sac.

For clinical purposes the various forms of conjunctivitis may be arranged in four main groups, in accordance with the presence or absence of the following symptoms:

1. The nature of the discharge, muco-pus or pus.
2. The presence of a membrane.
3. Chronic irritation with little or no discharge.
4. A miscellaneous group, in the course of which ulceration and vascularization of the cornea are prone to occur, and not characterized by the presence of discharge.

In any case in which discharge is present a bacteriological examination should be made. Its results, indeed, are frequently disappointing, nor is this surprising when the exposed situation of the conjunctiva is considered. Nevertheless, the great importance of the recognition of the presence of the gonococcus, streptococcus, or the bacillus of diphtheria, makes the examination of the discharge or membrane of great importance in all the more severe cases.

There are three main principles underlying the treatment of all varieties of conjunctivitis: First, the due recognition of the contagious nature of the discharge. This must be impressed on the patient and his friends or attendants. Nothing that has been contaminated by the discharge must be allowed to be used by any one else. Should some of the discharge be conveyed by a splash or in some other way to the eye of an attendant or surgeon, it must be immediately removed by free irrigation with 1 per cent. boric acid lotion, and the irrigation should be followed by the instillation of a few drops of 20 per cent. protargol. In the more severe purulent cases the patient should be completely isolated, and steps taken to protect the second eye, should only one eye be affected when the patient comes under observation.

The second main principle is to provide for the due removal of all secretion, and to prevent the gumming of the lids, which by closing the palpebral fissure converts the conjunctival sac into a closed cavity.

Thirdly, we attempt to destroy the vitality of the micro-organisms that are producing the disease by the application of certain chemical agents.

Acute Purulent Ophthalmia.

The most frequent cause of purulent ophthalmia is the gonococcus, and if early treatment is not successfully adopted the loss of the affected eye is an event only too probable.

If, as is frequently the case, only one eye is affected, the surgeon should first examine the apparently sound eye, and should this show no sign of inflammation, take immediate steps to protect it from contamination. This is best done by the use of a Buller's shield, but until this can be procured or improvised the sound eye can be efficiently protected by means of cyanide gausee tissue securely fixed with a bandage. When a Buller's shield is employed, constant attention must be directed to the strapping over the side of the nose, and a vent-hole should be made near the outer part of the eyebrow by inserting a small piece of drainage tube. The shield must not be removed until all discharge from the affected eye has ceased. The next step is the careful removal of all discharge from the affected eye by gentle irrigation with warm 1 per cent. boric acid lotion. The surgeon or attendant should always wear protecting goggles while engaged in the treatment of any of these severe ophthalmias. As soon as the eye is sufficiently clean the lids should be gently separated and the cornea examined. Should there be any doubt as to the presence of any ulceration, a drop of fluorescein solution is instilled. If the cornea is as yet unaffected, the lids are gently inverted without allowing anything to come in contact with the cornea—the slightest abrasion being sure to become infected, with disastrous consequences to the eye—and painted with a 2 per cent. solution of silver nitrate by means of a wisp of absorbent cotton wrapped round a glass rod. If the conjunctiva is very brawny and oedematous, this painting had better be omitted. There is no necessity to neutralize the excess of silver solution; it is sufficient to mop the conjunctiva with a pledget of wool.

The patient is kept in bed and provided with some absorbent cotton, and a basin of warm boric acid lotion, and instructed to wipe away the discharge as fast as it is secreted. Every hour or two during the day and at least

every four hours during the night the conjunctival sac is thoroughly irrigated with the same lotion from an undine by the attendant. A little boric acid ointment should be smeared on the lids to prevent them from sticking together.

The silver application should also be repeated daily, the strength and frequency of the applications being gradually diminished as the case improves.

If the cornea becomes affected, 1 per cent. atropine should be instilled every four hours, and if the discharge is still copious and an actual ulcer has made its appearance, 2 per cent. silver nitrate solution should be stippled into the base of the ulcer, but if the discharge has nearly ceased, cauterization with pure carbolic or the galvano-cautery will be advisable. If the ulcer is obviously about to perforate, as shown by the bulging of Descemet's membrane, a small perforation should be made so as to allow the aqueous to escape slowly, and thus prevent a large perforation with prolapse of iris. The later treatment of eyes in which perforation of the cornea has taken place and left a prolapsed iris adherent to the cornea falls outside the scope of this paper; it is sufficient to state that unless operative steps to free the iris or make an iridectomy are taken the eye will be lost through secondary glaucoma.

Ophthalmia Neonatorum.

Ophthalmia neonatorum, which is also in the majority of cases due to the gonococcus, demands similar treatment, but as both eyes are always affected there is no need to protect one. This affection is not so severe as the disease in adults, and if the case is seen before any affection of the cornea, a successful result should usually be obtained. A unilateral discharge of pus is occasionally met with in infants, due to an infection of the lacrimal sac. If keeping this squeezed out and the eye cleansed with a boric acid lotion fails to effect a cure, it is generally easily remedied by the passage of a fine lacrimal probe down the nasal duct, after dilatation of the canaliculus.

The first examination of an infant with ophthalmia neonatorum must be conducted with extreme gentleness, and should there be any reason to suspect that the cornea is affected it is safer to administer a general anaesthetic than to run any risk of increasing the damage owing to the struggles of the patient.

This affection is still, I regret to say, one of the commonest causes of irremediable blindness, and I am convinced that if Credé's method of applying silver nitrate to the eyes of all newly-born children, when there is any reason to expect the possibility of infection, was systematically carried out, it would become one of the rarest.

Muco-purulent Ophthalmia.

Muco-purulent ophthalmia may be due to a great variety of organisms, but the general principles of treatment conform to the account just given. It is generally unnecessary to repeat the application of silver, but the course of the affection is undoubtedly shortened by painting the lids with a 1 per cent. solution of silver nitrate at the first visit. The pain of the application may be much diminished by the use of cocaine, but this is inadmissible in the purulent affection from its damaging effect on the corneal epithelium; if in addition the lids are once more everted a quarter of an hour after the application, and the coagulated epithelium gently removed with some absorbent wool, no lasting irritation will be caused.

A lotion of 1 per cent. boric acid with 0.5 per cent. sulphate of zinc and some boric acid ointment are prescribed. The patient is instructed to lie on his back with the head on one side so that a little pool of lotion can be retained between the nose and the closed lids. A dozen drops are then placed in this position by means of a pipette, the patient meanwhile keeping the lids closed. He then with the hand draws the lids away from the globe, so that the lotion runs well into the fornices. After drying the superfluous lotion with some absorbent wool, a little of the ointment is smeared on the lid margins. This should be repeated half a dozen times a day at first, gradually diminishing the number of applications as the discharge ceases. If during the progress of the disease an ulcer of the cornea makes its appearance, it should be treated in the way already described, but under no circumstances should an eye in which discharge is present be covered with any dressing.

Membranous Conjunctivitis.

Nearly all the micro-organisms that cause mucopurulent ophthalmia may at some stage of their course, in suitable subjects, produce a membrane. It is, however, chiefly on account of the diphtherial and streptococcal affections that it is necessary to separate this class of case. Membranous conjunctivitis occurs chiefly in children, and shows all grades of severity, the more severe cases being accompanied by considerable constitutional disturbance. The pre-auricular gland is swollen, and even occasionally suppurates. Although a bacterial examination should be made in every case it is not advisable to wait for the results of this before using antitoxin. Until a definite bacteriological report has been obtained isolation should be insisted on exactly as in dealing with faucial diphtheria. The local treatment is exactly the same as that for purulent ophthalmia, but painting with silver is not to be resorted to.

Chronic Irritation of the Conjunctiva with little or no Discharge.

In nearly all these cases the source of irritation will be found in some error of refraction or muscular anomaly. If proper correction of these defects does not entirely remove the symptoms, I have seen considerable improvement result from the instillation twice daily of a 15 per cent. solution of protargol. It is to be noted that this or any other preparation of silver is on no account to be used for more than fourteen days for fear of producing silver staining of the conjunctiva.

The mild catarrhal conjunctivitis to which gonty subjects are liable is not benefited by energetic local treatment. Rest and protection from wind and dust, with in some cases the occasional instillation of a drop or two of a solution of cocaine (0.5 per cent.) are the best methods of dealing with this affection.

Angular Conjunctivitis.

There is one other form in this group to which I wish to draw attention, and that is angular conjunctivitis. This has two peculiarities. First, it is almost the only form of conjunctivitis in which the clinical appearance is characteristic of the special organism at work (the diplobacillus of Morax-Axenfeld); and, secondly, it is almost the only form of conjunctivitis which in the absence of suitable treatment tends to persist indefinitely. The inflammation is confined chiefly to the lid margins, with accompanying excoriation of the skin, especially marked at the canthi. The boracic lotion combined with zinc sulphate, applied as described in the treatment of mucopurulent ophthalmia, readily effects a cure.

Trachoma and Phlyctenular Ophthalmia.

The only common forms of conjunctivitis in my fourth group are trachoma and phlyctenular ophthalmia. Time will not allow of the discussion of the methods of treatment suitable for these diseases and their complications.

Tubercle and syphilis rarely attack the conjunctiva. Inasmuch as when they do they usually produce ulceration, they should not be confused with the forms already described. Finally, it must be remembered that certain drugs, of which the chief are atropine and eserine, may occasionally produce a condition of the lids that resembles erysipelas.

Iritis.

The iris, representing as it does the most anterior portion of the uveal tract, seldom passes through an attack of acute inflammation without some slight involvement of the ciliary body. In cases in which this involvement is very severe it is customary to speak of irido-cyclitis, but it must be understood that there is no very hard and fast line to be drawn between the two diseases.

Iritis is usually attended with very severe pain, and it is this which usually brings the patient before the surgeon.

On examination, it will be seen that ciliary injection is present, the pupil is constricted, and its edge is irregular. The reaction to light is sluggish, even before any synechiae have had time to form, and the colour and texture of the iris is altered. As during the acute stage iritis is usually unilateral, these points are easily determined by comparison with the other eye. Hypopyon and hyphaema are rarely met with in simple iritis. If there is much involve-

ment of the ciliary body, the altered condition of the intraocular fluid manifests itself by the presence of deposits on the back of the cornea. As a result of the albuminous nature of the aqueous humour in these inflammations, filtration is so seriously interfered with that the intraocular tension may be so increased as to endanger the eye in the absence of operative interference. These symptoms, compared with my previous remarks on conjunctivitis, sufficiently differentiate the two affections.

Before discussing the diagnosis of iritis from glaucoma I propose to say a few words about the etiology and treatment of iritis. Sepsis, syphilis, and tubercle are the main causes of iritis. Sepsis—under which heading I include gonorrhoea—is by far the most important of the three. Apart from gonorrhoea, the most frequent source of septic infection is to be found in the mouth, in the shape of pyorrhoea alveolaris and soft caries of the teeth. These affections are, as is well known, responsible for other diseases, and, as Hunter pointed out, individual patients exhibit great variations at different periods in the degree of their immunity. Iritis is usually accompanied in this class of case by cyclitis, and it is not uncommon to meet with a patch of inflammation in the choroid. The gonorrhoeal type usually shows much vascular engorgement, and is prone to the early formation of synechiae.

Syphilitic iritis manifests itself in two forms. The commonest is a simple plastic iritis usually seen before the end of the first year. This form may also be seen in congenital syphilis, and usually accompanies interstitial keratitis. A second and much rarer form is seen as a late secondary or early tertiary form, and is characterized by the formation of yellowish-red nodules near the pupillary and ciliary borders of the iris but not in the intermediate zone.

Tuberculous iritis occurs in a miliary and a conglomerate form. In appearance it resembles the late form of syphilitic iritis, from which it is to be distinguished by the history and the failure of specific treatment. There is also rather less general iritis.

I have not mentioned rheumatic iritis, and must confess to a certain amount of disbelief in its existence. It has never been found to accompany acute rheumatism, and the rheumatoid pains complained of may well be due to a mild septic infection.

The treatment of iritis must be local and general. The essential of the local treatment is to dilate the pupil and to keep it dilated. For this purpose I am in the habit of using atropine ointment, 1 per cent. combined with 0.5 per cent. cocaine, for the first three days. The cocaine acts as a direct stimulant to the sympathetic nervous mechanism of the pupilo-dilator fibres, and so increases the effect of the atropine, which acts chiefly by diminishing the hyperaemia and paralyzing the constrictor pupillae. The use of cocaine is deleterious to the corneal epithelium, and should be discontinued as soon as the maximum dilatation is obtained. The ointment should be employed every four hours at first, later, as the disease yields to treatment, atropine without cocaine, applied two or three times daily, will suffice to keep the pupil dilated. Hot fomentations or bathtings, or dry heat supplied from a Japanese muff warmer, diminish the pain and act beneficially. In all severe cases a couple of leeches applied to the temple are of great service. If high tension persist, paracentesis should be done, and, if necessary, repeated. The general treatment is that of the condition to which the iritis is due. All sources of sepsis, and more especially the mouth, must receive energetic treatment.

The treatment of the sequelae in the shape of numerous synechiae is mainly operative, and the discussion of this point and the value of prophylactic iridectomy in recurrent iritis would occupy too much time.

Acute Glaucoma.

The disease with which acute glaucoma is most liable to be confused is iritis, and, as the treatment necessary for the latter—namely, the dilatation of the pupil with atropine—would infallibly destroy an eye affected with glaucoma, it is evident that the diagnosis is of the greatest importance.

What are the main points of difference?

1. *History.*—In even the most acute cases of primary glaucoma there is usually a history of previous symptoms

in the shape of transient attacks of pain accompanied by misty vision, with haloes round the lights. The acute attack is accompanied by very severe pain, often causing actual vomiting, and therefore liable to be mistaken for a bilious attack. The onset is always sudden, frequently associated with some condition, such as alcoholic indulgence, that leads to raising of the general blood pressure. Vision deteriorates with such rapidity that at the end of a few hours hand movements only are distinguished.

2. *Objective Signs.*—The eye is intensely congested with marked ciliary injection. The cornea is steamy and defective in sensibility. The anterior chamber is shallow. The pupil is semidilated, with regular outline, generally rather oval in shape, with the long axis vertical. It will be remembered that in acute iritis the pupil is generally small, with irregular outline. Finally, the intraocular tension is very considerably increased. Examination of the other eye may show a cupped disc.

If due attention is paid to these points, there should be no difficulty in the diagnosis of ordinary primary acute glaucoma. The cases in which difficulty is found are those of glaucoma secondary to cystitis or to the obstruction to the intraocular flow due to adhesions of the iris. In these the smallness and irregularity of the pupil, combined with the deep anterior chamber, and possibly the presence of punctate deposits on the cornea, will generally indicate the nature of the complaint.

In all cases of acute primary glaucoma, iridectomy should be performed as soon as conveniently possible. It would take us too far to deal with the proper method of performing this operation, nor do I think it is an operation that should be undertaken by any one who is not likely to have the opportunity of performing more than one or two. It is certainly one of the most difficult that the ophthalmic surgeon is called upon to do.

Is there anything to be done while arrangements for operating are being made? Hot bathing, instillation of a solution of eserine sulphate 1 per cent. every two hours may be successful in reducing the tension; at any rate they should be tried, and a brisk saline purge administered. In all cases in which the intraocular tension is much raised, I prefer immediately before doing an iridectomy to first lower the tension in the posterior chamber by puncturing the eye behind the equator with a Graefe knife. This obviates one of the worst risks of the operation, namely, the dislocation of the lens forwards as a result of the sudden lowering of the tension in front. Where possible this may well be done a few hours before the actual iridectomy. It is simple of performance, and cocaine affords sufficient anaesthesia. For the iridectomy itself a general anaesthetic will be required.

Remarks

ON

PARTIAL THYROIDECTOMY,

WITH SPECIAL REFERENCE TO EXOPHTHALMIC
GOITRE, AND OBSERVATIONS ON 113
OPERATIONS UNDER LOCAL
ANAESTHESIA.

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During the past twenty months I have performed the operation of partial thyroidectomy 113 times, in the great majority of cases for exophthalmic goitre. During that time, watching the cases before and after operation—sometimes through successive operations—certain conclusions have forced themselves upon me.

This question, "Should exophthalmic goitre be treated surgically?" has been answered by the patients themselves in about one half of the cases, and by medical practitioners in the other. Every case had been treated medically until it had become apparent to the physician or the patient that improvement was not taking place. In many of the cases the condition of the patient had become extremely critical.

In cases which are definitely not improving under medical treatment there can be no question as to the

necessity for surgical interference, if one believes that the disease is a thyrotoxicosis, and that the removal from the individual of a large part of the poison-producing body will enable a state of equilibrium as regards the output of thyroid secretion to be regained and maintained. While not for a moment minimizing the risks of the operation (which are very great, and may easily lead to disaster), it may be said that the operation is as safe as any major operation in surgery. I believe that there is no need to fear death either at or following operation, provided it is performed under local anaesthesia.

Difference in Type.

Differences in degree and type with corresponding differences in character and rapidity of response to operative treatment may be noted, and I have begun to classify cases of thyrotoxicosis from the point of view of operation as follows:

1. Those cases which have all the classical signs—namely, goitre, exophthalmos, tachycardia and palpitation, and tremor—but are still able to do some work. The tachycardia is constant and palpitation frequent, especially with a little extra exertion. They may look well or be greatly emaciated, but they have no organic heart lesion and no oedema. Frequently there is complete amenorrhoea. Some patients suffer much from diarrhoea. The appetite is usually ravenous.

2. Cases which have all the classical signs but in which the symptoms have progressed until organic changes have taken place in the heart muscle; or there is dilated heart with inefficient valves. The patient may have an irregular, intermittent pulse. Oedema is present, perhaps only a little on walking about, perhaps constant in whatever part of the body is dependent. In one case it was also marked in the face, where it had been present for some months, on the side which was lowermost during sleep. In other cases there has been simply oedema of the feet and legs on walking, the oedema disappearing on lying down.

3. Cases in which the signs are incompletely developed, but often presenting great toxæmia. There is very little enlargement of the thyroid gland but very marked tachycardia and a constant sensation of smothering. Exophthalmos and characteristic tremor are not present. One cannot call this class of case "exophthalmic goitre"; the term "thyrotoxicosis" is much more suitable.

4. Cases sometimes described as secondary exophthalmic goitre, in which from the history it would appear that the goitre preceded the thyrotoxic condition. The thyroid gland is usually very much enlarged, and the enlargement may be central or unilateral. If the patient is put to bed, it is found that tachycardia is not always present, but palpitation supervenes so constantly on the slightest exertion that the patient is practically invalided. Owing to the size of the goitre and the long period during which it has been present, there is generally some pressure on the trachea, causing dyspnoea on exertion, and often during sleep—frequently, indeed, preventing sleep. There is sometimes some prominence of the eyes, and there is usually tremor.

Response to Operative Treatment.

Cases of the first class respond rapidly and almost completely to operative treatment. They have not lost their recuperative power, and, though they are ill and have all the classical symptoms of the disease, when the poisoning body is removed they at once feel a tremendous difference in themselves, and in a few weeks are almost—I might say completely—well. One woman says she can now do all her household washing and ironing, but scrubbing causes some slight return of the palpitation. Another cooks for her husband and two children, does all the household work, and, as well, teaches six music pupils. Two others, who had been completely invalided, are farmers' wives; each does the housework and a great deal of work incidental to the farm as well. This is the stage at which the operation should be performed, as practically complete recovery can be promised, and the period of convalescence is short.

If the patients have gone beyond this stage and belong to the second class—if there are objective signs of heart failure—the rapidity and completeness of cure varies. All the textbooks and articles which I can find speak of cases of this class as too advanced for operative interference presumably for two reasons: First, because the patient

are too ill to be cured; and, second and chief, because the operation in such cases would be too dangerous. The statement that they are too far advanced for operation is not true. I would go so far as to say that no case, unless almost moribund, is too far advanced to obtain immense relief from operation. The extent of relief is in inverse ratio to the extent of the organic heart lesion. Under local anaesthesia, the danger of the operation, even in the most advanced cases, is practically *nil*. Sometimes it is most difficult to tell whether or not there is actually organic heart disease. I have seen a case with oedema of the feet and legs, with the apex beat outside the nipple line, with markedly irregular pulse, with eyes so prominent that she had suffered from corneal ulceration twice, and who had the greatest difficulty in getting to town from the western district on account of the oedema and dyspnoea. This patient left the hospital with a regular pulse of 60. She is a farmer's wife, and now does her own housework, and writes me that she always feels well. One would have felt certain that this woman had myocarditis with a permanently damaged heart.

The most that cases in this class can hope for is great improvement without absolute cure, but it is quite worth while to operate to obtain this result, since great relief can always be promised. Local anaesthesia is essential. The following is a good example of the relief of symptoms:

The patient, a nun, had been under constant medical treatment for three years, but had grown steadily worse. When I saw her the face was asymmetrical with dependent oedema on the side on which she had been lying; the lower limbs also were oedematous. The pulse was most irregular and rapid. She had a large three-lobed goitre, and suffered with neuralgic pains at the apices of the lateral lobes and up into the ear, which prevented sleep. The other symptoms were those usual in a bad case of exophthalmic goitre. It was the oedema and the pulse which gave the interest to the case from the standpoint from which we are now viewing it. I kept her in hospital three weeks, and then sent her back to her convent. In the meantime I operated on another nun from the same convent, who had been ill with goitre for twenty-two years. Then the first nun, recognizing the risks of operation, wished to be operated upon. I removed the right lateral and the middle lobe, under local anaesthesia, without difficulty, and the patient was never once in danger to life as the result of the operation. Before operation she was completely invalided, but since she has taken long walks and has made a trip to Tasmania, visiting several convents there. The pain in the ears and upper neck region has disappeared, and all throbbing has gone. Her pulse, which was 120 to 130, is now between 80 and 90; it is still irregular, but quiet. There is oedema now only after long walks, and only in the feet. With a little care, she lives a happy life.

In a number of cases there is slight degree of oedema of the feet, but the heart beats regularly though fast—cases in which there is some acute dilatation, but apparently no gross organic change in the myocardium. These patients recover practically completely, but the period of convalescence is more prolonged than in cases in which there is no cardiac dilatation.

A good instance of this type is a lady who saw me in May of last year, and who arranged to be operated on. She was quite a typical case. On her way to Melbourne for the operation she heard of a case that had died after operation under general anaesthesia, and she at once went back to her home in the country and stayed there for three months. She then came to Melbourne again because she was rapidly becoming worse. She could not then get up the steps to my room. Her feet were oedematous; she had delirium cordis, and she was very ill. I removed the right lobe, the isthmus, and the lower pole of the left lobe at one operation. Her pulse slowed down, and all the objective signs improved, but she remained very weak and sweated profusely for six weeks before she felt much improvement. Then in the sixth week she gained 4 lb. in weight, all the sweating stopped, and from that time improvement was continuous and rapid.

The third class of case, with small thyroid gland, no exophthalmos, marked tremor, intense tachycardia, and constant smothering sensations, I regard as being the worst type to handle. The symptoms, which are out of all proportion to the enlargement of the gland, may indicate that thyrotoxicosis is a dysthyroidea and not a hyperthyroidea, an altered secretion and not simply an excessive secretion. In this class removal of half the gland does not give the certain relief of symptoms that it affords in typical cases. It seems as though even a small remaining portion of gland tissue pours out a secretion of such virulence that it is still able to poison the nervous system. The number of cases of this class is really very small.

With regard to cases without apparent enlargement of the thyroid gland, it must be remembered that not infrequently there is a very large lobe, the greater part of which is behind the upper end of the sternum, and the inner end of the clavicle and first rib. In two patients, one male and one female, it was practically impossible to detect enlargement of the gland, yet at the operation the enucleating finger was in contact with the second rib posteriorly, and in each case a large retrosternal goitre was removed.

The fourth class, described by some as secondary exophthalmic goitre, consists of cases in which the nervous symptoms are secondary, not primary, as the goitre precedes the heart irritability.

As a typical example of this class I would instance a nun in whom the goitre had been present twenty-two years. She had received constant medical attention. During the latter years she was practically invalided through palpitation, tremors, and sleeplessness. She was afraid of operation, as its severity had been frequently pointed out to her. A large central retrosternal goitre was removed. She was out of bed on the sixth day; within three months she was managing, and is still managing, a large orphan asylum.

When to Operate.

Every case should be treated medically for, say, three months, and if there is continuous improvement which shows definite signs of going on to complete cure, medical treatment should be persevered with. I have had three such cases, and I did not operate, although the patients placed themselves unreservedly in my hands.

A practitioner who advises against operation in any case which is not gaining ground, or which is losing ground, is undertaking a large responsibility. Nor is the operation to be regarded as a last resort. If a patient is kept under medical treatment until it is obvious that she is going to die unless some miracle be performed, her chances of ultimate complete recovery have been taken from her. Operation should be performed as soon as it is recognized that the patient is not improving, and before she has lost so much ground that she will require much nursing back to health after the cause of the disease has been removed. At the same time, it should be clearly recognized that it is practically never too late to operate, and that the operation in itself need never prove fatal if performed under local anaesthesia.

Local Anaesthesia.

In my opinion local anaesthesia governs the whole question as to the safety or otherwise of the operation for exophthalmic goitre. The underlying causes of death at or after operation are too ill-defined for us to be able to tell which cases will and which will not stand general anaesthesia. Under general anaesthesia the operation cannot be recommended as safe. Under local anaesthesia it may be recommended as perfectly safe unless the patient be moribund. In 88 operations for exophthalmic goitre I have had only one death, due to causes which will be explained later, and which need not occur again. I know of 54 deaths which have taken place during the last year in cases operated on under general anaesthesia.

There are many other reasons why local anaesthesia should be employed. Careful as I have been to avoid the vicinity of the recurrent laryngeal nerve, on one occasion the patient suddenly lost her voice and could only whisper. I at once removed all the artery clamps I had applied, and in a few moments she spoke naturally. I believe that if the patient had been under general anaesthesia a silk ligature would have been tied tightly around the nerve. In this instance the forceps had been applied to stop some deep venous oozing, but the nerve had evidently not been badly crushed. I never speak to the patient during the earlier part of the operation, but while the lower pole is being freed from its connexions and the inferior vessels divided, my practice is first to apply forceps, then to ask some question, and on the first sound of voice to cut above the forceps with scissors. While there is phonation I know that the nerve is not grasped in the forceps.

Another reason against general anaesthesia is that it is usually followed by some vomiting or retching, which is not only extremely painful with a deep and extensive wound in the neck, but also not free from danger, through the possibility of secondary haemorrhage from the large and brittle vessels which have been ligated. With local anaesthesia there is no vomiting.

Should there be any tendency to acute thyroidism, the treatment is to saturate the patient with fluid, preferably by copious ingestion of water. This is impossible immediately after general anaesthesia. Although the cases now never suffer from acute thyroidism, I always insist on their drinking three pints of water within the first two or three hours after operation as a prophylactic. The large size of a goitre is no bar to its removal under local anaesthesia. From one patient I removed a goitre (not exophthalmic, which weighed 1½ lb., and that only represented one lobe and the isthmus. It spread widely under the sternomastoid muscles, displaced the carotid arteries and jugular veins, distorted the trachea, and extended apparently to the base of the skull. I have injected three cases, one after the other, before beginning to operate, and then operated on the three in succession without trouble.

The total number of partial thyroidectomy operations I have performed under local anaesthesia is 113. It was necessary to give a general anaesthetic only to one of them, a girl of 17 years, who was so frightened that the operation could not be commenced until general anaesthesia was used. The anaesthesia is usually exceedingly good, though a little dragging sensation is felt while the deep connexions of the gland are being divided. This part of the operation takes very few minutes.

Even should it be admitted that general anaesthesia might be used in selected cases, the majority are too far advanced for a general anaesthetic when they are sent, or come themselves, to a surgeon, and there are many—all of those constituting the second class mentioned above—to whom it would be courting disaster to administer a general anaesthetic.

How much Gland should be Removed?

The next question is, "How much gland substance should be removed?" The answer is, "Enough to cure the patient." Heineck writes:

The surgeons that have, for the cure of this disease, removed the largest quantity of thyroid tissue short of its entirety, are those that obtained the very best results, both from the standpoint of the number of recoveries as well as from the standpoint of the completeness of recoveries.

Yet for several reasons too much should not be removed at one operation. First, it is bad surgery to remove more than is necessary to effect a cure. More can always be removed, but if too much be removed it cannot be replaced. Moreover, the second operation is safer even than the first, and the patients are so much improved as a result of the first that they face a second with equanimity.

There are differences of opinion as to whether it is necessary to remove more than one lobe. Kocher says that removal of one lobe and ligation of one artery of the other side is sufficient; C. H. Mayo does not advise removal of more than one lobe and the isthmus; Hartley removes considerably more. It is possible, however, that I have not seen their latest publications. In most cases the lobes are so large that if one lobe and the isthmus be removed the remaining lobe is still very much larger than the whole of a normal gland; and it is, moreover, excessively vascular and active. In a case like this the removal of one lobe improves the condition much, but the gland tissue remaining is still sufficient to poison the individual, causing some tremors and palpitation on exertion, and the pulse-rate may still be high.

If the patient is to be completely cured part of the second lobe must be removed. There is no danger of myxoedema if the upper and posterior portion of one lobe be left with its blood supply intact. The removal of portion of the second lobe has cured the condition in every typical case. Some months should be allowed to elapse between the first and second operations, because in many cases palpitation after the operation is simply the result of weakness, and disappears with the returning strength of the patient.

Crushing Gland Substance.

Next to the question as to whether these cases should be treated surgically, the chief interest centres around several points in the technique, chief of which is the method of division of gland substance. Almost all authorities state that the gland should be crushed before division, and that the crushed portion should be ligated or sutured. This is recommended presumably for two reasons, first, to prevent

haemorrhage, and secondly to prevent the exit of thyrotoxic secretion. I regard any crushing as quite unnecessary and exceedingly dangerous.

If the operation is for the removal of one lobe alone, it does not matter much whether the isthmus be crushed or not, though even in this case it is unnecessary. There is nearly always a division more or less fibrous somewhere through the isthmus. This is easily found, and if the isthmus is divided along it there is very little bleeding. Crushing across the isthmus causes an increase in the pulse-rate for some days after operation. Stitching up or tying up the crushed isthmus appears to me to be wrong, because it shuts up the crushed and bruised gland in a closed bag, the only exit from which is through the lymphatics and venules of the gland. It should be treated as an abscess or as an accumulation of any toxic material would be treated—that is, by allowing means of free exit for a day or two by means of a tube. This is shown much more definitely in the removal of half the second lobe. In my earlier operations on the second lobe I used to crush across and attempt to ligate, because the literature had taught me to fear haemorrhage when cutting across the middle of a gland in exophthalmic goitre. If a lobe is crushed across I have always found the patients exceedingly ill and in the gravest danger for some days subsequent to operation from acute thyroidism. I know now that this is due to so much gland tissue being bruised and crushed and enclosed until it is licked up by the veins and lymphatics of the gland and capsule during the succeeding days.

In the whole series of 88 operations for the thyrotoxic variety of goitre I have had only one death following operation, and it was, I believe, due to this cause. The case was my thirteenth. I had just begun to recognize that in a large bilateral vascular goitre the removal of one lobe was not enough to cure the case. The disease being a thyrotoxicosis, the larger vascular lobe which remains is still larger than a normal thyroid, and pours out thyrotoxic material sufficient to cause all the symptoms of exophthalmic goitre. I therefore did two things which I have since seen to be quite wrong. I removed the right lobe, the isthmus, and half the remaining lobe at the one operation; this was the first error. I crushed the second lobe across before dividing it; this was the second and chief error. This extensive removal of gland tissue at one operation is certainly a mistake if the surgeon is at all slow in completing the operation. With the practice that a great number of cases has given I can now remove one lobe, the isthmus, and half the second lobe in much less time than I took to remove one lobe in my earlier cases, and the handling of the gland is much less.

Many cases since the thirteenth have been incomparably worse before operation, but not one of them has caused me any anxiety. I remove one lobe at a time, and the patient stands it well. Later, if necessary, I remove half the second lobe, and again the patient stands it well, but I never crush. Books speak of bleeding as the great danger of cutting across a lobe, and they speak of crushing as the safeguard against bleeding. If a lobe be crushed across, a large quantity of bruised and pulped thyroid tissue must be left, which is taken up by the blood and lymph streams of the gland itself, and causes the gravest condition by acute thyroidism.

My opinion is not formed from that single case but from the facts that all cases in which I crushed were very ill, and conversely that in a larger number of subsequent cases I have sliced a lateral lobe from upper to lower pole without crushing, and there has never been the slightest danger from acute thyroidism. A tube is inserted for two days down to the raw surface of the gland through a separate incision. The collar incision is accurately sutured. The amount of colourless or slightly blood-stained secretion discharged on to the dressings is sometimes amazing; it continues for four or five days, and is, I think, from the cut surface of the gland and not from the surrounding tissues, because it is not present when a single lobe has been removed, the only cut surface there being through a fibrous division in the isthmus. This discharge is not accompanied by symptoms, a fact that seems to me further evidence that acute thyroidism is not due to absorption of thyrotoxin by surrounding tissues, but that, when present, it is due to absorption from crushed gland by the veins and lymphatics of the gland and capsule

itself. One case is interesting in this respect. A second lobe had been partially excised by clean cutting and without crushing, a large raw surface being left. Gauze drainage had been used. Instead of draining, the gauze had blocked the exit. When I next dressed the case I found the neck distended with secretion. I moved the gauze and the retained secretion poured out. It had been under pressure, but the patient had not been distressed. I believe that avoidance of crushing and free drainage are of the greatest importance.

Crushing is not necessary to stop haemorrhage. A lobe may be cut across with impunity. I do it constantly. When operating on a second lobe I cut from the front of the upper pole downwards and backwards to the back of the lower pole. That removes from half to two-thirds of the lobe, while it leaves the blood supply from the superior thyroid artery intact. Also it preserves the parathyroid glandules of that side from injury, though I cannot believe they possess the importance assigned to them by American surgeons.

The haemorrhage looks alarming at first, but the larger vessels are in the capsule, and are easily picked up. Any big point on the gland surface is under run with catgut, and sponge pressure soon stops the oozing. Twice in the series I have, when removing a gauze drain on the second day after operation, separated a ligature from a vessel. The haemorrhage was sudden and great; the wound had to be opened at once to secure the vessel. Since then I have always used a tube, never gauze. Later, with increased rapidity in operating, I have been removing one lobe, the isthmus, and half the second lobe at one operation, when I have judged that wise. The time taken, and the amount of handling necessary for this, are less than was required for the removal of one lobe in my earlier operations.

What I have written may appear to imply that the operation is easy and safe, but its severity should not be minimized. All handling must be of the gentlest nature, and must be rapid. The vessels are increased in number and size, and they are very brittle. If one gets off the track, the haemorrhage may be appalling and uncontrollable. If the operation is prolonged, the bleeding is bound to be excessive. It is not necessary, however, for any of these accidents to occur.

Finally, I would plead for early operation, as soon as it is seen that medical treatment is not effecting a cure, for with local anaesthesia, rapid operating, no crushing, and free drainage, the operation may be regarded as safely.

Analysis of Cases.

The following is a short analysis of my cases:

Total number of partial thyroidectomy operations under local anaesthesia, 113. Of these:

Malignant goitre	... ..	2 cases.
Exophthalmic goitre	... ..	88 cases, 1 death.
Parathyroid or adenomatous	... ..	23 cases, no death.

The parathyroid cases may be dismissed without comment. Of the exophthalmic cases, 52 were typical cases with classical symptoms; 15 of these 52 had part of the second lobe subsequently removed. Of this class I can say that in every case where the removal of the larger lobe has not effected a cure, the removal of part of the second lobe has done so (always excepting the one case which died). In many of the latter cases one and a half lobes were removed at one operation.

Eight cases with irregular heart beats and pronounced oedema. Of these, 4 had part of the second lobe subsequently removed; 4 had a third operation because the upper pole left after the second operation was unsightly. The original goitre had been of immense size. Every one of these stood the operation well. All are still alive but one. She had made a splendid recovery, and three months later went to her country home, engaged in a round of festivities for a week in a climate with the temperature of over 100° in the shade most of the time, and died very suddenly at the end of it. This case, before operation, had oedema of the legs, body, and arms. There were striae around the elbows like those on the abdomen of a multiparous woman, and the evening before operation fluid was drawn off from both pleural cavities. After the operation she passed immense quantities of urine each day. Every trace of oedema disappeared until the week in which she died. All the others are very much improved.

Two cases, irregular, had intense tachycardia, but no glands enlarged and no exophthalmos. Of these, in 1 case I subsequently removed a small piece of the lower pole of the left lobe. She represents the only failure of the series.

Five cases of secondary exophthalmic goitre. In this class cure is rapid and complete.

Seven of the exophthalmic cases have been in males.

REFERENCE.

Dunhill, *Intercolonial Medical Journal*, June 20th 1908.

A CONTRIBUTION TO THE SURGERY OF LINGUAL THYROIDS.

By WILLIAM STUART-LOW, F.R.C.S.,

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MEDICAL GRADUATES' COLLEGE.

THE persistence and development of thyroid remains in the posterior third of the tongue are the least usual of the aberrations to which the thyroid gland is liable, but its occurrence is sufficiently common, and these remains are sufficiently difficult to eradicate successfully and completely to warrant close attention to any improvement in the accepted methods of treatment.

The development of the thyroid gland explains their occurrence. As early as the fourth week, during the appearance of the buccal and pharyngeal portions of the tongue on the floor of the primitive pharynx, the hypoblast between these two parts proliferates and gives rise to a solid protrusion, and the part thus formed pushes downwards and backwards to the hyoid bone, and becomes the isthmus and part of the lateral lobes of the thyroid. The stem of this bud represents the thyro-glossal duct, and the buccal opening of the duct the foramen caecum. It is in the track of this duct that the remnants of thyroid tissue lie. These developmental remains may occur in any part of this canal, and constitute, when arising in the portion of it extending from the foramen caecum to the hyoid bone, lingual thyroids.

There may be one or a number of detached thyroid masses; and when one such mass is removed the others may take on compensatory action and grow, giving rise to a recrudescence of the tumour after operation. This is the reason for the imperative of radical measures in operating on these structures in the tongue.

The case narrated in this paper well illustrates the obstacles encountered in the removal of this fetal manifestation, and proves that the procedure most usually adopted may be futile, and therefore not always the best to employ.

A question that must ever be before the mind of the operator and carefully taken into account before deciding upon operation on the lingual thyroid is whether the thyroid gland in the neck is sufficiently developed to carry on the thyroid function in the bodily economy, or is the lingual tumour the only thyroid representative present? It is on record that excision of the lingual thyroid has been followed by myxoedema. The neck should, therefore, always be carefully palpated, and the outline, size, and development of the thyroid estimated. Should the gland be apparently absent, or be but small, one should certainly hesitate before deciding to operate. It would only be when the lingual tumour was of considerable size, and causing such marked disturbance as to impair the health, or jeopardize life, that a radical operation should be entertained.

In such circumstances it would be preferable to resect the thyroid tumour in the tongue, thus reducing its bulk, and so, in all probability, the distressing symptoms, and at the same time leaving sufficient gland to carry on the indispensable thyroid functions. This course should be chosen even at the risk of a recurrence of the lingual enlargement.

In searching the literature of this subject I have been unable to find any record of the method here adopted having been used for the eradication of these tumours—namely, by splitting the tongue from tip to base. The methods usually chosen have been either that of the galvano-cautery, or subhyoid pharyngotomy, or a combination of partial excision and the galvano-cautery.

The particular procedure selected is dependent upon the size of the growth. If the tumour be large, operation through the mouth is not likely to be successful, as access would be insufficient, unless the method here advocated were adopted. In these circumstances the operation of subhyoid pharyngotomy is that most favoured by surgeons, but this is by no means an ideal procedure.

It is excellently suited for the removal of growths at the entrance to the larynx, that is, involving the epiglottis, aryepiglottic folds, arytenoid cartilages, and in the region of the sinus pyriformis. But for tumours in the locality of the base of the tongue it has the great disadvantage of

opening a communication between the septic cavity of the mouth and the large neck wound. There is much risk of the wound failing to unite by first intention, and of a fistula resulting, or a disfiguring puckered cicatrix occurring, and in the case of a female patient this would be a serious consideration. The patient has to be most careful to maintain a fixed position of the head for some days, and the recovery is therefore slower and more hazardous, necessitating studious nursing and a longer stay in hospital.

Another disadvantage in subhyoid pharyngotomy that must not be lost sight of is that the extent of the opening is restricted by the imminent risk of dividing the superior laryngeal nerve if the transverse incision be carried any distance beyond the hyoid bone, as this nerve enters the larynx by piercing the lateral part of the thyro-hyoid membrane. Should the nerve be cut, the larynx is rendered insensitive, allowing of the entrance of food and mucus, and the wound discharges into the larynx. There is great likelihood of aspiration pneumonia, as these foreign substances cannot be reflexly coughed up, since the sensitiveness of the larynx to their presence has been destroyed, and one cannot trust, therefore, to the cough reflex to prevent secretions from flowing further down.

The tumours formed by lingual thyroids vary in size from that of a cherry to that of a hen's egg or small Tangerine orange. If the growth is small, incision of the covering mucous membrane and curetting, with the subsequent application of the galvanic or thermocautery, will sometimes suffice to get rid of it and prevent recurrence, but this treatment is less likely to be efficient than excision of the capsule, which consists of the dilated remains of the thyro-lingual duct.

Should the tumour be large, then excision becomes necessary, and the chief difficulty is to gain sufficient access so as to leave none of the gland substance behind. This obstacle is most readily overcome by the method of section of the tongue in the middle line.

The case in which this operation was carried out was that of a female, aged 32 years, a teacher by profession, who came to the clinic at the Central London Throat, Nose, and Ear Hospital complaining of something growing at the base of the tongue, of thickness of the voice, and of constant and uncontrollable desire to swallow. On looking into the mouth a large firm swelling was found occupying the region of the lingual tonsil and projecting above the surface quite visibly. She gave a history of a similar condition having existed eleven years before, when an operation was performed at St. Bartholomew's Hospital, and stated that she was again operated upon at the same hospital nine months ago owing to a recurrence. Both of these attempts at excision had taken place through the mouth, but laryngotomy had not been done on either occasion.

The operation here advocated was performed as follows: Under chloroform anaesthesia laryngotomy was performed, and the pharynx being firmly plugged with a capute sponge, the anaesthetic was administered through the tube.

The tongue, being well protruded from the mouth by means of two deeply inserted stout silk cords, was split from tip to base, and in this way the tumour, which was the size of a small Tangerine orange, was effectively exposed. The growth proved to be solid, and was enveloped in a firm, thick capsule; it occupied nearly all the region of the base of the tongue, the structures being so stretched and attenuated over it that there was considerable danger of the whole tongue coming away during the extrusion of the mass. Part of the capsule, very deeply situated near the hyoid bone in the vicinity of the thyro-lingual duct, had to be excised, but this was first thoroughly curetted and the surface well rubbed with a solution of chloride of zinc, gr. 60 to 53. The tongue was then stitched up from tip to base with interrupted sutures of chromicized catgut, except the last half-inch above and below which were left open for drainage.

Rectal feeding was employed for two days, and a spray of peroxide of hydrogen used for the mouth. She made an uninterrupted recovery, and left the hospital on the sixth day.

The tumour proved to be of thyroid-adenomatous nature.

THE annual meeting of the Medical Defence Union will be held at University College, Bristol, on Thursday next, at 4.30 p.m., when the annual report of the Council and statement of accounts will be presented.

PREPARATIONS are being made for a Health Congress in Leeds from July 17th to 24th, under the joint auspices of the Corporation and University of Leeds, the Royal Sanitary Institute, and the Royal Institute of Public Health. A meeting was held in the Town Hall on May 18th, presided over by the Lord Mayor (Alderman F. J. Kitson), at which committees were appointed to arrange for the reception, entertainment, and general comfort of those who will be attending the congress.

NOTE ON THE REMOVAL OF PORTIONS OF DOUBTFUL TUMOURS FOR DIAGNOSTIC PURPOSES.

By ARCHIBALD LEITCH, M.B.,

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DURING a discussion on mammary carcinoma at the annual meeting of the British Medical Association in 1908, Sir W. Watson Cheyne and other surgeons condemned the practice of removing portions of suspicious tumours of the breast for diagnostic purposes. It was contended that by cutting into cancerous tissue the tumour cells were carried into healthy surroundings and that there was grave risk of transferring them into opened lymphatic vessels from which, apparently by a process of embolism, they might be disseminated; and, at any rate, the condition was considerably aggravated by such a proceeding.

Two assumptions are the basis of this contention, first that the artificial transference of the cells from the malignant tissue to hitherto normal tissue increases their malignancy, and, second, that the deposition of these cells at the open mouths of severed lymphatics places them in a position for more rapid dissemination. There is no experimental evidence in favour of the former, and with regard to the latter there is no *a priori* reason why dissemination along opened lymphatic channels should differ from the same process occurring naturally along closed channels. It may, however, be said that by the procedure under discussion a wider area of lymphatic paths is presented to the growing cancer; and if sufficient time is allowed to elapse between the exploratory operation and the extended operation in the case of the tumour proving malignant, this would constitute a danger. Section of a doubtful tumour *in situ* can often determine the diagnosis, and in the case of cancer the immediate and extensive removal that would be practised would eliminate any such danger. Where such section does not render the condition certain, recourse should be had to laboratory methods that allow of rapid diagnosis, the examination of frozen sections, a proceeding which need not delay the operation for more than a few minutes, and which would not increase the supposed danger. To obviate the risks consequent on removal of a portion of a doubtful tumour it was proposed to remove the whole tumour presumably as if it were a simple tumour. Any wider removal than this, supposing no malignancy was present, would not be good surgery; and in the event of the tumour proving malignant, in which case the removal would be admittedly incomplete, would these risks be eliminated or even decreased? The proposition is very questionable, for in circumsecting a malignant tumour the surgeon would be cutting across lymphatic channels on all sides, some of which might be certain to contain cancer cells; the lymphatic and the implantation areas would be enormously increased. Whatever way be adopted, rapid histological methods of diagnosis are essential.

The method which I have found to give the best results is as follows:

Thin slices of the doubtful tissue, about 1 mm. in thickness, are removed, and placed immediately in acetone and taken to the laboratory.

The slices are transferred to hot water for a few seconds, dipped in gum solution, and placed on the stage of a freezing microtome. The current of carbon dioxide is turned on, and the whole tissue is well frozen in less than one minute. The microtome used is a very handy little apparatus made by Leitz, the knife carrier of which is sufficiently heavy to give a good momentum to the razor.

The sections, as they fly off tangentially, are caught in a basin of water held by an assistant. They are floated on to a glass slide, the excess of water is dried off, and a drop of acetone solution of "krystalviole" is placed on the section. This fixes it to the slide and stains it rapidly. The excess stain is removed with water and acetone and the section is cleared with xylol, and is then in a condition to be examined under the microscope.

Good histological preparations can thus be obtained and may be kept permanently. Allowing two minutes for conveyance of the tissue from the operating theatre to the laboratory, during which time the specimen lies in acetone, I have found that on an average the whole time occupied, from the removal of the tissue till the diagnosis is given to the surgeon, is seven minutes. I have also tried to freeze the tissue as it was obtained and to cut sections without

any sort of fixation or embedding, but it is rather hard on the razor, and staining is interfered with. It occupies less time, and is fairly trustworthy. The method given is, however, much superior.

As has been pointed out, doubtful tissue removed for diagnosis should always, if possible, be examined rapidly. Examples of what seem to me dangerous uses of diagnostic removal of doubtful tissues are found in the gynaecologist's curettings. By the curette, in the case of malignant disease of the uterus, all the favourable conditions for wide implantation of cells are supplied. Malignant cells are embedded in perhaps normal tissue, a large lymphatic area is trepanned upon, and, if embolic dissemination by lymphatics or blood vessels be accepted as a possibility, the risks are much increased. But the greater danger of continuous permeation of lymphatics over an increased area is courted when a few days are allowed to elapse between the curetting and the major operation.

From the pathologist's point of view, diagnosis from uterine scrapings is always difficult and liable to frequent errors. The tissue removed is divorced from its surroundings; its proper relationship is often indeterminate. A negative diagnosis is generally worthless, and in practice is not relied upon: a positive diagnosis is frequently untrustworthy. In the absence of the surroundings several conditions are liable to be mistaken for carcinoma or sarcoma even by the most competent pathologists: inflammatory conditions, sloughing fibroids, hypertrophic and hyperplastic endometritis, adenomyoma, leucidua, and conception products. Short of hysterectomy in doubtful conditions, there are no present methods of procuring portions of the suspected tissue otherwise than by the curette, for the reason that it is impossible, without actually seeing the interior of the uterus, to determine the position of the lesion. This, of course, does not apply to the cervix or endocervix. When scraping is resorted to the methods of diagnosis should be rapid, and as trustworthy results can be obtained by the freezing method above indicated as by any other.

But though the problem is different in many respects, it should not be impossible to apply indirect methods of inspection comparable to those adopted in the examination of hollow viscera such as the bladder, or more or less direct methods, as in the case of the oesophagus or rectum. By these means the disease could be located and a portion removed in the condition most suitable for pathological investigation.

THE INCIDENCE OF MORGAN'S BACILLUS NO. 1 IN THE NORMAL FAECES OF YOUNG CHILDREN.*

BY

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IN this JOURNAL (April 21st, 1906, and July 6th, 1907), Morgan (who was at that time Ernest Hart Memorial Scholar) published the results of a bacteriological examination of the stools of children suffering from epidemic infantile diarrhoea. The examination was confined to the group of non-lactose fermenting bacilli, which includes several well-known pathogenic organisms, such as typhoid and the various forms of dysentery bacilli. As a result of his work, Morgan concluded that in this country epidemic diarrhoea is not occasioned by one of the forms of dysentery bacilli, as was the case in some outbreaks investigated in America; but a particular organism, hitherto undescribed, called by him No. 1, was discovered in the stools of 50 per cent. of the cases. The biological characters, the pathogenicity, and reasons for regarding this organism as a factor in the causation of infantile diarrhoea, were detailed by Morgan in the papers referred to.

The etiological importance of Morgan's organism in epidemic diarrhoea has been further investigated during

the last two summers by Morgan and several members of the staff of the Lister Institute, and during the summer of 1908 a small share of the collective investigation was assigned to the Bacteriological Department of Guy's Hospital—namely, to control the investigation of diarrhoea cases by examining faeces from practically normal children (or children suffering from diseases other than those of the alimentary system), in order to determine whether Morgan's bacillus No. 1 was present, and, if so, in what percentage of the cases. These control cases were examined during the epidemic period of the year.

Material was obtained either from cases attending the out-patient department of the Surrey Dispensary, from healthy children accompanying mothers under treatment, or from healthy children belonging to families in which some other member was being attended by the district nurses instructed by that dispensary. No attempt was made to select children of any particular age period other than the broad one comprised between birth and 13 years, but the cases investigated are comprised in the following classification:

TABLE I.
Cases Investigated from July 24th to September 9th, 1908.

Age Period.	Male.	Female.	Total.
0-1	5	6	11 (1)
1-2	5	4	9 (1)
2-3	1	2	3
3-4	5	9	14 (1)
4-5	1	4	5 (1)
5-6	2	2	4
6-7	0	1	1
7-8	0	1	1
8-9	0	1	1
9-10	0	0	0
10-11	0	1	1
11-12	0	1	1
12-13	1	1	2
Not specified	5	4	7
	23	37	60 (4)

In all 60 cases were examined, 23 males and 37 females. These were scattered, so far as their homes were concerned, over the district bounded by the River Thames, Blackfriars Bridge Road, New Kent Road, Old Kent Road, and Bermondsey New Road, a poor and densely-congested area. The general condition of health in the selected cases was not, as a rule, first-class; but care was taken to avoid actual cases of intestinal disease, as well as children belonging to households in which sporadic or epidemic cases of diarrhoea had occurred. Such children as were themselves patients at the Surrey Dispensary suffered usually from some sequel to an infective fever, as will be seen from the following list, which accounts for 41 of the 60 cases:

Sequelae of Infective Fevers.	
After scarlet fever (nephritis) ...	1
After measles ...	7
After varicella ...	1
After pertussis ...	9
Malnutrition ...	3
Bronchitis ...	7
Chorea ...	2
Convulsions ...	1
Rickets ...	1
Congenital syphilis ...	1
Tuberculous joint ...	1
Chlorosis ...	2

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The remaining 19 children were, so far as can be ascertained, perfectly normal. The period of time over which the investigations extended was nearly two months, from the fourth week in July, 1908, to the second week in September.

Collection of Faeces.

The apparatus employed for the collection of each sample of faeces consisted of a large-sized specimen jar

* The expenses of this investigation were defrayed by a grant from the Scientific Grants Committee of the Royal Society.

containing a small metal spoon fixed to the cork which closed the mouth of the vial. The apparatus was sterilized in the hot air oven at 180°C. In taking the specimen the spoon was filled with a portion of the freshly-voided material, and replaced in its vial, which was then marked with the serial number.

After consultation with Dr. C. J. Martin and Dr. H. de R. Morgan, the following procedure for the detection of Morgan's bacillus No. 1 was agreed upon:

1. Bile-salt agar containing 1 per cent. mannite, and coloured with neutral red was chosen as the *selective* medium. It was used for the purpose of surface plate cultures—the medium being poured in Petri dishes, allowed to set, and dried for an hour at 43° C. before planting.

2. As soon as possible after collection, usually within an hour, a loopful of the faeces was transferred to the surface of the selective medium by means of a sterile platinum loop. An ordinary L-shaped glass or aluminium spreader was then used to distribute the material uniformly, and two or more further plates of the same medium were inoculated "in series," in order to ensure adequate dilution. This first stage yielded nearly one hundred (?) non-fermenters.

3. After forty-eight hours' incubation at 37° C. such colonies, if any were present, as had failed to ferment the mannite were picked from the plates and planted upon sloped tubes of ordinary nutrient agar; after incubation at 37° C. for twenty-four hours these agar cultures were stored in an incubator at 20° C. until the entire series of cases had been examined.

4. Next these agar cultures containing the presumably "non-fermenters" of mannite were replanted on the selective agar, in order to determine the purity of the cultivations thus obtained. [This step is essential, for, as all who have worked at the bacteriology of faeces are aware, it is quite a usual thing, on plating out the growth from what appears to be one single colony on a plate, to find two or three or sometimes more organisms present. This is probably due to the faecal mucus holding several organisms in close contact, and at the same time so firmly that the ordinary method of spreading the faecal material over the plate fails to separate them.]

5. After incubation for forty-eight hours at 37° C., individual non-fermenting colonies were picked from each set of plates and subcultivated once more on to nutrient agar for twenty-four hours at 37° C. At this stage the (?) non-fermenters were reduced to about 60.

6. Each organism was transplanted from the agar into mannite broth tinted with litmus and incubated for forty-eight hours.

7. Such strains as failed to ferment mannite in the fluid menstruum were again plated, this time on Eyre's nutrose agar (prepared with ox serum) containing lactose, as well as on the selective medium, neutral red-mannite-peptone-salt-

meat-agar, and the plates incubated for forty-eight hours. At this stage the (?) non-fermenters were reduced to six.

8. From each set of plates several colonies representing each strain of non-fermenters were isolated and planted upon gelatine, the reactions upon the various carbohydrate media carefully studied, also the indol-producing capacity of each strain investigated, together with the action of each upon litmus milk. In this final study strains were run in parallel series with a cultivation of Morgan's Bacillus No. 1, obtained for the purpose from the Lister Institute from Dr. Morgan himself. This final stage resulted in the isolation of four strains of Morgan's Bacillus No. 1, a percentage of 6.3. The identity of these with Morgan's bacillus are best shown in tabular form (see Table II).

On referring to the original notes relating to the source of origin these four strains were found to have been derived respectively from the four following cases:

Serial number	13	22	24	32
Date of examination of faeces	July 24th	July 31st	Aug. 5th	Aug. 12th.
Sex of child	Male	Female	Male	Female
Age of child	4 years	1 year 2 months	5 years	3 months
Clinical condition	Malnutrition	Normal	Rickets	Whooping-cough
Place of residence	Sumner's Buildings	Southwark Bridge Road	Barnham Street	Douglas Buildings

Beyond the fact that six other children from Sumner's Buildings were examined, with negative results, the above details call for no comment.

THE EMPLOYMENT OF IODIPIN IN SYPHILIS.

By DOUGLAS FRESHWATER, M.A., M.B.,
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IODIPIN has proved itself of such pronounced value in the treatment of certain syphilitic affections, that I do not think it would be out of place to give a short account of the method of its administration, and the special varieties of the diseases in which it is of value.

In 1897 Winternitz* made some experiments on animals, by feeding them on iodized fats, and after death he found traces of iodine in nearly all their tissues, especially in the bone marrow, liver, and mesenteric fat. From these results he concluded that, by the administration of an iodized fat, iodine may be supplied directly to any diseased tissue, and so develop its specific action. He also found that the iodine in these iodized fats—that is, mesenteric fat, etc.—through oxidation in the blood, combined to form an alkaline iodide, and from this it would appear that iodine so combined would have the same therapeutic action as potassium iodide.

In 1898 an additive compound of iodine and sesame oil, called iodipin, was introduced by Merck. It is prepared by repeated iodization of sesame oil by means of iodine monochloride in alcoholic solution. Iodipin is a light oily liquid, and is prepared in two strengths—10 per cent. and 25 per cent. The specific gravity of the former is 1.025, and of the latter 1.227. Iodipin at low temperatures becomes of a honey-like consistency, but it liquefies and becomes clear again if gently heated on a water bath. If exposed to a bright light it in time becomes brownish-yellow in colour, but this is no bar to its subsequent use, provided it remains clear and transparent; but a blackish tint, as well as flocculence or precipitates, renders it unfit for use. More recently a solid iodipin has been introduced, and is supplied in yellow-coated tablets of 7½ grains each, containing ½ grain of iodine, corresponding to 1 grain of potassium iodide.

Iodipin may be administered by the mouth, or by subcutaneous or intramuscular injection. The last method is that most commonly employed on the Continent. The 10 per cent. iodipin was introduced for internal administration, and the 25 per cent. for subcutaneous or intramuscular injections. The 25 per cent. is now nearly always used in both these methods. Iodipin taken by the mouth is passed

TABLE II.

			Morgan No. 1.	Serial No. 13.	Serial No. 22.	Serial No. 24.	Serial No. 32.			
			Acid	Gas	Acid	Gas	Acid	Gas	Acid	Gas
{	Dextrose	...	+	+	+	+	+	+	+	+
	Laevulose	...	+	+	+	+	+	+	+	+
{	Galactose	...	+	+	+	+	+	+	+	+
	Maltose	...	-	-	-	-	-	-	-	-
{	Lactose	...	-	-	-	-	-	-	-	-
	Saccharose	...	-	-	-	-	-	-	-	-
{	Raffinose	...	-	-	-	-	-	-	-	-
	Dulcite	...	-	-	-	-	-	-	-	-
{	Mannite	...	-	-	-	-	-	-	-	-
	Glycerine	...	-	-	-	-	-	-	-	-
{	Inulin	...	±	-	-	-	-	-	-	-
	Dextrin	...	-	-	-	-	-	-	-	-
{	Indole	...	+	+	+	+	+	+	+	+
	Litmus milk ¹	...	± to 0	± to 0	± to 0	± to 0	± to 0	± to 0	± to 0	0

* ± = faintly acid; 0 = no change.

practically unchanged through the stomach into the duodenum; here it is acted on by the bile and pancreatic secretions, and is emulsified (Pillemont), the iodine remaining bound to the fatty acids. The process of absorption is the same as for all fats. In the blood, iodipin circulates as small globules of iodized fat, and is partly acted on by the alkaline salts to give off free iodine, while the greater part goes to form a store of iodized fat in the tissues—for example, bone marrow, liver, etc.

When iodipin is given by the mouth, the iodine may be detected in the urine within half an hour. It may be given in capsules, or as an emulsion with tragacanth, but most patients will take it readily in milk, or hot coffee. The dose is 3ss. to ʒi of the 25 per cent. solution, but much larger doses may be given, up to ʒiv or even more three times a day (Radestock²). I have had no experience with 10 per cent. iodipin, but have given 25 per cent. iodipin in capsules of 2.0 grams (2.0 grams = 9 grains KI) in cases of syphilis, when there was an idiosyncrasy to potassium iodide, with favourable results.

For giving iodipin by intramuscular or subcutaneous injection, a syringe with a capacity of 20 c.cm., and with a large nozzle, is required. The needle must have a large bore and be at least 2½ in. long. A suitable syringe is such a one as has elsewhere been described by me.³ The piston is actuated by a rack and pinion movement, to get over the great force required to introduce the iodipin. Unfortunately, the "all-glass" syringes are not strong enough to withstand the great strain required to give an injection. The syringe will remain sterile if it is suspended in a glass jar, and if it is not quite emptied after an injection. The needle must, of course, be boiled, preferably in a solution of common soda. The injections are usually given in the buttock, the upper and outer quadrant being usually selected, as there are said to be fewer vessels and nerves at this spot.

The skin should be first cleansed with ether and then cubbed well with a swab moistened with a solution of mercury biniodide. The needle is then introduced with a sharp stab, and the syringe is removed, the needle being left *in situ*. A short space of time is allowed to elapse in order that it may be seen if a blood vessel has been entered, which mishap would at once become apparent by the exudation of a few drops of blood from the needle. Should this occur, the needle must be withdrawn and introduced afresh, and so on, until a spot is reached where no blood passes back through the needle. It is dangerous to give an injection if blood exudes from the needle, as a pulmonary embolism might easily occur. The filled syringe, having been warmed over a spirit flame, is fitted on to the needle and gradually emptied. A large amount of force is required to give an injection, unless a syringe with a mechanical contrivance such as I have mentioned is used. The syringe and needle are then withdrawn, the site of the injection is massaged for a few seconds with the finger-tips, and a dressing of gauze and collodion applied; this is essential, and must be carried out with care, as the iodipin tends to flow back. The injection causes practically no pain, and any discomfort is due to the accidental movement of the needle-point, or the stretching of the tissues round about, due to the introduction of so large a quantity of fluid. Occasionally during the operation pain may be felt along the course of the sciatic nerve, but I have never found it sufficiently severe to necessitate the injection being suspended, nor has any patient been so inconvenienced as to prevent him getting about his business. It is, however, well to let him rest for a few minutes. A course of iodipin injections amounts in the aggregate to the introduction of 200 to 300 grams, according to the severity of the case and according to the length of time between this and the next course. Twenty grams may be injected daily, or every other day, according to the requirements of the case. It is well to begin with 10 grams, increasing to 15 grams, and then to 20 grams, as the patient becomes more accustomed to the injections. Larger doses have been given, up to 30 grams, but these cause discomfort and are painful. The injection should be given on a different side each time, an average course of about 250 grams, expressed in terms of potassium iodide, is equivalent to about 1,250 grains of this salt. The 25 per cent. iodipin is provided in bottles of 100 grams each. I therefore give the best part of three bottles, in fifteen injections, once or twice a year according

to the case. I do not think that more than six courses of iodipin should be given to a patient, as there is a good deal of scar formation in the tissues of the buttock, which prevents infiltration through the buttock tissues, and also hinders absorption.

Iodipin is sterile and non-irritating, and unless sepsis be introduced at the time of the injection, through some fault in the technique, abscess formation need not be feared. I have never known an abscess follow an injection, but a hard infiltration is often seen, especially if the needle has not been pushed sufficiently deep into the tissues. There may be some slight discoloration of the skin over the site of the injection, but it passes off in a few days. The buttock, as a whole, may become enlarged, owing probably to the infiltration of the large amounts of iodipin into the subcutaneous tissues. Energetic massage will, however, soon reduce this.

Iodipin, after it has been injected, is very slowly absorbed. Traces may appear in the urine as early as the second day after the injection, but it is not until the sixth to tenth day, usually the latter, that a definite iodine reaction is shown on testing the urine. This reaction is easily obtained by adding an equal quantity of nitric acid to the urine in a test tube, waiting a short time for the two to combine, and then shaking up the contents with a little chloroform. The chloroform takes up the free iodine, as shown by a rose to red colour at the bottom of the tube. After long standing, certain alterations occur in the urine, changing the organic iodine combinations into the inorganic, and consequently the amount of iodine that may be liberated with nitric acid increases the longer the urine stands. From the second to the tenth day the elimination of iodine increases steadily until it reaches a maximum, which, in most cases, is 0.2 gram per litre in the twenty-four hours, and when this is reached it is not exceeded, no matter if twenty-five or fifty injections of 20 grams each are given. This proves that iodipin is deposited as iodine fat (as Winternitz says), wherever fat is present, so forming a sort of iodine reservoir, which is slowly drawn upon, that the iodipin is gradually utilized in the system, and that the quantities injected do not cause sudden changes in the amount excreted. The absorption of iodipin is favoured by bodily exercise, and takes place more readily in muscular and energetic people than in those who are either confined to bed or unable to take any exercise. Gentle massage after giving an injection also favours absorption by displacing the iodipin into the tissues of the buttock.

Iodine is secreted by the urine, saliva, and faeces. The largest absolute quantity is eliminated by the urine, the largest relative quantity by the saliva, and only a very little by the faeces. There is none excreted by the sweat. The period of excretion of iodine depends, to a certain extent, on the amount of the injection. Large doses appear to last longer; but this, I think, due to the larger amount absorbed, and so giving longer appreciable traces of iodine in the urine. The rate of absorption is, I think, the same for large or small doses. Iodine may be detected in the urine from three to six months after a course. This period is often exceeded, and one observer found traces after 402 days.

The excretion is fairly regular at first, but towards the end there is a rapid falling off. With potassium iodide large amounts are excreted over short periods. This explains the more energetic action of potassium iodide as compared to iodipin, and, when prompt action is desired, potassium iodide should be given.

I have never seen a case of intoxication with iodipin, even in those cases in which there is marked idiosyncrasy to potassium iodide. Occasionally there may be a few acne spots on the forehead, but these do not pustulate; nor have I seen a case with coryza. The patient, while undergoing an iodipin course, feels perfectly well, and has none of the depression which so often accompanies a course of iodide. As in some cases there is an increase in weight, it appears to be indicated in thin and badly-nourished cases; another important factor in these cases is that there is no disturbance of digestion from free iodine being set free in the stomach.

In secondary syphilis, it is advisable for patients to undergo a course of iodipin injections, in the hope of a prophylactic action against tertiary syphilis and parasymphilitic lesions, especially in those cases which show few

secondary symptoms, as it has often been noticed that parasyphilitic lesions have generally followed such cases, and it is rational to assume that in these instances the toxins which later on cause these lesions are produced early in the disease.

Cases which do not take mercury well will be found to stand it much better if it be given in conjunction with iodine. If the cases are being treated by injections of mercury, it is better to give the iodine either before or after the course of injections, but both injections may be given during the same period; in these cases, one side of the buttock should be reserved for the mercury salts, and the other for the iodine.

In syphilis of the nose, iodine is often preferable to potassium iodide, except in very acute cases, where there is danger of perforation of the septum or hard palate. The putrid greyish masses seen in the nasal cavity, probably remnants of a gumma, are more speedily thrown off under iodine administration than under a long course of iodide. These patients are, moreover, spared any rhinitis, which is easily produced when giving iodide of potassium.

In syphilis of the central nervous system, where iodine is indicated, and the treatment should extend over a long period, this is obtained by the administration of iodine.

One of the well-known effects of the poison of syphilis is arterial degeneration, and, both in its prevention and treatment, iodine has proved to be of value (Kalmus¹). The continuous circulation of iodine in the blood vessels may be assumed to be a powerful factor in the prevention of such degeneration, or if it has already commenced, in arresting its further progress.

The advantages of iodine may be summed up as follows:

1. It is often necessary to give a long course of iodine to patients who are unwilling to take iodide either from its lowering effects or that they are the subjects of iodism.
2. All the iodine injected is used up and must exert its specific action; an exact dosage is therefore possible.
3. Injections are painless, and there is no fear of sepsis if proper precautions have been taken.
4. Iodine subcutaneously does not produce iodism. Patients who have an idiosyncrasy to potassium iodide can take it quite well.
5. Patients remain much longer under the influence of iodine than when iodine is given in other forms. After a short course of injections the system can be kept for a period of four to six months under the influence of iodine.
6. The body is under a slow, continuous regular action of iodine, which is of prophylactic value.
7. In nearly all cases, after a prolonged course of potassium iodide, there are stomach and bowel troubles. This does not occur with iodine.
8. It has a specific action in tertiary syphilis and arterial degeneration.

The disadvantages to the use of iodine may be briefly summarized as follows:

1. In cases of syphilis, when a rapid therapeutic effect of iodine is required, iodine is of little use, as the absorption of iodine is extremely slow, two to ten days elapsing before the iodine can be definitely demonstrated in the urine, so that in cases in which there is a threatened perforation of the palate, cerebral gumma, etc., potassium iodide should be given. Iodine is not a substitute for potassium iodide when active lesions are in progress, but its value in the conditions I have previously mentioned can hardly be disputed.
2. A further disadvantage is that only a small amount of iodine can be absorbed per diem, about one-third what would be given in the ordinary way by the mouth. This can, however, be turned to account in various ways. For example, in tertiary syphilis, after potassium iodide has been administered somewhat vigorously, a course of iodine injections may be given, and the patient may then be left without medicine for some months, during which time the physician knows that iodine is daily passing through his tissues.

REFERENCES.

¹ Winternitz, *Deut. med. Woch.*, 1897, No. 23. ² Radstock, *Therap. Monats.*, October, 1899. ³ *Lancet*, May, 1908. ⁴ *Zol. Therap.*, July, 1908.

UNDER the will of the late Mrs. Martha Maria Fraser MacEwan, of Cobham, the Royal Hospital for Incurables at Putney and the London Hospital receive bequests of £2,000 and £5,000 respectively.

PROSTATE WEIGHING SEVENTEEN OUNCES REMOVED BY THE SUPRAPUBIC ROUTE.*

By ANDREW FULLERTON, B.Ch., F.R.C.S.IREL.,

HONORARY ASSISTANT SURGEON TO THE ROYAL VICTORIA HOSPITAL AND
THE BELFAST HOSPITAL FOR SICK CHILDREN.

ENORMOUS prostates have been removed in recent years by the method of Freyer, but I am not aware that one of the dimensions of that now reported has been so dealt with.

The patient was a gentleman aged 73, and was under the care of Dr. Colville of this city.

History.

He had always enjoyed good health. About a year ago he was successfully operated on for cataract. For the past ten years he has had to get up once or twice at night to pass water, but has never suffered severe pain. Nine months ago he had an attack of hæmaturia, which came on spontaneously without the passage of any instrument. At this time he passed a good deal of gravel, but no definite calculus. On rectal examination the prostate was felt to be very much enlarged. The hæmaturia lasted one day, and did not recur till the onset of the present illness. Ten days before I saw him with Dr. Colville he had a somewhat alarming cardiac attack during which his pulse fell from its usual rate of 72 to 40. He became pale and collapsed, and his face assumed a bluish tinge. Both hands were cold and anaemic as far as the wrists, and his feet were similarly affected. The heart sounds, especially the first, were faint and weak. There was no increase in cardiac dullness, and no adventitious sounds could be heard. The pulse, though slow, was of fair tension. Two days before I saw him he had a slight attack of hæmaturia. The next day he had retention, but a soft rubber catheter drew off about a quart of blood-stained urine, and during the rest of the day he passed water naturally. Next morning he had retention again, and on this occasion catheterization failed owing to the instrument getting blocked with clot. I then saw him with Dr. Colville, but failed to relieve him with catheters, and we resorted to suprapubic puncture. At this period prostatectomy was considered, and the opinion of Sir William Whittles was sought to enable us to decide, if possible, whether his heart was fit for the shock of the operation. With some misgivings, it was decided that the operation should proceed.

Operation.

Accordingly, the same afternoon I removed a huge prostate weighing 17 oz. by the suprapubic route. The operation was attended with the greatest difficulty on account of the finger being unable to reach the deeper portion of the gland. I had to put the greater part of my hand into the bladder, and even then I had the greatest difficulty in reaching the furthest limits of the growth. In order to deliver the prostate I was obliged to split it longitudinally and remove it in halves. The operation, a truly laborious one, was completed in fifteen minutes from the commencement of the incision, and was conducted under ethyl chloride administered by Dr. Fielden. I chose this anaesthetic because I am usually able to complete the operation in two or three minutes, but I was not prepared for the size of the prostate in this case.

After-History.

The patient suffered from very severe shock, and was with great difficulty kept alive for some hours after the operation, but he made a good rally, and is now—ten days after—doing well. There was also found in the bladder a pretty specimen of mulberry calculus about the size of a small marble.

The only prostate approaching this in size of which I am aware is one mentioned by Mr. Freyer, which weighed 14½ oz. Mr. Freyer says that this was the largest prostate he had removed, and that the labour involved in its removal was very severe. The operation took fourteen minutes, and his fingers, hands, and arms ached for two or three days after. I can endorse this statement as regards my own case. The muscular exertion was certainly very severe.

There are two points in my case besides the size of the prostate. First, the comparatively comfortable time the patient had had with his urinary organs up to the time of this illness, though the prostate must have been of great size for years; and secondly, the condition of his circulatory system, which in my opinion almost precluded the idea of any operative measures whatever.

REFERENCE.

¹ *Surgical Diseases of the Urinary Organs*, p. 165.

This paper was read and the specimen shown before a meeting of the Ulster Branch of the British Medical Association.

THE SCIENCE COMMITTEE

OF THE

British Medical Association.

REPORT CXIV.

TWO CASES OF JEJUNAL ULCER FOLLOWING GASTRO-JEJUNOSTOMY.

IN ONE OF WHICH GASTRIC ANALYSES WERE MADE BEFORE AND AFTER OPERATION FOR JEJUNAL ULCER.

By HERBERT J. PATERSON, M.B., B.C.CAMB., F.R.C.S.,
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NOTWITHSTANDING all that has been written in recent years on the subject of gastro-jejunostomy, there remains at least one problem in connexion therewith in need of further investigation and elucidation. The fear of the possible occurrence of a jejunal ulcer still casts a shadow, faint, it is true, over the otherwise admirable results which follow this operation when performed in appropriate cases. It is of the utmost importance that all instances of this condition should be published, in order that we may have all the available material from which to draw conclusions as to the etiology of this condition, as to the best methods of preventing it, and of treatment should it occur.

The notes of the following case which has been under my care are of interest, as it is, so far as I can gather, the first case in which an attempt has been made to obtain an accurate analysis of the gastric contents, and of the fluid escaping from a jejunal fistula before and after operation for ulcer of the jejunum.

CASE I.—Anterior Gastro-jejunostomy for Pyloric Stenosis: Per- foration of a Jejunal Ulcer Five Years later: Resection of Affected Portions of Jejunum, and Anterior Gastro-jejunostomy "en Y."

H. I., married, aged 47, was admitted into the London Temperance Hospital on August 21st, 1902, under the care of my colleague, Dr. Soltan Fenwick, suffering from pain after food, vomiting, and loss of flesh.

The patient stated that she had always been healthy until two years previously, when she began to suffer from pain after food, which gradually increased in severity, and she had lost 5 st. in weight. For one year she had suffered from vomiting, usually two or three times weekly, large quantities of undigested food being brought up. On admission the patient was much wasted and weak, and weighed 5 st. 5 lb. instead of 9 st. The stomach was markedly dilated, the lower border reaching a handbreadth below the umbilicus. There was constant visible peristalsis and a marked succussion splash. At the level of the umbilicus close to the outer border of the right rectus muscles there was a hard movable lump rather larger than a walnut. There was a marked free hydrochloric acid reaction in the stomach contents after a test breakfast, and also in the contents of the fasting stomach. Lactic acid was not present. Dr. Fenwick thought that the dilatation of the stomach was due to cicatricial stenosis of the pylorus, and asked me to see the patient with a view to operation. The patient declined to have anything done, and left the hospital on August 27th. On September 6th the patient returned, looking a good deal worse, and stating that she had been vomiting constantly. She had lost over 4 lb. in weight, and now readily consented to operation.

First Operation.

On September 8th I opened the abdomen. The stomach was large and much hypertrophied. In the region of the pylorus was a densely hard mass, about the size of a walnut, and situated mainly in the posterior wall. There were no adhesions and the lump was freely movable. Anterior gastro-jejunostomy was performed by means of a single layer of Halsted sutures, the opening made measuring 2 in. The pylorus was explored from within, and a dense, almost complete, stricture was found. The patient made an uninterrupted recovery, and left the hospital three weeks later. This was one of my earlier gastro-jejunostomies, and I must admit at the operation I thought the pyloric lump to be malignant, and I proposed to reopen the abdomen, remove a portion of the lump for microscopical examination, and if, as I anticipated would be the case, the lump were malignant, perform partial gastrectomy. Clearly I was wrong in my opinion, but fortunately the patient felt so well that she declined to have any further operation.

Part of a paper read before the Surgical Section of the Royal Society of Medicine on May 11th, 1909. The expenses of the investigations referred to in the course of the paper were defrayed by a grant from the Science Committee of the British Medical Association.

After-History.

Two years later—in August, 1904—I saw the patient again. She then told me that she had never had a day's illness or pain of any kind, and that she was able to eat ordinary food. She looked a different being, and weighed 9 st. 4 lb., a gain of over 3 st. The abdominal wound was soundly healed, and no trace of the pyloric lump could be felt.

On August 15th, 1907, the patient was readmitted into the hospital. She stated that ever since the operation she had enjoyed excellent health. Two years before readmission she began to have some pain after food, but the pain was not severe and did not cause her much inconvenience. During the previous nine months the pain had increased, nevertheless she continued to eat all kinds of food—cheese, tinned foods, etc. For three months she had noticed a lump forming in the abdominal wall above the umbilicus. On August 15th the skin over the lump gave way, and much yellowish fluid escaped. She was seen by Dr. Percy Edmunds, who at once sent her into the hospital.

The patient looked exceedingly well, and had become very stout, and weighed over 12 st. Midway between the umbilicus and the ensiform cartilage, immediately to the left of the middle line, was an aperture in the abdominal wall, with shelving indurated edges, from which escaped a turbid yellowish fluid apparently containing bile. Around the aperture there was considerable induration, and the skin for some distance around was much thickened. A diagnosis of perforated jejunal ulcer was made. As the patient was so well nourished, I thought that it would be advisable to postpone operation with a view to getting the skin into a more healthy condition, and also to reducing the gastric acidity, and rendering the intestinal contents sterile by keeping her on an exclusively milk diet. This period of waiting was utilized by a series of examinations of the gastric contents, and of the fluid escaping from the fistula. The examinations were as follows:

August 20th. Test breakfast. One hour later stomach contents drawn off, 110 c.cm.

Total acidity, 85.	...
Total chlorides	0.433
Free HCl	0.072
Protein HCl	0.208
Mineral HCl	0.153

During the digestion of the test breakfast and for half an hour later the fluid escaping from the fistula was collected and analysed, with the following result:

Total chlorides	0.405
Free HCl	0.044
Protein HCl	0.175
Mineral HCl	0.186

On August 27th, after patient had been on a milk diet for a week, the analysis of the gastric contents was as follows:

Total acidity, 80.	...
Gmelin's reaction absent.	...
Total chlorides	0.361
Free HCl	0.018
Protein HCl	0.187
Mineral HCl	0.146

At the same time 60 c.cm. of fluid was collected from the fistula.

Gmelin's reaction present.	...
Total chlorides	0.372
Free HCl	0.004
Protein HCl	0.092
Mineral HCl	0.276

September 3rd 70 c.cm. fluid collected from fistula.

Total acidity 60.	...
Total chlorides	0.401
Free HCl	0.004
Protein HCl	0.109
Mineral HCl	0.292

Second Operation.

On September 5th, 1907, an oval incision was made through the skin around the fistula, and carried downwards through the fasciae and muscles. The peritoneum was cut through in the middle line well below the fistula, and a finger introduced into the peritoneal cavity. The jejunum was found adherent to the abdominal wall for some distance on either side of the fistula. The fistula was plugged with gauze, and the peritoneum carefully cut through clear of the area adherent to the jejunum. It then appeared that the fistula led directly into the efferent limb of the jejunum 1 in. below the site of the anastomosis with the stomach; 6 in. of jejunum, including the perforated ulcer and the skin attached to it, were resected. After separating the jejunum from the stomach, the opening in the stomach measured 1 in. by ½ in. This opening was enlarged, and the distal end of the jejunum implanted into it; the proximal end of the jejunum was implanted into the side of the jejunum 4 in. below the anastomosis with the stomach. Both anastomoses were performed by means of two continuous sutures. Great difficulty was experienced in suturing the abdominal wound, as after removal of the fistula and dense hard tissue around it there was a considerable interval between the edges of the wound. It is interesting to note that all trace of the pyloric lump felt at the first operation had disappeared.

After-History.

The patient made an uninterrupted recovery, and on October 12th, after a test meal, 150 c.cm. of gastric contents were drawn off and analysed.

Total acidity, 59.	...
Gmelin's reaction absent.	...
Total chlorides	0.302
Free HCl	0.007
Protein HCl	0.164
Mineral HCl	0.138

She left the hospital in excellent health on October 12th, weighing 9st. 13lb.

I did not see the patient again until August 26th, 1908. She then told me that she had remained quite well until a month previously, when she began again to suffer from pain in the epigastrium bearing no relation to food. On passing a tube in the early morning the stomach was found empty. After a test meal 40 c.m. of gastric contents were drawn off, containing a good deal of mucus and some blood.

Total chlorides	...	...	...	...	0.430
Free HCl	...	...	...	...	0.032
Protein HCl	...	...	...	...	0.317
Mineral HCl	...	...	...	...	0.080
No lactic acid.	...	...	...	...

In view of the recurrence of hyperacidity and the presence of blood in the stomach I feared the recurrence of ulceration. When the patient left the hospital I had advised her never to take meat again, a warning which she had disregarded. I again cautioned her as to her diet, and prescribed bismuth and alkalis. The patient so strongly objected to the use of the stomach tube, and was so alarmed at the sight of blood in the gastric contents that she discontinued attendance for some months, so I lost sight of her again, although I heard indirectly that she was better.

In February, 1909, I saw her again. She was then much better although occasionally she suffered from attacks of pain, usually coming on during the night, accompanied by an acid taste in the mouth, and not bearing any relation to food. Her weight was 10st. 12lb. There was no tenderness of the abdomen, the abdominal scar remained soundly healed, and the patient looked in excellent health. On bismuth and hydrocyanic acid she quickly lost her pain, and I believe that if only she would be more careful in her diet, she would remain well.

In a few of the recorded cases the total acidity of the gastric contents was estimated before operation, and in still fewer the amount of free hydrochloric acid, as estimated by Toper's method, is noted. The estimation of free HCl by this method, however, is very inaccurate, and the amount of total acidity includes both organic and inorganic acids. The important point, it appears to me, is the amount of free hydrochloric acid present in the gastric contents, and this is well illustrated in the case just related. On admission into the hospital for the second time, the free HCl in the gastric contents was 0.072 per cent., more than three times the normal amount. The percentage of free HCl in the fluid escaping from the jejunal fistula—that is, in the jejunal contents—was 0.044, or more than double the amount normally present in the stomach. This observation appears to me of considerable significance with regard to the etiology of jejunal ulcer. Here we had evidence of the presence of a fluid rich in free HCl in a portion of intestine normally unused to the presence of acid contents. That under such circumstances ulceration should ensue is not surprising. The analysis of the gastric contents after a week on milk diet showed a very different state of affairs. The percentage of free HCl was then only 0.018, or just about normal, and the percentage of free HCl in the jejunal contents had diminished from 0.044 to 0.004. From these analyses we may, I think, draw the following inferences:

1. That the presence of an ulcer in the jejunum was connected with the large percentage of free hydrochloric acid present in the jejunal contents.
2. That as the high percentage of free hydrochloric acid in the gastric contents rapidly diminished to a normal amount on a milk diet, the excess of free hydrochloric acid in this case was probably due to errors in diet.
3. That the bile and pancreatic juices in the jejunum usually neutralize the free hydrochloric acid which escapes from the stomach. When, however, free hydrochloric acid reaches the jejunum in great excess, the alkaline juices are insufficient to neutralize all the free hydrochloric acid present.

Incidentally I may point out that although after a week on a milk diet the amount of free HCl had diminished by nearly two-thirds, the total acidity had diminished only from 85 to 80. This illustrates how little information Toper's method gives us as to the amount of inorganic acids present in the gastric contents.

ASE II.—Anterior Gastro-jejunostomy (May, 1899) for Pyloric Stenosis supposed to be Malignant: Recurrence of Pain Five Years later: Seven Years later Separation of Adhesions round Jejunum: Good Health until March, 1908: Death in September, 1908.

Anterior gastro-jejunostomy by means of a Murphy's button was performed by the late Mr. Walsbam in May, 1899, on a man aged 69 years suffering from pyloric stenosis, which was thought to be malignant. He remained well for nearly five years, but

then began to suffer constant pain after food. He was sent to see me by Dr. Howard Distin, who thought that the pain was due to the irritation of the Murphy button, which, so far as was known, had never been passed. The patient's weight was 8st. 6lb., a gain of 3st. since the operation. The stomach was somewhat dilated, and just above the level of the umbilicus there was a rounded induration in the left rectus muscle.

Under medical treatment the patient improved and remained well until the beginning of 1906, when he began to suffer severe pain in the left side, with occasional attacks of vomiting. I saw him again in July. He looked thinner and more careworn than when I last saw him, and he had lost 2st. 4lb. In the left rectus muscle was a tender nodular swelling about the size of a small Tangerine orange. A test meal showed the presence of free hydrochloric acid, a trace of lactic acid. An x-ray photograph did not show the presence of a button in the stomach.

Operation.

On July 20th I reopened the abdomen. There were adhesions at the pyloric end of the stomach. The pylorus was markedly stenosed, but all trace of the former tumour had disappeared. The anastomosed loop of jejunum was firmly fixed to the anterior abdominal wall for a distance of 2 in. There was considerable induration of the jejunal wall as if there existed, or had existed, an ulcer of the jejunum which had resulted in the adhesion of the jejunum to the abdominal wall. The separation of these adhesions would have involved an extensive operation, which I did not think justifiable in view of the patient's age. The other adhesions were divided, and the abdominal wound sewn up.

After-History.

The patient remained well until March, 1908, when his appetite began to fail. He suffered no pain, but he vomited occasionally. I saw him again in July. The stomach was then considerably dilated, and there was marked stomach splash. It was evident that the stomach was not emptying itself properly. With occasional lavage he improved for a time, but later his strength gradually failed, and he died in September, 1908.

Through the courtesy of Dr. Distin I was able to examine the abdominal viscera. On opening the abdomen an interesting state of things was found. The stomach was enormously dilated and flabby. High up towards the cardiac end the button could be plainly felt loose in the cavity of the stomach. The anterior wall of the stomach had been drawn downwards and backwards, so that the site of the anastomosis was posterior rather than anterior. Although an anterior operation with a long loop had been performed, the length of the afferent limb from the ligament of Treitz to the junction with the stomach now measured 4 in. only, and it emerged from under the colon near the splenic flexure. Until a careful examination had been made it was difficult to believe that an anterior and not a posterior operation had been performed. The stomach was distended with formalin and examined at a later date. When the stomach was opened I found that the anastomotic opening was much contracted and admitted only the tip of the little finger, and was surrounded with a considerable amount of indurated tissue. In the jejunum just below the anastomosis the mucous membrane was puckered as if the site of an old ulcer, and microscopical examination showed old chronic inflammation. The pylorus was indurated and almost completely stenosed, so that its lumen was diminished to the size of a cedar pencil.

This case bears out a view I expressed some years ago—that, after the anterior operation, the afferent limb, although at the time of operation it is drawn up round the colon, becomes later displaced outwards so that it emerges from under the colon at or near the splenic flexure. Nature thus appears to protect the afferent loop from the influence of the excursions of the movable part of the transverse colon.

REPORT CXV.

THE CARBON MONOXIDE METHOD OF DETERMINING THE TOTAL OXYGEN CAPACITY AND THE BLOOD VOLUME IN ANIMALS:

WITH SOME EXPERIMENTS ON ANAEMIA AND TRANSFUSION.

BY

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THE carbonic oxide method of determining the total oxygen capacity and the blood volume described by Haldane and Lorrain Smith¹ has been applied to experiments on rabbits. Using the apparatus previously described by Douglas,² we find that this can be done with a considerable degree of accuracy.

1. In a series of experiments, we have withdrawn from or added to the circulating blood of a rabbit a quantity of

blood of known oxygen capacity, as determined by the haemoglobinometer, with the following results:

C.cm. O ₂ Capacity Before.	C.cm. O ₂ Capacity Removed or Added.	C.cm. O ₂ Capacity After.		
		Calculated.	Found.	Difference.
15.9	- 5.7	10.2	10.0	- 0.2
26.7	- 6.6	20.1	18.6	- 1.5
16.8	- 6.9	9.9	10.4	+ 0.5
21.5	- 5.95	15.55	15.4	- 0.15
13.0	- 4.8	8.2	8.7	+ 0.5
21.3	+ 6.1	27.4	27.8	+ 0.4
22.5	+ 6.5	29.0	28.5	- 0.5
26.0	- 7.05	33.05	32.5	- 0.55

2. In another series we compared the total oxygen capacity as found by this method with that calculated colorimetrically by bleeding the animal to death, washing out the vessels, and subsequently mincing and extracting the tissues (Welcker's method). The results were not

Total Oxygen Capacity.		Difference per Cent.
CO Method.	Welcker's Method.	
21.0	19.4	+ 8
17.8	14.8	+ 20
16.1	14.7	+ 10
24.7	21.3	+ 16
23.3	23.3	± 0
26.05	30.55	- 15
21.0	21.1	- 0.5
		+ 5.5

altogether satisfactory; the CO method appears to give results somewhat too high, but we have not been able to make out the reason.

3. In three animals we studied the sequence of events following a single severe haemorrhage. The chief points

Weight.	Total O ₂ Capacity Before Bleeding.	Amount bled.		Days till Original O ₂ Capacity was Regenerated.	Ultimate O ₂ Capacity Reached.	In Days After Bleeding.
		C.cm. Blood.	C.cm. O ₂ Capacity.			
I. 2,180 ...	16.1	41.5	5.7	27	19.5	53
II. 2,450 ...	15.9	48.0	6.9	19	20.4	55
III. 2,170 ...	13.4	44.5	4.8	27	17.6	49

which arise are: (1) In the days immediately following the haemorrhage the blood volume may be considerably increased over the normal; (2) the percentage oxygen capacity (haemoglobinometer readings) is a very uncertain index of the rate and degree of regeneration; (3) over-regeneration occurs; (4) the rate of regeneration may be quantitatively followed day by day in the intact animal; over the whole period of regeneration it varies from 0.18 to 0.36 c.cm. O₂ capacity (0.13 to 0.27 gram haemoglobin) per day, sometimes being as great as 0.41 c.cm. (0.31 gram) per day.

4. In other three animals we followed the effects of repeated haemorrhage. We did not obtain any permanent dilution of the blood, as was found by Lorrain Smith in human cases of haemorrhagic anaemia.⁸ The chief points of interest are the large amounts of blood which may be removed with impunity and the rapid regeneration which occurs. At some points this reached the high figure of 2.2 c.cm. O₂ capacity (1.65 grams haemoglobin) per day.

Weight.	Total Oxygen Capacity.		Amount bled.		C.cm. Oxygen Capacity Regenerated.	
	Before Bleeding.	After Bleeding.	C.cm. O ₂ Capacity.	In Days.	C.cm. O ₂ Capacity.	C.cm. per Day.
I. 2,420...	16.2	18.5	49.9	47	52.2	0.870
II. 3,010...	18.6	25.0	28.9	23	36.3	0.527
III. 3,575...	26.65	23.5	23.8	6	20.65	0.941

5. Aniline poisoning is not altogether suitable for study by this method since the blood becomes yellow and muddy. We found, however, that the apparent anaemia as judged by the haemoglobinometer is greater than the real loss of haemoglobin owing to a marked increase in the volume of the blood.

Date.	Weight.	Total O ₂ Capacity.	Percentage O ₂ Capacity.	Volume of Blood c.cm.	Treatment.
March 26	3,120	19.5	12.0	163	
" 28	3,250	21.2	10.9	195	
" 30	3,020	20.9	13.2	158	0.2 c.cm. aniline daily from Mar. 30th to April 9th.
April 2	2,970	17.5	12.8	137	
" 4	3,000	19.6	11.2	175	2.0 c.cm. aniline April 6th.
" 8	2,980	12.4	5.7	217	
" 10	2,900	10.1	2.8	350	
" 13	2,820	10.5	3.8	276	
" 16	2,670	13.2	5.1	260	
" 24	2,450	10.6	6.5	163	
March 29	2,680	19.3	11.3	175	

The total O₂ capacity was actually halved, while the haemoglobin readings fell from 65 on the human scale to 15 instead of 32.

6. In a case of marked anaemia associated with suppuration, which arose fortuitously in a rabbit which was in hand, we found a marked instance of chlorotic anaemia associated with some loss of total haemoglobin.

Date.	Weight.	Total O ₂ Capacity c.cm.	Percentage O ₂ Capacity c.cm.	Blood Volume c.cm.	Remarks.
May 14	3,200	23.0	13.0	192	
" 22	3,080	23.2	12.95	179	
June 2	3,070	19.5	9.25	210	
" 4	3,000	18.8	9.6	196	
" 11	2,880	18.9	7.6	248	
" 12	2,850	17.3	6.5	256	Obviously ill.
" 13	2,740	15.3	6.7	228	
" 15	2,820	13.6	4.9	277	
" 18	2,620	13.5	3.05	443	Died June 18-19.

The blood volume here was more than doubled, and the haemoglobin fell to 16, though in proportion to the real loss in total haemoglobin it should not have fallen below 39.

7. In three animals we made a series of observations on the fate of rabbits' citrated blood transfused into rabbits. In this series on the whole the haemoglobinometer gives a fairly accurate measure of the total haemoglobin, though we met with some marked exceptions in detail. The chief points ascertained are (1) an accurate measure of the rate of disappearance of transfused blood; (2) the fact that a second transfusion disappears much more quickly than the first. The details of this are still occupying our attention. We may say here, however, that there are no external signs of haemolysis, and the serum is not haemolytic to rabbits' red cells.

Weight of Animal.	Total O ₂ Capacity before Transfusion.	First Transfusion.			Second Transfusion.			Third Transfusion.		
		Amount Transfused.		Normal reached in Days.	Amount Transfused.		Normal reached in Days.	Amount Transfused.		Normal reached in Days.
		C.cm. Blood.	C.cm. O ₂ Capacity.		C.cm. Blood.	C.cm. O ₂ Capacity.		C.cm. Blood.	C.cm. O ₂ Capacity.	
3,750	21.9	52	6.5	8	61	8.01	4	60	5.4	2
3,600	25.9	56	7.05	16	80	9.2	5	70	9.3	7
2,600	21.8	51	6.1	12	63	6.6	5	—	—	—

8. Incidentally we have obtained a number of measurements of the total oxygen capacity and blood volume in normal rabbits, which may be summarized as follows:

	Body Weight, Grams.	Per-centage Oxygen Capacity	Total Oxygen Capacity	Blood Volume.	Per 100 Grams c.cm. Blood.	Body Weight, c.cm. Oxygen Capacity
Average of 3 males	2,490	14.2	19.5	138	5.51	0.780
Average of 12 females	3,115	13.0	21.7	170	5.44	0.697
Maximum..	4,040	16.8	28.7	337	8.6	0.97
Minimum..	2,090	8.5	12.0	84	3.8	0.53

9. The chief results of immediate practical import are three in number. In the first place, the general accuracy of the Haldane-Lorrain Smith method is fully established. In the second place, we have found several examples (after hæmorrhage, aniline poisoning, spontaneous anaemia) in which the degree of anaemia indicated by the hæmoglobinometer is more profound than the actual deficiency of hæmoglobin existing at the time—cases, in short, in which the pathological condition is, as it is in chlorosis, in part a dilution rather than a defect of blood. Thirdly, it is shown that transfusion, if practised as a therapeutic measure, can only be done once on the same individual with much prospect of benefit; the second and subsequent lots of transfused red corpuscles are disposed of so quickly by the recipient that they cannot be of much use.

REFERENCES.

¹ *Journal of Physiology*, vol. XXV, 1900, p. 331. ² *Ibid.*, vol. xxxiii, 1905, p. 493; and vol. xxxiv, 1906, p. 210. ³ *Trans. Path. Soc.*, vol. li, 1900, p. 328.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

TREATMENT OF GONORRHOEA BY ALLOSAN.

SANTALOL preparations have been widely used for the treatment of gonorrhoea; indeed, of the liquid esters of this drug there is no lack, but only recently has a santalol preparation in a solid form been put upon the market under the name of "allosan," which is the allophanic ester of santalol, and has the formula $\text{NH}_2 \cdot \text{CO} \cdot \text{NH} \cdot \text{CO} \cdot \text{OC}_2\text{H}_5$. It is a white powder of a mild aromatic odour, tasteless, and non-irritating to the mucous membranes of the mouth and oesophagus; it is split up in the intestine, where it does not produce any irritative effect, the separation of santalol beginning after about two hours. A suitable dose is 15 grains three times daily, although in some cases I have given 20, and even 30, grains thrice daily without any harmful effect. I do not wish to claim that allosan is different in its action to santalol, the medicinal active component of East Indian sandalwood oil. It is not, of course, a substitute for the local treatment of gonorrhoea with or without complications, but it is a valuable adjuvant to local treatment. Its action seems to be to diminish the secretion and relieve the irritation in acute uncomplicated as well as complicated cases (cystitis colli posterior urethritis).

The following are brief notes of some cases in which this drug was used:

Mr. J., aged 20, complained of burning pain on passing water, and inability to sleep owing to painful erections; there was a

thick yellowish discharge and painful enlargement of the right testicle; this condition had lasted for ten days without medical treatment. Allosan 15 grains was prescribed in powder three times daily, while locally the orchitis was treated with belladonna and glycerine. In ten days the discharge was practically gone, only a thin, watery, scanty discharge occurring early in the morning; after another four days' treatment the discharge had entirely disappeared and the chordee had ceased. In this case I was satisfied with allosan and glycerine of belladonna, and no injections were given. The patient returned in three weeks and reported that he was quite free from any further symptoms or signs.

Mr. S., aged 28, complained of severe scalding during micturition; a thick discharge had been present for a fortnight; he had been under medical treatment without appreciable relief. Allosan 30 grains was ordered as powder four times daily. In four days the discharge was much thinner, he passed water with considerably less pain, and slept better. The treatment was continued for another five days, when the discharge was watery and scalding pain during urination had nearly gone. The treatment with allosan was continued for another ten days, with injections of protargol 2 per cent., and at the end of this time the patient was quite well.

I have selected these two cases as typical examples of gonorrhoea. I have now treated about 30 cases of gonorrhoeal infection in man with allosan, and the result has been uniformly successful. In the majority of cases towards the end I have, of course, used injections; but that does not diminish the value of the good results obtained by the allosan treatment in the early stage of the infection.

JOHN R. O'BRIEN, M.D., F.R.C.S.Irel.

North Kensington, W.

LACTIC ACID BACILLI IN THE TREATMENT OF MELANCHOLIA.

FORD ROBERTSON, whose recent brilliant researches in association with McCrae in regard to the etiology of general paralysis of the insane have created so much discussion, assigns to toxæmic states a large value in the causation of melancholia. (As a curious recapitulation of the dogmas concerning "black bile" of olden times may be noted the modern ideas of toxins.) Maudsley, Clouston, and many others have noted the invariable concomitance between disordered conditions of the alimentary canal and melancholic states. The latter, it is true, are frequently looked upon as causes, the former as effects. But, for the sake of argument, let us assume a contrary hypothesis.

Last summer it was stated in the *BRITISH MEDICAL JOURNAL* that the lactic acid bacilli or their product soured milk, or tablets containing the bacilli, had been tried in such conditions as chronic diarrhoea, catarrhal diarrhoea, constipation, etc., and their method of operation was not empirical, but was based on the hostile influence of the lactic acid bacilli on the other organismal denizens of the intestine. The results were gratifying. It occurred to me that, this inimical action having been proved, the lactic bacilli or their products might well have a beneficial effect in melancholia, the reasoning leading to this conclusion being as stated above. In discussing the matter with Dr. David Hunter, of the West Ham Borough Asylum, I found that the same idea had occurred to him.

Having tried the treatment by tablets containing the bacilli and by prepared milk, I have observed such improvement in the cases as to warrant a short note on the subject. In one case in particular the result has been marked—an example of hypochondriacal melancholia exhibiting such typical symptoms as would have marked him inevitably for inclusion in his categories by Burton: "His soul abhorred all meat. Like Job, he cursed his stars. He was weary of the sun, and yet afraid to die;

vivere nolunt et mori nesciunt." He had the jaundiced eye, the sallow complexion, a more than ordinary constipation. At first the bowels were moved with difficulty, and only when strong purgatives were used. He was given soured milk and bacillary tablets; and the result must be described as satisfactory. Now the bowels move easily (though he will not, by the way, admit that this is so), the complexion has cleared in a marked degree, and in the space of three months he has increased his weight by 11 lb. I do not imagine that ordinary aperient treatment would have wrought this change. Mentally he has become brighter, has taken more interest in his surroundings, has read the papers and books provided, and has conversed freely with his neighbours. In other cases I have noticed beneficial results, but not in such marked degree, though, on the other hand, they were not such profoundly melancholic cases as the one I have mentioned. The cases have been too few in number and the treatment has been carried out for too short a time to warrant me in making any generalization, and my sole object is to suggest that this method of treatment may be given a trial by those better qualified than myself to carry it out, and also with more material for observation to their hands.

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ETHYL CHLORIDE AS AN ADJUVANT TO NITROUS OXIDE WHEN ANAESTHESIA THROUGH THE NOSE IS DIFFICULT.

CASES in which induction of anaesthesia through the nose by nitrous oxide is difficult or impossible are by no means uncommon in dental work. The administrator may either quickly change the nasal for the ordinary apparatus, be content to give the operator a very short anaesthesia and so disappoint the patient, or else he may stop and explain the position to him and administer ethyl chloride or some other anaesthetic by means of an inhaler covering both nose and mouth. In either case he will lose such benefit as it is possible to gain in induction and maintenance of anaesthesia by the amount of nitrous oxide that can pass through the nose.

It is a great advantage at such times to be able straightway to carry over the patient from his half-stupid condition under the small amount of nitrous oxide inhaled to a light or even deep anaesthesia under ethyl chloride without disturbing him by a change of apparatus, and to have a better chance of being able, when he is once well anaesthetized by ethyl chloride, to continue the anaesthesia by nitrous oxide. I have therefore had made a mouth inhaler, the mouthpiece of which is wholly of metal and fashioned to fit closely to the mouth when kept open by a dental prop; to this mouthpiece is attached a very short wire cage fitted with a rubber bag with a capacity equal to that of a Clover's inhaler. It will stand face uppermost—for example, on a table close to hand.

When needed for use, and while the nose-piece is still applied, 2 or 3 c.cm. of ethyl chloride are sprayed by the anaesthetist's left hand into the bag, which is quickly applied to the patient's face, and he is asked to take a few breaths through the mouth. He will usually not notice the change of anaesthetic, and as there is generally some passage of nitrous oxide through the nose, the bag will gradually become filled with a mixture of ethyl chloride and nitrous oxide, which becomes more dilute as the patient goes under, and a very satisfactory form of anaesthesia, lasting from one to two minutes, is quickly reached. Thus the operator is enabled to do a good deal of work. At times it is impossible to prolong the anaesthesia by means of the nitrous oxide sufficiently, and there is then no objection to a fresh dose of ethyl chloride. If necessary the ethyl chloride may be followed by the addition of ether to strips of gauze attached to the wires and projecting into the bag.

I have several times found this method very useful, and it has already once saved me from the necessity of administering ether. Messrs. Barth, 54, Poland Street, London, have carried out my idea of the inhaler very neatly.

W. J. MCCARDIE, M.B., B.C.,
Anaesthetist to the General, Dental, and
Ear and Throat Hospitals.

Birmingham.

A LARGE DOSE OF SULPHONAL.

SINCE sulphonal was first brought to the notice of the profession in 1887 warnings have so frequently been given as to the danger of its administration in anything over 30 grains, that the following case of an extraordinarily large dose is of some interest.

I was called to see a man, about 30 years of age, who was said to have been asleep for twenty-four hours and could not be roused. His mother, an infirm woman, was the only other occupant of the house, and said that her son had gone out the day previously and purchased a bottle of 100 Burroughs, Wellcome and Co.'s 5-grain sulphonal tablets. On returning home he had swallowed two handfuls of them. On arrival I counted 51 tablets remaining in the bottle and assume that he had taken the other 49, or 245 grains. He had previously had some consolidation of the right apex, and owing to this had lost his post, and become very depressed. There is little doubt that he took the tablets with intent to commit suicide.

When I saw him he was lying curled up on his right side. The pulse was 68 and respirations 20. The pupils were normal in size, but did not react to light. The patella tendon reflex was somewhat difficult to elicit. The tongue was foul and there was a patchy erythematous rash. On being roused he turned his head, scowled, buried his head once more in the pillow, and relapsed into somnolence. He remained in this condition for five days, only rousing occasionally to take a little warm milk, and once in the twenty-four hours to pass water into a bottle. There was no incontinence and his bowels were not opened until the sixth day. The urine at no time contained any haematoporphyrin. The pulse and respiration kept good all the time, although the pulse became weaker as the days went on. After remaining in a condition of stupor for 120 hours he gradually regained consciousness, sat up in bed and took some beef tea. There was no marked loss of power in the limbs following his sleep, and in a few days he was about again.

That he came out of his adventure so lightly was probably due to the slow dissolution of the tablets. The stools afterwards contained no signs of them. His condition presented no symptoms to cause any alarm, and the treatment was purely expectant.

H. C. L. MORRIS, M.D. BRUX.,
M.R.C.S., L.R.C.P.

Bognor.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

GRAVESEND HOSPITAL.

(Two cases reported by SYDNEY W. MILNER, M.R.C.S.,
House-Surgeon.)

CASE I.—*Dilated Gall Ducts in a Child.*

J. G., aged 4, was admitted on January 13th last, with jaundice and abdominal swelling. He had been quite well until four months previously, when he had an attack of jaundice, which quickly passed off.

The spleen was greatly enlarged and firm. The liver was also much enlarged, hard, and the surface felt granular. The edge was very sharp, and could easily be grasped. On the right side of the abdomen, and separated from the liver dullness by a band of resonance, was another large dull area extending downwards into the right iliac region, and occupying the right flank. The dullness did not shift with change of position, and fluctuation could be detected. The urine contained bile and albumen. The faeces were clay-coloured.

A fortnight after admission the child had severe pain and rise of temperature. The pain was localized to a spot to the right of the notch for the gall bladder. At this time an aperient produced a stool the first half of which was clay-coloured and the second half blood-stained. Pain did not recur again until a fortnight later, when the temperature rose to 102.4°. At this time it was noticed that a swelling had appeared at the site of the pain over the right lobe of the liver, like the pointing of an abscess, but

without inflammation of the skin. The child was anaesthetized with chloroform, a small quantity producing deep anaesthesia, and the swelling incised, giving exit to about a pint of bile-stained, offensive, serous fluid, which, from the way it escaped, had evidently been under pressure. The acute pain was considerably relieved by the operation. A large quantity of bile-stained, serous, albuminous fluid escaped daily into the dressings. On the seventh and eighth days after operation there was copious haematemesis of dark tarry blood. Death occurred on the ninth day from exhaustion. It was noticed that the size of the abdomen became greatly reduced after death.

Post mortem the skin incision was seen to open into a small abscess-like cavity to the right of the fundus of the gall bladder. The omentum was turned up and was adherent to the under surface of the diaphragm and the upper surface of the liver. The liver was very hard, enlarged, of a dark-greenish hue, with thickening of the capsule. The cut surface showed many bands of fibrous tissue surrounding larger or smaller green pigmented masses of liver tissue. The intestines were adherent on the right side of the abdomen to a whitish, thick-walled, fibrous sac, which extended downwards into the right iliac fossa, and upwards, narrowing as it went, to the under surface of the liver. In separating the adhesions the sac was inadvertently opened, and thick, purplish fluid escaped. The pancreas was dissected out; it was very firm, and the pancreatic tissue of the head of the gland was seen to be spread out upon the surface of the sac of fluid. The liver and sac were next removed together and more carefully examined. The gall bladder was not enlarged, but was white and thickened and empty. The cystic duct, which was also thickened, opened by a pinhole into the large sac, and the latter was found to communicate by dilated branching ducts with the hepatic ducts within the liver substance. Evidently the cyst had not been opened at the operation, but another collection of fluid had been tapped. The duodenum was searched for the opening of the common bile duct, but this was not certainly discovered. The spleen was firm and enlarged.

Microscopically examined, the liver showed multilobular cirrhosis, with bile staining. The fibrous tissue of Glisson's capsule was increased, and there was proliferation of the bile ducts, but no recent inflammatory change. The pancreas contained increased fibrous tissue, but was otherwise normal. A lymph gland showed signs of chronic inflammation. There was no evidence of new growth. During life a diagnosis of cirrhosis of the liver was made, with dilated gall bladder. Undoubtedly this was a case of dilated gall ducts. The questions why the gall bladder escaped dilatation, and whether the pathological process began in the pancreas, arise.

CASE II.—*Sarcoma of Both Kidneys in a Child.*

E. B., a girl aged 4 years 9 months, admitted on February 22nd, 1909, with abdominal swelling, had been well until one month previous, and had had no children's complaint. The father, mother, and remaining children were all healthy.

On admission the child was listless and anaemic. The face, hands, and feet were oedematous. The abdomen was swollen and prominent in the umbilical region, where a distinct swelling could be felt, resonant on percussion. Both kidneys were enlarged, easily palpable, and smooth. The urine was scanty, and showed a thick cloud of albumen on boiling.

The child became gradually worse, and died rather suddenly after drinking milk on March 3rd, 1909.

Post mortem the abdomen contained some free purulent fluid with clots of yellow lymph. The intestines in the umbilical area were matted together by adhesions around a soft white tumour. On attempting to separate them a mass of the swelling easily came away, opening up the lumen of the gut. Both kidneys were greatly enlarged, white and soft. The ureters were not dilated. On section the capsule peeled easily, revealing a smooth, yellowish-white cortical region spotted with dark blood vessels. The kidney substance was replaced almost entirely by the new growth. There were small secondary deposits on the surface of the liver.

Microscopically the growth was a small round-celled sarcoma.

Reports of Societies.

MEDICAL SOCIETY OF LONDON.

Monday, May 17th, 1909.

CHARLES BARRETT LOCKWOOD, F.R.C.S., President,
in the Chair.

The Annual Oration.

DR. H. D. ROLLESTON delivered the annual oration, entitling his address the Classification and Nomenclature of Diseases, with Remarks on Diseases due to Treatment. Definitions, he declared, were a weariness unto the flesh and the framing of them an intellectual exercise which necessarily often resulted in a compromise. In dealing with diseases due to treatment, he pointed out the serious nature of the consequences resulting from the use of the Roentgen rays in certain conditions. The effect of x rays on the skin and other parts of the body provided an example of a group of morbid changes produced by a new method of treatment. The dermatitis was somewhat analogous to sunburn and the occurrence of malignant disease to Kaposi's disease or the appearance of multiple squamous-celled carcinomas in freckles. Considerable interest attached to the production of sterility as a result of exposure to x rays; that result was probably commoner than was known, for the absence of spermatozoa from the semen thus produced was not accompanied by impotence; Brown and Osgood, indeed, found that condition of unsuspected sterility in eighteen persons who had been employed in manipulating x rays for half an hour to four hours three times a week for from two to six years—a very startling result. It had been thought that the active destruction of cells induced in the x ray treatment of leukaemia might do so much damage to the liver as to give rise to cirrhosis. Mosse had reported a case of lymphatic leukaemia cured by x rays in which the patient succumbed a year later to cirrhosis and ascites. Pleurisy with effusion had also been thought to be caused by exposure to x rays. Great interest attached to the pathological effects of horse serum, either when normal or when containing specific antibodies as in antidiphtheritic serum. The symptoms of the "serum disease" were usually trivial, and even though in exceptional cases they were severe, about nineteen deaths being on record, the benefits of serum therapy were so universal that the infinitesimal risks must be neglected. Recently it had been shown that the entrance of an alien serum into the blood gradually produced a condition of hypersensitiveness to a further dose of the serum. The condition of anaphylaxis, which was exactly the opposite of immunity, had been extensively investigated in the guinea-pig, and it had been shown that in guinea pigs death, with widespread degeneration of the capillary endothelium and haemorrhages, might be brought about by a second injection of horse serum given after a certain interval. The guinea-pigs took about ten days for that hypersensitiveness to develop, but in human beings it appeared to take longer. Thus, if the interval between the two injections was from three to six weeks, there was an "immediate reaction," the symptoms of serum disease appearing within a few minutes to twenty-four hours instead of from seven to twelve days, as after a single injection. If the interval between the two injections was longer—three months or so, there was an "accelerated reaction," which appeared in five or six days. From the large amount of material under their observation Currie and Goodall had collected a considerable number of those reactions, but, fortunately, it did not appear that the results in man were likely to prove fatal, or that they were so severe as in experimental guinea-pigs. The importance of anaphylaxis or hypersensitiveness was far-reaching, for it occurred in connexion with injection of vaccines, and was thus the important factor underlying the positive reaction in the various tuberculin tests. In addition, the peculiar symptoms produced in some persons by eggs, and usually ascribed to idiosyncrasy, were probably examples of anaphylaxis, and it had been suggested that some cases of puerperal eclampsia were of that nature, and due to the absorption of the products of autolysis of the placenta.

LEEDS AND WEST RIDING MEDICO-
CHIRURGICAL SOCIETY.

Friday, May 7th, 1909.

Dr. W. H. CHEETHAM in the Chair.

Cæsarean Section.

Dr. HELLIER read a paper on two cases in which Cæsarean hysterectomy was performed for myoma uteri complicating pregnancy.

In Case I a lady of 35 had a myoma which obstructed the cervix. This had been watched throughout the pregnancy, but at term it was clear that the head could not enter the pelvis, and there were other nodules in the fundus. On January 22nd, 1909, a vigorous male child was removed by hysterectomy, and supravaginal amputation of the uterus followed, one ovary being left. The mother made an excellent recovery and suckled her own child. In Case II, a lady, aged 31, 1-para, had about twenty myomatous nodules in the uterus with obstruction of the cervix. She was operated on in almost exactly the same way as the previous case and made an excellent recovery. The child was a girl, weighing 5½ lb. The mother was not able to suckle it, but it had been reared after some difficulty.

The author considered that most cases of pregnancy complicated by myoma required no operation before delivery. When, however, the parturient canal was seriously obstructed operation was indicated in the interests of both mother and child. Great success attended Cæsarean section under the best modern conditions.

Rupture of Abdominal Wall.

Mr. BASIL HALL described the case of a man, aged 27 years, found lying in the road nearly an hour after a motor accident.

Shock was marked and several coils of small intestines were inside the trousers. There was a large ragged wound on the abdominal wall through which the gut had escaped. The viscera were partly replaced and covered over, and the patient conveyed to his home about a mile away. On examination the intestines were found to be intact, but in one loop the mesentery was cleanly split throughout its entire breadth from its root to the intestinal margin. There was a considerable retroperitoneal hæmatoma below the left kidney; the peritoneum was torn and the left kidney lifted forwards out of its bed. The descending colon was also lifted for a few inches from the posterior abdominal wall and the quadratus lumborum exposed. The viscera were carefully washed with saline solution and sutured, the various rents were sutured, posterior drainage established, and the abdominal wall repaired.

Idiopathic Mydriasis.

Mr. MICHAEL TEALE showed a woman, aged 19, who three days previously had found her left pupil widely dilated and her left eye almost blind. No cause known. On examination the sight of this eye was found to be reduced to vague central vision of large objects, peripheral vision being lost. Pupil widely dilated and fixed, there being no reaction to light or convergence. No abnormality of fundus discoverable by the ophthalmoscope. Slight photophobia but no pain. Cross-examination failed to show that a mydriatic had been used either intentionally or accidentally.

OPHTHALMOLOGICAL SOCIETY OF THE
UNITED KINGDOM.

Thursday, May 6th, 1909.

Mr. R. MARCUS GUNN, F.R.C.S., President, in the Chair.

Tubercle of the Choroid.

Dr. G. CARPENTER discussed tubercle of the choroid in connexion with a series of cases.

The first was a child aged 7, which had been getting thinner, and was admitted to hospital with physical signs at the right apex, front and back. There was a history of abdominal pain, but no cause for it could be discovered by palpation. The child then became drowsy and comatose, with great wasting. There were six choroidal tubercles, and flecks of retinal pigment were scattered about them. Three of the tubercles were crossed by retinal vessels.

Another patient was a girl, aged 2 years. She had been ailing six weeks, and had had sickness and headache five days. When admitted she was suffering from meningitis and died on the sixth day. The right fundus was normal, and no tubercles or optic neuritis could be seen, but on the left side there was slight papillitis. Close to the optic papilla was a tubercle of considerable size, and several blood vessels crossed its face. The retinal arteries were small, nothing was noticed about the veins. The surface vessels of the brain were congested. The diagnosis was verified at the autopsy.

The next case was a boy, aged 17 months, who had much the same physical signs as the foregoing. He had meningitis, which was later corroborated by lumbar puncture.

A fourth case was a boy, aged 2, who had had a bad cough five weeks, and when admitted had consolidation at both apices. There was a small amount of papillitis in both eyes. He died twelve days after admission, no changes having occurred in the fundus in the meantime.

Several other cases of the kind were recorded, and the author then discussed the readiness which had been shown to attribute such appearances to syphilis, whatever evidence to the contrary might have existed. He urged early and systematic ophthalmological examinations, which would often render unnecessary spinal punctures or injections of substances to induce reactions. The paper was discussed by the PRESIDENT and by Dr. FREDERICK E. BATTEN, the latter commenting on the comparative infrequency of tubercle of the choroid in tuberculous children, and stating that he was under the impression that spinal puncture afforded a more certain indication than ophthalmoscopic observation.

Radium and Spring Catarrh.

MESSRS. MACKENZIE DAVIDSON and ARNOLD LAWSON recorded a case of spring catarrh in a boy, aged 12, who suffered from chronic photophobia, lachrymation, and slight conjunctival discharge. It persisted for nearly a year, but no exciting cause could be discovered. Both tarsi were covered with dense, hard excrescences, closely aggregated, and separated by deep, narrow fissures. The retro-tarsal tissue was swollen and hypertrophied, and the viscid discharge was spread over the conjunctival surface. The disease was confirmed by examination of the discharge. All ordinary remedies having failed, Mr. Mackenzie Davidson was consulted as to the possibility of treating the case with radium. Such treatment was carried out for a year, each eye being treated eight times. No pain or other immediate effect was produced, but the granulations gradually subsided. After the eighth application he was quite cured, but a interval was allowed to elapse before publishing the case, so as to be sure there was no recurrence for a long time; 39 mg. of radium were used for fifteen minutes at first, and then 44 mg. Mr. Lawson thought few applications with a potent dose of radium were better than many applications with a weaker quantity. Mr. Mackenzie Davidson discussed the case, pointing out the importance of being sure the strength of radium used was what it was said to be, as he had found serious discrepancies. It was also very important to cut off those radium emanations which were not needed in the cure.

Atropine in Refraction Work.

Mr. R. R. CRUISE read a paper on the abuse of atropine in refraction work, based on an examination of 140 eyes in patients under 16 years of age. He concluded that, on the whole, homatropine and cocaine were quite equal, if not superior, to atropine, though in most cases the result after the two mydriatics was identical. Mr. DEVEREUX MARSHALL, in discussing the paper, alluded to Mr. LANG's investigations on the matter; and Mr. ERNEST CLAEKE said it would have been useful to learn what the astigmatism was in the cases.

Mr. MAYOU read a communication on the disappearance of the iris from the pupillary area as a consequence of injury.

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

Friday, May 14th, 1909.

Sir THOMAS BARLOW, Bart., in the chair.

Radium Treatment.

Dr. N. S. FINZI exhibited two cases of malignant disease.

In the first case the patient, a woman aged 78, noticed about eight years ago that her left breast felt hard. About three years ago she had some pain and consulted her doctor, who removed the breast in April, 1905. About twelve months ago she noticed some hard lumps under the skin, and when seen at the Metropolitan Hospital by Mr. Peter Daniel in November, 1908, she had several masses about the size of walnuts firmly bound down in the centre of the scar and the axilla, and a couple of nodules under the skin at the lower end of the scar. Under x-ray treatment (four full doses to different parts of the scar) great improvement resulted, and the subcutaneous nodules disappeared. The patient, however, did not attend for some

weeks, and the growth again became rapid and much larger than in November. She had two more doses of x rays on February 24th and February 28th, 1909. From March 10th, 5 cg. of radium filtered through a silver tube 0.6 mm. thickness and 1 mm. thickness of india-rubber were applied over the large mass for fifty-three hours, the position of the tube being altered once. On March 12th a dose of forty-one hours was commenced in the axilla. The radium used was the pure bromide, and was contained in a little glass tube within the silver tube. A considerable dermatitis developed in the two places, commencing almost at once, and reaching a maximum in about three weeks. The area of this, however, was quite small, and could be excised if required. The tumour by April 2nd had almost disappeared except for a little thickening between the two places where the application had been made. That proved to be a definite nodule, and a dose of twenty-six hours with filters of 0.6 mm. silver and 1 mm. lead and six hours with 0.6 mm. silver was given, starting on April 29th.

The second patient was admitted to the Metropolitan Hospital in March, 1909, with a growth on the lower lip, 4.5 cm. in size. It had started as a pimple, which gradually became larger and became crusted over, and had been growing for fifteen or sixteen years. The rapidity of the growth had considerably increased for the last eight or ten months. There were enlarged glands under the jaw on both sides, but larger on the left than the right. Five cg. of radium bromide, filtered through 0.6 mm. silver, were applied to the growth for fifteen hours from March 1st, and the same quantity filtered through 0.5 mm. of silver and four layers of lint for twenty-eight hours from April 1st to the glands on the left side of the neck. Eplilation was noticed on the neck about April 29th, and on the left side of the upper lip on May 5th. Considerable improvement resulted both in the growth and the glands. Commencing on May 4th, another application of twenty-four hours was given to the lip, the filter this time being 0.6 mm. silver and 0.5 mm. lead and two layers of lint.

Mr. GODLEE said it was difficult to understand how the radium applied at one small spot acted so satisfactorily. Mr. W. G. SPENCER gave details of a case of epithelioma of the tongue in which the glands of the neck became infected in spite of two months' treatment by radium in Paris. Mr. A. HOWARD PHIZ said that radium spread out on a pad was apt to lose its power, and Mr. PEARCE GOULD thought that there was little evidence of actual healing over of the growth. Dr. SHAW said that from an examination he had made it appeared that the radium, whatever it was doing to the size of the growth, had not caused any difference in the carcinomatous cells. Dr. FINZI, in reply, said that in Paris they claimed to treat precancerous conditions.

Serum Diagnosis of Syphilis.

Dr. ALEXANDER FLEMING gave a demonstration of the serum diagnosis of syphilis by the "complement deviation" method. This differed from Wassermann's original method in the following respects: (1) An alcoholic extract of normal heart muscle is used instead of a saline extract of syphilitic liver. (2) The natural haemolytic power of human serum for sheep's corpuscles is made use of, thus doing away with the necessity for the haemolytic serum of a rabbit immunized against sheep's corpuscles and the guinea-pig's serum (complement). (3) The amount of blood which can be collected in an ordinary blood capsule will furnish an ample supply of serum for the test.

EXHIBITS.

The following were among the other cases exhibited: Mr. WALTER G. SPENCER: A case after reduction of an old subcoracoid dislocation of the right shoulder, complicated by fracture of the upper third of the humerus, by excavating the glenoid cavity through a posterior intermuscular incision. Mr. V. WARREN LOW: A case of pneumococcal cystitis and arthritis successfully treated by vaccine therapy. Mr. SIDNEY BOYD: A case showing Sprengel's deformity of the shoulder and Hirschsprung's disease, with definite rectal obstruction. Dr. F. PARKES WEBER: A woman three years after omentopexy and peritoneal drainage for chronic ascites connected with hepatic cirrhosis. The patient looked and felt well, and could walk long distances without fatigue. There was no ascites or oedema. Dr. DE HAVILLAND HALL and Mr. W. G. SPENCER: A girl, aged $8\frac{1}{2}$ years, on whom splenectomy had been successfully performed for splenic anaemia (?). Mr. ARCHIBALD SMITH: A man, aged 40, with hernia of the right tibialis anticus muscle. Dr. F. J. POYNTON and Mr. W. TROTTER communicated a paper on the operation of cardiolysis, which was illustrated by a case they exhibited.

SECTION OF SURGERY.

Tuesday, May 11th, 1909.

Mr. WARRINGTON HAWARD, President, in the Chair.

AUTO-INOCULATION OF SYPHILIS.

IN a paper on this subject Mr. JONATHAN HUTCHINSON adduced 4 cases to prove the possibility of auto inoculation at periods of from a few days to two months after the earliest recognition of the first chancre. Lambkin's statement that auto-inoculation was impossible later than ten days, was therefore incorrect. In one of the author's cases a second chancre appeared on the index finger, and was accompanied by axillary bubo, two months after a chancre on the prepuce, which was followed by general secondary symptoms and vigorously treated by mercury. Infection through the unabraded mucous membrane, seemed to him quite possible. He also detailed 7 cases of true second attacks of syphilis—chancre, rash, sore throat, etc.—at intervals of from eighteen months to twelve years after the first attack. The possibility of a second attack was only the expression of the efficiency of the treatment of the first; it was, therefore, obvious that reinfection might occur within two years of the primary infection. Two cases of acquired syphilis in the subjects of the congenital malady were brought forward and discussed. Mr. WARRINGTON HAWARD remarked that the most interesting point was the relation of reinfection to treatment; anything calculated to throw light on the relative value of the different systems of treatment was well worthy of further investigation. Dr. McCulloch pointed out that the reactive processes at any site of inoculation, whether by staphylococcus or streptococcus or whatever organism, in tissues already the host of the spirochaete were necessarily very complex, and induration to be expected; was it certain, then, that the lesions described in the first four cases were really new primary chancres? Mr. HUTCHINSON, in reply, said that all his cases presented the most complete clinical picture of the disease.

Jejunal Ulcer.

Mr. H. J. PATERSON read a paper on jejunal and gastro-jejunal ulcer following gastro enterostomy, which appears at page 1231 of this issue. Dr. CHARLES BOLTON said that gastric ulcer was caused either by some "devitalizing" poison or by a poison introduced from without, such as HCl. Besides the causation of ulcer, there was, however, also the question why it did not heal. From his experiments he was able to say that hyperacidity did not delay healing so long as emptying of the stomach was unimpaired. Acute ulcers in guinea-pigs healed in three weeks, but if the exit of the gastric contents were delayed artificially, ulcers might persist for at least seven weeks. Whilst it required a strength of 0.7 per cent. HCl to produce ulceration in the stomach, it was quite possible that a 0.3 per cent. solution would be efficient in the jejunum, which was accustomed to an alkaline contents. Mr. W. G. SPENCER said that if hyperacidity were really the bugbear Mr. Paterson suggested, it would negative the operation altogether. He thought jejunal ulcers were less common now that the no-loop operation was done. In his experience of the anterior operation, which was said by Robson and Moynihan to be followed frequently by jejunal ulcer, there had been no such occurrence; most of his cases were done for cancer, and such of them as he had had an opportunity of seeing *post mortem* did not show any signs of ulceration at the site of junction. He thought primary union of the mucous membrane was obtained. Mr. JONATHAN HUTCHINSON thought that jejunostomy, which apparently had been done in some of the cases tabulated, was very inadvisable as a deliberate procedure. It had been suggested, too, to divert the bile and pancreatic juice into the stomach as a rational means of overcoming hyperacidity, but the danger of persistent vomiting appeared to him an insurmountable objection. Mr. PATERSON, in reply, stated that the operation was only intended as a last resort in relapsing cases. It seemed to him that Moynihan's case of ruptured duodenum had established the feasibility of the procedure without the promotion of vomiting.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting on May 7th, Dr. WALKER DOWNIE, President, in the chair, Dr. W. R. JACK read notes of a case of *Tuberculosis of the*

bladder treated by vaccine therapy. The patient was a young woman aged 32, a teacher by occupation. Frequency of micturition with scalding pain dated back four years. It came on acutely, and passed off after varying intervals. In May, 1908, the urine was acid, specific gravity 1020, and contained albumen and pus. Tubercle bacilli were readily detected in the sediment. On cystoscopic examination, tuberculous ulceration was found in the trigone of the bladder and in the neighbourhood of both ureters. Dr. J. H. Nicoll removed the right kidney, the pelvis of which was found to contain a uric acid calculus coated with phosphates. Scattered tubercles were found through the cortex. The right ureter was swollen and gelatinous. Convalescence was uninterrupted. The attacks of pain recurred, and in January, 1909, cystoscopic examination proved the ureteral orifices to be normal, but adjacent to the right orifice were one or two small white tubercles and two flat, yellowish ulcerated surfaces, with rounded margins and evidently tuberculous. Her index to the tubercle bacillus was 0.68. On January 22nd 0.0006 mg. of Koch's bacillary emulsion was injected. A few hours of meatal and hypogastric pain followed, and the index fell to 0.60, but rose steadily to 0.88 on the 24th, and 1.08 on the 28th, and 1.10 on the 31st. Frequency greatly diminished and pain disappeared. On February 2nd 0.0001 mg. was injected. The index did not rise beyond 1.06. After the injection of 0.00012 on February 14th, the index fell to 0.81 and rose to 1.34. Some injections of a vaccine grown from a pure culture of *Bacillus coli* found in the pus were also given and effected a marked diminution in the quantity of pus. Examination at this stage failed to discover tubercle bacilli in the urine and the symptoms steadily improved. Dr. WALKER DOWNIE reported (1) a case of *Epithelioma of the naso-pharynx* treated by radium. The symptoms were severe frontal headache and inability to breathe through the nose. Both nares were found filled with pus. The naso-pharynx was almost completely filled with a new growth, a piece of which was removed and was found to be a cellular epithelioma. Operation was refused and radium was tried. A small quantity of bromide of radium was passed into the naso-pharynx through the inferior meatus. It was at first left in for fifteen minutes, but later was left in for an hour each day. After a week he could draw air through the nose, and headache was less severe. After six weeks of this treatment the tumour had entirely disappeared. He returned again, however, with symptoms of intracranial tumour, from which he died. (2) Three cases of primary epithelioma of the uvula. Each tumour was removed with scissors, cutting away a considerable piece of the soft palate round the tumour. One case died ten years after of a malignant tumour in the right posterior triangle of the neck. There was no recurrence in the throat. The second case returned four years after with a scirrhus cancer of the left tonsil with involvement of the cervical glands, which, with the tonsil, were removed. Dr. A. A. GRAY showed stereograms illustrating normal and pathological conditions in the middle and inner ear. Dr. WYLLIE NICOL showed a new form of test tube. The opening was at an angle of about 45° to the length of the tube for the purpose of facilitating dropping in fluids, as strong nitric acid, from a bottle.

UNITED SERVICES MEDICAL SOCIETY.—At a meeting on April 14th, Colonel D. WARDROP, A.M.S., in the chair, Surgeon KENELM DIGBY BELL, R.N., in a paper on physical training and the medical profession, deprecated the current fashion of men specializing in one form of sport. What was wanted was all-round training. If we were to go to war and had to call upon our men for abnormal feats of endurance, it was all-round physique that was wanted, not the man who said he could not pull an oar but could "put the shot" further than any other man in the South of England, or any other similar case of which there were many examples to-day. It was the duty of the medical profession to ensure that some sound method of physical education was everywhere adopted. Its object should be to increase the strength, agility, and power of endurance of boys and men. By "strength" was meant not large muscular development, as it is so commonly understood, but an even balance of

work between every organ and function of the body, striving to produce an all-round man. The lines of the Swedish system of gymnastics should be followed. It secured all-round development of every organ and function of the body. No exercise is applied for developing, the muscular qualities aimed at being suppleness, co-ordination, smart reaction, and agility. This method had obtained a sure footing in England, as elsewhere, but was not receiving all the attention it deserved—partly owing, no doubt, to the freedom with which so-called professional experts were allowed to practise their various methods of physical culture and to advertise these methods as treatment for the cure of all sorts of diseases, so the mention of physical training had come to have an echo of charlatanism attached to it. The failure of the medical profession to show interest in the subject was also in a measure responsible for the same result. The subject was of immense importance, and should be studied by all medical men.

Rebivius.

CRIMINAL RESPONSIBILITY.

DR. OPPENHEIMER, in the preface to his book on *The Criminal Responsibility of Lunatics*, begins by alluding to the feud between medical men and lawyers on questions concerning the criminal liability of lunatics, and affirms that "almost all the writers who have approached the investigation in a conciliatory spirit have sought success by forsaking the claims of their own professional brethren and blindly recognizing the opponents' claims." There is a good deal of truth in this, and we therefore welcome the work of one who is both a medical man and a lawyer, and one in whom also a very extensive knowledge of comparative jurisprudence is combined with eminent analytical acumen. The work differs from many others published in this country, and gains added value by the fact that it is based upon a study of the articles and explanatory "motives" of the penal codes of all countries. This alone would justify its publication, but it is the author's application of these results to English law which make it interesting, if not indispensable, to English students. A remarkable fact—clearly brought out by Dr. Oppenheimer, and of which some, at any rate, of the medical men pressing for alterations in the English law may be unaware—is that in almost every country the same antagonism between law and medicine which obtains in England is to be found, and, further, that the very changes which by many here are urgently called for—for example, the competency of medical experts to deal with questions of responsibility and the exoneration by insanity *per se*—are condemned by medical opinion in those very states where these postulates have been realized in legislation. The French penal code, which identifies insanity with irresponsibility—

Art. 64. There is neither crime nor offence if the accused was in a state of mental alienation at the time of doing the act, or if he was constrained by a force which he could not resist,

—is constantly referred to by the author, and furnishes an interesting example of the way in which an apparently rigid and logical rule can be so stretched as to subvert entirely the ends of justice. By this confusion of insanity and irresponsibility the French law delegates judicial functions to the medical expert, and the reports of the physician usually include with the results of medical diagnosis an opinion as to the responsibility of the accused and a statement as to necessary defensive measures. The question of responsibility is not a medical concept and is not to be found in the French code, and the introduction of this criterion of responsibility and, by implication, of freedom of the will has been brought about, Dr. Oppenheimer says, by a recognition of the fact that the text of Art. 64, if taken in its natural sense, would lead to appalling results.

"Thus the French law, starting with the principle of the absolute irresponsibility of the insane, arrives, by means of

¹ *The Criminal Responsibility of Lunatics. A Study in Comparative Law.* By Heinrich Oppenheimer, M.D. Heidelberg. M.R.C.P. Lond., LL.D. Lond., Barrister-at-Law, etc. London: Sweet and Maxwell, 1909. (Demy 8vo., pp. 283. 10s. 6d.)

judicial interpretation in practice, at the same results as flow directly from the text of Par. 51 of the German code," according to which "there is no punishable act if, at the time of doing it, the actor was in a state of unconsciousness or of morbid disturbance of the mental faculties which excluded the free determination of his will."

Curiously enough, Dr. Oppenheimer says, the free-will test is looked upon in Germany with the deepest distrust.

Thus we arrive at the strange result that, whilst in France interpretation has introduced the will test of which the text of Art. 64 knows nothing, in Germany interpretation has in the case of mental disease eliminated it, though the letter of Par. 51 prescribes it in so many words.

Nevertheless, Dr. Oppenheimer "emphatically concurs in the opinion that freedom of the will is a fundamental postulate of all existing systems of penal law and the only possible justification for the infliction of punishment *stricto sensu*," and dismisses rather summarily the views of the positive school who would once and for all give up the notion, even the very word, of "responsibility," including those, we take it, who would ask instead, "Is the accused a danger to society, and if so, how dangerous?"

Accepting English law on this point as it is and not as it ought to be, Dr. Oppenheimer's discussion and analyses are admirably clear and thorough. It may not, however, be out of place to draw attention to two statements, made in different chapters but relating to the same phenomenon, on which the author may yet alter his views. The first statement refers to those cases in which, though, according to Dr. Maudsley "there have not been any previous symptoms to indicate disease, it is still possible that the crime may mark the period when an insane tendency has passed into actual insanity—when the weak organ has given way under the strain put upon it." Concerning this Dr. Oppenheimer says:

The commission of a crime by a person who has never been suspected to be insane by his friends or relations, may certainly be the occasion which first attracts attention to his mental condition and causes him to be, for the first time, subjected to medical examination; but the alienist will discover independent signs of undoubted lunacy, apart from the criminal act, and that which strikes him as peculiar in the act itself will not be the only material for him to work upon; it will in his hands be merely an index to the discovery of those morbid phenomena which enable him to diagnose an ordinary mania, melancholia, delusional, epileptic, hysterical insanity. But he will not then speak of "mania transitoria."

The second statement occurs in a chapter headed "The Critical Moment."

Considering that insanity generally runs a very protracted course, and that even most of what are called acute attacks last weeks and months, we are, in the absence of cogent proof to the contrary, not merely entitled, but forced to draw the inference that a prisoner shown to have been deprived, by mental disease, of the faculty of discerning between right and wrong on the 1st of March, was probably in the same state of blissful ignorance on the 1st of February, and on that day dedicated to him and to all his fellow-fools.

Briefly and in no contentious spirit it may be said that a little practical experience of criminal lunatics would convince the author of the error of his views on this matter, and that an acute episodic psychosis may occur, in which murder may be perpetrated, on February 1st; the prisoner may convince the experts of his sanity on March 1st, and the true—that is, in all human probability the true—state of affairs only be revealed by subsequent developments, it may be many months later. For this reason, we note with approval that Dr. Oppenheimer endorses the German criminal procedure by which an extended period of mental observation in a lunatic asylum of accused persons suspected of insanity is provided. Also the author's attack on the doctrine of partial insanity and his plea for the formation of a permanent professional body of medical experts attached to courts in an official capacity, analogous to the *Gerichtsarzte* in Germany, will probably meet with general acceptance. Dr. Oppenheimer's work is a valuable contribution to the literature of a most important subject, and will repay careful study.

RENAL DISEASE.

The volume on diseases of the kidney in Brouardel and Gilbert's system of medicine has been written by E. JEANSELME, A. CHAUFFARD, P. E. WEIL, and L. LAEDERICH.²

² *Nouveau Traité de Médecine et de Thérapeutique*. Publié sous la direction de MM. Gilbert et Thoinot. xxi. *Alcaladies des Reins*. Par E. JEANSELME, A. CHAUFFARD, P. E. WEIL, et L. LAEDERICH. Paris: J. B. Baillière et fils. 1909. (Roy. 8vo, pp. 462. Fig. 76. Fr. 9.)

of whom the first two deal with the examination of the urine and the last two with diseases of the kidneys. It seems to be a mistake to say (p. 59), as is said in the chapter on albuminuria, that mucin is coagulated by heat, nor is it altogether satisfactory that Bouchard's views on retractile albuminuria, should be given without a warning that the opinion of the eminent professor is no longer accepted by urologists. There is a want of detail in the description of the reactions given by the various protein substances called albumose, as Bence Jones's albumen (hetero-albumose), for example, reacts differently to ordinary deuto-albumose. The statements respecting benign albuminuria are not clear, and there is no reference to the benignity of albuminuria in boys when unaccompanied by other indications of renal disease. It seems strange to see any doubt cast on the presence of sugar in normal urine although the quantity is too small to be detected by the ordinary methods of examination. Under the description of the acetone bodies it is surprising to be told that the ferric chloride reaction has been abandoned because of the fallacy which arises in people who are taking salicylates and allied drugs; such a fallacy is easily eliminated, and we should have supposed the ferric chloride to be the most usual and at the same time the most useful ordinary test. None of the methods proposed for detecting acetone are approved by the authors, but they omit the method generally favoured in this country of adding a few drops of solution of nitro-prusside of sodium, and following this by excess of strong solution of ammonia. Although the presence of acetone in the urine of starvation is mentioned, nothing is said of the influence of meat diet in producing it. The description of the examination of urine by the use of a separator and catheterization of the ureters does not include the injection of indigo-carmin, which is generally recommended as the best of the colour methods, while in connexion with the influence of diseases of the pancreas on the urine there is no reference to Cammidge's reaction. On the whole, however, the account given of the examination of the urine is clear, and is illustrated by excellent figures printed in the text. The description of diseases of the kidneys occupies the greater part of the book, and is admirably done, but we observe with surprise that there is no separate description of puerperal nephritis or of those cases dependent upon diseases of the pelvic organs; nephritis thus produced differs greatly in its results from others due to the action of constitutional poisons; retinal disease, for example, is rightly spoken of as of grave significance; but in puerperal nephritis it is not, and this exception from the rule should have been given. The attitude of the writers respecting waxy kidney is unsatisfactory, for it ought to be generally known that the description given by Grainger Stuart was based on a misreading of pathological facts; his waxy kidneys were cases of chronic Bright's disease in its various forms complicated by the presence of waxy degeneration. Where waxy disease affects the kidney in common with the liver, spleen, and other organs, there may be no albumen in the urine; it is therefore only as a complication that waxy degeneration appears in the category of Bright's disease. The danger suggested (p. 430) of drinking more water than the kidney can eliminate seems somewhat fanciful, as excess of fluid is easily got rid of; and so long as it does not contain irritating or poisonous constituents it is improbable that the kidney could be damaged. With regard to dropped kidney, the view taken by the authors is that nephropexy is seldom needed, as general experience has proved the unsatisfactory results of surgical interference in local neurasthenic troubles; but that when the attacks of pain are severe and are not relieved by wearing a belt, when there is intermittent hydronephrosis, or where the nervous symptoms are clearly dependent upon the kidney lesion, the performance of the operation may be expected to be followed by good results.

URINARY SURGERY.

THE book by Drs. WATSON and CUNNINGHAM on the surgery of the urinary tract³ may be divided, for the purpose of review, into three parts: the sections on the

³ *Diseases and Surgery of the Genito-urinary System*. By F. I. WATSON, M.D., and J. H. CUNNINGHAM, jun., M.D. Two vols. London: Henry Kimpton; Glasgow: Alexander Stenhouse. (Imp. 8vo, pp. 627 and 474. Engravings 454, 47 coloured plates. 23 3s.)

anatomy of the various parts, those on general surgery and those on the technique of operations. The first of these is not well done. To begin with, it is not accurate; secondly, the same structure is often given a different name in the text and in the picture illustrating it; apart from these defects, such descriptions are out of place in a book of this sort. The anatomical details are dealt with superficially and in less detail than can be found in any textbook. Any one setting out to read such a book, which professes to be an advanced treatise on urinary surgery, knows all the anatomy that it contains, and the descriptions should either be left out altogether or written in such detail that the reader can learn something new, and not have to wade through page after page of elementary work. But if this first section be bad, the second two are good. That on general surgery is an excellent discussion on the urinary tract in all its bearings, while the part on technique gives the operations in a way which does not make easy armchair reading, but which is excellent for following out in the operating theatre or on the cadaver. At the end of the description of each disease is a series of illustrative cases, the majority being interesting and valuable; some, however, seem redundant, notably the lengthy description of a case of congenital occlusion of the urethra in a fetus, which has no practical bearing on the surgery of the part. Many of the coloured plates, too, are unnecessary; they are indeed beautifully executed, but have no very great value from the instructional point of view, and are no doubt a potent factor in making the price of the book so much. We do not mean to say that, as it stands, the authors and publishers are asking an excessive price in proportion to the cost of production, but the number of medical men who can afford to pay three guineas for a book on one single branch of surgery is not very large. Yet we must not quarrel with Dr. Watson on this point, as he tells us in his preface that one of his chief aims has been to produce a book with "as complete and artistic an illustration for the work as the author could secure." To sum up, then, this is an excellent work, showing a close practical knowledge of the subject and much painstaking labour. But we should like it better if, by leaving out all the anatomical descriptions and the coloured plates, it could be presented to us at a considerably cheaper rate.

A book to be a good one must fulfil its purpose as well as be correct and well written. Dr. CABOT, of New York, in his book on *Disorders of the Bladder*,⁴ aims at writing for the general practitioner. There is nothing actually wrong in the book, but we do not think it will fulfil the purpose with which it was written. The first chapter is an antivenereal essay written for the public at large, the second is on anatomy, and tells just so much about the anatomy of the urinary organs as would be remembered by a man who had just scraped through the easiest anatomical examination on record, even if he lived to 80 years of age. The third is on "urinalysis," and tells nothing that is not better told in any textbook of medicine that the practitioner may have on his shelves. Three chapters describe cystoscopy, the first of which is little more than an instrument maker's catalogue. Three short chapters describe the causes of cystitis, and the last describes "senile prostatic hypertrophy." The best chapter is that on contraindications to cystoscopy.

The lectures on the methods of investigation and the diseases of the urinary organs in both sexes, by Dr. L. BURKHARDT and Dr. O. POLANO of Würzburg, are admirably clear and magnificently illustrated. Being intended for students, they are necessarily somewhat elementary, but are quite up to date in the description of the methods of examination and also in the accounts of the various diseases, but in certain parts, as, for example, in the examination of the urine, the attempt to deal with too large a subject in a single lecture is hardly satisfactory. The lecture on stricture of the urethra is a good example

of the authors at their best; they say very justly that as the symptoms are so dependent upon the complications, no two cases are alike; that traumatic strictures develop in, at most, weeks or months after the event, rarely longer, but the injury need not have been severe or attended by any external wound. Asthma is mentioned as an occasional result of stricture, the connexion being shown by its disappearance when the urethral condition is cured. In certain cases they speak favourably of the results of excision; they have no personal experience of electrolysis, and though they mention fibrolysis, they express no opinion as to its value. In early prostatic hypertrophy the importance of warm clothing is urged, and the operation of suprapubic prostatectomy is spoken of favourably, but not as favourably as it deserves; Bottini's excision by galvano-cautery, vasectomy, and other obsolete operations being described in terms of almost equal praise. The description of cystoscopy is good, and is illustrated by life-like coloured plates. The authors do not seem very much impressed with the value of radiography in the diagnosis of urinary diseases. All the modern methods for investigating the functions of the two kidneys by separating the secretions by catheterization of the ureters, the use of separators and the use of indigo-carmin, methylene blue, and phloridzin are given fully. They describe cryoscopy and point out its fallacies, and refer to the examination of the electrical resistance of the urine by Kohlrausch's apparatus, which, though it seems to have been little used, is said to require very little urine, and to be quickly performed. Albarán's method of determining the physiological capacity of each kidney by the estimation of the various urinary excreta, especially urea and sodium chloride, the patient being put on a definite diet, is truly called a lengthy business for both doctor and patient. Movable kidney is said to be present in from 85 to 90 per cent. (!) of the female sex, and is attributed to repeated pregnancies, carrying heavy loads, too vigorous massage in the lumbar region, falls, injuries, and especially to predisposition from the so-called "enteroptotic habitus." They regard it as in itself a harmless lesion which may exist without causing symptoms. With respect to Edebohls's operations for nephritis, they confess that German surgeons have not been able to obtain results as brilliant as those described in America. The last chapter contains clear and well-illustrated descriptions of certain typical operations, and a number of useful prescriptions are printed in an appendix.

The second edition of the American translation of Professor CASPER's excellent and well-known *Textbook of Genito-urinary Diseases*⁵ has been revised and partly rearranged by Dr. BONNEY, who has also made further additions to the text and to the number of illustrations. The section on the treatment of hypertrophy of the prostate has been revised by Professor Casper himself, who is of opinion that when catheterization fails, and when a major operation is not contraindicated, the choice of procedure lies between the Bottini operation and suprapubic prostatectomy. Bottini's operation, however, in Casper's experience, as a rule, is only palliative, and suprapubic prostatectomy offers the best chance for complete cure, though the relatively high mortality militates against its universal employment. That this combination of German and American views and methods concerning genito-urinary surgery has met with favour is evident, for it is barely two years since the first edition was reviewed in these columns.

DISEASES OF THE BREAST.

Diseases of the Breast, by W. L. RODMAN,⁶ is a work by one who has for many years been known to take a keen interest in this department of surgery, and has had no small share in its development. It is a readable book containing definite views clearly expressed, and shows a catholic acquaintance with the actual practice of surgeons in many quarters as well as with their writings. In a

⁴ *Clinical Diagnosis and Treatment of Disorders of the Bladder, with Technique of Cystoscopy*. By Ellen Cabot, M.D. New York: E. B. Treat and Co. 1909. (Demy 8vo, 225 pp., 41 illustrations, 1 coloured plate. 2dols.)

⁵ *Die Untersuchungsmethoden und Erkrankungen der männlichen und weiblichen Harnorgane für Ärzte und Studierende*. In xvii Vorlesungen. Von Dr. L. Burkhardt und Dr. O. Polano. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1908. (Demy 4to, pp. 381; figs. 105; Tafeln iii. 10s.)

⁶ *A Textbook of Genito-urinary Diseases, including Functional Sexual Disorders in Man*. By Dr. Leopold Casper, Professor in the University of Berlin. Translated and edited with additions by Charles W. Bonney, B.L., M.D. Second edition. London: Rebusman Limited. 1909. (Royal 8vo, pp. 645. Ill. 230. 24 plates. 21s.)

⁷ *Diseases of the Breast, with special reference to Cancer*. By William L. Rodman, M.D., LL.D. London: S. Appleton. 1908. (Roy. 8vo, pp. 398, 111 illustrations. 16s.)

monograph one looks for a full discussion of unsettled problems, a requirement which Dr. Rodman's book fulfils. In the earlier chapters the most interesting and uncertain question discussed is the true significance of the changes usually described as chronic mastitis; Dr. Rodman believes chronic diffuse mastitis with cyst formation and general cystic disease to be one and the same disease, and that an important influence in causation is to be ascribed to interruptions in pregnancy with the consequent sudden arrest of evolutionary changes in the breast. This is a suggestion of importance, and the whole question is in want of further clinical and pathological investigation. In regard to the simple growths Warren's classification is adopted, probably the most satisfactory from the morbid anatomy point of view. The only criticism it seems worth while to make is to express a doubt as to the propriety of describing some of the fibro-adenomata as intracanalicular and others as pericanalicular, with an implied difference in site and tissue of origin, a difference which, in our opinion, cannot be supported.

In regard to carcinoma, the author does well to emphasize the distinct features, both histological and clinical, of adeno-carcinoma. One would have liked to find a more emphatic insistence on the fact that chronic mastitis and papillary cystadenoma are conditions liable to cancerous transformation, and distinctly dangerous for that reason. The theory of visceral dissemination by lymphatic permeation, as put forward by Handley, is not accepted as a whole, and in this matter the author will receive the support of many of those who have worked at the subject. In Handley's work, which is in a sense a restatement of long-accepted observations, the permeation theory is carried to its extreme. The merit of the work is not the discovery of permeation as a new principle, as some writers appear to believe; this principle of extension was discovered almost as soon as the morbid anatomy of cancer began to be studied; its merit lies in pointing out new directions of permeation, and demonstrating how widespread the process may be at early stages. Attempts to make the process cover all thoracic and abdominal metastases fail. Dr. Rodman's discussion of diagnosis is very helpful; in doubtful cases he favours the method of immediate microscopy; he does not appear to attach so much importance to the demonstration of adhesions in the case of doubtful tumours as some other surgeons. His views as to the prognosis of operation are expressed in the following terms: "Surgery should cure one-half of all cases, provided that they can be subjected to the complete operation early in the course of the disease." The illustrations of the operation for carcinoma are very good, as are also the coloured plates throughout the book. It is altogether an excellent work, and deserves a wide popularity.

PLASTIC SURGERY.

ON the Foundation Day of the Emperor William Academy of Military Education in Berlin, Professor HILDEBRAND delivered an address in which he reviewed the history of plastic surgery from the earliest times, its present state, and the prospects of its future development.⁸ The earliest work in which the subject is treated is that of Celsus, who gave clear directions for the repair of defects of the lips, nose, and ears by sliding skin flaps without twisting. From the time of Celsus until the artistic renaissance, there is no record of any advance. Perhaps, as Professor Hildebrand suggests, the newly awakened sense of beauty then caused a demand for the restoration of unsightly defects. However this may be, the first attempts were those of Tagliacozza to restore the nose. The nose has always been considered an important organ, as readers of Sterne will remember. Its loss was thought so much of that the canonists allowed it as a good reason for nullifying a betrothal. To Dieffenbach the credit is due of treating the subject in a scientific spirit, by which alone he said could surgery hope to progress. His results were noteworthy in his own day, but he prophesied greater progress in the future. This progress has been rendered possible by the work of Lister, not only in the treatment

of surgical wounds, but also in the experimental work to which plastic surgery owes so much. The object of a plastic operation should be, not to transplant a substance that will remain as a mere foreign body, but one that will be capable of growth and development in its new surroundings. In respect to this possibility, the tissues differ greatly. The wonderful technical skill of experimenters such as Carrel, of New York, has proved that whole organs, such as the kidney, and even a whole limb, may be transplanted and remain permanently effective. Striking as these results are, the difficulty of obtaining healthy human organs must render their practical value small.

BACTERIOLOGY.

DR. BOLDUAN's translation of Professor DIEUDONNÉ's useful and highly practical treatise on *Bacterial Food Poisoning*⁹ is well worth reading. In addition to a full account of the various types of meat poisoning and the bacteriological identification of the organisms to which it may be attributable, the book contains instructive chapters on poisoning through fish and molluscs, cheese, ice cream, potatoes, and canned goods. The translator has incorporated some additional records of outbreaks of food poisoning, and has also supplemented the author's statements regarding prophylaxis and treatment. The book raises a minor question which is rather perplexing. How can an animal be slaughtered after it is dead? On p. 13 reference is made to a calf "which had been slaughtered either after death or while moribund."

Dr. MINETT's small and very condensed laboratory guide to the *Differential Diagnosis of Bacteria*¹⁰ is a useful collection of memoranda, but seems to have been put together rather hastily. The first twenty-nine pages deal with the identification of bacteria and make constant references to various staining methods. One naturally expects that the descriptions of these methods should come first. On p. 2 we are told that they are described in the appendix, but we find that the appendix begins on p. 42, that the staining methods are described not in that section but on pp. 30 to 41. Throughout the book we think that the desire for condensation had been carried too far. The author seems to be in a hurry; his book contains valuable advice, but it needs a little expansion in order to become palatable to the average student.

DESIGN IN NATURE.

IN the compass of three large volumes entitled *Design in Nature* the late Professor J. BELL PETTIGREW has embodied a long series of beautifully-illustrated essays on anatomical and physiological problems.¹¹ Much of the text is entirely new, but it includes the main parts of the author's numerous descriptive, explanatory, and polemic contributions in which he has dealt with various phases of development and function and with many complicated details of animal structure. Dr. Pettigrew's object in publishing his observations and opinions regarding the various forms assumed by matter, the means adopted to produce locomotion, the numerous modifications of reproductive, respiratory, and circulatory organs, and the theories of development which have exercised so many great minds, was to show that "the resemblances of the embryos of higher forms to the adults of lower allied forms afford no proof that the higher forms are manufactured from the lower," and to advocate "the doctrine that like produces like in endless sequence, and that each begets only its own kind." It is probable that many readers will not be convinced by the arguments, but they will gain much pleasure from the delightful treatment of the subject, and they will admire the energy and ability of the author.

⁸ *Bacterial Food Poisoning*. By Professor Dr. A. Dieudonné. Translated by Charles F. Bolduan, M.D. New York: E. B. Treat and Co. 1909. (Demy 8vo, pp. 123. 1d.)

¹⁰ *Differential Diagnosis of Bacteria and Practical Bacteriology*. By E. P. Minett, M.D., D.P.H. London: Baillière, Tindall and Cox. 1909. (Crown 8vo, pp. 80. 1s. 6d.)

¹¹ *Design in Nature*. By J. Bell Pettigrew. In three volumes. London: Longmans, Green and Co. 1908. (Roy. 4to, pp. 1470. 102 figures, 181 plates. 6s.)

⁸ *Die Entwicklung der plastischen Chirurgie*. Festrede gehalten am Stiftungstage der Kaiser Wilhelms-Akademie für das Militärärztliche Bildungswesen, December 2nd, 1908. Von O. Hildebrand. Berlin: August Hirschwald. 1908. (Med. 8vo, pp. 35. M. 80.)

NOTES ON BOOKS.

PROFESSOR H. G. GREENISH'S *Textbook of Materia Medica*¹ is the second edition of his *Introduction to the Study of Materia Medica*, and the change of title is fully warranted by the extended scope of the work. The history and commerce of drugs are now described in a preliminary chapter illustrated by a number of photographs of original packages of many drugs as they reach this country, and the manner in which they are dealt with at the docks and drug sale-rooms. In the main part of the book, all the drugs in ordinary use are described; many illustrations accompany the text, but these are in most cases not intended to relieve the student of the necessity of handling and studying the drug itself, but to direct attention to some particular feature or to render more explicit the information given. Some use of the microscope in the study of drugs is contemplated, and many microscopic peculiarities are noted. Drugs are classed according to their nature as roots, leaves, gums, etc., and a tabular classification according to natural orders is also given.

The continued publication of pocket "Aids" to students would seem to indicate that such works are appreciated by those for whom they are compiled. In Dr. BERNARD HUDSON'S *Aids to Medicine*² we have a condensed account of all the diseases to which the internal organs are liable within the compass of 240 small pages! The author has carried out the instructions of the publishers, and only claims to aid the student in the revision of his knowledge. He has summarized the very latest work, however, and some of it may meet the reader's eye for the first time in this compressed form. Aid is usually sought only when difficulties arise, and it would seem hardly necessary to fill up the pages of a pocket reference book with the axioms of medicine when so many of the problems are awaiting solution. Condensed information should be accurate; but even in the more familiar accounts there have crept in certain inaccuracies which might well have been avoided.

The first volume of the nineteenth series of *International Clinics*³ for 1909 is an exceptionally interesting number. The first article, on the hospital for advanced cases of tuberculosis, by Dr. Lawrence F. Flick, is suggestive; its keynote is in the opening sentence, "The hospital for advanced cases of tuberculosis and for early cases in the acute stage of the disease is our most valuable asset in the crusade against tuberculosis. . . . It strikes at the root of the disease by bringing contagion under control when it is most intense." The theme developed in the paper will surely become a pressing issue in this country as well as in America. Among the other interesting papers are those on occupation and so-called rheumatic pains, by Dr. J. J. Walsh; on Mikulicz's disease and allied conditions, by Dr. C. P. Howard; on acute tuberculous rheumatism, by Professor A. Poncet and Dr. Lericque; on typho-bacillosis, by Professor Landouzy; on sporotrichosis, by Drs. Duval and Vinard; and one on absorption from the peritoneal cavity, by Professor W. J. MacCallum, of the Johns Hopkins University. Besides these and other lectures, the volume contains a valuable review of the progress of medicine during 1908, dealing respectively with treatment, medicine, and surgery.

MR. E. G. CLAYTON'S *Compendium of Food-Microscopy*⁴ is stated in the preface to be principally a revised issue of the microscopical portion of the works of Dr. Arthur Hill Hassall, together with additional matter and illustrations by Mr. E. G. Clayton himself. The preface and the opening "Summary of Dr. Hassall's Life-Work" show clearly the strong veneration felt by the writer for the original author of the work which is here reproduced; but if the end in view was to produce a book of as much value in food analysis to-day as Dr. Hassall's book was when it appeared thirty-two years ago, a more critical spirit might have been shown, and some of the older matter could well have been sacrificed and recent knowledge more adequately given. Thus five pages are devoted to descriptions and

illustrations of various adulterants of tea, their importance being qualified by such remarks as "it is doubtful whether lic-tea now finds its way into the English market," and "it is extremely unlikely that such articles as these in this country are anywhere obtainable at the present time. They are described here as curiosities of the past," while in the descriptions and illustrations of tea itself no reference is made to the large stone cells or idoblasts which form one of the most characteristic elements of the leaf. In a "compendium," too, a more complete list of materials might fairly be expected than is here given; thus, the *Nat. Ord.*, Umbelliferae, is represented only by cummin, which is principally used in veterinary medicine, while caraway, which are largely used in foods, are omitted, and yet room is found for ipecacuanha, scammony, and other drugs. For the most part the illustrations, which are mainly of microscopic preparations, are excellent, and show clearly the salient features; and as there are some 280 pictures, the book cannot fail to be useful, in spite of its obvious faults and limitations.

The seventh edition of *Sonshall's Materia Medica*⁵ has been revised and brought up to date by Mr. E. W. MANN. The book, as the preface states, is a compilation, but the work has been well done, and as is to be expected in a seventh edition, hardly any errors are to be found. It is intended as a companion to practical study of the drugs themselves, and hence contains no illustrations; judicious use is made of different kinds of type in distinguishing between official and unofficial substances, and between the essential and the less important parts of each subject. The list of drugs dealt with is very comprehensive.

⁵ *Sonshall's Organic Materia Medica*. By John Barclay, B.Sc., Lond., F.C.S. Seventh edition. Revised and enlarged by E. W. Mann. London: J. and A. Churchill. 1909. (Demy 8vo, pp. 376.)

MEDICINAL AND DIETETIC PREPARATIONS.

Digalen.

THE partial supersession of digitalis by its active principle, such as has occurred with several other powerful drugs, has been hindered by the absence of certain knowledge with regard to what this is. It is now generally agreed that of the many substances obtainable from digitalis leaves, digitoxin is the most powerful and reliable, and represents in its therapeutical action the entire drug; but its insolubility makes it unsuitable for hypodermic injection, which reduces the convenience of administering it by the mouth. Some time ago Dr. M. Cloetta claimed to have prepared from digitalis an amorphous digitoxin, possessing the same elementary composition as the crystalline, but being much more soluble. A solution of this amorphous digitoxin is now being supplied under the name "Digalen" by Messrs. F. Hoffman-La Roche and Co., Basle; it is stated to possess the full therapeutic properties of digitalis, and to be suitable for administration by the mouth or by enema, as well as by hypodermic or intravenous injection. A sample which was submitted was a clear colourless liquid, containing both glycerine and alcohol, and freely miscible with water. It gave the colour reactions for digitoxin as well as could be expected in the presence of large excess of glycerine.

NATIONAL ASSOCIATION FOR THE FEEBLE-MINDED.

The annual meeting of this association was held at the Mansion House on May 13th under the presidency of the Lord Mayor.

Dr. SAVAGE, in an opening address, emphasized the national importance of the question in view of the alarming increase of the feeble-minded class, which had been estimated as numbering, in England and Wales alone, about 140,000, of whom some 66,000 urgently needed special provision. Inasmuch as heredity was the preponderant factor in causation, and "prevention was better than cure" (which, indeed, was impracticable), the only remedy seemed to lie in the adoption of measures for the early detection of the unfit and the prevention of their propagation.

Mr. MONTAGUE CRACKENTHORPE, K.C., pointed out that, both from the humane and the economic aspects, it behoved society to protect itself from the criminal tendencies into which the uncared for feeble-minded so often drifted. An industrial farm colony, such as was

¹ *A Textbook of Materia Medica*. By Henry G. Greenish, F.I.C., F.L.S. Second edition. London: J. and A. Churchill. 1909. (Med. 8vo, pp. 640; 259 illustrations.)

² *Aids to Medicine*. By Bernard Hudson, M.D., M.R.C.P., Assistant Physician to the City Road Chest Hospital. London: Baillière, Tindall and Cox. 1909. (Fcap. 8vo, pp. 260; 5 illustrations. 3s.)

³ *International Clinics*. Edited by W. T. Loogooe, M.D. Vol. i. Nineteenth series, 1909. Philadelphia and London: J. B. Lippincott Company. 1909. (Roy. 8vo, pp. 316. £1 15s. four volumes.)

⁴ *A Compendium of Food-Microscopy*. By E. G. Clayton. London: Baillière, Tindall and Cox. 1909. (Demy 8vo, pp. 471, 282 illustrations. 10s. 6d.)

contemplated by the association, would meet a great social want.

Mr. W. H. DICKINSON, M.P., referred to the circumstances leading to the appointment of the Royal Commission, of which he was himself a member, and to its findings and recommendations. He combated the view that the feeble-minded formed a harmless element in the community, for in that class existed a potentiality for even serious crime. At the best they were a drag upon progress; workhouses and prisons were powerless to reform them; nothing less than real industrial colonies, specially organized, would suffice. The association had raised a certain amount of money for this purpose and had a suitable property in view, but to realize this useful scheme several additional thousands were required. He moved a resolution expressing the opinion that the facts brought out by the Royal Commission proved the existence of a grave national evil urgently requiring to be remedied, and pressing upon Government the need of early legislation on the lines of the Commissioners' recommendations.

Lady FREDERICK BRUDENELL-BRUCE seconded the resolution.

Dr. A. E. TREGGOLD, speaking from experience as a medical investigator to the Royal Commission, pointed out that the problem of how fitly to deal with the increasing number of degenerates was one of vital moment to the nation, and one of which the general public had not yet grasped the importance. In England and Wales alone there were nearly 140,000 persons suffering from original mental defect (apart from the insane)—a proportion of 1 to 248 of the population; and it must be borne in mind that mental unfitness had innumerable ramifications and correlations deeply affecting social conditions. It was high time for the nation to stem the advancing tide of degeneracy, instead of dwelling simply upon the glories of the past. Unfortunately, feeble-mindedness did not tend to sterility; indeed, he had found a larger average of children in degenerate families than in others (7.3 as compared with 4.63), and unless means were speedily adopted to check the increase of the unfit, national decadence seemed inevitable. Their propagation must be prevented, and their happiness and freedom from criminality secured, by early training and permanent segregation with useful employment in an industrial colony such as it was the ambition of the National Association to establish.

In conclusion a vote of thanks, moved by Sir WILLIAM CHANCE (Chairman of Executive Committee), and seconded by Sir R. BIDDULPH MARTIN (the Treasurer of the association), was heartily accorded to the Lord Mayor.

The thirteenth annual report of the association shows that during 1908 there had been a steady expansion of its work. New centres around London and in the provinces had been organized, additional homes affiliated, and local after-care committees had been co-ordinated in their methods, and their results compared and tabulated. The honorary medical staff had been strengthened by the addition of several provincial consultants; and lectures had been given under the auspices of the Education Committee. The Colony Fund had benefited by an increase of £1,514 during the year, and altogether about £3,000 seems now available for this object. Much more, however, is needed; and donations would be gratefully acknowledged by the Secretary, Miss A. H. P. Kirby, Denison House, Vauxhall Bridge Road, S.W.

LYNN THOMAS AND SKYRME FUND.

Report by the Honorary Secretary.

THE establishment of this Fund was announced in the BRITISH MEDICAL JOURNAL and in the *Lancet* of March, 1908. A full account was then given of the reason of the Fund and the manner of its inception, and to that account the reader is referred. The amount of money required to reimburse Mr. Lynn Thomas and Dr. H. E. Skyrme was £3,197 12s. 3d. The Fund was formally closed on July 31st, 1908. Since that date a few additional subscriptions have been received, and the gross amount of the Fund, with interest, is now £1,788 11s. 6d. All the details of the subscriptions have been published, lists appearing from time to time in the BRITISH MEDICAL JOURNAL and the *Lancet*. The amounts of individual subscriptions have varied from £10 10s. to 2s. 6d.

An analysis of the subscriptions appears in the statement of accounts below; 1,663 subscriptions were received from individuals, while 29 medical societies and 14 Branches or Divisions of the British Medical Association sent subscriptions from their general funds. To the honorary secretaries of these bodies Mr. Sheen, the Honorary Secretary of the Fund, wishes to express his sincere thanks for the help they gave.

The expenses of collecting the Fund have amounted to £176 8s. 9d. A great amount of correspondence was involved, necessitating much circularizing, stamps, clerical assistance, typewriting, and printing. Also, there was some expense in preparing the "protest," which was signed by foreign surgeons. The net amount to be handed over is £1,612 2s. 9d., so that each of the two gentlemen concerned will be reimbursed to the extent of half of his expenditure.

The result cannot be regarded as otherwise than satisfactory. The medical profession is not a rich one. The enormous mass of correspondence which has come to hand shows a feeling of universal sympathy with the two gentlemen concerned and approval of the methods of treatment they employed. Many letters of sympathy have been received from those who regret their inability to contribute.

Presentation of the Fund.

The presentation of the Fund will be made at Cardiff on June 24th next by M. J. Lucas-Championnière, President of the International Surgical Society. M. Lucas-Championnière will on that day give an address to the Cardiff Medical Society on the Modern Treatment of Fractures. To this address, besides the local profession, all subscribers to the Fund will be invited. In the evening a dinner will be given, in the course of which the presentation will be made.

No more appropriate member of our profession could be chosen to make the presentation than M. Lucas-Championnière, not only because of his position as President of the International Surgical Society, but because he is the pioneer of the present rational treatment of fractures. It was the carrying out of the methods of treatment advocated and practised by M. Lucas-Championnière that helped to involve Mr. Lynn Thomas and Dr. H. E. Skyrme in litigation. The sympathy shown by M. Lucas-Championnière, and his approval of the methods employed, has been undoubted from the first, and his opinion was expressed in no uncertain terms in an article which he contributed to the BRITISH MEDICAL JOURNAL on March 28th, 1903. The visit of so distinguished a surgeon to this country is a matter for congratulation and it is hoped that members of the profession will unite in large numbers to give him a cordial welcome, and express in every way possible their appreciation of his visit. His reception in Cardiff will be of a civic character, and he will be the guest of the Lord Mayor.

LYNN THOMAS AND SKYRME FUND.

Honorary Secretary's Statement of Receipts and Expenditure.

Receipts.		Expenditure.	
	£ s. d.		£ s. d.
To 374 subscriptions received by Hon. Sec. direct	1,365 14 0	By printing and stationery	64 5 9
To 850 subscriptions received through Hon. Sec. of Branches and Divisions B.M.A.	166 9 0	By stamps	61 1 10
To 119 subscriptions received through Hon. Secs. of medical societies	37 12 0	By incidentals	4 5 11
To 14 subscriptions from general funds of Branches or Divisions of B.M.A.	65 8 0	By clerical work	44 2 7
To 29 subscriptions from general funds of medical societies	113 12 6	By expenses of circuit, Western Australian Branch, B.M.A.	1 9 8
To 3 subscriptions from Hospital Staffs	11 19 0	By translation of "Protest"	1 1 0
To "Some Indian Sympathisers"	1 1 0		
To interest received from bank deposit	26 16 0	By balance at bankers	1,612 2 9
	1,788 11 6		1,788 11 6

I have examined the above account with the Honorary Secretary's books, vouchers, etc., and certify it to be correct.

Cardiff, May 12th, 1909.

R. H. March, F.C.A.

LLANDRINDOD WELLS.

A short time ago the authorities of Llandrindod Wells issued invitations to the members of the staffs of leading hospitals in Great Britain and Ireland to pay a visit to this spa as the guests of the town, and so many proved able to accept that the gathering last Saturday was of quite a representative character. The proceedings included luncheon in the Albert Hall, at which the chair was taken by Dr. J. Murray, M.O.H. for the district, and Chairman of the Llandrindod Development Association. On the toast list the place of honour was given to "Our Medical Guests," this being proposed by Dr. Murray himself and answered by Dr. Sainsbury of the Royal Free Hospital, London, and Professor Magee Finny, of Dublin. The rest of the afternoon was spent in examination of the resources of the place, while on Sunday morning a special sermon was preached by the Bishop of Swansea. Later in the day expeditions were paid to places of interest, and a good many medical men were the guests of Mr. Venables Llewelyn, at Llysdyman Hall, some five miles from Llandrindod. Throughout their stay the visitors had the advantage of the ciceronage of local medical men, and in addition to Dr. Murray must feel especially indebted for their courtesy to Messrs. Kerr, Hudson, and Ackerley. There was plenty to see, as changes have taken place even in the few years that have elapsed since the last occasion on which the town was visited by any considerable number of medical men, namely, at the date of the annual meeting of the British Medical Association at Swansea.

Its rapid development is somewhat remarkable. Its waters have been known, of course, to possess value from very early times, and about the time when Bath was at the zenith of its glory a speculator from over the border opened a pump room and a kind of hotel at Llandrindod. Nevertheless, it is only within the last two decades that Llandrindod has made any real attempt to vie with other places of like claims. As it now stands, it is a completely equipped Kurort, but in other respects is probably as little like what the newcomer unconsciously expects to find as could be imagined. Instead of an old-fashioned town with a spa built on to it, it is practically an entirely new creation. A brand new hamlet of red brick houses, with broad, excellently paved streets, electric lighting, refuse destructors, and septic tank sewage system. Indeed, except for the fact that the houses and streets are freely interspersed with gardens and open land and scattered over the sides of half a dozen little hills, the town in point of modernity is own sister to any of the more wealthy and up-to-date suburbs in the neighbourhood of London. At first this may be rather of a shock, but it is soon realized that the town is so microscopic that one can step in a minute from the centre of advanced civilization into the wilds of Wales.

As for its claims to be regarded as a Spa of the first order, these are unquestionable. It has two distinct pump

rooms and two distinct bathing establishments, both the latter being fitted with every form of bath and electro-therapeutic apparatus which modern hydrotherapeutic ingenuity has devised. These two pump rooms and bath houses lie at different levels of the town, but are within five minutes' walk of one another. Between them they are able to boast of as many as seven different springs, each providing a water of constant but materially different composition to that of its neighbour. This is a noteworthy point, for at first sight it seems strange that the waters obtained from springs in such close proximity should differ so very greatly in medicinal character. However, a little study of the geology of the district makes this fact fairly comprehensible. Back in the bygone ages some volcanic outburst has crushed the various strata of rock, and, tilting them at all angles, has allowed of waters of totally different characteristics rising from the ground practically side by side.

In general composition the springs fall under the headings of muriated saline, muriated sulphur, and chalybeate sources. The sulphuretted-hydrogen waters are of several strengths, one being an almost pure sulphur water.

Two of the springs have only been discovered within the last year or two. One of these, besides some sulphuretted hydrogen, contains a radioactive body, and the other a small amount of thallium chloride and a considerable quantity of lithia. Nearly all the waters contain traces of this metal, but in this particular source the amount is relatively considerable. It seems to be as high as 0.1 per mille as compared with 0.035 per mille, that of Royat water—and Royat



A View on the Ithon.

commonly prides itself on its wealth in lithia salts. All the waters are more or less gaseous, and all are cold.

The way in which the waters are utilized varies considerably in the practice of different medical men, but it would appear to be not uncommon to give them in combination, varying the proportions according to what are considered the special requirements of the case. In atonic dyspepsia, hepatic congestion, and the like, the alkaline muriated waters are, perhaps, usually given alone, while in gouty and rheumatic patients their use is combined with that of one or other of the sulphuretted waters. Similarly, the lithia water may be used either alone or in combination. As a whole, the morbid conditions in which their administration appears to be of the most value are those of torpid liver, chronic rheumatism, and gout. Benefit in cases of such character is easy to understand in view of the composition of the waters, but what is less explicable is that patients suffering from diabetes likewise seem to derive advantage. There seems, however, to be good evidence that this is really the case.

Apart from its waters and bathing arrangements, the spa has several material advantages. Its air is of the purest; and this is not difficult to understand, since the whole county of Radnor contains only some 40,000 souls, and the neighbouring counties also are sparsely inhabited. Its topography is also favourable. Residents describe the

town as lying on a plateau about six miles long and a mile wide, bordered by mountains of rather less than the average Welsh height. Inasmuch as the whole district lies at an elevation of some 700 or 800 ft., it may well be that the plateau idea is correct; but to new acquaintances the town and the district in which it lies seem to consist of a collection of innumerable hills and valleys. Therein lies one of the great attractions of the place. None of the ascents are forbidding in steepness, and plenty of level walking may be obtained; but the visitor is constantly tempted to explore one hillside after another, and can do so without undue fatigue.

It is, indeed, in this connexion that Llandrindod seems to have claims quite special to itself. Not only are its surroundings of the most attractive kind, but the smallness of the town makes geologizing, botanizing, fishing, and exploration of old cairns and Roman and other remains tasks of extreme ease. Nor are organized amusements lacking. Croquet lawns and tennis courts are numerous, and there are several golf links. One of them is a championship course of 18 holes winding along a hilltop at an elevation of from 1,000 to 1,200 ft., and is provided with an exceedingly comfortable club house. For those who prefer driving there are plenty of distant valleys and villages to visit, and motor cars are on hire. As for the accommodation to be found it is, like everything else in the town, of a thoroughly modern character, and the general healthiness of the district is clearly evidenced by the mortality returns. Last year the death rate was as low as 5 per 1,000. Although about six hours from London, the journey is not unduly fatiguing, for the line throughout is excellently laid, and in the early future the London and North-Western Railway expects to be able to shorten the distance materially.

On these grounds, therefore, quite apart from its claims in connexion with ordinary spa therapeutics, the place is one to be borne in mind when cases of pure neurasthenia have to be dealt with, or when a locality has to be selected for persons who are merely a little run down, and in need of change, open air, and gentle exercise. The picture which accompanies these lines is a view in the neighbourhood, and has been selected as more truly characteristic of the locality than would be a photograph of any building.

LITERARY NOTES.

We note that in the programme of the forthcoming meeting of the American Medical Association there is a "symposium" on syphilis. At another medical gathering in the States there is to be a "symposium" on cancer. Even if it be held that Venus and Bacchus naturally go together, surely cancer is scarcely a subject to be discussed *inter pocula*. The use of the word "symposium" to designate a scientific debate is a vulgarism due to ignorance of its meaning. Lest we be accused of pedantry, we will invoke the authority of one whose mind was far above any meticulous regard for verbal purism. In a letter (September 2nd, 1881) addressed to C. G. J. Romanes, who had suggested a conjoint article by a number of scientific men on vivisection, Charles Darwin wrote:

Allow me to demur to your calling your conjoint article a "symposium," strictly a "drinking party." This seems to me very bad taste.

A symposium, without excess and with the soothing accompaniment of the calumet of peace, may not inappropriately follow a debate. But to call the discussion itself a "symposium" suggests the possibility of scenes like that at the memorable meeting of the "Society upon the Stanislaw," in which the "scientific gents" might use bottles as weapons instead of "the remnants of a palaeozoic age." By a curious coincidence since writing this note we have come across in *Science* an account of a "symposium" on Correlation, which took place at the meeting of the American Association for the Advancement of Science. It is recorded that the Society of Vertebrate Palaeontologists held its meeting about the same time. Missiles for such a warfare as has been hinted at would not therefore have been wanting, and the more "vertebrate" the palaeontologists the more likely would they be to use chunks of old red sandstone and skulls of mammoths when the natural pugnacity that belongs to the scientific temperament was inflamed by a "symposium."

There is an interesting incident in the life of Beatrice Portinari which must appeal to all lovers of Dante, whether they believe that she was the poet's beloved lady or not. She was the daughter of a certain Folco Portinari, one of the most influential men in Florence, and three times Prior of the city; but his chief interest for us lies in the fact that he was the first Florentine who founded a hospital for the sick in his native town. In Edgumbe Staley's *Famous Women of Florence* it is stated that Florence at that time possessed plenty of charitable institutions for the relief of the suffering poor, but there was no establishment for the sole purpose of nursing the sick. This want was supplied by Portinari, who in the year 1285 took a house in the Piazza di Santa Maria Nuova, where he endowed 17 beds for the sick poor of Florence. It was known as the "Spedale di San Matteo," and formed the nucleus of the famous "Spedale di Santa Maria Nuova," which was built at Portinari's expense three years later. The new hospital buildings were large enough to include the ancient church of Sant' Egidio. Portinari continued to take an interest in the hospital while he lived, and this interest was shared by his wife and children, who, according to tradition, loved to visit the patients and minister to their necessities. But the most devoted of all the founder's household was Tessa, the old family nurse of the Portinari. Her charity is recorded in the inscription on a bas-relief of white marble which bears her effigy and is erected in the first cloister of the hospital. The inscription dates from the seventeenth century, but the bas-relief is obviously a fourteenth century work:

Madonna Tessa, represented in this bas-relief, was the servant of Folco Portinari, remarkable alike for her good deeds as for her fidelity: whilst she lived she employed her leisure time with merit and renown in visiting certain houses bought by her master for the care of the infirm. By the example of her noble-hearted charity, and by her kind offices to the sick, she persuaded Folco to display his pious and generous liberality in the foundation of the hospital, to-day so magnificent, the commencement of which took place on June 23rd, 1288.

Folco died soon after the completion of the hospital, and was buried in its chapel. The stone over his grave bore the following epitaph:

Hic jacet Fulchus de Portinariis, qui fuit fondator et edificator hujus ecclesiae et ospitalis S. Mariae Nove. Decessit anno MCCCXXXIX, die XXXI Decembris. Cuius anima pro Dei misericordia requiescat in pace.

The founder did not forget the hospital in his will. He placed all ecclesiastical matters, such as appointing priests to say mass in the chapel, etc., under the Bishop of Florence for ever, and having expressed his desire to be buried in the hospital church he goes on to offer "to God, to our Lord Christ, and to the ever-blessed Virgin Mary His Mother, the said Hospital and Church, or Chapel, for the forgiveness of my sins, and for the sins of my family, and for the benefit of the infirm poor for ever. I appoint my heirs patrons-in-chief and upholders thereof." The hospital of Santa Maria Nuova still exists, a perpetual reminder of the charity of a bygone age, and the generosity of one of Florence's most noble citizens.

No reader of Dickens is likely to forget that it was on his arrival at the Golden Cross that Mr. Pickwick and his companions had their encounter with the cabman from which they were rescued by Mr. Jingle. It was at the Golden Cross, too, that David Copperfield met his old schoolfellow, Steerforth, whose interposition wrought such a change in the accommodation provided for him. A history of this classic hostelry, now the Golden Cross Hotel, has been written by Mr. Stephen E. Hutchins, who gives an interesting account of its literary and historical associations. Its existence is traced back by the author as far as 1643, for he relates that in that far-off age the sign of the inn—it was then a wayside inn at the village of Charing—was taken down by the Puritans as superstitious and idolatrous. In the golden age of coaching, coaches ran from the Golden Cross to all parts of the country, and Mr. Hutchins tells us that there is still to be seen just at the rear of the hotel, away from the roar of Charing Cross, the yard from which the coaches were accustomed to depart, with its quaint old bedroom gallery still intact. The booklet, which is illustrated with copies of old prints, will be welcomed by all lovers of old London.

STATE REGISTRATION OF NURSES.

DEPUTATION TO THE PREMIER.

ON May 13th Mr. Asquith, the Prime Minister, accompanied by Mr. Herbert Samuel, M.P., received in his room at the House of Commons a deputation organized by the Society for the State Registration of Trained Nurses.

The deputation, which was introduced by Lord AMPHILL, comprised, among others, Mr. R. C. Munro-Ferguson, M.P., Lord Morpeth, Mr. C. D. Rose, M.P., Mr. Remnant, M.P., the Hon. Geoffrey Howard, M.P., Mr. S. H. Butcher, M.P., Mr. Ramsay MacDonald, M.P., Mr. Crooks, M.P., Dr. Rutherford, M.P., Dr. Rainy, M.P., Sir Charles MacLaren, M.P., Sir Henry Norman, M.P., Sir Luke White, M.P., Mr. Arthur Fell, M.P., Mr. Field, M.P., and Mr. D. Smeaton, M.P.

The British Medical Association was represented by Sir Victor Horsley and Dr. Smith Whitaker, Medical Secretary. Dr. Bedford Fenwick, and Sir William Macewen, of Glasgow, were also present.

The leading societies of women were represented by Mrs. Alfred Emmott, Vice-President of the National Union of Women Workers; Lady Strachey, President of the Women's Local Government Society; and Miss E. S. Kerrison, Member of the Executive Committee of the Women's Labour League.

Trained nurses were represented by Miss Isda Stewart, Matron of St. Bartholomew's Hospital; Mrs. Bedford Fenwick, President of the National Council of Nurses of the United Kingdom; Miss Huxley, late President of the Irish Nurses' Association; Miss Sidney Browne, late Matron-in-Chief, Queen Alexandra's Imperial Military Nursing Service; Miss Barton, Matron, Chelsea Infirmary; and Miss Pearse, Superintendent of the London County Council School Nurses.

Lord AMPHILL, in introducing the deputation, handed the Premier a list of those present and the capacity in which they came. He thanked Mr. Asquith most sincerely for his kindness in receiving the deputation, and said they fully appreciated the sacrifice of time it involved, and would endeavour not to trespass upon his kindness by taking up too much time. The deputation was not an instance of mere importunity on the part of the promoters of a cause. Its members were sincerely persuaded that their request would not be unwelcome to the Prime Minister when he was asked to see the deputation. The idea had been entertained at first of presenting a memorial so as not to trespass upon his time, and a memorial had been prepared and signatures obtained for it, but it became known that a deputation might be preferable and might be a more convenient method generally; the promoters, therefore, had ceased to obtain signatures to the memorial, which, however, he proposed to hand to the Prime Minister, as it briefly epitomized the history of the question. The movement in favour of State registration of nurses had been in progress for twenty years, and a bill with that object had been introduced into the House of Commons for six years past. During the last session that bill had been considered with more than usual care by the House of Lords, and eventually it had passed through every stage without a division, and, having been twice in committee in the form in which it finally emerged from the House of Lords it was amended in accordance with the views of several Government departments who were concerned. Previous to that the movement had received very striking support from the professional bodies mainly concerned. In 1889 the General Medical Council passed unanimously a resolution that such legislation was desirable. Again, in the three years 1895, 1904, and 1906, the British Medical Association, embracing some 20,000 out of the 30,000 members of the medical profession in the United Kingdom, passed a resolution practically unanimously in favour of such legislation; and, on the last occasion, 90 out of 93 delegates, all elected by constituencies in which the question had been practically canvassed, supported the resolution. Following that, in 1904 and 1905, a Select Committee of the House of Commons inquired into the whole subject, and reported unanimously that it was desirable that a register of nurses should be kept by a central body appointed by the

State. Further, the opposition to the movement was considered before a Committee of the Privy Council in 1892, and on that occasion, as well as before the Select Committee of the House of Commons, the arguments against registration failed to influence the judgement of the authorities who had to decide. The movement was primarily an educational one, and its objects were to ensure that the community might have a guarantee that the trained nurses whom it employed were skilled in their professional duty. That did not obtain at the present moment, and the evil was that there was no standard, and no means of discriminating between the value of the different kinds of certificates issued by different hospitals and training schools. The public could discern no difference between a certificate given by a small private hospital with a few beds after a few months' experience and one given by the trained school of a great general hospital after a long and very varied experience. That condition of affairs was unfair to the nurses as well as to the public at large. It was unfair to the nurse who had taken the trouble to qualify in her profession by a long period of training and by considerable sacrifices, because she was on precisely the same footing as one who had had very much less training and much less experience. What the promoters of the movement were aiming at was to have nurses put on the same footing as members of other professions who stood in somewhat analogous relationship to the public. The medical profession, for instance, or such professions as those of the dentist, or druggist, or accountant, or, what was even more to the point in the circumstances, the midwife, were all subject to conditions similar to those which they desired to obtain for nurses. The midwife, who required a training of three months, and belonged to a less educated and lower social order than nurses, had at present the advantage of State registration, and had, in fact, just that which they were seeking to obtain for nurses.

IN ANSWER to an inquiry from the PREMIER, Lord AMPHILL said the deputation was not there to ask the Government to bring in a bill, but to give facilities for the passage of a bill as had been done in the case of other bills. He pointed out that there were three bills at present before the House—Mr. Munro-Ferguson's bill, Mr. Findlay's bill, and a Scottish Bill in charge of Mr. Cleland.

THE PRIME MINISTER: They are in a state of suspended animation.

Lord AMPHILL agreed, but pointed out that they could be revived in twenty-four hours. They had hoped to be lucky in the ballot, and to get their Bill before the House in the present session, in which case its success in the House of Lords would have been assured. It had been thought that the Prime Minister would like to add to the legislative achievements of the Ministry over which he presided and to give facilities for a measure which must undoubtedly be classified as one of social reform. Also it was thought, for reasons which it was unnecessary to dwell upon, that it would be desirable to do something to mitigate the very prevalent complaint that women were unable to obtain the passage of legislation which concerned them; and, further, it had been thought that from a humane point of view Mr. Asquith might regard it as pleasant in his position of immense authority and power to help those who for so long had tried hard to help themselves, and that it might be not unwelcome to him to remedy the uneven working of the Parliamentary system—if he (Lord Amphil) might so venture to speak of the system which prevailed in the House of Commons—and to give a chance to a private member's bill. The promoters of the movement thought also that Mr. Asquith might welcome the opportunity of redressing a very real grievance which existed as between the nurse, who could not get registration, and the midwife, who had that advantage, before the grievance became more prominent and more emphasized by the full operation of the Midwives Act which should very shortly come about. Finally, it was hoped that the Premier would be glad of the opportunity of giving encouragement to the nursing profession, a profession which he (the speaker) was sure it would be agreed was one of singular nobility. He thought their country could

claim to have started the profession of nursing, and, consequently, it ought to be a matter of national pride to raise the standard of nursing in this country and to continue to set an example to other countries. In conclusion, he urged that, for the reasons he had given, the Government should give such facilities as might be in its power for introducing the bill into the House of Commons that Session.

SIR VICTOR HORSLEY, speaking on behalf of the British Medical Association, said he appeared there as representing that body and its Medico-Political Committee. The Association had on repeated occasions passed resolutions practically unanimously approving of the principle of the registration of nurses.

The PREMIER inquired whether Sir Victor said there was anything like unanimity in the medical profession.

Sir VICTOR HORSLEY replied that certainly there was very nearly unanimity, because he had had the honour of being in the chair at the meeting of the Representatives of the Association at Oxford in 1904, and the votes on that occasion were about 90 to 2 in favour of registration.

The PREMIER: Do you say that that represents the opinion of the profession?

Sir VICTOR HORSLEY replied that the British Medical Association was the only body that could represent the medical profession at all. The medical profession had no other machinery whereby its views could be represented. The British Medical Association numbered some 20,000 practitioners, and sent elected delegates to the Representative Meetings, and he thought it was certainly entitled to speak in the voice of the medical profession. But even if it were admitted, for the sake of argument, that the British Medical Association did not represent the medical profession, he would, at least, say that it was the only body in the medical profession which had taken the trouble to refer bills of such a kind to a committee and thoroughly to exhaust the subject. With regard to the three bills now in being, the principle involved in Bills No. 1 and No. 2, and the principle that the British Medical Association most laid stress upon was, that the qualification of the nurse should be no longer at the mercy of private individuals, or institutions. The Association felt very strongly that the time had arrived when in the interests of the public, as well as the medical profession, and the nurses themselves, that the guarantee of efficiency should be a State guarantee. With regard to the Scottish Bill, that left the question of guarantee of qualification practically to the teacher alone, and the British Medical Association had always held that that guarantee ought to be furnished by a statutory constituted authority who would control the proper examination.

The PREMIER: Are all the nurses to come up to be examined?

Sir VICTOR HORSLEY: All the nurses who are fit to be on the register ought to be examined.

Answering an inquiry of Mr. ASQUITH as to where they would be examined and whether provision was made for that in the bills, Lord AMPHILL said provision was made for the Council to have general power to arrange examinations, and the Council would undoubtedly arrange for examinations to be held in convenient centres.

Continuing, Sir VICTOR HORSLEY said the point was one which had been already considered by the medical profession in the reform of the Medical Acts, and it was purely a matter of administrative convenience. He suggested that the form of protection was one with which every one would sympathize, because it protected the buyer as well as the seller; the public would gain by the fact of the nurse having a State guarantee that she was fit to nurse. From the point of view of the profession itself (or, if it was preferred, of the British Medical Association) that was exactly the same as that of the public. The medical profession wished to have nurses properly equipped in nursing knowledge, and desired that that should be obtained by a State guarantee. But more than that was wanted. They wanted the ethical status of the nurse and the discipline of the nursing profession to be secured, and from the medical profession's own experience of the working of the General Medical Council it was found that that could be best obtained by having a statutory constituted body like that Council in whose hand to place the government of the profession, which in this case was that of the nursing profession; it was believed

that only by establishing a Council of that sort would an end be put to the undoubted existing evil of unequalled medical practice by nurses which constituted a danger to the public, and also constituted a scandal within the profession of nurses themselves. Finally, he assured the Prime Minister that the British Medical Association also sympathized very much with the nurses in the promotion of their own interests, and felt that if a nurse had worked hard for years, and had had a satisfactory course of education, and had passed an examination, she ought to be entitled to receive from the State a guarantee of her being fully qualified to nurse. As regards the constitution provided by the two English bills the British Medical Association also felt that the nurses should have a leading voice in the selection of those who were to govern.

Dr. BEDFORD FENWICK said that it was important to remember that a hospital certificate once given to a nurse became her private property, and could not be cancelled or withdrawn whatever the nurse did. There was always a very great difficulty in tracing nurses once they left their hospital employment, and from that followed the fact that it was very easy to forge or sell hospital certificates; that had been very often done, so that people who had little or no training as nurses could pose as nurses and obtain work as such. Many evils followed from that, and it was dangerous to the public. Further, he desired to call attention to the fact that the public were not only powerless to protect themselves against nurses who often nursed without sufficient knowledge, but by a decision of the Court of Appeal the public were powerless to obtain redress for injuries caused by gross carelessness or negligence in nursing. That decision was given in a case in which a patient sued an institution and obtained £300 damages. The institution appealed, and the Court of Appeal held that the institution had only to send out the nurse to the patient, and then she became under the control of the patient, and if the patient was injured it was only the patient who was responsible for any damage the patient sustained. The principles of the Bill introduced by Lord Amphil, which had passed the House of Lords and was now before the House of Commons in charge of Mr. Munro-Ferguson, had been accepted by the Privy Council, the Local Government Board, the Admiralty, and the War Office, all of whom had made most valuable amendments in the passage through the House of Lords. The second bill flattered the promoters of the movement by taking their clauses wholesale, which was the sincerest form of flattery; and he thought the only difference was that the second bill required a larger Council as it asked for a Council of twenty-seven, and the Privy Council considered the General Nurses Council should not consist of more than sixteen. The second Bill also required a lower fee for examination. The third bill was a bill for Scotland alone, and Sir William Macewen, the distinguished Scottish surgeon, had been good enough to come to London in order to express the feelings of Scottish doctors and nurses with regard to it.

Sir WILLIAM MACEWEN stated he was present by reason of the very cordial invitation extended to him to form part of the deputation, on the understanding that he was to express his views and those of a considerable number of doctors and nurses in Scotland relative to State registration of nurses. He, and those whom he represented, were entirely in accord with the aim of both British Nurses' Registration Bills; they desired to obtain for nurses a recognized standard of teaching and examination for the three kingdoms, and that all nurses placed on the British Nurses' Register should have equal rights to practise as nurses in any part of Great Britain. The reason why so many Scottish nurses recorded their votes for separate registration for Scotland was due to a widespread misapprehension of the clauses of the British bills which at the time had not been seen by the Scottish nurses; they were misled by erroneous statements which were current regarding the bill, such as, for instance, that Scottish nurses would have to go to London to be examined. The removal of such misapprehensions had resulted in a decided change in the attitude of the Scottish nurses, so that many who had previously been in favour of the separate Scottish Registration Bill were now in favour of a single portal system for the United Kingdom. Having given instances of such a change in feeling, Sir William Macewen pointed out that a separate Scottish bill would

act as a barrier to the progress of the Scottish nurses' because it would confine such a nurse to Scotland. Having detailed his reasons for such a statement, he said that the Scottish nurses were quite prepared to welcome and pass the highest standard of examination that might be instituted by the boards appointed by the agency of the British bills, and Scottish nurses claimed, along with their English and Irish sisters, equal rights in exercising their profession in any part of the United Kingdom, so that they might have the opportunity of gaining such position as their merits deserved.

MISS ISLA STEWART, President of the Society for the State Registration of Trained Nurses, and Matron and Superintendent of Nurses at St. Bartholomew's Hospital, handed in a number of resolutions on the subject of State registration for nurses and petitions from the St. Bartholomew's Nurses' League, the Leicester Infirmary Nurses' League, the St. John's House Nurses' League, the Chelsea Infirmary Nurses' League, and the Victorian and Bournemouth Nurses' League in favour thereof. She pointed out that the present condition of the nursing world was most detrimental to trained nurses and to the progress of nursing education, and was therefore detrimental to the sick of all classes. She contrasted the condition of medical students who obtained their education at hospitals which had to conform to and carry out the general principles of education defined by the General Medical Council with the case of nurses. Throughout the United Kingdom there was no accepted method of training nurses, nor a generally adopted system of examining nurses whose training was finished. The certificates issued by every hospital varied greatly, and their value might vary from time to time as different methods were introduced. Such a condition of affairs resulted in confusion, and it was impossible to estimate the value of a nursing certificate. It was unfair that nurses who had had their four years' hospital work should find themselves competing as private nurses with women who had only had short terms of training in special hospitals, or who had been dismissed after three or four months' training as utterly unsuitable for nursing work. Trained nurses also resented the fact that there was no means of exercising professional discipline as in the case of other professions, and that there was no means of excluding from their ranks those who brought discredit upon them. It was the earnest desire of trained nurses that Parliament should give them the means of distinguishing trained nurses from the many people who adopted the uniform without justification. In conclusion, she emphasized the fact that trained nursing was a matter of national importance. Nurses were not only entrusted with the care of the sick in private houses and in public hospitals, but were being employed in increasing numbers in the different Government departments of the country, and were at the present time being organized to help in the Territorial Forces. They had proved their usefulness to the Colonial Office and to the Indian Medical Service; many thousands were now engaged in workhouse hospitals and other positions under the Local Government Board, and were being employed in increasing numbers in the sanitary service of the country, for the prevention of diseases in schools, and teaching cleanliness and health to children, whilst the work they did for the poorest and in the preservation of public health as district nurses secured the unqualified praise of those best able to judge their work. For the reasons which she had given she urged that nurses had earned the right to ask Parliament to give them that public recognition which had been accorded to other professions, namely, a method of professional control over their education and the enforcement of discipline in their ranks—which had done so much for the advancement of other professions—and thus increase their usefulness and raise a most honourable profession to its proper position in the esteem of the public.

MISS M. HUXLEY, of Dublin, Senior Vice-President of the Society for the State Registration of Nurses, said that for twenty years she had worked to obtain by constitutional methods recognition for the nursing profession by the State. She and her colleagues agreed that a properly constituted governing body should be appointed to standardize the work of nursing education. At the present time existing schools varied in

their method of training and might be well designated as good, bad, or indifferent. Certificates were given to young women by institutions which provided no proper training—institutions in which the nurses were not taught by qualified people, and their work was not properly supervised; yet those women could go forth into the world certified as efficient, which undoubtedly they were not. There could be no question as to the importance of their work for the nation, and there was no doubt about their desire to qualify properly for it, and she was happy to say that that was one of the very few subjects upon which they in Ireland were agreed. It was not desired to exclude Irish nurses from the provision of the Act, and she earnestly begged the Premier to do all that he could to forward that for which they asked.

MR. WILLIAM FIELD, M.P., said that what the previous speaker had said, although it might be a peculiar circumstance, was absolutely true, and they in Ireland were quite agreed upon the matter.

THE PRIME MINISTER: That looks very suspicious, Mr. Field.

MR. FIELD: There is always a suspicion about everything—even about the truth. He agreed with all the arguments which had been put before the Premier, and thought the matter was one of national importance. If Mr. Asquith would throw his power and influence into the matter, and give facilities for the bill to be introduced, there would be practically no opposition, and no lengthy debate. In conclusion the speaker made an appeal to the Prime Minister to further a measure in which he would have the support of the Irish party, which produced considerable merriment.

THE PRIME MINISTER, who was received with applause, said: Ladies and Gentlemen,—I am very pleased to have the opportunity of receiving you here this afternoon and of listening to so important and representative a deputation on a subject with which, I confess, I have not myself much previous or first-hand familiarity. I understand that the object of the legislation which you are promoting is to provide, by means of a representative council, a machinery for the examination of persons taking up the nursing profession, to set up a register upon which only the names of those persons shall be inscribed who have satisfied the examination test, and to provide, under penal sections, that thereafter no one shall claim or assume to practise as a registered nurse who has not satisfied that test and has not come upon the register. That will not in the least, of course, as I understand the proposal, prevent such persons who have not complied with the test or come upon the register from pursuing the profession of nursing; and when Sir Victor Horsley said a few moments ago, in his very able speech, that the recognized nurse—that is to say, the nurse recognized by the State—is the only person fit to nurse, that would not be the necessary effect of this legislation. The unfit person, or the free-lance, if I may so describe her, would be still in a position to pursue her calling and to secure her clients and to carry on her profession just as she does now.

LORD AMTHILL: The public would take her at their own risk.

THE PRIME MINISTER: Yes, as they do now, in fact, but she would not be entitled, subject to a penalty, to describe herself directly or indirectly, as a registered nurse and as having satisfied such requirements as I understand to be within the scope of the proposed legislation. We are all agreed as to the growing importance and dignity of this great profession, as to the magnificent and indispensable services rendered to the medical profession and to the cause of humanity in the country, and I am certain that there is not a man or woman among us who does not wish to see it keep up the highest standard of efficiency both as regards skill and character, and every step that can be taken in that direction will, I am sure, command the sympathy, not only of all parties in the State, but of every English, Scottish, or Irish citizen who really cares for the best interest of his country. But here I have to deal with the question whether a particular machinery is best adapted to promote that. When my friend, Mr. Field, tells me that in Ireland they are all united, and that if we promote this legislation we shall have not only England and Scotland behind us but Ireland as well, I am bound to look at representations which have come to me from other

quarters. What do I find? Let us test the question of unanimity. I have a list of persons whose opinions are entitled to the highest respect who are absolutely opposed to this. I will not mention their names, but among them are the Chairman of the Westminster Hospital, the Vice-President of the Royal Free Hospital, the Chairman of the Middlesex Hospital, the Chairman and Treasurer of the London Hospital, the Chairman of St. Mary's Hospital, the Hospital for Sick Children, University College Hospital, the West-End Hospital for Diseases of the Nervous System, the Royal Victoria Infirmary, Newcastle-on-Tyne, and King's College Hospital, the Treasurers of St. Thomas's and of St. George's and of a number of other hospitals.

Mr. FIELD: There are none from Ireland.

The PRIME MINISTER: I am not talking about Ireland, but when I am told that there is complete unanimity and that we should have all the authorities in our favour, I think the enumeration of those hospitals is enough to show that that is not the case. I asked Sir Victor Horsley, and he said quite truly no doubt that he represented the British Medical Association, which, I agree, is representative of the body of the profession. Again, I must point out that I have here a list of the names of one hundred members of the medical profession in London (again I will not give their names) who include some of the most eminent members of the profession in many departments, particularly in the departments of obstetrics and surgery, and also something like 120 members, also gentlemen of the highest distinction, in the provinces, who are entirely opposed to legislation of this kind. Then when I come to another equally important body, the matrons of hospitals, I have here the names of 49 matrons of London hospitals, and no less than 109 matrons of provincial hospitals, who are entirely opposed to this legislation. I cannot possibly, in the face of those facts, regard this as proving anything in the nature of unanimity on the part of persons interested in medicine surgery, or nursing. Therefore I think you will agree when I say that the Government must look upon it as a matter which, for the time being, is highly controversial in the views of those most directly concerned. It is not possible to treat it, unhappily, as one of those questions which sometimes, although not often, emerge in politics when all persons are agreed and when legislation goes through by general consent. In those circumstances I do not think you can expect me to do more than promise to give the most careful and respectful consideration to the arguments you have laid before me. I admit their weight. I have not heard the other side, but I think they are, *prima facie*, very cogent arguments indeed, and, having regard to the composition of the deputation, and the authority which it possesses, I can assure you that they will be most carefully and sympathetically considered by my colleagues and myself. For the time being, however, you will agree with me that, in view of the facts I have stated, you cannot regard this as other than a question which requires very careful and detailed examination in view of all the interests concerned.

The deputation then withdrew.

A NEO-MALTHUSIAN propaganda has been set on foot in various towns of France, especially in Normandy. The municipal authorities have tried to forbid the lectures, on the ground that they are opposed to public morality. The Société Normande d'Hygiène Pratique, on the initiative of MM. Brunon, Cerné and Néé, has passed resolutions approving of the action of the municipal authorities, and expressing the opinion that if such lectures are delivered the lecturers should be prosecuted.

THE American Therapeutic Society has, at the suggestion of Professor Remington, Chairman of the Revision Committee of the United States Pharmacopœia, decided to appoint a standing committee on therapeutic research. The by-laws of the society prohibit the introduction by paper or discussion of secret, patented, or trade-marked medical products; but they are careful to test the efficacy, both by laboratory research and a thorough sifting of clinical evidence, of various drugs and preparations of drugs now contained in the *Pharmacopœia*. The committee will report on its work at the annual meeting of the society, in order that there may be placed before the profession trustworthy results of systematic investigation concerning those remedies which are in daily use.

THE THERAPEUTIC APPLICATIONS OF RADIUM: METHODS AND RESULTS.

THE INFLUENCE OF RADIUM ON CERTAIN TUMOURS OF THE BREAST, ESPECIALLY CARCINOMATA.

[FROM OUR PARIS CORRESPONDENT.]

THE articles which have appeared already in the *BRITISH MEDICAL JOURNAL* have enabled the reader to understand fully what Dr. Wickham considers the crucial point of all his research, that is, the treatment of cancer situated at some depth below the skin surface. As an example of this possibility this article will contain the results and conclusions of Drs. Wickham and Degrais in the treatment of cancer of the breast.

Clinical experience and histology have established that the radiations of radium exercise a special elective action on certain morbid cells of new formation; moreover, these rays, by reason of especially great power of penetration—the most penetrating traverse a thickness of several centimetres of lead—are able to act in the depth of the tissues; it thus became of interest to attempt the application of this dual property to neoplasms of the breast.

The first attempt dates from November 7th, 1907. Dr. Triboulet was interested in the case of a lady with a malignant growth in the left breast, but owing to the advanced age of the patient surgical intervention was deemed inadvisable. The tumour was of the size of a Tangerine orange, and was adherent to both the skin and the costal fascia: the nipple was retracted, and a little to its outer side the skin was ulcerated for an area of 2 square centimetres; the skin around was rough, like the skin of an orange, and on the point of breaking down. There was one enlarged lymphatic gland in the axilla, and acute pains were felt over the whole side of the chest. Under the supervision of Dr. Triboulet these lesions were subjected to radium. At the present time, eighteen months since the treatment, this lady is in good health, and she has no pain: there is no sign in the region of the breast or axilla to cause anxiety. All that remains is a quiescent movable nodule of fibrous consistency, which seems to have resulted from the transformation of the neoplasm.

Radium was applied in this case as follows: The attempts at filtration which Drs. Wickham and Degrais had undertaken before this date with screens of different kinds (cotton-wool, aluminium, lead protected by rubber), had shown them the way to modify the therapeutic action of the radiations; these after filtration were necessarily composed of rays less in number, but of greater penetrating power. In this case a filter of lead 1.27 millimetres in thickness was used with a thin sheet of rubber over it; the radium was applied in series of ten or twelve daily applications of one and a half hours' duration each time, followed by a period of rest for one or two months. Gradually, and without any irritation of the skin surface, the morbid process was first arrested, and then gave place to one of repair. In February, 1903, the ulcerated surface had cicatrized; the tumour had diminished in volume, was no longer attached at its base, and the skin had regained a certain amount of suppleness, the pain had entirely ceased, and progressively the signs of amelioration became more pronounced. These results were only obtained very slowly, but subsequently the method of "crossed fire" was applied; and having gained experience in dosing the rays, Drs. Wickham and Degrais were able to accelerate the process of repair.

The region of the breast lends itself especially well to the method of "crossed fire"; two apparatuses are placed simultaneously facing each other on opposite sides of the breast. By utilizing a radiation of activity 2,000 to 3,000, consisting of rays of great penetrating power, that is, the hard beta and the gamma rays, obtained by filtration through lead screens, the apparatus can be left in position all night for several nights in succession and the radioactive action in the deeper parts is greatly increased by the crossing of the rays. In certain cases four apparatus

G. P. writes: In reading the letters on the Budget I could not help thinking how well it would repay some of your correspondents to overhaul or scrap their carburetors. When an 8-10 car will only do 15 miles to the gallon on a stopping run she must be in a bad way somewhere. I possess an 8-10 2-cylinder car, which I have driven for nearly a year, and can get 33 to 35 to the gallon on my stopping runs. On a long run with only one engine stop—for lunch—I got slightly over 42 to the gallon. My car weighs practically 12 cwt. without

passengers, and can, at a pinch, take three people abreast. At 15 miles to the gallon I should be obliged to bid her a long good-bye.

MEDICUS, who is considering the purchase of a motor car for professional work, asks for opinions upon the following points:

1. What is the most economical and useful size or power of car for general work, and approximately what would be the cost of such a car?

2. Is a single, or multi-cylinder, car likely to be the more reliable for ordinary work?

3. In purchasing a car I should like to have the advice of a reliable motor engineer, as I believe by doing this I shall be relieved of a good deal of worry in connexion with the selection and purchase of a car, and at the same time obtain good value for my money. Can any medical man recommend such an expert?

4. I should like to know the cost of running a small car in order to compare it with the cost of hiring at present, such costs to be on a basis of town work.

*. * 1. 9.10 horse-power, which if an open car would cost, say, £220, and somewhat more with an enclosed body.

2. The single cylinder is equally reliable, but is a little more noisy.

3. We cannot recommend an independent motor engineer from personal knowledge, the only one we knew having given up this branch of business. Several motor engineers advertise in the *Autocar*. "Medicus" might join the Automobile Co-operative Association, 1, Albemarle Street, which has an expert adviser.

4. Particulars have been given from time to time in the columns of the *JOURNAL* of the cost of running motor cars by correspondents. (See also above.)

TYRES.

BEESSWING writes: I am a country doctor whose practice covers a large area in a hilly district, and I use my 10-12 car regularly. Tyres were my bugbear until I fitted a pair of Lynton wheels and tyres to the driving axles. I have now covered a considerable mileage and am delighted with them. The initial cost is only slightly in excess of that of armoured pneumatic tyres, and the ultimate cost per car mile is approximately half that of pneumatics. At the same time there is little appreciable difference in the riding. A friend of mine has them on the driving wheels of a 10-12 Humber, and has gone 5,000 miles with no trouble whatever.

MOTOR CYCLES.

J. M. (Cape Colony) would be glad of hints with regard to the most serviceable motor cycles suitable for negotiating rivers, drifts, and stiff hills, and free from the bad habit of breaking down twenty miles from home.

M.A. writes: In answer to "L.R.C.S.," regarding the "Wolf" motor cycle, I invested in a new one at £19 19s. some two months ago, and have run it in fair and foul weather. As far as the engine and machine is concerned I have found it excellent. It is easily started, and can be mounted by the step. By taking off the belt it can be pedalled as easily almost as an ordinary "push-bike." There is no vibration, the machinery is easily understood, and the running expenses very cheap. As a "run about" for short distances and constant stoppages for visits, this make of motor cycle should leave nothing to be desired if only the belt and its attachment could be relied upon. I have had endless trouble with the belt, which is a round one with hook connexion running over a jockey wheel. These belts either stretch unduly, slip, or pull through at the hook connexion. I have had advice from experts down to the village carpenter, and all have failed: though the village carpenter's contrivance was the best and lasted the longest. If "L.R.C.S." contemplates purchasing a "Wolf" motor cycle I should strongly advise him to buy the make which has a V belt on a direct drive, and handle-bar control. He should then have an ideal machine for short distances, or as a "run about" in general practice.

MAKERS' ANNOUNCEMENTS.

THE Wolsley Tool and Motor Car Co., Ltd., of Adderley Park, Birmingham, and York Street, Westminster, desire to give notice that to identify the Siddeley Autocar more closely with the name of the makers, they will, in future, be known as the Wolsley-Siddeley cars. The same company issues a catalogue of motor tyres and accessories; it is well illustrated and seems to be very complete, showing the prices for different makes of tyres, parts, and accessories.

HUMBER LIMITED have issued a small pamphlet describing their motor car show rooms at 60 to 64, Brompton Road, London, S.W. Trial runs will be arranged without committing the inquirer to purchase.

THE Borough of Finsbury this year has a medical Mayor, and on May 13th Dr. and Mrs. W. A. Dingle were "at home" in the Town Hall, Rosebery Avenue. A concert followed the reception of the guests, the evening ending in a dance. The company included a large proportion of medical men.

Medical News.

HIS ROYAL HIGHNESS THE PRINCE OF WALES has nominated Major R. J. Blackham, R.A.M.C., an Honorary Associate of the Order of St. John of Jerusalem.

THE late Rev. Thomas Cox, of Croydon, whose will has now been proved, bequeathed to the Croydon General Hospital a sum of £1,000.

DR. W. R. WILLIAMS, Machynlleth, has, on the nomination of the Lord Lieutenant, been placed on the Commission of the Peace for the county of Montgomery.

DR. SEPTIMUS GIBBON, for nearly forty years Medical Officer of Health for Holborn, who died on April 17th, aged 83, left estate valued at £90,304 gross, with net personality £81,762.

ON the occasion of his marriage Dr. George England Kerr, of Inverness, was the recipient of a handsome Panhard landaulette motor car and a purse of sovereigns from his patients and friends in Inverness and district.

THE annual meeting of the Durham Medical Graduates' Association will take place on Friday, May 28th, at 4 p.m., at 11, Chandos Street, London, W. The dinner will take place the same evening at the Café Royal, Regent Street, W., at 7.30.

THE May dinner of the Edinburgh University Club of London will take place at the Criterion Restaurant on Friday, May 28th. Mr. H. S. Butcher, M.P., will take the chair at 7.30. The following guests have accepted invitations to be present: The Lord Advocate, Sir Henry Craik, M.P., and Barry Paine, Esq.

THE annual dinner of the Post-Graduate College and past and present members of the West London Hospital will be held on June 16th at the Trocadero Restaurant: the chair will be taken by Dr. P. S. Abraham. Further particulars can be obtained from the Dean at the hospital.

WE are informed that Dr. A. Holdsworth Davis, after holding the position of Honorary Surgeon to the Monkwearmouth and Southwick Hospital, Sunderland, for eighteen years, has, much to the regret of the Hospital Committee, resigned his appointment, and has been succeeded by Dr. A. J. Gilbertson.

THE Croonian Lectures of the Royal College of Physicians of London will be delivered at the College by Dr. W. S. Lazarus-Barlow on Tuesdays and Thursdays, June 15th, 17th, 22nd, and 24th, at 5 p.m. on each day. The subject is radio-activity and carcinoma—an experimental inquiry.

THE annual dinner of the Indian Medical Service will be held at the Gaiety Restaurant, Strand, on Thursday, June 10th, at 7.45 p.m., Sir George Birdwood, K.C.I.E., in the chair, when the service will have the honour of entertaining General Sir O'Moore Creagh, V.C., K.C.B., Commander-in-Chief in India elect as their guest. Officers intending to be present should communicate without delay with the honorary secretary, Lieutenant-Colonel F. J. Freyer, 27, Harley Street, W.

THE following gentlemen have been elected office-bearers by the Partick and District Medical Society: President, Dr. J. Gibson Graham; Vice-Presidents, Drs. W. Snodgrass and J. Morton; Secretary, Dr. A. W. M. Sutherland; Recording Secretary, Dr. J. King Patrick; Treasurer, Dr. J. Gracie. Eight members of council, including the outgoing president, Dr. Arthur Meehan, have also been appointed. The first session of the society, which was formed last year, seems to have been very successful.

THE annual meeting of the North India School of Medicine for Christian Women was held on May 5th at Trinity Church House, Great Portland Street, London. The enterprise represented by this title is carried on at Ludhiana, in the Punjab, and has now been in progress for some fourteen years. It includes a hospital, which is apparently conducted on very active lines. Last year the new out-patients numbered nearly 20,000, and in-patients over 1,200; the number of beds constantly occupied was seventy-six, and 1,100 operations were performed. It is not a school of medicine in the proper sense of the term, as the women it trains are intended to be employed as nurses, dispensers, and hospital assistants. The undertaking appears to stand in need both of more money and of additions to its medical staff. What standard of knowledge the students of this school are expected to reach before receiving certificates is not indicated in the material which has reached our hands. Some assurance that it is sufficiently high seems desirable, since the primary object of the institution would appear to be, not education, but the spread of Christianity.

British Medical Journal.

SATURDAY, MAY 22ND, 1909.

SPIRITUAL HEALING AND CANCER.

ONE of the most serious difficulties in arriving at a correct conclusion as to the curative powers claimed for spiritual healing is the intangible nature of the evidence. For instance, most of the patients on behalf of whom prayers were asked in the earlier numbers of *The Healer*—which is published by Mr. J. M. Hickson, and which, we suppose, may be regarded as the organ of the Society of Emmanuel of which that gentleman is the president—are vaguely described as suffering from "rheumatism," "loss of nerve power," "spinal trouble," "internal weakness," "low vitality and great weakness," "heart trouble," "internal trouble." Some indeed are said to be the subjects of "locomotor ataxy" and "consumption," but no particulars are given by which the diagnosis can be checked, and it is difficult or impossible to trace the result of the treatment. In a report of the past year published in the number for November, 1908, Mr. Hickson does give some details of a few cases. The two following taken at random may be given as specimens: "Priest. Cancer in bowel. 'Specialist who examined him nine months ago under 'an anaesthetic said that an operation was impossible, and that he could not live for more than about 'three months. He then sought help through Divine 'Healing, when he was anointed with oil in the name 'of the Lord, and Mr. Hickson laid his hands on him 'in prayer, after which he was examined by the same 'Specialist, who found that a process of absorption 'was taking place. He is now quite well." "Lady's 'Maid. Age about 28. Suffering from rupture, which 'gave great pain. One year under treatment at 'Middlesex Hospital, and while waiting for an in-patient's bed for operation was advised to seek help 'through Divine Healing. After three visits to Mr. 'Hickson, two months ago, she is now quite well and 'strong, with no pain or swelling. Her mistress also 'reports that serious defects of her character are no 'longer apparent and her whole spiritual nature is 'quickened and her duties are better done."

These cases are sufficiently definite to be tested, and we should be glad if Mr. Hickson would supply us with the information necessary for the purpose. We should undertake not to publish the names of the patients or any particulars by which they could be identified. We should place the results of our investigation honestly before our readers.

In the meantime, we have succeeded in tracing a case more remarkable than either of the two just cited, and the result is very instructive. It was related in the third number of *The Healer* (March, 1908, p. 9) by the Right Rev. L. G. Mylne, D.D., formerly Bishop of Bombay, in a paper entitled "The Anointing 'of the Sick for their Healing." It has already been quoted in the BRITISH MEDICAL JOURNAL of January 9th, 1909, p. 109, but to enable the reader to form a correct judgement on the subject it must be repeated here. Bishop Mylne said: "In the latest up-to-date

"book on cancer, which is in the hands of the
"most scientific men of to-day, there is a case
"quoted which is, I have no doubt, correctly said
"to be a unique one of *abortive* cancer. The
"case is fully described from a medical point of view
"—how a patient, stricken unquestionably with
"cancer, was found to have, in place of the tumour,
"something which could only be called abortive
"cancer, the like of which was never heard of before.
"I happen to know the whole history of the case
"from the brother of the patient, himself a medical
"man. It was this: The patient had been suffering
"from a serious affection of the throat. He went to
"one specialist after another. Three eminent men
"told him without hesitation that he was suffering
"from a cancer growing on the vocal cords, and that
"nothing but their total excision could save his life.
"He was a hard-working priest of our Church, and, of
"course, the operation meant that he would never
"utter a word again. However, his life had to be saved.
"The doctors came; the throat was laid open; the
"operator had his knife in his hand to excise the vocal
"cords. He stopped dead. Instead of applying the blade
"of the knife, he took hold, between his thumb and the
"handle, of all he found there, and peeled it off just
"like the skin of a fruit. Between the diagnosis and
"the operation the patient had been anointed with oil
"in the name of the Lord. That is one of not a few
"cases which some of us know about, but it is by far
"the best defined one I know of, and one that is
"actually celebrated in medical circles; not of course
"being quoted as an instance of what may be done
"by anointing, but as a case unique in surgical
"experience." We went on to say that we should be
"glad to have fuller particulars, and we respectfully
"invited Bishop Mylne to furnish us with the name of
"the 'latest up-to-date book on cancer' from which he
"quoted.

In the meantime, we had been put on the track of the case by a distinguished physician, and had obtained a report of the case from the surgeon who operated. All, therefore, that was wanting was the name of the book from which the quotation purported to be taken. We communicated with Bishop Mylne on the subject, and we have to acknowledge the courtesy with which he received our request for information and the pains he took to procure it for us. His Lordship was, however, unable to gain the consent of those to whom he applied to help in any way in supplying an answer to a very simple question. As the matter is one of general interest not only to the medical profession but to the whole of mankind, we think it right to give the true facts of the case, of course without disclosing the patient's identity.

The operator was Mr. Butlin, who has been good enough to give us permission to publish the following account. He saw the patient, who was at that time 37 years of age, in 1890. There was then a very white patch, flat and sessile, on the middle of the left vocal cord, looking like a papillary growth. A month later the surface seemed to be ulcerated. The patient was seen by other well-known specialists, who, like Mr. Butlin himself, were puzzled as to the nature of the disease. Tubercle, papillary growth, and malignant disease were in turn considered, but no definite conclusion was arrived at. The patient was treated in various ways for four months before it was thought right to open the larynx. Mr. Butlin then operated in the presence of an eminent specialist, a distinguished surgeon, and another medical man, a friend of the patient. When the larynx was opened,

there was found to be no ulceration, although all present thought they had seen it with the laryngoscope. The diseased surface looked more like a thick patch of leukoplakia than anything else. The cord was scratched with an instrument and the patch came away clean and complete, leaving the cord underneath quite healthy. Mr. Butlin afterwards examined sections of it with the microscope and found that it consisted of horny epithelium, arranged in layers. He therefore supposes it was really a kind of leukoplakia. The larynx was closed, the patient recovered, and his singing as well as his speaking voice was restored as if nothing had ever been the matter.

Mr. Butlin adds that it was truly a very remarkable case, and one which does not quite correspond with any disease of the larynx of which he has knowledge either from observation or from reading. He does not remember ever to have published the case. This makes the quotation from "the latest up-to-date book" on cancer, which is in the hands of the most "scientific men of to-day," all the more mysterious. We cannot understand the objection which Bishop Mylne met with in his efforts to procure the reference for us, particularly as the case had been published in *The Healer* in a way which—no doubt quite unintentionally—was somewhat misleading.

It does not lie within our province to discuss the effect of the anointing with oil which is said to have taken place between the diagnosis and the operation; nor do we question either the good faith or the sound judgement of those who see in the issue of the case the manifestation of a supernatural agency. But it might have been thought that in regard to a case admittedly remarkable, they would have preferred to take advantage of the opportunity of helping to make the facts as public as possible, rather than to place obstacles in the way of their being made known.

We have only one thing more to say. As there is conclusive proof that the disease was not cancer, "abortive" or developed, the case should not be brought forward as an example of spiritual healing of that disease. We have used it here to point the moral which we are anxious to impress on spiritual healers of all shades of belief and practice—namely, that they should be more cautious and, above all, more precise, in their statements than, as a class, they have hitherto been. Moreover, they should not only verify their references, but give earnest inquirers the opportunity of doing so for themselves.

THE FEBRILE REACTION.

AN interesting and important contribution has been made by Dr. Fr. Rolly of Leipzig to the discussion of the relation of the febrile reaction of the body to infection. While many have held that fever is the natural reaction of the body to invasion by micro-organisms, a part of the defensive mechanism, others, and particularly Liebermeister, have maintained that fever is in all cases harmful; that the rise of body temperature is the actual cause of parenchymatous degeneration and fatty infiltration of the organs; and that it must be combated by vigorous antipyretic treatment.

To-day it is generally recognized that the whole process of inflammation is defensive and curative in purpose. The hyperaemia and oedema of the inflamed part signify the flooding of the infected tissues with blood plasma and phagocytes, the plasma activating the phagocytic process and neutralizing the toxins

produced. The fomentations and incisions of the surgeon and the cupping and congestive treatment of Bier are alike directed towards flooding the inflamed tissues with plasma. The success that accompanies the application of fomentations and poultices, as hot as the patient can bear them, points to the utility of the local febrile reaction. It is a well-established fact that the velocity of all protoplasmic and ferment action is diminished by cold, and increased by heat up to a certain limit. Rolly and Meltzer found that phagocytic action reached its maximum, not at 37° C., the normal body temperature, but at 39.5 to 40° C. (104° F.). By 41.5° C. (106.7° F.) the phagocytic power was significantly decreased. By placing rabbits in a well-ventilated, heated chamber, and feeding them in a suitable manner with plenty of watery green food, these authors succeeded in keeping the animals for from four to twenty days in a hyperthermic state. With a body temperature varying between 39.5 and 42.5° C. the animals remained well and healthy, and their organs, in consequence of this simple non-infective rise of body temperature, showed no signs of parenchymatous degeneration. The production of anti-toxins and agglutinins was accelerated in such warmed animals in comparison with the controls kept in a cold chamber. In respect of all the defensive mechanism the animal with a moderately-raised body temperature has the advantage over one that is kept at normal or subnormal temperature. Four rabbits of one litter which were kept in the hot chamber for days with a body temperature of 39.5 to 42.5° C. were killed and their organs contrasted with those of a fifth rabbit, one of the same litter, which was kept under ordinary conditions. Microscopic examination showed none of those parenchymatous changes in the rabbit's organs which are so easily brought about by febrile infections. The protein katabolism and nitrogen output was not increased to any notable degree so long as the body temperature was kept under 40° C., and the increase at higher temperature was very much less than in states of infective disease. Similarly Linser and Schmid observed in two brothers, who had little power of heat regulation, owing to a skin affection, that raising their body temperature to 39° C. by external warmth even for several days, had no effect on the nitrogen output, while a temperature of 40° C. and over increased it. Further, slight changes only were produced in the blood by a simple hyperthermic state as compared with the profound changes produced by infections.

It has been suggested that one function of the febrile reaction of the body on infection is to raise the temperature to a height which is unfavourable to the growth of the infecting bacteria. The evidence in favour of this hypothesis is based chiefly on observations of Pipping, who found that the growth of pneumococci on broth was influenced unfavourably by fever temperatures. Rolly and Meltzer found that this could not be the case when the organisms actually infected the body. The febrile reaction does not destroy the organisms by overheating them, but by favouring the bactericidal powers of the body. The conclusions reached are that fever temperatures up to 40° C. (104° F.) are part of Nature's cure, and should not be combated by antipyretic means unless serious symptoms of disturbance of the nervous system or of the circulation and respiration arise. Then the treatment should be directed to the relief of the untoward symptoms rather than to lowering considerably the body

temperature. To effect this warm sponging or warm baths are far more effective than cold, for the latter produces vaso-constriction of the skin and defeats the end in view, while warm sponging dilates the cutaneous vessels and the evaporation of the water effectually cools the blood.

It has been demonstrated by Pembrey and others that muscular activity raises the body temperature notably in animals and men. Leonard Hill and Martin Flack found a rectal temperature of 102° to 103° F. in students after a football cup tie or half-mile or mile races, and in two a temperature exceeding 104° F. (in one 105° F.) after a three-mile race. Stokers working in steamships in the tropics, puddlers in ironworks, miners in Cornish mines, where the temperature may be 93° F. and the air wet with moisture, dwellers in tropical regions where heat waves occur, must all, like Rolly and Meltzer's rabbits, live for periods with raised body temperature; and every man who takes violent exercise does the same.

It is doubtful whether the rectum is the most accurate place to take the temperature. It gives the highest reading no doubt, but probably the axilla gives a reading which is nearer to that of the brain, and perhaps of the heart—the two essential organs to be considered. In severe muscular exertions, when the heart is becoming exhausted, venous blood becomes pooled in the abdomen, and this raises the rectal temperature higher than elsewhere.

It must always be borne in mind that the temperature of the body varies from one part to another, and is never absolutely steady or constant anywhere. Curious and unexplained oscillations of body temperature occur from time to time; these were being studied by methods of continuous record by the late Dr. Gamgee, and results of a research which would have been of great interest have been broken short by his lamented death. To the last number of the *Proceedings of the Physiological Society* Leonard Hill and Martin Flack contributed a series of observations on the effect of hot baths on themselves and students. By immersion in water at 105° F. to 110° F. the body temperature can be raised in some twenty minutes to 102° F. to 104° F. This produces hyperpnoea, the evaporation of water from the lung being then the chief means of keeping down the body heat; the partial pressure of carbonic acid in the alveolar air is lowered by the hyperpnoea from the normal 5 to 6 per cent. to 3 to 4 per cent.; the body is not only cleansed of carbonic acid but well oxygenated by the hyperpnoea. In consequence, after such a hot bath, the breath can be held twice as long as normally. The extra oxygenation produced by the hyperpnoea and quick pulse of fever must be part of this curative reaction. The vasomotor system is so profoundly affected by the hot bath that the blood pressure may sink to 60 mm., while the pulse becomes very frequent and thready. The cutaneous vessels are greatly dilated, and most of the blood, determined to the surface.

On standing up the pulse-rate may increase by 40 beats a minute, and the subject faint from the sinking of the blood into the relaxed vessels of the lower parts of the body. All these conditions are immediately relieved by a cold douche: the skin constricts, the pulse becomes full and strong and far less frequent, the hyperpnoea ceases, and the blood pressure rises, the faintness disappears, the axillary temperature, which was equally as high as the rectal, falls to or below normal, while the rectal temperature

remains febrile owing to the driving of the blood from the skin into the abdominal organs.

A very hot bath followed by a cold douche is a means of affecting the body most profoundly, and one which the Japanese use habitually both for pleasure and as a curative agent. The temperature of the bath which the workpeople accustom themselves to resist for a few minutes is said to be extraordinarily high.

THE INDIAN MEDICAL SERVICE.

THE correspondence published as a white paper entitled "Measures for promoting the growth of an independent medical profession in India," presented to Parliament on May 20th, shows, we fear, that there are considerable grounds for the apprehension that the changes in the Indian Medical Service which the Secretary of State has directed to be carried out will seriously affect the future of that service. As will be seen (SUPPLEMENT, page 312) the matter was raised in a dispatch from the Secretary of State to the Governor-General on August 9th, 1907, referring to dispatches by Lord George Hamilton, dated as long ago as January and December, 1900, expressing the opinion that it would be a great benefit to India if medical men established themselves in private practice in that country in the same way as in other parts of the Empire without entering the medical service connected with the army. Lord Morley's first dispatch asked whether any steps had been taken to give effect to this policy. In the reply from the Government of India the whole question is dispassionately discussed; and while entire sympathy is expressed with the desire to promote the growth of an independent medical profession, the difficulties in the way of carrying out the policy proposed are clearly set forth. The general conclusions of the Government of India are that the changes should be very gradual and tentative, and in the main, but not exclusively, from the bottom, and only made as really qualified candidates become available in India, nothing being done to lower the efficiency of the medical schools and their hospitals; that a sufficient number of civil appointments should be reserved to provide for the economical employment of the war reserve of the Indian Medical Service; and that the necessity of maintaining the attractiveness of the service should be borne in mind in allotting them. Lord Morley accepts these principles, but at the same time demands an actual reduction in the numbers of the Indian Medical Service in civil employment.

The result of the proposed measures must depend on the way in which they are carried out. The Government of India fully realizes that the present European staffs of the medical colleges will become more than ever essential if the graduates they teach are to be given more responsible Government posts than heretofore, and as these posts also form one of the main attractions to first-class men to enter the Indian Medical Service, this is satisfactory so far as it goes. It is probable that some additional minor professorships to be held by Indian graduates will be created and will still further strengthen the teaching. Of more importance to the Indian Medical Service as a whole is the number of civil posts to be taken away from the officers recruited in England, and it

may be observed that the last entrance list included no less than five Indian graduates—probably as many as it will be possible to find suitable employment for. The Government of India points out that it is essential to retain sufficient civil posts to employ the Indian Army Medical Reserve, and that about half of the civil posts are so important that they can only be adequately held by Indian Medical Service officers, who could not be spared for military duty even in a big war. The remaining civil posts contain the available medical reserve for war time: and as it is these only which could at present be filled by locally-recruited Indians, it is clear that very few such posts now held by Indian Medical Service men can, with due regard to economy and efficiency, be given up to them. The local Governments have been instructed to report what posts can be so given up, and on the answers the future recruiting of the service will depend. If the civil list of the Indian Medical Service is seriously reduced in numbers, the result will be that instead of nearly two-thirds of the service being able to look forward to the civil professional opportunities which practically all enter in the expectation of attaining within three or four years of reaching India, only a minority will be able to obtain civil work, and that only after a number of years in military employ. In such circumstances it is certain that it will not be possible to "maintain the attractiveness of the Indian Medical Service" on which the Government of India rightly lays so much importance. Moreover, there is a natural fear that once a beginning is made in reducing the attractions of the service, as represented by the proportion of civil posts, the process will steadily advance, and, as recruits now entering have to look forward to at least thirty years' service in India to get the full pension, it will be quite impossible for them to foresee how far their prospects may be adversely affected after they have entered by the progress of the changes indicated.

It is earnestly to be hoped that the present uncertainty as to the future of this famous medical service will soon be settled in such a manner as fully to maintain its prospects and traditions; otherwise the standard of entries must inevitably rapidly fall: once the confidence of the medical schools of Great Britain in the future of the Indian Medical Service is destroyed, it will be exceedingly difficult to restore it.

FROM DEMOCRAT TO DICTATOR.

The political growth of Mr. John Burns appears to proceed with the bewildering rapidity of a tropical plant. It is not so many years ago that he was the rising hope of the Labour, if not, indeed, of the embryonic Socialist, party; then, after a period of more or less official radicalism, we find him a Cabinet Minister, steadied but by no means silenced by the responsibilities of office; and finally, last Saturday, he presented the country with a proposal for a dictatorship. We have no wish to criticize this course of development, and, if we are to have a dictator, Mr. Burns would probably make a reasonable if masterful tyrant. In his speech at the opening of the new municipal convalescent infirmary for London children he suggested that the President of the Local Government Board should be given a general commission to carry out such reforms founded upon the recommendations of the Royal Commission on the Poor

Law and Relief of Distress as might commend themselves to himself and his advisers, with, as a concession to his colleagues, the possible assistance in certain directions of the Home Office and the Board of Education. The suggestion, although very much on the lines of the historical development of democracies, is a little startling, and is not likely to be seriously entertained; we suspect, indeed, that Mr. Burns has no hope that it will be seriously entertained, and that his proposal was intended to be one of those apparent paradoxes which arrest public attention. The most significant part of his speech was the fear he expressed that the something which the Government must do will fall to the lot, not of this Government, or even of the next, but of the next but one. This is a roundabout way of saying that reform will, in the ordinary course of events, be postponed, for in all probability at least seven or eight years, and will then be contingent upon the accession to power of a political party pledged to this particular reform. Mr. Burns is an old parliamentary hand, he is no novice in party politics, and he has recently gained a first-hand knowledge of ministerial and departmental modes of procedure. We take it, therefore, that his speech is a warning to the country that unless a definite public opinion is expressed, Poor Law reform will be shelved until the findings of the Royal Commission have been forgotten, or the conditions have been materially changed. He does not want new commissions, a sentiment with which everybody will agree, nor does he wish to see the creation of new *ad hoc* bodies unacquainted with what has gone before. As to the meaning of this last opinion we must remain in some doubt, unless it can be taken to signify that Mr. Burns considers that the relief of distress should be added to the duties which already weigh upon the county councils. The question whether additional work can be placed upon the shoulders of these useful and long-suffering bodies is more serious than the Royal Commission probably recognized; we observe that Mr. Tonman Mosley, Chairman of the Bucks County Council, at the annual meeting of the County Councils Association on May 18th, in opening a discussion on the Poor Law Commission's report said that if the county was to be the unit, the county council with its existing organization would be preferable to a semi-independent public assistance authority responsible directly to no electors, insufficiently checked in its expenditure, and perhaps drawing away from county councils many valuable and hard-working members. Lord Belper, chairman of the Nottinghamshire County Council, who on this occasion was elected chairman of the County Councils Association, said that in his opinion it was impracticable for county councils as at present constituted to undertake the extra work, and eventually it was decided to appoint a committee to report upon the Poor Law Commission's report from the county councils' point of view.

SIGHT TESTING IN THE MERCANTILE MARINE.

THE case to which Mr. McArthur called attention recently by a question in the House of Commons (page 1262) affords another illustration of the unsatisfactory state of things existing at the Board of Trade when candidates are examined for colour vision. It appears that a Mr. Glover passed as second mate eighteen months ago, and has been at sea ever since. In March of this year he presented himself for examination for a first mate's certificate. He was then rejected on the ground of colour blindness by Captain Fletcher, who had passed him on the previous occasion. Mr. Glover then applied for a special test,

and the examiners in this final court of appeal were Professor William Watson, Assistant Professor of Physics at the Royal College of Science, and Captain Harvey. The court which sat to try the case consisted of the Chairman of the Local Marine Board, a stipendiary magistrate, a member of Parliament, two ship captains, and others, but no medical man was included either among the examiners or the court. According to Professor Watson, Mr. Glover made the most shocking mistakes by calling spectral green red, and by placing together as a match pink, blue, and violet wools, and these mistakes he made on several occasions, though he sometimes got them right. Captain Harvey gave corroborative evidence. So far no medical man had ever seen the candidate as regards his eyes, and not a single person who had seen him or heard the evidence had any knowledge of physiology or ophthalmology. Mr. Glover, however, decided that he would be examined by an ophthalmic surgeon, and he consequently consulted Dr. William Ettles, Pathologist to the Royal Eye Hospital, who stated that the candidate's colour vision was perfect, that the mistakes he had made were due to the abnormal length of time he was under examination by the non-medical witnesses, and that he considered him fit as regards colour vision to undertake any duties a ship's officer would be called upon to perform. After a brief deliberation the court found that he "is not incompetent by reason of colour blindness" to perform his duties, and his certificate is therefore returned to him." In the face of such contradictory evidence we express no opinion as to the rights or wrongs of the case, but one or two points call for consideration. Professor Watson, on cross-examination, stated that he "made a point of never failing a man unless he made a mistake several times." Does Professor Watson imagine that a collision at sea will not take place unless a man mistakes the colour of a light "several times"? No rule ought to be more insisted upon than one laid down by Dr. Edridge-Green—that a man who calls red green, or green red, or who mistakes a white (yellow) light for either on a single occasion should be rejected at once, for if he makes this mistake in the examination room, he is certain to do the same at sea when a light of unknown colour and intensity suddenly looms into view. No normal-sighted person would ever make a mistake even once. The evidence of Captain Harvey and Captain Fletcher may be passed over without comment, as they of course have no expert knowledge of the subject; but the evidence of Dr. Ettles that the candidate never made a mistake at all deserves respectful attention. Now it is obvious that someone's observations were wrong, and it seems strange that the crucial lantern test was not, so far as the published reports show, used by any one. The inquiry proves once more that the way in which colour vision is tested is inadequate. It would be ludicrous, if it were not so serious, to find that the British Board of Trade cannot get more competent people to examine candidates' eyesight than ships' captains backed up by a physicist, and cases like this will again and again recur until competent medical men with ophthalmic training are appointed examiners. We cannot decide from this evidence whether the man's colour vision was good or bad—perhaps it was as perfect as Dr. Ettles suggests, though if we believe a single word of the evidence of the other examiners he must be a person who has no right to be put in charge of a ship. We sympathize much with Mr. Glover, who may have perfect colour vision, as we are inclined to believe he has; if so, it is grossly unfair that he should be subject to all this incon-

venience and annoyance because he is examined by men who are not trained to form an opinion on the subject upon which they are asked to pass judgement. What would the public or the Board of Trade think of a court of examiners in seamanship composed of medical men and experts in physics?

CLERICAL PROTEST AGAINST THE EMMANUEL MOVEMENT.

WE learn from the New York *Medical Record* that at a special Masonic service held in Calvary Episcopal Church, New York, on May 2nd, the anthem, which had been specially composed for the occasion, was intended as a protest not only against Christian Science but also against the doctrines and practices of what may for convenience be termed Emmanuelism. The theme of the anthem is sustained by the baritone soloist, its warnings being explained and confirmed by the chorus. The soloist begins:

O Earth, Earth, hear the word of the Lord.
Be thou instructed, O Jerusalem, lest my soul depart from thee.
Shall a man make gods unto himself and they are no gods?
I have listened and heard, but they spake not aright.
They are vanity and the work of errors.
Deceive not yourselves. Ye looked for peace and no good came, and for a time of health, and behold, trouble.

Then the Chorus declares:

The way of man is not in himself; it is not in man that walketh to direct his steps.

The soloist goes on:

O ye priests! How long will ye sit still?
Who is this that darkeneth counsel by words without knowledge?
How do they say, "We are wise and the law of the Lord is with us?"
Thus saith the Lord of hosts, Lo, these have rejected the word of the Most High, and what wisdom is in them?
For they have hated the hand of my people slightly, saying, "Peace, peace," when there is no peace.

In thy sickness give place to the physician, for the Lord hath created him and given him skill, that he might be honoured in His marvelous works. Let him not go from thee, for thou hast need of him.
Of the Most High cometh healing. He hath created medicines out of the earth, and he that is wise will not abhor them.

The Chorus then explains that "Love and might no longer heal by touch, or word, or look," and that they who do God's work must read His laws in Nature's book. The soloist makes a final appeal:

How long halt ye between two opinions?

To which the response of the Chorus is:

As for me and my house, we will serve the Lord.

According to the anthem, the words of which seem to us excellently well chosen for their purpose, serving the Lord in time of sickness is to turn for help to the physicians whom the Lord hath created and to be healed by the medicines which "He hath created out of the earth," and which the wise man will not abhor. Several other protests against the Emmanuel movement and against the intrusion of the clergy into the sphere of medicine have been made in America. As the *Record* truly says, "It is a healthful and 'hopeful sign that many earnest churchmen are beginning to look askance on this sensational and 'harmful meddling of clergymen with pathology.'"

HIBERNATION AND PSYCHOSES.

AN exceedingly original and suggestive monograph, entitled *Stoffwechselpsychosen*,¹ or the psychoses of metabolism, published some eighteen months, has

¹ *Stoffwechselpsychosen. Die Störungen des Sauerstoff-gaswechsels im menschlichen Organismus.* By Dr. W. Ewald. Würzburg: A. Stube (Curt Kabitzsch). 1907. (Demy 8vo, pp. 59. M. 1.50.)

recently come under our notice. The author, Dr. W. Ewald, one of the medical officers of the Frankfurt State Infirmary, attempts to explain the etiology of some of the psychoses: he accepts with considerable reservation the statement that "mental diseases are diseases of the brain," maintaining that this only applies to the organic psychoses and to hereditary degenerative conditions. Acute and subacute "functional" psychoses, whether terminating in recovery or dementia, and manic-depressive insanity cannot, he considers, be considered cerebral diseases, but rather the result of general disorders of the whole body, the mental symptoms occupying the front of the stage because of the relatively great delicacy of neuro-cerebral response to injurious influences. So far Dr. Ewald is in agreement with most other writers, and also, in his opinion, as to the relative values of endogenous and exogenous toxins. Seeking, however, in the animal world for an example of a general change in the metabolism of the body associated at the same time with psychic alterations, Dr. Ewald was struck with the parallelism between the phenomena of hibernation and those of certain psychoses, notably, of course, stupor. Quoting, without criticism, Merzbacher's paradox that hibernation or winter sleep "is, in the first place, not a sleep, and in the second place, has nothing to do with winter," Dr. Ewald gives a summary of the bodily changes found in hibernating animals, as the result of the cause of the winter sleep, which included diminished intake of oxygen, before proceeding to discuss the various possible anomalies in oxygen metabolism in man, and the results of his experiments with regard to the specific oxygen capacity, blood alkaliescence, and other points. These are described in detail, but we need here only mention the main result, which is that all bodily diseases which produce alterations in the oxygen metabolism are accompanied by proportionate psychic alterations; diminution in oxygen metabolism being accompanied by retardation of mental processes and a depressive or apathetic emotional state, and increased oxygen metabolism by the opposite mental states. The examination of subjects of several forms of mental disease in the main supported conclusions arrived at previously on theoretical grounds. The specific oxygen capacity in epileptics, for example, fell, Dr. Ewald found, during stuporous states from 12.6 per cent. to 5.5 per cent. Also of six general paralytics examined, four were depressed and two euphoric and grandiose. The four depressed cases gave low or normal, and the two exalted patients very high specific oxygen capacities. Dr. Ewald has given a good deal of labour and thought to a subject which appears worthy of further study.

PUBLIC ACCOUNTANTS.

IN the characteristics of the movement now in progress in regard to accountants there is much that recalls the period immediately preceding the introduction of the Medical Act of 1857. Not so much in the proposals put forward respecting the future status of accountants as in the arguments used in favour of leaving things as they are. We have two bodies each claiming to be the rightful representative of accountancy, and numerous other bodies of recent growth claiming a recognition which their seniors are indisposed to accord to them. The older bodies have been accustomed to guard their portals by exacting from candidates the most convincing proof of professional capacity and personal trustworthiness, and they fear loss of dignity and prestige for the profession if they are called upon to merge themselves in a general institution. On the other hand, the public

is confused by the number of societies which claim that their members are entitled to public confidence, and there is a strong feeling among business men in general that the time has come when everything connected with accountancy should be duly regulated in the public interest. A very large share of all the business of the country is now carried on by limited liability companies, and the safety of the shareholders greatly depends on the ability and honesty with which the auditing and certifying of accounts is carried out. Hence the importance of submitting to some kind of control those who make their living by this work. It may be added that the need of some authority with whom complaints could be lodged, or whose attention could be directed to certain facts has frequently been felt by this JOURNAL when examining the accounts of charitable institutions. It was a great many years before those immediately concerned in the administration of public charities could be induced to see that it was their duty to have their accounts audited by some independent authority, and though this reform has now been effected, another evil has arisen. Accountants sometimes give their imprimatur to financial statements which do not bear examination. It is not that they are incorrect so far as figures are concerned, or that they are dishonest accounts in the common sense of the term. Nevertheless they are dishonest because so drawn up as to mislead subscribers who are unskilled in reading accounts. We have seen accounts, for instance, duly audited and signed as correct by accountants of some standing, in which by way of making out that the institution stood badly in need of assistance a sum of several hundred pounds spent in buying Consols was passed into the accounts in such a fashion as to make it appear that the income of the hospital during the year had fallen gravely short of the cost of its upkeep. It is not honest of hospital authorities to mislead their subscribers as to the real state of their finances even if no individual is thereby a penny the richer, and such dishonesty would not be permitted by accountants if these were subject to the control of some properly-constituted authority.

RESEARCH WORK ON NERVOUS DISEASES.

IF the increase of insanity and nervous disease at the present day affords grounds for some alarm, the organized effort that is being made to discover the causes of such affections by experimental research encourages the hope that means may be found to mitigate, and in time prevent, the evil. A few weeks ago we gave a summary of the work done with this object at Claybury by Dr. Mott and his collaborators. There is a similar laboratory at Morningside, near Edinburgh, where under the able direction of Dr. Ford Robertson important researches have been carried out. The West Riding and some other asylums have pathologists. Now we have the pleasure to announce that the directors of the Crichton Royal Institution, Dumfries, have decided to establish a laboratory for research on nervous and mental diseases in connexion therewith. The laboratory is to be organized on lines laid down by the Physician-Superintendent, Dr. C. C. Easterbrook, in a special report submitted on February 17th, 1909. In a report dated October 7th, 1908, Dr. Easterbrook had previously pointed out that if the institution was to keep abreast of what we may call the scientific stream of tendency it must provide, in addition to an efficient hospital and a comfortable home for the care of patients, adequate means for the pathological investigation of their maladies. The directors, after considering this report, asked the Physician-Superintendent to submit a

scheme for the establishment and organization of such a research laboratory as he proposed. This, after obtaining the opinions of a number of scientific experts, he has done in a report to which reference has already been made. His plan for the constitution and administration of the laboratory staff is briefly as follows: Three fellowships—one in clinical neurology and psychology, one in pathology and chemistry, and one in pathology and bacteriology, should be established. Each of these fellowships should be of the value of £250 a year, with quarters, board, attendance, and laundry at the institution, or an allowance in lieu of these of £50 a year. The fellowships should be tenable for one year, but renewable from year to year. Each fellow should be given periodical opportunities, at his own expense, of perfecting his studies and training in other clinics and laboratories at home and abroad. The fellows should devote their whole time to research work, and should be under the immediate direction of the Physician-Superintendent. Each one at the end of the year should make a short abstract of his work and list of published papers during the foregoing twelve months for submission to an Advisory Medical Committee consisting of the Physician-Superintendent, the Medical Commissioners in Lunacy for Scotland, the Superintendent of the Laboratory of the Scottish Asylums, and any others whom the Committee may think it advisable to co-opt. It is suggested that the fellows should be men holding a medical degree or diploma from a university of the British Empire, or a medical qualification from a recognized licensing body in the British Islands; that they should be men of wide education, with a knowledge of modern languages; that they should have had special experience in clinical work, preferably in the form of a good hospital appointment at a teaching centre; that they should have had special laboratory training and experience in laboratory methods as applied to clinical pathology. It is suggested, further, that they should be required to supply proof, in the form of published work, of their capacity to advance medical science by original research. Further information in regard to these appointments will be found in our advertisement columns. The scheme seems to us admirable in every way, and it is well calculated to increase the great usefulness of the Crichton Royal Institution, not only to its own inmates, but by the additions to knowledge which it cannot fail to be the means of making, to all who are similarly afflicted throughout the world. We congratulate Dr. Easterbrook on the breadth of view shown in his plan, and the directors of the Crichton Royal Institution on the large-minded zeal for humanity they have displayed in its adoption.

GLIMPSES OF MEDICINE IN THE FAR EAST.

In the *Boston Medical and Surgical Journal* of May 6th Dr. George Cheever Shattuck gives an interesting account of a tour round the world which he made a year or two ago. He bears testimony to the fact that the hospitals in the leper colony at Molokai have been renovated and enlarged, and states that it is hoped by careful segregation to stamp out the disease. The Government is building laboratories in which experimental work is to be conducted in the hope of discovering a cure for the disease. The hospitals at Honolulu contain comparatively few cases of tropical disease, and Dr. Shattuck was told that cancer of the stomach is so uncommon in the happy islands of which it is the capital that gastro-enterostomy has only once been performed there; cancer of the breast is still more rare. Japan was next visited. At Tokio our medical Ulysses found the hospital attached to the

university large and well appointed for surgery, but he judged, from the few attendants to be seen, that the patients receive little care. More interesting to him were the Imperial Institute for Infectious Diseases, the Serum Institute, and the Lymph Institute, all controlled by the Government under the general management of Professor Kitasato. Some 200 horses and cattle are kept for making serums; these are laboratories which supply vaccine and antitoxin for the entire nation; there is a special rat-proof and fly-proof building for the *Bacillus pestis*; a small hospital to which cases of infectious disease are admitted for study; and laboratories where practitioners from all parts of Japan may make themselves familiar with pathogenic bacteria and modes of prophylaxis by taking the course offered by the Government. Antitoxins for diphtheria, tetanus, erysipelas plague, cholera, and Shiga's dysentery are made in separate laboratories. Immunizing serums are prepared for small-pox, plague, cholera, and typhoid. At the time of Dr. Shattuck's visit a new antitoxin against the venom of the *habu*, a poisonous snake common in some parts of Japan, was being developed, and Professor Kitasato was experimenting with a new antitoxin for typhoid. In addition to these shrines of science, Dr. Shattuck visited the Shinto Temples dedicated to ancestor worship. In every one of these, on one side of the main hall, there sits a deity carved out of wood, with a wrinkled pot-belly and a benevolent expression. His name is Binzuri, and he heals the faithful by a sort of massage which is applied by the patient rubbing himself against the part of the body of the god corresponding to the situation of the pain in his own body. Dr. Shattuck says that from Binzuri's appearance it may be inferred that he has a large general practice, but that he specializes in headaches, joint pains, and indigestion. The votive offering is seen in Japan as elsewhere; it is common to see hanging near a shrine an array of sandals of various sizes, placed there by coolies whose sore feet have been cured by the divine power. In China the faith cure takes several forms. On the outskirts of Peking is the Temple of the famous Bronze Horse, who treats patients as does Binzuri in Japan. The horse is an archaic, stiff-legged, bronze pony of nearly life size, and he is polished all over by the sufferers. Another form of faith cure is seen at the fairs frequently held in Peking for the sale of household utensils, clothing, condiments, toys, and bric-a-brac. In a separate booth at one of these fairs Dr. Shattuck saw a doctor surrounded by an odd collection of relics, among which were some dried reptiles and the skull of a tiger. He offered for sale a black ointment compounded of the ingredients represented by the collection. At Hong Kong Dr. Shattuck visited the great Tung Wa Hospital, built by the Chinese for the poor of their race. It has two divisions, in one of which patients are treated on the Chinese system, while in the other Western methods are employed under the direction of a Chinese doctor trained in the United States. Unfortunately, no comparative figures showing the results are given. Dr. Shattuck was told, however, that patients suffering from beri-beri, which is very common at Hong Kong, often ask to be transferred to the western division in order that they may get morphine for the relief of the neuritic pains.

THE PERSISTENCY OF ANTIVIVISECTION MYTHS.

MANY things are killed by exposure; the antivivisection myth seems to flourish on it. Some correspondence which has recently appeared in the *Hull Daily Mail* affords a striking illustration of this. With the object of stirring up his fellow-citizens to attend

a meeting to protest against vivisection a Mr. Ronald Dixon cited the following example, purporting to be taken from *Vivisection: Is it Justifiable?* by the late Dr. Charles Bell Taylor: "Here is another, also called a moral experiment, which I quote from a speech by Dr. Shaw, delivered quite recently before the Royal College of Surgeons of Ireland. 'The operator began by treating the animal kindly, and winning its love and confidence. When these were secured, he cut off an ear of the dog, who looked astonished, but manifested no resentment. Next day he cut off a paw, and a few days afterwards another. Thus he went on from one outrage to another, slashing and stabbing till the experiment was complete. It was astounding how much the animal endured before his confidence was gone, and his love turned to hate. After the second paw was removed, he continued to gaze up into his master's face, and to lick the hand that maimed him.'" A controversy followed, in which Mr. Dixon said, in reply to Dr. Arthur H. Fullerton, who had asked if Dr. Taylor had seen the experiment described: "If Dr. Fullerton doubts the word and evidence of Dr. Bell Taylor and Dr. Shaw he doubts at least one of the noted leaders of his own profession, and reflects also to some extent upon the Royal College of Surgeons of Ireland, etc." This shows the antivivisectionist notion of evidence. It would be amusing if it were not so serious a thing that the public should be misled in regard to animal experimentation. For the benefit of the controversialists who, after making an inaccurate statement, hasten to take cover behind some one else, we may state that Dr. Bell Taylor was not recognized as a leader by his profession, and Dr. Shaw, on whose authority he seems to have taken the story without any independent inquiry, was not a member of the profession at all. The truth of the matter was set forth in the *BRITISH MEDICAL JOURNAL* of April 18th, 1908, p. 952. We need not repeat it in detail here; it need only be said that Dr. Shaw, a doctor of laws, related the experiments not before the Irish College of Surgeons, but at a meeting of the Senate of the University of Dublin, held on June 14th, 1892, with the object of preventing honorary degrees being conferred on Burdon-Sanderson, Michael Foster, Charles Richet, and L. Hermann, on the occasion of the tercentenary of the foundation of the university. Professor D. J. Cunningham, who spoke on the occasion, assured the Senate that "nothing of the kind ever happened in a physiological laboratory in this country." Those in attendance, according to the *Dublin Daily Express* of June 15th, 1892, numbered sixty-four; of these, twenty-four were clergymen. The honorary degrees were duly conferred, Dr. Shaw's overstatement of the case having disgusted the Senate. But this old story has become part of the stock-in-trade of the antivivisectionists, and will doubtless be heated up again and again, and served up for the delectation of those who love to sup full of such horrors. It may be added that the "moral experiment" which no physiologist would recognize as a scientific experiment in any sense, seems to have been performed in France some seventy or eighty years ago by Brachet. We have been unable to trace the report to its original source, but assuming the account given to be true, every physiologist in this country would utterly condemn such acts as wanton and useless cruelty, reflecting indelible infamy on the man who did such things in the name of science.

THE SALE OF POISONS.

THE Pharmaceutical Society of Great Britain held its annual dinner at the Holborn Restaurant on May 18th, the chair being taken by the President for the year,

Mr. J. Rymer Young of Warrington. On his left he had the President of the Royal College of Surgeons, Mr. Henry Morris, and on his right Sir Dyce Duckworth, Treasurer of the Royal College of Physicians. The company was, as usual, very numerous, and included that steady Parliamentary supporter of the society, Mr. Thomas Lough; Viscount Hill, and several other representatives of the Houses of Parliament. Early in the evening came a toast to the medical profession. It was proposed by Mr. Rymer Young, who, after sketching the progress of medicine and surgery in the last 100 years, drew a well-balanced comparison between the personal sacrifices entailed on members of various professions, and then gave his vote to medical men. The response to the toast came from Sir Dyce Duckworth, who regretted that the trend of modern pharmaceutical technique had in some measure served to make the association between pharmacists and members of the medical profession less constant and intimate than formerly. His own preference was for ordinary pharmacopoeial remedies, and he regretted that among young medical men of the present day skill in the writing of prescriptions was a less common possession than it was formerly, or than it should be. The main interest of the speeches, however, lay perhaps in the references to the strenuous year's work from which the Pharmaceutical Society has just emerged, and the probable effect of an increased taxation of alcohol. Mr. Robinson, who introduced this topic, confirmed the statements that have elsewhere been made as to the serious result which increased expenditure in this direction may have on the finance of many hospitals. The new Pharmacy Act seemed to be regarded, on the whole, with satisfaction, but fear was expressed lest the Government should fail to give effect to its implied promise that the strictest supervision would be exercised over the issue of licences to sell poisonous insecticides and the like. The clause in question—introduced at the instance of the Agricultural Board—is in any case a weak feature, for there can be few farms not within easy reach of an ordinary establishment for the sale of drugs, and the facilities now offered for the purchase of poisons are clearly open to abuse. It may be argued, of course, that neither accidental nor intentional administration of poisons can be prevented by keeping their sale strictly in the hands of pharmacists, but on the other hand, it is clear that substances or liquids only obtainable on compliance with the formalities of a chemist's shop are more likely to be handled with care than those readily to be bought at any general store. As the clause originally stood the licensee would have been entitled to regard and sell as suitable for horticultural and agricultural purposes any and every drug that he pleased, and it is fortunate that the Pharmaceutical Society succeeded in getting the purview of the clause limited to arsenic and tobacco derivatives. The Act came into operation on the first of last month.

THE ROYAL SANITARY INSTITUTE.

AMONG the many claims which the Royal Sanitary Institute could make for itself, one is the possession of some quality that promotes a strong spirit of loyalty among its fellows and members. It has its foundation, perhaps, in the fact that ever since the time when it amalgamated with the committee which had formed the Parkes Museum—a collection which it has maintained and greatly extended—its work has been steady and thorough and conducted with no undue beating of drums. In any case, there is a curious similarity in the composition of its annual

gatherings; the same faces may be seen year after year, and no dinners attract a larger number of distinguished representatives of applied and theoretical science. The general note of the dinner last week was one of content at the steadily increasing recognition of the importance of sanitation; the description by Sir Alfred Keogh of the successful creation of a sanitary corps in connexion with the Territorial Army being received with special satisfaction. A further point of interest was the statement made, apparently on good authority, by Sir Francis Sharp Powell, that the Government does not intend to allow the Housing and Town Planning Bill to drop. The President of the Institute, the Duke of Northumberland, who was in the chair, dwelt, as on several previous occasions, on the inconsistency of Parliament, which imposed on local bodies a constantly increasing number of duties without putting those bodies into a position to carry them out. The main duties of local authorities—namely, provision for the care of children, the upkeep of roads, and municipal hygiene—he summed up under the term *trinodis necessitas*. He also made passing allusion to the fact that while the nation rightly or wrongly stands committed to the principle of local government, there is evidence of a tendency on the part of the central administration to endeavour to keep real control in its own hands. In the course of the evening the annual report was obtainable, and showed that the position of the Institute is entirely satisfactory. Its new premises in Buckingham Palace Road are nearly ready, and only £2,000 remains to be collected for their equipment. A plan which we have seen shows that the accommodation provided in the new building is greatly superior to that of the Institute's old home in Margaret Street. The growth in the number of fellows and members has been steady, and examinations for the various certificates of the Institute were held during last year at as many as eighteen centres in the United Kingdom, and at seven in the Colonies. Some of the figures supplied with regard to the examinations are of interest. Since they were first instituted in 1877 some 14,882 candidates have sat for examination, but of this number only 7,720 have been successful in obtaining certificates. This represents an examination mortality of 49 per cent. Clearly, therefore, the certificates granted by the Institute must represent real knowledge.

THE new Institute of Physiology at University College, London, will be formally opened on Friday, June 18th, by the Right Hon. R. B. Haldane, Secretary of State for War. The funds for the building of the institute were provided by the liberality of Mr. Ludvig Mond and Dr. Aders Plimmer and by a bequest of the late Mr. Thomas Webb.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Budget.—A statement showing the estimated yield in the years 1909-10 and 1910-11, and ultimately of the new and increased taxation proposed by the Chancellor of the Exchequer in his Budget speech on April 29th, has been issued. It is estimated that the duty of 3d. a gallon on motor spirit will yield this year £340,000, and next year and subsequently £375,000; the increase on motor car licences is put down at £260,000. The increase in the rate of the income tax from 1s. to 1s. 2d.—except in respect of earned incomes between £2,000 and £3,000—is estimated to yield £3,600,000 this year, less £600,000 representing the abatement of £10 for each child under 16 in respect of incomes up to £500. The

supertax on incomes over £5,000, which is 6d. in the £ upon the amount in excess of £3,000, is expected to yield half a million this year, two and a quarter millions next year, and ultimately two and a half millions, making, with the abolition of exemptions and abatements as regards non-residents in the United Kingdom, £6,720,000 (ultimately).

The Budget and the Cost of Medicines.—Mr. Robert Harcourt called the attention of the Chancellor of the Exchequer to the minimum advance of 10 per cent. in the price of spirits used by chemists, and whether he would consider possible concessions. Mr. Lloyd George replied that he was aware that the increase in duty was likely to enhance the cost of spirits to chemists, and he had undertaken to consider the point; but there were serious difficulties in the way of allowing a special rebate of duty in their case. Mr. Harcourt returned to the subject on Monday last, and by a series of questions elicited from the Chancellor of the Exchequer that he had received some representations on the subject, including one from the Pharmaceutical Society of Great Britain. With regard to the difficulties in the way of granting a rebate, Mr. Lloyd George said that it would be difficult to provide an effective check which would ensure that the spirit was used only for strictly chemical purposes and to prevent frauds which might involve serious loss to the Revenue. As at present advised, he was doubtful whether it would be possible to devise means for surmounting these difficulties.

Medical Officers (Scotland).—Mr. Cathcart Wason asked the Lord Advocate on Monday if he was aware that in certain instances the medical profession had been warned against accepting certain appointments, owing to the treatment which had been received by the outgoing medical officers; and if any protection in such cases had been taken to safeguard the interests of the poor. Mr. Ure said that he was aware that circulars had from time to time been issued by a medical association warning members of the medical profession against accepting certain appointments. In regard to the second part of the question, he had to refer to the answer given on April 29th. Mr. Cathcart Wason then asked the Lord Advocate if he would state the number of parishes in the Highlands and Islands that had from time to time, for longer or shorter intervals, been without any medical attendance for the poor, owing to the parish council medical officer having been dismissed from or resigned his appointment. Mr. Ure replied that he was not aware of any instance in which a parish had been without medical attendance to the poor under the circumstances described. When a vacancy occurred temporary arrangements were made to provide such attendance until the appointment of a medical officer was made.

Medical Inspection of Boarded-out Children.—Mr. Walter Roch having called attention by a question to the statement made in the Minority Report of the Royal Commission on the Poor Law that the children boarded out beyond the union were not as a rule medically inspected, Mr. Burns said that he had seen the statement. Provision was made in the agreements between boards of guardians and boarding-out committees for arrangements being made with a medical man for attendance in cases of sickness, and with a dentist for the care of the children's teeth. The foster parent undertook in the case of the illness of a child boarded out with him to report the matter to the committee, the home was visited once in six weeks by a member of the committee, and a report was sent to the guardians at least once a quarter on the apparent bodily condition of the child. There was no special provision requiring the children to be periodically inspected by a medical man, though this was done in a good many instances, but as they attended the public elementary schools they were subject to the same medical inspection as other children attending these schools.

The Milk Bill.—In answer to Mr. Stanier, Mr. Burns said last week that he could not fix a date for the introduction of the Milk Bill, but that he should introduce it as soon as he could. Mr. P. Snowden then asked if the right hon. gentleman was aware that more than twelve months ago

certain clauses dealing with milk in a number of municipal bills were withdrawn on the distinct understanding that the Milk Bill would be introduced last session, and that the right hon. gentleman had given previous answers similar to the one he had just given; and whether, in view of the importance of the matter, he would give a definite undertaking that the bill would be introduced at an early date. Mr. Burns said he was aware of the facts. The delay was due to the hope which the Local Government Board and the Board of Agriculture had that they might, by means other than a bill, be able to remove three-fourths of the objections that would be raised in the discussion of the Milk Bill—by an Order of the Board of Agriculture.

Vaccination Officers.—Mr. Cave asked the President of the Local Government Board whether he had ascertained what effect the Vaccination Act, 1907, and the Vaccination Order, 1907, had upon the incomes of vaccination officers; whether he was aware that certain boards of guardians had refused to entertain an application from their vaccination officers that the board should apply to the Local Government Board for permission to pay a gratuity to the officers in order to recoup them for their loss of income arising from the operation of the Vaccination Act, 1907, and the Vaccination Order, 1907; and, if so, what action he proposed to take in the matter. Mr. Burns said that he had received representations with regard to the effect of the Act of 1907 upon the incomes of vaccination officers. The matter did not appear to be one for any general action; but in some instances the guardians had, with the consent of the Local Government Board, made additional payments to the officers affected, and in some others, where complaint had been made to the Board, they had communicated with the guardians, and had made such suggestions as in the circumstances seemed to be desirable.

The Vaccination Acts.—Mr. John Robertson asked the President of the Local Government Board on Monday whether he was aware that the vaccination officer for New Cleethorpes had served Mr. W. Truman with a notice of default, threatening him with prosecution under the Vaccination Acts unless he consented to the vaccination of his son, a boy of 12 years of age; whether the unvaccinated condition of the child was discovered through the medical inspection at the school; and whether steps would be taken to prevent vaccination officers prosecuting parents of unvaccinated children in cases where such parents had not had the opportunity of making a statutory declaration of conscientious objection to vaccination. Mr. John Burns replied that a notice did not appear to have been served upon Mr. Truman, but he understood there was another case in which the vaccination officer, finding that a boy of 12 had not been vaccinated, served the parent with a notice, and perhaps this was the case referred to. The fact that the boy had not been vaccinated was discovered from the records in the possession of the vaccination officer, and not through any medical inspection at the school. It was open to the parent within a limited time after the passing of the Vaccination Act, 1898, to apply for a certificate of conscientious objection if he believed that vaccination would be prejudicial to the health of the boy. He could not interfere with the operation of the law, which made the parent liable to proceedings if he did not obtain such a certificate.

Malarial Fever Researches.—Last week Mr. Ramsay MacDonald asked the Under Secretary for the Colonies whether he had reports on the steps taken for the suppression of malarial fever by the sanitary authorities in the Bahamas, Barbados, Jamaica, and St. Kitts-Nevis; whether these reports showed that nothing of any consequence had been done in this direction by those authorities; whether the reports had been submitted to either of the schools of tropical medicine in this country, and with what result? Colonel Seely said that the report of the Advisory Committee for the Tropical Diseases Research Fund for the year 1907 (Cd. 3,992), at pp. 29, 30, 31 and 32, showed, he regretted to say, that nothing of any consequence had been done in the direction indicated at that time. The reports in question had, with the rest of the matter contained in the Blue Book, been brought to the notice of the schools of tropical medicine, but action to

be effective must needs be taken by the Governments concerned, with the co-operation of the general community. Asked further as to the steps that had been taken to secure co-operation, Colonel Seely said the Colonial Office would do all it could, and he would be glad to answer further questions on the subject. It was the fact that in small colonies the people did not take the same view as the Colonial Office did of these matters. Therefore, it was difficult to get those measures carried out, however beneficent they were.

Sight Tests (Mercantile Marine).—Mr. McArthur asked the President of the Board of Trade a question calling attention to the case of a second mate who, after being twice rejected as colour blind, was, after an investigation by the London Local Marine Board, granted a certificate. Having regard to the fact that in the three years ending 1907 out of 51 persons rejected on the ground of colour blindness 20 successfully appealed, he asked whether the Board of Trade would consider the whole subject of sight tests as affecting the mercantile marine? Mr. Churchill replied that his attention had been called to this case, and he was aware of the facts as stated in the question. It was open to any candidate who failed in the colour vision tests in the Mercantile Marine to appeal to the Board of Trade, who remitted the case to special examiners for final decision. The tests were based on the recommendations of a Committee of the Royal Society in 1892, and the special examinations were conducted with the assistance of eminent scientific experts in colour vision. The whole subject of the sight tests and the method of conducting them was under consideration.

Medical Service (India).—Mr. Kettle asked the Under Secretary of State for India whether the higher grades of the medical service of the native states of India were generally filled by Indians, to the satisfaction of the Government and the public; whether less than 10 per cent. of such positions in British India were held by Indians; and whether he was aware that the exclusion of native Indians from these well-salaried posts was regarded in India as part of the settled policy of the Indian Government. Mr. Hobhouse replied that the Secretary of State had no detailed information on the first point, but he had no reason to doubt that the answer was in the affirmative. As regards the proportion of Indians in the Indian Medical Service, that service was recruited by competitive examination, and was freely open to natives of India. It was further the policy of Government to encourage the growth of an independent medical profession in India, and to throw open to the profession in general some of the appointments now held by members of the Indian Medical Service. The Secretary of State proposed shortly to present to Parliament papers on this subject.

Sanitary Services in India.—Sir William Bull asked on Monday if the scheme proposed for the improvement of the sanitary services in India and the development of existing establishments was completed, and what special provisions were made therein to offer a career to educated natives. Mr. Hobhouse, replying for the India Office, said that the scheme had not yet been completed. The Secretary of State attached great importance to the inclusion in any such scheme of special provisions of the kind to which the hon. member referred.

The Egyptian Department of Public Health.—Mr. Ramsay MacDonald asked last week if Mr. H. C. Ross had to leave the Egyptian Sanitary Service in consequence of his zeal for stamping out malaria, and Mr. McKinnon Wood replied that Mr. H. C. Ross was never in the permanent employment of the Egyptian Department of Public Health. He resigned his temporary post under that Department when he learned that the Director-General was not prepared to promise him a permanent post in the Inspectorate in Cairo.

The Whitsuntide Recess.—Till the House of Commons rises on Thursday, May 27th, the Budget resolutions will occupy most of its time. The Finance Bill is expected to be introduced on the 26th. The holidays will be short, and the House, as at present arranged, will resume its sittings on Thursday, June 3rd.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND DISTRICT.

THE MIDWIVES SUPERVISING COMMITTEE.

THE Manchester Midwives Supervising Committee has just issued for the guidance of monthly nurses a small pamphlet containing some valuable hints and instructions on the care of women in childbirth. Special stress is laid on the supreme importance of cleanliness on the part of the nurse and the necessity for disinfection of the hands and nails, instructions for this being given. Women suffering from sore throats or discharging sores of any kind are forbidden to attend lying-in patients, while if they have been attending cases of puerperal fever they are instructed not to attend another case without thorough disinfection, which will be done free of cost by the corporation, and are advised to consult the medical officer of health as to the precautions to be taken. They are further advised as to the arrangement of the lying-in room, the giving of an enema, the washing and disinfection of the patient, and other preparations before the arrival of the doctor. They are forbidden to make internal examinations or, except under the doctor's orders, to give stimulants or to use a douche. The after-care of the mother and infant is described in detail in a simple but thorough way, and some useful practical hints are given as to what the nurse can do if the child is born before the doctor's arrival. The whole pamphlet has evidently been prepared by a practical man; it deprecates all unnecessary interference by nurses, and is well worth attention even by fully-trained nurses.

The advice that all who act as monthly nurses should be trained and qualified opens up a subject that before long will need to be more fully considered by all midwives supervising committees, for the question arises, Ought not some training to be compulsory before any woman is allowed systematically and as a business to act as a monthly nurse? There are not wanting signs that before long there may be some reaction from the present tendency among the working classes to have a midwife instead of a doctor for confinement. Women with young families and no domestic help often find it necessary, whether they have a doctor or a midwife at their confinement, to engage some person who can act as nurse for themselves and their family, and to do the cooking and general housework. In addition, the cost of the training of midwives, what they regard as the severity of their examinations, and the strict control exercised over them, together with the fact that the bona-fide midwives are gradually lessening in number, have tended to raise the fees of certified midwives. At the same time, there is some fear that the practice is growing of doctors simply attending at the time of labour for a reduced fee and only making one or two visits afterwards, or in some cases actually never visiting at all after labour is over, but leaving the after-care of mother and infant to the totally untrained nurse. In such cases it makes very little difference in cost to the patient whether a doctor or a midwife is engaged for the labour, as some additional domestic help is in either case needed, and for the sake of cheapness takes the form of an untrained nurse who will do everything required in the way of nursing and housework for a much less charge than is made by a trained nurse. Now the opportunities which such women have of doing irretrievable harm are unbounded. As showing the dangers that may result it may be noted that, according to observations made at Monsall Hospital, the incubation period of puerperal fever is not over forty-eight hours, and out of 28 cases of puerperal fever treated at the hospital where a doctor had attended at the confinement, in 8 there were no symptoms of fever for from seventy-two to ninety-six hours after labour, while in 5 cases the latent period was over five days. Similar statistics are given for midwives' cases, all showing that Dr. Gordon is probably correct in saying that "in the bulk of cases the infection is not determined by anything that takes place at delivery," and "it is not possible to exclude the female attendant as the source of infection" one or several days after labour, so that, though sepsis during labour is of course of funda-

mental importance, there is some fear that the preservation of asepsis by the female attendant subsequently is often neglected. It is here that the untrained monthly nurse may do so much damage. She is absolutely free from any control under the Midwives Act so long as she does not undertake the management of labour itself. The hints now given by the Supervising Committee she may either regard or disregard as she thinks fit. She may defy the inspector of midwives; and if the scope of her employment is widened, as there is fear it may be through the possible shortage of midwives, it becomes a serious question whether the power of supervision by the Midwives Supervising Committee ought not to be extended, for, as things are now, the advice of the committee that all persons who act as monthly nurses ought to be trained and qualified is merely the expression of opinion which has no binding force. The British Medical Association has resolutely set its face against lowering the standard of training of midwives, and rightly so, as they often have the lives of patients in their hands. It would be disastrous to allow an inferior order of midwives to exist who could take the sole responsibility of labour, but there does seem to be some reason for legally regulating the training and controlling the practice of monthly nurses, who, while not being allowed to attend labours except in company with a doctor, have yet great opportunities of doing harm after labour is over.

THE MANCHESTER AND SALFORD PROVIDENT DISPENSARIES.

A few figures taken from the annual report of the Manchester and Salford Provident Dispensaries Association for 1908 will perhaps be of service to those places that may think of starting a provident dispensary. The association has 15,348 members, a decrease of 328 on the year; the new members numbered 2,415, but there were 2,743 withdrawals. The members pay 1d. a week, and the subscription for all children under 14 years of age in any family must not exceed 2d. a week. There is an entrance fee of 6d. for each individual or 1s. for a family, and 1d. is paid for each prescription received. The remuneration of the medical officers consists of one-half of the "ordinary members' fund," and is divided according to the number of patients that each medical officer has had during the year, members being at liberty to choose their own doctor from the staff. Payments made by members for cards, medicines, cod-liver oil, or bottles are not reckoned part of the "ordinary members' fund." The balance of members' payments and other receipts go towards the expenses of management, and if any sum be left after defraying expenses, at least two-thirds of it is distributed among the medical officers.

During the year 130,620 prescriptions were dispensed, being an average of 8.5 per paying member. The expenditure on drugs, bottles, corks, and dispensing was £1,114, so that each prescription cost about 2d., but as this includes the cost of dispensing, the actual cost of the materials of each prescription was below 2d. The total sum paid to the medical officers was £1,794 15s. 3d., and as there are 15,348 members, the amount paid to the medical officers works out at about 2s. 4d. a member a year, or slightly over 1d. a week. At Pendleton, which is the largest branch, the medical officers received £498 for attending to 3,298 patients. This branch is the best for the medical men, as they receive 3s. a member a year. For this amount there were 7,141 consultations at the dispensary and 7,057 home visits, which is rather under 8d. for each visit or consultation. About 27,000 prescriptions were dispensed, and the cost of the drugs, bottles, corks, and dispensing was £195, which is under 1d. for each prescription. At the Lower Broughton dispensary the medical officers received £108 for 1,028 patients, which is about 2s. 1d. a member a year. There were 2,486 consultations and 1,630 home visits, which is about 6d. for each visit or consultation. There were 6,440 prescriptions dispensed at a cost of £70, which is about 2d. each. At the Hulme Dispensary, which is the second largest, the medical officers received £326 for 2,963 members, which is 2s. 2d. a member a year. Here the average number of prescriptions during the year for each paying member was 10.3—that is 30,640 in all, costing £216, or not quite 1d. for each prescription.

It should be noted that the payments to the medical officers as given above are clear. But though prescriptions

are provided by the dispensaries at a charge of 1d. each, the actual cost of each prescription is from 1½d. to 2½d. Thus the excess cost is a deduction from what the medical officers would otherwise receive, or in other words, the medical officers are mulcted to the extent of about half the cost of each prescription. Again, in certain circumstances for special visits out of hours the doctors are allowed to charge 1s., but this can only rarely be enforced. Female members may be attended in their confinements for 15s., paid in advance if desired by instalments. As this is distinctly below the usual fee of the district, it offers some inducement to female members to have the dispensary doctor for their confinements.

The cost of management of the dispensaries is distinctly high. Their total income, including payments for prescriptions, and not reckoning £42 balance due to treasurer, was £4,069; and out of this only £1,794 went to the medical officers, while £1,114 was expended on drugs, cod-liver oil, bottles, corks, and dispensing, £516 for collectors, £336 for rent, rates, and taxes, £43 for printing, advertising, and stationery, and the remainder went in sundry expenses. Thus the medical men received considerably under one-half of the total income. But even this hardly represents the true financial position of the dispensaries, for it is found that the association as a whole has received since 1893 about £1,261 in legacies and donations; the council has made grants of £6,448 to the various dispensaries since 1875, and has only received in return from the dispensaries £1,578 in the same time.

On the whole, as a pure charity, something may be said for the dispensaries, but that almost completely exhausts their recommendations to medical men.

LONDON.

THE FRENCH HOSPITAL.

THE forty-first annual banquet of the French Hospital was held at the Hotel Cecil on May 15th. His Excellency the French Ambassador, M. Paul Cambon, presided, and was supported by the Spanish Ambassador and many other members of the Corps Diplomatique. The Lord Mayor and Sheriffs were also present, and about 300 subscribers. In proposing the toast of the evening the French Ambassador announced that the very large sum of £4,820 had been collected, and eulogized the untiring energy of the stewards. He congratulated M. Pondepeyre, the Secretary of the Hospital, on his skilful management of the funds during the past year; the weekly expenditure on in-patients—apart from out-patients—was less than in any other hospital in London. He announced that an extension of the building was required, which would cost £4,000. The toast of the "Corps Médical" was responded to by Mr. Edmund Owen in felicitous terms, and to demonstrate how well the patients were fed he invited any gentlemen present to come to lunch at the hospital, provided they did not all select the same day. On being asked by the French Ambassador to speak, Dr. Ogilvie said: "J'ai toujours suivi le principe du pauvre Coquelin, qui disait: 'Je n'entreprends jamais un rôle avant de l'avoir étudié à fond.' Ce soir je me trouve dans l'obligation de manquer à ce principe; car, un simple désir de son Excellence est un ordre pour moi, et bien que n'ayant pas étudié mon rôle, je vais tâcher de balbutier quelques paroles. Je me sens ce soir comme un métaphysicien écossais—Savez-vous, Messieurs, ce que c'est qu'un métaphysicien écossais? C'est un aveugle, cherchant à tâtons, dans une chambre obscure, un chat noir, qui ne s'y trouve pas. Mon crâne c'est la chambre obscure, et mes idées le chat noir. En effet, Messieurs, mes pensées s'en sont allées, comme à l'automne les feuilles jaunes tombent du chêne; elles s'en sont allées dans l'azur léger, et comme un songe éphémère, elles n'ont laissé derrière elles—aucune trace. Me trouvant dans une telle condition, ce que j'ai de mieux à faire, c'est de m'asseoir, et de me taire. Avant cela cependant, permettez-moi de vous donner mon opinion sur les devoirs d'un médecin. Son premier devoir c'est de prévenir le mal; s'il n'y réussit pas—de le guérir; et s'il n'y réussit pas non plus—de soulager la souffrance et de prolonger la vie. Je finirai, Messieurs, en répétant les mots, non d'un métaphysicien écossais, mais d'un grand mathématicien français—Descartes—"S'il est possible de perfectionner

l'espèce humaine, c'est dans la médecine qu'il faut en chercher les moyens."

In replying to the toast of his health, proposed by the Lord Mayor, M. Cambon said diplomacy did not consist in making fine phrases, but in clear and frank statements.

A MUNICIPAL INFIRMARY FOR CHILDREN.

On May 17th a building erected by the Metropolitan Asylums Board at Carshalton, originally intended for use as a convalescent fever hospital, was opened as a children's infirmary by the President of the Local Government Board. The site of the infirmary, which commands charming views of the surrounding country, consists of about 130 acres. It is anticipated that the building will accommodate at least 1,000 sick and convalescent children drawn from the workhouses and infirmaries of the metropolis. Motor ambulances have been provided for patients who cannot travel by train, and it is hoped that the institution will be used for the most part for cases requiring hospital treatment and continuous nursing.

Mr. Burns, who at the beginning of his speech was interrupted by Suffragettes, whom he described as "female hoodligans," said that the condition of Poor Law children had been greatly improved during the last forty years, and the opening of the infirmary constituted a new departure in their interests. The work of such authorities as the Metropolitan Asylums Board should be judged less by the results seen at present than by the evils they had prevented and were preventing. After insisting upon the fundamental importance of the maintenance of a due sense of parental responsibility, Mr. Burns discussed the report of the Royal Commission on the Poor Laws in his most characteristic vein; he claimed that while the Commission was sitting the Local Government Board had been acting wisely on lines of which both the minority and majority of that Commission approved. The Government of the country must do something to carry out the recommendations of the report, but whether it would be this Government or the next Government, or, as he thought more probable, the next but one, which would take action it was difficult to foresee. If Parliament knew its business it would remit the report and the whole problem of Poor Law reform to the President of the Local Government Board to take such action as seemed to him necessary, to report to Parliament every three months what had been done, and when its approval had been obtained the President should have power by regulations and orders to take action at once. If the Local Government Board was not considered capable of dealing with the whole question, the aid of the Home Office might be invoked in dealing with vagrancy and the criminal aspects of the Poor Law, and that of the Board of Education in dealing with children. He did not think that more commissions or *ad hoc* authorities possessing no knowledge of what had gone before should be imported. The State and municipality must concentrate on removing from the next generation the heritage of evils which this generation had received. To care for epileptics, imbeciles, and the feeble-minded was heroic but thoughtless charity: to avoid their creation would relieve the victim of a life of misery and the community of a perpetual burden. The child was the growing man, pliable to good influences, but susceptible to the vicious, amenable to all that made for culture, health, and strength, but, owing to its innocence, very liable to suffer from degrading influences.

TREATMENT OF SCHOOL CHILDREN.

At the meeting of the Education Committee of the London County Council on May 19th the Special Committee which is obtaining estimates of the cost of medical treatment of school children reported that it proposed to obtain information only in regard to eyes, ears, and skin diseases, and to postpone inquiries as to teeth.

Mr. Graham Wallis moved to refer the report back on the ground that it would be more satisfactory if the inquiries were complete, and he hoped in the end that the Council would decide to treat teeth.

Miss Lawrence replied that the special committee were dealing with the easiest part of the problem first. It had fairly definite information as to the number of children whose eyes, ears, and skin were affected; but estimates differed widely as to the extent of bad dentition. Public opinion was not sufficiently advanced on the question to warrant the Council undertaking the treatment of teeth.

The Rev. Stewart Headlam suggested, on the authority of a dental hospital, that the treatment of teeth should be limited to children aged between 6 and 8 years, which was a critical time if the teeth were to be preserved.

The amendment, however, was lost, and the report of the special committee was received.

WALES.

HYGIENE IN THE MONMOUTHSHIRE COAL AND IRON DISTRICTS.

In his quarterly report to the Sanitary Committee the county medical officer of Monmouthshire deals with the Tredegar and Mynyddislwyn Urban Districts. It is stated that during the seventeenth and the early part of the eighteenth centuries the Tredegar district was studded with farms, the main industry being agriculture. Mining operations commenced in the middle of the eighteenth century, and marked the beginning of the destruction of the natural beauties of the locality, which to-day are replaced by townships and iron and coal refuse. Quoting from the annual report of Dr. G. A. Brown (for 1908) it is stated that the birth-rate was 39.85 and the death-rate 18.15. The birth-rate was the highest since 1903, and slightly above the average for the past ten years, while the death-rate (18.15) was well below the average of the past ten years (19.71). The infantile mortality was considerably below the average of the past ten years, and compares not unfavourably with the average infantile death-rate of England and Wales. In recent years building operations have been mainly directed to the improvement of insanitary houses and the erection of good class workmen's houses, but notwithstanding this private enterprise does not seem to cope satisfactorily with the increased demand for houses, with the result that there is a scarcity of dwelling houses and overcrowding is becoming prevalent. In November, 1908, the sanitary inspector reported that within the Council's area there were 82 cellar dwellings occupied by about 350 persons, but since then the cellar dwellings at River-Row have, as already stated, been converted into houses of a satisfactory type, while a few of the other cellar dwellings have also received attention. Much yet remains to be done with respect to the remaining houses of this type and to back-to-back houses. After referring to the system of refuse disposal, Dr. Rocy Jones states that the urban council recently erected a Horstall refuse destructor at Cwmrhos, which from its inauguration has been quite a success, and he suggests that neighbouring councils who have the evergreen problem of refuse disposal before them would do well to visit the installation. The present system of conveying sewage by sewers direct to the Sirhowy river, rendering the river during the summer months particularly offensive, as well as the pail system, will be remedied when the Sirhowy branch of the Western Valley's main trunk sewer is completed and the subsidiary sewers of the district connected with it. He recommends the urban council to consider the following matters: The conversion of all cellar dwellings, with dwellings immediately above them, into separate through houses; the provision of better and more extended facilities for the isolation of infectious diseases; the closure of the cowshed at the isolation hospital; and the provision of a proper disinfecting apparatus. Dealing with the Mynyddislwyn urban area, Dr. Rocy Jones says that the urban district, being of recent creation and rapidly growing, falls much below the standard of ideal sanitary conditions, and makes a number of recommendations.

SWANSEA HOSPITAL.

On May 12th the board of management of the Swansea Hospital had before it a scheme for additions to the institution to cost £141,000. It was pointed out that the administrative and other departments were by no means satisfactory, being only adequate as regards accommodation but considerably out of date in equipment. The utilization of a small ward to provide 8 beds and the provision of accommodation for 50 extra beds in future was advised. It was recommended that a second floor with balconies should be built over the two existing large wards; and it was stated that the electro-therapeutic room was too small, that the accommodation

for the staff was inadequate, and that the several quarters required rearrangement. The building of a small nurses' home was advised. The report will be considered in due course.

THE EBBW VALE DISPUTE.

We take the following from the *Western Mail* of May 15th:

A meeting of the Cwm and Waunilwyd Section of the Ebbw Vale Workmen's Doctor's Fund was held at Cwm, Mr. F. Griffiths presiding. Mr. Mills, general manager of the Ebbw Vale Works, wrote: We do not intend to defend any further action in this matter, and if you will instruct your solicitors to send us an account properly set forth of your demands, we shall give it our immediate and careful attention. On the subject of splitting up the old doctor's fund into sections, this is a matter entirely for the workmen themselves. In the meantime we propose to deduct the pence in accordance with the old plan, and shall retain the moneys in the hope that, before a payment is due, some arrangement or settlement shall have been arrived at. It was decided to instruct the committee to form a separate fund for the Cwm district, Mr. Mills to be approached with a view to the contribution being stopped at the Ebbw Vale Company's offices.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

ABERDEEN ROYAL INFIRMARY.

Resignation of Dr. Angus Fraser.

At a meeting of the directors of the Aberdeen Royal Infirmary, held on May 12th, a letter was submitted from Dr. Angus Fraser, Senior Physician to the Infirmary, intimating his resignation of that post. The board resolved to record their high appreciation of the invaluable service rendered by Dr. Fraser to the hospital, and through it to the sick poor of the city of Aberdeen and large surrounding district during the long period of thirty-eight years in which he had occupied the position of a physician on the staff of the infirmary; their sense of the very high honour it had been to the infirmary to have had for so long on the roll of its officials the name of one so distinguished in his profession; and their grateful recognition of the many and varied ways in which Dr. Fraser had by his sagacious counsel and his unsurpassed knowledge of the history and working of the institution contributed to its welfare and success. It was resolved to request Dr. Fraser's permission to continue his name on the staff of the infirmary as a consulting physician, and the clerk was instructed to send to Dr. Fraser an extract of the minute.

The above announcement will be of interest to Aberdeen graduates in all parts of the world, hundreds of whom have passed through Dr. Fraser's hands in the classes of clinical medicine, and the passing from active duty at the hospital of such a well-known and popular figure will occasion feelings of regret, for one can hardly imagine the infirmary without his keen face and energetic personality in the foreground. The good wishes and grateful appreciation of a multitude will go with him in his retirement, and all will hope he may have health to enjoy the leisure he has so richly earned.

PRINCIPALSHIP OF ABERDEEN UNIVERSITY.

Much interest is being taken in the selection of a successor to the Rev. Dr. Marshall Lang as Principal of Aberdeen University, and several names are freely mentioned in connexion with the vacant position. Amongst others are Professor Sir W. Mitchell Ramsay, the distinguished archaeologist, Professor of Humanity in the university; Professor Baillie, Professor of Moral Philosophy; and Professor George Adam Smith of Glasgow. Special prominence has, however, recently been given to the name of Professor Matthew Hay, who, as is well known, has for a long time taken a leading part in the business of the University Court and in the conduct of university affairs generally. There is reason to believe that the appointment of Professor Hay would meet with the emphatic concurrence of his colleagues in the university, as it would also be warmly approved by the citizens at large. The appointment is in the hands of the Secretary of State for Scotland.

EFFECT OF THE INCREASED DUTY ON SPIRITS ON HOSPITALS.

A meeting of the Dundee and District Pharmaceutical Association was held last week, when the question of the increased duty on alcohol was discussed. A motion was adopted calling the attention of Mr. Lloyd George to the injustice done to infirmaries and hospitals by the increased tax on alcohol, and expressing the desire that such institutions should be exempted because of the increased expenditure that would result. It was stated that in the case of the Royal Infirmary, Dundee, the increased annual expenditure arising out of the additional duty on alcohol would be £160 to £180, Edinburgh Royal Infirmary and Sick Children's Hospital between £500 and £600, the Glasgow Infirmary between £800 and £900, and Aberdeen Royal Infirmary about £160.

CEREBRO-SPINAL MENINGITIS IN SCOTLAND.

The Registrar-General for Scotland reports that during the month of April, in eight of the principal towns of Scotland, 8 deaths were from cerebro-spinal meningitis. This was 4 fewer than in March, and 20 fewer than in April of last year; of these, 4 were registered in Glasgow, and 1 each in Edinburgh, Aberdeen, Paisley, and Perth.

PROPOSED SMALL-POX HOSPITAL FOR EDINBURGH.

A subcommittee of the Public Health Committee of Edinburgh Town Council considered, on May 17th, a communication from the Local Government Board regarding the erection of a small-pox hospital in some isolated part near the city. It was agreed to request that representatives of the Board should meet with the committee to discuss the matter.

MENTAL PATIENTS OF THE EDINBURGH ROYAL INFIRMARY.

At a meeting of the Edinburgh Parish Council held on May 17th an important recommendation was agreed to with reference to the treatment of cases of temporary mental disorder in the Royal Infirmary, and to the application from the managers of that institution for a contribution to the funds of the Infirmary under the Poor Law Act of 1845. The subcommittee of the parish council reported (1) that in its opinion the poor of the parish receive benefit from treatment in the Infirmary or as out-patients to such an extent as would warrant favourable consideration by the parish council of the application from the directors of the Royal Infirmary for a contribution; (2) that a contribution of £150 be made by the council to the Infirmary during the financial year of the council ending May, 1910; and (3) as regards cases of temporary mental disorder considered by the examining medical officer as suitable for treatment and observation in the Infirmary, and sent there at the instance of the Inspector of Poor, the council should agree meantime to pay the Infirmary authorities at the rate of 3s. 6d. a day for each case, the matter to be reconsidered when statistics as to the number of cases sent for treatment during a year became available.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

TUBERCULOSIS HOMES AT HEALTH RESORTS.

EXCEPTION has been taken by the residents of Howth, Sutton, and Baldoyle, near Dublin, to the recent proposal of the Women's National Health Society in Ireland to open the coastguard station at Sutton as a "health home" for persons in the early stages of consumption.

On May 17th a deputation, consisting of many of the leading residents, was received by Lady Aberdeen, the president of the association.

Mr. Andrew Jameson said that the scheme, if carried out, would be most injurious to Sutton as a summer resort, would depreciate all sorts of property, and deprive owners of the opportunity of letting their houses. A great many holiday makers and an immense number of children spent the summer in Howth. If consumptive patients occupied the coastguard station it would be a really serious source of danger. Professor O'Sullivan had said he hardly believed that any one who regarded tuberculosis as an infectious disease would consider the site as suitable for

a tuberculosis sanatorium, and thought the residents should protest as strongly as possible against a proposal so dangerous. Dr. Earl wrote that he would have less objection to a small-pox hospital near his residence than to a sanatorium for tuberculous diseases.

Lady Aberdeen, in replying, said the association had many purposes to which it wished to apply the various stations. In the first place, they would be called health homes, and she thought that that name would better explain the objects. The very last thing that would be done would be to start any institution that would be deleterious to the health of the residents in any district. The homes in many cases would be only for preventive cases and for persons who were run down and needed rest and good air. A pamphlet had been issued in the United States which showed that an inquiry had been addressed to 77 of the largest sanatoriums, and in 53 per cent. the value of the land had increased, in 35 per cent. there was no change, and in 7 per cent. a more or less marked depreciation. It was quite clear that where a wise policy was adopted a district sanatorium might benefit the community. What the association proposed to do would be of no danger at all to the residents. She wished that the result of the conference would be to dispel panic.

The President of the Royal College of Physicians and the President of the Royal College of Surgeons expressed the view that no risk would be run from the opening of the health homes.

Dr. Aberne, Father Colohan, P.P., approved the proposal.

Lady Aberdeen asked if the deputation would accept an assurance that no cases would be sent there for the present except preventive cases.

Mr. Jameson asked if they could have a guarantee in writing, and Lady Aberdeen then drafted the following statement:

We undertake that for the present no cases will be sent to Sutton suffering from pulmonary tuberculosis, and that the health home will be used only for preventive cases, which have been duly examined and pronounced non-infective by a competent medical authority.

Mr. Jameson, on behalf of the deputation, said they could not accept that guarantee with the words "at present" included.

The deputation then withdrew.

We cannot but regret that this difference of view has arisen, but it is only to be expected that persons with rights should try to preserve them from assault. The movement against tuberculosis will, it is feared, cease to be popular or to be supported by the public, if favourite places of resort are selected for tuberculous health homes. The fears expressed may be—and, we should judge, are—exaggerated; but, considering the immense coast line which Ireland possesses, it would be more politic to choose places not commonly frequented by health and pleasure seekers in large numbers. It is not only in Ireland that this objection is felt, for there are health and pleasure resorts—in Switzerland, for example—which used to be anxious to cater for consumptive patients, but now exclude them.

Victoria.

LUNACY.

THE report of Dr. W. Ernest Jones, Inspector-General of the Insane for the State of Victoria, for the year ended December 31st, 1907, recently received by us, shows that on January 1st of that year there were 4,937 persons certified as insane, and that by the end of the year the numbers had increased to 5,052, or an increase of 115. Of the total numbers at the end of the year, 4,961 were on the books of the seven public asylums, and 91 on the books of the five licensed houses. The proportion of insane to general population at the time of Dr. Jones's report was, he states, 1 in every 249. Victoria has thus a high ratio of insanity, for the ratio in England and Wales in 1907 was 1 in every 282. This would appear, however, to be due to accumulation rather than to increasing occurrence of insanity, for a reference to the table, in which is given a general survey of the statistics since 1891, shows that whilst the total numbers remaining at the end of each

year have undergone progressive increase, the actual numbers of the yearly admissions have not substantially altered in the past decade. The total cases under care during the year 1907 amounted to 5,615, and the average number daily resident 4,571. In his report Dr. Jones deals separately with the State hospitals, the receiving house, and the private licensed houses, and it will be convenient in this abstract to follow his plan.

STATE HOSPITALS.

Admissions.

During the year there were 742 cases in all admitted, of whom 14, however, were statutory readmissions, leaving 728 actual admissions, as compared with 773 for the preceding year. Of the total number, 641 were first and 87 not-first admissions. In 316 the attacks were first attacks within three, and in 94 more within twelve, months of admission; in 111 not-first attacks within twelve months of admission, and in the remainder the attacks were either of more than twelve months' (77) or of unknown duration (19), or of congenital origin (35). They were classified according to the forms of mental disorder into: Mania of all kinds, 142; melancholia of all kinds, 99; senile and secondary dementia, 159; delusional insanity, 126; general paralysis, 42; primary dementia, 37; epileptic insanity, 16; confusional insanity, 11; congenital or infantile defect, 77; and other and rarer forms, 19. The high proportion of secondary and senile dementias in this list is striking. As regards probable causation, alcohol was assigned in 64, or just under 8.8 per cent.; venereal disease in only 15; puberty and the menopause in 17; old age in 63; previous attacks in 86; moral causes in 129; starvation in 10; bodily trauma in 28; and various bodily diseases or disorders in 59. Hereditary influences were ascertained in only 57 and congenital defect in 56.

Discharges, Deaths, etc.

During the year 219 were discharged as recovered, giving a recovery-rate on the admissions of 30.08 per cent., with one exception the lowest recovery-rate since 1891. Also 68 were discharged as relieved, and 16 as not improved. It is to be noted that the general statistics of the State hospitals do not include cases sent to the receiving house and wards and discharged therefrom, therefore the increased use of the reception house accounts to some extent for the low recovery-rate of the State hospitals; but, on the other hand, the medical superintendents of the several State hospitals comment, in their reports, on the unfavourable class of cases received during the year. During the year 323 patients died, giving a death-rate on the average numbers resident of 7.17 per cent. The deaths were due in 56 to cerebro-spinal disease, with only 22 deaths from general paralysis; in 129 to chest diseases, including 45 from pulmonary consumption and 67 from pneumonia; in 53 to abdominal diseases, with 12 deaths from typhoid fever; and in 36 to general diseases, including 19 from senile decay. A troublesome outbreak of typhoid fever occurred at Kew Asylum in April, 1906, spreading some months later to the Idiot Asylum at Kew, and lasting in the main asylum till March, 1908. In the whole epidemic there were 61 cases of undoubted typhoid, occasioning 14 deaths in all. This epidemic was the subject of an investigation by the pathologist, Dr. Mackenzie, whose report is appended to the general report. His inquiries and those of Dr. Hollow resulted in the discovery of one "typhoid carrier" whose stools contained typhoid bacilli nine months after recovery from the fever.

Cost.

The average total weekly cost of maintenance per patient in the State hospitals was 11s. 3½d., or, deducting collections, 9s. 8½d.

LICENSED HOUSES.

At the beginning of the year there were 79 patients on the books of the licensed houses, and at the end of the year there remained 105. During the year 90 were admitted, in 71 of whom the attacks were first attacks. Only 4 were returned as suffering from general paralysis. Only general information is supplied as to the licensed houses, but it is stated that 31 were discharged as recovered, giving a recovery-rate on the admissions of 34.4 per cent. During the year 9 died, including 1 by suicide. The Inspector-General reports favourably upon the management of the licensed houses, but considers

they would be still more useful if they were permitted to admit voluntary boarders.

RECEIVING HOUSE, ROYAL PARK.

The most important event in the treatment of the insane in Victoria in 1907 was the opening of this institution in September. From September 26th to the end of the year 86 cases were admitted, including among them almost all forms of mental disorder. Cases of recent melancholia were the most numerous (19), but there were also 10 cases of recent mania, 6 of general paralysis, 12 of delusional insanity, and 6 of alcoholism. Of the 86 admitted 33 were later transferred to hospitals for the insane, 33 were discharged recovered to their homes, 2 discharged as relieved, 1 as not improved, and at the end of the year 17 remained in the institution. Dr. Jones says that there is every reason to believe that the receiving house is filling a long-felt want, and that probably, as an adjunct to the mental hospital—that is, as the reception ward of the mental hospital—its usefulness will be still greater in the future.

THE MENTAL HOSPITAL.

In 1906 the Cabinet of Victoria decided to permit the diversion from its original purpose as an inebriate retreat of a building close to the receiving house and its conversion into a mental hospital. The building will have accommodation for 120 patients, and in addition to the usual adjuncts it is proposed to equip it with a clinical and pathological laboratory. It has further the advantage of being close to the university and the medical school, and its establishment should prove of great benefit to lunacy in Victoria. Its opening, however, will necessitate several alterations or additions to the lunacy law of Victoria, and these matters were still undecided at the time of the report of the Inspector-General.

Correspondence.

THE BUDGET.

SIR,—Is it not beneath the dignity of the profession to take the ground which many have, to go cap in hand to ask the Chancellor of the Exchequer to grant us concessions in the petrol tax, and to urge each member of the profession to seek the good offices of his member of Parliament to assist us in the matter? It seems to me not only degrading, but that we have no claim to any special abatement. We should face the expenses of our own profession like every other citizen, and should be above asking or accepting doles; but we should have the manliness to fight for our just rights.

It is not in legitimate taxes where the shoe pinches us as a profession. But we do feel and resent the injustice we suffer in being coerced under penalty to give our work to the State as no other members of the community are ever asked to do.

It is not just to demand from us certificates of death gratis; they are required solely for State purposes.

It is unfair to constrain us to notify births without remuneration.

It should not be obligatory on resident or visiting members of the staffs of large or small hospitals to make *post-mortem* examinations and attend the coroners' inquests to give evidence on patients who die in hospital after accidents without receiving any payment. Surely our free services to hospitals should not be burdened by this gratuitous work for the State.

These are a few of the instances in which our generosity is trespassed upon; and it is in such cases where we suffer in dignity and financially. We do not wish, and ought not to seek, concessions; but we ought, one and all, to contend for our rights as members of a noble profession, and as citizens of this great empire. If we honoured ourselves more we should receive more honour in return. Let us cease asking for alms and claim what is our birthright. This is where the British Medical Association should show and use its strong arm. If we are content to accept concessions in taxation for those of us who happen to be sufficiently well off to be able to keep cars, what will the answer be when we claim as our right just payment for work done for the State?—I am, etc.,

Rugby, May 15th.

CLEMENT DUKES.

Sir,—I quite agree with "An M.D. who drives a Carriage," and I also think that medical motorists should be satisfied with the reduction in licenses and not expect it on petrol as well. Some of my medical friends tell me that they can now do their work in half the time and at half the expense of horse-keep—that they have their afternoon free for golf and tennis and their evening for bridge: as for railways they have no use for them however great the distance.

From this it would surely appear that the motor is not used solely as "a means of earning a mere living."—I am, etc.,

May 16th.

"EQUES."

Sir,—The suggestion of Dr. O'Connor¹ is apt to the present time. Friendly societies are exceedingly reluctant to increase the doctor's payment, and sick clubs tumble over each other in devising the lowest possible subscription. If we grant that these payments work out at a remuneration of something less than 1s. a visit or attendance, then any additional cost of medicine is an undue and exorbitant tax to be deducted from whatever profit there may be. The attempt should be made by every club doctor to charge a penny for medicine (a penny is paid for a bottle—we are dealing with poor folks, do not despise details). This is a mode of reasoning that the working man understands, and really the average club member is not so harsh and grasping as their spokesmen lead us to believe. In all probability increased pay in this indirect way would not be greatly objected to after the members became used to it.

The Divisions might here do good work and might advise all the club doctors within their membership. We in the Kensington Division are desirous of knowing the percentage of attendances and of bottles of medicine in club practice in the metropolis, and I shall be glad to hear from any one who has been careful enough to keep his club practice separate in his visiting list.

Dr. O'Connor, it is true, proposes to ask an additional shilling per annum. If some increase be obtained on whatever ground, no doubt it will stay, and the timid counsels of "Club Doctor" are not for a moment to be listened to. It is on the Branches and Divisions and the medical societies throughout the country that the responsibility rests.—I am, etc.,

London, W., May 17th.

GEORGE CRICHTON, M.D.

Sir,—Ten days ago, as Medical Officer of Health for the most thinly-populated and mountainous county of England, I drew the attention of our county members to the fact that, in this county at least, where a high-powered motor is a necessity, and the doctors have great distances to travel, both horizontally and vertically, per patient visited, the petrol duty would be a most serious matter—would, in fact, be a tax on health and life, for the small farmer up in the mountains, miles away from his doctor, is by no means a wealthy man.

Within three days I received from one of our members a letter, in which he says: "The country doctor is to get his petrol untaxed, according to the Budget scheme—the only person so privileged." He is not to have a rebate, for the simple reason that what he uses is to be untaxed.

Few people have any idea of the petrol bill or the tyre account of the country doctor, who motors forty or fifty miles per day, rises 3,000 ft. vertically, consuming his petrol accordingly, or puts his brakes hard on down a gradient of 1 in 8 or 1 in 10 to get down 3,000 ft., and tears his tyres in pieces by so doing. A tyre bill is bad enough to him, with his small receipts and exposure to wild weather, so don't begrudge him his Free Trade petrol!

We must wait till the "Finance Bill" is in print to ascertain exemptions proposed.—I am, etc.,

R. MUSGRAVE CRAVEN,
Medical Officer of Health, Westmorland Combined
Districts.

Kendal, May 15th.

* * * We hope that Dr. Craven's information may prove to be correct, but this cannot apparently be determined until the Finance Bill is published, which will not happen until the resolutions have been passed.

FOREIGN BODY IN THE AIR PASSAGES.

Sir,—The report in the JOURNAL of May 15th, p. 1180, of a fatal case of bronchiectasis due to the unsuspected presence of a foreign body in the left bronchus in a child of 4 years of age, induces me to call attention to the value of the bronchoscope in the investigation of cases of limited bronchiectasis of obscure non-tuberculous origin. If there had been forthcoming in this particular case a history of a tinctack having been inhaled it is probable that the child would eventually have been referred to a laryngologist experienced in the use of the bronchoscope, and from its position no difficulty would have been encountered in its diagnosis and removal.

It is a mistake to imagine that the employment of the bronchoscope should be limited to cases in which there is a history pointing strongly to the fact that a foreign body is present, whether backed up or not by an x-ray examination. That a careful bronchoscopic examination may help to clear up the diagnosis in some cases of limited suppurative bronchiectasis cannot, I think, be doubted, and it is, in my opinion, not only a justifiable but a necessary diagnostic procedure. Those who are familiar with the recorded results of bronchoscopic investigations on the Continent and in America well know that unsuspected causes of bronchiectasis other than foreign bodies have been found by direct endoscopic examination—for example, innocent bronchial tumours, cicatricial formations, and caseous plugs. In limited bronchiectasis, therefore, a routine bronchoscopic examination *per vias naturales* may be expected in the near future to take a recognized place in the diagnosis and treatment of this condition. The passing of the bronchoscope is comparatively easy, even in children, in expert hands, and in my experience patients are none the worse, provided the examination is made with delicacy and caution. Chloroform is, of course, usually necessary in children.

In the case under discussion it is perhaps open to doubt whether the recognition and removal of the foreign body would have effected a cure at the late stage when the child came under the care of Dr. Murray Leslie, but such a method of investigation probably held out the only possible chance for the child.

I am unable personally to claim to have found an *unsuspected* cause in a case of bronchiectasis by endoscopic means, though my experience includes the finding of an unsuspected foreign body by such means in the oesophagus. There are several laryngologists in this country who are skilled bronchoscopists, and it would be interesting to have their experience on the question which I have, I think not inopportunistly, raised.—I am, etc.,

London, W., May 17th.

WILLIAM HILL.

TETANUS OCCURRING AFTER SURGICAL OPERATION.

Sir,—In view of the widespread use of catgut as a ligature material Mr. W. G. Richardson's paper (BRITISH MEDICAL JOURNAL, April 17th, 1909, p. 948) has naturally aroused considerable interest amongst surgeons. While his article is a most careful record of facts and observations he does not venture any definite conclusion as to the real nature of the spasmodic conditions which have supervened after the use of catgut in the cases he has collected.

Unfortunately, the cases published since the appearance of his paper carry us no further, since in those in which a bacteriological examination was made it was inconclusive, while in others no attempt seems to have been made to discover what bacteria were present, although the cases were called tetanus. However, whether or not catgut was to blame in all the cases of so-called tetanus which have been reported, it behoves surgeons who use it as a ligature material to look to the method of sterilization employed. I venture to quote a paragraph from a paper of my own, on Ligatures and Buried Sutures, with special reference to Catgut (*Lancet*, April 20th, 1907), in which it was advocated that animal ligatures should be sealed in glass tubes with xylol and the tubes boiled for half an hour or an hour, or for about twenty minutes on each of two succeeding days, the equivalent temperature being raised to well over 100° C. by the pressure inside the tubes:

There is one condition to be attached to the routine use of catgut, and that is that the surgeon must be certain of its sterilization. For this purpose it is at least desirable that the

¹ BRITISH MEDICAL JOURNAL, May 8th, p. 1155.

process be carried out by some one who can be trusted and is known to the surgeon. Another essential is that the method should be simple, inexpensive, and easily carried out, and that there should be no chance of contamination of the material after it has been sterilized. To fulfil these conditions it is better that the gut should never be interfered with between the time of its sterilization and the time when it is used in an operation. Any method of storage which involves repeated withdrawals from the same stock is objectionable on this account alone. In conducting experiments on the sterilization of animal ligatures I have always considered that those methods which aim at this end by means of chemical antiseptics are inferior to those in which heat is the agent employed. I was convinced that practically all surgeons with an aseptic technique would also prefer a method of sterilization by heat to any chemical disinfection.

—I am, etc.,

Middlesex Hospital, W., May 17th.

ALFRED E. JOHNSON.

EARLY DIAGNOSIS AND TREATMENT OF CANCER OF THE STOMACH.

SIR.—In discussing the operative treatment of cancer of the pyloric end of the stomach Mr. Moynihan says "all the primary glands at least should be taken (these are the lower and upper coronary, right paracardial, suprapyloric, right suprapancreatic, right gastro-epiploic upper and lower, and the retropyloric)." According to him the removal of all these parts is possible, and he has in several cases removed the right suprapancreatic glands by "gauze stripping," without injury to the hepatic artery or the pancreas.

While admitting the possibility of complete removal of all the glands along the lesser curvature and coronary artery and along the greater curvature we do not feel convinced that we can modify the conclusion to which we gave expression in the *Lancet*,² after examining a large number of specimens, that many of the primary glands of the stomach are beyond the effective reach of the surgeon. Many of the right suprapancreatic glands lie under the hepatic artery almost embedded in the upper border of the pancreas.

Moreover, we believe that the list of glands given above does not include all the primary glands. We have already stated that in some of our specimens in which injection was very complete vessels pass from the pyloric end of the stomach directly to glands of the biliary chain lying along the lower part of the common bile duct.

The removal of the primary glands is an advance in gastric surgery founded on recent anatomical research, and though it is desirable that in the operation of partial gastrectomy every attempt should be made to remove as many glands as possible on the lines laid down by Mr. Moynihan, it should be borne in mind that unless the right suprapancreatic glands can be entirely removed, which we doubt, and unless the biliary chain is included in the field of operation, it cannot be supposed that the whole lymphatic area of the pyloric end of the stomach has been excised.—We are, etc.,

J. F. DORSON,

J. KAY JAMIESON.

Leeds, April 28th.

THE COAGULATION TIME OF THE BLOOD.

SIR.—Professor Sabrazès writes that in my article in your issue of April 24th I quote his method as being one of the most accurate. But he has quite mistaken my meaning. I do not think that it can be described in any way as an accurate method, and I only said that the end-point which he and Dr. McGowan adopt is more reliable than that employed in other clinical methods.

In the paper¹ in which I described my method of determining the coagulation time of normal blood, I reviewed the different methods, and among them Professor Sabrazès's and Dr. McGowan's. I referred to all the work which Professor Sabrazès has done on this subject, and showed that both methods, although in other respects different, had in common the adoption of very similar end-points. In my article in the *BRITISH MEDICAL JOURNAL* I therefore did not go over this ground again in detail, but only mentioned Professor Sabrazès's name in connexion with the point in which Dr. McGowan's method resembles his. The two methods are, however, essentially different. It is true that at first I did not think so, and was inclined to believe that McGowan's method was, indeed, rather a

retrogression, because he did not pretend to keep a constant temperature; but that was before I had had any practical experience in working with both of them. I wrote to Professor Sabrazès, and he was so good as to order for me the complete apparatus in its latest form, and in using it I closely followed his directions. I then found, in the first place, that in taking the second drop of blood from the puncture instead of the first drop, as in McGowan's method, he had allowed entrance to a source of considerable error. There is an acceleration of coagulation in the blood following the first drop, and the amount of this acceleration is inconsistent. In the second place, the method of maintaining a constant temperature was so extremely inefficient as to be little better than none at all. It is possible at the expense of a considerable amount of time and trouble to obtain for a short time an approximately constant temperature in the closed box, but the lid has to be removed every half minute in order to test for coagulation. If the room temperature is higher or lower than 18.5° C. there is, of course, an almost immediate equalization of the temperature of the air in this wide shallow box with the room temperature, and this disturbance is only very slowly corrected, when the lid is replaced, by the warm water or ice in the lower compartment of the box, and long before the temperature has returned to the constant the lid must be again removed to ascertain again whether coagulation has occurred. By no device, and I tried many, did I find it possible to maintain anything approaching a constant temperature of 18.5° C. unless the room temperature happened to be 18.5° C. also. Dr. McGowan's method, of course, pays no attention to variations of temperature between 15° C. and 20° C., and for this reason is useless for making comparative observations, but in this respect it is very little inferior to Sabrazès's.

Besides these points there are many other differences between the two methods, some of which are referred to in Professor Sabrazès's letter. For example, he lays stress on the importance of using tubes of exactly equal diameter. Now, McGowan's tubes are not very uniform in this respect, and in testing McGowan's method I thought of this as a possible source of error, but in practice I found that it made no appreciable difference. When two McGowan's tubes taken at random without reference to their diameter were filled from the same drop of blood and both placed together, so that they were under the same conditions, the average difference in fourteen of such double estimations was 25 seconds. When the tubes were specially selected so as to be as different in their diameter as possible, the average difference of thirteen estimations was also 25 seconds. The average difference of fifty-six estimations when tubes of equal diameter were obtained by using halves of the same tube was 29 seconds.

Another important point of difference is that in Sabrazès's method short columns of blood are used, whereas in McGowan's a column of about 4 in. long is employed. Professor Sabrazès says that with a short column you avoid "the error caused by the unequal repartition of fibrin in long tubes." Does he mean by this that fibrin in a tube of 1 mm. diameter can in the half-minute or so in which it may be present before its discovery alter its position to any appreciable extent under the action of gravity? It would, to say the least of it, appear to be extremely improbable that it does. I should like to know what evidence he has to show that there is any such "unequal repartition of fibrin" in blood under these conditions. On the other hand, I can show that short columns of blood are sure to lead to error. In the paper above referred to, in discussing the action of different foreign bodies in regard to their effect on the coagulation time, I have shown that air has about twice as great a power of accelerating coagulation as glass; and this has been fully borne out by my experience in using McGowan's tubes. When the column of blood is interrupted by bubbles of air, the blood near the air bubbles is always found to have coagulated first. For this reason the first and last quarter of an inch of the blood column in a properly-filled McGowan's tube must not be tested for coagulation, as this is very apt to give a fallacious result. But this is just the condition under which one works with the short column of blood in Sabrazès's method, so that this comes to be a very important difference between the two methods.

¹ *BRITISH MEDICAL JOURNAL*, April 3rd, 1902.

² Lymphatic System of the Stomach, *Lancet*, April 20th, 1902.

³ *Quart. Journ. of Exper. Physiol.*, Nov., 1903.

When Professor Sabrazès says that no method can be absolutely accurate as regards the maintenance of a constant temperature because of the differences in the body temperature of the persons from whom the blood is taken, he is no doubt, strictly speaking, quite right, although it is more a theoretical than a practical objection, for I have never found fever in itself to have any appreciable effect on the coagulation time of the blood *in vitro*; but when he goes on to say that such differences as may exist between the physical properties of blood from different people are sufficient to alter noticeably the rate at which the temperature of the blood comes into equilibrium with the temperature of its surroundings, he is making a surprising statement, which, so far as I know, is entirely unsupported by any experimental proof.

The unreliability of his method is clearly shown by the account of the work done with it by Genenil¹ under Professor Sabrazès's own direction. Many of the results appear to have been obtained by Professor Sabrazès himself. Fifty-eight observations were made on patients. They are extremely variable, not only in different but also in cases of the same disease. Times of 3 minutes, 3½ minutes, and 4½ minutes are given, while at the other extreme there are times of 15 minutes and 17 minutes, and all degrees between these two limits are represented, although most are between 7 and 12 minutes. I exclude two cases of hæmophilia in which times of 30 and 35 minutes are recorded. Some cases of malignant disease are shown to have times varying from 3 to 10 minutes, in three cases of amenorrhoea the times were 9½, 12½, and 15 minutes, and so on, so that when an attempt is made to draw general conclusions, the results are so conflicting that it is obvious that they have no firm basis. As a matter of fact, the variations they record are practically, without exception, due to experimental errors, for I have found with my modification of McGowan's method that the coagulation time is practically normal in patients suffering from such conditions as their list is made up of; the only exceptions which I have so far found have been cases of hæmophilia or those cases in which there was reason to believe that a condition of septicæmia was present or had recently been present.

For these reasons I think that Professor Sabrazès is not justified in recommending his method as not only simple but also exact and accurate. It is certainly not accurate. Nor should he say that Dr. McGowan or I have "borrowed" his method. Dr. McGowan developed his method entirely independently; he most certainly did not in any way or in any detail derive it from Professor Sabrazès. And since I, in modifying McGowan's method, specially mentioned Professor Sabrazès's in relation to the only point in which there is any resemblance between the two methods, and refer to a paper in which I discuss his work, I think I have done fully as much in the way of acknowledging his connexion with the subject as could reasonably be expected.—I am, etc.,

Berlin, May 9th.

T. ADDIS.

RESISTANCE TO PUERPERAL INFECTION.

SIR,—Dr. Chevers asks a most interesting question (May 8th, p. 1154), and one which must have occurred more than once to practically every physician who practises obstetrics, but more especially to those whose lot it is to practise the art among the lower sections of our population.

In my experience it is almost usual in, for example, a colliery district, for the parturient woman to don her dirtiest working clothes at the onset of labour, and to pile around her on the bed the filthiest and most suspicious rags which the dwelling can provide. Among these she may lie for days, the warmth of the bed no doubt favouring considerably the decomposition of blood and lochia and the growth of any bacteria which may happen to be present.

With Dr. Chevers's explanation, however, I do not agree, and my own is as follows: Roughly, the population may be divided into those whose habits are cleanly and those whose habits are not. The latter class is constantly exposed to the risks of puerperal sepsis, and, as a consequence, suffer more from its ravages. As time goes on, however, the very susceptible among them become weeded

out, simply because they die and leave no offspring, or only a limited number; the less susceptible or, in other words, the more immune in virtue of the natural immunity they happen to possess, thrive and rear families to which they bequeath this very useful characteristic. It is seen, then, that among the dirty classes the more or less immune (to puerperal fever) thrive; the more or less susceptible die out. Consequently, in time immunity to puerperal fever becomes to a greater or lesser extent a feature of the dirtier classes; in other words, dirty habits and immunity to puerperal fever become correlated.

In the case of the class guilty of considering cleanliness a virtue, the risks of puerperal sepsis are by instinct reduced to a minimum, and so is the ultimate immunity which the class as a whole acquires against the disease. This explanation, which shows the phenomenon to be one of natural selection or, to use Herbert Spencer's phrase, of the survival of the fittest, also throws light on the fact that, while puerperal fever very seldom occurs in lying-in hospital practice, a certain proportion of cases still occur in private practice, owing to the fact that the hospital patient is more often than not a member of the lower and therefore more generally dirty classes.—I am, etc.,

Ullapool, May 11th.

A. R. GUNN, M.B.

UNQUALIFIED MEDICAL PRACTICE.

SIR,—In your issue of May 15th you publish a copy of the circular addressed by the Local Government Board to medical officers of health, inquiring as to the evil effects of the practice of medicine and surgery by unqualified persons; and a footnote is added giving the reply of one of your correspondents, to the effect that there is no unqualified practice in his district except that of chemists; this reply is also commented on in your editorial on page 1200 of the same issue.

Unqualified medical practice is indefensible in any one, but your correspondent in imputing such to a body of scientific men like pharmacists has no ground for so doing except the delinquencies of a few; and he has overlooked a much more serious and at the same time a universal form of unqualified practice, which not only makes a serious inroad on the rights of physicians and pharmacists alike, but is a great and growing danger to the public health. I refer to the sale of proprietary and "patent" medicines, the manufacturers of which, as a rule, are neither doctors nor chemists, and thus possess no qualification whatever, except the qualification of commercial enterprise. A pharmacist, if he has not the medical qualification, has at least that of understanding the drugs he handles, their actions and their doses, and in many cases he also knows not a little about the body into which they are put, and it is often necessary for him to give some advice, generally in the form of warning, as to the use of drugs. Further, it ought to be remembered that the public will never be taught to go to a doctor for every slight ailment, any more than they will be induced to call in a carpenter for every picture that requires hanging; but there are very few chemists, indeed, who are so foolish as to abuse their knowledge or trespass on the domain of the doctor, strong though the temptation is in districts where doctors dispense their own medicine.

But the patent medicine manufacturer has neither diffidence nor scruple. His object is to extort money from the public, and he does so most successfully for himself, though often dangerously for them. His sway is not confined to a suburb or town, but is world-wide; he ingratiates himself, through advertisements, with a simple public before either doctor can advise or pharmacist can warn, and his appeals are generally couched in terms that cast untrue reflections on physicians and pharmacists alike, for these are too honest and too well-informed to serve his purpose.

If the Local Government Board, genuinely actuated as they are by a desire for the public weal, intend to put down unqualified practice, they should start at the beginning, and take steps to end this crying evil.—I am, etc.,

May 17th.

PHARMACOS.

RURAL DISTRICT NURSING ASSOCIATIONS.

SIR,—When the Midwives Act came into force my midwifery practice fell off considerably. I was frequently

¹ Méthodes pour déterminer le début de la coagulation du sang. Bordeaux, 1906.

called to difficult cases by midwives—some were difficult naturally, others through ignorance or want of skill. I used to go, give my services, and not get paid in more than one case in three. Result, midwifery very unsatisfactory, three deaths, several women permanently injured.

I then informed every midwife, including the nurse employed by the "county lady," that in two months from date I would only attend cases I was engaged for in the ordinary way, and would go to no case of theirs, however urgent or difficult; this was in order that the nurses could explain to the women my decision. They all practically told me if I would not go some one else would. They continued sending; I went until the time was expired; the next case I refused, and I continued to refuse. I was abused on all sides, but still kept to my decision. The result was that in 1908 I was not sent for except where previously engaged. I attended 121 cases, have been paid for 95 of them, and will be paid for most of the others. There have been no deaths.

I am a member of a union, and advocated my way of dealing with unruly midwives and nurses. Most of the members practically told me it was most unprofessional to act in such a manner, and asked me what would the public say if a patient died. One gentleman told me my duty was to save life, allay pain, and take what payment I could get after the work was done. After sixteen months' strict adherence to the above rules, I am glad to say my practice all round has not suffered, and several working men have told me they are glad I acted as I did, as they can see now that it has been for their benefit to have skilled attention for their wives.

A lawyer is a gentleman in private, a business man in his office. A clergyman is a gentleman in private, but a good business man in public. Is a doctor to be a gentleman in private and a fool in his business?—I am, etc.,

May 11th.

ANOTHER G. P.

THE LATE SIR WILLIAM GAIRDNER.

Sir,—In response to the wishes of Lady Gairdner and her family, I have undertaken to edit the medical and scientific papers and articles of the late Sir William Tennant Gairdner, and to preface the collection with a biography.

In order to render the work as worthy as possible of the memory of the late professor, I am desirous of enlisting the sympathy and help of his friends. I venture, therefore, to request through your columns that any one who has in his possession any letters or other literary remains of Sir William Gairdner will be so kind as to communicate with me.—I am, etc.,

G. A. GIBSON, M.D.

5, Drumsheugh Gardens, Edinburgh, May 12th.

LOCAL ANAESTHETICS RECOMMENDED AS SUBSTITUTES FOR COCAINE.

Sir,—Referring to the recent report to the Therapeutic Committee on "The Local Anaesthetics Recommended as Substitutes for Cocaine" by Dr. Le Brocq, which was published in the BRITISH MEDICAL JOURNAL of March 27th, may we be allowed to point out that the material used by the investigator in demonstrating relative toxicity was strictly confined to rabbits, mice, and frogs? Thus the conclusion arrived at in the report that alpin is more toxic than cocaine only means that it is more toxic to these animals. As a matter of fact, had Dr. Le Brocq carried out his experiments on cats and dogs he would have obtained quite different results. The average lethal dose of cocaine in cats was found by Dr. Impens to be 0.04 gram per kilo body weight, and that of alpin 0.06. On the human subject also, clinical experience has proved that alpin is much less toxic than cocaine.—I am, etc.,

London, E.C.

THE BAYER CO. LTD.

DR. JOHN HORNE, of Scarborough, who graduated M.D. in the University of Edinburgh in 1859, is about to present in perpetual trust a building on a freehold site in Scarborough, containing eight homes for aged and deserving persons who, while they possess a small income, are yet not in a position to pay house rent. Each home consists of a combined kitchen and sitting room, a bedroom, and a combined scullery and pantry. The building, which has a verandah, is of brick with stone dressings, of the Tudor style. It will be unendowed, but Dr. Horne has provided a fund for the payment of the fire insurance, upkeep, and water rate.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE following degrees were conferred on May 13th:

M.B., B.C.—B. H. Palmer, Pemb.; J. R. C. Canney, Christ's.
M.B.—C. H. Treadgold, Clu.

UNIVERSITY OF LONDON.

GUY'S HOSPITAL MEDICAL SCHOOL.

Mr. R. A. CHISOLM has been appointed Greville Research Student for research in connexion with the subject of cancer.

VICTORIA UNIVERSITY OF MANCHESTER.

The Winter Session.

THE Chancellor of the University, Viscount Morley of Blackburn, has consented to open the new session on October 5th, and to deliver an address.

Dean of the Medical Faculty.

Professor Stirling has been reappointed Dean of the Medical School and of the Faculty of Medicine.

Votes of Condolence.

At a meeting of the Council, held last week, resolutions were passed expressing the profound regret of the Council at the deaths of Professor Gamgee, formerly Professor of Physiology at the Owens College; of Dr. Lang, Principal and Vice-Chancellor of the University of Aberdeen; and of Mr. T. F. Byrne, formerly Lecturer in Common Law in the Manchester University.

Memorial Tablet.

A medallion of the late John Strachan, M.A., LL.D., formerly Professor of Greek in the University, has been presented to the university by the subscribers to the Strachan memorial fund, and it is proposed to unveil it on Tuesday, May 25th.

UNIVERSITY OF BIRMINGHAM.

Opening of New Buildings.

AN intimation has been received that the King and Queen will open the new buildings of the University of Birmingham on Wednesday, July 7th. A site of 27 acres was presented to the university by Lord Calthorpe, who subsequently gave 20 additional acres for a recreation ground. The total cost of the buildings will be £400,000, and with the equipment, the expenditure will exceed half a million. Of the £200,000 received in response to Mr. Joseph Chamberlain's appeal, only about £300,000 has been available to meet the outlay on the buildings and site, and the council now appeals for another quarter of a million to enable it to provide for future developments and open the buildings free of debt; of this sum about £75,000 has been received.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary Comitia was held at the College on May 13th, the President, Sir R. Douglas Powell, Bart., in the chair.

Fellowship.

The members elected at the preceding Comitia, were admitted Fellows of the College (see p. 1156.)

Licence.

The licence of the College was granted to Mark Bates and Thomas Benjamin Dixon.

Resignation of Dr. E. Liveing.

A letter was read from Dr. E. Liveing, resigning his office of registrar and the membership of the Committee of Management, both to take effect at the end of the collegiate year in July next.

The President spoke in eloquent terms of the services of Dr. Liveing, and regretted that the purport of his letter left the College no option but to accept his resignations.

Sir Wm. Church then moved:

That the College receives with much regret the resignation of Dr. Liveing of the office of registrar, and in accepting his resignation takes the opportunity of recording on its minutes the faithful and efficient manner in which he has for so many years carried out the duties of his office, his constant courtesy to the Fellows, and his universal watchfulness over the interests and dignity of the College.

This was seconded by Dr. Norman Moore, and carried by acclamation.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE COMING COUNCIL ELECTIONS.

THE Council is at present constituted as follows:

President.

Mr. H. Morris; C, (1) 1895 (substitute), (2) 1898, (3) 1906.

Vice-Presidents.

Sir W. Watson Cheyne, Bart.; C, (1) 1897 (substitute), (2) 1901.
Mr. Pearce Gould; C, (1) 1900, (2) 1908.

Other Members of Council.

Mr. Mayo Robson; C. (1) 1893, (2) 1901.
 Mr. Butlin; C. (1) 1895, (2) 1903.
 Mr. Edmund Owen; C. (1) 1897, (2) 1905.
 Mr. Rickman J. Godlee; C. (1) 1897, (2) 1905.
 Mr. F. Richardson Cross; C. (1) 1898, (2) 1906.
 Mr. R. Clement Lucas; C. 1901.
 Mr. J. H. Morgan, C.V.O.; C. 1902.
 Mr. H. H. Cluston; C. 1902.
 Mr. C. W. Mansell Moullin; C. (1) 1902 (substitute), (2) 1907.
 Mr. Clinton Dent; C. 1903.
 Mr. G. H. Makins, C.B.; C. 1903.
 Mr. F. S. Eve; C. (1) 1904 (substitute), (2) 1907 (substitute for Sir J. Tweedy till 1912).
 Mr. A. A. Bowlby, C.M.G.; C. 1904.
 Mr. G. Barling; C. 1904.
 Mr. C. H. Golding-Bird; C. 1905.
 Mr. G. A. Wright; C. 1905.
 Mr. W. Bruce Clarke; C. 1906.
 Mr. Charters J. Symonds; C. 1907.
 Mr. W. F. Haslam; C. 1908.
 Mr. C. B. Lockwood; C. 1908 (substitute for Howard Marsh until 1910).
 Mr. W. Arbutnot Lane; C. 1908.

The following list shows the proportional representation of metropolitan medical schools and the provinces:

St. Bartholomew's	...	4
Charing Cross...	...	1
Guy's	...	4
King's College	...	1
London	...	2
Middlesex	...	2
St. George's	...	1
St. Mary's	...	1
St. Thomas's	...	2
University College	...	1

Total number attached to London schools	...	19
London member unattached to any hospital	...	1
Provincial members (Birmingham 2, Bristol 1, Manchester 1)	...	4
Total	...	24

Having been elected or re-elected in 1901, Sir Watson Cheyne, Mr. Mayo Robson, and Mr. Clement Lucas retire in July, 1909.

An ordinary Council was held on May 13th, Mr. Henry Morris, President, in the chair.

Begrudge Studentship.

Mr. J. R. D. Webb (undergraduate of Liverpool University), having obtained the highest marks, was awarded this studentship for three years. This studentship, of the annual value of £20, is awarded to the candidate obtaining the highest number of marks in the anatomical part of the second examination of the Conjoint Examining Board in England.

The late Mr. C. G. Wheelhouse.

The following resolution was adopted by the Council:

That the Council hereby express their deep regret at the death of Mr. C. G. Wheelhouse, whom they highly esteemed as an able surgeon, keenly interested in all matters relating to surgical education and the advancement of surgical science, and whose services to the profession and to the College they remember with grateful appreciation. That the Council desire also to record their warm regard for the excellent personal qualities which won for Mr. Wheelhouse the friendship of all who knew him and to convey their sincere sympathy to Mrs. Wheelhouse and her daughters in their bereavement.

Diploma of Member.

Diplomas were granted to ninety-one candidates found qualified at the recent examination.

Licence in Dental Surgery.

Diplomas were granted to thirty candidates found qualified at the recent examination.

Courts of Examiners.

Mr. C. A. Ballance was elected a member of the Court in the place of Mr. A. P. Gould, recently retired. The President stated that the vacancy on the Board of Examiners in Dental Surgery, occasioned by the retirement of Mr. Pearce Gould from the Court of Examiners, would be filled up at the next meeting of the Council.

Gift to the College.

A work in bronze and marble by Alfred Gilbert, M.V.O., entitled *Mors janua vitae*, offered by Mrs. Macloghlin, was accepted by the Council, with its best thanks.

CONJOINT BOARD IN ENGLAND.

At a meeting of the Comitia of the Royal College of Physicians on April 29th, and of the Council of the Royal College of Surgeons on May 13th, Diplomas of L.R.C.P. and M.R.C.S. were respectively conferred upon the following candidates:

A. Abrahams, H. W. L. Allott, M. A. Ansari, R. R. Armstrong, J. L. Atkinson, K. J. Aveling, M. Bates, B. F. Bartlett, P. B.

Bharucha, H. E. Blossome, T. L. Bomford, W. F. Bowen, H. Bowring, E. C. Bradshaw, T. F. Brown, W. R. Butler, F. G. Caley, F. G. Cavston, H. D. Clapham, A. J. Clark, J. P. Clarke, R. Comyn, R. B. Dawson, C. Deutzer, J. R. Dick, T. B. Dixon, J. R. B. Dobson, M. Donaldson, A. W. Duncan, G. H. Dunn, L. W. Evans, T. Evans, P. C. Field, H. W. Gabe, E. B. Garrard, P. A. Gilroy, C. Gouldsborough, G. A. Greaves, H. S. Hall, D. J. Harries, T. Harrison, H. Hudson, E. P. L. Hughes, R. H. Hutchinson, V. P. Hutchinson, R. S. Ingersoll, R. P. Jones, C. F. V. Keble, L. H. Khan, H. G. Kilner, S. J. Lee, A. S. MacNalty, R. H. Maxwell, J. S. Milligan, H. E. H. Mitchell, E. B. Morley, H. R. Moxon, N. R. Naik, F. C. Nichols, R. D. O'Leary, D. G. S. R. Oxley, G. F. Page, R. Pearce, L. B. Perry, R. A. Rankine, A. A. Rees, E. D. W. Reid, A. Rhodes, A. D. Rope, F. A. Roper, A. J. Ryle, F. F. Saldanha, N. G. H. Salmon, A. G. Schlenburg, C. F. Searle, N. S. Shenstone, S. Shephard, H. G. Smith, R. R. Smith, E. R. Stone, T. W. R. Stode, W. F. Sutcliffe, H. L. Tasker, H. A. Treadgold, R. J. Vernon, D. Vainwright, G. Valdo, G. R. Ward, L. M. Webber, M. W. E. Wiedegren, W. G. Wince, R. N. Woodsend, T. S. Wright.

* M.R.C.S. granted on April 1st. † L.R.C.P. granted on May 13th.

CONJOINT BOARD IN IRELAND.

The following candidates have been approved at the examinations indicated:

FINAL PROFESSIONAL.—B. G. S. Belas, F. H. Gleeson, H. G. Massy-Miles, B. Power, E. Smith, G. C. Sneyd, C. H. Stringer, B. Wallace, J. McG. Williams.
 D.P.H.—W. W. Brovne, Captain R.A.M.C.; R. F. O'T. Dickinson, Lieutenant R.A.M.C.; B. D. Gibson, D. J. O'Connor, N. D. Walker, Captain R.A.M.C.

* With honours.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

DISTRICT NURSES AND MEDICAL MEN.

We have received a complaint from a member resident in Scotland with regard to the action of a district nurse, who, as far as we can gather from our correspondent's letter, is not working under Queen Victoria's Jubilee Institute for Nurses, or under rules approved by it. The complaint is that the nurse attends cases of illness, as well as confinements, without the supervision of a medical man. He also makes a complaint against a neighbouring practitioner who, in cases of difficulty—we presume he refers more especially to confinements—has been asked to assist the nurse. The nurse is fully trained, and we also presume, certificated. Our correspondent asks: (1) Whether the practitioner referred to is in order in attending confinements where the nurse fails; he also asks whether under the circumstances the nurse does not act as an unqualified practitioner? (2) Is the doctor in order in attending my cases at the call of the nurse? (3) Am I in order in attending one of my own patients who had been under the care of the nurse? (4) Am I in order in granting a death certificate if the patient above referred to dies? (5) Is the nurse in order? (6) Can anything be done to prevent the nurse practising and being paid by subscription, or can anything be done to stop prescribing chemists and chemists who prescribe one's own mixtures?

* (1) The nurse would fail in her duty if she did not call in skilled assistance. Our correspondent must know that in most towns and villages there are nurses and midwives who do a large practice in midwifery without a medical practitioner being present. If our correspondent will refer to the BRITISH MEDICAL JOURNAL of April 3rd, p. 852, he will see the suggested rules for district nurses under the Queen Victoria's Jubilee Institute. Rule 9 reads as follows:

9. In all cases of general sick nursing the attendance of the nurse must be sanctioned by the medical officer, it being understood that her attendance on such cases does not interfere with her engagements to lying-in women. When she has anything to communicate to the doctor she shall do so in writing, and it is hoped the doctor will do the same to avoid leaving verbal messages with patients or their friends.

The nurse may attend a patient on application or in emergency, but must not continue to visit without a medical man being informed. Should the nurse advise the patient to have a doctor and the patient refuse, the nurse may no longer attend this patient except in case of urgency. She must in any case report the matter to her Secretary.

(2) This, if the facts are correctly stated, would be a breach of professional etiquette. (3) Certainly. (4) Yes, if our correspondent is satisfied as to the cause of death. (5) We do not understand what this refers to. (6) As most, if not all, district nurses are paid by subscriptions collected in the neighbourhood, we can hardly see how this point can affect the complaints our correspondent brings against the nurse.

We would suggest that he should see the principal subscribers and endeavour to get them to form a committee, of which he should be a member, and draw up a set of rules for the guidance of the nurse. The Medico-Political Committee has the matter of rules for district nurses in hand, and is to have a conference with the Committee of Queen Victoria's Jubilee Institute in connexion with the matter. The latter part of query No. 6 refers to a subject too wide for discussion here.

MONOPOLY RIGHTS IN PRACTICE.

DISGUSTED writes that a neighbouring practitioner who practises in an unopposed village six miles from his house, where our correspondent has also an unopposed practice, has opened a surgery in our correspondent's village and dispenses medicine for our correspondent's patients on his own account. Asked to explain what was meant by dispensing medicine "on his own account," our correspondent replies that "wherever a man opens a surgery he is bound to take a certain proportion of patients away from the resident doctor, and his object in writing was to ask whether a man who has an unopposed practice can with any decency open a surgery in his opponent's unopposed practice six miles away, and how this is to be looked upon by members of our profession."

* * No one can claim an absolute monopoly of the area within which he resides, and although it may be regrettable that competition should cause ill-feeling, it is impossible to lay down any hard-and-fast ethical rules which can prevent it.

GRATIS ATTENDANCE ON THE FAMILIES OF MEDICAL MEN.

X. writes: A retired medical man calls in a neighbouring practitioner to see his wife, who is suffering from influenza. She is attended for about a fortnight, and a bill is sent in, charging at the rate of 10s. 6d. a visit. X. is not well off, having an income of about £300 a year, and when in practice made it a rule never to charge a fee to a brother practitioner. He asks what he should do.

* * There is no absolute rule that medical practitioners should not charge one another for their services, but it is a general custom. Payment should always be tendered, although, in our opinion, in most instances it should be refused. We think where there is no friendly relation already existing between the practitioners, if gratis treatment is expected it should be asked for in the first instance. In the present case our correspondent might write a courteous letter explaining his circumstances and asking for a reduction in the amount of the bill.

Medico-Legal.

TRANSFER OF APPOINTMENTS.

"5779" writes that he has recently bought a practice, and that certain appointments were mentioned in a letter during the negotiations as transferable. That letter has been lost, and the vendor says that he could not guarantee an appointment any more than he could a patient. Our correspondent asks whether he would be justified in making a deduction from the purchase money as a set-off against the loss of appointments.

* * It is very usual in the sale of a practice for one of the conditions of sale to be a return of a sum of money equal to the annual income derived from any appointment that the vendor may fail to get transferred. If there is no special agreement to this effect the buyer is not entitled to make any deduction.

At the meeting of the Zoological Society of London on May 11th, Mr. R. H. Burne, M.A., F.Z.S., exhibited a series of specimens, from the Museum of the Royal College of Surgeons of England, of adaptive structures for the respiration of air in some aquatic invertebrates and tropical fresh-water fishes.

A NEUROLOGICAL institute has recently been founded in New York for the treatment of nervous and mental diseases both curable and incurable. The institute comprises also a clinic for the study of nervous diseases, and the training of special nurses in the care of persons suffering such affections. The institute owes its foundation mainly to the efforts of Dr. Joseph Collins and Dr. Joseph Fraenkel, and more than £20,000 has already been subscribed. It is proposed to establish a sanatorium for convalescents in connexion with the institute.

Obituary.

PERCY BOULTON, M.D. EDIN., M.R.C.P. LOND.,
L.R.C.S. EDIN., L.M.

CONSULTING PHYSICIAN, SAMARITAN FREE HOSPITAL FOR WOMEN.

This obstetrician, so well known as one of the most active promoters of the associations for the proper education, examination, and registration of midwives which have developed during the past thirty years, died on May 15th at his town residence, Seymour Street, after a long and trying illness, in his 68th year.

Percy Boulton was born at Beverley on July 9th, 1841, and received his education in that town. He belonged to a medical family, his father, Dr. W. G. Boulton, being a practitioner in Beverley, and his brother succeeded the father and continued in the practice until his death several years ago. Percy was an athlete in his youth, and distinguished himself as a runner, and until his recent illness remained robust all through his career.

He studied medicine at the University of Edinburgh, and after qualification set up in practice at Worksop, Notts, but soon afterwards settled in London, where he assisted Dr. Tanner in his private practice. In 1871 he was elected Physician to Out-patients at the Samaritan Free Hospital, and in 1880 full Physician; he retired in 1900. For practical work he is chiefly remembered as the advocate of the purse-string suture in perineorrhaphy, which method he extensively practised at the hospital; but he was mainly distinguished in his hospital career as a loyal colleague and an able chairman, and he greatly contributed to the prosperity of the hospital by pleading its cause before wealthy and distinguished patients.

Dr. Boulton was a very active Fellow of the Obstetrical Society of London. He joined it in 1866, and, although he took but little part in the reading and discussing of papers and the exhibition of specimens, he was an energetic member of the council, working hard in the committees and subcommittees. He held the office of Chairman of the Board for the Examination of Midwives from 1897 to 1900; altogether, he was Examiner for eleven years on that board, which dissolved itself when the Midwives Act became law. Boulton's public spirit and zeal was made specially manifest when, towards the end of the Eighties, the old Berners Street societies left that thoroughfare for their present home in Hanover Square. He took upon himself the greater part of the weight of responsibility for the complicated administrative and legal business involved in the change of residence simultaneously with the maintenance of the relations of the Obstetrical with the Royal Medical and Chirurgical Society, which, as at the old address, remained its landlord. By 1890 the old Berners Street societies, the Pathological and Clinical, as well as the Obstetrical, were lodged in Hanover Square under the wing of the larger and older chartered society, an arrangement which stood for seventeen years, until, in 1907, they, taking up several other similar associations, fused into the Royal Society of Medicine. It was greatly owing to Boulton's good management that the change was managed with little or no inconvenience, so that the old relations remained satisfactory for so many years, until circumstances rendered another change imperative.

Dr. Boulton was as active in promoting legislation for the legal registration of women systematically trained, duly examined, and found fit and proper persons to attend labours, as he had been in guarding the interests of the Obstetrical Society in times of change, when bad management might have caused the Fellows trouble and expense. He acted not as a teacher of obstetrics or as a scientific authority, but rather as a physician admired and respected in influential circles, and by his tact he put before our legislators the state of the case—that is to say, the need for the legal qualification of midwives—in a way thoroughly comprehensible to them. As in the case of the Obstetrical Society, he took an infinite amount of pains, leaving nothing undone that had to be done, and for that he earned the thanks of the present generation of obstetrical teachers who actively worked with him, never relaxing their efforts until the Act became law.

Boulton wrote but little; his most important gynaecological work was quoted in textbooks and formed the subject of a monograph prepared by himself and published

in the thirty-second volume of the *Transactions of the Obstetrical Society*. He also edited the fourth edition of *Tanner's Index of Diseases*, and for six years took upon himself the arduous duties of editor of the *Transactions of the Society* which he served so faithfully.

Dr. Boulton was twice married but had no children.

DR. CHARLES KENNEDY, of Edinburgh, died with startling suddenness early in the morning of Monday, May 17th. He was apparently in his usual state of health on Sunday, and soon after midnight he left his house to visit a patient. He had only gone a yard or two from his door when he died. Born fifty years ago, the son of David Kennedy, the famous Scottish vocalist, he, like many members of his family, had inherited the musical talent of his father, and at the various medical dinners he was always good for two or three excellent songs. He was educated in the University of Edinburgh, took the degrees of M.B., C.M., in 1881, and the degree of M.D. in 1885, when he was awarded a gold medal for his thesis. He had a considerable family practice in the south side of Edinburgh, and was esteemed both by his professional brethren and the public. On May 15th, he was elected Chairman of the South Edinburgh Division of the British Medical Association. He was also a prominent member of the Edinburgh and Leith Medical Practitioners' Association, and a popular member of the Pen and Pencil Club. He had been a Freemason for many years. He leaves a widow and three sons, one of whom is now a student of medicine at Edinburgh University.

OLD St. Mary's men will hear with regret of the sudden death, at the early age of 34, of Dr. WILLIAM FERRIS, who was holding the post of Second Assistant Medical Officer to the Middlesex Asylum, Wandsworth. He was the son of the late William Edward Stiles Ferris, of Donnington Square, Newbury, Berks, and grandson of the late William Ferris, of Milton Manor, Pewsey, Wilts. William Ferris started his medical career at St. Mary's Hospital in 1893. After obtaining the M.R.C.S. Eng., L.R.C.P. Lond., and M.B., B.S. Lond., he was appointed Assistant Medical Officer at the Greenwich Infirmary, and whilst there took the D.P.H. In 1902 he was appointed an Assistant Medical Officer to the Middlesex Asylum, Wandsworth. In 1904 he obtained the M.D. Lond., being the first candidate to take that degree in Psychological Medicine. He was a great favourite with all with whom he came in contact, and was especially beloved by patients and colleagues. His keenness for detail and his methodical ways made many a difficult task appear simple, and he kept himself thoroughly up to date in the modern treatment of the insane. He was good at all sorts of games, especially at football, which he continued to play up to as late as last season. His sudden death, on May 15th, from an attack of double pneumonia, after only five days' illness, will come as a shock to many.

We regret to record the death of JOHN HODGSON, M.B. Lond., M.R.C.S., L.S.A., formerly of Oldham. Dr. Hodgson was the son of a minister of the Congregational Church. His medical studies were conducted at the Owens College and the Manchester Royal Infirmary, where he held the post of house-physician. Later he acted as medical officer at the Barnes Convalescent Hospital, Cheadle. He commenced practice in Oldham, and was appointed assistant surgeon to the Oldham Infirmary, and in 1899 became Honorary Acting Surgeon. He also held the post of medical officer to the Oldham School Board. He was the first Honorary Secretary of the Oldham Medical Society; he occupied the position for fifteen years, and the prosperity of the society was largely due to the enthusiasm with which he discharged the duties of the office. Failing health compelled Dr. Hodgson in 1905 to resign his position as honorary surgeon to the Oldham Infirmary and to give up practice. He first went to West Kirby and afterwards to Bowdon, and his health greatly improved. About two months before his death, he was appointed medical officer to the Southport Council Schools. He, however, had only held that post about three weeks, when his health broke down, and he died after about a fortnight's illness at his home in Bowdon. He leaves a wife and two daughters to mourn his loss. Dr. Hodgson was universally respected by all with whom he came into contact.

The Services.

ROYAL NAVY MEDICAL SERVICE.

AT the entrance examination for Surgeons in the Royal Navy, completed on May 14th, 32 candidates presented themselves for 15 vacancies. Two gentlemen withdrew, 8 were rejected for physical defects, and of the remaining 22, 18 obtained qualifying marks.

The following is the list of successful candidates:

Name.	Qualifications.	Medical School.	Marks.
Hole, K. H.	M.B., B.S. Lond., L.R.C.P., M.R.C.S.	Guy's Hospital.	2,151
Syms, G. F.	L.R.C.P., M.R.C.S.	Guy's Hospital.	1,965
Sanders, A. A.	M.B., Ch.B. Birm.	Queen's Hospital, Birmingham	1,933
Fitzgerald, M. P.	M.B., B.Ch. R.U.I.	Queen's College, Cork	1,927
Hadwen, J.	M.B., B.S., B.Sc. Lond., L.R.C.P., M.R.C.S.	St. Bartholomew's Hospital	1,914
Briggs, H. F.	M.B., Ch.B. Edin.	Edinburgh University	1,900
Jackson, G. A.	M.B., B.Ch., B.A.O.	Dublin University	1,739
Miller, W.	M.D., Ch.B. Glasg.	Glasgow University	1,710
Orwin, J. S.	M.B., Ch.B. Edin.	Edinburgh University	1,685
Barrett, J.	M.B., B.Ch., B.A.O. R.U.I.	Catholic University, Dublin	1,645
Nichols, H. W.	L.R.C.P., M.R.C.S.	Middlesex Hospital	1,638
Roberts, R. P. M.	L.R.C.P., M.R.C.S.	Guy's Hospital	1,505
Malcolm, M. G.	M.B., Ch.B. St. And.	St. Andrew's Univ.	1,495
Devas, H. C.	L.R.C.P., M.R.C.S.	St. Thomas's Hosp.	1,420
Burns, H.	M.B., Ch.B. Edin.	Edinburgh University	1,405

The above-named gentlemen will undergo a course of instruction in special subjects at Haslar Hospital, on the completion of which another examination will be held, and prizes consisting of a gold medal, a silver medal, and three navy regulation pocket cases awarded. The final position on the list will be determined by the combined results of the London and Haslar examinations.

Public Health

AND

POOR LAW MEDICAL SERVICES.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Borough of Brighouse.—The annual report of Dr. Martin (M.O.H.) shows that the birth-rate of Brighouse for the past year averaged 20.21 per 1,000 and the death-rate 14.5, against rates of 25.5 and 14.7 respectively for the whole country. The zymotic death-rate was much higher than the previous year, due largely to an epidemic of measles which led to the partial closing of six elementary schools, and primarily caused fourteen deaths. There was no small-pox, and very little scarlet fever.

Wallasey Urban District.—Mr. T. W. Naylor Barlow, Medical Officer of the Urban District of Wallasey, near Liverpool, has just published his first annual report for the district, to which he was appointed late in the year 1907. The district is becoming a popular suburb of Liverpool on the west side of the Mersey. It comprises 3,408 acres, and has a population estimated at about 71,000 in the middle of last year. The birth-rate was 24.2 per 1,000, and the death-rate was at the low figure of 12.7. The population is growing with great rapidity, having been only 21,000 in 1881. In view of the expressed opinion of the local medical practitioners the Notification of Births Act has not been adopted. A lady sanitary inspector visits houses in which births have been registered as having taken place and gives advice as to the feeding of the child. It has occasionally been found that the baby had died before the visit, perhaps, Mr. Barlow suggests, from a cause which a little timely advice might have prevented. He reserves his opinion as to the desirability of adopting the Act until he has had further experience of the district. The infantile mortality is exceptionally low—namely, 101 per 1,000—although in 1898 it was 168. Only 1 case of small-pox had occurred since 1904, the patient being a man who was landed from a ship. Energetic measures were taken, including vaccination of contacts, and there was no spread of the disease. Scarlatina was notified 248 times, most of the cases being near the end of the year, and is attributed to introductions from Liverpool and Birkenhead, chiefly as the result of Christmas shopping. The question of return cases is discussed at some length in connexion with 9 cases which might be so classed; 6 of these, however, were apparently not of that nature. Mr. Barlow evidently doubts

whether true return cases are common, and shows that some of them are merely due to coincidence. He also points out that they occur most frequently in the cold months and when the wards are full, and that they are associated with enlarged tonsils and adenoids almost invariably, and most frequently in connexion with children who have been kept a longer time in hospital than usual. They occur very rarely or never in connexion with cases discharged before what is known as the normal period of isolation has elapsed. He believes the existence of rhinitis is the chief reason of the persistence of infection, and does not attach importance to the presence of delayed or prolonged desquamation. He is of opinion that children, as a rule, are kept too long in hospital. It has been the common practice to fix six weeks as the period of infection, probably because desquamation usually continues for about six weeks; but no one who has had a large experience of scarlet fever in hospital now believes the desquamation *per se* has anything to do with infection. Six weeks he thinks is generally too long, but each case must be treated on its own merits. Cases with nasal discharge are kept in indefinitely, but Mr. Barlow doubts the wisdom of this practice since the cases are continually being reinfected. Typhoid fever has diminished greatly during recent years. In the 34 cases that were notified no connexion with sewer and drainage defects could be detected. Measles and whooping-cough, as elsewhere, have been the intractable diseases, and so far offer little hope of being dealt with in the way of prevention. Although the district is mostly well settled the sanitary property question is not unknown, and twenty-one houses have been presented for demolition, and other property has been made sanitary. The work done has been very creditable for the first year since the appointment of whole-time M.O.H. Mr. Barlow, however, sounds a note of warning against demolishing poor houses too quickly, owing to the difficulty in rehousing the displaced tenants.

Health of Abercrombie.—The medical officer of health for Abercrombie, Dr. J. A. Jones, in his annual report states that the birth-rate was 39.1 per 1,000 and the death-rate 19.4 per 1,000; infantile mortality-rate was 162 per 1,000 registered births. This figure, he says, is far too high, but in 1899 and 1897 the figures were 253 and 230 respectively. Diarrhoeal diseases alone caused nearly half the deaths among infants, and 24 out of 54 were bottle-fed babies, and he believed that through artificial feeding more children were killed by mistaken kindness, through ignorance, than wilful neglect. Intemperance was also a factor in the increase of infantile mortality, and the prevalence of drinking amongst women was deplorable, and they could not too strongly support State-directed efforts towards lessening the opportunities of getting drunk. The council, he urged, should see that the houses of the people were fit to live in, and that the streets should be free from dust and refuse. The town had been placed to much inconvenience and discomfort by the want of a plentiful and pure supply of water. The report was discussed at a meeting of the Town Council held on May 12th. It was decided to call the attention of the County Council and the Neath Rural Council to the matter of the pollution of the river Afan. The surveyor was instructed to see that the floors of new houses were concreted as far as he possibly could. It was explained that the water supply from the Ystradfellte reservoir could not be secured under two and a half years. This matter was referred to the Waterworks Committee. The clerk was asked to write the Neath Urban District Council, suggesting that the two authorities should go in jointly for a dust destructor. As to the infantile mortality, an alderman asked if it was not a fact that a large number of children were fed on tinned milk, and, although 560 samples of fresh milk were taken during the year, not one sample of tinned milk was taken. Dr. Jones said that matter was under the control of the County Council. It was eventually resolved to take samples of all tinned milk sold in the town for analysis, and to circulate with mothers and nurses, asking them to abolish feeding bottles with tubes.

URBAN DISTRICT COUNCILS AND THEIR MEDICAL OFFICERS.

ESTERINA LENTE writes as follows: "An urban district council wishes to change its medical officer on account of his residing out of the district. The council are seeking medical men residing in the district, and the urban district councillors wish to appoint one or other of them. Must the post be advertised? and is the sanction of the Local Government Board necessary for the change to be effected?"

"* We are not aware of any general order, rule, or regulation which necessitates the post of medical officer to an urban district council being advertised previous to the appointment being made. When any such appointment has been made by the council, it has to be reported to the Local Government Board and confirmed by that Board before being brought into actual operation.

The thirteenth meeting of the Departmental Committee appointed by the Lord President of the Council to consider the working of the Midwives Act, 1902, was held at the Privy Council Office on May 19th, Mr. Almeric W. FitzRoy, the Clerk of the Council, in the chair. The following witnesses attended: Mr. A. Rivers-Willson, Ph.D., L.S.A., Mr. E. Parker Young, L.S.A., M.R.C.S., Mr. J. Theodore Dodd.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL. The offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL are at 429, Strand, London.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attilioqui, London*. The telegraphic address of the BRITISH MEDICAL JOURNAL is *Attilioqui, London*.

TELEPHONE (National).—

2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

ORIGINAL ARTICLES AND LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS forwarded to the OFFICE of THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

"We would request correspondents who desire to ask questions in this column not to make use of such signatures as 'A Member,' 'A Member B.M.A.,' 'Enquirer,' and so on. By attention to this request much confusion would be avoided.

Correspondents are asked to write upon one side of the paper only.

DR. CAMPBELL (Uley, Gloucestershire) desires to hear of a village in North Italy where a patient with delicate lungs would find shelter from prevailing wind, sunshine, moderate elevation, and good lodgings.

THE CONSCIENCE CLAUSE.

DR. CHISHOLM (Halifax, Nova Scotia) asks: "What is the general attitude of the profession towards the Conscience Clause re vaccination? Does it tend to increase the number of unvaccinated, or cause much trouble to health boards?"

"* (1) The profession generally in this country appears to regard the Conscience Clause as a weak concession on the part of the Legislature, but recognizes that the clause was intended to suppress the martyrdom sought by many anti-vaccinators in order to give prominence to their agitation. (2) During the first ten years the number of exemptions averaged only about 5 per cent. of the births per annum. Last year it was made easier to obtain exemption, and the number of certificates granted was about three times larger than in the previous years. (3) The health boards do not administer the Vaccination Acts. Many medical officers of health have reported their anxiety to the local sanitary authorities, and the provision of adequate accommodation in case of outbreaks of small-pox is already receiving renewed attention. The Conscience Clause does not appear to diminish the number of those applying for vaccination when small-pox is prevalent.

LIP READING AND STAMMERING.

DEAF asks to be referred to a book or books explaining the teaching of lip reading to the deaf; also something on the treatment of stammering.

"* Our correspondent might consult the article entitled *The Treatment of Stammering* (and Lalling), by Dr. H. G. Langwill, published in the BRITISH MEDICAL JOURNAL, 1901, vol. ii, p. 130. Of books, the following may be found useful: *Wyllie's Disorders of Speech* (London: Simpkin, Marshall, and Co., 1894, 18s.) gives the physiological aspects of the subject, and practical remarks on the treatment of stammering. *A Series of Lessons on Articulation and Lip Reading*, by Richard Elliott, Principal of the Margate Institution for the Deaf (published by the Committee of the Institution, 93, Cannon Street, London, E.C., 2s. 6d.) is a good practical treatise. *Practical Lip Reading*, by E. F. Boulton (London: Upcott, Gill; New York: Charles Scribner's Sons), would be suitable in cases of adults.

INCOME TAX.

CYMO's income is made up as follows: From practice, after paying expenses, £195; rent of land, £5 10s.; total, £200 10s. He pays £49 for life assurance premiums, and has two children under 16 years of age. He asks whether he is liable to pay income tax.

* * Provided that the Budget proposals become law, our correspondent will not be liable. He will be entitled to the following allowances: Abatement, £160; life assurance premiums (one-sixth of total income), £33 10s.; allowance for children (£10 for each), £20; total allowances, £213 10s., which more than covers the amount of his income.

VACCINATOR received in February, 1909, the Government grant for efficient vaccination, it being three years since he received the previous grant. He asks whether the full amount received should be returned for assessment to income tax for the year 1909-10, or whether it should be averaged and the amount spread over the next three years.

* * The appointment of public vaccinator is a public office within the meaning of the Income Tax Act, 1942, and the remuneration received in respect of any such office is taxable under Schedule E on the amount receivable during the current year. This rule, however, is subject to an exception. The profits of any such office which fall under the head of "perquisites," as distinguished from ordinary remuneration, are taxable, either on the amount received in the preceding year or on the average amount received during the three preceding years. The answer therefore turns on the question whether the grant is to be regarded as ordinary remuneration or as a "perquisite" of the office of vaccinator. We incline to the view that it is a "perquisite," and that our correspondent is entitled to average the amount for the purposes of his income-tax return under Schedule E.

ANSWERS.

G. A. D.—The apparatus in question does not appear to differ in any way from the numberless electrical appliances of a similar kind which are advertised, and although in common with most of them it may have a good effect in chance cases, a leading authority in electrical treatment to whom we submitted the inquiry does not recommend it for insomnia.

THE CANARY ISLES.

W.—The Canary Isles are Spanish possessions, and, so far as we are aware, foreign practitioners are subject to the same regulations as in Spain. Nominally these necessitate the passage of exactly the same examinations as those undergone by Spanish students, but the extent to which the regulations are enforced seems to vary considerably from time to time.

LETTERS, NOTES, ETC.

A CASE OF CALENTURE.

MR. E. KNIGHT (Gravesend) writes: In an article on calenture which appeared in the BRITISH MEDICAL JOURNAL of February 27th, under the heading of Nova et Vetera, I stated that, according to old writers, those who suffer from this malady at sea become delirious, and, imagining it to be green fields, desire to leap into it. Also I remarked that I had been unable to find out from seafarers that they have any knowledge of a fever at sea producing this peculiar form of delirium. Since then a reader of the JOURNAL, who was formerly a ship's surgeon, has kindly sent me particulars of a case of "calenture" which came under his own observation. About twelve years ago a young man was found climbing over the rail of a vessel sailing in the tropics, preparatory to jumping into the sea. In explanation of his conduct he said that he saw his sister in a green field gathering flowers, and was climbing over the gate to go to her. He was of temperate habits, and it was not long before he recovered his mental equilibrium.

A QUESTION OF LIFE OR DEATH.

DR. BALDWIN (Bathurst, Gambia, West Africa) writes: The following incident may be entertaining to some readers as a sample of the intelligence of the native male nurses employed in some of our West African hospital wards: Recently a man was admitted with a badly-fractured skull and lacerated brain. I instructed the nurse on night duty to let me know every morning at 6.30 if the man was alive or dead, as in these hot places we make post-mortem examinations as quickly after death as possible. The nurse followed my instructions carefully. The patient died in the evening and I made the post-mortem examination about 11 o'clock at night. As I was leaving the mortuary the nurse came up to me and said: "Please, sir, shall I call you at 6.30 to-morrow morning to say if the man is alive or dead?"

AN A POSTERIORI ARGUMENT FOR PSYCHOTHERAPY.

WE find the following instructive story in an unexpected place, that organ of "occult and mystical research," *Light*. Our contemporary cites the story because it is recorded in "a

very serious—in fact, an eminently religious—American journal." It is said that Dr. Weir Mitchell gave a hysterical young lady a book on psychotherapy, with the advice to study it and cure herself. About a fortnight later the famous neurologist received a note from his patient in which she said: "That book is a prize. The other day I had an attack of the old sort—laughing and crying together—and the trouble was brought to an end in two minutes simply by the use of the book. Mamma spanked me with it." This case opens up a new use for psychotherapeutic and Christian Science literature. The books might be bound with a view to the special mode of application indicated.

A NOVELTY IN GYNAECOLOGICAL NOMENCLATURE.

In the May number of the *London Hospital Gazette* it is stated that a short time ago a patient attended an out-patient department with a card bearing the legend "Virginity." It may be believed that an inflamed virginity is a troublesome affection, but until Mrs. Eddy has fully revealed her method of propagation of the human race in a spiritual fashion, there is always a hope that it may find a natural cure.

"IN THE NAME OF THE PROPHET—SOAP"

MESSRS. JOHN KNIGHT, Limited, write: Our attention has been called to the leader in your issue of May 7th, under the above heading, and as we should much regret if by publishing the letter referred to we have unwittingly trespassed, we consider it only right that we should inform your readers that although the letter was quite unsolicited by us and we considered it contained Dr. Forbes-Ross's permission to make whatever use we cared to of it, we withdrew its publication on hearing from Dr. Forbes-Ross that he did not intend it for publication, and this we did all the more readily on becoming aware of the views expressed by the President of the Royal College of Surgeons contained in a letter Dr. Forbes-Ross sent us for perusal. We need hardly add that we much regret any inconvenience that may have been caused through a misapprehension on our part.

* * In addition to the cleansing virtues which it may be presumed to possess, the soap manufactured by Messrs. John Knight, Limited, would seem to have the peculiar property of producing, both in those who make it and in some at least of those who use it, a state of innocence which in these days of villainy, as Falstaff says, is as rare as it is enviable.

QUININE IN SYPHILIS.

T. A. P. writes: I wonder whether it has occurred to any other medical practitioner as it has to me that since quinine is a deadly poison to the malarial parasite there is a presumption that it would be also to another protozoal parasite, the *Spirochaeta pallida*. I have seen no reference to such a treatment of syphilis, and am not aware whether any trial of it has been made. I have seen much opportunity of dealing with it, a fair trial. Since it occurred to me I have had only one opportunity of administering it in syphilis, and that to a case already showing secondary symptoms. I did not dare to withhold mercury, but gave concurrently 2 grains of quinine three times daily. The case, which promised to be severe, ran an exceptionally favourable course, and I was particularly struck with the absence of cachexia and a positive improvement of the patient's complexion. I should like to see a recent case kept in a condition of cinchonism as long as it could be borne and the subsequent history watched. I venture to make this crude suggestion in the hope that some one more favourably situated than I am may be led to give it a fair trial.

THE EQUALIZATION OF COEFFICIENTS.

THE following sample of solution of a problem in pathological algebra has been sent to us by a lady at Oxford:

I happened to overhear the following, and thought you might like to use it in your paper:

Younger Sister: Yes, I do like him; I almost think I would like to marry him.

Elder Sister: "My dear, No! Why, his mother died of consumption."

Younger Sister: "Well, so DID MINE."

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An Address ON VOLVULUS.*

BY
HERBERT F. WATERHOUSE, M.D., C.M.EDIN.,
F.R.C.S.ENG.,

SURGEON AND LECTURER ON SURGERY, CHARING CROSS HOSPITAL;
SENIOR SURGEON, VICTORIA HOSPITAL FOR CHILDREN;
EXAMINER IN SURGERY, UNIVERSITY OF LONDON.

I HAVE chosen Volvulus as the subject of my remarks, for the reasons that this morbid condition is, I am convinced, by no means so rare as is generally supposed; that it is not often diagnosed prior to opening of the abdomen; that it is, in my opinion, the most fatal of all the many varieties of intestinal obstruction, although if treated in good time its mortality should be far less than it now is, as operation in the early stages of the affection is at least as likely to prove satisfactory as laparotomy for any other variety of intestinal obstruction; and, lastly, that it will afford me the opportunity of making some observations on the subject of mechanical intestinal obstruction.

We must at the outset distinguish between two great classes of intestinal obstruction: (1) those in which there is mechanical obstruction only, and (2) those in which to mechanical obstruction there is added strangulation of the intestine. In the latter case the vitality of the bowel wall is seriously impaired, with the result that necrosis, with permeation of the strangulated segment of bowel by infective microbes, takes place, with or without perforation of the intestine, and thus septic peritonitis arises. This is practically constant in volvulus unrelieved by treatment, in which condition the later symptoms owe their existence chiefly to infective peritonitis rather than to mechanical obstruction. A few hours' delay in relieving the obstruction may do little harm in a case of pure mechanical obstruction, while they may make all the difference between life and death in one such as volvulus, in which the lesion is obstruction *plus* strangulation.

The subject of volvulus has impressed itself upon my mind owing to the fact that within the past six months I have seen, I believe, no less than five cases of this lesion, one of which was a combined volvulus of both small and large intestines, so that I have encountered during this short period six examples of intestine rotated round its mesenteric axis. One case I admit recovered without operative treatment, and you may therefore feel some doubt about my diagnosis, but even if we exclude this case it is remarkable that so many examples of volvulus should have occurred in so short a time in the practice of a single surgeon.

Two distinct varieties of volvulus must be mentioned. In the more common variety the intestine (commonly the large bowel) is rotated around its mesocolic or mesenteric axis in such a manner that the lumen of the intestine is obstructed. In the rarer variety, of which the above five cases offer one example only, the small and the large intestine are both rotated around their mesenteric and mesocolic axes, so that a double or compound volvulus results with symptoms more urgent than in the more frequent variety.

Volvulus most frequently involves the sigmoid colon, and it will be noticed that this segment of the intestine was affected in four out of the five cases mentioned. More rarely the caecum and commencement of the ascending colon constitute the intestinal segment concerned; this was the case in one only of these cases. Still more rarely is a volvulus of the small intestine observed; this was noticed once only, and then in combination with volvulus of the sigmoid flexure.

Volvulus of the Sigmoid Flexure.

This, by far the most frequent form of volvulus, is found either uncomplicated—that is, the sigmoid colon is twisted upon its mesocolic axis (three instances)—or in combination with a volvulus of the small intestine (one case).

About 75 per cent. of all cases of volvulus are instances of the sigmoid colon rotated around its mesocolic axis.

The so-called sigmoid flexure has, as Sir F. Treves has remarked, a greater resemblance to the capital letter Ω .

The rectum of our student days has, by modern anatomists, been shorn of its first part, which is now included with the sigmoid colon under the name of the omega loop.

This omega loop varies more in length than any other structure in human anatomy. On the operating table I have known it as short as 7 in. and as long as 26 in. It will be observed that in cases in which the sigmoid colon approximates to the length of its mesocolic attachment to the posterior abdominal wall no volvulus can occur, whilst in instances in which the sigmoid colon is several times the length of its parietal attachment there is a definite predisposition to the occurrence of a twist of the colon around its mesocolic axis. In a long omega loop the comparatively narrow pedicle of attachment serves as a predisposing cause of volvulus. The nearer the two extremities of the omega loop approach one another, and the longer the segment of bowel, the more likely is rotation around the narrow mesocolon to occur. Elongation of the sigmoid colon might naturally be considered to be of congenital origin, but against this view I may state that during many years' service on the staff of a large children's hospital I have never met with a case of volvulus of the sigmoid flexure in a child.

I am convinced that the common cause of elongation of this segment of the large intestine is constipation. The omega loop laden with hardened faeces drops down into the cavity of the pelvis, and the weight of the faecal mass tends to lengthen the distance between the parietal attachment of the mesocolon and the bowel, and at the same time to approximate the two ends of the omega loop. The mere weight of the faecal content of the omega loop has much to do with starting the rotation of the intestine around its mesocolic axis.

Two varieties of rotation are possible. In that which is of by far more frequent occurrence the upper part of the omega loop travels downwards and forwards anterior to the lower part of the loop, so that the end of the descending colon touches and lies anterior to the upper rectum (type *rectum en arrière*, Potain). In the far less frequent variety the upper part of the omega loop passes downwards and backwards, so that the end of the descending colon is in contact with and behind the commencement of the rectum (type *rectum en avant*).

The extent of rotation of the colon around its mesocolic axis is very variable and may be from about half a circle—that is, an angle of 180 degrees—to three complete rotations. Anything short of 180 degrees will not produce symptoms of total obstruction or of strangulation of the intestine. It is commonly taught that once a volvulus has occurred it cannot replace itself spontaneously. This, I am convinced, is an error, and I shall adduce evidence in support of my contention. In cases in which reposition does not soon take place the volvulus rapidly becomes greatly distended with gas, as it is a closed sac with putrescent contents; at the same time its walls suffer intense vascular engorgement. The longer the volvulus is allowed to remain unreduced the more difficult is it to replace the bowel. Even if this be accomplished, the volvulus recurs immediately. No force must be used to untwist a volvulus, otherwise the damaged bowel will assuredly burst. An incision must be made into the tense intestinal loop to give exit to the distending gas and contained faecal matter; reduction of the volvulus is then easily accomplished and the twist does not recur.

A volvulus of the sigmoid colon may attain enormous dimensions. I have seen one which reached nearly to the liver, and overlay and thus hid from view the whole of the rest of the intestine.

The intestinal wall is always seriously damaged. In colour it may be dark violet-red to black; it is always swollen and very friable. Linear ruptures of the peritoneal and muscular coats are commonly seen, but the resistant submucous layer saves the mucosa from participating in the tear. In the worst cases numerous spots of gangrene of the size of a sixpenny piece, and affecting the whole thickness of the bowel wall, may be observed; in rare instances they lead to perforation of the bowel. Peritonitis always occurs if the case last sufficiently long, owing to the fact that the damaged intestinal wall is

*Delivered to the Norwood Division of the British Medical Association.

permeable to micro-organisms from inside the twisted loop of bowel, and it rapidly becomes generalized.

Volvulus of the Sigmoid Colon Combined with Volvulus of the Small Intestine.

One example of this rare condition was met with in my five recent cases. A segment of ileum with a long mesentery had apparently passed across the sigmoid colon at its lower part. It lay external to the line of the omega loop. The latter had twisted around the pedicle of the small intestine coil, and presented the normal aspect of a volvulus of the omega loop. I was fortunately able to untwist the volvulus, and the patient is now well. This is the most extraordinary case of volvulus that I have yet seen.

The patient, a woman, was admitted into Charing Cross Hospital on December 26th, 1908, with severe symptoms, enormous abdominal distension and constant vomiting. Enemata given every hour soon caused abatement of the symptoms and she desired to be discharged, thinking herself cured. Flatus and even fluid faeces were passed, but a lump could still be felt. Thirteen days later, on opening the abdomen, the above-described condition was found. The rotation in the case of the sigmoid volvulus was through an angle of 180 degrees, and the volvulus was held in this position by an adhesion to the left Fallopian tube. The loop of ileum was rotated through an angle of 130 degrees only.

This case lends support to the views of von Samson, who holds that a half-turn volvulus—that is, the rotation through an angle of 180 degrees—does not occlude the lumen of the bowel or produce symptoms of strangulation of the intestine.

Volvulus of the caecum and lower part of the ascending colon was found in one of my five recent cases.

It occurred in the case of a man admitted into my ward at Charing Cross Hospital, January 7th, 1909, suffering from carcinomatous stricture of the sigmoid colon. In this patient the distended caecum was rotated along with the lowest 3 in. of the ascending colon on its mesocolic axis through an angle of 360 degrees (a complete circle). The volvulus was a huge one and strangulation had lasted for more than four days. The wall of the caecum exhibited numerous round patches of gangrene, and for this reason, after the damaged segment of intestine had been incised, it was found necessary to leave it outside the abdominal cavity.

Volvulus of the Small Intestine.

In this variety the rotation may be from left to right or from right to left, and the loop of bowel, commonly the lower ileum, is twisted on its mesentery through a complete circle.

Incidence of Volvulus.

Volvulus is stated by various authors to be responsible for from 3 to 4 per cent. of all cases of intestinal obstruction. In my practice its frequency has been at least double that given above. In about three-fourths of all cases the sigmoid colon was the segment of intestine involved.

The condition is far more common in the male than in the female, fully 80 per cent. occurring in the former sex. The most frequent age is 50 to 60 years.

Volvulus is only possible where the mesentery or mesocolon is long. Hence its frequency in the sigmoid flexure, in the ileum, and in the caecum when this part possesses a mesocolon.

Spontaneous Reduction.

Spontaneous reduction of a volvulus is an event that is, I am convinced, by no means infrequent. I have once seen it occur. I performed ovariectomy in a thin woman, and, as the result apparently of the sudden removal of the support afforded by the tumour, the omega loop rotated on its mesocolic axis through an angle of 180 degrees. I was about to untwist it when, to my surprise, the twist undid itself spontaneously. I think that in many cases volvulus of the omega loop of mild degree takes place, occasioning sudden abdominal pain in the left iliac fossa, and is reduced either spontaneously or as the result of rectal enemata. It will be observed that in one of my cases I believe the recent volvulus to have been reduced by enemata. BROTHIE'S CASE.

This case occurred to a friend of mine, seen in consultation with Drs. Carruthers and Douglas of Upper Norwood. To the kindness of my friend, Dr. S. W. Carruthers, I am indebted for the account of the history of the case. "About 11.30 a.m. the patient was seized with intense abdominal pain, which rapidly abated sufficiently to allow him to continue what he was doing. An hour later the pain again became agonizing, and the patient

was writhing on the floor when I (Dr. Carruthers) saw him. Countenance anxious and pale, pulse 85. Patient located the pain definitely at a point in the left iliac region. The abdomen was not distended nor rigid. No flatus had been passed since the original paroxysm of pain. Patient was at once put to bed. No opium was given, for fear of masking symptoms. Two soap-and-water enemata were given in rapid succession. The first (30 oz.) brought away a small solid motion from the lower part of the rectum; the second (40 oz.) brought away nothing further, but gave the patient immediate sense of relief. It was followed, however, by sharp vomiting. Thereafter no severe paroxysm of pain, no flatus passed, and the pain had now become dull, not much more than acute discomfort, with occasional gripping. Enemata were continued, and the patient vomited twice. At 6.30 p.m. Mr. Waterhouse and Dr. Douglas saw the patient with me in consultation. Our unanimous opinion was that it was a case of volvulus of the sigmoid flexure, which it was hoped had been reduced by the enemata already administered. Some tenderness on pressure was elicited over the sigmoid flexure. It was decided to continue the use of enemata and to await events for a few hours. At 10 p.m., after discussion with Mr. Waterhouse over the telephone, it was decided to run the risk of postponing abdominal exploration, owing to the cessation of vomiting and general *bien être* of patient. Enemata given at intervals during the night, nothing but water by mouth. Between 7 and 8 a.m. flatus was passed several times. Fluid food was now allowed, and calomel was given, 3 grains hourly, after a second consultation with Mr. Waterhouse at 5 p.m. Bowels acted next morning, a fairly copious stool, and recovery was thereafter uneventful."

Can there be any doubt that this was an instance of volvulus of the sigmoid flexure untwisted by the second enema administered by Dr. Carruthers, which, though it brought away nothing, gave instant relief to the patient? I have no doubt on the subject, though I admit that I cannot prove my contention. I have come across several such cases, and I believe them to be far from uncommon.

Symptoms.

Volvulus is always of sudden onset and commonly commences in a patient in sound health. Abdominal pain about the seat of the twist is constant, it is commonly severe and continuous, but may be colicky; the constant pain is due to the twist, the exacerbations to the violent increased peristaltic movements above the volvulus. The other symptoms depend largely upon the locality of the volvulus. If it affects the small intestine the symptoms are those of acute intestinal obstruction. If, on the other hand, it occurs in the lower part of the large intestine the immediate symptoms of obstruction may be, at first, comparatively trifling. Vomiting is urgent and constant in the former case, whilst it may never occur in volvulus of the omega loop. My last case of volvulus of the caecum did not vomit either prior to or after the operation.

In volvulus, as in other abdominal diseases, tenderness is a far more valuable localizing symptom than pain. The latter may be referred, the former corresponds to the situation of the lesion. Distended coils of intestine may exhibit violent peristaltic movement which may be seen to cease abruptly at a definite spot. Local meteorism may enable a diagnosis to be made, and such localizing symptoms are often of real value. Soon the twisted intestine and mesentery undergo venous engorgement and cedema, and both exude plastic lymph which may glue the volvulus to adjacent coils of intestine, and thus present a formidable obstacle to reduction of the lesion. Not until the vitality of the bowel wall has been so impaired as to permit of its permeation by microbes from inside the strangulated bowel will septic peritonitis commence, but when once started this infective process spreads rapidly and soon becomes diffuse. Extreme intestinal distension is chiefly noted in cases of volvulus and of generalized septic peritonitis. As a point of differential diagnosis, it may be mentioned that tenderness on pressure is far more marked in the latter condition.

The onset of gangrene of the twisted bowel is indicated by the pulse becoming rapidly weak and quick and by the septic appearance of the patient.

A hyper-resonant note may frequently be elicited over the distended volvulus. The diagnosis of volvulus I have found far easier in the early stages of the malady than when the characteristic symptoms are concealed in great measure by the general tympanitic distension of the abdomen and the onset of peritonitis. In the diagnosis of volvulus it must be remembered that the onset is very sudden, that the obstruction of the intestine is complete, that the volvulus can often be felt as a tense tumour (resembling an india-rubber ball intensely inflated) which

is always tender on pressure, hyper-resonant on percussion, and commonly the seat of pain.

A volvulus that is very recent and in which no secondary changes have occurred in the twisted mesentery may, I am convinced, be reduced occasionally spontaneously, and more frequently by the aid of copious rectal enemata, especially if the rotation has only been through half a circle or thereabouts. When, however, the volvulus has been in existence for some time, and the rotation corresponds to a complete circle, or more, and when secondary changes have occurred in the mesentery and intestinal loop, then death from obstruction and septic peritonitis, otherwise inevitable, can only be avoided by opening the abdomen and undoing the twist. The more complete the twist and the higher up in the bowel the volvulus the more urgent is the danger.

Treatment of Volvulus.

The loop of bowel twisted upon its mesenteric axis provokes vigorous peristaltic movements in the intestine above it. The first indication in treatment is to calm this dangerous peristalsis, which tends markedly to aggravate the existing obstruction and strangulation. No food must be given by the mouth, but I never forbid water, as the suffering of the patient is greatly augmented by the intense thirst due to frequent vomiting, so often a prominent symptom in intestinal obstruction of all kinds. Should the ejecta consist largely of bile or the contents of the small intestine it adds greatly to the patient's comfort to wash out the stomach either by the stomach tube or, as I prefer, by giving water freely by the mouth. Many authorities advise that the exaggerated movement of the bowel above the site of obstruction should be calmed by opium administered by the stomach or by a hypodermic injection of morphine. I earnestly beg of you never to allow yourselves to be persuaded in any case of intestinal obstruction to use this, in such cases, treacherous and deceptive drug. I yield to none in my admiration for morphine as a mitigator of pain, but in intestinal obstruction I regard it as a deadly drug. How often have I at the bedside, racking my brains to make a diagnosis in a case of acute abdominal trouble, regretted that I could not discount the effect of even a single dose of morphine! Over and over again have I felt that I might have made a more correct diagnosis and by timely operation have been enabled to save life had it not been that my judgement was obscured by the statement both of the medical attendant and of the patient that the condition of the latter was evidently improving, as he was certainly better than he was six or eight hours previously. I have in many such cases neglected to make full allowance for the effect of even a single dose of morphine, and have fallen in with the request to wait to see how the patient was the next day, to learn at the operation that I had waited too long. Pray do not think that I am unreasonable in this matter. I fully understand that the practitioner's duty in the eyes of his patient is to give relief to his most urgent symptom—that of intolerable pain—and that a hypodermic injection of morphine will accomplish this. I beg of you, however, to remember that an operation followed by death will bring discredit on the surgeon, and that in common fairness to him he should be allowed to see the patient as he really is rather than with his sensibility to pain and tenderness annulled by a dose of morphine. If I, as a surgeon, were asked how I would define a first-rate practitioner, I would be inclined to answer: One who does not administer morphine in acute abdominal disease until a fairly confident diagnosis has been arrived at.

I am a profound believer in the value of rectal enemata in volvulus. I am convinced that I have seen many cases both of volvulus and of intussusception which have been reduced by the use of repeated rectal enemata. I admit that clear proof of this is wanting, but I have no doubt in the matter. I would draw special attention to the value of the genu-pectoral position during the administration of enemata. I am certain that I have been enabled more than once to reduce a volvulus of the sigmoid colon by repeated enemata administered in this position in cases in which enemata administered in the dorsal position had failed to accomplish reposition. My belief is that cases of volvulus of the sigmoid colon which can be reduced by rectal enemata are those only which are of recent origin

(less than twelve hours), and in which the angle of rotation is less than 270 degrees. You will remember that we have seen that there are two varieties of volvulus of the omega loop. In the more frequent, in which the upper part of the loop travels downwards, forwards, and inwards anterior to the lower part of the loop, it is clear that distension of the lower segment of the bowel will have a tendency to undo the twist. In the less frequent variety, in which the upper part of the loop passes downwards, backwards, and outwards posterior to the lower end of the loop, distension of the lower bowel will tend rather to aggravate the twist.

I have clinical evidence for this. In two cases of volvulus of the sigmoid flexure I found after opening the abdomen that the volvulus in the first-mentioned variety was readily reduced by rectal injection, which failed in the example of the latter variety, and in fact seemed to render the twist tighter than before.

What is the mortality of volvulus? I cannot tell, but I know well that it is appallingly high. It is certainly the most fatal form of intestinal obstruction, and yet it ought to be one of the least fatal. I am convinced that the cause of the awful mortality is that the operation is, in almost every case, postponed until the strangulated intestine is beyond recovery.

Few operations have yielded me happier results than those for early volvulus of the sigmoid colon; none more terrible consequences than those in which I have been called to a similar volvulus on the fourth, fifth, or sixth day subsequent to the onset of the condition, to find the strangulated bowel gangrenous and diffuse peritonitis already developed. One great reason for the delay that has occurred is the fact that in about half of my cases of volvulus of the sigmoid there has been no vomiting, and the case has therefore appeared to the medical attendant not to be one of urgent intestinal obstruction.

The two conditions that make for success in the treatment of volvulus are immediate diagnosis on the part of the practitioner and immediate reduction of the volvulus by the surgeon. Should either of the two fail in his part, the probable result will be the death of the patient.

In very recent volvulus, especially of the omega loop, reduction may be accomplished by rectal enemata in a certain proportion of cases. Should they fail, and this will frequently happen, the surgeon must in every instance open the abdomen. The incision should, I think, in every case, be made in the linea alba, for the reason that by a median incision every viscus in the abdomen may be examined.

There are few things more distressing than, after making an incision in the left inguinal region for the relief of a sigmoid volvulus, to discover that the caecum has burst owing to over-distension, and that a second incision is called for to deal with this terrible lesion. I speak from painful experience. The abdomen having been opened in the mid-line the caecum is in all cases of intestinal obstruction to be examined immediately. Its condition at once gives information of great value. In volvulus the caecum itself may be the seat of the lesion. If the caecum be empty the obstruction is obviously in the small intestine; if it be distended, in the large bowel. In all cases of two or three days' standing there will be found marked distension of the intestine above the site of the obstruction. The volvulus owing to its huge size will be readily found, and must if possible be brought outside the abdominal incision. This, owing to the undue length of the mesentery (or mesocolon), I have always been able to accomplish. The next step is to replace the twisted bowel into its usual position. In the majority of cases this reposition is by no means a simple matter. Should the volvulus be of only a few hours' duration the adhesions will be slight or absent. Untwist the strangulated loop in a direction the reverse of that in which the twist occurred and deal gently with it. In the majority of instances the bowel loop will immediately spring back into its former vicious position. In almost every case I have found it necessary to open the distended loop of bowel on its antimesenteric aspect in order to evacuate the gas and faecal contents. Not only must the contents of the volvulus be allowed to escape through this incision in the bowel, but the distended intestine above the volvulus must be evacuated of its putrefactive accumulation in order to prevent the risk of auto-infection. This evacuation of the bowel above the constriction is notably aided by irrigation,

of the distended coils of intestine through the opening. Once the volvulus has been emptied of its contents reduction of the twist is almost invariably possible, and in no instance have I then known the twist to recur. Many surgeons now advise closing the incision in the bowel and the return of the latter into the abdominal cavity. I admit freely that this is the ideal course to pursue, but I confess that I have never dared to follow it. I have always ligated the margin of the incision in the bowel to a glass tube and drained the distended and damaged bowel for several days. In most cases in which the patient has recovered, the fistulous opening in the bowel has closed spontaneously at the end of some weeks.

In the worst cases it is obvious that gangrene of the strangulated loop of bowel has occurred, and the condition of the patient is always extremely perilous. The ideal treatment would appear to be resection of the gangrenous intestine and union of the proximal and distal segments of the bowel either by end-to-end or by the far safer lateral anastomosis. This treatment I have never ventured to carry out. In every case of gangrenous volvulus that has come under my care the condition of the patient has appeared to me too desperate to warrant a prolonged operation. I have always, in such cases, been content with bringing the gangrenous bowel and a piece of healthy intestine on each side of it outside the abdominal cavity. In such cases as have recovered I have performed resection subsequently. Making two bites at a cherry may be in general a bad practice, but in surgical procedures of grave moment in which the life of the patient literally hangs in the balance, the operation *à deux temps* is, in many instances, the safer for the patient, and the one that the surgeon is therefore bound to follow.

Once the volvulus has been reduced, can any steps be taken to prevent the recurrence of the condition? In one of my recent cases, under the care of Dr. J. H. E. Brock, the patient, a man aged 31, had had his life placed in jeopardy no less than four times in thirteen months owing to recurrent volvulus of the sigmoid colon. I have endeavoured to convince you that the all-important factor in the establishment of a volvulus is undue elongation of the mesocolon or mesentery. Clearly it follows from this that the object of treatment directed to the prevention of recurrence of the volvulus is to shorten the elongated mesocolon or mesentery. Such an object I have endeavoured to obtain, I think with success, by introducing silk sutures at right angles to the bowel from the intestinal attachment of the mesentery or mesocolon to its root and then tying these. I have thus puckered the mesentery or mesocolon parallel to the axis of the intestine, with the result that the mesocolon or mesentery has been shortened and recurrence of the twist prevented. This measure is, I am convinced, far superior to that commonly adopted of suturing the coil of intestine to the abdominal parietes. It must be the experience of all surgeons that peritoneo-peritoneal adhesions almost invariably either stretch out to form long thin cords, which must constitute a constant danger of strangulation to any coil of intestine that may happen to be ensnared by them, or give way entirely, thus in the case of volvulus permitting the recurrence of the twist of the bowel.

In conclusion, may I remark that I have largely confined my remark to volvulus, but I hope that my observations may be taken as applicable to other forms of intestinal obstruction? It may be objected that I have taken a lesion of very rare occurrence as my topic; but I would urge that volvulus, certainly in its slighter degrees, is by no means so rare as is generally supposed. As to its rarity, my house-surgeon, Mr. E. H. Hogg, M.B., B.S. Lond., can bear me out in my statement that between January 5th and 12th he saw with me no fewer than 4 cases in which the intestine was twisted upon its mesocolic (three times) or mesenteric axis. I know no more delusive abdominal lesion, none more difficult of diagnosis, and none more fatal, owing chiefly to imperfect and tardy diagnosis, than volvulus. Some of you may say you have never come across a case of volvulus in practice, or you have seen but one or two. Within a few days you may encounter your first, second, or third case of volvulus. If so, pray bear in mind my warning. You will probably in such case misconstrue the symptoms. You will think of other conditions. Should vomiting be absent, as is not

uncommon in volvulus of the sigmoid, you will probably deem the case one of no urgency, and you may wait until the hour of successful intervention has passed. If what I have said prove the means of helping you to a correct diagnosis and induce you to have resort to timely operative treatment, with the result that your patient's life is saved, my object will have been attained.

An Address

ON THE

IMMEDIATE AND ULTIMATE RESULTS OF THE OPERATION OF GASTRO-ENTEROSTOMY FOR GASTRIC AND DUODENAL ULCER.*

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THE immediate results after gastro-enterostomy are wonderfully good when we consider the severity of the operation; still I think that those writers who give the mortality at only 1 per cent. rather underestimate the risk, and such a satisfactory result has only been obtained by good fortune and careful grouping of cases, as well as by good surgery. In a series of 132 operations which I have performed for ulcer of the stomach and duodenum (excluding cases of perforation) there have been 6 deaths, or a mortality of a little under 5 per cent. The causes of death in the fatal cases were as follows: Shock after Roux's operation in an exhausted patient, 1 case; shock after operation for repeated profuse hæmorrhages, 1 case; exhaustion after secondary operation for vicious circle, 1 case; syncope after hæmorrhage from ulcer ten days after operation, 1 case; rupture of the ulcer three days after operation, 1 case; and pulmonary embolism on the third day after operation, 1 case.

I consider that the last three fatalities were entirely outside the control of a surgeon, and that the case of death after operation for repeated hæmorrhage must be considered as occurring in spite of rather than in consequence of the operation. In the remaining two cases death was certainly hastened by the operation, although recovery was impossible had no operation been performed. My experience makes me hesitate to assert that the risk of a gastro-enterostomy is practically nil.

While considering the immediate mortality of the operation we ought to bear in mind the mortality of gastric ulcer under medical treatment. There seems to be a great difficulty in estimating this, and it is stated to be from 20 to 50 per cent. by various surgical writers. I cannot but think that even the lower estimate is probably too high, and that a mortality of 10 per cent. would be more reasonable to assume when comparing the results of surgical with those of medical treatment.

So much for the immediate mortality after an operation for gastric or duodenal ulcer. In the non-fatal cases the improvement, with very few exceptions, is wonderful; the patients feel better than they have done for years, and are able to eat and digest any kind of food. This improvement is maintained so long as the patient remains in the nursing home or in hospital, and, were we only considering the condition of patients within a month or two after an operation, we could positively affirm that over 90 per cent. of the cases were completely cured.

The point I wish to discuss is, What is the condition of these apparently cured cases some years after the operation?

Before doing this, I should like to call your attention to the physiological conditions attending a gastro-enterostomy in the case of a simple ulcer. When the opening is first made, the mucous membrane at the edges of the opening becomes congested, partially blocking the opening, and consequently we may have vomiting for the first twenty-four or thirty-six hours; after this the swelling of the mucous membrane subsides and a patent opening is left. Under these conditions, dilatation of the stomach, whether caused by cicatricial contraction or by spasm of the

* Delivered before the Kensington Division of the British Medical Association, January 21st, 1909.

pylorus, is cured, and in the absence of dilatation, with the consequent stretching of its base, the ulcer readily heals. When the ulcer is healed, the spasm of the pylorus ceases and the pylorus again becomes pervious; when this is the case, it is quite certain that the food will pass through the pylorus and not through the gastro-enterostomy opening; this has been proved both by experiments on animals and by clinical experience. One reason for the food choosing the pylorus rather than the gastro-enterostomy opening is that when the stomach contracts on its contents, the muscle fibres tend to form a sphincter round the gastro-enterostomy opening; the other reason is the tendency for all secretions to pass by the natural way if this is not obstructed by a stricture. We shall therefore find, after an ulcer has healed, that the gastro-enterostomy opening, having fallen into disuse, will tend to contract, and may even become completely occluded; in fact, at best it will only act as a safety valve in the case of a fresh spasm of the pylorus.

In cases in which the gastro-enterostomy opening closes, the operation will not have been of very much more avail than successful medical treatment; indeed, it will have acted in very much the same way as a suprapubic cystostomy does in a case of cystitis. These physiological considerations will explain a certain number of cases where recurrence of the symptoms takes place after gastro-enterostomy, and we may conclude that cases of gastric ulcer, in which there is no cicatricial contraction about the pylorus, are not likely to derive permanent benefit from gastro-enterostomy alone. When the ulcer is in the neighbourhood of the pylorus a certain amount of cicatricial contraction of that orifice is bound to occur, and so the gastro-enterostomy opening is not likely to fall into disuse, and consequently the cure of the ulcer will be permanent.

In cases of duodenal ulcer it is quite certain that the cure effected by a gastro-enterostomy is only likely to be a permanent one when severe cicatricial contraction of the duodenum has previously taken place, and in cases without cicatricial contraction there is a very grave risk of recurrence of the ulcer when the gastro-enterostomy opening has ceased to be functional.

In the same way gastro-enterostomy is not a permanent cure for gastritis without ulcer, as the symptoms of gastritis, together with the spasm of the pylorus are quickly cured by the physiological rest given to the stomach, and when these symptoms are cured the gastro-enterostomy opening ceases to act.

In neurotic dyspepsia the operation is not only useless but it is often very harmful, and likely to be followed by results most distressing to both patient and surgeon. The two most pronounced failures I have had were operations on young women, whose first operations had been performed before I saw them, and in whose cases I doubt that an ulcer ever existed.

Taking the operation of gastro-enterostomy alone, I have performed 104 operations on 101 patients (63 females and 38 males); 6 patients died from causes already described, 3 patients had a complete return of their symptoms, necessitating a second gastro-enterostomy; of these, 2 were cases of duodenal ulcer, and the recurrence of the ulcer is explained by my omitting to occlude the pylorus at the time of the gastro-enterostomy. Five patients who were cured by the operation have since died, 2 of bronchopneumonia, 1 from recurrence of a duodenal ulcer after two years and a secondary operation, 1 from cause unknown, and 1 after an interval of two years from cancer of the stomach. In the last case it is of course a question whether the thickened ulcer found at the pylorus at the operation was already malignant, but the absolutely good health enjoyed by the patient for eighteen months leads me to consider that the carcinoma was of more recent origin. I have been unable to trace 17 of my cases, no replies having been received to my letters of inquiry.

Out of 81 cases which I have traced, 5 have since died, and I have divided the remaining 76 cases into 5 groups.

In the first group the result is absolutely satisfactory, the patients feel better than they ever did; the following answer to my inquiry expresses the condition of a patient four years after a gastro-enterostomy: "I have no complaint to make; no sickness, no pains; eat and drink well. Many thanks!" In this group I have put 46 cases, or 55 per cent. of the cases which could be traced.

In the second group I place patients whose general

health is almost perfect, but who are liable to attacks of vomiting (nearly always bilious) which occur at irregular intervals. The vomiting often comes on after a chill, and is not dependent on any error of diet; directly the vomiting ceases they feel quite well again, and at other times can eat or drink anything. The explanation of this condition is that it is either caused by a chill, or by a temporary twist in the jejunum just below the anastomosis. In the same group are included cases who occasionally suffer pain after food, such pain not being severe and not depending on any error of diet. In some cases I have suspected the presence of adhesions as the cause, and in others I have suspected a neurotic element. In one case in which I suspected adhesions, the pain ceased after several injections of fibrolysin. In this group I have placed 21 cases, or 26.5 per cent. of the cases which could be traced.

In the third group I place cases who consider that they have derived benefit from the operation, but who still have occasional pain and vomiting, and whose general health is not much improved. In this class I am glad to say that there are only 5 cases.

In the fourth group I place two cases in which the results have been unsatisfactory, but who are still under treatment. In both these cases the pain and vomiting recurred within a couple of months of the operation, and an occlusion of the pylorus was performed in each case six months later; in one case this completely cured the stomach symptoms, in the other the vomiting recurred as soon as the patient got up. The case in which the stomach symptoms were cured suffered severe pain over the caecum, and the ascending colon became dilated; at a subsequent operation a band was found pulling on and obstructing the transverse colon. All pain ceased after division of the band, but the case is still under treatment. In the second case, in which the pain and vomiting recurred after the occlusion of the pylorus, a subsequent operation revealed miliary tubercles scattered over the upper part of the small intestine, omentum, and parietal peritoneum.

In the fifth group I have placed two cases whose condition I consider unsatisfactory. Both cases had undergone stomach operations before coming under my care, and in both I suspect that a wrong diagnosis was made in the first instance, and that they were cases not of gastric ulcer but of nervous dyspepsia. One case has had three operations, and is as bad as ever; the other has had seven operations, after each of which she has been apparently cured for two months, and then the pain and vomiting have returned. In addition to these two last groups of unsatisfactory cases, I ought to tell you that five other cases at first were not satisfactory, but these have been cured by a secondary operation.

I have not made any attempt to conceal any of the unsatisfactory results after gastro-enterostomy, as I wish to lay the case for the operation fairly before you. The successes amount to about 85 per cent. and the failures to about 10 per cent. This is a most satisfactory position.

Some of the earlier cases of incomplete cure have undoubtedly been due to imperfection in the technique of the operation, and the results of future cases are likely to be much more satisfactory. In my early cases, a loop of jejunum was left between the duodenum and the gastro-enterostomy opening, this in 4 cases was the cause of bilious vomiting, which was cured by an entero-anastomosis, and it may account for the occasional vomiting observed in other cases. I now always perform the so-called "no loop" operation in which the jejunum is attached to the stomach as close as possible to its commencement, so that the tendency to bilious vomiting is reduced to a minimum. Again, in the early cases the pylorus was never divided or occluded at the time of the gastro-enterostomy, with the consequence that in cases where there was no cicatricial stenosis of the pylorus the gastro-enterostomy has ceased to be of any use. I now make it a practice to occlude the pylorus in every case of gastro-enterostomy where the ulcer is situated at any distance from the pylorus or in the duodenum. I have occluded the pylorus as a secondary operation in four cases, in two of which the result was completely satisfactory.

Some years ago I was inclined to consider that gastro-enterostomy was a specific for every disease of the stomach, and I performed the operation in some cases of simple long-continued gastritis with spasm of the

pylorus; these, however, I do not consider suitable cases for operation, and should be left to the physician. I now never do a gastro-enterostomy unless an ulcer or the cicatrix of an ulcer can be found in the stomach or in the duodenum, and if I undertake an operation under a mistaken diagnosis of ulcer and I fail to find an ulcer or any disease in the neighbouring organs, especially the gall bladder, I close the abdomen.

The most brilliantly successful cases undoubtedly are operations for cicatricial contraction of the pylorus, but in my opinion it is not wise to allow patients to wait for operation till well marked stenosis has occurred, with its accompanying dangers of extreme dilatation and food decomposition. Such delay may reduce the patient's strength so greatly before operation that the prospect of recovery is lessened. This was the case in 3 cases which ended fatally, and in 2 others which died within a few months of their return home.

A certain number of cases of gastric ulcer have other morbid conditions associated with the ulcer. The most frequent associated disease in my cases has been floating kidney, which existed in 6 cases: in 1 case the operation of nephrorrhaphy was done at the same time as the gastro-enterostomy, and in 3 cases it was performed on subsequent occasions; in 2 cases no operation has been done for the floating kidney. Gall stones were present in 1 case, and cholecystectomy was performed. Lastly, appendix adhesions existed in 3 cases, and in 2 cases the appendix has been removed at a subsequent operation.

With regard to the indications for the operation of gastro-enterostomy, I consider that it should be performed in every case of chronic gastric ulcer which has resisted medical treatment, or which has recurred after it. In forming the diagnosis of a gastric ulcer with a view to operation, I consider the following points are the most valuable: The existence of a tender spot at a fixed point in the epigastrium, pain after food with or without vomiting, the history of hæmatemesis or melæna, especially when this is repeated constantly; the presence of free hydrochloric acid in the stomach contents; and, lastly, evidence of some dilatation of the stomach. I make a rule of passing a stomach tube in every case and withdrawing some of the stomach contents for chemical examination; after this I distend the stomach with air through the tube. Excluding cases of gastroparesis, I consider that a stomach which extends one or two inches below the umbilicus is dilated.

The presence of dilatation is an absolute indication for gastro-enterostomy.

The operation is also indicated in every case of duodenal ulcer as soon as it can be diagnosed, as practically no case of duodenal ulcer is permanently cured by medical means, and a temporary improvement under medical treatment may be followed by fatal hæmorrhage or by perforation. The difficulty here is to make an accurate diagnosis of a duodenal ulcer. The most valuable signs are the presence of a tender spot just above and to the right of the umbilicus, sometimes accompanied by rigidity of the right rectus muscle; the existence of "hunger pain," which sometimes necessitates the patient always carrying food with him; pain following some hours after food; the presence of melæna and of unexplained anaemia.

In acute gastric ulcer the indications for operation are repeated severe hæmorrhages, which are threatening the patient's life; and, secondly, symptoms of acute pain and shock, suggesting that the ulcer is spreading deeply towards the visceral peritoneum, and that perforation is imminent.

I believe that an ulcer in any part of stomach or duodenum can be cured by gastro-enterostomy; but if the pylorus is not stenosed it must be occluded at the same time, otherwise the results are not likely to be permanent.

In estimating the value of gastro-enterostomy in gastric and duodenal ulcer, we ought to compare the results with those obtained by medical treatment. Most surgical writers are rather scornful of the results of medical treatment, and recently it has been stated that barely 25 per cent. of cases of gastric ulcer are cured by medical treatment. I think that such statements are grossly unjust and misleading, since they are compiled from records of hospital in-patients, and therefore deal only with the most severe cases of ulcer; moreover, they

include deaths from hæmorrhage and from perforation. Now the greater number of cases of gastric ulcer are treated as out-patients, and their mortality cannot be large, but there are certainly a number of relapses. I suppose that even the most sanguine physician would expect relapses in at least half his cases of gastric or duodenal ulcer, and so would not expect one-half of his cases to be permanently cured; I think that even my statistics show a great improvement over medical treatment, since 56 per cent. were absolutely cured and another 26 per cent. were in almost perfect health.

The knowledge that the greater number of patients on whom the operation has been done are delighted with their present condition and have practically been restored to complete health after years of suffering consoles one for the few cases which appear to derive little benefit, and enables a surgeon to honestly advise a patient with marked symptoms of chronic gastric or duodenal ulcer to submit to a gastro-enterostomy when medical treatment has failed to effect a cure.

A Clinical Lecture ON THE TREATMENT OF ACUTE APPENDICITIS.

DELIVERED TO THE 1908 POST-GRADUATE CLASS AT
ST. BARTHOLOMEW'S HOSPITAL.

BY R. COZENS BAILEY, M.S. LOND.,
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I AM constantly being asked, "Do you believe in operating during the acute stage of appendicitis?" and I propose to attempt to answer this question.

I have chosen this subject partly because I shall be able to show you cases in the wards at the present time which illustrate many of the points we shall have to consider, and partly because the idea seems to have gained ground that it is old-fashioned to wait, and that the newest and most up-to-date practice in connexion with the surgery of appendicitis is to treat the case as if it were, say, a strangulated hernia, and to operate always when and where an opportunity first presents—an idea which I can only regard as most mischievous. Appendicitis seems to have become more common and more fatal of recent years, and this rightly suggests all sorts of questions as to our altered manner of life, our increased luxuriousness, the quality and quantity of our food and drink, our possibly diminished resistance to the onslaught of micro-organisms, or the increased virulence of these. It also suggests the question, Can our better diagnostic powers have anything to do with the one fact, and our methods of treatment with the other?

One of the chief difficulties in connexion with appendicitis arises from the number of different conditions included under the term. Thus not only do inflammation and ulceration find a place under this head, but also perforation, gangrene from infection or thrombosis, impaction of foreign bodies, the formation of concretions, stricture, etc., and it need hardly be pointed out what confusion would arise if in other parts of the intestine the term "enteritis" was used to cover all these.

I can only mention this source of error but cannot suggest a remedy at present, for the appendix is such a comparatively unimportant structure physiologically, that interference with its functions in these ways gives rise to few distinctive symptoms, and its importance, from a surgical point of view, depends almost entirely upon the results it is able to produce in connexion with the surrounding peritoneum. It may be that further experience and the more accurate tabulation of symptoms will one day render it possible to diagnose more certainly the state of the appendix upon which the resulting peritonitis depends, and so enable a more exact prognosis to be given, and thus render easier the question of treatment; but at the present time the beginning of the attack affords little or no indication as to what will be its end.

Now, if the appendix be damaged the infection may remain confined to the interior of the organ and its walls,

or may spread to the surrounding peritoneum. In the latter case the results depend chiefly upon the virulence of the infecting agent, the resisting power of the peritoneum, the amount of infective matter with which it has to deal, and the area of its surface infected. Thus there may arise:

- (a) A plastic peritonitis.
- (b) A spreading suppurative peritonitis.
- (c) A general suppurative peritonitis.
- (d) A localized suppurative peritonitis—that is, an abscess.

(a) Although it is a question whether such a thing as capsular appendicitis is possible—and it has been stated that the onset of symptoms of appendicitis always denotes that peritonitis has occurred—I have no doubt that on the one hand the trouble may be practically confined to the interior of the appendix and its walls, and on the other that the few adhesions which sometimes remain after an attack has cleared up are no indication either of the intensity or area of the infection at the time.

(b) This condition is often very difficult to diagnose, and it is in connexion with it, I believe, that mistakes in treatment are most likely to occur. In its typical form it complicates gangrene of the appendix or slow perforation, and spreads either as a lymphangitis or by extension throughout the peritoneal cavity, the purulent fluid not being shut off by adhesions, or, owing to the virulence of the infection, if adhesions do form, they are of the flimsiest character, and form only to melt away again.

The inflammation will radiate from the appendix, and so its starting point will depend upon the position of that structure; and it is no uncommon occurrence, when this is in the pelvis, to find that cavity full of a thin purulent fluid, scarcely shut off from the abdominal cavity by floating intestines, loosely held together by a sticky lymph, not sufficiently dense to constitute the wall of an abscess; and yet it is obvious that the abdominal peritoneum is not taking part in a suppurative inflammation, though possibly congested and containing a quantity of serous fluid.

The difficulty in diagnosing this condition lies in the fact that, though a localized suppuration, it is not sufficiently shut off to form a definite abscess, and though general often as far as the pelvis is concerned, it is not sufficiently widespread to give rise to the symptoms of a general peritonitis.

(c) General suppurative peritonitis comes on at different stages of the illness according to its cause.

If due to perforation or rupture of a free-lying appendix, with immediate wide extravasation of its contents, it is an early complication, showing signs of its presence in the first few hours after a longer or shorter interval of collapse, just as with perforations of the stomach or intestines.

In other cases a spreading peritonitis, as described above, may end by becoming universal: in which case the onset of general symptoms is more insidious and later, from the second to the third or fourth day.

It may sometimes, though rarely, be due to the bursting of an abscess, in which case it practically never occurs before the tenth day.

(d) Although, as mentioned above, a collection of pus may be localized in a portion of the peritoneum, a cavity with walls sufficiently dense to merit the name of an abscess can hardly occur before the fifth or sixth day. If any object to this distinction, I can only say that I regard it as most essential to differentiate, in some way or other, between the early collection of pus which will spread, and the later-formed one which will not.

Now the treatment of a case of acute appendicitis has for its object the prevention or alleviation of one or other of the above complications, and I cannot express the opinion too strongly that the treatment necessary must depend upon the stage the illness has reached, upon the time at which the patient is first seen; and that it is wrong to lay down a general rule that all such cases should or should not be operated on at once.

There are cases, of course, in which premonitory symptoms may warn a careful observer of what is taking place inside the appendix, and in these the organ may well be removed as a truly preventive measure; just as, for instance, the presence of gall stones within the gall-bladder

may be diagnosed before an actual attack of colic has occurred.

With such, or with those in which there has been a previous attack, I am not at present concerned, but with those in which the patient is struck down without previous warning, and with all the suddenness of a bolt from the blue.

Let us assume, and I admit it is a big assumption, and your own experience will confirm me when I say it is seldom indeed that such a combination of circumstances will exist—let us assume that you have been called to see a patient directly after he has been attacked, that the case is undoubtedly one of appendicitis, and all other causes of abdominal pain and stomach-ache can at once be definitely excluded; that the patient is in a good state to take an anaesthetic; that surgeon, anaesthetist, and nurses are all at hand, and that the arrangements for an immediate operation can be carried out; then I believe that such a course is a wise one.

If in any given case one could be sure that a plastic peritonitis only would result, I imagine there is no one who would not counsel, postponing operation until after the inflammation had subsided; but it is because one cannot tell whether or not one of the more severe complications will arise that an immediate operation becomes advisable.

At this time in every kind of case save one the mischief will still be confined to the appendix, and so the local conditions will be favourable for operation; and in the one class of case where the trouble will have spread already to the peritoneum (the so-called fulminating cases due to perforation or rupture of the appendix) no better time for surgical interference could be chosen.

My own experience of such events is limited to a few cases in hospital, where alone the combination of circumstances we have assumed is likely to occur; and I would lay it down as a rule that it is justifiable, and may be wise, to advise operation in all cases at the beginning of an attack of acute appendicitis, if—and there's the rub—if it can be done.

This early period having been missed, as in the great majority of cases it will be missed, operations should only be undertaken because one of the severe peritoneal complications has arisen. Of course, I don't mean to say that a series of successful operations may not be performed at a later stage than I have indicated, but every hour that is allowed to elapse renders surgical interference less and less advisable. For as the inflammation spreads the parts become most vascular and oedematous, adhesions which ooze blood at the slightest touch rapidly form, the engorged intestines bulge with stagnant flatus, micro-organisms swarm in the swollen and turgid tissues, and altogether at about the end of the first twenty-four hours it is impossible to imagine a local condition more unfavourable for an operation. This state of affairs seen by the limited view which alone is possible through an incision in the right iliac region may mislead even the honest statistician, when compiling his mortality tables, by giving the false impression that a general peritonitis already existed. And, worse still, the necessary manipulations which an operation entails may set up the very trouble which it had been undertaken to prevent, by diffusing the septic material so that a general peritonitis results, when probably if left alone the inflammation would have localized and at the worst an abscess have formed, but not necessarily even that. I admit that the dangers have been exaggerated, but nevertheless I know that they exist; and even where no fatal result ensues and the case is scored as a surgical success, such success may only be gained at the expense of a drainage tube, a suppurating wound with a weak abdominal wall, a hernia, and a second operation for its cure. A success indeed if death were the only alternative. But it must ever be borne in mind that the great majority of cases recover spontaneously, temporarily, at any rate, and therefore can be operated on more favourably at a later period; and that operation at this stage can only be advised to benefit the unknown minority in whom fatal peritoneal complications will ensue. The rights of this minority must depend upon its size, and I feel sure that the surgeon who recommends preventive operations at this stage exaggerates its proportions; and the more he operates the more he will be inclined so to do. There is no surgeon of any degree of

experience who will not be able to recall not one but many instances in which, when performing appendicectomy during the quiescent stage, he has found evidence of the gravest former trouble. Adhesions so universal that only a general peritonitis could account for; a truncated appendix whose condition nothing but sloughing or gangrene could have produced; inspissated secretion which showed clearly where a former abscess had been absorbed.

Though no one would trust for a moment to the *vis medicatrix Naturae* rather than to the surgeon's knife when actually confronted with any one of these, still cases of spontaneous recovery from the worst conditions occur in sufficient numbers to make us pause when estimating the risks of an operation undertaken to prevent their onset, especially when the odds are against that taking place.

I hold strongly, therefore, that at the time at which most cases of appendicitis will be seen it will be wrong to recommend an operation as a preventive measure. Complications will require to be met after they have arisen, and at this period it will only be necessary to exclude perforation or rupture of the appendix before deciding to rely upon medical measures.

Perforation of the appendix gives rise to the characteristic train of symptoms with which you are familiar in connexion with a similar accident to other parts of the intestinal tract.

The sudden severe onset of violent cramp-like pain, chiefly over the lower abdomen and in the region of the umbilicus, and intense localized tenderness with collapse (shown by the cold extremities, the subnormal temperature, the frequent, small, tensionless pulse, and cold perspirations), accompanied by extreme local rigidity, probably of the lower part of the right rectus muscle, with general hardness, immobility and retraction of the abdomen, will at once indicate that perforation of some viscus has occurred, and the position of the tenderness and rigidity will point to the appendix. If you see the patient at this stage you will have no doubt as to the proper course to pursue.

I would have you note that at this period the symptoms are those of abdominal shock, and though, of course, a certain amount of inflammation is early set up, general peritonitis with its equally impressive picture has not yet had time to supervene. When it has, the pain and tenderness become general, though still greater probably in the right iliac fossa; the temperature rises; the pulse, still frequent and small, acquires a degree of tension above the normal; the immobility of the abdomen remains, the local rigidity is marked by the general hardness, and retraction gives place to distension. Vomiting, which may or may not have occurred in the beginning, now is almost constantly present, and of a diagnostic character, namely, the frequent regurgitation without effort of small quantities from the stomach and upper part of the small intestine. Gaseous eructations frequently occur, but, owing to paralysis of the intestinal musculature, no flatus is passed per anum. The tongue becomes dry, and the face assumes its characteristic sunken, drawn, anxious expression. Again, if called to see the patient at this stage, you will not be in doubt. There is, however, a time when the collapse is passing off, and the symptoms of general peritonitis have not yet acquired their characteristic features, when the diagnosis may present difficulties; but even now the look of profound illness which the patient wears will indicate the urgency of the mischief; and though all other signs may be equivocal, the contracted abdominal muscles are never completely relaxed, and the frequency of the pulse will still remain. A slow pulse with a temperature about the normal, in my experience, is not met with in the early stages of general suppurative peritonitis, but when it occurs is an indication of the approaching end, the patient being so poisoned with toxic products that his tissues no longer react. A mistake in diagnosis may be made now, but as the case is practically hopeless by this time, its importance is not so great.

Having now decided that the time for a preventive operation has gone by, and that the patient is not suffering from a perforation, you may dismiss the question of operation from your mind, for the present.

The patient should be placed in bed on his right side with the shoulders raised in order that gravity may assist in preventing the diffusion of any fluid which may collect. Hot fomentations relieve pain, and are further useful in

bringing about an active local hyperaemia. Salt solution per rectum relieves thirst, and also acts beneficially by setting up an increased leucocytosis. Food by the mouth should be withheld, although I am convinced that most of the evils attributed to its administration in liquid form arise from the mistaken notion that milk is not a solid diet. It is an unnecessary cruelty to forbid all liquid, because in small, frequent doses it does no harm, in that it is absorbed long before it reaches the intestine in the neighbourhood of the inflamed part. And though the introduction of liquid into the rectum is a fairly efficient substitute, if this route be chosen on peristaltic grounds, it should be borne in mind that, granted peristalsis is harmful, it is as likely, and perhaps more likely in the case of the larger intestine, to be excited by the introduction of fluid by the anus as by the mouth. But is peristalsis harmful? I think not, but just the reverse.

If the peristaltic wave produced a violent commotion among the intestines, dashing them about, or even more gently transferring them from one place to another, then, of course, it would have to be avoided at all costs. But a regular peristaltic wave being but a gentle ripple on the surface, incapable of moving the bowel as a whole, but only able to produce an onward movement of the intestinal contents, and incidentally to favour the circulation of the blood and lymph in the intestinal vessels, can only be beneficial, and must produce less disturbance than the distension of the bowel by accumulated gas, etc., which necessarily results if peristalsis is absent; and I am so struck with the favourable termination of most cases which begin with diarrhoea that I do not hesitate to order a laxative at this stage if required, preferring small doses of calomel to anything else. Purgatives should be avoided, not on account of the peristalsis which they set up, but on account of the contraction of the abdominal muscles which is likely to attend their action. If peristalsis were, indeed, harmful, then not only should nothing be done to increase it, but it should be prevented altogether, and thus the long discredited treatment by opium be reintroduced.

Under the treatment outlined above the majority of cases will show signs of improvement, but this will be gradual, and from the second to the fourth day, even in those cases which eventually recover without suppuration, the patient may still show signs of a severe local peritonitis.

It is at this stage that the operating surgeon is so frequently called in with a view to opening the abdomen, and I must repeat, even at the risk of wearying you, that the time for a preventive appendicectomy has passed; that the harmless little exploratory incision in the right iliac region, when the offending organ may be down in the pelvis or up under the liver, is a delusion and a snare; that probably the peritoneum has fought its fight, and has won the battle, if the surrounded hosts of dying micro-organisms are not carried into fresh fields, and supplied with fresh food and vitality by the escape of blood which an operation will cause. That even under these circumstances victory will still generally rest with the peritoneum is nothing to the credit of the operation; but should victory be turned into defeat, operative interference (and the word possesses a sinister significance) cannot escape the blame.

No! at this stage, if the peritonitis is localizing, operation can do nothing but harm, and it is only if a spreading peritonitis is in evidence that the immediate opening of the abdomen becomes necessary. The onset of this is insidious and its detection not without difficulties. But it is so important to recognize what is taking place at an early period that I feel I must go a little more into detail with regard to the symptoms which enable a diagnosis to be made.

The temperature and pulse are misleading in so many instances that I have come to ignore them, but if the frequency of the latter keeps persistently over 100 with increased tension it should excite suspicion.

Persistent vomiting of small quantities without effort is almost diagnostic of a widespread affection of the peritoneum, and is of special import if it comes on again after the vomiting which ushered in the attack has subsided, or if it comes on for the first time after the disease has been in progress for some hours.

General contraction of the abdominal muscles is an important sign; but here I would warn you that you

must not expect the rigidity of a general peritonitis. In fact, palpation is an insufficient and unreliable means of detecting the condition. More information will be gained by inspection. Immobility of the abdomen and a consequent costal type of respiration will be seen, but, above all, attention should be directed to the contour of the muscles. I have known the visibility of the digitations of the external oblique afford an indication of the tonic spasm of the whole muscle, when this was insufficient to produce a hardness readily detectable by touch.

Constipation with flatulent distension is common enough in appendicitis, and means little; but when, perhaps in spite of laxatives and enemata, nothing, not even flatus, is passed, and the symptoms resemble those of intestinal obstruction, it may be inferred that an extensive peritonitis exists, giving rise to paralysis of a considerable length of intestine.

Sweating, often profuse, is another valuable sign that a large quantity of septic matter is being absorbed. It never occurs in uncomplicated cases of appendicitis, and at this period may always be taken to indicate a suppurative peritonitis.

The condition of the tongue may afford valuable help. True, it may remain moist and fairly clean throughout; but a dry, furred, foul state will suggest a grave condition.

Pain and tenderness in all cases, to start with, are generally referred to the whole of the lower part of the front abdominal wall, especially to the umbilical region; and then later only to the right iliac fossa. If, after this localization, the tender and painful area increases in extent, a spreading peritonitis is probable. But when, as is so often the case, the pelvic peritoneum is the part affected, no help can be derived from this sign. Extreme tenderness on rectal examination will be present, and the feeling with the finger of a bulging collection of fluid will at once reveal the nature of the case.

If cases of spreading peritonitis are diagnosed early, as they should be by proper attention to the above symptoms, and great care be taken to prevent diffusion of the fluid by careful packing after the abdomen has been opened; and if the disturbance of the parts be strictly limited to that which is necessary for the simple introduction of a drainage tube, the prognosis after operation is good—a fact again to be borne in mind when estimating the risks of a preventive operation.

We have now got to about the end of the fourth day, and with it nearly to the end of the dangerous period, for though late cases of spreading peritonitis may still occur, they are rare after this time.

And now the familiar, well-defined lump in the right iliac fossa can be readily felt instead of the indefinite hardness. This is a welcome sign, as it indicates a matting together of the intestines by strong adhesions, and a definite circumscription of the trouble.

Flatulent distension is still often a distressing symptom, and it is at this period again that laxatives are of great service. I would here repeat what I have previously said about the supposed dangers of exciting peristalsis.

A moderate dose of castor oil, combined with the use, if necessary, of the rectal tube and enemata of turpentine and asafetida, will often bring about, with the evacuation of the intestinal contents, such a marked change in the iliac swelling that what appeared to be an inevitable abscess rapidly disappears, accompanied by a fall in the temperature and a subsidence of other unfavourable symptoms little short of surprising.

From this point convalescence may date or an abscess may form. In the latter event the symptoms follow two courses. In the one the temperature and pulse come down, and the local symptoms somewhat subside; but after an interval, ranging from a few hours to a day, the temperature gradually rises again and the pulse increases in frequency, until both may stand as high as or higher than before. The local signs again become more marked; the lump increases in size and distinctness, pain is worse and of a throbbing character, tenderness even on slight pressure again becomes acute, vomiting and sweating may occur, and the tongue becomes dry and furred. In the other the inflammation runs on to abscess formation without any intermission. In such a persistence of acute symptoms on the fifth day practically always means that suppuration has occurred.

The subject of an increased leucocytosis in connexion

with the diagnosis of suppuration is much too large for me to enter into here, but I would say, in passing, that too much importance must not be attached to it. One total count, though high, is of little significance unless confirmed by subsequent readings. A differential count may afford more valuable information.

When localized suppuration has taken place an operation will probably be necessary. But here again it is a mistake to think that in all cases it must be done at once; in fact, I would go further and say in the majority of cases it is best to wait for a time. If the patient be kept quiet, bursting of an abscess is practically unknown at this period; and remote sequelae, such as portal pyæmia, rarely complicate abscess formation, and at any rate their onset is not favoured by reasonable delay. Against these theoretical disadvantages may be set the solid gains—that the abscess will become firmly shut off, its walls well defined and possibly adherent to the abdominal wall, so that the evacuation of its contents is greatly simplified; that the pus will decrease in virulence, or even become sterile; and that in some few cases operation will not be required, owing to the escape of pus into the bowel or its absorption. A certain amount of discrimination is of course necessary, but generally it may be said that those cases in which the symptoms have persisted acutely from the beginning will require an earlier operation than those in which an intermission has taken place.

And now let me add just a word or two about the removal of the appendix. If general peritonitis is present this should always be done, provided it does not add greatly to the length of the operation; if the peritonitis is local, never, unless the organ presents on opening the abdomen. In the case of a spreading peritonitis, even a limited search for it may break through the flimsy adhesions which are checking the spread of a virulent infection, and which will prove sufficient for the task once the pus has been given a free exit.

In the case of a definite abscess the risk is less. The greater density of the adhesions and the diminished virulence of the micro-organisms will generally allow the organ to be removed with impunity, but even so the immediate risk of the operation is increased. And in my experience the number of cases in which symptoms again supervene after once an abscess has formed and been evacuated is very small, less, considerably, than the 15 per cent. generally given. But, even taking these figures as correct, I am not prepared to submit 85 patients to an additional unnecessary risk, even if it were as slight as has been claimed, in order to benefit 15, especially as the benefit these latter derive is problematical, seeing that they might lose their appendices at a subsequent date with scarcely any risk at all.

In this connexion it is necessary to point out that the removal of an appendix after an abscess has healed is not necessarily a difficult operation. The adhesions left will disappear to a greater or less extent, so that the appendix may ultimately be freer even than when suppuration has not occurred, but the peritonitis has been of a plastic nature from the start.

Finally, if you have steered your patient through his first attack without operation, what course should you advise? Personally, I always recommend a patient not to run the risk of a second, but think it only fair to state at the same time that this may never occur, and that if it does it is likely to be no worse than the first, seeing that the majority of serious complications occur with a first attack.

If appendicectomy be decided upon, it is wise to allow an interval of at least three weeks to elapse from the cessation of acute symptoms in order that the local conditions may have time to clear up.

It is true that an aseptic operation may be done before this in most cases. But, having on more than one occasion met with an unsuspected abscess, which was obviously being absorbed, when tempted to operate at an earlier date, I have now fixed upon this period as a minimum.

The thirteenth Flemish Congress of Natural and Medical Science will meet at Brussels this year on September 18th, 19th, and 20th. One day will be devoted to the discussion of the diagnosis and treatment of syphilis. The discussion will be opened by Drs. Bayet and Behaegel.

A Clinical Lecture

RESECTION OF THE CAECUM FOR CANCER OF THE ILEO-CAECAL VALVE.

DELIVERED AT ST. BARTHOLOMEW'S HOSPITAL.

BY HARRISON CRIPPS, F.R.C.S.,

SENIOR SURGEON.

GENTLEMEN.—In a recent lecture I gave you a short account of the symptoms and treatment of rectal cancer. To-day I have a good opportunity of saying something about the same disease in the opposite end of the colon, for on the table before you are three caeca resected for cancer of the ileo-caecal valve. All the operations were done during the same week, which shows that the disease is not uncommon.

For the following notes I am indebted to my house-surgeon, Mr. Hoskyn.

CASE I.

W. B., aged 63, clerk. Admitted into the hospital November, 1908, complaining of pain in the abdomen since September. He has had two or three attacks of diarrhoea, but after these has gone some days without any motion. The diarrhoea was preceded and accompanied by violent vomiting. He has never passed any blood or mucus. He is a sallow-looking man with a large and full abdomen. Has lost weight recently. On the first examination no tumour could be felt. A few days later a tumour the size of an egg was detected 1 in. above and to the right of the umbilicus. The tumour was very mobile. Some days it could be easily felt, at other times the most careful palpation failed to detect it. It seemed to disappear under the ribs.

Operation.—November 16th. A 5 in. incision along the outer border of the right rectus. On opening the abdomen a small amount of free fluid escaped. On introducing the hand a tumour was at once felt, freely movable, and it could be pushed several inches in any direction. The edge of the omentum was adherent to it. It proved to be a hard malignant adenoid growth, spreading like a thick ring all round the valve and projecting into the caecum. The growth extended up to but not through the peritoneal coat. The caecum was excised, with about 2 in. of the ileum on one side and the same amount of the ascending colon on the other. An end-to-end anastomosis was made, great care being taken to unite the mesenteric attachments. The patient convalesced without trouble, rapidly gained weight, and left the hospital in five weeks. March, 1909; Patient is still in good health, and walks ten miles a day.

CASE II.

W. C., aged 67, sorter in the G.P.O. Transferred by Dr. Norman Moore to the care of Mr. Harrison Cripps in November, 1908. For the last nine months has been troubled with intermittent diarrhoea, with occasional constipation. For the last few months has had some intermittent pain about the umbilicus. Has lost flesh rapidly. No definite tumour could be felt by palpation until he was put under an anaesthetic, when a tumour could be clearly felt situated deeply in the right iliac fossa.

Operation.—November 23rd. On opening the abdomen the caecum was found to be the seat of a new growth involving the valve and a considerable portion of the caecum itself. In the mesenteric attachment two or three glands the size of nuts could be felt, but the finger and thumb could grasp the membrane well beyond them. The whole caecum was removed, with 2 in. of the ileum and 4 in. of the ascending colon, an end-to-end anastomosis completing the operation. The patient did well till the third day: he then died quite suddenly without any warning, sitting up in bed and expiring in a few minutes. At the post-mortem examination there was no sign of anything wrong in the abdomen. The anastomosis was perfect, showing no leakage with high water pressure. A careful examination was made for a pulmonary clot, but none was found.

CASE III.

Mr. —, aged 54, sent to me by Dr. Cayley with the following history: Has always been a most active and healthy man and indeed feels perfectly strong and well at the present moment, with the exception that once or twice lately he has had a sudden sharp pain in the abdomen. The bowels are quite regular. On two occasions in the last three months he has passed blood, dark in colour, and to the amount of a few teaspoonfuls. He also passed one day after a rapid walk "a small mass of tesh the size of the end of his finger which did not dissolve in water." On palpation nothing could be felt in the abdomen. Under an anaesthetic by bimanual examination a swelling could be felt high up in the pelvis, but not sufficiently distinct to enable a diagnosis to be made. An exploration was advised.

Operation.—On opening the abdomen by a 5 in. incision in the middle line and introducing the hand, a hard tumour could be felt the size of an egg lying in the pelvis at a level with the summit of the bladder. It was adherent and could not at first be drawn up. However, after separating some slight adhesions with the finger-tips the tumour was freed and suddenly came out of the pelvis right up into the wound. It was then found to be the caecum containing a cancerous growth surrounding the valve. The whole thickness of caecum in about half its diameter being involved. The growth was excised with a very free margin of healthy tissue, the cut bowel being joined end to end, the length of the excised portion being 8 in. The patient had no trouble and returned home at the end of a month, and has since remained in perfect health.

PATHOLOGY.

In the vast majority of cases malignant disease in any part of the large intestine is of the adenoid variety. It is essentially a growth starting in the mucous membrane, extending from hence into the submucous and muscular coats. It is only late in the disease that the glands are affected, and eventually the liver and other organs.

Fig. 1 is a section taken from the heaped-up margin of the tumour projecting into the lumen of the bowel. It shows an irregular glandular structure of the involuted type, like Lieberkuhn's follicles. Fig. 2 is a cross-section at point A in Fig. 1 under a higher power. What appears to be the epithelium lining a follicle is, of course, merely an invagination of the epithelium from the growing surface.

If the tumour grows entirely into the lumen of the bowel with a pedicle, it

forms an innocent polypus. If, on the other hand, instead of growing free into the bowel cavity, it grows downwards into the muscular coats, it spreads along and through them and becomes malignant.

Microscopically there is no difference in structure between an innocent polypus and malignant disease. It is a question of the direction in which the follicles grow. If growth takes place from the summit of a follicle, it soon becomes pedunculated and forms a beautiful tree-like structure, standing out bold and free, like an oak in a park. Such growths may slowly increase to the size of a tennis ball, forming a villous tumour, which may remain innocent for years, and will not recur after removal.

On the other hand, should the growth start from the base of a follicle, it will spread widely into and along the muscular coats and ultimately through them into neighbouring tissues, showing all the characteristics of malignant disease.

Although the great majority of papillomatous and villous tumours remain innocent throughout their career, I have seen and recorded cases in which such growths, after remaining innocent for years, suddenly commence to grow downwards, developing all the characteristics of cancer.

An important fact about cancerous growths in the intestines is that they are less malignant than cancer in many other parts of the body. If left alone, however, I have never known a case in which life has not ultimately been destroyed. On the other hand, if completely removed

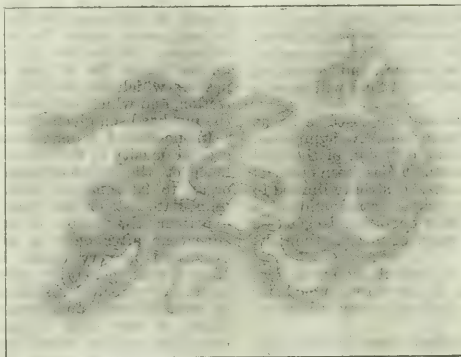


FIG. 1.—Section of adenoid cancer of the large intestine, taken from the spreading margin invading the mucous membrane. Low power.

before they have extended through the coats of the bowel, the results are often most satisfactory. I have had quite a fair number of cases of resection of portions of the bowel for cancer which have shown no sign of recurrence after intervals of ten to twenty years.

SYMPTOMS.

Seeing that success mainly depends on removing the growth before it has perforated through the bowel coats, an early recognition of the symptoms is of the utmost importance. If in the rectum and within reach of the finger the diagnosis is easy, but if high up in the rectum or in any part of the colon the detection of a growth is much more difficult. The higher up the bowel the less are the symptoms; indeed, when high up the colon or in the ileo-caecal valve the onset of complete obstruction may be the first indication of anything seriously wrong.

When low down, as in the rectum, the symptoms are more suggestive. At first the bowels act two or three times a day at odd times. As the disease advances the calls to the closet become very frequent—anything from half a dozen to a dozen times a day. The patient on going to stool does not pass a real motion; more often it is only a few teaspoonfuls of mucus, dark by a mixture of motions and blood. Occasionally there is some bleeding

without any motion with it. This is more commonly present in an early than in a late stage. The patient is troubled with wind, which he does not like to pass for fear of a mishap into his small clothes. When the sigmoid is affected the symptoms are much the same as in the rectum, but not nearly so pronounced. There is seldom any actual pain at the seat of disease, merely slight colicky discomfort from time to time all over the abdomen. Again, when in the colon, the constant desire to go to the closet is often absent, and there is less discharge. The reason of this is doubtless explained by the different habits of the rectum and colon. The latter objects very little to the accumulation of faeces within it; indeed, this is part of its function. On the other hand, the rectum resents anything being retained, and always has the desire to expel it.

In the 3 cases recorded the general symptoms were slight and not such as to suggest the patients were suffering from so fatal a disease as cancer. In Case III, when the operation showed a considerable mass of growth, the opening through which would scarcely admit the little finger, the symptoms were so slight that the patient described himself as feeling in perfect health, with the exception of occasional gripping pains, and it was only because he noticed some blood that he sought advice. In any case, when the possibility of a growth in the colon is suspected yet nothing can be felt definitely by ordinary palpation, a thorough examination of the abdomen should be made under an anaesthetic. The assistance given by complete relaxation of the muscles is invaluable. In Cases II and III it was only after such an examination that a definite tumour could be felt, and the grounds for an exploratory operation with a view to removal of the growth justifiable.

THE OPERATION.

In resecting portions of the intestine, it seems to me a mistake to remove a V-shaped piece of the mesentery as generally recommended. It is obviously important that the blood supply should be as good as possible right up to the cut edges of the bowel. The entire blood supply

comes through the mesentery, the vessels anastomosing very freely just before they enter the bowel. No portion of the mesentery can be removed, therefore, without including some of the supply vessels. If instead of removing the V-shaped piece the attachment is divided close up to and parallel with the bowel, there is no risk of cutting off the blood supply except to the portion actually removed, and even this is utilized through the anastomosing circulation right up to the cut edges. In sewing the bowel together about one-fourth of its circumference lies between the two layers of the mesentery. It is this portion which requires the most accurate coaptation to get good union, as it is not peritoneal surface to peritoneal surface. To ensure accuracy this part of the circumference should be first united, the needle taking a good grasp of all the coats except the mucous membrane, only just the edges of which are included. The sutures (No. 00 silk) are tied so that the knot lies within the bowel. The remaining circumference of the bowel is united by Lembert's sutures, the knots of which are, of course, tied on the outer surface. After the two rings of the bowel have been united, a few sutures should be passed so as to bring the mesenteric surfaces together and make them continuous with the gut.

As to the after-treatment, it is well for a few days to trust to rectal feeding. The alternate sutures in the abdominal wound can be removed on the ninth day, the remainder three or four days later.

Two of the cases recorded convalesced without any trouble, full motions being passed after the first week, and up to the present time both patients remain in good health. The death of the third patient was not explained by the *post-mortem* examination. Every thing within the abdominal cavity was found in complete order. Not a sign of peritonitis and the junction was firm and completely watertight under high pressure.

These sudden deaths a few days after abdominal sections must be familiar to every surgeon of large experience. Fortunately they are comparatively rare, but I have had three or four such cases in upwards

of 2,000 abdominal sections. The symptoms are all the same. A patient who is doing perfectly well, with a normal temperature and pulse, suddenly sits up in bed, turns an ashy grey colour, with a slight gasping for breath, and falls back dead in a few seconds. It is generally supposed that these sudden attacks are due to a clot in the pulmonary artery, but I can only say, though a careful *post-mortem* examination was made, no such clot was found in any of my cases, so that some further explanation of these tragic deaths is yet required.

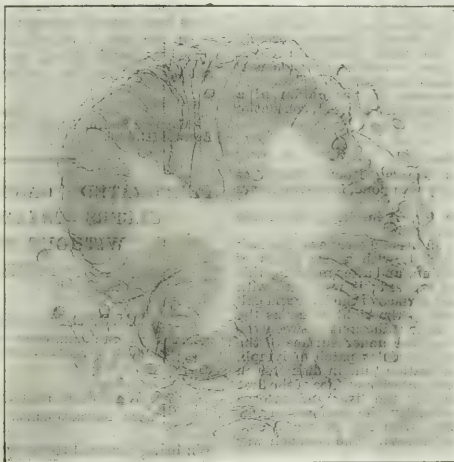


Fig. 2.—Cross-section of an involuted follicle of the same growth at point A, Fig. 1. Under high power.

PERFORATED DUODENAL ULCER TREATED BY SUTURE AND GASTRO-ENTEROSTOMY.

By W. PAYNTER NOALL, M.S.LOND., F.R.C.S.ENG.,
FORK.

I WAS asked to see the following case in consultation by Dr. J. R. Lawther on the evening of January 4th, 1909:

L. W. W., a man aged 44, who was on a visit to York, was suddenly seized on the previous midnight with intense abdominal pain, passing to the right side and top of the right shoulder.

History.

He had washed out his stomach the same day, and as he had taken nothing since, that organ was empty at the onset of the pain. He had eaten little for a week, and had taken only milk

and soda the two previous days. He stated that his health had been good till January, 1900, when pain came on after food at a regular interval of three hours, relieved by the next meal and also on the occasions he was sick. He also had acid eructations. On one night in October, 1900, the pain was severe. He vomited a large quantity of blood, had some loose black motions, and was a patient in a London hospital for three weeks.

From this date till June, 1904, every three months his symptoms would increase, the pain would be worse, he was constipated, had anorexia and loss of appetite, followed by vomiting, and relief with subsequent tarry motions. The vomit was sometimes black as well, but never alone.

From June to October, 1904, he could keep very little down; he consulted a physician, who told him he had a dilated stomach, and ordered him a special diet and lavage, which he had carried out up to the present. He remained in good health, exercising care in diet, till June, 1908, when he had a relapse of sickness and melaena, and also another in November, 1908.

When seen by me the patient was on his back; his expression was a little anxious and alert, the face pale and the tongue moist and slightly furred; he had a full pulse of 96 and the temperature was 99° F. There was no distension of the abdomen and the respiratory movements were present but their excursion diminished. There was some resistance over the upper part of the right rectus as well as tenderness (A) which extended downwards towards the appendix region. The liver dullness was diminished. The respirations were not hurried and there was normal vesicular breathing at the right base. On rectal examination no swelling or tenderness in Douglas's pouch was detected.

A diagnosis of perforation of a duodenal ulcer was made and an operation advised, consent to which was withheld till the next day.

Operation.

He was removed to the York Nursing Home, where, at 9.30 p.m., January 5th, a laparotomy was done, forty-two hours after perforation.

Under ether a vertical incision (B), 3½ in. long, was made through the upper part of the right rectus.

On opening the peritoneal cavity, a hissing escape of gas took place. Fluid, at first slightly turbid, with a few flakes of lymph, and then quite clear, welled up, and after mopping this up a cavity (shaded in figure) was exposed; it was lined with lymph, bounded above by the under surface of the liver and gall bladder and leading downwards and to the right as far as the appendix region. Separation of some adhesions between the commencement of the duodenum and the under surface of the liver revealed close to the pylorus a circular patch of lymph, the size of a sixpence, with a perforation ½ in. in diameter in its centre, situated on the upper and anterior surface of the first part of the duodenum. By retracting the liver and pylorus from one another, with some difficulty the perforation was infolded in a longitudinal direction with two rows of a continuous Lambert suture of celluloid thread. The stomach was filled with gas.

A posterior gastro-enterostomy was then performed, with the opening into the stomach made vertical, and the anastomosis with the jejunum as close to the duodeno-jejunal junction as possible, leaving no loop. The anastomosis was effected with two rows of celluloid thread, an inner one taking in all the coats of the stomach and jejunum, and an outer including the sero-muscular coats only.

The opening in the transverse mesocolon was sutured to the jejunum. Drainage was effected through a stab wound in the loin, and at the upper angle of the abdominal incision. Chronic catgut brought together the abdominal wall in layers, peritoneal musculo-aponeurotic, with additional supporting ones tied beneath the skin, and the skin edges with Michel's clips.

After-History.

The drainage tube and gauze were removed after thirty-six hours, and the clips on the fourth day. For the first twelve hours rectal salines were given, and after this feeding by mouth commenced. The pulse after the operation was 140; it fell to 100 the night after, and on the second night to 68. The bowels acted after an enema; physostigmine sulphate ½ grain was given hypodermically every two hours for four doses. There was no vomiting after the operation. In a month the patient left the home, having made an uninterrupted recovery.

As to his further progress, in answer to a letter of mine he wrote: "I have never had any pain or any sickness since I returned home from York. I can eat and drink practically anything now. My weight in overcoat was 10 st. 4 lb. about the middle of December last; now it is 11 st. 4 lb. in the same clothes. Every one tells me how well I look. After my past experience I can only say the sudden illness at York was really a great blessing in disguise."

In this case there was a nine years' history of ulcer; commencing with pain three hours after a meal, relieved

by the next meal, acid eructations, later haemorrhages, dilatation, intervals of good health under medical treatment, relapses, and finally perforation. Such a case may terminate in cancer, as a goodly percentage do.

Cases are on record where a duodenal ulcer and appendicitis have coexisted. The pain over the appendix in perforated duodenal ulcer can be explained on anatomical grounds. Maynard Smith¹ has shown experimentally that fluid escaping into the abdominal cavity through a perforation of the duodenum first fills up a cavity beneath the right lobe of the liver (the right kidney pouch), and then overflows, coursing downwards along the outer side of the ascending colon to the caecum. Hence the pain in this region.

Paterson² recommends gastro-enterostomy in all these cases if the patient can stand it, because it improves the after condition, lessens the risk where there is a second ulcer whether it has perforated or no, diminishes the risk of haemorrhage after operation, allows more efficient infolding of the ulcer, promotes more rapid and certain healing of the line of suture and so lessens the risk of further leakage, permits earlier feeding and earlier administration and more rapid action of purgatives, and so secures more efficient drainage of the peritoneal cavity.

The mortality depends mainly on three things: (1) Whether there is food in the stomach at the time of perforation; (2) the size of the perforation; (3) the time that has elapsed between perforation and operation.

In the case I record the stomach was empty, the perforation small (½ in.), and forty-two hours had elapsed between perforation and operation.

REFERENCES.

¹ Maynard Smith, *Lancet*, March 31st, 1906. ² Paterson, *Hunterian Lecture III*, 1905.

PERFORATED GASTRIC AND DUODENAL ULCERS TREATED SUCCESSFULLY WITHOUT SUTURE OF THE PERFORATION.

BY

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WE bring forward these two cases because they both had simple convalescence, and in neither case was there any escape of food debris or any sign of gastric or duodenal fistula.

Both cases behaved as though the ulcers had been closed successfully—although this was not done—and, indeed, did just as well as successful cases in which we have sutured the ulcer. So much so, that it would seem that the time spent on unsuccessful attempts to suture a perforation may be wasted and militate against the patient's recovery—for speed of operating is undoubtedly one of the great essentials in bringing the treatment of peritoneal catastrophes to a successful conclusion. Every surgeon knows how often the stitches, inserted to close a perforation, cut through wholly or in part. If this occurs under his eyes, how often does it occur after the operation is finished? Indeed, many a case, treated successfully, in which the stitches closing the ulcers are thought to be secure, may be merely an example of what we have found—namely, if a perforation is merely "curtained" by omentum, recovery may ensue with no more troublesome convalescence than when the ulcer is closed.

The recovery after the non-suture of an ulcer shows how great a tendency there is in the material passing through a tube to flow along the tube, and not out of its sides. This is observable in the old method of performing colostomy when a lateral opening was made and the bowel not divided. In our cases there was no escape of digestive fluids although the perforation was merely "curtained." To prove that such a result does not always occur, even when the patients recover, it is merely necessary to quote

the case recorded by Mr. Roper, of Exeter, whose patient recovered with a gastric fistula and underwent some observations similar to those made in the famous case of Alexis St. Martin.¹

We would submit that our cases suggest that—

1. If stitches cut through at the operation, no further time should be wasted in trying to close a perforation.
2. That such a perforation be covered by omentum, anchored in place by one or two sutures.
3. That a gauze drain be conducted to the perforation and removed under an anaesthetic in forty-eight hours.
4. That the chance of recovery under this treatment is unlikely to be less than if the ulcer is sutured.
5. That the remote results of these cases, as regards pyloric obstruction, are no worse than when the ulcer is closed.

6. That in these, as in many other cases, a primary gastro-enterostomy is unnecessary for the recovery of the majority of cases.

CASE I.

G., female, single, aged 35, a patient of Dr. W. B. Winston of Bowes Park. History (September, 1906) of fourteen days' pain and tenderness in epigastrium, followed by signs of perforation; operation fifteen hours after perforation. A large perforation was found on the anterior wall of the stomach near the pyloric end and the lesser curvature. The surrounding stomach wall was thickened, sodden, and inflamed, rendering it impossible to sew up the perforation, as stitches would not hold. A tag of omentum was drawn over the perforation and arranged in position by two stitches. A gauze plug was arranged around. The peritoneal cavity was dry sponged through epigastric and suprapubic incisions and drainage tubes left in. At the end of forty-eight hours the plug was removed under chloroform by Dr. Winston. There was no escape of gastric contents. No food was given by mouth for twenty-four hours. At the end of twenty-four hours water was given for two days, and milk at the end of three days. The patient made an uninterrupted convalescence, and is very much better as a result of operation, at the end of two years showing no indication of any pyloric obstruction.

CASE II.

J. S., male, aged 29. Admitted to St. Thomas's Hospital August 6th, 1908; discharged September 9th. History of four months' pain after food, with vomiting. No haematemesis or melaena. A more than usually acute attack, lasting for five days, preceded the perforation. Operation fourteen hours after perforation. A large circular perforation, the size of a shilling, found at junction of first and second parts of duodenum, which it was impossible to close. A piece of omentum was anchored by two stitches over the perforation. A gauze drain was inserted. The peritoneal cavity, which contained a very large quantity of fluid and food contents, including some dozen or so French beans in a totally undigested condition, was dry sponged. When rendered as clean as possible by this method the peritoneal cavity was thoroughly washed out with hot normal saline. The operation was performed with all possible speed, and drainage used in both the epigastric and the suprapubic incisions. The gauze drains were removed in forty-eight hours under chloroform anaesthesia. Saline was administered per rectum for the first twenty-four hours. Water was given by mouth at the end of twenty-four hours. On the second day a rectal feed was given, and also saline per rectum, at six-hourly intervals. At the end of three days milk was given by the mouth in gradually increasing quantities, and on the sixth day a light diet containing custard, etc. August 17th: Signs were found at the left base indicating possibly a left subphrenic abscess. A transpleural exploration performed; no abscess found.

But for the rise of temperature and cough about this time the patient made an uninterrupted recovery, and was sent to a convalescent home on September 9th. He remains quite well, not suffering from indigestion or gastric trouble.

REFERENCE.

¹ BRITISH MEDICAL JOURNAL, 1908.

A CASE OF TRAUMATIC RUPTURE OF THE SIGMOID COLON: OPERATION: RECOVERY.

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Cases of traumatic rupture of the intestine are not common in the records of any one hospital. Series of cases collected by different observers afford much information about the condition. A recent paper by Berry and Ginseppi in the *Proceedings of the Royal Society of Medicine* for November, 1908, relates a case of recovery after operation, and gives an analysis of 132 cases which have occurred in ten London hospitals during the fifteen years, 1892-1907. This list is of more value than the lists of other authors

who have abstracted their cases from current literature, because cases of death and recovery are equally reported. I have drawn freely upon this paper in compiling the commentary which follows.

James R., aged 55, donkeyman, was admitted to the Royal Hamadryd Seamen's Hospital, Cardiff, on November 8th, 1908, at 9.30 p.m.

On the same day at 5 p.m. while moving at a rapid walk along the engine-room on board ship, he knocked the left side of his abdomen against the stationary handle of a reversing wheel. He had considerable pain for the moment, which passed off, and he continued his work for half an hour until he was relieved from duty. As he was going on deck he fainted, and the pain returned with great severity. Between 7 and 7.30 p.m. the bowels acted twice, but he does not remember passing any wind. A doctor saw him and advised his removal to hospital, where he was carried on a stretcher.

Condition on Admission.

The resident medical superintendent, Dr. J. H. Whelan, found that the pulse was 75 and the temperature 98.8° F.; the whole abdomen was tender on pressure, and its wall very hard. There was no distension, and no feeling of anything slightly drawn in. There was considerable general abdominal pain of a gripping character and tenderness and swelling over the right inguinal canal; 8 oz. of normal urine were drawn off. Sips of hot water and a hypodermic injection of morphine and atropine were ordered. He passed a good night, and next morning the abdomen seemed slightly softer; he had vomited several times—at first bile, then brownish non-odorous fluid. A little hot milk was ordered.

Operation.

On November 11th at noon I first saw the patient. The abdomen was exceedingly rigid all over, not distended, generally tender, and the seat of considerable general gripping pain. Over the left inguinal canal was a hard, tender swelling with some bruising. Sickness was frequent, the vomit being brown and non-odorous. No faeces or flatus had been passed since admission. The tongue was moist, the temperature normal, and the pulse good—96. The left lower part of the abdomen was indicated as the point where he had received the blow.

I operated immediately at 12.30 p.m., 43 hours after the injury. Dr. Cyril Lewis gave the anaesthesia and Dr. Whelan assisted. An incision was first made over the left inguinal canal, disclosing considerable effusion of blood and serum around the cord. This wound was closed. The abdomen was then opened in the middle line below the umbilicus. On opening the peritoneum, a small quantity of faecal-smelling, turbid fluid escaped, and there was universal acute peritonitis. Search for some time failed to reveal the cause of this, and the intestines had to be eviscerated under hot towels before a ragged-edged round hole about 1 in. in diameter was found in the sigmoid flexure, where it occupies the hollow of the iliac bone; particles of faecal matter were exuding through the hole. The hole was closed by a purse-string suture with a continuous Lembert suture over it, the abdomen was mopped out and irrigated with saline, and a faecal fistula established in the small intestine about 9 in. above the ileo-caecal valve, a large rubber tube being sewn into the bowel and anchored in the upper part of the wound. The rest of the wound was closed in layers, with catgut for the deeper parts and silkworm gut for the skin.

After-History.

The operation lasted rather over an hour, and the man's condition was bad at the end. He rallied somewhat under ordinary methods of stimulation, but vomiting and hiccough were frequent during the first twenty-four hours. He was given calomel (1 grain) hourly for five hours. During the night about half a drachm of fluid faeces came through the tube. The next day he was better, with normal temperature and pulse 98. The abdomen was flatter and softer. He occasionally passed dark green fluid. The calomel was repeated. On November 14th the bowels acted for the first time, five motions being passed per rectum. On the next day the bowels acted again both through the fistula and through the rectum. Subsequently the general condition improved, and with aperients the bowels acted both ways. On November 19th it was found that the faecal matter from the fistula had burrowed, and the skin portion of the wound had to be laid open and plugged with iodoform gauze, and subsequently there was slow progress to recovery. When the wound had granulated secondary sutures were put in, which held. The fistula did not close, motions coming both ways.

When the main line of the wound was healed and the skin got into as healthy a condition as possible I operated (February 15th), freeing the fistula, closing it transversely to the long axis of the bowel, returning the bowel into the abdomen and freeing the ileo-caecal junction from the peritoneal and abdominal wound. There was some pain, vomiting, and flatulent distension after this operation. Flatus was passed on February 17th, and on February 23rd the bowels moved freely after a simple enema. The abdominal wound healed well, considering its unavoidable exposure to infection, only two or three sutures working out.

The patient left the hospital on March 15th. He has got much fatter, and I showed him to the Cardiff Medical Society on April 20th, well. The abdominal scars show no signs of weakness, but as a precaution he is wearing a belt.

The points which seem most worthy of attention about the case are—

1. The slight immediate symptoms, the man continuing work for half an hour.

2. The nature of the symptoms. Pain, rigidity, and vomiting were marked, and—if we except the bowel action two hours after the injury—no faeces or flatus were passed. On the other hand, there was little shock and no distension.

3. The blow over the left spermatic cord, with the resulting pain and swelling, being deceptive, as likely to produce some of the symptoms. The cord was cut down on first, for one could not ignore the possibility of strangulated hernia.

4. The intra-abdominal injury was beneath the site of the blow, indicating, in suspected lesions resulting from a localized blow, that it is better to cut down over the seat of the blow than, as was done, in the median line.

5. The fact of recovery, especially when the operation was performed so long a time after the injury. The mortality in 132 cases of ruptured intestine recorded by Berry and Giuseppe is 87.2 per cent.; 84 of these 132 cases were operated on and 17 recovered. These authors do not record one case of recovery amongst those in which operation was performed more than twenty-eight hours after the injury, and only two recoveries when the interval was longer than twelve hours. In the present case the interval between injury and operation was forty-three and a half hours.

6. The possibility of secondary rupture, the entire thickness of the gut wall not being destroyed at first, so that the lumen did not at once communicate with the peritoneal cavity. I believe that the rupture was primary, because the characteristic symptoms of rupture appeared immediately after the injury, the peritonitis was severe and general, and the peritoneum was not less torn than the other coats as if it had given way later. The shape of the hole, a circular opening, much resembling a perforated gastric ulcer, not a linear tear, might be thought to suggest secondary rupture, but other recorded cases in which the rupture was certainly primary, show that the opening may take this form.

7. The rarity of rupture of the sigmoid colon. In 132 cases of ruptured intestine, Berry and Giuseppe only record 4 of rupture in this situation; 3 of these 4 cases were not operated on. In the fourth the rupture was not found at operation. The difficulty of finding it is to be noted in the present case.

8. The establishment of the faecal fistula and the non-drainage of the peritoneal cavity. The faecal fistula was established to relieve the intestinal obstruction caused by the peritonitis. There was no drainage of the peritoneal cavity because of the formation of the fistula, because of the abdomen being got fairly clean, and because drains probably get encapsuled in a few hours.

9. The secondary suture of the granulating wound. When the sutures hold this procedure hastens healing and diminishes the liability to hernia.

10. The closure of the fistulous opening transversely instead of longitudinally to avoid unduly narrowing the bowel.

I can only find notes of two other cases of ruptured intestine that I have operated on.

The first of these was a man aged 28, who after a bicycle accident at Bristol travelled on the following day to Cardiff, and on the next day was admitted into the Workhouse Hospital. Here I saw him at the request of the visiting medical officer, and found evidence of general peritonitis. The patient was exceedingly ill. Immediate opening of the abdomen disclosed a tear 1 in. long of the jejunum and acute general peritonitis. A Paul's tube was sewn into the tear. The patient died shortly afterwards. A post-mortem examination showed no other injuries.

The second case was a man aged 40, under my care in the Cardiff Infirmary, who had received a blow on the abdomen by a piece of iron, which crushed him against a wall. I did not see him till fourteen hours after the accident, and operated immediately. On opening the abdomen, I found a piece of small intestine, 4 in. long, with its mesentery actually loose in the abdominal cavity, so that it could be picked out. There was much blood in the abdomen. The peritoneum in several places was torn. The intestine was joined by end-to-end union, other parts repaired, and the abdomen cleaned out. The

patient was extremely ill before operation, and died seven hours later. Although there were no signs of external bruising in this case, it was noted, when opening the abdomen, that the left rectus was torn completely across. On admission the patient had a pulse of only 84.

Traumatic rupture of the intestine is, as might be expected, more common in males than in females. Such injuries are produced either by squeezing, such as occurs in "run-over," or by a blow, the blow being sharp and unexpected, so that the abdominal muscles have no time to contract and protect the underlying parts. The rupture is due to crushing of the intestine between the force applied and some portion of the bony part of the posterior wall of the abdomen. More fixed parts of the intestine are more liable to injury than more movable parts, and therefore the duodenum and the lowest part of the ileum being more fixed, are somewhat more liable to injury. Injuries to the small intestine are shown by Berry and Giuseppe's tables to be more common than the large. Multiple ruptures are not uncommon. Partial (all the coats not being involved) and retroperitoneal ruptures occur rarely. The injury, of course, may be complicated with other injuries.

The three important symptoms are pain, vomiting, and rigidity. These are hardly ever absent. Other important symptoms are tenderness, sometimes localized, and cessation of the action of the bowels. Shock, which one would naturally expect, is a very inconstant symptom, and the pulse-rate is often not increased at first. Berry and Giuseppe say, "In many of our cases shock was entirely absent. Several of the patients walked home after the accident. Some of them walked to the hospital. Two of the patients went on with their work. Case cxxiv remained at work for four hours, and Case cxxxi wheeled his barrow home before going to the hospital."

Rigidity is hard and board-like in character. It is due to the abdominal muscles, so to speak, splinting the injured parts beneath them. A rapid pulse should never be waited for, neither should distension, for it is a late symptom, and so serious as almost to obviate the possibility of recovery under any circumstances.

Vomiting, frequent and in small quantities, is almost always present. Dullness is not very helpful. It is a symptom which more often occurs when blood is extravasated, as through injury to a solid organ. Absence of the liver dullness, a physical sign which is always looked for and its presence or absence carefully noted, is characterized by Berry and Giuseppe as a sign "of the worthlessness of which in the diagnosis of ruptured intestine we cannot speak too strongly." Of Berry and Giuseppe's 132 cases, 48 were not operated on, and they all died. Of the number operated on—namely, 84—17 recovered and 67 died, an operation mortality of 80 per cent.

With regard to treatment, early operation is the key to success. Little harm is done by opening the abdomen needlessly, while waiting for more pronounced symptoms is the cause of many a death. Where great pain and great rigidity are present we should not wait for a rapid pulse or for a distended abdomen, for the time for successful operating will then probably have passed by. With regard to operative details, knowledge of the site of the blow (if a blow has produced the injury), localized dullness or localized tenderness may all help to indicate where to cut down. The rupture is not always found. It was not found in 15 out of the 84 cases recorded by Berry and Giuseppe. When found it is best closed by simple suture. The questions of irrigation *versus* mopping and drainage or no drainage of the peritoneal cavity will probably always be determined differently by different operators. Enterostomy is of value when the symptoms of ileus are marked. An appendicostomy may be substituted.

In conclusion, I would emphasize the fact that early operation is the key to success in these cases; that pain, rigidity, and vomiting are the three symptoms which alone we must constantly expect, and that sitting up in bed, slow rectal saline infusion, and sometimes an enterostomy, are important points in the after-treatment.

THE King of the Belgians has given his estate of Saasable on the Gulf of Villefranche for the purpose of a convalescent home for sick and convalescents from the Congo Colony. The property is said to be one of the most beautiful on the Riviera.

* Recently I successfully closed the abdomen without drainage after operating for a perforated gastric ulcer.

THE TREATMENT OF SEVERE CASES OF CHRONIC COLITIS.*

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Cases of chronic colitis naturally divide themselves into two distinct classes:

1. Those cases which if carefully treated by suitable dietary, proper regulation of the bowels, and perhaps one or more visits to some suitable spa where proper lavage of the bowel can be carried out, quickly get well, and remain well; and

2. Cases in which in spite of prolonged and careful medical and spa treatment, little if any improvement occurs, or the improvement is only temporary, the patient quickly relapsing and the symptoms in spite of continued treatment getting worse.

I think every one who has had any experience in the treatment of chronic colitis will admit that this second type of case not only exists but forms an unpleasantly large proportion of the whole.

The worst cases in this second class spend their time going from one doctor to another, and in visiting most of the English and Continental spas. Many of them go in for Christian Science, vegetarianism, or other forms of quackery. In fact, they form one of the worst classes of chronic invalids, a nuisance to their doctors, their relatives, and themselves. It naturally occurs to one to ask what is the reason that the treatment which seems so effectual in the first type fails so signally in the second. The reason is, I think, not far to seek—chronic colitis is a condition usually diagnosed from the symptoms alone, and I think we shall all admit that the treatment of a disease which is only manifest by its symptoms is always difficult, and owing to the large possibilities of error which must be present in any diagnosis founded only upon symptoms, often unsatisfactory.

During the last few years I have seen a considerable number of the more severe cases of chronic colitis, both in hospital and in private. Most of these cases had previously been treated medically for long periods, and many had also been to spas and had Plombières treatment. For the most part they belonged to the second class of cases that I have mentioned, and medical treatment had failed to give them any permanent relief. All the cases that I have seen have been examined with the sigmoidoscope, and in many an operation has been performed which has enabled me to examine directly the colon and so to ascertain the exact nature of the pathological lesion.

I have no hesitation in saying that all cases presenting symptoms of chronic colitis should be most carefully examined with a view of ascertaining the exact nature of the lesion in the colon. The chief reason for the unsatisfactory results that are often seen in cases of chronic colitis is that the symptoms ascribed to this disease may result from a great many different conditions of widely different characters, and the treatment which is suitable for one case is not suited to others. Our aim in all such cases should be to find out if possible the real cause of the symptoms. This is admittedly not always possible, but, on the other hand, it often is.

In a paper read before the Royal Medical and Chirurgical Society in June, 1907, I first pointed out that in the great majority of cases of chronic colitis a lesion or lesions could by suitable means be demonstrated in the colon, that these lesions varied considerably in different cases, and that any treatment which did not take into account the cause of the symptoms is unsound in principle.

The name "chronic colitis" should be reserved for those cases in which there is a chronic inflammatory condition of the mucous membrane of the colon. They can be distinguished readily by examination with the sigmoidoscope, as the sigmoid flexure is practically always involved.

The cases in which there is a definite inflammatory condition of the mucosa, as seen on sigmoidoscopic examination, are those which are suitable for treatment by lavage and the Plombières douche. Many of them in my experience do well. They form the first class of which I have spoken, and the majority of all cases. On

the other hand, there are many cases with identical symptoms in which, on examination with the sigmoidoscope, we find the mucous membrane quite normal, but some other lesion is present. It is this class of case which I propose to consider in detail. In many there is no inflammation of the mucosa of the bowel, while in others in which there is, it is purely secondary to some other lesion. The nature of the lesion varies considerably. An important class is that in which some chronic obstructive lesion exists in the colon, such as adhesions from previous peritonitis or perimetritis. Or a kink or acute angle is present in the pelvic colon as the result of adhesions to the iliac fossa or in the meso-sigmoid, probably due to old chronic constipation. Another form of lesion is that in which there is a partial volvulus of the sigmoid, or a chronic and recurring intussusception.

We must also bear in mind that cancer of the colon may cause symptoms of chronic colitis, which are indistinguishable from those occurring in the simpler forms. I have seen seven such cases, in several of which the patient had previously undergone treatment for months for a supposed simple chronic colitis.

In another well-marked group of cases we find a chronically inflamed appendix, which, owing to the fact that it has not caused the usual distinctive symptoms, has remained undetected. There is no doubt that a chronically inflamed appendix may cause symptoms of chronic colitis, though exactly how it does so is not always clear. In some instances it is due to adhesions which have formed to the pelvic colon, while in others it probably produces symptoms by the constant discharge of septic material into the bowel, in the same way that carious and septic teeth will cause gastric disease.

There is one well-marked group of cases in which all the symptoms of a severe chronic mucous colitis exist, and in which there is no inflammation of the mucosa, but the whole colon is found to be lax and atonic. On examination with the sigmoidoscope the bowel is seen to be unduly lax and to have a marked tendency for the upper portions to prolapse into the lower; the walls are thin and semi-transparent; the lumen is dilated, and the normal sacculata much exaggerated. There is generally well-marked ptosis of the transverse colon and of the stomach. In several instances in which I have operated for this condition the centre of the transverse colon has been found in the bottom of the pelvis lying in front of the other part of the rectum. In this type of case the colon is dilated and its walls atonic, but there is no inflammation of the mucosa. It is obvious that it is most important to be able to distinguish this type of case, as treatment by lavage which involves distension of the already dilated colon will not only be useless but will do harm. Such cases are not suitable for Plombières treatment. It is quite obvious that these different conditions, although they cause the same symptoms, cannot be classed as one disease.

I cannot believe that the neurotic element which is so commonly present, and about which we hear so much, is other than secondary. I have frequently seen it entirely disappear after the cause of the symptoms has been removed.

One of the chief reasons for the unsatisfactory results that have been obtained in the treatment of many cases of colitis has been inaccurate diagnosis, and treating as a disease what is only a symptom.

The indications for operating in cases of chronic colitis will, of course, depend upon the nature of the lesion present. When there is any evidence of an obstructive lesion such as adhesions or chronic volvulus, laparotomy is clearly indicated, and affords the only possible method of adequately dealing with the case.

The following is a good instance of the type of case which can only be treated satisfactorily by operation.

The patient, a married lady, was recently sent to me by her doctor. For ten years she had been a chronic invalid with mucous colitis. She suffered from chronic pain in the abdomen, which at times became severe, and was always worst on the left side. She had lost weight, and always felt ill and depressed. She had fits of weeping, and misery on the slightest, and often upon no, provocation, and was unable to go about or enjoy life in the ordinary way. She had an earthy complexion, and her appearance when I saw her was typical of toxæmia or auto-intoxication. The stools contained large quantities of mucus, and often consisted of little else. A curious and unusual symptom was that the presence of anything in the rectum caused

* A paper read before the Balmological Society.

an uncontrollable desire to go to stool and much tenesmus. She had been under medical treatment for years, and all the recognized forms had been tried. On examining the bowel with the sigmoidoscope I found the mucosa quite normal in appearance. In the middle of the sigmoid, however, the bowel was found to be firmly fixed and angulated, apparently by adhesions. The uterus was also found to be markedly retroflexed. It seemed probable that the tenesmus from which she suffered was due to the condition of the uterus, and a gynaecologist who saw her with me confirmed this view.

I opened the abdomen and found a number of firm adhesions binding down and kinking the middle of the sigmoid flexure; these were divided and the wound left in the peritoneum seven up. The uterus was also drawn forward and anchored to the abdominal wall so as to correct the position.

The patient made a good recovery, and all her symptoms have now completely disappeared. When I last saw her some months after the operation she had put on weight, her complexion was good, she no longer had any mucus in the stools, and she told me that she never remembered feeling so well and fit.

Though most of the cases of true colitis (that is to say, when a chronic inflammation of the mucosa of the colon is found) get well as the result of medical treatment and lavage, there are nevertheless a certain number which either fail to get entirely well or suffer from frequent relapses. These cases are, I believe, best treated by appendicostomy, which enables the patient to keep the colon efficiently washed out daily with the minimum of inconvenience, and the symptoms quickly clear up.

The most difficult cases to treat are perhaps those in which there is a general atony of the bowel combined with ptosis of the colon. Stitching up the colon is quite useless, as it is unreasonable to expect any stitches to hold up the stomach and transverse colon permanently when the natural supports have not been sufficient to do so. It is impossible to deal directly with the condition, but I have had very satisfactory results in such cases from appendicostomy, and the fitting of a belt to support the abdomen. The object of the operation in such cases is to prevent the stagnation of the faecal contents of the colon, which is the chief cause of trouble, and at the same time by the introduction of suitable peristaltic stimulants to improve and restore the muscular tone of the bowel wall.

The following well illustrates this type of case:

Mrs. B., aged 32, a married lady, was sent to me by her doctor suffering from severe chronic colitis. There was a history dating back twelve years, though the symptoms had only been really severe for the last four years. She always felt ill, and had a chronic aching pain in the left side of the abdomen. She was always very constipated, and had to take large doses of aperients, and this often without success. The stools contained mucus, and often large casts over a foot in length. She had been treated for long periods by the usual remedies, and had on different occasions consulted several well-known physicians, but without obtaining any relief from her symptoms.

Examination showed an atonic condition of the bowel, and chronic inflammatory changes of the mucosa. There was also well-marked ptosis of the transverse colon.

I operated, and on opening the abdomen found the colon much dilated and thin. There was also considerable enteroptosis. Appendicostomy was performed, as the only alternative seemed to be removal of the colon.

The colon was subsequently irrigated daily with warm water (at first in small quantities) to which a teaspoonful of ox bile was added. She rapidly improved in health, and learnt to wash out the bowel for herself. The mucus entirely disappeared from the stools, her health improved, and the bowels acted without any aperient being used. During the next six months she put on 2 st. in weight, and when I last heard from her, about nine months after the operation, she was quite well, and although on my advice still washing out the bowel, was quite free from any of her old symptoms.

Appendicostomy is an operation followed by excellent results in many of these cases, but it is not a panacea for all cases of so-called chronic colitis any more than is lavage. It should only be performed in suitable cases, and that can only be done if we first ascertain the cause of the symptoms. I have seen cases in which appendicostomy has failed even to relieve the symptoms because there was some obstruction or other lesion which had not been detected.

I do not wish it to be thought that I am advocating operation in all cases in which there are symptoms of chronic colitis. I think operation should only be resorted to after a careful trial has been given to medical treatment. But the important thing is to ascertain the cause of the symptoms by a careful examination aided whenever possible by the use of the sigmoidoscope, as it is useless treating a case by medical measures where there is an obstructive lesion in the colon, or a chronically inflamed

and thickened appendix. And, in any case, it is not satisfactory to institute treatment without knowing the cause of the symptoms.

ENTEROSPASM: OPERATION: DEATH.

By VAUGHAN PENDRED, M.D., DUB., F.R.C.S., ENG.

COVENTRY.

MR. C. W. DRAN'S case of enterospasm reported in the *JOURNAL* of March 13th recalls a similar case I had under my care four years ago, which ended fatally, and on which I obtained a partial autopsy:

The patient was a querulous, excitable, grey-haired little woman aged 57 when I first saw her in October, 1904. She was fat and healthy-looking. For the preceding three years she had suffered from time to time from colic with vomiting and diarrhoea. Latterly these attacks had become very frequent and severe. The tongue was coated. The urine showed a trace of albumen, and she complained of frequent micturition. During the next two months, in spite of energetic treatment, she had much colic and some hæmaturia, and had plainly emaciated. A copious bleeding from the rectum occurred about this time.

In January, 1905, I sent her to Guy's Hospital, where some improvement took place during her month's residence. An x-ray photograph of the abdomen was negative. Movable right kidney was diagnosed and the wearing of a belt advised.

Month after month she continued to waste, and had constant vomiting attacks. Constipation alternated with diarrhoea, which latter somewhat relieved her pain.

In July, 1905—or ten months after my first notes—she was nearly bedridden with colic, coming on every few minutes, accompanied by tremendous borborygmi. Visible peristaltic waves passed across coils of intestine from left to right every few minutes, as though the intestine were endeavouring to overcome some obstruction. By the end of this month her condition was pitiable, and I had to keep her constantly under the influence of morphia. The pain was almost constant night and day. The vomit now became serous, and she could not supervene, and the bowels were confined. In short, the symptoms pointed to intestinal obstruction.

On July 29th I opened the abdomen below the umbilicus, but at first could find nothing amiss. Some feet of small intestine, distended but healthy looking, prolapsed through the wound. At one point the distension of the gut suddenly ceased, and the distal portion was flat, toneless, and of a paler colour, so that I thought that I had discovered the obstruction that I sought. Whilst I was considering what I would do next, the collapsed gut began to fill out again just as it had appeared to do through the abdominal wall. In order to return the gut it was necessary to incise a prominent coil, from which gas and foul liquid faeces escaped.

Three days later her condition was as bad as ever. The gurgling, peristalsis, pain and sickness, with occasional hæmaturia, being nearly continuous. She died in the middle of September, emaciated to a skeleton, as she was unable to take food for many days. The peristaltic waves were a marked symptom up to the last moment of her life.

A post-mortem examination of the abdomen was all I could obtain leave to make. Every organ, though wasted, was macroscopically healthy. The intestine was partly opened up, and presented a normal appearance. Portions of the organs were sent to a London pathologist, who confirmed my opinion of them.

This case parallels Mr. Dean's in many particulars. Both patients had suffered from abdominal pains, vomiting, and bowel trouble for some years. The appearance of the ileum at the operation was similar. In Dr. Ashe's and my case the flattened gut "lived up" under observation. Anorexia and utterly uncontrollable vomiting, with occasional hæmaturia and melaena, were such prominent symptoms in my case, that they point to a profound toxæmia, and not merely to a disturbance of innervation of the intestine.

FISTULAE BETWEEN THE STOMACH AND BILE PASSAGES, ETC.

By ALEXANDER DON, C.M., F.R.C.S., M.A.,

SURGEON, ROYAL INFIRMARY, DUNDEE.

THE CASES of unusual fistulae in the *JOURNAL* of May 1st by Mr. Mayo Robson make one think that the unrecorded cases may be more numerous than would be expected, and the following three may be of some interest:

M. L., aged 32, a multipara, whom I saw with Dr. Lawson on June 17th, 1899, had the following history: From November, 1898, she had repeated attacks of biliary colic, which developed in intensity till April 5th, 1899. The vomit was at times

Gilious and the pain was intense, an attack usually lasting for more than a week. The most severe attack was in April, and at that time she was confined to bed for a fortnight, and was extremely ill; but, owing to her condition—she was then in the seventh month of her pregnancy—operation was declined. The abdomen was noted to be unusually large. On the morning of June 13th she had what seemed to be the beginning of another attack, and an opiate was given to relieve the pain. This subsided, but next morning her doctor was summoned early and found labour apparently progressing normally, though the patient was in rather a collapsed condition. After the birth of the child haemorrhage continued very freely, and I was sent for. On my arrival the patient was moribund. On examination by the vagina I discovered a second child lying high up in the uterus, which was quite lax. The child was turned and delivered without any difficulty, but the uterus did not contract, and was found to be firmly fixed to the liver. No manipulation could free it. There was no question of its rupture, as the wall could be felt distinctly, and the hand passed up till the liver was reached. The patient died from loss of blood shortly after the delivery of the second child. No post-mortem examination was allowed.

The probable course of events in this case was gall-stone colic with inflammation, and in April a fistula had been formed into the colon or duodenum, and relief had been obtained at that time; but so much inflammatory adhesion had occurred that the uterus must have then become fixed to the colon or liver. At any rate, after this attack she was comparatively free from pain till her confinement in June, when the uterine contractions again caused a semblance of biliary colic.

The second case was a farm servant, J. C., aged 43, who consulted me in April, 1902, about an attack of indigestion with extreme pain. The pain always followed ingestion of food, reaching its greatest intensity about three hours after eating, and being relieved by complete emptying of the stomach by vomiting. I advised operation, but he would not at the time consent, and he was treated by dieting and bismuth carbonate, under which he improved considerably and was able to resume work. In June of the same year the pain recurred, and there was severe haematemesis on the 12th of that month, which so alarmed him that he consented to operation. At the operation the stomach, from the middle of the lesser curvature to the pylorus, was found to be firmly adherent to the under surface of the liver. When these adhesions were freed a large opening was found in the anterior surface of the stomach near the pylorus, and a large eaten-out cavity in the liver from which bleeding was persistent. This cavity measured 2 in. by 1 in., and about 1 in. deep. The cavity was packed with iodoform gauze. The opening in the stomach was closed, and a drain left in the upper angle of the abdominal wound. The patient died next day. The condition was one of gastric ulcer perforating after adhesion to the liver.

The third case was seen in consultation with Dr. Macdonald of Dunkeld in November, 1903. Miss J., aged 43, had suffered from indigestion when in Ireland twelve years previously. In October she began to vomit a dark-coloured fluid. All day the mouth was stopped, but the vomiting still persisted, amounting to several pints daily. No drug had any effect, and she got very weak and emaciated. Malignant obstruction about the pylorus was diagnosed, but very little beyond a marked resistance to palpation could be made out. The puzzling thing was the amount of fluid which must be returning through an obstructed pylorus, and which seemed to be pure bile. An alternative diagnosis was gall-stone obstruction by ulceration and blocking of the duodenum, and it was only at the operation that the diagnosis was cleared up. The gall bladder was found adherent to the front of the stomach 1½ in. above the pylorus, and the pylorus felt hard and fixed. The patient's condition was so poor that a posterior gastro-jejunostomy was performed. She rapidly recovered, and was enjoying light diet and sitting up in a fortnight. She then had another attack of vomiting, with marked nervousness and sleeplessness. This came on always at night; and, as nothing was found in her condition to account for it, she was allowed at her own request to go home, where she again rapidly recovered, and is now quite well, and able to attend to her household duties.

In this case the ulcer may have been gastric, and have penetrated after adhesions into the gall bladder, or it may have been biliary from gall stones, and ulcerated into the stomach. In either case the condition set up pyloric inflammation and thickening with obstruction, which was relieved by the gastro-jejunostomy. It is quite likely that the inflammatory condition at the pylorus may have subsided later and the pylorus again become patent; but, in any case, the proper treatment at the time seemed to me to be a gastro-jejunostomy. There was not much matting about the bile passages. The gall bladder adhered only at one point where the fistula existed, and nothing was discovered elsewhere to lead one to think that this case was originally one of gall stones rather than of gastric ulcer.

A FATAL CASE OF ACUTE VOLVULUS OF THE ILEUM.

By S. E. DENYER, C.M.G., M.D., M.A.CANTAB.,
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HULL.

I AM indebted to Dr. W. A. Bryant for giving me the opportunity of seeing and recording this case, which is of interest from a diagnostic as well as a forensic point of view.

History.

The patient, a man aged 23, a fitter, went to bed on the night of April 29th apparently in good health. He had done an ordinary day's work, and had not complained of any ill-health. At 3 a.m., while in bed, he was suddenly seized with acute abdominal pain and vomiting. This continued until 8 a.m., when Dr. Bryant was sent for. He saw the patient at 8.7 a.m., and found him in a state of collapse, pulseless, and with no audible heart sounds; respirations were five or six a minute, and spasmodic in character; the pupils were dilated. He gave a hypodermic injection of strychnine and digitalin, after which the pupils contracted, but there was no other reaction. The patient died at 8.15 a.m.

Dr. Bryant was told that the patient had had attacks of pain in the chest and back for some time, and his wife had recommended him to go to a doctor, but he had refused. Otherwise he had been healthy.

Necropsy.

The body was that of a well-nourished man, looking about the stated age. There was no sign of any external injury. Rigor mortis was well marked. The muscles were found to be healthy, normal in colour, and well developed.

Heart.—Muscle and valves healthy, no sign of disease in the coronary arteries. A small quantity of clear fluid in the pericardial sac.

Lungs.—Some oedema at bases, and on the left side some old pleurisy, otherwise healthy.

Thoracic aorta healthy; no atheroma.

The brain and meninges, as well as the arteries of the brain, were healthy.

Abdomen distended; on opening the abdominal cavity a large coil of intestine was found presenting. This coil was placed vertically, and was about 20 in. in length. It was very much distended, being about the diameter of an ordinary man's coat-sleeve, and was of a deep purple colour, almost black. At first, on account of its size and position, it was thought to be the transverse colon much dilated, but closer investigation showed that it was the ileum in an abnormal position. There was no peritonitis, nor any sign of perforation or gangrene. The stomach was collapsed and empty, excepting for an ounce or two of fluid contents, consisting of watery mucus with no unusual smell or appearance. The oesophagus and duodenum as well as the stomach had no sign of inflammation, corrosion, ulceration, or perforation; the mucous membrane was pale, but otherwise normal. There were no adhesions in the neighbourhood of these organs.

As the jejunum passed into the ileum it was found to become congested and distended, becoming more so as it lower part. The ileum was distended throughout its whole extent, but mostly in its lower two feet, which presented the appearance described above. The peritoneum of the posterior abdominal wall on the right side, as it left the root of the mesentery, had a dragged appearance, and the mesentery in the neighbourhood of the caecum was twisted on itself. On opening the ileum it was found to contain a large quantity of dark, opaque, and its walls were black with congested blood. On peculiarity noted was that this area of intense congestion suddenly ceased at the ileo-caecal valve; the mucous membrane of the caecum was very pale but otherwise quite normal in appearance. On the other hand, the congested condition of the ileum gradually lessened above. There was no foreign body in the intestine. The large intestine was very contracted and pale, and seemed smaller than normal, and this contracted appearance was common to the whole of the large bowel. The appendix was healthy.

It was situated in the right iliac fossa, where the caecum was also found in its usual position. There was no evidence of any congenital maldevelopment. Meckel's diverticulum was not found. There was no sign of internal hernia in any part of the abdomen. The superior mesenteric vessels were normal in appearance, and there was no sign of portal thrombosis or embolism. The pancreas was healthy, and there was no sign of fatty necrosis. The kidneys and suprarenal bodies were healthy. The bladder was contracted and the urine contained no sugar. The liver and gall bladder and its ducts were healthy, and there were no adhesions around these parts. The abdominal aorta and inferior vena cava presented no sign of disease. The spleen was rather large but otherwise was normal. There was no fluid in the abdominal cavity.

From the history of the case and the post-mortem appearances, it is evident that it was one of acute volvulus of the ileum. The constriction was definite below at the ileo-caecal valve; above it was difficult to say where the gut was gripped, as no sign of constriction could be found

In doing a *post-mortem* examination of this kind, one naturally looks first for the commoner causes of acute disease, and the appendix is early searched for on this account. Unfortunately, the moving of the intestines in the search for the appendix disturbed the position of the ileum, and the position of the upper limit of the volvulus must remain more or less hypothetical. The extreme distension affected about 20 in. of the ileum, and the upper limit of the volvulus was probably in this position. In recorded cases of volvulus of the ileum, both the upper and lower limits seem in some cases to have been more or less indefinite.

Death supervened in five hours in this case, and was undoubtedly due to shock following an acute strangulation of a comparatively large amount of bowel, and that bowel part of the small intestine which is of much more vital importance than the large. From the immense size this part of intestine reached, and the amount of congested blood in it, there was practically a severe haemorrhage into it, as far as the general circulation was concerned. This must have greatly increased the already severe shock from which the patient was suffering.

Shock is defined as a condition of exhaustion of the vasomotor centre. Crile has shown that if the abdomen of an animal is opened and the intestines exposed, a fall of blood pressure occurs. This is associated with a vascular dilatation of the splanchnic area, and a marked degree of shock occurs. The animal bleeds into its own portal system. Anaemia of the vasomotor centre results, and sets up a general vasomotor paralysis, which increases as the vasomotor centre becomes exhausted. Treves states that "the grave initial symptoms of intestinal obstruction do not depend upon the fact that the bowel is obstructed, but upon the severe injury to the sympathetic nerves involved." Crile's observations show that this injury acts by producing an inhibition of the vaso-constrictor nerves, and ultimate paralysis of these nerves by exhaustion of the vasomotor centre. The resulting dilatation of the vessels of the splanchnic area causes a great fall in the systemic blood pressure and coincident shock.

In the case of this man there was an added haemorrhage into the part of the intestine forming the volvulus, thus increasing the factors causing shock, and making it much more profound owing to the added anaemia of the brain.

I can find no record of death ensuing in so short a time from intestinal obstruction, although several cases have been recorded where death ensued within twenty-four hours. Dr. Bryant suggests that the man was one who did not complain much, and that he may have had some pain earlier than the time stated.

The part of the ileum involved in this case, the lower part, is most frequently the seat of volvulus when it occurs in the small intestine. Treves says "the majority of patients exhibiting this form of volvulus have been males with a mean age of 25 years." Cases of volvulus of the small intestine in cases of typhoid fever, simulating perforation, are mentioned by Roberts; the symptoms were severe abdominal pain and collapse. Eliot has recorded a case in which a volvulus of the ileum, associated with one of the pelvic colon, caused great shock, with a pulse of 140, thready and very weak, coldness and lividity, and apathy, but the facial expression showed intense suffering. In the case I have recorded the symptoms of shock were present to such a degree as to cause death within a few hours.

TWO CASES OF APPENDICITIS.

By H. GOODWIN, F.R.C.S. Edin.,

DOVEY TRACEY.

The following two cases of appendicitis presenting some unusual features are, I think, worth recording.

CASE I.

Mrs. C., aged 36, had for a period of two months repeated attacks of severe appendicular colic, accompanied on each occasion by a rise of temperature—101° to 102°—with severe abdominal pain, referred at first to the umbilical region, and latterly localized to the region of the appendix, the maximum point of tenderness being over McBurney's point. These attacks subsided under hot fomentations, rest in bed, etc., but the attacks became more frequent and intervals shorter; also they were more severe in character. The patient was three months

pregnant, but in the light of the increasing severity of the pain, and frequency of attacks, it was decided to operate, and at the worst the risk of miscarriage was less than the possibility of the formation of an abscess.

Operation.—The caecum was much bound down by adhesions, and the tip of the appendix was adherent to the pelvic brim. There was great difficulty in withdrawing the caecum sufficiently to expose the base of the appendix, and to free the appendix itself, owing to numerous adhesions, but eventually this was accomplished, and a long inflamed appendix was removed, and the stump invaginated by purse-string suture, and covered by Lembert's sutures.

The subsequent history was uneventful; on the next day temperature and pulse were normal, and on the fourteenth day the patient returned home; no signs of uterine disturbance had occurred, and she remained well after six weeks. On opening the appendix, a nematode worm about 1½ in. in length was found, and there was a haemorrhagic condition of the mucous lining of the whole organ, and an ulcer commencing to form on the floor, which would in all probability have gone on very shortly to perforation. I think the result amply justified the possible risk of cutting short the pregnancy.

CASE II.

A child aged 4, who for about twelve months had had attacks, none very severe, of abdominal pain without localized tenderness, principally referred to the umbilical region. Six weeks before operation she had a severe attack of pain, with rise of temperature to 102°; vomiting and marked constipation. There was no tenderness over the appendix at first; in about four days the pain was localized. The appendix, which was much inflamed, 4½ in. long, and considerably swollen, was isolated without difficulty. It was treated by invagination with purse-string suture, and closed over with Lembert's sutures. The recovery was uneventful; there was no rise of temperature or pulse, and the stitches were removed on the eighth day.

On opening the appendix a haemorrhagic condition of the mucous lining was seen, and a small fishbone, about ½ in. long, lying free in the lumen. There was also evidence of an old kink, as represented by a transverse band of scar tissue.

Both these cases are illustrative of the advantage of early operation when symptoms of colic recur without obvious cause; in the second case, though the temperature and pulse became normal in a few days, during the whole five weeks there was never complete freedom from slight attacks of pain, sometimes lasting only a few minutes, not from tenderness on deep pressure over the appendix.

The technique I practised was by incision through the skin over the outer border of the rectus, which was pushed inwards without splitting its fibres. I think this method has distinct advantages over the gridiron method, as especially in the first case it would have been nearly impossible to obtain sufficient room for the necessary manipulations without dividing the fibres of the internal oblique and transversalis. I followed Professor von Eiselsberg, of Vienna, in painting the skin with a spirit lotion of iodine liniment both before the incision and after the stitches were introduced.

A CASE OF VERY LARGE GALL BLADDER SUCCESSFULLY TREATED BY EXCISION.*

By F. W. COLLINSON, M.D. Edin., M.R.C.P. Lond., F.R.C.S. Edin.,

HONORARY MEDICAL OFFICER, PRESTON ROYAL INFIRMARY.

This case is remarkable owing to the immense size of the gall bladder, being amongst the largest on record.

Mrs. S., aged 31, was sent to me by Dr. Callanan of Longridge on October 14th, 1908, suffering from general abdominal distension and pain in the right side of the abdomen.

History.

There was nothing of note in the family history, as all were healthy; the mother had died in childbirth. The patient herself had always been in good health, though pale. She had two children, now living and healthy, born six and three years ago, with one miscarriage in between them.

The history of the present affection appeared to date from August, 1907, when she had a fall, for soon after she began to vomit each day, and in December she remained in bed on that account. She distinctly said there was then no swelling of the abdomen. In January she observed a swelling of the lower part of the abdomen towards the right side. On February 13th she had greatly increased in size, and was somewhat emaciated and markedly jaundiced. She was tapped, and 25 pints of fluid was drawn off, and the fluid must have been similar to that removed afterwards at the operation. Dr. Callanan was able to "feel the liver for 2 in. or 3 in. below the ribs," but he was not able to reach, rather prophetically, "this may, of course, be the sac of

* Notes read, and patient shown, to the Clinical Branch of the Preston Medical-Ethical Society, February 3rd, 1909.

a cyst." It might have been the cyst contracted, but it was more likely to be the liver, as the cyst would tend to fall away from the liver in all probability, for there would not be any adhesions at the first tapping, as they would arise from cozing after the puncture. Her general health improved, and the jaundice diminished. She, however, began to refill, and on April 10th 25 pints were again drawn off. Her general health still further improved, and her menstruation, which had ceased in the December, recommenced in June, and was regular up to the operation.

Condition when First Seen.

Upon examination there was no cachexia or jaundice and her pulse and temperature were normal. Excepting the evident enlargement of the abdomen there did not appear to be much the matter with her. The circumference at the umbilicus was 40 in., although she is short in stature. The abdomen did not appear irregular to touch or appearance; it was quite uniformly dull all over, as I failed to find a tympanic area anywhere. It did not feel tight, but soft and fluctuating and a thrill was readily propagated in any part. On vaginal examination the uterus was found to be normally placed, and there was not any bulging in the fornices. The diagnosis was not by any means clear, but, as Kocher says, "the conspicuous bulk of the growth at once turns the thoughts of the observer to the commonest form of abdominal tumour, ovarian cyst." I thought it most likely to be an ovarian cyst, but could not be certain, and, as a matter of fact, in my notes I placed a question mark against the diagnosis.

The same day she was admitted into Preston Infirmary. The urine was 1028, acid, no albumen, no sugar, urates, and no marked coloration of bile, though it must be confessed we did not think of testing for bile, as we did not get the history of jaundice till afterwards from Dr. Callanan.

Operation.

On October 19th Dr. R. M. Glover gave chloroform, but quickly changed to ether by the open method, which he continued throughout, and with the assistance of Dr. A. Toulmin I operated, the incision being in the middle line below the umbilicus. It was impossible to make out the layers of peritoneum and sac owing to the very firm adhesions, and the uncertainty was so great that we decided to empty the sac with a large trocar, and 20 pints of thick gamboge-coloured liquid escaped, leaving 2 pints at least in the bottom of the cyst. Upon opening up the sac, the velvety appearance of the inner lining was remarkable, reminding us of miniature valvulae conniventes covering the whole surface.

Commencing to separate the cyst, we found that it meant really tearing the sac from its attachments to the entire anterior abdominal wall, the bladder, the spleen, the stomach, and the liver. Fortunately it was not anywhere attached to the intestines, or the firmness of the adhesions would have rendered removal quite impossible; the intestines were all placed quite behind the cyst, which formed a complete cover to them. More fluid continued to well up into the cyst, and was seen to be coming out of the dilated cystic duct. There were not any calculi to be found. Another sinus ran up towards the right kidney, but it proved to be a cul-de-sac formed possibly by the pushing of the cyst upwards into that region. When the cyst was separated up to the under surface of the liver, the patient became so exceedingly collapsed, from the length of the operation (about two hours) and the violence required in the separation of the adhesions, that the anaesthetist asked for the operation to be brought to a speedy conclusion; hence careful examination of the common duct and hepatic duct was impossible, and we had to be content with cutting off the sac and ligaturing drainage tubes into the cystic duct and the aforementioned cul-de-sac, and rapidly stitching up the abdomen.

The collapse was great, but with the aid of hypodermic and rectal saline injections the patient gradually improved, and in forty-eight hours the pulse was 80 and of good tension. The quantity of urine during the first week was 14 oz., 18 oz., 20 oz., 16 oz., and 12 oz. The temperature immediately rose to 102, and remained so till the tube was replaced, when it became normal. The tube was removed altogether on December 20th, when the amount of fluid in twenty-four hours was from 2 oz. to 4 oz., and it had changed to a yellowish purulent fluid. There was never any bile in her urine after the operation; the faces were very pale at first, but gradually deepened to a colour. She left the infirmary on January 3rd, the sinus being dressed once in twenty-four hours, and discharging about 1 oz. The skin throughout the whole illness was never irritated by the bile. When last seen, on March 20th, she complained of occasional gain in the region of the liver, and her mouth temperature was 99.2°. She described her health as good, and said she was quite able to do her housework. The faces have been for some time colourless. She is pale, but as stated before, has always been so. There was only slight moistening of the small pad covering the sinus.

Specimens of the fluid and of the cyst wall were sent immediately after the operation to my friend, F. W. Enrich, M.D. Edin., Honorary Physician and Honorary

Pathologist to Bradford Infirmary, and he kindly reported as follows:

The cyst wall is composed of dense fibrous tissue, the fibres arranged parallel to each other. Its outer half is poor in cell elements. Its inner half is cellular, showing hyperplasia and multiplication of the fixed tissue cells, and also small round-cell (leucocyte) infiltration. These cell masses are developed at fairly regular intervals, so that the inner surface of the cyst wall is thrown into folds. The inner surface is covered by a thin layer of necrotic tissue in which no structure is recognizable. No epithelial elements are visible. A grain of bile pigment adheres in places to the inner surface. The contents of the cyst separate, on standing, into three layers. The upper consists of bile-stained fat, the middle of a dense albuminous liquid, bile-stained; the lowest of a granular deposit of bile pigment. Chemically the fluid is rich in albumen, fat, bile pigment, and bile acids. There is no cholesterin. Faintly alkaline. Microscopically fat globules and bile pigment, a few isolated leucocytes, and one or two large (epithelial) cells distended with fat globules. Specific gravity 1017. Diagnosis, distended gall bladder, chronic inflammatory induration.

In 1905 Alban Doran delivered an interesting clinical lecture at the Samaritan Free Hospital for Women upon Dilatation of the Gall Bladder Simulating Ovarian Cyst.¹ I feel much indebted to that lecture, and have taken from it the following details, of which I would not otherwise have been aware.

He describes his case of a gall bladder holding 2 pints of turbid fluid, together with a number of calculi. He then discusses the whole subject, dividing these conditions into three classes:

(a) Cystic tumours of great size extending to the left of the middle line (Terrier, Lawson Tait, Gersuny).

(b) Cystic tumours filling the greater part of the right side of the abdomen, liable to be taken for ovarian cysts, fixed to that side by parietal adhesions (Kocher, Tuffell—his own case).

(c) Relatively small dropsical gall bladders associated with a second tumour of more doubtful character (Raymond, Tiescheidorf, Chance).

For the purposes of my present paper it is only necessary to refer to those under class (a), into which my case naturally falls:

1. Terrier's case readily heads the list by virtue of its truly enormous size. Woman, aged 50 years, from whose gall bladder 24 litres, or practically 42 pints, of gamboge-coloured fluid was taken.

2. The case described in this paper falls into the next place from its very large size. Woman, aged 31 years, from whose gall bladder twice there were 25 pints drawn off, and from whom at the operation 22 pints of thick gamboge-coloured liquid were taken.

3. Lawson Tait's case. Woman aged 40 years. Eleven pints of lairy liquid taken out.

4. Gersuny's case. Woman aged 50 years. Quantity not given, but an "enormous quantity of bile."

Erdmann related a remarkable case of a man, aged 24 years, from whom 60 lb. to 80 lb. of bile stained fluid was removed by tapping. As no exploratory operation was performed, owing to his leaving the hospital, the relations of the cyst remain unknown. Alban Doran suggests that "it was most probably a cystic gall bladder, but that it might have developed inside the liver as a bile cyst, the gall bladder and ducts remaining normal." For the references to these cases quoted from the lecture by Alban Doran I would refer readers to the full report of it in the BRITISH MEDICAL JOURNAL of June 17th, 1905.

The mechanics of the development in my patient of such an enormous gall bladder with so thick a wall is interesting. Apparently in some way the fall led to an occlusion of the common duct, though the specific cause is not evident. The absence of any calculi in the cyst rather negatives the probability of one or more causing the obstruction. It is to be regretted that the urgency of her bodily condition was so serious that careful examination of the liver and ducts was impossible. The tension of the bile in the hepatic and cystic ducts must have been considerable to so greatly stretch the gall bladder and hypertrophy its walls. During this time her health suffered and jaundice was present. In consequence of the drawing off of twenty-five pints the tension was reduced and the jaundice vanished although no bile was apparently entering the intestinal tract. After the first and second tapplings the gall bladder from its overstretched condition and absence of contractile power served only as a reservoir,

After the removal of the sac, gradually the sinus from the cystic duct contracted and at the same time the kinking, or other cause of the occlusion of the common duct, was removed and the bile passed into the intestine and continues to do so, as shown by the colour of the faeces.

The age of my patient was less than usually is the case where the gall bladder is much dilated. The rate of dilatation was much greater, as usually the process is a slow one. Twenty-five pints were drawn off within four or five weeks of any swelling being observed, and not more than seven months after the fall which most probably set up the condition.

REFERENCE.

1 BRITISH MEDICAL JOURNAL, June 17th, 1905, p. 1316.

SECONDARY PAROTITIS DUE TO ORAL STARVATION IN THE MEDICAL TREATMENT OF GASTRIC ULCER.

BY

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THE occurrence of secondary or symptomatic parotitis is well recognized as a result of abdominal diseases, especially after laparotomy for perforated gastric ulcer and in cases obviously infected, such as appendicitis, in fevers, in gastric ulcer, and in some other conditions. Stephen Paget first drew attention to the parotitis secondary to abdominal lesions in 1886, and in the following year he collected 101 cases, 50 of which were associated with some morbid condition of the generative organs. In 1904 the etiology and pathology of secondary parotitis were fully discussed by Bucknall and by Tebbs. Bucknall brought forward histological evidence in support of the conclusion that parotitis is invariably due to an ascending infection of Stenson's duct depending on oral sepsis, and that its onset may be prevented by appropriate measures. Tebbs, on the other hand, considered that in the majority of cases the path of infection is the blood stream, and not the duct from the mouth.

In the present communication we desire to direct special attention to the occurrence of secondary parotitis in the course of gastric ulcer treated medically by oral starvation so as to ensure absolute rest to the stomach. One of us (H. D. R.), after trials with other methods, such as Lenhart's and the various modifications of oral feeding, believes that the safest method as regards the ulcer, and the one most likely to be followed by permanent cure, is the somewhat Spartan one of giving nothing, not even water, by the mouth, and supplying 3 or 4 pints daily of water or (in recent years) of saline solution containing sugar, or of albumen water, by the rectum until deep tenderness over the stomach has disappeared, nutrient enemata being given in special circumstances only. The reason for depriving the patient of water by the mouth, even in sips, is of course that, since it is not absorbed by the stomach, its expulsion necessitates peristaltic action, and thus interferes with healing of the ulcer and, as has happened in some cases, may give rise to haematemesis.

The drawbacks to this method of treatment are the discomfort due to thirst and the occasional occurrence of parotitis, to which we wish to draw special attention. During eleven years' work in the wards of St. George's Hospital one of us (H. D. R.) has employed this method of treatment in the great majority of acute gastric ulcers and of chronic gastric ulcers accompanied by haemorrhage; during this period secondary parotitis has supervened in 9 cases of gastric ulcer under his care. It may be mentioned that special attention has always been paid to the mouth in the way of ordering antiseptic mouth washes in these cases, so as to avoid this complication. Such an incidence of secondary parotitis in cases of gastric ulcer treated medically by oral starvation appears to be exceptional, if we may judge from the scanty references to this subject in medical literature and from conversations with some other hospital physicians. The largest published collection of cases is that given by Tebbs—

namely, 15 cases among the cases of gastric ulcer treated medically in St. George's Hospital between the years 1890 and 1904. These cases are included in our series of 23 cases collected from the notes of cases in the hospital during the rather longer period of the twenty years 1889-1908. Paget's original paper in 1886, which summarized 60 cases of secondary parotitis, contained one case of acute gastric ulcer with suppurative parotitis, the patient surviving but never recovering her "health of mind or body." In 1898 Hone reported a fatal case of suppurative parotitis in a patient treated by starvation for gastric ulcer, and collected 8 recorded cases—Hawthorne 2 cases, Donkin 3 cases, E. A. Barton 2 cases, Nicholson 1 case. In his textbook Osler mentions that he has seen 3 cases after gastric ulcer, but as no details are given we have not counted these as due solely to oral starvation. Campbell Howard states that in fifteen years at the Johns Hopkins Hospital there were 76 cases of ulcer of the stomach with 1 fatal case of suppurative parotitis (previously recorded by Atkinson).

In the twenty years—1889 to 1908—there were 1,000 cases of gastric ulcer treated by medical measures in St. George's Hospital. As we are anxious to confine our investigation to the influence of oral starvation in the causation of secondary parotitis, we have not included any cases of gastric ulcer which were operated upon in the following statistics. Secondary parotitis has been shown to occur in a considerable proportion of cases of gastric ulcer after operation (English, Tebbs), and may then be associated with, and possibly related to, peritoneal infection. Of the 1,000 cases, 530 received food, water, or both, by the mouth from the outset of treatment, whilst the remaining 470 cases were not allowed anything by the mouth for some days after admission. Among the 1,000 cases there were 23 cases of parotitis, or 2.3 per cent., all in women; in no case was any patient affected twice with this complication. Of these 23 cases complete oral starvation was employed in 21; the two remaining cases were on rectal feeding but in addition were allowed to suck ice. In other words, the percentage of secondary parotitis in 470 cases treated by rigid oral starvation was 4.5, whilst in the 530 cases allowed something, even though only water, by the mouth it was 0.4. Haematemesis had occurred, either before admission or while in the hospital, in 16 of the 23 cases of gastric ulcer complicated by parotitis. It is thus clear that exclusive rectal feeding, or rather oral starvation, is a much more constant antecedent than haematemesis. Attention is drawn to this point because Hone attached more importance to antecedent haematemesis than to oral starvation as a factor in the causation of this form of parotitis. Probably haematemesis is likely to be a factor in the production of parotitis only in so far as it leads to treatment by oral starvation. There is no evidence that secondary parotitis depends on the occurrence in the parotid gland of thrombosis such as might be favoured by a post-haemorrhagic leucocytosis.

Of the 23 cases, the parotitis was confined to the left side in 9 cases, and in 2 cases the left side was affected first and the right side later; in 6 cases the right side only was affected, and in 1 case the right side was affected first and the left side subsequently; in 5 cases the side affected was not noted. On two occasions secondary parotitis occurred in two patients about the same time; but, apart from this, there was no evidence that it occurred in epidemic form. Of the 23 cases, suppuration occurred in 4, 2 of which were fatal; in one of these two the suppuration spread diffusely into the tissues of the neck, and was indistinguishable from Ludwig's angina. Suppurative parotitis in the course of gastric ulcer is a grave complication, for out of 8 cases of suppurative parotitis (4 from St. George's Hospital, and cases recorded by Paget, Hone, Hawthorne, and Barton) 3 proved fatal. Among the remaining 19 patients of gastric ulcer, with non-suppurative parotitis, in St. George's Hospital, 2 died.

In conclusion, we have collected 34 cases of secondary parotitis in cases of gastric ulcer, 23 from St. George's Hospital and 11 published by others (Paget 1, Hone 9, Atkinson 1). From the consideration of the exceptional number observed at St. George's Hospital, an event which we cannot explain, it appears (1) that secondary parotitis may complicate cases of gastric ulcer treated medically by oral starvation; (2) that it occurs ten and a half times.

more frequently in such cases of gastric ulcer than in cases allowed fluid by the mouth: (3) that it is an outcome of the dry condition of the mouth, and that mouth-washes do not prevent its occurrence; (4) that it is more often unilateral than bilateral; (5) that suppuration occurs in about one-fourth of the cases, and that this constitutes a grave complication.

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THE PREVENTION OF PAROTITIS DURING RECTAL FEEDING.

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The necessary prohibition of food and water by the mouth after severe hæmatemesis is not infrequently followed by inflammation of the parotid glands, which usually develops on the fourth day after the hæmorrhage. The side first affected is determined to a great extent by the position assumed by the patient, the gland which is most frequently in contact with the pillow being first attacked. An examination of the pus obtained from the abscess shows a variety of micro-organisms, the most constant of which—the *Staphylococcus pyogenes aureus* and *Micrococcus lanceolatus*—are also abundantly present in the thick secretions of the mouth. The impossibility of keeping the buccal cavity absolutely clean in these cases permits an ascending infection of Stenson's ducts, with consequent inflammation of the glandular tissues.

When I first adopted the use of large nutrient enemata of peptonized milk (15 to 20 fl. oz.), some ten years ago, and trusted to the usual methods of cleansing the mouth, a very large number of cases developed suppurative parotitis. An effort was then made to promote a continuous secretion of saliva, with the object of irrigating the ducts, and thus of preventing an ascending infection, and with this object the patients were directed to chew horse-radish, pellitory, or pieces of raw meat at intervals, or to keep a pebble constantly in the mouth. Eventually it was found that an india-rubber teat about 2 in. in length met all the requirements of the case, and that patients were quite content to suck it for hours at a time, with the result that the mouth remained quite clean and moist. When not in use the teat is kept in a weak solution of Condy's fluid.

Since this simple device was adopted I have treated more than 300 cases of hæmatemesis by rectal alimentation, lasting from ten days to seven weeks, without being troubled in a single instance by parotitis. It is only in hospital practice, where the mouth is very foul at the time of admission, that the gland occasionally becomes inflamed before any measures can be taken to prevent it.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

OVERDOSE OF EUCALYPTUS OIL.

The taking of so large a dose as 5v or 5vj of eucalyptus oil is not of frequent occurrence. It may, therefore, be of interest to record the following facts:

About 1 a.m. on March 3rd, 1909, W. A., a man of about 55 to 60 years of age, a railway engine driver, came home from his work. He had a slight cold, and was in the habit about that time of taking six drops of eucalyptus oil on sugar, followed by what he called a tablespoonful of cod-liver oil. I was shown the spoon, and it was more like a small ladle, and I should say it would hold from

5v to 5vj. He took his six drops of eucalyptus, and put the bottle back on the shelf. He then took down in the dark what he thought was the cod-liver oil bottle, standing close to the other, but which was the same bottle containing eucalyptus oil, and poured himself out sufficient to fill the capacious tablespoon mentioned. No doubt the fumes of the six drops were still in his nose, covering the other, for it was not till he had swallowed the eucalyptus oil that by the warm feeling of it in the stomach he realized it was not cod-liver oil. He then told his wife of his mistake, but went to bed and fell asleep.

About 4.30 or 5 a.m. he awakened and felt very sick. He did not, however, vomit for some little time. When I saw him, about 8.45 a.m., he was so sick that he could not move his head or limbs, nor so much as lift up his eyelids to look at me. He had been vomiting a straw-coloured, watery, mucous fluid, which smelled strongly of eucalyptus. His skin was pale and even grey in colour. He was very cold, and could not be warmed up. His pulse was not hurried, nor small in the wave, nor high in its tension; it seemed a natural pulse of medium tension inclining to the soft side. The pupils were equal and medium in size, and reacted well to light.

By 3.30 p.m. he was very much better. He was not sick, had no headache, had a good healthy colour, and a moist clean tongue. His pulse was as before. He had slept very heavily. He had had some hiccup, breathing was never sighing.

On March 6th and 7th he still was shaken in his nerves, and did not feel "tone" enough to return to the footplate. He, however, was able to resume his usual employment in a day or two after that. He is now in his usual health.

Greenock.

KEITH ROBERTSON, M.D.

PETROLEUM IN FAVUS.

ON February 18th a woman brought to my surgery her two boys, aged respectively 6 and 10 years, both suffering from tinea favosa. The younger first began to show evidences of the disease, and it was ascertained that he had a habit while at his grandmother's house of frequently handling a cat, from which tufts of hair were falling out. His mother, before cropping his hair and applying some simple ointment, took very little further notice of the eruption until the elder began to show traces of the same disease, and whereas it spread but slowly in the younger boy's scalp, it spread very rapidly in that of the elder.

When I saw them, yellow scabs in size from a penny downwards to mere specks and having a mousy smell were thickly scattered all over their scalps, especially on the crown. The areas underneath the scabs were suppurating, and from these areas hair roots treated with caustic potash under an objective showed the parasite. I cut the hair shorter and began to depilate; but this proved so very painful, especially in the case of the roots on the outskirts of the suppurating areas, that I desisted. The usual watery antiseptic lotions (very likely from no fault in themselves) were unavailing to stop the spreading margins, although I persevered for a week or so, and one day I soaked the scalps in turpentine, in the hope that this spirituous antiseptic, by its greater penetrating quality would succeed where the watery antiseptics had failed. On the following day the skin was very inflamed and tender, and only olive oil was applied until these symptoms somewhat abated. I decided to try ordinary petroleum as less irritating but yet possessing equal, if not superior, penetrating properties. My object at first was mainly to limit the spreading margins, but after two or three applications I could see that the petroleum possessed curative properties also, and henceforth no other treatment was tried. The scalps were washed daily with soap and warm water, and after careful and thorough drying ordinary petroleum, purchased at 7d. a gallon for a store, was allowed to soak for several minutes into the skin, gentle friction being used meanwhile. A suitably fitting cotton cap as the only dressing was worn under the ordinary cap. Little or no irritation from the petroleum was observable, and in less than a month from the first petroleum bath bald patches alone remained to indicate the spots where the disease had been. They were perfectly healed.

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British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

STAFFORDSHIRE BRANCH.

Wolverhampton, Thursday, April 29th, 1909.

S. KING ALCOCK, M.D., President, in the Chair.

Cases.—Dr. CLENDINNEN showed a case of amputation of the penis by Pearce Gould's method. Dr. CODD showed: (1) A case of tuberculous peritonitis treated by laparotomy and drainage. Dr. DEANESLY discussed the operation. (2) Cases of enlarged cervical glands treated by x rays, also cases of rodent ulcer and sycosis treated by the same method.

The Chest of the Elementary School Child.—In a paper on this subject Dr. BADGER pointed out the importance which Nature assigned to the correct form of a child's chest, and said that ossifying centres for the ribs were found at an earlier period than those for the vertebrae. Anatomical differences between the chests of children and of adults were explained, and sources of erroneous diagnosis as the result of auscultation pointed out. The significance of a defective conformation was considered at some length; out of 651 cases in which the conformation was examined, 246 were more or less defective; a large majority of the latter were slight defects, but 29, or over 4 per cent. of the series examined, exhibited gross deformity. The varieties of chest deformity were dealt with; it was maintained that acquired deformities, such as the alar chest and the flat chest, were due to preventable causes, and that it was a fallacy to regard them as hereditary. The rickety deformities were described; doubt was thrown upon the existence of distinct types of pigeon breast due (a) to rickets, (b) to respiratory obstruction. The influence and varieties of the latter in producing deformity were touched upon, and reference made to the fashionable symptom—apnoea; the suggestion being added that an inability to concentrate the attention upon a subject for any length of time was characteristic not only of those who suffered from adenoids, but of many others who were presumably healthy. The relation of spinal disease to chest deformity was dealt with, and various scholastic influences bearing upon this relation discussed, a case being quoted where spinal curvature in a comparatively healthy girl had been traced by the reader of the paper to be due primarily to inequality of vision between the two eyes. Various tracings and cyrtometer curves were shown.

Specimens.—Dr. DEANESLY showed specimens from the following cases: (1) *Endothelioma of the submaxillary gland*, removed from a young man. The growth had been noticed for two years, latterly growing more rapidly. It measured about $4\frac{1}{2}$ by 3 in., and was roughly ovoid in shape. On section, several small cysts lay in the centre of the densely hard tissue which formed the bulk of the tumour. It was completely encapsuled, and, though deeply connected, easily removed. (2) *Advanced tuberculous kidney from a child of 10*. This was found in the course of an abdominal section for vague right-sided abdominal pains suspected to be due to chronic appendicitis or tuberculous peritonitis. There was a history of supposed typhoid fever one year previously, but no urinary symptoms were complained of. The opposite kidney (left) felt normal on palpation within the abdomen, so no hesitation was felt in removing the affected organ. The child was recovering. (3) *Multiple stones in the kidney of a child of 8: nephrolithotomy*. The symptoms were pain in the affected loin and pyuria. A radiograph taken by Dr. CODD clearly showed six shadows. One of these was found to be due to a large stone in the pelvis of the ureter, the others to pockets or aggregations of tiny round calculi, of which twenty-four were removed. The kidney substance was healthy and not infected. The patient was recovering. (4) *Traumatic rupture of a large hydronephrotic sac*. The patient, a middle-aged man, fell from a ladder a few feet to the ground, and was admitted with the usual signs and symptoms of ruptured kidney. Operation was refused until the second week after the accident, when a huge hydronephrotic sac the size of a football, distended with bloody

urine and ruptured extraperitoneally, was removed. (5) *Small solitary villous tumour surrounding the orifice of the right ureter removed together with the intravesical portion of the latter by suprapubic operation*. The patient was a man of 74, who practically bled to death from this small tumour, and was admitted in a very exhausted condition. But for cystoscopic examination, the haemorrhage would probably have been attributed to prostatic enlargement or cancer of the bladder. (6) *An early case of primary cancer of the gall bladder treated by cholecystectomy*. The patient was an elderly woman complaining of epigastric pain after food. She made a good recovery, and remained well at present, nine months since the operation. (7) *A case of chronic torsion and strangulation of the great omentum*. A huge blue-black mass, adherent everywhere to the bowels and extending from the liver to the pelvis, was enucleated from the abdomen of a middle-aged man supposed to be suffering from chronic appendicitis. The upper stalk was twisted almost completely off, and not a single vessel had to be tied. The tumour looked like a gangrenous lipoma. The patient made a good recovery. (8) *Two cases of excision of chronic ulcer of the stomach*. Both occurred in women, and had given rise to painful indigestion for seventeen to twenty years. Excision was performed in preference to gastro-enterostomy in each case because the ulcer was solitary and because it lay near the small curvature on the posterior wall at some inches' distance from the pylorus, a position in which gastro-enterostomy generally fails to give permanent relief. The result in each case was excellent. (9) *One half the thyroid gland removed by operation from a case of exophthalmic goitre*. The exophthalmos in this case was extreme, the other symptoms moderate. The operation was followed by some diminution of the exophthalmos, and in other respects a sense of well-being which had not been experienced for years.

Treatment of Glandular Affections by X Rays.—Dr. ALFRED CODD read a paper on this subject. He said that some time ago he was very sceptical as to the efficacy of x rays in the treatment of diseased structures under the skin. The effect of different interference films had been very marked. Many cases of lupus, rodent ulcer, and ringworm that had been under treatment with x rays had always shown when there had been a scab over the diseased surface in small patches, even though very thin, that while the exposed diseased surface had readily yielded where there had been a thin film of crust or scab on the diseased surface, the cure had been considerably delayed. So, too, a film of hair had prevented the rays getting to ringworm surface, and in order to treat ringworm in minimum time, it was necessary to clean the surface well, and cut the hair well up to the margin of the disease or a little beyond it. Again, in malignant disease, where the surface was ulcerating, the substance of the growth speedily melted away, but the parts of the growth that were still beneath the unbroken skin were highly refractory to the influence of the rays. These observations led him to doubt the value of x rays in subcutaneous disease, and it was only recently that he had made a systematic effort to treat a fair number of these cases. But the results had shown that there was a large field of usefulness among these morbid processes. One of the most striking pathological results illustrative of this line of treatment was the radiographer's azoospermia, an accidental complication incidental to his work before the days of opaque screen and aprons. Here the organs were generally exposed to the rays at some distance, and with a fair screen of garments and a somewhat inadequate one of skin. But the result was very marked. The glands were markedly reduced in size, the external secretion was deprived of its living elements, apparently permanently in spite of subsequent protection, while the internal secretion was unaffected. This accidental dystrophy was illustrative of the marked result that had been effected in treatment in other glands. The cases of splenic enlargements he had treated were three in number, and all spleno-medullary leukaemia. In all cases the spleen had been enormously enlarged, the leucocytosis had been very marked, the reduction of the size of the spleen had been very considerable, the blood condition had been distinctly improved, but not markedly so, and in two cases death did not appear to be materially delayed. The reason why better success could

not be attained was that the spleen was only one of the organs whose faulty action caused the disease, but that the bone marrow was also a faulty organ or organs, whose dissemination all over the body made it almost impossible to submit them to the x rays. The following cases of *leukaemia* were related:

W. C. M., aged 35. Original notes lost. Spleen well past middle line and right down to pubes; marked leucocytosis with abundant myelocytes. Had several applications of x rays, and the spleen shrank towards the apex where the rays had been applied through a circular diaphragm. On his second admission, November 7th, 1906, the spleen had the same shape and size as when he was discharged, showing the hilum of shrinking. Its edge extended down to the pubes and to the middle line, but the artificial hilum was 2 in. from the umbilicus. Under treatment the border retreated to the left somewhat, and his condition improved. After discharge on December 5th he continued treatment for six weeks and had eight treatments. Again, from February 190th to May 23rd last year he had twenty-one applications, but during that time he did not seem to make any progress, and on June 3th he died at home. His condition was always very precarious, and it was permissible to claim that his life was made more comfortable while it continued, but it is doubtful if it was materially prolonged.

S. M., aged 66. Admitted July 14th, 1908. Spleen down to umbilicus, and slightly over the middle line, and the convexity well below the level of the umbilicus. Discharged August 31st; readmitted October 30th; discharged December 5th, 1908. The average count on November 1st was: Red, 2,464,000; white, 27,151 per c.mm. In the differential count the polymorphonuclears were 23 per cent., and the myelocytes 47.6 per cent.; haemoglobin, 60 per cent. Many other counts were taken, but not recorded on the bed-papers, but there was a general rise of red cells and fall of white cells. The spleen became markedly smaller, retreating over the middle line, and the convexity came up to the umbilical level. His general health also much improved. He had in all fifty applications. When Dr. Codd had lost sight of him, but about a month ago heard that he had died rather suddenly.

S. F., aged 37. Admitted October 30th and discharged December 1st, 1908; readmitted March 17th and discharged April 7th. On the first occasion spleen across to umbilicus, and down below level of anterior spine. Blood count: Red, 3,750,000; white, 29,000, of which there were polymorphs 31 per cent., fine myelocytes 28 per cent., large hyaline 20 per cent. On the first occasion he had twenty-two applications of x rays, and got some dermatitis, and the spleen shrank so that the mesial border was 1 in. from the umbilicus, and the lower border on a level with the umbilicus. His general health improved, and on leaving the hospital he returned to work and remained well till a fortnight before readmission, when he had a blow on his left side, and since then he felt weak, lost his appetite, and on returning to the hospital Dr. Codd found that the spleen was almost the same size as on the first admission. Count: Red, 2,500,000; white, 39,000. He had thirteen applications of x rays, but left prematurely at his own request.

Enlarged lymphatic glands were very amenable to the influence of x rays. Under this treatment they very speedily got smaller, and this progressive lessening was continued long after the rays were withdrawn. In many cases operation was a ready alternative, and had been till recently practically the only method of treatment when the glands were of a certain size and the disease was advanced. But in spite of the very assiduous care taken by some surgeons in securing the best cosmetic results, these could not be so good as those attained by the use of x rays, where all visible swelling disappeared and all the disease vanished, leaving only a tiny nodule of scar tissue, deeply buried under the skin and subcutaneous tissue, palpable, indeed, to the medical man, but such as unskilled fingers could scarcely feel it—certainly not interfering with the contours of the skin surface. The risk of anaesthetic was eliminated, and the risk of x-ray dermatitis was very remote if adequate care were taken and protection given. Of this he would speak later. But there sometimes occurred cases where the glands were so swollen and adherent to subjacent structures that it was impossible to remove them, and here was a great opportunity for the services of x rays, and in these cases there appeared to be no adequate substitute. One such case was the following:

Mrs. P., of King's Heath, came to consult Dr. Codd in October, 1906, about a hard mass in her left groin. It was of considerable size, in the position of the inguinal glands, firmly fixed to the bone, but not particularly tender, and of stony hardness. The patient was rather obese and he could not feel the femoral artery here and could not make out its relationship to the growth. There was a considerable amount of pain and walking was very painful. In the vagina there was a hard band of constriction just below the fornices, but at the close of the examination the band seemed to have relaxed and got softer, and appeared to be spasmodic in nature. Nothing was felt in the rectum nor between one finger in vagina and another in rectum.

She had consulted Mr. Christopher Martin a short time previously, and Dr. Codd wrote to him giving his views of the case. Mr. Martin kindly sent him the following note: "Mrs. P. has a curious lump on in the groin. It is, I think, glandular and possibly malignant. I do not think it any operative interference, as if it is malignant I do not think it can be safely removed. It extends under Poupart's ligament into the left iliac fossa. On its inner side it is apparently adherent to the femoral artery. It is firmly fixed to the deep fascia. I do not think that there is any malignant growth either in the vagina or rectum." It appeared to Dr. Codd to be a case in which x rays would give the best chance of remission of symptoms or even a complete cure. Owing to distance and difficulty of locomotion he only treated her once a week, though he had to have increased the frequency if there had been any signs of enlargement. Each dose was 15 min. x 1 milliamperes. There was a steady improvement, the gland became smaller, caused less difficulty in walking. On December 3rd pigmentation appeared, and a fortnight later there was distinct dermatitis and soreness, so the x rays for four applications, and then the only thing that could be felt was a small, freely-movable, and painless nodule, and walking was not interfered with. Dr. Codd had frequently seen her and heard about her since, the last time quite recently, and she had remained quite well without a bad symptom. The only other treatment since she came under his care was some iod. salicyl., iron, and nux vomica.

Another class of cases of this description consisted of those of lymphadenoma, where the glands were massed together in huge masses, which the bolder class of surgeon had attempted sometimes with success. But the great difficulty was that he never knew where he was going to end. He might succeed in taking all the glands (say in the neck) that he felt or saw, but after that there was a long string of glands running from them into the thorax and even along the thoracic duct, and there was no finality to the complete removal. Even this was not necessarily inaccessible to x rays. But the general result was that the operation did not clear away even the visible glands, and the removal was imperfect. And in such a case, the results of the case of this type in Dr. Pirie's recent paper (*vide infra*) showed what it was possible to do with x rays with patience. One case of glands evidently of lymphadenomatous (or possibly malignant) type, was admitted to the hospital from Cheshire, and owing to the onset of dementia of intractable type, the woman had to be discharged, and lives too far off for continuity of treatment. The glands, however, became discrete and much smaller. The following cases were related:

T. A., aged 5, male. Enlarged cervical glands on left side 1½ in. long. Started on February 26th, 1909, to have x rays three times a week, ten times in all, and on March 29th the subcutaneous scar of the gland was about the size of a small pea. On that date it was noticed that there were enlarged glands on the right side, and treatment was being applied to that side. No drugs.

N. R., aged 15, female. Enlarged cervical glands in large mass. Started on April 8th, 1908, with x rays three times a week; sixteen applications in all; glands completely cleared up; no drugs.

G. E., aged 5, male. Enlarged submaxillary glands, right side, 2 in. long. Started January 20th, 1909, to have x rays three times a week without filter. February 10th only very small nodule left, and pigmentation developed. On February 24th all submaxillary gland disappeared, but small nodule felt by mastoid, where it had been screened off from x rays. Had had few applications to this area since, and now this had almost disappeared, but glands had developed in the left side which were being treated. Took oil, morrhua and iron.

J. W., aged 3, male. Enlarged cervical glands on right side 1½ in. long, on left side 2 in. long. Started on February 22nd with x rays three times a week to each side, thirty times to each side in all. March 15th—right ½ in., left 1½. Now slightly less; continuing; no drugs.

A. R., aged 11, male. Enlarged submaxillary glands on both sides. Came to Dr. Codd first on February 1st, and glands rapidly increased till February 22nd, when he started with x rays three times a week. After six applications size had very much reduced. March 29th, about the size of small bean. April 16th, quite clear.

D. W., aged 7, female. Very large mass of cervical glands, 2½ in. long and very thick and broad. Started on January 25th, 1909, with x rays daily for six times without filter. Then marked redness developed and it was discontinued. Resumed on March 15th with filter, and seven times a week for thirteen times. Now the length of the mass had been greatly diminished, but it was much narrower, shallower, and softer. Still continuing. Taking iron.

A son of a colleague, aged 13, had submaxillary glands on both sides about 1½ in. in length, which had been rather rapidly growing. Started on March 29th with daily applications to each side. Treatment pressed with a view of getting appreciable effect before prolonged holiday. After seven applications the size was markedly reduced, and there was also marked pigmentation over the exposed area. He then went away for a

orntnight, and on return the glands were discrete, and about the size of small beans, and the skin had desquamated freely. Might possibly require further treatment.

G. F., aged 5, male. Very much enlarged glands of left side. Had twenty-nine applications. May, 1908, glands completely disappeared. Well since.

N. S., aged 8, female. Enlarged submaxillary glands, right side. Started on November 20th, had nine applications, and on December 16th a small nodule only just felt.

Graves's disease was very intractable. Drugs, thyroidectomy and its analogues, excision of the cervical sympathetic, organotherapy of varied kinds, all appeared to be without decisive avail. He had freely tried them all except excision of the cervical sympathetic, and the results had been very nugatory. Rest, prolonged rest, had appeared to be the most potent agent, and much of the credit the other agents had acquired might have been due to the fact that rest had been employed at the same time. Recently thyroidectomy had been done with considerable success, but it was doubtful if that success would prove permanent, and certainly the sufferer from Graves's disease was one of the worst types of patient for a general anaesthetic (local infiltration anaesthesia had been recommended for it). In this type of patient it could only justify itself by being the only possible chance of cure, and this it certainly was not. The x-ray treatment had a sound pathological basis. Graves's disease was almost certainly due to intoxication from over-secretion of the internal secretion of the thyroid, due again to hypertrophy and over-activity of the gland. If by playing on the gland with x-rays the size and the activity of the gland could be reduced, it was likely that eventually the true balance between over-activity and under-activity—Graves's disease, on the one hand, and myxoedema on the other hand—would be established. It was comparatively recently that he had begun to treat the disease, too early to get any definite results, and he had also attempted the same thing with simple goitre. He showed the cases as they were. Some showed definite improvement, small, it was true, but sufficient to encourage further efforts. He found that at first he pressed the treatment too fast, and he did not protect the exposed skin surface with any filter, and the result was that he got some severe dermatitis in two cases and reddening in others. Since he observed these changes he had tried always to use a high tube, and had used a filter of four to six layers of notepaper; this had had the desired effect. In the papers read at the Royal Society of Medicine recently Mr. Thurstan Holland stated that he always used four layers of boiler felt, and Dr. Reginald Morton said that he used a layer of lint soaked in sodium tungstate solution, and that they afforded complete protection. Probably Dr. Codd would adopt one of these methods in the future. All the cases except one had been treated as out-patients, and no special care had been taken to ensure rest, and in most cases no drugs had been given.

S. H., aged 18, female. Treatment started February 22nd, 1909. Duration one year. Before February had been attending for alopecia areata, and gland had been increasing, but during the last few weeks had been increasing more rapidly. Neck measured 12 in.; pulse, 140; fine hand tremor, skin moist, nervous symptoms. Had applications three times a week, eighteen in all. Developed pigmentation. Now neck still 12 in., but much softer; pulse, 76; no tremor of fingers still present, but nervous symptoms much less. Had been taking iron.

E. M., aged 19, female. Treatment started January 23rd, 1909. Duration one year. Marked swelling of thyroid on both sides; neck measured 15 in.; very slight proptosis; pulse, 100. Had applications three times a week, twenty-four in all; developed a small patch of dermatitis when she was not using a filter. On February 15th neck measured 14 in.; on March 29th measured 13 in.; now measures 13 in.; pulse, 80. No drugs.

K. G., aged 15, female. In-patient; in bed until last fortnight. Treatment started March 10th, 1909. Duration nine months. Neck measured 12 in.; gland swollen on both sides; tremor of fingers, marked erythema; pulse, 120 to 130. Applications daily; soon developed pigmentation. Two intervals of five and thirteen days respectively. Total applications to date, twenty-eight. After first fortnight neck measured 12 in.; next fortnight, 12 in.; now 12 in. Fourth week pulse was 90 to 120; eighth week pulse was 95 to 112.

E. R., female, aged 12. Very much enlarged thyroid both sides, increasing rapidly lately, especially on the right; neck measured 15 in.; pulse 140, eyelids and upper lip puff. Standard V at school, good memory. Stertor at night; erythema very marked indeed. Cries if looked at by inoffensive person. On February 8th began with x-rays daily without filter; after ten applications got some dermatitis with exudation, and rays stopped for five weeks. Then dermatitis cleared up, and started again with filter and three applications a week, but

visits were very irregular, total only 17. Last visit, now less erythema, more control, but neck about the same size; pulse not taken.

E. G., aged 16. Simple goitre: large thyroid (measured 15 in.), hard, pressure symptoms, dysphagia, trachea flattened. Six months' duration, increased last fortnight. Started on January 30th, 1909, with x-rays three times a week; seventeen times got dermatitis. Neck measured 14 in.

The technique of the treatment might be summed up as follows: Each application was of ten minutes' duration; a high tube was selected, generally a heavy anode Muller large-bulb tube (18 cm. bulb), fairly hard, as near as possible to 6 in. parallel spark, and always 1 milliamperé through the tube, with standard distance of 8 inches from centre of anticathode to surface of skin, four layers of stout notepaper being used as filter. In summarizing these cases, Dr. Codd said that those of spleno-medullary leukaemia were very interesting from the fact that the spleen very materially shrank up under the rays, and this was especially where a circular screen was used which exposed the whole of the lower pole of the organ but did not include the upper pole. The shrinking of the exposed area showed a marked contrast to the behaviour of the unexposed area, which remained *in statu quo*. The circular diaphragm of the author's standard instrument was used at first for convenience and safety, but after noting the above effects it had been abandoned for this purpose and a naked tube used over a masked abdomen. The results, however, could not be said to be satisfactory, though he still thought it was very useful in conjunction with rest and drug treatment; and possibly further experience, especially with a view to treating the bone marrow, if this were practicable, might lead to better results. The treatment of lymphatic glands had proved very satisfactory, although in the case of larger masses a long time was required in order to secure safety from ill effects. The most valuable contribution on this subject was the very interesting paper read by Dr. Pirie at the Royal Society of Medicine, and reproduced in the *Proceedings of the Society for March*, and some facts of great importance elicited by the paper and the subsequent discussion were the following:

Huge masses of glands due to lymphadenoma, after having had five operations performed and still leaving an immense mass, after six months of x-ray treatment, the mass appeared to have completely gone. When the glands had broken down, if the pus was simply evacuated, the gland healed in a month under x-ray treatment. Sometimes the fluid might be absorbed without opening. Dr. Manders suggested aspirating the contents when it had broken down and continuing with x-ray treatment. Dr. Charles Henton said that when visiting Bordeaux he found that all the surgeons there referred their gland cases to the x-ray department.

The cases of Graves's disease and simple goitre Dr. Codd put before the meeting had been done rather in the way of an interim report, to show the cases as they were now, hoping to be able to show them again under very much more satisfactory conditions. The cases were not the most satisfactory ones for experimental work; it would have been a better test if they had been more typical, and had had definite exophthalmos, and the various symptoms associated with that condition. The time, too, was far too short for a definite result to have been arrived at. But the value of x-rays in the treatment of this condition did not rely for its demonstration on the results shown. For that demonstration with a clear and no uncertain note he referred to the excellent and convincing paper read by Mr. Thurstan Holland, and published in the March number of the *Proceedings of the Royal Society of Medicine*. His main conclusions were that:

1. The pulse-rate was nearly always reduced, and this almost at once.
2. The tremors and nervous symptoms improved from the first.
3. The gland noticeably diminished in size in some of the cases, remaining unaffected in others; but if hard, tense, and throbbing, the throbbing diminished and the gland became softer.
4. The exophthalmos was not materially altered.

This formed an admirable summary of the cases he described, and as far as they went Dr. Codd's cases conformed to this standard. The pulse had become diminished, the gland had become diminished in some cases, while in others it had become softer and free from throbbing, and the exophthalmos had diminished or disappeared. As there had been no marked exoph-

thalmos in any of them, the effect on this could not be assessed. The results Mr. Thurstan Holland had described were not what would be regarded as striking from the point of view of histronic demonstration, but were none the less very real, and satisfactory from the patient's point of view, and in restoring the capacity for work and averting the fatal issue. The last case he described was as clear a case of the saving of life and the restoration to comparative health by treatment as could be desired. The case for the value of this treatment rested upon sound pathology. Of all the many theories of the etiology of this disease, there were none that now held the ground except that of toxæmia from increased activity of the thyroid, and the outpouring into the blood of an increased and undue supply of its internal secretion. If x rays could reduce the size of the organ, reduce the bulk of its secreting tissue, or lower the secretory activity of the epithelium without diminishing its quantity, they were on the way towards restoring the normal balance between Graves's disease on the one hand and myxœdema on the other hand. And then the crethism, which was after all the sting of the disease, was dulled or destroyed, and the tendency of the disease to incapacitate or kill was removed. It had been held that thyroidectomy proved more effectual, but whether this were so or not, the Graves's patient was the worst type of patient for a general anaesthetic. There was another line of argument bearing upon this subject which was worthy of careful attention and experimental work. Senile enlargement of the prostate was dependent on the internal secretion of the testicle, some perversion of it either in its quantity or character. When the testicles were removed, the prostatic symptoms cleared up. When the vas was removed, the symptoms did not alter, so it would appear that it was the internal rather than the external secretion that was affected. They had seen that the unprotected radiographer, by getting frequent minute doses of x rays, suffered in his external secretion without the internal secretion being affected. If, however, a more intensive application were made with the x rays to the testes, although with a smaller total dose than the unprotected radiographer received, was there not a reasonable chance that the internal secretion might be affected so as to destroy its toxic effects without destroying virility, just as they could modify the toxic influence of the thyroid secretion in Graves's disease without going to the other extreme of producing myxœdema? He thought there was a very reasonable chance of this proposal having within it the elements of success. He had just had his attention drawn to an article in the *Lancet*, by Dr. Joseph Bolton of Nottingham, on this point. He at first raised the question of the treatment of enlarged prostate by the application of x rays to the testes and to the prostate itself directly or indirectly, but finally decided that the best method was to treat the prostate directly with high-frequency currents. He then described two cases in which he had used this method with the thoughtfulness and accuracy which he always used, and certainly the results were very good and striking. His method certainly ought to be well tried. But Dr. Codd's own feeling from *prima facie* considerations was that in treating the prostate directly they were treating the effect and not the cause, and that by using high frequency instead of x rays they were using the much weaker agent. It was thus seen that all these gland affections were amenable to some extent to x -ray therapy, and in some cases complete cures had been wrought which appeared to be very permanent in their effect. He therefore suggested that the inevitable appeal to the knife in some of these cases should be reconsidered, and due care should be given to a consideration of the chance of x rays effecting the result desired in a more satisfactory manner.

A NUMBER of the members of the medical profession in Moscow have formed an association for the establishment of a private institute for the medical education of women.

THE British Balneological and Climatological Society held a very successful provincial meeting at Torquay on May 8th. The Fellows were received on their arrival by Dr. Horton, President of the Torquay Medical Society, and other medical men resident in the district. In the evening there was a dinner, followed by a concert and conversation. The proceedings included the reading of a paper on the climate of Torquay, by Dr. Thomas Dunlop, its medical officer.

Reports of Societies.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

Wednesday, May 12th, 1909.

Dr. MICHELL CLARKE, President, in the Chair.

Ionic Medication.

DR. H. P. TAYLER gave an account of ionic medication in general practice, quoting eight cases of rodent ulcer which he had treated by the introduction of zinc ions with most encouraging results; he also mentioned other conditions which had benefited by similar treatment, among these being granular lids, neuralgia, and diphtheritic ulcer of the external ear. Dr. LEWIS JONES described the theory of the treatment and demonstrated the migration of ions in an electrolytic solution. In a solution of sodium sulphate particles of copper from a copper electrode penetrated into a pad of porous paper from the positive electrode, while the hydroxyl group was collected at the negative. He concluded his demonstrations by instances of the applicability of specific ions to diseased conditions. Mr. J. W. MCBAIN said that ionization had led already to valuable results. Both theoretically and practically it was possible to introduce metals and salts into the tissues of the body in this way. Dr. KENNETH WILLS said that ionic treatment of rodent ulcer had given him excellent results. Not much success had been obtained in treating ulcers where cartilage and bone were involved. Mr. J. TAYLOR mentioned the benefit derived in ozaena by the use of magnesium and copper ions; he had met with a case where a child's deafness had incidentally improved while undergoing ionization of the naso-pharynx for ozaena. Dr. G. PARKER inquired whether the combination of Bier's hyperæmic treatment with ionization enhanced the local effect of the ions. Dr. ROXBURGH quoted an instance of the value of zinc ions in healing a fistula in ano which had obstinately refused to heal under surgical treatment. Mr. HEY GROVES preferred surgical measures in rodent ulcer. Dr. WATSON WILLIAMS discussed the treatment of latent diphtheritic infection by ionization, mentioning the accessory sinuses of the nose. Dr. VICKERY said he had experienced the disappointing results of ionization in cutaneous epithelioma as contrasted with its success in rodent ulcer. Dr. BOWKER gave his experience with chlorine ions in Dupuytren's contraction and the improvement resulting. Dr. NIXON described some results of treatment of papillomata and warts, saying that the naked electrode had advantages over the lint pads upon small areas. THE PRESIDENT thanked Drs. Tayler and Lewis Jones for opening so instructive a discussion. He would be sorry to think with some speakers that the character of the ions used made no difference. Electrotherapeutics had suffered from the vague way in which it had sometimes been handled; in ionization exactness was possible and should be aimed at. For instance, salicylate ions introduced into the tissues should be recognizable in the urine. Drs. TAYLER and LEWIS JONES replied.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Tuesday, May 18th, 1909.

Dr. WARD-SMITH, Vice-President, in the Chair.

Tuberculous Skin Diseases.

DR. MITCHELL, in a paper on some tuberculous skin diseases, said tuberculosis cutis vera was rare, and simply an infection from within, at the orifice of a mucous outlet. Treatment was not of much use, as constant reinfection occurred. Tuberculosis verrucosa was due to infection from without, and was somewhat rare. Treatment consisted in applying salicylic acid or pyrogallol preparations, curetting, and treating with Finsen light or x rays. Scrofuloderma was not, strictly speaking, a primary disease of the skin, but arose from a caseating gland or bone lesion in the subcutaneous tissues. Treatment consisted in removing the original focus of the disease, thorough curetting of the sinuses and ulcers, and antiseptic dressings, together with general constitutional treatment. Occasionally x rays might be useful. Lupus vulgaris was a chronic cellular overgrowth due to the invasion of the skin by the tubercle bacillus. Treatment must be both constitutional and local. Given a small patch on some part where

cosmetic effect was of little importance, the quickest and easiest treatment was that of complete excision. In cases where this was not practicable, Hebra's arsenical paste or Unna's salicylic acid and creosote plasters might be used. Curretting was practically useless as a cure, and should never be employed about the face. The x-ray treatment was the most successful of all. Dr. LANKESTER thought that the treatment of lupus by zinc ionization was very effective. Dr. EURICH suggested that in cases which did not yield readily to x-ray treatment tuberculin should be tried as well. Very often the combination succeeded where either treatment separately was ineffectual. Mr. GOYER agreed with the last speaker. He was also greatly in favour of excision where possible, and thought that scraping in many cases was distinctly useful. Dr. WARD-SMITH compared the treatment now with that of five years ago, when he was in charge of the x-ray department. Dr. LOCKERBIE asked if x-ray treatment ever caused epithelioma. Dr. BRONNER said he had been very successful with scraping combined with the application of pure formalin.

The Uses of Alcohol.

Dr. CAMPBELL, in a paper on the therapeutic uses of alcohol, said alcohol should be avoided in all cases of deficient elimination—for example, kidney disease; in all cases where a pernicious habit was likely to be acquired, as in neurasthenics and women at the climacteric; in all cases of chronic nervous depression; in all conditions where prolonged mental or muscular strain had to be undertaken; and in all cases where there was a condition likely to recur. The drug was useful when associated with food and given in small quantities (not more than 5 per cent. of the total food taken) in certain cases of anorexia, especially when connected with or caused by overfatigue—in these cases the alcohol was best taken a few minutes before food; in moderate doses, as a cardiac and respiratory stimulant, as in heart disease and bronchopneumonia; in single full doses—best given hot with a diffusible stimulant, as ammonia—very useful in late stages of pneumonia, followed by digitalis; in cases of failing compensation of the heart where digitalis was ineffectual; in full doses to produce quiet and sleep in cases of excitement, as in the delirium of pneumonia; in full doses with plenty of water, and perhaps followed by digitalis, to increase the flow of urine (only if the kidneys were healthy).

GLASGOW SOUTHERN MEDICAL SOCIETY.

Thursday, May 13th, 1909.

Mr. GRANT ANDREW, President, in the Chair.

Lymphadenoma.

Dr. JOHN ANDERSON introduced a discussion on lymphadenoma, showing by the epidiascope that the gland lesions presented a distinct histological picture. In the earlier stages there was proliferation of the lymphoid cells, increased vascularity, and proliferation of the reticular epithelium, while the lymph sinuses were somewhat dilated, and showed the presence of small and large lymphocytes, epithelioid cells and eosinophiles. In the more advanced stages the reticulum was coarser in character and increased in amount. Bands of fibrous tissue were seen traversing the gland in an irregular manner, while varying amounts of small and large lymphocytes, plasma cells, large uninuclear and multinuclear giant cells completed the picture. He regarded the lesion as of the nature of a chronic inflammation of unknown etiology.

Dr. T. K. MUNRO dealt with the history, symptoms, diagnosis, and treatment of the disease. Its duration varied considerably, from weeks to many years. Diagnosis in the early stage might be impossible. Examination of the blood was valuable in excluding leukaemia, but as the composition of the blood varied, a diagnosis could not be based upon this alone. As regards treatment, when the glandular enlargement was localized, surgical treatment was rational, though frequently recurrence took place. In many cases surgical treatment was necessary from the complications produced by the pressure of the enlarged glands. He believed arsenic to be the most reliable internal remedy, and had seen much benefit from its use. He had also used x-ray treatment in addition for some time, and had sometimes seen an enormous improvement in the size of the glands after a few applications.

Professor STOCKMAN considered that the glandular enlargement was only a symptom, and that there was some underlying condition which would probably be discovered. He used arsenic for treatment with considerable benefit at times. He instanced a case of the disease which had lasted for twenty years, and the patient was still alive and in good health.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE.

Friday, May 21st, 1909.

Sir PATRICK MANSON, President, in the Chair.

Adjourned Discussion on Beri-beri.

Dr. C. W. DANIELS said that Dr. Braddon, whose theory they were discussing, had rightly laid much stress on the fact that in the Malay States there were several rice-eating races, and that one of these—one which prepared its rice in a different way from the others—was immune from beri-beri. The question of the preparation of rice had been prejudiced by the use of inexact terms; there was, for instance, a great difference between fresh rice and freshly-husked rice. The so-called Indian rice eaten in Malaya did not grow in India, nor was it prepared or "cured"—to use Braddon's term—in the same way as rice was in India. It was mostly grown in Siam, and was cured in Penang by being steamed or heated for seven or eight minutes; it was not boiled until the grains split, and during the whole process it was never warmer than a hot poultice; this alleged sterilization was carried out after a lengthened soaking in water, during which the grain often sprouted. The result was anything but sterilization. So-called Indian rice not only looked dirty, but was dirty and mouldy; it was full of dust, and he himself had cultivated innumerable moulds and bacteria from it. The Chinese said that it gave them dysentery, and that they could not eat it on that account. On the other hand, the uncured rice which the Chinese used looked, smelt, and tasted excellently, and appeared to be wholesome and appetizing. With regard to statistics, there had been variations in prevalence quite as great before the cured-rice days as there had been since. In Penang Gaol Rangoon rice was used for many years without beri-beri; suddenly, in one month, 35 cases occurred, most of them fatal. Why did the rice, alleged to be unwholesome by Braddon, take years to affect the prisoners? Again, cases originated in gaols almost immediately after admission of the prisoners; these could not be due to chronic poisoning. With regard to beri-beri in ships, he was quite unconvinced by Professor Holst's arguments that it was a form of scurvy. Uncured rice, which Braddon alleged to be the cause of the disease, was used everywhere—in England, on board ship, and all over the world—and if Braddon's views were true, it ought to be excluded from our households. Sir WILLIAM TREACHER, K.C.M.G., said that his somewhat extensive experience as a layman left him with an open mind on the subject. The feeding experiments certainly supported the rice theory, but most of them would remember instances in which beri-beri affected only one class of a community, all of which ate the same food. He recollected that in Labuan a company of Mohammedans (Malays from Ceylon) were stationed as a guard, and that they were attacked by virulent beri-beri, and almost the whole of them died. None of the other inhabitants had the disease, although all ate the same rice, which was brought from Singapore in a sailing ship. Mr. T. P. BEDDOES said that on the Amazon, where no rice was eaten, beri-beri was prevalent, and that the type was malignant. The principal food was cassava, prepared from the root from which tapioca was derived. Dr. HARTIGAN said that in different schools in Hong Kong in which the food was exactly the same, there had been a wide variation in the incidence of beri-beri. Some schools were badly affected; others were not. Dr. H. MACFARLANE said that at St. Paul's College, Hong Kong, there were outbreaks of beri-beri among the students every year, and that all sorts of rice had been tried without effect. Change of place, and not of diet, had arrested the disease. Professor RONALD ROSS, C.B., said that it was most important that the question should be taken up in earnest now that a prima facie case had been made out, and that further feeding experiments conducted

on more exact and searching lines should be initiated. Sir PATRICK MANSON said that the weight of opinion amongst those who had spoken in the discussion was opposed to the rice theory of the origin of beri-beri. Still, many capable observers had deliberately adopted the hypothesis after having opposed it. The society would hesitate to say definitely that these men were wrong; but until they had more facts at their disposal, his own position was one of suspended judgement. Dr. F. M. SANDWITH afterwards called attention to a paper forwarded by Dr. Stanton of Kuala Lumpur, which was written by J. Bontius of Batavia in 1624, and in which the disease was fully described. Bontius's volume, *De Medicina Indorum*, lent by the Royal College of Physicians, was also shown.

Pneumonic Plague.

A paper on the epidemiology of pneumonic plague was read for Captain Gill, I.M.S., Assistant Plague Officer, Lahore. It stated that pneumonic plague in all its stages was intimately connected with the bubonic variety of the disease, but that it had definite and well-marked epidemiological characters. When it occurred as an original infection it was associated with a preceding rat epizootic in the same way as bubonic plague. Further, an outbreak of pneumonic plague tended to die out quickly; sometimes it was succeeded by a bubonic epidemic, but at other times no bubonic plague appeared. The mode of spread was direct from man to man, but rats were extremely easily infected by human patients, and a rat epizootic was started, which in turn gave rise to an epidemic of bubonic plague. Pneumonic plague was, further, only seen at the commencement of the epidemic season of plague, and in almost every outbreak there had been pneumonic plague at the beginning. In estimating its effects it should be remembered that it was liable to start bubonic epidemics, and that it was in all probability the expression of an unusual or exalted degree of virulence of the plague bacillus. If any variety of plague ever again prevailed in Great Britain it would be the pneumonic form. A decrease in the prevalence of pneumonic plague was likely to be one of the earliest signs of the decline and final disappearance of plague epidemics in India.

Reviews.

PSYCHOLOGICAL MEDICINE.

SOME years ago, in 1902, Dr. Paul KRONTHAL wrote a book upon nerve cells and cells in general,¹ which, by the novelty of the views therein expressed—views in direct conflict with the neuron theory which at that time was almost universally accepted—and also by the amount of evidence adduced in support of his contention that the nerve cell, so-called, was not a true cell, but a composite structure or agglomeration of fibrillae and wandering cells indistinguishable from leucocytes, attracted considerable attention. Since this much of the internal structure of nerve tissues has been laid bare by APATHY, BOTHE, RAMON Y CAJAL, and others, and a new work by Dr. KRONTHAL on nerves and mind² will probably encounter less opposition, even if all of the author's views are not likely to be accepted. The book is divided into two parts, the first containing a description of the minute anatomy of nervous tissues with his interpretation of their origin and internal relations; and the second part treating of mind—or, as the author would say, "the sum of reflexes"—viewed in the light of his anatomical explanations. It would be impossible to give in brief space an adequate account of Dr. KRONTHAL's carefully thought out analysis of nervous structures, but it may be said that, according to his exposition, the conducting paths or fibrillae constitute the only true and essential nervous mass, and that the remaining parts of the nerve cell—that is, the protoplasmic and chromatin masses, nucleus and nucleolus—belong to the wandering or neutral cell, which bears the same relation to the neuro-fibrillae that a drop of oil does to a number of threads at whose intersecting point the drop has become entangled. There is, according to the author, only this difference: that inside the cell the insulation

of fibril from fibril is removed, the cell thus forming a switch or communication between the fibrillae. For the author's interesting demonstration of how cell form is determined absolutely by the number and direction of the fibrils meeting at that point; for his captivating elucidation of Wallerian degeneration; and for his destructive criticism of the theory of the dominance of the nerve cell we must refer readers to the book itself. Obviously Dr. KRONTHAL's main tenets, if true—indeed the main facts only, if true—involve the death of the neuron theory, a conclusion to which neuro-histologists generally appear to be leaning. The limits of space prevent at the moment any further discussion of Dr. KRONTHAL's eminently logical and searching treatment of the later part of his subject, or of the classifications and analyses of types of nervous disorder—using the term in its widest significance as including mental diseases. We need only say that Dr. KRONTHAL marshals a very great amount of evidence in support of his original views, which he expresses throughout with admirable clearness and definition, with a thorough grasp of his subject, and with unusual width of philosophical outlook.

A paper on the methods of examination of the intelligence, which was read by Professor ZIEHEN of Berlin at the International Congress for Psychiatry two years ago at Amsterdam, has been enlarged, and is now separately published, its subject being defined as the principles and methods of testing the intelligence.³ The monograph is limited to a discussion of the methods of proving in any individual case the normal or abnormal capacity for ideal presentations, their associations and elaborations. Professor Ziehen treats of his subject under the headings of: (1) Retention or deposition; (2) development and differentiation of ideas; (3) reproduction; and (4) combination. The whole paper covers only 61 pages, and is throughout simple and practical. Under "retention" Professor Ziehen alludes to the scanty value of school knowledge, such as the answers to questions in geography, etc., as a means of testing the stock of ideas, for what is required of man is a knowledge of those facts which are of value to him in his daily life; but, since these facts vary with each individual, the examination of the individual should be conducted along the lines of ascertained information concerning him. A uniform method of examination, therefore, is undesirable and likely to give inaccurate results. Professor Ziehen, however, gives a few examples of methods of testing the retention of number, form, narrative, etc., which are, in his opinion, free from the errors which lurk in most. In treating of the development and differentiation of ideas the author outlines and illustrates the processes he has called isolation, complexing, and generalization. These three processes have been explained by Professor Ziehen elsewhere (*Leitf. d. phys. Psychol.*, 7 Aufl., 1906), and he therefore contents himself in the present paper with examples. A child, for example, who out of the idea-complex of the touched, tasted and seen sugar draws the idea of "sweet," offers an illustration of isolation; one who from the thunder, lightning, and rain obtains the idea of "storm" shows complexing; and one who from many single sweet tastes obtains the idea of "sweet," or from many repeated storms derives the idea "storm" gives an example of generalization. Professor Ziehen then gives examples of the questions which may be addressed to the patients to disclose which of these processes may be defective, all of which, though simple, have been carefully selected for the particular end in view. In speaking of reproduction he draws a distinction between two groups of ideas and associations: (1) those which always are at disposal, like current coin, and (2) those which are only reproducible in particularly favourable circumstances or with definite constellations of ideas, the bills and banknotes of thought. He attaches considerable importance to this distinction in diagnosis; for instance, epileptic dementia affords a distinguished example of special defect in the first group, thinking becoming monotonous and limited by its restriction to the nearest and most trivial associations. To the last and most important process of combination, by which new series of associations are produced, most space is properly given,

¹ *Von der Nervenzelle und der Zelle im allgemeinen*. Jena: Gustav Fischer, Berlin, 1902. (M. 16s.)

² *Nerven und Seele*. By Dr. Paul KRONTHAL. Jena: Gustav Fischer, 1908. (Roy. 8vo, pp. 432, 139 figures in the text. M. 10s.)

³ *Die Prinzipien und Methoden der Intelligenzprüfung*. By Professor Dr. Th. Ziehen. Berlin: S. Karger, 1908. (Dbl. post 8vo, pp. 61. M. 1.20s.)

the various simple and most easily practised methods in common use being discussed—the various “completion methods,” in which all the factors of a series but one are given and the patient set to find that one, whether in number, form, narrative, or bodily exercises; the Ebbinghaus method, Bourdon’s test, and so on. The essay is not intended to be an exposition of the whole subject, but is merely a survey of the main points of those methods of examination which the author has proved to be of value in his practice in this particular matter, and is well worth reading.

Professor STÖRRING, in his book on mental pathology and normal psychology,¹ in describing the constituents of self-consciousness, speaks of “activity-feeling,” or the awareness of present mental acts, as “the condition of our regarding the spiritual self as within wide limits independent as against the material world,” and as also determining the content of the consciousness of self. In a paper read recently before the Prague Philosophical Society,² on the activity-feelings, the author, Dr. Löwy, Clinical Assistant in the Prague University Psychiatric Clinic, takes Störing’s description of patients who are apathetic about all that happens to them; who have lost the feeling of activity or effort that used to accompany their thoughts and actions, and so seem to themselves like lifeless machines, as a text, which he illustrates by a case under his own observation, with allusions to numerous others exhibiting the same loss of activity-feeling. Dr. Löwy’s patient was a highly-educated Russian girl, a university student, who some months after a powerful emotional shock developed neurasthenic symptoms and passed through three emotional phases—pleasurable, disagreeable or painful, and finally indifferent—which extended over four years, and ended in recovery. Her symptoms, apart from their affective colouring, were those of neurasthenia and psychasthenia, and comprised, amongst an infinity of others, headache, nightmares, dreams of for ever saying words different from what she intended, the attachment of a prophetic character to her dreams, compulsory counting, arithmomania, and numerous other obsessions, kinaesthetic and hypnagogic hallucinations, and numerous phobias, for example, fear of being watched, of being looked upon as an enemy, etc. At no time had she delusions, always recognizing the strange and absurd nature of her fancies and impulses, and at all times prompt and accurate in her answers to questions, disclosing a sound judgement and lucidly discussing complicated philosophical questions. The main theme of Dr. Löwy’s discussion, however, turns upon the three affective phases passed through by his patient. The first of these was distinguished by pleasurable feelings of detachment from the material world, including her own body, and of heightened mental penetration; the second by painful feelings of extinction; and the third by complete emotional indifference, for, though conscious of her bodily and mental existence and affectively aware of her body, her mental processes had no complement of feeling, so that her thoughts appeared to have no connexion with herself, self-consciousness being thus largely annulled. The whole of these phases and the neurasthenic symptoms manifested during the course of the disorder, Dr. Löwy endeavours to show, depend upon pathological alterations in the “feeling of activity,” which may be general in character or affect only particular processes—memory, reproduction, perception, and so on. This loss or alteration of activity-feeling, which is, he says, at the bottom of many phenomena frequently met in mental disease, outside simple depersonalization—impulsive feelings, feelings of doubt, etc.—he has found in the great majority of cases to occur not in the psychoses but in the neuroses.

Under the fascinating title of idealism as life-sustaining principle,³ Professor JAROTZKY, of the University of Dorpat, has written a book which teems with information which is always interesting and suggestive, but tantalizingly elusive and disappointing whenever the reader imagines

the author is at last going to come to the point, to grapple with his proclaimed subject-matter, and advance proof or even well-conceived theory of the influence of an idealistic mental habit upon bodily processes. He begins well. After a succinct account of modern advances in therapeutic art and science, and a statement that the two great levers by which modern medicine has been elevated to its present plane are, first, the conception of living matter as a mechanism whose functions are explicable by the same processes investigated in the inorganic world by physics and chemistry, and, secondly, experiments on living animals, and after describing and extolling the great benefits which have been obtained in these ways, he makes his first point, which is that modern medicine as its scope and method are regarded by some, does not differ from veterinary medicine and surgery, and that any capable veterinary surgeon (*Tierarzt*) could undertake, with perfect honesty of purpose, the treatment of man. This Professor Jarotzky attributes to the neglect or denial of the influence of mental events on bodily processes, and the prevailing conceptions of the human body as a machine. Professor Jarotzky sets out to combat this bogey of his own imagining. By idealism, which is nowhere defined in the book, we gather that he means lofty imaginings and aspirations; a love of truth and beauty; a firmly altruistic and self-sacrificing morality, and a settled theological faith. Professor Jarotzky’s idealism is thus not philosophic idealism; nor when he appraises mental influences does he descend to the base level of hypnotism, which “never raises the moral forces of the mind, but unfolds only the ignoble phases of the emotions; which lowers the level of mental activity; limits the field of consciousness; paralyses the resistance of the patient, and damages the whole moral personality.” The book also abounds in such statements as that intense fright sometimes brings about recovery in severe nervous diseases, and at others initiates the first changes of organic disease, but with never a word of proof. Notwithstanding all this, and notwithstanding the fact that the author never even attempts to supply any foundation to his oft-reiterated affirmation that “the highest idealistic phases of the mental life are the chief factors which dominate the whole physical cycle of the life of man; which decide the duration of his span of life, and determine the higher or lower degree of morbidity,” his book contains many points of interest to the speculative mind. Amongst these is a sketch of the economic and sanitary conditions of the Russian proletariat. Whilst it is impossible to attach any scientific value whatever to the work, it is equally impossible to read it without sympathy and admiration.

Dr. MOLINÉ, the author of a small book on the great question of brain and mind,⁴ is an orthodox dualist who has been struck by the trend of modern thought towards a monistic interpretation of vital phenomena, and in particular towards mechanical materialism. Admitting with Haeckel an eternal and infinite substance, he refuses to accept cosmic matter as an integral part of that substance. The author’s doctrine of bio-animism conceives the human mind as “a faculty of high differentiation, as a superior polarization of energy which co-ordinates and unifies”—informing the body, as Aquinas said. Only, this high differentiation, instead of being an inherent and progressive necessity of living matter, is the result of a special intervention of Providence, that is, the author discards entirely any teaching of an immanent Deity in favour of Christian revelation.

GASTRO-INTESTINAL DISEASE.

IN his monograph on fat absorption Dr. KOSTER⁵ has employed the histological method to elucidate the problem which has hitherto been attacked chiefly by chemical means. He has investigated the absorption of fat in the colon as well as in the small bowel, using various kinds of fat material such as emulsions of oil or simple cream or soap, with or without the addition of bile or pancreatic

¹ *Mental Pathology in its Relation to Normal Psychology*. By G. STÖRRING. Translated from the German by Loveday. London: Swan Sonnenschein and Co. 1907. Reviewed, *BRITISH MEDICAL JOURNAL*, vol. i, 1908, p. 537.

² *Die Aktionszufälle: Ein Depersonalisationsfall als Beitrag zur Psychologie des Aktivitätsgefühls und des Persönlichkeitsbewusstseins*. By Dr. Max LÖWY. Prague: Carl Bellman. 1908. Pp. 107.

³ *Der Idealismus als lebenserhaltendes Prinzip*. By Professor Alexander Jarotzky. University of Dorpat, Russia. Wiesbaden: J. F. Bergmann. 1908. (Sup. roy. 8vo. pp. 147.)

⁴ *Analytique de l’Esprit humain et de la vie (Bio-Animisme)*. By Dr. J.-A. MOLINÉ. Paris: Vigot Frères. 1907. (Cr. 8vo. pp. 128. Fr. 2.)

⁵ *Fettresorption im Darne und Gallenabscheidung nach Fütterung*. Von Prof. Dr. Med. Georg Koster. Leipzig: Dr. Werner Klinkhardt. 1908. (Med. 8vo. pp. 104. Taf. 6. M. 8.)

preparations; in particular he speaks of a certain German preparation as having given favourable results. With regard to the power of the ileo-caecal valve to prevent fluids passing upwards into the small bowel he found in six experiments on animals that the fluid did not pass the valve under low pressure and only when undue pressure was used did this occur. His results strongly confirm those of others as to the capacity of the colon to absorb fat; as much as 50 to 80 per cent. of cream was absorbed when the pancreatic preparation had been added to it. His experiments on dogs with biliary fistulae give no support to the statements that oil or fat acts as a cholagogue, but whether given by the mouth or by the rectum it induces the gall bladder to discharge its contents. The mechanical theories of fat absorption receive no help from Dr. Koester's histological observations, but the view of Pfleger and others that the solubility of fat in water is an essential condition of its absorption by the intestinal epithelium is confirmed. He believes the process consists of the splitting of the fat into fatty acid and glycerine by the seapsin of the pancreatic juice, while the bile partly dissolves the fatty acids and partly forms soluble soaps by combining them with taurocholate of soda. He thinks emulsification only aids the process by dividing the fat into fine droplets. The lipase of the intestinal juice is an important fat-splitting ferment, but it acts only on emulsified fat. His experiments and observations afford no evidence of fat absorption in the stomach. Exclusion of bile from the bowel did not affect the absorption of fat, but when both bile and pancreatic juice were excluded there was only very slight evidence of absorption, and that only in the neighbourhood of the ileo-caecal valve. He thinks the practical results of his observations go to show that rectal injections of oil are valuable, as they pass right up to the ileo-caecal valve, and are consequently of great use in softening hard faeces and relieving obstinate constipation. In the treatment of gall stones, although oil does not act as a cholagogue, it may be of use by emptying the gall bladder, and thus preventing the stagnation of bile. He does not think the oleate of soda (eunatrol) has any advantage over simple emulsions of fats. He lays stress on the importance for rectal feeding of the evidence of the power of the colon to absorb fat, and thinks that the effect of the addition of pancreatic preparations in promoting absorption should not be forgotten. The essay is illustrated by a number of microphotographs and coloured drawings, showing the fat in the wall of the intestine.

We noticed Dr. PAUL COHNHEIM's book on *Diseases of the Digestive Canal* on the appearance of the first edition (September 30th, 1905, p. 812) and again when the second German edition was published (December 14th, 1907, p. 1717). The general scope of the work was then described, and a high opinion expressed of the method upon which it was planned. We are therefore glad to welcome a translation of the second German edition by Dr. DUDLEY FULTON, Lecturer on Medicine in the University of Southern California, Los Angeles.² Our appreciation of Dr. Cohnheim's work must not be taken to imply complete agreement with all he says; he is not, in fact, always in agreement with himself; for example, we could not agree with the statement on page 19 that vomiting is never absent in actual dilatation of the stomach; or with that on page 2, that pain occurs exclusively in organic diseases of the stomach. He includes as painful all sensations of a cramping, colicky, cutting, stabbing, or burning nature, yet on page 169 he says, "The subjective symptoms of hypersecretion consist of burning, boring, and rarely cramp like pains in the epigastrium"; and in his description of gastric crises he says, "These attacks are often accompanied by most severe pain" (page 226); yet neither is an organic disease of the stomach. We differ from him in the opinion that "the gastralgia of neurasthenia never amounts to true pain." For some reason Dr. Fulton invariably prints "enteropticus" instead of "enteroptoticus," and repeats this wherever the adjective recurs, whether concerning the stomach or the intestine, although the German version gives the word correctly. "Stomach-stiffenings"

can hardly be regarded as a happy description of those alternate bulgings of the stomach or slow peristaltic movements seen in certain cases of pyloric obstruction. "Contracted liver" is not a good equivalent for *Schnur-leber*, meaning the "constricted" liver generally attributed to tight-lacing, but which Dr. Cohnheim says is rarely met with in women who wear stays, but is caused by the tight drawing of the strings by which the skirts are held in position. "Estalin" is said to be the latest remedy for haemorrhage, but is a misprint for "Escalin," and its supposed value has been denied by Ewald and others. We are glad to see that the translator takes a more enlightened view of the need for seeking early surgical assistance in cancer of the stomach than that expressed by Dr. Cohnheim. The translation is generally well done; but, in addition to the points already mentioned, we might point out that *Heidelbeer* (p. 262) is not blackberry, that *Hammelfleisch* (p. 269) does not mean "ham," and that, though "noodles" may be the American for "vermicelli" (*Nudeln*), it is a word in this significance unknown to us. May we add that the diagrammatic illustrations based upon photographs of naked women have no advantage over the usual outlines, and in other respects are objectionable.

A review of the original French edition of Dr. COMBE's work on intestinal autointoxication was published in this JOURNAL some time ago (December 14th, 1907, p. 1718). The volume entitled *Intestinal Autointoxication*,¹⁰ and prepared by Dr. STATES, is called not a translation, but an adaptation, presumably in order to give the translator greater freedom. Professor Combe, instead of attributing the causation of all diseases to uric acid in the blood, holds a similar view with regard to absorption of toxins from the intestine, but he comes very closely into harmony with Dr. Haig in the matter of treatment, as his dict, which is to constitute an almost universal panacea, is very much on the same lines. The diagnosis of autointoxication in cases in which there is no obvious intestinal disease is to be made by a somewhat complicated method for estimating the quantity of sulpho-ethers in the urine. The treatment is a lacto-farinaceous diet, no fluid being taken with meals. Combe also advocates the use of sour milk and of yeast to diminish intestinal putrefactions, but he has a very catholic belief in other remedies, including antiseptic drugs; preparations of the extracts of the various organs, such as the pituitary gland, the suprarenal capsules, the liver, and the thyroid; and he includes the various "natural" remedies—mineral waters, sun baths, and air baths. The volume concludes with a chapter on the lactic ferments, written by Dr. Fournier. The work of translation or adaptation is fairly well done, but the style is not very easy, and the text is disfigured by a very considerable number of slips in grammar and in spelling, especially of proper names.

GONORRHOEA.

IN *Gonorrhoea in Women*,¹¹ Dr. PALMER FINDLEY makes a summary of all the questions associated with his subject, in the hope that his monograph may serve in its way to instruct some and to awaken all to a greater realization of the great importance of the subject of gonorrhoea in women. The detection of the gonococcus in chronic or doubtful cases is, he insists, essential, and so important, in his opinion, is the recognition of that microbe that he dedicates his book "To Professor A. Neisser, the discoverer of the gonococcus." He dwells at some length on the moral and social aspect of the disease and its causes. It is sad to find how prevalent it is and how disastrous are its effects in the great Republic, just as in Western Europe; unfortunately the reasons are evident, though the remedy is far from clear. Dr. Findley admits that Noeggerath's deductions from personal observations are quite justly regarded as extravagant and unwarranted; indeed, another writer once argued that Noeggerath so overstated his case that without knowing it he implied that gonorrhoea rather promoted

² *Diseases of the Digestive Canal*. By Dr. Paul Cohnheim. From the Second German Edition. Edited and translated by Dudley Fulton, M.D., Philadelphia and London: J. B. Lippincott Co. (Med. 8vo, pp. 393, 16s.)

¹⁰ *Intestinal Autointoxication*. By A. Combe, M.D. English adaptation by W. G. States, M.D. London: Reban, Limited, 1908. (Roy. 8vo, pp. 479, 16s. 6d.)

¹¹ *Gonorrhoea in Women*. By Palmer Findley, M.D., Professor of Gynaecology in the College of Medicine of the University of Nebraska, Omaha, etc. St. Louis: The Mosby Medical Book and Publication Company, 1908. (Sup. roy. 8vo, pp. 112)

fertility, since he maintained that over three-quarters of the husbands in a town where the population was increasing had suffered from gonorrhoea, whilst three-fifths of their wives were infected. Checks on impregnation have to be taken into account, though we are aware that increase in population in the case in point is largely due to fresh immigrants rather than to native babes. Doctors, however, cannot remove the social wants that sin against the strength of youth, nor many other prejudicial conditions which retard or corrupt matrimony in modern nations. Dr. Findley agrees with the view that medical regulation and supervision of prostitution are inadvisable, inadequate, and promotive of a false sense of security from infection. Neither the author, nor any other authority, however, has suggested any remedy, legislative or otherwise, that is likely to remove the curse of this and other varieties of contagious disease. The medical aspect of the question is not so gloomy. At least we know, according to Dr. Findley and his American colleagues, that to determine the infectiousness of a given case we have but to recognize the gonococcus; at present we cannot discriminate between that germ when of high and when of low virulence, and we know that it may lie latent for years and then light up what appears to be a new and acute infection or may transmit a virulent infection without becoming manifest itself. Hence we must know how to find the gonococcus, we must be familiar with the conditions which foster or destroy it, and, lastly, after gaining that knowledge, we must endeavour to stop gonorrhoea in women at its source. In other words, we must make sure it is cured in the male, that is to say, in the husband or the suitor who asks his doctor if he be fit to marry. The total absence of the gonococcus after stringent test alone justifies a favourable verdict. Hence Dr. Findley makes much of the gonococcus and gives full references to authorities who have written on its bacteriology, which he himself summarizes in this monograph. There is, unfortunately, some discrepancy amongst experts as to power of resistance against desiccation. Kratter and McFarland make out that the gonococcus shows remarkable vitality even in dried secretions, others are of a contrary opinion. And Dr. Findley himself speaks of the early death of the germ in dried secretions, and observes that it is comparatively rare that gonorrhoeal infection is acquired by means other than sexual intercourse for the reason that the secretions when dried are innocuous. The question should be settled, as its importance is obvious. The relative gravity of gonorrhoea in the female is now well recognized, though forty years ago it was all but entirely overlooked. Dr. Findley rightly insists on its ravages—ophthalmia, pyosalpinx, peritonitis, constitutional symptoms, etc.—and reminds us that, as has already been written, in the case of gonococcal infection the individual risks which a wife is made to incur are much more serious than those following syphilis. The puerperium is certainly endangered, and the risk of blindness to the infant is very high. Couvelaire, perhaps the best authority on the histology of the gravid tube, believes that inflammatory changes are the result, not the cause of tubal gestation, and so would deny the gonorrhoea theory. Lastly, Dr. Findley admits that more progress has been made in the etiology, pathology, and diagnosis of gonorrhoea than in its treatment, but he adds full directions for the management of cases, and discusses the vaccine treatment of gonorrhoeal vulvo-vaginitis in children. Thus, as we have shown, this work is a handy and complete summary of a very grave subject.

We have read Dr. W. G. M. BYERS'S *Study of the Ocular Manifestations of Systemic Gonorrhoea*¹³ with great interest and profit. The author has collected and presented in a readable form all that is known to-day about this important subject. One of the earliest accurate descriptions of gonorrhoeal irido-cyclitis was given in 1830 by Sir William Lawrence. Mackenzie described the condition fully, and his views still influence our conception of the disease at the present day. Dr. Byers, after a historical retrospect and some general considerations, takes the tissues of the eye seriatim, and describes how each may be affected by metastatic gonorrhoea. His remarks upon metastatic conjunctivitis are very important to the general prac-

titioner, for it is a disease which is constantly—one might say almost always—overlooked. The monograph is well printed on good rough paper. A full bibliography is appended.

The small work on the diagnosis and treatment of gonorrhoea in the male by Dr. S. JESSNER of Königsberg¹⁴ forms one of a series of dermatological essays for medical practitioners. The author does not advocate the energetic and aggressive instrumental treatment of acute gonorrhoea adopted by some recent authors, and writes in a moderate and practical manner which should ensure his book a favourable reception both by practitioners and students. Dr. Jessner speaks well of ichthargan in the earlier stages, when the inflammation is not too severe. Protargol, he thinks, often increases the discharge. For chronic gonorrhoea he considers that silver nitrate and copper sulphate give the best results when intelligently and carefully adapted to the needs of each case. Of the numerous books on this subject which have appeared in Germany and Austria of late years this is one of the best we have seen, judged from the point of view of the general practitioner.

NOTES ON BOOKS.

TRAVEL is one of the most favourite forms of recreation with medical men, but each kind of travel calls for a special kind of information. To many the motor car has opened up delightful opportunities of seeing their own and foreign countries which the railway could not afford. For them the old guide books are a little out of date, since they do not give the information about roads and intermediate places which the motorist needs. Probably most motorists, who have toured in France know the *Guide Michelin pour la France*,¹⁵ and for them it will be sufficient to say that we have before us the edition for 1909 (in French). For others we may add that it is perhaps the most thoroughly practical guide book that has ever been compiled. The towns, including quite small market towns and even villages, are arranged in alphabetical order; the routes from each place are specified, with the distances and hints as to the gradients and surfaces. The hotels are enumerated, and by the use of conventional signs much information is given about them, and the chief buildings of historical interest are indicated. The volume includes a map of France in 67 sections, and a key indicating the main roads and the section of the map in which full details are to be found. The book is, of course, an advertisement of the tyres made by the Michelin Company, of Clermont-Ferrand, and, among other places, London (44, Sussex Place, S.W.), and if gratitude resides in the motorist's breast the company ought to have its reward.

The little book *How to Become a Naval Officer*,¹⁶ which Messrs. Gieve, Matthews and Seagroave (21, George Street, Hanover Square, London, W.) will, we are informed, be pleased to forward to any parents thinking of the Navy as a profession for their sons, appears to be just what its title professes, and Admiral Fremantle in a short introduction states after an examination of the volume, that the information given in it is thoroughly reliable. In Part I, the Admiralty regulations as to naval cadets are printed; in Part II there is a description of life at Osborne, and in Part III of life at Dartmouth College, to which the cadet goes after two years at Osborne. Part IV is a lecture by Professor Ewing, C.B., Director of Naval Education, on the new scheme of naval training, illustrated by a most curious "diagram of promotions" which looks like a transverse section of a barge. In an appendix some miscellaneous information is given, including the list of the articles in a naval cadet's kit. The volume is copiously illustrated by photographs of Osborne and Dartmouth, and has for a frontispiece a portrait group of the Prince of Wales and his eldest son in naval uniform.

¹³ *Diagnose und Therapie der Gonorrhoe beim Manne*. Von Dr. S. Jessner. Würzburg: A. Stuber, 1909. (Demy 8vo, pp. 164, M. 3.)

¹⁴ *Michelin-guide*. Clermont-Ferrand, Puy de Dôme, France (1 fr. 50c. Post free.)

¹⁵ *How to Become a Naval Officer, and Life at the Royal Naval Colleges at Osborne and Dartmouth*. Revised edition. London: Gieve, Matthews and Seagroave. (Cr. 8vo, pp. 76.)

UNDER the will of the late Mrs. Lucy Jane Grice, of Forest Row, Sussex, the Newport and Monmouthshire Hospital receives a bequest of £5,000, and the West Bromwich District Hospital and the Reigate and Redhill Cottage Hospital each £1,000.

¹⁴ Studies from the Royal Victoria Hospital, Montreal, vol. II, No. 2 (Ophthalmology, 2). *A Study of the Ocular Manifestations of Systemic Gonorrhoea, with Reports of Cases of this Nature*. By W. G. M. Byers. Price 5s.; to be obtained from the Secretary of the Hospital.

THE COMPOSITION OF SOME PROPRIETARY FOOD PREPARATIONS.

II.—Tonic WINES.

In addition to the meat wines already dealt with, a large number of medicated wines are advertised and sold for employment as tonics in convalescence after illness and at other times. The particular medication employed, whether cinchona, coca, phosphates, or some other, is mentioned on the label or in advertisements in most cases, but not in all. Analyses have been made of a number of these wines, and the results are here given; there is no reason to suppose that others differ greatly from those described.

Following the usual analytical practice in regard to wines, the volatile acid has been calculated as acetic acid, and the non-volatile as tartaric. The reducing sugar has been calculated as glucose, and the presence of this substance has been qualitatively proved in each case by formation of the osazone.

Liquid extract of coca contains a variable proportion of alkaloid, the average being about 0.4 per cent. The quantity of an extract of this strength which corresponds to a dose of the wine has been calculated for the first three wines; in the fourth the identity of the trace of alkaloid found was not sufficiently certain; and in the fifth it was not possible to say how much of the alkaloid was derived from coca and how much from cinchona.

Liquid extract of cinchona (*B.P.*) contains 5 per cent. of alkaloids, not less than half of which consists of quinine and cinchonidine. The quantity of this extract which corresponds to a dose of the wine has been calculated for those wines which contained cinchona alkaloid, except in the case in which quinine was practically absent.

ARNBRECHT'S COCA WINE.

Several varieties of this wine are supplied by Armbrrecht, Nelson, and Co., Duke Street, Grosvenor Square, London, W.; the one taken for analysis is described as Coca Port. The price of a bottle holding 21 fl. oz. is 4s. The dose is one wineglassful before or with each meal.

Analysis showed that 100 parts by measure contained:

Alcohol	...	15.05 parts by measure.
Total solids	...	23.5 parts.
Glucose	...	20.8 "
Ash	...	0.28 "
Acidity, volatile	...	0.08 "
fixed...	...	0.34 "
Alkaloid	...	0.006 "

The alkaloid caused numbing when applied to the tongue and agreed in other properties with the alkaloid of coca. A wineglassful of the wine would represent about 14 minims of liquid extract of coca.

SAVAT'S COCA WINE.

This wine is supplied wholesale at Bartholomew Close, London, and Hanover Street, Liverpool. No maker's name is given on the label. The price is 4s. a bottle holding 10 fl. oz.

Dose: A dessertspoonful in half a wineglass of water or wine before meals; after several days this may be doubled.

Analysis showed that 100 parts by measure contained:

Alcohol	...	23.40 parts by measure.
Glycerine	...	8.1 parts.
Total solids	...	5.4 "
Glucose	...	2.6 "
Ash	...	0.44 "
Acidity, volatile	...	0.13 "
fixed...	...	0.24 "
Alkaloid	...	0.07 "

The alkaloid caused numbing when applied to the tongue, and agreed in other properties with the alkaloid of coca. A dessertspoonful of the wine would represent about 21 minims of liquid extract of coca.

MARIANI'S TONIC COCA WINE (VIN MARIANI).

This wine is supplied by Mariani and Co., Paris, in bottles holding 17½ fl. oz. and costing 4s.

Dose: One claret glass full before or after the principal meal.

Analysis showed that 100 parts by measure contained:

Alcohol	...	16.40 parts by measure.
Total solids	...	8.9 parts.
Glucose	...	2.0 "
Cane sugar	...	4.9 "
Ash	...	0.22 "
Acidity, volatile	...	0.10 "
fixed	...	0.35 "
Alkaloid	...	0.01 "

The alkaloid caused numbing when applied to the tongue and agreed in other properties with the alkaloid of coca. A wineglassful would represent about 24 minims of liquid extract of coca.

HALL'S WINE.

This wine, supplied by Stephen Smith and Co., Ltd., Bow, London, E., is in bottles, price 1s. 9d. and 3s., holding respectively 1½ and 21 fl. oz.

Dose: Adults—wineglassful thrice daily.

This wine appears to be now advertised and sold simply as Hall's wine, and neither on the label nor on the circular enclosed in the package is any reference made to coca, but on the carton are the words "Recommended by the *Lancet*, April 9th, 1892." Reference to this recommendation showed that it dealt with "Hall's Coca Wine," and stated that cocaine could be readily extracted from the wine and identified, and also that "a wineglassful is stated to contain one drachm of the soluble active ingredients of the leaves" of coca. Our results show that the wine now sold is of very different composition.

Analysis showed that 100 parts by measure contained:

Alcohol	...	17.85 parts by measure.
Total solids	...	14.1 parts.
Glucose	...	11.9 "
Ash	...	0.29 "
Acidity, volatile	...	0.10 "
fixed	...	0.34 "
Alkaloid	...	0.003 "

The total quantity of alkaloid extracted from over half a pint of the wine barely sufficed to cause any appreciable numbing when applied to the tongue.

MARZA WINE.

The agents for this wine are Wright, Layman, and Umney, Ltd., Southwark, S.E. It is sold in bottles, holding 24 fl. oz., price 3s. 9d. Dose: A wineglassful three times daily, before or after food.

This is described on the package as "containing iron, phosphorus, coca, and pepsine."

Analysis showed that 100 parts by measure contained

Alcohol	...	17.43 parts by measure.
Total solids	...	9.4 parts.
Glucose	...	7.6 "
Ash	...	0.23 "
Acidity, volatile	...	0.11 "
fixed	...	0.30 "
Alkaloid	...	0.001 "
Iron	...	0.005 "
Phosphorus in combination, calculated as phosphoric acid	...	0.03 "

No free phosphorus could be detected. The alkaloid was bitter, and caused numbing when applied to the tongue. Although so small in quantity, its solution showed the fluorescence characteristic of quinine or quinidine.

No digestive action on egg albumen could be detected in eight hours, after removing the alcohol from the wine at a low temperature.

CHRISTY'S KOLA WINE.

This wine is supplied by Thos. Christy and Co., Old Swan Lane, London, in bottles, price 3s. 6d., holding 12½ fl. oz.

Dose: A liqueur glass, or one ounce, occasionally.

It is stated on the label that each ounce contains the equivalent of 30 grains of kola.

Analysis showed that 100 parts by measure contained:

Alcohol	...	18.85 parts by measure.
Total solids	...	10.9 parts.
Glucose	...	8.6 "
Ash	...	0.25 "
Acidity, volatile	...	0.09 "
fixed	...	0.24 "
Alkaloid	...	0.03 "

The alkaloid showed the characteristic reactions of caffeine, which is the alkaloid of kola. According to published statements, kola nuts contain 2 to 2½ per cent. of caffeine; taking the lower of these figures, 0.03 part of caffeine would represent 1.5 part of kola, or 6½ grains to each fluid ounce of the wine.

VIBRONA.

This preparation is supplied by Fletcher, Fletcher, and Co. Ltd., Holloway, London, N., in bottles holding 20 fl. oz., price 3s. 9d.

Dose: A liqueur glass (about one tablespoonful).

In a circular enclosed with the bottle it is stated:

To the many thousands of invalids who dare not take even the smallest quantity of Cinchona, or its alkaloid—Quinine—on account of the intense and unbearable headache and other distressing symptoms invariably produced, Vibrona has proved an inestimable boon.

Analysis showed that 100 parts by measure contained:

Alcohol	...	19.30 parts by measure.
Total solids	...	16.7 parts.
Glucose	...	6.4 "
Cane sugar	...	5.2 "
Ash	...	0.27 "
Acidity, volatile	...	0.07 "
" fixed	...	0.28 "
Alkaloid	...	0.02 "

The alkaloid was slightly bitter, and its solution showed a very slight fluorescence; it agreed well in its characters and reactions with a mixture of the alkaloids of cinchona, from which the quinine and cinchonidine had been removed.

BUGEAUD'S WINE.

This wine is supplied by Lebeault et Cie, of Paris, in bottles, price 4s., holding 16 fl. oz.

Dose: Adults, a small wineglassful half an hour before meals. This is described on the label as "Nutritive-Tonic Wine of Cinchona bark and Cocoa."

Analysis showed that 100 parts by measure contained:

Alcohol	...	14.80 parts by measure.
Total solids	...	21.5 parts.
Glucose	...	18.9 "
Ash	...	0.40 "
Acidity, volatile	...	0.13 "
" fixed	...	0.33 "
Alkaloid	...	0.01 "

The alkaloid was bitter, and agreed in its properties with the alkaloid of cinchona.

A wineglassful would represent about 2 minims of liquid extract of cinchona.

QUINA LAROCHE.

The London agents of this preparation are Comar and Son, Holborn Viaduct, London. The price is 2s. 9d. a bottle, holding 9 fl. oz.

Dose: As a stomachic, two measures per day after meals; for fevers, four to six measures a day. The measure supplied with the bottle holds a little over 1 fl. oz.

The preparation is described as

a vinous extract, containing concentrated in a small volume and free from all alteration all the soluble principles of the three best kinds of cinchona: red, yellow, and grey.

Analysis showed that 100 parts by measure contained:

Alcohol	...	15.90 parts by measure.
Total solids	...	26.9 parts.
Glucose	...	22.2 "
Ash	...	0.20 "
Acidity, volatile	...	0.05 "
" fixed	...	0.16 "
Alkaloid	...	0.05 "

The alkaloid was bitter, and agreed in its properties with the alkaloid of cinchona.

"Two measures" would represent about 10 to 15 minims of liquid extract of cinchona.

SERRAVALLO'S TONIC BARK AND IRON WINE.

This wine, stated to be prepared by J. Serravallo, Trieste, Austria, is sold in this country at the price of 3s. 6d. a bottle, holding 18 fl. oz.

Dose: Two or three liqueur glasses a day.

Analysis showed that 100 parts by measure contained:

Alcohol	...	17.23 parts by measure.
Total solids	...	21.2 parts.
Glucose	...	6.8 "
Cane sugar	...	12.2 "
Ash	...	0.23 "
Acidity, volatile	...	0.05 "
" fixed	...	0.23 "
Iron	...	0.01 "
Alkaloid	...	0.05 "

The alkaloid was bitter, and agreed in its properties with the alkaloid of cinchona.

A liqueur glassful would represent about 3 minims of liquid extract of cinchona.

ST. RAPHAEL QUINQUINA TONIC WINE.

This wine, supplied by the Société du St. Raphael-Quinquina of Paris, is sold in this country at 3s. 3d. a bottle, holding 25 fl. oz.

Dose: A glass before and during meals.

Analysis showed that 100 parts by measure contained:

Alcohol	...	16.89 parts by volume.
Total solids	...	14.3 parts.
Glucose	...	11.8 "
Ash	...	0.25 "
Acidity, volatile	...	0.13 "
" fixed	...	0.19 "
Alkaloid	...	0.038 "

The alkaloid was moderately bitter, and agreed fairly in its properties with the alkaloid of cinchona.

A wineglassful would represent about 1½ minims of liquid extract of cinchona.

VANA.

This preparation is supplied by Burroughs, Wellcome, and Co., London, E.C., a bottle holding 17½ fl. oz. costing 2s. 6d.

Dose: Half a wineglassful three to four times daily.

This is described on the label as "presenting calcium glycerophosphate and the alkaloids of cinchona bark in a pure, sound wine."

Analysis showed that 100 parts by measure contained:

Alcohol	...	19.20 parts by measure.
Total solids	...	23.9 parts.
Glucose	...	20.0 "
Ash	...	0.23 "
Acidity, volatile	...	0.05 "
" fixed	...	0.27 "
Alkaloid	...	0.03 "
Calcium	...	0.01 "
Phosphorus in combination, calculated as phosphoric acid	...	0.13 "

The alkaloid was bitter, and agreed in its properties with the alkaloid of cinchona. The total calcium found is equivalent to 0.05 per cent. of calcium glycerophosphate; the phosphoric acid, however, is sufficient for more than five times this amount.

Half a wineglassful would represent about 3 minims of liquid extract of cinchona.

NOURRY'S IODINATED WINE.

This medicated wine is supplied by F. Comar and Son, Holborn Viaduct, London, at 3s. 6d. a bottle, holding 10½ fl. oz.

Dose: For adults, one tablespoonful.

In a pamphlet enclosed with the bottle it is stated that

Nourry's Wine is an iodinated wine rich in iodine... the iodine is chemically combined with tannin to an almost tasteless compound, and this is dissolved in a sound sweet wine.

The quantity of iodine is given as 1½ grains in each fluid ounce.

Analysis showed that 100 parts by measure contained:

Alcohol	...	11.5 parts by measure.
Total solids	...	27.3 parts.
Glucose	...	21.4 "
Glycerin	...	6.6 "
Ash	...	0.35 "
Acidity, volatile	...	0.06 "
" fixed	...	0.39 "
Iodine	...	0.33 "

This amount of iodine is practically equivalent to 1½ grains per fluid ounce; its reactions indicated that it was in combination with tannin.

BAUDON'S WINE.

The wine, supplied by the Maison Baudon, Paris, is sold in this country through W. A. Massingham, London, E.C. The price charged for a bottle holding 13½ fl. oz. is 3s. 6d.

Dose: For adults—a wineglassful pure, or diluted with water or seltzer water before or during each principal meal. This is described on the label, which is in French, as "antimonio phosphate," but in a circular in English enclosed with the bottle, it is said to be "a very agreeable preparation of the Phosphates, with a basis of Pure Muscat Wine," and no mention is made of antimony.

Analysis showed that 100 parts by measure contained:

Alcohol	...	12.75 parts by measure.
Total solids	...	14.5 parts.
Glucose	...	13.1 "
Ash	...	0.56 "
Acidity, volatile	...	0.12 "
" fixed	...	0.67 "
Phosphate, calculated as phosphoric acid	...	0.54 "
Antimony	...	a minute trace.

DUSART'S WINE.

This wine, to be obtained wholesale from Wilcox and Co., London, W.C., is sold at the price of 4s. a bottle, holding nearly 14 fl. oz.

Dose: From 2 to 3 Bordeaux glasses for adults. This is described on the label as a "lacto-phosphate de chaux, ferrugineux"; it appears that a non-ferruginous variety is also prepared.

Analysis showed that 100 parts by measure contained:

Alcohol	...	16.85 parts by measure.
Total solids	...	15.4 parts.
Glucose	...	12.8 "
Ash	...	0.55 "
Acidity, volatile	...	0.11 "
" fixed	...	0.35 "
Iron	...	0.09 "
Calcium	...	0.07 "
Phosphorus in combination, calculated as phosphoric acid	...	0.03 "

ST. RAPHAEL TANNIN WINE.

This wine is supplied in this country by a company in Valence (Drôme), France, through English agents (E. Gallais and Co.) in London.

The price of a bottle, holding 16½ fl. oz., is 2s. 6d.

Dose: Half a wineglassful after meals.

A pamphlet enclosed with the wine contains a dissertation on its properties, etc.; no definite statement is made as to the kind of tannin which it contains, and it is not apparent whether it is or is not intended to imply that it is derived from cinchona.

Analysis showed that 100 parts by measure contained:

Alcohol	...	14.65 parts by measure.
Total solids	...	16.5 parts.
Glucose	...	14.0 "
Ash	...	0.29 "
Acidity, volatile	...	0.11 "
" fixed	...	0.41 "

Indications were obtained of a minute trace of alkaloid. The amount of tannin present did not differ greatly from the amount in an ordinary port wine, matured in wood, with which it was compared.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

The annual general meeting of this Society was held at 11, Chandos Street, Cavendish Square, on May 20th. In the absence of the President, Mr. J. Warrington Haward, acting Treasurer, took the chair. Twenty members were present.

It was reported that the society's invested funds amount to £100,071, from which was derived in interest the sum of £3,121 17s. 1d.; the sum received in subscriptions and donations was £645. During the past year the sum of £3,017 was distributed amongst the annuitants of the charity, 48 widows and 16 orphans, each widow receiving on an average £50 besides an additional £10 as a Christmas gift, and each orphan £12 and a gift of £5 at Christmas. The Copeland Fund is a special fund which

enables the society to grant to any widow or orphan already in receipt of the society's ordinary relief extraordinary assistance in special circumstances of unusual distress, such as blindness, paralysis, insanity, severe disabling accident, or grave permanent disease, and to continue such extra relief in the case of orphans beyond the age of 16 or 18 years (at which under the society's existing by-laws the ordinary relief ceases) for such further period as the court of directors may think fit. During the year two widows in receipt of grants died. One, whose husband had paid in subscriptions £19 19s., received £1,500. The other, whose husband had paid in annual subscriptions £31 10s., received £3,300; she had been in receipt of grants since 1855. Two new widows were elected during the year, and on December 31st there were 47 widows and 15 orphans in receipt of grants. One of the widows has been on the books since 1854, and has already received over £2,200. Relief is only granted to the widows and orphans of deceased members who have paid their annual subscription for three years, or who are life members. During the year nearly fifty letters were received from widows of medical men, who, in many instances, had been left practically penniless, asking for relief, but this had to be refused, as their husbands had not been members of the society. The directors cannot too strongly urge upon the members of the medical profession, especially the younger, the desirability of joining the society. Membership is open to any registered practitioner who at the time of his election is resident within a twenty-mile radius from Charing Cross. Should any member remove beyond the limits of the society he nevertheless continues to be a member. The annual subscription is two guineas; every member who has paid this sum for twenty-five years becomes a member for life. Life membership may also be obtained by the payment of one sum, varying with the age of the applicant. Further particulars and application forms may be obtained from the Secretary at the offices of the Society, 11, Chandos Street, Cavendish Square, W.

A cordial vote of thanks was passed from the chair to the editors of the medical papers in which from time to time notices of the society are published.

BRITISH MEDICAL BENEVOLENT FUND.

At the May meeting of the Committee sixteen cases were considered and grants amounting to £150 made to fourteen applicants, two cases being postponed for further inquiry. Appended is an abstract of the cases relieved:

Daughter, aged 63, of late M.R.C.S. Was left quite unprovided for at father's death more than thirty years ago, and now, with poor health and failing eyesight, finds it impossible to support herself. Relieved twice, £24. Voted £12.

Wife, aged 48, of L.R.C.P. Edin. For several years past has been obliged to support herself on account of husband's whereabouts being unknown. Now asks for a little help towards the education of one of her daughters, aged 10. Voted £6.

L.F.P.S. Glasg., aged 75. Has practised for many years past in the South-West of England, but receipts have now dwindled to less than £1 a week. No children. Voted £12.

Widow, aged 57, of M.D. Dubl. Quite unprovided for at husband's death six months ago, and is at present incapable of earning a living owing to ill-health. One child, aged 12. Voted £10.

Daughter, aged 66, of late M.R.C.S., L.S.A. Has supported herself since the age of 17, and helped younger members of the family, but is now obliged to give up a small school on account of ill-health. Slight help from a brother, who can ill afford it. Voted £12.

Widow, aged 57, of L.R.C.P., L.R.C.S. Irel. Finds great difficulty in getting a suitable post, and is temporarily given a home by a widowed sister, who is herself partly dependent on her daughters. Relieved once, £5. Voted £5.

L.R.C.P., L.R.C.S. Edin., aged 49, who practised for several years as an assistant, but had to have one eye enucleated, and has nearly lost the sight in the other, owing to iritis and glaucoma. No income; wife left lodgings. Five children, aged 14 to 9. Relieved once, £18. Voted £18.

Widow, aged 56, of M.R.C.S. Eng., L.R.C.P. Edin. Since husband's death, more than twenty-five years ago, has maintained herself by cleaning offices, but now suffers from bronchitis and emphysema, and is unable to continue such hard work. Relieved twice, £22. Voted £12.

Widow, aged 62, of L.R.C.P., L.R.C.S. Edin. Only income a small pension from a City company and has recently had many unavoidable expenses in consequence of a serious illness. Two sons only just self-supporting. Relieved twice, £12. Voted £10.

Widow, aged 48, of M.B., C.M. Edin. Practically unprovided for at husband's death twelve years ago, but with the help of

It may be pointed out that the lubricant application here recommended corresponds closely with the diachylon simplex which appears under the head of "Emplasters"

in John Quincy's *Pharmacopœia Officinalis et Extemporanea*, or a Complete English Dispensatory (Second Edition, London, MDCCXIX). The following is his formula: Take mullage of marsh mallow, roses, or Foenugreek (fennel) and linseed, ana lb. ij; old oil, lb. ij; litharge, lb. jss. Boil to a consistence.

Although the French are rather boastful of their freedom from what they regard as superstitions, they are much given to the worship of relics—provided they have no association with religion. Gambetta, it appears, had his right eye enucleated by de Wecker, and had to get a glass eye in its place. A French journal has recently—we cannot help thinking, somewhat unkindly—published a letter from the great Tribune of the people to his father, in which he tells him of the operation, dwelling on the loss of time caused thereby, the cost of the artificial eye, the increased cost of living owing to the Paris Exposition and a present he will have to give the surgeon, who refused a fee. Whether this eloquent appeal had the effect on the old tradesman of Cahors which it seems to have been intended to produce is not stated. We are told, however, by another journal that a pupil of de Wecker, who assisted at the operation, took possession of the eye and sealed it up in a bottle. When Gambetta had become famous, the pupil, who had in the meantime gained fame as an ophthalmologist, one day showed the eye to an American millionaire, who bought it for a great price. Americans, we know, are always on the watch to capture European works of art; but if they also buy up the damaged works of Nature, some of our museums might do a brisk trade.

Last year there was published in the *Nederlandsch Tijdschrift voor Geneeskunde* an account contained in a pamphlet in the library of the University of Leyden of an operation for the separation of xiphopagous twins which was successfully performed at Basel in 1689. Dr. Curt Schelenz of Brunswick, writing in the *Deutsche medizinische Wochenschrift* not long ago, pointed out that among the reports of the Imperial Leopold Academy (years 8 and 9) there are two accounts of the event—a summary of the Leyden pamphlet by Dr. Emanuel Koenig and a fuller account by the operator himself, Dr. Fatus. It was published by Theodor Zwinger, who was professor at Basel from 1653 till 1724. It is there stated that the twins were born at Hittingen, and notwithstanding the unfavourable position in which one of them lay—*recurvato capite et reliquo corpore*—the delivery took only two hours. The next day the twins, which were girls, were taken by Dr. Samuel Brunn to Fatus at Basel. Fatus consulted all the leading professors at Basel, who gave it as their opinion that although the issue was very doubtful, an operation should be attempted. The unifying band extended from the ensiform cartilage to the navel, and was of considerable thickness. The cartilaginous portion was cut through with a knife; the sister parts were divided by means of a strong string. The chief magistrates and officials of the city were invited to witness the operation. The wound healed in ten days. The children made a good recovery. The pamphlet contains illustrations which were reproduced in the Reports of the Emperor Leopold Academy.

Medical News.

The University of Leipzig will celebrate its five-hundredth anniversary at the end of July.

DR. D. EDGAR FLINN, Medical Inspector, Local Government Board, Ireland, and Dr. W. J. Howarth, M.O.H. Kent, have been elected Fellows of the Royal Sanitary Institute.

GEORGES DREYER, M.A. Oxon., M.D. Copenhagen, Professor of Pathology in the University of Oxford, has been elected a member of the Danish Royal Academy of Letters and Science.

A MEETING of the Socialist Medical League will be held at the Holborn Restaurant on Thursday next, when Dr. J. Jenkins Ross of Bourneville will open a discussion on the nationalization of the medical profession; the chair will be taken by Dr. Satter, L.C.C., at 4 p.m.

The annual Welsh medical dinner will be held at the Criterion Restaurant, London, on Tuesday, June 15th, when the chair will be taken by Dr. D. C. Lloyd Owen, of Birmingham, at 7.30 p.m. The date has been chosen in connexion with the National Eisteddfod in London, and will not clash with any of its celebrations.

The tuberculosis exhibition at the Art Gallery, White-chapel, arranged by the National Association for the Prevention of Consumption and other forms of Tuberculosis will be opened on Wednesday next, at 3 p.m., by the President of the Local Government Board; discussions will be held on June 8th, 9th, and 10th. The exhibition will remain open until June 19th, and popular lectures will be delivered on eight evenings.

The sixth meeting of the French National Periodical Congress of Gynaecology, Obstetrics, and Paediatrics will be held at Toulouse in September, 1910. The following questions are proposed for discussion: Acute curable forms of pulmonary tuberculosis in children; eczema of nurslings; vertebral osteomyelitis; pyloric stenosis in sucklings; megacolon; solid tumours of the ovary; biliary lithiasis complicating pregnancy and parturition; pathology and treatment of obstinate vomiting of pregnancy.

At the last meeting of the International Physiological Congress, which was held at Heidelberg in 1907, it was decided to hold the next Congress at Vienna in 1910 at Whitsuntide. It has been found, however, that at this time of year it would be impossible for a large number of physiologists to attend the congress, and the local committee of the congress at Vienna has therefore, after consulting the local secretaries in the various countries, determined to change the date of the congress. In accordance with the general wish, it will be held from September 25th to 30th, 1910.

A COMMITTEE has been formed to collect funds to provide for a suitable memorial to the late Dr. J. J. Ridge of Enfield, honorary secretary of the British Medical Temperance Association since 1874 until his death. It is proposed to erect in some public place in Enfield a memorial in granite and to found a Ridge Convalescent Fund for the benefit of patients at the Enfield Cottage Hospital, of which Dr. Ridge was the originator. Donations may be sent to the Enfield Branch of Lloyd's Bank, Enfield Town, to the credit of the account of the Ridge Memorial Fund, or to the Honorary Treasurer, Dr. Howard Distin, Holtwhite House, Enfield. A sum of between £70 and £80 has already been received.

MR. C. B. LOCKWOOD occupied the chair at a special meeting of the Motor Union Committee of Medical Motorists held at the offices of the union to consider the Budget proposals of the Chancellor of the Exchequer in so far as they affect members of the medical profession using motor cars. There was a representative attendance, members having travelled from the North and West of England in order to be present. The committee resolved that the motor car has now become an absolute necessity to a medical practitioner, who is, therefore, entitled to make a special claim for abatement. It was resolved to approach the Chancellor of the Exchequer with a view to securing a rebate of 1½d. a gallon on petrol used by medical men. A letter was read from Mr. W. Joynton Hick, M.P. (Chairman of the Motor Union), stating that the Chancellor had agreed to receive a deputation on the matter.

The ninth annual dinner of the Medical Graduates' College and Polyclinic was held on May 24th at the Trocadero Restaurant, Piccadilly. Professor Howard Marsh, who was in the chair, in proposing the toast of the Polyclinic, emphasized the importance of post-graduate teaching, and observed that it was impossible for a doctor to learn his work once and for all. He considered that the public should contribute to the funds of the Medical Graduates' College and Polyclinic. Sir Jonathan Hutchinson, in replying, described in detail the merits of the consultation methods followed at the Polyclinic, and the success with which the plan answered, especially in regard to obscure and difficult cases. Dr. Theodore Williams also replied. Dr. C. O. Hawthorne, in proposing a toast to Captain A. E. Howard Pinch, I.M.S., referred to the administrative difficulties in connexion with the Polyclinic from an academic as well as from a domestic point of view. He eulogized the achievements of Captain Pinch during his tenure of office as Medical Superintendent of the Polyclinic, and concluded by reading the words of a testimonial to Captain Pinch, and presented it to him with a cheque for one hundred guineas. Captain Pinch said that during his ten years' work at the Polyclinic he had done his best, and regretted much leaving. The toast of "The Guests" was submitted by Dr. Danlas Grant in a humorous speech, during which he averred that the Polyclinic was not a "close borough," but a valuable agent for the spread of post-graduate teaching. Sir William Church, who replied, said that the Polyclinic filled a wide gap. Sir Donald MacAlister proposed the toast of "The Chairman," who suitably replied.

British Medical Journal.

SATURDAY, MAY 29TH, 1909.

THE ANNUAL REPRESENTATIVE MEETING.

THE business to come before the Annual Representative Meeting to be held at Belfast on Friday, July 23rd, and the following days is now so far arranged that it was found possible in the SUPPLEMENT for last week to publish the provisional agenda. The document included the annual report of the Council, and that report will, so far as at present known, constitute the greater part of the agenda, for under the articles of association the only additional matters which can now be inserted on the agenda are supplementary reports by the Council, or further reports by committees instructed to report to the meeting, and motions relevant as amendments or riders to any motion already recorded.

It will be seen that the agenda list this year differs in form from the document published at corresponding dates in previous years; this is attributable to certain changes in the by-laws of the Association and standing orders of the Representative Meeting, whereby all standing committees now report through the Central Council and not, as formerly, in some instances direct to the Meeting. Certain other alterations are due to changes in the rules of the Meeting as to the procedure to be followed on the presentation of reports; it is hoped that these changes, made by the Annual Representative Meeting last year with the object of expediting business without sacrifice of thoroughness, will be found to work satisfactorily.

The Representative Meeting is not only called upon to deal with the internal affairs of the Association itself, but also with a very large volume of important business affecting the interests of the profession in its relations to the State and to the public. It will be found on comparing the agenda for this year with that for last year that there is a diminution in the amount of purely internal business, the chief reason being that last year the meeting had to consider in detail all the clauses of the draft Charter as well as the findings and recommendations of the Special Finance Inquiry Committee. The matters of general professional interest set down for discussion are numerous and important. As an instance of a matter in which the Association has taken action as the body representing the interests of the profession at large, we may take the report prepared by the Medico-Political Committee on the medical inspection of school children and the treatment of those found defective. This report was based on the replies of 102 Divisions to a document circulated in December last. The report, as will have been recognized by those who studied it in the SUPPLEMENT for May 15th, is a very well considered and comprehensive document which reviews the new problems presented to the profession by the institution of compulsory medical inspection, and makes a series of recommendations on which the Divisions are now invited to express an opinion and to instruct their Representatives. The action already taken with

regard to the terms of appointment and remuneration of school medical officers has had a very beneficial influence upon public opinion, and we may note in passing the fairness of the recommendation that a person appointed with the title of Assistant Medical Officer of Health to do medical inspection should be the officer not merely of the local Education Committee but also of the Sanitary Committee, and that his duties should include work which would enable him in future to base a claim for an appointment elsewhere as medical officer of health upon the experience gained in the subordinate office.

Although these matters will require continued vigilance, the recommendations possessing the most immediate interest and novelty are those with regard to the treatment of school children found on medical inspection to be defective. The report advises that the reference of such children to public medical charities should be opposed, and that their reference to the Poor Law should likewise be opposed pending such reforms as may result from the consideration of the reports of the Royal Commission. The mode of treating such children which is recommended is that they should be placed under the care of private practitioners, who, if the parents cannot themselves afford to pay, should be adequately remunerated out of public funds without the intervention of the Poor Law. To carry this out it is advised that in towns the work should be done by private practitioners at school clinics established in schools or independent buildings, and that in sparsely populated districts the surgeries of private practitioners should be recognized as places at which treatment may be obtained, under proper safeguards against abuse, at the public expense.

As not remotely bearing upon this subject, attention may be drawn to paragraph 58 of the Report of Council this states that after long consideration and repeated revision by the legal advisers the model rules for a public medical service are now ready to be issued for the consideration of the Divisions, and it will be seen that the Wandsworth Division has given notice of a rider instructing the Council to formulate resolutions embracing the main principles affecting medical contract practice, while the St. Pancras and Islington Division has another rider expressing the opinion that the time is opportune for the Association to draft a scheme for a public medical service to embrace philanthropic dispensaries and medical services, school clinics, the Poor Law medical service, provident dispensaries, and the medical services of friendly societies and clubs. It will be recollected that both the majority and minority of the Royal Commission, in discussing the reform of the present system of Poor Law medical relief, made recommendations which would lead, in fact if not in name, to the establishment of a public medical service. The main difference between the two parties on the Commission was that the majority favoured the system under which the work should be distributed among all registered medical practitioners in the district willing to undertake it, while the minority recommended the creation of a special service of whole-time officers under the control of a principal medical officer in each district. The subject cannot be satisfactorily considered apart from improvements which are generally admitted to be desirable in the public health service, and it will be seen that a step in the right direction has been taken in the Housing and Town Planning Bill now referred to a Grand Committee of the House of Commons. Owing to representations

made by the Association, acting along with the Society of Medical Officers of Health, a provision was introduced last year, giving security of tenure to medical officers of county councils, and this has been retained. The bill, however, contains no provisions giving similar security to district medical officers, though their duties and responsibilities are to be increased by the bill, and steps will be taken to bring the matter under the notice of the House of Commons this year.

The Hospitals Committee, dealing as it does with complicated questions affecting the material, educational, and scientific interests of the profession, must needs proceed with considerable deliberation, but it will be seen that it submits a final recommendation as to the need for requiring a medical certificate of suitability for hospital treatment as a condition of such treatment, except in cases of casualties, and also a definition of a nursing home, which, if adopted, will help to clear up some perplexities. This section of the report will raise the questions whether the Representative Meeting would not do well to express the opinion that no fresh public medical institution should be opened without previous consultation with the local profession, and that on all bodies receiving public subscriptions formed to promote or control medical assistance, including hospitals, there should be adequate direct representation of the local medical profession. A memorandum upon this second point has recently been circulated to the Divisions (SUPPLEMENT, April 10th, p. 161).

The recommendations arising out of the work of the Science Committee are evidence that that body has in recent years considerably extended the scope of its activity, and the Association is asked, while not relaxing its efforts to encourage scientific research by way of scholarships and grants, to take or to consider the advisability of taking certain steps for encouraging and organizing the scientific work of Divisions and Branches and the literary labours of individual members. For the latter purpose it is proposed that a special character should be given to the central library of the Association by its conversion, as far as possible, into a lending library available to provincial members, and that, as a first step, a collection and list of monographs and periodicals should be formed, which may be lent under approved conditions. It may not be inappropriate to point out that this proposal follows a division natural to any collection of medical books. There are, on the one hand, standard works or textbooks of medicine and surgery, which a member may require to consult with relative frequency upon particular points; and, on the other, monographs, often expensive to purchase, and periodicals of which it is not always easy to form a complete set; such monographs and periodicals, are perhaps only consulted by individual members at long intervals, generally when engaged in the preparation of some paper. We apprehend, judging from the later sentences of the paragraphs on the library, that the intention is to encourage the formation of local libraries containing standard works available for immediate consultation, and a central lending collection for the benefit of members when prosecuting some particular line of inquiry or investigation. On this point it would appear that an immediate decision is asked; but the next paragraph (No. 80, p. 296), dealing with scientific work of Divisions and Branches, raises points which are thought still to require further consideration in order that a good working scheme may be evolved.

There are many other subjects of importance in the agenda paper which ought to be studied, not only by the Representatives, but also by every member who takes a lively interest in the work of the Association, for it can only be through general co-operation of all its members that the Association can attain the full development of its powers of usefulness.

UNIVERSITY REFORM.

It is not only the University of London that feels the necessity for reform to meet the new conditions brought about by the remarkable movement in England for the organization of university education on broader lines—broader not only in relation to the public to which the appeal is made, but also in relation to the expansion of science and the application of the newer methods to the old learning. Both at Oxford and at Cambridge reform is in the air, and both the older universities hope to avoid the ordeal of a Royal Commission, to which it is deemed essential the University of London should once more be submitted. Lord Curzon's letter has for the moment concentrated attention on Oxford, but in Cambridge proposals are on foot having a similar end, and perhaps, from the way in which opinion has been conciliated, are more likely immediately to be carried out. The public interest in the matter would perhaps be greater were it not that the constitution and local government of both the older universities are so mysterious that they are little understood even by the graduates themselves, for during his career at Oxford or Cambridge the undergraduate is hardly ever brought into touch with the university itself, and never with its governing authorities; university control, as far as he is concerned, is almost entirely limited to the activities of the proctors. At both universities, however, grave difficulties have stood in the way of carrying out reforms rendered necessary by the altering conditions of modern education. The control of the university syllabus has lain in the hands not of the teachers in the university, but of bodies curiously and even grotesquely constituted, and in consequence true education has suffered. The machinery to be set in motion to bring about the simplest reform has been cumbrous, and time that might be spent in the direct or indirect furtherance of original work, or in increasing the efficiency of university or college teaching, has had to be squandered on university politics.

The essential feature of the proposals made both at Oxford and Cambridge is the reform of the university organization, the object of the reformers being to simplify the machinery, to give greater influence to resident expert opinion, and to make the final body of appeal, the whole body of M.A.'s, more truly representative than at present of general graduate opinion.

In the two universities the subject has been approached from widely differing standpoints. At Cambridge informal committees have collected those points on which all parties are at one in the university in desiring reform, chiefly constitutional points, and have urged the Senate to consider them with a view to their adoption at the earliest possible date. It is proposed that the governance of the university should be confided to two bodies: (1) a Congregation consisting of residents which would deal with all kinds of business save that involving the widest and most important questions of

policy and certain formal matters, and (2) a Senate consisting of all M.A.'s. There would be a right of appeal from Congregation to the Senate, and a subsidiary scheme has been put forward with the aim of encouraging a graduate to proceed to the degree of M.A., and to keep his name on the books of his college or of the university, instead of, as at present, in many instances completely severing his connexion. It is also proposed, and apparently generally agreed, that the system of co-operation in teaching between colleges should be extended and systematized. When the constitution has been reformed, and power to act placed in the hands of those familiar with academic needs, other reforms in all probability similar to those suggested at Oxford may be expected to follow.

At Oxford a more comprehensive scheme has been outlined by the Chancellor, who, not being bound to present a plan of reform on which all parties would be agreed, has been able to formulate proposals of a definite character with something approaching an air of finality, and has induced the Hebdomadal Council to accept the main principles laid down. Besides suggesting the reform of the university constitution on lines similar to those recommended at Cambridge, he has induced the council to accept the principle that Greek shall cease to be a compulsory subject. By the acceptance of the principle that no one should be allowed to come into residence without having passed an entrance examination or its equivalent, a blow has been aimed at the mere idler, for in this respect the rules of the University of Oxford present a curious contrast to those of London, and have preserved beyond its day of usefulness the original conception of a university as an assembly of willing students. The suggestions relating to scholarships and fellowships should provide funds for the encouragement of original research, and for giving pecuniary assistance more exclusively to those who are seriously in need; the plans for co-ordinating college lectures should economize the teaching energies of the lecture staff and in this way contribute to the general efficiency, while the encouragement of the relatively poor man should enable many more medical students than at present to secure the advantages of an Oxford training.

The chorus of praise with which Lord Curzon's letter has been received at Oxford is remarkable evidence of his tact, and the time spent in collating different views has not been wasted, for it seems probable that the majority of his suggestions will be accepted. On two of his points, however, the council is dumb: the encouragement of the working classes to enter the colleges, and the granting of degrees to women.

The effect on medical education of the proposals now under discussion at Oxford and Cambridge is necessarily at present uncertain, but it is to be expected that the medical course will benefit with other subjects by the establishment of a standard and a system generally more in keeping with modern conditions. The omission of Greek from the obligatory Oxford syllabus will render the university more easy of access to those who have had a specialized scientific training; the universities will be able to adapt themselves more rapidly than has been the case hitherto to the changing conditions of material requirements, and, above all, something will have been done to render them less prohibitively costly to the sons of professional men. From the more general standpoint the willingness of the universities to under-

take the work of reform from within is an encouraging sign, and may well stimulate the medical schools of London to put a practical working scheme before the Royal Commission.

DIRECT REPRESENTATION.

By a somewhat narrow majority of the members present the General Medical Council voted on Tuesday last that representations should be made to the Privy Council to the effect that it is expedient to confer on the registered practitioners resident in England and Wales the power of returning an additional member to the General Council. Only a small number of the members of the Council voted against the resolution, the narrowness of the requisite majority being due to the fact that, to render a vote valid, there must be votes recorded by an actual majority of the members present; the abstention of members from voting may thus, in effect, be equivalent to an adverse vote, although its moral significance, if such a term be applicable, is quite different from the record of an adverse vote. It may therefore be worth while to discuss, so far as they may be gathered from spoken words or otherwise inferred, the reasons which led a considerable number to abstain from recording their vote. It may be assumed that the members who adopted this course were not convinced that the addition was quite desirable, though at the same time they were not prepared actively to oppose it.

As Mr. Morris observed, the speeches made in support of the motion themselves afforded some grounds for doubt, apart from what might be styled sentimental considerations. Dr. McManus pointed out that in voting power the direct representatives were, as he put it, too few, even with the proposed addition, "to do any harm," and Dr. Latimer drew attention to the unquestionable fact that, as the voting is not territorial, the candidates must often be very little known to the majority of the electors, who, therefore, vote in the dark, unless the candidate happens to be a person of very wide reputation; this may account for the fact alluded to by Mr. Morris, who himself voted for the resolution, that only 47 per cent. of the constituency troubled to record a vote at all.

There is no doubt that this is a real blot upon the present system of election; the north country general practitioner cannot be expected to have much enthusiasm for the return of a resident in Devonshire or Kent whom he knows only as a candidate adopted by some such body as our Association, and vice versa. The Act, however, is very explicit as to the manner of conduct of the election, and no subdivision of the constituency is possible without amending legislation, though few will be found to doubt that this would be a real reform, and no doubt, if subdivision were feasible, Wales would constitute one of the divisions. The President, in his address, drew attention to the increase in the Council, due to the fact that the establishment of new universities added almost automatically to its members. The expense of the meetings is thus increased, and on the past year's working there is a considerable deficit arising from causes beyond the Council's control. The point was emphasized by a motion brought forward by the Treasurers that the addition, if approved by the Privy Council, should not take effect till the next

general election of direct representatives, as the poll inevitably entailed a heavy expense; this was readily agreed to by Dr. Langley Browne, the mover of the original motion, of whom it may be said that the exceedingly temperate speech in which he brought the matter forward was eminently calculated to win support from those who were wavering.

But though the constitution of the Council will not be materially altered if the Privy Council carries the proposal into effect the general result of the debate and division must be considered satisfactory, inasmuch as the vote is a freer recognition by the Council of the principle of direct representation than has been accorded when similar motions have come up on previous occasions, and such opposition—or rather lack of active support—as the proposal encountered was on grounds quite other than that of general principle.

THE INTERNATIONAL CONGRESS OF APPLIED CHEMISTRY.

"CHEMISTRY, whether industrial or scientific, is one." Sir William Ramsay contended at the inaugural meeting of the Seventh International Congress of Applied Chemistry, held in the Royal Albert Hall on May 27th. His Royal Highness the Prince of Wales, realizing the importance to this country of every attempt made to bring scientific chemistry into touch with technical chemistry, was in the chair, and the members of the assembled Congress endorsed Sir William Ramsay's contention. "Chemistry," he continued, "is above all a practical science, although in recent years it has tended to become more and more a branch of applied mathematics. The principles remain the same, and indeed the methods are only slightly varied whether the apparatus used are beakers, test tubes, funnels and flasks, or tanks, filter presses, and autoclaves. . . . This, I think, has hardly been realized in a practical manner on this side of the Channel, or, indeed, on the other side of the Atlantic. But our Continental friends have long seen and acted on the conviction that the industrial prosperity of a country can best be advanced by a close friendship and constant association between the technical and the practical workers, between the university and the factory, between the pure and the allied science. Congresses like the present can teach us much; if we learn this lesson from them we shall have gained a valuable national asset."

During the week for which the Congress sits several matters closely affecting medical men are to be discussed. Standardization comes up in section after section, including the standardization of methods of food analysis as applied to different classes of foods. Natural and artificial methods for the purification of water are to be discussed; the bad effects of vitiated air will be considered; the question of dangers due to seaweed accumulation is coming before the Section of Hygiene; and a host of papers are to be read on the various aspects of the milk question. The demonstration at University College by Messrs. A. Harden and W. J. Young of alcoholic fermentation without the intermediation of living cells is especially welcomed because of the difficulties most observers have experienced in reproducing the phenomenon. Several points of pharmacological and physiological interest are to be demonstrated, and the administration of anaesthetics is again to be discussed.

The advantages derived from a congress such as this are dependent only partly on the work actually done at the sectional meetings; they issue nearly equally from the publication of the broad ideas underlying the calling together of such congresses. For the medical profession especially the present Congress is suggestive. From certain aspects the medical man must be classed as the technical expert, and from others as the pure man of science. To the physiologist and the exponents of the so-called pure medical sciences he stands in the former relation, and to the other professions and to the public in the latter. In both the measure of his usefulness to society is largely dependent on the extent of his co-operation with allied workers. Much in the direction of co-operation has already been done—as evidence may be quoted the Sleeping Sickness Bureau, the Royal Society Committee on Anaesthetics, the expeditions sent out to the tropics and elsewhere to investigate the causation of obscure diseases, and many other like undertakings; but very much remains to be done, especially with regard to the relation of medical men to allied trades and professions. Principles such as the compulsory medical inspection of foods require further extension. It is only within the last few months that an organization has been started to bring about co-operation between the architect, the illuminating engineer, and the medical man, and the lack of such co-ordination in the past has notoriously meant unnecessary damage to eyesight and inefficient workmanship in our factories. More co-operation is needed between medical men and schoolmasters, between medical men and municipal authorities, and so on in the various spheres of modern life. It is largely because of the apt application of the ideals of the Congress now being held at South Kensington have to the medical profession that medical men have been called upon to interest themselves in the matter. It should be borne in mind by all who attend its meetings that the influence of the Congress will not be restricted to scientific and industrial chemistry, but will be felt by all the various arts and professions throughout the country.

DR. PAVY.

We desire to offer our warmest congratulations, and we are sure that in so doing we give expression to the feelings of the whole profession, to Dr. Pavy on attaining his 80th birthday this week. He was born in Wiltshire on May 29th, 1829, graduated M.B. in the University of London with honours in all subjects and a gold medal in medicine in 1852, and M.D. in 1853; he was elected Assistant Physician to Guy's Hospital in 1858, and became a Fellow of the Royal College of Physicians of London in 1860, and a Fellow of the Royal Society in 1863. Dr. Pavy's career is one which reflects honour on himself, his profession, and his country; he attained distinction as a physiologist and scientific physician at an early age, but he has never been content to rest upon his laurels, and has continued to work, both by observation and experimental research, at the subject of metabolism, with special reference to diabetes, his last volume on the subject having been published so lately as this spring. This is not the time to attempt to review his life's work, and, indeed, we may hope that it is by no means complete; it is rather an occasion for expressing those sentiments of esteem and affection with which he has inspired his fellow workers and pupils. They will be glad to know that

Mr. Thomas R. Way of 6 and 7, Gough Square, Fleet Street, E.C., has just issued a facsimile of the portrait of Dr. Pavy from the original drawing made by Mr. W. Strang, A.R.A., last year. This very characteristic work hangs in the rooms of the Royal Society of Medicine. It represents Dr. Pavy in his habit as he lives, and the reproduction is most satisfactory. We are informed that the issue is limited to one hundred proofs, price one guinea each.

EMPIRE DAY.

LAST Monday was the fifth birthday of "Empire Day," and its observance in England was much more general than heretofore. Most newspapers dealt with the subject in a satisfactory spirit, but it is quite in accordance with the eternal fitness of things that the efforts of all of them should have been eclipsed by the *Times* itself. That paper published a special supplement of no less than forty-seven pages, illustrated by maps specially drawn so as to bring out the true proportions of the British Dominions, the extent to which the outlying portions are inhabited, the means of communication, the distances from one to the other, and the fashion in which they are linked together for purposes of defence and the development of commerce. The production was a monumental feat of journalism. To watch with satisfaction the increasing recognition of Empire Day it is by no means necessary to be a political Imperialist. On more than moral grounds it is well to instil into the young a feeling that they have duties to others than themselves—that their lives and the fashions in which they lead them are of importance to the family, the village, the county, the nation, and the Empire at large; while the purely physical outcome is equally valuable. Apart from the hundreds of thousands of children who on Empire Day are taught to grasp at an elevating abstract conception quite outside the routine of their daily work and lives, there are thousands of boys and hundreds of girls who, as the outcome of the spirit which has brought this national festival into existence, are being led to engage in far healthier amusements than those which would otherwise occupy their spare time. It is easy to smile at the sight of strings of girls in khaki hats, belts, and the like, but for every one of those girls a hundred boys are being taught to enjoy exercise in the open air, and are having their intelligence, powers of observation, and sense of discipline and duty awakened and cultured in a thousand and one different ways. Even already the good effects are seen, as witness the array of some 5,000 children who on Monday afternoon marched from the Embankment to the review in Hyde Park. They were as healthy and bright-looking a lot of youngsters as any one could desire to see. On such grounds alone all thoughtful medical men are likely to favour the keeping Empire Day, while no member of the British Medical Association can possibly deny it his approval. For him the celebration has a special and direct significance, for he belongs to a body which is in itself an important link between the several parts of Greater Britain. In spite of the fact that no one can belong to the British Medical Association who is not either on the *Medical Register* of Great Britain and Ireland or of the colony in which he resides, it has its corporate or individual representatives in every inhabited quarter of the globe. In the East it has Branches in several parts of India, and in Assam, Burmah, Ceylon, and Singapore; in the West on the mainland of Central America and the neighbouring islands; while in Canada it has

numerous Branches. The same story is true of the Australian Commonwealth and its component States, of New Zealand, and Tasmania, and the other great colonies in South Africa; of Hong Kong, of Malta, Gibraltar, and many other spots. Moreover, there are many hundred members who, though unable to take an active part in its affairs, because resident in foreign countries or too far away from any Branch or Division, yet keep up their relations with their fellows in Great Britain and elsewhere through the medium of the *BRITISH MEDICAL JOURNAL*.

A CHRISTIAN SCIENCE LECTURE.

A CORRESPONDENT writes: Seeing a lecture on Christian Science, by a Dr. Francis J. Fluno, "billed" at the Queen's Hall on Monday evening, I had the curiosity to go to hear it, and I send you my impressions. In regard to Christian Science, I am one of the "profane," but, like the man who prayed to the devil on the principle that it is prudent to keep well with both sides, I went prepared to pick up any hints that might be useful on occasion. The large hall was filled, members of the "devout female sex," as the Catholic Church politely calls it, being, as far as I could judge, in a proportion of about 6 to 1 of the other. The audience was a well-dressed crowd; and if it is to be taken as representative of the new revelation, it may be inferred that the gospel according to Mother Eddy is not preached to the poor. As for the lecture, or rather sermon, it was, without exception, the dullest to which it has ever been my fate to listen. The lecturer, a gentleman of venerable appearance, who was described by his introducer as having abandoned the science of medicine for the science of Christianity, spoke in a dismal, monotonous drawl, which was listened to with a patience which was the most Christian feature in the affair. As for the substance of his discourse, like Gratiano, he spoke an infinite deal of nothing, and he spoke it over and over again. Now and again there were flashes of that mechanical humour which the vulgar American reproaches us with not understanding, not seeing that we think it silly. Thus we were told that there is no more feeling in nerve than in a shoe string, and no more strength in a muscle than in a dishcloth; that honesty is the best policy, but policy is not the best honesty. These are some of the gems of wit, for which the lecturer—sometimes after waiting a moment—got a rather thin laugh. The discourse in general was nothing but the recital of a series of propositions, truisms, platitudes, nonsense, and blasphemy, mixed in about equal proportions. There was no explanation, no proof, no evidence, no argument—nothing but dogmatic assertion and the endless repetition of meaningless formulas. "Truth is positive, error is negative"; "God is omnipotent and omnipresent"; "love is positive, hatred is negative"; "there is no heaven except here and now"; "there is no hell except here and now"; and so on. We were told that we must get rid of belief in hell, yet rather inconsistently we were instructed how to fight the devil. Disease, like sin, is a delusion—a comfortable doctrine which must make life easy to those who can make-believe enough. Matter is an error of "mortal mind." I cannot give a better idea of the lecture than by quoting what the American ladies said on an occasion described in *Martin Chuzzlewit*: "'To be presented to a 'Pogram,' said Miss Codger, 'by a Hominy, indeed, a 'thrilling moment is it in its impressiveness on what 'we call our feelings. But why we call them so, or why impressed they are, or if impressed they are at all, or if at all we are, or if there really is, oh gasping

"one! a Pogram or a Hominy, or any active principle to which we give those titles, is a topic, "Spirit searching, light abandoned, much too vast "to enter on, at this unlooked-for crisis." "Mind and matter," said the lady in the wig, "glide swift into the vortex of immensity. Howls the "sublime; and softly sleeps the calm Ideal, in the "whispering chambers of Imagination. To hear it, "sweet it is. But then, outlaughs the stern philosopher, and saith to the Grotesque, "What ho! "arrest for me that Agency. Go, bring it here!" "And so the vision fadeth." In the lady in the wig the prophetic soul of Dickens seems to have foreseen Mrs. Eddy. Dr. Fluno's discourse would have been an excellent soporific, but for the obsessing delusions of an uncomfortable seat and the painful cough of a lady near me, who, I suppose, had not attained the fullness of faith necessary to salvation from such unreal troubles. As far as I could gather from the lecture, the whole teaching of Christian Science is that man should bury his head in the sand like the foolish ostrich, and lull himself into forgetfulness of the fact that there are such things as sin, sorrow, and suffering all around him. Christian Science, we were told, covers the whole ground; if it cannot do everything it can do nothing; if it cannot do everything for every one, it can do nothing for any one. Yet the speaker made no appeal to humanity: no word did I catch of sympathy with distress, of self-sacrifice, of effort to lighten the burden of life for those on whom it presses heavily. People homeless and starving, the holocaust of infant life, the suffering men and women in hospitals and sickrooms, seemed to be put out of sight and out of thought. The aim of the Christian Scientist—if he acts on his belief—is to lap himself in a selfish dream, in which the anxieties, worries, and duties of life cease to trouble him. Every heroic element is eliminated from humanity; every belief, every hope that has supported man in the struggle to conquer the blind forces of Nature which war against him, is treated as error. Carried to its logical conclusion, the doctrine would abolish science as well as religion, and would bring about the state of things described in the closing lines of the *Dunciad*:

Lo! thy dread Empire, Chaos, is restored;
Light dies before thy uncreating word:
Thy hand, great anarchy! lets the curtain fall,
And Universal Darkness buries all.

THE INCIDENCE OF CANCER.

PROFESSOR ORTH has recently published statistics, based on data gathered in the Pathological Institute connected with the Charité in Berlin, relative to cases of cancer dealt with by Virchow between the years 1875 and 1885 and by himself from 1904 to 1908.¹ While admitting that statistics of this kind may be fallacious in various ways, he believes that they may, if properly analysed and collated, be of considerable use. The percentage of cancer cases among all the autopsies appears to have increased steadily. In 1875 it was 4.9 per cent.; in the following years the number rose almost regularly until 1883, when it was 7 per cent.; while in 1884 and 1885 it remained practically stationary (7.2 and 7.0 per cent.). In 1904 it was 10.7 per cent.; in 1905 it rose to 11.27 per cent.; in 1906 and 1907 it was just above 14 per cent.; and in 1908 it was 12.2 per cent. Professor Orth believes that these figures show a real increase in the incidence of cancer, for, as he points out, the means of detecting carcinoma and other forms of malignant disease pathologically have not altered during the years concerned. With regard to the situation of the tumours,

he finds that no change has taken place. Thirty years ago, as to-day, the most common sites were the uterus and the stomach. Cancer of the liver, occurring as a primary disease, was found only twice in the last five years. He is of opinion that clinical diagnosis is very imperfect, and quotes from the Registrar-General's Annual Reports, in which he finds from 13.2 to 14.3 per cent. of all malignant tumours entered as liver cancer. This indicates a frequency of occurrence 50 times as great as that—that is, 0.28 per cent.—found in the Pathological Institute. Taking only adults of over 20 years into consideration, he found that 14 per cent. of all the males and 20 per cent. of all the females showed cancer as the cause of death. The female sex, however, is not so frequently attacked by cancer, if cancer of the sexual organs is excluded. He further points out that the extreme rarity of cancer of the penis—only two cases in men aged 65 and 77 years respectively—is opposed to the infectivity of the disease, since cancer of the gravid uterus is by no means uncommon. Lastly, Professor Orth gives a table showing the average age at death of cancer patients, arranged according to the situations of the tumour. There are no great variations in the various years, and the age 50 appears to be the one around which most of the averages turn.

WATER AND SEWAGE PURIFICATION.

THE Ohio State Board of Health is evidently doing good work in procuring the purification of water supplies and of sewage, the results of which are set out in a voluminous official report.¹ This report is the outcome of an Act of the Legislature, which directs the Board of Health to undertake the duty of investigating these matters—a duty which our own Royal Commission suggests should be laid upon the central authority which they propose should be set up. This is another instance of the difference in method adopted abroad in dealing with such matters. At home individual communities are left to work out their own salvation and to learn from their own mistakes, while in Germany and in America there are properly equipped central bodies which undertake to advise and direct, and, above all, to educate, a point strongly insisted upon in this report. In Ohio they go farther than this. The Legislature has enacted that no new public water supply or sewerage system nor any extension of an existing system shall be carried out without the approval of the Board of Health. Here, on the other hand, our laws permit of new sources of pollution being set up without let or hindrance. With regard to water purification, it is stated that 70 per cent. of the population dependent on public water supplies are provided with water from polluted sources, so that the efficiency of the treatment of the water is of vital importance, but as yet only 30 per cent. of the urban population are supplied with filtered water. Owing probably to the turbidity of the rivers the method of filtration most favoured is that of mechanical or pressure filters, and the new Cincinnati plant is said to be the largest of this kind in the world. In connexion with these filters the use of coagulants is dealt with, but nothing seems to have been done towards investigating the effect of storage of the waters, nor is any mention made of sterilization of drinking water. In sewage purification the Ohio authorities have arrived at the opinion, which has now for some time been prevalent at home, that owing to scarcity and cost of suitable land dependence must be placed chiefly upon artificial methods, but as yet there are

¹ *Berl. klin. Woch.*, March 29th, 1909.

¹ Official Report of an Investigation of Water and Sewage Purification Plants in Ohio. Columbus, 1903. (Octavo, pp. 883.)

only forty-six sewage works in operation or under construction, dealing with the sewage of 12 per cent. of the urban population. The recent schemes are said to provide largely for septic tanks and sprinkling filters, but at the date of the investigation there was no completed sprinkling filter plant. An interesting account is given of some experiments in the disinfection of sewage with copper sulphate and chloride of lime. The various water and sewage works are described in detail with many illustrations. On the whole there is little new information to be gleaned by the English engineer, and in considering the results obtained the difference between English and American problems must be kept in mind. For instance, in one town the water supply is said to be nearly 500 gallons a head, and the sewage flow 246 gallons. The report shows, however, that the Board of Health is very active in its own sphere of work, and successful in inducing the communities in the State to carry out the necessary works for dealing with both drinking water and sewage. With such ample power as it seems to possess, and with a field of labour comparatively virgin, future reports should be extremely interesting and useful.

"KNOWN TO THE POLICE."

THE police-court missionary sees a certain phase of humanity, and the account which Mr. Thomas Holmes has given of his experiences deserves notice. It is satisfactory to observe that he unhesitatingly admits an improvement in the condition of the police-courts and the arrangements connected with them. He speaks of a time when all the prisoners waiting to be brought before the magistrates were put in a common room with no separation of the sexes—men, women, and children, some of them more or less intoxicated, many of them brutal and offensive in their behaviour. The courts are better lighted, better ventilated, and the old disreputable, beery solicitor of the type of Mr. Pell has disappeared; even the prisoners have in a way improved. It was formerly common to see a prisoner on the verge of delirium tremens, but Mr. Holmes says that he never sees such cases now, although his explanation is not satisfactory, for he thinks that the modern man can stand less drink; he gets drunk more quickly and recovers quickly. He thinks that the prisoners have changed in other respects, not altogether for the better. The old-time prisoner had more character, grit, pluck, and personality, and often had a keen sense of humour, but now they are cleaner and less brutal, but weaker; weakness, not wickedness, is their great characteristic. There are fewer crimes of violence, less brutality, less debauchery, less drunkenness, but more dishonesty. In Mr. Holmes's opinion, the Inebriates Act has worked badly, because the necessary condition of being convicted four times for drunkenness during the same year has limited its application almost entirely to one class—namely, that of drunken prostitutes, whom he regards as hopeless; while respectable women, who might be reclaimed from their intemperate habits, rarely come under the terms of the Act. He points out that a very considerable proportion of the women committed to inebriate homes under the Act are not sane, and he holds it absurd to treat such cases in these institutions. Another evil of recent legislation is the power given to a husband to put his drunken wife homeless on the streets, and it is somewhat alarming to know that up to the end of 1906 there had been granted no fewer than 72,537 separation orders. Mr. Holmes is a severe critic also of police-court marriages, and maintains

that a magistrate who puts pressure upon people to unite in this bond takes upon himself a grave responsibility. Mr. Holmes complains also of inequality of sentences and the uncertainty of punishment, and refers to vagabonds and scoundrels who by their apparent candour and flashes of humour continually save themselves from anything approaching a long sentence. Many young men are brought up on trifling charges, sometimes for stealing, sometimes for begging, with a long catalogue of convictions against their names; they seem unable to work steadily at anything; sometimes they may have been in the militia, but they have never learnt a trade and are hopeless members of society. Mr. Holmes, regarding discipline as essential, would put them in the army in special regiments, though the army at present is not a good training school for industry, as time-expired men form a large proportion of the casual labour class which too often recruits the "unemployed." He thinks much would be done by raising the school age to 16, and by making attendance at continuation schools compulsory, and would forbid any one under the age of 20 to be served with drink in a licensed house. We applaud his suggestion that public playgrounds should not be orderly places with notices "not to walk on the grass," but open spaces for rough out-door games. He is also in favour of the reduction of the alcoholic strength of beer to 2½ per cent. and of spirits to 50 per cent. below proof, and he goes so far as to say that such a change "would usher in the millennium." This is, after all, a more practicable proposal than local option or prohibition, as either would be defeated by illicit sales; but we doubt whether such weak beer would keep sufficiently long to make it a commercial success, and so far the taste of the English working man has pronounced strongly against beer of the German type, which contains nearly 4 per cent. of alcohol. Although we agree that spirits as now sold are too strong, we are not sure that a reduction in strength would be effective, as they are normally drunk diluted, and if sold weaker would probably be swallowed much as they are now, but that less water would be added by the consumer.

RETIREMENT OF DR. TATHAM.

It has been thought that the occasion of the retirement of Dr. J. F. W. Tatham from the position of Superintendent of Statistics in the General Register Office affords a fitting opportunity to his friends to show their appreciation of his great services to public health by entertaining him at a dinner which, it has been arranged, shall be held at the Grand Hotel, Charing Cross, on Thursday, June 17th, at 8 p.m. Sir Shirley Murphy has consented to preside, and a number of those who are associated with public health work have already intimated that it is their intention to be present. Dr. Hamer will be glad to receive at 55, Dartmouth Park Hill, N.W., the names of any of Dr. Tatham's friends who have not already communicated with him. The price of the dinner tickets is 1 guinea, inclusive of wine.

AUSTRALIAN INSTITUTE OF TROPICAL MEDICINE.

THE Australian Institute of Tropical Medicine is about to appoint a director. The objects of the institute are to further the scientific study of the diseases peculiar to tropical Australia, and to afford opportunities for the training of medical men in this department of medicine. The institute will be situated in Townsville, Queensland, and the committee of the large and well-equipped general hospital

1 Known to the Police. By Thomas Holmes, Secretary to the Howard Association. London: Edward Arnold. 1908.

there has undertaken to set apart, free of charge, an isolated building in the grounds of the hospital as an institute for the work of investigation of the diseases in question, and to maintain in the main wards of the hospital, also free of charge, patients under special observation who may be suffering from diseases other than those specially excluded by the provisions of the Queensland Health Act, and to give every facility for clinical observation to the officer in charge of the institute. The director will be required to devote his whole time to the work of the institute, and—subject to the general control of a committee appointed by the Universities of Sydney, Melbourne, Adelaide, and the Government of Queensland—will be required to organize and administer the institute, to conduct investigations into the tropical diseases of Australia, to give instruction in tropical diseases, and to superintend research work undertaken in the laboratories of the institute. The appointment is for five years, and the salary will be £800 a year. Further particulars will be found in our advertisement columns, and it will be sufficient to add here that applications, accompanied by six copies of testimonials, should be received by Dr. C. J. Martin, F.R.S., Director of the Lister Institute for Preventive Medicine, Chelsea Gardens, London, S.W., not later than July 10th. The selection of the director will, in the first instance, be made by a committee composed of representatives of the Royal Society and the London and Liverpool Schools of Tropical Medicine. The Government of Queensland and the committee of the Townsville Hospital are very much to be congratulated on the wise public spirit shown in establishing this institute, which will afford to the director and those who will have the opportunity of working there remarkable opportunities of extending our knowledge of the etiology, pathology, and treatment of tropical diseases, a department of medicine which, though it has made enormous progress during the last decade, still affords endless opportunities for further discoveries.

INTERNATIONAL ANTIVIVISECTION CONGRESS.

An International Antivivisection Congress is to be held in London on July 6th and four following days, under the presidency of Sir George Kekewich, K.C.B., M.P. Miss Lind-a-Hageby is the Honorary General Secretary. Lord Lonsdale, whose name was announced as Honorary Treasurer, has resigned that position, as well as the Honorary Treasurership of the International Antivivisection Society, on the ground that since he accepted these offices he has learnt that the object of the Congress is the total abolition of vivisection. "In this," says Lord Lonsdale in a letter to the press, "I am afraid I cannot acquiesce, for my feeling, after most careful inquiries, has always been that vivisection is an absolute necessity in the interests of human life, with a view to minimize the sufferings of those who have to undergo operations necessitated by accidents or arising from various diseases." He adds that "vivisection should be strictly limited, and no certificates should be given to other than those of the highest order of scientific research."

BERLIN PROFESSORS AND RUSSIAN PATIENTS.

REFERENCE was made in the JOURNAL of April 10th to certain alleged breaches of professional ethics by some Berlin professors, who were accused of bribing various persons to induce wealthy Russian patients to place themselves under their care. Geheim Rat Professor Dr. Senator, against whom, among others, the charges of offering bribes to the porters at the Russian Institute and at various hotels for the

purpose of gaining patients were brought, has found it necessary to institute proceedings for slander against the *Berliner Zeitung am Mittag*. The case was heard at the Moabit Court in Berlin on May 11th. Professor Senator said that he had no special reason to attack that paper, but that he had to protect his professional and private character. The judge made the suggestion that the defendants should offer a public apology and explanation. This apology was to the following effect:

I have been convinced by the evidence taken this day that the small fees paid, according to the statements of the plaintiff and of the witnesses, by the plaintiff to interpreters in rare exceptions were not paid as bribes or as payments for bringing patients to him, nor can such payments possibly be construed in this sense. I retract all that I said in the article that could be construed as accusing the plaintiff in this manner, and undertake to bear the cost of the action.

The next step in the matter is the inquiry into the charges brought against several consultants by the medical ethical court. Before the case is heard, before all the evidence has been given, and the various aspects have been considered, it would, of course, be most improper to express any opinion on the general subject. We may be allowed to say, however, that the tactics of those political newspapers which give currency to scandals, but keep silent when the reputations of those charged with unprofessional conduct are cleared, seem to us highly discreditable.

VAGINAL HERNIA AFTER TOTAL HYSTERECTOMY.

MUCH is written about the good results following total removal of the uterus for prolapse, and panhysterectomy for uterine fibroid. Unfortunately, as certain writers of experience have pointed out, the operator is not always careful about following up his cases. Wertheim's operation and all other procedures for malignant disease of the uterus need not be discussed, as the surgeon is generally interested in looking out for recurrence. It is otherwise when the womb is removed for the remedy of the two far less grave classes of diseases above mentioned. Some instances of vaginal hernia have recently been related by Küstner and Gerschun,¹ and they should not be overlooked, as they teach us that this distressing complication is not rare when the uterus has been removed. Those who report these bad after-histories maintain that vaginal hernia should, on the strength of present experience, be anticipated; in other words, when the uterus is extirpated, the vault of the vagina should be sutured to the abdominal wall above the bladder. Küstner reports one case, aged 59 years, under his care in 1904, which had been subject to prolapse for over eleven years. In 1893 the uterus was removed, but prolapse of the vagina recurred very soon afterwards. At length the patient began to suffer badly from cystitis and incontinence of urine. There was inflammatory infiltration in the vesico-vaginal region. Küstner operated through the abdomen; the vault of the vagina was drawn upwards with some difficulty, and the bladder raised and fixed by suture to the parietal peritoneum. The cystitis and other distressing symptoms disappeared at once. Küstner bearing this case in mind, when performing abdominal panhysterectomy for fibroid in a later case, when the uterus had been detached completely from its connexions, fixed the upper end of the vagina to the parietes, employing four catgut sutures and one silk thread. The patient recovered, but her after-history was not known, and in the discussion which followed the reading of Küstner's report it was pointed out

¹ Küstner, *Zentralbl. f. Gynäk.*, January 15th, p. 113; Gerschun, *ibid.*, March 13th, p. 381.

that the vaginal canal, however treated, short of extensive resection, tended to prolapse. Gerschun of Kieff more recently reported a case of vaginal hernia in a woman aged 48, who had undergone removal of the entire uterus for prolapse seven years before she came under his care. The vagina began to protrude from the vulva within a year after the hysterectomy. There was also a right inguinal hernia. In a photograph with which the report is illustrated the scar marking the line of detachment of the cervix from the vagina seven years previously is seen on the surface of the vagina, giving it the appearance of a cervix with a fissured os protruding from the vulva. Bassini's operation was performed for the cure of the inguinal hernia, and the operator attempted to push the vault of the prolapsed vagina upwards against the incision in the groin and to fix it there; failing in this, he opened the abdomen in the middle line, pushed the vagina up, and fixed it to the lower angle of the wound by two silk sutures passed through the muscle, aponeurosis, and peritoneum. Unfortunately, no after-history was given in this interesting report. Gerschun insists that the right treatment for prolapse is ventrifixation of the uterus followed by extensive resection of the vagina. These reports appear to prove that when a uterus is removed recovery from the operation by no means signifies permanent cure, indeed discomfort and worse complications may follow, so that the patient's condition may even be more unfavourable than it was before the fibroid was removed or the prolapse temporarily relieved. There are also psychological conditions associated with removal of the uterus, which must not be overlooked. Above all we must insist that long series of after-histories is urgently demanded.

THE MEDICAL LIBRARY ASSOCIATION.

THE Council of the British Medical Association has arranged to grant facilities to the Medical Library Association to hold its first meeting during the annual meeting of the Association in Belfast next July. A loan exhibition illustrating medical libraries and medical literature is being organized in connexion with this meeting: and the honorary secretaries, Dr. I. Walker Hall and Mr. Cuthbert E. A. Clayton, to whom communications may be addressed at The University, Manchester, are particularly anxious to receive specimens of the following: (1) MSS. and early printed books; (2) first editions of noteworthy books; (3) early Irish printed books there are few, if any, before 1700; (4) books on tuberculosis; (5) books upon Celtic medicine; (6) photographs of libraries; (7) statistical diagrams giving number of volumes, issues, readers, income, etc.; and (8), library papers, rules, etc. The Library Association will insure all loans, and will carefully guard them.

MEDICAL MEMORIALS.

It has been decided that the memorial to Dr. William T. Bull, the late eminent surgeon of New York, shall take the form of the creation of a large fund for the prosecution of original research under the auspices of the College of Physicians and Surgeons. It is hoped that £100,000 may be raised for the purpose. How much more suitable is such a memorial to a scientific man than the usual statue which is too often an eyesore, in any case useless, and inevitably doomed to more or less early decay, whereas research continues and develops the work done for mankind by the man who is commemorated, and keeps his name living among those who follow in his footsteps.

MILK AND DAIRIES BILL.

THE bill to make better provision with respect to the sale of milk and the regulation of dairies, introduced by the President of the Local Government Board on Tuesday, has now been printed. Its main objects are to provide for: (1) The more effective registration of dairies and dairymen; (2) the inspection of dairies and the examination of cows therein; (3) the prohibition of the supply of milk from a dairy where such a supply has caused, or would be likely to cause, infectious diseases, including tuberculosis; (4) the prevention of the sale of tuberculous milk; (5) the regulation of the importation of milk so as to prevent danger to public health arising therefrom; (6) the issue of regulations for securing the supply of pure and wholesome milk; (7) the establishment by local authorities in populous places of milk depôts for the sale of milk specially prepared for infants.

SPAS AND HEALTH RESORTS.

FOR some time past a place has been reserved in the advertisement columns of the JOURNAL for a list giving brief particulars of baths and health resorts at home and abroad, which it is believed will be found useful by practitioners who may wish to recommend patients to undergo one of the numerous cures which are offered by more or less enterprising municipalities. With regard to the choice of health resorts, as in other matters, we are all apt to fall into grooves, and the list will often afford useful suggestions or call to mind the name and properties of places which may have passed out of memory. There are, of course, many works of reference which profess to give complete lists and full particulars of such places, but they cannot always be up to date. There is also no lack of literature circulated by individual resorts describing the particular advantages claimed for them, but such literature we suspect usually very speedily finds its way into the wastepaper-basket, for the bulk of the circulars received by medical men in this country from health resorts, chemists, and makers of appliances is so huge that it is physically impossible even to preserve it, much less to attempt to classify it. Under these circumstances the standing notices in the JOURNAL will, we believe, be found serviceable.

MR. ALBAN DORAN has been elected an honorary member of the Leipzig Gesellschaft für Geburtshilfe und Gynäkologie and a foreign corresponding member of the Sociedad de Obstetricia y Ginecologia de Buenos Aires.

It will interest members of the British Medical Association to know that there is an intention to invite the Association to hold its annual meeting in Birmingham in 1911, and that a similar invitation will be extended from Liverpool to hold the annual meeting of 1912 there. At present no definite arrangement has been made with regard to next year—1910.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Doctors and the Motor Car Tax.—In the course of the debate on May 20th on the Budget resolution imposing the motor car tax, the proposed rebate to medical men was the subject of comment from several speakers. Sir Henry Norman, in suggesting that the Chancellor of the Exchequer might add slightly to the sums to be derived from the taxation of motor cars, said he hoped he had as much sympathy with the noble profession of medicine as anybody else had, but for the life of him he saw no more reason why a doctor's car should be exempted from taxa-

tion than the car of any other professional man. The builder, the surveyor, the commercial traveller, and, above all others, the veterinary surgeon, had certainly as much right to be relieved as the doctor of taxation, and the veterinary surgeon very much more so, because he had always to go to his work, whereas a good deal of the doctor's practice came to his own front door. It was true that the medical profession, to their very great honour, gave much precious service gratis or for next to nothing, but, on the other hand, the possession of even the smallest car would enable the doctor—if he had the other qualifications—to practically double his practice. Why should they be relieved of a few shillings of the cost, for it could only be a few, on an object which would enable them greatly to increase their incomes. A doctor of small means would certainly use a car of under 12 h.p., which was a most serviceable vehicle, and as that doctor under these proposals would have to pay 31s. 6d. instead of 2 guineas, if given a rebate of one-half, the Chancellor of the Exchequer was making him a present of 10s. 6d. That could not be said to be any great boon to the poorest members of the medical profession, and it was hardly worth the trouble. The doctor who used a powerful car, which, probably, the ladies of his family used for their own purposes, could well afford to pay the increased licence of 6 guineas instead of 2, which would only mean two visits of 2 guineas each. If the Chancellor did not see his way to abandon what he ventured to describe as unjust and unreasonable relief, he would strongly urge him to limit it to cars of 12 h.p. because there could be no reason for giving any relief to a doctor who could afford to own and use a valuable car. Mr. Markham took the opposite view. There were a great many doctors earning a very small income in country districts, and who worked extremely hard for it. A motor was a matter of great convenience to them and to their patients. Mr. Catcart Wason said he thought those who knew the life of the poor country doctor and the difficulty he had in getting about the country would appreciate this point. He thought he might say that as a rule country doctors used very low horse-power cars, and he thought it would be no very great sacrifice to exempt these cars altogether. They were propelled by 16 h.p. They were generally used by doctors, who in Scotland led a very hard life, and anything the Chancellor of the Exchequer could do to make life easier, both to them and to the poor people whom they visited, would be gratefully received. Question after question had been addressed to the Chancellor of the Exchequer with regard to lightening the burden in other respects, and he thought the right hon. gentleman would be doing a great public service, both to the doctors and to the poor people in the North, if he could make a concession in regard to these cars. Mr. Lloyd George, in replying at the close of the debate before the Budget resolution was carried, said that the doctor had been excepted for a humanitarian reason. He thought it was very desirable that there should be a difference from the point of view of the person who lived in a remote district where people had to travel four, five, or ten miles for a doctor, and where the difference of an hour in his arrival might mean the difference between life and death, or the alleviation of pain and misery. Therefore he thought the doctor was entitled to some exemption, and, if necessary, it should be substantial. That was really why he had not been able to consider the other claims for abatement which had been put before him in regard to others who did not come into the same category as the doctor.

The Profession and the Motor and Petrol Taxes.—Last week Mr. Vincent Kennedy asked the Chancellor of the Exchequer to consider favourably the remission of the petrol and motor taxes in the case of Irish dispensary doctors. Mr. Lloyd George replied that as at present advised he did not think there were sufficient grounds for granting doctors further concessions in addition to the rebate, which he had already proposed, of half the licence duty on their motor cars. Mr. Hugh Barrie then asked if veterinary surgeons could not receive the same rebate on petrol as medical men, and Mr. Lloyd George said he had not proposed to allow the medical profession a rebate upon the petrol used by them. As he had already explained, he did not see his way to extend to veterinary surgeons the rebate of half the licence duties allowed to

doctors on their motor cars. Major Anstruther-Gray asked whether the right hon. gentleman was aware that the petrol used on the average by medical men would amount to something like £12 a year? No reply was given.

Medical Officers (Elementary Schools).—Mr. Summerbell asked the President of the Board of Education if he could state how many medical officers for elementary schools had made reports to his Department; and whether it was the intention of the Government to issue a report in regard to the same, giving the number of children examined and particulars as to their general health, and also reforms, if any, recommended by such medical officers. Mr. Runciman answered that about 130 reports had been received up to the present date. The Board contemplated the issue of a report in due course on the work of medical inspection, but he was not in a position to indicate precisely what the contents of the report would be.

Seizure of Imported Meat.—In reply to Mr. Starkey, Mr. Burns said that he found that the meat recently seized at Grimsby included two diseased carcasses of calves which, though they did not themselves bear the official label guaranteeing that they had been inspected by officers of the Netherlands Government, were packed amongst several healthy carcasses which were so labelled, in a crate which itself bore an official label. He was in communication with the Consul-General of the Netherlands with respect to the matter.

Medical Fees for Yeomanry Recruits.—Mr. Meysey-Thompson asked the Secretary of State for War what remuneration was paid to medical men, other than army surgeons, for cases in which recruits for the Yeomanry did not pass the medical examination. Mr. Haldane said that a capitation grant per recruit enlisted was paid to county associations. The remuneration of the doctor who examined candidates for the Territorial Force was paid by the associations from their funds, and was fixed at their discretion.

The Infectious Diseases Hospital, Stornoway.—Mr. Weir last week asked the Lord Advocate if he was aware that the recent report of the medical officer of health for Ross and Cromarty called attention again to the fact that the hospital was in urgent need of a water supply, and, in view of the danger to patients, he asked what steps would be taken. Mr. Ure said he was aware of the statements referred to, but he could only refer to his answer of March 9th to the effect that in the present financial condition of the Lewis District Committee there was no immediate prospect of making this improvement. Mr. Weir then asked if he was to understand that the Secretary for Scotland and the Local Government Board for Scotland were so utterly indifferent that they intended to discard the Public Health Act. Mr. Ure replied that the Secretary for Scotland was not discarding the Public Health Act. The Local Government Board had no power.

Opium Exports from India.—In reply to Dr. Rutherford, Mr. Hobhouse stated last week that the figures were: 1905, 63,053 chests; 1906, 65,617 chests; 1907, 63,415 chests; 1908, 62,408 chests. In 1909 the export would be limited to 56,800 chests. In accordance with the arrangement made with China, the export of opium from India was being reduced by 5,100 chests per annum. This was with effect from 1908, the average export for the five years ending 1905 being taken, as suggested by the Chinese Government, as the basis of the calculation.

Epidemic Disease among Soldiers in India.—Mr. Buchanan, in reply to Sir William Collins, stated that the Government of India would be asked to furnish a return of the number of cases and deaths, and corresponding rates per thousand, of enteric fever, cholera, plague, and small-pox respectively in the native army and among the European troops in India in each year from 1900 to 1908.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

OLD AGE PENSIONS FOR IRISH DOCTORS.

LET it not be supposed that a paternal Government has been moved by a sense of justice to grant to Irish dispensary doctors superannuation. So far as we know, nothing is farther from their thoughts; but all the same, the old age pension scheme has proved a blessing in disguise to many an Irish rural practitioner. We think it was the Chancellor of the Exchequer who stated in the House that the number of persons apparently eligible for old age pensions in Ireland was 127 per cent. of the estimated population over 70 years of age, and it is really extraordinary how many Irish peasants have discovered they were over 70 on the first day of this year.

In many parts of Ireland a large percentage of the farmers' houses have one or more old age pensions coming in. If a peasant farmer cannot sufficiently trust his son or daughter to assign his farm to one of them outright, he only gets a pension for his wife; but if he assigns the farm, then both get it—a very satisfactory arrangement.

Hitherto, when old folk of this class who were past work got sick unto death it was "the will of God," and unless a red ticket could be got for the dispensary doctor, they were mostly permitted to depart in peace; indeed, the old folk themselves were frequently the chief objectors to such unnecessary expense as paying a doctor for them; and for this reason, as has been stated on many previous occasions, a large proportion of the deaths among the Irish peasantry are recorded as uncertified.

But all this is changed. The old age pensioner, being a person in receipt of £13 a year, probably with a well-stocked farm in addition, seldom has the audacity to demand a red ticket or pose as a "poor person," under the elastic definition of that class accepted by the Irish Local Government Board, and, besides being an asset of cash value, it is worth paying the doctor or promising to pay him for his attendance.

The result is that now the doctors are called to see, and, unless they have more of the innocence of the dove than of the wisdom of the serpent, are paid for visiting the pensioners who fall sick in their respective districts, and in this way are getting a share of the old age pensions a paternal Government never intended for them.

The spring of 1909 has been very fatal to old people in Ireland as elsewhere, but the effect in Ireland has been to make these very superstitious people regard the old age pension as an unlucky gift from the hated Saxon with some ulterior design upon their lives, and we should not be surprised if it had the effect of checking the applications—at least, for a time; at any rate, people in Ireland are chuckling over this unexpected plan for robbing the Saxon "hen-roost." That there is a vast amount of fraud is stoutly maintained by some and as vehemently denied by others; but one thing is obvious, and that is that the really poor—those who are past work and whose poverty has compelled them to accept the shilling or eighteenpence a week grudgingly granted them out of the rates—are left out in the cold—a real injustice to Ireland. However, as England is paying the bulk of the pensions, Irishmen have no great cause to complain.

TUBERCULOSIS AND SEASIDE RESORTS.

In our last issue we reported the protests of the inhabitants of Sutton and Howth against the proposal of the Women's National Health Association of Ireland to utilize the vacant coastguard cottages at this station as health homes in connexion with the tuberculosis campaign. The Countess of Aberdeen, as President, has since intimated through her secretary that the Association "have decided not to apply for the disused coastguard station at Baldoy, as, after inspecting it, it was decided not to be suitable for their purposes." It is not clear whether this letter also applies to the question of Sutton and Howth. Sutton and Baldoy are immediately adjacent, and it would seem that the same objections apply to the employment of the coastguard cottages in either.

Mr. John Lentaigne, President of the Royal College of Surgeons of Ireland, has addressed to the Dublin news-

papers a letter in which he says that the opposition is due to unreasoning panic, and calls attention to the fact that Lady Aberdeen has given a guarantee that no advanced cases shall be sent to the health homes, and that any patients sent will be made to observe all the special precautions which it is known can insure immunity from danger. He says:

A properly managed sanatorium for tuberculous patients is not a danger to the inhabitants of the district, but, on the other hand, a private house in which one case of consumption in the advanced stage resides without taking the precautions which we know can prevent the spreading of the disease is a source of real danger to the neighbourhood. The previously healthy residents in and near properly managed hospitals and sanatoriums for tuberculosis are not more likely to develop tuberculosis than other people living elsewhere. . . .

The London Brompton Hospital for Consumption, containing always over 300 cases, is situated in the midst of a well-populated and fashionable district, the buildings abut on the roadway, and the patients are constantly to be seen on the balconies in fine weather. There is no reason to believe that the health of the inhabitants of Brompton is injuriously affected, or that the rents of the houses are lower in consequence of the proximity of the hospital, and I remember well a statement by one of the medical officers of the institution that for a period of twenty-five years no nurse in the hospital had contracted tuberculosis. It is well to remember that the cases treated in this hospital are not the pre-tuberculous, or the slightly affected cases, such as the Women's National Health Association propose to send to Sutton—they are the severe well-marked cases which, if left untended and unmined, would certainly be a source of immediate danger to others.

To come nearer home, let us consider an institution that we in Dublin all know—the Royal Hospital for Incurables at Donnybrook. This hospital has forty beds exclusively for consumption, and may therefore be taken as an example. The patients admitted there are always advanced incurable cases, who can go anywhere about the neighbourhood on the days allowed for going out, yet there is no reason to believe that the neighbours are injuriously affected; certainly the rents of the houses in the district are not affected, and the lady superintendent informed me yesterday that she had never seen a case of tuberculosis arising amongst the nurses or staff in the hospital, although some of the nurses had been for ten years more or less in contact with these patients. As it is in these institutions so it is elsewhere. The argument against the health home is absurd, and would be ludicrous if it were not so tragic.

The tragedy lies in the fact that it is the poor people threatened with tuberculosis or actually slightly affected with the disease, and who are, therefore, all curable cases, who will, if this agitation goes on and succeeds, be deprived of the chance of cure now being provided for them in a way that is really safe and free from danger to the public. These poor people must then, in time, in their turn become chronic advanced cases, each a source of daily increasing danger to the people in their vicinity.

DUBLIN HOSPITALS' TUBERCULOSIS COMMITTEE.

At a meeting of the Committee held on May 21st, when Her Excellency the Countess of Aberdeen was present, and Sir John Moore occupied the chair, a report was submitted on the three months' work done by the two special nurses to look after poor consumptive patients in their own homes, placed at the services of the Committee by the Women's National Health Association. The number of cases attended was 198, including 69 new cases and 1,953 visits were paid. The number of deaths was 21, and 14 occurred in the patients' own homes. The amount of relief given to the parents and their families, in the way of nourishment, clothes, beds, etc., reflects the greatest credit on the Samaritan Committee, whose work in this direction is so commendable and practical.

THE MOTOR TAXES IN IRELAND.

A valued correspondent who knows, Ireland well sends the following notes:

The proposed taxes on motors and petrol will hit medical motorists especially hard, particularly the rural members of the profession, who are mostly dispensary doctors. The average country doctor in Ireland is a comparatively poor man, and if he has the means to buy and run a motor car, it is at a proportionally greater expense, as compared with the country doctors of his English brethren; indeed, the number of country doctors able to buy and run a car is very limited, and, if a dispensary medical officer, he can seldom do without a horsed vehicle as well, for there are but few districts in Ireland where he has not to travel by-roads too bad to take a motor over except at ruinous expense on tyres and machinery.

Again, he has more to pay for petrol than in England or near the large towns, because the dealers, having small demand, require larger profits.

Owing to the terrible state of the roads in all but a few counties his tyre bill is out of all proportion; the tyre that would live for 2,000 miles on the roads he must travel would be a

phenomenon. If he uses accumulators he must charge them himself, electric light plants being few and far between, and if repairs have to be executed the car or the parts must be sent away, local repairers are so few.

Still he might put up with the tax without much grumbling were he sure of getting any compensation in the shape of better roads, but he knows that the average county councillor is quite content with the roads as they are and will not spend an extra penny upon them if he can help it and even if a grant is made to be spent on the main roads it will be of little service to him for the bulk of his travels are on by-roads and boresms contracted for at about twopence a perch of seven yards, Irish measure.

Furthermore, in Ireland the motor is the only vehicle on which there is any tax at present, and if an additional tax is put on motors it will be adding to the manifest injustice on those members of the community who are trying to use them.

Motoring in Ireland is still only struggling for existence, and country doctors hesitate about going in for it on account of the excessive cost. In England it generally pays the doctor to motor, in Ireland it does not, and the taxes will put motoring out of the question for the ordinary dispensary doctors, who comprise nine-tenths of the rural practitioners.

Whether it is fair to mulct this already underpaid and over-worked class still further is a question, we suppose, too small to exercise the consideration of an English Chancellor of the Exchequer in want of funds, though a moment's thought would show him that if the better care of the poor is of any consequence dispensary doctors whose districts are so immense might well be encouraged to use this form of progression more freely, even to the extent of assisting them by a subsidy as some English county councils have assisted their surveyors to get over more ground than they could with horse traction. The great difficulty of medical practice in rural Ireland is to afford proper attention to patients over a wide area, and it is only by the adoption of motor transit, or an increase in the number of doctors and curtailment of the inordinate size of the districts, that this difficulty can ever be overcome. The motor would be the cheaper solution.

There is no hostility to motorists in Ireland, but most of the roads are unfit for use; the legal limit and the road hog is conspicuous by his absence. If the people are politely treated they are most friendly and obliging to the motorist; while as for the Royal Irish Constabulary, they are the best friends the Irish motorist has.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

POOR LAW MEDICAL OFFICERS.

THERE is some difference of opinion as to the real value of the game of cross-questions and crooked answers which nightly goes on in the House of Commons, but on the whole the evidence is in favour of the utility of addressing questions to the Parliamentary representatives of the various Government departments. To foil questioners by devising answers which admit as little as possible and promise nothing at all may afford intellectual amusement to permanent officials for a time, but it eventually palls, and departments as a whole dislike the atmosphere of suspicion thrown around them by constant questions, and commonly take steps accordingly. Hence the fact that Mr. Cathcart Wason again failed on May 15th to obtain from the Lord Advocate a satisfactory reply with regard to Poor Law medical work in Scotland, need not be taken to prove that no effect has been produced. The real question at issue is whether things are as they should be, or whether, on the contrary, the conduct of certain parish councils in some rural parts of Scotland towards their medical officers is not acting in a fashion seriously detrimental to the interests of the poor. It is safe to assume that the Lord Advocate is aware of the real nature of the question, but on May 15th, as on April 29th, he implied that no poor person in Scotland had ever failed to receive medical attendance because a Poor Law officer had been dismissed or had resigned in circumstances which made other medical men unwilling to take up the appointments. He indicated likewise that when vacancies occurred the temporary arrangements made to fill the gap were of a satisfactory nature. In the circumstances it might be well for the Lord Advocate to direct a specific inquiry on the point to every parish council in Scotland, and also to consider for himself to what period of time it is really reasonable to attach the adjective "temporary." Meanwhile, he might be asked to furnish a return showing the following: (1) In how many and in what places during the past three years have Poor Law medical officers

in Scotland been dismissed from their office or resigned owing to disagreements with the parish council, and what time in each case has elapsed before the appointments have been permanently refilled? (2) What periods have elapsed between the time that such resignations or dismissals have become effective, and the date at which temporary arrangements have been made for the performance of the duties required? (3) For what length of time in each case has it been necessary to maintain the temporary arrangements? and (4) during the continuance of those temporary arrangements what additional distances have the sick poor had to travel or send in search of medical attendance over and above the distances which would have been necessitated had a permanent medical officer been in office? Until and unless such a return is secured and proves satisfactory, the feeling must persist that, in addition to their other misfortunes, the poor of Scotland are being allowed to suffer for the shortcomings of their nominal guardians, and that the matter is not receiving the attention from the Scottish Office which its importance demands.

DUNDEE AND ITS SANATORIUM.

We have received the following letter:

Sir,—In your issue of May 15th your Special Correspondent has made statements as regards Dundee and its sanatorium which, I feel sure, will not be endorsed by every member of the medical profession. As is now a matter of history, the Dundee municipality determined to municipalize the sanatorium at Sidlaw in order, as they believed, to put the finishing touch to the stamping out process in the disease consumption. For one reason or other, however, the ratepayers rose up in arms against them, and at length succeeded in getting the municipality to withdraw their scheme. Your correspondent states that Dundee has thus thrown away the honour of being the first city in the kingdom to own a sanatorium for consumption.

I am not going to say a word about honour, but I desire to state that from the point of view of medical and social usefulness, I am one of those who are strongly of opinion that the Dundee people have done just as they ought to have done at the present time. Medically we know that the confident anticipations expressed more than a quarter of a century ago as regards the value of municipal isolation in infectious diseases of all kinds have not been fulfilled, and medically also we know that what infection danger a consumptive presents is dependent on individual conditions and surroundings rather than upon the disease. That is to say, that a consumptive who himself, or through his friends has the will and the power to exercise what is practically only cleanliness, is not a source of danger to the community at all. Sociologically, too, I hold that the municipalization of sanatoriums at the present time would be a mistake, inasmuch as it would tend to misdirect from its proper channels what energy a community can afford for its own improvement. Without disparaging in the slightest degree the value of the sanatorium in producing an arrest in the disease consumption, and so enabling the patient to plan out how he can best live what life remains to him, all experienced medical men must admit that the term "cure" in the sense that the laity understand it cannot really be applied to the results of sanatorium treatment. As was well put by a Dundee Town Councillor, "Municipalizing a sanatorium was like pumping a leaky ship: it may probably keep the ship a little longer afloat, but by directing what energy the community can afford towards the pumps rather than to the leaks, it will fail to use that energy to the best advantage."

The whole question of this ever-increasing municipal and State interference with the individual in disease is one which, I hold, requires very serious reconsideration. But this is far too wide a subject for discussion in this letter. Inasmuch, however, as silence on the subject of these interferences has been interpreted too much as meaning approval of them on the part of the profession, I beg to intimate to you by this letter that in my opinion there are many in the profession who believe that these interferences are already much too great, and who believe also that in this latest example of municipal interference in Dundee the people there have done wisely in acting as they have.

I am, etc.,
Edinburgh, May 24th.

ALEX. JAMES, M.D.

RUCHILL.

A small book entitled *Ruchill: A Romance: Almost a Tragedy*, has been published by one of the members of the Hospitals Committee. In it is traced the history of the difficulties at Ruchill from the first intimation of trouble on December 4th, 1907, to the recent decision of the Council that the physicians and superintendents of Belvidere and Ruchill Fever Hospitals should change places. The book is largely made up of extracts from the official minutes of the Town Council, Hospitals Committee, etc., and the author, ex-Baillie Willox, is clearly of opinion that the blame for the Ruchill trouble does not lie so much on the shoulders of the medical men as on those of the matron

and of the convener of the Hospitals Committee. The book is, it is understood, having a large sale. The interest in the Ruchill affair is by no means dead, and periodically crops up in the town council proceedings. Thus recently quite a breeze sprung up over the fact that the actual transference of the medical superintendents from Ruchill to Belvidere was not officially communicated to the council though notified in the newspapers as having taken place. The official explanation offered was that the matter must first come before the Hospitals Committee before it could be reported to the town council. Apparently certain members are determined to lose no opportunity of bringing up all doubtful points about the hospital administration, and one member has refused to accept the rulings of the chairman, and has, in consequence, been repeatedly suspended.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

LONDON.

THE PROPOSED HOSPITAL IN PUTNEY.

SINCE the Annual Representative Meeting at Sheffield, little has been heard of the Putney hospital question, but it has not been forgotten. The work involved by its existence has been quietly going on, and the matter is now ready for final consideration by medical men resident in the area likely to be affected should a hospital be brought into existence. The proposed site is Lower Putney Common (from which point are respectively distant as the crow flies the West London Hospital $1\frac{1}{2}$ miles, Bolingbroke Hospital $2\frac{1}{2}$ miles, Richmond Hospital $3\frac{1}{4}$ miles), and the affected area consists of the Putney and Southfield wards of the borough of Wandsworth and the whole of Barnes. When the proposal to build a hospital in Putney was first made—nearly three years ago—the South-West London Medical Hospital Committee was promptly formed and so constituted as to be fully representative of medical men resident in the district, whether members of the British Medical Association or otherwise. It laid down certain principles, all of which were subsequently adopted at the Sheffield meeting already mentioned. Four of them were adopted likewise by the committee of laymen formed to bring the hospital into existence. Hence, so far as general principles are concerned, all that now has to be done is to secure the establishment of the fifth axiom. This is that local medical men shall be directly and adequately represented on any committee formed either to evolve a constitution for the proposed hospital or to manage such hospital when established. The more interesting features of the plan suggested for putting the principles in question into practice are as follows: The hospital will have no out-patient department, and have no more than twenty free beds (these being as many as the funds of the hospital can support, and as many as the district is estimated to require). Cases of emergency or accident not deemed suitable for admission will be referred elsewhere for subsequent treatment; a medical certificate of suitability for admission will be an essential condition of admission, and any patient will be at liberty to be treated by his own medical man if he desires. There will be a consulting staff of six specialists, and an ordinary staff of four local medical men. The latter will remain in office for four years, but be re-eligible for a second like period. Between a second and third term there must be an interval of two years. Of the members of the governing body one-third must be local practitioners, elected by their fellows. They will retain office for five years, and be ineligible for further service until the lapse of another five. The medical governors and the local medical staff will together form a medical committee, to which all medical matters and appointments will be referable. A vote will be taken on these and other points at a meeting to be held at the house of the Putney Constitutional Club on June 3rd at 3.45 p.m. All local practitioners, as well as members of the Chelsea, Richmond, and Wandsworth Divisions of the British Medical Association, are invited to be present, and it is to be hoped that every one concerned will endeavour to be

present. No suggestion seems to be forthcoming as yet as to the way in which the first staff shall be chosen, and on this point, as also on the length of tenure of office by the medical staff and the medical governors respectively, free expression of opinion is desirable. As for the former, a period of two years, with an interval of one year before re-election, has elsewhere been found to work well, and may be thought to be more in accordance with the cottage hospital idea underlying the general scheme than a certain four years and a possible eight. The period allotted to medical governors is also important, as it is in their hands apparently that all future appointments to the staff will mainly rest. In any case all medical men resident in the area should make it their duty to attend.

TREATMENT OF RINGWORM.

A report on the treatment of school children suffering from ringworm, presented by the Education Committee at the meeting of the London County Council on May 25th, pointed out that when treatment by the ordinary means of ointment is adopted, prolonged absence from school is necessary, and there is also risk of other children being infected. Treatment by means of *x* rays, however, is effective as a rule after one exposure. The Committee proposed that the *x*-ray apparatus at the Whitechapel fairs school should be utilized for the treatment of ringworm cases. It would be possible for the school doctor to undertake the work without involving additional cost. Mr. Cyril Jackson, Chairman of the Committee, mentioned that he heard objections to this proposal on the ground that the children's heads were injuriously affected by the action of the *x* rays. Parents should know that that was not the case. He had seen the children treated at one of the hospitals. They said they felt no pain, but he understood that sometimes straight hair became curly after the application of the rays. The recommendation was approved.

DAYLIGHT SAVING BILL.

The London County Council, unlike many other responsible bodies in the country, declines to take the Daylight Savings Bill seriously. On May 25th it was invited by the Education and Highways Committees to express its approval of the measure on the ground that it would be of advantage to the education service and to the tramways—the latter, it was estimated, would benefit to the extent of £8,000 a year. An amendment was moved that the Council ought not to express an opinion on so contentious a measure. Mr. Waterlow, M.P., and Mr. Barlow appealed to members to discuss the question on its merits, but amid cries of "Waste of time" and "Vote, vote," the question was put and the amendment agreed to by 40 votes to 28.

A BAD DAY FOR THE BARNES COUNCIL.

The principal duties of a medical officer of health are set out in the order of the Local Government Board, dated March 23rd, 1891, but there are also certain statutory duties of an important character. For example, Section 30 of the Housing of the Working Classes Act, 1890, requires the medical officer of health to represent to the local authority of his district any dwelling house which appears to him to be in a state so dangerous or injurious to health as to be unfit for human habitation. Having made such representation further action falls upon the sanitary authority, and it is common knowledge that these bodies are not as a rule at all eager to give effect to the initial proceedings of their official. An instance in point has occurred in the urban district of Barnes. During several years past the medical officer of health (Dr. F. G. Crook-shank) has upon various occasions reported upon the insanitary condition of numerous houses in certain areas of the district, but, no action having been taken by the district council, an inquiry into the circumstances was recently held by an engineering inspector on behalf of the Local Government Board. The evidence laid before the inspector disclosed a very serious state of affairs, for the advocate of the council, Mr. Foote, K.C., had to admit that several of the blocks of houses in the area dealt with were unfit to live in and were injurious to health. One of the district councillors stated that the opposition to the recommendations had arisen because the medical officer of health had done his duty towards the inhabitants of the district, and he made a further statement, which does not

appear to have been disputed, namely, that at a recent meeting the council was told that the medical officer of health was taking up a position against his masters, and that it was a bad day for the council when it elected its medical officer for a period of four years instead of for one year. Can any stronger argument be brought forward in favour of the abolition of non-lapsing appointment of medical officers of health than this remark of a "responsible member of a sanitary authority?"

LEEDS.

THE GENERAL INFIRMARY.

Resignation of Mr. Edward Ward.

SOME few weeks ago Mr. Edward Ward, Senior Surgeon to the General Infirmary, sent in his resignation to the board. As has been well known to all connected with the infirmary, and to a large circle of his private and professional friends, Mr. Ward's health has been by no means good for some years, and the feeling of regret occasioned by his resignation, inevitable and general as it must of necessity be, is intensified by the fact that it has been determined by ill health. Mr. Ward, who studied at Cambridge and at Leeds, was appointed Assistant Surgeon to the infirmary in 1884, and on the resignation of Mr. Jessop in 1890 was promoted to the full staff. On the resignation of Mr. Mayo Robson he became the senior member of the acting surgical staff. By the rules of the infirmary, which include a twenty years' limit to service on the full staff, Mr. Ward's term of office would have come to an end next year, and his promotion to the consulting staff would have followed automatically. It is open to a general meeting of the governors of the infirmary, however, in the event of any member of the staff resigning before acting on the full staff for twenty years, to appoint that honorary officer a member of the consulting staff, and this has been done in the case of Mr. Ward. The resolution giving effect to this was moved by the Treasurer, Mr. Charles Lupton, at a meeting of the governors held on May 21st, and was seconded by Dr. Barrs, who spoke on behalf of the members of the honorary staff.

Appointment of Honorary Surgeon.

Consequent on the resignation of Mr. Ward a vacancy has occurred on the full staff, and at a meeting of the Special Election Committee, Mr. Walter Thompson, Senior Assistant Surgeon, was appointed to the post. The vacancy thus created on the assistant staff will be filled in due course.

POST-GRADUATE COURSE AT THE PUBLIC DISPENSARY.

THE summer term begins on Tuesday, June 8th, and consists of fifteen meetings which take place on Tuesdays and Fridays until July 27th. Dr. Wardrop Griffith will open the session with a demonstration on applied anatomy. His second demonstration will deal with irregularities of the heart. Dr. Trevelyan will lecture on glandular tuberculosis and its treatment by tuberculin, and on the paralysees of infancy and early childhood. Dr. Telling will lecture on purpura at his first meeting, and will demonstrate cases of skin disease at his second. Dr. Watson's demonstrations will be on the production of physical signs in the chest, and on serums and vaccines. Mr. Dobson will give a lecture on syphilis and epithelioma of the tongue, and Mr. Lawford Knaggs on fractures of the leg. Some illustrations of the pathology of pregnancy will be shown by Dr. Hellier. Mr. Michael Teale will give demonstrations on minor ophthalmology and otology. Mr. Sharp will lecture on adenoids, and Mr. Seaton will show various cases of surgical interest.

LIVERPOOL.

DISTRICT NURSING.

IN the proceedings of the recent conference on certain aspects of nursing there was little of direct interest to medical men, but some points in connexion with it are worth noting. It attracted much notice in Liverpool, where it was held, and it was generally referred to as the Jubilee Nursing Congress, but its main subject was not ordinary nursing but district nursing, and Liverpool was pitched upon as the place of meeting mainly because it

would appear to have been agreed to regard Liverpool as the original birthplace of district nursing. It is true that work of much the same kind was undertaken by the Society of Sisters of Charity, established by Mrs. Fry in Devonshire Square, E.C., in 1840, and that within eight years later the St. John's Sisters were also at work. Nevertheless, it seems fair on the whole to regard the work initiated by Mr. William Rathbone in Liverpool just fifty years ago as the real inception of district nursing as now understood. The earlier organizations were of a semi-religious character, while that of Mr. William Rathbone merely aimed at placing at the service of the poor, women who had received some kind of definite training in nursing duties. Once started the idea rapidly spread, and corresponding enterprises were started in Manchester in 1862, in Salford in 1864, in Leicester in 1867, in Birmingham in 1870, and in Oxford in 1879. Meanwhile, progress had been made in London, where, in addition to the two original institutions, the East London Nursing Society came into existence in 1868, the Metropolitan and National Nursing Association in 1874, and Queen Victoria's Jubilee Institute for Nurses in 1887. The Congress was attended by the Princess Louise and the Duke of Argyll, the Countess of Aberdeen, Viscount Goschen, and delegates from the Colonies and many foreign countries, and a message was received from the King and Queen Alexandra. A certain number of medical men also took part in the proceedings, either as chairmen of sections or as readers of papers, or both. Among the latter was Dr. Caton, who dealt with district nursing in connexion with maternity work; while Dr. E. W. Hope described the part which district nursing might play in the co-ordination of charitable efforts and limitation of tuberculosis. Similarly, Dr. Arthur Shadwell dealt with district nursing as a factor in social work, and Dr. Hayward dealt with the work of district nurses in connexion with school nursing. Judging from the proceedings as a whole, current opinion among nursing authorities seems to be in favour of securing a higher standard of knowledge among the women engaged by district nursing institutions than at present always exists, and of relieving the trained nurse of a part of the work which at present falls upon her by employing as sick-room helpers women not supposed to know anything about nursing, but prepared to take over domestic duties during sickness. It is a curious and possibly significant fact that, in spite of the multiplicity of papers read, the records of the proceedings seem to reveal no recognition of the fact that district nursing as at present carried on in some districts largely defeats its own object. Lack of attention to details of organization and administration gives rise to practices by nurses which make medical men less ready to avail themselves of their services than they otherwise would be.

WALES.

THE EBBW VALE DISPUTE.

THE *South Wales Daily News* of May 10th says:

By the rejection of the second ballot on the protracted dispute regarding the Ebbw Vale workmen's doctors' fund, the Cwm section of the fund have precipitated a crisis. The dispute is over the question of reinstatement of Dr. J. O'Sullivan on the staff. The Cwm section having finally decided to proceed for the recovery of the various sums of money awarded them by the county court, and for an injunction in the High Court to prevent any further deductions from wages being made towards the doctors' fund, the Ebbw Vale Company have now intimated that they will not collect and pay over any further money to the Fund Committee. A meeting of the General Committee was held at the Workmen's Hall on Saturday evening, and decided to ask Mr. Mills, the general manager of the company, to grant them an interview, and that the whole position be placed before a mass meeting of the payees on Saturday next.

In its issue of May 17th the same newspaper gives an account of a mass meeting of the payees of the Ebbw Vale Doctors' Fund held on Saturday, May 15th. Councillor John Gale, J.P., was in the chair.

Councillor Evan Davies, deputy miners' agent, said it was one of the most unfortunate disputes that Ebbw Vale men had ever been connected with. There was a tendency to blame the Doctors' Committee, but the committee was in no way responsible for the position as it was understood that day. They had

chosen the path of least resistance, and carried out to the best of their ability the desires and decisions of the general meeting of the payees. The resignation of the chairman and the retirement of the committee at a critical stage of the dispute did not help matters. Two ballots had been taken; the first was objected to as being conducted unfairly, and the decision of the other would not be accepted by the other side. The solicitors of the Cwm and Waun Lwyd section were pressing for their money for costs, etc., incurred in the County Court action, with the result that £340 had to be paid over. They were also faced with a further action in court and the possibility of an injunction in High Court. The Ebbw Vale Company did not intend going to any further expenses in law cases, and Mr. Mills suggested that the whole of the facts of the dispute should be submitted to three gentlemen who were entirely outside and independent, and he would give an undertaking that the award of that arbitration should be strictly carried out. As an alternative he would draft a scheme and submit it to both sides for their adoption or modification, and if his services were required he was quite prepared to act. Unless something was done in the immediate future the Ebbw Vale Company would have to take such action that they did not want to take—namely, to decline to make any further deductions at the office.

Mr. Chapman proposed that they revert to the old system of every man choosing his own cord irrespective of districts, with a limit to the area to be covered.

Mr. John Williams (Cwm) proposed that they submit the matter to arbitration in accordance with the suggestion of Mr. Mills. He said that both sides were anxious to preserve the fund. If it was broken up, what would become of the thousands of pounds' worth of property they possessed?

Mr. W. Hudson seconded, and an overwhelming majority declared in favour of arbitration. The secretary was instructed to write the secretary of the Cwm section asking them to agree with the suggestion, and to appoint representatives to meet to select the arbitrators.

The *South Wales Daily News* of May 19th states that the ballot of the workmen to choose their committee took place on Monday, May 17th, at Ebbw Vale. It was conducted on the new plan, that of districts, not by the different trade unions. Mr. T. Rees, secretary of the fund, acted as returning officer. The result of the election was as follows:

Ebbw Vale Miners (three seats)—John Gale, 336; J. Barber, 327; W. Hudson, 321.
Ebbw Vale Outside Men—Returned unopposed: David Evans, Henry Bowen, George Morgan, T. Llewellyn, D. Thomas, and J. Price.
Victoria Miners (one seat)—Henry Carter, 55.
Victoria Outside Men (one seat)—A. Price, 105.
General Office—Mr. Edward Watkins, unopposed.
Waun Lwyd Miners (one seat)—W. Brewer, 65.
Waun Lwyd Outside Men (one seat)—T. Lewis, 90.
Wm Miners (two seats)—J. Morgan, 182; John Morgan Williams, 134.
Beaufort Miners (two seats)—J. Phillips, 130; J. Evans, 124.
Brynmaur (one seat)—J. Huish, 118.
Srhynow (one seat)—W. Rudman, 28.

The polling was rather weak, especially in the lower part of the district.

India.

THE KASALI INSTITUTE.

THE seventh annual report of the Pasteur Institute at Kasauli, unlike its predecessors, covers the work of one complete calendar year—January 1st to December 31st, 1907. In this year the number of patients showed a further increase, in spite of the opening of a second institute at Coonoor. Altogether 1,349 persons underwent treatment, in addition to 69 who applied for advice, but were not deemed to require injections. The classification of patients shows that all classes of Indians have equal faith in the value of the treatment. In the list of animals from which bites were received there is a curious variety. Dogs predominate, then come jackals, the remainder including one donkey, two buffalos, one bear, and four bites by men. The dates at which the patients arrived for treatment indicate no seasonal prevalence of rabies in animals. As in previous reports, the cases are further classified according to the situation of the wounds and according to whether or not the animal was definitely proved to have had rabies. The percentage of failures among all classes was the lowest yet recorded—namely, 0.44, or six failures in all. Five of the six failures were in persons bitten on the bare skin, the sixth person being one who was wearing very thin clothing and received four deep

bites. In three of these cases other persons had been bitten by the same animal, and had been treated in the institute and recovered. The interval elapsing between the time of bite and commencement of treatment in these failures varied from four to twenty-four days. One of the two European cases is somewhat curious, for the disease did not develop until seven months after the cessation of treatment. During the year the technique elaborated by Pasteur was abandoned for the dilution method suggested by Høyes of Budapest, and the results thus obtained are deemed to have been greatly superior. Apart from giving a lower percentage of failures, it has the advantage of simplicity and accuracy. In the old method patients were injected with emulsions of cord, the virulence of which had been reduced by drying to the strength regarded as necessary in each individual patient. In the new method a small piece of the central nervous system of fixed virus is weighed and emulsified, and then reduced to the desired strength by diluting with salt solution. The amount of injection which has to be used is much smaller than formerly, and instead of a constant supply of large numbers of rabbits being required only one day is necessary, however great the number of patients. Hence a good deal of expense and an immense amount of work in the inoculation and dissection of rabbits and the drying of cords is dispensed with. Furthermore, uniformity and accuracy of dosage is secured and injection into the patient's system of substances other than the desired amount of toxic material is reduced to a minimum. Hence unfavourable reactions, including paralyses, which are not uncommonly noted when dried cord is used and which are due to what was regarded as inseparable organic material, can now be avoided.

Special Correspondence.

BERLIN.

Tuberculosis: Notification and Disinfection.—Statistics of Appendicitis.—Orientation of Schools.

THE German Central Committee on the fight against tuberculosis held its annual congress in the Parliament Hall of the German Reichstag during the recent parliamentary recess. Secretary of State Herr v. Behrmann-Hollweg presided, and there was the usual corona of Government and civic delegates and of distinguished specialists, among the latter Robert Koch. In a paper on "Disinfection in Tuberculosis," Kirstein (Stettin) spoke on the uncertain results obtained by sputum disinfection with chemicals (lysoform, formaldehyde, carbolic acid, antan, etc.), and expressed his conviction that the most thorough and most practical means of getting rid of the sputum was to collect it and pass it down the drainage pipes, where it was rendered quite innocuous through the enormous dilution it underwent. With regard to disinfection of dwellings, Kirstein pleaded for stringent legislation which should enforce disinfection after the removal of tuberculous persons and before new tenants be permitted to take possession. He recommended that notification of every case of tuberculosis should be compulsory, and that the landlord should be liable for proper disinfection of every dwelling vacated by a tuberculous person. This, Kirstein insisted, was the great desideratum in the struggle with the scourge. A discussion followed, animated enough, but chiefly one of ways and means, for all speakers unanimously recommended Kirstein's plan. Yet its practical difficulties are enormous, if not insuperable. In Germany removals—especially those in the lower class of small flats and tenement dwellings—take place almost exclusively on the quarter days. Even assuming that disinfecting experts would be available in sufficient numbers on these days, how could the work be done quickly enough even in the smallest decent homes—the "two rooms and kitchen" of the German workman? Are the new tenants to stand outside in the street, their bits of furniture exposed to the weather, while disinfection goes on within? And will not landlords fight shy of letting dwellings to tuberculous persons who are forced to put up with the worst class of—that is, the most unhygienic—dwellings?—an effect surely the opposite of that desired and aimed at.

The general inquiry on the subject of appendicitis in Germany during the year 1907 set on foot by the Berlin Medical Society two and a half years ago is now complete, and the statistics collected were communicated by Professors Albu and Rotter to the society at its last meeting. The statistics deal with 4,800 carefully tabulated cases. Of the cases that came under medical treatment from the first day of illness, 4.1 per cent. ended fatally; of those medically treated from the second day, 4.9 per cent.; and of those not under medical care until at a later stage, 11.9 per cent.; 68 per cent. were first and 19 per cent. second attacks, the remaining 13 per cent. third (or more) attacks. Of the 4,800 cases, 1,344 came under operation, the majority being severe types. Of those operated within the first forty-eight hours, no more than 0.9 per cent. died; of those operated on the third day 7 per cent. died, the mortality figures rising considerably after longer intervals. As regards sex of the cases, males were in the majority by about 10 per cent. Children gave the highest proportion of fatal endings, probably because children in general fail to give a clear account of their symptoms.

In a paper on heating and ventilation of schools, read before the German Society for Public Hygiene, Dr. A. Marx gave an account of a real set of botanical experiments, which prove by analogy how all-important sunlight is for the development of the human organism: cultures of bean-plants were made, one in ground fully exposed to direct sunlight, and the other in ground lit by diffused light only. The descendants of both cultures were then cultivated in one and the same sunny situation—with the result that, after the second generation, no fertile seeds could be obtained from the second culture. From this Dr. Marx deduces that schoolrooms should not face north. A westerly aspect he thinks the best for morning-hour schoolrooms.

Correspondence.

SPIRITUAL HEALING.

SIR,—In the article which appeared in the last number of the JOURNAL on the above subject you allude to the difficulties which exist in attempting to verify the correctness of the diagnosis in cases of asserted cures. The following case, which occurred in my own practice, is an instance of how little credit many of these statements are worthy of.

Shortly after I retired from practice some ten years ago, a well-known clergyman wrote to me saying that members of his congregation were being much disturbed by the advent amongst them of a lady professing herself to be a faith healer, and saying that her conversion was due to the fact of my having told her that she was suffering from a dreadful disease and that her sole hope of cure lay in the performance of a very dangerous operation. She refused to submit to this, and instead placed herself in the hands of the "healers" and was cured. He concluded by asking me to give him particulars of her case.

I had no recollection of any such patient, but as the name was given, traced her and found the following particulars recorded in my casebook:

I had only seen the lady once in my own house, when she had stated that she was well past middle life, and for more than a year had been weakened by the frequent recurrence of very profuse menstruations, the loss being sometimes quite alarming.

On my telling her I must examine her she had replied that she could not submit to it that day, as the discharge was then heavy, so I arranged that when it had ceased she would let me know, and I would call on her and examine her in bed. I made no diagnosis and gave no opinion as to the nature of her case. No doubt I may have told her that such symptoms often indicated serious disease, but to talk of performing an operation on a patient I had never examined, I never would have done, nor any other sane practitioner.

Instead of writing to me to call on her, she went to London. No doubt an examination would have revealed the fact that no disease existed.

It is impossible to deal with patients of this class. Their mental equilibrium is disturbed, they distort what

the doctor may say, and not infrequently invent and circulate statements he never made.—I am, etc.,

Dublin, May 24th.

LOMBE ATTHILL, M.D.

MYASTHENIA AND HYPOPHYSIAL LESIONS.

SIR,—Your readers will be interested to hear that in the BRITISH MEDICAL JOURNAL, vol. i, 1867, pp. 597–600, a case was described, under the title of "Case of Paralysis of the Diaphragm, with Remarks," by the late Dr. P. Victor Bazire, that was almost certainly one of myasthenia. Bazire was on the staff of the National Hospital for the Paralysed, London, and he died suddenly in August, 1867, three months after the case was published, but the sequel was never recorded apparently. That he was an exceptionally able man will be seen on reference to the obituary notices in (a) BRITISH MEDICAL JOURNAL, vol. ii, 1867, p. 141, and (b) *Lancet*, vol. ii, 1867.

It will be remembered that Dr. Leonard Guthrie mentioned in the *Lancet*, vol. i, 1903, p. 330, that the famous Dr. Willis had published a case in 1685 that seems to show that the disease was known to him then. Dr. Guthrie points out that Willis evidently regarded his case as functional. I shall show that Bazire did not fall into that error over his case.

Bazire's Case of Myasthenia (italics mine, unless otherwise stated).—"F., 41, married; tall, thin, bony, pale, sallow. Previous history good: nervous and excitable, easily moved, subject to depression of spirits; no history of hysterical fits, crying or sobbing; has been working hard and living poorly of late. Her son, aged 14, epileptic (under B's care). Present condition: Fifteen months ago gradual onset of epigastric discomfort (weight, not pain), and difficulty of breathing: kept gasping to take in more air. These sensations came on towards evening, most marked when working hard, washing or ironing. With the difficulty of breathing came loss of voice: Frequently towards evening she would lose her voice completely, and speak in whisper. If, however, she did during the day only sewing, etc., no dyspnoea occurred, and her voice was louder. She was always better in the morning; if she had gone to bed voiceless overnight she would wake up after a good night's rest perfectly able to speak. No cough: no pain in chest, no soreness, no abnormal sensations in throat to which she might refer her occasional and intermittent aphonia."

Bazire goes on, p. 597, col. 2: "When I first saw her, the peculiar character of her voice attracted my attention at once." He compares her to a person out of breath from running, but notes that: "Instead of her voice improving, as she went on talking, it became weaker and weaker, occasionally squeaky, till at last it left her completely, and she could not for a while proceed even in a whisper. This statement was confirmed by the nurse after the patient's admission to the hospital" (p. 598, col. 2).

Bazire found nothing in throat: cords came together perfectly on phonation. R. 32: breathing costal; on deep inspiration epigastrium was observed to sink inwards (italics in original); during expiration the parts that had sunk in during inspiration bulged outwards (italics in original); no lividity of lips or face; good entry of air in lungs: normal percussion. Heart regular; impulse somewhat feeble; sounds not very loud, but normal at apex and base. P. 65, regular. No enlarged glands at root of neck, nor any signs of aneurysm.

The paper is a very interesting one. As to diagnosis, Bazire held that the feebleness of the diaphragmatic action, on galvanization of the region of the phrenic in the neck, which he found "pointed to structural disorganization of the muscle." This proves that he rejected hysteria as a diagnosis. There is no mention of faradism; but we know that the myasthenic reaction is not always present in myasthenia.

Evidently Bazire recognized the intermittent aphonia brought on by exertion and relieved by rest as something quite new to him—and he was a very learned physician. The myasthenic nature is obvious.

Dr. E. B. Krummbaar has recently mentioned (*Bull. Ager. Clin. Labor., Pennsylv. Hosp.*, No. 5, December, 1908, pp. 32–45) that as far back as 1679 Theophilus Bonetus described what was evidently a serous cyst of the hypophysis (*Sepulchretum sive Anal. Practica*, Geneva, 1700, p. 24, obs. 24). Krummbaar quotes thus:

§1. Capitis dolor ab abscessu seroso, natus cerebri et infundibulo adherente. A girl, 12, phlegmatic and dull temperament, suffered for four months with a severe, continuous headache. When called to her case, I found her quite without fever, but rejecting all food. She lived for many days on sugared water only. She complained of pain over the coronal sutures. All remedies were vain; no swelling or redness was present; finally death put an end to her miseries and pain. On opening the head, everything was found beyond expectation well formed and without corruption. I had expected to find pus, as a little before death the right eye had

emitted some purulent fluid. But, when we despaired of ascertaining the cause, the surgeon, wishing to demonstrate to his pupils the rete mirabile and other parts, broke with his fingers an abscess which was adherent to the folds and infundibulum of the cerebrum, from which clear water flowed with force to the extent of 2 lb., as if gushing from a fountain.

Krumbhaar comments thus (page 41):

The enormous cyst, the modern equivalent of serous abscess, if attached to the infundibulum, evidently arose in the hypophysis. The dull phlegmatic temperament is interesting as a possible evidence of myxoedema, which has been found to have some connexion with lesions of the hypophysis.

In conclusion, Dr. F. Tilney has recorded a case of typical myasthenia¹ in which autopsy showed an adenoma of the hypophysis, originating in its anterior lobe and almost completely disintegrating its posterior lobe. I am told by a friend that he thinks one or two similar cases have been recorded, but at present I have failed to find them.

To sum up: Bazire's case is, with the single exception of Willis's, the most ancient case of myasthenia yet discovered; his description is far fuller than that of Willis's, and his greatness is shown by his rejection of the diagnosis of hysteria. It is of great interest after studying Bazire's case to refer to some excellent remarks on the differentiation between hysterical and myasthenic dyspnoea in a paper by Dr. Guthrie in the *Lancet*, vol. i, 1901, p. 395.—I am, etc.,

London, W., May 24th.

LEONARD J. KIDD.

FOREIGN BODY IN THE AIR PASSAGES.

SIR,—The letter by Dr. William Hill (p. 1268) with reference to the case published in the *JOURNAL* of May 15th, p. 1180, seems to me very opportune, and, like him, I desire to emphasize "the value of the bronchoscope in the investigation of cases of limited bronchiectasis of obscure non-tuberculous origin."

The details of the case published by Mr. Stroud-Hosford would suggest that, even had the foreign body been detected and removed when the patient was first admitted to the hospital, a fatal issue might only have been delayed. On the other hand, the history of such a case teaches two important lessons:

1. The value of skiagraphic examination in each and every case of limited bronchiectasis in children as well as in adults. Perhaps it would not be going too far to insist on the value of this mode of examination in any case presenting anomalous chest symptoms. In this particular instance the presence of the tintack would certainly have been revealed.

2. The great value of the bronchoscope in the examination and treatment of such cases. In this particular patient it is almost certain that the tack could have been removed by any one reasonably familiar with and skilled in the use of the instrument, although it is doubtful whether this would have saved this patient's life, because of the advanced stage of the lung mischief.

It has been my privilege to remove a large pin and the metal cap of a lead pencil from the larger bronchial tubes of two young patients, and during the past six years to make many examinations of the lower air passages by the direct method, and I do not think it an exaggeration to say that the method only needs a little skill, patience, and attention to technique.

Readers who are interested in the construction and uses of the bronchoscope will find an illustrated article dealing with the subject in the *Lancet*, November 7th, 1908, or in the *Laryngoscope*, December, 1906; and I am glad to think that since the publication of the first named the use of the bronchoscope has become much more general in this country than was hitherto the case.

It is only fair to state that for the perfection of the modern instruments we are indebted to Killian and Brining of Freiburg and Chevalier Jackson of Pittsburg, Pa.—I am, etc.,

London, W., May 23rd.

HERBERT TILLEY.

SIR,—The question raised by Dr. Hill is worthy of serious consideration, and his plea for a more extended use of the bronchoscope in affections of the chest comes at an opportune time, and deserves support. To those who are accustomed to make use of it in their daily work it appears surprising that those who devote special study

to chest diseases should have hitherto failed to appreciate its advantages.

An endoscopic view of the interior of a bronchus affords much more information than an indirect examination however carefully carried out. In many conditions which are obscure and puzzling to the observer, a correct diagnosis is only possible with its aid. I have already drawn attention in the *JOURNAL*¹ to some of these, and subsequent experience has fully confirmed the views I have there expressed. I make regular use of bronchoscopy in the investigation of affections of the bronchi. It can be carried out with safety, and one might quote instances of the invaluable help which a direct view of the interior of the bronchus has given, were there space to do so. One will suffice, that of a patient who had been under treatment for some time for "bronchitis and asthma." It was only on making a bronchoscopic examination that a benign growth, quite unsuspected, was discovered just above the bifurcation of the trachea. Its removal led to entire disappearance of the symptoms.

To those who may be sceptical of the feasibility of applying direct methods to intrabronchial conditions a case recently recorded by Killian² is worth mentioning. A man had a carpet tack embedded, head downwards, in the right bronchus. Its presence had led to marked stenosis and bronchiectasis. After repeated attempts the stricture was dilated and the foreign body extracted. The constricted bronchus was afterwards intubated, the tube being changed from time to time, and this was followed by a corresponding improvement in the chest condition. Yet that patient had suffered from chest trouble for over five years, and had been treated in various sanatoriums until a skiagraph revealed the presence of the foreign body, which had never been suspected.—I am, etc.,

Cardiff, May 24th.

D. R. PATERSON.

SIR,—The sincere thanks of all clinicians are due to Dr. Murray Leslie for his public spirit in placing on record the above case which affords several lessons.

Rightly or wrongly, some of us think that no value whatever is to be placed on a negative history as to ingestion of a foreign body in a child of this age, and the result in this case confirms our view.

Further, many of us regard it as an axiom in physical diagnosis that in one-sided lung disease with copious foul expectoration (more especially if there are signs of a cavity), the presence of a foreign body in a bronchus or bronchiole should be suspected, and its presence or absence proved by every means available, that is, radiology and bronchoscopy.

I have no doubt Dr. Murray Leslie used all the thoroughness and care for which he is so well known, and from the positive physical signs *plus* the negative history, was convinced that he could exclude the hypothesis of foreign body in favour of idiopathic disease. That he has had the courage to acknowledge that his conclusions in this case were incorrect, and to give full details of the ultimate result is likely to be of special interest and benefit to the profession now that the direct examination and treatment of the air passages, after having been a series of surgical triumphs on the Continent and America for some years, is at last becoming one of the burning medical questions of the day in these happy isles.

These cases are, after all, not very common, and since Killian's first case in 1897, there have been only about 200 recorded, according to the latest statistics in my possession (up to 1907).

Evacuation of the putrid contents of any accessible pulmonary cavity, and irrigation and perhaps drainage by pneumotomy, cutting down on the tube introduced into the cavity *per vias naturales*, is to be advised. Perhaps the utility of this letter will be increased if I just mention some of the chief conditions in which bronchoscopy has given the greatest assistance either in diagnosis or treatment: Tracheitis, tracheal papillomata, tracheal and bronchial ulceration and stenosis, adherent diptherial membranes, inspissated secretions and crusts in trachea and bronchi, and oesophageal growths, aneurysm, thyroid and thymus tumours as causes of dyspnoea from pressure on trachea. A recent case has been reported in which a diagnosis of dilatation of the aorta has been proved by

¹ BRITISH MEDICAL JOURNAL, 1906, vol. ii, p. 356.

² *Zeitschrift für Ohrenheilkunde*, Bd. 55.

¹ *Neurographs*, vol. i, No. 1, March, 1907.

tracheoscopy, and in which there were no other physical signs. The range of bronchoscopic possibilities is hence very great. The technique is to be acquired without any extraordinary difficulty, and so much experience has been accumulated, that the procedure with care is quite safe.—I am, etc.,

London, May 23rd.

ROBT. HY. SCANES-SPICER.

SIR,—I have read with interest the letter of Dr. William Hill, urging the importance of a bronchoscopic examination in cases of bronchiectasis, in which there is no obvious pathological cause such as tuberculosis, which would render the examination unnecessary. I would like to endorse fully Dr. Hill's remarks from my clinical experience of cases of this kind. Last year a case was under my care at the Great Northern Central Hospital, the patient being admitted with symptoms of pneumonia. Bronchiectasis at the right base was diagnosed, and this was complicated by septic pneumonia of the right lung. The ordinary methods of examination failed to reveal the presence of any foreign body, but at the necropsy a piece of bone was found lodged in the right bronchus which had given rise to all the symptoms. Had this patient been examined by the bronchoscope in the early stages of her illness I think the foreign body would have been seen, and could have been removed. I can recall other similar cases to that described. Since the prognosis in cases of this kind is extremely bad, septic pneumonia being almost certain to supervene if the case is left, in my opinion the bronchoscopic examination should always be resorted to early, so that the actual cause of the condition may be diagnosed, and if possible removed.—I am, etc.,

London, W. May 23rd.

W. H. WILLCOX, M.D.

SIR,—Dr. William Hill aptly points the moral of Dr. Murray Leslie's interesting case of foreign body in the air passages recorded in the JOURNAL of May 15th. It is a good example of the value to medical science which may accrue from the publication of our unsuccessful results. It cannot be too widely known that direct bronchoscopic examination is no longer a difficult procedure, and that it is likely to afford a most valuable method of investigation in obscure cases of pulmonary disease. Although in this case the disease was so advanced when the child came into the hospital that it was extremely doubtful if removal of the body would have effected a cure, yet the child had suffered from pulmonary symptoms for a considerable time, and, as the tack was situated in the left bronchus only 1 in. below the bifurcation of the trachea, there would probably have been little difficulty in recognizing and removing it.

I agree with Mr. Hill that this method should be employed even in cases in which no history pointing to foreign body can be obtained, for it is well known that such a history is often absent, and in cases in which an x-ray examination is negative, for the body may not be opaque, and I join with him in expecting that a routine bronchoscopic examination will in the near future take a recognized place in the diagnosis and treatment of such conditions as localized bronchiectasis.—I am, etc.,

London, W. May 25th.

HAROLD BARWELL.

SIR,—Without referring in any way to the case reported by Dr. Murray Leslie in the JOURNAL of May 15th, I should like to emphasize the value of direct vision laryngoscopy and tracheo-bronchoscopy, as described by Dr. W. Hill. After the meeting of the Balmatological and Climatological Society a fortnight ago, Dr. Hill gave a demonstration at the Torbay Hospital, and the ease with which it was possible to see into either bronchus or to the entrance of the oesophagus into the stomach was a revelation to most of those present. I therefore most heartily endorse all that Dr. Hill has said in his letter as to the value of this method of investigation, and am quite sure that examinations and operations are now rendered possible which were impossible by the ordinary method.—I am, etc.,

Torquay, May 26th.

WILLIAM ODELL.

TETANUS OCCURRING AFTER SURGICAL OPERATIONS.

SIR,—With reference to the paper published by Mr. W. G. Richardson in the JOURNAL for April 17th last, I beg to enclose notes of a case which has occurred in my practice:

A. T., male, aged 47 years, was admitted to the Kidderminster Infirmary on January 18th, suffering from extensive varicose veins of both lower extremities. He had been operated upon previously without benefit. An operation was performed on January 22nd. Five incisions were made on the left and three on the right side, varying in length from 2 in. to 4 in. The vessels were ligatured with catgut and the wounds closed with silk-worm gut. They were dressed on January 29th, when all were found to have healed per primam, and the sutures were removed. Two days later he was allowed upon the couch. His general condition was quite satisfactory.

On February 7th he was found to be suffering from well-marked symptoms of tetanus, rigidity of the muscles of the neck, and trismus, and he died the same evening, in spite of treatment, including injections of antitoxin, etc.

This is the only case of tetanus following a surgical operation in my practice, which extends over nearly thirty years. I was naturally much concerned, and in endeavouring to account for it I considered the many possible sources of infection. The catgut I use is prepared according to the directions of Sir William Macewen. It is stored in large glass jars. The one from which this gut was taken is in constant use, and I cannot help thinking that I should have had other cases if this was the source of the infection.

From my experience of tetanus, most of the cases occur in those who are associated with horses. This man had been a shoeing smith, and although he had not followed his occupation for two or three years I think it is possible that a bacillus managed to secrete itself about him, and was introduced by scratching, which we found he had indulged in.

I quite agree with Mr. Richardson that the importance of acquiring catgut is of great moment, but I am inclined to wait until the case against it is absolutely proved before relinquishing its use.—I am, etc.,

J. LIONEL STRETTON,

Senior Surgeon to the Kidderminster Infirmary and Children's Hospital.

Kidderminster, May 24th.

COAGULATION TIME OF THE BLOOD.

SIR,—Kindly allow me a last word with regard to Dr. McGowan's letter in your issue of May 15th.

No doubt it is perfectly excusable for Dr. McGowan not to know of my existence, but scientifically it is not excusable for him to establish a method without taking the elementary precaution of finding out what work of a similar nature has previously been done on the subject.

A description of my method appeared not only in an international journal of haematology (*Folia Haematologica*), but it can also be found in the textbook of Gravitz.

I agree with Dr. Addis that in the immense majority of cases the first drop of blood obtained coagulates later than the following drops, and this fact was also pointed out by Milfan several years ago.

It is for this reason, as I stated in my first letter, that I use the second drop as the one which indicates the coagulation time; the other drops being only employed as indicators.

Further, owing to the sensitiveness of the clotting time to disturbances, I would again insist on the importance of using tubes with an internal diameter of not more than 1 mm., because in larger tubes the fine filament of fibrin is pulled out with greater difficulty, or may even be lost sight of.—I am, etc.,

Laboratoire des Cliniques, Bordeaux, May 20th.

SABRAZÈS.

P.S. (May 24th).—My first letter, which has provoked a long and interesting reply from Dr. Addis, had no other object in view than to point out that the principle of the methods described by Drs. McGowan and Addis—that is, a column of blood in a glass tube, which is kept at a constant temperature, breaking, and drawing apart the fractured ends, until a fine fibrin thread is seen—is no other than that of my method, which I first published several years previously. I still maintain this statement. As to the rest, it is a question of details of application in technique and of personal opinion, and I feel that the

subject of coagulation of the blood is too complicated to be treated "au pied levé" in a correspondence column.

ACUTE THYROIDITIS.

SIR,—In the BRITISH MEDICAL JOURNAL of May 1st, p. 1064, Staff Surgeon Kenneth Jones published an interesting and very rare case of acute thyroiditis.

Allow me to state that this case, according to the description of it, belongs to a form of acute thyroiditis described first in English literature (*Journal of Laryngology*) in 1895 by me under the term *Thyreoiditis acuta simplex*—that is, an acute inflammation of the thyroid gland, ending in resolution without forming an abscess. Later, in 1904, Dr. de Quervain of Bern wrote an essay on this form (*Die acute nicht eitrige Thyreoiditis*).—I am, etc.,

Kjøbenhavn, May 8th.

HOLGER MYGIND.

HYPODERMIC INJECTION OF STRYCHNINE.

SIR,—In the JOURNAL of May 15th, in the report of the Medical Society of London, the use of strychnine injections in the treatment of shock was condemned by two speakers—Mr. Malcolm and Mr. Keetley. The objection would, I presume, equally apply to collapse from hæmorrhage or occurring during the course of acute disease. Now, like, I suppose, nearly every other general practitioner, I have for some years been using strychnine in these anxious emergencies. Some have recovered and some have died, but not in one single case have I been able to satisfy myself that the treatment did any good at all, or that any of these patients were in any way stimulated by the remedy. It is the fashion to use strychnine in all cases of collapse from whatever cause arising. It finds a place in the midwifery bag, and the nurse from the institute brings with her a hypodermic syringe and a bottle of strychnine tablets to use should the necessity arise. It is a very handy remedy, but is it any good?

Now strychnine is not an inert drug, and used as it so often is in cases which may fairly be said to be hovering between life and death it must have a very decided influence one way or the other for weal or for woe.

It is with the hope of drawing opinions from those who have more opportunity of looking into these matters than myself that I write these few remarks.—I am, etc.,

Milverton, Somerset, May 26th.

CHARLES RANDOLPH.

THE ASSOCIATION.

SIR,—In the Council report of 1908-9 regret is expressed "that the increase in the membership has not been more marked, in view of what the Association is doing for the medical profession." How can any one, other than the Council, wonder at this?

Since the Association has been broken up into Divisions, a great amount of superfluous printed matter has been constantly sent to them—dealing with subjects in which only a very limited minority take any interest—converting the old pleasant meetings of the Branches into a humdrum ordeal, without one item to interest or amuse the younger members. Further, unless there is in each Division a very energetic secretary or some enthusiastic member, no endeavour is made to reach the junior members of the profession, and to point out to them that, besides a very excellent JOURNAL, there are many advantages in being a member of the Association. It is a primary duty of the Council to devise means to arouse more enthusiasm rather than express regrets.—I am, etc.,

Harwick, N.B., May 24th.

JOHN R. HAMILTON.

RESEARCH DEFENCE SOCIETY.

SIR,—The Committee of the Research Defence Society have asked me to send you a copy of a letter which has been sent to the Secretary of State for Home Affairs, as follows:

Research Defence Society,
70, Harley Street, W.,
May 26th, 1909.

To the Right Hon. Herbert J. Gladstone.

SIR,—We desire, as members of the Research Defence Society, to call your attention to the following facts:

The Royal Commission on Experiments on Animals was appointed in 1906. It began to hear evidence in October of that year; and during 1906 and 1907 a great amount of evidence was given by many witnesses. So long ago as December 18th, 1907, the Commissioners decided that they did not wish for any

further evidence; but they met once more, on March 25th, 1909, to hear evidence on a special point. Apart from this one meeting in 1908, it is now nearly a year and a half since the Commissioners ceased to hear evidence; but they have not yet issued their report.

We are of opinion that this long delay is contrary to the public interest, and is likely to prejudice the public mind. We, therefore, beg you to exercise all your influence to hasten the issue of the report.

We remain, Sir,

Yours faithfully,

The letter has been signed by the Earl of Cromer, President of the Society; the Hon. Sydney Holland, Chairman of Committee; the Duke of Abercorn, Lord Avebury, Lady Bliss, Lord Robert Cecil, Lord Chylesmore, Sir Savile Crossley, the Hon. Walter Guinness, Sir Edwin Ray Lankester, Sir Frank Lascelles, Mr. Frederick Macmillan, the Earl of Malmesbury, Sir Patrick Manson, the Duke of Montrose, the Dean of St. Patrick's, Lord Rothschild, Mrs. Scharlieb, Professor Starling, Sir Reginald Talbot, Sir Frederick Treves, the Duke of Wellington, and the Bishop of Winchester.—I am, etc.,

STEPHEN PAGET,

Honorary Secretary.

London, W., May 26th.

Medico-Legal.

STATUS LYPHATICUS.

AT an inquiry in Chelsea on May 1st into the circumstances attending the death at Brompton Hospital of a boy aged 14, Dr. Spilsbury, of St. Mary's Hospital, stated that the immediate cause of death was syncope, brought about by the action of chloroform in a person suffering from status lymphaticus. The deceased had an enlarged thymus gland, and the heart was fatty, but there was no valvular disease. Death occurred before the commencement of the operation, and in spite of artificial respiration. The boy had chorea at the age of 7. It was stated by the mother that he had undergone ten previous operations for nasal trouble, but what anæsthetic was used seems to be uncertain. At Brompton Hospital chloroform was selected because the boy expressed a dislike for ether.

WORKMEN'S COMPENSATION.

Termination of an Award.

IN a case heard at Leeds on May 4th, the employers applied for an order terminating weekly payments on the ground that the applicant was fit to resume work. It appeared that he suffered an injury to his back in October, 1907. He then left work for some weeks, during which he was paid 18s. a week (half wages). He subsequently gave up work on the ground that the injury prevented his doing it; and in October, 1908, the county court judge made an award in his favour of 18s. a week. The ground of the present application was that he was quite fit to resume work. Dr. Barrs, Dr. Maxwell Telling, and Dr. Lister all gave evidence to this effect. Dr. Shephard, Dr. J. Taylor, and Dr. Towers, who were called on behalf of the workman, said that they were of opinion that he still suffered pain over the seat of the original injury, but they thought that he might go back to his work. The employers, however, refused to take him back. Judge Greenhow came to the conclusion that the man was cured, and terminated the compensation altogether.

Lead Poisoning.

IN cases which involve questions relating to industrial disease, the county court judges appear to rely more and more on the assistance of medical referees. In a case heard by Judge Ruegg at Burslem, compensation was claimed by the widow of a man who worked in an earthenware factory. Death was alleged to have been due to lead poisoning. Owing to a conflict of medical evidence his Honour sent the notes of the evidence to Dr. Kaufman, who reported that in his opinion the workman had died from acute inflammation of the kidneys, and that this acute nephritis was caused by lead. Upon this an award was made in favour of the applicant.

Injury to an Eye.

IN a case before Judge Ruegg at Stoke it appeared that the applicant, who suffered from a slight squint, met with an accident in which he received a blow on the head. He subsequently became totally blind of one eye, and an operation failed to restore the sight. Two doctors stated that the condition of the eye was consistent with the view that it was caused by the blow received. Two doctors called on the part of the employers said that in their view the accident had nothing to do with the injury, the eye having been defective before. The operation had been performed with a view to improving the sight. The applicant had been given a pair of spectacles which he had refused to use. The judge accepted the applicant's story. It was possible, he said, that a man's sight might be defective without him being aware of the fact, but such a possibility was remote and had not been proved in this case.

MEDICAL WITNESSES: A HARD CASE.

ROSACEAE writes that he has arranged with a locumtenent and booked rooms for himself and family at a watering place for the first fortnight in June. He has since been served with a subpoena to attend the county court as a witness on June 9th. (1) Is he compelled to attend the county court? (2) Can he claim hotel expenses, as he would have to stay the night? (3) Is he entitled to travel first-class?

. (1) He is bound to attend on his subpoena. (2) In the county court the expenses allowed to a medical witness are from 10s. to 20s. a day, and for travelling a sum reasonably paid for such purpose, but it must not be more than 6d. a mile one way. This is usually reckoned from his residence, and it is doubtful whether it could be claimed from a locality to which the medical man had gone for his holiday.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

A COMPLICATED CASE.

TRIO writes: A., B., and C. are independent medical practitioners in the same neighbourhood. A. went away for three weeks, leaving B. in charge of his cases. The patient whom he was engaged to attend in a confinement refused to accept B., and engaged C. Six weeks before her confinement she underwent a small operation, which was performed by C., with B.'s assistance. A fortnight later C. fell ill, and B. carried on the treatment for a fortnight. C. then resumed attendance. When the confinement came on, C. was ill, and B. attended until the return of A., who then resumed the care of his patient. He asks what would be a fair way of distributing the fees.

. As the patient declined to accept A.'s substitute and B.'s relation to the case was purely as a substitute for, or as assisting C., A. has strictly no claim to any share of the fees. B. is entitled to half the fee for the confinement, such fee as may be usual for the assistance rendered by him at the operation, and half the fee for the fortnight during which he attended, C. taking the balance. If, however, C. chooses to regard himself as having acted as A.'s substitute, he would get only half the fee for the operation, half the fees for the time he attended, and B. would get half the fee for the confinement, the customary fee for rendering assistance at the operation, and half the fees for the fortnight during which he attended and dressed the case, while A. would retain the balance.

ATTENDANCE AFTER INJURY INFLICTED BY UNQUALIFIED DENTIST.

LODGE SURGEON asks a question regarding the granting of a sick certificate to a member of the lodge to which he is medical officer under the following circumstances: M., a member of the lodge, is advised by his medical adviser—we do not gather from our correspondent's letter whether he is the medical man who advised M.—to have all his teeth extracted. Some friends recommend M. to employ a certain dentist who comes to the town once a week. This M. does; the dentist injects a local anæsthetic—presumably cocaine—into the gums and extracts all the teeth. Two days after the lodge surgeon is consulted and finds M. is suffering from (1) an overdose of cocaine; (2) alveoli torn away round the teeth, gums lacerated; and (3) mouth badly inflamed and gangrenous. The lodge surgeon finds out that the dentist M. employed is unqualified. While agreeing that M. is unfit for work and must remain indoors, the lodge surgeon does not consider that M. can claim sick allowance from his lodge, as in his opinion the injured mouth is due to the careless extraction of teeth by the unqualified practitioner, and that his claim in law is against the dentist. The lodge surgeon also considers that by signing a sick certificate granting such sick allowance he would be implicating himself as covering and condoning an unqualified dentist and render himself liable under the Medical Acts. The question therefore that lodge surgeon asks is this: Can he sign a sick certificate for M. and not render himself liable in any way under the Medical Acts?

. We consider he should sign M.'s sick certificate. M., as many others do, went to this dentist presumably in the full belief that he was a fully-qualified dental practitioner. Unfortunately for M. he has suffered the penalty for doing so, and has been compelled to call in the services of the lodge surgeon, who, clearly, in our opinion, should attend M. until the condition of his mouth is such that he is able to resume work, at the same time granting the necessary sick certificates as long as they are required. We do not see how, under any circumstances, the lodge surgeon would be held as con-

doning or covering this unqualified dentist; he is called to attend M. in his capacity as lodge surgeon for an accident for which, although due to the want of skill on the part of the unqualified dentist, M. is not to blame. M., as already pointed out, went to this man in the belief that he was qualified to extract teeth in a skilful manner. The remedy M. has, as our correspondent has already pointed out, is in a court of law, where he will, judging from cases which have appeared in court lately, probably obtain substantial damages. With reference to this we would point out that if M. takes the case to a court and he is denied medical advice at this time, his case against the dentist would be very materially weakened. We are further of opinion that M. can demand professional attendance from the lodge surgeon, as, under agreement, M. pays so much a week or month, as the case may be, for the services of the lodge surgeon.

The Services.

ROYAL ARMY MEDICAL CORPS (TERRITORIAL).

HONORARY COLONELS.

DIOPHONES writes to suggest that some of the senior retired officers of the Army Medical Staff be appointed honorary colonels of medical units of the Territorial Army. Up to the present only one such retired officer has been so appointed. There are very few positions connected with the army open to army medical retired officers, and they differ in that respect from combatant officers, many of whom are appointed honorary colonels; but the reorganization of the Territorial Forces affords some opportunity to place retired medical officers on the same footing as combatant officers. Surely men who have passed the best years of their lives in the army are entitled to consideration in bestowing those honorary appointments.

Universities and Colleges.

THE NATIONAL UNIVERSITY OF IRELAND.

THE Dublin Commissioners appointed under the Irish Universities Act, 1908, to make statutes for the general government of the National University of Ireland, have just issued the statute, comprising 57 chapters.

Registrar.

The salary of the first Registrar shall be £1,000; of his successors £500, rising £25 annually to £700.

Terms.

The terms shall be known as the Michaelmas, the Hilary, and the Trinity.

Matriculation.

The subjects of study for matriculation shall be proposed by the General Board of Studies, submitted to the Academic Council of each constituent college, and prescribed by the Senate after consideration of the General Board of Studies and the Academic Council of any constituent college.

Degrees.

1. The university may confer the following degrees upon students under conditions laid down in the statutes and regulations.

A.—In the Faculty of Arts.

Bachelor of Arts (B.A.).
Bachelor of Music (B.Mus.).
Master of Arts (M.A.).
Doctor of Literature (D.Litt.).
Doctor of Music (D.Mus.).

B.—In the Faculty of Philosophy and Sociology.
Doctor of Philosophy (D.Phil.).

C.—In the Faculty of Celtic Studies.

Master of Celtic Studies (M.Lit.Celt.).
Doctor of Celtic Studies (D.Litt.Celt.).

D.—In the Faculty of Science.

Bachelor of Science (B.Sc.).
Bachelor of Agricultural Science (B.Agr.Sc.).
Master of Science (M.Sc.).
Master of Agricultural Science (M.Agr.Sc.).
Doctor of Science (D.Sc.).

E.—In the Faculty of Law.

Bachelor of Laws (LL.B.).
Doctor of Laws (LL.D.).

F.—In the Faculty of Medicine.

Bachelor of Medicine (M.B.), Bachelor of Surgery (B.Ch.),
Bachelor of Obstetrics (B.A.O.).
Bachelor of Science, Public Health (B.Sc., Public Health).
Master of Surgery (M.Ch.).
Master of Obstetrics (M.A.O.).
Doctor of Medicine (M.D.).
Doctor of Science, Public Health (D.Sc., Public Health).
Bachelor of Dental Surgery (B.D.S.).
Master of Dental Surgery (M.D.S.).

G.—In the Faculty of Engineering.
 Bachelor of Engineering (B.E.).
 Bachelor of Architecture (B.Arch.).
 Master of Engineering (M.E.).
 Master of Architecture (M.Arch.).

H.—In the Faculty of Commerce.
 Bachelor of Commerce (B.Comm.).
 Master of Commerce (M.Comm.).

The statute sets out the conditions on which the degrees shall be conferred in the several faculties.

The University College, Dublin.

It is provided that this College shall have a President, who shall hold office until he shall have attained the age of 70. The stipend shall be £1,500 a year, but until an official residence, fuel, and light have been provided he shall be entitled to an annual sum of £500 in lieu thereof.

The Academic Council.

There shall be an Academic Council, which shall consist of the President and Professors of the College, with such Lecturers of the College as may be co-opted by the President and Professors.

The Faculties.

The Professors and Lecturers within the College shall be constituted into the following Faculties:

Arts, Philosophy and Sociology, Celtic Studies, Science—including Technology and Agriculture, Law, Medicine, Engineering and Architecture, Commerce.

The Stipends.

In Greek and Latin the Professors shall receive £600 and £700; in modern Irish, £600; in early Irish, £600; in anatomy, £200; in experimental physics, £800; in medicine, £250; in midwifery, £200; in surgery, £500; in French and romance philology, £500.

Officers of Residence.

The governing body shall appoint two or more deans of residence and one or more lady superintendents, hereinafter called "officers of residence," and shall require every student to enter under such one of these officers of residence, subject to the direction of his parents or guardians, as he may choose.

University College, Cork.

The statute for the University College, Cork, follows the same lines as that for the University College, Dublin, with the addition of chapters on pensions, the museums, and saving of rights and privileges.

The stipend of the President shall be £1,200 a year, and he shall in addition be entitled to residence, fuel, and light.

Amongst the stipends allocated to the professorships and lectureships are the following:

Professorships.

*Physics	£600	Surgery	£250
Zoology	550	Therapeutics	100
*Anatomy	600	Hygiene	50
Medicine	200	Materia Medica	50
Obstetrics and Gynaecology	200	Medical Jurisprudence	50
*Pathology	500	Mental Diseases	50
*Physiology	500	Ophthalmology	50

Lectureships.

*Physics	£300	Dental Mechanics	£50
*Botany	350	Dental Surgery	50
Ophthalmology	50		

* Full-time appointments.

University College, Galway.

The President shall receive a stipend of £800, with residence, fuel, and light. The professorships are about the same as in Cork. The stipends are appended:

Professorships.

*Physics	£350	Medicine	£150
*History, English Literature, and Mental Science	350	Surgery	150
*Chemistry	350	Obstetrics and Gynaecology	150
*Anatomy and Physiology	350	Materia Medica and Pharmacy	150

Lectureships.

Medical Jurisprudence and Hygiene (2) each	£40	Fever Cases	£20
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* Full-time appointments.

The teaching of Irish has been most abundantly provided for, so as in some sense to meet the clamour which has been raised in favour of an "Irish" national university. Thus in the Dublin University College there will be a professorship of Celtic Archaeology and Antient Irish History, £600; a professorship of Early Irish, £600; Modern Irish Language and Literature, £600; a lecture on Modern Irish History, £250; and a lecturer on Irish Language, £150 a year. In Cork University College there will be a professor of Irish Language and Literature at £450; a lectureship on Modern Irish, £150; a lectureship on Modern Irish History, £250; a lectureship in Irish Language, £250. In Galway the professor of Modern Irish will receive £300, on Celtic Philology, £150.

In the case of Galway there is a curious innovation. In a medical school, which in the senior subjects exists with some difficulty, there are to be two lectureships on Jurisprudence and

Hygiene at £40 each, and a lectureship on Fever Cases at £20. Some one is to benefit by this arrangement, but the western school will hardly have its glory increased by providing for a specialist in fevers.

THE ROYAL UNIVERSITY OF IRELAND.

The Calendar of the Royal University of Ireland for the year 1909 has now been published in two volumes, containing together some 1,300 pages.* The first volume, in addition to other information, shows that 4,135 students entered for examinations in the various faculties during the year 1908, and that 2,575 of them were approved. Of the remainder 1,377 were rejected, the balance either failing to appear at the examinations or retiring during their progress. The second volume furnishes copies of the papers set.

UNIVERSITY OF EDINBURGH.

UNIVERSITY COURT.

A MEETING of the Court was held on May 17th.

Recognition of Teachers.

Sir John Battie Tuke and Dr. John Keay conjointly were recognized as teachers in mental diseases.

Examiners.

On the recommendation of the Senatus, Dr. Martin, Director of the Lister Institute of Preventive Medicine, London, and Professor Ewing, Royal Naval College, Greenwich, were appointed additional examiners of theses submitted for the degrees of D.Sc.

Carnegie Trust.

Principal Sir William Turner was reappointed the university's representative on the Carnegie Trust for the universities of Scotland.

Usher Institute.

Mr. Sydney T. Champaloup, M.B., Ch.B., was appointed an assistant in the Usher Institute in connexion with the bacteriological work of the city.

UNIVERSITY OF BIRMINGHAM.

The Visit of the King and Queen.

The announcement of the intended visit of the King and Queen has already had a stimulating effect in relation to the university's appeal for more funds. During the last few days a number of donations, amounting together to nearly £1,000, have been promised. Others are expected to follow, and the council of the university will shortly publish the first list of contributions.

Honorary Degrees.

It is intended to confer honorary degrees on certain distinguished men of science, letters, medicine, and commerce at a special congregation in July. The congregation will probably follow immediately on the King's visit. These will be the first honorary degrees conferred by the university.

The Huxley Lecture.

Sir E. Ray Lankester, F.R.S., has resigned his appointment as Huxley Lecturer for the coming session, and Professor W. Bateson, F.R.S., of the University of Cambridge, has accepted an invitation to fill the vacancy. The Huxley Lecture will probably be delivered in October or November.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

COUNCIL ELECTION.

The Secretary has circulated the usual annual announcement that a meeting of the Fellows will be held at the college for the election of Fellows into the council. The date on this occasion will be Thursday, July 1st, at 3 p.m., and the vacancies are three in number, being occasioned by the retirement in rotation of Mr. A. W. Mayo Robson, Sir W. Watson Cheyne, Bart., C.B., and Mr. R. Clement Lucas. Blank forms of the requisite notice from a candidate and of his nomination may be obtained on application to the Secretary, and must be received by the Secretary, duly filled up, not later than Friday, June 4th. The voting papers will be distributed to each Fellow, whose address in the United Kingdom is registered at the college, on Tuesday, June 15th. Our usual analytical list of the members of council, giving their date of election or re-election will be found in the JOURNAL of May 22nd, pp. 1271-2, and we have added, as usual, a note of the proportional representation of the metropolitan medical schools and the provinces.

We are informed that Mr. Clement Lucas, and probably Sir W. Watson Cheyne, will offer themselves for re-election, and we understand that Mr. W. Harrison Cripps and Mr. W. H. Jessop, both of St. Bartholomew's Hospital, will be candidates, the latter as an ophthalmic surgeon.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

FELLOWSHIP EXAMINATION.

The following candidates have been approved at the examinations indicated:

FIRST FELLOWSHIP.—R. H. Barter, F. C. Crossle, J. L. Lunham, Captain I.M.S.; P. M'Cartan, S. A. M'Sweeney.
 FINAL FELLOWSHIP.—A. Chalmers, Captain I.M.S.; J. H. Dauber, S. Endlish, T. H. Hay.

THE ROYAL COLLEGE OF SURGEONS OF
EDINBURGH.

New Fellows.

THE following gentlemen were elected Fellows at a meeting of the College held on May 19th: J. M. Christie, J. Gilmour, R. T. Jupp, A. D. Macintyre, J. S. Mitchell, G. Raffan, H. Spiers, C. E. Tewsley, R. W. Townley.

Medal Competitions.

The Bronze Medal and Microscope presented to the College by Colonel William Lorimer Bathgate, in memory of his late father William McPhune Bathgate, F.R.C.S.E., Lecturer on Materia Medica in the Extra-Academical School, was awarded to Miss Marion Macintyre.

The first annual award of the Ivison Macadam Memorial Prize in Chemistry, consisting of a bronze medal and case of instruments, was made to Mr. C. H. Kembell after a competitive written examination in chemistry.

APOTHECARIES' HALL, DUBLIN.

THE following candidates have been approved at the examinations indicated:

FIRST PROFESSIONAL.—G. M. Mayberry, B. J. M. Neary, M. O'Donnell.

THIRD PROFESSIONAL.—E. Murphy, J. J. O'Mullane, G. Andeen.

FINAL.—G. H. Fisher, J. J. O'Mullane, J. H. Nichol, S. E. David.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved at the examinations indicated:

SURGERY.—H. H. Clarke.

MEDICINE.—†J. J. Cyriax, †A. H. C. Dawes, †J. A. Laughton.

†W. E. North-Smith.

FORENSIC MEDICINE.—J. A. Koch, J. W. Williams.

†Section I.

†Section II.

Obituary.

WILLIAM WOTHERSPOON IRELAND, M.D. EDIN.

On May 17th Dr. W. W. Ireland peacefully passed away at his home, Victoria Terrace, Musselburgh, in his 77th year. The son of an Edinburgh publisher of some note in his day, and was a lineal descendant of Mrs. Welsh, daughter of John Knox, the Reformer. He studied medicine at Edinburgh University and in Paris, graduating as M.D. Edin. in 1855. He obtained an assistant surgery in the H.E.L.C.S., and was attached to the Bengal Horse Artillery throughout the Mutiny. During the siege of Delhi (of which he afterwards wrote an account) he saw Lieutenant (now Lord) Roberts wounded, and attended him; finally, after seven months' campaigning, Ireland himself received the wound of a bullet which destroyed one of his eyes, and passing round the base of the skull towards the opposite ear was extracted from that situation. This wound led to his retirement from the service, and after some time spent in a prolonged convalescence at Madeira and a sojourn on the Continent (during which he wrote a novel, *Randolph Methyl: A Tale of Indian Life*), he returned to his native country to take up the post of Medical Superintendent of the Scottish National Institution for Imbecile Children at Larbert, succeeding his friend Dr. Brodie, whose obituary he published in the *Journal of Mental Science* as recently as April last. For several years Dr. Ireland filled this post with much distinction, taking the utmost scientific interest in his work; and in 1877 he published the result of his observations in a large volume entitled *On Idiocy and Imbecility* in the first edition, and later (in an extended form) *The Mental Affections of Children*. This book obtained the position of a classic on the subject of which it treats, and laid the foundations of a classification of the varieties of idiocy and imbecility which has been widely chosen. Dr. Ireland's literary efforts were not, however, restricted to the speciality which he had chosen; his linguistic attainments affording him ready access to whatever of neurological and psychiatric interest appeared in the publications not only of this country and America, but of the Continent, and he was a voluminous contributor to medical journals (and especially to the *Journal of Mental Science*) of reviews and digests of all that was notable in this department of medicine. He wrote several important articles in Hack Tuke's *Dictionary of Psychological Medicine* and in the *Edinburgh Medical Journal*. Dr. Ireland had always a bent for historical research and delighted in studying historical characters from the standpoint of the

psychologist, as may be seen in his interesting works, entitled *The Blot upon the Brain* and *Through the Ivory Gate*; and of late years he had been engaged in dealing with the period of the Commonwealth and of the Civil War, and published in 1905 *The Life of Sir Henry Vane*.

On the fiftieth anniversary of his graduation Dr. Ireland was the recipient of a jubilee gift and illuminated address, subscribed for by numerous friends. Dr. Clonston, in making the presentation, referred to the varied and valued nature of Dr. Ireland's work, and congratulated him on his having made his mark, not only in medicine but "in literature, in science, and in history, and on his having opened up a new path in biography by the application of medico-psychology and studies in heredity in the elucidation of the lives of men who have made history."

Dr. Ireland's personal character endeared him to all who knew him. Of distinguished personal bearing and of keen mental activity, his manner was unassuming, and with earnestness and love of justice and truth he combined a geniality of manner and pleasing humour which rendered him a welcome guest at the medical gatherings, both at home and abroad, to which he was a frequent visitor.

After his resignation of his post at Larbert, Dr. Ireland for some years had a private establishment for feeble-minded children at Prestonpans and at Polton, but retired, after his wife's death, to Musselburgh. He leaves behind him a son, Dr. Thos. Ireland, late of the West India Medical Service, and a daughter to mourn his loss.

ERNEST ALFRED SNAPE, M.D. BRUX., L.R.C.P. LOND.

WE regret to have to record the death of Ernest Alfred Snape, who died at his residence, 41, Welbeck Street, on May 11th. He was the eldest son of the Rev. W. A. Snape, M.A., for many years Vicar of Bury St. Edmunds, and was born in London in 1864, educated at the Merchant Taylors, Bury St. Edmunds Grammar School. Afterwards he became a medical student at Charing Cross Hospital, where was Gold Medallist and Pereira Prize-man. He became L.S.A. in 1887, L.R.C.P. Lond. in 1889, and M.D. Brux. in 1893.

He held the posts of House-Physician and of Electrical Assistant at Charing Cross Hospital, and afterwards was for some time Resident Medical Officer at the Welbeck Street Dispensary. When he gave up this appointment, he started in general practice in Welbeck Street, where he lived till the time of his death.

He was Honorary Physician to the Cripples' Home, Marylebone, and of the Governesses' Benevolent Institution, and was at one time President of the Brussels Medical Graduates' Association, a Fellow of the Royal Society of Medicine, and of the British Balaenological and Climatological Society. He was recently elected a Representative of his Division on the Metropolitan Branch Council of the British Medical Association.

He was joint author with Dr. W. K. Sibley of a report on all the special hospitals in London with reference to the question of hospital abuse, which was prepared on behalf of the Hospital Reform Association, of whose Council he was a prominent member. This report was published in the *BRITISH MEDICAL JOURNAL* in April, 1897, and also in the *Lancet* about the same time.

Dr. Snape was an active Volunteer, and served as Captain in the R.A.M.C. London Companies, and at the time of his death was Captain in the 3rd London Field Ambulance R.A.M.C. 1st London Division of the Territorial Force. For many years he was an enthusiastic politician, and served as a member of the St. Marylebone Borough Council, but his increasing practice compelled him to retire some time ago.

Dr. Snape will be deeply regretted by a large circle of friends and patients. He was a good and kind friend and a staunch and loyal colleague, and always most ready to help those in need of his professional assistance. He had naturally a very cheerful disposition and genial manner, and was gifted with a considerable amount of optimism.

For some years he had had slight attacks of rather indefinite abdominal symptoms, but never severe enough to lay him up, but on Monday, May 3rd, typical symptoms of appendicitis appeared, and although successfully operated upon by Sir Watson Cheyne he succumbed to an attack of pneumonia a week afterwards. His widow was the daughter of Mr. F. Hahn, C.E., of Mexico.

The funeral took place on May 14th at St. Mary-lebone Parish Church. The first part of the service was conducted by the Rev. F. Benson-Welsh, brother-in-law, assisted by the Rev. Horace Snape, brother. Nearly 100 wreaths and crosses were sent, and the church was crowded with friends and patients, including the officers and non-commissioned officers of the 3rd London Field Ambulance, Captain Langford-Lloyd and permanent staff of the R.A.M.C., representatives from the Governesses' Institution, etc. The body was afterwards cremated at Golders Green. The ashes were deposited in the Highgate Cemetery Columbarium.

CHARLOTTE LOUISA ELLABY, M.D., L.S.A.,

CONSULTING OPHTHALMIC SURGEON TO THE NEW HOSPITAL FOR WOMEN, LONDON.

It is with great regret that we record the death of Miss Ellaby, M.D. Paris, L.S.A. Lond., which took place on May 14th at her house in Harley Street, at the age of 55.

Charlotte Louisa Ellaby was the youngest daughter of the late Rev. J. W. Ellaby, of Woodstone, Peterborough, and it was only by the exercise of the most indomitable pluck and perseverance that she was able to enter her chosen profession. She graduated in medicine in Paris in 1884, embodying in her thesis the fruits of research work in ophthalmology undertaken while she was a student. In the autumn of that year, on the recommendation of Mrs. Garrett Anderson, M.D., she went out to Bombay to join Dr. Edith Pechey, first at a temporary hospital and afterwards as second physician to the Cama, a Government hospital for women and children. Here Miss Ellaby worked most successfully, not only in the special eye department which she inaugurated, but also in a very large out-patient department and in an increasing private practice.

After some years' work in India, desiring to devote herself entirely to ophthalmology, she resigned her appointments and returned to England. She then passed the examination of the Society of Apothecaries (which had recently been reopened to women), in order to have a registrable British qualification.

In 1890 Miss Ellaby was invited by the committee of the New Hospital for Women to organize an eye department in connexion with the hospital, and was appointed its first ophthalmic surgeon. Here she worked happily and with the success which waits upon enthusiasm controlled by the true scientific spirit, until failing health, fought with a courage little short of heroism, compelled her resignation three years ago. In the winter of 1894-5 Miss Ellaby returned to India for a few weeks, her services having been specially requisitioned to perform a double cataract operation upon the Rani of Jamnagar. The operations were successful, but it was partly to this visit to India that Miss Ellaby attributed her subsequent ill-health. At the time of her death she was Consulting Ophthalmic Surgeon to the New Hospital for Women, Lecturer on Ophthalmic Surgery to the London School of Medicine for Women, and a member of the Faculty of Medicine of the University of London.

Her literary contributions to scientific journals included essays on the amplitude of convergence and on the action of strychnine and the constant current on the normal eye, and a report on a series of cases of retinitis observed in the wards of the New Hospital and elsewhere.

WILHELM ENGELMANN,

PROFESSOR OF PHYSIOLOGY, BERLIN.

Our Berlin Correspondent writes: Professor Th. W. Engelmann, du Bois-Reymond's successor in the chair of Physiology at the Berlin University, died on the 20th instant in his 66th year.

Engelmann was a Saxon by birth, and studied in Germany, but it was in Holland that his chief lifework was done. For more than thirty years he formed one of the chief ornaments of the Utrecht University. On du Bois-Reymond's death in 1897 Engelmann accepted a call to fill the vacant place, and thus became Professor of Physiology and Director of the Physiological Institute in Berlin, a post which he held until last Easter recess, when ill-health obliged him to resign it.

We owe to Engelmann a large number of valuable contributions to physiological science, the most important being, perhaps, his researches on the subtler relations subsisting between nerve and muscle, on the electric phenomena of nerve and muscle, and on the development of pseudo-electric organs. He was one of the first to investigate the difficult problem of psycho-physiological processes in the lower forms of life, and in his researches on the relation between light and plant life he laid the foundations of the theory of chemotaxis.

In private life Engelmann was communicative, thoroughly cultured, and of a gentle humour. Music was his passion, and even in the stress of work he never neglected his violoncello, which he played with taste and skill.

The death is announced, at the age of 62, of Dr. HOPGOOD, of Sunderland. He had an attack of illness last July, but appeared to have recovered; on May 22nd he was found dead in bed, having evidently expired peacefully in his sleep. Thomas Frederick Hopgood was born at Chipping Norton, where his father practised medicine. He studied at University College, London, where he won the Fellowes clinical medal, and was medallist also in surgery, in medical jurisprudence and pathology. He took the diplomas of M.R.C.S., L.R.C.P. Lond., and L.S.A. in 1867, and after acting as House-Surgeon at the Royal Surrey County Hospital was appointed to a similar office at the Sunderland Infirmary. In 1874 he became Honorary Surgeon to the Sunderland and Durham County Eye Infirmary, then carried on in a small house, and continued to work for it for thirty-five years; he became greatly interested in its development, and was undoubtedly the means of getting the present institution built. For thirty years he was Surgeon to the Sunderland and Bishopswearmouth Infirmary, and on his retirement about a month ago he was presented with his portrait by the committee. Dr. Hopgood was widely known and respected throughout the town and district, and regret at his death is general among all classes of the community. He had been a widower for many years, and leaves three daughters and three sons, two of whom are now studying for the medical profession.

Public Health

AND

POOR LAW MEDICAL SERVICES.

BOARDS OF GUARDIANS AND EXTRA MEDICAL FEES.

PARISH DOCTOR (a district medical officer) writes saying that he has recently attended Mrs. S—, a pauper in receipt of medical relief, who required attention for five weeks after confinement on account of whiteleg. Our correspondent made a claim for £2; the guardians replied in writing that though they acknowledged his special kind attention to this patient, they objected on principle to pay more than the ordinary fee. He asks, Have I any remedy?

* By Article 183 of the Consolidated Order of the Local Government Board, bearing date July, 1847, our correspondent is clearly entitled to be paid a fee of £2 for his attendance on this case of phlegmasia dolens, which must be regarded as a puerperal affection unmistakably due to the antecedent confinement. We therefore recommend him to insist on this amount being paid. The other case on which he refers to us for advice we recommend him not to press further. Article 181 is permissive.

POOR LAW OFFICERS AND SUPERANNUATION. DISTRICT MEDICAL OFFICER writes as follows: I have just resigned after eight and a half years' service a position as district medical officer to one of the unions, and as my retirement is not due to "ill health or bad conduct," the board of guardians will not allow my claim for return of contributions to the superannuation allowance. The matter seems very unjust to me.

* We are sorry to find our correspondent in the position he describes—unable to claim any return of his contributions already paid towards superannuation, but Clause 8 of the Superannuation Act is quite clear on the point, and prevents any return of contributions after voluntary resignation of office even if the guardians wished to do so.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL.
The offices of the British Medical Association and of the British Medical Journal are at 429, Strand, London.

Communications respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the British Medical Journal is *Articulate, London*. The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

TELEPHONE (National).—

2531, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.

2530, Gerrard, BRITISH MEDICAL ASSOCIATION.

2534, Gerrard, MEDICAL SECRETARY.

ORIGINAL ARTICLES AND LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

CONFIDENTIAL SECRETARIES AND TYPISTS.

TYPIST asks how those medical men who employ typists and other lay helpers in their notes and correspondence arrange for professional secrecy? I am minded to get such a helper myself, but I hesitate because I do not see how I can keep matters which at present I regard as private, private then. I may say that, doing only special work, I write somewhat full notes.

MEMORY TRAINING.

R. E. D.—We have no special knowledge of the system of memory training in question, but have reason to believe that system may do much to develop the faculty of memory in persons in whom it is defective. Besides increasing the facility with which various things are remembered, a properly arranged system may develop what is even more often lacking than mere capacity to remember, namely, the power of storing facts in some orderly fashion ready to bring out as occasion arises. It is impossible, however, to assess the probable value of such training in the case of any individual learner, or to say whether it is worth while to pay any given sum for printed instructions how to follow a system. It would not be difficult for any thoughtful person to devise for himself a system suitable to his own particular needs.

ANSWERS.

PRURITUS PUERILI.

W. W. writes: "Baffled" (BRITISH MEDICAL JOURNAL, May 15th, p. 1216) does not mention the use of any constitutional treatment. It would be worth his while to reduce the patient's diet to 20 or even 12 oz. of solid food per diem, in two meals. The latter was the figure under which Luigi Cornaro prolonged his life to 100 years. I have known it successful in pruritus ani. Liquids not alcoholic may be taken freely, but milk must be calculated as one-third solid.

LETTERS, NOTES, ETC.

AUSTRALIA FOR THE SONS OF MEDICAL MEN.

DR. RICHARD ARTHUR (President, Immigration League of Australasia) writes: Some time ago you were so good as to allow me to call attention to the opportunities which life on the land in Australia offered to lads and young men, and to point out what excellent avenues to this the various Government agricultural colleges were. At these institutions an admirable training in scientific and practical agriculture in all its branches can be obtained at a cost of from £20 to £30 a year, including first-class board and lodging. After finishing the course fertile land in a district of good rainfall can be obtained on reasonable terms for either sheep, wheat, dairying, fruit growing, or mixed farming. As a result of this many doctors wrote to me, and some have already sent out their sons. I am at present in London, and will be glad to correspond with any others or arrange an interview with them. My address for the next two months will be the Royal Colonial Institute, Northumberland Avenue, W.C.

I have visited most of these colleges myself and so can speak from experience. I hope to make arrangements for a lantern lecture on the Australian agricultural colleges, to be given at Belfast when the British Medical Association is meeting there, and to be present myself to see any medical men who may desire further information.

AN APPEAL.

IN the JOURNAL of May 15th an appeal was published on behalf of a medical practitioner in Dublin who through no fault of his own is in distressed circumstances. It is signed by the Presidents of the two Royal Colleges in Dublin, by Sir John W. Moore and Sir Charles R. Cameron. The following subscriptions have been received:

	£	s.	d.
Sir Charles A. Cameron, C.B., Dublin	...	5	0
Dr. Ninian Falkiner, Dublin	...	1	0
Dr. Charles Gibbs, London	...	2	0
"Anonymous" (University of Leeds)	...	2	0
John Brown, Esq., M.D., D.P.H., Buncup	...	0	6
E. C. Cornack, Esq., M.D., Villa d'Alsace, Vichy	...	1	0
Postal Order, Devonshire Street, London, W.	...	1	0
Well-wisher, Boscombe, Bournemouth, Hants	...	1	0
"Anon." Exeter	...	1	0
Sir John Moore, M.D., Dublin	...	2	0
Dr. I. Burney Yeo, London	...	2	0
Dr. Maguire	...	0	6
Sir Stewart Woodhouse, Dublin	...	3	0

"AURAL AND OTHER VERTIGO."

IN a further note on the advantage of wearing loose neck clothing, Dr. W. G. Walford of Finchley Road, N., records several instances in connexion with sea sickness. They concern persons who, previously indifferent or bad sailors, found themselves quite comfortable in really bad weather after having adopted for some months the practice of wearing loose neck clothing. Dr. Walford gives some further particulars of the attack of cerebral congestion in his own person which after four months he found to be due to neck clothing not tight, according to conventional ideas about collars and the like, but tight enough to interfere with free venous flow from the head (see BRITISH MEDICAL JOURNAL, May 1st, p. 100). In addition to giddiness and other symptoms he had diplopia for eight days, and could not walk steadily, especially in the dusk. A thrombus in a small cerebellar artery was diagnosed. His illness, he says, resembled what is known by veterinary surgeons as "staggers." In horses this is due to tight throat lashes, and in dogs to tight collars.

MEAT POISONING AND COOKEEY.

DR. A. W. GILCHRIST (NICE) writes: Dr. McWeeney's recent observations on an outbreak of meat poisoning at Limerick (BRITISH MEDICAL JOURNAL, May 15th, 1909, p. 1171) are of a nature that should excite widespread attention. Why is such a pathetic disaster possible? Is it not a bitter reproach to our boasted scientific age that nine valuable young lives should fall a sacrifice to one of the least unavoidable of causes? Dr. McWeeney remarks, in concluding his exceptionally able report, that the practical lesson to be learnt from this is twofold. First, it indicates the need for the abolition of the private slaughterhouse... secondly, it emphasizes the danger arising from the use of old, stale scraps of meat. "Especially of beef," adds the writer. May I suggest another reflection of a general order? Should it not invoke the necessity for more thorough food reform? It is difficult to conceive of such a disaster happening in France. In an industrial school managed by a French sisterhood the whole economy of the kitchen would probably be different in every essential respect. The amount of meat consumed would be smaller, but the mode of preparation would be more elaborate and careful. Much more time and interest would be devoted to the kitchen. Leguminous products of all kinds would be in extensive use; peas, beans, and lentils, with their many varieties and substitutes, would be in constant requisition, and would further be wholesomely and palatably prepared. The habitual use of "purées," "pâtes," and "potages," entailing as they do lengthy heating in their preparation, would remove the danger arising from the habitual consumption of hastily prepared meats. A large poultry yard would be the natural and provident annex of the pantry and kitchen, and eggs therefore in constant use. Nor would the domestic economy I refer to be disturbed by complicating systems of dietetics. A good *cuisine bourgeoise* is unexclusive, and aims only at providing an ample, safe, and appetising table.

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A Clinical Lecture

ON THE

NEUROTIC ELEMENT IN DISEASE.

DELIVERED AT THE LONDON SCHOOL OF CLINICAL
MEDICINE.

BY

GUTHRIE RANKIN, M.D., F.R.C.P. LOND. AND ED.,

PHYSICIAN TO THE BREADSTREET AND ROYAL WATERLOO
HOSPITALS, LONDON.

SINCE the time when Adam and Eve were banished from the Garden of Eden mankind has been familiar with disease; but as the race has progressed from one stage of development to another, civilized humanity has gradually been learning how to mould its habits of life so as to rob sickness of many of its terrors, and subdue it to the influence of laws by which it is ever becoming more completely and effectively controlled.

In furtherance of this aspiration for betterment, scientific hygiene is constantly recording fresh triumphs. Some diseases, such as typhus fever, small-pox, scurvy, and Malta fever, are thoroughly under the control of preventive measures; while others, such as diphtheria, enteric fever, tuberculosis, and scarlet fever, though not yet so completely governed, are capable of being limited in the extent of their distribution and modified in the severity of their manifestations. These disorders belong, it is true, to the specific or communicable class of disease which preventive medicine most readily combats, but in other varieties of sickness no less remarkable progress has been made in the direction of amelioration.

Syphilis, in spite of all its dreadful possibilities, is amenable, if properly managed, to the influence of mercury, the iodides, and apparently also to the more recently discovered arylarsenates; myxoedema can be cured by thyroid gland extract; malaria sacrifices its protozoal parasites at the shrine of quinine; chlorosis vanishes under the revivifying influence of iron and arsenic; and the present investigations into the nature of cancer may be trusted to devise, in the near future, methods of prevention and treatment by which that widespread scourge will be held in check.

In the field of surgery the advances of scientific discovery and the improvement of technique have been no less remarkable than in medicine, with the result that many disorders which were formerly regarded as hopelessly incurable are now brought within the scope of successful treatment.

But while great gains have been achieved in the conflict against organic and specific disease, the record is by no means so satisfactory when we come to investigate the vast field of functional disorders with which we are brought in constant contact. It may be safely asserted that our knowledge of functional disease is still of the most limited description, and yet it must be confessed that functional symptoms are rapidly acquiring increased pre-eminence in every variety of illness. Those who come after us will certainly find, with more accurate and penetrating methods of research, minute organic changes to adequately explain many manifestations which, in our ignorance to-day, we label functional.

This neurotic tendency is becoming so general, that not only are the ordinary organic and specific disorders influenced by its complicating coexistence, but it has also come to establish for itself a symptom-complex known under the name of "neurasthenia," which though possessed of such distinctive characteristics that it can be scheduled as a disease-entity, is yet, so far, unaccompanied by any organic changes by which a *post-mortem* explanation is yielded. All we are able to say is that the seat of disorder is situated somewhere in the nervous system, and that the manifestations of a condition with which we are becoming more and more familiar, are obviously dependent upon disturbance of the great nerve supply by which the activity of the bodily functions is controlled and the stability of the mind itself provided for.

It has been asserted that the main cause of this great change which is taking place in nerve resistance to the powers of evil is the more rapid pace at which the world

moves, and the consequent increased strain which daily life and duty imposes upon each individual's reserve of energy. That, in addition to these necessary calls upon our vitality, we are becoming too luxurious, and are striving to enter the kingdom of Heaven by the preaching and practice of a gospel of comfort rather than by the older doctrine of self denial and hard work.

Whatever the true explanation be, it is certain that we, as physicians, are coming to recognize that the old order of things in disease is rapidly changing, and that in our management of the sick, new conditions are creeping in which are tending to modify the course of many organic ailments, and are compelling us to direct our methods of treatment so as to counteract their hindering influence upon the natural progress of this, that, or the other disorder.

Many diseases, indeed, are so different now from what they used to be that we believe them to be undergoing a change in type. This is not surprising when we consider how mankind is gradually being altered by the influence of circumstances and surroundings, and we begin to appreciate that the greatest change both in man and his ailments is dependent upon a progressive development of nervous instability. It may be objected that the perception of an increasing nervous element in disease depends in great measure on the preconception or bias of the observer, and to some extent this may be true.

But the observation of this growing neurotic influence is no longer that of a few physicians only; it has become the admitted experience of most men who are engaged in active work; so that such criticism may be regarded as applicable in only a comparatively small number of instances.

It is not my intention to direct your attention this afternoon to those neurasthenic conditions which may be said to be entirely central. The manifestations by which ordinary neurasthenia declares itself are familiar to most of us, but I may be allowed to recount the following epitome of its multifarious symptoms, in order to emphasize the fact that the only satisfactory explanation of such a complex picture is to regard it as the outcome of a central or constitutional upset: A constant sense of weariness and inability for sustained mental or physical exertion; impairment of digestion; disturbed sleep; restlessness and irritability; occipital or vertical headaches; vasomotor instability; feebleness of volition, loss of memory, and mental depression; and absence of physical signs, indicative of organic disease. What I desire more especially to consider with you to-day is the effect of a generalized neurasthenia or of the neurotic habit upon the progress of ordinary illnesses. And, in the first place, may I say that in my experience the distinctively neurasthenic type of person does not come out of surgical operations well. An operation is got through as in average cases, but no sooner is all anxiety as to recovery over than the neurotic element asserts itself more strongly than before, and ultimate convalescence is delayed—sometimes indefinitely. Here is a case illustrative of my meaning, and it is one of many I could mention:

A married lady, aged about 48, who belonged to a family of a highly neurotic type and who had herself suffered for several years from anaemia and neurasthenia, developed indefinite discomfort in the region of her appendix. This discomfort increased until it became actual pain, but was never accompanied by pyrexia or any evidence of active inflammatory mischief. In the right iliac fossa a sausage-shaped mass could be felt, which varied in size from lime to lime, and was situated in the midst of a resistant elastic mass. She very much dreaded operation, but she was advised that without removal of the appendix she need not expect any relief to her sufferings. In due course the appendix, which was found glued to the caecum, was removed, but recovery was so slow that the patient was unfit to return home for two months. Her nervous system became completely unyielding; she slept badly, could neither take nor digest food except in the smallest quantities, was constantly depressed, became exceedingly thin, suffered from general depression, and was altogether distinctly worse in her general condition of health, and especially in the state of her nervous system, than she had been before the operation. After her return home she did not recover, but for the following seven months was a confirmed invalid; even the pain for which her operation had been principally undertaken returned as badly as before.

I do not suggest that an operation was unjustified; I merely relate the case as one of a type in which surgical

interference is not well tolerated, and in which due consideration ought to be given to the general health as well as to the local condition before surgical methods of treatment are employed. If an operation is imperatively demanded to save life, all the consequences which may ensue must be risked; but there are many instances where the urgency is not great, and in some of them sufficient allowance is not made for the neurotic element which sometimes renders the diagnosis a little uncertain, and always impresses upon the physician the likelihood that complete recovery will be slow. The wound may heal as well and as speedily as in the case of other patients, but the nervous system does not rebound well from the shock of operation, and for a longer or shorter time—and much longer than most surgeons will admit—remains difficult of control and rebellious to restorative treatment.

It would be obviously impossible in the course of one short lecture to enumerate every disease the usual photograph of which may be blurred by the interpolation of neurotic lights and shadows. I desire only to refer to the subject in broad outline, in the hope that I may succeed in stimulating your interest sufficiently to make you investigate your cases with minds alert to the frequency with which the nerve element may not only modify the picture but even transmute it almost beyond recognition.

Let us, in the first place, glance for a moment at the diseases of the brain and nervous system generally. I need scarcely remind you that the various paræsthesiæ of functional disturbance are liable to cause in the neurasthenic mind the most grave dread of organic disease. Especially do neurasthenic patients readily fall into the fear of an imminent paralysis or apoplexy.

As an instance, I may quote a lady of 64 years of age who has come to see me from time to time over many years, and always with the same tale of numbness in her fingers and toes, a sense of formication down her right side, occasional headache and vertigo, and a record of failing memory and intellectual confusion. She is of a gouty habit of body, has considerable tension in her circulation, thickened vessels, and ineffective action of the bowels with a consequent liability to recurrent conditions of fecal accumulation in her colon. Up to the present she has always been restored to comfort and confidence by remedies directed to the proper evacuation of her bowels and the reduction of her arterial tension.

The neurotic predisposition of the patient is awakened into activity by an autointoxication from her intestine, and so soon as the primæ viæ are thoroughly cleared her normal equanimity is restored. But the manifestations, which so far have been functional only, point the way clearly to hidden rocks of organic danger ahead, and lend value to symptoms which, though not at present synonymous with the paralysis which she dreads, foreshadow to the professional mind a possible future verification of her fears.

Another patient—this time a full-blooded, freely-living man of 50 years of age, whose family has been gouty through many generations and several of whose ancestors have succumbed to apoplexy—comes to me periodically in terrible anxiety that he is on the verge of falling a victim to what he calls "the family scourge." He is a highly strung man and knows just enough about the signs of apoplexy to have his fears aroused by every headache that befalls him. So far, his headaches have all been of the occipital neurasthenic type and have been accompanied by such unmistakable confirmatory evidence of a passing nervous tension that one has been able to reassure him and to set his health re-established by suitable dietetic and medicinal correctives. But, again, the presence of high arterial pressure, a low specific gravity of the urine, occasional vertigo, and a sluggish portal circulation cast the shadow of organic illness across these chapters of functional disturbance in his life-history, and the problem recurs with increasing insistence whether the functional storms of his present period of life are not the heralds of a coming organic tempest that will some day add another victim to the roll of his family record.

The occurrence of "fits" is an incident in the history of many illnesses which gives rise often to difficulties in diagnosis and in differentiation between a functional and an organic foundation. Two cases of a widely different type, which were sent to me on account of what were described as "fainting attacks," are instructive in this connexion.

One of them, a young lady of 23 years of age, was of neurotic type, and was a descendant of a family through many generations of which there could be traced a strain of nervous instability. The girl, though shy and retiring in manner, was healthy-looking and without any definite organic fault.

Her health had been quite good until about a year before her first visit to me, when she began to complain of lassitude, disturbed sleep at night, failing appetite, vertical hiccoughs, vertigo, constipation, and fainting attacks. These attacks were said to be accompanied by temporary loss of consciousness, by pallor, palpitation, and dyspnoea, and were always followed by headache, but she had never bitten her tongue, never been convulsed, never passed water involuntarily, and never hurt herself in falling. The story did not suggest epilepsy, and her heart was normal. At first sight it seemed as though the "fainting fits" were either purely neurotic or merely a consequence of some passing gastric disturbance. But on question and investigation she proved to have a slight degree of intention tremor, a certain amount of nystagmus on extreme deviation of the eyeballs in the lateral direction, exaggerated knee-jerks, and a suspicious pallor of the temporal half of her right optic disc—all symptoms very slight in themselves, but when taken in conjunction with the girl's age, with her heredity, with an apparently idiopathic development, and with a certain degree of mental hebetude to which she had been previously a stranger, enough to raise in one's mind the question whether we were faced with something more than a mere functional disturbance of health—whether, in fact, we were not dealing with a disseminated sclerosis in the earliest stages of its development. The present condition of this patient, after a few weeks' treatment, is one of marked improvement, but the fact must not be lost sight of that no disease of the nervous system is so strikingly marked by remission of symptoms as disseminated sclerosis. In such a case, therefore, judgement should be suspended and no definite diagnosis ventured upon until a sufficient lapse of time enables us to conclude definitely that the threatening indications have been part only of an entirely functional condition, and have not been the early expression of tissue changes which will, later on, declare themselves the indisputable evidences of incurable organic disease.

The other patient was a man of 51 years of age, a soldier who had served his country in many parts of the world, and had never been seriously ill until about a year ago, when he suddenly fell down in what was believed to be a "fainting fit." Since the first attack he had experienced many similar seizures, and recently they had become so frequent as to cause him and his family serious alarm. He had also developed a tendency to headaches and to vertiginous attacks, and he was concerned to observe that his memory was rapidly failing him. He had been active all his life, had indulged freely in tobacco and alcohol, but denied ever having suffered from syphilis. Though distinctly neurasthenic, he had no evidence of established organic disease, but his vessels were atheromatous, the heart was somewhat hypertrophied, and there was a ringing second sound at his aortic cartilage. His urine was of low density, and contained the faintest haze of albumen. His attacks were, from the description, doubtfully convulsive, but he was said to lose consciousness, to become during them very flushed in the face, and always on recovery was intellectually confused, abnormally somnolent, and painfully emotional. He had never injured himself during his attacks, his discs were normal, and there was no evidence of muscular paresis or paralysis. On closer examination of his nervous system his pupils, though active, were sluggish; there was a suspicion of shivering in his articulation of certain words, and his tongue betrayed a slight fibrillary tremor. What was the nature of these attacks? The description of them, and the fact that they first declared themselves after middle life, made it unlikely that they were wholly functional, though his obvious neurotic tendencies suggested that explanation, and doubtless accounted for many of his symptoms. Further, the onset of idiopathic epilepsy is unusual so late in life, and if the attacks were even partially epileptic, there must be some early organic change to account for them. The minor symptoms which this patient presented warranted, I think, the suspicion that on a functional basis there was being developed an organic superstructure, the true nature of which was probably general paralysis. Time will declare whether such a suspicion is well founded, but at its present state of development this case is one which again conveys the lesson of the need for suspension of judgement until sufficient opportunity is afforded for deciding whether the neurotic element constitutes the whole story or part of it only.

If we next turn our attention for a moment to the circulatory and respiratory systems as we find them involved in diseases of the thoracic organs, we will discover equally striking examples of the pitfalls which beset the diagnostic path. And, in passing, let me say how misleading to the public a medical opinion, especially in respiratory or circulatory disorders, often is. Misleading because the doctor, either to safeguard his reputation or to shield imperfect knowledge, frightens the wits out of a nervous patient by declaring that he is suffering from weak lungs or from a feeble heart. Such a verdict means to the patient and his relatives a conviction of consumption in the one case, and the likelihood of sudden death in the other, and is generally given in cases where cough has been a persistent and troublesome symptom, or where what are described as fainting attacks have been to the patient or his friends alarmingly suspicious of heart disease.

Some years ago I saw a gentleman of 38 years of age who for a long time had been troubled with a cough which varied in degree and sometimes disappeared for weeks at a time, but always returned without any apparent reason to account for it. He had suffered much from many physicians, and had been seriously perturbed by being told in the early history of this cough that his lungs were feeble, though perhaps not actually diseased. He had taken drugs *ad nauseam*, had been sent to winter abroad, and had also undertaken a voyage to New Zealand to rid himself of his enemy. When I first saw him I was unable to find any evidence of active disease in either lung, though I thought there was some suspicion of rough breathing in the right upper lobe. The physical signs, however, were merely of a slight and indefinite to account for a cough of such long duration, and the patient, despite his long experience of "weak lungs," was well nourished and able for quite an average amount of professional work and physical exertion. He was a highly nervous man, by profession a solicitor, and was living in constant dread of tuberculosis. He indulged extensively in cigarettes, and his fumes showed clear evidence of the irritating effects of tobacco-smoke inhalation. To relieve the annoyance of his cough he was in the habit of taking glycerine, and it had become his habit to keep in his dressing room a bottle of this harmless substance for use when required. One night, shortly after retiring to rest, the cough became, as it often did, worrying, and he resorted as usual to his placebo; but, being unable to find a light, he groped his way in the dark to where he was accustomed to find his glycerine bottle, and hurriedly took a spoonful of the material, and swallowed it. He was, unfortunately, he discovered his mistake before he had swallowed much of the irritating liquid; but, in acute alarm at his mistake, he sent for the nearest doctor, who found that, though very little of the ammonia had reached his stomach, sufficient had been taken into the buccal cavity to shrink up much of the mucous membrane of his mouth, tongue, and fauces. No serious damage had been done, and, after a few days' discomfort, he recovered completely. But the satisfactory outcome of his carelessness was that thenceforth the cough, which had been for so long the enemy of his happiness and peace of mind, entirely disappeared, and he remains to-day a healthy and active member of society, with all the old dread of consumption no more than a memory of the evil influence which a careless diagnosis of "weak lungs" had exerted upon a sensitive and overstrung nervous system.

As an example of the disastrous effect of a loose diagnosis of "weak heart," may I also relate to you a case which is still under my observation?

The patient is a young, anaemic, neurotic woman of 21. She is said to have suffered from fainting fits for about two years, and her parents had been warned that these attacks were due to heart feebleness, that they were not without danger, and that she had a murmur. On close inquiry it was ascertained that, though she experienced feelings of faintness from time to time, she never entirely lost consciousness. The heart was excitable, its rhythm was slightly irregular, and a soft systolic murmur of its heard at the apex and over the pulmonary area, but the cardiac diameters were normal, and, after a little reassurance, the rapidity of the heart diminished, and the irregularity of its action entirely disappeared. It was obvious that the girl was not suffering from any organic lesion of her heart, but what her condition more strongly suggested was the possibility of *petit mal* as the explanation of her attacks. Under the influence of iron and arsenic, together with the restoration of her digestive activity, however, the faint feelings have disappeared, and the patient is now robust and well. Her own fears, as well as those of her parents, have been allayed, and the bogey of heart disease has been restored to the oblivion from which there never was any good reason for calling it forth.

Cases such as these are eloquently graphic of the evil which constantly ensues from faulty observation and enigmatic diagnosis. Actual disease of the lungs in the one case, or of the heart in the other, was not asserted, but in each instance the faulty judgement of a neurotic patient was encouraged to accept a needlessly apprehensive conclusion from the suggestive terms in which a halting and covering opinion was expressed.

But there are other thoracic disorders of greater importance than these, in which it is essential to carefully weigh the value of the neurotic element. The most distressing ailments in which we often find a jumble of organic and functional disturbance are angina pectoris in the circulatory system and asthma in the respiratory system. As you know, there are two forms of angina pectoris described—one dependent upon degenerative faults in the myocardium, increased arterial tension, atheromatous changes in the coronary and other vessels, kidney disease, and so on, which is attended by an ever-present possibility of sudden death; and another associated with vasomotor instability and neurotic accompaniments, which is regarded as unimportant and for the most part amenable to treatment by valerianates and discipline.

And there is yet another class, undescribed in textbooks, with which we are only too familiar, in which examination fails to reveal any adequate organic cause for the attacks complained of, but in which, none the less, something in the description which is given us, or something indefinite about the patient's general condition, warns our clinical instinct that there is a kernel of danger lying somewhere obscure in the recesses of the neurotic temperament which makes the prognosis uncertain. Here is such a case which I saw only a few weeks ago:

A lady of 64 years of age complained that within the past three or four months she had been frequently disturbed by unaccountable attacks of short and distressed breathing, accompanied by a sense of constriction in the chest and of tingling down both arms, but especially the left. The attacks occurred mostly at the early hours of the night, but she had also experienced several during the day after some form or other of unusual effort. She was a typically neurotic woman, and belonged to a family many members of which had suffered from nervous and mental disease. She was well nourished, bright, and active, had gouty proclivities, but presented no physical signs of organic disease other than a certain degree of thickening of her vessels and an accentuated second aortic sound. The arterial changes were not more pronounced than what is common to her time of life, and, except for the method of their onset, the description of the attacks from which she suffered was so suggestive of a neurosis that one was tempted to regard the condition as wholly functional. Not long ago this lady, after incautiously going upstairs hurriedly, was suddenly seized with acute pain in her chest which shot down her left arm and up the left side of her neck; this was accompanied by inability to move a step from where she stood, by panting respiration, and by a terrifying apprehension of immediate death. The attack fortunately did not prove fatal, but the description was too vivid to admit of any doubt as to its nature, and when I saw the lady shortly afterwards I found the heart dilated and in such a condition of irregular commotion that it seemed more than doubtful whether it could ever quiet down. She is now better, but I have learnt, not for the first time, how unsafe it is to speak too confidently about anginal attacks as being unconditionally functional.

Yet another case, more difficult to estimate and more painful in its dénouement:

A lady of 48, who was in the midst of her menopause, developed anginal attacks, which seemed, from a consideration of all the circumstances, to fully justify a diagnosis of functional disturbance and a prognosis of complete recovery later on. One day I was summoned to see her, and on my arrival at her house was told that while walking in the park she suddenly experienced a worse attack than usual, and was compelled to take a cab home. The pain gradually subsided after her return, and she lunched with the other members of her family, though not feeling quite comfortable. After luncheon she retired to her room, where I found her on the sofa, apparently better. Her pulse was rapid but regular, and she was flushed and restless. I was just about to leave her when she suddenly complained of a return of the pain; simultaneously her face became deeply cyanosed, and, before there was time to do anything for her relief, she was dead. I had examined this patient frequently, and she had also been seen by other physicians, but we were all betrayed into a wrong opinion. Leave was given to examine the heart after death, and the explanation of the tragedy—because it was nothing less—was found to be an abnormally small right coronary artery, obviously a congenital fault, which had remained mute throughout all the more active years of life, but was unable to cope with the added stress of functional disturbance coincident with the change of life.

The danger of regarding functional cases too seriously must, however, also be guarded against, and nothing can ever justify a gloomily expressed prognosis, unless under circumstances where the diagnosis is so certain that it is, for safety's sake, imperative to ring the danger bell. To frighten a neurotic patient with a verdict implying sudden fatal possibilities is tantamount to condemnation to a life of perpetual mental dread and unbroken invalidism.

I have intimate knowledge of such a case in a relative of my own.

She was a lady of 58 years of age who had always been delicate, was of the neurotic type, had passed through an anxious and disturbed life, and had comparatively recently come to the end of her menstrual periods. She developed cardiac attacks such as we are now considering, and was kindly, but unwisely, told by her doctor that in one of them she would almost surely die. For close upon three years that she lay in bed afraid almost to breathe. Periodically she experienced an attack of precordial constriction, and on every occasion the members of her family were speedily summoned to see her die. Her life was a living death to her, and to the members of her family her illness was a ghastly nightmare which haunted them unceasingly. Ultimately a course of treatment was suggested which had the effect of improving

a digestion which had been impaired over many years: a spirit of hopefulness was breathed by a wise and optimistic physician into this poor lady's mind, and she eventually recovered, and lived for many years without any return of the heart attacks which an unjustified opinion had led her to regard as her summons to death.

I have lingered over these cardiac conditions at too great length, but it is in the field of heart disease more than any other that the neurotic question becomes, both for the physician and his patient, one of such superlative importance. There is no certain means by which we can be infallibly guided, and, with all the care we can take, the best of us must make mistakes, but my personal experience justifies me in believing that along the pathway of a cheerful prognosis lies the doctrine of comfort for those who, on account of their temperament, are liable to construe out of a hedging opinion the confirmation of their worst fears. I go further, because I believe that, even in the presence of serious organic disease and with the knowledge that a heart is wearing thin, we lighten the remaining days or years of our patient's life, and add to his courage and happiness by keeping alive within him the spirit of hopefulness.

As regards asthma, which may be regarded as the greatest of all the respiratory bugbears of neurotic patients, time will not allow me to do more than glance at it. Asthma may occur under many circumstances, and is frequently secondary to some other disease; but true spasmodic asthma is still a disorder for which no definite organic cause has been found, and it is one which afflicts chiefly those who have inherited or begotten the neurotic temperament. We do not see much of it in our hospital wards, because it is most common among the upper and middle classes of society, where neuroses of one type and another abound. It is, when once contracted, one of the most intractable of all maladies. It does not end fatally, but exhibits a recurrent persistence which makes the sufferer's life miserable and drives him to one doctor after another, then to one quack remedy after another, until he becomes an unbeliever in rational treatment and the slave of "cures." But while all this is true, the point about asthma which in connexion with our subject to-day must not be overlooked is that its manifestations must not tempt us to carelessness. The following case aptly illustrates what may happen.

A man of middle life, who had suffered from ordinary spasmodic asthma since boyhood, came to me after an interval of many years and told me that he had become so tired of the ineffectual attempts of innumerable doctors to cure his trouble that, after consulting many in different parts of the world since I had last seen him, he had, for several years past, trusted to patented medicines of one kind or another. He had also tried almost every climate on the face of the earth, but was unable to assure himself that his attacks were either fewer or less severe in one place more than another. The reason for his present visit to me was that, being accidentally in town, he had been, two nights previously, attacked by an unusually severe seizure, and he thought the excuse a good one for renewing an old acquaintanceship. I remembered him perfectly, and saw but little change in his physical condition. From the long continuance of his asthma his lungs had become emphysematous and obscured the physical state of his heart, but there were no murmurs or other abnormalities so far as could be heard through the noise of his breathing. He assured me that, but for his old asthmatic enemy, he was perfectly well. Fortunately for me, a passing complaint of failing eyesight, which he laughingly attributed to *anno Domini*, prompted me to look into his eyes, and there, to my surprise and regret, I found a marked albuminuric retinitis. This led to an examination of the urine, where full confirmation was forthcoming of an established interstitial nephritis. This patient's asthma was probably still, to some extent, of the paroxysmal type, but added to the old neurosis there was now a renal element of so serious a nature that his days are certainly numbered.

The case is one of the many daily illustrations we get of the need for a routine examination of the urine, but in the bustle of active work, this is an investigation which we are liable to neglect unless there be something in the symptoms otherwise to cause us to fear the existence of kidney mischief.

One more recent experience may be referred to as illustrating an asthmatic difficulty of a different type:

A young lady, who had been operated on ten days previously for the relief of a hydronephrosis, suddenly experienced in the night an attack of breathlessness which gave rise to the greatest alarm. She was distinctly neurotic, and from the day of her operation her digestion had been a source of trouble, with flatulent distension of the abdomen as a leading symptom. The fear was at once aroused that a pulmonary embolism was the

cause of her seizure, and a very guarded opinion was expressed to her friends, but the attack subsided and she experienced no recurrence and developed no subsequent pulmonary symptoms. The absence of pain in the chest made the suggestion of embolism doubtful from the beginning, but, under the circumstances in which the difficulty in breathing arose, the suspicion was justified, though a confident diagnosis either way would have been, at the time, unwarranted.

As in the region of the thorax, so in that of the abdomen, we meet with interesting problems in connexion with disorders of the stomach, intestine, kidney, and liver, and are frequently brought face to face with complex manifestations which demand the most searching clinical investigation to solve correctly. I must defer their consideration to a future opportunity, but in this region of the body as in the others to which I have alluded this afternoon, there is no lack of illustration to prove that the neurotic element in disease is one to reckon with, and that, despite some incredulity on the subject, there is no getting away from the fact that symptoms which are apparently wholly functional dominate the aspect of many illnesses, that they may obscure the true significance of organic manifestations, and that not infrequently they are so much the end-all and be-all of a disordered state of health as to justify the assumption that—at any rate so far as the present state of our knowledge enables us to judge—the neuroses must be taken into account as definite integers in our conception and treatment of disease.

A Lecture

ON THE

TREATMENT OF ECZEMATOUS PATIENTS.

DELIVERED AT THE MEDICAL GRADUATES' COLLEGE
AND POLYCLINIC, LONDON.

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In no affection of the skin is it more important than in eczema to recall the axiom that it is the patient and not the disease that requires treatment; the characteristic which distinguishes the wise practitioner from the quack is that the former realizes that he is in the presence of a sentient human being who is the subject of disease; the latter has merely a nostrum which is applied to the disease with an inevitableness as monotonous as the response of an automatic machine to the insertion of the nimble penny. The title which I have used is intended to emphasize a protest—a more familiar, shorter, and less correct title would be "The Treatment of Eczema"—and my object will be to describe certain common forms of the disease with the methods of treatment which have been found serviceable in each type.

The very first difficulty to be overcome is the exact definition of what is meant by the term "eczema." It is unfortunate that no agreement exists as to what shall or shall not form a criterion of classification; one of the latest of these definitions, that of Dr. Norman Walker—"Eczema is the term commonly applied to any wet or scaly inflammation of the skin of the cause or nature of which the observer is ignorant"—is more humorous than helpful.

The older writers, before our idea of eczema became swamped with the introduction of Unna's "seborrhoeic eczema," insisted chiefly on the presence of "a serous discharge which stiffens linen" as an essential feature of eczema; the same feature distinguishes the phenomenon which recent French authors describe as "eczematization," to which I shall refer again. But, now that there seems a reasonable prospect of the withdrawal from this class of the whole large body of disease at present called "seborrhoeic eczema"—which, as a distinguished writer has tersely put it, is not seborrhoea and not eczema—it is possible that the older simplicity may be restored, and it would certainly make for clearness and be in accordance with the actual practice of a large majority of medical practitioners if the advent at some time or other of "a

serous discharge which stiffens linen" were again to be made the essential criterion of the disease. The presence of such a discharge, however produced, would justify the classification of the affection in which it occurred as eczema; and, consequently, all forms of so-called eczematization and of traumatic dermatitis attended by such discharge would be included in this class. It has always seemed to me a very anomalous and absurd practice to call an inflammation of the skin the result of a known irritant by one name and an inflammation of the skin clinically absolutely indistinguishable in which the cause of the inflammation has escaped observation by another name. This absurd practice is properly satirized in the absurd definition quoted from Dr. Norman Walker's textbook. In my opinion it would be highly desirable—and the time is ripe—to revert to the conception thus excellently defined by Dr. Tilbury Fox:

Eczema is a catarrhal inflammation of the skin which is mainly characterized by a peculiar discharge, stiffening linen, and drying into thin yellow crusts, and having its stages of erythema, papulation, vesiculation, discharge, pus formation and squamation more or less marked under different circumstances, and followed in some cases by the secondary results of inflammation such as hypertrophy, oedema, and the like.

With this conception of the disease as a cutaneous reaction progressively passing through the phases enumerated and with a special tendency, by reason of the discharge, to become secondarily contaminated by pyogenic and other organisms, the apprehension and description of the various clinical variations become much more easy.

Acute Eczema.

This is the name given to an early erythematous eruption occurring with acute onset, generally on exposed surfaces such as the face, and after exposure to cold or irritants. The eruption may be aborted in its erythematous stages, or it may pass on to vesication and subsequent exudation and pus infection of the surface. The erythema when occurring upon parts where the subcutaneous tissues are lax, as on the face round the orbits, may be accompanied by pronounced subcutaneous oedema; the swelling and redness thus produced may closely simulate erysipelas, and acute eczema is frequently mistaken for that disease, from which it is distinguished by the absence of temperature and severe constitutional illness, by a less well demarcated margin between diseased and healthy skin, and often by the presence elsewhere of some patch of older eczema; it is not contagious, so that the history of infection common in erysipelas is absent. The treatment should be prompt and earnest; the possibility, with care, of causing the inflammation to subside without macroscopic vesication—for it is probable that even at this stage there are microscopic vesicles—if explained to the patient, will generally enlist his co-operation in the measures to be adopted, which entail confinement to an equable temperature indoors and the application of the blandest and most sedative lotions. In this stage rest in bed is often the best expedient to secure subsidence of the inflammation. I believe a pure milk diet, partly by its digestibility, partly by the large fluid intake which it ensures, is advisable; and the local application which I have found most useful is the following (lot. plumbi lactatis of the St. Mary's Hospital Pharmacopoeia):

Liq. plumbi subacet.	...	...	...	3j
Acid. sal.	...	...	...	gr. ij
Lactis	...	...	...	3j

This should be freshly prepared, and applied to the face after thorough shaking of the bottle with a clear, soft shaving brush and allowed to dry *in situ*, fresh application being made every four hours. Concurrently with this treatment the bowels should be kept loose, a result which commonly follows from the increased fluid of the dietary, but it may be necessary to ensure the result by saline aperients, of which Carlsbad Sprudel salts (a teaspoonful in a tumbler of hot water every morning) is one of the best. It is a common experience that alcoholic excesses increase the tendency to acute eczema, and the complete prohibition of alcohol is advisable in these cases.

The same type of acute erythematous eczema may occur upon other parts than the face, and must be similarly treated.

When the case is seen in the stage of vesication the possibility of aborting the inflammation is past, and since vesication is almost certain to be attended by pustulation the local treatment to be adopted becomes similar to that detailed under chronic eczema in which those stages are present.

Chronic Eczema.

An attempt has been made to differentiate the so-called artificial eruptions from eczema by the fact that while eczema recurs and becomes chronic, artificial eruptions cease when the cause is removed. But this differentiation is fallacious, for if the cause is constantly renewed the artificial eruption which is its response will also be renewed, and thus chronicity may be simulated. For example, a case noted by Dr. Whitfield of what was diagnosed as "chronic eczema of the mouth" proved to be due to the repeated use of an irritating liquid dentifrice. Many cases of what appear to be chronic eczema are the result of a persistent irritant, and all such causes must be rigidly investigated in any given case. The possibility of constant renewal of external irritation must be particularly borne in mind in the case of persons whose occupations oblige them to come in contact with agents such as chemicals (photographers, druggists, laboratory assistants, operating surgeons, etc.), irritating plants or bulbs, strong detergents (washwomen, kitchen servants), and a large class of persons, such as bakers, cooks, furniture polishers, plasterers, painters, tar and gas workers, who are more obviously exposed to repeated chemical or thermal stimuli. In all such cases it becomes urgently necessary to avoid the pernicious contact if this be possible, especially during the acute stages of the reaction. When this is not possible there ensues a contest between the effects of the irritant and the remedial measures of the physician, in which the latter is not infrequently worsted.

Where no special cause can be identified and removed the conduct of the case becomes more difficult. Some general principles, however, may be enunciated, in the front rank of which I would place a caution not to use strong antiseptics, such as formalin. It is better to proceed gingerly at first with a patient whose cutaneous constitution is still a *terra incognita* to the practitioner. With a freely weeping surface, with much redness and itching, it will be found as a rule that lotions are more sedative and come more into actual contact with the diseased surface than ointments. For such surfaces a common prescription, and one which has done good service with me, is the following (lotio calaminæ oleosa):

Calaminæ	...	...	...	gr. xl
Zinci oxid.	...	...	...	gr. xx
Aq. calcis	...	...	...	3ij
Ol. olivæ	...	...	...	3j

This should be applied with a brush or a swab of cotton-wool, or strips of thin washed "butter muslin" may be soaked in the lotion and kept in position with a light muslin bandage. It is important that the part should not be kept hot, and the covering of an inflamed surface with wads of cotton-wool and several folds of a heavy bandage—a dressing too often resorted to by inexperienced house-surgeons—does not promote the comfort of the patient or the amelioration of the disease. Many practitioners advocate the use of powders in the wet stage of eczema, but my own experience leads me to prefer the formula I have given. When there is much pus infection of the discharge—a very frequent complication—it is often advisable to treat this feature at once, and a very useful means is to steep the part, when its position allows of this, in an antiseptic bath for twenty minutes or half an hour, drying the part carefully after with swabs of dry cotton-wool. The antiseptic used may be varied according to the fancy of the practitioner. I have found chinolol (1 in 200 to 500) unirritating and efficacious; cyllin is also recommended (1 to 200); perchloride of mercury (1 to 2,000 or 3,000) may also be used, or this ingredient may be added to lot. calam. oleosa ($\frac{1}{2}$ grain to 3vj) when an antiseptic effect is particularly desired.

When the discharge has become less free, and the diseased surface, although not dry, has ceased to pour out exudation, the continuous application of a paste is less uncomfortable a means of treatment than the application of lotions. A paste differs from an ointment roughly in the addition to the greasy base of the latter of a consider-

able proportion of an inert powder, which appears to exert a blotting action, on the same principle which is aimed at in the familiar resort to powdered salt to dry a recent wine stain in a table-cloth. One of the most pleasant pastes thus indicated is Lassar's paste. This is often given with varying formulae, and it is well to particularize the composition as follows:

Zinc oxide	24
Starch	24
Soft paraffin	50
Salicylic acid	2

In acutely irritative conditions the salicylic acid is best omitted; it may be retained and the quantity increased when there is less inflammatory reaction, and where much scaling has taken place. An equally good application, perhaps even superior (Cremor zinci, St. M. H.), where there is much redness of the skin, is the following:

Zinc. ox.)	
Aq. calcis)	aa 5j
Ol. olivae)	
Adip. lanæ)	

Dissolve lanolin in olive oil by heat, sift powdered zinc oxide into it, and whip up with lime water.

This may be thickly spread over the affected part, dusted with a fine starch such as potato starch, and left without any other covering than the clean cotton or linen underclothing of the patient.

Other powders used in the composition of pastes besides starch are fuller's earth, talc, kaolin, etc.

If the patient is seen in the stage of dry crusts, when the discharge has matted together the epithelial scales and debris of the surface into an impervious scab, local applications are useless until this is removed. This end may be effected by wet occlusive dressings when the adhesion of the scab is very pronounced—as, for example, on the scalp of children. Several folds of thin muslin, known as "butter muslin"—boiled in water to remove the stiffening used in its preparation and to sterilize it—are soaked in boric acid lotion or in other weak antiseptic fluids, preferably tepid; the excess of the moisture is squeezed out, and the dressing is applied while wet and then covered with oil-silk or protective oiled paper and kept in position with a light bandage. The dressings should be changed as soon as they become dry. Starch poultices, boricated, may be used in the place of this dressing, but are not so free from risk of spreading the pus infection.

A method which I have found very useful in treating the pustular eczema so commonly the result of pediculosis capitis in weakly children is to cover the scalp with an ointment composed of equal parts of olive oil and ung. hyd. am. dil., and enclose the head in an oil-paper cap.

When the crusts have been removed, the application of an antiseptic ointment, such as ung. hyd. am. dil. or ung. hyd. nit. dil., either unmixed or with an equal quantity of ung. acid. sal., will usually check the superficial pus infection and reduce the part to the condition of an uncontaminated exudative or excoriated surface, which may then be treated with lotions or pastes as described above. It is often possible, and is always interesting, to watch under this treatment a successive retrogression in inverse order of the stages by which an erythematous eczematous patch becomes vesicating, exudative, and suppurating.

When the suppuration is not controllable by these methods, and the stage of "chronic pus infection" is threatened, it is remarkable with what good effect vaccine-therapy can be used. The nature of the contaminating organism must be ascertained, and it is preferable that the opsonic index for that organism should be taken before vaccines are used, but even in the absence of an opsonic estimation, an inoculation of the appropriate vaccine may be tentatively made. The dose used should be a very small one; in the case of staphylococcus, which is much the commonest organism thus found to be present, a dose of 20 to 100 millions will usually suffice. The clinical improvement is often striking, and in the event of such improvement the inoculation may be repeated in about ten days' time. The cases in which such inoculations are useful are also eminently those in which general management of the patient is important in the respect of diet, environment, change of air, scene, and occupation, which will be dealt with later on.

Not infrequently patches of inveterate eczema are met with in which individual lesions have persisted for months and even years. In all such cases careful search must be made for some associated cause, such as the presence of ichthyosis, which renders the skin peculiarly liable to become eczematous; of varicose veins; the possibility of the co-existence of constitutional disease, such as gout, diabetes, and tuberculosis, must be borne in mind and investigated. When no such underlying factor is discovered, and when these diseases, though present, are irremediable, attempts may be made to stimulate the growth of healthier epidermis by the exfoliation of the diseased stratum. One of the best methods of achieving this purpose is by the application every four or five days of the following lotion, painted on the part with a cotton-wool swab wrapped round a wooden stick, such as a match or penholder, and dipped into the lotion:

Phenol, liq. picis carb., glycerin, spir. vin. rectif., aa.

In the four or five days' interval between each application the part should be painted three times a day with lot. cal., which should be allowed to dry on the surface. If the carbolic lotion should prove too painful, a 10 per cent. solution of cocaine hyd. may be applied five minutes before the application of this.

A solution of nitrate of silver (10 to 15 grains to the ounce) acts in a similar way and should be used similarly, with the application of lot. calam. in the intervals of treatment. This method is particularly useful for chronic eczema of mucous surfaces, for example, about the anus, the lips, the vulva, the nipple. I have also found picric acid in 1 per cent. or $\frac{1}{2}$ per cent. strength of great service in treating chronic excoriated surfaces, as in pruritus ani with fissures.

Eczema of the nipple, especially of suckling women, is generally kept up by the presence of the milk, which, flowing over the surface, affords an excellent nidus for micro-organisms. An importance which it does not deserve is commonly ascribed to this affection from the erroneous notion that Paget's disease—epithelioma of the breast—begins as an eczema of the nipple. This has been shown not to be the case; the condition which was thought to be eczema has been demonstrated to be epitheliomatous even in the early stage which simulates eczema; the latter disease occurring upon the nipple is often difficult to treat, especially when the patient is obliged to suckle the infant; but once this process is finished the condition usually heals rapidly. Eczema of the vulva may similarly be protracted owing to the discharge over the labia of saccharine urine in diabetes, and the latter disease should be looked for in such cases.

The introduction of zinc into the skin by cataphoresis (ionization) promises a particularly valuable resource in old chronic thickened eczematous patches. A plate of zinc, the size of the patch to be treated, is used as positive electrode of an ordinary galvanic battery of 20 to 30 cells. The electrode is covered with several layers of gauze soaked in a 2 per cent. solution of zinc sulphate, and applied to the patch to be treated, the patient holding in his hand the ordinary cylindrical electrode attached to the negative pole. Contact may be maintained for five to ten minutes, the current averaging 3 to 6 milliamperes during the treatment. For these especially chronic patches x-rays have also been shown to be useful. Some very suggestive experiments have been tried with textile fabrics impregnated with feeble solutions of radium salts, and applied to the surface of eczematous patches with good results.

A method which I have found useful in very chronic dry cases, with much lichenification of the skin, is the combination of occlusive dressings with tar ointment. Strips of lint thickly smeared with ung. picis are cut to the shape of the part, covered with oil-silk and cotton-wool and bandaged tightly over, and left in position for twenty-four or forty-eight hours. The same lint is to be repeatedly smeared with the ointment so that it becomes thoroughly impregnated with it. Under this treatment the resolution of the thickening and the healing of the skin are often very satisfactory.

Eczema of Children.

Young children frequently suffer from eczema of the face and scalp, which is too often ascribed to teething.

the initial microscopic vesicle is demonstrated to be sterile; the later microbic infections are due to secondary contamination of the surface. With these views the importance of the study of the individual becomes enormously increased, and Brocq thus sums up the formidable series of investigations which should be made to elucidate causes of disease other than those of internal source:

"Hereditary pathological states, individual idiosyncrasies, defective alimentation, defective assimilation and excretion, troubles of the venous system, troubles of the circulatory system, troubles of lungs, kidneys, genital apparatus, ductless glands."

Where any such cause can be identified, treatment must be directed to its removal. The hereditary transmission of tendency to eczematous disease, as well as an individual idiosyncrasy, must be accepted by any person of wide experience, and the nature of the cause lifts it beyond the domain of practical therapeutics. Defective alimentation, covering as it does the ingestion of food, has been partly dealt with under the heading of diet; in full-blooded young subjects moderation of the intake of solids will probably be indicated; in the exhausted, impoverished patient of hospital practice, on the other hand, liberal diet and rest are at least as important as any therapeutic measures, as the improvement manifested by admission of such patients to the wards amply demonstrates. Constipation must always be looked for and most carefully avoided, preferably by mild and tonic purgatives. The patient should be weighed at frequent intervals; there is an eczema of the obese as well as of the cachectic, and both are equally obstinate.

The nervous associations of eczema are numerous and difficult to treat. Nervous exhaustion is best met by rest, change of scene and occupation, and the administration of tonics such as combinations of arsenic and iron, strychnine, phosphoric acid, cod-liver oil. It is often stated that sea air is bad for eczema; while it is possible that salt-laden breezes may irritate the eczematous skin, I am convinced by many observations that its bracing effect, especially in the tired town-dweller, on the general constitution counterbalances the local disadvantages mentioned. In other cases where nervous excitability, with vasomotor disturbances, is the dominant feature, sedative measures, such as the administration of bromides, ergotin, antipyrin, colchicum, quinine, belladonna, are indicated; spa treatment in such cases, with its quieting routine, is particularly useful.

Where there is evidence of much oedematous infiltration into the skin, with vivid redness and itching, I have repeatedly found the greatest benefit, especially in children, from doses of calcium lactate, given either in small doses (5 to 15 grains), three times a day before meals, or in large doses (1 drachm), two or three times a week. In the latter method a convenient means of administration is to suspend the powder in milk and drink the latter after vigorous stirring. Calcium lactate should be continued only until the symptoms of oedema and itching have subsided. It tends to produce constipation, and this result must be prevented, preferably by mild laxatives, such as sulphur or senna.

I have touched upon the question of baths when dealing with eczema of children. A general impression, which has acquired the force of a religious belief, has grown up that water is baneful to the eczematous skin, and clearly patients have suffered much misery from the prohibition of washing. The late Professor Lassar, one of the most experienced and successful of dermatological therapists, spent much enthusiasm and energy in trying to subvert this doctrine, with only partial success, for it still lives and flourishes. I am strongly of opinion that this superstition, like many others, has little foundation in fact. It is surely desirable that an eczematous surface, like any other abrasion or wound, should be kept aseptic, and, with proper precautions, washing may be resorted to in any case of eczema and at any stage. The precautions are to use no strongly alkaline or irritating soaps, to use soft water, and more especially to thoroughly dry, not by rubbing, but by "blotting" the moisture off the part, after the immersion, with absorbent wool or gauze.

The question whether a patient should be kept in bed or not will have to be decided by the extent of the disease, the parts attacked, and other considerations. In the

forms where only a small surface is involved and no constitutional illness is apparent, it would, of course, be absurd to make an invalid of the patient. But nothing is more impressive than the difference in the rate of improvement between an in-patient and an out-patient, to be attributed to the greater facility with which dressings can be applied, as well as to the advantages of equable temperature, reduction of the pulse rate and tension, and the diminution of vasomotor disturbances and avoidance of mental activity which rest in bed entails. When the area involved is large the impossibility of keeping the dressings *in situ* in any other position than the horizontal one, will in itself sometimes compel that course. It is, of course, essential that the sickroom should be well ventilated, warm and cheerful, and that opportunities of chill in the change of dressings should be guarded against. Finally, long hours of sleep and avoidance of worry and psychological disturbances are desiderata which are too often "counsels of perfection" for the patient, but which the physician must, nevertheless, make it his business to obtain for him.

THE DISTRIBUTION OF LONGEVITY IN ENGLAND AND WALES.

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A FEW years ago, in a paper read at Plymouth, I pointed out a simple way of showing the great longevity prevalent in Devonshire by stating, for each registration district, the percentage of the total deaths which is formed by the deaths at 75 and over; and in 1907 I published a table of these percentages for all the registration districts of Devon and Cornwall.

Since then the Registrar-General's decennial report for 1891 to 1900 has become available, and, as local general longevity may affect local general prognosis in many chronic diseases, I thought it worth while to work out these percentages of survivals for the whole of the registration districts of England and Wales. The result is remarkable. Wide differences in local longevity are found to exist in different parts of the country, and it becomes a matter of no common interest to decide how far these differences in percentage mean real disparities in local expectation of life.

The simplest mode of proceeding seemed to be to compare with each other those districts which furnished the highest and lowest percentages (Table I).^{*} It at once became apparent that the highest were found in country districts and the lowest in town districts. Two sources of fallacy then suggested themselves—namely, the large infant death-rates of the towns and the movement of population into the towns from the country.

The first source of fallacy was easily disposed of by recalculating the percentages (for the first ten districts in each column of Table I) after deducting from the total deaths the deaths occurring under 5 years of age (Table II). The contrast between the high and low percentages remained almost as remarkable as before.

The second source of fallacy required more lengthy investigation. Table I gives in parallel columns the highest and lowest percentages amongst the districts arranged in order of numerical sequence, and side by side with each the latest available figures (1881 to 1890) from the Registrar-General's reports relating to (a) density of population expressed in terms of acres to a person, and (b) the decennial increase or decrease of population for the decade 1881 to 1890. In this table it is seen that:

1. All the low percentages are associated with relatively dense populations, and all the high percentages with relatively sparse populations.
2. Most of the low percentages are associated with increasing populations, and most of the high percentages with decreasing populations.

* In the Climatological Section of *A Book of the South-West*, the Handbook of the 1907 Annual Meeting of the British Medical Association.

† The Scilly Islands alone were omitted as, I understand, special arrangements are made there for the emigration of the surplus population.

TABLE I.—Percentages of Total Deaths formed by Deaths at the Ages of 75 and over—1891 to 1900.

Percentages of 7 and under.					Percentages of 25 and over.				
District.	County.	Percent- age of Survival.	Decennial Change in Popu- lation, 1881 to 1890. Per Cent.	Density of Popu- lation, Acres to a Person 1881 to 1890.	District.	County.	Percent- age of Survival.	Decennial Change in Popu- lation, 1881 to 1890. Per Cent.	Density of Popu- lation, Acres to a Person 1881 to 1890.
Manchester ...	Lancashire	2.2	- 2.48	0.01	Leyburn ...	Yorks, W. Riding	29.4	- 8.27	10.05
Whitechapel ...	London	3.3	+ 4.34	0.005	Hartismere ...	Suffolk	29.2	- 6.97	3.58
Strand ...	"	3.4	- 18.06	0.013	Aylsham ...	Norfolk	28.5	- 3.35	3.91
Stepney ...	"	3.4	- 1.99	0.008	Aberayron ...	South Wales	28.5	- 7.56	5.44
Pontypridd ...	South Wales	3.5	+ 57.03	0.62	Depwade ...	Norfolk	28.3	- 2.30	3.17
Liverpool ...	Lancashire	3.6	- 25.31	0.01	Guilbertoss ...	"	28.3	- 2.17	4.34
Salford ...	"	4.0	+ 12.67	0.04	Sedburgh ...	Yorks, W. Riding	28.3	- 0.96	12.97
Middlesbrough ...	Yorks, N. Riding	4.2	+ 34.82	0.21	Dunmow ...	Essex	28.1	- 7.46	4.24
Wigan ...	Lancashire	4.4	+ 19.19	0.32	Droxford ...	Hants	28.0	+ 1.74	4.31
Bedwellty ...	Monmouth	4.4	+ 16.16	0.46	Hoxne ...	Suffolk	28.0	- 7.20	4.42
Holborn ...	London	4.5	- 6.55	0.006	Oundle ...	Northampton	27.8	- 8.95	5.45
Sheffield ...	Yorks, W. Riding	4.5	+ 11.76	0.07	Plomesgate ...	Suffolk	27.7	+ 0.84	3.67
London City ...	London	4.6	- 25.45	0.015	Lutterworth ...	Leicester	27.7	- 7.32	4.58
Stoke-upon-Trent ...	Stafford	4.7	+ 16.46	0.11	South Molton ...	Devon	27.5	- 7.36	8.95
Barrow-in-Furness ...	Lancashire	4.7	+ 9.41	0.22	Church Stretton ...	Shropshire	27.5	- 4.56	8.34
Prescot ...	"	4.8	+ 19.47	0.43	Blything ...	Suffolk	27.4	- 1.64	3.68
Warrington ...	"	4.8	+ 20.41	0.40	Bala ...	North Wales	27.4	- 5.27	15.37
Oldham ...	"	4.9	+ 19.41	0.09	Caxton ...	Cambridge	27.3	- 9.16	5.20
South Shields ...	Durham	4.9	+ 37.00	0.13	Loddon ...	Norfolk	27.3	- 3.63	4.48
Merthyr Tydfil ...	South Wales	4.9	+ 15.54	0.70	Wayland ...	"	27.3	- 1.97	4.84
Burnley ...	Lancashire	5.0	+ 39.67	0.45	Mere ...	Wiltshire	27.3	- 8.67	4.90
Bolton ...	"	5.1	+ 17.88	0.22	Catherington ...	Hants	27.0	+ 8.85	4.58
Wolstanton ...	Stafford	5.2	+ 10.85	0.018	St. Ives ...	Huntingdon	27.0	- 4.61	3.79
St. George-in-the-East ...	London	5.3	- 2.89	0.005	Pewsey ...	Wiltshire	27.0	- 5.56	6.24
West Derby ...	Lancashire	5.4	+ 23.70	0.09	Dursley ...	Gloucester	26.9	- 3.15	2.16
Leigh ...	"	5.4	+ 25.66	0.38	Henstead ...	Norfolk	26.9	+ 1.86	3.95
Prestwich ...	"	5.4	+ 23.29	0.08	Shaftesbury ...	Dorset	26.7	- 6.49	3.04
Cardiff ...	South Wales	5.4	+ 63.71	0.56	Sturminster ...	"	26.4	- 4.63	4.01
Blackburn ...	Lancashire	5.5	+ 16.45	0.24	Axminster ...	Devon	26.4	- 5.24	3.31
St. Saviour, South- wark	London	5.6	+ 3.86	0.006	Thetford ...	Norfolk	26.3	- 2.14	6.90
Barnsley ...	Yorks, W. Riding	5.6	+ 21.69	0.40	Horncastle ...	Lincoln	26.3	- 6.10	5.63
St. Olave, Southwark	London	5.9	+ 1.51	0.011	Pwllheli ...	North Wales	26.3	- 2.78	4.12
Birmingham ...	Warwick	5.9	+ 0.35	0.01	Southwell ...	Nottingham	26.2	- 5.66	5.97
Hunslet ...	Yorks, W. Riding	5.9	+ 21.82	0.19	Forehoe ...	Norfolk	26.2	+ 0.14	3.23
Holbeck ...	"	5.9	+ 6.32	0.11	Walsingham ...	"	26.2	- 0.21	4.17
Walsall ...	Stafford	6.0	+ 19.03	0.024	Dulverton ...	Somerset	26.1	- 8.89	11.40
Toxteth Park ...	Lancashire	6.0	+ 9.71	0.03	Williton ...	"	26.1	- 7.34	5.74
Chorlton ...	"	6.0	+ 16.04	0.04	Bedale ...	Yorks, N. Riding	26.1	- 0.52	6.69
Leeds ...	Yorks, W. Riding	6.0	+ 16.92	0.07	Buckingham ...	Buckingham	26.0	- 5.82	4.50
Easington ...	Durham	6.0	+ 11.50	0.88	Wheatonhurst ...	Gloucester	26.0	- 8.60	3.43
Newcastle-on-Tyne ...	Northumberland	6.1	+ 30.99	0.04	Shipston-on-Stour ...	Warwick	25.9	- 6.01	4.52
Gateshead ...	Durham	6.2	+ 24.54	0.22	Easingwold ...	Yorks, N. Riding	25.9	- 7.21	7.07
Haslingden ...	Lancashire	6.3	+ 8.52	0.29	Mitford ...	Norfolk	25.9	- 3.83	3.98
Bradford ...	Yorks, W. Riding	6.4	+ 9.72	0.13	Swaffham ...	"	25.8	- 3.62	6.51
Hartlepool ...	Durham	6.4	+ 37.08	0.37	Malmesbury ...	Wiltshire	25.8	- 5.61	4.32
Sunderland ...	"	6.4	+ 14.08	0.03	Linton ...	Cambridge	25.8	- 2.67	3.93
Aston ...	Warwick	6.4	+ 23.35	0.13	Torrington ...	Devon	25.8	- 7.67	5.83
Rotherham ...	Yorks, W. Riding	6.5	+ 21.25	0.64	Bingham ...	Nottingham	25.8	- 4.96	4.82
Swansea ...	South Wales	6.5	+ 20.34	0.31	Honiton ...	Devon	25.7	- 2.89	3.97
Bramley ...	Yorks, W. Riding	6.6	+ 23.89	0.12	Wangford ...	Suffolk	25.7	- 4.88	2.39

TABLE I—(continued).

Percentages of 7 and under.					Percentages of 25 and over.				
District.	County.	Percentage of Survival.	Decennial Change in Population, 1881 to 1890, Per Cent.	Density of Population, Acres to a Person 1881 to 1890.	District.	County.	Percentage of Survival.	Decennial Change in Population, 1881 to 1890, Per Cent.	Density of Population, Acres to a Person 1881 to 1890.
Ashton-under-Lyne ...	Lancashire	6.6	+ 6.97	0.24	Okehampton ...	Devon	25.6	-3.25	8.00
Preston ...	"	6.7	-11.13	0.50	Spilsby ...	Lincoln	25.6	-7.11	4.63
Bury ...	"	6.7	+ 6.02	0.25	Royston ...	Herts	25.6	-5.83	3.80
Stockport ...	Cheshire	6.8	-15.47	0.23	Lexden ...	Essex	25.6	-0.73	3.28
West Ham ...	Essex	6.8	+81.70	0.07	Thingoe ...	Suffolk	25.6	-4.00	5.23
Stockton ...	Durham	6.9	+19.05	1.10	Brackley ...	Northampton	25.5	-5.51	4.69
Launceston ...	"	6.9	+13.17	1.09	Anglesey ...	North Wales	25.5	-3.30	4.03
Birkenhead ...	Cheshire	7.0	+22.26	0.03	Chard ...	Somerset	25.4	-2.31	2.45
Dewsbury ...	Yorks, W. Riding	7.0	+ 5.73	0.16	Crediton ...	Devon	25.4	-5.60	5.35
Neath ...	South Wales	7.0	+13.36	1.98	Thame ...	Oxford	25.4	-3.41	4.09
					Kingsbridge ...	Devon	25.3	-5.43	4.00
					Bicester ...	Oxford	25.3	-1.26	4.67
					Bosmere ...	Suffolk	25.2	-2.32	3.85
					Freebridge Lynn ...	Norfolk	25.1	+0.13	6.05
					Blandford ...	Dorset	25.0	-2.62	4.47

Now, of these two, there need be no hesitation in admitting a causal relation between density of population and percentage of survival. Such a relation is entirely in accord with all we know of the influence of density of population on health, and is borne out by a consideration of its influence on death-rate at successive groups of ages. The point to be determined is whether movement of population has anything to do with apparent percentage of survival.

Since this movement is constantly transferring a mass of young and adult life from the more sparsely populated areas to those more densely populated, it might reasonably be supposed that the differences in percentage were, at least in large measure, due to this movement—and, at first sight, the figures in Table I appear to support this supposition. Indeed, it can scarcely be thought that this movement is altogether without effect. But it has to be remembered that almost all densely populated areas are increasing in population, and that almost all sparsely populated areas are decreasing in population, so that the decennial changes shown in Table I are perhaps no more than should be looked for from the corresponding densities of population.

The following considerations suggest, at all events, that the influence of movement of population on the percentages of survivals is comparatively small.

1. If the columns in Table I are carefully examined marked exceptions are seen to exist to the usual rule of increase or decrease of population, and no clear relation is apparent between the actual percentage of survival and the degree of decennial increase or decrease of the population. (It must be borne in mind, however, that the changes of population given are only for the decennium 1881 to 1890.)

2. The age of 75 is beyond the time of life at which change of residence is usually made.

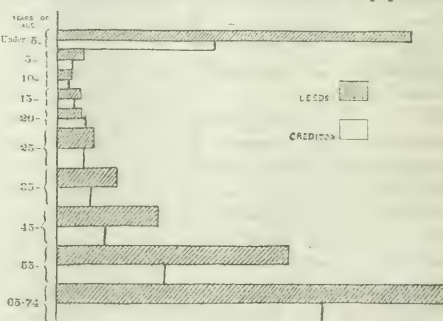
3. If the death-rates at successive age periods in each district given in Table II be compared, good cause is at once obvious for the higher percentages characterizing the sparsely populated districts. Between 1891 and 1900 the country death-rates were less at almost every age period than the town rates (Table III); and the annexed diagram shows this clearly in the cases of Crediton district (in Devon) and the district of Leeds, neither of these two districts being an extreme example of its class.

4. If we compare in Table I the densely populated districts whose population was either almost stationary or actually declined between 1881 and 1890 with the

TABLE II.—Percentages of Total Deaths over Five Years of Age formed by Deaths at the Ages of 75 and over—1891 to 1900.

District.	Percentage.	District.	Percentage.
Manchester ...	4.1	Leyburn ...	35.6
Whitechapel ...	5.2	Hartismere ...	37.7
Strand ...	4.6	Aylsham ...	38.7
Stepney ...	8.9	Aberayron ...	34.8
Pontypridd ...	7.8	Dewdade ...	36.7
Liverpool ...	5.8	Gullicross ...	35.9
Salford ...	7.7	Sedburgh ...	34.4
Middlesbrough ...	8.0	Dunmow ...	35.1
Wigan ...	9.1	Droxford ...	36.7
Bedwelty ...	8.7	Hoxne ...	37.7

sparsely populated districts whose population was either almost stationary or actually increased, we shall scarcely avoid the inference that mere movement of population



makes comparatively little difference to the figures of percentage of survival.

A correction for sex distribution might possibly slightly modify the figures. A correction for age distribution, so

TABLE III.—Average Annual Rate of Mortality from all Causes at Different Ages to 1,000 living during the Ten Years 1891 to 1900.

District.	All Ages.	Under 5.	5-	10-	15-	20-	25-	35-	45-	55-	65-74.
Manchester ...	26.3	93.4	6.7	3.8	5.5	6.7	10.3	19.0	30.8	50.9	79.3
Whitechapel ...	31.5	87.7	8.6	6.7	8.4	9.0	16.5	30.7	46.7	66.9	96.0
Strand ...	30.8	115.3	10.7	7.9	8.8	9.6	16.4	28.9	40.9	55.6	85.8
Stepney ...	22.3	104.9	6.9	3.3	3.4	3.4	5.1	10.5	15.5	27.3	52.3
Pontypridd ...	20.6	80.9	5.2	2.6	4.8	5.9	7.3	10.2	17.3	36.9	72.6
Liverpool ...	33.2	114.5	8.9	4.4	6.1	8.1	14.8	26.8	41.8	65.5	107.0
Salford ...	24.2	91.9	6.6	3.3	4.3	5.8	7.8	15.1	26.0	49.0	90.2
Middlesbrough ...	20.3	69.9	4.9	2.7	4.9	6.1	8.3	13.0	20.9	40.4	77.4
Wigan ...	21.8	79.0	5.3	2.7	4.0	5.7	6.8	12.0	20.2	41.5	86.1
Bedwelty ...	21.0	71.2	5.8	2.3	4.1	5.8	6.8	11.7	18.8	40.3	84.9
Leyburn ...	16.1	27.5	2.1	1.5	3.3	3.7	5.0	8.4	8.7	24.6	57.9
Hartismare ...	16.9	31.8	2.5	2.2	3.5	4.7	5.6	7.6	10.4	20.9	51.6
Aylsham ...	16.2	36.7	2.6	2.2	2.1	5.2	4.8	6.3	7.7	18.8	42.6
Abercrom ...	19.5	33.8	4.6	2.9	6.1	9.5	8.9	10.3	10.2	21.6	50.0
Depwade ...	15.7	31.9	2.3	1.9	2.8	4.7	4.9	6.4	9.5	18.1	51.7
Guiltcross ...	15.6	31.1	2.9	2.0	2.2	3.1	5.2	6.6	8.9	18.4	48.9
Sedburgh ...	15.3	27.6	3.0	2.4	2.9	5.6	3.8	9.5	10.3	23.0	56.8
Dunmow ...	16.5	29.7	3.4	2.4	3.5	5.0	5.3	8.8	11.9	20.6	50.8
Droxford ...	13.6	28.25	2.6	1.3	1.9	3.2	4.7	14.9	9.4	16.4	45.6
Hoxne ...	15.3	31.5	2.6	1.5	3.3	4.3	4.5	6.7	8.4	17.9	45.0
Leeds ...	—	74.8	5.7	3.0	4.7	5.2	7.4	12.6	21.5	41.9	82.6
Crediton ...	—	32.6	3.2	2.6	3.5	5.8	5.5	6.9	10.2	22.3	54.5

essential in inquiries into the incidence of certain diseases, has appeared to me inapplicable in this particular inquiry.

I would submit that it may be concluded:

1. That there is a very remarkable disparity of longevity in different districts of England and Wales.

2. That this disparity is closely related to density of population.

3. That mere movement of population from country to town, whilst probably tending to make the disparity appear greater than it really is, has on the other hand probably no very considerable effect upon the figures.

THE DIAGNOSIS AND TREATMENT OF SEVERE ANAEMIA.*

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THE title of my paper is, perhaps, somewhat too extensive for the ground that I shall be able to traverse—a more correct description would be the differential diagnosis and treatment of pernicious anaemia—and since in the diagnosis and treatment the examination of the blood is of crucial importance, I shall have a good deal to say on the features of the blood in pernicious anaemia and in other cases of severe anaemia which may so resemble it as to give rise to difficulty in diagnosis.

The main symptoms of pernicious anaemia are simply those met with in any severe anaemia—great breathlessness on slight exertion, faintness or actual syncope, great muscular weakness, and palpitation of the heart. All these may be present in severe anaemia from whatever cause, and are in no way characteristic of pernicious anaemia, but there are certain other features which may be present, though by no means always so, which afford further clinical evidence of the disease. These are the peculiar yellow colour of the skin, suggestive of a slight

degree of jaundice; the presence of numbness and tingling in the hands and feet, the result of the lesions in the peripheral nerves and spinal cord, which are almost always found if these are examined *post mortem*; and the presence of small ulcerations and red patches about the tongue, lips, and gums, of soreness in the oesophagus and stomach, vomiting, and occasional attacks of diarrhoea, with the passage of pale, clayey and sometimes frothy stools. These symptoms of an infection of the alimentary tract are not always present, but if present they are most characteristic.

There are many conditions which may give rise to anaemia so profound as to bear a close clinical resemblance to pernicious anaemia. It would be impracticable to refer to them all, but the most important among them are these:

1. Diseases of the haemopoietic and lymphatic system, as leucocythaemia—spleno-medullary, lymphatic, or, more particularly, acute; Hodgkin's disease; leukaemia, a condition probably closely allied to acute leucocythaemia; and primary aplastic anaemia.

2. Carcinoma of the stomach.

3. Repeated small haemorrhages.

4. Long-standing cases of septicaemia, in particular ulcerative endocarditis.

5. Severe chlorosis.

6. Chronic Bright's disease.

7. A number of secondary causes of severe anaemia, scurvy, malaria, syphilis, phthisis, infection of the intestine with *Bothriocephalus latus* or *Ankylostomum duodenale*.

All these conditions may cause severe anaemia which clinically closely resembles pernicious anaemia and accordingly they must be carefully borne in mind in examining a suspected case. It is a fatal tendency to place too sole a reliance on the blood examination. The examination may prove to one's satisfaction that a patient is suffering from pernicious anaemia, or it may as conclusively prove that he is not, but in this latter case the cause of the anaemia remains in doubt unless one has made inquiries as to other possible causes. So that when making the blood examination one must at the same time examine for any evidence of carcinoma of the stomach or for any history of haemorrhage, and a common form of the anaemia from haemorrhage is that which follows compara-

* An address to the Manchester Medical Society, November 4th, 1908, illustrated by a lantern demonstration of photomicrographs of the blood.

tively small but frequently repeated losses of blood from piles. Evidence of chronic septicaemia must be sought for and the heart examined, in the recollection that ulcerative endocarditis is very insidious in its onset, and that its symptoms frequently point to anywhere else other than the heart as the site of the mischief. Then the urine should be examined for albumen and other evidences of chronic nephritis, a condition which not uncommonly reveals itself by no other symptoms but those of anaemia. Other causes, with, as a rule, fairly obvious signs, such as soury, malaria, syphilis, and phthisis, must be borne in mind and examined for at the same time. Nor must it be forgotten that severe chlorosis may closely resemble pernicious anaemia, and that it may be met with not only between the ages of 18 and 25, but occasionally in older women, particularly in those that have suffered from it in their earlier years.

If, on a careful examination, none of these causes of severe anaemia can be recognized at present, there is a presumption that we have to do with a case of pernicious anaemia, but conclusive evidence can only be gained through the blood examination.

Blood Examination.

In pernicious anaemia the red corpuscles are greatly reduced in number; instead of 5,000,000 or more in the cubic millimetre we find only 2,000,000, 1,500,000, or they may be reduced to 1,000,000 or lower; that is to say, that there are only 40, 30, or 20 per cent. of the normal number of corpuscles. The haemoglobin is also reduced, but not to the extent that the corpuscles are; in a patient with 1,500,000 corpuscles (that is, 30 per cent. of the normal number) there may be 40 per cent. of haemoglobin, and the fraction formed by putting the percentage of haemoglobin above that of the red corpuscles is greater than unity, in the case supposed being $\frac{40}{30} = 1.33$, which, differently put, reveals the fact that each corpuscle contains 133 per cent. of the normal amount of haemoglobin, this figure, expressed either in relation to unity or per centam, being known as the haemoglobin index. The leucocytes are almost as constantly diminished from the normal 8,000 down to 2,000 or 3,000 or less in the c.mm., and as this reduction is almost solely confined to the polymorphonuclear neutrophils there is a relative excess of lymphocytes, these cells forming 60 to 70 per cent. of all the leucocytes present, instead of normally 15 to 20 per cent. On examination of stained films of the blood the most notable feature is the great diversity in the size and shape of the red corpuscles. There are many larger than normal, macrocytes, and, indeed, the average size is larger than normal, in keeping with the fact that each corpuscle contains, on an average, more than 100 per cent. of haemoglobin. The diversity in shape is an equally marked feature. In a normal blood the corpuscles are all approximately equal in size and with a correct circular outline, but in pernicious anaemia round corpuscles are in a minority, the majority are oval or elliptical or pear-shaped, or still more irregular—poikilocytes. We find, further, changes in the staining capacity of the red corpuscles, some are polychromatophilic—that is to say, they show an affinity not only for the acid eosin stain, as is normal, but also for the basic methylene blue, and so appear greenish or bluish; whilst some show the presence of granules which stain with methylene blue, the so-called "granular degeneration," or basophile stippling of the erythrocytes. In addition we may find nucleated red corpuscles, though I am inclined to lay much less stress upon them than upon the other features I have mentioned, and it is particularly the finding of the variety described as megaloblasts which is of such significance. Nucleated red corpuscles are not uncommon in many conditions of severe anaemia, but these are mostly normoblasts, corpuscles of about normal size, shape, and staining capacity with a small deeply staining nucleus. The megaloblasts which are met with in pernicious anaemia and in leucoerythraemia are very different looking cells, and are characterized by three typical features—namely, the large size of the corpuscle, the large nucleus with well marked nuclear network, and the cytoplasm showing very decided polychromatophilia.

Now let us turn to the characters of the blood in some of these other forms of severe anaemia that I have referred to. The more chronic forms of leucoerythraemia only occasionally present any high degree of anaemia; and in

addition they present certain clinical features, the great enlargement of the spleen in the spleno-medullary form and of the lymphatic glands in the lymphatic form, which suggest the nature of the disease. A single glance at the stained film clinches the diagnosis, the great increase of leucocytes is at once apparent; a large proportion of these, 25 to 40 per cent., in the spleno-medullary form being myelocytes with a large single nucleus and neutrophile or eosinophile granules, whilst in the lymphatic form the great majority, well over 90 per cent., as a rule are lymphocytes. Acute leucoerythraemia requires more circumspection. The anaemia is usually most profound, and not uncommonly there is no enlargement either of spleen or lymphatic glands, and it is impossible to pronounce for certain about a case until the blood examination is made, and in the absence of such examination there is little doubt that cases frequently go undiagnosed. But the appearance of the film is conclusive, and we find large numbers of lymphocyte-like cells, the larger forms usually preponderating. Of leukaemia I need say little; it is an uncommon, and as yet not quite clearly defined, condition. There is most profound anaemia, and the blood, while in many ways resembling pernicious anaemia, as in the high haemoglobin index, and the large average size of the corpuscles, bears also some resemblance to that in leucoerythraemia. Though there may be no increase in the number of leucocytes (at times even a decrease), there are qualitative changes, consisting in the presence of a considerable proportion of myelocytes or of the large "lymphoid" cells that are met with in acute leucoerythraemia, which distinctly bring it into the category of leukaemia-like diseases, and at times the number of leucocytes may greatly augment, so that the blood comes to be indistinguishable from a case of acute leucoerythraemia.

Apart from these special conditions, the other forms of severe anaemia I have enumerated all show practically uniform blood changes which are on the whole the antitheses of those met with in pernicious anaemia. The red corpuscles are rarely reduced to the extent that they are in pernicious anaemia while the haemoglobin is proportionately more reduced than the corpuscles, giving an index of below 100, very often far below. The average size of the red corpuscles is smaller than normal, instead of being larger, and there is comparatively little variability in size or shape. Nucleated red corpuscles are less numerous; if present they are of the normoblast type, megaloblasts being practically unknown, whilst those which show polychromatophilism or granular degeneration are infrequent, except the latter in lead poisoning. I may say parenthetically that the anaemia of *bothrioccephalus* infection is an exception to this type. I have never seen a case, but the blood is said to be indistinguishable from that of pernicious anaemia, and the diagnosis depends on the discovery of portions of the worm or its ova in the faeces.

Let us consider one case, that of a man with severe anaemia, the result of long-standing loss of blood from bleeding piles. His haemoglobin was down to 28 per cent., a more profound anaemia than in most cases of pernicious anaemia. But the corpuscles were proportionately much less reduced, being 2,700,000, so that the haemoglobin index was as low as 52, each corpuscle containing barely half the normal amount of haemoglobin, whilst the corpuscles in the stained film appeared small and washed out, but fairly regular in size and shape. Another man had all the appearance and symptoms of a case of pernicious anaemia, and took his place among the patients at a university examination as such. But on examination the haemoglobin was found to be 20 per cent. and the red corpuscles 2,570,000, giving an index of 52, and the stained films showed all the characters of a secondary anaemia, and none of pernicious anaemia. I felt very strongly at the time that the slight gastric symptoms which he showed, and which had naturally been looked on as the gastric symptoms of pernicious anaemia, were due to carcinoma of the stomach—a surmise which subsequently proved correct, and was verified *post mortem*.

Occasionally in cases of secondary anaemia one sees so great an irregularity in size and shape of the red corpuscles that at a first glance a diagnosis of pernicious anaemia is suggested. In one such case, however, the index was found to be only 74, and a more critical examination of the film showed that the average size of the corpuscles was in keeping with this low haemoglobin index—decidedly below the normal—and so the superficial resemblance to pernicious anaemia vanished. Very occasionally one may get a few true macrocytes, as in one case of severe

anaemia from carcinoma at the cardiac orifice of the stomach. Here there were occasional enormous red corpuscles that would have done credit to any case of pernicious anaemia, and others that were distinctly above the normal size. But these were exceptions, and the average size was much below normal, in keeping with a haemoglobin percentage of 18, a red count of 1,560,000, and a haemoglobin index of only 57 per cent. Even in a typical case of chlorosis I have come across large numbers of macrocytes, which at first sight strongly suggested pernicious anaemia, but the other corpuscles were small, and, in spite of the number of large corpuscles, the average size was below normal, as shown by the low haemoglobin index of 64.

Prognosis and Treatment of Pernicious Anaemia.

There is much error in regard to the prognosis; the disease is too commonly looked upon as inevitably and speedily fatal, and so no proper steps are taken to ensure adequate treatment. Now, although I do not for a moment deny the seriousness of the disease, it is my experience that no other of the more serious diseases responds so satisfactorily to prompt and efficient treatment; and that if recognized early some cases may be actually cured, while others may have several years of fairly comfortable life ensured to them.

Take, for instance, a case whom I have under my care in August, 1903. Her lowest red corpuscle count was 1,570,000 and the blood at that date had all the typical characters of pernicious anaemia. After two and a half months' treatment the red corpuscles had risen to 5,064,000 per c.mm., the haemoglobin was 92 per cent, and there was absolutely no abnormality to be detected in the corpuscles. I have had her under me since then from time to time and she has shown no sign of relapse.

Another case had only 1,210,000 red corpuscles in the c.mm. when he was admitted into the infirmary under Dr. Dreschfeld in 1899, and was in every way a typical case of pernicious anaemia. After five weeks' treatment his corpuscles had risen to 3,560,000 and had almost lost their irregularity in size and shape, and two and a half years later, when he was under my care at the Ancoats Hospital, they had risen to 4,180,000 and in appearance were perfectly normal. He died in 1906, but from consumption, not from pernicious anaemia.

Now as regards the details of treatment. Ever since Byrom Bramwell first demonstrated its value arsenic has been our sheet-anchor in pernicious anaemia. The mode of giving it is of the greatest importance. It is quite useless to give 2 or 3 minims of liq. arsenicalis as is too often done in a perfunctory fashion. It must be started at 4 or 5 minims three times a day and rapidly run up by increments of 1 minim per dose every day or every other day to a dose of 12, or, if possible, 15 minims. When these large doses are being approached, the blood should be again examined, and, if improvement is commencing, the dose should be dropped, and then again increased. The reason for this is that if improvement has started there is less need to push the drug and greater need to avoid setting up toxic symptoms, which might entail its being wholly stopped for a while, with consequent liability to relapse. I have emphasized this point particularly, because I have on more than one occasion had this account given me on asking a doctor how a patient that he had sent to me had gone on: "That he had gone on splendidly for some weeks with the continued full doses of arsenic, but then he had shown toxic symptoms, the arsenic had had to be stopped entirely, and he had rapidly gone to pieces." Of course, if the second examination of the blood shows no commencing improvement, the arsenic must still be pushed, and, in the hope of its eventually proving effective, the risk of poisonous effects must be taken. One is between the devil and the deep sea.

The natural history of a case under such treatment usually is that he improves rapidly after he has once started to pick up, gives up treatment, and before long relapses, and the successive relapses which may occur are usually each more severe and more difficult to cure than their predecessors. He feels so well as the result of treatment that nothing will convince him that he is not permanently cured, and too often his doctor falls into the same belief and sends him off for a long holiday, with most dire consequences. It is of the utmost importance that the patient should keep on with small doses of arsenic, even though feeling perfectly well, that he should never go longer than ten days or a fortnight without being seen by his doctor, and that if there is any suspicion of a

commencing relapse a blood examination should be at once made, for the relapses, if detected early, may respond readily to treatment, but if overlooked (and their onset is nearly always most insidious) they prove more stubborn than the previous attack.

There is another line of treatment which may be combined with the arsenical, based on Hunter's theory that the essential cause of the disease is a chronic oro-gastro-intestinal infection. The removal of carious teeth, the use of antiseptic mouth washes and of gastric and intestinal antiseptics should never be neglected. Various internal antiseptics may be used. I have mainly employed salol, beta naphthol, mercury perchloride, and petroleum emulsion. The same rule applies to these as to arsenic—they should be continued in small doses during the well periods and in full doses on any suspicion of relapse.

Finally, I should like to say a word about the use of red bone marrow in the treatment of pernicious anaemia. I had seen so many cases in which various extracts had been used with absolutely no good result that I not unnaturally became very sceptical as to its value. Its use, too, was advocated on an imperfect analogy with the use of the thyroid substance in myxoedema. The action of the thyroid gland is a chemical one, and its secretion is a chemical product, but the action of the bone marrow in producing the blood cells is a purely vital one, which must cease as soon as its cells are dead. But comparatively recently Dr. Gullan has published some cases in which its use appears to have been effective. He suggests that in addition to the vital process of reproduction of red and white cells which goes on in the bone marrow there may be a chemical process—the production of an internal secretion. He supposed that when the red bone marrow is administered this internal secretion may be such as to stimulate the vital production of blood corpuscles in the patient's bone marrow, and also that it may act, as there is some experimental evidence to show that arsenic does, by increasing the resistance of the red corpuscles to the action of the haemolytic toxins which are looked on as the cause of the disease. Consequently I tried the effect of the red marrow on two cases, old standing cases, one of whom had been suffering for at least four years, and had relapsed several times. Both were proving resistant, as is the way with relapses, to the arsenic and antiseptic treatment, and I can say that the more rapid improvement in both dates from the addition of the red marrow to their dietary, and one, the worse of the two, has now kept well for six months on no other treatment, though I cannot say how long the improvement is likely to last. At any rate, I believe that combined with other methods it is one which should not be neglected.

PERNICIOUS ANAEMIA WITH PIGMENTATION OF THE SKIN AND BUCCAL MUCOUS MEMBRANE.

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THESE notes on two cases of pernicious anaemia which were under observation about the same time appear to me to be of interest on account of the unusual site of the pigmentation in the first case, and the early appearance of glossitis as a symptom in both.

CASE I.

H. F., aged 52, a baker, was first seen on October 14th, 1908, complaining of general weakness of about five months' duration.

History.

Family history was unimportant and personal history good, he having had no illness of importance since childhood. There is a history of alcoholic excess at intervals over many years; he is a moderate smoker and has had no venereal disease.

Except for occasional attacks of biliousness—gastric discomfort and flatulence—he has always had good health. In May, 1908, he was able to carry on his business, which entailed early rising and long hours, without undue fatigue, and felt quite well. In the beginning of June he had an attack of diarrhoea without stomach disturbance after eating a quantity of new potatoes, and to this he attributes his present illness. The attack lasted two or three days. Some time afterwards he noticed that he had to take any exertion more leisurely on account of shortness of breath, and that his feet were slightly swollen at night. He suffered from pains in the legs at this

time, and occasionally noticed purple spots over his shins. During July the breathlessness became marked, and his friends commented on it and on his pallor. He became aware also of a decided loss of energy, feeling "done up" after his day's work, and of an excessive sleepiness. Owing to increased weakness and giddiness he had to shorten his hours, and finally by the middle of August to give up work altogether, as he had sometimes to be assisted home after fainting attacks. While his appetite and digestion seemed good, he has had at intervals, causeless and painless attacks of diarrhoea which ceased in a few days on a strict milk diet; and, occasionally, since the onset in June, a sore mouth and tongue which made chewing very painful. On each occasion he has "cured" this with borax and honey, and for the past six weeks it has not troubled him. For the last two months he has been mostly in bed; at times able to get up and go out; at others, shivery, languid, and liable to faint if he raises his head from the pillow. He has not been able to rise for two weeks past. His present complaint is of weakness and distressing noises in the chest and ears. He has never had pain in the stomach nor vomited. There is no history of any hæmorrhage.

Condition on Examination.

He is a well-built, muscular man, inclined to stoutness, but with no sign of wasting. Expression is languid. Face is extremely pale and pigmented (see below), and skin over the rest of the body is slightly yellow in tint. Mucous membranes are of a dull white colour, and the ocular conjunctiva is slightly yellow. Temperature is 100° F.; pulse 110, regular and very compressible. Tongue is clean, pale, flabby, and unusually smooth. All the teeth are gone, except two incisors, two canines, and four molars, which are blackened and carious. Pupils are equal and normal. There is slight oedema of the chest wall, dorsum of feet, and eyelids, and tenderness on pressure over sternum and long bones. The slightest exertion, such as sitting up in bed, brings on a violent thumping pulsation over cardiac area, especially noticeable in the epigastrium, and evident in the vessels of the neck, and this pulsation he hears painfully distinctly. The area of cardiac dullness is slightly increased to the right, and a soft blowing V.S. murmur is heard distinctly at the apex, less distinctly at base. Second pulmonary sound is accentuated. At bases of lungs behind there is deficient resonance to percussion, and a few fine moist râles are present. There is very marked dyspnoea on movement. Liver dullness extends about 1 in. below the costal margin, and the edge can be palpated there. It is not sensitive to pressure. Spleen is not enlarged, and there are no enlarged glands. Abdomen is relaxed and soft, and nothing abnormal can be detected there.

Urine is high coloured, acid, and specific gravity is 1018. A faint trace of albumen is present, but no casts. Knee-jerks are active, and plantar and superficial reflexes normal. Sensation appears to be undisturbed.

Fundus Oculi (Dr. Arthur J. Ballantyne).—There is abnormal pallor and transparency of the blood in the retinal vessels. In both fundi there are numerous flame-shaped hæmorrhages and several soft-edged exudative patches. Some of the hæmorrhages have the pale centre, sometimes described as characteristic of the hæmorrhages of pernicious anaemia.

Blood examined on October 14th showed red corpuscles 1,230,000 (24 per cent.) per c.mm.; hæmoglobin, 32 per cent.; index, 1.35; and white corpuscles, 5,500 per c.mm. The most noticeable feature in the stained slide was the very large size of a great number of the red cells, and on measurement 40 to 45 per cent. of them were over 9 μ . Most showed a tendency to oval in shape, and only a few were circular. There were numerous poikilocytes and microcytes. Polychromatophilia was marked, many of the red cells staining grey, brown, or purple in whole or in part (Ehrlich-Biondi stain). Polymorphonuclear leucocytes were diminished in numbers to 50 per cent., and a small percentage of neutrophilic myelocytes was present. Nine megakaryoblasts and two normoblasts were seen in differentiating 1,000 leucocytes.

On the arms and legs and lower abdomen, and to a lesser extent on the face and neck, a marked pigmentation of the skin is present. Over the face and neck pigmented patches are distributed, pale grey to pale brown in colour, with a distinct edge and irregular outline, but clearly marked off from the surrounding very pale skin. Similar patches are present on the lower legs, dorsum of feet, forearms, and backs of hands, and in those situations are of a dark brown colour. Scattered over those surfaces are also a number of discrete spots, light brown to chocolate in colour, varying in size from a pin's head to a sixpence, and mostly of circular outline. They are not elevated. Over thighs, flanks, and lower abdomen the skin presents a mottled appearance, due to the presence of a large number of discrete pale brown spots about the size of a lentil.

Blood Examinations (Case 1).

	Red Corpuscles.	Hæmoglobin.	Colour Index.	White Corpuscles	Neutrophils.	Small Lymphocytes.	Large Lymphocytes.	Eosinophiles.	Basophiles.	Myelocytes.	Megakaryoblasts.	Normoblasts.	No. Differentiated.
October 14...	1,230,000	32%	1.33	5,500	50.1%	39.8	3.8	4.7	0.1	1.5	9	2	1,000
October 22...	935,000	28%	1.5	—	51.7%	42.7	2.3	2.1	0.2	0.9	7	0	1,000
October 24...	614,752	20%	1.6	5,000	50.1%	47.0	2.0	0.4	0.0	0.5	22	1	1,000

A few spots are present on the front of the chest. There is no pigmentation of axilla or nipples.

Pigment spots are also present on the buccal mucous membrane, situated on the palate, lips, and cheeks; on palate and lips being symmetrically placed, on cheeks irregularly and where the teeth are absent. They are thirty in number, the smallest being the size of a pin's head, and the largest $\frac{3}{4}$ in. by $\frac{1}{4}$ in. The colour varies from a light patchy brown to a deep homogeneous chocolate; they are irregular in outline, but have a distinct edge. The spots are not raised, nor affected by pressure, nor sensitive to touch.

On the ocular conjunctiva on the upper surface of the globe, situated at the extremity of the vessels, are dark, opalescent spots about the size of a pin's head.

There were no signs of hæmorrhage on the mucous membranes or skin.

The patient could give no definite information about the spots on his skin, except that they had "become much worse lately."

After-History.

The patient became gradually weaker, though he had periods of apparent improvement, alternating with periods of apparent collapse. Temperature was irregular till he died, varying from 99° F. to 101° F., but never normal. Dyspnoea (which was not affected by posture) was very marked, and palpitation troublesome. On October 20th red corpuscles were 935,000 per c.mm., and hæmoglobin 28 per cent. On the 21st he fainted on attempting to get out of bed; vomited considerably, and for the next two days was hardly able to move. On the 24th, he again fainted on attempting to rise. Red corpuscles were 614,752 per c.mm., hæmoglobin rather under 20 per cent., and he had to be punctured several times before enough blood could be got to fill the pipettes. On the 25th he was unconscious all day, bowels and bladder acting involuntarily. Next morning he was sitting up in bed, having partaken of bread and porter. In the afternoon he became comatose, and remained so till he died, twelve hours later. Post-mortem examination was refused.

CASE II.

Mrs. H., aged 65, was seen in November, 1908, complaining of general weakness, giddiness, and palpitation, of eight months' duration.

History.

She had a history of ten years' indifferent health, having suffered from anaemia and shortness of breath, but otherwise no definite illness till two and a half years ago. Then, following a "sore tongue," she suffered from attacks of diarrhoea, and became gradually very weak, pale, and breathless. She was in hospital (August, 1906) for a time, and left much better. A similar turn took place in 1907; she was again in hospital, improved, and was better for some months. Eight months ago weakness and breathlessness gradually increased again; and since then she has suffered from bilious attacks (without vomiting or pain), which frequently left her skin yellow. These attacks were followed often by diarrhoea, and occasionally accompanied by a sore tongue. During the last month she has been completely confined to bed on account of weakness. There is no history of hæmorrhage. There is a history of alcoholic excess for some years.

Condition on Examination.

The skin was lemon yellow in tint and ocular conjunctiva was slightly yellow. There was no marked wasting. There was slight oedema of the eyelids, pulse was 100, regular and soft, and temperature 99° F. Teeth were mostly absent and remainder carious, and the gums were spongy. Tongue was slightly furred, and on the left side of dorsum and tip a shallow ulcer, 1 in. by $\frac{3}{4}$ in., with red edges, and very sensitive to the touch, was present. Cardiac dullness was normal and a V.S. murmur was present all over the cardiac area. Liver was slightly enlarged, and the spleen could be palpated. There was tenderness to pressure over the stomach. Urine was pale, with a specific gravity of 1016, and contained a trace of pus. Knee jerks were active and superficial reflexes normal. Blood examination showed red corpuscles 1,800,000 to 1,650,000 per c.mm., hæmoglobin 50 to 45 per cent., index 1.6 to 1.5, white corpuscles 4,400 to 5,400 per c.mm. More than 50 per cent. of the red corpuscles were over-sized. Poikilocytosis and polychromatophilia were marked. Differential count gave neutrophils 42.5 per cent., small lymphocytes 45.7 per cent., large lymphocytes 9.7 per cent., eosinophiles 3.2 per cent., myelocytes 0.7 per cent. Two megakaryoblasts were seen in counting 400 leucocytes on one occasion, three on another, but no normoblasts.

A slight degree of pigmentation of the skin was present. On the face and neck, arms and backs of hands, legs, thighs, dorsum of feet, and lower abdomen small pale brown spots, fairly circular in shape and about the size of a lentil, were

distributed. On exposed surfaces the spots were darker brown in colour. There was no pigmentation of nipples, axillae, or mucous membranes.

These cases present some features of interest. The entire duration of Case 1 from the onset of distinct symptoms was five months, and the course, though showing the peculiar periodicity of the disease, was typically "progressive." Hunter¹ states those acute cases are the rarest form, and Cabot,² in an analysis of 1,200 cases, found 14 per cent. progressive. The patient definitely dated the onset to an attack of diarrhoea—in itself, as a cause, out of all proportion to the anaemia that followed—and his only previous complaint was of biliousness. It is interesting to note that he made no complaint of a sore mouth until particular inquiry was made on that point, though it had given him considerable pain and he had had recourse to treatment for it frequently. Both diarrhoea and glossitis appeared—according to his statement, when he was "quite well"—before any definite symptoms of anaemia had developed, and both recurred frequently during the course of the illness. In the second case the patient attributed the onset voluntarily to a "sore tongue" followed by diarrhoea. She had been anaemic for some years previously, but after this attack of diarrhoea her condition became rapidly worse. From her history she has had two relapses, and in each the gastro-intestinal symptoms were early and periodic.

These cases appear to me to agree with Hunter's conclusions. As a result of his prolonged experimental, pathological, and clinical inquiries he holds that pernicious anaemia is not merely a special form of anaemia, but that it is a specific entity. "The primary etiological factor is a specific haemolytic infection, giving rise to a specific infective glossitis, gastritis, and enteritis, with sepsis of the alimentary tract, as a potent predisposing factor." "A definite, specific, haemolytic, infectious disease, localized to the alimentary tract, with characteristic mode of onset, clinical features, and course; haemolytic and infective lesions."³

The appearance and symptoms of Case 1 at first suggested Addison's disease. The typical lemon-yellow tint of the skin was nowhere present, and the pigmentation of the face to some extent obscured the extreme pallor. N. S. Davis,⁴ writing on Addison's disease, says "the symptoms of pernicious anaemia are so much like those of Addison's disease that the former might be suspected until the characteristic pigmentation appeared on some part of the surface"; and other writers refer to a possible confusion. In this case the widespread pigmentation of the skin, the presence of well-marked pigment spots on the buccal mucous membrane, with progressive asthenia, gastro-intestinal symptoms, and a tendency to syncope, made a diagnosis doubtful until the blood examination revealed the characteristic changes of pernicious anaemia, and further inquiry brought out the suggestive points in the history.

Pigmentation of the skin is an unusual feature in pernicious anaemia, and most of the textbooks do not refer to its occurrence. Cabot, in his analysis above referred to, found in 38 cases mention of a "brownish tint of the skin resembling sunburn, and usually attributed to overdosing with arsenic." Case II was possibly of this nature, as she had arsenic frequently and over long periods; but the resemblance of the spots in appearance and situation to those in Case I is suggestive. In Case I the administration of arsenic as a cause could be definitely excluded. A number of similar cases have been reported. Laache⁵ noticed a dirty yellowish discoloration of the skin in several cases, which recalled Addison's disease; and Immerman⁶ reported two cases in which a well-marked bronzing of the skin developed. Packhard⁷ has reported a case in which areas of pigmentation were present over the face and body, with areas of leucoderma, and quotes Broadbent⁸ as having described a similar case. Decastello⁹ has reported three cases, in one of which the pigmentary changes corresponded with sensory nerve areas; and Fortune¹⁰ a case in which well-defined brown patches and brown spots were present over body and limbs. It is noteworthy that in the cases which came to necropsy (Laache, Immerman, Fortune) the suprarenal capsules were found normal. On the other hand, Stanley¹¹ has described cases of anaemia (pernicious?) in which pigmentation of the skin occurred and in which at

necropsy there were marked changes in the suprarenal bodies.

With the exception of its presence in Addison's disease, buccal pigmentation does not appear to be of common occurrence. It has been reported as having been found, without any very evident cause present, in chronic gastric conditions; in abdominal conditions (Schultze¹²); in Graves's disease (Sibley¹³). It does not seem to occur as a result of the prolonged use of arsenic.

With regard to its occurrence in pernicious anaemia, I have found very little reference in the literature. Hale White¹⁴ showed a case of pernicious anaemia with pigmentation in the buccal mucous membrane at a meeting of the Association of Physicians of Great Britain and Ireland (May, 1907) of which I have seen no report. Lazarus¹ reports a case in which "on the tip of the tongue and on the mucous membrane of the cheeks, were circumscribed reddish-brown, mahogany-like discolorations, of punctate to dime size, which were undoubtedly the sites of hyperaesthesia, and probably represented haemorrhages into the mucous membranes."

In the present case the spots were on the palate, lips, and cheeks, but absent from the tongue; insensitive to touch; and no signs of haemorrhage were observed.

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TWO CASES OF CARDIAC DISEASE.

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THE following notes of two cases of cardiac disease who were under my care at Llangammarch Wells, during the summer of 1908 may be of interest.

CASE I.

A youth, aged 16, who had had a weak heart for several years. His history showed that he had scarlet fever at the age of 6 years, and he also had subsequently several attacks of influenza. In 1902 he had a severe fainting attack, and consulted a specialist, when a cardiac lesion was first observed. A short time before his arrival at Llangammarch he had evidently strained himself by running when at school.

When I saw him in July he was somewhat feeble, being thin and tall; his height was 6 ft., and his weight 9 st. 3 lb. The heart was considerably enlarged. At the apex, which was in the nipple line, the sounds were normal, but at the right base there was a systolic murmur, which was also heard behind. The pulse was regular, 72, and the tension 130 mm. by Poise's manometer. There was extensive granular pharyngitis.

He was placed on a strict course of treatment, which he carried out very faithfully. He drank a glass of barium water three times daily, and he had daily either a barium bath or massage. At the commencement he was, owing to his feeble condition, restricted in his exercise, but after a short time he was encouraged to undertake a little hill climbing. His diet was carefully regulated, and he had a short rest every afternoon. The pharyngeal granulations were destroyed by the galvano-cautery.

He soon began to improve; he gained in weight and strength, and was able to ascend a fairly steep hill slowly without any marked acceleration of the pulse, and without any signs of dyspnoea. This treatment, after the method suggested by Certei, I find to be of considerable value, and at Llangammarch there are special facilities for carrying it out. It is only used in selected cases.

After six weeks' treatment I found the patient much improved; the area of cardiac dullness had diminished, the apex beat now being distinctly felt half an inch inside the nipple line.

I heard from my patient a few weeks ago, and he reported that he felt very well, had gained in height, and had no cardiac symptoms to trouble him.

CASE II.

A young man, aged 19, had had rheumatic fever at the age of 11, and a second attack in 1907. He was also subject to chorea.

He was anaemic, he stooped considerably, and breathed chiefly through the mouth. The chest was flat, the area of cardiac dullness enlarged, the apex being in the nipple line, where there was heard a loud systolic murmur, which was conducted outwards and heard behind. The pulse was regular, the rate being 68 and the tension low. There was no dyspnoea

and no pain, but he had palpitation occasionally. At times there were slight choreic movements of the facial muscles, and also of the left arm and leg. There was considerable obstruction in the nasal passages owing to hypertrophy of the lower turbinate bodies.

He was placed on a course of general treatment similar to that mentioned above. The mucous membrane of the lower turbinate bodies was cauterized in several stages. After a few weeks he was able to breathe entirely through the nose, and ceased oral respiration. He made good progress, his palpitation ceased, and he was able to take walking exercise with ease and without discomfort. In addition to the balneological treatment I am convinced that the removal of the nasal obstruction had a marked effect in relieving the heart from obstruction in the pulmonary circulation.

A few days ago his medical attendant reported that he had no trouble with the heart and looked very well. The murmur was still present, but the pulse was regular, the rate being 68. He had increased in weight and had no dyspnoea.

One object of the treatment is to train the patient as to the amount and nature of the exercise he may take with benefit, and this forms a valuable guide to him when he returns to his ordinary life.

In conclusion, I should note that the mineral water, besides barium chloride, contains a considerable amount of calcium chloride, which recent observations have shown to have a somewhat similar action—that is, in slowing the pulse and increasing the force of the systole.

CASE OF GENERAL PARALYSIS OF THE INSANE WITH EXTRAORDINARY LYMPHOCYTOSIS IN THE CEREBRO-SPINAL FLUID.

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It is now generally recognized that in tabes and general paralysis of the insane the cerebro-spinal fluid usually—perhaps always—contains an excess of lymphocytes, and that this lymphocytosis may be of considerable value in

exact number could not be estimated. In the non-centrifuged cerebro-spinal fluid the number of leucocytes (almost all lymphocytes) was no less than 285 per c.mm.

I am indebted to Dr. Bramwell for permission to publish the notes of this case.

G. W., aged 30, single, a wine merchant's traveller, was admitted to the Edinburgh Royal Infirmary, under the care of Dr. Byrom Bramwell, on March 5th, 1909, complaining of nervousness and difficulty in speaking.

History.

The history furnished by an intelligent sister was that in July, 1907, it was noticed that he was beginning to speak indistinctly, slurring his words now and then. About six months later occasional twitchings of the lips and unsteadiness of the tongue were noticed. In the summer of 1908 he had a great deal of worry connected with money matters; shortly afterwards the articulation and the movements of the lips seemed to get worse. He was able to work up to June, 1908, but then found he was unable to get on with his employers; he had lived at home since.

His sister had noticed very little change in his general behaviour. There had been no grandiose ideas; his power of concentration was, she said, unaffected.

In 1898 the patient contracted syphilis, developed a rash and sore throat, and took pills for over six months. He had had no other illnesses of note.

Family History.

Nothing bearing on the case.

Social Conditions.

The nature of the patient's employment afforded numerous opportunities of taking wine and spirits, of which he seems to have availed himself freely; he states that at times he drank to considerable excess.

Present Condition.

The patient is a very strong, heavily-built man, with a somewhat hang-dog expression. His weight is 15 st. 5 lb.; two years ago he weighed over 15 st. There are no signs of syphilitic disease on the surface of the body.

Nervous System.

Although his mental symptoms are not well marked, yet there is something strange in his manner. While speaking to

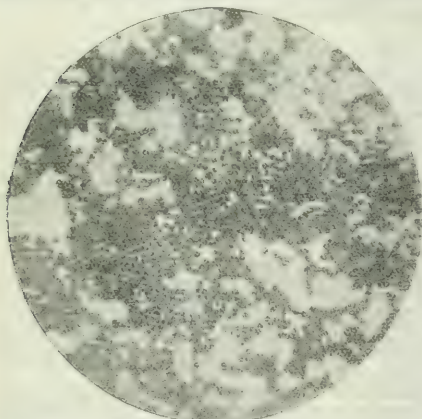


Fig. 1.—Photomicrograph of a lumbar puncture film in the case of general paralysis described in the text, magnified 50 diameters. The film was made after centrifuging 5 c.cm. of the fluid for ten minutes. The photograph was taken from a thin portion of the film.

the diagnosis of the parasyphilitic diseases of the nervous system.

Under normal circumstances the number of lymphocytes in a field of 450 diameters, in a film made after centrifuging 5 c.cm. of the cerebro-spinal fluid for a period of ten minutes, is usually two or three. In tabes and general paralysis of the insane the number is greatly increased. In several of Dr. Bramwell's cases which I have examined during the past six months the number has been from 200 to 250. Dr. Purves Stuart states that he has observed 450 in a field. In the following case the enormous number of 3,450 was counted in a single field of 450 diameters; in places where the film was thick this number was greatly exceeded, but, owing to the thickness of the clumps, the

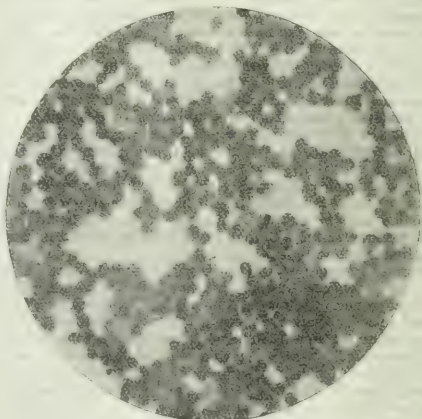


Fig. 2.—Photomicrograph of a lumbar puncture film in the case of general paralysis described in the text, magnified 50 diameters. The film was made after centrifuging 5 c.cm. of the fluid for one minute. The photograph was taken from a thin portion of the film.

him you get the impression that you are dealing with a person of rather childish intellect. Sometimes he is timid, at other times suspicious and morose.

There are no abnormal sensations (paraesthesiae) and no objective disturbances of sensation, except that the patient is rather less sensitive to pain than the average man.

The gait is normal; there is no Rombergism and no paralysis. In the muscles of the legs, and to a lesser extent in those of the arms and trunk, there is a curious fibrillary tremor. When the patient holds out the hand there is a slight tremor. There is marked tremor of the lips, tongue, facial muscles, and eyelids.

The tremor of the eyelids is very marked when the eyes are tightly shut. There is no ocular paralysis and no definite nystagmus, though the eyes are jerky when the patient tries to fix a near object. The pupils are equal, each measuring 4 mm. in diameter; the left pupil is very slightly irregular in out-

line; both pupils contract to light and on convergence. The optic discs are normal.

The articulation is much affected, slurring and indistinct, and is accompanied by inco-ordinate movements and tremors of the lips and tongue. "Hippopotamus" and other test sentences are pronounced in the characteristic C.P.I. fashion.

All the deep reflexes are distinctly exaggerated. The plantar reflex shows active flexion; the abdominal and cremasteric reflexes are present. The organic reflexes (bladder and rectum) are normal. There are no signs of disease in the other systems or organs.

Lumbar Puncture.

An examination of the cerebro-spinal fluid revealed some very interesting facts. The fluid came out under distinct pressure; it was very slightly turbid; this turbidity was not due to the admixture of blood; it was alkaline in reaction, and had a specific gravity of 1.001.

After centrifuging 5 c.cm. of the fluid for ten minutes, decanting and examining the deposit, it was found that the film presented an extraordinary appearance. Here and there the leucocytes were collected in great masses several layers thick; between these masses they were more sparsely distributed (Fig. 1). In places where the distribution was fairly uniform there were, under a magnification of 450 diameters, about 3,400 leucocytes to the field (Fig. 2).

In a fresh specimen of the fluid which had not been centrifuged, there were on an average 285 leucocytes per c.mm.

In the dense parts of the film all the leucocytes appeared to be lymphocytes, but in the thin parts it was found that polymorphs were present in the proportion of 1 to 5. The lymphocytes varied considerably in size, the great majority being small.

Chemical examination showed that the fluid contained a large amount of albumen.

A lumbar puncture was made on several different occasions and the results verified by Dr. Edwin Bramwell, Dr. Ford Robertson, and Dr. W. T. Ritchie. Dr. Ford Robertson and Dr. Ritchie made bacteriological examinations of the fluid, with negative results.

ANAESTHETICS IN GENERAL PRACTICE.

By H. BELLAMY GARDNER, M.R.C.S., L.R.C.P. LOND.,
FORMERLY INSTRUCTOR IN ANAESTHETICS AT CHARING CROSS
HOSPITAL, ETC.

It is my intention in this paper to recount some of the details which procure success in the administration of anaesthetics in general practice. It would not be wise to refrain from the preliminary remark that safe anaesthesia cannot be conducted without actual personal practice on the part of the administrator, for the larger his experience of its difficulties the greater becomes his facility in preventing their onset, and in correcting untoward symptoms when they have arisen.

There are two main principles by which the administrator must be guided in his care of an unconscious patient: (1) To retain a weakly active corneal reflex, and (2) to keep the airways clear.

1. The Corneal Reflex.

The most sensitive spot on the eye is the centre of the cornea opposite the pupil. This is protected from injury in daily life by the smart closure of the upper eyelid on contact with a foreign body. When a patient is unconscious the muscular reflexes are gradually lost in a definite order as narcosis deepens, but the sensitiveness of the centre of the cornea does not disappear until last of all, and this happens before the respiratory and cardiac centres are themselves invaded.

I cannot lay it down too emphatically as an invariable law that it is impossible under any known conditions for the respiratory centre or the cardiac centre to be poisoned by chloroform or ether whilst the upper eyelid still closes when the centre of the cornea is touched by the finger.

This sign, therefore, furnishes an absolute guide to safety, in that, if by careful frequent testing of both corneae a condition of weakly active reflex closure of the upper eyelid is always retained, any complications which occur cannot be due to central poisoning of the respiratory or cardiac nervous mechanisms. An extraordinary fact connected with this simple procedure is that so very few know how to do it. The administrator stands behind the patient, and uses only one finger with which to raise the upper eyelid and touch the cornea. That is, he should insert the pulp of his middle finger between the palpebral edges, drawing the upper eyelid upwards and at the same time brushing that finger pulp lightly against the centre of the cornea. When he has arrived at the upper limit of

the pupil he should let go altogether, noting both by the senses of touch and sight the degree of briskness with which that upper eyelid closes.

The frequent mistake which is made verges on the ludicrous, for the eyelid is held open with one finger so that it cannot move at all, and then the cornea is rubbed with another finger whilst the observer gazes doubtfully at the inert ocular globe.

An improperly elicited corneal reflex is not only useless but dangerously misleading. The sclerotic portion of the eyeball is weak in tactile sensibility, and is useless as a guide in surgical anaesthesia. The lower eyelid in man does not and is not intended by Nature to cover the cornea, and corneal contact has practically no effect upon it in the unconscious state. There is only one proviso with regard to this sign, which is that when a definite difference exists in the activity of the two upper eyelids, we must be guided by the more active. Working on this principle, on account of the fact that a large pupil is found both in the second and fourth stages of anaesthesia, which can only be differentiated by reference to the activity of the corneal reflex, pupillary signs may be neglected altogether. A progressive dose of chloroform or ether having been given until the upper eyelid is weakly active in response to corneal contact, this condition can be exactly retained throughout by stopping the anaesthetic for a few breaths to quicken its activity, or giving more anaesthetic to weaken it as required.

Put in another way, the addition of more anaesthetic by the administrator should always be a guarantee to the surgeon and onlookers that the patient has at that moment a demonstrable corneal reflex.

2. To Keep the Airways Clear.

It is necessary to know by the sound of the breathing, when they are clear. There is, of course, a distinct difference between the sounds of inspiration and expiration; but this is only known instinctively after careful practice. The rule in anaesthesia is that every expiration must be either heard or felt by the administrator in order to make sure that efficient breathing is going on. It is of no use to see the abdominal and thoracic movements, for they may proceed for a considerable time after obstruction to air entry has taken place. Fifteen years' experience has taught me that unrecognized obstruction to air entry is the main factor of danger and death in anaesthesia, that dosage regulated by the corneal reflex is rapidly learnt and easily adjusted; but that elimination of asphyxial factors in all cases is the avocation of an artist and the study of a lifetime. The successful elimination of the numerous possible asphyxial factors as they arise depends upon their immediate detection, causal differentiation and application of the proper remedial measure without hesitation. So subtle in their action are some of these factors that the clinical effect first noticed is often only a secondary syncopeal result upon the heart and circulation, when the general condition is graver than it ought to have been allowed to become.

Dusky of the lips and ears is a sign that air is not entering the lungs in adequate amount, and is due to this absence of air-intake, not to ether or chloroform *per se*. Here we have a definite physical sign, and the man who guides himself by the sound of breathing, putting in a small mouth prop, raising the jaw or drawing the tongue forward directly the sound of breathing through clear airways is replaced by that of partially obstructed respiration, prevents the onset of dusky and its consequent additional dangers.

I venture to assume that the operations for which anaesthesia is most frequently required in general practice, with the exception of dental extractions, are those undertaken by general practitioners themselves, and do not include those for which a surgeon has been engaged.

Dental Extractions.

In the employment of nitrous oxide gas for dental extractions, practice is especially required, not because of danger of giving an overdose, but on account of the extremely short anaesthesia which results from its administration.

Attention to a number of small details which greatly assist the dentist in his work is the only means of ensuring a painless operation under its influence. We

should remember that patients usually obtain their first practical knowledge of surgical anaesthesia in the dental chair, and in order to obtain the confidence of the public we should be most particular that no pain whatever is felt during dental extractions, so that when serious surgical operations have to be faced fear of a semiconscious condition may not be added to the patient's other trials.

There is a very great difference in the amount of nitrous oxide required by lethargic persons of slow speech and nervous, rapid talkers; the well-nourished, healthy girl of 15 provides the ideal subject; the powerfully-built plethoric man the most difficult.

In the first place, in order to prevent the tongue gravitating backwards and obstructing the airway, the patient *must* be seated quite upright in the chair with the head in a line with the body, *not* extended backwards. Dentists soon learn the value of this precaution, but if one should still insist that he cannot operate on a particular tooth in this position (though I think it is quite a fallacy), the chair may be inclined a little backwards after anaesthesia has been induced just before the removal of the facepiece. Dr. Hewitt's mouth props for insertion between the molar teeth are the best, because they bridge across two or three teeth and do not become dislodged. They should be placed in the mouth upon the side opposite to the site of the first extraction and kept in place by slight pressure upwards against the lower jaw.

The dental chair should not be raised very high, for unless both are tall men the doctor's control of the patient and the poise of the dentist are both lost by the patient being out of proper reach.

Movements of the patient's legs nearly always take place during gas anaesthesia, and his heels should therefore be either resting loosely on the floor of the room on either side of the chair or over the end of the chair platform, so that the legs are relaxed and no fulcrum exists for the limbs to push the body backwards and disturb the position of the head. Many an otherwise successful case has been ruined for lack of this simple precaution, which should never be neglected. The fingers of the patient's hands should be interlaced and clasped together in the lap for similar reasons.

Men's collars should be removed to prevent their being soiled by blood, which always runs out of the mouth straight down the chin and neck. Patient's friends should not be allowed near the chair, but placed some way off behind it where they cannot see the patient's face and the actual operation, but most patients behave better without friends in the room.

Too much should not be promised nor attempted at one sitting. I have a very great respect for the difficulties of tooth extraction, and one tooth may often require two doses of ordinary gas for its extraction if it should break off before its roots are all out. Two, or at most three, average teeth should only be promised at one sitting, unless they are loose.

Supposing the teeth to be extracted to be on both sides of the mouth, the doctor can give the best help in keeping the mouth open if the extractions are first made on the patient's left side—that is, the side upon which the doctor stands, for when these are finished he can then most readily slip in a Mason's gag on this left side, and pull out the mouth prop from the right side ready for the next extraction. The doctor should always have a clean sponge at hand to aid the dentist in sponging blood away from the alveolar margins during root extractions.

Oxygen in varying quantities from 6 to 15 per cent., added to nitrous oxide according to requirement, in order to eliminate asphyxial factors, aids enormously in the management of all kinds of patients, and personally I never administer it without. Great advantage can be obtained by the use of nitrous oxide and oxygen through Paterson's nosepiece for continuous administration, which I employ for difficult cases requiring four or five minutes' anaesthesia. The nearest approximation to the good colour and tranquillity ensured by the addition of oxygen is attained with the simple gas apparatus by admitting one breath of air after ten respirations of gas, and another breath of air at each succeeding fifth respiration until the eyes are in a fixed position, and some stertor has arisen. Absolute silence should be maintained during the operation as talking is remembered by the patient afterwards. Towards the termination of the period of anaesthesia the

dentist should be told to "stop" at the moment when, the left eyelid being held open, voluntary movements of the eye in looking round recommence. Sensation to pain is the last faculty to recover from nitrous oxide anaesthesia.

Gas and ether is most valuable in more extensive dental operations, and may quite safely be given to patients sitting upright in the dental chair, though it is best to lay them flat on a sofa for the after-period of recovery. With a Clover's gas and ether apparatus, a small mouth prop always being first inserted, five breaths of nitrous oxide are first given, the valves are then thrown out of action, and rebreathing into the gas bag commenced; immediately after this, ether is gradually introduced; when stertor has arisen, the small ether bag is applied instead of the gas bag, and a breath of air allowed at every fifth respiration. One good dose of ether taking five or six minutes to administer produces more satisfactory anaesthesia and less after-effect than two or three short doses, and when ether has been chosen this plan should always be followed. Children awake very quickly from a single dose of ether.

Circumcision.

More deaths and conditions of danger under chloroform have occurred during circumcision than are warranted by the gravity of the operation. In infancy and early childhood the C_2E_2 mixture followed by ether on an open mask should be used, because the reflex effect upon the respiration always produced by nipping and cutting the prepuce is not so marked nor so dangerous when respiration is fairly deep, and the circulation well stimulated by ether.

It is not wise nor necessary to obtain a degree of anaesthesia free from all reflex movement of the thighs for circumcision in childhood; but, having weakened the corneal reflex, it is well to get the nurse to place her hand on the patient's knees to prevent their upward reflex movement when the prepuce is first seized and to keep them down during the operation. Reflex laryngeal crowing almost always arises also at this moment, and the lips should then be rubbed briskly with a towel to stimulate deeper breathing; the jaw should be pushed forward and the anaesthetic withheld until respiration is more regular.

For adults gas and ether or open ether is the proper anaesthetic.

Ingrowing Toenail.

If nitrous oxide and air be the anaesthetic selected, an assistant should be present to hold the leg above the ankle, or it must be tied down securely to the bed, because the extremities are extremely sensitive, and reflex movements of the feet and legs are certain to take place and cannot be controlled by this anaesthetic.

I am, however, of opinion that in order to complete the operation when undertaken at the patient's house, it is far more satisfactory to put the patient under the influence of the C_2E_2 mixture or open ether, when all need for undue haste is avoided, muscular flaccidity is obtained, and if the patient is prepared by four or five hours' abstinence from food, after-effects are very slight indeed.

Adenoids and Enlarged Tonsils.

It must be borne in mind that patients with these affections have more or less obstructed air passages, and that the operation and the bleeding it causes also cause intermittent respiratory obstruction.

Chloroform *plus* asphyxial factors of this severity is unnecessarily dangerous. The C_2E_2 mixture is, without doubt, the most appropriate anaesthetic, because it keeps the patient's colour pink, and maintains moderately deep breathing, a condition which allows of short intermittent spells of air limitation without much fear of depression. Dosage should proceed until the corneal reflex is definitely weak, then three or four respirations of air should be allowed before beginning the operation, so that it may be done during the *return* from the maximum dose, thereby retaining the coughing reflex to reject the blood from the throat.

It is wrong to anaesthetize small children in one room and then carry them into another room for operation. The movement lowers the blood pressure dangerously, and greatly increases the risks of the whole proceedings. Children are not dismayed by lying down upon a proper table in a warm room prepared for operation, but are only mildly interested in the novelty of its appearance. The

induction of anaesthesia in a child's iron cot with high barred sides is very difficult, and the child is most apt afterwards to associate its experiences with its own sleeping bed instead of with a table which has then been taken quite away.

The mothers of these children are frequently absurdly lacrymose, and unnerve the child by their presence at the beginning of affairs. The surgical nurse or doctor should therefore take them into the room and the mother should go downstairs until called for after all has been completed.

Sebaceous Cysts.

These cannot be completely removed under nitrous oxide gas owing to venous oozing obscuring the cyst wall, and the C_2E_2 mixture is the most satisfactory anaesthetic for the patient and operator. These cysts are not very sensitive unless inflamed, and there is no need for a very deep anaesthesia. Their position on the scalp is often somewhat inaccessible when the patient is lying down, and a table should be used instead of a bed, so that the head may be properly reached from its upper end. If the patient has to be laid partly on his face he should be anaesthetized lying on his side and then rolled into position, care being taken that the chest walls can freely expand in respiration.

Dislocations.

Patients meeting with an accident causing dislocation of a limb are unprepared by abstinence from food for an anaesthetic, and are not likely to take it well. A jaw gag must be at hand in case of semi-solid vomiting, and, whatever anaesthetic is used to make the patient unconscious, ether should afterwards be given to obtain muscular relaxation. A great many deaths have occurred under chloroform unwisely pushed for this purpose. C_2E_2 followed by ether or gas and ether are the most suitable and safe anaesthetics to employ.

Diagnostic Examinations.

Chloroform may be wisely administered for examinations, except in rectal cases, where dilatation of the sphincter and causes reflex laryngeal spasm and ether should be used.

As chloroform requires some days for its complete elimination from the blood, it is wise not to employ it for a lengthened examination the day before a contemplated operation. After an interval of four days less after-effects result from the second anaesthetic.

Just as much careful watching of the patient must be practised as during a surgical operation; but two great factors, namely, the inhibitory reflex effects produced by surgical stimuli and haemorrhage, are absent.

Parturition.

One observation only is needed in conclusion. It should not be forgotten that all the conditions during confinements are extremely favourable for the administration of chloroform—the lateral posture, the higher blood pressure, the deeper respiration, all assist materially in the maintenance of circulatory equilibrium. The absence of difficulties and depressing effects from chloroform at confinements must not be looked for in other patients during other operations.

RESECTION OF THE TRACHEA FOR CICATRICIAL STENOSIS.*

By G. GREY TURNER, F.R.C.S.,

TANT 3 GEOR. ROYAL VICTORIA INFIRMARY, NEWCASTLE-UPON-TYNE.

So far as I can gather, it seems usual in cases such as that about to be described to attempt to dilate either through the larynx or a tracheotomy opening, but these methods are exceedingly tedious and admittedly unsatisfactory. In a *System of Practical Surgery*, by Professor E. von Bergmann, vol. xi, p. 220, it is stated that "extensive circular scar stenoses or complete occlusion form an indication, according to the experience of Kuster

and v. Eiselsberg, for circular resection with subsequent suture of the trachea." In my case the trachea rapidly became obliterated by a considerable mass of new tissue, and it seemed to me in accordance with surgical principles to excise the involved segment when dealing with a non-collapsible tube of large calibre like the trachea. The occurrence of so serious a complication as secondary haemorrhage may appear as a fitting rebuke for adopting an audacious proceeding, but it appeals to me rather as a warning against the close suture of the external wound in cases where the area has become septic from the constant presence of a tracheotomy opening.

The patient was a man of 25, who inflicted the injury in a fit of depression following alcoholic excesses.

He was admitted to the infirmary on April 16th, 1908, in such a collapsed condition that his recovery was despaired of. There was a fearful gash in the neck almost completely severing the trachea, though the great vessels had escaped.

Next morning he was so much better that chloroform was administered and the injured parts thoroughly examined by the house-surgeon. It was then found that the trachea had been divided just below the cricoid cartilage, and that the sterno-mastoid and infra-hyoid muscles had been partially divided. The wound was thoroughly cleansed and the trachea drawn up to the cricoid with three catgut sutures, the muscles being separately repaired with catgut. Tracheotomy was not considered necessary, but the superficial wound was left partly open.

From the time the patient first began to talk the voice was characteristic of recurrent laryngeal paralysis, and this condition never altered. Unfortunately suppuration occurred, and the wound only healed slowly by granulation. The sutures holding up the trachea gave way, and it was found necessary to introduce a tracheotomy tube. As cicatrization proceeded all attempts to displace with the tube gave rise to much distress, and it was obvious that the trachea was becoming stenosed.

On May 15th an anaesthetic was again administered, and just above the tracheotomy opening the trachea was found so much stenosed that it would only admit a fine probe through a channel at the summit of a funnel-shaped narrowing. It was found possible with a pair of sinus forceps, followed by artery forceps, to easily dilate the stricture, and an attempt was made to keep it patent by a silver tracheotomy tube passed upwards into the larynx through the top of a large rubber tracheotomy tube introduced in the usual way in imitation of Störk's tracheal cannula and dilator. As might have been expected, this plan was not successful, and, in spite of all our efforts to keep the trachea open, it became necessary to interfere again, or let the case drift into one of permanent stenosis with its necessary tracheotomy.

On June 12th the last operation was performed, again under general anaesthesia. This time complete obliteration was found, the lumen of the trachea being filled by a mass of scar tissue: it was therefore decided to resect the involved portion. The cricoid and the upper part of the windpipe were accordingly thoroughly exposed through a vertical incision, and a complete segment of the trachea excised. The resulting gap was very wide, but the trachea was found without fear until it could be easily approximated to the cricoid, to which it was fixed by several No. 1 chromic catgut stitches passed around the upper ring of the trachea and through the cricoid, care being taken to tie the knots on the outside. The posterior and lateral surfaces were brought into perfect apposition, but there was a little irregularity of the union in front. A vertical opening was made into the trachea about 1 in. below the line of suture for the introduction of a small silver tracheotomy tube. The skin incision was then carefully closed by silk-worm stitches. The part removed consisted of a complete transverse section of the trachea with two rings, the lumen being completely obliterated by a mass of scar tissue.

For five days the patient went on very well, but there was then a little suppuration with rise of temperature, and the skin wound gave way. On the eighth day, without any warning, he had a sudden profuse haemorrhage. The bleeding was clearly from the left side of the wound from a recess by the side of the trachea, and, after resisting all the efforts of the house-surgeon, it stopped spontaneously. As the source of the haemorrhage was doubtful, and its spontaneous arrest probably only temporary, I thought it wiser to give an anaesthetic, and, if possible, deal directly with the bleeding point. As a matter of fact, I was only able to curette a small area, which I packed from the left side in dressing in turpentine. As one or two of the sutures in the front part of the tracheal wound had given way, two silk-worm stitches were introduced and subsequently removed.

After this the patient made a straightforward recovery and was soon able to leave the hospital, the wound healing completely in the sixth week following the resection operation. When shown at the meeting in December, 1908, he was well and happy in daily breathing except on severe exertion or when suffering from cold. The scars in the neck were not very obvious, but on palpation the trachea was found to be a little narrowed from before backwards and this was well shown on x-ray examination.

Dr. S. S. Whillis kindly examined the larynx and reported paralysis of the left vocal cord, general hyperaemia of the laryngeal and tracheal mucous membranes, but no evidence of stenosis as far as could be seen.

*The case that forms the subject of this note was shown at a meeting of the Newcastle-upon-Tyne Clinical Society.

TREATMENT OF FACIAL PARALYSIS DUE TO DIVISION OF THE FACIAL NERVE IN THE MASTOID OPERATION.

By F. MARSH, F.R.C.S.,

CONSULTING SURGEON, QUEEN'S HOSPITAL, BIRMINGHAM.

IN the JOURNAL of May 8th a case of anastomosis of the facial nerve in the aqueduct of Fallopius is described by Dr. F. Sydenham of Walsall. It may interest him and other surgeons to know that a procedure similar in detail has been employed by me in two cases.

CASE I.

Mr. P. H. was operated on in 1900. The facial nerve had been divided by a splinter of bone when "the bridge" was being cut away with a chisel. The division was not noticed at the time, but the paralysis was complete on recovery from anaesthesia. As this persisted, the wound was reopened a fortnight later. The facial nerve was seen to be completely divided, and the proximal end frayed and everted by the gauze packing. At the suggestion of my colleague, Mr. Jordan Lloyd, who was present at both operations, the proximal end was teased into its normal position—coming almost in contact with the distal end; two or three strands of fine chromic gut were placed round the nerve, the ends being inserted into the bony canal, and the parts protected for a short time by gutta-percha tissue in the way described by Dr. Sydenham. Gentle galvanism was subsequently employed; slight return of power commenced in six weeks, and complete recovery resulted.

The case, though not published, has been related to several of my colleagues in the Midlands.

CASE II.

Miss H. F., aged 26. The facial nerve was divided on January 14th, 1908, in clearing a cholesteatomatous mastoid which had been operated upon twice previously, the relation of the parts being much altered by bone absorption. The division was recognized at the time, and the nerve ends were carefully approximated and protected for a few days with gutta-percha tissue. The operation cavity became rapidly covered with epidermis from the mental flaps, under hydrogen peroxide and spirit treatment. As no sign of regeneration appeared in a month (February 15th) it was decided to reopen the cavity and examine the nerve ends. It was not easy to define these again in the cicatrized tissue and to be certain that no union had taken place, indeed it seemed both to me and to Mr. Seymour Jones who assisted me that there was continuity of a few of the deeper fibres. The ends were readjusted, and a strand of fine chromic gut was with difficulty inserted in each of the aqueduct openings. The post-aural wound was closed, and the cavity rapidly healed without suppuration. Gentle galvanism was continued, but it was not until the end of June—four months later—that signs of power commenced in the mouth muscles; the improvement steadily extended to the other muscles, and the power has now (May 7th) returned to all except the corrugators of the brow.

In this case it is difficult to estimate the value of the second operation; it seems not improbable that if more patience had been exercised the first adjustment would have been all that was necessary.

It, however, showed that the operation is more difficult when the post-aural cavity is completely cicatrized than when it is in a recent post-operative condition.

The cases themselves show:

1. That if division of the facial nerve is recognized at the time of operation, careful adjustment in the manner indicated will probably result in restoration of function.
2. That if division has not been recognized, the wound should be reopened and the nerve ends adjusted at the earliest possible opportunity.
3. That if a careful adjustment has been made a second operation should not be undertaken within three or four months.
4. That this method of adjustment should be tried before anastomosis with the hypoglossal or spinal accessory nerves is attempted, the results of which are not always gratifying.

UNDER the will of the late Mr. Frederick Gorrings, the draper and silk mercer of Buckingham Palace Road, the Clapham and General Provident Dispensary receives a bequest of £1,000. On the death of the testator's wife £5,000 is to be paid to the Bolingbroke Hospital, and the residue of the estate after payment of other bequests divided in equal shares between some eight institutions. Among these are St. George's Hospital and Westminster Hospital; each, it is calculated, will ultimately benefit in this way to the extent of some £50,000.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

DISTRIBUTION OF BILHARZIOSIS ON THE VICTORIA NYANZA.

DURING a visit in January, 1909, to Usukuma on the Southern Shore of the Lake Victoria Nyanza, German East Africa, I was astonished to find at Nassa (a little place some 60 miles east of Mwanza, and on the southern shore of Speke Gulf) a very high proportion of the natives suffering from the symptoms of bilharziosis. I was only able to stay two days in that place, but of 156 patients whom I examined exactly half had the symptoms of bilharziosis of the bladder. Three of these chosen at random were asked to pass urine, and a drop of the urine (not centrifuged) showed in each case enormous numbers of typical ova. One of them was the local king or chief. The briefness of my visit prevented me from investigating the percentage of the general population so affected, nor was I able to investigate the presence or not of ova in the stools. The interest of the observation lies partly in the following facts:

1. The natives obtain their drinking water from the lake, and this lake is the source of the Nile, on the banks of which bilharziosis is endemic. The water is stored, as in my own neighbourhood, in earthenware jars of large size, which are seldom if ever cleaned. The natives likewise (or certain classes of them) do a good deal of wading in the water to fish, though this would not be true of the chief and upper classes.

2. On the northern shore of the lake bilharziosis is comparatively rare. I am told that in Entebbe bilharzia is occasionally found, especially in the stools. But in our hospital at Mengo (with an in-patient attendance of about 1,600 patients per annum, and an out-patient attendance of about 13,000 new cases every year) we have during the past thirteen years seen only two cases of bilharziosis, and they were probably not endemic. Mengo is only eight miles from the lake shore.

Mengo, April 6th.

J. HOWARD COOK,
M.S., M.B., F.R.C.S., D.T.M.H.

FATAL HAEMOPTYSIS IN AN INFANT.

THE patient in the following case, an infant aged 3 months, was the child of a puny, young, phthisical mother. It was stated to have kept in good health for four weeks after birth, and then commenced to have fever and cough. For nearly two months the fever never left the child, its cough was very frequent. When I saw it for the first time, a couple of days before its death, the cough was almost incessant. One evening the child was brought to my surgery in great haste, as it was supposed to have vomited blood. It was pulseless, and blood was oozing from its mouth and nose. The coat of the father, who had brought it in his lap, was saturated in front with blood. On inquiry I found that just half an hour before the child was brought to me it had a violent fit of coughing, and blood began to run from its mouth and nose. The haemorrhage proved fatal. That this infant had caught tuberculous infection from its mother and that the violent cough ruptured the pulmonary blood vessels and brought on the fatal issue is clear; but the extreme youth of the patient, which had barely completed the third month of its life, makes the case worth reporting.

A week after the baby's death the mother died also.

E. H. THOMAS, M.B., L.R.C.P. and S. Edin.
Dehra Dun, India.

FACIAL PARALYSIS FOLLOWING EMOTIONAL SHOCK.

Mrs. B., aged 38 years, consulted me for complete facial paralysis of the left side. She gave the following history: On Monday morning she was in perfect health. At breakfast she opened the paper and was startled to find news of a terrible shipping disaster, the *Penguin*, a local steamer, had sunk causing a great loss of life. She says that while reading the account of the wreck, she felt a sensation of "clawing" in her left cheek. Two hours later the left side of the face was completely paralysed.

I saw her twenty-four hours later. On examination the whole side of the face was motionless, all the branches of

the nerve were involved, the sense of taste and of hearing being normal. There was no reaction to either galvanic or faradic currents. No reaction of degeneration was present.

The treatment was high frequency currents, continuous current (anode placed behind the ear), and massage, potassium iodide being given internally.

Fifteen days later the patient wrinkled the forehead slightly, a few days after this the mouth could be lifted a little, and at the end of thirty days all the normal actions of the face could be performed.

I have never seen a case of facial paralysis from emotion, and I most carefully questioned the patient as to the possibility of having been in a draught or having had a blow, etc.

P. CLENNELL FENWICK, M.D.,
Surgeon to Christchurch Hospital, New Zealand.

Reports of Societies.

UNITED SERVICES MEDICAL SOCIETY.

Wednesday, May 19th, 1909.

Lieutenant-Colonel W. G. MACPHERSON in the Chair.

Antityphoid Inoculation.

MAJOR H. W. GRATTAN and Captain A. L. A. WEBB demonstrated the method of preparing antityphoid vaccine at the Royal Army Medical College. During the last twelve months they had prepared and issued 40,800 double doses for the use of the army both at home and abroad. The vaccine, they said, was prepared from a broth culture of the typhoid bacillus, some of the points on which they laid special stress being that the culture should not be overheated (a temperature over 53° C. had been found to have a deleterious effect on the immunizing properties of the vaccine), that the antiseptic (0.25 per cent. lysol) should not be added until the vaccine had cooled down, and that the vaccine should not be used later than three months from the date of manufacture. These conclusions had been reached by experimental work on the protective substances found in the blood of men and animals inoculated with vaccines prepared at different temperatures, and of different ages. They quoted the most recent statistics available, which had been compiled by Brevet-Lieutenant-Colonel W. B. LEISHMAN, R.A.M.C., and published in the February number of the *Royal Army Medical Corps Journal*.

The total strength of the 16 units under observation was 12,083, and amongst the inoculated—5,473 in number—21 cases of enteric occurred with 2 deaths. The remaining 6,610 non-inoculated men served as a control, and amongst them occurred 187 cases of enteric with 26 deaths.

THE ROYAL SOCIETY.

Thursday, May 20th, 1909.

Sir ARCHIBALD GEIKIE, K.C.B., President, in the Chair.

The Urine in Diseases of the Pancreas.

DR. P. J. CAMMIDGE reported that in the course of a series of observations on the metabolic changes associated with diseases of the pancreas he had found that if the urine of a patient suffering from an inflammatory affection of the gland were boiled with hydrochloric acid, the excess neutralized with lead carbonate, and the freed glycuronic acid precipitated out with tribasic lead acetate, treatment of the filtrate with phenylhydrazin, after the excess of lead had been removed with sulphuretted hydrogen, yielded a crystalline product which varied in amount with the intensity and stage of the disease. Normal urines and specimens from patients suffering from diseases in which there was no reason to think that the pancreas was involved gave no reaction. Twenty-eight cases in which the urine had been examined during life were investigated *post mortem*, and the results of the urinary examination confirmed. The urine of three dogs with experimentally induced acute or chronic pancreatitis was found to give a characteristic reaction. A detailed examination of a large quantity of urine from each of eight patients giving a well-marked reaction showed that it was due to a sugar having the reactions of a pentose, and

yielding an osazone with a melting point of 178° to 180° C. Attempts to isolate the mother substance were not successful; it would appear to be derived from the pancreas, and was probably set free as the result of degenerative changes in the gland, passing into the blood, and being excreted in the urine.

Incidence of Cancer in Mice.

DRS. E. F. BASHFORD and J. A. MURRAY (Imperial Cancer Research Fund) stated that the relative frequency of cancer at different age-periods in female mice had been determined on animals bred for the purpose, the ages, sex, and parentage being carefully recorded. The diagnoses had been made by combining clinical observation with microscopical examination and transplantation of the tumours, and with *post-mortem* examination of the animals. Following Jensen, they had demonstrated in 1903-4 that cancer could be transmitted artificially from one individual to another of the same species by the implantation and continued growth of living cancer cells, and had shown that this form of transmission was not responsible for the great frequency of the disease. Other authors had since described "epidemics" of cancer in animals, especially mice. In the course of a year 19 cases of cancer had been seen in the mice under observation. This aggregation of cases corresponded to the "epidemics" adduced as evidence that the disease was infective. The cases had been analysed with reference to the age at which the tumours were first observed. The liability to cancer at different age-periods was as follows:

	6-7 months.	-12 months.	-15 months.	-18 months.	-21 months.	-24 months and over.
Total ..	135	112	94	21	6	...
Cancer ...	3	4	7	3	2	...
Per cent. . .	2.2	3.5	7.4	14.2	33.3	...

The progressive increase shown in the table presented a remarkable parallel with the age-incidence of cancer in the human subject, and confirmed the earlier statements of the authors (*Proc. Roy. Soc.*, January, 1904, etc.) that in animals, whatever their length of life, the recorded frequency of cancer varied, as in man, with the opportunity for examining a sufficiently large number of adult and aged individuals. The observations also added a statistical confirmation to the results of the comparative histological and biological studies of the Imperial Cancer Research Fund, which had shown the close parallel, amounting in many particulars to complete identity, between malignant new growths in man and other vertebrates. They demonstrated that the law of the age-incidence of the disease held for the shortest-lived mammals as for man. Since the facts agreed with the less perfect data for other vertebrates, the general application of the law of age-incidence was probable, and therefore any explanation of the etiology of cancer must accord with the circumstance that when considered statistically cancer was a function of age, and when considered biologically a function of senescence.

Volume of the Blood.

DRS. J. O. WAKELIN BARRATT and WARRINGTON YORKE (Liverpool) described a method of estimating the total volume of blood contained in the living body. The principle employed was that of injecting into the blood stream a known amount of dissolved haemoglobin, and then determining the degree of the resulting haemoglobinaemia. This enabled the volume of the blood plasma to be calculated, and, with the aid of a haemocrit determination of the composition, by volume, of the blood, the total amount of blood present in the living body was ascertained. The haemoglobin employed was obtained from the red blood cells of the subject of observation. No ill effect had been observed after injection of dissolved haemoglobin. The estimation of haemoglobin was generally made with von Fleischl's haemoglobinometer, the scale of the instrument having been previously standardized by means of solutions containing known amounts of red blood cells. When the depth of the natural colour of the blood plasma before injection was markedly increased, as sometimes happened,

it was difficult to obtain haemoglobinometer readings of the amount of dissolved haemoglobin present after injection. In such cases the blood plasma, suitably diluted, was matched, by means of a comparison spectroscope, with solutions containing known amounts of dissolved haemoglobin.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Friday, May 7th, 1909.

JOHN LENTAIGNE, P.R.C.S.I., President, in the Chair.

Bier's Hyperaemia Treatment.

MR. R. ATKINSON STONEY, in a paper on treatment by passive hyperaemia produced by means of elastic bandages and suction glasses in tuberculous disease, said that his experience had not been promising. He had, however, not dealt largely with cases of this order. Excessive hyperaemia should be avoided, and in applying glasses ordinary aseptic precautions should be observed. The glass should be of sufficient size to leave a margin of 1 in. or more around the inflamed part or opening, to prevent strangulation or compression of the lips of the opening. Pain should not be produced. And, especially where the cup was placed over a superficial bone or firm membrane, excessive pressure should not be used, for fear of sloughing of the parts. The PRESIDENT said he had been deterred from the use of the method by its unsatisfactory results in the hands of some surgeons, but Mr. Stoney had helped to explain some of those results. He had recently been converted to its use for boils, but he had seen a great number of cases of tuberculous disease which had deteriorated under the treatment, and in some cases he could not satisfy himself that the dissemination of the tuberculosis had not been in some way due to it. Mr. L. G. GUNN said he had tried the treatment in cases of knee and wrist trouble, but found it impossible to produce any degree of congestion without pain. He was therefore not surprised at getting no good results. He thought French and English people, and more particularly Irish people, probably felt pain more acutely than the Germans, which might explain the differences in results. Mr. W. I. DE C. WHEELER confessed the same experience as Mr. Gunn, but in cases such as gonorrhoeal rheumatism he did find some easing of pain, and apparently some improvement. Mr. PEARSON said that the use of the band would seem to lead naturally to the increase of pain, as it was chiefly a matter of tension, but the suction apparatus, by reducing atmospheric pressure, might produce an initial diminution of pain. Mr. STONEY, in reply, said the worst results had been got by Bier in the knee joint, for some reason which he could not explain. He did not suggest the treatment in any case where better results, or quicker equal results, could be obtained by operative means. It was in tuberculous cases that the greatest difficulty was found in producing the correct degree of hyperaemia. The question of tension was difficult to deal with. It was, however, easy to understand that pain, which might be due to irritation of the nerve terminals by toxins produced by organisms, might be relieved by the congestion causing a flow of blood and lymph and producing a dilution of the toxins.

Post-operative Tetanus.

Mr. GUNN having read a paper on post-operative tetanus, the PRESIDENT said he could imagine no more appalling catastrophe to happen a surgeon than to have a case, or series of cases, of post-operative tetanus. He could not help keeping to the belief that the catgut must have been responsible. It was curious that in every case in which the catastrophe had occurred catgut had been used. It would be important to know what methods of sterilization had been employed. He had himself been using the iodine catgut for some time, but if he was threatened by the terrible phantom of possible tetanus he would be inclined to give up catgut altogether. Dr. KATHERINE MAGUIRE said she had been in attendance on one of the cases mentioned by Mr. Gunn. It was not a case of hysterectomy alone, but was combined with ovarian tumour, and quantities of thick catgut had been used. She thought the case was probably hopeless from the first. She knew that the patient could not have contracted

the sheep disease mentioned by Dr. Richardson in his paper, as the patient had come from a part of England in which it was absolutely unknown. The time of the dissolving of the catgut was the time of being infected, and that had made it impossible for her to exonerate the catgut. Mr. PEARSON recounted the clinical history of one of the cases alluded to by Mr. Gunn, in which the patient died about twenty-eight or thirty hours after the onset. Mr. BLAXNEY said it seemed difficult to get over the fact that in every single case catgut had been used. They knew the source of the catgut and the possibility of its being infected, and these made the conclusion as to its responsibility all the more probable. The extreme virulence of the cases seemed to be at variance with the results of the bacteriological examination. The conditions inside the body were not such as would be expected to favour the growth of the bacillus; in two of the cases there was no suppuration, and therefore no septic organism to prepare the way for the bacillus, and the tissues were well supplied with oxygen, which was also unfavourable to the bacillus. Mr. GUNN, in reply, said Dr. Richardson had made extensive inquiries as to the methods of sterilization employed, and had then come to the conclusion that there was no absolutely perfect method.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

Tuesday, May 25th, 1909.

Dr. NORMAN MOORE, Vice-President, in the chair.

Serum Treatment of Typhoid Fever.

PROFESSOR R. T. HEWLETT read a paper on the treatment of typhoid fever with an antientidotoxic serum. It was generally recognized that an antityphoid serum prepared by the injection of the horse with cultures of the typhoid bacillus was useless in the treatment of typhoid fever. An antientidotoxic serum had been made by the injection of the horse with typhoid cell juice. Such a serum had an active neutralizing power against both the typhoid endotoxin and the typhoid bacillus. The results of the use of this serum in 9 cases of typhoid fever were detailed. The impression which had been gained, so far, was that several cases were benefited, and that in 2 at least the disease was cut short by its use. The instillation of the endotoxin gave a reaction in some cases comparable with the Calmette reaction in tuberculosis.

Dr. E. W. GOODALL read a paper detailing the results of the treatment of 26 cases of typhoid fever with the same antientidotoxic serum in the Eastern Hospital, Homerton. In only 9 was there any reason to think that the injection of the serum had any beneficial effect. In the case that had the largest amount of serum injected no result was apparent. The conclusion was that it had appeared to do good in a few cases and deserved further trial. An ophthalmic reaction was obtained in a few cases of typhoid, but in 1 case of scarlet fever a marked reaction was given and none in other cases of scarlet fever. Thus a slight positive reaction could not be taken as diagnostic of typhoid fever.

Dr. BAUCE, of the Western Hospital, Fulham, also communicated notes of 5 cases of typhoid fever treated with the same antientidotoxic serum. His impression was that 2 at least of these were benefited by the injections.

Dr. HEWLETT, in reply to remarks, said that the effects of supersensitization were very manifest in some cases.

THE congress which met in Geneva last year to discuss the question of the suppression of frauds in food will be succeeded by a similar congress to be held in Paris during October of the present year. The congress is under the auspices of the Society of the White Cross of Geneva, which is presided over by M. C. H. Vuille. The General Secretary is M. Robert Fazy, 42, Rue du Rhône, Geneva. The principal object of the congress will be to define such methods as will prevent the fraudulent adulteration of food, but there will also be sections devoted to chemical products, pharmaceutical preparations, mineral waters, and similar substances. The congress will consist of two principal sections—technical and industrial. Any other information that may be desired can be obtained from Mr. Loudon M. Douglas, College of Agriculture, Edinburgh.

THE BIRTH OF MODERN SURGERY.

[WITH PORTRAIT OF LORD LISTER.]

It is a striking proof of the modesty of the begetter of modern surgery that he has never gathered together the scattered papers and addresses in which the results of the labours pursued *ohne Hast aber ohne Rast* through his long working life were conveyed to the scientific world. Too much cannot be said in praise of the beautiful simplicity of character which has made Lord Lister content to leave his work to speak for itself, and to keep silence in the face of misrepresentation and wrong-headed opposition. But we cannot help thinking that much of this would have been prevented had he set his teaching as a light fixed before the eyes of all men. To those who had not the good fortune to have his teaching stamped ineffaceably on their minds by the living word of the master and by the sight of his conquests over difficulties with which surgery had before been unable to cope, his own accounts of his work had become virtually inaccessible. No better way of honouring the occasion of his completion of his eightieth year could therefore have been found than the collection of his writings which has now been issued from the Clarendon Press.* The illustrious author is to be congratulated on the noble form in which the record of his labours—so fruitful of good to his fellow-men—is now permanently enshrined. A debt of gratitude is due by all interested in the history of modern surgery to the distinguished committee—consisting of Sir Hector C. Cameron, Sir W. Watson Cheyne, Mr. Rickman J. Godlee, Dr. C. J. Martin, and Dr. Dawson Williams—which undertook the task of preparing the work for the press. Of these gentlemen three were intimately associated with Lord Lister in his surgical work. Sir Hector Cameron was his dresser, then his house-surgeon, and afterwards his colleague at Glasgow; Sir Watson Cheyne was his house-surgeon, first at Edinburgh and then at King's College, London, where later he was his colleague; Mr. Godlee, who is closely related to him, worked with him at Edinburgh. The Committee had the advantage of Lord Lister's help, and has done its work with a reverent care worthy of the object on which it has been bestowed. The introduction which they have contributed is a masterly summary of Lister's work in which the sequence and relation of his varied researches are clearly pointed out. It is invaluable to the earnest student as a guide to the essential points of his teaching. Another useful help is a very copious index.

The writings are arranged under the four main heads of physiology, pathology and bacteriology, the antiseptic system, and general surgery. Some special addresses and lectures, which it would have been difficult to classify under any one of these headings, are placed in a fifth part at the end of the second volume. The papers in each part are arranged in chronological order, and the reader is thus enabled to follow the evolution of the doctrine which wrought a revolution more directly fruitful of good to mankind than any political upheaval or new invention of which there is record in human history. The plan of the work necessarily entails a good deal of repetition; but new ideas do not often find ready acceptance among the mass of men, and Lister had to preach his new surgical gospel to many deaf ears, and to not a few positive unbelievers,

before it was received as the guiding principle of surgical practice. As late as in 1883 we find him thanking an audience for their cheers, and saying that there was a time when such remarks might have met with a different reception. A few years before he had said that it seemed to be difficult for him to write the English language so as to make his meaning intelligible, so gross were the misconceptions of his ideas.

A complete analysis of the work before us would be impossible within the space at our disposal; this is not necessary, however, as a full account of the birth and growth of what may conveniently be called Listerism was given in a special number of the *BRITISH MEDICAL JOURNAL* of December 13th, 1902, on the occasion of the jubilee of the great surgeon's entrance into the medical profession. A rapid survey of the contents of the two large volumes before us will suffice to give a notion of the ground covered in them.

Lister's first steps in scientific research were in the domain of physiology. This was a natural result of the influence of Sharpey. Another teacher from whom he learnt much that was to be of the greatest use to him in his life work was Graham, the Professor of Chemistry at University College. From these men and from his father, Joseph Jackson Lister, who discovered the law of the aplastic foci, and who was described as "the pillar and source of all the microscopy of the age," the future reformer of surgery got a training in scientific methods such as fell to the lot of few students of his day. It is not, perhaps, too much to say that without the knowledge of physiology and chemistry and the mastery of the use of the microscope with which he started he would never have been able to build his system on the solid foundation which has made it, however subject to modifications in details, in its essence a truth that cannot be shaken.

His early papers on the contractile tissue of the iris, the muscular tissue of the skin, the minute structure of the involuntary muscular fibre, the flow of the lacteal fluid in the mesentery of the mouse, the influence of the nervous system in regulating the contractions of the arteries, all give evidence, not only of accurate observation, but of determination to see things through his own eyes. His studies on the causes concerned in producing the concentration and diffusion of the pigment in the skin of the frog under varying conditions show great ingenuity in experiment and acuteness of reasoning. The effects on these processes of the application of irritants to the skin and the relation of contraction and relaxation of the blood vessels to the nervous system threw a light on the nature of inflammation which was to guide him in subsequent investigations. A cognate line of research was pursued with regard to the functions of the visceral nerves, with special reference to their inhibitory action. Lister devoted much attention to the coagulation of the blood, especially to the question of the relation between that phenomenon and the condition of the walls of the blood vessels. These early researches display the resourcefulness in experiment the conscientious accuracy in the observation of facts and the caution in inference which mark all his work. He cleared the ground of much positive error, and gathered a large amount of sound material for the solution of this vital problem which was, and must continue to be, of incalculable use to those who came after. His study on the effects of irritants on the web of the frog's foot gave him the key to the mechanism of inflammation in the early stages of the process. He was the first who accurately described the phenomena of stasis of the blood, and the vascular reaction, immediate and later, which followed the application of irritants. He showed that the effects produced upon the circulation

* *The Collected Papers of Joseph, Baron Lister, Member of the Order of Merit, Fellow and sometime President of the Royal Society, Knight Grand Cross of the Danish Order of the Danebrog, Knight of the Prussian Order pour le Mérite, Associé Étranger de l'Institut de France, etc.* In two volumes, pp. 429 and pp. 589. Price 2s. 2s. net. Oxford: At the Clarendon Press. 1909.

by the application of an irritant are twofold—namely, dilatation of the arteries, a purely functional phenomenon developed indirectly through the medium of the nervous system, not limited to the part acted on by the irritant, but implicating a surrounding area of greater or less extent; and alteration of the tissues from the direct action of the irritant, as a result of which the blood in their vicinity loses the properties which characterize it while within a healthy part, and assumes those which it exhibits when removed from the body and placed in contact with ordinary solid matter. He showed further, by experiments on amputated limbs, that the tissues possess, independently of the central organs of the nervous system, or of the circulation, or even of the presence of blood within the tissues, an intrinsic power of recovery from irritation when it has not been carried beyond a certain point. He also pointed out that it was necessary to draw a broad line of demarcation between inflammation set up by direct irritation, and that which is produced indirectly through the medium of the nervous system, "whether in the immediate vicinity of a source of irritation, as around a tight stitch in the skin or a thorn in the finger, or at a distance from the disturbing cause, as when the kidneys are affected in consequence of the passing of a bougie, or the lungs through exposure of the feet to cold."

His final conclusion was that his experiments had established the fundamental principle, that "whenever the disturbance of the circulation which is truly characteristic of inflammation exists in any degree, the tissues of the affected part have experienced to a proportionate extent a temporary impairment of functional activity or vital energy."

This paper was published in 1857, when Lister was Lecturer in the Extra-mural School and Assistant Surgeon to the Royal Infirmary.²⁰ In 1860 he was appointed Professor of Surgery in the University of Glasgow, with charge of wards in the Royal Infirmary of that city. At that time inflammation and suppuration were universally regarded as natural processes in wounds by surgeons who directed their efforts, by means of poultices and other applications, to helping the formation of what was called "laudable" pus. Septic disease was everywhere rife and was the mere despair of surgery. Sir Hector Cameron, who worked under Lord Lister when he made his first attempts in the direction of antiseptics, describing the state of things at that time, says:

Every wound discharged pus freely, and putrefactive changes occurred in the discharges of all, producing in the atmosphere of every ward, no matter how well ventilated, a fetid sickening odour, which tried the student on his first introduction to surgical work just as much as the unaccustomed sights of the operating theatre. It is hardly necessary to add that fatal wound diseases and complications were never absent at any time from the hospitals of that day.

It is worth while to point out that, according to Sir Hector Cameron,

Lister soon began to enjoin on all persons in his clinic the practice of scrupulous cleanliness, which was at that time by no means always a characteristic of surgical practice. The washing of hands was insisted on after dressing each individual case, and large piles of clean towels stood on the tables of his wards for the use of his dressers and nurses.

Lister's work on inflammation, valuable as it was, did not lead him directly to his great discovery. But, unlike the surgeons of that day, he was not content to accept inflammation and suppuration as a necessary part of the process of healing. He believed that the natural course of events was that a wound should heal, like a simple fracture or other subcutaneous injury, without inflammation, suppuration, or septic infection. He recognized that the source of the mischief in wounds was putrefaction, and that the prevention of this should be the aim of the surgeon. The idea was in his mind at the very beginning of his career when he was Erichsen's house-surgeon in University College Hospital. The accepted teaching of the day, that putrefaction was due to the action of the air, particularly of the oxygen, on the organic fluids in wounds, did not satisfy him, and in the various methods of dressing

adopted by him he never made any attempt to exclude that constituent of the atmosphere. As has been said, he insisted on rigorous cleanliness, but his wards were so insanitary that neither this nor frequent changes of dressing, nor careful drainage, nor free washing with warm water and Condy's fluid, availed to check the prevalence of pyaemia, erysipelas, and hospital gangrene. Pyaemia is now little more than a memory to those who have witnessed the gradual diffusion of Lister's teaching. As Sir Victor Horsley said before the Royal Commission on Vivisection, any one who should be asked now to write an article on pyaemia in a dictionary of surgery could not do it, for the disease has ceased to be. The same thing may be said of hospital gangrene. What that fearful scourge was may be learnt from John Bell, who, in his *Principles of Surgery* (1801), says:

When it rages in a great hospital it is like a plague; few who are seized with it can escape. There is no hospital, however small, airy, or well regulated, where this epidemic ulcer is not to be found at times; and then no operation dare be performed! Every cure stands still! Every wound becomes a sore, and every sore is apt to run into gangrene; but in great hospitals especially it prevails at all times, and is a real gangrene. It has been named the Hospital Gangrene; and such were its ravages in the Hôtel Dieu of Paris (that great storehouse of corruption and disease) that the surgeons did not dare to call it by its true name; they called it the rottenness, foulness, sloughing of the sore! the word, hospital gangrene, they durst not pronounce: for it sounded like a death-bell; at the hearing of that ominous word, the patients gave themselves up for lost. In the Hôtel Dieu this gangrene raged without intermission for two hundred years, till, of late, under the new government of France, the hospital has been reformed. A young surgeon (says an ancient French author who is bred in the Hôtel Dieu, may learn the various forms of incisions, operations too, and the manner of dressing wounds: but the way of curing wounds he cannot learn. Every patient he takes in hand (do what he will) must die of gangrene."

What, then, says the same author, speaking of the treatment of hospital gangrene, is the surgeon to do?

Is he to try experiments with ointments and plasters while men are dying around him? Is he to expend butts of wine, contending, as it were, against the elements? No! Let him bear this always in mind, that no dressings have ever been found to stop this ulcer: that no quantities of wine or bark which a man can bear have ever retarded this gangrene; let him bear in mind that this is a hospital disease, that without the circle of the infected walls the men are safe; let him, therefore, hurry them out from this house of death: let him change the wards, let him take possession of some empty house, and so carry his patients into good air; let him lay them in a schoolroom, a church, a dunghill, or in a stable (like Paré's *sic*) gangrened soldier); let him carry them anywhere but to their graves.

These scourges were so prevalent in the Glasgow Royal Infirmary that Lister says he felt ashamed, when recording the results of his practice, to have to allude so often to hospital gangrene and pyaemia, and he came to welcome simple fractures, though of little interest either for himself or the students, because their presence diminished the proportion of open sores among the patients. In other hospitals both in this country and abroad, the state of things was just as bad.

Then came the discoveries of Pasteur which revealed the cause of putrefactive fermentation to be the development of living organisms in the dust of the atmosphere. Lister forthwith applied the new doctrine to the treatment of wounds. By his conviction that the ideal to be aimed at was that a wound should heal like a subcutaneous injury he was led to apply it first in the treatment of compound fracture. The effect was immediate and striking. Not only did repair occur without systemic disturbance, but primary amputation, which before was almost the rule in bad cases of compound fracture, became almost a thing of the past, and not only innumerable limbs, but a vast number of lives were saved. He observed that the crust formed by the carbolic acid applied as a dressing and the blood became organized into living tissue, and that dead bone, instead of being exfoliated, was absorbed. From compound fracture he extended his treatment to psoas abscess, and gradually to wounds of all kinds. Although at a shallow depth under his wards were found a multitude of putrefying bodies of people who had died of cholera in 1849, and who had been buried in pits, he was able to report to the British Medical Association in 1867 that during the previous nine months not a single case of pyaemia, erysipelas, or hospital gangrene had occurred in

²⁰ The portrait reproduced in this issue, which forms the frontispiece of the first volume of the collected papers, is from a photograph taken in 1856.



Lister



his wards. How had this miracle been wrought? It could not be ascribed to mere cleanliness, though that was most strictly enforced; the influence of sanitation was absolutely excluded by the existence of the sources of putrefaction in the near neighbourhood of the wards. This very fact, indeed, formed an *experimentum crucis* that proved that the change was due to the adoption of measures which killed the invisible agents which produced septic disease.

It is unnecessary here to tell, even cursorily, the history of the introduction and development of the antiseptic system. It is enough to say that Lister, taking Pasteur as his guide, studied for himself with characteristic thoroughness the action of micro-organisms in producing putrefactive fermentation in organic fluids and the methods of preventing their development. He then with definite patience tried how the new principle could most effectively be applied to the treatment of wounds. His early methods were crude and cumbersome, and he gave nearly the whole of his professional life to perfecting them.

Although carbolic acid had previously been used in a casual way by some surgeons as dressing, Lister was the first to use it systematically for the prevention of putrefaction in wounds. His attention was directed to it by experiments made at Carlisle on the disinfection of sewage with German creosote in which crude carbolic acid is the active constituent. But, successful as he found it for his purpose, he was careful to warn surgeons that it was not in itself a specific; that the antiseptic system did not consist in the mere use of an antiseptic, however potent, but in "such management of the case as shall effectually prevent the occurrence of putrefaction in the part concerned"; and that the treatment must be based on the germ theory of putrefaction. He insisted that his good results were not due to his personal care, but to the principle on which he worked. To the pains which he took to perfect his machinery, his labours in the improvement of the catgut ligature and dressings, which are related at length in these volumes, and his painstaking and unprejudiced trials of every substance that offered any promise of keeping wounds sweet without causing irritation, bear eloquent witness. We see him ceaselessly striving after simplification of dressings without sacrifice of efficiency.

It may not be superfluous here to point out that the carbolic acid spray is not, as has been imagined by some, the essence of Listerism. The spray was only an incident in the evolution of the antiseptic system; it was used for a few years and then discarded by Lister, who in 1890 frankly declared that he was ashamed he had ever recommended its use. If there is one feature in Lord Lister's character that strikes the reader of these volumes more than another, it is the open-mindedness with which he has tried everything that seemed likely to be of service, and his readiness to confess mistakes.

Listerism, it must be repeated, is not a system of dressing, but a principle. That principle is the exclusion from the wound of all agencies which have the power of causing putrefaction. So far from the aseptic system being, as is still said by some, the negation of antiseptics, it is the logical outcome of the principle on which the antiseptic system was based. The success claimed by certain surgeons who perform abdominal operations without antiseptic means has been, as Lister says, a stumbling-block to some. But, as he pointed out, these surgeons are careful to purify their sponges and wash out the peritoneum so as to clear it of the residual clots in which lies the risk of sepsis. We have seen that Lister himself, before he began his antiseptic work, insisted on scrupulous cleanliness. This in itself was a novelty in surgical practice. Did not Sir Astley Cooper, after removing a tumour from the scalp of George IV, and being in an agony of fear of the superinfection of erysipelas, incur the King's displeasure by appearing before him with his wristbands and his hands stained with the blood of a patient on whom he had operated just before? Years after the Listerian doctrine had begun to permeate the mind of the profession we remember a famous surgeon habitually operating in a coat which a decent butcher would now disdain to use, and another who went through his wards handling all manner of wounds, opening abscesses, and doing all his work without ever going through the ceremony of washing his hands. If such things are almost unthinkable nowadays, that is due to the teaching of Lister.

Less than twenty-five years ago we heard the late Sir John Erichsen publicly state that operative surgery had then reached its final development. There were, he said, three parts of the body into which the surgeon's knife could never penetrate; these were the brain, the chest, and the abdominal cavity. Long ago all these regions have been brought within the range of surgery. This, too, we owe to Lister. The painlessness of wounds is another thing for which mankind has to thank him. When Huxley visited the Edinburgh Royal Infirmary, he summed up his impressions as follows: "What amazes me, Mr. Lister, is the painlessness of your wounds. You have not only banished those awful scourges which used to affect our wards, but you have abolished the pain and suffering associated with wounds and surgery." This leads us to insist on the fact that Lister's beneficent work could not, as he himself declared before the Royal Commission on Vivisection in 1876, have been done without the light and guidance derived from experiments on living animals. That fact alone is a complete justification of vivisection.

Lister's work has by no means been confined to the establishment of the great principle with which his name will always remain associated. In pathology and bacteriology he made valuable additions to knowledge. In the province of surgery his writings include masterly essays on amputation, on excision of the wrist, on the wiring of fractured patella, on anaesthesia, in which he always took a special interest, and many other things. Years before the introduction of Esmarch's bandage he produced bloodlessness in limbs on which he was to operate by elevating them and applying a tourniquet. In 1870 he stated that for some years he had been in the habit, after removal of the breast for scirrhus, of clearing out the axillary glands after division of both pectoral muscles. The modern methods of treatment of spinal abscesses and diseased joints, of ununited or malunited fractures, and other operative procedures, have to a large extent been directly initiated by Lister. In many other directions he might have claimed, had he cared merely for fame, to be the pioneer. Of the procedures to which his principle finds ever new applications, it is needless to speak. The influence of his teaching is felt through the whole domain of surgery, and will continue to make possible its expansion to an extent undreamt of even now.

In the third Huxley Lecture delivered before the Medical School of Charing Cross Hospital on October 2nd, 1900, which is republished in the second volume, Lord Lister himself gives a most interesting summary of his work, from the time of his researches in physiology to his final victory over the hospital scourges which so often brought the work of the most skilful surgeons to nought. He worked with a first-rate microscope which the labours of his father had placed in the hands of scientific men. While he was still house-surgeon under Erichsen he made original investigations on pathology.

It was by Sharpey's advice that he went to Edinburgh—a visit which was to have such a lasting influence on his after-life. He was fascinated by the prominence given by Syme to the pathological side of surgery, and he was struck by the superiority of the treatment of recent wounds which he witnessed in that great surgeon's wards over the "water dressing" used at University College Hospital in accordance with the teaching of Robert Liston, who introduced it in place of what he called "filthy unguments." He married Syme's daughter, and a graceful tribute is paid in the introduction to the help which Lady Lister throughout her life gave him in his work.

The work here imperfectly reviewed shows the greatness not only of Lord Lister's intellectual achievements, but of his character. It is a record of patient labour, of self-sacrificing devotion to duty and of absolute honesty of purpose which has scarcely a parallel in human history. No man that ever lived has done so much for the relief of physical suffering. He has had the rare good fortune to live to see his labours bearing good fruit all over the world. He has received awards and distinctions such as fall to the lot of few, but those who know him best will readily believe that no dignities or honours can in his eyes compare with the consciousness that he has deserved well of his fellow men. His life may be summed up in the words, *Pertransiit benefaciendo et sanando*.

Reviews.

OBESITY, GOUT, DIABETES.

We have received the seventh and eighth portions of Professor von Noorden's collected clinical essays, which deal with the metabolism of fasting, with overfeeding and its converse the treatment of obesity, and with gout.¹ The first lecture treats of fasting, a subject which is well worthy of careful study, as its phenomena are not as well known as they should be, and this ignorance has led to mistakes; for example, the presence of acetone in the urine is normal in fasting, while the diminution of chlorides noted in many diseases has been simply due to the use of milk diet. Partial fasting is extremely common in disease, and may be voluntary or involuntary, and is a valuable means of treatment in certain conditions, for instance, in nervous anorexia, where complete abstinence from food for a few days is an effectual way of restoring the appetite. Fasting diminishes thirst; professional fasters drink only from 400 to 500 c.c.m. of water daily (12 oz. to 15 oz.), the loss of weight during fasting is not constant, and this may be due to the introduction or retention of water. Fasting, as a rule, proves fatal when 35 to 40 per cent. of the body weight has been lost, but in certain chronic diseases the diminution may reach 40 or even 50 per cent., as in the case of a lady aged 40, who weighed 140 kg. (20 st.), but reduced herself by diet to 11 st. 6 lb., when she developed pulmonary phthisis and died in six months, weighing at the time of her death only 46 kg. (6 st. 8 lb.). In the second lecture he discusses the cures by overfeeding with which we generally associate the names of Weir Mitchell and Playfair. He gives useful tables of diets calculated to allow an excess of about 1,000 calories over that required for the patient at rest. The result of overfeeding is only to fatten the patient, and does not increase muscle so long as the patient is kept in bed. Neither can massage effect this, but if judicious exercise is combined with overfeeding, then muscular development will take place. He strongly approves of putting the patients to lie out-of-doors instead of shutting them up in a room; and as soon as they are able to leave their beds they should begin to walk uphill or cycle or practise regulated gymnastics. Baths and other hydropathic means are helpful, but he protests against the exaggerated value attached in Germany to drugs, "where a cacodylate injection is regarded as of higher value than a beefsteak." The third lecture treats of obesity. He uses systematic diets containing only from 2,000 to 1,000 total calories. The amount of water drunk is not in all cases to be limited, but "by this means polyphagia may be inhibited." Treatment must be checked by the results of systematic weighing and measuring. He attaches importance to muscular exercise by hill-climbing, cycling, tennis, fencing, swimming, or gymnastics, but he does not think riding of much value—an opinion contrary to the universal experience of all nations. Mineral waters may help with regard to complications, but otherwise are "of no more value than a drop of water on a hot stone." Sweating may remove water from the body, but CO₂ baths are useless and are dangerous if the blood pressure is raised. In the last-named condition he prefers to begin treatment by bleeding the patient. The value of cold douching and of thyroid feeding are recognized. The last lecture is devoted to gout, which is remarkably infrequent in Vienna as compared with Frankfurt, where Professor von Noorden practised until three years ago. He holds to the belief that the retention of uric acid is the characteristic of gout, and in order to determine the gouty nature of doubtful affections of joints or nerves he estimates the retention of uric acid by first putting the patient upon a purin-free diet and observing the amount of uric acid still excreted after three or four days, which is what he calls the endogenous uric acid; a definite allowance of meat is then added to the diet, and the result noted; in gouty persons the uric acid is not increased, in others the addition is followed by a rise in the uric acid excretion. Strict diet for gouty persons

should consist of milk, eggs, and vegetables, but purin-containing foods may be added to the extent tolerated; given in carefully measured quantities, as we allow carbohydrates to a diabetic. Alcohol is held to be always injurious to gouty persons. Mineral waters are more useful in uric acid lithiasis than in gout; thymine acid is valuable as a solvent, but should be used in short courses lasting not longer than eight days. As will be seen the essays contain most interesting matter, but no very startling novelties.

We reviewed Dr. LORAND's pamphlet on the rational treatment of diabetes² when the first edition was published (1903, vol. ii, p. 1468). He is a physician practising at Carlsbad, and the rational treatment he recommends consists in diet, mineral water, and organotherapy. He believes that not only the pancreas, but the thyroid and the pituitary body, are concerned in diabetes; he holds that there is an antagonism between the thyroid and the pancreas, and he alludes to the cases of diabetes associated with Graves's disease in support of his view that overaction of the thyroid may give rise to glycosuria. He thinks, further, that eating meat stimulates the thyroid, hence people predisposed to diabetes, and the children of diabetics especially, should eat meat sparingly. He tried to investigate this question by removing the thyroid glands from three dogs who had been depancreatized by Professor Minkowski, but they died so quickly that the conclusions were not certain, although the glycosuria seemed to disappear. He thinks that diabetes may arise spontaneously, in persons who eat meat largely, and that it is a "poison" for diabetics. He goes so far as to say (p. 25):

It is my conviction that it were better for a diabetic to observe no diet at all and to take plenty of carbohydrate food than to confine himself to a strict diet of albumen, fat, and green vegetables for a long period. It is probable that in the former case he would live longer. It is not to be doubted that the observance of such a strict diet, to the exclusion of small quantities of carbohydrates, hastens the development of acidosis and shortens the life of the diabetic.

He is also of opinion that when carbohydrates are taken they are better tolerated if no meat is eaten at the same time. He says:

It is my firm conviction that severe diabetes does better on a milk and vegetable diet and lives longer than on meat diet (p. 24).

He consequently approves of van Noorden's oatmeal cure, yet, in spite of these paradoxical opinions, he insists upon the importance of not overlooking diabetes, and says that it is quite as important a disease as small-pox or tuberculosis, and that there ought to be municipal laboratories, where the urine of everybody could be compulsorily examined. He uses thyroid extract, or rather Kocher's thyraden and Moebius's antithyroidin, the former for severe and the latter for mild cases, and claims that he has cured a case of diabetic coma by the use of thyroid preparations. He thinks goat's milk, and especially that of goats from which the thyroid gland has been removed, best suited for the treatment of diabetes.

THE UPPER AIR PASSAGES.

FIFTEEN years have elapsed since Dr. Moritz Schmidt published his well-known treatise on the diseases of the upper air passages. It was at once recognized not only as a thorough exposition of recent knowledge, but also as bearing the impress of the personality of its author, who took for his motto the words, *Aus der Praxis, für die Praxis*, and throughout the work emphasized the lessons of practical experience for future use in practice. It was his expressed wish that the present editor of the new edition, Professor EDMUND MEYER, should carry on the work on the same lines, but with a free hand as regards individual opinion. Dr. Meyer undertook the work with some reluctance, owing to the fact that in many important points, both practical and theoretical, he and Dr. Schmidt had not seen eye to eye. Maintaining the same form and system, he has produced a book of the greatest practical value and historic interest. In the world of laryngology and rhinology history has been making itself space in the last decade, and a comprehensive work must needs be a

¹ *Sammlung Klinischer Abhandlungen über Pathologie und Therapie der Stoffwechsel- und Ernährungsstörungen.* Herausgegeben von Professor Dr. Carl von Noorden. Hefte 7 und 8. Ueber die Behandlung einiger wichtigen Stoffwechselstörungen (Hungerzustand, Mastkuren, Entfesselungen, Gicht.) Berlin: August Hirschwald, 1909. (Roy. 8vo, pp. 104, M. 2.00.)

² *Die Rationelle Behandlung der Zuckerkrankheit.* Von Dr. A. Lorand. Berlin: August Hirschwald, 1909. (Med. 8vo, pp. 60, M. 1.60.)

large one. Considerations of space have necessitated the omission of many references, but the use of bold type and the addition of a very full index render reference easy.

Dr. Schmidt did not live to see the completion of this edition, which would doubtless have been recognized by him as a worthy exposition of modern knowledge and thought on the subjects to which he had devoted so much of his life's work. Knowledge, even of the anatomy of the upper respiratory passages, has been steadily advancing, and with it the means of effective treatment. The introduction of better means of illumination has greatly assisted diagnosis, and within recent years the method of direct examination of the larynx and trachea has begun to take shape and to rank among the feasible adjuncts to successful treatment in suitable cases. The constant liability of the nose and larynx to injury or infection from without calls for the oft-repeated warning as to the disadvantages and dangers of over-coddling. Such warnings too often fall upon deaf ears. The "comforter" and the habit of wrapping up the neck by both sexes is still the commonest cause of the "delicate throat."

The immense importance of accurate diagnosis of affections of deep-seated parts cannot be overrated, and even among experts unanimity as to actual conditions cannot always be arrived at. The introduction of the electric lamp into the hidden cavities of the air passages has already done much, and may yet do more, to clear up doubtful points. The latest forms of instrument for this purpose are clearly described and demonstrated.

The general consideration of the diseases of the upper air passages follows the lines adopted in the first edition. Acute and chronic inflammations are exhaustively described. New methods of treatment—as, for instance, the submucous injection of paraffin in cases of ozena, to restore the internal constriction of the nasal passages, and vibratory massage within the nostril—are duly commented on and their relative values indicated. Affections of the naso-pharynx and tonsils are fully dealt with, and a description given of the special form of angina described by Vincent in 1898. The fusiform bacilli in association with spirilla, which he found in these cases, have been recognized by others, although many have failed to detect them. The accessory sinuses have been attacked by modern surgeons with ever-increasing boldness, and an account of all that has been achieved in this field of surgery and of the arguments for and against some of the most recent methods should be read by those who wish to preserve an open mind on the subject. Tubercle is an ever-present danger to the larynx, and the importance of its early recognition must always be emphasized. Even in the more advanced cases the former pessimistic views must now give place to a more hopeful outlook. The bolder use of endolaryngeal surgery and the occasional employment of laryngotomy have done much to relieve, if not to eradicate, the further progress of the disease. As in the case of tubercle, so also in the treatment of syphilis, lupus, diphtheria, and other less common infections, substantial advances have been made, and we cannot too warmly commend to the notice of all progressive workers in this department the admirable work in which the practical teaching of the late Professor M. Schmidt has been carried forward and amplified by his distinguished successor.

EXPERIMENTAL EMBRYOLOGY.

The discovery of the causes which determine the specific form in the race and in the individual is a matter of intense interest to all biologists. Many methods have been tried by those who would solve the problem, and present-day biologists are attempting to discover the secret by means of experiments on living embryos. Experimental embryology has thus become a new branch of biological science, and Dr. JENKINSON'S monograph on the subject¹ is an excellently conceived and admirably executed attempt to place on record a summary of the more important work which has hitherto been done and the conclusions which may be deduced from it. The

author describes in considerable detail the experiments which have been made upon cell division and cell growth—the effects of external factors, such as gravity, mechanical agitation, electricity, light, heat, atmospheric pressure, osmotic pressure, and the chemical composition of the media in which development occurs. The effect of internal factors forms the subject of another chapter; and the concluding section is devoted to Dreisch's theories of development which are introduced apparently more with the hope that they may serve as working hypotheses than in the belief that they explain all the known facts. The story of the work which has been done is fascinating, and, as set forth by Dr. Jenkinson, well repays perusal, but when the last page is turned the reader will be convinced that the end of the subject is yet far away. There was a period when preformation gained universal belief. Then epigenesis held sway. Later came the mosaic theory of Roux and Weismann's elaborate conception of the capabilities of the constituents of the chromosomes; both the latter views involved the belief that every inheritable quality of the body has its own definite representative in the germ. Once again the pendulum is swinging, and, if we understand Dr. Jenkinson correctly, it is inclining towards the combination of preformation and epigenesis, for he appears willing to accept Dreisch's theory so far as it postulates a simple original organization of the germ, which, however, though it is "simple enough to allow of divisibility of the whole into totipotent parts," is still "complex enough to account for the limitation of the potentialities of these parts, which, sooner or later, inevitably ensues"; for the idea of complete morphological preformation *ab origine* Dr. Jenkinson would substitute "the successive preformation by the action of the parts on one another in the organs of each stage of the structures that are to be developed out of them in the next."

HOLIDAY RESORTS.

WE have received a handbook published by the authority of the District Council of Cullen, which has of recent years become a favourite summer resort. Possibly many of our readers are not aware of the existence of this small town, which is situated on the Banffshire coast, and for the purpose of Parliamentary representation forms one of what are known as the Elgin District Burghs. Cullen is a town of about 2,000 inhabitants, largely composed of fisher people who reside almost exclusively in a part of the town by themselves. The chief attractions claimed by Cullen as a holiday resort are the combinations of sea and woodland; there is a fine open, sandy beach, with facilities for bathing, and a golf links with a course of eighteen holes. The surrounding country affords ample opportunities for pleasant cycling and walking tours: while for those who are not disposed for active exercise the grounds of Cullen House, the residence of the Dowager Countess of Seafield, are open to visitors several days in the week. Cullen may be confidently recommended as one of those places which have not yet succumbed to the conventional features of the modern watering place. It is a place where a hard-worked medical man may find a bracing and pleasant resting place after a heavy winter's work. Cullen is easily reached either from Aberdeen or Inverness. The small handbook is published by Doubleday and Co., 8, York Buildings, Adelphi, W.C. The passenger superintendent of the North of Scotland Railway—Mr. Deuchar—will give full particulars of route and also a list of lodgings.

Another handbook published by the same firm and also under the authority of the Burgh Council, refers to Kirkcubright, which is situated at the other end of Scotland, on the banks of the Dee, the estuary of which stretches out into Kirkcubright Bay. The situation of the town is beautiful; it is surrounded by finely wooded hills, and the climate is warm and soft. It has an ample supply of excellent water. Many places of interest abound in the neighbourhood, Lochgerris, St. Mary's Isle, scene of one of the exploits of Paul Jones. The hotel and house accommodation is good. There is a golf course of nine holes and a bowling green; boating may be had, and fishing in the neighbouring streams can be obtained by arrangement. Kirkcubright is reached by the Glasgow and South-Western Railway, and for those coming from the South there is a connexion with the Midland Railway. Kirkcubright should be a place well suited, on account of its balmy atmosphere, for elderly invalids who desire rest and quiet.

¹ *Die Krankheiten der Oberen Luftwege*, by Moritz Schmidt. Fourth edition, edited and enlarged by Professor Dr. Edmund Meyer, of Berlin. Berlin: Julius Springer. 1909. 48 pp. roy. 8vo. pp. 782; with 180 figures in the text, a portrait, and 5 coloured plates. M. 22.

² *Experimental Embryology*. By J. N. Jenkinson, M.A., D.Sc. Oxford: The Clarendon Press; and London: H. Frowde. 1909. 62 pp. 8vo. pp. 349, figures 167. 12s. 6d.

It may be objected, perhaps, that *Tourists' Guide to the Continent*⁵ is somewhat of a misnomer for a book which merely relates to parts of Holland, Germany, Austria, Switzerland, and Scandinavia, but otherwise the conception of the volume issued by the Great Eastern Railway Company and edited by Mr. Percy Lindley is excellent. Its object is to show the places on the Continent which can readily be reached by the service of this company, and to indicate the facilities offered at each principal centre for exploring the country more or less in its immediate neighbourhood. An endeavour, moreover, has been made to pick out places which at present are little known to tourists. It is certainly true that the traveller who reaches the Continent at the Hook of Holland finds himself in touch with much more comfortable traffic arrangements than at many other ports: and this fact, apart from the clear letterpress and the excellent pictures in this guide, should be sufficient to lead many prospective travellers to choose the Great Eastern route. The volume concludes with a vocabulary of useful phrases in English, French, and German.

A publication of corresponding kind is the illustrated *Guide to the London and South-Western Railway*, but it is of a less ambitious character, inasmuch as it deals merely with places in England easily reached by this railway. Their attractive points are brought out briefly in the letterpress, and in addition there are ample lists of hotels, boarding houses, and apartments, with the prices charged, and a note as to their distances from the railway station and other particulars. A list of golf links also finds place. This guide can be obtained, we understand, free on application at any of the stations or agencies of this line, and should be useful to those with thoughts bent on a week-end or longer holiday.

*To and Fro*⁶ is a publication which purports to save its purchaser time and money by showing him how to go from anywhere to anywhere in London. Directions for its use are supplied in English and several other languages. After studying these indiscriminately but steadily, we made several attempts to apply them, and finally concluded that this work was not likely to prove a serious rival to the local policeman as a guide and counsellor to the wayfarer, but that, on the other hand, it was worthy of consideration by those who find a Continental Bradshaw an attractive intellectual exercise. One of its features is a "Location Directory," which is apparently intended to be a guide to the principal houses of business, places of amusement, and the like. Included in it are two short lists of physicians and surgeons respectively. In neither case are the majority of them persons known, as far as we are aware, to any one but those in their immediate neighbourhood and their personal friends and patients. If the rest of the guidance as to principal places is of the same character, it is clear that the publication might be less useful than its compilers suppose. An intention is indicated to make this directory a monthly publication, but in humble imitation of its polyglot introductions we are disposed to say on this point. Wir wollen sehen! Nous verrons! Bakaloum! or in plain English, We shall see.

NOTES ON BOOKS.

The Family Doctor,⁷ by Dr. EDMUND BARRETT, bears a kind of family resemblance to a publication very popular some thirty years ago, which purported to give information about everything in a series of alphabetical notes. In this case the information is confined to short explanations of terms common in connexion with the ills to which human flesh is subject. Possibly there may be some utility in a volume of this order, but the selection for notice of a certain number of proprietary articles tends to give a dubious character to the whole book.

The Socialist,⁸ by GUY THORNE, seems to be a novel with a purpose, but whether intended to guide the reader to the conclusion that the claims of socialism are well founded or the reverse is not certain. The principal hero turns out, we understand, to be a churchman in disguise, and the principal heroine retires to assume the duties of maternity. It is on the whole well written.

⁵ *Tourists' Guide to the Continent*. London: 39, Fleet Street. (Pp. 319. Price 6d.)

⁶ *To and Fro*. Simpkin, Marshall. Price 6d.

⁷ *The Family Doctor*. By Edmund Barrett, M.B., B.S. Durham. London: George Routledge and Sons. 1909. (Pp. 329.)

⁸ London: Ward, Lock and Co. 1909. (Post 8vo, pp. 320. 6s.)

Thirty years ago Lieutenant-Colonel JOSHUA DUKE, then a comparatively young officer in the Indian Medical Service, wrote *Queries at a Mess Table*, and at the request of his publishers has now brought the book up to date.⁹ In spite of its small compass it contrives to supply a good idea of the more important characteristics of the foodstuffs and liquids which commonly figure on regimental and club dinner tables all over the world, and may claim to be a sound guide to men who wish to steer between eating to live and living to eat. General hints on the preservation of health and activity are also given, and with one exception are of a very useful kind. The exception is the unqualified condemnation of belts and kummerbunds. In one form or another these are worn by the inhabitants of tropical and semi-tropical climates all over the world, and this is a strong argument in their favour. They are superfluous in Europeans, when custom or duty necessitates covering the body and limbs with several layers of clothing, but on other occasions one would have thought their utility beyond dispute. The wearer of a belt can safely clothe the rest of his body as lightly as he pleases or as decency permits.

⁹ *Queries at a Mess Table: What shall I Eat? What shall I Drink?* Second edition. London, Calcutta, and Simla: Thacker and Co. 1908. (Fcap. 8vo, pp. 107. 1s. 6d.)

MOTOR CARS FOR MEDICAL MEN.

COST OF RUNNING.

DR. SAMUEL CRAWSHAW (Ashton-under-Lyne) sends the following notes on the actual cost of running a Ford 15-h.p. car for twelve months: The Ford is a car of American make, and mine was delivered to me on March 31st, 1908. Since then it has done all my work, and I have had about 1,500 miles of driving for pleasure in addition. I estimate the total mileage at 9,000; over half of this has actually been recorded and the other half carefully estimated. I have never once been stopped on the road for any mechanical trouble, and never turned out without getting home again on the car without the slightest delay, except when punctures have occurred. I selected the Ford car after very careful tests at the 1907 Olympia Show of it and six or eight other makes, and in my opinion it is one of the best designed and cheapest cars on the market for medical men. It is one of the most accessible cars—a very important matter—and contains many simple and novel features. I can crawl along on top speed at about 5 miles an hour, or go at any speed up to 35; and I can climb hills on top speed up to a gradient of 1 in 15.

Running Costs for Year ending March 30, 1909.

Petrol (519 gallons)	£27 10 0
Repairs and renewals	28 18 5
Tires	15 9 10
Oil and grease	5 0 0
Sundries	3 5 0
	83 3 1

9,000 miles = 2.14d. per mile.

Fixed Charges for Year Ending March 30th, 1909.

Chauffeur	£76 14 0
Stable rent, coal and gas	10 3 0
Licences	2 2 0
Insurance	12 15 6
Depreciation at 25 per cent.	59 0 0
Loss of interest at 3 per cent.	7 0 0

9,000 miles = 4.47d. per mile.

Total cost per mile, 6.61d.

£167 12 6

I have used 519 galls. of petrol, giving an average of 17.345 miles per gallon. On a pleasure run, about 70 miles I have on two occasions found the consumption to be 27½ and 28 miles per gall. respectively, but with the constant stopping, starting and reversing, that working a practice entails, the petrol consumption rises very considerably.

Repairs to the extent of about £2 4s. have been necessitated by several slight accidents, and another item of £3 was occasioned by the breaking of a ball in one of the front wheel bearings, which, before we had noticed it, had cut up the cones and ball races and deeply scored the arm. The other items are due to various small breakages and cost of labour in repairs, adjustments, and overhauling. My first set of tyres (five in number) ran about 4,300 miles each. During the year I have had two new tyres and one new tube. The first set of tyres have been retreaded. I consider that I have quite 2,000 miles left in the tyres yet.

I have estimated depreciation at 25 per cent., but perhaps this is excessive, as the car would still be worth something at the end of four years.

In addition to these items I have recently spent a little on what should be regarded as capital account—namely, a single trembler coil, which is really a great advantage, and a Bowden extra air inlet valve, with which I hope to improve the petrol consumption.

DR. W. V. FURLONG (Dublin) writes: As many of the accounts of your correspondents regarding the cost of running, repairs, etc., of their motor cars are, from my experience, far too rosy, I give, for the benefit of my brother practitioners, my first year's working, ending to-day:

10-12-h.p. Siddely, hood, screen, magneto, etc.	£375 0 0
Stepney wheel, extra lamps, and sundries	27 11 2
	<hr/> £402 11 2

Repairs for year (not including those covered by insurance)	£11 0 11
Tyres, tubes, and repairs to same	15 0 7
Petrol (181 gallons)	9 16 5
Lubrication	1 16 6
Insurance	11 10 0
Registration and licence	1 5 0
	<hr/> £50 9 5

Miles travelled 2,460, or about 15 miles to the gallon. The car was on the road and in good working order 120 days during the twelve months.	
Cochman's wages	60 0 0
	<hr/> £110 9 5 and capital £402 11 2

Yearly cost, excluding garage

The Siddely is a good strong car, but the time lost waiting for trivial repairs and in obtaining the correct parts wanted through the agents prevents a doctor from depending on a motor car unless he keeps horses as well, or a few other motors to be ready at hand. I probably have been particularly unfortunate, as my motor has only been able to do a third of my work for the year, nor can I get more than fifteen miles out of a gallon of petrol.

SOMERSET writes: I should be interested to learn what happens to the gallon and a half of oil and the pound of grease which "T. D. N." uses on a 10-12 Swift every week. From a year's experience of this excellent car I have found no need to use oil to this great extent. The engine lubrication is by a hand-pump on the dash, and the makers informed me that one charge every ten miles was sufficient, the pump delivering about 2 oz. of oil at each charge; with a mileage of 245, this accounts for 50 oz. a week. There are only seven grease cups on the car, and 1 oz. or so of grease will easily fill them, and it is only necessary to give each a turn daily to ensure proper lubrication. During the past twelve months my car has travelled 7,000 miles, and has used about 10 galls. of oil and 5 lb. of grease.

As to tyres, I have worn out two pairs of steel-studded covers on the back wheels, each lasting approximately 3,000 miles, and then being retreaded. One grooved front tyre lasted 4,500 before retreading; the other is still in use, and looks good for some little distance yet. It is interesting to note that the front cover which first failed had been run for a time with a detachable non-skid band, bearing out "Wiser's" contention that these diminish the life of the covers. At present I have grooved covers on all wheels, and fit a Parsons's chain when the roads are greasy. It is only fair to say that my car has a side-entrance body, with hood and screen, and must weigh, when loaded, fully a ton.

I am so satisfied with this particular make as being a first-class car at a reasonable price that, requiring a second vehicle, I have this week ordered a two-seater of the same power with dual ignition.

MEDICAL BAG ON MOTOR CYCLE.

J. D. asks hints as to the best way of carrying instruments, bottles, etc., on a motor cycle.

LITERARY NOTES.

A COMMITTEE has been formed at Athens for the publication of all the works of ancient Greek writers on medicine, both those which have already been issued and those which have never seen the light. The chairman of the committee is M. Konstantinos Kontos, professor of Greek literature in the University of Athens; the other members are Dr. Konstantinos Samaras, assistant professor of gynaecology in the university, and MM. Rossin and Charitonides, doctors of letters and professors of Greek literature at Athens.

Miss Gertrude Toynebe has published, through Mr. Henry J. Glaisher, a brief but charming account of the intellectual tastes and character of her father, the distinguished aural surgeon, Joseph Toynebe. He was fond of poetry; the elder Arnold, Dean Stanley, Frederick Robertson, of Brighton, and William Ellery Channing were all writers with whom he had much sympathy. As a young man he was deeply interested by Emerson. He watched with keen interest the progress of scientific thought. He had an ardent love of nature and enjoyed all kinds of scenery. He worked for the improvement of the physical and intellectual condition of the poor, and started a Samaritan fund for the provision of food for the

indigent. He also helped to found the Metropolitan Association for improving the Dwellings of the Working Classes, and wrote leaflets for the instruction of the ignorant in matters pertaining to health. In other ways he was active in promoting the welfare of the poor. He was a lover of art and a collector of water colours. In summing up her father's character, Miss Toynebe says that its distinguishing feature was his personal magnetism. He drew all kinds of people to him by his sympathy, charm, and sincerity.

Messrs. Churchill will publish in a few days a new edition of *Minor Surgery and Bandaging*, revised by Mr. Bilton Pollard, Surgeon to University College Hospital. The first edition of this work, by Mr. Christopher Heath, was issued 48 years ago. The present (14th) edition has been enlarged by nearly a hundred pages, and contains many new figures, and a frontispiece of a surgeon in aseptic operating costume. They will also issue an *Atlas of Dental Extractions, with Notes on the Causes and Relief of Dental Pain*, by Mr. C. E. Wallis, Assistant Dental Surgeon, King's College Hospital. The text will be supplemented with a series of illustrative plates.

In an article by Dr. James J. Walsh, Dean and Professor of the History of Medicine and of Nervous Diseases at the Fordham University School of Medicine, New York, entitled "Old Documents in Medical Educational Practice," published in the *Dublin Journal of Medical Science* for December, 1908, it is shown that medical education in the Middle Ages was more advanced than is usually supposed. One of these documents is a bull of Pope John XXII founding a school of medicine in the University of Perugia; the other is a law issued for the two Sicilies by the Emperor Frederick II. Both serve to show that a high standard of knowledge was required of the physician, and that care was taken to enforce the proper course of study and to prevent unqualified persons from teaching or practising medicine. According to Pope John's bull, which is dated February 18th, 1321, students of medicine had to go through three years of preliminary studies before beginning the five years' medical training. The first professors were to be graduates of medicine from the Universities of Paris and Bologna, then looked upon as the leading medical schools; and they were to occupy all the masterships and professional chairs at the new university for four or five years, until some of their pupils should be qualified to take them. The right of conferring the licence to teach (the Doctorate) was given to the Bishops of Perugia. The candidate who sought the degree of doctor was presented to the Bishop or his representative, who thereupon appointed four examiners. It was enjoined that these examiners,

without any charge to the candidate and every difficulty being removed, should diligently endeavour that the candidate be examined in science, in eloquence, in his mode of lecturing and anything else which is required for promotion to the degree of doctor or master. With regard to those who are found worthy, their teachers should be further consulted privately, and any revelation of information obtained at such consultations as might redound to the disadvantage or injury of the consultors is strictly forbidden. If all is satisfactory, the candidates should be approved and admitted and the licence to teach granted. Those who are found unfit must not be admitted to the degree of doctor, all leniency or prejudice or favour being set aside.

The law of Frederick II regulating medical practice was issued about the year 1240, and deals with every detail of professional life. None could practise medicine

except such as have beforehand in our University of Salerno passed a public examination under a regular teacher of medicine and been given a certificate, not only by the professor of medicine, but also by one of our civil officials, which declares his trustworthiness of character and sufficiency of knowledge.

This certificate had to be presented to the Emperor or his representative by any one who wished to obtain a licence to practise; any infringement of this law was punishable by confiscation of goods and a year's imprisonment. Stringent rules were laid down as to the length of the medical curriculum and the subjects comprised therein. No student was allowed to study medicine unless he had spent three years in the study of logic, which at that date included practically all the subjects comprehended within the sphere of the arts department of a modern university.

Five years had to be spent in medicine, and the student was obliged by law to study surgery at the same time. No one might practise unless he had, after the expiration of the five years' course, "during a full year devoted himself to medical practice with the advice, and under the direction of, an experienced physician." Then, and only then, could the licence to practise be obtained. The law for surgeons was equally severe. No surgeon was allowed to practise without a written certificate.

stating that he has spent at least a year at that part of medicine which is necessary as a guide to the practice of surgery, and that, above all, he has learned the anatomy of the human body at the medical school, and is fully equipped in this department of medicine, without which neither operations of any kind can be undertaken with success nor fractures be properly treated.

Professors in the medical schools were bound to teach both practical and theoretical medicine and to "devote themselves to the recognized books, those of Hippocrates as well as those of Galen," and no one might teach or lecture on medicine or surgery without previously having passed a searching examination in the presence of a professor of medicine and a Government official. Nor did the legislator forget the pharmacist. Two inspectors were appointed in each province of the kingdom to inspect all drugs and medicines, and to see that they were prepared according to law; no druggist was allowed to sell his goods until they had undergone this examination. In Salerno the inspectorship was limited to those who had taken their degrees as masters in physic; but besides these public inspectors every practising physician was bound by oath to report an apothecary who sold drugs "of less than normal strength." The greatest possible care was taken that the drugs should be pure, and the following regulation is said by Dr. Walsh to be the first law enforcing the purity of drugs:

Apothecaries must conduct their business with a certificate from a physician according to the regulations and on their own credit and responsibility, and they shall not be permitted to sell their products without having taken an oath that all their drugs have been prepared in the prescribed form, without any fraud. The apothecary may derive the following profits from his sales: Such extracts and simples as he need not keep in stock for more than a year, before they may be employed, may be charged for at the rate of 3 tarrenes [3s. 6d.] an ounce. Other medicines, however, which in consequence of the special conditions required for their preparation, or for any other reason, the apothecary has to have in stock for more than a year, he may charge for at the rate of 6 tarrenes an ounce. Stations for the preparation of medicines may not be located anywhere but only in certain communities in the kingdom as we prescribe below. We decree also that the growers of plants meant for medical purposes shall be bound by a solemn oath that they shall prepare their medicines conscientiously according to the rules of their art, and so far as it is humanly possible that they shall prepare them in the presence of the inspectors. Violations of this law shall be punished by the confiscation of their movable goods. If the inspectors, however, to whose fidelity to duty the keeping of the regulations is committed, should allow any fraud in the matters that are entrusted to them, they shall be condemned to punishment by death.

All business relations between doctor and apothecary were strictly forbidden, and no licensed physician was permitted to keep an apothecary's shop. The physician's fees were also regulated by law. He was obliged to treat the poor for nothing, but for other patients there was a fixed rate of payment:

A physician shall visit his patient at least twice a day, and at the wish of his patient once also at night, and shall charge him, in case the visit does not require him to go out of the village or beyond the walls of the city, not more than one-half tarrene in gold for each day's service (about 7d.). From a patient whom he visits outside of the village or the wall of the town, he has a right to demand for a day's service not more than 3 tarrenes, to which may be added, however, his expenses, provided that he does not demand more than 4 tarrenes altogether.

Such are the main points of what may be called the first Medical Act. It is a striking proof of the administrative genius of Frederick, who, occupied with wars and intrigues and all the business connected with his vast and troubled empire, yet understood the importance of medical science so well as to leave this proof of his interest in it. It is not so surprising to find Pope John manifesting an interest in medicine. Not only were the great medical schools of Bologna and Ferrara situated in the papal

States, but the professorships in the papal medical school at Rome were held by famous men, such as Columbus, Eustachius, Varolius, Coesalpinus, Malpighi, and Lancisi. The list of the popes' private physicians includes the names of the most distinguished representatives of medical science of their day; we need only mention Richard the Englishman, Taddeo Alderotti, Simon Januensis, Arnold of Villanova, Guy of Montpellier, and Guy de Chauliac.

In a paper republished from the *Proceedings of the Society of Antiquaries of Scotland*, vol. xxxvii, there is a very interesting account by the late Dr. William W. Ireland of a visit, made by him in company with Mr. W. C. Maughen, to the island of Eileach-au-Naoimh, off the coast of Argyllshire. This island he held to be none other than the island of Hinba or Himba, so frequently mentioned by Adamnan in his life of Saint Columba. According to this authority the saint founded a monastery on this island, at the head of which he placed his maternal uncle Ernau, somewhere between A.D. 563 and 574. This monastery seems still to have existed when Adamnan was Abbot of Iona, A.D. 679-704; but about the beginning of the ninth century the monks were massacred or driven away by the Northmen, and there is no proof that they ever returned. It is true that Fordun, in his *Chronica gentis Scotorum*, written 1441-7, mentions that there was a sanctuary on the island of Eileach-au-Naoimh (which he calls Heland Leneow), but he does not say if it was inhabited. All trace of the island of Hinba seemed to be lost, for none of the Hebrides bears such a name, which is derived from the Gaelic "Imbach" or "Imbeh," signifying "a surrounding sea." But in 1824 Dr. Macculloch visited the Garvelloch Islands, and in Eileach-au-Naoimh, "the mounds of the saints," or "holy mounds," he discovered the remains of some very ancient religious buildings and monuments. The island was uninhabited, and the question arose whether it could be the lost Hinba. Skene believed that it was, and Dr. Ireland held the same view. He describes Eileach-au-Naoimh as a rocky islet about 1½ miles long, with ½ mile as its extreme breadth, and its highest peak, Dun Bhrèanain, or St. Brandon's hill, about 270 ft. high. A column of rock, standing out on the southern shore, is called the Crauogg, or Columba's pulpit. The building supposed to be the ancient chapel stands on high ground, overlooking the sea. Though roofless its walls are entire, built of flat, wide stones laid one upon another without lime, and taken from the rocks around. There is a little splay window at the east end, and on the west side can be seen the traces of a square enclosure. A little way from the south side is an underground cell, with two stone shelves, probably used for storing the wine for the altar. The building known as the Kiln stands higher up the hillside, and is smaller than the chapel, with one end semicircular, and two-thirds of the interior taken up by a raised stone platform, with a hollow in the middle like that of a cauldron, and a flue below the pavement to let in air. Doubtless this building was used for drying corn. A small piece of level ground with a ruined wall, standing lower than the chapel, is supposed to be the site of the convent garden. Below this is the cemetery, which contains a number of headstones. There are no lettered inscriptions, but several rude carvings, and on one slab there is a Greek cross. A little away from the cemetery is a cairn, which tradition points out as the grave of St. Columba's mother. Another rude building stands east of the chapel, and nearer to the sea are two half-ruined cells, such as were used by the Celtic monks as hermitages. Each has its own entrance, and a channel for drainage, and there is a passage between the two. It is obvious, says Dr. Ireland, that these buildings are the remains of a monastic establishment, and they are so ancient as probably to be the ruins of the actual convent founded by St. Columba. The objection that the early Scottish churches and monasteries were built of wood does not hold good in this instance, for it is based upon a passage in Bede, who was not born till one hundred years after the foundation of Hinba; and even if wood were in general use for church buildings, it is not unreasonable to suppose that in such a place as Hinba, where wood was not attainable, the builders would take the materials provided by Nature, the stones.

Nova et Vetera.

AN OLD DIPLOMA.

IN the JOURNAL of September 26th, 1908, p. 953, there appeared an obituary of the late Dr. Charles Ray, who died on September 10th, then one of the oldest members of the Royal College of Surgeons. He had been a fellow student at St. Bartholomew's Hospital with Sir James Paget and Mr. Luther Holden, and had served as dresser under Sir William Lawrence. His diploma of membership bore the date December 13th, 1836, and the document is remarkable owing to the fact that all the signatories were at one time or another Presidents of the College. Through the courtesy of Mr. Herbert Sieveking, who gave us an opportunity of examining the diploma, we are enabled to reproduce the signatures. A sketch of each of the distinguished surgeons whose names are appended to Dr. Ray's diploma may be of interest to some readers.

SIR ASTLEY PASTON COOPER. In 1836 Sir Astley Cooper was holding the office of President for the second time. He was elected President for the first time in 1827. As illustrating his ideal of the profession we may quote the address which he used to deliver on the occasion of the admission of candidates to membership. After formally admitting them, he proceeded to say:

And now, gentlemen, give me leave to tell you on what your success in life will depend.

Firstly, upon a good and constantly increasing knowledge of your profession.

Secondly, on an industrious discharge of its duties.

Thirdly, upon the preservation of your moral character.

Unless you possess the first, *Knowledge*, you ought not to succeed, and no honest man can wish you success;

Without the second, *Industry*, no one will ever succeed;

And unless you preserve your *Moral Character*, even if it were possible you could succeed, it would be impossible you could be happy.

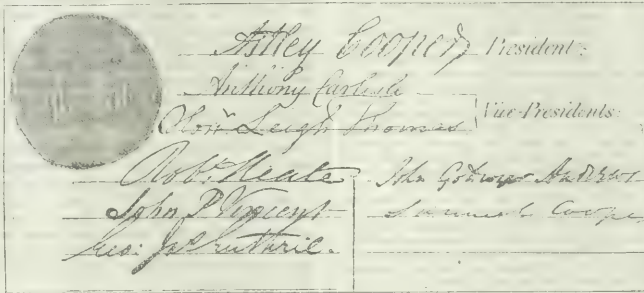
The address ended with a few words of encouragement. Astley Cooper himself was a conspicuous example of a preacher who throughout his life practised what he preached. His life is so well known that it need not be related here in detail. Only a few points need be touched upon. He was the son of the Rev. Samuel Cooper, D.D., and was born at Brooke, seven miles from Norwich, in 1768. His paternal grandfather was a surgeon at Norwich. He had also an uncle, William Cooper, who was for many years surgeon to Guy's Hospital. Astley in boyhood was more noted for mischievous behaviour and feats of daring than for attention to his books. Although he sobered down when he began to study his profession seriously, he was never a reading man. Indeed, when the *Lancet* in its hot youth began what was the revolutionary enterprise of publishing hospital lectures, Astley Cooper remonstrated with Wakley on the ground that his lectures were most incomplete and unsatisfactory, as he read few books and knew scarcely anything that was going on in surgery on the Continent. Wakley rightly pointed out that it was just the fact that the lectures were the genuine records of the surgeon's own experience that gave them their extreme value. All Astley Cooper's books were written from first-hand knowledge, and for this reason they remain authoritative while successive generations of compiled textbooks follow each other into oblivion. Throughout his life he constantly dissected. This, in the days before the passage of the Anatomy Act, naturally brought him into contact with the "Resurrection Men" and he told a

Committee of the House of Commons that there was no one, whatever might be his situation in life, whose body he could not obtain if he wished. He was always eager for information on all sorts of subjects, and however busy he was, if he found among his patients one who seemed to have some special knowledge, Astley Cooper did not grudge any time that might be required to extract it from him.

Though Cooper neglected his studies in boyhood, his early years were passed in an environment that must have gone far to supply any deficiency of school training. Among the visitors at his father's house were Canning, then fresh from Oxford; Dr. Parr, the famous scholar; the Lord Rosebery of the day; Lord Chedworth, and others. His father was a man of considerable attainments, and his mother was an accomplished woman. An operation by Mr. Donne which he witnessed at the Norfolk and Norwich Hospital first gave him, in his own

words, a strong impression of the utility of surgery and determined him to make it his profession. In 1784 he was sent to London to study under William Cooper. The uncle was, however, a somewhat rigid disciplinarian, and young Astley was by his own wish

transferred to the tutelage of Cline, then the leading surgeon of London. Cline was a disciple of John Hunter at a time when that great man was but little thought of by the profession. Cooper himself attended Hunter's lectures, and became one of his most ardent admirers. To Cline's influence Bransby Cooper attributes much of Astley's success in professional life. In one way, however, a shadow was for a time thrown by the master on the pupil. Cline was a close associate of Horne Tooke, Thelwall, and others, then in bad odour on account of their political opinions; like them he was a sympathizer with the leading spirits of the French Revolution. In a political sense Astley Cooper took the colour of his surroundings. He made rapid progress in his profession, becoming a lecturer on surgery before his pupillage had expired. So much was his heart in the work that he delivered his lecture as usual on the evening of his wedding day. In 1792 he made a trip with his young bride to Paris, where he witnessed some of the scenes of the Reign of Terror and worked in the hospitals. In 1800 he was appointed Surgeon to Guy's Hospital in succession to his uncle, who, however, did not actively favour his candidature. His political opinions were against him, but a timely sacrifice of these gained him the favour of the all-powerful treasurer, Benjamin Harrison. It should in justice be said that professionally Cooper stood head and shoulders above his competitors for the post, and the use he made of the large sphere of opportunity thus opened to him proved how worthy he was of the appointment. Till he became surgeon to Guy's, his progress in practice had been slow. He says himself that his receipts for the first year of his professional life were five guineas; in the second his fees amounted to £26; in the third to £64; in the fourth to £96; in the fifth to £100; in the sixth to £200; in the seventh to £400; in the eighth to £610. In the ninth, the year in which he became surgeon to Guy's, his income was £1,100, and afterwards it rose steadily, its high-water mark being reached in 1815, when his bank book showed earnings amounting to upwards of £21,000. But almost to the end his professional income was very large, and he received very handsome fees. The city merchants among whom he lived and practised for many years gave him five guineas a visit; one paid him £600 a year for periodical visits; and from another magnate whom he had cut for stone he got a thousand guineas. His mode of life



when he lived in the City is described by Bransby Cooper as follows:

His custom was to rise every morning at 6 o'clock, even during the winter. As soon as he was dressed, he went into his private dissecting room, where he worked till half-past 7 or 8. Scarcely then dressed his hair, and by half-past 8 he began to see the gratuitous patients, who came to him in large numbers at this early hour. His breakfast occupied but a short space of time. A glance at the newspaper, the rapid swallowing of two well-buttered hot rolls, his tea allowed to remain till it was sufficiently cool, and then drunk off at a draught, now and then the reading aloud of some paragraph from the newspaper which was likely to excite laughter, and the meal was finished. He would then suddenly jump up, and as he held the door in his hand, would turn round, and with one of his sweet, benign smiles, take leave of the party for the day; for none of the female members of the family, at any rate, would have the opportunity of seeing him again until the hour for dinner. He made a rule of never exciting his appetite at this meal by any of the usual dainties of a breakfast table. Although he cast many a longing glance at the bloaters, which were constantly sent to him from Yarmouth, nothing could induce him to break through this prescribed plan of abstinence from such stimulants. From the breakfast-room he went into his consulting room, to which a continued stream of patients would generally be pressing, until 1 o'clock.

The arrangement of the rooms in Broad Street was excellently adapted for the purposes to which they were applied. A large hall, an anteroom, and the consulting room, were in a direct line from the street door; to the right of the hall were two large rooms, which were occupied by gentlemen patients; while two drawing-rooms immediately above were appropriated to the reception of ladies. The hall had generally servants waiting for answers to notes for professional appointments; the anteroom was intended for the use of the patients who were next in succession to the patient then with Mr. Cooper.

The further room, on the right of the hall, which was the family dining-room, was generally full, from ten till twelve, of gentlemen waiting for their turn. These were anxious, perhaps, but still in a much less pitiable state than the occupants of the first room to the right. All who were admitted into this room had undergone some kind of operation, which had unfitted them for the present to leave the house. It was certainly an object of interest, at times partaking no little of the ludicrous, to me, as an inconsiderate youngster, on going into that room, to see six or eight persons, who had never set eyes upon one another before, contorting their features into expressions of all the kinds of suffering, from the dullest torment to the most acute pain; others moving in anxious restlessness to different parts of the room; while some one, more inquisitive than the rest, would be asking his neighbour with eager curiosity, what was the nature of the infliction he had undergone—still writhing, perhaps, under the effects of his own. These patients used to remain in this room until either their pain was eased, or Mr. Cooper himself dismissed them, after completing the operation to which they had been subjected.

The patience of the ladies, perhaps, was somewhat more severely tried than even that of the gentlemen, for as, in Charles's judgement, their occupation was not likely to be so important, nor their time so precious, he was accustomed rather to expedite the admission of the gentlemen than theirs. He most ungallantly used to observe, "there was more difficulty in drawing one lady than two gentlemen," meaning to imply by his term *drawing* the succeeding in withdrawing the lady from Mr. Cooper's presence. The manner by which the ladies exhibited their impatience was by frequently opening the drawing-room door, peeping over the banisters, or sometimes coming down into the hall and supplicating Charles to get them a speedy audience; requests which he knew well enough how to answer appropriately to the peculiar temperament of each applicant.

The anteroom was sometimes applied to another purpose than the legitimate one of merely facilitating the regular succession of patients, for Charles had some few chosen friends who knew how to pay their way into this room at once, without going through the more tedious ordeal of the usual waiting-room.

The attempts which Mr. Cooper's visitors made to induce his servant Charles to allow them to see him at once, perhaps out of their regular turn, were sometimes extremely ludicrous. No suffering was ever equal to theirs, would be tried. "Certainly Mr. Cooper would see them directly, if he had the least idea they were there." "It is not as if I should keep him a moment," and fifty other reasons were urged for the propriety of their admission. To all these arguments Charles turned a deaf ear, until that organ was rendered less obdurate by the chink of some more solid appeal; and then an excuse was generally found to allow him for this once to break through his usual plan. It is right to say, however, that when a mother spoke to him, or perhaps directed his attention to the sufferings of a child, he at once yielded to her entreaty, and gave her admission, often long before her turn.

Thus the patients were introduced in quick succession. I say quick, because the rap at the door of Charles—ever watchful of his master's interests, and not altogether perhaps forgetful of his own—and his exclamation, "A gentleman, Sir," were generally signals to depart which Mr. Cooper's Janus invariably made, as soon as he thought his master's name had been sufficiently occupied by the patient then with him.

When 1 o'clock came, it was announced that the carriage

was at the door; but at the same time, in quite a different tone of voice, it was not unfrequently whisperedd that the house was still crowded with patients. To this sometimes my uncle would listen, and say, "I will see one patient more"; then, perhaps, "I think there is time for a second." If, however, on any occasion, the urgent call of a third induced him to allow his admittance, as soon as he was gone, my uncle, looking at his watch, and finding perhaps half an hour elapsed, would certainly fly into a rage, abuse Charles for detaining him, and jumping into his carriage declare that he was certain the governors of the hospital would deprive him of his situation for his negligence.

At the hospital he would find a hundred students awaiting his arrival on the steps. He would immediately direct his attention to the dressers and elder pupils, asking them as to the important cases, and moved on into the ward *magni juvenum comitante catero*. After the visit to Guy's there followed a lecture at St. Thomas's. Then he would go through the dissecting room, noting anything worthy of observation. At half-past 3 he left, usually taking with him one of his pupils or dressers to write to his dictation or assist in an operation. At half-past 6 or 7 he reached home and took a rapid meal. Directly afterwards, if it were an evening on which he had to lecture, he would make a few pencil notes of the heads of his subject, hastily swallow two glasses of port, and at once go to sleep for a short time. Whether he lectured or not, he always had a number of professional visits to pay, and did not get home till midnight.

Astley Cooper's success was undoubtedly helped by his handsome presence and genial sympathetic manner; he was the opposite of Abernethy, whose roughness he used to say was worth £1,000 a year to him. But few men ever worked harder than Cooper, and no surgeon ever more fairly won the success that came to him. Work was his life, and when in his later days he gave up practice and went into the country, he returned to his work again in a few months.

He performed some remarkable operations, including his famous ligature of the aorta. Yet he says of himself that he was never a good operator where delicacy was required. To quote his own words:

He felt too much before he began even to make a perfect operator. For the operation of cataract he was quite unfitted by nature. Quickness of perception was his forte, for he saw the nature of disease in an instant, and often gave offence by pouncing at once upon his opinion. The same faculty made his prognosis good. He was a good anatomist of morbid as well as of natural structure. He had an excellent and useful memory. In judgement he was very inferior to Mr. Cline in all the affairs of life, and hence was continually walking upon a mine ready to explode under his feet. His imagination was vivid, and always ready to run away with him if he did not control it.

The following is another account of himself written in 1836:

As an operator for stone, aneurysm, hernia, and the removal of tumours he was excellent, prior to his giddiness, but after that time he was always afraid of being seized with them (attacks of giddiness to which he was subject after middle life) whilst he operated. He never was fitted for a very delicate operation. His strength consisted in the quickness with which he could decide upon the nature of a case, and the certainty almost of his decision being right, as well as the readiness with which he adapted his means of treatment. His diagnosis was really most remarkable. He obtained that decision from having made it a practice, when young, to see all the poor who would come to him, and thus he saw such a variety of disease as to make him as familiar with it as a parent with his child. His principle in practice was never to suffer any one who consulted him to depart without giving them satisfaction on the nature and proper treatment of their case.

His internal remedies were few and simple. He used to say:

Give me opium, tartarized antimony, sulphate of magnesia, calomel and bark, and I would ask for little else. These are adequate to restore all the actions of the body, if there be power of constitution to admit of the restoration, and disease, as far as I know, is either itself a deviation in the performance of some function, or at any rate is always marked by such a circumstance.

After referring to his success he proceeds:

For the benefit of the younger members of my profession let me say that this success may be always accomplished in a great degree. Be kind to everyone and most active to oblige. Learn your profession well, be an excellent anatomist, and understand well the practice and duties of your profession. Bend the force of your mind to some useful object, and be not multifarious and vacillating in your pursuits. Deep science is desirable to the man of fortune—useful science to the physician and surgeon. Let your zeal and industry be un-

bound. My own success depended upon my zeal and industry; but for this I take no credit, and it was given to me from above.

Elsewhere he gives a pregnant hint which all students of medicine would do well to take as a guiding principle in their work:

It is not the number of cases a surgeon has seen but it is his ready application of them which renders his knowledge of practical utility and constitutes him an efficient surgeon.

To a modern surgeon trained in the complicated ritual of asepsis, with the special sanctuaries, the officiating vestments and ceremonial lustrations considered indispensable, Astley Cooper's methods must appear crude and almost barbaric. He operated, says his biographer, in his consulting room to an extent that had never before been known in the home practice of any surgeon.

Tumours were removed, fingers amputated, and many other operations performed which, but a few years before were considered as feats in surgery. Infinite benefit arose to the public and to the profession by many operations being thus robbed of four-fifths of their horror. When a tumour was shown to him on such an occasion, which he at once saw required removal, if the subject were a lady, he would say: Now, my dear madam, this little swelling may become of importance to your life, at any rate your suspicions will render it a source of constant unhappiness to you, and therefore I am going to remove it," and as he began this address he rang the bell, and made signs which, without a word being said, sufficiently indicated to Charles what preparations were necessary. These were arranged so quickly, that Sir Astley had hardly finished his opinion before they were completed. It was rarely that a patient resisted his advice, for the dread of the operation was in a great measure removed by the simple manner in which he explained the propriety of submitting to it. In about five minutes often a patient was thus relieved from "a source of anxiety which had preyed upon the mind for months, and, moreover, many were saved the misery which must always attend the perspective (sic) view of a relative or friend being exposed to surgical operation."

In some cases, when he saw that a slight use of the knife was unavoidable, he would prepare himself, unobserved, by his patient, and under the pretence of a mere examination of the part, would at once execute the necessary task. Now and then this rendered the patient excessively angry, and I have heard a patient say, while wincing from the smarting consequent to the operation: "Sir, you had no right to do that without consulting me. God bless my soul! sir, the pain is intolerable. If you had asked me I don't think I should have submitted." "The very reason," my uncle would say, "that I considered it right to think for you, for now you will be well in about the same time that would have been occupied in making up your mind as to whether you would have it done or not." The patient by this time being restored to a somewhat more comfortable condition, from the gradual cessation of his pain, usually saw the force of Sir Astley's reasoning, and was grateful to him for the decision he had shown in his conduct.

It would be interesting to know the after-history of these impromptu operations. It must be remembered that these things were done in preanaesthetic days; the sights and the sounds must, one is disposed to think, have made Astley Cooper's consulting room present something of the character of a slaughterhouse. The difference between the surgery of Cooper's day and that of our own cannot be more graphically illustrated than by a story related by Dr. Badeley, who at one time used to go to his house to see poor patients. Cooper had removed a tumour from the head of George the Fourth, and was very anxious lest erysipelas should supervene. Yet on one occasion, after he had visited his royal patient, he said to Badeley on his return:

"Pray tell me if you see anything particular about me? for the King did not seem in good time; he looked hard at me from head to foot, and cannot understand why I do you see anything?" "Why," I said, "I should have put on a white cravat and a clean shirt or at least have washed my hands before I waited on His Majesty."

The fact is, says his biographer with engaging simplicity, that Sir Astley had performed a slight operation just before he went to the palace. Evidently common cleanliness counted for nothing in the days of our rude surgical forefathers.

Astley Cooper's writings are still valuable, for they are founded on direct observation, dissection, and experiments on animals. He spared neither trouble nor expense in their preparation, and his magnetic personality made all practitioners willing to help him by supplying particulars of cases. His chief works are his monographs on dislocations and fractures and on hernia. The completion of his

great work was prevented by his death, which occurred in 1841. He had worked to within a few weeks of the end. Every honour that can fall to a surgeon came to Sir Astley Cooper, and his name will always have a place in the history of surgery.

SIR ANTHONY CARLISLE.

Next comes Sir Anthony Carlisle, whom Charles Lamb described as "the best of storytellers and surgeons, who mends a lame narrative almost as well as he sets a fracture." It was from him that Lamb got the droll story about the three Quakers which he tells in his essay on "Imperfect Sympathies." Carlisle is also mentioned by De Quincey. He was born at Stillington, Durham, in 1786, and after attending the lectures of John Hunter, Baillie, and Cruikshank, and being the resident pupil of Mr. Henry Watson, surgeon to Westminster Hospital, he succeeded to the surgery on Watson's death in 1793. He held the office till his own death in 1840. He was president of the College in 1829 and again in 1839. He delivered the Hunterian Oration at the College in 1820 and 1826. Of the latter of these orations Sir Charles Bell writes to his brother, J. G. Bell:

To-day Sir Antony Carlisle (sic) delivered it (the Hunterian Oration). I heard him at the public dinner of the Hospital boast what he would do. I saw the moment he entered he would fail—that he had miscalculated the subject, and the time and the audience. He had a large volume of manuscript bore him; he was surrounded by a quantity of preparations suited to a course of lectures rather than to one discourse; and he had as many shell fish before him as you see in an oyster shop, and the folly or the wit to make the oyster the subject of the Hunterian Oration. He began with a supercilious confidence and after many interruptions, finally broke down after an hour and a quarter's delivery amid the noise and hisses of the audience. This was a fearful lesson to an audience.

Bell may not have been altogether without prejudice in the matter, as Carlisle had been appointed Professor of Anatomy to the Royal Academy in preference to himself. But the oration must have been a failure, for it earned for Carlisle the nickname "Sir Anthony Oyster." He was surgeon-extraordinary to the Prince Regent, and was knighted on the prince's accession. He held his appointment at Westminster Hospital till his death in 1840. He was a fair surgeon, and wrote several books, among them being *An Essay on the Disorders of Old Age and on the Means of Prolonging Human Life*; *A Lecture on Cholera*; *Practical Observations on the Preservation of Health and the Prevention of Diseases*; *Physiological Observations upon Glandular Structures*; and a pamphlet on man-midwives which gave great offence. In 1838 his conduct as surgeon to the Westminster Hospital gave rise to complaints as to his incompetency, and his clinical lectures were described as "frivolous, indecent, and absurd." In Mr. Fernandez Clarke's *Autobiographical Recollections of the Medical Profession* there is a description of one of his visits which fully bears out the description. A specimen of his stories, so much admired by Lamb, may be given: Sir Anthony asked his students if they had heard of the explanation given by a man who was asked why his nose was red. "I drink so much red wine," said the man. "I drink it red and p—— it white, and leave the red behind on my nose." Yet Carlisle must have been popular, for the publication of the report in the *Lancet* aroused such indignation among the students that Clarke on a second visit to the hospital had to flee for his life.

HONORATUS LEIGH THOMAS.

The next signatory, Honoratus Leigh Thomas, was born in 1769. On coming to London to study medicine, he brought a letter of introduction to John Hunter, who made an appointment with him for 5 o'clock the following morning. On presenting himself at that hour, Thomas found Hunter busy dissecting insects. He was a dresser under Hunter at St. George's Hospital, and also worked under Cruikshank the anatomist. After serving a short time in the navy, he was, on the recommendation of Hunter, who was surgeon-general, appointed assistant surgeon to Lord Macartney's embassy to China in 1792. In 1799 he saw service with the Duke of York's army in Holland. He married the elder daughter of Cruikshank, and in 1800 succeeded to his father-in-law's practice. He

was President of the College in 1829 and 1838. In 1827 he delivered the Hunterian Oration, in which he gave some interesting personal reminiscences of Hunter. Fernandez Clarke says of him:

The men whom we chiefly called in consultation occupied at the time prominent positions, but some of them contributed little or nothing to the literature of the profession. Honoratus Leigh Thomas, councillor, examiner, and twice President of the Royal College of Surgeons, was often called in by us. He was a very poor surgeon, very undecided, and avoided operations, but he was a shrewd practitioner in medical cases, for which his practice was mainly limited. He was familiarly known as "Dr. Thomas," and had a very extensive practice amongst the middle classes. He had in early life been a pupil of the celebrated Cruikshank, whom he afterwards assisted in his anatomical demonstrations, and lived with at his house in Leicester Place, Leicester Square. He subsequently married a daughter of Cruikshank, and succeeded his father-in-law as tenant of the house in Leicester Place, in which he practised for nearly half a century.

Mr. Thomas, as far as I know, made no contribution to the profession. He was courteous and able as an examiner, dignified as President, but he had no genius; there was nothing suggestive, nothing of *clan* about him. He was perfect in the sick-room; cool, attentive, kind, and in medical cases an excellent practitioner. Personally he was the *beau-ideal* of a physician—a tall and slender form, slightly bowed; a face sedate but kind; a forehead, though somewhat sunken, denoting great perceptive power; and a calm, somewhat subdued voice. He dressed truly "professionally"—black dress coat, waistcoat, and trousers, black silk stockings, and pumps; a spotless white cravat encircled his long neck; and a massive chain, with seals and keys, dangled from his watch-pocket. As I have said, he assisted Cruikshank in his anatomical lectures; but I am not aware that he was ever connected with any hospital or dispensary. He seemed to have a dread of operative procedure, though by no means in his palmy days a bad operator; but he would delay and delay surgical interference until his patient, tired out, would consult some more decided surgeon. He had a very extensive practice amongst licensed victuallers, and probably attended more members of that craft than any other surgeon of the present century.

Thomas died in 1846.

ROBERT KEATE.

Robert Keate was born in 1777. He was a younger brother of John Keate, the *plagiarist Orbitius*, who made his mark on the persons of so many of the future leaders in Church, State, and Society who passed under his birch at Eton. Robert Keate was apprenticed to his uncle, then surgeon-general to the army, and entered St. George's Hospital in 1793. In 1800 he was appointed assistant-surgeon to his uncle at St. George's, and thenceforward did nearly all his work. He retired from the army in 1810 with the rank of inspector-general of hospitals. In 1813 he succeeded his uncle as full surgeon at St. George's, and held the post until 1853. Keate spent his early professional life at sea. He was assistant-surgeon in the ship in which Prince William Henry, Duke of Clarence, was a midshipman. The Prince was grateful to him for his ministrations, and promised that if ever he became King of England he should be his body surgeon. The promise was fulfilled, and William the Fourth showed the same confidence in him when he was King as he had done when he was in the navy. In 1841 Keate was appointed sergeant-surgeon to Queen Victoria. He was proud of his appointments at Court, which he thought would be the basis of his fortune. He was President of the College in 1830, 1831, and 1839. But he said to Fernandez Clarke in 1853 or 1854:

My connexion with Royalty has been my ruin. I have attended four sovereigns and have been paid badly for my services. One of them, now deceased, owed me nine thousand guineas. The late King William IV always paid, but my journeys to Windsor to attend upon him and the Queen, as a rule, were a grievous loss to me. I have on many occasions, obeying a summons to the Royal residence, left a room full of patients anxious for my advice. The consequence eventually was that my practice declined, with respect to the public, and now that I am more than eighty years old I am a poor man. There is one exception, however, as regards my connexion with Royalty. That exception is the Duchess of Gloucester, who is my immediate neighbour. I visit her daily when she is in town, and the fees I receive in consequence from her form the staple of my income at present.

A characteristic story or two as to his relations with William IV may be quoted. He said:

I have no objection to relate to you one or two characteristic anecdotes of the late King. I was summoned down to Windsor to see the Queen. As it was "urgent" I immediately took post horses, and in two hours was at the Castle. I arrived so early that I was ushered into the breakfast room of the Royal

couple. The Queen was suffering from a pain in her knee, and she gave me a hint that the presence of the King might be dispensed with. According I said, addressing the King, "Will your Majesty be kind enough to leave the room?"

"Keate," said he, "I'm hanged if I go!"

I looked at him for a moment; I then said quietly but firmly, "Then, your Majesty, I will be hanged if I stay!" When I got to the door of the apartment, the King called me back.

"Keate," said he, "I believe you're right; I'll retire. You doctors do anything; but if a Prime Minister or a Lord Chancellor had presumed to order me out of the room, the next day I should have had to address his successor."

Once, said Mr. Keate, the Queen had determined to consult a homoeopathic practitioner.

"I hate humbug," said his Majesty, "and I won't allow any homoeopath to prescribe for my wife unless you are present."

"It is impossible, your Majesty," I said, "that I can meet Dr. D—; there is nothing in common between us."

"Well, then," was the rejoinder, "will you overhaul the prescription of the medicine which he orders for her, and see if she can safely take it?"

I promised to do so, and on the prescription being handed to me, I said, "Oh, your Majesty, she may take it for seven years, and at the end of that time she will not have taken a grain of medicine."

Keate contributed little or nothing to the literature of his profession, but, according to Fernandez Clarke, he was second to none of his time in the use of the knife. Clarke says his diagnosis was as a rule accurate, and he was a careful and sound practitioner. He was somewhat below the middle height, and his manner was bluff often to the degree of rudeness. This may have been acquired at sea. Although in later life he was irritable, he was incapable of any meanness of conduct either to a patient or to a brother practitioner. He died in 1857.

JOHN PAINTER VINCENT.

John Painter Vincent was born in 1776. He was appointed assistant surgeon to St. Bartholomew's Hospital, becoming full surgeon in 1816. He delivered the Hunterian Oration in 1829, and was President of the College in 1832 and 1840. According to the sketch of the Presidents appended to *Sir William MacCormac's Address of Welcome delivered on the Occasion of the Centenary Festival of the Royal College of Surgeons of England* on Thursday, July 26th, 1900, Vincent's opinion was highly valued by his colleagues in doubtful cases, especially by Lawrence. He was wonderfully skilful with his hands.

This was pre-eminently shown in his treatment of a case of strangulated hernia, which he often succeeded in reducing when others had failed. Over and over again the students, disappointed in their expectation of seeing him operate, would exclaim, "As usual old Vincent has tucked it up."

His deftness of touch was a natural gift, for Leigh Hunt, who was attended by him when a boy at Christ's Hospital, speaks of it. He describes Vincent as "dark like a West Indian." Clarke does not seem to have been so impressed by him as his colleagues. He says:

John Painter Vincent was occasionally called in for his opinion. He resided for many years on the north side of Lincoln's Inn Fields. Vincent was a peculiarly shy man, but was not without ability. People who did not understand him thought him slow and dull; yet he was a minute and careful observer, but he was not a good speaker. He failed to impress his patient, at first, certainly, with an idea of his real power. Those who knew him better had great confidence in him. In person just above the middle height, he walked quickly and somewhat clumsily. He had somewhat of the appearance and manner of a lawyer's clerk hastening to court. He dressed rather shabbily in black. His face denoted no great power. His features were regular, and he had a good forehead, but he never seemed to be on good terms with himself, and consequently was often not on good terms with others.

Vincent was the author of a volume entitled *The Principles of Surgery and of Observations on Some Points of Surgical Practice*. Mr. Skey said of him that he had a mind which revolted from any act of meanness or dishonour, and of whom it might be said without flattery he never sullied his integrity by a single ungenerous act during a long life of professional activity. He died in 1852.

GEORGE JAMES GUTHRIE.

George James Guthrie was born in London in 1785. He was early apprenticed to a surgeon, and worked as an assistant in the York Hospital; he became a Member of the College of Surgeons when not yet 16. He was almost immediately appointed assistant surgeon to the 29th

Regiment, and after five years in Canada he was ordered to the Peninsula, where he served almost uninterruptedly to the end of the war. He won the good opinion of the Duke of Wellington. In 1814 he retired on half-pay, and returned to London, where he worked under Bell, Brodie, and Abernethy. For two years he had charge of wounded men in the York Hospital. He is said to have been the first surgeon in England who used a lithotrite to crush a stone in the bladder. He founded the Royal Westminster Ophthalmic Hospital, to which he was chief surgeon. In 1823 he was elected assistant surgeon to the Westminster Hospital, becoming full surgeon in 1827. That appointment he held till 1843. He was President of the College in 1833, 1841, and 1854.

Guthrie lectured gratuitously for nearly thirty years on surgery to officers of the army, navy, and East India Company. His style was racy, and his teaching, being largely illustrated by his own experience on the battlefield and in the hospitals, was practical in the best sense. Fernandez Clarke says of him that he was brilliant as an operator, shrewd in diagnosis, and, though an uneducated man, he had all the natural attributes of a great surgeon. He died in 1856.

JOHN GOLDWYER ANDREWS.

John Goldwyer Andrews, the only one of the signatories whose name is not in the *Dictionary of National Biography*, was born in 1782, and was apprenticed at an early age to Sir William Blizard. He became a Member of the College in 1803. He was surgeon of the London Hospital, but contributed nothing to professional literature. He was President of the College in 1835 and 1843. He was a great collector of works of art. He died in 1849.

SAMUEL COOPER.

Samuel Cooper was born in 1780, and received his professional education at St. Bartholomew's Hospital. In 1806 he gained the Jacksonian prize at the College of Surgeons for the essay on "Diseases of the Joints," and in 1807 he published *First Lines of Surgery*, which went through seven editions. In 1809 appeared the first edition of his *Surgical Dictionary*, of which seven large and carefully-revised editions were published. After serving a year or two in the army, during which he was present at Waterloo, he devoted himself to the revision of successive editions of his two principal works, and also gained a considerable surgical practice. From 1831 to 1848 he was surgeon to University College Hospital and Professor of Surgery in the College. In 1845 he was elected President of the College of Surgeons. He died in 1848. Clarke calls him the Johnson of medical literature:

His great dictionary, though of a different stamp and written with a different object, was to surgery what Johnson's great work was to English literature; it is a monument to his memory illustrative of marvellous industry and marvellous erudition. The labours of no single man in our profession can be compared with those of Samuel Cooper in the compilation of his great work.

He was almost entirely unassisted, and the work was completed in three or four years. He rose early, and finished his literary labours before noon. Samuel Cooper is described as an excellent teacher; at the bedside he was painstaking, clear in diagnosis. As an operator he was careful, slow, and somewhat clumsy, but sure. Notwithstanding his lack of the brilliant qualities of his colleague, Robert Liston, he was a great favourite with the students.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE FRIENDLY SOCIETY.

THE annual general meeting of this society was held in the rooms of the Medical Society of London on May 27th, Dr. DE HAVILLAND HALL, Chairman of the Executive Committee, presiding.

The Chairman's Address.

Dr. DE HAVILLAND HALL congratulated the members on the excellent work done by the society. During the past year there had been 211 new proposals, the largest on record. There was a net gain of 140, bringing the total membership up to 2,723; of that total, 2,682 had insured for sickness benefit, 161 for life assurance, and 285 for

annuities. At the present time 28 members were drawing annuities, which amounted to over £1,000 a year. The amount paid in sickness claims had also created a record, being £14,447; the sickness experienced had been somewhat over the amount of the previous year; in fact, the sickness experience was gradually increasing. In the quinquennium ended 1898 the sickness experience was 75 per cent. of expectation; in the quinquennium ended 1903 it had reached 94, while in that just closed it was 97 per cent. of expectation. This, he thought, would afford an answer to certain members who suggested the extension of sickness provision beyond 65 years of age. If the sickness experience was growing under the present system, he was afraid that the sickness beyond 65 would prove something very startling. The Manchester Unity of Oddfellows showed that between 20 and 24 the sickness experience was 0.9 weeks a year, while between 65 and 69 it was 10.59 weeks a year, the Medical Assurance Society's experience worked out at about 1.2 days a year, if the society experienced ten weeks' sickness a year, the premium would have to be increased to such an extent that few members would be willing to pay it. The sickness fund now amounted to £126,126 as against £103,546 in the preceding year, a net increase of £22,579, but of this increase £9,557 was the share of the management and £7,827 the share of the investment fluctuation reserve fund. It had been decided that these two special funds should be merged into the Sickness Annuity and Life Assurance funds. The total funds of the society grew from £215,039 at the end of 1907 to £223,994 at the end of last year, an increase of £8,955. The members had all received the valuation report for the quinquennium just closed; it showed a satisfactory surplus in the sickness fund of £9,040 in addition to £6,306, the amount reserved against investment fluctuation. The surplus was sufficiently satisfactory to enable the committee to recommend the same rate of bonus to members retiring from the society at 65 as was paid in the last quinquennium—namely, ten guineas for each one guinea a week of sickness benefit assurance. The life assurance surplus of £4,303, with a reserve of £860, would allow a bonus of 15 per cent.; therefore, in future, all policies for £200 claimed during the present quinquennium would receive £230. In the annuity fund there was a small deficit of £2,781, which was more than covered by the reserve of £4,033. As was decided at the last general meeting, the sickness bonus would in future be paid out of the sickness fund, and not from the management fund. The result of the valuation was satisfactory, but as the rate of sickness experienced was steadily increasing, the society must be extremely careful to provide an ample margin for the future. At the last general meeting the question of the payment of members of the committee was referred to the committee for consideration, and he was glad to report that the whole of the committee felt that the work was a labour of love for their professional brethren, and that they did not wish to receive any pecuniary benefit; they were content with the thanks from the members of the society, and he hoped that the question would always be decided in the same way. As in the past, they were much indebted to the *BRITISH MEDICAL JOURNAL*, the *Lancet*, and the *Medical Press and Circular* for the notices published about the society's work. He tendered the warm thanks of the committee to Mr. Addiscott, their secretary, and Mr. Sutton, the assistant secretary, for the admirable way in which they conducted the business of the society. He also wished to express the thanks of the members to the auditor, and also to the trustees, who attended twice yearly at the bank to examine the investments; they were especially grateful to Mr. Hempton, who had given them useful suggestions about improved methods of showing how the society's funds were invested.

Report and Valuation.

The Chairman concluded his address by moving that the report of the committee and the audited accounts for the year ending December 31st, 1908, be received and adopted.

The CHAIRMAN, in reply to a question from Mr. GEORGE JACKSON, stated that the votes for Epsom College to which the society was entitled were confined strictly to the use of the children of deceased members.

The annual report was then adopted.

Two slight alterations of rules were adopted without discussion.

The CHAIRMAN then moved that the report of the actuary as to valuation of the society be received and adopted.

This motion was seconded by Dr. DICKINSON, and carried.

On the motion of Mr. GEORGE JACKSON, seconded by Dr. HAY, the officers for the year were elected.

Vote of Thanks to Chairman.

On the motion of Dr. BARKWELL, seconded by Dr. BRINDLEY JAMES, a hearty vote of thanks was accorded to the Chairman for presiding.

The reply of the CHAIRMAN brought the proceedings to a close.

MEDICAL DEFENCE UNION.

THE annual general meeting of the Medical Defence Union was held at University College, Bristol, on May 27th. Dr. STAMFORD FELCE, M.R.C.P., President, taking the chair at 4.30 p.m. There was a fair attendance of members, who listened with great interest to the excellent address on the work of the Union given by the President.

The annual report was adopted. The diversity of the claims for advice and assistance was shown by a schedule of some cases dealt with by the secretary, and by the legal report of the solicitor, Mr. Hempton. This set out the manifold nature of the matters referred to him: many of them had to be taken into court. It is interesting to note that of 128 matters placed in his hands, 40 were for libel and slander, 25 were claims for alleged negligence in treatment; 7 cases were in respect of suppression of unqualified practice, and the remaining 56 were matters as to appointments, partnership disputes, defence of members in actions under the Notification of Disease Act, and so on. Of the cases referred to the solicitor 70 were from the provinces, 45 from the metropolitan area, 4 from Scotland, 2 from Ireland, and 7 from Wales. Two cases were compromised at the special direction of the members concerned, and in one case an adverse verdict was given against the member concerned. In all other cases the Union was successful in its defence of the professional honour and reputation of the medical practitioner assailed. The statistics of the remarkable successes of the Union in the past have enabled the Council to make excellent terms with an insurance company of the highest reputation in the matter of indemnity insurance, the terms being within the means of all members of the profession. Those members who take out policies under the scheme of insurance set out in the annual report can congratulate themselves upon being in a position of great security; but the Council very properly cautions the members that there must be no relaxation in any way of the care and skill which should in all cases be exercised in dealing with the sick and suffering, and that the contract entered into between the insurer and insured presupposes that the same caution will be used in this respect as was used before indemnity insurance came into operation. With this caution we thoroughly agree. Insurance against third party risks is fully justifiable, and, as business as well as professional men, there is no reason why medical men should not secure for themselves indemnity for risks which, unfortunately, as the records of the Medical Defence Union have proved, are part of the professional life of medical practitioners. The security offered by the Defence Union is ample and satisfactory, and it is difficult to imagine what the loss to individual practitioners would have been had it not been constituted. As is pointed out in the Council's report, it can be said with absolute certainty that without the protection now afforded numerous practitioners would have been "greatly harassed and seriously embarrassed." The relief to those attacked, in being able to hand over their troubles to a skilled organization, amply equipped with special knowledge in dealing with medico-legal work, with ample funds and large experience, must necessarily be great.

The usual statutory resolutions were passed, and the report and minutes adopted. Dr. Stamford Felce, Dr. Victor Jaynes, and Mr. F. C. Larkin, F.R.C.S., were

unanimously re-elected members of the Council under Rule 28. A resolution directing the President to support the action of the General Medical Council in its endeavour to induce the Government to appoint a Royal Commission to inquire into the evils of unqualified medical practice was passed without any dissent. A vote of thanks to the President and Council for their arduous work for the protection of the members of the Union was carried unanimously, as was also a vote of thanks to the authorities of University College for the loan of the Library for the meeting.

ANNUAL REPORT OF THE CHIEF INSPECTOR OF FACTORIES AND WORKSHOPS FOR THE YEAR 1908.*

By the omission of a certain amount of statistical information it has been found possible to issue this report at an earlier date than in former years. The sectional reports have been summarized by the Deputy Chief Inspector, and this summary, combined with a good general index, makes the report for 1908 extremely convenient for reference.

The factory staff has been increased by 35, so that the total number of inspectors and assistants is 200. The number of places under inspection still continues to increase. At the close of 1908 there were 250,000 factories and workshops on the register. Owing to the general slackness of trade throughout the country the volume of employment shows a reduction. To this circumstance is partly attributed the decline in the year's total number of accidents.

White Phosphorus Matches.

Three years ago, at a conference in Berne, certain European countries decided to abolish the use of white phosphorus in the manufacture of lucifer matches, but the United Kingdom, and Sweden, Norway and Belgium did not fall in with the proposal. The times were not ripe for the adoption of the proposal, especially too as there had not been for three consecutive years in this country a case of necrosis, except in one factory. Subsequently, owing to an agreement among the manufacturers themselves, their attitude to this question became altered, especially in view of the absolute prohibition of the importation of phosphorus matches. The White Phosphorus Matches Prohibition Act was passed in December, 1908, and comes into force on January 1st, 1910. After this date white phosphorus matches may not be made or imported. When this Act comes into force all the special rules of 1899 will become obsolete.

Employment of Children in Scotland.

The Education (Scotland) Act, 1908, which came into force on January 1st of the present year, affects the employment of children and young persons. Previously certificates of exemption from school attendance could be granted to children between 12 and 14 years of age. By the new Act the age limit is extended to 16 years. The board is also empowered to make by-laws requiring the attendance at continuation classes of persons between 14 and 17 years of age who are not otherwise receiving a suitable education.

Laundries.

Laundries are now regarded as technically non-textile factories or workshops, accordingly as power is used or not, but they are subject to certain exceptions as to hours. Charitable and reformatory institutions also come within the influence of the Factory and Workshops Act, 1907.

Prison Employees.

The number of persons industrially employed in prisons in England and Wales is about 14,000: in "asylums" in England, Wales, and Scotland 10,000, and in inebriate reformatories in England, Wales, and Scotland 500. The figures for Ireland are not given.

Scheduled Diseases.

After the publication of the second report of the Industrial Diseases Committee the following further additions to the third schedule of the Workmen's Compensation Act, 1906, were ordered—namely, glass workers' cataract,

* Wyman and Sons, Fetter Lane, E.C. Price 2s 4d.

telegraphists' cramp, coxematous ulceration of the skin produced by dust or liquids, and ulceration of the mucous membrane of the nose or mouth produced by dust.

Employment of Mothers.

An inquiry is still proceeding as to the industrial employment of married women before and after childbirth, the results of which will appear in a forthcoming digest of the returns.

Sectional Reports.

In the Sheffield district there has been a decrease in the number of fatal accidents. Notwithstanding this circumstance, of the accidents which did occur 75 per cent. were preventable.

Although work in shipbuilding yards has been extremely slack, the number of accidents remains far too high. Many men were injured by articles falling upon them. A larger number of men were seriously injured by falls from staging, ladders, deck beams, etc. Although the attention of employers has been specially directed to this circumstance, no noticeable improvement has as yet been observed.

Cutlery Dust.

Messrs. C. Johnston and S. R. Bennett describe in an appendix the results of experiments undertaken with the view of devising means for the prevention of the inhalation of dust among operatives in cutlery. This paper, which was read at the Sheffield meeting of the British Medical Association in August last, is an indication of an earnest desire on the part of factory inspectors to participate in the various movements for the hygienic improvements of our industries so characteristic of our times.

The Flying Shuttle.

This appliance is still a cause of many serious accidents, for a perfect shuttle guard has not yet been invented.

Reports of the Lady Inspectors.

The lady inspectors have opportunities of eliciting information not always readily obtained by their colleagues. Many of the comments on industrial changes sent to Miss Anderson, the Principal Lady Inspector, deal with laundries. It would seem as if the day of the smaller laundries was drawing to a close. All over the country, not in the large towns alone, large laundries are being built.

With the small laundry will go many of the worst features of the trade; but will go also the small weekly wage of many a hard-working old woman who has kept herself off the parish or supported a sick husband by work in the smaller hand laundries.

The desirability of the air of workrooms being kept as pure as possible is shown by the tendency of the women to become anæmic and the possible development of tuberculosis. While work in a high temperature and a humid atmosphere is to be deprecated, a similar remark applies to work carried on in rooms wherein the temperature is little higher than that of the outside air.

As regards the industrial employment of children and young persons, attention is drawn to the greater loss of life in Belfast than in Manchester. At the age 15 to 20 the death-rate rises in Belfast to double that of Manchester, and yet the death-rate in the first five years of life shows that at this stage the chance of life is greater in Belfast. The higher death-rate in early womanhood is attributed to the strain of the long day in the hot and noisy mill or factory, leaving the workers no reserve of strength to support growth of mind and body.

The Report of the Medical Inspector.

Dr. T. M. Legge's report contains as usual much valuable information. During the year Dr. E. L. Collis was appointed an additional medical inspector of factories, a post to which he brings the experience gained during the ten years he acted as certifying factory surgeon for Stourbridge and surrounding districts. The appointment has been a most fortunate one, and has given general satisfaction. Already, in this 1908 annual report, there are indications of good work done by Dr. Collis.

Mention is made by Dr. Legge of the papers read and the discussions which took place in the Industrial Hygiene Section at the Sheffield meeting of the British Medical Association. Of the value of such a section at the annual

meeting there can be no doubt. It is anticipatory of, and complementary to, the work done by the Home Office.

Industrial lead poisoning shows an increase upon 1907. This may be due in part to the inclusion of lead poisoning in the third schedule of the Workmen's Compensation Act. The unhealthiness of some factories compared with others has long been known. This is well brought out by Dr. Legge. In one pottery the duration of employment for some women was only four months when plumbism supervened. There were 32 fatal cases of lead poisoning in 1908, 1 fatal case of arsenic poisoning out of 23 notified, and 47 cases of anthrax (7 of which were fatal), compared with 58 for 1907.

A short account is given of an investigation by Dr. Collis into the health of cotton operatives employed in card stripping, one of the dusty processes in a cotton factory.

Although known for decades of years it is only recently that the subject of deafness caused by certain occupations has formed the subject of careful inquiry. It is almost impossible for any person employed as a boilermaker to escape becoming deaf. To avoid the painful sensations caused by hammering, workmen are recommended to plug the ears with *plastiline* mixed with cotton. Not only will unpleasant sensations be thus prevented, but in all probability deafness as well. It is most desirable that this loss of hearing should, if possible, be prevented, for once established treatment is of no avail.

We have said sufficient in this brief review to show what a wealth of interesting information is contained in this report, and how favourably it reflects upon Dr. Whitelegge and his staff of competent inspectors.

THE SEVENTH INTERNATIONAL CONGRESS OF APPLIED CHEMISTRY.

WITH a membership of some 3,000 and a programme divided up into seventeen sections, the Seventh International Congress of Applied Chemistry entered on its brief life on May 27th. Chemistry relating directly to medicine claimed attention in no less than five of the seventeen sections—namely, in the sections of physiological chemistry and pharmacology, of fermentation, of hygiene, of pharmaceutical chemistry, and of bromatology. In spite of the number of members, the attendance at the individual sections was not large, and in none of the five mentioned was there anything approaching a crowd. Photo-chemistry attracted a fair attendance, as did the sections dealing with analytical chemistry, explosives, and organic chemistry. The head quarters of the Congress were the University of London, and the rooms allotted to the various sections were well adapted to the requirements. A little difficulty was experienced by a few who desired to attend some interesting and instructive demonstrations given in connexion with the combined sections of physiological chemistry and fermentation at University College.

GENERAL ARRANGEMENTS.

An ideal congress, as far as we are aware, has never yet been held, although, according to all accounts, the Surgical Congress at Brussels last year came near to this. It is, therefore, not surprising that the present congress was by no means ideal, either from a scientific or from a social point of view. The sectional arrangements appear to have been carefully organized and fairly well carried out, especially in the matter of selection of important themes for discussion. There were, as usual, many, too many, papers in the programmes, but the number of absentees was unusually small. The practical nature of some of the subjects and their association with trade rendered it inevitable that a certain amount of puffing should be included. The young scientist, or would-be scientist, who is so fond of holding forth at the maximum permissible length at medical congresses to his own great satisfaction and to everyone else's discomfort was not freely represented, probably because those who had a real interest in bringing themselves into prominence were men of maturer years and vested property. A thoroughly friendly spirit pervaded the discussions, and while banter was not infrequently indulged in, a happy smile and international courtesy accompanied it. The wealthy potentate from both sides of the

Atlantic was accorded more time for his speeches than was wise on many occasions, and on more than one did the chairman fail even to keep such a speaker to his point. Long-winded effusions were tolerated in a measure which often was out of proportion to the interest of what was being said, but it should also be recorded that the audience was as much at fault as the chairman, for no signs of impatience or noisy interruption were indulged in.

The scientific value of the deliberations of the Congress can scarcely be estimated until some time has passed, but as far as the sections dealing with medical subjects were concerned, we would be inclined to believe that it was fair, certainly not below the average.

From a social point of view, we cannot congratulate the management. It would be difficult to imagine more confusion, less organization, and less comfort. Everything that should have been worked out and prepared a week before the Congress was hurried through at the eleventh hour. To start with, the information office had no information on any subject to give, save that tickets for this or that entertainment would probably be ready on the next day. Crowds of members of both sexes swarmed in the office, and the unfortunate officials were powerless to allay the wrath of those who failed to obtain what they considered they had a right to claim.

Part of the difficulty arose from the fact that the receptions at the Guildhall and Foreign Office were limited to 1,500 and 2,000 members respectively. It certainly appears unwise for a public body to issue invitations to a limited number of members. If the City of London or the Government of England wishes to entertain the members of a great international gathering, surely not much difficulty should be experienced in offering hospitality to 3,000. The banquet was arranged to take place at the Crystal Palace. We presume that a sufficiently large hall could not have been obtained more centrally, where over 2,000 persons could be fed sitting at tables. The distribution of the tickets for the banquet took place at a most inconveniently late and awkward hour. The plans of the tables bore numbers which were incorrect, and arrangements for the formation of parties were conspicuously absent. The feat of carrying this large number of ladies and gentlemen from Victoria to the Crystal Palace was performed quite creditably by the S.E. and C. Railway; but no one could have been pleased to learn that the trains would commence running at 6 p.m., so that those who did not live close to Victoria would have to break off work at an early hour to dress, journey to Victoria and find their train before that hour.

The private invitations extending hospitality to the members by a number of well-known and influential Londoners were better managed; any member desiring to attend one of the parties had to fill in an application form, and, provided that the number of invitations issued was not in excess of the number of guests arranged for, he received a formal invitation in the course of post.

THE ENTERTAINMENTS.

On Wednesday evening, May 26th, the Lord Mayor and Corporation of London received members of the Congress at the Guildhall. A number of distinguished personages were present, and a military band assisted in enlivening the preliminary proceedings. In the various apartments leading from the central Guildhall entertainments were given. The concert attracted a fair attendance, although our Continental friends could scarcely have regarded the performances as, musically speaking, high class. Dancing was indulged in by a few, while many looked on. The pictures, too, appeared to please a considerable section of the visitors.

On the evening of May 27th, His Majesty's Government, represented by Mr. Harcourt, received 2,000 members at the Foreign Office. Among those present were Lord Justice Fletcher Moulton, Lord Strathcona, various members of the Government and of the Governmental departments, and other members of Parliament.

On the evening of May 29th the Society of Chemical Industry entertained the whole Congress at the University of London, while in the afternoon a garden party was given at the Royal Botanic Gardens by the Ladies' Committee. Both of these entertainments were crowded and much appreciated. At the former, dancing, music, and refreshment—Wein, Wein und Gesang—assisted in enhancing the general enjoyment of those present.

THE BANQUET.

As has already been mentioned, the Congress Banquet took place at the Crystal Palace on Friday evening, May 28th. Over 2,000 guests were carried by special trains to the Palace, and on arriving found a suitable space reserved for promenading until the hour when the banquet was announced as ready. The President received the members shortly before 8 p.m., and at length the whole vast company was ushered into the central hall. Here a maze of tables was spread, but considerable difficulty was experienced in finding the allotted seats, as not only had a series of numbers been omitted altogether, but no names were attached to the places. Of the speeches, we regret that nothing can be said, as nothing could be heard. With difficulty the various speakers could be recognized as they rose, and it was curious to watch the gestures, without being able to perceive the least trace of sound. The band, conducted by a lady, and consisting of many ladies and a few mere men, performed the national anthems of the various countries, we presume in response to the toasts. At 10 o'clock a display of fireworks took place, and at about 11 o'clock the company, not much wiser, and certainly not in the least sadder, was conveyed in many specials back to London and bed.

THE INAUGURAL MEETING.

The Albert Hall is too vast a place for a gathering of under 4,000 persons. Its proximity to the London University, however, rendered the choice convenient, but there does not seem to be any reason why the public should not have been admitted to the balconies, if only to fill up the gaps which made so cold an impression in their naked, empty condition. At 3 p.m. Sir Henry Roscoe and Sir William Ramsay received Their Royal Highnesses the Prince and Princess of Wales at the entrance of the hall, while Sir Frederick Bridge played "God Bless the Prince of Wales" on the organ. As soon as Their Royal Highnesses had been conducted to the platform and had shaken hands with the chief delegates of the various countries attending the Congress, the Prince opened proceedings. He read a short speech, in the course of which he greeted the members not only in his and in the Princess's name, but also in that of the King. His Majesty was glad to think that the foreign representatives would visit Windsor Castle during their stay. Continuing, he said: "I fully appreciate the important part which chemistry plays in almost every branch of modern industry. We all recognize that without a scientific foundation no permanent superstructure can be raised. Does not experience warn us that the rule of thumb is dead, and the rule of science has taken its place?" He then declared the Congress open.

Sir HENRY ROSCOE in a short speech welcomed the foreign members in the name of British chemists, and thanked Their Royal Highnesses for gracing the meeting with their presence.

Sir WILLIAM RAMSAY made an excellent speech, delivered in clear tones, which could be well heard in every corner of the hall. He called attention to the fact that the King of Italy had filled the same position at the last Congress, held at Rome, as the Prince of Wales was filling. Professor Cannizzaro was the honorary president at the last meeting, and he was glad to think that this great man, whose work had done so much to make clear what was obscure and involved before, was still well and strong. Professor Paterno had been acting president at Rome, and he bade him a hearty welcome to England. Professor Witt, the acting president of the Fifth Congress, held in Berlin, was also present, and he extended a warm welcome to him also. After referring in sympathetic tones to the loss sustained by the decease of M. Berthelot and M. Moisson, he passed on to the discussion of the value of the association of scientific and technical chemistry. He pointed out that the chief difference between the pure science and its application consisted in an answer satisfactory to the technical chemist, but wholly irrelevant to the man of science, to the question, Will it pay? In conclusion, he said: "It has often been said that science is cosmopolitan, and knows no country. The existence of such a Congress as this is in itself a proof of the truth of this saying. We are favoured by the presence of representatives from every civilized State of the world. We are met together to discuss how best to develop the special branches of

chemistry to which we devote our lives; how to further their progress, and to mark the level to which they have already attained. A glance at our programme will reveal the many-sidedness of our endeavours. There is a city on the other side of the Atlantic whose motto, I think, is one of the noblest imaginable. It has the sanction of Scripture, and it is eminently practical. '*Philadelphiamanito*'—let brotherly love continue." Before resuming his seat, he spoke a few words of hearty greeting in French, German, and Italian, which evoked great and prolonged cheers.

Professor H. W. WILEY, Chief Chemist of the Agriculture Department of the United States of America, replied in the name of America. In touching on the importance of chemistry to the whole world, it was natural that he should give agricultural chemistry the first place. He stated that one service of chemistry was even more important than the service of applying science for the massing of wealth. That service was the development of prophylaxis in medicine. He instanced the problem of sanitation as one essentially chemical, including as it does the provision of pure food, pure air, pure water, ensuring pure activity of mind and body. Chemistry, he said, detects frauds and adulterations in all articles bought and sold. It exposes the manufacturer and the dealer who makes and sells any article deleterious to man, or under a false name or representation, to public scorn, and to the penalties of the law.

Professor ARMAND GAUTIER spoke in the name of France and particularly as the representative of the Minister of Public Instruction and of the chemists of his country. His colleagues across the Channel, he stated, held British chemists in high regard. The services rendered by Priestley, by Cavendish, by Dalton, by Humphry Davy, were mentioned in support of the statement that England had contributed very largely to the advance in the science. Next, he recalled the names of several great French and British chemists who had supplemented and improved each other's work, and by whose combined efforts marvellous strides had been accomplished. In conclusion, he acclaimed that the country of Lavoisier, Pasteur, and Berthelot offered that day a just tribute to the country of Cavendish, Davy, and Faraday, bringing to British science and activity the expression of its admiration and sympathy.

Professor Dr. OTTO WITT, President of the German Chemical Society, spoke in the name of Germany. Speaking in German in a voice which carried to the utmost corners of the vast building and with an enunciation which rendered each syllable distinct and clear, he bore greetings from his Government and from his society. Applied chemistry, he said, advanced in two distinct directions. It dealt with the chemical condition of raw material and advanced the interests of the industries of the world. The vivid interest which was being taken in this dual work was shown by the patronage of the rulers of the various lands, and in this connexion he offered his thanks to Their Royal Highnesses and to the King for their presence and sympathy.

Professor EMANUELE PATERNO, Vice-President of the Italian Senate, spoke in the name of Italy. Using his native language, and speaking with deliberation, after offering hearty greetings to the illustrious gathering of scientists and manufacturers, he passed in review the work done in England by many renowned chemists, and concluded by hoping that the endeavours of the Congress would be crowned with success.

The last speaker was Professor S. A. ARRHENIUS of Stockholm, who spoke in the name of all other countries. He spoke in English, and referred to England as the classical land of applied chemistry, and called attention to the fact that the study of hygiene had been very materially furthered by chemistry. He found that London has the lowest death-rate of all the large cities of the world, and believed that this was the fruit of applied hygiene. The present Congress included more biological chemistry than had been included in all of the former congresses, and in this fact he found a promise for the future.

The whole proceedings only occupied some forty-five minutes, and it must be regarded as a wise innovation to avoid a large number of speeches by innumerable delegates. On the present occasion Professor Arrhenius was entrusted with the task of replying for "Other Countries,"

so that the audience was spared a tedious and unprofitable couple of hours. The choice was one which may be taken as a compliment to the medical profession, since Professor Arrhenius has turned his attention to the chemical side of the study of immunity, and had certainly furthered our knowledge of immunity even if all his views are not acceptable to the majority of our profession.

The meeting broke up to the accompaniment of the National Anthem, during the playing of which Their Royal Highnesses left the hall.

THE SECTIONS.

The Theory of Colloids.

An interesting series of papers led to an animated discussion on the colloids in biology and medicine. Dr. HARDY opened with an account of the source of electric discharge on colloidal particles. Mr. BAYLES followed, and gave his views as based on his experiments on certain dye-stuffs. Working with Congo red, he found that solutions in water behaved as if in true solution. The osmotic pressure, however, demonstrated that the particles were in colloidal suspension, and that the dye exerted an electro-negative charge. The solution exhibited extraordinary sensitiveness to the action of electrolytes, but the osmotic pressure proved to be independent of any foreign electrolytic action. Ultramicroscopically, no particles could be discerned. The type of colloidal solution was therefore explainable on the assumption of large aggregates of infinitesimally small particles. He then spoke of the demonstration of the varying size of molecules when the solution was mixed with other colloids, and with calcium sulphate. The methods by which the osmotic pressure could be theoretically measured was described and adapted to changes in the solution, which follow when acids are added. All these observations, he claimed, lent considerable support to the kinetic theory of colloidal solution.

Dr. FREUNDLICH considered the whole phenomenon as one of adsorption. He gave a working formula, from which calculations could be made. Dr. BECHOLD and Dr. BOTTAZZI also read papers on the same subject, while Dr. GAUTIER and others took part in the discussion.

Titration.

Much amusement was afforded by the discussion on Dr. Friedenthal's paper on titration, with indicators, and the determination of reaction by the determination of hydrogen anions. The reader attempted to prove that his method gave more reliable results than those methods more commonly in use, and that since the results obtained under certain conditions by the other methods failed to tally with theory, it was justifiable to introduce new methods, so as to have control means of testing. He argued hotly against the acceptance of Ostwald's conceptions of the processes of ionization. Drs. DRUCKER and ROTHMUND contested the admissibility of his arguments, and elicited ready replies. Professor ARMSTRONG interposed with the stringent remark that he considered Ostwald's theory as "undiluted nonsense," and included the work of Arrhenius and Van t'Hoff in his caustic criticism.

Haemoglobin Reactions.

Dr. BUCKMASTER spoke of and demonstrated his pseudo-peroxydase reaction between haemoglobin and its derivatives and guaiaconic acid. The old guaiacum test, in which guaiacum and turpentine oil is used, demonstrated the presence of blood pigment, at all events when applied to the body fluids. Care must be exercised when testing urine in which iodides might be present. Since guaiacum is a substance of unknown composition and is variable, he found that disadvantages occurred in its use. Solutions of aloin acted in the same way. The leucobase of malachite green reacted in the presence of traces of hydrogen peroxide and iron-containing derivatives of blood pigments. Pure haematoporphyrin and haematoidin, being free from iron, did not give this reaction, nor did they give the usual guaiacum or aloin tests. The leucobase acted on blood solutions which had been heated to 200° C. for three hours, and this he regarded as proof that the reaction was not due to peroxydase.

Alcoholic Fermentation.

Drs. HARDEN and YOUNG demonstrated the processes determined in alcoholic fermentation. The action of yeast

juice, by which they mean the juice expressed from yeast cultures after grinding up with kieselguhr or sugar, depended on the presence of the enzyme, which is thermostable and non-dialysable, and the co-enzyme which is thermostable and dialysable. The using up of either or both of these constituents is followed by the cessation of the fermentation. They further found that yeast juice fermented glucose more rapidly in the presence of phosphates than in its absence. Yeast juice, however, contained a certain amount of phosphate, so that they were inclined to believe that the phosphate was a necessary condition for the fermentation. Attempts had been made to free the juice from phosphate, but this had not been completely successful. Samples of yeast juice deprived of the greater part of their phosphates exerted only a very faint fermentative action on sugar. If phosphate in certain proportions were added to the juice, the increase of fermentation on sugar, as evidenced by the production of carbonic acid, could be calculated from the amount of phosphate added. The curve of the action showed that the rate of ordinary juice fermentation proceeded very gradually, while when phosphate was added the curve rose rapidly, and, after a short time, when all the extra phosphate had been exhausted, again returned to the original rate. The authors were thus enabled to work out a formula, according to which sugar acted on by yeasts which must contain phosphate forms a compound of phosphate, which they term hexose-potassium phosphate. The enzyme reacting on this complex phosphate after the fermentation has been completed hydrolyzes the latter, and a sugar and free phosphate is again formed. If the phosphate be added in excess inhibition of fermentation is seen. From these observations it appears that phosphate is essential for alcoholic fermentation. The demonstration proceeded with extraordinary smoothness, and the increase of production of carbonic acid gas was most striking.

Other Demonstrations.

A number of other demonstrations of a highly interesting nature were also watched closely by a number of members. These included the production of formaldehyde by light in the presence of chlorophyll, the estimation of phosphorus by Neumann's method by Drs. PLIMMER and KAYA, some methods of investigating the action of drugs on the heart by Professor CUSHNY, and a method of blood gas analysis by Dr. BARCROFT.

Standardization of Disinfectants.

Drs. SCHRIVER and LESSING described their method of determining the rate of putrefactive change in the presence of varying quantities of antiseptics by measuring the rate of change in the substrata. This measurement is carried out by recording the change in the electric conductivity. The method and its importance have already received full consideration in the pages of the JOURNAL. Dr. RIDEAL and Mr. ORCHARD followed. The communication resolved itself into a reply to the paper published in the *Journal of Hygiene* by Drs. Martin and Chick. This paper has also been fully dealt with in the pages of the JOURNAL. The authors dealt with the suggested modifications of the Lister Institute test by (1) introducing large quantities of organic matter in solution or in suspension. This they regard as unwise, since under ordinary conditions of sewage the quantities of faecal material are never present in the quantities which are suggested, that is, 3 per cent. In sewage effluents, the Commission on Sewage recommends that not more than 3 parts in 100,000 should be permissible, so that the percentage suggested must appear inordinately high. (2) It is suggested that the test should be carried out at an optimum temperature of 20°C. The Rideal-Walker test is prescribed at a temperature with a range of from 15 to 17°C. that is, at room temperature. Disinfection is greater at higher temperatures, and therefore the suggestion departs from the conditions usually met with in practice. (3) The Lister Institute test requires the adoption of one definite time of contact for the valuation, and (4) requires that the time during which the disinfectant is allowed to act be lengthened to thirty minutes. The authors consider that in practice a disinfectant is required to destroy unknown cultures of different organisms in various kinds of media of unknown reaction at different temperatures and in the quickest possible time. The majority of disinfectants show increasing carboic coefficients with longer times of contact, but between two and a half and fifteen minutes

lies within the limits of experimental error. The authors further disagree with the deductions made by Martin and Chick in regard to the action of mercuric chloride, the action of which is arrested after a given time by the application of sulphuretted hydrogen.

Dr. CROEN interposed a paper on the disinfectant action of peroxide of hydrogen, in which it was maintained that this drug is more active in acid or even alkaline solutions than in neutral solution. Alkaline solutions were not taken into account on account of their instability. The action was weak at low temperatures, but rose rapidly with increase of temperature. Peroxide, he concluded, therefore, was not suitable for disinfection of drinking water or sewage, but was eminently suitable for the sterilization of instruments, hands, and other objects in surgical practice.

Dr. WYNTER BLYTH considered that bacteriological tests could not be used alone for standardization purposes, owing to the want of agreement in results obtained by different bacteriologists using the same standard method. In this direction he especially dealt with the Rideal-Walker test, which he stated gave extremely varying results. He found that heated organism tests did not always expose worthless or fraudulent disinfectants, and that chemical analysis combined with bacteriological tests appeared to be required for the proper control of disinfectants. He thereupon described his method of testing the commercial emulsions. The method depends on the de-emulsifying of the soap disinfectants by means of acetone, and subsequent treatment with ether and soda solutions. The details are somewhat complicated, and cannot be given in this place. More difficulty is experienced in de-emulsifying albumen emulsions, but this can also be done with acetone, and the liquid is then dealt with by petroleum ether. Professor KENWOOD also spoke of the variable results obtained by the Rideal-Walker test. In his reply, Dr. Rideal sought to show that the admission that the simpler test yielded variable results indicated that the time had not yet arrived to introduce a more complicated one.

Legislation.

Quite apart from those sections which might have been expected to contain matters of interest to the medical man, there were several papers read in other sections bearing directly or indirectly on medical subjects. This was especially true of the section devoted to Law, Political Economy, and Legislation affecting Chemical Industry. On the first day's session the chief business done was the carrying of a motion to the effect

That the committees of the various countries party to the International Convention for the Protection of Industrial Property be requested to consider the desirability of adopting the following provision: "The manufacture in one country of the Union protects the patentee against the revocation of his patent in all countries of the Union."

The meeting on May 29th was devoted chiefly to technical points of patent law, but several of the French members present pressed for a motion proposed by M. Fourneau, forbidding more than one registration in respect of the same pharmaceutical substance. German and English members, however, pointed out that this was an impossibility in their respective countries and of purely local interest for France. The motion, after an animated discussion, was withdrawn and reserved for the next Congress.

On May 31st an interesting and important paper was brought forward on behalf of Dr. C. A. von Martins on the transport of dangerous goods in merchant vessels. The author contended that the cases of damage by fire on board merchant vessels had considerably increased during the last few years, and quoted the following table, drawn up by the German Lloyd, showing that the packing, stowage, and declaring of dangerous goods left much to be desired. Between the years 1903 and 1907 inclusive the following cases of damage by fire were reported:

	1903.	1904.	1905.	1906.	1907.
Totally destroyed ...	29	25	35	34	42
Of these, parcelled goods ...	4	4	3	2	6
Partially destroyed ...	333	337	320	317	334
Of these, parcelled goods ...	95	94	101	103	127

The author had intended to propose that Great Britain should be invited to call a conference of maritime States interested to draw up and ratify suitable regulations. In his absence, however, the motion was not proposed.

In the afternoon, following a paper read by Professor BASKERVILLE (New York), a motion was proposed for the appointment of an International Commission to establish uniformity in the control of the escape of noxious gases.

At the last session M. HENRI TAFFE proposed that milk sellers should be obliged to supply only a certain minimum percentage of dry extract and butter in milk, and at the same time that the presence of a centrifugal cream separator near a dairy, as indicating fraudulent intent, should be regarded as a penal offence.

Starch.

In the other sections there was no lack of similar material. In the Starch Industry Section papers were read on various processes for the bleaching and conditioning of flour. Mr. R. WYMPER contributed a remarkable paper on the microscopic changes occurring in starch granules during the germination of wheat. The paper was based on a microscopic examination of grains extended over a period of growth of fourteen days. Inspection showed that thirty-six hours after the grain had become thoroughly moist the larger starch granules nearer the germ began to show signs of pitting. After three days the grains swelled, and in the centre of the flanks were considerably swollen, and in many cases were pitted by enzyme action. At this stage long oval starch granules, more resistant than the usual round form appeared, and by the ninth day the majority of the starch granules were of the oval form. As a result of these observations the author concluded that the larger and more mature starch granules were the more easily assimilated as plant food. On investigation by means of diastase and other reagents it was found that no general relation existed between their size and the ease with which they were attacked, but that it was almost universally true that the larger granules of any one starch succumbed more quickly to attack than the smaller granules of the same kind.

Oxidation of Atmospheric Nitrogen.

Saturday was the great day of the Electro-Chemistry and Physical Chemistry Section, when a full-dress debate was held on the possible means of the oxidation of atmospheric nitrogen, with an experimental demonstration by Professor BERNSTEIN. The room at the Central Technical Institute was crowded, and several members of the Congress were unable to gain admission. Other aspects of this important national problem were also dealt with by Messrs. N. CARO and C. WEISS. Throughout the week the agricultural chemists discussed various aspects of the same nitrogen problem, considering the value of the different nitrogen manures and the possibility of substituting biological for chemical methods.

Photography.

In the photo-chemistry department Mr. F. W. T. KROHN had a most sympathetic hearing when he argued in favour of the establishment of an international standard method of marking the speed of photographic dry plates and a definition of the standard conditions under which such speed tests should be carried out.

Other Sections.

To a certain extent the papers read in the Fermentation Section covered the same ground as those in Bromatology, for among the questions considered were various points in connexion with the analysis of brandy and of wines. Partly owing to the omnipresent influence of Dr. Wiley the question of standardization entered into the Section on the Industry and Chemistry of Sugar, where the standard temperature of 20° C. was recommended as the most suitable for taking all polarization readings of raw and refined sugars.

In the Explosives Section several important papers were read on the subject of mining explosions, dealing, for the most part, with the old question of the explosibility of coal dust mixed with air. Among the chief recommendations were the watering of the mines liable to be affected, the replacing of the normal floor in patches by concrete, and the liberal distribution of hygroscopic

salts about the mines. Evidence was brought to show that as a result of proper precautions being taken in the Westphalian district the number of mining disasters had very greatly decreased in recent years.

Several papers touching on matters of medical interest were brought before the Section on Inorganic Chemistry and Allied Industries. Mr. G. HARKER described a method for fire extinction and disinfection in ships and in other enclosed places. Briefly, his proposal is to utilize the gases from the ships' funnels, to pump this in large quantities into the holds of a burning vessel, and so to starve the fire of the oxygen necessary for combustion to continue. In support of Mr. Harker's claim that he has invented a suitable apparatus it may be mentioned that a Select Committee of the New South Wales Parliament has investigated the apparatus and recommended that it should be fitted to the salvage steamer used for dealing with outbreaks of fire on ships lying in Sydney harbour. Mr. Harker described some of the very stringent tests applied while his method was still in the experimental stage.

A sensational debate took place on the ionic theory and on how far it could be legitimately applied to explain chemical phenomena. Professor ARRHENIUS spoke energetically in favour of the theory, and Professor ARMSTRONG subjected it to a fire of vigorous criticism.

(To be continued.)

Medical News.

A MEMORIAL to Theodor Schwann, whose name is intimately associated with the conception of the living cell, is to be unveiled at Neuss, his birthplace, on June 6th.

THE annual dinner of the British Balneological and Climatological Society is fixed for Friday, June 11th, at the Piccadilly Restaurant, the President, Dr. Ernest Solly, of Harrogate, being in the chair.

THE Bowman Lecture of the Ophthalmological Society of the United Kingdom is to be delivered by Mr. Nettleship, at 5 p.m. on Friday, June 11th, at 11, Chandos Street, Cavendish Square. Mr. Nettleship will deal with some diseases of the eye illustrating heredity.

THE annual meeting of the Royal Medical Benevolent Fund Society of Ireland will be held in the Royal College of Physicians, Dublin, on Monday, June 7th, at 4.30 p.m. The chair will be taken by Dr. Andrew Horne, President of the College.

THE summer dinner of the West African Medical Staff will take place on Monday, June 21st, at the New Gaiety Restaurant, London. Members of the staff desirous of being present should communicate without delay with Dr. Froust, C.M.G., 78, Rodney Street, Liverpool.

THE East Suffolk County Education Committee has issued two leaflets from the school medical officer, one on vermin in the heads of children and the other drawing attention to the importance of cleansing the mouth, and particularly the teeth, of children.

It is proposed to establish a medical school in China under the auspices of Harvard University. This step is being taken in response to invitations of the Chinese themselves, among them being His Excellency Tuan Fang, Viceroy of the Kiang Soo. The approval of other Chinese officials has been obtained. A Board of Trustees, which includes such well-known names as those of President Charles W. Eliot and Drs. A. T. Cabot and W. Councilman, has been formed to administer the endowment fund. Ten medical graduates of Harvard are preparing to go to the East to work in the school.

A DINNER of the Glasgow University Club was held at the Trocadero Restaurant, London, on May 25th, when the chair was taken by the Lord Advocate, Mr. A. Ure, M.P. A gift to the club from Dr. C. O. Hawthorne of a silver snuff-box for use in the old Scottish style and fashion at the club dinners was gratefully accepted. The chairman, in proposing the toast of "The University and the Club," described the successful career of the club and its present satisfactory condition. Sir Donald MacAlister, in proposing a toast to "The Guests," referred to Sir Patrick Manson's important services in the sphere of public health work in the tropics. The toast was duly acknowledged by Sir Patrick Manson. After Mr. C. S. Dickson, M.P., had given "The Health of the Chairman" and that gentleman had replied the proceedings terminated.

British Medical Journal.

SATURDAY, JUNE 5TH, 1909.

MILK AND DAIRIES BILL.

THE regulations under which milk is produced and distributed vary in different parts of England and Wales. The requirements of the Dairies, Cowsheds, and Milkshops Orders apply to the whole country. They refer to the registration of dairymen, to water supplies, to the sanitary state of dairies and cowsheds, and to the prevention of the contamination of milk. The Local Government Board can make certain regulations by Orders, but it rests entirely with the authority to decide whether such regulations shall be made. In those districts in which the Infectious Disease (Prevention) Act has been adopted, the sanitary authority possesses the power to prohibit the sale of milk under conditions which are likely to cause the spread of infectious disease. Lastly, the councils of a few of the large county boroughs, including London, have special powers for the prevention of the supply of milk from tuberculous cows.

Those who are engaged in the dairying industry have over and over again urged that this exceptional treatment of particular districts should cease, and this is what the Milk and Dairies Bill, just introduced by Mr. Burns, seeks to provide. An abstract of the main provisions of the Bill will be found on page 368 of the SUPPLEMENT. It may be regarded as a codification of existing enactments and regulations with important additions. The machinery for preventing, without undue delay, the continued distribution of milk which is causing or likely to cause disease will be very much simplified. In cases of urgency, a medical officer of health may require a dairyman to stop a supply of milk for a period of ten days or less, and may agree upon what terms this course should be carried out. Where urgency is not indicated, a prohibition order may be made, on the report of a medical officer of health, by a sanitary authority. From this order there is an appeal to the Local Government Board, or, in certain circumstances, to the Board of Agriculture and Fisheries. An officer appointed by one of the Boards will hear the appeal, and, if he considers the order to have been unreasonable, full compensation will be paid the dairyman.

The clause of the bill which will meet with the greatest criticism is that which empowers the Local Government Board, after consultation with the Board of Agriculture and Fisheries, to make orders for specific purposes. Many of these purposes are quite legitimate, but there is at least one which should be looked upon with suspicion. It is that which places in the hands of the Board the power to say which are the authorities by whom the Orders are to be executed. This might in some conceivable instances

involve a question of principle which should not be decided by a Government department.

With the bill as a whole we are favourably impressed, and it may without presumption be claimed that this JOURNAL has had a very large share in preparing public opinion for the introduction of such a measure. The bill would indeed give effect to many of the most important recommendations made as the result of the inquiry into the methods of producing and distributing milk in England conducted by our special commissioner a few years ago. Among the omissions is one which must be regarded as very serious. It is apparently to be administered by the sanitary authorities and by the medical officer of health. One of the reasons why the bill is required at all is that the sanitary authorities have failed to carry out existing Statutes and Orders, and because the medical officer of health feels that if he presses for their enforcement he will be quietly relieved of his appointment. The omission in the bill is a failure to provide for its efficient administration. No greater security against capricious dismissal at the hands of members of district councils who may also be dairy farmers or the friends of dairy farmers, is given to medical officers of health, and, although the county council may take over the duties of a defaulting sanitary authority, it can only do so after a complaint has been made to it by four householders, or by a parish council, or by the sanitary authority of a district in which milk is received from the area of the defaulting district. It is true that the Local Government Board is empowered under certain conditions to make an Order directing an authority to carry out its duties, but the Order can only be enforced by *mandamus*. If an authority is so far neglectful of its duties as to become a defaulter, it will not be alarmed by a threat of *mandamus*. Alternatively the Board may make an Order empowering some person to carry out the duties of a defaulting authority at the cost of the authority. We cannot forget, however, that the Board has possessed this power since 1875 with respect to those sanitary authorities who have made default in providing their districts with sufficient sewers or with a supply of water—but there are still a large number of districts very ill supplied with water and where sewerage is urgently needed.

PHYSIOLOGY AND THE UNIVERSITIES.

PROFESSOR MAX RUBNER, whose researches on body heat are famous throughout the world of medical science, recently reviewed the position of physiology in university education in the opening address which he gave at the new Institute of Physiology in Berlin on May 4th.¹ Purkinje, in Breslau, was the first to found a laboratory of natural science; then followed the chemical laboratory which was built for Liebig in Giessen. The Institute of Physiology, the founding of which is coupled with the name of du Bois-Reymond, has a history of fifty years behind it—no more. But what an astonishing outgrowth of physiological science has occurred in that time! Think of the rise of bacteriological research and the separation of bacteriology as a separate science, and the enormous service rendered to man by such discoveries as those of Pasteur, Lister,

¹ Berl. Min. Woch., May 17th, 1909, p. 909. The address has been reprinted in a pamphlet, *Ueber die Stellung der Physiologie in Universitätsunterricht*. Berlin: Hirschwald. Price 60pf.

Koch, Behring, Manson, Ross, Bruce, Wright, and others, by which the world has been freed from the greater risks and pains of surgery, the heavy toll of diphtheria; taught how to expel malaria, yellow fever, sleeping-sickness from infected lands, a lesson which, learnt and put into practice, has rendered possible the greatest economic revolution of modern days; lastly, by which the world has gained an extension of the vaccination method of combating infection. Think of the extension of physiological chemistry, and the aids to diagnosis and treatment, the exact knowledge which has grown up, for example, about foods, metabolism, and the principles of dietetics. Think of the marvellous unravelling of the structure of the nervous system, and the foundations now laid for the science of neurology; of the rise of experimental pharmacology, the standardization, the discovery of the action and the synthesis of drugs.

If there is one of the numerous offshoots of physiology—shoots which in the last half-century have expanded into new sciences—if there is one which has led to least development when most was expected from it, it is the electrical physiology which seemed to du Bois-Reymond and his disciples the most likely to solve the riddle of life. The discovery of radio-activity has now revolutionized the whole of chemistry and physics, the atomic theory is shaken to its foundations, if not overthrown, and we must recognize henceforth that molecular construction is not the sole basis of metabolism and that other and unknown valences are at work in the living substance. Vast untrodden fields of research lie before us. Professor Rubner draws attention to two dangers of modern times—extreme specialization by which men are trained to work at some little piece of science and never gain that perspective of the whole by means of which great imaginative advances alone can be made. The second danger is the overproduction and publication of books and papers, nine-tenths of which are either rehashes of old material, often by the same pen, or contain accounts of poorly conceived, ill-conducted, and unco-ordinated inquiries carried out to maintain the outward signs of activities of laboratories which are continually being multiplied in number. It is impossible to keep in touch with the literature, to winnow the chaff from the grain, and the only way in which the difficulty can be met is by there being two sets of workers, one which chiefly experiments and has the imaginative faculty to conceive and the handicraft to perform, the other which specializes in some branch and chiefly reads, correlates, and publishes monographs dealing with the experimental advances made. The first group of men would find out what others have done in their line of research from the labours of the second group. The Germans, fortunately, are by nature well fitted to carry out more particularly the work of the second group—to the great content of the scientific world. Men of the first group are rare in any country, for the imaginative faculty is a gift of the gods.

In the new Institute of Physiology in Berlin there are the following departments: Chemical, physical—including photographic, operative, nutrition and calorimetry—bacteriology and microscopy. Much the same kind of division is made in the new Physiological Institute of University College, London, and at Oxford and Cambridge. Professor Rubner points out that suitable provision of instruments, which must

periodically be scrapped with advancing knowledge, is as necessary to medical education as armaments are to an army; he also points out that while for theoretical teaching it is no more costly to lecture to a hundred than to one, for practical instruction the cost in apparatus is multiplied a hundredfold. When will the Government of this country recognize this and adequately support our medical schools with grants for apparatus and laboratories, without which the training for the most important service in the country cannot be adequately given?

SPEECH FRIGHT.

EVERY one knows what stage fright is, and most of us who have had to recite speeches at school or have taken part in private theatricals have experienced the unpleasant and often paralysing feeling. It is not the raw novice who suffers most; it might almost be said that the greater the actor, the more frightened he is, especially at a first performance. One of the most celebrated of living actresses used to suffer so much on first nights that it was difficult to keep her from throwing up her part, and one of the most distinguished of living actors is in such a state of nervous trepidation and irritability when he is about to assume a new part that his friends dare hardly speak to him for some days before the first night. Orators are subject to the same infirmity. Cicero confessed that he could never mount the rostrum without a feeling that his knees were giving way under him. In his *Sixty Years in the Wilderness* Mr. W. H. Lucy relates the following examples of similar nervousness on the part of famous speakers of our own day: "On a night in 'June in the session of 1877 I observed Bright 'seated on the front Opposition bench hour 'after hour. The subject was a proposal to 'abolish capital punishment, and Bright had 'evidently intended to speak, and might, of course, 'have chosen his own time. He missed chance after 'chance, deferred his rising till after midnight, 'when the debate was about to collapse. Chancing 'to meet him at dinner the next night I made some 'remark about his delayed interposition, when he 'told me there had come upon him a species of stage 'fright that possesses all new members on first 'addressing the House. Even Mr. Gladstone was subject 'to this influence. This would be incredible to 'observers of his later manner were it not affirmed 'by his own testimony. In the diary of his second 'session he records how, preparatory to making a 'speech, he silently 'offered earnest prayer for 'Divine assistance.'" Lord Beaconsfield, we believe, impassive as he looked, was no stranger to the sensation.

In this country, where platform or post-prandial oratory is forced by national usage or social exigencies on so many reluctant victims, speech fright naturally is common. To some, indeed, public speaking is a task beyond their powers. They need not be ashamed of this. Many of the greatest masters of language might say with Alphonse Daudet, when invited to deliver an address: "Je n'ai jamais pu 'proférer une parole devant une audience quel- 'conque." But, except to those who deliberately shun social gatherings, there comes a time when they are called on to make a speech. What certain persons go through on such occasions amounts to

agony, and their hearers suffer in sympathy or are irritated by their struggles. Charles Darwin tells us that, when he was a student at Edinburgh, "one evening a poor young man got up, and after 'stammering for a prodigious length of time, blushing crimson, he at last slowly got out the words, 'Mr. President. I have forgotten what I was going to say.' The poor fellow looked quite overwhelmed. And all the members were so surprised that no one could think of a word to say to cover his 'confusion.'"

We have received a piteous appeal from a medical practitioner on behalf of a patient of his who occasionally has to speak in public, and who suffers at such times from "extreme nervousness and an 'all gone' feeling accompanied by palpitation"—in short from the symptoms of speech fright. The question is, Can medical art give relief in such a case? Our experience is that in many cases it can. In the particular case referred to, the administration of 20 grains of potassium bromide an hour before the dreaded moment has not been of much use. Our correspondent asks if a small hypodermic injection of morphine, not sufficient to cause drowsiness, would do good. We have no experience of this treatment, but it is within our knowledge that the great actress who has been mentioned was enabled to face the trying ordeal of the first night by means of seven drops of laudanum. She learnt to rely confidently on this medicine, which never failed of its effect. As the drug was given only on these special occasions she never contracted the opium habit. Years after learning empirically this method of preventing stage fright, we read that John Hunter, who disliked public speaking, never gave the first lecture of his course without nerving himself for the trial by taking thirty drops of laudanum; this gave him courage to face his audience. We think it likely that laudanum is used as a preventive of stage fright more frequently than might be supposed. Lord Erskine, the celebrated advocate, who suddenly appeared in the course of the trial of Queen Caroline, disconcerted the prosecuting counsel, for a great speech was naturally expected; after saying a few words, however, he fell into the arms of Lord Stanhope, who was sitting next to him. As Erskine was an old man at the time, it was thought that the strain and the excitement had proved too much for him. The truth, however, appears to be that he had drugged himself for the effort with opium, and had taken an overdose. Our readers do not need to be told that this method of conjuring away speech fright must be used with the strictest precautions against abuse.

We have seen it stated that an American professor was in the habit of giving 10 drops of fluid extract of gelsemium three times a day to students about to offer themselves as a sacrifice to examiners; the effect is said to have been that "all feeling of uneasiness was abolished during the ordeal, and the students were able to tell just what they knew." This treatment would equally well apply to speech fright, but we cannot testify to its efficacy from personal knowledge. As it is harmless, however, it might be given a trial. The very worst method of preparing oneself to speak in public is the arousing of "Dutch courage" by means of alcoholic stimulants.

As speech fright is a common affliction, and may seriously interfere with a man's success, we have thought it worth while to discuss the subject. Perhaps some of our readers will give us the benefit of their experience.

THE MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

THE Medical Sickness, Annuity, and Life Assurance Friendly Society is well known to many of our readers. Its objects are described in the rules as the payment of a weekly allowance during sickness or disablement, of quarterly sums in old age, and of sums on the death of a member. The scope of the society's business, however, was restricted by a resolution passed in 1894, when it was decided to undertake no new liabilities under the heads of life assurance and deferred annuities, and its main scope now is provision for sickness or disablement.

The quinquennial valuation of the society's assets and liabilities as at December 31st, 1908, has been made by the secretary, Mr. F. Addiscott, F.I.A., and his report is now before us. In making the valuation the mortality and sickness tables of the Manchester Unity of Oddfellows have been used, and the rate of interest assumed has been $2\frac{1}{2}$ per cent. for the sickness fund and 3 per cent. for the life assurance and deferred annuity funds.

The number of persons assured against sickness has grown from 2,231 in 1903 to 2,682 in 1908, and the gross premiums have increased from £15,151 in the former year to £18,774 in the latter. The amount of the sickness fund stands at £323,625, as compared with £259,496 five years ago.

Notwithstanding the stringency of the basis of valuation of this fund, the results shown are satisfactory. The experienced sickness was less than the expected sickness by 3 per cent., and a surplus of £9,040 exists in the fund. It is, however, pointed out that this surplus has not arisen entirely during the past quinquennium, but is due to the allotment to the Sickness Fund of its share of the accumulated savings of the Management Fund. We refer below to the position of this latter fund.

During the five years ending 1908 the number of chronic cases of sickness—that is, of members who are permanently incapacitated—has just doubled, having grown from 23 in December, 1903, to 46 on the last day of 1908. All these persons are entitled to substantial annuities until they reach the age of 65. At each valuation of the society's funds a large extra reserve is stated to be made in respect of these chronic cases for the Medical Sickness Society is almost alone among assurance institutions in making a feature of this class of business.

The Life Assurance Fund is being gradually reduced as liabilities are discharged, and will eventually disappear altogether. At the date of valuation there were 161 members, as compared with 191 five years ago. A surplus of £4,303 has been found to exist in this fund, the amount of which stood on December 31st, 1908, at £22,670.

The Deferred Annuity Fund is not in quite so happy a position. Like the Life Assurance Fund, it is approaching a moribund condition, the number of members being 378, as compared with 435 at the previous valuation. A deficit of £702 was found to exist in this fund in 1903, and this has increased to £2,781 in 1908. The present deficit is more than covered by the Investment Reserve of £4,033 (5 per cent. of the fund), and is not considered by the Secretary to be large as compared with the funds in this branch. Whether this fund will ultimately prove sufficient to meet all claims is a question which only the future can determine, and depends to a considerable extent on the price of securities and the rate of

interest earned. It is by no means improbable that future movements of prices may be in an upward direction, in which case the deficit may be reduced or disappear altogether.

In accordance with the rules of the society, 10 per cent. of the full premiums is placed to the credit of the Management Fund. The actual cost of management, however, is little more than 5 per cent. of the premiums received, and there is now an accumulated balance of £14,382 in this fund. This balance has been divided *pro rata* among the three benefit funds, and, as stated above, accounts for nearly the whole of the surplus in the Sickness Fund.

Bonuses are recommended to be granted as follows: To every sickness member reaching the age of 65 during the current quinquennium, £10 10s. for every £1 ls. per week of sick benefit which he has secured during his membership; and, in the life assurance branch, an addition of 15 per cent. to all assurances which become claims during the present quinquennium. The bonus to sickness members is the same as that declared in 1904: that in the life assurance branch is 50 per cent. higher than the bonus declared five years ago.

In addition to the printed valuation report, we have been furnished with a list of the society's assets as at the date of the valuation. These are made up of £104,062, loans to various local authorities (over forty in number); £116,215 invested in Corporation, Colonial Government, and railway stocks; and £3,716 cash at bank and in hand. It is satisfactory to notice from the prices at which the stocks stand that the society is at present earning interest on its investments at rates which are well above those assumed for the purposes of the valuation. A report of the annual general meeting of the society on May 27th is published at p. 1371, where many of these facts will be found, but it has seemed well to call special attention here to the result of the quinquennial valuation; it shows that the society is in a sound financial condition.

With regard to life assurance, which the Medical Sickness Society is giving up, it may be added that the Medical Insurance Committee is able to arrange with an old and well-established office for life insurance for medical men on specially favourable terms, particulars of which can be obtained on application to Mr. Guy Elliston, the agent of the committee, at 429, Strand, W.C.

A "HOSPICE" FOR HEALING BY PRAYER.

WE learn from the newspapers that a "hospice" for the practice of "healing by prayer and the laying-on of hands" has been opened in London. The "hospice" has been established under the auspices of the Society of Emmanuel, the President of which is Mr. J. M. Hickson, whose name doubtless is by this time familiar to some of our readers. Among those present at the opening ceremony was Dr. Mylne, formerly Bishop of Bombay, whose account of the cure of a remarkable case of cancer—which was clearly proved not to have been a cancer—was quoted in the JOURNAL of May 22nd, p. 1253. Mr. Hickson was good enough to state to a representative of the *Daily Chronicle* that he has no antipathy to doctors; indeed, the hospice is to have two doctors on its staff. The healer thinks it is always desirable that the complaint from which a patient is suffering should be properly diagnosed; he likes to know the seat of the

trouble. Why a doctor should be needed to make the diagnosis before the prayer can be effectual seems a trifle mysterious; we do not wish to be profane, but it almost seems as if Mr. Hickson believed that Providence required to be told the nature of the case before the prayer of the healer can be answered! Mr. Hickson is reported to have said that he has another case of "cancer of the throat" under his care; the patient had undergone two operations before going to him, and is now apparently getting well. It is not clear whether the improvement is due to the surgical treatment or to the prayers of Mr. Hickson; however that may be, we should be glad to have full particulars of so interesting a case. But we doubt whether they will be forthcoming. In the *Evening News* we find an account of the cure of a cancer, which was furnished by a lady member of the society. The patient was a Bishop of the Church of England. "The doctors abandoned all hope of a cure." Then Mr. Hickson took the case in hand. He "arrived on the morning of a day on which the sufferer had to undergo an operation. Mr. Hickson prayed with him and anointed him, followed by a laying-on of hands. In the afternoon the surgeon arrived and made his examination. He was greatly surprised. 'This case puzzles me,' he said. 'There is the mark of a new wound, but the cancer has gone.'" "The cleric in question," added the lady, "is now perfectly well, and was with us the other day, but I believe the surgeon has not yet recovered from his surprise." We confess to sharing his surprise: we should have expected the prayer cure to work without making a wound. It is sometimes alleged that surgeons are too fond of the knife, but, granting that prayer may be more effectual, it would appear to act by the same method. Surgical prayer is surely a novelty even in spiritual healing. Once more we invite Mr. Hickson to give particulars of his cures sufficient to allow them to be tested in accordance with the ordinary rules of evidence. We do not wish to be understood as denying the power of prayer in relieving sufferers; without trespassing on the domain of theology, we need only say that to any one who knows the influence of the mind on the body, it is easily conceivable that an earnest prayer may bring about its own fulfilment in certain cases by the very intensity of the suggestive force which it calls into play. But we feel it our duty to point out that Mr. Hickson and the members of his society take upon themselves a heavy responsibility when they claim to have cured cancer and other organic disease without vouchsafing anything in the nature of proof.

THE TUBERCULOSIS EXHIBITION IN LONDON.

THE Tuberculosis Exhibition arranged by the National Association for the Prevention of Consumption was opened at the Whitechapel Art Gallery by the President of the Local Government Board on June 2nd. Mr. Burns delivered an interesting speech, which in its earlier parts was much interrupted by suffragettes. After they had been removed he proceeded to develop his thesis that while very much had been done to reduce the amount of tuberculosis in the country it is still a terrible drain on human vitality, especially during the working years of life, for 56 per cent. of the total deaths from consumption occurred between the ages of 20 and 45 years—the prime of life physiologically, economically, and reproductively. One-seventh of the total deaths among members of friendly societies was, he said, due to this cause, from 25 to 30 per cent. of all deaths between the ages of 20 and 45 in many large friendly societies being due to tuberculosis. That, Mr. Burns

said, meant wages wasted, contributions dissipated, and homes destroyed; one out of every three widows under 65 was either on the Poor Law or on some public fund, and it was difficult to estimate the economic waste and the loss to society, to relatives, to trade unions and friendly societies by the sickness, death, and disability which tuberculosis caused. Speaking generally, the disease was the child of poverty, the daughter of ignorance, the offspring of drink, and the product of carelessness. The statistics of London alone proved the truth of this, for whereas the general death-rate from consumption in London was 132 per 100,000, it was only 78 in Hampstead, but 215 in Finsbury with its one and two roomed tenements, its low wages, and its irregular work. London was saved from a worse position, and compared favourably with Berlin because of its system of small houses, but to obtain further improvement workmen must realize that to reciprocate the advice of a doctor, the State and the municipality, and of associations like the National Association for the Prevention of Consumption, they must spend their wages more wisely, selecting better food and paying higher rent, and also they must learn better to utilize the space at their disposal. The workman's front parlour was a fetish, a mausoleum for wax fruit, stuffed birds, and china dogs, which the children dare not enter, and where even the father would be a trespasser. If it was used it would add 25 per cent. at least to the breathing space of every workman's home. In new houses being built in London damp and dirty basements would not be found, and the intolerable cellar dwelling was doomed; wherever there was little light, damp air, dirt, and laziness, consumption found its lair, and in his judgement a good kitchen was the best pharmacy, a good table the best doctor, and cleanliness the best cook. He hoped soon to follow up the Notification of Tuberculosis Order by a circular to Poor Law authorities dealing with the conditions under which relief should be given to outdoor consumptive paupers, suggesting methods of self-treatment, and extending help in the direction of cure and prevention. Consumption was a house disease, almost a bedroom disease, and for its elimination he looked to higher wages, with wiser spending, less drink, and less betting, the money being spent on giving the wife and family better food and more house room. It was true that Parliament could do much, and municipalities could do more, but the individual could do more than both by personal attention. A vote of thanks to Mr. Burns was moved by Sir John Brunner, and seconded by the Mayor of Stepney, the Hon. Harry Lawson. Afterwards the company inspected the exhibition, which contains many interesting models, pictures, and diagrams, including one of an open-air school for consumptive children; there is also a collection of pathological specimens showing the effects of tuberculosis on various tissues and organs.

THE DANGERS OF SPINAL ANAESTHESIA.

At least 33 cases have been published in which paralysis of an ocular muscle has followed the injection of local anaesthetics into the spinal cord. In most of these examples the sixth pair was affected, in one case the fourth, once the third and sixth together, and in one patient there was complete ophthalmoplegia externa. The paralysis of the sixth nerve has, except in two cases, been unilateral. It makes its appearance from the fourth to the twentieth day, and usually disappears in from five to forty days. In one case published by Vossius it lasted for six months. The complication is not very rare. Ashe gives the figures as 4 in 400 anaesthetics, or 1 per cent. Werner and

Degreave as 2 per cent., Chapat and Pascalis as 1 in 258. Ricchi, of Boulogne, now adds another case to this long list.¹ The patient, a woman, received an injection of 2.5 c.cm. of a 4 per cent. solution of novocain for an operation upon the foot. Diplopia appeared two days later, and a squint developed. The paper is somewhat obscure as to the duration of the trouble, but it was more than twenty days.

THE FUNCTION OF THE PROSTATE.

THE physiology of the prostate gland can scarcely be said to be a closed chapter. The biological and chemical characteristics of the prostatic secretion are little understood, and apparently few physiologists have been able to determine the essentials of a healthy gland as opposed to one whose functions are impaired. The connexion between the prostate and the testes has long been recognized, and indeed in the last decade of the nineteenth century this was made the basis of operative treatment. Prostatic hypertrophy was treated freely by castration, but apparently with unsatisfactory results. With the development of the operation for the extirpation of the gland, the importance of the exact functions of this organ becomes evident. It is, therefore, a highly satisfactory circumstance that Professor C. Posner² has considered this subject from its scientific point of view. He started with the idea that, as in the case of the thyroid, the physiological importance of the prostate might be deduced from the symptoms noted after the complete removal. The matter, however, proved to be less simple, since those persons who are subjected to prostatectomy are usually advanced in years, and since the prostate gland is intimately connected with the sexual life, the loss of functional activity would not be apparent in persons who had lost this function as a result of increasing age. In a few cases in which sexual potency existed up to the time of the operation its loss may reasonably be ascribed to an accidental or unavoidable disturbance of the efferent ducts. That the prostate has nothing to do with the complete closure of the bladder is clearly shown by the results of prostatectomy, as well as by the experience of eunuchs, in whom the prostate atrophies early in life. Animal experiment has been resorted to to throw some light on the problem, and Posner states that although the work of Disselhorst, Steinach, Albarran, Serralach, and Pares cannot be accepted as bringing absolutely convincing proof, it may afford a basis for acceptable hypothesis. With regard to the relation between the vesiculae seminales and the prostate it appears that when the one is small or absent, the other takes on a compensatory growth. Removal of the seminal bladder and prostate in dogs, rats, and other animals, leads to interruption in the production of semen and abrogates sexual appetite. Feeding with prostate substance, however, stimulates these lost functions. The spontaneous reappearance of sexual power and semen containing spermatozoa which has been observed in a few cases after prostatectomy must be ascribed to the growth of traces of gland left. Posner therefore accepts the hypothesis that the prostate is a gland with an internal secretion, and that its functions are definitely of a sexual order. Professor Posner finds that diagnostic puncture of the testes, which he and Cohn have introduced, may be useful in deciding the question whether spermatozoa are formed and merely prevented mechanically from appearing in the ejaculation. He has observed a number of cases of true

¹ *Revue d'Ophthalmologie*, February, 1902.

² *Brit. Med. Jour.*, November 2nd, 1908.

azoospermia—that is, cases in which no sperm cells can be found in the puncture fluid—and found that the prostate gland in these cases was small, atrophic, or aplastic. This would mean that the prostate had been developmentally inhibited simultaneously with the testes, or that the cause lay in the prostate itself. Although he is not in a position to produce definite evidence in support of his contention, he believes that many of these cases result from a previous prostatitis, whether gonorrhoeal, due to a colon bacillus infection, or of the type spoken of as “aseptic.” Stern has found that chronic prostatitis is just as common a complication of diabetes as hypertrophy of the prostate. It might be of use to treat such cases with prostate substance or spermin. The results of implantation of prostate after extirpation of the gland, which Haberer is carrying out, may supply corroboration of this view. In conclusion, Professor Posner deals with the analogy between the prostate and the “rut” glands of some mammalian animals. It has been shown that the substance possessing the sexually stimulating smell in the hedgehog is derived from the prostate and not from the cloacal glands, as in the majority of other animals. In this respect, the function of the prostate would be less important to man than to the lower animals, and the stimulating quality of the prostatic secretion would be comparatively rudimentary.

INTERSTITIAL ECTOPIC GESTATION.

GESTATION in the portion of the Fallopian tube which passes through the uterine wall, known as interstitial or tubo-uterine pregnancy, is specially dangerous, as it is liable to early rupture, and gynaecologists teach that a pregnancy of this kind cannot proceed to term. Mr. Carr Roberts turned attention to this form of gestation in a report in the *JOURNAL*, vol. ii, 1882, p. 736, where he described a typical acute fatal case. The uterus and appendages were presented by Mr. Carr Roberts to the Museum of the Royal College of Surgeons, and were figured and described with notes on other cases in the museums of hospitals in London, by Mr. Alban Doran in the twenty-fifth volume of the *Transactions of the Obstetrical Society of London*. The specimen is figured in Bland-Sutton's and Hubert Roberts's well-known textbooks. Much has been learnt since Carr Roberts's case appeared in our columns. In a discussion on a memoir to which we will presently refer, Lovrich stated that there is a specimen in the museum of the University of Budapest illustrating an instructive case of interstitial gestation. The patient had died suddenly from rupture of the sac, and the midwife who attended her was accused of criminal abortion. Von Kubingi reported an instance in which a woman died in the fourth month after the uterus had been cleared of an “abortion,” but at the necropsy ruptured interstitial gestation sac was discovered. This discussion followed the reading by Dr. Windisch of a case in which interstitial gestation continued after death of the fetus at term.¹ He had enjoyed the great advantage of observing the pregnancy from the fifth week to the eleventh month. A healthy woman aged 25, who had already borne children, consulted Windisch at the end of September, 1906, for crampy pains and haemorrhages ten days after the period was due. She appeared to be about five weeks pregnant, and was advised to be careful lest abortion should set in. The pregnancy, however, went on undisturbed, and the fetal movements were first felt in the middle of December. The patient

expected her confinement at the end of May, 1907, but false labour pains set in, and the fetal movements ceased. There was much milk in the breasts in May. Then the abdomen grew smaller. Windisch suspected gestation prolonged over term, and operated on July 27th, 1907. He removed a big fetal sac containing a macerated female fetus over 20 in. in length. This sac encroached on the right cornu of the uterus, a portion of the uterine cavity was laid open, when the sac was removed and the breach in the uterus was closed by sutures. Windisch insisted that the gestation had primarily developed in the uterine portion of the right Fallopian tube, and brought forward microscopic evidence supporting his view. He considered that the isthmic and ampullar part of the tube had slowly dilated and allowed more room for the fetus. Tauffer, in discussing the case, agreed about the primary seat of the ectopic gestation, but considered that the sac had ruptured and a secondary abdominal pregnancy developed. He denied that the Fallopian tube ever dilates beyond the limits of the fetal sac, and most gynaecologists will, we suspect, agree with him. Several specimens illustrating early rupture of an interstitial sac have been added to museums in London since Carr Roberts's paper appeared in the *JOURNAL*, but the case above related is of special interest and should not be forgotten.

MEDICAL TESTIMONY AS TO CHRISTIAN SCIENCE.

It is by no means easy to bring the “testimonies” of healing by Christian Science to the touch as the accounts of its cures are generally so meagre and so vague that they cannot be accepted as proving anything but the credulity of the witness. It is interesting, therefore, to get some evidence that offers prima facie assurance not only of good faith, but of such knowledge of disease as to make the testimony worth considering. One of the medical men who have abandoned their profession to follow Mrs. Eddy is Mr. Walter Wilding, M.R.C.S., L.R.C.P., sometime medical officer of health for Hindley, Lancashire. Writing in the *Outlook* for March 28th, 1908, he states that he had periodically under his care for six or seven years a case of valvular disease of the heart complicated with diseased conditions in other organs, the ravages of each year leaving the patient in a worse condition, until a fatal termination appeared terribly near. “At this stage “of apparent helplessness and hopelessness,” Mr. Wilding goes on to say, “the prayers of a Christian Scientist were called for, and through them the patient was healed. The healing was complete, has been permanent, and the life has since then been “one of great physical energy and activity, full “of brightness, happiness, and joy. A Christian Scientist healed it by a purely mental process, “by that understanding of the efficacy of prayer “typed by Jesus at the tomb of Lazarus: ‘Father, “‘I thank Thee that Thou hast heard Me’—the prayer “of faith—the prayer that knows the availability of “the omnipotent power and goodness of our Heavenly “Father—God, from whom man derives all he is.” Mr. Wilding adds that while still practising medicine he witnessed the healing by Christian Science of several other cases of disease. “One was a young “man, whose knee-joint was quite disorganized by disease to little more than a pulp, “and the surgeons of one of our largest hospitals “urged that the knee-joint be cut out completely, as the only remaining hope of saving “his leg. Dreading this, he turned to Christian “Science, and was healed instantaneously.” Mr.

¹ Report of meeting of the Gynäkologische Section des Kgl. ungar. Ärztevereins, *Zentralbl. f. Gynäk.*, No. 19, 1909, p. 655.

Wilding says he examined the knee the day before and again the day after the healing, and, finding the cure perfect, it brought him to a crucial (*sic*) conviction that Christian Science is able "to improve on surgery as well as on medicine." He has seen "consumption healed in more than one case, the failing sight of old age return, paralysis in various forms disappear, a fracture of the large bone of the lower leg, after being ununited for four months, knit firmly together without any splint, first the crutch, next the stick, and, lastly, the 'limp' being discarded, and all in a fortnight." Mr. Wilding states, further, that Christian Science has brought seven years of health, strength, and freedom to his daughter in exchange for a condition of tuberculous disease in joints and lungs, which was rapidly carrying her to a grave. Now, we do not for a moment call in question Mr. Wilding's professional competence. He speaks with evident candour of that which he thinks he has seen. But if the events which he narrates really happened, we have got far beyond the region of suggestion and have entered the domain of the frankly miraculous. To the instantaneous *restitutio ad integrum* of a joint destroyed by disease there is scarcely a parallel to be found in the records of the most famous shrines of healing. Mr. Wilding's other cases, though wonderful enough, are not so entirely beyond human experience. But as to all of them our attitude is that of Dr. Johnson with regard to the immortality of the soul. When asked if he did not think there was evidence enough, he replied: "Sir, I should like to have more." Doubtless Mr. Wilding could easily supply more evidence of the cases which he relates; it would be interesting to the profession and useful to mankind if he could see his way to report the cases with all the details required in a medical report.

MINER'S NYSTAGMUS.

THIS important disease was the subject of a paper by M. Romi  e (Li  ge) to the Belgian Ophthalmological Society.¹ Last year the society devoted a whole sitting to a discussion on the same question,² which was duly abstracted in this JOURNAL. M. Romi  e's paper was an acrimonious polemic against M. Dransart, and the discussion which followed was evidently of a heated and personal character. The following data are, however, to be gathered from the papers read and the facts adduced by surgeons who joined in the discussion: (1) Miner's nystagmus is essentially a disease of the collier. (2) It is not found among miners in metal mines, who, equally with the collier, work in a bad light, and often in a cramped position, and who are obliged, as is the collier, to work with the eyes constantly elevated above the primary position. (3) It is never seen among boiler makers and repairers, who also work in a bad light, and in an even more strained position than the collier. (4) It is not more prevalent in gassy mines than in those free from firedamp. (5) Workers in photographic factories, who often work for hours in a feeble monochromatic light, and, where isochromatic plates are being made, in absolute darkness, never under any circumstances develop nystagmus. (6) The disease first appeared, or rather began to be described, at the time when the Davy lamp was introduced—that is to say, when the miner's light was reduced in intensity from 1 to 0.28. The lamps improved rapidly, the ordinary lamp now in use in Belgium—the Mueseler—giving a light of 0.44 candle power, and the Wolf

benzine lamp 0.87. (7) With the improvement in mining conditions, better ventilation, better light, and shorter hours of labour, the incidence of the disease shows a tendency to diminish. (8) It takes some years for the disease to develop, it being unknown in young miners. (9) About 20 per cent. of all colliers working underground are affected in a greater or a lesser degree, but only a small proportion of these men are incapacitated from work. (10) Hemeralopia is not a symptom of the disease, as has been stated by Court. Dransart, and others. If these statements are to be accepted as correct, then it would appear that nystagmus is not caused by position or by direction of regard alone, nor can it be due to feeble illumination alone, as Romi  e, Dransart, and others believe. Nor can the nystagmus be due to the action of the position on the semicircular canals. It appears that it is not inhibited, as Peters supposed, when the head is thrown back, unless at the same time the eyes drop. The only condition which remains over which is peculiar to colliers is the dead black surface with its crystalline fracture, and its myriad facets, which reflect and disperse the light in every direction. This environment is not present in the metal mine nor in the photographic dark room. It must in some degree be one of the causal factors. The *Bulletin* contains many statistics regarding the candle power of various safety lamps, which are of value to those interested in these lamps.

METHOD IN DIAGNOSIS.

EVERY one must often have felt discouraged by his failure to arrive at a correct diagnosis or indeed any diagnosis at all in cases which, regarded in the light of subsequent events and more highly-trained skill, appear perfectly simple. This loss of self-esteem is, of course, more frequently experienced by young practitioners who have not yet acquired the philosophical temper which comes with years and experience. It would be charitable to warn them at the onset that they will find diagnosis difficult or for the time being impossible in a not inconsiderable proportion of cases, while in a certain proportion the diagnosis at which they arrive will turn out to be wrong with consequent mortification and heart burning. From this point of view a lively correspondent suggests that the practice of medicine presents some resemblance to a game at billiards. If a man wish to learn to play well he must practise with more skilful players, and their services may not always be available. The great thing in medicine as at billiards is to be able to make sure of ordinary shots, and success cannot fail to accrue to the practitioner who never overlooks a lesion which he might reasonably be expected to recognize. If he will only make sure of this, if he will keep his standard of efficiency up to this by no means exorbitant level, his inability to accomplish feats of diagnosis need not disturb his peace of mind. There is, of course, no objection to his practising these strokes in his leisure moments, but he may miss them and still win the game. Gull used to say that mistakes in medicine are caused far more frequently by want of care than by want of knowledge, and want of care may usually be interpreted as want of method. Method in an observational science like medicine is what honesty is in daily life—a safeguard against wrong-doing. It should be cultivated for its own sake, without allowing discouragement at the occasional paucity of results to militate against its application. Then, in cases in which a consultation becomes necessary, the practitioner will not infrequently find his hesitation shared by the consultant; for in scientific medicine there can be no confident decision in the absence of the necessary data.

¹ *Revue de la Soci  t   Belge d'Ophtalmologie*, No. 25, 1908.

² *Ibid.*, No. 24.

THE TENDER SPOT IN APPENDICITIS.

The significance and diagnostic value of a tender spot in association with appendicitis was discussed by Lejars a year ago, and Papin has recently analysed the views of various surgeons on this subject.¹ McBurney's spot, these French observers consider, indicates "an exaggerated precision" on the part of the surgeon after whom it is named, but they rightly add that his opponents go too far in the opposite direction in denying any appreciable value to this sign. It is certainly not pathognomonic of appendicitis; it is often absent in cases of that common disease, and may be present when the appendix is in its normal condition. In appendicitis pressure on McBurney's spot may cause pain referred to the umbilicus or epigastrium; whilst a tender area away from the "spot" is often observed when the inflamed appendix lies in its natural situation. Sonnenburg, Keith, Lanz, and Schröder make out that the "spot" corresponds more frequently to the ileo-caecal valve than to the base of the appendix; Keith, indeed, found that the base or point of insertion of the appendix lay about an inch below the "spot." Schröder, when assistant to Lanz, noted the tender spot in 119 cases operated upon by that surgeon. Within a few months 93 of the patients had no more tenderness over the "spot," but in the remaining 26 this was still tender on pressure. Lennander points out that as the abdominal viscera have no sensitive nerves, the parietal peritoneum is in appendicitis the seat of pain, most probably due to lymphangitis, or to adhesions involving the parietal peritoneum, and argues that on this account the tender spot cannot be well localized. Morris describes a tender point 4 cm., or 1½ in. from the umbilicus on a line drawn from the umbilicus to the iliac spine, and ascribes the tenderness to the effect of cutaneous pressure on the right sympathetic ganglion, which lies at this level. Often the pain in appendicitis is due to tension of the caecum distended by gas. Rovsing and Max make a diagnostic point of this fact. They press the caecum, and continue the pressure upwards along the ascending colon so as to drive the gas into the lower bowel; and this process is only painful when there is some caeco-appendicular affection. Lejars concludes that the careful clinical study of tender points is useful, but that no "spot" is pathognomonic. "Appendicitis," he warns us, "is not a disease to be diagnosed by the tip of the 'finger.'"

THE PRISON COMMISSION.

LORD ELGIN'S Committee on Scottish Prisons, which reported in 1902, expressed a very strong opinion that the presence of a medical member on the Prisons Board would greatly improve the administration and increase the confidence of the public. The recommendation was similar to that made with regard to England and Wales by Mr. Herbert Gladstone's Committee in 1895, and by the Grand Committee of the House of Commons on the Prisons Bill of 1897, to which the then Home Secretary gave effect on the first opportunity, and was similar also to that of Lord Cross's Commission on Irish Prisons, which resulted in the appointment of a Medical Commissioner. Lord Elgin's Committee was much impressed by the fact that in the great majority of instances in which difficulties have arisen in the management of prisons questions have been involved needing for their determination experience in medical requirements and practice. The recommendation has not been carried out in Scotland, which as a rule is able to boast that it precedes the sister countries in administrative reforms. An opportunity, however, is now afforded to the Secretary of State to

carry out this improvement, inasmuch as the chairmanship of the Scottish Prison Commission is now vacant. There was for long a kind of tradition that retired military officers made sufficiently good prison administrators, but this theory, which has not, so far as we are aware, been entertained outside the United Kingdom, has been condemned by results, and is now generally discarded. It is, therefore, very much to be hoped that, in the interests of efficiency, Lord Pentland will take this opportunity of carrying out the recommendations of Lord Elgin's Committee.

ON June 8th Convocation of the University of Oxford will be asked to make a decree gratefully accepting the gift of two sums of £2,500 each from Dr. C. Theodore Williams, who is an Honorary Fellow of Pembroke College, for the encouragement of the study of physiology and anatomy respectively. It will be proposed to establish two scholarships in physiology in relation to medicine, tenable for two years, one to be awarded in each year, and to establish one scholarship in human anatomy tenable for two years, to be awarded annually.

THE report of the Medical Officer of the Local Government Board for England for 1907-8 was issued this week. It contains the usual general articles on the administrative business of the department, on vaccination and the Government lymph establishment, on plague, and on cholera. The scientific investigations include an inquiry into the bacteria of sewer and drain air by Dr. Andrewes; on the defensive mechanism against pyogenic infection, by Drs. Andrewes and Horder; on the defensive mechanism in meningococcus infections, by Drs. Horder and Gordon; on mastitis in cows in relation to human sore throat, by Dr. Savage; and on *Streptococcus faecalis* and its endotoxin, by Dr. Sidney Martin.

General Medical Council.

NOTES.

The Business of the Council.—The General Medical Council concluded its session on Tuesday evening, at about 8 p.m., but it would not be quite correct to say that it had concluded its business by that hour. The greater part of the time of the Council during this session was occupied in hearing and considering two charges against medical practitioners, the one a charge of covering and the other of improper relations with a female patient—the decision in both cases being in favour of the accused practitioner—and in adjudicating on a rather long series of cases reported by the Dental Committee. There can be no doubt that the system rendered possible under the Dentists Act of making the Dental Committee a court of first instance, and the whole Council a court for final decision, very greatly economizes the time of the Council without in any way prejudicing the accused. Had this procedure not been in force, it is probable that the session would have occupied another day, or perhaps two. The Council did not sit on Monday—a bank holiday in England and Ireland, though not in Scotland, a circumstance which we believe aroused some dissatisfaction in the breasts of Scottish members. The reason for following this course, however, was, as we gathered from the President's address, that the printing establishment on which the Council depends for its daily programme and other necessary papers was closed on bank holiday, although, from our knowledge of the manners and customs of printers, we apprehend that this difficulty might have been overcome had the duration of the disciplinary inquiries been foreseen. As it was, several matters of general interest to the profession were inadequately dis-

¹ *Semaine Médicale*, March 11th, 1903; and *Rev. de Gynéc. et de Chir.* *Abd.*, January-February, 1903, p. 124.

cussed; in this connexion special reference may be made to the report of the Education Committee, which was really not discussed at all. We are glad to observe that the Council decided that the report of this committee should be on the agenda for the first day of its next session, which will commence at the end of next November.

Changes in Membership.—The death of Dr. Lindsay Steven, the representative of the Faculty of Physicians and Surgeons of Glasgow, and the retirement, on account of ill-health, of Dr. Pye-Smith, the representative of the University of London, and of Professor Young, the representative of the Victoria University of Manchester, led to the introduction of three new members: Dr. Knox, Dr. Frederick Taylor, and Professor Dixon Mann. This again led to certain alterations in the constitution of the committees, and it will be noticed with satisfaction that one of the direct representatives for England and Wales, Dr. Langley Browne, was elected a member of the Executive Committee, which may properly be looked upon as the most important committee of the Council since it meets on stated occasions at intervals between the sessions of the Council, and has most important functions in carrying on the work of the Council during these intervals and in giving general supervision to the preparation of business for the next ensuing session.

The Curriculum for the D.P.H.—During the session of the Council last November, Professor Thomson, the representative of the University of Oxford, drew attention to the regulation with regard to the Diploma in Public Health, which, while it laid down a curriculum of nine months, required an interval of one year before the candidate could present himself for examination, and argued that this was a hardship, especially to those graduates who might wish to proceed without delay to the Colonies. The point was referred to the Public Health Committee, which at this session presented a report strongly advising the Council not to alter the existing regulations. The main reason assigned was that the D.P.H. being a higher and post-graduate qualification, and one which had always been regarded in the light of an honours qualification, a sustained course of study was necessary and an interval of at least twelve months was commonly demanded by examining bodies between a pass examination and that for a higher qualification. It was pointed out further that the regulation is relaxed in the case of senior members of the profession, especially military and colonial officers serving abroad, who were permitted to complete their course in nine months. The Committee, however, considered that to extend this indulgence to junior candidates would be a retrograde step. Professor Thomson still adhered to his view that the regulation was unnecessary and even foolish, and met with a good deal of support, but the President pointed out that to carry out the curriculum adequately twelve months were still necessary, although, owing to a great deal of pressure, the Council had consented to the two half-years being telescoped, so that the curriculum could be completed in nine months. The view that it would be inexpedient to alter the period or alter the duration of the curriculum by recognizing the overlapping of the two periods of six months as a rule, prevailed, an amendment to refer back the report to the Public Health Committee was lost, and the report was approved.

Apothecaries' Hall in Dublin.—This body, through its representative, Dr. Adye Curran, announced that, notwithstanding the adverse expression of opinion by the General Medical Council, it was about to institute examinations of its own in preliminary general education, urging that it suffered by students who had taken their preliminary examinations under the auspices of the Royal College of Physicians and Surgeons in Dublin being thereby inclined to go to those bodies for their diplomas. The Council has no power to stop the Hall from carrying out its intention, which the President described as a purely domestic arrangement, as the examination was not recognized by the Council, and need not be accepted by any other licensing body. The perennial question of the reports upon the examinations of this body was raised also,

and it was urged that under the terms of the Act it was illegal for surgical examiners appointed by the Council to report to it, but that their functions were limited to the conduct of the examination. This point, it was urged, was emphasized by the fact that the new examiner in surgery is Sir Thomas Myles, a member of the Council. Reference was also made to the old Act of Parliament giving powers to the Apothecaries' Hall of Dublin, which elicited from Dr. Little, who also read from a copy of the Act, that the functions now assumed by this body were widely different from those laid down in the Act referred to.

Administration of Anaesthetics for Unregistered Dentists.—More than ten years ago, on December 1st, 1898, the Council adopted a resolution stating that: "Any registered medical practitioner who knowingly and wilfully assists a person who is not registered as a dentist in performing any operation in dental surgery, either by administering anaesthetics or otherwise, will be liable, on proof of the facts, to be dealt with by the General Medical Council as having been guilty of infamous conduct in a professional respect." A case in which a charge of this nature was made came before the Council during the recent session. The defendant admitted that he gave gas to a patient for an unregistered dentist on one occasion, but stated that the unregistered dentist was a patient, and that he was not aware when he went to the house that he would be asked to give an anaesthetic. He, however, further admitted that he had administered anaesthetics on a few other occasions, the last being during the autumn of last year, at a time when he was aware that the dentist in question was unregistered. The Council found the fact that the defendant had repeatedly given anaesthetics for an unregistered dentist proved, but on an expression of contrition and a promise never to repeat the offence, postponed judgement until its November session, informing the defendant that he would be required to produce evidence, particularly from his medical colleagues in the neighbourhood, as to his professional good conduct in the interval, and in particular that he had not repeated the offence as to which the complaint had been made.

Colonial Medical Legislation.—An ordinance has been enacted in Canada which prohibits, under penalty of £20, any person not registered from practising in the colony, whilst, in regard to dentists, it follows the lines of the home Dentists Act in merely prohibiting the assumption of titles. The difference in treatment may have arisen from the fact that it is the first step in dental legislation in the colony, whereas the 'medical enactment is not a new departure, but is a tightening up of existent legislation. In New Brunswick the Medical Act lately passed prohibits the act of practice. In both cases, therefore, a step in advance of our home Acts is to be noted. The New Brunswick Act, however, prescribes only a four years' curriculum, and makes no provision for the registration in the Province of practitioners whose names appear upon the British Register. Reciprocity with New Brunswick in the matter of medical qualification thus becomes impossible under the terms of our Act, and the union in this respect of the various Canadian provinces is not within sight. A new Act has been passed in Tasmania, but it is drawn somewhat closely on the lines of the home Acts, and only prohibits the assumption of medical titles by the unqualified.

The Charter of the British Medical Association.—The President in his address stated that the Lord President of the Council had forwarded to the General Medical Council a copy of the Draft Charter prayed for by the British Medical Association, with a request for any observations which the Council might have to make thereon. Sir Donald MacAlister suggested that the Executive Committee should examine the Draft Charter in consultation with the legal advisers of the Council, and report on any provision which might specially concern the Council. This course was, no doubt, followed, but no public announcement was made although the matter was, we understand, discussed in camera.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND DISTRICT.

MEDICAL INSPECTION OF SCHOOL CHILDREN IN SALFORD.

THE medical inspection of school children in Salford receives special attention in the annual report for 1908 just issued to the Health Committee. The staff engaged in the work consists of the borough medical officer of health, who is also medical officer to the Education Committee; an assistant medical officer of health, the greater part of whose time is devoted to school work; and also a special ophthalmic medical officer, who attends at the education offices for two half-days a week to examine the sight of children specially sent to him. There are also two trained nurses, whose duties include the visitation of schools at such times as the medical officer of health may lay down, and six district sanitary inspectors, engaged in school work. The duties of the medical officer of health in connexion with the schools are chiefly organization, supervision, and preparation of reports, while the assistant medical officer, besides inspection of the children, has to report on the sanitary condition of the schools, to examine plans for any new school buildings and to report as to their sanitary arrangements, ventilation, and so on, to examine candidates for teacherships, and to give lectures on school hygiene to teachers.

Last October a scheme of inspection was submitted to the Board of Education under which each school department was to be visited by the medical officer three times a year. On two of these occasions he was to examine only new admissions and children to whom the teachers called special attention. On the third visit he was to be preceded by the nurse, who would inspect all the children and receive reports from the teachers, and then make a list of all children that required to be examined by the medical officer. In this scheme there was a careful distinction made between inspection and examination, and it was so obviously incomplete that the Board of Education pointed out that it did not comply with the regulations of the code, as it did not provide for medical examination of healthy children, but only for their examination by the trained nurses under medical inspection. A new scheme had therefore to be submitted which provides for examination by the medical officer at least once a year of all children between 5 and 6 years of age, and between 12 and 13 years of age, as well as for inspection of all the children and examination of cases selected by the nurses.

It would seem as if the Education Committee only proposed this latter scheme under compulsion from the Board of Education, for the report says that "almost half the time devoted to medical inspection will be spent in examination of children just about to leave school, and over whom little or no further influence can be exercised." There seems, in fact, to be some reluctance to carry out the full medical examination contemplated by the Board of Education. That the examination carried out was very incomplete is further shown by a note to the effect that in the statistics given of defects and diseases the figures do not include all cases.

More complete clinical examination would probably reveal an increased number, but the figures indicate those that require either medical treatment or special school treatment and as great a number of the milder cases as can be discovered by the examination which is practicable under existing conditions.

Thus it is quite impossible to know how far the statistics given represent the actual state of affairs. The fact is, and it might just as well be admitted, that the medical examination is imperfect; it is only "what is practicable under existing conditions," and with the present staff. If complete medical examination is to be undertaken, a larger staff will have to be appointed. The question then arises, Is a medical examination that simply detects well marked cases and a variable number of mild cases sufficient? On the one side it may be said that it is more statistics ought not to be the aim, that it is enough to detect cases that actually now need treatment, and that to examine medically every scholar to detect incipient disease would entail a prohibitive cost on the

rates. That seems to be the position taken by the Education Committee. On the other hand, it may be said that it is important to detect all the mild cases of every disease in order that they may be kept under individual supervision, as they are just the cases in which preventive treatment should be exercised, seeing that preventive treatment in mild cases, which can only be detected by careful medical examination, is quite as important as simple curative treatment of well-marked cases. This, of course, applies not only to Salford but to other towns, and there is some ground for believing that elsewhere as well as in Salford the cost of such medical examination is regarded as prohibitive.

Keeping in mind, then, the statement that all the mild cases are probably not included in the figures given, during the last four months of the year the following statistics were obtained, the number per 1,000 of scholars examined being given in each case: Well-marked tonsillar enlargement or adenoid growths were found in 25 per 1,000; suppurative middle-ear disease in 8.5; hernia in 0.85, all the cases being boys; rickets in 8.83, the proportion of boys to girls being as 3 to 2. The figure 8.83 for rickets is, perhaps, open to some doubt, for in an individual medical examination of 3,145 new admissions there were 20 per 1,000 showing rickets. Chorea was found in only 4 cases—that is, in 0.28 per 1,000; lateral curvature of the spine in 20; lung disease in 7.1; heart disease in 1.9; epilepsy in 0.85; tuberculous bones and joints in 1.7; tuberculous glands and cicatrices in 2.06; while enlarged glands "of an unimportant character" occurred in no less than 147 per 1,000. The feeble-minded children numbered 1.7 per 1,000. In the first eight months of the year pediculosis occurred in 30 per 1,000 boys and 45 per 1,000 girls, while in the later months of the year it was below 20 per 1,000 in each, the improvement being largely due to the inspection and to the firm stand that the teachers had been able to take. Careful directions had been given to parents for the treatment of *Pediculus capitis*, but there seems to be an ineradicable idea among parents that pediculi are caused by ill health or some idiosyncrasy, and there is the greatest difficulty in getting them to consent to cutting of the hair. Eye diseases and defects of vision were found in 44.5 per 1,000 during the last four months of the year, blepharitis being by far the commonest disease; 419 cases of defective vision were found and 400 pairs of spectacles prescribed. Of the refractive errors, compound hypermetropic astigmatism was the most frequent, accounting for 33 per cent. of the total; while simple myopic astigmatism was the least frequent, being only 2 per cent. of all errors. All these figures undoubtedly show good work by the present medical staff, and if more exact statistics are required the staff will have to be considerably augmented. Special attention has been directed to the teaching of hygiene, a series of evening lectures having been given to teachers and arrangements made for the teaching of elementary hygiene in all the schools. The syllabus of lectures appended to the report shows a careful selection of subjects on the whole, but there may be some doubt whether the treatment of sprains and wrenches, coughs, diarrhoea and sore throat ought rightly to find a place in such lectures.

LIVERPOOL.

TREATMENT OF OPHTHALMIA NEONATORUM.

AT the annual meeting of the St. Paul's Hospital for Diseases of the Eye and Ear several references were made to the new departure made in the direction of special measures for the treatment of ophthalmia neonatorum and the prevention of subsequent blindness. The scheme had been warmly commended in the memorandum appended to the report of the Committee of the British Medical Association, and had been there described as an almost ideal method which might well be imitated in other large cities. It was also stated that the Local Government Board had sent a request for particulars, and evidence had been given before the Parliamentary Committee appointed to consider the working of the Midwives Act. The cases treated in the hospital in the first year numbered 75, and in the first four and a half months of the present year 53. The ward now

contains 4 beds for mothers and 4 cots. The accommodation having proved insufficient the committee has appealed for funds to rebuild the hospital on a new site, opposite the David Lewis Northern Hospital. A special feature of the new hospital is to be the extra accommodation for children with a view to the prevention of blindness—work for which there is but scanty provision of beds in Liverpool. There will be an ophthalmic ward of 10 beds and 10 cots, and two wards (including isolation rooms) of 10 beds each for boys and girls respectively. It is proposed that this department shall be called the "George Edward Walker Memorial Children's Department," in memory of the late senior surgeon. It was stated that the cost of reconstruction of the hospital would be £13,000, of which sum £5,000 and the value of the land were already either promised or given. It was agreed to shorten the title to "St. Paul's Eye Hospital," and to cease to treat diseases of the ear.

Mr. Sydney Stephenson (Chairman of the Ophthalmia Neonatorum Committee of the British Medical Association) made an eloquent and convincing appeal for the prevention of blindness, on the grounds both of humanity and of economy. Besides those who appeared in the census as blind there were many persons of whom no official account was taken, whose sight was more or less permanently damaged. The cost of educating a blind child was ten times as great as the cost of educating a child with normal sight, and the result as to earning capacity was usually so much less that the blindness of each adult represented a loss of £50 yearly to the country. Nearly all cases of blindness in children were preventable. Cases of ophthalmia and corneal ulcer did extremely well in the country, and, though the committee had not at present any scheme for country beds, it would be a good thing if children's eyes were treated and their education attended to in the country. In the direction of curing ophthalmia neonatorum, St. Paul's Hospital had done pioneer work and set an example to the rest of the civilized world. As soon as a case was heard of, mother and child, with the co-operation of the local health authority, were removed to the hospital in an ambulance, so that they were not separated during the time the child's eyes were being treated. Of the 75 cases removed to the hospital last year 57 of the babies recovered full sight in both eyes. He did not hesitate to say that such a result would have been impossible with the older methods prevailing elsewhere. The public could rest assured that the money subscribed to the hospital would be well spent, whether the expenditure was regarded from a humanitarian or an economic point of view.

BIRMINGHAM.

BIRMINGHAM MEDICAL BENEVOLENT SOCIETY.

THE eighty-seventh annual meeting of the members of the Birmingham Medical Benevolent Society was held on May 25th. The report showed that there were twenty-five annuitants on the books at the end of the year. The annual value of the grants ranged from £18 to £36, and the sum expended in this way during 1908 was £757.

The following typical cases show the good work the society is doing:

Widow, aged 71, of M.R.C.S.Eng., L.S.A. Only income derived from the interest on £200. Granted £27, and has received already £930.

Widow, aged 48, of M.B., C.M.Glasg. Income £58. Has had to educate four children, the eldest is now 21. Granted £36, and has received already £381.

L.S.A., aged 70. Unable to work and has a wife dependent on him. One of his children gives slight help. Granted £36, and has received already £381.

Widow, aged 67, of M.D. Very small income, in bad health, in lodgings, and helped by her sons. Granted £36, and has received already £1,011.

L.S.A., aged 83. No income. Wife's friends are helping to support him. Granted £25, and has received already £112.

L.S.A., aged 57. Only income £60. He has a wife and nine children, only one of whom is independent. He is incapacitated from work. Granted £36, and has received already £54.

The invested funds of the society amounted to £15,940, making, with a balance of £120 at the bank, a total of £16,060. The income for 1908 was about £775, which was made up in the following manner: Members' subscriptions, £225; interest on investments, £535; donations, £15. The expenditure was £805, so that there was, for the first

time in the history of the society, an adverse balance of £31. The total number of benefit members at the end of the year was 390. The society lost six members through death during the year, and among these was Dr. Edwin Rickards, who was twenty-three years a director, eight years a trustee, and in 1906 president. Sir Thomas Chavasse was elected president, Dr. Simon president-elect; Dr. Langley Browne, of West Bromwich, and Dr. Kauffmann, of Birmingham, vice-presidents; Sir Thomas Chavasse, Mr. Bennett May, and Mr. W. Hewitt, trustees; Mr. F. Marsh and Mr. W. F. Haslam treasurers; Dr. Stacey Wilson and Sir Walter Fisher auditors; Mr. C. F. Crowder honorary solicitor; and Dr. Sawyer honorary secretary. The directors are Dr. Agar, Mr. W. Hewitt, Dr. Malins, Dr. Thomas Nelson, Sir James Sawyer, Dr. William Thomas, Dr. A. S. Underhill, Dr. E. E. Whitcombe, and Dr. Thomas Wilson.

THE CARE OF EPILEPTICS AND FEEBLE-MINDED.

The first annual report of Dr. B. Jordan, medical officer to the Moryhull Colony for Epileptics and Feeble-minded, recalls the fact that the object of the colony is that epileptic and feeble-minded persons under the care of the guardians of the parishes of Birmingham, Aston, and King's Norton should be placed under the most favourable conditions for their general well-being and improvement by residing in an industrial colony where special treatment, suited to their malady, could be provided. The medical officer reports that during the thirteen months the colony has been opened there has been a gratifying improvement in the general condition of the inmates. They were better in physical health, brighter in mental condition, more easily influenced by and amenable to the nursing staff, more capable of steady work, and more responsive to moral and mental impressions made on them by religious services and entertainments. The number of inmates was 94, and of these 55 were males and 39 females. A certain number of helpless epileptic and feeble-minded girls and young women were sheltered from the appalling evils which too often result from their being at large in poverty-stricken or vicious homes. Two men and three women died during the year, and fifteen men and fifteen women were discharged to union infirmaries.

WALES.

DOCTORS AND COLLIERS.

WE take the following from the *South Wales Daily News* of May 31st, with the explanation that the responsibility for the accuracy of the statements must rest entirely with our contemporary:

As the result of the refusal of the local Branch of the British Medical Association to extend by two months the notices to terminate their engagements given by the doctors at the beginning of the present month, the Llanbradach workmen employed at the local colliery at a mass meeting on Friday (May 28th) decided to start a medical fund of their own, and appointed a committee to take the necessary steps. The doctors, it appears, wish to secure the operation of the poundage system instead of the present one, by which every man and boy pays 3d. per week towards the fund. A recent ballot showed that 1,149 persons were in favour of the retention of the present system.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

THE Laboratory Committee, with the approval of the council of the college, has issued new regulations in the matter of reporting on specimens sent for examination. Formerly the corporation of the city paid an annual sum of several hundred pounds to the college for this work, but some years ago this honorarium was transferred to the John Usher Institute of Public Health of the University of Edinburgh. Despite the transference, the college laboratory has gone on doing this work for the medical profession, "all for love and nothing for reward." But now a new order prevails, and charges will be made varying from 2s. 6d. for examinations for tubercle bacilli, or for a culture from diphtheria swab and report, up to £5 5s. for a medical

report and culture for tubercle bacillus, or for an examination of the central nervous system of a dog suspected of hydrophobia. The examinations to be undertaken by the college laboratory cover a wide field—sputum, pus or other material, blood, hair, skin, urine, faeces, stomach contents, tumours, water, milk, hydrophobia, opsonic index, etc. The John Usher Institute of Public Health will continue to do the ordinary routine work for the general practitioner, such as diphtheria, tubercle bacillus, and the like.

EDINBURGH ROYAL INFIRMARY AND THE BUDGET.

At the weekly meeting of the managers of the Edinburgh Royal Infirmary on May 31st, Lord Skerrington presiding, Dr. R. McKenzie Johnston submitted a statement, made out on the basis of last year's figures, from which he showed that the increase in the duty on alcohol as proposed in the Budget would affect the institution to the extent of £112. This did not apply to alcohol as a beverage or as a stimulant except in a very small degree, but it applied to various preparations in which alcohol was largely used; anaesthetics alone accounted for nearly £50 out of this sum of £112. Dr. McKenzie Johnston had received a communication from Dundee Royal Infirmary, asking support to a movement to get some concessions in regard to the making of tinctures and other remedial preparations. In Dundee it was calculated that the Budget meant an increased expenditure of 10 per cent. Dr. Johnston was of opinion that it would be difficult to get exemption for hospitals alone. The matter was remitted to the Medical Committee for consideration and report.

THE REGISTRATION OF NURSES IN SCOTLAND.

The following is a copy of the resolution which has been sent to the Prime Minister on the subject of the registration of nurses in Scotland:

The Executive Committee of the Association for the Registration of Nurses in Scotland, at a meeting held in Edinburgh on May 14th, expressed their satisfaction that the Prime Minister was unable to assent to the proposals of the deputation which awaited on him on the 15th inst. This association (which represents public opinion, and, with a few exceptions, the opinion of the medical and nursing profession in Scotland) trusts that it will be afforded an opportunity of placing its views before any committee of the House of Commons that may be appointed to deal with this important subject. The enclosed printed statement (already published in the press) gives in detail the reasons of the association for objecting to Registration Bills No. 1 and No. 2, and although Scotland does not desire to be associated with the scheme of either of these bills, the Scottish Committee see no reason why a bill for the registration of nurses should not be introduced which would be satisfactory to England, Scotland, and Ireland, arranging for representative branch councils, and for a separate register for each country, to be embodied in one common register, the branch councils to supervise examinations in their own country, just as is done under the Medical Act, 1858, and its subsequent amending Acts. The views held by this association coincide generally with the recommendations of the Select Committee which reported to Parliament in 1905 on the question of State registration of nurses.

THE TREATMENT OF PHTHISIS IN EDINBURGH.

On June 1st the Public Health Committee of Edinburgh Town Council agreed to recommend that the number of patients suffering from phthisis, which the Committee has the power to treat at Colinton Mains Hospital, be increased from fifty to sixty-two, and that six pavilions should be provided for their use.

INDIAN MEDICAL SERVICE DINNER.

The annual Indian Medical Service dinner took place in the Caledonian Club, Edinburgh, on May 28th, and proved a marked success. Twenty-seven members, past and present, sat down, and the guests included the Presidents of the Royal Colleges of Physicians and Surgeons, Colonel Corker, R.A.M.C., Sir Halliday Croom, Drs. Haultain and McBride, and Lieutenant Bruce-Turnbull, 23rd (Sikh) Pioneers. The service was represented by Sir Alexander Christison, Bart., in the chair, Surgeon-Generals Bidie, C.I.E., Turnbull, K.H.S., Sinclair, C.S.I., and Hay, Colonels Warburton, C.S.I., Stephen, Arnott, MacLaren, Downie, Robb, Bannerman, Bell, Lamont, Wylie Thomson, and Julian Smith, Major Robertson-Milne, Captains McRae, Masson, Harvey, Stewart, Husband, Kirkwood, Roberts, Tarr, Fleming, and Morison.

After the usual loyal and patriotic toasts, the Chairman proposed in appropriate and eloquent terms, "The Medical Services," which was responded to by Colonel Corker. "The Scottish Universities" and "The Royal Colleges of Physicians and Surgeons, Edinburgh," was given by Surgeons-General Sinclair and Hay, and acknowledged by Dr. Allan Jamieson and Mr. Cotterill.

A most pleasant and enjoyable evening was spent, and before the meeting broke up, the health of the veteran chairman was proposed in the most felicitous terms by Colonel Warburton. This toast was received with the utmost enthusiasm, and all present were of opinion that this was the most successful I.M.S. dinner yet held in Edinburgh, and bestowed on Colonel Arnott full credit for all his work in organizing it.

THE FUTURE OF QUEEN MARGARET COLLEGE AS A MEDICAL SCHOOL.

The Universities Commission in 1892 empowered the Scottish Universities Courts to make provision for the instruction of women, either by admitting them to the ordinary classes or by instituting special classes. The latter course was adopted, as, with few exceptions, the professorial staff of that day did not desire to undertake the teaching of women, nor to admit them to their classes at Gilmorehill. Accordingly a full curriculum of medical studies was provided at Queen Margaret College under a special staff of lecturers and a few of the professors who were willing to undertake the double courses. The position became changed when new professors were appointed who were required to undertake the teaching of the women students. They soon felt it to be a distinct hardship that a special course of lectures were required for a mere handful of students, and a strong movement arose in favour of admitting the women students to the university classes, and eventually it was arranged that any individual professor could, if he wished, admit the women to his university class. This course was readily adopted, and already several of the Queen Margaret courses have been abolished. The most recent case is that of *materia medica*. Dr. Wm. MacLennan recently sent in his resignation from the lectureship at Queen Margaret College; it was decided that it would be inexpedient to appoint a new lecturer. Accordingly next winter the women students will be taught in the university. Already the following classes are held at Gilmorehill: Zoology, botany, physics, physiology, medical jurisprudence, and pathology. Probably when the new chairs for the final subjects are instituted at the Royal Infirmary, it will be found that part of the duties will include the teaching of women. From their point of view there is no doubt that the eventual abolition of the separate classes will be a decided gain in every way. They will obtain whatever advantage there is in being taught by their examiners, and there is no doubt that the Gilmorehill teaching facilities are on the whole greater than those provided at Queen Margaret College, where, with the exception of the special anatomical institute, the laboratory accommodation was very primitive. As a rule the number of women students was small—about a dozen each year—but the recent difficulty in Edinburgh has already increased the numbers.

PRESENTATION TO DR. JOHNSTON.

An interesting sidelight on late events at Ruchill is afforded by the presentation of a silver rose-bowl to Dr. and Mrs. Johnston by a deputation of the staff of Ruchill. The bowl bore the following inscription: "Presented to Dr. and Mrs. Johnston by the General Staff of Ruchill Hospital as a mark of esteem and affectionate regard, May 27th, 1909."

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

DUBLIN HOSPITALS BAZAAR.

The great bazaar in aid of the funds of Mercers' and the Orthopaedic Hospitals has been concluded. It was held in the magnificent buildings of the Royal Dublin Society, and was opened last Tuesday week by His Excellency the Lord Lieutenant and Lady Aberdeen.

It was favoured by good weather, a wide sympathy, and crowds of sightseers. In Ireland bazaars are popular, and every few years it is possible to conduct one on a scale of great splendour as this was. Every county had a committee, and there were elaborate stalls, cafés, and dancing halls, and the other arrangements which are essential to the success of such an undertaking. It is hoped that a substantial addition has been made to the hospital funds. About 50,000 persons passed the turnstiles in five days.

IRISH MEDICAL ASSOCIATION.

The annual general meeting of the Irish Medical Association will be held in Sligo on Tuesday, June 8th, when the chair will be taken by Sir William Smyly, President of the Association.

Special Correspondence.

VIENNA.

Morbidity and Mortality in Vienna.—Food of the People of Vienna.

THE report of the Board of Health for 1908 contains some very interesting figures regarding the public health and mortality in this city. The general health is improving, and the expectation of life has been steadily increasing since 1873. The number of deaths in the past year was a little over 35,000, or about 17 per thousand, with a population of two millions. But an analysis of the causes of death gives a good illustration of the importance of infantile mortality in the records of large cities. More than 27 per cent. of the deaths are those of infants under 1 year of age, while 8 per cent. are those of children from 2 to 5 years, so that about one-third (32 per cent.) of all persons who died belonged to the lowest age. Twenty-five years ago 38 per cent. of the deaths came under this heading. The constant remarkable diminution of infant mortality is a most gratifying feature of the modern endeavours to reduce the loss of young lives—*gouttes de lait*, mothers' associations, free milk distribution. As regards the causes, tuberculosis is responsible for 19 per cent. of the total number of deaths, infectious diseases for 11 per cent.; disorders of the intestinal canal, excluding neoplasms, caused 7 per cent. Only 29 persons died of typhoid fever (forty years ago typhus was an every day affection), thanks to the splendid water supply of Vienna. All cases could be traced to a source outside the town. Brain disease and neoplasms were rather less fatal last year than a few years ago. This, however, may be accidental. Special attention has been paid to diphtheria. The number of cases does not vary considerably, but the mortality has been found to be less than 10 per cent., even in hospitals, where only serious cases are received. The absence of deaths from small-pox is also noteworthy; nearly the whole population, with insignificant exceptions, is now vaccinated, thanks to the scare in 1907. On the whole, the health of Vienna is fairly satisfactory, especially as the tendency to improvement is steady.

For about two years the nature of the daily food of the people of Vienna has altered appreciably, partly from a change of taste, partly from an increase in the price of various articles of food, especially meat. The latter has become more than 30 per cent. dearer, when compared with 1902, and it is still going up. The report of the market board shows that there is a decided fall in the sale, and therefore consumption, of beef, whilst pork is more favoured. On the other hand, the increased consumption of eggs, potatoes, milk, and flour shows that large numbers of the population have adopted a more vegetarian mode of life. It may be doubted, however, whether this is done from any other reason than economy. The conditions are manifest enough to arouse public attention, and a deterioration of the national physique is justly feared. Therefore all public corporations have taken up the matter, and Government and municipalities are asked to bring about a change of the present policy, which makes the poor man's meat and bread dear, without enabling him, by better pay, to procure it in sufficient quantity for his family. The "anti-agrarian" movement is spreading fast, and it is hoped that it will succeed in bringing ordinary food once more within the reach of the consumer.

Correspondence.

THE DOCTOR AS A VICARIOUS PHILANTHROPIST.

SIR,—I have at different times and in divers places urged on my professional brethren that if they take up a determined stand they will secure that recognition and reward for their professional services to which they are entitled.

Here is a case in point:

At 7 o'clock last night a group of men brought a boy into my surgery, saying he had been run over by a cab. I asked of them, "Who guarantees to pay my fee for attending to the boy?" There was no answer. I then asked the cabman if he would not guarantee my fee on behalf of his employer, and he declined to do so. I then ordered the boy to be taken to the infirmary. The boy was taken away, and a hostile and threatening crowd gathered outside my surgery, cursing me for not attending to the accident. Five minutes later the boy was brought back by two policemen, and I said, "I refuse to attend, unless my fee is guaranteed."

One of the policemen said he would do so on behalf of the police, whereupon I attended to the boy. When the crowd and the boy had gone, the police remained to get particulars of the injuries.

In the course of the conversation I referred to the readiness of the public to call on the doctor for his help and of their unwillingness to pay the doctor's fee, and I was staggered to learn that the supposed cabman whom I asked to guarantee my fee in the first instance was the owner of the cab and the son of a large hiring proprietor.

The fee I shall get is a very small one, no doubt, but I have done a great deal for the vindication of a principle, upon which I wish more of my professional brethren would act. We have all suffered from being called to accidents, in having our clothes destroyed and our convenience set at naught; and when we have given freely of our physical powers, our professional skill, and our lint and bandages, we have all been turned into sad philosophers when liability was repudiated all round.

The payment of the doctor for street accidents is but a small phase of the social question which could be so easily settled, but which never will until the profession is united.

—I am, etc.,

Glasgow, May 27th.

J. WISHART KERR.

RURAL DISTRICT NURSING ASSOCIATIONS.

SIR,—The attention of the Chairman of the Central Midwives Board having been drawn to a letter signed "G. P.," appearing on pages 1153 and 1154 of your issue of May 8th, the letter was considered by the board at a meeting held yesterday.

I am directed to inform you that the board is prepared to investigate the matter if the writer of the letter will communicate with me.—I am, etc.,

G. W. DUNCAN,

Secretary.

Canton House, Westminster, London, S.W.,
May 28th.

PAYING PATIENTS AT VOLUNTARY HOSPITALS.

SIR,—It is to be hoped that this subject will receive careful consideration before the Association is definitely committed upon it, for it is of great importance to a large section of the public, no less than to those members of the profession who are attached to public hospitals.

The resolution passed by the Liverpool and Birkenhead Joint Divisions, as reported in the JOURNAL of May 29th (SUPPLEMENT, p. 327), disapproves of the practice of treating paying patients at public hospitals because it is wrong in principle and unjust. If it were true that hospitals compete with private nursing homes by charging the same fees or lower ones to those who can afford to pay more, the principle would be wrong indeed. But what does really take place is that patients who require treatment at an institution and whose means do not allow them to go to a private nursing home but who on the other hand are not poor enough to claim charity make use of an arrangement which is a great convenience to them while causing no loss to the hospitals. The arrangement may be regarded something like that upon which are based self-supporting

philanthropic institutions, and only proves once more the great necessity there is for self-supporting public nursing homes. Whilst the rich and the very poor are amply provided for, the great middle-class is left to look after itself—and it generally looks in vain.

As to the medico-ethical aspect of the matter, one fails to see why one should not be paid for one's services rendered to a patient under circumstances intended in the first instance for his—the patient's—convenience, provided, of course, the patient is willing and able to pay for them.

That the usual medical attendant is thereby deprived of fees which would go to him if the patient were debarred from deriving great convenience is hardly an argument which the profession can bring forward with any dignity. If any one has to wait for the realization of those "economic laws which regulate the matter of demand and supply," it must be the doctor and not the patient. Meanwhile it may be mentioned that there are many hospitals which have general practitioners on their staffs, and that the "usual medical attendant is not always deprived of his fees" when paying patients are treated at public hospitals.—I am, etc.,

Manchester, June 1st.

J. DULBERG, M.D., J.P.

THE ASSOCIATION.

SIR,—I notice Dr. John R. Hamilton's letter in the JOURNAL (p. 1331) commenting on a passage in the Report of the Council of the Association regretting that the "increase in the membership was not more marked," etc., and attributing that fact to the splitting up of the Association into Divisions.

I attribute it to another fact. I find that the usual reply I get when asking some one to join the Association is "What has the Association done for us?" This is an example of the old adage, "Give a dog a bad name and hang it." The Association got its bad name in the old days, when it simply held "pleasant meetings with items to interest and amuse," and when the medical practitioners of the country were wanting it to attend to their real interests, and it did not at all, or only scantily. It has not had time to lose that bad name yet, and if it is to lose it its members must be more earnest in their attendance at its meetings, and in giving proper instructions to the delegates they send to the Representative Meeting. The members have now the success of the Association in their own hands, and will mar or mend it accordingly as they perform their duty towards it.—I am, etc.,

Ashton-under-Lyne, May 29th.

SAMUEL CRAWSHAW.

THE PROFESSION, THE ASSOCIATION, AND THE JOURNAL.

SIR,—The object of the existence of the British Medical Association may very largely be expressed by the late Mr. Ernest Hart's rendering of a famous dictum: The government of the profession, by the profession, for the profession. It is clear that this object can only be attained by the absorption into the Association of the very large number of men who still remain outside its ranks. I have not the exact figures, but I think that at the present moment something over half the total number of medical men in the United Kingdom are members.

Dr. Brown, of Baeup, informs me that, in the fifteen Divisions of the Lancashire and Cheshire Branch which make returns both of membership and of the numbers of medical men practising within the areas of the said Divisions, there are 716 members out of a resident total of 1,367. Assuming, then, that two-fifths of the profession in these islands are still outside the ranks of the Association, it is clear that the latter cannot speak with all the authority of the profession as a whole. Only a few days ago, at the interview of a representative deputation with the Prime Minister enent the State registration of nurses, the fact that the British Medical Association is far from being in a position to speak for the profession as a whole seems to have been urged with a view to belittling the objects of the deputation.

Now, can anything be done to close up the ranks of the profession, and to unite with us those who are still outsiders? After considerable consideration, and after discussing the matter with several members of the Association, I make bold to say that the JOURNAL, which up to a certain point has been the making of the Associa-

tion, is now the greatest bar to our further progress. I have little doubt that this statement will be derided in many and influential quarters. But I feel convinced that a very large number of men would join our ranks but for the fact that doing so involves subscribing to a medical periodical which they either do not want or have other opportunities of seeing. In saying this, I do not for a moment wish to disparage the conduct of the JOURNAL, which holds a place of high honour among the medical periodicals of the world. But it is inevitable that among many thousands of medical men there must be many who would prefer some other periodical.

I venture, therefore, to take the liberty of calling attention to the resolution of the Rochdale Division, published in the SUPPLEMENT of May 8th, 1909, p. 236, suggesting that there be in future two grades of membership subscription, one, as at present, to include membership and JOURNAL, the other (say 10s. 6d. per annum) to include membership and the SUPPLEMENT only. Our Representative has been instructed to bring this forward at the Belfast meeting.

The advantages which I believe would accrue from this change are, in my opinion, mainly two:

1. A large accession of new members. This is infinitely of more consequence than any mere increase in the circulation of the JOURNAL.

2. It would at once clear the way for the absorption into the local Division of the Association of a large number of local medical societies. This is most desirable, as in many instances there is not room for two medical societies in areas which are nearly coterminous.

It is possible that some subscriptions might be partly lost through present members taking advantage of the lower grade of subscription. This, however, would be a small price to pay for the advantages.

I suggest that the machinery of the Association might be utilized to ascertain the views of non-members in respect of some such scheme as I have attempted to outline.—I am, etc.,

Rochdale, June 1st.

J. CUTHBERTSON WALKER.

SANITARY PROGRESS IN THE BRITISH WEST INDIES.

SIR,—I have just returned from a special visit to Barbados, St. Vincent, St. Lucia, Grenada, British Guiana, and Trinidad, having been especially concerned with mosquito-borne diseases, more particularly yellow fever.

I have read the official report of a committee which was established in 1852 to inquire into the terrible mortality, chiefly from yellow fever, amongst the military and naval forces then stationed in the West Indies. The appalling picture of death and loss of money at that date and the comparative health-security of to-day shows that immense strides in prophylaxis have been made. These I have carefully analysed, and I am now in a position to state that, certainly since the date of my visit to British Honduras in 1905, a most energetic campaign has been undertaken against mosquito-borne diseases. In the first place, the doctrine of mosquito-borne diseases has taken root. Of course there are a few fixed individuals yet to be found amongst our own profession, as well as amongst the legal and business men; but taken as a whole, the people have learnt. I am in a position to state this, for during my visit I delivered 32 addresses to all classes of society, examined 1,097 yards and 2,292 water receptacles. This splendid advance in knowledge has been brought about by means of lectures and cheap literature in the form of pamphlets, diagrams, circulars, notices, and primers used in the schools. To show how real the movement is it is now a punishable offence to have larvae on premises, and no less than 226 summonses have been taken out since 1907, and fines inflicted from 1s. to 40s. During the last three months there has been a remarkable increase of activity. Yes, the people now understand, "No *Stegomyia*, no yellow fever." "No *Anopheles*, no malaria." Indications also are not wanting that the profession is realizing the advantage of uniting for the purpose of advancing medicine by reading and publishing papers of value. I had the honour of addressing several meetings of Branches of the British Medical Association, which have been formed in the islands; but much more in this direction requires to be done. Whilst on this topic, I venture to suggest that a meeting of the British Medical Association in Trinidad

or Jamaica would do much to stimulate medical and health progress in our West Indian Empire, and would be most popular and easily organized. Finally, it was my good fortune to fall in with the work of Dr. Beaupertuy, who, born in Guadeloupe, flourished in Cumana in Venezuela, and died in British Guiana. To him belongs the credit of having to my mind foreshadowed the doctrine of insect-borne disease. His opinion on yellow fever and malaria are strikingly prophetic, and his fulminations nearly one hundred years ago against the absurdity of "miasm"-borne diseases have to-day been proved to be fully warranted.—I am, etc.,

University of Liverpool, June 1st.

ROBERT BOYCE.

* An account of Beaupertuy's life, work, and opinions was given in the JOURNAL about a year ago (May 30th, 1908, p. 1306), and will be read with interest in connexion with Sir Robert Boyce's letter.

OPERATIONS ON THE PROSTATE.

SIR,—May I make some remarks upon the case of enlarged prostate described by Mr. Fullerton in the JOURNAL of May 22nd? The estimation of prostates by weight is convenient, sufficiently accurate, and serviceable for statistical purposes. To the operating surgeon it is of little use, because it gives little if any idea of the mechanical difficulties of operation which depend much more upon such properties as size, shape, consistence. From a general point of view, I think it is of still less service, for, while to surgeons accustomed to see, handle, and weigh prostates, their weight may give an approximate notion of their size, it can give none of their other qualities; while to those not actively engaged in operating on prostates it gives practically no concrete notion at all.

From Mr. Fullerton's account of the case, it is clear that before beginning the operation he did not expect to find any particular difficulty, whereas, in fact, extreme difficulty was experienced. I would ask whether examination immediately after the bladder was opened gave any indication, and if so what, of the degree of difficulty likely to be found.

The adoption of a line of treatment by a man of Mr. Fullerton's professional attainments and position cannot be without influence. I therefore venture to offer the following comments because I think the account of the case given shows that the treatment adopted was not the wisest.

For ten years before operation there was nocturnal micturition—cause not stated, presumably not known at the time, reasonably to be regarded as enlarged prostate. Nine months before operation there was brief spontaneous haematuria with gravel, and the prostate was found to be enlarged—cause of haemorrhage not stated, presumably not definitely known, possibly gravel. Two days before operation slight haematuria occurred—cause not stated, presumably unknown. On the day before operation there was retention of bloody urine, relieved by catheter; and on the day of operation there was retention of urine containing clots, relieved by suprapubic puncture—cause not stated, presumably not known.

Operation was rightly considered, and now, I submit, the first mistake was made. It is clear that the most urgent indication was to relieve retention. The catheter had failed; the aspirator had given temporary relief. It is not stated that clots had come away; presumably they were still in the bladder. There is no mention of any sign that the bleeding was diminishing.

The second indication was to check the vesical haemorrhage. The most promising way to fulfil these two indications, in view of the known large size of the prostate, was to open the bladder above the pubis. There is nothing in the account of the case to suggest that the fulfilment of these two indications would not restore its former degree of efficiency to the bladder, a condition, I submit, by no means amiss in a man of 73. This patient had had a grave cardiac attack ten days before, and this, together with his age, made it clear, I think, that the less that was done consistent with relief the better; while the short duration of the urgent symptoms suggested the probability that relief might have been simply obtained.

Notwithstanding these facts and the misgivings which they occasioned prostatectomy was the only operation stated to have been considered. This, I think, was bad.

Prostatectomy was the operation performed, which, I think, was worse. Prostatectomy was the operation which the patient just managed, with help, to survive.

Only in the last sentence of the report of the case is there to be found any reference—and that a passing one—to what seems to me the key of the clinical picture.

I submit, with all deference to Mr. Fullerton's much greater experience, that the indications in this case, as recorded, were these:

1. To empty the bladder, because retention existed.
2. To do this by cystotomy, because the catheter had completely failed and the aspirator had not removed clots.
3. To open the bladder above the pubis, because of the ascertained great size of the prostate.
4. To decide upon further measures after the interior of the bladder had been explored, because the condition of its interior was very incompletely known.
5. Having opened the bladder above the pubis and found, as described, a large prostate and a mulberry calculus, to remove the stone, wash out, and drain the bladder.

I think that the sufficiency of this treatment is indicated by these considerations: the presence of the mulberry stone was sufficient to account for the haemorrhage described; the prostate, despite its great size, had not of itself caused much trouble; its immediate removal, therefore, was not necessary, and might—and in the event did—involve an enormous strain upon the patient.—I am, etc.,

Middlesbrough, May 25th.

ROBERT K. HOWAT.

HYPODERMIC INJECTION OF STRYCHNINE.

SIR,—Mr. Charles Randolph raises an interesting question in his letter in the JOURNAL of May 29th, p. 1331. It is especially so in view of the modern tendency among physiologists and surgeons to decry the value of hypodermic injections of strychnine. Quite recently, in a paper on the treatment of shock during anaesthesia, read before the Anaesthetic Section of the Royal Society of Medicine, Dr. Dudley Buxton deprecated the injection of strychnine. To me these pronouncements come somewhat as a surprise. Twenty years in general practice and ten in that of anaesthetics have convinced me of the value of strychnine injections in suitable cases. Of course, it is useless to expect good results when the patient is almost pulseless, as the drug probably never gets into the circulation. But when the circulation has not sunk quite so low as this, or there is a chance of reviving it by artificial respiration, oxygen, or intravenous saline infusion, my experience is that injection of a full dose of strychnine is most valuable.—I am, etc.,

London, W., May 29th.

G. A. H. BARTON.

THE CAUSATION OF CANCER.

SIR,—Will any of your readers kindly offer arguments against or in favour of the following reflections on the causation of cancer?

That chronic irritation is the safest "jumping-off place" for cancer research, there being no doubt as to the important part which such irritation plays in the development of cancer.

That the evidence so far adduced is in favour of a verdict of cancer from natural causes. That what we call Nature or the mysterious forces contained in cells which Weismann calls "determinants"—having tried in vain to heal a chronically inflamed wound in a position where the necessary physiological rest is impossible, and in a person with enfeebled nerve force and devitalized tissues, has recourse to another plan—namely, changes the original destiny of the local cells and resuscitates ancestral reproductive faculties. That this influence of irritation on specialized cells is quite in harmony with the doctrines of evolution, and a cell with reproductive faculty might very well get into the lymph stream and start secondary growths in the glands or elsewhere.

From a fragment of a begonia leaf may arise an entire individual capable of continuing the race. Environment here changes the destiny of the cells. Among low multicellular types, the power of continuing the race persists in many cells, and environment decides whether it shall be exercised or not. The power of regeneration in specialized tissues is only lost because the retention of the power is no longer useful.

That as regards reaction to environment, a plant and a

man must be placed in the same class. Of interest in this connexion is Darwin's remark that "if a flower is accustomed to open at sunrise it will open none the less punctually if transplanted to a dark cellar. A residue of the stimulus remains in the cells so that opening at a given time becomes part of its being."—I am, etc.,

Lightcliffe, nr. Halifax, May 29th.

ASHNALL MARSDEN.

Obituary.

SIMEON HOLGATE OWEN, M.D., M.R.C.P.,

CONSULTING PHYSICIAN, MANCHESTER NORTHERN HOSPITAL.

Few men of a retiring disposition will be so much missed by a large circle of friends as Dr. Simeon Holgate Owen, who died suddenly from heart failure, after doing an ordinary morning's work, on May 19th, at his residence, Whalley Range, Manchester. Dr. Owen was in his 65th year, and for some years had suffered occasionally from pains in the chest which were apparently regarded as dyspepsia, so that his death came with quite unexpected suddenness. He was the son of the late Mr. Henry Owen, Dental Surgeon, and obtained the diplomas of M.R.C.S. and L.S.A. in 1869. He graduated M.D. at Queen's College, Belfast, in 1872, and obtained the M.R.C.P. Lond. in 1888. For some years before the incorporation of Moss Side, Manchester, he was M.O.H. for that district, and was a Fellow of the Royal Institute of Public Health. At that time he took special interest in sanitary science, and frequently lectured on public health subjects for the Manchester and Salford Sanitary Association, of which he was an active member. Two of his lectures on Fevers, their Nature and Prevention, and Work and Recreation in their Relation to Health, were published, and were very favourably received. He had held the posts of Assistant Physician to the Manchester Royal Infirmary and House Surgeon to the Manchester Southern Hospital for Women and Children. He was best known, however, as Physician to the Manchester Northern Hospital for Women and Children, a post which he held for some years and where he endeared himself to a large number of patients by his careful, painstaking, and sympathetic treatment. On his retirement from the active work at the Northern Hospital he was elected consulting physician, his services to the hospital being as much appreciated by his colleagues and the Board of Management as by the patients under his care.

For many years he took a very active part in the work of the various medical societies in Manchester. In 1891 he was President of the Clinical Society, and in 1893-4 Vice-President of the Manchester Medical Society, of which he was elected Honorary Treasurer in 1903. He also held the position of President of the Medico-Ethical Association on two separate occasions, having been elected for the second time shortly before his death. For some time he made diseases of the heart a special study, and wrote various articles on the subject, among which may be mentioned *Mitral Disease in Children*, *The Prognosis of Mitral Disease in Children*, and *Cardiac Thrombosis after Abortion*. He was also the author of numerous reviews and articles on general literary subjects. He was an enthusiastic Unionist, and a member of the Manchester Constitutional Club, and worked hard, if unostentatiously, for his party.

As a member of the British Medical Association he took no active part until comparatively lately, but as a member of the committee recently appointed by the Joint Divisions of Manchester and Salford to consider the ethical relations between consultants and general practitioners in Manchester he showed an amount of fair-mindedness and sympathy with both branches of the profession that augured well for the success of the committee in its difficult task. Shortly before his death he was elected Chairman of the Manchester West Division, and the Honorary Secretary of that Division writes as follows: "As one who has enjoyed the privilege of frequent personal intercourse with the late Dr. Holgate Owen, and has often benefited by his ever ready sympathy and help, I feel, and all who knew him will agree with me, that his Division has lost in him an ideal chairman and a true friend. Although in the past

he had been unable to take any active part in the work, he was keenly alive to, and showed much interest in, what was done, and he was ever willing to aid with well-considered advice. Dr. Owen was unanimously elected to the chairmanship of the Division for the ensuing year at the annual meeting on May 11th, and a day or two later wrote accepting the position and expressing his pleasure at the prospect of active work in the interest of the Association. He promised to attend the first meeting of the Executive Committee, but he died on the afternoon of the day previous to the meeting. The news of his sudden and unexpected death came as a rude blow to the hopeful anticipations of a year's pleasant labour under his able leadership, and added to the bitterness of the personal loss felt by those who reckoned him among their friends. The geniality and earnestness so characteristic of him, his courtesy, tactfulness, and common-sense methods of dealing with difficulties, and his general popularity—he had no enemies—all tend to make the loss of such a man seem wellnigh irreparable, alike to his Division, his profession, and his personal friends."

MR. JOHN MASON WILLEY died at his residence in Leicester on May 20th after a prolonged illness. He was born in 1852, and received his medical education at St. Bartholomew's Hospital. After obtaining the diploma of M.R.C.S. Eng. in 1876 he spent several years in resident appointments. He was House-Surgeon successively to the Jessop Hospital for Women, Sheffield, the Sheffield Public Hospital and Dispensary, and the Royal Isle of Wight Infirmary, Ryde. In 1883 he became L.R.C.P. and L.M. Edin., and in 1890 he settled in Leicester and was engaged in busy general practice until failing health compelled his retirement in 1908. Of quiet and retiring disposition, Mr. Willey's kind, unassuming manner made him very popular among a large circle of patients. For several years he held the post of Surgeon to the Leicester Provident Dispensary. Mr. Willey leaves a widow, but no family.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are: Professor Guldstrand of Berlin, a well-known medical statistician, aged 70; Dr. Vicente de Figueiredo Saboia, formerly Professor of Clinical Surgery in the Medical Faculty of Rio de Janeiro; Dr. Paul Cavaillon, *agrégé* Professor at the Medical Faculty of Lyons, and founder of the *Lyon Chirurgical*, aged 32; Dr. Ernest Besnier, Member of the Paris Academy of Medicine, one of the most famous dermatologists in Europe, sometime head of the Dermatological School of Saint Louis Hospital, founder of *Annales de Dermatologie*, author of numerous works on general medicine and hygiene, as well as dermatology, and translator of Kaposi's *Lectures on Diseases of the Skin*, with copious notes; Dr. Manuel Amador, first President of the Republic of Panama, and at one time the leading physician on the isthmus, aged 74; and Dr. Ferdinand Klug, Professor of Physiology in the University of Budapest, aged 64.

THE LATE PROFESSOR GERALD YEO.—In the obituary notice of Professor Gerald Yeo, published in the *JOURNAL* of May 8th, it should have been stated that Professor Yeo left only one son, who is a second lieutenant in the Devonshire regiment.

Medico-Legal.

HERBALISTS AND THE PEOPLE.

AN inquest was held in Sowerby on May 17th on a woman whose death would appear to have been due to internal strangulation, which being unrelieved was followed by peritonitis. She fell ill on May 6th, and died a week later. Two days after she began to be ill a herbalist named Culpan was called in to attend her, and continued to do so until she died. Late on the night before her death a medical man was asked to see her, but sent a message to the effect that he would be unable to come that night. The jury returned a

verdict of death from natural causes. Culpian was not present at the inquest, but subsequently wrote a letter to the *Halifax Guardian* saying that on the morning of the day he first visited the deceased he was asked for a mixture to stop "bilious vomiting," but declined to give it until he knew more particulars. In the afternoon he diagnosed the case as one of inflammation of the bowels, probably complicated by peritonitis. The following day he confirmed his diagnosis and suggested that other advice should be summoned, but the patient declined and asked him to continue to treat her. This letter was written subsequent to the holding of the inquest and to the medical evidence as to the nature of the disease and the cause of death.

The case in its essential features is merely one more unfortunate instance of a person trying owing to causes which could probably have been removed had medical attention been received, but the action of the jury on the occasion lends it a certain special interest. The foreman and other members of the jury kept on arguing with the coroner as to why the inquest should have been held at all, and evidenced a strong desire to defend Culpian—who was mentioned as "Dr." Culpian from any kind of blame. They had known him for thirty or forty years and had every confidence in him. He was not a mere quack—not a person continually coming and going—but one who had been brought up among the people, and a very respectable man. The chivalry thus displayed is a pleasing feature which might well be emulated by juries elsewhere; but, on the other hand, the jury's general attitude towards the matter did little credit to their heads. The only excuse that can be made for them is that subsequent events seem to show that they were under the influence of an egregious body calling itself the National Association of Medical Herbalists. Its members wish the people to believe that an elementary knowledge of herbs administered by rule of thumb is all that is required for success in the treatment of sickness, and to conceal from them the fact that when they consult a medical man they receive advice founded not only on a complete knowledge of the laws, but of the human body and its diseases as well. As Yorkshiremen, but the reputation of being curers, one would not have imagined that these Sowerby people would have been thus deceived, or have failed to see for themselves that the cheapest goods to buy are those into which the most labour has been put.

It is to be feared, however, that nothing will prevent the occurrence of preventable deaths of the same kind until the Legislature places a penalty on the practice of medicine by persons who have no scientific knowledge of it.

WORKMEN'S COMPENSATION CASES.

Refusal to Undergo an Operation.

ALTHOUGH a workman may be justified in refusing to undergo an operation, the county court judge has it in his power to reduce compensation if the workman will not submit to reasonable treatment. In a case at Barnsley, a man who had sustained an injury to his right finger was awarded compensation at the rate of 15s. 10d. a week. It was suggested by the employers that an operation would enable him to work. The man, however, refused to undergo the operation, as his medical adviser recommended him not to. He had neglected, however, to have the hand massaged. The county court judge held that while the refusal to be operated on was justifiable, the workman had not done all that he could to get his hand better. He therefore reduced the compensation to 12s. 10d. a week.

Carbolic Acid Poisoning.

It is for those who make claims under the Act to prove that the death or injury was caused by accident. In a case at Manchester a cloth presser died of carbolic acid poisoning. It was proved that this fluid was used in the works, that the deceased was in the habit of drinking his tea out of mineral water bottles, and that a bottle containing traces of carbolic acid was lying near where the deceased lay. Upon this it was suggested that he must have been killed by drinking something which he thought was harmless. The judge held that no case had been made out.

Probable Future Incapacity.

The fact that a workman may at some future time suffer incapacity as the result of an injury is a matter which the court will take into account when asked to make a declaration that liability is at an end. In a case heard in Scotland a man had sustained a rupture while lifting a derailed hatch. He returned to work in three weeks at full wages. In a claim for compensation he only asked for three weeks' wages, but he also sought a declaration of liability. The sheriff decided, on the medical evidence, that as there might be incapacity at some future time in consequence of the injury, the workman was entitled to have his right to prefer a claim kept alive.

Medical Notes should be Taken.

At Merthyr, during the hearing of a claim, it was pointed out that the number of claims that went into court was very small compared with the number with which doctors had to deal. The judge remarked that he would look with some suspicion on the evidence of medical men who made no notes on such cases. It was almost impossible for them to remember one case out of a hundred, and it would only take a minute to make a note at the time.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE following degrees were conferred on May 27th:

M.D.—R. E. French, King's; J. C. L. Roberts, Cla.; F. W. M. Palmer, Jes.
M.B., B.C.—F. C. Trappell, King's; J. W. B. Bean, H.-Selw.
M.B.—S. Maclaren, Trin.; F. Worthington, Joh.; G. H. Davy, Govt. and Cal.

UNIVERSITY OF LONDON.

THE following candidates have been approved at the examinations indicated:

FINAL M.B., B.S.—A. H. G. Burton (c), Guy's Hospital; "R. R. Elworthy (a), Westminster Hospital; A. P. Fry (d), St. Bartholomew's Hospital; "M. D. D. Gilder (c), University College Hospital; "C. A. Joll, B.Sc. (a, b, c, d), University Medical, University College, Bristol; "D. A. Powell (a), Charing Cross Hospital; J. T. Baker, S. J. A. Beale, T. L. Bonford, R. H. Bott, K. Bremer, C. H. Broadhead, J. P. Buckley, Elsie M. Chubb, L. Croft, S. J. Darke, H. C. R. Darling, T. B. Davies, N. C. Davis, G. V. Deshmukh, Irene C. D. Eaton, A. E. Evans, T. Evans, C. H. S. Frankau, W. L. E. Frez, Janet M. Fiske, H. S. Furness, C. J. Galbraith, H. Gooch, A. E. Jow, F. N. Houghr, E. R. Holborow, M. J. Holgate, W. F. Holtbusen, H. P. L. Hurst, Melville Hunt, J. L. Johnston, E. J. G. Jones, R. P. Jones, W. B. Jones, J. D. Judson, H. C. Lucey, G. R. Lynn, J. C. Lyth, H. E. H. Mitchell, M. H. E. R. Montesole, H. L. Morgan, W. P. H. Munden, W. H. Palmer, O. B. Parry, J. R. Pordran, Ellen M. Pickett, Laura G. Powell, T. E. Pryce, W. P. Purdon, R. A. Rankine, H. A. H. Robson, J. E. Scudamore, Florence Stacey, Marione Stocks, St. J. A. M. Tolhurst, S. A. Tucker, J. O. D. Wade, H. G. Willis, C. A. Wood.

- (a) Distinguished in Medicine. (b) Distinguished in Pathology.
- (c) Distinguished in Forensic Medicine and Hygiene.
- (d) Distinguished in Surgery.

FINAL M.B., B.S. (Group I only).—E. W. Archer, B.Sc., Ella M. Barker, A. Burrows, D. F. Dobson, J. S. Lukis, W. N. Pickles, G. R. Strong, R. R. Vickers, G. R. Ward, H. O. Williams.
FINAL M.B., B.S. (Group II only).—Anne Borrow, W. F. Bowen, C. G. Galpin, W. S. Hughes, J. E. L. Johnston, D. Loughlin, P. D. F. Makovan, J. H. Meers, L. G. S. R. Oxley, A. H. Peniston, S. G. H. Salmond, F. C. Seale, R. H. Smith, W. R. M. Turtle, L. A. Weakley, H. O. West, R. T. Williams.

UNIVERSITY OF DURHAM.

MEDICAL GRADUATES' ASSOCIATION.

Increase of Council.

AN extraordinary meeting of the association was held on May 28th at 11, Chandos Street, London, W., when Dr. R. A. Bolam's motion to increase the number of the Council from 12 to 13 was carried unanimously.

Annual Meeting.

At the annual meeting which followed, with Mr. Bruton Angus in the chair, it was decided that the auditors shall not be *ex officio* members of council.

The Treasurer's report was agreed to after some criticism on the way it was drawn up.

Dr. Braithwaite proposed that the method of voting for the election of officers should be entirely by ballot paper. It was agreed to refer the question to the Council for consideration, and the following officers were then elected: Wm. Rawes, M.D., F.R.C.S., President; T. Beattie, M.D., B.S., M.R.C.P., and M. G. Biggs, M.D., Vice-Presidents; Wm. Martin, M.A., M.D., B.S., and J. Inglis Parsons, M.D., M.R.C.P., Honorary Secretaries; eighteen members of Council, and three Auditors, Dr. Wm. Rawes, the President, and Drs. Wm. Martin and Allison were elected Representative Governors of the Court of the Durham College of Medicine. Dr. Edridge Green's motion that "Four members of Council shall form a quorum" was carried by a majority. The report of the Subcommittee on the University Bill was approved. Sir T. Lauder Brunton and Dr. W. F. Mott were unanimously elected honorary members of the association.

Annual Dinner.

The members and their guests dined together the same evening at the Café Royal. Dr. William Rawes, the new President, in the chair. The "University of Durham" was proposed by Mr. Bruton Angus, and responded to by Sir George Hare Philipson. "The Association" was proposed by Dr. F. W. Mott, and responded to by Dr. Inglis Parsons. The toast of "The Guests" was proposed by Dr. F. M. Saudwith, and responded to by Sir James Barr in humorous terms. Some excellent music was provided by Mr. A. E. Godfrey, and a most enjoyable evening was passed.

QUEEN'S UNIVERSITY OF BELFAST.

STATUTES MADE BY THE COMMISSIONERS.

THE statutes made by the Commissioners appointed under the Irish Universities Act, 1903, for the government of the Queen's University of Belfast were issued on May 22nd.

There are four Faculties—Arts, Science, Law, and Medicine.

In Medicine there are six degrees: the usual ones of Bachelor of Medicine, of Surgery, and of Obstetrics (M.B., B.Ch., and B.A.O.) constitute the primary degrees of the Faculty, and require five years' registration as a student of medicine and attendance in Belfast on the prescribed course of studies for three academic years at least. The degrees of M.D., M.Ch., and M.A.O. will not be conferred until the expiration of at least

three more academic years, or in the case of graduates of the university in Science and Arts, of two years. These latter degrees will be conferred after examination or submission of a thesis.

No mention is apparently made of State medicine or public hygiene, and considering the enormous importance of these studies, the great number of Belfast students that seek a degree or qualification in them from Cambridge, Dublin, and elsewhere, and the general public interest, this must be regarded as a grave omission. Neither is there any mention of dentistry, nor in the arts and science faculties is there word of commerce. The Commission may, of course, have found that these last two departments are not a success elsewhere.

Only the main outline or skeleton appears in these statutes, but there is a certain feeling of disappointment that when a new university was thus being forged red hot, the opportunity should not have been seized of beating the yet malleable form more into the state anticipated by the leading thinkers of the day. The old division between physician and surgeon is fading; gynaecologists are both, and answer the demand of facts. The day when the young surgeon will be taught asepsis and how to perform intestinal anastomosis and other abdominal operations in the veterinary wards and theatre seems not far distant.

The whole classification of medical science and art is changing. Every medical ward in a hospital seems to require a surgeon, and every surgical one an immunizer. It is to be hoped that the statutes are not final, and that liberty of expansion in both faculties and degrees may be given to the Senate. As at present drawn they offer no recognition of the great changes that are fast taking place in what may be called the very constitution of medicine.

UNIVERSITY OF BIRMINGHAM.

The Ingleby Lectures.

SIR THOMAS BARLOW delivered the first of the Ingleby Lectures on May 27th, in the Medical Lecture Theatre at the University to a very large audience. The subject of the lectures is Raynaud's disease and erythromelalgia, a summary and a review.

Public Health

AND

POOR LAW MEDICAL SERVICES.

URBAN DISTRICT COUNCILS AND THEIR MEDICAL OFFICERS.

THE answer returned under this head in the JOURNAL of May 22nd, p. 1275, was given under a misapprehension. It was thought that the inquiry referred to an appointment under the Poor Law, whereas it referred to an appointment of medical officer of health. As Dr. Butler-Hogan has pointed out, and as is, of course, well known, the General Order of the Local Government Board as to Medical Officers of Health and Inspectors of Nuisances (Urban Sanitary Authorities), dated March 23rd, 1891, contains the following, Article (3):

An appointment shall not be made unless an advertisement specifying the district for which such appointment is to be made, together with the amount of salary proposed to be assigned, and the day fixed for such appointment, shall have appeared in some public newspaper or newspapers circulating in the district of the sanitary authority at least seven days before the day so fixed.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Surbiton Urban District.—Based upon an estimated population of 18,747 persons, the birth-rate in 1908 was 20.5 per 1,000, the death-rate from all causes 10.4, and from zymotic diseases 0.4 per 1,000. The infant mortality-rate was equal to 70 per 1,000 births. The medical officer of health (Dr. Owen Coleman) points out that it is important to correct the crude death-rate by excluding non-residents who die in public institutions within the district and including residents who die outside the district. He appears to have been at some pains to make these corrections in his mortality tables, and complains of the difficulties which attend the gathering together of the necessary data. He expresses the opinion that there should be devised some machinery for forwarding the necessary information to the medical officer of health, and considers that the registrar is the person to whom the duty should be entrusted. We would point out that arrangements are already made by many medical officers of health under which the registrars supply the information desired by Dr. Coleman. It is true it is no part of the registrar's duty to make out the necessary returns, but as he is willing to furnish them upon being paid by the sanitary authority the usual fee of 2d. for each entry and for each return. Since 1898 the Surbiton Council have had power under a by-law to require the owner of a dwelling-house to pave a yard or open space in connexion with the house if it is necessary for the prevention or remedying of insanitary conditions. It is satisfactory to find that this regulation is being enforced, and that already nearly 500 houses have been satisfactorily dealt with. Many observers have commented upon the relation between outbreaks of diphtheria and unpaved back yards. It would be of interest to know whether the activity of the district council in the manner indicated in any way accounts for the lessened incidence of the disease in the town of Surbiton.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL.

THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL are at 429, Strand, London.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C. TELEGRAMS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Articulate, London*. The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

TELEPHONE (National).—

2531, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.

2530, Gerrard, BRITISH MEDICAL ASSOCIATION.

2534, Gerrard, MEDICAL SECRETARY.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

DESIGN OF SURGERY.

T., who is about to put up a surgery to be attached to his house at a cost not exceeding £60, would be glad to know what other medical men have found most suitable.

DENTAL FEES.

CARIES asks what would be a fair fee for a qualified dentist in a small town to charge an ordinary patient (clergyman) for refilling an incisor with gold, the time occupied being one hour and a half?

*. The question is difficult to settle, so much depending upon the class of practice and the standing of the practitioner. For protracted and difficult operations a dentist in high-class practice in London would charge a fee of 2 guineas an hour, and in some provincial towns fees nearly as high are obtained, though as a rule probably about half this fee would be regarded as a good one. It is to be remembered that the longer the operation the more gold is used, and the cost of the gold may be considerable.

LETTERS, NOTES, ETC.

"A CHRISTIAN SCIENCE LECTURE."

WE have received a letter from Mr. Frederick Dixon, who writes from the office of the District Manager of the Christian Science Committee on Publication for Great Britain and Ireland relative to a paragraph under this heading, which appeared in the JOURNAL of May 29th. It is too long to publish in full, but we give what seem to us the essential parts. After saying that our correspondent speaks of the cough of a lady beside him who had not attained sufficient faith to overcome it, he goes on:

Now, supposing this to be the case, what does it prove? Really nothing at all, since, for aught I know, in order to overcome the cough the lady might have had to overcome something very much more serious than a cold, and no Christian Scientist pretends to be able to overcome every phase of sickness instantaneously. But, as a matter of fact, how does he know that the lady was a Christian Scientist? The probabilities are distinctly against it. So many patients have been turned away from Dr. Munro's first lecture that Christian Scientists were largely conspicuous by their absence at the second, having left the hall mainly to the outside public.

Passing on now to his argument why, if Christian Scientists are engaged in ignoring the evidences of sin, sorrow, and suffering around them, is there so much criticism of them for their efforts to heal the sick and preach the Gospel? The critics of Christian Science might at least endeavour to be consistent.

Because Christian Scientists deny the absolute reality of the existence and power of evil, it no more follows that they deny the relative sense of its reality to the human consciousness, than because the philosophical idealists of to-day deny the actual reality of matter they deny its existence as a phenomenon. For centuries the world has been face to face with the problem of evil, and for centuries the effort has

been persistently made to overcome it whilst admitting its reality. If, however, evil is real it is eternal; if it is eternal, it is hopeless to expect that it can be overcome. Jesus of Nazareth was the man who first showed the world the powerlessness and unreality of evil. Evil, he declared, was a lie, and the only semblance of power a lie can ever even seem to manifest is in the delusion produced by being deceived by it. As soon as the truth is known the temporary power of the lie is destroyed by reason of its very unreality. "Ye shall know the truth," Jesus said, "and the truth shall make you free." Not free, it is certain, from anything that is real, that is from anything God made, but equally certainly free from every lie by reason of its unreality as a lie.

It is scarcely fair to argue that because Christian Scientists have realized the futility of mankind's struggle through the centuries with evil regarded as a reality, and have turned in consequence back to the teaching of Jesus in the effort to meet it as an unreality, that they are ignoring the evidences the material senses given them of sorrow, and suffering, and sickness. "Sickness," Mrs. Eddy has written on p. 460 of *Science and Health*, "is neither imaginary nor unreal—that is, to the frightened, false sense of the patient," and has "therefore to be dealt with through a right apprehension of the truth of being." This right apprehension is surely the knowledge of the truth which makes men free, and the gaining of this knowledge would necessarily bring with it the power to demonstrate its truth—to do, in a word, the works which Jesus declared those who believed on Him would be able to do.

Christian Scientists and those who come to them for help are just as anxious to destroy the evidences of sin and suffering and sickness as those who are most bitterly opposed to the teaching of Christian Science, and most sceptical as to the value of its works. If, therefore, they have turned aside from the old method of fighting evil as a reality, and adopted a method new to-day, though not new altogether, of fighting it as an unreality, it is because they have had evidence which to them is overpowering of the superiority of the new method to the old. This can scarcely be described as burying their heads in the sand, but rather as facing the facts presented to them. Though, if your contributor will forgive me for saying so, the method of ignoring all evidence of Christian Science healing, when it is quite obvious it is going on, is a perilous approach to the reputed habit of the ostrich.

* Mr. Dixon speaks as of "prave 'orts" as Ancient Pistol, according to Fluellen, spoke "at the pridge." If words, as some of the old Greeks believed, could "materialize" into the things they denote, Christian Science would need no defence. There are only one or two points in Mr. Dixon's communication on which we need comment. His concluding statement that we ignore all evidence of Christian Science healing is, as he ought to know, quite inaccurate; we have always said that Christian Science, like many other methods which dispense with ordinary medical treatment, cures a certain number of cases of functional disorder. We take the liberty, however, of explaining these cures in a different way from that taught in *Science and Health*. Mr. Dixon's quotations from that illuminating work prove nothing but the incoherence and ignorance of its author, whoever he or she may have been, in respect not only of science, but of philosophy and logic. Looking into it for ourselves we find in one place the plain statement that "what is called disease does not exist"; in another we are told that "man is never sick"; for the delectable reason that "Mind is not sick and matter cannot be." Again, there is a paragraph headed "All disease is a delusion." But of Mrs. Eddy's self-contradictions there is no end. For instance, immediately after the passage quoted by Mr. Dixon, she condemns most of her own disciples when she says: "If Christian Science is abused by mere smatterers in Science, it becomes a tedious mischief-maker. Instead of scientifically effecting a cure, it starts a petty cross fire over every cripple and invalid, baffling him with the superficial and cold assertion, 'Nothing ails you.'" Thus, out of the prophetess's own mouth is our charge, that Christian Scientists as a body have little sympathy with suffering, justified. Mr. Dixon complains that we criticize the Christian Scientists for their efforts to heal the sick. On this we have only to say that we should be glad that the sick should be healed in any way. What we criticize are what appear to us to be the mischievous consequences of their teaching. If their practice is better than their gospel, that is simply a further proof of the irrational character of the system. *Pace* Mr. Dixon, we agree with our contributor in holding that they do not "face the facts presented to them." That may be why it is so difficult to get properly authenticated facts from them.

HEALING BY ANGER.

DR. H. C. FOLEY writes: As the JOURNAL has lately contained a good deal about the doings of the spiritual quack, I send you the account of how Ulick of the Heads, the first Lord Clairvoyant, was cured of paralysis. I copy the account

from the *History and Antiquities of Kilmacduagh*, mentioning that the scene of the cure is quite near my residence, and that the traditional account is still held by the people. "The circumstances under which Ulick de Burgo received the name Ulick of the Heads are extraordinary. It is difficult to discredit them considering they are found in the pages of a scholar so learned, so conscientious, and so favourably known as the author of *Cambrensis Eboracensis*. Ulick was confined in his castle at Dunkellin for a considerable time by paralysis, which in those days (1542) of active warfare was sure to be attended with serious consequences. Accordingly, his possessions were seized on by neighbours, some of whom were his own kindred. After plundering his extensive territory they attacked his residence, intending to make him prisoner, and seizing all that remained. Bedridden as he was, when it was told that those bound to him by the closest ties of blood had hearts so merciless as to deprive him, a cripple, of the necessities of life, his rage knew no bounds. He forgot his weakness, and cried aloud for 'A horse, a horse!' 'May not,' he added, 'the great God who took away the life of my limb restore it again and enable me to recover my cattle from those merciless thieves.' His attendants, awed by his anger, yielded to his wishes, and placed him with difficulty on horseback. So feeble was he that he was unable to remain in the saddle without assistance. Nothing daunted, he persisted to sit upright, 'till at length the bones emitted a sound loud enough to be heard by his attendants, and in the instant the sinews recovered their strength. His enemies were terror-stricken as he came on the scene; he not only retook his cattle, but brought back in triumph the heads of many of his enemies. Such was the remarkable occurrence that got him popularly known as Ulick of the Heads."

He possibly suffered only from chronic rheumatic arthritis. This disease is to-day not uncommon amongst the people near Dunkellin. The river that flows alongside when the castle mound was probably filled by it possibly made the residence a very damp one.

QUININE IN SYPHILIS.

DR. C. F. MARSHALL (London) writes: Quinine is strongly advocated by Dr. William Murray in the treatment of syphilis in his *Rough Notes on Remedies*. I have also mentioned it as a useful auxiliary indication in my book on *Syphilology*, and have frequently found it of benefit in cases of syphilitic cachexia. But I am not aware of any published cases which were treated exclusively by quinine, nor of any experiments on the action of quinine on the spirochaete.

ASTHMA.

DR. H. G. H. NAYLOR (St. Kilda, Victoria, Australia) writes that he has found the following prescription very useful in asthma: R. Ext. grindel. robust. liq. 5 ii, vin. ipecac. 5 jss, tr. nuc. vom. 5 jss, ammon. carb. gr. 30, pot. iodid. 60, tr. camph. co. 5 ss, spt. chloroform. 5 jss, aqua ad 5 vi. Mft. mist. 5 ss in water three times a day after food. To be taken in water for two or three weeks at a time.

LYNN-THOMAS AND SUTHER FUND.

Twenty-third List of Subscriptions.

MR. WILLIAM SHEEN, M.S., F.R.C.S., 2, St. Andrew's Crescent, Cardiff, Honorary Secretary of this Fund, desires to acknowledge the following subscriptions:

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EPSOM AND LETTSOM.

A CORRESPONDENT sends the following from the diary of a young lady whose family were patients of Dr. Lettsom. It recently appeared in *Notes and Queries*:

Next day it was enough to vex one;
There came a bill from Dr. Lettsom.
The bill was due that very day,
And Pa had not enough to pay,
For what was saved to pay poor Lettsom
Was spent the day before at Epsom.

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An Address

ON

THE MODERN TREATMENT OF
FRACTURES.DELIVERED AT THE ANNUAL MEETING OF THE CARDIFF
MEDICAL SOCIETY ON JUNE 4TH.

By JUST LUCAS-CHAMPIONNIERE.

HONORARY SURGEON TO THE HÔTEL-DIEU, PARIS; MEMBER OF THE
FRENCH ACADEMIE DE MEDECINE; PRESIDENT OF THE
INTERNATIONAL SOCIETY OF SURGERY.

GENTLEMEN,—I no doubt owe the honour you have done me in asking me to deliver an address on this occasion to the fact that I am an old student of the British universities. When I was a young man, soon after completing my studies in Paris I paid a visit to this island, early enough to see the surgical science of Lister at its dawn, and I am happy to-day to remember and to state that since that time I have been among those who have always rendered just homage to the science of your country. This is not because, like certain philosophers, I think that Science has no country; on the contrary, I believe that we ought to be as proud of our country's men of science as of our great soldiers. But the man of science is fortunate in that he is imbued with an additional sentiment added to the love of his own country, and that is a sincere admiration and brotherly sympathy for all those who in foreign countries have enriched the science to which he himself has devoted his life.

The best way of proving sympathy and sincere admiration for a scientific association which meets to celebrate a long and laborious past is to present to it a review of a subject to which the speaker has for many years himself given much attention. I propose, therefore, on this occasion to speak on the modern treatment of fractures, not only because I believe firmly in the efficacy of a mode of treatment which I myself introduced, but also because the profession in this country is still under the influence of the righteous emotion caused in the surgical world by the unjust accusation to which your compatriots were subjected.

That it is possible for such injustices to occur is due not merely to the existence of a feeling unfriendly to the medical profession, but also to the important changes which the method of treating fractures has recently undergone, changes not fully known to the medical world, and still more imperfectly known to the non-medical public. The importance and gravity of the subject will, I hope, interest you sufficiently to induce you to forgive any deficiencies in my address.

TREATMENT BY REDUCTION AND SPLINTS.

The truth is that within recent times the classical treatment of fractures has been undergoing a radical change.

It is a remarkable fact that the treatment of fractures, the beginnings of which go back so far into the mists of time that we have no idea of the era when splints and treatment by immobilization were invented, has always rested upon the same data and upon the same principles ever since the first beginnings of the science of surgery.

Read any treatise on fractures, from the most ancient to the most modern, from Hippocrates to Ambroise Paré, to Dupuytren and Malgaigne and Hamilton; read all the encyclopædias, even the titles of which I cannot enumerate—every one of them will tell you that movement is the enemy of the formation of callus, and of bony repair; that it is an obstacle to the formation of callus, so that defective consolidation, whenever it is observed, is attributed to movement having been permitted. In order to obtain the union of fractures, all practitioners have taken account of one fact alone, that a bone is a rigid lever. When it is broken the fragments must be fixed in the position of the normal bone and immobilized. To reduce and to immobilize are the only measures upon which attention is riveted.

Ambroise Paré, the first surgeon who boldly relied on his own personal observation, whose imagination was always alive to find out something new, often hesitates

between his own imagination and the ancient traditions as to fractures; but he ends up always with remarks which impel him to greater exactness and greater violence to ensure the reduction of fractures and their maintenance in position. Beyond this he gives information only as to the drugs which might favour the production and the union of bone. With the exception of this last point, the aims of Dupuytren, of Malgaigne, and of Hamilton are exactly the same, although, like all nineteenth century writers, being convinced that they possess much more accurate views on anatomy and physics than the older writers, they apply procedures for reduction and maintenance still more rigorously, and invent new details in the methods of reduction and in splints.

The strange thing is that they are so persuaded that they really reduce fractures, and that they favour union by immobilization, that they pay little or no heed to clinical observation. It does not occur to them to try any other means. If their results are bad, their only thought is to attribute the failure to the inadequacy of the means of reduction and immobilization which they had adopted.

Here and there in their writings on fractures it can be clearly perceived that some great observers were disturbed by facts which as it were struck them in spite of themselves. Malgaigne had indeed seen untoward results due to muscular contraction in fractures of the lower limb, and he thought that in the inclined plane he had found a means of preventing them. Hamilton, speaking of fractures of the elbow, recommends that the fragments should be immediately mobilized at the risk of not obtaining good adjustment, because it is essential to prevent ankylosis. Velpéau recommended that in fracture of the radius the splints should never be tightly applied, for fear of causing permanent ankylosis. The doubts expressed by these surgeons show that the evil consequences of immobilization could not have been altogether unknown to them, yet not one of them was bold enough to run counter to accepted opinions; all soon returned to the employment of the most complete possible immobilization after the most violent reduction. We find the greatest surgeons devising most extravagant appliances, such as Dupuytren's splints for fracture of the radius, the action of which is utterly futile, because, from a *point d'appui* in itself detestable, it has to oppose the contraction of the muscles, and the cicatricial contraction at the site of the fracture; or again, that apparatus of Desault for fracture of the clavicle, which recalls the "Maiden," the torture jacket of the Middle Ages, under which the contraction of the muscles renders certain in the future the maximum possible deformity owing to overriding of the fragments of the bone.

Every one of these authors, not excluding even those who hesitated, all come back to the formula which Malgaigne very frankly placed at the head of his great treatise on fractures: *Immobilisation est la base.*

"The treatment of fractures can be summed up in two great indications: Reduce the fracture and keep it reduced until consolidation is complete."

The nineteenth century saw the birth of a considerable number of works on fractures; all of them rely, above everything else, on physical or geometrical theories of the mechanism of fractures; if they discuss treatment at all, it is only to describe new means for the forcible reduction of fractures and their maintenance in position.

TREATMENT BY IRREMOVABLE APPLIANCES.

An enormous part in treatment of this kind has been played by a new invention—that of irremovable apparatus. This method of treatment is extremely valuable in certain cases, but the infatuation for these appliances has been such that in a very large number of cases they are the cause of the very worst evils that can be produced by immobilization. To realize the regrettable results of this absolute immobilization upon the nutrition of the limbs we must come down to our own times. The problem presented by the treatment of fractures, which used to be "reduce, and maintain relative immobility," has now become "reduce, and enforce absolute immobility of one or several segments of the limb without regard to the duration of the immobilization."

THE ORIGIN OF MODERN TREATMENT.

It was perhaps the very exaggeration of the evil produced by the abuse of this ingenious invention that

contributed to bring about an understanding of the necessity for a change in treatment. So far as I myself am concerned, it was the excess of the evil which, more than any other fact, particularly struck me. The excess of the evil opened my eyes to the inconveniences of immobility, and to the part which mobility ought to play in the repair of fractures. This observation it was which emboldened me to make mobilization a leading principle in the treatment of fractures. The success of the treatment has been due to the very numerous clinical observations which have demonstrated the truth of the principle.

But to bring about an abrupt change in treatment, and to replace a bad by a good line of treatment, it is not alone sufficient for observers to recognize the existence of the evil. Our art must advance by slow steps, and it is well to learn how a change which upsets all the oldest principles could be made, how it could even enter the mind of an observer, and how it could be adopted by the majority of surgeons accustomed to another practice, which, although it presents many disadvantages, yet has for centuries rendered services at once incontestable and uncontested. This progress in therapeutics must be brought into relation with the great scientific changes by which modern surgery has been created. The paradoxical idea of introducing movement as a part of the treatment of fractures, and its acceptance by the medical public, must in fact have owed its development and its success to some very strong reasons.

Before making known the results of my own observations and experience, I long meditated upon the facts, and I can assert that I only made up my mind to publish conclusions contrary to all received ideas, and to initiate a revolution in treatment, because I was witnessing and taking a part in the transformation which surgery was undergoing.

Pasteur and Lister had so completely upset all our earlier notions that their example forbade any hesitation in submitting the best established scientific and practical theories to severe criticism. They inspired me with the courage which alone could lead to useful discoveries, and transform what it is most difficult to transform—practices resting upon most ancient customs, such as are to be described by the word "routine."

My assertions as to the remote consequences of the discoveries of Lister may be considered exaggerated, yet I am profoundly convinced of this indirect influence of a great piece of scientific work, and more especially of a piece of work which brought about a radical transformation not only in scientific theory, but also in the mechanical execution of the details of the surgeon's own acts, a change which completely upset his habits in practice.

This extraordinary piece of work which upset all our habits and destroyed the whole edifice of our surgical education, produced in us such an aptitude for change that I also found it possible to accomplish another piece of destructive scientific work, which, while it has its own dangers, can alone lead to great transformations in science and in practice.

The relation of the change which I have advocated to our older education is in fact very singular. A distinguished American surgeon, Caldwell, of Freeport, who had assiduously followed my practice at the Beagion Hospital, and had watched my treatment in the various types of fractures treated there, said in summing the matter up: "It is a very strange thing, after spending all one's life as a surgeon and following scrupulously the precepts of surgery, to realize that one has been steadily deceived, and that in a practical matter so well established as the treatment of fractures one has been doing evil where one believed that one was doing good."

Is not this the very same idea that Sir William Bennett has sought to express in the introduction to his *Lectures on the use of Massage and Early Passive Movements in Recent Fractures*?

Indeed, it cannot but excite surprise in the mind of an intelligent person that the stiffness, pain, and other disadvantages which so constantly follow the treatment of fractures upon classical lines, should have been countenanced for so many years when they can, in the majority of cases, be entirely obviated by a treatment so simple as that described in the following lectures.

To break so completely with acquired habits, even when the change is the consequence of numerous positive obser-

vations, is in truth a revolution, and revolutions are only made when the reasons in their favour are many and strong. The transformation wrought in our scientific mentality, giving it a degree of boldness which might seem to be temerity, undoubtedly had a leading part in influencing my course.

But the advance of surgery is always complex, and it must not be forgotten that other considerations influenced my mind, leading me to study the fundamental influence of movement on the vitality and on the regeneration of organs damaged or destroyed by injury. It is no doubt true that these considerations also have no very direct bearing, but they are the consequence of the advance of science and of the contemporary progress of medicine and physiology. When the study of many of the empirical methods of massage and gymnastics was commenced in France, the study of movement was at the same time founded and developed. In this study two great French men of science were the chief leaders. Marey, by his methodical and in a certain sense mathematical study of all movements, taught us to register and reproduce them in pictures which were at once true and expressive; while Lagrange introduced medical analysis into the study of functional and gymnastic movements by applying the physical ideas of Marey to sport and training. It is, at any rate, the fact that my acquaintance with these two men of science contributed to lead me to study movement from the point of view of its physiological and pathological consequences in fractures and in injuries of the joints.

Since that time a considerable number of men of science, teachers of gymnastics, masseurs, and others, have carefully studied all the scientific facts bearing on the subject, and the present position of what is called physio-therapy is the result of a series of quite modern investigations.

The study of movements from the educational and therapeutic points of view seems to have originated in France during the last century. The aims of the gymnastic methods of Amoros and Laisné were at first educational, but their applications in my country long remained very restricted, whereas in England and in America the love of sport gave origin to important empirical ideas with regard to movement and to training. It was, however, in Sweden and Norway especially that the study of movement from the educational point of view and the development of the art of massage were given a truly scientific character, and was controlled by men of science and doctors, while in every other country it remained the property of empirics.

We must, in fact, not fail to recognize that the share of Sweden and Norway in the evolution of massage and gymnastics has been scientific. It must not be supposed that the fundamental difference between the system of gymnastics known as Swedish and other systems lies in any actual difference in the movements. The merit of the Swedish system of gymnastics lies in the application of scientific rules and of a definite method. The cause of its success is to be found in this methodization. Various very different forms of movement are capable of giving equally successful results if they are measured and if they are performed on a regulated system. Again, it is the method or system which has rendered it possible to use this therapeutic procedure in many very different forms of education and treatment.

TREATMENT BY MASSAGE AND EARLY MOVEMENT.

With regard to the treatment of fractures which I advocate, I will say this, that my success has been due, more than anything else, to the introduction of a strict method of applying special forms of movement to the treatment of fractures. It is the method which has rendered possible the generalization of this therapeutic measure and its application to all forms of injury of the skeleton and of the articulations.

It is not unprofitable thus to recall the spirit of the method which served as a clue to guide me in working out a therapeutic revolution, and it is in fact true that each successive step can be traced in the history of my various trials and investigations, and in the order in which my various applications of the method succeeded one another. I began by lessening the degree of immobility; next I did away with it altogether; next I began to use movements at an early stage; then I began to use them immediately after the injury; finally, I made use of massage, that is to

say, of a method of mobilizing the muscles, the joints, and even the bony fragments. It was necessary to define the indications and the limits of this special form of movement. Thus it was that years of observation and experiment led me to establish the bold practice of methodical therapeutic mobilization.

It is a singular thing to realize that it was through my own detailed studies that I did this, and that, apart from my personal researches, nothing was published before the appearance of the description of my method. The only instance in which massage had been used for a fracture at about the time at which I developed a complete method was for fracture of the patella; it was so used by Metzger, who apologized for applying massage to a fracture, on the ground, as he said, that in this particular fracture bony union could not be obtained. The same masseur, in discussing sprains of the ankle, stated specifically that massage should not be used if the malleolus was fractured.

At the very same period I showed, in opposition to this, that massage favoured the production of new bone, and later on the beautiful experiments of Cornil on animals proved that this result of the mobilization of the fragments was invariably to be observed, and in young animals was too great.

Having carefully studied all earlier observations which might have served as precedents for my method of mobilization and massage, I have satisfied myself that none such existed.

SUTURE OF BONES.

Since my method was devised and generalized two important means for the study and the treatment of fractures have seen the light of day; these are suture of bones and radiography.

I do not wish to decry immediate suture of fractured bones. When Sir Hector Cameron performed the first suture of the patella, when Lord Lister published his articles on the subject, I was the first to follow their example. I believe, indeed, that I am to this day the surgeon who has performed the operation of suture of the patella in a greater number of cases than any other in the world. I believe also that there are few surgeons more familiar than I with the suture of bones in general. I consider that most valuable results can be obtained from immediate suture performed antiseptically.

But the question is, Does the suture of bones used as a general method for treating fractures in the way recommended by Arbuthnot Lane in England, Lambotte of Antwerp, Tuffier of Paris, and many other surgeons, deserve to be generalized and preferred to every other method? Without denying its conspicuous advantages, I must say that for my part I do not think so. I believe that it is a sort of continuation of the old method of reduction and fixation of the fragments. It would seem, indeed, to be the ideal of reduction followed by immobilization, and has in fact been held to be the most perfect realization of the old precept as to the treatment of fractures. It is certain also that the more the method of mobilization is developed the fewer will be the occasions on which immediate suture will be performed. If, as I have shown, a small amount of movement assists the process of repair at the site of fracture, it is quite evident that suture cannot be the ideal mode of treatment, for it ought, if properly performed, to do away with all movement of the fragments. I can at once give a practical example of this; suture of the olecranon is undoubtedly the simplest of all operations of the kind. I have done it for old fractures inadequately treated by other surgeons. I have never had occasion to do it for recent fractures properly treated by my method, because perfect recovery is obtained within a fortnight without operation.

RADIOGRAPHY.

Since I began the treatment of fractures by movement, light has been thrown on the study and the treatment of fractures from another new and important source; this is the application of radiography to the examination and to the treatment of fractures.

Although I am the author of an essay on the errors of radiography, I appreciate the importance of radiography in regard to fractures; but I hold that on the one hand radiography cannot dispense us from the study of the symptoms of fractures, and on the other that it

cannot warrant an untrained person replacing a doctor in making a diagnosis and in treating fractures.

Radiography gives us only a picture of the projection of a bone, and is subject, therefore, to many more drawbacks than ordinary photography by reflection. Consequently it is necessary very critically to examine images which for a multitude of reasons may give misleading pictures of the site of the fracture. It is necessary to learn how to appreciate the real value of a radiogram; only after much experience can one become a good judge of radiograms of fractures, even when these radiograms have been well taken. A radiogram which is badly taken may give rise to a multitude of errors of representation which ought to be known, and which produce many mistaken ideas in the mind of the non-medical public.

Subject to these two reservations, radiography is a marvellous aid in the diagnosis and in the treatment of fractures. From this time forth the surgeon ought never to fail to use it whenever it is possible to do so. Nevertheless the value of the help it can give varies very much. In the immense majority of cases there is very little chance that abstention from resort to radiography will prevent us from arriving at a correct diagnosis and the institution of proper treatment; it is essentially necessary in rare cases only. In the majority of instances it is only an additional security, giving a useful assurance to us, and to the friends of the injured person an interesting demonstration, and a document for future use.

Radiography has afforded me very special help in all that concerns my own standpoint with regard to the treatment of fractures. I have long maintained that surgeons who supposed that in reducing fractures they adjusted the bony fragments end to end and restored them to their normal position were deceiving themselves, and that in spite of faulty position, in spite of a certain degree of persistent overriding, the function of the limb again became perfect. The object which we must have in view in treatment, then, must not be this ideal juxtaposition.

Radiography has, in fact, surprised surgeons very much by showing them fractures well and soundly cured, with excellent functional results, but with considerable bony displacement. Very often, indeed, surgeons not fully acquainted with these matters, and still more patients, on examining such radiograms have been led to believe that errors have been made, even when the function of the limb is as perfect as the nature of the injury renders possible. What we are thus taught will prove very valuable in establishing a modern treatment of fractures.

THE MODERN METHOD.

After this very short summary of the history of the treatment of fractures down to the present day, let me next explain my conception of what this treatment by movement is, and state the new facts observed by me which give a revolutionary character to my method.

A certain amount of movement between the fragments ensures the best bony repair; this is the corner-stone on which my method is based. Every movement which is not injurious by reason of its amplitude favours repair; but it must be understood that the movement must be measured—dosed, so to say.

The movement which is necessary for the repair of the bones is not less necessary to the vitality of all the constituent parts of the limb, and particularly for all the organs of motion—joints, muscles, ligaments, and tendons.

The relation which the movements have to pain experienced by the patient are not such as is commonly believed; certain kinds of movement help to relieve the pain. Immobilization, which seems to relieve, only gives momentary relief, for it prepares the way for other pains in the future. Mobilization, gently performed as early as possible after the injury to the bones, is the method which best promotes disappearance of the pain.

Massage affords the best form of movement. By simple mobilization, by massage, and even by his own examination, the surgeon ought never to cause pain, for the pain so caused leads to fresh pain and produces complications.

The reduction of a fracture is only a relative necessity; it should be resorted to only in certain deformations of the axis of the bone which are incompatible with the function of the limb—lower third of the leg, shaft of the humerus. In a large number of cases the manoeuvre of reduction is useless; it is useless in all fractures of the radius with

impaction and moderate deformity, in most fractures of the upper extremity of the humerus, and in the great majority of fractures of the neck of the femur. In all fractures in which the displacement is due to muscular contraction any attempt at reduction is useless, as in fracture of the clavicle, of the olecranon, and many fractures of the malleoli. After massage the fracture is either spontaneously reduced, as in the case of the olecranon, or is very easy to maintain reduced, as in the case of the clavicle and malleolus. Those conditions which favour the vitality of the limb are all more important than those which produce immobilization of the fragments. The fact that shortening has not the injurious influence on repair which it is said to have should not be lost sight of when considering displacement. A moderate degree of shortening which does not change the static position of a limb is favourable to repair. The muscles surrounding a shortened lever act more rapidly and better than upon a lever on which they are stretched. A certain amount of shortening ought not to be interfered with, as it is favourable to the repair of a broken bone.

Massage has so great an effect in stimulating bony secretion at the site of fracture that in children, in whom the activity of the production of bone is great, massage ought not to be applied, save with great moderation, for fear of provoking excessive osseous secretion—in fact, a tumour. In their case simple mobilization is often sufficient.

Mobilization from the beginning, within the first twenty-four or forty-eight hours, is of capital importance, and at this stage movements of very small amplitude are sufficient; passive or induced movements are the best at the beginning. Active or spontaneous movements ought to be measured and directed by the surgeon; to allow the patient to follow his own fancy with regard to active movements is dangerous—all the more dangerous because with my method the pain caused by movement disappears from the beginning, and therefore does not limit the untimely action of voluntary movement. The pain experienced and the degree of sensitiveness of the callus are the best guides in directing and in permitting movement by the patient.

The secondary treatment of fractures and their supervision ought to be prolonged. Functional use of a fractured limb is the condition most favourable to its regaining active power. Even during this secondary period everything likely to irritate the region of the callus ought to be avoided. It is useless to cause pain by movements exaggerated in amplitude or by resort to forcible manipulation.

While before my investigations the surgeon contented himself, after having reduced a fracture, by awaiting cure, the modern surgeon should play a much more active, much more personal, and much less simple part. He ought not only to diagnose the fracture but ought to make its exact nature visible by a radiographic picture, and then take action to obtain not only solidity of the limb, but also to restore its suppleness, its regularity of action, and its power. He must not merely await the solidification of the skeleton. Moreover, his treatment must vary a great deal according to

1. The age, sex, and constitution of the patient.
2. The variety in the site of the fracture,
3. The kind of fracture of the limb,
4. The general or local health of the patient,
5. His occupation.

and according also to the circumstances under which he is called upon to act, for if he cannot ensure proper personal supervision of mobilization, massage, and the supervision of the movements, it may happen that he will be compelled to replace an excellent method of mobilization by a moderately good method of suture, or absolute immobilization.

The surgeon needs a great deal of experience to conduct the treatment of a fracture in the best way, and I cannot help asking with some anxiety how a non-medical tribunal is to form a judgement on questions so complex, should the patient and his medical attendants cease to be in accord.

The situation is complicated. Well-to-do people bring actions against surgeons because they continue to experience pain or stiffness after a fracture; workmen

reproach the surgeon because he cures them too well, inasmuch as by causing the disappearance of all secondary pain, accidents are not followed by the permanent infirmity for which they hoped.

The whole history of the surgery of fractures cannot be related in an address which is already too long, but I shall have succeeded in my purpose if I have made plain to you to how great an extent the duty of the surgeon has become, difficult indeed, but effective in this matter of fractures. Instead of waiting for the injured person to cure himself, we can cure him and quickly restore to him the use of his limb.

It is a laborious task, more difficult than the banal application of irremovable appliances; it is still insufficiently understood by the profession, and altogether unknown to the public. But I am proud to think that in your country it has met so favourable a reception that you have been willing to listen to the exposition of the subject which I have to-day offered to you as a tribute of fraternal homage.

An Address

ON THE

PRODRAMAS OF MIGRAINE.

DELIVERED BEFORE THE WESTMINSTER DIVISION OF THE
BRITISH MEDICAL ASSOCIATION.

BY

SIR WILLIAM R. GOWERS, M.D. LOND., F.R.S.

GENTLEMEN,—I have chosen a subject for your consideration with which every practitioner is familiar from the accounts of his patients, and a good many are also well acquainted from personal suffering—the curious sensory symptoms that constitute the premonition of attacks of migraine, using the term as equivalent to paroxysmal headache. The symptoms occur before every form of such headaches, those which are bilateral, as well as those that may be strictly termed “hemispheric,” but both are common without premonition.

The knowledge we have of these peculiar symptoms, the prodromas of migraine, is very small, compared with their frequency, their detailed features, and the facility which frequent recurrence affords for their collection. It is easy to explain the paucity of facts. Observation under conditions of distress is not easy, especially when minute precision is needed. A graphic presentation of visual sensations, such as that which was afforded by Dr. Airey, can only be recorded from memory, because vision is too much interfered with by the subjective disturbance at the time. A knowledge of, or at least some acquaintance with, the physiology of sensation is necessary for the full use of the opportunities which are met with, especially by personal observation. It is the hope that I may excite some to careful record, that makes me choose this subject for consideration, and describe some cases which illustrate the leading features of these strange manifestations. I will, however, endeavour to avoid repeating those that I have given in the Bowman Lecture on Subjective Sensations of Sound, and in the lecture on migraine in *The Borderland of Epilepsy*. I do not propose to discuss their nature, although it is difficult to avoid alluding to the hypotheses that have been brought forward.

The prodromas are a functional disturbance in the sensory region, and so is the headache which succeeds. But the headache may be termed a coarse disturbance consisting of pain, often most intense, and sometimes with some secondary effects of its severity. On the other hand, it may be slight and of short duration, and it may be even absent, the prodroma occurring alone. These premonitory symptoms, although sensory, do not include pain. They are restricted in range. The sense of sight is often involved, sometimes by loss, partial or general, sometimes by an elaborate display of its higher crude functions in light, colour and apparent motion. Other special senses do not participate, except the sense of touch. Neither smell, taste, nor hearing seems to be involved, although there is rarely a slight degree of vertigo, the precise nature of which is not clear. The involvement of cutaneous sensibility seems to be of touch, and is a frequent and

marked manifestation. The arm is its most common seat. It may be felt in the tips of the fingers, passing along them, and going no further, or as a zone of tingling around the wrist, which slowly ascends the arm, in the course of ten to fifteen minutes. As it passes up, it leaves behind it lessened sensibility, which gradually becomes normal, and with this some degree of loss of power, apparently the result of inhibition. After reaching the shoulder, the tingling hardly ever descends the trunk to the leg, although it may in rare cases be felt in the foot, and sometimes ascends the leg. Often, after ascending the arm, or primarily, it is felt at the mouth, in the lips, sometimes in the gums and tongue, on one side, but in the lips it is often felt on both sides. Here it is an intense tingling, sometimes compared to pins and needles, apparently as slight pricking, but it is never described as pain. It seems here also to leave distinct diminution of sensibility behind it, but on this we much need further observations, on the degree and duration and character of impairment.

Still more frequently the premonition consists in interference with sight. There may be impairment of one half of the field of vision, seldom, if ever, so complete as it is from organic disease, not reaching actually the middle line. Often the loss on one side is associated with a luminous spectrum, of which a typical form is that figured by Dr. Airey in the *Philosophical Transactions*. This begins as a star, a little to one side of the fixing point, which enlarges, becoming first an angled sphere and then a serrated or zigzag outline which breaks below, and the elements of which it consists become progressively smaller towards the free extremity. They are often coloured, adjacent ones differing. Sometimes they are luminous without colour. Often they are double. Within the zigzag, as it expands, there is a misty luminosity which becomes fainter internally, and hinders sight if an object is looked at. Thus the dimness of vision within the bright or coloured zigzag outline resembles the numbness left by the tingling as it passes up the arm. After its expansion, the spectrum often ends by a whirling explosive appearance. In other cases an angled light appears near one lateral edge of the field, or both, sometimes several interlacing zigzags. Or a stellate bright object may appear on one side and remain without expanding. In other cases a sort of luminous lacework occupies the middle of the field, sometimes bounded by a brighter band. Various other spectra are seen, of which we much need precise drawings.

This sensory disturbance may be always the same in some patients, in others varying. The premonition is often unilateral in character, and the succeeding headache is felt on the opposite side of the head. Sometimes the premonition is felt on both sides or has no lateral significance, and then it is succeeded by a medial or bilateral headache. These constitute the common rule, but exceptions are frequent; at least, a patient may fail to recognize a one-sided seat of the headache which succeeds a unilateral prodroma. The headache may be successively bilateral, that on one side ceasing when pain develops on the other side. Moreover, the premonition when unilateral may pass beyond the middle line in its course, although the headache is confined to one side.

One other frequent symptom of the warning remains to be mentioned. When the sensory disturbance is right-sided it is often accompanied by impairment of speech of the character of aphasia. Sometimes the loss is almost complete; in other cases there is only a difficulty in the use of words. But we need much to know more precise details of this loss when it occurs.

Of the process which induces the premonition we have only hypothesis to rest on. There is clearly a disturbance of function in certain parts of the cerebral hemisphere, probably the cortex, which is the subsequent seat of the pain. The disturbance of function is apparently crude, and seems, as it were, to ripple through the centre, leaving an inhibited condition which quickly passes away.

Any hypothesis presents difficulties. That which is least difficult is the opinion that local vasomotor spasm causes anaemia in a certain region, and that subsequent dilatation of the arteries is the cause of the subsequent pain. There is often superficial pallor and coldness during both the sensory premonition and the early part of the headache, but it is not always con-

spicuous, and the state of the surface is only evidence of the occurrence of vasomotor derangement, and not of its kind. A greater difficulty is constituted by the uniform character of the nervous symptoms in most cases, and the difficulty in assuming that such a nervous discharge can be explained by such a process as vasomotor spasm. But the production of an effect may be facilitated by repetition. Some time after a previous headache an attack may be brought on by over-fatigue or by error in diet, which would have no effect soon after one. This has given rise to the assumption that some toxic state is developed in the system. It is, I think, certain that the sufferers often have a pronounced gouty inheritance. But the assumption of a peculiar blood state throws no light on the immediate mechanism of the attacks, and is quite compatible with the theory of vasomotor disturbance. Certainly marked benefit is often obtained from the regular administration of nitroglycerine (with strychnine), which seems to act by steadying the vasomotor nerves and rendering them less prone to derangement. I have never had an opportunity of observing the retinal vessels during a sensory prodroma, but during the headache I have seen no abnormality in size, and the known symptoms during vasomotor spasm of the retinal artery bear no resemblance to those which precede migraine.

The time of life at which migraine begins varies much. Often the headaches are said to go back to the period of earliest memory: they may begin only when adult age is reached, or a prodroma is added to those which before occurred without one. They may commence at any later period, and often as late as fifty or after. At any adult age, the prodroma may occur alone, at least sometimes, the headache being or becoming slight and trifling. When a visual spectrum has often preceded the headache, it is sometimes called into separate existence without succeeding headache by any flickering light before the eyes, such as a reflection from rippling water. A surgeon, who had suffered from migraine for many years, sometimes set up his customary spectrum by the reflection from the knife with which he was operating. Thus the functional disturbance is apparently the same as is produced by actual vision.

In middle or later life the occurrence of an unaccounted premonition may give rise to much concern, especially if it involves the arm, lips, or speech. It may seem like a vascular lesion in the brain, especially if it occurs without succeeding headache, or if this is only slight. Even a more severe degree of pain in the opposite side of the brain may seem the effect of a presumed cerebral lesion, to the medical practitioner as well as to the patient, who is likely to consult his adviser in alarm on account of symptoms which are new in his experience. I have known this to occur, and an erroneous diagnosis to be made without any other foundation. The symptoms which alarm the patient closely correspond to the premigrainous premonition in detailed character, and this should therefore be familiar, for the correspondence may always be trusted. I will indicate the points on which reliance may be placed in describing some cases to illustrate the general facts I have mentioned, as I now propose to do. Especial weight may be placed on the deliberate progress of the symptoms, such as the sensation of numbness ascending the arm, and on the definite numbness in the lips and its extension to both sides of the lips, and on the brief defect of sensation which follows it, and on the affection of vision, and the definite but transient interference with speech. This is always associated with right-sided symptoms in vision or the arm or face. The constant vanishing of the symptoms in the order in which they come on is also of great significance.

A young man of 17 had suffered from migraine since 12, the intervals ranging from a week to several months. Coloured zigzags appear on the right side of the field, and he cannot see on the right side. The spectrum expands and passes to the left, together with the impairment, which thus involves at last the whole field. After it has passed away, speech is almost lost; for half an hour he is only able to utter a single word of four or five he wants to say. When this ceases the headache begins at the back of the left eye, passing to the left side of the head, for six hours or so, it persists throughout behind the eye. There was no sickness, but great general sense of cold, and a very small pulse.

A man of 37, who had had rheumatic fever in early life, had suffered from left-sided headaches for a year, about once a month. They began sometimes soon after waking in the morning, more often at any time in the day. First there is

numbness in the tips of the fingers of the right hand, which passes slowly up the arm and then is felt in the right side of the cheek and mouth, but does not go to the throat. He is then unable to utter words correctly; there is not difficulty in getting the right word, but a difficulty in uttering it, apparently in articulation. Then this and the numbness cease, and headache comes on in the left frontal region, or left side of the occiput. On nitroglycerine the attacks ceased for nearly a year, and they returned less frequently and in very slight degree, but with the same premonition, and he had occasionally, during sleep, a right-sided convulsion, apparently of idiopathic epilepsy. There was no optic neuritis or sign of organic disease.

A member of our own profession, aged 37, whose mother also suffered from migraine, had had attacks as long as he could remember. The headaches had been preceded by visual symptoms, which occurred alone once or twice a week when he was seen, without succeeding headache. The condition begins as a luminous zigzag near the periphery on one side; it becomes larger, without colour, and inside it is a yellowish luminosity. Then it seems to him to cross to the other side, but there is no definite hemianopia. The side varies on which it appears, but the headache he had previously was always on the side opposite to that on which the spectrum began, and was accompanied by a small spot of hyperaesthesia on the occipital scalp. Formerly, when the premonition was on the right side and the headache on the left, aphasia formed part of it, and the first symptom was numbness in the hand, beginning in the hypotenar region and passing along the tips of the fingers to the thumb, which passed off in the same order, and never ascended the arm.

When a prodroma in the arm is associated with disturbance of vision the former usually occurs first. But it occurred last in one patient:

A lad of 18 suffered from headaches, which came on at intervals of six weeks or longer, sometimes six months, and then two or three headaches occurred at much shorter intervals. First there is an appearance of zigzag shaped objects before the eyes, not coloured, extending over the fields, but intermittently, and anything at which he is looking disappears and then can be seen again to vanish. This is repeated several times, and is followed by slight dimness of vision to one side. Then numbness occurs in one hand or the other, sometimes in the shoulder, and then it passes down the side and the leg. Sometimes it passes up to the face and involves the tongue and throat, like pins and needles, on one side only, but the side varies in different attacks. It is slow in progress, taking half an hour to go through the side, and seems to recede in waves in 1½ courses, as did the affection of sight. Sensation in the skin seems dimmed by it, but is not lost. When it is over headache comes on, severe, usually on the side of the head opposite to that on which the prodroma was felt, rarely on the same side, lasting from one to several hours, and attended by vomiting. I could not learn the character of the premonition of the same-sided headache.

In almost every case which is carefully studied the prodroma presents some special peculiarity, and a number of precise records must be collected and compared, to furnish the ground for any inference regarding their features. Momentary symptoms are usually characteristic of the warning of epilepsy, but in one case of migraine the prodroma was a bright spot of light, with a blue margin, which lasted only for a moment, but returned three or four times in the course of an hour, when severe pain came on, on one side of the head. The patient was a woman, 35 years of age, who had suffered thus for many years. Her mother also had migraine.

I have said that in bilateral or medial headaches, if there is a prodroma, it is of similar distribution. Thus a man, whose attacks of pain were severe and were situated in the middle line of the head, experienced a premonition which consisted in a concentric contraction of the field of vision, which became restricted to a small spot in the middle of the normal field. Before this he sometimes had tingling in both hands. In another case there is first general dimness of sight and after it has lasted a quarter of an hour, bright luminous spots appear at each outer side of the conjoined field of vision, and are seen in rapid movement. They do not extend far into the field, and one or two are larger than the others. When they disappear, headache comes on across the forehead and behind both eyes. It lasts only an hour, but he feels tired for the rest of the day.

Migraine and epilepsy occasionally coexist in the same patient, as in the second case mentioned above; but generally whichever disease existed first presents a diminution after the second has developed. That this is the rule cannot be doubted if a large number of cases are compared. I pointed this out in the *Borderland of Epilepsy*, and mentioned some examples. The two

affections seem, however, essentially independent. I have only once or twice met with a true connexion between them, the visual premonition of migraine becoming quickened into the aura of the epileptic fits. But such a relation is extremely rare. As a rule, the prodroma is always most deliberate, and is never attended by motor spasm, or, indeed, any motor symptoms, except the slight weakness when the numbness has just passed. Very rarely some spasm may be met with in association with the subsequent headache, when it is very intense. In a clergyman of 47, whose headaches began at 20, the early symptoms were unusual, inasmuch as right hemianopic dimness of sight, for a quarter of an hour, was followed by right-sided headache, chiefly at a spot in the right side of the occiput. The pain also passed down the spine to both legs and caused a twitching backwards, apparently semi-convulsive. The pain reached its height in six hours. There was no change in consciousness. The motor spasm was clearly a secondary effect of the pain. It had given rise to the diagnosis of epilepsy, and also of hysterio-epilepsy, to neither of which it had any relation.

In another case, a woman with very severe headaches of long duration—two days—which were attended during their height by semiconsciousness, and sometimes by spasm on the left side when the headache had reached its intensity, on one occasion the spasm made her fall out of bed. The prodroma was also long, lasting two hours, and consisted of coloured zigzags, which sometimes occurred alone.

That which is presented to the patient in the sensory premonition is a release of function, the form of which is thereby shown, and also its character. It is this which gives importance to the precise details. Most of the unilateral premonitions may be explained by the limitation of the disturbance to one hemisphere, by whatever it is excited, arterial spasm or whatever may be productive of the activity of function. But in rare cases the visual loss has the form of transverse hemianopia, loss of the upper or lower half of the combined field. In the hinder part of each hemisphere is represented the lateral half of the field, as a combination of the upper and lower quadrants. But the transverse loss implies an affection of the two upper or two lower lateral quadrants, situated in different hemispheres. This may be effected by arterial spasm involving symmetrical branches in the two hemispheres, on the supposition that arterial spasm excites the initial disturbance; or it is conceivable that this spasm may be on one side only, and the functional inhibition induced may act secondarily on the related centre in the other hemisphere.

I have elsewhere mentioned some examples of transverse hemianopia, loss of the upper half. It was also described by a woman, aged 38, as a prodroma of headaches from which she had suffered for twenty years. The first symptom was loss of the lower half of the combined field, observed with each eye. Often, but not always, luminous zigzags were seen in the dim region, bright but without colour. During recent years this had been followed by other symptoms, numbness and tingling in the upper lip or in one thumb, and on one occasion a patch was felt on the back of the left foot. Sometimes it was felt on the right side of the nose and adjacent cheek, with marked diminution of sensibility. When on the thumb it may remain there or may ascend the forearm as far as the elbow. Wherever it is felt, it lasts for ten or fifteen minutes, and then the headache begins, usually at the back of the head, and comes forward.

In another patient, a woman of 41, the hemianopia was sometimes lateral and sometimes transverse; the lateral loss did not extend to the middle line of the field, but the transverse loss reached the horizontal mid-level. If she looked at the middle of a clock dial, everything below the middle was indistinct. There was also numbness in the arm, slowly ascending and going to the lips and mouth on that side. When this was on the right side, loss of speech occurred also before the headache.

In young children sudden symptoms are sometimes seen, with headache, pyrexia, and general aspect of illness, often with vomiting. The symptoms cause a fear of acute meningitis, but after one or two days they rapidly pass away. For example, a boy, aged 9, had suffered since the age of 6 from two or three such attacks about every

six months. Each began with frontal headache for an hour; then extreme sleepiness came on, with vomiting at intervals. The temperature rose to 101° or 102°; the tongue was much furred, but after thirty-six or forty-eight hours all the symptoms passed away. There was a strong double family history of gout. The attacks generally seemed to be excited by some indiscretion in diet. I doubt not you will remember such cases, which come chiefly under the notice of the practitioner rather than of the physician, and I should like to know whether you have not observed that they gradually acquire, as years go on, the characteristic features of true migraine.

At the other end of life the prodroma of migraine frequently occurs without, or with but slight, headache, and sometimes with more brief headache than occurs during middle life. Occasionally the loss of power seems to be the chief symptom, and in these cases the headache is generally so slight as not to attract special attention. With many patients an error in diagnosis readily occurs in a first attack of this character, although another one is less likely to be mistaken. The weakness may be considerable. In one patient the attack came on when on a journey, and for an hour he walked with great difficulty. If we assume that vasomotor spasm is the cause of the prodroma, we may regard arterial spasm in the motor region as a sufficient cause of the loss of power.

The same conclusion was reached by Dr. Langwill of Leith regarding two cases of this character in late life, in which symptoms quite like those of a grave organic lesion passed away after an hour's duration. Each patient had other similar attacks.²

Recovery may not always occur, even if the vasomotor hypothesis is correct. The arterial contraction prevents sufficient blood reaching the region of the brain to maintain its function. When the blood state favours rapid thrombosis this may occur in the vessel so as to preclude the return of the circulation, and enduring thrombosis, with all its consequences, may maintain the loss of function as permanent hemiplegia. Indeed, there is some danger of this in earlier life if any change in the blood promotes its coagulation. A woman of 29 had been subject to migraine as long as she could remember, always on the right side of the head. During the fourth month of her second pregnancy an attack of her customary pain was followed by left-sided weakness, with ataxy of the hand, permanent left hemianopia, and impairment of sensibility on the left side. Pregnancy often involves an increased proneness to blood coagulation; there was no heart disease or albuminuria.

Migraine abounds in problems of interest, but I have striven to confine your attention to the points on which additional and extended facts are much needed. A consideration of the cases I have mentioned will show how numerous and various are these features in every case.

If these are not at first evident to you, I shall be only too glad to have an opportunity of pointing out the details on which any case may add to our knowledge, on information as to the general character of the premonition. The task is not easy, for the prodroma is brief and ever changing, and observation needs the perception of another person; but it is worth an effort and will reward the trouble it occasions.

I may add another word regarding treatment. The benefit from nitroglycerine and strychnine, although often most conspicuous, is not invariable. Cases in which vasomotor disturbance is well marked externally sometimes derive no benefit. Why this should be the case it is not possible to say. Bromide taken regularly may then have more effect, or a small, long continued course of salicylate. For the relief of attacks which are developing, a dose of antipyrin has often a quick influence, or Hochst's fused combination of antipyrin and caffeine (migrainin), or a similar preparation made by Martindale of antipyrin fused with salicylate of caffeine (migralgin). Nitroglycerine may conveniently be given in the form of the 1 per cent. solution, liq. trinitrini, but the mixture containing it must be kept acid. It may therefore be usefully united with a digestive tonic. Dyspepsia is common in some of those who suffer from migraine, and an error in diet may give rise to an attack some time after the previous one.

An Address

ON

THE DIAGNOSIS OF SYPHILITIC DISEASES OF THE NERVOUS SYSTEM.

DELIVERED AT THE CLINICAL AND PATHOLOGICAL SECTION OF THE BIRMINGHAM BRANCH OF THE BRITISH MEDICAL ASSOCIATION, ON FRIDAY, APRIL 30TH, 1909.

By F. W. MOTT, M.D., F.R.C.P., F.R.S.,

PHYSICIAN TO CHARING CROSS HOSPITAL, LATELY SENIOR TO THE LONDON COUNTY ASYLUMS.

ALTHOUGH syphilis is directly or indirectly responsible for a large number of organic diseases of the nervous system and it is a useful practice based upon the results of experience to treat a large number of cases of disease of the nervous system by antisyphilitic remedies, yet it is well to bear in mind that in such a widespread disease as syphilis, coincidence as well as cause is of very frequent occurrence. Therefore, in making a diagnosis we have to determine the question whether the fact that the patient has had syphilis, or even presents at the time of examination signs of active syphilitic lesions, is a coincidence or bears a direct or indirect causal relationship to the nervous symptoms for which he is consulting you. In many cases, especially in women, there may be no history of syphilitic infection and no signs on the body, and yet the character of the disease may clearly point to the possibility or even the certainty that it is of syphilitic origin; or it may happen that without a history or signs of syphilis a nervous affection may arise in an individual, which after antisyphilitic treatment ends by cure, arrest, or amelioration, but it does not necessarily follow that the disease was syphilitic, for we do not know what would have happened in the way of improvement if no drugs had been administered; in fact we cannot be sure whether it was an example of coincidence or cause.

A person suffering with an affection of the nervous system, whose blood gives a positive antigen reaction, is much more likely to be suffering from a syphilitic affection than one who has had syphilis but whose blood does not yield the reaction; for it is an indication that the syphilitic virus is still active, and therefore capable of producing true syphilitic lesions of the nervous system. An examination of the cerebro-spinal fluid in such a case will afford most valuable evidence not only as to whether the disease of the nervous system is post-syphilitic or not, but whether it is one of true syphilitic inflammation or of a degenerative parasyphilitic nature. Such evidence is of vital importance, for, in the case of the former, mercury, rapidly but judiciously administered, may be followed by a complete cure, whereas in the latter it will do more harm than good. I will cite a case that was recently under my care.

A woman, aged 34, was admitted to Charing Cross Hospital said to be suffering from tabes. She had shooting pains in the legs, unsteadiness in gait and station, a feeling of the soles as if walking on cork, unequal pupils which reacted sluggishly to light and to accommodation, pain and cramp in the muscles of the legs, absent knee-jerks, patches of anaesthesia on the legs, and a belt of thoracic anaesthesia with girdle sensation. After inquiring into the history and finding that she had suffered with headache and squint, that the knee-jerks which were absent on admission had returned a few days later, I came to the conclusion that this woman, with a probable duration of infection of not more than four years, was suffering really from pseudo-tabes, the result of syphilitic meningitis, especially as she told me that she had had a little stiffness in the neck, and I then obtained Kernig's sign. Lumbar puncture was performed, and 390 lymphocytes per c.mm. were found—an enormous number for tabes dorsalis. This large number of lymphocytes could only be accounted for by a widespread active gummatous change in the meninges. She was placed on mercurial inunction. The symptoms began to clear up rapidly, and a fortnight later the lymphocytes had fallen to 70 per c.mm., and at this time was tested by the Wassermann method, and found to give a negative reaction for both antigen and antibody. Unfortunately, blood was not tested on this or future occasions. A fortnight later the cerebro-spinal fluid was examined and only 20 lymphocytes per c.mm. were found, the patient being almost well. A fortnight later still, there were no lymphocytes, and the fluid was negative to the Wassermann reaction. The patient was quite well; the pains, anaesthesia, and unsteadiness had entirely disappeared.

REFERENCES.

- ¹ Borderland of Epilepsy, pp. 59, 84, 97. ² Scottish Medical and Surgical Journal, June, 1905.

It is of the greatest importance, therefore, to be able to decide whether a syphilitic patient is suffering from the immediate effects of the syphilitic virus on the enclosing, supporting, and vascular structures with secondary effects on the nervous structures, or from the remote effects of the syphilitic poison upon the bio-chemical stability, and therefore durability, of the nervous elements themselves. In the former case the nervous elements are secondarily irritated, damaged, or destroyed at random, although, for anatomical reasons, there are certain seats of election, the onset is more or less sudden, the symptoms are obtrusive and contrast markedly with parasyphilis, in which the onset is insidious, progressive, and of slow evolution. We shall see that examination of the blood and the cerebro-spinal fluid will often enable a decision to be arrived at as to which group of post-syphilitic affections the patient is suffering from. The sooner the nervous affection follows the primary infection the more likely it is to be syphilis of the nervous system; the longer the interval the more likely it is to be parasyphilis, but exceptions occur, especially to the former rule. It is much more common for tertiary syphilitic lesions of the nervous system to arise very long after the primary infection than for tabes dorsalis or general paralysis to occur within a few years of infection. There is no period from the appearance of the primary sore onwards to the end of life in which true syphilitic lesions of the nervous system may not occur.

The first point to decide is whether the nervous symptoms from which the patient is suffering are the direct result of the syphilitic virus upon the membranes, the blood vessels and their sheaths, with secondary degeneration of the nervous elements (for example, (1) Gummatous meningitis—cerebral, cerebro-spinal, spinal; (2) localized gummata, single or multiple, obliterative arteritis) or are the symptoms those of tabes or general paralysis? It is not always easy to decide, but it is well to bear in mind that the shorter the period which has elapsed between the primary infection and the onset of the symptoms the more likely it is to be due to the action of the syphilitic virus; it is very unusual for a generalized syphilitic meningitis to commence after the lapse of five years from primary infection; quite one-half of the cases manifest symptoms within the first eighteen months, in some the symptoms are obvious with the appearance of the roseolar rash, and a few cases have occurred when the primary sore was yet unhealed. A very different order of things to tabes dorsalis and general paralysis, for in these diseases it is very rarely that symptoms occur in less than four years after infection, and the average time is ten years.

In the case of active syphilitic meningitis, arteritis, and gummata, all of which conditions may occur simultaneously, successively, or progressively over the whole cerebro-spinal axis, the blood will most probably give a positive antigen reaction, the cerebro-spinal fluid will exhibit a great increase of lymphocytes and albumen, but it may give neither antigen nor antibody reaction. The administration of mercury will cause the disappearance of the antigen serum reaction, the disappearance of the lymphocytes from the cerebro-spinal fluid, and the cure, amelioration, or arrest of the symptoms if the disease has not been allowed to progress so far as to lead to thrombosis of vessels and destructive ischaemic softening of the cerebro-spinal nervous substance. In the case of parasyphilis, especially general paralysis, there is a different reaction, the blood serum giving the antibody reaction; the cerebro-spinal fluid both in tabes and general paralysis exhibits lymphocytes and shows the presence of albumen.

CLINICAL DIAGNOSIS.

Neurasthenia.

A neurasthenic who has had syphilis, and who is suffering with irritability of temper, headache, insomnia, lassitude, loss of memory, who has occasionally difficulty in finding words to express his thoughts, complaining of migrainous or vertiginous attacks and of various cutaneous sensory disturbances, in the form of anaesthesia or paraesthesia, who is hypochondriacal and depressed, who has a mortal dread of softening of the brain, from which some

friend of like habits and history has suffered, whose knee-jerks are exaggerated, and whose physiognomy exhibits a wearied, hypotonic, anxious condition, with lack-lustre eyes, will naturally arouse in the mind of the practitioner the possibility of the patient being in the prodromal stage of general paralysis. Examination of the pupils and of the cerebro-spinal fluid with negative results, in conjunction with the absence of any signs of dementia, will usually enable him to decide in favour of neurasthenia and to give a favourable prognosis.

Pseudo-General Paralysis.

Pseudo-general paralysis (diffuse syphilitic brain disease) is sometimes termed syphilitic general paralysis. I think that this is an unfortunate term to use, because general paralysis is of syphilitic origin and yet is incurable by antisymphilitic remedies. Diffuse syphilitic brain disease is not a primary neuronic decay, but a widespread chronic inflammatory process affecting the enclosing, supporting and nutrient structures, due directly to the action of the syphilitic virus; instead of occurring, as a rule, many years after infection, the most serious cases commence within the first four years after infection, therefore the average age incidence is some years below that of general paralysis.

The early diagnosis of *diffuse cerebral syphilis* is of the most vital importance, for it is amenable to antisymphilitic treatment, which if adopted in its early stages arrests or ameliorates, but occasionally a partial cure, or even a cure may be hoped for. It is, therefore, essential to know what are the diagnostic differences of general paralysis and diffuse cerebral syphilis. It is rarely that true general paralysis is associated with permanent coarse obtrusive paralyses; in fact the term "paralysis" expresses the condition more truly. On the other hand, diffuse syphilitic brain disease is very liable to be followed by paralyses of all kinds.

Still, cases of universal syphilitic *endarteritis cerebri* accompanied sometimes by a gummatous meningitis and gummatous cerebral tumours for some time present no evidence of coarse paralyses, and not infrequently such cases are admitted to the asylums and are more often than not diagnosed as general paralyses; accordingly they are not treated with mercury. At the autopsy one recognizes a disease which is of a totally different pathological nature; the brain is not wasted, the convolutions are not shrunken, if anything they are rather flattened, as if there had been an excess of intracranial pressure. The patient was undoubtedly demented, and, although there were no signs of paralysis, he was weak, shaky, and tottery in gait. But was the mental condition like that of a typical paralytic dement? had he no physical signs or subjective symptoms during life which would point to his suffering from diffuse cerebral syphilis? These have been the questions I have many times asked myself when making autopsies on such cases. First of all many of these patients have signs of syphilitic skin lesions, often scars of gummata. The friends will tell you that they have for some time complained of severe headache, often worse at night. If accompanying the dementia they have had coarse paralyses, blindness or other obtrusive symptoms, coming on more or less suddenly, and with remissions and regressions, there is but little difficulty in diagnosis; but where the symptoms are mainly demential the diagnosis is not so easy, and necessitates a comparative knowledge of this form of dementia and the dementia characteristic of general paralysis. I now attempt to indicate the main points which will enable a differential diagnosis to be made. "The dementia of syphilitic brain disease is partial; it is unequal and elective in its attack; it compromises certain forms of psychic activity, memory, association of ideas, energy and capacity for mental work, rather than diminishing intelligence as a whole. It does not alter so profoundly the character and personality of the individual, nor in the great majority of cases does it destroy the patient's idea of his past and present state, nor that of orientation in time and space. He still possesses the *autocritical* faculty, and is more or less conscious and disturbed by his mental deficiency" (Dupré). It is not necessary to inquire of others whether he has had lapses of consciousness or signs of torpor and apathy, or fits of depression, for he himself will usually tell you.

"According to my experience, based upon the results of a large number of post-mortem examinations, there is always associated periarthritis, endarteritis, peripneumonitis, encephalitis, and myelitis; the neoplastic formation extends from without inwards along the perivascular lymph sheaths, and is never entirely limited to the membranes; it affects, more or less, the whole cerebro-spinal axis.

(1) *Diagnose différentielle entre la Dénence Paralytique et les autres formes des Démences acquises.* Rapport IV, 1er Congrès Internationale de Psychiatrie, etc., Amsterdam, 1907.

From a clinical point of view syphilitic dementia is accompanied by numerous mental and bodily symptoms. The mental symptoms comprise states of excitement and depression more sudden and accentuated than general paralysis; there are disturbances of consciousness in the form of somnolent, drowsy, semi-comatose conditions from which the patients emerge, again to relapse, and such remissions are especially significant. In the intervals there is not the same intellectual and affective deficiencies as in general paresis, nor does the same apatheticism, moral optimism, suggestibility, mobility, and automatism obtain as in general paralysis. The accompanying bodily troubles are coarse and obtrusive, and due to focal disseminated lesions in the brain and spinal cord, causing apoplectic and epileptiform seizures, followed by aphasia, paraphasia, apraxias, hemiplegias, monoplegias, paraplegias, triplegias due to affection of cortical centres and their projection systems: or paralyzes and sensory troubles from affection of cranial nerves and their nuclei of origin arise. The clinical picture may be slow in its evolution; it is irregular, variable, and proceeds by fits and starts, with prolonged and sometimes indefinite periods of arrest. It is often a stationary dementia, and under the influence of mercurial treatment it may undergo regression. True general paresis may occasionally—but rarely, according to my experience—supervene on such cases of regressive or arrested cerebral syphilis. The syphilitic dementia may in rare instances be accompanied by a tabes dorsalis, and we may think we have a case of tabo-paralysis, or there may be a pseudo-tabes associated with pseudo-general paralysis. When hereditary syphilis produces in a child or young adult a diffuse meningo-encephalitis, it may simulate general paralysis.

The best criterion lies in the mode of evolution of the dementia and paralysis. The evolution of general paralysis is slow, insidious, and progressive towards marasmus and death. Syphilitic dementia, especially if it be treated, remains stationary or tends to regression, ending in a state of acquired imbecility, of which the history affords the clue. In my experience dementia from congenital syphilis is much less frequently met with than juvenile general paralytic dementia.

Recent investigations have shown that tuberculosis may produce in children diffuse encephalic changes of a chronic inflammatory and hyperplastic nature, terminating in a diffuse nodular sclerosis of the brain. These lesions cause mental enfeeblement, imbecility, and idiocy.

Arterio-sclerosis.

Syphilis is probably the most important factor in the production of arterio-sclerosis, especially cerebral arterio-sclerosis. Consequently a patient who has had syphilis may present signs of general arterio-sclerosis in which the vessels of the body generally, and of the brain and kidneys in particular, may suffer. Toxic conditions of the blood may arise in consequence of the latter affection; owing to the renal inadequacy, and probably also the diseased conditions of the vessels of the brain, uraemic symptoms may arise in a person who is suffering with mental symptoms caused by the disease of the cerebral vessels and the altered conditions of the blood. The symptoms of uraemia—namely, headache, pyrexia, twitchings, epileptiform seizures—may simulate the symptoms and seizures of general paralysis. There are, however, points of difference which will enable a diagnosis to be made. In such a case examination of the heart and arteries and of the urine would afford information. The pupils in uraemia may have a sluggish reaction to light, but they are rarely unequal or irregular. Very probably examination of the fundus will show retinitis, haemorrhages, and arterio-sclerosis of the retinal arteries, causing thickening of the walls, which appear like silver wires; consequently the veins as they pass over the thickened arteries often show a kink. The patient is usually over 50 years of age. The cerebral symptoms are often characterized by a progressive dementia and paralysis, but there are many points of difference, both in the mental and motor symptoms. From the psychological point of view, the dementia of cerebral arterio-sclerosis is a partial, unequal loss of mind. The patient becomes irritable, suspicious, and even dangerous to himself and others; there is exaggeration of emotivity, and various psychopathic reactions complicate the intellectual decadence; but, unlike general

paralysis, the patient retains his notions of personality and the faculty of auto-criticism, and is therefore more or less conscious of his loss of memory and mental enfeeblement. From a clinical and evolutionary point of view the dementia of arterio-sclerosis is associated with varied and innumerable paralytic symptoms appearing after seizures or in sudden attacks, and due to the capricious, random affection of the different arteries of the brain supplying different functional territories. The arteries may be so thickened as to interfere with a proper supply of blood to various areas of the brain, or they may become occluded by thrombosis, in which case disseminated areas or foci of inflammatory softening and necrosis may result. The symptoms naturally vary according to the seat and extent of the lesions. When the anterior cerebral is affected a seizure may occur, and, owing to the paracentral lobe being destroyed on one or both sides, a leg monoplegia or paraplegia may result accompanied by disturbance of spontaneous psychic activity and of memory; in affection of the middle cerebral, there results hemiplegia, aphasia, apraxia, paraphasia, word deafness, word blindness, and dysarthria; in the posterior cerebral, hemianopsia, psychical blindness, and disturbances of topographic orientation. If symmetrical areas are affected by arterial ischaemia, or the projection fibres proceeding from those areas in the internal capsule undergo necrotic softening, paralyzes of a pseudo-bulbar nature—for example, dysarthrias and difficulty of swallowing, etc.—may occur. One fact obtains in all cases: it is a parallelism between the depth of the dementia and the extent and degree of destruction of the cerebral cortex. Besides, we may have other less serious bodily disturbances resulting from arterio-sclerosis of the cerebral vessels which might especially be thought to indicate general paralysis—namely, apoplectic attacks followed by hemiparesis, dysarthria, difficulty in swallowing, disorders of psycho-reflex activity of speech, of mimicry, forms of apraxia and asymboly combined more or less with paretic-spastic symptoms. The character of the physiognomy in the case of organic dementia differs from that of general paralysis by the predominance of mimic disturbance over intellectual deficiency. In the former disease the patient shows a marked emotivity, readily bursting into tears or laughter, and not infrequently there is facial asymmetry of spasmodic or paralytic origin. These cases of arterio-sclerosis producing progressive dementia, paresis, or paralysis and pseudo-bulbar speech troubles are sometimes erroneously diagnosed as general paralysis of the insane, especially when accompanied by seizures, mental excitement, or depression and delusions. I have, however, seen typical general paralysis accompanied by general arterio-sclerosis; but, as a rule, the cerebral arteries in general paralysis are not thickened, and examination of the fundus rarely shows any noteworthy changes unless it be a case of tabo-paralysis, when optic atrophy is very frequently discovered. In a number of cases which I have examined of arterio-sclerosis I have found multiple softenings in the internal capsule and basal ganglia caused by disease of the lenticulo-striate arteries. These lesions account for the emotivity, mimic disturbances, dysarthrias, and pseudo-bulbar affections.

Chronic Alcoholism.

Cases of chronic alcoholism in which there is a history or signs of syphilis frequently offer many difficulties in the matter of diagnosis. They do so for many reasons: first, because many paralytics in the early stages of the disease take to drink. The symptoms they present are largely due to the effects of the intoxicant, and they are certified and sent to the asylum, where the diagnosis of *mania a potu* is made. The true nature of such a case declares itself after the effects of the alcohol has had time to wear off. I once saw a man who upon admission saw black devils come and perch on his nose and fill his nostrils with stinking things. He had been drinking heavily. A week later, when the effects of the alcohol had passed off, he had a marked euphoria, and when asked whether he still saw black devils that came and perched on his nose he said that they were angels with wings of gold, and that they put sweet perfumes in his nostrils.

Hallucinations, especially of vision and of a terrifying nature, are common in alcoholism; they are not common in general paralysis uncomplicated by alcoholic intoxication.

tion. The dementia of alcoholism is characterized by the predominance of the moral affective defects over the intellectual, by a degradation of the ethical sense, deterioration of will, and the tendency to delusions of persecution, jealous suspicion, and violent motor reactions, rendering them dangerous to themselves and others. The psychic activity is confused rather than destroyed. There is deficiency rather than absence of memory.

Alcoholic Polyneuritic Psychosis (Korsakow's Disease).

The clinical picture of a severe case of the disease is not unlike that of general paralysis in its final stages. It is commoner in females than in males. The patient, prostrate, bedridden, and emaciated, with contracted limbs and suffering with bedsores, lies oblivious to her surroundings; roused to reply to questions, only incoherent responses are obtained. Such a condition may well be termed *pseudo-general paralysis*. Frequently a definite diagnosis cannot be made unless the case be watched; if this be done, occasionally at intervals the mind may appear to be relatively clear in Korsakow's disease. The definite signs and symptoms of polyneuritis may be present. When the symptoms of Korsakow's disease are confined to loss of memory and mental confusion the diagnosis is more difficult. Auto-criticism may still be present in a patient suffering with Korsakow's disease; consequently, when confronted by her mental shortcomings she betrays astonishment and even alarm in her facial expression. The general paralytic, having lost the faculty of *auto-criticism*, is self-satisfied, and the expression is one of foolish contentment or of apathetic indifference. Both diseases are characterized by *pseudo-remembrance*: but in general paralysis there is fantastic fabrication, whereas in Korsakow's disease the content of the pseudo-remembrance is more or less of a probable nature and usually related to some past experiences in the patient's life. For example, a woman suffering with alcoholic dementia, named Gloster, was certified as suffering from delusions of grandeur. "She said she was the Duchess of Gloster." After she had been in the asylum some time and the dementia was passing off, I questioned her in reference to the delusion in the certificate. She stated: "My husband was humpbacked; his name was Gloster, and his pals called him the Duke of Gloster. If he was the duke, surely I had a right to call myself the duchess." She admitted that it was foolish on her part to have done so. A very characteristic delusion of this disease is that there is a baby in the bed. In Korsakow's disease there is complete disorientation: the patient has no idea of time or place or of the identity of persons. In general paralysis, on the other hand, there is incomplete disorientation: the patient still recognizes familiar surroundings and persons with whom she is habitually brought in contact. The loss of memory and receptivity is transient or temporary, but it is more complete for the time being than in general paralysis; the *amnesia* of general paralysis may not be so marked at first, but it is progressive and continuous. The existence of the Argyll Robertson pupil and of irregular, unequal pupils as permanent phenomena would decidedly point to general paralysis rather than Korsakow's disease. The cerebro-spinal fluid in the case of Korsakow's disease would be negative as regards the antibody reaction and lymphocytosis; therefore in all doubtful cases lumbar puncture should be performed and the cerebro-spinal fluid examined.

Dementia Praecox.

The age, mode of onset, and evolution of this disease is unlike that of general paralysis, except in the juvenile form. In 80 per cent. of the cases of dementia praecox the mental symptoms occur before the age of 25. There is usually a strong hereditary history of insanity, and no history or signs of congenital syphilis. General paralysis is a disease which on an average does not commence until ten years after infection; therefore the most frequent period for general paralysis to occur is not adolescence, but the prime of life. Occasionally, however, I have seen young women admitted to the asylum with *dementia paralytica* in whom the mental affection commenced at a relatively early age. Inquiry into the history often shows that they were prostitutes or had come from a refuge home, or a history of congenital syphilis was either certain or probable. Dementia is not the earliest sign of this affection, but hallucinations and fragmentary delu-

sions; the Argyll Robertson pupil is not present, the pupils are not unequal, and as a rule not irregular. If there is any doubt, the diagnosis can at once be settled by examination of the blood and cerebro-spinal fluid by the Noguchi and Wassermann methods, and by cyto-diagnosis of the cerebro-spinal fluid. Twenty successive cases of dementia praecox were examined by Drs. Harper Smith and Rae Gibson in the laboratory, and in every instance the result was negative.

Disseminated Sclerosis.

The typical insular sclerosis of young adults should not be mistaken either for general paralysis or multiple syphilitic brain disease, although cases of multiple focal patches of sclerosis, the result of syphilitic arteritis, thrombosis and ischaemic softening, in many respects resemble that form of insular sclerosis the cause of which is at present unknown. The difference in the clinical symptoms and the evolution of the disease to general paralysis in most cases suffice for a differential diagnosis; but if there be any doubt, examination of the cerebro-spinal fluid and blood with negative results will serve to exclude general paralysis. I have occasionally seen cases of multiple syphilitic focal lesions, the result of syphilitic arteritis, in comparatively young women, in whom there was scanning speech, increased deep reflexes, spastic limbs, Babinski's sign, and nystagmus. One case in particular I have in mind. At the autopsy I found an old syphilitic arteritis with a focal sclerosis in the pons; there was also degeneration of the ascending and descending long tracts of the cord. The patient showed no signs of syphilis on the body, but she may have had it, as she was unmarried, and yet had had a child. It is probable that such a case might have given the serum reaction, and possibly the cerebro-spinal fluid also would have yielded a positive result.

Cerebral Tumours.

Cases of cerebral tumour without motor or sensory troubles are not infrequently sent to asylums, and, according to my experience, they are as often as not called "general paralytics." Examination of the fundi in most cases would have revealed optic neuritis, a condition never found in general paralysis, although it may occur in syphilitic brain disease; but as a rule, according to my experience, syphilitic gummata and syphilitic meningitis do not produce the same degree of swelling of the disc that non-syphilitic tumours do; very much, however, depends upon the situation and the rapidity of growth of the tumour. Large slow-growing tumours of the frontal lobe occurring in men at the prime of life and with a history of syphilis and drink may be especially difficult to differentiate from the slow demential form of general paralysis; especially is this so when the tumour destroys the left frontal lobe and irritates the adjacent motor cortex, as it would cause epileptiform seizures and speech affections from the involvement of Broca's convolution. I have recorded a case in vol. iii, *Archives of Neurology*, of such a nature, in which the pupils were unequal, there was no optic neuritis, no vomiting, no severe headache. He was seen later by Dr. Percy Smith, who agreed with me that it was a case of general paralysis; he was then certified and sent to the asylum. The attendants there said he was a general paralytic, but not an ordinary case. Not infrequently the effect of treatment by mercury injection is associated with diminution of the swelling of the discs, and even when there is no history of syphilis this result would point to its being the probable cause. I recently saw a woman in one of the London County Asylums, and had her transferred to Charing Cross Hospital. Mr. Collins found five diopeters of swelling in each disc. After a course of mercurial treatment the swelling went down rapidly to two diopeters, and from being unable to read large print, she could read quite small, the headache ceased, and the vomiting no longer occurred. The cerebro-spinal fluid of this case did not give the Wassermann reaction, although it contained a considerable excess of lymphocytes; but then we know that in only about 25 per cent. of cases of syphilitic brain disease does the cerebro-spinal fluid give a positive antibody result. Lymphocytosis by itself is not sufficient evidence to prove that the disease is syphilitic, but the result of treatment combined with this makes it fairly certain that it was a syphilitic gumma that caused the symptoms in this case. When a gumma has gone on to

the later stages of necrobiosis and formation of dense scar tissue, as not infrequently happens in syphilitic neoplasms of the brain, the chances of successful treatment by mercury and iodide of potassium are more improbable. If epileptiform convulsions or epilepsy have become established, it is no proof, therefore, that it is not syphilitic because the fits do not cease after administration of anti-syphilitic remedies. I have seen quite a number of such cases which have been treated efficiently with anti-syphilitic remedies in which the fits continued, and which at *post-mortem* examination still showed an old caseous focus commingled and surrounded with dense scar tissue; consequently the treatment failed to produce resolution, and the symptoms of irritation had continued. The early diagnosis of a syphilitic gumma is therefore of great importance for successful treatment. A gummatous pachymeningitis giving rise to headache and pain on pressure, but without the general signs of increased intracranial pressure—namely, optic neuritis and vomiting—may occur. I have seen such cases with localizing symptoms, and one which I diagnosed during life in Hanwell Asylum was of interest, inasmuch as it failed to yield to anti-syphilitic remedies, but had it been transferred to the hospital it could have been treated surgically with almost certain success. (See *Archives of Neurology and Psychiatry*, vol. iv.)

General Paralysis.

It will be gathered that my object hitherto has been mainly to exclude from the diagnosis general paralysis, but in doing so I have alluded to most of the mental and bodily symptoms of this disease. Although grandiose delusions are very common in general paralysis, and occur in the majority of the cases, sometimes indeed persisting from the earliest period when the disease is diagnosed until the fatal termination, yet some cases of paralysis are associated with marked mental depression and hypochondriasis, while others are characterized simply by a progressive parietic dementia. Sir Alex. Morison, in his *Physiognomy of Mental Diseases* (1840) gives a very good clinical account of general paralysis, and remarks that Drs. Calmeil and Esquirol (he should have added Bayle) had given the disease the name of "general paralysis of the insane," but by the regulations of Bethlem Hospital cases of this description for upwards of fifty years have been excluded; nevertheless, patients in the early stage of the disorder, have been frequently admitted, and have undergone treatment for a limited time, so it is well known there. Thus he says:

When a patient is brought to the hospital expressing ideas of high rank or expectations, great abilities, extensive possessions or much wealth, particularly in articles of gold, with impaired memory and weak volition, or what may be termed infirmity of purpose, and at the same time has a slight difficulty and hesitation in speech, and an unsteady and tottering gait in walking, it is concluded that he labours under this formidable disorder in its early stages, and that there is little or no chance of his recovery.

Sir A. Morison, it may be remarked, was attached to Bethlem, and must have been aware of Haslam's description. But long before Haslam had differentiated this form of paralytic insanity, the keen observation of Hogarth had depicted inimitably some of its most characteristic symptoms in a scene in *Bedlam* of the *Rake's Progress*, 1735. I here reproduce two drawings (taken from this scene) from Morison's *Physiognomy of Insanity*, with the explanation, p. 279:

Upon these portraits Gilpin observes that the self-satisfaction and conviction of him who has discovered the longitude and

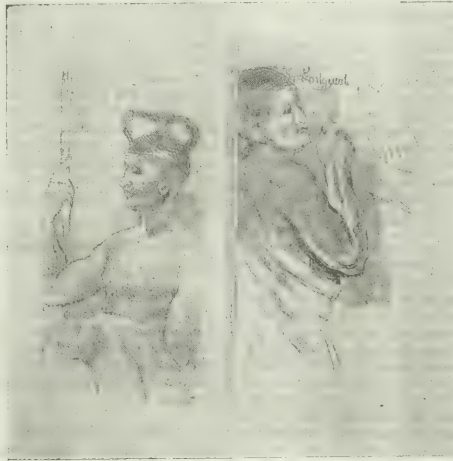
the mock majesty of the monarch are admirable; the latter deems himself worthy of a crown, and sits in an attitude of great pomp, viewing his wooden sceptre and wearing his paper crown with as much conviction of his dignity as any monarch in Europe. The mind of the other seems lost in thought, and Hogarth's peculiar genius appears in his having the geographer whose element is ranging the wide world closely mowed up in a corner.

What better example could one have of the loss of autocriticism to which I have referred so often as being so significant of parietic dementia? (See illustration.)

There are many types of general paralysis; but there are a few phenomena which are seldom or never absent: (1) progressive dementia affecting the mind in its totality usually accompanied by elation, motor activity and grandiose delusions, sometimes by depression, motor inactivity and hypochondriacal or persecutory delusions; (2) pupillary affection—the pupils may be unequal, they are generally irregular and react sluggishly or not at all to light, but react to accommodation; (3) progressive paresis with tremor, especially affecting the tongue and face muscles; (4) hesitant, tremulous, slurred speech with elision of syllables; (5) similar affection of the handwriting, and often even in the early stage of the disease, the subject matter denoting dementia and delusions combined with the tremor, the elision or repetition of letters and syllables, suffice for a diagnosis; (6) altered knee-jerks generally exaggerated, sometimes absent on one side, or on both sides without Babinski's sign or ankle clonus. When the above symptoms are present there is little difficulty in diagnosis, but in the earliest prodromal stage, sometimes termed "the medicolegal," there may be considerable difficulty in forming an opinion, and the most experienced authorities make mistakes. I shall, therefore, only point out some of the manifestations of this early prodromal period. A modification of character and conduct occurs, the patient may become depressed, irritable, ill-tempered, preoccupied, moping, and hypochondriacal; or he may become

unusually restless, active, and excitable, full of new ideas and schemes, neglecting his business, profession, and family; he may launch into speculations, purchase goods for which he has no use, or he may give himself up to immorality, and even depravity. At this period alcoholic abuse is very frequent; hence at the commencement of parietic dementia toxic disturbances frequently complicate the clinical picture, making the diagnosis more difficult. A hyperaesthesia sexualis is frequent, and the increased sexual desire, with impairment or loss of function, may lead to criminal acts which may bring him into the police courts. In this medicolegal period he may get into the police courts for acts of drunkenness, theft, attempted suicide, manslaughter, or homicide. The loss of control and impulsiveness is in a large number of cases aggravated by alcohol, so that he becomes a danger to himself and others; yet it is not uncommon at this period to find that the patient is not unconscious of his morbid state, and it may be very difficult to certify him, as he may apprehend the object of your visit and take care not to give himself away. As a rule, however, even in the early stage, he is not critical of his own conduct and behaviour; moreover, grandiose ideas are often easily revealed by suggestion; moral optimism and approval is frequent.

The most important somatic disturbances in the prodromal stage are apoplectiform, epileptiform, and congestive seizures. I have known many cases in which such attacks have preceded years the definite signs of dementia. There



attacks may be followed by transitory paralysis in the form of aphasia, hemiplegia, monoplegia, etc.

It is in cases of doubtful diagnosis that the pathologist can afford help by the employment of methods of examination of the blood and cerebro-spinal fluid, to which I fully referred in the Morison Lectures, but which I will briefly note again, for since I gave the lectures I have found these methods of great use in the diagnosis of several early doubtful cases of general paralysis.

EXAMINATION OF THE CEREORO-SPINAL FLUID.

The Wassermann-Neisser-Brück Method.

This test may be carried out in the following manner. It is necessary first to immunize an animal against the blood corpuscles of some other animal—for example, by injecting the blood corpuscles of an ox into the circulation of a rabbit. After several injections the blood serum of the rabbit becomes haemolytic to the blood corpuscles of the ox by virtue of the presence in the serum of an immune body *plus* the normal complement or cytase. The latter is removed from the serum after withdrawal from the rabbit by heating to 56° C. for thirty minutes. There is then left in the rabbit's serum the immune body, which by itself will not dissolve the red blood corpuscles of the ox. The addition, however, of a small amount of guinea-pig serum which contains complement will at once restore its haemolytic properties.

The actual experiment consists in mixing the serum or cerebro-spinal fluid to be examined in varying dilutions with a watery or alcoholic solution of the liver of a syphilitic fetus; a small amount of the serum of a guinea-pig is added, and the bulk made up to a constant volume (about 2 c.cm.) with saline solution. The series of tubes containing these mixed solutions are placed in an incubator at 37° C. for one hour, and then the sensitized corpuscles are added. By sensitized corpuscles I mean the washed corpuscles of the ox to which has been added the heated rabbit's serum. The mixtures are again placed in an incubator for two hours at 37° C., then removed and placed on ice overnight. The next morning the amount of haemolysis in each tube can be estimated. If, on the one hand, antigen (contained in the extract of the syphilitic liver) and antibody (in the serum or cerebro-spinal fluid) have been present they have united with the complement (provided by the guinea-pig serum), and no solution of the corpuscles will have taken place, because the complement has been fixed before the addition of the sensitized corpuscles. If, on the other hand, the antibody was not present in the serum or cerebro-spinal fluid, then the complement in the guinea-pig serum has remained free to act on the sensitized corpuscles, and to lead to their solution (haemolysis). A control experiment using normal serum or cerebro-spinal fluid—namely, one which contains no antibody—must be made at the same time.

In order to make the antigen test, the blood serum or cerebro-spinal fluid is used in place of the syphilitic liver extract, and tested in varying dilutions against a serum or cerebro-spinal fluid which has previously been proved to contain antibody in known amount.

The Noguchi Method.

A simple method introduced by Noguchi consists in boiling two parts of the cerebro-spinal fluid with five parts of a 10 per cent. solution of butyric acid in saline solution for a few seconds and then adding one part of a normal sodium hydrate solution and again boiling briefly. A flocculent or granular precipitate is obtained on standing in parasyphilitic affections, due to the presence of a globulin. The test is useful in distinguishing general paralysis from other forms of insanity not associated with meningitis-encephalitis.

Cyto-diagnosis.

The number of leucocytes present in the cerebro-spinal fluid may be estimated approximately by the following methods:

1. A drop of the fluid which has been previously well shaken is placed in the chamber of a Thoma-Zeiss haemocytometer and the cells allowed to settle. The number of cells lying over the 400 squares of the chamber multiplied by 10 will give the number of leucocytes in 1 c.mm. of the fluid.

2. The cerebro-spinal fluid is centrifuged and the supernatant fluid poured off. The residue is removed in a

capillary pipette, blown on to a slide and allowed to dry. Stained with Leishman or Jenner's stain the residue from a normal cerebro-spinal fluid will show at the most only two or three lymphocytes in the field with a magnification of 400 diameters, whereas in progressive parasyphilitic affections the lymphocytes are markedly increased in number.

An Address

ON

CHRONIC INTESTINAL STASIS.*

BY

W. ARBUTHNOT LANE, M.S.LOND., F.R.C.S.ENG.,

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GENTLEMEN,—I am very pleased to have this opportunity of addressing you on a subject that has afforded me the greatest interest, as I am most anxious to have the benefit of your opinion upon it, knowing that you will consider it with an open mind. I hope, however, that some of what I have written about it may not be completely unknown to you, and that it has possibly already received your attention and kindly criticism. Chronic intestinal stasis comprises the conditions arising in consequence of the progressive development of an imperfect or delayed functioning of the gastro-intestinal tract. While constipation is the most frequent objective evidence of unsatisfactory drainage associated with chronic intestinal stasis, it happens not uncommonly that there may be a daily evacuation. In some cases the motions may be abnormally frequent and loose. Therefore the character and frequency of the evacuations are by no means constant in this condition.

PATHOLOGY.

I will endeavour to describe what I consider to be its pathology.

1.

In the first place there is the dilatation and extension of the caecum into the true pelvis, associated with the development of retaining bands or mesenteries between its outer aspect and the adjacent peritoneum lining the abdominal wall. The caecum may become so distended that, after occupying the true pelvis, it ascends upwards from it.

2.

Secondly, there is the fixation of the appendix by retaining bands continuous with those holding up the caecum, and securing the appendix usually about its centre, sometimes by separate bands, and at other times by a band blended with the normal mesentery of the appendix. This band is continued by the proximal portion of the appendix, and forms together with it a retaining support helping to hold up the caecum, and oppose its descent from its normal position.

The drag exerted upon the caecum, upon the proximal part of the appendix, and upon its retaining band of peritoneum, produces a kinking of the lumen of the appendix at its point of fixation, since the distal portion of this structure is necessarily tilted abruptly upon its proximal segment. The degree and chronicity of this occlusion produce varying results, all of which are grouped under the heading of "appendicitis." The point of the abdominal wall to which the appendix becomes secured varies within wide limits, but it is usually anchored to the iliac fossa. If, however, it is fixed to the posterior wall or floor of the true pelvis, the appendix in the female finds itself in dangerous proximity to the right ovary which is affected by any inflammatory change in the appendix, while during menstruation the engorgement of the ovary and adjacent structures accentuates any trouble in the appendix.

Though surgeons refuse to recognize the causation of these bands obstructing the appendix, they know that adhesions exist about it very constantly, and they are always very ready to avail themselves of these adhesions as an excuse for removing the appendix when they have

* Delivered before the American Surgical Association at Philadelphia June 3rd, 1909.

opened the abdomen on a wrong diagnosis of disease in some other organ, such as stone in the gall bladder, duodenal ulcer, stone in the kidney or ureter, etc. At the operation, when the incorrectness of the diagnosis is plain to all, they satisfy their own conscience, the medical attendant, and the patient and his friends by removing an appendix anchored in the manner I have described.

3.

The ascending colon is anchored to the peritoneum lining the abdominal wall external to it by similar bands, while the hepatic flexure is drawn upwards and outwards to an abnormally high level by the presence of bands of peritoneum of considerable density.

4.

The transverse colon forms a loop the convexity of which reaches in some cases into the pelvis, where it struggles with the caecum for priority of occupation.

Bands of peritoneum bind the convexity of the transverse colon to the adjacent ascending and descending segments of the colon. Above these viscera are bound directly together by newly-developed adhesions, but below they are connected by an acquired mesentery.

5.

The splenic flexure and descending colon present changes similar to those described on the right side.

In the large bowel generally the strain exerted by restraining bands may so control it as to reduce its lumen very materially at one or more points.

6.

The changes in the sigmoid are perhaps the most striking and obvious. They arise in precisely the same manner as those already described. Nature makes an effort to convert the mobile loop which would attempt to occupy the pelvis into a narrow fixed straight tube connecting the descending colon and rectum.

This is effected by the development of little bands which pick up the outer aspect of the meso-sigmoid and secure it to the adjacent peritoneum. This process continues till a proportion of the outer wall of the sigmoid itself is secured to the iliac fossa, and the tube is rendered fixed and straight, all evidence of the original loop having disappeared. This ideal condition does not always exist, since the bulk of the mesentery may not have been grasped securely by the newly-developed adhesions before the ends of the loop have been secured and approximated by them. Consequently a very considerable dilatation of the sigmoid results, and when it is completely obstructed it is called a volvulus.

The fixation of the sigmoid by these acquired adhesions may be irregular, and obstruction may occur at one or more points in its length.

Unfortunately for the left ovary it lies in immediate relationship with the meso-sigmoid, and it very frequently indeed becomes involved and fixed in the acquired adhesions. In some cases it appears as if the ovary is merely anchored to the contracting meso-sigmoid by adhesions, while in others the ovary may be completely surrounded by and included in the altered meso-sigmoid.

7.

The fixation of the left ovary is very detrimental to that structure since it is followed sooner or later by a cystic change in that organ. In some cases the ovary may be infected with a chronic inflammation, or suppurative may result in it necessitating its removal. Very rarely the sigmoid may be so much involved by the process that it may be necessary to resect a portion of it also.

The cystic ovary, completely surrounded by the adhesions, may after a time again become mobile in a cavity developed in them and later may escape from it. It then ceases to have any apparent connexion with the adhesions in which it was embedded except in so far as the association of an anchored sigmoid and a cystic ovary is observed to exist.

8.

The ileum is very thin-walled and flaccid. If its termination is drawn upwards so as to expose the under surface of its mesentery the peritoneum forming its

posterior surface is picked up in puckers precisely like the meso-sigmoid but not so effectually. This is clearly with the object of helping to support the loaded caecum and oppose its displacement.

9.

The stomach is dragged downwards by the pull exerted upon its convexity by the depressed transverse colon, while the pylorus and first portion of the duodenum are bound to the under surface of the liver and often to the cystic duct and gall bladder. The stomach is dilated apparently because of the kink effected at the exit by the downward drag on the convexity of the stomach and the resistance offered by the adhesions binding the pylorus and duodenum to the liver.

Owing to the very different construction and mechanics of the abdomen and of the viscera in the sexes the mode of anchoring of the pylorus and duodenum differs somewhat. I believe that this variation is responsible for the greater frequency of duodenal ulcer in the male and of gastric ulcer in the female.

The posterior surface of the stomach is not infrequently adherent to the peritoneum covering the pancreas, etc.

10.

The gall bladder is generally full of bile, and gall stones are not infrequently present. The development of gall stones may be consequent on the stagnation of bile in the gall bladder whose evacuation is impaired by the drag upon it or upon its duct by the anchored duodenum and pylorus and by the prolapse of the liver itself. Women being much more frequently affected by intestinal stasis than men suffer more often from gall stones. It is a noteworthy fact that, while gall stones do not form in cases of intestinal stasis in which loss of flesh results at an early period of life from toxic absorption, they do so very readily in stout women in whom intestinal stasis develops in a marked degree comparatively late in life.

11.

The breasts show changes which vary from a recurring mastitis affecting the upper and outer segments of the breasts, and especially of the left, to a definite cystic degeneration involving the whole of both breasts. These degenerated breasts are very susceptible to the development of malignant disease.

12.

The kidneys are mobile.

13.

There is very little fat.

14.

The skin is stained and inelastic.

15.

Respiration is chiefly diaphragmatic.

16.

The circulation is bad, as evidenced by the coldness of the extremities.

17.

The muscles are very friable and small in bulk.

SYMPTOMS.

The symptoms produced by this condition of things are due in part to the interference in the normal functioning and is expressed by pain, and in part to the absorption of poisonous material, and is evidenced as toxæmia.

While toxic symptoms may exist without pain, pain has always associated with it definite evidence of auto-intoxication. I would just mention that many of the objective evidences of auto-intoxication, such as pigmentation of the skin and bad-smelling perspiration, are much influenced by the colour of the hair. In light-haired people a very advanced condition of poisoning may exist without the presence of these symptoms, while in dark-haired people these evidences appear at an early period.

Pain is due apparently to the distension of a portion of the bowel with faecal contents and their gaseous products or by the passage of faecal material through it. For instance, the distension of the caecum is a frequent and distressing symptom.

Pain about the hepatic and splenic flexures, both in front and behind, results from the obstruction which exists at those points and from the drag or strain upon the retaining bands by the loaded bowel in the erect posture of the trunk.

Pain in the sigmoid segment may be due to the difficulty in forcing the contents through a fixed, straight tube of diminished calibre, length, and elasticity whose mucous membrane may be gorged, inflamed, or even ulcerated, or to the distension of a loop or loops placed at a mechanical disadvantage by irregular anchoring by adhesions. Pain also results from the distension of the stomach, and also of the small bowel because of its delayed functioning.

Pain in the fixed left ovary is frequently a distressing symptom, especially at the periods. The fixation of this irritated organ renders it very tender on pressure, especially if examined bimanually, since it cannot readily avoid the pressure of the fingers as does a mobile ovary. Apart from this, there are the mechanical symptoms which ensue from the progressive development of the cystic condition of the ovary, which is now found to be more frequently malignant in structure than was supposed.

Degenerative cystic changes in the breast are very commonly present in a varying degree in certain cases of chronic intestinal stasis. This change is usually first observed in the upper and outer segment of the left breast, and later in the corresponding area of the right breast.

In the young unmarried woman chronic mastitis which is accentuated at the periods is very common. It affects the same areas of the breasts as does the cystic change which appears later. In a number of patients on whom I have operated for chronic intestinal stasis one or both breasts had been removed for cystic degeneration. This condition has been called Schimmlbusch's disease. I have been much struck by the fact that these degenerative conditions do not arise in the breasts of women having regular intercourse, however toxic they may be, while they develop very rapidly on its cessation. How far the mechanical impairment of the sexual apparatus here referred to is responsible for the loss of sexual appetite which is a very marked feature in these women, and how far it is consequent on the associated toxæmia, is a matter of question. In any case it is much influenced for good by the cessation of the auto-intoxication following on some satisfactory treatment of the defective intestinal drainage. It is not improbable that the more frequent presence of cystic change in the left breast results from the fact that the left ovary is damaged and rendered cystic very much more often than the right, owing to its fixation by or inclusion in the bands which obliterate the meso-sigmoid and shorten and straighten the sigmoid.

The pain due to movable kidneys, gall stones, gastric and duodenal ulcers, pancreatitis, renal conditions due to the narrowing of the right ureter by the band retaining the appendix or by suppurative about the appendix, uterine versions and flexions, and to many other conditions, which I believe are all effects of chronic intestinal stasis, are fairly characteristic.

It is difficult to separate abruptly the symptoms that are brought about mechanically from intestinal stasis from those which result from the consequent auto-intoxication, since many are due to both.

Here I would like to call attention particularly to the work of Dr. Victor Vaughan and Miss Wheeler *On the Effects of Egg White and its Split Products on Animals*, and of Dr. Török *On Experimental Studies on Round Ulcer of the Stomach and Duodenum*. I can do no more than refer to them here, but their importance in reference to intestinal stasis is obviously very great indeed.

The chief toxic symptoms are headache, a feeling of mental and physical lassitude, an inability to perform the ordinary duties of life, mental misery and distress, nerve symptoms as migraine, etc., which are comprised usually under the term of biliousness, and a want of control over the temper which renders these patients unhappy and unpleasant companions.

The symptoms for which the patient seeks relief at the hands of the surgeon vary materially with the position and occupation of the sufferer. While the unfortunate governess or domestic servant will struggle on until complete physical disability renders her incapable of performing her duties, the woman who has not to earn her

living calls attention rather to the mental distress from which she suffers. For this reason the patient in good circumstances receives attention at a much earlier stage in the disease than the poor worker, and either requires a less extensive operation, or benefits much more from a serious one. Too frequently the poorer patient has reached a stage in which operative procedures, however extensive, afford only temporary benefit, since the distension of the small intestine, having reached a certain limit, is liable to return and progress after an interval, and there is associated with this distension pain for which very little relief can be afforded.

Of the many cases of chronic intestinal stasis in private practice which called for operative interference, in nine only have I removed the large bowel. Of these one died, and that accidentally, from the bursting of a small deep-seated stitch abscess into the general cavity. Of the larger number of private cases in which division of the ileum and its junction with the large bowel was effected, there was no death from the operation. One of these patients died six months after the operation from acute obstruction. The cases in which simple division of constricting bands, or the establishment of a junction between the occluded ileum and the sigmoid or rectum, are sufficient are much more commonly met with in private than in hospital practice.

Auto-intoxication reduces the resisting power of the individual to the entry of organisms of various sorts and facilitates their obtaining a foothold in some of the tissues of the body. I will call attention to only one organism, the tubercle bacillus, since it illustrates very well this depreciation in the vitality of the tissues. The examination of a large number of dark-haired children affected with chronic tuberculous disease of joints will show the presence in them of unmistakable signs of auto-intoxication.

The examination of a number of girls suffering from lateral curvature or fixation of the asymmetrical position of rest will afford striking evidence of the effect of the toxin in depreciating the respiratory capacity and energy of the individual and will show them to be characteristically toxic. In them, as in the tuberculous cases alluded to, thoracic respiration is more or less completely in obedience.

TREATMENT.

If I have done nothing more than impress on you the importance of regarding chronic intestinal stasis as a very serious condition and one of which the capacity for harm is great and far-reaching in its results, I shall feel that my efforts have not been without result. We must acquire as thorough a knowledge as possible of the causation and pathology of delayed intestinal drainage and so endeavour to render our treatment of its several stages as scientific as possible.

I do not propose to discuss the medical treatment here, but will assume that the condition has developed to a degree that such treatment is obviously inefficacious to give the relief required. In other words, a stage has been reached in which owing to the delay in evacuating its contents the large bowel has not only ceased to perform a useful function, but has become such a source of danger that its removal from the drainage scheme will be of great service to the body.

It depends on the degree of development of the condition as to whether it is sufficient to separate and destroy constricting bands, or to divide the ileum and to connect it with the sigmoid or rectum, or whether it is necessary to remove the large bowel proximal to the junction. While in an early stage, and especially in the male subject, the obstruction at the hepatic or splenic flexures or at the sigmoid may be relieved by the division of bands producing constriction, in a late stage, when the small intestine has undergone extreme changes, the removal of the whole of the large bowel proximal to a junction between the small intestine and the sigmoid affords only a temporary alleviation of symptoms.

The most favourable cases for operation are those in which the symptoms are of a toxic rather than of a painful nature. In such the division of the ileum and its junction, with the lower part of the large bowel give complete relief to the symptoms and the consequent physical and mental improvement is extraordinary. When painful symptoms are much in evidence the large bowel should

be removed. The risk entailed by operation can be reduced very materially by first relieving the toxic symptoms by connecting the divided ileum with the sigmoid or rectum, and later, when the general condition of the patient has improved in consequence of this procedure, the large bowel can be excised if the symptoms demand it. I do not pretend that removal of the large bowel is not a very serious operation in certain circumstances. Indeed, in many of these patients any serious operation must be regarded as being dangerous to life, the danger varying chiefly with the degree of toxicity. I may say that in these and similar cases the risk can be very materially reduced by the subcutaneous injection of a large quantity of normal saline solution immediately before the operation. By this means the patient appears to suffer a minimum of shock from the extensive operative procedure, and vomiting either does not follow it, or should it do so, it is trivial in character. In these cases the absence of vomiting is a matter of very great importance. It was very frequent and severe after my earlier excisions of the large intestine, and was the cause of more than one fatal result. Besides the distress and depressing influence it exerted on the patient, the constantly recurring strain on a long wound was very liable to render it insecure or to determine the development of a septic infection in it, which would probably not have occurred had the recently incised structures been kept at rest. The risk of an infection starting in the peritoneal cavity appears to be very small. The mode in which the subcutaneous transfusion of normal saline, employed immediately before the operation, acts has been very clearly demonstrated by Dr. Crile's most interesting and valuable researches on the production of shock, of which America must be very justly proud.

HYPERTROPHIC OSTEO-ARTHRITIS OF HANDS WITHOUT VISCERAL OR CONSTITUTIONAL DISEASE.

By R. CARMICHAEL WORSLEY, M.R.C.S., L.R.C.P., COVENTRY.

J. L., the subject of the deformity illustrated by the accompanying photographs is a man, aged 47, one of a family of fifteen. One brother was born with two toes fused on one foot, the other foot normal. There is no history of any other abnormality in the family. The parents were not related in any way. The father was a very big, strong man, and is said to have been "double jointed" in the hands. He was a smith. J. L. was born with hands apparently natural, except that the middle finger of the right hand was crooked at the top joint. At 2 years of age this and the index finger of that hand, and the same two of the left hand, began to grow out of proportion to the general rate of growth, and the enlargement was most marked from the eighth to the fourteenth year of age. From the sixteenth year of age they have not hypertrophied further, but only taken part in the general growth.

The only movement now possible is at the metacarpophalangeal joint of the deformed fingers (the other fingers and thumbs having normal movement), all the other interphalangeal joints are ankylosed. At most of these joints (see photographs) there are large craggy nodosities, which feel cartilaginous, and over the dorsal surface of the

metacarpophalangeal joints of the first and second fingers of the left hand and middle one of the right are to be felt movable bodies, evidently cartilaginous, of $\frac{1}{2}$ in. to $\frac{3}{4}$ in. diameter, and one or two smaller pieces like "melon seed bodies." The enlarged fingers are transparent-looking at the more distal portions, and traversed by fine pink-coloured venules. The palms, especially the left, have huge pachydermatous pads, well seen in the photograph; the smaller pad next the thumb can be picked up, and has a thick, broad pedicle. The man generally carries his hands in his pockets. He is a boot finisher by trade, and says he can make a good living by it when work is plentiful. He has refused any operative interference.

BIOTRIPSIS, OR LIFE-WEAR: TROPHIC CHANGES IN OLD AGE.

[WITH SPECIAL PLATE.]

By G. LENTHAL CHEATLE, C.B., F.R.C.S.,

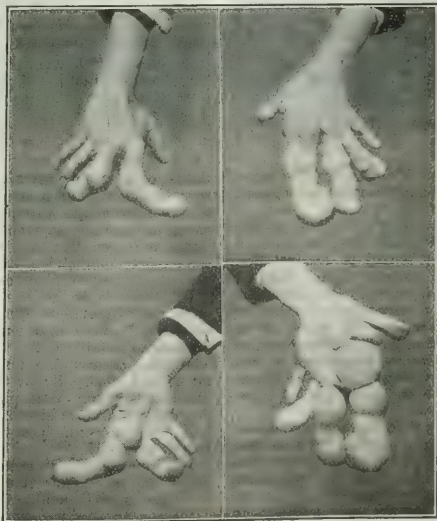
SURGEON TO KING'S COLLEGE HOSPITAL AND ITALIAN HOSPITAL.

THE appearance of the skin in an old person varies in different parts of the body. In this article I propose to call attention to the skin which has been subjected to the greatest exposure of the wear and tear of life. Dr. Head and Mr. Sherren have alluded to them¹; but, although I cannot find definite reference to them as a whole, there can be no doubt that the appearances are not described now for the first time. The changes in the greatly exposed skin are so marked that I think the general condition deserves a term to itself, and I propose "biotripsis" (life-wear), and to speak of a process of biotrophic changes. The condition is important from another point of view, for on the parts where it is most marked there is prone to occur papillomata and cancer.² Hence, if it could be shown that biotrophic changes are related to neurotrophic changes, the demonstration would support the two theories:

1. That a neurotrophic disturbance is concerned either directly or indirectly with the genesis of cancer.
2. That a neurotrophic influence bears upon the direction and limitation of the spread of cancer.

The biotrophic changes are observed most commonly upon the backs of the hands, the temples, and the foreheads of old people, but I have seen some of the changes upon the lower lips, cheeks, forearms, and occasionally elsewhere. The skin becomes shiny, smooth, thin, inelastic, pigmented, and apparently scarred, although the last cannot be explained by solutions of continuity of which there is no history.

The skin which shows the changes to best advantage is that which covers the second metacarpal bone and its immediate neighbourhood. The coloured plate which accompanies this article reproduces the most marked state in which I have seen this condition. It shows the backs of the hands of an old woman, aged 72. She did not complain of her hands, and had noticed nothing peculiar about them until she found I took an interest in them. She has never suffered from "chapped hands," nor has there been a solution of the skin's continuity. For the main part of her life she has been the wife of an agricultural labourer, and her duties have been domestic and household. I showed these hands to a distinguished



HYPERTROPHIC OSTEO-ARTHRITIS OF HANDS.

surgeon, and the first thing he did was to ask her, "How did you do this?"

The skin is shiny, smooth, inelastic. The subcutaneous

veins are almost subepithelial, there is a great degree of pigmentation, and there are in the most pigmented parts long radiating scars, which are more marked by loss of pigment than by the existence of cutaneous thickening. The condition is symmetrical; it is most marked in the region of the second metacarpal bone, and gradually fades away from this part. There is no similar change elsewhere on the hands. The tactile, heat and cold and pain sensations are not brisk, but it cannot be said that they are otherwise abnormal.

The condition very much resembles the bronzing of skin which has been subjected to prolonged exposure to the α rays. It is interesting here to remark that the two conditions are similar in another respect, namely, they are prone to be the seats of cancer.

It is difficult to account for biotriptic changes. In any country village in rural England many old people can be visited and the condition of their hands observed; it will be seen that they show great variety in the degree in which many of the biotriptic changes are present, although all their lives they have been exposed to prac-

Sir Victor Horsley has given me leave to publish a very interesting case which is under his care, and I take this opportunity of thanking him. The case bears upon the relation of nerve supply and pigmentation. Fig. 1 shows the head of a little boy whose right forehead is bald, the bone atrophied, and the skin pigmented in the region supplied by the supraorbital nerve of that side. Ten years ago he knocked the upper margin of the right bony orbit against the handle of a door.

It is a curious case from many points of view, and it makes one wonder that cutaneous pigmentation does not occur with greater frequency after operative and accidental traumatism. Whether pigmentation can be associated in any way with the cancer process is an undeveloped question. It is well known that pigmented cancer is a highly malignant type of cancer. Does the presence of the pigment in the malignant epithelial cells mean that they possess great resistance and vitality?

It appears from P. Carnot's experiment that the normal pigmented epithelial cells of variegated guinea-pigs possess greater vitality or resisting power than their white epi-



FIG. 1.



FIG. 2.

tically the same wear and tear of life. Hence the same wear and tear of life can induce in different skins different degrees of the biotriptic changes.

Skin which has been deprived of its nerve supply becomes smooth, shiny, inelastic, and atrophied, and in herpes zoster it is scarred. With regard to the relation between pigmentation and nerve supply there is much evidence to show that it may be close. But from the evidence at our disposal we cannot state definitely whether disturbance of nerve supply (1) induces an intracellular manufacture of pigment, (2) or whether it induces changes in the blood vessel walls which allow diapedesis of red blood corpuscles, the pigment of which is deposited either outside the cells of the part, or even picked up by them and incorporated within them.

Anaesthetic leprosy, Addison's disease, melanoderma, leucoderma, moles, and the greyness of hair seen in the heads of people "turning grey" all indicate by their distribution or associated nerve lesions a possible connexion between pigmentation and nervous influences.

The action of the nervous system upon normal pigment is shown in Lord Lister's classical experiment¹ in which he demonstrated that the change in colour of frogs when taken from the light into the dark and vice versa depends upon a reflex the afferent fibres of which traverse the optic nerves.

thelial cells when both kinds are grafted on to the same raw surfaces. There is at present no evidence to show that cancer is more frequent in negroes than in white races, nor can one say that the skin of brunettes is more liable to cancer than that of blondes, nor is cancer known to be more common on the most pigmented parts of the skin of any person, black or white.

Dr. Ironside Bruce has kindly sent me a case which bears upon this point. The patient is a woman, aged 60, and Fig. 2 shows that there is a rodent ulcer upon the internal extremity of the lower eyelid on the right side. The skin around the lower eyelid had become highly pigmented, especially at the point on which the rodent ulcer began, and some pigment also exists in a minor degree on the other side of the nose. This pigmentation had occurred some years before the appearance of the rodent ulcer.

Dr. Ironside Bruce's case is an example of what I mean, but it may be an exception to the rule, and more evidence is wanted on this point.

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SOME ASPECTS OF THE LEGAL RESPONSIBILITY OF MEDICAL MEN.*

BY

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HISTORICAL.

From the earliest times of which we have any authentic records, the responsibilities, liabilities, and privileges of medical men have been the subject of legislation. Yet the measure of that responsibility has varied greatly in times past, and amongst divers nations. The oldest known Code of Laws, promulgated by Hammurabi, King of Babylon, during the period 2285-2242 B.C., and which is believed by scholars of Assyriology to embody the best judicial decisions prior to that period, enacted the privileges, fees, and serious liabilities of those venturosome enough to practise medicine and surgery. After laying down a scale of fees which then, as now, varied with the social status of the patient, the code proceeds:

If the doctor has treated a gentleman for a severe wound with a lancet of bronze, and has caused the gentleman to die, or has opened an abscess of the eye for a gentleman with a bronze lancet, and has caused the loss of the gentleman's eye, one shall cut off his hands.

If a doctor has treated the severe wound of a slave of a poor man, and has caused his death, he shall render slave for slave. If he has opened his abscess with a bronze lancet, and has made him lose his eye, he shall pay money, half his price.

In later times, when priests assumed the function of medical practitioners and performed surgical operations, they enjoyed almost complete immunity as far as legal liability was concerned, for their knowledge, being supposed to be of a divine origin, was looked upon as infallible. On the other hand, among the ancient Egyptians the surgeon who ventured beyond the boundaries of the rules then in vogue, was liable to suffer corporal punishment even though the practice was successful. Among the western Goths the unsuccessful ministrations of the surgeon, if resulting in death, were followed by his being handed over to the vengeance of the relations of the deceased.

CRIMINAL LIABILITY OF THE MEDICAL PRACTITIONER.

The motives actuating every medical man must be to heal, to relieve suffering, and to prolong life. If he intentionally use any means to shorten life he is guilty of murder, and since the law imputes to any person the intention of bringing about that which is the obvious consequence of any wilful act, if he use any means, knowing that the inevitable resultant consequence thereof will be the shortening of life, he is guilty of murder. Moreover, although any person (whether qualified or not) who professes by way of occupation to deal with the life or health of His Majesty's subjects is bound to possess competent skill to perform the task that he holds himself out to perform, and is also under a duty to treat his patients with care, attention, and assiduity (*R. v. Spiller*, 1832, 5 C. and P. 333), these correlative duties are even more emphatically binding upon duly qualified and registered medical practitioners than upon others (*R. v. Crook*, indictment for manslaughter, 1859).

It is culpable negligence for a practitioner to omit giving either to the patient or to the person immediately in charge thereof, necessary directions as to the use of a dangerous drug, substance, or thing (*R. v. Chamberlain*, 1867, 10 Cox, C.C. 466).

It is, however, admissible evidence for a defence on a trial for manslaughter of a patient to show the remedial effects upon other persons of the particular means which caused the death of the person in question (*R. v. Long*, 1830, 4 C. and P., 398-423); but even if the remedial measures employed were the actual cause of death, or if the death was in any sense accidental or due to an honest mistake on the part of the practitioner, or if the fatal result was one which even with skill he could not reasonably have foreseen, he is not guilty of any offence, and the court will discourage a conviction where a practitioner has, with the bona-fide intention of healing, exercised his best skill, as in the case of *R. v. Van Butchel*, where the prisoner passed a rectal bougie on the deceased, who had

a disease of the rectum. The instrument on being inserted caused great pain, and shortly after the patient died. *Post mortem* the rectum was found to have been perforated. The judge considered that this case did not even approach to manslaughter, and directed an acquittal.

It is improbable that any but very serious cases of malpraxis would be dealt with as crime at the present day, although, as a matter of strict law, even a technical assault, such as vaccinating without consent or examination against a patient's will, is a crime as well as a tort. To the honour of the profession, it may be added that such cases are of the rarest possible occurrence, and when they do occur juries are not eager to convict, except where they think that prisoner has shown culpable ignorance or inattention or rashness under all the circumstances of the case.

CIVIL LIABILITY OF THE MEDICAL PRACTITIONER.

In all cases of skilled or professional labour, where a man publicly practises a profession, he holds himself out as being properly equipped for its due performance. He represents and undertakes, therefore, that he is possessed of the necessary and customary skill pertaining to that profession (*Harmer v. Cornelius*, 28, L.J.C.P., 85). He does not, if an attorney, undertake that at all events you shall gain your case, nor does a surgeon undertake that he will perform a cure, nor does he undertake to use the highest degree of skill. There may be persons who have a higher education and greater advantages than he has, but he undertakes to bring to bear a fair, reasonable, and competent degree of skill (*Lamphier v. Phipps*, 8 C. and P., 479). Whether the practitioner be qualified or unqualified matters nothing. The legal wrong is the incompetent or negligent treatment, not treatment by one wanting a qualification. The qualified man is an expert, the unqualified man has put himself into the position of an expert, although in the case of one who did not assume to be a medical practitioner evidence of gross ignorance would be required to render him liable to damages in a civil court, whereas in the case of a regular practitioner the ratio would be such reasonable knowledge and skill as is usual among medical men.

The degree of skill requisite is such as may be expected in the circumstances of time and place from an average person in the profession, one neither specially gifted nor extraordinarily dull, and where the reasonable amount of skill proportioned to the duties that are undertaken is found, there is no liability for error of judgement in the application of knowledge. Each case depends upon its own circumstances, and where an injury has been sustained that could not have arisen except from the absence of reasonable skill, then there is liability (*Hart v. Frame*, 6 C. and F. 193). Nevertheless the standard of care and competence is variable, for example, that might be negligence in a doctor of repute who holds a recognized position on a hospital staff, which would not be so in the case of a village doctor in the wilds of Kerry. What constitutes a reasonable degree of skill cannot be defined. It is a question of fact to be determined by the jury in the light of the circumstances of each case.

Treatment involving probabilities of danger cannot be applied without communication to, and some expression of consent by, the patient, although the duty to forewarn the patient is discharged by a general intimation of likelihood of pain or danger without going into a scientific dissertation on the probabilities and peculiarities of the case.

A medical man is usually responsible for the torts of his apprentice or assistant if the act complained of be done under his directions, with his authority, and in the particular manner sanctioned by him, but not otherwise. Nor are doctors in a hospital responsible for the negligence of the nurses therein unless they are in close proximity to the patient at the time of the commission of the wrongful act, and consequently able to prevent it. If it be not the usual hospital practice for them to superintend every minor detail, a patient who goes there cannot complain if they omit to do so in his case.

Speaking generally, no one can be held responsible for another's negligence unless the relationship of master and servant or of principal and agent exists. Hence a qualified assistant or locum tenens is himself responsible for any negligence proved against him. He does not involve his

* From a paper read before the Medico-Legal Society

principal unless the principal has employed him, knowing him to be incapable though qualified. And where, in a recent case, the plaintiff, a qualified medical man, sought to make the defendants, the governors of a hospital, liable for alleged negligence in conducting an operation upon him at the hospital, resulting in injury to his arm by burning and pressure while he was under the influence of an anaesthetic. It was held that the relationship of master and servant between the hospital staff and the governing body of the hospital did not exist, that if there was negligence, the operating surgeon who had control of the proceedings would be liable, but that the governors of the hospital were not liable for the negligence of the staff even if proved.

RELATIVE RESPONSIBILITY OF THE SURGEON AND ANAESTHETIST.

There does not appear to be any recorded case in England in which either criminal proceedings for culpable negligence or a successful civil action has been brought against a medical man on account of a death resulting from or occurring whilst under the influence of a general anaesthetic, which is probably the reason why no authoritative ruling laying down the exact degree of responsibility attaching to the operator and the anaesthetist respectively has ever been given. In all probability each case would be left to the jury to be decided in the light of the particular circumstances, but as the question has been the subject of much recent discussion the following observations, though unsupported by direct authority, are submitted for consideration.

It is well understood in the profession that the administration of an anaesthetic is a grave and responsible duty requiring undivided attention and unremitting vigilance on the part of the administrator, who, as such, has nothing to do with the operation *per se*, except in so far as it affects the administration. If negligence be proved in respect of such administration, the medical practitioner actually administering the anaesthetic is liable, not the surgeon who is engaged in the operation. But if the surgeon take upon himself to decide the particular kind of anaesthetic to be employed, or the apparatus to be used, or the amount of anaesthetic to be administered, he would probably be held jointly responsible with the anaesthetist for any unfortunate result to the patient—assuming negligence to be proved. Liability as against the administrator might arise from omitting the duty of careful physical examination, of previous appropriate preparation, or from leaving the patient before the administrator has had reasonable grounds for assuring himself that the case could be so left in safety.

Liability, it is apprehended, might also arise from committing the irregularity of assisting the surgeon while engaged in the administration of the anaesthetic (urgent necessity excepted).

But where a nurse or student is engaged in the administration of an anaesthetic under the direct supervision of a medical man, there (it is apprehended) the relationship of master and servant exists, the nurse or student being under the direct control of the medical man as to method, quantity, and kind of anaesthetic employed; hence the qualified man is responsible. Where circumstances compel an operator to accept the services of an unskilled or non-professional person, the operator must take the entire responsibility of the administration.

It is customary, though not the invariable practice, for the surgeon to select the anaesthetist, and generally control the procedure of the operation. If an operating surgeon can be properly charged with selecting an anaesthetist who has not had sufficient experience to enable him to give the anaesthetic properly, in case of a fatal result the surgeon might be held liable.

But apart from gross negligence, which is probably of the rarest occurrence, it is submitted that attempts to make medical practitioners liable to legal consequences for deaths occurring while an anaesthetic is being administered would damage humanity at large.

Moreover, where pure anaesthetics are administered, it would be difficult, in view of the fact that differences of opinion exist as to the exact manner in which anaesthetics act, to state the precise mechanism of the fatal issue, and hence the extent of the responsibility of the administrator.

CONSENT.

The law extends its protection to all, not only against actual hurt and violence, but against every kind of bodily interference and restraint not justified or excused by allowed cause; and, speaking generally, and apart from certain statutory requirements under the Workmen's Compensation Acts, a medical practitioner has no right to treat in any way, or even examine another, without his consent (persons in the public service and convicted prisoners excepted); and, should he do so, this technically amounts to an assault, which may give rise either to criminal proceedings, or to a civil action for damages. Even in cases where the patient actually consents, if such consent is obtained by fraud on the part of the practitioner he is guilty of assault—for example, if a parturient woman consented to be attended in childbirth by a medical practitioner because she relied on his fraudulent statement that he had not been lately attending any cases of scarlet fever, his attendance on her under such circumstances would amount to an assault.

Nevertheless, there are also circumstances in which a man's person may have to be dealt with promptly for his own obvious good, but his consent, or the consent of anyone having lawful authority over him, cannot be obtained in time. And it is not an assault for a competent surgeon if he perceives that an operation ought forthwith to be performed to save life to perform it without consent, such being a work of charity and necessity.

Generally speaking, it is implied that the practitioner shall, so long as the relationship of doctor and patient exists, do all that is necessary in his opinion for the welfare of his patient, within his province, subject to the proviso that when a dangerous or extensive medical or surgical proceeding is contemplated, the patient ought to be warned of the possible consequences, and given an opportunity of declining to undergo the treatment proposed.

Where a practitioner is requested by a mistress to examine a servant who is believed to be pregnant, it is highly important to obtain the consent of the servant both to the examination and to the making known to the mistress the information gained thereby.

The great importance of obtaining consent to such surgical proceedings as may be found necessary is obvious in these days when "explorations" may reveal a state of things requiring subsequently prolonged and extensive surgical proceedings.

The law of England in its relation to medical men is not, as is too commonly supposed, a professional mystery, nor is it a collection of decisions which "squint both ways."

Though possibly uncertain in some few particulars and incomplete in others, yet, viewed as a whole, it takes full, and even generous, cognizance of the anxieties and difficulties inseparable from medical practice, and in its dealings with medicine, as with other arduous and honourable callings, it embodies those notions of fair play, justice, and humanity by which Englishmen are governed in their public and private affairs.

NOTES ON A THIRTY DAYS' FAST.

By F. PENNY, M.R.C.S.,
...LOPEN, ILMINSTER, SOMERSET.

THESE notes are from personal experience of myself, a medical man, aged 46, height 5 ft. 7 in., whose weight for years prior to 1905 had averaged 11 st. 3 lb. net. Since that date I have been a purin-free vegetarian, and have dropped about 10 to 14 lb. in weight.

I felt, and was considered to be, in fairly good condition, but I undertook this fast to endeavour to satisfy myself whether the accumulation of waste and unnecessary material in the system is the real cause of much disease, and whether a prolonged fast is a sound method of elimination and as such conducive to bettered health.

Most of my observations are tabulated, the measurements, weights, blood counts, etc., being checked by another medical man. The morning records were taken in bed about 9 a.m., and those of the evening between 10 and 11 p.m., before retiring. The respiratory count, being my own, may unconsciously have been modified for the occasion. The spirometer records were taken by a Lowne's spirometer, and, though relatively correct, I

Day of Fast.	Net Weight 142 lb.	Morning Observations taken about 9 a.m., before getting up.				Evening Observations taken about 10 to 11 p.m., before retiring.				Observations taken just after coming down in the morning.										Temp. An. distal.	Urine.
		Pulse.	Resp.	Mouth Temp.	Rectal Temp.	Pulse.	Resp.	Mouth Temp.	Rectal Temp.	Sphygmometer.	Dynamometer.		Walking.	Cycling.	Miles.	Miles.	Oz.	Gr.	Sp. Gr.		
											R. Hand.	L. Hand.									
1	137½	—	—	—	—	50	12	—	—	398.	140	110	—	—	—	—	—	—	—	—	
2	—	59	10	97.4	98.6	52	12	96.4	98	418	142	110	—	—	10	—	30	—	—	—	
3	—	51	13	97	98	63	—	—	98	432	155	112	—	—	—	—	20	32	—	—	
4	132	52	15	96	97.8	45	—	—	98.4	422	145	117	—	—	—	—	15	—	1022	—	
5	—	45	13	95.2	98.8	72	—	—	98.4	412	150	130	3	—	13	—	45	—	1015	—	
6	131½	44	12	96.8	97.8	74	16	96.8	99	410	157	127	63	—	—	—	50	—	1015	—	
7	128½	43	13	96.6	97.4	76	—	—	99.8	388	160	105	—	—	—	—	50	28	1028	—	
8	—	43	14	96.4	97	46	14	96.8	99.8	406	135	105	2	—	81	—	35	—	1033	—	
9	—	44	11	96.2	97.2	48	12	96.8	98.4	385	160	115	3	—	13	—	45	16	1022	—	
10	127½	42	11	96.4	97.2	48	13	96.8	98	412	160	118	7	—	—	—	40	42	1016	—	
11	—	42	10	97	97.5	44	13	96.4	98	410	165	130	1	—	18	—	45	34	1016	—	
12	126½	43	11	97	98	43	16	97	98.4	388	155	130	5	—	—	—	45	32	1016	—	
13	—	39	11	96	98.8	45	12	96	97.8	402	170	132	6	—	—	—	45	55	1008	—	
14	123	39	10	95.2	96.4	45	13	97	98	396	170	130	5	—	—	—	40	18	1020	—	
15	—	39	10	95	96	44	12	96.8	99	382	170	120	7	—	2	—	40	21	1016	—	
16	126½	40	11	95.4	96.6	44	12	96.8	98.4	380	170	120	3	—	—	—	160	78	1008	—	
17	—	42	10	95	96	53	12	96	98	390	160	118	6	—	—	—	30	25	1025	—	
18	123½	39	11	94.6	96	46	11	96.4	98	388	160	120	—	—	—	—	70	48	1006	—	
19	—	44	12	96.2	97.4	57	12	97.4	98.2	385	165	118	6	—	—	—	70	50	1010	—	
20	—	42	11	95	96.4	49	13	97.4	98.4	375	160	125	—	—	—	—	60	56	1008	—	
21	120½	44	11	96	97	53	14	98.2	99	396	160	118	2	—	15	—	60	50	1006	—	
22	—	46	11	96.5	97	53	14	98	98.6	395	155	120	4	—	2	—	50	48	—	—	
23	—	44	11	96.5	97	52	14	97.6	97.8	395	170	115	1	—	8	—	50	52	1006	—	
24	117	45	11	96	97	58	13	97.2	98.4	380	160	118	2	—	3	—	65	60	1006	—	
25	—	44	11	95.8	96.6	52	13	97.6	98.8	360	155	115	—	—	—	—	50	40	1008	—	
26	116	44	11	95.6	96.4	50	13	96.5	98	368	150	110	—	—	—	—	30	29	1010	—	
27	—	44	11	95.6	96	50	14	96.4	98	365	150	105	—	—	—	—	40	1008	—	—	
28	—	43	11	95	95.6	65	13	96.8	98	333	140	110	2	—	—	—	45	38	1008	—	
29	—	45	11	95	96	54	12	96.8	98	335	150	120	2	—	—	—	50	50	—	—	
30	112½	42	11	94.4	95.4	64	13	96.2	98	325	140	110	—	—	—	—	30	30	—	—	
1	111½	40	10	94	95.4	76	15	96.6	98	375	142	110	—	—	—	—	—	—	—	—	
2	113	48	12	95.4	96.4	80	—	97	98.4	385	140	105	—	—	—	—	—	—	—	—	

* Weight after drinking 4 pints.

consider them absurdly high, in spite of authoritative statements that the instrument gives correct readings. My respiratory capacity on a von Brockmann's spirometer was before the fast 275 cub. in. and after its completion 255 cub. in.

My drink consisted of distilled water only, except that on the sixteenth day I added a little salt; on that day, as an experiment, I drank 8 pints.

Blood Counts taken on the Twelfth, Twentieth, and Thirtieth Days.

	Red Corpuscles.	White.	Poly-nuclears.	Large Mono-nuclears.	Lymphocytes.	Eosinophiles.
			Per Cent. 76	Per Cent. 12	Per Cent. 12	Per Cent. —
Twelfth day	6,600,000	10,000	76	13	6	—
Twentieth day	7,000,000	11,000	76	13	6	—
Thirtieth day	6,000,000	8,800	70	20	7.5	1.5

200 corpuscles were counted on each occasion.

Haemoglobin varied from 104 to 112 per cent.

Blood pressure (taken by a Martin's modification of the Riva-Rocci sphygmomanometer) fell steadily during the fast from 110 to 90½ mm.

Measurements.

	Before.	After.
	Inches.	Inches.
Neck ...	15	13½
Chest expanded ...	38½	35
Chest contracted ...	34½	31½
Abdomen ...	31	26½
Hips ...	35½	32½
Thigh ...	21	18
Calf ...	15½	12½
Ankle ...	8½	7½
Arm ...	13	11½
Forearm ...	11½	10½
Wrist ...	6½	6½

My urine remained acid and clear until the twenty-second day, after which there were copious deposits of "uric acid crystals" and also of "urates." I had been subject to bouts of this sort for years whilst on a mixed

diet, but I shall be glad of the explanation of such an occurrence after a twenty-two days' fast. The bowels acted only after enemata, eight plain water ones being given. Three Turkish baths were taken to assist elimination.

My time was occupied chiefly in reading, exercise, and conversation. I retired generally between 10 and 11 p.m., and generally spent twelve to fourteen hours in bed with the windows wide open. My average loss of weight was 1 lb. a day. My exercise was walking three miles and a half and cycling five miles and one-fifth a day. After the first two days I felt no hunger. I suffered much from cold, especially in the feet and hands, probably to some extent due to my being too lightly clothed for this climate. At times I was very irritable. Throughout the fast my tongue was coated and my breath offensive. During the last eight days I had very little inclination for exertion of any kind.

This fast was broken on the completion of thirty days with 1 lb. of fruit, in spite of eating which my weight dropped 1 lb. during the next seventeen hours, and my urine was loaded with "urates." Then I took fuller meals of milk, rice, fruit, toast, honey, etc., and gained weight rapidly ($\frac{1}{4}$ lb. in two days). I then had some travelling to get through, and on the third day took a long railway journey, including crossing London; on the fourth day I cycled fifteen miles, and took another long railway journey, and during the following night I had acute dyspepsia with very violent diarrhoea, which latter continued, with intermissions, for three days. After this I ate well and steadily, gained weight (10 lb. in ten days). During the third week my mouth was very tender, and my sublingual glands were considerably swollen, and during this week I gained 3 lb. in weight.

For some days during the second and third weeks there was very free diuresis.

This fast was not carried to a finish—that is, until my tongue cleaned and natural hunger returned, as described by Dr. Dewey—and I have not yet completely satisfied myself with regard to the objects for which the fast was undertaken, but I hope for better success next time.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF TRUE ELEPHANTIASIS.

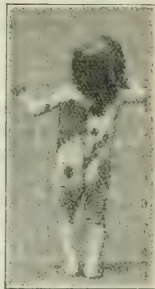


The unfortunate young Zulu shown in the photograph was committed to gaol for a breach of the peace; his age is from 22 to 25; he is pleasant and intelligent and in good health, with the exception of the condition of his foot and leg. He was, he says, in a normal state of health up to 8 or 9 years of age, when the trouble commenced in his foot, and has gone on to its present state. He tells me that he is the only member of his family with this affection, and he has not heard of any ancestor being so troubled. He has a little pain at intervals, but, as a rule, beyond the weight and unwieldy condition, he is not troubled. I find there are two or three similar cases in this district, which is a small percentage, considering that there are about 30,000 natives in the Mapumulo division. Unfortunately I did not get a lateral picture, which would have shown more folds of hide-like skin so characteristic of the elephant.

H. S. REYNOLDS, F.R.C.S.E.,
District Surgeon, Mapumulo, Natal, S.A.

NAEVUS PIGMENTOSUS.

The accompanying illustration shows an Armenian child, aged 2, who was seen by me in Ispahan, Persia. She was being taken to India to be exhibited. She is a bright, intelligent girl, rather fairer than is usual among children here. Large hairy moles cover a large portion of her body. There are considerably over 100 in all. The largest is on the left side, extending from the region of the left scapula behind to about 2 in. to the right of the umbilicus in front. In its widest part it measures $\frac{1}{2}$ 12 in., breadth 7 in., diagonally 17 in. There is a patch 5 in. by 4 in. on the right buttock. There is one tuft of hair above the left eyebrow, otherwise the face is normal. There are several moles on the scalp. Both labia have an outgrowth of hair on them. The moles on the legs are more pedunculated in character. The hair on the moles is about $\frac{1}{2}$ 1 in. long and darker than that on the head. It is very fine.



The patient is the third of a family of four children. There is no hereditary history of naevus pigmentosus, nor of maternal impression.

ELIZ. N. MACBEAN ROSS, M.B., Ch.B. Glasg.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

KENSINGTON INFIRMARY.

EPITHELIOMA OF OESOPHAGUS IN A WOMAN AGED 26.

(By J. BASIL COOK, M.D., D.P.H., Senior Assistant Medical Officer.)

M. C., aged 26, was admitted on April 23rd, 1909, and died two days afterwards.

History.

She had been losing flesh for three months, and for the past seven weeks had experienced considerable difficulty in swallowing. There was no family history of cancer.

Condition on Admission.

She appeared very ill, was emaciated, and was quite unable to swallow solid food, and liquids only with difficulty. There was no coughing or regurgitation after swallowing, but she groaned both when awake and asleep. No history could be obtained of her having swallowed any hot or corrosive fluid; there was no evidence of syphilis, nor any sign of thoracic growth, aneurysm, or pharyngeal abscess. The heart and lungs were normal. There was some obstruction of the air passages as there was marked recession on inspiration. At the level of the cricoid cartilage there was a slight fullness of the throat, and about 2 in. lower down on the right side a small, hard gland was easily palpable. There was an offensive blood-stained discharge from the throat. An unsuccessful attempt was made to pass various sized bougies, which when withdrawn were bloodstained. The obstruction was opposite the cricoid cartilage. The patient was fed with nutrient enemata.

Post mortem there was an epitheliomatous growth completely surrounding the upper end of the oesophagus, and extending downwards for a distance of 4 in. Beyond the small gland in the right side of the neck there was no sign of secondary deposit anywhere. The thorax and the organs of the body were free. The tonsils were apparently healthy.

REMARKS.

This case is chiefly interesting on account of the rarity of the condition in so young an individual. Gastrostomy was contraindicated because of the grave condition of the patient. The offensive discharge and obstruction to the passage of a bougie enabled one to diagnose the case and to eliminate the hysterical dysphagia occasionally met with in young women.

Reports of Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Friday, May 14th, 1909.

W. G. SMITH, President, in the Chair.

Clinical Evening.

DRS. O'CARROLL and PURSER exhibited a case of *Progressive Bulbar paralysis* in a man 56 years of age. A year ago the patient first noticed a certain amount of difficulty in his speech. It was very indistinct, but still intelligible. He was now hardly able to protrude the tongue beyond the lips. He had a little difficulty in getting food back, but he did not complain of difficulty in swallowing, except occasionally with liquids. He complained of difficulty in holding his head up. There was a little wasting of the muscles of the thumb, and of the biceps and triceps of the right side. The knee-jerks of each side were sharp, and occasionally, on stroking the sole of the left foot, Babinski's sign was found. They also exhibited a case which had been diagnosed as locomotor ataxy. The patient was a young man, 25 years of age, married at 19, the father of two healthy children. There had been no miscarriages. There was a distinct history of congenital lues. About a year ago he got suddenly weak in his left leg, with a pain in his knee. Since then he had had a progressive difficulty in walking. Some two years previously he had "seen double" for a short time. His present condition was that he had not got paralysis of any muscles, but had considerable difficulty in walking, and was very ataxic. Absence of knee-jerks. The pupils contracted neither to accommodation nor light. He appeared to have no loss of sensation in the limbs, but was rather slow in recognizing touches on the left leg, especially from the knee down. He had a certain amount of difficulty in passing water; he often had to press, and sometimes it came away without sufficient warning. He had always been a little deaf. Dr. DUFFY exhibited (1) two cases of *Hereditary ataxia*—sisters, aged 11 and 13—in whom the disease had been noticed about three and five years respectively. The younger was the much more advanced case. She stood fairly well with the feet apart, but could not balance at all with her eyes closed. The elder girl had sometimes a slight shaking of the hand, which was only noticeable when watching closely. There was no sensory disturbance, or disturbance of the sphincters. The eye symptoms were variable. In the younger girl there was slight nystagmus, but some days it was absent altogether. In both cases there was a total loss of knee-jerks. The limbs were well nourished. The younger girl showed well-marked lateral curvature, and both feet were getting flat. She had a systolic murmur heard near the apex, and at the base of the heart she had a loud systolic murmur when lying down, which disappeared when she sat up. The day following the observation of the latter murmur it was exactly the reverse—that is, it was absent when lying down and present when erect; it varied from day to day. Her sister had the same. When they came to hospital they were very thin, but they had grown fatter and better in colour after a couple of months on arsenic. (2) A case of *Idiopathic muscular atrophy* in a young man, aged 24. The patient had not noticed anything peculiar about his condition, except that he knew he was not a very powerful person. There was great thinness and want of muscle everywhere. There was no actual atrophy, but he took it that it was still in an early stage. Such cases were usually met with in groups, but there was no history of such in the present case. Although they could not find anything in the way of thoracic disease, still he had extremely marked myoidema. His grasp was feeble, but he had quite well-marked knee-jerks. Dr. T. G. MOORHEAD read a paper on *Grocco's triangle*, giving his observations on the subject for some years past. Dr. KIRKPATRICK said he had looked for the sign during the past two years, and had endeavoured to demonstrate it. He could sometimes demonstrate it to his own satisfaction, but he had often failed to do so to others looking on. It was in cases of small effusion that the sign was of particular value, and it was in such cases that it was very difficult to elicit it. The

PRESIDENT said that, short of *post-mortem* evidence, some mystification hung over the subject. It took 10 oz. of fluid to produce recognizable physical signs, and in cases of large effusion the sign was hardly necessary. Dr. MOORHEAD, in reply, said he was an advocate of early removal of fluid, and endeavoured to demonstrate it. In three of the five cases in which he did not get the sign he also demonstrated fluid, but he had not been able to demonstrate the relationship between the size of the triangle and the effusion. Dr. PEACOCK recorded a case of glioma of the spinal cord in a girl, aged 11.

Reviews.

FRACTURES AND SPRAINS.

SIR WILLIAM BENNETT is the first and chief exponent in this country of the doctrines of Dr. Lucas-Championnière. We welcome the appearance of a fourth edition of his *Lectures on Massage and Early Movement in Fractures*,¹ as evidence of a steadily growing interest in the subject on the part of the medical public. The main part of the book differs little from the third edition, published six years ago, but the number of illustrations is increased, and a chapter on sprains and their consequences, and one on stiffness of the spine, take the place of one on derangements of the knee-joint, which appeared in the earlier editions. There is therefore little to be said of the first two lectures, which have been noticed in former reviews of the book, but on comparing it with Dr. Lucas-Championnière's *Traitement des Fractures par le Massage et la Mobilization*, which was published in 1895, it will be noticed that Sir W. Bennett appears to attach more importance to reduction of fractures, and uses apparatus more than does the originator of the method. Despite this, however, his treatment is essentially the same, in that the apparatus is not applied tightly, and that it is soon and often removed for massage and passive and active movement. The lecture on sprains has already appeared in our pages (December 8th, 1906), and that on stiffness of the spine has also been published before, so that it is not necessary to say much about them on this occasion. The first contains useful hints on the treatment of sprains on the same principles as for fractures; in which latter category the x rays have shown that many supposed sprains should be included. In the second lecture the various causes of stiffness are detailed, and the diagnostic value of the symptoms discussed.

Dr. WHITELOCKE has had rather exceptional opportunities of studying sprains and allied injuries of joints² in young adults, owing to his position as surgeon to the Radcliffe Infirmary and Lecturer on Surgery at Oxford, where a large number of young men occupy themselves with athletic pursuits, which render them liable to injuries of many kinds. This book deals with many so-called minor injuries, some of which are little understood by the majority of surgeons, and which too often fall into the hands of bonesetters, with results lamentable for the patient, while the few striking cures, which serve only too well to advertise the "professor," are due more to good luck than skill. The scope of this work is wider than its title might lead some to suppose, for it includes many fractures of and in the neighbourhood of joints, as well as sprains and strains of muscles and ligaments. The treatment of internal derangement of the knee-joint and of ankylosis are also included. The author is at one with Dr. Lucas-Championnière in that he relies little upon apparatus, but his experience of massage and early movement in the treatment of fractures and injuries of joints appears to have led him to conclusions very different to those of the distinguished French surgeon. Possibly the difference of opinion is due to Dr. Whitelocke having had to deal mainly with young subjects, and his views are not so directly opposed to those of Dr. Lucas-Championnière as at first sight appears. For the latter has expressly stated that early massage of fractures is not advisable in the case

¹ *Lectures on the Care of Fractures and Early Movement in Fractures*. By Sir William H. Bennett, K.C.V.O., F.R.C.S. Fourth edition. London: Longmans, Green, and Co. 1899. (Demy 8vo, pp. 144, with 25 illustrations. 6s.)

² *Sprains and Allied Injuries of Joints*. By R. H. Ansell Whitelocke, M.D., M.C., F.R.C.S. Oxford Medical Publications. London: Henry Frowde, and Hodder and Stoughton, 1909. (Demy 8vo, pp. 221. 7s. 6d.)

of children, in whom it is apt to produce too exuberant callus; and this tendency to too abundant exudation may continue for as long as the growth of the cartilages persist. Certainly the most striking results of the early massage and movement treatment are to be seen in older patients, who were too often disabled after treatment by prolonged fixation. The author records three cases of fracture of the scaphoid bone of the wrist, in two of which the diagnosis by *x* rays was not made till late, while in the third it was made directly after the injury. Consequently, the two first were treated by massage and movement, while the third was treated by rest. The disability and pain in the first two cases were indefinitely prolonged, while the third patient was as well as ever in six weeks. If we may argue from so small a number of cases, the author's conclusion that in this particular injury rest is the proper treatment, is irresistible. An even more important lesson to be derived from them is the necessity of radiography in the diagnosis of what may seem to be mere sprains of the wrist, and, we may add, of sprains of the fingers also. The descriptions of various unusual sprains and displacements of tendons should be very useful, for these not very common and not very serious injuries are scarcely treated of at all in the formal textbooks of surgery: yet in no cases more than in these does the surgeon stand to gain or lose reputation according as his diagnosis and treatment are right or wrong. We would enter a protest against the recommendation of proprietary preparations, when the same therapeutic effect can be attained without them. This book is well illustrated and printed, like the rest of the series of Oxford medical publications, and it will no doubt have a large sphere of usefulness.

DRUGS AND THE DRUG HABIT.

Of the many books that have been written about drugs it can be said of very few that they possess much interest beyond that concerned with the dry, hard facts with which they deal. Even the still more numerous books which treat of drugs in their therapeutic application seldom arouse any sense of satisfaction from either the literary or philosophic point of view.

A volume recently published by Dr. HARRINGTON SAINSBURY, entitled *Drugs and the Drug Habit*,^{*} is a notable exception to this general rule. In his preface, Dr. Sainsbury states that his treatise has for its main object "to look at the essentials of the task which disease sets and drugs undertake, and to discuss with what show of reasonableness the medicaments can claim to be equal to their task." To accomplish his purpose the author wisely avoids multiplicity of details, and by dealing with general principles he presents his readers with a clear and comprehensive view of the position which drugs ought to occupy in their relation to the prevention and treatment of disease, of their influence upon the human mind as well as the body, of the necessity for their adaptation to personal requirements and idiosyncrasy, and finally of their possibilities for evil when allowed to pass from the sphere of use to that of excess.

The first chapter is devoted to an interesting and instructive review of the history of medicine from the earliest mythical times of the immortal gods, down through the days of Aesculapius, Hippocrates, Celsus, Dioscorides, Galen, Paracelsus, Harvey, and Sydenham, to the more recent times of Pasteur, Koch, and Lister. The author then proceeds to develop his subject by pointing out that the objective of drugs is the cure of disease and that therefore, from the widest standpoint, the term "drug" comprises not only the *materia medica* of the *Pharmacopoeia*, together with all the more recent serums, vaccines, antitoxins, and organic extracts, but also the psychic effects of hypnotism, and all the various systems of "faith cures." The value of suggestion as an aid to recovery from disease is undoubted, and, consciously or unconsciously, it plays its part in every curative process that is undertaken. As to the ethics of its deliberate employment, Dr. Sainsbury says: "It is a power and it should be used; it is a power and it may be abused; it is there for the honest physician, and it is there also for the charlatan." Unfortunately, it is the weapon

against disease which the quack finds most suitable to his methods, and so it is, of all others, that which has been most unscrupulously wielded in the treatment of those who are over-credulous and who, in the feebleness of their individuality, refuse to accept pain as a necessity of human existence, and spend their lives in an insensate attempt to escape, at all costs, every form of discomfort.

But pain drives all men, sooner or later, to seek relief from its tortures, and is mainly responsible for the tyranny of sedative drugs as well as for the popularity of secret quack remedies, and of Christian Science, Faith Healing, and every other fashionable craze which poses as a panacea. Although persistent pain, whether of mind or of body, may provoke the abuse of narcotic drugs, their proper use ought not to be discouraged: the one essential is what Dr. Sainsbury calls their *controlled* administration. When anodynes are thus employed,

drug treatment, instead of degrading the moral sense, may actually become a means of building it up: for the patient who accepts the restrictions as to the use of the palliative, and is willing to bear himself resignedly until the time appointed for relief, is actually submitting to a form of discipline which may tax to the uttermost his powers of endurance, and which if endured cannot fail to strengthen his moral fibre.

Without the saving grace of control, the risk from the continued use of all drugs, but especially of those which are sedative or stimulating in their effect, is the creation of a habit, and one of the most pernicious characteristics of the drug habit is the need which it engenders for increasing dosage. It is pointed out by Dr. Sainsbury that the persistent administration of a drug under certain circumstances—as, for instance, in the case of such a disease as myxoedema—is a beneficent habit; but habit becomes injurious when it is created and indulged under such conditions as to render its relation to the welfare of the economy evil. He says: *2801 ON 6741 01 101599 01 01*

To regard the question of habit and control alike, now when Life touches its zenith, and now when it is within sight of harbour, is not to follow the dictates of reason. Sometimes in the midst of seeming health, in the full tide of things, the warning comes that we must make ready for departure, as when a cancer declares itself: and not to take into account this new fact and make due allowance is to prove ourselves unskillful mariners. Habit is not to be made into a bogey, neither is control to be made into a fetish. Life always will run betwixt its Scylla and Charybdis: it is meant so to run; that is why the helm is put into our hands to guide. It is meant that we should have the opportunities to show ourselves courageous and prudent steersmen, but these opportunities the great waters only can give. If for fear of establishing a habit through misuse we forego the benefits which are here to our hand for use, we shall inevitably limit the scope of life, and so narrow its outlook and cramp its purpose.

In a chapter devoted to the uncontrolled habit, detailed consideration is given to the leading sedative and stimulant drugs which furnish the most striking examples of habituation, and especially to opium and its derivatives, and to alcohol. The author's views will well repay the careful attention of all who devote attention to the great sociological problems which have arisen out of the widespread custom of careless recourse to, as well as out of the unhappy prevalence of excessive addiction to, these potent and popular indulgences.

Passing finally to the question of prevention and cure as they apply to injurious drug habits, Dr. Sainsbury contends that there is need for greater regard to the new science of eugenics, for the more careful education of the child both by precept and example, and for the assistance of the State to secure a proper quality of food and a standard purity of medicine, and of such other articles of daily consumption as tea, coffee, and alcohol. As regards alcohol, a wise word of warning is given to the extremist when he is reminded "that temperance promises a higher moral yield than total abstinence; that the aim of all education should be to develop character, to create a people strong willed for good; that it is possible to pay too high a price for sobriety, and that this excessive price is paid when liberty of action is forfeited."

Enough has been said to indicate the scope and merit of Dr. Harrington Sainsbury's book. We congratulate him upon the production of a treatise which for breadth of view, temperance of exposition, simplicity and clearness of style, deserves to be carefully read, not only by members of his own profession, but by all to whom the public weal and the betterment of the race are questions of interest.

^{*} *Drugs and the Drug Habit*. By Harrington Sainsbury, M.D., F.R.C.P., Senior Physician to the Royal Free Hospital; Consulting Physician to the City of London Hospital for Diseases of the Chest (The New Library of Medicine). London: Methuen and Co. 1909. Demy 8vo, pp. 321; illustrations 11, 7s. 6d.

OBSTETRICS.

We noticed the second section of the *Edinburgh Stereoscopic Atlas of Obstetrics*⁴ in our issue for August 29th of last year. The third section consists of twenty-five further stereoscopic photographs, illustrating the delivery of the child and placenta, the application of forceps, the diameters of the fetal head, and Walcher's position. The student who uses these diagrams has at least the satisfaction of knowing that what he looks at is a faithful representation of Nature. We may be permitted to cavil at two small points: There is a photograph of a fetal head, and the suboccipito-bregmatic diameter is marked, and defined as being a line drawn from midway between the foramen magnum and the occipital protuberance to the anterior fontanelle. This diameter, so defined, is of no importance obstetrically. It cannot be measured in the living child because the foramen magnum cannot be felt. The measurement in the sagittal plane that is important is the largest diameter that has to pass the vulva and stretch the perineum, and this is the sub-occipito-frontal, and should be defined as the measurement between the nape of the neck and the most distant point of the frontal suture. This point may or may not be the anterior fontanelle. The other point is that restitution and external rotation are described as the same thing. If so, why use two names? The difference between them used to be clearly defined by Matthews Duncan. Restitution is the restoring of the head to its natural relation to the shoulders—the undoing of the slight twist of the neck which brought the head into the antero-posterior diameter while the shoulders were in the oblique diameter of the pelvis. External rotation is this movement carried further by the rotation of the shoulders into the antero-posterior diameter. This may be a trifle, but it is well that words should be used accurately. The student who looks carefully through this *Atlas* will learn a great deal. The fourth section, which completes the work, illustrates transverse and face presentations, placenta prævia, accidental hæmorrhage, retained placenta, Caesarean section, pendulous belly, inversion of the uterus, and some of the instruments used in midwifery. The text is descriptive only, and of an elementary kind. In the section on rupture of the uterus we should like to have seen it more clearly insisted on that the obstacle to reduction is the contracted os internum, and the necessary condition for reposition is the dilatation of the os internum. The *Atlas* is not a substitute for a textbook on midwifery, but only an aid to impressing things on the reader's memory. We congratulate the editors on the completion of their work, which we hope a wide circle of readers may find helpful.

Until the present time, Professor FEHLING remarks in the preface to his book on operative midwifery, there has been only one kind of midwifery. But unfortunately, he says, there is growing a kind of surgical midwifery different from that of private practice. The object of his book⁵ is to show the general practitioner how far he may go, and when he should send his patient to the hospital. At present it is necessary, in the interest of the patient, to draw this line. It will be the object of the future so to train students that they may be masters of the whole field. In the first chapter of the book, which relates to antiseptics, the author shows himself a Listerian of the most pronounced Continental type, and between his hospital observances and the practice of the ordinary general practitioner there certainly is a difference, or at least we should have thought so. Does the German doctor attending a working man's wife in her labour wash and scrub his hands for ten minutes by the clock, and then put on indiarubber gloves? Medical fees are not high in Germany, and we should not be surprised to learn that the expense of indiarubber gloves, both by reason of their cost and their fragility, prohibited their use in private practice. The book is a series of clinical lectures. It does not profess to be exhaustive, but it is clear and practical, and we presume

fairly represents German practice. Like many of his brethren, Professor Febling does not know the best way of decapitating. He advises the clumsy instrument of Braun, by which the cervical vertebrae can be fractured, leaving the soft parts to be cut through with scissors. If he were acquainted with Ramsbotham's sharp hook, he would not have recommended anything else. He describes the axis-traction forceps, but does not advise its use, for the reason that continuous pressure on the child's head is not good. He does not know how easy an operation subcutaneous symphysiotomy is. He describes "pubiotomie" (*sic*), an operation which we cannot imagine a general practitioner with only average surgical skill and experience undertaking. Nor can we think that vaginal Caesarean section is a general practitioner's resource. Professor Febling mentions as an indication for this operation persistent retroflexion of the gravid uterus; not knowing, apparently, that in every such case that has been let alone natural delivery has taken place. The work is no doubt a good textbook for the average German student. Perhaps we are the subjects of insular prejudice when we say that we think there are better textbooks published in our own language.

The title of the book, *Das Auge des Geburtshelfers*,⁶ is metaphorical. Professor SELLEHM explains that the eye of the midwife (male or female) is, when practising that department of surgery, at the tip of the forefinger. The work consists of two parts. The first is a brief summary of the physiology of sensation. It is not up to date, for the author has apparently not heard of the great work done by Head, with the assistance of Sherren and Theodore Thompson. Dr. Selheim is aware that there are different kinds of sensation—as for light contact, deep pressure, heat and cold, etc.—but he has not attained to the meaning of "protopathic" and "epicritic" sensibility. The second part is an account of what an educated finger ought to be able to feel in the pelvis, and advice as to how a practitioner of midwifery should educate his sense of touch, and record observations made by that faculty. The student, the author points out, when he begins the study of midwifery, enters a new world, in which the sense of touch replaces that of sight. The trend of the work is to inculcate care, thoroughness, and accuracy. Its influence upon those who study it cannot but be good. It aims at forming sound methods rather than imparting information. It is laudable but limited.

The large sale of *Aids to Obstetrics*⁷ shows that it has been popular, and in its conciseness and clearness we discern the reasons for its popularity. For the present edition Dr. Nall, the original author, disclaims responsibility. Dr. LONGRIDGE has revised the book. There are a few things which we take to be errors, and we feel bound to point them out. At p. 132 the reader is told that "version or Caesarean section" is recommended for persistent retroversion of the gravid uterus. He should have been informed that natural delivery has taken place in every case that has not been interfered with. For placenta prævia, Caesarean section is said to be "good treatment." The latest collection of results that we know of—that of Dr. MUNRO KERR, published in 1904—shows an average mortality for this operation, when performed by the best operators and in the best hospitals in Europe, of 8 per cent. The mortality among cases treated according to the precepts of Braxton Hicks is less than half this. At p. 163 the author has copied from old books a recommendation to divide the neck by a piece of whipcord. He says not whether he has tried it, but we trow not, for he tells not how many hours it takes. Such an archaic futility and as an alternative to Ramsbotham's sharp hook on the same page, is a deplorable waste of space in a small book like this. But on the whole the revision has been well done.

⁴ *Das Auge des Geburtshelfers*; eine Studie über die Beziehungen des Tastsinnes zum geburtschilflich-gynäkologischen Fühlen. Von Dr. Hugo Selheim, o. ö. Professor der Geburtshilfe und Gynäkologie an der Universität Tübingen. Wiesbaden: J. F. Bergmann; aus Glasgow: F. Baumeister, 1908. (Sup. roy. 8vo, pp. 67, 1s. 10d.)

⁵ *Aids to Obstetrics*. By Samuel Nall, B.A., M.B. Cantab., M.R.C.P. Lond. Revised by C. J. Newman Longridge, M.D. Viet. F.R.C.S. Eng., M.R.C.P. Lond., Pathologist and Registrar at Queen Charlotte's Lying-in Hospital, Examiner to the Central Midwives Board, Lecturer on Midwifery for the London County Council. Twenty-fifth thousand. Seventh edition. London: Baillière, Tindall, and Cox, 1909. (Fcap. 8vo, pp. 201, 2s. 6d.)

⁶ The *Edinburgh Stereoscopic Atlas of Obstetrics*. Edited by G. E. Barbour Simpson and E. Burnett. Sections III and IV. London: The Caxton Publishing Company, 1908. (Cr. 4to; 25 sub-jects, 4 parts. 84s.)

⁷ *Die operative Geburtshilfe der Praxis und Klinik*. In: *Zwanzig Vorträge*, von Dr. Hermann Febling, Ord. Professor der Geburtshilfe und Gynäkologie, Direktor der kaiserl. Universitäts Frauen Klinik zu Strassburg im Els. Wiesbaden: J. F. Bergmann; Glasgow: F. Baumeister, 1908. (Roy. 8vo, pp. 158, 77 Abbildungen. 4s.)

THE ROENTGEN RAYS IN DIAGNOSIS AND TREATMENT.

The fact that the leading exponents of x-ray practice are also the most careful to point out its inevitable limitations is suggested by the appearance of Dr. ARNSPERGER'S substantial volume on the Roentgen examination of the organs of the chest and its results in physiology and pathology. The author, who was a pupil of William Erb, aims to bring the radiological method into harmony with the other diagnostic methods, rather than to assert its independence and self-sufficiency. The idea that these other methods are superfluous is, he says, a danger to straightforward x-ray procedure. Having thus given the keynote of the book, its scope may be indicated by saying that it is really a sort of guide-book to the perplexing x-ray shadows of the chest. Technical preliminaries occupy the author scarcely at all; for these he refers the reader to other text-books. Confining himself to the medical side of the question, he takes the scientific line of examining in the first place the normal thorax, and then devotes the larger portion of the volume to a critical review of the changes to be noted in injury and disease. All kinds of abnormal conditions are treated in turn, from cervical ribs to mediastinal tumours, but the interest centres in the lengthy section dealing with the localization of the shadows in phthisis. Dr. Arnsperger is sceptical as to the value of Williams's phenomenon, and states that he has found the diminished excursion of the diaphragm an early symptom in only 6 per cent. of his cases. In his opinion pleuritic adhesions, which are often absent in early tuberculous cases, are generally the cause of this limitation of movement. With regard to apical appearances he reiterates his former statement that the shadows seen in the diseased apex during deep inspiration sometimes become darker instead of lighter up. Enlargement and cessation of the bronchial glands he believes to be only a secondary and somewhat uncertain feature in early diagnosis. Very frequently remains of glandular swellings left from childhood cause confusion in a radiological examination. On the whole question he affirms that while the x-rays furnish a very good idea of the extent of the tuberculous process and of its infiltrated, cirrhotic, or cavernous character, they fail to give the evidence upon which to form a decision as to the clinical importance of the visible variations. It cannot be stated with certainty whether what is seen in an x-ray picture is a fresh process or an old scar. A number of radiograms are given in the appendix, but the author considers that the physiological movements produce so many different appearances that, in spite of improvements in technique on the photographic side, the screen examination is still to be preferred. Nevertheless, there are requirements, such as the detection of isolated tubercle, when the radiogram may be of more value than the screen. On the other hand, in considering the size of the heart, the single screen examination is open to many sources of error, and here comes in the use of the orthodiagraph. The absence of any index to such an elaborate work is a serious omission.

So noteworthy have been recent x-ray developments that Dr. H. E. SCHMIDT has found it necessary to issue a second and augmented edition of his compendium of Roentgen-therapy,² which was first published in 1904. One third of this concise treatise is devoted to the technique of interrupter, tube, dosimeter, etc., favourable mention being made of the newest dosimetric method of Schwarz. The author then discusses at length the indications for x-ray treatment in many dermatological and other conditions, including syphilis, in which he has found the tertiary ulceration yield to this therapy. An important chapter treats of the three forms of x-ray dermatitis, distinction being made between the erythema, skin atrophy with warty proliferation, and the sclerodermic condition with impeded movement of the muscles. He points out that the degree of sensitiveness differs with individuals and bears some relation to the general nutrition. In dealing with x-ray injuries from the forensic standpoint, he says

that cases of serious mischief to patients are now rare, but the possibility, particularly of testicular injuries to youths, needs to be borne in mind. He has been called as an expert in cases in which indemnification was demanded, and his list of precautions, the neglect of which most commonly gives rise to the allegations of malpractice, is instructive. The book will be useful to those who follow German details of technique and treatment.

NOTES ON BOOKS.

ALL medical men who contemplate "taking a ship" for the first time would be well advised in procuring a copy of Mr. J. F. ELLIOTT'S excellent little volume *Hints to Ship's Surgeons*.¹⁰ It can be read in an hour, and gives an immense amount of information of a practical kind. The young medical man who "signs on" for the first time, is almost necessarily ignorant to a large extent of some of the conditions under which he is about to practise his profession. This little book will inform him as to his relations to the Board of Trade, the owners of his vessel, the passengers, his fellow officers, and the crew. Incidentally it will warn him against many mistakes that would be the natural outcome of inexperience, and provide him with much useful advice as to treatment under the peculiar conditions that prevail aboard ship.

The fifteenth edition of *Chavasse's Advice to a Wife*¹¹ will fully maintain the reputation which has been won by its predecessors. As far as the medical advice given the book is quite modernized, and seems to contain all that a married woman ought to know without interfering with the proper function of the medical attendant. As several generations of mothers have now been trained on this book the language might be a little modernized also, and what the present editor calls the "chaty style" of the original author might be modified to suit the taste of the present generation. At least we would plead for the substitution of the word "woman" for "lady" in discussions of female sexual functions. The latter word in such a connection smacks of a kind of early Victorian "delicacy" which has become almost indecent to a modern ear.

*The Territorial Year Book*¹² contains a great deal of information about the Territorial Force and other matters likely to interest Territorials. It begins by reviewing the work of the past year, including the progress of the force and its developments, the changes and improvements in the medical department being specially noted. Details of how to enlist, dress, pay and allowances, training and instruction, and peace and war establishments, are then given, as well as particulars of the territorial divisions and brigades in the various districts and commands. Several pages are taken up with hints for camp and manoeuvres, and will be found of particular value to recruits. These are followed by hints on health and first aid, and if all men would follow the advice given there would be a good deal less of the minor ailments which are so frequent in camp and interfere with efficient training. Veterinary hints are not forgotten, and here again details are given, and, if studied by those mounted men who in civil life have not much to do with horses, will enable them to do their work more expeditiously and with greater advantage to themselves and the animals. We may add that a list of books, official and unofficial, and their prices is given, and will be found specially useful to officers or men desiring to make themselves proficient in technical subjects.

The second German edition of the work on tuberculosis by Drs. BANDELIER and ROEPKE was reviewed in our issue of November 14th last, p. 1501: it was then said that the book might be warmly recommended to the attention of all who have to treat tuberculosis in any of its forms, and readers will be glad to know that Dr. Ebert C. Morland has made a translation into English of this edition, which is published under the title *Tuberculin in Diagnosis and Treatment*.¹³

¹⁰ *Hints to Ship's Surgeons*. By J. F. Elliott, L.R.C.S., L.R.C.P.I. London: John Bale, Sons, and Danielsson, Ltd. 1908. (Cr. 8vo, pp. 64, 2s.)

¹¹ *Chavasse's Advice to a Wife on the Management of her own Health and on the Treatment of some of the Complaints incident to Pregnancy, Labour, and Suckling*. Fifteenth edition. Revised by G. D. Robinson, M.D., B.S., F.R.C.P. London: J. and A. Churchill. 1909. (Cr. 8vo, pp. 368, 2s. 6d.)

¹² *The Territorial Year Book*. 1909. London: Hodder and Stoughton. (Cr. 8vo, pp. 34, 9 maps and diagrams, 1s.)

¹³ *Tuberculin in Diagnosis and Treatment*. By Drs. Bandelier and Roepke. Translated from the second German edition by Ebert C. Morland, M.D., B.Sc. London, M.D. Berna. London: John Bale, Sons, and Danielsson, Limited. 1909. (Roy. 8vo, pp. 120, 7s. 6d.)

² *Die Röntgenuntersuchung der Brustorgane und ihre Ergebnisse für Physiologie und Pathologie*. Von Privatdozent Dr. Hans Arnsperger. Leipzig: F. C. W. Vogel. 1909. (Roy. 8vo, pp. 271, 34 figures in text and 27 plates. M. 12.)

³ *Kompendium der Röntgen-Therapie*. Von Dr. H. E. Schmidt. Second edition. Berlin: August Hirschwald. 1909. (Post 8vo, pp. 164; 36 figures. M. 3.)

The latest volume of the *Transactions of the American Laryngological Association* covers the proceedings of that body at its meeting last year, when the Association visited Montreal. Among the thirty-eight papers read were a series of three dealing with sinus disease, and another series of four which served as an introduction to an interesting discussion on recurrent and abductor paralysis of the larynx. The volume also supplies an index (names and subjects) to all papers which have been read before the society during the past ten years. The president at the meeting was Dr. Birkett, parts of whose interesting account of the history of medicine in the Province of Quebec between the years 1535 and 1838, have already been quoted in our Literary Notes.

It is impossible when the fetish of examination prevails to criticize unfavourably any book which accurately represents, however briefly, the facts which an unfortunate examinee has to produce for the ordeal. We can say this of Dr. MURRELL'S *Aids to Forensic Medicine*¹⁴ that they do present accurately the facts required for the above purpose; and probably the author himself will think that this is all that the "Aids" series requires; but we would like to add that Dr. Murrell possesses a faculty of expressing these facts in language pleasant to read, and that does not irritate by its style. The fact that the book has passed through six editions proves conclusively that it is found useful by those for whom it is written.

PHYSIOLOGICAL CHEMISTRY.

Hoppe-Seyler's name is still one to conjure with, and is rightly preserved both in the journal which he founded and in the book by which he is best known. At the time when he began his work his was the only handbook of physiological and pathological chemical analysis¹⁵ in Germany. At the present time the number is so great that teachers and students alike have a difficulty in making a selection. It is almost six years since Professor THIERFELDER edited the seventh edition, and in this time the changes in the science have been so sweeping that the book has had almost to be rewritten. As a practical laboratory guide it is, in our opinion, easily first, and we wish it continued success.

Professor HAWK has rewritten a good deal of his textbook, so as to bring it up to date, and in so doing has much improved it.¹⁶ The work still possesses some disadvantages as a guide for practical classes to which we referred in our review of the first edition. These relate mainly to matters of arrangement. The book, however, is extremely good and very complete. A special feature in it is the wealth and beauty of the illustrations. No properly equipped laboratory or library can afford to be without it.

CLINICAL THERAPEUTICS.

A textbook on clinical therapeutics¹⁷ which has achieved the distinction of a fifth edition needs but little introduction, and Dr. LEMOINE'S is essentially businesslike in its method of classification. An outline of the characteristic clinical features of each malady, followed by a summary of the symptoms which it produces, leads up to an account of the therapeutic measures, arranged under special headings. The instructions thus given are of necessity somewhat dogmatic, but on testing their accuracy and scope in some of the less common diseases we can commend them as trustworthy and fairly comprehensive. Vaccine treatment does not as yet seem to have found much favour in France, and radio-therapy is still in the experimental stage. Tuberculous disease is to be treated on hygienic and symptomatic lines only, no mention being made of the relative merits of serums or tuberculin. The whole work forms a handsome volume, written in very easy French, which has attained to its present proportions by successive stages from the very elementary book which first saw the light in 1896. A fuller index would add to its value as a work of easy reference, and still further justify its title to be a guide to everyday medicine.

¹⁴ *Aids to Forensic Medicine and Toxicology*. By W. Murrell, M.D., F.R.C.P. Seventh edition. London: Baillière, Tindall and Cox, 1908. (Fcap. 8vo, pp. 133. 2s. 6d.)

¹⁵ *Fests Hoppe-Seyler's Handbuch der physiologischen und pathologischen Chemie, Anleitung für Ärzte und Studierende*. Bearbeitet von Dr. H. Thierfelder. 8te Auflage. Berlin: A. Hirschwald, 1903. (Gr. 4to, pp. 874. Fig. 10, Taf. 1. M. 22.)

¹⁶ *Practical Physiological Chemistry*. By Philip B. Hawk, M.S., Ph.D., Professor of Physiological Chemistry in the University of Illinois. Second Edition. London: J. and A. Churchill, 1903. (Roy. 8vo, pp. 453, 126 figures in text, and 2 plates of absorption spectra. 16s.)

¹⁷ *Thérapeutique Médicale et Médicine Journalière*, by Dr. G. Lemoine, Professor of Clinical Medicine at Lille. Fifth edition. Paris: Vige Frères, 1903. (Roy. 8vo, pp. 1,123. Fr. 15.)

In the preface to his pocket-book of therapeutics,¹⁸ Dr. SCHNIRER explains that an earlier edition has received the flattery of plagiarism, which has been stopped by process of law. It is a little difficult to say whether this is mentioned by way of complaint or boast. For the rest the booklet contains a miscellany of prescriptions, sound enough in a sense, and very similar to those contained in various English works of the same sort. But this kind of potted therapeutics is open to grave objection, in whatever language it may be written.

MISCELLANEA.

The story of *Sir Guy and Lady Rannard*, by H. M. DICKINSON,¹⁹ is that of a millionaire madman and his wife. Regarded as an ordinary novel, perhaps, its interest lies chiefly in the picture painted of a woman who, marrying from ambition, begins to love her husband when she finds he needs her care. It is prolix in parts, but in the description of the skill and courage with which the wife endeavours to conceal her husband's mental state there is a decidedly truthful touch. There is skill, too, in the description of the development of the hero's insanity, though to the end most medical readers will remain in doubt as to the precise nature of his malady. Probably they will conclude that the author has had under observation cases both of volitional insanity and of general paralysis of the insane, and has confused their symptoms.

The play by Mr. ST. JOHN HANKIN,²⁰ named *The Last of the de Mullins*, is a clever impressionist sketch of a very old situation. Failing the arrival of a conventional festa, the heroine thinks it more sensible to eat her cake with a chance partner than let it mould in the cupboard. The usual fit of indigestion follows, but for this she refuses to accept either pity or forgiveness, deeming neither needed.

¹⁸ *Taschenbuch der Therapie*. Von Dr. M. T. Schnirer. Würzburg: A. Schäfer's Verlag, 1909. (Dfl. demy 32mo, pp. 394. M. 2.)

¹⁹ London: W. Heinemann and Co.

²⁰ London: A. E. Field. 1s. 6d. net.

MEDICAL AND SURGICAL APPLIANCES.

A Suture Needle.

DR. G. H. PEAKE (Medical Mission, Fianarantsoa, Madagascar) has designed a suture needle which he has found useful in passing deep sutures in operations in the pelvis when, owing to the presence of the tumour or adhesions, there has not been room to secure easily the thread in the ordinary suture needle. The head of this needle, with the suture, can be seized with an ordinary pair of artery forceps, guided to it by the finger. The shaft is then easily withdrawn, the needle-head pulled up, and liberated by division of the suture: a double ligature is thus left under the structure to be tied. The extra needle-head, supplied with the handle, can be kept ready threaded in the instrument tray. The needle is made by the Holborn Surgical Instrument Company, Limited, Thavies Inn, Holborn Circus, London, E.C.



A Urine Collecting Bottle.

The annexed engraving shows a bottle which Messrs. Hewlett and Son, of Charlotte Street, E.C., are now making under the name of the "Handy Collecting Bottle." It is intended to facilitate the collection of samples of urine from ordinary receptacles, and seems well suited to its purpose. It holds



some 4 oz., and on its external surface has a roughened space on which the name of the patient can be written either in pen or in pencil. It is easy to clean, and its india-rubber stopper fits so well that when the bottle has been placed in the tin case, shown alongside it, it can be carried in the pocket without risk of leakage. Its price, bottle and container together, is 2s. 6d., extra bottles costing 1s. 6d. each.

SEVENTY-SEVENTH ANNUAL MEETING
OF THE
British Medical Association.
AT BELFAST, JULY, 1909.

SPORT AND TOURING IN IRELAND.

[FROM AN IRISH CORRESPONDENT.]



The Giant's Causeway.

may be taken for granted that the great majority of members attending the Annual Meeting of the Association in Belfast will spend a few days or weeks exploring some of the many beautiful districts in Ireland, or taking advantage of the facilities that country offers for sport in one or another form. It is the aim of this article to give some help to such members, and assist them in choosing what will best suit their tastes. When the choice is made, help in obtaining it will be given through the Honorary Local Secretaries, either by correspondence beforehand, or during the meeting.

First it should be said that, though Ireland is not a large country, neither is it one in which travel is rapid as a rule, so that, except for the motorist, it is a mistake to try to see the whole country on one visit. Dublin and Killarney may certainly be combined with Belfast, the Giant's Causeway, and Donegal in one trip, but unless one has had the fortune to be born under the Stars and Stripes, such a trip is likely to prove more exhausting than satisfying. The first piece of advice, then, is to choose a short tour and not hurry over it. As regards time, those who can arrange to take their holidays in July, before the meeting, are sure to have the best of it, for they get the long evenings, less crowded hotels and trains, and greater likelihood of fine weather. The last point leads to the remark that Irish weather has been greatly maligned, for though it rains often it seldom rains for long, and the sudden change from a dull and wet morning to a brilliant sunny afternoon among the Donegal or Kerry hills is a thing to be remembered for a lifetime.

MOTORING.

Some hints on motoring in Ireland may be of use to those members who think of taking over their cars. Irish roads, speaking generally, are rough, and a low-powered light car is the most suitable for them—say a car of 16 h.p. weighing not much more than a ton. There is a common tariff for cars on the cross-channel steamers, amounting to 30s. a car up to 10 cwt., and 1s. a cwt. over 10 cwt., owner's risk, or 25 per cent. extra at company's risk. The cars are well cared for on the journey.

Through Ireland generally the facilities for repairs and for obtaining supplies of petrol are quite good, and the hotels are accustomed to house cars. It is well to remember the frequent occurrence of hog-backed bridges and culverts, which render fast going dangerous, especially for a heavy car. As has been said above, Ireland is a small country, and it is possible to see a great deal of it in a fortnight's motoring. One might begin at Dublin, go by Killarney and round the coasts of Kerry and Clare to Galway, then through Connemara to Achill, by Sligo to Bundoran, and round the coasts of Donegal and Antrim to Belfast. But a far more enjoyable holiday will be spent if the trip is shortened, and taken easily, exploring some of the hills and valleys on foot. Innumerable side trips may be made, too, off the main route suggested, and one which the writer thinks quite unequalled in the British Isles is down the Dingle Peninsula from Tralee, co. Kerry, over Connor Hill Pass, and round Sleah Head, the

most westerly point of Europe. Given a fine clear day, the views of sea, island, and mountain are magnificent.

EXCURSIONS
FROM BELFAST.

Three excursions have been arranged for the Saturday after the meeting: (1) To the Giant's Causeway, (2) to Glenariff and round the Antrim Coast to Larne, (3) to Newcastle and round the co. Down coast to Warrenpoint.

The Giant's
Causeway.

This excursion, which



An Antrim Trout Stream.

will no doubt be the most popular of those on Saturday, will take the visitor from one end of co. Antrim to the other, through a picturesque stretch of country, chiefly agricultural, but very different from English agricultural districts. The small fields, thatched and white-washed farmhouses, occasional bogs, and frequent streams, are all typical of Irish scenery.

For the first few miles the line runs down the north shore of Belfast Lough, then reverses its direction and ascends the Antrim plateau, on which it keeps most of the

way to its terminus at Portrush. Just after leaving Antrim station a glimpse is got on the right hand side of the line of a very fine round tower, one of the most perfect of these interesting and puzzling remains of prehistoric Ireland. Halfway to Portrush a stop is made at Ballymena, where the line to Glenariffe, the second excursion, diverges to the right. Ballymena is a flourishing little market town, and the station, a model of neatness and convenience, is worth noticing. Soon after leaving it a real Irish bog on the right side of the line is passed. Piles of turf or peat are seen drying, and the bog is scored by the long dark lines of cuttings from which it has been taken. At Coleraine the main line goes off to the left to Londonderry, and a glimpse is got on the left of the Bann, a fine salmon river, which drains Lough Neagh. Then almost immediately the Atlantic Ocean is sighted, with Malin Head, the most northerly point of Ireland, running into it in the north-west. At Portrush, which it is correct to refer to as "the Brighton of the North," the electric tram is taken to the Causeway, eight miles off. The run is a splendid one—first through the links of the Royal Portrush Golf Club, and then along the cliffs with superb

which the stream forms some fine waterfalls, well worth seeing. After walking down the glen for about two miles the road is rejoined and the drive continued to the foot of the glen, 6 miles away, then round the splendid coast road 25 miles to Larne, stopping on the way to lunch at Carron Tower, built by one of the Londonderry family, and now an hotel. It is very beautifully situated on a height overlooking the channel and the Scottish coast, which at one point, a little to the north of this, is only 11 miles distant from the coast of Ireland. After lunch the drive will be resumed to Larne, whence train is taken 24 miles to Belfast.

The County Down Coast.

This excursion will appeal specially to those who enjoy mountain scenery, for the road from Newcastle to Warrenpoint lies round the base of the Mourne Mountains, the highest hills in Ulster. Slieve Donard, overlooking Newcastle, is 2,796 ft. high, and many of the others are not much less. As they rise steeply from the sea they show their height well, and, being a mass of granite, are singularly fine in outline.

Newcastle is reached in about an hour by express train



On the Links, Newcastle. Mourne Mountains in distance.

sea and rock views. A glimpse is got of Dunluce Castle, for centuries the stronghold of the Macdonnells. After passing the little town of Bushmills, chiefly famous for whiskey, the line passes over the river Bush, a fine salmon river, and shortly reaches its terminus, whence it is twenty minutes' walk down to the Causeway. There guides can be had who will expatiate till further notice on the geology, mythology, or theology of the district, according to the taste of the visitor. But after satisfying one's curiosity on the actual Causeway the visitor ought to do one of two things—either take a boat, if it is a fine and calm day, and visit the caves, or else walk round the cliff path, where the most glorious views of sea and headland are obtained, varying at every turn. The return journey will be made to Belfast by the same route.

Excursion to Parkmore and Glenariffe.

Parkmore, reached from Ballymena, on the line to Portrush, by a narrow-gauge line, is the highest station in Ireland, being about 1,000 ft. above the sea. It is on the edge of the Antrim plateau, at the head of Glenariffe, one of the most beautiful of the glens of Antrim. These glens are valleys cut deep into the plateau, and running down to the sea on the east side of the county. The head of Glenariffe is actually a gorge, worn by the water in the rock, in

from Belfast, the journey being through the good agricultural districts of County Down, and very picturesque. The district is one of the most prosperous in Ireland, a stronghold of the Ulster Scot. After passing the little town of Downpatrick, with a cathedral under whose shadow St. Patrick lies buried, the line enters rougher country, and approaches the sea at Dundrum Bay. Just before Newcastle is reached the golf links of the Royal County Down Golf Club are seen on the left side. It is on these fine links that the Belfast Cup, described in another column, will for the first time be played for on Friday, July 30th. From Newcastle the road to Warrenpoint, a distance of twenty-four miles, will be taken; it runs between the mountains and the sea, with fine views on every side. Near Warrenpoint it passes through Rostrevor, the favourite health resort of Ulster when a mild and sheltered situation is desired. Warrenpoint lies on the shores of the beautiful Carlingford Lough, and is the terminus of a branch of the Great Northern Railway. After dinner there the train will be taken back to Belfast.

not only dead fishing. In the short space at disposal it is impossible to deal with angling in Ireland generally, and the following

remarks are confined to districts easily reached from Belfast, and worth visiting about the time of the Annual Meeting. This is not the best time of year for angling, but it is by no means the worst, and it is often quite good if the weather is favourable. It is hardly necessary to say that the best angling must be paid for, but nevertheless really good sport, both salmon and trout fishing, may be had free at many hotels which have acquired the angling rights in their districts, and the charges at these hotels are generally very moderate compared with those usual in Scotland. Wherever the visitor fishes, he must take the £1 Government licence to angle for salmon or sea trout, or rather must take the licence within twenty-four hours of landing his first fish.

The Bann.

The river Bann, flowing north from Lough Neagh to the Atlantic, offers good salmon fishing in July. About the best to be had by a stray visitor would be got by going to the Mercer's Arms, at Kilrea, co. Derry, where the angling ticket costs about £1 a week, and a man and boat 5s. a day, with lunch for the man. There are some trout to be had here also, large fish, and the dry-fly fisherman has good chances. Early in August the prospects are equally good, provided the flax water is not down early. The pollution of the rivers by the water in which flax has been soaked is the curse of angling in north-eastern Ireland, for the fish are poisoned by it, and if not killed outright are too sick to rise. Portlennone, co. Antrim, is another good centre on the Bann. Accommodation may be had at a comfortable inn.

Cushendall.

At Cushendall, on the Antrim coast, free fishing may be had in several streams, with plenty of small brown trout. It is a delightful and picturesque district, suitable for a visitor who wants to explore the country, and only takes out his rod on a showery day.

County Donegal.

In County Donegal first-class fishing may be had at various places. Beginning in the north of the county, at Churchill, on Gartan Lough, small brown trout are plentiful, and in the Lennon river (free) there is a good chance of a salmon after a flood. At Rosapenna, which is noticed more at length under the head of golf, below, there is good fishing attached to the hotel up to the end of July, but after that date it is reserved by Lady Leitrim. Gweedore, on the west coast, is probably the best place for salmon, but as the rods are limited it is necessary to apply early (the Manager, Gweedore Hotel, co. Donegal). The charge

to visitors in the hotel for angling for salmon is 10s. a day. The river is heavily stocked, but needs a flood to make it fishable. The fish run small—about 7 lb.—and sea trout are plentiful. In the lakes, which are close by, are plenty of small brown trout, and on a good day one is likely to get some sea trout also. The gillie on the river receives 2s. 6d. a day and lunch, and rows the angler on the lake if he fishes it.

Dungloe is the centre for the Rosses fishery, best for sea trout, with the chance of a salmon. It is a dull place to stay at, with no resources except angling. Terms can be had from Mr. Hanlon, Dungloe.

Ardara is the centre for the Owenca and Owen-tocker rivers; the former is a good salmon and sea trout river (7s. 6d. per day), and the latter brown trout. Carrick offers good fishing—salmon, sea and brown trout—in two rivers free to visitors in the Glencolumbkille Hotel. It is a picturesque spot, and a good centre for excursions.

The river Erne, at Beleek or Ballyshannon, is among the best angling rivers of the kingdom, but the number of rods is limited, and generally all places are engaged months beforehand. The charge is five guineas a week, with 5s. a day and lunch to the gillie, and two fish a week are allowed to the angler. It is necessary to wade deep; the dry-fly fishing for trout is excellent, specially early in the season, and it is not expensive. (For full particulars write to the Manager, Erne Fishery, Beleek, co. Donegal.)

Lough Melvin, at the extreme south of the county, may be fished either from Bundoran, where there is a most comfortable railway hotel, and good golf links, but a rough drive to the Lough, or from Garrison, which is more primitive, but quite comfortable, and has the advantage of being on the Lough. The trout fishing is free; the angler pays 5s. a day for a boat and two men, and gives the men lunch. The fishing is most interesting, as not only Ferox, but the beautiful Gillaroo trout, rare black-fin trout,



The Royal County Down Golf Club, Club House and Slieve Donard Hotel, Newcastle, County Down.



A Newcastle Bunker.

(with so-called gizzard), and the locally called Sonaghan, may be got.

Single Days.

Plenty of single day angling excursions may be had from Belfast, but the choice should depend on the local weather conditions, and cannot be made long beforehand. Any member wanting such an excursion during the meeting should apply to the Honorary Local Secretaries, who will put him in communication with an angling member ready to help.

GOLF.

The choice which lies before a golfing member coming to Belfast is embarrassing in richness, so that a few hints as to the character of the chief links in the neighbourhood may be a help.

Carnalea.

The Royal Belfast, the oldest club in Ireland, has its home at Carnalea, about ten miles from Belfast, on the south shore of Belfast Lough, and reached quickly by a good train service on the County Down line. It is a nine hole course, and though on the sea, it is in many respects like an inland course, the ground being clay. The greens are good, and the bogey score is 39. There is a most comfortable club house, and the situation of the ground is beautiful, overlooking the Lough and the Channel.

Newcastle.

The Royal County Down, at Newcastle, is the seaside course most favoured by Belfast golfers. It is reached in about an hour from Belfast by express train, and is most beautifully situated at the foot of the Mourne Mountains, the highest hills in Ulster. On the edge of the links is the Slieve Donard Hotel, an excellent hotel owned and managed by the County Down Railway. Arrangements are being made for members of the Representative Meeting to spend the week end, July 24th to 26th, there. The course is about 6,400 yards, almost, if not quite, the longest in Ireland, and is most sporting. The bogey score is 80. The ground, which is an excellent natural one, has been carefully tended for about twenty years; the greens are well kept and are exceptionally large, and the course is very free from daisies in summer. Though a championship course, it is never overcrowded. It is here that the golfing members of the British Medical Association are invited to go on Friday, July 30th, to play for the Belfast Cup, presented by the golfing members of the Ulster Medical Society. Some particulars and an illustration of the cup will be found on p. 1426. Golfing members will be made honorary members of the County Down Club from Monday till Friday, and on Friday they will be entertained at luncheon and tea in the club house.

Portrush.

The Royal Portrush is one of the oldest clubs in Ireland, having been founded in 1838, and from the unrivalled situation of the championship course on the open Atlantic coast, is a favourite in summer. It is, indeed, often crowded at that season, and start is by ballot in the height of the

season. The course is first class in every respect, well laid out on magnificent natural ground, and well kept. Portrush is about two hours from Belfast by express train, and as it is a most popular seaside resort, there is ample accommodation of all sorts, though, like the links, the accommodation is apt to be rather crowded in the busy season. One further remark should be made on Portrush, and that is to say that the air possesses in a remarkable degree

stimulating or bracing qualities, which, according to many visitors, make a day there worth a week in any other place. It is hard to say why the air should vary much at places only a few miles apart, but vary it undoubtedly does, the coast only ten miles to the west being quite different.

Port Saloon.

Port Saloon, in County Donegal, is well out of the world, and quite beyond the range of the cheap tripper. It is reached in a few hours from Londonderry by train, boat, and car. There is a comfortable hotel,

with splendid natural links, the first tee just outside the hotel door. As only hotel visitors play there, it is never crowded. The course is a long 18-hole one, with a bogey of 82, and the greens present a wonderful variety of character. There is a little harbour and pier close to the hotel, where a dive or swim can be had before breakfast. There is some fishing in the neighbourhood.

Rosapenna.

Rosapenna, also in North Donegal, is somewhat similar to Port Saloon, and equally far from the madding crowd. It has a first-rate hotel, rather more fashionable, and excellent natural links running right round it. The course is about 6,000 yards with a bogey of 81. It is most splendidly situated, with the cliffs and bays of Sheep Haven on one side and Mulroy Bay on the other. There are numberless excursions to be made, and river, lake, and sea fishing for non-golfers.

Bundoran.

Bundoran is at the extreme south of County Donegal, and is a favourite summer resort. There is a good 18-hole course of about 5,500 yards, owned and kept in excellent order by the Great Northern Railway, which owns also a most comfortable hotel on the links. The course is never overcrowded, and, though not flat, is easy walking, with comparatively few hazards. The bogey is 77. Bundoran is the terminus of a branch of the Great Northern Railway, and is easily reached from both Belfast and Dublin.

Greenore.

Greenore, in County Louth, has also a good 18-hole



Royal Belfast Golf Club, Carnalea, County Down.



Golfing at Carnalea on Belfast Lough.

course and a very good hotel, owned and managed by the London and North-Western Railway Company, whose boats sail between Holyhead and Greenore daily. The course is just beside the station, and is well kept and interesting, with plenty of good hazards, both natural and artificial. The bogey is 77. Greenore is a remarkably bracing place, with lovely views of the Mourne Mountains, which rise steeply from the water on the other side of the picturesque Carlingford Lough.

VISITS OF HOSPITALS. Other Courses.

There are a number of inland courses round about Belfast as well as many shorter seaside courses in various watering places within easy reach of the city. Of the inland courses, the one most largely used by medical men and by the Queen's University staff is Malone, which is just a mile from the college, half the distance being traversed by the Stramillis tram, which passes the front gate of the college every few minutes. The course is an 18-hole one, over undulating ground, and quite good. It is about 5,400 yards in length, with a bogey of 77. Arrangements will be made for members of the Association to use the links during the week.

Golf Competition: The Belfast Cup.

The Ulster Medical Society has arranged to present

to the British Medical Association a cup, to be known as the "Belfast Cup." It is to be played for at annual meetings, and to be won out and out by any member winning it three times. It will be played for on the Friday of the Belfast meeting, on the fine links of the County Down Club at Newcastle, co. Down, kindly lent for the day by the council and members of the club. The play will be by bogey score. The cup is designed after the famous Ardagh Cup, now in the Kildare Street Museum in Dublin. The original, one of the finest examples of ancient Irish work, is composed of gold, silver, enamels, and jewels, and was, it is believed, meant for use as a chalice. The challenge cup will be of silver, about 9 in. high, with gilt panels and coloured enamel bosses; round it will be set stones representing the four Provinces of Ireland—the black pebble for Leinster, the white or Carnmoney pebble for Ulster, the red stone for Munster, and the green Connemara marble for Connaught.



The Belfast Cup.

To be played for at Newcastle on July 30th. Presented by the Ulster Medical Society.

CRICKET MATCH.

The North of Ireland Cricket Club, the premier club of Ulster, and one of the best in Ireland, has kindly offered to play a one-day match against a British Medical Association team. The beautifully turfed grounds of the club are only about five minutes' walk from Queen's College, where the Association will meet. The local executive will be very glad if some English cricketer will undertake to organize a team for the occasion; any one interested in the matter should communicate with one of the Honorary Local Secretaries.

LAUNCH.

The local executive has some reason to hope that there may be an opportunity during the annual meeting, of witnessing the launch of one of the great steamships for which the shipyards of the city of Belfast are famous. A large vessel for the Orient Line is at present on the stocks in Messrs. Workman, Clark, and Co.'s yard, and is expected to be launched in July. The exact date cannot be settled so far ahead, but if the firm can make it coincide with the visit of the Association to Belfast, it has courteously promised to do so.

BOATING.

The sheltered and picturesque waters of Belfast Lough are naturally much favoured by amateur sailors, and quite a large number of medical men regularly spend Saturday afternoon in sailing. Some of these have made arrangements to entertain brother sailors who may visit Belfast next month, and will give them an opportunity of trying their skill in managing a boat if they so wish.

The Royal North of Ireland Yacht Club will invite yachting members and their friends to a garden party at the club house at Cultra, about five miles from Belfast, on Friday afternoon, July 30th. A fleet of about fourteen of No. 2 and No. 3 classes Belfast Lough "one design" boats will be placed at the disposal of the visitors, and races will be got up if enough enter. It will greatly facilitate this if those interested in sailing, and intending to avail themselves of the club's hospitality, will write to that effect to the Honorary Local Secretaries at Queen's College, Belfast.

ARCHAEOLOGY.

Some inquiries have reached Belfast as to the objects of archaeological interest in the neighbourhood. In the city itself these are conspicuous by their absence, as it is entirely modern, and in Ulster generally there is not a great wealth of architecture of archaeological interest.

There are a number of old castles, the remains of the places fortified by the first Norman invaders, but these are generally of a very simple character, and attain interest more as picturesque objects in the landscape than on account of their architectural merits. There are few ecclesiastical remains, the only place of much interest near Belfast being Grey Abbey, co. Down, about sixteen miles from the city. It was a Cistercian abbey, founded in 1193 by the wife of John de Courci.

By far the most interesting antiquities in the district are the numerous prehistoric remains. The whole country is dotted over with Druidical altars or cromlechs, and one of the finest, surrounded by an immense earthen circular rampart, is only half an hour's drive from the college. There are also numbers of artificial caves or souterrains, but these are not easily explored without skilled guides. Of the well-known round towers there are

several within reach, the best being that at Antrim, mentioned above. The stump of one may be seen at Drumbo Church, within an easy drive of the college.

CONCLUSION.

Enough has been said to establish to the satisfaction of any member intending to be present at the annual meeting that he may feel sure, whatever his tastes in the matter of outdoor recreation, of being able to gratify them should he be able to take a holiday of a week or a fortnight either before or after. It would, of course, be easy for the visitor with more time at his disposal to go further afield, and to spend a month or more in extending the trip to the west and south-west of Ireland, where mountain scenery of great beauty, and a coast line of unequalled grandeur may be explored on foot with the help of the public cars, railways, and steamboats. But this article has been confined to the north of Ireland, which possesses special features of its own which may well detain the tourist, and where he may pleasantly fill in any short interval of leisure.

In a subsequent article some further account will be given of the immediate surroundings of Belfast and of the most convenient ways of reaching the city from various parts of England and Scotland.

THE MODERN TREATMENT OF FRACTURES.

DR. LUCAS-CHAMPIONNIÈRE, on his arrival in Cardiff on June 3rd, was accorded a cordial welcome. The eminent surgeon, who was accompanied by Madame Championnière and their two daughters, was met at the Cardiff station by the Lord Mayor (Alderman Lewis Morgan), Mr. Lynn Thomas, C.B., Mr. William Sheen, and Dr. Crawford Treasure (President of the Cardiff Medical Society).

After the usual formalities, the party, headed by mounted police, drove to the Mansion House, where during their stay in Cardiff Dr. Lucas-Championnière and family were the guests of the Lord Mayor. In the evening his lordship gave a private dinner at the Mansion House in honour of the visitors. The guests at the dinner included Dr. and Madame J. Lucas-Championnière, Mr. J. Lynn Thomas, C.B., and Mrs. Thomas, Dr. W. B. Crawford Treasure, J.P., Mrs. Treasure, Dr. F. P. S. Cresswell, Dr. H. E. Skyrme and Mrs. Skyrme, Mr. Wm. Sheen and Mrs. Sheen, Dr. Wm. Martin and Mrs. Martin, Dr. C. T. Vachell and Mrs. Vachell, Dr. W. T. Edwards, J.P., the Deputy Mayor (Councillor J. W. Courtis, J.P.), Dr. D. R. Paterson and Mrs. Paterson, the Misses Championnière, and the Misses Lewis Morgan.

MEETING OF THE CARDIFF MEDICAL SOCIETY.

Address by

M. LUCAS-CHAMPIONNIÈRE.

DR. CRAWFORD TREASURE, President of the Cardiff Medical Society, took the chair at the annual meeting of the society on Friday afternoon, June 4th. Owing to the large attendance, the meeting was held in the theatre of the Engineers' Institute, which was crowded by members of the society and other medical men who had accepted the invitation to be present.

The PRESIDENT, addressing M. Lucas-Championnière in French, welcomed him to Cardiff, and thanked him for honouring the society by undertaking to give the annual address. He recalled the fact that Professor Kocher, of Berne, had delivered the address two years ago, and the society was proud that his successor as President of the International Society of Surgery had become his successor also as the orator of the Cardiff Medical Society. The medical profession in Great Britain welcomed M. Lucas-Championnière with the greater cordiality because it was by no means his first visit to these islands and because he had taken back from his first visit an appreciation of the great principle propounded by Lister, for the reception of which his mind had been prepared by his study of the researches of Pasteur. Dr. Lucas-Championnière had been the earliest and the most convincing exponent of Listerism in France, but his name would be imperishably associated with the great reform he had himself introduced in the treatment of fractures, and he called upon him to deliver his address on that subject.

M. LUCAS-CHAMPIONNIÈRE, who on rising was received with loud applause, then delivered in English the address which is published at p. 1397. At its conclusion he was again much applauded, and the applause was renewed when he briefly acknowledged the presentation to him by the President of the diploma of honorary membership of the society.

A vote of thanks to the orator was moved by Dr. E. TENISON COLLINS, President-elect of the Society, in which he expressed his sense of the compliment paid to the society, to Cardiff, and to English surgery, and concluded by expressing in French to M. Lucas-Championnière the pleasure with which all present had listened to his lucid and interesting address.

Dr. T. D. GRIFFITHS, of Swansea, ex-President of the British Medical Association, in seconding, expressed his delight at the chance of hearing such a master of surgery. In the admirable address there were valuable lessons to the physician as well as to the surgeon. Their illustrious guest had emphasized the necessity for mobilization in the cure of fracture. By inference the physician could not help feeling that there was a lesson also for him as to the necessity of systematic movement, of sensible exercise, in prolonging life. As old age came, there came too stiffness in the joints—immobility. Old men properly exercised would hear the advancing motor car and would be able to step aside, and the sensible physician would have patients who would constantly be congratulated upon their smartness of appearance and comparative quickness of action. It had been a lecture full of suggestion to its hearers, it was a lecture that would be historical.

Mr. CLEMENT LUCAS supported the resolution in a few words, commending the suggestiveness of the address, and congratulating the society upon having enjoyed the honour of a visit from the greatest French surgeon of his generation.

PRESENTATION OF

THE LYNN THOMAS AND SKYRME FUND.

On the same evening the annual dinner of the Cardiff Medical Society was held at the Royal Hotel, the gathering being one of the largest and most representative of the medical profession that has ever been held in the Welsh metropolis.

Dr. CRAWFORD TREASURE, J.P., President of the Society, was in the chair, and on his right sat the guest of the evening, Dr. J. Lucas-Championnière (Paris), and on his left the Lord Mayor of Cardiff.

After the usual loyal toasts had been duly honoured,

The CHAIRMAN gave the toast of "Our Illustrious Guest," and in so doing said it would ill become him to enter into a description of the magnificent work in surgery which Dr. Lucas-Championnière had accomplished. He had followed in the footsteps of Pasteur, to whom medicine and surgery owed so much to-day. The work that their guest had done, and was still doing, was a great one. To have introduced the antiseptic system into France was an achievement of the highest

order; to have applied that system in the way he had and which had resulted in the reduction of mortality among women was also a great achievement; and now, to crown the labours of years, he had introduced a system which promised to revolutionize the treatment of fractures. The fame of their guest was not confined to his own country, but was international, and they honoured in him the head of the International Surgical Society.

The toast was drunk with musical honours.

Dr. LUCAS-CHAMPIONNIÈRE, in a brief response, said he must thank them all, both on behalf of himself and his wife and daughters, for their extreme kindness, and they felt especially grateful to the Lord Mayor and Lady Mayores for their hospitality. They had all made them feel at home. He would content himself with asking them to accept his heartiest thanks for the cordial way in which his health had been honoured.

Mr. WILLIAM SHEEN, who had acted as honorary secretary for the Lynn Thomas and Skyrme Fund, then made a statement regarding the initiation and progress of that movement. He said he might remind them that the case concerning which the action was brought occurred in July, 1904, and the first trial was in December, 1905, and the second trial in November, 1906. The plaintiff claimed £2,000 damages, but was only awarded £100. The total expenses of the trial were large. When the plaintiff's costs had been taxed and the Medical Defence Union had paid £928, there remained to be paid a sum of £3,200. At once the feeling of the medical profession



JUST LUCAS-CHAMPIONNIÈRE.

was made manifest with regard to it by a dinner held in Cardiff six days after the trial, at which 110 medical men attended, and which was the largest gathering of the kind that had then been held in that city. As soon as possible afterwards steps were taken to open a fund, and the credit for the initiation of this was due to Dr. Maclean, Mr. Edmund Owen, Mr. Robert Jones, and the editors of the two leading medical papers, to whom he would like to express their feelings of gratitude. As a result of the efforts of those gentlemen there was published at the end of March, 1908, a document known as "The Appeal," signed by over ninety leading men of the profession throughout the kingdom: they were all men of position, and included the President of the British Medical Association, the representatives of medical societies all over the country and of the hospitals. This appeal was widely circulated, and as a result during a period of four months there was collected for the fund no less than £1,788. When the expenses had been paid, the two gentlemen who had been involved in the matter would each receive £800, or just about half the expense to which they had actually been put. He understood that so large a sum had never been collected for such a case before. There were 2,000 subscribers, and it was interesting to know that of these 200 gave sums of half a crown. In conclusion, Mr. Sheen said that the work he had been able to do in this matter had been a labour of love.

Mr. EDMUND OWEN congratulated the Cardiff Medical Society upon the tremendous success of the gatherings that afternoon and evening. It must have been a great comfort to Mr. Lynn Thomas and Dr. Skyrme to know that in their time of trial—or he might say of trials—there was not only the profession of Cardiff standing by them but the profession of the whole of Great Britain and of the whole Empire. It was not in mortals to command success, but when medical men had done all they could to deserve it and had not altogether succeeded in attaining it, they deserved the sympathy of every member of their profession. Mr. Lynn Thomas and Dr. Skyrme had come well through their ordeal, but the verdict of the courts was against them. That day it had been shown that the verdict of the profession was with them, and in an affair of this sort, where a man's brain and heart and honour and conscience were concerned, it was much better, he ventured to believe, to have the verdict of the profession than of the court; and he was quite certain that they would not like the verdicts reversed. He was sure that all would agree that it was exceedingly fit and proper that Dr. Lucas-Championnière be asked to make that presentation. Their distinguished guest that evening was a disciple of Lister, and from being a disciple he became an apostle; the amount of good that he had done was immeasurable. When their guest came over impressed with the Listerian doctrine to see Lister in 1863, he followed him to Glasgow, and he followed him in 1875 to Edinburgh, and it was in these cities that he acquired that slight Scottish accent which they had noticed that evening. The fact that Dr. Lucas-Championnière was the President of the International Society rendered that gathering one of almost international importance. If it did not actually do that, their distinguished guest was doing what their dear King had done, and what Lansdowne and Edward Grey and Delcassé and Loubet had done—putting brick by brick into the *entente cordiale*.

Sir ALFRED THOMAS, M.P., in a brief speech, said how much pleasure it gave him to be present and to speak as a layman of his friends, Mr. Lynn Thomas and Dr. Skyrme. Mr. Lynn Thomas was an honour, not only to his profession, but to Cardiff and to the little country that gave him birth. He knew that Mr. Lynn Thomas had the courage

of his convictions, and, to quote in English a Welsh triad, it might be said of him that he had an eye to see Nature, a heart to love Nature, and the courage to follow Nature. He rejoiced at the ample vindication of Mr. Lynn Thomas and Dr. Skyrme that evening. He could not forget the splendid work that they and other members of their profession had done for the Medical School of Cardiff, in connexion with the foundation of which the names of W. T. Edwards and Daniel Jones would ever be associated.

Mr. MANSELL MOCLLIN (Senior Surgeon to the London Hospital) said that he was very glad to have the opportunity of speaking, for two reasons, one was that Mr. Lynn Thomas and Dr. Skyrme were two of his oldest friends, men with whom he had worked and whose word he could rely upon down to the ground. The other reason was that that occasion was, he believed, unique. He did not think there had ever been a testimonial presented under circumstances similar to this—a testimonial raised not from Cardiff, or Wales, or England only, but supported by the whole world. Its success was due simply to the fact that the medical profession believed in the justice of its cause. Larger amounts had been subscribed on occasions where there was some question of charity, but there was no such question here, and the numbers of those who subscribed showed that the medical profession believed in the justice of the appeal.

If it ever became his lot to have any such work done for him he could only hope that it would fall into the hands of Mr. William Sheen, who had done such excellent service as honorary secretary in this case.

Dr. LUCAS-CHAMPIONNIÈRE then made the presentation, Mr. Lynn Thomas and Dr. Skyrme walking arm in arm amidst a scene of great enthusiasm to the head of the banquetting hall. In making the presentation, Dr. Lucas-Championnière said he was proud to be present on that occasion and to have the honour of making the presentation. The occasion was not merely British, but had an international character.

Mr. LYNN THOMAS, who had a splendid reception on rising to respond, said he desired to thank them all for their very warm reception. That was, indeed, in his life a very memorable event. It had awakened what he had only very little realized till within the past

twenty-four hours. He had, he believed, ever since the verdict in the court, enjoyed the confidence of his brother medical men, but he had not an idea till quite recently that members of the profession could feel assured that there was an invisible hand which would render help to any member when accused wrongly of not doing his duty. That was a thing of which any profession might be very proud. He desired first of all to thank their guest of the evening, because by his presence he was not only paying a compliment to the Cardiff Medical Society, but to the whole British Empire. He looked upon him as a prophet from the East, travelling West. He (the speaker) would also like to take the opportunity of thanking his colleague, Mr. William Sheen, for the kind way in which he had taken up the matter of the testimonial. His action had cemented the friendship existing between them. He also desired to express his gratitude to the editors of the *Lancet* and the *BRITISH MEDICAL JOURNAL*, the two most powerful journals in the medical profession in the British Empire. The case which had come before the courts was one that affected every member of the profession, and he was gratified indeed to know that the testimonial had been subscribed to by no less than 2,000—from Lord Lister, the head of their profession, to many medical men in the smallest villages. It was in 1892 that he paid his first visit to Paris, and on that occasion he saw their distinguished guest treating certain types of fractures in a way that he had not seen before and which had surprised him, but he had also seen their guest doing ordinary opera-

tive surgery, and was very much impressed with his skill and care, so that he was prepared to believe that his method of treating fractures was worthy of study. In 1895 their guest brought out his great book, and a careful perusal of it, and further opportunities of observing M. Lucas-Championnière's practice, had made him one of their guest's disciples. He had a confession to make, and it was that he experimented once on a patient. That experiment was an extension of the principle laid down by Dr. Lucas-Championnière. The patient had ruptured his tendo Achillis. Mr. Lynn Thomas thought what their guest would have done under similar circumstances, and decided to follow out the treatment as in fractures. It was carried out with a measure of success quite satisfactory to the patient. He had reported the case in the *Barrish Medical Journal*, and he would like to tell them that that patient was himself. On one occasion he was returning from Paris; the sea was very rough, and some of those on deck had on occasions to clutch anything near when the vessel rolled. One gentleman near him used a word that was very familiar in the English language, and he (the speaker) asked him if he was hurt. He replied that he had strained his wrist, adding, "I broke my wrist a month ago." So he (the speaker), thinking for once in his life he would play the part of a Sherlock Holmes, said, "You have been under Dr. Lucas-Championnière." The gentleman turned and exclaimed, "How do you know?" "Because," was the reply, "it is only by his method that you would be able to use your hand within a month." In conclusion, the speaker again tendered his grateful thanks for all the sympathy he had received.

Dr. H. E. SKYMER, who was heartily received, said he wanted to express to them in the simplest words of sincerity the gratitude which he felt for the sympathy of the profession extended to Mr. Lynn Thomas and himself, and also for the practical form which that sympathy had assumed in generous contributions to the fund raised to reimburse their monetary loss, the intention being much more comforting than the actual money contribution. The considerable cost to which they were put was incurred from a sense of the necessity of conserving the interests of the profession at large, which was made especially apparent to them by the first trial at Cardiff. The knowledge that they were not fighting their own battle only, but that of the profession generally, induced them to employ the best possible counsel at any cost, the vital principle involved in the action being the right of every medical practitioner to use his discretion under any circumstances. One practical result of the action had been that the two medical protection societies who formerly undertook the cost of ordinary counsel for the defence only had since made arrangements with insurance companies, which, in consideration of a small annual subscription, undertook the payment of any damages that might be awarded and the taxed costs up to a certain amount involved by an adverse verdict—a substantial consideration to which he would call the attention of every medical man.

The toast of "The Visitors" was submitted by Dr. D. R. PATTERSON.

The LORD MAYOR OF CARDIFF expressed the pleasure with which he had listened to Dr. Lucas-Championnière's address and taken part in giving him a civic welcome to Cardiff.

Dr. SQUIRE SPRIGGE said that he was very glad to be present on what he considered to be a professional occasion of the highest importance, but, as the significance of the meeting had already been so eloquently indicated by previous speakers, he would confine his words to one particular point—namely, the manner in which the appeal to the profession was made. That manner was wholly admirable. The statement of the case in the medical press was studiously fair, and every point made was, or could be, vouched for by first-class surgical opinion. The original letter of appeal was based on broad grounds, without a touch of bitterness or personal recrimination in it; it was signed by names eminent in the medical world as professors, consultants and leaders generally, and received a remarkable scientific endorsement from the Continent and the United States. The success of the movement was assured by the manner in which it was inaugurated not less than by the righteousness of the cause advocated.

Dr. DAWSON WILLIAMS, who was also called upon to respond, said that the movement which reached its final

stage on that occasion owed nothing of its success to personal considerations. It was a movement to vindicate the right to freedom of thought. The claim to that right was no new thing for it had led to the foundation of the mediaeval universities, but it was appropriate enough that this most recent defence of the principle should have originated in Wales, for the people of the principality had in comparatively recent times been impelled, by a punctilious adherence to that principle, willingly to make many sacrifices. In the exercise of the medical art, freedom of thought implied freedom to act for the best according to the best knowledge of the day. In conclusion he said that he was commissioned to state that Dr. Rayner, Treasurer of the British Medical Association, had intended to be present, but was detained in London by pressure of business. Dr. Davy too, who, when President of the Association, had taken a warm interest in the initiation of the movement, was also unfortunately detained at the last moment.

The Rev. A. HENDERSON (Vicar of Cardiff), submitted the toast of "The President," who responded.

During the proceedings an excellent programme of vocal and instrumental music was performed by Mr. Arthur Angle and party.

MEDICAL PRACTITIONERS AND THE FINANCE BILL.

IN THE *BRITISH MEDICAL JOURNAL* for May 8th, 1909, an article was published on the Budget in its relations to the medical profession. The novel and complicated character of several of the proposals of the Chancellor of the Exchequer made it inevitable that many points should remain more or less obscure pending the introduction of the Finance Bill. After prolonged discussion of the Budget resolutions, the bill was introduced just before the Whitsuntide holidays, and a perusal of its clauses renders it possible to clear up several difficulties and to remove a number of misapprehensions.

Income Tax.

The income tax proposals were summarized in our former article, and we find comparatively little in the Finance Bill that was not there referred to. There are, however, some interesting features which may be touched upon. The first of these is the method of estimating the income for the purposes of the supertax on total incomes exceeding £5,000. Clause 47 provides that the total income is to be taken as "the total income . . . from all sources for the previous year, estimated . . . as the total income . . . is estimated for the purposes of exemptions or abatements. . . ." This proposal seems a wise one, as tending to simplicity, so far as simplicity is possible in income tax matters. The practitioner who is liable to pay supertax will not be required to enter into an elaborate calculation in order to make his return; he will simply insert on the form the amount of income under each head on which he paid tax during the previous year, and the aggregate of these amounts, less an abatement of £3,000, will be the amount on which he will be called upon to pay the supertax of 6d. in the £. Thus, in making a return for the current year, 1909-10, for the purposes of the supertax, the practitioner will insert as his professional profits, not the amount of his estimated income for 1909, nor the amount of his realized income for 1908, but the amount on which he was assessed to the ordinary income tax in 1908, which, as our readers are aware, represents the average profits realized during 1905, 1906, and 1907. His income from appointments must similarly be taken at the amount on which he paid tax in 1908, and so too with dividends, rents, interest, and any other private income. Though possessing the merit of simplicity, this system involves two possible sources of hardship. A careless taxpayer who was over-assessed in 1908, and did not trouble to appeal in due time, will again suffer this year, as the amount of the excessive assessment will be taken for the purposes of supertax. Again, a person whose income exceeded £5,000 last year will pay supertax this year, although he may be now receiving considerably less than £5,000 a year. It should, however, in fairness be stated that a person whose income was less than £5,000 last year will pay no supertax, although his income may greatly exceed that amount this year.

Medical men who own considerable property will be interested to learn that in reckoning income for the pur-

poses of supertax a special deduction will be made for expenses of management of 5 per cent. of the annual value of the property. From the wording of the clause it appears that this deduction will be allowed whether any expenses of management are actually incurred or not.

Professional profits are, for the purposes of the ordinary income tax, dealt with by local or district commissioners, unless the option is exercised of claiming to be assessed by the special commissioners, a body of paid officials appointed by the Treasury. The supertax is to be assessed exclusively by these special commissioners, who are to make regulations for the rendering of returns and for carrying the provisions of this part of the bill into effect. The selection of the special commissioners to deal with the supertax is probably due to the feeling that persons with large incomes would object to the disclosure of all their circumstances to their friends and neighbours, and possibly to their rivals, and therefore would prefer to be assessed by a body of officials rather than by local unpaid commissioners.

All persons on whom the prescribed notices are served are to make returns whether they are or are not chargeable with supertax, and every person who is liable to pay this tax is required to give notice to the special commissioners that he is chargeable before September 30th, annually. This requirement is doubtless intended to catch persons whom the taxing authorities might omit to serve with return forms. The penalty for failure to make returns or to give the notice referred to is £50, and, after judgement has been given for that penalty, a further penalty of £50 a day is incurred for every day during which the failure continues. It is obvious that attempted evasion of the supertax will be extremely dangerous.

A time limit of three years after the end of the year of assessment is imposed for the making of assessments to supertax. This corresponds with the limits applicable to the ordinary income tax.

With regard to the ordinary income tax, Clause 49 makes it clear that the allowances of £10 for each child, which are to be granted where the total income does not exceed £500, are to be made primarily from the earned income—that is, at the rate of ninepence. This clause also provides that the expressions "child" and "children" shall include stepchild and stepchildren, but not an illegitimate child or illegitimate children. This is in accordance with what had been generally anticipated.

It is to be noted that practitioners whose total incomes lie between £2,000 and £3,000, and to whom the reduced rate of one shilling will apply for 1909, so far as their incomes are earned, must make their claims for relief by sending declarations setting out their total incomes before September 30th, 1909. Attention is called to the fact that the words are *before*, and not *on or before*, September 30th. Failure to notice this distinction was the cause of a good deal of misapprehension and some disappointment two years ago, when the relief in respect of earned income was originally introduced.

By Clause 50 of the Bill persons who reside out of the United Kingdom but derive income therefrom will cease to be entitled to the exemptions and abatements applicable to residents in this country. This provision is novel as regards British income tax, although it is a feature of several foreign and colonial systems. Retired medical men drawing their incomes from this country, who have gone to reside abroad may find their pockets adversely affected by this proposal.

Motor Cars.

The new scale for licences for motor cars was given in the article already referred to, and is based upon the horse power of the cars. The unit of horse power is to be calculated in accordance with regulations to be made by the Treasury for the purpose. Medical automobilists are to pay only one-half of the full rates, and we quote in full the sub-clause conferring this relief.

66 (4).—If a duly qualified medical practitioner proves to the satisfaction of the Commissioners or council by whom the licence is granted that any motor car kept by him is kept for the purpose of his profession, he shall be entitled to an allowance in respect of the duty payable under this section on the car equal to half the amount of duty so payable.

It is interesting to observe that the relief applies to a car "kept for the purpose of his profession." The word "exclusively" does not appear in this expression, so that it is reasonable to suppose that a car kept by a doctor for

professional purposes, and principally so used, will not be charged with the higher rate of licence duty merely because it may be used occasionally for private purposes. This interpretation seems, at any rate, to be fair and equitable.

Disappointment has been expressed at the refusal of the Chancellor to extend the principle of "half rates" to the tax on petrol used by doctors for their cars. It is to be hoped that some concession on this point may be made during the passage of the bill through the House of Commons. That medical men are not entitled to this rebate as the bill stands is clear from the fifth schedule, which contains the conditions under which relief is to be granted. It runs as follows:

REBATE OF MOTOR SPIRIT DUTY.

Motor spirit used for the purpose of supplying motive power:—
1. To a motor car which is constructed or adapted for use, and is used solely, for the conveyance of any goods or burden in the course of trade or husbandry, and whereon the Christian name and surname and place of abode or place of business of the person, or the name or style and principal or only place of business of the company or firm keeping the same, shall be legibly and visibly printed in letters of not less than one inch in length.

Death Duties and Life Assurance.

The clauses imposing the increased death duties contain no provision of special import to the medical profession, although, in common with other members of the taxpaying community, they will probably find it increasingly necessary to make some provision by life assurance to meet the considerable burden which this group of taxes now imposes. This form of providing for the death duties has the incidental effect of reducing the practitioner's income tax, for, as is well known, the amount of income applied in payment of life assurance premiums is, subject to a limit of one-sixth of the total income, allowed as a deduction from the assessment.

Spirit Duty.

The increased stamp and tobacco duties and liquor licences call for no special comment in this article. With regard to the spirit duty, we may be allowed to reiterate the opinion that the manufacture of medicine should be allowed a special rebate of the additional duty imposed under this head. No provision for this rebate appears in the Finance Bill, and it can be introduced only by a direct amendment in Committee. We venture to express the hope that the Government will see its way to the acceptance of such an amendment in due course, for, as has been pointed out, an increase in the cost of medicines must fall to some extent upon the poorer classes—a result which we take to be directly contrary to the intentions of the present Administration.

Land Values.

We have left until the last the proposals for the imposition of duties on land values, and, as they do not affect members of the medical profession as a class, our explanations and comments will be brief. Three duties are to be imposed: A duty of 20 per cent. on increment value, payable on every occasion of the sale of land, or of any interest therein, or on death; a reversion duty of 10 per cent. on the determination of any lease, the original term of which exceeded twenty-one years, to be levied on the value of the benefit accruing to the lessor by reason of the determination of the lease; and an annual duty of one half-penny in the pound on the capital value of undeveloped land. It is claimed by the advocates of this tax that its effect will be to force development, to bring into the market building land which is now being held up for excessive prices, and, by reducing rents, to assist in the solution of the problem of the better housing of the working classes. On this highly controversial political question we express no opinion, merely remarking that members of the medical profession will welcome any measure which substantially tends to the improvement of the conditions of the life of the poorer members of the community. In any case, we rejoice to observe that the bill contains exemptions from undeveloped land duty for parks, gardens, and open spaces which are open to the public as of right, or to which reasonable access is granted to the public, where the Commissioners of Inland Revenue are satisfied that that access is of benefit to the public as contributing to the amenity of the locality. Similarly, land used for the purposes of games or recreation is to be exempted on like conditions,

THE FINANCIAL PROSPECTS OF MEDICINE.

INTRODUCTORY.

AMONG all classes of society complaints of hard times have ever been common, and medical men have probably never been an exception to the general rule. During the past few years, however, allegations of undue difficulty in making an adequate income have been increasingly frequent. They have come, moreover, not only from comparative novices in the practice of medicine as a livelihood, but from those whose knowledge and experience in medicine as a craft fall in nowise short of their professional attainments—from men who never forget the personal equation and are just as skilful in dealing with patients as in diagnosing their diseases.

Whether medicine when handled by men of average capacity and average ability is a less efficient money-making machine now than formerly is a question on which there is perhaps room for more than one opinion. No answer could be deemed unimpeachably correct which did not take into consideration a multiplicity of factors, including such minor points as differences in present and past general standards of life, the comparative expense of working a practice now and at earlier dates, variations in the value of money and consequently in the adequacy or inadequacy of the fees commonly received formerly and now.

Clearly, therefore, the question mentioned covers a very wide ground, and this article is not intended to supply a complete answer, the point considered being of a somewhat narrower character. It is as follows:

Assuming that complaints of hard times among medical men are well founded, are there any specific factors which might serve sufficiently to explain and justify their existence?

In other words, are there any material differences in the conditions of medicine at the present time as compared with the recent past which, so far as the general mass of medical men are concerned, would be likely to make it a less paying occupation than it was formerly?

Probably every medical man who has been long in practice could suggest some circumstance more or less of this order, but at the bottom of the whole question lies a factor the value of which cannot be determined by any man's personal experience; moreover, it is one not easy to define by a single phrase.

The clearest way of stating this factor is to ask whether the profession at the present time is overstocked or understocked as compared with the past. Put in this way we have a definite issue which can be considered with reference to the profession of medicine on the same general lines as would be followed in relation to any other occupation or trade. Overstocking in any of these may be brought about in a great number of different ways. Thus:

1. The demand may fall while the supply remains the same.
2. The supply may increase more rapidly than the demand.
3. Irrespective of any alteration in the ratio between demand and supply, the calling may be overstocked owing to new fashions of meeting the demand being invented.
4. Or any of these factors may be combined.

Each of these factors constitutes a separate question, and the order in which they are placed is perhaps the most natural one. In applying them, however, to medicine, a variation of sequence will be convenient. Furthermore, since the main question is not one of absolute but of relative overstocking, it is necessary to determine the period over which the investigation should be carried.

Provided that the same data are obtainable throughout, the period should be as long as possible; hence the years from 1881 to 1903 have been chosen, this period of twenty-eight years presenting the further advantage that a large proportion of the men who were at work at the beginning of it are either still in practice or have only recently retired.

The geographic extent of the investigation is also of importance, in order still further to ensure the comparability of the data obtained. On this point it should be said that soon after the investigation commenced it became clear that if it were extended to the whole of the British Isles it would be difficult to avoid certain possible sources of error. In Scotland and in Ireland the courses followed by socio-political matters have not been identical either with one another or with those of England and Wales. The figures given, therefore, relate only to England and

Wales. At the same time, however, it may be said that investigation regarding Ireland and Scotland was carried on sufficiently far to enable it to be stated with some assurance that, if an investigation were completed regarding each of these countries separately, the broader conclusions derivable would be identical with those hereinafter shown to be deducible from investigation of the position of the medical profession in England and Wales.

The ground being thus cleared, the method of investigation and the results may now be detailed.

POSSIBLE PATIENTS AND ACTUAL MEDICAL MEN.

It is necessary to assume for the moment that the demand for the work represented by the labour of medical men is just as great as ever; or, in other words, that of the four factors mentioned No. 1 has not been operative. No. 2 factor is thus reached, and applies to the medical profession in the following fashion:

Any community of, say, a thousand people may be regarded as a thousand possible patients, and, assuming that their liability to sickness remains the same in any two years, the demand for medical work will remain the same in the two periods. If, however, the number of medical men ready to do that work alters, the supply will vary accordingly, and comparative understocking or the reverse at once be created. Hence the ratio between the medical population or the actual workers and the general population or possible patients, and its variations year by year are both points of interest; while the difference between the ratios at the beginning and at the end of the period will show the presence or absence of relative overstocking so far as factor No. 2 is a conclusive test.

This information is supplied by Table A, in which the general population is the total number of persons living at

TABLE A.—Possible Patients and Actual Medical Men.

Year.	Col. 1. Number of Medical Men.	Col. 2. Rate of Increase.	Col. 3. Population.	Col. 4. Rate of Increase.	Col. 5. Ratio of Population to Medical Men.
1881	15,308	—	25,046,142	—	1,700.4
1882	15,783	0.48	26,334,942	1.10	1,710.9
1883	15,827	2.88	26,626,949	1.11	1,681.5
1884	16,408	3.67	26,922,152	1.10	1,639.7
1885	16,801	2.39	27,220,706	1.10	1,619.1
1886	17,163.5	2.19	27,522,532	1.10	1,600.4
1887	17,644	2.76	27,827,706	1.10	1,576.1
1888	18,064.5	2.38	28,136,258	1.10	1,556.9
1889	18,514	2.48	28,448,239	1.10	1,535.0
1890	18,906.5	2.12	28,763,673	1.10	1,520.3
1891	19,170	1.39	29,085,819	1.11	1,516.2
1892	19,564.5	2.05	29,421,392	1.15	1,502.8
1893	20,143.5	2.98	29,760,842	1.15	1,476.0
1894	20,771	3.08	30,104,201	1.15	1,448.3
1895	21,510	2.59	30,451,528	1.15	1,428.0
1896	21,850	2.53	30,802,858	1.15	1,408.7
1897	22,342.5	2.25	31,158,245	1.15	1,393.5
1898	22,638	1.32	31,517,725	1.15	1,391.2
1899	22,891	1.11	31,881,365	1.15	1,361.7
1900	23,263.5	1.65	32,249,187	1.15	1,384.8
1901	23,589	1.54	32,621,265	1.15	1,381.9
1902	23,811	0.94	32,997,626	1.15	1,384.7
1903	24,032.5	0.80	33,378,338	1.15	1,389.6
1904	24,219.5	0.90	33,763,434	1.15	1,393.0
1905	24,491	1.12	34,152,977	1.15	1,393.5
1906	24,727.5	0.96	34,547,016	1.15	1,386.1
1907	24,920.5	0.78	34,945,600	1.15	1,401.2
1908	25,092.5	0.69	35,348,780	1.15	1,407.7

the middle of each year, as calculated by logarithms on the basis of the decennial increase ascertained to have taken place between the two previous census periods. On the other hand, the number of medical men regarded as in practice at the middle of each year is the arithmetic mean between the number of medical men shown by the *Medical Directory* to be resident in England and Wales in the issue for one year and in the issue for that which follows it. This seems the only possible method of making the calculation, and for all practical purposes may be taken as perfectly correct. The *Medical Directory* always includes a certain number of men who give up practice before the middle of the year, but a certain number who are not in practice when the *Directory* is published have commenced work by the time the sixth month has been reached, and the two may be balanced one against the other. Finally, in calculating the number of possible patients to each medical man, the medical population has been deducted from the total population.

In looking at this table the first notable point is that this period of twenty-eight years has seen a great increase both in the general population and in the medical population, but that relatively the increase in the latter is the more marked. In round numbers, the thousands of medical men have increased from 15 to 25; while, again, in round numbers, the millions of population have increased from 26 to 35. The percentages of increase from year to year are shown in the second and fifth columns respectively. On running the eye down these it will be seen that the rate of increase in the medical population, especially in the earlier years, is very irregular, while the yearly additions per cent. to the general population vary very slightly throughout the whole period.

This regularity in the case of the general population is, in a measure, artificial; for, though it is a fact that the population expands very steadily, the appearance of regularity is increased by the fashion in which the population is estimated, and by printing only few decimals. From this point of view, the figures given as regards the medical population may be regarded as the more correct, for they are founded on a yearly census as opposed to a ten-yearly census in the case of the general population.

For all practical purposes, however, both sets of figures may be taken as absolutely correct, and the point to be noted is that while the percentage of increase in the medical population varies from less than $\frac{1}{2}$ per cent. to over 3 per cent, the annual increase in the general population never reaches half that figure. It will be seen, too, that the higher figures in the medical population are all to be found in the first two-thirds of the period, while in the remaining one-third, or since 1898, there has been an intermittent tendency for the percentage of increase to diminish, such diminution for the last three years having been quite steady.

There still remains to be mentioned, however, the last column. This shows the number of possible patients which year by year each practitioner might have been expected to have, had the whole population been divided up in precise proportion to the number of medical men. It will be seen that each practitioner's field of work steadily diminished in size year after year until nine years ago, when it began slowly to expand once more. In other words, the number of possible patients to each actual medical man dropped from 1,710 in the year 1882 to as low as 1,384 in the year 1900, since when it has slowly increased until the ratio of possible patients to actual medical men—omitting decimals—now stands at 1,407 to 1.

All these points, however, will be gathered much more readily on reference to Chart B, opposite, and to Chart C, on p. 1434. These are graphs originally made on a very large scale, and in each case they are approximately accurate to three places of decimals. From Chart C will be gathered at a glance the fashion and extent to which each medical man's nominal field of action has expanded or contracted during the period under review.

The same knowledge could indirectly be gleaned from Chart B, but its real value is that it shows the different rate of increase in the general and medical populations much more clearly than the figures given in Table A. It should be noted that the percentages on which it is based are not the percentages given in that table. Those are the percentages of increase from year to year; while the percentages graphically shown in Chart B are the differences

between the first year under consideration and each of those which follow, and the chart makes it quite clear that almost throughout the period the increase in the number of the medical profession has been much more rapid than the increase in the population.

These tables, therefore, whether taken separately or together, conclusively prove that the second of the factors mentioned in the introduction has been actively at work in the last twenty-eight years. The supply has increased more rapidly than the demand, with the result that the ratio of possible patients to actual medical men has fallen by nearly 18 per cent. The first conclusion to be reached, therefore, is that, so far as factor No. 2 can decide the question, overstocking of the profession of medicine at present exists.

It would not be right, of course, to jump forthwith from this conclusion to a final verdict on the question initially raised, and to say that the profession of medicine has been proved to be a less efficient money-making machine for the average man than formerly. What has been proved so far is simply the existence of one circumstance which, unless counterpoised by some other circumstance, must inevitably bring about the condition of affairs in question. So far, in short, the evidence is of the kind known as *prima facie*, and it may even be that the relative overstocking is not really so high as that which the figures would indicate, because before the period commenced, as also throughout its first two-thirds, there was a large number of unqualified assistants at work as well as registered medical men.

This circumstance is not without interest, but for the moment it need merely be said that any effect it might be esteemed to have on the primary question under investigation is balanced by another circumstance, and that in any case the conclusion to be based on what is herein called factor No. 2 is not vitiated by its existence. The relative overstocking may be small or may be great, but in either case it represents a circumstance likely to diminish the financial attractions of medicine for the average man, for if a practitioner has even one more competitor to deal with than formerly, his chances of financial success are diminished to that extent.

The net conclusion, therefore, is that the investigation, even when carried out to this limited extent, has already revealed a circumstance which goes some way towards explaining and justifying complaints as to hard times amongst medical men.

SOME SIDE ISSUES.

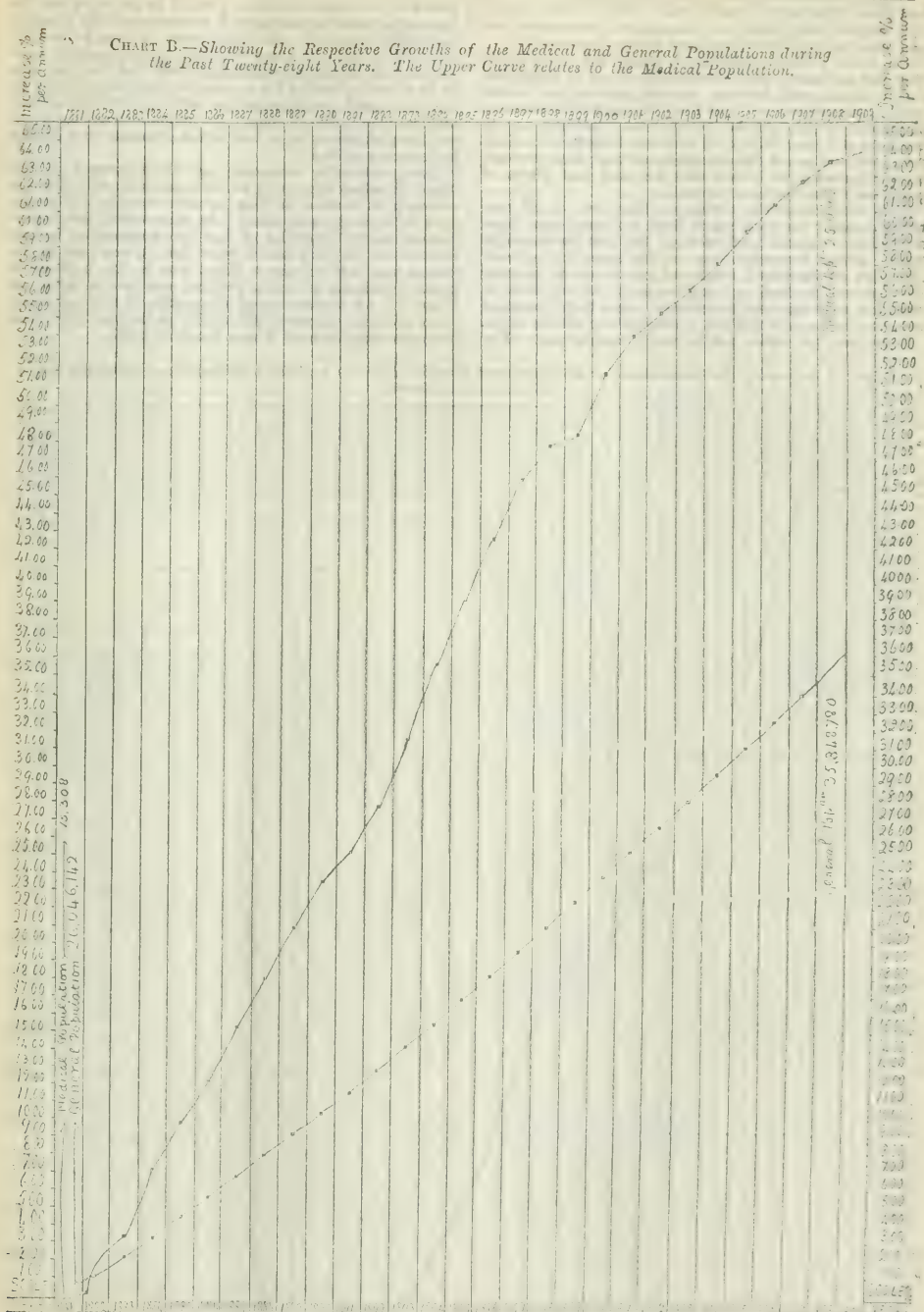
Before ending this purely statistical consideration of a question which is as intricate as it is interesting, one or two comments may be permitted on the character of the curves in Chart B, and the cause of the fluctuations in the number of possible patients to each actual medical man shown in figures in Table A and graphically in Chart C.

As for the former, it is important to note that the disproportion in the growths of the two populations is evident at the very beginning of the period, and that, with one or two exceptional years towards the end, it is persistent throughout it. If, therefore, a cause is to be looked for, search must be made for a circumstance capable of continuous action, or for a sequence of circumstances whose net effect would be that in question. Nothing of the latter class suggests itself, but conceivably it might be argued that the growth of the medical profession is only abnormal because the general population has ceased to increase at the same rate as formerly, or because opportunities for medical men to settle abroad have diminished, or because medical men from the sister countries have settled down in England and Wales more frequently than heretofore.

On these points it need merely be said that the first contention would be annihilated by figures which need not here be given. The growth in the general population has by no means fallen off, while that of the medical population, so far as materials for calculation exist, has in the period under consideration vastly exceeded that of any earlier date.

As for the second suggestion, the cause in question may possibly have been at work, but it does not seem, on the whole, as if its effect could have been more than minimal. The third suggestion is insusceptible of statistical treatment, but the medical profession in England and Wales

CHART B.—Showing the Respective Growths of the Medical and General Populations during the Past Twenty-eight Years. The Upper Curve relates to the Medical Population.



has from the earliest times been largely recruited from Scottish and Irish practitioners, and the extent to which such recruiting has been going on during the past twenty-

eight years has not, so far as can be discovered, varied during the course of that period. It is true that the number of Irish medical graduates who remain in Ireland

has greatly diminished during the course of those years, but, on the other hand, the number of Scottish medical men who practise in Scotland has greatly increased.

On these grounds, therefore, it seems fair to conclude that the increasing gap between the curves in Chart B—the decreasing ratio between possible patients and actual medical men shown in Chart C—is due neither to an arrest of growth in the number of possible patients, nor to blockage of former outlets, nor to a mere transfer of medical men from one part of the country to another, such as would be represented by an influx into England and Wales of graduates from the sister countries.

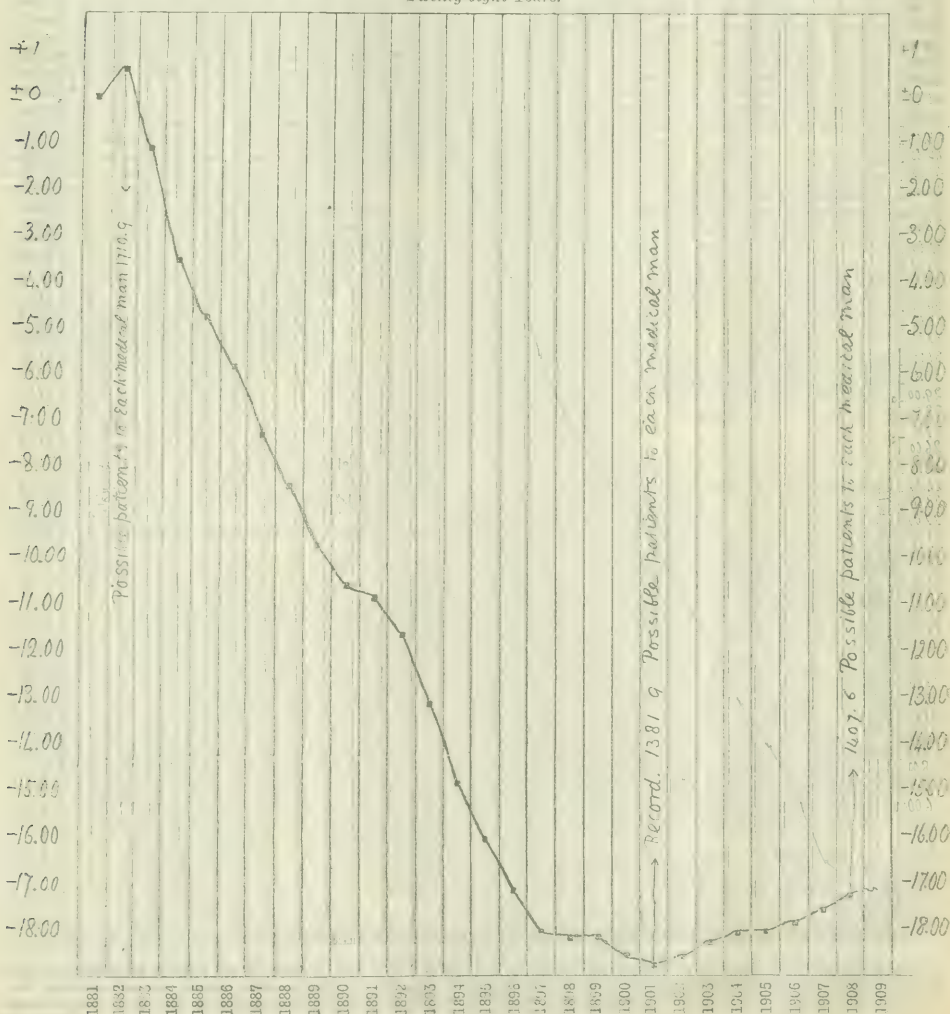
The character of the curves is, therefore, in all probability simply due to the fact that too many men have entered the medical profession in the last twenty-eight years; either because owing to the spread of general education an increased number of men is seeking to enter the learned professions, and amongst others that of medicine, or because erroneous ideas have been prevalent as to the prospects which the profession of medicine offers.

There are two other points worth mentioning. The

action of the General Medical Council in putting a stop to the employment of unqualified assistants might possibly have been expected to affect the curve relating to medical men. Were it to be supposed that the unqualified man was capable of getting qualified, the effect of forcing him to do so or to abandon his occupation would seem likely to have increased the disproportion in the growth of qualified medical men. But, of course, the unqualified assistant was only unqualified owing to lack either of means or of energy to become qualified.

Quite naturally, therefore, his disappearance is not found to affect the curve in the manner stated. On the contrary, it is after his disappearance that the two curves tend to separate less widely. In other words, the disproportion in the growths of the two populations is less marked in the very latest years than in any part of the period, and this is why a slight rise in the number of possible patients to actual medical men is to be noted on Chart C. As already stated, the number at first ran down from 1,710 in the year 1882 to 1,381 in the year 1901, and then rose slightly until it now stands at 1,407.

CHART C.—Showing the Variations in the Number of Possible Patients to Actual Medical Men during the last Twenty-eight Years.



Why there should have been this slight rise is puzzling, and at present nothing which seems quite a satisfactory explanation suggests itself. It may be noted, however, that in the year 1890 the nominal length of the curriculum for medical students was extended, and it is about ten years later—by which time knowledge of the increased length must have become general—that we find the disproportion in the growths of the two populations slightly lessening. How long this diminution will continue remains to be seen. Meantime, the net outcome of the investigation represented by this article may be restated in a few words:

1. It has been found that the ratio of possible patients to actual medical men has materially fallen in the past twenty-eight years.

2. This means that one of the accepted causes of relative overstocking in any calling, trade, or profession, exists in the case of the profession of medicine.

3. Hence one specific factor has been discovered which quite independently of any other circumstance would go far towards explaining and justifying complaints of hard times among medical men.

4. Since the average medical man of to-day has even in point of mere numbers more competition to contend with than had his predecessor, it at once becomes evident that the profession of medicine should be regarded—*prima facie* at any rate—as a less efficient money-making machine for the average man than it was at the commencement of the period under investigation—namely, the twenty-eight years ending January 31st, 1909.

And this was the question initially propounded for consideration.

LITERARY NOTES.

SIR SAMUEL WILKS writes:

I have enjoyed reading about an old diploma, as the names of the signatories are familiar to me. On my own College diploma, 1847 (?), I have the name of John Goldwyer Andrews and also Liston. I forget the others, but I will try and find my diploma. Andrews I had seen and heard about, for my old master to whom I was apprenticed was dresser to him. He always called him in for consultation. He knew he was an uncultivated man, for he told the story of a student who, seeing lice on a patient's head, pointed them out to another student to warn him, said in an unknown (to the patient) tongue to his fellow, "*Pediculi!*" whereat the surgeon, also looking, exclaimed, "I see nothing particular" (*pediculi*). He mentioned also Andrews's jealousy on seeing his juniors performing new operations. These younger men were Adams, Scott, and Luke. I think it was the last who was the first man in London to remove the upper jaw for a growth. When half way through it he got into some muddle, and asked Andrews a question. He answered in a surly manner some words I forget, but equivalent to, "As you have attempted it you know best how to go on with it." Scott I knew by sight, as I often saw him riding home on horseback through Sydenham Park, and I am under the impression that it was his park which he sold to the Crystal Palace and on which it stands now. He had a large practice in the City for sore legs, because his father had commenced making sore legs a speciality and treating them in a manner which had a name like Baynton. The mercurial ointment he used was long after called Scott's ointment. I think it was nothing more than leaving off all the rubbish hitherto used, putting on some of this mild ointment, strapping it up, and leaving it alone for a week or two. This reminds me, after speaking of Liston, of University College, known for his splendid operations like Ferguson, that I think it was he who introduced water dressings for wounds, which I take it was mainly successful in preventing the use of the messes then in vogue. I was able to compare this superior method myself with what was done at the French hospital when I was in Paris, seeing the surgeon stuff in the charpie into a wound covered with some yellow stuff looking like the material they used to put into the axle-boxes of the railway carriages.

An article on William Hamilton, Royal Academician, fashionable portrait painter and friend of Mrs. Siddons, which appeared just a year ago in the *Connoisseur*, has a melancholy interest, as the death of the writer, Mr. A. P. Spanton, M.A. Cantab., LL.B., C.S. Ed., a son of Mr. W. D. Spanton of Stoke-on-Trent, was lately announced in the *JOURNAL*. Apart from the authorship the article has a distinct value of its own, as in it is given an excellent critical estimate of a British painter, now almost forgotten except by the few. According to Mr. Spanton, Hamilton may be regarded as one of the most successful pioneers of the English water-colour school, a fact which would have been recognized earlier if he had not died so soon. Many of his works are now lost, including some of his best oil paintings, but a sufficient number of water-colours remain to show his characteristics, and the difference in style between his earlier and his later work. All his best drawings, such as his "Shepherd Boy," "Girl with Cows," "Eve and the Serpent," belong to the later period, and were produced during the last six years of his life. His earlier work was done chiefly for book illustrations; for instance, he illustrated Tomkins's edition of Thomson's *Seasons*, which was published in 1797, and Macklin's Bible, published in 1800. The majority of his drawings were engraved by Bartolozzi. Hamilton did not disdain to try his hand at decoration, and a cabinet belonging to Charles IV of Spain and a state carriage of Lord Fitzgibbon, both adorned by paintings of his, still exist to prove the versatility of his art. He also painted a set of furniture in imitation of antique cameos for William Beckford, of Fonthill Abbey, the famous and eccentric author of *Vathek*, described in *Childe Harold* as "England's wealthiest son," and some arabesque decorations for the Marquis of Dute at Highcliffe, Hampshire. Of these, however, all trace has been lost. Hamilton's poetical and classical pieces, whilst resembling the work of his contemporaries Opie, Wheatley, and Kauffmann, seem to express more of the extravagance of the eighteenth century, and from them can be gathered a very good idea of the fashion in art at that period. Mr. Spanton's article is illustrated by reproductions of five of Hamilton's pictures, and the author has appended a list of fifty-nine of his extant drawings and paintings, with a full description of each.

In a thesis for the degree of Doctor of Medicine presented to the University of Paris on February 25th, M. Falin discusses the practice of medicine and pharmacy in ancient Rome. Greece had schools of medicine, but neither degrees nor diplomas. Roman medicine was altogether a Greek importation. Neither under the Republic nor under the Empire was there any diploma. In the Code of Justinian medical practitioners in whatever way they were connected with the treatment of the sick were called *Medici*, the art of pharmacy in the modern sense being in the same hands as the practice of healing. Cujas says: "*Medici sunt hi qui medicamenta conferunt, vulnera curant, cucurbitas admovent, item qui circumcidunt aut castrant.*" Although there was no diploma, those who wished to call themselves *medici* probably had to follow the lessons of a master with whom they visited patients; there was, in fact, a system of apprenticeship. For a long time pharmacy was a part of medicine, the doctors preparing their own drugs. Galen himself, who lived in the same century, kept an open shop on the *Via Sacra*. The doctors' shops contained not only drugs but dressings and everything necessary for medical treatment. That some of these drugs were poisonous may be gathered from the lines of Plautus: "*Cur ego vivo? Cur non morior? Quid mihi est in vita boni? Certum est; ibo ad medicum atque me ibi toxicum mori dabo.*" This reminds us of Astley Cooper declining to take elaterium from his physicians on the ground that he wished to die a natural death; or perhaps it may be taken to mean that the practitioners of that day were not unwilling—for a consideration—to provide their customers with the means of shuffling off this mortal coil. In the second century the practice of physic began to be separated from the preparation of remedies. The druggists proper at that time were called *Seplasiarii*, and dwelt in a quarter not far from the Capitol, called *vicus theurarius* or *unguentarius*. Even in those days there appears to have been a good deal of counter-practice, but as at present the chemist was mainly the doctor of the poor.

A NEW INSTITUTE OF PHYSIOLOGY IN LONDON.

ON Friday, June 18th, the new Institute of Physiology at University College, Gower Street, will be opened by the Secretary of State for War, the Right Hon. R. B. Haldane, K.C., M.P., F.R.S. Although at first sight there might not seem to be much in common between the position which Mr. Haldane holds in the Government and the part he is to take in opening an institute of physiology, there is a special fitness in his officiating at the ceremony. He is a man of wide and varied intellectual interests, with a thorough appreciation of the importance of science to the welfare of the nation as well as of the individual, and his family associations must tend to arouse in him a particular interest in physiology. His brother, Dr. John Scott Haldane, of Oxford, is recognized as a leading physiologist, while the late Sir John Burdon-Sanderson was his uncle. Moreover, the opening of the new institute is to be made the occasion of a review of the University Contingent of the Officers' Training Corps of the Territorial Force which Mr. Haldane has called into being; this corps owes much of its present state of efficiency to the patriotic efforts of Professor Starling and the other professors, all of whom are enthusiastic in the cause.

University College may be said to be the cradle of modern physiology in this country. There William Sharpey taught for nearly forty years. Before his time physiology was looked upon as a "poor relation" of anatomy, and was treated as of comparatively little importance. The teaching was directed mainly to meet the requirements of the College of Surgeons, and the College, though particular about bones and muscles, was believed to care little about cells and the functions of organs. Physiology, as Russell Reynolds said in an address delivered in 1858, was "thrown in as a makeweight." To Sharpey's teaching it was mainly due that physiology gained its rightful place in medical education, and, directly or indirectly, he trained most British teachers of that science for many years. It was at University College that the practical teaching of physiology begun by Michael Foster was further developed by Burdon-Sanderson. These great men were afterwards the creators of the schools of physiology at Oxford and Cambridge. The foundation of a new Institute of Physiology carries on the tradition of University College, and gives to the teaching of physiology there vastly increased possibilities of development.

University College and London University.

Before going further, a few words of explanation as to the existing relations between University College and the University of London may not be out of place, as there is still a good deal of confusion on the subject in the minds of many people. Till two years ago University College was an independent institution, governed by a Council which was elected at an annual meeting of the Board of Governors. In the hands of the Council lay the whole administrative control of the college. University College was in the same position in relation to the University as the London Medical Schools, Bedford College and other institutions, which are labelled "schools" of the university, but are practically autonomous. Of course the fact that University College had been in the first instance founded as "the University of London," and had, with King's College, for many years been the only institution within the University, gave University College a prestige not possessed—except in the case of medicine—to an equal extent by other places of education. But this was a matter more of tradition and staff than of legal status.

By the Act of Incorporation this independence of the college was abolished, and the hospital and that part of the medical school dealing with clinical studies and pathology were formed into a separate corporation, which, as a school of the university, bears the same relation as the other medical schools of London to the university. The whole of the rest of the college, including the departments for preliminary and early medical studies, was handed over to the university, which thus acquired, by the Act of Incorporation, complete control over the college. The college is no longer governed by an independent council but by the senate of the university, which entrusts

the actual administrative care of the college buildings and of the teaching carried on therein to a committee which it appoints.

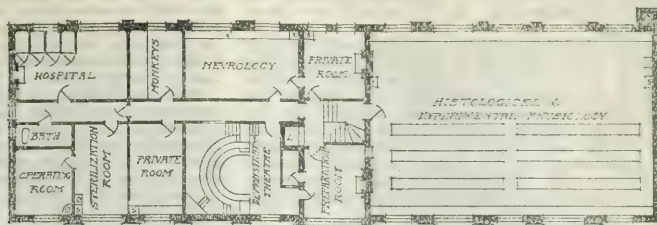
This Act of Incorporation, the promotion of which in itself called for the display of some courage as well as devotion to the university ideal on the part of the authorities of the college, may be the first step in a great movement that will in time place the whole of the academic training in Arts, Science, and Engineering, under the direct control of the university. King's College, with the exception of the hospital and its departments dealing with clinical studies, will shortly be incorporated, and one of the main reasons for the appointment of a Royal Commission on the university was the necessity of bringing about some closer connexion between the new Imperial College of Sciences and Technology, and the university. By such an incorporation of the main bodies of academic studies in the university, an immense impetus will be given to the possibilities of consolidation and development of the facilities for higher teaching and research in London.

At the present time, a medical student who enters the University of London at University College or King's College, is in very much the same position as a student beginning his career at Oxford or Cambridge. He will pursue his studies in the sciences preliminary and ancillary to medicine in laboratories built and maintained by the university and staffed by men who are appointed by the university. In his studies he will have the advantage of mingling with students of other faculties—a condition which has always been regarded as an important factor in the general culture which a student is expected to obtain during his university career. At the conclusion of his training in anatomy, physiology, and pharmacology he will be free to make his choice of a hospital school at which to pursue his strictly professional studies in association with actual bedside observation. Some time must elapse before this condition of things will be extended to the whole of London; but revolutionary changes are so apt to be associated with the destruction of useful energy and material that the wisest course is to proceed gradually, especially in London, so that it may be seen how much of the existing structure can be worked into the university fabric and utilized as active parts of the academic machine. But the erection of such an institute as that at University College shows that the university is determined to take the lead in the development of higher education in London, and to be ready, when the time comes, for the consolidation of all higher scientific teaching under its own control.

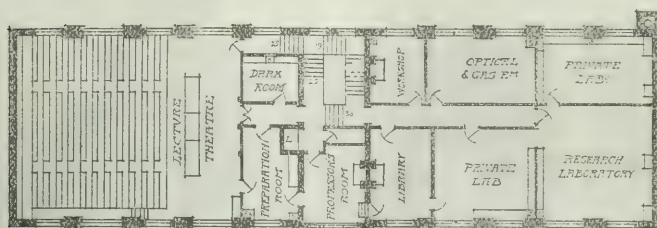
Description of the Institute.

A short time ago a representative of the *BRITISH MEDICAL JOURNAL* visited the new institute, where he was most courteously received by Professor Starling, Dr. W. M. Bayliss, the Assistant Professor of Physiology, Dr. Page May, Lecturer on the Physiology of the Nervous System, and Dr. R. H. Aders Plimmer, Lecturer on Physiological Chemistry. By these gentlemen he was conducted all over the building. Though not yet complete in all its internal details, our representative was struck by the ample accommodation and the completeness, and indeed the luxury, of the equipment both for teaching and research. He mentally compared it with the laboratory of the early and middle Seventies, in which, according to the legend, Burdon-Sanderson was one day left by his assistant studying a frog's heart, with a sandwich beside him; on the return of the assistant he found the professor wrapt in contemplation of the sandwich, while the frog had disappeared. The difference between the two or three scantily equipped rooms of that day and the palace of science which is about to be opened may be taken as a visible proof of the progress of physiology during the last thirty-five years. For completeness of equipment there is, we believe, nothing to equal the new institute in Germany. A feature of the institute to which our representative gave special attention is the provision made for the comfort of the animals used for experiment. The sheds where they are kept are airy and at the same time well heated. The operating room is fitted up with the same elaborate precautions against sepsis—which means suffering—as those in hospitals of the most modern type, while the arrangements for their accommodation after operation gives proof of the most careful regard for their comfort.

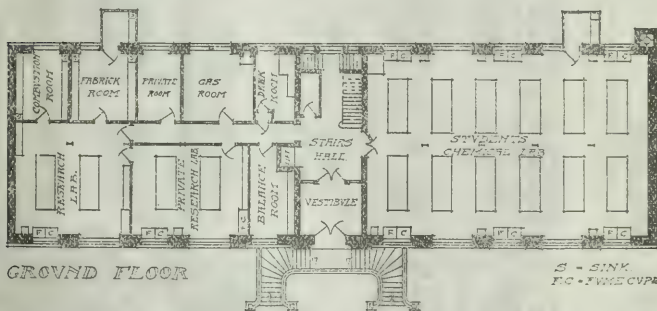
UNIVERSITY OF LONDON,
UNIVERSITY COLLEGE.
NEW PHYSIOLOGY INSTITUTE.



SECOND FLOOR PLAN.

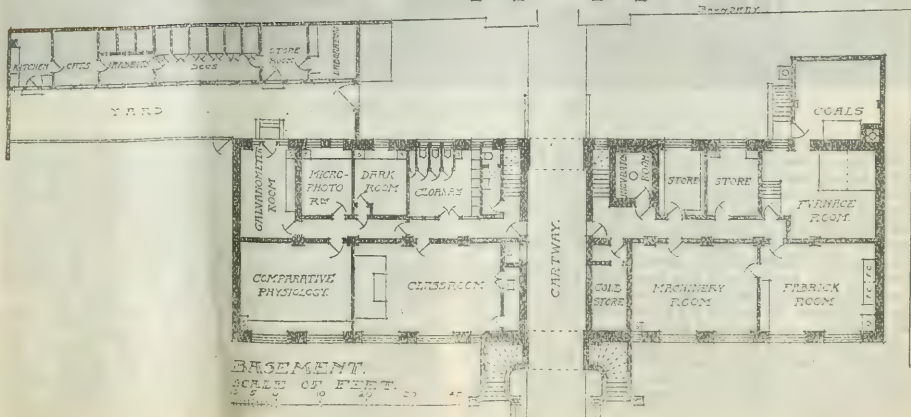


FIRST FLOOR PLAN.



GROUND FLOOR

S - SINK
F.C. - F.W.C.C.V.P.R.



BASEMENT.
SCALE OF FEET.

GROUND PLAN.

The architect is Professor Simpson, F.R.I.B.A., whose account of the buildings, kindly placed at our disposal, is virtually reproduced here. For the photographs we are indebted to Dr. May, to whom, as to Professor Starling, Dr. Bayliss, and Dr. Plimmer, we take this opportunity of expressing our gratitude for the trouble they have taken on our behalf.

The removal of University College School to Hampstead, which was made necessary by the incorporation of the college in the University of London, made available for university purposes not only the South Wing of the college which had been previously occupied by the school, but also a plot of land of 1½ acres in extent which had formerly been used as a playground. Almost every department in the college required increased space for its work. The pressing needs of the departments of chemistry and of the medical sciences, especially

Simpson in preparing plans for an institute of anatomy, physiology, and pharmacology, with a view to the immediate erection of a portion thereof for the department of physiology, at a cost not exceeding £15,000 without equipment. For the cost of equipment, estimated at £5,000, provision was subsequently made partly by subscriptions, partly by a legacy left by the late Mr. Thomas Webb to the college for the purposes of research. The work of building commenced in the first week of March, 1903, and was completed by May 1st, 1909.

Since the Institute of Physiology is to be part of an institute that will include the other medical sciences, it is so arranged that it can be extended in either direction according to the funds and the land which may be available. It is a simple rectangular edifice occupying a site 44 ft. by 144 ft. This runs east and west parallel to the south wall of the playground and also to the south



Fig. 1.—Main Entrance, facing due North.

physiology, could not adequately be met by a reconstruction of the South Wing, and it was agreed that for each of these departments a new building was necessary. It was estimated that the cost of such an institute of the early medical sciences would be £50,000, namely, £20,000 for anatomy, £20,000 for physiology, and £10,000 for pharmacology. To meet this expenditure the only money available was £10,000, which had been included in the money raised for the provision of the increased accommodation necessary by incorporation, but on July 11th, shortly before the vacation of the ground by the boys' school, two sums, one of £2,000, the other of £3,000, were offered by Dr. Aders Plimmer and Dr. Ludwig Mond for the purposes of a physiology building on condition that the £10,000 already available was also devoted to this purpose and that the erection of the building be commenced forthwith. These offers were accepted by the Senate of the University, and a committee was appointed to co-operate with Professor

wing of the college, from which it is distant about 90 ft. Its west end approaches closely to the walls of the gardens of the houses in Gower Street, space thus being left at the east end between it and the racquet court for the erection at an early date of the pharmacological laboratory. Since the building does not front on the main street, architectural embellishment has been diminished as far as possible, the sole objects aimed at being simplicity of construction, stability, and light. Nevertheless, the front is striking from its size and justness of proportion. (Fig. 1.)

The building consists of a central vestibule and staircase, which is approached from the playground by two flights of stone steps. Underneath this vestibule is a tunnel through the building giving access for carts from the mews in Francis Street. Above the basement are three floors, which consist, practically of six large rooms, each measuring about 62 ft. by 41 ft., divided into smaller rooms by means of partitions. Thus, at any future time

it will be possible at very small expense entirely to rearrange the rooms on any floor to meet whatever requirements may arise.

Certain features are to be found throughout the building. The windows, which occupy the maximum amount of wall space allowed under the Building Act, have wide casements opening inwards so that they can be cleaned at any time from the room. Above these casements is a sash hinged vertically for ventilation. The window-sills are as nearly as possible on a level with the window benches, so that no shadow is cast by the sill on the table. All rooms are amply supplied with water, gas, and electric leads. The main water supply is derived from a 3-in. pipe which comes off the main, and is carried up in the centre of the building to the roof level. From this main pipes are taken off at each floor to supply the various benches and sinks. In addition, there is a so-called high-pressure supply, which runs direct from the main to the taps, to which are going to be attached filter pumps or water motors. At the top of the building are two large cisterns with a capacity of 2,000 gallons, which serve as a supply for the boilers as well as a reserve for the whole building in case the water is at any time turned off at the main. By means of valves it is arranged that

the whole water supply of the building is automatically connected with the tanks whenever the pressure in the main drops below a certain point.

Most of the rooms are also supplied with gas from two sources, each of which can be controlled from the basement. One of these is constant for the supply of incubators, etc.; the other is turned off every evening at the main. Hot water is also supplied to the chief laboratories. Care has been taken that

none of the pipes shall run in inaccessible positions. They either run freely on the walls or in special canals in the floor which are covered with iron plates, so that access is easy at any time. All the pipes are painted, of different colours according to the purpose they serve—for example, constant gas is yellow, ordinary gas red, hot water aluminium, etc. It is possible to turn off both gas and water at every working place from every bench, from every floor, as well as for the whole building.

The heating of the building is effected by means of low pressure steam radiators on the Webster system. In most cases the radiators are situated under the windows, and an air inlet is provided in the wall so that the air may be warmed as it enters. For the extraction of the vitiated air, the theatre, the main class rooms, as well as the dark rooms, are connected by flues with a large extract flue in the roof, from which the air is extracted by means of a sirocco fan driven by a 5-h.p. electric motor. Since the main extract flues are provided with shutters, as are also the flue openings in the various rooms, it is possible to direct the whole force of the extract draught to any particular room. Thus it is possible to provide a current of 12,000 cub. ft. a minute through the theatre or through either of the large class rooms in case of necessity.

The main entrance, which is on the ground floor, is

approached by a double flight of steps from the playground. From the landing at the top of the steps one enters the vestibule, which is separated by a glass screen with swing doors from the inner vestibule, which gives access to the laboratories on each side of the ground floor as well as to the main staircase. Into the inner vestibule also opens the lift.

The staircase is built round a well at the back of the building. It is well lighted by windows at the south side as well as by the top light in the roof. The stairs, as well as the doors of the vestibule, are made of oak. The walls of the staircase have a dado 4 ft. high of a greenish terrazzo with a fillet of oak. All the other walls in the building, with the exception of those in the aseptic department, are distempered.

Physiological Chemistry.

The ground floor is devoted entirely to physiological chemistry. To the right of the entrance—that is to say, on the west side—is a large students' laboratory about 62 by 40 ft. (Fig. 2). It is lighted by six windows on each side, and is fitted with twelve benches, each of which will accommodate eight students. Each bench is 12 ft. long by 4 ft. 6 in. wide. The floor of the laboratory is covered with wood planking, except under each bench, where a

cement platform is provided at a level $\frac{1}{2}$ in. above that of the surrounding floor, so that the bench rests on cement, and any water which may accumulate below the benches will at once run away. The water and gas are brought to the benches by pipes lying in a channel in the floor to which access is easy, and are distributed to the benches without being hidden anywhere in their structure. The waste from the benches is carried into open glazed



Fig. 2.—Students' Laboratory of Physiological Chemistry.

earthenware channels resting at the outer ends of the benches, and opening without traps into lead heads outside the building. The channels are rendered in cement and the earthenware pipes set in bitumen. They are closed by iron plates, which can be raised for inspection at any time.

In three of the windows on each side of the room (six in all) are placed double fume cupboards, so that all manipulations in these cupboards are carried out in the best possible light. Each cupboard is provided with two extract flues built into the wall, and forming rectangular earthenware pipes glazed internally, which terminate on the roof in special heads to prevent any down draught. Even under ordinary circumstances there is usually a very good draught up each of these flues, but each is provided with a gas burner so as to ensure the absence of any down draught.

On the south side of the building the westernmost window opens at the floor level on to a stone balcony which is provided with a stone shelf, with a glazed sink, water and gas. The balcony is roofed in by glass, but is open at the back and sides so that it is possible to carry out manipulations involving the production of objectionable fumes practically in the open air. Between the fume cupboards seven large wooden tubs are provided for

washing-up purposes. Each of these has a large draining rack immediately above. The four benches at the west end of the room have plugs connected with a special electric heating circuit, so that it may be possible to heat inflammable liquids without the use of any flame. The benches are of a pitch pine framing with teaktops; their general structure will be evident on reference to the figure.

The east side of the ground floor is devoted to laboratories for research in physiological chemistry. There is (1) *A Balance Room* with teak shelves for four balances, each provided with an electric bracket at a suitable distance over the balance. The floor is of linoleum over cement. Next to this room is (2) the *Private Laboratory of the*

Assistant Professor in charge of the department of physiological chemistry. This room, about 20 ft. by 22 ft., has two double benches, each with gas, ordinary and high pressure water supply, and electric heaters. The pattern of these benches varies slightly from that adopted in the

students' room in order to give greater variety in the shape and dimensions of the drawers and cupboards. There is a small sink at each end, each with a three-way tap and a high-pressure tap for filter pumps, and in the middle of the bench four water-taps over a central glazed earthenware channel for use in distillations, etc. All washing up is carried out at a large wooden tub between the windows on the north side of the room. There are two fume cupboards, namely, a large one in one of the windows and a smaller one against the west wall. Along the rest of this wall is a lead covered bench fitted with water and gas for miscellaneous operations.

A door leads from this room into the *General Research*

Laboratory. This is a large square room about 25 ft. by 25 ft., also provided with two double benches each 12 ft. long, 4 ft. 6 in. wide, to accommodate eight workers. This room, like the private laboratory, has two fume cupboards, one in the window and one against the wall, and a lead

covered bench with water and gas. In addition to the draining pegs over the two washing tubs, each worker is provided with a small draining rack, which is hung at the side of his working place. On this are placed his glass apparatus, after using at the end of each day, so that it shall be ready for his use the next morning. Both these laboratories have a copious supply of hot water for washing purposes. The floor is of deal boards. The supply pipes are brought to

the benches in floor channels, and wastes are carried in glazed earthenware channels, as in the large students' laboratory.

Opening out of the south side of this room are the combustion room and the distillation room.

The *Combustion Room* is provided at each side with a stone bench 3 ft. above the ground, 2 ft. wide, each with a stoneware sink 2 ft. 6 in. by 1 ft. 6 in. by 9 in., arranged so as to take two aspirators from gas reservoirs. The bench is set on glazed brick piers, and is supplied with large gas nozzles for combustion furnace. One of the bays below the bench on the east side is closed by a wrought iron sliding door, and is used for working with the tube furnace. Over

each bench is a wooden hood lined with malite, which conducts the gas fumes into a flue running directly to the top of the building. The floor is of cement.

The *Distillation Room* is provided on each wall with a lead covered bench with water and gas supply. The high



Fig. 3.—Research Laboratory of Experimental Physiology.



Fig. 4.—Laboratory for Physical Measurements (Dr. Bayliss).

pressure supply is also carried to a sink near the window to allow for vacuum distillations. In this room we also find electric leads for supplying heaters. The floor is of asphalt on cement. On one wall is fitted a range of drying ovens combined with an apparatus for the production of distilled water. The window of this room, which opens down to the ground, leads on to a stone balcony for work involving the production of objectionable fumes, similar in all respects to that provided in the students' laboratory.

There is a small room for use as a private office by the head of the department.

Adjacent to it is the *Gas and Optical Room*, that is, a room where operations may be carried out involving the use of mercury or the use of instruments which cannot be exposed to the ordinary fumes of a laboratory.

The last room in this side, which adjoins the inner vestibule, is a small room with double doors which can be completely darkened for polarimetric work. The bench is fitted at one end with a small hood leading into an extrac flue, so as to conduct away at once the fumes given off by the sodium chloride lamps which are ordinarily so destructive for all brass apparatus. This room is also fitted with small taps connected with a hot and cold water supply, so as to be able to lead a current of water at any desired temperature through or round any instrument where variations of temperature are desired. These three rooms last mentioned have floors of linoleum over cement.

Experimental Physiology.

The first floor is devoted to experimental physiology on

the west side of the staircase, and mainly to the large theatre on the other.

The *Theatre* is 50 ft. long by 40 ft. wide by 19 ft. high. It has seating accommodation for about 200 students. It is entered by the students by a branch staircase from the

first landing above the vestibule. The lecturer enters through a preparation room, which communicates on the other side with the professor's private room. The chief light to the theatre comes from three large windows on the north side, but light is also obtained from hemispherical windows placed high up on the south side. A passage 2 ft. wide is left between the benches and the north wall so as to allow of access from the building to be later

erected for pharmacology. From this building, too, it will be possible to provide for a students' entrance to the benches from the back of the theatre. At present the theatre suffers from the disadvantage that students entering late have to pass the lecturer's table in order to get to their places.

The windows are provided with light-tight blinds which can be raised or lowered in twenty seconds by means of an electric motor, and set into action by switches on the lecturer's table. The lighting is by incandescent lamps from the ceiling over the auditorium, an intense light being thrown on the back of the theatre as well as on the table by a row of 1,600 c.p. metallic filament lamps fixed immediately over the table. At the back of the lecturer



Fig. 5.—Students' Laboratory of H Stelgis.

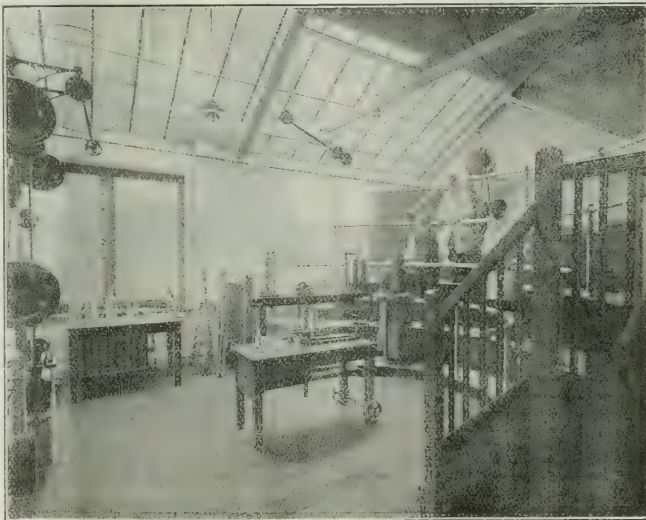


Fig. 6.—Demonstration Theatre.

turer are three tiers of slates arranged so as to slide up and down in sashes and providing altogether six blackboards, each 5 ft. by 3 ft. There is a space of 10 ft. clear between the back of the lecturer's bench and the wall, thus providing ample room for the display of apparatus. There are two

lanterns, one with a small arc lamp by the south end of the table for the projection of ordinary lantern slides, the other the large epidiascope of lights at the north end, which takes a current of 30 amperes, and by which it is possible to show lantern slides in broad daylight, or in the darkened theatre solid objects or microscopic specimens.

The rest of the wall is occupied by two large diagram screens, which can be rolled up out of sight when not in use, and are composed of lathes attached to webbing, to which diagrams can be pinned or clipped.

The space between the theatre and the central well of the building is taken up with a preparation room and with a spacious dark room.

Immediately in the middle of the building is the professor's private room.

The series of rooms on the west side of the first floor are known as the Thomas Webb Research Laboratories, to commemorate the legacy of £5,000 by Mr. Thomas Webb to the college for the purpose of research, which was devoted in accordance with his wish to the expenses of the physiology building.

On the north side are three rooms. Immediately opening out of the professor's private room is:

The *Departmental Library*, with shelving for about 4,000 volumes, where will be kept (at any rate until the completion of the whole Institute of Medical Sciences) the periodicals and works in the College Library dealing with physiology and cognate sciences. In the centre of this room is a long table on which are arranged the current numbers of the physiological periodicals.

Adjoining the library is the *Professor's Private*

Laboratory, a room about 20 ft. by 20 ft., fitted with shafting and electric power and with a chemical bench along one side. Opening out of this, but approached also from the central corridor, is the *General Research Laboratory* (Fig. 3), 25 ft. by 25 ft., also fitted with shafting and

motive power, a chemical bench, and a fume cupboard. In this room are two kymographs.

On the south side of this wing are three rooms, namely, one fitted out for accurate physical observations, and occupied at present by Dr. Bayliss (Fig. 4); a large room which can be completely darkened for optical experiments or for investigations involving the use of mercurial gas pumps; and a small workshop fitted with lathe and bench. The

mezzanine floor between the first and second floors provides a cloak room for the ladies who are working in the laboratory, a lavatory and bath room for the staff, and a small room known as the committee room.

Histology and Neurology.

The second floor is devoted to the departments of histology, of neurology, and to the aseptic department. The whole of the west wing of this floor is taken up with a large students' classroom for histology and experimental physiology. This room (Fig. 5) is about 63 ft. by 42 ft., its height varying from 14 ft. at the sides to 20 ft. in the middle. It is brilliantly lighted by large windows at both sides, and by a continuous sky-

light along the whole of the north side of the room. It is fitted with working benches providing seventy places for students of histology. Each student is provided with a locker and drawer, with water, gas, and electric light. In addition there are five tables, each 8 ft. 6 in. by 2 ft. 6 in.

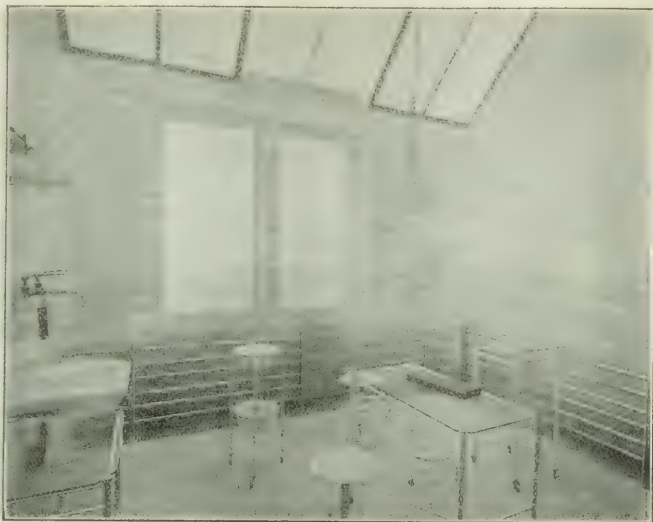


Fig. 7.—Aseptic Department: Operating Room.



Fig. 8.—Aseptic Department: Animals' Hospital.

fitted up with shafting for experimental physiology. Three of the histology benches are also provided with continuous shafting, and space is left in the room for additional benches, which would provide another thirty-two places. The walls of this laboratory, as of the big chemical laboratory downstairs, are of glazed brick.

Adjoining this room, on the north side, is a preparation room for the teacher in charge of the histological students.

On the south side of this floor are the following rooms:

At the north side there is a *Demonstration Theatre* (Fig. 6). Here the benches, which present only standing room, rise rapidly in semicircular tiers, and are so arranged that forty students can obtain a full view of any experiment. This room is provided with a kymograph, artificial respiration, time mark, etc., with water and electric power, and is brilliantly lighted by windows as well as by the skylight. The rest of the rooms on this floor are devoted to research.

Adjacent to the demonstration theatre is a well-lighted room fitted up for histological research.

Opposite these rooms on the south side is the department devoted to the physiology of the nervous system. This includes three rooms: one for keeping monkeys; a large room fitted with benches, incubators, etc., for histological work; and a small room with skylight which can be used by the lecturer in charge of this branch of the subject.

Aseptic Department.

The east end of this wing, separated from the rest by a door in the passage, is devoted to the aseptic department. This includes four rooms. On the north side is a sterilization room, provided with a Manlove and Alliott steam sterilizer, and the necessary arrangements for the sterilization of instruments and the preparation of animals for operation (Fig. 7). There is also an operating room, provided with double windows so as to make the attainment of a high temperature possible. Instead of the ordinary radiators, the heating of the room is effected by means of nickel-plated copper tubes which run in loops round the walls at such a distance from one another that all accumulation of dust can be prevented. There is a wash-basin provided with hot and cold water supply, a glass shelf for antiseptic solutions, and a slate shelf with gas, at which a plentiful supply of warm sterilized normal salt solution can be provided. All the supply and waste pipes are taken straight out of the room through the wall, so as to avoid any chances for the accumulation of dust. The floor of this room, as of all the other rooms in the aseptic department, is of terrazzo, and the walls and ceilings are of adamant painted with ripolin enamel.

Between this room and the passage is a *Bath Room* for the preparation of animals.

On the south side of the passage is the *Animal Hospital* (Fig. 8), excellently lighted and ventilated, provided with four kennels carried out in glazed brick for dogs, and with ample space for cages for other animals.

Both this and the adjoining Monkey Room are provided, in addition to the steam heating apparatus, with gas stoves, which can be lit in the evening, so as to prevent any falling of temperature during the night.

Refrigerating Chambers, Machinery, etc.

On the west side of the basement are a series of rooms which can be regarded as serving all departments of the building. Both sides of the basement are only just below ground level, so that they are excellently lighted. On the north side, next to the central roadway, is the *Refrigerating Chamber*, with thick brick walls in which is built up the chamber proper—two layers of wood, with a packing of slag wool between. A space is provided for cold storage, about 6 ft. 6 in. by 10 ft. by 7 ft. 6 in. The chamber is lined throughout with zinc, so that it can be effectively disinfected, and is provided with an air-lock so as to diminish the access of warmth when it is necessary to enter or leave it. It is provided with large accumulative tanks containing calcium chloride solution, so that it may be possible to limit the running of the refrigerator to two or three hours daily.

Next to the refrigerating chamber is the *Machinery Room* containing the refrigerating machine, driven by a 5-h.p. electric motor. The counter-shaft of the motor is prolonged and geared on to two other sets of shafting, so that it is possible to obtain a large range of speeds for driving other apparatus such as centrifuges, grinding mills, etc. In this room are also contained the gas meter, the main tunnels and fuses of the electric supply, and the three switch-boards from which light, power, and heating circuits are carried to the different parts of the building.

The end room on this side, which is lined with glazed brick, forms a *Fabrik-Raum*—that is to say, a room for working up material on a large scale. It is fitted with sink with hot and cold water, a slop sink with flush cistern, a large fume cupboard with stone bench, and an apparatus for



Fig. 9.—Sheels for Animals.

the production of distilled water in quantity. The floor is of asphalt and is channelled so that the whole floor may be washed down with a pail of water, or the out-flow may be provided from a table in the middle of the room.

On the south side of the wing are the following rooms:

The *Boiler Room*, containing two low pressure steam boilers, the vacuum pump for the heating apparatus, worked by a 3-h.p. electric motor, and the hot water boiler with a storing capacity of 250 gallons. Opening out of this is the *Coal Cellar*, and enclosure with *Destructor Furnace*. The latter is one of Horsfall's destructors, fitted for gas.

There are two *Store Rooms*, one for apparatus the other for chemicals.

Adjoining the staircase is an *Incubator Chamber*. It has double brick walls with an air space between, the interior one being of glazed brick. It is provided with a gas stove and temperature regulator on Hearson's principle.

On the east side of the basement are the following:

A *Class Room*, fitted with platform, blackboard, and benches for small tutorial classes. From the west end of this room access is obtained to the enclosure containing the lift machinery. Opposite this room on the south side are a series of lavatories for workers in the department. The end room on the north side is devoted to Comparative

Physiology. There is a room for the servants of the institute.

There are two dark rooms for photomicrography, etc. One of these rooms is provided with a masonry pillar with slate top, so as to provide a support free as far as possible from any vibration.

Sheds for Animals.

In the yard on the south side of the building, and extending as far east as the racquet court, is a building about 12 ft. deep by 76 ft. long, containing accommodation for animals (Fig. 9). It is divided up into a number of rooms, namely: (1) Small laboratory; (2) store room for food; (3) dog kennels; (4) rabbit room; (5) room for animal cages; (6) a room, with stone bench and gas, for the preparation of the animals' food. In this room is also situated the heating apparatus—a gas stove which warms a run of hot-water piping passing through the different rooms. There is a yard in which cats and other animals can take exercise.

The opening of the new Institute of Physiology will mark an important date in the evolution of scientific teaching in this country, and we look with confidence to Professor Starling and his associates for results corresponding to the splendid opportunities of research now open to them.

MOTOR CARS FOR MEDICAL MEN.

COST OF RUNNING.

SWIFT AND SURE writes: As a user for over two years, may I stand up for the motor car in general and the little Swift in particular? For the man who values a little leisure in life over and above that spent in sleep, the motor is a veritable godsend, and surely he is prepared to pay a small sum for that sorely-needed commodity. Again, if he uses his car other than for his practice, he should be prepared to pay a little for that pleasure which is an extra.

To the general practitioner who tells me he runs 12,000 miles per annum in his practice, I cry, "Fudge." How many of us could stand cycling 40 miles a day? and yet most of us did our work upon the handy "bike" before taking to motors. My father and I have each of us cars with recorders, and I find that I average about 5,000 miles a year, and my father, who does about the hardest practice in this city, about 6,000 miles. As to tyres, I have all my original Dunlop tyres on the car, only two of them being retreaded, and this after 10,500 miles. My repair bill besides this has been confined to overhauling and renewal of brake bands. Most of the necessary work on a car can be done by any intelligent man who understands it. I have recently cleaned out my engine and ground in the valves in five hours. My car is running to-day almost as well as when I bought it, and if I bought another to-day it would be a "Swift."

The total expenses for last year, including garage, lighting, cleaning, warming, overhauling and some varnishing, insurance, oil and petrol—in fact, everything—totalled with me £78. Care and attention to one's car cuts down expenses out of all proportion to the time bestowed; and if doctors would read their cars as they do their patients, and relieve their little groans and squeaks, their repair bill—at any rate, in their early years—is practically negligible. Why, even my sparking plugs have been in for almost two years!

If the medical man wishes to economize on his car, let him get a two-seater with big tyres. It is the man who buys a large-bodied car and takes his family all over the country, driving on small tyres, who grumbles, and he forgets that his wear and tear is accomplished in the time which is not consumed in his practice, and the useless weight he carries around with him when it is.

MEDICAL BAG ON MOTOR CYCLE.

DR. Q. R. DARLING (Eardisley, Hereford) writes: In reply to "J. D.'s" query in the BRITISH MEDICAL JOURNAL, June 5th, p. 1365, after fifteen years as a medical cyclist, I can strongly recommend "Turner's Bi-carrier" on back of cycle, and Lucas's "Bundle Carrier" on handle bars. These will carry a large quantity of luggage and not be found to interfere with the riding, as a bag carried on the top bar.

STEAM CARS.

R. E. E. asks for notes of experience of the upkeep of steam cars, say Stanley 10 h.p., their advantages and disadvantages.

TOWN AND COUNTRY.

DR. AMPROSE ATKINSON (Green Lanes, Hornsey, N.), writing as a town doctor, emphatically advises any medical men contemplating changing from horse to motor not to do so. The motor for a general practitioner in a town is, he considers, a constant and serious source of anxiety. He offers to give any one thinking of making the change from horseflesh to motor the benefit of his pecuniary experience.

Medical News.

THE King has been pleased to grant permission to the undermentioned gentlemen to accept the decorations stated against their respective names which have been conferred upon them on the nomination of the Khedive of Egypt in recognition of valuable services rendered by them: Henry Pottinger Keatinge, Esq., M.B., F.R.C.S., Director of the School of Medicine and of the Hospital of Kasr-el-Aini, the Imperial Ottoman Order of the Medjidieh, Second Class; Frank Cole Madden, Esq., M.D., F.R.C.S., Professor at the same School of Medicine, the Order of the Medjidieh, Third Class.

DR. AENEAS JOHN McDONNELL, of Toowoomba, has been appointed a member of the Queensland Medical Board.

At a meeting of the Royal Microscopical Society, 20, Hanover Square, on Wednesday next, at 8 p.m., Dr. J. A. Braxton Hicks will give an exhibition of the better known tropical parasites.

THE honorary degree of LL.D. was conferred upon Professor C. S. Sherrington, Professor of Physiology in the University of Liverpool, at the graduation ceremonial of the University of Glasgow, on June 8th.

At the meeting of the Medical Society of the State of California, held recently at San José, Dr. James H. Parkinson, of Sacramento, was elected President for the ensuing year. Dr. Parkinson holds British qualifications, and is a member of the British Medical Association.

THE annual general meeting of the Society of Tropical Medicine and Hygiene will be held at the rooms of the Medical Society of London, Chandos Street, on Friday, June 18th, at 5 p.m. On the same evening Professor Ronald Ross, C.B., F.R.S., will take the chair at a dinner to be held at the Trocadero Restaurant.

THE Cavendish lecture will be delivered before the West London Medico-Chirurgical Society by Sir Victor Horsley, F.R.S., on Friday, June 25th, at 8 p.m., at the Kensington Town Hall. The subject of the lecture is the cerebellum. The society will hold its conversazione on the same evening.

AN extraordinary general meeting of the members of the London and Counties Medical Protection Society will be held on June 23rd, at 3.30 p.m., at the offices of the society, 31, Craven Street, Strand, W.C., for the purpose of considering certain alterations in the articles of association. The annual general meeting of the society will take place on the same day at 4 p.m. for the reception and adoption of the annual report and balance sheet and for the election of officers.

THE International Council of Nurses, founded in 1899, will hold a meeting on July 19th at the Caxton Hall, Westminster, to report progress and to receive reports from different countries upon questions relating to the welfare of the sick and of the nursing profession. Following the business meeting of the International Council an international congress of nurses and nursing exhibition will be held at Caxton Hall on July 20th, 21st, 22nd, and 23rd.

AN Conference of the National Federation of Hair-dressers, which was recently held at Scarborough, rules enjoining strict cleanliness on all working in barbers' shops were adopted. A special committee has been appointed to deal with all questions relating to "foul-shave" charges, "barber's rash" advertisements, and also to approach the British Medical Association with the view of inducing them to use the correct term of "tinea sycosis" instead of "barber's rash" or "foul shave."

THE sixth annual course on ophthalmology in connexion with the University of Oxford has been arranged from July 5th to July 17th. The main idea of the course is to demonstrate—on actual patients as far as possible—the whole range of ophthalmology in order to make the reading of a textbook more profitable than can be the case when relying merely on pictures. The first part will be mainly devoted to demonstrating the practical examination of eye patients, the use of the ophthalmoscope and the work of refraction. During the second part the work will be more specialized and the lectures delivered by various ophthalmic surgeons. Altogether some 500 cases will be available for demonstration. The fee for the course is £5 5s. Gentlemen attending it will be provided with board and residence at Keble College at the rate of 7s. 6d. a day during the second week, but during the first week lodgings must be secured. Further particulars may be obtained from Mr. Robert W. Doyne, M.A., Margaret Ogilvie Reader in Ophthalmology in the University of Oxford, 30, Cavendish Square, London, W.

British Medical Journal.

SATURDAY, JUNE 12TH, 1909.

THE MODERN TREATMENT OF FRACTURES.

THE address delivered at Cardiff by the President of the International Surgical Society, Dr. Lucas-Championnière, which we publish elsewhere, is important not only because of the occasion, but still more because of its subject and of its author. The occasion was noteworthy, seeing that it was that of the public expression of sympathy with Drs. Lynn Thomas and Skyrme by practically the whole of the medical profession in this country and by many distinguished foreign surgeons. It was at the same time a protest against the decisions of judges and juries, who have shown themselves quite incapable of understanding or appreciating the technical evidence given by a number of surgeons of the greatest skill and experience. The best thanks of the profession are due to Dr. Lucas-Championnière for once more testifying to the skill of our colleagues and to the brotherhood of surgeons of all nations. The matter of his address is of yet greater importance, and we trust that it may have the effect of arousing those British surgeons who have not already tried early massage and movement to the necessity of reconsidering their treatment of fractures.

For a generation Dr. Lucas-Championnière has been working at this subject, but he himself gives the year 1884 as that in which he first began the systematic treatment of fractures by massage and early mobilization. It needed no little courage to denounce the time-honoured methods of fixation, which have come down to us from before the dawn of history. Dr. Lucas-Championnière had to face a storm of criticism from some of the best surgeons of the day, but he met it without flinching, and in paper after paper read at the Paris Surgical Society and elsewhere he opposed facts and an ever-growing experience to *ex cathedra* statements of time-worn principles and *a priori* objections, until he won recognition for his methods. It is now not too much to claim that by early massage and mobilization the time of treatment of many fractures may be shortened by one-half; and, what is still more important, that the pain and disability which too often remain after so-called cures may be enormously lessened, especially in the case of fractures near to or involving joints, such as Colles's and Pott's fractures, to quote two of the commonest and most disabling of these injuries.

Dr. Lucas-Championnière, who was one of the earliest and most strenuous advocates of antiseptic surgery in France, paid a graceful tribute to Lord Lister's genius when he said that it was largely owing to his example as an innovator that he was led to question the time-honoured principles of immobilization. We fear that it may be somewhat disappointing

to our distinguished guest to find that comparatively few surgeons in this country have learnt the lessons which he has been teaching for more than thirty years. It should be some consolation to him to reflect that the teaching of our own great countryman was but slowly accepted by us, and that a new method of treatment coming from abroad is even less readily adopted, despite the proverb concerning the honour of a prophet in his own land. Dr. Lucas-Championnière's visit and address on such an occasion should go far to disturb the self-satisfaction which has been content with ancient ways, and it should stimulate the wider use of a method which has brought forth such good results in the hands of those who have given it a fair trial. Of the latter, Sir William Bennett, the latest edition of whose book is reviewed in this issue, is a notable example, one whose ripe experience and sound judgement ought to have great influence with the profession at large.

Stare super vias antiquas may be far easier than to leave the beaten track and explore new country; and it must be confessed that the old plan, which Professor G. Elliot Smith has shown was in use in Egypt some five thousand years ago, of "setting" a fracture, fixing it as firmly as possible in some apparatus and leaving it there till the time believed to be necessary for consolidation has passed makes fewer calls upon the attention and skill of the surgeon than does the treatment by massage, which needs constant supervision if it is to produce the best results. Those, however, who are willing to acquire such skill and to give such attention will be well repaid by the gratitude of their patients and the satisfaction of doing good work.

Dealing with another side of the question, Dr. Lucas-Championnière did well to insist upon the advisability of employing *x* rays in the course of the treatment of fractures; he did well also to point out the limitations of the method and the false conclusions to which it may lead inexperienced persons. He has himself published an essay on the errors of radiography, and in this country numerous papers on the subject have appeared in our columns and elsewhere, which show the many sources of error in the interpretation of plates and prints. Every surgeon, when called upon to treat a fracture, would do well to adopt the precaution, when possible, of having radiographs taken, not so much for his own guidance as for his protection against subsequent accusations by the patient or his friends. We say advisedly radiographs, for no one should be satisfied with less than two, taken if possible in planes at right angles to each other, for it is not uncommon to find that a plate taken from one point of view may represent perfect reduction, while one taken from another point may show both angular deformity and overlapping of bones.

Dr. Lucas-Championnière also very wisely insists that patients and their friends should not be invited to inspect the negatives, the unfamiliar appearances of which may lead to strange errors and consequent complaints of wrong treatment. It is the duty of the profession to educate the public to the extent that it shall know and admit its own unfitness to interpret radiographs, and at the same time to awaken it to a consciousness that the treatment of many fractures has of late years been radically reformed. The weighty utterance of the President of the International Surgical Society ought to give fresh impetus to our efforts in this direction, and we trust that by practising his methods British surgeons will show their appreciation of the graceful tribute of fraternal homage which, to use his own words, he has offered us.

THE MEDICAL TREATMENT OF SCHOOL CHILDREN.

ONE of the most important matters to be considered by the Annual Representative Meeting is the medical inspection of schools and the practical consequences that must logically follow on the adoption of that necessary addition to our system of State-aided education. The principle that all children in Board Schools should be medically inspected is excellent in itself, but the mere recognition of disease or physical defect does not take us very far. Provision has to be made for treatment, and here a serious difficulty meets the social reformer. Where and by whom are the children found on inspection to be diseased or defective to be dealt with? The first thought of the administrative authorities is to save expense, and therefore they—naturally from their point of view—look to the hospitals. For this the hospitals themselves are mainly responsible, for they have accustomed the public as well as the profession to believe that they gladly suffer all manner of patients to throng their out-patient departments, as they go to swell the number of attendances and thus help to make a good case for support in their periodical appeals to the charitable public. It was inevitable that this solution of the problem should not commend itself to the great mass of the medical profession in large towns, which already finds the hospital out-patient department a most damaging competitor in the struggle for existence.

As our readers know, the matter has received the closest attention from the Medico-Political Committee of the Association, and, as occasion arose, it has been dealt with in the JOURNAL. A report on the subject to the Divisions by the committee was published in the SUPPLEMENT of May 15th, and the recommendations are on the Agenda of the Representative Meeting (see SUPPLEMENT, May 22nd, p. 271). It may not be out of place to recall here the principal of these. Briefly, it is recommended that the Association should oppose the reference of such children to public medical charities for treatment; that there is no objection to treatment by provident dispensaries or other contract practice organizations, provided the practitioner who carries it out is adequately paid for his work; that the Association should oppose any scheme for treatment which involves reference of the children to the Poor Law pending such reforms as may result from the consideration of the reports of the Royal Commission. It is further recommended that, under existing conditions, the most satisfactory provision for the treatment of children whose parents cannot afford to pay for it, is to place them under the care of private practitioners, who should be adequately remunerated out of public funds independently of the Poor Law. In sparsely-populated districts, the committee recommends that the surgeries of private practitioners should be recognized as places where the children may be treated at the public expense; and that in towns the work should be entrusted to private practitioners, who should treat the children, either at convenient centres (designated "school clinics") situated in the schools or in independent buildings.

In London the question has become one of urgent importance, as the County Council has recently adopted provisionally a proposal made by its Education Committee to invite the hospitals to become in this respect a part of a State Medical Service. A Special Subcommittee appointed by the Education Committee, consisting of members of the London

County Council or of the Education Committee, and of experts and representatives of outside institutions, whose report was published in the BRITISH MEDICAL JOURNAL of December 26th, 1908, p. 1869, after full consideration of the subject recommended that, for children suffering from physical defects not requiring operative or in-patient treatment, the Council should establish school clinics at suitable centres in the metropolis. A Minority Report recommending that the Council should utilize for the purpose existing types of institutions, giving financial help, if necessary, and receiving special facilities in return for any grant of public money, was published in the same issue. At a meeting of the London Education Committee, when the reports were presented, the temporizing conclusion was come to that, in districts where there is no prospect, within a reasonable time, of utilizing existing institutions, the Council should itself make suitable provision "if thought desirable." Since then the Council has decided to secure treatment for the children by utilizing existing institutions and making grants in return from public funds. The governing bodies of some of the hospitals have, we believe, given their assent to this scheme, apparently without consulting the medical staff, on whom it is thus proposed to throw additional work. At other hospitals the matter is still under consideration. For this work the hospital will be paid, but, as far as the medical staff is concerned, it seems to be expected that virtue will be its own reward.

In connexion with this subject we would call the attention of the London County Council to a document, published in this issue (page 1462), in which the Court of Governors of the Royal Hants County Hospital has expressed its feeling that, "having regard to the heavy demands that are made upon their staff, they would not be justified in allowing general treatment of the numerous cases that must arise as the result of the medical inspection provided by the Act referred to, and they desire to suggest that the Local Education Authority should, before these questions arise, proceed to make arrangements for the discharge of these duties by the medical men in their respective districts, which they have ample powers to do."

Against the proposal made by the London Education Committee, a strong protest has been made by the Metropolitan Counties Branch in a letter sent to all the members of the staffs of London hospitals. In that letter the case is put with lucidity and force. Reference is made to the enormous number of children found defective on medical inspection; it follows that provision must be made for the treatment of diseases of the eyes, ears, throat, teeth, and other obvious defects, and this, in the words of the letter, "involves a large increase of the unpaid work already done for the community by the medical profession."

It is the duty of the State to do its utmost to prevent the physical deterioration of its citizens, on whose efficiency the future of the nation depends. But the State has no right to do this at the expense of medical charities supported by voluntary contributions—still less by making further exorbitant demands on their medical staffs. The Education Committee, in fact, proposes to create a new form of hospital abuse which will not only intensify the feeling of the general practitioner on the subject, but will inflict a cruel wrong on the children. Abundant evidence was obtained by the Day Schools Committee, the report of which was published as an

appendix to that of the Special Subcommittee already referred to, showing that it was impossible for the hospitals to deal adequately with the very common forms of childish defects (vision, hearing, ringworm, teeth), while they found it equally difficult to deal with chronic cases requiring prolonged treatment, such as tuberculosis. The map of the County of London, including the City, showing the educational administrative areas, the number of school children in these areas, and the position of general and special hospitals, provident and free dispensaries and Poor Law infirmaries, published in the JOURNAL of January 9th, shows at a glance that the institutions for medical relief are to a large extent grouped in the central districts. It is obvious that this fact alone makes it practically impossible for vast numbers of the children within the area of jurisdiction of the London County Council to be taken to the hospitals at all. In the case of many children, the loss of time caused to parents or others by taking them there will deprive them of the opportunity of being treated. In the case of those who are taken, the difficulty of transport, with the exposure to weather and other possible mischievous influences, the length of time they have to wait before being seen, and the perfunctory manner in which, owing to the already overcrowded state of the out-patient departments, it is likely they will have to be dealt with, made up a combination of factors calculated to render the treatment nugatory, if not worse.

We have reason to believe that a considerable number of the members of the staffs of London hospitals are in agreement with the views expressed in the letter of the Metropolitan Counties Branch. Some may be expected to dissent, because the smaller schools find it not an altogether easy matter to get a sufficient number of cases which can be used for teaching purposes. But the interest of the public which subscribes the money for their maintenance must prevail over that of any hospital school; and the welfare of the children must be placed before everything else. The only satisfactory solution of the question is, in our opinion, to be found in the establishment of school clinics in large towns, and in the recognition of the surgeries of private practitioners in rural districts. In either case adequate remuneration of those who do the work is an essential condition which should be insisted upon with the united strength of the whole medical profession.

INTESTINAL STASIS AND TOXINS.

Two distinguished British authorities, Sir Lauder Brunton and Mr. Arbuthnot Lane, have recently made public their views on the pathology and treatment of certain well-known chronic affections of the large intestine. Mr. Lane's address (p. 1408) deserves the attention of all who practise or teach medicine—the physician, the surgeon, and the obstetrician alike—for he discusses the cause of a condition familiar to them all. He observes that, while constipation is the most frequent objective evidence of unsatisfactory drainage associated with chronic intestinal stasis, it happens not uncommonly that there may be a daily evacuation or even diarrhoea. He insists, after relating the general changes which aid in the diagnosis of chronic intestinal stasis, that the symptoms are due in part to interference in the normal functioning, expressed

by pain, and in part to absorption of poisonous material, evidenced by toxæmia. The chief toxic symptoms, Mr. Lane reminds us, are headache, a feeling of mental and physical lassitude, an inability to perform the ordinary duties of life, mental misery and distress, nerve symptoms comprised usually under the term of "biliousness," and a want of control over the temper which renders these patients unhappy themselves and the cause of unhappiness to others.

Mr. Lane's conclusion that when the stage has been reached in which owing to delay in evacuating its contents the large bowel has not only ceased to perform a useful function, but has become a source of danger, its removal from the drainage scheme will be of great service to the body, will seem to many very bold, but if the long catalogue of evils which he attributes to intestinal stasis and the consequent absorption of toxins is proved, then it is obvious that the drastic remedy he advises must not be ruled out of court merely because of its boldness. Sir Lauder Brunton in a recent paper¹ insists on the importance of intestinal toxins produced and absorbed as a consequence of chronic colitis. He tells us that he has lately been struck by the frequency with which patients suffering from chronic colitis complain of being always tired—a symptom which he has found to be diagnostic in more than one doubtful case. We are here reminded of the feeling of mental and physical lassitude which Mr. Arbuthnot Lane signalizes as an essential indication of chronic disease of the large intestine. Mr. Lane ascribes the lassitude to toxic agencies; and Sir Lauder Brunton says that whereas he was once inclined to attribute the lassitude to the absorption of peptones or albumoses from the intestinal canal, the recent researches of Weichardt have led him to the conclusion that the weariness is more probably due to toxins formed by microbes. During the breaking down of albuminous molecules toxins may be produced possessing a special property of causing fatigue. Weichardt has shown that fatigue toxins can be expressed from exhausted muscles and made to produce fatigue in other subjects into which they are injected. On the other hand, fatigue antitoxins may be produced in the same way as other "anti" bodies—by the injection of small quantities into a horse, the dose being gradually increased until a great power of resistance has been obtained. Weichardt asserts that fatigue toxins can be completely antagonized by the administration of fatigue antitoxins, which afford the tissues a far higher degree of resistance to fatigue than they normally possess. Sir Lauder Brunton suggests that Weichardt's researches may solve the mystery of beef-tea and beef juices, which contain little nutritive material but yet possess a very considerable stimulant action. The meat juice, according to Weichardt's teaching, supplies a fatigue antitoxin, and is not simply a mild, second-rate nutrient, for its active power in removing or preventing fatigue seems to be altogether out of proportion to its nutritive value. Sir Lauder Brunton admits that he can give no rules for the administration of medicaments which will bring about the development of fatigue antitoxins, but he thinks that the introduction of large quantities of the lactic acid bacillus into the intestine, as suggested by Metchnikoff, acts by destroying the bacilli which produce fatigue toxins. As a practical physician, the same

¹ On Chronic Colitis as a Cause of Fatigue. *St. Bart's Hospital Reports*, vol. xlv, p. 1. (Lancet, June 12, 1909.)

authority dwells on the advantages of eliminative, as opposed to tonic, treatment in cases of chronic colitis. Iron and strychnine often fail, he reminds us, adding that Byron found a dose of Epsom salts more stimulating to the brain than a glass of champagne. Old-fashioned purgatives remove the sense of weariness present in many cases of intestinal catarrh, a fact quite familiar to the experienced practitioner. A small dose of castor oil, repeated every morning, is, Sir Lauder Brunton thinks, the best remedy for chronic colitis, although a subsequent course of intestinal irrigation at Plombières, or elsewhere, may be necessary. As Sir Lauder Brunton refers to Byron, we wonder what that noble but wayward bard, who sang of those sodas and magnesias which form "that bitter draught the human species,"² would have thought and written of the possible developments of fatigue antitoxins, a tragic theme to all who with unashful forehead woo the means of weakness and debility, as Adam says in *As You Like It*. Perhaps we may be prophets, and foresee a race who, with foreshortened colons, will forswear alcohol and carouse with elegant brews of fatigue antitoxins, abusing the latter as much as our own forefathers spoilt themselves with the former.

THE FINANCE BILL.

THE Finance Bill has now been published, and it has been possible in an article published at page 1429 to gauge more exactly than before how the Budget this year will affect medical men and the profession of medicine should the proposals made be accepted by the Houses of Parliament without material modification.

The taxation on motor cars as apart from motor cabs, omnibuses, and vehicles for carrying goods, has already been discussed in these columns. As medical men are to be allowed a rebate of one-half, the taxes in their case will be: For cars not exceeding 6½ h.p., 21s.; not exceeding 12 h.p., 31s. 6d.; not exceeding 16 h.p., 42s.; not exceeding 26 h.p., 63s. There are higher rates for higher powered cars, but these need not be considered, since few, if any, medical men buy for purely professional purposes cars which, when measured according to the Royal Automobile Club formula, exceed 26 h.p. So far, therefore, medical men may congratulate themselves. It is otherwise with regard to the petrol tax. This in their case, as in that of all users of petrol-driven cars other than cabs, omnibuses, and trade vehicles, will be 3d. a gallon. Mr. Lloyd George has consented to receive a deputation on the subject, and it is possible that medical car users may still be put upon the same terms as cab, omnibus, and trade vehicle owners.

The income tax proposals work out exactly as indicated in the article published in this JOURNAL on May 8th; the injustice of regarding an income derived from inherited property and one resulting from the provision for old age made by the individual himself as of precisely the same character, remains unremedied. Exemption from income tax, and even the ordinary rebatements made in the case of income tax under £700, are no longer to remain in the case of persons resident abroad. This will make a material difference in the case of a medical man who, having spent his working life in a tropical climate, wishes after retiring to reside in Southern Europe or elsewhere in a climate which suits him; by living abroad he forfeits his right to exemption or rebate, and in the case of a man who retires on a pension or other income of about £400,

this new regulation will mean a choice between endeavouring to live on about £375, less any local income tax, and taking his chance in England.

The effect of the new proposal with regard to estate and legacy duties is not easy to determine; but in the case of estates which for probate purposes are regarded as exceeding £15,000 in value the additional payments will clearly be very heavy. With regard to smaller estates, such as those commonly left by medical men, one might suppose at first sight that the effect of the new regulations will work out favourably; but on examination it is found that the bill takes away with one hand what it apparently gives with the other. The only way to determine the net result is to take a number of hypothetical estates of small value and calculate what they would pay under the present regulations and under those now put forward. It then becomes clear that the sums which in future medical men will have to accumulate for the benefit of their children will have to be materially greater than the sums which they at present aim to leave behind them if they wish their children to obtain the same benefit as they would have received heretofore. A medical man, for instance, who dies leaving an estate of £7,500 which he desires to tie up in some fashion for the benefit of his daughters may safely count upon the Government relieving them of the care of practically the whole of the odd £500, if not a good deal more.

All transfers of property will entail a very much heavier expenditure in stamps than hitherto, but the new taxation on supposed incremental values of land—unlikely to affect the majority of medical men—will not be operative in the case of hospitals and some other institutions. The same is true of the clauses which render liable to taxation gifts of real or personal estate made within five years of the death of the donor.

The taxes hitherto mentioned may be regarded as affecting individual medical men rather than the profession of medicine as a whole. It is the reverse with the increased imposts on alcohol and the taxes mentioned in the second section of the third schedule to the Act. Taking these together, it may be said that they will work out very hardly in the case of a great number of individual medical men, that they will do something towards increasing the financial difficulties of many hospitals, and that they will handicap every medical man in the performance of his work. As regards the first point, the increased taxation of potable spirits of every kind, and whatever their purpose, will make it more difficult for medical men engaged in contract practice and obliged by their agreements to supply medicines as well as advice to fulfil their obligations without direct loss. As regards hospitals, their dispensary bills, which are already very heavy, will be gravely increased both by the additional price of alcohol and the imposts on chloroform, ether, collodion, ethyl chloride, and other like drugs.

As for medical men as a whole, they perhaps need not worry, because their better class patients will be charged higher prices for medicines containing or prepared with alcohol by pharmacists, but they will be puzzled how to deal with those whose means they know to be strictly limited. It is always difficult to combine scientific soundness and practical feasibility in the advice given to such patients, and medical men will be still further handicapped in their task when medicines have to be chosen into the preparation of which little or no alcohol enters. When in-

² Don Juan, Canto X, 17.

creased taxation becomes necessary, it is always on the poorer members of the community that the new burdens press most heavily in the long run. This is probably inevitable, but it might have been expected that the public would be spared in the special direction under consideration. In particular, the taxes on chloroform, ether, and other alleviators of pain and distress seem to us simply wicked. A benevolent and far-seeing Government will kindly abstain from charging the purchaser of a gallon of whisky more than 15s. odd for a carouse for himself and his friends, but if in the hope of saving his fellows from horrible agonies a man buys the same quantity of ether it will mulct him to the extent of £1 16s. 6d., adding about 7s. to that sum if his choice falls on chloroform. It has thus been reserved for Mr. Lloyd George to suggest a variation of one of Shakespeare's most familiar sayings: "The quality of mercy is not strained but it shall be heavily taxed."

It is expected that the opposition to the Finance Bill will centre round the land clauses, which introduce taxes of a novel kind, and to which many persons are bitterly opposed. As these clauses have been placed in the forefront of the bill, the fight may be expected to begin in earnest as soon as the Committee stage is reached, and it is probable that provisions more nearly affecting the medical profession will not be reached for several weeks or even months.

HYGIENE AND TEMPERANCE IN THE PRIMARY SCHOOLS.

THE British Medical Association comes in from time to time for a good deal of criticism, and for our part we do not think that this is a matter for regret. Any man or organization which does things is certain to be criticized; they will be criticized by people who are fond of quoting Lord Melbourne's interrogatory response. Why not leave it alone? they will be criticized by people who really believe that mistakes are being made; and they will be criticized by those intangible folk who say that they quite approve of the purpose, but object to the means taken to bring it about. But things cannot be left alone when they are evil in themselves, and the seeds of worse evils in the future. Over thirty years ago Parliament, in response to the demands of an unmistakable public opinion, enacted that education should be compulsory for all, and naturally enough the first idea of educationalists, having caught our young barbarians of the poorer classes, was to give them an education in books, modelled so far as it could go on the book education given to the wealthier young barbarians. The statistics of recruiting, rubbed into the public mind by the unfortunate incidents of the Boer war, aroused the country to a consciousness of the fact that all was not well with our system of elementary education, that it was grossly defective in that no attempt was made to inculcate the first principles of personal and domestic hygiene, nor to promote physical development by suitable training, and the removal of causes of physical deterioration. This, then, was one of those things which could not be left alone, and we believe that for once in a way the British Medical Association escaped criticism when it stood forward as the exponent of medical opinion on the subject. It did this in many ways, but we are now only concerned with the representations it made to the Board of Education five years ago as to the urgent importance of giving elementary scientific instruction in health subjects, including temperance, in all primary schools.

A resolution to this effect, adopted by the Central Council and subsequently approved by the Representative Meeting, was submitted to the President of the Board of Education on behalf of the British Medical Association, by the then President, Dr. Griffiths of Swansea, who was one of the Representatives of the Association who took part in the deputation which went to the Board in July, 1904. The official response on that occasion was indecisive, stress being laid upon the difficulty of providing teachers adequately equipped to give instruction in hygiene and temperance. The efforts of the British Medical Association and of its JOURNAL to instruct public opinion were, however, not remitted, and the institution of compulsory medical inspection by the direct act of the House of Commons put the matter on another plane. In the Annual Report of the Board of Education issued last March, it was stated that a new syllabus in hygiene had been framed for students in training colleges, and that the Board's final examination for its students would in future include a paper in hygiene containing questions based on this syllabus. We are now able to announce that the Board has taken a further step forward. It has issued a syllabus of lessons in temperance for scholars attending public elementary schools, which we are enabled to publish in the SUPPLEMENT for this week. The Board directs that in future this syllabus shall be used by all teachers in public elementary schools, and suggests that at least three lessons in the subject should be given to the children in each school year. This, of course, is not very much, but it is a beginning, and the prefatory note rightly points out that the teachers on the staff of the school will find frequent opportunities, apart from the regular lessons, of impressing upon the scholars the importance of habits of self-control. The syllabus, it will be seen, is drawn on thoroughly practical lines; the first section deals with the subject of food and its use, including the use of beverages, with a brief reference to the fact that alcoholic beverages contain little or no real food substance; the second gives some account of the effects of alcoholic beverages on the body; and the third, intended only to be used in the instruction of children over twelve years of age, sets out more in detail the evil consequences of intemperance to the individual, to the home, and to the State. The prefatory note rightly impresses upon the teachers the impropriety of exaggerated statements, and directs that the instruction should be of a kind to make a sober appeal to such reasoning capacity as a child possesses, and to the ideas of decent, self-respecting, and dutiful living which every good teacher endeavours to present to and to cultivate in the children under her charge. The Representative Meeting at Caxton Hall in 1906 urged as one of the reforms most urgently necessary the establishment of a medical department within the Board of Education, and pressed the matter upon Mr. McKenna, the then President of the Board. This recommendation was carried out by Mr. McKenna in 1907 by the appointment of Dr. George Newman to be chief medical officer to the Board of Education. We may look upon the syllabus to which we have referred as one of the firstfruits of the expert advice which the Board has received in this way and as a proof of the great value of the creation of a medical department.

THE ANNUAL MEETING.

In the SUPPLEMENT for May 22nd was published the provisional agenda paper for the Annual Representative Meeting this year, and in the SUPPLEMENT for this week will be found the programme of the Annual

General Meeting of the Association and its fifteen Sections, which begin their sessions on Wednesday, July 28th. In some instances it has been possible to publish brief synopses indicating the scope of the remarks by which the subjects selected for discussion will be introduced. That it is not possible to do this in all cases is a matter of regret, and we would appeal to those gentlemen who have not yet complied with the requests addressed to them to do so at the earliest opportunity, for there can be no doubt that a discussion is usually more fruitful and interesting if those who take part in it have had the opportunity beforehand of considering the line of argument to be followed. Elsewhere in the JOURNAL will be found the third of a series of articles of a general character dealing with the arrangements for the meeting. The first article, published last December, contained a description of Belfast, its public buildings and trade; the second, published in January, described its college and hospitals; the third, which appears this week, gives some account of the surroundings of Belfast and the opportunities for recreation which the north of Ireland affords. All these articles have been copiously illustrated by the reproduction of photographs supplied to us by Dr. Cecil Shaw, of Belfast, and for the most part specimens of his own skill as a photographer. In a later article it is intended to give a general account of the arrangements and entertainments, the train service, short excursions round the city, and some particulars regarding the journey from London, the north and south-west of England, Wales, and Scotland. In a recent issue we stated that there was reason to believe that an invitation would be received to hold the annual meeting of 1911 in Birmingham, and of 1912 in Liverpool, but that nothing had been definitely settled with regard to 1910. We understand that a plan with regard to that year is under consideration, and that it is possible that an announcement on the subject may be made at an early date.

SPIRITUAL HEALING.

In the *Transvaal Medical Journal* for March we find a typical example of the utter disregard for truth often shown by patients who testify to cures supposed to be wrought in them by spiritual healers. Dr. Arthur G. Brinton, of Johannesburg, quotes the following extract—published about November, 1908—from *God's Latter Rain*, which appears to be the official organ of a local religious sect: "Letis Saunders, of 32, 'De Korte Street, Braamfontein, Johannesburg, testifies: 'My eyes were so bad, my sight was almost 'gone, and my eyes were sunken and withered. I 'was treated by several doctors—Dr. Brinton, an 'eye specialist. Dr. —, and Dr. — (we do 'not think it necessary to give the names), and 'others. The doctors said my sight had always 'been defective and could not be healed. I went 'to the tabernacle and Jesus healed me as the 'brothers prayed. Now my eyes are perfectly well 'and all the pains are gone.' We do not mean for a moment to call in question either the efficacy of the brethren's prayers or the good faith of the patient. But the brethren themselves would doubtless wish that the truth should be made manifest, and it is fortunate that they have had their wish. Dr. Brinton gives an extract from his case book from which it appears that the patient was sent to him five and a half years before the date of the statement above quoted. She was then 9 years old. A comparison of his notes taken at the time with the girl's testimony shows that the statement attributed

to him is inaccurate in every particular. Her vision was perfect; her right eye was normal, while there was nothing wrong with the left eye but some slight scarring, probably left by phlyctenular conjunctivitis from which she had suffered before she came under his care. This scarring, as Dr. Brinton says, would in all probability have yielded naturally in the course of the five years to the use of the yellow oxide of mercury ordered by him. We repeat we do not mean to insinuate that the poor child was consciously lying when she testified to the remarkable cure of non-existent disease. Her statement, like that of all the testimonies as to Christian Science and other forms of spiritual healing that can be brought to the test, is obviously the result of auto-suggestion stimulated in an ignorant mind by an atmosphere of unwholesome religious excitement.

MEDICINE AS A SOURCE OF INCOME.

At page 1431 of this issue will be found an article dealing with a subject of great interest to all medical men, and to all those who are ever called upon to give advice as to the choice of a career. The profession of medicine does not, of course, depend for its attractions solely on the amount which those who adopt it as a career may expect to obtain in the way of income. Nevertheless, in the vast majority, if not in all cases, this must be regarded as a very important consideration. How far it is common for medical men to enter on the actual practice of medicine without any capital whatever may be a moot question; but since a medical education is very expensive and the acquirement of a practice either by purchase, or by setting up house and waiting until patients come, may well absorb quite an average fortune, it is to be feared that no large proportion of medical men has means other than those drawn from their labours year by year. In such case the difference of a few pounds in the year's income one way or the other may make all the difference between comfort and discomfort, and it is indubitable that of late years complaints as to undue difficulty in making an adequate income have been increasingly frequent. It is possible that such complaints are sometimes exaggerated, but unfortunately one meets commonly with distressing evidence that many of them are only too true. In any case it is assumed in the article that it really is more difficult to gain a satisfactory livelihood from practice than it used to be, and an attempt is made to discover whether, when things as they now exist are contrasted with what they were twenty-eight years ago, any difference is discernible which would naturally tend to make the practice of medicine a less paying calling than formerly. It is admitted that a complete answer to the question involved must depend upon consideration of a great number of different factors, and in this article, which is based on painstaking and laborious investigation, no attempt is made to deal with more than one of them. Its net outcome is to show that one striking difference in the conditions of practice between the beginning and the end of the period investigated certainly exists, and that it is of such a character as to be likely to add to the difficulties which a man of average ability and average opportunities may expect to encounter in gaining a living by practice. The whole case, however, cannot be considered to be proved until other investigations along the same line have been completed and analogous conclusions are shown to result from them. The results of one of them will be published at an early date.

THE REVOLT OF THE HERBALISTS.

THE inquest in a case which had been attended by a herbalist, to which reference was made in the medico-legal notes in last week's JOURNAL, has been followed by a local demonstration by the so-called People's League of Medical Freedom. Under the auspices of this league a public meeting was held at Sowerby, a village on the fringe of the Yorkshire moors, to protest against the action of the Halifax District Coroner (Mr. E. H. Hill) in connexion with the *post-mortem* examination and inquest. Quaint customs die hard in remote places. There are districts where the village herbalist still has a following, and any attempt to restrict his or her pretentious practices are strongly resented by the villagers. Lovers of freedom and liberty in medicine were invited to the meeting "to resist the tyranny of medical priestcraft." The proceedings were enlivened by the presence and speeches of Mr. W. H. Webb, a Southport herbalist, and proprietor of the *Herb Doctor*, and Mr. J. P. Swan, Honorary Secretary of the People's League, of which the *Herb Doctor* is the official organ. With a touch of unintentional but ironical significance, a press report says: "Darkness closed in on the meeting, the resolution was put without delay, and was carried without dissent amid loud applause." The resolution expressed indignation at the action of the coroner. Two grievances were resented. It was alleged that the inquest should not have been held, and that the herbalist should have been called to give medical evidence. Regarding the first point, the discretion is properly in the hands of the coroner, to whom the facts and circumstances are communicated. The second point raises an altogether insupportable claim. It is preposterous to suggest that a coroner should accept medical evidence as to the cause of death from persons who have had no medical training. Mr. Swan is reported to have said: "Medicine is an Art, and therefore a great doctor was 'born, not made. The success was to the man with 'superior instinct.'" This is an age of prodigies, but we are not aware of the existence of any individual born with a knowledge of anatomy, physiology, or pathology. Artfulness (not Art) and superior instinct may be useful in impressing other people that one possesses knowledge and ability where neither exists, but these are precisely the elements which make the empiric and the quack. It would be interesting to know the constitution and membership of this league with the high-sounding title. The agitation for medical freedom of the kind desired by this league is promoted by means of much misrepresentation as to the meaning and intention of the Medical Acts now on the Statute Book. These are framed in the public interests, and not for the benefit of registered medical practitioners, as often alleged. Other comments on the eccentricities of the People's League of Medical Freedom appeared in the JOURNAL on May 23rd, last year.

TYPHOID CARRIERS.

A MEMORANDUM, addressed to hospital physicians and others who may be called upon to deal with typhoid fever cases, has been issued by Dr. D. S. Davies, M.O.H. Bristol, suggesting that, in view of knowledge recently acquired as to the risk of continuously-infected persons known as "carriers" maintaining and distributing typhoid fever infection, physicians—especially those attached to public institutions—might do well to arrange to keep a register of convalescents and their addresses, with a view of securing their periodic attendance for a period of six months, in order to determine

bacteriologically their actual condition as to infectivity. The ultimate aim of any method adopted to check this source of infection must be the discovery of a method of cure, but it is suggested that in the meantime the circulation of simple rules among convalescent patients might lead to some diminution of typhoid, and with this object Dr. Davies appends a paper of instructions to typhoid convalescents. Dr. Davies makes reference to the report by Lieutenant-Colonel Semple and Captain E. D. W. Greig published in the *Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India*, the conclusions of which were stated in the BRITISH MEDICAL JOURNAL last September (vol. ii, 1908, p. 834). The inquiry confirmed the conclusion drawn from the cases reported at various times during the last few years in our columns, which is that persons convalescent from typhoid fever, and even in some cases persons who have had the disease years before, may harbour the bacillus, and become centres of small epidemics. This is more particularly true of individuals engaged in the preparation of food. There can be no doubt that the solution of the problem of how to treat these persons so as effectively to free them from the bacillus would be a most important step in advance, and would eliminate one most insidious cause of the continuance of the disease, and of the occurrence of so-called sporadic cases. The fact that the medical officer of health of an important English city has felt it advisable to invite the profession in that city to co-operate with him to this end, may perhaps be some consolation to Captain Clive and Mr. Ward, who, as will be seen by a paragraph in our Parliamentary Notes this week, are much exercised because certain soldiers who harbour the bacillus are being detained under treatment in the Millbank Military Hospital.

MILK AND DAIRIES BILL FOR SCOTLAND.

THE Milk and Dairies Bill introduced by Mr. Burns on May 25th, and analysed in the SUPPLEMENT for last week, is to apply, with certain necessary verbal alterations, to Ireland, but is not to extend to Scotland. The reason for this is that on the previous day the Secretary for Scotland introduced a Milk and Dairies Bill for Scotland into the House of Lords. The text of this bill was not available until after Parliament had adjourned for the Whitsuntide recess, and we were therefore unable to publish an analysis of its provisions last week; but such analysis will be found in the SUPPLEMENT for this week. The Scottish bill is generally on the same lines as the bill for England and Ireland, but appears to us to be in certain respects better. The appointment of a veterinary officer in England will depend upon a special order being made by the Local Government Board, whereas in Scotland, if we read Section 3 correctly, it will be incumbent upon the authority in every district to appoint such an officer. In Scotland the medical officer of health will be required to inspect every dairy annually, whereas the provision of the English bill on this head is permissive. The Scottish bill provides that a vehicle from which milk is sold shall be deemed to be premises, but we fail to find any such provision, which may prove extremely useful, in the English bill; nor do we see in the English bill a provision requiring the dairyman to produce a list of his customers and invoices in any case in which the outbreak or spread of infectious disease appears to be attributable to the milk. There are other points on which the two bills differ, but these appear to be the more important.

UNQUALIFIED PRACTICE.

THE inefficient nature of the Medical Acts for the prevention of unqualified medical and surgical practice is illustrated daily in the advertisement columns of the newspaper press, both in London and in the country. By means of specious advertisements, the ignorant public is deluded into entrusting the health of themselves and their children to those who, neither by course of study or professional knowledge, are fit and proper persons to undertake the important duties involved. Our attention has lately been called to a column advertisement in the *Leicester Daily Mercury*, headed "Blindness," which emanates from a limited liability company, styled Ison's Eye and Ear Dispensary, Great George Street, Leeds. Starting with extracts from the *Daily Mail*, in which the cause of blindness in many cases is imputed to neglect in infancy, and continuing with an extract from the *Lancet*, in which some years since the importance of special study for medical practitioners in eye diseases was made the subject of comment, it proceeds to eulogize the "life study" of one Thomas Ison. "Oculist and Aurist," and to inform the public that he is in a direct line of descent of those who have made a study of such diseases for upwards of sixty years. It is added that "none should attempt to cure its defects but those 'who have made a thorough study of the diseases 'to which it—the ear—is peculiarly liable.'" This information is somewhat discounted by the fact that Mr. Ison is not a qualified practitioner in any respect, and it is as well that the public should realize that the titles, "Oculist and Aurist" are self-assumed, and, therefore, of no value as a mark of any special knowledge of the subject about which he writes and advertises himself. It will be remembered in this respect that Mr. Ison was prosecuted by the Medical Defence Union in 1906 before the stipendiary, and convicted under Section 40 of the Medical Act, 1858, for assuming titles implying that he was recognized as a surgeon, and subsequently converted himself into a limited liability company, and thus presumably ended any further liability under the Act. It will also be remembered that a bill to prevent the practice of medicine and surgery by limited liability companies was passed by the House of Lords and sent down to the lower house about two years ago, but since that date no further progress has been made in this direction. The advertisement of Ison's Eye and Ear Dispensary, Limited, is an object lesson, and affords a concrete instance of the need for amended legislation. To comment by advertisement upon the dangers of neglect in infancy in order to tempt unwary parents to continue such neglect by placing their ailing children under the treatment of an unqualified practitioner would be amusing if it were not dangerous. It must be remembered that under the "Children Act" failure to provide adequate food, clothing, and medical aid is now deemed to be neglect in a manner likely to cause injury to health. It cannot be too forcibly brought home to parents that to entrust the care of their children to quacks is a statutory offence which makes them liable on conviction to a penalty.

CONGRESS OF OPHTHALMIC SURGEONS.

THE meeting of ophthalmic surgeons that for some years past has taken place at the conclusion of the post-graduate course in ophthalmology at Oxford will be held this year on July 15th and 16th. The following programme has already been arranged. Demonstration of a case of leprosy under treatment, by Mr. Treacher Collins. (1) Address on *sérothérapie*

paraspécifique, (2) demonstration of intravenous injections, by Dr. Darier (Paris). (1) Operation for detached retina, (2) address on treatment by yeast serum in eye diseases, by Professor Deutschmann (Hamburg). Address on difficult iridectomies, by Professor Dufour (Lausanne). Demonstration of several new phenomena connected with colour vision, by Dr. Edridge-Green. (1) Address on the etiology of trachoma, (2) demonstration of the microbes of trachoma, by Professor Greeff (Berlin). (1) Address on muscle defects, latent and actual, (2) a new test for vision—the diaphragm test, by Mr. Bishop Harman. A series of microscopic specimens of the iris after iridectomy, showing the absence of cicatrization, by Dr. T. Henderson. Demonstration of his operation for glaucoma on pig's eyes, by Colonel H. Herbert. Address on some lacrymal gland cases, by Dr. Hill Griffith. Demonstration of the methods and appliances employed in the estimation of the working capacity of injured workmen, Mr. Jameson Evans. (1) Operation for ptosis and for glaucoma, (2) demonstration of test for binocular vision, by Dr. Freeland Fergus. Head specimen for demonstrating operations, by Dr. Knapp. Demonstration of the Mendelian theory and its application to ophthalmology, by Mr. Ormond. The use of radium in eye disease, by Mr. Arnold Lawson and Dr. Mackenzie Davidson. Some x-ray pictures will be shown by Dr. Mackenzie Davidson. Microscopical demonstration of the bacteriology of corneal ulceration, by Mr. A. McNab. Operation for ptosis, by Dr. Motais (Angiers). Demonstration of his diploscope, by Dr. Rémy (Dijon). Address on the significance of optic neuritis, by Dr. Risien Russell. Operations for (1) muscle advancement, (2) marginoplasty for entropion, by Dr. Story. Stereoscopic demonstration of the structure of the eye, by Professor Thomson. A scotomograph with stereoscopic fixation will be shown by Mr. Tomlinson. In addition there will be several interesting cases shown at the Eye Hospital. Surgeons who desire to attend can be accommodated to the number of seventy at Keble College at the rate of 7s. 6d. per day. A dinner will be held in Keble Hall on Wednesday, July 14th. At the conclusion of the meeting a launch will leave Folly Bridge on Saturday, July 17th, to go down the river to Reading. Further particulars can be obtained on application to Mr. R. W. Doyne, 30, Cavendish Square, London, W.

THE LATE MR. SIMEON SNELL.

DR. RICHARD A. REEVE, of Toronto, President of the British Medical Association in 1906, writes: By a regrettable mischance the issue of the *JOURNAL* of April 24th was mislaid and overlooked, so that I was unaware of the passing away of our lamented President for several weeks after the sad event. I was quite shocked to hear of Dr. Snell's death, and I would like to add my tribute of appreciation of his good work and solid worth. I had known him for a number of years and had formed a high estimate of his character, wide experience, and professional acquirements—an opinion which, I believe, was shared by not a few of his *confères* on this side of the Atlantic. His geniality and wholeheartedness were much in evidence; as an instance, I recall with pleasure not only his successful conduct of the Section, but his generous hospitality to the members, at the Portsmouth meeting. One could not fail to recognize the energy, ability, and thoroughness which Dr. Snell displayed in all his work—qualities, indeed, which marked him as a worthy member of the British School of Ophthalmologists. One cannot but feel that the demise of such a man will be a distinct loss even to so great a body as the British Medical Association.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Typhoid Carriers.—Some little time back Captain Clive asked a question about the detention in hospital of soldiers who had contracted enteric fever in India, and on their return to this country had been found to be enteric germ-carriers. Mr. Haldane said that the question evidently referred to the seven non-commissioned officers and men under treatment at Millbank Military Hospital. He was informed that the condition of these cases rendered them dangerous to their comrades in barracks. It was, therefore, decided, on the recommendation of the Army Medical Advisory Board, to place them under special treatment to see if their condition was curable. This treatment had met with encouraging results, and one at least of the cases, it was hoped, had been cured. Although patients in hospital, they were allowed considerable freedom, and were not treated as ordinary patients, but rather as convalescents. They would be free so soon as the danger of the bacilli which they had brought to this country had been removed. Mr. Clive asked if the theory of germ-carrying was not quite unproved. Mr. Haldane replied that he did not think so. The advance of medical science on this subject within the last two years had been enormous. Mr. Ward asked if the experiments were being made with the sanction of the men and whether they would be poisoned in case of permanent injury. Mr. Haldane said he did not know why the treatment was referred to as an experiment; it was a well-known ascertained cure. Last week Mr. Ward resorted to the matter and asked whether these men had given their sanction to the experiments being made, and whether, if the treatment impaired their health they would be granted pensions. Mr. Haldane, in a written answer, replied that the proposed treatment was fully explained to the patients who, far from offering any objection, were greatly interested in what was being done. Apart from their liability to infect others, they were in exceedingly good health and the possibility of permanent injury to their health from the treatment need not be contemplated. Papers on the subject would very shortly be laid on the table.

Indian Medical Service.—Mr. Mooney asked the Under Secretary of State for India whether it was the policy of the Government of India to make use of the civil branch of the Indian Medical Service as a reserve of officers for the Indian Army; whether it was proposed in case of war to withdraw officers of the Indian Medical Service from the posts which they hold at present in all the important civil medical institutions; and, if so, whether any provision was or would be made to fill their places? Mr. Hobhouse answered that the civil side of the Indian Medical Service was intended to be used to a considerable extent as a war reserve; but the officers holding the more important and specialized posts in civil medical institutions were not regarded as a part of the war reserve.

Dispensary Doctors (Ireland).—Mr. Ginnell asked the Chief Secretary for Ireland how long the Local Government Board for Ireland allowed a dispensary medical officer to continue incapable from excessive indulgence in intoxicating drink before taking action; and what precautions, if any, the Board took for the lives of the poor, who had no choice of medical practitioner, after the Board had learned that the officer was addicted to this vice? Mr. Cherry replied that the hon. member was in error in assuming that action was not taken at once when a complaint was made officially to the Local Government Board that a medical officer of a dispensary district had become incapable of discharging his duties owing to excessive indulgence in intoxicating drink. The medical officer, however, could only be deprived of his post on sufficient grounds, which should be established at a public inquiry where he could be afforded a full opportunity of offering a defence. Allegations of intemperance contained in anonymous letters or made by individuals who refused to permit their names to be

disclosed, would not be a proper basis for an official investigation against a medical officer. The boards of guardians were charged with the supervision of the medical officers, and were assisted in that duty by the Local Government Board's medical inspectors. In addition, the poor might at all times complain against medical officers either to the guardians or the Local Government Board, and in that way secure redress and efficient medical attendance.

The Colonies and Malaria.—Mr. Ramsay Macdonald asked the Under Secretary for the Colonies whether the eleven Colonies which made no special report on malaria, in response to the circular of June 6th, 1906, had since been communicated with, and had been asked to furnish reports. Colonel Seely said that a special circular had recently been sent out by the Secretary of State with a view to obtaining fuller information with regard to anti-malarial measures, both from the Colonies referred to and from other tropical colonies. Mr. Ramsay Macdonald then inquired as to St. Kitts-Nevis, where nothing had been done to destroy the breeding places of malaria-carrying mosquitoes. Colonel Seely replied that the Secretary of State had made no further representation to the Government of St. Kitts-Nevis in this matter. He feared that effective action in this direction might be hampered by financial considerations, but the officer administering the Government would be asked for a report on the possibility of taking action. Mr. Ramsay Macdonald then referred to the opinion expressed by the Administrative and Executive Council of the Colony that rules for the suppression of mosquito-borne diseases, including malaria and yellow fever, were *ultra vires*. Colonel Seely answered that the incident referred to took place in 1906, and there had been no recent correspondence on the subject. The Secretary of State would now call upon the Governor to furnish a report as to the measures taken in the Bahamas to combat tropical diseases. It had to be remembered that legislation and expenditure in this colony were dependent upon the consent of the House of Assembly, which was an elective body.

The Madras Medical College.—Mr. Mooney asked the Under Secretary of State for India whether the present President of the Medical College, Madras, was appointed to that post after having acted as Surgeon on the personal staff of three successive governors of Madras; and what educational experience this gentleman possessed to qualify him for his present appointment? Mr. Hobhouse replied that the present principal of the Medical College, Madras, was Surgeon to the Governor of Madras from May, 1892, to February, 1902. He had also held various other appointments in the medical service, and was Professor of Medical Jurisprudence and Professor of Surgery for two and a half years before he became principal. The appointment was one for which the authorities in India were responsible, and the Secretary of State saw no reason to question the propriety of their selection.

The Public Health Acts.—Mr. Gladstone stated before the Whitsuntide recess that on the application of the local authorities orders had been made declaring Section 85 of the Public Health Acts (Amendment) Act to be in force in thirty-three boroughs and thirty-two urban districts. The Act did not empower a county council to apply for an order.

The Medical Acts Amendment Bill was withdrawn on Monday night last. It is understood that the bill will be introduced again shortly in an amended form, so as to place the question of the administration of anaesthetics in a shape less likely to excite opposition.

A SPECIAL meeting of the Council of the Charity Organization Society will be held on Monday, June 28th, at 4.30 p.m., at Denison House, Vauxhall Bridge Road, S.W., when Miss Amy Hughes, of the Queen Victoria Jubilee Nurses' Institute, will read a paper on provident nursing. Sir Alfred Lyall, G.C.I.E., K.C.B., will take the chair, and the Right Rev. the Bishop of Islington will speak.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND DISTRICT.

THE LANGHO INEBRIATES' HOMES.

SPECIAL interest attaches to the annual report of the Langho Inebriates' Homes, in view of the fact that some time ago the Manchester Justices expressed a very unfavourable opinion as to the value of such institutions. At the beginning of last year there were 128 persons under detention, and 51 fresh cases were received; 14 were released on licences, 2 of which were revoked; 28 were discharged on the expiry of their sentences, 1 was sent to an asylum, and 1 readmitted, leaving 137 at the end of the year. Suitable occupation was given to the inmates, such as wood chopping, dairy work, and haymaking, while 35 women were engaged in laundry work, and others at sewing or rug making. Some of the well-conducted women, towards the end of their detention, were allowed to go out as charwomen in the neighbourhood, and the experiment was thought successful, as only 2 gave way to drink, and, besides being a source of revenue to the institution, it served as a sort of preliminary trial of their self-control previous to their dismissal. The Director complains that these and similar homes have gradually become places of detention for feeble-minded criminal drunkards, which will account for the fact that many of the patients after dismissal relapse into their old habits. The list of previous convictions recorded against the women sent to the homes averaged 28, though there seems to be some doubt in many cases. Exaggerated statements have from time to time appeared in the press as to the cost of treatment; in one case it was stated that a woman had cost the ratepayers £230, but on investigation it appeared that the actual cost of her detention for three years was a much smaller sum. Another press report said that it cost a certain authority 30s. a week for each inmate, whereas the actual cost for each woman during the last year was 14s. 3½d. a week, towards which the local authority paid 7s. 7d., the remainder being provided by the State contribution and the receipts from work done by the women themselves. During the year the women had earned altogether £981 actual cash profit, exclusive of work done for the institution. Referring to the question of the value of such homes, the Director urges that critics have not made allowance for the fact that by far the greater proportion of the cases are feeble-minded, and also that one special purpose of the Act was control by detention, which seems often to be forgotten. The majority of the women leave the institution with good intentions, but on returning to their own homes they are faced by want of employment and exposed to the temptations of old companions, and the unfortunate facility with which they can obtain a living by immoral practices often leads them to drink as a sequence.

WALES.

A CASE OF LEPROSY AT CARDIFF.

At the Seamen's Hospital, Cardiff, on June 1st, the Medical Superintendent discovered one of the out-patients, a Chinaman lodging in one of the Bute Street boarding houses, to be suffering from leprosy in a very early stage. Dr. Whelan immediately communicated with the port sanitary and municipal authorities, and since that time the patient has been the subject of a series of microscopic examinations. The result of these examinations seems to have confirmed the view as to the nature of the disease formed by Dr. Whelan, and the leper was admitted to the Seamen's Hospital and immediately isolated. Every other possible precaution has been taken by disinfection and other preventive methods, and a close examination has also been made as to the condition of all the other lodgers at the house where the patient stayed. Dr. Whelan is of opinion that the disease was originally contracted in China prior to the departure of the patient from Hong Kong in March, 1907. Dr. Fairfield Thomas, assistant medical officer of health, has reported to the Cardiff Health Committee that he had done everything possible with regard to the leper, the patient having been

isolated, and disinfection had been carried out very thoroughly. The question for the committee was the extent of its responsibility. It was of course responsible for the man's maintenance in the Seamen's Hospital. Legally he was destitute, and undoubtedly the guardians were responsible, but he did not know that the committee would care about shifting the responsibility in such a case.

SANITATION OF GLAMORGANSHIRE.

At the quarterly meeting of the Sanitary Committee of the Glamorgan County Council, held at Cardiff on June 4th, the County Medical Officer reported with regard to infectious diseases, that there had been an increase in the number of cases notified of small-pox, membranous croup, and puerperal fever, and a decrease with regard to diphtheria, erysipelas, scarlet fever, and enteric fever. It has been decided to provide a hospital with some 50 beds at Aberdare. The Caerphilly Hospital was opened for the reception of patients on April 27th. Several sites for a hospital for Neath Rural District have been inspected, and the District Council has given the Hospital Committee full power to deal with the matter. The alterations and additions in connexion with the administrative block of the Rhondda Hospital have been completed.

EBBW VALE DISPUTE.

The following paragraph appears in the *Western Mail* (Cardiff) of June 7th:

The two subcommittees appointed to arrange the terms of arbitration in the doctors' fund dispute at Ebbw Vale have met and discussed the question of arbitrators. The workmen's doctors' fund committee has selected Mr. Phil. Snowden, M.P., as their arbitrator, and the Cwm section has chosen Mr. Tom Richards, M.P. The doctors' committee so far has not accepted Mr. Richards. They do not object on personal grounds, but on the contention that it would be more satisfactory to have a perfectly independent person, and one who is totally unacquainted with the dispute. They hold the same objection to Mr. Brace, M.P., and would prefer the Cwm section to submit the name of a person outside the county of Monmouth. It is understood that the Board of Trade will be requested to nominate the referee.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

EXTENSION OF THE GLASGOW WESTERN INFIRMARY.

The building of the extension to complete the west block has now been commenced, and will be rapidly pushed on, as the builders are under contract to have the roof on by November. This addition will provide accommodation for 94 beds.

VICTORIA INFIRMARY, GLASGOW.

The post of visiting physician, vacant by the retirement, owing to the age limit, of Dr. Duncan, has been filled by the appointment of Dr. Love, who was so long associated with the late Dr. Finlayson at the Western Infirmary.

MEETING OF THE PHYSIOLOGICAL SOCIETY.

The experiment of holding a meeting of the Physiological Society in Glasgow was fairly successful. Comparatively few of the English members came north, but there was a good attendance of local members, and the contributions and demonstrations gave some indication of the scope and quality of the research work carried on in Scotland. The size and equipment of the physiological buildings was much commented on.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

The Secondary Education Committee of the County of Lanark has prepared a draft scheme which provides for the co-operation of all the school boards. It is proposed to divide the county into districts, each under the charge of a medical inspector, who would be responsible for the work in that district. From five to seven medical inspectors would be required, and in order to supervise and co-ordinate the work of these inspectors the draft scheme provides for the appointment of a supervising medical officer, who would also collate and be responsible for the compilation of the statistics. As Dr. Wilson, the county medical officer, is willing to undertake this supervising and

statistical work, a considerable saving could be effected, as it would not be necessary to provide separate offices. This draft scheme was submitted to a large and representative conference of the school boards of the county, and, after a full discussion, it was decided that the representatives should confer with their boards and at a subsequent meeting decide whether they were prepared to adopt the draft scheme.

LUNACY IN SCOTLAND.

The general Board of Commissioners in Lunacy for Scotland have just issued their annual report. In it they state that on January 1st, 1909, exclusive of insane persons maintained at home by their natural guardians, there were in Scotland 18,197 insane persons of whom the Commissioners had official cognizance, including the inmates of the training schools for imbecile children and of the criminal lunatic department of Perth Prison. Of these, 2,682 were maintained from private sources, 15,464 by parochial rates, and 51 at the expense of the State. There is an increase in the number of insane during the past year of 289. The maintenance of this large number of insane amounted to £398,682.

Referring to the cost of district asylums, which is a heavy item of expenditure falling to be paid by the ratepayers, the Commissioners remark that the constant demand for additional accommodation for the insane, the large scale on which it has been found necessary in many cases to provide it, and the magnitude of the expenditure involved, have recently become the subject of much discussion. The Commissioners further state that for some time past they have urged upon district lunacy boards that all asylum buildings should be of the utmost simplicity compatible with efficiency for their general purpose, and that no expenditure should be incurred on external ornaments or in any other similar directions which are contrary to a strict economy and in no way contribute to the amelioration of the condition of the insane. It is hoped these pertinent remarks of the Commissioners will have some effect in diminishing the cost of asylums.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

IRISH MEDICAL BENEVOLENT FUND SOCIETY.

The annual general meeting of this society was held in the Royal College of Physicians on June 7th, when Dr. Andrew Horne, P.R.C.P., occupied the chair.

Annual Report.

The report of the Committee stated:

The total amount of the grants recommended since the last distribution is £1,327. The total number of applications considered during the year was 30. Of these 81 were from the widows of medical men, 5 from; or on behalf of their orphans, and 4 from medical men themselves. The number of applicants this year has been very large, and the amount given in grants has strained the resources of the Society, yet to many of the recipients the aid given has fallen very far short of their claims, and of their urgent necessities. The amount received through the central treasurer was £225 3s. 6d., as compared with £195 the year before. The subscriptions received from branch treasurers amounted to £315 16s. 2d., as compared with £351 11s. 3d. the year before. The Belfast and Co. Antrim Branch contributed £151 5s., including £5 5s. received late for audit the previous year. Since the accounts were closed a further sum of £9 15s. 6d. had been received from that branch. Of the £315 16s. 2d. received from county branches, £138 18s. 2d. should have appeared in last year's account, but was not received until that account had been closed. The branch treasurers doubtless do what they can to send their collections in time for audit. At present it is impossible to present the accounts in such a form as to make it easy to compare one financial year with another.

Mr. John Lentaigne moved and Dr. MacDowel Cosgrave seconded the adoption of the report. The former stated that there were about 3,000 members of the profession in Ireland, but only 500 contributors to this fund. Roughly, the amount of the subscriptions came to £541, while the amount paid out in awards was £1,327. There was a most serious falling off in the contributions from the branches. He thought one reason was that some medical men did

not know of the existence of the society and of the work that it was doing. This year they would try another plan, and he hoped that it would result in a considerable improvement in their funds.

Dr. Hastings Tweedy, Sir Lambert Ormsby, Dr. J. Magee Finny, Dr. Garland, Dr. Knox Durham, and the Chairman also addressed the meeting, and pleaded for liberal support of the society.

NEW CHILDREN'S HOSPITAL IN UNION INFIRMARY, BELFAST.

On June 3rd a large company assembled to join in the opening of the New Children's Hospital of the Belfast Poor Law Guardians. Dr. Bryars, Chairman of the guardians, heartily welcomed Lady Hermione Blackwood, who was to perform the ceremony, and other guests, and gave a short history of the movement. Lady Hermione Blackwood said the Belfast guardians had forestalled the findings of the Poor Law Commission, had segregated phthisical patients, built an admirable sanatorium, and now provided a separate block of buildings for a children's hospital, which enabled the classification in separate wards of medical, surgical, and special diseases. The true economy was to place a sick child under conditions of sunshine, cleanliness, and fresh air. The new block was then opened, and named the "Dufferin Children's Hospital," after the late Lord Dufferin. Sir John Byers, at the request of the Chairman, moved a hearty vote of thanks to Lady Hermione Blackwood, and said that the guardians could have got no more suitable person, as she was not only a daughter of a most illustrious Ulster house, but also a fully trained nurse and an inspector of Jubilee nurses in Ireland, who thus as an expert could keenly appreciate the enormous advantages of such an institution. A choir of the children sang "The Irish Emigrant," a song composed by Helen, Lady Dufferin, Lady Blackwood's grandmother.

The new hospital has eight wards, and accommodates 200 children. It is situated apart from the other work-house buildings, with large balconies facing south-west, and commanding a view of the valley for miles. It is built of red brick, and is three stories high. The main entrance is by a front central door with fireproof stairway rising to the top story. The separation of the children is well carried out in all details. The medical attendant will be Dr. Fulton, and Mr. Craig will have charge of the Eye, Ear, and Throat Department. Dr. Mary E. M. Logan will act as resident surgeon.

PROFESSOR FRASER.

A committee has been formed in Dublin to present Professor Fraser with some token of respect and admiration on the completion of his twenty-five years as Professor of Anatomy in the school of the Royal College of Surgeons in Ireland. It is felt that Professor Fraser's distinguished position as an anatomist, his lucidity as a teacher, and the unselfishness which has characterized his intercourse with students, deserve recognition from his former pupils, and subscriptions, not to exceed one guinea, may be forwarded to the honorary treasurer, Sir Arthur Chance, 90, Merrion Square, Dublin. The chairman of the committee is Mr. John Lentaigne, President of the College of Surgeons; and the honorary secretary is Mr. William Taylor.

HEALTH OF BELFAST.

At the meeting of the City Council on June 1st the medical officer of health reported that the death-rate from all causes for the past month had been 20 per 1,000, and from zymotic diseases 0.8 per 1,000. The number of infectious cases notified had been abnormally low.

The Harbour Commissioners and the City Council have come to an agreement which settles the dispute between the two bodies that threatened at one time to involve serious litigation. The Council will pay to the Commissioners £6,000 in full settlement of all claims for dredging of sewage of the town from the various channels.

The Local Government Board has refused to sanction the application by the City Council for a loan of £112,500 for the purpose of providing purification sewerage works, on the ground that the precise amount of purification is not evident; the resolutions dealing with the question were referred back to the committee.

Correspondence.

SPEECH FRIGHT.

SIR,—I liked your leader on "speech fright" very much, for it is a subject deeply interesting to all of us who have had from time to time to face the necessity of the responsibility for public speaking. But it disappointed me, too, for I had hoped for a scientific explanation of the curious but undoubted fact that a man who has been talking fluently and even eloquently as long as he retains his seat, begins to halt and stammer and even to break down hopelessly whenever he assumes the erect posture.

Cannot the physiologists help us? The ingenious Lauder Brunton has lately discovered, or popularized the discovery of some one else, that fatigue is due to a toxin developed in some mysterious way within the human body, and perhaps a microbe or some of those microscopic intruders may have something to do with the nervousness which afflicts most of us at inconvenient times; and I suggest this as a plausible line of investigation, to be carried out under the pecuniary auspices of the British Medical Association or the Royal Society. Meanwhile we must grin and bear the thorn in our intellectual flesh which Providence for some inscrutable reason of His own has planted there; and it is consoling to note that this form of temporary mental incapacity, sometimes running up to an absolute evaporation of words and ideas, is shared by some of our greatest orators. Lord Coleridge told George Russell that he once asked Gladstone if he ever felt nervous. "In opening often, in reply never," was the reply. And Lloyd George, so notorious for his glib tongue and nimble wit, made this confession to a friend: "When I was making my maiden speech I tell you I was in a state of misery. It is no figure of speech, but literally true, that my tongue clove to the roof of my mouth, and at first I could hardly get a word out." And Lord Althorp, the famous Prime Minister, said to Macanlay that he had only just got over his apprehensions. "I was as much afraid," he said, "last year as when I first came into Parliament. But now I am forced to speak so often that I am quite hardened. Last Thursday I was up forty times." Dizzy's famous breakdown is a matter of history, and Toby, in his inimitable style, has described the painful scenes he witnessed when Bob Lowe and the late Lord Derby came within more than measurable distance of total collapse. Probably some of your readers may have been present at the dinner given to my old friend, Sir John Tenniel, when the hero of the occasion, after helplessly looking round the room and stammering out a few words, abruptly sat down. This was when Birrell used the very happy phrase that this was one of the occasions when silence was more eloquent than words. But the great cartoonist told me afterwards that he had prepared an excellent speech, but when he stood up, absolute vocal paralysis seized him, and, unluckily, he had no text to fall back upon. In my own experience, I remember two occasions when I rose up to speak at public dinners, when my mind suddenly became a blank, and I was only saved from absolute disaster by some notes which I prudently had before me. I presume that temperament has something to do with this, for I have seen an Irish member, within a couple of hours of his introduction to the House, get up and hold forth with perfect fluency and confidence, and women are much less self-conscious on public occasions than men, and, take them all over, they speak much better than we do.

You have referred to various drugs taken by speakers to stimulate their oratorical powers and overcome nervousness. Wilberforce usually took an opium pill. Lord Granville in his *Life*, regrets having stood between Lord Beaconsfield and the House of Lords, because he heard afterwards that the great ex-Premier had swallowed something and inhaled something which timed him to speak at a particular moment; and it is broadly hinted that a very distinguished politician is in the habit of using whiffs of oxygen to recruit his flagging energies.

Stammering is, I suppose, a form of nervousness, and as a rule it cannot be overcome by any effort of will. But how curious it is that a man who stutters painfully in ordinary speech should be able to sing or read or make a

considered speech without hesitation. David Plunkett, whose conversational efforts were marred by painful hesitancy, was one of the few real orators to whom it has been my privilege to listen in the House of Commons. It seems evident to my mind, also, that animals are occasionally nervous. We know that a gun-shy pointer is only really food for powder, and another who blinks his points had better follow it into the grave as quickly as possible. The inexplicable in-and-out running of racehorses can only be explained in this way, and the irritating peculiarity of parrots in always declining to talk to order must certainly be due to a disinclination on the part of the bird to display its accomplishments "before folk."

But I could ramble away for ever over this fascinating theme, and I must now make room for others who, I hope will keep the ball a-rolling, and contribute their experiences and recollections for our interest and instruction.—I am, etc.,

Reform Club, June 8th.

R. FARQUHARSON.

SIR,—Your request to readers of the JOURNAL to give their experience in treating "speech fright" or the analogous condition of "stage fright" is one that I hope will receive the attention it deserves. Nothing that we can do earns us more gratitude than the relief of this most distressing condition, especially as on the concert or dramatic stage it is often the real artist that suffers most. For various reasons I have had many opportunities of treating these unfortunate people, and have been able to satisfy myself as to the right lines on which they should be treated. Bromides are worse than useless, and also other drugs with one exception. In many cases a placebo is all that is necessary; but there is no doubt that in others a dose of from 6 to 10 minims of vinum opii, given a quarter of an hour before the first appearance on the stage, is a remedy of very great value, and I have never found it leave any disagreeable after-effect, though, as you remark, Sir, it should obviously only be used under medical advice.—I am, etc.,

Birmingham, June 7th.

E. D. KIRBY.

SIR,—When I was a student at St. Bartholomew's (1870 to 1875) I remember well our revered teacher, Luther Holden, always recommended students who were nervous to take a $\frac{1}{2}$ grain of opium (or, at most, $\frac{3}{4}$ grain) just before going into college examination. A small dose of opium, as most people know, sharpens the wits and yet quiets the tumultuous heart; and also diminishes the secretion of urine, which is apt to be so excessive in the nervous state. Large doses of opium are, of course, foolish and harmful. On many occasions I have prescribed for nervous speakers 1 grain of opium in four pills, and one of the pills has been all that was required, a cup of good coffee after the mental effort recuperating the tired talker or performer and preventing any headache. Alcohol, as you wisely say, is the worst possible drug to try on these occasions.—I am, etc.,

J. KINGSTON BARTON, M.R.C.P. Lond.

London, S.W., June 6th.

SIR,—I have had success in the treatment of this complaint by suggestion, both with and without hypnosis. I gave a list of my cases up to the end of June, 1907, in the paper I read at the Annual Meeting of the British Medical Association in August, 1907; they were as follows:

- 28 cases treated.
- 23 cases results satisfactory.
- 5 cases improved.

Within the last few weeks I have treated two further cases: one, that of a medical student who had failed several times through nervousness at his *viva voce* examination. After one treatment, which I gave him the week he went up for his examination, he passed easily, and felt not the least nervous.

The second case was that of a lady who had to make a speech at a philanthropic meeting. She wrote afterwards, and told me that she was not a bit nervous, and was able to express herself fluently.—I am, etc.,

London, W., June 8th.

J. F. WOORS.

SIR,—In response to the invitation conveyed in the article on this subject in the JOURNAL of June 5th, I should like to say that I have had a long experience of the treat-

ment of such cases amongst voice users of all classes. There is no doubt that in a large proportion of cases medicinal treatment suitably administered has enabled the sufferer to overcome his trouble.

During the years that I was private assistant to the late Sir Morell Mackenzie, he used to treat large numbers of these cases with varying proportions of laudanum administered in strong coffee in doses of from 10 to 30 minims. I believe one of his prescriptions for some years went the round of the dramatic profession under the name of "First Night" or "Stage Fright Tonic." It is needless to say that the haphazard use of any prescription, no matter how eminent the prescriber, is doomed to failure in far more cases than it may chance to help.

The age, sex, and temperament of each patient have to be taken into account in treating this trouble. In some cases, owing to hereditary or acquired nervous peculiarities, no treatment is of any use for such special occasions, and no drug treatment that is not combined with efforts to improve the nervous stability is likely to be permanently beneficial, and may, if continued too long, lead to the worse evils hinted at in your article.

On general principles I do not think depressants such as bromides are likely to prove helpful. On the contrary, I believe the irritability present so often is the irritability of weakness, and that quite the opposite line of treatment is indicated. The patient is already sufficiently depressed by the accumulation of toxins in his system from increasing nervous metabolism as the time of trial approaches, as well as very often from other causes. The line of treatment should be by suitable diet, exercise, and, when necessary, medication, to get him into the best possible condition, and that this is the right course is shown by the success of those who have felt themselves able at the critical moment to dispense with drugs. When, however, one has to prepare such a patient for a near emergency, if time allows, it is well to order a calomel or other purge two days before "the great occasion," followed usually by a saline next morning. At a period of from fifteen to sixty minutes before the public effort has to be made the patient takes from 10 to 20 drops of laudanum in a small cup of pure strong coffee. Where a more sustained stimulation was desirable I have frequently added a few drops of tincture of cannabis indica with good results. In many cases the preliminary purge and the coffee will have the desired effect without the narcotics. Where these are given the medical man must exercise his own judgement and experience of such cases in hitting the doses likely to obtain the maximum and longest stimulating effect without risk of producing listlessness or even drowsiness later on in the performance. The purity and strength of the coffee is essential, and it would be better that the patient should take his dose of properly prepared coffee with him if the arrangements as to time are likely to condemn him to the use of any of the decoctions commonly sold under that name. The drugs should be prescribed in any suitable medium, with or without syrup, in a teaspoonful dose to be added to the coffee.

In a very great number of cases this treatment or the patient's faith in it has the desired effect. One cannot resist some scepticism as to what was the real share of the drug in people who never felt any need for such aid after the first occasion. There are, however, too many cases on record of eminent speakers, singers, and actors who have repeatedly felt the difficulties described, but who have been enabled to overcome them on these lines. Hypnotic suggestion has, I believe, been employed with good results in obstinate cases on the Continent, but I have no experience of its use in this country.—I am, etc.,

London, W., June 8th. J. G. DONALDSON, JAMES DONALDSON.

SIR,—If an etymology in one of the obscurer dictionaries were correct, the *Pharmacopoeia* itself would hold out a specific for stage fright in tinctura camphorae composita—"paregoric elixir." There is the general sense of "soothing" in *παρηγορέω*, *παρηγορικός*, like that of eloquence upon the crowd; the medical use of the word, however, is not metaphorical, but is derived from what the orator would take to allay his own perturbations when he stood up (— *παρά + ἀγος* —) in public.

I cannot now find my authority. One has seen a mental invalid called back for a time to intelligence and brilliance by a single dose of opium, and has known phosphorus carry through an examination a distracted and sleepless student.—I am, etc.,

Bristol, June 8th.

D. A. ALEXANDER.

SCHOOL CHILDREN AND THE HOSPITALS.

SIR,—May I be allowed to offer some comments upon the circular issued by the Council of the Metropolitan Counties Branch to its members on the subject of the treatment of school children?

As the circular indicates, parents able to pay for the treatment will be referred to their medical practitioner, and it is in reference only to those children whose parents cannot afford to pay that the Education Committee of the London County Council has recently issued to the London hospitals a letter of inquiry as to how far each is willing to assist in carrying out the treatment of certain ailments of the eye, ear, and skin. The circular calls on members of the Branch to oppose what is characterized as a proposal to take advantage of the voluntary hospital charities, because "it really involves a large increase in the unpaid work already done by the medical profession."

Although estimates exist as to the number of children suffering from the ailments in question, there are none, that I am aware of, which show the number of school children already being treated for them by existing institutions, and in default of such figures it is not possible to estimate what the increase in the number applying to hospitals would be if they were systematically notified by the school doctors. No doubt the effect at first would be to increase the numbers considerably, but when the arrears of these children had been cleared off the increase, if fairly distributed among existing institutions would not, I believe, be very great in any one of them.

Children, too, would no doubt come under treatment at an earlier age than at present, but this would not increase the total number to be treated.

If the x-ray treatment of ringworm proves to be as successful as expected, the number of children under treatment for that disease will very rapidly decline, and the unfortunately decreasing numbers in children attending the schools will tend in the same direction as regards all diseases.

The letter of the County Council is not a proposal to send an unlimited number of these children to hospitals, but an inquiry as to how far they are willing to co-operate with the London County Council: and to this inquiry the circular of the Branch suggests the reply, "Not at all!"—that is, the hospitals are to decline to continue treating any school children for these ailments, because there is a prospect of the number being increased.

The circular urges that the London County Council proposal involves a diversion of the funds of charitable institutions from the purposes for which they were intended. But why the treatment of ringworm and eye and ear affections, till now regarded as appropriate for hospital treatment, should become a diversion of hospital funds immediately that their importance is recognized by the London County Council is not apparent.

The connexion between the "principle" adopted by the Association that the out-patient departments shall be consultative institutions, and the inference drawn from it by the Branch, does not appear to be very close, but even if the consultative principle be accepted it does not appear to be infringed by a proposal that children shall be treated who come with a notification from a school doctor. If the "principle" involves that a child otherwise eligible for out-patient treatment (as necessitous children are) becomes ineligible when its ailment is discovered and notified by a school doctor, then I think the principle is unsound. The Branch portion of the paragraph is merely a statement of opinion, that a child eligible for treatment forfeits its right to it if its qualification is detected by the State—that is, the London County Council.

The circular further protests against capitation grants on the ground that it is "undesirable, and the attempt to allot such on hospital work would be obviously impossible." The impossibility is open to question, and as hospitals

receive payments from householders, from employers of labour, from public companies, from the Hospital Sunday Fund, and even in some cases from the Poor Law, giving in return letters admitting to treatment, there is nothing in their constitution or custom to prevent their receiving capitation grants from the London County Council. And the dictum of the Medico-Political Committee that capitation grants are undesirable, cannot be taken as the last word on the subject. Finally, the circular denounces the proposals as contrary to the public interest because the hospitals are in many districts not conveniently situated. No doubt this is so, but why it should be opposed to the public interest for existing institutions to carry on the work where they are conveniently situated, because in other districts it is not possible, is not apparent.

So far as can be gathered from the circular, it is proposed that the hospitals shall decline all cases of the diseases which the London County Council specially name as important to be treated. But it is to be remembered that all children of the hospital class are London County Council children, and, if the principle of refusing school treatment for these affections is to be carried out, all London children must be refused treatment for these complaints; it would be absurd to accept for gratuitous treatment a school child brought by its mother on her own initiative with ringworm or eye affection, and to refuse at the same time another of her children brought with the same affection, but with the notification of a school doctor, and for whom the London County Council offers a contribution to the hospital funds. Both are school children, and, if one is to be refused, so must the other, and hospitals must decline to treat all London children whose ailments have been selected by the London County Council as specially important. Again, if school children are to be refused treatment for certain parts of the body, are they to be accepted for other parts of the body? Is a child to be refused treatment for ringworm or eye defects, and to be accepted for enlarged glands or for rickets? And how far is this division of the body into diseases which are eligible and diseases which are not eligible to be carried? Very likely the London County Council will at times add another to their list of affections which they deem to be of importance; are the hospitals each time to revise their list of boycotted diseases?

The opposition of the Branch Council will result, if carried out, in this—that no London children shall be treated in a hospital out-patient department. And among other things, the hospitals, and especially the children's hospitals, would be deprived of any children out-patients for purposes of medical education.

If the hospitals refuse to treat the affections named by the London County Council, the alternative appears to be the establishment of municipal clinics. These will require large waiting rooms, as each child will be accompanied by a mother and often by other children, who cannot be left at home. Cases of infectious disease, especially when throat cases attend, will inevitably come to the clinics, and there must be isolation rooms. Some children will be unfit after operation to return home at once, and beds will soon be wanted. A pathologist and laboratory are essential, and a staff of clerks, nurses, and porters. The municipal clinics will be extensive and costly, and even if the London County Council does not soon add to its list of diseases (adenoids are already ready for nomination), and the hospitals inconsistently continue to treat some school children, the clinics will soon become municipal hospitals.

It is suggested that the profession will be benefited by this. Is it likely that more money will go into their pockets if the London County Council have to erect municipal buildings than if they pay grants to existing hospitals to be devoted to the expenses of the out-patient departments concerned, and which will provide salaries for qualified clinical assistants? I think not; and so far from the labours of the honorary staffs being increased, they will be lightened by such assistants. I venture to hope that the members of the hospital staffs to whom special appeal is made in the circular will not without full consideration decline to discuss with the London County Council their proposals. Although municipal clinics may be required in some districts, there is no sufficient reason why arrangements shall not be made by hospitals with the London County Council (at any rate, provisionally for a year or so,

after which the matter could be reconsidered) whereby school children shall continue to be treated by the hospitals to the advantage of the profession and of the public. —I am, etc.,

London, W., June 9th.

SIDNEY PHILLIPS.

"FACTS" AND "THEORY" REGARDING THE TREATMENT OF SEVERE ANAEMIAS.

SIR,—Your readers may be interested to hear that my so-called "theory" of infection, which the writer of a paper in your issue of June 5th (p. 1347) refers to, and attempts with imperfect success to describe in a few words, is going on very well, and has grown quite a strong young fellow, thanks to his original excellent constitution. He attains his majority this year, which is quite remarkable, considering that, being only a "theory" founded on twenty-five years' work, he ought to have been dead and buried long ago.

It may also interest them to know that the "facts" about successful treatment with bone marrow, which the writer describes and dwells upon with seeming satisfaction, are unfortunately in rather a sad way. For it happens to be known to me, although obviously not known to the writer of the paper, that both the "successful" cases which he refers to had relapsed, and one of them at least was dead some three to four weeks before he was recorded as cured! It was distinctly unfortunate that he died in the short interval of a month or two between the time of writing and the publication of the author's paper. It was truly "pernicious" on his part to do so.

But it only serves to illustrate what I have in a recent new work on these anaemias demonstrated from cover to cover—namely, that the hollow mockery of the so-called "facts" of etiology, clinical features and diagnosis associated with the name "pernicious," which for the past thirty to forty years have deluded the profession and made the poor patient's disease a terrible tragedy, follows the latter even into their graves. One to two years after they are dead; they are still reported on as wonderful examples of cures!

Now, Sir, what I have attempted to do is to deprive this astounding disease alike of its pernicious mystery and its pernicious name. That and a hundred and one other facts are involved in what my friendly detractors still continue to term to their own satisfaction a "theory," "contention," "hypothesis."

I therefore throw them out a challenge which they can, singly or collectively, meet as may seem good to them.

I notice in the literature of the past seven years or so a steadily increasing number of references to the improved prognosis of these anaemias and their greater amenability to treatment than formerly. My challenge is therefore the following: Will any observer or group of observers point to any single measure of treatment—other than those connected with, and suggested by, my work regarding the infective nature of these anaemias—which during this period differs in any form or degree from the measures previously adopted?

Even the writer who terms my work a "theory" states that certain of the measures—which he very inadequately describes—"should never be neglected." Why so, if they are only based on a "theory"? As a matter of fact, the treatment based on this "theory" is, as I know from scores of cases sent to me, and from information on every hand, being carried out in an increasing number of cases daily. What useful purpose, then, is served by terming it a "theory," thereby blinding the eyes alike of doctors and patients to its real nature and value, and perpetuating even in treatment the pernicious confusion which has characterized these diseases from first to last?—I am, etc.,

London, W., June 8th.

WILLIAM HUNTER.

SANITARY PROGRESS IN THE BRITISH WEST INDIES.

SIR,—I was very much interested in reading Sir Robert Boyce's account of recent sanitary progress in the West Indies published in your issue of June 5th, 1909. As long ago now as 1901 I made a similar visit for the London

School of Tropical Medicine to the same islands and British Guiana, including also St. Kitts, as the governor and inhabitants specially requested the Colonial Office that I should not omit them in my tour. Filial diseases and other mosquito-borne maladies were the objects of special study, opportunities being taken at the same time to instruct the populations of the different places in respect to mosquito prophylaxis. About this time Professor Ross was carrying out experiments for the destruction of *Anopheles* in Africa, and the Americans in Cuba had just proved the part *Stegomyia* played in the transmission of yellow fever, so that things were ripe for useful work.

Largely owing to the energy and interest which Sir Frederick Hodson, the Governor of Barbados, took in the subject, I followed out a plan of campaign very like that described by Sir Robert Boyce—namely, giving lectures to the medical profession, more popular ones to the laity, and a course of special lectures to the sanitary inspectors of the island. Examination of yards, special localities and breeding grounds were also carried out, and one specially interesting fact was soon discovered—namely, that there were no *Anopheles* mosquitos in Barbados. This coincided with the clinical experience of the physicians there—that there was no indigenous malaria amongst the population. It soon became evident that it was useless for a few individuals to destroy the common mosquitos found in houses if the general population was to remain apathetic, so I suggested to Sir Frederick the advisability of having a law passed to enforce their destruction, the penalty for not doing so being a fine, a similar procedure to that adopted by the Americans in Havana. The measure came up for discussion after I had left the island, and I believe was rejected; it is therefore specially interesting to hear that six years afterwards such a measure is actually in force.

I found little difficulty in persuading the medical men of the different places visited as to the part the mosquitos played in the spread of disease; it was the laity who were specially conservative and unprogressive, and even then perhaps things might have moved more quickly if the necessary funds had been available. There is little doubt that progress in mosquito destruction in some British Colonies is woefully behind that in American possessions (Havana, Colon, Panama, etc.), but still there is now an advance even in the West Indies; and one must be grateful for that. It would be a pity that the good work Sir Robert Boyce has helped to carry on should be allowed in any way to stand still or go back; and though perhaps a meeting of the British Medical Association in Trinidad or Jamaica will not take place, I should suggest that the Colonial Office or one of the tropical schools should send some one every three years or so to the West Indies to study the progress made, and to advise on further sanitary developments. Persuade the merchants that no mosquitos mean no yellow fever, and a great deal can be done.—I am, etc.,

London, W., June 5th.

GEORGE C. LOW.

SPINAL ANAESTHESIA.

SIR,—I trust you will allow me space to criticize briefly the announcement emanating from the London Hospital, with regard to the method of inducing analgesia by the intraspinal injection of stovaine, which appeared in the *Daily Mail* of June 3rd.

As a hospital surgeon, it appears to me, as it probably does to most of my professional brethren, that the action of the House Committee of the London Hospital in issuing any report on so purely scientific a matter as this, is at least very unusual. With every respect for the good intentions of that committee, one cannot help thinking that any such report should have come from the professional staff of the hospital and not from the members of the lay committee.

Quite apart from this question, however, there is another which is of much greater importance. The report, coming as it does from so influential a source as that of our largest London hospital, must in the eyes of the public at least inevitably bear the stamp of authority, and by suggestion lead that public to suppose that the conclusions arrived at (and with which I have no fault to find) are the outcome of the energetic work and the personal experience of the staff of this well-known hospital. But this I have reason to believe is by no means the case. On the

evidence of a member of the House Committee of the London Hospital, as well as from other sources, I am given to understand that the method has neither been accepted by the hospital authorities nor practised by the staff of the hospital to the extent which obtains in many other quarters, and certainly not to such an extent as to warrant the House Committee of the London Hospital taking a stand as an authority on the subject. In doing so they are unquestionably robbing University College Hospital of the just claim to be considered the first and foremost hospital in London to place this method on a sound and sure basis. At least two other hospitals—namely, the Seamen's Hospital, Greenwich, and the Hospital of the Royal Army Medical College, Millbank, have long been able to show results which the House Committee of the London Hospital would appear, at least by inference, to lay claim to. That the work done by the London Hospital is admirable, no one who knows anything of surgery will deny; but that its House Committee should lay claim to constitute itself an authority on the subject of spinal analgesia, is a matter which cannot be allowed to pass unchallenged. If the conclusions at which it has arrived are the result of work carried out in the wards of the London Hospital, it would have been more satisfactory and extremely interesting, if the statistical evidence on which the conclusions are founded had been given to the medical profession; if, on the other hand, these conclusions are drawn from the work done in other hospitals, would it not have been more courteous to these hospitals, and less misleading to the public, to have acknowledged the source of the information obtained?—I am, etc.,

London, W., June 7th.

LAWRIE MCGAVIN.

THE BRITISH MEDICAL BENEVOLENT FUND.

SIR,—Local secretaries of the British Medical Benevolent Fund confine their appeals for aid to their own districts and have intimate knowledge of the persons benefited by the charity administered by the central committee. A good many years have passed since I first took an active interest in the fund, and my experience of the generous methods of those who have carried on the work, in spite of indifference and financial difficulties, has been that the cases recommended have been relieved quietly and promptly. No doubt this is a common experience among local secretaries. I am moved to write to you to-day because I have received a letter from one of the beneficiaries of the fund which illustrates the operations of this most deserving charity. The case is only too common—a lady left with a family of young children almost unprovided for owing to the early death of her husband, who was in general practice of the more unremunerative kind. She is handicapped by cardiac troubles, and her life has been a record of strenuous toil. The fund has been her mainstay, a grant of £12 a year, repeated year by year, has relieved her of anxieties about house rent, and she has striven for the education of her children with that and other aid. It is a small grant, strictly limited by the narrow means at the disposal of the committee, yet she says:

My experience of life during the last ten years has been so hard that I feel almost too tired to write about it. I don't understand how anyone could hesitate in helping such a fund, especially educated men who know how many benefit from it, and what a help it is to those who many a time do not know how to get a decent meal.

I might also cite a case of suffering prolonged through many years—a practitioner who had saved some little money when he was rendered useless by paralysis. When my attention was directed to him he was living in the humblest manner at an expenditure of 6s. a week. His bodily state was deplorable, and he was torn by anxiety. His savings were almost exhausted after some twenty years of invalidism and incapacity, and he lived in dread of an appeal to the parish. I was enabled to assure him that the fund would undertake to provide for him as soon as his money was exhausted. His mind was relieved, his gratitude was painful to witness, until death relieved him from his "mattress grave."

I know very well that there are only too many of the less fortunate doctors who are quite unable to subscribe to the British Medical Benevolent Fund—one of them, indeed, lately said, "You have no idea what half a

crown means to me just now." And I know quite as well that there are very few whose income reaches a comfortable competency even in these days of great wealth; but I am impelled to add that the apathy of those who are unconcerned by the necessities of silent and suffering poorer brethren is shameful to members of a liberal profession. We, who endeavour to direct their attention to the limited resources of the fund and the urgency of the claims made upon it do not ask for great sacrifices or notable contributions: we merely plead for the steady annual subscription of moderate sums. If every medical man on the *Register* gave 5s. the result would be some £10,000 for yearly distribution. The accounts of the grant department for 1907 showed receipts barely reaching £1,700. For the credit of the profession, for the necessities of our poor, it is not enough.—I am, etc.,

Perth, June 7th.

A. R. URQUHART.

"THE DOCTOR AS A VICARIOUS PHILANTHROPIST."

SIR,—I fear Dr. Wishart Kerr's suggestion will not commend itself to the bulk of the profession. Not many of us would have the fortitude to risk the "cursing of a hostile and threatening crowd" outside our surgeries (which are generally also our homes), and indeed I cannot but think that we should fall in our own estimation as well as in that of the crowd. In such a case as Dr. Kerr describes, it seems almost our duty to give our services gratuitously; the patient cannot guarantee remuneration, and there is no onus on any of the crowd to do so. Our assistance, skilled though it is, is but what we owe of humanity to the unfortunate victim: moreover such cases (street accidents) are rare, perhaps two per annum to each medical man, and entail no serious loss of income or derangement of business.

Night calls are in another category; they are demanded by responsible persons—the patient himself or his friends—and entail a serious disturbance of rest and health; but even they would be better dealt with on another basis than that of pecuniary reward. My custom is to refuse all night calls except from my own patients. I have no "red lamp," as I wish nobody to find me at night except those who can do so without a directing light. Night calls are made on a doctor by strangers generally because they fear their own doctor (to whom they already owe money) will not go; and my answer to such is that my own patients give me all the night work of which I am physically capable, and that theirs is the responsibility and duty of keeping on good terms with their doctors.

I commend this plan to my professional brethren. Night calls (even if paid for) are a poor source of income. Never admit any question of a fee, and one's position will be a great deal pleasanter in the event of the matter becoming public.—I am, etc.,

Bristol, June 5th.

HARRY GREY.

MANCHESTER (WEST) DIVISION.

SIR,—In the account of the proceedings of the General Medical Council, published in the *SUPPLEMENT* to the *BRITISH MEDICAL JOURNAL* of June 5th, certain assertions appear which imply that the Manchester (West) Division has dealt with the complaint against Dr. C. W. Brown, a member of the Association, residing in the Division.

As Honorary Secretary of the Division, I beg to state that no complaint against that gentleman has ever been received by me, and that neither the Division nor its Executive Committee has at any time discussed this case or taken any action whatever in connexion therewith.—I am, etc.,

J. SKARDON PROWSE,

Manchester, June 8th.

Hon. Sec., Manchester (West) Division.

SIR,—In justice to the Honorary Secretary of the West Manchester Division, may I ask you to correct a self-evident error which has crept into the summary of my evidence before the General Medical Council on May 26th last?

From the printed report, it would appear that the Honorary Secretary had informed me that the complaint of Dr. Paterson had been received and considered by the West Manchester Division; this is incorrect; the evidence given by me was to the effect that the Honorary Secretary had

informed me that the West Manchester Division had *not* considered, much less decided to prosecute, a charge against Dr. Brown, and I further supported this statement by pointing out that, by the rules of the Division itself, as no notice of complaint had been sent to the person accused, the Division *could not* have considered the complaint, and much less could they have taken a vote on it!

This evidence was given by me in reply to questions asked by Mr. Bodkin with the object of rebutting the opening statement of the prosecution that the complaint had been considered by the West Manchester Division, and was now brought before the General Medical Council by the unanimous request of that Division; and this evidence was made further use of by Mr. Bodkin for this purpose in his opening address on the following day.—I am, etc.,

Manchester, June 8th.

T. ARTHUR HELME.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

Prizes in Botany and Zoology.

THE Vice-Chancellor has received an offer from Mr. Francis G. Smart to give £600 to found an annual prize for Botany and Zoology respectively.

Degrees.

The following degrees were conferred on June 3rd:

M.D.—M. A. Cassidy, Cla.; C. W. Ponder, Esq.; R. N. Hart, Esq.
M.B.—B.C.—K. M. Walker, Esq. and Cai.

UNIVERSITY OF LONDON.

Meeting of the Senate.

A MEETING of the Senate was held on May 19th.

Recognition of Teacher.

Dr. William H. Willcox has been recognized as a teacher of forensic medicine at St. Mary's Hospital Medical School.

Amendment of Regulations.

It was resolved that the following should be substituted for Section 17 of the Regulations as to approved courses of study (Red Book, September, 1903, p. 9):

A student who has matriculated in January, or has been exempted from matriculation under Statute 116 as from January, may be registered as an internal student as from the date of the beginning of his course of study, provided that such date be not anterior by more than four months to the date of the first day of the matriculation examination which he passed, or in respect of which he was registered, and that the present regulation shall not apply to students who matriculated or were exempted from matriculation before January, 1906.

Brown Animal Sanatory Institution.

Mr. F. W. Twort, M.R.C.S., L.R.C.P., has been appointed superintendent of the Brown Animal Sanatory Institution for three years from June 1st, vice Professor T. G. Brodie, M.D., F.R.S., resigned.

Mr. Malcolm Allan, M.R.C.V.S., has been reappointed Veterinary Assistant for the coming year.

The annual report of the Committee of the institution stated that the number of cases treated last year as out-patients was 6,264, and as in-patients 699.

Amendment of the Scholarships Regulations.

It was resolved that the following amendments be made in the scholarships regulations (the references are to the *Calendar*, 1908-9):

(a) On page 264 insert the following:

11. The term "matriculated students" as used in these regulations includes all students who are registered as matriculated students of the university by reason of having passed the matriculation examination of the University of London either in its ordinary form or in the form of the school examination (matriculation or higher standard) conducted by the university for its school-leaving certificate, or an examination accepted in lieu of the matriculation examination under the terms of the statutes, Section 116.

(b) On page 263, Regulation 5, line 3, for "with the receipt for," substitute "before the payment of."

(c) On page 265, line 1, for "paragraph" substitute "paragraphs."

Instruction in Practical Midwifery for the M.B., B.S. Examination for Internal and External Students.

In connexion with the recommendation of the Faculty of Medicine suggesting that the teaching of practical midwifery in the wards of a lying-in hospital or lying-in ward of a general hospital should be made compulsory as soon as practicable which the Senate on May 13th, 1908, directed to be sent to the medical schools of the universities and other medical schools

from which certificates were received, the Senate on May 19th, 1909, adopted the following resolution:

That, in order to allow the medical schools of the University and the other medical schools from which certificates are received for the M.B., B.S. examinations to take time to complete the necessary arrangements for the teaching of practical midwifery in the wards of a lying-in hospital or the lying-in ward of a general hospital, further action in connexion with the resolution contained in Minute 2333 of May 13th, 1908, be postponed for twelve months from the present date; and that the schools in question be informed accordingly.

B.Sc. (Honours) Degree in Human Anatomy and Morphology.

It was resolved that for internal students the following be substituted for paragraph A (Red Book, September, 1908, p. 207).

A. Candidates who have passed the second examination for medical degrees as internal students. Such candidates must pursue a further approved course of study extending over one year, and must have attended . . . (The rest of the paragraph as at present.)

For internal and external students: That for the words (Red Book, September, 1908, p. 209; Blue Book, p. 511: Subsidiary subjects, Physiology, Zoology, be substituted the following:

Candidates for the B.Sc. (Honours) degree in Human Anatomy and Morphology will not be required to present any subsidiary subject.

The Senate.

Dr. E. G. G. Little (Convocation, Medicine), Mr. H. H. Clutton (Royal College of Surgeons of England), and Professor E. H. Starling, F.R.S. (Faculty of Medicine) have been re-appointed to the Senate, while Sir William H. Allchin succeeds Dr. P. Pye-Smith as the representative of the Royal College of Physicians of London on the Senate.

Appointment of Representative.

Dr. E. G. G. Little has been appointed the Representative of the University at the Health Congress to be held at Leeds in July, 1909.

Boards of Examiners for Medical Degrees.

The following have been elected chairmen in the subjects indicated for the first and second examinations for medical degrees for internal and external students: *Anatomy*, Professor J. Symington, M.D., Ch.M., F.R.S.; *Chemistry*, Mr. J. A. Gardner, M.A., F.I.C., F.C.S.; *Zoology*, Mr. F. E. Beddard, M.A., F.R.S.; *Pharmacology*, Professor A. E. Cushman, M.D., C.M., M.A., F.R.S.; *Physics*, Mr. A. W. Porter, B.S.; *Physiology*, Professor G. A. Buckmaster, M.D., B.Ch., M.A., D.P.H.

Advanced Lectures in Physiology.

Professor E. H. Starling's course of lectures on recent advances in physiology has been postponed until next term.

University of London Lodge of Freemasons.

Dr. Robert Henry Cole has been elected Master for the ensuing year.

London (Royal Free Hospital) School of Medicine for Women.

The following scholarships will be awarded on the result of the Intercollegiate Scholarships Board examination to be held on September 21st and the following days:

1. The School Scholarship, value £30 a year for one year, open only to candidates who have passed a recognized preliminary examination and are not holding any other scholarship. The successful candidate will be required to enter at once upon a full course of medical study at the school. Students who have been at the school only one term can also compete for this scholarship.

2. St. Dunstan's Medical Exhibition, value £60 a year for three or five years. Candidates must be: (1) Not more than 20 years of age on June 1st, 1909. (2) Resident in the Metropolitan Police district area for the past three years or longer (this area includes a large district round London). (3) Matriculated students of the University of London. (4) In the opinion of the governors in need of such an exhibition for the prosecution of their medical studies.

The Fanny Butler Scholarship, value £14 10s. a year for four years, is open only to candidates willing to practise in connexion with the Church of England Zenana Missionary Society, 27, Chancery Lane, W.C.

THE VICTORIA UNIVERSITY OF MANCHESTER.

THE CHAIR OF ANATOMY.

ALL medical students past and present who have had the opportunity of working under Professor Young at Owens College will most sincerely regret that ill-health has compelled him to retire from the Professorship of Anatomy at the Manchester University.

* Students who have passed in Anatomy and Physiology at the second examination for medical degrees as internal students will be allowed to submit for the B.Sc. (Honours) degree in Human Anatomy and Morphology a course of study extending over one academic year from the date at which they passed in the subjects enumerated above, but in no case shall they be allowed to present themselves for such B.Sc. (Honours) examination unless they shall have passed the second examination for medical degrees (or the intermediate examination in science subject to the conditions given under B. below).

The post has now been filled by the appointment of Mr. Grafton Elliot Smith, Professor of Anatomy in the Government School of Medicine at Cairo. Professor Smith graduated at the University of Sydney in 1893, and obtained the degree of M.D. in 1895 with first class honours and the university medal. After acting as house-physician and house-surgeon in the Royal Prince Alfred Hospital of Sydney, he was demonstrator of anatomy for two years under Professor J. T. Wilson. He obtained a travelling Fellowship of the University of Sydney, and proceeded to Cambridge, where he took the degree of M.A. in 1902. He was elected to a Fellowship of St. John's College, and was appointed Demonstrator of Anatomy. Later he was appointed Professor of Anatomy in the Government School of Medicine at Cairo. He has done a considerable amount of original work in embryology, anthropology, and surgical applied anatomy, and was director of the archaeological survey of Nubia. He was selected in 1905 to make the official catalogue of royal mummies at the Cairo museum. He is author of *The Brain in Reptiles and Mammals*, and is perhaps best known for his researches on the anatomy of the brain and nervous system.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.

VISCOUNT TREDEGAR, who, since its establishment has frequently given substantial proof of his interest in the college, just expressed his intention of contributing another £5,000 towards the new college fund; this brings his donations towards the building fund to £12,500. His first was a sum of £2,500, given on the occasion of the first effort made to establish a building fund. Viscount Tredegar is the largest of all the private donors. The Drapers' Company of London has contributed £16,000 towards the new library; Mr. Harry Webb has also given £500 towards the building fund.

ROYAL COLLEGE OF SURGEONS.

THE COUNCIL ELECTION.

The number of candidates for election to the council now amounts to seven, and the list is complete, as no more applications can be received. The three retiring members of council—Sir Watson Cheyne, Mr. Mayo Robson, and Mr. Clement Lucas—seek re-election. There remain four candidates. The senior of the four as a Fellow of the College is Mr. Harrison Cripps (Fellow, June, 1875; Member, July, 1872); the second is Mr. C. H. Ballance, M.V.O. (Fellow, June, 1882; Member, July, 1879); the third, Dr. Bland-Sutton (Fellow, June, 1884; Member, July, 1882); and the fourth, senior to Mr. Bland-Sutton as a Member but junior as a Fellow, is Mr. Walter Hamilton Hylton Jessop (Fellow, December, 1884; Member, 1880).

Our annual analysis of the council, including the proportional representation of medical schools and provincial hospitals, will be found in the JOURNAL for May 22nd, p. 1272. The contest—as all the three retiring members seek re-election, and all the four candidates well-known surgeons—will be of unusual interest. Mr. Harrison Cripps has twice served on the council as a substitute member, and distinguished himself as Chairman of the Finance Committee. Mr. Ballance, M.V.O., has won wide renown as an authority on the surgery of the brain and the great arteries. Mr. Bland-Sutton is a leader in gynaecological surgery, and Mr. Jessop is Ophthalmic Surgeon to St. Bartholomew's Hospital.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE sixty-sixth annual meeting of the Royal College of Surgeons in Ireland was held on June 5th, when the chair was occupied by Mr. John Lentaigne, the President.

Finance.

The Auditor's certificate for the year showed that the receipts for the year amounted to £4,174 3s. 6d., leaving a balance due to bank at close of year of £121 1s. 9d. The general investment account shows a sum of £9,469 18s. 11d., while there are the usual sums invested for prizes.

Diplomas.

Nineteen candidates were admitted to the Fellowship. Forty-seven candidates received the Conjoint Diplomas in Medicine, Surgery, and Midwifery of the Royal Colleges of Physicians and Surgeons. One candidate, a registered practitioner, was admitted a Licentiate. Twenty-seven candidates received the Conjoint Diploma in Public Health of the Royal Colleges of Physicians and Surgeons. Sixteen candidates received the Licence in Dental Surgery. Seventy candidates having passed the Conjoint Preliminary Examination with the Royal College of Physicians received certificates.

Physical Education.

It was moved by Dr. J. B. Story, and carried unanimously:

That having regard to the importance of physical education, and the neglect with which it has hitherto been treated in Ireland, it is desirable that representatives of the medical profession, as such, be appointed upon the Board of National Education and upon the Board of Intermediate Education.

Election of Officers.

At a meeting of the Fellows held on June 7th, the following were elected officers for the ensuing year: President, John

Lentaigne; Vice-President, Robert H. Woods; Secretary of the College, Sir Charles A. Cameron, C.B.; Council, Sir Henry R. Swanzy, William Stoker, Sir Charles Alexander Cameron, C.B., John B. Story, Sir Charles B. Ball, Sir Thomas Myles, Sir Arthur Chance, Richard D. Puresoy, Sir Lambert H. Ormsby, Henry G. Sherlock, R. Bolton McCausland, R. Lane-Joynt, William Taylor, Edward H. Taylor, G. Jameson Johnston, R. Charles B. Maunsell, William Ireland Wheeler, D. Edgar Flinn, Thomas E. Gordon.

CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examination:

D.P.H. Parts I and II.—W. W. Browne, Captain, R.A.M.C. (with Honours); R. F. O'T. Dickinson, Lieutenant, R.A.M.C.; B. D. Gibson; D. J. O'Connor; N. D. Walker, Captain, R.A.M.C.

Medico-Legal.

SLANDER ACTION AGAINST A MEDICAL MAN.

JUDGMENT has been given in the Falkirk Sheriff Court against Dr. Gardner in an action brought against him by a nurse. This nurse averred that Dr. Gardner had said of her that she was no nurse at all, that no respectable persons in Falkirk would let her into their house, and she had no right to wear uniform. She claimed £250 in the name of damages. The pursuer also stated that Dr. Gardner had said of her that she was a dangerous woman, that the condition her children were in was owing to her drinking, and if the worst came to the worst he could prove that she was a dirty woman. Dr. Gardner denied having slandered Nurse McLachlan, and pleaded that in any case what he said was privileged in view of his position of medical attendant to the persons to whom the statements were made. Sheriff Mowatt, in his judgement, finds the first of the statements not proved, but finds it proved that the defender said of the pursuer that she took drink, and that the condition her children were in was owing to her drinking. He also finds that the defendant said of the pursuer that she was a dangerous woman, and that he would prove she was dirty, and that on neither occasion was the statement in any way privileged. The damages were assessed at £10, with expenses.

Public Health

AND

POOR LAW MEDICAL SERVICES.

LOCAL GOVERNMENT BOARD IN ENGLAND.

SCIENTIFIC INVESTIGATION.

IN connexion with the annual grant voted by Parliament in aid of scientific investigations concerning the causes and processes of disease, Mr. Burns, the President of the Local Government Board, has authorized the following special researches:

1. A continuation of the investigation into protracted and recurrent infection in enteric fever, by Dr. Theodore Thomson, Medical Inspector of the Board, in conjunction with Dr. Ledingham of the Lister Institute.
2. A continuation of the investigation into protracted and recurrent infection in diphtheria, by Dr. Theodore Thomson and Dr. C. J. Thomas.
3. A continuation of the investigation into flies as carriers of infection, by Dr. Monckton Copeman, Medical Inspector of the Board, and by Professor Nuttall of Cambridge.
4. A continuation of Dr. Andrews's investigation on the presence of sewage bacteria in sewer air, with a view to ascertaining their number and the distance they can be carried by air currents. Also a continuation of Dr. Andrews's investigation into the part played by changes in bone marrow in the defensive mechanism of the body against infection.
5. A continuation of Dr. Savage's investigations on the bacterial measurement of milk pollution, and on the presence of the Gaertner group of bacilli in prepared meats and allied foods.
6. An investigation into the chemical and physical changes undergone by milk as the result of infection by bacteria, and into the relation of the process to epidemic diarrhoea, by Dr. H. A. Schöberg, Lecturer in Bacteriology in University College, Cardiff, and Bacteriologist to the Glamorgan and Cardiff Councils; and Mr. Wallis, Lecturer in Physiology, University College, Cardiff.
7. An investigation of the records of charitable lying-in hospitals as to the nutrition of the mother and other factors influencing the vitality of infants and their progress in the first fourteen days of life, by Dr. Darwell Smith, Physician to the British Lying-in Hospital.
8. An investigation into the occurrence and importance, in relation to treatment, of mixed infections in pulmonary tuberculosis, by Dr. Inman, Pathologist to the Brompton Hospital for Consumption.
9. An investigation on the relative importance of certain types of body cells in defence against the tubercle bacillus, and the effect of tuberculin and other remedial agents on their activities, by Dr. J. Miller, Pathologist to the General Hospital, Birmingham.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

THE following document has been sent by the Honorary Secretary of the Winchester Division, with a request that it should be published in the JOURNAL:

The Court of Governors of the Royal Hants County Hospital have had their attention called to the recent provisions for Medical Inspection of Children.

It would seem that provision is now made for the Medical Examination of all Children under Section 13, Subsection B, of the Education Act (Administrative Provisions), 1907, the duty of providing for such Medical Inspection is placed upon the local Education Authority. In the event of Children being certified to require medical care and attention, the Court of Governors consider it probable that it may become the custom to send many such cases to the special departments of the Hospital for treatment. It would seem that this idea has probably occurred to the Board of Education, inasmuch as Circular 596, dated 17th August, 1908, addressed to the Local Education Authorities, contains suggestions for contributions to Hospitals, Infirmarys, Dispensaries, etc. (Clause 78), and making it "permissible to include among the conditions of contribution a provision allocating a reasonable remuneration to the Medical Men working for such Institutions."

The Court of Governors feel, after full consideration, that this latter proposal would be undesirable, and, greatly though funds are needed, could not be entertained. Any such scheme of payment would alter the whole of the existing arrangements and cause the Hospital to be worked on totally different lines and in a way which the Court of Governors could not approve. The Medical Staff attached to the Hospital give gratuitously their services to the Hospital Authorities, and the public owe them a great debt of gratitude. The Court of Governors feel that, having regard to the heavy demands that are made upon their Staff, they would not be justified in allowing general treatment of the numerous cases that must arise as the result of the Medical Inspection provided by the Act referred to, and they desire to suggest that the Local Education Authority should, before these questions arise, proceed to make arrangements for the discharge of these duties by the medical men in their respective districts, which they have ample powers to do.

The Hospital will not object to taking, as at present, urgency cases, or other cases requiring, in the opinion of a responsible medical man, such care and attention as only the Hospital can supply.

The Court of Governors need to bring this matter before the Local Education Authority in order to allow ample time for provision to be made and to prevent any misunderstanding or difficulty arising.

TUBERCULOUS MEAT.

THE Corporation of the City of London has issued a circular for the information of meat salesmen within the City who, it is recognized, are anxious and willing to do anything in their power in the interests of public health and legitimate trading to prevent unsound meat being offered for sale. The circular states that for many years the Corporation has instituted legal proceedings, resulting in many instances in the infliction of heavy fines or terms of imprisonment against farmers, butchers, and other persons for sending diseased or unwholesome meat into the City markets, or for exposing such meat for sale. In some instances the offence may have been due to gross carelessness or even ignorance of the symptoms of disease in the living animal, or of the appearance of unsound carcasses after slaughter, and the object of the circular is to make public a memorandum by Dr. Collingridge, the Medical Officer of Health of the City, pointing out the signs of tuberculosis in the carcass and organs, and another by Mr. James King, M.R.C.V.S., Veterinary Inspector to the Corporation, on the symptoms in the living animals.

DRAINAGE OF LOW-LYING TOWN.

M.O.H.—Drainage of a small town where there is practically no fall presents special difficulties. At Chester, where sewage purification works were carried out by Major Hector Tulloch, C.B., R.E., the sewage has all to be pumped up before it can be purified, for the reason that it reaches the outfall 8 or 10 ft. below the level of the ground, which for miles on both sides is below the level of the river, and would be flooded but for embankments. It is pumped by suction gas engines and centrifugal pumps. The gas is made out of anthracite coal, and at the price of 24s. or 20s. a ton of coal the makers will now guarantee from 8 to 10-h.p. an hour for a penny. Centrifugal pumps are used, because any form of plunger pump is out of the question for sewage in which there is so much hard material like gravel, sand, etc., which wear out the surfaces of the brass plunger cylinders.

DIPHTHERIA: PERIOD OF QUARANTINE FOR CARRIER CONTACTS.

S. T. B.—It is not by any means the universal practice of medical officers of health to insist upon three negative results after the bacteriological examination of material taken from the throats of diphtheria patients or of contact carriers of the disease. There is no doubt that it would be a great advantage if the practice were universal, and also if the nasal passages were swabbed as well as the throat.

OFFICIAL TREATMENT OF DIPHTHERIA.

ULULA.—It is not usual, nor is it desirable, for a patient to be removed to an isolation hospital without any reference to the medical attendant, unless in exceptionally urgent circumstances. For the charge nurse of an isolation hospital to inject antitoxin (4,000 units) as a matter of routine in all cases of diphtheria admitted to a hospital is a practice to be deprecated. The injection should be made by the medical man in charge of the patient.

THE BACTERIOLOGICAL DIAGNOSIS OF DIPHTHERIA.

DR. EDWARD CARNALL, D.P.H. (Newton Abbot) writes:

The number of cases admitted into provincial isolation hospitals of late years as diphtheria, when compared as regards population with the number of cases notified in a central London district, suggests the question whether the swab is to be relied on as a correct means of diagnosis.

In reading the reports of large central London institutions where patients are visited at their own homes and are treated at the dispensary one finds that out of a total of 35,455 patients only 25 cases of diphtheria have been sent to the Metropolitan Asylums Board hospitals during the past eight years. It cannot be said that the conditions under which this large number of people live is better or more hygienic than in small urban and rural districts; in fact, if any one visited some of the streets and courts of a London district they would be rather surprised to see the conditions under which some of the people live or exist.

As we all know, the throat is a part of the body most susceptible to influences (not of necessity sewer gases), such as changes of weather, foul air, state of our general health, and catarrhal conditions; it is easy to understand the number of so-called sore throats which fall to the lot of a dispensary doctor. As regards the swab patients after a stay of twenty-one days or more in hospital will be returned as positive, when no sign whatever exists that the patient is or has been suffering from diphtheria. It is also noticed that children with enlarged tonsils, if treated locally and generally, will be returned also positive, and it seems to be impossible to obtain a negative result from such cases. The only reason why such cases are sent to the hospital is the swab return. Nothing is seen in the throat, nor has the patient even developed any symptoms of the disease. But the fact remains that all those cases after removal to the hospital, whatever the condition of the throat—there may be patches on tonsils or fauces—improve rapidly whether treated or not, which points to their real nature. I have also noticed that cases of what appears to be genuine diphtheria always return a negative result after the allotted stay in hospital. Whether we should admit cases to the acute wards of hospitals solely on the swab result is doubtful; for no doubt children have been admitted on swab evidence alone and developed diphtheria after admission, but have been saved by the prompt antitoxin injection.

Obituary.

WE regret to note the death on June 1st in St. George's Hospital of Mr. HENRY KAY RAMSDEN, M.B., B.Ch.Manch., of 102, Sloane Street, after a long and trying illness, borne with great fortitude. He died at the early age of 42 years the victim of a malignant growth in the lungs. He was one of four brothers, all members of the same profession, and was the third son of the late Dr. W. H. F. Ramsden, of Dobcross, Saddleworth, Yorkshire, to whose memory in 1900 the people of the district erected a fountain "for his devoted services to the people of Saddleworth," on which is inscribed a quotation from Leigh Hunt's "Abou Ben Adhem":

Write me as one that loves his fellow men.

The same words might fitly be chosen to characterize the son. As illustrating his courage and humanity the following incident is worthy of record. While surgeon to a certain workhouse infirmary he had ordered a generous meat diet for some of the inmates for whose recovery he thought it specially necessary. The guardians declining to supply it, in spite of his urgent representations, their surgeon ordered it at his own expense from a neighbouring hotel,

and every day, accompanied by the cook bearing a large joint, walked through the streets from the hotel to the workhouse. These "meat-bearings" quickly developed into large processions of indignant sympathizers, and the guardians found themselves obliged to give way, and it is not surprising to learn that their surgeon had no further difficulty in getting his orders carried out. Mr. Ramsden had served as Civil Surgeon in the Boer war, and was Surgeon-Captain in the 2nd Battalion of the City of London Rifles. He was an ardent Freemason and a member of the Chelsea Borough Council.

Mr. GEORGE HENRY HAMES, who died on May 28th, at his residence, 11, Park Lane, was a well-known practitioner in the West End of London. He was a native of Lincolnshire. He joined the medical school of St. Bartholomew's Hospital in 1871, and distinguished himself as a student, winning several prizes. He obtained the diploma of M.R.C.S. in 1875, and that of F.R.C.S. in 1878. He was House-Surgeon to Sir William Savory; he also served a term of office as House-Physician. After quitting these house-staff appointments he attached himself to several other hospitals and dispensaries for a few years; but although he was distinguished as a good junior officer in all the appointments that he held, he decided early in life to devote himself to general practice, for which he proved eminently qualified.

Dr. CHARLES MARSHALL KEMPE, of Shoreham, died at his residence in that town on May 23rd. He had reached his 70th year, but, having regard to the fact that he was constantly to be seen about the town, and appeared to be in good health, his death after an illness of a day or two was the cause of much surprise as well as of the deepest regret. Dr. Kempe, a Cornishman by birth, and a student of St. Thomas's Hospital, became M.R.C.S. in 1861 and L.S.A. in 1863, and had long resided in Shoreham, where his life was one of great activity both in professional and non-professional connexions, and of marked public utility. On the professional side, in addition to private practice, he held at one time and another a large number of appointments. For some thirty years he was Medical Officer of Health for Shoreham, and a Medical Officer to the Steyning Board of Guardians. He was also a Medical Officer of Health to the Port Sanitary Authority, and Medical Officer to the Admiralty, to the Railway, and to the Order of Foresters. How fully he satisfied public expectations in these connexions is shown by his receipt of two illuminated addresses—one from the Shoreham District Council, the other from the local court of the Ancient Order of Foresters. The part he played in the local public life of the district was equally active. When the old School Board was in existence he was its Chairman for five years, and on its abolition he became Chairman of the local Education Authority. A zealous Freemason, he was a Past Master of the St. Mary of the Harbour Lodge, and one of the founders of the Duke of Richmond Lodge. He also took a leading part in the establishment of a soup kitchen in the town, and devoted a good deal of time to church affairs. He was often to be seen at public meetings in support of the Conservative cause, and was an excellent and popular speaker. He retired from practice some two years ago, but continued to co-operate in public affairs, and was this spring elected to a seat on the urban district council. Apart, therefore, from his attractive personal qualities, he must inevitably be greatly missed in the locality. He died on the Sunday preceding Empire Day, and as a mark of respect to his memory certain public proceedings in connexion with that festival were abandoned. Dr. Kempe was married, and leaves a family of three sons and three daughters.

THE London Spectacle Mission is stated, in its sixteenth annual report, to have received last year 2,915 applications for assistance. The society does not assist any one under the age of 25, its main object being to benefit old people of the poorer classes suffering from presbyopia. It was founded in the year 1886 by Dr. E. J. Waring, C.I.E., a retired medical officer of H.M. India Army, and until his death, in 1891, the mission was carried on at his sole expense. The honorary secretary is Miss C. Waring, 197, Sutherland Avenue.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL. The offices of the British Medical Association and of the British Medical Journal are at 429, Strand, London.

Communications respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

IS Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

S. B. W. asks for statistics as to the comparative amount of food, in general or detail, consumed by the United Kingdom and the Continental countries. He also desires to ascertain the relative amounts for Ireland and Great Britain.

HERPES PREPUTIALIS.

P. D. asks for advice in the treatment of chronic herpes preputialis in a patient who has suffered for the past two years. It comes on very badly about every three months, and remains from two to three weeks; it has recently spread to the glans. Various kinds of local applications have been tried; also constitutional treatment for rheumatic gout, but without success.

THE BRONCHOSCOPE.

DR. CHARLES W. CHURMAN (London). We ask for experience as to the value of the bronchoscope in the diagnosis of intrathoracic tumours in the early stage—that is, before they can be recognized by other methods, and whether any serious consequences such as hæmorrhage have been known to follow the use of the instrument.

PENDULOUS EAR.

W. M. B. asks for advice as to any means, mechanical or operative, of correcting the following defect: The patient is a baby 5 months old, whose right ear in its upper half is pendulous over the lower half. The cartilage at birth was found to have been displaced from the upper part of helix and antehelix to the skin in front of the ear over the zygoma. The ear after birth was strapped to the head with adhesive plaster, but no improvement ensued.

INCOME TAX.

E. C. B. has for many years made a correct income tax return for himself and partners. He has now received a request from the assessor or surveyor for certified copies of the partnership accounts for each of the past three years. Our correspondent has no certified accounts, no accountant being employed. He asks whether the Commissioners have power to make their demand, and what line of action should be taken.

* * On the first point we refer our correspondent to an answer given to "E. M. C." in the BRITISH MEDICAL JOURNAL for April 24th last, page 1043, where the question is fully answered. For the reasons there stated it will save trouble to "E. C. B." if he furnishes the accounts asked for, when the liability will be agreed to by the surveyor according to the results shown, with little or no difficulty. If an accountant is not employed the fact should be stated, when the surveyor will doubtless accept accounts signed by our correspondent as sufficient for his purposes.

ANSWERS.

APHONASIA.—We cannot depart from the rule against publishing anonymous communications. The name of the writer, however, need not necessarily be published.

DISAPPEARANCE OF MALARIA FROM ENGLAND.

"5814."—No complete satisfactory explanation has ever been offered of the disappearance of malaria from England. One suggestion is that many of the so-called cases were not really malaria at all, but on the other hand, provided that the weather is warm enough, there is no reason why it should not occur, as in many districts *Anopheles maculipennis* abounds. On the whole, however, this insect in England does not seem to bite readily, though, of course, it does so further south—in Italy, Spain, etc., where it is the chief propagator of the disease. Drainage can only have played a subsidiary part as it has certainly not stamped out all the mosquitoes. The requisites for the case to appear are, of course, the following: (a) An individual with gametes in his blood. (b) The *Anopheles* to bite and so become infected. (c) A sufficiently high atmospheric temperature for the development to take place in the tissues of the insect. This latter condition would probably only be fulfilled in England in late July and August, so that the season is very limited in its possibilities.

LETTERS, NOTES, ETC.

LYNN THOMAS AND SKRYEME FUND.

MR. WILLIAM SHEEN, M.S., F.R.C.S. (2, St. Andrew's Crescent, Cardiff), Honorary Secretary of this Fund, desires to acknowledge the following subscriptions:

Twenty-fourth List of Subscriptions.

J. Harris Jones, Maesteg	... £1 10 0
S. P. Francis, Brecon	... 0 10 6

AN APPEAL.

THE following further subscriptions are acknowledged by Sir John W. Moore and Sir Charles Cameron in response to the appeal signed by the Presidents of the two Royal Colleges in Dublin on behalf of a medical practitioner in Dublin who, through no fault of his own, is in distressed circumstances. The appeal was published in the JOURNAL of May 15th, p. 1211:

	£	s.	d.
Amount already acknowledged	22 19 0
Dr. A. J. Horne, President, R.C.P.I.	3 3 0
Mr. Louisa, President, R.O.S.I.	3 3 0
Dr. Lombé Atthill (Monkstown, co. Dublin)	2 0 0
"Melitensis" (Malta postal orders)	2 0 0
J. J. Charles, Esq., M.D. (Portewart, co. Derry)	1 0 0
"Sympathy"	2 0 0
"A Practitioner" (Dublin)	1 1 0
Dr. Arthur Finegan (Mullinsar)	1 1 0
Dr. J. Knox Denham (Dublin)	1 1 0
			16 11 0
			22 19 0
Total	39 10 0

ANSWERING LETTERS.

A GRADUATE OF FIFTY YEARS' STANDING writes to complain that the younger members of our calling are now in the habit of not answering letters addressed to them, to the great annoyance and vexation as well as inconvenience of their correspondents. "I have written," he says, "to two of the younger members of the profession within the last few weeks, and my letter, though undoubtedly calling for a reply, remains unnoticed. This has occurred to me now so frequently that I beg you will allow me to publicly protest, through the medium of your influential JOURNAL, against such an ungentlemanly practice."

QUININE IN SYPHILIS.

J. L. L. writes: Your correspondent, "T. A. P." (BRITISH MEDICAL JOURNAL, page 1276), is not wrong in assuming that quinine may exert a similar effect on the *Syphilis chancroide pallida* that it does on the malarial parasites, because experience has shown that quinine has a most beneficial action in syphilis, especially when combined with mercury. If "T. A. P." will refer to Whittall's *Dictionary of Treatment*, 4th edition, 1902, page 918, he will find there the following prescription:

R. Hydrag. c. creta...	...	...	gr. j
Quin. sulph.	...	...	gr. jss
Ext. opii	...	...	gr. j
Ext. quassiae	...	...	ss
Fiats pil.	Mitte xxxvi ter.	Sumat i ter in die p.c.	

This combination, or modifications of it, I have used for seventeen years, and I know that quinine was used in combination with blue pill long before that. As "T. A. P." suggests, the absence of anaemia and cachexia under this treatment is most striking.

MEDICAL GOLFING SOCIETY.

THE annual tournament of the Medical Golfing Society will be held at Burnham Beeches Golf Club on Thursday, June 24th. Play will be eighteen holes match play c. Bogey under handicap. There will be three prizes in each division: handicaps 12 and under, and handicaps over 12. The Henry Morris challenge cup and the Medical Golfing Society's gold medal will be competed for. There will also be a foursome sweepstake in the afternoon. Any person on the *Medical* or the *Dental Register* can join on payment of the annual subscription (4s.), which includes entrance to the tournament. Entries, accompanied by subscription and giving lowest handicap, should be sent to L. Elliot Greasy, 35, Weymouth Street, London, W., on or before Monday, June 21st. Conveyances will meet trains at Burnham Beeches Station (G.W.R.). Cards may be handed in till 8.30 p.m.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Eight lines and under	0 4 0
Each additional line	0 0 6
A whole column	2 13 4
A page	8 0 0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance, not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication: and, if not paid for at the time, should be accompanied by a reference.

N.B.—It is against the rules of the Post Office to receive letters at Postes Restantes addressed either in initials or numbers.

The Croonian Lectures

ON

RADIO-ACTIVITY AND CARCINOMA.

AN EXPERIMENTAL INQUIRY.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS OF LONDON IN JUNE, 1909.

By W. S. LAZARUS-BARLOW, M.D., F.R.C.P.,

DIRECTOR OF THE CANCER RESEARCH LABORATORIES, THE MIDDLESEX HOSPITAL.

[WITH SPECIAL PLATE.]

LECTURE I.

After thanking the College for the honour it had done him in inviting him to deliver the lectures, pointing out that the inquiry was still incomplete and that contributions to the entire research had been made by numerous workers in the Cancer Research Laboratories of the Middlesex Hospital, the lecturer proceeded as follows:—

The leading idea throughout the whole research has been the undoubted fact that workers with x rays are liable to suffer from carcinoma of the hand. It is unnecessary to labour this point in view of the conclusive evidence furnished by my former assistant, Mr. C. W. Rowntree, in this Hunterian Lecture before the Royal College of Surgeons of England on March 17th, 1909. From a careful examination of the microscopical sections shown by Mr. Rowntree, I am convinced that he is right in describing the x -ray condition which may follow on a somewhat severe and prolonged dermatitis occasioned by exposure to x rays as a squamous cell carcinoma.

Into the question of the relationship of the x rays to the carcinoma, whether it is specific and direct or non-specific and, so to speak, accidental, I do not propose to enter here. It will be more convenient to deal with the whole subject at the conclusion of the lectures. For the moment it will suffice to allow that exposure to x rays and carcinoma of the hand are closely related in certain cases.

The next idea of importance in connexion with the research is that for many years certain physical agents have been considered by the profession to be causally related to cancer of special sites. Thus clay pipes have been associated with cancer of the lip, paraffin and tar with cancer of the hands and arms of workers with these substances, soot with cancer of the scrotum in chimney sweeps, gall stones with cancer generally and particularly with cancer of the gall bladder. In addition, betel-nut chewing has been associated with cancer of the cheek, especially in Ceylon and the East, where the habit is common; use of the kangri has been associated with "kangri cancer" in Kashmir, while bilharziosis in Egypt has been held accountable for cancer of the bladder. Similarly it has been noted that cancer occasionally develops on old scars, on the floor of chronic ulcers, and on the site of lupus.

An approximation of these two ideas suggested the inquiry whether the clay pipes, the paraffin, tar, soot, etc., emit x rays or give other evidence of radio-active properties. If the answer to this question were in the positive, a single factor would be demonstrated to be present in a group of physical agents differing to the widest degree from one another, and the probability that each particular variety of cancer depended upon the physical agent usually inculcated would be strengthened, while presumption would be raised for the proposition that the common factor in all the physical agents—that is, their radio-activity—is causally related to the common factor in the pathological conditions to which they all are supposed to give rise—that is, the cancer.

It is remarkable that the cancer in all the cases that have been mentioned above, with the sole exception of that affecting the gall bladder, is squamous cell carcinoma. Moreover, the histological diagnosis is almost invariably to be made with great ease, Malpighian cells, prickly cells, and epithelial pearls being conspicuous. For this reason the present research has been confined to the group of carcinomata, meaning thereby squamous cell, columnar cell, and spheroidal cell carcinomata as determined by microscopical examination.

The research, therefore, resolved itself into a determination whether clay pipes, etc., and carcinomatous material give evidence of radio-activity.

The two chief criteria of radio-activity relied on by the physicist are (1) the action of the substance in question upon a charged electroscope and (2) its action upon a photographic plate in the dark. Of these criteria action upon a photographic plate in the dark is well known to the medical profession in the production of skiagraphs, but it is upon the electrical properties that the physicist places more reliance.

Owing to the fact that the x -ray tube only emits gamma radiations, while such radio-active substances as radium, uranium, and thorium emit alpha particles, beta rays, and gamma rays, while they also are far more complex than their chemical names would suggest, it became necessary to consider these substances as well as the x rays. It is clear that a substance may belong to the radio-active group and yet fail to produce gamma radiations. Thus, "chemically pure" uranium oxide emits alpha particles and beta and gamma rays, but the physicist can separate a uranium oxide from this, which is indistinguishable in its chemical reactions, but differs electrically in emitting alpha particles alone. Such uranium is without effect upon a photographic plate, though it affects a charged electroscope.

In addition to their power of affecting a photographic plate in the dark, radio-active substances emitting gamma rays with their high velocity and penetrating power, or beta rays with their somewhat lower but still great velocity and penetrating power, have the property of affecting the photographic plate though separated from the film by such substances as aluminium, mica, etc. This property forms an important means of differentiating the action of a recognized radio-active substance, such as radium or thorium, from other substances which apparently fail to possess the power of acting through a screen. How far this differentiation between radio-active and non-radio active substances may be carried by this method will be discussed later.

Electrically, the recognized radio-active substances have the property of accelerating the discharge of an electroscope whatever the sign of the electricity with which its leaves are charged. This property depends upon the fact that the radio-active substance by the alpha particles (helium atoms charged +), beta rays (negative electrons) and gamma rays which it emits, ionizes the air in the electroscope, breaking the molecules up into their constituent atoms, each of which is electrically charged + or -. These charged atoms collide with the charged gold leaves, and such as are of opposite sign to the charge on the leaves neutralize a corresponding amount of electricity on the leaves. The greater the ionization of the air in a given time the more rapidly the charged leaves fall together, and the greater the radio-activity of the substance under investigation is said to be.

From what has been said it follows that the various substances dealt with in the present investigation call for consideration (1) as regards their action when exposed to a photographic plate in the dark, and (2) as regards their influence upon the rate of leak of an electroscope (a) charged + and (b) charged -. In addition, it is necessary to determine the same points in regard to non-carcinomatous substances, and, further, to determine the influence of radio-activity upon the division of cells by direct experiment.

In the present lecture I propose to show that certain animal tissues and other substances have the power of acting upon a photographic plate in the dark. In the second lecture I shall consider, as far as possible, the properties and nature of the substances in the tissues which possess this power. The third lecture will be devoted to a consideration of the electrical properties of the carcinomatous and non-carcinomatous substances; while the fourth lecture will deal with the influence of radio-activity upon cell division, and will include a short general survey of the bearings of the experiments.

THE SKOTOPHOTOGRAPHIC ACTION OF CERTAIN ANIMAL TISSUES AND OTHER SUBSTANCES.

If a sample of human liver be minced, dried in the hot-air oven at 100–110° C., reduced to a powder and some of

* I have ventured to use the word "skotograph" to signify the effect that is produced upon a photographic plate by certain substances in the dark (error, darkness), on the analogy of "photograph," "radio-graph," and "skiagraph." The effects to which attention is about to be directed are certainly not photographs in the ordinary sense of the word, neither are they skiagraphs, while to term them radiography would be to assume the point at issue.

this powder be placed on a photographic film in the dark and the plate and powder be kept in contact in complete darkness for a certain length of time, it will probably be found, on developing the plate, that the former situation of the powder is indicated by a more or less considerable, punctate, deposition of silver. Prior to development the photographic plate shows no alteration. Similarly, if a "pure" cholesterol gall stone be exposed to a photographic plate in the dark, subsequent development of the plate will probably show an intense deposition of silver which occupies a larger area than corresponds to the area of the calculus in contact with the plate (Figs. 1 and 2). Skotographic action is not manifested by all animal substances, for example, it is rarely produced by spleen or lung dried and powdered as above, while numerous experiments made with uric acid calculi, paraffin wax, and clay pipes have shown that these substances possess no skotographic power. Similarly certain varieties of micro-organisms possess marked skotographic power, while others appear to be totally deficient.

It is unnecessary here to enter into the details of the method for obtaining skotographs, or the precautions to be taken in order to eliminate the action of light or of any outside influence of a recognized radio-active nature. These are all given elsewhere.¹ It must be stated, however, that the values assigned to the various plates showing skotographic action were determined by comparing them with the effect produced in a photographic plate by allowing x rays to act upon it through a Benoit's gauge. Since the gauge consists of aluminium graduated in thickness from 1 mm. to 12 mm. a graduated deposition of silver takes place on the plate. It was possible to graduate the degrees of silver deposition by this means from 0 to 6; and since the same skiagraph was used throughout, the values given for the various substances and tissues are comparable among themselves.

Tissues from Non-malignant Cases.

In all, tissues from 115 bodies of persons dying from some cause other than malignant disease were examined skotographically. In most instances the examination included samples of liver, kidney, spleen, and lung. The patients were of both sexes and of all ages; they were grouped for purposes of comparison into the following age-periods:

Under 2 years of age.	35 to 45 years.
2 to 20 years.	45 to 55 years; and
20 to 35 years.	Over 55 years of age.

This grouping of age-periods was made in order to institute a comparison with similar tissues derived from cases of carcinoma. In addition to the above, specimens of brain, pancreas, breast, liver of sheep and of ox, tissues of mouse, guinea-pig, and rabbit were examined skotographically, but no reference to the results will be made here.

The results of the investigation are summarized in the following table:

Table showing Mean Skotographic Values of Liver, Kidney, Spleen, and Lung in 115 Non-malignant Cases.

Age.	Males.				Females.			
	Liver.	Kidney.	Spleen.	Lung.	Liver.	Kidney.	Spleen.	Lung.
Under 2 years (10 males, 40 females)	1.7	2.3	0.8	0.9	3.1	1.6	0.7	1.1
2 to 20 years (9 males, 6 females)	2.1	2.4	0.6	0.4	3.2	2.8	0.4	0.6
21 to 35 years (12 males, 10 females)	3.0	2.6	1.1	0.75	3.7	2.3	0.5	0.6
35 to 45 years (9 males, 10 females)	2.7	1.6	0.3	0.0	13.4	3.9	0.9	0.5
45 to 55 years (10 males, 10 females)	3.3	1.4	0.5	0.0	4.2	2.7	0.8	0.8
Over 55 years (11 males, 8 females)	3.9	2.0	0.5	0.9	2.6	2.5	1.1	0.29
Means at all ages (61 males, 54 females)	2.8	2.1	0.6	0.6	3.4	2.8	0.8	0.6

From this table it appears that liver and kidney possess a far higher skotographic power than spleen or lung, and that the female tissue in each case had a greater skotographic power than the corresponding male tissue.

Owing to the large size of the liver and to the fact that it exerts the largest amount of skotographic effect, the figures for it may be examined more closely. It is seen

that the skotographic power of the liver in males increases steadily throughout life, with the exception of a fall at the age-period 35 to 45 years. In females this rise in skotographic power of the liver, including the fall at the age-period 35 to 45, is also seen. But whereas the values for the male reach their highest in the age-period "over 55 years," this same age-period in females witnesses a remarkable fall in skotographic power of the liver. Further reference to this point will be made in the last lecture.

The small mean values obtained for the spleen and lung are due to the fact that occasionally these organs exert a definite effect. Two-thirds of the total number of spleens examined skotographically, and two-thirds of the total number of livers, were absolutely without skotographic power. On the other hand, only one-fifth of the total number of livers examined skotographically were without effect.

Carcinomatous Material.

The skotographic value of the primary mass has been determined in 17 cases of carcinoma; of secondary growths, 29 specimens from 24 cases have been examined; 11 of the cases were male, 30 female. Two primary and four secondary growths were without skotographic effect, or the effect was doubtful. The mean skotographic value of the male primary masses was 2.0, male secondary masses 2.5; that of the female primary masses was 3.6, female secondary masses 3.2. Hence the superiority of the skotographic value of female tissue over that of male tissue obtains also in the case of carcinoma (Figs. 3 and 4).

Tissues from Cases of Carcinoma.

The skotographic values of the liver, lung, kidney, and spleen have been determined in 72 cases of carcinoma, 41 of which showed important metastases, and 31 insignificant metastases or none at all. The cardinal facts that liver and kidney exert a greater skotographic power than lung and spleen, and that the skotographic power of a female tissue is greater than that of the corresponding male tissue, are shown in this class of case as in that in which there is no malignant disease. But it appears that the carcinomatous condition is not without effect upon the skotographic power of the various tissues. This is best seen by considering the case of the liver. The effect of carcinoma upon the skotographic power of the liver may be considered in two ways:

1. Livers, themselves free from metastasis, may be compared skotographically according as they are derived from cases in which the total mass of carcinomatous material in the body is great or is small.

2. A comparison may be made between the hepatic tissue of non-malignant cases and the hepatic tissue of carcinomatous cases in which the liver is the seat of numerous large metastases.

These two different methods of approaching the question agree in indicating that carcinoma augments the skotographic power of the liver in males and decreases it in females. In the following table are given the figures upon which this statement is founded.

Table to show the Influence of Carcinoma on the Skotographic Power of the Liver.

Age.	Males.				Females.			
	No. of Cases.	Mean Growth in Liver.	Mean Growth in Body.	Little Growth in Body.	No. of Cases.	Mean Growth in Liver.	Mean Growth in Body.	Little Growth in Body.
Under 35	3	—	—	—	3	2.0	1.7	1.0
35-45	2	3.6	2.75	—	3.4	3.5	3.7	4.25
45-55	3	3.6	3.5	1.8	4.2	—	3.7	4.0
Over 55	4	4.5	4.5	3.8	2.6	2.5	2.5	2.6

But consideration of the above table shows that the matter is not so simple. For, although male hepatic substance in the neighbourhood of liver metastases is more skotographic than non-malignant liver while the converse is true in the case of the female, and although male

hepatic substance where there is much growth in the body is more skotographic than when there is little while the converse is true in the case of the female, a small amount of carcinoma in the body appears to diminish the skotographic power of the male liver, while it augments that of the female liver. I do not attempt an explanation of these points; indeed, they need confirmation on a much larger number of cases. The regularity with which female liver and male liver act in opposite directions, in the face of what is apparently a single condition—that is, carcinoma—is, however, such that it suggests the existence of some sort of interaction between carcinoma and the skotographic property of the liver. On the other hand, we may be quite wrong in considering carcinoma as a single condition relative to the two sexes; it has already been shown that male and female carcinomatous materials differ in skotographic power.

The only condition in which a thoroughly satisfactory determination can be made of the influence of carcinomatous growth upon the skotographic power of the tissue in which it lies is that in which one of paired organs is the seat of metastasis. This is relatively so uncommon, and when it occurs the chance that the metastasis will be sufficiently large to influence the neighbouring tissue of the organ to any extent is so small that I have only obtained a single example. The case was one of carcinoma of the cervix, and one kidney was the seat of a fairly large number of metastases, while the other was free. The renal substance of the unaffected kidney had a skotographic power of 3, while the renal substance of the affected kidney was absolutely without effect upon the photographic plate. This case, therefore, conformed to the statement made above for the liver that, in the female, carcinoma leads to a diminution of the skotographic power of the tissue in which it lies.

"Substances commonly supposed to be causally related to Carcinoma.

Numerous samples of clay pipe, soot, pitch, paraffin wax, metallic arsenic, arsenious oxide, betel nut, cholesterol gall stones, pigment gall stones, renal and vesical calculi, have been examined skotographically, the calculi, renal, biliary, and vesical, being made the subject of an extended research by Dr. Colwell.³ Skotographic effect was exhibited by one sample of soot out of two examined, by betel nut on all of numerous occasions, by each of twenty-three specimens of cholesterol gall stone, more or less "pure," in three out of four samples of pigment gall stones examined, the effect being always very slight as compared with the action of the cholesterol calculi, and by thirty out of thirty-eight vesical calculi. Metallic arsenic and arsenious oxide produced effects upon the photographic plates, but inasmuch as the films showed alteration before development the action cannot be regarded as skotographic. On the other hand, none of nine specimens of clay pipe, of numerous samples of paraffin wax, of four samples of pitch from different localities, of several specimens of coal, yielded the slightest trace of skotographic action.

In the case of cholesterol gall stones the action on the plate extends widely beyond the area of the surface of the calculus in contact with the plate, but in the case of all the other substances the area of silver deposition was coextensive with the area of contact between substance and film. This is well seen in the skotographs of vesical calculi, in which rings of silver deposition alternate with rings of no deposition in such a way that a picture is formed of the surface of the calculus by which the skotograph was produced (Fig. 5). When the nucleus of a calculus, or certain laminae, or the entire calculus consists of "pure uric acid," the corresponding part of the film shows a complete absence of skotographic effect. As a rule, calculi or laminae in calculi consisting of ammonium urate, calcium oxalate, calcium phosphate, or ammonio-magnesium phosphate possessed skotographic power; but since instances to the contrary were found Dr. Colwell concluded that the chemical substances in question, *as such*, were not the effective agent. Similarly he found that purified cholesterol obtained from a gall stone which produced a profound effect upon a photographic plate was itself entirely devoid of skotographic power.

Skotographs of betel nut are of especial interest in connexion with the observation made by Dr. Russell, F.R.S.,⁴ that almost all varieties of wood affect a photo-

graphic plate when placed in contact with it under conditions of total darkness—that is, possess skotographic powers. This power is possessed by the winter and spring woods in different degrees, so that a skotograph of a piece of wood reproduces a picture of the grain of the wood in the same way as a skotograph of a vesical calculus reproduces the appearance of the cut surface of the calculus. Similarly a skotograph of a bisected betel nut shows the peculiar markings of the nut in all their detail (Fig. 6).

LECTURE II.

THE NATURE OF SKOTOGRAPHIC ACTION.

RUSSELL'S researches upon the effect of various woods upon a photographic plate in the dark led him to the conclusion that the deposition of silver is occasioned by traces of hydrogen peroxide formed owing to oxidation of the terpenes and other resinous substances in the wood in the presence of moisture. This strictly chemical action, albeit produced by traces of hydrogen peroxide so minute as to be beyond detection by any other method, is distinguishable from the action brought about by ethereal vibrations, such as those of beta or gamma rays, by the fact that it is completely inhibited by interposing a thin screen of mica between the wood and the film. Russell showed, further, that wood which had been exposed to strong sunlight before being placed in contact with the photographic film produces a far stronger effect than wood which has been kept in the dark.

Under these circumstances it became necessary to determine as far as possible with what constituent or constituents of the animal tissues their skotographic power was bound up, and subsequently whether that power conformed more to the type of a chemical substance, and particularly to hydrogen peroxide, or more to that exerted by ethereal vibrations.

It must be stated at the outset that a complete answer cannot be given to the above questions. It can rather be said what the skotographic power is *not* bound up with than what it *is*. Similarly it will be found that it is impossible to include it definitely in the chemical or the physical group of phenomena, since in certain respects it appears to resemble hydrogen peroxide and in others to resemble an ethereal vibration.

Attempts at Isolation of the Skotographic Substance.

The skotographic substance, or substances—for there is reason to believe that, in the liver at least, two substances exist which differ from one another in certain reactions but agree in affecting a photographic plate in the dark—is not protein, or fat, or carbohydrate, or colouring matter or mineral salts. Each of these constituents of the tissues has been definitely excluded. It is unnecessary to enter into a detailed account of the method in which this has been done, for it has been recorded elsewhere.⁴ The following short account will suffice.

That it is not *protein* is indicated by the fact that it is yielded by liver, for example, and not by spleen, while the same fact shows that it is not dependent upon the "cellularity" of the tissue as such. But the non-protein character can be shown by obtaining a completely protein-free extract of the tissue, and proving that this extract still possesses skotographic power. Fig. 7 shows that this is the case. It was produced in the following way: Liver of sheep was minced and allowed to stand under distilled water for eighteen hours. The watery extract was then acidified, boiled, and filtered. To the filtrate three times the volume of basic lead acetate in solution and suspension was added, and the resulting precipitate was filtered off. Then sulphuretted hydrogen was passed through the filtrate to precipitate the lead, and after the filtrate from this operation had been concentrated to small bulk upon a water bath it was added to twenty times its volume of absolute alcohol and allowed to stand for three weeks. The merest trace of precipitate was formed, and was filtered off, and the alcohol was removed by evaporation. The residual fluid was then used to write certain words on a plain glass plate with a camel-hair pencil, and this plate was exposed to the photographic film under skotographic conditions and separated from contact with the film by strands of cotton. It is seen that this watery extract of liver, in which none of the laboratory tests for protein shows the slightest trace of that material, possesses intense skotographic power. The process for

purification from protein has been checked at every stage, as well as the reagents used, and it is certain: (1) That the skotographic power is not introduced during the process, and (2) that the various precipitates formed are devoid of skotographic power, except in so far as they are contaminated with the corresponding filtrate.

That the skotographic substance is not *fat* as such is shown by the fact that a material which has been rigidly extracted with ether still possesses skotographic power. Thus, all the powdered tissues that were used to arrive at the conclusions given in the first lecture were extracted with pure ether in a Soxhlet apparatus for a minimum of six hours before being examined skotographically. This method extracts the phosphorized as well as the non-phosphorized fats.

Just as the watery extract of a liver, for example, possesses skotographic powers so it is possessed by an ethereal extract. Into the question of the actual constituent of the ethereal extract which possesses the power it is impossible for me to enter. The chemical analysis I have not attempted, owing to its difficulty.

That the skotographic substance is not *carbohydrate* as such is proved by the facts that some of the extracts by which it is manifested contain carbohydrate while others are devoid of it, that it is manifested by ethereal extracts, and, as will be shown later, that it survives charring.

The fact that the skotographic power is independent of the water-soluble and the ether-soluble pigments of the tissue is shown by the persistence of effect if one of these extracts be decolorized by finely divided animal charcoal.

And, finally, that it is independent of the *mineral constituents* of the tissue—at least those which survive a temperature of 300° C. (see below)—is shown by the fact that the ash of a tissue which possesses marked skotographic power is entirely without effect upon a photographic plate in the dark.

The skotographic power of any tissue is completely removed if it be first extracted with water and subsequently with ether. This appears from the accompanying figure (8), in which the upper fourth shows the effect of the original substance, the second fourth shows the effect of a watery extract, the third that of an ethereal extract made subsequently to the watery; the bottom fourth, over which there is an absence of skotographic action, was exposed to the solid residue after the watery and ethereal extractions. A similar absence of skotographic power characterizes a tissue which has been extracted with acetone, as might be expected, since it dehydrates and also extracts fat.

Just as the skotographic power is contained in the watery and ethereal extracts so it is contained in one made by acetone, and by evaporating with care the constituents of the original skotographic material which are soluble in water and those which are soluble only in strong acetone may be divided. They are apparently the same as those which are contained in the watery and ethereal extracts when these are made separately.

But though it is clear that the skotographic power is not a property of protein as such, there is no doubt that it is a property of certain organic substances, as distinguished from inorganic, that are probably derived from protein. As will be said later the skotographic power is not destroyed even though the substance manifesting it be heated to a temperature of 300° C. Such a temperature chars the substance, and no doubt breaks up much of

the protein, but from it a material, often of polymorphic crystalline character, but highly deliquescent, can be separated which exerts a skotographic effect, and which is still organic in nature, as shown by the fact that it chars on further heating. By repeated solutions in water and precipitation with absolute alcohol this crystalline material can be divided into a honeylike non-crystallizable and a colourless crystallizable portion. The skotographic power resides chiefly, if not entirely, in the honeylike, highly deliquescent material. This material is dialyzable with ease, and carries with it the actual skotographic substance. Further than this analysis has not gone.

CONDITIONS DETERMINING THE MANIFESTATION OF SKOTOGRAPHIC POWER.

It has been shown above that I have not succeeded in isolating the skotographic substance, though it has been stripped of certain materials with which it is usually associated. It has therefore been necessary to investigate the skotographic property upon crude material, and for this purpose the ether-extracted, dried, and powdered original material and watery extracts that have been freed from protein in the way already described, have chiefly been used.

Relation of Substance to the Photographic Film: Contact: Proximity: Screens.

All the photographic effects to which reference was made in the first lecture were obtained by allowing the powdered substances to lie in actual contact with the photographic film, but there is no doubt that they can act at a little distance. This is better seen in considering the watery extracts, for when they were under investigation contact with the film was necessarily excluded. Attempts were made to determine the maximum distance at which recognizable photographic effect is produced by exposing a glass plate bearing the watery extract to the photographic plate at an angle. In this way, and using photographic plates specially sensitized for x rays, it was found that the watery extract used for producing Fig. 7 is still effective when it is separated from the film by a distance of 15 mm.

DESCRIPTION OF PLATE.

Fig. 1.—Skotograph of dried, powdered, ether-extracted, non-malignant liver.

Fig. 2.—Skotograph of pure cholesterol gall stone. Action occurs well beyond the limits of the calculus.

Fig. 3.—Skotograph of dried, powdered, ether-extracted primary spheroidal cell carcinoma of breast.

Fig. 4.—Skotograph of dried, powdered, ether-extracted pulmonary metastasis from a case of spheroidal cell carcinoma of the breast.

Fig. 5.—Skotograph of a mixed phosphatic and uratic calculus.

Fig. 6.—Skotograph of a section of a betel nut. The dark crescent was at the seat of a film of celluloid two years old.

Fig. 7.—Skotograph produced by a protein-free watery extract of sheep's liver. Material prepared and skotograph taken March 24th, 1908. Compare with Fig. 10.

Fig. 8.—Skotograph showing that the power of affecting a photographic plate in the dark manifested by dried, powdered, non-malignant liver (top quarter) is entirely removed (bottom quarter) by extraction with water and subsequent extraction with ether. The extracts possess strong skotographic power.

Fig. 9.—Skotograph showing that the effective agent in cedar-wood oil can be transported in a current of air. The air impinged on the photographic plate at the apex of the triangle of silver deposition.

Fig. 10.—Skotograph taken with protein-free watery extract of sheep's liver used to produce Fig. 7 over a year after its original preparation.

Fig. 11.—Skotograph of a phosphatic calculus removed by Percival Pott (died 1788).

Fig. 12.—Skotographs on Ilford x-ray and on Imperial special rapid plates produced by the same sample of dried, powdered, ether-extracted carcinoma material under identical conditions. Compare with Fig. 13.

Fig. 13.—Skotograph on Ilford x-ray and on Imperial special rapid plates produced by the same sample of sawdust under identical conditions. Compare with Fig. 12.

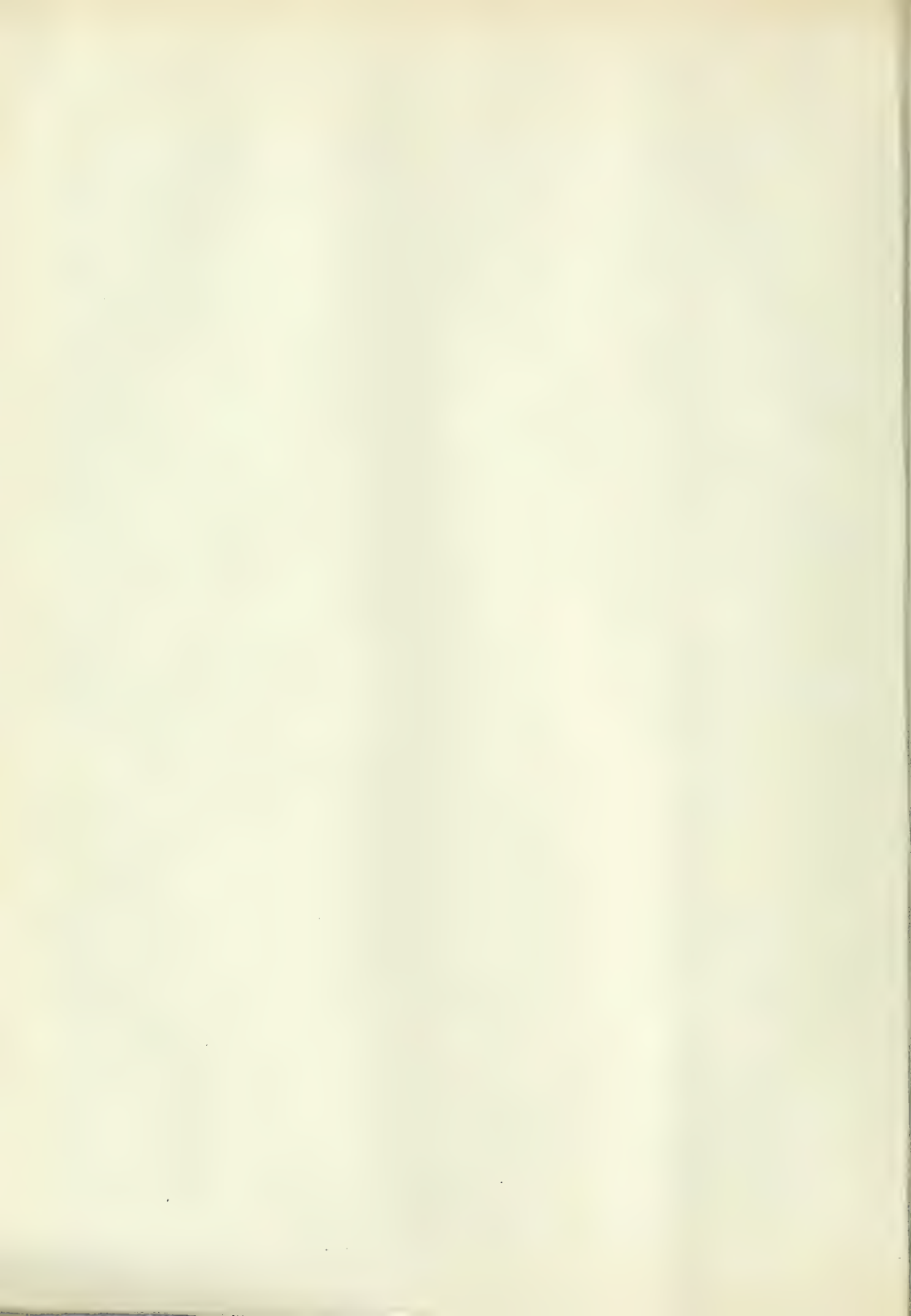
Fig. 17.—Skotographs of dried, powdered, and ether-extracted testis and ovary of herring. The testis produces the greater deposition of silver. (This specimen will be referred to in Lecture IV.)

The question of screens between the material and the photographic film is one of fundamental importance in trying to arrive at a conclusion as to the nature of skotographic action, and must, therefore, be dealt with in some detail.

It may be stated at the outset that interposition of a screen of the order of thickness of that used in examining the effects of recognized radio-active materials such as uranium or thorium between the animal substance under investigation and the photographic film completely eliminates skotographic action. This is true whether the screen be metallic (for example, aluminium) or non-metallic (for example, mica), however intense the skotographic action may be in the absence of a screen, or however long (up to six weeks) the exposure may have been, and even though it had been carried out at 55° C.

On the other hand, the matter is not simple, as the following experiments show:

If a flat section of a betel nut or of liver be coated with a thin film of celluloid and the whole be exposed to a photographic plate in the ordinary way, it will be found that the greatest deposition of silver occurs on that part of the plate which was separated from the substance by the celluloid. That this effect is not due to the celluloid itself is shown by the fact that an old film of celluloid is entirely without skotographic effect, and in the betel nut experi-



ment the celloidin had been painted on the nut two years before it was exposed to the photographic plate (Fig. 6).

In the second place, if an albuminate of thorium be made by allowing a solution of the nitrate to fall into egg-white, the resulting precipitate after drying and powdering fails to affect a photographic plate through a film so thin as that produced by brushing a minute quantity of egg-white over tissue paper, though a fair deposition of silver occurs when the albuminate is separated from the photographic film by tissue paper uncoated with egg-white. Such an albuminate of thorium contains about 10 per cent. of the radio-active element by weight. Even in this case it is possible that such direct skotographic effect as was produced was due to uncombined radio-active salt, since the precipitate was not washed for fear of hydrolysis. In several instances, where the precipitate with thorium was washed thoroughly with hot water before drying, it failed to produce an effect upon the photographic plate even though it were actually in contact with it during exposure; nevertheless, such samples of albuminate showed the presence of considerable amounts of thorium on analysis.

Hence under special conditions a vegetable or animal tissue may produce skotographic action through a thin film of celloidin and a recognized radio-active substance may fail to affect a plate through a film of egg-white or probably even a greater tenuity.

Effect of Temperature.

Within the limits of -3°C . and 100°C . it may be said that the skotographic action of the tissues is independent of the temperature provided that the exposure be longer at the lower temperatures. Thus a degree of silver deposition which can be attained by exposing a cholesterol gall stone for eighteen hours at 55°C . to the photographic plate can only be obtained after an exposure lasting for weeks at the room temperature, and probably for several months in the ice chamber at -3°C . Exposure of the substance to a plate at a dry heat of 100°C . is an unsatisfactory procedure, but if the exposure be shortened to about half an hour, silver deposition is not general, but is confined to the part with which the substance under investigation was in contact. The general temperature at which the skotographs in this research were taken was 55°C ., and the length of exposure was eighteen hours. Except in certain cases, Imperial special rapid plates were used, and development was by 1 in 20 Rodinal.

I have dealt above with the temperatures at which the substance has been exposed to the photographic plate, but the substance itself may be exposed to a much higher temperature without undergoing complete loss of skotographic power. I have not been able to determine with exactness the highest temperature to which a skotographic substance may be raised without undergoing complete loss of its power; but it is certain that a skotographic watery extract painted in a thin layer upon a No. 1 coverslip and exposed to dry air at about 280°C . for five minutes will probably afford evidence of skotographic power, while a similar coverslip exposed to about 300°C . will not. In any case it is certain that the skotographic power is not destroyed by a temperature (about 200°C .) which chars the substance itself and therefore in large measure disintegrates it.

Light and Darkness.

Leaving on one side such points as the fact that the change in the photographic plate is not due to the hygroscopic character of the partially purified skotographic substance, the gradual disappearance of the power on continued exposure to air, the curious way in which occasionally there occurs a recrudescence of skotographic power in a watery or acetone extract, the fact that the power is independent of the acidity, basicity, or neutrality of a watery extract—points which have been made the subject of many experiments and are of great theoretical interest—I pass to certain experiments instituted in order to compare the skotographic power of animal tissues with that manifested by woods and held by Russell to depend upon the presence of hydrogen peroxide.

Russell found that the skotographic power of a wood is profoundly influenced according as it has been exposed to light, and especially direct sunlight, or has been kept in darkness before exposing it to the photographic plate. If exposed to light, the skotographic power is always intensified; if kept in darkness, it is always diminished. In the case of animal tissues and of calculi of different kinds

this point has been carefully investigated by myself and by Colwell respectively. We agree in finding that our substances do not show the slightest difference in skotographic power, even though they may be exposed to direct sunlight or be preserved in total darkness for a period of six months before placing them in contact with the photographic film.

Volatility.

Inasmuch as the skotographic power of an animal substance disappears after about a fortnight if it be exposed freely to air, it was thought that the effect might be due to some volatile product. Apart from the fact that it is difficult to imagine a volatile substance which can withstand a temperature of 300°C ., below which the skotographic power is not destroyed, the question has been approached directly. By causing a current of air which had passed over cedar-wood oil, or clove oil, or oil of cajuput, or oil of origanum, to impinge upon a photographic film, it was found that volatility, as such, is not the effective cause of a skotographic effect since a skotographic effect was produced in the case of air charged with the volatile products of oil of cedarwood alone. Further, it has never been found possible to carry over the skotographic power of any of the substances used in the present research although they frequently give off volatile products with powerful odours that can be detected in the stream of air impinging upon the photographic film by the sense of smell. Fig. 9 shows the skotographic effect of a current of air charged with the volatile products of cedarwood oil.

Is Skotographic Action essentially due to Hydrogen Peroxide?

The experiments made bearing on this question were of two kinds. In one set Colwell took a cholesterol gall stone, which yielded a profound skotographic effect, and prepared from it a sample of purified cholesterol. Examined skotographically, this purified cholesterol was absolutely without effect. He now exposed a thin film (made by dissolving cholesterol in chloroform, pouring it on a glass plate, and allowing the chloroform to evaporate) to an atmosphere fully charged with hydrogen peroxide vapour for twenty-four hours at a temperature of 53°C . Similarly he exposed to hydrogen peroxide vapour a vesical calculus normally possessing no skotographic power. He found that now both cholesterol and vesical calculus affected the plate profoundly, but that within twenty-three hours of their removal from the atmosphere of hydrogen peroxide they had completely regained their original freedom from skotographic power. Probably the last traces of hydrogen peroxide had disappeared long before twenty-three hours, but of this there is no proof. This experiment bears upon the length of time during which skotographic power is held by a substance—a subject which will claim our attention shortly.

The second set of experiments concerns the so-called peroxydase effect shown by certain tissues. In its best-known form the peroxydase reaction is represented by the guaiacum test for blood. It depends upon an oxidation of the traces of guaiaconic acid present in the freshly-prepared tincture of guaiacum by oxygen that has been set free from hydrogen peroxide by a substance (peroxydase) present in the substance undergoing the test.

In examining a large number of dried and powdered tissues from this point of view, as well as from that of their skotographic power, I found, speaking generally, that the degree of peroxydase reaction manifested by them and measured against a standard graduated series of blue solutions, varies inversely with the skotographic power.

Table showing Results in Two Series of Ten Consecutive Specimens.

No.	Tissue.	Photo-graphic Value.	Peroxy-dase Value.	No.	Tissue.	Photo-graphic Value.	Peroxy-dase Value.
220	Kidney	6	0	320	Liver	6	2
221	Lung	4	6+	321	Kidney	3	4
222	Liver	3	5	322	Liver	5	3
223	Kidney	4	0	323	Kidney	3	5
224	Lung	2	4	324	Liver	5	0
225	Spleen	3	6+	325	Kidney	2	6
226	Liver	4	0	326	Liver	4	1
227	Kidney	2	0	327	Kidney	2	4
228	Spleen	2	4	328	Liver	3	5
229	Lung	0	2	329	Kidney	2	5

This fact would seem to indicate that a tissue possessing a large amount of a substance which splits up hydrogen peroxide has but little skotographic power, and conversely that a substance exerting a great skotographic power contains but little of the hydrogen peroxide splitting property. From this it is but a step to the conclusion (with Russell) that the skotographic property is in reality nothing more than a manifestation of the action of hydrogen peroxide upon a photographic plate.

But that this conclusion is not justified is shown by two sets of observations.

First, I have found that skotographic effect may be shown by watery extracts which from beginning to end of their exposure to the photographic plate contain peroxidase and are therefore in a condition to split up any hydrogen peroxide that may be formed immediately on its production. And secondly, the inverse relations of peroxidase and skotographic power do not obtain for dried and powdered carcinomatous material, for such material, whether it produce a great skotographic effect, or a slight one or no effect at all, is devoid of peroxidase. Amongst seventeen samples of dried and powdered carcinomatous material examined for the purpose only four contradictions were found. One of these is explicable by the fact that the growth was a pulmonary metastasis, and probably contained some pulmonary tissue which has, normally, a high peroxidase coefficient, and the remaining three, all of which were hepatic metastases, gave the least recognizable amount of peroxidase.

Duration of Skotographic Power.

Strictly speaking, the length of time during which a substance retains skotographic power can only be determined in the case of such materials as have actually been prepared. Thus, the material used in the production of Fig. 7 was prepared on March 24th, 1908, and inasmuch as a skotograph taken with the same substance a year later (Fig. 10) also shows effect, it is clear that the substance in question retained the power for that length of time. Numerous skotographs taken at intermediate times showed that the power was present throughout.

From the time of its preparation the substance was kept in a clear stoppered bottle in the laboratory without any special precautions. This experiment renders it probable that a substance which at any time shows skotographic power also possessed it at the time of its original formation, and this assumption becomes of importance in connexion with the skotographic power of calculi. Colwell has shown that cholesterolin calculi will often produce intense skotographic action directly after their removal from the body, but he has also shown that intense skotographic power may be shown by a cholesterolin gall stone that had been preserved in the museum of the hospital for over twenty-five years. In the case of vesical calculi he goes much further; for a calculus removed by Percival Pott, who died in 1786, shows well-marked skotographic power (Fig. 11), and faint but definite skotographic power is shown by a calculus removed from the body of a pre-dynastic Egyptian mummy, and therefore at least 7,000 years old.

Use of Photographic Plates Specially Sensitized for X-ray Work.

Recently plates have been put upon the market which are specially sensitized for x-ray work. It was thought that a series of comparative tests of the same substances, when exposed to these and to ordinary plates, might indicate whether the skotographic power of the substance under examination was more akin to light or to x-rays. Dried, powdered, and ether-extracted carcinomatous material from a metastasis in the liver and ordinary deal sawdust were examined in this way. It was found that the first appearance of action on the x-ray plate occurred at the end of the sixth hour of exposure, and on the Imperial special rapid plate not till the end of the seventh hour (the powdered growth being separated from the photographic films by thin layers of filter paper), and that the ultimate density of silver deposition was

greater also on the x-ray plate. When the material was not separated from the photographic film by filter paper, the first appearance of action was observable on both plates at the end of the first hour of exposure; but whereas it was quite marked on the x-ray plate, it was only just distinguishable on the other. In the case of sawdust these differences did not show themselves, the deposition of silver on the ordinary plate being very nearly, though not quite, as intense as that on the x-ray plate (Figs. 12 and 13).

Skotographic Action of Bacteria.

MacCormac¹ has published the results of an investigation into the question whether skotographic action is exerted by bacteria. He examined in this respect 27 different varieties of micro-organism, and from his table they may be grouped as below:

GROUP I. NO SKOTOGRAPHIC ACTION.

B. Rabinowitch, *B. Cohn* I, *B. Gärtner*, *B. phosphor. albiensis*, *B. intestinalis sporogenes*, *B. Danyasz*, *B. mycoides*, *B. coli*, *V. cholerae*.

GROUP II. SKOTOGRAPHIC ACTION FICKLE.

Sarc. flava, *B. Flezner*, *V. Metchnikovi*, *B. Hoffmann*, *B. megaterium*, *M. citreus agilis*, *B. pyocyaneus*, *B. phlei* II, *B. prodigiosus*, *B. typhosus*.

GROUP III. SKOTOGRAPHIC ACTION USUAL AND CONSIDERABLE.

Staph. pyogenes aureus, *Staph. pyogenes albus*, *B. tuberculosis*, *B. tuberculosis bovinus*, *B. diphtheriae*, "pathogenic throat yeast."

The importance of these researches will be indicated later.

SUMMARY.

In this and the preceding lecture I have shown that certain of the tissues of the human body show skotographic action (liver, kidney), while certain do not (spleen, lung); that a larger amount of this property resides in female tissues that possess it than in male of the same kind; that the amount present in the liver increases from infancy to the age of 55 years, with an unexplained drop in both sexes during the age-period 35-45, and that after 55, while it increases still further in the case of males, in females it undergoes a sharp diminution. I have shown that carcinomatous material possesses skotographic power, whether it be primary or secondary, and that female carcinomatous tissue has a higher skotographic value than male; and that the existence of a mass of carcinoma in a tissue modifies its normal skotographic value. I have found that certain substances commonly supposed to be causally related to carcinoma possess the skotographic power to a high degree (cholesterin gall stone), while others are devoid of it (clay pipe, paraffin). I have endeavoured to throw some light upon the nature of the skotographic action manifested by animal tissues and certain other substances, comparing their behaviour with that of woods in which the action has been regarded as dependent upon the formation of hydrogen peroxide, and with that of recognized radio-active substances. On this point I have adduced evidence showing that the animal tissues and other substances under examination cannot, so far as their action upon a photographic plate in the dark is concerned, be grouped conclusively with the recognized radio-active substances or segregated into a class such as that formed by the woods, and believed by Russell to affect a photographic plate in the dark by means of a purely chemical action. They occupy an intermediate position and have affinities with the woods on the one hand, and with the recognized radio-active substances on the other. Lastly, MacCormac, working in my laboratory, has shown that bacteria may be divided into groups according to their skotographic power, and that the only group which acts in this way with constancy and to a marked degree is a small one, which includes the pyogenic staphylococci and the bacilli of tuberculosis and diphtheria.

The bearing of these observations upon the question of carcinoma must be left for consideration in the last lecture.

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¹This calculus is preserved in the Museum of the Royal College of Surgeons, and was kindly lent by Mr. Shattock. Owing to its unique character, it was impossible to deal with it as with other specimens. Hence a flat surface could not be placed in contact with the photographic film. The original skotograph was shown during the lecture, but the markings, though definite, are too faint for reproduction in a plate without retouching, which is, of course, inadmissible.

A Lecture

ON THE

RED DEGENERATION OF UTERINE FIBROIDS COMPLICATING PREGNANCY.

DELIVERED AT THE MEDICAL GRADUATES' COLLEGE AND
POLYCLINIC, MAY 5TH, 1909.BY JOHN BLAND-SUTTON, F.R.C.S. ENG.,
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Of all the genera of tumours to which women are liable, the uterine fibroid is the most common, and there is no genus of tumours which has such a definite age-distribution. Though the uterine fibroid is such a common tumour, like pregnancy, it only arises during the menstrual period of life, which in Great Britain covers an average period of thirty years, from the fifteenth to the forty-fifth. There is, however, this difference—from the twentieth to the thirtieth year pregnancy is extremely common, the occurrence of a large fibroid uncommon. From the thirtieth to the forty-fifth year women are as liable to grow uterine fibroids as to become pregnant. The interval between the twenty-fifth year and thirty-fifth year of a woman's life may be regarded as the great child-bearing period (Matthews Duncan). It is clear that in the interval between the thirtieth and fortieth years of life there is so much overlapping of the child-bearing period and the fibroid-growing period that the co-existence of pregnancy and one or more fibroids in the uterus ought to be fairly frequent; such is indeed the case (see table). In relation to the frequency of this combination, which, as I shall endeavour to show, is a piece of ill luck for any woman, we have to remember that uterine fibroids are quite as common in spinsters as in married women, and it is a fact that among barren married women fibroids are very common; and although those who practise midwifery cannot come to an agreement as to whether fibroids cause sterility, or sterility causes fibroids, women with fibroids often conceive. Pregnancy under such conditions often goes successfully to term; frequently it is a serious matter for the patient, especially if she be a primigravida who has married late in life and possesses a large fibroid in the lower segment of her uterus, or in its neck.

In this lecture it is my intention to deal with the influence which pregnancy exerts on the fibroids. The baneful effects which fibroids exercise on the fetus, especially those connected with delivery, are for the greater part mechanical, and will not be considered. The dangers to the mother constitute my theme on this occasion.

In order to realize the disturbance which pregnancy induces in uterine fibroids, we should remember that in a normal adult virgin the uterus is on an average 3 in. long, its wall is 1 in. in thickness, and the uterine cavity measures from the "os" to the fundus 2½ in., and the whole organ weighs between 2 and 3 oz. The pregnant uterus at term is about 13 in. long, with walls ½ in. thick; it weighs between 2 and 3 lb.; its capacity varies from 1 to 1½ gallons. At the full period of pregnancy it forms an ovoid muscular bag, the os uteri occupying the narrow end. These weights and measurements afford some notion of the extraordinary changes produced on the uterus by pregnancy.

The uterus differs from all other hollow viscera in the extreme thickness and rigidity of its walls. From the histologist's point of view it would appear to be the last organ in the body whose tissues would yield to an expanding force within, and gynaecologists sometimes appreciate this when they attempt to forcibly dilate it with hard metal instruments.

There are few physiological events so clearly appreciated as the simple, easy, and rapid way in which the uterine walls soften, stretch, and increase in size under the mysterious influence of an embryo growing within it. The changes may be expressed as increased vascularity, multiplication of the muscle cells, and softening of the uterine tissues.

When the walls of the uterus are occupied with fibroids and pregnancy ensues, it is undeniable that these tumours, depending as they do on the circulation of the uterus for nutrition, are often influenced by the altered conditions.

The changes wrought in them by pregnancy have been described by many writers as consisting in the softening and flattening out of interstitial fibroids; also that the tissues of these tumours multiply with the growth of the uterus coincident with pregnancy. Indeed, this supposed active growth of fibroids during pregnancy appeared to receive support by the fact, noted by many writers, that the tissues of fibroids lodged in a pregnant uterus often became red or flesh-coloured; this alteration in colour was supposed to be due to an increase in the muscular tissue of the tumour. Some observers attributed the alteration in colour to increased vascularity of the tumour, and others to actual bleeding into its tissue, and it seems somewhat odd that no one endeavoured to determine the nature of this striking change with the assistance of a microscope. Several surgeons, myself among them, had given some attention to this alteration in the colour and texture of fibroids in the walls of pregnant uteri, and realized they were degenerative changes. I had even taken the trouble to have several examples examined bacteriologically, but with negative results. In 1903 Fairbairn made a valuable communication to the Obstetrical Society, London, entitled "A Contribution to the Study of one of the Varieties of Necrotic Change—the so-called Necrobiosis in Fibro-myomata of the Uterus," which served to focus attention on this subject, and, among other matters, points out that he had failed to find micro-organisms in these red fibroids, and that the red degeneration occurred in fibroids lodged in the unimpregnated as well as in the gravid uterus.

It may be stated at once that the occurrence of red degeneration of fibroids in non-gravid uteri is admitted by all gynaecologists, but it is equally true that the change is more frequent, more extensive, and more intensive when associated with pregnancy.

Another important feature accompanying the red degeneration of fibroids when associated with pregnancy is pain and tenderness. I appreciated this in the first examples of the condition which came under my notice, and have persistently called attention to its clinical significance. Before considering this symptom in detail, it will be useful to describe the alteration wrought in the fibroids when the subject of this change.

The ordinary colour of the common hard uterine fibroid on section is dirty white, or very pale yellow; in many degenerating and necrotic fibroids the yellow deepens. During pregnancy a fibroid may assume a deep red or a mahogany tint. In the early stages a tumour undergoing this change exhibits the colour in streaks, but as the pregnancy advances the whole tumour becomes affected, and in well-marked examples the whole fibroid softens and becomes diffident. I have known such a softened tumour to rupture its capsule during the puerperium, and the red softened tissue to be discharged from the uterus in shreds (No. 2 in table); the medical attendant regarded this stuff as "retained secundines." In this instance the tissue was the colour of mahogany. Even in this fibroid no micro-organisms were detected in the bacteriological laboratory. This happened in 1901. The failure to find micro-organisms in these degenerating fibroids astonished me, especially as many of them immediately after removal exhale, on section, the peculiar odour of stale or putrid fish. On microscopic examination, the tissue of the fibroid is found to be necrotic, and refuses to stain; the characteristic redness is due to the diffusion of blood pigment through the necrosed tissues.

This softening of the tissue composing a uterine fibroid sometimes takes place with great rapidity, and reduces even the hardest (uncalcified) fibroid to the consistency of soft soap. Recently some new investigations on the nature and cause of this red degeneration have been published by Professor Lorrain Smith and Dr. Fletcher Shaw. They investigated with especial care four examples, of which three were associated with pregnancy, and in which the "outstanding clinical features were pain and rapid enlargement of the tumours." In two of the cases there were also symptoms of toxæmia. A study of the clinical history of the three pregnant women shows that it was chiefly on account of pain that they sought surgical assistance, and in each instance hysterectomy was performed with success. In the non-gravid patient hysterectomy became necessary mainly on account of menorrhagia, but in addition she complained of some interference

with micturition. The chief interest in Smith's and Shaw's communication lies in the opinions they express on the pathology of the change, and in the fact that they isolated from two of the specimens micro-organisms. In one they found staphylococci in the blood vessels and in another diplococci in the spaces round the vessels. These observers also express the opinion that "the chief change found in red degeneration of fibroids consists in thrombosis of the blood vessels." They also state their belief that tumours which have undergone this change "are liable to become infected by septic organisms, and so give rise to acute toxic symptoms."

I was deeply interested in reading an abstract of this paper, and within a few days the following remarkable case came under my notice:

A primigravida, aged 31, two months pregnant, was suddenly seized with such acute abdominal pain during a railway journey, that she left the train at an intermediate station, and placed herself under the care of a doctor whom she knew. He considered the patient to be suffering from the bursting of a gravid Fallopian tube, and sent for me.

I saw her twenty-four hours after the onset of the symptoms, and found a large tumour, probably a fibroid, occupying the right half of the belly and reaching as high as the liver. I considered that some change had taken place in this tumour consequent on the pregnancy; it was also probable that it might be an ovarian cyst which had twisted its pedicle. The tumour was very tender and the patient very ill, with a pulse-rate of 112 per minute and temperature 100° F. I opened the abdomen; the tumour proved to be a large subserous fibroid with a thick stalk; the uterus was gravid, and as it contained several fibroids the size of golf balls, I removed it. The patient recovered. (Case 19 in Table.)

On examining the big fibroid in the course of the operation I noticed an area of softening about 5 cm. in diameter; it appeared as if acutely inflamed, and there were flakes of lymph over this soft area. On completing the operation I packed the uterus and its tumours into sterilized waterproof material, and on reaching London took it to the laboratory for investigation. When the large subserous fibroid was bisected, a pyriform patch of red softening appeared (looking exactly like an infarcted area) equal in size to one-third the total bulk of the tumour, the remaining tissue of which was very hard. The red area had become so soft that the finger could be pushed in with ease. Mr. Somerville Hastings undertook the bacteriological examination of the red tissue, and he succeeded in obtaining in pure culture *Staphylococcus pyogenes aureus*, and the method by which he effected this is set forth in his own words: "With a piece of iron heated to redness a linear scar some 3 in. or 4 in. long was made on the peritoneal covering of the fibroid. A scalpel sterilized by prolonged boiling was then taken and an incision made deeply into the tissue of the fibroid by cutting along the seared area. The cut edges were retracted, and two small pieces of tissue about the size of peas were removed by forceps and scissors, also sterilized by boiling, from the centre of the fibroid and dropped into two tubes of ordinary peptone broth. These

were incubated at 37° C., and the next day staphylococci were obtained from both tubes. The staphylococci gave the staining and cultural reactions of *Staphylococcus pyogenes aureus*, and the cultures were shown to be pure by being plated out."

The interstitial fibroids showed the red changes in streaks, but no micro-organisms were isolated from them.

From the clinical standpoint red degeneration of fibroids associated with pregnancy is of great importance, and especially its influence in causing them to become tender and painful. It is necessary to emphasize the fact that these two signs—painfulness and tenderness—are only markedly exhibited by "red fibroids" when associated with pregnancy, and they are a source of errors in diagnosis. It is also necessary to state that pain is present only in the early stages of the degenerative process; when the tumour is completely disintegrated it is insensative. This is illustrated by examples taken from the uteri of women after labour, in which the degenerated fibroid is so soft that the finger can be pushed into it easily, and painlessly; but these softened submucous tumours set up profuse bleeding from the uterus and place the patient's life in great peril. This is a matter of some importance, because to my mind it is an explanation of the ready way

in which submucous fibroids complicating pregnancy so readily become septic during the puerperium and entail a long and dangerous illness, which often terminates in the death of the patient unless the nature of the case is recognized and the peril averted by a timely hysterectomy.

A uterus may contain many fibroids in its walls, yet only one will exhibit this red change and become acutely painful whilst its companions remain colourless and insensative. In one instance a uterus in which the pregnancy had advanced to the end of the second month contained seven fibroids varying in size from a golf ball to a duck's egg; three of them exhibited the red change.

The remarkable feature of the pain accompanying red degeneration is the suddenness of its onset. It is so sudden and severe that it resembles the pain experienced by patients when an ovarian tumour undergoes acute rotation and twists its pedicle, or the shock produced by the bursting (or abortion) of a gravid Fallopian tube. It is true that, in very many instances in which operations have been performed for fibroids complicating pregnancy, they were recommended and carried out on the notion that the patients were suffering from an ovarian cyst which had twisted its pedicle, or rupture of a gravid tube. In 1901 I published a table of 8 cases in which submucous fibroids had been removed from the walls of the gravid uterus on account of continuous pain, and in all the cases the operation was undertaken on an erroneous diagnosis. In many cases the fibroid was regarded as an ovarian cyst which had twisted its pedicle; in some a pyosalpinx; in others a gravid tube which had burst, for it must be remembered that the uterus and one of its Fallopian tubes occasionally become gravid simultaneously (compound pregnancy). It is only necessary to read carefully the "reports" of red fibroids communicated to the Obstetrical Section of the Royal Society of Medicine to learn not only how frequently the change occurs in fibroids complicating pregnancy, but how it produces symptoms which mimic those caused by the axial rotation of ovarian

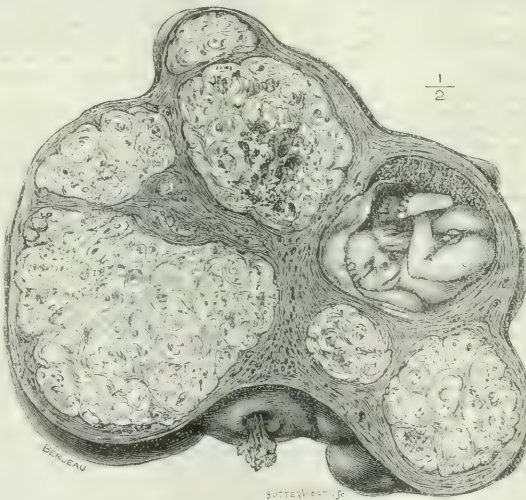


Fig. 1.—Uterus distorted with fibroids and containing a fetus of four months' development. From a primigravida aged 43. She recovered easily and quickly.

* The complete paper is published in the *Journal of Obstetrics and Gynecology of the British Empire*, April, 1909.

tumours, or the bursting of a gravid Fallopian tube, so that the most experienced practitioners of midwifery are often deceived.

The condition is being better recognised by obstetricians. It is clear that when a uterus beset with fibroids becomes gravid, the fibroids do not, as some believe, enlarge in consonance with the physiological increase of the normal muscular tissue of the uterus. That some of the fibroids enlarge is beyond doubt, but this is the result of interference with the circulation in these tumours producing oedema and colour change due to haemolysis of the blood, not to a rapid increase of muscular tissue, as so many writers have erroneously asserted. This is another illusion swept from obstetric art by careful microscopic inquiry. The student need only study the conditions which exist in the uterus depicted in Fig. 1 to appreciate the disturbance which the growth of the fetus must have produced in the "constellation of fibroids" by which it is surrounded. I removed that uterus from a primigravida, aged 43, on account of pain, realizing that she was pregnant, and that the acute pain and suffering which caused her to seek surgical aid were due, in all probability, to red degeneration of an interstitial fibroid, which could be felt as a tender uterine prominence in the hypogastric region. One tumour only in this uterus showed the red change; its companions exhibited the usual greyish-white tint common to hard fibroids.

It may interest you to know that even with the knowledge that the occurrence of red degeneration will produce pain, sudden and acute, like that accompanying rupture (or abortion) of a gravid tube, it is easy to make an erroneous diagnosis. The uterus represented in section in Fig. 2 illustrates this very well. I removed it from a primigravida aged 35, who had lived in sterile wedlock fifteen years. After over-running two menstrual periods she had a sudden attack of bleeding and painful seizures, which led the doctor to think that a miscarriage was impending. The bleeding continued, and at the end of three weeks the patient was placed under chloroform with the view of emptying the uterus, but a definite swelling could be felt in the right half of the pelvis which so simulated a gravid Fallopian tube that operative interference was deferred. Eventually the patient came under my care; the signs and symptoms accorded best with tubal pregnancy. Coeliotomy was performed. I found a gravid uterus containing many fibroids. A subserous fibroid as big as a bantam's egg and occupying the fundus of the uterus had swollen in consequence of red degeneration and split its capsule. There had been some bleeding into the abdomen, but nothing serious. The uterus was removed and the patient quickly recovered. The condition within the uterus is worth consideration, for there is a submucous fibroid projecting into its cavity. This tumour shows no degenerative change, but, as represented in the drawing, its capsule is enveloped with a thick layer of decidua.

I am particularly desirous to point out that when pain and tenderness, due to red degeneration of a fibroid, are present in a mild degree, they generally subside if the patient be kept at rest in bed. It is only the very severe cases which call for surgical treatment.

It is perhaps worth mention that a tumour occasionally grows in the ovary, which in its naked-eye characters, and even in presenting a whorled disposition of its fibres, resembles the hard uterine fibroid. The microscopical features of the "ovarian fibroid" are indistinguishable from those exhibited by the common hard uterine fibroid. The ovarian fibroid is also liable to soften, to liquefy, and to

calcify. As such a tumour may be met with at any age, from 17 to 77, it occasionally complicates pregnancy. An ovarian fibroid has been found incarcerated in the pelvis by a gravid uterus; when lying high in the abdomen above a pregnant uterus it has undergone axial rotation and twisted its pedicle, but in none of these adverse circumstances, so far as my experience shows, has red degeneration been observed. This is a matter worth attention from those who get the opportunity of examining such specimens, for if red degeneration is due to thrombosis, an ovarian fibroid with a twisted pedicle would be an ideal condition for its occurrence. I have on four occasions removed an "ovarian fibroid," each of which had been incarcerated by a gravid uterus, but none showed any signs of red degeneration.

In the early part of this lecture I mentioned, in referring to the overlapping of the child-bearing and the fibroid-growing period of a woman's life, that theoretically the coexistence of fibroids and pregnancy ought to be most frequent between the thirtieth and fortieth years. In order to test this I prepared the subjoined table, containing 20 consecutive cases of this unfortunate conjunction, which have come under my care since 1900.

The facts are significant, for the patients, with two exceptions, were primigravidae. These women had in most instances married late in life, or, if they had been married many years, there had been a long interval of sterile wedlock (in one instance fifteen years). The pregnancies, with two exceptions, occurred after the thirtieth year of life. In the case of the two multiparae



Fig. 2.—A gravid uterus in section. The walls were beset with fibroids. The fibroid shown in section is submucous, and its capsule is covered with a thick layer of decidua. From a primigravida, aged 35, and about two months advanced in pregnancy.

Table of Cases in which Fibroids coexisting with Pregnancy caused such Symptoms as to necessitate Surgical Interference.

No.	Social State.	Age.	Month of Pregnancy.	Operation.
1	S.	28	Third.	H.
2	M.	36	Puerperium	H.
3	P.	36	First	E.
4	P.	28	Third	E.
5	P.	32	Third	H.
6	P.	33	Seventh	T. H.*
7	P.	35	Fourth	H.*
8	P.	43	Fourth	H.
9	P.	40	Sixth	H.*
10	P.	33	Fourth	E.
11	S.	38	Fifth	H.
12	P.	35	Fourth	H.
13	P.	39	Second	H.
14	S.	44	Fourth	H.*
15	P.	35	Second	H.
16	P.	39	Fourth	H.*
17	M.	45	Puerperium	T. H.*
18	P.	41	Third	H.
19	P.	31	Second	H.
20	P.	35	Second	H.

P., Primigravida. S., Spinster. M., Multipara. H., Hysterectomy. E., Enucleation (abdominal).

* This signifies that the tumour was a cervical fibroid.

the fibroid in each instance caused such severe losses of blood during the puerperium that an operation became an urgent necessity.

I have tested these points by reference to other cases under my care, and the conclusions are confirmed, so there is no reason to encumber the lecture or the reader with a longer table.

My knowledge of this red change in fibroids of the uterus complicating pregnancy is founded on a study of thirty-two examples which have occurred in my practice.

I hold no opinion as to its cause. The presence of micro-organisms in the degenerated tissue is in all probability exceptional; the thrombosis and the infarction theories require more proof. The only facts established in regard to red degeneration of fibroids is its proneness to occur in them when the uterus is gravid. Fibroids so changed seriously menace pregnancy.

ON THE SPONTANEOUS RUPTURE OF CYST-ADENOMATOUS OVARIAN TUMOURS.

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THE main aim of this communication is to urge (1) that the primary cause of cyst rupture in cases of ovarian cyst-adenoma is tumour degeneration (necrosis), (2) that the rarity of cyst rupture in relation to the frequency of tumour degeneration is not inconsistent with the adequate vascular compensation almost invariably supplied by adhesions to the degenerated tumour, and (3) that these adhesions are simply reparative and are not, as generally stated, the result of peritonitis. The innocent leakage through attenuated and thin cyst walls, a common and normal occurrence, is distinguished from the rare rupture: on the absence in the former, or on the presence in the latter, of clinical manifestations is based a working distinction.

Cyst rupture as an appreciable clinical and pathological complication is one of the accidents in a case of ovarian cystic tumour, and just as in a case of accidental haemorrhage during pregnancy, trauma, or violence in the history of its causation, is almost invariably wanting.

The records from the earlier and darker days of ovariotomy of sixty-six and eighty tappings of an ovarian cyst leave no doubt as to the healing power of the normal cyst wall.

Meredith¹ reported an exceptional result of tapping in a case of his which became famous as evidence of the vital activity and resistance of the peritoneum; in a single woman, aged 47, after one tapping the refilled cyst ruptured and reruptured, into the peritoneal cavity, thirty-four times, and on each occasion with local pain and subsequent diuresis. At the end of a ten years' history the ovarian cyst, containing 21 pints of fluid, was removed with success; only a few filamentous adhesions around the aperture of the original puncture were found during the ovariotomy by Meredith.

Sir Spencer Wells² discussed adhesions after tapping; he stated that they were most frequently absent, and that there were firm adhesions in some patients who had never

been tapped; the mortality table of 500 cases after one to eighteen cyst tappings proved that tapping itself had little adverse influence on subsequent ovariotomy in his hands.

The revival of tapping is not to be desired. Sir Spencer Wells said that during later years he became more impressed with the danger of putrefactive changes after tapping without antiseptic precautions.

In the absence of infective organisms and of loose particles of growth capable of implantation, intraperitoneal cyst rupture—at the time unattended by serious haemorrhage—is of itself a harmless, or almost harmless, pathological process; but, inasmuch as the opening from a degenerated cyst is permanent, the contents continuously dribble without any barrier of defence such as is provided by the haematocoele sac around a chronic tubal drip in a case of tubal mole. Hence, free intraperitoneal fluid (hydroperitoneum), devoid of any plastic properties, bathes on all sides the loose tumour.

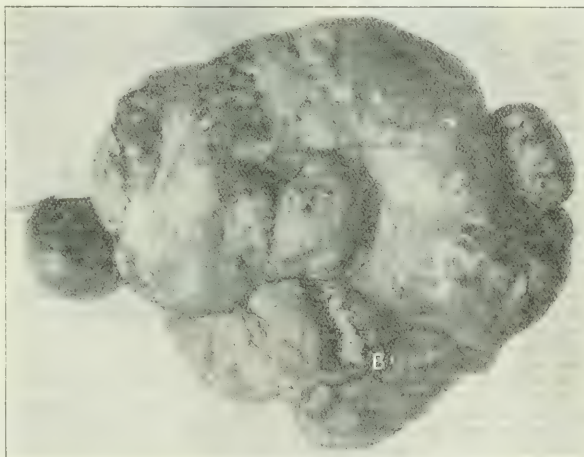
Elsewhere,³ Dr. T. E. Walker and myself reported on the invariable absence of hydroperitoneum when adhesions were universal, whether with innocent or cancerous tumours and after torsion of the pedicle.

Cancerous tumours as a rule degenerate earlier, and adhesions are, or rupture is, earlier and more frequent than with simple tumours.

Degenerative changes are the common exciting causes of adhesions. Cyst rupture does not occur at the site of adhesions, but through unprotected degenerated areas of cyst wall. In Case 153 in Sir Spencer Wells's table of 1,000 ovariotomies there were, to portions of the tumour, parietal and omental adhesions, and there was, over other non-vascular, central portions of degenerated patches,

demonstrated in the same tumour, a covering of recent plastic exudate.

Where repair from without is defective the degenerated portions of the cyst wall may rupture. This is what had clearly taken place in the four cases of my series.



CASE 1.—A. H. A, Probe in Fallopian tube. B, Site of rupture.

CASE 1.—The aperture of rupture measured 3 in. by 1 in.; its edges were raised, everted, and adenomatous; the aperture led into a central cyst—half the size of the whole tumour—surrounded by tiers of small cysts; the small cysts contained thick, mucoid fluid. The whole tumour measured 7 in. by 7 in. by 3 in.; necrotic in many areas; two

patches of adhesions to bladder and rectum denoted early degeneration before the tumour—then the size of an orange—ruptured (vide infra).

A. H., aged 27; six years married; two children; each born by normal labour.

History.

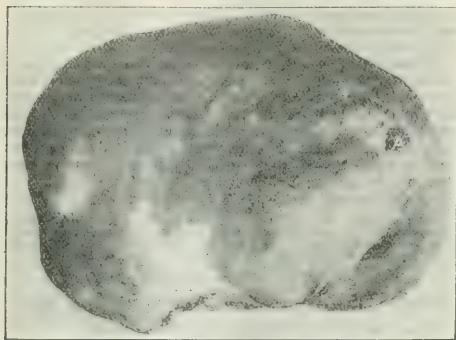
Menstrual losses recurred fortnightly from the birth of the second child in August, 1906, to August, 1907—that is, for exactly one year; subsequent menstrual suppression continued for 16 months; epistaxis is stated to have recurred frequently and irregularly during the menstrual suppression. Dr. James (J. H. Preston), who sent the patient to me on January 20th, 1909, wrote: "The first abdominal pain, four months after the birth of her second and last child, was attributed to acute peritonitis; several weeks afterwards the abdomen was full of fluid; after tapping the abdomen, the tumour, the size of an orange, was felt; the intraperitoneal fluid reaccumulated with varying rapidity, and once there was a three months' interval between the tappings; latterly the large amount of over 2 gallons has been removed every fortnight or three weeks; the fluid has always been clear, pale in colour, and thin; specific gravity, 1005; only once a little blood was present; the oedema of the legs of a few months ago has not returned." The total number of tappings was fourteen.

Physical Examination.

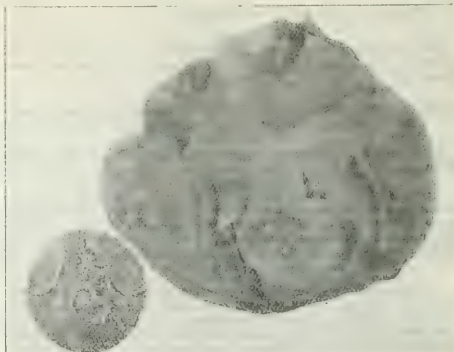
January 20th, 1909. The abdomen had been tapped the previous day; 3½ gallons of fluid were then withdrawn. The

CASE II.—*Ruptured cyst: circular opening $\frac{3}{4}$ in. in diameter: cyst-adenoma of the right ovary, 6 in. by 6 in.*

M. A. D. (sent by Dr. F. J. Knowles, St. Helens), aged 26



Case II.—M. A. D. A. Site of rupture.



Case III.—M. G. Site of rupture indicated by an arrow. A, Photomicrograph.

flaccid state of the abdomen aided the palpation of the firmly cystic, lobulated, mobile tumour. The patient was feeble and emaciated; the flexure surfaces of her forearms were hollowed. Her strength was barely equal to the contemplated radical operation; she returned to Preston, in spite of entreaties not to waste time and not to allow the fluid to reaccumulate. She again came to Liverpool five days later and entered the Hospital for Women.

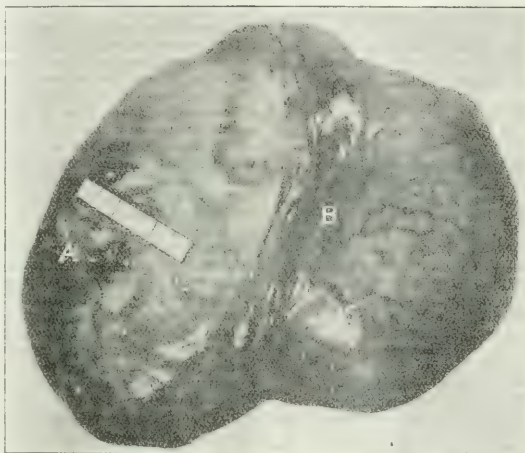
Operation.

On January 27th the abdomen was opened: 17½ pints of free fluid; specific gravity 1006; alkaline; mucin and protein present; probably a mixture of ascitic and ovarian fluids (Dr. T. W. Jones). The pedicle, 3½ in. wide, was laced through and through with No. 0 catgut. There were two localized adhesions to bladder and rectum.

After-History.

For a few hours she appeared to be dying; pulse 160; later she rallied appreciably, and the next day her condition was hopeful. On the fifth day Dr. McClellan, the house-surgeon, found a round and afterwards successfully treated a small carbuncle, 1 1/2 by 1 1/2 in., on the back of her neck. The highest temperature was 99.2°, on the fifth day after the ovariectomy, when the carbuncle was found; her pulse at that time remained at 120.

She is now well advanced in convalescence, in spite of a whitlow on the middle finger of her right hand, self infected from contact with the caruncle.



Case IV.—E. B. A, Site of rupture. p, Omental blood vessels.

six years married; three children, the youngest aged two years.

History.

History of ill health and increase in the size of the abdomen; she did not consult a doctor. During lactation for nine months after the last confinement there was menstrual suppression; menses afterwards regular until four months ago; since then the flow recurred fortnightly with pain. Throughout the whole day preceding her admission, from 9 a.m. onwards, the patient suffered from distressing vomiting, wrongly attributed to poisoning by uncooked plums consumed overnight.

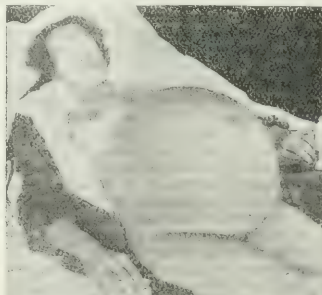
Operation.

She was admitted into the Hospital for Women on August 18th, 1907 with fever, 100° F., pulse 120; irritable bladder and constipation. The abdomen was tightly distended and tender; there was free fluid and a tumour. On August 19th, the day after admission, the abdomen was opened; present in considerable ovarian tumour was removed; its pedicle was laced with cagut.

After-History.

A nightly rise of temperature of 100.4° F. for the first three days, and afterwards a normal temperature were recorded. The pulse fell from 120 to 80.

CASE III.—Cyst-adenoma of right ovary with circular opening of rupture $\frac{3}{4}$ in. in diameter: tumour 6 in. by 6 in.



Combined pregnancy and cyst adenoma:
large size without evident degeneration. Slight
emaciation.

M. G., a patient of Dr. Hugh T. Shaw, aged 50; single. Before the climacteric, at 44, menstruation had been regular. For two

years she had complained of sickness and weakness. Six months ago her abdomen was swollen. She has lost flesh. Abdominal pain at intervals. The abdomen contained free fluid around an ovarian cystic tumour. The fluid decreased in amount during the few days she was at rest in hospital.

Operation.

On November 14th, 1900, the abdomen was opened, and the thick ovarian intraperitoneal fluid and the ovarian tumour were removed.

CASE IV.—*Cyst adenoma, 8 in. by 5 in.: one heavy tumour, tensely cystic along the right and less tensely cystic along the left border.*

E. B., aged 42, twenty-six years married, three children, the youngest 10 years old.

History.

History of abdominal pain for one year; irritable bladder: menses longer in duration and shorter in interval. She had lost flesh. She was a sallow, anaemic woman. There was an adenomatous polyp of the cervix uteri; the ovarian tumour in the abdomen reached 2 in. above the umbilical level.

Operation.

At the operation on February 16th, 1909, the pedicle was ligatured and the whole tumour removed from amidst a pint of free ovarian fluid: the small aperture of recent rupture of the cyst and the dribble of its contents were observable through the large incision before the tumour was handled during the operation. Adhesions supplied by one omental band of blood vessels attached to the tumour some distance from the site of rupture.

A brief analysis of the four cases is suggestive. In non-malignant cyst adenomata the clinical manifestations are those of—

(a) Tumour degeneration: (1) impairment of health disproportionate to the size of the tumour; (2) abdominal pain; (3) variable distension of the abdomen; (4) irritability of the bladder; (5) irregular menstruation subject to the usual modifications of pregnancy, lactation, and the climacteric.

(b) Rupture of the cyst, acute pain, recurrent pain, vomiting, the accumulation at a variable rate of free fluid in the abdomen.

The diagnosis of cyst rupture by free intraperitoneal fluid can only be (1) positive, when the partially-filled cyst can be felt or when the previously firm cyst has completely collapsed; (2) presumptive, when the clinical manifestations of degeneration and rupture have been obtained; and (3) occasionally and exceptionally, when the free fluid is small in quantity and the rupture minute, both may escape detection before and during the operation of ovariectomy. The modern preference for removal of the tumour entire, if practicable, accounts for a long incision in Case iv, whereby both the 20 ounces of free intraperitoneal mucoid fluid, and the dribble through the small aperture of rupture were exposed to view.

The teaching of Matthews Duncan—that, although the diagnosis of an ovarian tumour approaches practical certainty, it is not one of scientific precision—applies also to the recognition of complications.

The ovarian tumours of small size and the largest of only moderate size in my series of ruptured cysts had impaired the health of the patients to an extent unusual for the size of each growth. Not one was malignant. The general peritoneum, so far as it was visible, was only changed in one case (i), in which it was injected and thickened, but not shredded.

The quantity of fluid in Case i may be estimated at 37 gallons, but it is not the fluid alone that exhausts the patient.

Records of tappings, as of other achievements during life, have been preserved in odd places. On the authority of T. Stafford Lee,¹ an old tomb (1728) in Bunhill Fields Cemetery, inscribed with the name of Dame Mary Page, who died at the age of 55: "In 67 months she was tapped 66 times, had taken away 240 gallons of water." Several similar epitaphs have been discovered. A dried ovarian cyst in the museum of the Royal College of Surgeons² is catalogued with this history: "Between 1757 and 1783, a patient, aged 27, to begin with, underwent 80 tappings, and lost 6,631 pints of fluid in 26 years."

The mechanical inconvenience caused to a patient by an abdominal tumour may be distressing. A multiple pregnancy or a combined ovarian tumour and advanced pregnancy entail physical inconvenience equal to that of an ovarian tumour of corresponding total size, yet the vital effects on the patient have always been widely different, as illustrated by the photographs.

Degenerative changes in cyst-adenomata are important; they frequently exist without clinical evidence, because the often slowly formed compensatory vascular adhesions they excite check or modify their course. Rupture is rare, and, like the degeneration of which it is the consequence, may occur early with a small growth, as in Case i, where the growth was the size of an orange.

Degeneration, whether the tumour be ruptured or not, varies in its effect on the patient with the degree of vital reaction she possesses, and with the total recumbent rest she takes; it may be revealed by corresponding clinical symptoms showing exacerbations or improvements. These variations are inconsistent with a locally progressive simple tumour, and they have not been shown to have been due to chronic inflammation.

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THE INCIDENCE OF GONORRHOEA IN GYNAECOLOGICAL HOSPITAL PRACTICE.*

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It is somewhat remarkable that a disease so widely spread in the community and disastrous in its effects upon the female pelvic organs should have been treated with less attention than the more rare gynaecological diseases. The explanation is partly the natural avoidance of an unpleasant subject. It is also probable that medical practitioners who are not regularly attending gynaecological departments do not fully realize the prevalence of the disease. Again, dread of publicity and possible litigation prevents frank statements from the doctor to the patient or patient's relatives. It therefore arises that the medical profession as a whole is somewhat indifferent on the subject of gonorrhoea, from ignorance of its prevalence, especially in the chronic forms.

Cases may be regarded as simple leucorrhoea, cystitis, or pelvic inflammation, unless a searching inquiry is made into their etiology. It follows that the lay public is entirely unaware of the lifelong suffering and chronic ill health caused to thousands of women annually by this infection. Otherwise it is inexplicable that while attention is concentrated on the falling birth-rate, no one should have brought forward gonorrhoea as the most frequent cause of sterility. Women are not infrequently blamed as unnatural creatures losing the maternal instinct in the present-day struggle for ease and pleasure when they are the victims of a preventable disease. The chief danger of gonorrhoea lies in its chronicity, as cases are multiplied by those who believe themselves to be cured.

Impressed by the relatively large number of cases of gonorrhoea in all stages presenting themselves for treatment in the gynaecological out-patient department of the Liverpool Stanley Hospital, I have kept brief notes for the purpose of getting some approximately accurate figures of the frequency of this disease in women.¹

It will readily be understood that a seaport, with its mixed nationalities and large proportion of sailors, would be in the unenviable position of being more generally infected than an inland city.

It is from 1,052 consecutive out-patients and 157 in-patients, drawn chiefly from the wives of dock labourers and sailors, that I have made notes on which I venture to base these statements. In many cases I have confirmed the clinical diagnosis by a bacteriological examination of the discharge from urethra, cervix, Bartholini's ducts, or of the contents of pelvic abscesses.

Diagnosis.

Most of the usual points have been considered—namely, a history of pelvic inflammation following the first menstruation after marriage, associated with painful micturition, sterility, and, when there are children, with the presence of ophthalmia neonatorum.

* Read before the Association of Registered Medical Women, March, 1909.

In getting the history, leading questions have not been asked, as it only adds mental misery to her physical sufferings if the suspicions of the patient are aroused as to the cause of the illness. In acute cases the physical signs are usually sufficiently striking, in latent cases there is more difficulty when the organism cannot be found. The presence of bilateral inflammation of Bartholini's ducts, shown sometimes by redness at their orifices, acuminated condylomata on the vulva, a caruncular condition of the urethral mucous membrane, may assist the diagnosis. In some of the more acute cases oedema of the cervical mucous membrane may cause a polypoid appearance at the external os. This may be followed by an erosion of the cervix with a yellowish-green vaginal discharge. The urethral lips may be swollen and oedematous. At the time of the menopause an irritating vaginitis sometimes occurs. When the disease is no longer limited by the internal os, but has spread to endometrium or tubes, a tender enlarged uterus, or an inflammatory mass in the pouch of Douglas, will be noted. The bilateral character of the lesions is not an infallible guide, as I have found the organism in a unilateral pyosalpinx, and a solitary Bartholini abscess.

Obscure cases of cystitis are frequently of gonorrhoeal origin, as the organism readily extends along the urethral mucous membrane to the trigone, and chronic ulceration results. Direct examination of the bladder and urethra by Kelly's cylindrical cystoscope with head lamp or forehead mirror is of the greatest value. In the knee-elbow position the bladder can be inflated with air and readily inspected. If a small-sized instrument is used no anaesthetic is necessary. At the same time, local treatment can be applied to the affected bladder or urethra.

Menstruation is usually increased in frequency and duration when the endometrium is infected. A mucopurulent discharge without menorrhagia is symptomatic of disease of the cervix limited above by the internal os. In quiescent cases menstruation is not infrequently followed by an exacerbation of the discharge, when the gonococcus can be more readily found.

A latent case may become acute after extreme exertion, exposure, during pregnancy, in the puerperium, or from any cause producing pelvic congestion.

Attempts at replacement of fixed retroverted uteri, pessary treatment, or curettage may cause an exacerbation in a latent case.

Incidence.

American and Continental observers have published statistics of the incidence of the disease, varying somewhat widely. Noeggerath,* who in 1872 was the first to point out the frequency of gonorrhoea, made some rather sweeping statements, which he modified later. Sanger³ estimated that 18 per cent. of all gynaecological cases had gonorrhoea. His facts were criticized by Erb,⁴ who found 4.5 per cent. of all married women affected among the cases he examined.

Statistics will vary with the class of patient, the character and religion of the population, and the personal factor of the observer. In the results here recorded I have not included doubtful cases.

Among 1,052 consecutive gynaecological out-patients I found 149 cases of gonorrhoea—14 per cent.—an incidence rather lower than that of Sanger. This means that one out of every seven women who come or are sent to the out-patient department has gonorrhoea in an acute or chronic form. Three cases of gonorrhoeal vulvo-vaginitis occurred in children. Nearly all the patients were poor, respectable, married women. Of them, 47 were sterile, 30 per cent., while a considerable number had only one child. I have not been able to ascertain the relative incidence of sterility in the pelvic or uterine cases and of those limited above by the internal os, though it might be of some value to ascertain if the latter condition affects fertility least.

Among 157 in-patients, nearly all operation cases, 39 were gonorrhoeal, or 24 per cent.—1 out of every 4 women admitted. Of these 13 were sterile, 33 per cent. Of these 39 cases, 5 required operation for purulent salpingitis, 2 for pyosalpinx, and 2 for ovarian abscess. In 2 there was a haematoma of the ovary, in 1 haematosalpinx. The latter condition was associated with haematuria and profuse cervical discharge. In 18 there was chronic salpingitis with adhesions from localized pelvic peritonitis. Among

them were 3 cases of hydrosalpinx. A large majority required laparotomy, 7 only, chiefly very chronic and long-standing cases of endocervicitis, were treated by curettage and the intrauterine application of pure carbolic acid. Among the total number have been some striking instances of the latent form becoming acute.

One patient after treatment for chronic pelvic inflammation became pregnant. She had a good deal of pain during the pregnancy and in the puerperium an acute exacerbation occurred necessitating later the removal of both tubes and the separation of innumerable adhesions.

A second case illustrates the danger of curettage for sterility. This operation had been performed at another hospital, acute symptoms immediately supervening. The patient declined further operation and was treated by a doctor at home for some months. When she was sent to the Stanley Hospital she had a large ovarian abscess extending nearly to the umbilicus.

A third patient, a widow, gave a history pointing to gonorrhoea fourteen years before. She had a small cyst of Bartholini's duct, and suddenly developed acute purulent salpingitis. It was possible that the organism had remained quiescent in the duct, but a second infection was also possible.

A fourth case emphasizes the danger of pessary treatment in chronic gonorrhoeal cases. In a young woman attending for pelvic pain it was possible after prolonged douching to replace a somewhat fixed retroverted uterus bimanually and insert a Hodge pessary. A week later she returned with an attack of acute purulent salpingitis necessitating operative treatment.

Curettage occasionally reveals the fact that what one has believed to be a limited endometritis has spread to the tubes.

A patient was curetted for supposed simple endometritis. Under the anaesthetic a questionable thickening of one tube was felt. The next day there was a high temperature with symptoms of pelvic peritonitis, which fortunately rapidly subsided.

Curettage should be limited to cases of endocervicitis, where the infection has not spread beyond the internal os.

The Gonococcus.

The gonococcus, though difficult to cultivate, can be fairly easily recognized in smear preparations from its morphological characters, staining reactions, and tendency to penetrate the protoplasm of the leucocytes. In pus of long standing the gonococci may be absent or scanty, and when found look unstained and degenerate. Secretion from urethra, cervix, or Bartholini's ducts gives the best results. The organism has a tendency to linger in recesses lined by columnar epithelium.

Mortality.

In this series of 37 in-patient and 149 out-patient cases there has been no death.

Prognosis.

Once infected the prognosis as regards cure is uncertain. Even when the disease is confined to the lower zone—that is to say, is limited above by the internal os—it is possible for the organism to lurk in a recess and to cause further trouble. In pelvic cases complete recovery without a mutilating operation is uncommon, even when prolonged rest can be taken. Conservative efforts directed towards preservation of the tubes frequently end in disappointment and a second operation. Still, the occasional success of such efforts is an encouragement to refrain from unnecessarily severe measures. In most cases the patient, if a young woman, prefers to run the risk if the facts are explained to her. Reinfection frequently spoils a successful course of treatment. One patient curetted for long-standing leucorrhoea was quite well for six months. She then returned with an exacerbation apparently due to a reinfection.

In a mild case the prognosis is difficult. The disease may subside to light up again after extra exertion or during menstruation or pregnancy. In many cases the patient becomes the subject of chronic pelvic pain, which takes her from one hospital to another. The physical signs are so slight that she is often regarded as the victim of neurosis, and it is only on opening the abdomen that one finds justification for her complaints. In such cases operative measures are often quite successful, and, freed from the chronic pain, the nervous system may return to a normal condition.

Treatment.

The treatment of these cases has necessarily varied with the character and site of the disease. If acute, rest and

cleanliness have been the first measures adopted. Alkaline sitz-baths have been advised, to relieve the pain and remove the discharge.

In chronic bladder lesions, the local application of silver nitrate solution through a Kelly's speculum, followed by boric lotion irrigation has given good results.

Caruncular excrescences of inflammatory origin have been snipped off and the bases canterized, and similar treatment has been applied to acuminate condylomata.

Cases of acute salpingitis have been kept in bed until the temperature fell, on milk diet, saline aperients, having turpentine stupes applied for the severe abdominal pain. If pus was suspected, the abdomen was opened. In all but one case, at least one ovary has been left.

This patient, a young woman, came up a few months later looking very miserable. She said she had no pain, but felt wretched, was irritable, had pains in her head, and was getting thin. She improved on tonics to a certain extent. The operation had been for a prosalpinx which had undergone torsion with resulting haematosalpinx. The other tube was diseased, and so intimately associated with the ovary that removal was necessary. The uterus was left.

It has been occasionally possible to excise the inflamed corpus luteum containing sero-purulent material by a wedge-shaped incision, leaving healthy ovarian tissue, and such cases have done well.

Expectant treatment has been adopted when the acute attack passed off rapidly, and the physical signs were slight. Unfortunately cases of complete recovery have been few, a relapse often driving the patient back into hospital. After a sharp attack, when the patient has to return to hard household labour, such as washing, it has proved more satisfactory to open the abdomen, and then to treat them as conservatively as possible.

In two of the 39 cases the uterus was removed with the tubes.

In one case an ovarian abscess communicated by a small fistulous opening with the rectum, and was secondarily affected by *B. coli communis*. All the pelvic organs were matted together by adhesions of some eighteen months' standing, and the uterus was removed for vaginal drainage. It was easier to remove than to leave it.

In a somewhat similar case of large ovarian abscess the wall had become adherent to the bladder, into which it was on the point of discharging. With some difficulty on account of the infiltration at the base of the bladder the uterus was removed with the tubes and right ovary, no rupture of the abscess taking place. As there was danger of leakage from the bladder, the pelvis was drained with iodoform gauze carried through into the vagina. The uterus was large, and its lining resembled the wall of an abscess cavity.

In both these cases the pouch of Douglas was opened up posteriorly to avoid leaving an undrained cul-de-sac. The after-result in these cases was better than in those in which the uterus was left, where leucorrhoea often persists.

Drainage has not been adopted in gonorrhoeal cases, unless there has been some complication, and only in one instance through the abdominal wall, where there was suspicion of injury to a ureter in a myxoedematous patient, whose condition did not warrant prolonging the operation. Drainage has proved to be entirely unnecessary, and, after mopping out the pelvis with warm saline solution on gauze sponges, the abdomen has been closed.

One case subsequently developed a small pelvic abscess, necessitating drainage, following the removal of a thickened tube and ovarian haematoma.

She was a very anaemic and debilitated woman. The abscess was so small that it could not be localized from below, and was reached through an incision above Poupart, through which adhesions were separated. Two fingers in the vagina were of assistance in locating the pus, the quantity of which did not exceed a teaspoonful.

In all cases the abdominal wall was sewn up in three layers, with fine catgut for the peritoneum, and buried continuous silkworm gut for the sheath of the rectus. No hernia has at present been reported, though belts were not advised, and the patients got up about the tenth day, leaving on the twelfth, unless there was some contra-indication. No suppuration in the abdominal wound occurred in any of these cases, except in that of the pelvic abscess, where the silkworm gut was removed at the second operation. It would appear that a high opsonic index has been reached, and that the tissues are highly resistant to microbial infection.

It is too soon to give complete after-histories. At present a considerable number have reported themselves as quite well. In three or four some chronic pain remains, and these are unfortunately those in whom adhesions were separated, leaving what were to all appearances healthy tubes. Leucorrhoea has persisted in some instances where the uterus was left.

Prophylaxis.

My object in bringing forward these facts is to renew interest in a disease extremely widespread, and the cause of endless suffering to many ignorant and innocent women, and in the hope that practical prophylactic measures will be suggested.

I would suggest that, with the co-operation of the medical profession as a whole, further investigations be undertaken to ascertain the extent of this disease, and some attempts made to lessen the incidence.

I do not venture to indicate how to deal with the sensitive social conscience of the present day, but it is obvious that ignorance constitutes a grave danger to the community.

Loyalty to the patient herself must be the first consideration, and the risks employers and others are running secondary. Apart from education, the only solution of the problem is notification, as has been suggested for ophthalmia neonatorum, so that early and complete treatment could be adopted and if necessary enforced. To this method, unfortunately, there are many grave objections.

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CAESAREAN HYSTERECTOMY IN PREGNANCY COMPLICATED BY MYOMA UTERI.

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A good deal has been written lately on the treatment of myomata in pregnancy. My experience in Leeds confirms the view that operative interference is very rarely called for to secure delivery. The myoma very rarely obstructs the birth. When, however, the parturient canal is seriously obstructed, operation is necessary to save the child and to obviate risks to the mother. When anatomical relations permit, myomectomy is the operation to be preferred, but in most cases that require operation hysterectomy is best.

CASE I.

Mrs. A. B., wife of a medical man, was brought to me by her husband in July, 1908, on account of myomatous growths in the pregnant uterus. She was 35, and had been married six years without becoming pregnant; she had enjoyed good health on the whole, and, though liable to dysmenorrhoea, had never suffered from menstrual excess. She had not suspected that anything was wrong with the uterus until a few weeks pregnant. Menstruation ceased in April, 1908, and labour was due about January 22nd, 1909. The usual symptoms of pregnancy were present when I saw her, but the uterus reached two-thirds the distance between pubes and navel in the third month, and there was a hard myoma on the right of the fundus. On vaginal examination, another could be palpated occupying the posterior and left wall of the cervix and projecting in the direction of the broad ligament. It was clearly recognized that this might prove an obstacle to normal delivery, but it was decided to let the case go to term if possible. The husband was very anxious that the child should be saved and that delivery should take place *per vias naturales* if possible, and that later the myoma should be operated upon, for he was contemplating removal to a foreign station, and very much dreaded the possible recurrence of the conditions now present at a time and place where skilled assistance might not be available. I willingly agreed to do my best to carry out his wishes, but stipulated that if at any time the parturient canal were found to be seriously obstructed I should be at liberty to perform Caesarean section and deal with the myomata at the time as might seem best. What one would most anxiously avoid would be to allow labour to progress to the second stage and then to be compelled to destroy the child, or to risk damage to the myoma and uterus, or else to have to perform Caesarean section on a patient advanced in labour after fruitless efforts at vaginal delivery. This discretion was freely given by those concerned.

In the following month the uterus increased rather quickly in size, and there were at least two attacks of severe pain, with symptoms of obstruction of the bowels; fortunately these yielded to simple treatment. During the autumn there was a good deal of pain in the left leg, and vomiting was troublesome.

In spite of our fears to the contrary, she went to term, and when she came into a nursing home on January 20th I was delighted to find her in very fair condition and free from serious symptoms. There could, however, be no doubt as to treatment, for the head was mobile above the pelvis, and could not be made to enter it, while a large, solid tumour occupied the pelvis and could not be pushed up. The liquor amnii began to be discharged on January 21st.

Operation.

The operation was performed on January 22nd. Mr. Hann administered chloroform, and Mr. L. R. Braithwaite assisted me. Through a median abdominal incision I drew the uterus forwards and removed the child by an incision in the fundus. On drawing up the uterus I was glad to find that below the myoma in the cervix there was space for a satisfactory supra-vaginal amputation. The right ovary was not removed. I tied the vessels with catgut, drew the edges of the stump lightly together with a few catgut sutures, and sutured the peritoneum over it in the usual way. No drainage was necessary. The myoma was then closed as usual.

This operation, which has superseded the old Porro, is to any one accustomed to hysterectomy a quick and easy one, for the size of the abdominal incision and the laxity of the tissues make it very easy to see and deal with all the parts concerned. The child was a very well developed male weighing 8 lb., and having a chest girth of 18 in. Except for a little temporary difficulty on the second day with intestinal distension, which yielded to treatment, the mother made an uneventful recovery. She had an abundant supply of milk, and suckled the child entirely from the fourth day onwards; the wound healed without suppurating, and the husband was able to take her home at the end of two weeks. She has progressed well since, and the child has gained on an average about 4 lb. a week.

The specimen removed was shown at the Leeds and West Riding Medico-Chirurgical Society on May 7th; it measures after retraction and hardening 12 in. by 7 in. It shows three myomatous nodules in the corpus uteri, and one as large as a fetal head in the cervix. It does not project into the cervical canal, and could not have been removed by the vagina before delivery. A portion projected downwards towards the sciatic notch, and probably pressed on the nerves.

CASE II.

This bore a close resemblance to Case I. A woman, aged 31, married three years, primigravida, was brought to me, when three months pregnant, by Mr. H. J. Roper of Leeds, in July, 1908. She was a spare but not unhealthy woman, and had suffered from no serious degree of menstrual excess. The myomata had never been discovered before pregnancy. The uterus reached nearly to the navel, and at least felt as distinct and rather mobile myomata could be felt through the abdominal wall.

Per vaginam several nodules could be felt in the lower uterine segment, threatening obstruction in labour, although not so great as in the last case. The usual signs of pregnancy were present. Labour was due about January 18th, but she did not go quite to term, but came into the nursing home on January 6th with the liquor amnii discharging.

Operation.

The operation was performed on January 7th, its details being almost exactly the same as in the previous instance—supra-vaginal amputation, right ovary not removed, retro-peritoneal treatment of stump, no drainage, no difficulties. The child weighed 5 lb. 7 female. The mother was not able to suckle through failure of secretion. The wound healed without suppuration, and the recovery was uncomplicated.

The uterus removed shows an extraordinary number of interstitial, subserous, and submucous nodules; there must be about twenty in all, larger or smaller. One of the submucous nodules was almost detached in the uterine cavity. There was no appearance of degeneration in the myomata.

I may refer, in closing, to a case on which I operated several years ago, where a myoma complicated a four months' pregnancy and was causing pressure symptoms. It was felt in the pouch of Douglas, and was supposed to spring from the cervix and lower part of the uterus. It turned out to be a myoma springing from the fundus of a retroflexed pregnant uterus, and could be drawn out of the pelvis on abdominal section. The uterus is now in our museum, and the case illustrates a difficulty in diagnosis which is worth noting.

The safety of modern Caesarean section, whether conservative or mutilative, is so well established as to need little emphasizing, but I think that there are many women with a sufficient degree of pelvic contraction to lead to loss of child after child who might well be encouraged to undergo delivery by abdominal section for the sake of having a living child.

UNDER the will of the late Miss Ann Hill of Peterborough, who died on March 20th, the Hunstanton Convalescent Home and Peterborough Infirmary each receive a sum of £2,000. They are also entitled to share in the residuary estate, and from this source will probably each receive some £700 or £800 in addition.

A SUCCESSFUL CASE OF HYSTERECTOMY FOR PUERPERAL INFECTION.

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In my own experience it is very rarely indeed that the question of performing hysterectomy for puerperal septic disease presents itself. In a series of 250 cases of the more severe type of puerperal fever, I have only attempted the operation once with a good prospect of success in the following case, though I have removed the uterus unsuccessfully in 5 other cases (twice by the vagina and three times abdominally) as a last resort and at the urgent solicitation of the relatives or of the medical attendant. As a rule, the patient is either in a condition of general septicæmia with streptococci in the circulating blood when she arrives at the isolation hospital, or if the lesion is well localized, reacts to vigorous disinfection of the uterus.

F. G., aged 23, a previously healthy primipara, was delivered at full term of a normal child on August 21st, 1908. A midwife only was in attendance, who is stated to have made vaginal examinations very frequently until the birth of the child, the labour lasting thirty hours. Half an hour after delivery, the placenta having partially come away, there was severe post-partum hæmorrhage, and a medical man was summoned, who found it necessary to introduce his hand into the uterus in order to detach the remains of the placenta. He did not wear gloves, and was unable, owing to the absence of any facilities, to disinfect his hands, or even wash them satisfactorily. Half an hour later, as the bleeding recurred, he repeated the manoeuvre, and then gave an intrauterine douche.

Sixteen hours later the temperature rose, and the patient had a rigor. She became rapidly worse, and ultimately—seventy-two hours after delivery—was notified as a case of puerperal sepsis and removed to Monsall Hospital.

Condition on Admission.

Her state was very grave. The pulse rate was 144 and the temperature 103°. The extremities were cold, and there was intense anaemia with much prostration. The abdomen was uniformly distended but there were no signs of general peritonitis; the fundus uteri could be felt externally 1 in. above the umbilicus. On further examination the vagina was found to be sloughing, with large necrotic masses on each labium and on the posterior wall. The cervix was split bilaterally, and the posterior lip was covered with greyish membranous exudate. The os was widely dilated, and fetid pus was flowing freely from the interior of the uterus, the cavity of which measured no less than 10 in. in length. The uterine wall was everywhere softened, and it would have been possible to push the finger through its substance without difficulty. At the fundus were several partially loose masses of placental tissue.

The advisability of removing the uterus forthwith was considered, but as the patient was worn out from want of sleep and in a very dirty condition from the absence of proper attention, and as it also appeared desirable to investigate the bacteriology of the blood before operating, I decided to temporize. Accordingly, under the analgesia afforded by a dose of alcohol followed by morphine subcutaneously, I scraped the interior of the uterus thoroughly with a large sharp curette, and swabbed the resulting raw surface with pure iodo solution, packing the cavity subsequently with gauze soaked in a 1 in 100 solution of the same preparation. Three pints of saline solution were then given subcutaneously.

Operation.

On the morning of the next day the patient had rallied somewhat, but the pulse-rate had not diminished, and the temperature remained at 103°. Two rigors had occurred. The cultures taken from the blood showed no growth (and remained sterile subsequently), while those from the interior of the uterus showed *B. coli* and *B. proteus* in large numbers. I came to the conclusion that there was no general bacillary infection, and that it would probably not be possible adequately to disinfect the uterus by further local palliative treatment, so I opened the abdomen and amputated the uterus at the level of the internal os, leaving both ovaries, and covering the stump with peritoneum in the usual manner. A rubber tube was placed in the remains of the cervix, and the peritoneal cavity closed without drainage. After the effects of the ether had passed off the patient was propped up in the sitting position, and three pints of saline solution given subcutaneously.

After-Treatment.

For the next ten days the temperature remained at about 101° until the discharge of pus from the cervix and sloughing vagina had ceased, but her progress after the operation was otherwise very favourable. She left the hospital sixty days after the operation with a firmly healed abdominal wound, and free from vaginal discharge. A month later I saw her again, and found the vaginal vault firmly healed. She had resumed her work as a tailoress, and had menstruated since her discharge.

I have only to add that the reason why I did not remove the cervix as well as the body of the uterus was because the patient's condition rendered it desirable that the operation should not be prolonged. In this case it had lasted for twenty minutes, and it then seemed that the further ten minutes or so which would be required to remove the cervix might turn the scale against the patient. On theoretical grounds, however, I should prefer the total operation in a similar case.

"CLEAN MIDWIFERY" IN GENERAL PRACTICE.

By ARTHUR H. GREGSON, M.B., CH B.,

BLACKBURN.

For five years no doubt had ever entered my mind as to the efficacy of mercury perchloride as a hand and labial disinfectant and a sure preventive of puerperal fever; but in December, 1905, a midwife sent for me to attend one of her septic cases, which proved fatal within a week; and after that, though none were fatal, several of my own had unpleasant rises of temperature; it seemed as though the infection would not be got rid of, so I determined to use rubber gloves.

At first they were carried in a glass bottle containing glyc. ac. carbolic, diluted ten times at one end of my bag; a yard of cotton-wool was also put in, and the midwifery forceps transferred to a sterilizer made by a local tinsmith for 7s. 6d. The nurse was required to find an enamel pan and some soda to boil the gloves, a bowl for lysol to transfer them to, another for perchloride to wash the labia with, as the lysol is too irritant, besides the usual washhand basin, the whole making a somewhat formidable array.

Before long, however, a case occurred in which elaborate preparations were out of the question; even a pint basin for the perchloride had to be borrowed—just such a case where perfectly clean midwifery would be held an impossibility. In these poor houses the gloves are put into the kettle and transferred to the mercury solution instead of to lysol, and this is found to do quite well. Of course the soda is omitted, and then the gloves must be boiled in it at home to remove any trace of blood or fat before being used again; whereas this is usually done at the patient's house, the pan being kept at one side throughout the case and used repeatedly.

The gloves having been boiled, one's own hands are washed with soap and water, all the folds of the patient's genitals and adjacent parts cleansed with perchloride and the vagina swabbed as thoroughly as possible with cotton-wool wet with the same solution and never dipped into it a second time; then one's hands are sterilized in the ordinary way and the gloves put on without filling with water, a pad of cotton being used to work them on, and the examination made without any lubricant except the 1 per cent. lysol when convenient, contamination from the anus being prevented by keeping a pad of dry wool over it. The patient is always instructed to have an enema before she sends for me, but too often she omits it. If during the vaginal examination the rectum is found overloaded and the os not fully dilated, an enema is given.

If instruments are found to be required, boiling water is poured into the tin, the gloves put in, and 2 per cent. lysol added. The whole are then boiled for five minutes with the spirit lamp, half the solution poured into a jug as a reserve, and cold added to the tin.

Such a change in routine had its disadvantages. Tactile sensation required re-educating, but half a dozen cases were sufficient to complete this. The waste of time was at first about an hour, but now it is only fifteen minutes, and is fully compensated for by not having to give intra-uterine douches later. If any rotating or turning is required, lysol makes the gloves too slippery, and perchloride must be used instead.

The greater peace of mind is worth much, although two or three cases of puerperal fever have occurred in my own practice since.

The first was one in which the patient had taken plenty of castor oil, and refused to have an enema, with the result that faeces contaminated my glove during the

rotation of an occipito-posterior into an occipito-anterior presentation, and taught me to leave the pad at the anus.

The second might easily have been a mystery, but that on my arrival a neighbour said, "She won't be long now, doctor." "You have examined her?" I asked. "Yes, but my hands are clean; I am washing," she answered. A washerwoman making a vaginal examination! In this case the mother-in-law remarked, "There should be no blood poisoning here," when she saw my preparations to prevent it.

The third was an occipito-posterior presentation delivered by rotation and instruments; the perineum was torn. There was swelling of the abdomen six hours later, which disappeared after defaecation next day. The temperature never rose above 99.6°, and became normal after removing a painful suture on the fourth day; the pulse fell from 108 immediately after delivery to 80 during the same time. Satisfactory progress reported on the seventeenth day. At noon on the eighteenth day I was called in again. She had vomited; was suffering from pain in the right iliac region; the temperature was 102°, and the abdomen again swollen. On vaginal examination there was tenderness limited to the right fornix; an intrauterine douche brought away nothing and caused no improvement. Involuntary defaecation commenced soon after, and a rigor occurred on the twentieth day. A consultation was held on the twenty-first day; the uterus was normal for the time, and the perineum healed, but the abdomen was more distended. Septic peritonitis was diagnosed, and the appendix mentioned as a possible source; but, owing to the circumstances, it was decided to regard the genital canal as the route of infection. She had always been much troubled with wind—a complaint which I remembered (when too late) that two of my male patients have recently been completely cured of by removal of the appendix.

Patients themselves like the gloves, because they slip in more readily than the bare fingers, and one commented that I had not scratched her.

The greatest enemies were the neighbours, who declared unanimously against the innovation, one admitting that she had not sent for me "because Dr. Gregson is so faddy"; another asking if I was afraid of blood; but the most annoying incident was the setting out of the report that a certain patient must have had syphilis, or gloves would not have been used, after which I put up a notice that an extra charge of 2s. 6d. would be made for rubber gloves.

Memoranda :

MEDICAL, SURGICAL, OBSTETRICAL.

PRIMARY EPIDIDYMITIS IN MUMPS.

On the evening of April 16th, 1909, I saw a youth, aged 18 years, lying in bed and complaining of a pain in the right testicle. This on examination proved to be due to epididymitis, the body of the testicle being quite sound. The temperature was 99.4°, and the history of the onset quite sudden and non-traumatic.

There was no urethral discharge or scalding, nor had there been any; the boy (a country lad) denied any sexual history, nor was there anything about the meatus urinarius to cause me to doubt the truth of his statement. I recommended supporting the testicle on a pillow covered with mackintosh, and hot fomentations, giving at the same time a saline purge. The next day the true nature of the case revealed itself. The left parotid swelled out in the typical way, and also the right submaxillary gland. The temperature rose to 103° and a little over. The body of the testicle began to swell the following day. In about ten days the fever and swelling subsided, and salivary glands and testicle resumed their normal appearance.

The unusual feature of the case is the primary manifestation in the epididymis. The so-called metastatic orchitis frequently precedes mumps, but in no case can I find a record of the epididymis taking the lead. The testicular manifestations are almost invariably unilateral and are frequently followed by atrophy of the gland, which fortunately did not occur in this case.

Whittlesey.

J. J. WADDELOW, F.R.C.S.Eng.

THE TREATMENT OF BOILS AND CARBUNCLES. No boil or carbuncle need be painful, nor should the treatment cause pain. I recently gave gas for a friend who opened and scraped a very painful boil on a man's arm. The treatment was drastic, it may have been efficacious, I do not know, but it certainly was painful. Not long previously I had treated a glycosuric man for one of a series of large boils on his neck. The previous boils had been cut or scraped *secundum artem*, and had caused great pain.

The treatment which I employ is simple. A pledget of cotton soaked in carbolic glycerine is applied to the boil and covered with gutta-percha tissue and a bandage. As soon as pus shows, the epithelium is gently turned back and the glycerine reapplied. As soon as a slight cavity appears some of the glycerine is gently inserted by means of a simple glass syringe, and again the poultice of glycerine is applied. In two or three days the slough separates, and after one final poultice of glycerine the cavity speedily closes, with the minimum of scar, under any simple dressing. The hygroscopic action of the glycerine relieves the tension—the cause of the pain—very speedily, and it need never recur.

I have never had occasion to use any other treatment. I have never seen a carbuncle spread when once this treatment was begun, still less have I seen any danger to life in my own cases.

One very serious case I saw recently in consultation—that of a butcher with a carbuncle 6 in. by 4 in. between the shoulders. The treatment described above was adopted, the spread of the carbuncle was promptly arrested, and a quick recovery ensued.

My glycosuric patient tells me he has had more than one boil since, but has not needed my help as he independently treated himself in the same way.

This method is not original. I owe it to my old teacher, the late Dr. John Duncan of Edinburgh. It may be that glycerine alone would suffice, but I have no fear of the carbolic acid, as the glycerine dehydrates the tissues and so probably prevents absorption.

London, E.C.

A. OGIER WARD, M.D.

TETANUS FOLLOWING SURGICAL OPERATIONS. I HAVE been deeply interested in the excellent paper by Mr. W. J. Richardson on the subject of tetanus occurring after surgical operations, and in the subsequent contributions by other writers on the same subject. I have personal experience of one case that occurred at the Ingham Infirmary, South Shields, in March, 1907, where I was at the time senior house surgeon. At the request of the surgeon who operated, I sent complete notes of the case very soon after it occurred to the *Northumberland Medical Journal*. It also formed the subject of a very prolonged and very interesting discussion by the Newcastle-on-Tyne Medical Society. I have unfortunately mislaid the notes of the case and the journal in which it was published; but I have been favoured by the Secretary of the Clinical Research Association with an exact copy of the report on the examinations made for me, and I believe I can give the other details fairly well from memory.

The patient was a woman, about 31 years of age, and the operation was ovariectomy. Everything went well from the time of the operation, the wound healed by first intention, and the patient was making an excellent recovery. About the seventh or eighth day after the operation she began to complain of pain and stiffness in the back of the neck, a little later this was followed by stiffness in the jaws and difficulty in opening the mouth. This condition advanced very rapidly, and within a few hours from the onset of the first symptom I came to the conclusion that she was undoubtedly suffering from tetanus. I started antitoxin treatment immediately, but in less than thirty hours from the commencement of the trouble she was dead.

I at once drew off some of the cerebro-spinal fluid and sent it to the Clinical Research Association of London for examination, but nothing specific was found. The catgut was suspected. We had at the time four varieties of catgut at the hospital from four different firms. The catgut used in that particular operation came from a stock we had just got in and which we had only then used for the first time. I may also say that to the best of my recollection it came from a firm—I remember the name of the firm—that supplied us then for the first time. The method of sterilizing in that particular case was the same as had been in practice at the hospital for a considerable number of years. I took samples of the four varieties of catgut, marked them A, B, C and D, and sent them to the Clinical Research Association for examination, which was carried out with great precaution and

every possible attention to detail. I quote here from their report.

"Several varieties of sporing bacilli, including atrophic as well as anaerobic organisms, were obtained from the various samples, but it was only in 'D' that an organism having the characters of the *Bacillus tetani* was found. . . . From the cultures of this sample 'D' of catgut we have isolated a large anaerobic bacillus, of which certain of the individuals show large terminal spores, giving to the rod the drumstick appearance characteristic of the *Bacillus tetani*."

A note was added to the report to the effect that it would not be possible to find proof of the specific nature of the bacillus without animal inoculation, and that they were not authorized to make an animal experiment made—this a triumph for antivivisectionists!

It only remains for me to add that sample "D" of the catgut came from the stock we had used in the operation here described, and I regret very much that the investigation was not carried further, and an animal experiment made.

London, N.

J. I. JAFFÉ, M.R.C.S., L.R.C.P.

POISONING BY BISMUTH SUBNITRATE INJECTED INTO A KNEE-JOINT.

IN view of the frequency of bismuth injections into cavities for diagnostic purposes by radiography, the following note may interest surgical readers:

P. E., aged 37, with a history of venereal trouble and joint affections but no injury, came under my care on March 8th. His right knee was swollen, and had been getting sorer and larger for two months. Several examinations of the fluid, which was at first purulent and later serous with some stringy fibrous clots, revealed no organism, either by culture or microscope. Calmette's test gave a slight positive reaction. As the serous discharge was rather profuse, I injected over 2 oz. of a 1 in 3 suspension of bismuth subnitrate in vaseline on April 12th. A rather tight bandage was applied, and in thirty-six hours a characteristic bismuth stomatitis with ulceration developed. There were no digestive symptoms except anorexia. The joint was evacuated, and the ulcers in the mouth healed up in a week, with the help of a feeble acid mouth wash and free use of swabbing with a solution of potassium chlorate. There was no looseness of the teeth. The joint also rapidly improved, and the knee was quite well to appearance and painless three weeks later. There was still some coloration round the teeth and gums when he left hospital.

Dundee.

ALEXANDER DON, C.M., F.R.C.S.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

DEVON COUNTY ASYLUM.

A CASE OF SUDDEN DEATH FROM PANCREATIC HAEMORRHAGE.

(Reported by SIDNEY J. STEWARD, M.B., B.C. Cantab.,
Assistant Medical Officer.)

THE patient in the following case, a man aged 65, had been in this asylum for seven years, suffering from depression with intermittent insomnia.

History.

During the last two years he became partially demented and had a delusion that something was wrong with his testicles, which he wished to have cut away. There was never any indication of organic physical disease, but he was always rather thin and sallow, with flabby muscles and a small, soft pulse. Being suicidal he was under constant observation, and his bowels and bladder were seen to act regularly; he ate well, did not vomit, and seemed in his usual state of health up to the time of his death.

He got up at 6.30 a.m. and dressed and washed himself, and at 7.30 a.m. he was seated in a chair, being tidied, when he suddenly fainted in the attendant's arms; he became pallid, cold, and pulseless, and died in two or three minutes, with no other symptoms than those of syncope.

Necropsy.

At the necropsy the pancreas was found to be totally disorganized by recent blood clot, which involved the surrounding tissues and the suprarenal capsules. Under the microscope these glands showed recent infiltration with blood, but there was no evidence of inflammatory change, fat necrosis, or new growth. The only other pathological conditions found were marked congestion of the lungs, liver, and spleen; a few minute cortical cysts in the left kidney, and one as large as a hen's egg in the right; a patch of old pleurisy on the right side; some thickening of the parieto-frontal pia arachnoid; slight degeneration of the cardiac muscle, the valves being competent. There was no pigmentation of the skin, no oedema, and no sign of trauma, and the urine drawn from the bladder *post mortem* did not reduce Fehling's solution.

REMARKS.—Death was apparently due to a haemorrhage into the pancreas, which involved the suprarenal capsules and the surrounding areolar tissue, and seems to have occurred spontaneously, as there was no evidence of any inflammatory change, new growth, or traumatism.

Reports of Societies.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Thursday, June 10th, 1909.

Mr. W. H. H. JESSOP in the Chair.

Congenitally Defective Lenses.

Mr. P. H. ADAMS described a series of cases of congenital displacement of the lens. The patients were a mother and seven out of her nine children. No other instance could be found in the family. In three cases the lens was displaced downwards, instead of the more usual displacement upwards, while in the eldest boy the dislocation was complete, thus leaving the pupil clear of the lens. The two members of the family who were unaffected had perfectly normal eyes. He also dealt with a family with congenital opacities in the lens. The great-grandfathers, grand-mother, father, and four of his children (out of five), as well as the father's sister, showed the peculiar opacities of the lens known as stellar cataract. Posteriorly there were from three to six primary rays, and numerous secondary ones, while some of them showed Y-shaped markings on the anterior surface as well. The opacities slowly increased throughout life, especially in the front of the lens, while the posterior markings were broader and less defined.

Retinal Disease.

MESSRS. A. HILL GRIFFITH and A. W. ORMOND read a paper entitled, *A Case of Retinal Disease, with Massive Exudation and Arterio-venous Communication*, the patient being a woman aged 31. The left eye had been removed for secondary glaucoma by Dr. Hill Griffith ten years ago. The fundus of the remaining eye showed very tortuous and distended retinal vessels, with varicosity of several of them, and a red blurred optic disc. In the extreme periphery of the fundus, deep to the retinal vessels, was a whitish mass, the limits of which could not be seen. The changes in the fundus were probably all due to vascular disease. The interest in the case was furthered by the fact that the other eye of the patient was removed for secondary glaucoma simulating an intraocular growth, and on examination it proved to be a case of extensive subretinal exudation, with retinal detachment and an old organizing haemorrhage, but no growth. The patient's sister also lost an eye from a similar cause, and the same condition was found on pathological examination.

A Filament in the Anterior Chamber.

Dr. GEORGE MACKAY reported a case in which an epithelial filament resembling a threadworm was observed in the anterior chamber of the eye of a girl aged 7. The child had always enjoyed good health, had no special illness, had never suffered from worms, and had not complained much about the eye. The filament had been first noticed when she was 8 months old. No independent movement had ever been detected in it, but the parents were under

the impression that it was slowly increasing in size. The eye was occasionally a little irritable, with a tendency to lachrymation, and a trace of ciliary injection. The tension was normal, the media otherwise transparent, and the fundus healthy. The pupil responded to light, although it was less mobile below than above. At the periphery of the iris, close to the anterior chamber angle, between the 5 and 6 o'clock meridians, a buffy-grey filament about a millimetre in diameter emerged between the fibres of the iris, and lay in close relation to the posterior aspect of the cornea, and appeared to rest lightly in contact with the sphincter surface of the iris. The structure terminated in a slightly bulbous free extremity, which did not re-enter the iris, nor extend to the angle of the anterior chamber. The arched filament had thus a slight spiral twist from before backwards. The vision of the right eye was approximately $\frac{2}{5}$; the left, $\frac{5}{6}$. The child was put under chloroform, and through an incision made at the corneo-scleral junction a little to the nasal side of the filament the foreign body was successfully removed, though breaking into two pieces, on account of its brittle structure. From the pathological examination made by Dr. Shennan of Edinburgh and Mr. A. E. Shipley of Cambridge no confirmation was obtained of the presence of a parasite. Microscopic sections showed that the filament was mainly composed of stratified epithelium, with a little loose connective tissue and some melanine pigment.

International Notation.

Mr. W. H. H. JESSOP presented the report of the International Committee on the Unification of the Notation of Visual Acuity and of the Meridians of Astigmatism. The following were the conclusions: (1) The meridians of astigmatism should be measured and represented as the observer looked at the patient; (2) the axes should be measured and represented in the lower semicircle of the trial frame. The numbering of the axes should start from the middle line of the face in each eye, and proceed downwards and temporally. The zero would therefore lie at the nasal end of the semicircle, and 180° at the temporal end; 90° would be below and midway between these points. The committee also agreed that for international test type numbers should be used. Landolt's ring was also thought to be a suitable object. The unit of measure was an angle of 1 minute, and the figures were to be constructed on this unit. The types were to be constructed as regards size on arithmetical progression, and the standard distance at which they were to be seen should be 5 metres. The source of light was to be diffuse daylight, if possible, opposite the types, and not laterally.

ROYAL SOCIETY OF MEDICINE.

SURGICAL SECTION.

Tuesday, June 8th, 1909.

Mr. WARRINGTON HAWARD, President, in the Chair.

Benign Tumours in the Wall of the Stomach.

Mr. WALTER G. SPENCER, in a paper on benign tumours of the stomach wall, related the case of a woman, aged 46, first seen by Mr. Barling. She then had three tumours in the abdomen, all freely movable. Two of them were mobile in the horizontal plane only, and these were taken to be the kidneys. Not until the operation was it ascertained that the third reniform tumour was really a submucous fibroma of the stomach. The tumour was shelled out and the patient did very well, resuming her occupation in three or four months. Two other cases of similar tumours from the Westminster Hospital Museum were exhibited, and reference was made to a number of reported cases. In the museum of the Royal College of Surgeons there were specimens of such growths from the horse and codfish. Diagnosis, except at the time of operation, was impossible, but it was important to remember that these neoplasms could easily be enucleated, and that it was unnecessary to excise any part of the gastric wall. Mr. BIDWELL drew attention to the fact that stomach tumours might be mistaken for mobile kidneys, and asked if the view that these innocent growths might "become malignant," suggested by the author, was generally accepted. Dr. MACNAUGHTON JONES said that myofibromata of the uterus certainly underwent malignant degeneration.

tion. Mr. HAWARD spoke of the invasion of benign tumours by malignant growth. Mr. SPENCKE, in reply, differentiated between surgical and histological malignancy, and spoke of the existence in the sections of his specimen of cells open to suspicion of malignancy, although the gross tumour was encapsuled and benign.

Gastric Surgery.

Mr. STANMORE BISHOP read a paper on some fifty cases of gastric operations, chiefly gastro-enterostomies, giving details of a number of representative examples. He laid stress on the value of x rays of the bismuthized stomach and intestines, both in diagnosis and in the study of the mechanical conditions existing after anastomosis. He also showed a series of clamps, some of which were of his own design, and intended to facilitate partial or complete gastrectomy. Mr. BIRWELL said that he never used clamps for his gastric operations, and pointed out the advantage of performing the anastomosis first, in the course of a partial gastrectomy. He had had experience of double gastro-enterostomy for hour-glass stomach, a procedure of which Mr. Bishop did not approve, and thought it could be performed with safety. In duodenal ulcer it was important to occlude the pylorus as well as to short-circuit the stomach. Mr. CHILDS mentioned a successful case of double gastro-enterostomy for hour-glass stomach. He advocated the performance of an anastomosis at the time of operation for perforation of a gastric ulcer, and illustrated the importance of early operation in these cases by instances from his practice. Mr. SPENCKE spoke of the desirability of having more than one type of clamp, a powerful one to crush the tissues and a thin-bladed pair for use subsequently, when applying sutures. Mr. BISROP, in his reply, objected to the attempt to occlude the pylorus, believing that it was impossible to secure permanent closure unless pylorotomy was performed.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—At a meeting on June 4th Mr. CANNY RYALL, in opening a discussion on *Spinal analgesia*, stated that he now used it for operations on all parts, his list including craniectomies, excision of the sympathetic, extirpation of the larynx, and excision of one-half of the tongue, together with removal of the glands from both sides of the neck. One of his patients was a little girl 2½ years of age, who was submitted to an operation on the head without the slightest alteration in her general condition. He introduced the method of making high injections in Budapest and Vienna. In Vienna he injected an old woman from whom Professor Eiselsberg removed the greater part of her thyroid, weighing over 12 oz., with the greatest success. These results were due to Jonnesco's discovery, which enabled him to incorporate strychnine with novocain. Novocain was a depressant to the vital centres. Strychnine, on the other hand, was a stimulant. When these drugs were mixed together and injected into the subarachnoid space the strychnine, by neutralizing the depressing effect of novocain, prevented the occurrence of respiratory paralysis. For operations on the upper part of the body he inserted the needle into the first, and for operations on the lower half into either the eleventh or twelfth dorsal spaces. He rarely used lumbar puncture, since better results were obtained by making injections into the dorsal region. There was no advantage in making a cervical puncture, for perfect analgesia lasting an hour or longer could be obtained in the head and neck by injecting the solution between the first and second dorsal spines. The great danger of spinal analgesia was the likelihood of respiratory paralysis supervening; but now that it was known that strychnine prevented its occurrence, it should be the duty of every one employing this method to incorporate this drug with the analgesic solution.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.—At a meeting in Leeds on May 21st, Dr. J. W. MARTIN (Sheffield), President, in the chair, the following were among the exhibits: Dr. E. O. CROFT (Leeds): (1) The left kidney from a fatal case of *Pyelitis in pregnancy*. The patient died in coma a few hours after a series of three fits. She was six months advanced in her second pregnancy. The first pregnancy occurred six

years before, and the labour had been followed by convulsions. The kidney was hydronephrotic, and contained a large quantity of milk like pus. The dilated and thickened ureter contained caseous material. The right kidney was normal in size, and on naked-eye section showed evidence of slight fatty degeneration; its capsule stripped easily. (2) A large, solid *Broad Ligament tumour* of unusual character. It had been enucleated from the broad ligament of a woman of 47 years without injuring the corresponding tube and ovary. It weighed 14½ lb., and measured 10 to 12 in. in various diameters. On section it showed a central, well defined, oval mass, 5 or 6 in. in diameter, of the consistency of a soft uterine fibroid and of a light brick-red colour. This was surrounded by a broad band of material of a myxomatous appearance. From this area a considerable amount of fluid exuded. The tumour was apparently an oedematous fibroid which had undergone central "red degeneration" and myxomatous degeneration of the peripheral portion. Dr. CARLTON OLDFIELD (Leeds): A specimen of *Carcinoma of the cervix* which had been removed by Wertheim's method. The patient was only 30 years of age. She was also suffering from syphilitic rubra and ecthyma. One enlarged lymphatic gland was found in the parametrium close to the cervix. Mrs. OXFORD (Pontefract): A specimen of *One-eyed monster* (cyclocephalus). Dr. J. B. HELLIER read the notes of a case of *Double uterus and vagina with unilateral haematocolpos*. The patient, aged 16, had menstruated regularly and normally for two years, with a little dysmenorrhoea. For some months she had noticed a swelling at the vulva but only at the monthly periods. Retention of urine led her to seek advice. There was a normal vaginal passage leading to a normal cervix uteri on the left side. On the right was a cystic swelling occupying the whole length of the vaginal wall, and protruding from the vulva. On incising this about 6 oz. of dark red inspissated menstrual fluid escaped. The right half of the uterus was also dilated but there was no sign of a haematosalpinx. The vaginal septum was completely excised. The patient had menstruated normally since. Dr. Hellier also showed a *Uterus with double pyosalpinx*. The uterine body had been amputated because both tubes and ovaries had to be removed. There was a septum extending to the os externum, and completely dividing the uterus into two cavities.

Reviews.

THERAPEUTICS.

Dr. I. LIPOWSKI, in the preface of his book on the value of the more important new drugs, says truly that to estimate the therapeutic value of new drugs put forward by able researchers, or as commercial speculations, is a hard task for the doctor. The volume is an attempt to place the new chemical drugs on a plain basis in the mind of the practitioner who, the author wisely assumes, has forgotten the chemistry he learnt as a student. Dr. Lipowski does not pretend to deal with all the vaunted synthetic remedies, but only with those proved in his own experience, or attested by reliable authorities. The drugs discussed are classified on the whole according to their chemical composition, but where such an arrangement would be inconvenient the author has wisely dropped it. Thus, in addition to sections dealing with the derivatives of methane, benzene, and the alkaloids, there are sections on antiseptics, new purgatives and diuretics, preparations of organs, serums, and new foods. Most of the important drugs recently introduced are mentioned, and discussed clearly but thoroughly. The short section on new purgatives treats of purgatin or purgatol, exodin, and purgen. It is shown how anthraquinone is related to anthracene, the active principle of rhubarb, cascara, and other purgatives; the trioxanthraquinone works so strongly in the intestine that colic is caused. The problem was, therefore, to combine this substance in such a way that it would be set free gradually in the intestine and a moderate but efficient stimulation obtained. Such a combination was found in the diacetyl-trioxanthraquinone or purgatol. Of the new diuretics

¹ *Abhandlung zur Darstellung und Bewertung der wichtigsten neueren Arzneimittel*, I. Lipowski. Berlin: Julius Springer, 1908. (81 in. by 5½ in.; with an introduction by Professor Senator.)

of the xanthin class theocin is the most active, but it may stimulate the brain even to convulsions, and is irritating to the gastric mucous membrane; these serious disadvantages are avoided by using theocin sodium acetate, but it is best to give even this in the form of suppositories. Theobromine sodium salicylate or diuretin is recommended in heart failure, either combined with digitalis (pulv. fol. digit. gr. jss, diuretin gr. xv, three to five times a day) or after digitalis has ceased to produce diuresis. The sodium acetate salt of theobromine, agurin, has the advantage over diuretin that it upsets the digestion less; it should be given in rather smaller doses. The author does not speak well of the artificial digitalis preparations. Digitalin is, he says, usually digitoxin, and digitoxin, or digalen, is so poisonous that it is only recommended when a rapid action is imperative; the drug should then be injected into a muscle or a vein, as it is extremely irritating when put under the skin. On the whole Dr. Lipowski prefers the powder of digitalis leaves; when made from a large quantity of material and very carefully dried, this preparation will keep its strength for a long time, and should be standardized by its action on the frog's heart. The powder acts more slowly than the separated active principle, but in heart disease this is often an advantage. We can recommend this little treatise, and regret that we know of no equally informing and readable book of the kind in our own language. Between 200 and 300 drugs are discussed.

In a little volume on sleeping draughts by Dr. C. BACHMANN the composition, pharmacological action, and doses of all the more important hypnotics are carefully described under three main groupings—namely, those containing (1) halogen elements, (2) alkyl radicles, (3) aldehydes or ketones. The general and local anaesthetics, the anodynes, such as opium, and the sedatives, such as bromides, are not considered. Each drug is briefly, readably, and systematically discussed, the name of the manufacturer and, in many cases, the price being given. Of especial value are the sections upon the effects of the drugs other than the hypnotic effect. A short bibliography of each substance is also provided. The author speaks highly of bromural in cases in which no severe pain is present, and, so far as observations have been recorded at present, the drug seems to be free from undesirable after-effects than many others. It is, however, apt to fail in the most difficult cases. For mild cases of sleeplessness bedonal is recommended in doses of 20 to 30 grains, and is best given in cachets. It is claimed that there is no stage of excitation or fear of cumulative action, and little danger of the patient becoming accustomed to the drug, whilst unpleasant secondary effects are rare. Veronal is treated at some length, as befits its wide use, and is described as a relatively harmless and reliable hypnotic, particularly in neurasthenia, senile dementia, mania, melancholia, paranoia, delirium tremens, hysterical sleeplessness, alcoholism, and morphinism. It may also replace morphine in the cough of phthisis. One disadvantage is the varying time which expires between the administration of veronal and the production of its effect. It may be tried in valvular disease of the heart, and does not irritate the kidneys. Apart from its action as a sleeping draught, veronal has been found useful in the night sweats of phthisis; indeed one author places it before both agaricin and atropine in this respect. It is also recommended in the hyperemesis of pregnancy, in epilepsy and multiple sclerosis, and as a prophylactic against sea sickness. The bad effects which have been observed are nausea and various rashes, headaches, giddiness, and even coma. Women appear to bear veronal, like sulphonal, rather worse than men. A number of instances of the formation of a veronal habit are recorded, and the doctor is advised never to prescribe more than six to ten powders of half a gram ($\frac{1}{2}$ grains) at once, and to write on the prescription "*Ne reiteretur.*"

Dr. TYRODE'S *Pharmacology* purports to "give the facts essential to an ordinary medical student without profound

scientific discussions of opposite opinions," and the reader will not, therefore, be surprised that it is throughout dogmatic rather than judicial. The style suggests that the author has published his lecture notes with but little expansion. Here and there are expressions that we could wish improved upon in a subsequent edition; particularly might the free use of superlatives be modified with advantage, and exacter terms than "infinitely more marked," "terrible," and "tremendous" would carry greater weight with the reader. The student will find a concise and up-to-date account of the actions of the more important drugs, but such matters as the general modes of action of drugs, idiosyncrasy, tolerance, and the growing and important subject of the relation between the chemical structure and physiological action of medicines, are inadequately treated; so that we fear we cannot recommend the volume to those reading for examinations in pharmacology in this country. For the practitioner who needs a book which will give him in some detail the action of any particular drug he may be desiring to use the information is too scanty, for some important drugs, such as strophanthus, receive only the briefest mention.

The structure and properties of the colloids are likely to occupy the attention of scientific men for an indefinite future period, since living tissue is colloidal. To the chemist, the biologist, the bacteriologist, and the physician, the study of these is of great importance, but is only just beginning to be intelligible. The term "colloid" has been extended beyond the limits in which it was used by Graham, for there are many substances not ordinarily known as colloids which do, under certain circumstances, form colloidal solutions, or solutions which are physically comparable to very fine emulsions—a state between the liquid and the solid—the substance being in molecular aggregates too small to be seen by the ordinary microscope. Dr. STODEL, in his recent book on the subject,⁴ first gives a general review, and then describes the methods by which colloidal solutions of metals, such as gold, silver, platinum, and mercury, may be produced. An interesting and readable account is given of the method of examining very fine particles by the ultra-microscope, and of the results of calculations of the actual size of the various colloidal particles; a discussion follows of adsorption, the movement of electrolytes, the action of electrolytes on colloids, and the action of colloids upon one another. A section on the colloids in biology treats of the various body fluids and of diastatic action, absorption, and immunity. The specific properties of the colloidal metals are then considered, and the inhibitory action of collargol upon bacterial growth, and its action upon the tissues when it is injected into the veins of an animal, described. The section on the treatment of disease by metallic colloids is less satisfactory, as the proof that these substances, in virtue of their catalytic and bacterio-inhibitory powers, exercise any definite effect upon morbid processes is naturally difficult to obtain. From the figures given it appears that, with medication of this type, the fatal diseases continue to be fatal, and the recoveries in the complaints amenable to treatment do not seem to be more frequent than is the case with the means, based upon a more secure pharmacological foundation, which we have at our disposal. The matter is capable of experimental proof, and we prefer to withhold judgement until a much larger number of observations upon infected animals has been made. The last part of the volume is occupied by a discussion of colloid mercury, electrically prepared. Dr. Stodel gives bacteriological experiments which lead him to conclude that colloidal mercury is more active as a germicide than the perchloride and is less toxic to rabbits. The electric colloidal preparation in isotonic solution is also not haemolytic for the red corpuscles of the dog. Therapeutic doses injected into the veins or muscles of man produce leucocytosis in twenty-four hours. The use of colloidal mercury, electrically prepared, in syphilis is illustrated by 59 cases of the primary, secondary, and tertiary disease. The author states that the intramuscular injection is painless and rarely gives rise to local reaction. Intravenously, large and repeated doses may be used without giving rise

² *Unsere Schlafmittel, mit besonderer Berücksichtigung der neuern.* Von Dr. C. Bachmann. Berlin: August Hirschwald. 1909. (2 in. by 5½ in. 88 pp.)

³ *Pharmacology: The Actions and Uses of Drugs.* By Maurice Veix Tyrode, M.D. Philadelphia: P. Blakiston's Son, and Co. 1908. (2 in. by 6½ in.)

⁴ *Les colloïdes en biologie et en thérapeutique. Le mercure colloïdal électrique.* Par G. Stodel. Paris: Vigot Frères. 1908. (10 in. by 6½ in., pp. 282. Fr. 5.)

to toxic symptoms. Intraspinal injections are followed by a temporary meningeal reaction only. Solutions containing 0.5 and 1 gram per mille were used. Three c.c.m. of the weaker solution may be injected into the muscles daily. In severe cases 5 to 10 c.c.m. may be injected daily into a vein. The intraspinal injections of 3 c.c.m. were used once a week and of the stronger solution 2 or 3 c.c.m. may be given intramuscularly.

In this volume Dr. v. WALDHEIM⁵ discusses the elimination of poisonous material by the skin, the promotion of which he describes as an effective method of treatment of all forms of fever. The book is intended to show whether the old view that the excretion from the skin in health and disease contains important poisons the retention of which will injure the body, or the modern teaching that it consists merely of water, carbonic acid, urea, salt, and minute quantities of fatty acids which are of little significance, is correct. The author does not appear to doubt that every one is definitely for one or other of these propositions. He himself is perfectly clear, and believes that modern medicine has wandered in error on this matter for the past eighty years, and that thereby enormous harm has been done to mankind, to science, and to the medical profession. The first sixty-nine pages are occupied with a review of the older teachings as to the nature and treatment of fevers, from the time of Hippocrates to the present day; the next forty pages treat of the work of Jäger and Lahmann. The author then describes very briefly his own experience, telling how he has cured himself of phthisis more than once, including attacks of rhinitis, angina, pharyngitis, tracheo-bronchitis, laryngitis (on one occasion with perichondritis), and influenza, by the Jäger-Lahmann process of wet packs, massage, and a dry diet. Then follows a long list of the diseases to be treated by this method. Aural surgeons will be interested to know that mastoid inflammation as a complication of suppurative otitis media can be prevented with certainty. Dr. v. Waldheim details the various fatty acids passed out in the sweat, which are in such small quantities that they are recognized chiefly by their odour, and concludes that the benefit which experience shows to follow a free perspiration is due to the removal of substances exerting a harmful influence on the organs of the body, particularly the brain. On the statement that a nerve is more irritable when it contains less water—which we may remark is only true within very small limits—he concludes that the beneficial result of sweating is partly due to the withdrawal of water. The compensating effect of more or less secretion of urine is not mentioned at this part of the argument. Bacteria, also, are said to be passed out, and hence free perspiration lessens the number of these in the body. No more need be said to show that the book is one of those not uncommon productions of an enthusiast bent, though probably all unconsciously, on riding his hobby to death. Anything that any one has written which seems to support the views of the author is dragged into the argument. The dietetic and balneological measures advocated are in themselves useful weapons in the therapeutic armoury, but, when applied and advocated with lack of judgement, an important branch of medical work is brought into disrepute. In spite of the proverb, it is possible to have a great deal too much of a good thing. Of bad things, such as hasty conclusions and analogies masquerading as proofs, a very little is too much, and 166 pages insupportable.

In a reprint of a paper in the *Deutsche monatschrift für Zahnheilkunde*, Dr. C. RÖSE⁶ begins with an introduction in which he says that when clinical observation shows that certain degenerations are becoming more and more evident in areas deficient in particular saline constituents of the food and drink, we may conclude that the want of the salt or salts is the cause of the degeneration. Such a process of reasoning does not lead us to hope for real accuracy of thought in the rest of the book. There is, however, a valuable series of statistics gathered from various regions in which the hardness of the water is com-

pared with the incidence of diseased teeth, and accompanied by exhaustive discussions of their meaning. The following conclusions may be mentioned: The harder the water the less the incidence of dental disease and of rickets, and the greater the quantity and alkalinity of the saliva. On a similar statistical comparison the author concludes that certain districts in which military ability is least marked owe this distinction to the fact that the drinking water is poor in calcium and magnesium. "Lime-poor" stock is a bad recruiting material. It follows that it is of the greatest importance, if we wish to be able to bite our food and to annihilate our enemies, that none of the salts in the food should be wasted. To this end, vegetables should be steamed and not boiled. We find ourselves in full agreement with the author's conclusion that the best cure for the evils attributed by him to lime starvation (and incidentally for most others) is that advised by Goethe—

Leb mit dem Vieh als Vieh
Und achte es nicht für Raub
Denn Acker, den du pflanzt, selbst zu düngen,
Das ist das beste Mittel, glaub,
Auf achtzig Jahr dich zu verjüngen.

DR. FERDINAND HUEPPE⁷ in a monograph upon chicory, after reviewing the literature of the subject, which is mostly hostile, points out that the harmful effects of an excess of coffee are to be ascribed to the caffeine it contains, and that the addition of some other material which does not contain caffeine is, therefore, desirable. Chicory when roasted provides a bitter taste, contains volatile oils, and gives a dark colouring to its infusions. Analyses are given of chicory from seven different regions of the Continent. The bitter taste is said to be derived from the cooking of inulin, and the dark colour from inulin and sugar. Beyond the statement that there is insufficient reason to believe that chicory is harmful, no evidence is brought forward to show whether it has any specific effects or not. The author in the early pages proposes to investigate the matter, but reaches the end of the pamphlet without describing any new pharmacological experiments.

PARCIMONY IN NUTRITION.

WHEN a Lord Chancellor's Visitor in Lunacy intervenes into a controversy on dietetics one is inclined to say, Que diable allait-il faire dans cette galère? But Sir James Crichton-Browne is, if not omniscient, a very able advocate who can get up his brief admirably. His book, *Parcimony in Nutrition*,⁸ is founded on a popular lecture delivered at Buxton last year, revised and enlarged. It is superfluous to say that it contains much that is wise and well expressed, but he throws all the weight of his influence on the side of those liberal feeders who after middle life come so surely into the hands of the physician. It is true that he says "there is far too much adipose tissue about in certain social strata," and he admits that some people eat too much, but his general line of argument is that a full and generous diet, especially in the allowance of proteid food, is the basis for individual and racial superiority. He makes many doubtful statements—for example, that "the whole population of all civilized countries" (p. 7) uses an ample diet, especially of proteids; that this diet has been founded upon "statistical and experimental studies" (p. 7), although elsewhere (p. 22) he admits that "the science of dietetics is based on common observation and on the hereditary customs and habits of mankind"; that "all the successful races have habitually consumed proteid far in excess of the Chittenden standard," although the Greeks and Romans were largely vegetarian in their diet, and we have no data upon which we can estimate the proportion of proteid consumed by them; that "the best fed races and classes are always the best tempered," a statement which, so far as classes in England are concerned, will not, we suspect, generally be accepted; while, as to races, the West African negroes and the Irish are generally admitted to be the most good-tempered people although among the worst fed; the well-known case, too, of the bear quoted by Liebig directly

⁵ Die Perkutane Entgiftung. Von F. Schürer v. Waldheim. Wien und Leipzig: Spielhagen und Schurich. (10 in. by 7 in., pp. 166. 10 Kronen.)

⁶ Ernährungsmangel und Entartung. Von Hofrat Dr. med. C. Röse. Berlin: Julius Springer. 1908. (9½ in. x 6½ in., pp. 156.)

⁷ Untersuchungen über Zichorie. Von Dr. Ferdinand Hueppe. Berlin: August Hirschwald. 1908. (8½ in. by 5½ in., 37 pp.)

⁸ *Parcimony in Nutrition*. By Sir James Crichton-Browne, M.D., LL.D., F.R.S. London and New York: Funk and Wagnells Company, 1909. (Cr. 8vo, pp. 118. 3s.)

contradicts Sir James's theory. Again, he says: "In all civilized countries the working classes have as far as practicable arrived at a tolerably uniform diet," which is very far from accurate, as workmen in England, America, France, Germany, Spain, and Italy do not eat a "tolerably uniform diet." Moreover, while he has a perfect right to criticize Chittenden's conclusions, he need not create prejudice by mixing them up with many foolish statements from writers on quite a different plane, like Fletcher, Carrington, Dewey, Kellogg, and other members of the great army of faddists. When he quotes Mr. Rowntree as saying that a large proportion of our population is underfed he ought to have added that Mr. Rowntree based this conclusion on the assumption that Voit and Atwater's standard of proteid dietary was universally accepted. Sir James claims that civilization is "not the antithesis of nature but a higher branch of natural history." We take him to mean by this that the habits and customs of civilization are the results of natural evolution, and that consequently the dietary which civilized men have adopted can be regarded as a conclusion arrived at on the principle of the survival of the fittest. This was a principle the late Sir William Roberts was fond of enunciating, and though it contains an element of truth, it ought to be applied with discrimination; it may equally be argued that so far as man's physical development is concerned, civilization has been a continued struggle against evolution, and consequently contains in itself the seeds of failure and decay. Horsekeepers tell us that the full diet given to the fine animals we see drawing railway wagons enables them to do a large amount of work, but their lives are short; so, too, with man it is probable that a full diet containing much proteid enables him to do a maximum amount of work, but it by no means follows that it is favourable to his continued health or to his prospects of longevity. We may be quite prepared to allow that Chittenden's conclusions require confirmation, and that this can only be obtained by further experiments and observations, and we may agree fully with Sir James Crichton-Browne that during the growing age a liberal supply of proteid is necessary, without sympathizing with his rhetorical attack on Chittenden and those who believe with him that economy in nutrition may be obtained on a diet which, while considerably below the Voit and Atwater standard, sufficiently maintains health and strength and does not cause the development of those disorders of metabolism which are unquestionably associated with overfeeding. It is probably true that in England gross and excessive indulgence in food is by no means so common amongst the educated classes as it was a hundred years ago, but it is still seen in all ranks, and the belief in the need for large quantities of food is widespread; it is also true that a small minority of faddists go to the other extreme and eat too little; but while the physician is well acquainted with the diseases resulting from excessive eating, he has as yet learnt comparatively little about those depending upon under-feeding, except where morbid conditions interfere with the normal desire for food.

FACE MASSAGE.

The treatment of morbid cutaneous conditions of the face by means of massage has been somewhat neglected, owing to the impudent quackery associated with face massage. But there is no doubt that the method is valuable in such diseases as acne vulgaris, acne rosacea, and so forth, in combination with rational general treatment of each individual case on its merits. Dr. Jacquet has recently called attention once more to the beneficial results obtained by pinching up the skin of the face, followed by superficial *pétri sage*, a method he calls "plastic massage." One of his pupils, Dr. Leroy, who has employed this method, has written an instructive monograph on the subject,⁹ in which the various modes of using massage are compared with the method suggested by Dr. Jacquet. A *sine qua non* is that the hands must be kept scrupulously clean. No ointments are used, but a powder (kaolin, talc, etc.), in order to give a purchase on the parts. A strong yet delicate male hand is required to apply the proper amount of pressure requisite in each case, com-

mencing lightly, and gradually increasing in vigour. As before stated, general treatment is important—in acne cases, for instance. Suggestions are made as to where mastication, vegetarianism, attention to the teeth, bowels, etc., are indicated. Details of 25 cases are given, in which the facial manifestations were associated with a variety of etiological factors. Dr. Leroy's work will well repay perusal by any one desirous of giving the method a trial.

NOTES ON BOOKS.

THE transactions of the International Society of Surgery at its meeting in Brussels last year have been published in two volumes, entitled *Deuxième Congrès de la Société Internationale de Chirurgie, Bruxelles, 21-25 Septembre, 1908. Vol. I, Procès-verbaux et Discussions, et vol. II, Rapports*.¹⁰ The proceedings were reported in our columns at the time, but surgeons all over the world will be glad to have the full text of the papers and of the discussions, for this society is in a way unique. It is an extremely business-like society; its members are limited in number, since only those surgeons invited by the international committee can become members, or attend its meetings; and, judging by the proceedings of the two meetings which have been held, it intends to devote itself to the discussion of practical matters directly concerning operating surgeons actively engaged in that department of professional activity. The volumes have been edited by the Secretary-General (Dr. A. Depage) and the Secretary of the congress (Dr. L. Mayer), and have been very well and clearly printed by the Royal Printing House in Brussels. The way in which the volumes have been prepared for the press and their relatively early publication reflect the greatest credit upon the two editors, and the only criticism we feel called upon to make is that the photographs are not so well reproduced as desirable. The papers are published in the official languages, English, French, German, or Italian, according to the nationality of the author, and the volumes will form an indispensable part of every reference medical library.

The latest fascicule of the *Archives of the Middlessex Hospital*¹¹ marks a new departure and bears a subtitle, "Clinical Series No. 1." It contains some half-dozen papers, mainly of a clinical order, and the reports of the medical, surgical, and obstetric registrars for the year 1907. In future there will be four issues yearly, one of them dealing with the cancer laboratory and the connected work, and the other illustrating the teaching of the hospital in respect of the latest developments of medicine and surgery.

MR. WALKER-TISDALE's little book on *Milk Testing*¹² is intended to give farmers, dairymen, and milk consumers information with regard to simple tests for ascertaining the purity and quality of milk. Thorough knowledge of the subject is shown by the author, and the book should prove useful within the limits of its purpose. It is probable, however, that a farmer or dairymen who was willing to go to the trouble and expense of providing the apparatus, etc., described would find it better to make an arrangement with a competent chemist for the systematic checking of his milk. The danger in imparting a little knowledge is illustrated by such a statement as "annatto colouring is of a harmless character, owing to its being of vegetable origin," no caution being expressed against the natural inference that any substance of vegetable origin must be harmless.

The volume entitled *Studies from the Department of Pathology of the College of Physicians and Surgeons of Columbia University* is the eleventh of a useful series. Most of the papers contained in it have appeared in some one or other journal during the past two years, but their collection in this form makes reference to them easier than it otherwise would be. Included is an elaborate paper by Drs. Bovaird and Nicoll dealing with the weight of the viscera in infancy and childhood. The average weight of 495 thymus glands of children of all ages from birth up to 5 years old was 5.9 grams. The extremes were 4.6 grams for the second month, and 7.7 grams at birth. The cases were unselected, and represented the result of all autopsies at the Foundling Hospital during a period of about three years.

¹⁰ Bruxelles: Hayez, Roy, 8vo; vol. I, 528 pp.; vol. II, 916 pp.

¹¹ Macmillan and Co., 10, 102.

¹² *Milk Testing: A Simple Practical Handbook for Dairy Farmers, Estate Agents, Creamery Managers, Milk Distributors, and Consumers.* By C. W. Walker-Tisdale, F.C.S., N.D.D. Northampton: W. R. Smithson, 1908. (Ct. 8vo, pp. 78, 1s.)

⁹ *Le massage plastique dans les dermatoses de la face.* Par le Dr. Raoul Leroy. Paris: Alex. Coqueux, 1908. (Roy. 8vo, pp. 193; 11 illustrations. Fr. 4.)

In *The Mystery of Existence*¹⁸ Mr. A. C. W. ARMSTRONG essays the task of making metaphysical theories fit in with established beliefs. Even though—for him—conscious being is merely an incidental, if not accidental, exhibition of the subliminal self, which is an intrinsic part of the general World-spirit, individually exists and is growing. So, too, does free will, while love is a necessity and the aim of the whole World-spirit. Similarly, although matter is merely the concrete idea or conviction of the World-spirit, it is perfectly real. There is a God whose powers are only finite in that they are regulated by the Laws of Nature, which are the Law of Thought, this in its turn being the Law of Mathematical Possibility. If there are any persons who have studied metaphysics sufficiently deeply to follow the writer's arguments and understand his terms, but not deeply enough to have learnt to keep working beliefs and metaphysical conceptions comfortably packed away where they can do one another no harm, this book will probably meet their case. Its direct interest for medical men is the view of the author that predominance of a belief in immortality retards the progress of hygiene. Continuance in this world being a matter of secondary importance, attempts to prolong life have hitherto been insufficiently resolute. Some day or other the span of normal terrestrial existence will be so long that original thought or research will be expected of no one under the age of 70. Over-population of the globe will then be prevented by restriction of the right to propagate species.

¹⁸ Longmans, Green and Co. 1909.

THE SEVENTH INTERNATIONAL CONGRESS OF APPLIED CHEMISTRY.

THE SECTIONS.

Lipoids and Pharmacological Action.

Dr. HANS MEYER, speaking in German before the Section of Physiological Chemistry, read a very able paper on the relations between lipoids and pharmacological action. He stated the evidence in favour of the theory that the animal and vegetable cell protoplasm practically consist of minute albuminoid particles encompassed by layers of lipoids, which take up water, salts, and fat solvents. This lipoid prevents the hydrophilic colloids, enzymes, albuminates, etc., from diffusing out of the cell at random or from acting on each other. It further allows of the taking up of oxygen and carbonic acid. The carbon dioxide in the blood cell renders the cell permeable to sugar and anions, and in a similar manner the fat solvents act on the lipoid of other cells, rendering the intake of water, salts, and other substances possible. Turning to the phenomenon of hæmolytic, he described the various degrees of solution of lipoid content of blood cells, and applied a similar argument to other forms of cytotoxicity. Narcosis and anaesthesia could be understood from a study of the lipoids; heat partially liquefied these fat-like substances, and the unconsciousness of fever was due to a heat change in the lipoids of the brain cells. Experimentally this would be demonstrated by placing a frog or other cold-blooded animal in warm water. Water at 38° C. caused anaesthesia in the frog in a few minutes, but it could readily be awakened by immersion in cold water. Anaesthesia by heat in warm-blooded animals was not safe, because the lipoids were not affected until the temperature was near that which coagulated proteins. Fat-dissolving gases, however—such as ether and chloroform—could effect a safe partial solution of the lipoid of the brain cells. As soon as they were removed the lipoids returned to their original condition and the person awakened. The narcotics acted in a similar manner, and the narcotic power of a drug depended on its lipid-dissolving power. The actual pharmacological action was measured by the smallest molecular concentration of the substance which would put small fish to sleep when immersed. He had found that the "distribution coefficient" obtained by dividing the solubility of the substance in fatty substances by the solubility in water stood in direct relation to the pharmacological action. A table of narcotics, including trional, tetronal, etc., showed this relation clearly. Narcosis was thus a change in the physical condition of the lipoid, and this change involved a corresponding change of the normal permeability of ions of the cells. On this theory irritability of cell and

pharmacological action could, he contended, be adequately explained.

Professor B. MOORE, who spoke next, dealt with the chemistry of the unsaturated fatty acids. Basing his opinion on the evidence obtained by his own researches and those of other workers, he came to the conclusion that lipoids were not independent chemical substances, but part and parcel of the large cellular molecule, which consisted of carbohydrates, proteins, and these fatty substances. In substance he agreed with much that Dr. Meyer had said. He believed that some narcotics—for example, cocaine—do not owe their action to their fat-dissolving power.

Dr. NICLOUS supported Dr. Meyer's theory of the function of the lipoids. He had conducted experiments with Mlle. Frison which demonstrated that the various portions of the central nervous system of an animal killed by prolonged chloroform intoxication took up chloroform in direct proportion to the amount of lipid or lecithin of that particular part.

Dr. BARBIERI failed to convince the majority of those present that lecithin does not exist. Part of his communication dealt with the analysis of the yolk of eggs, while the second part dealt with the chemical constitution of the nervous system.

In reply to Professor B. Moore's objection to the assumption of a separate entity called lipid, Dr. MEYER pointed out that the only difference between them was that he believed that the lipid surrounded the protoplasmic particles as a membrane, while Professor Moore regarded it as a part of the protoplasmic molecule.

In this connexion Dr. ROSENHEIM read a paper proposing a recasting of the nomenclature of the lipoids. The ideas expressed, although based on rational grounds, did not meet with much support.

Control of Food Supplies.

In opening the discussion on the systems in force for the control of the food supply, Dr. WILEY made a very long communication, which in substance consisted of: (1) A description of the American laws placing a tax upon food products, and of the laws controlling interstate and foreign commerce; and (2) the methods employed in the several States of America for detecting adulteration and misbranding, and for punishing the persons offering such foodstuffs for sale. Tea, spirits, wines, cheese, mixed flour, oleo-margarine, and butter were, he said, subjects of special legislation. The sale of meat was controlled by a Meat Inspection Act, and the misbranding of food and dairy products had been rendered a punishable offence; the Food and Drugs Act of 1906 dealt with adulteration and misbranding. The State and municipal laws affecting food control were administered by the Secretary of Agriculture and the Bureau of Chemistry centrally and by State officials locally. When the foodstuffs were liable to duties or taxes, the Treasury Department in the Bureau of Internal Revenue had the execution of the provisions. The method of taking samples for analysis was described; it consisted usually in taking three samples, each of which was sealed by the inspector. The method of taking action against offenders varied in the different States. The penalty was either a fine or imprisonment, or both. Imprisonment was usually reserved for a repetition of the offence. There were special arrangements for the control of imported goods, and when an analysis disclosed misbranding or adulteration, the goods had either to be relabelled or exported beyond the jurisdiction of the United States.

Dr. ROUX, the chief of the French Service, described the law of 1905, which dealt with commercial and sanitary frauds, but did not touch fiscal frauds. The Act was amplified by a number of supplementary laws. Frauds and falsification are determined by the ordinary methods, and the law deals with ordinary foods, liquors, grains, fodder, etc. Inspection was carried out by agents of each prefecture. Four samples for analysis had to be taken, one of which was sent to be analysed in the first instance, while the remaining three were reserved for a second official analysis, and for analyses by an expert of the Court and by another selected by the accused. There were thirty-seven administrative laboratories in which such analyses were carried out. The practical effect of this law was a diminution of misbranding from 26.2 per cent. of the analysed samples to 12.6 per cent. Dr. BORDAS

gave an account of the work of the laboratories of the French Financial Minister.

Dr. BUCHANAN spoke of the administrative methods of food control in Great Britain and Ireland. He passed in review the workings of the Public Health Acts, the Weights and Measures Acts, the Merchandise Marks Acts, and the Sale of Food and Drugs Acts. He dealt in some detail with the sampling officers and their duties, the work of the public analysts, the offences and prosecutions for contravention and on the general question of proper descriptions of food stuffs.

Drs. WANTERS and KERF spoke of the regulations in force in Belgium and Germany. They were followed by Dr. McGILL who dealt with the control in Canada. He reported that the laws relating to the subject included: (1) The Adulteration Act, (2) the Inspection and Sale Act, (3) the Meat and Canned Food Act, and (4) the Canned Goods Act. The first of these acts was administered by the Minister of Inland Revenue, his deputy and the analyst of the department, assisted by six analysts and five clerks at Ottawa, four district analysts in different cities and a staff of sixteen inspectors. In taking samples, one was always left with the vendor, one was sent to the main laboratory, and the third at times to the district analyst. Adulteration of foods consisted in reducing quality or strength by admixture, substituting inferior substance, abstraction of valuable constituent, imitation or false naming, use of diseased or putrid material, addition of poison, strength or purity below fixed standard, colouring or coating to conceal damage, and milk or butter from diseased animals. Adulteration of a character injurious to health involved a penalty not exceeding \$500 or six months' imprisonment, or both. A few articles of food were dealt with specially.

After Professor SCHAFER had spoken of the control in Switzerland, Dr. VAN RUN, in a very interesting paper, described in detail the Dutch method of butter control. He stated that, as the Director-General of Agriculture in Holland was a permanent official, and the present incumbent of this office an extremely energetic person, the control of dairy produce and meat had received very careful consideration. In order to safeguard the export trade and to guarantee the purity of inland supply the official certificate, including a certificate, label, mark, stamp, or other voucher, was the first guarantee recognized by the British Local Government Board. In the past adulteration of butter was common in Holland, and the first step was to introduce uniform methods of analysis. These methods were also adopted in England. The difficulty in setting up a standard of quality of butter was insurmountable, and for this reason the method included the registering of the components of each parcel of butter by an analysis of the sample of the parcel, taken at the dairy from which it issued. The director or inspector visited the dairy when advisable and took a sample. The analysis of the sample was registered and the butter of the yield made in the presence of the inspector was stamped with the official stamp. In this way the record of every yield of butter at any time of the year was registered, and it was easy to trace by means of the register the origin and destination of every parcel. If such a butter was exported to England and offered for sale, a sample of it could be taken for analysis. The number being known, it was essential that the analysis made in England should correspond within narrow limits to that registered in Holland, and to which the English officials had access. The method of stamping was described, and books of specimen labels were handed round for inspection.

In the discussion, Dr. McKERR pointed out that fraud might be practised by cutting off the upper layers of the butter, including the label, and adulterating the remainder. He also raised the question whether the labels could not be imitated. Dr. THORPE spoke in terms of high praise of the method which he had personally investigated in Holland for his department. He described the system as one which was as perfect as human ingenuity could devise. It had revolutionized the position of Dutch butter on the English market. In reply, Dr. VAN RUN said that although the removal of the upper layer was theoretically possible, it would not be difficult to detect such a fraud, and in practice it did not occur. The labels could not be imitated more easily than a bank note.

A few other papers dealing with other branches of the same theme concluded this important and interesting discussion.

Preservatives in Food.

The discussion on this subject was opened by Mr. CRIBB, who read a communication by Mr. Bevan, in which the author advocated the prohibition of all preservatives in foods. Dr. Thresh's paper, read by Dr. RIDEAL, argued against the indiscriminate use of preservatives, but adduced evidence to prove that preservatives in reasonable quantities had not been shown to be injurious, that in many cases their use was legitimate and of benefit to the community, and that only in certain cases was the use of chemical preservative unnecessary and undesirable. Dr. WILEY, on the other hand, maintained that under all conditions preservatives should be regarded as adulterants. A trace of copper sulphate in peas might not harm a robust person, but to many weakly persons and invalids such additions must be highly injurious. Preservatives were unnecessary, and he wished to see them swept away. In the discussion, it was urged, from a trade point of view, that preservatives were indispensable. Another member considered that the trade could get on very well with pasteurization, and tried to show that the addition was not even in the interest of the producer.

Standards for Foods and Drugs.

Dr. BECK opened a discussion on the advantages and disadvantages of legally binding standards of composition. He considered that the amount of water in butter had increased generally since the adoption of a legal standard, and in consequence the dry butters of the Colonies had virtually disappeared from the market. Standards for natural products or articles of simple manufacture were of very doubtful utility; a standard was futile in the case of mixtures, such as coffee and chicory, because quality was of much greater importance than quantity. The setting up of legally binding standards in respect of the use of preservatives, colouring matter, etc., in foods was essential.

M. WANTERS regarded a standard for foods as unfair to the producer, who could not continuously make analyses of natural products, but might at any time be prosecuted for variations in composition for which he could not morally be held responsible. If the limits of the standard were wide no good purpose could be served, while whether they were wide or narrow, they would prove to be the means of legalizing frauds in the hands of unscrupulous persons.

MESSRS. MOOR and PARTRIDGE considered the question not only from the standpoint of the public and the producers, but especially in the interest of the poor, who needed protection. The setting up of standards saved the producer from unfair competition and satisfied the administrators that uniformity would be secured. He suggested certain standards for aerated waters, baking powder, beer, and brandy. With regard to bread, he contended that not more than 40 per cent. of water should be allowed. The amount had been in certain cases as high as 58 per cent. He considered that the standard of 16 per cent. of water in butter was too high, and the fixing of the standard had done good in reducing the quantity from 22 per cent., or even 24 per cent., and he thought a standard of 2 per cent. of salt advisable. Cream cheeses should contain at least 40 per cent. of fat; other cheeses at least 30 per cent. Cheeses containing less than this quantity of fat should be described as having been prepared from skimmed milk. No standard existed with regard to condensed milk, and he suggested that it should contain at least 10 per cent. of fat. Hand-skimmed cream should contain 10 per cent. and artificially-separated cream at least 50 per cent. of fat. Infant foods were rarely, if ever, examined under the Food and Drugs Acts; they should contain no starches and no impurities. The standard of 3 per cent. of fat in milk was still low; it was fixed at 3.5 per cent. in other countries. It had, however, risen from 2.5 per cent. He considered that the public analyst in every district should publish the percentage of fats contained in the milks supplied by the different dealers, mentioning them by name. In this way the public would be able to discriminate between the qualities of the various milks offered for sale.

Dr. KERP discussed the arguments for and against the setting up of standards. He considered that it would be impossible to determine generally whether standards were advisable, but that each foodstuff must be dealt with separately.

Professor WYSMANN dealt with the difficulties of setting up standards for wines, etc., which would not only fix the composition but also indicate the origin. With regard to milk, he considered that a legal definition should be the secretion from the udder to which nothing had been added, from which nothing had been abstracted, and which contained at least 2.5 per cent. of fat.

Dr. WILBY reported that hundreds of standards had been fixed in the United States, and he expressed himself in favour of efficient standards.

Dr. BORDAS contended that it was essential to have the co-operation of the manufacturers in fixing standards. He advised a waiting policy until the White Cross Congress should come to a decision. Mr. GILES described the work of the White Cross Congress at Geneva last year, which had tentatively fixed some standards; in Paris this year the manufacturers would recommend certain alterations in these standards, and next year a congress would consider how far the alterations had affected the hygienic value of the original provisions. A final congress would correlate the divergent views.

Sewage Effluents.

A large number of papers dealing with the treatment of sewage and sewage effluents were read. M. ROLANTS dealt with colloidal organic matter in sewage and its treatment by dialysis, by precipitation, and by agitation with an inert powder. Dialysis was unsatisfactory, the clarification method of Fowler by a ferric salt in alkaline solution had disadvantages, and better results were obtainable by precipitation with calcium phosphate. Agitation with talc or kaoline and filtration yielded much better results.

Papers were read by Mr. JOHNSTON on physical and biolytic purification of sewage, by Mr. DIBBIN on aerobic treatment, by Mr. SCOTT MONCRIEFF and by Mr. STODDART on nitrification. Dr. GROSSMANN read a paper on sewage sludge disposal, in which he pointed out that sludge after filtration and pressing into cake contained about 50 per cent. of solid matter. In many places the time was approaching when no further land would be available for dumping, especially since modern hygiene had shown that this method of disposal was not only objectionable but against all economic principles. The fact that sludge clogged up the soil detracted from its utility as a fertilizer. This was due to the content of fatty matter—grease and soap. About 400,000 tons of soap were used every year in this country, and practically all this found its way into the sewage. This meant that sludge would contain at least 5 per cent. of fatty acids. The recovery of the fatty acids by means of solvents or by destructive distillation was costly in the large majority of instances. Recovery by non-destructive distillation required careful consideration. He had experimented in this direction, and had set up a plant at Oldham capable of recovering 60 per cent. of the total solids of sludge as saponifiable matter. Each ton of sludge had yielded 1.4 cwt. of crude grease which had a marketable value of 9s. 9½d. The residue containing soil, organic matter, nitrogen, potash, and phosphate, was found to be an excellent manure. The value of this per ton of pressed sludge would be at least 5s. 9d. Estimating the values at a low figure, this would yield 13s. 6½d. for each ton of sludge containing 50 per cent. of water. The cost of working up the sludge was 6s. 11½d., so that there was a margin of 6s. 7d. a ton. Illustrating the value of this, he stated that in a town of 100,000 inhabitants, the cost of working up the sludge would be £2,610, whilst the sum realized by the sale of the products obtained would be £5,078, leaving a margin of close on £2,500.

In dealing with the tests for effluents suggested by the Royal Commission on Sewage Disposal, Dr. RIDEAL and Mr. BURGESS contended that local authorities should only be required to purify sewage so far that natural agencies could deal efficiently with the effluent without causing a nuisance. The Commission regard de-aeration and presence of suspended matter as the cause of nuisance, but the authors considered that anaerobic micro-organisms played an important part, and were concomitant with

de-aeration. The Commission had fixed the limit of suspended matter allowable at 3 parts per 100,000, but the authors regard this as too generous, as such an amount would cause deposits in sluggish streams. Dr. Rideal criticized Dr. Adeney's apparatus, and claimed that his own modification was a better instrument, while his colorimetric method was most simple and convenient. Dr. ADENEY, replying, denied that the Commission had recommended the use of his apparatus for testing effluents. The object of these tests was to determine the aerability of the organic matter present. Dr. MACGOWAN, the chemist to the Commission, supported Dr. Adeney's arguments. Mr. SCOTT MONCRIEFF spoke in support of Dr. Rideal's arguments, while Mr. HALLIVELL questioned the advisability of these tests, and pleaded for the continued employment of the older chemical analyses. Mr. O'SHAUGHNESSY did not think that 3 parts in 100,000 a generous allowance for suspended matter in sewage effluent, and gave his opinion that gravimetric tests by means of centrifugation yielded better results than filtration.

Dr. FOWLER dealt with trade effluents. For tannery effluents clarification by simple subsidence was as a rule satisfactory, but mechanical filters might be required in some cases. Brewery or distillery effluents required special biological tanks and filters. Colouring matters in effluents did not constitute a dangerous element in sewage, but were frequently destroyed in biological filters. Alkaline sulphides should be treated with lime or coppers, dilute alkalis and acids should be neutralized, and other chemical products dealt with according to their action on fish life in varying concentrations. In conclusion he dealt with some aspects of the law relating to this subject. Dr. HAUPT spoke on the cost of the removal of some products of trade waste. Alkaline sulphides cost from 5 to 6 pfennigs per kilogram for removal. Dr. PURVIS considered that sulphuric acid was satisfactory for brewery effluents, and objected to the use of lime, which when discharged into rivers killed fish. Mr. COLEMAN challenged this statement. Professor KILASON dealt with the clearing of the outfall water from the sulphite cellulose factories in Sweden.

Sewage Pollution in Sea Water.

Drs. KENWOOD and KAY MENZIES discussed the requirements of a satisfactory test of pollution injurious to shell-fish, and sought to determine whether sea-water contamination constituted a danger to bathers. The presence of *B. coli communis* could not under ordinary circumstances be regarded as a safe indicator, since *B. typhosus* might persist long after *B. coli communis* had disappeared. They considered that the presence of oxidized nitrogen in sea water in the form of nitrites would indicate contamination, but its absence would not guarantee freedom from contamination. Free ammonia might be accepted as a valuable clue to contamination, while albuminoid ammonia was not so suitable as an index. Neither oxidizable organic matter nor dissolved oxygen nor phosphates could be relied on to disclose contamination of sea water.

Dr. ADENEY demonstrated the simpler form of his apparatus for measuring the rate of absorption of dissolved oxygen in polluted water. The system depended on the absorption of oxygen dissolved in distilled water, which he considered better than the dilution system. He emphasized the fact that the work was pioneering work, and should not be regarded as finished. It was necessary to obtain agreement as to the interpretation of results before the methods could be adopted for general use. The paper and demonstration was much applauded.

Drs. PURVIS, MACALISTER, and MINNETT read a paper in which they adduced evidence that the total number of micro-organisms diminished more rapidly in a mixture of sewage and sea water than in sewage alone; that denitrifying micro-organisms could live longer in a mixture in which potassium nitrate was present, and that nitrifying organisms did not appear in sewage or sewage and sea water at any time.

A very animated discussion took place. Dr. RIDEAL entered a general objection to taking ammonia as the indicator of pollution of sea water; he described the methods which he considered best, including the determination of chlorine as well as ammonia, the samples being taken at different states of the tide and from the

bottom. He discussed some points with regard to Dr. Adeney's apparatus. Mr. HARRISON EDDY regarded the measurement of natural processes preferable to chemical measurements. In Boston the sewage was carried out a considerable distance from the shore, where the mass of water acted sufficiently in diluting the sewage to prevent a nuisance. The whole question was financial rather than scientific. Mr. HALLIWELL discussed the technical difficulties connected with Dr. Adeney's method, the chief being the necessity of constant shaking. He considered the apparatus Dr. Adeney had first described excellent, but did not like the simplified modification which he had demonstrated. Mr. Blake, of Belfast, stated that no smell was noticed when sewage was thrown into the sea, provided that a sufficiency of oxygen was present. Mr. ANDERSON did not obtain satisfactory results with Dr. Adeney's second apparatus, and preferred the dilution method. Dr. DYCK thought that phosphate examination was more important than Drs. Kenwood and Menzies would have the members believe. Mr. O'SHAUGHNESSY considered that Dr. Adeney's method was preferable to the dilution method. Professor Lett was not present, but a paper was read by Dr. ADENEY, upholding the reader's views. The readers of the chief papers then replied, but did not bring forward any fresh ideas. On the whole, the objections raised to Drs. Kenwood and Menzies's paper, and to Dr. Adeney's communication were sufficiently met in the replies to gain a consensus of opinion. In his reply, Dr. PURVIS dealt in some detail with the methods of determining nitrates, which he considered required minute attention.

Lead Absorption.

Drs. GOADBY and GOODBODY read an interesting communication dealing with an investigation on experimental lead poisoning. Having described the methods adopted they stated that the compounds employed were white lead, "market pot," and litharge. The preparations were applied by inhalation, by feeding either alone or together with wine, and by injection. Cats were more rapidly poisoned by inhalation than by feeding. The dust entered the respiratory passages from which it was absorbed; lead sulphide could be demonstrated in the alveolar cells, in the perialveolar tissue and in the lymphatics after treatment of the tissues with H₂S. When alcohol in the form of cheap port was given simultaneously, the course of poisoning became acuter. Feeding even with large quantities produced very little toxic effect. Death by lead poisoning could be caused by the injection of lead acetate in doses of 0.05 gram per kilo body weight. In conclusion the authors described some experiments with lead compounds digested with gastric and intestinal ferments. The effect of gastric digestion on white lead was to cause a slight increase in the solubility of the lead compound.

In the discussion Sir J. CRICHTON-BROWNE questioned the correctness of the view that lead dust could be absorbed directly from the lung. Analogy had shown that carbon, tubercle bacilli, and other particles are not inspired directly into the lung, but gained an entrance from the gastro-intestinal channel through the lymphatics into the lung. Professor MOORE had experimented with heavy metals for a different purpose, and supported the view that the heavy metals were more poisonous when applied to a surface like the respiratory passages than when taken into the stomach. Mr. ARMIT was able to confirm the views of the authors that dust could be directly inhaled and absorbed from the respiratory passages. His work with the heavy metals, such as nickel, iron, and cobalt, had given very definite evidence that this occurred. He had found that the absorption was dependent on the relative size of the surface of the particles to be absorbed and of the absorbing surface. Even insoluble compounds such as sulphides of nickel, iron, and cobalt could be absorbed from the peritoneum, where the conditions were favourable. The conditions in the stomach were not favourable for the absorption of heavy metals. Dr. LEGGE spoke from the clinical point of view. He had always held the opinion that lead was absorbed from the stomach, but the experimental evidence adduced by the authors and by the last speaker must be taken into account. He regarded the question of the situation of absorption as of academic importance only, since the preventive measures must be the same in both cases. Sir THOMAS OLIVER sup-

ported the authors and considered the finding of lead sulphide in the lung as conclusive proof that the inhalation of dust into the respiratory channels had taken place. He spoke of the resistance against the toxic effect of lead. That the loss of weight in lead poisoning was not due to starvation was shown by the fact that, whereas an animal only died of starvation when it had lost two-thirds of its body weight, the animals in the authors' experiments only lost one-third of their weight. The authors replied.

Entertainments.

On Tuesday evening, June 1st, in spite of heavy rain, there was a large attendance at a reception by Sir William Ramsay, the President, and Sir Henry Roscoe at the Natural History Museum, South Kensington.

Excursion to Windsor Castle.

A message from His Majesty to the effect that the congressists were at liberty to visit the Castle having been received, a large number of members and their ladies set out for Paddington Station early in the afternoon of June 2nd. The visitors were delighted with all that was to be seen, both within the grey walls and without among the verdant surroundings of the Castle. An exceptionally fine view was obtained of the surrounding country from the Tower, where the foreign visitors massed in imposing numbers. Special trains conveyed the company to and from Windsor on the Great Western Railway.

The members had opportunity of inspecting a number of works, etc., which offered chemical interest. Among these may be cited the London works of Liebig's Extract of Meat Company, the Power Station of the Underground Electric Railways of London, the National Physical Laboratory at Teddington, various biscuit factories, breweries, at Burton and elsewhere, engineering works, and other chemical works.

Closing Meetings and Resolutions.

Sir WILLIAM RAMSAY presided at the closing meeting on Wednesday morning, June 2nd. He announced that over 3,000 members and 650 accompanying ladies had taken part in the proceedings. From the official returns it appears, however, that less than 1,000 members had attended the meetings of the sections.

The reports of the sections were then read. The only resolutions affecting the medical profession were the following:—The section for physiological chemistry and pharmacology presented the following resolution, which was agreed to:

That the section in future congresses be a separate and independent section entitled "Biochemistry, including Pharmacology."

The following resolution of the section of hygiene was also carried:

That the congress requests the various Governments to nominate a commission to make researches in collaboration with manufacturers in materials used in the ceramic arts, to encourage the use of substances not containing lead; to restrain the use of lead materials and to conduct further researches with regard to protective materials for the hygienic use of those engaged in the ceramic industries.

Two further resolutions, proposed in conjunction with the section of law, political economy, and legislation affecting chemical industry, were deferred, together with the rest of the resolutions emanating from the last-named section, for consideration by the next congress, as no one was present to argue in favour of their adoption.

Dr. TAFFE wished the congress to pass a resolution prohibiting the use of milk-skimming machines in connexion with dairies, but his motion was not seconded.

Various commissions were reappointed, and certain monetary grants were voted.

Next Meeting.

An invitation to the congress to hold the next meeting in the United States of America was given by the Hon. Whitelaw Reid, the American Ambassador, and supported by Drs. Wiley, Professor Meldola, and Professor Baskerville. After various other items of business had been disposed of, a number of delegates from various countries spoke.

THE COMPOSITION OF SOME PROPRIETARY FOOD PREPARATIONS.

TONIC WINES.

VIBRONA.

Messrs. FLETCHER, FLETCHER AND CO., LIMITED, the proprietors of the tonic wine called "Vibrona," have written to us with regard to the analysis of this preparation which we published in the JOURNAL for May 29th, as they take the view that the statements then made may produce an impression unfavourable to their wine. Messrs. Fletcher, Fletcher and Co. wish to point out that the alkaloids in the wine are present in the form of hydrobromides; that the natural quinates, cinchonnates, and other constituents of the bark are retained unaltered by a special process of manufacture; and that it is on account of the particular combination in which the alkaloids exist in the wine that persons can take this wine who cannot tolerate other forms of quinine. They also assert that the figure which we gave for the amount of alkaloids—namely, 0.02 per cent.—should be 0.0285, the latter figure corresponding to the constituents of 5 grains of cinchona bark in 2 fl. oz. of the wine; they have submitted certificates which show that during the fourteen years of its manufacture the strength of Vibrona has been checked by a chemist who is one of the leading authorities on cinchona, who has periodically obtained bottles of the wine through ordinary trade channels, and analysed them, and has reported that he has found the wine to be uniformly of the strength stated. We gladly allow Messrs. Fletcher, Fletcher and Co. to bring forward these points; but it may be pointed out that eleven other wines containing alkaloids were reported on in the same article, and in no case was any statement made as to the form in which the alkaloid was combined, or to the presence or absence of other constituents of the drugs concerned; the analyses only purported to give the proportions of the principal ingredients.

MEDICAL AND SURGICAL APPLIANCES.

Surgical Lamps.

SUPPLEMENTARY to their catalogue of electro-therapeutic apparatus issued last year, the Sanitas Electrical Company, Limited (61, New Cavendish Street, W.), have published a sectional list devoted to the latest developments in surgical lamps. The instruments are chiefly if not entirely of German design, and some of them combine a variety of purposes in the one apparatus. To this class belong the universal electrosopes of Casper and Görl, which with slight adaptations can be used for illuminating seven or eight different body passages. Many instruments having special uses in ophthalmoscopic, pharyngeal, and other examinations figure in the catalogue, and mention should be made of the broncho-oesophagoscope of Dr. Brünings, to which considerable attention has lately been directed. The extraordinary progress made in precision instruments, however, is perhaps best seen in the cystoscope, and the Sanitas Company claim that their irrigation cystoscopes with divided-wall catheter excel other varieties because the double tube permits a continuous flow of liquid into and out of the bladder. In addition to its distinctively trade features there is some general information in the little catalogue on the use of electrical incandescent lamps of different tension in diagnostic investigation.

DIETETIC PREPARATIONS.

Brusson Jeune Diabetic Bread.

WE have received several samples of bread made by the firm of Brusson Jeune, of Villemar, France, which has an agency in London. According to the printed leaflet sent with the bread, it is claimed that it is "of all gluten bread that which, although relatively poor in starch, is the most appetizing, the most nourishing, the lightest on the stomach, and at the same time rapidly diminishes the diabetic sugar." In the typewritten letter accompanying it we are told that the "combination of carbohydrates and proteid present in our gluten bread constitutes a diet from which diabetic patients derive great benefit, this being due to the fact (1) that the flour and the gluten are intimately

combined by the special processes employed; (2) the condition of the starch as the result of the excessive heating to which the bread is subjected during its manufacture; (3) the low percentage of fat; (4) the low percentage of moisture." A further statement that some of the rolls are practically pure gluten is corrected in a subsequent letter, which admits that they contain about 35 per cent. of starch, while others, called "Mignonettes," contain somewhat more; and it is further admitted that the Brusson Jeune's "Diabetic Bread" contains from 48 to 56 per cent. of starch, but, the letter goes on to say, the firm does not rest its claim upon the chemical analysis of the bread, but upon "the results revealed in the urine," and, "while fully understanding the importance of chemical and theoretical analyses of foods intended for diabetic patients, they think it will be agreed that it is upon the results of the urinary analysis that the value of a particular food must stand or fall." We have submitted one of the rolls of diabetic bread for analysis, with the following results:

	Brusson Jeune Bread.	Standard White Bread.
	Per Cent.	Per Cent.
Moisture (212° F.)	9.10	39
Mineral matter	1.00	1
Albuminoids	31.75	6.5
Fat	5.00	1
Woody fibre	2.50	—
Carbohydrates	50.65	51.5
	100.00	

Matters soluble in water 9.15 per cent.

These rolls are palatable, but as will be seen the amount of starch scarcely differs from that of ordinary bread; on the other hand, the gluten and fat are largely increased. We cannot admit that a diabetic food can be judged by us in any other way than by analysis, as the estimation of its effect on patients is too complicated for it to be possible to eliminate fallacies except by its prolonged use over a series of cases, and we know of no physiological reasons for supposing that a bread which contains 50 per cent. starch, readily converted by the saliva, and then reducing Fehling's solution freely, can be of any special utility in the treatment of diabetes.

Sweet Whey Powder.

The dry preparations of milk which are obtainable are becoming very numerous, and they are, as a rule, very serviceable and satisfactory. One of the most recent to come under our notice is the sweet whey powder made by Casein Limited, for the preparation of whey for infant or infant feeding. It is a fine powder, slightly alkaline in reaction, readily soluble in water to a cloudy solution which is free from curd, and in which boiling increases the turbidity. Analysis showed the presence of 12.6 per cent. of protein, 8.04 per cent. of mineral matter (chiefly phosphate), and milk sugar with only a trace of fat. It has an agreeable taste, quite free from sourness. Solution of the powder appears satisfactorily to represent freshly-made whey, and the fact that it can be prepared in two or three minutes instead of several hours may make it useful under some circumstances.

MOTOR CARS FOR MEDICAL MEN.

COST OF RUNNING.

DR. J. BERNARD WALL (Coleshill, Birmingham) writes: I have been driving Siddleley cars for nearly two years, and my experience is entirely contrary to Dr. Furlong's (BRITISH MEDICAL JOURNAL, June 5th, 1909, p. 1365). I do a widely scattered country practice, and cover nearly 10,000 miles a year. During these two years I have never experienced five minutes' delay, and have never driven a horse. When I require any little space I write direct to the works, and always get it by return of post. I began with a 10-12 h.p., out of which I got an average of 25 miles to the gallon, but at the commencement of last November I exchanged it for a 14-h.p. landaulette, which, up to-day, I have driven 5,780 miles, and my repairs and renewals have cost me less than £1. The tyres are the same which came from the works, and look like doing a good many miles yet. It is quite obvious to anyone with any experience of motors that if Dr. Furlong has spent 25 £s. 7d. on tyres, tubes, and repairs, and travelled less than 3,000 miles, there is something radically wrong, and I should think it would pay him well to engage a competent chauffeur at a few shillings a week more money.

B. G. H. writes: Possibly the result of my seven years' experience with motor cars may interest others as well as "T. D. N." I live in probably the most hilly suburb of London, and practise as a general medical practitioner. For the nine years 1895-1902 I worked with two horses, two carriages, and a bicycle, and my average annual expenses for these, including buying and selling and upkeep, came to £249 all told.

Since May, 1902, I have used only motor cars in my practice. I divide my medical motoring into two periods, the first, or expensive period, lasting 2½ years; the second, or moderate period, 4½ years.

During the first period, beginning with the purchase of a new 10-h.p. American car, and including also a second-hand 6-h.p. De Dion, I did not have very good luck. The American car was splendid and a wonderful hill-climber for the first six months, but then it began to go wrong, and the repair and replacement bill became very excessive. The De Dion worked well, but it had no hood.

I paid for these two cars £340 17s. 4d., and sold them for £57 10s., thus losing on them £273 7s. 4d., or an annual average depreciation in the 2½ years of £119 12s. 11d. During this same period my annual average expenses for upkeep, petrol, oil, repairs, man's wages and clothes were £261 16s. 8d., making an annual total of £381 9s. 7d. These cars were sold towards the end of 1904.

In September, 1904, I bought a second 4½-h.p. De Dion, and used that exclusively for 1½ years; and in January, 1906, I bought a second-hand 7-h.p. four-seated Panhard, and I have used these two cars ever since. I use only one car at a time, and of the two the Panhard is used nine-tenths of that time. I paid £310 for these two cars, and deducting what I consider to be their present selling value, though they are decidedly worth more to me, I find that during the second period of 4½ years the average depreciation has been £49 12s. 3d.

My average annual expenses for upkeep, wages, repainting, etc., of the cars for this same period have been £205 11s. 4d., and with depreciation, £49 12s. 3d., £255 3s. 7d., a total average expenditure which compares very closely with that for my horses and carriages already mentioned.

My average annual earning capacity, as judged by "bookings," has hardly altered, but I am enabled to finish work much earlier, and can work with much greater comfort to myself and patients, as there is no horseflesh to consider. Having a vehicle always ready for evening and night work alone makes motoring worth while, and I should not at all care to go back to horses. I can, and do, usually drive myself, and understand the mechanism of my cars, but I keep a man, who cleans the car, does all ordinary adjusting and repairs, comes out with me, and drives when necessary. I am not particularly careful, and certainly not "parsimonious"; but am not needlessly extravagant, nor do I allow my man to be. The average annual mileage has been between 6,000 and 7,000, or about 18 miles a day. I consider "T. D. N.'s" estimate of 12,000 miles as almost impossible for a medical man with many patients to see.

I have taken a car on four of my annual holidays, but I do not recommend this if expense is an object. The figures given, however, include these holidays.

I insure for everything.

As to tyres, I use one studded tyre during the winter on the Panhard, and have tyres retreaded when possible. I have found Michelin and Avon tyres quite good.

I know probably over fifty medical men who use motors; their favourite cars are the following, placed in order roughly, according to numbers used, the first two mentioned being much the most numerous:

De Dions of 8, 6, 10, 15 h.p.	Humbers of 12, 15 h.p.
Panhard's of 7-10, 8, 15 h.p.	Argylls of 12 h.p.
Renaults of 10, 14, 16 h.p.	Sunbeams of 12, 14 h.p.
Darracqs of 8, 16 h.p.	Swifts of 10 h.p.
Rovers of 8 h.p.	Italas of 16 h.p.
Siddeleys of 10, 15 h.p.	Napiers of 24 h.p.

and a few others.

I summarize as follows:

Annual Average.			
	Expenditure.	Depreciation.	Total.
Nine years' horses and carriages	249 0 0
Two motors:			
First period, 2½ years	...	261 16 8	119 12 11
Second period, 4½ years	...	205 11 4	49 12 3
			255 3 7

The annual expenditure for the last 4½ years has been made up as follows, on an average:

	£	s.	d.
Petrol and oil	...	23	16 0
Tyres	...	35	3 0
Man's wages, clothes, etc.	...	70	0 0
Insurance	...	15	11 0
Replacements, repairs, and sundries	...	65	1 4
	205	11	4

Average annual mileage, 6,000 to 7,000 miles.

My final advice is: Get a car of a standard make, and to begin with a good second-hand one. Do not use too large a car. Have two cars, so as to avoid delays while any repairs are done to tyres or mechanism of either car. Carry a Steeple wheel. Learn to understand your cars yourself.

LITERARY NOTES.

MR. MURRAY will shortly publish a work by Dr. David Forsyth, entitled, *Children in Health and Disease*. After treating of the physiology and psychology of the normal child, the book deals with the health of children in elementary and public schools, and with the principles on which the training and moral education of boys and girls should be founded. The State and municipal problems of infant mortality and of the idiot and feeble-minded population are discussed in detail. The concluding chapters are devoted to the various aspects of disease as affecting children.

Messrs. Rebman, Limited, will publish on June 23rd *The Maniac: a Realistic Study of Madness from the Maniac's Point of View*. The book is said to be a faithful account of a genuine attack of acute mania; and the publishers, in a note to the book, give it as their opinion, after careful investigation, that the book is a genuine record of an actual case of madness. The same publishers also announce for issue on the same date a new novel by the author of *Morag, the Scot*, entitled, *Old as the World: a Romance of the Western Islands*, by J. W. Brodie Innes.

It is related, on the authority of Van de Weyer, that at a diplomatic conference Talleyrand pointed to a sentence, and remarked, "I suppose this means so and so." To which the reply was, "Cela va sans dire." Talleyrand quietly answered, "Oui, certainement, mais cela va mieux en le disant." We commend this saying to the attention of those who—say in relating a case, drawing up a report, or writing a letter—omit something which is too readily assumed to be known to the reader. A thing may to the writer's mind "go without saying," but it is seldom that it will not go better by being said.

The mention of Talleyrand reminds us of his niece, the Duchess de Dino, who acted as hostess for him when he was ambassador in this country. In her memoirs, entitled, *Chronique de 1831-1862*, describing Lord Holland, she says he had "une bienfaisance perturbatrice." How well we all know this disturbing benevolence. Doctors suffer from it more than any other class of the community, for charitable persons of all sorts think they have a right to make unlimited calls on their gratuitous services. At the present time the London County Council and many other public bodies are displaying a "bienfaisance perturbatrice" which, unless it is checked by the action of the British Medical Association, is likely to make the struggle for life more arduous to many members of the medical profession.

On June 1st M. Capitan presented to the Paris Academy of Medicine four Peruvian vases belonging to a period before the Incas. On one was represented the head of an Indian who had lost an eye; on another was an admirably modelled figure with both orbits empty. M. Capitan thinks that the figures represented cases of non-leptotic panophthalmia. A third vase showed a person the end of whose nose was cut obliquely; the lower limbs were wasted. On a fourth was a recumbent figure whose nose had also been cut obliquely, while there was a considerable loss of substance on the upper lip. On the right side of the neck was a large mass; the lower limbs ended in stumps. Various explanations of these lesions have been given, some seeing in them the effects of syphilis or tuberculous lupus. Virchow believed them to be due to leprosy. Others think they are the results of amputation of the nose and upper limb done to stop the advance of lesions of some kind. M. Capitan makes no mention of the possibility that they may show the handiwork of the executioner. The mass on the neck of one of the figures, however, would suggest disease.

On May 8th there was issued to the public the fourth volume of the *Belfast Health Journal*, a publication devoted to the promotion of the health of the public. It is now many years since Dr. O'Neill issued his first volume of the *Health Journal*, and it is just a quarter of a century since he began his health crusade in Belfast. In 1884 the population of the city was 215,622; it is now 380,344, while the death-rate has fallen by 3 per 1,000; 70,000 copies of the *Health Journal* have been circulated to teach the public the cardinal doctrine of life—that to ensure health they must breathe fresh pure air, use pure water, eat wholesome food, keep the body clean,

wear comfortable clothing, live in healthy homes, and avoid mental worry. The journal deals with the important subject of primary education and the proper conditions for such work. It points out that, while there are numbers of schools well suited to the needs of the position, there are others which are a positive discredit to public decency and a menace to the health and the lives of the children attending them. Photographs of some of the new ideal schools, such as the "O'Neill Memorial" School, Crossnacreevy, are shown in contrast with others of the old objectionable type. The success of the technical movement in Belfast under zealous municipal control is pointed out, and the proposal is put forward to establish primary education throughout the country similarly under the control of borough or county councils. Another question dealt with is the provision of decent houses for workers, especially in rural districts, where hundreds of labourers have to live in wretched hovels, ruinous to the health of themselves and families. Rural councils are urged to take immediate steps to avail themselves of the Government grant to provide housing conditions that will check the emigration of the labourers, and so secure that workers can be had to carry on farming operations in the country. The issue contains 130 pages, with fine reproductions of many of the national beauty spots of Ireland.

G. J. Guthrie's *Commentaries on the Surgery of the War in Portugal, Spain, France, and the Netherlands, from the Battle of Rolicia in 1808 to that of Waterloo in 1815*, were published in 1853, but, as he tells us in his preface, an introductory lecture appeared in the *Lancet* nearly two years before. In that lecture there are some interesting foreshadowings of abdominal surgery, the developments of which are among the most remarkable achievements of the healing art. He tells the following story:

A respectfully dressed woman of a middle age, by which something between forty and fifty may be understood, came into my room one morning, saying she "was sent to show me her demon." Seeing that I hesitated and did not appear to understand, she added, "the mark of the cut, Sir, made by Mr. —, in my stomach, fourteen inches, Sir, from the end of the breast bone, to the bone below." This was conclusive, and we proceeded forthwith to examine, and there it was sure enough. "Then, Ma'am," said I, "you were regularly opened." "Oh, yes, Sir," she replied, "a lump twice as big as your head was taken out, and the doctors were very kind. One put back my bowels, another arranged my liver and pushed my stomach into its place, but there was some difficulty about what they called my colon." And the lump, I said, "did that bleed?" "Oh, no, Sir, very little; it was tied before it was cut away from my womb, which was shoved back to its place." She concluded by saying, by way of climax, and looking a little demure, "I have had a child, Sir, since that." I could only express my thanks and assure her that she was a lucky woman, but that ladies often did take a great deal of killing—more, I believed, than men. Since that period it is calculated that 150 or 160 operations of a nearly similar nature have been done; one I saw myself precisely similar, the woman dying of bleeding after several days. Obstetricians or accoucheurs, the class of gentlemen who have generally done these things, have recommended, some a cut of ten, some of eight, some of six, some of four inches, instead of fourteen; but whether the cut be longer or shorter, one-third of the sufferers only have escaped with life, and the operation is not considered quite as successful as might be wished, more particularly as the complaint is usually one of great inconvenience and distress, but is not necessarily mortal, sometimes for many years. The great fault, however, is established, and that by gentlemen who are presumed to be the gentlest of doctors, that the whole length of the abdomen of a lady may be laid open by a clean cut, her ovary, and occasionally both, taken out, and that the patient may recover.

Guthrie goes on to say that years before he had said that a mere incision into the belly was not necessarily mortal, except under bad treatment, and he adds that the proof has now been fully given. He proceeds to draw an inference:

When a man has recovered from a wound which has been supposed to have left a hole in his diaphragm, he must not clean a horse, nor tie his own shoes, nor even bend his back, beyond making a bow—I do not forbid that, if he cannot help it. He must eat sparingly at a time, drink less, and sleep as much as possible in a somewhat raised position. When, however, all possible precautions have been taken in vain, and he is distinctly suffering from the symptoms of an internal strangulated hernia of the part supposed to have been injured, and is likely to die unless relieved, what is to be done? Why, you must make an incision through the wall of his abdomen (as the accoucheurs do in this part of the ladies), just over the suspected spot; introduce your hand through this cut; feel with your forefinger for the hole in the diaphragm, and withdraw the strangulated part, even if it should be necessary to enlarge

the hole in the diaphragm by a blunt-pointed bistoury. If it should have formed attachments and cannot be withdrawn, the strangulation may be relieved and the patient survive.

Further on he says:

Wounds of the abdomen are, perhaps, more dangerous than those of the chest, and several points in connexion with them have received the earnest attention of several surgeons of great repute. The general and efficient knowledge of the subject differs, nevertheless, but little from that I have noticed with respect to wounds of the thorax. I have, however, lately seen two or three cases recorded, in which all known principles were successfully resorted to; and I augur from them a most important change in the attention paid, and about to be paid to the treatment of these injuries.

I have recommended you to open the belly of a man to enable you to reach and reduce a strictured protrusion of some internal part of the chest, through a hole in the diaphragm. A friend of mine being in Paris, and understanding that M. Amussat had laid open the back of a lady, in order to enable him to make an incision into her great bowel, above a part strictured and impassable from disease, and has thus saved her life, waited upon him accordingly. Shown into great chamber, he fell into conversation with a very agreeable good-looking lady, profuse in her praises of M. Amussat, of which she seemed to speak so feelingly, as to induce my friend to say that the especial object of his visit was to see a lady on whom he had performed a remarkable operation, which he named. His fair auditor was delighted, declared herself to be the person who had been so operated upon, and, as the speedy arrival of the doctor was uncertain, she, with great good nature, raised her inexpressibles, pulled out the plug in her back, and convinced my friend of the successful result of the operation on her colon. This operation has since been done as successfully in England, and I have very lately seen a case in which the abdomen was opened above the left groin for a similar purpose, the patient, a good-looking middle-aged man, congratulating his surgeon and himself on its successful result.

It has frequently been said that the most heroic qualities of mankind are only developed in times of universal trouble, and a very cursory study of the French Revolution goes far to confirm the truth of this statement. One of the most remarkable features of the period is the sublime heroism displayed by all sorts and conditions of quiet, peace-loving citizens—scholars, priests, and women—heroism of which no one would have thought them capable, and which seems to have been developed suddenly under the stress of circumstances. Several doctors figure amongst these obscure heroes. One of the most courageous was a famous surgeon—Dessault—the head of the Hôtel-Dieu. After the sack of the Tuileries on August 10th he managed to rescue several of the wounded, whom he hid in the beds of his patients in the hospital. The mob invaded the Hôtel-Dieu in search of their victims, but Dessault, with the help of nurses and patients, skilfully evaded all questions and saved them all from certain death. Another doctor who played a part in the drama of the Revolution was Lemonnier, equally celebrated as physician or as botanist. Mrs. Maxwell-Scott in her recent book, *Madame Elisabeth de France*, makes honourable mention of him. He had been one of the tutors of Mesdames Clotilde and Elisabeth, sisters of Louis XVI, to whom he taught botany. He gained the affections of the royal children to such an extent that later, when Madame Elisabeth had her own establishment at Montreuil, and Lemonnier was living close by, a close friendship grew up between the two. The Princess made her old master her almoner in the village, and delighted in sharing his studies, and even his experiments in the laboratory. Lemonnier's devotion to his pupil nearly cost him his head. At the outbreak of the Revolution he held the post of physician to the King, and occupied a suite of rooms in the Tuileries. When the mob broke into the palace they found Lemonnier quietly seated in his library. The infuriated people asked him what he was doing there. "I am at my post," he answered. "I am the King's physician." "And are you not afraid?" they cried. "Of what?" was the calm reply. The old man's courage so astounded his questioners that they forbore to touch him, and merely asked where he wished to go. He answered that he desired to be conducted to the Luxembourg, and a line of pikemen escorted him thither, no one raising a hand against him. "Let him pass," said his escort; "he is the King's physician, but he is not afraid." Lemonnier saw his former patrons again before the end of the tragedy. During his imprisonment in the Temple the King was troubled with an abscess in the mouth, which made him very unwell. He was not allowed to see his

own dentist, but as he grew steadily worse his gaolers became alarmed and sent for Lemonnier. The doctor was given leave to visit Louis twice a day for a week, and one cannot doubt that these visits were a consolation to the unhappy King and his family. Lemonnier had a great respect and affection for Louis as well as for his sister, and was profoundly distressed by their misfortunes. These two examples, taken at random from a score of others, might be multiplied indefinitely, and show us that, side by side with doctors such as M. Souberbielle Bellommc, there were members of the profession who remembered their duty and dared to brave the guillotine in performing it.

Medical News.

DR. R. DEANE SWEETING has been appointed to represent the University of Oxford at the forthcoming Sanitary Congress at Leeds.

DR. WM. STIRLING, Professor of Physiology, University of Manchester, has been elected a foreign corresponding member of the Reale Accademia di Medicina di Turin.

DR. ELLIOT SMITH'S Arris and Gale Lectures at the Royal College of Surgeons of England, which were to have been delivered on June 25th, 28th, and 30th, have been postponed. They will be delivered during the winter months.

SIR WILLIAM BENNETT will take the chair at a conference on the medical inspection and treatment of school children arranged by the Incorporated Institute of Hygiene, to be held on Monday next at 4.30 at 34, Devonshire Street, W.

THE Savings Bank of Milan has voted a grant of £10,000 to the Italian Committee for the study of cancer, on the understanding that the money shall be payable when the proposed National Institute of Cancer Research is in working order.

AT the recent sitting of the Board of Examiners of the Royal College of Veterinary Surgeons, held in Edinburgh, nine students of the Royal (Dick) Veterinary College passed the final examination and were granted the diploma of M.R.C.V.S.

THE Royal Mail Steam Packet Company has told off for Norwegian and Morocco cruises this summer two of its finest vessels, one having a swimming bath in addition to ordinary accommodation. A booklet describing the tours, none of which are expensive either in time or money, can be obtained on application at any of the company's agencies.

THE Council of the Royal Institute of Public Health have awarded the Harben Gold Medal for eminent services to the public health, which they are empowered to do triennially, to his Excellency Professor E. von Behring, M.D., Marburg, Germany, and have appointed Brevet Lieutenant-Colonel W. B. Leishman, M.B., R.A.M.C., Professor of Pathology, Royal Army Medical College, the Harben Lecturer for the year 1910, and Professor Angello Celi, M.D., Rome, the Harben Lecturer for the year 1911.

THE Inter-University Congress, which met in Belfast last year, is to meet in Durham and Newcastle-upon-Tyne at the end of this month. A large gathering of the Students' Representative Council of the universities and medical colleges is expected. Already invitations have been issued by the University of Durham College of Medicine and the Armstrong College to social functions. There will be, in addition to the more serious business of the meetings, the usual sports.

A CRICKET match for the members of the British Medical Association visiting Belfast will be held on Thursday, July 29th, on the grounds of the North of Ireland Cricket Club, which are only ten minutes' walk from Queen's College. Dr. J. W. Taylor has kindly arranged to give luncheon to the teams, and afternoon tea to them and the spectators as well. Cricketers members who are willing to take part in the match are asked to communicate as soon as possible with Dr. J. W. Taylor, Dunelm, Malone Road, Belfast.

COMMEMORATION DAY at Livingstone College was celebrated in the grounds of the institution at Leyton on May 26th, the Master of Trinity College, Cambridge, presiding, and a large number of medical men being among the visitors. The speakers included Dr. C. F. Harford, the principal of the college, who said that in

the last fifteen years public opinion as to the need of missionaries having some medical training had changed, and the Master of Trinity, who, touching on the same point, said that he had had missionaries among his own relatives, and felt that their lives might have been saved had they had the advantage of the knowledge afforded by a residence at Livingstone College. Professor Alexander Macalister said that when the institution first commenced its work he had had some doubt as to the wisdom of the training given; but now, as an old medical teacher, he had thorough confidence in it. A missionary ought to be in a position to render simple medical aid to natives when qualified medical assistance could not be obtained, and to know how to safeguard his own health. He hoped that before long training such as was provided at Livingstone College would everywhere be regarded as an absolute necessity for missionaries. The meeting was also addressed by the Central Asian explorer, Dr. M. A. Stein, who said that he had come specially to bear testimony to the value of the services rendered him during his recent travels in the Himalayas by an old student of Livingstone College. When making for home towards the end of his expedition his feet were so badly frostbitten that he felt it imperative to obtain assistance of some kind. He therefore caused himself to be carried on an improvised litter over a pass between 17,000 and 18,000 ft., and was met by an old student of Livingstone College, the Rev. Sebastian Schmitt, who took him to Len and gave him the attention he required. He had since consulted eminent surgeons both in India and in England, who said nothing could have been better than the conservative surgery carried out by Mr. Schmitt. His left foot had entirely recovered, and the utility of the right foot was far greater than he had any right to expect.

THE annual meeting of the Society for Training Teachers of the Deaf, and for the diffusion of the "German" or pure oral system, was, by the kind invitation of Mrs. Synes-Thompson, held at 33, Cavendish Square, on May 26th. Sir McNeill Bechocroft, Chairman of the London County Council, presided, and in moving the adoption of the report, pointed out that, according to the latest available census returns, there were at least 20,000 deaf and dumb persons in the United Kingdom. The London County Council provided school accommodation for 625 deaf children, of whom about 400 were in day classes and 225 in residential institutions. For these about 65 specially trained instructors were required. The demand for trained teachers was much in excess of the supply, one reason being that the cost of training exceeded that of the training of the ordinary elementary teacher. It seemed remarkable that while the State imposed on the local educational authorities the duty of providing for the teaching of deaf children it gave no financial aid—or at best, inadequate aid—to the training of their special teachers. In these circumstances the work of such colleges as that at Ealing and its sister institution in Fitzroy Square called for support in sympathy and funds from the benevolent to help in supplying this great public need. Dr. Shuttleworth seconded the adoption of the report, supporting the chairman's statements as to the inadequacy of State assistance in the provision of teachers for deaf children, though the instruction of the latter was compulsory by law, and pointing out the danger to the community of the uneducated deaf drifting into the asocial and criminal classes. He referred to a recent case in which a "stone deaf" prisoner, without the benefit of education, had by reason of his inability to plead been, without trial, for his offence committed to prison as "non-sane." Though the prison surgeon did not consider him insane, he still remained in custody awaiting "His Majesty's pleasure," three learned judges having decided that the man's inability to plead constituted "insanity" in point of law. From such a predicament special education would no doubt have saved him. Such a case seemed a strong argument in favour of the beneficent work of this society. The resolution having been carried, Sir M. M. Bownagregre, K.C.I.E., moved the reappointment of the officers, and referred to the fact that no less than 148 teachers had been successfully trained at the Ealing College, which was admirably and economically managed, satisfactorily reported on by the Board of Education Inspector, and capable of even more extended utility if only better supported by private benefactions or public funds. Mr. A. E. Miles is Treasurer, the Rev. A. J. Thompson Honorary Secretary, and Miss E. Hewett, Principal of the Training School at 47, Eaton Rise, Ealing, which receives deaf children for education, besides training teachers.

British Medical Journal.

SATURDAY, JUNE 19TH, 1909.

PUBLIC HEALTH AND SOCIAL CONDITIONS.

THE conditions which at the present day help to build up the fabric of society in highly civilized States are of such a complex character that the social reformer is often in despair when he attempts to modify or to amend the hard lot of his less fortunate fellow beings. If he decides to make himself master of one aspect of the problem he finds that it is so closely interwoven with other aspects that he hesitates to draw conclusions which may ultimately prove to be fallacious. If, for example, he makes himself thoroughly familiar with the administration of the Poor Law, he discovers that he must obtain also a knowledge of the main facts concerning public health; he must, for instance, become acquainted with death-rates and with sickness-rates in different localities, and he must gauge their effects upon pauperism. Then, again, he cannot avoid a study of industrial conditions and the varying conditions of the labour market. Details on all these matters are to be obtained by those who know where to find them, but those who possess the knowledge are comparatively few, so that it was a happy inspiration which led the President of the Local Government Board to commission some of his staff to compile from material which they had to their hands a series of statistical memoranda relating to certain aspects of existing social conditions. The resulting volume¹ is intended "to illustrate in a convenient and readily intelligible form various matters of importance in the study of those conditions such as the growth of population, mortality, and public health administration, the changes in the occupations of the people, the recurring periods of industrial prosperity and depression, pauperism and the action of the Poor Law, local taxation and local debt, and the development of education and thrift." The sections relating to public health were produced under the supervision of Dr. Newsholme, and those relating to the Poor Law under that of Mr. J. S. Davy, while the volume generally was compiled by Mr. C. F. Adair Hore, one of the staff of the Permanent Secretary of the Local Government Board for England and Wales.

The feature of the memorandum throughout is the simple and graphic representation of facts. This is achieved not alone by a liberal use of charts and maps, but by the simplification and explanation of tables, of which there is a very large number. For instance, the varying increase or decrease in the population in the past half-century in the several divisions of the United Kingdom is shown by stating that for every 100 persons living in 1851 there were in 1908 estimated to be 197 in England, 187 in Wales, 167 in Scotland, and only 67 in Ireland. The birth-rate in England and Wales was at its highest in 1876, and calculated as the ratio of the number of births

in a particular year to the total population estimated to be living in that year—that is to say, in the manner in which it is usually calculated—there was a decrease equal to 20 per cent. between 1876 and 1905; but when the calculation is made, as it should be, as a proportion of the number of married women at child-bearing ages, between 15 and 45 years, the decrease in the birth-rate is found to be equal to 27 per cent. in the same thirty-year period. When the illegitimate birth-rate is calculated in the same manner—that is to say, as a proportion of the number of unmarried and widowed women at conceptive ages—there is seen to be a fall from 14.6 per 1,000 in 1876 to 7.8 per 1,000 in 1907.

The relationship between the death-rates, institutional treatment of disease, pauperism, prices and wages is very graphically shown in a chart. Assuming that all these factors stood at 100 in 1869, the death-rate from all causes in 1907 was equivalent to 72, and from phthisis to 47; the amount of pauperism would be represented by 55, while prices have fallen to 80. On the other hand, wages have risen to 140, and the amount of institutional treatment to 225. The satisfaction which is aroused by the gratifying elements in these records receives a serious check upon turning to the details of infantile mortality, for during the whole of the second half of the last century there was practically no diminution in the appalling rate of death among young children which obtained in the first half. The genuine efforts made in the past few years to reduce this mortality are now having some result, for in the present century there has been a fall in the infantile mortality rate of about 20 per cent.

A very interesting and concise account is given of the Public Health administration of England and Wales. The powers and duties of the central and the local authorities are recorded with a simplicity so engaging that those who read of them for the first time will wonder how it is that insanitary conditions are permitted to exist in face of the fact that such acknowledged powers of abolition exist. The Local Government Board, we are told, is empowered to receive complaints as to the default of local sanitary authorities in providing sewerage or (in certain cases) water supply, and in enforcing the provisions of the Public Health Act, which it is their duty to enforce, and it may, after local inquiry, compel them to discharge their duty in these matters. The medical officer of health and the inspector of nuisances, it is stated, occupy an important place in local sanitary administration. This is an admission of some importance, for it has not infrequently happened that these officials have not received the support from the central authority to which they considered they were entitled.

The account of the development of institutional care in England and Wales includes some very striking facts. In 1871 there were in the whole country 13,706 persons in hospitals, and this number had increased to 35,160 in 1906. In the former year 2.6 per cent. of the total deaths occurred in hospitals, but in 1906 this percentage was 6.6. In London the increase was not so great during the same period, for in 1871 there were 5,228 persons in the metropolitan hospitals, in which there occurred 6.5 per cent. of all deaths, while in 1906 there were in these institutions 10,611 persons, and the deaths in them constituted 14.3 per cent. of the total number registered in London.

In the section of the memorandum which deals with pauperism and the Poor Law we are told that in the

¹ *Statistics and Memoranda and Charts prepared in the Local Government Board relating to Public Health and Social Conditions.* London: Wynaf and Sons; Edinburgh: Oliver and Boyd; Dublin: E. Ponsonby, 1909. (5s.)

last fifty years every class of pauper in proportion to population has declined, the decrease being about 74 per cent. in the case of children and able-bodied adults and 44 per cent. in the case of the aged and infirm. In the year 1849 the number of adult able-bodied paupers was 13.5 per cent. of the total population, but in 1908 this percentage was 3.5. The cost of poor relief presents several features of interest. Between 1850 and 1907 the cost per head of the population has risen from 5s. 11d. to 7s. 9d., but the cost per £ of rateable value has fallen from 1s. 6½d. in the former year to 1s. 4d. in the latter. The increased expenditure is, no doubt, in part accounted for by the very large number of lunatics who are now cared for in asylums compared with those who were so treated fifty years ago. The additional care bestowed upon the sick poor and the increase in the number and character of institutions accounts for still more of the increase.

It is impossible to dip more deeply into this extremely interesting and instructive document, which is certainly one of the most useful Blue Books ever issued from a Government department. Although we have been able only to skim the very topmost layer of the cream, we have endeavoured to show that it is a volume which contains within its pages data and material which will materially assist in the solution of many urgent social problems, and, while pointing the right direction to be taken, will also prevent the selection of dangerous or altogether inappropriate paths.

TUBERCULOSIS IN INDIA.

THE great attention paid during recent years to diseases peculiar to, or specially prevalent in, the tropics has been accompanied by a comparative neglect of the study of the havoc wrought by certain common world-wide diseases in hot countries. One of the most important of these is tubercle, to which, in its relation to India, attention has recently been directed prominently by the publication in the *Indian Medical Gazette* of series of papers read before the Medical Section of the Asiatic Society of Bengal. The interest aroused in the subject is shown in the fact that the reading of these papers and their discussion occupied three monthly meetings. The outstanding feature of the debate was the conclusive and unanimous evidence adduced regarding the great frequency of tuberculosis, especially phthisis, in Bengal, and its high mortality. The statement made by the late Dr. A. Crombie at the International Congress on Tuberculosis in Berlin in 1899, to the effect that the disease was quite rarely met with in natives of India, seems to have been completely disproved. Thus Lieutenant-Colonel G. F. A. Harris, I.M.S., in his introductory address, stated that 10 per cent. of the admissions to the General Hospital, Calcutta, in 1882-4 were for pulmonary phthisis, while after ten years' recent experience at the Medical College Hospital, mainly with Indian patients, he had come to the conclusion that the disease is one of the commonest and most fatal in that city. This view is fully confirmed by an analysis of *post-mortem* records of that hospital for twenty-six years contributed by Major L. Rogers, I.M.S.; no less than 17 per cent. of the deaths were directly due to tuberculous disease, while 8 per cent. more showed latent or healed tubercle in the lungs. Thus no less than 25 per cent. of the bodies revealed evidence of this disease, and the percentage would

doubtless have been higher still had the condition of the lymphatic glands been regularly recorded. Major J. Mulvaney found that as many as one-fifth of the deaths in Bengal gaols were from phthisis, and that nearly all occurred among prisoners admitted with the disease. Another interesting point brought out is the comparative rarity of surgical forms of tuberculosis, which were observed in only 0.45 per cent. of the total *post-mortem* examinations, and in only 2.2 per cent. of the total admissions to the surgical wards at the Medical College Hospital. Major L. Rogers attributed this to the great rarity of bovine tuberculosis in India as compared with Europe, a view which lends important support to the conclusions of the Tuberculosis Commission regarding the frequency of infection through cow's milk in England. The evidence of the *post-mortem* records and the vital statistics of Calcutta also agreed in showing that the highest tuberculosis-rate was found among females, and especially among Mohammedan women, who are so closely confined in overcrowded houses and have less opportunity of getting out in the open air than any other class. The analysis of the *post-mortem* records also showed that tuberculous pericarditis and pneumothorax were more common and tuberculous meningitis less common than in temperate climates. All these data reveal a very great prevalence of tuberculous disease in India, while the fact that in an inquiry into the real causes of deaths returned under the elastic heading of "fever" in an unhealthy malarious district of Bengal, no less than 9 per cent. were found to be certainly due to phthisis alone, makes it clear that tuberculous diseases in this province produce a mortality second only to that due to pneumonia and to malaria and kala-azar combined. It is also now known to be exceedingly prevalent in the United Provinces and Central Provinces, as well as in Bombay and Madras; in short, over nearly the whole of India. It is probably less prevalent in the dry Punjab, although exact data appear to be wanting on that point.

Enough has been said to prove that tubercle is a far greater scourge in India than, for example, such dreaded diseases as cholera, small-pox, and dysentery. It would seem that this fact has not hitherto been fully realized, for otherwise some attempt would certainly have been made to introduce sanatorium treatment which is even more necessary in India than in Europe, on account of the rapidity with which the disease progresses in the hot weather and rainy seasons in the sultry plains of Hindostan. The selection of a site which will present favourable conditions for the treatment of phthisis at all periods of the year is a matter of some difficulty. The only places which have been suggested in Bengal are Darjeeling and the plateau of Chota Nagpur, but in the opinions of competent men who contributed to the debate the former is too wet and cold at certain seasons, and the latter too hot for several months. Those who have had many years' experience of sending tuberculous patients to different places in India seem to be agreed in considering Almora, in the Kumaon Hills of the United Provinces, as the most suitable place for starting a sanatorium. It is at a medium elevation, and is protected from excess of rain by higher ridges to the south, and is very sunny for a hill station. When once the benefits of treatment in a well-managed sanatorium become realized in India, doubtless many wealthy Indians will come forward to endow similar institutions in different parts of India, and so in time something may be done for the

successful treatment of the disease in its early stages, and further infections will be lessened by removing the dangerous patients from the too often overcrowded houses of Indian cities. As a result of the discussion a resolution was unanimously adopted to the effect that the Medical Section of the Asiatic Society of Bengal was of the opinion that it is an extremely common cause of great suffering and mortality, both among the European and Indian communities, and therefore ventured to call the attention of the Government of India and the local Government, to the urgent necessity for providing a properly equipped sanatorium for the treatment of early phthisis, such as has now been provided with most satisfactory results in nearly all civilized countries.

RETARDATION OF METABOLISM.

PROFESSOR R. STAHELIN, in a paper founded on observations made in the university clinic of Professor His in Berlin,¹ has sought to arouse fresh interest in what he believes to be the overlooked importance of retardation of metabolism in certain conditions, a theory which a few decades ago was much talked about, but has gone out of fashion because it was shown by careful research that metabolic processes are more constant than had been assumed.

Stachelin holds that there are reasons for its rehabilitation, at least to a certain extent, on the ground that certain substances hinder the destruction of others. Thus fat, when given with albumen, retards the appearance of nitrogen in the urine, and this effect is to be observed in certain diseases—diabetes for example. Again, according to Falta and Gigon, cheese retards the nitrogen excretion in diabetes, and Stachelin observed the same thing in obesity. The curve of the elimination of purins in gout can, he thinks, best be explained by accepting the theory that there is a retardation of the nuclein metabolism in this disease. A similar condition occurs in alcoholism, diabetes, and lead poisoning. Mohr has maintained that sugar is burnt off more slowly in diabetes, and if its consumption is diminished its destruction should be slowed, but this has not been proved. Combustion may be slow but complete, as in obesity, or it may be incomplete. Dogs from whom the thyroid has been removed show slow carbohydrate metabolism. Waldvogel believed he had proved that in obesity the transformation of beta-oxybutyric acid into acetone is retarded, but his results have not been confirmed. Raising the external temperature has the effect of diminishing the production of heat in warm-blooded animals, but beyond a certain point the external temperature remains without effect, indicating that there is a minimum which cannot be altered.

Any great retardation of consumption must produce marked effects, as is seen in the only universally admitted pathological condition in which it is known to occur, namely, where the function of the thyroid gland is depressed. Stachelin, Hagenbach, and Nager studied the case of a boy who had had a goitre excised twelve years previously, and who in consequence had remained stunted in growth, was thin, ate little, but was perfectly intelligent. The oxygen output was found to be only 70 per cent. of that of a healthy child of the same age; thyroid feeding raised it 25 per cent.

and the case is sufficient to prove that a reduction of oxygen consumption may occur.

Cases have been observed in which men have been able to maintain their body weight on very low diet. Such a case was studied by Pettenkofer and Voit, who proved that there was diminished excretion of CO₂. In oesophageal occlusion from injury, Fr. Muller and Nobelthau found that the body adapted itself to a minimum of food, and Magnus-Levy, in a case of voluntary starvation, where the body weight was reduced to 36 kg. (72 lb.), observed that the oxygen consumption was very small, but when food was taken in proper quantities oxygen was again consumed in normal amount. R. O. Neumann, in observations on himself continued over months and years, found that his body weight remained the same on very varying quantities of food, and Chittenden's experiments show that when nitrogenous food is diminished the demand for it is also reduced. Falta, Rubner, and others have shown that this is true also of animals, but it is not known how far this capacity extends, certainly not to all animals or men, and it is probably less frequent among the latter. Some convalescents show diminished oxygen consumption, others do not. In diabetes most patients have a normal or even increased oxygen consumption, but some show a decided reduction, and can bear a reduced diet without loss of weight. Van Noorden believes that such patients are always ill nourished, but Stachelin doubts the invariable truth of this, and cites the case of a patient weighing 67 kg. (134 lb.) who maintained his body weight on a dietary containing only 30 calories per kilo.

Gout, diabetes, and obesity are the conditions in which slowing of metabolism is observed, and these are the diseases long ago styled "*Maladies par ralentissement de la nutrition*" by Bouchard. He was unable to bring forward sufficient evidence to establish this theory, but it appears that retardation of metabolism is not so uncommon as has been assumed, and it is of great theoretical interest that it should occur in certain diseases of metabolism and in connexion with the depressed functions of certain glands (thyroid and ovaries) which have internal secretions. There are, therefore, grounds for hoping that the experiments of Falta, Eppinger, and Rudinger on the influence of these organs on the rate of katabolism may throw light on the origin of these diseases.

The knowledge of the retardation of nuclein metabolism is of great practical importance in the treatment of gout, while the fact that many diabetics tolerate diminished food supply should overcome our fear of underfeeding these cases, and should allow us to venture in difficult cases to try the effects of reduction of nitrogenous food, even when the distinctly reduced diet possesses an insufficient caloric value.

THE ANNUAL MEETING.

At the end of the JOURNAL for this week (pp. 1521, 1522, 1523, and 1524) will be found a form for the use of members who propose to attend the Annual Meeting of the British Medical Association in Belfast next month. If the form is filled up and returned to the address shown, a voucher or vouchers will be issued from the central office, giving the right to the special terms which have been arranged with the railway companies. A return ticket will be issued at a single fare and a quarter, and this year negotiations with the railway

¹ *Deut. sch. med. Woch.*, 1909, No. 14, p. 77.

companies have resulted in a special concession, which is that the return tickets at the reduced rate will be available from Thursday, July 22nd, the day before the Annual Representative Meeting, until the end of August. This extension will allow members holding return tickets to make an extended tour in Ireland, and to visit some of the places described in the article published in the JOURNAL last week (p. 1422). On the back of the form is a list of hotels, and on the next succeeding page is a list of lodging-houses in Belfast, with a scale of charges: members are requested to communicate direct with the persons whose names are given in the list, or with the managers of the hotels mentioned. The early receipt of the form stating the intention to be present will greatly facilitate the work of the local committee, and, as has previously been pointed out, it is desirable to secure rooms at an early date. The agenda paper of the Annual Representative Meeting, so far as it could then be settled was published in the SUPPLEMENT for May 22nd, and the programme of the general meetings and of the Sections was last published in the SUPPLEMENT of last week, but we may recall the fact that the President-elect, Sir William Whitla, will be inducted on Tuesday afternoon, July 27th, and will deliver his address on the evening of that day in the Assembly Hall. The Sections will meet on Wednesday, Thursday, and Friday, July 28th, 29th, and 30th.

THE MEDICAL TREATMENT OF SCHOOL CHILDREN.

THE London County Council, as was stated in the JOURNAL of June 12th, decided, in opposition to the majority report of the special subcommittee of experts appointed to consider the means of providing for the treatment of school children found defective, to attempt to utilize existing institutions—that is to say, hospitals and dispensaries. The education officer thereupon issued a circular to the London hospitals, asking whether they were willing to co-operate—in other words, whether they were prepared to place an additional burden on their medical staffs, and increase the already intolerable amount of hospital abuse. We published in the same issue a circular letter addressed by the Council of the Metropolitan Counties Branch to the members of the medical staffs calling attention to the significance and consequences of this action of the County Council. That some, at least, of the hospitals will agree with a light heart to an arrangement which will inflate their statistics of out-patient attendance is tolerably certain. Indeed, from a note published at p. 1504, it will be seen that the Great Ormond Street Hospital for Sick Children has expressed its willingness to provide treatment for twenty-five school children a week. Naturally the Education Committee recommended the acceptance of an offer which "would not involve the Council in "any expense." This will doubtless be satisfactory to everybody, except the doctors; and of course their willingness to bear the burden imposed on the County Council by the State is taken for granted. Their vicarious charity is apparently held by some members of the Council to be an act of reparation, as one ornament of that bright exemplar of municipal bodies said that it was the doctors who were responsible for the fact that the children require to be treated, and asked, with a fine assumption of indignation, if it was suggested that the Council should make amends for the misdoings of the profession! We suppose the next proposal will be that a special rate should be levied on the medical profession to defray the cost of the treatment.

AN INDEX OF CURATIVE SKILL.

MR. FRANCIS GALTON in his early days was a medical student, and in his *Memories of My Life* he has some interesting remarks on the practice of the healing art. He says: "The opinions held by the students 'about the several physicians and surgeons were 'curiously guided by a mixture of loyalty and 'irreverence. There was no doubt of the fact that "M., one of the doctors, who never professed or had "a claim to scientific acquirements, got his patients "out of hospital more quickly than any of his "colleagues. His treatment was as simple as that "of Dr. Sangrado, though of quite another kind. "It consisted of a strong purgative followed by low "diet, and a subsequent feeding up as soon as the "fever had gone. The composition of his drench "never varied; a big bottle of it was made every "morning in the dispensary, in readiness to be served "out. It was so cheap that the overplus could be "thrown away and a fresh infusion made the next day." Mr. Galton goes on to express the opinion that it is desirable that some "index of curative skill" should be awarded to doctors, based on their respective hospital successes. He says he has often amused himself with imaginary schemes to this effect. If it could be compiled truthfully, he thinks it would be an excellent guide to those who wanted a doctor, but were doubtful whom to consult. A high index of curative skill would serve as a measure of merit, and the fee to the doctor might be regulated by its height. This may seem fanciful, and it is to be feared to attempt to weigh what is imponderable would lead to all sorts of fallacies in theory and to undesirable results in practice. It is, however, within the experience of every one who has watched the practice of physicians and surgeons at a hospital, or of general practitioners in town or country, that there is a difference between one man and another in curative skill, and that it is by no means always the most "scientific" who cure most. We have ourselves had occasion to observe that in surgery the results achieved by certain men were notably inferior to those of others not to be compared with them in point of knowledge or experience. It has been suggested that in the case of operators the hand, or rather the way in which tissues are handled, may have something to do with the course taken by the wound. In medicine and general practice, the difference in curative skill is less easily explained. It is true, as Professor Osler says, that the best doctor is the one who gives hope. But besides this there must be some subtle instinct in the adaptation of means to the end which leads one man right where another goes astray. Sometimes a doctor may unconsciously be ahead of his day, as when Antonius Musa cured Augustus of a complication of ailments by cold baths. Dr. De Lisle, in a paper read at the annual meeting of the New Zealand Branch of the Association, and published in the *New Zealand Medical Journal* for February, relates that in the Thirties there was a physician at St. Thomas's Hospital who treated his fever cases much as they would be treated to-day. The students thought him an old woman, would not go round the wards with him, and took out their lectures in the practice of physic at Guy's. A gentleman whom Dr. De Lisle knew, who got his diploma in 1836, told him he considered himself unfortunate in being appointed clinical clerk to the physician in question; nevertheless, he observed that the death-rate was smaller in his wards than in those of the other physicians, and that while other men's patients were sitting over the fire spitting, his patients were out of the hospital and at work. We have ourselves known a specialist who was very successful in curing cases of uterine displacement by feeding, with little or no local treatment. His assistant

confessed that he thought his chief an old fool, but he faithfully carried out orders, and was astonished by the results. It would be interesting as well as important to ascertain exactly in what "curative skill" consists, so that the power could be cultivated. We fear, however, that it depends on some inborn personal quality which cannot be communicated by teaching.

A NATIONAL HOSPITAL.

TURNING over recently the pages of an early edition of *Burdett's Hospitals and Charities*, the following passage caught one's eye: "The most interesting of this group (miscellaneous hospitals) and the best is the National Hospital for the Paralysed and Epileptic. It treats a very extensive class of patients with an efficiency and success which leaves nothing to be desired." These words are as true to-day as when written some twenty years ago, for the institution has well maintained its promise and has claims to the title of "national," such as cannot be equalled by any other hospital in the country. For a long time past it has been a Mecca for post-graduate students from all parts of the British Empire, and probably does more than any other individual medical institution in these islands to maintain the reputation of British medicine at a high level among our foreign colleagues. The patch of the field of medicine which it has made its own is exceedingly difficult to cultivate, and must prove absolutely sterile, both in therapeutic results and in acquirement of knowledge, unless tended in a scrupulously scientific spirit and with never-failing courage. These have always been forthcoming, and the impress of the work done in the institution may be found in nearly every journal and textbook dealing with medical science. There will be a general hope, therefore, that its jubilee appeal will meet with a good response. The objects were explained at a festival dinner at the Mansion House last week by the chairman of the evening, the Lord Mayor, and by the treasurer of the hospital, Mr. Frederick Macmillan. A desire for more working space and for greater stability in finance represents them in a summarized form. The need of the latter is not the outcome of recklessness in the past, for it was at this institution that the possibility of bringing about material change in domestic management of like institutions was first recognized, with results which have been more than once quoted in these columns in articles on hospital administration. The desire for more space is also quite natural. Its consulting rooms, used as they are as places of post-graduate study, have to be unusually large, and as so many of the patients are helpless more dressing-rooms are required than are elsewhere found necessary. Modern developments in physio-therapy have also helped to create a demand for further space; exercises form now an important part of the treatment administered, and a new room in which to conduct them is needed. Nor are the present quarters for nurses what they should be in a leading hospital. The sleeping quarters are crowded, and the living rooms small and gloomy. All the improvements thus indicated to be required can be provided for about £50,000, which sum would likewise suffice to put the finances of the hospital into a satisfactory position. The sum collected in the room at the Mansion House was not as satisfactory as it might have been, but it may be hoped that between now and the date at which the King has promised to visit the hospital in November the whole sum will be in hand. Meanwhile, and as a further stimulus, H.R.H. the Duchess of Albany is to receive purses at the hospital in October. Part of the hospital is a memorial to her late husband, the youngest brother of the King, and she

is taking an active part in promoting the success of the appeal. Every penny contributed will go direct to the hospital, as she has established an expenses fund to pay for printing, postage, and other connected outlay.

SPEECH FRIGHT.

SIR JOHN BYERS has kindly sent us a very interesting addition to the growing mass of testimony and opinion on this subject which we continue to receive from various quarters. In an address delivered by him to the members of the Literary and Scientific Society of Belfast on January 25th, 1906, and reprinted as a pamphlet, Sir John Byers discusses with keen appreciation the qualities of the late Lord Dufferin as a public speaker. Referring to an address delivered by Lord Dufferin to the students of Queen's College, Belfast, Sir John Byers gives some extracts which bear directly on speech fright. We reproduce some of them here, in the hope that they may be useful to those to whose lot it falls to speak in public. Lord Dufferin said: "No great orator has ever lived who did not feel very nervous before rising to his feet. I have often seen the legs of one of the most effective and heart-stirring speakers in the House of Lords, to whom that assembly never failed to listen, shake like an aspen leaf during the delivery of the first few sentences of his speech [Lord Dufferin told Sir John this was "Lord Derby"]; and should the young speaker feel his tongue grow twice too big in his mouth, and curl itself inextricably round one of his canine teeth, he may console himself with the conviction that he possesses one at least of the characteristic qualities of a great speaker." Lord Dufferin himself was always nervous about speaking, and in his later years the thought of having to speak lay heavy on his mind beforehand. In this respect he resembled John Bright, whose sister, Mrs. Lucas, told Sir John Byers that he was always nervous when rising to speak, and his friends knew beforehand from his preoccupied manner when he was likely to deliver one of his great orations. Lord Dufferin went on to insist that no very good speech was ever made without a considerable amount of preparation, at all events, until long practice had so cultivated the speaker's faculty as to render the art of thinking aloud with fervour and precision a second nature. Even so, he said, he had heard a Lord Chancellor break down and a Prime Minister lose the thread of his discourse. He explained that by preparation he did not mean learning a speech by heart, but the saturation of the mind with a knowledge of the subject and then the construction, not necessarily in writing, but in the mind, of a well-knit skeleton of the argument or exposition; finally when out walking or in the solitude of one's own room, the language in which the ideas may most fitly be clothed should be considered. "A crowded street," said Lord Dufferin, "is not a bad arena for this exercise, as it accustoms you to abstract your thoughts from outward objects, and will render you proof against the discouraging smile of an over-critical opponent. Should you wish to go a step further, and embody in sound the thoughts that burn within you, you can always fall back upon the wandering stars for an audience. A very distinguished member of the House of Commons communicated to me years ago in the hunting field the plan which he adopted, and certainly in his case the result was extraordinarily effective. He said that when about to make an important oration he used to write down what he intended to say as rapidly as he could on successive sheets of paper, which he threw

"into the fire the moment they were filled, without reading them over. This process he repeated seven or eight times, and, as a consequence, he found when he repaired to the House that, in no sense dependent upon his memory for a sentence, these preliminary canters over the ground to be traversed had supplied him with a fecundity of expression and a lucidity of ideas to which otherwise he might never have attained. At all events, if you ever put a speech on paper, don't let the copy slip out of your pocket." Speakers differ greatly in regard to the manner of preparation. Some write out the whole speech and deliver it, like Sir James Paget, "paragraph by paragraph, sentence by sentence, word for word, commas and all," as Huxley once said in his presence. Others, like Huxley himself, will write out a speech and then deliver something which in wording at least is wholly different from the manuscript. Others, again, jot down a few headings and speak from these. As for us, to whom we confess, the orator is a dangerous nuisance—for he appeals not to the reason of the individual but to that most mischievous of social forces, the passions of the mob—the rule we would impress on speakers is to have a message to deliver, to do so as briefly and in words as simple and direct as possible, and to sit down. It would be well if speakers would follow the hint given by a man of the world for visitors, "When you have made a good impression, go away."

PICTORIAL INSTRUCTION IN HYGIENE.

MEDICAL officers of health are only tardily appreciating the value of pictorial representation as an aid in teaching hygienic habits. The advantages of appealing to the popular fancy by means of a picture rather than by printed words, however simply expressed, are sufficiently obvious not to require stating. A good example of what may be done in this direction is to be found in a handbill and poster issued by the New York State Department of Health. In a series of pictures those who are consumptive are shown how they are most likely to be cured; how they may live with others with safety, and in what way they are a source of danger to those who are well. The non-consumptives are shown how they may safeguard themselves against the disease. The pictures are being published in this country (with the permission of the owners of the copyright) by *The Medical Officer*, a newly established journal for medical men in the Government and municipal services. Those medical officers of health who advise their authorities to purchase a supply of these picture placards, either for general distribution or for public display, may feel assured that the money laid out has been wisely expended.

ILLUMINATING ENGINEERING SOCIETY.

THE "Illuminating Engineering Society" was formally established on May 25th with the object of correlating the divergent interests of the architect, the illuminating engineer, the medical man, and the physiologist. The society exists for the purpose of advancing the theory and practice of illuminating engineering and for the dissemination of knowledge, by the reading and publication of papers, the holding of discussions, and the participation in or actual holding of international exhibitions and congresses. A noteworthy feature is that the constitution of the society has been designed to secure the necessary representation of all the interests above mentioned. The need for some such society is apparent to those who have studied the progress of modern illumination. Legislation on the subject is so limited as virtually to be non-existent. Thus, in the report of

the Chief Inspector of Factories and Workshops for 1908, just issued, one of the inspectors states with reference to illumination in factories, "We have no statutory provision to rely upon." Legislation is urgently needed both as regards intensity and quality of illumination. Want of light in factories is a common evil, resulting in inefficient work, in an increased number of accidents, and in general hygienic unfitness; and while bad illumination should be made impossible in the interests of the worker, it would be found that the result of wise legislation on the subject would have most satisfactory economical results. The case against bad illumination can be made out with even greater force when the position of the schools is considered. As has been repeatedly pointed out in our columns, the printing of school books often leaves much to be desired, and when to this evil that of inefficient illumination is added, it is hardly surprising that the most serious results are caused to the children's eyesight and to their general health. It is essential that both natural and artificial illumination up to a satisfactory standard should be made compulsory. Inefficient illumination is the most serious evil that the society will have to combat. But in the near future a more insidious evil will have to be attacked. Direct illumination by means of gas and other illuminants is rapidly disappearing, giving place to indirect methods, such as the heating of mantles to incandescence by the gas, and to the production of high temperature effects by filaments and arc lights by electricity. With the increase in the temperature of the source of illumination the quantity of ultra-violet rays emitted has rapidly increased, and Drs. Schanz and Stockhausen, who are still working on the subject, maintain that artificial illuminants are more trying to the eyes than natural light, owing largely to their very much higher percentage of ultra-violet constituents. The continued subjection of the eye to ultra-violet light is said to cause the lens to become fluorescent and eventually opaque, and glassworkers' cataract is attributed to the action of the ultra-violet rays given out by the molten glass. A glass can now be obtained commercially which cuts off the ultra-violet rays without, it is said, seriously interfering with the brilliance of the light supplied. The new society will no doubt consider how the use of these high-power illuminants may most efficiently be controlled. Mr. J. Herbert Parsons, D.Sc., F.R.C.S., is chairman of the Executive Committee, and the society has already received influential support. All further information can be obtained from the Honorary Secretary, Mr. Leon Gaster, 32, Victoria Street, S.W.

PUBLIC HEALTH IN EGYPT.

IN view of an attack which has recently been made by the *Egyptian Daily Post* on the Public Health Department of the Ministry of Interior in Egypt, an abstract of the birth and death returns for last year, which has reached us, is of special interest. The native population of Cairo at the middle of last year is estimated at 657,438, the birth-rate being 47.5, the general death-rate 34.6, and the infant mortality-rate 282 per 1,000. In Alexandria the native population is given as 337,816, the birth-rate as 44.9, the general death-rate as 30.0, and the infant mortality-rate as 259 per 1,000 births. The same statistics regarding the foreign population are of no interest, as they are calculated on the census of 1897. As regards particular diseases, 269 cases of small-pox were notified in Cairo, with 95 deaths; 23 of these were amongst foreigners; while in Alexandria the notifications were 35, and the deaths 19, of which 5 were amongst the foreign population. In Cairo the typhoid deaths greatly exceeded the typhoid notifications, the former

being 183, and the latter 148. Of these deaths, 27 were amongst the foreign population. In Alexandria, the same disease caused 99 deaths, 23 of the latter being cases amongst foreigners. There was also a good deal of typhus, 359 deaths being due to this cause in Cairo and 9 in Alexandria. Altogether, 11 foreigners in these two cities died from this cause. As for plague, the return for the whole of Upper Egypt is 780 deaths, of which 57 occurred in Alexandria, 15 of these being among foreigners. In Cairo no cases of the disease seem to have occurred. As regards the attacks of the paper mentioned, these, so far as we understand them, would seem to be a charge that the statements commonly sent to Europe by a news agency (which apparently claims to base its reports on official information) habitually minimize the extent to which the principal zymotic diseases prevail in Cairo and elsewhere in Egypt. This is a point on which the present report throws no direct light, but it may be said that while the report does not indicate an ideal state of affairs in Egypt, it at least does not tend to support the belief that Egypt suffers more from zymotic diseases than is usually believed to be the case. A death-rate of 34 per 1,000 is high, but not much higher than that returned by some highly civilized cities in other countries. In examining the returns it must be borne in minds that the term "foreigner" does not relate merely to Europeans, but covers Syrians, Greeks, and all persons who in one way or another are enabled to get enrolled at the Consulates, and thus secure whatever benefits arise from the capitulations.

DEAF-MUTISM.

SHOULD a philosopher of the far future ever chance to amuse himself by classifying each past age according to its seeming mental attributes, the term "priggish" is not unlikely to fall to the lot of the present period. Not only is the voice of the *laudator temporis acti* rarely heard in the land, but there is a general disposition to regard all things good—all the scientific and sociological attainments of the hour—as the product solely of those now living. The medical profession is by no means free from the tendency in question, and for this reason, if for no other, habitual study of the history of medicine is to be commended. It is true that there are some difficulties in the way, since an ideal textbook dealing with it has yet to be written. Nevertheless, valuable contributions to some future treatise on the subject are constantly to be found in current literature. A case in point is a paper recently published by Dr. J. Kerr Love of Glasgow¹ for, though its primary object is to show that the time has come for a new departure in the after-treatment of deaf-mutes—steps being taken to encourage old pupils of deaf-mute schools to consort with the normal members of the community—it incidentally relates much that is not commonly known about the development of oralism. For this, as for so much else, Germany often gets credit which is not its due. The dumb were taught to speak, the deaf to lip-read over a hundred years ago in England, and the method only seems new because sign language—which is less laborious to teach—practically displaced oralism during the first half of last century when the utility of educating deaf-mutes was at length beginning to gain general recognition. For the rest, the evolution of ideas concerning the deaf and dumb, if slow, has been fairly steady. At first, perhaps, the idea of protection mainly predominated, but side by side grew recognition of the practical value of education, and it is now known

that deaf-mutes, if properly trained, are likely, individual for individual, to be as independent of assistance as normal members of the community. It is a Frenchman, the Abbé de l'Épée, who should, perhaps, be regarded as the parent of the present attitude towards deaf-mutes, for though he does not seem to have appreciated the full possibilities of what he was doing, he started a public school for deaf-mutes in 1760, nearly twenty years before any one else thought of doing so. Then followed in turn a school at Vienna, one at Meersburg in Baden, one at Bordeaux, and finally, in 1788, one in Berlin. The Abbé de l'Épée's school was taken over by the Government during the Revolution, but the others were from their inception Government institutions. In Great Britain the work, like most other enterprises of an analogous kind, depended until quite recently on private philanthropy. First came the British Asylum for the Deaf and Dumb, in the Old Kent Road in 1792, then a similar place in Henderson Row, Edinburgh. In Ireland, the first public institution was started in 1831. As things now are, the education of the deaf and dumb is compulsory and since the year 1890 in Scotland and 1907 in England, the ratepayers have been responsible for its whole cost. That deaf-mutes may be so educated as to become capable of holding leading positions in business houses is clear from the letters from old pupils of deaf-mute schools printed by Dr. Love.

ACTINOTHERAPEUTICS.

A RESEARCH studentship in actinotherapeutics, of the annual value of £300, to be known as the Douglas Research Studentship, has been established at Guy's Hospital; the first incumbent will very shortly be appointed, and will be required to take up his duties on July 15th. The Douglas Student, who must possess a registrable qualification, will be required not to hold any other office or engage in any occupation which would prevent him from devoting himself with due diligence to the prosecution of original research. His investigations, unless otherwise specially provided, are to be carried out at Guy's Hospital, under the supervision of the surgeon to the actinotherapeutic department. The student will be appointed for one year, and will be nominated by a special board of electors. Further particulars will be found in an advertisement, but we may add that the appointment will be made by the Treasurer of Guy's Hospital, by whom applications must be received not later than June 28th.

SIR FELIX SEMON, K.C.V.O., Physician Extraordinary to the King, is about to retire from practice, and a complimentary banquet is to be given him by his professional and other friends on Friday, July 2nd, at the Whitehall Rooms, Hotel Métropole. The organizers of the banquet are anxious to found a lectureship or scholarship in his name to be a record of his scientific work. Mr. Butlin will preside. All communications with regard to the Testimonial Fund, or applications for seats at the banquet, should be addressed to the Honorary Secretaries, Mr. A. Mond, M.P., 35, Lowndes Square, S.W.; Dr. P. Watson Williams, 4, Clifton Park, Bristol; and Mr. H. J. Davis, 8, Portman Street, London, W.

THE annual general meeting of members of the Research Defence Society will be held on Friday, June 25th, at the house of the Royal Society of Medicine, 20, Hanover Square, W., at 5 p.m. The Earl of Cromer, president, will take the chair and give an address. Other speakers will be Sir James Dewar, Sir Arthur Conan Doyle and Professor Starling.

¹ *Glasgow Medical Journal*, vol. lxxi, No. 6.

Medical Notes in Parliament.

Visivisection.—The Home Office vote gave Mr. George Greenwood his opportunity of arraigning the administration of the Cruelty to Animals Act. He said the two inspectors under the Act received in all £895 a year. They did not give their whole time to the work of inspection, and he had nothing to say against them personally, but surely it was the duty of an inspector to try to find out any transgressions of the law, to detect and report them. Yet one of them said he was told by the senior inspector when he was appointed that he was not expected to act as a detective. This seemed to be telling him that he need not be efficient. The fact was both inspectors were pro-visivisectionists. In the year 1900 there were, under Certificate A, 8,954 experiments. This certificate allowed these experiments to be conducted without anaesthetics. They were generally inoculations; they might produce terrible suffering and terrible disease, but one would hardly expect the inspector to be present at them. Under the licence which allowed the experiment to be made under anaesthetics there were 1,113 experiments, while under Certificate B, which postponed the obligation to kill until the animal had emerged from the anaesthetic, until the object of the experiment was secured, there were 586 experiments. Then, under Certificate C, which allowed demonstrations to be given in vivisection for the instruction of students, the number was 181. The inspector for Ireland expressed a decided opinion, after many years' experience, that these were demoralizing certificates, and ought not to be granted at all. Take these licences under Certificates B and C. There were 1,885 experiments altogether, and of these the Chief Inspector, Sir James Russell, saw two. In 1905, under the licences in that year alone, there were 1,348 experiments; under Certificate B there were 1,013; under Certificate C, experiments for demonstration to students, there were 145; making a total of 2,506. The number of experiments under Certificate A—the experiments without anaesthetics, and, he supposed, without inoculation—had risen to the enormous figure of 35,429, but he did not count them in. Under Certificates B and C Sir James Russell saw 8 and Mr. Thane said he saw 15, or 23 in all out of 2,500—not 1 per cent. Under these circumstances what was called inspection under this Act was a farce, and almost a fraud. The public thought that these experiments were always subject to inspection. The evidence of the inspectors themselves showed that this inspection, so-called, was really a positive farce, and the public had been lulled into a false sense of security, as really the vivisector did what he liked, sent in his own report, and was never inspected by these officers. He protested against the manner in which the Act had been administered by the officials of the Home Office for the last thirty years. Applications for certificates were referred by the permanent officials to the Association for the Advancement of Medicine by Research—a private body formed for the promotion and protection of vivisection, and of which men might become members on payment of 10s. It was in evidence that the association was started "to bring effectual pressure to bear on officials." What it came to was this: the practice had been that the Home Secretary delegated the matter to the officials and the officials delegated it to the association. He next called attention to the returns presented to Parliament. For many years this return was presented to Parliament in a form which purported to distinguish between experiments which gave pain and painless experiments, but they never classed any under painful experiments, and it was supposed that all these experiments were painless experiments, or that they purported so to be. The return for 1905 came out in a different form, and there was no attempt to distinguish between painless and painful experiments, and he asked a question about it, and the answer was that the change was made because it was found impossible to make a separation between painful and painless experiments in some cases, and, it was impossible for any one—even the operator—to discover whether any pain was caused or not. That was a very significant admission, and he thought the change was hardly a change for the better. The Act of 1876 was passed for the prevention of cruelty to animals. The Act

was passed and came into existence because of the report of a Commission on which Professor Huxley sat in 1876. They found that there was cruelty, and they said:

It is not to be doubted that inhumanity may be found in persons of very high position, as physiologists. We trust your Majesty's Government and the Parliament of this Kingdom will recognize the claim of the lower animals to be treated with humane consideration.

The Act was passed, therefore, with this view, that the Home Office was to be interposed between the animals and the vivisectors, and the Home Office was to protect the animals: but speaking generally of the administration for the last thirty years, the officials of the Home Office had conceived it to be their duty to protect, not the animals but the vivisectors. There had never been any prosecution under this Act. In the first place, there could not be any prosecution without the consent of the Home Secretary; and secondly, there was no real inspection. One did not know what the inspectors reported. The report was that of the vivisectors, and these vivisectors were not going to give themselves away. They did so now and then, however; but this Act was under the six months limit provided by the Summary Jurisdiction Act, and they could not bring a prosecution after six months, and they never got the report until long after that period had expired after the experiment had taken place. Therefore it was impossible to institute any proceedings. He ventured to hope that in the future the right hon. gentleman might find it possible to administer this Act a little more for the protection of the animals, as the Act required, and a little less for the protection of the vivisectors. Mr. Akers Douglas, as an old Home Secretary, defended the administration of the Act. It had been administered, in his opinion, in so far as these operations went, with great humanity. The hon. member for Peterborough forgot to tell the House that very careful investigation was made into the character of those who had licences to carry out experiments on living animals by medical authorities. First of all, no operation could be carried out except in isolated places, and no experimenter could have a licence unless he was recommended by certain medical authorities, including the President of the College of Physicians or the President of the College of Surgeons. Therefore, he was hardly right in saying that care was not taken in the question of selecting those who carried out these operations. Sir William Collins said that, as a member of the Royal Commission on Vivisection, his lips at the present time were sealed; but he might say, in view of what had been said in debate, the Commission was now considering the evidence and preparing to issue a report. Mr. Gladstone, in his reply, referred to Mr. Greenwood's statement that when the inspectors went to the laboratories they would have a friendly chat with the operators and do nothing more. That conveyed a very serious charge, but he did not suggest for one moment that it was intended. Mr. Greenwood repudiated any such intention, and Mr. Gladstone went on to say that there was some danger in disputing about the principle of vivisection and the method of carrying out the law. Some might think vivisection was inhuman, and some might think it necessary in the interests of humanity. We had the Act, and it was of no use bandying charges of inhumanity against those who were appointed to administer that Act. He could quite understand that his hon. friend did not intend to say anything which might be construed as offensive to anybody, but it was his duty to stand up for professional men who were serving the Department and serving their country according to their own opinion and consciences, and who were faithfully discharging the duties entrusted to them. It was quite true that their whole time was not given to the work, but they were not paid for their whole time. They must have men who were competent for the work, and unless the Government was prepared to pay a very high salary it would never get officials who would be able to give their whole time to the work. All these were matters of administration by the inspector of the Department, and they came under review. Later on in the debate—after the London ambulance question, flogging, the condition of prisons, the alteration of sentences, the administration of the Aliens Acts, and other matters had been discussed in a thin house—Mr. Herbert Samuel, after Mr. Lupton had again raised the subject of vivisection, said that all these matters were

being thoroughly considered by a Royal Commission, which was now bringing its investigations to a close, and which would shortly present its report. As soon as its report was presented, it would receive the fullest consideration. In this consideration he might add, in reply to the hon. member for Lutonborough (Mr. G. Greenwood), who said that his right hon. friend delegated the work of issuing vivisection certificates to the Association for the Advancement of Medicine by Research, there was no foundation for that allegation at all. The Home Office had always investigated each case by the inspectors appointed by the Home Secretary, and it was on the report of those inspectors that the Home Secretary was satisfied or not satisfied as to the suitability of the persons who applied for licences. The debate then reverted to the administration of the Aliens Act, and on this subject a division was challenged, and the vote passed by 140 to 20.

Vivisection and London University.—Mr. George Greenwood asked the Secretary of State for the Home Department last week whether the words "University Physiological Laboratory" in the list of places on the Register under the Act 39 and 40 Vict., c. 77, in the Return of Experiments on Living Animals, No. 172, of June 11th, 1908, referred to the Physiological Laboratory of the University of London; whether that laboratory was now situate in the building which used to be known as the Imperial Institute; whether that building, or the part of it which was used for such laboratory, was purchased by public moneys; whether it was now owned by the State or by the university; and whether he would give directions that in future the returns of experiments on living animals should, in the list of registered places, set forth specifically the addresses of such places, in order that the public might be informed where such places actually were. Mr. Gladstone replied that the answer to the first and second parts of the question was in the affirmative. The answer to the third part was that the part of the building in the occupation of the University of London was transferred to His Majesty's Commissioners of Works under an agreement the nature of which was explained in Parliamentary Paper 300, July, 1899; to the fourth, that it was in the occupation of the university, and was held by the Commissioners of Works, as explained in the Parliamentary Paper just referred to. The return for 1908 was in print, but if his hon. friend would inform him of any reasons for giving more detailed addresses of registered places in future returns he would consider them. In the particular case to which he referred the address given was that used as the postal address of the institution. Mr. Greenwood then asked whether the university physiological laboratory was not in a building which was State property. Did it belong to the University of London or to the State? Mr. Gladstone said he could not say. He was not in a position to answer that question.

Death Certification.—Sir Walter Foster asked the President of the Local Government Board whether his attention had been called to the case of Mary Jane Walker, at Wolverhampton, who narrowly escaped premature burial owing to a medical man having given a certificate of death without having viewed the body; and whether he would take steps so to amend the law with regard to the certification of death as to render such dangers impossible in the future. Mr. Burns replied that he had seen a newspaper report of the proceedings at the inquest in this case. He was afraid he could not undertake to propose legislation on the subject of death certification during the present session.

Chloroform, Ether, and Drugs (New Duties).—Mr. Fell asked the Chancellor of the Exchequer what was the total amount of revenue which he anticipated he would raise from the new duties on chloroform, ether, and other drugs? Mr. Lloyd George said that he was not in a position to give any exact estimate of the revenue for the current financial year from the duties on these particular articles. The total net revenue during the last financial year was £2,127.

Newly-born Calves for Human Food.—In reply to Mr. Cathcart Wason, the President of the Local Government Board said that he could not state the number of newly-

born male calves butchered annually in the United Kingdom and Ireland. The carcass of a newly-born calf would usually be regarded as unfit for food, and would be liable to be dealt with by meat inspectors accordingly. If it was necessary to prevent danger arising to public health from the importation or preparation of these calves when intended for sale for human consumption, regulations could be made on the subject under the Public Health (Regulations as to Food) Act.

Military Camp Hospitals.—In reply to Mr. Joynson-Hicks, the Secretary of State for War said that the General Officer Commanding-in-Chief reported that 131 cases had been admitted during the present training period to Bulford Military Hospital, 261 to brigade and regimental hospital tents, and 39 to the military hospital at Tidworth. As regards the cases in the East Lancashire Division, 40 had been dealt with in hospital tents. None of these cases were reported to be traceable to preventable causes, such as inadequate supply of tent-boards and clothing. In reply to a further question by Mr. Joynson-Hicks, Mr. Haldane said that regulations provided for serious and dangerous cases being reported to the relatives of the patients, and a commanding officer must use his discretion in regard to other cases.

Army Hospital Blankets.—Mr. Ashley asked the Secretary of State for War whether the blankets of men admitted to hospital were used by other men without cleaning, for the unexpired portion of twelve months? Mr. Haldane replied that if the men admitted to hospital were suffering from any disease likely to convey infection the blankets were not used by other men without cleaning.

Cairo Water Supply.—In reply to Mr. John Robertson Sir Edward Grey said that the report of Sir Horace Pinching as to the quality of the water supplied from the wells of Rod-el-Farag was practically endorsed by the Commission appointed to examine the question, which pronounced that the water contained nothing detrimental to health (see BRITISH MEDICAL JOURNAL, May 8th, p. 1135). He was not aware what amount of money was spent upon the scheme, or whether any loss or danger had occurred through the use of the water, but the Egyptian Government had given practical proof of its desire to consult public opinion by the steps taken to examine the matter in consequence of the complaints which had reached them.

The Phthisis Death-rate in Greenock.—In answer to Mr. W. Thorne, Mr. Burns, replying for the Lord Advocate, said that the Local Government Board for Scotland were aware that the death-rate from phthisis in Greenock was somewhat high; they had the matter under consideration and were in communication with the local authority.

The Home Office Vote came on for consideration on Monday last, and Sir Charles Dilke opened the debate with a review of some points in the work of the year. He first of all dwelt on the excessive infant mortality in the towns where the mothers were engaged in work, and quoted from a report issued by the Bureau at Washington, which said of England, "Where mothers worked the majority of the children were dead; where they did not work the majority were alive." He said it was a disgrace that this could be said of some of our towns, and he hoped Parliament would never rest until it had met the evils of infant mortality. He then proceeded to give some gruesome instances of the maiming and death of small children working in factories, and urged a more strict enforcement of the law. He lastly referred to lead poisoning and the progress made in checking it by the Home Office, and said that manufacturers obviously had been trying to use this lead. He showed how this restriction had been beneficial, and called attention to the greater susceptibility of women to the poison. Mr. Gill, who followed, called special attention to the ill effects of dust on the lungs of the workers in the stripping and grinding trades. He said when it was found that 7 out of 10 of the men employed in this work were suffering from pulmonary diseases it was time something definite was done to remove this grievance, and it could be done at no very great cost.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

LONDON.

TREATMENT OF SCHOOL CHILDREN.

THE Hospital for Sick Children, Great Ormond Street, has notified the London County Council that it is willing to provide treatment at the hospital for twenty-five school children a week subject to the conditions that, as far as practicable, every child shall be accompanied by its parent, and that the cases attending on any one day shall be selected so as to avoid placing too great pressure on any one department of the hospital. It was suggested that the cases should be divided between the ophthalmic and aural departments.

The matter came before the Council on Tuesday, when the Education Committee, in recommending the acceptance of the offer, remarked that an experiment on this limited scale should prove valuable as a guide when the Council dealt with the general question. Acceptance would not involve the Council in any expense.

Dr. Beaton said he could not allow this report to go through without congratulating the Council on this great blow struck for the children of London. According to official reports 60,000 children needed treatment of the eyes, 15,000 of the ears, and 3,000 or 4,000 were suffering from ringworm. The Council has arranged with a hospital to treat twenty-five of these children for nothing! Nearly two years had elapsed since the question was first taken up, and now 25 children out of 80,000 were to be treated. Furthermore, 600,000 children had caries of the teeth, but their treatment was not even under the consideration of the Council. It was true that the Council recently determined in its generosity to spend £45 in treating suppurating ears, but none of the money had been spent at present.

Mr. E. G. Easton, a member of the Public Health Committee, in reply to Dr. Beaton, made an attack on the medical profession. Dr. Beaton, he said, should call to the bar of judgement the medical profession, which was responsible, to a very large extent, for the state of things he described. The condition of the children's eyes and ears was to be attributed to neglect by doctors and midwives during childbirth. Did Dr. Beaton suggest that the London County Council should make amends for the misdoings of the profession he adored? The medical profession were also responsible to some extent for the prevalence of bad dentition, having neglected to instruct their patients in the necessity of keeping their teeth clean.

Mr. A. J. Shephard said that Dr. Beaton's was a perfectly justifiable protest. He hoped this serious question would not be treated in the spirit of Mr. Easton's speech.

Mr. Cyril Jackson (Chairman of the Education Committee), replying to Dr. Beaton, said that this was the first offer from a hospital to come before the Council, but he hoped and believed there would be a great many more.

The offer of the hospital authorities was accepted with an expression of thanks.

INDIAN MEDICAL SERVICE.

The annual dinner in London of the Indian Medical Service was held at the Gaiety Restaurant on June 10th. The chair was taken by Surgeon-General G. Hay, in the absence of Sir George Birdwood, K.C.I.E., through ill health, and the guests were: General Sir O'Moore Creagh, V.C., K.C.B., Commander-in-Chief in India elect; Sir William Church, K.C.B., President of the Royal Society of Medicine; Mr. Henry Morris, President of the Royal College of Surgeons; Mr. Austin Low; and the Editors of the *Lancet* and the *BRITISH MEDICAL JOURNAL*. The officers present were:

Surgeon-Generals.—P. H. Benson, A. M. Branfoot, C.I.E., W. R. Browne, C.I.E., J. Cleghorn, C.S.I., J. P. Greaney, L. D. Spencer, P. W. Sutherland, B. Williamson.

Colonels.—W. E. Gates, D. E. Hughes, C. H. Joubert de la Ferté, H. G. L. Wortabet, W. A. S. Wynne.

Lieutenant-Colonels.—W. G. Alpin, N. L. Bartholomew, A. T. Bown, W. J. Buchanan, Sir R. H. Charles, K.C.V.O., A. Duncan, G. A. Emerson, P. J. Freyer, G. H. D. Gimlette, H. Herbert, R. A. K. Holmes, E. R. Johnson, D. F. Keegan, S. Little, C. C. Manifold, R. J. Marks, C. Monk, J. Moorhead,

J. O'Brien, A. Stephens, T. W. Stewart, A. W. F. Street, C. M. Thompson, W. H. Thornhill, D. Warlicker, G. Waters, A. H. Williams, F. W. Wright.

Major.—H. Bamfield, A. E. Berry, J. F. Blood, C. Bowle-Evans, W. S. Caldwell, C. F. Fearnside, J. Fisher, P. C. Gabbett, G. G. Giffard, C. H. James, A. J. Macnab, W. Selby, D.S.O.

G. B. Smith, F. W. Watling, C. G. Webster, E. H. Wright.

Captains.—W. R. Battye, F. F. Elwes, G. King, J. T. Leary, R. A. Lloyd, J. L. Lunham, J. H. Murray, W. S. Patton, A. E. H. Pinch, M. F. Reaney, W. S. J. Shaw, G. Tate, M. H. Thornely.

UNIVERSITY COLLEGE BAZAAR.

In order to find the £7,000 required to free the University College athletic ground at Perivale from debt, to make some necessary extensions, and to effect improvements, a bazaar is to be held on Thursday, Friday, and Saturday, July 1st, 2nd, and 3rd, at the college buildings in Gower Street. The wives and daughters of professors and other lady friends of the college have undertaken the management of twenty stalls. The students at the hospital and at the college have each their own stall, and the stall-holders are hoping to receive assistance in money or in kind from old members of the college. Lord Desborough has promised to assist the college generally, and, with Lord Howard de Walden, will arrange a fencing display. On one, and possibly on several, of the nights there will be a performance of Sheridan's *Critic*. Mrs. Roy will repeat the "Indian Tableaux" with which she recently delighted London. Episodes are to be portrayed from the life of Buddha, and Professor Gardner is arranging a series of Homeric scenes. An exhibition of pictures will be given by those members of the Slade school who have studied or taught there since Professor Brown has occupied the chair. Other side shows are to include demonstrations of the use of x rays and of liquid air by the medium of a "magic" kettle, dialogues by well-known artists, variety entertainments, and concerts. The Duke of Connaught has promised to open the bazaar on the first day. The Duchess of Sutherland will perform the same service on Friday, and Lady Reay on Saturday. Amongst patrons of the bazaar are His Royal Highness the Prince of Wales, the Duke of Connaught, and Lord Rosebery.

MANCHESTER AND DISTRICT.

THE HEALTH OF SALFORD.

THE annual report of the Medical Officer of Health for Salford estimates the population of the borough at 239,294; during 1908 the birth-rate was 29.8 per 1,000 and the death-rate 17.9. The number of stillbirths is put down at 270, but there is the usual uncertainty, as this only represents the records obtained from the registrars of cemeteries and sextons. The total deaths were 4,356, and of these more than a quarter were due to lung diseases, 849 being attributed to bronchitis, pneumonia, and pleurisy, and 383 to phthisis. Next in order come brain and nervous diseases 383, heart diseases 326, and diarrhoea 231. Of the zymotic diseases measles caused 168 deaths, and diphtheria 125, the latter being 39 above the decennial average.

Infantile Mortality.

There were 1,110 deaths of infants under 1 year of age, giving a rate of 15.3 per 1,000 births. This is an increase over 1907, when it was 140, but is still below the average of the preceding five years, which was 162. The death-rate among illegitimate infants, which numbered 231, was 290 per 1,000. The commonest causes of the infant mortality were bronchitis and pneumonia, which caused 186 deaths, atrophy and marasmus 182, diarrhoea 181, and premature birth 128. Compared with the eight Lancashire towns, Salford stands fourth on the list in infant mortality, the rates being Liverpool 142, Blackburn 150, Manchester 151, Salford 153, Preston 154, Oldham 160, Bolton 161, and Burnley 201 per 1,000 births. The infants specially visited and observed with the object of seeing the effect of various methods of feeding numbered 2,262; of these 85 per cent. were found to be breast-fed, and the death-rate among these was 97 per 1,000, only few of them suffering from diarrhoea. About 7 per cent. were fed on fresh cow's milk, with a death-rate of 284 per 1,000, diarrhoea being far commoner among these. It was also noticed that diarrhoea was far commoner when the

infants were given fresh cow's milk than when condensed milk was used.

Scarlet Fever.

There were 1,341 cases of scarlet fever notified, 403 above the average of the preceding five years, with 65 deaths, a mortality rate of 4.8 per cent. of the cases. About 76 per cent. of the cases were removed to the Ladywell Sanatorium. Ninety-six, or 7.2 per cent. of the total cases, were related to patients who had been returned to their home as convalescent after treatment in the sanatorium. The report says "there appears to have been a steady reduction of the number of carrier cases of infection of scarlet fever, which in 1903 was 13.2 per cent. of those discharged after complete desquamation, whereas in the present year it is 6 per cent., and desquamation is no longer taken into consideration in deciding the date of the patient's discharge." It ought not to be argued from this that desquamation has nothing to do with carrying of infection, for though desquamation is now neglected, much greater attention is given to seeing that there are no discharges from the throat and nose, and all that can properly be deduced is that such discharges are worse than desquamation, not that desquamation is harmless. Neither would any comparison with other towns, where desquamation is taken into account as it is in Manchester, be of any value, as other circumstances probably count for more; for instance, there is ground for believing that the use of convalescent wards before patients are discharged is of great importance, as probably there is both an intrinsic infection belonging to the patient, and an extrinsic infectious material inhaled by the patient from other cases, which lodges in the air passages. There is in fact no method of determining whether desquamation is infectious or not, except the discovery of the cause of the disease, and meantime Salford is running some risk in neglecting desquamation altogether.

Diphtheria.

Diphtheria has been unusually prevalent during the year, there having been 629 cases notified, against an average of only 387 for the preceding five years. The death-rate was 20 per cent. of the cases, the rate for the five years being 23 per cent. The attack-rate for Salford is consistently higher than in Manchester and Liverpool, and the medical officer cannot account for this, but the report says:

It is, perhaps, worth noting in connexion with this point that out of 513 notified cases sent into Ladywell Sanatorium by the practitioners of the borough, no less than 135 showed no clinical signs of the disease, and swabs taken from the fauces and nares gave negative results when examined for the Loeffler bacillus.

This implies rather than states a serious charge against the practitioners of the borough. It is acknowledged that a negative result in examination for the bacillus is not decisive, but patients believe that it means certain absence of diphtheria; and as somehow they often get to know the result of the examination, they jump to the conclusion that their medical attendant has made a mistake and sent them to a place where, if they have not already got diphtheria, they are pretty sure to get it. The statement that "no less than 135 cases showed no clinical signs of the disease" encourages this idea, and in simple justice to the medical men requires further investigation. At present the statement is received with some scepticism. The death-rate for cases removed to the sanatorium was 17.2 per cent., and of those treated at home 31.9 per cent., and the report suggests that this may be due to the lack of confidence in the efficacy of antitoxin among general practitioners. A singular fact has been the frequency of mixed infection of scarlet fever and diphtheria, which gave rise to great difficulty in the hospital. Towards the end of the year a routine practice was adopted of taking swabs from every scarlet fever case admitted, and 58 cases, or 9 per cent. of the total cases of diphtheria, were found to be connected with convalescents discharged from the hospital, many of whom had only suffered from scarlet fever. Comparing Salford with the rest of the country, the mortality-rates per 10,000 living were as follows: England and Wales 1, London 1, the seventy-six great towns 2, Salford 5. As the death-rate per cent. of the notified cases is about the same as elsewhere, it is evident that the true attack-rate is actually, as the notifications show, much higher in Salford than elsewhere, and this throws still further doubt

on the statement that so many cases notified showed no clinical signs of the disease. Vigorous measures should be taken to discover what local factors are at work in causing the large excess of cases in Salford.

Tuberculosis and Milk.

For phthisis a system of voluntary notification exists, and during the year 563 new cases were notified, of which 245 were visited by the health officers, and 318 were notified as "not to be visited." The most noticeable facts were the much greater incidence among males (362 cases) than among females (201 cases), and also the advanced age at which many cases commence, no less than 53 of the male cases having commenced after the age of 60. Also, among the male cases, 208 occurred among outdoor workers, and of these 131 were labourers and navvies; 84 samples of milk were examined during the year, and of these 13 were found to be tuberculous. Professor Delpine is engaged preparing a special report on the examination of milk for the presence of dirt, and so far, out of 72 samples examined, 11, or 15.3 per cent., were found to be distinctly dirty, containing 50 parts or over per 100,000 by volume.

Houses and Workshops.

Considerable work has been done in the inspection of insanitary property, lodging houses and workshops, and the report shows that Salford compares favourably in this respect with other towns.

THE MIDWIVES ACT IN SALFORD.

The information given in the annual report of the medical officer of health as to work done under the Midwives Act in Salford during 1908 is decidedly scanty and not altogether satisfactory. The total births during 1908 were 7,264, of which 5,541, or 76.3 per cent., were attended by midwives, and 1,723, or 23.7 per cent., by medical practitioners. These proportions are about the same as last year, and it is difficult to understand why in Manchester only 61 per cent. are attended by midwives, while in Salford over 76 per cent. are midwives' cases. There are fifty-two midwives on the Salford register, so that they average 106 cases each. As the medical practitioners number about 120, each attended only about 15 confinements in the year. During the year two midwives have been reported to the Central Midwives Board and have had their names removed from the roll. The total number of cases of puerperal fever notified during the year was 27, of which 8 died, giving a mortality-rate of 30 per cent. It is noted that 14 occurred in the practice of midwives and 13 in the practice of doctors. This is remarkable, as it works out at 1 case of puerperal fever in every 132 doctors' cases and only 1 in every 395 midwives' cases. This looks bad for the doctors, and the report is so incomplete that no explanation can be extracted from it. If only some particulars were given as to the time that elapsed between the confinement and the first symptoms of the disease, such as were given in the Manchester report for last year, it might be possible to tell how often the disease was caused by something occurring during labour, and how often by some carelessness on the part of the nurse after labour, as the incubation period is fairly well known. Statistics, however, about puerperal fever are extremely fallacious, and there can be little doubt that if a rise of temperature to 100.4° in the puerperium with quickening of pulse for over twenty-four hours is to be the test, far more cases of puerperal fever occur than are ever notified, and with a more careful supervision of midwives' cases by a medical inspector, probably more cases would be found than these statistics show. In any case, seeing that the remote results even of mild cases are often so serious, it is most important that the medical supervision should be as thorough as possible. The amount of chronic uterine disease in Salford is appalling, and there is little doubt that this is the result of former neglect of mild or overlooked cases of puerperal fever. The same may be said of cases of ruptured perineum. Before the Midwives Act came into force midwives took little or no notice of even extensive tears of the perineum. In 1906 the Salford midwives notified 19 cases, in 1907 36 cases, and in 1908 48 cases. This by no means shows greater neglect in the conduct of labour, but rather greater care in notifying the cases. But even now probably many cases of rupture are not notified as they ought to be, for it is found that while

the Salford midwives notify 1 case of rupture in every 115 cases of labour, in Manchester, where the midwives are equal, if not superior, in ability, and where the supervision is undoubtedly stricter, rupture was notified in 1 out of every 65 midwives' cases in the year 1907. Such a difference is too great to be attributed to anything except greater care in notifying in Manchester. A similar difference is seen in the total number of cases in which medical assistance is summoned. In Salford in 1907 medical aid was summoned by midwives in 1 case out of every 17 labours, and in 1908 in 1 out of every 14 labours. But in Manchester medical aid was summoned in 1 out of every 7.3 labours in 1907, the figures for 1908 not yet being available. Here, again, it is not that the Manchester midwives summon assistance where they ought to manage by themselves, as the conditions for summoning aid are strictly laid down and the supervision most careful; the reason is rather to be found in the imperfect provision for supervision in Salford, and, considering the large number of births attended by midwives in Salford, there would be ample work for a whole-time fully-qualified medical inspector of midwives in addition to the lady inspector, who would have quite enough work to do in other directions.

WEST YORKSHIRE.

DISTRICT MEDICAL OFFICERS OF HEALTH.

The West Riding County Council is at present considering the feasibility of appointing whole-time medical officers of health for combined areas in the county. In the rural districts and in the smaller towns the medical officers of health are at present general practitioners. It is proposed to combine two, three, or even four small areas and appoint whole-time officers. If security of tenure were only obtained for medical officers of health the difficulty of condemning insanitary property would soon disappear. Rather in this direction appears to lie the solution of the problem than in appointing whole-time officers at inadequate salaries.

ALLEGED INSANITARY HOUSES IN BRADFORD.

The owners of twenty-seven dwelling-houses in Bradford were summoned recently by the corporation to show cause why orders should not be made for the closing of the houses as dangerous or injurious to health and not reasonably capable of being made fit for habitation. The opinion of the Medical Officer of Health for Bradford (Dr. Arnold Evans) given in his evidence was that the properties were a nuisance and a danger to the health of the people living and working in the neighbourhood. The summonses were, however, dismissed by the bench, who considered that the prosecution had not succeeded in establishing the fact that the properties were not reasonably capable of being made fit for habitation. The Corporation will now no doubt try to compel the owners to put the property into a reasonable state of repair.

ANTHRAX IN THE WEST RIDING.

The centre of anthrax investigation in the West Riding has always been in Bradford. Formerly the late Dr. J. H. Bell took a profound interest in investigating and tracing the origin of the disease. His mantle has of recent years fallen on the shoulders of Dr. Eulich, and it is very gratifying to observe the recognition that is everywhere given to Dr. Eulich for his patient and laborious investigations into the causes of this preventable disease. In the annual report of the Chief Inspector of Factories for 1908 Dr. Eulich's methods, investigations, and conclusions are described in considerable detail, and these passages of the report will be found worthy of careful study. At the last meeting of the Anthrax Investigation Board Dr. Eulich reported that since the last meeting of the board, on April 19th, 2 cases of anthrax had occurred, both being external, and that one had proved fatal. A fatal case of this disease occurred at the Bingley Cottage Hospital on May 7th:

The patient was a man who pricked himself on the wrist with a sharp instrument in the course of his work a week previously. He was seen by Dr. Crocker, of Bingley, a day or two afterwards, who found a small pustule on the wrist. On May 3rd, and again on May 4th, a full dose of serum was given, and also periodical injections of carbolic acid. On May 5th the swelling of the arm had gone down considerably, and the patient seemed to be improving, but on the following day he became worse, and

was delirious. Dr. Eulich, who gave evidence, thought that the prick had introduced the bacillus directly into the blood, as the case was more severe than any he had previously seen. The post-mortem examination confirmed the diagnosis of the disease.

All the necessary precautions had been taken by the firm of woolcombers who employed the deceased, and the unfortunate loss of this man's life only shows the extreme difficulty of eliminating the danger of infection when the bacillus has at any time had the chance of infecting the material to be treated.

BIRMINGHAM.

THE GENERAL HOSPITAL.

On June 9th a memorial service was held in the chapel of the General Hospital for the late Miss M. E. Jones, who died on June 6th, and who was until quite recently matron of the hospital. In addition to the matron, assistant matron, house sister, and a large number of the resident staff of the hospital, there were present Sir John Holder, Bart. (Chairman of the House Committee), Mr. B. B. Tilley (Chairman of the Board), Dr. E. Malins, Dr. J. E. H. Sawyer, Mr. F. V. Milward, Mr. C. Woodward, Miss Mossop (Homoeopathic Hospital), Miss Armstrong (Moseley Hall), Miss de Chastelain (Jaffray Hospital), Miss Pidgeon (formerly matron of Jaffray Hospital), and the house governor (Mr. Howard Collins). The service was taken by the Rev. William Card, chaplain to the hospital.

The Lord Mayor (Alderman G. H. Kenrick) opened a large addition to the nurses' home on June 10th. This building, which has been erected to meet the demands of a growing staff of nurses, is especially designed for the night nurses. It is situated on the Wenman Row side of the hospital, forming a wing to the nurses' home, and comprises forty-three bedrooms, and a classroom for instruction in cookery for the sick. The cost of the new wing was about £8,000. A large number of ladies and gentlemen interested in the institution were present at the opening ceremony.

WALES.

THE WELSH MEDICAL DINNER.

The sixth Welsh medical dinner in London was held at the Criterion Restaurant on Tuesday, June 15th. The chair was taken by Dr. D. C. Lloyd Owen of Birmingham, and there was a large attendance. After the loyal toasts had been given from the chair, that of the "Prince of Wales" being followed by a most hearty singing of the anthem, the toast of Welsh men practising in all parts of the world and of medical men practising in Wales was given by Mr. Ellis Griffith, M.P., who dwelt on the distinguished position which so many Welsh practitioners had won for themselves in all parts of the world. The toast was acknowledged by Dr. Garrod Thomas of Newport. The toast of "The Visitors" was proposed from the chair and acknowledged by Mr. Henry Morris, President of the Royal College of Surgeons, and by Dr. Simon of Birmingham, who concluded by proposing the health of his friend the Chairman. The response of the Chairman brought the proceedings to a close. During the evening there was much excellent music, Miss Bessie Jones playing a harp solo and an encore, and Eos Dar intoning impromptus containing many topical allusions, more especially to the thirstiness of England which compelled it to go Wales for water; Miss Boddicombe also sang. The arrangements were admirably carried out by the Honorary Secretary, Mr. Howell Evans.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

RESIGNATION OF PROFESSOR OGSTON AND DR. ANGUS FRASER.

At a meeting of the Aberdeen University Court held on June 9th, a letter resigning the Chair of Surgery sent to the Court by Professor Ogston was read by the Secretary. Professor May, who was in the chair, said that by the

death of Professor Hamilton and the resignation of Professor Ogston, the Faculty had lost, perhaps, its two most widely-known members. Like Professor Hamilton, Professor Ogston was a man of the first rank as a teacher, and enjoys a cosmopolitan reputation as a surgeon and scientific worker. By common consent he was regarded as one of the two or three great Scottish surgeons of his time. Indeed, it would be difficult—apart from Lord Lister, who had some right to be considered as a Scottish surgeon—to name any other Scottish surgeon of the past thirty years who had done more for the advancement of surgery by scientific research. It added to the pride with which they regarded Professor Ogston that he was educated in that university. He begged to move that they should enter in their minutes an expression of their appreciation of the value of the eminent services which Professor Ogston had rendered to the university as a teacher and investigator of the highest order, and of their regret at his retirement.

The Chairman then referred to another great loss in the medical teaching staff associated with their university. After long years of most able service, their colleague, Dr. Angus Fraser, had retired from the Senior Physicianship of the Royal Infirmary, and with it from his position as one of the Lecturers in Clinical Medicine. There was no one whose great powers as a lecturer and clinical teacher have been more fully appreciated by his university colleagues, and by generation after generation of students, than Dr. Fraser. No one had endeavoured more fully to keep himself in touch with every modern advance relating to his subject, and although he had always been wholesomely sceptical and critical of merely new things, no one had been more ready to make use, for either diagnostic or curative purposes, of every well-ascertained discovery. Dr. Fraser had the personal magnetism of the born teacher, and none of his colleagues had had a stronger hold on the respect and affection of the students. The reconstruction and reorganization of the infirmary, by which their medical teaching had greatly benefited, was largely due to his initiative. Dr. David Littlejohn said he had special reason to know, perhaps, for a longer period than any of his colleagues at the table, both Dr. Ogston and Dr. Fraser, and had been acquainted with the most valuable services they had rendered. Dr. Ogston and Dr. Fraser he had known from boyhood, and they had in Aberdeen been very proud of them and of the position which they had attained and which they had held for so long. Those who were watching events closely, some five and twenty years ago, would remember that the Aberdeen Royal Infirmary had fallen behind externally and internally in the matter of what was looked upon as up-to-date requirements in hospital arrangements and management. Dr. Fraser and the late Dr. Robert Garden drew public attention very forcibly to what they viewed as being behind the times. Their action was strongly resented by the then management of the infirmary, and they practically imperilled their reputation and standing in Aberdeen upon making good the position which they had taken up. The result was that there was a complete reorganization and reconstruction of the Royal Infirmary.

LOCAL GOVERNMENT BOARD FOR SCOTLAND.

Mr. George M. Falconar Stewart, secretary to the Local Government Board for Scotland, has just retired under the age limit, and, on the recommendation of the Secretary for Scotland, the King has been pleased to appoint Mr. Abijah Murray, I.S.O., at present chief clerk, to be secretary, in succession to Mr. Falconar Stewart. Mr. Falconar Stewart joined the staff of the Board of Supervision (the earlier name of the Local Government Board for Scotland) in 1883, when he was appointed to undertake temporarily the duties of visiting officer. In 1885 he received a permanent appointment as visiting officer, and in 1897 he was made secretary. Mr. Murray joined the clerical staff of the Board of Supervision in 1873, and, after passing through the various grades, he was in 1897 appointed chief clerk.

PROFESSOR CHIENE OF EDINBURGH.

Professor John Chiene has placed his resignation of the Chair of Surgery in the University of Edinburgh, which he has held since 1882, in the hands of the University Court. At Christmas last he obtained leave of absence, but his health we regret to learn, has not improved

sufficiently to warrant him in resuming active work at the university.

EDINBURGH ROYAL INFIRMARY.

New Medical Out-patient Department.

The medical out-patient department of the Royal Infirmary of Edinburgh has been recast during the past year, many additions and alterations having been made. It is now in close proximity to the medical wards; there is a new large glass-covered porch or verandah under which an ambulance may be driven, and there is a large waiting-room (40 ft. by 36 ft. in size) and an isolation room with tiled walls for the reception of any suspected infectious cases. On either side of the waiting-room are suitable dressing-rooms with lavatories for male and female patients. These dressing-rooms communicate by two parallel corridors with a large demonstration or lecture room with raised benches and seats for eighty students. There is a separate entrance for students, a private room for the physicians, and a dark room for eye and throat examinations. Patients can leave without going through the waiting-room. A nurse's room, nurse's kitchen, and laboratory, have been constructed, opening directly off the main vestibule. Steam heated radiators warm the building, and an extract fan electrically driven is provided where special ventilation is needed. The walls of the various buildings are finished in polished Keene's cement, while in the waiting-room, vestibule, and corridors, there is a dado of glazed tiles. The floors in the waiting-room and corridors are of marble terrazzo, and in the dressing-rooms and demonstration rooms of red wood bedded in bitumen on concrete. The demonstration-room is lighted partly by means of three large windows in the end wall, and partly by a large roof light extending the full width of the room. The sanitation is in accordance with modern ideas. The cost has been £3,000, and the architect, Mr. A. Balfour Paul, of Edinburgh.

EDINBURGH ROYAL INFIRMARY RESIDENTS' CLUB.

The annual general meeting of members of this club will take place in the Caledonian Station Hotel on Friday next, at 7 p.m., when the Secretary's and the Treasurer's reports will be read. The fifteenth annual dinner will be held at 7.30 p.m., when Dr. Byrom Bramwell, president of the club, will occupy the chair. Members intending to be present must send their names to the Secretary, Dr. Edwin Bramwell, 24, Walker Street, Edinburgh, on or before June 21st. The treasurer of the club, Dr. W. Macrae Taylor, has prepared an interesting brochure, giving a history of the fourteen years' life of the club, its rules, a chronological list of events in the history of the residency, lists of presidents, secretaries, treasurers, etc., and a list of residents in the Royal Infirmary from 1837-8 to 1909.

PROFESSOR CLELAND.

The news that Professor Cleland had sent in his resignation of the Chair of Anatomy in the University of Glasgow is an entire surprise. For thirty years he has worthily upheld the traditions of the chair, and at the time of his resignation was, with the single exception of Professor Ferguson, the senior professor in the medical faculty; but in one sense Dr. Cleland was senior even to Professor Ferguson, as before he was appointed to Galway University in 1863 he had been senior assistant to Professor Allen Thomson. We are glad to say that Dr. Cleland's retirement is due to a desire for rest, and is not dictated by any special indication of failing health.

RUCHILL AGAIN.

A new life has been given to the unfortunate Ruchill episode by the wholly unexpected decision of the Town Council to accept and act upon a petition signed by 18,000 citizens. The petition, which has been promoted by the Woodside Municipal Association, is intended to restore confidence in the public mind as to the administration of the hospital. The terms of the petition are as follows:

We, the petitioners, respectfully call upon the Lord Provost, Magistrates, and Councillors to appoint an independent inquiry into the administration of Ruchill Hospital from the date of the Local Government Board inquiry up to the present date, and would suggest that the parties carrying out the said inquiry consist of our fellow citizens, drawn from the following bodies: Three from the Faculty of Physicians, three from the Faculty of Procurators, three from the Merchants' House, and three from the Trades Council, with a neutral chairman, such as Sir Donald MacAlister or Dr. Robert Gourlay.

This petition was adopted after discussion, and it was agreed that it be remitted to a special committee of the corporation to arrange for an inquiry. The corporation has shown a strange lack of consistency in their conduct of the movement for an independent investigation. As late as April 29th it decided by a large majority not to appoint a special committee of the town council to investigate the conduct of the Health Committee in regard to Ruchill. Yet within six weeks the council has completely turned round, and now has decided to hold an independent inquiry by outsiders, though in the meantime, so far as is known, no fresh reasons have cropped up for holding such an inquiry. It is to be hoped that if the inquiry takes place that it will be the final step in the interminable Ruchill dispute.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

CONOLLY NORMAN MEMORIAL FUND.

At a meeting of the subscribers to the Conolly Norman Memorial, held at the Royal College of Physicians, Dublin, on June 15th, under the Presidency of Dr. J. Magee Finny, Dr. Donelan submitted the secretary's report. It was found that the funds provided would not be sufficient to found an after-care association. The committee recommended that the memorial should take the form of a portrait of the late Dr. Norman, to be hung in the College of Physicians, of which he was President at the time of his death, and also of a bust in bronze with marble tablet, to be erected in St. Patrick's Cathedral. It was further resolved that the portrait should be painted by Miss S. C. Harrison and that the bust should be executed by Mr. E. Cairé.

PROFESSOR ALEX. FRASER.

We very much regret to learn that Professor Alex. Fraser, the distinguished professor of anatomy in the Royal College of Surgeons in Ireland, has been suffering for some weeks from the result of septic infection acquired during the preparation of a subject. He is able to be out of bed, and hopes to leave for Scotland very shortly to re-establish his health.

DOUBLE TENANCIES IN BELFAST.

In Section XII, or "Summary of Conclusions and Recommendations," of the Report of the Belfast Health Commission, we find in paragraph (7) of the portion entitled, "Sanitary Administration," the recommendation, "Double tenancy of houses should be prohibited, save where suitable water-closet accommodation is provided for each portion of the house let independently." This recommendation was generally approved. The miserable conditions indicated were a scandal and a shame to a civilized community; not merely were they unhealthy, but both morally and physically injurious. Under the influence of public opinion the Public Health Committee served notices on the landlords, and at the meeting of the committee on June 10th it was stated that landlords had given notice to the tenants rather than comply with the council's requirements, and it was affirmed that it was almost impossible to obtain other dwellings. By 6 votes to 4 it was decided to rescind the previous resolution as to the serving of the notices. A subcommittee was appointed to consider the question of erecting artisans' houses under the Housing of the Working Classes Act, in conjunction with the scheme at present under consideration dealing with the removal of insanitary dwelling-houses. The retrograde action of the committee has been condemned in the public press, as may be judged from the following quotations:

In view of the extent and terrible character of the evil which exists, and which the committee knows has existed for many years, it is difficult to find words sufficiently strong to condemn the action of the committee.

It is the sheerest nonsense to pretend there is not sufficient house accommodation.

The public health authorities have no right to favour slum landlords, who care nothing about the conditions under which their tenants live.

IRISH MEDICAL ASSOCIATION.

The annual meeting of the Irish Medical Association was held on June 15th in the Town Hall, Sligo.

The President, Dr. E. C. MacDowel, in his opening address, said no doubt the reason Sligo was chosen as the seat of the conference was that the Sligo Branch had succeeded in getting a graded scale of salaries adopted in the Sligo Union. Some 50 out of 159 unions had adopted the scale, and some 400 dispensary medical officers had benefited accordingly. This was a result of which the Irish Medical Association might be proud. He would like to be able to speak more hopefully as to the future prospects of superannuation, but under the present régime a life of grinding toil, of self-sacrificing devotion to duty, would not gain this reward unless the medical officer was able somehow or other to conciliate his masters. Last October Dr. Rawson, of Carlow, the Medical Officer of Carlow Union, was refused superannuation after twenty-six years' meritorious service. He had since been granted a miserable pittance of £30 per annum. The Castlereagh Guardians also recently refused superannuation to their aged doctor, now gone to his long rest. It was humiliating in the extreme that doctors should be subjected to such cruel injustice. Referring to the recommendations of the Viceregal Commission, Dr. MacDowel expressed the hope that the Legislature would not repeat the errors of 1838 and foist on the country a Poor Law authority under a new title. The Poor Law system was always detested by the Irish people ever since it was introduced; it treated poverty as if it were a crime; and, notwithstanding certain alleviations, the dislike still continued. The report of the Viceregal Commission was a most able and exhaustive document, and a really statesmanlike effort of three distinguished Irishmen to deal with the reform of the Irish Poor Laws. There was an absolute unanimity of opinion throughout the Poor Law Medical Service that the Public Health Administration had been an utter failure. This breakdown had been most marked in the small towns and rural districts, the sanitary condition of many of these being deplorable. The sanitary laws, taking them all round, were excellent; the failure was due to the fact that they were very rarely administered with firmness. The failure could not be laid at the door of the medical profession. No more faithful servants ever existed than the Poor Law medical officers of Ireland. The blame was to be attributed to the obsolete, ineffective system; and the initial mistake occurred when the Public Health Act of 1876 made every Poor Law medical officer *ex officio* a medical officer of health. The onerous duties placed on them were only rewarded with a nominal salary of the most miserable description, and it was not to be wondered that the new responsibilities were often evaded. The next and most fatal error was in the constitution of the so-called sanitary authority. These bodies, which knew little of the A.B.C. of sanitation, were the practical masters of medical officers. The medical officer had to report to this body, which could carry out his suggestions as it thought fit, and very often his valuable report was consigned to the waste-paper basket. There was an urgent need for a Minister of Public Health, and the creation of a strong central medical board vested with sufficient powers to influence all medical legislation for good, and presided over by the Minister of Health. The question of a State medical service, and the cost thereof, to be defrayed out of money voted by Parliament, was of enormous importance. The formation of such a service would greatly raise the prestige of the profession, and ensure the election of medical officers on merit, and not on political or religious grounds. It was notorious that in the elections there was much bribery and corruption, and such practices were on the increase. Referring to Sligo, the President said the less said about its sanitary condition the better. The streets were badly kept, there was a very imperfect system of scavenging, and the poor dwelt in many instances in foul alleys. The Infectious Diseases Act was not in force, the town had no public ambulance, no baths, while means of disinfection were often ludicrously ineffective, and the results were deplorable.

THE APOTHECARIES' HALL.

On June 11th the members of the Apothecaries' Hall, Dublin, presented the Governor, Dr. Seymour Strutch, with a service of plate on the occasion of his marriage. The presentation was made on behalf of the subscribers by Colonel Adye Curran, M.D., F.R.C.S., who said that though the Hall was founded by the Irish Parliament in 1791, it

was the first occasion on which the governor had been married during his year of office. Dr. Stritch acknowledged the testimonial in a suitable speech.

CORK MEDICAL AND SURGICAL SOCIETY.

At the recent annual meeting of the Cork Medical and Surgical Society the following officers were elected for the session 1909-10: President, Professor D. T. Barry; Vice-President, Dr. J. Booth; Honorary Treasurer, Dr. C. B. Pearson; Honorary Librarian, Dr. E. Murphy; Secretary, Dr. J. T. O'Connor. A Council of seven members was also appointed.

WAR IN CASTLEREA.

Though we have not referred to the proceedings of the Castlereah Board of Guardians for some months, it must not be supposed that this celebrated board has been idle during that period or failed to provide a weekly supply of entertainment for the Irish community. Indeed, it has been going stronger than ever, but as we foresaw a climax was impending we thought it better to defer further reports until it occurred.

At the risk of wearying our readers we must, however, recapitulate in brief the contest of this board with their medical officers and the Local Government Board.

Castlereah is a large union hitherto divided into four dispensary districts, and included in it are a number of small towns. About two years ago the four medical officers applied to the guardians for a graded scale of salaries as in other unions, assigning as their reason that their salaries of £100 a year each were insufficient to provide for the bare cost of locomotion in their very large districts. The guardians, after sundry facetious comments, consigned their application to the waste-paper basket, and a similar application, made a few months later, met with a similar fate.

Then the medical officers applied to the Local Government Board, and that body sent the guardians a mild remonstrance and a request for a reconsideration of the matter, followed, so far as the guardians were concerned, by a repetition of the facetiousness and a further recourse to the waste-paper basket. A further remonstrance in stronger terms had the same result.

Next the Local Government Board sent down an inspector to hold a sworn inquiry. The doctors gave evidence as to the vast areas they had to cover in the discharge of their duties, one district being eighteen miles from end to end; some of the guardians also gave evidence. Those who lived far from a doctor thought they should have one next door, and those who had a doctor close at hand thought four medical officers quite enough for the poor of the union. Of course, it was always the "poor of the union" they were anxious about, but, as was to be expected from arithmetical considerations, the majority wanted more doctors—not for their own convenience, only for the poor. So the Local Government Board invited them to frame a scheme for dividing the union into five districts with five medical officers.

Our readers can imagine the wrangle that ensued. Every time a resolution was carried a notice of motion was given to rescind it, and so the game went on for months, until the Local Government Board walked in with a sealed order rearranging the union into five districts as it thought most suitable.

It was then that all the blood of their heroic ancestors flew to the guardians' heads. "Resolutions and counter resolutions to be sent to the local M.P.s, the Chief Secretary, and others," were passed or recommended on alternate weeks protesting against this further injustice to Ireland, but all to no purpose. The Local Government Board refused to budge.

The next step was that the guardians instructed their solicitor to apply for a writ of *quo warranto* to set aside the sealed order as being *ultra vires*. It came before a judge of the High Court in due time, and was promptly decided against the guardians. It was a severe blow to their patriotism. They did not go so far as to say the judge had been bribed, which was rather surprising, but after a tremendous fight amongst themselves they decided to appeal. The appeal was dismissed with some £600 costs, and we believe it was this £600 saved the unfortunate ratepayers of Castlereah from an appeal to the House of Lords, for defeat there would have been disastrous.

The Local Government Board having ordered the guardians to advertise for two medical officers for the two new districts created by their order, they had no choice, but they overreached themselves by inserting an illegal condition. They advertised for two medical officers at a salary of £100 a year each, imposing a condition that they should attend "poor persons," a most elastic term in Ireland, at ridiculously low fees when distances are considered. The election took place, and the result is seen in the following letters:

Local Government Board, Dublin,
May 7th, 1909.

Sir.—The Local Government Board transmit herewith, for the information of the board of guardians of Castlereah Union, a copy of a letter which they have received from Dr. J. W. Beirne, complaining that at the election held on the 17th ult. to appoint medical officers for the Ballaghadereen and Loughglenn districts, the guardians endeavoured to impose upon the candidates, as a condition of appointment, that the person appointed would attend private patients upon a special scale of fees fixed by the board of guardians. Dr. Beirne states that the candidates, when the matter was brought under their notice, held a conference, and arrived at the unanimous conclusion not to consent to the suggested scale of fees, and signed a document to that effect; but that subsequently some of the candidates, notwithstanding this undertaking, notified their acceptance of the scale of fees. In the circumstances Dr. Beirne states he refused to allow his name to go forward to the poll for the medical officer of Ballaghadereen district as a protest against the proceedings. The Local Government Board have Dr. J. W. Beirne's letter, and consider that the scale of fees should be arranged under Article 7 of the dispensary rules, guardians are not authorized by law to require candidates for the office of medical officer of a dispensary district to agree to accept a fixed scale of fees for attendance upon private patients, and they have endeavoured to intimate that the manner in which the election was conducted by the guardians on the 17th ult. was such that the Local Government Board, in the exercise of their discretion, consider that they should not approve of the appointment made if the facts are as stated in Dr. Beirne's letter, but that a fresh election should be held.—I am, etc.,

A. R. BARLAS, Secretary.

(Copy of letter.)

Ballaghadereen, April 19th, 1909.

Sir.—An election for the appointment of medical officers for the Ballaghadereen and Loughglenn Dispensary Districts was advertised to take place on Saturday last, April 17th, at Castlereah, and in accordance with the advertisement was a candidate for the Ballaghadereen vacancy, and having made my application I attended on Saturday last the meeting of the board at which the election was to take place. When the motion for the election came on there was a proposal moved of a scale of fees, no mention of which was made directly or indirectly in the advertisement for the appointment, and naturally I felt constrained to object to the procedure on principle. Some councillors moved that the candidates for the I was to should consult amongst themselves as to the advisability of agreeing as to this new element of the scale of fees being introduced into the appointment and therefore allow the election to proceed. The candidates accordingly held a consultation, and came to the unanimous conclusion that they would not consent to it, and signed a document stating that they would not agree to the scale of fees being introduced then. After this document was signed and handed in before the board, some of the candidates changed their minds, and, I presume, acting on the suggestion of their friends, or for some other reason, made up their minds to sign a document accepting scale of fees, and the election being proceeded with. I refused to allow my name to go forward, as a protest against the irregularity and illegality of the whole proceedings. I now formally protest against the action taken, and ask the Board to refuse to sanction the election, and request that a new election be ordered.

(Signed) J. W. BEIRNE,
Acting M.O., Ballaghadereen.

In the apportioning of the new dispensary districts the town of Castlereah was taken from Dr. Donnellan, who had been the leader of the insurrection, was the oldest medical officer, and had the largest district in the union, and given to Dr. O'Donoghue, who held an adjoining district, but the Local Government Board decided most justly that Dr. Donnellan, who had over twenty years' service, should not be required to leave the town of Castlereah to reside in another part of his district, and they also advised the guardians that Dr. Donnellan was entitled to reasonable compensation for the loss of registration and vaccination fees, also for the loss of the most easily worked portion of his district, and that Dr. O'Donoghue was entitled to have his salary increased on account of the extra work thrown upon him. "A further attempt to rob the poor ratepayers by the minions of an alien Government" was about the mildest comment upon these suggestions as they were

consigned to the waste-paper basket, which by now must be pretty full. Having afforded the guardians full time for consideration without any effect, the Local Government Board have sent them a sealed order, fixing Dr. Donellan's salary at £140 per annum and Dr. O'Donoghue's at £122—certainly a most inadequate recompense in the case of a man who like Dr. Donellan has devoted his life to the work.

We should be sorry to assert that Castlereagh is a specimen of all other Irish boards of guardians; but there is far too much of this sort of senseless extravagance going on to the detriment of the interests of the ratepayers, and we think that the extended powers for the Local Government Board asked for by that able administrator Mr. John Burns would be an incalculable benefit to Ireland. A large extension of the powers of that Board would make for efficiency and economy impossible under the present system. That the people realize this was shown by their unanimous approval of the proposals of the Viceregal Commissioners.

Special Correspondence.

BERLIN.

House Disinfection after Tuberculosis.—Portable Field Cooking Apparatus.—Treatment of Inebriates.

THE magistrates of Wilmersdorf, a large suburb of Berlin, have determined to carry out, free of charge, the disinfection of all homes in their district from which a tuberculous person or persons may have removed. It will be interesting to see how this measure, which was much discussed and warmly advocated at the recent Congress for Tuberculosis, and has been in force for some time in other countries, will work in Germany.

The Berlin branch of the German "Vaterländische Frauenverein" recently invited experts to witness the practice of a special ambulance detachment, and to test a new transportable camp-kitchen for army purposes. This kitchen, which was constructed by the Senking Works in Hildesheim at the suggestion of the Prussian War Ministry, consists of a boiler for 200 litres of food, and a coffee-boller for 50 litres, both of which can be expeditiously heated in an oil-bath, thus avoiding freezing of the water, which is the great danger of the ordinary water bath (*bain-marie*) cooking. The boilers are made of pure nickel, to prevent oxidation of the food, which remains good for thirty-six hours without any replenishment of the fire, and which can even be kept for three or four days without turning sour, if the boiler-temperature does not fall below 40° C. The whole apparatus is most simple, and can be managed without previous instruction. Directions for use are fixed in a prominent place. The price is from 4,500 to 5,000 marks, that is, £225 to £250.

In a petition lately presented to the Prussian Diet, the Association of German Inebriate Asylums prays for more efficient legislation in the care of habitual drunkards. It appears that there are at present in Germany thirty-one charitable establishments for the care of inebriates, with 1,137 beds in all, and that during the year 1907 1,500 persons (of whom 188 had previously been interdicted) were received as inmates. At the close of 1907 there were 761 beds occupied. If these small numbers be compared with the thousands of dipsomaniacs who, year out year in, crowd German general hospitals and lunatic asylums; if the enormous sums these miserable victims of alcoholism cost the State and the municipalities be remembered, then every one must agree with the petitioners that stricter, and above all more practical, measures are required than the present method of interdiction preceding forced seclusion. In Germany hardly more than a thousand persons are annually put under trustees, the reason not being far to seek. Besides the difficulty of finding a "disinterested party" among the near relations, the dipsomaniac's family is deterred from applying for his interdiction sometimes by false shame or want of energy, and often by fear of his brutalities, or by apprehension of the expense. The Poor Law guardians, too, dread the trouble and costs of the present complicated procedure, and so things continue to go on in the old unsatisfactory manner, though the evil is known and acknowledged.

Correspondence.

SPEECH FRIGHT.

SIR,—I love to see a letter from Dr. Farquharson! It is sure to be out of the beaten tract—something original, something interesting. But I suppose that when he was a hospital physician he used to write like the rest of us, saying that the temperature was high or the appetite bad. (You, Mr. Editor, know the style.) However, I am not alluding to-day to written articles and reports, but to speeches.

One of the finest speeches which I have ever read was Lord Rosebery's of the other day to the press delegates. I wish that I had heard it! And as I read it I said to myself, "And this great orator once lost his thread in the House of Lords." And the thought gave me great comfort. Rosebery, the greatest and most graceful of our speakers, "drying up," as the actors say.

"After the Lord Mayor's carriage comes the dust cart." Sometimes I make a speech. I never seek to make one. I always back out of it if I can. But every man has a certain amount of duty which he must not shirk, and now and then I feel bound to accept the invitation to make a speech. And from the moment that I have accepted a cloud hangs over me! When I wake in the morning I say to myself, "In three days I have to make that speech," and the same thing occurs with increasing frequency as the time approaches. As the days pass by I get together some rough ideas and dot them down on a piece of paper. Then I get the words into sentences, and polish them up as best I can. It is probably an after-dinner speech; and at the dinner I am miserable. When the soup is put before me I want to stand up and deliver myself. But I must not. As the dinner goes on every one around me seems to be quite happy; I am miserable. At last the Toastmaster calls out, "Pray silence for your Chairman"; and then I feel inclined to sink off and never return. But I can't. I have undertaken to make a speech, and I must needs see it through. But my time is not yet. There are other speeches before mine, and songs or recitations, all of which prolong my misery! My neighbour at the table says, "I see you are down for a speech." I reply, "Yes, I am sorry to say that I am." He rejoins, "You? Why it is nothing for you to make a speech; you are first-rate at it." He is kind and flattering, but he doesn't know. As a matter of fact, I am miserable. My heart-rate is becoming excessive, and I am breaking out into a profuse perspiration. My hands are clammy, and I am more miserable than ever. Then my turn comes, and I give a sigh of relief, much as, I suppose, the criminal does when he descends from the dock to do his time.

Somehow or other, I have always up to this got through the task without failure, but I am always more disappointed with the result than my kind friends seem to be. I am thankful that I have not failed; thankful to be safely delivered. And in my thankfulness I am quite humble, and I say to myself that on the next occasion my speech will certainly be a "frost"—that it is only a question of time when a speaker comes to grief. For even the very best sometimes fail.

After my delivery I am less miserable than I was; but I am anxious to get home. "I am afraid to think on what I've done; look on't again, I dare not!" But I cannot get away from it, and on my way home I remember the "points" which ought to have been made. My evening has been made miserable, and peace comes only with sleep.

I wish that Dr. Farquharson would ask Lord Rosebery to read the correspondence on this subject and induce him to write a few lines for our JOURNAL. We know that his speech is not like the song of the skylark, "unmediated art," but his art is perfect; it is absolutely concealed. Would that he might tell us how he goes to work!—I am, etc.,

June 12th.

CELT.

SIR.—Undoubtedly there is a great deal more in the etiology of this condition than one can perceive at a cursory glance, and is of more importance than a passing notice would lead us to believe; the intricate nervous

metabolic changes which take place whether they be of a functional nature or otherwise, are most difficult to understand, and, from my experience, they occur in several members of a family and in various degrees, and are hereditary. I have a case in my mind's eye now, which to me demonstrates that the "causa causans" is in the commissures between the primary intellectual centres (glossokinaesthetic) and the motor speech centre.

This individual as a boy stammered, and while he was perfectly conscious of what he wanted to say, was at a loss to convey his meaning owing to his speech centre, or the commissures between the glossokinaesthetic centre on the floor of the fourth ventricle being in some way temporarily aberrated, and this was in all cases intensified during excitement, or when suddenly taken to task, at the same time several other nervous conditions exhibit themselves, such as tremors, twitchings, and jerking movements of the different parts of the body. When speaking quietly and dispassionately language came fairly fluent. As the youth grew older the stammering ceased, or nearly so, and another condition developed, apparently in its stead and evidently closely connected with it, for when under any excitement or undergoing some unusual ordeal, such as being presented to some important personage, or suddenly asked to take part in a discussion, speech seemed suddenly to leave him, or, as it is usually said, "his tongue clove to the roof of his mouth," and often only a few muttered, incoherent sentences could be made; at other times, if suddenly spoken to, while conscious of everything and thoroughly conversant with the details in question, and conversation could be carried on fairly well, some part of the intellectual faculties seemed to be in abeyance—memory seems momentarily to fail—he could not recollect the names of persons and technical things under discussion, which at other times were quite familiar, and in his quiet moments he would be able to write a perfect paper upon the same subject in lucid style without any reference or loss of memory.

I think all this goes to show that the fault lies in the communicating nerve tracts of the brain itself—that is, in the commissures linking up the various intellectual centres with the speech centre—and not the centres themselves from some cause being over-stimulated and fail to act at all. And these commissures are probably put out of gear by some other condition, perhaps, causing momentary stasis or engorgement of the blood in the capillaries surrounding these tracts, involving the motor fibres, too, as tremors, nervous twitching movements, and suchlike frequently accompany and are often observed to be associated with the affection, though I am aware this is contrary to the physiological teaching relative to the cerebral circulation. And anything which could prevent this occurring would, to my mind, abolish or mitigate the distressing condition. In the particular case under discussion a cup of hot tea or coffee—tea especially—had a remarkable effect in calming down and reducing the uneasiness, whether taken alone or after a meal; but the degree of mental disturbance was always much exacerbated when for some hours no food had been taken.—I am, etc.,

Birmingham, June 13th.

CLEMENS BELCHER.

SIR,—Although the following note scarcely comes under the heading of "Speech fright," yet it has been recalled to mind by this correspondence and may, perhaps, interest your readers, as it illustrates what is probably a little known therapeutic action of repeated small doses of opium.

Many years ago in India I heard an officer relate his experience during the Afghan campaign. He had occupied an important staff appointment, the duties of which were extremely heavy, entailing much worry, responsibility, and night duty. He was rapidly breaking down, both mentally and physically, under the strain, when one of his native officers strongly urged him to take grass of opium every morning before he commenced work. The remedy was tried, more from curiosity than from anything else. In a week or ten days all the unpleasant symptoms had disappeared; lapses of memory seemed almost impossible, and he went through the rest of the campaign without strain or difficulty. He felt convinced that the use of opium had saved him from a complete breakdown, if not from actual insanity.

The difficulty came later on when the strain was over

and it was necessary to give up the drug. This was only accomplished by stern determination, after months of considerable suffering.—I am, etc.,

June 15th.

G. H. YOUNGE,
Lieutenant-Colonel, R.A.M.C. (ret.).

SIR,—I am particularly interested in the suggestion made by several correspondents to use opium in some form in the treatment of this condition; for it corroborates a little experience of my own in 1895. This occurred at a picnic to which I had been invited by a brother medico. For some reason, which I cannot now recollect, I took 1 dram of liquor morphinae just before starting. I am by nature of a very retiring disposition, shrinking from all social gatherings, dances, picnics, and the like; in fact I cannot remember ever having really enjoyed one in my life. But, on this particular occasion, all reserve seemed blown to the winds; I was full of go, up to all sorts of pranks and fun; in fact, my host, who had known me for years as a steady, inoffensive young fellow, perhaps a trifle dull, said he never suspected I had as much go in me. Personally, I may say that it is the only occasion upon which I ever fairly "let myself go," and, moreover, I had no unpleasant after-effects, not even a breach of promise action which might quite reasonably have been expected. Warned by medical friends, to whom I have related my experience, I have avoided repeating the experiment, and so, like Oliver Wendell Holmes's funny man, I may say—

Albeit in a general way
I am a sober man,
Since then I never dared to be
As funny as I can.

—I am, etc.,

June 15th.

H. E. B.

SCHOOL CHILDREN AND THE HOSPITALS.

SIR,—Dr. Sidney Phillips's failure to appreciate the point of view expressed in the circular on the above subject issued by the Metropolitan Counties Branch Council seems to be due to a misapprehension on his part as to existing conditions. In his letter he three times refers to "the school doctor." But the whole point of the trouble is that there is no school doctor, and that a proposal is being made that the County Council shall remedy this defect by inducing the honorary outpatient officers of the voluntary hospitals to fulfil the functions of this missing official. There are of course medical inspectors of school children, who are not permitted to carry out any sort of treatment; but these cannot be the officers that Dr. Phillips refers to as school doctors, and with whom he intimates that the staff of the outpatient department might co-operate as consultants. One could no more act as consultant to a medical inspector debarred from practice than to a relieving officer without a medical qualification.

I am confident that it is but necessary to point out to Dr. Phillips this error into which he has fallen to ensure that he will reconsider his attitude on this question. It is important that the profession should stand together in resisting the proposals that are being put forward by the County Council or by others on its behalf. When the County Council has made arrangements to ensure that all children found needing treatment in their schools shall secure treatment at the hands of medical practitioners who are properly remunerated for their services, either by the child's parent, or by the Council, or by the guardians of the poor or by the charitable public, or by the friendly societies, or, indeed, by anybody, provided only that they are properly remunerated—then, but not before, it will be possible for the voluntary hospitals to consider the terms on which they can reasonably ask the members of the medical staff to co-operate in the treatment of these children.—I am, etc.,

June 14th.

LAURISTON E. SHAW.

SIR,—Dr. Phillips in his sentence, "That a child eligible for treatment forfeits its right to it if its qualification is detected by the State—that is the London County Council," exactly hits the nail on the head. If the State or the London County Council wish to provide medical aid for a child let them pay market price for it.

By all means let the State or the London County Council find out if a parent is doing his duty by his child. Having found out that he is not so doing, let them notify him as to his liability, and see that he accepts it.

The existing law is quite strong enough to enforce proper care of children, and the arrangements of the Poor Law and charitable institutions are able to afford all the relief necessary, if the parent cannot pay the necessary fees.

The owner of the land on which schools are built has not of late years given the ground for them; the architect who drew the plans, the contractor and workmen who built them, the teachers who work in them are all paid for their services. Why should the doctor, who attends to the ailments of the children, be the only person who is not paid a proper fee?—I am, etc.,

Bradford-on-Avon, June 14th.

HERBERT P. TAYLER.

"THE DOCTOR AS A VICARIOUS PHIL- ANTHROPIST."

SIR,—I do not know whether you feel obliged to print every letter sent to you or not; but if you do I am sure you must have been as sorry to print as I was to read that from Dr. Wishart Kerr.

Men who act as he did are simply lowering the status of the profession to that of a trade, and that even not of a good trade.

Any shopkeeper seeing a small boy in serious want of food would have willingly given it to him. Most good tradesmen do not require payment before supplying one with goods; but when a poor child has been hurt in an accident, and has been brought to our surgery, we have no right to refuse first aid without payment. We may have the right to refuse to continue the treatment of the case, but the present suffering should be relieved; and Dr. Kerr's refusal to treat the poor child was a disgrace to the profession which he vaunts himself he is upholding. —I am, etc.,

Grange over-Sands, June 7th.

OWEN GWATKIN.

SIR,—The letters under this heading must have appealed to all of us and recalled sad memories of time and trouble freely given—alas, too freely. It is a real grievance which the profession has to endure: for not only has the case to be dealt with, but subsequent treatment is also thrust upon one, lest, for instance, a badly united fracture should be ascribed to his improper setting. It produces strange results. For instance, one man I know now poses as a doctor indeed, but of music, when attending, as is his wont, numerous race meetings. He found his little jaunts too frequently disturbed by being called to accidents on the course, which never resulted in anything more than thanks. The climax came when, after attending an aristocratic gentleman rider in a bad accident in the first race and losing his day's amusement and his day's expenses, his little bill was ignored. The work, too, is not pleasant. For instance, after examining as far as practicable an injury to the hip in which one suspects an impacted fracture, it is difficult to answer the numerous inquiries of "Is it broken, doctor?" (such a simple question, too) in a manner that will redound to his after-credit. I have often hoped to meet one British citizen who would exercise charity out of his own pocket in a case of emergency instead of, as now, at the expense of the "noble profession."

The fact is we are too noble and too unbusinesslike, and, considering how many general practitioners can now barely make both ends meet, the time has come to make a stand against the burdens placed upon us. For instance, the petrol tax; we should all take care, by strictly charging mileage and being firm with our country patients, that the tax is paid, not by us, but by the public. Again, does the present state of affairs help the public? No doubt there are many who, like myself, lacking Dr. Kerr's courage, evade the difficulty by issuing orders, "Not at home to accidents." In the end the public get what they pay for (with only about 100 per cent. thrown in), as in the case of club practice where, unwisely for themselves, the best class of working men have cut down fees to a point which compels a corresponding cutting down of visits and drugs. A most exacting profession should at least allow

its slaves to be freed from sordid pecuniary worries. We have a monopoly; why not use it? I enclose my card, but fearing local opinion, can only remain

June 7th.

NOT AT HOME TO ACCIDENTS.

RURAL DISTRICT NURSING ASSOCIATIONS.

SIR,—Several letters have appeared lately in the BRITISH MEDICAL JOURNAL with reference to district nurses.

May I give my experience of the Belvoir District Nursing Association? This exists to supply nurses to its members, chiefly of the working agricultural type, in this neighbourhood.

The nurses are resident—that is to say, they are sent from the central home to a particular case, and when this is finished they return to the home. In the patient's house they are expected to nurse the patient, cook, and generally look after the welfare of the house and carry out the doctor's orders.

They are clean, respectable women, able to take temperatures, etc., and not above their work. They are not allowed to meddle with other patients than their own, nor to prescribe. They are under complete control. They fill a distinct want, and are acceptable to both their patients and to the doctors.

The advantages of such a system to the district nurse depicted in your columns who is dumped down in a locality to prescribe, nurse, interfere without let or hindrance is obvious. I commend it to the consideration of those who have to form or reform rural nursing associations.—I am, etc.,

Nottingham, June 7th.

W. WINDLEY.

THE CAUSATION OF CANCER.

SIR,—I understand from Mr. Marsden's letter that he considers that chronic irritation upsets the normal equilibrium between, say, the epiblast and mesoblast, so that, if I may coin a word, the "tissue-tension" of the one exceeds that of the other, and an invasion results. One can adduce some support for this in the fact that sarcoma is commoner in youth and epithelioma in advanced age. In youth the mesoblastic tissues are at the height of their activity, but the need for surface protection and sensation is not vastly greater than in later life. Here, then, the tissue-tension of the mesoblast will tend to exceed that of the epiblast and hypoblast—hence, sarcoma following a special call upon the reproductive powers of that mesoblast. It is not difficult to imagine, moreover, that partially developed and embryonic tissue will have a higher reproductive tension than fully developed tissue. In advanced age the reverse is usually more marked, since the mesoblast is notoriously atrophic—so also is the epiblast to a lesser degree perhaps, but the work meted out to the epiblast is not proportionately decreased, and, as Mr. Marsden points out, in the case of chronic simple ulcer it is enormously increased as far as the call upon its reproductive powers are concerned.

Thus the "tissue tension" of the epiblast exceeds that of the atrophic mesoblast, and hence the invasion called epithelioma. The same applies to the hypoblast in its relation to the mesoblast, since many elderly people eat far too much, and are frequently constipated and take little exercise. I have heard it stated that malignant disease is due to primary degeneration of the basement membranes; but I imagine the proof of this would be difficult to obtain even if it were shown what part the basement membranes played in keeping the cells in their proper place. Doubtless these theories are as "old as the hills," and I venture to predict that the causation of tumours will be discovered by the bacteriologist and not by the morbid histologist or embryologist.

From the bacteriological point of view it may be assumed that the parasite is one against which the leucocyte is of little avail, or is but slowly influenced by chemotaxis, and to which ordinary granulation tissue by itself is no barrier. Therefore the epithelial cells, to which the parasite strongly appeals, reproduce and endeavour to limit and wall off the invaders. This they are unable to perform successfully, but nevertheless greatly impede their progress; especially in rodent ulcer are they most successful.

In secondary deposits epithelial cells are carried off by the lymph stream to the liver or elsewhere, as also is the parasite, there to start the unequal fight once more, for maybe the epithelial cell is a comparative novice at warfare.

The shrinking of a scirrhus is analogous to the contraction of ordinary granulation tissue. Likewise it may be conceived that the parasite of sarcoma is resisted by the connective tissue cells of the mesoblast, which attain a great size when successful. After all, why should we look to the leucocytes to fight every kind of marauder unaided?—I am, etc.,

Reading, June 6th.

CECIL E. REYNOLDS.

OPERATIONS ON THE PROSTATE.

SIR,—Dr. Howat's somewhat trenchant criticisms of my procedure in the case of enlarged prostate, reported in the JOURNAL of May 22nd, demand a reply, not only to satisfy him but also all others who hold similar and, in my opinion, erroneous views as to the value of suprapubic cystotomy in cases of enlarged prostate.

After all, the mortality of suprapubic prostatectomy is not high when one considers the age of the patients and the condition of the bladder and kidneys often present. Mr. Freyer's results, showing a mortality of about 7 per cent. in a large series of cases of all sorts, speak for themselves, and at the meeting of the British Medical Association at which my case was described I reported a small series of 23 cases with one death. The ages of my patients varied from 53 to 79 years. One old man, aged 79, who was operated on for severe haemorrhage, had a double aortic murmur, and is still alive and comfortable one year after. Another weighed 20 st., and had a weak heart, but made an excellent recovery. Other surgeons have had similar results.

Dr. Howat asks whether, when the bladder was opened, examination gave any indication of the degree of difficulty likely to be encountered. In reply to this I may say that on opening the bladder a large firm, elastic, lobulated mass, somewhat cone-shaped, presented almost immediately under the suprapubic wound. The internal opening of the urethra was situated at the apex of the projecting mass, a long finger-length from the neck of the bladder. Surrounding the growth was a deep trench, into the depths of which my finger could not quite reach. Consequently I did not feel the stone, which was not discovered until the prostate had been removed. The only difficulty I apprehended was the mechanical one of being unable to reach the limits of the growth with my finger. I have already reported how I met that difficulty. Dr. Howat agrees that operation was rightly considered, but argues that the operation chosen was the wrong one. He would have performed suprapubic cystotomy, with the object of relieving retention and checking the bleeding. Just so, but the retention having been relieved and the bleeding arrested, what was he prepared to do next? Wait for the suprapubic wound to close? In what other way was he going "to restore its former degree of efficiency (the italics are mine) to the bladder?" He must know that closure of a suprapubic wound is only likely to take place when there is free vent for the urine by the natural passage. Even a very moderate degree of obstruction is sufficient to prevent closure of a suprapubic sinus or to cause it to reopen when apparently soundly healed. In cases of enlarged prostate with obstruction closure of the sinus is certain to fail. Consequently the patient is doomed to that most distressing condition—a permanent fistula. Further, drainage of the bladder by the suprapubic route is very imperfect, and is only undertaken in septic cases prior to the performance of prostatectomy for the purpose of facility in washing out. In the case in question it will be seen that it would have been futile to have expected closure of the wound. The patient, who is a well-read man of a high degree of intelligence, had the alternatives, with all the attendant risks of prostatectomy fully explained to him, and he unhesitatingly accepted the radical operation, which, he was informed, would, if he survived, place him in a comfortable position as regards his urinary organs for the rest of his life. My medical colleagues were of opinion that though there was considerable risk with the operation, the patient had a reasonable chance of recovery, and they were further of

opinion that delay would not tend to improve the condition of his heart and might be dangerous from the advent of sepsis in his bladder. If any operation were to be performed it would have to be done at once and completed once for all, as the probability was that further operative interference later on would prove too much for him. The patient had a fight for life, but has succeeded beyond my most sanguine expectations, and is now, five weeks after operation, able to be up every day. His wound is dry and he can already retain his urine for five hours, and pass it with ease and freedom.

I would recommend Dr. Howat to reconsider carefully the advisability of performing suprapubic cystotomy in similar cases, unless he is prepared to contemplate the certainty of the persistence of a suprapubic fistula, through which all or most of the patient's urine will be voided, a condition which can only be successfully dealt with by a subsequent prostatectomy.—I am, etc.,

Belfast, June 7th.

ANDREW FULLERTON.

SIR,—Dr. R. K. Howat's able and unbiased criticism from a clinical standpoint (p. 1392) on the acquisition of a record prostatic trophy by Mr. Andrew Fullerton is one that will have the endorsement of clinicians. Dr. Howat, perhaps intentionally, omits to question why, in the presence of gravel and haematuria, a radiograph was not taken in this case as a preliminary diagnostic measure.

My excuse, however, for troubling you is to confirm the views expressed on p. 1301 of the previous issue of the JOURNAL by Dr. Alfred Codd, of Wolverhampton, on the treatment of enlarged prostates directly by the x rays. If Dr. Howat's line of treatment had been followed, after removal of the calculus, this prostate could have been thus resolved, in so far as its neoplastic tissues were concerned, and the urinary function restored.

Your comments on the function of the prostate on p. 1382, drawing attention to Professor C. Posner's contribution on this subject, are interesting in this reference. May I be permitted to suggest that, as in circumcision, the rule has been for eunuchs to be castrated in infancy or early life, and it is natural for the development of the prostate to be thus arrested in the absence of the testicular hormones? A similar influence being known to follow ovariectomy in young mammals in their mammary development, a fact, indeed, which was also responsible for the application of ovariectomy in the last decade as a remedial measure for mammary cancer, but now of merely historic importance.

The failure of castration as practised in the last decade of the nineteenth century for reducing the enlarged prostate in the aged might be accounted for if it is realized that in the vast majority of such cases the enlargement is not intrinsic and parenchymal, but is interstitial and fibrotic, the sequela of long-standing chronic prostatitis. The senescence of the emunctories, atony of the intestines, with constipation and pre-existing urethral and cystic infection, are doubtless important etiological factors to be borne in mind. Castration in the aged could not, therefore, be expected to do more than remove certain sexual reflexes, thus preventing periodic congestion in the gland.

From the small but gratifying experience radiotherapy has afforded in quickly reducing both enlarged tonsils and enlarged prostates, by means of the filtered x rays, on the basis of the impact of the negatively charged molecules of matter, travelling at high velocity through the large protein molecules, which constitute the cytoplasm of all transitional cells, splitting them up and thus rendering the smaller molecules and debris more diffusible and capable of excretion without damage to the somatic cell elements, their more extended adoption in cases uncomplicated by calculus is to be recommended.—I am, etc.,

London, W., June 5th.

H. D. McCULLOCH.

SECONDARY PAROTITIS.

SIR,—I have read with interest in the BRITISH MEDICAL JOURNAL of May 29th the paper by Dr. H. D. Rolleston and Mr. M. W. B. Oliver, and also the note on the same subject by Dr. W. Soltan Fenwick. In simple terms the former show that abstinence from food is a leading factor in the production of secondary parotitis, while the latter recommends chewing as a prophylactic measure. The

practical value of these observations is considerable, but I should like to draw attention to what I believe to be an additional factor in the causation of secondary parotitis—namely, morphine.

Taking a wide view of the subject, there is little doubt that the affection is due to the coincidence of two conditions—infection and stasis. If it were possible to eliminate one of these factors, there would be no secondary parotitis. I have seen it stated that the affection can be prevented by oral disinfection. This may be correct; but, if so, the requisite degree of oral cleanliness is difficult of attainment, as the following case will show.

A few years ago a dentist's assistant was under my care for a perforated duodenal ulcer. After the operation I ordered him a carbolic acid mouth wash, and some antiseptic lozenges to suck. In spite of these prophylactic measures both parotids became inflamed and suppurated, causing a prolonged and complicated convalescence. The patient had been given morphine. A careful examination of his mouth did not reveal a spot of dental caries, and one could hardly expect to have again a case so favourable for oral sepsis. Since then at least six cases of secondary parotitis have come under my personal observation, and in every case morphine had been given.

A short while ago a patient of mine was suffering from cerebral thrombosis. Nourishment could be given only with difficulty, and was confined to fluids; thus there was no chewing. The patient was so restless and even violent that she was given hypodermic injections of morphine. Her breath was foul, and the united exertions of two nurses failed to cleanse her mouth. Here were the conditions for parotitis, namely, a septic mouth, absence of chewing, and the administration of morphine; and as a matter of fact a suppurative parotitis ensued. I think that most men would have failed, as I did, to anticipate the complication, partly because it has been associated in the literature chiefly with abdominal lesions. It is to be hoped that in the future this association will be regarded as in no way essential, for it is but a chance. The various causative factors are most commonly present in abdominal cases, but are not confined to these. Given any illness in which there is oral sepsis and arrest of the salivary flow, and parotitis is apt to occur. It is probable also that the administration of morphine, together with the absence of chewing, plays an active part in arresting the salivary flow.—I am, etc.,

Southsea, June 8th.

HAROLD BURROWS.

THE PROFESSION, THE ASSOCIATION, AND THE JOURNAL.

SIR,—May I suggest to Dr. Cuthbertson Walker that the records of attendance at Branch and Division meetings indicate that about 90 per cent. of members belong to the Association for the sake of the JOURNAL alone?

Owing to the size of the Branches, only a small percentage of the men in the district can attend the meetings; in urban districts these men are the better-paid members of the profession whose "hours of business" do not run to 8, 9, or even 10 o'clock at night, and who live in the fashionable quarter of the town, that is to say, near the place of meeting. In rural districts, the men who attend are again those who have leisure, and who live in the town of meeting.

Few country practitioners can afford half a day for either outside business or pleasure, but they belong to the Association for the sake of the JOURNAL, which keeps them au courant of the progress of their art and in touch with medical politics.

The non-members of the Association are those who have no time to attend meetings, and no time or inclination to read a medical paper. To paraphrase Dr. Crawshaw, they say, "What can membership of the Association do for me?"

A new era of prosperity may open with the reception of the Charter, when the Association will be able to offer other inducements to join it; but much more might be accomplished by largely increasing the number of meetings, and holding them in rotation at different places.—I am, etc.,

Bristol, June 5th.

HARRY GREY.

THE NEW IRISH UNIVERSITIES.

SIR,—In a fortnight the statutes of the new Irish universities will have passed into law, so that any modifications must be made by Parliament at once.

Convocation of the Royal University—largely composed of medical men—has not been consulted about these statutes, and therefore they need amendment. The Convocation recommended the establishment of a degree of B.Sc. in Public Health. This has been done in Dublin and not in Belfast, but instead of being open to graduates of all universities in the *Medical Register*, is confined, apparently, to those who have taken the M.B. in the University of Dublin.

It is also complained that effort is made to shear Convocation of any real power by confining the power to call meetings of it to the Chancellor or Senate in Dublin, whilst in Belfast members can call a meeting. Power to elect a clerk of Convocation has hitherto lain with that body; now it is transferred to the Senate.

Hitherto Convocation of the Royal University elected a certain proportion, usually of medical men, to the Senate. This power is now taken from them for five years.

There is also a strong objection to persons who have been nominated members of the Senate of the new universities being elected to paid professorships or other posts of emolument. If such are elected they should resign from the Senate forthwith. The institution of a degree of D.Sc. in Veterinary Medicine is desirable—there is a strong veterinary college in Dublin—but there is no provision for the study of diseases transmissible from animals to man. Such post-graduate study would be the result of the possibility of obtaining a higher qualification for a veterinary surgeon. In like manner a much-needed stimulus to the study of pharmacology would result from the granting of a B.Sc. degree in Pharmacology for registered pharmacists.—I am, etc.,

J. C. MCWALTER, M.A.R.U.I., M.D.Brux.,

Dublin, June 10th.

F.F.P.S.Glasg.

THEORY AND HYPOTHESIS.

SIR,—It would be pedantic to expect all persons, or any person at all times, to be logically exact in the use of the word "theory." But I think that my friend, Dr. Wm. Hunter, does himself insufficient credit in complaining that his opinion on a certain point is stated to be "only a theory" (BRITISH MEDICAL JOURNAL, June 12th, 1909, p. 1458). Surely a "theory" is a "scientific interpretation of fact," and if the point he makes on the subject of severe anaemias be really a theory, it must be true. If, however, the principle contended for be not a demonstrated truth, it should be called a "hypothesis," which may, or may not, now, or at some future time, be proved to be a "theory." Into the merits of the question between himself and Dr. Charles H. Melland (BRITISH MEDICAL JOURNAL, June 5th, 1909, p. 1349, col. ii, line 7) I cannot enter, but my regard for the personality and accomplishments of Dr. Hunter makes me venture to pull him up on this matter of expression in a letter in which he evidently aims to be exacting. It is not necessary for me to justify the definition of "theory" and "hypothesis" here quoted, as it is fully given by John Stuart Mill in his *System of Logic*, Book III, Chaps. xiii and xiv.

Colloquially, the word "theory" has often, if not generally, to do duty for hypothesis, but when language aims at scientific precision it is necessary to distinguish between the two.

I therefore trust that Dr. Wm. Hunter will accept my remarks as no intentional departure from either amiability or appreciation. (See also *Lancet*, April 26th, 1879, p. 289, line 16.)

Liverpool, June 13th, 1909.

RUSHTON PARKER.

THE LATE MR. C. G. WHEELHOUSE.

SIR,—It is proposed to place a brass in Filey Parish Church to commemorate the name of the above, whose services to humanity at large, and to Leeds and Filey in particular, deserve some public recognition.

The brass will be placed immediately below a stained-glass window which he erected, and opposite the place where for nineteen years he worshipped.

Mr. Wheelhouse had many friends, patients and pupils scattered about the country, and possibly some may wish

to share in this tribute to his memory. Subscriptions, limited to a sovereign, may be sent to the undersigned.

A. N. COOPER, Vicar.
HENRY FOSTER, Churchwardens.
A. V. MACHIN,

Filey, June 7th.

SURGICAL INSTRUMENTS: A WARNING.

SIR,—Will you permit me through your columns to warn medical practitioners to be careful in buying surgical instruments and apparatus from persons purporting to be agents of manufacturers or distributing firms selling such goods? In a case which has lately come before the Medical Defence Union a man representing himself to be an agent of a well-known firm of instrument makers sold to a surgeon a certain instrument and received payment for the same. Later the surgeon was written to by the firm in question, stating that the "agent" had in reality stolen the goods he was offering for sale, and making a demand either for the return of the instruments or payment of the value to them. The matter was placed in my hands, and on behalf of the surgeon I declined to carry out the suggestion made, as the action of the member concerned was bona fide and he had paid the price demanded by the agent, whose credentials he had to reason to disbelieve; and also stated that, should the firm desire to take the matter in court, our solicitors would be fully instructed to defend. Since the date of my letter I have heard nothing further. It would be as well for medical practitioners to merely give an order, and, when payment is required, to send a cheque to the business address of the firm, and not to pay the "agent" himself, unless absolutely certain that he is as he represents himself to be.—I am, etc.,

London, W.C., June 11th.

A. G. BATEMAN.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

Lectureships.

THE following reappointments have been made:

University Lecturer in Organic Chemistry.—Dr. Ruhemann.
University Lecturers in Chemistry.—Dr. Sell and Dr. Fenton.
University Lecturer in Physical Anthropology.—Dr. Duckworth.

University Lecturer in Special Pathology.—Mr. Strangeways.

Degrees.

The following degrees were conferred on June 10th:

M.D.—A. W. Izard, Trin.; C. N. Le Brocq, Pemb.; A. E. Martin, Down.
M.B., B.C.—E. Beaton, Govv. and Cai.; A. E. Burgess, Govv. and Cai.
M.B.—A. F. Jackson, Pemb.
B.C.—L. W. Sharp, Govv. and Cai.

The report of the syndicate on alterations for the general examination has passed the senate, one alternative being a preliminary examination in science in the subjects of the First M.B.—namely, chemistry, physics, and biology. A student who has passed this preliminary examination in science in all these subjects will be regarded as having passed the First M.B. Examination without the payment of an additional fee. The subjects may be passed separately.

UNIVERSITY OF LONDON.

SCHOOL OF MEDICINE FOR WOMEN.

THE Fishmongers Company has awarded a University Exhibition of £60 per annum for three years to Miss Naomi Tribe, a student of the school.

The Council has appointed Miss Kate Brown, M.B., B.S., to be Demonstrator in Anatomy and Curator of the Museum.

Lady Northcote will present the prizes and certificates to students for 1908-9 on Friday, July 2nd, when Mrs. Garrett Anderson will take the chair at 4 p.m.

UNIVERSITY OF BIRMINGHAM.

Endowment Fund.

THE first list of donations promised in response to the special appeal for the University Endowment Fund contains 125 names, and the total amount of the subscriptions is £75,859. The Chancellor (the Right Hon. J. Chamberlain, M.P.) heads the list with £100, £10,000 is subscribed by the Lord Mayor (Alderman G. H. Kenrick), and £2,000 by the Vice-Chancellor (Alderman Beale). Other large contributions are £30,000 from Sir Charles Holcroft, Bart., and £2,000 from Mr. J. A. Kenrick. Among donors of £1,000 each are the treasurer (Alderman Clayton), Sir John Holder, Bart., Messrs. W. A. Albright, J. S. Beale, W. Waters Butler, Barrow Cadbury, Neville Chamberlain, Edward Cheshire, Cregoe Colmore, F. Dudley Dockes, W. Gibbins, A. B. and C. B. Holmsworth, A. Keen, the

Right Hon. W. Kenrick, T. Grosvenor Lee, F. W. V. Mitchell, and H. F. Osler.

The Resignation of Mr. Bennett May.

Mr. Bennett May, F.R.C.S., has resigned his post as Professor of Surgery in the university, and the following resolution has been passed by the council:

That the resignation of Professor Bennett May be accepted with regret, and that the best thanks of the council be given to him for his valuable and distinguished services to the Birmingham Medical School during a period of thirty-three years.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ORDINARY COUNCIL, JUNE 10TH, 1909.

Mr. HENRY MORRIS, President, in the Chair.

Fellowship Examinations.

At the recent examination in Anatomy and Physiology for the Fellowship 45 candidates were approved.

Diplomas of Fellowship were issued to 34 candidates found qualified at the final examination as follows:

Name.	Medical Qualification and School.
Charles Henry James, Maj. I.M.S....	... L.R.C.P. Lond., St. Thomas's.
Carlton Oldfield, Leeds ...	... M.D. Lond., Leeds.
Percy Montague Smith, London ...	... M.D. Lond., St. Mary's.
Edmund Arthur Dorrell, London ...	... L.R.C.P. Lond., Bristol and St. Bart's.
Archibald Hugh Pavan Dawnay, London ...	... L.R.C.P. Lond., St. Thomas's.
Walter Rodney Batty, Capt. I.M.S. Witleton	... M.B. Lond., St. Thomas's and St. Bart's.
Thomas Wilfrid Litchworth, Walton-on-Thames	... M.D. Lond., Camb. and St. Bart's.
William Herbert Forshaw, Newark	... L.R.C.P. Lond., London.
Aaron Levy, London ...	... M.D. McGill, St. Bart's.
John Jekyll Rainforth, Lincoln ...	... M.B. Lond., London.
Herbert Francis Woolfenden, Southport ...	... M.D. Lond., Liverpool and London.
Clifford Sidney White, London ...	... M.D. Lond., University College.
Robert Alfred Worthington, Hale Ead, near Chingford	... M.B. Lond., Camb. and Lond.
Frank Anderson Juler, London ...	... M.B. Camb., St. Mary's.
Thomas Charles Clare, Edgbaston	... M.B. Lond., Birmingham.
John Davis Barris, London ...	... L.R.C.P. Lond., Camb. and St. Bart's.
Thomas Braulley Layton, London	... M.D. Lond., Guy's.
James Eustace Rudolph McDonagh, London	... L.R.C.P. Lond., St. Bart's.
Sydney Gray MacDonald, Sydney ...	... M.B. Camb., St. Thomas's.
Hamilton Ernest Quick, Swansea	... M.B. Lond., St. Bart's.
Rupert Farrant, London ...	... L.R.C.P. Lond., Westminster.
Alexander Fleming, London ...	... M.B. Lond., St. Mary's.
James Leonard Joyce, Tenbury	... L.R.C.P. Lond., St. Bart's.
Christian Frederic Louis Leopoldt, Clarendon, Cape Colony	... L.R.C.P. Lond., Guy's.
William Fulton Neil, Dunedin, N.Z.	... M.B. New Zealand, New Zealand and Lond.
Cecil Frederick Robertson, London	... M.B. Lond., Middlesex.
Edward Kenneth Martin, Weston-super-Mare	... M.B. Lond., University College.
Robert Ollerenshaw, Glossop ...	... M.D. Viet., Manch. and Lond.
Hugh Raymond Guy Poate, Sydney ...	... M.B. Syd., Sydney and Lond.
Frederick Charles Pybus, Stockton-on-Tees ...	... M.B. Dur., Durham and St. Bart's.
Vincent Zachary Cope, London ...	... M.D. Lond., St. Mary's.
Arthur Cecil Devereux, Charlton ...	... M.B. Edin., Edin. and Middlesex.
William Maxwell Munby, North Shields ...	... M.B. Edin., Edin. and Lond.
Laurence Christopher Panting, Truro ...	... M.B. Oxon., Oxford, and Guy's.

Report of the Committee on By-Laws.

As requested by the Council on May 15th, 1909, the Committee has taken into consideration the copy of a letter addressed by the Society of Members to the Home Secretary and sent by him to Mr. Wilde for the observations of the College in reply. The Society asked the Home Secretary not to sanction the by-law relating to the admission of women to the College diplomas on the grounds:

1. That it is not necessary.
2. That it places women in an inferior position under an Act not adopted by any other qualifying body.
3. That paragraph 1 is in flat contradiction to paragraph 2.
4. That women will be invidiously treated under the scheme for a future London degree.
5. That the Council has throughout this matter acted directly in the face of the opinion expressed by the Fellows and Members of the College.

The following reply was forwarded by the Committee on the authority given it by the Council to the Secretary of State.

1. It is not customary and it is unnecessary for the College to apply for a Charter to effect changes which it has the power to effect by by-law. The power to admit women to examination for the diplomas of the College is given by the Medical Act, 1876, and the by-law has been made in accordance with the provisions of that Act.

2. The Medical Act of 1876 clearly contemplates a difference in the corporate standing of men and women admitted to medical qualifications, and the Royal College of Surgeons is entitled to give effect to this definite provision of the Legislature.

The property of the College is not vested in the existing Members, but in the body corporate. Members upon their admission pay a fee, in return for which they receive a diploma entitling them, in association with the licence of the Royal College of Physicians, to registration, and to other professional and collegiate privileges, but they pay no further fee or subscription.

If on petition being made at any future time by the College, the Crown should be advised to grant a Charter giving full corporate rights to women, the fact that the by-law now proposed existed would not place women in any worse position than that in which they are at present.

3. The Royal College of Surgeons is not comparable to a university with its numerous faculties, and there is no reason why it should follow the example of such bodies in framing its regulations. It may be pointed out that the course adopted by the Royal College of Surgeons is the same as that adopted by the Royal College of Physicians of London.

4. In the scheme for conjoint examinations by the Royal Colleges of Physicians and Surgeons and the University of London, it is contemplated that three qualifications should be granted, each of which would be held subject to the laws and regulations in force at the particular institution from which it was derived.

There is nothing anomalous or unprecedented in this arrangement, and indeed it is the position which actually prevails at the present time with regard to those who hold more than one degree or diploma.

5. The quotation in paragraph 5 of the letter from the "Society of Members," with regard to Clause 1 of the proposed By-law XXVI, by omitting the important words, "subject to the provisions therein and hereinafter contained," endeavours to show that the By-law is contradictory in its terms, but these words prevent this being the case.

6. The result of the Poll taken by the Council is set forth in the accompanying document. It will be seen that more than one-third of the Members to whom circulars were sent failed to express any opinion. As regards the supplementary poll mentioned, the Council has no information regarding the number and nature of the replies received, nor, so far as it is aware, have these particulars been published.

The foregoing was adopted by the Council.

Report of the Committee on Anaesthetics.

The Committee recommended that the following be added to the regulations for the licence in Dental Surgery:

6. Of having attended at a recognized dental hospital and school

(b) A course of practical instruction in the administration of such anaesthetics as are in common use in Dental Surgery.

The Committee further recommended that a certificate of such attendance be required of all candidates for the licence in Dental Surgery of the College who enter at a recognized dental hospital or school on or after October 1st next.

This was adopted by the Council.

Examiner in Dental Surgery.

Mr. Haslam was appointed a member of the Board of Examiners in Dental Surgery in the vacancy occasioned by the retirement of Mr. A. Pearce Gould.

Examiners for the Membership and Fellowship, and the Diploma in Public Health for the Ensuing Year.

The following appointments were made:

Elementary Biology.—James P. Hill, Thomas William Shore
Anatomy.—Wm. Hy. Clayton Greene, Arthur Robinson, William Wright.

Physiology.—Ernest Henry Starling, Benjamin Moore.

For the Fellowship:

Anatomy.—Charles Herbert Fagge, Frederick Gwynne Parsons, James Sherren, Arthur Thomson.

Physiology.—George Alfred Buckmaster, E. W. Vace Carlier, Charles Frederick Myers-Ward, William Henry Thompson.

Medicine.—Hugh James Moore Playfair, William Rivers Pollock, James Henry Targatz, Walter William Hunt.

Diploma in Public Health.—Part I, Harold Robert Dacre Spitta.

Part II, Richard Deane Sweeting.

University of Bristol.

Mr. R. J. Godlee was appointed the Representative of the College on the Court of the University of Bristol.

Arts and Gale Lectures.

The Arts and Gale Lectures, which were to have been given in June by Dr. G. Elliot Smith, have been unavoidably postponed until the winter.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

An extraordinary comitia was held at the college on Wednesday, June 16th, the President, Sir R. Douglas Powell, in the chair.

Lectures.

The following appointments were announced for the year 1910: Gulstonian Lecturer, Dr. Joseph Shaw Bolton; Lumenian Lecturer, Professor Osler; Oliver-Sharpey Lecturer, Dr. Mott; FitzPatrick Lecturer, Professor Sir Clifford Allbutt; Horace Dobell Lecturer, Dr. Wm. Bullock; Croonian Lecturer, Dr. F. W. Andrews, vice Dr. Arthur Gamgee, deceased. Dr. Henry Head was appointed Croonian Lecturer for the year 1911.

Darwin Anniversary.

The College Seal was affixed to an address to the University of Cambridge on the Darwin Anniversary.

Communications.

The following communications were received:

1. From the Secretary of the College of Surgeons, reporting proceedings of their Council on June 10th.

2. From the Rev. John G. Geare, of Farnham Rectory, Bishop's Stortford, asking leave to have a photograph taken of the portrait of Dr. Richard Hale (1670-1728) in possession of the College. Permission was granted subject to the usual restrictions.

University of Bristol.

On the nomination of the President, Sir William Church was appointed the Representative of the College on the Court of Governors of the new University of Bristol.

Report.

A report was received from the Representative of the College on the General Medical Council, Dr. Norman Moore, on the proceedings of the Council at their May session.

THE CONJOINT BOARD IN ENGLAND.

Syllabus of Examination for D.P.H.

The secretary of the Conjoint Board of the Royal Colleges of Physicians and Surgeons in England gives notice that on and after January 1st, 1910, a new syllabus for Parts I and II of the examination for the Diploma in Public Health will be adopted. Copies can be obtained on application to the secretary at the Examination Hall, Victoria Embankment.

The Services.

TERRITORIAL FORCE.

AMBUCLANCE COMPETITION IN LONDON.

The competition for the Hamilton Challenge Bowl took place on Monday at the head quarters of the 5th London Rifles, Finsbury Row, City, and was won by a squad of six men, under Lance-Corporal A. Gray, drawn from the 1st City of London Field Ambulance, R.A.M.C.T.F. The subjects included first-aid and stretcher drill, and the competition was open to all the medical units of the 1st and 2nd London Divisions Territorial Force, and to all regimental stretcher bearers and cadet corps. The examiners were Surgeon-Colonel W. Colver James, M.D., F.R.C.S., Honourable Artillery Company, and Major A. Ducat, M.B., Royal Artillery Corps T.F.

The Challenge Bowl was presented by the late Surgeon-General J. B. Hamilton, M.D., A.M.S., and has been keenly competed for by N.C.O.'s and men of the Volunteer Force for many years. Colonel P. B. Giles, F.R.C.S., A.M.O., 1st London Division, in announcing the result, stated that the Challenge Bowl would be held for twelve months by the Officer Commanding 1st City of London Field Ambulance, and that the conditions of the competition would be changed from time to time.

Medico-Legal.

PRACTICE BY UNQUALIFIED DENTISTS.

A DECISION of considerable importance to those whose duty it is to suppress the practice of dentistry by unqualified persons has been recently pronounced by the Court of Appeal. The facts of the case as stated were that certain persons entered into partnership to carry on the business of "the extraction and adaptation of teeth." It was a term of the articles that if any member of the firm should take any title, or do anything which should contravene the Dentists Act, 1878, the other partners should be at liberty to terminate the partnership.

Section 3 of that Act provides that a person shall not be entitled to take the name or title of "dentist" (either alone or in combination with any other word or words), or of "dental practitioner," or any name, title, addition, or description implying that he is registered or that he is a person specially qualified to practise dentistry unless he is registered. Two members of the firm fixed upon the partnership premises the following notice: "Bellerby, Heyworth, and Bowen. Finest artificial teeth. Painless

extraction. Advice free. Mr. Heyworth attends here." This was alleged to be a breach of the partnership articles, and good ground for dissolution. Acting on the decision of the King's Bench Division in the case of *Barnes v. Brown*, which was pronounced on October 14th, 1908, Mr. Justice Parker dissolved the partnership. The defendants appealed on the ground that *Barnes v. Brown* was wrongly decided:

That was a case in which the appellant carried on a dentist's practice at premises on the inner door and window of which he exhibited his name and a notice as follows: "H. J. Barnes. Finest Artificial Teeth at Moderate Prices. Extractions. Advice Free. Hours 10-7. English and American Teeth. Advice Free. Painless Extractions." He was convicted of having taken and used a description implying that he was specially qualified to practise dentistry. It was held that there was evidence upon which he could be convicted of an offence under Section 3 of the Act.

After a protracted argument, the Court of Appeal dissented from the view taken by the King's Bench Judges in *Barnes v. Brown*, and reversed the decision of Mr. Justice Parker. In effect this is a pronouncement by the Court of Appeal that the use of such a notice is lawful. The Master of the Rolls said: "As I read the section, it is directed to the personal description of the man as distinguished from the work he does. I cannot find any personal description which brings the present case within the Act."

It is to be observed that the meaning of the words "specially qualified" was not considered by the Court of Appeal, inasmuch as it was not necessary for the purposes of the decision; and it is important to notice that the Lord Chief Justice, in giving judgement in *Barnes v. Brown*, said it was a question of fact for the magistrate to decide whether the defendant had held himself out as specially qualified. Mr. Plowden was of opinion that where a man announces "painless extractions" he professes the highest degree of skill.

Having regard to the object of this legislation, namely, the protection of the public, the decision of this question of fact should always be left to the magistrate. He hears the evidence, and he is surely the best person to decide whether the public are likely to be induced to believe that the irregular practitioner is specially qualified. A case recently at a Dublin police court may be cited in this connexion. The Irish Branch of the British Dental Association took out two summonses against Mr. J. Byrne for unlawfully using the following descriptions:

Consult Mr. Byrne, The worlds expert adapter of teeth; he renders you original advice on the treatment, acquired through his vast experience of 25 years abroad; decayed teeth infallibly treated by Natures' own remedy; shattered health restored; all parties delighted; consultations free; hours 9 till 6. Metropolitan address. 36 Talbot St. N.B.—Letter appointments specially attended to.

The defendant had also issued this notice:

Are you wanting artificial teeth, or a misfitting case remade? Then come in and I guarantee my work for life. Installments taken. Fillings with gold or any of the fifteen amalgams, all one fee, 2s. 6d. Extractions (by my secret method without gas, cocaine, or other drugs) one fee only 1s. Mr. Byrne, 36 Talbot St.

A witness said that he called at the defendant's premises and made an appointment with him. The defendant examined his mouth, and mentioned the fee that would be charged. Upon the authorities cited to him the magistrate convicted the defendant, and fined him £5 for each offence, and gave £3s. costs. The report of the proceedings which appeared in the *Irish Times* did not mention the case of *Barnes v. Brown*, but it was probably relied on to support the conviction. If the effect of the decision of the Court of Appeal is to legalize advertisements of this kind, it would seem that the whole object of S. 3 of the Dentists Act has been largely frustrated.

In spite of the reverse which the British Dental Association has suffered by the case of *Barnes v. Brown* being overruled—if it has been overruled—it is to be congratulated upon the suppression of one form of unqualified practice—namely, practice by a limited company. In *Jaffe's* case, which was heard by an Irish Court in 1904, it was decided that a company not being a "person" could not be convicted of an offence under S. 3 of the Dentists Act. Relying on this decision a company named "Myddletons, Limited," attempted to practise dentistry, but in 1907 the Irish Court of Appeal granted an injunction restraining the company and its directors from adopting such titles as would lead persons to believe that qualified dentists were being employed. Commenting on *Jaffe's* case in *Attorney-General v. Myddletons, Limited*, Mr. Justice Barton said:

I am disposed to think that the defendant's counsel have endeavoured to found on *Jaffe's* case a larger claim of privilege for companies than the decision in that case will support. The claim for limited companies, as a result of that case, an unrestricted right to use the word "dentist" or its synonyms in any and every shape, and in any and every context. That case decided that the word "person" in Section 3 of the Dentists Act, 1878, does not include artificial person; and that

the section hits individuals, but does not hit limited companies. But a company, although it may be exempted from the penalties imposed by that section, is not, in my opinion, thereby privileged to make false representations, which are calculated to mislead the public as to the qualifications of the individuals whom it comprises or employs. I think that the official documents and advertisements to which I have referred contain representations of that kind. There may be other advertisements or announcements of the same kind. Each might have to be considered on its own merits.

Company practice has also been restrained in England. Thus, in a case decided by a judge of the English Chancery Division in January of this year, an action was brought, at the instance of the British Dental Association, against a company named "George C. Smith (Ltd.)," and against George C. Smith, the sole director, for alleged breaches of the Dentists Act. It appeared that the company had been formed to carry on the business of Smith, who had been on the *Register*, but was struck off in May, 1906. Since that date several convictions had been secured against him. The company was alleged to be unlawfully carrying on the practice or business of dentists at several places in the metropolis and elsewhere. As a result of the case, which was not defended, an injunction was granted perpetually restraining the company "from representing" that they are carrying on, or intend to carry on, the profession or business of a dentist or surgeon dentist as successors to George C. Smith, surgeon dentist, or that they are dentists or dental practitioners, or by any name, title, addition, or description, or any title, addition to a name, designation, or description, whether expressed in words or letters, or partly in one way or partly in another, implying that they are registered under the Dentists Act, 1878, or are persons specially qualified to practise dentistry.

As was pointed out by Sir Donald MacAlister in his presidential address to the General Medical Council, these decisions not only prevent practice by companies, but they practically impose upon companies the same disabilities as are now imposed on individual persons.

DOAN'S PILLS.

AT an inquest in Lowestoft on June 3rd evidence was given to the effect that the deceased, a man aged 39, had refused to seek medical advice during a long illness because he was relying on a secret nostrum. A medical man usually called in found him in a dying condition with marked dropsy and gangrene of the feet and scrotum. Death, he said, was due to renal disease aggravated by the excessive use of the pills and the want of proper medical treatment. The jury returned a verdict in accordance with this testimony. The pills in question were, we are informed, Doan's backache and kidney pills, though this is not mentioned in the report of the case in the local newspaper. In an article published in the *British Medical Journal* for December 8th, 1906, the probable composition of twenty such pills was shown to be: Juniper oil, 1 drop; henlock pitch, 10 grains; potassium nitrate, 5 grains; powdered fenugreek, 17 grains; wheat flour, 4 grains; maize starch, 2 grains.

A PROSECUTION UNDER THE MIDWIVES ACT.

A CASE of considerable interest to medical men was heard recently at the Eccles Borough Police Court on Monday, May 10th. Under the Midwives Act of 1902, Sarah Ann Marsh was summoned for procuring admission to the Midwives' Roll for Lancashire by a false and fraudulent certificate, and Dr. G. Sidley, Vice-Chairman of the Eccles Health Committee and a member of the Education Committee, was summoned for aiding and abetting. Mr. Lewis, of the Office of the Director of Public Prosecutions, conducted the prosecution, and Mr. F. Ogden, instructed by the Medical Defence Union, defended Dr. Sidley. It was stated in evidence that Mrs. Marsh, having been in bona-fide practice as a midwife since 1899, applied within two years of the passing of the Midwives Act to be placed on the roll of Lancashire midwives. For that purpose she called on Dr. Sidley, who at her request signed a certificate to the effect that she was "sober, trustworthy, and of good moral character." The certificate was sent to the Central Midwives Board, and Mr. G. W. Duncan, Secretary of the board, who gave evidence, said that in consequence of the certificate she was admitted to the roll of midwives on April, 1905. She practised as a midwife until February, 1909, when she was convicted at Eccles of being drunk and incapable, and was fined 5s. and costs. This was reported to the Central Midwives Board, and inquiries were then made as to her previous history. It was then found that previous to her obtaining the certificate from Dr. Sidley, on the strength of which she was admitted to the roll, she had been convicted eight times of being drunk and disorderly, and after that date she was again convicted four times on similar occasions sent to prison for a week and a month respectively. In March last her name was erased from the Midwives' Roll, and Mr. Duncan brought the case to the notice of the Director of Public Prosecutions, who thereupon instituted the present actions against Mrs. Marsh and Dr. Sidley.

For Dr. Sidley it was pleaded that he had first known Mrs. Marsh as a night nurse at the Eccles and Patricroft Hospital at which he was honorary surgeon; he had also frequently met her at Patricroft in her capacity as nurse, and had always found

her trustworthy. He had not the least idea when he signed the certificate that she had ever been convicted of drunkenness, and what he did could not be said to be false or fraudulent. Neither had he acted recklessly, as in signing the certificate he spoke not from mere hearsay but entirely depended on his own personal knowledge of Mrs. Marsh. To give a false certificate wilfully would be a misdemeanour under the Act, and no one would believe for one moment that Dr. Sidley had been guilty of issuing a false certificate merely to enable a woman to earn her living as a midwife. After a short absence from court, the magistrates were unanimously of opinion that there was not even a *prima facie* case against Dr. Sidley, and the case against him was dismissed. Mrs. Marsh, however, was committed for trial at the Quarter Sessions.

The case came up again at the Salford Sessions on Monday, May 24th, when Mrs. Marsh was brought up on the charge above stated. Mr. Gordon Hewart appeared on behalf of the Public Prosecutor. Similar evidence was given to that previously given before the Eccles Magistrates. Mr. G. W. Duncan, Secretary of the Central Midwives Board, said that the prisoner having been convicted several times of drunkenness, was unfit to hold a certificate as a midwife. There was, however, no evidence that she had ever neglected a case or attended one while under the influence of drink. Dr. Sidley gave evidence to the effect that when he signed the certificate he did not know that she had been convicted of drunkenness, or he would certainly not have signed any certificate. For the defence it was pleaded that the words "sober, trustworthy, and of good moral character" were only intended to apply in her capacity as a midwife, and the fact that she occasionally got drunk when not attending a case did not affect the question, as there was no suggestion that she had ever endangered the life of any woman or child whom she had charge of. The jury found that the prisoner was guilty, but that she had acted in ignorance, not realizing the full purport of the letter she took to the doctor, and so they recommended her to mercy. The Chairman said that, as she had already lost her livelihood by this offence, that was some punishment, and he bound her over in her own recognizances of £5 to come up for judgement when called upon; he trusted the case would act as a warning to others.

CONDITIONS OF SALE OF PRACTICE.

Ctesiphore writes that A. sold a dispensing practice with the usual restrictions, but an asset in the practice was the sale of what is called a "specialty." The said specialty consisting of a particular form of tonic. One of his old patients who had been taking this preparation went to A. at his new home and procured a supply of it, but A. told the patient that in future his successor would supply it to him. "Ctesiphore" wishes to know whether this was legal?

*A. should refuse to see any of his old patients, but so far as the legality of his action is concerned all would depend upon the terms of the contract of sale. We notice that the complainant is not the person who purchased the practice from A., but his successor, and it is doubtful whether any agreement between A. and B. would be held to be equally binding between A. and C. We should not have thought that the sale of what purports to be a secret remedy would have formed a part of the practice of a registered medical practitioner.

MEDICAL WITNESSES' FEES.

T. R. A. has been subpoenaed to give evidence at a county court on behalf of an insurance company in an arbitration under the Workmen's Compensation Act. He wishes to know what fee he is entitled to charge the company, and whether he can demand his fee before entering the witness box.

*A. Before being sworn, he is entitled to ask that his legal fees shall be guaranteed by the party issuing the subpoena, but these fees are only from ten to twenty shillings a day, and mileage of sixpence a mile one way.

CERTIFICATES FOR INSURANCE COMPANIES.

H. H. S. writes that he has on several occasions been asked for duplicate death certificates for insurance offices in which the deceased held policies, but the offices have declined to take any death certificate save that issued by the registrar. He wishes to know if this is the law.

*A. The insurance offices are fulfilling a statutory obligation. It is illegal for them to pay any policy without the production of a copy of the registration of the death, which can only be furnished by the registrar. Some insurance companies require a special certificate from the medical attendant on the deceased, in addition to the registrar's certificate. A medical practitioner is perfectly justified in charging a fee for this.

THE PHARMACY ACTS.

BARNBY.—Medical practitioners, by Section 1 of the Pharmacy Act Amendment Act, 1899, are exempted from all the restrictions in the first fifteen sections of the Pharmacy Act, 1868. We may refer our correspondent to a decision on the use of the word "pharmacy" as the description of a place where business is carried on by a person who is not registered under

the Pharmacy Act, 1852, given by Judge Shand in the St. Helens County Court on March 31st. In giving judgement for the Pharmaceutical Society, Judge Shand said, "The use of the word is a sign implying that the person carrying on business in that place is one registered under the Act, or a person duly qualified to dispense medicines, as required by the Act." Leave was granted to the defendant to appeal against this finding. So there the matter rests at present until the appeal is disposed of.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

GRATIS ATTENDANCE ON MEDICAL PRACTITIONERS. ANTIGRABER can, of course, if he chooses, write to the practitioner and tender the amount which he thinks fair.

A DOCTOR'S CERTIFICATE.

W. A. S. R.—In reply to our correspondent, we would say that a fee of £1 is. would not have been too much, having regard to the fact that a visit was required and the important nature of the certificate. Our correspondent was expected to make a most careful examination, and to take detailed notes of the case, having in view the possibility of his being called upon to give testimony in a court on oath.

SUPERSESSION.

E. F. L. DE J.—(1) The patient was justified in going to Dr. B. (2) Dr. B. was justified in attending. (3) Dr. B. should have offered to retire in favour of Dr. A., but if the patient insists and refuses to allow Dr. A. to attend, Dr. B. may continue to treat the case to the end, but he should avoid taking over the patient if possible. Dr. A.'s arrangements for night calls seem to be faulty.

THE ACCIDENTS OF PRACTICE.

A DENTIST writes to say that in the course of extraction part of a root was broken off. It was deemed advisable to do nothing more at the time, but the patient was advised to come back if it gave any trouble. Six weeks later he heard that the patient was under the care of a medical practitioner. He called to see her, when it was found that there was an acute alveolar abscess, which was subsequently opened. Something seems to have been said about the possible risk of necrosis, and even of blood poisoning; and our correspondent complains that exaggerated reports are being circulated by the woman to the prejudice of the dentist, who is blamed. He asks what he is to do.

*A. We should strongly advise him to do nothing. This is the sort of accident that must happen from time to time in surgical or dental practice. If any really slanderous statements are made the dentist has a legal remedy, but he will probably best consult his own interests by allowing the matter to blow over, as no doubt it will very soon.

Public Health

AND

POOR LAW MEDICAL SERVICES.

THE EDINBURGH SMALL-POX HOSPITAL.

A SUBCOMMITTEE of the Public Health Committee of Edinburgh Town Council met on June 14th, with members of the Local Government Board, with reference to a suggestion by the latter body that the wooden erection used as a small-pox hospital within the grounds of Colinton Mains Hospital should be removed further from the main blocks of buildings. The officials of the Board urged that the hospital should be situated at as great a distance as possible from dwelling houses and buildings occupied by other patients; but the representatives of the city were not inclined to incur any fresh expenditure at the present time. After an exchange of views the matter was left as it stands at present.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

CITY OF COVENTRY.—The report for the year 1908 of the City of Coventry, by Dr. E. H. Snell, the Medical Officer of Health, contains the following principal features. Estimate population at the middle of the year, 91,000; birth-rate, 28.9; average for previous 10 years, 29.1; marriage rate, 17.0; average for previous 10 years, 17.2; death-rate, 13.3; average for previous 10 years, 15.5; infantile death-rate, 93 per 1,000 births; average for previous 10 years, 135; zymotic death-rate, 0.94; average for previous 10 years, 1.9; respiratory death-rate, excluding phthisis, 2.12; phthisis death-rate, 1.31; death-rate from other forms of tuberculosis, 0.45. There were 238 cases of scarlet fever with

7 deaths, 7 of typhoid fever with 1 death, 108 of diphtheria with 8 deaths, and 2 cases of puerperal fever with 1 death. Twenty deaths were registered as due to whooping-cough, and there were 235 alleged cases notified from the schools. With regard to vaccination, there were 2,536 births, 192 died unvaccinated, 1,524 were vaccinated, 1,346 were unvaccinated, and there were 964 declarations made of conscientious objections, so that of the children who survived only 63.4 per cent. were vaccinated. Eighty-three deaths were attributed to cancer and other forms of malignant disease. The result of the examination of 1,992 school children is shown in the following table:

Defects and Diseases.	Total Number.	Per Cent.
Head verminous	531	26.6
Ringworm	5	0.25
Teeth slightly decayed	330	16.0
Teeth much decayed	896	44.9
Tonsils slightly enlarged	169	8.4
Tonsils much enlarged	85	4.2
Enlarged glands in neck	779	39.1
External eye disease	52	2.6
Squint	17	0.8
Defective eyesight	45	2.2
Defective hearing	80	4.0
Heart disease	5	0.25
Lung disease (non-tuberculous)	29	1.4
Tuberculosis	6	0.3
Rickets	5	0.25
Deformities	39	1.9
Other defects	12	0.6
Defective speech	18	0.9
Defective nutrition	83	4.1
Debility	150	7.5
No defect found	303	15.2

An examination was made of the sight of 1,688 children who during the year were admitted to the senior departments, and of these no less than 362, or 21.3 per cent., were found to have either defective or very defective sight. The parents in all of these cases were communicated with and advised to seek advice. With regard to the verminous heads, the proportions were: Infants, boys 11.4 per cent., girls 40.4 per cent.; senior, boys 1.27 per cent., girls 47 per cent.

A MINISTER OF HEALTH.

DR. JOHN HIGHER (M.O.H., Workington) writes: I am glad to see from a report of the opening of the Whitechapel Exhibition that Mr. John Burns, towards the conclusion of his address, made a pronouncement of far-reaching importance. "As Minister of Public Health, I wish the exhibition good luck!"

To myself personally this declaration on the part of a responsible minister identifying himself with public health matters and creating himself for the time being Minister of Health, is particularly gratifying, for it is now something like twenty years ago when, in an address I delivered on "State Obligations in Matters of Public Health," I advocated the creation of a State Department of Public Health with a Minister at its head to deal with all matters affecting the sanitary well-being of the people of this country.

Since that time things have moved but slowly in the direction I indicated. Now, however, public opinion seems to be fast awakening to the truth of Lord Beaconsfield's policy of sewage, "Sanitas, sanitatum; sanitas," and a democratic minister does not disdain to style himself a "Minister of Health." So far this is distinctly encouraging. Will Mr. Burns take his courage in both hands? Will he dissociate the department of which he has constituted himself "Minister" from that of the Local Government Board, and create a State Department of Public Health, the duty of which shall be to devote itself exclusively to public health affairs?

I will not here go into details of what ought to be included in the work of this service, but briefly state as my opinion that, beginning with the Notification of Births Act, it ought to follow the subject from the cradle to the grave, including administration of Factory Acts, compensation, and old age pensions; and, having done all this, will be kindly consent to obliterate himself by, so far as the Public Health State Department Service is concerned, committing hari-kari, and allow someone of eminence and repute in sanitary affairs to direct and govern the said service, and to be in something more than name a "Minister of Health."

Obituary.

D. M. BOURNEVILLE, M.D.,
PHYSICIAN TO THE BICÊTRE, PARIS.

On the last Sunday in May there passed away, in his 69th year, a notable figure among our Parisian colleagues, Bourneville, for many years physician to the children's department of the Bicêtre. A man of the people, sprung from a yeoman stock in Normandy, he studied medicine in Paris, under the special guidance of Delasiauve, to whose *Journal of Mental Medicine* he contributed his earliest papers on idiots and epileptics. He took as the subject of his graduation thesis in 1870, "A Study of Clinical Thermometry in Cerebral Haemorrhage and other Brain Maladies."

He early showed a literary bent, and in association with such men as Pascal, Claude Bernard and Charcot, assisted in the publication of many valuable works, notably of the admirable lectures by the last named on diseases of the nervous system. After the Franco-German war, during which he acted as an ambulance surgeon, he founded the *Progrès Medical*, a weekly journal, which he continued to edit till a year or two ago. In 1879 he became Physician to the Bicêtre, a post he retained till 1905, when he reached the age of compulsory retirement. His clinics in this hospital, and perhaps more especially his annual reports under the title of *Recherches Cliniques et Thérapeutiques sur l'Épilepsie, l'Hystérie et l'Idiotie*, published during a long series of years, with the aid of his clinical assistants, and containing a mine of pathological treasure, gave him a wide reputation, and he was the leading Continental authority on all that concerned mentally abnormal children. He devoted much attention to reorganizing, at the Bicêtre, the arrangements for the education and training of the latter class, which had fallen into abeyance since the days of Séguin, providing, moreover, systematic instruction in useful industries. He also founded at Vitry, near Paris, a private establishment for defective children of the upper social class, and of this, as also of the Fondation Vallée, he remained Medical Director till his death. In addition to an original work on the *Care, Treatment, and Education of Idiotic and Backward Children*, he published, under the title of *The Library of Special Education*, valuable reprints of the works of Séguin and other helpful treatises. Thanks to his persevering efforts, a trial of day schools for special instruction of defective children has at length been made in Paris.

Bourneville's activities were, however, not limited to matters strictly professional, and in 1876 he was induced to take up municipal politics, chiefly with the view of remedying hospital abuses, and after serving seven years on the Municipal Council he was returned in 1883 as a representative of a division of Paris to the Chamber of Deputies. His efforts were mainly directed to the laicization of the hospital services and to the establishment of systematic professional instruction of "infirmiers and infirmières," both in hospitals and asylums. He also brought about a reorganization of the "Services Speciaux d'Accouchements." His reforming zeal occasionally involved him in differences with professional confrères and exposed him to the abuse and misrepresentation of the clerical party, but to the end he adhered fearlessly and unwaveringly to what he considered the path of duty.

His funeral, which took place on June 2nd, was attended by a large assembly of the nurses, attendants, and other members of the staffs of the hospitals and asylums of Paris, for whom he had done so much, and was honoured by the presence of representatives of the Government, the President of the Municipal Council, and the Director of Public Assistance.

THE LATE MR. G. H. HAMES.—In the obituary on Mr. Hames, which appeared in the *JOURNAL* of June 12th, it was stated that he was house-surgeon to Sir William Savory. We have been informed that it was to the late Mr. G. W. Callender that he was house-surgeon. The date was July to October, 1875. Mr. Hames was appointed house-physician to Dr. Southey for one year on April 1st, 1876.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL. The offices of the British Medical Association and of the British Medical Journal are at 429, Strand, London.

Communications respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

ARSENIC IN HUMAN HAIR.

DR. STANLEY COLVER (Hullian) asks: What is the normal amount of arsenic found in human hair?

HOSPITAL WALLS AND FLOORS.

Savage (South Africa) asks for advice as to a durable and easily cleansed paint for walls of hospital wards; on what kind of plaster is such best applied; whether there are any other substitutes excepting glazed bricks and material of this kind; and what makes a good floor for an operating theatre.

STALE ASPARAGUS.

A. L. asks whether asparagus develops any deleterious properties if kept for a few days after being cut before it is cooked. Three gentlemen have suffered from vomiting and purging, commencing eight hours after the ingestion of asparagus, which had been cut three or four days before being boiled.

* We can find no record of asparagus producing the symptoms mentioned in any of a considerable number of authorities dealing with its use as food which have been consulted. Asparagus contains a high proportion of nitrogenous substances, of which more than half consist of various amides, and it would not be at all surprising if these underwent some change on keeping the cut vegetable whereby deleterious substances might be produced. The stem portion is said to contain ferments favourable to decomposition.

ANSWERS.

DESIGN FOR A SURGERY.

R., who has just finished building a surgery, writes, in reply to "T's" inquiry in the JOURNAL of June 5th, p. 1395: "My surgery is an annex to my dwelling house, and I only required three walls, the fourth being part of the gable of the house, through which a door was broken. My new surgery is 23 ft. long, 10 ft. wide, and 10 ft. high (outside measurements). The front is dressed stone to correspond with house, the sides and end of brick, 9 in. thick, and plastered with cement. The roof is wood, covered with thick felt and heavy corrugated iron. The estimate for that part of the work was £22 15s. Inside I have divided it into two rooms, one being 11 ft. by 9 ft. wide, and the other 9 ft. square. All inside is lined with dressed yellow pine, and has two coats of varnish. The smaller room I have fitted up as a dispensary, and it has a small counter, containing half a dozen drawers, and there is upwards of 60 ft. of shelves along the side wall. The front has a window and a door for patients, so that they need not come through my dwelling house. The cost of joiners' work, painting of doors, fitting up of electric bell, shelves, counter, etc., was £30, so that I had the whole building for a little less than £53.

LETTERS, NOTES, ETC.

LYNN THOMAS AND SKYRME FUND.

MR. WILLIAM SHEEN, M.B., F.R.C.S. (St. Andrew's Crescent, Cardiff) Honorary Secretary of this Fund, desires to acknowledge the following subscription:

Twenty-fifth List of Subscriptions.
D. C. Lloyd Owen, Birmingham... £1 1 0

SENILE GANGRENE.

DR. GEORGE MURRAY (Sunderland) writes: In June, 1908, I was called to see a man aged 70 suffering from gangrene in the great toe. It spread gradually up the limb until it reached the junction of the middle and upper third, where the line of demarcation formed. The soft parts sloughed in time until the bones were reached. About the middle of January, 1909, the patient sent for me, and, on examining the limb, to my surprise I found the gangrenous part of limb completely separated. The bones were eaten through. The hæmorrhage was very slight. The stump was nearly healed, except where the fibula and tibia protruded. Granulations slowly covered the ends of the bones, and now the stump has healed. The case is an interesting one, as it shows what can be done by leaving things to Nature. The limb was dressed antiseptically. Had he been operated upon, the shock would probably have killed him.

"HYPERTROPHIC OSTEO-ARTHRITIS OF HANDS WITHOUT VISCERAL OR CONSTITUTIONAL DISEASE."

DR. F. PARKES WEBER (London, W.) writes: May I point out that the title "Hypertrophic Osteo-arthritis" given to Mr. R. C. Worsley's interesting article in the BRITISH MEDICAL JOURNAL for June 12th (page 1411) is liable to give rise to some confusion in nomenclature? Mr. Worsley describes and illustrates a typical case of "giant growth" of portions of both hands, whereas the term "hypertrophic osteo-arthritis" is almost exclusively applied to the totally different condition known as pulmonary (or better, secondary) hypertrophic osteo-arthritis, described by Pierre Marie and others.

THE FINANCIAL PROSPECT OF MEDICINE.

DR. H. S. CHATE, M.B., B.Sc., D.P.H. (Twickenham), writes: The article under the above title is of great interest to the medical profession, especially to those who have recently qualified and are beginning to realize the prospects. But I would suggest that the ratio number of medical men to general population does not give a quite accurate idea of the amount of work for each medical man at the present time, as compared with the amount of work for each man twenty-eight years ago. For after all, it is not the number of possible patients, but rather the number of illnesses which determines the remuneration of the doctor. And there is no doubt that the amount of illness is much less than formerly, owing to improved sanitation and knowledge of hygiene. This applies more especially to infectious diseases, but also to some extent to general diseases. Dr. Newsholme, in his *Vital Statistics*, estimates, if I remember rightly, a decrease per annum of 50,000 cases of sickness since the passing of the Public Health Act, 1875.

Moreover, there are several factors at work at the present day to diminish sickness—for example, the inspection of school children, the Midwives Act, etc.

Hence it is practically certain that the increase of population has not brought with it corresponding increase of number of illnesses, and therefore the amount of work per medical man has decreased in much greater ratio than your figures represent.

* Our correspondent's point is the subject of the article, promise of which was made at page 1450 in the issue of the JOURNAL for June 12th.

ANAESTHETICS IN GENERAL PRACTICE.

DR. SYDNEY HAYNES (Birmingham) writes: While agreeing with Mr. Gardner, whose article on this subject appeared in the BRITISH MEDICAL JOURNAL of June 5th, p. 1353, on the advisability of keeping the air ways clear, I do not consider that it is always wise to retain even a weakly active corneal reflex, more especially in abdominal and other operations where any strain may prove injurious to the patient. Another point I may mention is that a too frequent testing of the corneae results in the loss of corneal sensibility, so that the anaesthetist who relies only on that test may fall into the error of considering the patient more deeply anaesthetized than he is. I agree with Mr. Gardner in his advocacy of the E_2C_2 mixture, which I believe to be safer as a routine anaesthetic than CHCl_3 , and am of opinion that all patients, whether children or not, should be lifted or moved as little as possible when anaesthetized.

SLEEP.

DR. H. G. H. NAYLOR (St. Kilda, Victoria) writes: As the subject of sleep has been under discussion in your columns lately, will you permit me to make a few remarks on this physiological condition? The idea of anaemia of the brain as a cause for the necessity for sleep is, in my opinion, not reasonable, otherwise cats and dogs must suffer with frequent attacks of brain anaemia daily. I think the inclination to sleep is to be accounted for by the retention of waste products from the absorption of unassimilated food, and from daily excitation, the stimulating the blood supply to the brain. One is often consulted by patients who want to sleep too long or not sufficiently long. Both conditions are relieved by a free clearing out of the mucinities, the bowels, and kidneys at the same time by a dose of about 2 grains or 3 grains of calomel, a drug which acts simultaneously on them both. I have often in my practice found a dose of calomel about three times a week enable the patient to sleep well and rid him of his inane woe and dreams, while at the same time he has been dieted.

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BRITISH MEDICAL ASSOCIATION.

SEVENTY-SEVENTH ANNUAL MEETING.

JULY 27th, 28th, 29th, and 30th, 1909.

Members of the British Medical Association who intend to visit BELFAST during the Annual Meeting will greatly facilitate the labours of the Local Committee if they will fill up the following form and forward it by post as addressed on the other side. This will eventually be sent to the Head Office, London, to issue the necessary certificate to enable members to obtain Railway Tickets at reduced fares.

MEMBERS DESIRING ACCOMMODATION ARE REFERRED TO NEXT PAGES.

The Forms are intended for the use of Members of the British Medical Association exclusively.

It is my intention to be present at the ANNUAL MEETING in BELFAST,

*and I expect to be accompanied by**

Name

Address

* Here indicate whether accompanied by a lady, as separate vouchers are required to enable Members to obtain Railway Tickets at reduced fares.

It is my intention to be present at the ANNUAL DINNER of the Association on Wednesday Evening, July 28th, and I herewith enclose Cheque (or P.O.O.).†

Signature

† DINNER TICKET without Wine, but inclusive of Aerated Waters, 15s.
Wine to be paid for as ordered.

Cheques and Postal Orders should be made payable to the Secretary of the Executive Committee, CECIL SHAW, Esq., M.D., and enclosed in an envelope, together with this form, directed as on the reverse. Early application for Tickets is requested by the Committee, to enable them to provide accommodation and allot seats.

[SEE NEXT PAGE

SEVENTY-SEVENTH ANNUAL MEETING, BELFAST, July 27th, 28th, 29th, and 30th, 1909.

LIST OF HOTELS WITH SCALE OF CHARGES.

	Single	Double	Bed, Breakfast and Attendance.	Distance from Queen's University Buildings.
GRAND CENTRAL HOTEL—				
Royal Avenue	50	50	7/6 to 12/-	8 min. tram.
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Royal Avenue	10	20	6/6	8
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Donegall Place	50	—	5/- to 7/6	8
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Donegall Street	25	—	4/6	10
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College Square East	20	—	4/- to 4/6	5
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SEVENTY-SEVENTH ANNUAL MEETING, BELFAST, July 27th, 28th, 29th, and 30th, 1909.

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Mrs. McKee, Ardara Villa, Rathmole, 142, Lisburn Road ...	2	5/-	...	Mrs. McKee, 114, Malone Avenue ...	1 two bedded 1 single	4/-	...
Mrs. E. A. Byars, 16, Cromwell Road, Botanic Avenue ...	1	2/6	...	Miss L. Reid, "Wilmington," Market Square Park ...	2	4/-	...
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[SEE NEXT PAGE]

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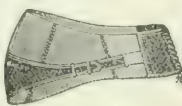
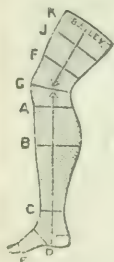
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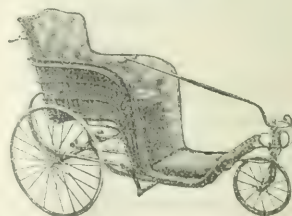
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Remarks

ON A

CASE OF PNEUMOCOCCUS INVASION
OF THE THROATUPON WHICH LARYNGEAL AND PULMONARY
TUBERCULOSIS SUPERVENED.

BY

SIR FELIX SEMON, K.C.V.O., M.D., F.R.C.P.,

PHYSICIAN-EXTRAORDINARY TO HIS MAJESTY THE KING.

IN November, 1908, I delivered at the Polyclinic a lecture on the question of pneumococcus invasion of the throat, which was later on published in the *Medical Magazine* for December, 1908. In this lecture I described two cases of a hitherto unrecorded affection of the throat due to pneumococcus invasion. The material being so small, it was of course impossible to establish a full and characteristic picture of this new form, and I contented myself, after describing in detail the course of the affection in the two cases I had observed, with saying that I had "seen two cases of a throat affection which were characterized by a course entirely different from any known to me in other diseases of that part, namely, by showing the most surprising fluctuations between intensely painful inflammatory conditions of the throat and improvements which appeared to render complete and speedy recovery almost a certainty, but which repeatedly gave way to absolutely unexpected aggravations, until finally—in the one case certainly spontaneously, in the other one during an iodide of potassium treatment—complete recovery took place."

I further stated that these cases were characterized by profound asthenia, by ulceration of the affected parts, by an almost entirely afebrile course, and by complete absence of swelling of the cervical lymphatic glands; that in the first case pneumococci were present almost in pure culture, whilst in the second case the culture consisted predominatingly of pneumococci, and that in both cases towards the end a punched-out loss of substance occurred, whilst by far the greater part of the ulcers healed without leaving any scarring behind.

So far as I know, no further instances of pneumococcus invasion of the throat have been recorded since. Having lately had the opportunity of observing a third case, which ended fatally, owing to tuberculosis supervening upon the original infection, I consider it my duty to place its details on record.

Mr. H. R., aged 45, a well-known and universally respected member of our profession, suffered from sore throat early in September of last year whilst in Scotland. He consulted Dr. P. McBride of Edinburgh on September 25th, who found nothing but an enlargement of the lingual tonsil.

I saw the patient, who was a great friend of mine, on October 27th. He then complained of unpleasant sensations in the throat, which were referred to the region of the lingual tonsil. He had not felt well in Scotland, he told me, and shortly before his return the symptoms had localized themselves in the region of the base of his tongue. The lingual tonsil was found to be distinctly swollen, and was treated with applications of a solution of iodine and iodide of potassium (Lugol's solution). After a few applications the swelling decreased, and the patient for a few days felt better.

On November 5th he returned, complaining of distinct pain in the left side of his throat. An irregular superficial small ulcer, surrounded by a small area of whitish discoloration, was seen in the lateral wall of the throat, just opposite the last molar, and in its neighbourhood a few small irregular spots of white infiltration, but without loss of substance, were visible. The ulcer was not bigger than a split pea. It was cauterized with a weak chromic acid solution, and, as this proved of no avail, with a solution of nitrate of silver (60 grains to the oz.). For a time these applications afforded relief; usually, however, within a few days after disappearance of the ulcer, it reappeared, sometimes with, sometimes without, a whitish infiltration

in its neighbourhood. No enlargement of cervical glands was ever present.

The course of the affection induced me to think of a pneumococcus infection, as in several respects it corresponded to my first case, and on telling the patient of my suspicion, he submitted a specimen of a scraping from the ulcer to the bacteriological institute of his own hospital, with the result that an almost pure pneumococcus culture was obtained. After this I informed him that the affection would probably last a considerable time, but that ultimately recovery might be hoped for with certainty, to conclude from the issue in my previous two cases. For nearly two months the patient, who was devoted to his work, continued, in spite of his affection, to attend his private duties. On meeting him one day over a bad septic case, I strongly warned him not to expose himself to infection whilst his throat was in an ulcerated condition, but could not prevail upon him to take care of himself in this respect.

During the first days of the month of December he told me that he had been occasionally a little feverish. On December 15th the pharyngeal ulcer had again almost disappeared, but there was distinct swelling of the mucous membrane over both arytenoid cartilages without subjective symptoms of any kind. On December 21st there was again no recurrence of pharyngeal ulceration, but the mucous membrane over both arytenoid cartilages was very much swollen, partly oedematous, and the epiglottis too had very suddenly become tumefied and oedematous, so that the aspect of the larynx was almost typical of laryngeal tuberculosis. The patient's voice had become husky, and there was slight difficulty in swallowing. His pulse was quiet and the temperature was normal, but I sent him to bed all the same, asked him to put a Leiter's tube round his neck, to suck ice, and to live on cold fluid food only.

When I went to see him on the 22nd at his house, I found him considerably relieved, the swelling of the arytenoids had considerably diminished, that of the epiglottis was unchanged. I was very doubtful whether I should consent to his going into the country, as he had wished, on account of the laryngeal oedema, and ultimately arranged that he should come and see me next morning before going away. When he called on the 23rd, another considerable change had taken place; the oedema of the epiglottis was materially reduced in size from what it had been on the previous day, although it had not quite disappeared, whilst the oedema over the arytenoid cartilages, and indeed over the whole posterior wall of the larynx, had again considerably increased. Although he said that he felt much better, I had great doubts about the wisdom of letting him go into the country in this condition, and sent him to Mr. Butlin for a second opinion. He returned and told me that Mr. Butlin had at first sight said he would certainly have considered the larynx tuberculous, but that he had never seen a tuberculous swelling of this kind originate so suddenly. All the same, he thought it would not be wise for the patient to go into the country whilst in this condition. Upon this joint expression of opinion the country visit was given up.

In the course of the next week matters remained very much *in statu quo*. The patient was kept indoors, and for the first two or three days wore a Leiter's tube with ice-water round his neck. As this proved ineffectual to reduce the laryngeal swelling, repeated applications of mustard plasters were made to the neck, with no better result. He occasionally suffered from very slight pain in the left side of his throat, where the pharyngeal ulceration had reappeared, and from slight difficulty in swallowing. The actual conditions varied from day to day. One day the epiglottis was more swollen, next day the swelling had diminished, and the arytenoids, which on the previous day had been less swollen, had meanwhile become more oedematous. On one occasion he had slight disturbance in breathing in the evening, but this passed so quickly away that he did not think it necessary to send for me. Meanwhile the patient, although he would not admit it, became visibly depressed. Neither internal administration of iron and quinine nor the use of a spray of adrenalin and cocaine had any effect upon the local conditions. I did not dare at that time to give iodide of potassium on account of the laryngeal oedema, which I was afraid might be increased by the use of that drug.

On December 30th the swelling of the epiglottis was very much diminished, that of the arytenoids quite unchanged; fresh ulceration had appeared in the pharynx, this time on both sides symmetrically; the ulcer on the left side had again above it quite a lot of seriginous white opacities in the mucous membrano. Although the effect of the injections of a pneumococcus vaccine had not been a success in my first case, I suggested that Dr. Bulloch, who was a friend of the patient's, might be asked to prepare some such vaccine, and to this the patient, who had been all along desirous of trying this treatment, at once agreed. The same night when this was decided upon and previous to any vaccine treatment he had a slight rigor, followed by a rise of temperature to 101°. At the same time his throat felt very uncomfortable. This, however, passed off quickly, and the following morning he was none the worse for the attack. The epiglottis was less swollen that day, the pharyngeal ulcers were healing, and the oedema over the arytenoids was unchanged.

On January 2nd the patient, who had been seen on the previous day by Mr. Bowlby, who was a friend of his, was distinctly better. He could swallow more easily, had hardly any pain, and had had a good night, although the temperature on the previous evening had again risen to 100°. Dr. Bulloch informed me on that day that the swab which had been taken from the patient's throat contained various micro-organisms, with great predominance of pneumococci; that he had injected a rabbit and four mice with the culture, and that he was about to prepare a vaccine from it. On that day the oedema had quite disappeared from the epiglottis, the swelling over the arytenoids was much diminished, and the grey discoloration in the pharynx had given way to more natural colour, whilst the ulceration in that part had quite disappeared on both sides. The patient was allowed to take some warm food, was given a tonic, and permitted to take a little outdoor exercise, weather permitting.

It ought to be mentioned here that during the time the patient was in bed I almost daily carefully examined his chest without detecting the slightest evidence of disease.

His improvement continued during the next few days, and it was decided in consultation with Mr. Bowlby to grant the patient's urgent request, and let him go to Shanklin to recruit his strength, where he was to be under the care of Mr. Cowper. Now that the oedema had completely disappeared from the larynx, I gave the patient iodide of potassium as a matter of conscience, although there never had been any history nor any symptoms of specific disease. I may say at once that the drug had no effect whatever.

The reports from Shanklin were only moderately satisfactory. On January 18th Mr. Cowper reported that there had been a considerable amount of oedema of the uvula, and that after this had diminished the tumefaction of the epiglottis had returned, whilst small ulcers were now visible in the mucous membrane over the arytenoid cartilages.

On January 24th an inoculation was made of 7,000,000 pneumococci vaccine prepared by Dr. Bulloch. The patient's temperature went up to 101°, and he had several profuse perspirations, but the temperature next morning was normal, and Mr. Cowper reported that the whitish infiltration in the pharynx appeared diminished. A day or two afterwards, however, the throat began to feel more sore than previously.

On February 1st, 1909, I saw the patient again after nearly a month's absence. He came back looking very ill indeed, white and emaciated, with a pulse of 106, whilst his temperature was slightly subnormal. He told me that shortly after the injection of pneumococcus vaccine, nine days previously, his throat had been troubling him a good deal. On January 26th some ulceration had again appeared in his pharynx. This got worse during the next three days, and again three days afterwards the nurse found, in addition to the old ulcers on both sides of the pharynx, an ulcer $\frac{1}{2}$ in. deep on the posterior wall of the pharynx. There had also been considerable difficulty in swallowing and a good deal of pain. Three days before I saw him he had begun to improve a little, and at the time of the consultation he felt a little better on the whole. He himself attributed the aggravation to the vaccine injection.

On examination there were various fresh spots of ulceration on both lateral walls of the pharynx in the old situations, and another one further back on the left posterior pillar of the fauces. Further, there was a rather large but superficial ulcer on the posterior wall of the pharynx in the middle line below the uvula. The epiglottis was, if anything, a little less swollen than it had been when I last had seen him, but the arytenoid cartilages were not only fully as much tumefied as they had been during the worst stage before he left town, but were additionally all over superficially ulcerated, whilst the ventricular bands were either covered with some ashy-grey deposit or were infiltrated. Spraying with a glycothymoline solution did not alter the aspect. The vocal cords were free, and the voice was almost normal. The aspect of the larynx, however, was so typically tuberculous now that I proposed, and obtained, an immediate consultation with Dr. F. de Havilland Hall (also an old friend of the patient). Dr. Hall entirely agreed as to the tuberculous appearance of the larynx, and on joint examination of the chest we found some slight dullness posteriorly on the right side, corresponding to the spine of the scapula. In the same locality expiration was somewhat harsh, without any adventitious sounds being heard. We were much afraid that tuberculous infection had supervened, although, in view of the comparative novelty of the subject, we could not definitely exclude the possibility that a pure pneumococcus invasion might closely simulate a tuberculous affection. We agreed that, first of all, his expectoration should be repeatedly examined for tubercle bacilli and pneumococci, and considered, in the event of our suspicions of tuberculosis being corroborated, that a stay at a sanatorium would give the patient the best chance.

The bacteriological examination was made at the Laboratories of Pathology and Public Health, with the following result:

Tubercle bacilli are present in the sputum in small numbers: one small clump was seen. In a film stained by Gram's method there is a variety of micro-organisms present, many of them probably being derived from the mouth. Pneumococci are present in moderate numbers, and some short chains of cocci were seen.

This result was confirmed by a subsequent examination: On February 4th I made the following note:

The ulcer on the left side of the pharynx is distinctly more developed, and the two spots of ulceration have become confluent. On the right side the ulcer has again disappeared. On the posterior wall of the pharynx only the last remnants of the ulcer are visible. The left arytenoid cartilage appears to be much less ulcerated than it was, whilst the right is unchanged. The ventricular bands are less infiltrated, the vocal cords still free. Altogether a most perplexing case, the more so as his swallowing is much better, and as he has gained flesh. He does not now experience any pain on swallowing, which is, of course, quite against one's usual experience with tuberculous ulceration of the pharynx. On the other hand, his temperature goes up quite regularly to something like between 99° and 100° in the evening. Dr. Bulloch has examined his sputum yesterday, and whilst finding large numbers of pneumococci, could not satisfy himself as to the presence of tubercle bacilli. He is going to repeat his examination.

On February 6th, 1909,

The patient came, accompanied by Dr. Bulloch, who told me that all the mice which he inoculated with what he had obtained from the patient's secretion had died from general pneumococcus infection of the blood. The fact that they did not die so quickly as usual under such circumstances is due, in his opinion, first to the fact that in order to isolate the pneumococci he had to make a culture on agar, which probably diminished its virulence, and secondly, that instead of injecting the culture into the peritoneum, he injected it merely subcutaneously; but there can be no doubt that the patient's affection, in part, at any rate, is of a virulent pneumococcus infection, as I had suspected from the first.

On the other hand, in a very large number of examinations made on two subsequent days only four tubercle bacilli altogether could be discovered by him (Dr. B.), his assistant, and a third bacteriologist, so that whilst their presence cannot be denied, it certainly looks very much as if a tuberculous infection had become engrafted upon the primary pneumococcus infection. We discussed what should be done under the circumstances. Every form of treatment—sanatorium, tuberculin injections, local treatment—seemed rather hazardous and experimental in view of the double infection, and I proposed that a consultation should be held between Drs. Kingston Fowler, de Havilland

Hall, Bulloch, and myself before a definite decision was arrived at. To this Dr. Bulloch and the patient agreed. It was further arranged that previous to this consultation fresh specimens of the pharyngeal and laryngeal ulcerations respectively should be examined by Dr. Bulloch. On this day the pharyngeal ulceration on the left side looked quite unchanged. On the right side there are again some fresh epithelial opacities of irregular form, the ulcer on the right side has almost healed, in the larynx the ulceration of the arytenoid cartilage is distinctly less, whilst the swelling remains the same. The patient has distinctly less pain in swallowing, the temperature is normal in the morning, and goes up to about 100° at night; no cough, no expectoration.

On February 9th a consultation took place between Drs. Kingston Fowler, Hall, Bulloch, and myself, in which, later on, also Mr. Bowly joined. At the beginning of the consultation we informed Dr. Fowler of the history of the case, and Dr. Bulloch reported the extremely remarkable result he had obtained from the scrapings of the patient's pharyngeal and laryngeal ulcers which I had effected two days previously. Whilst the pharyngeal specimens were simply teeming with pneumococci without any evidence of tuberculosis, the scrapings taken from the ulcerated spots on the arytenoid cartilage contained large clumps of tubercle bacilli, sometimes 20 to 30 in one clump, such as are usually found only in vomicae, together with very numerous pneumococci. It seemed, therefore, quite evident that tuberculous infection had supervened upon the original pneumococcus infection. The patient's temperatures according to the latest charts show the characteristics of tuberculosis, being about normal in the morning and between about 99° and 100° in the evening. On joint examination of the pharyngeal and laryngeal conditions they were found to be very much as described in the last note. Even now it was curious how little the patient complained of pain and difficulty in swallowing.

The condition of the right lung had rapidly deteriorated since Dr. Hall's and my own joint examination; occasional crepitations were now heard in the suprascapular region on the right side, whilst the dullness extended to the apex of the middle lobe, and here also harsh prolonged expiration and occasional rhonchi were heard.

On discussing the case, we were unanimous in considering the prognosis as very bad, and we were also all of opinion that neither tuberculin injections nor local treatment of the larynx should be undertaken, but that the patient should go as soon as possible with his wife—who was throughout the bravest of comrades and the most devoted of nurses—to a sanatorium, where he should lead the ordinary sanatorium life, plus complete vocal rest. The patient agreed, and went a few days afterwards to the Cotswold Sanatorium, where during the remainder of his life Dr. Etlinger attended him with the greatest care and friendliest interest.

Unfortunately, the course of the disease throughout his stay, which lasted until his death on April 28th, was on the downward grade. At first, according to Dr. Etlinger's reports, there was a temporary slight improvement, the difficulty in swallowing being much relieved by applications of anaesthesia in the form of a spray, dissolved in palm oil. Local applications of nitrate of silver solution to the pharynx did not improve the condition.

On March 10th Dr. Etlinger reported that there had been a good deal of extension of the pharyngeal ulceration, which he then began to treat with applications of lactic acid.

On March 18th I went to the sanatorium to see the patient, who ever since his arrival, about a month previously, had been in bed with a temperature which lately had been varying between 100° in the morning and 102° at night. At the same time, his general health had kept up remarkably well, and, although he now had considerable difficulty in swallowing, he had actually gained 1½ lb. during the last week. His complaints referred particularly to pain in swallowing and to the difficulty of removing the abundant, extremely tenacious secretion from his throat.

On examining the pharynx I found it looking distinctly worse than when I had last seen him. The superficial ulceration and infiltration had so much spread to the right side that there was no longer any difference between the two sides. The uvula and posterior part of the gingivae had also become affected. The ulceration had not increased in depth, and the appearances now are those of a superficial white ulceration and infiltra-

tion with serpigineous edges, occupying the greater part of the soft palate, part of the uvula, the hindermost part of the gums, and—what is quite a new feature—the region of the lingual tonsil, where originally the whole affection had started. The larynx, which is not so much swollen as when I last saw it, shows the same appearance as that just described in the pharynx. The whole affection certainly does not look like an ordinary tuberculous affection. The conditions in the chest are very much the same as they were on the occasion of the last examination. There are no moist rales to be heard anywhere, nor has the dullness extended.

In the presence of Dr. Rupert Collins of Cheltenham, the bacteriologist to the Eye, Ear, and Throat Hospital there, I scraped the larynx, lingual tonsil, and pharynx, the scrapings being immediately transferred to culture tubes.

Dr. Collins's report was as follows:

From cultures made on Loeffler's blood serum, staphylococci and a small growth of pneumococci were obtained from the back of the tongue, whilst cultures made on agar-agar only showed staphylococci. The scrapings from the pharynx and base of uvula showed staphylococci and abundant growth of streptococci, whilst the cultures on agar-agar revealed similar conditions. The laryngeal scrapings on Loeffler showed a larger growth of pneumococci than that discovered in the scrapings from the back of the tongue, together with staphylococci and a small growth of streptococci, whilst on agar-agar staphylococci only grew. No examination was made for tubercle bacilli.

A subsequent report from Dr. Collins, dated March 24th, runs as follows:

Posterior Part of Tongue.—Scattered single and one large clump of tubercle bacilli, some pneumococci, and a few staphylococci and streptococci.

Pharynx.—A few tubercle bacilli and a few pneumococci.

Epiglottis.—Numerous tubercle bacilli, singly and in small clumps, numerous pneumococci, some staphylococci.

Sputum.—Numerous tubercle bacilli, a few cocci, and short bacilli.

It was evident from this that, as one would naturally expect, the two affections, which at first concerned different parts of the throat, as shown with such remarkable clearness by the result of Dr. Bulloch's examination on February 8th, should have become blended later on, seeing the close vicinity and constant opportunities of mutual infection.

From this time onwards a rapid deterioration in the patient's general health took place. The emaciation made constant progress and the temperature increased, so that during the last three weeks of his life it varied between 100° in the morning and 104° in the evening. On April 1st he was seen by Dr. Woods, of Dublin, who in a letter to me described the condition as one of great rarity.

On April 13th Dr. Etlinger reported that the difficulty in swallowing had greatly increased, and that this was probably due to the fact that the epiglottis had practically been destroyed by the disease. The patient continued to struggle on bravely against the disease. Some injections of tuberculin had been made by Dr. Bulloch's advice, but his temperature had been rather higher after them, and they were discontinued.

On April 22nd the report was that the patient had been losing ground rather rapidly, and that any chance of recovery was quickly disappearing. A patch of congestion was now noted at the base of the left lung.

On April 25th I went again to the sanatorium and found the poor patient in a very sad condition. Already on the previous day Dr. Bulloch, who had been to the sanatorium two days previously and had taken a swab from the patient's throat, informed me that this contained an enormous quantity of pneumococci and some staphylococci, whilst he had not examined for tubercle bacilli. On the other hand, Mr. Bowly, who had been to the sanatorium on the previous day, informed me on the morning of my journey that he had been surprised at the enormous improvement in the pharynx, and partly so in the larynx, but that apparently infection had taken place at the bases of the lungs, and that the breathing was very bad.

On my seeing the patient on April 25th I was shocked at the amount of emaciation which had taken place since I last had seen him. During the last three weeks his temperature had regularly varied from 100° in the morning to 104° in the evening. He looked very grey, and his lips were cyanotic; the respirations were 30 to 36 a minute, and the pulse 150 to 160. He had to be frequently refreshed with oxygen whenever his breathing got laboured. On the other hand, the improvement which had taken

place in the pharynx was simply astounding, and even more marked than I had expected from Mr. Bowby's report; practically all the ulceration which has been described on previous occasions had disappeared without leaving any scar. Only on the posterior wall of the pharynx there was still slight patchy ulceration. The epiglottis had for the most part been destroyed by ulceration, and the left half of the larynx was nearly immobile, but the laryngeal mucous membrane, which had been also ulcerated, had healed without showing much evidence of scarring. The pain in the throat had entirely disappeared, and the tenacious secretion which had for a long time been such a trouble to him was also quite a thing of the past. He coughed rather frequently, but not excessively so, and brought up white unmulmated sputa, which were not fetid and showed no traces of blood. The voice was very weak—almost reduced to a whisper.

On examination of the lungs both were found to be extensively affected; rhonchi and crepitations were heard everywhere, but more particularly over the bases of both lungs, where fine crepitation predominated over other sounds, and where marked dullness was found on percussion. There was no evidence of a cavity in these parts. The mechanical difficulty in swallowing was still great. He has so far taken a fair amount of nourishment, but has several times had attacks of choking, and Dr. Etlinger suspected that particles of food might during these attacks have entered the lower air passages, and have set up infective pneumonia (*Speisepestnemonie*), which is now present at the bases. I recommended rectal feeding, in addition to the food by the mouth, quinine and old brandy to be added to the nutrient injections, and hot poultices round the bases of the lungs.

On April 25th Dr. Mitchell Bruce went down to the sanatorium, and considered the case almost hopeless, but not absolutely so. He found the infection of the left lower lobe to be "massive" at that time, and considered it therefore not tuberculous, but due to pneumococcus infection of the nature of bronchopneumonia with pleurisy. He did not, as stated above, absolutely despair of the case, basing this slender hope upon the fact that, as the pneumococcus infection of the pharynx and larynx had yielded, there was a remote chance of the pulmonary affection doing the same.

By way of treatment he suggested regular saline injections, with brandy, to continue with food by the mouth, strychnine, and at night a little morphine with it, and of course continuation of oxygen.

Unfortunately, this treatment proved of no avail; the patient gradually sank on April 28th, and died very quietly in his sleep during the following night. No post-mortem examination was obtained. [2122]

Thus ended one of the saddest cases I have ever seen, and what one of his relatives wrote to me—namely, that "it seemed so hard, after so brave a fight, that all should end thus, but that the patient certainly had left behind him a memory of patient fortitude and heroic bravery, which surely must have left its influence on others"—is absolutely true.

Remarks.

The reason for describing the above case in such full detail is that pneumococcus invasion of the throat, and, more still, a combination of that disease with tuberculosis, is practically unknown. As a matter of fact, the various distinguished members of the profession who kindly lent their help in the management of the sad case, one and all stated that they had never seen anything similar. It seemed, therefore, desirable to assist further observers, and to enable them to build up a clinical picture of the disease, by describing the features of the first instance observed of such a combination in full detail. That the characteristics of pneumococcus invasion were blurred in the present instance by the supervention of tuberculosis there can be no doubt. When first the tumefaction of the larynx above described came into being, I anxiously asked myself whether it was possible that pneumococcus invasion of the larynx should thus mimic tuberculosis of that part, and during the whole remainder of the course of the disease it was a perfectly open question how much of the appearances seen in the larynx were due to tuberculosis, and how much to pneumococcus infection. On the other hand, there could be no doubt that the pharyngeal affection from first to last was

predominantly, if not exclusively, due to the pneumococcus invasion only. A proof of this is given not merely by the repeated bacteriological examinations, but above all in the fact that in the last four weeks before death occurred, the pharyngeal ulceration, which had been so long and so extremely troublesome, practically disappeared without leaving any loss of substance, a fact which is quite incompatible with the idea that the pharyngeal ulceration, too, might have been tuberculous.

One of the most interesting features is Dr. Bulloch's report, according to which the scrapings from the pharynx at one time yielded an almost pure culture of pneumococci, those from the larynx an equally characteristic culture of tubercle bacilli. This fact, I think, shows conclusively the mixed character of the infection, and, taken in conjunction with the course of the illness, demonstrates the fact that the tuberculous infection supervened upon the primary infection. Very interesting, too, is the fact that, whilst the affection clinically began as enlargement of the lingual tonsil, which for a time subsided, at a later stage of the disease ulceration and sloughing in that region occurred, and that the scrapings from the ulcerated surface in this region showed the presence of pneumococci.

With regard to the complications, which supervened later on, it is difficult, if not impossible, to say which part was played by, and how much of them was due to, each of the infecting micro-organisms. The first signs clinically observed in the chest were quite characteristic of ordinary tuberculosis. The later phenomena left it quite undecided whether the progressive changes were due to tuberculosis only, or to the combination of that disease with pneumococcus infection, whilst the final phenomena might have been caused either by "foreign-body pneumonia" (*Speisepestnemonie*) or by a sudden increase of virulence of the pneumococcus infection alone. The latter possibility finds support in Dr. Mitchell Bruce's statements.

I do not attach exaggerated importance to the statements of the patient himself, who dated the aggravation in the condition of his throat from the inoculation with pneumococcus vaccine, which was made on January 24th, but I can say positively that in this case, as well as in the first described by me, and in which also a pneumococcus vaccine was used, no improvement at all resulted from the employment of this method. The only remedy, in fact, of the very many which were used in the long course of this case which proved of any value were the anaesthesia insufflations, which, although they did not entirely abolish the difficulty in swallowing, yet materially alleviated the pain experienced during the act of deglutition. The effect of the remedy was not diminished by its long use.

It must be hoped that further contributions will shed more light upon the occurrence, pathogenesis, clinical features, and treatment of the disease, which, although hitherto undescribed, cannot be exceedingly rare, as is shown by the fact that in the course of three years 3 cases came under the notice of one single observer.

Remarks

ON

ACUTE PNEUMOCOCCUS INFECTION OF THE PHARYNX.

By JOHN ELLIOTT, M.D., F.R.C.P.,
HONORARY PHYSICIAN, CHESTER GENERAL INFIRMARY.

THE first three months of the present year have been remarkable for the prevalence of pneumonia in Chester and the surrounding district. So striking a feature has this been in my own practice that I have been at pains to ascertain from other medical men practising in the neighbourhood whether their experience has coincided with my own in this respect, and the replies I have received convince me that such has been pretty generally the case.

With a view to gain something like an accurate estimate of the number of cases I have, with the kind permission of Dr. Thomas (Medical Officer of Health for the city), examined the returns of deaths from pneumonia in the city of Chester during the first three months of each of the years 1905, 1906, 1907, 1908, and 1909.

It will be evident that there are so many sources of fallacy in such an inquiry—the prevalence at one time of measles with secondary pneumonia or broncho-pneumonia; at another time of whooping-cough; again of influenza—that one was not surprised to find the results confusing, and tending but little to elucidate the question of the incidence of pneumonia primarily due to pneumococcal invasion. Again, the varying severity and death-rate of any particular epidemic would render the mere enumeration of the number of deaths anything but an accurate estimate of the number of cases of the affection.

The figures, such as they are, are appended:

Deaths Returned either as "Pneumonia" or "Lobar Pneumonia."

January 1st to March 31st, 1905	...	2 cases.
" " " " 1906	...	8 "
" " " " 1907	...	10 "
" " " " 1908	...	3 "
" " " " 1909	...	11 "

It occurred to me that more useful information could be gained by finding the number of cases of acute lobar pneumonia which had been treated in the wards of the Chester Infirmary during the first three months of the present year. The cases had all been under the observation of one medical man—the house physician, Dr. Stanley Wood, who had every opportunity of judging of their applicability to such an inquiry, and to whom I am indebted for the return.

There were 28 cases of lobar pneumonia treated in the adult wards, and 5 in children under 5 years of age during the period January 1st to March 31st, 1909. Bearing in mind the fact that the hospital contains only 118 beds, including medical, surgical, and ophthalmic, and that the average number of beds occupied is 102, I think this is a convincing proof that pneumonia has been unusually prevalent during the period in question.

About the end of January I saw several cases of pharyngitis with fever and considerable enlargement of the cervical glands, the latter being a prominent feature of the cases.

The submaxillary lymphatic glands, the deep cervical glands under the sternomastoid, and also the glands below the lobule of the ear were enlarged, forming a mass which, in the early stage, might well lead one to make a diagnosis of mumps (an experience which fell to my own lot in one of my cases). The glands on both sides of the neck were enlarged, but more extensively on one side. The accompanying fever was not unusually high, 102° to 103°. The onset was sudden; the whole of the back of the pharynx was red, inflamed and swollen. Sometimes the tonsils were considerably enlarged, with follicular concretions visible. The fever was of short duration—about forty-eight hours usually, with slight rise of temperature in the evening for several days longer.

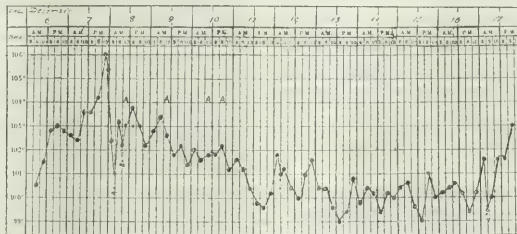
I was puzzled by the marked adenitis, which was quite unusual, and thought that probably influenza was at the bottom of the mischief. So far as my own experience went, however, the annual visitation of influenza had been delayed this year, and I had not then seen any cases of true influenza.

On January 25th my housemaid was taken ill with sore throat, with fever and glandular swelling. The attack after about a week culminated in a quinsy, which she had had several times before, and to which she was susceptible. Early in February another of the maids in my house was down with sore throat and adenitis, and then my four children were successively attacked. Meanwhile I awoke one morning myself to find my neck stiff and painful on one side with the glands under the sternomastoid swollen and tender. I had not been conscious of any sore throat. The soreness disappeared and the swelling subsided in the course of twenty-four hours, and then the same process

was repeated on the other side of my neck, to subside without further trouble in a day or so.

One of my children, a little girl aged 5, developed the affection severely. The whole of the pharynx was uniformly red and swollen, the glandular enlargement was well marked; the temperature 103°, with rapid pulse. The severity of the inflammation induced me to take a swab from the throat and inoculate an agar tube on February 24th. To my surprise I obtained a pure culture of the pneumococcus. The throat was painted frequently with a solution of mercury perchloride, 1 in 4,000; the inflammation began to subside with the fever, the glandular enlargement, however, continuing unchanged. In the course of a day or two the child had acute pain in the ear, with a fresh rise of temperature to 102°. An antiseptic dressing was applied to the ear to anticipate the abscess which was expected; it burst into the dressing; the pus was inoculated on an agar tube, and again a pure culture of pneumococcus was obtained. The same course of events followed in the other ear. The aural abscesses were treated with strict antiseptic precautions, and the discharge ceased in each case in about fourteen days. Hearing returned normally. The cervical glandular enlargement subsided slowly (as it had done in all the cases), and took a month or six weeks to disappear completely.

I took a swab from the throat of another of my children, aged 3, who was attacked by the pharyngitis, and found the pneumococcus in great preponderance, but mixed with a few staphylococci. In this case there was more marked affection of the tonsil, and no aural complications developed. In all other respects the case was similar. I exhibited Lumière coloured photomicrographs of the pneumococci, and also the growths on agar, at the meeting of the North Wales Branch of the British Medical Association at Colwyn Bay on April 20th. I saw other cases of the affection (13 in all) in which the main features described above were reproduced. Unfortunately, no cultivations were made, except in the 2 cases mentioned. There was no ulceration of the throat or



A. Injection of antistreptococcus serum 10 c.c., with the exception of 20 c.c. on December 9th.

membranous inflammation in any of them.

With regard to the origin of the affection I would sum up my conclusions as follows:

1. These cases were not influenzal in origin, for the usual visitation of influenza came later, and several of my cases afterwards developed influenza, which ran a typical course.

2. Although I could not trace exposure to infection from pneumonia in any of them, it was unusually prevalent at the time; indeed, my colleague and next-door neighbour, Dr. King, died of pneumonia on February 24th, at the very time when the cases described above were under investigation.

3. There can be no doubt that in the case of the two of my children from whom I took cultivations the infection was pneumococcal, and, taking into consideration the great similarity of the other cases, the remarkable glandular enlargement which was a feature of all of them, and the fact that the other cases in my own house were exposed to the same conditions as the two investigated, I think there can be little doubt that the pneumococcus was responsible for the trouble in all.

The following case, which I saw in December, 1908, with Dr. Storrs, of Overton (to whom I am indebted for some of the notes of the case), and Dr. Lloyd, of Chirk, must, I think, be classed as one of pneumococcal pharyngitis with general septicaemia.

F. H., aged 49, returned from a shooting box in Scotland in November, not feeling well; easily tired. December 1st, out shooting; felt ill, throat "rough." December 2nd, seen by Dr. Storrs; redness, covering the right tonsil; back of the pharynx swollen and red; temperature 101°; pulse rapid; temperature 102° at night. December 3rd, temperature 102°; inflammation spreading to left tonsil; whole pharynx in-

tensely inflamed and infiltrated; no membrane; not much glandular enlargement. December 4th, temperature 101.5; diphtheria suspected; 4,000 units antitoxin administered. December 5th, temperature still 101.5; 3,000 units given. December 6th, seen by Dr. Lloyd also; report on throat swab received, "No diphtheria"; urine nearly solid with albumen; pulse rapid and weak; temperature rose steadily. December 7th, temperature, at 10 p.m., 106; pulse 152.

December 8th. In the early morning a patch of pleurisy appeared on the right side. Seen by me midday with Drs. Scotts and Lloyd, the patient looked very ill, tongue dry and brown, slight herpetic eruption on the lips, uniform red glazed condition of the whole of the pharynx without either ulceration or membrane: at the right base a patch of dullness with bronchial breathing about 2 or 3 fingerbreadths in extent; no abnormal sounds of the heart; spleen not enlarged. We thought that in all probability it was a case of streptococcus infection from the throat. Ten c.c.m. of polyvalent anti-streptococcus serum were administered, and tubes of agar, galatine, blood serum, and bouillon (ten in number) were inoculated with blood taken from the median basilic vein at 7 p.m. On the morning of December 10th abundant growth of pneumococcus was found in all the tubes; meanwhile 20 c.c.m. of the serum had been injected on December 9th, and the patient's condition had improved materially: temperature and pulse falling, tongue becoming moister; taking well, sleeping quietly; 20 c.c.m. serum again on December 10th.

The daily administration of serum was continued with evidently good results. The albumen diminished in the urine until only a trace remained. The hypodermic administration of strychnine was pushed until twitching appeared. The temperature fell to 99° on the 15th, and we had great hopes of his recovery. The pulse, however, continued quick, and his exhausted heart began to fail on the 16th. Strophanthin and digitalin had been tried without success. He died on the 17th, with the usual premonitory rise of temperature, 105°. During the last few days of his life there was a hæmorrhagic punctiform rash on the thighs. The albuminuria increased again in the end. A sore on the shin from burn during a hot-air bath remained in an unhealthy condition covered with a greyish slough.

Although no cultivation was made from the throat, there seems to me every reason to conclude that the primary source of infection was in the pharynx, and that it was pneumococci. There was undoubtedly later a patch of bronchopneumonia at the right base, but it interfered in no way with the course of the case. There was neither cough nor expectoration at any time; the respirations were not quickened by it, and with the exception of the pleuritic pain which ushered in its onset its presence could only be ascertained by careful examination. It did not make its appearance until the main features of the case were well advanced.

The exact form which pneumococcal infection of the pharynx may take is still undetermined. Cornil described a case of abscess in the tonsil due to the pneumococcus; Jaccoud a case of pseudo-membranous pharyngitis of similar origin. Rendu and Bouloche¹ in 1891 recorded two cases of acute pharyngitis with sudden onset, accompanied by high fever of short duration, occurring in individuals who were exposed to pneumococcal infection, and slept in the same room. The pneumococcal origin of the infection was proved by inoculation of rabbits. In neither of these cases was there either ulceration or false membrane. In their main features they resemble the cases I have described above, but there was no great glandular enlargement.

In 1901 Monro² described a case of membranous pharyngitis which he considered to be of pneumococcal origin, as also have Bezanon and Griffin.³ The latter observers made use of the agglutination serum reaction to prove their case.

In the discussion which followed the paper by MM. Rendu and Bouloche (referred to above), Netter summed up the several types of pneumococcal angina as follows:

Suppurative) proved.
Pseudomembranous	
Follicular) doubtful.
Inflammatory	
Herpetic	

Recently (December, 1908) Sir Felix Simon⁴ described several cases of ulcerative pharyngitis with perforation of palate, and brought convincing evidence to show that they were pneumococcal in origin.

REFERENCES.

- ¹ Rendu et Bouloche, *Bull. et mém. soc. méd. d'hop. de Paris*, 1891, 35, 7, viii, 219-222. ² Bezanon et Griffin, *Presse méd.*, Paris, 1900, ii, 294. ³ Monro, *Glasgow Med. Journ.*, 1901, li, 214-217. ⁴ Simon, *Méd. Magazine*, December, 1908.

Observations

ON

THE THERAPEUTIC VALUE OF THE PNEUMOCOCCUS VACCINE IN THE TREATMENT OF PNEUMONIA

AND SOME OF ITS COMPLICATIONS.

BY A. BUTLER HARRIS, M.A., M.B. OXON.,

MEDICAL OFFICER OF HEALTH FOR THE LOUGHTON URBAN DISTRICT.

THE pneumococcus is, perhaps, next to the *coli* bacillus and the staphylococcus, the most constant parasite of the human race. Mackenzie¹ quotes statistics from various authorities, who state that 50 per cent. and upwards of normal individuals harbour this organism. "Hiss says it is more than probable that every individual acts as a host to organisms of true pneumococcus type at some time or other during the winter months, and probably at repeated intervals. The organisms leave the body with the saliva or sputum, and in either moist or dried sputum may remain virulent for a considerable time."²

That the pneumococcus of Fraenkel is the cause of pneumonia has been established since 1889;³ indeed previously, in the year 1886, he showed that a rabbit which had recovered from an attack of pneumonia was subsequently immune to a lethal dose of the organism.⁴ It is, therefore, unnecessary to burden the reader with what is now ancient history.

It may be taken as proved that practically every case of acute pneumonia is a case of pneumococcal septicaemia—that is to say, the infecting organism is not confined to local areas, but may be recovered from the blood.⁵ The crisis in septicaemic conditions, whether it be that of pneumococcus or streptococcus, is determined by the amount of protective material the invaded host is able to elaborate in a given time. When this elaboration is at a sufficient rate to inhibit the reproduction of the infecting organism, it is probable that the clinical manifestation of a crisis will occur. In 1891 the Klemperer brothers explained that the crisis in humans occurs at the moment when the poisonous products manufactured by the bacteria located in the lungs are present in the circulation in amounts sufficient to call forth in the tissues the reactive change that results in the production of the antitoxic substance which has the power of rendering the poison inert. To this end they prepared an antiserum, which they used in 6 cases. There was in 4 a temporary improvement, and 2 cases got well.

The Klemperers apparently did not realize that they were dealing with a general infective condition, and failed because their experiment consisted merely in the neutralization of a certain quantity of toxin.

The decade 1890-1900 may be described as the era of serum therapeutics, when antisera were used in many infective processes, but only attained success in that of diphtheria, a local infection producing a general toxæmia. In this connexion the names of Washbourne, Eyre,⁶ Pane,⁷ Wilson, Marchaux, Tyler, and Parr should be mentioned. Bokenham, indeed, showed that antipneumococcal serum had no bactericidal effect upon living pneumococci.

In the course of these serum investigations animals were necessarily inoculated with attenuated cultures, increasing in later inoculations in virulence. Foa discovered that animals thus immunized against one strain of pneumococcus were not necessarily protected against others, and Washbourne and Eyre⁸ found that Pane's serum protected against four out of five varieties, but not against the fifth. Here, then, arose a second factor, which militated against successful immunization at the bedside.

Wright's work on staphylococcal and tuberculin inoculations from 1902 onwards introduced the present era of vaccine treatment. He himself in his earlier papers argued that inoculation was indefensible in acute infective conditions, because of the probabilities of auto-inoculations. This supposition, based on the results

¹ Rosenow found pneumococci in 160 out of 175 in 1905; Fraenkel, found pneumococci constantly in the blood; Prochaski found pneumococci in blood of 50 consecutive cases, 1901.

obtained in tuberculous infections, rendered it extremely improbable that bacterial inoculation would be of any value in combating septicaemic conditions; in fact, such a course would increase the disaster.

The analogy, however, between tuberculous infection and an acute septicaemic condition is, happily, not a true one. In the former disease, when fulminating, necrotic foci are continually liberating dead organisms into the tissues, there to act as a bacterial vaccine. In pneumonia the bacteria are of a different type; they have not anatomically the same chance of getting into contact with the tissues, but remain in the lung, and circulate in the blood, until their life-history is done and they are digested. It may be that the spontaneous crisis in pneumonia and acute erysipelas may be due to some such process gradually building itself up.

With some such conception in his mind Macdonald⁵ studied the opsonic index in 8 cases of pneumonia, and found it low during the disease until the crisis was reached, when it suddenly rose as high as 1.6. He laid the foundation of vaccine treatment in pneumonia by producing artificial crises in rabbits infected with the pneumococcus by inoculating them with a vaccine made from the infecting strain. He was able at will to produce an artificial crisis, and recovery if he inoculated the animal with a vaccine made from the same strain with which it had been infected. Control rabbits, not inoculated, died. This research carried out in the bacteriological department of the London Hospital does not appear to have been followed up in hospital treatment.

Preparation of the Autogenous Pneumococcal Vaccine.

It is desirable to prepare the vaccine from cultures of the patient's own pneumococcus. If this is impossible, a stock vaccine made from a particularly virulent strain may be used.

It usually happens that the more virulent the pneumococcus, the more readily does it grow *in vitro*. On several occasions sufficient culture has been obtained after twelve hours' incubation from which to make the vaccine. The statement, therefore, which has been frequently made, that it is impossible to grow enough pneumococci to make a vaccine from in so short a space of time that it may be available, is untrue and misleading.

Pure cultures from chronic infections are difficult, and sometimes impossible, to obtain on account of rapidly growing contaminations. In acute pneumonia, however, if the rusty sputum be washed in sterile saline, and penetrated with a hot wire, a pure culture of the pneumococcus is, more often than not, obtained.

Agar-agar slopes should be used which have previously been smeared with a thin film of blood drawn from the finger. The latter should be washed, dipped in ether, and flamed. The ether flaming should be repeated three times. A narrow tape is wound twice round the end joint, and the skin deeply pricked with a sterilized needle or glass point behind the nail. Squeezing the pulp pumps out sufficient blood, which is then sucked up with a sterile Wright's pipette and nipple, and so conveyed direct to the agar slope. Three drops are sufficient, and if these be mingled with the water of condensation in the tube, a sufficient film can be spread by gravitation over the surface of the slope. For safety, the tube should be incubated for twelve hours before inoculation. It rarely happens, however, if this simple technique is followed, that any contamination with a skin staphylococcus occurs.

It not infrequently happens that sputum is not available. It is usually possible in acute pneumonia to recover the pneumococcus from the blood, if sufficient blood be drawn. This is most simply effected by passing the sterilized needle, attached to a large 20 c.cm. syringe (the "record" is, perhaps, the most suitable), into the median basilic

vein, already distended by compression, and withdrawing 10 to 15 c.cm. of blood; 5 c.cm. of 2 per cent. citrate in normal saline, previously drawn into the syringe, will obviate clotting.

The blood may then be introduced into ten agar sloped tubes. Sufficient growth will be obtained from the surfaces to prepare a vaccine without subculture. Care must be taken in both the above methods to keep the tubes upright and not to reflow the slopes with the blood which has settled at the bottom of the tube, otherwise it will be impossible to obtain clean emulsions of the pneumococcus for standardization.

CASE I.⁶

At Christmas, 1905, a lad named A. had a typical left basal lobar pneumonia. His crisis was unsatisfactory, and during January, 1906, he ran a variable temperature, normal or nearly normal in the morning, rising at night to 101° and 102°. There was a small dull patch at his left base, but there was no pleurisy. He was losing ground and weight week by week. His index to tubercle bacilli was normal, and the sputum contained none of these micro-organisms. There were, however, quantities of pneumococci present, and to these his index was low. He was inoculated towards the end of January with a pneumococcal vaccine made from cultures obtained from a case of chronic pneumococcal infection involving the knee-joint. This vaccine, although helpful in the case from which it was derived, had no effect on A.

In February, his condition becoming more serious from continued fever and loss of weight, he was seen in consultation with Dr. H. P. Hawkins. He agreed that probably there was a small consolidated patch at the left base, and that there was no pleuritic effusion. I suggested inoculating the lad with a vaccine made from his own strain of pneumococcus. After some little delay this request was granted. Within thirty-six hours of his inoculation all the usual clinical phenomena of resolution by crisis occurred, and the lad made an uninterrupted recovery. His index before the inoculation was 0.7, and at the crisis shot up to 1.4, whence it gradually declined to normal six days later. It occurred to me that possibly the introduction of the vaccine was coincident with the rupture of a small abscess. The microscopic character of the expectoration, however, negatived this, and later no physical signs were present to support this supposition. At the present time, three years after, the lad is perfectly well and has been in good health since his convalescence.

It would appear that the small dose of vaccine—50 million—was the determining factor in starting the sudden process of self-immunization into action.

CASE II.⁷

On April 30th, 1906, I was asked by Dr. Brooke, of Chingford, to see a case of pneumonia.

The patient, D., aged about 47, was a big man. He was seen on the fifth day of the disease. There was slight consolidation at the left base, definite peritoneal infection, distension of the bowel, effusion into his left ankle-joint, and thrombosis of his left posterior tibial vein. He was in a state of acute delirium alternating with dull apathy. His sputum showed pneumococci which grew rapidly on blood agar. His index was 0.4. A vaccine was prepared, and he was inoculated with 10 million dead pneumococci on May 2nd in the afternoon. Within thirty-six hours his condition began to improve, his peritoneal, stomach, and intestinal conditions were better, and the effusion in his ankle began to subside. His temperature did not, however, drop much until a second inoculation of 30 million was given on May 4th. Observation of his opsonic index taken twenty-four hours after the first inoculation showed that it had risen to 1.2, but by the time the second was given it had fallen again to 0.6. After the second inoculation his temperature fell from 102° to 99° on the morning of May 5th, rising during the day to 102°. He was accordingly inoculated again with 50 million in the afternoon of May 5th. His temperature fell continuously during the night and the whole of May 7th, rising on the morning of May 8th to 101°. It will be noticed that here the temperature became for the first time inverted, no doubt on account of the wearing out of the immunization. On the afternoon of May 8th he was inoculated for the fourth time with 50 million. On May 11th, 12th, and 13th, his temperature was normal in the morning, rising to 100° at night. During this time his mental condition varied between stupor and acute mania, and, indeed, this condition continued until about May 20th.

The sole remaining focus of infection was apparently in the left posterior tibial vein. On May 14th a fifth inoculation of 50 million was given. On May 15th his temperature never rose

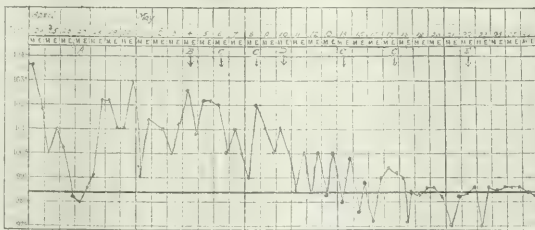


Chart 1, Case II.—A. Abortive crisis relating only to lung; B. 30 million; C. 50 million; D. 20 million; E. 50 million.

above 98.8°. On the morning of May 17th he was not so well again, and his temperature rose to 99.4°. A sixth inoculation of 50 million on this date was given, and from now onwards it remained practically normal. A seventh and final inoculation of 30 million was given on May 22nd, and from that time he became himself. He made a perfect recovery at the time. At the end of last year (1903) he came to see me with a large ulcer in the lower third of his leg. This had gradually developed during 1903, no doubt due to the original blocking of the posterior tibial vein.

This case was clinically rather one of pneumococcal septicaemia, in which the lung infection was but a small incident. The pneumococcus was recovered not only from his sputum, but from blood drawn from his median basilic vein. The rapidity with which the graver signs of infection yielded to inoculation was remarkable, and I think that the fever was prolonged by the thrombotic condition of his left leg. It appears, too, that the septicaemic condition is not a contraindication for bacterial inoculation. As regards this point, Douglas* had successfully inoculated a case of acute septic endocarditis in the previous March (1905) with a streptococcal vaccine derived from the patient's own organism, which had been recovered from the blood. In March, 1903, a case of acute streptococcal septicaemia, with local erysipelas of the head and face under my own care, responded at once to inoculation. The temperature was 105°; there was low muttering delirium with subsultus, picking of the bedclothes; respirations were 40, and pulse 140. An inoculation of 20 million streptococci was given at 10 p.m., and during the night profuse sweating occurred. At 8 a.m. the temperature was 93.8°. No opsonic index was made.

CASE III.

Mr. W. A., aged 43, was seen by my colleague, Mr. G. L. Parsons, who has kindly furnished me with the clinical history.

On December 29th, 1907, he was feverish and slightly jaundiced. On December 31st he developed a cough in addition to the other symptoms, with viscid sputum and increased V.R. at the right apex. On January 1st, 1908, his liver was found to be enlarged, with pain and rigidity in the abdomen. There were definite signs of pneumonia at the right apex, with rusty sputum. On January 2nd the pneumococcus was observed in the sputum, and cultures on blood agar made. On January 3rd the patient sweated profusely; there was general improvement, and signs of resolution at the right apex. On January 4th he became worse; the pain and distension of the abdomen were more marked; there was evidence of infection of the left apex. On January 5th his pulse-respiration ratio was 2 to 1 or less; he appeared very emaciated and suffering from general toxæmia.

On January 6th the left apex and upper half of the left lung were consolidated. Pulse (120) feeble; respirations, 70; mental condition, excitable and delirious. The vaccine having been prepared, a dose of 60 million was given about 11 p.m. January 7th: Little improvement was noticed, and the dose of 60 million was repeated at 8 p.m., twenty-two hours after the first. The temperature fell two degrees that night. January 8th: There was marked improvement. The abdominal pain and distension disappeared, and the consolidation of the left lung began to resolve. The temperature rose one degree, but on January 9th fell to below normal.

Here again the septicaemic condition was arrested within twelve hours of giving the vaccine, though not until the second dose. At the bedside the case appeared to be hopeless, and the vaccine was given as a last resort. The intoxication was very profound, and it was not until January 12th or 15th that he recovered his normal mental state. The mental condition resembled that of Mr. D., periods of apathy alternating with an active fighting delirium.

He made a perfect recovery, and is now (1909) in good health.

CASE IV.

W. F., boy, aged 3½, also under the care of Mr. G. L. Parsons, was seen first on March 13th, 1908. He had been ill already for about ten days. His temperature was 102°. There was pain on the right side of the chest and poor expansion. There were some bronchitic sounds on both sides, and a patch of dullness with crepitations half way down the right side in the mid-axillary line. Complete dullness with loss of breath sounds at the right base. On March 15th there was some improvement in physical signs and symptoms. The temperature fell to 99° for the next two days. On March 18th the temperature rose rapidly to 103°. Pulse and respirations increased in frequency, and fluid in the right pleura extended high up. The urine became dark, and there was increased frequency of micturition. Total quantity passed was small; it contained albumen, pus, and casts.

On March 20th the right pleura was aspirated and found to contain pus. A film showed quantities of pneumococci. Cultures on blood agar were made with a view to the preparation of a vaccine. On March 21st the temperature rose to 104°; a portion of the seventh rib on the right side was resected and free drainage established. On the morning of March 22nd the temperature had fallen to 99°, and there was general improvement. On March 22nd the temperature was 99°. The discharge from the wound had become serous. More urine was passed, which was better in character.

On March 23rd there was constant cough, the temperature rising to 102°. The urine again became scanty and contained albumen; there was incontinence. The drainage tube was removed and the wound, which again had become purulent, was fomented. The temperature fell on the morning of the 24th, but again rose during the day. As the condition was now becoming very serious, 10 million of the vaccine, which had been prepared, was injected. The next morning (March 25th) the child's temperature was normal, but rose to 100° in the evening, and an injection of 10 million was given. There was marked general improvement.

On March 26th a third inoculation of a similar amount was given. The general condition had now improved; the wound discharge became serous again, and the urine, increasing in quantity, was free from albumen, blood, and casts. The pulse and respiration for the next two and a half days were normal.

On April 1st his temperature rose suddenly to 103°, the wound was found to be purulent, and the urine again became thick and contained albumen. Pulse and respiration were feeble and rapid. The right pleura was explored, a small pocket of pus evacuated, and a tube inserted again. An inoculation of 10 million was given. April 2nd. Temperature fell to 99° and under, but the wound still remained purulent. On April 4th the temperature rose to 101°, and another 10 million pneumococci was injected, as the urine was albuminous.

From April 5th onwards the temperature remained normal, the discharge became serous and gradually dried up. The urine gradually lost its albumen. To accelerate matters and prevent further flares of infection a further inoculation was given on the 6th. The child made a perfect recovery.

The influence of the vaccine was very noticeable, both on the discharge and on the urine, and it is remarkable how quickly so severe a pneumococcal nephritis, which was evidenced by the presence of blood casts and albumen, was each time checked and finally cured by inoculation. The rise

of temperature on April 1st and the subsequent fall was no doubt entirely due to the pocketing of a small quantity of pus, and it would be hardly fair to give any credit to the inoculation on that date beyond generally improving the whole resistance of the patient.

As in the other cases, the lung seems to have cleared without much difficulty and the gravity of the complications were the final factors to be reckoned with. No opsonic indices were done. It would probably have been better if they had, as thereby the various rises of temperature might have been prevented by earlier inoculation. Anyhow, this case illustrates very clearly that it is possible to give a child repeated inoculations at short intervals, the sole guide being the temperature. If we remember that

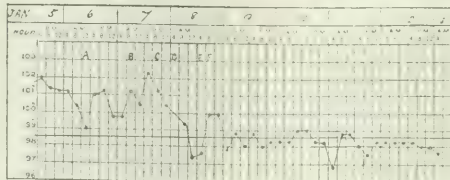


Chart 2. Case III.—A, Abortive crisis; B, 60 million, 11.50 p.m.; C, 60 million, enema; D, too delirious; E, 4.50 p.m.; F, 9 p.m.

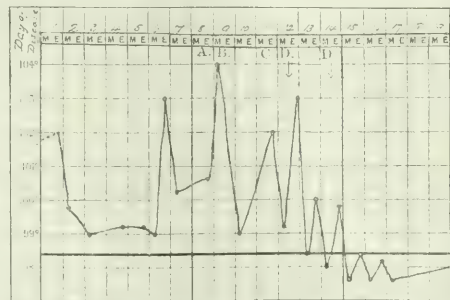


Chart 3. Case IV.—A, Aspirated chest, pus; n, operation; c, wound fomented; d, injection of vaccine.

probably in all these acute conditions the rise of temperature is almost coincident with the fall of resistance, as has been shown by Latham⁷ in the case of pulmonary tuberculosis, the need for indices as a guide to inoculation seems in such circumstances unnecessary.

CASE V.

H. L., aged 36, under the care of Dr. Norman, was taken ill with left basal pneumonia on December 18th, 1908, at 1 a.m. The infection was of a very virulent type, and eventually extended to both lungs. He died on the morning of December 23rd.

I examined his sputum on December 18th, and found it contained many pneumococci and some *M. catarrhalis*. Cultures were made on blood agar, which grew with extraordinary rapidity, showing lanceolate, chain, and diplococcal forms. It was possible on December 19th to make 50 c.cm. of vaccine containing 80 million pneumococci per c.cm.

The first inoculation of 40 million was given on the evening of December 20th. "He was perspiring freely the first two days, and after the first injection it became more profuse, but otherwise there was no improvement in his symptoms, excepting the continual decrease in fever."

He was given a second inoculation on December 21st, and a third on December 22nd. After these two doses there was a slight rise, the temperature remaining at the higher level. "The abdomen was markedly distended, and, though there was no special vomiting or tenderness, I rather think he had peritonitis. He had a mottled, purplish rash over the abdomen and thighs not unlike that of typhus." There was albumen in the urine. The heart from almost the first became engorged and dilated, and Dr. Norman procured temporary relief by venesection.

A study of the temperature chart indicates that whilst possibly the first inoculation had some beneficial effect, the remaining two had none.

The remarkable rate of growth of the pneumococcus outside the body is an indication of its virulence.

CASE VI.

A. B., aged 60, labourer, was seen on December 27th. He had had a cough for a few days. His temperature was 102.6°, pulse 120, respirations 30. There was crepitation, bronchial breathing, dullness, and increased vocal resonance at the right base. His sputum was crowded with pneumococci. He was given 25 million of L.'s pneumococcus vaccine at 3 p.m. At 9 p.m. temperature was 103°, pulse 114, respirations 30. The consolidation had now extended to the middle lobe of the right lung. On December 28th, 10.30 a.m., temperature 103°, pulse 120, respirations 36, no further extension; 9 p.m., temperature 102.4°, pulse 120, respirations 40. December 29th, 11 a.m., temperature 102.3°, pulse 138, respirations 48; 11 p.m., temperature 102°, pulse 144, respirations 60. He was given 50 million of the same strain of pneumococcus vaccine. On December 30th the patient was moribund, and he died that evening.

In this case the patient was in a feeble state of health to begin with. The vaccine had no effect upon him, and he died of heart failure, the disease not extending during the last two days of his illness. Apparently, the toxic infection of his heart muscle, rather than a rapid extension of the disease, was the cause of death.

CASE VII.

Mrs. S., aged 63, was seen on March 27th. On March 26th she was seized with a severe bout of vomiting, and rapidly became ill. There was general bronchitis over the upper part of both lungs. There was consolidation of lower left lobe, with pain under the heart and failure of that organ. Ordered digitalis and carbonate of ammonia and brandy.

On March 26th the whole of the lower lobe of the left lung was solid. Temperature 100.6°, pulse 120, respirations 42. The pulse, though regular, was very feeble. The sputum was crowded with pneumococci; 25 million of L.'s pneumococcus vaccine was given. The heart did not respond in the least to stimulants nor to digitalis and ammonium carbonate, and she died at 8.30 a.m. the next day (March 27th).

The failure of the heart in this case was the cause of death, and the vaccine failed to produce the least result.

CASE VIII.

Mr. B., aged 58, a well-nourished man in good circumstances, had an influenza attack of the gastric type lasting from April 4th to 8th, but with no lung symptoms. On April 12th he was

seized with recurring rigors, and when seen had definite consolidation of the base of the left lung. Temperature 102.6° F., pulse 90, respirations 36. An inoculation of 25 million of L.'s vaccine was given at 6 p.m. At 10.30 a.m. next day he was breathing easily. Respirations 24, pulse 80, temperature 97.8° F. He had sweated profusely during the night. The left base was still slightly dull, but marked reduplications could be heard.

The crisis in this case occurred during the night, and after the administration of a vaccine obtained from a virulent fatal case (L.). It is reasonable to suppose that the vaccine was a factor in producing a crisis at so early a stage of the disease, between the second and third days at latest.

CASE IX.

W., female, married, aged 45, stated she had had attacks of asthma every winter, and for the last four winters this has been complicated with acute bronchitis. In the winter of 1906-7 *M. catarrhalis* and pneumococci were found in the sputum. Vaccines were made and used.

On February 17th, 1907, an inoculation of the mixed vaccine, 10 million of each, was given. The temperature dropped four hours after inoculation from 99.8° to normal. The cough became looser, and the asthma was relieved.

On February 21st the cough was dry and troublesome, the sputum contained few pneumococci, but many *M. catarrhalis*. An inoculation of the mixed vaccine was given as before. The next day the cough was looser again, but still paroxysmal; the index to pneumococci was 0.35.

February 25th, 26th, cough was more troublesome; the sputum contained chiefly *M. catarrhalis*; a few pneumococci. On February 27th, inoculation with *M. catarrhalis* vaccine from another strain (Addison), 0.5 c.cm., and

on February 28th cough much easier.

March 1st, cough worse; inoculation with Addison's *M. catarrhalis* vaccine 1 c.cm. March 2nd, cough easier. March 3rd, inoculation as before; had a good night. March 7th, improving; more pneumococci in sputum; gave 0.5 c.cm. of her own mixed vaccine. On March 8th the sputum contained less pneumococci and *M. catarrhalis*.

March 9th gave 0.5 c.cm. of her mixed vaccine; no cough.

From this time she remained fairly well.

During the following winter, 1907-8, she was under other care, and had no inoculations. There was a long period of several weeks of acute bronchitis with fever, and she did not really improve until the spring.

(On November 7th, 1908, she noticed a running from the nose; next day the nasal discharge was examined and found to contain practically a pure culture of *M. catarrhalis*. She had a bad cold in the head. Asthma developed two days later, and on November 12th the temperature rose suddenly to 102°. The sputum contained quantities of pneumococci and a few *M. catarrhalis*. Cultures and plates were made, and eventually a vaccine containing 160 million pneumococci per c.cm. was obtained.)

On November 14th, her temperature remaining up over 100°, an inoculation of 80 million was given. The temperature came down to 99.6° during the night; the expectoration was more abundant. On the evening of the 15th the temperature rose to 100.6°, and another 80 million were given. She had a good night, and on the 16th her temperature was 98.6°. The expectoration became rusty and abundant; the breathing deeper and easier. On November 17th, 18th, and 19th the temperature remained down; the sputum contained a few pneumococci and *M. catarrhalis*.

On November 29th there was an increase of catarrh with asthma; no rise of temperature. Sputum showed *M. catarrhalis* with a few pneumococci. Cultures were made. On December 2nd the nasal discharge showed *M. catarrhalis* alone. On December 6th an inoculation of a *M. catarrhalis* vaccine made from the above strain, 30 million, was given. Exacerbations of asthma were treated with the mixed vaccine on December 11th, 14th, 23rd, and 27th. In each case the asthma was relieved and the expectoration became looser and more abundant.

During January, 1909, she was practically free, only a few *M. catarrhalis* appearing in the sputum.

On February 2nd there was a slight return of asthma, and the mixed vaccine was again injected.

This case is interesting by itself. The details of two attacks in 1906-7 and 1908-9 are similar, as regards the infection, the necessity for frequent inoculation, and the results of the inoculations. The prevalence of the micro-organisms in the sputum has proved a very fair guide as to the variety of vaccine; and, indeed, this has been sub-

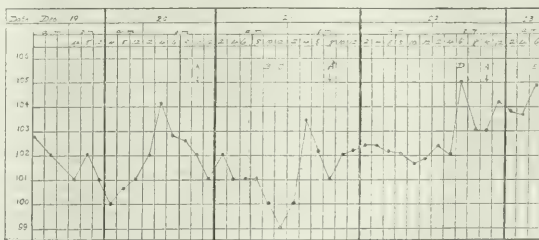


Chart 4, Case v.—A, 5 c.cm.; B, hypodermic injection of morphine; C, after washing; D, sponge; E, death.

stantiated in a number of catarrhal infections investigated. In the last attack very important evidence was obtained as to the rôle of the *Micrococcus catarrhalis* plays in these mixed infections. In this case the *M. catarrhalis* paved the way for the pneumococcus to become virulently pathogenic. In another case recently the *M. catarrhalis* was the forerunner of a general infection with the Friedländer pneumobacillus, and Allen and Benham both record cases of mixed infection also with *M. catarrhalis* and *B. septus*.

I think, perhaps, in both attacks a stronger vaccine of *M. catarrhalis* might have been used; but in this case it was difficult to grow enough at one time. In the second attack the inoculation of December 16th produced a definite resolution sputum with a fall of temperature to normal—phenomena similar to cases of a definite lobar type.

CASE X.

T. P., aged 58, male. Gave on September 17th, 1908, a history extending over several years. He had been liable he said to repeated attacks of nasal catarrh, with loss of smell and taste. Latterly these had been more severe; the bronchial tubes had become affected, and he had several times been laid by with jaundice and catarrh of the stomach. Extreme prostration and muscular weakness followed after an attack. Cultures made from the nasal and purulent discharge showed *M. catarrhalis*, Friedländer's pneumobacillus, *Streptococcus*, and a few lanceolated pneumococci in pairs. Vaccines were made of *M. catarrhalis* and Friedländer, and were given during the next three weeks with little result. The indices to Friedländer were normal. On October 14th, 1908, he started a fresh cold. Cultures of the sputum were made on blood agar on the 17th, and showed more pneumococci, but a preponderance of Friedländer. More Friedländer vaccine was given, with the result that this organism was wiped out of the sputum, and on the 23rd the sputum apparently contained only pneumococci. Cultures on blood agar were made and a pure strain of the true pneumococcus obtained; a vaccine was made from this, 95 million per c.c.m. in strength. On November 4th he had more or less recovered from this cold, and his index to the pneumococcus was 1.7. He was inoculated with 50 million pneumococci.

On November 7th his index for pneumococcus was 2.2; sputum of the 8th contained pneumococcus, *M. catarrhalis* and *B. septus* in the shed mucous epithelial cells, as well as Friedländer. On November 11th he was inoculated with 50 million pneumococci. His index to pneumococcus was 2.0. On November 14th the sputum was less, thin, and clear, but contained all the above micro-organisms. For the first time his general condition was better. He coughed less and was more vigorous. His appetite was returning and his colour improving.

I determined, as my results with *Micrococcus catarrhalis* and Friedländer vaccines had been negative, and as he had obviously improved after two inoculations with the pneumococcus vaccine, to continue the latter, particularly as in this organism alone he had shown an index differing from the normal. Inoculations were given on November 25th, December 3rd, 14th, and 23rd. During this time he remained free from catarrh, and was in excellent health and spirits. He expressed himself as being in much better condition than he had been for several years, although he had been working the whole time at high pressure in the city. During January, 1909, he was so well that inoculations were unnecessary.

On February 2nd, 1909, the sputum was rather thicker and more abundant. It contained *M. catarrhalis*, pneumococcus, *B. septus*, and Friedländer's pneumobacillus. The *M. catarrhalis* was in large amount. As severe colds had been going through his office, and from other sources I was aware that there was an epidemic of *M. catarrhalis* abroad, I gave him 125 million of a *M. catarrhalis* vaccine.

This case illustrates the feeble toxicity the pneumococcus may assume. Apparently it was doing little in the respiratory tract, but was probably the cause of his malaise, recurrent jaundice, and bilious attacks. I have little doubt (though the evidence is by no means conclusive) that the pneumococcus was the chief offender, because it was a matter of common remark how his colour, energy, and elasticity of spirits returned after the second inoculation with the pneumococcus vaccine. It will, however, require at least a year's careful observation in this case to settle definitely the etiology. Meanwhile it is worth recording this history in the present series of cases of pneumococcal infection.

CASE XI.

Mr. C., aged 50, was sent to Harrogate in the spring of 1908 for intractable gout, to be under the care of Dr. Wesley Smith, who, however, from the history suggested an infective process, and advised a bacteriological investigation.

On May 13th, 1908—Twelve months ago Mr. C. had pneumonia, and got better, but a chronic cough remained; the lung has cleared up except a small patch at the left base. Before the pneumonia he had a cough with pus, I believe, but was always able to work. Just over a month ago (April 1st, 1908) the left leg began to swell, which looked like an acute attack of gout,

but there was very little redness in the ankle; fluid in the left knee joint; no temperature. He was anæmic. There is a slight systolic tricuspid murmur. He feels well in his body, gets up every day, and goes out in a chair."

May 17th. His sputum was sent to the Clinical Research Association. A pneumococcus was isolated and subsequently sent to me.

I saw him myself on May 19th. He was lying in bed pale and anxious, breathing quickly, with a rapid pulse. The heart was irritable, with a definite local murmur. There was a trace of slight dullness at the vocal resonance over the right middle lobe behind, and definite dullness over the left base. The expectoration was abundant and purulent.

His left leg was oedematous and painful, particularly in the ankle; there was fluid in his left knee. I came to the conclusion that he was in all probability suffering from a prolonged pneumococcal infection widespread in character. His temperature in the afternoon was over 100°. The opsonic indices of specimens of his blood proved instructive.

The blood index for May 19th was 0.71 against the pneumococcus; on May 21st, 0.88; and on May 23rd, 1.0. On this date he was said to be improving; the oedema fluid from the leg gave an index against the pneumococcus of only 0.09.

The use of Bier's passive congestion method by placing a rubber bandage lightly round the upper part of the thigh for twenty minutes daily was advised, and a course of inoculations with a pneumococcus vaccine as soon as it could be prepared. The Bier's treatment was begun at once, and within two days the leg began to go down, the general condition to improve, and the sputum to decrease.

The first inoculations of 30 million pneumococci were given on June 1st and on June 7th. On June 8th, sputum still less, sweating had stopped, but the anæmia was still severe.

On June 17th a third inoculation was given. Dr. Wesley Smith reported: "Mr. C. is a little better. The left leg, which was so swollen, has gone down, and the right leg is now going down. I am keeping him in bed. For a week the sputum has changed in character—instead of being yellow, it is now merely grey mucus, and only one lump every other day. His lung is much better."

The inoculations were continued at intervals of seven days. On July 7th Dr. Wesley Smith writes: "The mucus now contains no pus; the temperature rises to 100° at night, and is 97° in the morning, but sometimes is normal in the morning. The legs are as swollen as much as before."

The inoculations, etc., were continued as before, but with an increased dose of 250 million. On July 23rd Dr. Wesley Smith writes: "Mr. C. is getting better. I am sure the vaccine has set him up and done him a great deal of good. The anæmia is getting better. He is gaining flesh, sleeps well all night. The fluid in the knee is gone, and the oedema in the ankles and legs is much better, but the latter are still swollen. The systolic murmur at the base is gone." The larger amount of vaccine was still continued.

On September 12th the doctor reports: "Mr. C. has greatly improved. The sputum is now like grey mucus, and only comes in small quantities. The temperature rises to 99° every night, instead of 100°. He is no longer anæmic. There is only the faintest trace of endocardial murmur. He has got fat. His legs are still swollen. I have just begun the Bier's treatment again. I left it off until now, because he said it upset him, but it does not do so now."

Mr. C. slowly recovered, and returned home early in December.

The points of interest in this case are that he recovered in six months, although he had been infected for a year previously; that, although his joints were probably infected with the pneumococcus, there was no suppuration; that he began to improve generally directly the Bier's treatment was begun, suggesting that this method actually produced auto-inoculation; that his immunizing power gradually returned, wiping out the general infection; and that this was slow, owing to the feeble anæmic state he had got into from the prolonged toxæmia.

Latham^{9, 10} in the discussion on pneumonia at the Medical Society of London, March, 1908, stated that he believed that in the near future a great advance might be made by the adoption of vaccine treatment. The lung tissue had some peculiar power of resistance to the pneumococcus, for an abscess of the lung, as the result of pneumonia, was very rare, whilst in other situations the pneumococcus frequently led to abscess formation. This fact encouraged the belief that vaccine treatment might be of great service. The results of vaccine treatment obtained by Roelke, in a few cases of severe pneumonia, and one case of pneumococcal endocarditis were most encouraging. The results of vaccine treatment in case of delayed resolution of the lung, and in pneumococcal infection of other portions of the body were also most encouraging. In 2 cases of pneumonia he (Latham) had recently administered dead pneumococci by the mouth, and in both cases this was followed by a marked fall in the temperature which was progressive, in one case on the third day, and in the other on the second day.

Floyd and Worthington¹¹ record the following cases of pneumococcic empyema treated with a pneumococcic vaccine:

A girl of 2 years entered the Children's Hospital, Boston.

February 19th, 1907. For eight days previously there had been pain in the right side. On the day before admission the skin broke on the right front of the chest and considerable pus discharged. On the day of entrance a portion of the eighth rib was resected and a few ounces of pus evacuated. The child was thin and weak and in a precarious condition.

February 22nd. Culture from discharge showed pneumococci. Index to the organism was 0.6. A stock vaccine was used and 50 million organisms given.

February 23rd. Index 0.25.

February 24th. Index 1.17.

February 25th. Index 2.25, child brighter, sinuses discharging freely.

February 26th. Inoculated 50 million organisms.

February 27th. Index 0.69.

February 28th. Index 2.14. Discharge lessening. Eating better.

Decidedly stronger.

March 1st. Inoculated 50 million organisms.

March 2nd. Index 1.38. Gaining daily. Inoculations were continued regularly, and the child gained rapidly. After about three weeks she went to the country with no discharge from either sinus and in excellent condition.

A boy of 3½ years entered the Children's Hospital on February 15th, 1907. There was a history of pneumonia, with a crisis of five days previous to entrance. This was followed by a second rise of temperature, and a diagnosis of empyema was made. The portion of the eighth rib in the posterior axillary line was resected and about a quart of pus evacuated. A culture showed a pure growth of the pneumococcus present.

February 18th. Osmonic index 1.1.

February 19th. Patient inoculated with 50 million pneumococci.

February 22nd. Index 1.59.

February 23rd. Index 1.5. Inoculated with 50 million organisms.

February 24th. Index 0.45. The child was restless following the last inoculation, and the temperature rose to 105°.

February 28th. Index 1.2. Temperature still elevated, but general condition improving.

March 1st. Index 0.72. Inoculated with 50 million. Discharge slight, and there has been a steady gain in weight and strength.

March 5th. Temperature normal; general condition good.

March 7th. Index 1.2.

March 13th. Index 2.0. Very slight discharge from sinuses. Up about the ward. Fairly well. The general gain continued and the sinus closed rapidly. Child sent to the country for a few weeks.

A girl of 3 years entered the Children's Hospital on February 25th, 1907, with signs of infection on right thigh. The following day an incision was made and about 1 oz. of pus evacuated from the femur. A culture from the wound showed the pneumococcus.

February 28th. Index to pneumococcus 0.71.

March 1st. 50 million pneumococci given.

March 4th. 50 million pneumococci given.

March 8th. Index 1.1. Condition of wound much improved; very slight discharge.

March 10th. Incision closing rapidly; no discharge.

March 19th. Wound healed solidly. Child sent home well.

The criticism which presents itself in the two cases of empyema, is that in both cases sufficient time was not given after operation to see the effect produced by the evacuation of the pus and the consequent autoinoculation which invariably takes place under such conditions. In the first case the index was 0.6 two days after inoculation, probably indicating a negative phase. This interpretation is supported by the fact that a fall to 0.25 was registered the next day, intensifying the general low bacteriostatic pressure. That the index rose rapidly is not surprising, but since the first dose produced so marked a negative phase in this case it should certainly have been reduced in the second inoculation. It was not, with the result that a profound drop from 2.25 to 0.69 was produced. In the second case, on the second inoculation of 50 million, a deep negative phase from 1.4 to 0.45 was produced, involving a rise of temperature, which lasted several days. There is no evidence on paper that this child would not have done perfectly well without special inoculation, and the notes show that there was actually a set-back caused by inoculation of what certainly in this case seemed to be too large a dose. My own experience is that 10 to 20 million of this vaccine is quite sufficient for a child. It is to be regretted that the temperature charts were not given in the reports.

The third case was certainly one for inoculation. These infections of the thigh, so common in young children, and so often associated with the lower epiphysis of the femur, yield quickly to the effects of inoculation if given after the disturbance caused by the operation has passed off.

CONCLUSIONS.

It may be taken as a clinical fact that in pneumonia death usually takes place through failure of the heart. Particularly obvious is this in the cases of virulent pneumonia, where death occurs about the fourth day of the disease. Jørgensen aptly says, "It is the heart, and always the heart, upon which the burden is ultimately thrown. Death results from the insufficiency of the heart."¹² It is easy to understand, therefore, why in virulent pneumonia

with early heart failure the vaccine treatment in many cases, though it may produce a fall in the temperature, fails. The toxæmia produced is already too profound for just the arrest of the infecting process to be successful. It would seem logical that scientific treatment demands not only the exhibition of the vaccine as early a stage as possible, before an overwhelming toxæmia has occurred, but also the introduction of a sufficient quantity of an antitoxin at the same time. I am not aware that any work has been hitherto carried out on these lines—the employment of both vaccine and antitoxin—at the same time.

It is not improbable that, in the case of the pneumococcus, the success of a vaccine is not simply due to the fact that it should be autogenous. A good deal of stress is laid upon this feature; but the fact of a vaccine being autogenous narrows down the issue to (1) the right organism being selected, and (2) the vaccine being prepared, if not unduly subcultured, from an organism of requisite virulence.

Fraenkel's pneumococcus is, however, as far as we know, invariable; it is not like the streptococcus (Gordon), an inclusive term for several varieties. On the other hand, we know from the staphylococcus and *coli* bacillus that these may be so subcultured as to lose their original virulence, and that vaccines so prepared are of little use therapeutically. If, then, a potent and reliable stock pneumococcus vaccine is to be obtained, it should be made from as virulent a strain as possible. There is unhappily no difficulty in the early months of the year in obtaining as much as is wanted. The truth of this argument can only be verified by a great number of observations. My own results, as far as they have gone, certainly tend to support this view.

With regard to the treatment of acute pneumonia by inoculation, the practical conclusions which alone can interest the busy clinician are:

1. That successful inoculation for pneumonia is possible.
2. That inoculation does no harm.
3. That a vaccine from one or a number of virulent strains should be used.
4. That it should be introduced as early as possible.
5. That the estimation of the opsonic index is not necessary.
6. That the observation of the temperature and physical signs is in pneumonia a sufficient guide in gauging the repetition of the dose.

Infections of the lung by the pneumococcus which fail to resolve after an acute pneumonia, as well as pneumococcal infections of other areas, ought certainly to be treated with a pneumococcic vaccine; and these cases appear to afford a reasonable prospect of success.

To place the whole question on a sound scientific basis needs, however, a vast inquiry by many workers. It was thought, however, that the above observations were worth recording, as helping in some small measure to clear the ground, and so indicate the direction of a research which has already lagged behind all too long.

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- ¹ *Proc. Roy. Soc. Med.*, vol. i, No. 1, p. 3. ² *Ibid.* ³ Sternberg's *Bacteriology*, section v. ⁴ A. Fraenkel, *Bakt. Mikr. Zeit. für klin. Med.*, Berl., 1886, x, 401. ⁵ Macdonald, *Path. Soc. Trans.*, January 17th, 1906, vol. i, p. 69. ⁶ *Proc. Roy. Soc. Med.*, vol. i, No. 2, p. 45. ⁷ *Ibid.*, p. 46. ⁸ Douglas, *Lancet*, 1906. ⁹ Latham, *Proc. Roy. Soc. Med.* ¹⁰ Latham, *Practitioner*, April, 1908, p. 448. ¹¹ Floyd and Worthington, *Boston Med. and Surgical Journal*, vol. cviii, No. 1, January 2nd, 1908. ¹² Eyle, On the Pneumococcal Activities of the Pneumococcus, *Lancet*, February 2nd, 1908, p. 535. ¹³ Pane, *La Riforma Medica*, 1898, i, 179.

REQUESTS OF £5,000 to St. Bartholomew's Hospital and of sums of £500 each to the Kensington Dispensary and Children's Hospital and the Home for Confirmed Invalids, Highbury, are contained in the will of the late Mrs. Holborn, of Campden Hill, who died on April 28th.

The French Surgical Association will hold its twenty-second congress in Paris next October, under the presidency of Dr. G. Richelot, surgeon to the Paris hospitals. The opening meeting will take place on Monday, October 4th. The following questions are proposed for discussion: (1) Surgery of the arteries; (2) care of the patient before and after abdominal operations; (3) surgical intervention in injuries of the spine and spinal cord. An exposition of surgical instruments, illuminating apparatus, and dressings will be held during the congress. The General Secretary of the Congress is Dr. Walther, 68, rue de Bellechasse, Paris (7c).

The Croonian Lectures

ON

RADIO-ACTIVITY AND CARCINOMA: AN EXPERIMENTAL INQUIRY.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS OF
LONDON IN JUNE, 1909.

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LECTURE III.

THE ELECTRICAL PROPERTIES OF RECOGNIZED RADIO-ACTIVE
SUBSTANCES; OF NON-MALIGNANT TISSUES; OF CAR-
CINOMATOUS MATERIAL; AND OF CERTAIN SUBSTANCES
COMMONLY SUPPOSED TO BEAR A CAUSAL RELATION TO
CARCINOMA.

THE researches to which I am now about to refer have been in progress for the past three and a half years nearly continuously. This length of time was necessitated partly by the importance of controlling certain of the results, but mainly by the fact that the differences between the control and the experimental conditions are so small that special care was necessary for their determination. The rate at which the electricity on charged gold leaves leaks from them is dependent upon so many factors that unless the extrinsic causes of leak are reduced to the lowest possible point small intrinsic differences are entirely lost sight of. Electroscopes in which the natural leak is greater than about 1 mm. per hour are quite useless for the purpose; in the majority of the cases the charged leaves approximated over a fixed distance at a rate of about 0.6 mm. per hour, and in a large number the rate was about 0.2 mm. per hour. It follows that the length of time necessary to obtain a single observation, whether control or experimental, is considerable; in no instance has it been possible to obtain more than one observation a day, and in certain of the experiments it took two days to obtain each observation. This difficulty was obviated to some extent by using several electroscopes. As a rule two control electroscopes (charged + and - respectively), and eight experimental electroscopes (four charged + and four charged -) were under observation.

It is unnecessary to enter here into a description of the apparatus or of the precautions taken; they are sufficiently described elsewhere.* Similarly, it is unnecessary, in the majority of cases, to refer to the actual experiments. It will suffice to state that the object of the research was to determine whether the leak of a fully earthed lead electroscope differed according as it did or did not contain one of the substances under investigation.

The substances examined were: Liver, kidney, lung, and spleen (four specimens of each) from non-malignant cases; four specimens of hepatic substance from livers the seat of carcinomatous metastasis; four specimens of the inorganic constituents of bones from non-malignant cases; four specimens of the inorganic constituents of bone from cases of carcinoma, in one of which the bone itself was the seat of secondary growth; twelve specimens of carcinoma. Of substances supposed to be causally related to carcinoma, the following have been examined electrically: Three samples of clay pipe, each sample consisting of portions of three distinct pipes from different sources,

powdered and mixed; two samples of soot; one sample of impure cholesterol gallstone from a case of columnar cell carcinoma of the gall bladder; one "pure" cholesterol gallstone; "pure" pigment gallstones; four samples of pitch from different localities; three samples of paraffin wax; three samples of betel nut; and one sample each of metallic arsenic, arsenious oxide, and coal.

In addition to the above, experiments have been carried out in connexion with the recognized radio-active substances—uranium, thorium, and pitchblende—in order to throw light, if possible, upon certain unexpected electrical phenomena.

In the case of the carcinomatous material diagnosis was always made microscopically. Four cases were primary (cervix, cervix, tongue, breast), and 8 metastatic. Of the latter, 6 came from the liver, the sites of the primary growth being rectum (3 cases), breast (2 cases), stomach (1 case); the remaining 2 were pulmonary metastases from cases of mammary carcinoma. The substances were introduced into the electroscopes in the dried powdered state to which they had been reduced for skotographic examination.

RESULTS OF EXPERIMENTS.

In the case of carcinoma material which has been extracted with water and subsequently with ether, or has been extracted once and for all with acetone, there is strong evidence that the leak of the electroscope is accelerated, whether the charge on the leaves be + or -. Similarly there is evidence that the inorganic constituents of bone, whether taken from non-malignant or from carcinomatous cases, accelerate electroscopic leak, whether the charge on the leaves be + or -. And, thirdly, clay-pipe, and possibly one sample of soot, acted in an identical manner.

So far, therefore, there is evidence to satisfy the physicist that the substances mentioned above are "radio-active" in the physico-chemical sense of the term. But already difficulties have arisen, for whereas the carcinomatous material produces skotographic effects when it has been extracted with water alone or with ether alone, it fails to do so when it has been extracted with both, or with acetone, while the inorganic constituents of bone and the clay pipe are equally non-skotographic.

The difficulty becomes much greater, however, when it is found that substances exist which, so far from accelerating the discharge of the electroscope or being without appreciable effect, actually retard the leak whether the charge on the leaves be + or -. I make this statement with a full sense of the responsibility I am incurring. I am aware that the physicist does not recognize such retardation or "antiradio-activity" as it may be termed. I am aware that it includes theoretical considerations of great magnitude, that if recognized radio-activity means the breaking up of large atoms into smaller ones antiradio-activity may mean the synthesis of elements with high atomic weight from elements with lower atomic weight. But I have carried out the experiments with the utmost care of which I am capable, and have found evidence of antiradio-activity a sufficient number of times to be convinced of the accuracy of my observations. Moreover, as the following experiments will show, I believe that evidence of antiradio-activity may be obtained by the use of recognized radio-active substances themselves.

If an aluminium disc be kept in close proximity but not in contact with uranium or thorium or pitchblende for forty-eight hours under fully earthed conditions and its influence upon electroscopic leak after such exposure be compared with its influence before exposure, it will be found, I believe, that the rate of leak has become retarded. This retardation persists for many days, and is independent of the sign of the electricity with which the leaves are charged. Full details of the experiments are given elsewhere.† It will suffice to give here a summary of the results obtained in an experiment lasting over four months, and carried out in order to reinvestigate the question, owing to the adverse criticism to which the first set of experiments had been exposed. This second experiment completely confirmed the first.

* Archives of the Middlesex Hospital, vol. vii (Fifth Cancer Report), 1906, p. 190. In this article and in articles that have appeared in the Sixth and Eighth Cancer Reports (1907 and 1909) full details are given of the experiments upon which the conclusions referred to in this lecture are founded.

† See previous footnote.

Experiments showing that an aluminium disc which has been kept in proximity to a recognized radio-active substance has acquired retarding or antiradio-active properties on electroscopic leak. The values are the mean differences between the experimental and the control electroscopes (Cf. "Arch. Middlesex Hosp.," vol. xii, 8th Cancer Rep., 1909, p. 145).

Experiment.	Control Period.	Blank Experiment.	Actual Experiment.	Remarks.
I. Electroscope in which was examined the aluminium disc placed in proximity to uranium nitrate	Mm. -25	Mm. -25	Mm. -27	29 observations for retardation to 10 for acceleration.
II. Electroscope in which was examined the aluminium disc placed in proximity to uranium oxide	+86	+85.5	+82	36 observations for retardation to 9 for acceleration.
III. Electroscope in which was examined the aluminium disc placed in proximity to pitchblende	-18	-21.5	-26	44 observations for retardation to 2 for acceleration.
IV. Electroscope in which was examined the aluminium disc placed in proximity to thorium	-31	-34	-38.5	37 observations for retardation to 9 for acceleration.

NOTE.—In the case of thorium the observed acceleration occurred on the first four days of each of the two parts of which the actual experiment consisted and was evidence of the well-known "induced radio-activity" due to thorium.

The following experiment shows that a similar retarding property is conferred upon an aluminium disc that has been placed in proximity to a substance that itself has retarding influence upon electroscopic leak. This experiment was carried out at the same time and under the same conditions as those mentioned above.

Experiment.	Control Period.	Blank Experiment.	Actual Experiment.	Remarks.
V. Electroscope in which was examined the aluminium disc placed in proximity to a cholesterol gall stone	Mm. -5	Mm. -4	Mm. -8	41 observations for retardation to 5 for acceleration.

Returning now to a consideration of carcinomatous material itself, it appears that the electrical properties differ according as the substance has or has not been extracted before its influence upon electroscopic leak is determined. Moreover, the extract exerts a definite influence upon the leak, and that influence is in the opposite direction to that exerted by the extracted substance. This is shown by the following table, condensed from one given by me elsewhere¹:

Table showing the influence upon electroscopic leak of four specimens of carcinomatous material before and after extraction and of the extracts themselves.

	I.	II.	III.	IV.
Charge on gold leaves	- +	- +	- +	- +
Carcinoma, dried and powdered	A A	B? O	A O	A O
Above after extraction with ether	A A	R A	A A	A A
Above after extraction with ether and subsequent extraction with water	A A	A A	A A	A A
Ethereal extract of above...	R R	R R	R R	R R
Watery extract of above after its extraction with ether	R R	A? R	A R	R R

A is used to signify acceleration; R, retardation.

The manner in which the uncertain influence upon electroscopic leak exerted by the substance when simply dried and powdered gives place to an increasing evidence

for an accelerating power after each extraction; the power fully retarding character of the first extract, and the less powerful but still distinctly retarding character of the second, afford a chain of evidence, not only for the existence of "antiradio-activity," but also for the presence of both forces in carcinoma tissue, that cannot lightly be dismissed. So far as concerns the accelerating influence of carcinoma material after extraction, the conclusion given above is supported by the results of examining electroscopically eight other specimens extracted with acetone.

While carcinoma tissue after extraction accelerates the leak, this is not the case with liver or lung from non-malignant cases. These extracted tissues were found uniformly to retard leak. The acetone extract of non-malignant liver, however, agreed with that from carcinoma tissue in retarding leak, and the unextracted tissue showed a less tendency to induce retardation than the extracted. Below are given the results obtained with four specimens of liver from non-malignant cases.

Table showing the influence upon electroscopic leak of four specimens of liver from non-malignant cases before and after extraction and of the extracts themselves.

	OTI I.	II.	III.	IV.
Charge on gold leaves	- +	- +	- +	- +
Liver, dried and powdered.	A R	R? R	R R	R R
Above after extraction with acetone	R R	R R	R R	R R
Acetone extract	R R	R R	R R	A A?

A signifies acceleration; R, retardation.

In the first lecture evidence was given to show that the skotographic action of an organ which is the seat of carcinomatous metastasis differs from normal. Examination of four specimens of hepatic tissue from livers the seat of carcinomatous metastasis shows that the new growth also influences the electrical properties. Thus, in the table immediately preceding, the evidence for retardation exerted by the four specimens of acetone-extracted liver (each of which retarded the leak whether the sign on the leaves was - or +) consisted of 76 individual observations of retardation to 4 of acceleration. In the case of hepatic substance from livers the seat of carcinomatous metastasis, not only did two of the specimens show discordant results affording evidence of acceleration in the electroscope charged with one sign and retardation in the electroscope charged with the other, but the total number of individual observations in favour of retardation was only 52, against 28 in favour of acceleration.

Comparison of the results obtained with the inorganic constituents of bones from non-malignant and those from malignant cases affords confirmatory evidence of the influence of carcinoma upon the electrical properties of the tissues, but here the natural influence of the inorganic constituents appears to be accelerative and in carcinoma the tendency is increased. Thus two out of four samples of inorganic constituents of bone from non-malignant cases afforded discordant results, showing acceleration in the electroscope charged with one sign and retardation in the other, while the total number of individual observations in favour of acceleration was 41 (or 59 per cent.), against 29 for retardation, whereas when derived from cases of carcinoma the discordancy was somewhat less, and the total number of individual observations in favour of acceleration was 53 (or 66 per cent.), against 27 for retardation.

Leaving on one side the evidence afforded by electrical examination of kidney and spleen on the ground that the results are not sufficiently clear to allow of deductions being drawn, I pass to the consideration of substances commonly supposed to be causally related to carcinoma.

In this part of the subject the evidence that I have to offer is of different value in different cases. Electrical examination of clay pipe, of paraffin wax, and of cholesterol gall stone has been carried out on so many occasions that I have more confidence in the case of these substances than in that of others of which the electroscopic examinations are clearly too few. Here, I can only beg your

indulgence and plead the motto of our college as an excuse:

Ὁ Βίος Βραχύς ἢ δε τέχνη μακρῇ.

I have already stated that I find evidence that clay pipes exert an accelerating influence upon electroscopic leak whether the gold leaves be charged — or +. In the case of paraffin and cholesterol gall stone the evidence is no less clear, but both substances exert a retarding influence, and again whether the electrical charge on the leaves be — or +. Experiments with different samples of pitch seem to show on the whole that this substance exerts a retarding influence, but there is no reason to suppose that a uniform effect would be produced by all samples of this or of any other substance of an impure or complex nature. The same criticism holds good in the case of soot, one sample of which yielded me evidence of retardation, while the other gave uncertain results. Metallic arsenic, arsenious oxide, and betel nut appeared to be without effect upon electroscopic leak, but too few experiments were made with them to allow me to speak with confidence.

In my experiments with the substances mentioned above—some of the earliest made in the entire research—I sought to show that the accelerating or retarding property was manifested, even though the substance under examination were covered with an aluminium cap. In numerous instances this appeared to be the case, and undoubtedly, if true, it would afford convincing proof of the similarity of the action of the substances with that of recognized radio-active substances. But owing to the fact that I have found an aluminium disc to become electrically modified by the proximity of a recognized radio-active substance or of a pure cholesterol gall stone, my conclusions on this point require reconsideration. It may be added, however, that even if the influence from the substances did not traverse the aluminium, it would not disprove the possibility of their being essentially "radio-active," since conceivably they might only give off alpha particles, or alpha particles and beta radiations of so low penetrating power that they failed to traverse the aluminium screen.

Having described in brief the electrical effects of the various substances that particularly interest us from a medical point of view, it is now necessary to revert to the recognized radio-active substances.

I have already said that I have reason to believe that recognized radio-active substances induce "antiradio-activity" in an aluminium disc with which they have been placed in proximity, though not in contact, for a certain length of time. This change, I believe, is indicated by the acquisition of a retarding power by the disc on electroscopic leak. But there is no doubt that a metallic surface that has been bombarded by radio-active rays manifests physical change of a gross kind. Thus, the anticathode of an x-ray tube not infrequently becomes perforated in course of time, an aluminium disc which has been exposed to radium for four months shows actual pits on its surface, while an aluminium disc exposed to the relatively feeble radio-activity of uranium for four months shows a loss of polish of its surface over an area corresponding to that which had been in proximity to the uranium. In the last lecture it will be shown that animal cells, in like manner, afford evidence of altered behaviour as the result of proximity to recognized radio-active substances.

This brings us to a consideration of extreme importance. There is no doubt that the facts and the conclusions of the chemist and physicist cannot be applied to biological problems in a crude manner. It is unnecessary to labour this point. It is supported by the whole of chemical physiology and pathology, from so simple an example as the fact that iron in combination with globulin in the form of haemoglobin fails to give the ordinary chemical tests for inorganic iron to the complicated problems of immunity which have shown repeatedly that the animal body is not a mere test tube in which a simple chemical process is taking place. In a word, for the biologist, a necessary preliminary to consideration of radio-activity as understood by the chemist and physicist is a determination whether the radio-active element when in combination with protein behaves in the same way as it does when in combination with other elements to form an "inorganic" compound. It is in the latter form alone that it has been examined by chemist and physicist.

Even if a series of inorganic compounds of a radio-

active element be examined it will be found that the radio-activity as measured by the rate of leak of an electroscope is not identical for all of them. Thus, Colwell and I have shown that the rate of leak of an electroscope in which are examined a number of uranates of the alkalis and alkaline earths as well as the nitrate and sulphates of uranium varies inversely as the atomic weight and the valency of the elements with which the uranium is linked. From this we argued that uranium in combination with the huge protein molecule would show a correspondingly enormous diminution of its influence on electroscopic leak.² This proved to be the case. We showed, further, that the radio-activity of the uranium is not lost, but only masked, for the ash of an incinerated albuminous compound of uranium or of such inorganic compounds as the nitrate and sulphates of uranium or ammonium uranate (which are more or less completely disintegrated on incineration with the formation of an ash consisting chiefly or entirely of an oxide of uranium) produces a profound acceleration of leak. Similar results were obtained with the nitrate and sulphate of thorium and a thorium albuminous compound. Full details will be found in the original paper. Below are given examples in illustration of the statements made above:

Mean values of electroscopic leak in the presence of certain uranium and thorium compounds in the natural state and after incineration.

	Mean Rate of Leak per Hour in Min.	
	Natural State.	Incinerated.
Black uranium oxide	175	177
Ammonium uranate	125	171
Thallium uranate	101	114
Uranyl sulphate	91	177
Uranyl nitrate	80	187
Uranous sulphate	62	159
Uranium Witte-peptone	22.4	126
Uranium serum (pleural fluid)	13.5	85
Uranium egg-white	13	95
Uranium spleen-pulp	10.9	53.6
Thorium sulphate	62	124
Thorium nitrate	55	142
Thorium egg-white	7.5	41.4

Natural leak of empty electroscope 3.6 mm. per hour.

Now the uranium and thorium albuminous compounds contained about 10 per cent. of the radio-active element by weight, and it has already been said that their photographic effect is small and may be completely wanting, even though they be allowed to act on the film through a thin layer of air, while at least the thorium compound fails to affect the film through a screen so thin as that formed by brushing egg-white over tissue paper. Evidence of radio-activity in the physical sense is therefore reduced to a very low point, and it is easily conceivable that with smaller percentages of the radio-active element, or in combination with still larger molecules or combinations of molecules, all evidence of "radio-activity" should be lost, although the fact that the substance in question contains the recognized radio-active element would be immediately demonstrable on removing the impeding constituents of the compound by incineration.

Proceeding on these lines I have incinerated animal substances of all kinds, in the hopes of setting free a radio-active substance that would be recognized by physicists and chemists, but without success. Clearly the tissues contain no radio-active substance which can survive exposure to a white heat. Whether they contain a radio-active substance that can withstand a temperature of 300°, after which skotographic action disappears, but is dissipated or disintegrated between 300° C. and the temperature of white heat, it is impossible to say. In any case experiments with albuminous compounds of recognized radio-

active substances, such as uranium and thorium, indicate that small evidence of radio-activity manifested by an animal tissue does not necessarily mean that that tissue contains only a small amount of a radio-active element. The smallness of the evidence may simply depend upon the relative completeness with which the radio-activity is masked by the albuminous molecules with which the radio-active element is in combination.

By comparing the rates of electroscopic leak when the substance is directly exposed to the charged leaves, and when it is separated from them by a screen of thin aluminium foil, it is possible to separate that portion of the leak which is due to the impact of alpha particles from that portion due to beta and gamma rays. As is shown by the following table, the masked radio-activity consists chiefly, if not entirely, of alpha particles. In the case of thorium compounds, the table is of particular importance, inasmuch as it not only shows the great increase of leak due to alpha particles after incineration, but also an enormous disappearance of some radio-active element producing beta and gamma rays during incineration. It is necessary to add that the amount of radio-activity that is removed from thorium compounds by incineration varies considerably under a number of circumstances that need not be mentioned here, but that all the thorium compounds given in the table were prepared from a single sample of thorium, and are comparable amongst themselves, though not with those given in the preceding table.

Portions of the rate of leak per hour occasioned by certain uranium and thorium compounds due to alpha particles and to beta + gamma radiations.

	Natural State.		Incinerated.	
	α Particles.	$\beta + \gamma$ Rays.	α Particles.	$\beta + \gamma$ Rays.
Black uranium oxide	145.8	29.2	144.0	33.0
Ammonium uranate	101.2	23.8	145.5	25.5
Thallium uranate...	79.4	21.6	82.6	21.4
Uranyl sulphate ...	57.0	35.0	142.8	37.2
Uranyl nitrate ...	52.4	27.6	151.9	35.1
Uranous sulphate ...	52.8	11.2	127.0	11.0
Uranium egg-white	4.8*	0.6*	124.0	1.8*
Thorium sulphate...	24.1	77.9	78.4	27.6
Thorium nitrate ...	21.7	70.6	127.8	16.2
Thorium hydroxide	104.0	496.0	123.0	22.0
Thorium egg-white	3.1*	1.4*	46.5	7.8*

* In the case of these low values the ascertained leak has been corrected by the natural leak of the electroscope determined specifically for the purpose on each occasion; elsewhere it is neglected.

As to the work done and the changes produced within the molecule by the imprisoned alpha particles, it is only possible, as yet, to speculate. Evidence has been given that carcinoma material, with its tendency to accelerate electroscopic leak, modifies the electrical conditions of the tissue in which it lies; it is not impossible that the bombardment with alpha particles undergone by an aluminium disc in proximity with a recognized radio-active substance may lead to that "antiradio-activity" of the disc which I have described.

LECTURE IV.

INFLUENCE OF RECOGNIZED RADIO-ACTIVITY AND OF CERTAIN SKOTOGRAPHIC NON-MALIGNANT MATERIALS UPON THE DIVISION OF ANIMAL CELLS.

HITHERTO the experiments I have described have been of a chemical or a physical nature; the next step, and the last I am at the present time in a position to make, will be into the animal kingdom. Whatever the results we may have obtained, their sole importance to us as biologists, and even more as medical men, lies in any application they may have to the processes going on in the animal cell. If radio-activity, if the peculiar skotographic and electrical properties we have now found to be associated with a number of substances some of which are

derived from the animal body, influence cell nutrition, cell growth, cell multiplication, they are of interest to us; if not, we may leave them on one side.

The cell which I have chosen for this part of the research is the ovum of *Ascaris megalocephala*, an intestinal entozoon of the horse. When removed from the oviduct the ovum shows a thick cell membrane, a single undivided cell, and a general absence of pigment or foodstuffs. Since it is obtainable in enormous numbers, is clearly visible with a half-inch objective, and passes through the changes up to the formation of a complete living and moving embryo worm within a few days or a few weeks, according to the temperature at which development is allowed to proceed, it is very suitable to our purpose.

Examination of the development of the ovum when it has been exposed to the influence of recognized radio-activity, has been carried out in the case of x rays, radium, thorium, and uranium.² The results agree remarkably, not only in their general direction, but also in the fact that certain special effects are produced by the two most potent members of the group—radium and x rays.

The experiments consisted in determining the rates of division of the cells under conditions that differed only in respect of their exposure or non-exposure to radio-activity. In the case of x rays, exposure lasted varying times, from two minutes to twenty minutes, and the ova were exposed to the rays at the commencement of the experiment when they were all in the one-cell stage. In the case of radium, thorium, and uranium the ova were exposed to the action of the substance during the whole time of their development. Inasmuch as x rays are gamma rays alone, while radium, thorium, and uranium give off alpha particles as well as beta and gamma rays, the experiments differed in this respect. Moreover, since the radium, thorium, and uranium were exposed to the ova without any intervening substance except a thin layer of air, the cells were acted on by all three constituents of radio-activity in the case of these substances.

Below are given the results of an experiment using x rays.

Characters of Cell Division in 200 Ova after Exposure to X Rays for Varying Periods.

Immediately after exposure:
All cells in 1-cell stage.

24 hours after exposure (room temperature):

	1-cell stage.	2-cell stage.
Control ...	158	43
2 min. exposure ...	140	60
4 " " " " " " " "	151	49
6 " " " " " " " "	164	36
9 " " " " " " " "	175	25
12 " " " " " " " "	184	16
15 " " " " " " " "	187	13
20 " " " " " " " "	194	6

48 hours after exposure (room temperature):

	1-cell stage.	2-cell stage.	3-cell stage.	4-cell stage.
Control ...	74	65	26	35
2 min. exposure ...	71	52	22	55
4 " " " " " " " "	81	42	21	56
6 " " " " " " " "	90	46	20	44
9 " " " " " " " "	107	53	21	19
12 " " " " " " " "	123	43	14	15
15 " " " " " " " "	104	60	15	21
20 " " " " " " " "	126	57	13	14

This experiment, which has been repeated on many occasions with similar results, shows conclusively that x rays have a dual effect. Short exposures accelerate, long exposures retard, cell division.

Since the ovum does not increase in size during development it becomes impossible to conduct the experiment satisfactorily during the period between the four-cell stage and the early embryo, but with the formation of the embryo the accelerating and the retarding influences of the x rays again become manifest. Thus the ova, concerning which details have been given above, were transferred to the incubator at 37° C. during the third and fourth days after exposure to x rays, and it was then found that the control specimens showed immature embryos and 1 living and moving worm; the two-minute and four-minute specimens were indistinguishable from the control, and also showed 1 living and moving worm apiece.

the greater part of the time at my disposal in this way, partly because in cancer research there is at present more need for practical experiment than for theoretical disquisition, and partly because the Croonian Lectures afford a rare opportunity for presenting the results of a prolonged research in an orderly manner. It is right, however, that in the time remaining to me I should summarize my results, and, as far as may be, consider established facts in connexion with carcinoma under the light that they afford.

The original question with which I started—namely, Do the physical agents which are commonly supposed to give rise to cancer (clay pipes, soot, etc.), and do samples of carcinomatous material afford evidence of the possession of radio-active properties?—is not conclusively answered. In certain respects they behave like the radio-active materials of the chemist or physicist, but in no single instance do they respond to all the criteria of recognized radio-activity. Thus, I have shown that many of the substances affect a photographic plate in the dark; but, on the other hand, few can act on the plate if a screen be interposed, and even in those instances in which a positive result is obtained under these circumstances, it is doubtful whether the interposed celloidin screen is fairly so called. Nevertheless, it is doubtful whether the power of acting through a screen is a necessary criterion of radio-activity, since I have shown that albuminous compounds of recognized radio-active substances may possess a power of acting on the photographic plate which will not traverse an extremely thin screen, and, indeed, may be devoid of photographic powers altogether. In the latter respect they are comparable with clay pipe, inasmuch as neither type of substance acts on a photographic plate and both accelerate the discharge of an electroscope. In the same category comes carcinoma material which has been extracted with acetone or with water and subsequently with ether. Possibly, too, some specimens of spleen and of the inorganic constituents of bone are to be reckoned in the same class.

Even a greater difficulty arises in connexion with those substances which I have found to retard electroscopic leak. Such a property is entirely repugnant to present ideas of radio-activity. If I am correct in asserting that evidence of retardation can be obtained by the use of recognized radio-active substances, as in the case of aluminium discs which have been placed in proximity to uranium, thorium, or pitchblende, this difficulty is overcome. It may be that the dual accelerative and retarding influence which I have found all forms of radio-activity to exert upon the development of the ova of *Ascaris megalocephala* will help in determining this important question. Already this line of research is indicating that certain animal extracts having skotographic powers resembling those of radio-active substances up to a certain point are able to influence the rate of development of animal cells when acting on them from a distance, and through the screen of their own egg case. It is not impossible that we shall find that the laws of radio-activity as determined by the physicist require some modification when adopted into biology owing to the presence of the protein molecule, just as the laws of filtration and osmosis have required adjusting to the special circumstances of the case. I showed some years ago that the presence of even a minute trace of protein profoundly modifies the rate of osmosis,¹ and I showed in the last lecture that combination of a radio-active element with a protein molecule profoundly modifies the rate with which it induces electroscopic leak, and its photographic powers.

Table showing Principal Skotographic and Electroscopic Results hitherto Obtained.

Type of properties:	The substance acts on a photographic plate directly and also through a screen. It <i>accelerates</i> electroscopic leak whether the charge on the gold leaves be — or +.
Recognized radio-active substances	Radium, uranium, thorium, uranium aluminate some weeks after its preparation.
Other substances of research	No member found.

Type of properties:	The substance acts on a photographic plate directly but <i>not</i> through a screen. It <i>accelerates</i> electroscopic leak whether the charge on the gold leaves be + or —.
Recognized radio-active substances	Uranium aluminate directly after its preparation, thorium aluminate weeks after its preparation, doubtfully, directly after preparation.
Other substances of research	Carcinoma material after extraction with either water or ether but not both.
Type of properties:	The substance acts on a photographic plate directly and also through a screen. It <i>retards</i> electroscopic leak whether the charge on the gold leaves be + or —.
Recognized radio-active substances	No member of the group found.
Other substances of research	Solid mass of hepatic material.
Type of properties:	The substance acts on a photographic plate directly but <i>not</i> through a screen. It <i>retards</i> electroscopic leak, whether the charge on the gold leaves be + or —.
Recognized radio-active substances	No member of the group found.
Other substances of research	Carcinoma extract, watery or ethereal, non-malignant liver, before and after extraction with acetone, acetone extract of liver, cholesterol gall stone.
Type of properties:	The substance has <i>no</i> photographic action whatever. It <i>accelerates</i> electroscopic leak whether the charge on the leaves be + or —.
Recognized radio-active substances	Thorium (?) and certain specimens of uranium aluminates directly after preparation.
Other substances of research	Carcinoma material after extraction with acetone, clay pipe, possibly some others.
Type of properties:	The substance has <i>no</i> photographic action whatever. It <i>retards</i> electroscopic leak, whether the charge on the leaves be + or —.
Substances prepared by means of recognized radio-active substance	Aluminium discs after proximity to uranium or thorium or pitchblende.
Other substances of research	Aluminium disc after proximity to cholesterol gall stone, paraffin wax, liver substance after extraction with acetone.

The Relation of Radio-activity to Carcinoma.

Leaving now the question whether the substances commonly supposed to be causally related to cancer and certain animal tissues, including carcinomatous material, are radio-active as unanswered—and, in our present state of knowledge, as unanswerable—we may pass to consider recognized facts in connexion with carcinoma as a disease in the light of the experimental evidence I have adduced. It is impossible for me to traverse the whole field, partly from lack of time, partly because I should thereby introduce too much contentious matter. I shall therefore confine myself to a few salient points, offering you something in the nature of an impressionist picture.

One of the most certain features of carcinoma (at all events, as we meet with it in this country) is that it occurs more commonly in women than in men, and that the case-incidence, corrected by the number of persons of the sex living at various ages, in both sexes runs on parallel ascending lines up to the age of about 55 years, while after that age the lines diverge, liability to the disease continuing to increase in males but undergoing a sharp diminution in females. It is certainly remarkable that the degree of skotographic power of the liver in the two sexes and at different age-periods affords a pair of curves agreeing absolutely in these points with the curves of cancer liability (Fig. 15). It is possible that the identity of the two pairs of curves is a coincidence, and that both cancerous and skotographic conditions may depend upon some common underlying cause—for example, senility. Thus, curves made for the incidence of fibrotic kidney and greyness of hair would probably run parallel courses, but no one would infer that the one bears a causal relation to the other. But when one finds that the liability of liver, kidney, lung, and spleen to primary, and in the main to secondary, growth varies directly with their skotographic power, that the liability of gall bladder, urinary bladder, and kidney to carcinoma varies directly with the skotographic value of the calculi by which severally they are affected, that carcinomatous

material possesses this skotographic power, practically without exception, and that the normal skotographic power of a tissue is modified by the presence in it of a carcinomatous mass, the idea that the two are in some way interdependent is strengthened. And when one further finds that these tissues, or their extracts, are capable of influencing the rate of division of animal cells, the suggestion that in them lies the key of a disease which is, after all, nothing more than a disorderly overgrowth of a particular variety of cell, becomes alluring. Nor is the fact that certain of the extracts have been found to possess accelerative, while others possess retarding, powers on development a difficulty, for it is clear that for the occurrence of a carcinoma it is as necessary for the subjacent tissues to undergo a diminution of their normal resisting powers to the encroachment of the epithelial cells as for these latter to undergo an increase in their normal rate of reproduction.

This brings us to the question of metastases. I have long felt that the metastases in carcinoma are not regarded in their proper light. Stripped of non-essentials, the occurrence of a metastasis simply means that a cell which is capable of growth is lodged in a situation at which it is not killed. That is to say, the tissues into which a carcinomatous cell is carried by embolism, tissue permeation or other means plays as considerable a part in determining the occurrence or non-occurrence

Nevertheless, the fact that the existence of carcinoma in a body affects the skotographic power of the liver of the patient, even though the liver itself be devoid of metastasis, indicates that an influence is exerted by the carcinoma, or the initial cause of the carcinoma, upon distant parts. And in this connexion one may ask whether it is not possible that those rare cases may be thus explained in which

death in carcinoma cannot be attributed with fairness either to the mass of growth, septic absorption, mechanical interference with vital parts, or other similar cause. One of the most noteworthy points in connexion with carcinoma is that a mass will kill, being carcinoma, which would probably not kill if (*caeteris paribus*) it were inflammatory. It is only necessary to compare the certain death from so small a mass of disease as is often a carcinoma of the body of the uterus, with the relatively good prognosis of a far more extensive tuberculosis, actinomycosis, or tertiary syphilitic condition.

If the general liability to carcinoma in males and females be split up into its component parts and the liability to carcinoma at different sites be considered individually, certain interesting points are disclosed. This has been done for 6,421 cases of cancer at the Middlesex Hospital of which details as to age are available. The cases are distributed as follows: Uterus, 2,205 cases; breast, 2,126 cases; alimentary tract from stomach to rectum, 470 female and 586 male cases; tongue and rest of mouth, 783 cases (male); lip, 251 cases (male). The total

number of cases of each kind in each quinquennial age-period has been corrected for the number of persons (male or female, as the case may be) surviving at that age-period from 100,000 persons born. The curves thus formed are given in Fig. 16.

The most striking point in the curves is that whereas all of them show a rising liability with increasing age, this increasing liability only persists to the end of life in the case of cancer of the lip. In every other instance a maximum is reached, after which the liability to cancer diminishes with more or less suddenness. And, further, the maximum liability to cancer of a special organ does not occur at the same age as

the maximum liability to cancer of another organ, nor are the ascents and descents of the different curves equally rapid or high in all cases.

There is thus a great contrast between cancer of the lip and cancer of the uterus, for example, so far as the liability of individuals to the two types of disease is concerned. This difference may clearly depend upon either a difference in the incidence of the cause of cancer or

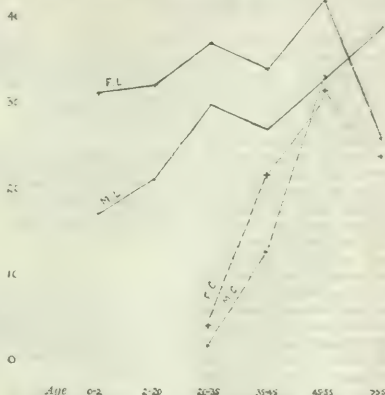


Fig. 15.—PL, Female liver skotographic value; ML, male liver skotographic value; LC, female liability to cancer; MC, male liability to cancer.

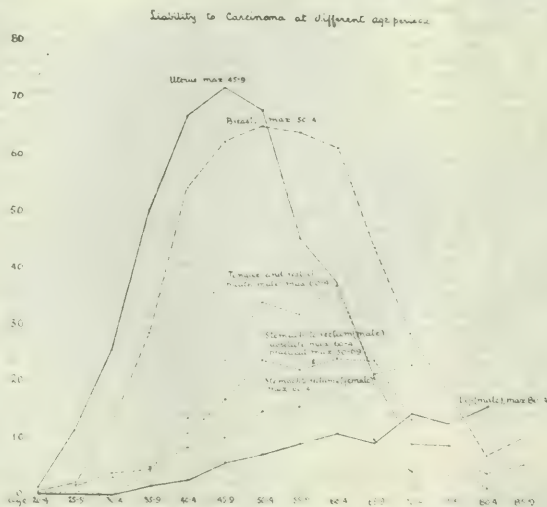


Fig. 16.—Liability to carcinoma at different age periods. (Middlesex Hospital.)

of them they are destroyed at the seat of their lodgement.

In the difference between a tissue which allows a transported carcinoma cell to grow and multiply and a tissue which destroys it consists it is impossible to say, but the different properties of tissue extracts upon the division of the ova of *Ascaris megalocephala* are such that in them may perhaps lie the solution of the question.

upon a difference in the tissue upon which the cause is acting. So far as a difference in the tissue is concerned, there is no doubt that the maximal liability to cancer of the uterus occurs about the menopause, and that it diminishes with great rapidity immediately after. But the uterine, and particularly the cervical, changes following the menopause are amongst the least marked of climacteric changes, and in any case are minute compared with the uterine modification following a pregnancy. If, however, we consider the question from the point of view of a difference in the incidence of the exciting cause of the disease the matter becomes simpler.

The cervix uteri is particularly suitable for an inquiry into the etiology of carcinoma. It is a limited region, it is in the majority of cases affected by the simplest form of carcinoma, the squamous cell variety, it is placed out of reach of an infinitude of accidents and forces which act upon other parts covered with squamous epithelium, and it is liable to three conditions, two of which, namely, bathing with menstrual blood and bathing with seminal fluid, are peculiar to it, while the third—laceration during childbirth—is merely a trauma more or less resembling traumata in other regions, and, once occasioned, persists throughout life. At the same time, as it is more than usually protected from outside influences, it is one of the commonest, if not actually the commonest seat of carcinoma. Of these three conditions, the two that are peculiar to the cervix are those which attract most attention when considered in relation to the age for the maximum liability to carcinoma of the cervix, partly because traumata occur in other regions, partly because a period of many years usually elapses between the last parturition and the age of maximum liability; and, considering menstrual blood and seminal fluid as possibly containing the essential cause of carcinoma of the cervix, menstrual blood must be put on one side, if only for the reason that if it were the cause one would expect that vagina and vulva and body of the uterus would not show so marked an inferiority in liability to carcinoma as they undoubtedly do. This leaves the seminal fluid; and it is a remarkable fact in this connexion that the spermatozoon is the most potent instigator of cell division known when it acts upon a specific cell, the ovum, and that an extract of the testis of the herring (which consists almost entirely of spermatozoa) favours the division of the cells of the ova of *Ascaris megalocephala* to an extraordinary extent, and at the same time possesses marked skotographic powers (Fig. 17).*

In the case of the breast it appears to me that the observation of MacCormac that various bacteria possess skotographic powers is of great importance in conjunction with the fact that a greater or less degree of chronic mastitis is so commonly met with in mammary carcinoma. From this point of view, mammary carcinoma may be brought into line with carcinomata arising on old cicatrices and long-standing ulcers, whether these be simple or lupoid. It is, indeed, remarkable that the only varieties of bacteria which have been found to possess marked skotographic powers are those which pre-eminently affect man, the pyogenic staphylococci, *B. tuberculosis*, *B. diphtheriae*, while man amongst the animal kingdom is so much more commonly affected by carcinoma that it may be termed a pre-eminently human disease. When it is remembered that bacteria—especially pyogenic and tuberculous bacteria—may remain latent for years, when it is remembered that the skotographic action, if not of bacteria, at least of other animal substances, may persist for a period, certainly of months and probably of years, the question arises whether we shall not find the essential cause of carcinoma affecting mamma, cicatrices, old ulcers, directly connected with the bacteria underlying the primary chronic inflammatory condition. If this be so, if the bacteria introduced into the breast, possibly during some lactation period, carry with them by virtue of their skotographic power the cause of a carcinoma which develops years later, we should expect the feebly skotographic bacteria to induce carcinoma later in the individual's life than the far more powerful spermatozoa; we should expect the period of maximal liability to a carcinoma of bacterial origin to be spread over a larger range of

years than one of spermatozoal origin, we should expect a later onset of diminution in liability with a carcinoma of bacterial origin than with one of spermatozoal origin, but in both cases we should expect the liability to cancer to diminish in later life. In a word we should expect to find carcinoma of the breast and carcinoma of the cervix showing just those differences of incidence which they actually manifest.

But if, in the case of the uterus, it is difficult to associate the occurrence of carcinoma with peculiarities on the part of the tissue itself, this is even more difficult in the case of carcinoma affecting that part of the alimentary tract lying between stomach and rectum. A glance at the curves of liability to cancer in these regions drawn up for males and for females shows that in males the liability is not only greater but also that it reaches a maximum some ten years earlier than in females, and persists at that maximum for five years longer. We cannot consider that there is so striking a difference between male and female alimentary tissues as this would indicate in the absence of definite evidence on the point. It is easier to imagine that some factor leading to increased division of epithelial cells is more potent in males than in females during the age-period 50 to 69. It would serve no good purpose to discuss here what that factor may be, but it may be pointed out (a) that Sir J. J. Thomson has shown that certain foodstuffs—namely wheat flour—may be radio-active; (b) I have shown above that many animal substances have properties which may be radio-active, that both definitely recognized radio-active substances, and extracts of animal tissues are able to accelerate cell division in the ova of *Ascaris*; and (c) that, partly as a result of the greater degree to which they are occupied in arduous labour, men consume more food than women.

I have left consideration of the curves obtained for carcinoma of the lip, and of the tongue and other parts of the mouth, to the last because of their great dissimilarity in spite of the similarity of the tissues concerned, and of the identity of most of the conditions to which those tissues are subjected. This dissimilarity of the curves of liability to carcinoma, and particularly the fact that the liability to carcinoma of the lip undergoes no diminution in old age such as is observed in the case of carcinoma in all other sites that we have examined, is strong evidence that some fundamentally different condition obtains in the two situations. The persistency with which the old man clings to his pipe, holding it between his lips, whether actually smoking or not, whether awake or dozing as he sits in the sun or by the fire-side, is as characteristic of the ages above 70 as is the toothless condition which commences to set in about 65. On the assumption that the pipe in some way is directly related to carcinoma of the lip, while the teeth are in some way directly related to carcinoma of the tongue and other parts of the mouth, the curves of liability to this disease in the two situations should be exactly as we find them to be.

It may be urged that the observations I have brought forward are nothing more than evidences of that "chronic irritation" which since the time of Virchow has been held to play an important part in the causation of carcinoma. To this my answer must be that the term "chronic irritation" is meaningless, and only indicates that some common factor exists in a variety of conditions that differ otherwise to the greatest extent. Is it not possible that the common factor, which must be capable of stimulating the growth of certain cells while it depresses the growth of others, which must reside in substances of the widest diversity, which must act with varying intensities in different cases though always with comparative slowness, the natural action of which must be progressive so long as it persists, should be radio-activity? The α rays cause carcinoma, they stimulate (like other radio-active substances) the growth of cells, and, again, they retard the growth of cells, carcinomatous material, non-carcinomatous material, extracts of animal tissue, various substances usually regarded as causally related to carcinoma, possess properties resembling those of recognized radio-active substances to a greater or less degree when considered from the physicist's point of view, and there is evidence that they possess powers of stimulating or depressing the division of animal cells. Such similarities are at least suggestive.

*The freedom of lower animals from carcinoma cervicis, I suggest, is explained by their entirely different sexual habits. Its occurrence in an undoubted virgin would be explicable on the lines sketched in the next paragraph.

At the same time as radio-activity—using that term to cover the properties of other than recognized radio-active substances for the moment—would serve to explain a large number of the salient features of carcinoma as a disease, it would fall in line with other facts that have been made known more recently, and often affords a common ground for views that appear at first sight to be diametrically opposed.

It would fall in line with the observations of Farmer Walker, and Moore on the frequent occurrence of heterotypical and irregular mitoses in malignant new growths, for all observations go to show that the ova of *Ascaris megalocephala* divide with great irregularity when they are exposed to recognized radio-activity, and the same is true when they are exposed to the influence of any of the watery extracts of animal substances that have been mentioned above. It would fall in line with the observations that there is a deficient secretion of pepsin and trypsin in carcinoma, for Colwell and others have shown that the activity of these enzymes is largely diminished when they are exposed to radio-active influence.⁹ It would fall in line with the observation that the erptic power of the tissues in carcinoma cases is not diminished more than in other chronic diseases accompanied by wasting (Colwell¹⁰), for exposure to radio-activity does not affect the erptic power of a tissue extract in the slightest degree. It would fall in line with the fact that certain varieties of carcinoma, notably those which are superficial, are curable by radio-activity; for, as is shown by the cases of diphtheria, typhoid, tetanus, anthrax, rabies, and other microbic diseases, the agent producing the disease is prepotent in elaborating the remedy. It would fall in line with the fact that carcinoma is primarily a disease in which a definite variety of cell—the epithelial—is concerned, for there is evidence that radio-activity has selective powers—for example, in its action upon the specific cells of the testicle and upon the spleen. It would fall into line with the remarkable observations of Ehrlich and Apolant, and of Haaland, that in mice transplantation of one type of tumour may lead, as they believe, to the origination of another type from the tissues of the host, for the cells of a carcinomatous mass are endowed with properties resembling those of recognized radio-active substances in many respects.

On the other hand, it would not be opposed to a belief in "cancer houses and localities," for there is no reason why the soils of districts or the materials of which houses are built should not differ in the degree to which they are radio-active, nor why the local radio-activity should not be in certain instances so considerable that cancer arises in successive inhabitants time after time. In a sense the electrical department of every hospital is a "cancer house." It would not be opposed either to an infective or non-infective, a contagious or non-contagious, an animal or vegetable parasitic, a parasitic or non-parasitic, an hereditary or non-hereditary view of cancer, for it would only be concerned with the question whether the inculcated agent is radio-active or not. So far as certain bacteria possessed the properties we are considering, the carcinoma associated with them might be regarded as bacterial and infective, but the bacterial and infective properties would be accidental and non-essential. So far as the agent which leads to hereditary transmission was provided with "radio-active" properties cancer would be hereditary, but the inheritance of cancer would be accidental and non-essential. Similarly it would be opposed to Cohnheim's theory of embryonic rests, to Virchow's theory of mechanical irritation, to von Hausmann's theory of anaplasia, to Ribbert's theory of tissue tension, to Adam's theory of habit of growth—for it would constitute the underlying force required by each.

There remains the question whether by applying radio-activity we are able to produce carcinoma. To this question I can only reply that numerous experiments have hitherto resulted in failure. I have exposed rats and mice to the action of x rays or to uranium or thorium for months; I have kept a glass tube containing radium in the abdominal cavity of a rabbit for months; I have exposed the ears of rabbits to x rays for prolonged periods and under different circumstances; but, so far, the only cases of carcinoma resulting from exposure to radio-activity are those which have occurred in the human sub-

ject. Yet the experiments I have mentioned have not been without importance, for, as Rowntree¹¹ has shown, the changes in the rat's tail, and even more those in the rabbit's ear, resemble those in human x-ray dermatitis, while there is in certain places a well-marked overgrowth of epithelial cells. In the case of the rabbit's ear, indeed, he finds that the epithelium on the under, or indirectly exposed, surface shows an irregular arrangement of the hypertrophied epithelial cells which appears to be on the border-line between non-malignancy and malignancy. When we can determine that that border-line shall be crossed, one of the greatest steps towards a discovery of the cure for carcinoma will have been made.

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Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

TREATMENT OF VOLVULUS.

THE article by Mr. Waterhouse on volvulus, in the JOURNAL of May 29th, is most valuable, as pointing out that the site is usually the sigmoid flexure, and so almost always remediable by enema in the early stage. I believe his advice would have been more useful to the general practitioner, who treats most of these cases, if he had descended to particulars as to how an enema should be given. It may be that the hint I am about to give is found in various textbooks and periodicals, but in thirty years' reading I have never met with it, and only found it out by painful experience. One case, as a sample, will illustrate my meaning. A farmer, aged 63, fell from a load of hay on to the meadow and got concussion of spine followed by partial paralysis of the lower limbs; a catheter had to be passed for two weeks. During the following three years he suffered from constipation, and at the end of this time I was sent for urgently—a distance of eight miles—to see him. I found him with bowel obstruction; the abdomen was tympanitic and as tight as a drum; breathing was shallow, owing to pressure on the diaphragm, but there was no vomiting nor eructations. I gave enemata in the ordinary way, and after nearly an hour I only removed some small scybala from the lower bowel. It was evident that the obstruction was higher up. I left the patient no better, gave some calomel and opium, and promised to return early in the morning. This I did, taking with me a long tube of soft rubber similar to that used for passing into the stomach. Attaching this to the bone pipe of a Higginson syringe, I gave an enema. The tube when passed through the sphincter is very apt to curl up in the wide or ballooned part of the rectum, and considerable difficulty is often experienced in getting it to enter the upper narrow part, which owing to the curve of the sacrum goes forward at an angle. I pushed the tube as far as it would go, and then, pumping in water under pressure, the bowel dilated in front and I was able to gain an inch or two at a time. Continuing this manoeuvre, the whole 32 in. of the tube were at last passed inside the sphincter. I felt the pumping tension relax, heard a gurgling, but continued pumping for a little longer. I now detached the bone pipe from the tube and allowed the water to come away, when the whole gas followed, the abdomen relaxed, and the patient was well.

I have on different occasions had to supplement the tube by a second, and I advise that the tube be 3 ft. or over. I am persuaded this hint of mine may be of service to some sorely perplexed general practitioners.

Castleberg, co. Tyrone.

ROBERT MOWBRAY, M.D.

Reports of Societies.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE.

Friday, June 18th, 1909.

Sir PATRICK MANSON, K.C.M.G., in the Chair.

The Future of Tropical Medicine.

PROFESSOR RONALD ROSS, as newly-elected President, delivered an address dealing with the future of tropical medicine. The subject, he said, was a wide one, and required comprehensive and philosophic treatment. He would, in the first place, emphasize the desirability of a careful study of the national history and decadence of the kingdoms and empires of the Old World, and the effects which had been exercised on the prosperity or decay of nations by endemic disease. The work of Mr. W. H. Jones and Drs. Ellett and Withington on the influence of malaria on Greek history was known to them all; and it was only a summary of what had occurred in every part of the world. The physical deterioration which was now so prevalent in large tropical cities he believed was due almost entirely to helminthiasis; and there was no reason why the tropics should not produce healthy and vigorous men in the same way that they produced the strongest and finest specimens of life in the animal kingdom. The scientific history of tropical medicine had also to be carefully studied, and he thought that the publication of monographs on special subjects, and of reprints of classical papers, should receive greater attention. He had long insisted that, in the ordinary medical curriculum, parasitology and perhaps medical entomology should be taught. Diplomas issued by qualifying bodies in Great Britain certified that their holders were qualified to practise anywhere, but that claim could scarcely be justified at present. The future of tropical medicine lay to a great extent in the domain of therapeutics, and fuller research in this direction was urgently demanded. In the tropics, as at home, the housing of the poor was another burning question. It had been shown by one or two of the most advanced nations in Europe that it was possible to have cities without slums, and he was hopeful that the future would banish from their eyes the miserable sights which they now saw everywhere in the tropics. Investigation of possible improvements in the present methods of the disposal of sewage and town refuse was also urgently required; and other measures, such as the provision of wholesome water supplies, the management of wells, and the extinction of vermin in the tropics, were pressing and vital necessities. To achieve these objects sanitary organization must be completely remodelled. The present deplorable condition of things was not surprising; it was only fifty years ago that sanitation on scientific lines had been undertaken at home; and in a sense great improvements had already been made in the tropics. But further advances were most urgently demanded, and it was essential that the sanitary services of practically the whole of our tropical colonies and possessions should be thoroughly organized. At the present moment the health departments resembled the units of an army which had no general; and looking at the question merely from the monetary point of view, judicious expenditure on reorganization would pay. Let them not fall into the mistake that discovery, great or small, finished their duty; research was not a mere academical amusement consisting in the publication of elegant articles adorned with coloured plates. They had not only to teach, but to beseech, demand, and command. They were apt to take too haughty a view of their scientific work, to stand above and apart from the throng of men for whom they were working. It was for them to descend, to go personally into the battle, and fight hand to hand in order to save their fellow men from grave and imminent dangers. Sir PATRICK MANSON said that it was true they had not yet got the general public to believe the truths which had been shown to them. The fault was, perhaps, not altogether on one side, and medical men had, he thought, failed to convince, largely from lack of articulate expression and eloquence. Governments had often been blamed for their

deliberation in adopting new and extensive measures of sanitation, but it must not be forgotten that circumspection had been forced on them by the mistakes of sanitary advisers. In India, for instance, millions of public money had been wasted on the supposition that cholera was an airborne disease, and if authorities now believed that the most ambitious schemes did not always mean the most rapid progress, they had abundant precedent to justify them.

ROYAL SOCIETY OF MEDICINE.

SECTION OF DISEASES OF CHILDREN.

Friday, May 28th, 1909.

Mr. R. CLEMENT LUCAS in the Chair.

Tetany and Dilatation of the Colon.

DR. F. LANGMEAD showed a case of facial irritability of fifteen months' duration succeeding tetany in association with dilatation of the large intestine. The patient, a girl, aged 8, was admitted to hospital for tetany in April, 1908. Her facial irritability was pronounced on both sides. No signs of organic nervous disease were found. The colon was dilated. Attacks of laryngismus stridulus occurred. The urine contained indican. The colon was daily washed out, whilst castor oil and salol were given by the mouth. Sauerin, koumiss, and thyroid were also used without effect. The washing out was then discontinued, and energetic treatment with bismuth and opium applied. Enemata and massage were then used for a week with improvement, and after two months she had gained 4 lb. in weight and the tetany and laryngismus had subsided. The massage was continued for three months. The signs of dilatation of the colon then disappeared, but the facial irritability had persisted. A month ago she had another attack of tetany with vomiting. The author also mentioned nine other cases exhibiting relapsing tetany, dilated large intestine, and unhealthy offensive motions, occurring at an age beyond that of the usual infantile tetany. All had died except the patient exhibited. On tapping the cheek of the child an immediate rapid contraction of the muscles on the same side of the face was elicited.

Oxycephaly.

MR. SYDNEY STEPHENSON showed a case of oxycephaly in a boy aged 32 days, admitted to hospital with ulceration of the right cornea. The right eyeball protruded from between the eyelids immediately after birth. Labour was easy. The eye bulged forth whenever the baby screamed or was bathed. The child weighed 5 lb., had a red and wrinkled skin, loud "snuffles," and a slight papular rash on the hands and arms and trunk. The skull was typical of oxycephaly, the frontal region rising steeply and overhanging the face. The cranium was deficient as regards total size and capacity. All the bones and sutures appeared to be present. The eyeballs, especially the right one, were prominent, though they could still be covered with the eyelids. The orbits were clearly deficient in depth. The CHAIRMAN said that those interested in such cases as this might like to know that at the Royal College of Surgeons all the abnormal skulls had been arranged in series by the new Curator, Dr. Keith.

Congenital Dislocation of the Hip.

MR. RALPH THOMPSON read a paper upon congenital dislocation of the hip-joint, and showed a number of specimens in illustration of the points arising. He put forward the view that the changes associated with pressure or static dislocation of the hip were too frequently regarded as primary and as producing the dislocation, whereas in many cases of congenital dislocation no deformity was noticed until the child began to walk, and the deformity occurred in well-developed female children, in whom the mechanical conditions were more likely to produce dislocation at the time of the adoption of an erect attitude than was the case in males. The changes found were a shallow and triangular acetabulum, a small flattened head of the femur with a short and anteverted neck, deficiency in the iliac segment of the acetabulum and hour-glass constriction of capsule, a stretched or absent ligamentum teres and some coxa valga and shortening of the leg below the knee. These conditions could all be explained by considering the mechanics of

the joint in children of 2 to 3 years of age. Mr. HUGH LETT said the theory brought forward was very interesting and important. All who had seen cases of congenital dislocation of the hip must have been struck with the remarkable fact that those children did not appear to have anything wrong until they were 3 or 4 years of age. No accident or anything of the kind had been noticed; simply that the child had perhaps limped ever since she could walk. He would like to consider the paper more carefully before speaking very decidedly about it; but there was very much, from an anatomical point of view, in what had been brought out, particularly in connexion with the fetal pelvis, and the relations of various lines of force in male and female. He believed Mr. Thompson's view would very likely be accepted by very many authorities; and, even if they did not accept it, they were bound to weigh it with very great care before putting it on one side. The CHAIRMAN said he had been accustomed to point out that when a child was not allowed to walk on one of its limbs from any cause, it was not only the thigh which was shortened, but measurements showed that the foot and all the bones of the limb were shortened as a result of the lack of use. He understood from the argument that, as the female was less protected than the male from dislocation of the hip, it was unwise to place the female child on her feet so early as the male child.

Medical Inspection of School Children.

In the course of the evening the following resolution, passed by a committee which was appointed some time ago to consider the matter, was discussed and adopted:

It is desirable that the Board of Education should issue forthwith a complete set of forms for use in the medical inspection of elementary school children, in accordance with Circular No. 582 issued by the Board on January 23rd, 1908, and should issue definite instructions to medical officers as to the manner in which the medical inspection shall be carried out.

Rebelsus.

THE URANIAN.

The Urning and the Carpenter
Were sitting hand in hand;
They wept because Homogeny
Is generally banned;
"If prejudice were swept away,"
They said, "it would be grand!"
"If to abnormal practices
We publicly adhere,
Do you suppose," the Urning sighed,
"The Law might interfere?"
"I dread it," cried the Carpenter,
And shed a sterile tear.

MR. EDWARD CARPENTER is responsible for a slim gilt-edged volume, published at 3s. 6d. net, with all rights reserved, entitled *The Intermediate Sex; a Study of Some Transitional Types of Men and Women*.¹ It is a collection of five articles of his own, plus an appendix, "which the author hopes will prove helpful, though he does not necessarily endorse all the opinions presented." These articles reiterate *ad nauseam* praise and laudation for creatures and customs which are generally regarded as odious. We have been subjected to so many publications of this character since *Psychopathia Sexualis*, *Sexual Inversion*, and kindred works fell into the hands of curious people, that we recognize the form at a glance.

We look for a prefatory apology for each volume by way of explaining that this particular work, at any rate, is published solely in the interests of science. Mr. Carpenter does not disappoint us in this respect; we find on page 9:

The literature of the question . . . has already grown to be very extensive, especially on the Continent, and includes a great quantity of scientific works, medical treatises, literary essays, romances, historical novels, poetry, etc. And it is now generally admitted that some knowledge and enlightened understanding of the subject is greatly needed for the use of certain classes, as, for instance, medical men, teachers, parents, magistrates, judges, and the like.

Whist admitting the unpopularity of the five classes of people Mr. Carpenter has selected as students of his creed

and work, we have sufficient pity for them to attempt to mitigate their punishment by extracting from this book some passages which may suffice to guide each pupil, whether medical man or magistrate, parent or teacher, to an enlightened understanding of the Urnings and Uranianism.

First, then, the derivation of this word "Urning"? Thirty years ago, to be precise, an Austrian writer drew attention to this class of people, amongst whom "the (apparently) masculine person instead of forming a love-unit with a female tended to contract romantic friendships with one of his own sex." So Dr. Ulrichs called the creatures "Urnings" and the custom "Uranianism." This term of endearment amongst foreigners, "Urning," is, we are told, derived quaintly enough from the word *Uranus*; the explanation given is that *Uranos* signifies heaven, the idea being that, according to those who know, "the Uranian love is of a higher order than the ordinary attachment." To avoid any confusion we may here remind our readers that the word "urinal" comes from a different root.

On page 158 of the Appendix we find classification of these eccentrics. (1) *Mannlings*, who tend to love softer and younger specimens of their own sex. (2) *Weiblings*, who love rougher and older men. (3) *Zwischen Urnings*, who love young men, the *Urano-dioning* who is born with a capacity for loving both women and men, and the *Uranianster*, a normal man who has contracted the urning habit.

Krafft-Ebing is cited as insisting upon—

the generally strong sexual equipment of this class of persons, but he hastens to say that their emotional love is also enthusiastic and exalted, and that while bodily congress is desired the special act with which they are vulgarly credited is in most cases repugnant to them.

The Urning loves, defies his male beloved one. For him he is capable of the greatest sacrifice, experiences the torments of unhappiness, often unrequited, love, of faithlessness on his beloved's part, of jealousy, and so forth. His attention is enchained only by the male form. . . . The sight of feminine charms is indifferent to him if not repugnant.

Now we have put before "medical men, teachers, parents, magistrates, judges, and the like," the description Mr. Carpenter gives of these Urnings whose cause he so warmly champions. Most of our readers will prefer to leave them at this point, but since Mr. Carpenter appeals to magistrates and judges, we will cite a few more of his arguments for the defence of those who "form beneath the surface of Society a large class"; for "they suffer severely from the way they are regarded, and in the *manifesto* of a considerable community of such people in Germany, occur the words, 'we are responsive and deeply grateful for the least movement, for every single voice that speaks in our favour in the forum of mankind.'"

We can see Mr. Carpenter holding a pocket-handkerchief before his streaming eyes as he urges us to pity the sorrows of a poor Urning:

To many of them it is a painful thing that in consequence of their peculiar temperament they are, though fond of children, not in the position to found a family.

This appeal *ad misericordiam* may suggest to our magisterial students the plea of the parricide that the court should "pity a poor orphan!" Mr. Carpenter, however, sees a prospect of growing popularity for Urnings from a strictly economic point of view.

Popular opinion has probably been largely influenced by the arbitrary notion that the function of love is limited to child-breding; and that any love not concerned in the propagation of the race must necessarily be of dubious character. And in enforcing this view no doubt the Hebraic and Christian tradition has exercised a powerful influence, dating from far-back times, when the multiplication of the tribe was one of the first duties of its members and one of the first necessities of corporate life. But nowadays, when the need has swung round all the other way, it is not unreasonable to suppose that a similar revolution will take place in people's views of the place and purpose of non-childbearing love.

Those will surely be great days, according to a Swiss writer who is quoted:

Happy indeed is that man who has won a real Urning for his friend; he walks on roses without ever having to fear the thorns.

And then he adds a beautiful touch:

Can there ever be a more perfect sick-nurs: than an Urning?

¹ London: Swan Sonnenschein. Manchester: S. Clarke. 1908. (Cr. 8vo, pp 176. 3s. 6d.)

Mr. Carpenter proceeds to assert that "in the alienation of the sexes from each other, of which complaint is so often made to-day, it must be admitted that Urnings do much to fill the gap," and he goes on to plead that "the love with which we are specially dealing is a very important factor in society, and that its neglect, or its repression, or its vulgar misapprehension may be matters of considerable danger or damage to the commonweal."

That is a passage calculated to disturb the normal mind. But Mr. Carpenter has many shocks and surprises in store for simple folk, for instance:

True Democracy rests more firmly than anywhere else on a sentiment which easily passes the bounds of class and caste, and unites in the closest affection the most estranged ranks of society. It is noticeable how often Uranians of good position and breeding are drawn to rougher types, as of manual labourers, and frequently very permanent alliances grow up in this way, which, although not publicly acknowledged, have a decided influence on social institutions, customs, and political tendencies, and which would have a good deal more influence could they be given a little more scope and recognition. There are cases that I have known (although the ordinary commercial world might hardly believe it) of employers who have managed to attach their workmen, or many of them, very personally to themselves, and whose object in running their businesses was at least as much to provide their employees with a living as themselves; while the latter, feeling this, have responded with their best output. It is possible that something like the guilds and fraternities of the Middle Ages might thus be reconstructed, but on a more intimate and personal basis than in those days; and, indeed, there are not wanting signs that such a reconstruction is actually taking place.

Really, all this is very unsettling, especially when we read that:

Successful love exercises a helpful influence on the Urning. His mental and bodily condition improves, and capacity for work increases.

The passion is, I suppose, so powerful, just because one looks for everything in the loved man—Love, Friendship, Ideal and Sense-satisfaction.

To magistrates and judges we submit the appeal of Mr. Carpenter:

The present state of the Law, both in Germany and Britain—arising as it does partly out of misapprehensions and partly out of the sheer unwillingness of legislators to discuss the question—is really impracticable and unjustifiable. While the Law rightly seeks to prevent acts of violence or public scandal, it is going beyond its province when it attempts to regulate the private and voluntary relations of adult persons to each other. We have said that the homogenic affection is a valuable social force, and, in cases, an indispensable factor of noble human character; yet the Act of 1885 (The Criminal Law Amendment Act) makes almost any familiarity in such cases the possible basis of a criminal charge. Whatever substantial ground the law may have had for previous statutes on this subject—dealing with a specific act—it is surely mistaken in passing so wide-sweeping a condemnation on all relations between male persons (though inconsistently enough making no mention of females). It has undertaken a censorship over private morals (entirely apart from social results) which is beyond its province, and which—even if it were its province—it could not possibly fulfil. It has opened wider than ever before the door to a real, most serious, social evil and crime—that of blackmailing; and it has thrown a shadow over the simplest and most natural expressions of an attachment which may, as we have seen, be of the greatest value in national life.

Mr. Carpenter, however, does not deny "that the homosexual feeling may lead to public abuses of liberty and decency; that it is often improperly indulged; and that much teaching and instruction on the subject is needed."

Mr. Carpenter and his set may, if they please, cherish their grievance against the attitude of the law as to the practices they so warmly advocate; and we would remind them that since England and Germany agree in their condemnation of the cult of Uranus, there are other countries where their society might be welcomed. For instance, how about Tahiti as a health resort? We read:

In the annals of this island are examples of extravagant friendships unsurpassed by the story of Damon and Pythias—in truth much more wonderful—for notwithstanding the devotion to which they led they were frequently entertained at first sight for some stranger from another island.

Surely, however, it would be better for the Urnings to inhabit—we were about to write colonize, but we remember that the chief sadness of their lives is the emphatically non-childbearing essential of their love—some land where their presence might be welcome, and thus serious people in England might be spared the waste of time consumed in reading a low-priced book of no

scientific or literary merit advocating the culture of unnatural and criminal practices, which, while having a pernicious tendency, remains chiefly but not wholly ridiculous. An authority frequently quoted in this book when discussing the criminal side of Uranianism complains "that if familiarities between those of the same sex are made illegal, as immoral, self-abuse ought much more to be so made!"

But we must decline further quotation. The author has definitely unbuttoned himself to any one who likes to pay 3s. 6d. for this book.

HEART DISEASE.

THE small volume, *Graphic Methods in Heart Disease*,² by Dr. JOHN HAY, with an introduction by Dr. JAMES MACKENZIE, printed in clear type, plentifully and well illustrated, has much to recommend it. It contains little or no new matter, but gives a concise account of polygraph work, and is intended to serve as an introduction and guide to those who wish to acquaint themselves with the graphic method. Non-controversial in his style, the writer places before his readers certain facts, with brief interpretations, which are in the main consistent with the views of other workers in the same field in this country. Having outlined the cardiac functions, as now commonly conceived, he gives a summary of Keith's anatomical researches, a detailed description of the new instruments employed clinically and the method of using them, and offers many useful hints to the uninitiated. Normal curves from the jugular veins, apex beat, and other pulsating areas are carefully described. The commoner forms of abnormal cardiac action are exemplified and explained; separate chapters are devoted to "extra-systole" and the "ventricular or nodal form of venous pulse." The eighth chapter acquaints the reader with anomalies of function separately considered. The section allotted to the disturbances of conduction is particularly rich in excellent tracings. The book, ending with a graphic history of a case of mitral stenosis, should fulfil its function—providing a path to the essential facts, and serving as an easy introduction to a subject still in its infancy.

Dr. SCHOTT³ expresses the opinion that the number of heart cases in which direct damage is being done by over-indulgence in athletic exercise is yearly on the increase, and he names cycling as the sport which produces the largest number of such cases. A careful comparison of the effects produced in a healthy individual of 58 years of age, by cycling and walking respectively, showed a marked difference between them in respect of heart dilatation as tested by percussion and x-ray examination. Two points of considerable interest arise out of the perusal of the work before us: First, it confirms the necessity, lately insisted upon by medical officers of schools, for medical examination of all competitors in sports involving great exertion, since latent heart weakness may be wholly unsuspected by the subject of it; and, secondly, it shows that dilatation of the ventricle as seen upon the *post-mortem* table is not an accurate measure of the degree to which the ventricle may have been distended during life. The demonstrable dilatation of the heart of the healthy athlete may often be only temporary, but the corresponding stress upon the weakened heart wall of a less vigorous subject may, and probably often does, lead to a permanent weakening which may have its effect throughout life.

ELECTRICAL INJURIES.

DR. SCHUMACHER, of the University clinic of Zurich, has published a small volume on the subject of accidents brought about through the agency of the electric current.⁴ The work is mainly a clinical study, but it also deals with this important question from the standpoint of medical jurisprudence. It forms an index to the scattered

² Oxford Medical Publications. *Graphic Methods in Heart Disease*. By John Hay, M.D., M.R.C.P., London: H. Frowde, and Hodder and Stoughton, Oxford University Press, 1909. (Pp. 280, 134 pp., 128 figures. 7s. 6d.)

³ *Zeitschrift für die Untersuchung des Herzens und deren Behandlung*. By Dr. Schott of Naumburg. Fourth edition. Wiesbaden: J. F. Bergmann, 1908. (Sup. roy. 8vo, pp. 59, Taf. III, illustrated. 2s. 3d.)

⁴ *Unfälle durch elektrische Stromstärke. Eine klinische und gerichtlich-medizinische Studie*. Von Dr. E. D. Schumacher. Wiesbaden: J. F. Bergmann, 1908. (Sup. roy. 8vo, pp. 82. 2s. 3d.)

literature on the subject in Germany, France, England and Italy; data are gathered from accident assurance companies on the one hand and medical colleges on the other, and a large number of cases are particularized to enforce the points which the author brings forward. The manner in which electrical currents cause death has given rise to contradictory opinions. The author divides the authorities into three groups, quoting d'Arsonval and Kratzer as affirming that death is due to paralysis of the respiratory centres: Tatum, Oliver, and Bolam and others, that it is brought about by stoppage of the heart's action; and Prevost and Battelli, that either explanation may hold good under different sets of circumstances. For his own part he inclines to the belief, which is shared by most British authorities, that death following upon brief contact with, for example, the poles of an alternating current circuit at high pressure is due primarily to heart paralysis. In this work the effects of lightning discharges are not taken into account, the author confining himself to accidents brought about by artificially generated electricity. Particulars are given of 100 cases of persons killed and injured by electrical currents as a consequence of 98 separate mischances within three years. In the considerable majority of these cases the strength of current involved was more than 1,000 volts, but an appreciable number of accidents, with a fair proportion of deaths, were due to smaller currents ranging from 110 to 250 volts. In 57 cases of supposed death the usual methods of resuscitation were applied, but were successful in 8 only. In dealing with the forensic-medical side of the question, the author illustrates the demands which are made upon the expert knowledge of the "Gerichtsarzt"—that is, the public medico-legal officer. Very often the cause of death is doubtful; moreover, the possibility of suicide must be kept in mind. One fatality is instanced which, instead of being caused by the electrical current as was originally supposed, was found to be due to rupture of the spleen. Even when it is clearly established that electrocution has taken place, the "balance of criminality," if any, has yet to be decided. Negligence or ignorance on the part of the victim is responsible for the largest number of electrical accidents, but it is pointed out that among contributing causes must often be set down makeshift apparatus, insufficient illumination, misleading directions from those in authority, and the absence of protective precautions. Alcohol is cited as answerable for many injuries; not senseless drunkenness, but the bravado stage of intoxication. Those who have to deal with the industrial applications of electricity will find valuable information in what the author has to say about contact risks, the conditions that induce accidents, and the assistance that may be rendered when such accidents occur.

THE DICTIONARY OF NATIONAL BIOGRAPHY.

Since we last referred to the reprint of the *Dictionary of National Biography*,⁵ three volumes, XIV, XV, and XVI, have appeared, containing the articles which filled Volumes XL to XLVIII of the original edition. As has already been stated, the text remains unaltered, save for the correction of certain errors and the revision of some of the biographies. In its new form the *Dictionary* occupies about a third of the shelf space, is as clearly printed, and is at least as convenient to consult as in its earlier form. The three volumes under notice carry the names from Myllar (Andrew), a Burgess of Edinburgh, and the first Scottish printer, who flourished 1503-1508, to Robins (Sanderson), an English divine, who in 1851 published a letter to Lord John Russell on the necessity for State education of the people. Volume XIV contains the biographies of Nelson, by Professor Sir J. K. Laughton, of the Napiers, and of many distinguished Irishmen among the O's. In Volume XV will be found the account of the remarkable career of William Petty, who after teaching anatomy in Oxford, and acting as physician-general to the army in Ireland, surveyed the settled lands in that island, became a politician and an authority on economics, and founded the family of which the Marquis of Lansdowne is now the head. Volume XVI contains the biography of the famous

Radcliffe, physician, for a time, to Queen Anne, and the founder of the library which bears his name at Oxford. Each volume is furnished with an alphabetical index of names, and the *Dictionary* is not only a model of what a work of reference should be, but an exceedingly enticing book to that respectable person, the desultory reader.

NOTES ON BOOKS.

A LARGE volume⁶ which has reached our hands gives a full account of the proceedings of the Society of Medicine and Surgery of Bordeaux during the year 1908. Its contents cover a very wide field. The society appears to meet weekly, and the number of papers recorded is upwards of one hundred. Many of the papers are followed by discussions, but, thanks to the brevity typical of French scientific communications, none of them are fatiguing to read.

The appearance of the *Bibliographica Gymnastica Medica*, by Dr. EDGAR F. CYRIAX,⁷ proves, if proof were wanting, that massage and movement now claim a large share of medical attention. To increase its usefulness, the preface and contents page are printed in three languages. It should be useful to all those who wish to refer to previous works on the various branches of gymnastics, massage, and movement cures.

⁵ *Bulletins et mémoires de la Société de Médecine et de Chirurgie de Bordeaux*. Année 1908. Paris: Masson et Cie. Bordeaux: Feret et Fils. 1909. (Roy. 8vo, pp. 552.)

⁶ *Bibliographica Gymnastica Medica*. By Dr. Edgar F. Cyriax. London: Worcholt, Buchdruckerei. 1909. (Royal 8vo, xxi and 162 pages, containing about 4,000 references to works by about 2,500 authors. 4s.)

THE ANNUAL REPORT OF THE MEDICAL OFFICER TO THE LOCAL GOVERNMENT BOARD.

The annual report of the Medical Officer to the Local Government Board (Dr. Newsholme) for the year 1907-8, has recently been issued.

FOOD INSPECTION.

Dr. Buchanan, Chief Inspector of Foods, presents a report on the work done by his subdepartment during the two years 1906-7 and 1907-8. As a result of representations made to the Board, his assistant, Dr. MacFadden, has made investigations regarding the contamination by lead and arsenic of tartaric acid, citric acid, and cream of tartar. A large number of imported samples were examined and the amounts of lead and arsenic present determined. In several instances the results were unsatisfactory, and it appeared that much of the tartaric acid which arrived in British markets had not been prepared with the care which its use as a food ingredient demanded. In these circumstances it seemed desirable that limits of impurity should be established in regard to lead and arsenic which, account being taken of the ways in which the substances in question are consumed, appeared unlikely to be injurious, and that these, if possible, should not impose an unduly severe task on manufacturers. The limits recommended as guides for trade guarantees and analytical practice in dealing with tartaric and citric acids and cream of tartar were $\frac{1}{10}$ grain per pound of lead and $\frac{1}{100}$ grain per pound of arsenic as arsenious oxide. These recommendations were published in March, 1907, and from information subsequently obtained Dr. Buchanan states that they have been found of practical utility by the trades concerned. There has been a considerable increase in the number of samples of tartaric and citric acids and cream of tartar taken under the Sale of Food and Drugs Acts, and action in these cases has in a number of instances been based on the recommendations of the report.

Dr. Hamill, another of Dr. Buchanan's assistants, has inquired into the adulteration and misdescription of vinegar; he found, amongst other practices calling for remedy, that the adulteration of vinegar by the addition of sulphuric acid was still being carried on. Amongst other subjects which have been engaging the attention of the food inspectors are the addition of preservatives, the

⁵ *Dictionary of National Biography*, Edited by S. Lea. Volumes XIV. Myllar-Owen; XV. Owens-Pookrich; and XVI. Pocock-Robins. London: Smith, Elder, and Co. 1902. (Roy. 8vo, Vol. XIV, pp. 1373; Vol. XV, pp. 1552; and Vol. XVI, pp. 1540. 15s. per volume.)

inspection of imported meat foods, and local administration in regard to the wholesomeness of home prepared foods.

VACCINATION.

Of 935,338 births returned to the Board by the several vaccination officers in England and Wales as registered during the year 1906, the number which, at the time the return was made, had been registered as successfully vaccinated was 686,992 (being 73.4 per cent. of the whole), and the number registered as having died unvaccinated was 88,553 (or 9.5 per cent. of the whole). Of the remaining 159,793 children, 2,203 (or 0.2 per cent. of the whole) had been registered as insusceptible of vaccination, 6 as having contracted small-pox, 14,376 (or 1.5 per cent.) as having their vaccination postponed by medical certificate, and 53,828 (or 5.8 per cent.) as children respecting whom certificates of conscientious objection had been received, leaving 89,380 (or 9.6 per cent.) as "removed," "not to be traced," or otherwise unaccounted for. If from the 935,338 births returned by these officers deduction be first made of the deaths that took place before vaccination, it appears that, of the surviving 846,785 children, there were registered at the time of the return 81.1 per cent. as successfully vaccinated, 0.3 per cent. as either insusceptible of vaccination or as having had small-pox, 1.7 per cent. as under medical certificate of postponement, and 6.4 per cent. as children respecting whom certificates of conscientious objection to vaccination had been obtained, leaving 10.6 per cent. as at that time still unaccounted for as regards vaccination.

Regarding alleged insusceptibility to vaccination, Dr. Leslie Thorne Thorne, director of the animal vaccine establishment at Lamb's Conduit Street, reports that during the existence of this establishment 125,566 consecutive primary vaccinations have been performed there without the occurrence of a single instance of so-called insusceptibility to vaccination having been met with by the officers of the establishment.

Referring to the new Government lymph establishment at Hendon, Dr. Newsholme says:

This establishment has been made as perfect as possible in all its arrangements, and provision has been made in it for the production of greatly increased amounts of lymph in times of emergency.

BACTERIA OF SEWER AIR.

Dr. Andrewes has continued his researches on this subject. In his previous report he brought forward evidence to show that, under many ordinary conditions, characteristic sewage bacteria are demonstrable in sewer and drain air. He found that streptococci in sewer air corresponded in character with those of sewage rather than with those of fresh air, and that bacilli of the colon group, though almost absent from fresh air, could be demonstrated in drain air with no great difficulty, and exhibited biological characters which corresponded exactly with the various bacilli of this group present in sewage. In his present report he has conducted further experiments on "the conditions favouring dissociation of faecal bacteria from sewage during its passage through closed channels in a way to render micro-organisms of this class airborne in emanations from sewers and drains." After considering the methods of bacteriological technique most appropriate for his work, he has satisfied himself that the bile-salt neutral-red lactose agar medium devised by McConkey is well fitted for the detection in drain air of sewage bacteria belonging to the *E. coli* group. Giving a constant exposure of one hour, the number of red colonies arising on plates of this medium has been taken as an index of the relative abundance of sewage bacteria in the air, though it does not reveal the actual number of such bacteria in unit volume of air. Numerous control exposures in fresh air have proved uniformly negative as regards the presence of these bacteria. Applying this mode of investigation to the local drain air of a large public institution and of private dwelling, Dr. Andrewes has shown that sewage bacteria can readily be demonstrated in almost any situation, but that their presence is of a markedly intermittent character. In trapped local inspection chambers the intermittence is more conspicuous than in manholes over main drains. In the latter situation, given even slight degrees of splashing or gurgling, such bacteria seem never

wholly absent from the air; but in a local inspection chamber they may be absent for hours at a time. He considers that in the drainage system of a house or institution in ordinary occupation the determining cause of the presence of sewage bacteria in the drain air is droplet contamination due to splashing, though under other conditions of sewage flow the bursting of bubbles or alternate moistening and drying of the walls may also play a part in the sewage contamination of the air. In droplet contamination the droplets are of extremely minute size, probably less than $\frac{1}{1000}$ c.m. Even in the absence of demonstrable air currents, the influence of droplet contamination extends, in lessening degree, for at least 14 ft. in a horizontal direction, and for at least 12 ft. in a vertical direction, from a focus of slight splashing or gurgling. But the effect of any single act of splashing is very transitory, lasting only for a few minutes. The number of sewage bacteria in the air of drains is influenced by the volume of the sewage flow, which determines the degree of splashing. But as regards the content of drain air in faecal bacteria, the more important factor would appear to be the faecal content of the sewage, and the relative number of lactose fermenting coliform bacilli in the drain air bears a direct relation to the abundance of faecal material in the sewage. Dr. Andrewes points out that his experiments do not justify any conclusion on the important question of the degree to which air currents may convey bacteria dissociated from sewage. This is the problem which underlies the whole question of drain and sewer ventilation and the dangers of the escape of drain air into inhabited houses. He further remarks that there is no evidence that the bacteria which he has so far found in drain air are in themselves harmful. Their importance consists in their being an index of sewage contamination.

ACTION OF LEUCOCYTES ON PYOGENIC COCCI.

Drs. Andrewes and Horder have studied in the rabbit the behaviour of the circulating leucocytes towards pyogenic cocci. In experiments in which known numbers of living pyogenic cocci were introduced, in dangerous dose, directly into the circulation of normal rabbits, they were unable to trace more than a rough correspondence between the size of the dose and the duration of life, owing, apparently, to variations in the individual resistance of the animals. Studying the leucocyte counts of the animals thus infected at short intervals (an hour to fifteen minutes or less), they found the leucocytic response to be highly intermittent. They conclude that the reserves of leucocytes in the bone marrow are, in these circumstances, discharged into the circulation not continuously but in temporary gushes; and they point out that it is easy to overlook a high leucocytic count unless observations are carried out at frequent intervals. Animals which die within one or two days exhibit a failure of leucocytosis before death, but animals which survive longer may show a relatively high leucocytosis up to the time of death, owing, the authors think, to the development of a leucoblastic reaction on the part of the bone marrow. The circulatory leucocytosis is essentially due to increase in the polynuclear neutrophile leucocytes.

When pyococcal vaccines were administered subcutaneously in rabbits, the authors were unable to detect any consequent leucocytosis except in cases where the animals had been previously immunized against some form of pyogenic coccus; but when the vaccines were administered intravenously a pronounced leucocytosis at once ensued. If, in such intravenously vaccinated animals, leucocyte counts are made at short intervals (fifteen to twenty minutes), the leucocytosis is always found to present marked oscillations, suggesting that the bone marrow discharges its reserves in intermittent gushes. This condition is identical with that seen when living pyococci are injected into the circulation. There is experimental evidence that the effect of a single moderate or large dose of pyococcal vaccine intravenously administered is to increase the degree of leucocytic response to subsequent dose, and hence probably to infection with living cocci. The leucocytic response to pyococcal vaccines is essentially due to the polynuclear neutrophile leucocytes. There is nothing to show that the increased

leucocytic response seen after vaccination is in any way specific.

Dr. Andrewes, in a special study of the leucocytes in the rabbit's bone marrow, finds that in normal rabbits submitted to intravenous inoculation with fatal doses of *Staphylococcus aureus*, the number of neutrophile cells in the bone marrow is diminished, though not greatly so, in the animals which die of acute septicæmia within forty-eight hours. If, however, the animal survives for four days or more, there is in all cases a marked neutrophile reaction in the marrow, the number of neutrophile cells per c.mm. being doubled or even quadrupled. This defensive reaction on the part of the bone marrow is also excited by intravenous inoculation with vaccines of killed staphylococci. The known relative immunity which attends such treatment is thus shown to have not merely a humoral (or opsonic) basis, but one which is also anatomical and measurable in terms of the number of neutrophile cells per unit volume of marrow. A correspondence seems to exist between the opsonic value of the serum and the degree of neutrophile reaction in the bone marrow. By too large and too frequently repeated doses of staphylococcus vaccine it is possible to induce an abnormal susceptibility to the coccus in question; this susceptibility is associated with a diminution in the leucoblastic reaction, present in the marrow during the earlier stage of the experiment, no less than with a fall in the staphyloposonic index. In the marrows of animals the resistance of which has been raised by vaccine treatment, but which nevertheless succumb to large doses of virulent cocci, exceedingly high neutrophile counts may be obtained. The bone marrow appears to respond to the presence of *Streptococcus pyogenes* in the same way as to *Staphylococcus aureus*.

Dr. Horder records some preliminary observations upon the prophylactic use of coccus vaccine in rabbits, with particular reference to the amount and frequency of the dose, and the relative advantages of subcutaneous and intravenous inoculation.

PROTECTIVE AGENTS IN MENINGOCOCCUS INFECTIONS.

Drs. Horder and Gordon have issued a preliminary report on this subject. They have tested the value of three anti-meningococcus serums for prolonging the life of rabbits. First they had to deal with the preliminary difficulty arising from the fact that enormous doses of meningococcus are necessary in order to kill a rabbit. This drawback they were able to overcome by making the discovery that, instead of employing a large single dose, smaller doses of meningococcus are given at hourly intervals, a much smaller total amount of culture suffices to kill the animal. It was found, moreover, that this serial method of dosage brought about the death of the animals with great regularity. Employing this method as the criterion of injury, they found that the three serums in question exhibited neither prophylactic nor curative effects. Normal horse serum had, however, some slight value in prolonging the rabbit's life. The authors then proceeded to study vaccination with the meningococcus as a protective measure, and found that rabbits treated with vaccines prepared in various ways withstood, in most cases, a dose of meningococcus fatal to control animals. Encouraged by these results the authors vaccinated themselves with killed meningococcus, in order to satisfy themselves that the material was not injurious. Having established this point, Dr. Horder applied the vaccine in the same way to certain children suffering from cerebro-spinal meningitis, and obtained most promising results.

MASTITIS IN COWS.

In continuation of work commenced a year previously, Dr. Savage reports on the bacteria present in 30 cases of mastitis in cows. These 30 cases, together with 6 cases described in last year's report, showed that in 68 per cent. of the total cases streptococci were present, in 16 per cent. staphylococci, in 3 per cent. *B. tuberculosis*, and in 10 per cent. the origin of the mastitis was doubtful, though in the majority of them it was probably attributable to streptococci. In 60 per cent. of the cases of mastitis associated with streptococci the organisms were of a special type, termed by Dr. Savage the "*Streptococcus mastitidis*." In the remaining 20 per cent. other varieties

of streptococci were found which in several instances were pathogenic for rodents. It was observed that streptococci identical with those associated with the inflammation in the diseased quarters of the udder were found in milk from quarters clinically unaffected by inflammatory or other changes.

Dr. Savage also investigated the streptococci present in 15 cases of human sore throat, and found two types to be particularly prevalent, the more frequently occurring of the two being the *Streptococcus anginosus* type of Andrewes and Horder. Inquiring into the capacity of streptococci to produce mastitis in goats, he found that severe mastitis was produced in three goats infected experimentally with streptococci from cases of bovine mastitis and from a case of ulcerated teats; but in six goats inoculated with streptococci isolated from human sore throats no mastitis resulted. Comparing the human and the bovine streptococci, Dr. Savage says:

Morphologically and culturally the two groups are indistinguishable, but they show a wide divergence when their action towards animals is considered. The mastitis type is non-virulent towards mice and other rodents, but possesses in marked degree the power to cause under inflammation in goats. The anginosus type possesses a considerable virulence towards mice, but is unable to originate mastitis in goats. In other words, an essential difference of functional power separates the types.

GAERTNER BACILLI IN THE ANIMAL INTESTINE.

Dr. Savage has made extensive cultural investigations of thirty-four strains of known members of the Gaertner group of bacilli. The majority of them proved to be culturally identical when eighteen different chemical tests were employed, although they were obtained from a variety of sources—namely, from meat poisoning cases, from cases of paratyphoid fever, and from special diseases of rats, mice, pigeons, and calves. Dr. Savage attaches special importance to the chemical tests by salicin, dulcitol, and saccharose, and doubts if organisms ought to be included amongst the pathogenic members of the Gaertner group when they do not respond to these tests in the same manner as the recognized Gaertner bacilli. The author has also examined the intestinal contents of eighteen healthy and three diseased domestic animals. A number of organisms were found which in many cultural respects closely resembled the meat poisoning bacilli and other organisms of the Gaertner group; but all except one of these could be culturally differentiated by the application of the dulcitol, salicin, and saccharose tests. The remaining bacillus was distinguished by its power to ferment glycerine. The organisms resembling the Gaertner group were further differentiated by their failure to agglutinate with the serum of animals immunized by the different types of Gaertner bacilli. Dr. Savage has been unable to find any evidence in support of the view that recognized pathogenic members of the Gaertner group are inhabitants of the normal animal intestine.

MEDICAL AND SURGICAL APPLIANCES.

A Chloride of Ammonium Inhaler.

THE benefits to be obtained from the use of a neutral nascent ammonium chloride vapour in middle-ear deafness are so well established, and have been so widely recognized, that it is a matter for regret to many medical men to have to discontinue ordering this treatment for their patients, owing to the uncertain and often irritating character of the vapour. The "Kloram" inhaler has been designed by Mr. Frank A. Rogers to obviate this drawback. It has further advantages, which may be briefly summarized as follows: It is simple and strong in construction; it has few working parts; the vapour produced is pure and neutral, and can be easily medicated and rendered antiseptic; furthermore, the inhaler is easily managed by the patient, it is self-contained within a case from which it need not be removed when required for use, and in which it can be readily stored when not in use; the directions for charging, using, and cleaning are given in the case, are clear and unmistakable, and everything necessary for a prolonged course of treatment is provided at the moderate and inclusive price of 7s. 6d., which in view of the time and trouble that have evidently been expended in perfecting the apparatus cannot be regarded as unreasonable.

THE INSTITUTE OF PHYSIOLOGY, UNIVERSITY COLLEGE.

THE new Institute of Physiology, an illustrated account of which was given in the JOURNAL of June 12th, was formally opened on Friday, June 18th, by the Right Hon. R. B. Haldane, Secretary of State for War. Professor M. J. M. HILL, Vice-Chancellor of the University of London, presided, and there was a large attendance. The number and splendour of the academic robes gave variety of colour to the scene. Among those present were Lord REAY (Chairman of University College), Lord Cromer, Lord Strathcona, Sir Archibald Geikie (President of the Royal Society), Sir Richard Douglas Powell (President of the Royal College of Physicians), Mr. Henry Morris (President of the Royal College of Surgeons), Sir William Church (President of the Royal Society of Medicine), Dr. H. A. Miers (Principal of the University of London), Sir John Tweedy, Sir Dyce Duckworth, Dr. H. T. Bovey (Rector of the Imperial College of Science), Sir Philip Magnus, M.P., Mr. H. T. Butler, Sir John Batty Tuke, M.P., Sir William Ramsay, Professor Gotch (Oxford), Dr. Gaskell and Professor Langley (Cambridge), Professor Schifer, Professor Verworn (Goettingen), Sir Victor Horsley, Colonel Lockwood, Sir William Gowers, Sir Thomas Barlow, Professor Halliburton, and the Hon. Sydney Holland.

After an introductory speech by Lord REAY,

Mr. HALDANE, who had previously inspected the laboratories, congratulated Professor Starling on having an equipment attached to the Chair of Physiology which put him in the first position in that respect among the universities of the world. He went on to speak of the vast development of university education in this country during the last twenty years. The founding of the University of Wales in 1893 had been followed by the incorporation of the universities of Birmingham, London, Liverpool, Manchester, Leeds, Sheffield, and Bristol. Ireland had now got two more universities; Scotland had always had four. In the United Kingdom there were now eighteen universities. Further, the development of university colleges—Reading, for example—had been very marked; and there had grown up in the last twenty years the great technical colleges. If the nation continued at that pace he should have no fear with regard to the future of the highest kind of education. The present condition of primary education stood in the way of the organization of secondary schools, and until these were organized the universities could not be given their properly defined place. Secondary education was perhaps the most backward in this country, and some of the best-known public schools were the slowest to see the wisdom of adopting leaving certificates and sending their pupils to the universities properly equipped. He hoped that people were waking up to the claims of university colleges. When he read, as he did with great interest, the obituary and testamentary records in the *Times* every day, he was delighted to observe that testators were more prone than they used to be to leave large sums for higher education. He hoped that tendency would grow. Mr. Haldane then declared the new institute open.

A vote of thanks was proposed by the PRESIDENT OF THE ROYAL SOCIETY, seconded by the PRINCIPAL OF THE UNIVERSITY, and supported by Professor STARLING, who spoke on behalf of the staff of the Institute. He referred to the presence of so many leading members of the medical profession and biologists representing the chief universities of the British Empire as well as of the Continent. "Those of our colleagues," he said, "who come from foreign countries to testify to the solidarity of science throughout the world, may perhaps have wondered why we should have invited the Minister of War to open these laboratories, and why this ceremony should be made at the same time an occasion for a military parade. They perhaps had not known that Mr. Haldane, in addition to the responsible position which he holds in the Cabinet, has for many years discharged the self-imposed duties of a Minister for Universities, and that his persistent advocacy of the cause of higher education, is due largely to the great development in university work in England, which has taken place during the last decade; nor are the two roles so ably fulfilled by Mr. Haldane incompatible, for, after all, in this attempt to make voluntary training universal, beginning with the universities, he is teaching an individualistic race the great lesson which has to be learnt by every community

—namely, the lesson of service. That, after all, is the aim of all education; on the learning of that lesson depends the man's future value as a citizen; on our success in inculcating that spirit in the new generation depends the survival or failure of our race. But I would have you see, as Mr. Haldane sees, that this devotion, this spirit of service to a national ideal, is but a phase in the development of the race. The same lesson of service must be learnt before we can hope to grapple successfully with the problems presented to us in our laboratories." "Already," he continued, "throughout the armed camps of Europe we have an ever-increasing body of men who in their laboratories devoted their lives to the service not of their nation alone but of the whole of humanity. It is these men who have honoured us by their presence to-day at the dedication of this home of science, this temple for the service of man. It is these men who, forming now a brotherhood within the nations, are working for the final brotherhood of all nations. That, I take it, is the ultimate goal of the eminent philosopher and statesman who to-day visits us in the guise of a Minister of War, who can see through and beyond the national army which he is creating to that further development which must be the final outcome of his efforts, when civilized man, like the science which is its leader, shall be but one nation, and these battalions but a memory of the playthings of man's childhood." Professor Starling concluded by saying that physiology was a pure science. Those who pursued it had as their immediate object merely the increase of human knowledge. They claimed that this increase was for the good of mankind, however remote the subject of their investigations might seem from the immediate needs of suffering humanity. It was only now and then, as it were, by chance, that their physiological researches resulted in some immediate method of successful treatment of disease. The greater part was the laying of the foundation on which the medicine of to-day and to-morrow must be built, and without which all practice must be pure empiricism. It was upon the medical profession they called to bear witness to the truth of this statement.

INSPECTION OF OFFICERS' TRAINING CORPS.

After the ceremony Mr. Haldane reviewed the University of London Training Corps drawn up in the south quadrangle in front of the institute. He expressed himself as highly pleased with the appearance of the men.

DINNER TO DR. J. F. W. TATHAM.

DR. J. F. W. TATHAM was entertained at dinner at the Grand Hotel, London, on June 17th, on the occasion of his approaching retirement from the position of Superintendent of Statistics, General Register Office, which he has held since 1893.

Sir SHIRLEY MURPHY was in the chair, and amongst those present were the Registrar-General (Sir William Dunbar), Mr. R. Brudenell Carter, Drs. Sidney Coupland, Arthur Newsholme, Franklin Parsons, R. Bruce Low, B. A. Whitelegg, C.B., G. Newman, J. C. McVail, A. K. Chalmers, R. Deane Sweeting, S. Monckton Copeman, F.R.S., Wilfred Fletcher, H. Timbrell Bulstrode, G. S. Buchanan, Squire Sprigge, Colonel Lane Nottet, Colonel Firth, Mr. A. C. Wares, Mr. G. Udney Yule, Lieutenant-Colonel W. Grant Macpherson, C.M.G., Mr. R. O. K. Lempert (representing Dr. W. N. Shaw, F.R.S.), Drs. J. Kerr, W. J. Simpson, Dawson Williams, J. F. J. Sykes, T. Hugh Dickson, F. E. Fremantle, R. Musgrave Craven, G. Millson, Paddock Bate, J. Niven, S. Barwise, W. A. Bond, C. W. F. Young, George Reid, J. M. Martin, Bushell Anningson, A. A. Mussen (representing Dr. E. W. Hops), J. F. Payne, F. J. Allan, T. H. C. Stevenson, Kenneth Goadby, Mr. George King, Mr. George H. Day, together with Drs. W. H. Hamer and Herbert Jones, who acted as secretaries.

The loyal toasts having been honoured, the CHAEMAN proposed "The Health of Dr. Tatham." He spoke of his long connexion with the public health service as Medical Officer of Health of Salford and of the city of Manchester, and referred to his sixteen years in the office of the Registrar-General as the crowning work of his life. Though there might be some persons who would say that they had never heard of Dr. Tatham, every one engaged in public health work had every good reason for knowing how greatly this country was indebted to him.

He had succeeded in office two eminent men in Dr. Farr and Dr. Ogle. Dr. Farr had realized what could be made of the classification of diseases, and had produced a system which was so able that it only required modification in the manner subsequently adopted by Dr. Ogle and Dr. Tatham to bring it into line with modern scientific ideas. This work of the Registrar-General and of Dr. Tatham had, in his opinion, been a very active cause in diminishing the death-rate in this country. The tables that had been published in the reports of the Registrar-General constituted lessons of the very first importance, and there was no doubt that a great deal of light had been thrown on the causes of death among infants by the tables on infantile mortality. When the system of death registration was proposed in the early Seventies it was not intended at first that the cause of death should be included in the information recorded, and the requirement was only inserted by the House of Lords. In 1874 medical certification of the cause of death became compulsory, but prior to that date Dr. Farr had suggested to the Presidents of the Royal Colleges of Physicians and Surgeons and the Master of the Apothecaries Society that medical practitioners should be invited to certify voluntarily as to the cause of death. It might be said that diagnosis was the best guess that could be made in the circumstances, and Dr. Tatham and the Registrar-General had to accept the diagnoses which reached them. In order to clear up doubts in certain cases, the General Register Office had introduced a system of addressing an inquiry to medical practitioners, and as many as 5,000 such letters were sent out each year, involving a large amount of labour, which was, however, well rewarded by the more exact results obtained. Sir Shirley reminded his audience of the important part which Dr. Tatham had taken in instituting the system of interchange of records of infectious diseases, a work which he had to relinquish upon taking up his duties at Somerset House, but which was considered of such importance that it was taken over by the Local Government Board. Great changes had taken place in medical knowledge during the time that Dr. Tatham had been in the General Register Office, but he had been able at all times to place the best medical knowledge at the disposal of the Registrar-General. Outside the actual work of his office, Dr. Tatham had rendered excellent service to the State as chairman of the Statistical Committee of the Cancer Research Fund, and also as a member of the Departmental Committee on Physical Deterioration. Sir Shirley recalled with satisfaction the fact that so many of the responsible positions in the State service were recruited from the public health service, instancing Dr. Newsholme, Dr. Parsons, and Dr. Bruce Low at the Local Government Board, Dr. Whitelegge at the Home Office, and Dr. Newman at the Board of Education. He finally referred to Dr. Tatham as the willing servant of those engaged in public health work, and said that he had always been so ready to render help to all those who asked for it that they had begun to feel that they had a right to it.

Sir WILLIAM DUNBAR said that he had the permission of the Chairman to say how glad he was to be there to show his appreciation of the services to the State which Dr. Tatham had rendered, and also to thank the medical profession for the many ways in which they had helped him. He was in the fortunate position of being able to confirm as few people could all that had been said of Dr. Tatham's work. The seven years he had himself spent at Somerset House had been made appreciably pleasanter and happier because of his association with such an able colleague. He himself was not a statistician, so that it would have been quite impossible for him to have prepared his report on the last census without the assistance of Dr. Tatham. Mr. Noel Humphreys, and Mr. Waters. The declining birth-rate had caused a great deal of concern to many persons whose pessimistic views he did not endorse, and he could never agree with those who thought that England was going downhill.

Dr. TATHAM, in responding, said that he felt he did not owe the honour that had been done him to any merits of his own, but to the general feeling of comradeship that existed between members of the medical profession and himself. Statistics must always, he said, be defective, and to reduce those defects had ever been his first aim. Referring to the certification of the causes of death he said

that the experience of the past sixteen years had led him to form a very high opinion of the care which medical men took in certifying those causes. Greater accuracy had certainly been secured from the replies which were received to the inquiries which were sent out from the Registrar-General's office for the purpose of clearing up doubtful points. Our own statistics, he maintained, would compare most favourably with those of foreign countries. He concluded by expressing the hope that his successor would be as fortunate as he had been in securing the loyal and disinterested support not only of his colleagues in the profession but of all the staff of the Registrar-General's office.

Dr. WHITELEGGE proposed the health of the Chairman, who responded.

MOTOR CARS FOR MEDICAL MEN.

COST OF RUNNING.

VIATOR writes: I agree with Dr. J. Bernard Wall that there must be something "radically wrong" if motor car expenses run up as some of your correspondents state. I have used motors now for more than five years, and find them cheaper than horses, while they are more satisfactory in every way. The expenses are very largely under the control of the owner. If he gets a good car to start with, and carefully studies the book of instructions which most makers supply, and sees that these instructions are really carried out, he will, I think, be surprised to find how low the expenses are. My own experience is that motors have lessened my expenses and increased my receipts.

NESTOR writes: The correspondence on the expenses of a motor car is interesting, and, taken in conjunction with the article on the financial prospects of the profession, I am rather inclined to agree with your original correspondent as to the difficulty of keeping a banking account and running a motor car. Thus a country practice making £900 gross receipts on an average may safely be considered a good practice. I think it is obvious that the stable expenses of such a practice should not exceed £150 a year at the most. Now "P. L. J. 31" gives his annual expenses for an 8-h.p. two-seated Greenglade, including depreciation, as £103 8s. I am sure he has underestimated depreciation, as I cannot believe he would get £100 at the end of five years for a car which originally cost £220. Probably he would get £50.

Again, some of your correspondents mention the necessity of having two cars. I can well imagine it, but the cost would be enormous to most men. In other words, to keep a small car, including depreciation, and adding the wear of a groom-chauffeur, would certainly amount to £150 a year or over. For the same money or less two horses, or perhaps, better still, a horse and a motor-cycle could be kept.

I think it is quite clear that motoring under the most lucky conditions is costly, and that men in practice are evidently increasing their running expenses without any corresponding gain in receipts. And so your original correspondent is not far wrong in his contention that running motor cars (apparently insufficient) is not compatible with keeping a banking account, and this taking a mileage of 6,000 miles a year.

CARS FOR THE TROPICS.

INCORAMUS desires to learn of a good make of motor car (8 h.p.) suitable for Rangoon or Madras, and whether a good second-hand car could be obtained for £100.

THE first annual dinner of the Society of Tropical Medicine and Hygiene was held on June 18th at the Trocadero Restaurant, London, Professor Ronald Ross, C.B., F.R.S., the newly-elected President, being in the chair. A large number of Fellows were present, and also many well-known guests, including Sir Archibald Geikie, President of the Royal Society; Mr. Henry Morris, President of the Royal College of Surgeons; Professor Count Mörner of Sweden, Colonel Seely, D.S.O., M.P., Under Secretary of State for the Colonies; Mr. Ramsay MacDonald, M.P.; Sir Alfred Jones, K.C.V.O., and Sir William Treacher. After the loyal toasts had been drunk, the toast of "The Society" was proposed by Colonel Seely and Sir Alfred Jones, the Chairman responding. In a very interesting speech, Colonel Seely made sympathetic reference to the men who had laid down their lives in the pursuit of tropical research abroad, and also indicated the intense interest the Colonial Office took in the schools and the work they were doing. Sir Alfred Jones spoke as to the progress sanitation had made in Africa, and what had been done to ameliorate the lot of the natives and white people living in these areas. The Britisher, he said, liked to get his twenty shillings for his pound, and by making these places healthier he would get it or more. Sir Patrick Manson proposed the health of the guests, and after responses had been made by Sir Archibald Geikie, Mr. Henry Morris, and Professor Count Mörner, the proceedings were brought to a close by the proposal of the Chairman's health by Mr. Ramsay MacDonald, M.P. The society, though only started two years ago, is now in a very flourishing condition, its Fellows numbering over 320.

EXPERIMENTS ON LIVING ANIMALS.

The return showing the number of experiments on living animals during the year 1908, under licences granted under the Act 39 and 40 Vict., c. 77, has just been issued.

ENGLAND AND SCOTLAND.

Professor Thane's report contains the names of all "registered places." Three new places were registered for the performance of experiments, and three places were removed from the register during the year. All licensees were restricted to the registered place or places specified on their licences, with the exception of those who were permitted to perform inoculation experiments in places other than a "registered place," with the object of studying outbreaks of disease occurring in remote districts or under circumstances rendering it impracticable to perform the experiment in a "registered place." The names of all the persons who held licences during 1908 are given. The total number of licensees was 453. The reports furnished by the licensees show that 126 licensees performed no experiments. The number and nature of the experiments returned by each licensee are also stated. The experiments are, as usual, set forth in a Table (IV), which is divided into two parts—A and B—for the purpose of separating experiments which were performed without anaesthetics from experiments in which anaesthetics were used.

Number of Experiments.

The total number of experiments included in Table IV (A) is 2,851.

Of these there were performed :

Under Licence alone	...	...	...	1,452
" Certificate C ...	...	...	...	156
" Certificate B ...	...	...	...	989
" Certificate B + EE	...	...	...	247
" Certificate F ...	...	...	...	7

Table IV (B) is devoted entirely to inoculations, hypodermic injections, and some few other proceedings, performed without anaesthetics. It includes 85,783 experiments, whereof there were performed :

Under Certificate A ...	...	...	85,121
" Certificate A + E	...	...	460
" Certificate A + F	...	...	202

The total number of experiments was 88,634, being 15,260 more than in 1907; the increase in the number of experiments included in Table IV (A) is 271, and in Table IV (B) 14,989.

The Use of Anaesthetics.

The larger part of the experiments included in Table IV, namely, all performed under licence alone, under Certificate C, and under Certificate F (without A or B), 1,615 in number, come under the provisions of the Act that the animal must be kept under an anaesthetic during the whole of the experiment, and must, if the pain is likely to continue after the effect of the anaesthetic has ceased, or if any serious injury has been inflicted on the animal, be killed before it recovers from the influence of the anaesthetic.

In the experiments performed under Certificate B, or B linked with EE, 1,236 in number, the initial operations are performed under anaesthetics, from the influence of which the animals are allowed to recover. The operations must be performed antiseptically, so that the healing of the wounds shall, as far as possible, take place without pain. If suppuration occurs, the animal must be killed. After the healing of the wounds, the animals are not even generally in pain.

In the event of a subsequent operation being necessary in an experiment performed under Certificate B, or B linked with EE, a condition is attached to the licence requiring all operative procedures to be carried out under anaesthetics of sufficient power to prevent the animal feeling pain; and no observations or stimulations of a character to cause pain are allowed to be made unless the animals are anaesthetized.

In no case has a cutting operation more severe than a superficial venesection been allowed to be performed without anaesthetics.

The experiments included in Table IV (B), 85,783 in number, were all performed without anaesthetics. They were mostly inoculations, but a few were feeding experiments, or the administration of various substances by the

mouth or by inhalation, or the abstraction of blood by puncture or simple venesection. In no instance has a certificate dispensing with the use of anaesthetics been allowed for an experiment involving a serious operation. Inoculations into deep parts, involving a preliminary incision in order to expose the part into which the inoculation is to be made, are required to be performed under anaesthetics.

Professor Thane goes on to say :

It will be seen that the operative procedures in experiments performed under Certificate A, without anaesthetics, are only such as are attended by no considerable, if appreciable, pain. The certificate is, in fact, not required to cover these proceedings, but to allow of the subsequent course of the experiment. The experiment lasts during the whole time from the administration of the drug, or injection, until the animal recovers from the effects, if any, or dies, or is killed, a period possibly extending over several days, or even weeks. The substance administered may give rise to poisoning, or set up a condition of disease, either of which may lead to a fatal termination. To administer to an animal such a poison as diphtheria toxin, for example, or to induce such a disease as tuberculosis, although it may not be accompanied by acute suffering, is held to be a proceeding "calculated to give pain," and therefore experiments of the kind referred to come within the scope of the Act 39 and 40 Vict., c. 77. The Act provides that, unless a special certificate be obtained, the animal must be kept under an anaesthetic during the whole of the experiment; and it is to allow the animal to be kept without an anaesthetic during the time required for the development of the results of the administration that Certificate A is given and allowed in these cases.

It must not be assumed that the animal is in pain during the whole of this time. In cases of prolonged action of an injected substance, even when ending fatally, the animal is generally apparently well, and takes its food as usual, until a short time before death. The state of illness may last only a very few hours, and in some cases it is not observed at all.

In a very large number of the experiments included in Table IV (B) the results are negative, and the animals suffer no inconvenience whatever from the inoculation. These experiments are therefore entirely painless.

In the event of pain ensuing as the result of an inoculation, a condition attached to the licence requires that the animal shall be killed under anaesthetics as soon as the main result of the experiment has been attained.

Explanation of Increase in Experiments.

It is explained that the increase in the number of experiments in Table IV (B), 1908, when compared with that of 1907, namely, 14,989, is mainly due to the 12,500 experiments performed on behalf of the Royal Commission on Sewage Disposal. These experiments consisted in exposing the ova and young of fish to the influence of effluents in different stages of purification and dilution.

During the year 1908, 40,870 experiments were performed at three institutions in the course of cancer investigations. Of these 233 are in Table IV (A), and 40,637 in Table IV (B). The latter were almost entirely inoculations into mice.

Experiments for Government and Public Bodies.

A large number of experiments, almost wholly simple inoculations and similar proceedings, contained in Table IV (B), were performed either on behalf of official bodies, with a view to the preservation of the public health, or directly for the diagnosis and treatment of disease. Several county councils and municipal corporations have their own laboratories in which bacteriological investigations are carried on, including the necessary tests on living animals; and many others have arrangements by which similar observations are made on their behalf in the laboratories of universities, colleges, and other institutions. A sewage farm is registered as a place in which experiments on living animals may be performed in order that the character of the effluent may be tested by its effects on the health of fish. The Board of Agriculture and Fisheries has a laboratory which is registered for the performance of experiments having for their object the detection and study of the diseases of animals. In other places experiments have been made on behalf of the Home Office, the War Office, the Colonial Office, the Local Government Board, the Metropolitan Asylums Board, the Royal Commission on Tuberculosis, the Advisory Committee for Plague Investigation in India, and the Tropical Diseases Committee of the Royal Society. Sixty-six licensees return over 12,000 experiments which were performed for Government Departments, county councils, municipal corporations, or other public health authorities; 2,332 experiments were performed by three licensees for

the Royal Commission on Tuberculosis; and thirteen licensees performed nearly 5,000 experiments for the preparation and testing of antitoxic serums and vaccines, and for the testing and standardizing of drugs.

Inspections.

During the year the usual inspections of registered places were made by Professor Thane and by Sir James Russell. They saw numerous animals under experiment, both of those coming into Table IV (A) and of those coming into Table IV (B); they everywhere found the animals suitably lodged and well cared for, and the licensees attentive to the requirements of the Act, as well as to the conditions appended to their licences by the Secretary of State.

Irregularities.

The irregularities which occurred during the year were few, and all arose from misunderstanding or inadvertence with respect to the extent or application of certificates. They were as follows:

One licensee performed 186 inoculation experiments in excess of the number for which the Certificate A had been given.

One licensee performed feeding experiments on seven puppies, one kitten, and two rodents without obtaining the necessary Certificate A (E).

One licensee exceeded the terms of his certificate, which authorized the abstraction of small quantities of blood, by bleeding to a considerable amount.

One licensee who held Certificate B, authorizing exposure to x rays and the application of heat to the skin under anaesthetics, carried out these procedures without an anaesthetic.

Two licensees holding Certificate A, authorizing experiments without anaesthetics, performed feeding experiments which were not indicated in their certificates.

By direction of the Secretary of State a suitable admonition was addressed to each of these licensees.

IRELAND.

Sir W. Thornley Stoker reports that in 1908 there were in Ireland fifteen registered places; in three of them no person was licensed to perform experiments during the year 1908. Twenty licensees were in force during the year, of which thirteen were in existence at the beginning of the year, and seven were new licences issued during the year.

Number of Experiments.

The experiments performed were 390 in number; 42 under licence alone, and 348 under certificates. Sixteen licensees performed experiments. Twenty licensees held 37 certificates, of whom 14 performed experiments, namely:

Under Certificate A	...	...	...	322
" Certificate C	...	...	...	21
" Certificate E + A	...	...	...	2
" Certificate E + B	...	...	...	1
" Certificate F	...	...	...	2

Animals Used.

The animals experimented on were as follows: Guinea-pigs, 208; mice, 113; rabbits, 38; dogs, 15; cats, 3; sheep, 3; cattle, 3; fowl, 3; horses, 2; goat, 1; rat, 1.

Nature of Experiments.

The experiments were very various, and included studies of the mechanism of respiration, blood pressure, and cardiography. The differentiation of various forms of blood stains, the diagnosis of cattle diseases, the consideration of questions concerning food poisoning, of typhoid fever, of the actions of various drugs on the heart and blood, of tuberculous milk, of the action of the vagus nerve, of the diagnosis of urinary diseases, were all matters considered. The study of meningeal cocci, of gland secretion, of the etiology of pulmonary tuberculosis, and cerebro-spinal meningitis of the epidemic form, were also subjects of investigation.

No Abuse.

The work done in Ireland under the Act was, in the inspector's opinion, free from abuse, and was sincere and well intentioned. The increase in the number of licensees and of their experiments is to be attributed to the study of new investigations and treatments of disease by means of antitoxins, serums, and vaccines. This branch of physiological and pathological work, says the inspector, is of great value and importance, is unattended by more than very slight pain, and promises even greater results in the future than it has achieved in the past.

THE ROYAL COMMISSION ON THE POOR LAW AND THE RELIEF OF DISTRESS.

INFANT MORTALITY IN WORKHOUSES.

It is a somewhat unusual thing for a Government Department to issue a memorandum finding fault with the statistics and deductions given in a report by a Royal Commission, but a few weeks ago the Local Government Board issued to Parliament a memorandum distinctly controverting the statistics about infant mortality in workhouses given by the Minority Report of the Poor Law Commission. Sufficient time has now elapsed, but the only reply, by one of the signatories to the Minority Report, has been a reiteration of the statistics and the deductions from them. There has been no attempt to deal with the fundamental objections of the Local Government Board against the reliability of the statistics, and it would seem as if the force of these objections and the seriousness of issuing figures which are open to the charge of being misleading was hardly realized. The seriousness of the matter is all the greater because the figures and the method of argument adopted by the Minority Report would involve a charge against not only the workhouses, but against some of the best conducted maternity hospitals of the metropolis. This may not have been intended, but it is a logical deduction. It would therefore seem to be necessary again to emphasize in an elementary way the contention of the Local Government Board that the statistics on infant mortality given by the Minority Report are quite unreliable, and from their very nature give no warrant by themselves for the conclusions drawn from them.

It is not necessary again to quote at length from the Minority Report, as this has already been done in the issue of the JOURNAL for February 27th, pp. 546-8, to which and to the report itself reference should be made, but a brief summary may be convenient. It appears that something like 11,000 children are born every year in the workhouses of England and Wales, and a member of the Commission was able to get some information from 450 workhouses in which 8,483 infants were born in 1907. We are told that "out of these 8,483 infants no fewer than 1,050 actually died on the premises before attaining one year." This is about 123 per 1,000, but of course this figure is quite useless for so floating a population, and in order to get statistics that it was thought might be compared with statistics given by the Registrar-General for the whole population, the Minority Commissioners hit on the extraordinary and fallacious device of assuming "that those who left the workhouse within the year had a death-rate equal to those remaining in the institution," and having made this assumption they conclude as follows:

The result appears to us somewhat startling. The infantile mortality in the population as a whole, exposed to all the dangers of inadequate medical attendance and nursing, lack of sufficient food, warmth, and care, and parental ignorance and neglect, is admittedly excessive. The corresponding mortality among the infants in the Poor Law institutions, where all these dangers may be supposed to be absent, is between two and three times as great. Out of every 1,000 babies born in the population at large, 25 die within a week, and 132 are dead by the end of the first year. For every 1,000 children born in the Poor Law institutions 40 or 45 die within a week, and, assuming the mortality among those who are discharged to be the same as those remaining, no fewer than 268 or 392 will be found to have died by the end of the year, the number varying according to whether we take the experience of the Poor Law institutions for legitimates or for illegitimates in the metropolis or elsewhere.

Now it is evident that while accurate figures are obtainable for the first week or two, as all the infants remain on the premises for about that time, the figures for the annual mortality are, on the other hand, on quite a different footing, depending on an assumption that is open to question. Separate consideration is therefore needed.

Taking the annual figures then first, we are told that "more than half the mothers discharged themselves within a month, one-eighth of them indeed within a fortnight." Others of course may be assumed to have taken their discharge at varying times within the year, so that comparatively few would remain for the whole year. Further, it is practically certain that infants' ailing from

birth would be retained in the workhouse, while the strong mothers with their strong infants would be more likely to take their discharge. Thus the workhouse would retain most of the bad lives and discharge most of the good lives. Again, of the healthy infants discharged into good homes, only few would be readmitted to the workhouse; their death-rate would be low, and it is altogether unwarrantable to assume without reason that their death-rate is equal to that of those retained in the workhouse. On the other hand, many of the infants discharged would be taken to the worst of slum homes where they would be badly clothed, badly nursed, and badly fed, and when their health had been ruined and their death practically determined by conditions *altogether outside the workhouse* many of them would be returned to the workhouse when it was too late to save them. In this way, then, the workhouse would be not simply a maternity home or an ordinary nursing home, but also a sort of hospital for incurables, whose death-rate is almost beyond control. In addition to all this, the general type and character of the parents is such that we might naturally expect that the death-rate of the infants would be high, however efficient the workhouse might be. In the House of Commons recently Mr. Burns said, "It ought to be remembered that many of the mothers of the children born in workhouses had been cruelly beaten, overworked, and badly treated generally before their admission, and the offspring of such mothers could not be expected to be as healthy as children who were differently placed." The report itself acknowledges this in quoting the words of an inspector describing the character of the mothers:

Poor girls refused the shelter of their own homes in time of trouble; syphilitic patients; women who have been knocked about, neglected, and ill-treated up to the last minute; cases actually in labour when admitted; in time, all sorts and conditions of poor women, who have nowhere else to go, find their way to the Poor Law maternity wards.

And yet, though the report acknowledges this and admits the shortcomings of its statistics, it still harps on the death-rate as if the workhouses were responsible for it. The report further compares the annual infant mortality of 10 workhouses in which 493 infants were born with another 10 in which 333 were born. In the first 10 the annual infant mortality was 30 per 1,000, and in the second 10 it was 330 per 1,000. It is implied here that the first ten were models of maternity and nursing homes, and that the second ten, having a mortality eleven times as high, must have been everything that is bad. But nothing of the sort is proved by the figures alone; they are open to the same fallacies as are noted above, and, in addition, the varying character of the contributory population is ignored. As the Local Government Board points out, very different results may, to take an extreme example, be expected in workhouses where healthy farm servants are the inmates from those where only slum dwellers are dealt with. Common fairness of debate ought to have prevented the use of statistics which are inherently so unreliable and misleading. To bolster up even a good case with arguments which might catch the unthinking but the fallaciousness of which is obvious on the slightest examination, is apt to throw some suspicion on the whole case, which may be undeserved.

Again, dealing with the deaths that occur within the first week or two after confinement, we are told that while in the general population 25 out of every 1,000 born die within a week, in the workhouses 40 to 45 die. This is confirmed by figures furnished by the Local Government Board for the whole of the metropolitan Poor Law institutions, which show that the infant mortality during the first week is 42.2 per 1,000 births, which is nearly double the corresponding rate for the general population of London. But a totally different complexion is put on the figures from what the Minority Report implies when the causes of the deaths during the first week are examined. The Local Government Board finds that over 50 per cent. of the deaths are due to premature birth, 41 per cent. to congenital defects, atrophy, debility, marasmus, and inanition, 2.6 per cent. to congenital syphilis, 3.5 per cent. to difficult labour and asphyxia, and 1.8 per cent. to convulsions—all causes mostly due to prenatal and maternal conditions entirely independent and unconnected with the workhouses. In other words, it is the character of the

material that is at fault, not either the ability or the care bestowed on it in the workhouses. In the second week of life the death-rate was actually slightly lower in the workhouses than in the general population; but even so early as this the numbers remaining in the workhouses were becoming too small for any trustworthy statistics to be based on them, as half the children leave the institutions within three weeks of birth. After that time the deaths include a proportion of infants readmitted after being exposed to all sorts of injurious conditions outside the workhouses.

The Minority Report points to the Plaistow Maternity Charity, which deals with women in their own homes in West Ham, and has an infant mortality of only 15.3 per 1,000 births in the first fortnight, while the four large voluntary maternity hospitals in London have an average rate of 30 per 1,000, and the Poor Law institutions of the metropolis a rate of 46 to 47. If the Minority argument is of any value it would show that the Plaistow nurses are able to manage better in the wretched slum houses of West Ham than in the well-equipped voluntary hospitals, with all their appliances and competent attendance. But, of course, nothing of the kind is proved by the figures. The different results may be explained by the different character of the patients, and no comparison of figures is of the slightest value. Labours conducted in the patients' homes will be mostly normal, while the hospitals get the most dangerous cases where the infants are most likely to suffer. Of so little value are such numerical comparisons that it may easily be the case that a hospital with a death-rate of 50 may really be better managed and more efficient than another with a death-rate of only 10, or, to take a concrete case, it by no means follows that the General Lying-in Hospital, which has an infant death-rate of 59 per 1,000 in the first fortnight, is worse conducted than the City of London Lying-in Hospital, where the death-rate is only 20.4. If the number of patients be small and the nature of the cases be not taken into account, the fallacy of any figures ought to be obvious, and to say that "it cannot be right that there should be workhouses in which 40 per cent. of the babies die within the year" is a statement that shows an utter failure to grasp the significance of varying conditions. Such a death-rate is deplorable, but it may not be the fault of the workhouses at all.

These remarks must not be taken to denote any desire to palliate or excuse any bad management of either lying-in wards or nurseries. Their only object is to point out that the extraneous conditions vary so immensely, not only in different workhouses, but in the same workhouse at different times, that it is practically impossible to frame any statistics that can be fairly comparable with one another, and the demand for such statistics by the "State Children's Association" cannot be gratified. There may be perfect management with high death-rate, and bad management with low death-rate. The only test of efficiency is careful inspection by competent experts. Numerous witnesses whose ability to judge is unquestioned have testified that the management in some workhouses is lamentably bad both in lying-in wards and nurseries, and it is a matter for satisfaction that Mr. Burns has assured the House of Commons that special investigations were being made by the medical department of the Local Government Board, and that a report would be issued. Meanwhile, when Dr. Downes and Dr. McVail testify to the "admirable work and the extraordinary success" of some workhouses in their maternity wards and nurseries, it is not fair to assume for one moment that they are attempting to whitewash the faults of others. Nothing will ever be gained by exaggeration. It is indeed an open question whether the wholesale condemnation of the lying-in wards and nurseries may not have the apparent effect of raising their death-rates by deterring poor women of good character from entering, while the prostitutes and women of the worst classes whose babies are more likely to die, will enter as freely as ever. The workhouse already attracts the class that it ought to repel, and repels the class that it might benefit. One would imagine that the Poor Law is deterrent enough already without making it still more deterrent to decent poor women. But perhaps it is thought that it will help the crusade against workhouses.

THE DARWIN CENTENARY AT CAMBRIDGE.

The centenary of the birth of Charles Darwin has been celebrated this week with much ceremony at Cambridge. Darwin was born on February 12th, 1809, and an article on his early career and his relation to medicine appeared in the *JOURNAL* of February 13th; we need not dwell further on the subject here. Two hundred and thirty-five universities, 167 of which are foreign or colonial, sent delegates to do honour to the memory of one of Cambridge's greatest sons.

Medical Delegates.

Among the delegates were many members of the medical profession. Among the representatives of British medical bodies were the President of the Royal College of Surgeons of England; Dr. A. J. Horne, President of the Royal College of Physicians of Ireland; Dr. W. A. Jamieson, President of the Royal College of Physicians of Edinburgh. The Royal College of Physicians of London was represented by Dr. Norman Moore. Among the delegates of the University of Oxford was Professor Gatch. The University of Edinburgh was represented by its Principal, Sir William Turner; that of Glasgow by its Principal, Sir Donald MacAlister; that of Aberdeen by Professor Trail, M.D. Among the French delegates were Professor Le Dantec, of Paris, and Dr. Metchnikoff, of the Pasteur Institute; among the German were Professor Waldeyer, of Berlin. Professor Max Verworn, of Goettingen. The University of Melbourne was represented by Dr. C. J. Martin, Director of the Lister Institute; the University of Toronto by Professor T. G. Brodie.

Publications.

Some interesting literature has appeared in connexion with the Centenary. The *Order of the Proceedings at the Darwin Celebration held at Cambridge, June 22-June 24, 1909*, printed at the Cambridge University Press, contains a fine photograph of the author of *The Origin of the Species*, as he was in 1881, and another photograph taken in 1849. There is an interesting sketch of his life, with photographs of persons and places connected with him, such as John Stevens Henslow, who may be said to have launched him on his career as a naturalist, Sir Joseph Dalton Hooker, Mrs. Darwin, Darwin's birthplace at Shrewsbury, his rooms in Christ's College, his house at Down in Kent, and H.M.S. *Beagle*, in which he made his memorable voyage.

The *Christ's College Magazine* has issued a Darwin Centenary Number, which contains a large amount of interesting matter about Darwin's Shrewsbury days; Darwin at Cambridge and at Edinburgh; Christ's College in the days preceding his entry; letters from him to A. R. Wallace; and a list of plants named after him.

A publication of special interest is *The Foundations of the Origin of Species*, a sketch written in 1842, and edited by his son, Mr. Francis Darwin, who contributed an introduction in which the evolution of his father's thought is traced. It is printed at the Cambridge University Press.

Address of the President of the Royal College of Surgeons of England.

The following address was presented by Mr. HENRY MORRIS, in the name of the Royal College of Surgeons of England, of which he is President. We are happy to be able to print it in full, as it is particularly interesting to members of the medical profession:

The Council, Fellows, and Members of the Royal College of Surgeons of England experience in a very special degree a deep sense of gratification in having been honoured by an invitation to send a delegate to the Commemoration by your university of the centenary of Charles Darwin's birth and the fiftieth anniversary of the publication of his great epoch-making work *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*.

We feel a peculiar, indeed an almost personal and certainly a professional, pride in taking part with your great commonwealth of learning and knowledge as a whole, and with Christ's College, and the Faculty of Natural Sciences in particular, in this In Memoriam celebration of one who in so conspicuous and brilliant a manner added lustre to this great and ancient university.

The numerous, and intimate personal, and family associations of Charles Darwin with the University of

Cambridge are equalled by similar connexions with the profession of medicine. We are mindful that his grandfather, the celebrated scientist and poet, Dr. Erasmus Darwin, was a physician at Litchfield, and afterwards at Derby; that his father was a very successful medical practitioner at Shrewsbury; that his only brother was a Bachelor of Medicine of Cambridge, and that his paternal uncle and he himself were intended for the medical profession, and actually studied physic at the University of Edinburgh.

The sciences to which Charles Darwin devoted his life and on which he built his great generalizations are, some of them, ancillary to medicine, and, as developed and interpreted by him, they transfigured many of the doctrines and classification of disease, illumined with new conceptions pathology as well as biology, and opened up fresh avenues of thought, and new pathways of investigation, leading to a more correct and scientific knowledge and practice of the resources of surgery.

To the museum of our college Charles Darwin presented about thirty valuable specimens of fossil mammalia collected by him during the voyage of the *Beagle*, a fact which may not be generally known.

To the students of medicine as well as to the students of general biology Darwin has left on record a caution of the utmost importance, and at no period more than at the present time have they had greater need to be reminded of it. He tells in his autobiographical recollections how his neglect of dissecting when a student in Edinburgh "proved one of the greatest evils of his life"; how the anatomical knowledge and aptitude he would have gained by the practice of dissection would have been invaluable for all his future work; and how the want of these and his incapacity to draw had been an "irremediable evil," and that "a great pile of manuscript" which he had made during the voyage of the *Beagle* had in consequence "proved almost useless."

Charles Darwin esteemed it a high honour to have been elected an honorary member of the Royal Medical Society of Edinburgh, and an original honorary member of the Physiological Society which was founded in London in 1876. By his efforts to forward legislation on the question of vivisection, by his private communications to physiologists and others, and by his letters to the editor of the *Times* "on the right of experimenting on living animals" he showed the righteousness as well as the wisdom of his judgement by denouncing the practice of vivisection for "mere damnable and detestable curiosity," whilst he endeavoured to obtain "justice to science," and gave proof of his willingness to bear his "share of the abuse poured in so atrocious a manner on all physiologists." Though, in his own words, "Hippocrates had taken the wind out of my sails," though when informed of the views on pangenesis of this philosopher of antiquity Charles Darwin admitted they seemed almost identical with his own, and although theories somewhat akin to those of the *Origin of Species* had been advanced by Buffon, Lamarck, and Erasmus Darwin, and the principle of natural selection had been enunciated by Dr. Wells and Mr. Matthews, yet the central hypothesis of the *Origin of Species* came in 1859 as a revelation to the historians of scientific ideas as well as to all the biological specialists then living. Charles Darwin knew that he was regarded as "the greatest revolutionist in natural history of that if not of all centuries," and he naturally yearned for some half-dozen great and sound scientists to accept his views, for then he would have no fear of their ultimate success.

And whose were the opinions he most especially valued and "longed to learn"? They were those of J. D. Hooker, Charles Lyell, Huxley, Richard Owen, W. B. Carpenter, Milne-Edwards, and Asa Gray, every one of whom, except Sir Charles Lyell, had received a medical education, and was the holder of a medical degree, or other medical qualification. Two of them, Huxley and Owen, had been intimately associated with the Royal College of Surgeons of England—Huxley as a member of the college and Hunterian Professor, and Owen as a member and Fellow of the college and Hunterian Professor and Conservator of the Hunterian Museum for many years. Hooper and Huxley were the most sympathetic exponents and staunchest champions of the Darwinian principles, and if Owen never actually expressed a definite opinion of Darwinism, he at least inclined to the theory of "natural

selection," and conduced to the writing of a letter in which Charles Darwin evinced a candour, a modesty, a tolerance of disagreement, and an indifference to the claims of priority which so supremely characterized him throughout his whole scientific career.

It is interesting to us who are connected with the College of Surgeons to recall that in 1859 Owen delivered the Rede lecture at Cambridge—his subject being the classification of mammalia—and that he then received the degree LL.D., thus becoming the recipient of the first honorary degree ever conferred by this university. Also, in the same year, the remains of John Hunter, the great founder of scientific surgery, the fruits of whose labours will for all time be the chief glory of our college, were removed from the vaults of St. Martin's-in-the-Fields to Westminster Abbey. If, instead of the reinterment of the body—lifeless for sixty-six years—Hunter could have been restored to life in this world, it is only reasonable to conclude, from the opinions expressed in several of his writings, that he would have greeted the *Origin of Species* with great delight, and would have given it the readiest and fullest acceptance.

For these, amongst other more general reasons, does our college, with special zest and gladness, beg to offer to the university our best wishes for the success of these memorial ceremonies, and to thank her for affording us the pleasure and satisfaction of joining with the representatives of the liberal arts and sciences from all parts of the world in this tribute of honour to the name and fame of one of her most illustrious sons.

THE

THERAPEUTIC APPLICATIONS OF RADIUM: METHODS AND RESULTS.

TREATMENT OF INOPERABLE CANCERS BY RADIUM.

Our Paris Correspondent writes that at the last meeting of the Académie de Médecine Dr. Dominici made a communication on the results he had obtained in the treatment of deep-seated inoperable cancers by radium, used in a hollow apparatus containing the pure radium salt, the radiations from which were filtered through a sheath of a dense metal such as gold or silver. This apparatus was inserted into the mass of the cancerous tissues. Dr. Dominici reported the following results:

1. The disappearance of a malignant tumour of the parotid, a lymphadenoma treated in the wards of Dr. Bazy, by the introduction into the substance of the tumour of an apparatus containing 5 mg. of pure radium bromide enclosed in a gold cylinder, the wall of which was $\frac{1}{16}$ mm. thick. The apparent cure had lasted for six months.

2. The amelioration of an inoperable sarcoma of the neck, treated in the wards of Dr. Regnier by the introduction into the mass of the tumour of a silver apparatus $\frac{1}{16}$ mm. thick, the cavity of which contained 5 cg. of pure radium bromide. The sarcoma had decreased in volume and become mobile enough to allow M. Chiffoleau, assistant to Dr. Regnier, to remove the tumour surgically, which had till then been impossible.

3. The disappearance of a cancer of the parotid (epithelioma) treated by the same method in the wards of Dr. Schwartz.

Other malignant tumours, of different kinds and in various situations, treated in the wards of Drs. Segond, Tuffier, and Piqué, had been ameliorated. Dr. Dominici did not consider as definitely cured even those tumours which had disappeared for several months, for metastasis might have occurred and the fear of recurrence was still present; but the observations showed that (1) inoperable tumours had been rendered operable, and that (2) general disorders and the local lesions of patients with tumours in the presence of which the surgeon was powerless had been suppressed or greatly attenuated.

THE twenty-ninth annual meeting of the Ontario Medical Association was held in Toronto on June 1st, 2nd, and 3rd. There was a large attendance, and a number of valuable papers were read, among others one by Dr. Deaver, of Philadelphia, on Diffuse Peritonitis, which aroused a good deal of discussion, the point in dispute being the advisability of the author's method of mapping the infected peritoneum. Dr. L. Emmett Holt read a paper on Results of the Serum Treatment of Cerebro-spinal Meningitis, with report of some 700 cases. Dr. Osler gave the address on Medicine; a Philosophical Study of the Practice of Medicine.

BRITISH MEDICAL BENEVOLENT FUND.

At the June meeting of the committee fifteen cases were considered and grants amounting to £129 made to twelve of the applicants, two cases being passed over and one postponed for further inquiry. Dr. F. G. Crookshank was appointed honorary local secretary at Barnes and Dr. C. E. Solomon an additional local secretary at Liverpool. Appended is an abstract of the cases relieved:

1. M.R.C.S., L.R.C.P., aged 38. Has had a small country practice, but for the last eight months has been incapacitated by general paralysis of the insane, and is now confined in an asylum. Small savings have been quite exhausted by providing a locum tenens and by unavoidable expenses of the illness, and so far it has not been possible to sell the practice. Two children, the younger only a few months old. Voted £10 to the wife.

2. Daughter, aged 53, of late M.R.C.S., L.S.A. No income; health too indifferent to undertake laborious or continuous work, but obtains a light post as companion when able to do so. Relieved three times, £30. Voted £10.

3. Daughter, aged 58, of late L.S.A. No income; has supported herself as housekeeper or companion for the last fourteen years, but is now incapacitated by locomotor ataxia. Voted £12.

4. Widow, aged 63, of M.D. Edin. Quite unprovided for at husband's death eighteen months ago, and endeavours to make a living by letting lodgings. Is allowed a few shillings a week by some distant relations. Voted £6.

5. Widow, aged 90, of F.R.C.S. Since husband's death has been living on the proceeds of the sale of furniture, and now receives an old age pension. No children; is quite blind. Voted £18.

6. Daughter, aged 52, of late L.R.C.P. Edin., L.S.A. Unable to earn a living on account of heart disease and defective eyesight, and is dependent on two sisters, who have to support themselves, and can ill afford to help. Relieved four times, £36. Voted £10.

7. Daughter, aged 60, of late M.R.C.S., L.S.A. Has a pension of £14 a year from the Admiralty and receives a little help from Lloyd's Patriotic Fund. Relieved twelve times, £70. Voted £5.

8. Daughter, aged 62, of late M.R.C.S., L.S.A. No income, and being mentally deficient, is dependent on a relation who can only help with difficulty. Relieved three times, £36. Voted £12.

9. Widow, aged 62, of L.R.C.P., L.R.C.S. Edin. Since being left a widow, nearly fifteen years ago, has supported herself by taking lodgers, but finds the necessary work increasingly difficult. Two children, one just self-supporting, the other still at school. Relieved twice, £24. Voted £12.

10. Widow, aged 31, of L.S.A. No income; endeavours to maintain herself by nursing, but has been incapacitated during the last three months by acute rheumatism, and is told that a rest is absolutely essential before taking further cases. Three children, 10 to 3. Relieved twice, £15. Voted £10.

11. Widow, aged 58, of L.R.C.P., L.R.C.S. Irel. Since husband's death has endeavoured to support herself by maternity nursing, but is now nearly blind. Relieved fifteen times, £137. No children. Voted £12.

12. Widow, aged 59, of M.D. St. Andrews. No income; slight occasional help from children. Lets lodgings, but has been obliged to part with some of her furniture to make both ends meet. Relieved five times, £60. Voted £12.

Contributions may be sent to the Honorary Treasurer, Dr. Samuel West, 15, Wimpole Street, London, W.

LITERARY NOTES.

We are informed by Professor Dr. Pilcz, of Vienna, that the official general report of the Third International Congress on the Nursing of the Insane will be published in July. A copy will be sent to each member of the Congress. Non-members may obtain the report from C. Marhold, Halle.

The first number of a new medical journal entitled *Heart*, dealing exclusively with the circulatory system, will be issued early in July. The aim of the journal is to further the progress of knowledge of the mechanism by which the blood circulates in health and disease. The editor is Dr. Thomas Lewis, who will be aided in the selection of papers by Dr. W. H. Gaskell, Professor A. R. Cushny, Dr. J. Mackenzie, Professor A. W. Hewlett (Ann Arbor), and Professor G. N. Stewart (Cleveland). Among the collaborators are Sir T. Clifford Allbutt, Professor Rose Bradford, Sir Lauder Brunton, Dr. G. A. Gibson, Professor F. Gotch, Dr. T. W. Griffith, Dr. W. P. Herringham, Professor A. Keith, Professor J. A. MacWilliam, Dr. S. J. Meltzer (New York), Professor Joseph L. Miller (Chicago), Sir Richard Douglas Powell, Professor E. H. Starling, Professor Graham Steel, and Professor G. S. Woodhead. The first number will contain a preface by Dr. W. H. Gaskell, an editorial preface, and the following papers:

Professor A. R. Cushny, on the irregularities of the mammalian heart observed under acotinine and on electrical stimulation; Dr. James Mackenzie, on nodal bradycardia; Dr. Thomas Lewis, on paroxysmal tachycardia; and Dr. Leonard Hill, on the measurement of systolic blood-pressure in man. The journal will be issued, as far as possible, at regular quarterly intervals, and each volume will consist of four numbers. The publishers are Messrs. Shaw and Sons, Fetter Lane, Fleet Street, London, E.C.

On June 13th the Frankfort Medical Association celebrated the centenary of the birth of Dr. Heinrich Hoffmann. Dr. Hoffmann was Medical Director of the Frankfort Lunatic Asylum, and during the fifty years of his connexion with that institution he made it so widely known that sufficient funds were collected to rebuild it at a cost of 600,000 gulden. Distinguished as was his medical work, Dr. Hoffmann was probably still better known as the author of the famous nursery book, *Struwwelpeter*. He also wrote a large number of epigrams, satirical or humorous sketches, and poems on a variety of subjects.

In the current number of the *Cornhill Magazine* Canon John Vaughan gives an interesting account of a forgotten botanist of the seventeenth century. He says that when Dr. William Tanner, Dean of Wells, in the reigns of Edward VI and of Queen Elizabeth, published his black-letter *Herbal* only some 300 British species of plants were enumerated. A century later the number of plants in Ray's *Catalogue* had risen to 1,050; and when in 1696 the second edition of his "Synopsis" was published fully 1,600 species are described. In many instances the names of those who by their discoveries had thus helped to enrich our knowledge of British plants are duly remembered. The labours of such men as Lobel, Gerard, Johnson, Parkinson are abundantly evident in their writings. In some cases the finder's name has been bestowed upon the plant itself, and in this way the services of Sherard, Sibthorp, Teesdale, and others have been commemorated. In many instances, however, the honour due to our early herbalists has been but scantily recognized, and the names of several who rendered distinguished service to the science in its early days have passed into almost total oblivion. Amongst these we would venture, as a conspicuous example, to place the name of Mr. John Goodyer, of Maple Durham, in Hampshire. His services are repeatedly acknowledged in contemporary botanical literature; by virtue of the large number of rare plants which he discovered he should, undoubtedly, be placed at the head of our Hampshire botanists, and yet his name is passed over in silence in the *Dictionary of National Biography*, and the very identity of his place of residence has been called in question. Parkinson writes a few years later, speaking of him in his *Theatrum Botanicum*, published in 1640, as "a great lover and curious searcher of plants, who hath found in our country many plants not imagined to grow in our land." He is mentioned by Dr. How in his *Phytologia*, and Merret, in his *Pinax*, speaks of him as "an incomparable botanist, of sound judgement and of immense industry." Ray frequently acknowledges his services both in the "Synopsis" and in the "List of Rare Plants," which he supplied to Gibson's edition of Camden's *Britannia*. And Pulteney, in his Botanical "Sketches," published in 1790, thus sums up the very brief notice of his work:

The great number of rare English plants which Mr. Goodyer brought to light entitles him to the most reputable rank among those who have advanced the botanical knowledge of the kingdom.

At Maple Durham, then, either in the larger or the smaller house, Mr. John Goodyer lived during the first half of the seventeenth century. There he had a fine garden, or, rather, "gardens and orchards," in which he cultivated rare and curious plants. We find him supplying the famous Mr. Parkinson with the seeds of wild lettuce, the juice of which plant, he says, hath "a very strong and grievous smell of opium." He doubtless visited the different Physic Gardens, at that time beginning to spring up in various parts of the country, such as those at Oxford and Holborn, the one, it may be, in company with Mr. William Brown, Fellow of Magdalen, and the other with old John Gerard himself, who cultivated, we are told, "near eleven hundred sorts of plants." He seems to have been the first to describe the male fern, which he found "growing abundantly on the shadowy moist rocks by

Maple-Durham neere Petersfield, July 4th, 1633." He was also the first to discover the Narrow-leaved Lungwort, or "Long-leaved Sage of Jerusalem" (*Pulmonaria angustifolia*, L.) to be a British plant. He found it "May 25, anno 1620, flowering in a wood by Holbury house in the New Forest." This is one of our most interesting Hampshire plants, not only because it is confined almost entirely to the New Forest and the Isle of Wight, but also on account of the use made of it by the old herbalists in cases of pulmonary diseases. Another plant of famous medicinal virtue, which Goodyer found plentifully "in the unmanured inclosures of Hampshire and on chalky downes," was the Purgive or Cathartic Flax, which he calls "Mill-mountain." His account of how he came to know the name and properties of this plant is so quaint as to be worth quoting in full:

On the second of October 1617, going to Mr. Colsons shop an Apothecarie of Winchester, I saw this herbe lying on his stall, which I had scene growing long before; I desired of him to know the name of it; he told mee that it was called Mill-mountaine; and hee also told me, That being at Doctour Lake his house at Saint Crosse a mile from Winchester, seeing a man of his have this herb in his hand, he desired the name; hee told him as before, and also the use of it which is this: Take a hand full of Mill-mountaine, the whole plant, leaves, seeds, floures and all, hew it in a small tune or pipkin of a plate filled with White Wine, and set it on the embers to infuse all night, and drinke that Wine in the morning fasting. This Dr. Lake was afterwards made Bishop of Bath and Wells, who always used this herbe as his physic, after the said manner, as his man affirmed.

The medicinal qualities of plants had a great fascination for our friend Mr. Goodyer, as indeed they had for all early botanists. He is ever on the look-out for information as to the virtues of herbs, and he sometimes meets with it in unexpected quarters. The corn-parsley he had for years observed in the clay grounds around his home, but it was not till the year 1625 that he realized what a wonderful virtue it possessed. This is the story:

I saw Mistris Ursula Leigh (then servant to Mistris Bilsom at Maple-durham, and now (5 Martii 1632) wife to Mr. William Mooring, Schoolemaster of Petersfield, a Towne near the said Maple Durham) gather it in the wheate ershes about Maple Durham aforesaid, who told mee it was called Hone-wort, and that her Mother Mistris Charitie Leigh, late of Brading in the Isle of Wight, deceased, taught her to use it after the manner here expressed, for a swelling which she had in her left cheeke, which for many yeares would once a yeare at the least arise there, and swell with great heate, rednesse and itching, until by the use of this herbe it was perfectly cured and rose no more nor swelled, being now (5 Martij 1632) about twenty-three yeares since, only the fear remaineth to this day. This swelling her mother called by the name of a Hone, but asking whether such tumours were in the said Isle usually called Hones she could not tell, by reason she was brought from Brading aforesaid young, and not being above twelve yeares old when she used the medicine.

Mr. Goodyer then describes how, instructed by Mistris Leigh, the parsley should be used:

Take one handfull of the greene leaves of the Hone-wort, and stamp them, put to it about halfe a pint or more of beer, straine it, and drinke it, and so continue to drinke the like quantity every morning fasting, till the swelling doth abate, which with of in her was performed in the space of two weeks at the most.

John Goodyer died in the spring of 1664, and was buried, as he directed in his will, in "the churchyard of Buriton, near his late wife."

In connexion with the cheerless weather of this summer it is interesting to find that a similar condition of affairs existed in London exactly one hundred years ago. The Quarterly Report of Diseases treated at the Public Dispensary, near Carey Street, London, from May 31st to August 31st, 1809, has appended to its list of the names and numbers of the prevailing maladies the following paragraphs: "The summer months have been unusually wet and cool. A few warm days occurred in the third week of June, in the second week of July, and about the end of August; but the remaining portions of those months were cool, often very chill, with almost daily rains, accompanied with thunder and lightning." *Abit omen!* "On the whole, however," the report continues, "a damp and cool summer is favourable to the health of the inhabitants of London, and accordingly the number of applicants to the dispensary has been smaller than is usual at the summer season." This reflection must have seemed cold comfort to the Londoners of a hundred years ago, who doubtless were willing to suffer a little in order to have fine weather.

Medical News.

THE first Greek Congress on Tuberculosis has recently been held under the patronage of the Crown Prince of Greece.

IN accordance with the policy settled last year, the London Education Committee intends shortly to appoint twenty-six additional assistant school medical officers.

THE Lord Chancellor has added the name of Dr. T. W. Clay, of Holyhead, to the Commission of the Peace for the county of Anglesey, on the recommendation of Sir Richard Williams Bulkeley, Bart., Lord-Lieutenant for the county.

AT a Chapter-General of the Order of the Hospital of St. John of Jerusalem in England on May 25th, Major J. Robertson Reid, M.D., R.A.M.C.(T.), Birkdale, was selected an Honorary Associate, in recognition of services rendered in connexion with ambulance work.

THE annual exhibition at University College of Egyptian antiquities found by Professor Flinders Petrie and students at Memphis (Palace of Apsies) and Thebes will be open from 10 till 5 from July 5 to July 31st, and on the evenings of July 5th and July 15th from 7 till 9.

THE annual luncheon of the Continental Anglo-American Medical Society will be held on Thursday, July 29th, at Belfast, during the annual meeting of the British Medical Association. Members intending to be present should communicate with Dr. C. G. Jarvis, the Hon. Secretary, 81, Boulevard Malesherbes, Paris.

A COURSE of twelve lectures on tuberculosis of the bones and joints will be given at the Maritime Hospital, Berck-sur-Mer, Pas-de-Calais, near Boulogne, by Dr. Menard, chief surgeon, and Drs. Andrien and Calvé, assistant surgeons. The lectures, which will be illustrated by cases, specimens, and casts, will be delivered from August 2nd to August 13th. The fee for the course is Fr.50. Further information as to hotels, etc., can be obtained from the Agence Lafillé et Gerardin, Berck-sur-Mer.

A SERIES of post-graduate lectures will be given at the London School of Dental Surgery connected with the Royal Dental Hospital, Leicester Square, during October and November. The lectures will deal with pathogenic organisms of the mouth, periodontal disease, stagnation and drainage, vaccine treatment, radiographs, and pathological conditions of the third molar. Past and present students of the hospital and internal students of the University of London will be admitted free; the fee to others will be 2 guineas. Further particulars can be obtained on application to the Dean.

THE twelfth annual dinner of the West London Hospital and Post-Graduate College took place at the Trocadero on June 16th, the company numbering over 150 persons. Dr. Phineas Abraham presided, and the guests included Surgeon-General A. M. Branfoot, I.M.S., and Fleet Surgeon C. E. Stalkart, who replied to the toast to the Imperial Forces; Sir Havelock Charles and Dr. C. O. Hawthorne, who responded to the toast to "The Guests and Kindred Colleges." In the course of the evening it was mentioned by Mr. Bidwell that the entry of post-graduate students last year reached a total of 232, and that since the establishment of the college in 1896, over 1,700 medical men, largely consisting of officers of the Royal Navy and the Indian Medical Service, had enjoyed its benefits.

THE West Kent Medico-Chirurgical Society, now in the fifty-fourth year of its existence, gave its annual dinner on June 18th. The president of the society, Mr. Septimus Barnett of Lewisham, was in the chair, and the company included a very large number of guests. Among the latter was the Rev. E. Grundy, who drew an analogy between sacerdotal and medical general practitioners which was interesting and humorous in its completeness. The difficulties with which they had to contend and the pitfalls which awaited them were of a corresponding kind; they gained an equally wide acquaintance with the best and the worst sides of human nature, and the qualities which were required to make a successful general practitioner served also to promote the success of the parish priest. In the course of the evening the view was expressed that the time had come when, for its own protection and for the eventual benefit of the public, the medical profession should enter into close defensive union. As an instance of the arbitrary fashion in which its individual members are liable to be treated, a mandate recently issued by the Postmaster-General was quoted. It renders a postal medical officer liable to have thrust upon him at any time the care of a patient whom he has not contracted to attend, but whom, nevertheless, he is practically obliged to treat at a rate which in many instances may work out at an absolute loss.

THE late Dr. Hall, of St John's Wood, and formerly of Crouch End Hill, left estate of the net value of £87,679. We are informed that Dr. Hall was unmarried, and that a wealthy patient left him a large sum of money. Dr. Hall, who was a graduate of the University of Glasgow, after legacies to a number of charities, including Epsom College, the British Medical Benevolent Fund, the National Hospital for the Paralyzed and Epileptic, Queen Square, and the Royal London Ophthalmic Hospital, and one of £1,000 to the Research Defence Society, bequeathed the balance to the University of Glasgow for the foundation of tutorial fellowships. An account of these is given elsewhere.

THE annual meeting of the Poor Law Medical Officers' Association will take place on Tuesday, July 6th, at the Guildhall, London, when a conference of the Poor Law medical officers of England and Wales, to consider the recommendations of the Royal Commission on Poor Law Medical Relief, which will be opened by the Right Hon. the Lord Mayor in the Council Chamber, at 11 a.m. Papers will be read on district medical officers and the report of the Royal Commission, by Dr. Major Greenwood, D.P.H., LL.B.; on medical relief and public assistance, by Mr. C. S. Loch, Secretary of the London Charity Organization Society; on the place of the district medical officer in a unified county medical service, by Mrs. Sidney Webb; on the genesis of the Poor Law infirmary, by Dr. F. S. Toogood, Medical Superintendent, Lewisham Infirmary; and on the public health aspect of the report of the Royal Commission, by Dr. G. F. McCleary, M.O.H., Hampstead. The papers will be followed by discussions, and the special business of the association will be conducted at 2 p.m., after which any matters postponed from the morning will be continued. The annual dinner will be held at the Waldorf Hotel, Aldwych, London, at 7.30 p.m. the same evening, Surgeon-General Evatt, C.B., the President of the Association, being in the chair. The price of the tickets is 7s. 6d., not including wine. Any Poor Law medical officer wishing to be present is requested to communicate with the Honorary Secretary, Dr. Major Greenwood, 243, Hackney Road, N.E. Ladies are admissible among the guests. The Lord Mayor and Lady Mayoress have kindly invited Poor Law medical officers attending the conference to afternoon tea at the Mansion House between 3.30 and 6 p.m.; the invitation includes ladies.

AT the last meeting of the Socialist Medical League, Dr. Salter, L.C.C., chairman, said that the medical profession, along with every section of society, was moving in the direction of collectivism; the special knowledge and training of the medical profession could be enlisted to shape the movement on scientific lines. In Japan the manufacture and supply of drugs for medical purposes had been undertaken by the State, and a Government Commission was sitting at the present time in Tokio to discuss the advisability of the medical profession being nationalized. The main factor had been the extraordinary anomaly that while the fever raged the doctor flourished, but when the country had a clean bill of health the doctor starved. Dr. Robb of Bourneville said that the private practitioner was between the upper and nether millstones of the club and the dispensary and hospital. He was not paid to prevent disease. Whilst preventive medicine under State control had markedly advanced, it was only by a complete development of the national system that the ideal could be attained. By the nationalization of the medical profession hospital abuse would cease. State insurance would include medical aid, for only thus could the national funds be adequately protected both from the effects of disease and from the wiles of the malingerer. Dr. McVail in his report to the Royal Commission on the Poor Law had maintained that free access to and the acceptance of medical advice on the part of the general community would result in great improvement in the average physical health and great diminution in the prevalence of disease. Dr. Burton said that nationalization would be brought about not by medical men, but by the people through an economic revolution. Dr. Rose said that the teacher of the future would be the medical man. Nine millions a year were being spent in providing for old people who were of no use to the State, yet there was hesitation to spend even one million on the children, who were the chief assets of the country. Surgeon-General Evatt said that every army medical officer was a sanitary officer, and better treatment had produced better men. If every medical man in the country was a sanitary officer, paid to prevent disease, the slums and all their attendant evils would be got rid of. The discussion was continued by Drs. Clarke, Bruce, Appel, and others.

British Medical Journal.

SATURDAY, JUNE 26TH, 1909.

PNEUMOCOCCUS INVASION OF THE THROAT.

MEDICAL science can point with justifiable pride to the almost complete extinction of some diseases, notably typhus, and to the great diminution in the prevalence of others, such as small-pox, tuberculosis, and typhoid fever, which are among the results achieved by it during the last half-century. But, like the voice behind the hero of a Roman triumph telling him that he was mortal, there is one disease that whispers a like chastening reminder in the ear of victorious hygiene. Professor Osler says that "among the maladies of modern life, pneumococcal infections alone have increased in frequency and severity." The pneumococcus, though it has not yet got the ill name among the public which it deserves, works an infinity of mischief in addition to the inflammation of the lungs with which its name is mainly associated. It is carried about from one part of the body to another by the blood and lymph channels. Not to speak of the pleura, it invades the heart, the meninges, the brain, the peritoneum, the joints, the kidney, the bones, and the ear, causing in these various parts secondary, and sometimes primary, inflammations. It has been found in the fetal blood and in the uterine sinuses in pregnant women suffering from pneumonia. It lurks in the throat, waiting for the opportunity offered by exposure to cold or other influence lessening the power of resistance. The wonder is that it should not oftener find a point of attack in the upper air passages. It is not improbable that it may be accountable for septic conditions of the throat which are attributed to more familiar agencies.

That the pneumococcus does sometimes find a weak spot in the throat, with the result that infective pharyngitis is produced, is shown by two remarkable papers published in the present issue of the JOURNAL. Some cases of pneumococcal pharyngitis were reported many years ago by French observers, references to whose papers will be found at the end of Dr. Elliott's paper, which appears at p. 1528. There also will be found a reference to a case recorded by Monro in the *Glasgow Medical Journal* of 1901. It was Sir Felix Semon, however, who, as far as we are aware, first dealt fully with the subject. His recognition of the importance of a previously almost unknown definite sequence of phenomena is equivalent to the discovery of a new disease. It is not to the man who first happens to notice a fact, but to him who, understanding its significance, calls attention to it and succeeds in getting it generally admitted, that the credit of a discovery properly belongs. In a lecture delivered at the Polyclinic in November, 1908, and published in the *Medical Magazine* for December of the same year, Sir Felix Semon reported two cases of affection of the throat characterized by a course entirely different from any known to him in other

diseases of that part. They showed, to use his own words, "the most curious oscillations between intensely painful inflammatory conditions of the throat and improvements which appeared to render complete and speedy recovery almost a certainty, but which repeatedly gave way to absolutely unexpected aggravations until finally—in the one case—certainly spontaneously, in the other during an iodide of potassium treatment—complete recovery took place." These cases, says Sir Felix Semon, were characterized by "profound asthenia, almost entirely afebrile course, and complete absence of swelling of the cervical lymphatic glands." In one case the pneumococcus was present almost in pure cultures, and in the other the cultures consisted mostly of pneumococcus; in both cases towards the end perforation of the palate occurred. The facts seemed to Sir Felix Semon to warrant a suspicion that the morbid process was of the nature of chronic sepsis due to invasion of the pneumococcus.

In the paper by him which we publish this week he records in detail another case, in which pneumococcus invasion of the throat was combined with tuberculosis. It is remarkable that while the pneumococcus attacked the pharynx, the tubercle bacillus at first confined its depredations to the larynx. Later the two parasites joined forces, as it were, and were found mingled together on the pharynx, the posterior part of the tongue, and the epiglottis. The case in some of its clinical features simulated tuberculosis, but the pneumococcal origin of the pharyngeal lesions was conclusively proved by bacteriological methods. The tuberculous infection supervened on the pneumococcal invasion.

Some other interesting cases of pneumococcus infection of the pharynx are reported at page 1528 by Dr. John Elliott, of Chester. These cases differed from those recorded by Sir Felix Semon in the suddenness of their onset and the acuteness of their course; the fever usually lasted no more than forty-eight hours. In one case there were auricular complications, which were also clearly traced to the action of the pneumococcus. It is noteworthy that pneumonia was very prevalent in the neighbourhood at the time, but there was no influenza. Although there was considerable swelling of the lymphatic glands under the jaw and the neck, the pharyngeal lesion was much less severe and ran a much shorter course than those in the cases reported by Sir Felix Semon.

With regard to the treatment, there is little to be said. In a paper published at p. 1530, Dr. Butler Harris discusses the therapeutic value of the pneumococcus vaccine in pneumonia. He brings forward evidence to show that successful inoculation for pneumonia is possible, and that in any case the treatment does no harm. He recommends that a vaccine from one or a number of virulent strains should be used, and that it should be introduced as early as possible. His conclusion is that infections of the lung by the pneumococcus which fail to resolve after an acute pneumonia, as well as pneumococcal infections of other areas, should be treated with a pneumococcal vaccine, and he believes that the treatment in such cases affords a reasonable prospect of success. It should be pointed out, however, that in two of Sir Felix Semon's cases the use of a pneumococcus vaccine proved useless; in one case the patient, himself a medical man, thought it did him harm. The number of cases is evidently much too small to form a solid foundation for any conclusion as to the value of the treatment. (Prof. Semon)

The papers open a new field of observation, but much spade work is still needed before definitive conclusions can be reached. Nevertheless, the thanks of the profession are due to the pioneers. The affections described by Sir Felix Semon and Dr. Elliott seem to have little in common beyond the presence of the pneumococcus. The severe form so vividly described by the distinguished laryngologist may not, as he himself suggests, be exceedingly rare; but we think it likely that the more acute affection described by Dr. Elliott is more frequent. We recommend our readers to study the papers for themselves and carefully to compare the clinical and pathological features of the affections there described and the differences in course and in the character of the lesions which they present. Now that attention has been so strongly called to the fact that the pneumococcus may invade the throat, practitioners will doubtless be on the watch, and will recognize it when it comes under their notice.

TOXAEMIC INFANTILISM.

CASES of intractable wasting and ill-development without obvious cause are frequent enough in infants. In older children cases in which there is a striking retardation in the growth of the body, implicating the skeleton, the muscles, and most of the organs, whilst there is a relatively fair development of the brain, are occasionally met with, but have received little attention. With the assistance of Dr. Emmett Holt, Professor Herter of Columbia University has studied five fully-developed and typical examples of this condition, and five others of shorter duration and subacute course. His observations were carried out for several years, and he has embodied his careful researches in a monograph of extreme interest and value.¹ It not only throws light on these cases of so-called "infantilism," but helps, perhaps, in the investigation of other conditions of ill-development in infants and older children.

Cases of infantilism usually first come under observation at ages varying from 4 to 6 years, and, according to Herter, the chief or essential features of the complaint are: An arrest in the development of the body; the maintenance of mental powers and fair development of the brain; marked abdominal distension; moderate degrees of anaemia; rapid onset of physical and mental fatigue; and various obtrusive irregularities referable to the intestinal tract. Of these signs the most striking is the arrest in development in regard to both bodily stature and weight. Thus, in one patient, at the age of 7 years the height was only 36 in. and the weight 25 lb. Another weighed only 29 lb. at the age of 9 years. Both weight and development may remain almost stationary for long periods of time, in spite of the utmost care to ensure dietetic conditions favourable to growth. In several instances it was noted that a slight tendency to increase of weight during the winter months was counterbalanced by a loss during the ensuing summer. These losses of weight were always attributable to intestinal disturbances—usually a moderate degree of diarrhoea. Any loss of weight incurred, too, was very slowly recovered from.

Of the other special features of infantilism, disturbance of the intestinal functions is the most striking

and characteristic. Diarrhoea was a prominent feature in all of Herter's cases. Pronounced watery diarrhoeal attacks, however, were comparatively rare. Much more frequently the intestinal disturbance was manifested by the appearance of soft stools containing an abundance of neutral fat, soap, and fatty acid crystals. In the absence of diarrhoea the stools are apt to be voluminous, light coloured, floating on water, sour-smelling in spite of the faecal odour due to the presence of indol and mingled with large masses of mucus. Herter carefully investigated both the bacterial flora and the chemical constituents of the stools. The most interesting result of the bacterial examinations was the discovery by Kendall of large colonies of Gram-positive organisms for which the name *Bacillus infantilis* is proposed. This organism, or rather type of organism, is, it would appear, normally present in the faeces of infants, whether suckled or hand-fed, but is ordinarily absent in the motions of children of older age. It is found associated with other Gram-positive organisms, the *Bacillus bifidus* of Tissier and the *Bacillus acidophilus* of Moro. For a detailed description of this *Bacillus infantilis*, with the means of its detection and cultivation, reference must be made to Herter's work. If further observations should confirm the author's conclusion that in the height and relapses of the complaint these Gram-positive micro-organisms almost entirely replace the *Bacillus coli* and the *Bacillus lactis aerogenes* in the faecal flora, the reverse being the case at stages of improvement, a clinical fact would be established that might prove of far-reaching interest and importance. The appearance and constituents of the stools have been sufficiently indicated for our purpose. It only remains to add that any undue increase of carbohydrates in the food leads to frothing, and increased frequency of the motions. An analysis of the amounts of calcium and magnesium in the food, and of those in the urine and faeces, showed that the output of these two salts was equal to the intake, with a remarkable degree of accuracy.

The urine was examined with the same care as the faeces. As a rule, the volume passed was excessive—800 c.cm. to 1,000 c.cm. in the course of the day. The most important features discovered on chemical analysis were a rise in the ethereal sulphates, the occurrence of an excess of phenol in the distillate, the presence of aromatic oxyacids, and a marked degree of indolaceturia in several cases. Each of these is held to be indicative of absorption of the products, and a putrefactive decomposition of the intestinal contents. Herter also found that the urinary evidence of intestinal putrefactive decomposition was greatest at the times when the Gram-positive organisms were the dominant ones in the faecal flora.

In the pathology of intestinal infantilism Herter considers that two leading features call for explanation—the retardation of growth and the chronic intoxication. According to him, "the retardation in growth can apparently be explained on the basis of the imperfect absorption of nutritive material, which can be demonstrated in these cases. This impaired absorption of foodstuffs is probably to be ascribed to a chronic inflammation located in the ileum and colon and associated with the presence of abnormal forms of bacteria. The intoxication, which is so prominent a feature of intestinal infantilism at its height, may confidently be ascribed to the action of putrefactive products of intestinal origin upon the central nervous system and

¹ On *Infantilism from Chronic Intestinal Infection*. By C. A. Herter. Professor of Pharmacology and Therapeutics, Columbia University. New York and London: The Macmillan Company. 1908. (Post 8vo, pp. 118. 4s.)

"muscles. The exact relation of the abnormal bacterial flora to the pathological conditions in the intestines is not yet clear. The chief evidence in favour of the causal relationship between the phenomena of infantilism and the overgrowth and persistence of flora of the nursing period, especially *B. bifidus*, is found in the changes that occur during convalescence when these organisms are replaced by those of the type appropriate to childhood. A further evidence in the same direction is seen in the great increase in the infantile types of bacteria during periods of relapse. There is no evidence at present that intestinal infantilism has any other origin than a purely intestinal one."

The prognosis in these cases is doubtful; many die from exhaustion, or from some intercurrent malady. Where the complaint has been of any severity, recovery is associated with permanent dwarfism, which may be very marked.

For such patients an equable temperate climate is desirable, as their body temperature is unstable, they readily lose heat, and any rapid changes of weather are likely to give rise to digestive disturbance. The main lines of treatment are, however, dietetic; a first essential being the reduction of carbohydrates and fats to digestible limits. When this has been attained, any increase of either of these two classes of substance should be made with extreme caution. As a proteid element in the food, Herter strongly advocates gelatine. As it contains neither a tryptophan nor tyrosin nucleus, he claims that its digestion in the intestine cannot give rise to indol, skatol, indolacetic acid, or any of the other substances responsible for the chronic intoxication in the child. Another reason for its administration is that the *B. bifidus* and the *B. infantilis* are practically uncultivable on gelatine media. It may well be, then, that gelatine may inhibit the growth of these organisms in the intestinal canal. The amount of gelatine recommended is 1 oz. in divided doses for a child of 7 or 8 in the course of twenty-four hours. In addition to other properties, it is claimed that this amount of gelatine would contribute 125 calories towards the maintenance of bodily temperature.

The recommendation of gelatine is of interest for other reasons: it was once held in high esteem in invalid cookery, but for many years past its nutritive value has been reckoned as little or nothing. At one time, again, it was a favourite addition to cow's milk for infantile use on account of its separating the particles of casein. Nowadays, however, it would appear to have been entirely superseded for this purpose by barley water and other substances. In the light of Herter's investigations it may be that gelatine had more valuable properties than that of merely separating the particles of casein when administered in milk to wasting babies, and that its supersession has been a mistake.

THE STATISTICS OF OPSONINS.

SINCE the introduction by Sir A. E. Wright of a method of testing the response of the body to infection and immunization by the fluctuations of the opsonic index numerous articles have appeared, in which the accuracy of the method as commonly employed has been called in question.

These protests have come from two quarters. The one party has urged that the technique of the method is subject to so high an error that reliable deductions

cannot be drawn from the indices—that, in fact, many of the minute variations recorded as significant by the whole-hearted opsonist come within the experimental error of the method. The other party (much the smaller number) contends that if the opsonic antibody is an amboceptor which co-operates with complement, the current method of estimating the amount of that antibody in a serum is not valid.

Until recently, however, no serious attempt had been made to test the validity of the opsonic method as at present practised by rigid mathematical analysis. This lacuna has now been filled by Drs. Greenwood and White in their recent contribution to *Biometrika*.¹ The authors set out from the consideration that the constants (mean, mode, etc.) cannot be deduced from a certain distribution unless the form and extent of that distribution be known. In the opsonic technique a varying number of leucocytes containing a varying number of micro-organisms are observed and recorded, and an average value is deduced by dividing the total number of micro-organisms taken up by the total number of leucocytes counted. In comparing one serum with another, therefore, the means are taken as the most probable values resulting from the distributions. Obviously the mean would be appropriate only if the distribution followed the normal or Gaussian curve of error (a symmetrical curve). Greenwood and White, therefore, in this first memoir proceed to determine the nature of the frequency curve formed by plotting the number of micro-organisms per cell against the frequency of that cell. A few preliminary analyses were made with material obtained at the London Hospital. A series of counts of 75 cells was compared with control counts made on the same day, and with the same emulsion. The difference between the mean of each count and that of the control was estimated along with its probable error on the assumption that the distributions followed the normal or Gaussian curve. Taking the usual statistical criterion for significance they found that values below 0.8 and above 1.2 were certainly significant, but the figures when plotted out or even casually examined showed a markedly skew arrangement, thus foreshadowing the results of their analysis of a far more extensive mass of material. This latter was prepared by the best technique available, and was placed at the disposal of the authors by Dr. Strangeways of Cambridge and Dr. Fleming of St. Mary's Hospital. Dr. Strangeways supplied eight sets of 1,000-cell counts and one count of 2,000 cells, while Dr. Fleming supplied six counts, the number of cells in each varying from 400 to 1,100. Each of these distributions was now analysed, and the mathematical criteria necessary for the application of one or other of Pearson's frequency curves worked out. It may be mentioned that these curves introduced into statistical work by Professor Karl Pearson are of a very general type, and include the normal or Gaussian curve of error merely as a particular case.

The arithmetical labour entailed in an investigation of this kind is enormous. Suffice it to say that the authors have worked out the equations of the curves which fit most closely all the various distributions.

These curves are without exception of markedly skew type, rising fairly rapidly to a maximum point, passing through a point of inflexion and then declining very gradually to the base line. Pearson's Type I can be

¹ A Biometric Study of Phagocytosis, with Special Reference to the Opsonic Index. First memoir: On the frequency distributions of phagocytic counts. *Biometrika*, Vol. vi, No. 4, March, 1909.

fitted to ten of the curves, while the remaining four are satisfied more closely by Type V. To none of the distributions can the normal or symmetrical curve of error (in which the mean coincides with the mode and divides the curve into two exactly similar parts) be fitted. The skewness was markedly less in Fleming's curves than in those of Strangeways, and the question arose whether this reduction in skewness could be accounted for by the somewhat thicker emulsions with which Dr. Fleming purposely worked, and the correspondingly higher values which he obtained for the modes. Though this circumstance would partly account for the reduced skewness, the authors conclude from the result of a rather intricate method of analysis, which cannot be illustrated here, that Strangeways's counts were more truly random samples of the whole population of leucocytes than those of Fleming, and consequently afforded a more reliable guide to the whole distribution.

The main conclusion which arises from this elaborate paper is, that the normal curve of error does not apply to phagocytic distributions, and consequently that the mode (that is, the number associated with the greatest frequency of cell) would be a more reliable measure of the whole distribution than the mean. The authors reserve for a further memoir the analysis of the frequency curve formed by the means of equal samples taken from a large population of leucocytes. Naturally for adequate statistical treatment of this question a large number of cells would be required (perhaps 15,000), but the authors have performed a preliminary analysis with a count of 2,000 cells made by Dr. Strangeways, who grouped his results in 80 batches of 25. The curve of means (of 25 cells), though admittedly based on a paucity of data, was also found to be of skew type (Pearson's Type I), and accordingly the calculation of probable errors on the basis of the normal curve of error would be quite inappropriate.

We cannot too strongly praise the valuable statistical investigations which Dr. Greenwood and Dr. White have carried out on what might be called the quantitative side of immunity work. It marks a distinct forward step, and similar methods might with advantage be employed in other questions affecting immunity. To the critic who asserts that opsonic data are not suitable for such statistical treatment there can be but one reply—namely, that the best technical skill has been employed in the preparation of the material used by the authors in their work. Of the validity of their analyses from a purely mathematical point of view there can be no question. They have shown that phagocytic distributions resulting from the ordinary opsonic technique are markedly skew. This is certainly a result of immense importance, but one would wish to know whether the form of the phagocytic distribution is entirely independent of the method by which the amount of opsonic antibody in a serum is estimated. One point, for instance, which we hope the authors will attempt to investigate, is the estimation of the probable effect on the frequency curve of other methods of testing quantitatively the amount of opsonin. The employment of heated serum, or inactivated and complemented immune serums, might conceivably lead to some modification in the amount of skewness of the frequency curves.

In the meantime, the authors are heartily to be congratulated on the result of their work, and their future contributions to the statistical side of the opsonic question will be awaited with interest.

DEATH OF PROFESSOR D. J. CUNNINGHAM.

WE have to announce with the most profound regret, a regret which will be shared by countless friends and old pupils all over the world, the death on Wednesday last, June 23rd, of Professor D. J. Cunningham, of Edinburgh. Some months ago he went to Egypt in the hope that a change to that kindly climate, along with absolute rest, would bring about a renewed vigour. The hope was not realized, and on his return home it was found that there were signs of more serious and deep-seated disease, and for the past few weeks it has been recognized by his friends that recovery could not be expected. Professor Cunningham, who was an Edinburgh student, was Demonstrator of Anatomy in the University from 1876 until 1882, when he was appointed Professor of Anatomy in the School of the Royal College of Surgeons in Ireland. In the following year he became Professor of Anatomy in the University of Dublin, an office which he only resigned in 1903 to succeed his old master, Sir William Turner, in the Chair of Anatomy in Edinburgh. Of all that Professor Cunningham did in and for Dublin and Edinburgh it is too soon to speak; it was a fine career, nobly lived in a spirit of true and chivalrous devotion to science, to the profession he adorned, and to the public weal.

THE REFORM OF THE POOR LAWS.

THE Council of the British Medical Association, at its last meeting, decided that a special Poor Law Reform Committee should be appointed to consider the reports of the Royal Commission on the Poor Laws as affecting the medical profession, and to make recommendations as to any action which should be taken by the Association. It was further decided that, for the consideration of questions affecting England and Wales, the committee should be constituted of five members nominated by the Medico-Political Committee, three by the Public Health Committee, and two by the Hospitals Committee, and this committee met last week. At the same time the Scottish Committee and the Irish Committee were each requested to consider questions specially affecting Scotland and Ireland, and to nominate two members each to the special Poor Law Reform Committee for the consideration of questions affecting the United Kingdom as a whole. As our readers are aware, the Report proper¹ is a folio volume of 1252 pages, consisting of a Majority Report filling 670 pages; memoranda and notes by individual members of the Commission, filling 48 pages, and a separate or Minority Report which contains 518 pages. In addition there has been issued the report by Dr. J. C. McVail² of an inquiry undertaken by him at the request of the Royal Commission as to the methods and results of the present system of administering indoor and outdoor medical relief, founded upon careful examination of the administration in certain selected unions; this report forms a volume of 338 pages. In May was issued the report on Ireland.³ That volume contained a statement to the effect that the complete publications of the Commission would extend to at least thirty-one volumes; it is obvious that the consideration of such a mass of material, even if for the moment we confine attention to the Majority and Minority Reports and that on England and Wales by Dr. McVail, will demand prolonged study, more especially as all the three reports contemplate a profound modification of the present system of giving relief in poverty and sickness and the co-ordination and extension of the machinery

¹ BRITISH MEDICAL JOURNAL, February 20th, p. 479, and February 27th, p. 545.

² *Ibid.*, April 3rd, p. 855.

³ *Ibid.*, May 8th, p. 1123.

for the prevention of poverty. It is hardly to be expected that the special Poor Law Reform Committee will be able to present a report containing considered recommendations in time for its discussion at the Annual Representative Meeting next month, and the subject is of such great importance and so extremely complicated that it would obviously be unwise for the Association to commit itself to any settled line of policy until the problem has been fully reviewed in all its aspects. It is not the interests of Poor Law medical officers alone that are concerned, but the whole future of the medical profession in this country is involved, as Dr. Ford Anderson points out in the address published this week (SUPPLEMENT, p. 408), which we may commend to those who have not yet commenced the study of the subject as a very excellent brief introduction to it. As he recognizes it is very desirable that the opinion of Poor Law medical officers should be ascertained at an early stage, and we may direct attention to the particulars given elsewhere of a conference of Poor Law medical officers to be held at the Guildhall, London, on July 6th, under the auspices of the Poor Law Medical Officers' Association of England and Wales to consider the report of the Royal Commission with regard to Poor Law medical relief. It is estimated that there are in the Poor Law medical service of this country between three and four thousand medical practitioners, and their status must be considerably affected by the carrying out of the proposals of either the majority or the minority of the Royal Commission: both parties in the Commission are to be represented at the conference, for Mr. Loch, who signed the Majority Report, and Mrs. Sidney Webb, who signed the Minority Report, are both to read papers.

THE STUDY OF MAN.

FROM statements published in sundry newspapers, it would appear that the larger municipalities in this country have all recently received from Mr. Arthur MacDonald, of Washington, a memorandum urging the establishment of municipal departments for the study of the criminal, pauper, and defective classes. The idea is not likely to be acted upon for the present, at any rate, as the anthropological energies of local authorities are fully absorbed by the study of children as represented by the scholars in elementary schools, but the circular lends interest to a pamphlet by the same gentleman, which has recently reached our hands. It bears the attractive title, *A Plan for the Study of Man*, and consists of 162 closely-printed pages. As far as we have been able to ascertain, it discloses no definite scheme of any sort for studying man, but, on the other hand, contains an infinity of disconnected paragraphs and quotations from other of the author's very numerous publications, and some records of examinations of adults and children. The latter lose most or all of their value, because the fashion in which they were collected is imperfectly stated. The short paragraphs are perhaps intended to direct attention to points to be studied at a laboratory of the kind advocated, and deal in a couple of hundred words or so with such subjects as defects of sight and hearing, dangers at the age of puberty, and measurements of the head. Many of the statements made are decidedly remarkable. Thus the reader, after being informed that the criminal classes contain an unusual proportion of left-handed people, is told that the finger muscles of the pickpocket are sometimes cut so that he can apply either hand with greater dexterity. A similarly valuable piece of information is that at puberty the arteries increase in length, but little in diameter, so more work is then thrown on the heart, and

if growth is hindered there is danger of the early development of consumption. More space is devoted to hypnotism than to any other subject. The author appears to have visited hypnotic clinics in various countries, and has been so much impressed thereby that apparently he would desire to see hypnotism adopted as one of the ordinary methods of dealing with unruly children in schools. Finally, it may be noted that the author indicates a belief that students of psychophysics should have a preliminary scientific training of the kind undergone by medical men, and, after reading his book, one is fully disposed to hold the same view.

MAY MARRIAGES.

How comes it that May has got the reputation of being an unlucky month for marriages? We all know that "in the Spring the young man's fancy lightly turns to thoughts of love," and the natural inference would seem to be that he would be eager to translate his thoughts into action. Vegetation begins to revive in May, and the birds sing their love songs on every spray. Yet how strong is the superstition as to the unluckiness of May marriages is shown by the fact pointed out by Sir Samuel Wilks in the *Hampstead and Highgate Express*, that whereas at the end of April a column and a half of the *Times* was occupied by announcements of weddings, with the beginning of May the list fell almost to nothing, becoming longer again in June. The superstition is older than Christianity, for it is mentioned by Ovid, who says in his *Fasti* that May was the month of the Lemuralia, or the Lemurian festivals. "These," to quote Sir Samuel Wilks, "were instituted by Romulus in honour of his brother Remus, who died in this month, and were called the Remuria. Afterwards, the letters being changed, which was a common thing amongst the Romans, they were called the Lemuria. The Lemures were the 'manes' of the dead, which wandered about as ghosts over the world, terrifying the good people and haunting the wicked. The Romans had the superstition to celebrate festivals in their honour in the month of May. The solemnities continued three nights, during which time the temples of the gods were shut and marriages prohibited. The people performed many curious ceremonies to drive the 'ghosts away.' The following are the words of the poet in his *Fasti*, the subject of which is the feasts of Rome:

Mox etiam Lemures animas dixere silentium;
Hic sensus verbi, vis ex voce erat,
Pana tamen veteres illis clansere diebus,
Ut nunc ferali tempore aperta vides,
Nec viduae tædis eadem, nec virginis apta
Tempora; quæ nupsit, non diuturna fuit.
Hæc quoque de causa, si te proverbia tangunt,
Mense matum Maio nubere vulgus ait.

Sir Samuel Wilks says that in one edition of the *Fasti* the text gives "malas" instead of "matum," which would mean that "they are bad wives who marry in May." For our own part, we should say that May marriages are most likely to be unlucky when that month of love and mellow fruitfulness weds with sapless and barren December.

HERMAPHRODITISM.

MUCH has been written recently in French medical serials about hernia of the uterus, hermaphroditic conditions associated with that form of rupture, and hermaphroditism independent of uterine hernia. Cranwell's monograph is a standard work on uterine hernia, and Cornil and Bressard, and in Germany Arnolds, have also published cases with comments on androgyny, and some notice of these contributions to medical literature has already appeared in the

JOURNAL. Bégouin of Bordeaux has recently published a report of a very doubtful case.¹ He observes that in about 96 per cent. of all instances of pseudo-hermaphroditism it is a male that is taken for a female on account of a perineo-scrotal hypospadias, yet he considers that the subject about whom he writes, brought up as a boy, was really a girl. A child aged 7 was brought to Bégouin in the spring of 1904 on account of an abdominal tumour which had been observed for six months. The child had grown rapidly during the past year; the penis was large, but the mammae had also developed, and had attained the size normally observed in a girl of about 13 years of age. There was much hair on the pubes, hypospadias was detected, and while the left side of the scrotum was empty, there was a right scrotal hernia including a body which felt like a testis. A solid tumour occupied the hypogastrium, rising above the umbilicus; it lay more to the left than to the right of the middle line. This movable hard tumour, as big as a fetal head, felt like a fibroma of the ovary, or a pedunculated uterine fibro-myoma, and Bégouin states that had he known the true sex of the patient as was afterwards revealed he would have diagnosed accordingly. He believed that the child was a boy, and therefore suspected that the tumour was a fibroma of the mesentery, a subject on which he is known to be an expert.² He opened the abdominal cavity and discovered that the tumour was a fibro-myosarcoma of the left ovary, connected by perfectly normal relations with the uterus; the left round ligament and Fallopian tube ran over its anterior aspect, and the left broad ligament was not opened up. The cervix of the uterus was reduced to a thin fibrous band, which was divided together with the broad ligament, and then the tumour came away. No ovary, Fallopian tube, or broad ligament could be found in the right side of the pelvic cavity, but when Bégouin proceeded to obliterate the inguino-scrotal hernia on the right side he found that the right Fallopian tube lay in its sac, connected with the body that Bégouin had taken on palpation to be a testis, but which was found to have all the appearances of an ovary. He reduced the right tube and ovary, not wishing to risk occurrence of the symptoms which frequently follow removal of both genital glands. The external parts were carefully examined after the patient's convalescence, and then it was seen that the scrotum ran forwards, passing over the front of the root of the short though well-developed penis-like body which Bégouin considers to be a clitoris, the more so because the urethra did not run along under its lower border as in hypospadias in the male, but passed upwards straight into the bladder, just as in the normal female. There was not even a lemuroid clitoris traversed by the urethra. Bégouin saw and examined his patient last November, four and a half years after the operation. He admits that the child looked like a boy. Bégouin calls "him" *il* more than once in this second report, and notes that the mammae were much less developed than in 1904. "He" stood 4 ft. 10½ in. in "his" stockings and was very muscular. "He" is now at the top of "his" class in a boys' school and excels in active sports; "his" parents have decided to let nothing be known about "his" condition, and to take no steps to alter "his" *état civil*, so that the "girl" will probably have to serve "his" term in the army. With all respect to Bégouin, we must add, in conclusion, that many authorities will hardly be con-

vinced that this subject is a female. The left "ovary," converted into a large tumour, contained no ovarian elements; this is purely negative evidence, as the same may be the case in double solid ovarian tumours of the ovaries. But the right "ovary" was not removed, so that we cannot feel sure that it was an ovary at all. A rudimentary Fallopian tube, and even a uterine cornu have been found connected with a true testis. In a doubtful case the microscope alone can decide what is the true nature of the genital gland.

ATTEMPTS TO REDUCE VACCINATION FEES.

A VACANCY occurred recently in the office of public vaccinator for one of the districts of Newcastle, and in deference, it would appear, to the wishes of the local ratepayers' association a proposal was made to reduce the fee to 2s. 6d., and was only rejected on a close division. A similar proposal was made a few years ago, and then also was defeated only by a narrow majority. The ratepayers' association has not acknowledged either defeat, and at the meeting of the board of guardians at which the appointment was to be made the other day, a deputation from the ratepayers' association attended and represented the views of that body. The chairman informed the deputation that it was too late as the board had already decided that the fee should be 4s. 6d.; nine candidates had sent in their names, and of these eight attended and were interviewed by the board; each was asked whether he would take the appointment at a lower figure, and the reply was to the effect that the candidate was resolved to be guided by the views of the British Medical Association. The Division, as may have been observed by attentive readers of the JOURNAL, had already taken action in the matter, and had recommended that the reduction of the fees ought not to be accepted. The candidates have loyally abided by this opinion, and Dr. Hindhaugh was appointed at the rate of 4s. 6d. In another part of the country another Division, the Hampstead Division of the British Medical Association, has had to take similar action. At the last meeting of the Hampstead board of guardians a deputation from the Hampstead Division presented a memorial protesting against the fee of 2s. 6d. for each successful vaccination and 1s. for each name placed on the list, offered for the posts of public vaccinator in the Hampstead and Kilburn districts in advertisements recently issued. The memorial pointed out that the fees were insufficient, having regard more especially to the facts that the average number of visits for each case of successful vaccination exceeds three and a half, and that in Hampstead a relatively small number of cases was scattered over a large area, so that the amount of time required for the discharge of the duties was disproportionately great. The board resolved to refer the memorial to the Finance Committee, and the Chairman said in reply to inquiries that, owing to the action taken by the British Medical Association, no applications had been received in response to the advertisement.

FLIES AS CARRIERS OF INFECTION.

THE part played by flies in the carrying of disease germs is a question which has recently come somewhat prominently before the medical profession. A good deal of work on the subject has already been done, especially in Liverpool and New York, and last year the President of the Local Government Board authorized an investigation into the possible carriage of infection by flies, under the general supervision of Dr. S. Monckton Copeman, F.R.S., in co-operation with Professor Nuttall, F.R.S., of Cambridge. As Dr. Newsholme points out in the preface to a preliminary

¹Pseudo-hermaphroditisme masculin externe coïncidant avec un sarcome de l'ovaire. *Revue de gynéc. et de chir. abdom.*, March-April, 1905, p. 173.

²Traitement des tumeurs solides et liquides du mésopètre. *Revue de chirurgie*, vols. xviii (1838), and xix (1839).

report¹ of this investigation just published. several years will have to elapse before the relation of flies to certain diseases can be definitely ascertained, and the investigation completed, but in the meantime many interesting points crop up justifying the publication of these preliminary papers. The report contains the following: (1) How to distinguish the more important species of flies found in houses, by Mr. E. E. Austen, of the British Museum; (2) Mr. Austen's notes on flies examined during 1908; (3) Mr. Jepson's report on the breeding of the common house-fly during the winter months. In examination of sets of flies from a number of centres in London, collected on twenty-three different days at intervals varying from one to seven days, Mr. Austen found ten or eleven species, but the majority occurred seldom. The commonest species were the common house-fly, *Musca domestica*; the lesser house fly, *Homalomyia canicularis*; the blue-bottle, *Calliphora erythrocephala*, and the *Muscina stabulans*. The distinctive characters of the more important species are given in a synoptical table, and a plate of diagrams is appended. The differentiation of the insects is seen to be easy, the characteristics of the fourth longitudinal vein in the wing being one of the important points to note. The breeding grounds of the house fly are accumulations of horse manure and house refuse, and, this being so, such collections should be frequently removed or destroyed, especially during the summer months. Mr. Jepson shows by a series of experiments that flies, provided the temperature is suitable, may go on breeding during the winter months. The duration of the various stages at an average temperature of 70° F. he gives as follows: The eggs hatch in twenty-four hours, the larval period occupies eleven days, the pupal on an average ten days. He concludes that much might be done, in reducing or even exterminating flies, if isolated colonies living in certain warm places over the winter months were carefully looked for and destroyed. This certainly seems sound advice, and might in many instances be easily acted upon. The report should prove of use to the laity as well as to the medical profession, and will contribute to the more general recognition of the danger of flies.

THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE specimens added to the Museum of the Royal College of Surgeons during the present year, some 380 in number, are of exceptional interest. They are to be exhibited in the Council Room of the College on July 1st, 2nd, and 3rd. Among the more curious specimens added to the pathological series may be mentioned a part of the calcified aorta of King Menephtah, the Pharaoh of the Exodus, a very large calculus removed from the bladder of an Egyptian subject by Mr. O. Richards, a skull from one of the Cook Islands, showing extreme syphilitic lesions, another from the Gold Coast with an early condition of leontiasis, while a third from Fiji, presented by Mr. Glanville Corney, exhibits a remarkable form of calvarial periostitis. The numerous additions to the pathological series are representative of the more recent advances in surgery and morbid anatomy, and will well repay a visit. Amongst the specimens illustrating malformations, besides two sets of additions illustrating clefts of the palate and congenital defects of the heart, are three of special interest. These are the skull and brain of a "steeply-headed" child of 7 weeks, presented by

¹ Reports to the Local Government Board on Public Health and Medical Subjects (New Series, No. 5). Preliminary Reports on Flies as Carriers of Infection. London: Wyman and Sons, Limited; Edinburgh: Oliver and Boyd, Tweeddale Court; Dublin: E. Ponsonby, 909, 2d.

Dr. George Carpenter; the pelvic viscera of an individual regarded in life as a woman, but in whom the sexual and accessory sexual glands were found to be completely absent; and the dilated rectum of a child, operated on some years previously for atresia ani, presented by Mr. P. Daniels. Important additions to the series illustrating the anatomy and physiology of the body will also be shown. The great collection illustrating the diseases of the ancient inhabitants of Upper Egypt, which formed a striking feature of the exhibition given last year, is now suitably arranged in the museum and supplied with a card catalogue, and open to the inspection of all.

THE MEDICAL DEPARTMENT OF THE BOARD OF EDUCATION.

BRADFORD has exerted a quite remarkable influence on the medical aspects of education. A great deal of the pioneer work in connexion with the medical inspection and examination of children in elementary schools was done in Bradford by Dr. James Kerr. Dr. Kerr became medical officer to the London County Council, and the value of his work is well known to all educational experts. His successor in Bradford (Dr. Ralph Crowley) has now received the appointment of assistant medical officer to the Medical Department of the Board of Education. All who know Dr. Crowley will acknowledge that his promotion is well deserved, and there is no doubt that his talents and ability will be utilized to the greatest advantage in promoting physical and mental efficiency in the elementary schools of the country.

THE BRISBANE AND QUEENSLAND BRANCH.

WE regret to announce that Dr. Archibald Birt Brockway has resigned the office of Honorary Secretary to the Queensland Branch of the British Medical Association, which he has held since 1901. During that period the membership of the Branch has increased from 127 to 160. Its present flourishing condition is due largely to the untiring energy and self-sacrificing devotion which Dr. Brockway brought to the discharge of his duties. Not only the Branch which he served so well, but the whole Association, owes him a debt of thanks for his work, in which he has been ably assisted during the last three or four years by Miss Earnshaw. Dr. Brockway is succeeded by Dr. Donald Cameron, of Brisbane, under whose fostering care there is every reason to expect that the Branch will continue to grow and prosper.

Medical Notes in Parliament.

The Local Government Board Vote. Children.

DURING the consideration of this vote last week on Thursday Lord Edward Talbot raised the question of keeping children in workhouses, and advocated their removal from such surroundings by boarding out. Mr. Long, who followed, paid a compliment to the administration of Mr. Burns, and urged that there should be no undue haste in deciding on action with regard to the two reports of the Poor Law Commission. Mr. L. Haslam advocated the appointment of women in each union to supervise the boarded-out children. Mr. W. Crooks, who followed, made an interesting speech, in which he criticized all the plans hitherto adopted for dealing with the workhouse children, and urged that they ought, as a rule, never to come into the house, but that the guardians should take steps to prevent widows' homes from being broken up. The mother was the proper guardian, and a better could never be got. If adequate out-relief was allowed, it would not be more costly, and would be infinitely better for the children. He also advocated that imbecile children should be kept in separate homes up to 21 years of age, and that all Poor Law children should be under the Education

Authority as regards schooling. Mr. D. Maclean also spoke on the treatment of children, and urged that in the maternity wards some classification should be made so as to separate the young mothers from vicious inmates. Several other members having raised other points as regards the treatment of children.

Vaccination.

Mr. Lupton made a characteristic speech, in which he said that the President of the Local Government Board scattered with his right hand the blessing of ventilation, pure air, good drainage, and everything that could confer happiness on the community, while with his left hand he scattered poison, and strangled all the good that other departments under his control effected. Why should he go on scattering poison and persist in impregnating the blood of the people with it? He knew perfectly well—he must know—that there was a daily breaking of the law; that they were daily supplying stuff which was called “glycerinated calf lymph.” They said that it could not do any harm, because they had looked through the calves. One would like to know whether the Local Government Board would persist in requiring, as it did some years ago, that the vaccinators should make four big marks on the body of the poor little infant. He would like to know whether an inspector, when he went to examine the arms of children who had been vaccinated, looked to see whether they had got these four big marks, and whether the bonus was given for torturing infants. Dr. Monckton Copeman, a well-known authority and a most scientific inspector, said that big marks were an exploded fallacy, that the marks were made by what he described as extraneous organisms, and that you might have perfectly good vaccination with hardly a perceptible mark. Mr. Lupton also cited a case in which injury was alleged to have been done by too early vaccination.

Tuberculosis.

Mr. J. W. Wilson next referred to the movement to combat the spread of tuberculosis, and urged the publication of elementary instructions as to how to act when phthisis occurs in a family.

Mr. Burns's Reply.

After some remarks on the administration of the Adulteration Acts, more especially with reference to margarine and butter, by Mr. Kilbride, Mr. Burns replied to the several speeches, and said that there were in England 233,000 children wholly or partly supported by rates in and outside Poor Law institutions. Of that total, 70,000 were boarded out in cottage homes, barrack schools, scattered homes, district schools, and workhouses and infirmaries. A child in a district school cost from 10s. to 13s. 7d. per week; in a barrack school the cost was from 10s. 4d. to 18s. 8d.; in cottage homes from 12s. 9d. to 25s. 2d. in a few cases; and in the scattered homes 8s. 6d. to 11s. 2d. So far as money was concerned, public benevolence towards the children dependent on the State was larger and more generous than in any other country. Of all the indoor children in England and Wales 58 per cent. were in cottage homes, scattered homes, or in separate institutions where their bodily or mental peculiarities could be more satisfactorily administered to than they could be in the old-fashioned general workhouse. He should not rest until the whole of the sick children in London workhouses and infirmaries, and also in the provinces, were transferred from workhouses and infirmaries to institutions in which they could be better cared for than they could be in those institutions, however good they might be. As regards boarding-out, he proposed to issue an Order to bring the children within the union under the inspection of the Local Government Board inspectors, and also under the supervision of visiting officers and other kindly disposed persons. An Order would be issued under which the guardians would be able to carry this out, and where necessary appoint female officers. As regards the transference of the Poor Law schools to the Education Department, he thought there was something in it. As regards tuberculosis, he thought much good would result from the Order already issued, and they intended to follow it up. The Notification of Births Act had been adopted by 140 towns and boroughs. The Registrar-General said that 84 large towns had adopted it, and that of the 140 which had altogether adopted it 18 of them were metropolitan boroughs. The City of London

had adopted it, and he was pressing the remainder of the metropolitan boroughs to adopt it. If they did not do so he should take steps to force them. He was convinced that the Notification of Births Act, the regulations dealing with tuberculosis, and those relating to outdoor relief, would do a great deal towards stamping out some of the worst diseases. He would consider how instructions might be issued as regards tuberculosis and its prevention. He was glad to say that the general infant mortality of the whole country had shown a direction downward. It had fallen from 140 or 150 to 113 throughout the whole country. He believed that the steps which had been taken through the Notification of Births Act would tend still more to the rapid diminution of infant mortality. Unfortunately, in some of the Midland and Northern towns, where too many married women go to work under conditions and at a time when they ought to be at home, and frequently resumed work when they should be nourishing themselves and sustaining their children by natural means, the infant mortality was still too high. That aspect of infant mortality had not been raised, but the infant mortality for which the Local Government Board was responsible was being dealt with. The Medical Department of the Local Government Board was going to follow up the excellent Report on Public Health and Social Conditions which had recently come from the Department, and intended to produce a special Report on Infant Mortality viewed from several aspects which had not been dealt with in the past. That inquiry was now going on, and the excellent books which had recently been published would be supplemented by a special report of the investigation into infant mortality. As regards the death-rate which happened occasionally, and, he admitted, too frequently in some of the worst districts, in the workhouses and maternity wards and infirmaries, it was only right hon. members should temper their reception of certain allegations made recently in various newspapers by a knowledge of facts and circumstances as to the death-rate of infants born, often to women who had been cruelly treated and beaten, overworked and badly cared for before they came into the workhouse, and very often absolutely in the process or immediately before the act of childbirth itself. It stood to reason that a child whose father and mother lived under the conditions from which this type of child was drawn could not be expected to live or to be as strong as children differently placed. Where 60 per cent. or 70 per cent. of the women who were in the maternity wards in London and other workhouses were illegitimate mothers, as against only 4 per cent. of illegitimate mothers outside, it stood to reason that the children who were the offspring of such women could not expect to live, or, if they lived, to be as strong as the children of legitimate parents. The hon. member for Merthyr Tydvil (Mr. Keir Hardie) shook his head. Did he agree with Savage, the poet, who himself was illegitimate, that illegitimate children were the sickly fruit of fond compliance? No; he could not. Did he take the converse view that illegitimate children, according to the same poet, were stamped in the mint of Nature's glowing ecstasy? Certainly not. What were the facts? The facts were that illegitimacy not only connoted moral delinquency, but also indicated physical degeneracy. (Mr. John Ward here interjected, “Nonsense.”) If one visited the maternity wards it was easy to see how lack of food, overwork, and ill usage borne by the mothers had destroyed the power of the illegitimate child to resist disease. Hence during the first week of life the mortality of such children was greater in such wards than outside, but afterwards the infants improved rapidly under good feeding and good nursing with regular medical care. The matter would receive his best attention, but he was convinced that in the interests of the race the prenatal conditions of the children must be improved by saving the mothers from overwork, bad treatment, and bad food. The debate afterwards dealt mainly with unemployment, and late at night the vote was agreed to without a division.

The Spirit Duty and Medical Preparations.—Mr. Fell asked the Chancellor of the Exchequer if the additional duties proposed to be levied on chloroform, ether, and collodion were to be imposed for the purpose of raising further revenue or for the purpose of protecting whisky and other

potable spirits from unfair competition? Mr. Lloyd George said that he was afraid that he did not quite understand the hon. member's question. If he meant to imply that there was any serious risk of chloroform becoming a substitute for whisky and other potable spirits, the supposition, if he would pardon him saying so, seemed to be somewhat absurd. Mr. Fell asked what was the object of making the tax on colloidon and chloroform 6s. and on whisky 3s. 6d. Mr. Lloyd George said it was not a duty on products. It was purely a duty on spirits, and it was to meet the practical difficulty of exercising the necessary supervision in every chemist shop, and of making special exemption of small amounts of spirit included in these separate preparations. Mr. T. F. Richards also asked whether the extra duty of 3s. 9d. per gallon on spirits would mean 6s. per gallon extra duty on rectified spirits of wine, so largely used in pharmacy, in the preparation of medicines, ether, chloroform, sal volatile, balsam, tinctures, etc.; whether he was aware that wholesale druggists were already charging 6s. per gallon extra; and whether, in these circumstances, he could relieve the friendly societies' medical associations by exempting spirits used for medicinal purposes only. Mr. Lloyd George replied that he was aware of the fact mentioned, and he had given the matter very sympathetic consideration. He would have been glad had it been feasible to exempt from the additional taxation spirits used for medicinal purposes only, but, as he had already explained to the House, the practical difficulties were very serious.

The Indian Medical Service.—Mr. Kettle asked the Under Secretary for India whether, in pursuance of the scheme of reform outlined in the paper lately presented to Parliament, Indian medical men, not belonging to the Indian Medical Service, would be appointed to such posts as those of surgeon-general, professor in the medical colleges, physician or surgeon in Government hospitals, chemical examiner, sanitary commissioner, and the like, or whether it was proposed to appoint native Indians only to posts of minor importance? Mr. Hobhouse answered that the title of surgeon-general implied membership of the Indian Medical Service; as regards the other classes of posts mentioned, it would be seen from the published correspondence that the policy laid down by the Secretary of State contemplated a gradual extension, without restriction as to posts, of the employment of civil medical practitioners recruited in India. The extent to which this policy could be carried into effect, and the particular posts to which it could be applied, must necessarily depend largely on the qualifications found in the independent medical profession, from which it was intended that vacancies should be filled. As regards an inquiry whether the assistant surgeons in the General Hospital and Eye Hospital, Madras, were given no opportunity of performing major operations, Mr. Hobhouse said that the Secretary of State had no information, but would inquire.

Mosquito Extirpation in Egypt (Malaria).—Mr. Ramsay MacDonald asked the Secretary of State for Foreign Affairs whether early in 1907, under the supervision of Dr. Hugh Ross, steps were taken to extirpate malaria-breeding mosquitos from the district of Ghezireh, in Cairo; whether, after Dr. Ross's resignation, there were frequent changes of the Europeans who were in charge of the work; whether it was ultimately placed under the supervision of a native cabdriver, who had been coachman to the late adviser to the Minister of the Interior; whether, as a result, the campaign collapsed after the rising of the Nile last October; whether the Foreign Office was aware of any complaints being made that the malarial staff in Cairo was now altogether insufficient for its work; and whether, in view of the results obtained under Dr. Ross's supervision and of the importance of this work to the health of the city, the Egyptian Government would be communicated with on the subject. Sir E. Grey said that Dr. H. C. Ross was instructed in December, 1906, to take measures for the destruction of malaria-breeding mosquitos in part of Cairo, and shortly afterwards at Heluan and in other quarters of Cairo. He was aware that after Dr. Ross's resignation the post which he had filled was given to an officer of the Royal Army Medical Corps, but had no information as to whether any other European was afterwards appointed to it. The latest information in his

possession related to the month of June, 1908, and was to the effect that at that time the work at Heluan was being very efficiently supervised by a native employee. He had no information as to the collapse of the campaign beyond a statement made by Dr. Ross in a letter to the *Times* that a report to that effect had reached him, nor had he heard any complaints as to the insufficiency of the staff employed on this work in Cairo. He had no reason to doubt that the Egyptian Government was continuing to use its best efforts to stamp out malaria, and he therefore saw no necessity for the interference of His Majesty's Government in the matter. He would, however, make inquiries.

Fever in King's County.—Mr. Reddy asked the Chief Secretary to the Lord Lieutenant of Ireland whether he was aware that an outbreak of fever had recently taken place in Clonliff, Ferbane dispensary district, King's County, and that up to the present four deaths had occurred; would he state what time elapsed between the date of notification by the Member for the Division and the arrival of the inspector on the scene; whether he was aware that the spread of fever was due to the fact that not until after a fatal case did the people find out that fever was the cause of death; and, seeing that this had been the second outbreak in this district, would he grant sworn inquiry into this matter in order to give confidence to the people who were terror stricken? Mr. Birrell answered that he was informed by the Local Government Board in Ireland that there were 16 cases of enteric fever last month, at the place mentioned, but the Board did not know the exact number of deaths which had occurred. He understood that the hon. member communicated with the Board on May 25th, and that the medical inspector visited the district on May 28th. The first recognized case of the series was seen by the medical officer of health on May 15th, when he suspected the water supply to be the source of infection, and a sample of water sent for analysis had been found to be polluted. The medical officer appeared to the Board to have taken all reasonable precautions in connexion with the outbreak, which was now probably at an end, as no case was reported to have occurred since May 26th. The Board had brought the sanitary requirements of the locality under the notice of the district council, and had urged them to provide a proper water supply. There was nothing in the case calling for a sworn inquiry. On Tuesday Mr. Reddy pressed again for a sworn inquiry, on the grounds that the outbreak was due to the incompetence of the medical officer, and that it was the second outbreak of the kind. Mr. Birrell replied that in the opinion of the Local Government Board no blame attached to the medical officer of health in connexion with this matter. The previous outbreak of fever in this district had occurred some fifteen years ago. He had already stated that there was nothing in the case calling for a sworn inquiry.

Postal Servants (Vaccination).—Mr. T. F. Richards asked the Postmaster-General whether he was aware that the medical men attached to his department were refusing to accept persons for employment unless they could exhibit good marks of primary and secondary vaccination; and whether this was done with his sanction. Mr. Buxton replied that candidates for employment in the Post Office who had a conscientious objection to revaccination were allowed exemption therefrom on making a statutory declaration to the effect that they conscientiously believed that revaccination would be prejudicial to their health. Primary vaccination was, however, necessary. There was no reason to suppose that the rules were not properly observed; but if any case, thought to have been improperly dealt with, was brought to his notice, he would have inquiry made.

Vivisection: Report of Royal Commission.—In answer to Lord Robert Cecil, Mr. Gladstone stated last week that he was unable at the present time to say when the Royal Commission would make its report, but he understood that there had been no unreasonable delay in the proceedings.

Administration of Anaesthetics.—On Tuesday Dr. Cooper introduced a bill to regulate the administration of anaesthetics.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

YORKSHIRE.

THE MEDICAL OFFICERSHIP AT EASTBY SANATORIUM.

THE Bradford Poor Law Guardians recently offered the medical officership of this sanatorium to Dr. Margaret C. Macdonald, who has been acting for some time past as assistant medical officer to their workhouse. Dr. Macdonald's salary at the workhouse was £130 a year, with residence, rations, and washing. After resigning the latter post Dr. Macdonald discovered that the guardians were only willing to pay her £120 at the sanatorium, and very properly declined it. It is to be hoped that the guardians will recognize the excellent work done by Dr. Macdonald and give her at least the same salary as she received formerly.

BRADFORD BATHS AND ELECTRICAL TREATMENT.

Two or three years ago the Baths Committee of the Bradford Corporation proposed to instal high-frequency treatment at the Bradford Central Baths. The Bradford Division opposed the proposition, and a deputation from the Division interviewed the chairman and members of the committee, who finally agreed not to make the installation. Recently it was by chance learnt that the proposal has been revived, and a letter of remonstrance was sent to the Chairman of the Baths Committee. At his request the Division has appointed a deputation to meet the committee, and it is to be hoped that the Baths Committee will again give up this undesirable proposal. Facilities exist in the city for high-frequency treatment at the Royal Infirmary for the poorer classes, and under private medical supervision for those who are able to pay. The extension of the medical treatment of disease by bath attendants is to be deprecated.

TYPHOID FEVER IN ROTHERHAM.

Typoid fever is endemic in the county borough of Rotherham, and in order to ascertain whether any special conditions capable of amendment are responsible for the continued prevalence of the disease the Local Government Board recently commissioned Dr. R. Deane Sweeting to make some inquiries as to the sanitary administration. The report upon his investigations has just been published, and is a valuable addition to the epidemiological records of the Board. During the sixteen years 1892-1907 the number of cases of the disease notified in the borough averaged 66, the lowest number in any one year being 42 and the highest 101. There have rarely been distinct outbreaks, so that Dr. Sweeting was able to eliminate as possible causes water supplies, or milk supplies, or articles of food such as shellfish, fried fish, celery, or watercress. Although the town is well sewered and is provided with suitable outfall works, there are still in existence over 2,000 midden privies of an objectionable type. They are for the most part open, sunk below the level of the ground with unbricked floors, and many are of huge dimensions. Provision is made in a private Act of Parliament for the rapid conversion of these very objectionable structures, and the corporation is empowered to pay a portion of the cost of such conversion, but for some reason or other advantage has not been taken of the Act. Dr. Sweeting recommends greater activity in the direction of converting the existing privies into waterclosets. He found that in 1906-8, of the houses provided with waterclosets, 16.3 per cent. were infected with typhoid fever, while of those provided with privies 21.3 per cent. were infected. Other causative factors were connected with defective administration. They included inadequate scavenging and disposal of refuse, insanitary conditions of back yards, badly ventilated houses, incomplete disinfection of infected articles, and the undue number of patients nursed in their own homes. Dr. Sweeting pays a well-merited tribute to the excellent services rendered by the medical officer of health (Dr. Alfred Robinson), and points out that the advice tendered in annual and special reports has not always been followed by the borough council.

It appears that Dr. Robinson, though in name the head of the sanitary department of the borough, divides his

jurisdiction with the chief sanitary inspector. This is a condition which can only act to the detriment of the town, and the council ought at the earliest opportunity carry out the recommendation of Dr. Sweeting, and make the medical officer of health *de facto* as well as *de jure* the single head of the sanitary department.

CUMBERLAND.

PROPOSED SANATORIUM FOR SCHOOL CHILDREN.

At a conference of delegates from the education authorities of Carlisle, Cumberland, Workington, and Whitehaven, from the committee of the Blencathra Sanatorium, and from the Charity Organization Society, held recently in Carlisle, it was resolved that it was desirable to establish an open-air boarding school for children of poor parents suffering from tuberculosis in an early stage in Cumberland. Dr. Morison stated that last year 19 cases of definite phthisis were found among 1,513 children examined in Cumberland, a proportion rather over 1 per cent. A committee was appointed to consider the cost and details of the scheme, and to report to a future meeting.

LONDON.

WEST AFRICAN MEDICAL STAFF DINNER.

The summer dinner of the West African Medical Staff took place on June 21st at the New Gaiety Restaurant, London. Dr. W. Prout, C.M.G., occupied the chair, and among the guests were Mr. R. L. Antrobus, C.B., Mr. James Cantlie of the London School of Tropical Medicine, Mr. A. Fiddian of the West African Department of the Colonial Office, and the Hon. H. M. Brandford Griffith, Colonial Secretary, Gambia. In the course of the evening Mr. Antrobus, in responding to the toast of "The Guests," had something to say as to the future of the West African Medical Staff. Naturally he spoke in guarded terms, but it could be gathered that the decision of the Secretary of State on the multiple questions which have been so long at issue will prove to be of a more or less satisfactory nature. The Secretary of State has at present under consideration two reports—namely, that of the Departmental Committee which commenced its inquiry at the beginning of this year, and that on the sanitation of the West African Colonies prepared at the request of the Colonial Office by Professor Simpson during his expedition to West Africa last year. It seems probable that the Secretary of State will not be found to have accepted the recommendations of the Departmental Committee in their entirety, but, at any rate, some of the larger defects in the present administration of the corps will be removed, and the arrangements as to pay and allowances be so modified as to make the prospects of medical officers on the coast more hopeful than they are at present. But even more satisfactory in one way is the prospect of the establishment of a board of a general advisory character but charged primarily with the duty of laying down a sanitary programme and of securing its execution. Poorness of prospects and superfluous irritations due to faulty administrative methods have certainly counted for a good deal in creating the feeling of dissatisfaction which has prevailed among medical officers of the West African Medical Staff for the last two or three years, but to their credit be it said that another factor has been equally potent in that direction. The development of tropical medicine makes now feasible much that was formerly impossible, and has opened up for tropical countries a vista such as never before existed. Utilization of their immense resources in the way of natural products is no longer necessarily and inevitably accompanied by equally great sacrifices of human life. The fact that this is the case greatly increases the responsibilities of medical men working in the tropics, and to fulfil these adequately—to turn the existence of this fresh knowledge to the advantage of their white and coloured patients—demands from the West African Medical Staff, as was suggested by Dr. Prout in the few earnest sentences he addressed more particularly to its younger members, more self-forgetting devotion to practical and scientific work than ever. Nevertheless, however much these officers may strive, their efforts must be futile unless encouraged by local administrators, and co-ordination and continuity of work are

secured. So far there have been grave defects in all these directions, and the recognition by medical officers that their work is more or less wasted has been followed by perfectly natural and even praiseworthy discontent.

Officers Present.

The list of retired and present officers of the West African Medical Staff attending the dinner included in addition to Drs. Front, C.M.G., A. H. Handley, C.M.G., and G. F. Barker, Dr. F. G. Hopkins, Deputy Principal Medical Officer, Drs. A. Pickels, G. S. Rutherford, and F. Manning, Senior Medical Officers; and Messrs. J. C. Bailey, D. A. Ashton, J. S. Pearsons, W. H. Peacock, R. P. Williams, J. P. Howe, W. Burrows, G. G. W. Kergevin, W. F. Taylor, H. G. McKinney, G. F. W. Ford, E. W. Graham, E. J. Tynan, J. Cross, E. C. Eliot, J. C. Franklin, F. J. A. Beringer, E. J. Kelleher, and P. M. Tobit.

WALES.

SANITARY INSPECTORS' ASSOCIATION.

The sessional meeting of the South Wales and Monmouthshire Branch of the Sanitary Inspectors' Association of Great Britain was held at Barry Dock on June 12th. The President, Dr. W. Williams, County Medical Officer for Glamorgan, was unavoidably absent through illness, and a telegram of sympathy was forwarded to him expressing the hope that he will speedily recover. Dr. Williams has been president of the centre since its inception, and he has always taken the keenest interest in the welfare of the sanitary inspector, and therefore his absence from the meeting was very much felt. Mr. Torloff, Clerk to the Barry Urban District Council, was voted to the chair. Chief Inspector S. B. Sommerfeld read an interesting paper on the sanitary progress of Barry, in which he pointed out that the public abattoir was one of the most modern in the country, and the town's sewerage arrangements excellent. The death-rate of the town had decreased from 17.1 to 11.7 per 1,000 of the population, the reduction being principally due to improved sanitation. Inspector Hookley, Chief Port Sanitary Inspector, followed with a practical paper on food inspection. The delegates were entertained to luncheon by the District Council, the chair being taken by Dr. P. J. O'Donnell, Chairman of the Health Committee. Visits were afterwards made to the public abattoir, local hospitals, and the municipal buildings, a most enjoyable day having been spent.

COLLIERS AND DOCTORS.

The following paragraph appeared in the *South Wales Daily News* of June 10th:

The doctors' question at Llanbradach has been settled at last, and to the satisfaction of the workmen, but apparently to the dissatisfaction of the local medical men. The local medical men endeavoured to enforce the system of payment of 3d. in the £, instead of 5d. per week per man. This brought about the deadlock, and the doctors gave notice to terminate their agreement, and this expired last week. The workmen's committee have now, much to the indignation of the medical fraternity, appointed Dr. Charles Hawkins of Caerphilly as their medical man on the old system—that is, 5d. per man.

The *South Wales Daily News* of the next day contained the following explanation:

With reference to the doctors' question at Llanbradach, it should be explained that while Dr. Charles T. Hawkins (Caerphilly) has been appointed under the old system of payment of 5d. per member per week, this is only by a minority of the workmen. The majority of the workmen have signed on the new system enforced by the local medical men, who gave notice to terminate their agreement, this system being 3d. in the £ per man.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

MEDICAL INSPECTION OF SCHOOL CHILDREN.

The Edinburgh School Board, on June 21st, agreed to appoint two assistants to their medical officer, a male assistant at a salary of £250 and a female at a salary of £200 a year, to give their whole time to the work of the board. It was also agreed to appoint two nurses at a salary of £60 per annum each.

Dr. J. Hally Meikle, medical officer to the School Board, makes the following recommendations in his report for 1907-1908:

1. More strict inspection for and more stringent methods of dealing with dirty and verminous children. The appointment of the school nurse would secure the first, and there was ample work to be done. The second would be secured by taking advantage of the powers given under the new Education Act.
2. The following up of cases and home visits to see that any treatment recommended was carried out. This work would again fall to the school nurse. There were many parents anxious to do their best for their children, but ignorant of how to do it.
3. Schools for special skin diseases, chiefly favus and ringworm, a subject at present under the consideration of the board.
4. Relaxation of quarantine regulations for certain minor infectious diseases.
5. That the infectious disease history of pupils be recorded on their entrance forms.

The Earl of Wemyss, who is Chairman of Aberlady School Board, has submitted a resolution to the board on the subject of medical inspection of school children in East Lothian. The County Committee had recently issued a circular letter on the subject, recommending the appointment of a special medical officer for the county for school inspection. The resolution of Lord Wemyss is to the effect that the appointment of a county medical officer specially for the inspection of school children is unequalled for and would be a needless addition to the heavy school charges now borne by the ratepayer—charges which, when free education was first established, the ratepayer was assured would never exceed 3d. in the £—and also that before any steps are taken in furtherance of the committee's report full information be given of the total cost of the committee's plans and of the contribution thereto required from each individual board. The resolution has been adopted by the Aberlady Board.

MEDICAL TUTORIAL FELLOWSHIPS AT GLASGOW.

By the will of the late Dr. John Hall, of London, the medical side of Glasgow University will eventually come in for a large estate which is expected to realize over £35,000. Dr. Hall, who was an old graduate of Glasgow University, died on April 17th last, leaving an estate of the gross value of £88,366, subject to the life interest of his sister. A number of London medical and other charities receive donations, but the bulk of the trust goes to the Senate of Glasgow University as an endowment for the foundation of tutorial fellowships in connexion with the chairs of medicine, surgery, and midwifery. These are to be known as Hall Tutorial Fellowships, and are to be open to graduates of Glasgow University of not more than four years' standing. The election is to be made by a committee of the professors of the three subjects named, after examination (either a special examination or part of the graduation examination). Each fellowship is to be of the value of £200, tenable for three years. As many fellowships are to be founded as the income will permit; any surplus of income being applied for providing models, instruments, etc., for teaching purposes, or in providing prizes for deserving students. During the tenure of a fellowship the holder must not hold any other bursary scholarship or other educational endowment, nor engage in private practice or private teaching. He must reside within three miles of the university and must devote his whole time to practical instruction of students under the direction of the professors.

THE CHAIR OF SURGERY IN EDINBURGH.

The vacancy in the Chair of Surgery in the University of Edinburgh, caused by the regretted resignation of Professor Chiene owing to ill health, will shortly be filled. The patronage is vested in the Curators, and formal notice will be found in our advertisement columns that applications with relative testimonials must be lodged with Mr. R. Herbert Johnston, Secretary to the Curators, 4, Albany Place, Edinburgh, on or before July 15th.

THE MILK AND DAIRIES BILLS.

The Public Health Committee of Edinburgh Town Council have had under consideration the Milk and Dairies (Scotland) Bill and the Milk Control (Scotland) Bill, abstracts of which were published in the SUPPLEMENT of June 12th. It was pointed out to the committee that the powers of local authorities which would be repealed by the Milk and Dairies Bill were in many respects superior to those contained in it, and it was agreed to approach other local authorities with the view of making arrangements for amending the bill in the direction desired.

HOSPITAL TREATMENT OF PHTHISIS.

At a meeting of the Town Council of Edinburgh on June 15th it was agreed to increase the authorized number of beds set apart for phthisis cases in Colinton Mains Hospital from 50 to 62, and that six pavilions to accommodate 12 patients be provided at a probable cost of £120, the estimated annual cost of treating 12 additional patients being £250.

PAROCHIAL MEDICAL OFFICERS IN THE HIGHLANDS AND ISLANDS.

We have received a letter from a parochial medical officer in one of the western islands of Scotland, giving his experience of the work he is expected to do and the hardships he has to undergo for a salary of £126 per annum. As the experience of this medical officer is that of many of the medical officers in the Highlands and islands of Scotland, the publication of the facts should serve as a warning to others. The advertisements which appear from time to time asking for candidates for these posts may seem to young and inexperienced graduates rather tempting, for besides the salary offered for the parochial appointments the advertisement generally states that there is a free house and good scope for private practice.

Our correspondent tells us that in his case the salary, including parochial, lunacy, vaccination, school and public health, work was £126 per annum. The island contains a population of 6,000, is 40 miles long, 10 to 12 miles at its broadest part, and 2 miles at the narrowest. Vaccinations had to be done, some of them 40 miles from our correspondent's house, necessitating long and trying journeys, with the expenses of the same, including night's lodging and board and fares by steamer, or horse hiring when available. No travelling expenses were allowed. In the first six months our correspondent held the appointment he had a list of over 100 vaccinations, for which he received 40s., the allowance for vaccination being £4 a year, the medical officer not being paid so much for each vaccination. Pauper lunatics have to be visited once a quarter, for which the doctor gets £6 per annum. Forty-eight visits were paid to these cases, at an average distance of 10 miles; this works out at about 4s. a visit. No travelling expenses are allowed.

The house provided for the medical officer on this island was leaking in every room and was in a bad state of repair. The difficulty of getting provisions and fresh food is also a serious factor in connexion with these appointments, especially during the winter months, tinned provisions being the mainstay. Fuel is also a serious item of expenditure, the supply of peat to keep fires going having cost our correspondent 12s. a week.

Private practice proved a delusion and a snare. The scheme under which it is worked is that the crofters pay 6s. per annum, and if they all paid the amount would come to about £100 per annum. For this the medical officer would have about 300 families to attend residing within a radius of 20 miles. The doctor is supposed to get paid for medicines supplied, but unless the amount is prepaid he has little chance of getting it; in the experience of our correspondent only 20 per cent. of the patients paid for their medicines. Our correspondent works out the remuneration he received for some of his visits to the outlying crofters at the rate of 1d. a week; he had to walk 20 miles to see them, and either stayed at a house not possessing the most sanitary surroundings, as the olfactory organs soon discovered, or else put up at the nearest hotel, which meant, of course, the expense of board and lodging for the night.

Our correspondent states that for six months he covered an average of 400 miles a month, and mostly on foot, and there was seldom a day without a strong wind blowing, sometimes half a gale. Most of the travelling was over extremely rough footpaths, covered with stones and rocks, very steep and impassable except on foot. He calculates his out-of-pocket expenses for travelling at £50 per annum, and as he says, "combine this with a leaky house, tinned provisions, and you have as undesirable and unremunerative a place as could be found anywhere." Any one taking up an appointment in this particular island will have to pay a good deal to get there, and as his tenure is likely to be short, in a few months will have to pay a similar sum to get away. Any one bringing furniture will in all probability leave it there, as, after being knocked about

from rail to steamer and from steamer to boat, and from thence by any available means of carriage, it will hardly be worth carrying away.

We have frequently in the columns of the JOURNAL drawn attention to the hardships of the parochial medical officers in the Highlands and islands of Scotland, mainly on the ground of harsh treatment on the part of the parish councils. This is an instance not, as far as we can gather, of harsh treatment, but of a sweated medical practitioner who, doubtless thinking the salary and prospects of private practice looked good in the advertisement, resolved to give it a trial. The vicissitudes of climate combined with the amount of bodily fatigue which the medical officer is expected to go through in order to reach patients living many miles away from his house seem more than mere man is able to endure. We therefore again warn young medical men against these appointments, and if they are tempted to apply for them they should consult the Secretary of the Scottish Poor Law Medical Officers' Association, Dr. W. L. Muir, 1, Seton Terrace, Glasgow, who has all the information necessary regarding them, and who, we feel sure, will be ready to advise any young man on the subject.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

EMERGENCY CASES.

At a recent meeting of the Galway Urban Council, Sir James O'Donohoe, J.P., expressed some not unnatural indignation at the working of a regulation with regard to the admission of emergency cases into workhouse infirmaries. A man was run over by a scavenging cart and was obviously seriously injured; a police sergeant was appealed to, and said that he could not remove the man without an order from the dispensary medical officer or a ticket from the relieving officer. Sir James O'Donohoe, on his own responsibility, secured a van and removed the sufferer to the county hospital, where he died two hours later. The incident illustrates one of the anachronisms of the Irish Poor Law. The police sergeant was wrong in stating that the dispensary doctor had power to send a patient to the workhouse infirmary; neither he nor the medical officer of the workhouse has such power. According to un repealed regulations, admission can only be granted by the board of guardians in session, the relieving officer, or in cases of sudden and urgent necessity by the master of the workhouse. These places upon the master the responsibility of deciding, in the absence of a line from the relieving officer, whether the case is sudden or urgent—a decision which has often been most unfairly criticized, where the master has exercised his judgement to the best of his ability but the board of guardians or the Local Government Board has taken a different view.

If a patient belongs to another union and has no friends on the board, the master is often between the hammer and the anvil. If he admits such a case the guardians fall foul of him, and if he does not, and the patient dies, the Local Government Board will probably call on him to resign; we have reported several such cases within the last few years.

The Irish Poor Law of 1837 and the existing general regulations framed upon it were designed to keep people out of the workhouse, and the attempt of the Local Government Board to modernize these institutions in face of these regulations has resulted in a hopeless muddle. Another Poor Law anachronism is that patients have to be detained in hospital long after they are fit to leave, because there is no provision for treating them as outpatients. Possibly some medical officers may do so, but they run the risk of sworn inquiries and unknown pains and penalties for transgressing the general regulations which take no cognizance of the needs of convalescents.

TUBERCULOSIS IN COUNTY DOWD.

At the annual meeting of the Down County Council the Chairman (the Right Honourable Thomas Andrews), after dealing with the various improvements which had been

brought about since the council came into office ten years ago, made an eloquent plea for further measures to prevent tuberculosis. Some 5,000 inhabitants of the county were, he said, suffering from the disease, and some 500 died each year. At imminent personal peril people rushed to the rescue in case of a threatened accident, and yet they were content to sit quietly with folded hands with 500 of their friends and neighbours dying annually from this white scourge. An example had been set at the county infirmary, unfortunately on too small a scale. They would probably soon have a disused workhouse, or an unused coastguard station; might such buildings not form a nucleus of a sanatorium? He commended the problem most earnestly to the members.

MEDICAL BENEVOLENT SOCIETY.

The annual meeting of the Belfast and County Antrim Branch of this society was held in the Medical Institute, Belfast, on June 18th, the President, Professor Symington, in the chair. Dr. Fielden, Honorary Secretary, submitted the annual report, which showed that £164 6s. 11d. had been raised. The subscriptions included £100 7s. from 139 Belfast practitioners, £27 11s. from 40 country practitioners, £6 11s. from the Belfast Medical Students' Association, and various donations. The committee expressed its hearty appreciation of the subscription from the medical students. The amount of £135 was distributed in sums of from £10 to £15. The President, in moving the adoption of the report, said efforts should not be relaxed until a minimum of £200 of annual subscriptions was reached. The society was enabled to afford assistance to extremely deserving cases. Dr. R. J. Purdon, who seconded, said that although there was a certain monotony in the annual complaint of the apathy of the profession, yet both numbers and contributions had increased; still some 70 or 80 members of the profession in Belfast and 160 in the country had never given anything. On the other hand they compared favourably with England, a much richer country, where the profession gave 1s. 4d. a head to its benevolent fund as against 3s. 7d. a head given by the Irish, or nearly 7s. 6d. from this branch. Dr. Gausson (Dunmurry) moved the election of Professor Symington as President, and Dr. Wadsworth seconded. The motion was passed with acclamation. On the motion of Dr. Calwell seconded by Dr. Maguire, the committee was elected as follows:—Sir William Whitla, Sir John Byers, Professor Lindsay, Drs. McLorinan, J. W. Taylor, Cecil Shaw, R. J. Purdon, William Gibson, Gardner Robb, Macarthur (Greyabbey), St. George (Lisburn), Gausson (Dunmurry), Greenfield (Holywood). Dr. Fielden was re-elected Honorary Secretary and Treasurer, and Dr. Calwell made reference to his indefatigable services.

Correspondence.

TREATMENT OF SCHOOL CHILDREN.

SIR,—Dr. Lauriston Shaw attributes my dissent from the views of the Branch circular to my "misapprehension of existing conditions." This has been revealed to him by the fact that in my letter I three times use the term "school doctor." "But," says Dr. Shaw, "the whole point of the trouble is that there is no school doctor." I am quite aware, and in each of my three allusions to school doctors I made it clear I was aware, that their functions were investigation and not treatment; but it seems incredible that Dr. Shaw, or any one else interested in this question, should not know that the officers are appointed and discharge their duties under the title of "school doctor."

I ventured in my letter to question whether the consultative principle would, as the circular stated, be infringed by a child being received for treatment on the notification of a school doctor. Here is Dr. Shaw's pronouncement on this subject:

One could no more act as a consultant to a medical inspector debarred from practice than to a relieving officer without a professional qualification.

I commend this doctrine to the Ethical Committee, but Dr. Shaw may be interested to learn that the officials to whom he alludes are not debarred from practice at all;

fortunately, therefore, neither Dr. Shaw or anyone else will be called upon to put his rather inhuman edict into force.

But Dr. Shaw's proposal shows the impracticability of the consultative principle, and the oppressive manner in which it might be manipulated. Although Dr. Shaw discusses the minor question, such as this "consultative principle," he does not meet the more important objections to the policy urged upon us by the Branch Council. He does not explain why a grant should be forbidden to a hospital from the London County Council while it is allowable to be accepted from the Poor Law and from other public bodies.

Nor does he explain on what grounds a school child can be refused treatment for some diseases and accepted for others. No doubt there is abuse of out-patient departments, but of all the cases that are appropriate for treatment it is these cases which we are now urged to refuse because the public has recognized their importance and offers payment in return for their treatment.—I am, etc.,

London, W., June 22nd.

SIDNEY PHILLIPS.

SIR,—I think it is to be regretted that public attention should have been called to the recent decision of Great Ormond Street Children's Hospital with regard to the treatment of London County Council school children. It is the result of precipitate action on the part of the Committee of Management without previous consultation with the Medical Committee. I have drawn the attention of the Medical Committee to the matter, and I have no doubt that the Committee of Management, who have always shown themselves exceptionally responsive to the suggestions and desires of the medical staff, will reconsider the question at the earliest opportunity.—I am, etc.,

J. HERBERT PARSONS,

London, W., June 18th.

Ophthalmic Surgeon to the Hospital.

SPEECH FRIGHT.

SIR,—Although "Celt" has concealed his identity, there are two things we have learnt about him: he can write a readable letter and he can make a good speech. The latter fact he hardly seems to be aware of, but the symptoms are too well marked to admit of mistake. There is no more certain sign of coming success than speech fright which comes short of actual brain collapse. The state of nervous tension which precedes a vocal effort is a certain sign of a mental energy that will appeal to others. The intensity of feeling which produces speech fright is identical with that which impresses an audience. Probably no one who has not suffered from speech fright has ever made a speech really worth listening to. The fact is well known to teachers of singing and of elocution. Nothing pleases them better than nervousness before a first performance. It shows that the pupil has intense feeling, and if he has feeling he can put it into his words. Meanwhile, whether it is from the habit of suppressing our feelings, or from an acquired contempt of all emotion, doctors are rarely able to make speeches, and almost as rarely (as "Celt" truly suggests) to write readable English. I remember at the first dinner of the Polyclinic Mr. Alfred Lyttelton mercilessly chafing the medical profession on being absolutely unable to make a speech. There were about 400 doctors present, and not one of them was able to controvert his statements, or to give a practical demonstration that they were unfounded.

One of the best accounts of speech fright ever written is probably that in Rider Haggard's book called *Mr. Meeson's Will*. In this case an eloquent young barrister, with the whole case at his fingers' ends, is unable in court to speak a single word. When he is in the last extremity of despair some occurrence in the court makes him laugh. The laugh causes some diversion of the circulation in the brain, and the speech fright is gone. His eloquence immediately returns. He carries the whole case through singlehanded without a hitch, and of course gains it.—I am, etc.,

London, S.W., June 16th.

J. FOSTER PALMER.

SIR,—The discussion taking place concerning the causation and cure of "Speech fright" in the columns of the BRITISH MEDICAL JOURNAL, which has gained the attention of the general public through the *Daily Mail*, will result in

incalculable evil and widespread injury being done if the remedy suggested by more than one medical correspondent—namely, the taking of opium—is seriously entertained by the average medical or lay reader, and if the advice given is not promptly met with an earnest warning that such a remedy freely recommended would surely bring consequences that would prove a thousand times worse to humanity at large than any amount of ill-delivered, and badly-prepared, but comparatively harmless after-dinner speeches that might be delivered in course of time.

The medical practitioner who is experienced and clear-minded enough knows well that to advocate opium, morphine, cocaine, and such-like drugs is to create and spread a craving more dangerous than that so commonly observed for alcohol. Cases which come before him prove indisputably that once the assuaging and exalting effect of opium is perceived by the patient there is every likelihood of a desire for more being created, which is frequently so strong that a hopeless and degenerate future is unavoidable. The drugs named give temporary relief or stimulation, but they are equally certain to render the subject weaker to resist further increased desire for more. Taking once, gently persuades the speaker to take usually, which again invites him further to take just every time he wants it—which, of course, he soon finds is very frequently. Better that there should never be another after-dinner speech delivered than that in future the excellence thereof should depend chiefly upon necessarily increasing dosage of evil-bringing medicaments. Once the opium idea gained firm root amongst the masses, the extent to which it would be carried out would soon be quite appalling. The habit might even find its way into the pulpits, and perhaps be advocated there. Think, also, of an opium-stimulated Cabinet Ministry! For if temporarily effective for one, so also good for any and all.

I am myself a public speaker and a medical practitioner, and I would suffer the misery of a hundred dry months and repeated hours of speech-suffering before I took a single opium pill.

Most drug maniacs trace their misery to medical prescriptions. I would go so far as to recommend that certain drugs should never be administered through written prescriptions, but only handed over to the patient by the doctor with instructions for taking, the patient not even knowing the name of the remedy.

Speech or stage fright is a simple neurotic symptom—usually a sudden irruption of a sense of incompetency—a manifestation of mental, nervous, or physical incapacity. It is said to be on the increase, as, indeed, are all neurotic disorders. In some cases merely the general health is a little below par, at other times the digestion is particularly at fault, here and there we find a family history of either mental or nervous conditions of various kinds, and very often in others the heart is primarily or secondarily affected. The cure for such should not be a difficult matter—and a safe one when a truly scientific one—but necessarily a slower one than the taking of a dose of opium; yet a more lasting one, constituted of medicinal and dietetic measures, acting directly and indirectly, while, of course, habits, exercise, etc., should be properly regulated. But, in addition, experience has shown that hypnotic suggestion has a most powerful and rapidly curative influence, promptly correcting, as it will, obsessions of incapacity or ideas of recurring failure, helping a halting, nervous temperament, and even further enabling general treatment to be adopted pleasantly, thoroughly, and much more efficaciously. Dr. Woods has recently referred to twenty-eight cases of "speech fright" in the BRITISH MEDICAL JOURNAL, treated merely by hypnotism alone, out of which twenty-three gave satisfactory results and five were improved.

Speakers should not forget, however, that one of the most important factors making for easy, comfortable, and self-possessed powers for public speaking is, after all, a thorough grip of the subject. Many good speakers on favourite subjects fail occasionally through over-confidence in thinking they are sure to speak well upon almost any other subject. Moreover, it must be borne in mind that a difficult subject will sometimes cause a week of worry and anxiety before the speech is made, which will gradually upset the digestion, interfere with sleep, and unsteady the nervous system, to the end that some sort of

speech failure or breakdown distresses both the speaker and the audience.

I see so much human wreckage caused by opium, morphine, and cocaine that I am simply amazed at the free advocacy of such a dangerous remedy as opium by medical correspondents in the BRITISH MEDICAL JOURNAL. I consider that doctors now thoroughly deserve the blame they are getting from clear-headed critics for actually creating drug-maniacs. It is eloquent that some of the worst cases among my patients have been medical men.—I am, etc.,

Caterham, June 16th.

HAYDN BROWN.

SIR,—It is most interesting to read the various letters on speech fright, and I think most medical practitioners have had experience of this and other varieties of the same condition. I should like to state my experience of a case of "piano fright." I have on several occasions been called upon to treat this most distressing condition. A few months ago a lady visited me and said she had been suddenly asked to accompany a very celebrated vocalist at one of our leading London concert halls. She said that she was quite certain that as soon as she made her appearance on the platform she would go off in a "dead swoon" before ever she reached the piano. I endeavoured to reassure her, and ordered her the following draught a quarter of an hour before she came on to play: Sp. am. co., 60 minims; tinct. opii, 10 minims; camphor water, 1 oz. I saw her at the hall just before the concert commenced, and she was then in a very nervous state. I never heard her play better, and she told me afterwards that the draught steadied her so thoroughly that she was not in the least nervous throughout the evening. She has had a similar draught since on more than one occasion with equally successful results.—I am, etc.,

Margate, June 15th.

SANDERSON MELLOR.

INTERNATIONAL NOTATION OF ASTIGMATISM.

SIR,—In the report of the Ophthalmological Society on page 1482 of the JOURNAL of June 19th, Mr. Jessop's note as given under the heading of "International Notation" is certainly misleading as far as the notation of astigmatism is concerned. Any one reading it would come to the conclusion that it had been agreed upon, as printed there, that henceforth

the axes should be measured and represented in the *lower* semicircle of the trial frame; the numbering of the axes should start from the middle line of the face in each eye, and proceed *downwards* and *temporally*; the zero would therefore lie at the nasal end of the semicircle, and 180° at the temporal end; 90° would be *below* and midway between these points.

This is sure to give rise to no end of confusion, and no one is likely to come to the conclusion that the Eleventh International Ophthalmological Congress held at Naples in April, to which the committee referred to had been appointed to report, almost unanimously resolved the following—namely:

That the axes should be measured and represented in the *upper* semicircle of the trial frame, that the numbering of the axes should start from the middle line of the face in each eye and proceed *upwards* and *temporally*, and that the zero would therefore be at the nasal end, 180° at the temporal end, and 90° *above* and midway between these points.

What actually occurred was this. The report of the committee (appointed at the preceding congress held in Lucerne in 1904, and consisting of seven members representing Austria, Belgium, England, France, Germany, Italy and Switzerland) had been drawn up substantially as stated in your issue of June 19th, and handed to each member of the congress on arrival at Naples. During the two days preceding the discussion of this report the committee had had ample opportunity to convince themselves that the proposal of selecting the *lower* semicircle of the trial frame would be rejected by almost every one; they therefore had resolved to agree to the selection of the *upper* semicircle for the notation of the axes. When the matter came before the well-attended meeting, the *upper* semicircle was adopted for notation by an overwhelming majority.

The notation as adopted being so completely opposite to the one published in the committee's report, it is difficult to see why the latter, after its almost unanimous rejection, should have been published at all, and especially without

the all-important addendum that it had been rejected in favour of the opposite notation.

It may be some time before the *Transactions* of the congress appear, and I beg, therefore, that you will kindly insert this correction in your next issue, in order to minimize the confusion that the statement in your last issue is bound to provoke.—I am, etc.,

Liverpool, June 19th.

KARL GROSSMANN.

EPITHELIOMA OF THE OESOPHAGUS.

SIR.—The case reported in the *JOURNAL* of June 12th by Dr. Basil Cook is an instance of a class of malignant growths well known to laryngologists, but of which little mention is generally made in the textbooks. They originate on the epithelium covering the posterior surface of the cricoid plate, and are variously described as epithelioma of the pharynx or of the oesophagus. Growing, as they do, on the cricoid, they are sometimes classed under extrinsic laryngeal cancers, but this is incorrect, for they arise on the epithelium of the alimentary canal. Mr. William Hill has urged the use of the term "party-wall cancers," but this nomenclature has the disadvantage of making no distinction between those growing on the posterior surface and those originating on the anterior aspect within the lumen of the larynx.

A point of interest about these tumours is that, while they are fairly common in the female sex, they are almost, if not quite, unknown in men. Again, they are found at a comparatively early age, frequently between 30 and 35, so that the age of Dr. Cook's patient, which was 26, is not very far from the usual range.

London, W., June 14th.

HAROLD BARWELL.

THE CAUSATION OF CANCER.

SIR.—Intending as I do to take part, at the forthcoming Belfast meeting of the Association, in the discussion on the notification of tuberculosis, I made only this morning the following preparatory note: "As in cancerous processes groups of cells may be supposed to have assumed ancestral reproductive functions, so in tuberculosis we may conceive that certain cells develop equally primitive hyperoxidizing functions." I added to my note: "This view incidentally offers an argument against the specificity of the germ plasma or germ cell."

Later on in the day I saw Dr. Marsden's letter¹ bearing the title that stands at the head of this answer. It is a pleasure therefore to me, in reply to his invitation, to express my agreement with him on several points. I am convinced, in the first place, "that the evidence so far adduced is in favour of a verdict of cancer from natural causes." I further share the impression that irritation, local or antigenic in its broadest sense, plays an important part in the development of cancer. And, lastly, I agree, as will appear from the note I have just quoted, with the view that the natural causes he invokes embrace a number of evolutionary factors. Indeed, I can add, I have long held and even advocated the opinion that most of the chronic pathological processes are susceptible of explanation on purely evolutionary principles.

The difficulties arise, as Dr. Marsden has probably anticipated or will experience, when these evolutionary doctrines are defined. No Weismannist or so-called neo-Darwinian, for instance, would consistently admit for a moment that the original destiny of the local cells could be changed, or much less even that so radical a transformation could be attributed to the environment. The Lamarckian factor of habit and use or the mnemonic principle, as Semon has recently designated this attribute, would have to be postulated.

Dr. Marsden has presumably been influenced by Mr. Francis Darwin's last Presidential address on the movements of plants. This luminous review of the latest advances in the doctrine of descent should be in the hands of every pathologist.—I am, etc.,

Nico, June 7th.

A. W. GILCHRIST, M.D.

THE DISTRIBUTION OF LONGEVITY IN ENGLAND AND WALES.

SIR.—Dr. Gordon's paper in the *JOURNAL* of June 5th loses a great deal of its value owing to his having looked

on correction for age distribution as inapplicable—a position which he takes up without giving any reasons. That it has a very decided influence on such figures as he gives is shown by considering an imaginary case of two towns, one of which has 10 per cent. and the other 90 per cent. of its population over 75 years of age; the ratios of the deaths over 75 to the deaths at all ages will manifestly not give a true comparison of the respective longevities in the two towns. Of course such an instance is absurd, but differences in age distribution will certainly have some influence, and in many cases a considerable one.

To take a case in which I have the figures worked out. Averaging over the three years 1900, 1901, and 1902 in the case of males, the deaths over 75 in England were, in round numbers, some 10 per cent. of the total deaths, in Scotland slightly less, and in Ireland some 19 per cent. Does this show that longevity in Ireland was more pronounced than in the sister kingdoms? It suggests what is the fact, that there is a larger population over 75 in Ireland, a fact which can be seen at once from the census; but are these old people healthier? By no means.

The average common death-rate for 1900, 1901, and 1902 for the United Kingdom for those aged 75 and upwards was a shade over 160 per 1,000. From this the number of deaths over 75 to be expected in each kingdom could be calculated; and while in England and Scotland fewer died than were to be expected, in Ireland there was a considerable excess.—I am, etc.,

London, W., June 7th.

F. C. MARTLEY.

MEDICAL TREATMENT OF DUODENAL ULCER.

SIR.—Mr. Leonard Bidwell's address on the surgical treatment of gastric and duodenal ulcer, published on May 29th, is so admirable, and is, in addition, so free from the unblushing condemnation of all medical treatment which disfigures many recent surgical utterances on the subject, that I hesitate to offer criticism. He will, however, I hope, forgive me for challenging his statement that

Gastro-enterostomy is also indicated in every case of duodenal ulcer as soon as it can be diagnosed, as practically no case of duodenal ulcer is permanently cured by medical means.

I shall not, I think, be contradicted when I assert that duodenal ulceration is a far commoner clinical event than is often supposed, and that *post-mortem* evidence of sound cicatricies of old duodenal ulcers is not altogether rare. The inference to be drawn from such assertion, if true, is obvious. Apart, however, from this, it is very necessary, before impugning the value of any medical treatment, to define what is meant by the term. If medical treatment means employing the archaic system of treating all cases of duodenal ulcer, acute and chronic, by "oral starvation," which also, be it noted, almost necessarily includes "rectal starvation" (since the nutrient value of even 20-ounce rectal enemata is very small), there is some justification for Mr. Bidwell's strictures. If, again, medical treatment means the adoption of the Lennartz method of feeding, or other similar half-hearted procedure, he can find further support. Even then, however, we must acknowledge that many cases diagnosed as duodenal ulcer do recover when treated on these lines and do not relapse, though some are not improved, and others—an undetermined number—improve first and then relapse.

But the time is fast approaching when it will be fully recognized that the treatment, both from the medical and the surgical standpoint, of gastric and duodenal ulcer, as of other destructive tissue lesions, must be placed on a much broader basis than at present holds, even though starvation treatment or operation are the only alternatives offered for the acutest cases. It is now over two years since I first introduced the serum treatment of gastric and duodenal ulcer. I have in that time treated over 40 cases of chronic duodenal ulcer by a meat diet, and by administering by the mouth horse serum. In these cases there has been only one failure, in a gentleman who had a jejunal ulcer as well, both ulcers being excised by Mr. Moynihan. All the cases were most intractable to starvation treatment, Lennartz's treatment, or meat diet without serum. They were all diagnosed as instances of duodenal ulcer by experts in different parts of the world, and constituted as rigid a test as possible, several being of over twenty years' standing. In addition I have notes in private letters from medical men of cases treated

¹BRITISH MEDICAL JOURNAL, June 5th, 1909, p. 1392.

in the country by this method, in which success in the majority has been most gratifying. Failures, too, there are, though in some of these the diagnosis has subsequently proved to be wrong, whilst in others the conditions necessary for success have not been complied with. Unqualified failures, unreported, there are sure to be, and I am not without hope that this letter may discover them. The serum treatment is based on the strong probability that ulcer at the point of the duodenum, as of the stomach, is only symptomatic of a yet undiscovered disease, and hence every effort must be made to encourage general nutrition, without which the promotion of local repair is impossible. To encourage general nutrition by full diet is indirectly to encourage the power of local repair. To promote directly local repair it is necessary to combine the peptic and tryptic bodies. This is partly effected by insisting on a proteid diet, which must not be of slop, and partly by administering, at the height of digestion, a serum rich in antipeptic and antitryptic bodies, which combine with the residue of peptic and tryptic bodies not satisfied by the proteid molecules. This at least is the rationale of the proteid and serum treatment, which in practice gives results incomparably better than any medical procedure yet devised. To hope in all cases to ensure rest of stomach and duodenum by starvation is to hope in vain, and merits the reproach of our surgical colleagues. Two years is all too short a time from which to argue as to permanency of benefits derived from the serum treatment, but before utterly condemning the medical treatment of duodenal ulcer it is worth investigating the claims of an absolutely harmless procedure. Without laying undue stress on the fact, it is worth recording that in the last ten months I have been asked to treat no less than 7 cases of gastric and duodenal ulcer in which gastro-enterostomy had completely failed to cure either the ulcer, the hæmorrhage, or the pain. Such failure, however, in no way justifies the wholesale condemnation of a most valuable surgical operation.—I am, etc.,

London, W., May 29th.

E. C. HORT.

"THE DOCTOR AS A VICARIOUS PHILANTHROPIST."

SIR,—I was rather surprised to read Mr. Owen Gwatkin's criticism of Dr. Wishart Kerr's courageous stand against the clamant demand for free medical attendance in cases of accident. Unless a man has abundant private means, those dependent on him must suffer if he gratifies his benevolent and altruistic aspirations by treating without charge any one who rambles, or is brought by sympathetic but parsimonious onlookers, into the surgery for first-aid. A few lessons of the kind Dr. Wishart Kerr administered would be most helpful in educating the public to a due sense of the fact that medical men are not usually rich enough to work for nothing.

I daresay most of us have had demands for the exercise of vicarious philanthropy from certain members of our own profession. Some medical men in large practice do not hesitate to encroach on the leisure of their professional brethren by asking them to do emergency work, which is, in some cases, not even acknowledged by a word of thanks, much less a fee. It is certainly making friendship a profitable thing when it can be used to save the expense of an assistant, and it is difficult if one is friendly with a man to hint that a friend and an assistant are not quite one and the same thing. The end of the matter seems to be that in a "business" world one must be "business" in self-protection, and philanthropy, "vicarious" or otherwise, is a luxury of the rich.—I am, etc.,

Falkirk, June 19th.

GEORGE C. STEWART.

THE PROFESSION, THE ASSOCIATION, AND THE "JOURNAL."

SIR,—I quite agree with Dr. Harry Grey in saying "that about 90 per cent. of members belong to the Association for the sake of the JOURNAL alone." My point is that the converse is also true—that a large proportion of non-members do not belong to the Association because they do not want the JOURNAL. I cannot, however, agree with Dr. Grey that those outside the Association never look at

a medical paper or attend a medical meeting. I think that quite a considerable proportion of non-members do take some medical periodical, and some at least attend medical meetings; and there is also the not inconsiderable point that in a badly-paid profession, the difference between 25s. and, say, 10s. 6d. per annum forcibly appeals to not a few.

I strongly hold that the solidarity of the profession—as evidenced by the absorption into the British Medical Association of practically every medical man practising in these islands—is of infinitely more consequence than any mere increase in the circulation of the JOURNAL. Whether the introduction of a lower-grade subscription would induce any considerable number of non-members to join is a point which the machinery of the Association might well be used to investigate.—I am, etc.,

Rochdale, June 22nd.

J. CUTHBERTSON WALKER.

A MEDICAL ROLL OF HONOUR.

SIR,—You were good enough to publish in the JOURNAL of February 6th a list, compiled by myself, of medical men who remained in London during the Great Plague. I thought that list was complete. I regret to find it was not. Dr. J. A. Nixon, of Bristol, has kindly called my attention to the following notice in the *Intelligencer* for August 7th, 1665, from which it appears that two other names must be added:

Whereas, since the appointment of two Physicians (Dr. Hodges and Sir Thomas Witherley) to administer to the Infected in and about the City, the Plague has so increased, that it is requisite there should be a greater number to take care of the Sick, Be it Known that Doctor Nicholas Austin, a Member of the King's College of Physicians, living in Austin Friars, and Dr. Edward Deantrey, a Member of the same Society living in Broad Street, being two of those Physicians that were presented* by the College to the Right Honourable the Lord Mayor and Court of Aldermen of the City of London for prevention and cure of the Plague, have thought fit, upon principles of Honour and Conscience, to declare that they are ready and willing to attend the said service and to visit all such persons in and about the City and Countries adjacent as shall desire their assistance and directions.

My biographical notes, therefore, published on February 6th, require supplementing by the two following addenda:

Davys, Nicholas, of Austin Friars, was a native of Devonshire, M.D. of the Universities of Leyden and Oxford and Hon. F.R.C.P. I have been unable to recover the dates of his birth and death.

Deantrey, Edward, of Broad Street, was M.D. Oxon. and Hon. F.R.C.P. Further particulars of him are wanting.

—I am, etc.,

London, W., June 14th.

S. D. CLIPPINGDALE.

THEORY AND HYPOTHESIS.

SIR,—It would be a gain if writers of textbooks on medicine would substitute the word "hypothesis" for the ambiguous word "theory," which nobody can accurately define, and which is sometimes used as equivalent to hypothesis, and sometimes as equivalent to a general law or truth, as when we speak of the theory of the tides.

Instead of "theories" as to the etiology of gout, chorea, etc., we should read "hypotheses." For what is a hypothesis? It is a scientific guess. It is any supposition which we make (either with or without actual evidence, or on evidence avowedly insufficient), in order to endeavour to deduce from it conclusions in accordance with facts which are known to be real.

The hypothesis must fit the facts. The facts must not fit the hypothesis. And in order to demonstrate the truth of any particular hypothesis we must show not only that it will explain all the facts, but that no other hypothesis will.—I am, etc.,

June 20th.

M.D.

* Dr. Liversidge, Registrar of the Royal College of Physicians, has been so good as to send me a copy of the Latin minute dealing with this matter. From this minute it appears that the following eight Physicians were originally nominated: "Dr. Joannes Wybræd, Dr. Guis. Conyers, Dr. Humphredus Brooke, Dr. Nathaniel Hodges, Dr. Edwardus Deantrey, Dr. Nicolaus Davys, Dr. Lancelot Harrison, and Dr. Witherley." I have been unable to find evidence that Drs. Wybræd and Lancelot Harrison remained in London.—S. D. C.

Universities and Colleges.

JOINT MATRICULATION BOARD OF THE UNIVERSITIES OF MANCHESTER, LIVERPOOL, LEEDS, AND SHEFFIELD.

AN agreement has now been drawn up for an interchange of matriculation certificates issued by the Joint Board of the Universities of Manchester, Liverpool, Leeds, and Sheffield, and the University of London. In each case there are certain obligatory subjects without which no certificate is issued. In London these are English and mathematics, while under the Joint Board they are either English language or English literature, English history, and mathematics. Each system also requires three other subjects from a list specified in their syllabus. In order to obtain recognition of the certificate by both bodies, these three optional subjects must be chosen from the following list: Greek, Latin, French, German, mechanics, chemistry, geography. The Joint Board further requires that one of the subjects shall be a language. The London University requires that one of the three subjects must be either Latin or a science, and that if Latin be not taken, one of the other subjects must be another language from the list, and further, that the certificate should state that the candidate has passed in "unprepared translation in lieu of set books." These conditions are what each body requires from its own candidates.

THE VICTORIA UNIVERSITY OF MANCHESTER.

Chemistry Department.

MR. A. LAPWORTH, D.Sc., has been appointed a Senior Lecturer in Chemistry and Assistant Director of the Inorganic Laboratories. He has also been elected to a Schunck Fellowship, part of the duties of which will be to conduct and supervise research in the Schunck laboratories. Mr. Lapworth is at present head of the chemical department of the Goldsmiths' Institute, London, and is the son of Dr. Lapworth, Professor of Geology in the University of Birmingham.

Visit of the King.

At a meeting of the University Council the Vice-Chancellor said that it was expected that the King would make a short stop at the university on the occasion of his visit to Manchester to open the New Infirmary on July 6th, and an address to be presented was approved.

Popular Lectures.

Arrangements have been made for a series of free popular lectures on Monday evenings during the coming session, and in addition a series of museum lectures will be given by Professors Flinders Petrie, Boyd Dawkins, Hickson, and Weiss.

UNIVERSITY OF EDINBURGH.

Medical Education.

At a meeting of the Students' Representative Council on June 17th it was agreed:

That the Senatus be petitioned to appoint a committee to institute an inquiry into the present state and methods of teaching in the Medical Faculty, with a view to increasing, if necessary, the amount of time spent upon practical training, and that a copy of this resolution be sent to the Dean and professors of the Medical Faculty.

The Services.

INDIAN MEDICAL SERVICE.

STUDY LEAVE.

THE *Gazette of India* of May 21st contains the following: "Paragraphs 3 and 8 of the regulations regarding the grant of study leave to officers of the Indian Medical Service, as published in the Department of Military Supply, Notification No. 16 of 1907, are reconstructed as follows: Study leave may be taken at any time, but will not be granted more than twice in the course of an officer's service. This restriction does not, however, apply to an officer who has part of his furlough converted into study leave under Rule 8. Officers on furlough, or other leave, who wish to have part of it converted into study leave should address the Under Secretary of State, India Office, and should attach a statement showing how they propose to spend the study leave. Similarly officers on furlough or other leave who desire to have it extended for the purpose of study should address the Under Secretary of State, but, in addition to the statement of the proposed study, they must support their applications with documentary evidence of their having obtained the approval of the authorities concerned in India to their applying for an extension of leave."

THE French Association for the Advancement of Science will hold its annual meeting this year at Lille from August 2nd to the 7th, under the presidency of Professor Landouzy, Dean of the Paris Faculty of Medicine. The Section of Medicine will be presided over by Professor H. Roger of Paris. The following questions are proposed for discussion: (1) The new methods of diagnosis and treatment of tuberculosis; (2) cerebro-spinal meningitis; (3) pathological physiology and pathology of the digestive canal.

Medico-Legal.

WORKMEN'S COMPENSATION CASES.

Chronic Bronchitis.

In a case heard in the Court of Appeal on May 26th, a man whose knee had been injured by the fall of a stone was compelled to crawl home as best he could. He was consequently exposed to the weather for three hours in December. As a result he suffered from double pneumonia which was followed by chronic bronchitis, and this prevented him from working. A county court judge refused compensation on the ground that the incapacity to work "was not the natural or probable result of the injuries." On appeal it was pointed out that, according to the medical evidence, the blow to the knee produced a shock which reduced vitality, and it was the exposure while his vitality was impaired which did the mischief. For the employers it was contended that the county court judge had found and was justified in finding, that the man's condition was not the proximate cause of the injury. The Court of Appeal held that there was evidence worthy of consideration as to whether the man's weak condition was due to the accident. The real question was whether the man's condition was a result of the accident in this sense—that it was occasioned by the debilitated condition of the man immediately after the accident. The case was sent back to the county court judge for consideration in the light of this finding.

"Strained Heart."

In a case heard at Wolverhampton on May 25th, a brewer's labourer claimed compensation for strained heart, which rendered him incapable. It appeared that he had been in the employment of a firm of brewers for twenty-three years. On March 11th, 1908, he collapsed while carrying a heavy bag. He had previously had pains over his heart. A month later, Dr. Grout told him his heart was strained. His sick club paid him until September, when the firm paid him 5s. a week until February, 1909. Dr. Grout, in his evidence, said that the cardiac weakness was probably due to lifting heavy weights, but he could not say it was entirely due to what happened on March 11th. The county court judge held that the strain was due to the nature of the employment, not to an accident, and dismissed the claim.

Seamen and Industrial Diseases.

One of the anomalies of the Act was brought to light in a case which was heard in the Court of Appeal on May 25th. The applicant was a boatswain who had been employed as painter-mixer on board ship. Owing to his employment he suffered from lead poisoning, which disabled him from work. He claimed compensation, as lead poisoning is one of the industrial diseases for which employers are liable. It was pointed out, however, that compensation for industrial disease is only payable (1) on the certificate of the district certifying surgeon appointed for the district in which the workman is working; or (2) where a workman is suspended in accordance with special rules under the Factory and Workshop Act, 1901; or (3) where death ensues. The Court held that, as there can be no certifying surgeon in the case of a seaman at sea, there could be no claim in respect of an industrial disease suffered by a seaman.

"Arising out of the Employment."

The Court of Appeal on May 26th upheld a decision of the judge of the Gloucester County Court, who, sitting as arbitrator, refused compensation to a domestic servant injured in the following circumstances: She was employed as a lady's maid and sewing maid, and was sewing one hot night last June with the window open. A cockchafer, attracted probably by an electric light in the room, flew in at the window. To frighten it away, she threw up her head, and struck herself on the right eye with the knuckle of her thumb. The result was the formation of a cataract, which, although removed by an operation, left her with permanently defective vision. In giving judgement, the Master of the Rolls remarked that what the court was really asked to do was to remove from the Workmen's Compensation Act the words "arising out of the employment," or to treat them as of no account. The Court could not depart from its invariable rule, which was to hold that it was not enough for an applicant to say that the accident could not have happened if he had not been in that particular place. The applicant must show that the accident arose because of something he was doing in the course of his work or because his work placed him in a position of peculiar danger. Unless that was established, the applicant must fail, because the accident did not arise out of the employment. In this case the maid was not placed in any position of special danger. The intrusion of a cockchafer into a lighted room through a window was a thing that might happen to anybody, and it seemed impossible to say that the fright which led to the applicant putting her thumb into her eye was something caused by her employment. The other two judges concurred, and the appeal was dismissed.

Aortic Aneurysm.

VERITAS.—We are inclined to the opinion that it is not possible to state with any approach to accuracy the length of time an aortic aneurysm has existed, nor is it possible to tell from a specimen the age of the pathological changes. The possibilities appear to be, from the evidence before us, that the man at the time of injury was the subject of atheromatous disease and that he had an aneurysm which up to that time did not cause incapacitating or disabling symptoms. A severe strain or effort occurring in a person suffering from atheromatous

degeneration of the aorta may produce damage there, but in the case as reported the strain can hardly be considered to have been severe, so that the presumption is in favour of the pre-existence of some form of aneurysmal dilatation. In a case of aneurysm, an effort may cause the dislodgement of a clot, but embolism may be merely a coincidental circumstance which would have occurred without the least relation to the trauma. It must be admitted that the displacement of a clot would be more likely to follow injury or effort, and it is quite clear that this patient became totally incapacitated immediately after an occurrence which might be regarded as an effort or strain. Whether or not the occurrence mentioned is an accident arising out of or in the course of the man's employment, is a question of law, and the opinion of a solicitor should be sought; he will advise if the evidence is of such a character to be capable of presentation to the county court judge for decision.

CORONER AND MEDICAL WITNESS.

MEMBER has sent us an account of an inquest recently held near Trowbridge concerning the death of a newly-born child, unidentified and found dead in a ditch. Our correspondent, the medical witness, after making a very careful *post-mortem* examination, came to the conclusion the child was born alive, had fully breathed, and had a complete and separate existence from the mother, the lungs having been fully inflated with air; and that it had died from asphyxia caused by external constriction round the neck. There was a distinct pressure mark round the neck 3 in. wide, and at one place deeper marks, as if knots had been tied, and he concluded that either tape or some such material must have been used. He said, in answer to the coroner, that he did not think that the umbilical cord could have caused such a mark as he saw. Other questions were put to him rather disparaging to his evidence. Ultimately the inquest was adjourned to give the police time to make further inquiries.

At the adjourned inquiry, and despite the clear and distinct evidence of our correspondent, the coroner, who is a lawyer, summed up, and suggested that the jury could return one of three verdicts: First, of accidental death, by the cord getting round the neck at the time of birth; secondly, they could say "Found dead, with insufficient evidence to show the cause"; or, thirdly, they might return a verdict of wilful murder against some person or persons unknown, if they believed the doctor's evidence was sufficient, but he thought it was hardly conclusive.

The jury then retired, and consulted in private for some time, and brought in a unanimous verdict that the deceased was wilfully murdered by some person or persons unknown.

We agree with our correspondent that had the coroner been a medical man, he would have more fully appreciated the medical evidence; but, notwithstanding, "twelve good men and true" evidently fully believed the medical evidence given, and returned their verdict in accordance with it. We think now that the medical witness should rest satisfied.

Obituary.

EDWARD CHARLES CRIPPS,

EX-PRESIDENT GLOUCESTERSHIRE BRANCH, BRITISH MEDICAL ASSOCIATION.

MR. EDWARD CHARLES CRIPPS, of Cirencester, died recently after an illness which had lasted nearly two years, and necessitated more than one operation. The results of the latest seemed to promise entire recovery, and in that belief he had gone to Bournemouth to complete his convalescence, but dangerous symptoms reappeared, and he was removed to his home by motor ambulance, reaching it only two days before his death. His long illness had in nowise lessened the number of his friends, and the news that it had ended fatally was received with widespread regret. It was not quite unexpected, of course, by those in direct touch with Cirencester, but among his more distant friends it has caused much surprise; for Charles Cripps, as he was locally called, in contradistinction to the Edward Cripps who preceded him, had only reached the age of 54, and seemed an unusually healthy man, much more likely to survive than to predecease his compere and coevals.

Mr. Charles Cripps came of an old Gloucestershire family long connected with Cirencester. His father practised in that town before him, his grandfather held a vicarage in the neighbourhood, and his great-grandfather represented the locality in Parliament for the long period of fifty years. His early education he received at Guilford, and on its completion joined St. Bartholomew's Hospital. There he forthwith became "Ox Cripps" to all and sundry, and by many of his friends would not have been recognized by any other title to the end of his life. It was a tribute alike to his physical proportions and to his sterling

amiable character, for he possessed to the full those qualities of cheeriness, geniality, and coolness on all occasions, which are commonly supposed to accompany great physical strength and size. After receiving the diplomas of the two Royal Colleges in London in 1877, he served the hospital for a year as House-Surgeon, and then became Medical Officer to the Central London Sick Asylum at Highgate, an early example of the modern Poor Law infirmary, and at that time a show place among such institutions. This post he held for several years; then came a few voyages to the East as a medical officer in the P. and O. Steamship service; and finally his settlement in Cirencester in succession to his father. His life there was one both of professional and social success. A thoroughly sound surgeon and medical adviser, he was held in great professional esteem both among the general population and among his colleagues, his skill as an anaesthetist being especially esteemed by the latter. He was also a tower of strength in support of all outdoor occupations among both the younger folk and his older neighbours. An all-round athlete himself, he did much both for cricket and football in the town, and popularized swimming, in which art he was specially accomplished. It was he, too, who laid out the Sabberton Golf Course, and who founded what is now the Cirencester Golf Club. He was not, however, only an outdoor man. He possessed considerable musical talents, and was often called upon to use his attractive voice at social functions and on behalf of local charities; and he was a prominent Mason, a Past Master of the Cotswold Lodge, and Past Provincial Director of Ceremonies for Gloucestershire. Even from a mere sense of *esprit de corps* such a man as Charles Cripps was bound to become a member of the British Medical Association, and in Gloucestershire he did much to promote and consolidate its interests, both by leading other men to join this body and by taking an active part in its affairs. He was a ready and clear speaker whenever occasion required, and served a term of office as president of the Branch, and remained a member of the Branch Council up to the time of his death. Mr. Charles Cripps was married, and is survived by his wife, one of the Elliots of Andover.

FREDERICK NUTCOMBE HUME, M.R.C.S., L.R.C.P.,

MEDICAL SUPERINTENDENT NORTH-WESTERN FEVER HOSPITAL, HAMSTEAD.

WE regret to record the death of Mr. F. N. Hume, which occurred at the age of 58, at his residence in Hampstead, on June 14th. His death was very sudden. He appeared to be in his usual health on Sunday, but in the night was seized with an acute pain in his chest, and was seen by one of the assistant medical officers. He remained in bed on Monday morning, and sent for his friend, Dr. W. F. Corfield, who saw him about 2 o'clock, when he seemed quite himself, but a few minutes after was seized with another attack of pain, apparently angina pectoris, and died immediately.

Mr. Hume was the third son of the late Rev. C. N. Hume, Rector of Meonstoke, Hants. He was educated at Marlborough School, and subsequently entered Wadham College, Oxford, in order to read for classical honours. After some two years, being strongly attracted to medical study, he joined the medical school of St. Thomas's Hospital, obtained the diploma of M.R.C.S. in 1876 and that of L.R.C.P. at a later date. During this student period he held the appointment of Clinical Assistant at the Victoria Park Chest Hospital. In 1876 he was appointed as one of the Surgeons to the National Aid Society's Ambulance in the Servo-Turkish War, and in the following year joined the Stafford House Ambulance in the war between Turkey and Russia. In 1878 he served for a time as Assistant Medical Officer at the Metropolitan Asylums Board's South-Eastern Hospital. He practised subsequently in Kensington for some years, and in 1885 again served with the National Aid Society in the Servo-Bulgarian War, and afterwards as Director of the English Hospital at Belgrade. He received the Takova, Medjidieh, and St. Sava Orders, as well as Turkish and Servian war medals.

In 1886 he re-entered the service of the Metropolitan Asylums Board as assistant medical officer at the South-Eastern Hospital, and was successively superintendent of

the Northern Hospital at Winchmore Hill, and of the North-Western Hospital at Hampstead, where he remained till his death.

On the formation of the Territorial Force last year Mr. Hume was the first to be offered the command of one of the newly-established sanitary companies, that attached to the 2nd London Division. He was gazetted Major in the R.A.M.C. Territorial Force last July, and since that time has worked hard to get his unit to the state of efficiency it has attained. The establishment of officers was only completed the week before his death, and the N.C.O.'s and men were almost up to the full establishment. His place will be difficult to fill.

His interest in public medicine was keen and unflagging. At the Northern Hospital, where there were large numbers of diphtheria cases among the convalescents from scarlatina, he was one of the first to test on a large scale the effects of the antitoxin treatment in the early stages of diphtheria. His reports on this experience are of much value. At the North-Western Fever Hospital he was appointed as one of the clinical instructors to London students. His teaching there was clear and practical, and greatly enjoyed both by himself and his pupils. He brought to his medical work in a high degree the essential qualities of a genuinely scientific mind, untiring energy, a deeply sympathetic nature, and a fine conscientiousness. His administration was able, and he won the warm regard and respect of all whom he served or who served him, whether in hospital or military work.

His many sorrowing friends can testify to his charming social qualities, and not least to the bright intelligence and kindly humour which inspired his conversation, and the high courage and promptitude which marked his actions.

He was buried at the Hampstead Cemetery on June 18th, the funeral being attended by his family and by many of the hospital staff as well as representatives of the Metropolitan Asylums Board, the Local Government Board, and the 2nd London Division of the Territorial Force, including all the officers of his unit; the coffin was carried by eight privates. He leaves a wife and two young sons.

Dr. PLUMBE, who had practised for thirty-one years at Maidenhead, was found dead in his bedchamber on the morning of June 7th. He had attended as usual to his professional work the day before, and seemed to be well and strong when he retired to rest, but he had suffered from an attack of syncope three years earlier, and it was then discovered that he was already the subject of heart disease. His father died suddenly in December, 1876, at the age of 52, and Dr. Samuel Plumbe himself was only 56 at the date of his decease. He died unmarried. Dr. Samuel T. Plumbe was the son of Dr. Samuel Alderson Plumbe, who settled in Maidenhead in 1852. He studied at St. Bartholomew's Hospital. He graduated M.B.Lond., and obtained the diploma of M.R.C.S. and L.S.A. in 1877, and took the degree of M.D.Lond. in 1882. He held for a time after his first qualification the appointment of House-Surgeon to the Kent and Canterbury Hospital. In 1878 he joined his deceased father's partner, Dr. Edwin Cuthbert Montgomery, in practice. Dr. Plumbe was widely and deservedly popular, being skilful, prompt, punctual, and extremely humane. His funeral, which took place at Maidenhead Cemetery on June 10th, was very largely attended, and the assemblage of persons representative of all classes was a striking testimony to the affection and esteem in which he was held throughout the town and district.

AFTER a seizure of double pneumonia on May 27th Dr. J. H. WILLIAMS passed away at his old home, Llanidloes, North Wales. The news occasioned universal sorrow at Aberavon. He was born in 1857, and was the son of the late Thomas Williams of Llanidloes. He received his medical education at the London Hospital, and about fifteen years ago settled in Aberavon, where he quickly became popular through his genial and kindly nature. His popularity may be judged from the fact that a couple of years after his advent he contested a seat on the town council, and was returned at the head of the poll. He was soon added to the Commission of the Peace for the borough of Aberavon. After being again returned at the head of the poll he was made an alderman, and in

the year 1902 occupied the mayoral chair of the borough. He was afterwards put on the Commission of the Peace for the county of Glamorgan. He represented the council on the Port Talbot Pilotage Board and the Port Sanitary Authority, and was a Freemason for many years. He was Medical Officer for Port Talbot Docks and Railway; Surgeon to the English Celluloid Company; Surgeon to the Whitworth Collieries; Medical Inspector of Seamen; Surgeon to various works and insurance societies. He leaves a widow and two young daughters.

Public Health

AND

POOR LAW MEDICAL SERVICES.

THE ADULTERATION OF RICE.

THE Local Government Board has issued a report (Reports to the Local Government Board on Public Health and Medical Subjects. New series. No. 4) by Dr. J. M. Hamill on "facing" and other methods of preparing rice for sale by the use of adulterants. It has been ascertained by the authorities that rice millers are generally not content with the appearance given to rice by ordinary mechanical methods of treatment, but endeavour to improve upon it in various ways by the use of extraneous substances during or subsequent to the milling. Talc or kindred substances are used to impart a high polish or glaze to the grain; pigments of various kinds are sometimes brought into requisition in order to modify its colour; and oil may be employed to increase its translucency. The use of talc (French chalk) or stearate in the form of a fine powder is particularly common. It is generally mixed with glucose, glycerine, and starch paste before it is applied to the rice, and sometimes also with mineral oil. This glazing mixture forms an exceedingly thin coating on each grain and ensures the adherence of talc in sufficient quantity to give the required degree of lustre. Rice has normally a creamy white colour; but a demand has been artificially created for a rice of dead whiteness, and this is attained by the addition of blue pigments, either mineral or organic, during the milling process. Ultramarine is most commonly used, but Prussian blue is also employed, or at least was used until quite recently. Amongst the organic pigments indigo has been used, but at the present time the aniline blues of one kind or another are in vogue. Rice in the natural condition varies considerably as regards its translucency, some varieties being very opaque. This opacity can be greatly modified by treatment with oil, whereby the grain obtains a dull, pearly translucency which has been found to prove attractive to many rice consumers. For this purpose a vegetable oil, such as arachis oil, is used to some extent; but as oils of this nature have the disadvantage of easily becoming rancid, a mineral oil or petroleum is more generally preferred. In discussing these commercial methods of treating rice as a possible danger to health, Dr. Hamill admits that minute amounts of talc, colouring matter, or oil may not do any harm; but he points out that the presence in this food of comparatively large quantities (such as 1 to 2 per cent.) of insoluble and possibly irritating mineral matter might in some circumstances be deleterious, particularly to infants or invalids.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Dudley.—The medical officer for Dudley (Dr. J. W. Wilkinson) in his annual report states that the death-rate for 1908 was 15.23 per thousand of the estimated population, and that it is the lowest rate ever recorded in the borough. The death-rate from the seven principal zymotic diseases was only 1.0 per thousand. The infantile mortality-rate again showed a marked improvement upon previous years. The birth-rate was 30.25, and showed a slight falling off as compared with that of 1907, but was not, however, so low as in 1906, when it was 29.73. An enormous amount of work had recently been carried out by the chief sanitary inspector in getting houses connected with the deep drainage system, and it had been fraught with much difficulty, owing to the expense entailed upon property owners. During the year 520 houses have been provided with proper drainage, and the water carriage system applied to 823. The medical officer speaks very highly of the admirable work which is being done in this direction to improve the health of the borough.

Herefordshire Combined Districts.—The report of Dr. Herbert Jones, medical officer of the Bromyard, Dore, Hereford, Ledbury, Leominster, and Weobley rural districts, relates to a scattered and slowly decreasing population, estimated to number 51,168 persons in the middle of last year. The birth-rate per 1,000 of population was only 21.5, as against 26.2 in rural districts England and Wales as a whole. Calculated, however, on the number of women between the ages of 15 and 45, the difference between the Herefordshire and the general rate would appear to be trifling. The death-rate was 15 per 1,000; it was lowest at Bromyard (10.7), and highest at Weobley (14.6). The infant mortality-rate was only 62 per 1,000 registered births. Dr. Jones makes no comment on this fact, which, however, is remarkable testimony to the value of the work done by him.

We gave some account of it last year, when the infant mortality was likewise much lower than the average figure for rural England and Wales. The secret seems to lie in the extent to which village nurses are used and the care which is taken by Dr. Jones to see that they are properly instructed and their work duly supervised. It is noteworthy likewise that the death-rate amongst illegitimate children in this area was not only exceedingly low in itself—namely, 57 per 1,000—but lower than the death-rate amongst legitimate children, whereas all over the country it tends to be both actually and relatively very high. The number of such births was also greater in proportion to the population than is usual throughout the country, and this fact, taken in connexion with the low death-rate amongst illegitimate children, perhaps represents a local attitude towards the subject which renders it comparatively easy for unmarried mothers to pay an adequate amount of attention to their children. The pithitis death-rate averaged 1.07 per 1,000, which is somewhat less than that of rural England and Wales in 1907, but considerably higher than the rate for the previous ten years in this particular district. The cancer-rate was 1.55, which again is much higher than the record of the previous ten years. Indeed, nearly 1 in 10 of all the deaths in the district seems to have been due to this disease. The same volume also includes particulars concerning the Bromyard Urban District, of which Dr. Jones is likewise medical officer. It has a population of 17,704, and its corrected death-rate 16.7, or 3.7 per 1,000 higher than in the combined rural area surrounding it. The only circumstances which would seem to explain this difference is the high rate of persons per acre in the combined rural area, which is 0.15 per acre, and in the Bromsford Urban District nearly 9.

Merton Urban District.—Merton is a rapidly increasing district, which until the end of 1907 was included within the area of administration of the Croydon Rural District Council. In 1901 it had a population of 4,500 persons, and in the middle of 1908 this had increased to 12,550. The birth-rate during the year was 28.5 per 1,000, the death-rate 7.9 per 1,000, and the infantile mortality-rate equal to 48 per 1,000 births. The rural isolation hospital is still used by the newly formed urban district, and in 1908 as many as 85 per cent. of the cases of diphtheria were removed there, while only 3 of the 18 scarlet fever patients and only 1 of the 4 typhoid patients were nursed at home. The importance of this can be better appreciated when we learn that nearly all the houses in the district are let on weekly rentals. The medical officer of health (Dr. D. A. Bellios) has drawn up a very useful pamphlet, which was delivered at every house in the locality, giving appropriate advice for the prevention of summer diarrhoea among young children. In 1908 only five deaths were registered as due to this disease.

Borough of Bath.—The population of Bath at the census of 1901 was 49,839, or some 2,000 less than the number recorded at the previous census. Estimated by the Registrar-General's method, the population of the city at the middle of 1908 would be 48,751, but Dr. Symons is of opinion that there may have been an increase since the last census and not a decrease. For statistical purposes, therefore, he estimates the population at 50,000, or the same number as in the three previous years. This cannot be considered satisfactory and emphasizes the importance of enumeration more frequently than every ten years. The death-rate during 1908 was 15 per 1,000 of the population, and the infantile mortality-rate equal to 87 per 1,000 births. The birth-rate was 19.5 per 1,000 of the population at all ages, compared with 26.5 per 1,000 in England and Wales. This very low birth-rate is more apparent than real, for, calculated as it should be, and as Dr. Symons has, it is equal to 207 per 1,000 married women between the ages of 15 and 45 years. In 1907 the ratio in the whole of England and Wales was 215.6. It is a pity that more medical officers of health do not adopt this method of calculating the legitimate birth-rate. There are 23 private slaughterhouses in Bath, 26 of which were established before 1847. It is satisfactory to find that 3 slaughterhouses which were of a very bad type have been acquired by the corporation. A health resort with the reputation of Bath ought to have a public abattoir, for the difficulties attending the proper supervision of the 23 private slaughterhouses must be almost insurmountable.

RESIGNATION OF MEMBERS OF BOARDS OF GUARDIANS.

LIBRA.—There is no line on resigning the office of Poor Law guardian. The question of resignation is a matter solely to be dealt with by the Local Government Board, and any application from a guardian to resign has to be sent to that Board by the applicant, and reasons given for wishing to resign office as guardian. It is not essential for a guardian to resign before becoming a candidate for a paid office under his board, but in the event of his being elected to any such office he would be disqualified from serving as a guardian.

BY LAWS OF LOCAL AUTHORITIES.

5825.—Section 37 of the Local Government Act, 1894, reads as follows: "Any laws, orders, regulations, and resolutions of any authority whose powers and duties are transferred by this Act to any council, as are in force at the time of the transfer, shall, so far as they relate to or are in pursuance of the powers and duties transferred, continue in force as if made by that council, and may be revoked or altered accordingly."

Letters, Notes, and Answers.

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CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

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In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

✉ Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

HYPERTRICHOSIS asks for the best treatment for temporary alleviation and permanent cure of trichosis, abundant and downy, on a lady's upper lip.

PRACTICE IN NEW ZEALAND.

L. J. asks for information as to the best means of obtaining a good and reliable partnership practice in New Zealand, with proper facilities for a thorough investigation.

DISTURBED NIGHTS.

NIGHT BIRD writes: When called up at eight I often find I cannot get to sleep again and am done up next day. Can any one suggest the best stimulant (non-alcoholic) to take on these occasions to induce sleep? It must be a common experience with others.

CANCER OF BLADDER.

DR. J. BURTON CLELAND (Chief Secretary's Department, Bureau of Microbiology, Sydney) writes: I am anxious to find out a reference to a permanent disease (7 prostatic) occurring in the urinary bladder of workers in one of the coal-tar dye industries, fuchsin workers. I believe it may be possibly, however, in indigo workers. I am unable to come across it in the literature available in Sydney.

INCOME TAX.

PERPLEXED has been asked by the surveyor of taxes to furnish particulars of his takings and working expenses for the years 1907 and 1908. As his income tax for those years has been paid and the return for this year sent in, he wishes to know whether he is bound to go to the trouble of furnishing the particulars.

*. The object of the surveyor of taxes in applying for this information is doubtless to verify the amount returned as to the liability for the current year. This return should have been made on the average profits of the three years 1906, 1907, and 1908, and from the fact that the request does not extend to the profits of 1906 it is assumed that the figures for that year have previously been furnished, or that the practice is a new one. Our correspondent is not bound to furnish the information at the request of the surveyor, but it will probably save him trouble in the long run to do so, inasmuch as the surveyor's object is presumably to ensure that a correct assessment shall be made. It is possible that non-compliance with the request may result in an estimated assessment being made by the Income Tax Commissioners, in which case the full details will be insisted on in connexion with the consequent appeal.

A. S. inquires as to the income tax liability in regard to quarterly instalments paid in respect of the purchase price of a practice.

*. The quarterly instalments in such a case do not represent income to the recipient any more than would the payment of the whole purchase price in one sum. The instalments should accordingly not be returned by the recipient for assessment to income tax. So far as the purchaser is concerned, the quarterly instalments must be regarded entirely as capital outlay, and no deduction should be made on account of them from his receipts in arriving at the profits to be returned for income tax purposes.

ANSWERS.

HOSPITAL WALLS AND FLOORS.

DR. W. B. PARSONS (London) writes, in reply to "Savage" (p. 1520), to recommend Paripan, the South African agents for which are Messrs. Fraser and Chalmers, Ltd., Johannesburg. It presents, he says, a smooth and highly-glassed surface, is durable, and can be washed with ordinary antiseptics without deterioration.

STUDY OF EYE DISEASES.

POST-GRADUATE would probably find the best place for studying eye diseases for the F.R.C.S. (Edin.) would be the special eye hospitals of London or Edinburgh. Of the Continental schools, for one who speaks German, Vienna or Freiburg, and one who speaks French, Paris or Brussels are probably the best for the purpose. Freiburg and Brussels are fairly cheap to live in, and the teaching of Axenfeld at Freiburg is excellent.

BRONCHOSCOPY.

DR. WILLIAM HILL (London) writes: Dr. Charles W. Chapman will find the information he requires as to the value of the bronchoscope in the diagnosis of intrathoracic tumours in Chevalier Jackson's monograph on *Tracheobronchoscopy, Oesophagoscopy, etc.* (St. Louis, 1907), in which there is a bibliography of 358 references. He might also consult the article on bronchoscopy in *Allbutt's System of Medicine*, vol. iv, part 2.

* Dr. Jackson's book was reviewed in the JOURNAL, 1903, vol. i, p. 1236.

STALE ASPARAGUS.

CAPTAIN E. BLAKE KNOX, M.D., D.P.H., R.A.M.C., writes: I was much interested in "A.L.'s" query about gastro-intestinal irritation due to eating stale asparagus (p. 1520 of June 19th) as I have had exactly the same personal experience. In two cases which I have recently seen severe diarrhoea occurred in each and vomiting in one; the symptoms closely resembled ptomaine poisoning and I made a very careful investigation and analysis of the food taken prior to the illness. Pieces of blackened asparagus fibres covered with stringy mucus were passed in the stools, and these, no doubt, were the causal agent, as all other food taken was proved to be absolutely above suspicion. The asparagus was described as slightly flabby before being cooked. I have seen similar cases occurring from eating stale spinach. Perhaps the method of applying liquid manure to these vegetables has something to do with the formation of poisonous bodies when they get stale. I believe asparagus, like sea-kale, is often grown in beds covered by manure mixed with ash-pit refuse, which from its heating properties forces growth. As the contents of many ash-pits contain putrifying animal matter, the presence of ptomaines on the surface of these vegetables can be easily accounted for.

LETTERS, NOTES, ETC.

ANIMAL PARASITES.

PROFESSOR M. BRAUN and Dr. M. LUHE (Königsberg) write: In your issue of May 8th you publish a review of Braun and Luhe's *Leitfaden zur Untersuchung der tierischen Parasiten des Menschen und der Haustiere*, in which your reviewer expresses himself as follows: "A glance at the general style, printing, diagrams, and text of the work shows at once that it is based upon, or might even be termed, a synopsis of Braun's well-known work." Then he censures one of the authors for "considerable changes introduced into the old and time-honoured classification of the protozoa." It is rather hard to understand how this both can be true. Indeed, a glance at the table of contents shows at once that Braun's former work and the work under discussion are quite different from each other, the one detailing the parasites of man and their life histories, the other the methods of obtaining, preparing, preserving, and examining parasitic material. Both intend to supplement each other. No less than 23 of the 100 illustrations of the *Leitfaden* are wanting in Braun's former work, and the readers will judge whether the new work is really a "synopsis" of the former or a "practical companion" to it, as we may describe it. Moreover, it is not possible to accept your statement that considerable changes are introduced into the classification of the parasites. The most important of these so-called changes, the inclusion of the haemoflagellates and haemosporidies in a single order, is introduced by Hartmann two years ago, and the paragraph of the work under discussion dealing with this question is concluded as follows: "Although this basis of classification is not, as yet, accepted by all authors, it is expedient to the present purpose to class the blood parasites together, more particularly as the method of examination is the same in both cases." It is to be regretted that the "glance" which your reviewer bestowed upon the text of this work was of so cursory a nature, and that he should have so wholly mistaken both its intention and its scope.

* It is not unusual for authors, if a book be unfavourably criticized, to suggest that the reviewer has not read or has only glanced at it, but we cannot accept the insinuation in this case. The resemblance between the volume under notice and Braun's well-known work in style and text is close, and we calculate that 73 of the 100 diagrams in the new book are the same. Neither can we accept our correspondents' opinion as to the classification adopted; the fact that "the

method of examination is the same in both cases," ought not, in our opinion, to be made the basis of classification.

HUNGER PAIN OF DUODENAL ULCER.

O. I. writes: I have followed the discussion on this subject with unusual interest, having been myself a sufferer at intervals for the last four years. About three years ago I consulted a physician, who diagnosed "hyperacidity." I had grave doubts as to the correctness of his diagnosis, and from more than one article which I had read in the JOURNAL about that date on the subject of duodenal ulcer I was convinced that such was the cause of my symptoms.

As a small boy I had suffered occasionally from heartburn, accompanied by acid eructations. Since then, till about four years ago, I had no stomach troubles. About the date mentioned I began to feel pain in the region of the stomach, which I could only describe as cramp. It came in paroxysms. Beginning with the slightest degree of discomfort, it steadily increased in intensity until it reached its height, and then as steadily decreased in severity till it disappeared, the whole time occupied being about 10 to 15 seconds. After an interval of about half a minute another paroxysm occurred. These continued regularly for about an hour. Each paroxysm was rather more severe than the preceding, until a certain stage was reached, and then they began to taper off gradually until they entirely ceased. These attacks came at first only about 9 or 10 p.m.

A mouthful of undiluted whisky caused eructations, and was speedily followed by complete relief at first, but soon failed to act with the same efficiency, and was consequently stopped. By and by these symptoms began to occur during the day, but almost invariably several hours after a meal, and the taking of food always brought relief. At a later period the trouble only occurred during the night. At the height of an attack exceedingly tough mucus was rapidly secreted from the fauces—so tough, indeed, that it could not be swallowed, although there was a constant desire to do so. It had to be hawked up vigorously, and on spitting it out it clung to the lips, forming a rope of mucus 3 ft. or 4 ft. long. This is an invariable accompaniment of these attacks, and on which I have not seen mentioned by any of your correspondents.

When an attack was unusually severe, it usually terminated rapidly with pyrosis. The pain was not on any occasion what one might call acute.

Diet did not appear to have any marked influence in bringing on an attack. The appetite has remained good throughout. In corroboration of my own diagnosis I once observed a loose motion which had every appearance of melæna.

With regard to the cure of this condition in my own case I have some doubts. During the last eighteen months I have had only two periods of a very few days each, of any degree of severity, although I have occasional twinges to remind me of the past.

Regarding the treatment I have adopted, it may be of interest. After the whisky failed to give relief, I tried fasting and various remedies without much success till I used liquor potassæ in ss to xx , with the same quantity of tinct. of iron in water, taken whenever the pain threatened, and continued for a few days before meals. After two or three days this treatment has never failed to bring about complete relief which has continued for considerable periods of time. I may say that I was led to adopt the above treatment on the assumption of hyperacidity.

Some of your correspondents have referred to recurrences after apparent cure. Has anyone observed anything approaching seasonal periodicity? On reflection, it appears to me that my attacks have usually occurred during the summer months.

A WARNING.

OUR attention has been called to a case in which a medical attendant on a family was asked by one of the family members to sign a declaration in order that he might obtain a Foreign Office passport. This was done without the practitioner making any special inquiries, since he knew the family well, and had no reason to suspect the individual member making the application. The passport was duly granted. Our correspondent recently received a letter from the Foreign Office reprimanding him for signing the application and reciting a series of convictions against the individual in question. The passport was issued on the basis of various terms of imprisonment. We therefore venture to warn medical practitioners against signing any forms for patients without making full inquiry.

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JUNE 26, 1909.]

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AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

1. Duodenal Ulcer in the First Decade.

L. KUTTNER (*Berl. klin. Woch.*, November 9th, 1908) records the details of 2 cases of duodenal ulcer in children. The first case was that of an infant of some 30 days, who suffered from diarrhoea and vomiting from the seventh day of life. On the ninth day the stools were stained with blood, and on the thirtieth day a profuse bleeding took place, which led to death within a short time. The only signs made out during life were meteorism, enlargement of the liver and spleen, and pallor. *Post mortem*, a round duodenal ulcer was found. The second patient was 4 years of age. The abdomen was distended, the spleen and liver were enlarged, the stools contained mucus and blood, but no dysentery bacilli or amoebae could be isolated. *Coli* bacilli were found in large numbers in the stools. On the sixth day after admission a fatal profuse haemorrhage from the bowel took place. *Post mortem*, three round duodenal ulcers were found, as well as a parenchymatous nephritis. Kuttner calls attention to the fact that duodenal ulcer is in reality much more common than is usually supposed. He cites from Moynihan, who has operated on 114 cases during the last seven years; Mayo Robson, who has performed gastro-enterostomy 66 times for this condition; and William J. and Charles H. Mayo, who performed 188 operations for duodenal ulcer. Krug of Kiel found duodenal ulcers in 53 bodies out of 12,020 *post mortem*. Other surgeons and pathologists have brought forward observations in support of the frequency of these ulcers. Collins found duodenal ulcer 42 times in children under 10 years of age. Of these, 17 occurred in infants under 1 year. The condition, however, must be regarded as uncommon in children. With regard to the pathology, Landau ascribed the ulceration to a thrombosis of the umbilical vein and embolus of the vessels of the small intestine, leading to local necrosis. The author considers that in older children the etiology may include plugging of vessels and digestion of the tissue shut off by the plugged vessels. The large majority of the cases show ulcers in the first part of the duodenum, just below the papilla. The association between nephritis and duodenal ulcer is recognized. Kuttner passes on to a brief discussion of those cases in which the duodenal ulcer follows on burns of the skin. He is not inclined to ascribe any etiological rôle to the burns, but regards these cases as coincidences. Of more probable causal nature is the occurrence of pseudo-membranaceous colitis. The action of *Bacillus coli communis* in producing gastric ulcer has been proved experimentally by Fenton Turk. The appearance of the ulcer in his second case, however, led Kuttner to believe that the *Bacillus coli* had not produced it, but that it was a peptic ulcer. He regards his cases and those of other authors as warnings to surgeons to think of duodenal ulcer in infants and young children. Anaemia of unknown origin and occult bleeding from the bowel should be regarded as a possible result of this condition. If the diagnosis can be made, the condition should be treated just like gastric ulcer. When vomiting and haemorrhage is present, rectal feeding should be employed for a time. Infants do quite well on Fühmann's ementa of mother's milk. Alkalies, including carbonate of magnesium, liquor calcei, Carlsbad water, bismuth preparations and styptics may be required. Poultices should not be applied when haemorrhage is present; icebags applied to the epigastrium can be substituted in these cases. He has no experience of operative treatment in young children and infants, but sees no reason why this should not be successfully carried out. Profuse haemorrhage occurring suddenly excludes operation, as death usually takes place within a few hours at most.

2. Radical Neuralgias.

VERGER (*Gaz. Hebdom. des Sci. Méd.*, July 5th, 1908) recommends progressive doses of opium in the treatment of neuralgias referable to the nerve roots. Such neuralgias include most of the sciaticas and nearly all cases of brachial neuralgia. The symptoms in both upper and lower limbs consist of spontaneous pain, day and night, with increased paroxysms, either spontaneous or excited by movements such as coughing; and, objectively, zones of diminished or increased cutaneous sensation, not corresponding to the region of any given nerve, but taking the

form of hands, parallel to the axis of the limb, and varying according to the nerve roots affected. A negative characteristic of these affections is the absence of the painful points of Valleix, so that they can easily be distinguished from other neuralgias of a peripheral origin. From an etiological point of view they may be divided into two groups. In the first group the neuralgia is a sort of precursor of some affection of the meninges of the medulla or cord. Pott's disease, hypertrophic meningitis, vertebral cancer, or meningeal tumours, such as sarcoma; and symptoms, definitely medullary, or pointing to implication of the anterior roots, soon appear. In the second group the neuralgia proceeds from a radical affection, to some extent primitive, such as compression by plaques of syphilitic meningitis, or an inflammation which may be toxic or infectious; and then the neuralgia may present the characters of a specific malady. The diagnosis is difficult at first, the bilateral nature not being always an indication of a grave lesion. But in both groups the prognosis is always doubtful, because, apart from the possibility of very serious ulterior symptoms, radical neuralgia is particularly obstinate, except in cases which yield to antisyphilitic remedies. Local treatment is of no use in essential neuralgia, and surgical interference is apt to fail, division of several nerve-roots having resulted in no improvement in the hands of M. Chavannaz. Verger, in three well-marked cases of radical neuralgia of the limbs, has employed with success the treatment with progressive doses of opium, used by Trousseau for epileptiform neuralgia of the face. In order to obviate the risk of constipation, Verger prescribes a pill containing 2 centigrams of extract of opium with 5 milligrams of belladonna extract. Beginning with five pills a day, he increases the doses by one every second day, until a decided improvement takes place. After about fifteen days of the maximum dose the amount is gradually diminished. Verger's cases comprised an old woman, a young girl, and a man of 44; the first two were cured, and the third, who suffered also from diabetes, was greatly relieved. The maximum doses required were 18, 22, and 24 centigrams respectively. He has never found any serious inconvenience from the treatment, and the relief afforded has been previously sought in vain by means of other remedies. He considers the internal administration of opium preferable to the injection of morphine.

3. Personal Identification.

TAMASSIA (*Gaz. degli Osped.*, August 2nd, 1908) has been working for some years on the dorsal veins of the hands as a means of personal identification. As is well known, these veins differ considerably not only in different people but also in the two hands of a single individual, and it is this marked difference and variability which the author proposes as a means of identification. The veins are rendered prominent either by letting the hand hang down for some time or by applying a ligature, and then the hands are photographed. The surface is a fairly large one, the differences considerable, easily photographed, and require no elaborate measurements or delicate apparatus to register; and even if one right hand may resemble another, it is pretty certain that a right and left hand of any given subject would differ from any other right and left hand. The author describes six chief types:—(1) The arch, used in a general and rather wide sense; (2) the arteriform distribution; (3) the reticulate type; (4) an arrangement like the letter V; (5) like two Y's placed side by side; (6) a mixture of these various groups. The last group is perhaps the commonest arrangement. Whilst the author does not wish to disparage the numerous data furnished by Bertillon's method and by Galton's finger-tip impressions, he believes insufficient attention has been directed to this simple method of identification by means of the dorsal veins of the hands. These veins remain pretty much the same throughout life, and cannot be altered by disease or by intentional fraud, or at least cannot be altered in such a way as to impair their value as marks of personal identity.

4. Prognosis of Diabetic Retinitis.

ROCHOU-DUVIGNEAUD (*Journ. des Prat.*, July 11th, 1908) points out that in certain cases the differential diagnosis of diabetic retinitis and albuminuric retinitis rests much more upon the result of urinary examination than upon the

retinal changes. In both there are vascular and blood lesions, white fibrinous effusions, and haemorrhages. In a case of Bright's disease the appearance of albuminuric retinitis indicates a grave prognosis, and generally speaking its appearance means the entry of the last stages of the disease. If one excepts the short periods of amaurosis of uraemic origin one finds that very few patients suffering from Bright's disease become blind, as they die before the retinitis has seriously affected their vision. In diabetes there may be seen in the retina numerous white spots surrounding or occupying the region of the macula: discrete haemorrhagic points, especially at the periphery: numerous haemorrhagic patches often associated with oedema which partially separates the retina: haemorrhages invading the vitreous and giving origin to cicatricial strings which separate the nerve layer and may cause complete blindness: thrombosis of the central vessels: haemorrhagic glaucomatous lesions causing blindness, and according to the localization and intensity of the lesions, so may the affection of vision be either slight or complete blindness may ensue. Diabetic patients may live for a long time after their sight has been lost, and the prognosis of retinal affections in diabetes is certainly less grave, both as regards the eye and also as regards the duration of life. In some cases the retinal changes have retroceded and good vision has been recovered, whilst in others death has occurred soon after the appearance of retinal changes.

SURGERY.

5. Surgical Treatment of Phosphorus Necrosis.

LEVAI (*Pester Mediz. Chirurg. Presse*, September 6th, 1903) states that among 1,500 persons engaged in Austria in the manufacture of phosphorus matches 250 cases of phosphorus necrosis occur yearly. This disease is not the effect of local irritation, nor does it find its entrance solely through the medium of decayed teeth. It occurs in workmen with perfect teeth, and in one case a regenerated maxilla containing no teeth was attacked. On the other hand, some workers with very defective teeth have worked for many years in a phosphorus manufactory without developing necrosis. Phosphorus attacks the organism as a whole, and affects other bones besides the jaw. A phosphorus worker of 40 broke two ribs after an insignificant blow and twice fractured his forearm. A forty-year-old packer broke her femur four times in three years. (None of these patients had syphilis.) In 11 cases Levai examined histologically the removed bone, and in two cases portions of bone chiselled out of the sound maxillae, and found that the endothelium of the blood vessels of the bone is diseased in those who have worked for a long time with phosphorus. This makes the bones brittle, and as thrombus formation readily occurs in diseased vessels, predisposes to necrosis. To cause such a predisposition four or five years' systematic employment in a phosphorus-containing atmosphere is sufficient, and, once it exists, a worker cannot avoid his fate, even by giving up his injurious occupation. Levai urges the importance of early operation. Waiting for the formation of an involucrum is accompanied by a mortality of at least 21 to 22 per cent. The early operation is fraught with hardly any danger, and, even if the operation is not sufficiently radical, the mere removal of dead bone makes the patient's condition more tolerable. Death usually occurs with obstruction of a whole branch of a vessel at once throughout the whole thickness of the bone, so that the necrosis quickly spreads. Even if an involucrum forms, it is imperfect and dies subsequently. After an early operation the periosteum left behind is adapted to new bone formation, and good functional and cosmetic results are attained where the whole maxilla is removed, especially when, directly after the operation, a provisional substitute for the jaw is inserted. Substitutes made of tin are best: strong wire may be used. Caoutchouc is bad for aseptic reasons. Levai always carries out the operation from the oral cavity, partly from a cosmetic point of view, partly because when the mouth is opened from without the wound renders nourishment exceptionally difficult. In these weakened patients good nourishment is of the greatest importance. In slight degrees of necrosis Levai operates under a local anaesthetic: with far-reaching necrosis, under the morphine-ether narcosis. After removing the loose teeth, he makes an incision along the edge of the sockets reaching to the bone—around the dead bone this is easy—and resects in healthy bone. When the larger half of the maxilla is dead he removes the whole bone at once, as his experience shows that when half of a

jaw-bone is dead the other part dies shortly after. When the incision is carried at once down to the bone and the periosteum pushed back from the entire bone haemorrhage is usually insignificant. In the after-treatment frequent irrigation of the mouth is necessary: he uses a 2 per cent. boric acid solution. Levai gives notes of 7 cases of very successful operations exhibited before the Buda-Pesth Medical Society in 1907.

6. The Treatment of Burns.

RENNER (*Zentralbl. f. Chir.*, No. 30, 1903) reports that in the treatment of burns of all degrees he has obtained much success from the use of a powder made up by one part of subnitrate of bismuth to two parts of kaolin. The burnt surface, after it has been thoroughly cleansed, is covered by a thick layer of this powder, over which is bandaged a layer of sterilized gauze, the whole being finally covered by thick layers of wadding. This dressing is changed every day so long as there is much discharge, the injured area being submerged in a partial or a complete bath, according to the extent and the situation of the burn. This powder, the author states, is a very active absorbent, and speedily takes up fluid from the burnt tissues, which are converted into a black and desiccated eschar. In burns of a mild degree the area, after the use of the powder, is covered by a thick crust, which serves as an excellent protection during the growth of the new epidermis. By this treatment, for which are claimed the advantages of simplicity and cheapness, together with the capacity of arresting free secretion and preventing septic infection, pain, it is asserted, is relieved and the temperature kept down. In some few cases there has been an urticarial rash with much itching around the burn, but this, the author states, soon disappears after a temporary suspension of the use of the powder.

7. The Surgery of Pancreatic Contusions and Fistula.

PIQUÉ (*Rev. de Gynéc. et de Chir. Abdom.*, July-August, 1903) reported a case of partial removal of the pancreas. A boy, aged 13, was knocked down, and a cart wheel passed over his abdomen. Signs of localized peritonitis developed above the umbilical level, but not until the third day. Piqué opened the abdomen and discovered a retrogastric haematoma, in the midst of which lay the pancreas, with its tail completely detached and beginning to slough. He removed it and packed the cavity which had contained the effused blood with gauze. The boy recovered, but a pancreatic fistula developed: it closed spontaneously, however, in a few weeks. Injuries confined to the pancreas are not frequent. Piqué has collected 20 cases; 14 underwent operation (suture or tampon), 10 recovered. Fistula nearly always follows these procedures; it heals up spontaneously and heals quickly, provided that the patient is submitted to an antidiabetic treatment. Schwartz, in discussion, related another case of contusion of the pancreas treated by the tampon; a fistula developed as usual, but closed spontaneously. Regnier stated that he successfully treated a case of pancreatic fistula following contusion of the abdomen by antidiabetic diet. Tauber cured, by enforcing that diet, an obstinate case of pancreatic fistula following an operation on the stomach. Two other pancreatic fistulae following complicated surgical procedures on the stomach healed spontaneously.

OBSTETRICS.

8. Criminal Abortion.

H. MARX (*Berl. Klin.*, May 18th, 1903) propounds a question of ethics: Should a medical man who is called in to attend a case of criminal abortion notify the police of the nature of the case? The medical man is never compelled to do so in Germany, and in most cases he would not be justified in violating professional secrecy. Dr. Marx, however, believes that there are cases in which the medical practitioner would have solid excuse for so doing. He quotes the following illustration: The patient died, but before death told the doctor the name and address of the washerwoman who had procured abortion for her. The doctor considered it to be his duty to denounce the woman, in the interest of the public. The majority of abortionists are women, and have a regular plan of campaign in their business. First they try the so-called abortifacients, which are very rarely successful. Next baths, massage, and douches are employed. Marx finds that the only certain drugs for the induction of labour or abortion are phosphorus and mercuric chloride, and both of these usually kill the

mother as well as the child. As the mild expedients rarely lead to the termination of the pregnancy, the patient is then subjected to instrumental interference, which takes the form either of the passage of a catheter or sound or the injection of a fluid. In Berlin the latter is more common, and frequently takes the shape of a soapy solution. The medical man is at times asked in a court of law whether this or that internal remedy is capable of terminating a pregnancy. While it cannot be denied that at times one or the other may succeed, there is no doubt that nearly all the drugs used by these women are inert. Very hot vaginal douches may succeed, but the temperature of the water for this purpose must be at least 104° F., and the fluid must be directed immediately towards the os uteri. When an abortion has taken place the medical man may be asked whether a manipulation which can be proved to have been resorted to can be made responsible for the effect. The time elapsing between the manipulation and the abortion is important. From twelve to twenty-four hours is the usual interval between the interference and termination of the pregnancy. A not uncommon trick of abortionists is to advise the patient to fall after the uterine injection has been carried out. In discussing a case in which the prisoner was charged with procuring criminal abortion with an instrument, and in which the defence raised was that the patient "overreached" herself in taking a book out of a bookshelf, Marx points out that the argument which he used in court was that no one could believe that if a spark were thrown into a barrel of gunpowder, and then a sharp knock was given to the barrel, the explosion could be due to the knock. When death follows abortion in response to acute sepsis, one is justified in assuming that the abortion was criminally procured. Quacks rarely realize the normal anteflexion of the uterus and wounds perforating the vagina or cervical canal are not infrequent. Sudden death may take place in connexion with induced abortion. He cites the case of a "masseuse" who succeeded in separating a six months ovum from the uterine attachments and caused a small superficial wound in the mucous membrane. The ovum was intact. Death took place from an air embolus. Death from scalding also may follow the manipulations of these abortionists. The diagnosis of pregnancy and abortion after death is easy, if the case is recent and the insertion of the placenta is still visible. In late cases, it may, however, be extremely difficult. The presence of decidual cells and of a corpus luteum in the ovary may assist the diagnosis. During life the diagnosis of a pregnancy which has been interrupted by abortion is made forensically as the diagnosis of pregnancy is ordinarily made in practice. It must be remembered that an abortion can take place without the destruction of the hymen. In conclusion, he finds that in towns the induction of abortion is relatively common, while in the country districts child murder is relatively frequent, and therefore abortion is proportionately rare.

GYNAECOLOGY.

9. Vaginismus and Appendicitis.

RICHELOT (*Bull. et Mém. de la Soc. de Chir. de Paris*, November 3rd, 1908) discussed at length the etiology of vaginismus at the October meeting of the Société de Chirurgie de Paris. He pointed out that the local irritation theory was faulty. In many cases the mucosa and integuments are found to be quite sound, free from fissures and ulcers, and not subject to the irritation of any vaginal or uterine discharges; on the other hand, women with eczema and other causes of irritation in the vulvo-vaginal region often tolerate coitus without ever suffering from true vaginismus, even when connexion is actually painful. The neurosis theory is probably correct. Richelot reports a case in which the patient was a woman aged 28, married for five years. She had been troubled for fifteen years with a complication of objective and subjective symptoms. At first mucous enteritis set in, and was followed by obstinate constipation, chlorosis, mental depression, and loss of will power. At last, when Richelot examined her, he found all the evidences of chronic inflammation of the appendix. The patient had never been able to submit to complete coitus. The vagina and vulva showed no morbid appearances, but introduction of the finger caused great pain. Richelot removed the vermiform appendix, which he found buried in adhesions connecting it with the caecum, and filled with small stercoral calculi. He did not operate on the vulva. After convalescence the patient's health steadily improved, and at the end of two

years the bowels were regular without drugs, and all neuroses had disappeared. But the vaginismus ceased when the operation was performed, for when the patient returned to her home coitus was from the first quite practicable without the least pain. In discussing the case, Lucas-Championnière agreed with Richelot's opinion on the two theories. Local irritation did not necessarily cause vaginismus, and was not invariable in cases where that affection was present. Distant sources of irritation, on the other hand, were often to be defined. After ovariectomy and hysterectomy vaginismus was not rare. Lucas-Championnière in 1879 performed Porro's operation on a dwarf—one of the earliest instances where mother and child were saved. The artificial menopause did not cause much general disturbance, though there were periodical hæmorrhages from the lungs and rectum, and the patient was able to work for her living; but coitus, which she sought eagerly as there was no more chance of the perils of maternity, became impossible on account of the most severe vaginismus. Lucas-Championnière examined the vulva and could find no erosions.

THERAPEUTICS.

10. Treatment of Pancreatitis.

DR. DREESMAN (*Med. Klinik*, October 4th, 1908) considers operation the only effectual method of completely eliminating the pancreatic secretion, which is being abnormally distributed to the body, as soon as possible. Acute pancreatitis, untreated, is undoubtedly, with rare exceptions, fatal. Death is the direct or indirect result of the action of the pancreatic ferment upon the tissues, acting either directly upon these or being carried thereto by the blood or lymph vessels. In exceptional cases cure by means of conservative, purely symptomatic treatment (washing out the stomach, irrigation of rectum, administration of oleum ricini) is not possible: the hopes raised of immunization by means of trypsin and by serumtherapy have not yet been realized. Dreesman recommends opening the omental cavity through the gastro-colic ligament. The cut should be between the ensiform process and the navel, or a little more to the left, according to the site of the greatest sensitiveness to pressure or resistance. A blood-stained peritoneal exudate, if incarceration or mesenteric thrombosis can be excluded, signifies in all probability pancreatitis and justifies opening the omental sac. The inflamed gland and peritoneum should only be incised when the pancreas is much swollen, and its peritoneal covering uninjured, otherwise severe hæmorrhage, only controlled with difficulty, may result. A suspected focus of suppuration may always be punctured. Dreesman recommends drainage by gauze plugs down to the surface of the gland, which can be changed several times a day, and if the secretion is very great (for example, ½ litre or more) a drainage tube in addition. Washing out the abdominal cavity is not recommended unless the patient's condition, especially the pulse, is good, which is not generally the case; the mesentery is, in these cases, moreover, very easily torn. Drainage of the bile duct may be useful, even in the absence of gall stones, when the gall bladder contains abnormal bile resembling tea. As Robson recommends, calcium chloride is useful in lessening hæmorrhage, and may be given in doses of 2 to 4 grams thrice daily for one to two days before the operation, and 4 grams thrice daily by rectal injections, after the operation, for two days. If in eight to fourteen days a fistula has formed, a tube usually suffices for drainage. Action on the skin may be prevented by antiseptics (airol, viroform), and in one case Burnmeister used a special aspirating pump with success. The diet should be regulated. Secretion from the pancreatic fistula is very profuse after carbohydrates, is less after albuminous foods, ceases after fatty diet, is excited by hydrochloric acid, and is hindered by sodium bicarbonate. Of 118 cases, taken from the literature, in which an operation was undertaken, including Dreesman's 5 own cases, 40, it appears, were treated with tamponade of the pancreas: of these only 8 died (20 per cent.). Recovery took place in 53 of the 118 cases, mortality being 55 per cent. In chronic pancreatitis special diet and administration of pancreas preparation are useful. Schmieder recommends iodide of potassium; Robson, in cases of obstinate constipation, calomel, followed by saline purges, and later by bismuth subnitrate and small doses of opium. In many cases operation becomes necessary, on account of great emaciation or pain, and its nature will depend on the cause of the pancreatitis. When dependent upon cholelithiasis, its most frequent cause, cholecystotomy or cholecystenterostomy should be undertaken.

11. Treatment of Neurasthenia.

A. D. ROCKWELL (New York *Med. Record*, December 5th, 1908) discusses the treatment of true neurasthenia—not the condition of autointoxication often called by that name, and resulting from too much eating and insufficient exercise. The symptoms of the disorder are, he says, astonishingly numerous, while the patient may appear in good general condition. It is important to distinguish between hereditary and acquired neurasthenia. In hereditary cases slight irritations will produce severe symptoms. Neurotic and hereditary instability is an important factor in prognosis and etiology. A typical neurasthenic is easily affected by alcohol. One important causative factor in men is sexual excess out of wedlock. Neurasthenia is rare in persons suffering from grave organic diseases. In many cases rest is not as good treatment as occupation. When there is cerebral excitement with physical exhaustion rest is imperative. For lithaemics who suffer from autointoxication work is a good remedy. The use of few drugs is indicated. When any are given, the bromides are useful to calm irritation. Electricity is the best remedy for the neurasthenic. Light and heat are also valuable. An intelligent encouragement and control of the patient are essential. Sympathetic consideration must be shown for his symptoms.

12. Isopral in Cardiac Affections.

PETERS (*Deut. med. Woch.*, October 29th, 1908) discusses the value and advisability of administering isopral to patients suffering from various forms of cardiac disease. In referring to the literature on the subject, he finds that certain clinicians have expressed the opinion that isopral is endowed with a toxic effect on the heart. This he denies. Actual reports of cases in which isopral is supposed to have produced undesirable actions on the circulatory system are few, and most of these, he thinks, can be explained without difficulty. The symptoms complained of were in all cases symptoms which could readily arise in the course of the disease which was being treated, and he therefore objects to assigning the cause to the drug which was given. He has given isopral in a number of cardiac patients, and has not met with any toxic effects either on the cardiac nerves, or on the vascular system, or on the blood pressure. The heart itself is not attacked by this drug, nor have any deleterious effects been noticed in any of his heart patients during the exhibition of the drug. In cases in which salicylate of sodium was not well tolerated he obtained a good pain-relieving action from isopral. He therefore recommends isopral as a safe hypnotic, which can be given even in advanced heart disease.

PATHOLOGY.

13. Rhythms of Growth Energy in Mouse Cancer.

G. N. CALKINS (*Journ. of Exper. Med.*, May, 1908) holds that three factors must be taken into account in considering the continued propagation of cells in experimental mouse cancer. In addition to (1) the inherent capacity for division of the cancer cells, and (2) the natural resistance of the inoculated animals, there is a third factor which he describes as "the potential of infectivity of the cancer cells." This third condition is characterized by more or less regular rhythms, rhythms distinguishable from the rhythms of growth energy of the cancer cells which in all probability occur within the individual mouse. Cancer cells differ from epithelial cells by virtue of this potential of infectivity combined with that of division energy, the latter quality being attributable to the action of stimuli and not to the liberation of a restrained growth power of embryonic tissue. Infectivity distinguishes all cancerous growths from normal epithelium and from benign tumours or teratomata. "The rhythms of infectivity of cancer cells . . . appearing as they do in successive batches of mice which we may legitimately assume to have like powers of resistance, must have their cause in the cancer cells themselves. These cells, therefore, must be equivalent to parasites, or else parasites are contained within or associated with them." It is suggested that there may be some organism which, acting like *Plasmodiophora brassicae* within vegetable cells, underlies the infectivity of cancer cells, and provides the stimulus for their continued proliferation. This is the assumption which will best explain

the numerous cases of cage infection. This mysterious organism, like the organism of yellow fever, may reside within the cell protoplasm but be too small to be recognizable by the microscope. Calkins also suggests that the spirochaetes often found in mouse cancer may have something to do with the disease. They may prepare the soil for cancerous growth, or they may have intracellular stages in their life-history which are too minute to be seen.

14. Prevention of Tropical Abscess of the Liver.

LEONARD ROGERS (*Archives of Internal Medicine*, June, 1908), from a seven years' exceptional experience of this disease in Calcutta, has arrived at the conclusion that tropical abscess of the liver can be prevented by the early diagnosis and treatment of the presuppurative stage of amoebic hepatitis. In a series of papers published in the *BRITISH MEDICAL JOURNAL* between 1902 and 1906, the author has traced the relationship between tropical abscess of the liver and amoebic dysentery, and the good effects of the treatment of acute hepatitis by large doses of ipecacuanha, and of abscess by aspiration and injection of bi-hydrochloride of quinine. Although large doses of ipecacuanha are commonly given in cases of amoebic dysentery complicated by hepatitis, the author advises this treatment for hepatitis when not accompanied by dysentery, and the considerations which led him regularly to adopt it are the finding of dysentery associated with 90 per cent. of tropical abscesses of the liver, and the fact that in many patients dying from liver abscess, without history or symptoms of dysentery, amoebic ulcers are found *post mortem* in the upper part of the large bowel. He therefore regarded hepatitis accompanied by leucocytosis as an indication of the presence of latent amoebic ulceration of the large bowel, which indicated large doses of ipecacuanha for its cure. The results of this treatment have been so successful that during the last two years no instance has occurred of abscess developing while the patient was in the European General Hospital, Calcutta. The drug is given in 30 grain doses, twenty minutes after a dose of tincture of opium, no food or drink being given for several hours before and after the dose. This is in order to avoid vomiting. It should be given daily at first, and continued at increasing intervals for at least two weeks. There is as a rule ample time for the diagnosis by blood examinations to be made, and the ipecacuanha administered before the formation of an abscess, as the presuppurative stage is never less than two weeks, and extends to a month in about 50 per cent. of cases.

15. Haemolytic Reaction of Blood Serum in Malignant Disease.

W. FISCHER (*Berl. klin. Woch.*, May 4th, 1908) states that Kelling read a paper at the German Surgical Congress in 1906 on a new haemolytic reaction of blood serum of persons suffering from malignant tumours, and drew diagnostic and statistical conclusions from his observations. Kelling believes that the cell acts as a parasite in cancer, and that a specific haemolytic power is present in the serum for blood corpuscles of animals of other species. Other workers have studied this problem. Von Düngring subjected the arguments to a severe criticism, and concluded that Kelling's reaction was worthless. Rosenbaum found that Kelling's reaction proved positive in 54 per cent. of cancer cases affecting the gastro-intestinal tract, and from this he considered that the matter should be studied more closely. The American observers have found that a haemolytic action is present. Weil found that the serum of dogs with tumours almost always revealed a powerful haemolytic action toward the blood corpuscles of healthy animals of all species; that the blood corpuscles of these dogs resisted solution by serum more than the blood cells of normal dogs; and that the serum of dogs which had no tumours rarely possessed any haemolytic action. The author set himself the task of examining the position of Kelling's claims, and summarizes the results which he obtained as follows: The blood serum of many patients suffering from malignant tumours possesses a marked haemolytic power toward the blood cells of various animals. The haemolytic reaction is, however, not specific for the blood cells of a particular species as Kelling assumed. The haemolytic reaction is not specific for malignant tumours. It occurs in other diseases, notably in pernicious anaemia and tuberculosis. He details the scope and type of his experiments and shows that his conclusions are justifiable as a result of his observations.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

16. Vasomotor-trophic Neuroses.

In dealing with the prognosis and treatment of vasomotor-trophic neuroses, Cassirer includes acroparaesthesias, Raynaud's disease, erythromelalgia, sclerodermia, sclerodactylia, and Quincke's fugitive oedema (*Deut. med. Woch.*, October 29th, 1908); he, however, recognizes many transition forms and cases in which it is impossible to define the disease by any one name. At times these vasomotor-trophic neuroses appear as accompaniments of other nervous complexes. The facts that in these neuroses a common localization is met with and that the sensory and secretory disturbances are more prominent than the motor disturbances speak for a common factor of the etiology. He regards all the diseases grouped in this way as manifestations of disturbances of the sympathetic system. They are, further, all functional nervous disturbances. For this reason the application of the word "neurosis" is justified. All the forms tend to manifest themselves in periodic attacks. The prognosis, taken generally, is good as far as life is concerned, and also as far as the transition to organic nervous disease. The course is, however, generally an obstinate one. General lines for treatment can be set up on the basis of the common factors of these conditions. Everything should be done to oppose the development of the inherited or acquired neuropathic diathesis. The individual measures are best dealt with separately for each disease. Acroparaesthesias are characterized by unpleasant, irritating, and even painful sensations in the fingers, hands, and forearms, accompanied by the phenomenon of "dead fingers." At times cure occurs; but, inasmuch as this form usually accompanies general nervousness and not infrequently arises as a climacteric phenomenon, the majority of the patients do not get better. The treatment consists in avoiding all conditions which might lead to nervous symptoms, and especially avoiding the touch of cold, wet objects, cold water, etc., as well as all forms of over-exertion. Faradic hand baths do good, as do galvanic baths, and Swedish gymnastics at times yield good results. Raynaud's disease is characterized by the appearance of symmetrical superficial dry gangrene, chiefly affecting the nose, fingers, ears, chin, and toes. Ulceration near the nails and what are known as local syncope, local asphyxia, and local rubor are seen. Great pain often accompanies this form. The prognosis is doubtful, although the disease can scarcely be said to threaten life. In the treatment the alleviating of pain is usually the first duty of the physician. Pyramidon, opium or morphine are the best drugs for this symptom. Electricity offers a useful action of the process. Dry heat and massage as well as passive movements are useful in many cases. The gangrenous parts should not be removed surgically too early, and even if no operative treatment is undertaken, the resulting scars are often much smaller than would be expected. Local hyperaemia has yielded quite good results in recent times. Tonics and good food are necessary. Amyl nitrite and adrenaline have proved disappointing. Erythromelalgia is characterized by redness and pain in a limb or portion of a limb. It is a rare condition. As a rule the affection, unlike Raynaud's disease, is not symmetrical. The treatment is purely symptomatic and consists in raising the limb and applying cold. Sclerodermia and sclerodactylia may be treated in a similar manner to Raynaud's disease. Fugitive oedema is a much more important and complicated condition than is usually supposed. The swelling attacks the mucous membranes, the muscles, the joints, the tendon sheaths, and probably the serous membranes, the meninges, etc., as well as the skin. The symptoms are therefore different according to the site of the oedema. When the larynx is attacked, the case may end fatally, but, as a rule, life is not endangered. The prognosis is bad or doubtful as far as complete recovery is concerned. The treatment consists in regulating the diet and motions of the bowels. Quinine is much recommended, atropine at times appears to do good, and arsenic also may be of value when the other drugs fail. The itching requires special treatment and the tendency to vomiting may even call for morphine.

17.

Lobar Pneumonia.

NORRIS (*Amer. Journ. of Med. Sciences*, November, 1908) deduces some valuable observations from a study of the

statistics of 445 cases of lobar pneumonia admitted to the Philadelphia General Hospital during a period of nearly three years, starting from the time of the inauguration of the fresh-air treatment, with a resulting decrease in mortality. The male patients were isolated in a special ward in which the windows were constantly kept wide open regardless of weather or temperature, whilst the females had, from lack of room, to be treated in the general wards with only the ordinary ventilation, but the statistics of the two sexes have been kept separate. Compared with statistics compiled some years previously and prior to the adoption of the fresh-air treatment the mortality showed a decrease of 10 per cent. for the males, while the mortality in the case of the females was nearly double that of the males. Besides the constantly-open windows and doors therapeutics was largely symptomatic in character, delirium and insomnia being treated with bromides, opium, etc., and asthenic cases with strychnine, caffeine, ammonia, digitalis, etc. The use of alcohol is deprecated, since the drug does more to relax the vasomotors than to stimulate the heart, and its use appears to be gradually falling into disfavor. Cold-water sponging was frequently used, and found to be most beneficial, not so much in reducing temperature as in toning up the vasomotor system. Digitalis was largely used, though in febrile cases it is of practically no value. Of complications, acute pericarditis occurred in 8 cases, all of them fatal, and this incidence of pericarditis corresponds very closely with the experience gathered from a study of the general literature. Acute endocarditis occurred 3 times, and all the cases terminated fatally. There were 2 cases of empyema, giving 1 recovery and 1 death. Pulmonary abscess occurred in 2 instances, with 1 death. There were 3 cases of meningitis, with 2 deaths; and acute arthritis occurred 3 times, with 2 fatal cases. Otitis media was noted in 6 cases, of which 1 died, and parotitis was recorded once, with recovery. Acute peritonitis was only met with once, ending in death, and acute colitis occurred in 4 fatal cases. Albumen was present in 78 per cent. of the cases, and a clinical diagnosis of acute nephritis was recorded in 16 of the cases, 14 of which ended fatally. With regard to the fresh-air treatment, the author considers that anyone who has the courage to try it will never abandon it, since his experience shows that its use gives a greater sense of well-being to the patient as well as a decreased mortality, and this without any deleterious effects.

SURGERY.

18. The Surgical Aspects of Ionic Medication.

TUFFIER (*Bull. et Mém. de la Soc. de Paris*, No. 33, 1908) gives the results of a careful study he has made, from both experimental and clinical points of view, of the method of electrical ionic-therapy or ionic medication, in regard to its probable value in surgical practice. The method, the principles, indications, and technical details of which have been fully described by Dr. Lewis Jones (*Proc. Roy. Soc. Med.*, vol. i, No. 5), aims at the removal of subcutaneous lesions by driving medicinal chemical substances through the healthy skin into the deeper tissues by electrical means. The substances which can be used in this treatment act on the deep tissues differently and much more efficiently, it is held, when introduced by electrolysis than when they are applied by the simpler process of hypodermic injection. The diseases in which ionic medication has hitherto been found useful are rodent ulcer, local septic conditions, warts, and lupus; it has also been tried with promising results in cases of chronic arthritis and of neuralgia. Although many powerful agents—such, for instance, as iodine, chlorine, chloral, phenol, and alcohol—are not available for this treatment on account either of loss of their properties when in the ionic form, or of insolubility or incapacity of dissociation when dissolved, there are, Dr. Lewis Jones has pointed out, a very large number of active substances which can be used. The agents most likely to be found of service are not only inorganic salts, but also such useful organic compounds as quinine, cocaine, strychnine, adrenalin, and salicylates. Tuffier, who describes in the first place some experiments with a stained solution of nitrate of silver, states that there can be no doubt that

chemical substances may by the aid of the continuous current be introduced beyond the healthy skin, and there be absorbed more or less rapidly. It is not quite clear in the author's report how far such solutions may be driven, but much stress is laid on his conclusion that their penetration is superficial. It is certain, he states, that the medicinal agents cannot pass beyond the cutaneous covering, and whatever the modifications effected in the concentration of the employed solution, and in the electrical intensity, he has never succeeded in reaching the subcutaneous cellular tissue. The author confirms the previous observations that the action of chemical substances on the subcutaneous tissues is influenced by their mode of introduction. Trypanoth, when injected in a 1 per cent. solution by the usual method of injection, forms an unstable combination with the cellular protoplasm, and is speedily dissolved and removed. On the other hand, when introduced by the action of the electric current, the particles of colouring matter are closely combined with the cells of the dermis, and are rendered less soluble. These experimental results serve to explain the observations of some authors that substances introduced by electrolysis pass much less slowly into the urine than those introduced by way of the stomach or by subcutaneous injection. Tuffier has obtained good results from the ionic treatment in painful affections of the surface of the body, as, for instance, facial neuralgia. He failed in two cases of epithelioma of the face, and is disposed to think that penetration is more difficult through cancerous than through healthy tissues. His experience of salicylic ions in the treatment of chronic joint affections has not been very favourable. In some cases relief certainly followed the introduction of these ions, but it was found that equally good results could be gained in similar cases by using as electrodes simple water or chloride of sodium. In two cases in which the ionic method was practised with good results for supposed ankylosis, the articular weakness and rigidity were found to be really due to pain localized to the surface of the joint. Under the influence of the electric current the pain in both cases ceased, and the adjacent joint, which was quite healthy, very rapidly regained its normal motility. In reviewing the results of his experimental and clinical work on this subject, the author concludes that the benefits of ionization should not be exaggerated, and that it is necessary in regard to this method to consider two very distinct actions. In the first place there is the assured medicinal action which is absolutely restricted to the skin, but which, thanks to the more or less soluble combinations formed in the cellular protoplasm, may have such special effects that, even if electricity does not carry the therapeutic agent to the diseased part, it does not follow that the electrolytic introduction is incapable of aiding in certain cases the good effects of the current. The second action, which is due to the biological phenomena produced under the influence of the current, is independent of the solution employed, owing to the osmotic action excited by the displacement of the ions of the organism.

OBSTETRICS.

19. Gangrene of Leg from Thrombosis in Pregnancy.

JARDINE (*Journ. Obstet. and Gynaec.*, of the British Empire, March, 1938) reports a case of a woman who had excellent health during her pregnancy until within a fortnight of term, when she began to suffer from cramp in her right leg and foot, alternating with sensations of tingling and numbness. Six days later the pain was so great as to necessitate injections of morphine, and the foot and leg were white and cold, no pulsation being felt in the tibial arteries. The heart sounds were slightly roughened in the aortic area, but otherwise pure. Labour commenced eight days after the onset of these symptoms; the child, which was delivered with forceps, was hydrocephalic, and did not survive. The puerperium was practically uneventful, but the gangrene of the leg progressed steadily, and ten days later she was transferred to the care of the surgeon, who amputated just below the trochanter. All the vessels in the face of the stump were thrombosed, and only the femoral artery and vein were tied. No tourniquet was used, but the abdominal aorta was compressed during the operation. Subsequently the patient experienced severe pain in the left foot and leg, and the pulsation of the tibial arteries, and later of the femoral in Scarpa's triangle, could not be felt. The flap also became gangrenous, and the covering of the stump was destroyed.

The patient refused to have any further operation to remedy this. The circulation in the left limb had recovered and the foot was warm when the patient left the hospital. The cause of the thrombosis is not clear; the cardiac lesion was of the slightest, the process of blocking seems to have been a gradual one of some weeks' duration, although the pain only became marked a few days before admission to the hospital. It is unlikely that the hydrocephalic condition of the child should have had any bearing on the condition.

GYNAECOLOGY.

20. Cancer of Stomach Secondary to Cancer of Fallopian Tube.

EVERKE (*Monatsschr. f. Geb. u. Gyn.*, October, 1938) removed a right Fallopian tube subject to primary cancer, in February, 1932. The patient was 46; she had suffered from purulent vaginal discharge shortly after marriage, but had borne two children after wards, her last confinement being twelve years before the operation. She consulted Everke for bloody discharge, and he detected a tumour of the size of a fist, apparently in the parametrium. It proved to be an adeno-carcinoma of the right tube which had invaded the parametrium and adhered to the rectum and sigmoid flexure. The tube, healthy at its uterine end, was removed, the uterus sutured to the parietes, and a wound in the rectum made during the separation of the tumour closed by suture. In September, 1933, dyspeptic symptoms set in and a tumour the size of a goose's egg was detected in the epigastrium. It was a cancerous growth in the stomach, and proved fatal by March, 1935—a month over three years after the operation.

THERAPEUTICS.

Heart Stimulants.

21. HORATIO C. WOOD, Jun. (*Amer. Journ. of Med. Sci.*, November, 1938), continues his remarks to the digitalis group of drugs. There are three factors in the action of these which are of clinical interest. These are (1) the cardio-inhibitory action, prolonging the diastole and slowing the pulse; (2) the tonic action on the heart muscle, making the systole more powerful and complete; and (3) the vaso-constrictor action. The slowing of the pulse-rate is the most important part of the action of digitalis, because this is brought about by the prolongation of the diastole. With a prolonged diastole the ventricle becomes more completely filled, and so, from the very beginning of the systole, the cardiac contraction is occupied in sending blood out into the vessels, and no part of its power is wasted in contracting down on to the contained blood, as when it is partially empty to begin with. Economy in the work of the heart is in this way effected, a point of much importance in cases of chronic heart disease where it is essential to make the burden of the feeble heart as light as possible. The importance of the tonic action on the heart muscle lies in the fact of its preventing this muscular relaxation during the prolonged diastole from going on to permanent dilatation. These effects are produced mainly on the left ventricle; so that in some cases of mitral regurgitation with much hypertrophy of the left ventricle it may happen that the action of this chamber is so disproportionately strengthened that the left auricle and right ventricle are relatively weakened, and may dilate before the powerful regurgitant stream from the left ventricle. The vaso-constrictor action is less harmful than is often supposed. It keeps up the pressure in the aorta, on which depends the filling of the coronary arteries, and consequently the nutrition of the heart. It is harmful when, from degeneration or other causes, the cardiac muscle is too scanty to respond to the tonic action of the drug. With regard to the various members of the group, squills and apocynum are of restricted usefulness from their irritant action on the kidneys and stomach; strophanthus has less tendency than digitalis to produce a cumulative toxic effect, though its action on the vessels is, in spite of what is widely believed, the same as that of digitalis; adonidin appears to act on the heart in a similar way to digitalis, but relaxes the coronary arteries. The author considers digitalin, digitalein, and digitoxin, the so-called active principles of digitalis, unsatisfactory. Experimentally, they are none of them found to produce the characteristic therapeutic effects of the drug, while digitoxin possesses the cumulative toxic properties to a marked degree.

PATHOLOGY.

32. On Infection Path of the Tubercle Bacillus.

REICHENBACH (*Zeit. f. Hyg.*, Bd. 60, H. 3) studied the relative probability of alimentary and inhalation infection. It has been shown that both alimentary and inhalation infection are possible, but nothing has been done to show the relative probability of the two modes of infection. A suspension of known strength was prepared; part of it was used for feeding experiments and the other part for spray infection. The quantity used in spraying and feeding was then estimated in relation to the minimal fatal dose. For feeding experiments 140 millions were necessary, whilst spraying only required 40,000. This was the number used in producing the spray. Corrections based on the data of other observers were then made for the number of bacilli which were not inhaled at all and for the inhaled bacilli which never reached the lungs. Only one-thirty-fifth could have been inhaled, and of these only one-third ever reached the lungs. Applying these corrections we find that 357,000 times the inhalation dose is required to produce an alimentary infection. These results were obtained with the guinea-pig. With goats, being unable to obtain sufficient animals, he never reached the non-lethal inhalation dose, but he was able to show that the inhalation dose was at the most only one-hundredth the alimentary dose. Using smaller doses, repeated fifty times, he found that the minimum for the guinea-pig was 800,000 for the alimentary dose. To exclude lymphatic absorption from the nose he did some controls with the nostrils plugged. The results were identical.

33. Etiology of Tuberculosis.

ALEXANDER (*Zeit. f. Hyg.*, Bd. 60, H. 3) experimented with the rabbit to investigate (1) the susceptibility to the different modes of infection, and to (2) the two types of bacilli. The human bacilli were obtained from sputum by filtration, then enumerated and control experiments were performed with guinea-pigs to show that inhalation of 80 bacilli uniformly caused a fatal tuberculosis. The results on the rabbit were: (1) *Minimal active dose*—(a) For inhalation: Human bacilli, 50,000; bovine, 100. (b) For feeding: Human type, quite inactive; bovine, 50 mg., in five doses of 10 mg. (c) For intravenous injection: Human type, 50,000; bovine, 50 bacilli. (2) *Maximal inactive dose*—For inhalation: 25,000 and 50,000 respectively; for feeding: 180 mg. and 50 mg. respectively; intravenously: 8,000,000 and 5,000 respectively. The qualitative results are also interesting. Subcutaneous infection with human virus is rarely fatal, whilst with bovine virus it is uniformly fatal in two to three months. Intravenous injection with human virus (1 mg.) is rarely fatal, but when the animal is killed in three months there is found a slight pulmonary lesion without any glandular infection. An intravenous injection of $\frac{1}{10}$ mg. bovine virus causes a general tuberculosis, fatal within five weeks. He concludes that in rabbits inhalation is more fatal than feeding, and that this applies to both strains of bacilli. The bovine type is much more fatal to the rabbit than the human type. REICHENBACH and BOCK (*Zeit. f. Hyg.*, Bd. 60, H. 3) discuss the permeability of the intestine towards the tubercle bacillus. Previous experimenters have obtained positive results, but Reichenbach and Bock claim that these results are invalidated for practical purposes by some unnatural conditions. The bacilli have been given in huge doses, or the stomach tube has been used, or the blood vessels have been opened up in making an artificial gastrostomy, or the intestines have been injured by large doses of purgatives, or the animals had been starved for a long time. They avoided all these sources of error, and used quantities of bacilli which were accurately estimated. Oettinger has shown that when bacilli are introduced into the venous circulation they are not, as some have assumed, retained in the lungs as a filter, but that most of them are found in the liver. Hence, when bacilli are found in the lungs and not in the other organs, the presumption is that they have been inhaled and not that they have arrived there from the blood. Sublethal doses of bacilli were used in most experiments. The dogs took the bacilli suspended in omeza, the guinea-pigs in turnip mash. They were killed by stunning, and in removing the lungs every care was taken to avoid opening the oesophagus, as this was found to invariably result in contaminating the lungs. In 1 dog, out of 4, bacilli were found in all the organs. Out of 27 guinea-pigs, bacilli were found in the organs of 2 only, and this occurred when a dose above the fatal alimentary dose had been given. They conclude that the alimentary canal is not permeable to the tubercle bacillus, and that this fact is the only satis-

factory explanation of the vast discrepancy between the alimentary and inhalation doses necessary to produce infection. Jallin (*Zeit. f. Hyg.*, Bd. 60, H. 3) answers the theories of the Lille school that foreign bodies, such as bacilli, cannot reach the lungs by inhalation but only after absorption from the alimentary canal. He also determined the part of the lungs, the finer bronchi or the alveoli, in which bacilli were detained. He used the spores of an easily recognizable mould. The spores were blown into the air and breathed by guinea-pigs, which were killed at different intervals after the inhalation. With *Aspergillus fumigatus* spores the results were as follows: After inhalation for half an hour the animals died from dyspnoea in seven or eight hours. The lungs were filled with haemorrhagic foci. Spores were found in mucus and in plate cultivations from the lungs. Microscopically they could be seen in the alveoli and smaller bronchioles. Smaller doses were used. After three hours the spores were found in the alveolar walls as well as in the alveoli. After six hours they were almost all within the alveolar wall. After longer intervals they were proliferating and finally there was cellular infiltration. *Aspergillus niger* was then tried as it was less injurious. The results were similar, but there was less inflammatory reaction. With the harmless spores of *Penicillium glaucum* identical results were obtained in so far as the spores passed into the alveolar wall just as rapidly. Control feeding experiments were performed. The animals were fed on large quantities of the spores for seven to fourteen days, but the spores could not be found in the lungs, either by cultivation or by simple microscopic examination. HEYMAN (*Zeit. f. Hyg.*, Bd. 60, H. 3) examined the lungs of guinea-pigs at different intervals after the inhalation of known quantities of tubercle bacilli. In a first series of researches the portions of the lungs to be examined were inoculated into a second series of animals. After inhalation of 10,000 or 100,000 bacilli the bacilli could be demonstrated in the most peripheral parts of the lungs after one hour, whilst they could be found in the glands only after three days. After inhalation of 1,000,000 the bacilli could be demonstrated in the lungs and in the bronchial glands from the first. Using microscopic methods alone, he could demonstrate bacilli only after inhalation of 1,000,000. After two hours they were found in the epithelial cells of the finer bronchioles, in degenerated alveolar epithelium, in the alveolar wall, in the epithelial cells under the bronchial epithelium, and, rarely, free in the alveoli. It is noteworthy that he rarely found them inside the leucocytes, either free in the alveoli or in the alveolar wall. Oettinger (*Zeit. f. Hyg.*, Bd. 60, H. 3) discusses the predisposition of the lungs to tuberculosis. Whether the infection be due to intravenous or to alimentary infection the disease is usually in the lungs. A satisfactory explanation that the lungs act as a filter has not been satisfactorily demonstrated. Vastenburg's experiments, where he found carbon particles in the lungs after feeding on scot through a stomach tube, are rejected on account of the difficulty of avoiding inhalatory contamination in this method. *A priori*, there are objections to this mechanical explanation, for the lung capillaries are very wide, and the velocity of the blood in the lungs is very high. It has been shown that intravenous injection of carbon particles leads to pigmentation of the liver and spleen as well as the lungs. Oettinger injected small quantities of different organisms into the arterial vein of rabbits, killed the animals, and then estimated the number of bacilli in the different organs by rubbing up a small portion of the organ in broth and plating. In order to imitate the natural conditions of rupture of a tuberculous gland into a vein, he also used an agglutinated culture of *B. typhosus*. In all cases he found that by far the greater part of the bacilli were found in the liver. With the agglutinated organisms he found a much larger proportion of them in the lungs, but never so many as in the liver. He next attempted to obtain roughly quantitative results with tubercle, using inoculation of a second series of guinea-pigs as a quantitative test. He showed that the bacilli were found in all the organs, but as he never reached the sublethal dose his results here are incomplete. Having thus shown that mechanical factors will not explain the predisposition of the lungs to tubercle, he calls attention to Neumann and Wittenstein's work. These investigators injected dogs intravenously with tubercle bacilli, killed the dogs, and then estimated the infectivity of the lungs and other organs (1) immediately after death, and (2) after the same organs had been kept for twenty days. In the first case "all the organs were infective," but after twenty days "all but the lungs were harmless." KOLSON (*Zeit. f. Hyg.*, Band 60, H. 3), noting that other investigators had obtained conflicting results from experi-

ments on the inhalation of dried sputum dust, performed some very careful quantitative experiments. He knew the amount of air inhaled in a given time by a guinea-pig. Then, using some easily recognizable spores which could be cultivated and enumerated on plates, he placed a guinea-pig in an infected atmosphere for a certain time, killed it, and estimated the number of spores in the lungs. This number is called L. From the same atmosphere at the same time he sucked the same amount of air as would be breathed by the animal through a filter paper, and then estimated the number of spores on the filter paper (Number F). With great care he found the ratio L:F fairly constant. It varied from 4 to 10 per cent., the average being 7 per cent. Findel, working with a moist spray, had found the ratio to be about 33 per cent., showing that moist bacilli were more readily retained than dry ones. With some dust from a local cotton factory he then made a mixture containing known numbers of both spores and tubercle bacilli. Thus 8 grams of dust contained 90 million spores and 11 million tubercle bacilli to the cubic centimetre. With this mixture he performed fifteen experiments. From the above data he was able to determine that number of bacilli which, inhaled with dust, were sufficient to cause an infection. It was found that to get constant results it was necessary to use 300 to 400 bacilli. In one case a dose of 50 was sufficient. With the moist spray 50 bacilli are always fatal, whilst 5 or 6 are often fatal. With dried sputum dust mixed with dust from a dwelling he found that the dose was 300 to 4,000 bacilli, whilst the same sputum used for a spraying experiment gave uniform infection after the inhalation of 50 to 60 bacilli. It seems probable that bacilli inhaled with dust are more readily removed by the cilia of the bronchial passages. Natural conditions were then imitated. Guinea-pigs were placed in a cage at different heights from the floor, some sputum rubbed up with street dust to a fine powder was then placed on the floor and stirred up with a broom every ten minutes for half an hour. Most of the animals suffered from pulmonary tuberculosis. Kölsch thinks that these conditions were, however, worse than ever obtained in a dwelling. He wished to try the effect of letting the animals inhale the dust in a dwelling where there was pronounced expectoration. Thanks to the spitting regulations, he was unable to find such a house in Breslau. Experiments with the dust from very dirty houses were negative, even after two hours' inhalation. He concludes that infection from the inhalation of infected dust is possible under certain conditions—namely, dryness of the dust and inhalation of very large quantities.—Ostermann (*Zeit. f. Hyg.*, Bd. 60, H. 3) deals with the question of contact infection, especially in children. Tuberculosis in the first year is very common. Direct infection through kissing and "dummies" is not probable, owing to the spread of the knowledge of the infectious nature of tubercle. Great importance has been attached to the so-called "Schmutz" or smut infection. The child in crawling about contaminates its fingers and transfers the bacilli to its mouth. Ostermann carefully investigated the conditions in the houses of twenty infected families where the conditions were exceptionally bad even for Breslau, a very dirty town. Of 42 children examined bacilli were found by injection of washings into guinea-pigs in 4 only. Examination of the floors gave results in 50 per cent. He thinks this proportion very small when the extreme filthiness of the houses is taken into consideration and in connexion with other researches by fellow-workers thinks that they indicate the rarity of "Schmutz" infection. Investigating adults, he examined the hands of 14 consumptives, finding the bacilli on 7; also on the hands of one healthy nurse. Are these transferred in handshaking, etc.? The spores of a harmless saprophyte were rubbed on the hands of one person and allowed to dry. His own thumb was then rubbed on the infected palm, the organisms washed off his thumb and plated. At the most only 1 out of the 700 spores were transferred. A rich tuberculous sputum was then dried on one hand and a second hand vigorously rubbed on the infected hand. The washings of the second hand were injected into guinea-pigs with negative results in every case. Is the nose or mouth likely to be infected from the infected second finger? A finger-pad was infected with a known number of spores, then immersed with a slight rubbing movement in broth, which was subsequently plated. The time of immersion was found to be a most important factor. For one second 1 to 500, 1 to 343, 1 to 9, and 1 to 8 were the maxima in a series of experiments. He sums up the possibilities of contact infection in adults as follows: There might be a thick layer of dry sputum on a consumptive's hand; a healthy person by a long and

heavy grasp might transfer some to his own hand; he might then suck it off his fingers into his mouth—all remotely possible but highly improbable. In a second paper Ostermann discusses the danger of milk infection. By inoculating guinea-pigs with varying dilutions of milk from cows with udder tuberculosis, he estimated that the worst "single cow" milk he could find had about 10 to 20 bacilli in $\frac{1}{1000}$ c.c.m. One such cow in a herd would cause the milk to contain at least 1,000 bacilli to the cubic centimetre. That this is an extreme case is shown by the fact that only 10 per cent. of the market milks are infectious to guinea-pigs. With 1,000 bacilli to the cubic centimetre in the milk, the butter from the same herd would contain about 100 to the gram. Is such milk dangerous to the human child when taken into the alimentary canal? Findel, Reichenbach, and Alexander have determined the minimum fatal alimentary dose for the guinea-pig: 140,000,000 is the minimum for the guinea-pig when taken in one dose; when the dose is repeated fifty times the minimum is 800,000. Then assuming the consumption of 1 litre of milk with 1,000 bacilli to the cubic centimetre, we get a daily dose of 1,000,000, which is harmless in a single dose, and only just on the borderland of danger when fed to a very susceptible animal like the guinea-pig. The butter would certainly be harmless. He concludes that the danger from milk is very slight. He does not claim that dairy inspection is unnecessary (he admits its necessity for other reasons), but he claims that we must not expect great improvements from these measures alone. They will do harm if they lead to the neglect of other more important measures.—Bruno Heymann (*Zeit. f. Hyg.*, Bd. 60, H. 3) discusses the relation of infant's tuberculosis to milk. His arguments are derived from statistical and ethnographic data. The cases of infection of wounds from bovine tuberculous products, although many have been recorded, are not of importance. Compared with the frequency of opportunities for infection they are very rare. As regards primary intestinal infections, these are very rare, according to many leading German pathologists. The English statistics which make it much commoner are not reliable, for many cases of enlarged mesenteric glands are not tuberculous, yet are, he claims, counted as such. The English and German communities, who were specially looking for bovine cases, isolated altogether 271 strains, of which only 39 were bovine. Caffky, out of 57 consecutive cases in children, found only 2 which were bovine. Beitzke, in 25 cases of children's tuberculosis, found 2 bovine. All pulmonary cases are due to the human bacillus, and when it is remembered that in Germany there are 108 deaths due to pulmonary tubercle to 10 from tubercle in other organs, the overwhelming importance of human sources of infection is manifest. Investigation of families where tuberculous milk has been consumed for long periods fails to make out a case for the bovine bacillus. Out of 53 cases there was found 1 case of undoubted bovine infection and 3 very doubtful ones. Raw has stated that in countries with a large consumption of raw milk there is an increased incidence of surgical tuberculosis, which he assumes to be due to the bovine bacillus. Heymann criticizes this argument from two standpoints: (1) Most surgical tuberculosis is of human origin. Oehlecker investigated 50 consecutive cases of surgical tuberculosis, and found only 4 to be of bovine origin. (2) He quotes some countries where no milk is consumed but tuberculosis is very common. *Japan*: (Kitasato) *Perlsucht* only introduced thirty years ago, whilst tubercle is very common. Children never get milk, yet alimentary tuberculosis is very common. *Greenland*: No tuberculous milk, yet phthisis very common, and tubercle meningitis one of the commonest causes of death in children. *Asiatic Turkey*: Raw milk never drunk even by adults, children breast-fed for two years; tuberculosis of all kinds very common and very virulent. *Roumania*: Children breast-fed for a very long time; tuberculosis very rare even in regions where there is no milk at all. *Faroe Islands*: *Perlsucht* only introduced a few years ago; tubercle of all kinds very rare for a long time. Out of 342 cases the infection could be traced to human infection in 262. *Egypt*: Milk so dear that it is a luxury to the rich; tuberculosis very common, especially amongst the negroes and Berbers. It is only necessary to see one Berber expectorate to understand why it spreads so well. *Gold Coast*: Children breast-fed or on a concoction of palm oil; tuberculosis of all kinds rare. Heymann comes to the conclusion that the great prevalence of human tubercle cannot be due to *Perlsucht*, but must be due to some other cause, and that our endeavours to combat the main source of infection must not be abated by a sense of security based on rigid milk and meat inspection.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

24. Pressure Pain, a Symptom of beginning Consumption.

THE pathological increase of the painful sensation on pressure is a symptom which K. Francke (*Bett. z. Klin. d. Tub.*, vol. X, No. 3, 1908) wishes to employ in the diagnosis of the early stages of pulmonary tuberculosis. He has directed the attention of clinicians to this phenomenon in an article entitled "Algeoscopy" in 1901, but up to the present but little attention appears to have been paid to the subject. He points out that since the lung tissue itself is poor in sensory nerves, it cannot be expected that inflammation of the lung in itself will produce pain. Tuberculosis of the lung usually begins at the apex, close to the pleura, and the inflammation passes over to the visceral layer of the pleura at an early stage. Soon the parietal layer is affected; roughness of the surfaces follows and friction is produced. Adhesions are not uncommon and these give rise to dragging. In this way pain is produced in connexion with early pulmonary tuberculosis. Based on his observations made in the post-mortem room, he states that the beginning of the lesions is to be found behind and close to the top of the apex, and not in front. In the early stages pain in this situation is rarely spontaneous, and is not severe. Pain on sneezing, coughing and breathing speak for advanced lesions. However, pain is experienced in the earliest stages when the part affected is pressed upon. The cause of the pain may, of course, be something else besides tuberculous pleurisy, but the differential diagnosis is not difficult. He finds that there are three methods of utilizing pain diagnostically: (1) observing if the patient complains spontaneously of pain; (2) questioning whether he has pain; and (3) testing for pathological pain pressure areas. For the early diagnosis of consumption only the third method comes into account. Pressure on normal tissue is not painful or even unpleasant, while it becomes definitely painful when the tissue pressed is pathological. When the pressure is an increasing one, pain is usually complained of. The patient may call out, or he may simply wince or draw up his face, or he may move away to avoid the continuance of the painful pressure, or, in the case of a lung, he may begin to cough. The pressure may be exerted by a percussion hammer, or by the fist or by a finger. The author has designed a special hammer, which he considers to be better than all other percussion hammers. This instrument is used for the purpose. The fist, he states, is also a useful means of eliciting the pain from pressure. When applied by the finger, he calls the method algeoscopy, and this method he finds to be the most delicate. After discussing the situations at which the pain is found in phthisis, he turns to the exclusion of other conditions. Rheumatic muscle pains are limited to groups of muscles and the distribution suffices to distinguish them. Neuralgias can also be detected by their distribution. It is extremely rare that a costal neuralgia is limited to the first or second cervical nerve on one side. He also deals with less common diseases, and concludes by describing briefly his method of testing for pressure pain. This is done by gradually applying pressure and desisting as soon as the pain is determined. He finds that this symptom is present in 81 per cent. of all early cases. The symptom alone is not supposed to form the basis of the diagnosis of phthisis, but in conjunction with other signs it will be found of great value.

25. Sigmoiditis and Perisigmoiditis.

A. MAYOR (*Journ. de Méd. et de Chir.*, July 25th, 1908) divides sigmoiditis into chronic and febrile forms, and then discusses perisigmoiditis. Chronic sigmoiditis occurs usually in persons the subject of chronic constipation. Patients the subject of this disorder complain of pain in the left iliac region, which is intensified before or after defaecation; movements of the body increase the pain. Complaints are also made by these patients of functional intestinal troubles, and sometimes attacks of "diarrhoea" occur, the motions being glairy and even bloodstained. Loss of appetite and often great loss of flesh occur after a time. On palpating the left iliac fossa, one finds a cylindrical, elongated, sausage-shaped swelling, which is firm to the touch, and which gradually tapers off above into the descending colon. In febrile sigmoiditis two

classes of cases are met with. In one variety occur cases of definite inflammatory trouble, but the inflammation appears to be too superficial, and arises too quickly for one to consider that the whole thickness of the gut has been involved. In these cases purgatives and enemata cause a complete subsidence of the signs and symptoms in a few days. In the other variety of sigmoiditis the whole thickness of the gut is involved, and sometimes this occurs in a case of chronic sigmoiditis. In most of these cases, however, the patient has suffered only from chronic constipation until more or less suddenly pain in the left iliac region sets in. These pains may remain localized or may radiate to other parts, such as the bladder, and in a few days' time become very marked, disturbing and preventing sleep. The temperature is raised, nausea and sometimes vomiting occur, and the constipation may indeed become absolute, neither faeces nor flatus being passed. Sometimes, however, there may be diarrhoea. Accompanying these symptoms one finds some abdominal distension, and on palpation a similar mass to that found in chronic sigmoiditis is to be detected in the left iliac region. In a few days' time, under suitable treatment, the acute symptoms subside, and flatus and faeces are passed, but the passage of these causes marked pain in the iliac region. Perisigmoiditis occurs in two main forms. In the first the affection occurs in persons who suffer from sigmoiditis. In these cases fever sets in, sometimes with shiverings; nausea and vomiting, which become more and more frequent, occur; general abdominal distension, with absolute constipation, sets in, and muscular rigidity over the left iliac region becomes more marked. These symptoms, together with the changes in the pulse and the faeces, cause marked resemblance to a case of general peritonitis. In the course of a few days one finds in the left iliac region a large swelling. When resolution occurs the sigmoid loop gradually separates itself from the surrounding loops of gut and appears hard, sausage-shaped, and painful to pressure. If suppuration occurs, the usual symptoms of suppuration show themselves, and the swelling gradually increases in size. In the second variety of perisigmoiditis the patient may be suddenly attacked whilst in the best of health; in other cases he has suffered from intestinal disturbances for some time previously. In both cases, however, the symptoms of perisigmoiditis very quickly show themselves, either in the form of an iliac phlegmon or in the form of a peritoneal inflammation. In these cases of abrupt onset the thigh may be flexed on the pelvis or pains may be felt in the left leg. Of the complications which may arise from sigmoiditis and perisigmoiditis, Monod mentions transitory albuminuria, phlegmasia is noted by Loison, a pain over the liver on percussion by Mayor and Gerlier. In some patients their constipation becomes aggravated, and in others defaecation is always accompanied by pain. Recurrences are relatively frequent. Simple chronic sigmoiditis has to be differentiated from cancer or tuberculosis of the sigmoid. Where in addition acute attacks have occurred, actinomycosis and inflammation, consecutive to intestinal narrowing, have to be considered. When suppuration has occurred, infections of the female genital organs, appendicitis and abscess of the psoas muscle have to be considered in the differential diagnosis. The greatest difficulty is to exclude cancer; but where there is a definite history of several years' duration, and in the course of which one discovers in the left iliac region a cylindrical sausage-shaped swelling, which is quite regular, smooth, mobile, and firm, but not of a wooden hardness, and when one finds that there is no history of frequent attacks of diarrhoea, or of abundant haemorrhages, one can with considerable confidence exclude cancer. As regards treatment of these conditions, the main endeavours are to overcome constipation, to relieve pain, and to favour resolution of the inflammatory trouble. When there are no marked peritoneal signs daily purgation is indicated. Injections of warmed oil are useful, and for the relief of abdominal pain hot fomentations are of great use. At the commencement of an attack of perisigmoiditis a small dose of morphine should be given to relieve any intestinal spasm, whilst treatment is conducted on similar lines to those employed in sigmoiditis.

26. A Scapular Murmur.

UNDER this title Tedeschi (*Gazz. degli Osped.*, November 8th, 1908) describes certain phenomena which can

he detected in some cases when the palm of the hand is laid over the scapula and the patient told to breathe forcibly or swing the arm to and fro. Under these conditions something between a thrill and a friction fremitus can occasionally be detected, or if the ear is placed over the spot a sound between a rustle and a bubble. Continued movement of the arm may cause the sensation to disappear. The sensation described is not to be confused with pleural friction or with coarse rheumatic grating. During the last three years the author has observed 58 cases where this scapular murmur could be detected: 32 of these presented early signs of phthisis either at the time or shortly after the detection of the murmur: 17 had decided, rather advanced phthisis; and 9 showed nothing more than anaemia and general debility. There was no constant relation between the diseased lung and the side where the scapular murmur existed; sometimes it was the same side and vice versa. It could not be due to wasting of the shoulder muscles, for in the early cases there was no wasting. Exaggerated professional use of muscles (for example, in seamstresses) might tend to cause this particular localization, but the leading factor seems to be tuberculosis, and the author believes it is really a case of tuberculous myositis. The chief aim, however, in bringing the matter forward is because it may be of assistance in the early diagnosis of phthisis. The author says that he has not infrequently detected this scapular murmur before the appearance of any recognizable clinical signs of that disease.

SURGERY.

27. Prostatectomy.
WILMS (*Deut. Zeit. f. Chir.*, Bd. 93, Hn. 4 and 5) states that though suprapubic prostatectomy is rapidly superseding the perineal operation, he still, with many of his German colleagues, prefers the latter, the general adoption of which, he holds, is prevented only by the dread of wounding the rectum. It is asserted that the diseased prostate, even though it may not be much enlarged, projects downwards at the margins of the pubic arch to such an extent that either of its lateral lobes can be readily reached through an incision made on the corresponding side of the perineum. This incision, which should be about 2 in. in length, is made over the descending pubic ramus on the left side. After blunt dissection of the thin layer of fascia and the subjacent layer of connective tissue, the left lobe of the prostate is reached. In the deep dissection the ischio-cavernosus muscle, together with the internal pudic artery and its branches, is pressed towards the middle line. After the course of the urethra has been revealed by the introduction of a catheter, and the capsule of the left lobe of the prostate has been incised, the operator will be able on introducing his finger through this opening to separate the whole of the prostate from its capsule as is done in the vesical method. The right lobe should be first attacked in front, where there is often some resistance to be overcome at the junction of the two lobes. The prostatic portion of the urethra is removed with the gland. In his experience of this operation the author has been struck by the small amount of bleeding. Wounding of the rectum is, it is held, quite impossible, as in detaching the posterior part of the gland the surgeon works within the capsule. In the after-treatment inferior drainage is carried out. The author, who has been led by the results of his own experience to prefer this method of prostatectomy to any other in present use, hopes that its simplicity and efficiency will soon be widely recognized.

28. Cholesteatoma or Umbilical Calculus.
COENEN (*Beiträge zur klin. Chirurg.*, vol. lviii, Part 3, 1908) reports that a porter, aged 49, was admitted into hospital for a suppurating umbilical fistula. He was of intemperate habits, yet had enjoyed good health until the past six months. Then pain in the umbilical region set in, especially when he bent his body at work. Three days before admission pus and blood discharged freely from the navel. There had been no symptoms of peritonitis. Coenen found that the discharge was very free and feculent, so that intestinal fistula was suspected, but no trace of semidigested food tissue could be detected. Around the fistula there was redness of the skin and induration with tenderness. Icterus set in a day or two after admission. A free incision was made over and through the orifice of the fistula, exposing a cavity filled with pus, of the capacity of a hen's egg. It extended posteriorly into the abdominal cavity, but was cut off from the peritoneal cavity by old peritonitic adhesions. In the abscess cavity lay a pearly,

shining body as big as a pigeon's egg. On section it was seen to be laminated; in fact, it was a cholesteatoma. The jaundice disappeared a few days after the operation, and the fistula healed up. The complication, according to Coenen, was therefore not due to hepatic disease, but to pressure of the wide area of inflamed parietal tissue and of the abscess on the bile ducts. He adds that new growths are relatively common in the tissues of the umbilicus. Again, fistulae communicating with Meckel's diverticulum and the trachus, and fistulous tracts lined with gastric mucous membrane (Tillmanns, Lexer, etc.), as well as urachal cysts, have repeatedly been detected in connexion with the umbilicus, as well as small new growths representing inclusion of intestinal epithelium.

29. Molluscum Contagiosum in Husband, Wife, and Child.

GOODALL (*Amer. Journ. Obstet.*, September, 1908) was consulted by an emigrant French woman in the fifth month of pregnancy for frequent micturition. He found no definite condition which could explain the symptom, and there was no abnormality about the genitals. Two months later the husband consulted Goodall on account of an attack of molluscum on the dorsum of the penis, partly suppurating. The only explanation which he could give was that when on board ship he had frequently used towels in common with other passengers. The first wart, as he called it, appeared over three months after he had landed with his wife in Canada. He had irritated the nodules of molluscum by caustics. Two small nodules appeared on the mucous surface of the prepuce. He was advised not to have connexion, and when he brought his wife at a second visit not a trace of the disease could be found on the external or internal genitals. She was delivered at term about two months after that visit, and not a sign of molluscum was detected. Two months after the confinement she consulted Goodall once more, stating that she thought she had contracted the disease to which her husband was subject. Nineteen characteristic nodules were found, confined to the labia majora, perineum, region of anus, and outer surface of the labia minora. Eleven months later the mother brought her child, which had developed seven nodules of mollusca on the left side of the neck and shoulder. They had been observed by the mother for about six weeks. Although the symptoms of the skin disease in the child developed late, and although Goodall detected no trace of molluscum on the mother's genitals during delivery, he was inclined to believe that molluscum was incipient in the mother at that time, and that it was then communicated to the infant in whom it lay latent for several months. Goodall dwells on the fact that in the case of the mother no trace of molluscum could be found on the cervix, vagina, or mucous surface of the vulva. The bactericidal action of the genital secretion prevented infection. The absence of sebaceous or other glands in the vagina has to be taken into account, but glands exist on the inner surface of the labia minora and in the vestibule.

OBSTETRICS.

30. Caesarean Section.
MOUCHOTTE (*Ann. de Gyn. et d'Obstét.*, November, 1908) reports 14 cases in which Caesarean section was successfully performed. He found that in 12 out of the 14 cases the pelvis was rachitic with markedly reduced diameters, seven pelves belonging to the canaliculated type, and five to the annulated type. In dealing with contracted pelvis, he waits for dilatation to become complete in order that symphysiotomy may be attempted; but when symptoms of urgency arise, Caesarean section is undertaken without further delay. In two of his cases prolapse of the cord and a change in the cardiac sounds hastened intervention. In two others a brow presentation showed signs of becoming impacted, and in two other cases osteitis and tuberculous hip had caused obstruction of the parturient canal. Operation was only undertaken after the onset of labour pains. In cases which evidently cannot be delivered naturally there is no need to delay operation for long; in cases of moderate contraction, when there is some hope of spontaneous delivery, the practitioner may wait some hours, even some days, for complete dilatation followed by symphysiotomy. If while waiting signs of distress on the part of the mother or child supervene, the operation cannot be deferred, and is then undertaken under less favourable conditions. Nine of the writer's cases were operated upon late, and after the membranes had ruptured, and it was in these cases that a rise of

temperature and in the pulse-rate was noted during the two subsequent days. In all the operations the uterus was brought out of the abdomen before being incised; this method is considered to conform more particularly to surgical principles, and to prevent the entrance of blood or fluid into the peritoneal cavity. If gloves are worn they should be changed after the uterus has been cleared out and cleansed. Vertical incisions were made in the middle line, beginning below at the junction of the lower and upper uterine segments. It is not unusual to find the placenta adherent to the anterior uterine wall, and in the line of incision. In the earlier cases the incision was made through the placental tissue, but this plan was abandoned in favour of finding the layer of attachment of the placenta to the muscle wall and stripping it up, so as to permit of incision of the wall; the membranes were then divided above the placental margin, and the fetus having been extracted, it was simple to remove the whole after birth intact. The cleansing of the uterine cavity is accomplished rapidly, unless there is adherence from endometritis. This was present in two of the cases reported; one suffered from phlegmasia dolens and fetid lochia, the other had a small haemorrhage. A gauze drain put into the uterus before suturing and led out through the os uteri assists drainage, but is unnecessary when the membranes have not been ruptured before the operation. Catgut was used for sutures, and in all cases a drain was left in the abdominal wound for forty-eight hours. The writer considers the operation a simple one, easy to execute, and giving excellent results.

31. Caesarean Section in Cases of Vaginal Contractions.

POZZI and HARTMANN (*Comptes Rendus de la Soc. d'Obstét. de Gyn. et de Pédiatr.*, July-October, 1907) related two instances where Caesarean section was performed on women with contractions of the vagina. Pozzi's patient was a healthy married woman aged 23. She had menstruated ever since the age of 17, and married at 18; connexion was always painful. At length, when under observation, she became pregnant. The meatus urinarius was not quite normally placed; the vagina ended in a cul-de-sac about 2 in. above the vulva, where the os externum could be felt as an orifice with rigid borders, about 1 mm. in diameter, and not dilatable. As the cervix was softened by gestation its limits could not easily be defined. About term it was found that the fetal heart sounds were becoming weak, so Pozzi did not wait for labour. He performed Caesarean section, saving both mother and child. As he found that it was impossible to drain the uterine cavity through the vagina, owing to the rigidity of the contraction, he amputated the uterus above the cervix. Hartmann's patient was 39 years old. When 25 years old she suffered from dysmenorrhoea; her doctor then discovered a vaginal contraction, through which only a very slender probe could be passed. Some operation, of a nature not clearly ascertained, was performed, and the catamenia were never painful afterwards. In 1905 the patient consulted Hartmann, and he could define a circular stricture 1½ in. above the fourchette; the forefinger could hardly be passed through it. He did not advise any operation, and considered that there was little chance of pregnancy; though, if it occurred, delivery through the natural passages seemed hardly possible. The patient did become pregnant, the vagina grew softer and more capacious, but the stricture remained as narrow and rigid as before. Labour pains set in about term. Hartmann operated, saving mother and child. As in Pozzi's case, the stricture prevented drainage, and the dangers of another pregnancy seemed great; moreover, the patient was relatively old. He therefore amputated the uterus above the cervix. There was a long discussion after the two cases were read before a medical society, in which several leading obstetricians took part. A few details were criticized, more than one speaker implying that the uterus in both cases might have been saved, a second Caesarean section being hardly more dangerous than a first; but Pozzi insisted on the unfavourable condition of his case for vaginal drainage, so that infection would have been almost certain; and Hartmann stated that his patient, nearly 40 years of age, lived in a remote country district, and might therefore be in danger, for self-evident reasons, should she become pregnant once more. Lepage doubted if all chance of further offspring should be taken away; the only child in both these cases might die. Pinard favoured operations of this kind when labour set in, and not earlier. Operators made too sure about "term" when there had been no pains. Routier related a case where labour was retarded by a cicatrix following sloughing of the vulva and part of the vagina as

a complication of small-pox. The scar tissue, however, was successfully divided with scissors, and the child was delivered alive. Potocki operated in 1902 in a case of congenital stricture during labour, after finding that the firm circular ring half-way up the vagina was not stretched by the pressure of the fetal head during the pains. He performed Caesarean section, and amputated the body of the uterus. The patient recovered, and suckled her child.

GYNAECOLOGY.

32. Bier's Method in Gynaecology.

ADLER (*Pester Mediz.-Chirurg. Presse*, November 8th, 1908) has found Bier's method of value in cases of old and obstinate endometritis, the secretion disappearing permanently for a long time; in cases of inflamed appendages, the pain being always stilled while exudation is not appreciably lessened; and in amenorrhoea. His cases of endometritis were those which had been under treatment on and off for two to five years without essential improvement. He applied suction daily, or every other day, for five to fifteen minutes, with moderate rarefaction. After the first sitting the secretion was much increased; after four or five sittings discharge ceased; and in three to six weeks the patients were cured. Some returned after several months with a slight discharge. Erosions were often present and healed slowly—in one or two months. There was no pain during the suction, or if present it ceased at once on letting a little air in. In no case did considerable bleeding result. In cases of subacute and chronic inflammation of appendages with exudation, Adler found that though pain was removed the exudation was but slightly influenced. In 3 cases of large exudation of puerperal origin in private practice the treatment was begun ten to fourteen days after the fever, and was continued, at first daily and then every other day, for five to six weeks, but the exudation was only reduced by a quarter or a third. The result in chronic tumours of the appendages was no better. In 8 cases no cure resulted, but after four or five sittings pain began to lessen, and later disappeared, while in three or four weeks the patients mostly felt well. In 4 cases of retroflexion with fixation, in private practice (other means being also employed), the author had the impression that the suction was of definite assistance. A hypoplastic uterus was treated on account of amenorrhoea for two months every other day. A sufficiently copious period, quite painless, lasting two days, ensued, while a decided development of the uterus took place. Adler uses the ordinary tube speculum of caoutchouc, which is closed after insertion in the vagina (the cervix being carefully introduced) by a conical rubber stopper, pierced by a glass tube which is connected by a rubber tube with the pump. When the required rarefaction is obtained this rubber tube is clamped and the instrument left on for a certain time. The speculum is only removed when the cork has been taken out. The action of the suction is partly the regular removal of the secretion, partly the hyperaemia induced on the pelvic organs, and partly the congestion caused by the kinking of the veins.

THERAPEUTICS.

33. Unna's Bandage in Ulcers of the Leg, etc.

HECKER (*Mediz. Klinik*, October 18th and October 25th, 1908) has employed Unna's paste since 1886, and finds Unna's original formula the best—that is, zinc oxide, gelatin, aa 4 parts, glycerini, aq. destillat., aa 16 parts (ichthylol 1 part). The leg is thoroughly cleansed with soap in a warm bath, shaved, and the fat removed by rubbing with cotton-wool dipped in ether or benzine. The whole of the leg except the ulcer is then painted by a bristle paintbrush with Unna's paste liquefied (but not heated) in a water bath. The ulcer is sprinkled over with a thick layer of airoil and covered with cotton-wool, which is also placed round the foot immediately behind the toes and around the leg about a handbreadth below the knee. The heel and ankle are covered with cotton-wool or, in very sensitive people, with boletus igniarius. Two strong gauze double-headed bandages (that is, rolled from both ends towards the middle to get the necessary pressure) are well wrung out of water and applied, if possible, before the patient leaves bed. The leg is banded from the ankle to the toes and upwards to a handbreadth below the knee, the cotton-wool reaching a centimetre higher, each turn of the bandage overlapping the previous one. The second bandage is similarly applied over the first, every turn being drawn equally tight. The leg

must be kept horizontal throughout, and the bandage freely exposed to the air until fully hardened. This may be hastened by a hot stove or the sun. Unna's bandage should be worn some time after the ulcer heals, and be followed by an elastic bandage until the scar is quite consolidated. Hecker leaves the bandage on three weeks, or, later, four to six weeks, more frequent changing being only necessary in cases of unusually free secretion. Some accumulation of secretion does not in any way hinder the cicatrizing of the ulcer if a thick layer of aïrol, dermatol, or xeroform be present. With these Hecker has never observed idiosyncrasies, as in the case of iodoform. The bandage is cut away with plaster-of-Paris nippers or simply unwound after softening with warm water, the outline of the ulcer having been sketched on the bandage as soon as hardening occurred. If the surrounding skin is much irritated, before applying the bandage rest and compresses of lead acetate, lysol, chinolol, or those with ice, may be used for three or four days. If eczema still persists, spreading it with Unna's paste usually suffices to heal it. In cases of bad weeping eczema, first apply Lassar's paste (zinc oxide and starch in 1. vaseline 2). The chief advantages of Unna's bandage are: (1) Rapidity of healing, a firmer cicatrix being formed than by any other method after a few bandages; (2) the patient's occupation may be continued undisturbed throughout; (3) enormous saving of expense; (4) if the bandage presses in any place, it may be permanently softened by repeated moistening, instead of cutting it away; (5) the severe pains accompanying ulcers of the leg diminish and disappear; (6) the bandage has a good effect on varicose veins. It is best to first paint these thickly with ichthyol-collodium, 1 to 10. Unna's bandage is also very useful in promoting (1) the absorption of effusions into joints, (2) the healing of wounds. It is very practical for children, round the neck (after extirpation of glands, etc.), thorax, limbs, especially where these join the trunk, and fingers. After an amputation or excision, etc., the wound is covered with a thick layer of iodoform gauze, a few turns of a small bandage applied, and the whole finger enveloped in paste. The simple method of arresting hæmorrhage by means of this bandage forms an important substitute on the battlefield for the dangerous and painful tourniquet.

34. The Prevention of Tuberculosis in Childhood.

S. A. KNOPE (New York *Med. Record*, December 5th, 1908) says that the predisposition to tuberculosis consists of a general enfeebled condition without distinct pathological lesions, all the organs possessing less than normal resistance to the attacks of disease. The overcoming of this predisposition must begin *in utero*, the mother being placed in the best possible hygienic conditions while bearing the child. She should take breathing exercises. Her living and sleeping rooms should be well ventilated. There should be a law preventing work in dusty, insanitary environments for children, and a pregnant woman should have to give up work in a shop two months before her confinement. The newly-born child needs fresh air as much as the mother. From the tenth to the twelfth months the child should be accustomed to cold baths gradually. Children should be dressed without constriction and young girls without the corset. The author describes exercises to be used to produce deep breathing. The conception of deficient respiratory function in the apices is erroneous. These portions of the lungs inspire well but expire poorly, so that the micro-organisms remain in them. A thorough inhalation followed by a thorough exhalation should be taught by exercises. The child should not go to school before the eighth year. It should have more sleep than other children, and should be most of the time in the open air during the day. More school farms and playgrounds are needed, and outdoor sports should be encouraged. The most frequent sources of post-natal infection are kissing, tasting the food, coughing in the face of the child, and the infection of its hands by handling articles and playing on the floor. Ritual circumcision should be placed under sanitary restrictions.

PATHOLOGY.

35. Human and Bovine Tubercle Bacilli.

IN from 1 to 5 per cent. of phthisical patients either no or but few tubercle bacilli can be found in the sputum when stained by the usual Ziehl method, but when the sputum is stained by Sprengler's "*Pertsucht*" method numerous bacilli may be seen. C. Sprengler (*Deut. med. Woch.*, February 28th, 1907) finds that bovine bacilli are easily decolorized by acid, especially when found in the human host. His method is carried out without any acid treat-

ment. He further has found that nearly 60 per cent. of all phthisical patients have both the human and bovine type of bacilli in their sputum. He therefore came to the conclusion that it was very desirable to work out a more certain method for distinguishing between the two forms of tubercle bacilli by means of staining properties. He now describes three new methods. First, he deals with his capsule or envelope method. This is a method of staining in layers. Smears are rendered alkaline in a 1 per cent. caustic soda or potash solution and very carefully dried with heat. The wax envelope of the bovine bacillus has a low melting point, and therefore one must be careful not to overheat. Next one pours on to the specimen some Loeffler's methylene blue, and washes with water. The next stage consists in staining with warm carbol fuchsin until steam rises from the fluid, and then washing off the stain with water. Then one restains with methylene blue and adds one or two drops of a 15 per cent. sulphuric acid to the stain. This stage only lasts a few seconds. The specimen is then rinsed in water and dried between blotting paper or by some other means, care, however, being taken not to overheat if dried over the flame. Stained in this way, *Pertsucht* bacilli appear much larger than human tubercle bacilli. Another striking difference between the two forms when stained by the capsule method is that the bovine bacilli show what Sprengler calls "*splinters*," which are structures arranged in the interior of the bacillus in a precisely similar manner as anthrax spores are arranged. He claims to have proved that these splinters are spores. In the human bacillus no such splinter formation is seen, while spore-like bodies which are arranged in chains are seen instead. The wax capsule is very thin, and constricts the bacillus between the spore-like bodies. The wax capsule is rarely sharply defined in the latter, but it is always sharply defined in bovine bacilli. The envelope method only succeeds satisfactorily when the *Pertsucht* bacilli have not been subjected to drying. The envelope is very delicate, and is liable to shrink when its moisture is abstracted. However, the human organism possesses the capability of so damaging the wax envelope that this method can no longer serve as a differential method. Under such circumstances he uses his second method—the picrin method. This is carried out, as before, by staining in carbol fuchsin, then treating in picric acid-alcohol after pouring off the fuchsin for two or three seconds; then adding 3 or 4 drops of 15 per cent. sulphuric acid and more picrin until the film appears faintly yellow (this takes from five to ten seconds); then washing in water, and, lastly, drying. The picrin solution is made up by mixing equal parts of a saturated solution of picric acid and absolute alcohol. The bacilli, when stained in this way, appear brilliantly red, as do also the "*splinters*," and both are well contrasted against the yellow background. The method presupposes a trace at least of the wax envelope. One meets with one difficulty in carrying out this method. This is that it is extremely difficult to focus with high powers. He finds it best to first seek the yellow islands in which the red bacilli must be sought, under comparatively low powers, and then to apply the oil-immersion lens without moving the specimen. He claims that the picrin method is specific for acid-fast bacilli. Further, he believes that the evidence of damaged wax envelopes is of prognostic importance. When this is marked it indicates that the patient is getting the upper hand over his bacilli. The last method is called the "*colour-true method*" (*Farbaecht-methode*). This means that when the bacillus has once taken up carbol fuchsin it is unaffected by any other stain. All the bacteria which belong to the acid-fast group are colour true. No acid decolorizing is used. While tubercle bacilli from the human origin are probably better stained after Ziehl's method, other acid-fast bacilli show up much better as colour-true pictures. All three methods are therefore capable of distinguishing bovine from human tubercle bacilli under various conditions. He adds a few other remarks on the details and interpretation of the methods.

36. A Case of Cyclops.

MIZUO (XXXV *Versammlung, d'Ophth. Gesellschaft.*, Heidelberg, August, 1908) described a case of complete cyclops. The anterior brain looked like a placenta, the middle brain was maldeveloped; there was one central eye and one optic nerve. The rest of the body was normal.

CORRECTIONS.

IN the EPITOME of December 19th, 1908, No. 561, col. 2, line 25, the word "*sanatol*" was printed instead of "*sanatol*." In line 30 mention is made of viocol, which is described as the active principle of cod-liver oil; this should of course read "*castor oil*." We regret that these errors should have crept in through inadvertence. cc.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

37. Congenital Pyloric Spasm.

KOPLIK (*Amer. Journ. of Med. Sciences*, July, 1908) records several cases of congenital pyloric spasm and congenital hypertrophic stenosis of the pylorus in infancy, and in order to more clearly differentiate the varying forms which may be found he considers the subject under two headings. Notes of three cases are given typical of those in which there is a definite spasm of the pylorus initiated by some error in feeding, thereby causing an increased peristalsis of the stomach which eventually results in such pyloric spasm. The peristalsis may not be sufficiently marked to be visible, but the children vomit after every nursing, at times rejecting more than has been taken, a residual amount of food being retained by the stomach. The prognosis is good and operation is not indicated. Six cases are reported presenting initial symptoms as severe as the above but in which either a rapid improvement followed under observation, or after passing through many dietetic vicissitudes they recovered spontaneously on foods apparently scientifically most unsuitable. In the second class of cases, not only does pyloric spasm exist with peristalsis of the stomach, but in addition there is a distinct hypertrophy of the pylorus and a narrowing of the lumen from a distinct growth of new tissues, which can be palpably demonstrated as a hard nodular mass, and the peristalsis too is markedly visible. This latter condition presents all the symptoms of simple spasm in an aggravated degree, and in addition there is marked visible peristalsis towards the pylorus and constipation is more marked, the stools showing little or no milk faeces, but only bile-stained mucus. As regards prognosis the cases of simple spasm will generally be relieved by persistent trial of feeding, while many of the hypertrophic cases will eventually recover upon the same lines, only the rare cases requiring operation. Breast feeding is the ideal and should be given at long intervals and short nursings, and in artificial feeding small amounts at each feed should be given. Stomach washing appears to be useless and in some cases harmful, but enemata in the form of enteroclysis of small amounts of normal saline solution given several times daily are useful in maintaining nutrition.

38. X-Ray Diagnosis of Tracheo-Bronchial Adenitis.

LAUREATI (*Gazz. degli Osped.*, October 25th, 1908), continuing his researches in the diagnosis of enlarged bronchial glands, gives the result of a number of x-ray examinations of the thorax in 30 cases of children who were reasonably suspected (and in many cases proved) to have enlarged tracheo-bronchial glands. The net result was to show that such examinations possessed only a relative value in conjunction with other symptoms. Out of the 30 cases, no shadow at all was given in 19 cases, in 1 the shadow was seen anteriorly, in 5 posteriorly, and in 5 both anteriorly and posteriorly. The author suggests that further experience of the real or comparative value of x-rays in diagnosis might be gained by examinations in the post-mortem room. The results of experience so far seem to show that the chief value consists in affording confirmatory evidence, and for this purpose it seems to have about as much and as little value as the venous hum described by Einsteine Smith, and fully discussed by Laureati in a previous communication.

39. A Young Girl with a Deep Bass Voice.

SCHIEER (*Medic. Klinik*, October 25th, 1908) records the case of a girl of 16 with a man's deep voice. The mother died of phthisis. The girl menstruated fairly regularly for a year, when, at the age of 15, the menses suddenly ceased, and her voice changed from a beautiful soprano to a true deep bass. She now has a range of nearly four octaves, sings the deepest bass notes with ease, and also produces the most ideal falsetto tones. The speaking voice has remained a deep bass up to the present. Laryngoscopically the vocal cords are seen to be much broader and longer than in other girls; they are reddened, and during ordinary phonation leave a triangular space between them at the back. They only close completely when she phonates quite high. Externally the larynx appears larger than usual, with a very prominent thyroid angle. Schieer thought first the patient was a hermaphrodite, but the genitals proved entirely feminine, the

breasts well developed, the type of respiration entirely costal, and the disposition wholly that of a female. Examination with the x rays revealed no ossification of the thyroid cartilage beyond the slightest trace, just starting, in the posterior part of the laminae. The author asks if this is a case of abnormality—the sudden change of a woman's voice into a man's—and will the voice always retain its mannish character, or is it a case of perverse cracking of the voice at puberty? The removal of the testes in boys has a considerable influence on the growth and form of the larynx and on the voice, and, following changes in the female genital organs, the larynx has been observed to approach the male type. When the appearances accompanying the change of voice—that is, the redness and swelling of the cords—have disappeared, an attempt will be made to act on the larynx through the induction of menstruation. Special electrical treatment and systematic voice exercise will be undertaken.

SURGERY.

40. The Operative Treatment of Facial Neuralgia.

MORESTIN (*Bull. et Mém. de la Soc. de Chir. de Paris*, No. 32, 1908) publishes two cases of very severe facial neuralgia, in which complete and welcome, though it is anticipated only temporary, relief was afforded by operative treatment. In each of these cases the patient was a male. The first patient, who suffered "terribly" from facial neuralgia involving the regions supplied by the superior and inferior maxillary nerves on the right side, was, after failure of injections of alcohol and an attempt to expose and divide the roots of the affected nerves, subjected to a combined operation in which the author through a single long incision made in front of the sternomastoid muscle, ligatured the external carotid, extirpated the superior cervical ganglion, and finally, after division of the inferior dental near the process of Spix, tore away the upper portion of this nerve. This operation was followed at once by complete cessation of pain, not only in the region of the inferior dental, but also over the whole range of the distribution of the trifacial nerve. The interval between the date of the operation, which was performed early in October, and the communication of the report on November 4th is far too brief to present any definite conclusions on the value of the treatment applied to this case, but the author is disposed to think that by the combination of three different procedures, each of which is capable of affording for a time complete relief from pain, the chances of obtaining a durable result may be increased. The long delay in the relief of the neuralgia that usually occurs after sympathectomy alone was abolished in this case, the author holds, by the association of this operation with ligature of the external carotid. The vaso-dilatation due to the resection of the nerve is neutralized by the ischaemia resulting from the arterial occlusion, and thus, it is pointed out, the patient is guarded against painful consecutive reaction. The history of the second case is a record of a long succession of severe operations, including sympathectomy, practised from time to time in the course of the last years, with the invariable result, after intervals more or less brief, of recurrence of very intense neuralgic suffering. After an unsuccessful attempt made in October to expose the Gasserian ganglion the author trephined over the Rolandic region on the opposite side of the head. This operation, proposed and practised in a single case by Jaboulay, was, in Morestin's case, followed, after an interval of a few hours, by complete relief from much suffering. In both cases in which this operation has been practised for facial neuralgia the results have undoubtedly been very good. It is difficult, however, to explain these, and the period of relief in each case has hitherto been too short to allow of any sanguine expectations of an absolute and abiding cure. It is a remarkable fact, the author states, that though in his case trephining on the opposite side gave almost immediate relief, the large opening made in the cranial vault at the previous attempt to reach the Gasserian ganglion had not influenced in any degree the intensity of the pains. In the discussion of Morestin's report Schilean stated that a long experience of surgical interventions in cases of facial neuralgia had abolished all previous illusions as to the utility of such treatment, and that he thought of refraining from future operations for this affection.

41. Local Anaesthesia in Adenoid Operations.

F. HUTTER (*Wien. med. Woch.*, October 10th, 1908) has devised a method of anaesthetizing the pharyngeal tonsil by infiltration. Painting the tonsil must be repeated so often before the deeper parts become anaesthetic that the process is more objectionable than an operation without anaesthesia. If the curved needle of a syringe is passed behind the soft palate from the mouth it may enter the adenoid tissue, but probably does not pass sufficiently high to anaesthetize the roof of the naso-pharynx. Further, owing to the vertical direction of the needle track and the numerous clefts in the pharyngeal tonsil, a considerable quantity of any liquid so injected escapes downwards. In the writer's method the needle is passed through the nostril. A camel's-hair brush is soaked in a 10 to 20 per cent. solution of cocaine, passed through one nostril, slightly upwards towards the upper border of the posterior nares, and left there for a few minutes. The process is repeated on the other side. The deeper parts are caused to shrink, so that the upper border of the posterior nares and the adenoid tissue behind become visible by anterior rhinoscopy. The camel's-hair brush is then gently rubbed over these parts until they are superficially completely anaesthetic. If this part of the process is not carefully done the subsequent prick of the needle will be felt, and the patient, especially if a child, probably becomes unmanageable. The most satisfactory drug, for purposes of injection, is β -eucaine in a warm 5 per cent. solution with 0.8 per cent. of NaCl. Cocaine is unsuitable, as more concentrated solutions are required than are necessary for ordinary infiltration anaesthesia. Novocain is unreliable. The eucaine solution can be sterilized by boiling, is but slightly toxic, and is not followed, as are the vaso-constrictors, by secondary vascular paresis and haemorrhage. Its action is increased by the addition of 5 drops of adrenalin to each syringeful. The capacity of the syringe employed by the writer is slightly more than 2 c.cm (about 34 minims). The needle, which is straight and 12 cm. in length (nearly 5 in.), has a bayonet attachment to the syringe, from which it comes off almost at a right angle. The orifice at the point faces upwards. The needle is passed into one nostril backwards and slightly upwards towards the upper margin of the orifice of the posterior naris, where it impinges on the mucous membrane of the anterior part of the roof of the pharynx and the insertion of the pharyngeal tonsil a short distance external to the septum. This should be done under the guidance of the eye. Even if the dividing line between the posterior naris and the adenoid tissue is not distinct, there is, with practice, no difficulty in selecting a suitable place for insertion of the needle, which is passed on until it meets with the resistance of the basilar process, when its point is slightly elevated so as to reach the highest layer of the adenoid tissue. Considerable pressure is requisite to force the fluid into the tissues, and an easy flow indicates that the needle has not travelled sufficiently upwards to the pharyngeal roof. The process is repeated through the opposite nostril, half a syringeful being injected on either side. After waiting a short time the adenoids can then be removed, in the great majority of cases entirely painlessly. The method is especially applicable to older children and adults, though, in the writer's hands, it has often succeeded in children under 10, and not infrequently in those as young as 4 or 5. There should be no crying or struggling, and the growths can be removed as thoroughly as under a general anaesthetic with avoidance of the dangers inseparable from the latter. It is important not to frighten children by digital examinations or attempts at posterior rhinoscopy, which frequently render them unmanageable. Anterior rhinoscopy is usually sufficient for diagnosis.

42. Hydatid Cyst of the Stomach.

HARTMANN (*Rev. de Gynéc. et de Chirur. Abt.*, July-August, 1908) reported before a medical society on a specimen of hydatid cyst of the parietes of the stomach removed by Dujarier. A woman aged 65 was admitted into hospital for pains in the left flank. She had never suffered from any symptoms of indigestion. On palpation a rounded tumour could be defined in the left flank. It was of the size of a fist, firm, very movable, and not very tender. On account of these characters it was taken for a movable kidney. A lumbar incision was made with a view to nephrorrhaphy. The kidney was found to be in its normal place and perfectly healthy. The posterior layer of peritoneum was laid open, and then it was found that the tumour was situated in the stomach. The lumbar wound being closed, Dujarier opened the abdominal cavity anteriorly. The cyst was enucleated from between the mus-

cular and mucous coat of the anterior wall of the stomach. The patient recovered without any complications. Hartmann maintained that the case was unique. Tuffier, in discussing it, stated that he had operated on a case of hydatid cyst of the lesser omentum, which being closely applied to the lesser curvature felt like a tumour of the stomach, and was diagnosed as cancer of that organ.

OBSTETRICS.

43. Central Rupture of Perineum.

REISCH (*Monats. f. Geb. u. Gynäk.*, September, 1908) recently reported before a medical society a case of breech presentation, where the after-coming foot tore through the recto-vaginal septum and projected out of the anal ring. The perineum remained intact, but it had to be laid open from the vagina before the foot could be set free. More recently he attended a primipara, aged 21, where the second stage was lingering; at each pain the head passed the perineum, so that the vulval ring was pushed forwards. The midwife protected the perineum according to the usual practice, and at length the head was delivered. The perineum seemed intact, but on closer inspection an oblique laceration was detected in front of the rectum, and the shoulder could be seen pressing it open. Reich managed to make the shoulder pass through the uninjured vulval ring, and delivered the child, a well-developed female, over 7½ lb. in weight. Then it was clear that a central rupture of the perineum existed, over 2½ in. in length, and running from near the anus on the right obliquely forwards to the left, ending about the middle line of the perineum. The sphincter ani lay bare, yet unruptured, in the wound. The vagina, on the other hand, was severely lacerated, its posterior wall being torn away from the perineum, which formed a bridge over the torn tissues. The vaginal laceration reached to the rectum posteriorly, as far as the labia minora laterally, and passed upwards on each side of the posterior vaginal column, 2 in. on the left and a little over 1 in. on the right. There were some short fissures in the vaginal wall anteriorly, near the meatus urinarius. The bridge of unlacerated perineal tissue anteriorly had to be laid open in order to repair the damage to the vagina and deeper parts satisfactorily. The wound healed by second intention, as there had been much bruising of the tissues, but it ultimately healed very well. Reich discussed the mechanism of central rupture of the perineum and of rupture of the recto vaginal septum in labour.

44. Decapsulation of the Kidney for Eclampsia.

IN 1903 Sippel suggested, on the basis of conditions found in an autopsy, that eclampsia might be due to the displacement of a ureter causing a marked venous stasis of the kidney. The displacement of the ureter would be caused by the uterus increasing in size, and even when the cause of the displacement no longer acted, the hyperaemia would continue in the kidney. He therefore proposed stripping the capsule off the kidney in cases of venous hyperaemia or anuria. In discussing the value of this method of treatment for eclampsia, Ernst Runge (*Berl. klin. Woch.*, November 16th, 1908) follows out the history of the development of the suggested treatment. Edebohl independently came to a similar conclusion, and was the first to carry the idea into practice. He dealt with three cases. He had obtained an immediate increase in the quantity of urine secreted in 100 cases of chronic nephritis by decapsulation, at times obtaining enormous quantities of urine. In two of his eclampsia cases the emptying of the uterus did not have the desired effect, while the fits ceased after the decapsulation. Polano first carried out this in Germany. The fits set in after delivery, and ten days post partum he carried out the operation. The patient died, but he was of opinion that the procedure had exerted a beneficial influence on the diuresis and on the general condition. Gauss reported on a successful case. Asch, Wiener, Kleimertz, Frank, and Falgowski also were able to record successful cases. Others, however, did not have so much good fortune, and Esser-Müller, Haim, and Kleimertz lost patients after the operation. Bunni, too, attempted this method in three cases, but failed to prevent a fatal termination. The opinions as to which time is the best to operate are still divided. Some wish to operate after delivery has proved unsuccessful, while others consider that it should be performed as soon as the diagnosis is made. Bunni considers that decapsulation should only be attempted during the puerperium, when the fits continue, or when anuria is complete. He prefers to reserve the operation to those cases which offer no chance of recovery when treated by any other method. The observations on

the kidneys at the operation differ widely. At times the kidneys were tense, and protruded as soon as the capsule was divided; while other kidneys were soft, not enlarged, and soddish. In surveying the position Runge finds that of the 17 patients who had been subjected to the operation, 9—that is, 53 per cent.—have died. It is probable, in his opinion, that some of the patients who recovered might have done so without operation. Improvement only set in in two cases a considerable time after the operation. In other cases, however, the immediate increase of the diuresis and diminution in the quantity of albumen kept pace with the decrease in the number of clamptic fits, and it is therefore possible that the operation saved the patients' lives. It is impossible at present to give a definitive verdict as to the value of this operation in the treatment of eclampsia, but up to the present the results are not very promising. In the hands of a skilled operator, however, decapsulation is not a severe operation, and can be performed in about twenty minutes. It may, therefore, be tried in desperate cases when all other means have failed.

GYNAECOLOGY.

45. Inoperable Uterine Cancer.

IN discussing the treatment of inoperable cancer of the uterus, H. Freund (*Deut. med. Woch.*, December 3rd, 1908) finds that some difficulty is experienced in defining inoperability. When the malignant growth has spread beyond the limits of the pelvic cellular tissue and has involved other organs, when perforation of the bladder or rectum has taken place, or when marked cachexia, with dropsy and other terminal symptoms have presented themselves, there is no doubt about the inoperability. In less advanced cases the determination depends on the skill in examining, the experience, and the technique of the gynaecologist. The best way out of the difficulty is to consider as operable only those cases in which all the macroscopical cancerous tissue can be removed. When the disease has not advanced as far as in the cases described above, and the strength of the patient still admits of operative interference, he considers it advisable to consider the question of operative treatment of "inoperable" cancer. The operation, then, must include the removal of the uterus, and as much as possible of the pelvic connective tissue and vagina. In spite of the theoretical opinion that incomplete operations should be carried out vaginally, he believes that this operation should be performed through the abdominal wall. If done vaginally, the vulsella usually tear through, the bladder cannot be detached, and the haemorrhage can only be controlled by means of tamponage or permanently applied pressure forceps. The results obtained in this way are usually not better than those obtained by means of the canterly or sharp spoon, which only occasionally are satisfactory. As a rule the beneficial effects of these palliative operations only last for a very short time. During the last two and a half years he has operated solely through the abdomen. The object of the operations is not so much the prolongation of life as the arresting the spreading of the growth and the checking of the bleeding and decomposition. The results which he has obtained were particularly satisfactory with regard to the checking of bleeding and discharge. He illustrates this and other points by means of clinical histories of cases. The following points are especially emphasized: (1) That there is a sufficient preparation. The patient is put under an anaesthetic (deep anaesthesia is not necessary), and exuberant parts of the growth are removed by the sharp spoon or canterly, and then dried and disinfected. The drying and disinfecting is achieved by means of tannin-salicylates and repeated application of 3 per cent. peroxide of hydrogen. (2) At times it is advisable to perform a sort of high amputation in cases of cervical cancer, and to disinfect and dry prior to the more radical measure. (3) In the operation itself it is necessary to work rapidly and to provide ample protection of peritoneum. The removal of the malignant tissue is best done by means of Cooper's scissors, which will not lead to wounding of neighbouring organs. Naturally portions will be left behind; but this is unavoidable in inoperable cancer. (4) It is necessary to cover the whole of the field of operation by means of peritoneum. If healthy peritoneum cannot be made to unite exactly so as to shut off the soiled and infected area, it is better to limit the operation to ligation of the arteries. Objection has been taken to this severe procedure on the ground that the operation is a big one, the risks are considerable, and the possibilities are small. Freund answers

that if only those patients whose disease has not advanced so far as to render death imminent are chosen for the operation, the operation, which can be completed in forty minutes, is well stood, and within a short time the general condition improves very materially. The freedom from haemorrhage and discharge acts beneficially on the mind as well as on the body. The use of lumbar analgesia for general anaesthesia has further assisted in rendering this operative interference justifiable. With regard to pain in inoperable cancer of the uterus, the author has made the experience that morphine, opium, and the usual narcotics not infrequently fail. He has given a single lumbar injection of stovaine, and while this only obtained complete freedom from pain for one day the pain was never so intense afterwards that it could not be banished with aspirin or morphine.

THERAPEUTICS.

46. Serum Treatment of Epidemic Meningitis.

FLEXNER and JOBLING (*Journ. of Exper. Med.*, September, 1908) have analysed 393 cases of epidemic meningitis which were treated with antineurotoxin serum. Out of these, 295, or 75 per cent., recovered. In children under 1 year of age the prognosis is usually considered to be hopeless, but out of the 22 cases analysed by the authors 11 recovered. Of the 11 cases which terminated fatally, 10 were already in the third week of the disease when the treatment was commenced, and some were in a later stage; 6 or more presented well-marked symptoms of hydrocephalus; and only 1 was in the first week of illness at the time of the first injection. Of the 11 cases which recovered, 1 infant was 4 weeks old when first injected, all but three were in the first week of the disease, and none showed symptoms of hydrocephalus when the injections were begun. Of the 19 children in the series between the ages of 1 and 2 years, 11 recovered and 8 died. Analysis of these shows that only 1 case injected in the first week of illness died, while 6 cases injected in the first week and 5 injected from the second to the fourth week recovered. In patients of all ages the importance of early inoculation is emphasized. The histories of 361 cases were sufficiently explicit to enable the authors to ascertain with fair accuracy the date at which the treatment was commenced. Injections were given during the first three days in 123 cases; only 16, or 16.5 per cent., of these died. The treatment was resorted to from the fourth to the seventh day in 126 cases; 30 of these, or 23.8 per cent., died. Out of 112 cases treated later than the seventh day, 39, or 35 per cent., died. The histories of 110 cases afforded evidence of the influence of the injected serum upon the diplococci: in 100 of them the diplococci disappeared and lost viability quickly; in 10 instances the elimination of the organisms was slow. In several cases which recovered the spinal exudate was purulent to begin with, but rapidly cleared under the influence of the injections. It was also found, in favourable cases going on to recovery, that, correlated with the disappearance of the diplococci and the clearing of the spinal exudate, there was a fall, often very rapid and even critical, in the number of leucocytes in the general blood stream. The general conclusion at which the authors arrive is as follows: "It is our belief that the analyses of histories of cases of epidemic meningitis which have been presented in this article furnish convincing proof that the antineurotoxin serum when used by the subdural method of injection, in suitable doses and at proper intervals, is capable of reducing the period of illness; of preventing, in large measure, the chronic lesions and types of the infection; of bringing about complete restoration to health in all but a very small number of the recovered, thus lessening the serious, deforming, and permanent consequences of meningitis; and of greatly diminishing the fatalities due to the disease."

47. Atoxyl as a Tonic.

SCHACHT (*Med. Klinik*, September 13th, 1908) has systematically employed atoxyl during five years with excellent results and no harmful secondary effects. He gives intramuscular injections usually into the gluteal region, not too near the ischium, using slight massage afterwards to distribute the drug. Intravenous injections he thinks unnecessary. Out of all his cases he has never once observed any harmful effect or local irritation, a course taking one month when the injections were given every second day. He usually gave atoxyl in single doses as follows: 0.02, 0.04, 0.05, 0.03, 0.10, 0.12, 0.15, 0.15, 0.15.

0.15, 0.12, 1.10, 0.08, 0.06, 0.04, 0.02 gram, altogether 1½ grams, a small amount compared with that recommended in recent works. Three to five times as much arsenic is thus carried into the blood stream as is introduced when Fowler's solution or Asiatic pills are employed, and Schacht believes that the above dose may be safely increased. For the use of injections he recommends small bulbs containing the solution, which can be safely sterilized without destruction of the atoxyl solution. A 10 per cent. solution must be frequently renewed, since part of the atoxyl easily crystallizes out, and in this way danger of decomposition is also lessened. Atoxyl proved successful in the following diseases, where formerly arsenic seemed indicated, that is, chlorosis or anaemia, primary following malaria, or associated with nervous diseases, Basedow's disease, tuberculosis, convalescence after infectious diseases, general conditions of weakness, malnutrition, etc. Increase in good health, weight, red corpuscles, and haemoglobin always occurred, atoxyl proving effective in cases where the other arsenic preparations were either not tolerated or without effect. Schacht attributes accidents and failure to the use of excessive doses employed in attempts to find in atoxyl a specific for sleeping sickness, syphilis, pellagra, carcinoma, etc.

49. Vaccination of Bovines against Tuberculosis.

CALMETTE and GUÉRIN (*Ann. de l'Inst. Pasteur*, September, 1908) have made a further study of immunization by the alimentary route against tuberculosis, and conclude that by the ingestion of virulent tubercle bacilli, or of bacilli modified by heat, a relative degree of immunity may be conferred on either young or adult bovines. When at a later period animals thus treated are tested by causing them to ingest a large dose of virulent bacilli invariably fatal for the controls, one finds that at the end of four to six months they remain unaffected; that they do not react to tuberculin; and that their mesenteric, mediastinal, bronchial and retropharyngeal glands no longer harbour tubercle bacilli, inoculation of such glandular material being harmless for guinea-pigs. But experiments continued for a sufficiently prolonged period do not justify the assertion that these animals are capable for a longer period than a year of resisting artificial infection by the digestive tract or natural infection by cohabitation. When, eight or twelve months after having resisted a large test dose administered by the alimentary tract, the vaccinated bovines receive an intravenous injection of virulent bacilli in sufficient dosage to kill the controls in four or five weeks, it is found that the vaccinated animals, after a short period of malaise, maintain for six or eight months every appearance of perfect health. Nevertheless, they retain in their bronchial and mediastinal glands virulent bacilli capable of producing tuberculosis in guinea-pigs. These bacilli give no clinical manifestation of their presence, not even when the tuberculin test is applied: but after a period of delay, lasting from about six to eight months, the immunity of the animal disappears, and the bacilli present are then capable of setting up tuberculous lesions. Thus, cultures of tubercle bacilli, when introduced by the digestive tract, are finally absorbed in the mesenteric glands when not present in sufficient numbers to provoke lesions, but when introduced intravenously the bacilli remain alive and virulent in the groups of lymphatic glands draining the thoracic organs. Animals which are tuberculous or have been sensitized to tuberculin by two or three large injections of this substance in the veins exhibit a very marked resistance to reinfection or to the severer forms of infection by natural or artificial means, even when the tests are applied by the intravenous method. This resistance, though less in degree, seems to be of the same nature as that conferred by various methods of vaccination, such as: (1) Intravenous inoculation of human or bovine bacilli (Behring, Koch, and Schütz); or of homogeneous bacilli (Arloing); (2) subcutaneous inoculation of similar bacilli (Lignières, Arloing); or (3) subcutaneous insertion of reed sacs treated with collodion and containing cultures of bovine or human viruses (Heymans). These methods of vaccination do not produce a true immunity, since the animals so treated, though failing to react to tuberculin, continue to harbour in their bodies living and virulent bacilli, which are capable, when the animal's resistance is on the wane, of producing in their host grave lesions.

49. Cocaine and Novocain.

VERDERAME (*Zeit. für Augenheilk.*, xviii, p. 191) has made experiments to test the relative deleterious action of

cocaine and novocain upon the tissues. He decides that novocain is more likely to cause corneal lesions and detachment of the epithelium. When injected under the conjunctiva, novocain causes degeneration of the cornea. It is less anaesthetic than cocaine, and has only one advantage, it does not dilate the pupil. Injections into the anterior chamber cause well-marked ureal irritation, associated with alterations in the corneal endothelium and parenchyma.

PATHOLOGY.

50.

Protozoa in Pathology.

FREDERICK G. NOXY (*Proceedings of the Pathological Society of Philadelphia*, 1907) surveys the progress which has taken place in pathology during the half century which has elapsed since the organization of the society, with especial reference to the rôle of protozoa in pathology. In 1857 Pasteur published his first study on the mysterious phenomenon of fermentation. He looked upon the motile organisms which he encountered as animals or infusoria. Before two decades had passed the botanist laid claim to all the bacteria, a claim undisputed until the recent development of interest in the spirochaetes. Pasteur's investigation of one of the first-known protozoal infections—namely, pébrine, or the silkworm disease—demonstrated the transmission of a protozoal infection. The author reviews in turn the chief circumstances of discovery and the means of study of amoebae, trypanosomata, spirochaetes, sporozoa. In regard to amoebae, which are not directly dependent upon the living host cell, pure culture is a useful and desirable, if not actually necessary, condition to a thorough investigation; and with the improvement of culture methods it cannot be too strongly urged that morphological studies be supplemented by cultivation tests. In regard to trypanosomata, after collecting the most important conclusions of all workers, the author asks the question whether *Tr. gambiense* may not have been originally a mere variety of *Tr. brucei* which has acquired its destructive properties by repeated and brief passages through man, effected by the tsetse flies. It is worth bearing in mind that the protozoa as well as the proto-phytes are easily influenced by environmental conditions even to the extent of giving rise to a number of distinct strains or varieties. The number of spirochaetes has steadily grown during the past few years, and it is hardly necessary to point out the importance of giving close attention to the presence of these organisms in view of the recognition of a spirochaete in the tumours of cancerous mice by Gayford and Calkins and the questions it raises of their relation to the pathological process with which they are associated. In cancer, small-pox, scarlet fever, measles, yellow fever, rabies, and Rocky Mountain fever, protozoa have been credited with being the causative agents. The evidence, however, at present is either morphological or wholly speculative, and as such is open to doubt. It is only by exhaustive experimental tests and by the successful search for new methods that we may hope to gain the desired positive knowledge. Morphology alone seems powerless, and it must be supplemented by studies bearing on the physical, chemical and biological properties unless the crucial test—that of artificial cultivation—is first realized. In regard to modes of transmission, according to Stiles there are two general rules with reference to parasites and disease. Diseases which are accidentally spread by insects are caused by parasitic plants, particularly by bacteria, and those diseases which are dependent on insects or other arthropods for their dissemination and transmission are caused by parasitic animals, particularly by sporozoa and worms. To the first rule certain exceptions are known, but the second has been regarded as yet without exception, and the classification of certain organisms, as protozoa, is dependent upon it. The author brings forward considerations based upon analogy to show that the function of insects as active carriers of bacteria is a possibility which must be borne in mind. Hence the transmission of certain spirochaetal diseases by ticks does not afford a serious argument against the bacterial nature of the spirochaetes, and similarly, the part played by *Stegomyia* in the transmission of yellow fever does not necessarily imply a protozoal organism. In fact the evidence is strikingly suggestive of a spirochaete cause. An experimental solution of this question is desirable, and perhaps can be effected by injecting dialyzed and unaltered salt suspensions of the infected mosquito before the supposed life-cycle of the protozoan has been completed.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

51. Duodenal Diabetes Mellitus.

A. HERLITZKA (*Giorn. d. R. Accad. di Med.*, Turin, 1908, lxxi, p. 57), after discussing the diabetes described by Pfliiger in 1907 as due to removal of the duodenum or to separation of the duodenum from the pancreas in the frog, describes his own experiments. In these he attempted to paralyse the sympathetic nerve cells in the frog's duodenum by the injection of vaseline to see whether the frog would then develop glycosuria. Accordingly he injected pure vaseline into the duodenums of a number of frogs; some developed a slight transient glycosuria. Into other frogs he similarly injected vaseline containing up to 2 per cent. of nicotine; they all developed in one to three days marked glycosuria, lasting a week or until death. With yet other frogs he injected the nicotinized vaseline into the dorsal lymph sac; a few of these developed transient glycosuria after one to six days. Herlitzka concludes that duodenal diabetes is due to interference with the action of ganglia situated in the wall of the duodenum, and controlling reflexly the internal secretion of the pancreas: he adds that these ganglia are no doubt part of the sympathetic nervous system. In 1907 Pfliiger noted that removal of the pancreas in the frog, or even laceration of the mesentery between the pancreas and duodenum without any injury to the pancreas, gave rise to true glycosuria. A. Visentini (*Il Morgagni*, Milan, 1908, l, p. 479) discusses this duodenal diabetes, quoting from the literature; several German experimenters have failed to produce glycosuria in dogs by extirpation of the duodenum, or at most have found a transient glycosuria after this severe operation. Visentini removed the duodenum in three dogs, leaving the pancreas intact, and forming an external biliary fistula: death followed on the third, fourth, and twentieth days respectively, but no glycosuria was observed. In five other dogs he removed the duodenum and with it the greater part of the pancreas, leaving behind only the tail of the pancreas near the spleen. Death followed in two to eleven days, but no glycosuria occurred in any case. In the first three cases a trace of duodenal tissue—that around the ampulla of Vater—was left behind, but can hardly have been enough to protect the animals from duodenal glycosuria, if such a condition exists. Minkowski (1908) removed (from dogs?) first the greater part of the pancreas, and at a second operation the duodenum; no diabetes was produced. But when, at a third operation, the remaining fragment of pancreas was taken away, severe glycosuria at once followed. Visentini quotes the experiments of Gaultier (1908), who found that cauterizing the duodenal mucosa with silver nitrate produced severe glycosuria, lasting till death in four and eleven days in two dogs; Eichler and Silbergleit (1908), on the other hand, only obtained a transient glycosuria, the duodenal mucosa having been cauterized with caustic soda or with Paquelin's cautery.

52. Percutaneous Tuberculin Reaction.

E. MORO (*Muench. med. Woch.*, September 29th, 1908) has made some observations with regard to the percutaneous tuberculin reaction, which appear to him to be of importance. First, he records that when tuberculin has been rubbed into the skin at suitable situations, the reaction has occurred not only in the site of the application, but also in a situation placed in the site of the application. Next, he reports that the reaction occasionally appears disseminated at some distances from the site of application. In one case he observed a unilateral girdle form of reaction following the local reaction. In this case the tuberculin ointment was rubbed into the skin of the abdomen. From these three types of reaction he deduces that the direct toxic action of the tuberculin cannot have produced the changes, but that it may be accepted that the appearances depended on some effect acting on the central nervous system. He further noticed that when pure lanolin is rubbed in the skin no reaction is produced, but when tuberculin lanolin is rubbed in one place and pure lanolin is rubbed into another in the same patient a reaction was noticed in the site of the latter. This lanolin reaction was usually less severe than the tuberculin reaction, and was sometimes later in appearing, but was typical. Further, he was able to watch the entire disappearance of lichen scrofulosorum after local treatment with tuberculin ointment. He states

that this disappearance was incomprehensible until he learnt that the central nervous system took an active part in the production of the tuberculin reactions. He therefore believes that the percutaneous tuberculin reaction is chiefly a vasomotor phenomenon, or, as he defines it later on, an angioneurotic inflammatory phenomenon. Having come to this conclusion, he proceeds to argue that the same must apply to the conjunctival and to the cutaneous reactions to tuberculin, and also to the subcutaneous reactions. In raising the question whether the reactions are due to the intervention of an antibody, he states that if an antibody is to be excluded a specific peculiar irritability of the nervous system in tuberculous subjects must be assumed. This he describes as a specific nervous "allergy." He leaves it undecided whether this nervous allergy or the tuberculin antibody is to be accepted. He appears, however, to lean more in favour of the purely nervous theory. On the other hand, he cites a number of phenomena which would speak rather for the second solution. These include the absence of the reaction in the last stage of tuberculosis, the absence immediately after the appearance of the measles rash, the absence of the reaction after prolonged treatment with tuberculin, the exacerbation of old reaction foci on repeated tuberculin applications, Koch's focal reaction, the accelerated reaction in connexion with a repetition of the test, the so-called secondary tuberculin reaction, and the long incubation period of the apparent inflammatory phenomenon.

53. Bilateral Pleural Effusion after Radical Cure of Hernia.

MAUCLAIRE has recently insisted upon the liability of a radical cure of inguinal hernia to be followed by pulmonary embolism. Mollard (*Lyon Med.*, November 29th, 1908) records a case in which the infarct was accompanied by bilateral effusion as well as by haemoptysis, a combination of signs which at first caused a suspicion of tuberculosis. His patient, a man aged 20, with a good personal and family history, was operated upon for left inguinal hernia on January 17th. The operation was very simple, and the cicatrix formed normally without inflammation, and with no visible sign of phlebitis about the leg or abdominal wall. The temperature rose on January 20th, and remained above normal until the 24th, when sputum stained with blood was first seen. The slight haemoptysis continued, and the temperature, after being normal for a week, rose again. On February 3rd signs of pleural effusion were found on both sides, more particularly on the right, from which some rose-coloured serum was obtained. This on examination was found to contain many red blood corpuscles, endothelial cells, and haemocytes (polynuclear 79 per cent., lymphocytes and other mononuclear 21 per cent.). On February 15th all signs of effusion had disappeared, and the patient seemed perfectly well. There was throughout a striking contrast between the gravity of the chest symptoms and the insignificant disturbance of general health. The absence of tubercle bacilli in the sputum, the rapidly favourable evolution of the affection, and, later, the negative result of inoculation, were considered sufficient for a diagnosis of post-operative infarct. It is probable that such embolism is due to a phlebitis not sufficient to block the vein or to interfere with healing of the wound by first intention. According to Nélaton, such an occurrence is frequent after operations in general, and explains slight pyrexial and pleuritic pains which have hitherto been attributed to chill.

SURGERY.

54. The Treatment of Undescended Testis with Inguinal Hernia.

COLEY, of New York (*Annals of Surgery*, September, 1908), discusses the treatment of abnormalities in the transit of the testis which are associated with inguinal hernia, and publishes in support of his views on this subject an analysis of 126 cases of such mixed defects on which he has personally operated. This surgeon states that there is by no means uniformity of opinion as to the indications for surgical intervention in such cases, and that also a wide difference exists as to the best methods of operation. Furthermore, but little information has hitherto been

afforded concerning the results of operative treatment. His own observations, as well as a careful study of the reports of other surgeons, have led Dr. Coley to certain definite and important conclusions. The undescended testis, he holds, is almost invariably of little or no functional value. It often gives rise to considerable pain, and is more subject to inflammatory attacks than the normally descended organ. Possibly, though this is by no means proven, it is more subject to malignant disease. The undescended testis should never be sacrificed, the author holds, in children, and very rarely in adults, as it has been proved that it is possible to effect a radical cure of the hernia without the removal of the organ. In childhood the testis, even if it never attains any functional value, is nevertheless of use in developing the male characteristics of the child as well as in promoting its general health. In the adult it should be retained for its influence upon the mentality of the subject, if for no other reason. An operation should seldom be performed under the age of 8 years, unless the accompanying hernia demands surgical intervention. Those who advise such treatment on very young children ignore the fact that in a large proportion of cases of undescended testis in such subjects the organ will reach the scrotum by the age of puberty without surgical interference. An exception to this rule, however, occurs when the defect is bilateral. Abdominal ectopia, unless bilateral, had better be left untreated, as operative intervention in such cases is difficult and by no means free from risk. The main principles of any operation likely to do good must be free opening of the inguinal canal by Bassini's incision; thorough freeing of the testis from any adhesions or peritoneal bands, even with the sacrifice of some of the veins if necessary; depression of the testis into the scrotum; suturing of the canal without transplantation of the cord. The present tendency in favour of giving up all forms of suturing the testis, either to the scrotum, the other testis, or the thigh, is, the author believes, fully justified. As satisfactory results may be obtained without cutting away all the structures of the cord except the vas and its vessels, this radical step, it is held, is very seldom indicated. In the same number of the *Annals of Surgery* Dr. Starr of Toronto describes a new operation for undescended testis which he has practised, he states, with very excellent results, and which he thinks can be applied with good prospects of success in cases of retention of the testis in the inguinal canal just within or outside the external ring. In this operation the testis after the coverings of the cord have been dissected away, is sutured to the lower end of a pouch made by finger pressure and blunt dissection in the scrotum, and is there secured by a loop of silver wire, which serves as a splint to retain it in its depressed position.

55. The Influence of Trephining on Optic Neuritis.

VON HIPPEL (*XXXV Versamm., d. ophth. Gesellsch.*, Heidelberg, August, 1908) draws the following conclusions from the study of 221 cases where optic neuritis was present and the skull was trephined. In the majority of cases the neuritis improved for a long time, and sometimes permanently. Improvement in vision is marked if the operation be performed early, but when the remaining vision is very small there is no such improvement. In most of the cases under examination the operation was delayed too long. In those cases where vision is improved life is also prolonged, and so the operation is advisable from this point of view. Trephining may result in complete cure, for in many cases which have all the clinical aspects of cerebral tumour there is really only a 'false tumour,' a chronic hydrocephalus, an acute hydrocephalus, or a serous meningitis. If these cases be not operated upon the result is sometimes good, but they often die. The risks of the operation are by no means negligible, but when it is undertaken solely to improve sight the danger is much less than in trephining for other reasons. The total mortality of all cases combined is, according to von Bergmann, no less than 47.7 per cent. The death-rate can be diminished by taking certain precautions, such as anaesthetizing with chloroform and not with ether, the two-stage operation, coicizing of the dura, slow escape of the cerebro-spinal fluid, immediate suture of the wound, and simple trephining, instead of osteoplastic methods. It is not always necessary to open the dura to reduce the intracerebral pressure. Cerebral hernia is necessary if we are to obtain the desired result, but we must keep it within reasonable dimensions. If the tumour can be localized we should trephine over it, otherwise it is best to select the right temporal region. In spite of possible bad results, it is always correct to trephine as soon as sight begins to fail.

OBSTETRICS.

56. Puerperal Fever and its Treatment.

MAX HENKEL (*Deut. med. Woch.*, Nos. 43, 44, and 45, 1908) shows that sepsis and pyaemia in the puerperium are caused by various types of streptococci, some of which he believes are introduced from without and others are already in the vagina. It is, in his opinion, impossible at present to determine which forms present the greatest dangers to women, and all he is inclined to say is that the Krönig-Menge streptococci are non-pathogenic. Even the appearance of haemolysis does not necessarily carry with it the most marked virulence, although he believes that the prognosis of an infection with streptococci, in which the cocci are found in numbers in the blood and present Schottmüller's phenomenon, is extremely serious. The author discusses at some length the bacteriology of puerperal fevers, and then passes on to speak of the prognosis. In the first place, he finds that the diminution of the neutrophile leucocytes and the loss of red cells, which Kownatzky regarded as a bad sign, cannot be definitely relied on, and offers very little practical value. The behaviour of the pulse and temperature are important prognostic signs when taken in conjunction with the general condition and controlled frequently. The fact that recent haemorrhage, as well as other occurrences, may influence both must render a mere objective determination of the pulse and temperature valueless. The possible source of infection can often be determined, and when scratches and other traumatic lesions can be discovered it will be found that the more extensive these are the greater is the danger of infection. He deals with the methods of conducting the labour as being of importance for the prognosis of an infection, and also concerns himself with the influence of decomposition of the liquor amnii on the prognosis. The way the uterus undergoes inversion and the presence of blood clots are also points which should be regarded. These and many other details are considered as influencing the chances of infection during the puerperium, and Henkel hints from time to time at various preventive measures, although he attempts to limit his remarks to the actual infection, its prognosis, and its treatment. Passing on to the latter, he arrives at a conclusion, at the end of a somewhat lengthy argument, that puerperal sepsis finds its best treatment in the surgical removal of the uterus, and that puerperal pyaemia ought to be treated by ligature of the thrombosed veins. He holds that serumtherapy, up to the present, has been a failure; that collargol has scarcely a better record; that the results obtained from those drugs, like nucleogen, which induce a profuse leucocytosis, have not been of such a character as to induce the obstetrician to pin his faith to their action, and that other methods of treatment are too symptomatic to be considered as curative. He dwells on the indications for the extirpation of the uterus, which he considers should be performed vaginally, and for the ligature of the thrombosed veins. He insists on the proper time being chosen for these procedures, and feels justified in predicting far better results than have hitherto been achieved, if the indications are well defined and carefully adhered to.

GYNAECOLOGY.

57. The Menopause.

VINAY (quoted in the *Journ. de Méd. et de Chirurg.*, September 10th, 1908) first refers to the functions of the ovary—namely, the expulsion of the ovum, the destruction of toxins which are formed during the menstrual period, and the production of an internal secretion which neutralizes the vasomotor toxins and which has an influence both on the uterus and on the whole body. This secretion possesses several properties. It reduces in a very marked way the blood pressure, and, when absent, hypertension occurs; this takes place when the menopause sets in. Secondly, it influences general nutrition by stirring up internal combustion and by increasing oxidation. Thirdly, it acts on the bulbo-medullary nervous system, and, when absent, tachycardia and anginal attacks are prone to occur. Fourthly, the internal secretion possesses a destructive action on certain waste products of the organism and prevents toxæmia. Amongst the most serious manifestations arising from deficient ovarian function the author refers to are hypertension, followed by cardiac troubles and tachycardia. At first the symptoms are vague, the patients complaining of palpitation, which becomes more and more frequent; later, attacks of dyspnoea occur, or, in other cases, attacks of paroxysmal tachy-

cardia, followed by vasomotor troubles (skin pallor, cold extremities, anginal attacks). Oedema of the legs only occurs at a late stage, and is often accompanied by slight albuminuria which is of a transitory nature. Remissions of the symptoms occur from time to time, the attacks lasting from six to seven days. Although during these attacks a high blood pressure is the rule, in some cases the pressure is subnormal, and in such cases marked muscular weakness and moral depression are present: the cardiac action is weak, and these disturbances are liable to last for weeks or months at a time. Amongst less common manifestations of the menopause the author refers to symptoms connected with the bladder and kidneys. Lumbar pain, violent headache, vomiting, diminution of urine, and sometimes albuminuria, are not very uncommonly found to occur. In thin women with a prolapsed kidney the organ can be felt to become painful and swollen. It becomes less movable and a generalized oedema may occur, together with a marked diminution in the amount of urine. If chronic nephritis be present there may be a sudden increase in the symptoms of the disease at the onset of the menopause. Urinary lithiasis sometimes occurs and may cause marked pain, and the presence of vesical calculi may give rise to troublesome symptoms. Pain localized to the neck of the bladder is a troublesome and often very persistent symptom arising during the menopause. The pain begins at the commencement of micturition and diminishes as this act is accomplished. Haematuria has also been known to occur, often coinciding with attacks of uterine bleeding. As regards treatment of the symptoms, for the uterine bleedings injections of hot water are often efficacious, and when combined with warm baths the insomnia, vertigo, palpitation, etc., often yield readily. If haemostatic drugs are necessary ergot should be given either by the mouth or subcutaneously, and in severe cases of uterine haemorrhage a mixture of the fluid extracts of hydrastis, hamamelis, and viburnum may be employed. Solution of adrenalin may be used, but its marked vaso-constrictive effect is always followed by great vaso-dilatation. Other drugs which may be used are stypticin, hydrastis canadensis, and calcium chloride. For the congestive attacks purgatives are useful, especially the saline purgatives, which are of great value in patients who suffer from flushings of heat, tachycardia, vertigo, etc. For the nervous depression arsenic, iron, and the glycyero-phosphates are of value, either singly or combined. Sedatives and hypnotics, such as opium, chloral, bromides, and sulphonal, are better avoided. For the nervous excitement one may employ hot baths, valerian, belladonna, etc., and for the pains antipyrin.

58. Diagnosis of Uterine Retrodeviations.

LAPOINTE (*La Clinique*, May 29th, 1908) writes that retrodeviation means the displacement of the uterine fundus backwards, with displacement of the cervix forwards. He finds that retroflexion is always associated with retroversion. The retrodeviated uterus is either movable or fixed by adhesions; these are the result of lesions of the adnexa, which are a cause of retrodeviation. In most cases a displacement is tolerated for a time at least without giving rise to much discomfort; an accident, such as a fall or an effort, may call attention to the condition. Pain and menstrual disturbance are the usual symptoms; there is a feeling of weight and radiating lumbar pain. Menorrhagia is a common symptom, and may be sufficiently severe to cause anaemia. In young girls a profuse and painful flow is the only symptom. In women who have reached the age of the menopause, the abnormal position tends to prolong the menstrual period. Leucorrhoea may simulate a "false metritis"; difficulty of micturition and defaecation are unusual in these cases, but pressure of the cervix on the neck of the bladder is liable to provoke frequent and painful micturition. Constipation is a common symptom, and is often accompanied by headaches, indigestion, and neurasthenic symptoms. Pain and pelvic discomfort are aggravated by the presence of adhesions and the disease, possibly latent, which has produced them. A vaginal examination shows the cervix to be lying directly behind the symphysis and lower than is normal; the fornices are empty, and the fundus is detected in the hollow of the sacrum; it is then possible to determine whether the uterus is simply retroverted or whether it is acutely flexed. The mobility of the uterus depends upon the condition of the adnexa; when the latter are swollen, painful, and adherent the uterus is generally adherent, fixed, and irreducible. Efforts to reduce it may result in the rupture of a pyosalpinx. When there are no adhesions the uterus is replaceable by digital manipulations; the fundus is pressed up and forward by the fingers

inserted in the vagina, the hand on the abdomen exerting forward pressure on it while the fingers in the vagina assist by pressing the cervix backwards. Should the uterus be entrapped in Douglas's pouch this manipulatory effort is unsuccessful. The pressure should be slow and continued for some length of time; it is facilitated if the patient assumes the genu-pectoral position. The cervix may be seized and drawn down, with the result that the fundus also descends, and two fingers can then be passed into the posterior pouch to assist in replacing it. If neither method is successful the uterus is probably fixed by adhesions. In virgins it is better to insert the fingers into the rectum instead of the vagina. When the abdominal wall is very thick it is possible to mistake for a retroflexion a fibroma or adherent tube or a collection of blood or pus occupying the pouch of Douglas. A careful vaginal examination is required to determine the relation of the mass to the uterus. When the uterus is involved in a mass of inflammatory adnexal adhesions the prognosis must depend upon the character and extent of the pelvic mischief. A retrodeviation, however simple, does not recover spontaneously; it is generally increased by pelvic affections, menstrual disorders, and neurasthenia. The advent of the menopause aggravates the symptoms; it is only in senile involution that the misplacement ceases to exercise an unfavourable effect. These misplacements are one of the causes of sterility; conception often occurs promptly when the position has been corrected. The presence of inflammation and adhesions tends to prevent conception, and there is a liability to tubal pregnancy. When conception does occur in a retrodeviated uterus the patient is exposed to unusual risks, with an increase of functional trouble and *malaise*. In the fourth month it is not uncommon for the gravid uterus to reduce itself spontaneously; if this does not happen an abortion will generally result. The chief danger in these cases is from pressure on the bladder and urinary system, which has been known to produce a fatal rupture, or death from uraemia. A woman who shows the usual signs of pregnancy and who complains of bladder disturbance, should be carefully examined to decide the position of the uterus. The further pregnancy has advanced the more difficult it is to recognize the cervix pressed up behind the symphysis, while a large soft mass, the gravid uterus, fills the pelvis.

THERAPEUTICS.

59. The Treatment of Neuralgia by Alcohol Injections.

IN 1903 Schlösser described a new method of treating neuralgia by injections of alcohol. Since that time a few authors have written on this subject, but practically no new method or material modification of the original method has been suggested. W. Alexander (*Berl. klin. Woch.*, November 30th, 1908) states that he has adhered to Schlösser's technique. It was found that 70 to 80 per cent. alcohol damages a nerve with which it comes in contact. The idea of utilizing this action was first awakened in connexion with convulsive affections of motor nerves, such as the tic convulsif. Sensory nerves were also chosen for the action in painful conditions like neuralgia. The nerves were found after such treatment to be degenerate, and eventually to become absorbed. The symptomatic effect of the injections is to produce anaesthesia of sensory nerves or paresis and paralysis in motor nerves. It has further been found that the sensory nerve fibres are less resistant toward the effect of alcohol than are the motor fibres. Leaving the question of applying the idea for convulsive affections, he limits himself to the injections for neuralgias. Good results have been obtained by many operators in sciatica, but Fischler and Erb have seen in man, and Finkelnburg in animals, that the motor fibres are too markedly affected by the injections to warrant the procedure. The author produced a marked paralysis of several months' duration of the peronei. In this case he injected 1 c.cm. of a 75 per cent. alcohol into the sciatic nerve. He says that it may be possible to avoid such occurrences by employing weaker alcohol. In the treatment of pain in pure sensory nerves, such as the trigeminal, extraordinarily good results follow. He describes the technique somewhat as follows: The alcohol can be injected either peripherally or centrally—that is, in the case of the trigeminal nerve at the foramen rotundum or ovale. Since it is never certain whether the affected portion of the nerve is central or peripheral, the author first tries the effect of the former, and, when this fails, goes closer to the brain. It is still uncertain whether recurrences take place more frequently after the peripheral than after the central injections. If this proves to be so,

it will become necessary to inject centrally in every case. The injection syringe has a capacity of 2 c.cm., and a variety of different shaped needles are fitted. The walls of the needles are thickish, as it is important to have them as strong as possible to ensure against breaking. The point is rounded, so that vessels are not injured. The skin is anaesthetized by Schleich's infiltration, but no further anaesthesia is permissible, as it is often important to ascertain whether pain is being produced or not. For peripheral injection in trigeminal neuralgia the needle is introduced straight down to the bone in the direction of the supra-orbital, infra-orbital, or mental foramen, and an attempt is made to enter the canal for a short distance with the needle. This is not difficult in the infra-orbital canal. The patient usually calls out at this time. The pain should correspond to the pain felt in the neuralgic attacks. If the pain corresponds, the injection is immediately begun. No blood may be issuing from the cannula. The syringe is then applied and 0.1 c.cm. to 0.2 c.cm. is slowly injected. This produces acute pain of short duration. As soon as this is over the same quantity is again injected, and at each successive injection of the small quantity the pain which follows is less. After from 2 to 4 c.cm. has been injected the area is analgesic. Central injections are more difficult, but if the operator has taken the trouble to study the anatomy of the various nerves carefully and practised the injections on the dead body the difficulties are overcome. No one should attempt to inject centrally without such previous study. After a successful injection one or more attacks of pain not infrequently appear. However, within a short time no more pain sets in and the neuralgia becomes cured. Each branch must be injected separately until no further pain occurs. The author reports that even when the pain is due to organic disease of the brain it can be relieved in this way, and cites a case in support of this. In comparing this method with other forms of treatment he mentions resection of nerves, which has the disadvantage of requiring a general anaesthetic, and, further, of leaving an unsightly scar. Removal of the Gasserian ganglion is a dangerous operation, and is only performed for cases in which the pain is intolerable. He contends that where the removal of the ganglion can cure, alcoholic injections can also cure, and that the latter must be preferred. In some cases it is necessary to repeat the treatment for recurrences, but he quotes a case to show that the patient willingly submitted to the injection for the second time, and that it was permanently successful. The supposed dangers of the procedure are necrosis of the skin, paralysis of motor nerves, and injury to large vessels. He has not met with any of these ill-effects save the temporary inclusion of motor nerves. In conclusion, he deals with the indications for the injections, and particularly in the distinction between true neuralgia and hysterical or neurasthenic pain. It is easy to determine whether the pain has a true localized character and radiates in a characteristic manner. He pleads for a freer use of this method.

50. Arsacetin in Syphilis.

IN speaking favourably of a number of arsenic preparations in the treatment of syphilis, A. Neisser (*Deut. med. Woch.*, August 27th, 1908) lays emphasis on the fact that mercury is a true specific for this disease, and he does not suggest that mercury should be replaced by arsenic. Given in suitable doses, mercury can remove the symptoms, kill the virus, and therefore cure the patient of the disease without giving rise to toxic symptoms. He is, however, able to show that arsenic is also capable of curing syphilis. Atoxyl was first used in the treatment of syphilis by Uhlenhuth, Hoffmann, Roscher, and Salmon, after extensive animal experiment. The results obtained on man are, however, not of such a nature to admit of definite deductions being made until many years have passed. Uhlenhuth, the author, and Metchnikoff have shown in animals that arsenic can render the syphilitic poison in the animal body absolutely harmless without producing toxic effects. Some animals even react better to certain arsenic preparations than to mercury. Arsenious acid, even in large doses, proved itself incapable of achieving this end. Given by subcutaneous injection, it produced abscesses, infiltrations, and necrosis. Neisser is, however, prepared to believe that in combination with some other arsenic preparation, and given by the mouth, it may yet be found useful, as it has been in experimental trypanosomiasis. Coccyliates are not of use. In his experiments, atoxyl exhibited both preventive and curative actions. The former could be demonstrated by giving the material from five to seven days after infection, and in one case even thirteen days after. All the animals remained healthy when atoxyl was given in sufficient doses. No toxic effects manifested

themselves. Even the latent virus was killed with atoxyl in animals. Next the author reports on his experiments with a new atoxyl preparation which owes its existence to P. Ehrlich, and which is called arsacetin. The aim which Ehrlich had in view was to prepare an arsenic compound which should possess the same action as atoxyl without being so toxic. It is especially the danger of optic atrophy which has caused many clinicians to refuse to use atoxyl altogether. The danger of atoxyl, however, has been shown to be partly due to impurities, and the French authors insist that the German atoxyl was responsible for far more accidents than the French atoxyl, and that the latter was purer. Lately the German preparation has been altered, and it is to be hoped that blindness and other serious effects will not occur in the future. Arsacetin or sodium acetyl-(p)-amido-phenyl arsenate is stable even at high temperatures. It proved to be far less toxic than atoxyl when compared in consideration of the arsenic content; 5 grams of atoxyl is equal to 6 grams of arsacetin. In animal experiment Neisser found that arsacetin was at least as powerful a curative agent in syphilis as atoxyl. He therefore has employed it in a number of his syphilis patients, and believes that he can recommend its use. He is of opinion that the atoxyl preparations and mercury can be applied simultaneously with advantage. The certainty that mercury acts well renders it inadvisable to replace it by a new drug whose action is less well known. But as animal experiment has yielded such good results, he considers that use should be made of the new preparations. So far none of his patients have exhibited any undesired effects from arsacetin, save a slight disturbance of the stomach and intestine. The simultaneous drinking of an alkaline water or taking of burned magnesia appears to remove even this action. Patients suffering from parenchymatous affections of the organs should not be given arsacetin; those suffering from nephritis may be given it if care be exercised, but if the kidney symptoms are increased the drug should be stopped at once. He gives injections of 0.6 gram of arsacetin on two consecutive days each week. He is uncertain whether the results would be equally satisfactory if an injection were given every fourth day. He has given the injections for periods up to ten weeks, and the maximum total quantity given in one course of treatment was 14 grams. The substance is given in 10 or 15 per cent. solution, but if the latter is employed it must be warmed, as arsacetin precipitates in this strength in the cold. It can also be given internally. The substance can be obtained from the "Farbenfabrik" in Höchst a. Main (formerly Meister, Lucius, and Brünig).

PATHOLOGY.

61. Etiology of Chronic Nephritis.

HAVEN. EMERSON (*Archives of Internal Medicine*, June, 1908) undertook experiments upon dogs to effect changes in the blood supply of the kidneys. Various means were used, such as inhalation of alcohol, ether, chloroform, amyl nitrite; intranephritic injection of alcohol (25 per cent.), adrenalin chloride (1 in 1,000); intravenous injections of acetate of lead (10 per cent.), adrenalin chloride (0.1 per cent.), gelatine (5 per cent.). Only dogs secreting urine free from albumen were used, and this led to the rejection of eleven dogs in the choice of fourteen. Their diet was carefully regulated, and their requirements were regarded. Seeing that circulatory disturbance resulting in a stagnation of venous blood, or a diminution in the supply of arterial blood is an almost constant accompaniment of the accumulation of connective tissue it was sought to produce the change experimentally in the hope of arriving at some conclusions relative to the effect of the reagents used. The paper contains a complete and pertinent discussion on the etiology of chronic nephritis. The causes usually recognized come under the four headings: (1) Infectious diseases; (2) gout, rheumatism, syphilis, plumbism; (3) vices of appetite; (4) errors persistent or frequently repeated in the circulation—for example, cardiac disease, etc. The author concludes that chronic nephritis in man is due to conditions which have as a common factor a more or less severe and prolonged stagnation in renal blood supply, and although this factor is often accompanied by the presence of irritants which we recognize as injurious to the kidney substance, inefficient blood supply alone will cause, first an error in the function and later an alteration in the structure of the kidney. The fault in function will cause more or less disturbance in the body at large according to the degree of circulatory compensation which can be maintained.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

62. The Heart in Convalescence from Acute Infectious Disease.

BEVERLEY ROBINSON (*Amer. Journ. Med. Sci.*, December, 1908) considers the care of a patient during the early days of convalescence from an acute infectious disease, in view of its influence on the comfort and usefulness of his after-life, a matter of prime importance, and one which receives less than deserved attention in medical textbooks. And while the general nutrition and the muscular and nervous systems all require consideration at these times, it is the heart which most often and most urgently calls for careful watching and governing. Especially is this so in typhoid fever, diphtheria, influenza, pneumonia, and scarlet fever, and most of all, of course, in acute rheumatism; but this last, in consequence of the frequency with which it is associated with definite cardiac complications of the nature of endocarditis or pericarditis, forms a class of its own and does not come into the present consideration. The various toxins of these diseases, in cases of any severity and duration, produce certain definite pathological changes in the heart muscle and nerves which are more or less common to them all. The muscle bundles are separated by small lymphoid cells, the fibres are sometimes ruptured, the individual cells are swollen and show granular or fatty change, while the striæ are feebly marked and the nuclei have often disappeared. Later the heart muscle may become hyaline or even fibrous. These changes may be general throughout the heart or may occur in discrete patches. The cardiac nerves show fatty infiltration and cloudiness of the sheaths and irregularity of the axis cylinders. The heart as a whole is flaccid, thin-walled, and easily torn, and often contains soft or sometimes fibrinous thrombi, especially on the right side. Sometimes, however, in cases of death from heart-weakness following an acute infectious disease, no organic change in the muscle or nerves is discoverable, though evident cardiac dilatation is present *post mortem*, and in these cases the real cause of the weakness is not known. Such changes being found at autopsies in these diseases, the author concludes that they are present in less degree during life, and that they extend beyond the acute stage of the disease into the early days of convalescence. In view of this assumption, how is the early part of the convalescence to be managed? The results of the author's experience have led him to the following practice: In typhoid fever the patient does not sit up until the temperature has been normal for seven to ten days. A pulse increased in frequency, irregular, and occasionally intermittent indicates that the sitting up must be restricted and watched, while the addition of a soft systolic mitral murmur with accentuation of the pulmonary second sound, or of a weak and toneless first sound and a feeble, rapid, irregular, sometimes intermittent heart's action, means that the sitting up should be discontinued altogether. In the absence of any of these the patient leaves his bed after a few days, and a little later begins to walk about the room, and their appearance at any time shows that advance has been too rapid, and that retreat must be made until the point is reached at which they disappear again. Other indications of too rapid advance are a subnormal temperature with diminution in the specific gravity and amount of the urine and the presence of a little albumen. Much more urgent danger signals still, as indicating a liability to sudden heart failure, are marked slowing of the pulse and heart. When these are present, attacks of acute dilatation, evidenced by sudden faintness, pallor, and blueness, or perhaps by sudden death, and due to failure in some cases of the muscle and in some cases of the nerves of the heart, are to be feared. They are specially apt to occur in convalescence from diphtheria. The special danger to the heart in scarlet fever is from the complicating nephritis or rheumatism in the third or fourth weeks of the disease giving rise to dilatation or endocarditis respectively. In pneumonia clotting of the blood is another danger, and one which is more commonly found in this than in any other infectious disease. As to treatment, Robinson emphasizes the prime importance of rest, enough in degree and in duration after acute infectious diseases in order to prevent cardiac dilatation with its unfortunate consequences immediate and remote. Rest for the mind is of no less importance than rest for the body. Enough

rest, with maintenance of careful watch for any of the above-mentioned signs at each advance in the convalescence, is the one thing needful. Later in the convalescence, especially after typhoid fever and influenza, he has found the Nauheim treatment of great value. With regard to drugs, in the attacks of acute failure he finds strophanthus, followed at once by ammonia or alcohol, the most rapid and efficient heart stimulant. Adrenalin ($\frac{1}{10}$ grain) by mouth or hypodermically is of undoubted value. Strychnine and digitalis are of use sometimes. Clotting of blood in pneumonia may be guarded against by giving ammonium carbonate or citric acid, and after influenza quinine or, better, cinchona bark, has a special value as a general tonic and a protection against cardiac dilatation.

63. Radiculitis.

MIRAILLIÉ (*Journ. Méd. de Bruxelles*, September 10th, 1908) considers the subject of nerve-root inflammation under two main forms, according as the anterior or posterior roots are involved. When a motor root is involved the muscles which receive their innervation from this root become paretic or paralysed, and their muscular power progressively diminishes, the degree of the loss of motor power being proportional to the severity of the pathological process. The affected muscles atrophy and in severe lesions may completely disappear and antagonistic muscles bring about vicious attitudes which are permanent. Tendonous reflexes diminish and then disappear. Electrical examination of the affected muscles shows the classical signs of a lesion of the peripheral motor neuron. When the sensory roots are involved there occur feelings of painful swelling and heaviness, which become continuous more or less and interrupted from time to time by extremely violent paroxysms of pain—in Pott's disease they were described by Charcot as "pseudo-neuralgias"; in tabes they constitute the lightning pains. These pains are always very severe and definitely localized to certain regions, and from being at first paroxysmal they become gradually continuous. Déjerine has laid special importance on what is spoken of as "the sneezing sign," that is, a very acute pain occupying the whole extent of the region supplied by the affected root, and occurring when the patient sneezes. When the nerve root has become destroyed the pains diminish and may disappear, to be followed by alterations of sensibility, such as paraesthesia, and at the same time the "sneezing sign" disappears. On pressure the peripheral nerves are painful, but not so markedly as in peripheral neuritis. At the beginning of the trouble one finds on examination areas of hyperaesthesia, which later on become less sensitive than normal; the sensory disturbances show themselves in all the different forms of sensation—touch, pain, heat, and cold—and the deep, muscular and joint senses may be affected. Just as with the motor lesions the characteristics of the sensory lesions are their topography. Camus and Cézary and others have pointed out that in the area supplied by an affected root the sensory disturbances are not everywhere the same; in some parts there may be simply diminution of sensibility, in others true anaesthesia, or there may be a dissociation of sensory disturbances. Head and Campbell have shown that herpes zoster limited to the area of skin supplied by the affected root may occur. Langevin has described exanthemata with root distribution, and Ramon, Grenet, and Delille have observed purpura similarly distributed. In a certain number of these cases in which lumbar puncture has been carried out the cerebro-spinal fluid has shown a marked lymphocytosis, a certain sign of a meningeal lesion and therefore a confirmatory sign of a radiculitis. Clinically, some cases set in extremely abruptly and without premonitory symptoms; more often, however, a slower progress occurs, transitory pains first appear and later become permanent as the disease becomes established. Either the cranial or the spinal nerve roots may be affected and in the former case the fifth and the seventh nerves are especially liable to be involved. With brachial plexus lesions two forms occur, a total radiculitis (Duchenne-Erb type), and an inferior radiculitis with oculo-pupillary signs (Déjerine-Klumpke type). In the lower limbs there may be sciatic pain of root origin or pain of cauda equina distribution. Either one or many roots may be involved and consequently an infinite variety of forms may occur. Pure

motor and pure sensory root lesions are exceptional and most often a mixed form occurs. Radiculitis is diagnosed by the topographical distribution of sensibility and motor disturbances, and can therefore be distinguished easily from multiple neuritis. From lesions of the spinal cord, such as haematomyelia, it may be very difficult to distinguish, and from syringomyelia, and takes it to be distinguished by an absence of all other signs pointing to these diseases. Pathologically radiculitis should be limited to lesions of an inflammatory nature involving the nerve roots from their emergence from the cerebro-spinal axis to the foramina through which they pass. By this means are eliminated such lesions as traumatic injury, rupture, and tearing of the roots. It may occur as a primary affection or more usually as an effect on following meningitis, polyceritis or a spinal lesion. As to the causes of the condition, any infection can give rise to it and especially syphilis, and this particularly in radiculitis of the lower spinal roots. Next to syphilis, the commonest cause is tuberculosis, either a meningitis or caries of the spine. Gonorrhoeal conjunctivitis, cancer of the nerve roots, and alcoholism are also noted as causes. With regard to treatment, considering the frequency with which syphilis is associated as the cause, antisyphilitic treatment should be carried out with vigour, and in chronic cases surgical interference may be necessary.

SURGERY.

64. The Removal of a Cerebral Tumour.

IN publishing the details of a case of fibro-sarcoma of the left island of Reil and first temporal lobe of the brain which was treated by operation, H. Oppenheimer and F. Krause discuss many points of interest in connexion with the diagnosis of cerebral tumour and with the symptomatology of cases dealt with surgically. The patient was 37 years of age, and complained chiefly of pain over the left eye and left temple. Other symptoms were loss of memory, defect of speech, giddiness, thirst, and depression. During a stay in a sanatorium attacks of severe headache, vomiting, and slowness of the pulse were seen. Lumbar puncture only revealed a slight increase of the pressure of the cerebro-spinal fluid. The speech defect was chiefly a sensory and amnesic aphasia. Reading was possible but mechanical: the patient did not understand what she read and there was paralexia. On trying to write she mixed up the letters. There was no hemianopia. On examination of the retinae, double stasis of the papillae, more marked on the left than the right, was detected. There was tenderness and dullness on percussing the left temporal region. From these signs and symptoms Oppenheimer made the diagnosis of tumour in the left hemisphere, probably in the left temporo-sphenoidal lobe. Krause operated, the procedure being carried out in two stages. The upper left temporal region was incised and a skin-bone flap measuring about 80 mm. in each direction was reflected. The dura mater scarcely pulsated and was tense, and through it a hard mass of about the size of a finger-nail was felt. This corresponded to the beginning of the Sylvian fissure. The second stage had to be undertaken on the following day on account of the increasing intracranial pressure. Consciousness had gradually diminished during the night, and the second operation could be performed without any anaesthesia. On opening the dura mater, a small adherent portion of the size of a pea was found. This lay superficial to the resistance, and the adherent portion of the brain was found to form a prolongation of a more deeply situated mass. The latter was covered above by the operculum and below by the first temporo-sphenoidal convolution, and was presumably pushing the island of Reil medianwards. It was shelled out with the finger. It measured 60 mm. by 56 mm. by 43 mm. The vascular attachments were few and easily dealt with. The bed of the tumour was plugged to arrest the bleeding, and the flap was replaced. On the evening of this day the patient was found to be speechless: the right arm was completely paralysed, and there was right-sided facial paralysis. The right leg was spastic. There was deviation of the eyes to the left. During the following days only interjections were uttered, the mind became considerably clearer, but severe general disturbance gave rise to anxiety. The speech improved considerably at the end of a week. The paralysis of the right arm and facial muscles persisted at first, but Krause predicted that it would pass off. She continued to improve from this time onwards, and in the course of the following weeks the power returned in the right arm. The speech remained highly deficient. Two months later it was found to be necessary to remove some

protruding brain tissue. Six months later fresh cerebral symptoms led to a further operation, at which a tumour was removed, which the authors do not regard as a recurrence, but as a piece of the original tumour which had been left behind, and which had taken on fresh growth. The patient recovered well after this, and at the date of the report presented the appearance of a normal person. Her speech, however, was still defective, and her power of reading and writing was still limited, but these defects were improving daily. All the other cerebral symptoms had disappeared.

65. Prostatectomy.

PACHET (*Arch. Proc. de Chir.*, No. 12, 1908), who has performed 113 prostatectomies, advocates Freyer's operation, which, he holds, gives satisfactory immediate results, and subsequently affords perfect relief. He does not agree with those surgeons who regard it as a formidable method, and holds that the high rate of mortality noted by some operators is the result of neglect of certain technical details. In the first place, the bladder should not be freely exposed and incised, and the surgeon should be content with an opening in the vesical wall just large enough to admit the index finger. The enucleation, which is carried out "in the dark," and simply under control of palpation, should be effected gently, regularly, and methodically, commencing close to the vesical orifice of the urethra, over the culminating point of one of the lobes, and pursued forwards on either side, and afterwards, in a backward direction, at first over the superior half of the adenomatous mass, and finally along the inferior half. The author, who attaches much importance to the effective arrest and control of the bleeding after this operation, is guided in his practice by the method adopted by accoucheurs for arresting haemorrhage and preventing infection, of clearing the uterine cavity of clots and pieces of membrane, and of causing contraction and close apposition of the uterine walls by massage. After the enucleation of the prostate, the vesical cavity is gently washed out with hot water, and after removal of blood clots the walls of the cavity previously occupied by the enlarged gland are compressed between one finger in the bladder and another finger introduced into the rectum. Objections are raised against the use of gauze and of the siphon tube in drainage of the bladder, preference being given to the short and wide tube used by Freyer. This, it is stated, should not project into the vesical cavity for more than 2 centimetres. In cases in which the prognosis of prostatectomy is rendered very unfavourable by extreme debility, by digestive trouble, and by infection of the urinary passages, the author has obtained successful results from the performance of the operation in two stages, the enucleation of the gland being postponed for two or three weeks after the bladder has been opened by suprapubic section.

66. Local Anaesthesia in Major Surgery.

WINFIELD SCOTT SCHLEY (*Med. Rec.*, December 19th, 1908) advocates the more extended use of local anaesthesia in surgery. Many cases, he says, can be operated on by this method that would be impossible under general anaesthesia on account of heart, lung, or kidney lesions. Shock is much less by this method, there is absence of gastric and respiratory disturbances, and a much more agreeable post-operative period is obtained. This method must be used in selected cases, the character of the disease, of the patient, and the surroundings being factors that affect the choice. The author has done several abdominal operations successfully under local anaesthesia, of which he gives a detailed account. Gentleness of handling of the tissues is necessary. The patient feels no pain, and is not made nervous by the technique if properly managed. A very small amount of ether may be needed in some cases, for its mental effect chiefly. The peritoneum and intestines are practically devoid of sensitiveness when no inflammatory condition is present. One hour before operation a small dose of morphia is given. Novocain combined with adrenalin is used for injections into the skin along the line of incision. At intervals of $\frac{1}{2}$ in. to $\frac{3}{4}$ in. along this line the needle is inserted perpendicularly and injections made. The tissues remain dry and bloodless, and haemorrhage is saved the patient. The operation is begun after fifteen minutes. No bad effects are ever experienced.

OBSTETRICS.

67. Dilatation of the Os in Placenta Praevia.

HANNES (*Mediz. Klinik*, July 12th, 1908) opposes figures of cases observed by him during the last thirteen years to those of Hammerschlag. The latter, who recommends

bringing down a foot, had, in 191 cases, a mortality of 6.3 per cent. mothers and 84 per cent. infants. He mentions that Freund's mortality is given as 10.1 per cent., and Zweifel's as 7.8 per cent. Hannes found that among 119 cases of total placenta praevia, where dilatation of the os was employed, the mortality was only 5 per cent. mothers and 48.8 per cent. infants. He employs dilatation in all cases of total placenta praevia; in lateral placenta praevia (1) when the child lies transversely, (2) in head or breech presentations, when, after rupture of the membranes, haemorrhage does not cease, or pains are weak or absent. The bag is introduced through the placenta by boring through the latter with the finger or some blunt instrument. Thus introduced, filling of the bag does not cause further separation of the placenta, as would probably be the case were the bag introduced between placenta and uterus. Braun's vaginal dilator is used, and must be as big as a child's head when filled, so that when expelled the passages shall be wide enough to permit the passage of the head. It must therefore be capable of holding 600 c.cm. of fluid. Good rhythmical pains are stimulated by the pressure of the bag on the cervical ganglion. Traction should be exerted by a weight corresponding to the amount of fluid injected, but not greater than 600 to 700 grams; the object of this is merely to fix the bag immovably in place. Among out-patients a patent beer bottle, half-filled with water, has proved serviceable. Too forcible traction may cause premature expulsion of the bag in a sausage-shape, due to the formation of a diverticulum or to a cervical tear. Dilatation of the os is an easy operation; the bag can be passed when the os will admit one finger. On expulsion of the bag, delivery can be effected, if necessary, by turning. Of the 6 deaths, 2 were from air embolism after satisfactory delivery, 1 from uncompensated morbus cordis in the puerperium, 1 from anaemia, 1 from cervical tear (in the early days of the use of this method), 1 from pyaemia four weeks after delivery. Puerperal infection occurred in 0.8 per cent., whereas Hammerschlag lost 1.6 per cent. from this cause. This method is the best for the mother, and for the children the results are far better than are obtained with Hammerschlag's method. The danger of fatal pressure on the umbilical cord is equal in both methods, and in boring through the placenta there is a danger of wounding a large fetal vessel. The diminution in the contents of the uterus by bringing down a foot adds to the danger of the child.

68. Removal of Hypertrophied Mammæ in Pregnancy.

WISSHAUPT (*Prager med. Woch.*, No. 26, 1908) reports the history of a woman aged 28, who was pregnant and suffering from extreme hypertrophy of the breasts. Three years previously the disease began in the fifth month of her second pregnancy and advanced so quickly that two months later she became too weak to be able to leave her bed. Premature labour was induced, and the breasts diminished considerably in size afterwards. Wisshaupt was consulted by the patient in the fourth month of her next pregnancy. She suffered badly from a recurrence of the hypertrophy. The breasts hung down to the umbilicus; the right measured 29 in. in circumference, the left over 31½ in. Operation was considered advisable, and both breasts were removed; the right weighed 12½ lb., the left, which was amputated eight days later, was over 14½ lb. in weight. Pregnancy continued after the second operation. The disease of the breast proved, on microscopical examination, to be pure hypertrophy. This appears to be the second instance of operation during pregnancy for the removal of breasts hypertrophied as a complication of that physiological condition. The first operation of the kind (Foges) was reported in 1901.

GYNAECOLOGY.

69. Menstruatio Praecox: Hypernephroma of Ovary.

GAUDIER (*Echo Méd. du Nord*, July 26th, 1908) publishes a report of an operation on a female child aged 4 years where, as in Naeck's case (*EPITOME*, October 24th, 1908, No. 247), menstruation had been established and other signs of puberty were observed. The child was very hairy, the labia minora protruded beyond the labia majora and were strongly pigmented. The mammæ were 4 in. in diameter and the nipples had a distinct areola and area of dilated veins as in pregnancy. For three months there had been free menorrhagia and metrorrhagia between the periods. The abdomen had been enlarging for about four months. A freely movable, smooth tumour of the size of a big orange

could be defined; it was successfully removed. Its surface was pearly white, it was solid and seemed to be an adenoma, but on microscopic examination it was found to be made up for the most part of true adrenal tissue. It must have developed from an accessory suprarenal body in the parenchyma of the ovary, which had undergone hypertrophy. Gaudier notes that Marchand described in 1883 the first recorded case of accessory adrenals in the broad ligament, and Marchetti the first known instance of accessory adrenals in the ovary. They are usually detected in youth and tend to undergo atrophy in the adult.

70. Puerperal Abscess communicating with Bladder: Utero-Intestinal Fistula.

LE JEMTEL (*Revue de Gynéc. et de Chir. Abdom.*, July-August, 1908) took charge of a patient suffering from some obscure mischief of puerperal origin, possibly the result of a perforated wound of the uterus caused by the curette. There appeared to be an abscess opening into the intestine and vagina, and in addition faeces passed out of the os uteri, whilst the urine was mixed with pus. The abdomen was opened. A wide rent was found in the posterior wall of the bladder communicating with a cavity full of pus. Le Jemtel did nothing further than to close the rent with a few points of catgut and to drain the bladder through the urethra. He refrained from exploring by dissection the utero-intestinal fistula. At the end of one month the patient was not only cured of her bladder complaint, but also of the fistula, which had closed spontaneously.

THERAPEUTICS.

71. The Treatment of Burns.

PELS-LEUSDEN describes the methods now in use in the Berlin Charité in the treatment of burns (*Deut. med. Woch.*, November 26th, 1908). Before determining on the prognosis of a burn, it is necessary to consider the extent of the surface involved. When more than one-half of the surface of the body has been burned, the patient nearly always dies. Burns involving one-third of the surface may also lead to death. Next, it is necessary to determine the degree of the burns. He emphasizes that burns may appear to be of the first degree, but later show the formation of blisters, or even of scabs. The third point to be taken into consideration is the time which has elapsed between the burning and the examination. The effect of burns on the patient is manifested in general and local symptoms. No general symptoms occur in burns of small extent, but when a considerable area of skin has been involved certain disturbances are seen. The most apparent of these are those of the heart, kidney, and brain. Eppmann has shown that the effect of the heat on the skin produces toxic substances. These substances having been absorbed should be got rid of as soon as their presence is recognized. The cardiac activity is depressed, the pulse becomes rapid and very small, and the vascular tension is lowered. Haemoglobinaemia and haemoglobinuria are seen in many cases, the temperature sinks, and other symptoms indicate an intense toxic action. It is therefore necessary to give digitalis and large quantities of fluids. As the patients are usually thirsty no difficulty is experienced in getting them to swallow strong coffee and tea, with brandy and champagne. Repeated enemata of physiological saline fluid (100 c.cm. in each), or if the blood pressure is sinking intravenous injections of the same, often do good. This, however, should not be carried out in elderly patients until vomiting sets in and delirium or drowsiness threatens. He does not claim that this treatment will save patients for certain, but believes that in a number of cases with doubtful prognosis it acts well. Morphine must be given to allay pain and to quiet the patient, who often suffers severely either from the fear of impending death or from anguish in having been careless. The general symptoms must always be treated first, and it should be remembered that the treatment of the local condition may increase the shock. As a rule the general symptoms pass off in five or six days, but death has been seen after eight or even ten days without sepsis or duodenal ulcer being present. Local treatment of burns of the first degree is unimportant. This, however, is not so in burns of the second or third degree. The object aimed at is to avoid infection of the wound. First the burned area must be thoroughly disinfected. This is extremely painful and cannot be undertaken without some form of anaesthesia. When the burn is not extensive, a local anaesthesia by Hackenbruch's method suffices; in other cases a conduction anaesthesia may be employed, or lumbar anaesthesia should be resorted to. In extensive

turns of the head or of the body a general inhalation anaesthesia is necessary. Ether is better than chloroform. The vesicles or bullae are opened, and the whole surface is well washed with hot water, soap, and a brush for ten minutes. Then alcohol and perchloride of mercury solution is applied for two minutes, and, lastly, the wound is covered with a gauze dressing, with a thick layer of absorbent wool, and another of non-absorbent wool. This method was introduced by Tschmarke. The secretion of the wound is often extremely free, and it then becomes necessary to change the wool from time to time, but not the gauze. The exclusion of air usually relieves the pain. After from ten to fourteen days the whole dressing is spontaneously cast off. The wound is then found to be epidermizing well, and scars resulting from this treatment are usually satisfactory. When the burn is first seen after the lapse of some time, and especially if the surface is not free from infection, Bardeleben's bismuth dressing is to be recommended. Alcohol poultices may be applied when distinct infection has already taken place, and abscesses or phlegmonous inflammations require special treatment. Large denuded surfaces can be cleaned by means of a permanent bath, but care of the heart must be exercised if this is employed. The skin should be well smeared with a fatty ointment to prevent maceration. In the process of healing splints may be required to prevent contractures of joints, and early injections of thiosaniline or fibrolysin will be found useful to obviate contraction of scars in the skin, etc.

72. Osteomalacia Treated by Adrenalin Injections.

REVANDI (*Gazz. degli Osped.*, November 15th, 1908) records a case of osteomalacia successfully treated by adrenalin injections in 1906, cured at the time, and remaining well since, so that she was delivered without difficulty of a living child in July, 1908. The woman was 33 years old, and first began to notice symptoms in her seventh pregnancy (tiredness in the erect posture, difficulty in walking, pains in the pelvic girdle). In her eighth pregnancy her symptoms became so exaggerated at the eighth month that she was admitted into hospital; at that time she was compelled to keep her bed; the clavicles, ribs, and pelvic bones were swollen and tender, and the pelvic measurements reduced from incurving of the bones. Ordinary treatment seemed to do little good, and Caesarean section was contemplated, but Professor Bossi determined first to try the effect of hypodermic injection of Parke Davis 1 in 1,000 adrenalin solution, of which 3 c.cm. was given morning and evening. Almost at once relief from the pains in the bones and the consequent restlessness and insomnia was obtained. The dose was ultimately raised to 2 c.cm., and injections, with occasional short interruptions, were given from December 16th to January 6th, when labour set in. Twins were delivered with the help of forceps, and the puerperium was uneventful (save for a slight mastitis). The patient left the hospital February 27th, cured. Since then she had one miscarriage at two months, and a full-term child born in July of 1908 naturally and without any of the disturbances which had been so marked in the seventh and eighth pregnancies. Experimentally the author has found that with x rays one can see a certain degree of osteoporosis in the bones of animals deprived of the suprarenal glands. The interest of the case consists not only in the cure but in the permanent character of the cure. No injections were given after she left the hospital. The author suggests the possibility of similar treatment in rickets.

73. Treatment of Angioma by Congealed Carbon Dioxide.

SAUERBRUCH (*Zentralbl. f. Chir.*, No. 1, 1909) reports very favourably of the results obtained from the treatment of cutaneous angioma by the direct application of congealed carbon dioxide. This method, which was brought under the author's notice by A. I. and E. Oxner of Chicago, will, it is stated, be found a simple and efficient means of dealing with both superficial naevi and also with small cancerous growths of the face. The following description is given of the technique of this treatment: From a cylinder of carbon dioxide, such as is used in making frozen micro-sections, a fairly strong jet of the gas is played on to a piece of cotton-wool; the rapid evaporation of the liquid dioxide causes intense chilling, which condenses a portion of the gas into a snowy powder with a temperature of -70° C. Some of this solidified gas is applied to the surface of the naevus, where it remains from ten to thirty seconds. The intense cold causes extreme contraction of the blood vessels and anaemia of the growth. This is repeated once or twice at the same sitting, the white flakes being applied to different parts of

the vascular surface. No dressing is placed over the seat of this operation. The treatment is renewed at intervals of from eight to ten days until the tumour has completely disappeared. In its cosmetic results this method, it is stated, compares favourably with those that are usually practised, and, moreover, is free from pain.

PATHOLOGY.

74.

Haemophilia.

ESMEIN (*Arch. des Mal. du Cœur des Vaisscaux et du Sang*, September, 1908) quotes the following case of haemophilia and gives the result of a pathological examination. The patient, 16 years of age, came under observation for recurring and rebellious epistaxis which had led to extreme anaemia. There was no family history of haemophilia: the skin was pale, the mucous membranes blanched, and slight oedema was present about the malleolar regions. The liver and spleen were slightly enlarged, the other organs appearing normal. The blood contained 2,000,000 red cells per cub. mm.; there was a slight polynuclear leucocytosis together with some myelocytes and nucleated red cells. The coagulation time of the blood was retarded, varying from thirty minutes to an hour. There was no local lesion present in the nose or pharynx to explain the epistaxis. Soon after coming under observation profuse nose bleeding, together with bleeding from the gums and petechial haemorrhages into the skin, occurred, and death took place. At the post-mortem examination lesions were found in the liver, spleen, bone marrow, and kidneys. The bone marrow was red throughout, and was of such a character as is found after haemorrhage. The spleen was much in the same condition, and its section stuffed with debris of red cells and blood pigment; the liver appeared fatty and was smooth, its general yellowish appearance being marked with small irregular red zones. On microscopical examination a section of the liver showed that normal hepatic tissue was present around the portal spaces only: around the hepatic veins were found large masses of necrosed liver tissue, the hepatic cells here having disappeared, and having been replaced by masses of brown pigment, of blood pigment, and of fat globules. In this debris were seen numerous polynuclear leucocytes. A slight amount of sclerosis was also found. The kidneys were somewhat sclerotic. The author believes that in this case the lesions found in the liver were the cause and not the result of the haemophilia.

75.

Tuberculous Infection through the Alimentary Canal.

MAZYCK P. RAVENEL and JOHN REICHEL (*Proc. of the Path. Soc. of Philadelphia*, 1907), on tuberculous infection through the alimentary canal, report the results of experiments conducted upon 65 guinea-pigs. The problems of the experiments were to determine the ability of tubercle bacilli to pass through the intestinal wall of healthy guinea-pigs, and the time required for them to reach the lungs. The plan of Schlossmann and Engel was in a general way closely followed. Young guinea-pigs were used which had been deprived of food for some hours before they were operated upon. The stomach being raised through an abdominal incision, an emulsion of tubercle bacilli of known virulence was mixed with an equal volume of fresh heavy cream, and injected into the stomach. An extremely fine hypodermic needle was used, and special precautions were taken to prevent infection of the peritoneum on inserting and withdrawing the syringe. Of the 65 guinea-pigs, 10 were used as controls, 10 were killed after four hours, 12 after five hours, 8 after six hours, and the remainder were permitted to live for different periods, the longest being twenty-four hours. The lungs from each guinea-pig were removed, ground in a mortar with physiological salt solution, and injected intraperitoneally into a pair of healthy guinea-pigs. The experiments apparently show that tubercle bacilli passed readily and quickly through the intestinal wall, and reached the lungs in a short time through the thoracic duct. There is doubt as to the accuracy of the method followed; for infection occurred not only through the mucous membrane of the intestine, but also directly through the wound in the stomach caused by the hypodermic needle, and it is possible that in spite of the precautions taken tubercle bacilli were deposited on the edge of the wound when the needle was withdrawn. It appears that inoculations into the alimentary tract should be made without the production of a fresh wound of this tract, in order to obtain results not open to criticism.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

76.

Angina Pectoris.

Two varieties of angina pectoris are usually recognized—the true angina or “angina major,” the result of definite anatomical changes, and generally of the nature of arterio-sclerosis, and the false angina or “angina minor,” the result of functional disturbance without anatomical substrata. The attack of true angina occurs suddenly but not spontaneously. Josué (*Arch. des Mat. du Cœur des Vaisseaux et du Sang*, October, 1908) says there is always to be found a cause which precipitates an attack, such as fatigue, walking, and especially walking against the wind, digestive processes, straining at stool, mental emotions; fear of an attack may actually precipitate one. With the onset of the attack there occurs pain in the heart and behind the sternum of an extremely painful constricting nature. The pain radiates into the left arm and sometimes into the neck and auricular region, and the region of the cervical plexus. Accompanying the pain there is a terrible mental anguish; the patient is fully conscious of the danger which threatens him, and avoids making the least movement for fear of increasing the duration of the paroxysm. He does not speak nor complain. In some cases the pain is less intense, but the characteristic mental anguish shows itself, as it does in those cases in which pain may be completely absent. During the attack the face is pale, respiratory movements are free and auscultation and percussion shows no disturbance of the respiratory apparatus. The attack lasts from a few seconds to several minutes, when the pain ceases abruptly. In some cases abundant clear urine is passed in the attacks. The attacks may occur only at long intervals, or they may become frequent, several occurring during day or night, or the attacks may indeed become more or less continuous. Death may occur during the first attack or during subsequent attacks; generally sudden, death may occur less quickly through dyspnoea or from a rapidly oncoming oedema of the lung; in other cases the patient dies from a giving out of cardiac power in arterio-sclerosis. Angina minor occurs in hysterical and neurasthenic subjects or in patients suffering from organic nervous diseases, such as tabes. In exophthalmic goitre false angina pectoris sometimes occurs, as it does in tobacco intoxication. The attacks come on generally at night, and are not precipitated by fatigue, efforts, etc., as in true angina, but seemingly spontaneously. The patient complains of violent burning in the chest, she feels as if her heart were too large for her chest, which appears swollen. The precordial region is markedly hyperaesthetic. The face is cyanosed and often covered with a cold sweat; the patient is agitated and restless, respiration is difficult, and the extremities are cold and cyanotic. The attack does not cease rapidly and abruptly, as in true angina, but lasts for half an hour or longer. Large quantities of urine are passed, and the symptoms gradually pass off. The attack never ends fatally. Between typical cases of true and false angina it is very easy to distinguish, as the author remarks, but there are intermediate cases in which it is difficult if not impossible to do so. With regard to the pathology of angina pectoris, the general idea is that it is the result of an anaemia of the myocardium caused by complete or incomplete obliteration of the coronary arteries. The blood supply to the cardiac muscle through the narrowed coronary arteries is sufficient when the patient is resting, but insufficient for the needs of the cardiac muscle when the patient exerts himself. The upholders of this hypothesis as to the coronary artery obstruction being the cause of angina think that attacks of false angina are the result of a simple spasm of the nutrient vessels of the heart. The coronary artery theory of angina is, however, not borne out by anatomical and physiological facts. Cases have been published in which typical attacks of true angina have occurred, and in which cases at autopsy neither obliteration nor stenosis of the arteries of the heart have been found. Also obstruction or narrowing of the coronary arteries has been found *post mortem* in persons who have never suffered from attacks of angina. After ligation of one of the coronary arteries in an animal it is found that the cardiac muscle supplied by the ligated vessel ceases to contract, and complete arrest of the heart follows ligation of both coronary arteries. These results are quite different to what occurs in angina

pectoris, in which the heart continues to beat normally. Another view is that true angina pectoris is the result of a neuritis of the cardiac plexus of nerves, which in its turn is the result of aortic lesions (Lancereaux, Peter). This theory explains readily the radiations of the pain, but does not explain how it is that the attacks are precipitated by certain occasional factors, nor why it is that the attack ceases as soon as the patient remains at rest. Merklen thinks that a subacute distension of the heart plays a rôle in the attacks of angina pectoris, and, whilst admitting that this factor may possibly have a share in bringing about the pain in certain cases, in others it can have no influence. According to Roudot, and Gilbert and Garnier renal insufficiency is the real cause of anginal attacks. With regard to the state of the arterial tension in cases of angina, Déja-Dunin found that in cases of arterio-sclerosis, attacks of angina occurred in 46 per cent. of cases with an arterial tension lower than normal, and in 18 per cent. of cases in which there was increased arterial tension. He further found that there was no difference in the symptoms and prognosis between the two classes of cases. On the other hand, Pal and Rist and Krantz have noticed that even if the arterial pressure be normal or subnormal between the attacks of angina, the pressure rises the moment the attack occurs, and Pal considers angina as a form of vaso-constrictor crisis. Vaquez says that abrupt distension of the aorta, which is already diseased, sufficient to cause an accidental increase of pressure, is the cause of anginal attacks. In the author's opinion anginal pain is the pain of a diseased aorta, and he likens the pain to that occurring from intestinal, hepatic, and nephritic colic where disturbances in the intestine, liver, or kidney exist. In the case of aortic pain, however, the patient unconsciously recognizes the grave danger of disease of so important a vessel. These painful attacks occur when the disease is localized to the first part of the ascending aorta near its origin. The influence of movement, emotion, etc., in precipitating an attack of angina is seen when one remembers that these factors cause a rise of arterial pressure, the aorta becomes more distended, and pain then occurs. This theory explains how it is that angina occurs so readily in patients with a high arterial pressure such as is found in renal insufficiency.

77.

Hysterical Fever.

MÜRCHEN (*Berl. klin. Woch.*) states that undoubtedly rise of temperature to the highest degree possible occurs for which no explanation can be found in any diseased organ. Mixed forms also occur where an existing organic fever rises considerably owing to the intervention of nervous causes. Presumably the rise of temperature is of vaso-motor origin. The cases described are met with in individuals with marked vasomotor neuroses, especially hysteria. This nervous fever is further distinguished from one of organic origin by the irregular type of fever, its origin and disappearance in connexion with psychico-nervous occurrences, the very slight disturbance of the general well-being even with the highest degree of fever, the hardly altered condition of the pulse, nutrition, breathing, etc., the failure of antipyretics and the positive action of baths and suggestive treatment. Differential diagnosis: Phthisis, typhoid, meningitis, influenza. A false diagnosis of phthisis is most often made; it is extraordinary how often one finds a history of lung trouble of which later no further mention occurs; some authors speak of pseudo-phthisis. In one case osteo-myelitis was thought of.

SURGERY.

78. Gland Puncture in the Diagnosis of Syphilis.

PREIS (*Pester Med.-Chir. Presse*, November 8th and 15th, 1908) has been able to demonstrate the *Spirochaeta pallida* in nearly 100 per cent. of cases of syphilis in the secondary latent stage. In all of 60 doubtful cases, which gave a positive result, clinical evidence of syphilis appeared later. The technique is so simple that every practitioner can undertake it, and it is thus no longer permissible to allow a diagnosis to remain in doubt, or to wait for the appearance of secondary symptoms. Gland puncture should be used in all cases where, for any reason, examination of the ulcer serum proves negative. This is likely to be the

case if the ulcer is partially or completely resolved, if it has been treated with caustics, or if it is disintegrating. The author has never failed to find the *palidra* during the period between the first typical hardening of the glands and the first eruption (six to ten weeks). A small syringe, such as is used for injections, is employed; the skin over the gland is shaved, cleansed, rubbed energetically with ether, and then drawn away from the gland as far as possible, so that on withdrawing the needle no superfluous exudation from the loose tissues shall enter. The needle is plunged as obliquely as possible in the long axis of the gland, and its point is moved about, so as to obtain exudation from various parts. Aspiration should be vigorous. The liquid obtained is then syringed out at once on to a glass slide, and smeared along this by the edge of a second slide. This should be done as speedily as possible. No attempt to fix should be made, but a solution of 20 to 25 drops of Giemsa's solution in 15 c.cm. of distilled water should be at once poured liberally on to the slide. The slide is then warmed over a Bunsen or spirit flame until steam begins to rise, when the solution is poured off. This process is repeated till the stain has all been used, and the whole procedure should be as rapid as possible. The slide is then washed under the tap and dried with blotting paper. The preparation should now be examined under a low power in order to see if the red blood corpuscles are well stained. If this is the case (and if otherwise staining should be repeated), a part where the red blood corpuscles show well should be chosen, and this part examined with the immersion lens. No spirochaetes have as yet been found in syphilitic glands except the *palidra*; and the author has examined the glands in cases of carcinoma of the buccal mucous membrane and of gangrenous ulcer and found no single spirochaete. Preiss gives notes of 3 doubtful cases in which gland puncture cleared up the diagnosis. This method is superior to Wassermann's reaction, in which only 56 per cent. of the cases in the secondary latent stage give a positive reaction, which is also complicated, and in which mistakes may occur on the positive side—a result never seen in gland puncture. Wassermann's reaction should only be used when spirochaetal examination for any reason is inadvisable.

73. Mechanical Treatment of Paralysis of the Shoulder.

DAVID SILVER (*Amer. Journ. of Orthop. Surg.*, November, 1903) says the disability in paralysis of the shoulder is the result of direct sinking of the head away from the socket, insecurity of the head, and contraction of unaffected muscles. That damaged nerve cells may recover sufficiently to functionate, but in the meantime the muscles are incapacitated by overstretching and atrophy from disease, is well known. If these evils have not been avoided by timely measures, it is still possible at a later stage to do some good by maintaining the paralysed muscles in a position of maximum relaxation, and thus permitting retraction to take place. In the application of this principle of treatment to the shoulder the author makes use of a modification of Monk's wire splint, putting up the arm with hand supinated, elbow flexed, and palm resting upon the top of the head. Three cases are reported in which the method was followed by good results. Since the method is a conservative one, its use is recommended in all cases not known to be completely paralysed. While in some cases the paralysis is so extensive that the remaining power will be insufficient, even when developed to the highest degree of efficiency, to maintain contact between the head of the humerus and the glenoid, in others it may be sufficient to maintain contact and no more, yet there are still others with a greater degree of recovery of the nerve lesion, in which a varying amount of active abduction will be secured. The use of the method is also recommended as a preliminary measure to muscle grafting.

83. The Treatment of Ruptured Kidney.

MORESTIN (*Bull. et Mém. de la Soc. de Chir. de Paris*, No. 36, 1908), in a report on a case communicated by Prodet, in which extensive laceration of the left kidney causing abundant haemorrhage was successfully treated by suture of the injured organ, discusses the indications for direct surgical intervention in similar instances. While acknowledging that in most instances renal contusion may be cured by rest and simple means of treatment, the author of this report holds that when there is free and persistent bleeding with a large perirenal haematoma, and the condition of the patient is such as to excite much anxiety, the surgeon should not hesitate by the simple and harmless procedure of a lumbar incision

to expose the injured kidney with the views of dissipating doubt, of arresting the flow of blood, and of protecting the patient against remote complications. Nephrectomy, which, it has been stated, is practised too frequently and without just cause in cases of renal injury, should, it is argued, be reserved for those extreme forms of traumatism in which the kidney has been either completely crushed or torn away from its hilum. In most cases, Morestin asserts, the condition of the ruptured kidney will permit a conservative operation. Suture of the lacerated kidney is possible, and, indeed, a relatively simple measure. It may enable the surgeon to re-establish the shape of the organ, and will suffice to arrest bleeding. It is pointed out, however, that the application of sutures to a lacerated kidney will not prevent but rather favour the formation, between the apposed surfaces of torn renal tissue, of cicatricial septa which will tend to keep the fragments anatomically distinct. Moreover, the tension of the sutures may modify the functional value of the preserved organ. For these reasons the use of the suture would be indicated, the author thinks, only in those cases in which the laceration is not extensive. If the kidney be much torn, but still in a condition favouring conservatism, it might be well, it is suggested, to arrest the bleeding and to treat the injury by simple packing. It remains uncertain whether the conservative treatment of ruptured kidney which is so satisfactory and free from danger in its immediate results, is likely or not to lead in course of time to any serious disturbance of the function of the retained organ.

OBSTETRICS.

81. Artificial Interruption of Pregnancy.

IN developing the thesis that the practitioner is justified in inducing premature labour under certain conditions. H. Fritsch (*Deut. med. Woch.*, November 19th, 1908) points out that no definite indications for this procedure can be set up, but that each case must be judged on its own merits. He regards it as a gross error to say that pregnancy should be interrupted in hyperemesis gravidarum, and just as great an error to say that it should not be interrupted. The objection to killing a fetus or to inducing labour before the fetus is viable is usually that the practitioner has no more right to sacrifice a life than any other man has. To this he replies that it is certainly criminal to sacrifice the life of the mother when she could be saved by the removal of the fetus, while if the pregnancy is undisturbed both mother and fetus will die. The skill of the practitioner is required to determine when this applies. He cites a case in Bavaria in which a medical man was found guilty of manslaughter by negligence in not performing laparotomy after rupture of the uterus and escape of the child into the peritoneal cavity. Neglect to do the right thing in obstetrics is just as culpable as doing the wrong thing. It is frequently stated that pregnancy may not be interrupted until all other means have been tried and have failed. Fritsch considers that this may lead to difficulties, inasmuch as "all other means" is a very wide expression. He prefers to lay it down as an axiom that pregnancy should not be interrupted until the patient has been carefully observed for a reasonable time in a hospital. He maintains that observation in the patient's house is incompatible with the proper trial of less radical measures. Two diseases are mentioned which may form indications for the interruption of pregnancy. These are hyperemesis and tuberculosis. He has been consulted five times during forty years in cases of hyperemesis, in which the only reasonable advice was to let the patient die as comfortably as possible. The lives might have been saved at an earlier stage by induced abortion, but it was too late. With regard to tuberculosis, it is necessary to recognize that some cases run a very rapid course and death ensues within a few weeks, while others are essentially chronic. Between these two extremes there are innumerable transitions. A careful selection of the cases is therefore necessary, and only experience can teach which cases will do well if the pregnancy is left undisturbed under otherwise favourable conditions, and which will do well only after abortion is performed. The only solid objection to artificial interruption of pregnancy in selected cases is the one that the mental effect on the patient, the pain, the loss of blood, and the subsequent febrile disturbances do more harm than the removal of the fetus does good. Fritsch admits that all this will detract from the usefulness of the procedure if the technique is bad. He points out that nearly all authors who write on this subject describe a different technique. He therefore

goes into some detail in respect to the technique which he has employed, and which has yielded him excellent results. He warns the obstetrician against rapid clearing of the uterus. It is very tempting to get the business over as quickly as possible, but it is very fatal to put this into practice. First, the patient is admitted into hospital. The advantages of this are: First, that the notes on the history of the case and the presence of a number of trained persons guarantee that the induction of premature labour is not criminal: in the second place, the observation in hospital permits of a better determination of the proper time when the pregnancy should be interrupted than in private houses. The bowels are opened, a "sitz" bath of lysol solution is given, and the patient is put to bed. During the course of twenty-four hours the vagina is irrigated three times with 2 litres of lysol solution, and the external parts are well disinfected. A suitable miniprina tent is then introduced into the cervix. The vagina is loosely packed with iodoform gauze. The external parts are covered with wet disinfectant dressings, which must be renewed after each soiling, and also from time to time. After twenty-four hours the patient is placed on her side, the tent is removed, and the vagina is irrigated. The membranes are then pierced by a uterine catheter, and the amniotic fluid is allowed to escape through the catheter. Long strips of iodoform gauze which have been dipped into ichthyol glycerine are then introduced into the uterus and amniotic cavity. In multiparae the whole ovum is often expelled rapidly after this without marked pain. As the fetus dies the decidua becomes spontaneously detached and the glycerine also calls forth contractions. After the whole ovum is expelled the vagina and uterus are irrigated and the patient is put back to bed. After about twenty-four hours no more blood comes away, and as a rule the patient can get up and leave the hospital on the second or third day. In some cases the uterus does not contract and fever sets in. This is not a sign of infection, but arises in all cases in which the fetus dies *in utero*. As soon as the membranes, etc., are detached the whole ovum can be removed by means of a curette or of ovum forceps. In this way the author obtains good results, never experiences hæmorrhage, and always places his patients in the best possible position for a complete recovery.

GYNAECOLOGY.

82. Treatment of Cancer of the Genital Organs in Woman.

FAURE (*Internat. Soc. of Surgery*, 1908) states that the removal of cancers of the vulva should always be accompanied by removal of the inguinal glands. If the vulvar carcinoma be situated medially the glands in both groins should be removed, and even when the vulvar growth appears to be limited to one or other side he thinks it is wise to remove the inguinal glands on each side. In cancer of ovary or Fallopian tube, both tube and ovary should be removed. With regard to cancer of the uterine body, the author thinks hysterectomy by the abdominal route far preferable to that by the vaginal route, as the former allows of complete removal of the diseased organ without laceration or tearing of it, as is inevitable when the vaginal method is adopted. In feeble patients, however, and in very fat patients, he thinks it is better to carry out subtotal hysterectomy and to leave the neck, provided that a sufficiently wide margin of healthy tissue can be removed outside the limits of the growth. In the case of cancer of the vagina the author discusses the treatment under two headings: First, cancer of the lower part, and secondly, cancer of the upper part. Cancer of the lower third of the vagina should be treated like vulvar cancer, whilst cancer of the upper two-thirds of the vagina should be treated like cancer of the uterine cervix. In cancer of the upper part of the vagina, removal by the vaginal route is, in the author's opinion, a very uncertain and insufficient method, and the abdominal route he considers the only satisfactory way. It is necessary to remove both the uterus and the upper part of the vagina, and the operation should be carried out just like an abdominal hysterectomy for cancer of the cervix. By the abdominal route one can separate the diseased vagina from the rectum, bladder and ureters, and the hypogastric arteries can be ligatured. Before commencing the abdominal operation, the wall of the vagina should be cut through in a circular way about 2 cm. below the lowest limit of the growth. Such an operation, although fraught with considerable immediate danger, will, the author thinks, give far better results than vaginal operations, which almost always end in recurrence and

death. With regard to cancer of the cervix, there is no doubt in the author's mind that abdominal hysterectomy is far superior to hysterectomy by the vaginal route. The abdominal operation has rendered possible a hysterectomy on a far larger number of cases than was possible when vaginal hysterectomy was employed, the statistics of Rosthorn, Doderlein, Schauta and Chrobak, Wertheim, etc., showing this. By the abdominal method one can remove the diseased parts far more surely and carefully than by the vaginal route, and the ureters especially can by the former method be carefully dissected; this is not feasible at the vaginal operation. Another disadvantage of the vaginal operation is that infected lymphatic glands are liable to be missed. Even in cases in which the extent of disease is limited, the author is of the opinion that the abdominal operation is still to be preferred, as, under these circumstances, the gravity of the operation does not exceed that of vaginal hysterectomy, and it allows of a far more complete inspection and examination of the extent of disease than does the latter. Vagino-perineal colpo-hysterectomy, as performed by Schuchard and Schauta, has given very good results, from 40 to 50 per cent. of their cases being cured; but, in the author's opinion, this operation, although superior to vaginal hysterectomy, has some of the same disadvantages; by this method the ureter cannot be freed from growth with the same ease and safety as in the abdominal operation, nor can the lymphatic glands be had access to. He considers this operation justifiable only in cases of well circumscribed disease; and, as the case mortality for this operation is the same as that for abdominal hysterectomy, for this and for the reasons given above he prefers the latter operation. Abdominal hysterectomy is in simple cases an easy operation; it affords the surgeon infinite resources in exploring the pelvis which no other operation does, and its only drawback is its gravity. But, as the author remarks, in treating such a mortal disease as cancer of the cervix, the operation which gives the best prospect of lasting cure should be carried out in spite of its gravity. In carrying out abdominal hysterectomy by the method of Wertheim the author nearly always ligatures the hypogastric arteries, as by this means excessive loss of blood is prevented and a more minute examination of the diseased parts can be carried out. To check bleeding from small vessels in the depth of the pelvis the author employs metallic ligatures, using Michel's forceps for this purpose. He is convinced that it is advisable to remove all lymphatic glands which can be felt easily, and especially those situated on each side of the pelvic wall near the bifurcation of the iliac arteries. Further than this he does not go, as to remove all the glands and cellular tissue of the pelvis is an impossible operation. With regard to the removal of the lumbar glands, the author thinks that if the lumbar glands are infected there are probably many others also involved, and that it is folly to think that one can remove all such glands. Large and extensive operations for the removal of all possibly infected glands renders the gravity of the operation much more severe, and may be the means of infecting the large cellular spaces and lead to septicaemia. For these reasons the author advises that only those glands which appear to be infected should be removed, these glands being those situated on the lateral aspects of the pelvis about the bifurcation of the iliac arteries. Vagino-abdominal hysterectomy the author has carried out thirteen times. The vaginal wall is incised circularly at a suitable height, the wall is separated from the bladder and rectum, and its edge sutured over the cervix, enclosing this. This being done, abdominal hysterectomy is carried out in the usual way. This preliminary separation of the vaginal wall allows the uterus to be well raised up from the pelvis during the abdominal operation, and the parts around the cervix can then be dissected with great ease. This preliminary vaginal section has also the advantage that by it the operator can easily know at what level he is to stop when dissecting in the pelvis. In conclusion, the author states that in simple cases with limited ulceration and a perfectly movable uterus the simplest and the best operation is pure abdominal hysterectomy; in more complicated cases and when the uterus is not freely movable, it is better, both for the safety of the patient and for the facility of operating, to have recourse to vagino-abdominal hysterectomy.

THERAPEUTICS.

Treatment of Carbuncles.

83. The treatment of large carbuncles is, according to Max Grasmann (*Deut. med. Woch.*, October 15th, 1908), one of the most difficult problems which the general practitioner

has to meet. A simple incision of an inch or so in length cannot serve any useful purpose when the pustule extends from the middle of the occiput to the upper dorsal vertebrae and from the one sterno-cleido-mastoid to the other. Poulitices also are not sufficient for such a lesion. The most certain method is excision. Kiedel first described a satisfactory method of carrying this out. The operation must be so planned that all the dangerous area is removed, that the general health does not suffer from the interference, that not too much healthy tissue be sacrificed, and that while the process of healing is rapid, the scar resulting becomes a smooth one. Various methods have been suggested, but the author considers that the one which he uses can be recommended. He makes a deep crucial incision over the carbuncle. The skin flaps thus made are dissected from the muscular fascia and packed underneath with gauze. Hot boro-salicylic acid solution applied on gauze is used for stopping bleeding and for plugging. The surrounding skin can be protected from burning by smearing with fat. The necrotic tissue is then removed partly with scissors and partly with forceps. A sharp spoon should not be used. When all the inflamed and necrotic tissue has been got rid of, a fresh hot boro-salicylic plug is applied and a large wet dressing covers the whole wound. The greater part of the necrotic tissue is cast off within a week of the operation and healthy granulations appear in the wound. The skin flaps are then brought into position by a few sutures, and the wound is rendered as small as possible. The only points in the treatment on which he lays emphasis are free and early incision from healthy tissue to healthy tissue across the carbuncle, free exposure of the necrotic tissue after the flaps have been protected, and plugging with hot boro-salicylic acid solutions. He has obtained excellent results in his cases with this method.

84. Intravenous Injections of Sublimite in Typhoid Fever.

CRISPOLTI (*Rif. Med.*, December 14th, 1908) reports two severe cases of typhoid where extraordinarily good effects were induced by intravenous injections of sublimite. In each case a marked feature was the high temperature and grave toxæmia. The treatment was inaugurated on the twelfth and thirteenth day of the disease respectively. In one case the temperature dropped after the first injection. In seven hours, from 40.3° C. to 37.2°, and after a temporary rise the next day to 37.9°; after a second injection it fell to normal and remained so to the end. In the other case an equally satisfactory result was obtained, but owing to two secondary and temporary rises of temperature three injections were necessary. Both cases recovered completely. With the fall of temperature there was a corresponding rise of blood pressure and improvement in the toxic symptoms. The dose was 1 centigram, and the author strongly advises that not less than this should be given: he has given 2 centigrams in some cases of syphilis. The effects were certainly highly beneficial in these cases and showed themselves chiefly in the reduction of the temperature, in the lowering of the rapidity of the pulse and respiration, in the rise of blood pressure and the lessened toxæmia. Probably these results were brought about by stimulating the greater and more active production of antitoxin substances.

85. Bromglidin.

H. BORUTTAU (*Deut. med. Woch.*, October 29th, 1908) states that while organic bromine compounds have been recommended in therapeutics, little has been made out with regard to the method of excretion or retention of the bromine. It is apparent from what has been written on this matter that bromine, when given in the form of the alkaline bromides, behaves differently to the way in which iodine in the form of alkaline iodides behaves. Iodine is not stored up in the organism, even when given in large doses. Bromine, on the other hand, is very slowly excreted, and to a considerable extent is retained. It has been found that chlorine is excreted in excess during medication with bromides, so that it has been assumed that the bromine replaces chlorine in the organism. Bromglidin contains 10 per cent. bromine. It is put up in 3 gram tablets. Boruttan studied the excretion of bromine when taken under varying conditions. After taking six tablets daily for four days—that is, 1.2 grams of bromine—he found that the urine contained the following quantities of bromine on the respective days: 0.171, 0.202, 0.217, 0.189, 0.099, and 0.017 grams, while traces were found up to the tenth day. Testing the conditions on animals, he found that rabbits behaved in a similar manner. Other experiments confirmed the find that the bromine of bromglidin is excreted, like the bromine of the alkaline bromides, extremely slowly, but that the initial excretion—that is, the excretion during the

first twenty-four hours—is higher than in the case of the bromide. He further found that the same physiological action was obtained by smaller quantities of bromine in bromglidin than in alkaline bromides.

86. Fulguration in Cancer.

K. SCHULTZE, writing from Bier's surgical clinic in Berlin, reports on the trials which they have made of the fulguration treatment of cancer, and comes reluctantly to the conclusion that its value is *nil* (*Deut. med. Woch.*, October 6th, 1908). Four cases of inoperable mammary carcinoma were selected for the treatment. At first a beneficial influence was seen in the carcinomata. The pain and discharge from the ulcerating surfaces lessened, and the general condition improved in some of the cases. It is, therefore, as good a palliative means as are Roentgen and radium rays and caustery. He gives short summaries of the four cases, from which it appears that one of the patients had already died after an apparent improvement lasting for eleven days; the second patient improved locally under the treatment, but a spread of the growth soon made itself visible and palpable; the third patient improved after the operation and fulguration, but after a time fresh growth took place, and the general condition became markedly worse; while the fourth patient also appeared to have been improved by removal of the greater part of the tumour and fulguration of the unremovable portions, but after a short time fresh nodules appeared, and the disease seemed to progress with undiminished energy. In spite of the good results claimed by some surgeons from this method, Schultze is forced to state that fulguration in his hands has been a complete failure.

PATHOLOGY.

87. Serum Reaction of Syphilis.

DURING recent times the clinical value of the Wassermann-Neisser-Bruck reaction in syphilis has been shown to be considerable, and it was therefore of importance when Much and Eichelberg reported early in 1908 that in a series of scarlatina patients, to which they had applied the reaction, complement was deflected in 40 per cent. These authors considered themselves justified in warning clinicians against attaching too great importance to a positive reaction. Bruck and L. Cohn (*Berl. klin. Woch.*, December 21st, 1908) considered that the clinical value of the reaction would only be lessened by this find, if confirmed, if it could be shown that the scarlatinal reaction persisted after convalescence. Several observers tested the serum of non-syphilitic children during an attack of scarlet fever and obtained negative results. While the authors do not question the correctness of Much and Eichelberg's results, they came to the conclusion that a positive reaction in scarlatina is not the rule but an exception, which is produced by some altered conditions, the nature of which is still unknown. Seligmann and Klopstock accidentally came across an interesting find. They obtained negative results in 13 scarlatina cases. After a longish interval they used the same extract and obtained positive reactions not only with scarlatinal serums but also with the serum of persons who were not suffering from scarlatina or syphilis. The antigen had obviously undergone some change. Others found that different antigens were capable of yielding positive reactions in scarlatina and syphilis. This would suggest that the reaction in scarlet fever is not identical with that in syphilis. In repeating the experiments with various antigens, the authors found that while all the antigens which they used gave uniform positive reactions with syphilitic serum, some scarlatinal serums gave positive reactions with one antigen and negative reactions with the others. It is therefore not correct to state that the syphilis reaction occurs in scarlatina, since it has been shown that the substance giving rise to complement deflection in scarlatinal serum is not identical with that giving rise to the reaction in syphilitic serum. They therefore claim that the clinical value of the syphilis reaction is not lessened by the find that scarlatinal serums may react positively with one antigen but not with others. Much himself has more recently admitted that this is so.

88. Phlyctenules after Calmette's Reaction

STARGARDT (*XXXI. Versammlung d. Ophth.-Gesell., Heidelberg*, August, 1908) finds that the phlyctenules which so often follow the use of Calmette's serum have the same characteristics as the ordinary phlyctenules described by Leber. Giant cells are present, but no caseation. Tubercle bacilli are not found.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

89. Grocco's Triangle.

GROCCO described this as an area of relative dullness taking the form of a right-angled triangle, to be found on the opposite side of the back to that on which a pleural effusion is present. Its inner limit corresponds to the line of spinal processes, its base to the lower limit of the thoracic resonance, and its outer limit is represented by a line drawn from the base rising obliquely to join the vertebral column in the neighbourhood of the upper limit of the pleural effusion. Grocco states also that the dullness increases as one approaches the base or the vertebral spines, and it is modified by the position assumed by the patient, diminishing when he lies on the side with the effusion. It is more definite when a right pleural effusion is present, and the sign is stated to be of great value in diagnosing between pleurisy and pneumonia. Roch and Dufour (*La Semaine Médicale*, October 21st, 1908) find that, according to many Italian observers, Grocco's triangle is always to be found in cases of pleural effusion, and that it is of real diagnostic value. In Germany, Rauchfuss is a very strong advocate of the value of Grocco's sign. He has found it to be present in 77 cases of pleurisy in children, and in every case in which a free effusion reached the level of the eighth dorsal vertebra. He does not find, however, that the sign varies according to the position of the patient. At Escherich's clinic Hamburger has frequently found in children a zone of paravertebral dullness on the side opposite to a pleural effusion, which, however, he has found to take the form of a longitudinal band rather than that of a triangle: this sign he finds, however, occurs in all conditions in which there occurs a hepatization or extensive infiltration of the lung, and he does not think it of diagnostic importance. Pollak draws similar conclusions. In France Cassatè is convinced of the value of this sign, and according to him it occurs in all large pleural effusions, and that when found it is sufficient evidence for the diagnosis of an effusion. Darier and Bernard hold much less positive views. In England and America, Ewart, Thayer, etc., conclude that the sign of Grocco is of considerable value in the diagnosis of pleurisy. The paravertebral triangle of dullness has, however, been found in cases of disease beneath the diaphragm: thus Ewart found it in a case of pyuria with lumbar abscess, Beall in sulphuric abscess, and Smythies found it in a woman suffering with an ovarian tumour. When one seeks for an explanation as to the cause of Grocco's sign, the opinions of different investigators are at still more variance. Some think that the fluid arrests the vibrations on the spine and side, and hence a diminution of resonance occurs on the side opposite to the effusion; for this view there is no evidence. Others think the mediastinum is pushed over to the healthy side by the effusion, thus causing compression of the healthy lung. Others think that the posterior pleural cul-de-sac distended with fluid passes across the middle line, pushing before it the posterior mediastinal contents and encroaching on the healthy side. The marked prominence of the vertebral bodies renders the two latter theories extremely unlikely explanations. The experience of the authors of this paper is as follows: They have found the paravertebral dullness present in some cases of pleural effusion; this area of dullness was, however, more in the form of a longitudinal band than in the form of the triangle as described by Grocco. They found that this band did not alter appreciably according to the position assumed by the patient. They found it present in cases of pneumonia and after evacuation of a pleural effusion by aspiration. Further, they have convinced themselves that in healthy adults there is present on each side an area of relative dullness corresponding to the lower and inner borders of the lungs. These two areas of dullness come together at the line of vertebral spines and at the level of the fourth and fifth dorsal vertebrae form a band 6 to 7 cm. in breadth; this band of dullness, traced downwards, enlarges until it merges into the lumbar dullness at the level of the tenth dorsal vertebra; it measures approximately 12 cm. across. The dullness, the authors consider, is due to the presence of the vertebral column and the large muscles which fill up the costo-vertebral gutters and which,

increasing in thickness as they do from above downwards, give rise to that gradual impairment of percussion note as one proceeds from above downwards in these regions. In none of the cases of pleural effusion investigated by the authors have they found the extent or the degree of this paravertebral dullness to be greater than in persons free from effusion. The conclusions drawn by the authors are that in the adult the triangle of paravertebral dullness is not pathognomonic of pleurisy, and it is of no help in the diagnosis of lung affections from pleurisy.

90. Tricuspid Regurgitation.

THE correct diagnosis of insufficiency of the tricuspid valve is extremely difficult, and our knowledge of the attending conditions is limited. The textbooks give but little information on the subject, and it has to be admitted that comparatively little important work has been carried out in connexion with it. D. von Tabora (*Deut. med. Woch.*, November 26th, 1908) deals with this subject and presents some useful information. As compared with endocardial affections of the valve, the functional or relative disease of the valve is very common. The latter is produced by a dilatation of the right ventricle. It is, however, not possible to diagnose *intra vitam* between organic and functional tricuspid regurgitation. It is stated that the symptoms of tricuspid regurgitation are those of extreme insufficiency of the heart. The author cannot accept this, although he realizes that since functional disease of the tricuspid orifice is a sign of loss of compensation in cases of mitral disease, the circulation, taken as a whole, is disturbed. The possibility of tricuspid regurgitation being the first sign of cardiac weakness has not been recognized until quite recently. In examining a series of cases of anaemias of various origins no auricular venous pulse could be recorded. However, he recites the history of a case in which tricuspid insufficiency followed primary weakening of the right ventricle. The curve of the jugular vein showed a ventricular pulse, while the arrhythmia was seen to correspond to what is known as *pulsus irregularis perpetuus*. The symptoms usually ascribed to tricuspid regurgitation are: extension of the cardiac dullness to the right, pulsation to the right of the sternum, systolic murmur, soft second pulmonary sound, systolic venous and liver pulse, severe signs of failure of the heart (ascites, oedema, etc.). On examining his cases he found that while the extension of the cardiac dullness to the right was present in all cases, it was not extreme in more than half the total number. Pulsation to the right of the sternum is rare, and is only met with in extreme cases. In none of his cases could he definitely localize a systolic murmur to the tricuspid orifice. As a rule, when such was present, it was quite as intense or more so at the apex or at the pulmonary orifice. In a considerable number of cases of undoubted tricuspid regurgitation he did not hear any systolic murmur at all. The same experience was made with regard to the supposed softening of the second sound at the pulmonary area. He does not believe that it has anything to do with tricuspid regurgitation, and maintains that the majority of cases do not show this sign. The only symptom which remains over is the systolic venous and liver pulse. This is called positive or ventricular, and corresponds to the contraction of the ventricle in point of time. Inspection and palpation are not capable of determining such a pulsation. A suggestion has been made that if the jugular vein be compressed digitally and observation be made whether the central portion of the vein fills again or not, regurgitation of the tricuspid valve might be diagnosed. Von Tabora, however, considers that this is extremely unreliable. In many cases the venous pulse is not visible, and it is therefore essential to record it graphically. He discusses the various points in connexion with the type of curve obtained from cases of this kind, and appends some illustrative curves. Marked tricuspid regurgitation, even if of functional origin, rarely clears up completely. It is, however, possible for the symptoms to disappear, and the patients may then pass months or years without any subjective signs pointing to heart disease. In a few isolated cases von Tabora believes that tricuspid regurgitation occurs as the first sign of cardiac failure, but this must be regarded as being very rare.

SURGERY.

91. Treatment of Perityphlitis.

KLAUBER (*Med. Klin.*, July 12th, 1908) advises immediate, and, wherever possible, radical operation in every stage of appendicitis. He claims that by this means he has reduced the mortality of the cases in his hands from 39 per cent. in 1905 to 12 per cent. in 1905, and 8 per cent. in 1907. During 1902 to 1905 he employed the expectant treatment, with the following results. All those tabulated are late cases—that is, operated upon over forty-eight hours after the commencement of the illness.

Abscess incision	26	Two deaths from fistula and pleurisy respectively.
Extraperitoneal appendectomy	13	No deaths.
Laparotomies	21	Twelve deaths—57 per cent.
Total	60	Fourteen deaths—23.3 per cent.

From August, 1905, to March, 1908, all late cases were operated upon at once, no case being refused operation, with the following results:

Abscess incision	11	No deaths.
Laparotomies	43	Two deaths—5 per cent.
Total	51	Two deaths—3.9 per cent.

Klauber bases his opinion upon the following considerations: The clinical division into early, intermediate, and late stages was found in numberless cases not to correspond to actual anatomical conditions. It is never possible to tell at the commencement of a case whether it will run a mild or severe course. The mortality of cases operated upon in early and late stages is not comparable, because in the latter a waiting policy has been employed, and operation has been undertaken either experimentally after an abscess has formed, when results have been excellent, or intraperitoneally after peritonitis has occurred, when the mortality has been 50 to 60 per cent. It is to avoid this mortality that Klauber advises early operation in all cases. Those cases which would otherwise be opened extraperitoneally are not endangered by early operation, as is shown by Klauber's two deaths. The one died from an abscess of the liver present at the time of the operation, the other from intestinal paralysis existent four days before operation, while at the autopsy the peritoneal purulent exudation was found to have disappeared. On the other hand, a waiting policy may lead to disastrous results. A perityphlitic movable tumour may be felt in the abdomen, causing no severe general symptoms, but at the operation a mass of omentum containing the gangrenous appendix and a sanious abscess may be found, the whole mass freely movable. Expectant treatment of such a case would lead to intraperitoneal bursting of the abscess and general peritonitis; or a second abscess may be found in the pelvis as well as the perityphlitic abscess, well marked off, and with healthy surroundings. The appendix is always removed, because the author finds that only in this way can the various burrowing abscesses be drained, and its removal means also the removal of the source of infection. This has not been found difficult. The pelvis should always be examined, even in cases of apparently well-circumscribed abscesses, as collections of fluid may be found here, and a drain inserted towards the pelvis may guide, on the second or third day, the exit of a quantity of pus. A large collection of exudation in the left half of the abdomen necessitates a counter opening on the left side and drainage. Klauber disapproves of irrigating the abdomen, because (1) in bad cases it is useless; (2) favourable cases do as well without; and (3) in certain other cases—for example, perforation—it was found to cause multiple abscesses, whereas in similar cases, where irrigation was not employed, these did not occur. Nature's method of irrigation is assisted by the administration of fluid per mouth and rectum. Every hollow of the abdomen where fluid exudate collects should be drained. The author's unfavourable results are ascribed to virulence of infection or to intestinal paralysis which occurred mostly after previous opium treatment. In none of the author's last 56 cases was it necessary to perform a further operation in order to open a peritoneal abscess, to drain Douglas's pouch, etc. Whenever intestinal contents appeared on the dressings, as was often the case, indicating a fistula, all plugging was removed, and the wound cavity was kept clean by irrigation without pressure. All cases healed without requiring operation.

92. Extravesical Suprapubic Prostatectomy.

STOCKUM (*Zentralbl. für Chir.*, No. 3, 1909) holds that though the suprapubic is preferable to the perineal method of prostatectomy, the former is still to be re-

garded as a dangerous operation, and that it is therefore advisable to make effort to improve its technique and to diminish as much as possible its undoubted risks. The following description is given as a modification of the high operation, devised by the author and practised with success in two cases of enlarged prostate. In this procedure, which is named "extravesical suprapubic prostatectomy," the enlarged gland is first attacked at its urethral portion, and the only opening made in the upper part of the bladder is a small puncture which serves for the introduction into the vesical cavity of a drainage tube. The usual median incision having been made above the pubic symphysis and the recti muscles separated, the operator's finger is passed downwards in front of the bladder until it reaches the vesical end of the urethra and the enlarged prostate. In order to obtain good access to the gland the fatty tissue behind the symphysis, together with the fold of peritoneum, should be carefully stripped away from the bladder, but not further than is absolutely necessary. The lateral paravesical connective tissue should be left undisturbed. Over the upper part of the exposed prostate, a little to one side of the middle line, a short vertical incision is made through the capsule into the glandular tissue. Through this opening the surgeon introduces at first one finger and afterwards two fingers and enucleates the gland, guidance being afforded by a catheter previously introduced along the urethra into the bladder. During the enucleation the prostate is pressed upwards and forwards by an assistant's finger in the rectum. After the removal of the enlarged gland the wound is closely packed with gauze with the object of preventing secondary hæmorrhage; after the introduction of a drainage tube into the bladder the upper portion of the abdominal wound is closed by sutures. In one of the author's cases the gauze packing and the vesical drainage tube were removed on the fifth day, and for the next seven days the bladder was drained by a urethral catheter.

OBSTETRICS.

Contracted Pelvis.

93.

AT the International Congress for Gynecology held in Geneva in 1896, the frequency of contraction of the pelvis in the various countries was discussed, but inasmuch as the data obtainable were insufficient, the subject was postponed for a future occasion. A. Hegar now takes up the same theme and deals with the whole problem briefly in the *Muench. med. Woch.* of August 25th, 1908. Collecting his facts from the work of others, he finds that in Austria-Hungary 8.08 per cent. of pelvis which were measured proved to be contracted. Dohrn found the percentage in Germany to be between 12 and 20. Barnes found that in England 0.4 per cent. of the examined pelvis were flattened and 0.12 per cent. generally contracted. Hegar suspects that some mistake must have arisen in these measurements, as they are so much lower than those made in Germany, although he recognizes that much is done in England to guard against deformities in the way of exercise, good nutrition, etc. Ogata found that with the exception of one district, where osteomalacia and rickets are prevalent, no contracted pelvis are met with in Japan. Simpson and Stenat found that the percentage for Scotland was 6.3 to 6.9, while Glasgow gave a percentage of 10. Möller worked the material in Norway up and found that in the northern countries contracted pelvis were very uncommon. Brandt and Petersen, however, found 3.61 per cent. In Denmark it appears to be about 4 per cent. The reasons why contracted pelvis is so much less common in Norway and Sweden than in Germany is, in Hegar's opinion, not difficult to discern. The women in the two former countries are better cared for, they work healthily in such callings as agriculture, forestry, shipping, etc., and not in the industries. Alcoholism is being effectually battled against, and, last but not least, the women nurse their own babies. Developmental disturbances play a large part in the etiology of this deformity. The beginnings may be laid down in fetal life, or some noxious influence may act early in independent life. In infantism it is not only the pelvis which shows the disturbance of development. Freund and Mendelsohn have shown that infantile types of the pelvis are frequently associated with stenosis of the upper aperture of the thorax. The noxious influences which may contribute to this end are largely to be neutralized by breast feeding in infancy, by proper feeding, good hygienic conditions in the home, sufficient exercise in fresh air, and the avoidance of taking part at an early age in the so-called social pleasures, for example, theatre, concert, and ball attendance, during childhood. Next, the prevention of certain diseases must be regarded as preventive measures

against the development of contracted pelvis. Of these, chronic infections, and especially tuberculosis, are the most important. Cretinism is a cause of contracted pelvis. Added to infantilism and cretinism, rickets must be mentioned as a cause of this condition. The recognition of the etiology of contracted pelvis must serve as a basis of preventive measures. Hegar points out that a study of this problem, if carried out properly, will give the index for preventive treatment, and his remarks tend to give a guidance for such a treatment.

94. Pyelitis in Pregnancy: Irrigation.

STOECKEL (*Zeit. f. gynäk. Urologie*, vol. i, part i, 1908) writes on the diagnosis and treatment of this complication of pregnancy, having already demonstrated his views and practice at the eightieth meeting of the Deutsche Naturforscher und Aerzte at Cologne in September. He observes that the disease of the kidney is actually caused by the pregnancy, that retention of urine in the ureters plays a prominent part in the production of this complication, that the urine in pyelitis contains the *Bacillus coli* either alone or with other germs, and that pyelitis is not only most frequent but also most severe when the right kidney is affected. Diagnosis, Stoeckel insists, is not easy. Pyelitis is very often overlooked when cystitis is present, and when the bladder remains healthy the clinical symptoms simulate inflammatory disorders of the gall bladder, vermiform appendix, and uterine appendages. Cystoscopy with double catheterism of the ureters can alone make diagnosis sure. As for treatment, induction of abortion is to be rejected, and nephrotomy is only to be practised when there is evidence of true pyonephrosis. The right treatment, eminently surgical, is irrigation of the renal pelvis with antiseptic solutions, such as collargol. Five women have already been successfully treated by this method, the pain and fever disappearing and the pregnancy remaining uninterrupted. All the children were saved and reared. Stoeckel reports three cases, and writes the technique of his method, adding an illustration.

GYNAECOLOGY.

95. Placental Syphilis

W. O. PAULI (*Johns Hopkins Bull.*, November, 1908) says that the fact that various authors have reported the finding of the *Spirochaeta pallida* in the placenta of syphilitic infants, while other observers have failed to find the organisms in the placenta, though they were present in the majority of instances in the fetal organs, gave rise to this investigation. The diagnosis of syphilis of the placenta was based on the presence of the following conditions. On gross examination: (1) An increase in the size and weight of the placenta in relation to that of the child, the increase being from 1.6 (the normal ratio) to 1.4 or even more; (2) a pale pink coloration and greasy feel of the maternal surface of the placenta; (3) an abnormal width and depth of the intervillous spaces. On microscopic examination: (1) A thickening and clubbing of the ends of the finer branches of the villi; (2) absence of blood vessels in the finer branches of the villi and their partial obliteration from endarteritis in the rest; (3) an abnormal density and hypernucleation of the stroma. During the year 1907-8, 825 placenta were examined, and of these 25 were pronounced syphilitic, after microscopic examination of sections, by Professor J. W. Williams. An autopsy was made on the infants in 16 out of these 25 cases. In 14 cases the diagnosis of syphilis was made on anatomical grounds, and in 11 of the 16 was established by the finding of the *Spirochaeta pallida* in the fetal organs. Twenty-four of the 25 placenta were examined for the spirochaete (the tissue in one case being lost), but in no case was it found even after careful and repeated search. Levaditi's method of staining was used in every case. The grounds for making an anatomical diagnosis of syphilis in the fetus were (1) an increase in the size and weight of the liver and spleen; (2) the presence of pneumonia alba; and (3) the presence of definite osteochondritis at the epiphyseal line of long bones. In the literature the author has been able to find 120 cases of examination of syphilitic placenta for the *Spirochaeta pallida*, with positive results in only 16 of these. He concludes: (1) That the spirochaete is rarely found in syphilitic placenta; (2) that the anatomical changes observed in the placenta are the result of toxins produced by the spirochaetes in the fetal organs; (3) that the placenta is not the nidus of infection. This comparative immunity of the placenta, particularly of the maternal part, may be due to its close connexion with the maternal blood and its contained antibodies or immune substances.

THERAPEUTICS.

96. Treatment of Pernicious Anaemia.

G. KLEMPERER records the results of some experiments made on patients suffering from pernicious anaemia (*Berl. klin. Woch.*, December 28th, 1908). The usual treatment has proved itself incapable of preventing recurrences which sooner or later end with death. Cases, however, are recorded which have lasted for as long as thirteen years, showing numerous recurrences. The characteristics of the disease include the marked diminution of red blood corpuscles, with an increased haemoglobin index, the presence of nucleated red cells, including megaloblasts, while the white corpuscles are not increased in number, and may be diminished. His therapeutic experiments are divided into two chapters. The first were conducted with cholesterin. That substance occurs not only in bile, but also in practically every animal and vegetable cell. It has been shown that cholesterin becomes visible when the cell dies, and when destruction of body cells takes place, cholesterin enters the blood freely, and a sort of lipid-æmia is produced. When red blood cells are destroyed in large quantities, the bile becomes richer in cholesterin, and the same substance appears freely in the faeces. Further, it has been shown that the haemolytic action of a substance called saponin can be prevented by cholesterin. Cobra poison is also neutralized by this substance. It has been employed in the treatment of the anaemia following cobra poison lecithide intoxication with good results by Morgenroth. The same author has suggested that it might be of use in pernicious anaemia. If cholesterin is capable of acting beneficially in this disease, it would be clear that pernicious anaemia is a haemolysis. This, however, is not recognized up to the present. No free haemoglobin has ever been found in the serum of the patients, nor has haemoglobinuria been noticed, although the presence of urobilin may be regarded as a sign that red blood cells have been disintegrated and the contents set free. Klemperer further states that the cholesterin content of the serum of pernicious anaemia patients has been determined in a few cases and is not diminished. Notwithstanding these objections, he employed cholesterin as a form of treatment. The difficulty of applying cholesterin in a 5 per cent. solution in oil was found to be considerable, as the patients did not tolerate the oil well and could scarcely be induced to swallow it. Previous experiments, however, had taught him that the ingestion of milk, cream and butter in large quantities increased the quantity of cholesterin considerably in the serum. Butter and other milk products contain considerable amounts of cholesterin. One litre of cream and 200 grams of butter correspond to 2.1 grams of cholesterin. By boiling these with gelatine and sugar, and in other ways, it is possible to prepare this quantity of cream and butter so that the patients will take it in every day. Some patients only took half this quantity, but even this quantity proved itself capable of exercising a marked effect on the general nutrition. In all, 8 cases were so treated. They were placed on a mixed diet with as much milk, cream, and butter as they could take. In order to enable them to digest the large quantity of fat more easily, they were given small doses of brandy and a powder consisting of calcium carbonate and calcium phosphate. Only one patient was treated by means of the cholesterin alone, while the other 7 patients, whose illness was too severe to chance it, were given arsenic as well. The first patient put on 6 lb. in weight, and his red blood cells increased from 2,720,000 to 2,930,000 per cub. mm. His general condition was materially improved. In two of the other cases the treatment was begun with arsenic (atoxyl), and as soon as some improvement manifested itself the cream and butter treatment was pushed. The weight improved under this, and the symptoms of the disease also diminished. The results, however, were not so brilliant as would justify him to be satisfied with them, and for this reason Klemperer sought for a better form of treatment. The possibility that pernicious anaemia may be an infection, and the occurrence of severe forms of anaemia in kala-azar, suggested that the more modern forms of arsenic might be tried. He therefore applied arsacetin, which Ehrlich has recently introduced for other forms of disease—namely, for the protozoal infections. He injected 0.1 gram of this substance subcutaneously in a 10 per cent. solution, and worked the dose up to 0.6, without any ill effects presenting themselves. The effect on the blood was very marked. The number of red blood corpuscles in the 6 cases in which arsacetin was employed increased very considerably. The improvement only continues up to a certain limit, and he has found that it is then useless to continue the treatment. If a recurrence sets in later the

treatment can again be taken up. He does not claim that either of these two forms of treatment can cure pernicious anaemia: but both have done good in all his cases, and he considers that this, at all events, is one step onwards.

97.

Sabromin.

EULENBURG (*Mediz. Klinik*, November 8th, 1908) has tried sabromin in 14 cases, sufficiently long to judge of its efficacy, especially as compared with other bromine preparations. Six of these were cases of epilepsy, which had all been treated for a long time previously with other bromine preparations, more or less adequately. Bromine, given in the form of sabromin, gave equal if not better results than twice the amount given in the form of alkaline bromides. A striking success was obtained in the case of a lad of 18 who had had seven severe fits during the previous year, the two last six weeks and ten days respectively before the commencement of the treatment. Four tablets (2 grams) were given daily, and no further fit occurred, so that five months later the dose was reduced to three tablets, and later to two. No unpleasant side-effects occurred, and the psychical state remained unaltered. In 2 cases it was found necessary to add other bromine preparations. In several cases increase of weight (1½ to 5½ kilog.) occurred during the use of sabromin. In the other 8 cases, of chronic neuroses, sabromin was strikingly successful in 2—one a case with attacks of psychic depression, and the other an elderly lady with obstinate pruritus. In the latter case the pruritus completely disappeared after hardly a week's treatment. The drug proved very useful in 2 cases of sexual neurasthenia, but in the other cases it was less successful. The cost is M. 1.35 for twenty tablets. Sabromin contains 50 per cent. bromine, as against 67 per cent. in potassium bromide. It should always be given one hour after meals, and should be either masticated or broken up in water before taking. It is tasteless, and causes no gastro-intestinal disturbance or signs of bromism. Eulenburg only once saw a slight acne.

98.

Paraganglin in Senile Tremor.

TARABINI AND MASSAGLIA (*Gazz. degli Osped.*, December 13th, 1908), in view of the recent experimental work in relation to the parathyroid glands and their influence over various convulsive muscular attacks, have tried the effect of paraganglin (Vassale) in two cases of senile tremor. Whilst believing that senile tremor and paralysis agitans own a more or less common origin, and may, indeed, be looked upon as different degrees of a more or less similar condition, they hold that the two affections are rightly separated from a clinical point of view. They differ, for example, in origin; senile tremor always begins in a slow and subtle manner, whilst paralysis agitans sometimes begins quite suddenly, and attacks men rather than women. The tremor in paralysis agitans is at first limited to the limbs, whence it is diffused to the body at large and to the head: on the other hand, the oscillations of senile tremor affect the head, jaw, and upper limbs, and are simple in type (no twirling movements of the fingers such as one often sees in paralysis agitans), and seldom accompanied by the muscular rigidity, sleeplessness, peculiar gait, mask, etc., of the typical paralysis agitans. Both the cases were women, aged 76 and 75, and the drug was given in tabloid form. In the first case, it was noted that after about fifteen days' treatment the tremor was much diminished in intensity, and ceased for more or less long periods, and a troublesome pain in the muscles of the neck was also much relieved. No actual cure was obtained, but so much relief (far more than had ever been obtained by any of the numerous drugs previously tried) was effected that the patient, when the treatment was suspended for a short time, strongly urged its renewal. In the second case an absolute cessation of tremor occurred for a short period after the treatment was commenced, but unfortunately this proved to be only temporary, and it returned as badly as ever after a few weeks.

99.

Synthetic Suprarenin.

KRAUPA (*Mediz. Klinik*, September 6th, 1908) has tested suprarenin, prepared synthetically, with adrenalin, tonogen, and suprarenin obtained by extraction from the suprarenal capsule. Synthetic suprarenin is a solution of the chloride in physiological salt solution in the proportion 1 in 1,000, with 0.6 per cent. thymol added to preserve it. By instilling this in one eye of an individual and one of the other substances in the other eye, he found on comparison that its action was precisely similar in every respect, both in normal and in inflamed eyes. The same held good for subconjunctival injections. On boiling the solution for three minutes, it remained unchanged, and even when boiled for half an hour, no lessened action could be

observed. When allowed to remain exposed to the air for eight days the solution became slightly coloured, but retained its action on the vessels completely. Kraupa concludes that synthetic suprarenin is in every respect equal to the other suprarenal preparations, and it is, moreover, cheaper.

PATHOLOGY.**100. The Morphology and Biology of Malignant Tumours.**

C. LEWIN is of opinion that neither Cohnheim's nor Ribbert's theories as to the nature of cancer can be accepted (*Berl. klin. Woch.*, December 16th, 1907). The former believed that cancer was caused by the growth of widely distributed embryonic residues, but he failed to produce malignant growths by transplanting embryonic tissue into animal organisms. The latter thought that cancer was brought about by a disturbance of the arrangement which keeps the cells of the organism in regular connexion with one another. This disturbance was supposed to be called forth by a primary overgrowth of connective tissue, which caused the expulsion of the cells from the organic connex. He is further convinced that all the attempts to produce cancerous growths by chemical or mechanical stimuli have failed, although he owns that Fischer has succeeded in producing an atypical overgrowth by means of scarlet red oil. The workers who pinned their faith on a parasitic origin of cancer have also failed to reproduce anything at all similar to a malignant growth artificially. The work which certain experimenters have been carrying out recently, however, has thrown some light on the dark problem. Ehrlich, Apolant, Bashford, Borrel, Haaland, and Michaelis have worked with transplantable tumours of the mouse. Striker has utilized lymph-sarcoma of the dog. At first some doubt was expressed whether the mouse tumours were in reality real cancerous tumours. It is now a matter of indifference whether these tumours have an endothelial or epithelial origin, since their malignity has been amply demonstrated. Apolant, however, has conclusively shown that the mouse tumours were real epithelial growths which almost always had their origin from the mamma. The slight infiltration of these tumours was accounted for by the fact that they grew in very loose tissue, the subcutaneous tissue. Haaland has further shown that a large percentage of the transplanted tumours gave rise to metastases in the lungs. He owns, nevertheless, that there are many points in which these tumours differ from cancer of human beings. In order to meet this objection he now brings forward an account of the behaviour of a mammary carcinoma of the rat, which he thinks is more analogous to that of the human subject than any of the tumours of mice or rats which have yet been described. This tumour is now in its thirteenth generation. Its chief characteristic is that of forming metastases very freely. In almost every inoculation generation it produced metastases in the lungs, liver, spleen, and in contrast to mouse carcinoma it was transplantable on the peritoneum, where it produced ascites and general cancerous infiltration of the peritoneum. The rats died of cachexia, while the tumours infiltrated solid tissues or internal organs. He reproduces the microscopical appearances of the original tumour, which possesses the characters of a primary pure adenocarcinoma of the mamma. In the third generation, however, he found that the type had suddenly become modified. Here he found the adenocarcinomatous structure in places, while the mass of the tumour which developed from a subcutaneous inoculation was that of a typical canceroid. Since this tumour was seen he has succeeded in producing tumours which were either mixed tumours or either pure adenocarcinoma or pure canceroid tumours. From the fourth generation onward the peritoneal inoculation led to solid carcinomatous growths without any keratinization and without prickle cells, while keratinization was always well marked after subcutaneous inoculation after the seventh generation. He denies the possibility that the primary tumour was in reality a mixed tumour. This he bases on a number of contentions. In the third series of the fifth generation he found that the connective tissue began to overgrow, and this overgrowth consisted chiefly of spindle cells. On inoculating these outgrowths further, he found that he obtained tumours which were indistinguishable from Ehrlich's mixed-celled sarcoma, some of which showed a preponderance of spindle and some of round cells. He succeeded in raising the virulence of these tumours until he obtained inoculation tumours in 100 per cent. of the attempts. He concludes with some critical remarks on the problem of inherited and acquired immunity towards these artificially-produced tumours.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

101. *Achylia Gastrica in Childhood.*

It is usually said that achylia gastrica becomes increasingly frequent with age. According to Branner it is seldom, if ever, found before puberty. A. Hecht (*Wien. klin. Woch.*, November 5th, 1908) has seen the following case. A girl, aged 9, was said to have been healthy till the age of 4, when she suffered from abdominal pain and frequency of micturition. She ate well, but lost flesh, and was backward developmentally. On admission to hospital there was extreme emaciation with dry scaldiness of the skin. There were slight dyspnoea and dullness, and harsh respiration anteriorly at the right apex. The liver and spleen were of normal size. The appetite was good. Two to five putraceous or liquid, fetid, clay-coloured stools were passed daily, and the diarrhoea persisted as long as the child was under observation (from June 22nd to July 17th). The urine and temperature were normal. Von Pirquet's tuberculin vaccination gave at first a negative, but later a positive, result. An injection of tuberculin was followed only by a local needle-track reaction. A blood count gave no important information. The child was, on June 24th, placed on A. Schmidt's No. 2 test diet, consisting of $\frac{1}{2}$ litre milk-cocoa and a piece of toast (*Zwieback*) for breakfast; beef-tea with an egg during the morning; oat-water with milk and half the yolk of an egg, 5 dgm. of rather overdone minced meat, 5 dgm. of mashed potatoes with butter, and a piece of *Zwieback* for dinner; for tea the same as for breakfast; and macilaginous oat-water with half the yolk of an egg for supper. On June 26th the stools were putraceous, frothy, of a bright greyish-yellow colour, and strongly alkaline—possibly from the admixture of ammoniacal urine. The shreds of mucus in the faeces, when stained, appeared microscopically as thick red filaments, and contained but few cellular elements. The presence of numerous muscular fibres with intact striation and no signs of digestion, the paucity of connective tissue, the absence of starch, and the presence in the faeces of small white granules, which consisted almost entirely of needles of fatty acids, with exceedingly few droplets of fat, all indicated serious disturbance in the digestion of meat, with a well-maintained fat-splitting function. Repeated examination of the gastric contents after test meals showed the constant absence of rennet and HCl. scarcely any fat was split up in the stomach, and pepsine was greatly deficient, and at times entirely absent. On one occasion trypsin could not be found in the faeces, but this was of doubtful significance. The patient was probably tuberculous, but the chronic diarrhoea was evidently due to gastric achylia. The writer believes that if the gastric functions were investigated in every case of chronic diarrhoea achylia gastrica would be found not infrequently.

102. *Pigment Disappearances in Skin and Hair.*

SCHIEIN (*Pester Mediz.-Chirurg. Presse*, October 25th, 1908) considers that pigment atrophy in a large number of cases, if not in all, follows upon previous excessive production of pigment. For example, grey hairs appear earliest from follicles whose previous hairs have been richest in pigment, or longest, or have grown most rapidly, and thus been replaced more often by successive hair-generations (the life-length of a hair is from two to four years)—that is, where much pigment has been previously formed and consumed. Schein quotes a case where the hairs had been previously noticeable for depth of pigmentation. That long hairs whiten sooner than short ones is shown by the fact that the hair of the head and beard become grey before that of the rest of the body, the hair on the shoulders, breast, and pubes before that of the eyebrows. The beard whitens soonest at that part of the chin where, at puberty, the first hairs grow, at which place they also grow to be longest. Fohl found that in senile baldness the individual hair generations were shorter lived, and it may be also that senile grey hairs follow on the excessive pigment production caused by an increased number of hair generations. In a case of trichiasis where epilation was frequently performed Schein noticed after a time that the new eyelashes were white. After the application of

the Roentgen rays darker hairs grow first, and these are followed by lighter ones. Vitiligo is very frequent in negroes, especially at parts rich in pigment—for example, the penis, scrotum, or where the skin is exposed to the rays of the sun. The author finds his principle applicable in the explanation of leucoderma syphilitica, and of the pallor surrounding syphilitic papules. Jadassohn used Finsen rays in a case of vitiligo and found that under their influence excessive pigmentation was replaced by pigment atrophy. That the skin from which grey hairs spring is normally pigmented is explained by the much smaller demand on pigment made by the skin than is made by hairs. Schein concludes: (1) That pigment production in man is limited; it differs in different races and individuals—for example, it is much greater in negroes than in Caucasians, in dark people than in light. Different organs and tissues possess different powers of production. (2) The upper limit of pigment production is sooner reached in dark than in light people. (3) When this limit has been reached further stimulation leads to atrophy, which will account for cases of sudden bleaching of hair. (4) This stimulation may be the same which previously caused the excessive pigmentation.

103. *Cutaneous Hyperalgesia.*

ELSBURG AND NEUBOF (*Amer. Journ. Med. Sci.*, November, 1908), from the examination of a large number of cases of abdominal affections, verify the findings of Henry Head as to the diagnostic value of cutaneous hyperalgesia (Head's zones) in abdominal disease. The pin method of examination was adopted, and found to be satisfactory for practical purposes, a sharp pin being held between the thumb and index finger of the right hand and drawn slowly along the surface of the skin, while the nail of the index finger rests upon the patient's skin and presses equally along the area examined. The patient is told to say "now" as soon as the pinstroke becomes painful, and care must be taken that the pressure of the pin point remains constant, especially as it passes over the groin or costal margin. By this means zones can be mapped out, and the procedure repeated a second time, both the patient and the operator keeping their eyes away from the pin, so as to eliminate as far as possible the personal equation in the examination. The zones may appear very early in the course of visceral affections, and they usually persist throughout the course of the disease, disappearing promptly with the relief of the lesion. Occasionally, however, zones may disappear suddenly, with a persistence or sudden increase in the general symptoms; and when such is the case, it may be of grave significance, betokening in mild cases of appendicitis the development of severe symptoms, and rendering operative interference imperative. Zones may be absent, and while such absence does not mean that there is no disease of the organ suspected, the presence of a zone implies an undoubted lesion. For purposes of diagnosis a Head zone must not be the only factor relied upon, though in the absence of all other localizing signs such a zone may indicate the organ affected. As an aid to diagnosis, and used in conjunction with other symptoms, a zone may be of value to substantiate conclusions arrived at from a general consideration of all the signs and symptoms. In patients with marked abdominal distension and rigidity the presence of a characteristic zone has greatly helped in the differential diagnosis between disease of the gall bladder and appendix, gall bladder and kidney, and between disease of the appendix and uterine appendages. In the early stages of abdominal disease such zones of hyperalgesia may be of value in helping to form an early diagnosis. The degree of cutaneous hyperalgesia has no constant relation to the severity of the pain or gravity of the mischief attending the lesion. The presence of several zones may indicate a combined lesion of several adjoining viscera, but in such cases the possibility of the cutaneous hyperalgesia being due to a lesion of the cord must be borne in mind. Though they may vary somewhat in extent and outline, these zones have a characteristic location, and present very constant and definite areas of hyperalgesia, but the presence of such a characteristic zone, while being evidence of an affection of the corresponding abdominal viscus, need not of necessity point to the affection which is causing the symptoms in any given case.

SURGERY.

103. Rubber Gloves and their Substitutes.

G. BECKER (*Deut. med. Woch.*, December 10th, 1908) says that Unna recommended, in 1885, covering the hands with a layer of soap, in order to cut off the bacteria present in the deeper parts of the epidermis, when it was required to disinfect the hands. Mikulicz suggested using thread gloves, Perthes suggested using silk stockinette gloves, and Wollfer suggested leather gloves; but all these methods proved to be insufficient for the purpose. Friedrich found a solution of the difficulty in 1898 in the shape of rubber gloves. It has been shown that these can be sterilized, and provided that no cuts or tears are present, the field of operation may be kept free from bacteria from the hands of the operator by their means. The sterilization may be carried out by means of steam or by boiling. Steam has the advantage that the gloves can be used in a dry condition. The author shows that the fears which have been expressed that the steam may not penetrate into the interior of the glove is not well founded, and he has found experimentally that gloves sterilized by steam are sterile inside and outside. Various devices have been suggested to guarantee the full action of the steam, such as stuffing the fingers with wool or other material, hanging the gloves up by the fingers, or putting them on nickel skeletons, but all of these devices are unnecessary. There is, however, no doubt that sterilization does attack the rubber, and after two applications of steam the gloves tear very easily. Boiling is better tolerated, but this has the disadvantage that after the process the gloves become sacklike and no longer fit the fingers. It is uncomfortable to wear gloves which have been boiled. Gloves are therefore costly as a means of protecting against infection by the hands. An advance has been made in this direction by the introduction of a method of disinfecting the surface of the gloves by washing in water and soap for three minutes, and then disinfecting for two minutes in corrosive sublimate solution. A further disadvantage of gloves is found in the fact that they can be cut by instruments, and then the danger of wound infection is greater than if no gloves had been worn at all. It was to overcome these disadvantages that certain substitutes for rubber gloves have been introduced. The author mentions two of these, Klapp's *chirostoter* and Wederhake's *dermagummit*. The first named is a solution of a waxy and balsamic body in carbon tetrachloride, which is sprayed on the hands and rubbed until dry. It is supposed to fix the bacteria in the deeper layers of the epidermis as paraffin fixes the specimen in embedding. Becker has experimented with soiled hands and *chirostoter*, and has found that relative and not absolute sterility of the surface of the skin could be obtained by this means. He mentions that the space beneath the nail is not completely shut off, and that reliable results can therefore not be expected. *Dermagummit* is prepared by Dr. Degen and Kuth's factory in Düren (Rhine), and is a patented solution of gum elastic vulcanized by iodine. It is sold in sterile bottles, and should be applied to the hands after these have been disinfected in the usual manner and dried with a sterile towel. The rubber solution is rubbed on the hands until a thin layer covers every part, and is then allowed to dry. It is advisable to powder the surface with sterile talc or caolin to prevent the hands from remaining sticky. Each application to the hands costs from 4 to 6 pfennigs (1 pfennig is nearly one-hundredth of a shilling), but the cost of removing the layer must be added to this. The removal can be done with carbon tetrachloride, ether, or benzine. First Becker tested whether chemical substances like the ferrocyanide of potassium could pass through the layer, and he found that this was not the case. Next he tested the efficacy of the sterilization process. Hands were infected with *prodigious* cultures and then covered with *dermagummit*. On rubbing sterile potato on the hands some remained sterile, some showed growth, but none showed as free growth as did the control potatoes rubbed on the hands before the *dermagummit* was applied. Passing silk behind the nails of the ordinary hands after treatment with *dermagummit* removed micro-organisms which grew well on agar. Probably the drawing of the silk through out into the rubber coating. Although he admits that when the hands are disinfected before the application of *dermagummit* the bacteria are very largely diminished, he does not consider that we have any right to rely on the absolute sterility of hands treated with this material. He claims that sterile rubber gloves are more reliable, and even when soiled these can be rendered absolutely sterile

in five minutes with water, soap, and perchloride of mercury: 8 per cent. formaldehyde or formogen achieves the same effect in one minute.

105. Nerve Suture.

ALFRED S. TAYLOR (*Amer. Journ. of Orthopaedic Surgery*, November, 1908) says that, concerning the regeneration of the distal portion of a divided peripheral motor nerve, there are two views. The "Peripheralists" assert that it undergoes a process of regeneration from the neurilemma cells, independently of the proximal stump and the central system. This stops short of the return of function, which comes only after the reunion of the distal segment with the central system. The "Centralists" maintain that regeneration comes only as a result of the down-growth of central axis cylinders. Whichever of these theories is correct, the fact remains that even after twenty-nine years a return of voluntary control over paralysed muscles has followed the operation of nerve suture. Of first importance is the condition of the paralysed muscles, the natural tendency of which is to undergo fibrous degeneration. The rapidity with which this change develops varies very greatly. In every case the muscle condition must be tested by careful electrical test. Neglect to prevent the occurrence of deformities in paralysed limbs results in the occurrence of contractions of muscles and ligaments and maldevelopments of bones, and offers mechanical obstacles to movements which makes it impossible for even fully regenerated nerves to restore normal mobility to the damaged area. The paper is illustrated by a plate showing the various types of suture—namely, end-to-end, nerve bridging, nerve crossing or transfer, and lateral implantation, which includes a variety of procedures. The simple implantation of the paralysed nerve into a longitudinal slit in the sound nerve gives very satisfactory return of motor power, causes the minimum of disturbance in the muscle field of the sound nerve, and it should be the method of preference. The release of a nerve from constriction which has caused more or less complete peripheral degeneration has a wide field of usefulness in post-traumatic conditions. Nerve dissociation is practically an intraneural neurolysis in which a nerve trunk is separated into its several bundles to relieve them from the constriction due to increased connective tissue. The first evidences of nerve regeneration appear in improved sensory and trophic conditions. These are very variable in the time of their onset, but they are usually well advanced by the end of three months. Voluntary motion, except in a few unexplainable instances, never returns sooner than three months after operation, and often only after six to fifteen months have elapsed. After voluntary motion begins to return, progress is slow, but continues for several years, and depends upon good after-treatment, and especially upon the interest and co-operation of the patient. The paper contains illustrative groups of cases.

OBSTETRICS.

106. Pernicious Vomiting of Pregnancy.

No satisfactory explanation of the pathology of pernicious vomiting of pregnancy has hitherto been given, and probably the pathology is not always identical. Dufour and Cottenot (*Revue Neurologique*, December 30th, 1908) look to the nervous system to explain the association of gastric disorder and uterine disturbance in pregnancy. They are not dogmatic, but bring forward two cases to show that vomiting of pregnancy, at any rate of the intractable type, may be due to tabes dorsalis. One case only is reported in detail. It is that of a woman in her third pregnancy admitted into hospital in the fourth month for intractable vomiting causing much loss of weight. In her first pregnancy vomiting had lasted from the fifteenth day after the last period preceding conception until the end of pregnancy. In her second pregnancy it lasted from the second month to the end. On examination the following evidence of nervous disease was obtained: The right leg had superficial scars which had been present from infancy; cutaneous sensibility in the right leg diminished, with complete anaesthesia as far as the ankle-joint. The Achilles jerks present. Knee-jerks present, but weaker on the right side and especially so during the crises. At the height of the crisis it could not be obtained (intermittent loss of knee-jerk). The Argyll Robertson pupil was obtained on both sides with diplopia in certain directions. Romberg's sign absent. Slight lymphocytosis of cerebro-spinal fluid. No history of

syphilis could be obtained from the patient or her husband, but the authors consider the above symptoms sufficient to warrant the diagnosis of tabes dorsalis. The first child died two days after birth from icterus, and the second one six weeks after birth (cause not stated). The disappearance of the knee-jerk at the height of the crisis would be analogous to similar observations as regards the Argyll Robertson pupil phenomenon observed by Erb and Mantoux. Further interrogation elicited the interesting statement that since her first pregnancy the patient had had severe abdominal pains with vomiting and diarrhoea occurring every two months, although she had never so suffered previously. The pregnancies apparently acted as an excitant in a tabetic patient, just as we know that atmospheric changes, fatigue, excess in drink, and coitus may provoke a crisis in a tabetic. Tarnier in his lectures apparently did not recognize tabes as a cause of pernicious vomiting in pregnancy, for he says that one must distinguish between the two conditions, namely, tabetic crises and pernicious vomiting.

GYNAECOLOGY.

107. Treatment of Retroversion of the Uterus.

P. STRASSMANN (*Berl. klin. Woch.*, November 2nd, 1908) states that the estimate that over 50,000 women in Greater Berlin suffer from retroversion of the uterus is not exaggerated. It is, however, questionable whether such a common condition can really be described as pathological. As far as is known, retroversion does not occur in the lower animals. That this is in part due to the upright position of the human being is certain, but it appears also to be due to the fact that women have wider pelvis than other female animals, and the possibility of backward displacements are greater in the former than in the latter. True, such animals as apes have not been subjected to minute examination, which would be necessary to determine whether the uterus is at times tilted backwards. Strassmann points out that all abdominal organs have a dorsal convexity and a ventral concavity. Each organ develops with a flexion forwards. In the upright position the fundus is normally lower than the os. In the cadaver the ligaments are slackened, and the uterus is found to have sunk backwards on opening the abdomen. A sudden misplacement never takes place. Even when the trauma is severe enough to rupture the bladder or to dislocate a kidney, the uterus remains untouched. It may be considered to be the most protected organ in the whole body. Retroversion and retroflexion, which is merely another manifestation of a less pronounced degree of the same condition, either arise as a congenital defect or the false position is gradually acquired. The congenital displacement is present in about one-sixth of all the cases. In the first place, Strassmann mentions a distended bladder as a cause of acquired displacement. The next contributing cause is overloading of the rectum. This levers the cervix forwards, and combined with the backward pressure of a full bladder, which acts on the fundus, the uterus is tilted backwards. These two factors are especially active in lying-in women. The fact that the abdomen has emptied itself of from 5 to 6 kilograms (the weight of the fetus, placenta, and liquor amnii) explains the absence of desire to pass water or to empty the rectum. If no aperient is given, the lying-in woman does not have a motion until the sixth or seventh day *post partum*. The ligaments, and especially the two round ligaments, hold the uterus in its normal anteverted position when other causes tend to disturb this position. A weakening of these ligaments must, therefore, be followed by a failure of natural reposition when the bladder remains full or when constipation continues for some time. The condition of the floor of the pelvis, and the weight of the organ when involution takes place slowly or incompletely also play an important rôle in the genesis of retroflexion and retroversion. Other contributory causes are also mentioned. The author then discusses the results of the displacements. It is a mistake to consider that the uterus alone is turned back. The broad ligaments are thrown out of position with the uterus, and many of the complaints are probably due to this. The first result is that the vessels become twisted, and although the arteries scarcely suffer in their elasticity, the veins become altered and a varicose condition of the ligament results. In response to the venous obstruction, the uterus becomes congested. The posterior lip becomes thickened and bluish, and not infrequently shows an erosion. Menstruation becomes profuse and a catarrhal endometritis develops. Pain arises

from the effort on the part of the uterus to empty its contents against the laws of gravity. The displacement of the ovaries is also important. Follicular haematoma arises, and eventually may lead to adhesions. Small cystic degeneration of the ovaries is not an infrequent find in these cases. The capability of conception and of carrying the fetus is often disturbed. Women with retroverted uteri may conceive, and some of these can pass naturally through the course of pregnancy. Many women under these conditions, however, are sterile, and it is within Strassmann's experience that women have objected to have the retroversion reduced, because they preferred to remain sterile. In Java midwives at times press the uterus into a retroverted position after delivery, in order to produce sterility. This may lead to severe and even fatal inflammations. Next he deals with the retroflexion of the bladder, which follows upon that of the uterus. After dealing with various symptoms which are met with in connexion with displacements he proceeds to discuss the treatment. In cases in which spontaneous correction of the malposition has taken place in pregnancy it is wise to assist matters by giving ergot of rye after delivery or abortion. When the retroversion is due to posterior adhesions following a gonorrhoeal or other inflammatory affection of the tubes, it would be bad gynaecology to attempt a reposition, and, at all events during the early stages, no attempts to deal with the displacement may be made. There is, further, no need to interfere with retroversion in old women. Pessaries may be applied after replacement in suitable cases; and Strassmann believes that, provided no deep tears in the cervix and no unrepai red perineal rupture are present, a case of retroversion taken early may be cured in one year by a ring. He prefers zinc rings to the soft rubber pessaries. Thomas's and S-shaped pessaries are also useful in some cases. When a misplaced uterus has given rise to symptoms which do not yield to conservative dietetic and balneo-therapeutic means, operative treatment should be adopted. Even replaceable misplacements may with justification be fixed in the anteverted position operatively. Ventrifixation yields excellent results. It forms a certain method of curing the condition, and does not disturb a subsequent pregnancy. The operation called "Alexander-Adams's," which consists in shortening and suturing the round ligament in the inguinal canal, can also be utilized for the condition, and leads to good results. It is especially useful when a rupture has to be operated on, as the two conditions can be cured at the same time, and two instruments can be disposed of. When adhesions are present the operation is of no use. With regard to vaginofixation, he points out that disturbances in pregnancy of a serious nature have arisen, and he concludes that the method cannot be recommended. Prophylactically, he advises regulation of the evacuations, especially before and during menstruation. Recent displacements should be detected early, and this implies an examination after every case of lying-in before the patient is discharged as well.

THERAPEUTICS.

108. Antipneumococcic Serum.

G. LANDMANN (*Deut. med. Woch.*, November 26th, 1908) has been experimenting with pneumococci with the object of preparing a powerful antibacterial serum. He found that it was advisable to utilize a very large number of strains, and, adopting a suggestion of Ehrlich's that the bacterial cell possesses variations in the haptophoric groups, he used horses, oxen, and sheep to gain his antibacterial serum, and uses these serums mixed. At first it was assumed that this serum would not be standardizable, but further experiments showed that by using strains which had been increased in virulence and by forcing the immunizing in the horses he was able to produce a serum which lent itself to the usual methods of testing and standardizing. The price of the serum was necessarily much increased by the forced treatment of the horses, as the number of horses which died under the treatment was not inconsiderable. He, however, hopes to be able to reduce this mortality, and consequently the price of the serum, in the future. The value of his serum has been determined as follows: One immune unit is stated to be contained in 1 c.cm., when 0.01 c.cm. of a serum protects a mouse against the effects of an injection of from 10 to 100 times the lethal dose of a living culture applied twenty-four hours later. His serum contains from 10 to 40 immune units per c.cm. He has

further found that his serum acts curatively as well as prophylactically. Animals could be saved if injected with serum from six to eight hours after infection. The usual space of time between infection and death in experiment animals being twenty-four to forty-eight hours, this curative action must be considered satisfactory. He has not come across any strain against which the serum had no influence in animal experiment. So far he has no evidence of its value in human therapy, but he advises its employment in doses of 400 units daily for curative efforts, and one or two doses of 200 units for prophylactic measures. The serum must naturally be employed during the early stages of the various pneumococcal infections, of which he instances ulcer serpens, pneumonia, etc., if success is to be attained.

109. Fibrolysin in Pleural Adhesions.

It is not uncommon that a free deposition of fibrin takes place after the more or less complete absorption of a pleural effusion. This leads to adhesions between the two layers of the pleura, and thus binds down the lung to the chest wall or to the diaphragm. Schnütgen (*Berl. Klin. Woch.*, December 21st, 1908) points out that when the affection is recurrent, as is the case in tuberculosis, an induration of over $\frac{1}{2}$ in. in thickness may be formed. The results of such adhesions and induration on the pulmonary circulation need no special description. The clinical symptoms of such adhesions are diminished breath sounds, loss of vocal fremitus, and dullness on percussion. Pain is complained of. Subjective symptoms may, however, be very slight. The treatment usually adopted in such cases is painting the chest with iodine, applying iod. vasogen, and lung gymnastics, but the results of these forms of treatment are rarely apparent. When gymnastics are combined with fixation of the healthy lung, by means of pneumatic apparatus, better effects are obtained. Since fibrolysin (thiosinamin and sodium salicylate) has within recent times been highly recommended for a large variety of internal and external scar formations, the author determined to try it in pleural adhesions. He used Merck's preparation, which contains 2.3 c.cm. of fibrolysin in each capsule, and injected this dose either locally or into the gluteal muscles. The injections were repeated once or twice every week according to the severity of the case. In the majority of the cases the injections were painless, and the only undesired effects were occasional slight rises in the temperature, slight feelings of tiredness, and headache. The objective and subjective symptoms diminished markedly, and in some cases with extraordinary clearness. In reviewing his cases he states that fibrolysin applied immediately after the effusion is completely absorbed, and signs of beginning pleural adhesions can be made out, is often followed by good results, and should therefore always be tried.

110. Sabromin, a New Bromide Preparation.

V. MERING (*Mediz. Klinik*, September 20th, 1908) has investigated the action of sabromin, the dibromobenzenate of calcium, so called from its analogous composition to that of sajodin, the moniodobenzenate of calcium. The formula of sabromin is $(C_{12}H_4O_2Br)_2Ca$, and it contains 29 to 30 per cent. of bromide. It is a colourless, odourless, and, in contrast to the alkaline bromides, tasteless powder, well borne by the stomach, where it is converted into dibromobenzoic acid, a substance which has no action upon the stomach, and only becomes absorbed when it has passed into the intestine. The author finds the action of sabromin to be less prompt, but more lasting, than that of the alkaline bromides. He considers the drug especially suitable for hysteria, neurasthenia, nervous excitation, palpitation, sense of anxiety, and nervous insomnia. V. Mering usually prescribes 1 gram two or three times daily, but he has given as much as 6 grams daily over a long period. Potassium bromide contains 67 per cent. of bromide, while sabromin only contains 30 per cent., and since the therapeutic effect of the latter equals that of the former, while the dose is about the same, it follows that a smaller quantity of bromide is required when the sabromin is administered. This may partly account for the fact that signs of bromism have never been observed from the use of sabromin, even in animals to whom very large doses have been experimentally administered.

111. Europhen.

IODOPHORM acts by the liberation of iodine in the secretion of wounds, and in consequence is much valued both as a disinfectant and as a stimulant to granulations. The

disadvantages of the preparation include its highly penetrating smell and its toxicity. P. Meissner (*Berl. Klin. Woch.*, August 31st, 1908) points out that even when the odour of iodoform is not objected to, the fact that it is frequently used for soft sores, and that this use is so well known, renders it unsatisfactory to the public. In seeking for a substitute, the chemists have turned their attention to iodized phenols, and in 1901 the employment of isobutyl-ortho-cresol iodide was suggested. This compound is now known as *europhen*. It is gained by allowing a solution of iodine in iodide of potassium to act on an alkaline solution of isobutyl-ortho-cresol. It is a yellow, light powder, possessing a faint odour like saffron. It is insoluble in water, but easily soluble in ether, alcohol, chloroform, and fatty oils. It contains 28 per cent. of iodine. Its physical properties include a capability of adhering well on mucous surfaces and wounds, and in virtue of its lightness small masses are able to cover comparatively large surfaces. Under the influence of moisture, body temperature, and an alkaline medium, iodine is split off, and this, being combined with the secretions, is absorbed and is eventually excreted in the urine. The advantages of europhen as a substitute for iodoform appeared to Meissner to justify a trial, and he therefore applied it in 32 cases of non-infecting chancre. Twelve of these cases were complicated in so far as gonorrhoea was concerned. In all cases it was well tolerated, and the effect was satisfactory. The secretion soon cleared up, the sloughing or dirty surface of the ulcers gave way to healthy granulations, and healing took place steadily. He employed it by powdering a mixture of europhen and boric acid in equal parts every morning and evening by means of a fine paintbrush. The average duration of the healing was between six and ten days. In all cases the powder appeared to diminish the local pain. He has further used it in some cases after the excision of a syphilitic sore. In discussing the action the author states that the splitting off of the iodine is gradual and continuous, and for this reason he is inclined to ascribe special value to the local application. He recommends it strongly.

PATHOLOGY.

112. The Pathogenesis of Tuberculous Neuritis.

G. C. MIRANO (*Riv. Crit. di Clin. Med.*, Florence, 1907, p. 681) discusses the etiology of that somewhat rare complication of pulmonary tuberculosis, the appearance of muscular atrophy and sensory disturbances in the limbs, with loss of the reflexes. These symptoms have been referred by some to peripheral neuritis, by others to changes taking place in the spinal cord (myelitis). Peripheral neuritis has been produced in the lower animals by several experimenters by the injection of tuberculin, and degenerative changes in the anterior cornual cells have been recorded in some of these cases. A few observers have even recorded degenerative changes in the cells of the motor cortex, or in Purkinje's cells in the cerebellum, in cases of pulmonary tuberculosis. Mirano's patient, a man of 19, gave a history of tuberculosis acquired about a year previously in a very dusty flour mill: the symptoms were cough, haemoptysis, night sweats, and wasting. Three months before Mirano saw him he began to complain of pains, formication, weakness, and some rigidity in the legs rendering walking difficult, and he had difficulty in extending his fingers. On examination he showed marked tuberculous lesions at the left apex; a few tubercle bacilli were repeatedly found in his sputa, and he gave a positive tuberculin reaction. He was emaciated, with marked atrophy of the muscles of the thigh, of the tibialis anticus and peronei, of the muscles on the flexor aspect of the forearm, and of the interossei in the hands. Steppage gait was marked, and dorsal flexion of the feet was impossible. Romberg's sign was absent. The plantar, patellar, cremasteric and abdominal reflexes were abolished on both sides, and Babinski's sign was absent. The nerve trunks were not tender, and no trophic changes in the skin were seen: sensation (touch, pain, heat) was not impaired. The reaction of degeneration was well marked in the legs and arms: strong currents were necessary, and ACC was often obtained before KCC. Fever was absent. The patient improved much under treatment by rest, good food, anti-septic inhalations, and galvanism to the extremities. The gait improved much, the knee-jerks and cremasteric reflexes reappeared, the reaction of degeneration was less marked. Mirano argues that this case was undoubtedly one of tuberculous peripheral neuritis. References to the literature are given.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

113. Cheyne-Stokes Respiration.

CHEYNE-STOKES respiration is met with in cerebral, cardiac and renal affections, and in some infections and intoxications. It consists of a series of respiratory movements, at first small and superficial, then more deep and rapid. A progressive diminution in the amplitude and rapidity of these movements then takes place, until complete respiratory cessation accompanied by torpor and somnolence occurs. This respiratory rhythm, due to irritation of the nerve centres, may be observed in organic lesions of the nervous system, such as haemorrhage, softening, degeneration of the vagus nerves, cerebral and cerebellar tumours, acute meningeal affections, and also when there is no organic disease of the nerve centres. In cardiac cases there is no doubt a certain degree of oedema of the nerve centres accompanied by a stimulation of these centres by toxic substances. In chronic renal disease Cheyne-Stokes breathing may appear only in the late stages when the heart becomes dilated, and this fact indicates that by relieving the cardiac dilatation one may cause the Cheyne-Stokes type of respiration to disappear. The most grave form of Cheyne-Stokes respiration, according to Fliessinger (*Journ. des Pratic.*, October 20th, 1908), is that dependent upon chronic renal disease not complicated by cardiac insufficiency. For its treatment one employs the same remedies as for uraemia—blood-lettings, milk and water diet, but these remedies are not often so effective in this condition as in uraemia. Injections of morphine or of heroin, the former in 4 to 5 mg. doses, the latter in 2 to 3 mg. doses, give better results. In acute renal disease the prognosis is less grave. A much less grave form of Cheyne-Stokes respiration is that which occurs in cases of renal insufficiency following on cardiac insufficiency. In such cases of these where the heart is much dilated and there are engorged viscera and oedemas, marked improvement can be obtained. For these cases the proper treatment consists of a reduction in the quantity of liquid taken (Huchard's milk and water diet, 1,500 grams in the twenty-four hours), administration of digitalin in very small doses given for some days, then stopped for a few days and again repeated. Theobromine should only be given when auria is marked, and not before the third or fourth day of treatment. Morphine by subcutaneous injection may be employed, but with the greatest care and caution, but in doses of 2 to 3 mg. is without danger. Morphine calms the dyspnoea and lowers the extreme excitability of the patient. After the fourth or fifth day the milk and water diet may be replaced by broth and cream; then gradually rice may be added to the milk, also cream; potato cooked in water free from salt and boiled eggs may also be given. In Cheyne-Stokes respiration occurring in cerebral diseases the gravity depends much on the extent of the disease. When the disease is limited the altered breathing may disappear, but with extensive disease death is generally quickly brought about. In these cases injections of camphor in oil may be employed. When infections and intoxications are the cause of Cheyne-Stokes breathing it is necessary to direct treatment towards the primary cause. In typhoid fever, diphtheria, small-pox, cholera, and pneumonia Cheyne-Stokes respiration may occur, and in such cases two factors are in action, namely, cardiac weakness and infection with toxic products. In these cases the prognosis is grave; the proper treatment will be to employ cardiac tonics (digitalin, camphor) and diuretics. Certain drugs, such as morphine and the bromides, when used in toxic doses may cause the appearance of Cheyne-Stokes breathing, but with suppression of the drug one may hope for a satisfactory termination.

114. Nutrition and Nervousness in Children.

IN dealing with nervousness in children and the causal part played by malnutrition, F. Siegart states that he only refers to acquired nervousness, and not to inherited cases or to children who have become nervous in response to long-continued illness and consequent nursing and exaggeration of symptoms (*Munch. med. Woch.*, September 22nd, 1908). His cases include children who have been subjected to a special form of strengthening diet. Children who are fed on large quantities of milk to the exclusion of all vegetables,

or on milk and eggs, frequently present a typical picture of anaemia, with loss of appetite, and marked constipation. In analysing his cases he finds that a diet consisting of proportionately too much albumen and fat, and too little carbohydrate, alkali, and cellulose, especially when the total quantity is too small, leads in every case to a marked dystrophy, and in these cases nervousness is one of the most salient symptoms. Diets consisting of an adequate quantity of albumen and fat, with too little carbohydrate and no vegetable or fruit, are not quite so harmful, although these, too, lead to typical dystrophies. He gives a number of examples of these cases, and traces in each case the fault to the improper diet. The author attacks the so-called strengthening diets for children very severely, and attempts to standardize the diets for children between 3 and 10 years of age. With regard to the symptoms of that form of dystrophy in which his nervousness is found, he emphasizes the pale, yellow complexion, the want of appetite, the constipation, the restlessness, and the loss of weight. The treatment of this condition, he says, is very simple. The diet should be one which does not lead to unhealthy fattening, but which can cover the requirements of the children's bodies. Eggs should be excluded, as he finds them unreliable and dear. They may, however, be used in cooking certain dishes, such as puddings, macaroni, etc. Meat should be given once a day after the age of 3 in small quantities, and may be either red or white. Cocoa, chocolate, and husked legumens should be avoided. Milk should be limited in quantity, and may best be given in the form of milk puddings (rice, semolina, barley, and others). When constipation is present the bread should be of coarse-grained flour (Graham, etc.). Fruit, both raw and stewed, with a plentiful supply of vegetables and salads, should form a large part of the diet. He gives further details with regard to the meals which he advises and by means of which he has obtained good results.

115. Alleged Dangers of the Conjunctival Reaction.

TEICHMANN (*Mediz. Klinik*, June 28th, 1908) bases the following conclusions on his observation of 1,500 cases, and on a comparison with the results obtained by others: (1) That the harm alleged to have been caused by the conjunctival reaction depends without exception on the choice of unsuitable tuberculin preparations or on the neglect of important contraindications. (2) That the instillation, in diseased and especially in tuberculous eyes, in the scrofulous, particularly in those of youthful age, and a second time in the same eye, especially with strong solutions, is not permissible. (3) That the conjunctival reaction—undertaken with freshly-prepared solution—is absolutely free from danger, and is at present the simplest means of diagnosing a tuberculous focus, not recognizable by our other clinical methods of examination. The cases observed by Teichmann were all treated with 1 per cent. old tuberculin, and the majority showed only a mild conjunctivitis lasting three or four days. Isolated cases, however, occurred in which chemosis, follicular enlargement, purulent secretion, and subjective sensations of pressure and burning were present. These were limited to the conjunctiva, and disappeared in four to eight days, leaving no trace, and the eyes, after some further months of observation, still gave no sign of conjunctival irritation. Reactions which threaten to be severe are readily checked by the instillation of cocaine 2 per cent. and adrenalin 1 in 1,000. These marked reactions occur almost solely in cases where tuberculosis is clinically manifest, so that the test will not in future be used in such cases, but if it is used, a transient ophthalmia is better than the general disturbances which, in these same cases, would probably occur from the injection of tuberculin. Severe conjunctivitis of long duration, corneal ulcers, iritis, etc., described as having been occasioned by the conjunctival reaction, were in no case observed. Calmette's and Hôchst's tuberculin are inconstant and much too strong. The author advises the use of Koch's old tuberculin in 1 per cent. or at most 2 per cent. solution. Any irritant condition of the urea is an absolute contraindication. Simple chronic conjunctivitis was never made worse, nor did any complication arise, but the test is difficult to determine in such cases. In the literature, harm resulted in no case (with a single unexplained exception) from any other cause than the omission of one or other of the above-mentioned precautions, which we have thus experimentally learnt to be necessary.

SURGERY.

116. Congenital Dislocation of the Hip.

M. FROELICH (*Rev. d'Orthop.*, January 1st, 1909) says that at any age up to about 3 years congenital dislocation of the hip is a malformation which is curable by the manipulative method, and which does not require more than four or five months in the cure. At more advanced ages the treatment becomes proportionately difficult until we are met by cases which have passed the age for which these operations are curative. Here we still continue to fumble. There are three methods open to us for the relief of these cases, namely, the mechanical, the subtrochanteric osteotomy of Kirmisson, and the operative method of forcible abduction of Lorenz and Redard. The mechanical method has given very satisfactory results. It consists of some form of corset with a moulded pelvic piece and thigh piece which retain the leg in a position of abduction, which is the most favourable for fixing the head of the femur. The pelvis-trochanteric muscles shorten and the bone is firmly retained. It is necessary to add to the heel of the boot on the side of the shorter leg. Subtrochanteric osteotomy is indicated when the telescopic movement is large and progressive, when walking with the abducted leg is painful or when lordosis is pronounced. The chief objection to the method of forcible abduction under anaesthetics is the necessity which exists for wearing after operation for months or years a rigid apparatus of moulded leather or celluloid, in order to maintain abduction after rupture of the adductors, which without such apparatus is not maintained. The author gives short notes of 10 cases in which a modified operation had been done after a preliminary extension by weight and pulley. The children were aged 9 to 14; one case was bilateral, the remainder unilateral. There were 2 boys and 8 girls. Extension was used for periods between eight days and two months, with a weight not exceeding 25 kilograms. As a result of his experiences the author is of opinion that the age is not of such great importance as the degree of luxation. When the femoral head is more than 3 cm. displaced from the cotyloid cavity reduction should not be attempted. The state of the muscular system is of enormous importance. When well-developed it is better to abstain from interference, but when weak and small replacement is easy. Again, when the head of the femur is fixed and there is little up and down movement it is not well to interfere. When a weight of from 10 to 12 kilograms is not enough in eight days to bring down the head a distance of at least 1 cm. it is useless to prolong the traction. It will not be tolerated, and there is a danger of bringing about paralysis of the sciatic nerve. He concludes that a few cases which have passed the age limit for the bloodless operation are still benefited by a trial of the method of radical cure.

117. Thyrotomy for Tubercle of Larynx.

SCHMIEGELOW (*Ugeskrift for Læger*, February 4th, 1909) demonstrated before the Danish Oto-Laryngological Society a case of tuberculous disease of the larynx cured by thyrotomy. The patient, a woman aged 49, had been hoarse for about one year, with some cough and expectoration, but no wasting. Six months later a rough infiltration was discovered on the left superior vocal cord, the true vocal cord being fixed. A detached piece appeared, on microscopic examination, to be a typical specimen of flat-celled carcinoma. In the hospital symptoms of phthisis were discovered in both lungs. Thyrotomy was performed after a previous insertion of a Hahn's cannula, and both superior vocal cords were removed by scissors and knife. The inside of the thyroid cartilage was scraped with a sharp spoon, afterwards being sutured with catgut. The microscopic examination now showed typical tuberculous structure. The operation had been performed fourteen months previous to the patient being shown, and she had spent ten months in a sanatorium, where she had gained 17 lb. in weight. The larynx was now found to be scarred and somewhat stenosed circularly; everywhere the mucous membrane was free from tuberculous processes. Had the right diagnosis been made, the exhibitor would not have attempted a thyrotomy, as his previous experiences had shown that any larger operative interference in cases of laryngeal tuberculosis often produced a recrudescence of the lung tuberculosis. He had even lost some cases from acute military tuberculosis. It is possible that in this case the favourable result was obtained first by the energetic, complete removal of the tuberculous tissue and secondly by the primary closure of the larynx without tamponade and the simultaneous removal of the tracheal tube, thereby reducing the post-operative irritation to nil.

118. Post-operative Parotitis.

MARCHETTI (*Rif. Med.*, January 25th, 1909), owing to a recent experience of this condition in two cases (one after an operation for hernia, and the other after an ovariectomy), has given some attention to the subject. The rarity of such cases may be gauged from the fact that only 1 case has occurred out of 10,000 operations in the last ten years. The symptoms are the usual ones described in connexion with mumps, and the cases may be divided generally into three main groups: (1) A mild catarrhal type where the swelling and pain subside in about a week's time without suppuration (about 33 per cent.). (2) A severe and often fatal type where extensive phlegmonous inflammation sets in, with necrosis of tissue, suppuration and probable loss of the gland, and salivary fistula (48 per cent.); this group requires free surgical treatment. (3) A small group (19 per cent.) where some suppuration occurs, but the pus makes its way out through Steno's duct. Adults, especially women (78 per cent.), are more frequently affected than children. Many theories to explain the onset of this particular form of parotitis have been put forward, and the author briefly discusses some of them, laying greater stress on the theory that it is due to exalted virulence in the oral flora, which in its turn is accentuated by the diminished activity of the parotid gland, due to fear, preoperative preparation (purge, altered diet, etc.), diminution in mastication, buccal manipulation by the anaesthetist. But, as the author points out, all these supposed causes are more or less prevalent in every operation, and yet post-operative parotitis is very rare; again, parotitis does not occur as the result of prolonged septic conditions of the mouth. He believes that the parotitis in question is merely post-operative in the chronological sense of the term, and not in any causal sense; that it is not scialogenic in origin, but most likely due to some unrecognized trauma.

OBSTETRICS.

119. Bacteria of Puerperal Uterus.

A. W. W. LEA AND E. J. SIDEBOTHAM (*Journ. of Obstet. and Gynaec. of the Brit. Emp.*, January, 1909) review the present-day knowledge of the organisms found in the vaginal secretions and lochial discharges of pregnant and puerperal women, and give the results of their own investigations as to the bacteria present in the puerperal uterus, and especially as to whether virulent streptococci can in these cases be distinguished from non-virulent ones by the power of haemolysis which they possess. Observers of the organisms found in the vagina during a normal pregnancy have arrived at widely different results. Walthard gives the following list of organisms which have been found: (1) Facultative anaerobic streptococci of the type of *Streptococcus pyogenes puerperalis*; (2) facultative anaerobic diplo-streptococci; (3) anaerobic streptococci; (4) staphylococci of the type of *Staphylococcus albus*; (5) bacteria of the *coli* group; and in rare cases (6) *Bacillus funduliformis*, (7) pseudo-tetanus bacilli, (8) *Bacillus aerogenes capsulatus*. The vaginal portion of the cervix and even the lower part of the cervical canal contain many organisms which do not, however, appear to be able to penetrate the protective zone of the cervical secretion during pregnancy, and all observers are agreed that the cavity of the uterus during a normal pregnancy is free from organisms. During the puerperium a large number of organisms of apparently little virulence are present at the vulval orifice; the vagina is comparatively free during the first twenty-four hours, but later the organisms present during pregnancy multiply rapidly in the alkaline secretion; and, in spite of much difference of opinion, it must be concluded that organisms closely resembling those present in puerperal infection often exist in the upper part of the vagina and in the cervical secretion shortly after delivery, and that spontaneous ascent of the organisms into the uterine cavity is not infrequent. Schottmüller, who has for several years made a large number of observations, chiefly of organisms in the blood in cases of septicæmia, was the first to claim that the virulence of the organism varies with its haemolytic power, and he regards a haemolytic streptococcus as pathogenic. His conclusions have not been altogether confirmed by recent work, since many observers have shown that haemolysis may be produced by organisms of little virulence, although considerable evidence also exists to show that the organisms in severe puerperal infection always show a marked power of haemolysis. Lea and Sidebotham examined the lochial secretions in a series of 58 cases between the second and

ninth day after delivery, and found that organisms were present in the cervical canal cavity of the uterus in 80 per cent. of the cases. It was worthy of note that in 5 out of the 12 sterile cases no vaginal examination had been made during labour. The organisms were mainly those which have been shown to be present in the vaginal secretion during pregnancy; the authors find, however, that there is considerable evidence to show that organisms also ascend from without during the early days of the puerperium. In the great majority of the authors' series of cases the course of the puerperium was entirely uninfluenced by the presence of the organisms. In 20 per cent. of the cases streptococci were cultivated, and in 5 cases these showed marked power of haemolysis. In 4 of the cases in which haemolytic streptococci were demonstrated the puerperium was afebrile throughout; in the fifth case there was a superficial infection of the endometrium with febrile symptoms. The authors, therefore, arrive at the conclusion that the presence of haemolytic streptococci in the vaginal or uterine secretion cannot, in itself, be regarded as an indication of the existence of infection.

120. Grocco's Sign in Pregnancy.

SMITHIES (*Amer. Journ. of Med. Sci.*, October, 1908) records his observations upon 7 cases of pregnancy in which he investigated the value of the paravertebral triangle of dullness (Grocco's sign). The presence of paravertebral dullness in a case of an enormous multilocular cystadenoma suggested the possibility of the occurrence of similar areas of dullness in pregnancy. The patients were all primiparae ranging in age from 16 to 22 years. Five were pregnant between the eighth and tenth month, 1 was fifteen days overdue, and 1 was at the sixth month. A well-marked area of dullness along the spine to the left of the mid-vertebral line was demonstrable in all but 2 of the cases, and these areas were roughly triangular with more or less convex hypotenuses, but the areas were not so distinctly triangular as in cases of simple pleural effusion. The triangles varied in size according to posture, being generally larger with the patient lying on the left side. In 2 of the cases no paravertebral dullness was present, but as one of these was at the sixth month it would be of interest to note whether the sign developed later in the pregnancy. The presence of this paravertebral dullness appears to be due primarily to the abdominal tumour displacing other viscera upwards, and this, in combination with a displacement of the mediastinal tissues by an abnormal arching of the diaphragm whereby the lung may become temporarily moved away from the spine, affords a reasonable explanation of the symptom. In this connexion it is significant that, in the 2 cases referred to in which the sign was absent, in one the uterus had descended just before labour, and in the other the uterus had only reached the size of a six months pregnancy.

GYNAECOLOGY.

121. Retroflexion of the Uterus.

WHILE he realizes that retroflexion of the uterus can cause a number of very definite symptoms and may be the sole cause of a woman's trouble, Max Henkel (*Luench. med. Woch.*, January 26th, 1909) recognizes many cases in which no symptoms or discomfort are produced at all. In forming a diagnosis of retroflexion it is primarily necessary to distinguish the fixed form from the mobile form. The fixed form produces more frequent and severer symptoms than the mobile form, and it is rare for the appendages or pelvic cellular tissue to escape from inflammatory complications in the case of the former. Mobile retroflexion may be practically without symptoms which are noticed by the patient; but Henkel points out that the constitutional or virginal form is a frequent cause of sterility, and that this sterility may be at once removed when the uterus is placed in a proper ante flexion. Some obstetricians believe that the uterus is normally retroflected, but Henkel cannot conceive what reply can be given to the fact that a retroflected pregnant uterus becomes incarcerated unless the misplacement is corrected. He thinks that the gynaecologist should only determine whether sterility is caused by retroflexion by correcting the misplacement and watching whether pregnancy develops. Each case must be dealt with on its own merits. With regard to symptoms, he states that congenital retroflexion only rarely causes any at all, save when marked infantilism or sharp flexion is also present. In these cases the symptoms are those of dysmenorrhoea. The symptoms

are not wholly or even chiefly due to the backward displacement, but can be better explained on the basis of the defective development of vessels, muscles, etc., and for this reason this form is frequently not much relieved by correcting the displacement. In distinguishing between mobile and fixed retroflexion, he advises Schultze's bimanual method and the uterine sound to replace the uterus. The former is only applicable when the abdominal walls are flaccid, so that the hand can be delved well behind the organ. At times it is wise to put the patient to sleep with chloroform for this purpose. This method is not well adapted to primiparae, whose abdominal muscles are rigid and vaginae narrow. The sound should be employed when the bimanual method fails or cannot be easily carried out, but it is necessary to exclude pregnancy and cervical catarrh first. Inflammation of the appendages also contraindicates the use of the sound. No force may be used in attempting to replace the uterus. The whole length of the sound lying within the uterus must touch the anterior wall of the uterus, but the point, which should not be sharp, should not reach quite to the fundus. When the uterus is replaced, provided that no inflammation of any neighbouring tissues is present, a ring pessary may be employed. He prefers Breuss's modification of the Thomas pessary, which has the same curve, but the hind portion is not so thick. Vulcanite, glass, or celluloid all form excellent pessaries. It is important that the pessary fit well—that is, that it is the smallest which keeps in place. In young individuals, however, he finds that pessary treatment should not be employed as a rule. The proper course is to perform the Alexander-Adams operation. He discusses the technique of the operation and some details in the after-treatment. When a mobile retroflexion is complicated with inflammatory conditions or with prolapse of the ovaries, he prefers to perform ventrifixation, and considers that Olshausen's operation is the best. When there is uterine prolapse, the best method is Schauta's vaginoplasty. Details of these various procedures are given, but his accounts do not differ essentially from the accounts published in textbooks and elsewhere.

THERAPEUTICS.

122. Treatment of Syphilis by Atoxyl.

CHARNEILL, BERTIN, AND POITEAU (*L'Echo Méd. du Nord*, October 25th, 1908) have used atoxyl in the treatment of numerous cases of syphilitic disease, and a paper on the above subject gives the results obtained by them. With regard to the physiological properties of atoxyl, the authors point out that the drug is eliminated by the skin and especially by the kidneys, and in some case causes a transitory albuminuria. Elimination, however, is not always rapid, and, like mercury, the drug is liable to accumulate in the system. Koch, Hallopeau, etc., have shown that the drug possesses toxic properties, and its administration may cause headache, vertigo, deafness, fever, vesical tenesmus, retention of urine, and especially blindness. For these reasons it is prudent not to exceed 0.5 gram as a dose, and not to repeat the dose oftener than every other day. Further, it is wise not to continue the drug for more than ten days, then to allow an interval of fourteen days to elapse before entering on another ten days of treatment. When given subcutaneously or injected into the muscles (the two common modes of administration) the drug gives rise to no local disturbance. In many patients whom the authors have treated with atoxyl injections soon after the appearance of the primary chancre they have found that secondary symptoms of syphilis have appeared late, but that the disease has ultimately pursued its usual course. Out of 30 patients presenting various syphilitic manifestations which were treated by atoxyl injections by the authors, in all the general health appeared markedly improved; this, as the authors admit, may possibly have been due to a better condition of life and better hygienic surroundings of the patients whilst in hospital. On the actual syphilitic manifestations atoxyl appeared to have a very slow effect, and primary chancres remained stationary for a long time, in spite of atoxyl treatment. With regard to secondary syphilitic lesions, the authors found that mucous patches rapidly disappeared under atoxyl injections, whilst in other cases of secondary syphilis not very favourable results have been obtained. In tertiary syphilis arrest, and even slight retrogression, of the lesions have been observed; but a complete disappearance of tertiary lesions has never been observed even after long-continued treatment with atoxyl. In all cases in which atoxyl has had very little curative effect treatment by mercury has been

carried out, with the result that all symptoms have rapidly disappeared. As a result of their experiences with the use of atoxyl in the treatment of syphilis the authors conclude that mercury and iodide of potassium cannot be abandoned for atoxyl. They admit, however, that atoxyl has a certain curative effect, and that its employment may be of value in certain cases. However, in the authors' opinions, atoxyl will never become a specific for the treatment of syphilis; its effect in this disease is much inferior to that of mercury, and its toxic effects, especially on the visual apparatus, are greater than those which may result from mercurial treatment.

123.

Treatment of Anthrax.

BARLACH (*Med. Klin.*, November 1st, 1908) has had considerable experience in the treatment of anthrax at Neumünster, a seat of the leather industry. During 1872 to 1900, 10 cases were treated by him, all by the purely expectant method; of these 3 died. During 1900 to 1905, 9 cases were treated surgically. None of these died but recovery was slow. From 1905 to the present time, of 23 cases, treated according to the author's present method, none have died, and the period of treatment required has been short, while there have been no bad after-effects—for example, scars, etc. Barlach's method is as follows:—(1) Rest in bed in every case. This is absolute and rigidly enforced, since it is believed that movement favours the entrance of the bacilli into the blood stream. For the same reason all pressure on the pustule is carefully avoided. (2) In slight cases, fomentations of aluminium acetate or sublimate, the former especially when the pustule is on the face. The author considers cases slight when the disease has remained local, the pustule being situated on an area not markedly hardened, even if there is slight redness and swelling. (3) In severe cases the pustule is slit open, the pointed thermo-cautery is used in a ring of rather deep punctures close together, around the pustule, so that a groove results and this groove hinders the passage of the bacilli from the pustule into the surrounding tissues. The numerous incisions formerly employed were not found to be necessary, and the author now only uses them when there is excessive tension from the oedema. Antiseptic fomentations are also used. In very severe cases, with marked oedema and severe erysipelas, Barlach finds injections of iodine to produce a surprisingly good effect. He injects one or two drops of the tincture at different points on the border of the erysipelas, about 5 to 10 cm. apart, using generally, in all, about 8 minims, or, in very extensive cases, up to 17 minims. This may be repeated, if necessary, in the following days. The author states, in passing, that he has found this iodine injection excellent in cases of ordinary erysipelas, especially of the wandering type. Small abscesses occasionally form at the site of the injection. Camphor injections are also given in severe cases when indicated.

124.

Hypnotic Suggestion in Nervous Pain.

DELIUS (*Med. Klin.*, December 27th, 1908) explains how it is possible to remove so-called nervous pains or psychoses by physical means. The sensation of pain is brought about by a nervous excitation of the neurons in the cerebral cortex (to which the stimuli from the periphery reach) awakening in us the consciousness of pain. Such a neuron-exciting process is called "neurokrym" or nerve waves. Stimuli must be sufficiently intense as well as extensive in order to pass beyond the so-called "stimulus threshold." The height of this varies in different people, in the same people at different times, and at the same time in different groups of cells of the cerebral cortex, which may be in varying conditions of excitability. Modern psychology supposes that it is the ganglion cells of the cortex of the brain—that is, the neurons—which the sensory stimulus reaches, and in which at the same time the remembrance of the stimulus is stored up as a recollected image, a conception. If a neuron receives a similar sensory stimulus often, or if the consciousness of the neuron is frequently awakened through association, then the recollected image will become clearer and sharper with practice, and, in future, an ever-decreasing stimulus will be sufficient to awaken the recollected image—that is, the stimulus threshold becomes ever lower. Since the conception is only the impression of the sensation, and differs only quantitatively, not qualitatively, from the sensation, it is clear that a conception may exist through associative stimulation, if the nerve waves are only strong enough to lead to sensation. This is called hallucination. Hysteria may be the result of the persistence of hyper-excitability of certain neurons after the disappearance of

an organic cause. It is often a case more of primary over-stimulation of the neurons combined with a prohibition of restraint, the state of mind playing an important part. The emotional idea of a diseased condition is by itself sufficient to produce the latter. Nervous pains are due to illusions and true hallucinations rather than true sensation, and therefore can be removed by psychical measures. It is a case of illusion when peripheral sensory stimuli, which ordinarily cause no painful or no sensation at all, are interpreted by over-excitable centres as pain. Delius has successfully treated facial and brachial neuralgias, sciatica, cardiac pain, and migraine by psycho-therapeutic measures. In a case of trigeminal neuralgia, first right, then left, or always symmetrical, one should first think of a psychalgia. Signs of neurasthenia or hysteria will also be present. Delius dealt successfully with 60 cases of disturbed menstruation by hypnotic suggestion; the pain during a period ceased or became much less, in cases where the flow previously lasted too long the duration was shortened, excessive loss was reduced, and the onset of menstruation brought about earlier or later as required. Suggestion may prevent the consciousness of pain even of organic nature, and Delius twice brought about a practically painless confinement, but pain of organic origin cannot be removed for long. Delius concludes that anomalies of menstruation are largely due to the co-operation of cerebral causes. Perfectly healthy women have practically no pain during the period. Local inflammation causes pain, and, owing to the monthly recurrence of the period, such a condition of over-excitability of the neurons may be gradually brought about, fear playing an important part; finally, even after healing of the local affection, the normal flow may overstep the stimulus threshold, and call forth consciousness in the form of pain; and, on the other hand, it may produce further nervous paths which lead to an abnormally severe flow. In hypnotic treatment by suggestion, the over-excitability of the affected system of neurons is lowered, and thus their stimulus threshold raised, so that in future neither stimuli reaching them from the periphery nor the association of sensations connected with the idea of the disease will be in a position to produce painful signs of consciousness. One will then try by direct suggestion to bring about a momentary prohibition of perception, success varying with the suggestibility of the patient and depth of the hypnosis. Through the removal of pain by suggestion, the distrust of the patient disappears, and more powerful association channels in a better direction are produced. The more powerfully these innervation waves incite in the direction of healing the sooner are they in a position to prohibit the over-excitability of the diseased neurons maintained by fright. If one explains to the patient that precisely the anxious consideration of his condition is harmful, his conception and the impulse of his will in the right direction will help to strengthen the recovery. Delius maintains that one should desist from the use of hypnotism in all such suitable cases only when it cannot be attained, instead of reserving it for cases which defy every other therapeutic measure.

PATHOLOGY.

125.

The Blood in Gonorrhoea.

SARRA (*Gazz. degli Osped.*, No. 104, 1908), in view of the well-known clinical aspect (fever, pallor, general malaise, etc.) often associated with acute gonorrhoea, has carried out certain researches on the state of the blood in this condition. His conclusions are as follows: (1) In the early days of acute anterior urethritis the red corpuscles and the haemoglobin vary within limits that may be considered normal, but when the whole urethra is affected there arise signs of slight anaemia (diminution in the haemoglobin and number of red corpuscles). (2) More marked changes are seen in the white corpuscles, which tend to reach figures above the normal, and if the urethritis is total, and especially if there are complications, a definite hyperleucocytosis is present. (3) This hyperleucocytosis is almost entirely made up of polynucleated neutrophilic cells. If these descend to the normal or below, then there is a larger number of eosinophiles. (4) The eosinophiles in anterior urethritis vary within normal limits: in total urethritis they are increased in number, and that may occur either at the acme of the disease or during defervescence. (5) In chronic urethritis the blood formula varies within the normal limits. These facts confirm the clinical view that during the acute stage of gonorrhoea there is a certain amount of general infection.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

126. Haemorrhagic Purpura.

LENOBLE reports the following case (*Arch. des Mal. du Cœur, des Vaisseaux et du Sang*, August, 1903): A painter, aged 16, was admitted to hospital on May 4th, 1903. About one month previously he had fallen on to his back, and a few days later complained of pain over the region of the kidneys. Ten days after the fall he suffered from violent pains in the abdomen and legs, and the following day vomiting and severe diarrhoea set in, the stools containing blood. Repeated attacks of epistaxis occurred, together with bleeding from the gums. The patient was feverish and delirious. Red spots then appeared on the arms and legs, and the abdomen became distended and painful to palpation. On the fifteenth day following the accident the patient passed bloody urine. When admitted to hospital he was found to be a well-developed man: the mucous membranes were of a good colour and the skin slightly icteric; the abdomen was distended and painful; there was no oedema of the limbs. On percussion, there was slight dullness found in the flanks, the rest of the abdomen being tympanitic. The tongue was pale, the appetite very bad; vomiting had stopped, but diarrhoea still persisted, although no blood was seen in the stools. Heart and lungs were healthy. The urine was of a deep red colour. On rectal examination there was to be felt behind the bladder a hard mass. Slight attacks of epistaxis occurred from time to time. On May 20th a confluent purpuric eruption appeared on both forearms and both legs. From this time the abdomen ceased to be painful, but signs of ascites appeared. Diarrhoea ceased and the stools became of a putty colour. Signs of fluid in each pleural cavity at this time occurred. By June 1st the purpuric eruption was clearing up, but the ascites was increasing and oedema of the legs and scrotum appeared. On June 5th a fresh attack of purpura occurred; this, however, had completely disappeared by the 11th; the urine contained a large quantity of albumen and, on centrifugalization, red cells. The examination of the blood on May 23th showed well-coloured red cells and numerous haematoblasts; the white cells were abundant. The coagulation time of the serum was ten minutes. The serum was alkaline in reaction and did not give a positive Gmelin reaction. A differential count of white cells showed the following: Polynuclears, 71.2 per cent.; lymphocytes, 25.5 per cent.; mononuclears, 3.3 per cent.; eosinophiles, 0.4 per cent.; mast cells, 0.1 per cent.; transitional forms, 1.7 per cent.; no myelocytes. The red cells exhibited neither poikilocytosis nor polychromatophilia, and no nucleated red cells were seen. On June 5th the red cells numbered 3,162,000, the white 10,330, and large numbers of haematoblasts were present. There were no nucleated reds. The differential count of white cells gave much the same result as on the first occasion.

127. Muscular Rheumatism.

EMIL SCHWAB (*Zentralbl. f. die gesamte Therap.*, October, 1908) deals with the subject of muscular pains under three headings: (1) Muscular pain due to affections of the muscles which are preceded by some pathological process in the nervous system, as, for example, the pain of the cramps which are an expression of the alcoholic diathesis; (2) muscle pain accompanied by anatomical changes in the muscles, as in purulent or haemorrhagic acute polymyositis, or in the acute simple or rheumatic polymyositis, the symptoms of which are high fever and severe muscular pain; (3) pain not accompanied by any obvious pathological anatomical change in the muscles. Cases belonging to the third group are those frequently met with, and, since within the group are included many different conditions whose common characteristic is the muscular pain, the author would prefer to give to them the name "myalgia" rather than the more pretentious ordinary name of "muscular rheumatism." The diagnosis of myalgia needs considerable care: it is not enough that spots painful on pressure should be found on the muscle, but the body of the muscle must be painful in its whole extent. Where the muscles of the trunk are in question it is not always easy to differentiate hyperaesthesia of the skin from myalgia. In connexion with rheumatic torticollis and lumbago, Schwarz puts forward the views of Erben. Erben finds that in

rheumatic torticollis the pain is on the convex, not on the concave, side of the neck, and he considers it to be caused by the distortion of the cervical spine, and thus to be a joint affection rather than true myalgia; similarly lumbago, according to Erben, is either a neuralgia or caused by an acute distortion of the joints; the author is unable to agree with this explanation of lumbago in all cases, because of the permanent benefit which he has often seen result in lumbago from the application of strong faradic currents. Abdominal myalgia is often the cause of a mistake in diagnosis: in one case which came under the author's notice myalgia was diagnosed as cholelithiasis, while in another the patient was treated for myalgia, but died of perforation of an ulcer ventriculi. In testing for abdominal myalgia the author's practice is to put his hand upon the rectus muscle while the patient is lying down; the patient then sits up, the muscle contracts almost against the investigating hand, and in cases of myalgia there is acute pain. Errors may still arise, either because the muscular contraction has an irritating action upon the deeper lying muscles, as is perhaps the case in abdominal colic, or because hyperaesthesia of the skin may occur, as in appendicitis or cholelithiasis. The diagnosis of other forms of muscular rheumatism is also considered. Finally, Schwarz points out that the pain of myalgia is not always most severe after movement, but is very often worse at night in bed. Women at the time of the climacteric are very subject to nightly exacerbations of myalgia, often accompanied by acroparaesthesias of the fingers and legs; the association of symptoms suggests the possibility that the seat of the disease is not in the muscles, but that the muscular pain depends upon an abnormal nervous and vasomotor condition.

128. The Ophthalmic-reaction to Tuberculin.

A COMMUNICATION on the ophthalmic-reaction, which was intended for the meeting of the German scientists and physicians at Cologne, but which the author, A. Wolff-Eisner, was prevented from delivering there, was read at the Tuberculosis Congress at Washington, and is published in the *Muench. med. Woch.*, November 10th, 1908. With regard to the subcutaneous application of Koch's tuberculin, Wolff-Eisner states that while a positive reaction obtained by its means indicates the presence of tuberculosis, it by no means indicates that the disease is active. Positive reactions have been obtained in from 50 to 80 per cent. of persons who were apparently healthy. The cutaneous reaction seems to correspond fairly exactly. It is a handy and safe method of applying tuberculin for diagnostic purposes, but it discovers inactive and latent tuberculosis as well as clinically manifest tuberculosis. The conjunctival reaction, on the other hand, is capable of determining an active form of disease. It is positive in active tuberculosis, save in advanced stages. Healthy persons are said not to react to it, some apparently healthy persons react, and have been shown later to have been tuberculous; and, further, that some 5 to 8 per cent. have shown a positive reaction, but the future may show that they, too, were tuberculous. From this he concludes that apparently healthy persons who show a positive ophthalmic-reaction to tuberculin should be suspected of tuberculosis. The value of the reaction lies in the positive responses; negative results do not exclude active tuberculosis. It is, in his opinion, not a focal reaction, and in this fact its safety lies. The danger of a general reaction does not lie in the rise of temperature which manifests it, but in the fact that tuberculous foci respond to the introduction of the tuberculin. If the contraindications of the ophthalmic-reaction are strictly adhered to, there is no risk attaching to its employment. These include the avoidance of applying the tuberculin to an eye affected with tuberculosis, and of repeating the test in the same eye. Concentrated preparations should not be used. The author uses a special tuberculin, called "Ruefe-Enoch" in from 1 to 2 per cent. solution. He complains that ophthalmologists, who are in a specially good position to determine the value of the test, habitually neglected these contraindications. It has been stated that the reaction is unreliable. Wolff-Eisner states that those who say this are not good clinicians. Negative reactions in obvious cases of tuberculosis are indications of a bad prognosis, but the reverse does not hold good. Further, he considers that progress can be materially

assisted by a comparison of the ophthalmic and cutaneous reactions. In comparing the reaction with opsonin as a diagnostic and prognostic means, he has come to the conclusion that in spite of the very laborious technique involved in determining the opsonic index, this does not yield more information than does the ophthalmic-reaction. He states that his opsonin experiments, and also his experiments with complement deflection, have proved that tubercle toxin, corresponding in every way with tuberculin, is absorbed by every tuberculous patient. This means that an injection or other application of tuberculin cannot do more than the progress of the disease can do, and that when a patient has reacted to an application of tuberculin, it is open to the observer to ascribe the changes in the tuberculous foci either to the artificially-introduced tuberculin or to the tuberculin produced in the disease focus itself. He believes that various tissues are capable of producing receptors which combine the tuberculin, and thus localize the toxic action. This idea has a practical importance, inasmuch as it is possible to produce the receptors in connective tissue or in the skin by means of tuberculin injections or inunctions, which may attract the tuberculin produced in the pulmonary foci to itself.

SURGERY.

129. Intestinal Surgery.

The fifth *Bulletin of Research Work* in the Division of Surgery of the Medical School of Harvard University, published in December, 1908, contains four reports of experimental work on novel questions in intestinal surgery. Cannon and Murphy, in a paper on *The Movements of the Stomach and Intestines in some Surgical Conditions*, give the results of fluoroscopic observations made after operations on these viscera by means of the Roentgen rays. It is stated that after high intestinal section and suture gastric peristalsis is not interfered with. For about six hours after the operation the pylorus remains tightly closed against the peristaltic pressure of the stomach, and does not permit food to pass into wounded gut. There is a striking coincidence, the authors believe, between the duration of the delay of the discharge from the stomach and the period of the primary cementing of the intestinal wounds. After end-to-end suture of severed intestine no inefficiency of the gut at the seat of suture was observed, but after lateral anastomosis, on the other hand, there was always an accumulation of food in the chamber formed by the apposed loops. From this latter result, which is attributed to prolonged failure of co-ordination of the divided circular muscles, it is concluded that lateral anastomosis is not so ideal an operation as end-to-end union. In cases of intestinal obstruction the food, it was found, leaves the stomach without delay, and, after accumulation and subjection to turbulent movements of peristalsis at the seat of the obstruction, is swiftly returned to the stomach. After thrombosis and embolism there is usually no movement of either stomach or intestine, the food lying quiet in the former viscus until discharged by vomiting. Post-operative paralysis of the alimentary canal is due, it is held, but in a slight degree to prolonged etherization, and to exposure and chilling of the gut. The delay in the passage of food was found most marked after handling of the digestive organs, which, even when gentle, was followed by a temporary arrest of the movements of the stomach. In his conclusions from a *Clinical and Experimental Study of the Use of Sterile Oil for the Prevention of Intra-peritoneal Adhesions*, Blake holds that it is fair to assume that olive oil, absolutely sterile, may be used in the peritoneal cavity of patients in moderate quantities (1 to 4 drachms) without danger, general or local; that it remains in the cavity for periods varying from five to fifteen days and possibly even longer; that its presence tends to prevent early and direct adhesion of denuded or inflamed peritoneal surfaces, and, therefore, that its use under certain precautions is indicated as being moderately effective in sometimes preventing and usually diminishing the formation of post-operative peritoneal adhesions. The author states that special care must be taken in sterilizing the oil, which is not done by some methods in common use, and mentions that in two of his clinical observations very unpleasant symptoms occurred. It seems probable, moreover, that this method would not be free from the danger of fatty embolism. In a paper by Monks on *Flushing the Intestinal Canal with Salt Solution through Multiple Enterotomy Openings*, the author concludes, from experiments on animals and the human cadaver, and also from the favourable results obtained in one case of grave streptococcal peritonitis, that this pro-

cedure is likely to have in certain cases a distinct sphere of usefulness. It is argued that when a patient's life is in danger from acute intestinal poisoning associated with much distension of the bowels, and the time has passed when ordinary methods are likely to be of any use, there is a fair possibility that the immediate removal through enterotomy openings of a part of the intestinal contents, and flushing the intestinal canal with a quantity of warm saline solution from one opening to another, may turn the scale in favour of the patient and save life. The following suggestions are made on the technique of this procedure: A loop of bowel is picked up high in a median laparotomy wound made from the pubes up to or above the umbilicus. The upper and lower ends of the loop having been determined by reference to the root of the mesentery, a small opening is made in the loop. After a free escape of gas and faeces a small glass tube is inserted through the enterotomy opening and directed downwards towards the ileo-caecal valve. Some of the intestinal loops below the opening are now gently distended by warm saline solution. If nothing more than this can be done, the substitution in the bowel of the warm salt solution in place of the gas and faeces that have escaped will, the author thinks, presumably help the patient. If the patient's condition will allow it, a second opening should now be made in the loop which is apparently the lowest of those distended. A glass tube is passed through this and the portion of intestine between the two thoroughly washed out, until the solution running away through the tubes is quite clear. The first enterotomy wound is next cleansed and sutured, and the portion of intestine that has been washed out returned into the abdominal cavity. This procedure is repeated on the lower bowel, unless further action is prevented by the patient's condition. Finally, if the condition permits, the colon is filled with the saline solution from the lowest opening in the small intestine, and a tube is introduced into the rectum to remove any of the solution or of intestinal contents that may reach the lower bowel. In the final paper on intestinal surgery, Scudder states that he has undertaken laboratory experiments in order to determine the behaviour of the bowel after it has been deprived of its mesentery and the omentum has been used to take the place of the mesenteric blood supply. The results of his own, together with those of other investigators, have led him to regard this procedure of omentopexy to a portion of bowel detached from its mesentery as of very limited usefulness in human intestinal surgery. Resection and anastomosis of the bowel remain the procedures to be adopted to the conditions following a removal, accidental or intentional, of the mesentery from the bowel. It is conceivable, however, that an omentopexy, especially if made to either side of the denuded area, might prevent necrosis if a limited portion of intestine (2 or 3 cm.) were deprived of its mesentery.

130. Laryngeal Cyst.

KLEIN (*Ugeskrift for Læger*, February 4th, 1909) reports an unusual case of laryngeal cyst. The patient was 74 years old, and had suffered from increasing hoarseness for about nine months, and during the last month from nocturnal suffocation symptoms. The voice was alternately toneless and rough and vibrating. The laryngeal mucous membrane was diffusely red and so much swollen anteriorly as to hide the vocal cords, which posteriorly were greyish-white and fully movable on inspiration. During phonation they were separated for a considerable distance, as a smooth tumour, seemingly of the size of a bean, was pressing upwards, filling the anterior two-thirds of the laryngeal aperture. Its exact position could not be determined on account of the swollen condition of the mucous membrane. It was easily removed by the endolaryngeal method under cocaine-adrenalin anaesthesia after Parker's method, by means of the cold snare, some force being necessary. The tumour was smooth, sausage-shaped, 2½ cm. long and 1 cm. in section. Its stalk was found to have been attached to the anterior third of the right superior vocal cord. It had thus been hanging down into the rima glottidis, so that only its tip was visible on strong expiration. The microscopic examination showed that its distal rounded part contained a cyst filled with serous fluid, its wall consisting of connective tissue sparsely infiltrated with cells, this tissue being directly continuous with that of the mucous membrane, and its free surface was continuously covered with similar surface epithelium. The cyst appears to have arisen by retention in one of the glands of the mucous membrane affected with chronic catarrh. Laryngeal cysts are most common round the lig. glosso-epiglottica, and are as a rule broad-based. The author has not found any similar case of stalked laryngeal cyst reported.

OBSTETRICS.

131. Dystocia from Circular Vaginal Septum.

LÉPAGE (*Comptes Rendus de la Soc. d'Obstét. de Gynéc. et de Pédiatr. de Paris*, November, 1908) attended a labour where the first stage was obstructed by a diaphragm placed transversely in the vagina. The patient was a primipara, aged 18, the last period occurred in the middle of September, 1907. In the middle of the eighth month Lépage was consulted by her doctor. The vagina was tender and an anaesthetic had to be given before the parts could be examined properly. The hymen, lacerated, was partly persistent. Above, half-way up the vagina, some white cystic bodies, each of the size of a haricot bean, were discovered and laid open; they were thin-walled and contained sebaceous matter. Immediately superior to these cysts was a well-developed transverse diaphragm, thickest posteriorly. There was a small central orifice into which some cystic bodies, like those below the septum, projected. The cervix with the fetal head presenting, could be plainly defused. Thirteen days later, on June 24th, 1908, labour pains began at 8 a.m. By 11.40 p.m. dilatation of the cervix and of the vaginal diaphragm was complete, and one hour later a live female fetus over 6½ lb. in weight was delivered spontaneously. By July 23rd the diaphragm was represented by a cicatricial ring hardly constituting a stricture; it lay 1½ in. above the vulva. The cervix was free from any bands running across its fornices. The transverse vaginal septum is a condition normal in some of the lower mammals. When it complicates labour the fetal head generally dilates and tears the septum without the aid of obstetric art. Pinard, in discussing Lépage's case, observed that he had seen a great number of instances of circular transverse vaginal diaphragms obstructing labour, but in no instance did he find it necessary to intervene. When there was a longitudinal vaginal septum, the presenting head usually pushed it aside; but in a breech presentation the legs of the fetus tended to get astride the upper border of the septum. On that account Pinard always applied two forceps to the septum and divided it between them.

132. Aisol in Gynaecology and Obstetrics.

PINNER and SIEGERT (*Med. Klin.*, December 27th, 1908) recommend aluminium-aceto-tartrate (which the firm Attenstedt and Redeker have called aisol) as an antiseptic which (1) is non-poisonous, (2) does not corrode, (3) does not stain linen, (4) is transparent, (5) does not smell disagreeably, (6) has no action on indiarubber tubes. It is prepared by dissolving 2½ parts of basic aluminium acetate with 1 part of tartaric acid in water, filtering and evaporating to dryness. Colourless, shiny, gummy lumps are obtained, which smell faintly of acetic acid, and, when diluted with water, give a colourless mass of the consistence of syrup. The statement that aisol is non-corrosive refers only to the diluted solution in which it is commonly given to patients. When concentrated it is highly astringent and corrosive, and may be used instead of Paquelin's cautery. It is excellent in the treatment of erosion of any kind and ectropion, and is useful for douching the vagina during treatment by pessaries and as an after-cure in acute gonorrhoea. As an intrauterine douche after curetting following abortion, it causes immediate contraction of the uterine muscle, and is very useful in chronic parametritis and specially painful chronic forms of pelvic peritonitis. It may be heated to at least 60° C. without decomposing, and will disinfect instruments and apparatus. Aisol dusting powder is excellent for powdering the hands before a gynaecological examination; thus a discharge may be diagnosed by digital examination alone, which is not possible when a fatty or oily material has been used. By experiments with anthrax and Neisser's gonococcus, etc., Aufrecht showed that the disinfecting power of aisol is more than twice as great as that of liquor aluminium acetatis and very slightly greater than that of carboic acid.

GYNAECOLOGY.

133. Congenital Diaphragmatic Hernia.

SCHREIDER (*L'Obstét.*, August, 1908) attended a woman who was delivered of a female child spontaneously. The infant cried once and then turned blue; the pulsations of the heart were perceptible on the right side of the thorax. The child died, and radiography was undertaken at once. A left diaphragmatic hernia was discovered. Schreider

inquired about the family history. The mother's first pregnancy was gemellar. A boy and girl were born, the former had a right inguinal hernia. Two years later a daughter was born, who also had a right inguinal hernia. At the end of four years a boy was born with umbilical hernia and ectopia of the abdominal viscera. Lastly came the girl with diaphragmatic hernia. The mother's father was subject to double inguinal hernia, and had a twin sister. The mother had six brothers and four sisters all in good health, but two of the sisters had undergone operation, the one for single, the other for double, hernia, the variety not being specified. The mother's father, mother, sisters, and three out of her six brothers were all subject to varicose veins, an interesting fact, Schreider remarks, in association with the tendency to weakness of the abdominal walls so marked in her relations.

THERAPEUTICS.

134. Treatment of Bronchial Asthma.

SUCCESS in the treatment of bronchial asthma depends on a proper estimation of the condition. The treatment necessarily falls under two heads: That of the acute attack and that of the "disposition." G. Treupel (*Deut. med. Woch.*, December 31st, 1908) first discusses those processes which lead up to an acute attack. The chief symptoms are air hunger, spasmodically prolonged expiration, and frequently a feeling of pressure on the chest, which may amount to actual pain. There may be some pressure symptoms heralding the attack. Fear is associated with the attack. Physical examination reveals loud sibilant rales; the auxiliary muscles are used for respiration, and the expiration is laboured and slow. The heart and pulse are remarkably little affected. The lungs are found to be in a condition of over-distension. Towards the end of the attack there is usually some thick, mucous sputum. When this is got rid of, a freer type of breathing takes place. The patient usually feels well between the attacks, and capable of undertaking exerting work. The causes of the attack are: First, a narrowing of the finer bronchial tubes, and secondly, a secretion of mucus in response to dilatation of blood vessels in the bronchi. The former is a muscular spasm, which depends on some irritation of the vagus, and the second is due to vasomotor changes. It thus appears that both determining causes act through the nervous system. Pressure on the vagus is capable of calling forth an attack of asthma (for example, by a tumour). It has been found experimentally that an asthmatic attack produced by irritation of the vagus can be stopped by paralysing the nerve endings with atropine; ½ to 1 mg. of atropine injected subcutaneously stops the stormiest symptoms of an attack in from ten to twelve minutes. The old burning powders contained atropine. The action of Tucker's secret remedy depends largely on this drug. Treupel calls attention to the analyses of this preparation, and medical practitioners will do well to write their own prescriptions according to the one or other formula. Einhorn's analysis was:

Cocaine nitrite ...	...	1.0 per cent.
Atropine nitrite ...	...	0.6 "
Glycerine ...	...	32.2 "
Water ...	...	66.2 "

The percentages are approximate.

Bertram's analysis was:

Atropine sulphate...	...	0.15 gram
Sodi nitrosi ...	...	0.60 gram
Glycerine...	...	2.00 grams
Aque ...	...	15.00 grams

If the solution prepared according to the analysis of Bertram is sprayed for three minutes, from ½ to 1 mg. of atropine will be absorbed from the tracheal mucosa. Ritsert's inhalation fluid contains anaesthesin, atropine, belladonna, saltpetre, and stramonium. This is known as *eupneuma*. Trousseau introduced a preventive method of treatment by giving a pill containing ½ mg. of atropine daily, and increasing the dose by ½ mg. every second or third day until 4 mg. were reached. The treatment was continued for four weeks. Morphine also does good in the acute attack. The dose must not be less than 1 cg. This can with advantage be associated with ½ mg. of atropine; 2 grams of chloral hydrate also works well. Next the author turns his attention to the reflex neuroses, and especially those originating in the digestive organs, sexual organs, and nose. It is naturally necessary to remove the cause of irritation, whenever this is possible. When the attack is due to the reflex action of certain

forms of dust or volatile substances acting through the nasal mucous membrane the latter should be cocaineized. The asthmatic is usually very dependent on psychic influences. The remembrance of circumstances accompanying a previous attack may give rise to a renewal of the malady, when these circumstances are repeated. Fear and other forms of nervous disturbances, especially at night time, predispose to an attack. The fear of choking often leads to a wrong irregular form of breathing, and it is quite possible to produce an attack willingly by imitating this form of respiration. Treatment which influences the fear of choking and which regulates the respiration is of importance. The author goes into some detail with regard to the psychical treatment of asthmatics. Lung gymnastics, either by means of the Swedish system or by special apparatus, require to be employed in certain cases. The effect of climate is also important. In some cases sea or mountain air permanently cures. The catarrh connected with asthma is best dealt with by means of sweating, either with iodides or without. Electric-light baths form the best method of applying the sweat-producing agent. A handy form has recently been introduced which permits of the bath being given in bed under a cradle. In conclusion, Trempel states that the treatment of asthma is a grateful field for the practitioner, but is by no means an easy one. It depends largely on the knowledge and capabilities of the practitioner and on his will and perseverance.

135. Cutaneous Tuberculin Reaction in Infants.

ELLENBECK (*Mediz. Klin.*, October 18th, 1908) had 232 infants in the Dresden Home for Infants vaccinated cutaneously with tuberculin in the way Pirquet recommended, regardless of the disease present, to show whether the cutaneous test proved always negative in non-tuberculous children, and positive in the tuberculous. The practical results show that: (1) The cutaneous reaction is a valuable aid in the diagnosis of tuberculosis in infants, since it is harmless, simple, and trustworthy. (2) A positive reaction is often the first sign of incipient tuberculosis, and can therefore increase our knowledge of the course of tuberculosis in infants. (3) A reaction is only to be counted as positive when a distinct red papule forms; doubtful reactions are to be included as negative. (4) The negative reaction is often of great significance: a negative result of the cutaneous test is only to be held of value after several repetitions at suitable intervals (fourteen days). (5) A positive reaction occurred 5 times amongst the 232 unselected infants vaccinated, and showed that tuberculosis of infants, even in previously thriving children, offers a bad prognosis. The author gives notes of the tuberculous 6 cases in which the Pirquet treatment was tried, 5 proving positive and 1 negative. In 1 case the patient was $\frac{3}{4}$ months old, mother tuberculous, infant artificially fed since fourteenth day. January 19th: Condition—weakly, badly nourished child; skin, greyish-white; anxious expression, restless; respirations accelerated and deepened left lung, posteriorly and below; prolonged and heightened respirations; no fever. January 20th: Result of yesterday's cutaneous reaction strongly positive; around the vaccinated spot near the elbow an area has formed, larger than a 3-mark piece, of papules, the size of a pin's head, thickly set on a red ground. January 21st: Death following convulsions. Section: Caseous bronchial glands; fresh crop of fairly numerous tubercles in lungs, liver, and spleen; mesenteric glands not noticeably swollen.

136. Endovenous Injections of Corrosive Sublimate in Acute Rheumatism.

OSTALI (*Gazz. degli Osped.*, August 16th, 1908) records three cases of acute polyarticular rheumatism which, after proving rebellious to salicylate treatment, improved quickly under endovenous injections of corrosive sublimate. The first case was that of a man aged 22, admitted on February 21st with acute rheumatism (feet, knees, and ankles). Sod. salicyl. and caffeine were given, salicylic packs applied to the joints: after about a week of this treatment, no benefit being observed, on March 2nd an endovenous injection of 5 mg. of sublimate was given; the next two days the patient was much better, pains relieved, and temperature lower. On March 4th a slight relapse occurred, and another injection of 5 mg. was given. March 9th, 10 mg. were given. After this no further treatment was required, and the patient was discharged cured. The other two cases (aged 29 and 52) derived similar benefit. In the second case the patient became apyretic the day after the first injection, and remained so. No ill effects were observed.

PATHOLOGY.

137. Experimental Reduction of Kidney Substance.

PEARCE (*Journ. of Exper. Med.*, September, 1908) finds that removal of one-half, two-thirds, and sometimes three-quarters of the kidney substance in the dog causes no change in the general nitrogenous metabolism as determined by estimations of the total nitrogen, urea, and ammonia eliminated by the urine. The removal of larger amounts, and sometimes of three-quarters of the substance, leads to the condition of metabolism associated with starvation. This, however, is apparently the result of the gastro-intestinal disturbance constantly associated with extensive kidney reduction, and not of a disturbance of general nitrogenous metabolism. The determination of the amount of faecal nitrogen indicates that the gastro-intestinal disturbance is not due to diminished absorption; and only in one experiment was there evidence of its being due to an increased elimination of nitrogenous substance into the intestine. Pearce argues that the results of his experiments are against the theory that the kidney furnishes an internal secretion which has an important influence on general nitrogenous metabolism. At least, if such a function exists, it is not disturbed by the removal of three-fourths of the kidney substance.—Sampson and Pearce (*Journ. of Exper. Med.*, November, 1908), in a further research on experimental reduction of the kidney substance, find that the immediate effect of the operation on the portion of the kidney remaining is an infarction of the tissue compressed by the sutures. The area of necrosis extends only a short distance into the adjacent kidney tissue. The infarction gradually becomes replaced by fibrous tissue, and in three to four weeks' time the necrotic tissue entirely disappears. The amount of fibrous tissue in time becomes so slight and the healing so perfect, that it is difficult to detect the site of the operation. The renal elements sometimes persist in the infarcted area, and the glomeruli apparently are more resistant than the tubules. The tubules in this area sometimes become calcified, and bone formation beneath the epithelium of the pelvis is also of frequent occurrence. The pelvic epithelium usually shows marked proliferation, and may invade the field of operation in alveolar masses. In two experiments removal of approximately half of one kidney did not alter either the remaining portion of that kidney or the size of the opposite kidney: these experiments were terminated on the thirty-fourth and forty-seventh days. In another experiment, terminated in twenty-one days, there was a slight but definite atrophy of the remaining tissue of the kidney operated upon. In six experiments in which one kidney was removed and approximately half of the other, three of the animals died as a result of the operation on the sixth, seventh, and tenth days. The probable cause of death was renal insufficiency. The animals refused food, vomited persistently, and lost strength and weight. The other three animals recovered, and were killed at periods varying from five to eight weeks.

138. Complement Fixation in Mothers of Syphilitic Infants.

KNOEPFELMACHER and LEHNDORFF (*Mediz. Klinik*, August 2nd, 1908) think it highly probable that the mothers of syphilitic infants have, as a rule, had syphilis themselves. This belief is based on their observations of 45 women, the mothers of children admitted into hospital for hereditary syphilis. Of those mothers who showed no signs and gave no history of syphilis (32) reaction was positive in 18 (56.2 per cent.). Of those who had had syphilis (13) 8 gave a positive reaction (61.5 per cent.). The proportion is thus seen to be about the same in the two groups. Taking all mothers of hereditary syphilitic infants together, 57 per cent. gave a positive reaction, and as recent observers state that in cases of latent syphilis a positive reaction is to be expected in 50 per cent., almost the same proportion, the authors take this to indicate that the mothers have really had syphilis themselves. The theory that the reaction products which produce complement fixation have been absorbed by the mother from the fetus, through the placenta, without the mother herself suffering from the disease, is discarded, because in many of the authors' cases the mothers had borne syphilitic children a good number of years previously, and yet showed complement fixation. That this could occur without the mother herself having suffered from the disease is a theory not upheld by analogy with any other infectious disease. A comparison between the results obtained by Wassermann's test in mother and child is promised when observations have been instituted in a larger number of cases than at present.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

133. The Results of Cerebro-spinal Meningitis.

EPIDEMIC cerebro-spinal meningitis offers the best prognosis *quoad vitum* of all the forms of meningitis, but the exact prognosis *quoad restitutionem* has not yet been clearly made out. L. Cohn discusses the experience which he has made in Posen in a series of 82 cases, and collects the available evidence, which can be utilized to form a basis of prognosis with regard to the ultimate condition of the recovered patients (*Berl. klin. Woch.*, January 11th, 1909). Fifty patients died, and of the remaining 32, 3 were lost sight of and 2 died after leaving the hospital. There were therefore 27 cases which he could deal with. He calls attention to the pathology of the disease. Beginning with a hyperaemia of the meninges, a fibrinous purulent exudation is formed in the arachnoid and pia mater, the inflammation then spreads on to the grey substance and sero-fibrinous or purulent fluid collects in the ventricles. When the disease resolves, the pus cells disintegrate and the fluid becomes partly absorbed and partly organized, leaving behind a thickening of the arachnoid and pia with adhesions. The fluid in the ventricles may either be completely absorbed or a chronic hydrocephalus may result. Even extremely severe cases may terminate in almost complete pathological recovery. He cites a case in which the only residue left after a very bad attack was deafness. The child died of myocarditis complicating diphtheria a year later, and the *post-mortem* examination revealed some adhesions of the meninges and the bone in the site of the anterior fontanelle, but otherwise no macroscopical changes at all. The 27 cases may be divided into 8 mild cases, 15 medium cases, and 4 severe ones. In the mild cases the recovery was complete. The examination undertaken after recovery failed to reveal any abnormal sign. The intelligence was good and the children were holding their own at school. Some of the patients belonging to the medium cases recovered completely. In 2 cases paralysis of the extremities and of the ocular muscles were present when the patients were discharged, but disappeared completely at a later date. In 4 of the cases permanent symptoms were met with. Headache, especially after exertion such as bearing down or stooping, was complained of. Weakness of the arms and legs, which prevented the persons from performing any exercises involving the expenditure of exertion, was seen in 3. Loss of memory was complained of by 3 of the patients, while in 2 there was distinct loss of power of concentration and attention. Of the 4 patients belonging to the class of severe cases the child who died of myocarditis was one; 2 further patients were deaf on recovery; in both of them there was paralysis of the facial nerve; in one there was besides paralysis of the right arm; the paralytic symptoms cleared up completely, but the deafness persisted. The last case may be described as one of extreme severity, and the clinical history and description of the child after recovery admits of the possibility of a complete *restitutio ad integrum*. The author further records that agglutination with Weichselbaum's meningococci was found to be positive after more than two years in 2 cases.

140. Physical Causes of Cardiac Murmurs.

BRADSHAW (*Arch. des Mal. du Cœur, des Vaisseaux, et du Sang*, June, 1908) thinks that the view that valvular murmurs are due to a vibration of the valves caused by friction between the blood current and the valve is one which it is very difficult to uphold. In the first place, Poiseville has shown that there does not occur any friction at the valve. The theory that the murmur is due to vibrations of the blood is based upon the fact that when a liquid passes from a narrow into a larger space there is produced at this region a fluid vein. If one listens with a binaural stethoscope, whose upper opening is closed by a tightly stretched rubber membrane over a rubber tube connected with a stream of water, one finds that with moderate rapidity of flow of water, no sound is heard, provided the tube is of uniform calibre throughout its length; if, however, the tube be narrowed by pressing between thumb and finger, a sound resembling a cardiac murmur is heard; if the constriction is marked and the stream of water

strong, the hand feels a well-marked thrill. Careful examination further shows that the most marked vibrations occur, not at the point of constriction, but just beyond, and that these vibrations are felt for a considerable distance further on. The sound is heard for a certain distance above the constriction, but the thrill is not propagated on this side of the constriction, except under special circumstances. This experiment further shows that the sound is due to vibration of the fluid vein inside the tube, and not to vibrations of the edges of the constriction. If this explanation be accepted, one can readily understand the localization of the majority of valvular murmurs, the systolic murmur of mitral regurgitation, however, being an exception. According to the above view, this murmur ought to be best heard over the left auricle, and not, as every one agrees it is, at the apex beat of the heart, and to explain this the author puts forward the views of Petit, Fye-Smith, and Sanson, none of which he thinks are sufficiently explanatory. His own explanation is summed up as follows: The extremity of the cone formed by the mitral flaps is situated midway between the apex of the heart and the insertion of the flaps, and this cone, as Noel Paton has shown, is always filled with blood. In mitral insufficiency the pathological sluice is found about the extremity of the cone, and a fluid vein will therefore arise at the middle of this cone in the blood which fills it. The cone of blood surrounding this fluid vein will be put into vibrations, which vibrations will be conducted to the valves (representing the walls of the rubber tube in the experiment already described). These valves being, however, very thin, offer little or no resistance to the transmission of vibrations, which, traversing the valves, propagate themselves to the blood in the interior of the left ventricle surrounding the cone. Reflection of the vibrations to the walls of the cavity then occurs, the whole mass of blood in the ventricle will be brought to vibrate uniformly, and this vibration will be conducted especially to the apex, since at this part the muscular wall is thinner than at others, and because this part is nearest to the thoracic wall. In fact, the vibrations which arise in the fluid vein are conducted to the apex of the heart by the blood, this being rendered possible by the anatomical disposition of the valves.

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Raynaud's Disease.

SACHS (*Amer. Journ. of Med. Sciences*, October, 1908) regards Raynaud's disease, erythromelalgia, and allied conditions as far more often the expression of disease of the peripheral blood vessels than associated with central nervous disease, Raynaud's disease being a pure angi-neurosis, either occurring as an independent form of disease or in association with some central nervous affection. From observations upon an unusually large number of such cases it is probable that malnutrition, premature arterio-sclerosis, and occupations involving a retardation of the venous circulation—for example, tailoring, sewing-machine work, etc.—largely enter into the etiology; and, although a large number may be due to syphilis, it would seem that the rest in bed, with elevation of the foot, application of heat, etc., by improving the return circulation, does more to improve the condition than can be brought about by severe antisyphilitic treatment. Pathologically, marked interference with the peripheral blood supply is present in all classes of cases, and their study has drawn attention to the importance of routine examination of the dorsal artery of the foot. Raynaud's disease and erythromelalgia are often associated with one another, the types blending so readily that any marked line of demarcation cannot always be drawn. Clinically, the disease may at one point correspond closely with the erythromelalgic type, and later with the Raynaud type, erythromelalgia being relatively frequently associated with dry gangrene. Cases occur also which at the outset are typical of Raynaud's disease, but later might well be designated cases of spontaneous gangrene due to obliterating endarteritis. Occasionally Raynaud's disease is associated with chronic rheumatism, and with cases of cerebral endarteritis, and attention is called to the association also of intermittent claudication with symptoms of the disease. Notes of 6 cases are given typifying the points to which attention is directed.

SURGERY.

142. Suture of the Lung for Severe Haemorrhage.

LOTSCH publishes the details of two cases of suture of the lung, performed for bleeding which threatened the life of the patient (*Munch. med. Woch.*, January 19th, 1909). The first patient was a workman, aged 26, who was stabbed with a knife in the left side of the back. The extreme pallor of the face, etc., the soft, small, rapid pulse, and the physical signs pointed to bleeding into the left pleural cavity. The chest was opened in Brauer's plus pressure chamber, and on increasing the pressure to 17 cm. about 1½ litres of blood escaped. The wound in the lung was found and closed with catgut sutures. Saline infusion was given after the operation, and the pulse improved. The recovery was disturbed by a purulent effusion into the pleura which proved to be sterile, while fibrolysin injections were given to prevent contraction of the pleural adhesions during healing of the empyema. He was discharged well. The second patient attempted to commit suicide by shooting himself twice through the chest. The clinical diagnosis was wound of the left lung, haemopneumothorax, and possibly wound in the heart. At the operation a large quantity of blood was evacuated from the pleura, and, after the field of operation was clear, the two shot wounds were found and sutured. This patient also got an empyema, but with suitable treatment complete healing took place, and the man was almost well when discharged. The shots were not found at the operation, but were seen after Roentgen examination. In discussing the cases Lotsch justifies his procedure by showing that over 40 per cent. of such cases die if treated expectantly. The difficult question to decide is when is a pulmonary haemorrhage abundant. He was guided by the degree of anaemia. He discusses the technique of the operation, and also adds a few words on the treatment of secondary empyema, which appears to be common after intrathoracic operations.

143. Uretero-Intestinal Anastomosis after Total Cystectomy.

LEGUEU (*Bull. et Mém. de la Soc. de Chir. de Paris*, No. 33, 1908), in a report on a case of total cystectomy for bleeding tumours, communicated by Marion, after dealing with the indications for extirpation of the bladder, discusses the difficult question of what to do with the ureters. To leave the open ends in the wound is, as is proved by the fatal result of Marion's case, to court disaster, and the attempts to overcome the difficulty by attaching them to the skin or to the wall of the vagina have failed. Uretero-rectal anastomosis becomes a very serious procedure when both ureters have been divided, as it has recently been shown by Papin that such a course has been followed by 16 deaths in 19 cases of total cystectomy. In some of these cases the fatal result occurred soon after the operation, while in others it was delayed for some months and was due to pyelonephritis and pyonephrosis. Legueu suggests that it might be better to practise double nephrostomy; but to those surgeons who would hesitate to subject by such treatment their patients to very serious infirmity, and who decide on discharging the urine into the intestine, he would propose that the double implantation be effected in two stages with an interval of some few days. In a discussion of Legueu's report it was held by Tuffier that the late evils of uretero-intestinal implantation originate in stenosis of the distal ends of the ureters and in consequent urinary stagnation and renal infection. By preserving a collar of vesical mucous membrane, and, if possible, of the whole thickness of the wall of the bladder, at the end of each of the detached ureters, and by suturing this to the margins of the opening in the intestine, the risks of ascending infection, it is held, may be diminished.

144. Metastases of Glioma Retinae.

It is quite a common thing for a malignant glioma to involve the extraorbital structures of the face and head, but secondary growths in distant parts of the body are infrequent. Wintersteiner (*Das Neuroepithelioma Retinae*, Wien, 1897) collected 497 cases of glioma. In 46 cases the adjacent lymph glands were affected: in 43 the brain and meninges; in 40 the cranium and face bones; in 9 the parotid gland. The metastatic growths were fewer: the skeletal bones in 9 cases: the liver in 7, the ovary and kidney in 2; the lungs and spleen 1 each. Fehn (*Centralbl. für prakt. Augenheilk.*, 1900, xxiv, 129) reports a case with metastatic growths in the liver, the inguinal glands, the ribs, and the mediastinum. Radcliffe and Goldberg (*Arch. of Ophthalm.*, 1907, xxxvi, p. 223) found secondary

hepatic tumours: J. P. Gardiner (*Arch. of Ophthalm.*, xxxvii, p. 657, November, 1908) collects these cases, and gives a detailed account of one of his own which is illustrated by plates, showing the head with recurrent growths in each eye, and the histology of the primary glioma and its metastasis. The skull and meninges were extensively involved, with the bones adjacent to the orbit, the cervical glands, the ribs, the vertebrae, the spinal canal and dura, the testicle, the os ilei, the pubes, the ischia, the long bones of the leg, and the manubrium. In short there was general and extensive dissemination of the glioma.

145. Early Orthopaedic Treatment in Poliomyelitis.

W. R. TOWNSEND (*Amer. Journ. of Orthop. Surg.*, August, 1908) says the prevention of deformity has always been considered by orthopaedic surgeons as of the utmost importance, but in most diseases they have been able to accomplish but little in a practical way as they have rarely been permitted to see cases until after the deformity has occurred. This statement applies with particular force to the deformities following infantile paralysis. A recent epidemic in New York, probably the largest in numbers ever known, has provided the author with an opportunity for a study of these cases from the onset. Whereas in 1906 but 39 cases were seen at the hospital for ruptured and crippled, in 1907 387 applied which had been stricken with the disease that year. The first fact of importance noticed was the large number applying during the early stages of the disease. The plan followed was to advise complete rest until all symptoms of hyperaesthesia and of the weakness following the attack had passed. Many did not believe that the proper way to regain the lost power was to keep the limb quiet, and that this was beneficial was a most difficult matter to impress on them. That the cases so treated have done far better than the others is the firm belief of the writer. Warm coverings to the affected part were advised and some limbs were immobilized for a time in plaster-of-Paris. Later the galvanic current was given together with massage and salt baths, and a very gradual return to use of the muscles affected. As soon as it could be clearly made out that the paralysis of any muscle would, if not treated by orthopaedic measures, result sooner or later in a deformity, suitable apparatus was applied. The conclusions to be drawn from the study of these cases are that infantile paralysis if not treated suitably at the commencement is, in the majority of instances, followed by deformity and that practically all these deformities can be prevented by appropriate treatment. The prevention of the primary deformities tends to a greater degree of recovery and prevents the occurrence of secondary deformities.

OBSTETRICS.

146. Modern Treatment of the Puerperium.

OPITZ (*Med. Klin.*, January 3rd and 10th, 1909) has treated 235 puerperal women by Küstner's method of letting them get up very early. Unless contraindications—that is, sutured perineum, operations on the placenta, fever, great weakness, cardiac defects, or similar troubles—exist, he allows the women to get up as soon as they have thoroughly rested—that is, when one night has elapsed since delivery. They sit and walk about as they like, only after mid-day they must go to bed for a few hours. None are forced to get up early, and the unanimous opinion of cultured women treated thus was that they felt incomparably better and recovered quicker when they were able to quit bed earlier. Opitz attributes the pallor, languor, and dizziness on getting up at the end of fourteen days and many cases of thrombus to the long lying in bed of the old treatment. Immediately after delivery each patient receives a firm body bandage fastened by straps, and a strap passes between the legs to keep up any protrusion of the genitalia. Gymnastic exercises, according to the individual strength, are usually undertaken from the second day—that is, rising up from the back without help from the arms, exercises for the perineal muscles, etc. The perineum is also played upon by tepid and cold sprays. Of 235 women, 56 got up on the first day, 65 on the second, 27 on the third, 52 from the fourth to sixth days, 21 on the seventh and eighth days, and 14 later. In the cases getting up from the fourth to sixth days special reasons—ruptured perineum, etc.—prevented them getting up earlier. The three chief dangers, according to the opponents of the treatment, are: (1) Embolism,

(2) uterine displacement, (3) interruption of convalescence. (1) In the clinics where this treatment has been tried emboli have not occurred; the longer bed is kept the greater the retardation of the blood stream and the easier thrombus formation. (Where a thrombus exists, absolute rest in bed is, of course, urgently indicated.) (2) Küstner and others have long proved that in the upright position ante flexion of the uterus is increased. Opitz's statistics show that getting up early does not favour retroflexion, and slack abdominal walls are the exception. Involution is satisfactory. Of the 121 examined on the tenth or eleventh days, and who had got up from the first to third days, the uterus was the size of a fist or larger in 33, about the size of a goose-egg in 58, smaller than this down to almost normal size in 30 cases. (3) Convalescence was in no way interrupted, and no increased tendency to puerperal infection was shown by those getting up on the earlier days, though existing infection may certainly be made much worse by early movement. Opitz observed no marked effect of the getting up early on the pulse, and his cases do not bear out Stöckel's opinion that scopolamin is a cause of rapid pulse. The chief difficulty is to prevent the newly-delivered woman from leaving hospital, and this method is more risky in private, where such exact observation of the patient is not possible. It is very important that the mind should be quite at rest, and no household duties should be undertaken, and very few visits received. Only 5 of the 235 women developed mastitis, in every case slight. The prophylactic treatment during the last six weeks of pregnancy consists in thoroughly cleansing the breasts with warm water and soap every other night, drying them and touching them with 10 per cent. tannin spirit. Later, after each feed the nipple is covered with lanolin ointment, which is washed off, before the child is put to the breast, with boracic lotion or boiled water. Cases treated with gaudanin were not so successful. If rhagades appear the child is put to the breast with a nipple shield. In the 1.28 per cent. cases in which mastitis occurred (compared with 3.18 per cent. of Olshausen's cases) the child was not put to the breast any more; the breast was bandaged up and packed with an aluminium acetate compress. No further treatment was required. Whenever possible only one breast is used at one feed, a quarter of an hour being the maximum time allowed. At night the children are all separated from their mothers. As regards Wassermann's syphilis reaction, of 135 mothers, 12 gave positive results, while only 7 children gave the serum diagnosis. In few of these cases did either mother or child show any clinical signs of syphilis. Of 163 women on whom Wolf-Eisner's ophthalmic reaction for tuberculosis was tried, 39 reacted positively, while only 2 showed clinical signs of the disease. Pirquet's skin reaction remained negative in the corresponding infants. Opitz allowed the mothers to suckle unless the tuberculosis seemed to be progressive, which only occurred once. He takes Walcher's standpoint, and anticipates better nutrition and sometimes dying-out of the tuberculosis when they are allowed to suckle. He allows ordinary diet, but articles likely to cause flatulence are avoided. The children are first put to the breast at the end of twenty-four hours, and in few cases did the nourishment prove insufficient. From the outset only six meals are allowed, at 6, 9, 12.30, 4, 7, and 10 o'clock. During the night the children are not fed at all. After birth 1 per cent. of silver nitrate is dropped into the eyes of each infant, but after Herff's experience Opitz will change to sophol. The treatment of the navel consists in ligaturing the cord about 2 c.cm. from the umbilicus. After the bath, the navel is dabbed with alcohol, covered with sterile gauze, and a gauze bandage wrapped round the body. If the navel is soiled with urine the bandage is changed, and after dabbing with alcohol powdered xeroform is employed. The remains of the cord fall off between the fifth and ninth days, occasionally not till the tenth. Until this occurs the baby is washed but not put in a bath.

GYNAECOLOGY.

147. Haematometra after Pregnancy.

BRINDEAU (*Annales de Gyn. et d'Obst.*, February, 1909) reports two cases of acquired haematometra—a condition much less frequent than the congenital type. A young woman was delivered early in 1904, and suffered from puerperal complications. The periods reappeared, and then ceased; but, when due, violent hypogastric pains set in with a sensation of weight in the perineum. There was always obstinate constipation at the same time. These

disturbances subsided in two or three days, but a tenderness in the abdomen persisted. In the summer of 1908 Brindeau examined the patient and defined a spherical tumour like a pregnant uterus, which reached up to the pubes above, and bulged inferiorly into the vagina, coming down to within an inch of the vulvar cleft. The tumour was smooth and tense, and no trace of a cervix or external os could be detected. On palpation it was found to be of an hour-glass shape, as though the uterine cavity and cervical canal were distended separately; and, further, the cervix was separated from the uterus by a sharp angle—a marked ante flexion. The round ligaments could be felt to be very tense. An incision was made in the middle of the vaginal part of the tumour, and a tumblerful of a black, syrupy, odourless liquid came away. The incision was enlarged, and then it was found that the cervical canal was the seat of the distension, the upper lobe of the tumour being the uterus, firm and retracted, seated on the top of the cervix converted into a blood cyst. The cavity was plugged with a strip of gauze. Ten days after the operation the catamenia set in, and were painless. Three months later the patient was well, and the periods were regular. The second patient had contracted pelvis and albuminuria. Basiotripsy had to be performed in labour, and the puerperium was complicated. The periods did not return, and six months later a haematometra developed. It was treated like the first case, and with similar success.

148. The Revival of the Vaginal Surfaces in Colporrhaphy.

YAUVERTS (*Le Nord Méd.*, November 1st, 1908) points out a little modification which he has employed for the purpose of facilitating the removal of the strip of mucous membrane in the repair of the perineum. Having marked out the extent of the denudation, he seizes the upper corner of the patch with artery forceps, and places the left index finger underneath, folding the mucous membrane over it. In this way it is easily and safely removed, by means of either bistoury or scissors, care being taken not to leave any islands of intact mucous membrane to prevent accurate adhesion of the raw surfaces.

THERAPEUTICS.

149. Collargol Enemata in Typhoid Fever.

T. MIRONESCU (*Berl. Klin. Woch.*, January 4th, 1909) finds that serumtherapy has not yet gained a firm foothold in practice, and that Brand's cold water treatment is still the classical method of treating typhoid fever. It has reduced the mortality considerably. Modern teaching has shown that this disease is a general and not a local condition, and that the intestinal symptoms are only prominent, while the causal microbe is to be found elsewhere as well. It can be regarded as a septicaemia, especially in the early stages, and for this reason it is rational to deal with it as other forms of septicaemia are dealt with. Collargol has proved itself of value in the treatment of the various forms, and indeed this drug has also been tried in typhoid fever. It has been warmly recommended by a number of observers; but on the whole the results have been disappointing, which the author believes to be due to the fact that comparatively small doses were employed. Large doses of collargol have been given in septicaemia by Seidel as enemata, and good results were obtained. For this reason the author has treated cases of typhoid fever with collargol enemata. Each patient was given one or two enemata daily containing 5 grams of collargol in 100 grams of water. A cleansing enema was given first. When the collargol enemata were not retained, 10 to 12 drops of tincture of opium were added to them. When even these were not retained, he gave collargol by the mouth in capsules containing 1 gram each. The effect was much more marked when given in large doses per rectum than when given by the mouth. Even when 10 grams were given daily for from ten to twelve days no intoxication was produced. In all, 17 cases were treated in this way, and the results were compared with those obtained by cold water treatment alone. The cases were taken at random, and included severe instances of typhoid fever. The fever was beneficially influenced, the general condition was improved, the duration of the illness was shortened, and the frequency of complications was diminished. As a rule, the temperature fell gradually, and only when the enemata were given late was there anything approaching a critical fall. With regard to the cutting short of the attack, he states that the fever lasted from ten to fifteen days longer

in the cases treated by cold water than in the cases treated with collargol emenata. In a certain number of cases the initial leucopenia disappeared after the treatment. Among the 17 patients treated with cold water 4 died, while none died who had been treated with collargol. He is therefore inclined to regard the collargol emenata treatment of typhoid fever as a very effective one.

150. Intravenous Arsenic and Tuberculin Treatment.

F. MENDEL considers that since the organism loses its power progressively to manufacture antibodies in tuberculosis, and since all attempts to immunize in a passive manner have failed, all the methods of curing the disease specifically have been unavailing (*Munch. med. Woch.*, January 5th, 1909). It therefore becomes necessary to employ the specific products of the bacilli in order to obtain a curative action in such a way as not to produce deleterious effects, and at the same time to improve the nutrition and raise the resistance. For this purpose he believes that a combined treatment with tuberculin and arsenic can be recommended. Whatever the views are in connexion with the value of tuberculin in the treatment of tuberculosis, he claims that when properly applied it can assist the organism in forming those protective substances which tend to counteract the poison of the disease. Koch showed in 1901 that when given intravenously, even in minimal doses, tuberculin (T.O.) raises the agglutinating power of the serum of tuberculous subjects rapidly. This may not be accepted as absolute evidence in favour of the increase of the above-mentioned protective substances, but other facts tend to support this view. Tuberculin produces an inflammatory stimulation in the neighbourhood of the tuberculous foci, which stimulation if not excessive induces an active hyperaemia in the perituberculous zone. Mendel conceives the idea of utilizing this perituberculous inflammation in his combined treatment without relying on the tuberculin to cure the disease. It is known that certain drugs are attracted and deposited in preference by inflammatory stimulation. If one can succeed in producing a perituberculous inflammatory reaction of mild degree by means of very small doses of tuberculin, a simultaneous application of arsenic will lead to the attraction of this metal to the foci and the formation of a nutritive stimulation, which should form an adequate protection against the process going on in the diseased foci. He chose atoxyl for this purpose, and, using a 15 per cent. solution, injected 0.05 gram, increasing to 0.3 gram. These doses do not produce any toxic symptoms when applied intravenously. The atoxyl injections were repeated every two days, but it was found unnecessary and undesirable to increase the tuberculin doses more frequently than every week. Severe febrile reactions should be avoided, but moderate general reactions with slight fever increase the activity of the treatment. The patients treated in this way were suffering from the first or second stage of the disease. The general condition of the patients improved during the treatment, the appetite improved, the weight increased, the night sweats diminished, and the cough got better. The number of rales diminished and the quantity of sputum also was lessened, while the character was changed from a purulent to a clear type. He considers that the combined treatment is adapted for cases which do not improve under the ordinary sanatorium treatment, and also to ambulatory patients who are well enough to visit the physician at his house.

151. Phtysoremid.

UNDER the fancy name of "phtysoremid" Krause has introduced Koch's bacillary emulsion in capsule form, which he warmly recommends for internal treatment of tuberculosis. F. Köhler has tried this remedy in a series of 42 cases. He had previously tried old tuberculin in pill form without obtaining satisfactory results (*Munch. med. Woch.*, January 26th, 1909). His results with phtysoremid were as follows: 7 patients were cured—that is, showed no signs of disease after the treatment; 7 were nearly cured, 14 were not benefited, and 13 got worse. The last patient interrupted the treatment before a definite conclusion could be formed. Two out of the 13 patients who got worse died. The results were therefore not at all good, and he is satisfied that when given by the mouth bacillary emulsion is not useful. He notes, however, that while the patients were not doing well, as far as the clinical signs were concerned, they put on weight in an extraordinary manner. This leads him to the conclusion that more care should be exercised before a prognosis is based on increase of weight. In mild cases phtysoremid may be given as an

adjunct to the usual treatment, provided that too much is not expected. He begins with one "weak" capsule daily, and increases this to three or four. Then he gradually goes on to the "strong" capsules. The patient should take from 100 to 200 capsules during the treatment.

PATHOLOGY.

152. Variations of Catalase Ferment in Disease.

WINTERSTERN and MELOT (*Journ. of Exper. Med.*, November, 1908) have investigated the presence in the human body of catalase, which is a ferment characterized by its power of decomposing hydrogen peroxide. In nephritis they find a diminution in the amount of this ferment in all the tissues examined—namely, kidney, blood, lung, liver, and spleen—but the reduction is most marked in the renal tissue. This reduction varies directly with the severity of the pathological lesions in the kidneys and the clinical symptoms. The urine also in cases of nephritis shows a much greater inhibiting power than normal urine. "This may be accounted for by the reaction of the urine, and subsequent work must prove whether or not the kidney takes any more active part in nephritis and secretes into the blood and urine a substance which manifests itself by a reduction in the catalytic activity." In the two cases of eclampsia which the authors have examined the catalytic activity of the blood was not reduced. They consider that these last observations may prove to be of great importance, because, if substantiated by a sufficient number of further cases, they will establish the use of a ready method for differentiating during life between eclampsia and nephritis. In pneumonia they find that during the stage of red hepatization the lung has an increased catalytic activity. This increase varies directly with the number of intact red blood corpuscles in the exudate and in the engorged capillaries. This influence of the red corpuscles is also shown in fresh haemorrhagic infarcts, where the increase of catalytic activity is very great. In grey hepatization, on the other hand, there is no increase. In tuberculosis the lung shows a decreased activity, probably owing to the lack of blood in the diseased area, while the lowered activity found in the other organs may also be explained by the anaemia and emaciation associated with the disease. In the cases of diabetes mellitus and jaundice which the authors investigated there was no increase of catalytic activity. One case of asphyxiation by illuminating gas and also one case of congenital syphilis, showed a marked lowering of catalytic activity. The diminution effected by *post-mortem* change is only slight, and does not affect the results recorded. There is no marked change in the catalytic activity due to age.

153. Agglutination Studies in Tuberculosis.

H. R. M. LANDIS (*Proc. of the Path. Soc. of Philadelphia*, 1907) says that although the existence of agglutinins in a serum is not regarded as having any part in the phenomenon of immunity, it is believed that their presence affords an index to the degree of immunity present, and that as the agglutination test is high or low, or subject to an increase or a decrease, we may determine the resistance of the organism to the special bacterium tested for. Recent work on agglutination in tuberculosis has been devoted to determining its value in estimating the degree of immunity obtained by means of specific or other forms of treatment, and in forming a prognosis. Under specific treatment with tuberculin the agglutination reaction can be greatly increased, and a decrease in the agglutination power or failure to increase is usually attended by an unfavourable outcome. The author has continued the study of the agglutination reaction as met with in cases of advanced tuberculosis at the Phipps Institute, and in cases under treatment at the White Haven Sanatorium, and in negroes in the wards of the Philadelphia Hospital. The test was also applied to effusions of various kinds obtained during life, and to fluids obtained from the serous cavities shortly after death. Further studies along these lines may throw additional light on the complex question of immunity in tuberculosis. In so far as the agglutination is concerned, our knowledge may be summarized as follows:—(1) That the reaction is valueless as a diagnostic agent. (2) That it forms an available means of estimating the degree of immunity attained in tuberculosis by means of tuberculin and other forms of treatment. (3) That the absence of the agglutinating reaction in fluids containing but little albumen, such as cerebro-spinal fluid, renders it highly probable that the agglutinins are closely allied to the albumens.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

154. Pleuritic Effusion.

F. LOMMEL (*Medizin. Klinik*, No. 4, Jahrgang v) reviews the recent advances made in the study of pleuritic effusion, advances which are partly of theoretical, partly of practical interest. The importance of the diminution of vocal thrill as a sign of pleural effusion has, perhaps, somewhat diminished. Arneith, as a result of the examination of 117 cases of pneumonia, arrived at the conclusion that, as a rule, vocal thrill was absent in the second stage of pneumonia; while Wolter supported Arneith in so far as he found the increased vocal thrill of pneumonia not constant, and observed an increased vocal fremitus in pleuritic exudate. A more recently observed physical sign of value in diagnosis, first described by Grocco, is the presence of a triangular area of diminished resonance on percussion situated on the sound side near the spine, with its apex at about the height of the upper limit of the effusion. Ranchfuss explains the area of dullness on the sound side as due to the fluid-filled recess arching over like a sac in front of the vertebral column; Rather, on the other hand, looks upon it as due to a weakening of the pleximeter action of the spine from an accumulation of fluid. On the affected side Krönig's recent description would make the three-cornered resonant area smaller than that formed by Garland's S-shaped upper boundary: the anatomical reason for this resonant area on the affected side is the drawing back of the lung still containing air on to its hilum. Illumination by Roentgen rays may clear up the diagnosis in cases of pleural effusion. By means of it the presence of small effusions which only fill up the pleural sinus can be demonstrated, and also effusions situated between the lobes of the lung, the effusion in the latter case being differentiated from abscess in the lung by the absence of elastic fibres in the sputum. Thickenings of the pleurae can be differentiated from effusions by the fact that the shadow due to thickening varies in intensity according to the distance from the screen, and thus, for example, a thickening of the posterior pleura will cast a more distinct shadow if the screen is behind than in front. The upper limit of a pleural effusion as tested by percussion may appear to be different from that obtained by Roentgen-ray illumination; but this does not necessarily show inaccuracy in percussion, because an effusion with a horizontal upper limit may throw a shadow whose upper line rises from within outwards as a result of the increased amount of fluid through which the lateral rays have to pass, and partly also because of the lateral part of the lungs being more readily compressed by fluid than the part near the root. In practice, the great question as to the course of a pleurisy is whether it is or is not tuberculous. The disadvantage of many of the methods of attempting to determine whether or not the fluid is tuberculous in origin by means of culture media or inoculations of animals, is the length of time which must elapse before certainty is arrived at. Thus Vetter uses a peptone glycerine water as culture medium, and finds the method more reliable than that of animal inoculations, but the time needed is from twenty-one to twenty-five days. When guinea-pigs are used and inoculations made into the peritoneal cavity, according to Grober, from three to four weeks is needed. Bloch shortens the time to from ten to fourteen days by injecting fluid into the bend of the groin, and injuring the lymph glands by pressure between the fingers. Weber arrives at much the same result in time by using subcutaneous injections. Nattan-Larrier inoculates a suckling guinea-pig at the base of the lacteal gland, and finds bacilli present in the milk at the end of five days; the only disadvantage of this plan is that, even in the larger institutes, there is not a constant supply of such animals. In a more restricted number of cases cyto-diagnosis is of great value. In general it may be said that an excess of lymphocytes as compared with polymorphonuclear leucocytes in an acute febrile condition denotes with great certainty a tuberculous affection, but the absence of lymphocytes does not exclude the possibility of tubercle. The question as to whether an effusion is essentially pleuritic or of the nature of a transudation does not, as a rule, present much difficulty, except where an inflammatory process is combined with a hydraemic transudation: in this connexion may be mentioned those obstinate right-sided pleural exudates which are not infrequently found in

combination with diseases of the cardiac muscle, and to which attention has been specially called by Gerhardt. Here the absence or insignificance of other pathological collections of fluid, the obstinate course and the tendency to relapse even where good diuresis is maintained, all go against the diagnosis of simple transudation. In considering the question of paracentesis in the case of serous or sero-fibrinous exudates, too narrow a constriction is not to be put on the vital indication. Gerhardt has shown how the injurious effect of a pleural exudate upon the lesser circulation is minimized by deepening of the inspirations, so that the intrapleural pressure in cases of recent exudation, where the pleurae are not much thickened, may be even more strongly negative than in health; the powerful muscular action needed to accomplish this may, however, suddenly fail through exhaustion, and thus cases of sudden death may be explained.

155. Diseases associated with Dentition.

HUTINEL in the *Annales de Médecine et Chirurgie* for March discusses the question, is dentition a cause of infantile disease? The opinion that it is has been held for centuries, but for the last fifty years it has been in dispute. Guersant maintains that the period of dentition is a time when the physical powers of resisting disease is at a low ebb, and he compares it to the menstrual, the puerperium, and the climacteric periods, when disease is easily acquired. He quotes Magitot, Politzer, and especially Dr. Comby, as holding the same view. But he also points out that one cannot by a stroke of the pen destroy the result of observations made by many physicians and maintained by the ancients. The ideas that the ancients had concerning cold have lost nothing of their accuracy, notwithstanding the discovery of the pathological agent of pneumonia; we have found, however, that cold lights up their virulence. Progress in medicine does not take place in one direct line—there are too many difficulties for that; it is by a series of zigzags that the ultimate goal is reached. Teething is accompanied by pain; this is manifested by the cries and the habit of biting in infants. The same can be seen in animals, such as a young dog. Delabarre proved fifty years ago that irritation of the nerves of the gum causes hyperaemia, redness and swelling of the tissues, and prolonged vasomotor trouble. This irritation of the gums is accompanied by increased secretion from the salivary glands, and also increase in the secretions of the whole of the intestinal tract, for the parts are intimately connected. The congestion disappears as soon as the tooth makes its appearance, and the retraction of the mucous membrane enables the tooth to grow rapidly. The turgescence favours infection. An infant just born, and during the first few days of life, is not infected; this comes with time. Hutinel proceeds to quote Drs. Rillet and Barthez as authorities who believe that diseases accompanying dentition are due to infection, and he states that this opinion is supported by Trousseau. Children suffer from diarrhoea because the infection starting at the mouth passes along the whole length of the intestinal tract. But to conclude that dentition apart from infection could, *per se*, cause serious diarrhoea, or infantile cholera, would be absurd. The pathological state has for its commencement a vicious alimentation, dentition further reduces the power of resistance, thus is produced a morbid congestion, which paves the way for bronchopneumonia. The diminution of the resisting powers is shown locally by stomatitis and aphthous patches in the month. The local infection is declared at a distance by the enlargement of the glands of the neck. But the first signs of infection may show themselves in the chest. Hutinel has frequently seen congestion and bronchitis both disappear with the first appearance of the teeth. Syphilis is readily contracted at this period of life. It is due to want of care on the part of attendants; it is seen at the anus, where may be found enormous mucous plaques; they may disappear by a few days' treatment. In childhood it is dentition that is the chief means of infection; in the adult it is decay of the teeth. The evolution of the teeth at any period constitutes a period of danger.

156. *Ascaris Lumbricoides* Escaping through Ear.

HOLM (*Ugeskrift for Læger*, No. 6, 1909) reports the case of an *Ascaris lumbricoides* passing through the Eustachian tube and out of the ear in a child 3½ years old. According

to the mother's account, the child whilst playing began suddenly to sneeze and scratch her nose, and after a few moments to scream in agonizing pain, holding her hand to her ear. The mother, thinking that the child, who had for some time been suffering from post-scarlatinal otitis media, was seized with sudden pain, began to syringe out the ear, when she noticed a worm trying to work its way out of the ear. She managed to pull it out, and brought it with her for inspection. The child was found to have a large defect in the tympanic membrane, but otherwise nothing abnormal was detected in the fauces.

SURGERY.

157. The Surgical Treatment of Suppurative Pericarditis.

ELIOT (*Annals of Surgery*, January, 1909), in concluding a review of 22 collected cases of suppurative pericarditis, holds that it cannot be too strongly emphasized that every case of this affection in which the patient is not moribund should be treated by an operation which, when a general anaesthetic cannot be tolerated, may yet be successfully carried out under some local anaesthetic. Puncture alone affords in most cases at the best but temporary relief, and, as a rule, the removal of pus in this way is but partial, and its reaccumulation is rapid. The use of this method should, it is urged, be exclusively restricted to diagnostic purposes. The author objects to the formation of a musculo-cartilaginous flap, including two or more costal cartilages, and also to Allingham's "epigastric" operation, which, though it offers the advantages of a dependent outlet, and of diminished risk of opening the left pleural cavity, is likely in its performance to take up too much time. The simplest and most rapid exposure of the pericardium is accomplished, the author states, by resection of the inner part of either the fifth or the sixth costal cartilage through an oblique incision of the skin made parallel to its long axis. After division of the perichondrium and the trianglularis sterni, the pleural angle in the absence of adhesions is pushed outwards without, if possible, any extension of the skin incision. If obliteration of the pleural cavity has taken place, the underlying pericardium may readily be opened without danger of exposing the left lung. The presenting pericardium should be divided by scissors between two pairs of forceps, the opening being of sufficient size to permit the passage of a finger. Irrigation with either a saline or a weak antiseptic solution is thought to be desirable, but it is pointed out that inadequate provision for the free exit of the injected fluid from the interior of the pericardium may determine a fatal issue. The irrigation may be dispensed with if the patient's condition be so bad as to indicate a speedy ending of the operation. The edges of the opening in the pericardium should, whenever it be possible, be sewn to the margins of the wound in the skin. Drainage, which is undoubtedly favoured by the movements of the heart, may be further assisted by the insertion of a rubber tube or of a capillary gauze drain. In a case under the care of the author drainage was kept up for several weeks without causing any trouble, but, as has been pointed out by Riedel, the presence of a rubber tube may excite stormy and irregular action of the heart. In cases of recovery subsequent impairment and irregularity of the heart's action are, the author asserts, marked exceptions, nor is the patient likely to suffer from any future indication of cardiac displacement. Such satisfactory result, however, it is pointed out, cannot always be expected. In 7 of the 22 cases collected by the author full details are wanting in regard either to the nature of the effused fluid or to the definite results of the treatment. In the remaining 15 cases resection of one or more costal cartilages resulted in 9 instances in recovery and in 6 in death. These results may be regarded as satisfactory, as suppurative pericarditis is in a great majority of instances a secondary infective disease. The fact that recovery may occur even when pyopericarditis is part of a general sepsis certainly warrants, the author believes, surgical interference under all circumstances in which the patient is not moribund as the best and, indeed, the only means of averting a fatal issue.

158. Bier's Methods of Surgical Treatment.

DEBIEZ (*Archiv. Prov. de Chirurg.*, No. 1, 1909) gives the results of his experience of Bier's method of treatment by blood stasis in some branches of surgical work, reserving his views on the application of this method to tuberculous

affections and diseases of bone for a future paper. In order to carry out this treatment properly and efficiently surgeons, it is held, should not trust to printed information but endeavour to acquire direct experience of the complicated technique of the method in Bier's own clinic. Arterial hyperaemia, the author reports, has given good results in the treatment of chilblains and in some cases of articular stiffness, but failed in cases of varicose ulcer and of chronic articular effusion of non-tuberculous origin. Venous hyperaemia, it was found, did not simplify the treatment of boils and whitlow. This latter method by hindering the development of infection exerts a favourable influence on soiled wounds, but it is difficult in such cases to estimate exactly the part played by Bier's method of establishing stasis, as stasis is usually applied under such circumstances by other means. In most cases of gonorrhoeal arthritis, even in its most severe forms, venous stasis will lead to a complete restoration of the function of the affected joint. The main condition of success in the application of the method of such cases is a thorough practical knowledge of its technical details. The most satisfactory results obtained by the author from venous stasis have followed its use in the serious cases of acute purulent arthritis of traumatic origin and due to streptococcal infection. In other cases of acute purulent arthritis no good results have been obtained. It is pointed out that in the treatment of articular affections exact immobilization of the diseased joint is incompatible with the application of stasis in accordance with Bier's principles, and that, consequently, it often happens that in subjecting articular disease to venous stasis with the hope of preserving complete mobility of the affected joint, a very unsatisfactory result is obtained, the articular surfaces being displaced and the patient after the treatment being left with a limb less useful than one in which ankylosis has taken place with the bones in good position. In concluding his paper the author asserts that venous stasis is capable in many cases of modifying rapidly and to a considerable extent the evolution of acute infective lesions, this action being manifested by favourable changes in the nature and amount of the secretion from the wound.

159. Cataract following Electric Shock.

M. TERRIEN, at the Ophthalmological Society of Paris (*Rec. d'Oph.*, November, 1908), described a case in which cataract in one eye came on two months after the patient had received a discharge of 500 volts, having accidentally touched a conductor with his hand. He remained unconscious for two hours, and was badly burnt about the forehead. Such cases are not infrequent, but must be distinguished from fulguration and direct lightning stroke. They have been carefully studied by Gonin (*Annales d'Oculistique*, 1904, t. cxxxi, p. 81). The cataract in Terrien's case was a soft one with moderate swelling of the lens, and matured rapidly. There can be little doubt that it was caused by the electric discharge.

OBSTETRICS.

160. Vaginal Thrombosis in Pregnancy.

FUNCK-BRENTANO (*Comptes Rendus de la Soc. d'Obstét. et Gynéc. et de Pédiat. de Paris*, etc., January, 1909) reports a case where a single woman, aged 22, became pregnant for the first time. Gestation, closely observed in the later months, proceeded normally; but one day very near term the patient felt something coming out of the vulva when she was raising the leg of a heavy table to disengage the corner of a table-cloth. She declared that she had not strained herself before during the pregnancy, and that the last coitus was in the third month. The patient was sent into a lying-in hospital, as it was suspected that the head of the child presented. Funck-Brentano found that an oval pedunculated body, of the size of a hen's egg, projected from the vulva. It somewhat resembled a loop of strangulated intestine, and blood oozed from its surface. The pedicle was short, but very distinct; it consisted of a fold of vaginal mucosa attached over an area $1\frac{1}{2}$ in. in diameter to the posterior column of the vagina, coming down at its lowest point to within $\frac{3}{4}$ in. from the fourchette. When it protruded it made a retrocele, which disappeared when it was reduced. The patient had varices of the labia and both lower extremities. The tumour was removed by division of the pedicle close to its attachment, a small artery was divided and ligatured. Labour set in five days later, and ended spontaneously. The tumour was examined under the microscope, and was reported to be a collection

of blood amidst a varicose plexus of veins in the substance of the vaginal mucosa. Brindeau described in 1903 a case where a pedunculated thrombus of the size of a cherry was detected two days after a normal labour. It was attached to the posterior column of the vagina, and in consistence resembled a testicle. It was not removed, and had most probably developed before labour. In all other recorded cases of vaginal thrombus associated with pregnancy the tumour made its appearance in the later months of pregnancy. In 12 out of 14 cases the patients were primiparae, and in 2 secundiparae; thus this tumour has never been observed in multiparae, and, besides, the patients were nearly all young, only 3 being over 24 years old. In 8 cases, at least, there were adjacent varices, and in only 1 was it specified that this complication was entirely absent. After the reading of Funck-Brentano's report there was some discussion as to whether the term "thrombus" was correct.

161. Glycosuria in Pregnant Women.

WILLIAMS (*Amer. Journ. of Med. Sci.*, January, 1909), in considering the clinical significance of glycosuria in pregnancy, points out the importance of determining whether the sugar in the urine indicates a true diabetes, or a transient, alimentary, or recurrent glycosuria, or merely a lactosuria. If no sugar occurs as lactose it is without clinical significance, and is probably associated with premature activity of the breasts. If a glycosuria of the alimentary type is present its clinical significance is also unimportant. The mere reduction of Fehling's solution is therefore an insufficient guide to the prognosis of any particular case, as it is essential to determine whether the sugar is present in the form of glucose or lactose. Practically this may be ascertained by using the fermentation saccharometer, as glucose ferments readily while lactose does not. If the glycosuria appears late in the pregnancy, does not exceed 2 per cent. in amount, and is not accompanied by symptoms, it is most probably transient and may disappear spontaneously or persist throughout the pregnancy, but in either event its clinical significance is slight, though the patient should be carefully watched. A more serious condition is that in which the sugar appears early in large amounts, as it may not be possible to make a positive diagnosis between glycosuria and a true diabetes until after delivery. Pregnancy occurring in diabetic women and diabetes manifesting itself during pregnancy are serious complications, though the prognosis is not so alarming as is usually stated, for the majority do perfectly well, and in only a smaller proportion is the condition fatal. If the amount of sugar is large and uncontrolled by treatment, the induction of abortion is indicated even in the absence of other serious symptoms.

GYNAECOLOGY.

162. Fibroids and Pregnancy.

BOSSI (*La Ginecolog. Mod.*, January, 1909) publishes some cases illustrating some of the complications and dangers associated with pregnancy and labour in the presence of fibroids. From a consideration of these and other cases he feels justified in the following conclusions. As a general guide to conduct in these cases one ought, as far as possible, to preserve the powers of procreation and their respective organs, not blindly, but with scrupulous and careful consideration of the merits in each individual case. Care should be taken to note whether pregnancy unduly accelerates the growth of the fibroid so as to indicate the necessity of induced labour. If it is decided to let the pregnancy go on, special attention should be paid to the circulatory, urinary, and hepatic systems. The question whether pregnancy should be allowed to go to full term or interrupted at some period short of that, but permitting a living child, must be determined by the judgement of the medical man. The presence of a fibroid need not condemn a woman to sterility either natural or forced, and *ceteris paribus* one ought to encourage rather than disparage fecundation in these cases. In many cases fibroids do not interfere in any way with the normal progress of a pregnancy, in others a viable premature child may be obtained and satisfactorily reared, and further, gestation seems in some cases to indirectly prove useful in the cure of a fibroid, for this shares in the general uterine involution which occurs in the puerperium, and sometimes to such an extent that subsequent pregnancy may occur without danger. On the other hand, sterility undoubtedly favours the development of uterine fibroids.

THERAPEUTICS.

163. Fresh Air in the Treatment of Disease.

EVIDENCE that fresh air is an important factor in the successful treatment of disease continues to accumulate. Dr. Edwin Graham (*Archives of Paediatrics*, February, 1909) relates his experience gained in the wards of the Philadelphia Hospital. Before adopting the open-air method he was puzzled to account for so many deaths among infants in his wards in spite of every care in diet and nursing. In his private practice, the same type of infants were doing well, almost without exception. He finally decided to try the open-air method for his hospital patients; even in the month of January he had the children placed for two hours each day on the fire-escapes. Towels were pinned over the top of each crib to shield the child from wind. The infant mortality began to lessen immediately. Dr. Graham continued this practice for two or three years with the greatest benefits to the children. New wards have since been constructed in the hospital, and for the last five years his patients have had an abundance of fresh air both by night and day. He is no longer a pessimist when in the infants' ward, but an optimist. In the Jefferson Hospital Dr. Graham uses the roof garden all the year round both summer and winter. He now treats all cases of bronchopneumonia and lobar pneumonia by the fresh-air treatment. The plan has been so much more successful than the older methods of treatment that he has lost more or less his dread of pneumonia as a hospital disease. The same line of treatment he adopts for typhoid patients, and his patients have done so much better that nothing would induce him to revert to the older methods. The special wards have large windows on both sides and an open door at the end; these are always open and the air of the wards is always cool, except once in two or three hours when the windows are closed whilst the children are examined for cleanliness. An effort is made to keep the hands and feet of the infants warm by means of gloves, stockings, and hot-water bottles. Dr. Graham has for the last five years adopted the open-air method of treatment for his private patients. On his first visit he instils into the mind of the mother that fresh air differs as much from stale air as fresh milk differs from impure milk. If the physician is enthusiastic the mother will be easily convinced. He finds rickets, scrofulosis, gastrointestinal disease, and all conditions, benefited by the fresh-air method of treatment. If possible, the temperature in which a child lies should be "indifferent"—that is to say, 75° F. in summer with summer clothing, and 65° F. in winter with winter clothing. Children stand cold air very well provided their bodies are kept warm. High altitudes are useful in children with incipient tuberculosis or an inherited tendency; there is increase in heat production and an augmented metabolism, proved by the larger amount of carbonic acid given off by the lungs, and as a rule there is an increase in the red blood corpuscles. Seaside air is indicated in children convalescing from severe illnesses, especially gastro-intestinal in type. Dr. Graham exhorts all medical men to unite in preaching fresh air, vote for open squares, endorse roof gardens, and the removal of adenoids and tonsils.

164. Meat Broth for Infants.

W. STOLTZNER (*Medizin. Klinik*, February 7th, 1909) has obtained excellent results, in the case of infants brought to him with gastro-intestinal symptoms due to a diet of flour foods and sugar, by putting them on to a mixture of milk and meat broth. Bretonneau in 1818 first attempted to feed young infants suffering from atrophic chronic gastro-intestinal symptoms on milk mixed with broth instead of with water; since that time the system of infant feeding has never fallen into absolute disuse. In France, some doctors recommending it, as did Bretonneau, only for atrophic infants, others for any infants for whom breast feeding was not obtainable. In Austria Mayer in 1850, Monti and v. Huttenbrenner later, have all advocated the dilution of milk by broth, Monti for children with rickets, and v. Huttenbrenner even for newborn children. In Germany A. Steffen recommends a mixture composed of 50 grams of milk, 50 grams of meat broth, 1 teaspoonful of cream, and 3.8 grams of milk sugar, as an infant food, failing human milk. Although from time to time the use of meat broths as a diluent of milk for infants has been recommended, it has never become widely popular. Stoltzner, in the present article, describes his own experience and finds that meat broth is indicated for cases of "tabes mesenterica," or atrophy, caused by a flour-food diet. He reports on 14 such cases, one of them dating back to 1905, the other 13 belonging to the

years 1907 and 1908. The broth used was made from beef or veal, and was of ordinary medium strength; sugar was never added to the mixture. The relative strength of milk and of broth in the mixture varied according to the case. The average age of the children was five months, with an average weight of 4.055 grams (9 lb. approximately). Seven of the children had never been breast-fed, the other 7 had been breast-fed on an average for 2.7 months. The length of time of feeding on flour food was not less on an average than two and a half months. Eight children during the whole of this time had not been given any milk at all; 6 had received small amounts of milk along with the carbohydrates; to this group belonged 1 child fed on Nestlé's food and 3 on condensed Swiss milk; 8 out of the 14 children suffered at the beginning of treatment from diarrhoea, which in some cases had persisted for weeks and months; 6 children were in an especially serious condition, 2 of them showed pronounced myotonia, 1 obstinately refused food; 1 child at 3 months weighed only 2.970 grams ($\frac{6}{16}$ lb. approximately). Unfortunately, in 9 cases the treatment was only carried out for a short time; but even these cases served to show that diarrhoea, when present, quickly stopped when feeding with the mixture of milk and broth was begun. In 6 out of the 9 cases a gratifying increase in weight became evident; of the remaining 3, 1 child during the time of the diet suffered from an influenza-like feverish attack, a second did not take enough food, a third soon after the beginning of the treatment began to have dry, crumbling stools. The course, in the 5 cases which remained longer under treatment, was very favourable: immediately or soon after the beginning of treatment the weight in each case began to go up, and the further increase left nothing to be desired. Although the whole number of cases is not large and they all belong to the hospital class, yet the results were so clear that the author finds himself justified in considering that the symptoms due to a flour-food diet form an indication for the milk and meat-broth diet. Further information is needed as to how long the diet should be persisted in. Two of the cases appeared to indicate that the milk and broth mixture was only of value for a few days, and that some children could after that return to milk and flour mixtures.

165. Injections of Morphine in Acute Laryngeal Spasm in Infants.

SARGNON, BARLATIER, and MASTIER (*Ann. de Méd. et Chir.*, February 15th, 1909) quote Lesage and Clérét, who have had favourable results from the following minimum doses in cases of laryngeal spasm where operative interference seemed urgent. Respiratory difficulty vanished at once, and was, as a rule, followed by six or seven hours' peaceful sleep. There were no bad after-effects, and the writers now tend to give larger doses. Those reported are: $\frac{1}{2}$ c.cm. of $\frac{1}{100}$ per cent. solution of morphine hydrochlorate in the first year of life, $\frac{1}{2}$ c.cm. in the second year, and 1 c.cm. in the third. The same treatment has been carried out where intubation had been required, shortening the period during which the instrument was necessary and preventing renewed intubation where removal had been followed by an exacerbation of the symptoms. Treboullet and G. Bozé publish 13 cases of croup treated by injections varying from $\frac{1}{2}$ to $\frac{1}{4}$ cg. with the following results: Two deaths in children of 18 and 19 months, where there had been intubations and tracheotomy. One uncertain case; recovery following intubation and injections. Ten successes in children from 21 months to 10 years. Difficulty of breathing vanished in twelve hours at latest. These authors administered as much as $\frac{1}{2}$ cg. in children of 6 months without ill-effects, and obtained good results from the same doses in whooping-cough uncomplicated by bronchopneumonia. They counsel strict attention to diet and frequent examination of the urine. Sargnon, Barlatier, and Mastier publish the following observation of their own after dwelling on the bad results of tracheotomy—from which Rankin gives a mortality of 95 per cent. in children under 1 year and 75 per cent. in those under 2—urging the desirability of trying any safe form of medication tending to do away with the necessity of operative interference; they, however, emphasize the fact that the value of this treatment consists in its application to pure cases of spasm, and that it is contraindicated where there is mechanical obstruction, or where spasm is complicated by bronchopneumonia: A child, aged 14 months, had slight cough; no dyspnoea; temperature 39.9° in the morning, rise of temperature to 40.5° at night; pulse-rate, 108; no other symptoms. Intense difficulty in breathing the following night; rapid respiration-rate; no chest symptoms;

no false membranes. Preparations were made for intubation and tracheotomy, the diagnosis being non-diphtheritic laryngitis. A precautionary dose of serum was administered (10 c.cm.), followed by that of $\frac{1}{2}$ c.cm. of a $\frac{1}{10}$ per cent. solution of morphine. The patient settled in about ten minutes and slept for six hours. Uninterrupted recovery ensued. Cultures revealed staphylococci and streptococci, but no Klebs-Loeffler bacilli.

PATHOLOGY.

166. The Toxicology of Nickel Carbonyl.

H. W. ARMIT (*Journ. of Hygiene*, November, 1908) continues his investigation of nickel carbonyl poisoning by experimentation on rabbits, cats, and other laboratory animals, and arrives at the following conclusions. Nickel carbonyl poisoning is a particular instance of nickel poisoning. The lethal dose of nickel varies according to the method of application. When given subcutaneously the physical condition of the compound influences the rate of absorption, and therefore relatively large quantities may be required; in rabbits the lethal dose is about $\frac{7}{8}$ mg. per kilo of body weight, and in cats it is about 12½ mg. per kilo. When applied intraperitoneally the absorbing surface is considerably larger, and consequently the minimal fatal dose is smaller, being less than 7 mg. for a rabbit. When applied in the form of nickel carbonyl vapour the conditions are still more favourable for rapid absorption, the fatal dose for rabbits being from 3 to 4 mg. per kilo, and for cats about 8½ mg. Nickel carbonyl is dissociated in the lungs, and a nickel compound, probably the hydrated subcarbonate, is deposited. The nickel is dissolved from the respiratory surface by the tissue fluids, and is then taken up by the blood and enters into complex combination with some constituent of the body. Some of the nickel finds its way directly through the lymphatic channels into the bronchial glands. The brain, the adrenals, and the lungs appear to exercise a selective absorption of the nickel which is brought in contact with them, but the poison only stays for a short time in these organs. The specific pathological changes produced are primarily a degeneration of the endothelial cells of the capillary vessels, and it is possible that some further primary action is exercised on the ganglion cells in the brain and on the parenchyma cells of the adrenals. As the result of fatty degeneration of the vessel walls, haemorrhages follow, and secondary changes result from the effects of the haemorrhages. The nickel is excreted by the kidneys and intestines. The method of poisoning with iron carbonyl is similar to that of nickel poisoning, but the amount necessary to kill in the former case is larger. Iron acts in a similar manner to nickel on the walls of capillary vessels, but the author has obtained no evidence of selection by any special tissues. Cobalt has a toxicological action which is identical with that of nickel, but the lethal dose is higher, though smaller than the lethal dose of iron. After the inhalation of a quantity of nickel or iron carbonyl greater than the minimum required to kill, no form of treatment was found to avert death.

167. Catalysis and Oxydasis in Normal and Carcinomatous Liver.

BLUMENTHAL and BRAHM (*Méd. Klin.*, January 3rd, 1909) take normal human liver, as fresh as possible, and equally fresh carcinomatous liver, and let them undergo autodigestion with chloroform water in an incubator at 37° C. The autodigestion mixtures are pipetted off after a fixed time, and the amount of oxygen set free from hydrogen peroxide—that is, the action of catalysis and oxydasis in the autodigested mixtures is tested quantitatively, as follows: A measured amount of H_2O_2 is added in excess to the autodigested liquid, removed with a pipette, and when the development of gas has quite ceased, the amount of unaltered H_2O_2 is determined by titration with a $\frac{1}{10}$ normal solution of $K.MnO_4$, dilute H_2SO_4 being added. Fresh carcinoma of the liver sets free a considerable amount of O from H_2O_2 , but always decidedly less than normal liver. The amount of O set free decreases rapidly in carcinoma, while in normal liver it remains constant for many weeks. This corresponds with the rapid decrease in oxygen-liberating ferment action in the case of carcinomatous as opposed to healthy liver. Pieces of liver, macroscopically normal, were further examined in this way, and figures obtained which lay between those for normal and carcinomatous liver: this shows the influence of the diseased parts on the healthy by means of the ferment in question.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

169.

The Parathyroid and Tetany.

UNDER the title of "the parathyroid gland and its relation to the pathogenesis of tetany," Bruno Glaserfeld sums up our knowledge with regard to the physiology of the parathyroid and to the symptoms produced by disturbances of its functions (*Berl. klin. Woch.*, January 18th, 1909). Sandström first described the parathyroid gland in 1880. Anatomically, the gland has been found to vary in size, shape, and position not inconsiderably. In man it is usually placed directly touching the posterior surface of the thyroid gland, toward the lower and median border of the lateral lobes, and therefore lies in close proximity with the oesophagus and trachea. It is usually rounded or flattened, and resembles a lymphatic gland macroscopically. Its colour is brownish-red. More than one pair of parathyroid glands have not yet been seen in man, but occasionally only one gland has been found. Apart from this gland, an internal epithelial body situated in the structure of the thyroid gland has been seen in some animals, but it appears to be doubtful whether this occurs in man as a normal condition. Histologically, the glands consist of epithelial cells forming a compact contiguous mass, without reticulum, merely separated by septa carrying the vessels, but at times well-marked connective tissue septa are met with. The cells are partly large epithelial cells, with well-developed nuclei, which stain intensely, and almost structureless protoplasm, and partly large epithelial cells with small nuclei, very sharp edges, and granular, well-differentiated protoplasm. The idea which Sandström first expressed that the parathyroids were embryonal thyroid glands—has been disproved, and it is now almost certain that these structures are independent, and arise from the third and fourth branchial arches. With regard to the pathology of these glands, Schmorl has described amyloid degeneration and miliary tubercles affecting them. Haemorrhages in the glands as well as hyperplasia have been described in connexion with tetany, while necrosis, tumour, and other changes have been met with on rare occasions. The experimental removal of the parathyroids in animals leads to the development of tetany. If some parathyroid tissue is left, the tetanic convulsions are mild, and only last for a short time, while recovery soon takes place. Some observers have attempted to dispute this, but it may be stated that the dependence of tetany on operative disturbance of the parathyroids has been proved. It is wrong to speak of a *tetania strumipriva*; *tetania parathyropriva* is the proper term. The parathyroid gland is absolutely necessary for life, and no animal has been kept alive after the complete removal of this organ. Its functions may be said to regulate the proper balance of the motor nerve function. Glaserfeld inquires into the question whether tetany is always produced by some lesion of the parathyroid gland. Tetany is known to arise, apart from operative removal of goitre, in certain occupations, in acute infectious diseases, in pregnancy, in chronic gastric affections, and in early childhood. The idea that these forms are primarily due to an insufficiency of the gland is accepted by many astute observers. Experimentally the tetany of pregnancy alone has been dealt with. Thaler has removed the parathyroids of a rat, leaving one-half of one gland intact. No symptoms were seen, but tetany occurred as soon as the animal became pregnant. This experiment has been repeated in various forms with similar results, so that it may be accepted that pregnancy tetany is due to insufficiency of the gland. Tetany of childhood cannot be experimentally studied, but it has been found in a large proportion of the autopsies that haemorrhages in the parathyroids was present. With regard to the other forms, one very significant fact is emphasized. Tropic disturbances, especially affecting the skin, nails, etc., are frequently met with in these cases, and similar trophic disturbances were described by Erdheim in experimental tetany. The author considers, therefore, that it is justifiable to regard human tetany as a condition which stands in relationship with affections of the parathyroid. So far no defined tetany toxin has been discovered, and, although various theories with regard to the way in which tetany is produced have been brought forward, no actual evidence in this direction is available. Tetany has been treated by means of animal parathyroid gland or some preparation of

the same. Löwenthal, Wiebrecht, and MacCallum report on favourable results, while in tetany of childhood no benefit has yet been obtained.

169. The Sign of "Tapotage" in Pulmonary Phthisis.

IN 1904 Erni described a symptom which frequently exists in pulmonary tuberculosis. In certain cases percussion—above all in the subclavicular region—will excite immediate cough and expectoration. Molle (*Lyon Méd.*, February 7th, 1909) has observed this sign of tapotage in several cases, and disagrees with Erni's opinion that the sign is distinctive of a subjacent pulmonary cavity. He found it in one case of early tuberculous infiltration in which cavitation was extremely improbable, and was not shown by any other sign. On the other hand, "tapotage" is frequently absent where a cavity undoubtedly exists. Nevertheless, the sign is by no means without diagnostic value. Molle has found that it is associated with the neuro-muscular hemiparesis, such as Weil and Jaquet have described in pulmonary tuberculosis; it presents the same characteristic variability and inconstancy, and is due to a hyperaesthesia of the subjacent pulmonary parenchyma, the area of which is the same as the area of hyperaesthesia of the relatively superficial structures such as the muscles and nerves. The cough is, then, reflex rather than of mechanical causation.

170. Diagnosis of the Functional Capacity of the Kidney.

ZAGARI (*Rif. Med.*, February 22nd, 1909) points out that it is often more important to know whether a kidney is functioning adequately than to know whether it is diseased. A diseased kidney, like a diseased heart, may still perform its functions sufficiently well so as to be of less danger than a kidney less diseased but functionally compromised. Hence the importance of tests which may be relied on to indicate faulty function on the part of the kidney at early stages. The author has made trial of most of the recognized methods for his purpose, and briefly gives his experience. On the whole, he believes most may be learnt from a careful examination of the way in which chloride of sodium is eliminated. If the kidney is not working well there is almost certainly some retardation, or even retention, of the salt. In a healthy or compensated kidney salt is readily eliminated. In a definitely diseased kidney less than a quarter of the salt is eliminated, and this proportion holds good relatively in milder degrees of disease. In a healthy kidney the salt (meaning in every case a small excess over the normal diet) is quickly eliminated within the first hour, and the earlier the time the quicker the rate of elimination; all this is altered and retarded in kidneys that are not working well. This retarded elimination in diseased kidneys is a valuable indication. The author is alive to the fact that it may not be safe to test the total functional capacity of a kidney by the elimination of one particular solid constituent of the urine, but of the methods tried by him or suggested by others he has found his practically the most useful.

SURGERY.

171. Mobilization of Left Colon in Removal of Cancer of the Sigmoid Flexure and Upper Part of the Rectum.

JAVAILLON and CHALIER (*Lyon Chir.*, Tome I, No. 4, 1909) describe at length a complicated operation which they have practised on the cadaver, with the expectation that in its application to the living subject it may enable the surgeon to avoid some difficulties, and also the inconvenient result with regard to a false anus, in the removal of large and adherent cancer of the sigmoid flexure and the upper part of the rectum. It has been found by the authors that it is anatomically possible to drag down through a perineal wound the whole of the sigmoid flexure, and to attach the lower part of the descending colon to the margin of the skin wound in this region, after having mobilized the whole of this portion of the intestine. In the first and abdominal stage of this operation the descending colon, together with the splenic

and sigmoid flexures, is, after exposure by left lateral laparotomy, rendered free and floating like small intestine by careful section of the suspensory ligaments of the splenic flexure, of the peritoneal investment along the outer margin of the descending colon, and of the mesenteric attachment of the sigmoid flexure. In the second stage, following complete closure of the abdominal wound, the coccyx is resected and the rectum set free by the usual perineal operation. The sigmoid flexure, and, indeed, most of the descending colon, can now be drawn into the wound. After removal of the growth the lower end of the divided colon can be sutured to the margin of the anus or to that of the rectum, if the lower portion of the gut can be saved. The performance of this operation may, the authors believe, be justified from a physiological point of view by the following considerations: It is a fact that at the present time very extensive resection, and even complete occlusion, of the large intestine may be practised without causing any serious inconvenience. In the second place, the different manœuvres of loosening the attachments of the splenic flexure and the descending portion of the colon are not accompanied by any vascular division capable of impairing the vitality of this portion of the intestine. Perineal displacement of the descending colon does not exert on the blood vessels of this portion of intestine such a degree of traction as might interfere with or even seriously compromise its nutrition. Finally, steps taken before closing the abdomen to fix by sutures the loose and depressed portion of colon would serve to prevent any flexure or faulty position that might ultimately cause any mechanical troubles of the intestine and symptoms of obstruction. This proposed method of dealing with recto-sigmoid cancer is not likely, it is held, to be more severe than the combined abdominal and perineal operation now usually practised in such cases, and it has the great advantage over the latter of saving the patient from the infirmity of an artificial anus in the groin.

172. Endoscopy in Cicatricial Stricture of Oesophagus.

GUISEZ (*Bull. de la Soc. de l'Internat. des Hôpitaux de Paris*, No. 9, 1908) reports very favourably of oesophagoscopy as an aid to the direct treatment of cicatricial stenosis of the oesophagus. By exposing to view the seat of obstruction the surgeon is enabled to deal with any diverticulum that may exist, to find the entrance to the stricture, which has often an eccentric situation, and to treat with good prospects of success a narrow constriction that could not have been dealt with by ordinary means. A very fine bougie having been passed through the stricture under oesophagoscopic control, the further treatment in the author's practice consists, according to the nature and extent of the lesion, either in gradual dilatation, in section of the stricture, or in dilatation by electrolysis. The author describes the results of his treatment in 31 cases of narrow and difficult oesophageal stricture, in 6 of which gastrostomy had been performed. In 25 cases he has succeeded in restoring the calibre of the oesophagus, and in rendering the patients capable of normal or almost normal alimentation. In the cases in which the treatment failed the stenosis was complete, or the author was unable to find the very minute entrance to the stricture. The results obtained in the successful cases are regarded as complete and durable, several patients having passed over intervals of from two to three years without presenting any signs of relapse. The prognosis is better in cases of recent stricture than in those of stenosis of long duration in which the cicatricial tissue is tough and fibrous. The most favourable cases, it is pointed out, are those of short and valvular stricture. Multiplicity of the strictures is not an obstacle to endoscopy, provided each be dilated successively. Long strictures with longitudinal infiltration of the oesophageal walls are very difficult to traverse, and, even if permeable, necessitate for their treatment frequent endoscopic sittings. The author holds that his results have been very satisfactory, as they indicate that a cure can be effected in 80 per cent. of cases in which gastrostomy is the only alternative.

173. Iodoform Amblyopia.

M. ROCHON-DUVIGNEAUD brought a case before the Paris Ophthalmological Society (*Recueil d'Ophthal.*, November, 1903) in which symptoms of retrolubular neuritis followed the injection of 20 c.cm. of glycerine emulsion of iodoform into a psoas abscess. Eight or ten days later the patient began to taste iodoform and have a smell of it in his nose. He had a heavy feeling in his head, but no vomiting or vertigo. Thirty-seven days later amblyopia came on.

A double optic neuritis was present, with later a central scotoma for green and red. There was also some peripheral contraction of the fields for these colours. Valude and Terson have published similar results from saturation with iodoform. Both these cases resulted in permanent partial optic atrophy. Sauveau, during the discussion which followed, stated that he had had a similar case in his practice.

OBSTETRICS.

174. The Induction of Premature Labour.

In order to determine which method is the best for inducing premature labour, Otto von Herff (*Muench. med. Woch.*, December 15th, 1908) first considers what results have been obtained by hebstectomy at full time; 664 cases published were found to be available for this purpose. Of these, 4.9 per cent. of the mothers and 9.6 per cent. of the children died; and even when the mothers recovered it was found that a considerable proportion of those examined at a later date showed serious disturbances, which could be ascribed to the operation. In comparing the conditions applying to induced labour, he states that the maternal mortality is less than 1 per cent., although that of the children is 20 per cent. Bumm has succeeded in diminishing the infantile mortality to 13.2 per cent., but at the same time maternal mortality rose to 1.9 per cent. He believes that hebstectomy must disappear from the list of operations of selection, and only be retained for those cases of urgent necessity in which no doubt exists that the method is sufficient for the case. Every general practitioner should be able to induce premature labour with safety, but, inasmuch as the unfavourable conditions of the private house with regard to antisepsis and asepsis as compared with the clinic might affect his results, it is necessary to introduce the simplest method of inducing labour, in order to keep the maternal mortality as low as possible. The simplest method, undoubtedly, is rupture of the membranes. It is rapidly performed; the armamentarium required is limited to a suitable membrane "Sprengrer" (the ordinary pointed probe may be insufficient), and it never fails. As a rule the pains set in after from six to twelve hours, while occasionally a somewhat longer interval may intervene. The patient is kept in bed during this period, and in some cases vaginal douches should be given. No further interference is required, so that the risk of infection becomes almost nil. Von Herff gives the statistical results obtained in his clinic by inducing labour prematurely by rupturing the membranes. Among 12,400 births, 5.7 per cent. were so induced. The pain set in on an average eighteen hours after the rupture. The birth itself usually occupied a shorter period than at full time. Only in 3.9 per cent. of the cases were the pains "too weak." Part-partum haemorrhages were not more frequent than when the birth took place spontaneously at full time. The placenta had to be artificially assisted in rather more cases than is usual, but this is probably due to the fact that the induction of premature labour was performed for contracted pelvis. Prolapse of the cord was met with nine times. The infantile mortality was 2.8 per cent. Turning to the condition of pelvis for which premature labour had to be induced, he finds that in 4 cases osteomalacia was present, in 3 cases there was a "filter" shaped pelvis, and in 1 case each there was a transversely contracted, a coxalgic obliquely, and a kyphotic obliquely contracted pelvis. In all the rest there were simple flattened, general contracted, or general irregular contracted pelvis. The conjugate measured from $7\frac{1}{2}$ cm. to $8\frac{1}{2}$ cm. in 73 per cent. of the cases. More important was the estimation of the actual size of the inside of the pelvis in relation to the fetal head. The labour was induced at or after the thirty-fifth week whenever this was possible. Out of 100 such births undertaken by the author at the lying-in hospital one woman died; all the other mothers recovered. Of the 100 children of these mothers, 85 were born alive, while 5 died during the early days of their lives. The remaining 80, however, left the hospital in good condition and with an excellent prospect of life. He compares these results with the results obtained in contracted pelvis when the labour was allowed to go to full time; 68 mothers brought their babies into the world without further help, but 30 per cent. of these babies were lost. Forceps were used in 30 per cent. of the cases, with an infantile mortality of 36 per cent.; version yielded an infantile mortality of 76 per cent., while all the operative-born children taken together included 55 per cent. dead children. The whole series showed a loss of infant life to the extent of 45 per cent. This, he claims, speaks

most eloquently in favour of inducing premature labour by rupturing the membranes according to Scheel, at the proper time, for contracted pelvis.

GYNAECOLOGY.

175.

Laparo-colpohysterotomy.

A. DÜHRSSSEN records a new method of dealing with labour complicated by contracted pelvis (*Berl. klin. Woch.*, February 1st, 1909). The means hitherto at our disposal in such cases have been summed up by Hegar as boring a hole in the head of the fetus, or sitting up the mother's belly, both of which he considers to be inhuman and rough. Sawing through a pelvic bone in the mother is not less objectionable, and should not be performed. Hegar further considers that the classical gynaecological operations are forceps, version, and Dührssen's vaginal Caesarean section. The author agrees that symphysiotomy and pubiotomy will disappear from the list, but he thinks that a new operation—which his assistant, Solms, has devised—will replace it. This is a combination of Ritgen's gastro-elytrotomy and vaginal Caesarean section. This operation was performed on a 3-para, whose conjugata vera measured 10 cm.—that is, nearly 4 in. She had lost her two babies during the former births. At the end of pregnancy, after dilating for one hour with a bag, an incision was made above Poupart's ligament on the left side, through the abdominal muscles and fascia transversalis. The bladder was then pushed forward, and the peritoneum was separated from the uterus and pushed upwards. In this way the lower uterine segment was exposed. Very little haemorrhage was experienced, as the inferior epigastric artery was tied in two situations and divided between the ligatures. The next step consisted in incising the anterior vaginal and cervical wall in the manner of anterior colpohysterotomy. The child was lying in the first vertex position. Forceps were applied through the flank wound, and the child was easily delivered through the two openings—that is, that in the vagina and cervix and that in the flank—alive and well. The placenta was expressed *per vias naturales*. Then the vaginal-cervical wound was closed through the vagina, and the flank wound was suture in several layers. The wounds healed by first intention. The uterus underwent a normal involution, and was found three weeks after to be anteфлекed, as against a slight retroflexion which was present early in the pregnancy. In discussing the operation, Dührssen states that it was actually extraperitoneal, although the medial incisions do not permit of extraperitoneal access to the uterus. The peritoneum is considerably less firmly fixed laterally than it is in the middle line. No raising of the pelvis is required, so that the danger of air embolus is not present. He mentions that it can be undertaken on any table, and does not need a special operating table with mechanism for tilting the patient upside down. An excellent drainage is provided by the vaginal hysterotomy. Since many cases of contracted pelvis are not seen by the surgeon until attempts have been made to deliver, and since these attempts include the introduction of the faultily disinfected hand into the genital canal, a considerable proportion of the cases will not be free from some infection, and for this reason good drainage is of paramount importance. He further discusses in some detail the advantages of his operation over Frank-Sellheim's Caesarean section. E. Solms adds a short description of the operation itself, and deals with the technique of the same.

THERAPEUTICS.

176.

Karell's Milk Cure.

L. ROEMHELD (*Monatsschr. f. d. physikal.-diätetischen Heilmethoden*, January, 1909) describes Karell's milk cure, with its modifications and the widened indications for its use. Karell in 1865 reported on 200 cases in which he had employed a milk cure for the purpose of unloading the system generally and especially the circulatory organs; his method was to administer the milk at first three or four times a day, later at four-hourly intervals, the quantity allowed being half or a whole coffee-cupful of skim milk to be taken in sips. Recently Jacob has given a report of Karell's cure as systematically employed by Lenhart during fifteen years in the treatment of chronic bronchitis, of heart disease with failure of compensation, and of obesity with an overtaxed heart. Under Lenhart the patient was absolutely at rest in bed, and for the first five to seven days of treatment received four times a day 200 c.cm. of milk. During the next two to six days an egg,

Zwieback, and later minced meat and vegetables, etc., were added, so that after about twelve days there was a return to a full mixed diet. During the treatment special attention was given to securing a regular evacuation of the bowels. In cases where the heart had sufficient reserve power the effect of the treatment was seen in greatly increased diuresis, in loss of weight, and in re-establishment of cardiac compensation; in some cases it was advisable to administer digitalis during the period. Where the cure failed it was, as a rule, a sign of advanced degeneration of the cardiac muscle. Roemheld and also Moritz, without knowledge of Karell's cure, have recently recommended milk cures for obesity. Roemheld arrived at the treatment from a consideration of the diuretic action of a salt-free diet. He puts his patients on to milk for two or more days of each week throughout the whole cure; on "milk days" he allows 1,000 to 1,200 c.cm. of milk; on other days a mixed diet such as to afford two-fifths to three-fifths of the necessary calories. The diet is especially suited for patients suffering from heart disease, gout, or nephritis. The "milk days" are especially effective at the beginning of a cure where there is failure of compensation. At the end of a cure a patient may keep his weight down for an indefinite time if he will continue to have two of the "milk days" each week. Moritz goes further than Roemheld, and recommends a pure milk cure to be continued for weeks. On his system the amount of milk required is calculated on the normal weight of the patient, and varies from $1\frac{1}{2}$ to 2½ litres a day. Moritz claims that the cure is the simplest one for obesity: the patient loses on an average 200 grams of weight a day without suffering from thirst or great hunger. As a rule the patient can go about his work during the cure, but he must be under medical observation. A consideration of Karell's original cure suggests that its good effects are due, first, to the sparing of the heart as a result of underfeeding and rest, and, secondly, to the diuretic action of the milk with its small percentage of NaCl. Roemheld would therefore recommend the original cure in cases of failure of compensation, whether as a result of heart or kidney lesion or of chronic bronchitis. In cases of obesity he would combine his own and Moritz's cure, beginning with a pure milk cure, and later, in order to avoid monotony, going on to a mixed diet of lower than normal caloric value with the systematic use of certain "milk days" each week; when the cure is ended he would still recommend the "milk days" as a means of making the results of the cure more lasting. Emphasis is laid on the fact that any cure for obesity which involves underfeeding should be carried out under medical supervision and should be adapted to the individual case.

177.

Veronal Sodium.

H. WINTERNITZ points out that Meick and Bayer, who manufacture veronal, have brought out a sodium diethylbarbiturate, which they quite properly call "sodium veronal," while Schering produces the same combination under the artificial name of *medinal* (*Munch. med. Woch.*, December 15th, 1908). This double patenting of the same substance reveals a peculiarity of the German patent law. Sodium veronal is far more soluble than is veronal, 1 part of the former being soluble in 5 parts of cold water, while 1 part of the latter is only dissolved in 145 parts of cold water. The author states that sodium veronal is split up in the acid contents of the stomach into veronal, but on reaching the alkaline intestines the sodium salt is again formed. The only advantage of the sodium salt over ordinary veronal is therefore its solubility, but since the stomach usually contains sufficient fluid to dissolve a dose of veronal, the rapidity of action is usually the same in both cases. When administered per rectum in the form of suppositories, the sodium salt has advantages over veronal, but the action is not reliable. Applied subcutaneously or intramuscularly, sodium veronal is rapidly absorbed. The author has given it in 10 per cent. solution, of which he injected from 5 c.cm. to 10 c.cm. He was unable to try the hypnotic effect in cases of excitement or intractable sleeplessness, but in cases of sleeplessness following sciatica and intercostal neuralgia, he gave both forms of injection, and was surprised to find that the hypnotic action was very slight. Sleep only set in after from three to four hours, was not deep, and only lasted for a short time. When applied intramuscularly during the daytime, no hypnotic effect appeared at all; $\frac{1}{2}$ gram of sodium veronal given internally acted more powerfully in inducing sleep than 1 gram given subcutaneously. On the other hand, in neuralgic pains, the intramuscular injections acted exceedingly well in relieving the pain. This he was able to test in six cases of sciatica and one of alcoholic intercostal neuralgia. He

points out, however, that we possess local anaesthetics which are more powerful and better adapted to local pain-stilling. He concludes by relating the rough data of some experiments which, in his opinion, show that the respiratory centre requires a considerably more powerful stimulation to produce increased work during sleep (including hypnotic sleep) than in the waking condition. The diminution of the respiratory activity during sleep is produced by a diminution or cessation of sensory and psychic stimuli on the centre as well as by a diminution of the excitability of the respiratory centre. This applies to sleep induced by veronal, amylene hydrate, chloral hydrate, etc., as well as to natural sleep.

178.

Neuroprin.

ROASENDA (*Gazz. degli Osped.*, No. 21. February, 1909) has noticed good results in the treatment of certain convulsive types of nervous disease by means of neuroprin, which is an extract of nervous tissue, and has been compared to digitalis in as far as its tonic action on the nervous system is concerned—as digitalis is a cardiac tonic, so neuroprin is a specific nerve tonic. The author has used the drug with success in epileptics, in epileptoid attacks, in neurasthenia (especially when marked by insomnia, mental and physical excitability followed by speedy exhaustion), in Graves's disease, and in one case of paralysis agitans. From his experience he believes that neuroprin is a good nerve sedative and tonic, and may in certain cases prove a useful substitute for the bromides and other cortical sedatives. He has not observed any ill-effects from its use.

179.

Atoxylate of Mercury in Spirochaetal Diseases.

UHLÉNTHUTH AND MANTEUFEL (*Mediz. Klinik*, October 25th, 1908) have found the mercury salt of p-amido-phenylarsenic acid, or mercury atoxylate, more efficacious than either mercury or atoxyl alone in the treatment of syphilis. (1) Mercury atoxylate, given in a single injection in doses well below the toxic, kills fowl spirochaetes in the organism with certainty. A single intramuscular injection affords sure protection against subsequent infection by fowl spirochaetes, even when this occurs only one or two days afterwards. (2) In the treatment of syphilis in rabbits, mercury atoxylate has shown itself superior to all other mercury and atoxyl preparations. A single injection in all Uhlenhuth's and Mantefuel's cases caused the disappearance of severe corneal syphilis in from five to six days. So far relapses have not been observed. (3) The preparation acts also on the spirochaetes in the recurrent infection of rats. The slight resistance of rats towards the preparation makes a true judgement difficult. The application of this preparation to monkeys and human beings will further elucidate its efficacy. (4) In trypanosome infections (dourine, sleeping sickness) the preparation has a good effect. The introduction of mercury into the atoxyl group seems to raise in a very marked manner its spirochaetal-destroying property. (5) In a test tube the preparation is distinguished from atoxyl by the fact that though it is with difficulty soluble in water, it rapidly kills trypanosomes and spirochaetes. The surprising results in rabbit syphilis induced the writers to recommend mercury atoxylate in the local and general treatment of human syphilis; they hope by this preparation to simplify and accelerate treatment, and suitable trials are already being carried out.

PATHOLOGY.

180.

The Development of Sarcoma after Transplantation of a Carcinoma.

BASHFORD, MURRAY, AND HAALAND recently described the development of a sarcomatous tumour out of carcinoma of a white mouse. Ehrlich and Apolant have also been able to describe this phenomenon in their mice. Loeb has been able to observe a similar alteration in the type of growth, and reports briefly some of the more important points in connexion with this case, while he reserves the full description together with the microscopical appearances for a future publication (*Deut. med. Woch.*, January 1st, 1908). The case was one of an adeno-carcinoma of a Japanese mouse, thus differing from the other cases which affected white mice. The primary tumour was characterized by the plentiful presence of vacuole cells. The primary tumour was situated in the submaxillary gland. At first there was no reason for regarding the tumour as a mixed tumour, and it was only after the successive inoculation that the type changed to that of a sarcoma. The sarcomatous type appeared first in the second generation,

which proves that the change was not due to a stimulus which arose after the repeated transplantations or to an increase of virulence obtained by several passages. The sarcomatous element was found in all the replanted tumours which were obtained from the first sarcomatous tumour. It therefore appears that the sarcoma formation does not depend on a constitutional peculiarity of the animal into which the tumour is grafted, nor does it depend on any accidental circumstance in connexion with the transplantation. Loeb shows that such a transformation does not require a special virulence of the original carcinoma; indeed, he finds that considerable variations in the inoculability of the tumours have been met with. In his series he obtained 100 per cent. of successful implantations, as against the 50 per cent. which Bashford and his colleagues obtained. He argues that the development of sarcoma depends on the overgrowth of the connective tissue of the animal into which the tumour is implanted. In support of this he states that in his cases, in the first generation, he found that the connective tissue of the implanted growth showed degeneration, while the epithelial elements proliferated. At the time strands of newly-formed connective tissue were seen which stood in direct connexion with the connective tissue of the host. Further, he found that the sarcomatous elements were situated at the periphery of the growths and not among the carcinoma nests. In some of the tumours of subsequent generations he found three types of growth: (1) Large sarcomatous growths situated apart from large carcinomatous growths in the same animal. (2) The sarcomatous tissue invaded the carcinomatous growth. (3) The growth was chiefly sarcomatous, but small nests of carcinoma were included in the tumour. He proceeds to describe certain changes which were met with in the structure of both elements. The chief changes in the carcinomatous portions consisted in the decrease and eventual disappearance of the vacuolated cells. As far as the sarcomatous elements were concerned, here again he found that the structure tended to become much more simple. At first there was a well-marked polymorphous character of the cells, but this was absent in subsequent generations. He found that while the first sarcomatous tumours tended to grow slowly, later on the transplanted tumours became more rapid in their growth, and, speaking generally, he states that quick-growing recurrent sarcomatous tumours were richer in cells than the slow-growing primary sarcoma. While he realizes that one is not in a position to explain the occurrence of sarcomatous elements after transplantation of carcinoma, he suggests that it is possible that some micro-organisms may be transferred from the epithelial cells to the connective cells. This theory would not clash with the finds of the other workers, but it must be understood that so far it is a mere hypothesis.

181.

Ichthyosis Fetalis.

COSTON (*Amer. Journ. Obstet.*, October, 1908) has published a report of another case of this disease, issued almost at the same time as Henneberg's paper in the *Ann. de Gynéc. et d'Obstét.*, September, 1908, with a good synopsis of earlier literature on the subject. In Coston's case the parents were a healthy country couple, the father aged 21, the mother 17, a Birmingham, Alabama, and all their antecedents and surroundings were satisfactory. Pregnancy speedily followed marriage. In the fifth month, when the patient was in perfect general health, and free from pain, a copious sero-sanguinolent discharge set in. The uterus was as big as it normally is in the seventh month; the fetal heart sounds were audible. He applied the tampon when an attack of flooding occurred. Seven days later labour came on, the breech presenting. Delivery was easy; the membranes were preserved intact until the breech was passing the vulva, when they ruptured spontaneously. A considerable portion of the placenta was torn off by the advance of the head. The fetus made feeble attempts to breathe. The placenta was of enormous dimensions, a fact which accounted for the great distension of the uterus, and for the haemorrhages; it extended from the fundus almost to the os internum, and measured 34 in. at its thickest part. Ichthyotic patches were detected on the surface of the umbilical cord, and on the amnion, which was of extreme thickness. During delivery, Coston noticed that the fetal limbs were rough and scaly. The fetus was covered from head to foot with characteristic rough scales, separated by fissures. The feet and hands were clubbed, and the nose and eyes deformed; there were no abnormalities in the ano-genital region. The thickening of the skin caused considerable rigidity of the trunk and limbs.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

182.

Cancer of the Stomach.

IN a clinical lecture, L. Kuttner (*Deut. med. Woch.*, January 14th, 1909) estimates the value of the various signs and symptoms associated with gastric carcinoma, and gives indications for making a correct diagnosis. In a large number of cases no difficulty in diagnosis presents itself; but cases not infrequently occur in which the opposite holds good. The fact that the only chance for the patient lies in an early diagnosis, during a time when operative treatment is still possible, renders it imperative for the general practitioner to be in a position either to make the diagnosis himself, or at all events to be suspicious of the nature of the disease, and therefore call on the specialist to confirm or refute his suspicions. While cancer of the stomach may give rise to no symptoms until a sudden hæmorrhage—either in the form of hæmatemesis or melaena—appears, the vast majority of cases show an insidious onset, and usually present the symptoms of acute dyspepsia or chronic catarrh of the stomach. The course at first may be extremely gradual, and the most marked symptom is the loss of appetite, together with a dislike to certain forms of food (usually meat). This symptom is important, although it must be recognized that some cancer patients retain their appetite until the end. Next Kuttner deals with the general predisposition. Age is an important factor, but young persons are not immune from the risk of the disease. He does not consider that heredity has anything to do with the disease, since this would only apply in about 6 to 7 per cent., and in so common a disease it is not surprising that several members of a few families should suffer from the same disease. Trauma, in his opinion, only plays an unimportant rôle in the etiology of the condition. Gastric ulcer is said to predispose to cancer. The same is said of troubles, excitement, mental depression. Kuttner regards these conditions as important in affecting the general state of nutrition, and suspicion of cancer should be aroused, especially when associated with severe anaemia. Intractable itching of the skin at times is noticed before a tumour is palpable. Multiple angiomata of the skin, on the other hand, have no diagnostic significance. Rarely the swelling of the left supraclavicular lymphatic glands may indicate a masked gastric cancer. Ill-smelling eructations and the vomiting of "coffee grounds" material are important symptoms. Fresh blood in the vomit need not indicate cancer. With regard to pain, he warns the practitioner against placing reliance on this symptom in forming a diagnosis. The palpation of a tumour naturally is of great importance, but in a large number of cases the tumour is not palpable, even when it has attained a considerable size. Visible peristaltic movements or antiperistaltic movements, including the so-called "stomach stiffening," are valuable diagnostic signs. He then turns to the examination of the secretion and motility of the stomach. Neither the absence of hydrochloric acid nor the presence of lactic acid are specific. When there is well-preserved motility, the HCl is usually diminished, lactic acid is not present, and neither lactic acid bacilli nor sarcinae are to be found. When the motility is insufficient, free HCl may be present, lactic acid is absent, but sarcinae are present, or the free HCl may be entirely absent, and there will be lactic acid fermentation. The presence of pus or purulent material in the empty stomach, provided that other sources of suppuration are sought for and excluded, is in favour of carcinoma. Particles of malignant tumour may be caught up in the eye of the stomach tube. The presence of amœbæ and flagellates in the mucus from the fasting organ is regarded as an early sign. The same applies to the discovery of a fluid containing considerable quantities of albumen. Left-sided pleurisy should always cause the practitioner to think of a gastric tumour. X rays may also prove valuable in the early diagnosis. Kuttner also deals with the treatment of inoperable carcinoma of the stomach. He disposes of Adamkiewicz's cancerin, Doyen's serum, radium, Keating-Hart's fulguration, etc., in a few words by stating that none of these methods can do any good. The results of trypsin treatment is summed up by recording that no cure has been effected. It thus appears that no curative treatment is available at present. Symptomatically the regulation of the diet, the improving of the appetite by means of

condurango bark and other drugs, the combating of vomiting by iced effervescent drinks, cocaine, chloroform, or morphine, and by washing the stomach out, the cautious treatment of diarrhoea and constipation, and a few other similar means may render the lot of the unfortunate sufferer tolerable. Nothing more can be done.

183. Human Contagion the Cause of Infantile Tuberculosis.

COMBY (*Arch. de Méd. des Enfants*, March, 1909) says the theory that tuberculosis is hereditary has been revived by some who hold that a predisposition is inherited. The disease has been observed to be transmitted to the fetus from a mother in an advanced stage of phthisis, by way of the placenta, but carefully compiled statistics have proved that this is very exceptional. The theory of an inherited predisposition is based on well-known facts wrongly interpreted. Predisposition is supposed to be recognized by certain signs—pallor, thinness, a narrow chest, enlarged glands. But these stigmata are not peculiar to children of tuberculous stock; they are found in others when they have been exposed to contagion. These stigmata are not signs of predisposition, but the results of infection; the children have the disease in a latent form, and have been contaminated at an early age. Thanks to the tuberculin test and Calmette's reaction it is now possible to prove that these children have the disease. Henceforth it can be said that the disease (with rare exceptions) and the predisposition are not inherited. If a child born of a phthisical mother, in the last stages, is at once removed from the danger of infection, that child will grow up strong and robust without developing tuberculosis; but if it remains with the infected family the contagion will prove fatal. In the same family some children react to tuberculin while others do not; those who react have been infected. The evidence of autopsies for the last fourteen years shows an increase in the number of tuberculous children in accordance with age. The disease nearly always makes its first appearance in the bronchial glands. In 216 autopsies in infants less than 3 months old there were 4 tuberculous; in 1,012 autopsies in infants under 2 years there were 253 tuberculous. The percentage works out thus: 43 per cent. between 1 and 2 years; under 1 year, 16 per cent.; between 3 and 6 months, 18 per cent.; between 6 and 12 months, 27 per cent.; after the second year the proportion reaches 67 per cent. Twenty-five years' experience has led Comby to the conclusion that in the majority of cases infantile tuberculosis is due to family contagion, and the bacillus is not introduced through the milk, but inhaled. The basis of this conclusion is the fact that there has been no diminution in the disease during the last twenty years, although every endeavour has been made to occlude infection from tuberculous milk by eliminating diseased cows, and by sterilizing the milk. The theory of human contagion is supported by the fact that tuberculous children are only seen in tuberculous families. Comby has never seen a case of infantile tuberculosis caused by milk. By all means let the milk be boiled, but this is useless unless means can be taken to protect the child from human contagion. The author has seen numbers of children die of tuberculous meningitis because they were not protected from the caresses of their diseased grandparents. As adjuvants in preventive treatment, Calmette's eye test and von Pirquet's skin test should be used; these are inoffensive and easy of application.

184.

Endemic Appendicitis.

SAXLUND (*Tidsskrift for den Norske Lægeforening*, No. 5, 1909) describes an endemic occurrence of appendicitis in a country district in Norway extending for about 3 to 4 kilometres. Sixteen cases had been personally treated from October, 1908, to February, 1909, and another 10 cases had been reported to him. They occurred mostly in young women about the age of 20, and the symptoms were mild. The majority had been operated on with good results. There was no evidence of case-to-case infection, but everything pointed to a common cause. Saxlund is inclined to attribute the occurrence to the ingestion of bad foodstuffs, and is having specimens of flour from several shops examined.

SURGERY.

185. Bilateral Ligature of the Internal Jugular Vein.

DUVAL, in a communication to the Société de Chirurgie de Paris (*Bull. et Mém.*, No. 7, 1909), directed attention to a case in which, in the course of a preliminary operation for removal of the glands of the neck, before dealing with a cancerous growth of the lower jaw, he found it necessary to resect on both sides the internal jugular vein. This sudden and simultaneous suppression of the two main channels for the return of blood from the brain, though immediately followed by intense congestion of the face and neck and by temporary arrest of breathing, did not lead to any fatal results or interfere with the subsequent satisfactory progress of the patient. In a report on this communication, Morestin referred to two fatal cases under his own observation, which show that while ligature of the internal jugular vein on one side of the neck is a harmless procedure, simultaneous occlusion of both these vessels, on the other hand, is a very serious step, which should never be taken except in case of absolute necessity. If such necessity be enforced by the depth and extent of the cancerous glands on both sides of the neck, the danger attending bilateral ligature may, it is suggested, be diminished or abolished by recourse to certain precautions or to some supplementary operation. The vein should be occluded very gently and gradually, and the venous occlusion be associated with ligature of the internal carotid or with temporary compression of the common carotid. It might be found practicable to effect an anastomosis between the internal and the external jugular or to reconstruct the former by vascular interposition.

186. Accidents in Hernia Operations.

ERDMANN (*Annals of Surgery*, February, 1909) points out that among the dangers to be avoided during an operation for the radical cure of hernia, especially by the Bassini method, are to be included, in addition to wounding of the vas deferens and bladder, wounding also of the bowel and the large blood vessels. An inquiry made among members of the New York Surgical Society elicited two instances of injury to the bowel, one in a large sliding or slipped hernia, in which the sigmoid was opened and subsequently sutured without any bad result. In the other the sigmoid had been evidently included in one of the deep sutures, as a faecal fistula developed soon after the operation, and persisted for several weeks, with eventual repair without secondary operation. Injuries to the femoral vessels in Bassini's operation on inguinal hernia are attributed to several important factors, among which are: (1) An anomalous distribution of the branches; (2) the needle; (3) the suture material as a contributory rather than a primary cause; (4) the method of passing the needle from above or from below; (5) too free exposure of the ligament. The arterial branch most likely to be wounded is the superficial epigastric. The author objects strongly to the use of a large curved needle with sharp edges, and holds that safety will be enhanced by substituting for Hagedorn's needle one that is round. Theoretically there is less danger in passing the needle from above downwards than from below upwards, but the author believes that if Poupart's ligament be grasped and held well upwards, it is not important how the needle is passed. The suture material should be soft and pliable, not stiff and wiry. With regard to the treatment of the injured vessel, if this be the femoral vein the surgeon can ligate laterally, or should the opening be too large for ligature, suturing can be practised more readily than in cases of arterial injury. If the artery be the wounded vessel, lateral ligature is out of the question, and either arteriorrhaphy or ligation above and below the wound must be practised.

187. Foreign Bodies in the Eye.

BEAUVOIS (*Revue d'Ophthalmologie*, September, 1908) points out that by far the largest number of workmen who seek compensation for loss of sight have suffered, not from violent accidents, but from small foreign bodies, such as a piece of steel, which have infected the cornea and caused ulcers, which have left large leucomata and consequent loss of useful vision. Nor is the cause an obscure one. When a mechanic gets a piece of steel or emery into his cornea he does not at once seek medical aid; in most factories there is a man, who may or may not have gone through an ambulance course, who proceeds to scrape out the offending body with a foul match or a filthy "magnetized penknife"; in these advanced days he even puts in a cocaine pellet. The patient then probably

goes back to work without even a protective bandage. If he use a lotion at all, it is probably not the usual boracic acid solution, but his own urine. Even when the workman seeks medical help it is generally only when the "works doctor" has failed to extract the foreign body, but has not failed to denude a large area of the cornea of its superficial epithelium; nor does he as a rule succeed in introducing the prescribed lotion or ointments into his eye. Beauvois thinks that in every case, even the most trivial, of abrasion of the cornea the eye should be bandaged for two days, and here all ophthalmic surgeons will agree with him. Especial attention must always be given to the lacrymal apparatus, for if there be pus in the lacrymal sac infection of the cornea is almost certain; but above all, when there is evidence of infection having already occurred, should the patient be admitted to a hospital, then alone is it certain that treatment will be carried out efficiently, and the simplest methods will often then give excellent results. If the patient refuse to undergo efficient treatment he should lose his compensation.

OBSTETRICS.

188. External Version.

IN spite of the ever-increasing extension of operative obstetrics which signals the midwifery of to-day, as it is taught in the large German clinics, A. Labhardt (*Muench. med. Woch.*, January 12th, 1909) states that von Herff realizes that simplicity is a golden rule in midwifery, and for this reason attempts to reduce the number of large operations to a minimum in the Basle clinic, and to employ and teach the simplest and least severe manipulations which can be regarded as safe. Among other simple methods, external version is resorted to where it can be applied with a fair chance of success. External version was recommended by Weigand over a hundred years ago. The author considers that internal version should never be attempted until external version has been fairly tried. There is no doubt at all that the danger of introducing the hand into the genital passages increases in direct proportion to the depth to which the hand is passed. Since internal version requires the operator to pass his hand far into the cavity of the uterus, the morbidity is relatively high. On the other hand, if version can be performed without passing the hand into the uterus at all, the morbidity must remain the same as that of normal births. The second advantage is the fact that an anaesthetic need not be given. He realizes that the danger of ether or chloroform in the hands of a practised anaesthetist is small, but in general practice the practitioner usually finds himself without assistance other than the midwife or "nurse," and he is forced to hand the chloroform bottle over to this unskilled individual. He points out that it is usually possible to convert a transverse presentation into a vertex presentation by means of external version alone. In a small number of cases this may prove impossible, and then the obstetrician can still perform podalic version by the external method. The last advantage which he mentions is that it is possible to turn by this method at all stages of labour, even when the os is still undilated. Against all these important advantages certain disadvantages must be mentioned. First of all, he states that unfortunately external version is not always possible. Next, there is a risk of prolapse of the cord or extremities of the fetus. This risk can be minimized by a proper impression of the head and by allowing the "waters" to drain slowly away. In 63 external versions he experienced a prolapse of the cord 3 times only. The indications for external version are found in all forms of transverse or oblique presentations. When a rapid delivery is required for the safety of mother's or child's life, cephalic version may not be undertaken, but podalic external version saves the insertion of the hand into the uterus. No anaesthetic is required, and all that is necessary is to bring down a leg after the child has been turned. External version is only admissible when the fetus can be clearly felt through the abdominal walls, and either end can be moved in any desired direction. A dead fetus cannot be turned from without, since it lacks the necessary rigidity. As a rule, the turning by this method depends on the intact condition of the membranes. It is, however, possible at times to turn after the membranes have ruptured and the liquor amnii has escaped. In a fair proportion of cases in which Labhardt has carried out this method hydramnion was present. An excessive supply of liquor tends toward the production of transverse presentation, and it is therefore especially when hydramnion is present that external version will be valuable. When the amount

of liquor is very excessive, it is wise to puncture the membranes and to allow some water to drain away, so that the fetus can be readily palpated and the risk of prolapse of the cord is diminished. Believing that a breech presentation is never an advantage in contracted pelvis, he cannot support the so-called prophylactic version. External cephalic version should always be attempted, even when the degree of contraction is comparatively severe. External cephalic version should, however, not be attempted when there are conditions existing which call for a rapid termination of the birth. These include eclampsia, dangerous illness of the mother, asphyxia of the child. In these conditions external podalic version should be performed, and a leg should be brought down later. With regard to the technique of the method, he has little new to add. When a fair attempt has failed, it may be necessary to have recourse to internal or combined version. In order to carry this out, anaesthesia is given, and a last attempt to turn externally should first be made with the patient asleep, the hand being protected with a sterile towel or glove. In all, from April, 1901, to October, 1908, 225 transverse presentations were dealt with. Of these a few were cases of placenta praevia, while some others came into the world by spontaneous evolution. The remaining 185 were left for external version, and in 35 per cent. of these the desired result was attained. The version was performed at all stages of the birth, from the time when the os was still closed until it was widely dilated. In the majority of the cases the membranes were punctured immediately after the version; in a few they were punctured before. In 7 cases the membranes ruptured spontaneously before the version, and in the same number they ruptured spontaneously after. In 3 cases it was necessary to rupture the membranes later. Forty-seven children were born as vertex presentations. Thirty-four of these were postero-anterior cases and 2 were stillborn, while 1 child born spontaneously as a face presentation also died. In all, 4 head presentation children died, while 3 out of 9 breech presentation cases were born dead.

GYNAECOLOGY.

189. The Gastric Secretion during Menstruation.

DEALING with the gastric functions during the menstrual period, I. M. Wolpe (*Dent. med. Woch.*, December 17th, 1908) briefly recalls the effects which have been noted on the mental state, the sight, the liver and secretion of bile, the intestine, peritoneum, metabolism generally, as well as on disturbances of a febrile nature, of the heart, etc.; on tuberculosis; and, lastly, on disturbances of the stomach. The author has studied the secretory and motor conditions of the stomach in 12 women in Ewald's clinic. The observations were made in the premenstrual period, during the menstruation, and also in the interval between two periods. He found that the difference exhibited during two periods in the same subject were so small that they need not be taken into account. Certain differences were noted between the conditions during the premenstrual and the menstrual period; but these again were slight, and do not indicate any marked characteristics of the two periods. His 12 patients include 5 who were suffering from nervous dyspepsia, with normal secretion and motility, 2 with anacidity, 2 with gastric ulcer and pronounced gastrosuccorhoea, 2 with hyperacidity, and 1 with subacid gastritis. These cases he compared with women whose digestive organs were normal. After describing the precautions which he took in order to avoid falling into error, he records his results. With regard to the secretion of gastric juice, he found that in all the conditions named the acidity is distinctly increased during menstruation, both when tested with an empty stomach and when tested after the trial breakfast. This menstrual hyperacidity consists of an increase in the secretion of hydrochloric acid, and also an increase in the total acidity. The acidity of the gastric secretion has apparently no connexion with the acidity during the interval, as was shown in cases of anacidity and hyperacidity; but the author supposes that it is produced by a reflexory action of the irritated genitals on the secretory nerves of the stomach. The amount of secretion during fasting was increased during menstruation, even in a case of gastrosuccorhoea. This was tested in 11 out of the 12 cases, in all of whom no motor insufficiency was present. With regard to the motor functions of the stomach, he found that the motility was distinctly diminished during menstruation. Normally, one hour after the trial breakfast there are 150 c.cm. of gastric contents. When this quantity is diminished there is evidence of weakness of the

stomach muscle. After testing by Mathieu-Remond's method, he concludes that a weakening of the stomach takes place during menstruation. These differences between the gastric functions during the intramenstrual and intermenstrual period cause him to warn physicians not to base a diagnosis of gastric disturbances on tests carried out during menstruation.

THERAPEUTICS.

190. Intraspinal Injections of Magnesium Sulphate in Chorea.

MARINESCO (*Sem. Méd.*, November 18th, 1908) has treated four cases of Sydenham's chorea by the above method, and describes the results obtained in these cases. The solution he employed for the injections was a 25 per cent. strength of crystallized sulphate of magnesia, which was prepared a short time before being used, and generally speaking he withdrew first a quantity of cerebro-spinal fluid equal to the quantity of sulphate of magnesia solution which he injected. The first case was a girl of 14, who had suffered from chronic symptoms for a short time only before admission to hospital on June 2nd, 1908. At first limited to the left side, the movements soon spread and became generalized. On July 5th 3½ c.cm. of the magnesium sulphate solution were injected into the spinal canal, and three-quarters of an hour later the intensity of the choreiform movements had greatly diminished. The following day the movements returned in the legs, and as they did not diminish another intraspinal injection (3 c.cm.) was given on July 30th. A half-hour later the patient complained of headache and formication in the limbs and back. The choreic movements had, however, diminished, although movements in the arms persisted. The next day the movements were reduced to a minimum, and by August 2nd they had completely disappeared. The second patient was a girl of 22, who had already suffered twice previously from chorea. Her present attack began July 11th, 1908, and on admission to hospital on July 18th she had all the signs of a generalized chorea. On July 18th 5 c.cm. of the magnesium sulphate solution were injected into the spinal canal. Following the injection her pulse rate, which previously had been 104 per minute, fell to 68, and one and a half hours later she became numb in the lower extremities, and could not move these, and these no longer showed choreic movements. A few hours later the patient slept, and it was then seen that her respiration rate was 34 and her pulse rate 106 to the minute, and her temperature was slightly raised. Three days later the numbness had disappeared, as had also the choreic movements. The third case was a girl of 15, who for about two months had had choreiform movements, and on admission to hospital on August 13th, 1908, these were seen to be very severe and generalized. The next day 3 c.cm. of magnesium sulphate solution were injected into the spinal canal, following on which there was a slight increase in pulse-rate and increased agitation of the patient; the legs appeared numb, and she could not move them; the choreic movements had diminished. Four days later the patient became somnolent, and the choreic movements were still less, but she complained of headache and nausea, which continued until August 20th. At this date the choreic movements were considerably less, and the patient could use her hands to feed herself, and could walk and write. On August 26th choreic movements were noticed in the arms and face, and on this day a fresh injection was given, preceded by a subcutaneous injection of morphine. The following day all choreic movements had disappeared and did not return. The last case was a girl of 11, who had suffered from chorea for a few weeks before admission to hospital on September 9th, 1908. She was then found to exhibit choreic movements of moderate intensity, and limited to the right side; there were also movements of the face, eyelids, and tongue. On September 11th 4 c.cm. of cerebro-spinal fluid was withdrawn, and 2½ c.cm. of magnesium sulphate solution injected, this being preceded by a subcutaneous injection of morphine. One hour later the choreic movements had become less marked, but the patient complained of headache and of a numbness in the limbs. The following day the choreic movements were still less manifest, but as movements of the right arm and face did not cease, another injection was given on September 13th. Fifteen minutes later the pulse quickened, the patient felt nauseated, complained of headache and of vertigo, and the temperature rose slightly. The following day the choreic movements were much less marked and became less and less, and by September 18th had altogether ceased. The author points out that these cases

show that intraspinal injections of sulphate of magnesia exercise a remarkable sedative effect on choreic movements, and that by this treatment the disease completely disappears after a few days, and that these results are superior to those obtained by any other method of treatment. This method of treatment is, however, not without drawbacks: thus, Meltzer and Auer have found respiratory troubles occur, and others have noted motor and sensory disturbances, and sometimes urinary troubles. Some of the ill effects following the injections appear to be due to the toxicity of salts of magnesia, but it is also possible that they be due to impurities in the salt employed. The author has found that subcutaneous morphine injection has diminished the headache and pains following intraspinal injections, and he has never seen urinary troubles follow in young subjects. He is convinced that this method of treatment constitutes an excellent therapeutic measure in Sydenham's chorea, and may be employed in both mild and severe cases.

191. Intestinal Massage in Heart Disease.

MAX HERZ (*Monats. für die phys.-diät. Heilmethoden in der ärztlichen Praxis*, 1 Jahrgang, 1 Heft) recommends a system of intestinal massage for the treatment of chronic constipation in cases of heart disease. Even though the explanation of the intimate connexion between affections of the gastro-intestinal tract and the symptoms of heart disease may vary from time to time, the fact of the connexion is undoubted. Thus in cases of heart disease the severity of the subjective symptoms is seen to vary with the changes in the course of a chronic constipation. The combination of chronic constipation with the symptoms caused by arterio-sclerosis, and especially by arterio-sclerosis of the coronary vessels, is so frequent that it is claimed that constipation is a cause of the arterio-sclerosis, and it is probably not accidental that anatomical diseases of the circulatory system are usually found with atonic constipation, but the so-called heart and vessel neuroses with spastic constipation. Experience also teaches that treatment of disease of the circulatory system is most effective when normal intestinal action can be restored. Intestinal massage for conditions of intestinal atony is in general use, but it has been objected to for cases of heart disease on the theoretical ground that the emptying of the abdominal veins as a result of massage may momentarily increase the work of the heart, and at the same time lead to an increase in the amount of the circulating blood. On this theory abdominal massage would be obviously contraindicated in cases of abnormally high blood pressure. Herz testifies that these fears are altogether without foundation, at any rate for the simple form of intestinal massage which he advocates. Most systems of abdominal massage are complicated, and include manipulations intended to strengthen the abdominal muscles, others to help to push on the contents of the intestine in the desired direction, and a third group to remove the supposed accumulation of venous blood in the abdominal vessels. Herz, on the other hand, attacks only those parts of the large intestine which are found on palpation and percussion to be pathologically changed, these parts being the caecum, which is often much distended; the ascending colon, which can be felt as a firm cylindrical body; and the sigmoid flexure, parts of which are palpable as hard, sometimes spindle-shaped, sometimes knotty, masses. The affected parts are treated by a very light kneading, while with the finger tips pressure is made on the median side of the abdominal wall to push the palpable masses outwards until they slip of themselves inwards again under the fingers. At the beginning this manipulation is often painful, but the pressure is then reduced, and only increased again as the patient becomes accustomed to the treatment. Herz likes to end up with light vibration, either manual or with the usual apparatus, applied to the same regions. Such treatment carries with it no danger of injury to a weak heart from emptying of the abdominal veins; and since, in an overwhelming majority of the cases, a spontaneous evacuation of the bowel very quickly ensues, Herz maintains that the more complicated and severe methods are superfluous.

192. Meningococcal Serum in Epidemic Meningitis.

LANGE (*Med. Klin.*, February 21st, 1909) has studied the figures of two epidemics of epidemic meningitis, during which 85 cases were admitted into the Augusta Hospital at Cologne. In each case the diagnosis was confirmed by the discovery of Weichselbaum's meningococcus. During the first and the more severe epidemic, between March and September, 1907, 57 cases were admitted. Fourteen of

these were not treated with serum at all; of these, 13 died (92.8 per cent.), 4 of which were dying on admission. Thirty-seven were treated with serum, but not systematically: of these, 23 (62.1 per cent.) died, of which 1 was dying on admission, 1 died from septic infection of a puncture wound, and 2 from hydrocephalus; if these 4 are excluded the mortality is reduced to 51.3 per cent. During the second epidemic, between December, 1907, and October, 1908, 28 cases were admitted. Of these, 24 were treated systematically with large doses of serum (adults 30 to 40 c.cm., children 10 to 20 c.cm.), on an average every other day, but, if necessary, more often. The injections were intradural. Of the 24, 9 died (37.5 per cent.). Lange considers the numbers too small to show definitely whether an early resort to serum would give better results than when the serum is given late, but the figures given suggest that this may be so. No harmful effects of the serum injections were observed. The low mortality of the cases in the second epidemic is, at any rate in part, accounted for by the milder nature of the epidemic.

PATHOLOGY.

193. The Serum Diagnosis of Syphilis.

IVY MCKENZIE (*Journ. of Path. and Bact.*, January, 1909) reports on experiments which he has carried out by the complement deviation method first suggested by Wassermann, Neisser, and Bruck. The haemolytic system which he used was one obtained by the treatment of a 5 per cent. suspension of ox red blood corpuscles with haemolytic immune body from the serum of a rabbit treated with ox corpuscles, guinea-pig serum being used as a complement. The corpuscular suspension was treated with five times the minimum haemolytic dose of immune body. As antigen, watery and alcoholic extracts of various organs were employed; in the preparation of the extracts one part of the chopped and pounded organ was put in four parts of normal saline with a ½ per cent. carbolic acid, or in 96 per cent. alcohol, well shaken from time to time, and at the end of twenty-four hours filtered for use: 0.1 c.cm. of the solution of extract in 0.6 c.cm. normal saline was employed for each tube in the experiments. The syphilitic and other serums to be tested were inactivated for one hour at 57°C. before use, and 0.05 c.cm. was, as a rule, used for each test tube. Out of one series of 57 cases in which a clinical diagnosis of syphilis had been made, positive reactions were obtained in 50 instances. No opportunity presented itself of examining the blood of the patient before the appearance of secondary symptoms, but the author's observations led him to believe that in the later stages of the disease the reaction is more marked. A very striking amount of complement was absorbed in some long-standing cases of gummata with bone lesions. Twenty-three cases of nervous disease (locomotor ataxy and general paralysis) were examined, and it was found that in 19 instances the blood serum gave a positive result. In 15 of these 23 cases the cerebro-spinal fluid was also examined: it yielded positive results in 9 instances. It was noted that the cerebro-spinal fluid never gave a positive reaction when the blood serum reaction was negative. The whole of the foregoing results were based on observations made with the same sample of extract: in its preparation one part of congenital syphilitic liver with milium gummata and numerous spirochaetes was added to four parts of 96 per cent. alcohol, and filtered after twenty-four hours. During the six months in which the extract was used it seemed to undergo little or no change as regards its visible effects on the haemolytic system used. The author found that by dialysis the extract of syphilitic liver lost to a considerable extent its original deviating property, and filtration of the dialysed extract through a Berkefeld filter practically removed the deviating power. From a case of congenital syphilis he prepared alcoholic extracts of various organs in the same proportions: the suprarenal, muscle, lung, and kidney extracts exhibited the power of deviating complement in greater or less degree, but in no case was their activity as great as that of the liver extract. Summarizing his results, the author concludes that the complement deviation method, when carried out with due care, may be of great service in the diagnosis of syphilis. Of 80 cases of syphilis examined, 69 gave a positive reaction and 11 a negative reaction: while from a control series of 53 cases only one gave a positive reaction, and the clinical diagnosis in that case must be considered doubtful.

CORRECTION.

In paragraph 171 of the *Epitome*, of April 3rd, the name printed "Javallion" should be "Cavallion."

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

194. Constitutional Eczema of Infants.

REGARDING eczema as a manifestation of some constitutional anomaly, E. Feer (*Muench. med. Woch.*, January 19th, 1909) calls attention to the fact that in its chronic forms this manifestation is most commonly met with during the first year of life. Acute eczematous are frequently true dermatites, and even intertrigo may be regarded as such. The real chronic eczematous are frequently produced as secondary infections in children possessing a particular anomaly of constitution. He prefers to divide the latter into two large classes: the weeping, scab-forming head eczematous and the disseminated dry eczematous. The former usually attack fat or pasty children, or even those who look rosy and robust. The children, however, may lose a considerable amount of flesh during the course of the illness. As a rule, it starts as a marked seborrhoea of the scalp, and a weeping, scabbed, purulent crust of the haired scalp is rapidly formed and spreads on to the cheeks, leaving the nose, mouth, and conjunctivae intact. On the face it may form scabs or remain moist. The hands and forearms may be infected by direct contact. Rarely, the neck, arms, body, and legs may be affected, while more frequently the groins or other joint folds of skin are affected. As a rule there is not a great deal of itching. The children are most frequently overfed, constipated children with good digestions. Even breast-fed infants are not uncommonly attacked. Spontaneous cure may take place at the end of the first year of life, when a mixed solid diet is given. The second form attacks artificially fed infants almost exclusively. There may be overfeeding. The children are usually pale, thin and flabby. Chronic intestinal disturbance is not infrequently present. It manifests itself as discrete, dry, red desquamating infiltrating islands together with small papular pustular patches, and may attack the whole body. There is but little tendency to weeping or to the formation of scabs. This form has been described as gouty, while Marfan ascribes it to an autointoxication from the intestine. The treatment of infantile eczema is difficult, and many practitioners neglect it altogether, and await spontaneous cure. The public at times has a dread of external treatment, on account of occasional unfortunate accidents. Attacks of fever and the occurrence of convulsions are seen even when the treatment is carefully carried out, and death may take place quite suddenly, with all the characteristics of cardiac failure or dyspnoea, fever, and intoxication symptoms. Feer has observed a number of such "eczema deaths," and has found records of about 30 cases. He believes that these cases are for the most part cases of status lymphaticus. His usual treatment of infantile eczema consists of softening the scabs with oil or vaseline, which must be gradually done; weeping surfaces are treated with very dilute solutions of acetate of aluminium, and subsequent application of zinc paste (oxide of zinc, starch, aa 25 grams; yellow vaseline, 50 grams). Mild patches may be powdered with zinc oxide and talc (3 in 7). Scratching must be prevented. When the healing is delayed he adds the following medicaments to the paste: Naphthalan (5 to 10 per cent.), tamenol (1 to 3 per cent.) for itching; lenigallol (1 to 5 per cent.) for obstinate weeping; sulphur or thigenol (2 to 5 per cent.) for seborrhoea; salicylic acid ($\frac{1}{2}$ to 2 per cent.) for infiltrations, etc. When the patches no longer secrete much fluid he finds the following ointments useful: Either a bismuth and zinc ointment or Lassar's ointment, consisting of hydrarg. sulph. rub. 1 gram, sulphur 10 to 20 grams, and yellow vaseline to 100 grams. For obstinate disseminated cases he finds sulphur baths useful at times. Obstinate dry eczema may require some Fowler's solution. The most important part of the treatment, however, is the dietetic. Breast-fed infants should be fed not more than five times daily, and only for a short time. From the third month onward he advises barley water if the reduction of the mother's milk does not cure alone. With artificially-fed babies the quantity of food must be reduced to a minimum. The daily supply of milk should be reduced to $\frac{1}{2}$ to $\frac{3}{4}$ litre, according to the age of the infant. When necessary, the amount of carbohydrate may be increased to make up for the small quantity of milk. If the eczema does not heal within one or two weeks, he reduces the milk still further. Some loss of weight is not harmful to a fat, over-

fed baby. After the fourth month of life the treatment becomes easier, as more starchy food can be given. In the second half year he gives finely divided stewed fruit with very little sugar, or possibly sweetened with saccharin, or raw fruit, green vegetables, and potatoes. If this fails to cure, milk may be stopped altogether for two to four weeks during the second half year, or it may be sufficient to use skimmed milk. Eggs should be avoided under all conditions, as should be soups. After the eczema has healed the reduced quantity of milk should be kept up for months or even years. In the disseminated form in thin wasted children underfeeding may not be employed, but carbohydrates should be substituted for milk, and attempts should be made to fatten the children with these means. In conclusion, he discusses his experience with Finkelstein's method of giving whey. He believes that good results are obtainable in this way, but does not see any advantage over the method described above.

195. Heredity in Diabetes Mellitus.

In a reprint from the *Medical Chronicle*, January, 1909, R. T. Williamson publishes his observations upon the hereditary tendency in diabetes mellitus. In a series of 100 hospital cases recorded by him ten years ago a family history of the disease was obtained in 13, and this present publication is the result of his investigations in 250 cases (157 male, 93 female) occurring in private practice, and in which on careful inquiry a family history of the disease was obtained in 47—that is, 18.8 per cent., while in 100 of these more specially investigated such a history was obtained in 22 cases, and this may be regarded as the minimum percentage. As a control to these statistics a family history of the disease was inquired for in 50 cases seen in consulting practice in which the patient was not suffering from diabetes, and none of these presented any history of the disease. Grouping these cases with regard to age a family history was obtained more frequently in patients under 40 than in those over 40 (50.6 per cent. and 13.7 per cent. respectively). On an examination as to the relatives most frequently affected by the disease, they were in order of frequency—brother, father, mother, sister, and in 5 instances among the 250 cases (2 per cent.) the husband or wife of a diabetic patient also suffered from the disease; but such instances cannot, of course, be included in any tables of heredity. Some striking examples are recorded of this family tendency—for example, in a family consisting of two sons and two daughters, two sons and one daughter became diabetic. Each had lived in different towns, and several years elapsed between the onset of the disease in the three cases.

196. Typhoid Fever and Crises of Subnormal Temperature.

COURTELLEMONTE and HAUTEFEUILLE (*Echo Méd. du Nord*, November 15th, 1908) cite a case of typhoid fever in the course of which several crises of subnormal temperature occurred, without the presence of any serious complication. On the seventeenth day of a comparatively mild case, in which the temperature had for some time remained nearly at 104°, the patient, at midnight, had a sudden and violent rigor, with a general sensation of cold. The face was pale, and the extremities felt cold. The temperature, which had been 103° at 9 p.m., had fallen to just over 97°, and she complained of an indelible sense of illness, with some tendency to syncope. After a subcutaneous injection of caffeine, the general condition gradually improved, but at 3 a.m. the temperature was only 94°, regaining its former height, of between 103° and 104°, about mid-day. The same deferescence took place on the following night at the same hour, and on four subsequent occasions; each crisis, after the first two, being a little less marked and a little less prolonged, the last two occurring during the day. There was no sign of intestinal haemorrhage or of meteorismus, so that perforation was excluded, and no exciting cause for the phenomenon could be found in connexion with heart, lungs, liver, spleen, or nervous system. Pus appeared in the urine on the day following the second crisis, explaining the occurrence of pain on pressure in the right renal region; but in two days the urine was clear again, and the pain ceased in two days more. The disease ran its course without further complication, convalescence being marked only by a long period of subnormal temperature. In trying to discover the

cause of the defervescence, the authors eliminate renal or hepatic insufficiency, gangrene, profuse diarrhoea, sloughing, and profuse sweating, the symptoms of the renal complication having been too mild to cause so grave a crisis. Pyramidal has been given for the high temperature, and it has been found that such subnormal readings were caused by the use of antipyretics; but in this case its administration had been discontinued before the appearance of the first crisis, and they are inclined to attribute the symptom to the effect of the typhoid toxin on the heat centre in the brain.

SURGERY.

197. Gastric Neuroses from a Surgical Standpoint.

DEAYER (*Amer. Journ. of Med. Sciences*, February, 1909) considers the so-called gastric neuroses from the point of view of the surgeon. There are many conditions directly or indirectly causing what is termed "nervous dyspepsia," the origin of the symptoms being referable to some very definite lesion either within the stomach itself or in one of the various organs concerned in digestion which together form a system correlated in every part. A pure gastric neurosis without any evidence elsewhere of neuroses or neurasthenic conditions is most rare, and the most important feature in the diagnosis is the eliciting of a careful history pointing to the general neurasthenic condition of the patient. Producing symptoms of infinite variations, such a diagnosis is most difficult to make, and the existing textbook descriptions of symptoms of diseases of the abdominal organs are practically useless in helping towards the formation of an early diagnosis. Carcinoma, gastric ulcer, puncture ulceration of the mucosa, etc., frequently give rise in their earliest stages to symptoms of so varying a nature as to lead to a diagnosis of nervous dyspepsia, a correct diagnosis being made only when it is too late. As it is more clearly recognized that all the organs of digestion form a system correlated in every part, it will be more readily seen how lesions of any one portion of the tract may give rise to symptoms apparently referable to the stomach only, as has already been recognized in the case of the gall bladder and appendix, and more frequent diagnoses of gall-bladder dyspepsia, duodenal dyspepsia, and appendical dyspepsia will, by such greater refinement of diagnosis and the advising of prompt surgical interference, be attended with better results in the treatment of such conditions. Many other conditions external to the gastro-intestinal tract may reflexly similarly operate in producing symptoms of nervous dyspepsia—for example, renal, pelvic lesions, etc.—and it becomes increasingly more evident that, as a rule, the origin of such symptoms can be traced to some very definite lesion within or beyond the stomach. With but very few exceptions the surgeon's attitude towards these cases should be one of "hands off," if possible separating them from secondary dyspeptic conditions due to lesions possibly coming within the scope of operative interference, while to operate merely for the mental effect upon the general neurasthenic condition is regarded as illogical.

198. Preoperative Sterilization of Septic Cavities by Hot Air.

QUÉNU (*Bull. et Mém. de la Soc. de Chir. de Paris*, No. 4, 1909) points out the difficulty of adequately sterilizing before operative removal a hollow organ—such, for instance, as the uterus or rectum—which is the seat of ulcerating cancer. He has in such cases tried preliminary injections of antiseptic fluids, curetting, and cauterization by chloride of zinc; but these methods have not proved sufficient, and curetting, from its liability to set up intravascular inoculation, is not free from risk. A recent attempt has been made by the author to solve this problem by injecting hot air. In a case of cancer of the uterus the removal of the diseased organ was preceded by the introduction into its very foul cavity of air heated at first to 300°, and afterwards for three or four minutes to 600°. The patient made a good and speedy recovery, and during the after-treatment did not present any abdominal complication. Culture media to which, after the operation, minute portions of the fluid contents and of the desiccated and scorched inner surface of the removed uterus were added, remained sterile. In dealing with some adverse criticism made by Guinard the author of this communication expressed the opinion that the action of the intensely heated air would not be likely to affect the deep tissues, and also that in a case of uterine cancer

it would not extend through the Fallopian tubes and injure the abdominal viscera. In removal of the rectum, however, it would be necessary to take some special step to protect the upper portion of the intestinal canal.

199. Operative Treatment of Ascites due to Hepatic Cirrhosis.

BOGOJAWLENSKY (*Zentralbl. für Chir.*, No. 9, 1909), after an expression of opinion that omentopexy in cases of ascites due to cirrhosis of the liver has not completely fulfilled early expectations, holds that such good results as have resulted from this operation are due mainly to the simple laparotomy and not to the endeavour to establish a collateral circulation by suturing the omentum to the abdominal wall. The good obtained by mere exposure of the abdominal cavity is attributed to an increased capacity of the peritoneum for absorption being set up by the hyperaemia resulting from this operation. The author agrees with Klopstock that in many cases of hepatic cirrhosis the ascites is due rather to an inflammatory condition of the peritoneum than to a mechanical obstruction in the portal circulation. This chronic inflammation, it is suggested, is set up by irritation of the membrane by toxic matter which, in consequence of the impaired function of the liver, is carried by the blood to the whole organism, and particularly to the contents of the abdominal cavity. In 10 cases treated by the author, after the whole of the ascitic fluid had been withdrawn, the parietal peritoneum was moistened by normal solution, and afterwards dried by gauze. This method of treating ascites by laparotomy and artificial irritation of the peritoneum should be regarded, the author points out, as strictly contraindicated in cases in which the renal functions are compromised.

200.

Appendicitis in Children.

ALLISON (*Amer. Journ. of Surg.*, No. 2, 1909), in an article on borderline cases in medicine and surgery, points out that in appendicitis in children the diagnosis is rendered difficult by a lack of subjective response and an imperfection of clinical history. These, which are often associated with other difficulties, need deep consideration, for the facts that in young subjects the walls of the appendix offer comparatively less resistance to irritating agents, and that the omentum is immature, indicate a far greater danger of peritoneal sepsis and the necessity for promptness in surgical treatment. There is less vomiting and nausea occurs less frequently in appendicitis than in the gastro-enteric disturbances of childhood. In the "stormy" type of the disease, however, the symptoms are more marked. In such cases the position will often suggest the nature of the attack, the little patient inclining to the right side, with the right lower limb flexed, and the hand acting as a guard over the affected area. Muscular resistance has less weight, clinically, than in adults, but if elicited by gentle manipulation it strongly favours the diagnosis. In the differential diagnosis care should be taken to determine the absence or presence of inflammation in the chest cavity, and also of disease of the hip. Persistent vomiting, abdominal pain, a high temperature and a quick pulse, leucocytosis, muscular resistance during the quiescent periods, the above-mentioned position of the patient in bed, will all, if chest lesions can be excluded, strongly indicate in children an acute attack of appendicitis.

OBSTETRICS.

201.

Treatment of Placenta Praevia and Eclampsia.

The treatment of placenta praevia and eclampsia consists in delivering the patient as rapidly as possible. In the case of the former, the woman runs a risk of death from haemorrhage until the birth is completed, and the child's life is endangered the longer the process of birth lasts. In the case of eclampsia, it has been shown that in from 60 to 80 per cent. of the cases the fits cease after delivery. No difference appears to exist whether the birth is spontaneous or artificial. K. Baisch (*Munch. med. Woch.*, January 19th, 1909) states that it is only logical to deliver the patient immediately after the first eclamptic fit. According to Bumm, the mortality of women delivered immediately after the first fit is 2½ per cent. The difficulty, however, which presents itself is that the os uteri and cervix are closed, and that in the majority of cases these have never been previously dilated, since the patients are usually primiparae. Baisch considers that *accouchement forcé* by means of combined version and extraction, dilatation with

the bag or with Bossi's dilator, is unjustifiable, as the interference may be more dangerous than the eclampsia itself. Mueller's bag is safer than Bossi's instrument, but the two may be combined by applying the bag first with moderate traction, and when the cervical canal is dilated enough Bossi's dilator may open the canal sufficiently to allow of version and extraction, forceps delivery or perforation. Even under the most favourable circumstances, however, these methods scarcely yield better results than an expectant treatment, since valuable time is always lost. He therefore comes to the conclusion that no satisfactory method exists which permits of a safe non-operative delivery of the eclamptic woman. With regard to placenta praevia, combined version by the method of Braxton Hicks has for many years been the standard treatment. The conditions differ from those applying in eclampsia. The greater the danger for the mother, the less may the condition of the fetus be taken into account. In eclampsia the maternal mortality of about 30 per cent. renders it necessary to neglect the child. The infantile mortality in eclampsia is from 20 to 25 per cent. The maternal mortality in placenta praevia is less than 10 per cent. This mortality although high is not so high that the child's life need be neglected. By Braxton Hicks's method, from 5 to 8 per cent. of the mothers die, while from 60 to 80 per cent. of the children also die. This means, therefore, that the child is sacrificed to save at most 5 per cent. of the mothers. By dilators, the maternal mortality has been reduced to 5 per cent. and the infantile mortality to 50 per cent. This is not much better than the result of combined version. Bossi's instrument is still worse, and tamponade does not yield better results. Dührssen has introduced a method by means of which the danger to the mother is kept at a minimum and the rapid delivery of the infant secures a good chance of survival. This is anterior hysterotomy. The dilatation of the cervix and os is dispensed with altogether, and by the help of an exact incision through the cervix, room is made for the passage of the fetal head. Some operators regard the friability of the cervix and its engorgement with blood as an indication for an extra-peritoneal operation through the abdominal wall, but Baisch points out that Dührssen's operation is incomparably less dangerous than a laparotomy. In Munich forty vaginal sections have been performed for conditions including placenta praevia and eclampsia. All the mothers have recovered, and of 22 living fetuses 19 have been saved. He regards this method as the ideal one for both the named conditions. A. Fiessler (*Muench. med. Woch.*, January 26th, 1909) pleads for the extraperitoneal abdominal operation for placenta praevia, which Kröwig and Sellheim have adopted as the operation of choice for this condition. He attempts on the strength of 9 cases to compare in percentages the value of this method with that of version (35 cases) and vaginal Caesarean section (10). He does not adduce any new facts beyond those depending on the experience of the Tübingen clinic.

202. The Milk in Wet Nurses.

PORCELLI (*Riv. di Clin. Pediatr.*, February, 1909) discusses the quality of the milk in the case of consecutive nursing from the point of view as to its nutritive value. His material is not large, as he has only examined the milk in the case of two healthy nursing mothers, one nursing up to the seventeenth month after the birth of the child (the milk was examined for the last four months), and the other up to the eighteenth month. The milk in each case was examined as to density, amount of water, dry residue, density of dry residue, salts, fat, proteins, and lactose. In one case menstruation reappeared at the sixteenth month. The weight of the child was also taken at regular intervals. His general conclusions are that the nutritional state of the infant is best in the following order: (1) When nursed by its own mother; (2) when nursed by a wet nurse with the first milk; (3) when nursed by a wet nurse with the second milk, provided that this milk is not too old and the milk be given, as in the first case, in the child's own home, or at least the wet nurse lives so near as to be watched daily. Artificial feeding gives the worst result as compared with any of the previous alternatives.

THERAPEUTICS.

203. Inunction Method of Administering Drugs to Children.

RACHFORD (*Amer. Journ. of Med. Sciences*, January, 1909), from previous experience with inunctions of guaiacol in the treatment of tuberculosis in infants and children,

points out the value of this method of treatment for all drugs which are capable of being so administered, and which are intended to influence lymphatic or blood diseases, or to act favourably upon the respiratory passages or at the point of excretion. The cutaneous surface in infants being four times greater in proportion to the body weight than in adults the whole blood and lymph circulation is in closer communication with the blood vessels and lymphatics of the skin, and drugs rubbed into the skin make their appearance quickly in the urine, faeces, bronchial mucus, and other secretions. The vasomotor mechanism also being more responsive to reflex stimuli than in adults, and the lymphatic functions being more active, the facilities for absorption by the friction and heat of inunction are greater in infants than in adults. Since in young children nutritional problems in the treatment of diseases are of the greatest importance it is evident that when drugs can be administered other than by the stomach the risk of upsetting digestion and nutrition is avoided. Experimentally it was shown that such drugs as guaiacol, iodine, oil of wintergreen, and salicylic acid were capable of being easily introduced into the circulating media of the body by inunctions through the skin, and that this result was more easily obtained in infants and young children than in adults. For inunctions of iodine a 6 per cent. iodine vasogen was used, while the other drugs were combined with anhydrous lanoline in the proportion of 1 drachm to the ounce. The chest and abdomen having been washed, hot moist towels were applied for a few minutes in order to warm and redden the skin. One drachm of the ointment was then gently rubbed into the chest and upper abdomen, the inunction lasting for from five to ten minutes. The drug generally appears in the urine within two hours, and the younger the child the sooner does this take place. Guaiacol administered by this method was found to be a valuable remedy in lymphatic tuberculosis, tuberculous peritonitis, streptococcal and other localised infections of the lymphatic tissues, pulmonary tuberculosis, and in all diseases where a pulmonary or bronchial antiseptic was indicated. In the treatment of influenza, bronchitis, and other respiratory affections in infants guaiacol inunctions have been advantageously used to the almost entire exclusion of expectorants. Mercury, and colloidal silver in the form of unguentum Credé, are among other drugs which can be administered most efficaciously by inunction.

204. The Treatment of Whooping-cough.

In a clinical lecture on the treatment of whooping-cough, E. Feer (*Deut. med. Woch.*, October 8th, 1908) shows that in the first year of life this disease is responsible for many more deaths than are measles, diphtheria, and scarlatina, while in the second year of life the mortality of pertussis is nearly equal to that of morbilli, is twice that of scarlatina, and is only second to that of diphtheria. In the third year it is considerably less. The disease is preventable, and as such should be prevented. This is, in the author's opinion, possible by carrying out a strict prophylactic treatment. In the first place, the patient should be isolated. As soon as the diagnosis can be made the patient should be separated from all healthy children until the cough has entirely disappeared. It is a very bad principle to allow children to play in open-air playgrounds with other children during convalescence from pertussis. Those who have been unavoidably exposed to infection should be isolated for from ten to fourteen days, and if then free from cough and catarrh may be allowed to go to school or mix with others. The most infective period is the early stage of the disease, before the cough has become characteristic. The sputum should be collected, if possible, in suitable vessels and disinfected, not so much to destroy the causal microbe of pertussis as to destroy other accompanying microorganisms. Feer does not believe that any good is done by disinfecting the patient's room after the attack is over. A suspected case should be treated just like a certain case until the true nature of the illness can be made out. Since no specific has up to the present been discovered, the treatment has to be conducted on wide lines. It has been noticed that rachitic, nervous, and neuropathic children are more severely attacked than other children. Feer is inclined frequently to ascribe the apparent beneficial effect of a certain form of treatment to the effect on the child's nervous system. It therefore becomes necessary to take the child's nervous disposition into account, and to pay attention to conditions which might influence this. He is a firm believer in the efficacy of careful treatment, even if this cannot be regarded as specific. The hygienic-physical-dietetic treatment forms the most important. Whooping-cough children do best in pure air. Provided

that the weather is suitable, and that no fever is present, it is advisable to keep the patients out of doors. Wet, cold, and windy weather, however, is actually dangerous. Dust must also be avoided. When it is necessary to keep the patient in bed or in the room, it becomes essential to keep the air free from dust, warm and moist, and the patients should be prevented from soiling their hands on the floor. It is a great advantage, when possible, to place two rooms at the disposal of the patient (night and day rooms), so that proper ventilation, airing, and cleaning can be safely carried out. Change of air is only advisable when the conditions at home are bad, and must be strongly condemned when the patients have a good garden and airy, clean house. The only effect of such a change is that the infection may be spread far beyond the original area. Hydrotherapeutic measures are useful in complicated cases, especially for bronchitis and bronchopneumonia. The diet must be carefully attended to and must be suitable to the age of the patient. Physical measures are invaluable and must be carried out with coolness, kindness, and firmness. With regard to drugs, the vaunted specific medicaments may do good, even if they do not cure the disease. Quinine, best given in the form of capsules of the sulphate (as many decigrams in each dose as the child is years old, up to 1.2 grams), or eucanine, or, lastly, when diarrhoea, etc., is present, as quinine tannate, given in chocolate, at times exercises a beneficial effect on the bronchial affection. Fever does not feel justified in recommending tussol, aspirin, or antispasmin. The thyme preparations at times yield good results and at times fail utterly. The most usual preparations are Golaz's dialysate and Taeschner's pertussin. Insufflations of quinine, etc., used to be employed, but, as no good resulted, have been discarded. Bromoform, when carefully given, frequently acts exceedingly well. It may, however, only be given when the parents are intelligent and when it can be kept in well-stoppered bottles. Fever gives it in doses of $a + 2$ to 4 drops, a being taken as the number of years of age. Thus a child of 3 years would be given from 5 to 7 drops. This he gives from three to four times a day. Of the results obtained, he says that even severe cases usually recover in from four to six weeks under bromoform. The pure narcotics may be used, and of these codeine is the most suitable. It may be combined with guaiaacal carbonate. In severe cases, when the child becomes drowsy and the cough becomes less, sedatives may not be given, and it then becomes advisable to employ ammonia and senega as expectorants. Caffeine will also be found useful in these cases. As a rule, he starts a case with quinine or bromoform. If the results are not satisfactory, he tries some other drug after two or three weeks, and only in the severe cases with many attacks does he give codeine.

205. Treatment of Asthma and Emphysema.

BOELLKE (*Med. Klin.*, February 21st, 1909) has found pyrenol of great service in the treatment of emphysema and of asthma. It is given in doses of 3 to 4 grams per day. It is a product of Siam benzoic acid and thymol with synthetic benzoic acid and oxybenzoic acid, and is therefore an expectorant, and possesses by reason of the thymol an anaesthetic property. Boellke has observed its action in 39 cases, of which notes are given of 5. The dyspnoea is relieved in three to four days, and expectoration becomes looser generally on the second day. The cough soon loses its hard and paroxysmal character. A number of patients experienced a sense of well-being to which they had long been strangers. The bronchitic sounds disappeared from the chest, in many cases almost entirely. Relapses were observed in one case only. No harmful influence of the drug was observed, even with long-continued use. No lessening of the effect with time or cumulative action was found. Complications on the part of the heart, kidneys, or liver are not contraindications. Those who had formerly been treated with atropine or potassium iodide declared that pyrenol gave the best results.

203. Cerebral Hyperaemia as a Result of the Injection of Beck's Bismuth Paste.

ALAPY (*Pester Mediz. Chirurg. Presse*, January 17th, 1909) injected Beck's bismuth paste into a pleural fistula of seven months' standing in a child of 4 years. The next day the child complained of headache, and vomited several times, and in the evening she was found to be blind. Ophthalmoscopic examination revealed a "choked disc"

in each eye. Vision finally became restored, and the fistula healed. A similar case of bismuth poisoning was recently reported in which signs of poisoning occurred six weeks after the injection, and led to death. At the autopsy, besides the usual erosions and ulcers in the gastro-intestinal tract, a marked hyperaemia of the brain was found. In Alapy's case, it was probably hyperaemia of the occipital lobe which led to increased cerebral tension and blindness. Alapy thinks that such undesirable complications may possibly be avoided if the bismuth paste is not overheated, so that the substrate be not converted into the nitrite. The possibility of embolus may be avoided by using a paste made with a paraffin whose melting point is about 55°. It should be injected at a temperature of 55 to 60°.

PATHOLOGY.

207. Relation of Tetany to Parathyroid Glands.

MACCALLUM AND VOEGTLIN (*Journ. of Exper. Med.*, January, 1909) have endeavoured to ascertain in cases of tetany produced by parathyroidectomy the effect of the administration of various substances, chiefly mineral salts, which might occur normally or under pathological conditions in the animal body, and have paid particular attention to the soluble calcium salts. They have also investigated the changes in metabolism during tetany, and in the chemical condition of the tissues of animals dying in that condition. Recent researches, they point out, indicate an intimate relation between the various forms of tetany and relative or absolute insufficiency of the parathyroid glands. These glands are independent organs with a definite specific function, and are liable to variations both in number and in distribution. Failure to produce tetany experimentally is probably due to leaving behind some parathyroid tissue after an apparently complete extirpation. When extirpation is complete tetany appears, even in herbivora, but only a very small amount of parathyroid tissue is required to prevent it. The effect of the extirpation of the parathyroid glands may be annulled by the introduction of an extract of these glands even from an animal of widely different character. The active principle is associated with a nucleo-protein in the extract, and may be separated with this nucleo-protein from the remaining inert albuminous substances. Its effect in counteracting tetany appears some hours after injection, and lasts several days. The extract does not contain iodine. The authors think that in tetany there is some disturbance of the composition of the circulating fluids, normally prevented by parathyroid secretion, which disarranges the balance of the mineral constituents of the tissues. Possibly this is due to the appearance of an injurious substance of an acid nature, since the tetany may be relieved by extensive bleeding with replacement of the blood by salt solution. The calcium salts have been shown to have an important relation to the excitability of the central nervous system: their withdrawal leaves the nerve cells in a state of hyperexcitability, which disappears on supplying a solution of a calcium salt. Tetany may be regarded as an expression of hyperexcitability of the nerve cells from some such cause, since the injection of a solution of a salt of calcium into the circulation of an animal in tetany promptly checks all the symptoms, and restores the animal to an apparently normal condition. Injections of magnesium salts probably have a similar effect, but these effects are masked by the toxic action of the salt. The injection of sodium or potassium salts has no such beneficial effect, but rather tends to intensify the symptoms. This is also true of the alkaline salts of sodium, which the authors specially studied in respect to their basic properties. The investigators consider that the effect of calcium is of value in human therapeutics in combating the symptoms of spontaneous forms of tetany, and in relieving the symptoms in cases of operative tetany, and thus tiding over the period of acute parathyroid insufficiency until remnants of parathyroid tissue can recover their function, or new parathyroid tissue can be transplanted. It is in this way an important and convenient ally of the method of injecting parathyroid extract. Studies of the metabolism in parathyroidectomized animals show: (1) A marked reduction in the calcium content of the tissues, especially of the blood and brain, during tetany; (2) an increased output of calcium in the urine and faeces on the development of tetany; (3) an increased output of nitrogen in the urine; (4) an increased output of ammonia in the urine with an increased ammonia ratio; (5) an increased amount of ammonia in the blood.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

208. Brown-Sequard's Paralysis of Traumatic Origin.

DONATH (*Pester Med. Chir. Presse*, No. 1, 1909) reports the case of a man, aged 34, who in a drunken squabble was stabbed in the back with a clasp-knife; he fell in a heap, but was not unconscious. When admitted to hospital he suffered from hæmoptysis. He was an excessive smoker and drinker, and had had gonorrhoea. There was a wound 1.5 cm. long, to the right of the spinous process of the fourth dorsal vertebra. The power of the right leg was much diminished; his walk was highly spastic and parietic, and the foot dragged. The belly reflexes (the epi-, meso-, and hypo-gastric) were absent, as well as the cremasteric on the injured side; they were active on the left side. The patella and tendo Achillis reflexes were exaggerated on both sides, particularly on the right, where also there was foot clonus. Babinski's sign was absent. Disturbances of sensation began in front at the fifth rib, behind at the tenth dorsal vertebra. On the right half of the body there was tactile hypoaesthesia and acute hyperaesthesia; on the other side there was analgesia, including hypalgesia and thermæsthesia for cold as well as heat. The muscular sense in both extremities was good and equal. A marked anaesthetic district was found in front from below the nipple to the inguinal region, extending outwards as far as the nipple line. Behind was a similar area the size of the palm, at the side of the vertebral column from the ninth dorsal to the fourth lumbar. The part of the cord injured was in the fifth and sixth spinal segments, corresponding to the fourth dorsal vertebra. The innervation area of the fifth thoracic segment corresponds to the region of the fifth rib in front, and behind to the eighth vertebra. As to the absent belly reflexes, according to Oppenheim their centre is still lower, eighth to twelfth dorsal. In this patient, on the injured side the hyperaesthesia was very marked, while on the opposite side there was little or none; painful cramps occurred in the affected leg and in the right hypochondrium. During the attacks the patient groaned, his face became covered with cold sweats, and there were clonic convulsions (trepidation) in the extremity. Some of these attacks lasted five to ten minutes, and were probably due to some irritation of the pain-conducting fibres. Donath remarks on the surprising improvement which sometimes takes place in these cases, and must be attributed to the incision being clean, early union, vicarious action, regeneration and functional recovery consequently ensuing. In Brown Séquard's palsy the loss of sensation is quite intelligible; not so the improvement in function which occurs for pain sensation and motor palsy. Woroschiloff, Raymond, and Gowers have sought explanations; Oppenheim, Münzer, and Wiener assume that every stimulus which enters the cord through the posterior roots splits into two components, one of which goes up by the long, direct, ascending path, fasciculus posterioris, and enters the subcortical centres—cerebellar, bulbar, pontine. If an interruption in the long, direct, ascending path takes place, the splitting of the upward-going impulses is hindered and the whole turned over into the crossed path which goes to the conscious centres, and this causes increased intensity. On this hypothesis and under such circumstances all qualities of sensation should be increased on one side of the body, but up to the present this has not been observed. The assumption must, therefore, be valid for pain conduction. The fact that as a rule tactile anaesthesia is less marked and clears up more quickly is explained by Mann as due to the fact that stimulations of touch are specially conducted by the fasciculus posterioris, but that the centripetal path is open to them as long as they are still practicable. Other observers (Langendorf, Münzer, Wiener, Ziehen) and experimenters (Borchert, Borwinkow, Rothmann) assume the same paths for all sensations, while Head and Thompson think that the long fibres conducting touch also get to the other side by degrees, conduction for long stretches being double-sided. As to the cramps in Donath's case, he thinks they were different from the spasmodyia cruciata of Oppenheim, in which the tonic cramps were associated with pains in the opposite side. Worth noting also is the con-

trast between the abdominal and cremaster reflexes, which were absent on the lesion side, and the patellar and Achilles reflexes, which were exaggerated on both sides, particularly the paralysed.

209. A Family of Pleuritis.

LEONARDI (*Gazz. degli Osped.*, February 16th, 1909) reports the facts concerning a family several members of which developed pleurisy with effusion. All the family were marked by considerable pallor of a faint yellowish type, slight oedema of the eyelids, sluggish in movement and in mind, and, as it were, submyxoedematous. In 1901 the eldest son, aged 19, developed a pleural effusion on the left side without fever and without pain, and attributed to cold. This was twice tapped and about 5 litres of serous fluid withdrawn. Cure soon followed and the lad entered the army, and a year later had another attack of left pleural effusion, for which he was tapped. Somewhat later he had a third attack with effusion as before. No sequelae were left, no adhesions, and no tubercle. In 1902 a brother, aged 16, had an attack of right pleurisy with effusion, for which he was tapped twice. This also was unaccompanied by fever or pain and left no sequelae. The boy was hardly cured when a younger sister, aged 14, developed a mild pleurisy with effusion, which was absorbed without any paracentesis. In 1903 the mother, who was a robust woman about 40, developed pleurisy with effusion (tapped twice), which only slowly cleared up. She had some trace of albumen in the urine and presented a pemphigous kind of eruption on the skin which was hard like scleroderma; the pulse was frequent and of high tension. The sister of this patient was said to have suffered for a long time from a similar skin trouble and to have died of dropsy. In 1904 the child of the eldest son in its turn developed an empyema. The author thinks there is something more than mere coincidence in his group of cases, and suggests that the root cause predisposing was a kind of submyxoedema, due in its turn to want of proper action of the thyroid. The only member of the family who did not develop pleurisy (the eldest daughter) was very anaemic and suffered from oedema of the lower limbs.

210. Tobacco Poisoning in an Infant.

JULES LEMAIRE (*Ann. de Méd. et de Chir.*, March, 1909) relates a case of acute tobacco poisoning. The accident occurred to an infant of 1 year of age. He prefaces the story by referring to the fact that classical authors describe two forms of acute tobacco poisoning: (1) The acute, evanescent form with malaise, nausea, vomiting, headache, vertigo, and cold sweats; (2) the grave form, with excitement, headache, vertigo, affections of the sight and hearing, slowness of pulse, dyspnoea, vomiting and diarrhoea, extreme weakness with coldness and stupor, ending in collapse with intense dyspnoea, failure of the pulse, and death by asphyxia. The case in point occurred on December 12th, 1908. The infant, 1 year and a few days old, swallowed a cigarette made by W. D. and H. O. Wills, known as Three Castles brand. This occurred at 6 o'clock at night, after which the infant had its usual meal and went to sleep. After a quiet sleep of about an hour the infant woke and began to cry and vomit; he turned pale, the face was covered with a cold sweat, and diarrhoea followed. Dr. Lemaire saw the patient at 9 p.m.; he was collapsed and sleepy, pale, with cold extremities, but the pulse and respiration were not interfered with; there was much yawning, and the vomited matter contained much mucus and pieces of the cigarette. Pieces of the tobacco were also found in the stools, and were more numerous there than in the vomited matter. The infant was given two cups of warm tea with one teaspoonful of cognac, and kept warm with hot water and cotton-wool. Towards midnight the child went to sleep and next morning was quite well. The clinical picture presents a case of acute tobacco poisoning in a mild form, but the diarrhoea and collapse would lead one to classify the case as one intermediate between the grave and mild forms of poisoning. Inquiry led to the fact that the kind of tobacco the cigarette contained was pure Virginia and weighed slightly over 1 gram. The case was of special interest on account of the age of the patient—namely, 1 year and a few days.

SURGERY.

211. Slipping of Interarticular Cartilage of Temporomaxillary Joint.

UNDER the heading of *Discitis mandibularis*, Lanz of Amsterdam (*Zentralbl. f. Chir.*, No. 9, 1909) describes a morbid condition of the temporomaxillary articulation, marked by pain, a feeling of abnormal laxity in this region, and, occasionally, a distinct cracking sound during free movements of the lower jaw. Reference is made to two cases, the affection in each being unilateral and on the left side, in which the above troubles ceased after removal of the interarticular disc through a horizontal incision made over the lower margin of the zygoma. In each instance, on opening the joint, the cartilage was, it is stated, found to be abnormally loose. Although in neither of these cases was there any history of previous injury or of an inflammatory attack, the author insists on a close analogy between this affection of the temporomaxillary joint and the so-called "internal derangement" of the knee-joint, now regarded as being almost always due to a slipped semilunar cartilage. The mandibular condition described by the author of this paper seems to be identical with that known in this country as subluxation of the temporomaxillary joint, which Annandale has successfully treated by fixing the retained disc by suture.

212. Gangrenous Lymphangitis of Scrotum in the Newborn.

ANDREI (*Riv. di Clin. Pediatr.*, February, 1909) reports 3 cases of this condition, aged 20 days and 2 months respectively: 2 of these recovered and 1 died; he also refers to 7 other cases reported by various authors. As far as the details were given in the various cases the diseased process began in the thigh in 2 cases, over the crural arch in 1, in the umbilical region in 3 cases, the place of origin was not mentioned in the other cases. The processes associated with the separation of the cord are a common starting point for the septic infection which sets up the lymphangitis: in one of the author's cases (the fatal one) this was undoubtedly the case. In two of his cases the streptococcus was found, both locally in the pus of the metastatic abscesses; in the third case *Staphylococcus pyogenes albus* was found in the pus of the secondary abscesses. The disease begins in some slight lesion which usually escapes notice, then the red striae of a lymphangitis and slight red oedema appears. This stage lasts from three to five days. After this the pubic region becomes suddenly red, the scrotum is enormously enlarged, the penis is also affected in a similar way. The scrotum is hard, tender, and dark red in colour, with purplish patches on its anterior surface, and sometimes bullae; necrosis quickly sets in, and the whole of the testes may become exposed. Symptoms of general infection usually accompany this stage of the disease. If the child survives, the breach in the tissues is rapidly made good; it is possible the testes may subsequently atrophy from inclusion in the scar tissue. The chief condition simulating this gangrenous lymphangitis is erysipelas. Treatment, apart from that directed to the general septicæmia, is local and surgical and consists in free incisions into the scrotum either with a knife or, better still, with the thermocautery.

213. Sprengel's Deformity.

A. E. HORWITZ (*Amer. Journ. of Orthop. Surg.*, November, 1908) brings together and investigates all the known facts and theories concerning this interesting malformation. The scapula in its development is a cervical and not a dorsal appendage. It retains that position throughout fetal life. In its development it passes through the different stages of lower forms, and repeats the history of its species. In congenital elevation alterations in shape are found coinciding with conditions normally seen in the scapula of lower animals—namely, increase in width and diminution in length, rounding of the superior median angle and articulations with the vertebral column. If these articulations were of secondary growth due to attrition, they would be bony throughout, whereas the union at either end or both ends is by means of cartilage. They are, according to Minot, due to centres of ossification appearing within the sheet of development of the scapula. The affected scapula, situated from two to four vertebral bodies' distance above its fellow, is rotated upon its sagittal axis. This is due in part to the weight of the arm and in part to retracted muscles. Scoliosis existed in nearly half the cases. The curve must be regarded as of congenital origin, parallel with defective ribs and vertebrae and other evidences of arrested development elsewhere in the body; cleft palate, spina bifida, congenital

dislocations, undeveloped limbs, etc., are due to the same mechanical pressure causes. The undeveloped scapula is not to be regarded as a deformity due to these same causes, but as of another type. The scoliosis is neither primary nor secondary to the elevated scapula. Torticollis is seen in 10 per cent., and cranial asymmetry is 1½ per cent. These deformities are not dependent upon each other, nor upon the elevated scapula. Sprengel regarded this deformity as an upward displacement due to pressure exerted *in utero* through lack of amniotic fluid. The author believes that this is a factor which retains the scapula in its original high position. The caudal migration of the scapula depends upon muscular traction. When this is insufficient, as it may be when the intrauterine pressure is excessive, or when abnormal articulations exist, or when the musculature is *per se* defective, Sprengel's deformity is seen. Treatment consists in operation and gymnastics. The results in cases operated on, where an articulation existed, were good. A degree of improvement is offered by stretching and gymnastics.

OBSTETRICS.

214. Pregnancy and the Puerperium in connexion with Cholelithiasis.

SINCE the time of Langenbuch's and Naunyn's monographs the more frequent incidence of gall stones in women than in men has been abundantly recognized, while the interest of gynaecologists in the subject has increased as observations accumulated on the onset of gall-stone colic in connexion with the puerperium or the end of menstruation. J. Hofbauer (*Med. Klin.*, No. 7, 1909) reviews the literature on the causation of gall stones, and finds that the essential factors, apart from bacterial action, are stagnation of bile, precipitation of cholesterol, free protoplasmic substances, or cell desquamation. An examination is next made of the results of *post-mortem* examinations of the livers of women who have died from intercurrent causes either during pregnancy or the early part of the puerperium. It is found that such livers are characterized by: (1) Fatty infiltration in the central parts of the lobules and diminution in the amount of glycogen in the same regions. (2) Stagnation of bile with deposition of layers of pigment in the central parts of the lobules, together with widening of the gall capillaries. (3) Ectasy of the central veins and the capillaries leading to them. There is present also in the tissue of Glisson's capsule an inflammatory condition of the connective tissue layer such as is found in pregnancy in the mucous membrane of the larynx or the bladder, and the lumen of the bile ducts contain mucous and lymphoid cells which have here and there pressed in from without. We thus find a series of conditions present which help towards the formation of gall stones. Thus stagnation of bile is shown to be present; insufficiency of the liver cells has been scientifically demonstrated to tend to the precipitation of cholesterol; and finally in the larger bile ducts we find hypersecretion of mucus and emigration of lymphoid cell elements. But the presence of concretions does not necessarily imply an attack of gall-stone colic; and Kehr, for instance, calculates that the presence of gall stones only gives rise to symptoms in 5 per cent. of the cases in which they exist. The chief complication to determine an attack is infection of the biliary passages, which may take place from the intestine or through the blood, and a second complication is hindering of the flow of bile. These two factors both come into force far more frequently during the puerperium than during pregnancy; resorption of bacteria from the genital tract, followed by their elimination through the bile, and displacement of the intestines due to changed pressure conditions in the abdomen post partum play the greatest part in producing them during the puerperium. In accordance with these observations is the fact that attacks of gall-stone colic occur far more frequently in the first and second weeks of the puerperium than in pregnancy. The influence of menstruation is next considered. A history is often given that an attack of gall stones coincided with the end of a menstrual period. Our knowledge of any change in the liver coincident with menstruation is very scanty. Senator observed four cases of menstrual jaundice which he ascribed to hyperæmia of the liver leading to swelling of the biliary passages; and Metzger speaks of a relative stagnation of bile under the influence of menstruation. These and similar observations can only be received with reserve as showing a causal connexion between an attack of gall stones and menstruation; but they are supported by recent investigations which show that during menstrua-

tion changes take place in different organs, as, for instance, in the mucous membrane of the larynx and nose, which are similar in nature though considerably more mild than those occurring during pregnancy.

GYNAECOLOGY.

215. Pelvic Pain: Bone Tissue in Fallopian Tube.

DEVEZE (*Ann. de Gyn. et d'Obstét.*, March, 1909) reports a case where a woman aged 44 had been troubled for twenty years with a feeling of weight in the perineum. There was also severe dysmenorrhoea. She had married when 20 years old, and had never borne a child. There was marked retroflexion and retroversion. A hard nodule as big as a walnut, not tender on pressure, could be defined on the posterior wall of the uterus. After six sittings the uterine displacement was cured by Thure-Brandt massage and a pessary. The pains had entirely disappeared, but they returned at the end of a month. Devezé operated and removed a pair of enlarged sclerotic ovaries, the larger, the right ovary, being as big as a hen's egg. There was a small myoma as large as a chestnut on the posterior wall of the uterus, which organ was removed. The right Fallopian tube was as rigid as a tobacco pipe. At the junction of the inner and middle third was a hard mass of the bulk of a grain of Indian corn. When the tube was laid open the mass was seen to be porous like a fragment of bone, and on microscopic examination was found to consist of true bony tissue. Devezé considered that the presence of the bony mass accounted for the dysmenorrhoea, as the contraction of the Fallopian tube on the resistant body set up violent colicky pains. He was of opinion that the bone was a relic of an old fetal sac which had undergone bony change as a form of degeneration.

216. Ovarian Cysts Developing after Hysterectomy for Fibroid.

BROWN (*Amer. Journ. Obstet.*, February, 1909) has observed this condition twice in his own operative practice. A woman, aged 39 years, came under his care for a large ventral hernia in the line of a former laparotomy scar, and a small cyst could be defined to the left of the cervix. The patient had undergone myomectomy in 1903 and subtotal hysterectomy in 1906. Brown operated in the autumn of 1908; there were abundant dense pelvic adhesions. One ovary had been removed, the other was the seat of a unilocular cyst of the dropsical follicle type. The second patient underwent subtotal hysterectomy for a lobulated bleeding fibroid; as in the first case one ovary was removed. About a year later an ovarian cyst developed, and Brown removed it. He found that the tumour was a cystic dilatation of a Graafian follicle, with no trace of adenocystoma, and he ascribed the cystic degeneration of the ovary in both cases to disturbance in the circulation of the ovary caused by previous removal of the uterus.

THERAPEUTICS.

217. The Treatment of Syphilis with Mercury.

K. ZIEGLER still regards mercury as the most important remedy in the treatment of syphilis (*Muench. med. Woch.*, November 17th, 1908). The efficacy of mercury, however, is in his opinion dependent on the proper administration of the drug. Dealing first with "grey oil," he says that it has always been described as mercury emulsified in liquid paraffin. The latter is unabsorbable, and for this reason attempts have been made to substitute for it an oil which is capable of being absorbed. Oleum oleicini, which is castor oil obtained at a high temperature and therefore sterile, proved to have this property; the author therefore prepares his grey oil in Neisser's clinic as follows: Hydraz. puriss. bidestill. 40 grams; lanolin. puriss. steril., 15 grams; and ol. oleicini steril., 45 grams. The mercury is first carefully rubbed with the lanolin until an equal and fine emulsion is obtained, and then the oil is gradually added. When properly carried out, the preparation yields mercury globules of equal size varying between $\frac{1}{4}$ and $\frac{1}{2}$ of the size of a red blood corpuscle, that is, not exceeding 2μ in diameter. When the mercury is finely divided, the injections are painless, non-toxic, and readily absorbable. After standing for a long time, some separation of the oil takes place; but, inasmuch as the oil cannot become rancid, simple shaking will again mix the ingredients up and render it safe for use. Since the introduction of this new preparation

694 cases have been treated by its means, and the author shows that the advantages to the patients are considerable. In three quarters of the cases large doses up to 0.14 gram of mercury were given without producing any severe forms of intoxication. Some patients received ten or even twelve injections of 0.14 gram of mercury in all. Men tolerated the high doses better than women, in whom infiltration, etc., sometimes occurred. He therefore gives women from 0.05 to 0.07 gram as a rule, and never exceeds 0.1 gram. In one case five injections of 0.14 gram beside salicylate of mercury and calomel in a weakly patient led to loss of weight, stomatitis, and severe anaemia; but these effects disappeared under suitable nursing, etc. While he admits that there is no reason to push the dose very high in women, he finds that the doses in which his grey oil can be given guarantee an energetic action of the mercury. It is necessary to employ a first-class oil for the purpose, and also to select the cases with care, if good results are to be expected. With regard to the injection syringe, he states that a great degree of exactness is required in the graduation. Barthélemy has introduced an instrument which admits of the injection of 0.01 gram of mercury in the 40 per cent. oil being accurately given, 1 c.cm. of the oil weighs 1.25 grams, so that each cubic centimetre contains 0.5 gram of mercury. Each graduation on the syringe, therefore, corresponds to $\frac{1}{20}$ of a c.cm. The syringe and the platinum iridium needle must be sterilized before use and the injections must be carried out into the gluteal muscles. Care must also be taken that the point of the needle has not entered a blood vessel before the injection is made. When the first two or three injections are followed by hard infiltrations he does not continue the treatment, as it is evident that the oil has become encapsuled. The injections should never be made in the same place twice in the same course. In robust persons he injects the grey oil every fourth or fifth day, but later he increases the intervals between the injections. Next he turns his attention to calomel injections. Grey oil is the best remedy for patients who do not need a very rapid removal of symptoms. When the latter is required, calomel is the best form of mercury. Ten per cent. suspensions are usually very painful when injected. Lang suggested that calomel could be employed in the same manner as metallic mercury in grey oil, and showed that the injections were less painful. The author uses the following mixture for this purpose: Calomel 4 or 5 grams, lanolin anhyd. camphor. 5 per cent., and ol. oleicini camphora. 5 per cent., in proportions of 1:3, to make 10 c.cm. This yields a mixture which contains 40 per cent. by weight of calomel. The calomel must be absolutely pure, and is best prepared by the wet method, washed in pure ether or in boiling alcohol. The manipulations should be carried out in the dark to prevent any chemical dissociation. He injects 0.112 to 0.12 gram of calomel *pro dosi*, and repeats the injections every four to six days. A course includes from eight to fourteen injections. Of 32 women submitted to the course, 7 manifested no ill effects. One patient was given three injections, of which two led to softening and abscess. This patient had shown intolerance of other forms of mercury injections. Of the rest, only a few patients complained of pain at the injections and the like slight side-effects; 146 men were also injected with calomel. Although some pain was complained of on a few instances and slight signs of mercurial poisoning were seen occasionally, the doses were readily absorbed in the vast majority. The author recommends this method of applying mercury to the practitioner who has to treat bad cases of syphilis.

218. Tuberculin and Similar Preparations.

MOELLER (*Muench. med. Woch.*, November 10th, 1908) believes that the subcutaneous application of tuberculin cannot exert any deleterious effect on the body, save inasmuch as the temporary disturbance of the general health during the reaction is concerned. The fear of the results of the injections, which he considers to be unjustified, is, nevertheless, widespread, and at times offers an insurmountable obstacle to its application. For such cases Moeller proposes other methods of giving tuberculin. First he deals with inhalations. The chief disadvantage of this method is the impossibility of an exact dosage. The nasal application of tuberculin is better, but does not equal the subcutaneous injection in sharpness of results. Tuberculin can be applied per rectum in the form of suppositories, or as enemata, and can produce reactions in this way. Calmette has found, and Moeller, too, has seen, that tuberculin given by the stomach can exercise its specific action. This has been tested in animal experiment. The author soon learned

that when given by the stomach in man, even when the acid had been partly neutralized, it did not give satisfactory results. Tuberculin given in *gelduratur* capsules, however, is absorbed smoothly, and produces the full effect of the toxin. The capsule is not attacked in the stomach, and only after it has passed into the bowel is the tuberculin set free. The *gelduratur* capsules are made of the wall of the small intestine. Moeller found that when given in this way tuberculin exercises the same action as when applied subcutaneously. Not only for diagnostic purposes but also for treatment does the physician meet with patients who object to tuberculin, when injected. The objection disappears when he is asked to swallow the drug. The objections to treatment with ordinary tuberculin and with bacillary emulsion are to a certain extent justified on account of the fact that hypersusceptibility at times sets in. This can to a certain extent be diminished or prevented by combining the emulsion of other acid-fast bacilli, which are nearly related to tubercle bacilli (for example, Timothy bacilli, blind-worm bacilli), and the author has shown that the specific process is equally manifested by the "tuberculinoids," that is, the emulsions of the other acid-fast bacilli, as by the true bacilli of Koch. The dose of the allied tuberculin, however, has to be higher than that of the real tuberculin. Next, the author discusses the combination of calcium formate with tuberculin, on lines similar to the combination of the formates with diphtheria antitoxin, which is supposed to be useful. He has experimented in this direction, and has introduced a combination which he calls tuboid. This is put up in *gelduratur* capsules, each capsule containing 0.001 mg. of tubercle bacilli in emulsion, 0.0001 c.c.m. of emulsion of Thimothein, and 0.01 gram of formate of calcium. At first he gives one capsule every second day, and after two or three weeks he gives one every day. Naturally the variations in dosage must be considered in each case. He found this method of treatment useful in children with tuberculous glands. Febrile patients often lose their fever under the influence of tuboid. Further, he has found it very useful in the tuberculosis of pregnant women. The effect of the treatment is characterized by the disappearance of night sweats, the diminution of the cough, and the easing of expectoration. Purulent sputum becomes serous, and the appetite improves. He has obtained good results in early stages and in the larvated forms in which the general condition is considerably affected.

219. Physical Treatment of Bronchial Asthma.

ALOIS STRASSER (*Monats. f. d. physikal.-diätetischen Heilmethoden*, January, 1909) has during the last sixteen years made use of hydrotherapeutic measures for cases of asthma: the methods employed have been the customary ones which have for their object lessening of the general reflex irritability by stringing up the nervous system—for example, general douches, local douches applied to the legs, simple and Scottish douches to the epigastrium. Such measures have often given good results even in severe cases where asthma has been complicated by bronchial affections such as chronic swelling and exudative catarrh, the treatment being indeed that employed for bronchial affections apart from asthma. On the other hand, in a number of severe cases these douches, etc., have had no result. V. Strümpell has of late warmly advocated electric incandescent light baths for bronchial asthma; and Strasser, working on V. Strümpell lines, fully confirms his view as to the benefit to be obtained from such baths. Strasser has in some respects varied the manner of the bath as recommended by V. Strümpell. Especially he has modified the after-treatment, and instead of allowing the patient after the bath to remain in a bath of sweat, and be gradually cooled off during two hours in bed, Strasser in mild cases follows up the bath, which is not more than of ten minutes' duration, with a douche or rubbing down, followed by movement of the muscles, while in more severe cases the bath takes a slightly longer time. The hydrotherapeutic measures which follow are milder, and the patient rests in bed after them for from one to two hours. Strasser finds that in asthmatic patients it may be as long as from seven to eight minutes before the bath causes a profuse perspiration, and he regulates the duration of the bath not by the amount of sweating induced but by the subjective condition of the patient; as a rule the initial baths are not longer than from six to eight minutes in duration, and a bath of more than fifteen minutes is scarcely ever given. Daily baths are found to be in some cases exhausting, and they are therefore given either every other day or on two days out of each three; on the intervening days either the treatment is intermitted or general mildly tonic hydrothera-

peutic treatment is given. V. Strümpell does not recommend that the baths should be taken at the height of the attack, but Strasser has found them useful under such circumstances in cutting short the attack. As to the method of action of the baths Strasser agrees with V. Strümpell in laying special emphasis on their diaphoretic effect, and in the view that the light may also have a specific action both on the sweat glands and on the glands and epithelium of the bronchial mucous membrane, to aid secretion, and possibly to lead to the excretion of harmful substances. Strasser also, from the result of observations of the effect of heat upon hysterical patients suffering from spasm of the cutaneous vessels and at the same time from bronchial spasm, suggests that the baths may have a direct antispasmodic action simultaneously on the skin and on the internal organs. The author's conclusion is that whatever be the method of action the baths are undoubtedly of great value in cases of bronchial asthma.

PATHOLOGY.

220. Studies in Anaphylaxis.

RICHET (*Ann. de l'Inst. Pasteur*, June, 1908) has extended his studies of anaphylaxis, using for the purpose of his experiments on dogs a toxin which he terms "actino-congestin." This substance, which is similar in its physiological action to the "mytilo-congestin" employed in earlier experiments, is prepared by extraction from the tentacles of *Actinea equina* and *Aneomina cereus*, animals found attached to rocks on the Mediterranean coast. He finds that the organism of the animals inoculated with congestin manufactures a special substance, quite different from antitoxin, which he proposes to call "toxogentin." This substance has not yet been isolated, but it has been found to exhibit certain well-marked physiological characteristics. The toxogentin is innocuous, since dogs brought into a condition of anaphylaxis present every appearance of good health, and their blood, when inoculated into normal dogs, produces no pathogenic effects. This toxogentin has, however, the remarkable property of developing a poison when it reacts with congestin, the result being that when congestin is injected either in a dog in a condition of anaphylaxis or in a dog which has received a dose of serum from a dog in a condition of anaphylaxis, the animal thus treated very rapidly dies. For the reaction which takes place the author suggests the formula—"toxogentin + congestin = apotoxin." The toxogentin, produced by the first injection of congestin, takes some time to develop. Its incubation period has not been precisely determined, but the commencement of its formation has been noted as early as the sixth day; the maximum development appears to be reached by the twenty-fifth day; it then persists without diminution for fifty days; after this it declines, but is still evident as late as the one hundred and thirty-fifth day. Apotoxin appears to be a poison possessing a selective action on the nervous system, since its effects are inhibited by the administration of an anaesthetic. Besredka (*Ann. de l'Inst. Pasteur*, June, 1908) seeks to explain the curious fact that whereas anaphylaxis is produced in the guinea-pig with small doses of horse serum ($\frac{1}{10}$ to $\frac{1}{100}$ c.c.m.), large doses (3 to 5 c.c.m.) not only produce less effect in the direction of anaphylaxis, but actually protect the sensitized guinea-pig against the effects of anaphylaxis. His theory is that in every normal serum two properties or two substances are present, the one possessing the character of antigen, the other that of antilysin. He calls the former "sensibilisinothen," and the latter "antisensibilisin." The former is thermostable; it has the property of giving rise in the guinea-pig, twelve days after injection, to "sensibilisin" (= Richet's "toxogentin"), that is, the substance which creates the anaphylactic state. The antisensibilisin is thermostable; it has the property of combining with the sensibilisin wherever it encounters it, whether the latter be free in the blood or fixed in the nervous system. It is the violent encounter of antisensibilisin with sensibilisin in the nervous system which gives rise to the disturbances characteristic of anaphylaxis. The violent conjunction of these two substances may be prevented if we cause the two to come into contact with each other gradually. This is accomplished by using for inoculation a very large dose of serum, owing to the fact that the large amount of antisensibilisin present in the dose of serum picks out the sensibilisin gradually as it is in process of being formed (that is, in the preanaphylactic period). The same result may also be obtained by bringing a very small dose of antisensibilisin into contact with sensibilisin (vaccination by minimal doses of serum in the anaphylactic period).

AN EPIITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

221. Relapsing Tuberculous Polyarthritides.

PONCET has during recent years put forward the view that attacks of arthritis running an acute course may be of tuberculous origin, and are analogous to the arthritis of other infectious diseases, such as syphilis, gonorrhoea, etc. Schaffer (*Zeit. f. Tuberk.*, Bd. 13, Heft v) accepts Poncet's view and reviews the whole question in connexion with the notes of 11 cases which have come under his own observation. Poncet divides the cases into primary and secondary ones according as the joint affections are the first sign of tuberculosis or appear during the course of an already evident tuberculosis. He also divides them into three groups: (1) Cases of arthralgia, (2) of acute and sub-acute arthritis resembling rheumatic polyarthritides, (3) of chronic arthritis, resembling any of the different forms of chronic joint rheumatism. Cases belonging to the first group may later pass into the second and finally into the third. Poncet finds that the joint affections are in many cases due to the action of tuberculous toxins and in some possibly to that of tubercle bacilli of little virulence. The first of Schaffer's cases is that of a child 13 years of age, who at 5 years of age had suffered from spondylitis lumbæ, and who was now being treated for suppurating tuberculous glands. The case belongs to the first group of arthralgias. The child during the course of the illness suffered from pains in different joints accompanied by slight rises of temperature; the pains never lasted for more than a few days at a time, but with remissions and exacerbations continued for almost a month. Later on there was a monarticular relapse without rise of temperature. The joint affections disappeared as the more obvious tuberculous lesions were recovered from and as the general condition improved. The next case was a similar one, but there were no elevations of temperature, and at two different times there were effusions into certain of the affected joints. In three cases the main features resembled those of attacks of acute joint rheumatism; the temperature, however, never rose to the extreme height of rheumatism, the effusions were fairly often indolent in character, movement of the joints was possible to the extent allowed by the effusion, the general condition was less affected than is usual in rheumatism, and in none of the cases was there a history of a previous angina; in one instance there was, in addition to a strong general tuberculin reaction, also a very marked local reaction. The sixth case was marked by frequent effusions into both knee joints, with final complete recovery; this patient passed through an attack of scarlet fever later without having any joint complication. The next three cases illustrate the tendency for the tuberculous joint affections to finally become localized in a single joint, after it has for a longer or shorter time taken the form of polyarticular attacks. One of them was a primary case—that is, joint affections which came and went were for a comparatively long time the only signs of disease, but the patient finally developed a coxitis with abscess formation. In the tenth case also the joint affections were the first sign of disease; here the patient suffered later from tuberculous nephritis. There is a tendency to agree that such tuberculous joint manifestations are toxic in origin, but Schaffer is of opinion that the toxin acts directly on the synovial membrane rather than indirectly through the central nervous system, as has been suggested by some authorities. Where the condition passes into that of a typical chronic tuberculous affection, it may be considered that the previous attacks of local toxæmia have weakened the resistance of the joint to invasion by the tubercle bacilli. The diagnosis has more especially to be made from acute joint rheumatism. Here the family and personal antecedents of the patient must be considered. The clinical picture also differs from that of acute joint rheumatism in several particulars, which, taken together, are of much significance. The general condition is not at all, or is much less, affected in tuberculous than in true rheumatic joint affections. The acute attacks are not accompanied by sweating; primary angina is not observed; in none of the author's cases was endocarditis present, although in rare instances a tuberculous endocarditis has been noted by other observers; relapses continually recurred; and, still more important, salicylates were altogether without effect. The differential diagnosis from joint affections

accompanying the exanthemata, the secondary stage of syphilis, and gonorrhoea, is also considered. In the tuberculous joint affections the reaction to tuberculin, if positive, is a help to diagnosis, and especially if there is, as in one of the author's cases, a local joint reaction. The prognosis depends to some extent upon the condition to which the joint affections are secondary; and as a rule, though not invariably, the joint affections tend to disappear as the primary condition improves. The danger lest the acute cases should develop into cases of chronic tuberculous arthritis makes the prognosis less favourable. The local treatment of acute tuberculous arthritis is purely symptomatic, the chief treatment being that of the principal condition—that is, sanatorium treatment of the tuberculosis.

222. Tic-Douloureux.

BETTREMIEX (*Nord Medical*, November 1st, 1908) reports a case of facial tic seen by him first in 1897, lately seen again, and found to be without recurrence. The patient was an accountant who had previously submitted to resection of the alveolar ridge, which had given him only nine months' relief. Bettermiex, fixing his attention on the usually neglected symptom of lachrymation, found obstruction of the lacrimal duct in both eyes, although the pain affected only the right side of the face. He catheterized both ducts thoroughly, and followed up the procedure by antiseptic injections. Improvement was felt after two or three days and complete relief in a few weeks. Two years afterwards a slight recurrence took place and was relieved by the same means, since which time the patient has been radically cured. As tic-douloureux is said to be incurable Bettermiex has published this case, with the advice that when trigeminal neuralgia is associated with lachrymation, permeability of the lacrimal ducts, and subsequent disinfection, should, always be secured.

SURGERY.

223. Vaso-cellular Carcinoma of the Scalp and Skull.

CHARLES M. FOX (*Quarterly Bull. North-Western Univ. Med. School*, September, 1908) reports a case of vaso-cellular carcinoma of the scalp and skull from the clinic of Professor W. B. Schroeder. A piece of the skull, 10.5 by 11.25 cm. in size, was removed by means of chisel and mallet, and the defect was filled in by a dense connective tissue, that held the brain so firmly that the normal convexity was lost and the exposed area flattened. The motor centres for the leg, arm and face were all found located anterior to the fissure of Rolando. This was also found to be the case in five subsequent cases in which the brain was exposed. A discussion on the various methods of opening the skull follows, and attention is called to the use of the chisel and mallet, particularly on the ground of availability and simplicity. The author believes, after some experience with electrical instruments for this purpose, that ultimately they will be ideal, but that at present there are some difficulties to be overcome. In regard to the closure of defects in the skull, it is stated that this should not be done unless for some sound indication, as no case is reported in literature where a fatality resulted from the presence of such a defect, and frequently a dense fibrous tissue fills in the defect. Experimental work done on twelve dogs gave the following conclusions: (1) Connective tissue plays a very important part in the repair of defects of the skull; (2) there may or may not be bony union, but if there is not the connective tissue union is firm enough for practical purposes; (3) old bone or bone stripped of its periosteum acts merely as a foreign body, and has little to do with closure of the defect; (4) it is important to have the skin wound and bone incision apart from each other on account of the possibility of a skin infection causing a meningitis.

224. Tracheal Scleroma.

MAYER (*Amer. Journ. Med. Sciences*, February, 1909) having noted the remarkable results obtained in cases of external scleroma by the use of x-rays, gives an additional report upon a case of scleroma of the larynx, previously recorded by him two years ago, in which a recurrence was

beneficially treated by the same method. Ten months after the first report a recurrence of the growth took place, causing rapidly progressing dyspnoea. Increasing tracheal stenosis due to scleroma, with secondary involvement of the intranasal mucous membrane existed, and tracheotomy was performed by an incision $\frac{1}{2}$ in. long through the cricoid cartilage and tracheal rings, thereby exposing the bifurcation of the posterior and lateral aspects of the trachea. The growth, which extended $\frac{1}{2}$ in. below the larynx, was greyish-white in appearance, and resembled mucous polyps, readily breaking down. A large tube was inserted with packing about it to keep the wound open. Two days later this was removed, and under chloroform, while the edges of the wound were held apart by retractors, a five-minute exposure to high-frequency current at a distance of 8 in. was given. Paroxysms of coughing and frequently vomiting followed whenever the patient was in any way disturbed, phenomena which were not present prior to the x-ray treatment. After an interval of eight days five to six minute exposures were again commenced, and repeated at intervals of two or three days, during three weeks. The growth was found to be greatly decreased in size and the coughing and vomiting reflexes much diminished after the first four exposures, and within six weeks from the commencement of treatment the tube was removed and the patient was discharged as cured, the voice being normal and there being no dyspnoea and no tumefaction of the larynx. A year later the general condition was good and the respiration normal, the patient expressing herself as quite well, except for occasional nasal obstruction. A small pink mass on the right inferior turbinate bone was present, and on the left side of the septum was a rounded mass about 1 in. in length, which was removed by snare. The larynx and trachea showed perfectly normal conditions, there being no sign of any recurrence. Should a recurrence be present at any future time, good results may be expected to follow external x-ray application over the cicatrix, since this would not present the same resistance as normal tissues; but, failing that, it would be easy to reopen the wound and make application locally.

225. Otitis Media and Convergent Squint.

KNAFF (*Archives of Ophthalmology*, September, 1908) publishes a case of paralysis of the sixth nerve, which came on during an attack of influenzal otitis media. A child, aged 5, developed earache and headache during convalescence from influenza. This persisted for two weeks, and was associated with unusually severe pain in the right half of the face and the right eye. The gums on the right side were sore. Then the right eye turned in. Complete sixth nerve paralysis was found, no fundus change, drum red and slightly bulging. The pain is better, the ear condition was improving; so paracentesis was not done. The case recovered. The group of symptoms pointed to a lesion of the Gasserian ganglion. The ganglion lies close to the sixth nerve at the apex of the petrous pyramid. It is well known that this region can be involved by an extension of the purulent process from the tympanum along the cancellous bony tissue surrounding the ossicular labyrinth. The most recent paper on the subject is by Baldevinck (*Ann. d'Oculistique*, April, 1909). This author, after an exhaustive review of the clinical records and autopsies, regards the anatomical lesion which affects the sixth nerve as an osteitis of the petrous process. The complication occurs in cases where there is insufficient drainage. In the absence of other symptoms of intracranial disease the prognosis is good.

fluid from flowing back out of the uterus, an object which can be more simply attained by clamping the tube outside the vulva after the process of injecting fluid into the uterus is completed. The metreurynter is for use in cases in which the membranes have ruptured prematurely, the cervix being still present, and sufficiently dilated to admit one, or at most two, fingers, whenever version is either immediately indicated or when it seems likely to be needed later, as in cases complicated by narrowed pelvis or oblique or transverse presentations. The filling of the uterus should also be of advantage in prolapse of the cord or prolapse of an arm. The operation should obviously only be undertaken when there is a possibility of a living child being born, and it is, therefore, contraindicated where the conjugate is under 8 cm. If the cervix is not dilated to admit one finger, dilatation to the required extent is carried out by Hegar's dilators. The metreurynter is introduced after being boiled for ten to twenty minutes; in order to prevent air being carried into the uterus the tube for filling the uterus is connected beforehand with a Potain's pressure flask or a syringe filled with sterilized water or salt solution, and the water flows through the tube as the metreurynter is introduced. The tube is then clamped and the dilatation of the metreurynter with 1 per cent. lysolform solution undertaken. When this is completed the clamp is removed from the first tube and the fluid gradually injected into the uterus. There is a certain danger of separation of the lower edge of the placenta, and as a precautionary measure a few drops of fluid are allowed to return through the tube during the process of filling, and a little time after it is completed in order to ascertain that haemorrhage is not occurring. In the few cases in which the method has been employed it is found that from 400 to 500 grams of fluid can be injected into the cavity of the uterus, and this is enough to restore the power of performing external version. The dilated metreurynter forms an efficient tampon to prevent the escape of the fluid, and the operator can either perform version at once or can postpone any operative measure until dilatation of the cervix has proceeded to the required extent or until the metreurynter is expelled. The metreurynter should not be left in position for longer than twelve hours, and should after this time, if necessary, be replaced; this is, however, only necessary in the rarest cases, for as a rule adequate labour pains set in after from three to four hours, and the desired result quickly follows. Where such a procedure is adopted the fetus is spared the harmful effects of the long-continued pressure of the uterine wall in protracted labour, and it is therefore to be hoped that the prognosis for the child may become decidedly more favourable. The author has only once had occasion to use his instrument in a case of narrowed pelvis, in which it appeared likely that version might be required; delivery, however, followed spontaneously, and the case was therefore inconclusive. Bucura made use of the procedure in three cases, and warmly recommended it—the movability of the fetus within the uterus was found to be markedly increased after filling the uterus. In one case there was a certain amount of separation of the lower edge of the placenta, causing haemorrhage. In this case version was successfully performed, but owing to rigidity of the vagina and extension of the arms above the head delivery was difficult, and the child died as a result of the injuries it received during delivery. The author warmly recommends the procedure in the sort of case indicated in the article.

GYNAECOLOGY.

OBSTETRICS.

226. Premature Rupture of Membranes.

H. PETERS (*Medizin. Klin.*, February 28th, 1909) has designed a metreurynter which is combined with a tube for filling up the uterus in cases in which the membranes have ruptured prematurely and it is desired to retain the power of performing external version if that operation should be required later in the case. After laying before the Dresden Gynaecological Congress an account of his metreurynter the author found that a somewhat similar instrument had been already constructed by Bauer, of Stettin. Peters's metreurynter differs from Bauer's in that the tube for filling up the uterus is close to the tube for filling the metreurynter instead of very much to one side; the top of the filling-up tube projects above the top of the expanded metreurynter, instead of being level with it, and Peters dispenses with a valve inside the filling-up tube, which is intended to prevent the

227. Primary Cancer of Fallopian Tube.

DELAUNAY (*Paris Chirurgial*, No. 1, 1909) performed ovariectomy in May, 1908, on a woman aged 52, who had not menstruated for four years. The abdomen had been swelling for two years; there had been no discharge of any kind from the vagina. At the operation the left Fallopian tube was found drawn high up on the front surface of the ovarian cyst, strongly adherent to the tumour and as big as a man's thumb. The pedicle was not thick or broad, and was easily secured; the ovarian tumour showed no signs of any glandular or other solid growth, and contained clear deep yellow fluid. The right ovary and tube were normal. The diseased left tube was very thick-walled, and the fimbriae and plicae had undergone marked hypertrophy. Borel examined it at the Institut Pasteur, and reported "incipient cancer of the tube." Delaunay admits that no report of the ovarian cyst was made, but it showed no signs whatever of malignancy. In September Delaunay's patient began to

suffer from symptoms of recurrence, and she died in November, 1908, with secondary growths disseminated over the abdomen, and involving the parietes.

226. Ovary Removed Three Times.

RIES (*Amer. Journ. Obstet.*, April, 1909), with the design of showing the difficulty of extirpating a normal ovary entire, reported how a woman, aged 31, suffered when 24 years of age from pelvic abscess after the induction of abortion. Three years later the appendix was removed and part of the right ovary; a year later both ovaries and tubes were amputated, and Ries obtained possession of them. The right ovary looked as though complete like its fellow. Haemorrhage occurred, and the patient applied to Ries. He found a fibroid of the uterus, of the size of a fist, and removed it. The tumour proved to be an adenomyoma, and on the right of the uterus lay a structure which, on microscopic examination, proved to be a normal corpus luteum. Ries also referred to an older case. A woman underwent removal of both Fallopian tubes for suppurative. After recovery haemorrhages set in, and the uterus, full of myomatous growths, was removed. No ovarian tissue could be detected by the naked eye, but Ries made a number of sections through the posterior wall of the uterus, laying open a cavity smaller than a pea. It proved to be ovarian tissue spread out as a thin layer over the posterior wall of the uterus, and it included a perfect follicle containing a normal ovum.

THERAPEUTICS.

229. Ferratin.

IN 1894 Schmiedeberg prepared a substance from pig's liver by maceration with boiling water and subsequent precipitation with tartaric acid, which he designated ferratin. It contained 6 per cent. of iron in organic combination, unaffected by ammonium sulphide. No compound of a similar nature had ever been prepared from liver before, nor, so far as Schmiedeberg knew, from any other organ of the body. Later on, by heating white of egg with an alkali in the presence of an iron salt he obtained ferri-albuminic acid, which he holds to be identical with the original ferratin. Moreover, he considers from the mode of preparation that ferratin is the form into which iron must be converted before absorption into the system. If his contention were true it would raise ferratin to a position of extreme importance in the treatment of anaemia. Experiments carried out by Salkowski did not indicate that ferratin was in any way superior, but slightly inferior, to paraneulmine of iron, a substance introduced by Salkowski himself (*Zeit. f. Physiol. Chemie*, Bd. 84, iv, 1909). Moreover, no subsequent observer had obtained any compound with such a high percentage of iron from the liver. Hanmarsten prepared a nucleo-proteid from the pancreas by a method similar to Schmiedeberg's for making ferratin, but substituting hydrochloric for tartaric acid. In 1902 Becari prepared ferratin by Schmiedeberg's method, and found that it only contained 1.67 per cent. of iron (0.52 per cent. if made from ox liver). Scaffidi also found a nucleo-proteid in the liver of the dog, containing 0.18 to 0.44 per cent. of iron; he also obtained a nucleo-proteid from the liver of the pig, containing 1.93 per cent. of iron, rising to 3.59 per cent. after repeated washing. Salkowski repeated these experiments on the pig's liver, and obtained a nucleo-proteid with a fairly constant percentage of phosphorus in the case of each liver examined, but the amount of iron varied considerably. Without prejudice to the value of ferratin in therapeutics, he agrees with Becari and Scaffidi that the substance prepared by Schmiedeberg from pig's liver was not a new variety of compound or a ferri-albuminic acid, but a nucleo-proteid with a variable percentage of iron, and that the ferri-albuminic acid prepared from white of egg has no connexion with the iron-containing proteid in the liver substance. Scaffidi's results are published in the same number of the journal.

230. Anaesthesia with Artificially-limited Circulation.

THE dangers of general anaesthesia have led many surgeons to rely chiefly on infiltration, conduction, medullar, and venous anaesthetics, while attempts have been made by others to replace the usual anaesthetics by less toxic drugs. A third means of reducing the danger is to employ narcotics beforehand in order to lessen the quantity of anaesthetic required to induce full surgical

anaesthesia. Zur Verth (*Muench. med. Woch.*, November 17th, 1908) reports on the experience which has been made in Bier's clinic with a method introduced by Klapp. This depends on the observation that persons who have lost a great deal of blood only require small quantities of chloroform to put them to sleep. In order to diminish the quantity of blood to be saturated by chloroform, he employed a constricting bandage around the extremities, imprisoning a quantity of blood below the stricture. Corning first suggested a similar idea, and Zeigener performed some experiments on animals which demonstrated that this could be carried out in practice. Two rabbits were exposed to the same quantity of chloroform vapour in air for the same time. If the legs of one were constricted by a bandage, the anaesthesia was complete in half of the time required for the other. The animal so anaesthetized awoke from the anaesthetic sleep much more rapidly than the other. On testing the method on human beings, zur Verth found that strong men could be put to sleep quite readily by the ether drop method and kept asleep by slow continuation of the dropping. The quantity of anaesthetic was thus very considerably diminished when the legs were constricted as compared with the quantity necessary to anaesthetize a man under ordinary conditions. Since no harm has followed the Esmarch's method of rendering a limb bloodless, it was not expected that any harm would accrue by the constricting of a limb without driving the blood out of the limb. In practice no harm has been noticed. In discussing whether only the lower limbs or all four limbs should be constricted, he states that experiments were made on himself, his colleagues, and some patients. The pain at first was tolerable when all four limbs were constricted, but after fifteen minutes became so intense that no one could tolerate it. No changes in the pulse or blood pressure, however, took place. While the scopalamine-ether method of anaesthetizing offers such a material advantage over the ordinary method that a new method is scarcely called for, he found that the diminishing of the quantity of anaesthetic beyond the quantity required after scopalamine would undoubtedly be a considerable gain. By means of the artificial limiting of the circulation, the quantity of ether can be reduced to a very low level, and in this way it becomes unnecessary to employ a second toxic substance like scopalamine at all. The second advantage is the rapidity of awakening after the loosening of the constricting tube. Further, he considers it to be an advantage to have a large quantity of blood containing an excess of carbonic acid imprisoned, in case of accident. If the respiratory centre should become attacked by the chloroform or other anaesthetic, a sort of autotransfusion of carbonic acid-containing blood can be immediately applied by loosening the constrictions. This must work beneficially when it is recognized that it is not the want of oxygen but the excess of the toxic anaesthetic which causes the respiratory failure. The constriction is carried out without any previous hyperaemia or suspension, and must be so tight as to completely arrest the circulation. Only the legs are constricted.

231. Intravenous Injection of Strophanthus in Heart Affections.

DANIELOPOLU (*Arch. des Mal. du Cœur des Vaisseaux et du Sang*, November, 1908) has treated 23 cases of chronic heart affections by intravenous injections of strophanthus, and embodies the results obtained in a short paper. His 23 cases consisted of 8 mitral cases, some of which were accompanied by myocarditis; 6 cases of chronic myocarditis; 3 cases of aortic lesions, with chronic nephritis; 5 cases of a systole in emphysema accompanied with advanced chronic nephritis. The dose of strophanthus employed was 1 mg., which was repeated not sooner than twenty-four hours after the first injection. In some cases a single injection has sufficed to relieve systole, but usually two or more injections have been necessary. In no case in which the doses have been repeated has any symptom of accumulation of the drug in the system shown itself. The strophanthin employed was prepared by Merck and employed in aqueous solution, which was sterilized before being injected. One of the most marked effects of these intravenous injections was the extreme rapidity with which the drug acted. The author found that in cardiac cases with very advanced renal lesions the results obtained by intravenous injections of strophanthin were not so good as in cases where the kidneys were less seriously involved; in fact, where there was intense chronic nephritis, the improvement made was very slight. The author observed also, as did Tust and Hoepfner, that in cases of cardiac lesion and chronic nephritis, although the injection of strophanthin has had no immediate effect, yet it

has prepared the way for the action of theobromine, which, given to the same patients before they had received any strophanthin, caused no diuresis. As a result of his experience with the intravenous injections of strophanthin in cardiac affections, the author concludes that strophanthin should be considered one of the best cardiac tonics, the advantage it possesses over other cardiac tonics being: (1) The rapidity and energy of its action on the heart; (2) its exclusive action on the heart; (3) the possibility of one knowing the exact amount of the drug one employs. He also considers that the intravenous method is the best way to give strophanthin, and that this method does not cause the pain and oedema which follow subcutaneous injections. The dose employed should be 1 mg. of strophanthin, which may be repeated at intervals of twenty-four hours. Strophanthin strengthens the heart beat, slows the pulse, and increases arterial tension; further, it favourably influences the cardiac rhythm. It increases diuresis, causes oedema to subside and passive congestions to disappear. Lastly, its action is very rapid. In none of his cases has the author observed any untoward symptom as a result of this method of treatment.

232. The Treatment of Acute Rheumatism.

A. PLEHN (*Dent. med. Woch.*, Nos. 51 and 52, 1908) discusses the treatment of acute rheumatism, and emphasizes the wrong principle, which appears to be gaining ground, to throw overboard the older salicylates, on account of their supposed toxic effects on the kidneys. Luethje was the first to demonstrate the changes in the urine which are present when salicylates are given even in moderate doses. Klemperer considered that it is necessary to use the smallest doses possible, in order not to expose the kidneys to the toxic influence. Hauffe, representing the Schwenger school, which refuses all medicamentary treatment, claims to have obtained excellent results without salicylic acid. However, closer investigation has shown that the renal irritation of salicylic acid is more imagined than real, and that perfectly normal, healthy persons frequently pass minute traces of albumen, and even casts, without taking any of this drug. These forms of albuminuria not infrequently clear up while the patient is taking salicylates. Plehn considers that even if slight irritation of the renal apparatus were produced by this drug, since it acts specifically in rheumatic fever, just as mercury acts in syphilis and quinine in malaria, it would be wise to give it freely. He believes that it is necessary to give it in large quantities in order to obtain the full specific effects. First, however, it must be certain that the rheumatic affection is really acute. He prefers pure salicylic acid to the sodium or other salts. He gives it in doses of 1 gram (that is, about 16 grains) every two hours, or 0.5 gram every hour during the first day, but none during the first night. On the following days he gives 6 grams in $\frac{1}{2}$ or 1 gram doses. This is continued until the temperature has been normal for three days and all pains and complaints of all sorts have disappeared. Then he gives 4 grams a day for a week, and after three further days, during which the patient remains in bed but receives no salicylic acid, he allows him to get up, provided that no further symptoms develop. Men stand the doses better than women, and he finds by experience that the proper dosage of this drug can be calculated at 0.08 gram per kilo body-weight per day (this corresponds to about $\frac{7}{8}$ grains per stone). When salicylic acid produced disturbance of the stomach or other indications caused him to modify the doses, he preferred to substitute aspirin in doses of $\frac{1}{2}$ gram, given six to eight times a day. With these doses both of the acid and of aspirin the body-weight often increased during the medication, the kidneys were not attacked, and even during a nephritis the condition of the kidneys improved. Next he finds that salicylic acid acts prophylactically as far as the heart is concerned. Complications such as endocarditis and pleurisy occurred less frequently when salicylic acid could be given freely from the first than in those cases in which it was withheld. He brings forward evidence to show that this drug is not a cardiac poison when given as he has described. Next he deals with the actual frequency of heart affections in rheumatic fever, and shows that among 319 cases treated by him by salicylic acid, only 2 left the hospital with chronic heart disease due to the attack of fever for which the patient had been treated. Those cases which are treated outside without sufficient salicylic acid, and which when admitted prove refractory toward the influence of the drug, usually do well when treated by injections of quinine and antipyrin, or by intravenous injections of collargol. Finally he compares his results with those of Hauffe, who deals with his

patients by means of so-called physical therapy, and shows conclusively that his results are considerably better.

PATHOLOGY.

233. Pathology of Gastric Digestion.

O. COHNHEIM and G. L. DREYFUS (*Muench. med. Woch.*, December 1st, 1908) state that the watching of the digestive process through a high duodenal fistula is the only means of ascertaining all the details of the secretion and motility of gastric digestion. This method was first described by Cohnheim and Tobler. The present paper deals with observations and experiments on dogs, on which the high duodenal fistula was performed, and also dogs in which two fistulae were made in the duodenum, so that the gastric contents and the pancreatic juice could be collected separately. In other dogs a gastric fistula was made, while in another the oesophagus was divided in the neck. The dogs were fed by trial breakfasts and trial meals. In the first place they determined that the trial breakfast called forth the secretion of about 16 grams of saliva. The trial meal on the other hand, produced only from 6 to 7 grams. The former consisted of 400 grams of water or tea, and 50 grams of bread, well divided. Three minutes after taking food the pancreatic secretion and the flow of bile began; one minute later the stomach began to empty itself of its contents, which at first was almost clear fluid, and after became more and more acid. After from thirty-five to forty minutes the first traces of bread were seen. Taking the average of the experiments, it was found that the trial breakfast produced from 145 to 155 grams of gastric secretion, and more than 250 grams of pancreatic secretion and bile. The quantities did not vary materially. The trial breakfast consisted of from 250 to 350 grams of gruel, a beefsteak weighing from 110 to 150 grams, and from 250 to 300 grams of potato mash; 6 to 7 grams of saliva were secreted in response to it, while the quantity of gastric secretion was from 700 to 800 grams and of pancreatic secretion and bile was over 500 grams. The gastric contents were first thin and watery, and later became more acid and thicker. In injecting varying quantities of the gastric contents into the duodenum they found that proportional amounts of secretion and of albumen digested were to be measured. Quite small amounts were registered when no gastric content was passed on into the duodenum, more was found when small portions were passed, and much more when the full quantity was passed on. This is of importance in estimating the pyloric reflex. In order to compare the gastric digestion in the dog with that in man, they determined the acidity of the contents from time to time in the dog. They found that the total acidity was from 52 to 70 and the free HCl from 20 to 30, so that the values corresponded to those met with in man. This was when the trial breakfast was given. The conditions were more complicated when the meal was given. After discussing certain peculiar differences between the acidity of the material collected from the duodenal fistula from that collected through the gastric fistula, they record that the total acidity during the trial meal in dogs corresponds to that of the reclaimed meal in man. Considerable differences, however, were recorded in the free HCl. This was shown to be due to the larger quantity of pepsin which the canine gastric secretion contains as compared with human secretion. Having determined the physiological conditions, and having satisfied themselves that the values obtained by means of the stomach tube after trial meals are approximately correct, they proceeded to initiate pathological conditions. The ingestion of 5 per cent. ammonia produced a temporary gastric catarrh, but did not alter the digestion, nor the acidity, nor the motility. The injection of 4 per cent. NaCl or MgSO₄ solutions downwards into the duodenum produced diarrhoea and general disturbance. By carefully regulating the quantity injected they were able to produce nausea, diarrhoea, and general illness without vomiting, which terminated in recovery. This produced a distinct delay in digestion—a disturbance of motility. The sodium chloride produced hyperacidity and smaller quantities of secretion, while the magnesium sulphate produced the reverse—hyperacidity and increase in the total quantity. They lay great weight on the fact that an artificial disturbance of the duodenum is capable of altering the gastric digestion very considerably. They make the suggestion that in human patients a disturbed gastric digestion may possibly be due to a pathological condition of the bowel and not of the stomach.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

234. *de cur.* Anuria in the Newborn.

BAKKE (*Tidsskrift for den Norske Lægeforening*, No. 5, 1909) was called to see a female infant, 3 days old, who had had anuria since birth, and was then suffering from convulsions. The child was well developed and well nourished, and nothing abnormal could be detected on examination, such as swelling or tenderness in the renal or bladder region, or atresia of the urethra. A metal catheter was introduced into the bladder, but no urine came away. Thinking that some serious congenital defect was present, a grave prognosis was given to the parents and permission obtained for an eventual autopsy. To the great astonishment of the writer, he was told some days later that the child was living and quite well. It had become steadily worse until the fourth day, when it suddenly began to urinate and to improve rapidly. The only treatment carried out had been baths and administration of ether. The only suggestion the writer can give is the possibly delayed development of the kidney structure. With reference to this case, Jervell, in No. 6 of the same journal, points out that Casper reported a somewhat similar case in *Verhandl. der deutschen Gesellschaft für Urologia I Kongress in Wien*, 2-5 Oct., 1907. This occurred in a boy, 2 days old, who had not urinated since birth. To be able to pass the catheter into the bladder he had first to split open a phimosis and a very narrow external opening of the urethra. Casper therefore regards his case as a pure reflex anuria, thinking that the reflex action on the kidneys was caused by the deformities present. Adenot, in *Lyon Médicale*, 1905, reports 2 cases of anuria in infants, but the first of these cases appears to be a case of simple retention. The second occurred in a boy 36 hours old. By means of an india-rubber catheter 40 c.cm. of an opaque, thickened urine was withdrawn. On analysis it was found to be strongly acid, and gave on filtration a copious reddish-yellow deposit of acid urate of soda. There was a trace of sugar, but no albumen or biliary pigments. Some mucus undergoing dissolution was also present. The author points out that the presence of a trace of sugar and an excess of acid urate is normal in the urines of the newly-born, but the concentration found in this case was altogether excessive, and can only be explained by an anuria. The sequel in this case was also a simple one; after the first catheterization micturition was normally established, and the infant prospered.

235. Pathological Anatomy of Haemolytic Icterus.

VAQUEZ and AUBERTIN (*Arch. des Mal. du Cœur des Vaisseaux et du Sang*, November, 1908) report the case of a woman of 34, who was admitted to hospital complaining of weakness and loss of strength. She had been jaundiced from the 15th year of age. On admission she was emaciated and markedly icteric. Her urine was scanty and dark-coloured, but did not react to Gmelin or Hay's tests. The stools were not decolorized. The blood serum contained bilirubin, but not bile salts. The spleen was about four fingerbreadths below the costal border. The liver, heart, and lungs were normal. The blood contained about 2,000,000 red cells, the leucocytes varied between 8,700 and 10,200, the differential count being practically normal. The size of the red cells was below the normal. At the *post-mortem* examination the spleen weighed 850 grams, was rather firm, but not sclerotic. On section it was of a blood-red colour, remarkably homogeneous in appearance, and the Malpighian bodies could not be seen. The liver weighed 1,450 grams, and was normal in appearance; the bile passages were healthy, as were also the digestive tube, pancreas, heart, lungs, kidneys, and suprarenals. Histological examination of the spleen showed enormous congestion of the splenic pulp. The Malpighian bodies were normal in appearance, with the exception that the central arteries showed here and there thickenings of their walls. There was no sclerosis. The engorged splenic pulp was found traversed here and there by large and enormously dilated sinuses filled with blood cells. The essential fact appeared to be that the congestion was more marked in Billroth's cords than in the sinuses themselves. The former were enormously dilated and engorged with red cells and were traversed by fine connective tissue strands. The macrophages did not appear to be very

active and contained only a small amount of iron pigment. In the sinuses the macrophages were much more active, the cells being swollen and vesiculated and engorged with iron pigment and, in some places, with nuclear debris. Around these cells were seen masses of cell debris. In the greatly-dilated sinuses were to be seen mononuclear cells filled with pigment and the macrophages here were also filled with pigment. A mesenteric gland which was examined was found to be very congested. The medulla of a rib was in a very active condition, showing large numbers of nucleated cells undergoing karyokinetic changes. In the liver there was found an enormous amount of iron pigment in the hepatic cells. This pigment was in the form of large granules. The cells of the peripheral zone were more affected than the others. The larger number of the hepatic cells were of irregular shape, atrophied, and isolated from one another. Fatty changes were not marked. The kidneys showed iron pigment in some of the cells of the convoluted tubes. In the suprarenal capsules it was noted that the pigment in the reticular portion was not very abundant. As the authors point out, these facts indicate rather a blood disease than a liver affection and the anatomical changes found coincide with the changes found in a case described by Oettinger, Bouvoisin, and Flessinger. In the case of the authors a portion of the splenic pulp was injected intraperitoneally into guinea-pigs, with a result that an almost immediate red cell destruction and leucocytosis occurred, followed by a relatively slow blood reparation; and on examining the organs of the guinea-pig after death there was found an enormous splenic siderosis, without liver siderosis, together with a hyperplasia of the bone marrow. These facts clearly show, as the authors point out, that the splenic pulp has a haemolytic action, but there is no evidence to show that in these cases the spleen had any special haemolytic action. In conclusion, the authors consider that the sequence of events in their case may be considered as follows: A primary change in the blood, changes in the spleen and liver being secondary, and the change in the bone marrow being of a reactionary nature.

236. Acute Dilatation of the Stomach.

R. C. KEMP of New York, in a reprint from the *American Journal of Surgery*, November-December, 1908, discusses the anatomical and clinical types of acute dilatation of the stomach from the point of view of symptoms, prophylaxis, and treatment. In order to discover the effects of acute dilatation of the stomach upon the heart and respiration, two experiments upon dogs were conducted, artificial dilatation being produced, and the respiratory and blood-pressure changes noted. In these physiological experiments, however, the conditions are artificial and altered by the anaesthesia, and they are instructive rather from their negative than from any positive deductions. Four anatomical types exist—namely, acute dilatation of the stomach alone; acute dilatation, supervening upon a pre-existing chronic dilatation; acute dilatation of the stomach and duodenum, which is the most fatal form; and a mixed type of acute dilatation of the stomach with the intestines (tympanties). In this latter, frequently met with in the acute infections, a fact that is frequently lost sight of is that the tympanties is due to this mixed condition, and treatment directed to the intestine alone may be without result, whereas the acute distension of typhoid with active haemorrhage, for instance, may be relieved by lavage. Seeing that such tympanties is due to a systemic infection or to dietetic errors, it seems absurd to imagine a selective action for the intestines alone. Prophylactic measures consist in rapidly in operating with a minimum amount of anaesthetic and of manipulation of the viscera, and care in feeding after operation, so that food is not given too frequently or in too large quantities, and, in the acute infectious diseases, typhoid fever, and pneumonia, the substitution of broths, strained soups of barley, rice, and gruel, etc., for the usual milk diet. The stomach should be immediately evacuated by lavage, as the pressure from its distension is a source of actual danger. Lavage should be carried out at regular intervals several times during the twenty-four hours, as the stomach tends to redden in many cases, and no food or drink should be given by the mouth. Rectal feeding must be continued for several days, and

thirst relieved by saline enemata, or even hypodermoclysis. Unless other symptoms contraindicate it, after washing out the stomach with plain water in which 2 oz. of milk of magnesia has been dissolved. 3 to 5 gr. of calomel in $\frac{1}{2}$ oz. of water may be inserted into the stomach before the tube is withdrawn. Of drugs, tincture of belladonna, 5 to 10 drops on the tongue, with strychnine hypodermically every four or six hours, may be given. Only second in importance in treatment is posture, the patient lying in an inclined plane with the head of the bed raised on blocks, and by this method in one case of typhoid the tympanic area in the thorax became lowered 4 in. In the acute gastro duodenal type the prone position should be adopted.

SURGERY.

237. The Intra-Abdominal Administration of Oxygen.

BAINBRIDGE (*Ann. of Surg.*, March, 1909) publishes the results he has obtained from experiment on animals, and also from clinical research, in regard to the utility of infusion of oxygen into the abdominal cavity in the following morbid conditions: (a) Tuberculous peritonitis with ascites; (b) after the removal of any kind of ascitic fluid; (c) in the final stage of a severe laparotomy, the object of the infusion in such a case being to control shock, haemorrhage, cyanosis, and vomiting. The author has made certain deductions from his laboratory experiments, some of which, however, he acknowledges are not in accord with those reached by other workers. Oxygen, he believes, is completely absorbed in the abdominal cavity. Its stimulating action on both the heart and the lungs is slight, and it has but little effect upon blood pressure: without being an irritant to the peritoneum or abdominal viscera, it stimulates, it is held, intestinal peristalsis. It has been shown by experiment, also, the author states, that abdominal infusion of the gas tends to bring round an animal quickly from deep anaesthesia. In a review of an extensive clinical trial of intra-abdominal infusion of the gas, the author states that though final deductions concerning the practical value have yet to be made, the experience he has already gained warrants some tentative conclusions. It may, he believes, be safely stated the intra-abdominal administration of the gas has a distinct field of usefulness in lessening shock, haemorrhage, and vomiting; in overcoming negative intra-abdominal pressure after the removal of large tumours, in preventing the formation of adhesions, and also after such have been broken down, of lessening the liability of their return, and in influencing favourably certain types of tuberculous peritonitis. In three cases of septic peritonitis in which the gas was introduced into the peritoneal cavity, promising results were obtained. In his description of the method of administration the author states that he uses the so-called pure gas warmed to a temperature of from 90° F. to 100° F. This is accomplished by passing it through a rubber tube from the tank in which it is compressed into a wash-bottle filled with hot water. From this bottle the partially warmed gas passes through a long exit tube coiled in a basin of hot water. This tube is connected with a piece of glass tubing, to which in turn is attached a piece of sterile rubber tubing, through which the gas is introduced into the abdominal cavity. In closing the wound in the abdominal wall an opening is left either at its upper or at the lower end for the introduction of the tube, which is secured by a purse-string suture in the peritoneum. The amount of oxygen to be administered depends upon the exigencies of the case. In instances of abnormal distension from ascites or tumour the girth of the abdomen should, it is suggested, be measured before the operation, and after removal of the fluid or the large growth, the cavity should be distended to about the same degree, but not beyond this, by the injection of the gas. When there is no abdominal distension, a crude yet practical test may be found by first determining that the liver is not adherent to the chest wall, and is of approximately normal size, and then administering enough gas to obliterate the hepatic dullness. The author is very guarded in his conclusions on the value of intra-abdominal infusion of gas in clinical work, the most definite report being that in some cases the condition of the patient at the time of operation was so bad, or the shock from the operation was so great, that the result without some such support as oxygen seemed to give would have been questionable.

238.

Ischaemic Contracture.

DERNIER (*Rev. d'Orthop.*, March 1st, 1909) discusses those cases of deformity (usually in the forearm) resulting from pressure in the course of treatment of fracture. He first deals with the pathology of the subject and shows that the ischaemia leads to coagulation of the myosin in the muscles, to destruction of a certain number of muscular fibres followed by retraction, added to this there are certain phenomena due to changes in the nerves. To prevent these unhappy accidents great care should be exercised in the treatment so as to be on the look-out for signs of undue pressure. If any such signs appear it is good after the apparatus has been removed to elevate the limb for some time, use massage and quick active and passive movements. Curative treatment may be operative or non-operative, in the slighter cases non-operative treatment (elevation, massage, hot air, etc.) continued for many months may do good, but in bad cases operative treatment is usually necessary. Thiosinamin injections have been tried, but without much success—forcible straightening under anaesthesia seems on the whole to do more harm than good. The two chief operative procedures are tenoplasty and resection of part of the diaphysis, in the one case the tendons are lengthened, in the other the bone shortened. The author's preference is for tenoplasty, but the figures are not conclusive either way (resection gave a good result 9 times out of 11—tenoplasty, 13 out of 15). The time taken over each operation is pretty nearly the same. Resection has been followed by pseudarthrosis. As to the time for operation the author does not advise waiting too long, he operates if some weeks of massage, etc., have given no result. In operating he prefers not to use the Esmarch bandage: the haemorrhage can easily be controlled. Post-operative treatment (massage, passive and active movements, hot baths, electricity) is essential and as soon as the operation wounds are healed all apparatus should be discarded. If there is reason to suppose the nerves are injured or involved in scar tissue, these can be attended to at the operation. The author gives brief details of 97 cases reported from various sources.

239.

Aneurysms of the Hepatic Artery.

VILLANDRE (*Arch. Gén. de Chir.*, Nos. 1 and 2, 1909) gives a lengthy review of the pathology and clinical characters of aneurysm of the hepatic artery, and discusses the prognosis of surgical intervention in the treatment of this obscure and grave lesion. Aneurysm of the hepatic artery, the author points out, is a very rare affection, the cause of which is an acute arteritis of infective origin, and a sequel in most instances of pneumonia or enteric fever. It develops in the form of a tumour, the size of which is of less import than its tendency to invade and disintegrate the structures with which it is in contact, particularly the biliary passages. The sac usually ruptures into the excretory ducts, this phase being indicated by the symptoms of pain, frequently repeated haemorrhage into the digestive canal, and jaundice from retention. Rupture of the aneurysm into the peritoneal cavity is also a frequent termination of the affection. If left to take its course, hepatic aneurysm will inevitably cause death by more or less rapidly developed anaemia, and by hepatic insufficiency due to chronic jaundice. In considering the prospects of surgical intervention in cases of this kind the author acknowledges that from a physiological point of view ligation of the hepatic artery would seem to be impossible. Two cases, however, have been recorded—one by Tuffier, the other by Kehr—which, together with a pathological record by Ledieu, show that the hepatic artery may be ligatured or obliterated without causing total hepatic necrosis and consequent death. Such necrosis, it is pointed out, can be prevented only in those cases in which the artery has been gradually obliterated in the course of the development of the aneurysm, and the supply of blood has been maintained by a collateral circulation through the branches of the inferior phrenic and the gastric coeliac arteries. In the case treated by Kehr by combined cholecystectomy and ligation of the hepatic artery, the patient made a complete recovery.

OBSTETRICS.

240.

Laceration of Cord in Labour.

THREE cases of this condition have recently been reported. Lequeux (*Ann. de Gyn. et d'Obstét.*, March, 1909), at a meeting of the Société d'Obstétrique de Paris, read notes of the labour of a multipara. The ovum was expelled at term intact, and just before its complete extrusion from the genital canal the amnion was ruptured artificially and

the child extracted. It weighed $6\frac{1}{2}$ lb., and cried directly it was born. The cord was partially lacerated close to its placental attachment, one artery being torn through. The length of the cord is not stated. In this instance there was skilled help at hand, but Lequeux states that had the mother been delivered outside a hospital, and before medical aid could be obtained, the child would probably have died asphyxiated in its membranes or else have bled to death. The medico-legal point of interest was the fact that the cord was torn, the laceration involving a vessel by the natural expulsive forces alone. F. Unterberger (*Zentralbl. f. Gyn.*, No. 14, 1909) records two cases under his observation in the Rostock University Lying-in Hospital. The first patient was 27 years old and in her second labour; the previous labour had ended at term spontaneously. On this occasion pains set in at the end of the eighth month, and the fetal head presented in the second position. The pains were very strong, and the head was delivered five hours and forty minutes from the beginning of labour: it was then noticed that the cord was twisted twice round the fetal neck. Almost immediately another strong pain occurred, forcing out the shoulder and the whole body and tearing completely through the cord 83 in. from the fetal umbilicus. The torn ends were immediately ligatured. The placenta, which showed signs of calcification and held one infarct, followed eight minutes later. There was but little haemorrhage, and the perineum was not lacerated. The child was over 20 in. in length and weighed nearly 8 lb. The cord was 18 in. long, and held much Whartonian jelly. The second case occurred a few months later. The patient was a primipara aged 19, short and thin. Pains set in at the end of the eighth month, and were very strong; ten hours later the membranes ruptured spontaneously; the head presented in the first position. Forty minutes later the head was delivered, the cord was seen to be twisted once, very tightly, round the neck, and an attempt to disengage it failed. During the attempt a strong pain occurred, expelling the shoulders, and the tensely-stretched cord tore through completely within 4 in. of the umbilicus. The process was visible to the eye of the obstetrician, who, as in the first case, secured both ends of the cord at once. But little blood was lost before and after the expulsion of the placenta. The cord was 19 in. in length, poor in gelatinous tissue, and with much less marked spiral rotation than in a normal cord. The child, a female, was 20½ in. in length, and weighed $7\frac{1}{2}$ lb.; as in the first case it lived. The tissues of both cords were found to be sound, and the laceration was clearly due to their shortness and the strength of the uterine contractions. These cases prove that spontaneous laceration of a healthy cord may occur during a normal labour.

GYNAECOLOGY.

241. Broad Ligament Varicocele.

CAMUSSET (*Thèse de Lyon*, 1908-9) has collected seven undoubtedly authentic cases of this condition, which should be termed tubo-ovarian varicocele. It was once believed to be more frequent than further research has verified, haemorrhage from ruptured varices being far rarer than bleeding due to tubal gestation. The signs of tubo-ovarian varicocele are never well defined. There may be sharp lancinating pains, or obstinate menorrhagia, or habitual abortion independent of any evidence of syphilis or traumatism. The most positive symptom, the presence of a soft compressible swelling in the region of the appendages, is rarely present or, rather, is easily overlooked, yet Budin laid stress on it. Diagnosis is seldom if ever accurate. The causes of varix are not clear, most likely the anatomical course of the ovarian veins and changes in their walls favour its development. Camusset advocates a conservative operation, direct ligation of the dilated veins in young women, especially nulliparae. Each vein should be carefully tied, and when all are secured the varicose mass may be removed. In old subjects, in multiparae, and in all subjects where the uterus and appendages are also the seat of other diseases, radical operative treatment is indicated. Medication is of no avail.

242. Intestinal Obstruction from Necrosis of Fibroid in Pregnancy.

SPIERANSKY-BACHMETEFF (*Zentralbl. f. Gynäk.*, No. 16, 1909) attended a patient who was attacked with very definite symptoms of intestinal obstruction late in her first pregnancy. There was a pedunculated fibroid attached to the left cornu; it was observed to grow steadily during the pregnancy. The obstruction seemed to be situated in the left iliac region close to the growth. At length tympanites

developed; enemata proved of no avail, and the patient suffered badly from vomiting. Professor Ott made use of the endoscope, and located the obstruction at the junction of the descending colon with the sigmoid flexure. Pains had set in and labour was induced, but the obstruction was not relieved. Ott operated. The transverse colon was found greatly distended and hyperaemic; on raising it the pedunculated fibroid was exposed. It was intimately adherent to the great omentum, which was detached and carefully resected. Then the fibroid was found to be strongly adherent to the large intestine at the point already defined by Ott. In separating the gut its serous coat was damaged, exposing the muscularis; the raw surface was closed with fine sutures. The pedicle of the fibroid, which was short and thick, was excised at its insertion into the fundus. The vermiform appendix, being inflamed and adherent to surrounding structures, was excised. The patient made a good recovery. The tumour showed hyaline degeneration, and the necrotic process so often described by recent observers. Its surface had become inflamed and adherent to the bowel, on which it dragged more and more as the uterus enlarged, and rose upwards during the progress of gestation.

THERAPEUTICS.

243. Treatment of Stricture of the Urethra.

IN discussing the treatment of severe forms of urethral stricture, J. Cohn agrees with Henry Thompson that dilatation remains the proper procedure (*Berl. klin. Woch.*, January 25th, 1909). Even when several strictures are present in one urethra, dilatation may lead to a clinical cure, and the patient will be able to pass his urine without difficulty, and all inflammatory infiltrations will be removed. From a practical point of view the surgeon has to determine what instrument he should use for the dilatation, how long the instrument should be left *in situ*, and how often it should be passed. He described cases in which ordinary dilatation was not possible, which show how difficult cases may be dealt with. In one case the patient, who had suffered from gonorrhoea for the first time twelve years previously, and for the last time six years previously, noticed that his micturition was becoming difficult for about two years. The stream was small, and considerable pressure had to be employed. On passing a sound a dense stricture was felt some 10 cm. from the orifice. A No. 11 (Continental) bougie passed through. As the patient had a dislike to catheterization, Cohn injected a 15 per cent. solution of thiosinamin in alcohol subcutaneously every two days. A sound was passed every fortnight, but no improvement was seen. He therefore gave up the thiosinamin after twenty-five injections, and proceeded to dilate with soft bougies. No. 22 having been passed, he reverted to metal instruments, until No. 26 passed easily. Urotropin and silver nitrate sufficed to clear up the turbidity of the urine, and the patient was then able to pass his urine in full stream without difficulty. The second patient had had gonorrhoea first ten years before, and for the last time four years previously. When admitted there was retention of urine. A Nélaton No. 20 could not be passed. With some difficulty he passed a silk web catheter, and emptied the bladder. (The sizes given are the Continental numbers—No. 20 is between the English 11 and 12.) Cohn then tried the effect of fibrolysin injections but without appreciable effect. After a time he succeeded in passing a No. 15 bougie, and by gradual dilatation he was able to pass a No. 24, both in soft bougie and as a metal sound. Several authors have reported favourably on the injections of thiosinamin and fibrolysin, but he has never seen any good follow the injections. The next case was one of a stricture of the pars cavernosa. Bougie No. 12 could not be passed, while No. 10 passed readily. He then dilated up to No. 18, but after this not only could he not get a larger instrument to pass, but he found that even No. 14 would not go through the stricture. Ten grams of a 1 in 1,000 adrenalin solution were therefore injected into the urethra and allowed to act for some minutes. On trying again he had no difficulty in passing No. 19. The patient was dilated up to No. 26 (that is, English 15), and discharged with a normal urine stream. The fourth case was more complicated. The patient complained of difficulty in passing urine. On pressing heavily, a few drops of turbid urine were passed. A bladder sound passed smoothly as far as the bulbous, but could not be induced to pass beyond. Even a filiform catheter would not pass. Some lukewarm oil was injected, and a filiform bougie was then passed. Two days later the same process was repeated, but larger instruments could not be passed. As the patient was able to pass urine better he did not

present himself for two months. After the lapse of this time he came to hospital with complete retention. Not even a filiform bougie could be passed. Ten grams of a 1 in 5,000 solution of adrenalin solution was injected into the urethra, and a filiform bougie was then passed. This bougie had a screw thread at its end to which a catheter could be attached. The bougie was left *in situ* for twenty-four hours, during which time urine passed at the side of the instrument. Metal sounds were then screwed to the bougie, commencing with No. 14 (that is, somewhat larger than No. 7 English), and pushed into the bladder. After No. 18 (that is, No. 10 English) had been passed, both sound and filiform bougie were withdrawn and a silk web catheter was passed. This was left in the urethra for twenty-four hours, during which time the bladder was washed out with silver nitrate solution and boric acid solution. On removing the catheter a larger instrument was passed, until No. 23 was passed readily. The patient could pass urine without difficulty when he left the hospital. In a fifth case, he passed five filiform bougies as far as the stricture, and then tried to get one of them through the stricture. At length one could be directed through into the bladder, and the after-treatment was similar to the fourth case. After discussing several points in connexion with these cases, he turns his attention to cases in which no instrument can be passed at all. Under these conditions, external urethrotomy should be performed. When a stricture cannot be gradually dilated, or when for private reasons of the patient this course is refused, internal urethrotomy must be applied. He prefers Le Fort's method.

244. Injections of Extract of Tuberculous Glands in Tuberculosis.

LIVIERATO (*Rif. Med.*, March 15th, 1909) has carried out a series of experiments on guinea-pigs with a view to determine what influence injections of extract of tuberculous glands has on the evolution of experimental tuberculosis in animals of the same class. In Group A he inoculated the animal with tuberculosis, and then treated with tuberculous gland extract; in Group B he began by treating with gland extract, and some days later inoculated with tubercle; Group C were used as control animals. The animals in Group C all died within a month of infection, Group A within two and a half months, and Group B within three months. The animals of Groups A and B presented few tuberculous lesions (in some cases no naked-eye lesion), especially when compared with Group C, which died showing typical tuberculous lesions. The animals were inoculated by a single injection of 1 c.cm. of the emulsion in 10 c.cm. of a sterile physiological solution of a young (20 to 22 days) culture of living and virulent bacilli on potatoes. Control experiments with extract of normal lymphatic glands gave no protection against tubercle. The author does not feel warranted in drawing any definite clinical application from his experiments on animals at present, but proposes to continue his researches in his direction. The experiments do, however, suggest that scrofulosis—that is, an attenuated tuberculous gland infection—may, in a certain sense, act as a protective vaccine against the development of tuberculosis.

245. Lumbar Anaesthesia.

W. TOMASZEWSKI (*Deut. med. Woch.*, December 19th, 1908) records the results which he has obtained with lumbar anaesthesia in the Military Medical Academy of St. Petersburg. In all, 104 patients were subjected to the procedure, of whom 87 were males and 17 females; 120 operations were performed on these persons under its means. During the period of from October, 1905, to December, 1907, 60 per cent. of all operations on the lower half of the body were conducted in this way. Lumbar anaesthesia was not applied in cases of definite spinal cord disease, when marked nervousness or hysteria was present, in operations for which no plan could be made beforehand and which were expected to last a long time, to entail great difficulty and possibly create an unfavourable impression on the mind of the patient if awake, for operations which necessitated much raising of the pelvis and for operations deep down in the peritoneum. The ages of the patients varied between 14 and 65 years. In 6 cases—that is, 5 per cent.—no anaesthesia was induced; in 6 further cases the anaesthesia was incomplete. No unpleasant or threatening symptoms were met with. In one case, in a small patient in whom 0.1 gram of tropacocaine was injected, the anaesthesia reached up to the line of the nipples. Two hours after the operation the patient complained of feeling of oppression, and there was pallor and cyanosis of the face and lips. This passed off after twelve minutes. The dose was obviously too high. In

another case, a large quantity of cerebro-spinal fluid was accidentally allowed to drain away, and a severe headache lasting three days followed. Headache of short duration and some retching was seen in a few cases. The average duration of the anaesthesia was seventy-one minutes, while the average duration of the operation was forty-four minutes. In 15 per cent. of the patients, affections of the vascular system or lungs were present, but in no case were these affections rendered worse in any way. He used tropacocaine exclusively, and injected from 0.05 to 0.09 gram into the lumbar canal at first by means of Bier's syringe and later by means of a syringe designed by himself. The drug was dissolved in the cerebro-spinal fluid. Scrupulous asepsis is required not only with regard to the skin, instruments, etc., but also with regard to the tropacocaine itself. In 40 per cent. of his patients no changes were found in the urine, while in 60 per cent. traces of albumen, detectable by means of Spiegel's reagent, were met with. The albuminuria cleared off in from one to three days. Severe nephritic changes are, according to the author, extremely rare. In this respect, tropacocaine applied by lumbar injection is preferable to chloroform inhalation. He regards tropacocaine as the safest and best lumbar anaesthetic.

PATHOLOGY.

246. The Serum Diagnosis of Syphilis.

HIDEYO NAGUCHI (*Journ. of Exper. Med.*, March, 1909) has devised a simplified method for the serum diagnosis of syphilis. It is based upon the same principle as Wassermann's, and utilizes the Bordet-Gengou phenomenon of complement fixation to determine the presence of the syphilis antibody in a given specimen of blood serum or cerebro-spinal fluid; but it differs from the Wassermann method in using an antihuman haemolytic system instead of an antishape haemolytic system. The following reagents are required for making a test by the author's method. (1) *Antihuman haemolytic amboceptor*, prepared in rabbits by injecting them five or six times into the peritoneal cavity with increasing doses (up to 20 c.cm.) of washed human blood corpuscles, allowing five days' interval between each injection. The serum is collected from the immunized animal eight or nine days after the last injection. (2) *Complement*.—Fresh guinea-pig serum. (3) *Antigen*.—Alcoholic extract of organs or crude preparations of lecitin. (4) *Suspension of human blood corpuscles*, prepared by mixing one drop of the blood of a normal person with 4 c.cm. of physiological salt solution. (5) *The serum to be tested*. About 10 drops of blood from a patient are collected in a small test tube, and the clear serum obtained is employed for the test. The author has found that further modifications may be introduced into this method for the purpose of simplifying its use in the clinical laboratory. These modifications consist essentially in drying the reagents on paper and standardizing them. The antihuman haemolytic amboceptor, the guinea-pig complement, and the antigen, when dried and standardized on filter papers, can be kept indefinitely at room temperature in a dry place. In employing the filter paper slips, they are dropped by means of forceps into the test tubes already containing the human-blood suspension and patient's serum. It is necessary to shake the tubes a few times at intervals in order to ensure proper solution of the reagents. The incubation may be carried out perfectly well in the test pocket if a thermostat is not at hand. Naguchi has examined 465 samples of serum by his new method, and has at the same time examined 115 of these by the original method of Wassermann. This comparison gave the following results: Of 7 cases of primary syphilis the Wassermann test was positive in 5, the new test in all. Of 27 cases of manifest secondary syphilis the Wassermann test was positive in 23, the new one in all 27. Of 12 cases of latent secondary syphilis the Wassermann test was positive in 6, the new one in 9. In 18 cases of manifest tertiary syphilis the two methods agreed; and were positive in 17. Of 18 cases of latent tertiary syphilis the Wassermann test was positive in 11, the new one in 14. Out of 11 cases of testes dorsalis only 3 were positive to the Wassermann test, but all were positive to the new test. Out of 28 cases suspected of syphilis or of syphilitic origin the Wassermann test gave positive results in 16, the new method in 21. The causes of the observed differences, in certain cases, between the results of the two tests were found to be the existence of a large amount of natural amboceptor for sheep's blood corpuscles in those particular specimens of human serum.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

247. The Heart during Early Convalescence from Acute Infectious Disease.

BEVERLEY ROBINSON (*Amer. Journ. Med. Sci.*, December, 1908) points out that in such diseases as enteric, diphtheria, influenza, pneumonia, and scarlet fever, the heart muscle and the nerves governing heart action are usually organically affected if the disease be at all severe or last its usual period. Cloudy change and fatty degeneration, both of heart muscle, and nerve fibre, may be found; numerous lymphoid cells may be present in the interstices of the cardiac muscle fibres; the muscle fibres may be granular or fatty, and striation obscured. The cardiac muscle degeneration may be general or localized. Sometimes at a late period of the disease the heart muscle may be found hyaline or even fibrous. Fatty infiltration of the cardiac nerves and cloudiness of nerve sheath and irregularity of axis cylinders are not uncommon at autopsies. The heart is flaccid, the walls thin; occasionally there may be hypertrophic dilatation. The muscle is easily torn, and of a yellow or reddish-brown colour. Endocarditis and pericarditis are rare. Thrombi may be found, especially in the right heart. In some cases there is dilatation of the cardiac chambers, but no lesion of the cardiac muscle can be found, nor indeed any organic cardiac lesion. The author points out that it is fair to assume that during life, in minor degrees at least, similar pathological conditions exist even after the acute stages of the disease are passed and the patient has entered the period of convalescence. When, therefore, is it safe to allow such a patient to sit up, get up, take exercise, etc.? In typhoid fever the author believes that as a rule it is unwise for the patient even to sit up in bed until a week or ten days have elapsed since the temperature became normal. He should not leave his bed until he has sat up in bed several times at least, and this without the heart's action or the pulse-rate being much increased in rapidity. If sitting up in bed causes rapid action, irregularity, or intermittency of the heart, great caution should be observed, and if, in addition, there is a soft blowing mitral murmur, with perhaps an accented pulmonary second sound, or if the first sound lack tone, the patient is safer on his back than even sitting up in bed. If blood pressure estimations show a more than moderate difference between pressures whilst the patient is lying flat on his back and when he is sitting upright in or out of bed, we should absolutely forbid any physical or mental exertion. If the patient's temperature be subnormal, he should not be allowed out of bed. If the urine, which was previously normal, becomes lessened in quantity and its specific gravity becomes very low, the author objects to his patient getting out of bed. If, instead of increased rapidity of pulse-rate, the pulse becomes markedly slowed, one should be on the look-out for attacks of sudden heart failure. The author points out that, in convalescence from acute disease, such as typhoid, the possibility of fainting attacks or of cardiac dilatation occurring may exist for weeks, months, or years, and such cases must be watched with the greatest care and patience—time, with proper hygienic conditions of pure air, pure food, proper rest, recreation, and many hours of sleep in the twenty-four, will bring the patient out as well as ever. Of drugs, the most suitable are straphanthus, by the mouth or hypodermically, followed immediately by brandy, whisky, or ammonia. Subsequently strychnine, coca, or digitalis may be employed. In the later convalescent period of certain cases of influenza and typhoid fever the author thinks the Naheim method of treatment is often of great value. In instances of sudden heart failure occurring during the early convalescence of acute infectious disease, suprarenalin or adrenalin by mouth in $\frac{1}{2}$ grain dose, or preferably hypodermically in solution 1 in 1,000, is very useful. The author insists most emphatically on the necessity of securing complete physical and mental rest to these patients, which may need to be continued for many weeks. In scarlet fever the nephritis of the third or fourth week throws a strain on the already weakened heart, and dilatation is occasioned. If during the scarlatinal nephritis marked rheumatic manifestations are added, we should guard against endocarditis or pericarditis by employing the icebag or hot water bag to the precordial region, and give salicin internally. In croupous

pneumonia we should guard our patients against blood clotting by administering citric acid or ammonium carbonate. For the poison of influenza the author thinks quinine or compound tincture of cinchona valuable. As the author points out, the prognosis of a given case during the early convalescent period must depend upon the previous health of the patient, and especially upon the previous condition of his heart. If the patient be young, and hitherto well, the prognosis is usually fairly good, even although the infectious disease has been of a severe type. In patients near or past middle life we should be more anxious, especially after pneumonia or influenza, as there may have been pre-existing myocarditis or valvular disease, which may have been present, together with a myocarditis.

248. Tuberculosis in Children.

FLOYD AND BOWDITCH (*Archives of Pediatrics*, March, 1909) give the results of a systematic examination of 1,000 families in which tuberculosis had shown itself. This investigation was subsequent to the notification of the disease which has been in operation in Boston for four years, and thus incipient cases were discovered. In their experience the death-rate decreased as the age of the children increased. Predisposition was hereditary. Tuberculosis developed when children were living under defective hygiene; measles, whooping-cough, and influenza predisposed; and intimacy of the children with infected persons was a frequent cause of the disease spreading—39 per cent. of the children thus exposed to infection showed definite signs of pulmonary consolidation; 50 per cent. of the infected children had enlarged tonsils, but only 14.5 per cent. had adenoids. Of the 679 children infected, only 11 had glandular tuberculosis, and only 5 had bone infection; these cases, often known as the surgical type of the disease, must be of bovine origin, whereas the cases studied were those of human origin. In all but two cases the disease appeared as the adult type or chronic phthisis, and the two only was it general military in character. The first signs of the disease were languor, pallor, loss of strength and appetite; night sweats frequent, rapid loss of weight, cough constant, but haemoptysis uncommon. Slight evening pyrexia was most significant. The disease was frequently associated with asthma. The authors consider that the use of tuberculin subcutaneously is the most accurate diagnostic means we have: it not only reveals the presence of tuberculosis, but also often indicates where the process is located. With the cutaneous reaction there were rarely constitutional symptoms and no dangers: it is generally reliable. The ophthalmic reaction was sometimes useful, but 3 cases of phlyctenular conjunctivitis occurred and so the tuberculin test was generally preferred. In 14 cases the cutaneous reaction was negative and the ophthalmic positive. Of 73 children with no signs 30 gave a positive reaction to tuberculin; in 174 suspected cases, 112 gave positive reaction. The authors found the x-rays useful and often proved the disease to be more extensive than a physical examination would suggest. The prophylactic means suggested to combat the spread of tuberculosis in children are: Early notification of all births; better inspection and control of milk supply; systematic school inspection; housing reform; segregation of advanced cases; notification of the disease; provision for the care of phthisical children; education of all school children in hygiene.

SURGERY.

249. Surgical Treatment of Cerebellar Tumours in Children.

BERTHAUX AND BURNIER (*Arch. gén. de Chir.*, Nos. 1 and 2, 1909) hold that operative treatment is indicated in cases of tumour of the cerebellum in childhood when symptoms of cerebellar localization presenting the signs of the common syndroma of intracranial tumours have been observed. It is acknowledged that a precise topographical diagnosis is often very difficult in such cases; but this, the authors suggest, is a further indication for exploratory intervention. The rapid evolution of optic atrophy renders it advisable not to persist for long in the medical treatment of a supposed growth in the cerebellum. Posterior craniectomy, unilateral or bilateral according to the extent

and situation of the tumour, should, it is stated, be performed in two stages, the first operation for making a breach in the cranial wall being followed, after an interval of four or five days, by incision of the dura mater, by exploration of the cerebellum and the posterior cranial fossa, and finally, if practicable, by extirpation of the tumour. In 17 out of 49 collected cases of cerebellar tumour in childhood, craniectomy, it was reported, had resulted in cure. The authors of this paper, while doubting the completeness of the recovery in all these cases, believe that the results on the whole are very encouraging in face of the difficulties of the operative treatment and the malignancy of some forms of cerebellar tumour. It is stated that in more than a half of this number of cases the operation had been long delayed after the first appearance of decided symptoms. Better results, the authors hold, will be obtained from a deep and widely-spread conviction amongst surgeons that cerebellar tumours are malignant and operable affections.

250. Thrombosis of the Cavernous Sinus.

JACKSON (*Ophthalmology*, January, 1909) says that thrombosis of the cavernous sinus arises without sepsis as the result of general blood conditions. Septic thrombosis occurs by extension from the other cerebral sinuses, from otitic disease, from the nasal sinuses, from furunculosis, and by infection from diseased lids or orbital contents. The signs are almost entirely ocular, the chief being pain, oedema of the lids, chemosis, and extreme exophthalmos. A moderate degree of optic neuritis may be present, and venous engorgement is common. Vision may or may not be impaired. The condition usually spreads to the other eye by way of the circular sinus, this is pathognomonic of the disease. The author does not discuss treatment, which is purely surgical; if the cavernous sinus be not drained, an operation described by Dwight as by no means very difficult, death is almost certain in septic cases. The sinus is exposed by an operation similar to Rose's method of exposing the Gasserian ganglion.

251. The Operative Treatment of Papillo-Oedema.

DE SCHWEINITZ and HOLLOWAY (*Univ. of Pennsylvania Med. Bulletin*, January, 1909) publish observations upon the operative treatment of papillo-oedema (choked disc), more especially by decompressing trephining, and from their own experience and that of others this operation, with the removal of the growth if possible, is regarded as affording the most satisfactory treatment for the purpose of preserving vision in all cases not due to a toxic or constitutional disease, but depending upon increased intracranial tension. The importance of early interference is insisted upon, since the prognosis is most favourable in the first, second, or third stage of the condition, and good vision must not be regarded as a reason for delay, since in the very earliest stages processes may have begun which unchecked would lead to degenerations of the nerve and ultimately to blindness and atrophy. Should, however, the operation have been postponed until the fourth or fifth stages, operation is indicated, for, although the prognosis as to sight is then unfavourable, there is the chance of preserving such vision as remains, while without it blindness is a certain result. As to whether it is possible to detect a commencing papillo-oedema prior to the first stage, ophthalmoscopic examination cannot alone be relied upon, but a careful investigation must also be made of the visual field, colour perception, light sense, size of the blind spot, etc.; but the difficulties attending such early diagnosis are increased by the fact that an incipient papillo-oedema may be masked by a corresponding general retinal oedema or be extremely hard to distinguish from a simple hyperæmia. In spite of occasional unfavourable results, patients with papillo-oedema dependent upon increased intracranial tension should be urged to submit to operation, since without such interference blindness is sure to result. Twenty-one cases of cerebellar tumour, or cyst, and 22 cases of cerebral tumour, cyst, or abscess, were investigated, of a few of the more illustrative of which short notes are given.

252. Decompression in Choked Disc.

ROBINSON (*Ophthalmology*, January, 1909) reviews our present knowledge of choked disc, which he defines as "optic neuritis due to tumours, etc., of the brain." It is always associated with rise of intracranial pressure. This is communicated to the sheath of the optic nerve, and causes a lymph stasis; the veins get compressed, and congestion of the papilla ensues. The author agrees with Horsley that these cases should always be decompressed to save the sight, even when the primary disease must of necessity be fatal.

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OBSTETRICS.

253. Symphysiotomy and Hebosteotomy.

RUNGE (*Berl. Klin. Woch.*, December 13th, 1908) prefers pubiotomy, more recently called "hebosteotomy," to symphysiotomy. Hebosteotomy was first practised by Gigli with a saw of his own design. In the open operation, which differs in technique from the subcutaneous, the os pubis is laid bare by a transverse cut through the soft parts; Gigli's saw is guided by means of the fingers passed round the bone, which is then sawn through. Bumm and others, carrying out an entirely subcutaneous operation, pass a specially constructed bent needle between the labia major and minor, two fingerbreadths from the clitoris, close to the descending ramus of the os pubis. The index finger of the other hand controls the advance of the point of the needle from outside the vagina. After emerging above the os pubis near the pubic hair, Bumm's modified saw is hooked into an opening in the needle. This is drawn back with the saw and the pelvic bone sawn through. The open method is more complicated and carries greater danger of infection, but hæmorrhage is more readily arrested than in the subcutaneous operation. The latter is technically very simple and may be carried out in private, asepsis being almost guaranteed. The wound may be merely dabbled with collodion or a light bandage applied, but in the open method greater care is needed. A hæmatoma in the course of the puncture track must be avoided by a vaginal tamponade and a firm pressure bandage, which is indispensable for the first twelve hours. Later less stress is laid on absolute rest, as, with slight movability of the divided bones, the scar is less firm and more lasting expansion of the pelvis is attained. Most authors believe that bony union replaces connective tissue after the first week. In hebosteotomy considerable tears of the vagina may be caused by the sharp ends of the bone during the passage of the head; others may be due to rigidity of the soft parts, and would probably occur apart from the operation. Some injury of the vagina and bladder may be avoided by pressing the thighs together to prevent the pelvis gaping too wide during the passage of the head. Punctures of the bladder caused by the hebosteotomy needle heal almost spontaneously, and hæmorrhage from the corpus cavernosus is usually readily controlled. The space between the divided ends of the bones averages two to three fingerbreadths. Permanent widening depends on whether a broad callus or connective tissue scar forms. Hebosteotomy should only be undertaken after exact observation of the course of labour has shown that the child is viable and less dangerous methods are impossible. In primiparæ Bumm performs Caesarean section to avoid damage to the soft parts caused by hebosteotomy. The latter he employs in cases of contracted pelvis, where the conjugata vera is not less than 6.75 cm., or in cases of normal pelvis with a giant child. After the operation, which should be undertaken on that side on which the occiput is expected, immediate delivery is often indicated, and forceps should usually be applied. Comparing it with symphysiotomy, the degree of pelvic contraction is the same. The technique and after-treatment of hebosteotomy are simpler, healing of the wound surer, and danger of infection less. After subcutaneous hebosteotomy one can wait with far better conscience for spontaneous delivery than in the case of symphysiotomy, and it may be carried out in cases with fever, where, Zweifel says, symphysiotomy is contraindicated. The power of walking is regained much earlier in hebosteotomy. It may be practised by an experienced accoucheur, with good assistance, in a private house, which is practically impossible with symphysiotomy.

254. Detachment of Cervix and its Influence on Subsequent Labours.

GILLES (*Comptes Rendus de la Soc. d'Obst. et de Gynéc. et de Pédiatr. de Paris*, etc., January, 1909) followed up the case of a patient who became pregnant five times after this grave accident had occurred in the course of her first labour. On that occasion, in October, 1900, the membranes ruptured prematurely, and the forceps was applied on account of rigidity of the os and lingering labour. In the course of extraction the vaginal portion of the cervix was completely torn off. The child weighed over 7 lb., and was saved; the curette had to be used, and the patient not only recovered but became pregnant for a second time, and was delivered at term—fourteen months after her first confinement—in December, 1901. Labour lasted 7 hours 15 minutes, the fetal head dilating spontaneously the false os, which had thick, irregular borders. The placenta was expelled by expression. The child weighed nearly 6 lb.

The third labour occurred in August, 1903, in the ninth month. The membranes ruptured prematurely, as in the previous and all the succeeding labours; yet labour ended spontaneously in five minutes, and the child, which weighed less than 5 lb., was living. The fourth labour occurred in March, 1905; the patient had become pregnant without any menstrual period appearing after the last pregnancy. Labour lasted half an hour, and the child, weighing over 6 lb., was delivered spontaneously. The fifth labour occurred in May, 1906, in the eighth month; delivery was spontaneous and very speedy; there had been hydramnion; the fetus weighed a little over 4 lb. The sixth labour—the fifth after the circular detachment of the cervix—occurred in March, 1908, in the eighth month. As before, the membranes ruptured early, the presentation was vertex, and the circular orifice, which represented the os externum, still had thick borders. Labour lasted three hours, ending spontaneously, and the child weighed 7½ lb.; a battledore placenta followed. This case showed how little, if at all, complete avulsion of the vaginal cervix might influence subsequent pregnancies and labours. Indeed, some of the labours in this case were unusually uncomplicated. There was some discussion, when Gilles's report was read, about the relative gravity as to future labours, of surgical and traumatic amputations of the cervix. The former had often a prejudicial effect, premature rupture of the membranes having frequently been noted.

GYNAECOLOGY.

255. Myoma of Vagina: Hydronephrosis.

HALBAN (*Zentralbl. f. Gynäk.*, No. 16, 1909) recently reported at a meeting of a medical society a case with a suggestive clinical history. A maiden lady aged 36 had undergone nephrectomy for hydronephrosis of the right kidney six years before she came under his care for dysuria, which had caused her much distress for several months. Blood had repeatedly been observed in the urine. The vagina was blocked by a mass as big as a fist, and the portio vaginalis of the cervix could hardly be reached by the finger. The mass was tough, tuberculous, not tender, and not freely movable. The mucosa of the anterior wall of the vagina was firmly adherent to its surface. The uterus, of normal size, was anteverted and quite distinct from the mass, which reached upwards to the superior border of the symphysis pubis. Halban made a deep incision along the vaginal wall, and enucleated the mass with ease. It was a tumour over ½ lb. in weight, a typical myoma free from any glandular elements. Halban was not sure whether it had developed in the tissues of the vaginal wall or in Gartner's duct. The base of the bladder was laid bare by the enucleation, and it was noticed that the right ureter was atrophied. The relations of the tumour accounted for the dysuria, and Halban believed that the hydronephrosis for which the right kidney had been removed might have been caused by pressure of the tumour on the corresponding ureter. He transpired that the vagina had not been explored when the kidney was extirpated; therefore Halban considered that the vagina and rectum should always be carefully examined in cases of renal tumour.

THERAPEUTICS.

256. A Malignant Neoplasm Treated by X-Rays.

At a meeting of the Medical Society of Munich, Mader reported the result of the treatment of a malignant new growth of the upper air passages by Röntgen rays, and demonstrated the result by showing the patient (*Muench. med. Woch.*, March 23rd, 1909). The patient was a man, aged 48 years. On December 3rd, 1907, he consulted a throat specialist on the advice of his practitioner on account of slight pain in the throat, difficulty in swallowing and some roughness in the throat. At first no objective signs were discovered, but after a few weeks a tumour was seen to develop low down on the posterior pharyngeal wall. There were no palpably enlarged glands. Iodide of potassium failed to bring about any improvement, and on January 25th, 1908, a portion was excised for microscopic examination. This proved to be a squamous epithelial cancer, and the radical removal of the tumour was undertaken two days later. On April 6th the growth had recurred and had become larger than before. Mader admitted the patient on May 7th. He found a tumour measuring about 4 mm. by 2 cm., situated low down on the pharyngeal

wall, close to the larynx. The surface was uneven, ulcerating, and covered with a sticky, purulent, greyish-yellow exudation. There was not much pain, but considerable difficulty in swallowing was experienced. No enlarged glands were felt, but the scar from the operation bound the tongue down to the side. The patient was treated in nine sittings by means of Mader's special pharyngeal Röntgen apparatus. Each sitting occupied from sixty to eighty minutes, and was made up of short exposures of from five to twelve minutes with short intervals between. A pause of about two weeks to allow the reaction to pass off was made before the next sitting was undertaken. The technical details of the treatment were: Induction coil, 40 cm.; Walter transformer, 110 volt current in front of the transformer; 1 to 2 amperes at a focal distance of from 8 to 10 cm.; slow mercury interrupter (from 200 to 300 in the minute), and tubes of varying hardness. After the fourth sitting the tumour was seen to be smaller. It had been growing steadily up to the time when the treatment was begun. After the eighth sitting the practitioner reported that after the swelling of the reaction had gone down scarcely any growth was to be seen. The ninth sitting succeeded in removing the last traces of a tumour, and the patient was in excellent health—had no pain or other symptom on November 25th, 1908. The rays were applied directly from the fauces. The rays were directed so that they could act intensely on the affected area. Mader does not give a description of the special tubes, as he demonstrated them at the meeting. From the text it appears, however, that the tubes are completely screened off, and the rays are only allowed to pass through a small window. The prolongation of the instrument is passed into the mouth and so directed that the window looks straight at the tumour. He compares his method with that of Hölst and Payenneville, and shows that the advantage of his is that the rays are directly applied, that no pain is produced, and that no anaesthetic is required; all of these do not apply to the French instrument. In dealing with the general question, he finds that x rays are only useful in a small number of laryngeal or faucial tumours. He believes that this treatment should only be employed under given conditions, and sets up an indication as follows: Operative treatment should be undertaken in all cases in which a chance of removing the whole growth is present, and in which the age and strength of the patient permits of the interference. X-ray treatment is permissible when it is doubtful whether surgical means can succeed, when the age and strength of the patient scarcely justify an operation, or when from any cause a considerable danger to life is produced by operation. He instances a case which he treated three years ago by x rays, and succeeded in causing the tumour to disappear. A small recurrence has recently taken place, which is at present being successfully re-treated by the same means. Lastly, x rays are indicated in all cases in which operative treatment is refused, when the condition is hopeless, or when a recurrence after operation has taken place.

257. Arsacetin in the Treatment of Syphilis.

G. HEYMANN finds that, although the value of arsenic in the treatment of syphilis has been recognized by most authorities, practically the only preparation of arsenic which has hitherto been extensively used is atoxyl (*Deut. med. Woch.*, December 10th, 1908). This drug has certain disadvantages, of which the following are put forward: (1) The mucous membrane of the intestinal tract is irritated and nausea and vomiting and diarrhoea are produced; (2) the uropoietic system is irritated, and nephritis, dysuria, etc., are produced; and (3) the nervous system is attacked, and giddiness, polyneuritis, and optic neuritis, followed by blindness, are produced. Ehrlich found, when experimenting with atoxyl in animals infected with trypanosomes, that among a number of derivatives of this substance arsacetin exercised at least the same curative properties and was considerably less toxic. Arsacetin is the (p) acetyl-amino sodium phenylarsanilate, is free from arsenious and arsenic acid, and is not dissociated by boiling. It is soluble in cold water to the extent of 1 part in 10, while hot water takes up 3 parts in 10. The injections are undertaken with a 20 per cent. solution into the gluteal muscles, 3 c.cm. being injected at each dose, equalling 0.6 gram of the substance. The solution has to be warmed before use to dissolve all the crystals, and the syringe and needle must also be warm, so that the substance is not thrown out of solution. Heymann has attempted to determine what curative power arsacetin possesses in syphilis in man and what its degree of toxicity is. He applied it in a number of cases of primary, secondary, and tertiary syphilis. In 20 out of 31 cases he

succeeded in obtaining a rapid and obvious curative action of the drug. Broad condylomata, papules on the mucous surface of the mouth, and various forms of rash were seen to disappear in a short time under its influence. On the other hand, although the total quantity used in the treatment did not exceed 7.2 grams, 6.0 grams failed to influence gummatous affections at all. The rapid beneficial influence in the above-mentioned cases, however, did not persist, and recurrences of the symptoms within a fortnight of discharge from hospital were met with. The repetition of the treatment, however, proved of no value, and mercury had to be employed in the recurrences. In 7 cases he found it necessary to interrupt the treatment on account of symptoms which pointed to intoxication. Headache, nausea, oliguria, albuminuria with blood and casts in the urine, giddiness, and pains in the abdomen and extremities were seen in these cases. In none of these cases did any bad effects persist on discontinuing the injections. He therefore comes to the conclusion that arsenacetin acts rapidly in influencing the symptoms for the time, but that this action is not durable. In 23.6 per cent. of his cases symptoms of intoxication compelled him to discontinue the application of the drug.

258. The Food Value of Eggs.

S. AUFRICHT AND F. EDJON (*Deut. med. Woch.*, No. 53, Jahrgang 34) find it a matter of surprise how few works there are dealing with the food value of eggs, the extent to which they can be absorbed, and their digestibility. Uffelmann carried out a series of observations, but his results were vitiated by the fact that his patient suffered from fever during the whole period. Penzoldt and Prager investigated the length of time for which eggs were retained in the stomach. If it be granted that the length of time for which food is retained in the stomach is a measure of its digestibility, lightly cooked eggs are the most digestible, next come raw eggs, then buttered eggs and finally hard-boiled eggs and eggs in an omelette. Such experimental data are not, however, conclusive as to the true food value of eggs. More effective investigation is that which includes the examination of the urine and stools of a person on an egg diet. Rubner experimented on a student, 24 years of age and weighing 46 kilos; on each of two consecutive days the student ate 42 hard-boiled eggs, with a weight of 1896.2 grams, a nitrogen-content of 41.5 grams, and a fat content of 206.7 grams. The amount of the nitrogen excreted in the urine or stools on both days was 45 grams. The percentage loss by the stools of nitrogen and fat was 2.9 and 5 per cent. respectively, as compared with 2.6 and 19.1 per cent. respectively on a meat diet. Thus, according to Rubner, the nitrogen of hard-boiled eggs is absorbed to about the same extent as that of meat, but the fat is much better absorbed than that of meat. More recently Lebbin has published results which are approximately the same as those of Rubner. The authors of the present article have made a series of experiments which are of greater practical interest than those described above, because in actual life no person is ever put upon a diet consisting solely of eggs. The authors' investigation lasted for a total period of seven days: the person experimented on—one of themselves—was for three days on a measured mixed diet; for the next two days the diet was altered only in so far that the meat—150 grams, containing 43.65 grams of proteid and 29.85 grams of fat—was replaced by 8 eggs which had been boiled for three minutes, and which contained 52.29 grams of proteids and 49.8 grams of fat. In the third period of two days the lightly cooked eggs were replaced by raw eggs. The mean daily nitrogen intake during the three periods was 11.35 grams, 12.73 grams, and 12.73 grams respectively. Of this the proportion of nitrogen which was not absorbed was during the three periods 5.22, 3.81, and 3.1 per cent. respectively, and the proportion of fat not absorbed was 14.39, 6.25, and 4.09 per cent. respectively. The mean daily loss of nitrogen was 1.273 grams, 1.535 grams, and 1.815 grams respectively. The mean daily nitrogen loss was thus proved to be proportional, not to the amount of nitrogen taken in, but to the amount absorbed. Both in the meat and in the egg periods the nitrogen was better absorbed than the fat. The absorption both of nitrogen and of fat was least in the meat period, increased in the lightly cooked egg period, and increased again, though only to a small extent, in the raw egg period. The practical lesson of these investigations would be that lightly boiled eggs and raw eggs have a higher food value as part of a mixed diet than a corresponding amount of meat, but that the superiority of raw eggs as compared with lightly boiled eggs has been much overvalued. Eggs deserve to be much used, both in disease and in health,

on account of the ease with which they are digested, their high food value, and the extent to which they are absorbed.

PATHOLOGY.

259.

Milk Anaphylaxis.

BESREDEKA (*Ann. de l'Inst. Pasteur*, February, 1909) finds that when guinea-pigs are sensitized to milk the intracerebral injection of milk ($\frac{1}{2}$ to $\frac{1}{4}$ c.cm.) produces the symptoms of anaphylaxis, with a fatal result in a few minutes. Unlike blood serum, milk does not lose its toxicity after heating to 100° C. It is still highly toxic at 120°, and its toxicity is not markedly diminished until the temperature exceeds 130°. The sensitizing power of milk submitted to temperatures varying from 100° to 130° exhibits the same gradations as the toxicity. Sensitization does not take place when the milk is administered per os or per rectum. Milk possesses a vaccinating power which is retained even after heating to 130° for fifteen minutes. The specificity of the anaphylactic reaction is not absolute for milks of a given kind; thus, guinea-pigs made anaphylactic with cow's milk react to goat's milk. The casein possesses sensitizing, vaccinating, and toxic properties, just like the whole milk. The whey sensitizes in some conditions, but not in others; it always vaccinates, and is never toxic. The active principle of the whey is contained in all probability in the substance usually called lactoprotein, which is easily reabsorbed in the intestine. Anti-anaphylactic vaccination is accomplished by administering whey or whole milk either per rectum or per os; it is rapidly effective, absolutely harmless, and does not sensitize.

260.

The Pancreas in Diabetes Mellitus.

R. L. CECIL (*Journ. of Exper. Med.*, March, 1909), from a study of the pathological anatomy of the pancreas in 90 cases of diabetes mellitus, arrives at the following conclusions: (1) Anatomical lesions of the pancreas occur in more than seven-eighths of all cases of diabetes mellitus. (2) When lesions are found, the islands of Langerhans constantly show pathological changes (sclerosis, hyaline degeneration, infiltration with leucocytes, and hypertrophy). (3) In some cases (12 out of 90) the lesions are limited to the islands of Langerhans. (4) In 16 cases associated with hyaline degeneration of the islands of Langerhans the average duration of the disease was three and a half years; and in 46 cases with sclerosis of these bodies the average duration was 3½ years. In 6 cases associated with an infiltration of leucocytes the average duration was eleven months. (5) Destructive lesions of the islands of Langerhans may be associated with compensatory hypertrophy of other interacinar islands. (6) Peculiar adenoma-like hypertrophy of the islands of Langerhans occurred in a small proportion of cases (7 out of 90), and were associated with adenoma of the thyroid gland in 2 cases, and of the pituitary body in one. (7) Diabetes mellitus occurring in association with haemochromatosis (bronzed diabetes) is referable to pigmentation and destruction of the islands of Langerhans. (8) In 12 per cent. of the cases the pancreas exhibited no distinctive pathological change, but in approximately one half of these instances it was noted that the size of the gland or the number of islands was much less than normal. (9) Fifty per cent. of cases of diabetes mellitus occurring before the age of 30 years are associated with lesions of the pancreas; 75 per cent. of all cases of diabetes in which the pancreas is normal occur before the age of 30 years; 97 per cent. of cases occurring after the age of 30 are associated with lesions of the pancreas, and 86 per cent. occur in association with chronic interacinar pancreatitis accompanying arterio-sclerosis. (10) Interacinar pancreatitis, which occurs in 73 per cent. of cases, is almost constantly associated with arterio-sclerosis, and gangrene of the extremities, which occurs with one-fourth of cases of interacinar pancreatitis, is referable to the same cause. (11) Chronic interlobular pancreatitis, when associated with diabetes, is accompanied by sclerosis or hyaline degeneration of the islands of Langerhans. (12) Diabetes in association with myxoedema or with exophthalmic goitre may be referable to a lesion of the pancreas—namely, chronic interacinar inflammation with sclerosis of the islands of Langerhans; diabetes in association with acromegaly may be referable to a lesion of the islands of Langerhans—namely, sclerosis and hyaline degeneration with adenoma-like hypertrophy.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

261. Intestinal Sand.

MYER AND COOK (*Amer. Journ. of Med. Sciences*, March, 1909), from a study of the literature and from their own observations in a case in which "intestinal sand" was a constituent of the faeces, do not consider it a clinical entity nor productive of any definite train of symptoms. The faeces in their case—that of a woman aged 24—were dark brown in colour, firm in consistency, and contained a little mucus and from 1 to $1\frac{1}{2}$ grams daily of fine granules resembling sand, which gradually disappeared after being present in the motions for a fortnight. The patient was constipated, and complained of great fullness of the abdomen, which was tense and slightly tympanitic. The right kidney was movable, and the stomach was in moderate ptosis but otherwise negative. There was no family history of gout or rheumatism. The sand-like granules were intimately admixed with the stool, gritty to the touch, translucent in appearance, and varied in colour from light yellow to the colour of uric acid crystals or garnets. A chain of such sand was found, together with two or three fibro-vascular bundles histologically identical with banana tissue. By the ingestion of bananas sand identical with that found in this case could be produced experimentally, being obtained from the faeces in teaspoonful to tablespoonful quantities after the ingestion of one or two bananas, and persisting in gradually diminishing amounts for several days. On treating a thin section of the banana with ferric chloride small masses of a garnet-coloured substance, each contained within a cell membrane, were obtained. In the stem as well as in the fruit there are milk tubes, consisting of a row of vertical cylindrical cells containing large homogeneous, highly refractive resin balls, suspended in a fluid rich in tannin. The secretions of the stomach and intestine act upon these similarly to the ferric chloride, hardening the resin and producing an insoluble tannate of sand, after digestion of the cell walls, is liberated as a grain of sand.

262. Tuberculous Cirrhosis of the Liver.

THE association of pulmonary tuberculosis with cirrhosis of the liver has often been noted in man, and also in rabbits or guinea-pigs infected with tubercle bacilli the liver is often cirrhotic. S. Isaac (*Frankfurter Zeit. f. Path.*, Wiesbaden, 1908, ii, p. 125) remarks that the cirrhosis is usually atrophic, although Hanot's hypertrophic cirrhosis has been recorded, and may simulate tuberculous peritonitis very closely. He details the case of a man of 45 who had had "fever" and syphilis in Java twenty years before, and early in January, 1904, had cough and fever. In March the cough had gone, but the fever persisted, and the patient's liver was enlarged. Rest in bed, iodide, and mercurial inunctions were prescribed, but the liver did not lessen. No history of alcoholic excess was obtained. In June the liver reached to within a fingerbreadth of the navel, its edge was sharp, its surface smooth; the spleen was much enlarged; the heart was hypertrophied; the lungs showed no abnormal physical signs. The morning temperature averaged 96°, the evening 102°; hepatic abscess was suspected, and an exploratory laparotomy was performed in July, 1904. The liver was found to be very large, soft, with a faintly-nodulated surface, but no abscess could be found by puncture; the spleen was six to eight times the normal size, and slight ascites was present. The patient left the hospital in September; for about six months he had had much cutaneous itching, latterly with an urticarial eruption; the lungs showed nothing abnormal. In October jaundice set in, and the pruritus was more troublesome. The fever continued, and puncture of the liver was tried, with negative result; antisiphilitic treatment was given several times, without improvement. In November, 1906, an effusion appeared in the right pleura, no evidence of pulmonary phthisis having till then been found. In March, 1907, the patient sank, dying at the end of June. At the obduction 5 pints of ascitic fluid were found in the abdomen; the great omentum was rolled up and adhered to the liver, and contained numerous small yellow-stained tubercles, as did the mesentery and peritoneum. The liver weighed 21 lb., and was extensively adherent to the diaphragm, smooth on the surface, deeply jaundiced, and showed no normal acinous structure; the

cut surface exhibited small areas 2 to 4 mm. in diameter separated by sunken fibrous septa, without any macroscopic caseation, and gave no amyloid reaction; the liver tissue was very tough, the kidneys showed many small yellow tubercles; the lungs showed extensive tuberculous lobular pneumonia, but no old tuberculosis. The spleen contained typical solitary tubercles, as did the bronchial glands. Microscopically the liver showed extensive destruction of the liver cells, much infiltration with small round cells, countless typical small tubercles in the acini and in the interacinar tissue, and a few newly-formed bile ducts in the parts where the inflammatory reaction and congestion were most marked; other parts of the liver showed mainly fibrosis. The bile ducts and vessels exhibited much inflammatory invasion of their walls. The fibrosis generally extended into the acini of the liver, only exceptionally being limited to the periphery of the lobules. Tubercle bacilli were freely found in the liver, both in the tubercles and in the aggregations of small round cells. Isaac regards the case as a primary haematogenous tuberculosis of the liver, running its course in three and a half years, associated with hypertrophic cirrhosis, and spreading to the lungs only a few months before death.

263. Mitral Stenosis and Congenital Malformations.

HEITZ AND SEZARY (*Arch. des Maladies du Cœur des Vaisseaux et du Sang*, December, 1908) report the following 2 cases of mitral stenosis associated with congenital malformations. The first case was a man of 48 who had been in good health until two years previously, when he began to suffer from shortness of breath, palpitation, and loss of strength and flesh. On examination of the heart there was evidence of dilatation of the left auricle to percussion and an increase in the extent of cardiac dullness, especially transversely. A diastolic murmur was heard, and the second sound was permanently reduplicated. In this patient it was noticed that there was a left-sided hemihypertrophy of the body. The left arm and leg were increased both in length and in thickness, and the left shoulder was larger than the right. The left hand was $1\frac{1}{2}$ cm. longer than the right, and the digits of the left hand were larger than were those of the right. The left great trochanter was in a higher position than the right and there was a certain amount of luxation of the left hip. The left leg exceeded the right in length by about 6 cm., and the circumference of the former exceeded that of the latter by from 1 to $1\frac{1}{2}$ cm. The left foot was longer than the right. The face, neck, and thorax were normal. The second case was that of a youth 17 years of age, who appeared much younger. His hair was poorly developed and his testicles were small. In this patient there was found a completely bifid uvula and an anomalous union of the two sides of the mandible. In the region of the symphysis menti were found two longitudinal projections separated by a very deep median depression. In this patient there were found signs of mitral stenosis—thrill, diastolic murmur, and reduplication of the second sound. The authors admit that the presence of congenital malformations, such as those described in association with mitral stenosis, does not prove that the mitral stenosis was of congenital origin, as the latter may have resulted from an infection in the early years of life. Still, in such cases as these, in the absence of any definite cause for the mitral stenosis, one should bear in mind the possibility of its being the result of conditions occurring during intrauterine life.

SURGERY.

264. Hepatic Cancer Mistaken for Abscess.

MICHELEAU (*Gaz. Hebdomadaire des Sci. Méd. de Bordeaux*, March 7th, 1909) relates the following case: The patient was a man of 34, very strong and robust until seven months before coming under observation, when he was suddenly seized with severe pain in the region of the left kidney, accompanied by haematuria, sufficiently profuse to form intravesical clots and subsequent retention of urine. The renal colic did not return, but the left kidney was somewhat painful as well as tender on pressure, and the haematuria continued for about two months, causing

anaemia, pronounced weakness, and very considerable emaciation. About the time when the pain ceased, or a little sooner, a rise of temperature was observed, about 102° even at the outset, sometimes preceded by rigors, and followed by profuse sweats. Renal tuberculosis was diagnosed by two surgeons, but Koch's bacillus could not be found in the urine. When seen by Micheléan he had been suffering from gastric disturbance for some days, the appetite being irregular, and the gastric region swollen and painful, with vomiting of mucus and of food, but without haematemesis or melaena. He had formerly suffered from haemorrhoids, which had ceased to bleed some time before his illness began. An operation on the kidney, which had been thought of, was abandoned because the symptoms had left the renal region for that of the stomach, and the aspect of the patient indicated marked cachexia, either from a serious suppurative process or from some neoplasm. The temperature oscillated round about 102°, with a morning remission of nearly two degrees; the pulse ranged between 100 and 110, and there was no marked sweating. The epigastrium presented a uniform tumefaction, extending to the right under the false ribs, which it pushed forward, the left side being free. There was spontaneous pain, dull and aching, but seldom acute, and there was no radiation, as, for example, towards the right shoulder. On palpation the pain increased so much that deep pressure was impossible, but a uniform smooth swelling was made out, apparently continuous with the liver, the lower border of which could be felt three fingerbreadths below the ribs, no fluctuation being perceptible at any point. No other organ appeared to be affected, and the diagnosis of liver abscess was made, probably on the inferior surface, as there were no radiations of pain towards the shoulder. This idea was encouraged by the fact of a past history of some malaria and dysentery, incurred on foreign stations during the seven years of his service with the fleet. Some more definite physical sign was sought for in vain: examination of the blood was not efficiently carried out, and as variations in the size of the liver hypertrophy seemed to point to an abscess, operation was decided upon. Exploratory punctures, under chloroform, revealed no pus, and the laparotomy was proceeded with. The internal half of the right lobe, corresponding to the external swelling, consisted of a lardaceous mass, very hard, almost woollen; and the diagnosis of cancer, not formerly thought of, became obvious. After some further futile punctures, the wound was closed. The incision healed by first intention, and no subsequent complication intervened, but the patient died ten days afterwards. It was ascertained later that a sister had previously died, at the same age, of general melanotic cancer, but there was no other item of family or individual history which would have thrown light on the true nature of the case, and Micheléan is of opinion that under similar conditions the same course should be pursued.

265. Momburg's Method of Compression.

MOMBURG made the suggestion that simple constriction around the waist would serve the purpose of controlling haemorrhage in operations on the hip-joint and other parts in or close to the pelvis, and by avoiding a compressing disc or pelotte no risks would be associated with it. G. Axhausen relates his experience of the method (*Deut. med. Woch.*, December 3rd, 1908). He applied the constriction when the patient was under the anaesthetic. He used a rubber tube doubled, and wound it twice round the body. The leg was raised before it was applied, and the tube was drawn tight until the femoral pulse could no longer be felt. The operation was a resection of the acetabulum and of the neighbouring portion of the pelvic bone as far up as the anterior superior spine of the ilium. The operation was performed bloodlessly. No difficulty was experienced in applying the compression, and no ill effects were seen during or after the operation. So far, therefore, the method has proved highly useful.

266. Mesocolic or Retrogastric Hernia.

W. J. MAYO (*Annals of Surgery*, April, 1909) reports 2 cases of the rare form of intra-abdominal hernia known as mesocolic or retrogastric, both of which came under his observation and were successfully treated by operation in the course of 1908. Notwithstanding the peculiarity of the conditions in these two instances, the lesions revealed by laparotomy were practically identical. The 2 cases, the author states, present points of interest not only on account of their rarity, but also because of the primary pathological condition which appears to have been the important factor in the production of the hernia. The hernia in each case was revealed by a median laparotomy practised for the relief of very severe and long-continued

gastric disturbance. In the first patient, a female aged 59, a large rent of the mesocolon was found, through which the small intestine, with the exception of its proximal 3 in. and its distal 12 in., and the whole extent of the mesentery had passed into the lesser sac of the peritoneum behind the stomach and out through a second opening in the gastropneumatic omentum. Each opening was about 5 in. in diameter, and the margins were round and smooth. In the subject of the second case, who was a female aged 32, about 5 ft. of small intestine had passed behind the stomach through an opening in the transverse mesocolon, carrying the peritoneum of the transverse mesocolon ahead as a sac, the firm ring of which was at the loop of the middle colic artery. In the first case the stomach was completely covered by small intestine; in the second case the organ, which was in front of the herniated intestine, was prolapsed and dilated so that it filled almost the entire abdomen and pelvis. After the performance of gastroenterostomy, which was indicated in both cases by duodenal ulcer, the cavity occupied by the small intestine was in each patient closed by suturing the margins of the opening in the mesocolon to the posterior wall of the stomach. Both patients, the author states in his comment on these cases, presented typical conditions of Glénard's disease. There was undoubtedly in each a primary prolapse of the stomach. The duodenal ulcer, which existed in both, had undergone a chronic perforation, causing adhesions and fixing the duodenum beyond the stomach, just as the cardiac end is held normally by the oesophagus. The obstruction in each case was extreme, the huge stomach hanging down in front of the intestines. The abdominal muscles exerted great force in the frequently repeated efforts to expel by vomiting the large accumulation in the stomach of undigested food, and caused compression of the intestines behind this viscus, which was confined at each extremity and much prolapsed in its middle part. In this way, it is held, pressure was brought to bear on the transverse mesocolon, upward in the line of least resistance, causing this peculiar form of hernia.

OBSTETRICS.

267. Cardiac Disease in Pregnancy and Labour.

HARRAR (*Bulletin Lying-in Hosp., City of New York*, September, 1908) writes that cardiac disease, with failing or lost compensation, occupies an important position among the complications of pregnancy and child-birth. While these broken-compensation cases are not half so numerous as those of placenta praevia or eclampsia, they occur twice as frequently as those of severe accidental haemorrhage. The situation presents a mortality for the mother which is appalling, and a fetal mortality greater than is generally supposed. It is not unusual to discover chronic valvular disease with perfect compensation in the ordinary routine examination of ante-partum cases. The etiology of the defect, as a rule, antedates conception. Leaving chronic endocarditis with compensation and no symptoms aside, the writer has collected a large number of cases of valvular disease, in which loss of compensation has occurred during pregnancy or labour, including those few instances of chronic endocarditis with symptom-free pregnancy, in which collapse occurs shortly after labour. All the cases were suffering so severely as to require treatment in bed. They exhibited the symptoms which arise in ordinary cases of failure or lost compensation. These included general weakness, anorexia, dyspnoea, palpitation, and oedema. Later symptoms showed dilatation of the heart, rapid irregular pulse, oedema of the lungs, cough, haemoptysis, cyanosis, albuminuria, and in many cases acetonuria and anaemia. The immediate mortality of 82 cases treated was 30 per cent., without taking into consideration the number of cases that succumbed after discharge from the hospital in the first few months succeeding the puerperium. Serious loss of compensation can occur during the latter months of pregnancy, and yet the woman may be put into serviceable condition and go on normally with pregnancy; the author reports 15 such cases which were discharged in good health undelivered. His report includes 75 cases treated in hospital. The prognosis improves the further along in pregnancy the woman is at the time of the first breakdown in the circulatory balance. In 9 cases the first loss of compensation occurred during the ninth or tenth month with but 1 death. In 9 others the breakdown occurred before the sixth month, and of these 7 died, and only 2 recovered. In women giving a history of broken compensation in previous pregnancies or before the

present one, the mortality is increased to 60 or 70 per cent. The age or the para of the woman appears to affect the outlook but little, except that labour in primiparae, being more prolonged, the strain on the heart is greater. It is wise to advise against future conception, though not always justifiable to induce abortion in a later conception unless symptoms arise. When the circulation fails and dilatation begins, the variety of lesion seems to make little difference. The heart with double mitral lesion is the more prone to fail, and also the more able to recover: the simple aortic lesions are the most infrequent, with the best recuperative power. Combined mitral and aortic disease is the most serious of all when compensation fails. The mortality for the child is dependent upon its prematurity and the frequent necessity for artificial delivery. The metabolism of the child is not affected by the uncompensated maternal heart. It is rare that a patient with compensated cardiac defect dies in labour, therefore a clear record of perfect compensation is a valuable asset in any *ante-partum* case with heart disease. Prophylaxis is of importance, and includes the treatment of endocarditis during the stage of compensation. Pregnant women with chronic valvular disease must lead a quiet, regular life, avoiding physical exertion and emotional excitement. Fresh air, ventilation, prohibition of alcohol, a digestible, nutritious diet, and scrupulous attention to the skin and bowels—in fact, the ordinary hygiene of pregnancy is to be well enforced. Resistant exercises and Naheim baths are of great value when as yet there is no loss of compensation. In 75 of the cases under consideration compensation became broken in 72 before admission to hospital: 69 of them recovered under treatment from the first lapse. Rest in bed is more important than drugs. It is more difficult to prevent a second loss of balance than it is the first one. After the patient is up no exertion except short slow walks should be allowed. A tri-weekly examination of the urine should be made, and upon the slightest return of albumen, or oedema or dyspnoea, the patient should return to bed. The medical treatment includes bleeding from the arm, when there is cyanosis and acute dilatation, and the use of the ordinary drugs, digitalis, strophanthus, and caffeine. Calomel and the salines give relief, while morphine and codeine combat dyspnoea and restlessness. Where there is suppression of urine the introduction of physiological salt solution into the rectum is of great service. Nitroglycerine, oxygen, and dry-cupping are also available. Labour should only be induced if the compensation is not promptly restored with rest and therapeutic measures; or, if compensation once lost has been regained, when it may be done at the thirty-sixth week to secure easier labour; or if the compensation fails markedly before the sixth month; or in desperate or moribund cases in the interest of the child. Anaesthesia is generally necessary for induction, and it is wise to use large quantities of oxygen with the smallest possible amount of chloroform. During the second stage of labour a hypodermic injection of strychnine and digitalis may be given, while the management of the third stage must depend greatly upon the patient's condition. If there is dilatation of the right heart with a weak irregular pulse, *post-partum* haemorrhage is rather to be encouraged. But if there is no dilatation, but pallor and a small weak pulse, it is best to put on a tight binder with a folded compress in the epigastrium to maintain the intra-abdominal pressure and avoid the tendency to engorgement of the large abdominal veins. If the patient is anaemic, as so many are if there is any kidney trouble, it is best to prevent all bleeding if possible. After delivery the patient should be closely watched and given oxygen freely and emergency stimulation as required. She is liable to collapse at any time in the first twenty-four or forty-eight hours. Chronic valvular disease is in itself not a serious condition in the child-bearing woman, but timely prophylaxis is all-important. When loss of compensation once occurs the danger is increased a hundred-fold. If the balance can be preserved during pregnancy labour need not be feared, but given one or more severe disturbances of the balance and the prognosis becomes very grave.

GYNAECOLOGY.

268. Gonorrhoeal Conditions in Women.

ANDREW J. LOVE (*Med. Record*, April 17th, 1909) says that gonorrhoea in women is the chief cause of sterility. It is also a frequent cause of sterility in males, and absence of child-bearing is more often due to the inability of the male than of the female to produce a fecundated ovum. It is responsible for most cases of salpingitis and specific endo-

metritis. In most cases that come early to the doctor the woman may be cured by confinement to bed, cleanliness, open bowels, and swabbing the parts with a mild antiseptic fluid. But most cases are neglected until the infection has gone up into the uterus. The peritoneal tissues have become infiltrated, abscess formation has begun, the tubes have had their ciliated epithelium destroyed, and sacculation or abscess has closed the lumen. The ovaries have become cystonata, with prolapse and fixation. When the disease has gone no higher than the cervix, pregnancy lights up the infection, which passes on to tubes and ovaries. Latent gonorrhoea may infect another person who has connexion. Eighty per cent. of men between the ages of 18 and 28 have had gonorrhoea. In some persons one attack gives partial immunity to another attack. Prostitutes will be thus protected, while they will communicate the disease. Their disease is generally in the latent form. A fruitful source of sterility is vulvovaginitis in little girls, which is gonorrhoeal, and causes them to develop into cases of infantile uterus, with imperforate tubes and ovaries that do not mature normal ova. It may be communicated by sleeping with the mother who is infected.

THERAPEUTICS.

269. Biliary Extract in Exophthalmic Goitre.

REVILLET (*Lyon Méd.*, November 15th, 1908) having had good results from the use of an extract of bile in the treatment of the tachycardia of pulmonary tuberculosis, has employed it recently in 2 cases of Basedow's disease. The daily injection of 2 c.cm. of biliary extract in the first case slowed the heart from 200 to 120 beats per minute in twenty-eight days. For the next two months the injections were given daily for fifteen days with intervals of five days. At the end of this time the pulse-rate was 95 to 100, the appetite and strength had improved, there had been an increase in body weight, the goitre had diminished in size, and the tremor, which was distressing before treatment, had disappeared. In the second case ten injections diminished the pulse-rate from 140 to 110. After a month's treatment the pulse-rate was 96, the goitre was diminished in size, and the exophthalmos was much relieved. When the treatment had been suspended for a fortnight, however, the pulse-rate began to rise again. Although Revillet admits that he is not justified in generalizing from such a small experience, he thinks his results encouraging enough to induce others to make a trial of the treatment.

270. Treatment of Ophthalmia Neonatorum with Protargol.

MOTAIN (*Bull. de l'Acad. de Méd.*, May 4th, 1909), discussing the treatment of ophthalmia neonatorum, pays tribute to the service rendered by nitrate of silver, which has been so long used; he, however, considers it dangerous when ulceration of the cornea is present. He considers that great credit is due to Darier for his researches in the organic compounds of silver—namely, argyrol, collargol, and protargol, the latter of which he considers by far the most valuable. The method he adopts is as follows: The lids are washed frequently with a lukewarm solution of weak permanganate of potash 25 cg. to 1,000. If the secretion causes the lids to adhere they should be smeared with iodoform ointment. Every six hours he uses 2 drops of a 20 per cent. solution of protargol, no matter whether a corneal ulcer be present or not; this never does the cornea any damage. In severe cases with abundant secretion, and especially if the cornea is affected, he uses the protargol drops every three hours, and he considers that accidental injury of the cornea is far less liable to occur than if the lids be painted. If this treatment is regularly carried out the secretion is diminished from the first day, and in three, or at most four, days there is but little discharge. The protargol is used at half its strength for several days after the case is apparently cured. Should recurrence take place, which he has never seen if the treatment is fully carried out, he reverts to that first recommended. If a corneal ulcer is present it quickly heals. Atropine is also recommended in order to avoid the occurrence of posterior synechiae. He claims for this treatment that it is simple, without danger, and it gives the best results. He describes ten typical cases.

271. Multiple Subcutaneous Electrolysis.

KROMAYER states that the ordinary method of destroying hairs by electrolysis has the disadvantage of producing a scar which remains visible. In order to limit this

unsightly appearance it is usual to interrupt the process before the hair is completely destroyed, and in this way so-called "recurrences" are frequently seen (*Deut. med. Woch.*, December 24th, 1908). Even when the superficial layer of the hair bulb is destroyed the hair may grow again. He therefore considers that it would be better if the whole process could be carried out subcutaneously, so that it would not be necessary to interrupt the action until the hair was completely and finally destroyed. For this purpose he has constructed electrolytic subcutaneous needles, which are coated up to within from 2 to 10 mm. of the point with varnish. This coating is so thin that it does not hinder the introduction of the needle. Usually electrolytic epilation is performed with one needle at a time, but he sees no reason why several may not be employed simultaneously. He therefore has his needles connected with 15 cm. of the thinnest copper wire, which can be brought in contact with the copper wire of the other needles. Having formed a bundle of such needles, he seizes each one in rotation by artery forceps and inserts it into the hair follicle. When all the needles required are in place the wires are connected with the battery and the current turned on. In applying a number of needles simultaneously it is necessary to adjust the current according to the number of needles acting. It has been found that a current of 5 milliamperes destroys a hair completely in one minute. The complete destruction of the hair can be ascertained by pulling lightly on the hair shaft. The hair will be found to be held tight. On pulling somewhat more strongly, the hair comes away and is found to end sharply, as if cut off. No trace of the hair bulb may be found, as this should have been destroyed by the electric current. Before the process is complete a hardening around the needle is felt, and soon a definite nodule is seen. If this nodule begins to be transparent, it is time to remove the needle, as there is danger of the cutis becoming involved in the necrosis and of the skin "burning through." If five needles are applied at one time the current will be divided into fifths, and it will therefore be necessary to allow a 25 milliamperes-minute current to act. It is wise to apply the strongest current well tolerated, and the author usually begins with 1 milliamperes, and increases this up to 5, 10, 20, and 40. The highest he has used was 50 milliamperes. It must be remembered that the stronger the current the shorter will be the time during which it is necessary to apply the current to destroy the hair bulb. There is no theoretical reason why as many as 100 needles should not be used, but as a rule the current becomes divided irregularly, and uncomfortably strong currents run through some needles, while too little passes through others. At times he finds it wiser to use only a few needles, for example five, and to apply them continuously. After one has done its work on one hair bulb it is withdrawn, and is inserted into another follicle, and so on. In this way there are always five needles acting. In this case it is impossible to calculate the current by milliamperes-minutes, but the process must be determined by the test mentioned above. Care must be taken that at least 2 mm. of varnish-covered needle penetrates the skin, so that 4 mm. of needle (including 2 mm. of bare steel and 2 mm. of varnished steel) lies in the skin. Since there is some danger of producing extensive necrosis of the cutis, it becomes impossible to destroy all the hairs in one area in one sitting. After a few have been destroyed, it is necessary to wait for a while until the inflammatory reaction has disappeared. This may take from a few days to one or two weeks. The method does not produce any scar formation if properly carried out, is easy to carry out, and saves a great deal of time as compared with the usual method of electrolysis.

272. The Incompatibility of Iodide with Pagenstecher's Ointment and Calomel.

It is well known, but constantly forgotten, that if yellow oxide of mercury ointment or calomel be placed in the eye of a patient who is taking iodine in any form, violent irritation is produced, and the morbid process instead of being arrested is accentuated. It is very easy when treating a "strumous" child suffering from phlyctenulae with yellow oxide ointment locally, and with cod-liver oil and syrup of iodide of iron internally, instead of using syrup of phosphate of iron. Next day the child returns with all the symptoms aggravated. Yvert (*Rec. d'Ophtal.*, August, 1908) in a lecture at Dijon treated of this subject. He told his hearers that the iodide acted upon the mercury compound, and produced a mercurous iodide which in the presence of an excess of iodine rapidly decomposed into free mercury and the extremely caustic mercuric iodide. The same unpleasant experiences occurred when oxy-cyanide of mercury was used locally to wash out the bladder of a patient taking

iodide. Hollander (Berlin Society of Medicine, May 16th, 1906) pointed out that this double decomposition with the formation of nascent mercuric iodide could be utilized therapeutically in cases of tubercle of mucous membranes, buccal, laryngeal, and cystic. He found that, especially in tubercle of the bladder, excellent results were obtained. The patient is given a teaspoonful of a 5 per cent. solution of iodide of potassium a quarter of an hour before the local treatment, which consists of the insufflation of calomel or its injection in oily emulsion. Yvert concluded by warning his hearers never to put calomel or yellow ointment into an eye until they had ascertained that the patient had not taken iodine, either from a medical man's prescription or in one of the patent medicines which often contain it.

PATHOLOGY.

273.

Brieger's Cachexia Reaction.

In publishing their third communication on the reaction of the serum of carcinomatous and other patients in inhibiting tryptic digestion, L. Brieger and J. Trebing (*Berl. klin. Woch.*, December 21st, 1908) use the term "cachexia reaction." They record the effect of pancreatin on the serum of carcinomatous persons both when operative treatment has been carried out and when this has been found impossible. They found that in 5 cases in which the antitryptic power of the serum was high, the administration of pancreatin was able to depress the titer to the normal limit. The general condition improved during the exhibition of the pancreatin, and in 2 cases the body weight even increased for a time. They explain that the pancreatin had obviously acted beneficially on the cachectic condition without influencing the carcinomatous process in the smallest degree. In 5 further cases the antitryptic titer was 1.10, and after the exhibition of 20 grams of pancreatin, this rose to 1.15 or more. They say, "it appears by this that the antitryptic reaction may be regarded as the quantitative indicator (Gradmesser; literally the measurer of the degree) of cachexia, in that cachexias whose titer can be influenced by pancreatin may perhaps be regarded as possessing a more favourable prognosis than others whose high antitryptic titer is maintained in spite of the pancreatin treatment; in the first-named category, it is possible that the carcinomatous process is progressing slowly." They further give the results of their continued observations on the serum of cancer patients, which show that in cases of carcinoma with histological confirmation of the diagnosis the reaction was marked; in suspicious cases with clinical diagnosis alone the reaction was just positive, and in three sarcoma cases it was also just positive. Diagnosis cannot be made on the reaction alone, but they find that the cachexia reaction with observations on the influence of pancreatin, when compared with the clinical symptoms, may be useful. It was found in a case which was examined before and after operation that a high titer before the operation fell to normal after the lapse of several months. The patient was doing well and was putting on weight. In non-carcinomatous tumours the serum yielded low values. Lastly, they record the titers of the serum of cachectic patients suffering from other diseases than carcinoma. These include diabetes and phthisis. The antitryptic titer was higher than normal.

274.

Incubation Period of Syphilis.

LEVADITI and YAMANOUCHI (*Ann. de l'Inst. Pasteur*, October, 1908) have endeavoured to find some explanation for the length of the incubation period in syphilis by the study of lesions produced experimentally. They have selected as material for observation the keratitis induced by inoculating the virus into the anterior chamber of the eye of the rabbit, and the lesions produced in anthropoids and monkeys by inoculations over the eyebrow. They find that the incubation period is not due to the existence of any cycle of evolution necessary for the *Treponema pallidum*, but corresponds to the slowly progressive development of the histological lesions which are set up by the multiplication of the specific organism. This multiplication takes place at the commencement only to a small degree, owing to the difficulty which the parasites find in assimilating the new nutritive medium and in accustoming themselves to the change of environment. The active multiplication of the parasite and the concomitant termination of the incubation period is due to the completion of those changes in the vessels and newly formed cellular elements which assure for the *Treponema* a plentiful supply of nutritive material.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

275. Paralysis of Left Recurrent Laryngeal Nerve in Mitral Affections.

OSLER (*Arch. des Maladies du Cœur des Vaisseaux et du Sang*, February, 1909) points out that there are two kinds of conditions in which valvular affections of the heart may give rise to the impression that there exists an aneurysm of the aorta. First, in aortic insufficiency the throbbing of the arch may lead one to suspect aneurysm, particularly in young subjects, where the systolic pulsation of the aorta may be very marked; secondly, in mitral lesions, when great dilatation of the left auricle exists, and when this dilated chamber compresses the left recurrent laryngeal nerve. In most of these cases reported in which with mitral disease there has been left recurrent laryngeal paralysis, it has been shown that the nerve has been compressed between the aorta and the dilated auricle; in some the enlarged pulmonary veins compressed the nerve, and in a case of Fischauer's the left branch of the pulmonary artery compressed the nerve. In some cases both recurrent nerves have been paralysed, and such cases have been explained by assuming that the weight of the dilated and engorged heart has drawn down the arch of the aorta and its large branches so as to irritate and cause atrophy of the recurrent nerve loops. The author quotes three cases which have come under his direct observation. The first patient, a woman of 45, had suffered from heart disease for some years. She was fat, the hands were somewhat cyanotic, and there was marked dyspnoea on exertion. The apex beat could not be felt; a faint thrill was detected, and the area of cardiac dullness appeared to be increased; there was no pulsation to be seen or felt to the left of the sternum, nor was there any tracheal tugging. An apical presystolic murmur was heard, also a systolic murmur conducted to mid-axilla. The voice was doubled-toned, and the left vocal cord was paralysed. Death took place about fifteen months later, and at the *post-mortem* examination the mitral orifice was found stenosed and the left auricle greatly dilated; there was no aneurysm. The second case was a woman, aged 27, who gave a history of scarlet fever and whooping-cough in childhood, and a mild attack of diphtheria some months previously, since when she had been ailing. When seen by the author the typical signs of mitral stenosis were present, and for a year her voice had been altered in character; this was found to be due to paralysis of the left recurrent laryngeal nerve: the apex beat was in its normal position; there was a well-marked presystolic thrill, and cardiac dullness commenced at the third rib. A loud presystolic murmur was heard, followed by a ringing first sound. A short, loud systolic murmur was also present, and the pulmonary second sound was accentuated. About one year later recurrent paralysis still existed, and death occurred about six months afterwards. The third case was a man, aged 48, in whom an aneurysm was suspected. There was oedema of the legs and of the bases of the lungs, dyspnoea, and signs of grave asystole when seen by the author. Cardiac pulsation was seen in the third, fourth, fifth, and sixth left interspaces, and also in the second left interspace. On auscultation the double murmurs of aortic and mitral disease were found; the voice was binaural, and the left recurrent nerve paralysed. Improvement in the patient's general condition occurred; x-ray examination showed a very much enlarged left auricle and absence of aortic aneurysm. At the *post-mortem* examination, on opening the pericardium, the appendix of the right auricle was found to reach to the left sternal margin, and the rest of the anterior surface of the heart was formed by the right ventricle; the aortic valves were incompetent; the mitral orifice admitted two fingers, the tricuspid three. All the cavities of the heart were dilated, and the heart generally much hypertrophied. The left auricle was enormous, the aortic valves were sclerotic, the mitral flaps thickened, also the chordae tendineae, and the mitral orifice somewhat narrowed. The left recurrent nerve appeared sclerotic and of an opaque white appearance in that part which was compressed between the left auricle and the aorta.

276. Thrombosis of the Portal Vein.

HECHT (*Wien. klin. Woch.*, 1908, p. 944) reports the fatal illness of a girl aged 15 years, who had a fall downstairs when 6 years of age. Directly after this accident she

vomited dark-red fluid, and attacks of vomiting continued until she was 10. Then they ceased for several years, appearing again when the patient had reached the age of 14. She became emaciated, and when admitted into hospital Hecht noted that the abdomen was distinctly prominent in the region of the epigastrium, the stomach was distended with gas, the liver seemed beneath its normal size, whilst the spleen was enlarged, firm, but not tender. On the day of admission there was free vomiting of dark-brown blood. The temperature was above normal, and the urine, at first free from abnormal constituents, contained nucleo-albumen later on. Blood was frequently found in the motions. On the eighth day oedema of the left foot was observed; ascites followed, the oedema extended to the thighs and vulva, the spleen enlarged rapidly, and the liver also increased in size. The patient died after several attacks of haematemesis. There was thrombosis of the splenic vein. The portal vein was also thrombosed, as had been diagnosed before death; the process had begun in a small varicose pouch, which held a soft clot. On dissection, it was found that the portal vein ran an abnormal course; inferiorly it lay external to the common duct, then it twisted round so as to lie behind that duct, and curled once more forwards, crossing the cystic duct, and entered the liver between the cystic and the hepatic ducts. The cystic duct pressed on the portal vein, and was seen to be the cause of the thrombosis. Hecht, in conclusion, declared that in this case the vein might easily have been mistaken for the common duct had an operation been performed.

277. The Opsonic Index in Lobar Pneumonia.

F. DE MARCHIS (*Lo Sperimentale*, Florence, 1908, lxii, p. 681) has investigated the opsonic index in 17 patients with lobar pneumonia, daily in 10 of them. Of these 10, 4 died, 5 recovered, and 1 recovered after a metapneumonic empyema had been operated on. In all he found that the opsonic index fell during the first few days, rose again before the crisis, and reached the normal again a day or two after the crisis; the administration of quinine made no difference in the index. No rise took place in the cases that did badly, though recovery might occur after the index had fallen to 0.35. In the case developing an empyema after the pneumonia, the index none the less rose to about the normal after the crisis. De Marchis thinks that some care must be exercised in drawing prognostic criteria from the behaviour of the opsonic index in lobar pneumonia; no direct connexion between the index and the degree of leucocytosis attained seemed to exist, and the variations in the index were the same for Fränkel's diplococcus and for *Staphylococcus pyogenes aureus*—hence the opsonin is not specific. He found that many of the leucocytes of the pneumonia patients were incapable of ingesting either the diplococcus or *Staphylococcus pyogenes aureus* in the earlier stages of the disease; and that a spontaneous phagocytosis of these microbes would take place if they were exposed to the leucocytes for some hours in the incubator.

SURGERY.

278. Appendix Abscess in a Young Child.

CHURCHMAN (*Johns Hopkins Hosp. Bull.*, February, 1909) records a case of appendicitis in a child, aged 27 months, with an analysis of 8 other cases under 5 years of age which occurred in the Johns Hopkins Hospital. Originally brought to the hospital with painful micturition of twelve months' duration, becoming worse five days previously, a diagnosis of vesical calculus was made. Examination of the abdomen was negative, and although x-ray suggested a calculus, none was found after careful search under ether, and the symptoms disappeared. A week later, fever, abdominal distension, pain and tenderness, especially on the right side, developed, typical of acute perforative appendicitis with abscess, and an appendectomy and drainage was performed. Except for an early post-operative reaction (rapid pulse and temperature, with negative abdominal condition), possibly due to iodoform poisoning, convalescence was uneventful and recovery complete. The substitution of plain gauze drains for iodoform gauze remedied the above condition, and points

to the wisdom of using plain gauze in young children. Short notes of the other 8 cases are given, while of the whole 9, 6 were boys. Five of the cases gave no history of previous attacks, and the disease was of a severe type when first recognized, perforation having occurred in all. In 4 only did the diagnosis present difficulties, tuberculous arthritis, general peritonitis, cerebro-spinal meningitis, and vesical calculus being the differential diagnosis respectively. Not only were the urinary the only symptoms in the case recorded, but the diagnosis of calculus was supported by x rays, and abdominal examination was negative and the temperature normal. The probable pathology was acute appendicitis characterized by pelvic peritonitis, causing bladder symptoms, which, after subsiding for a time, recurred with rupture and abscess formation extrapelvic. The possibility of appendicitis must be borne in mind in the differential diagnosis in children presenting urinary symptoms or signs of possible hip disease. Palpable resistance on the right side per rectum is a frequent sign, and points to the importance of rectal examination in any doubtful case. As regards prognosis, there is less reason for operative delay in these cases than in adults, as the outlook is good in all such cases unless general peritonitis has occurred, when it becomes almost hopeless.

219. Sunshine and the Eye.

E. O. SISSON discusses (*Ophthalmology*, January, 1909) the effect of intense sunlight upon the eye of the blonde type, in a paper which is preliminary to a research he is undertaking. He reviews the arrangements which Nature has made in a large number of animals to protect the nervous elements of the eye from the deleterious action of the violet and ultra-violet rays. He arrives at the following conclusions: (1) Normal eyes contain pigment which absorbs all rays which are unnecessary for vision. (2) The macula where accurate vision is centred is the best protected by pigment deposits. (3) One of the functions of the visual purple may be to protect the delicate nerve tissue of the retina from light. (4) Pigment does not exclude dangerous actinic rays, such as those from the tuiol mercury vapour lamp. (5) That these actinic rays are destructive to living protoplasm. (6) The anatomy and function of any organ at a higher type can be better understood by a study of the same organ in a lower. (7) The amount of pigment in the eyes of animals and birds and the presence of other structures to protect their eyes from excessive light varies with their habits and the region they live in. (8) We have ample proof that light injures eyes. (9) Glasses protect the eyes because glass absorbs the ultra-violet rays. (10) The facts adduced show the necessity for pigment in the eyes; the density of the pigment must be in proportion to the degree of light to which the man has to be exposed.

220. Anterior Dislocation of Shoulder.

THOMAS (*Am. Journ. of Med. Sciences*, February and March, 1909) discusses at length the etiology, pathology, and treatment of habitual or recurrent anterior dislocation of the shoulder. Seeing that the lesion is due to a traumatic cicatricial, anterior hernial pouch of the capsule, the object of any operation for its relief must be to obliterate the hernial protrusion, and at the same time any free or attached joint body that may be present can be removed. The essential cause of such recurrences is a relaxation due to the addition to the original capsule of the new cicatricial portion which bridges over the gap between the margins of the tear produced by the first dislocation. In 34 cases collected from the literature the operation of capsulorrhaphy, or shortening the capsule, was followed by success in 33 of the cases, and in the one apparent failure recurrence took place a month later only after a degree of violence sufficient to have produced dislocation in a normal shoulder. In all of these the incision employed either divided the deltoid or separated it from the pectoralis major, but the axillary incision was followed in the author's case as being the better route, since division of the deltoid is avoided and the site of the original capsular tear is better exposed, while a smaller incision is required and, if drainage is needed, it is dependent. The only muscle divided was the subscapularis, and the anterior circumflex vessels were divided between two ligatures in order to allow of retraction inwards of the large vessels. This route exposes exactly the part of the capsule torn, which in the case recorded presented a protrusion. While good results have followed merely reefing the capsule without opening it, exploration of the joint is advisable in order to remove any movable joint body that may be present. The opening in the capsule is closed by sutures, either by overlapping the edges or after excision

of a piece of the capsule. Prior to operation the patient had had nine dislocations, and these even recurred while he was wearing a leather shoulder brace which had for its main object the limiting of abduction. A fortnight after the operation all bandages were removed and a leather brace substituted for a week, and in the fourth week he was allowed to use his arm freely without strain. In the sixth week forcible movements were tried, and he was able to hold the arm in the vertical position in abduction with the arm alongside the head, and nine months after the operation he had full use of the arm and shoulder, swimming, boxing, and swinging a sledge hammer.

231. Scoliosis and Infantile Paralysis.

M. FIRMIN CARLES (*Rev. d'Orthopédie*, January, 1909) reviews several cases of spinal curvature in infantile paralysis, together with the current French theories concerning the causes of scoliosis in association with this disease. The article is illustrated with photographs of several of the patients, and the study of the distribution of paralysis by the electrical methods is very complete. The author concludes that all these cases cannot be attributed to the variation in the length of the legs which follows a unilateral paralysis, but that they are primarily paralytic and due to unilateral, partial, or complete paralysis of spinal muscles. The scoliosis that is a result of inequality of the limbs is long in making its appearance, is compensatory in character, and easily cured by levelling the pelvis; whereas, on the contrary, the scoliosis that is primarily paralytic makes its appearance early after the incidence of the acute poliomyelitis. The views of Messner and Kirmisson—namely, that the convexity of the curve is in general directed towards the sound side, and only occasionally towards the side of the paralysis, and that the cause of this is contraction of the unaffected muscles—are not acceptable to the author. His opinion is that the scoliosis is due to unilateral, partial, or complete paralysis of spinal muscles, and that the convexity of the curve, according to the case, is directed towards the sound side or the paralysed side, and is determined by three factors: (1) The extent of the paralysis, whether total, unilateral, or limited to a definite region of spinal muscles and unilateral in that region; (2) the degree of rapidity of onset and intensity of lesion on one or other side (atrophy of affected muscles and unilateral atrophy of the bodies of the corresponding vertebrae); (3) the contraction of the spinal muscles of the sound side which are the antagonists of the paralysed group on the opposite side, and symmetrical with them.

OBSTETRICS.

232. Management of Occipito-posterior and Transverse Positions of the Fetal Head.

KNAPP (*Bull. Lying-in Hosp. City New York*, September, 1908) writes that one of the commonest causes of prolonged labour is the lack of rotation of the fetal head either before or after entering the superior strait. Though the pelvis may be large, and the other conditions normal, the mother may exhaust herself, attempting to push out a head which does not advance owing to its abnormal position. From a half to two-thirds of all occipito-posterior cases rotate spontaneously, and interference is unnecessary unless the mother or child shows signs of exhaustion. It is not always possible to tell whether a case is going to rotate or not, but by watching it for a certain period we can tell whether there is any change in its position. Other conditions being normal, if there is no change for two hours after the beginning of the second stage, it is hardly probable that there will be any, and it is best to interfere. In these cases special attention should be paid to the condition of the mother and child, and interference is desirable rather early than late. Frequently a woman will not get a fully-dilated cervix by her own efforts, especially in occipito-posterior cases, when she may even die from exhaustion before the cervix is dilated. If the head is small in relation to the pelvis, one may wait longer for rotation than when the head is large. An absolute diagnosis is necessary for a successful cephalic application. This is not always easy to make. Even when familiar with the sutures and fontanelles, the bulging of the occasionally unruptured membranes and the caput hamper the examiner. If the head is well down in the pelvis, two fingers will as a rule suffice, though it is necessary to be perfectly familiar with the sutures and fontanelles. The anterior or large fontanelle has four sutures running from it, while the posterior has three. When one

is sure that he feels the posterior fontanelle, it is necessary to distinguish the sagittal suture; as a rule its edges may be worked upon themselves by the fingers, while the lambdoid suture is generally overlapped. The diagnosis is only complete when the size of the head and the size and shape of the pelvis are made out. If the examination cannot be completed with two fingers, the patient should be placed under chloroform, and the whole hand used. If the head be floating above the brim, and by our examination we decide that it can come through, the first step is to rotate it with the hand. The external hand can assist by attempting to rotate the body through the abdominal wall. The tendency of these heads is to again assume the occipito-posterior or at least the transverse position after the hand has been withdrawn; if this occurs, the use of forceps is indicated, or a version must be performed. Where the pelvis is irregular or the fetal head soft, a version is preferable; where the head and pelvis are normal, the writer usually tries forceps, but if a satisfactory application is not quickly made, he resorts at once to version. If after rotation the head remains anterior, the position is occipito-posterior, and delivery takes place accordingly. In some cases the head becomes lodged in mid-pelvis; the best procedure is to rotate with the hand and apply the forceps, or it may be possible to bring the head to a transverse position by the hand when complete rotation is impossible, and to make a cephalic application from the transverse position. Rotation by means of the forceps is liable to injure the head and the maternal soft parts. In rotating by the hand or the forceps, slight upward pressure should be made. In a large number of cases where the head has spontaneously reached the perineum in an occipito-posterior position, it may be rotated to an anterior position by either the manual or the instrumental method.

283. Pregnancy and Phtisis.

NEITNER (*Zentralbl. f. Gynäk.*, No. 8, 1909) has collected, in a Strassburg thesis, 27 severe and 34 milder cases of tuberculous pulmonary phtisis detected in a series of 5,720 pregnant women. In 41, or 67 per cent., of the cases the lung symptoms grew worse during pregnancy. In every case where the larynx was involved the patient's condition became aggravated in the puerperium. In 18 cases pregnancy was interrupted by an obstetric operation; in 3 by Caesarean section, for pelvic contraction in 2, and for cancer of the cervix in the third; in 3 by induced abortion, and in 7 by induction of premature labour. In 16 abortion or premature labour occurred simultaneously. In Neitner's series induction of abortion gave the best results, but this obstetric operation was mostly practised on patients where the lung disease was not advanced. The stage of phtisis in any particular case is of great importance in regard to artificial interruption of the pregnancy.

GYNAECOLOGY.

294. Primary Cancer of Female Urethra.

MAISS (*Zentralbl. f. Gynäk.*, No. 3, 1909) recently read before the Breslau Gynaecological Society a report of a case of this rare condition—the twentieth authentic instance of primary urethral cancer recorded in medical literature. He observed that Karati had published a monograph on cancer of the female urethra, including 57 cases, amongst which 19 were without doubt primary, 4 more were of doubtful origin, and 34 were classed as vulvo-urethral cancer. Maiss's patient was 46 years of age; she had given birth to four children spontaneously, the last labour occurring fifteen years before she came under the reporter's care. The catamenia were normal. She consulted Maiss for dysuria of less than two months' duration, ending in retention, so that for several days no urine could be passed without the catheter. A tumour of the size of a walnut pushed out almost the entire anterior wall of the urethra; it was of firm consistence and was found to proceed from the posterior wall. The urethral canal was so narrow and the obstructing tumour so tough that it was a slender catheter could not be passed without some force. There was no disease of the internal organs and no evidence of glandular infection. The tumour was excised. Three weeks later, as there was incontinence of urine, an artificial urethra was made, but the results were at first unsatisfactory. The patient was discharged from hospital with a urinal, but returned for inspection six weeks later in good health and able to hold her urine.

THERAPEUTICS.

295. The Limitation of Common Salt in Diet as a Therapeutic Agent.

THE employment of an exclusively milk diet in the treatment of disease was first scientifically suggested by Karell in 1866, but was not largely employed by the medical profession. Jacobs referred to this method of treating disturbances of circulation and adiposity last year, and appears to have attracted more notice than Karell did. Mendel (*Munch. med. Woch.*, March 2nd and 9th, 1909) finds that the undoubted benefit which follows the employment of a strict milk diet has been explained in various ways. Some observers have inclined to the view that milk improves the condition of the cardiac muscle, and reduces waste energy of the heart. Others have ascribed the benefit to the peculiarly happy mixture of albumen, fat, and carbohydrate, and consider that the little stimulating effect of milk is responsible for its diuretic action. Romberg and his followers, however, regard these grounds as secondary, and believe that milk acts in virtue of its poverty in sodium chloride. Mendel argues that if Karell's method is really dependent on a limitation of sodium chloride, the same beneficial results would be obtainable when any other diet containing very little common salt is given. He cites a case in support of this contention. The patient was suffering from myocarditis. The quantity of urine increased rapidly, and the anasarca and ascites disappeared in response to a course of Karell's treatment. Six weeks later the symptoms recurred, and as the patient objected strongly to the milk diet, he was given a diet consisting of coffee with milk, meat, bread, butter, potatoes, and fruit, without any additional salt. The symptoms disappeared in response to this diet as rapidly as they had done under the milk diet. A second case is mentioned in support of the same idea. Here it was shown that an excessive intake of sodium chloride was chiefly responsible for symptoms of dropsy, etc., while the same disappeared as soon as milk diet was ordered. Milk contains but 1.6 gram of sodium chloride per litre. Mendel claims that it is this small salt content of milk which produces the marked change. In cases of adiposity, without oedema and without any disturbance of the circulatory system, the employment of a diet containing a limited quantity of salt produces increased diuresis and loss of weight. Common salt used to be regarded as an indifferent substance. Javal and Widal first showed that a retention of 1 gram of sodium chloride was capable of producing oedema. It has been shown that if the quantity is reduced to a minimum the osmotic pressure of the fluids in the vessels and tissues increases, and more water is attracted in order to reduce this increased osmosis. It is difficult to determine how far the increased absorption of water, following on an increased intake of sodium chloride, is physiological, and how far it may be considered to be pathological. Mendel speaks of a hydraemic plethora, as distinguished from a true plethora, by which he means the increase beyond normal limits of water in the organism. The experiments of Cohnheim and Lichtheim lend support to his theory. They found that no apparent changes take place when physiological saline fluid in large quantities is injected into the vessels of animals. The rate of circulation, however, is found to be increased until the organism has reduced the quantity of fluid to normal limits again. If the animal is killed before this takes place, the organs of the abdomen are found to be oedematous, while those of the thorax are natural. Further, when the femoral vein is tied no oedema is seen, but if saline fluid be injected in large quantities after the ligature, the limb swells considerably. Clinical as well as experimental evidence is available, which tends to show that hydraemic plethora in itself does not lead to retention of fluid, but as soon as the circulatory organs are damaged it immediately leads to oedema. Mendel argues that the oedema of acute and chronic nephritis and of heart disease depends on the primary presence of a hydraemic plethora. He applies his arguments to a number of other conditions, including eczema, burning of the surface of the body, thrombosis of veins, etc. He further shows by means of cases that the action of digitalis is at times only evident when employed together with a limited supply of sodium chloride. The marked effect of a milk diet in cardiac oedema is also illustrated by clinical histories. In speaking of a limited supply of salt, he means from 2 to 4 grams in twenty-four hours. This represents from one-eighth to one-quarter of the normal intake. It is, in his opinion, inadvisable to cut off the sodium chloride altogether.

This is conveniently supplied in milk, but other diets yield similar results. Children stand exclusive milk diets well, and the same applies to adults suffering from acute illnesses. Adults who need a prolonged limitation of salt cannot be kept sufficiently long on milk, and therefore need a mixed diet with little salt. He speaks in the highest terms of the effects of limiting the common salt for a number of disturbances of the circulatory organ, etc.

236. Vitralin, a Disinfecting Wall Paint.

XYLANDER has compared the disinfectant qualities of various wall paints, and has paid special attention to a substance called vitralin, which is, according to the manufacturers, Rosenzweig and Baumann, Cassel, a product of linseed oil varnish with other substances, which hasten oxidation (*Arbeit, a. d. kaiserlichem Gesundheitsamte*, vol. xxix, Part 2, 1908). It contains no resins or copal, and no white lead. It is said to resist the influence of vapours, gases, acids, salts, and sea water. It was compared with white lead and zinc colours, calcium paints, and glue containing paint. The various paints were applied to tiles, oak boards, clinkers, and glass plates in three coats and allowed to dry. After the surface was dry, infection with various bacteria was undertaken. When the plates, etc., were exposed to daylight, tubercle bacilli were killed in three days, as against five days by oil paint, ten days by the other forms of paint. *Bacillus typhosus* and *paratyphosus* were killed in six hours, as against eight hours by oil paint (the other paints did not kill at all), while diphtheria bacilli were killed in four hours by vitralin and in five hours by oil paint, while the other paints took ten days. When kept in the dark, more marked differences were seen, as are shown in the following table:

	Vitralin.	Oil Paints.	Other Paints.
Tubercle bacilli ...	Killed in 5 days	Not killed in 30 days	Not killed in 30 days.
Typhoid bacilli ...	Killed in 10 hours	Killed in 12 hours	Not killed in 10 days.
Paratyphoid bacilli ...	Killed in 10 hours	Killed in 12 hours	Not killed in 10 days.
Staphylococci ...	Killed in 13 hours	Killed in 16 hours	... 30 days.
Diphtheria bacilli ...	Killed in 5 hours	Killed in 6 hours	Not killed in 10 days.
Anthrax spores ...	Not killed in 30 days	Not killed in 30 days	Not killed in 30 days.
Streptococci ...	Killed in 10 hours	Killed in 12 hours	Not killed in 10 days.

In further experiments, he found that the bactericidal action of vitralin was still present toward the vegetative forms after three months. In the control experiments oil paints also exercised a bactericidal action after the same time, but this was less marked than that of vitralin, save with diphtheria bacilli. The other paints had no action. He was able to show that the presence of oxygen was necessary for the action of vitralin, and that no disinfection took place when carbonic acid gas or hydrogen was used. The action proved to reach an optimum with a medium degree of moisture. Dry air prevented the action within thirty hours, while saturated air only allowed vitralin to kill after twenty hours. Previous soaking of the painted plates, etc., in strong solutions of the ordinary disinfectants, with subsequent washing off, did not lessen the disinfecting qualities of the paint. Xylander therefore speaks in high terms of this paint.

PATHOLOGY.

287. Exudates and Transudates.

ALONZO (*Rif. Med.*, March 29th, 1909) sums up the results of an experimental examination of some of the characters differentiating exudates from transudates. He finds that as a rule the density varies directly with the percentage of albumen. Exudates usually have a greater percentage of albumen than transudates, at least as far as simple effusions are concerned; but effusions are often of a mixed character, sometimes starting as simple exudates and becoming mixed with transudates, or vice versa, or even beginning *ab initio* as mixed effusions; this mixing may be of a temporary or permanent character; according to the nature of the cause. The percentage of

albumen forms one means of differentiating between the two types. The albumen found in effusions has a double source, namely, from the blood and from the surrounding tissues. A source of fallacy in estimating the percentage of albumen is the ignorance of what proportion the mass removed bears to the mass of liquid left, the degree of concentration, for example, after the first withdrawal of a transudate the albumen may not only not decrease but increase, which may be due to absorption of fluid and increased concentration of what is left, or to increased outpour of albumen from the tissues and blood due to good nutritive condition, or, on the other hand, if these conditions can be excluded, may be due to the onset of an inflammatory state and admixture with exudate. Later and repeated exploratory punctures show a steadily decreasing amount of albumen; *ceteris paribus*, the longer the fluid remains in a cavity the richer it becomes in albumen. Exudates contain more albumen than transudates, owing to the changes in the blood vessels and tissues brought about by the processes of inflammation. The estimation of the percentage of albumen, although subject to fallacies like other methods, still remains the best means of differentiating between the two classes of fluid, and possesses an absolute value in the case of pure effusions.

288. Reactions of Cobra Venom with Antiserum.

CALMETTE and MASSOL (*Ann. de l'Inst. Pasteur*, February, 1909) summarize as follows certain observations which they have made on the interactions of cobra venom with the serum of vaccinated horses: (1) The serum of the horse vaccinated against cobra venom precipitates this venom. (2) This precipitate only appears at the moment when the mixture of serum and venom becomes atoxic, and after about one hour at the temperature of the laboratory. It fails to be produced when the serum is in excess. (3) Hence this precipitating reaction may serve to measure approximately *in vitro* the antitoxic value of an antivenom serum. (4) In a mixture of serum and venom, exactly neutralized, the precipitate and the liquid, separated by centrifugalization, are atoxic. (5) The precipitate appears equally well when solutions of unheated venom are employed, and when the solutions of venom are previously deprived, by heating to 76° to 78° C., followed by filtration, of their albumens coagulable by heat, which are atoxic. (6) The atoxic precipitate of serum and venom in the fresh state is insoluble in physiological salt solution, but soluble in water slightly acidulated with HCl or in presence of an excess of venom. (7) The same precipitate, heated to 72° in an acid medium, recovers almost all its previous toxicity. The venom and the antitoxin therefore become dissociated, and the antitoxin is destroyed. (8) In becoming precipitated under the action of the serum, the venom takes up about thirty to forty times its weight of dry serum extract. (9) The toxic precipitate of serum and venom, when separated by centrifugalization and washed, may be preserved in the dry state. In this form it is insoluble in an excess of venom and in acidulated water, but it may be dissolved and commence to split up on digestion by trypsin or papain. If the product of this digestion be heated at 72° in presence of a very small quantity of HCl, the antitoxin is destroyed, whilst the venom is set at liberty, and recovers all its toxicity and its capacity for being neutralized again by antitoxin.

239. Search for Tubercle Bacilli in the Sputa.

VALERIO (*Rif. Med.*, July 27th, 1908), referring to the well-known difficulty of detecting, quickly and surely, tubercle bacilli in the sputum of early cases of tuberculosis, just when it is most important to know, describes certain experiments he has carried out. His object was to find some culture medium which should favour the growth of tubercle bacilli and retard the growth of associated bacilli. Hesse's medium has been highly recommended as a suitable medium for this purpose, but the author believes that there is no ground for this assertion, and that the apparent advantage of Hesse's medium is really due to some substance contained in the added sputa. He believes that sputum contains some nutritive substance which is favourable to the growth of tubercle bacilli. Moreover, control experiments showed that Hesse's medium did not hinder the development of other bacteria. Hence, the practical conclusion is that the quickest and best method of developing tubercle bacilli cultures is to place the sputum for forty-eight to seventy-two hours in a thermostat at 37° C., in a Petre capsule, on a piece of blotting-paper, and examine every six hours. The common organisms found in sputum do not hinder the development of the tubercle bacilli.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

290. *Streptococci and the Diseases of Childhood.*

J. RITTER (*Berl. Klin. Woch.*, April 5th, 1909), who deals with the significance of streptococci in diseases of childhood and their treatment by serumtherapy, states that local suppuration rarely occurs by means of streptococci alone. In the majority of these cases staphylococci are found primarily, and the streptococci occur as secondary infecting organisms. Garré's experiment of causing an infection by rubbing staphylococci into the unbroken skin never succeeds with streptococci. These organisms produce local infections at times, and at other times general infections. This he believes to be due to the differences in the nutrient media, that is, in the tissues, and not to differences in the cocci. In affections of the tonsils, in rheumatism, and in infective processes of the skin and the mucous membranes, the streptococci which are frequently found are always associated with some other micro-organisms. In enteritis and pertussis at times streptococci are found, but in each case their presence can only be regarded as secondary. The significance of streptococci in diphtheritic infections is next dealt with, and the author expresses the opinion that the signal of danger is to be found in the plentiful presence of these secondary invaders. In scarlatina, too, he regards the occurrence of streptococci as accidental and not as a causal organism. The primary activity of streptococci is limited to erysipelas, some forms of fresh local suppuration and acute infections of wounds. He believes, however, that streptococci are practically always the same, no matter what symptoms they call forth. He does not place any confidence on the agglutination phenomenon as a means of differentiating the kinds of streptococci, and concludes that it is only the soil which causes differences in the virulence. Thus, it makes all the difference whether the cocci have been grown in the human tissues or in animal tissues or on artificial culture media. This is the cause of the difficulty in preparing efficacious immune serums for therapeutic purposes. Four different classes have been introduced. First there is the serum gained by treatment with non-virulent cocci derived from human affections (for example, Menzer, Parel, Moser). Secondly, there is the serum gained by cocci the virulence of which has been increased by passage through animals, but this serum is useless for human streptococcal infections (Marmorek and Aronson's first serum). Thirdly, the serum is gained by means of the original human coccus and also the same coccus, which has been rendered virulent by passage (Aronson's second preparation, Ruppel). Fourthly, there is the serum gained by primary treatment with cocci which are virulent to animals and subsequent treatment with human cocci (Meyer-Ruppel). The first two types are of theoretical, but not of practical, value. The author therefore investigated the effect of Aronson's second preparation, but states that he realizes that Meyer-Ruppel's serum possesses distinct advantages over this one. Although he regarded it as extremely doubtful whether the serum would prove active against a chance strain of streptococci which produced a given infection, he was quite surprised at the good results he obtained in erysipelas. In all he treated 22 children by means of the serum for erysipelas. The dose taken was 20 c.c.m. for each 10 kilograms body weight. In 80 per cent. of these cases the symptoms disappeared within two days after the injection, while the rest were cured within three days. Only in 3 cases did a mild rash appear later. In all his cases he was astonished to find extremely little bad after-effects. In four advanced cases of umbilical infection (primary) of infants, the serum was tried, but all the infants died. He obtained, however, apparently good results in secondary infection of the tonsil with the serum. In 34 cases the process rapidly cleared up. Further, he treated 19 cases of scarlatina with scarlatinal serum. Of these, 10 recovered and 9 died. The recovery, however, corresponded to the rapid fall in temperature and disappearance of symptoms, as is seen in mild cases. Details of these cases are given; 14 cases of septic diphtheria were treated with streptococcal serum as well as with diphtheria antitoxin. Although the number of these cases is small, he considers that the results which he obtained justify a continuation of this form of treatment. He considers that the antistreptococcal serum

should be employed where other means of treatment fail. In any case it should be employed before the infection is so far advanced that no form of therapy is capable of saving the life.

291. *The Heart in Acute Infectious Disease.*

ROBINSON (*Amer. Journ. Med. Sci.*, December, 1908) regards the management of the heart during the early period of convalescence from acute infectious diseases as of paramount importance in treatment, since upon the prevention of cardiac dilatation mainly depends the patient's future vigour and well-being. Without ignoring other organs, it must be borne in mind that the heart stands out primarily and essentially in need of careful watching and treatment in the majority of instances, more especially in typhoid, diphtheria, influenza, pneumonia, and scarlet fever, while in acute articular rheumatism there is the added danger of inflammatory complications. The cardiac muscle and its nervous control are generally organically affected if the infectious disease has been severe or of long duration, more or less cloudy changes and fatty degeneration being produced by the various toxic elements associated with the particular disease. Various pathological lesions may exist affecting the cardiac nerves, muscle, and vessels, and it is probable that, in cases where the infectious disease has been grave or prolonged, a relatively acute myocarditis is set up. As to treatment—for example, in typhoid fever—it is held to be wise not to allow the patient even to sit up in bed for a week or ten days after the temperature has reached the normal, and he should not leave his bed until he has sat up in bed several times without causing any considerable changes in his pulse or cardiac action. Increased pulse-rate, irregularity, or intermittence, especially if associated with a soft systolic mitral murmur, accentuation of the pulmonic second sound, or a notable lack of tone in the first sound, are indications for a further period of rest in the recumbent position. Marked slowness of the heart's action requires, if possible, greater care, owing to the liability to cardiac failure; and mental rest is as important as physical, especially in those whose occupation has been pre-eminently an intellectual one. Of drugs, strophanthus by mouth or hypodermically is recommended during the acute attack, followed later by strychnine, coca, or digitalis, and iron when there is evident anaemia. For convalescents in poor circumstances recovering from such diseases the need for institutions more especially devoted to their treatment is urged.

SURGERY.

292. *Surgical Treatment of Basedow's Disease.*

H. MOSES (*Berl. Klin.*, April, 1909) discusses the value and prognosis of surgical intervention in the treatment of Basedow's disease, and suggests that recourse to the knife is too often neglected or unduly delayed in favour of purely medical methods. The inclusion of this grave and distressing affection in the increasing list of maladies that are now brought under surgical as well as medical care is justified, in the first place, by the fact that of the many different theories of the origin of Basedow's disease, that of Moebius, which assumes a morbid condition of the thyroid body and a morbid change in its secretion, has received the widest acceptance. A remote and primary cause may be found in disease of the sympathetic or some altered condition of the blood, but if, as Moebius holds, the symptoms of Basedow's disease are due to flooding of the organism by a toxic thyroid secretion, removal of the source of this agent is fairly indicated. Operative treatment, Moses holds, is indicated in every case of Basedow's disease, whatever form this may present, when a not unduly prolonged course of medicinal treatment has failed to do any good. Stress is laid upon the necessity of intervening before the development of severe cardiac and pulmonary complications. In operations practised directly on the thyroid body with the object of reducing the amount of secreting tissue, and thus restricting the discharge into the organism of its toxic secretion, it is advisable, the author states, to protect the wound in the neck against infection from the patient's mouth and hair by a small sterilized screen placed just below the

chin. In discussing the choice of the anaesthetic method in such operations on the thyroid, he recommends general narcosis in preference to local anaesthesia, as being more convenient for the surgeon, not more dangerous in this than in any other class of operations, and for the sensitive and restless subjects of Basedow's disease more humane. In the surgical treatment of this disease by direct attack on the gland, hemistruumectomy, or removal of one lobe, has hitherto been the operation of choice. Ligation of the thyroid arteries has not met with much favour. In most instances three arteries have been tied, but some surgeons have secured and divided all four vessels without any serious results. This method is specially indicated in cases of quite recent and not very severe Basedow's disease with a very vascular goitre. Jaboulay's operation of exothyropexy, by which the enlarged gland is exposed and displaced but not removed, might do some temporary good as a palliative measure in cases of asphyxia caused by very large goitre, but only in very exceptional cases would it, in the author's opinion, be indicated in the treatment of Basedow's disease. Resection of the superior cervical ganglion, which has been practised by French surgeons holding that the morbid phenomena of Basedow's disease are due to a primary lesion of the sympathetic system, is not favoured in Germany. This operation, the author asserts, has technical difficulties, and its results have not been encouraging. The mortality of unilateral strumectomy for Basedow's disease, though it has in the course of the last few years been reduced from about 13 to 14 per cent., is still higher than that of the same operation in other forms of goitre, which in Kocher's last series of 600 cases was not more than 3 per cent. In many cases of the form of goitre under discussion the thyroid vessels, especially the veins, are very large and easily lacerable, and the free and continuous bleeding may endanger life, not only directly, but also indirectly by flooding the field of operation and prolonging the work of the surgeon. Partial removal of an exophthalmic goitre has been brought into discredit also by frequent instances of sudden death during or soon after the operation. In most instances of this disastrous complication of strumectomy for Basedow's disease, death, the author points out, is due, not, as was formerly supposed, to the action of the anaesthetic, but to the association with the goitre of a persistent and hypertrophied thymus. The difficulty in diagnosing this condition sometimes prevents the surgeon from rejecting in a case of this kind the idea of an operation; but, as the author points out, it should be borne in mind that to the subject of Basedow's disease who has not undergone any surgical treatment an enlarged thymus is a constant cause of dread and danger. Another unfavourable condition to surgical intervention, which is attributed to delay in associating surgical with medical treatment, is the advanced development of toxic lesions of the heart and lungs. The post-operative occurrence of so-called thyroid fever has, the author asserts, been seldom observed, and may, it is held, be effectually prevented by proper attention to the aseptic technique of the operation. Moses gives a very favourable report of the results of strumectomy observed in the large majority of patients who have recovered from the immediate effects of the operation. There are good grounds, he states, for full satisfaction in regard to the decided benefits following surgical treatment. Marked signs of improvement are rapidly developed during the first week, after which there is a continuous, though slower, advance. In the course of the first three or four days the pulse frequency falls from 150 to 80. The subjective symptoms are relieved very quickly, the patient becoming calmer and less irritable, and the mental tone being much improved. It is acknowledged, however, that instances of ideal cure in which all the symptoms of Basedow's disease disappear are very rare. Exophthalmos is a very resistant symptom, which, though it may be slightly modified after the operation, usually persists when every other symptom of Basedow's disease has disappeared. In the exceptional cases in which surgical treatment has not influenced the objective signs the general condition is usually much improved and the patient feels as if restored to good health and former vigour.

293. Amblyopia from Mercurial Poisoning.

CORONAT (*Lyon Méd.*, January 24th, 1909) records a case of amblyopia, which he believes was due to chronic poisoning by mercury. His patient, a medical man, was accidentally inoculated with syphilis on the eyelid. He took mercury for ten years in large doses, continuing the treatment for three months at a time with no interval longer than a month. At various times he showed signs

of the mercurial intoxication, such as colic with haemorrhagic diarrhoea, pyrexia, and a scarlet rash. Later paresis of the deltoids and intercostal pains showed involvement of the nervous system before any ocular symptoms were noticed. Paresis of accommodation occurred five years after the beginning of the treatment. The ocular symptoms were always aggravated by a renewal or increase of the mercurial dosage. In each eye a central scotoma was the first phenomenon. In the left eye, which was first affected, this remained small and unaltered for a year; blindness did not occur till after an aggravation of the intoxication, which was shown by other grave accidents such as vomiting and diarrhoea. In the right eye the central scotoma was uncomplicated until, in addition to the usual dosage of mercury, five injections of atoxyl had been given. The papillary atrophy of syphilis, whether associated with tabes or not, seldom begins with a central scotoma; indeed Coronat believes that where this does occur it is due to a superadded intoxication, especially alcoholism. In tabes, the ophthalmoscopic changes in the papilla are often accentuated when the vision is relatively good. In Coronat's case vision was reduced to mere perception of light and darkness, although the papilla was relatively of good colour. Optic atrophy has not been hitherto considered as a complication of mercurial poisoning, but in the case recorded the dosage was altogether abnormal both in amount and in duration.

OBSTETRICS.

294. The Oedema of Pregnancy.

RUDAUS (*La Clin.*, January 15th, 1909) writes that oedema in obstetrical practice is generally regarded as a symptom of albuminuria requiring the treatment suitable for this affection, or as the result of impeded circulation due to the increase in the size of the uterus and consequent abdominal pressure. There is another form of oedema which is not accompanied by any trace of albumen, and which appears too early in the pregnancy to be due to the presence of the enlarged uterus. The patient will be found to be suffering from some minor ailment of the liver, kidneys, intestines, or possibly the thyroid or suprarenal bodies. Or she will have gastric disturbance, headaches, and neuralgia. A careful examination of the urine will show that, although there is no albumen present, the quantity excreted is below normal. A pregnant woman should excrete from a pint and a quarter to a pint and a half of urine in twenty-four hours, and this quantity often falls to less than a pint. When oedema appears it should be systematically measured. Further examination will show a diminution in the amount of urea and chlorates present, while the arterial tension is higher than normal. Treatment entails rest in the recumbent position, a daily morning dose of magnesia, and diuretic beverages during the day, such as *uva ursi*, with two teaspoonfuls of lactose. Salt must be omitted from the diet, which, however, may include pepper, lemon, and vinegar, as well as the following articles: Vegetable soups, white meats, fresh-water fish, eggs, potatoes, rice, peas, haricots, carrots, artichokes, and salads, cream and cooked fruits, bread without salt, and as drinks, milk, Evian water, or some other mineral water.

295. Acute Gangrenous Appendicitis Occurring during Pregnancy and Labour.

LOBENSTINE (*Bullet. Lying-in Hosp.*, City of New York, September, 1908) considers that attacks of appendicitis are not infrequent during pregnancy. The development of such attacks is favoured by the greater degree of constipation existing under these circumstances. In those cases in which the appendix, from a previous attack, has become adherent to the uterus, tubes or ovaries, such attacks are more likely to be renewed, owing to the increased traction or pressure on the appendix, meso-appendix, or caecum. The milder cases are not easily diagnosed, the pain being mistaken for a threatened miscarriage, a salpingitis, or ureteritis. In the really severe cases one has to remember that at the onset of the attack they may be confused with cases of acute idiopathic pyelitis of pregnancy, or with the symptoms of torsion of the pedicle of an ovarian cyst. Palliative treatment is the best in the milder cases, while in the severer an operation is desirable at once, as in the non-pregnant state. The choice of incision lies between that of McBurney and that of Deaver, at the outer border of the right rectus muscle. Either of these incisions secures a firm abdominal scar. The anatomical landmarks are often much altered: the appendix may be higher than usual or else bound

down and posterior to the uterus. Extreme gentleness of manipulation is requisite, since from the severity of the inflammation or from rough handling the patient may abort or go into premature labour. If uterine contractions begin soon after the operation, adhesions that are forming are almost invariably torn asunder, and the infection may rapidly become generalized. The author gives his notes upon five such cases, in which operation was undertaken and a gangrenous appendix removed: two of the patients aborted, and three died of general septic infection. These cases were not brought for treatment until peritonitis was severe and the general infection well marked. If the operation is an early one, and if it is conducted with care, and particularly if the inflammation is not too extensive, the patient may proceed to term. Induction of labour is not justifiable, since pregnancy may not be interrupted; and the induction itself in the presence of a severe process may add much to the gravity of the condition.

GYNAECOLOGY.

296. Appendicitis and Disease of the Female Genital Organs.

PAUL PROFANTER (*Wien. klin. Woch.*, No. 11, 1909) calls attention to a report, presented to the Berlin Medical Association, on 400 cases operated on for appendicitis, of which between 9 and 10 per cent. had proved to be suffering from some complaint other than appendicitis. Such a report emphasizes both the difficulty of and the necessity for a right diagnosis. Profanter gives a list of the many conditions which may be mistaken for appendicitis, but deals especially with pseudo-appendicitis nervosa and with diseases of the adnexa. In pseudo-appendicitis there is great tenderness at or near McBurney's spot, and it is this tenderness which is liable to cause errors of diagnosis. Dretzel has pointed out that the tenderness in pseudo-appendicitis differs from that in all other affections of abdominal organs in which the peritoneum is implicated, in that it tends to grow less and often disappears shortly after gradual, deep, strong pressure, instead of increasing in intensity. Profanter quotes Lanz, Keith, and Obratow in support of his view that pain at or about McBurney's spot is present not only in appendicitis but also in inflammatory affections of other organs in the abdominal cavity if the inflammation has affected the sensitive parietal peritoneum. He deals with the extent to which the sympathetic system is involved in inflammatory disease of abdominal organs, in order to explain the pains felt in other and distant parts of the body and the pain which in appendicitis or in disease of the adnexa or other abdominal organs may be felt on the sound side when it is absent on the diseased side, perhaps because the sympathetic nerve plexus is anaesthetized by the pressure of inflammatory oedematous swelling. The diagnosis between appendicitis and disease of the adnexa may be a matter of enormous difficulty. In a large proportion of all women during the period of full sex activity—a proportion which Profanter would put as high as one-half—the appendix has sunk in the abdomen so as to become for practical purposes a pelvic organ, while in a few cases the tubes rise so high as to be near to a normally situated appendix. In such cases the diagnosis will present especial difficulties, and also infectious disease of the appendix is likely to spread to the adnexa and vice versa. With normally situated organs a possible direct peritoneal connexion between the appendix and the right ovary by means of the so-called ligamentum appendiculo-ovarium and the connexion by means of the retroperitoneal connective tissue have to be considered. The intimate connexion between the appendix and the female genital organs explains the especial liability of women to an attack of appendicitis at the time of menstruation. Different methods of physical examination are suggested as helpful in establishing a diagnosis of appendicitis. Roving finds that strong pressure of the descending colon inwards and upwards in the left iliac fossa will elicit, in appendicitis, the characteristic pain at McBurney's point. Plönies, in palpating the abdomen, employs finger percussion as a means of overcoming the muscular tension of the abdominal wall. Bimanual examination is the most important method of distinguishing between disease of the appendix and the adnexa, and Profanter advocates that the examination should be made while the patient is in a bath, in order that advantage may be taken of the effect of the water removing intra-abdominal pressure and the tension of the muscular wall, and the patient is able to help the diagnosis in a way impossible when an anaesthetic is

given by recognizing the points of greatest tenderness. According to Berthomieu it is important to recognize that in chronic appendicitis, but not in diseases of the tubes, the pain of palpation in the ileo-caecal region may be greater when the patient is on her left side than when she is in the customary dorsal position. Cases of so-called menstruation colic in virgins may be due to latent appendicitis, and both the history and the bimanual examination may be deceptive, because a congested, and, at that particular time, tender ovary, may be held to be the cause of the pain. In bimanual examination in disease of the right tube the pressure of the finger upon the uterus is painful, and the right wall of the vagina is painful and rigid—conditions which are not found in appendicitis. In general, appendicitis is more acute in its onset, the general condition is more profoundly affected, and the typical facies peritonealis more often seen. In pregnant women, where the diagnosis may be unusually difficult, the appearance of vomiting accompanied by fever would be in favour of appendicitis. In rupture of a tubal pregnancy there is the history, the increase in size of the uterus, and until the blood clots, the shifting dullness, and also the evident signs of collapse. Shortly put, the three chief points in the differential diagnosis between appendicitis and disease of the adnexa of the right side are, the anamnesis, the general condition, and the bimanual examination.

THERAPEUTICS.

297. Magnesium Sulphate in the Treatment of Tetanus.

MILLER (*Amer. Journ. of Med. Sciences*, December, 1908), from a summary of the 13 previously reported cases of tetanus treated with magnesium sulphate injections (10 subarachnoid, 3 subcutaneous), points out the value of this method of treatment, and reports a case of a boy, aged 7 years, in whom eleven lumbar punctures were made in thirteen days, approximately 2.5 c.cm. of a 25 per cent. solution of magnesium sulphate being injected into the meninges at each puncture. Extensive paralysis, lasting from eighteen to twenty-nine hours and involving all muscles except those of the head, neck, and diaphragm, followed each injection. From being in violent spasm and continuous opisthotonos, the patient was reduced in a few minutes to complete and lasting relaxation by an intraspinal injection of magnesium sulphate, and this result, as compared with the treatment by sedatives, was obtained much more promptly and efficaciously. The chief danger lies in the directly depressing effect such injections may produce upon the respiratory centre, an effect produced in this case after the third injection, but, in spite of this, the pulse remained good, and, as a precaution, the head was elevated after the third and during subsequent injections in order to prevent the injected fluid reaching directly to the respiratory centre. A profuse secretion of mucus, sufficient to embarrass respiration, frequently followed the injection, but this was easily controlled by atropine. After each injection, paralysis of the legs, abdominal walls, and sometimes the arms, appeared within thirty to sixty minutes, the muscles of the face remaining unaffected. It was necessary to catheterize the patient for retention of urine from the fourth to the eleventh injection, but the bowels moved involuntarily throughout, though no purgative effect was noted from the absorption of the magnesium sulphate. From the experience of this case and from a summary of the 13 previously reported cases it would appear that by this method it is possible to produce complete muscular relaxation in almost all cases of tetanus, thereby benefiting the patient by preventing the rapid exhaustion due to the convulsions and making the administration of nourishment possible.

298. The New Arsenic Compounds and their Action on Trypanosomes.

THE researches of Ehrlich have led to the preparation and employment of a number of arsenic compounds in the treatment of trypanosomiasis in rats. Starting from atoxyl, Ehrlich has succeeded in producing a large number of its derivatives, and some of these are said to be as active as atoxyl and less toxic. H. Wendelstädt has been enabled to experiment with some of these preparations, and records the results in the *Berl. klin. Woch.* of December 21st, 1908. These include (1) para-oxyl-benzylidene arsanilic acid, (2) tri-oxyl-benzylidene arsanilic acid, (3) arsaetin (acetylated arsanilate of sodium), (4) arsenophenyl glycin, which had been prepared in flasks, and

which had partially undergone dissociation and partially oxidized into arsenic oxide phenyl glycin, as well as (5) pure arseno-phenyl glycin prepared *in vacuo*. (In the following abstract the various preparations will be called by the number to obviate the repetitions of the long chemical names.) It was found that 0.075 to 0.09 gram per 100 gram body weight was required to protect rats infected with nagana trypanosomes for a time. Recurrences were noted, and the reinjection of the preparation succeeded in protecting the animals for increasingly short periods, until at last even large doses proved inactive. When 0.015 to 0.01 gram per 100 gram body weight of the preparation No. 2 was employed, the blood of the rats was kept free from trypanosomes for a few days, while smaller doses only lengthened life without killing off the protozoa. Rats infected with nagana trypanosomes were permanently cured by injections of 0.03 to 0.09 gram of No. 3 per 100 gram body weight. When infected with "arsanil-fast" trypanosomes, this preparation proved inactive. The cured animals exhibited marked tremors for some time after recovery. No. 4 preparation proved to be unstable. When quite fresh, 0.005 to 0.01 gram per 100 gram body weight cured permanently, while after two months 0.005 to 0.009 gram killed the rats in from two to four days. The older preparation, however, achieved permanent recovery in doses of 0.003 to 0.004, which doses were insufficient when fresh preparation was used. Number 5 preparation—that is, the vacuum preparation—proved to be stable: 0.008 to 0.025 gram sufficed to cure permanently, while 0.005 to 0.007 gram only turned the trypanosomes for a week. A monkey which had been infected with nagana trypanosomes, and whose blood showed numerous protozoa, was cured by two injections of 0.025 gram. No recurrence has taken place up to the present. No. 4 preparation revealed a great disadvantage in that, on dissociating and oxidizing, the products became highly toxic, and blindness, among other symptoms, was produced by therapeutic doses of the compound. No such unwished-for effects were seen in the vacuum preparation, which appears, therefore, to be an almost ideal medicament in nagana trypanosomiasis in animals.

299. Rectal Injections of Red Wine for Infantile Diarrhoea.

HOUSAY (Rev. Franc. de M^{d.} et de Chir., January 25th, 1909) speaks highly of the procedure of washing out the lower bowel with warm wine in severe cases of infantile diarrhoea. Realizing that the ordinary red wine of France is a natural and physiological antiseptic, being a tannic and alcoholic solution, he has employed it in summer diarrhoea for some time, and he recalls to mind the fact that it was used as long ago as 1880 in Cochinchina. He injects one litre on the first day, and afterwards two litres daily until the stools become normal. A double cannula facilitates the operation, and it must be understood that it is a washing out that is required and not an enema. Old wine, rich in alcohol, is not suitable for the purpose.

PATHOLOGY.

300. Latent Microbiom of Typhoid Bacilli.

Er latent microbiom H. Lüdke (M^{unch.} med. Woch., January 12th, 1909) means the vegetation of living or viable germs in the animal organism, without any manifestation of the clinical illness which is pathogenically produced by the bacteria in question. During the last few years support has been forthcoming for the theory, and has taken the form of the discovery of healthy bacillus-carriers in whose gall bladders and intestines typhoid bacilli can be found. Similarly, persons are met with in whose fauces pathogenic diphtheria bacilli, streptococci, and pneumococci are found, in spite of the fact that the individuals remain quite well. Meningococci have also been found in the naso-pharynx of healthy persons. There is no doubt that, at all events, the bacilli gained from typhoid carriers and diphtheria carriers are virulent to other persons or animals. The author next adduces evidence that various pathogenic bacteria may be present in apparently healthy normal tissues. In order to understand the process better, he considers it necessary to consider the life of latent germs in the circulating blood. In animals the cholera vibrio disappear out of the blood after from twenty to forty minutes; *B. pyocyaneus* disappear after six hours and *B. typhosus* after about twenty-four hours. Pneumococci have been demonstrated in the blood of infected animals for weeks. Bruce found *Trypanosoma gambiense* in the blood of 23 out of 29 perfectly healthy negroes. In order to determine the latency of typhoid bacilli in the circu-

lating blood, Lüdke has performed a series of experiments which show that six days after intravenous injection no typhoid bacilli can be cultured from the blood, when one-tenth of a loopful of culture was introduced. After the injection of one-fifth of a loopful, bacilli were still found on the sixth day, while, after half or a whole loopful, bacilli were found on the eighth day. He points out that in order to determine the presence of bacilli, it is necessary to use comparatively large quantities of blood. In human subjects, typhoid bacilli were found in the blood of 95 per cent. during the first week, in the blood of 50 per cent. during the second week, in the blood of 18 per cent. during the third week, and in the blood of 10 per cent. during the fourth week. In recurrences, the bacilli which have been lying dormant in organ depôts again appear in the blood. He next shows, on the strength of two cases, that typhoid bacilli can be present in the blood of patients after the fever has disappeared. Investigating the latency of the bacilli in the organs in animals, he found that the spleen and bone marrow contain bacilli for about two weeks after intravenous injection of one-tenth of a loopful of culture. He adduces evidence in favour of the bacilli being carried to the organs by the blood. It is extremely difficult to determine whether typhoid bacilli increase in the organs. Certain changes in the bacilli can be shown to take place in the organs. Bacilli which have been cultured from the organs show increased resistance toward the various forms of serum activity. For example, a strain was obtained from a typhoid carrier, which was proved by agglutination, by the capability of producing a bactericidal immune serum in guinea-pigs, by the fact that immunized guinea-pigs were immune to this strain, and by all the cultural characteristics, to be true typhoid bacilli. These bacilli were not affected by Pfeiffer's test in a concentration of over 1 in 20. The loss of reaction toward the lytic serum might have caused some doubt as to the nature of the bacilli had the other investigations not been carried out. Next he cites examples of the persistence of bacilli in an organism in which a high degree of protective power was found. The agglutinating value of the serum may rise as the bacilli disappear out of the serum. Cases are given in support of this. Lastly, he finds experimentally that a long latency of typhoid bacilli in the organ produces a loss of virulence, while a passing over to the blood takes place concurrently with an increase of virulence.

301. Gall Stones and their Cholesterin Constituents.

ADAM (Western Canada Medical Journal, January, 1909) publishes the results of some recent investigations upon the composition of gall stones, especially with reference to the cholesterin constituent—how it comes to appear in the bile, how it is liberated, and what are the factors leading to the formation of calculi. Cholesterin is either excreted and is present in normal bile as a chemical compound soluble in the bile and subsequently undergoing dissociation with liberation and precipitation of the crystalline cholesterin moiety, or it passes through the cells in a state of solution and becomes precipitated later owing to altered conditions in the bile. The stagnating bile in the gall bladder contains a much larger amount of unprecipitated cholesterin than does fistula bile, and it is there associated with fats, soaps, and lipid substances, lecithin, etc.—gall bladder bile containing five times as much fats, and thirteen times as much soaps as that flowing freely from a biliary fistula. In the blood cholesterin is present in the form of cholesteryl esters, and the only known bodies which assume the fluid crystalline state at the room temperature are sundry oleic acid compounds. It would appear that the myelin globules in the gall bladder epithelium and Naunyn's amorphous cholesterin are essentially cholesteryl oleate which normally passes in solution into the bile, but which, under certain conditions in the gall bladder, is liberated in a solid state, tending to collect into clumps, while under other conditions precipitation of crystalline cholesterin occurs. With dissociation of the cells the myelin cholesteryl oleate is liberated, which under the action of pure alkalis in the bile becomes dissociated and the cholesterin precipitated, the fatty acid being converted into soaps which tend to become absorbed. It is concluded that cholesterin is capable of existing in the organism in definite combination with fatty acid and lipid substances, and that in the form of this easily soluble compound it is excreted into the bile, where it may become dissociated, either undergoing solution in the presence of fats, soaps, etc., or, where such solvents are inadequate, undergoing precipitation, and so becoming portions of gall stones.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

302. Estimation of the Functional Activity
of the Pancreas.

H. SCHLECHT (*Zentralbl. f. inn. Med.*, February 6th, 1909) has devised a method of testing the functional activity of the pancreas which is based on that of Müller and Jochmann for the detection of proteolytic ferments. Experiments with Löffler's serum showed that the proteolytic ferment contained in faeces is trypsin. The presence of pepsine and the proteolytic ferment of leucocytes was excluded. That the ferment could be derived from intestinal bacteria was rendered improbable by the quantity of ferment being least in those parts of the intestine in which bacterial decomposition was most active. Finally, the faeces of a dog were found to contain no ferment twenty-four hours after an operation had been performed to prevent the entrance of pancreatic juice into the intestine. To estimate the functional activity of the pancreas the following procedure is employed: The lower bowel is cleared out by a large enema or injection of glycerine early in the morning. A test meal is then given consisting of 150 grams of meat and 150 grams of mashed potatoes ("Kartoffelbrei"). An hour later a brisk purge is administered, such as 0.2 gram (3 grains) of calomel, or 0.5 gram ($\frac{7\frac{1}{2}}$ grains) of purgen, or 0.2 gram of calomel with 0.5 gram of purgen. Two or three watery stools usually occur two or three hours later. To determine whether the faeces contain trypsin, a few drops of the faeces are placed with a platinum loop on a plate of Löffler's serum, which remains in the incubator at 50° or 60° C. for twenty-four hours. If the faeces contain trypsin a depression forms under each drop. This becomes apparent if much ferment is present after about thirty minutes. If no depression is formed within twenty-four hours trypsin is certainly absent. If the faeces are pulsatious they should be rubbed up with 10 grams of glycerine and 100 c.cm. of water before being "sown" on the plate. As trypsin is most active in an alkaline medium, it is important to test the reaction of the faeces and, if necessary, to render them alkaline with a weak solution of caustic soda. If much fat is present it should be removed by agitation with ether. If the stools are diluted in a graduated pipette the method may be used for approximate quantitative estimations. If the test is positive—that is, if a depression forms on the Löffler plate—the pancreatic duct is certainly patent, but an organic disease of the pancreas is not excluded, with the possible exception of an extreme result as regards digestion of the plate. Great diminution of the normal digestive action of the faeces suggests pancreatic disease. But within fairly wide limits diminution merely indicates diminution of pancreatic secretion, such as is common in carcinoma of the stomach, gall stones, catarrhal jaundice, and chronic constipation. If the result is negative, obstruction of the pancreatic duct or a severe lesion of the pancreas may safely be diagnosed. The test is also useful in cases in which pancreatic disease is clinically obvious, to ascertain to what extent the pancreatic function has suffered. It is of interest that in normal persons the tryptic activity of the faeces was uninfluenced by diet or diminution of the acidity of the gastric juice by administration of large doses of bicarbonate of sodium. In the few cases of diabetes mellitus examined the results were inconclusive; in some the tryptic action was very slight, and in others (the minority) almost normal. The writer has recently modified the method to avoid the trouble of preparing Löffler plates. Capsules of hardened gelatine, similar to Sahli's guttoid capsules, are filled with powdered wood charcoal. One of these is added to a tubeful of diluted faeces, which is then placed in the incubator at 37° C. If trypsin is present the capsule is digested and the faeces become coloured black in from thirty minutes to twenty hours. If the capsule has not dissolved within twenty-four hours trypsin is absent.

303. Late Rickets.

FALAGI (*Archiv. di Ortoped.*, An. 26, f. 1, 1909) gives the results of a study of 28 cases of this condition seen by him at the Hospital for Rickets in Milan, and on the recorded cases of others. Heredity does not seem to play an important part in the etiology of the disease; for example, of

the authors 28 cases only 3 had brothers who suffered from rickets in early infancy and 5 had a doubtful history of rickets in collateral relations. An acute illness will sometimes be followed by late rickets (the author quotes 2 cases). The chief exciting cause, however, seems to be more or less laborious work at the time of early puberty. The usual age of onset is between 12 and 15 years, and 17 out of the 28 cases were females. The first symptom is pain, usually in the lower limbs, especially the knee. It is generally the joints, or their neighbourhood, that are affected, the shaft of the bone not being painful. The pain is not very severe and is in relation to the work imposed on the limbs, hence repose usually relieves it. Shortly after the pains come on, there appear the epiphyseal enlargements. There is nothing particularly noteworthy in the general condition of these patients. The muscular hypertonus and increased tendon reflexes cannot be relied on as a differential mark between the disease in question and osteomalacia. There are no visceral changes. The gait is characteristically altered. Some confusion may arise between an unusually prolonged case of infantile rickets, a syphilitic epiphysitis, and juvenile osteomalacia; in all these cases much help can be derived from radiography, and the author goes very carefully into the radiographic appearances best seen in the knee. The course of the disease is slow and the prognosis generally favourable. In treatment the best results are obtained by phosphorus dissolved in cod-liver oil. The deformities may need operative treatment. Genu valgum may in some cases be a local result of late rickets which is itself a general disease. Probably juvenile osteomalacia is so closely akin to late rickets that the two are almost identical, and the author quotes a case strongly in support of this. Details of 30 cases are given and a bibliography of 88 references.

SURGERY.

304. Post-operative Pulmonary Embolism.

LENORMANT (*Arch. Gén. de Chir.*, No. 3, 1909) bases on four records of the occurrence in his surgical practice of pulmonary embolism after operative intervention a full and instructive discussion of this complication, which he states is by no means an exceptional event. These four instances were observed in a series of 792 diverse operations, and in statistics of von Eiselsberg's clinic pulmonary embolism is noted to have occurred in 57 out of 6,800 operations. This low proportion may, however, be much increased by taking into consideration only those operations that have been practised on the contents of the pelvis and the lower region of the abdominal cavity. Post-operative pulmonary embolism, it has been shown, occurs in a very large majority of instances in connexion with surgical intervention for appendicitis, for diseases of the female genital organs, and for the relief of strangulation or for radical cure in cases of hernia. The original thrombus constituting the starting point of the post-operative embolism has on *post-mortem* examination been found in some cases at the seat of the operation, in other cases at some distance from this in the femoral and iliac veins, which in 90 per cent. of instances, and even after operations on the appendix and right inguinal hernia, are exclusively those on the left side. In the first class of cases the formation of the thrombus may, it is stated, be readily explained by surgical traumatism or by local infection. Many suggestions, such, for instance, as disturbances of the circulation and alterations of the blood, cardiac lesions produced by chloroform, and the abnormal conditions imposed on the patient during the after-treatment, have been made to account for the development of a distant thrombus, but each of the suggested factors, the author holds, is quite incapable by itself of causing the complication. Thrombosis, he believes, is always caused by phlebitis, and support is given to the view held by many German surgeons that post-operative thrombosis and embolism are septic lesions. The infection may be so slight as to be clinically inappreciable, but still, the author asserts, it exists. It is difficult to account for the migration of the whole or a portion of the clot to the heart and lungs in those cases in which post-operative embolism has its origin in an organ—the

intestine, omentum, or appendix, for instance—the veins of which belong to the portal system. The author holds that it is necessary to assume in such instances the extension of the thrombosis to the porto-caval anastomoses formed by the retroperitoneal veins, and also, in cases of appendicitis, the existence in adhesions of new-formed vessels establishing a communication between the appendicular veins and the veins of the abdominal wall. The pulmonary lesions vary in character and intensity in accordance with the size of the embolic clot. Large emboli arrested in the trunk or primary divisions cause speedy death by syncope, whilst minute emboli are carried into the lung, in most cases into the lower lobe of the right organ, and there set up haemorrhage, infarction, or, in cases of well-marked infection, supuration or gangrene. The relative frequency of these different lesions is indicated by the statistics of Ranzi, who found that of 57 cases of post-operative embolism, 23 were rapidly fatal; that in 20 there were symptoms of pulmonary infarction, and in the remaining 14 symptoms of embolic abscesses. Post-operative embolism is sometimes preceded by evident signs of thrombosis of the veins of the lower limb, but in most cases, especially in those in which the deep-seated veins of the abdomen and pelvis are affected, the first symptoms occur in the chest. The length of the interval between the operation and the embolic attack varies very much in different cases. One instance has been recorded of sudden death within the first twenty-four hours, and in others the complication was delayed for three months. The author states that the first signs of the attack usually occur from the tenth to the twelfth day after the operation. The symptoms of post-operative distinguished from other forms of embolism present no special characters. The attack may cause sudden or speedy death from syncope or asphyxia, or it may be almost latent and result only in slight pain and scanty expectoration. The prognosis, it is pointed out, is extremely grave. Many of those who are not carried off suddenly succumb sooner or later to infective lesions such as pneumonia, abscess, and gangrene. Statistics of 233 collected cases show a death-rate of 45.5 per cent., but this, it is suspected, fails to express the absolute mortality of post-operative embolism. In discussing the preventive treatment of this complication, Lenormant insists on the importance of careful preparation of the patient before any serious operation, of strict attention to aseptic details, and gentle dealing with large veins during the intervention, and of prolonged and complete rest during the after-treatment. He directs special attention to this last condition, and strongly opposes the views of those who have recently advocated a very early release from bed after laparotomy. Very little, he holds, can be done by the surgeon after the development of thrombosis and embolism. A proposed attempt to prevent embolism in cases of thrombosis of the femoral vein by proximal ligation is regarded as useless, as the thrombosis in such cases has usually involved the deep pelvic veins. This paper ends with a review of the methods of treating those severe forms of pulmonary embolism in which immediate death is feared, by direct massage of the heart and by direct removal of the large clot after exposure and incision of the pulmonary artery. The latter method, proposed and practised by Trendelenburg, has hitherto failed, but Lenormant thinks that the records of this very formidable and difficult operation justify some hope, and should encourage surgeons to make fresh endeavours.

305. Operative Treatment of Carcinoma of Penis.

NICOLL (*Ann. Surg.*, February, 1909) describes an operation for the removal of penile cancer which he has practised during the past fourteen years. The object of this method is the removal *en masse* of the primary carcinoma, the fat and glands of the groins, and the lymphatic vessels intervening between the primary growth and the area of actual or probable secondary extension. It is pointed out that epithelioma of the penis primarily extends along the dorsal lymphatic channels on either side of the blood vessels, and affects the superficial and deep inguinal glands above the brim of the pelvis. The author holds that only late in the progress of the disease does the growth infiltrate the corpora cavernosa and thus reach the lymphatics under the pubic arch, and, through these, the intrapelvic glands. When such infiltration of the proximal portion of the penis and invasion of the intrapelvic glands have occurred, the case in a vast majority of instances may, it is stated, be regarded as inoperable. The operation of bisecting the scrotum and removing the whole penis together with the corpus, it is stated, be possibly justifiable in only a few cases. The author's method, which is adapted to the usual operable case in which the anterior fourth or third of the

penis is involved, with possible extension of the disease along the dorsal lymphatics to the inguinal glands, is carried out through a Y-shaped incision, each arm of which extends from the root of the penis towards the superior iliac spine, the leg being carried along the dorsum of the diseased organ, and terminated in a loop around this organ in front of its proximal fourth. The fat and all lymphatics and glands are dissected out *en masse* from both groins. In cases in which this step is indicated, the fascia just below Poupart's ligament is opened, and after exposure of the femoral sheath and repression of the peritoneum, the fat and glands along the external iliac vessels are excised. In the next stage the dorsal blood vessels and lymphatics of the penis, together with all investing fascia, are dissected out. The dorsal arteries and veins are tied close to the pubes at the suspensory ligament. The fat of the groins and the fascia and vessels of the dorsum of the penis form one continuous mass containing the unbroken lymphatic channels. The corpus spongiosum and corpora cavernosa are now cut through, the first, together with the divided urethra, being left rather longer than the latter bodies. Drainage of the wounds in the groins is necessary as removal of the fat and glands of this region is followed by lymphorrhoea, a result, the author states, that is unknown in the axilla after excision of mammary cancer.

OBSTETRICS.

306. Indications and Technique of Forceps Delivery.

H. SELLHEIM (*Deut. med. Woch.*, April 1st, 1909) attempts to set up definite indications for the application of forceps to terminate labour. In cases of uterine inertia, he considers that forceps may be used if the reaction on the part of the mother, properly and repeatedly applied, is absent. Hot "sitz" baths or full baths are used for this purpose, and if, after several hours, no responding pains set in, if the local condition reveals that the birth will not be completed for a long time and the uterus does not appear inclined to assist itself further, he believes that it is a mistake to wait longer. He speaks strongly against the application of the forceps to please the patient. The mechanism of birth when completed by forceps is identical with that when Nature completes it herself, and, when properly applied, the traction on the forceps can replace in every sense the expelling power of pains. Traction must be made in the proper direction, but the handles of the forceps show which this direction is. Nature assists even when forceps are applied, and the obstetrician must take his hints from her. In the same way, rotation takes place automatically when forceps are being used, provided that the traction is applied in a skilful manner, in which the automatic following of the curves of the pelvis is permitted by the steering hand and not acted against. It may be necessary, however, to rotate artificially in certain cases. At times, when the fetal head does not rotate when it should, the blade of the forceps should be used to carry out the rotation, but it must always be borne in mind that under abnormal anatomical conditions, an abnormal mechanism may be required, and that unusual methods of completing labour may be the best. Before applying forceps both rectum and bladder should be emptied. In easy cases the patient is placed transversely across the bed, but in cases in which difficulties are anticipated she should be placed on a suitable table. The preparation of the operator, instruments, and patient must be the same as is required for any modern instrumental intervention. The legs may be held by the most promising looking person to be found in the house. Anaesthesia is desirable and should be deep to protect the perineum from rupture. No anaesthesia is better than bad or superficial anaesthesia. Before the forceps are applied the parts should be again examined. The blades of the forceps should be applied by adapting them to the head. The directing finger should precede the tip of the blade in order to ensure that the maternal soft parts are not included, whenever this is possible. All folds of skin and hairs must be carefully pushed aside before the blades are locked. Trial traction is necessary to satisfy that the forceps are properly applied to the fetal head. The extraction should be conducted in a manner calculated to imitate the natural mechanism of labour. The progress must be continuously controlled by the examining finger. In occipito-anterior presentations the most favourable conditions are met with, but no difficulty should be experienced when the forehead or face enters the pelvis in the corresponding manner. When the occiput, forehead, face, or coronary suture presents in an oblique position, the forceps may be applied either in the adaptation optimum for the head or in the adaptation optimum

for the pelvic canal. It is generally wiser to choose the adaption optimum for the head, and to accept the slight difficulty arising from the canal. The head having been properly secured, less damage is likely to ensue to the pelvis than would ensue to the head if the canal were the first consideration. When the head presenting by the occipito-posterior refuses to obey the usual mechanism of these presentations, or when trial traction tends to rotate the posterior fontanelle backwards, an attempt should be made to convert the presentation into an occipito-anterior. The forceps with the concavity corresponding to the pelvic curve turning to the forehead, are applied to the head in that diameter oblique of the pelvis in which the sagittal suture is not placed, and attempts are made to push the forehead to one side. The finger must govern each movement. As soon as the sagittal suture lies in the transverse diameter, the forceps are taken off and reapplied in the reverse direction. The occiput is then directed forwards and the forehead backwards. A similar scheme is followed in face presentations with the chin pointing backwards. Next the author speaks of the high forceps operation. He mentions that this operation is only permissible as an experiment, and it must always be recognized that the usual conditions for a forceps operation are not fulfilled—namely, that the head should be completely in the pelvis. Under any circumstances the high operation may only be attempted by an experienced hand. The head must be easily grasped by the forceps, and may not slip off at the trial traction. In presentations with the temporal bone looking backwards, in high forehead or face presentations, and when the anterior fontanelle is lying low down, the forceps always slip off. It must further be remembered that this operation cannot save a child which is showing signs of dying. The last word of warning is that if the attempt is made and fails, only perforation remains to help the mother. The blades should be applied in the transverse pelvic diameter. The finger should attempt to guide them as far as possible, but it is always possible that the points of the blades may compress the cord which lies around the neck. Before closing he warns the practitioner not to apply force when skill suffices.

GYNAECOLOGY.

307. Vermiform Appendix adherent to Fibroid with Twisted Pedicle: Appendicitis Simulated.

PILLET (*Annales de Gyn. et d'Obstét.*, April, 1909) reports that a single woman, aged 35, was seized in the night with a sharp attack of pain in the hypogastrium and right iliac fossa and vomiting of food, mucus, and at length bile. On the next day there was marked muscular resistance over the iliac fossa, the features were drawn, the pulse 120, but the temperature low. A few days later Pillet examined the patient; the muscular resistance then extended all over the abdomen. He diagnosed appendicitis, yet believed axial rotation of an ovarian cyst to be possible; but there was no history of any other symptom of any kind associated with ovarian new growths. At the end of a month the period set in and lasted for three days without pain. A mass as big as an orange could be defined, through the rectum, lying to the right of the uterus and continuous with deposit filling the corresponding iliac fossa. Four weeks later, as there was no diminution of the swelling and exudation, Pillet operated through a lateral incision. He found that the mass of the size of an orange was a necrotic fibroid, to which two-thirds of the vermiform appendix adhered. There were other adhesions: on separating them the bladder was damaged, but repaired at once. The uterus was amputated above the cervix and the appendix excised. There were no complications during convalescence. A considerable number of cases of axial rotation of pedunculated uterine fibro-myomata have been recently published, but Pillet dwells on the adhesions to the bladder and vermiform appendix as of special surgical and clinical interest in his own case.

308. Hairpin in the Bladder.

GUILLET (*Rev. Franç. de Méd. et de Chir.*, January 25th, 1909) describes a successful operation which he undertook for the removal of a hairpin from the bladder in the case of a girl of 16. The pin had been introduced two days before, and an unsuccessful attempt to remove it had been made by the family doctor. Pain in the lower part of the abdomen was complained of. Vaginal examination revealed nothing, but a metallic sound in the bladder caused a flow of slightly blood-stained urine, and gave indication of the presence of a foreign body. Under chloroform the situation of the pin—near the neck of the bladder—having

been again made out, the cavity was distended with boric solution, and the urethra gradually dilated by means of Hegar's bougies, up to No. 13. The little finger of the right hand was then introduced into the bladder carefully and gradually, but without any difficulty. The distension of the bladder had moved the pin from its former position near the neck, but the left forefinger in the vagina soon enabled the surgeon to get the other finger in contact with it, to turn it lengthways with its closed end next the urethra, and finally to extract it safely, after some little delay. The operation was concluded by washing out vagina and bladder, hardly any bleeding having occurred. The urethral dilatation caused no incontinence, but, on the contrary, two days' retention, which passed off without special treatment, and the patient left the hospital on the fifth day.

THERAPEUTICS.

309. The Behaviour of Atoxyl in the Body.

IGERSHEIMER and ROTHMANN (*Hoppe-Seyler's Zeitschr. f. phys. Chemie*, vol. lix, p. 256) have investigated the fate of atoxyl in the organism, not only because of its value in trypanosomiasis but also to elucidate the selective action of atoxyl on the eye, its specific action on the central nervous system of the cat, and the nephritic hæmorrhages to which it gives rise in the dog, and which are seldom if ever observed in poisoning by inorganic forms of arsenic. The greater part of the atoxyl given in one dose is, according to Croux and Seligmann, eliminated in four to eight hours, but continues for some twenty-two hours in small traces in the urine. Blumenthal and Kegel obtained similar results. The authors estimate the atoxyl in the urine by a colorimetric method, which depends on the formation of an azo-dye when atoxyl (or urine containing atoxyl) is treated with α -naphthol in the presence of sodium nitrite. The colorimeter is described by Gottlieb and Stangassinger in vol. lii of the *Zeitschr. für physiol. Chemie*, and the method gives very accurate results when tested with known quantities of atoxyl dissolved in urine or water. The total quantity of arsenic in the urine and faeces was also determined by Dragendorff's method. The experiments were carried out on rabbits, cats, dogs, and man, the atoxyl being injected. Elimination was completed in five or six hours (for rabbits) and in nine hours (for men), and in one case 96 per cent. of the atoxyl was recovered from the urine of a rabbit. As the total arsenic recovered was generally greater than the atoxyl recovered, some chemical change must have taken place to a small extent. No toxic symptoms were observed, unless there was evidence from the analyses of retention in the body. Ehrlich suggested that the therapeutic action of atoxyl depends on its reduction in the organism to p-amidophenylarsin oxide; for atoxyl is not fatal to trypanosomes *in vitro*. Igersheimer and Rothmann find that this substance is not eliminated in the urine of rabbits after subcutaneous injection, so that if atoxyl were converted into it in the body, there would not have been any azo-dye produced in the urine of the experimental animals. (The two substances—atoxyl and p-amidophenylarsin oxide—produce apparently similar azo-dyes.) Moreover, the urine of the experimental animals was not more toxic than atoxyl when injected into rabbits, whereas the reduction product is extremely fatal to rabbits; therefore, they say there was, if any, only a negligible amount of the reduced body in the urine, and the substance eliminated was actually atoxyl. This conclusion harmonizes with Heffter's observation, that after injecting sodium cacodylate, it is eliminated as such and not as cacodyl. The blood of rabbits was examined after intravenous injection of atoxyl, and it was found to be present almost exclusively in the blood serum, and only in very minute traces in the corpuscles. After two hours and a half, even with saline perfusion, only very small quantities were found in the blood serum, but there was more arsenic than could be accounted for by the quantity of atoxyl present. In one of the experiments 500 mg. of atoxyl were injected intravenously into a rabbit. It was bled to death five minutes afterwards. The urine contained 8.33 mg. and the kidneys 33.74 mg. of atoxyl, and linear hæmorrhages were seen in the kidneys. Inorganic arsenates take only a few minutes to disappear from the blood after intravenous injection, or, at any rate, are only present in traces (Mori-shima). The more protracted sojourn of atoxyl in the serum may have some bearing on the therapeutic value of atoxyl in diseases caused by hæmatozoa. On the other hand, the fact that atoxyl can only be demonstrated in traces in the blood corpuscles accounts for the resistance which the malaria parasite exhibits towards atoxyl. In

the rabbit and the dog considerable quantities of the atoxyl were found in the internal organs and also in the central nervous system of the cat. Traces were found in the eye of the cat and dog, whereas injection of sodium arsenate into a cat in doses corresponding in the amount of arsenic with the quantity of atoxyl used in the previous experiments did not give rise to the least trace of arsenic in the eye. The authors agree that there may be some production of an inorganic combination of arsenic after administration of atoxyl, but only in a relatively non-poisonous form. The large amount of atoxyl in the blood after injection explains the possibility of trypanosomiasis being cured in some cases by means of a single injection. The poisonous symptoms of atoxyl are, in the opinion of the authors, due to reduction products on the one hand and to inorganic arsenic on the other, for the late symptoms of atoxyl poisoning are the same as those of arsenical poisoning—namely, conjunctivitis, rhinitis, pharyngitis, trophic skin changes—but these never occur in acute and subacute atoxyl poisoning.

310. Roentgen Rays in Malignant Disease.

PFÄHLER (*Amer. Journ. of Med. Sciences*, April, 1909) discusses the value of Roentgen-ray treatment in cases of deep-seated malignant disease in contradistinction to the epitheliomata and superficial carcinomata. Personal observations were made in the treatment of 35 sarcomata and 304 deep-seated carcinomata involving the subcutaneous, glandular, visceral, or osseous tissues; and most of the cases were recurrent, very advanced, or very malignant, and such as had passed beyond the reach of other methods of treatment. Although the Roentgen rays were used as a last resort and ultimately failed in the majority of cases, some lives were saved, or were much prolonged, while in nearly all there was some temporary benefit. Of the 35 cases of sarcoma 9, still under treatment, have markedly improved, while 65 per cent. of the remainder recovered, with a recurrence in 2. In operable cases the best results will follow operation with a thorough course of Roentgen-ray treatment immediately following. The treatment of carcinoma is not so satisfactory, though improvement was noted, and probably the greatest field of usefulness of the Roentgen rays is supplementary to operation both before and after, and this latter should be commenced within a week, approximately fifteen to twenty treatments being given. Exposures should be from ten to thirty minutes, and when over ten minutes they should be given in more than one direction, though always towards the centre of the growth. The distance of the anode from the skin should be from 10 in. to 15 in., and the deeper the lesion the greater the distance and the longer the exposure. In rapidly-growing sarcomata treatment should be daily, while in carcinomata three times a week may be sufficient, and this may have to be continued from a few months to several years, with varying intervals, depending upon the patient's condition. Localized recurrent carcinoma usually yields to treatment unless the mucous membrane is involved.

311. Action of Thyroid and Thymus Extracts on the Circulation.

CONSIDERABLE obscurity has hitherto attached to the influences exerted by extracts of the thymus and thyroid glands on the blood pressure. Some experimenters have found that they lower the blood pressure, others that they raise it. A. Farini and G. Vidoni (*Lo Sperimentale*, Florence, 1908, lxii, p. 721) find that extracts of the thyroid gland and thyroïdine both cause a local vaso-constriction, which is neither preceded nor followed by any vaso-dilatation; they attribute this to a direct action on the involuntary muscle of the vessels. Injected into the veins, however, thyroid extracts cause a notable lowering of the arterial blood-pressure, in some instances preceded by a rise. Hence there is an antagonism between the local or peripheral action of thyroid extract and its central action. The influence of extracts of the thymus is similar to, but less marked than, those of thyroid extracts; here, too, the antagonism between the central action and the peripheral action is to be observed.

PATHOLOGY.

312. The Origin of Anthrax Antibodies.

MAX GRUBER and K. FUTAKI publish the results of their experiments which deal with the resistance of animals against anthrax and the origin of the antibodies in the organism (*Muench. med. Woch.*, February 5th, 1907). The dog and hen are practically immune toward anthrax. The

high temperature of the latter (41° to 42° C.) must be harmful to the micro-organism, but the dog's temperature appears to be beneficial to its growth. Hen's leucocytes and also dog's leucocytes eat up virulent anthrax bacilli readily, while guinea-pig's and rabbit's leucocytes do not exert any phagocytic action on them. They surround the bacilli for a short time and then leave them free. However, rabbit's leucocytes are not harmless to anthrax bacilli: 0.1 c.cm. of leucocytic emulsion was capable of killing 350,000 anthrax bacilli in one hour. This action depends on the giving off of a substance which digests the protoplasm of the bacilli. This action is so strong *in vitro* that one is astonished at first that the animals have so little power of resistance against an invasion of the bacilli. In some experiments with the bactericidal action of rabbit's serum, they found that the bacilli which resisted the action of the serum were possessed of an enormously thick capsule. It proved quite easy to cultivate the bacilli in heated rabbit's or guinea-pig's serum. They found that non-capsuled bacilli, both in animal experiment and also *in vitro*, are readily attacked and surrounded, while capsuled bacilli are not attacked by the leucocytes at all. In order to find an explanation of this fact, they studied the behaviour of the various animals when inoculated in various ways. When applied subcutaneously capsuled bacilli rapidly multiply in rabbits and guinea-pigs, while anthrax bacilli die within a short time in dogs and hens, and very few capsuled bacilli are developed even when large quantities are injected. The bacilli in the last-named case die extracellularly. It thus appeared that the lymph in the subcutaneous tissue would have a specific action, and they next collected this lymph in hens, rabbits, and guinea-pigs by introducing plugs of cotton-wool under the skin. The plugs were taken out after a time, and the fluid either expressed or centrifugalized off. Lymph gained after two hours from guinea-pigs proved inert; two-hour lymph of the rabbit was not quite inert, but in a number of experiments the action on bacilli was very weak. On the other hand, two-hour lymph taken from the hen killed off all the bacilli within one hour in thirteen out of fifteen experiments. It therefore is certain that the bactericidal action in the hen is independent from the blood, since serum is inert toward the bacilli. They attempted next to determine the origin of the bactericidal substance. They were able to show that it does not originate from the subcutaneous tissue itself. Further experiments prove that the substance is derived from the action of the lymph on leucocytes. It seems as if the giving off of this substance is a normal production and not a pathological manifestation. They found that, after the tissue had been rendered oedematous in the rabbit, the oedema fluid attained the same bactericidal capabilities, and this fact is offered as an explanation for the experience that when rabbits are treated by passive hyperaemia according to Bier, they recover from an otherwise lethal dose of anthrax bacilli. Rabbit's leucocytes, however, are much less productive in bactericidal substance than are hen's leucocytes. Lastly, they found that the blood platelets of the rabbit and rat, as against those of the guinea-pig and hen, give off another substance which acts bactericidally toward anthrax bacilli. This last-named substance is given off after the blood has clotted, and in this way lends a bactericidal action to the blood serum of the two animals. It is possible that it may be present in the serum of the circulating blood when the animals are infected, and that through its influence a certain degree of immunity is produced.

313. Histology of Retained Testes.

CONFORTI (*Il Morgagni*, July, 1908) has examined 8 cases of retained testes with especial reference to their histology. In such testes it is common to find groups of tubules or single tubules at an early period of development. These tubules are for the most part grouped in nodules which Pick described as adenomatous neoformations and Lanz called atypical inclusions of seminal epithelium. In the author's view they are, as far as his researches extend, merely groups of tubules at an early or arrested period of development. The spherical and concentric bodies described by Félizet are not (as they thought) endocanalicular and formed by hyaline degeneration of seminal epithelium, but extracanalicular and originating from the basal membrane by a process of degeneration. The interstitial cells vary greatly in quantity in single cases, sometimes they may be very numerous and grouped in large nodules. Their secreting capacity is usually diminished and in proportion to the number of such cells. Their presence is not so much a kind of compensatory hypertrophy as a result of disturbed evolution acting both on the seminal canaliculi and on the interstitial cells.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

314. Habitual Constipation in Infancy as a Cause of Death.

B. GLASERFELD (*Berl. Min. Work.*, March 22nd, 1909) finds that habitual constipation in infancy is very scantily dealt with in medical literature, although the same condition in adults commands great attention. The condition in infants is extremely common, and frequently is very difficult to treat. It is usually unaccompanied by morbid processes, and rarely leads to a fatal termination. Since the author has been able to observe a case which terminated fatally, he considers that the details are worth publishing as a contribution to the pathology of this condition. The patient was born on June 2nd, 1908, and weighed 3,000 grams. The organs appeared to be healthy. No meconium passed until an enema was given on the seventh day. It was fed at the mother's breasts but no spontaneous motion was evacuated. In response to water enemata, hard but otherwise normal stools were passed. Abdominal massage was resorted to without appreciable benefit. On October 4th the infant had to be weaned on account of illness of the mother—appendicitis, necessitating an operation—and from that time onward cow's milk, various infant's foods, etc., were given fair trials. In the following nineteen days the infant lost 450 grams, and the constipation remained very obstinate. Glycerine enemata, castor oil, camomile infusion, water salt solution, and other substances as enemata, syrup of rhubarb *inter alia* were used to produce motions. On a few occasions scybala had to be mechanically removed from the rectum. On December 20th no motion could be obtained. Fever appeared on the 22nd. The rectum was empty, flatus passed plentifully, and there was marked tympanites. An operation was decided on, and this was carried out on the 23rd. As soon as the peritoneum was opened faecal-smelling gases escaped, and thin pus was found in the cavity. The appendix was natural, but there was marked injection of the vessels in the serosa of the small intestines. A hard faecal tumour was found in the colon, which was crushed between the fingers and kneaded toward the rectum. No motion was obtained. The child slept quietly after the operation, but sank in a few hours and died on the 24th. *Post-mortem* examination revealed ulceration in the sigmoid flexure and in the descending colon. The former had led to perforation. The caecum and the ascending and transverse colon were dilated, and the mesenteric glands were enlarged. In discussing the case, Glaserfeld comes to the conclusion that the constipation was congenital. He further points out that neither aperients nor any form of diet appeared to have any influence on the constipation. He therefore believes that the condition must have been due to some physiological change in the wall of the large intestine, which did not produce any corresponding anatomical change.

315. Deglutition Rales.

ISRAEL-ROSENTHAL (*Ugeskrift for Læger*, No. 14, 1909) is of the opinion that sufficient attention has not been drawn to the presence of the so-called "false râles," or râles heard over the apices of the lungs, and which have some extraneous cause. Most textbooks warn students against the "dry râles" that often arise in the shoulder joint, or in its muscles, or those caused by the friction of the scapula against the thorax; but the most frequent cause of an error in diagnosis—the râles caused by the act of swallowing—are scarcely mentioned. The "Schluckgeräusche," of the Germans, first described about fifty years ago, are described by Gerhardt as soft, moist râles heard along the spinal column, and by Guttman and Eichhorst as also heard along the trachea on the left side; but the fact that the sounds caused by the act of swallowing can also be transmitted to the apices of the lungs, appears to be known to but few observers. Turban mentions "oesophagus sounds" as a possible error in diagnosis, but the only author who has described them fully is Petersson in his *Fysikalisk Diagnostik* (Upsala, 1908). According to the author's (the writer of the preseat monograph) experience, one can hear in most people, in connexion with the act of swallowing, sounds simulating râles over the apices of the lungs, although these sounds vary in extent, strength, and character. They are heard, not only above the clavicle, according to Turban, but also below it, down to the second rib; at the back they are heard not

only along the spinal column, but in the suprascapular region and even below the spine of the scapula. They are generally present on both sides, but are loudest on the left side, and are always more pronounced and constant above the clavicle and the spine of the scapula. The sounds are mostly of a moist character, and appear as medium, subpercussant râles with a slight indication of a musical sound caused by their formation in a chamber of resonance. More rarely the sounds are of a "half-dry" character. If there is present infiltration of the apex with bronchial symptoms, these râles acquire a pronounced bronchial character. These sounds may be distinguished from true râles by taking note of the following facts: (1) The deglutition râles are not restricted to the act of respiration, but are present both during inspiration and expiration and during the pauses between them, whereas the real moist râles are principally heard during inspiration, especially at its end, much less during expiration, and not at all during the pauses. (2) The act of swallowing can be easily controlled by placing the finger on the trachea when auscultating. (3) By making the patient hold his breath and swallow during auscultation, one is able to note the resemblance in number and character between the sounds heard after a cough and those caused by the act of deglutition. But it must be noted here that deglutition often becomes more difficult and the sounds caused by it weaker after repeated acts of swallowing. (4) By following with the stethoscope the deglutition sounds from the trachea outwards it is also possible to control the resemblance between the sounds. (5) Intelligent patients can be persuaded to omit the usual act of swallowing after coughing. But it can be absolutely prevented by making the patient hold his mouth open during auscultation. After reviewing the various theories about the genesis of these sounds, the author is inclined to the opinion that they are produced in the pharynx, partly because the sounds are loudest over the trachea, and partly because the pharynx must necessarily be a better chamber of resonance than the oesophagus.

SURGERY.

316. Results of Operative Treatment of Cancer of the Stomach.

PONCET (*Bull. de l'Acad. de Médecine*, No. 12, 1909) publishes a statistical report on the results of operative intervention in 211 cases of cancer and ulcer of the stomach. This report, prepared with the assistance of Delorme and Leriche, deals with cases observed by the author in the course of the last six years. Of 137 cases of gastric cancer regarded as operable, 40 were treated by gastrectomy and 97 by palliative operations, such as gastro-enterostomy, gastrostomy, and jejunostomy. The radical operation of gastrectomy, which the author states was as free as possible, and more or less extensive, resulted in the high operative mortality of 35 per cent. Death in the 14 fatal cases was, it is stated, rarely due to shock, and is attributed to several diverse causes, as, for instance, haemorrhage, peritoneal infection, and acute dilatation of the stomach. It might, the author acknowledges, have been avoided in some few instances by a more rigorous technique and by abstention from operative intervention. In his report on the subsequent fate of the 26 patients who recovered from the immediate results, the author excludes 8, who either were lost sight of, or who, though alive and quite free from recurrence, had not when last seen passed over an interval of more than six months from the date of operation. The remaining 18 patients are ranged under three categories. The first of these, including instances of rapid recurrence or generalization of the disease, shows a death-rate of 40 per cent. in the course of the first twelve months. The data given under the second category show that the proportion of fairly prolonged recoveries is about 34 per cent. Seven patients who lived over the first year died after an average interval of twenty months from the time of the gastrectomy. The frequent occurrence of early relapse after gastrectomy cannot, it is urged, be regarded as a proof of the total failure of this operation in the treatment of cancer. It is, the author holds, the best of the palliative methods, as it favours a complete restoration of health during the free interval. Gastro-enterostomy is also capable of affording

much relief, but this in cases of gastric cancer is a very serious operation, and almost as fatal as gastrectomy. Gastrostomy and jejunostomy are indicated only in extreme cases, and each has the disadvantage of causing a post-operative infirmity. Under the third category are included five instances of patients who when last seen had remained free from recurrence for more than twelve months. The free interval has in one of these cases been three years and a half, and in another as long as five years and ten months.

317. Thrombosis of Inferior Vena Cava.

STILLMAN AND CAREY (*Amer. Journ. of Med. Sciences*, March, 1909) report two cases of thrombosis of the inferior vena cava, the first being acute and possibly a sequel of influenza, and the second being chronic. Case I, a man aged 26, suffered from influenza a fortnight previously, but had felt well for a week. While lifting a heavy weight, he was seized with severe pain in the right side, followed by abdominal tenderness and some ascites. Five days later the abdomen was enormously distended, tense, symmetrical, and tympanitic, with slight tenderness. The legs and external genitalia were very oedematous and cyanosed, but not tender or painful except for the tenderness due to the oedema which had developed gradually since the onset of the illness. The urine contained no albumen. Operation was refused, and the patient died from exhaustion about three weeks later. The inferior vena cava was widely dilated and thrombosed, containing a partially-organized blood clot extending downwards into both common iliac veins and upwards to the groove in the posterior surface of the liver. The walls were much thickened, fused together, and firmly adherent, the lumen being obliterated. The liver was markedly rotated to the right with enlargement of the left lobe, and this occupied almost the position normally occupied by the right lobe. Influenza may have been the primary cause producing a secondary thrombo-phlebitis with extension into the inferior vena cava, or the strain of lifting may have caused the tilting over of the liver to the right, thereby causing a twist of the vena cava and consequent thrombosis. Case II, a man aged 42, complained of swelling and ulceration of the legs. For the past twenty-one years there had been a history of alcoholic excess, with periodic attacks of fever, at first occurring once a year, but later only once in three weeks. The present illness started suddenly in 1893 with severe pain in the left calf, followed by considerable swelling as high as the knee, and two days later the right leg became similarly affected, with swelling of the whole leg. Three weeks later a left pleurisy developed, and after three months ulcers formed on both legs, and these have persisted ever since, occasionally healing at times and then breaking down again, and the veins on the left side of the abdomen became dilated and tortuous, while the attacks of fever became more frequent. It is assumed that at the outset there was a thrombus in the left popliteal and in the right femoral veins, which extended upwards to the lower part of the inferior vena cava, while the pleuritic attack was probably caused by a small portion of clot becoming dislodged, and causing infarction of the lung. Objectively the most important symptoms are oedema of the regions drained by the thrombosed portions of the inferior vena cava, and the establishment of a collateral circulation, while pain and fever are frequently accompanying symptoms, the latter depending rather upon the primary disease than upon the thrombosis.

318. Reflex Scoliosis.

M. DIEULAFAÉ (*Revue d'Orthopédie*, January, 1909) reports a case of sclerosis associated with perinephritic abscess. The patient, a man aged 35, was seen about two and a half months after what was probably the onset of the abscess. There was no great tenderness in the right loin, but a rigidity of muscles and a sense of resistance. The scoliosis was most marked in the lumbar region, with the convexity to the left, and a compensatory curve in the dorsal region. The history of the onset, the general state of emaciation and the facies following, the presence of rigidity of the lumbar muscles on the right side, and the scoliosis, led to the diagnosis of a purulent collection in the region of the kidney. The absence of signs of vertebral affection and of urinary symptoms made a perinephritic situation most probable. The abscess was opened and washed out. Three weeks after operation the scoliosis, which improved day by day, was not to be detected. It is evident that the nature of the lesion determined the form of the scoliosis, but the sensibility of the patient was also an element in the causation, together with the intensity of the inflammation and the mobility of the vertebral column.

OBSTETRICS.

319. Prematernity Practice.

J. W. BALLANTYNE (*Journ. of Obst. and Gyn. of the British Emp.*, February and March, 1909) describes the work done in the prematernity ward of the Edinburgh Royal Maternity and Simpson Memorial Hospital during the autumn quarter of 1908. The number of patients treated was 30; there were 5 cases of eclampsia, 3 of albuminuria without eclampsia, 4 of accidental haemorrhage in pregnancy, 3 of placenta praevia, 4 of threatened abortion, 2 of retroversion of the gravid uterus, 2 of phlebitis in pregnancy, 2 of heart disease (1 of which was complicated by buccal haemorrhage and gingivitis), 1 of gonorrhoeal rheumatism, 1 of marked contraction of the vagina and vulva, 1 of chorea gravidarum, 1 of hydramnios complicated by twins, and 1 case sent in because of the occurrence of fetal death in each of two previous pregnancies. The average age of the patients was somewhat high—namely, 30; 9 of the patients were primiparae, the rest multiparae, 1 being in her seventeenth pregnancy. The result of treatment as far as the mothers were concerned was good; only one died, the patient who suffered from chorea, and she was admitted in an almost hopeless condition only two days before her death. Of the children, 10 out of 25 were stillborn, but only 1 of the 10 had reached the ninth month, 5 being under the seventh month; 6 or 7 were macerated as well as stillborn. The details of the individual cases are given. The 5 cases of eclampsia have several features in common. There was albuminuria and diminution in the amount of urine passed; the pregnancy continued for a time after the onset of convulsions. The treatment consisted in the use of hot packs, of enemata, of acetate of potash mixture, of Henry's solution to act upon the bowels, and of strict milk diet. In all the cases also the mother recovered. Four of the patients were primiparae, 1 was a multipara; the number of convulsions was 5 in one case, 3 in another, 2 in each of two others, and 1 in the fifth; the most serious case was that of the multipara, and she was also the only one with signs of renal disease before the pregnancy. In addition to the treatment described above, in 3 cases a $\frac{1}{2}$ -grain suppository of morphine was given, in 2 cases thyroid extract was used, in 1 of them more than 100 grains altogether of the extract being given, and in 1 case venesection was twice performed, saline solution was transfused, and dry cupping performed. In only 1 case—that of the multipara—was labour induced, and this was the only case in which recovery was doubtful for some days after labour. In 4 cases the fetus was born dead and macerated, and the author inclines to the opinion that the condition which caused eclampsia also caused the fetal death, and that the death of the fetus relieved the renal overstrain and prepared the way for recovery. The 4 cases of accidental haemorrhage were treated by rest in bed, use of enemata, and a morphine suppository ($\frac{1}{2}$ grain). Labour set in in each case a few days after admission; 1 only of the infants survived, 1 died after leaving the hospital, 1 after six hours, and 1 was stillborn. The 3 cases of placenta praevia did well; in 1 of them the os was dilated normally under chloroform; in all of them the fetus was premature and stillborn. In 3 out of the 4 cases of threatened abortion the pregnancy continued. In the case of "habitual" fetal death the patient came in at seven and a half months with a history that fluid had been coming away for three days; labour was induced and a child born in a state of asphyxia pallida; efforts to resuscitate the child were unsuccessful, and it was afterwards found that the thorax could not dilate because of the presence of free fluid in the thorax and abdomen. The author claims that the records given prove that a rapidly increasing demand exists among medical men for some place—either a hospital or nursing home—where cases of morbid pregnancy can be kept under observation and suitably treated, and that there are indications that the patients themselves are beginning to share in this feeling; of the 40 patients, 16 were sent in by medical practitioners outside. The records also prove that many of the most serious cases in obstetric practice occur in the first half of pregnancy. Ballantyne recommends that prematernity cases should be treated in a semi-detached building, rather than in the maternity hospital itself.

320. Pregnancy and Operations for Gall Stones.

ROITH (*Monats. f. Geb. u. Gyn.*, April, 1909) has prepared a monograph including a series of cholecystostomies and cholecystectomies performed on pregnant and puerperal subjects, with general considerations on cholelithiasis in relation to gestation, and the influence of operations on the gall bladder and ducts on pregnancy and the puerperium.

Experience teaches the surgeon and obstetrician that pregnancy is not in itself a contraindication to such operations. Expectant treatment, according to clinical evidence, is not safer than under other conditions. The risk to life when operative measures are undertaken is not greater than under other conditions. The prognosis as to interruption of pregnancy is dependent on the stage of gestation, on the degree of jaundice and infection, and on the extent and duration of the operation. Up to the middle of gestation the risk of abortion is trifling, but it is otherwise later on. On that account cystostomy through a free oblique incision under the ribs is preferable during the later months to more complicated measures, but this rule only applies when the continuance of the pregnancy is important and safe on obstetrical grounds. In the worst cases of the whole class, where the bile symptoms are severe near term, it may be necessary to induce labour before operating on the gall bladder or ducts. Roith advocates vaginal Caesarean section. This measure avoids the perils of labour pains, and the uterine incision will lie far away from the area of operation, which is nearly always infected. When pains set in after operation, it is still advisable to terminate labour artificially at once, as the uterine contractions may promote the dissemination of infection from the operation wounds. Anaesthesia requires great care in all cases of this class.

GYNAECOLOGY.

321. Adrenalin in Caesarean Section.

BOGDANOVIC (*Zentralbl. f. Gynäk.*, No. 19, 1909), in a case of Caesarean section where the wounded uterus contracted badly after extraction of the fetus, acted on the recommendation of Neu, who used adrenalin to bring about contractions. Schäfer had long since pointed out that this compound acted very definitely on the muscular tissue of the non-gravid uterus. Bogdanovic's patient was a primipara, aged 31, with a typical flat, rickety pelvis, and knock-kneed. The child was well developed, and the head presented; the os was beginning to dilate. The mother desired to have a living child and consented to any operation likely to save it. Symphysiotomy and delivery of the child through the rigid soft parts of this elderly primipara seemed dangerous on the child's account. Caesarean section was preferred. A transverse fundal incision was made, the child extracted alive, the membranes removed, and the uterine wound sutured with catgut. The uterine muscle, however, was highly atonic, and free irrigation with warm saline solution failed to set up contractions. Bogdanovic therefore injected into four different points in the uterine wall 1 c.cm. of a 1 in 10,000 fresh solution of Richter's tonogen, a preparation of adrenalin recommended by Neu. The uterus at once contracted till it became of stony hardness, and the haemorrhage from the incision ceased at once. The operation was concluded without any further complications and the puerperium was normal.

322. Foreign Body retained Nine Years in the Uterus.

WINDISCH (*Zentralbl. f. Gynäk.*, No. 19, 1909) reported at a meeting of the Royal Hungarian Medical Association last year that he was consulted by a woman aged 32, many years divorced, on account of uterine haemorrhages and hypogastric pains, which had lasted for nine years. It transpired that she had been under treatment in several hospitals. For six months the bleeding had become very severe, and there was much bearing-down pain in the rectum. The uterus was enlarged and hard, and there was parametric exudation surrounding the rectum as well as the cervix. Rest and the administration of ergot had no effect. There was no rise of temperature. At length Windisch determined to use the curette, and directly it was introduced a little piece of softened wood bent in two was extracted. The patient recovered at once, and, when the foreign body was shown to her, she stated that nine years previously she had pushed it into the uterus to stop haemorrhage. Windisch shortly afterwards came across a similar case. The piece of wood had been slipped into the uterus eight years before the patient consulted him, but he found that it had perforated the posterior wall of the cervix, and projected from the portio, so that it was detected at the first exploration of the vagina, and was extracted with ease. There was purulent exudation, and the patient's after-history could not be traced. Von Kubinyi, in discussing Windisch's case, stated that he once found a piece of wood in a pyosalpinx; it appeared that abortion had been attempted.

THERAPEUTICS.

323. The Treatment of Nervous Bronchial Asthma.

N. VON JÄGIE (*Berl. klin. Woch.*, March 29th, 1909) points out that, although a large number of medicaments have been recommended for the treatment of asthma, none of them are consistently reliable. In America adrenalin is not infrequently employed for this purpose, but this drug is but rarely used in Europe. For the last three years the author has employed adrenalin as a means of cutting short the acute attack, and has found that it acts promptly and well. He discusses the action of adrenalin, and points out that at present we know that the superficial blood vessels are constricted and that the coronary arteries are dilated. Certain vessels, no doubt, are dilated by adrenalin, and it is open to doubt whether the vessels in the lungs are constricted or dilated. It is, however, suggested that a constriction of the pulmonary vessels would have the effect of reducing the swelling of the mucous membranes of the lungs, and inasmuch as the attack of asthma depends on a stimulation of the vagus nerve and a disturbance of the vasomotor secretory function of the mucous membranes, the beneficial action of adrenalin would be explainable if an anaemizing effect takes place. He further suggests that it may act by stimulating the sympathetic as atropin does. He is doubtful whether the adrenalin treatment is of permanent use. The results of animal experiments in producing arterio-sclerosis renders it imperative for the clinician to be cautious in giving adrenalin for a long time. He has, however, given it to one patient, a girl, repeatedly, and when examined two years later, no trace of damage to the vascular system could be detected. He appends some clinical histories, which show the prompt manner in which the attacks terminate in response to subcutaneous injections of 0.5 c.cm. of a 1 in 1,000 solution of adrenalin.

324. Thyresol.

A. HIRSCHBERG considers that it is a considerable advance in therapeutics that the chemical manufacturers have succeeded in freeing sandalwood oil of its irritating effects on the kidneys, stomach, and skin. The Farbenfabrik (vorm. Bayer and Co.) of Elberfeld have introduced a preparation called thyresol, which is stated to be a santalol methyl ether (*Berl. klin. Woch.*, March 22nd, 1909). Various therapeutic reports dealing with the effect of thyresol in gonorrhoea in the male have appeared and have dealt favourably with it. Thyresol is so constituted that no santalol is set free in the organism, so that the usual irritative action of sandalwood oil should not occur. Thyresol is a pale yellow fluid, possessing a weak aromatic odour, is insoluble in water, but is soluble in absolute alcohol, ether, and chloroform. Cats and rabbits tolerate 1 gram well by mouth. Hirschberg has employed it in a large number of female patients in Dr. Nagel's clinic and polyclinic in Berlin. Thyresol is put up in drops, tablets, and capsules. The tablets are made up with carbonate of magnesium, each tablet containing 0.5 gram of thyresol. All the patients took it well, and no signs of irritation of the kidneys, gastro-intestinal tract, or skin followed its use. A few nervous patients complained of eructations, but this he ascribed to hyperacidity of the gastric secretion. The acid acting on the magnesium carbonate produced an excess of gas development. As to the therapeutic effect of thyresol in female gonorrhoea, he points out that the urinary and genital apparatus in the female is separate, unlike in the male. It is therefore theoretically impossible to influence the affections of the genital passages by internal treatment, while those of the urinary passages can be so dealt with. Local treatment had therefore to be employed for the genital affections. Acute and chronic gonorrhoea, with profuse discharge, granular colitis, and urethritis, were beneficially influenced by the medication, and he further found that non-gonorrhoeal cystitis was improved by thyresol. No details of any kind are given by which the reader could judge whether the benefit of the treatment should be ascribed to the internal or to the local treatment.

PATHOLOGY.

325. Brieger's Cachexia Reaction.

THE antifermentative power of human serum has recently been studied from the point of view of utilizing variations in this power for the diagnosis and prognosis of disease. Brieger and Trebing found that the serum of persons suffering from cancer and other diseases in which cachexia is a frequent symptom inhibited the action of trypsin more powerfully than normal serum does. The estimation

of this power was judged by allowing a 1 per cent. solution of trypsin to act on albumen in the form of serum plated out on Petri dishes, and determining how much of the serum of the patient is necessary to stop the formation of a depression or dell due to digestion of the coagulated serum. They found that one loopful of fresh serum mixed with four loopfuls of trypsin solution marked the limit of the power of the normal serum, and expressed this as a positive reaction of 1:4. F. Landois (*Berl. klin. Woch.*, March 8th, 1909), in studying this problem, preferred to use a 1 per cent. trypsin glycerine solution, as he found that unequal suspensions of undissolved trypsin could lead to varying results and also that an aqueous solution does not keep so well as the solution containing glycerine. Another difference between his technique and that of Brieger and Trebing was that he used drops from a pipette instead of loopfuls of solutions. A source of error which he admits lies in the fact that the drop of thickish glycerine solution is probably not of the same size as the drop of more limpid serum. However, this error was constant through all his experiments. He found that the normal dilution, or, as he terms it, index, was between 1:2 and 1:3. Testing the index on cancer patients, he did not obtain a higher antitryptic power than 1:7, while the majority of the patients gave an index of 1:3—that is, practically a normal index. He found, however, that when cachexia was present the index tended to be higher than normal. He found that in a case of hysterical anorexia, with marked loss of weight, the index was normal, which he ascribes to the difference between loss of weight due to hunger and loss of weight due to destruction of leucocytes and proteids. In septic processes the index rises hand in hand with the destruction of leucocytes. He considers that the cause of the increased antitryptic power lies in the destruction of leucocytes and the liberation of leuco ferment. A. Braumstein (*Deut. med. Woch.*, April 1st, 1909) also deals with the same problem. He utilized the same technique as Brieger and Trebing, and obtained the same degree of inhibition of tryptic fermentation. Brieger and Trebing found that in 91.6 per cent. of cancer patients the reaction was positive: von Bergmann and Meyer found that 92.7 per cent. of cancer patients gave positive reactions; and Braumstein found that 91.7 per cent. of cancer patients gave the reaction. Of the non-cancer patients, Brieger and Trebing found a positive reaction in 23.9 per cent., von Bergmann and Meyer in 24.2 per cent., and the author met with it in 27.7 per cent. Taken together with other signs and symptoms, he regards the reaction as a valuable diagnostic means. This contention is supported by cases. The explanation of the reaction given is that the destruction of albumen permits of an absorption of proteolytic ferment and thus to the production of antiferment. He supports this theory by detailing the results of experiments. Rabbits and guinea-pigs were given phloridzin and also phosphorus, both of which are known to lead to the disintegration of proteids. He found that the antiferment power of the serum could be doubled in each case. He compares the reaction to the find of lactic acid in the gastric secretion; far-reaching conclusions cannot be drawn from it with safety. From Brieger's laboratories, F. Brenner (*Deut. med. Woch.*, March 4th, 1909) deals with the reaction in anaemia and details some observations which he made in a series of cases. The haemoglobin content of the blood and the red and white blood cell counts are tabulated and compared with the antitryptic determination. In the 35 cases, the reaction varied from 1:2 up to 1:10. Only two gave normal values (that is, 1:3). In about half the cases the author found a correspondence between the haemoglobin and antitryptin. In the rest of the cases no such correspondence was noted. No parallel was found between the altered number of corpuscles and the altered condition of the antiferment. But the author states that the antitryptic value indicated the severity of the illness. He followed the reaction through the condition during treatment. Twenty of the patients were treated with a natural arsenic water (Max-quelle from Bad Dürkheim), which was given in increasing quantities for thirteen days, and decreasing quantities from the thirty-first day, so that a course extended over forty-two days. Here, again, he believes that the improvement in the haemoglobin content of the blood and of the general condition went *pari passu* with the decrease of the antitryptic power of the serum. He goes as far as to state that the reaction can be utilized as an indication of the improvement of the condition. In the rest of the cases arsenic pills were given, and in these cases he found that both the improvement in the condition and the lessening in the antitryptic power was less rapid and less marked, but just as parallel as in the first series.

326.

Bovine and Human Tubercle Bacilli.

FINGER and JENSEN deal with the wide question of the relation existing between tuberculosis and tubercle bacilli of man and tuberculous and tubercle bacilli of the ox, in a very detailed article in the *Berl. klin. Woch.*, Nos. 42, 43, 44, and 45, 1908. They take into account the work which they have previously carried out and published, and also the publications of other observers. They start with an account of a number of cases of various forms of human tuberculosis and the characteristics of the bacilli found in these cases. They tested the virulence of the bacilli in each case on guinea-pigs, rabbits, and calves, and paid especial attention to the types of pathological changes met with in each case and compared these with the types met with in cases in which the bacilli presented other virulent characteristics. They then proceeded to classify their cases according to the degree of virulence to the various animals, and considered this standpoint in connexion with the possible sources of bacilli. Next the morphology of the bacilli in cultures was studied, and attention was paid to the reaction of the bacilli in glycerine cultures, showing the value of the phenomenon of the alteration of slight acidity to neutrality or weak acidity described by Th. Smith. Having considered these and other points in connexion with the subject, they come to the following conclusions: They do not recognize a sharp differentiation between the type of human and of bovine tubercle bacilli. Bovine bacilli are not always strongly pathogenic to calves, and bacilli which are gained from human sources and for which there appears to be no reason to ascribe a bovine origin may prove much more virulent to calves than the true bovine type. The virulence of bacilli gained from human sources is very variable, and can be high, even in cases in which the type is not characteristic of the bovine origin. They therefore determine that inoculation into rabbits is not a safe method of distinguishing between bovine and human bacilli. They found that no constant differences in the anatomical changes produced by the bovine and human bacilli in man can be found. Even the morphological characteristics of the two types are too little constant to justify conclusions being formed in this connexion. The cultural characteristics are so extremely variable and depend on so many external conditions that it is impossible to distinguish between bovine and human bacilli in this way. With regard to Th. Smith's reaction test, they point out that strains of bacilli are at times met with which correspond in every other respect to the human type, and which behave like bovine bacilli in turning the glycerine bouillon alkaline. It is therefore not permissible to utilize this phenomenon for the distinction between a human and a bovine type. They consider it necessary to investigate the question further in order to determine whether the tubercle bacillus is altered in its characteristics by a sojourn in the human or animal organism, and whether a transition from one to the other type does not at times actually take place. This question is of paramount importance, inasmuch as it may yield an indication as to whether the bacillus of bovine tuberculosis is highly virulent to human beings and vice versa, and whether the change in characteristics is easily induced or not. The subject further has a considerable biological interest. A careful perusal of the original article is strongly recommended to all students of the modern tuberculosis movements, as it in some respects amplifies the work done by others, and thus throws light on a problem which is not yet settled. It is impossible to give all the details in this place.

327.

Properties of Serum in Trypanosomiasis.

MESNIL and BRIMONT (*Ann. de l'Inst. Pasteur*, February, 1909) find that the serum of animals affected with a trypanosomiasis of a subacute or chronic type acquires very quickly special protective properties, and, when mixed with the trypanosomes, prevents the infection of mice. The appearance of these properties and their degree are independent of the progress of the disease; but they rapidly diminish when they survive at all, after a cure has been effected. Up to a certain point this protective power is specific, and may assist in the differentiation of the trypanosomes. It resists heating to from 56° to 64° C. The active substances attach themselves, at least in part, to the body of the trypanosome, which may then be injected with impunity into mice. *In vitro* the active serums do not exert any destructive action on the trypanosomes, even when mouse serum is added as complement. But *in vivo* there is found in the peritoneal cavity of mice which have received serum and virus a rapid and intense phagocytosis of the parasites. Hence it seems that the effect of the serum is to render the trypanosomes susceptible to the leucocytes.

THE

British Medical Journal.

THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

SUPPLEMENT

CONTAINING

PROCEEDINGS OF COUNCIL

REPORTS OF STANDING COMMITTEES

MEETINGS OF BRANCHES AND DIVISIONS

PROGRAMME OF ANNUAL MEETING

MEDICAL BILLS IN PARLIAMENT

PROCEEDINGS OF THE GENERAL MEDICAL COUNCIL

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British Medical Association.

PETITION FOR THE GRANT OF A ROYAL CHARTER OF INCORPORATION.

The following is the text of the petition for a Royal Charter for the British Medical Association, which was lodged on Monday, December 21st, 1908:

TO THE KING'S MOST EXCELLENT MAJESTY IN COUNCIL.

THE HUMBLE PETITION of JAMES ALEXANDER MACDONALD, of Taunton in the County of Somerset, Esquire, Doctor of Medicine, and Master of Surgery EDMUND OWEN, of 64 Great Cumberland Place in the County of London, Esquire, Doctor of Laws, and Fellow of the Royal College of Surgeons (England), EDWIN RAYNER, of Stockport in the County of Cheshire, Esquire, Doctor of Medicine, and Fellow of the Royal College of Surgeons (England), ANDREW CLARK, of Uxbridge in the County of Middlesex, Esquire, Doctor of Science,

Fellow of the Royal College of Surgeons (England), The Right Honourable SIR BALTHAZAR WALTER FOSTER, of 30 Grosvenor Road in the City of Westminster, Knight, Doctor of Medicine, Doctor of Laws, Fellow of the Royal College of Physicians (London), Member of Parliament, and one of Your Majesty's Privy Council, SIR VICTOR ALEXANDER HADEN HORSLEY, of 25 Cavendish Square in the County of London, Knight, Doctor of Laws, Fellow of the Royal Society, Fellow of the Royal College of Surgeons (England), ROBERT COCHRANE BUIST, of 166 Nethergate Dundee in Scotland, Esquire, Doctor of Medicine, Member of the Royal College of Physicians (Edinburgh) CHARLES GEORGE DRUMMOND MORIER, of 65 Hamilton Terrace St. John's Wood in the County of London, Esquire, Licentiate of the Royal College of Physicians (Ireland), Licentiate in Midwifery, Licentiate of the Royal College of Surgeons (Ireland), and THOMAS JENNER VERRALL, of Brighton in the County of Sussex, Esquire, Member of the Royal College of Surgeons (England), Licentiate of the Royal College of Physicians (London)

SHewETH as follows:

1. Your Petitioners are respectively the Chairman of Representative Meetings, the Chairman of Council, the Treasurer, the Chairman of the Organisation Committee, two of the Vice-Presidents, the Chairman of the Scottish Committee, the Chairman of the Colonial Committee, and the former Chairman of the Organisation Committee of The British Medical Association (hereinafter called "the Association").

2. The Association is honoured by the direct patronage of Your Majesty, and Your Majesty when Prince of Wales was, and His present Royal Highness the Prince of Wales is, an Honorary Member of the Association.

3. The Association was originally founded at Worcester on the 19th July, 1832, under the name of "The Provincial Medical and Surgical Association," with the objects of the advancement of Medical Science, and the maintenance of the honour of the Medical Profession, by promoting friendly intercourse and free communication amongst its members.

4. The name of the Association was changed in the year 1856 to that of "British Medical Association."

5. On the 17th October, 1874, the Association was duly incorporated and registered with limited liability in pursuance of a licence granted by the Board of Trade under the Companies Act, 1857, Section 23.

6. As the membership increased local Branches and Divisions of the Association were from time to time formed for local areas, the area of each Division being included within the area of a Branch. Members of the Association residing in the area of a particular Division are members of that Division and of the Branch comprising that Division. Every part of the United Kingdom is included in some Division and Branch of the Association.

7. For many years the operations of the Association have extended beyond the limits of the United Kingdom, and Branches and Divisions exist in many of Your Majesty's Dominions beyond the Seas, including (amongst others) India Canada Australia New Zealand and the African and West Indian Colonies.

8. The number of the Members of the Association at the date of its formation in the year 1832 was 50. At the date of its incorporation in the year 1874 the members numbered about 6,000, and the present number of its members is 20,800, of whom about 4,000 are included in Branches outside the United Kingdom, and the remainder are members of Branches in the United Kingdom. The present membership of the Association comprises upwards of 50 per cent. of the total number of practitioners on the Medical Register.

9. Under the present constitution of the Association the general control of its affairs rests with a body known as the Representative Meeting composed of members elected annually by the Divisions. A Central Council, consisting of members elected by the Branches, and of certain members *ex officio* and co-opted members, acts as the Executive of the Association, and carries out the mandates of the Representative Meeting, but with power in certain cases to refer the decisions of that meeting to the votes of all the Divisions of the Association. Considerable latitude is allowed to the Divisions and Branches in the management of their local affairs.

10. The property of the Association consists of—

(a) Freehold land in the City of Westminster, upon which buildings known as No. 429 Strand, Nos. 2, 3, 4, and 5 Agar Street, and Nos. 1 and 2 Harvey's Buildings, formerly stood, but now forming the site of the offices and premises of the Association recently rebuilt at a cost exceeding £40,000.

(b) Various stocks funds and securities and personal chattels and effects.

11. The objects of the Association are declared by its Memorandum of Association to be "the promotion of "medical and the allied sciences, and the maintenance of "the honour and the interests of the medical profession "by the aid of all or any of the following:—

"(a.) Periodical meetings of members of the Association, "and of the medical profession generally, in "different parts of the country.

"(b.) By the publication of such information as may be "thought desirable in the form of a periodical "Journal which shall be the journal of the "Association.

"(c.) By the occasional publication of transactions or "other papers.

"(d.) By the grant of sums of money out of the funds of "the Association for the promotion of the medical "and the allied sciences in such manner as may "from time to time be determined on.

"(e.) And such other lawful things as are incidental or "conducive to the attainment of the above objects."

12. In furtherance of the objects of the Association:—

(a) Annual General Meetings are held at which papers are read and discussions take place upon all branches of medical knowledge. In the years 1897 and 1906 these meetings were held in Canada. They are invariably attended by distinguished members of the medical profession from all parts of the civilized world, and are eminently useful in diffusing information as to the most recent discoveries in medicine and surgery, and the state of knowledge and practice of the profession in different countries. Local meetings with similar objects are organized and held by Divisions and Branches.

(b) Annual grants (usually to the extent of about £1000) are made out of the funds of the Association, by means of scholarships prizes and otherwise, for the encouragement of medical and scientific research.

(c) Committees are appointed for the investigation of the causes and conditions of, and remedies for, particular diseases, and of other subjects of medical interest.

(d) A Journal (known as "The British Medical Journal") has been published weekly ever since the year 1844, and is supplied to every member of the Association. It contains articles dealing with questions affecting medicine, surgery, and the ancillary sciences, reports of the proceedings of various scientific societies (including the Association), reviews of medical literature, and other matter of interest to the medical profession.

(e) Committees are appointed to enquire into and advise upon matters affecting the material interests of members of the medical profession, and their professional relations to one another and to the public. The Association has frequently been instrumental in obtaining the recognition of an accepted standard in various questions of professional conduct.

(f) The Association has from time to time assisted Your Majesty's Government, and the Governments of Your Majesty's Colonies, and Municipal and Local Authorities, in the framing and carrying out of legislation affecting the public health, the poor law, the treatment of lunacy and inebriety, and other matters as to which the members of the medical profession have special knowledge.

(g) The Association has encouraged the establishment of benevolent and provident funds for the benefit of members of the medical profession and their families, but in this respect, and in regard to the protection of individual members against unjust attacks and accusations, the Association has been hampered by the conditions attached to the licence under which it was incorporated.

13. The Association has for many years considered that in the respects last mentioned and in other respects greater freedom of action is desirable in order to enable the Association to undertake more completely than hitherto all proper means for promoting the efficiency and welfare of the medical profession and the advancement of the sciences of medicine and surgery.

14. Your Petitioners humbly submit that, having regard to the antecedents and useful work of the Association, it is appropriate and fitting that it should be honoured by the grant of a Royal Charter of Incorporation, and they firmly believe that it would be greatly for the benefit of the Association that it should be under the protection of Your Majesty's Royal Sanction by means of such Charter, and that the same would greatly tend to promote the objects for which the Association was established and still exists.

15. At the Annual Representative Meeting held at Leicester in the month of July, 1905, the following Recommendation (which had been unanimously adopted by the Central Council) was approved viz.:—"That the Representative Meeting issue the necessary authority for 'application on behalf of the Association to be made' to the Privy Council praying His Majesty to grant a 'Royal Charter of Incorporation.'"

16. In pursuance of the said authority, drafts of the proposed Charter Ordinances and By-laws were prepared and published in the "British Medical Journal," and circulated amongst all the Divisions, both within and without the United Kingdom. The said drafts, and various amendments thereto, were considered by Representative Meetings held in the years 1906, 1907, and 1908.

17. At the Annual Representative Meeting held at Sheffield in the month of July, 1908, it was resolved (with one dissentient only) "that this Representative Meeting approve subject to the amendments adopted 'by the Meeting the draft Charter Ordinances By-laws' and Schedules thereto submitted by the Council and 'that it be an instruction to the Council to take forthwith all necessary steps (1) to carry out in the draft Charter Ordinances By-laws and Schedules the amendments approved by the Meeting and (2) to present 'on behalf of the Association a Petition to His Majesty 'the King to grant to the Association a Royal Charter of Incorporation in the form approved by this Meeting with 'such consequential or formal variations as the Council or 'their legal advisers may find expedient.'"

18. The proposed Charter Ordinances and By-laws submitted with this Petition are those of which the drafts are referred to in the said Resolution, with the amendments in the said Resolution mentioned, and with the addition of such consequential or formal variations only as aforesaid.

19. It is intended that if the proposed Charter be granted all legal and necessary steps shall forthwith be taken for the winding up of the Association as now constituted, and for vesting its property in the Association to be incorporated by the said Charter.

Your Petitioners therefore on behalf of themselves and the other members of the Association most humbly pray Your Most Gracious Majesty to grant a Royal Charter for constituting the members of the Association a Corporation under such regulations and restrictions and with such powers as may to Your Most Gracious Majesty seem meet And Your Petitioners will ever pray &c.

Dated this fifteenth day of December one thousand nine hundred and eight.

The Seal of the British Medical Association is hereunto affixed in the presence of—

	EDMUND OWEN, <i>Chairman of Council.</i>
Seal.	EDWIN RAYNER, <i>Treasurer.</i>
	GUY ELLISTON, <i>General Secretary.</i>
J. A. MACDONALD,	B. WALTER FOSTER,
EDMUND OWEN,	VICTOR HOUSLEY,
EDWIN RAYNER,	R. C. BUIST,
ANDREW CLARK,	C. G. DRUMMOND MORIER,
	T. JENNER VERRILL.

1st To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

LANCASHIRE AND CHESHIRE BRANCH.—Several Divisions have asked the Branch Secretary to assist them in drawing up a clinical and scientific programme for their winter meetings by letting them know of gentlemen who would be willing to read papers or to give demonstrations at meetings of Divisions other than their own. The Honorary Secretary would accordingly be pleased to know of any members willing to give such papers or demonstrations, so that he may be able to submit them to the Divisions.—F. CHARLES LARKIN, Branch Secretary, Liverpool.

METROPOLITAN COUNTIES BRANCH: KENSINGTON DIVISION.—There will be a meeting of the Kensington Division, at the Kensington Town Hall, on Thursday, January 21st, at 5 p.m., when Mr. L. A. Bitwell will give an address on the immediate and ultimate results of gastro-enterostomy for gastric and duodenal ulcer.—H. BECKETT OVERY, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—The next meeting of the Westminster Division will be held at the Florence Restaurant, Rupert Street, on Thursday, January 7th, 1909, when Dr. Savage has kindly promised to read a paper on the future care of the insane. The meeting will be preceded by a dinner at 7.30, at which members of any other Divisions of the Association will be welcome if they will kindly notify J. Howell Evans, Esq., F.R.C.S., 25, Berkeley Square.—HARVEY HILLIARD, Honorary Secretary.

THE SEVENTY-SEVENTH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION,

BELFAST,

JULY 23RD TO JULY 31ST, 1909.

President :

SIMON SNELL, Hon.D.Sc., F.R.C.S.Edin., Ophthalmic Surgeon, Royal Infirmary, Sheffield.

President-elect :

Sir WILLIAM WHITLA, M.D., LL.D., Professor of Materia Medica and Therapeutics, Queen's College, Belfast.

Past-President :

HENRY DAVY, Hon.D.Sc., M.D., F.R.C.P.Lond., Physician, Royal Devon and Exeter Hospital, Exeter.

Chairman of Representative Meetings :

JAMES ALEXANDER MACDONALD, M.D., M.Ch., R.U.L., Physician, Taunton and Somerset Hospital.

Chairman of Council :

EDMUND OWEN, Hon.D.Sc., LL.D., F.R.C.S., Consulting Surgeon to St. Mary's Hospital, London.

Treasurer :

EDWIN RAYNER, M.D.Lond., F.R.C.S., Surgeon, Stockport Infirmary, Stockport.

The Seventy-seventh Annual Meeting of the British Medical Association will be held in Belfast in July, 1909. The President's address will be delivered on Tuesday, July 27th, and the Sections will meet on the three following days. The Annual Representative Meeting will begin on Friday, July 23rd, 1909.

PROGRAMME OF BUSINESS.

The Address in Medicine will be delivered by FREDERICK TAYLOR, M.D., F.R.C.P., Consulting Physician, Guy's Hospital.

Professor KOCHER has been invited to deliver the Address in Surgery.

The Address in Obstetrics will be delivered by Sir JOHN W. BYERS, M.D., Professor of Midwifery and Diseases of Women, Queen's College, Belfast.

The Popular Lecture will be delivered by Dr. J. A. MACDONALD, Physician to the Taunton and Somerset Hospital, Chairman of the Representative Meetings.

THE SECTIONS.

The scientific business of the meeting will be conducted in fifteen Sections, which will meet on Wednesday, July 28th, Thursday, July 29th, and Friday, July 30th.

The President, Vice-Presidents, and Honorary Secretaries of each Section constitute a Committee of Reference for that Section, and exercise the power of inviting, accepting, or declining any paper, and of arranging the order in which accepted papers shall be read. Communications with respect to papers should be addressed to one of the Honorary Secretaries.

A paper read in the Section must not exceed fifteen minutes, and no subsequent speech must exceed ten minutes.

Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the BRITISH MEDICAL JOURNAL without special permission.

The following are the general arrangements so far as they are yet complete :

ANATOMY AND PHYSIOLOGY.

President : CHARLES SCOTT SHERRINGTON, M.D., F.R.S., Physiological Laboratory, University, Liverpool.

Vice-Presidents : Professor THOMAS HUGH MILROY, M.D., F.R.S.E., Queen's College, Belfast; Professor PETER

THOMPSON, M.D., King's College, Strand, London; ARTHUR PHILIP BEDDARD, M.D., F.R.C.P., 44, Seymour Street, Portman Square, London, W.

Honorary Secretaries : ALEX. LOW, M.B., 142, Blenheim Place, Aberdeen; JOHN ALEX. MILROY, M.D., Queen's College, Belfast.

DERMATOLOGY AND ELECTRO-THERAPEUTICS.

President : WILLIAM CALWELL, M.D., 6, College Gardens, Belfast.

Vice-Presidents : ROBERT BRIGGS WILD, M.D., 95, Mosley Street, Manchester; LESLIE ROBERTS, M.D., 46, Rodney Street, Liverpool.

Honorary Secretaries : JAMES HARRY SEQUEIRA, M.D., F.R.C.P., 8A, Manchester Square, London; S. ERNEST DORE, M.D., 26, New Cavendish Street, London; JOHN CAMPBELL RANKIN, M.D., 38, University Road, Belfast.

EDUCATION

DISEASES OF CHILDREN.

President : HAROLD J. STILES, F.R.C.S.Edin., 9, Great Stuart Street, Edinburgh.

Vice-Presidents : JOHN McCaw, M.D., 74, Dublin Road, Belfast; RICHARD WHYTOCK LESLIE, M.D., "St. Heliers,"

Strandtown, Belfast; ROBERT CAMPBELL, F.R.C.S., 21, Great Victoria Street, Belfast.

Honorary Secretaries: ANDREW FULLERTON, F.R.C.S.I., 8 University Square, Belfast; JOHN WILLIAM SIMPSON, M.D., 19, Lansdowne Crescent, Edinburgh.

HAEMATOLOGY AND VACCINE THERAPY.

President: SIR ALMROTH WRIGHT, M.D., F.R.S., 6, Park Crescent, Regent's Park, London, N.W.

Vice-Presidents: ALEX. GARDNER ROBE, M.B., 15, University Square, Belfast; THOMAS HOUSTON, M.D., 95, Great Victoria Street, Belfast; Captain STEWART RANKIN DOUGLAS, I.M.S., Inoculation Department, St. Mary's Hospital, London.

Honorary Secretaries: WILLIAM DUNLOP DONNAN, M.D., 12, High Street, Holywood, co. Down; DUDLEY W. CARMALT-JONES, M.B., B.Ch.Oxon., 78, Wimpole Street, London, W.

INDUSTRIAL DISEASES AND PUBLIC HEALTH.

President: LOUIS COLTMAN PARKES, M.D., 61, Cadogan Square, Chelsea, London.

Vice-Presidents: SAMUEL AGNEW, M.D., Lurgan, co. Armagh; HENRY O'NEILL, M.D., 6, College Square East, Belfast; CHARLES KILICK MILLARD, M.D., Town Hall, Leicester.

Honorary Secretaries: CHARLES PORTER, M.D., Public Health Department, Town Hall, Finsbury; WILLIAM MCLEORINAN, L.R.C.P., 103, Antrim Road, Belfast; THOMAS CARNWATH, M.B., Town Hall, Manchester.

LARYNGOLOGY, OTOTOLOGY, AND RHINOLOGY.

President: ST. CLAIR THOMSON, M.D., F.R.C.P., 28, Queen Anne Street, London.

Vice-Presidents: ERNEST BLECHYNDEN WAGGETT, M.B., 45, Upper Brook Street, London, W.; V. P. HENRY SMURTHWAITE, M.D., 8, St. Mary's Place, Newcastle-on-Tyne; J. A. KNOWLES RENSCHAW, M.D., 11, St. John Street Manchester.

Honorary Secretaries: HAROLD SHUTTLEWORTH BARWELL, F.R.C.S., 55, Wimpole Street, London; JOHN STODDART BARR, M.B., 13, Woodside Place, Glasgow; HENRY HANNA, M.B., B.Sc., 57, University Road, Belfast.

MEDICINE.

President: PROFESSOR JAMES ALEXANDER LINDSAY, M.D., F.R.C.P., 3, Queen's Elms, Belfast.

Vice-Presidents: ARTHUR FOXWELL, M.D., F.R.C.P., 47, Newhall Street, Birmingham; JOSEPH FRANCIS O'CARROLL, M.D., F.R.C.P.I., 43, Merrion Square, Dublin; LAURISTON ELGIE SHAW, M.D., F.R.C.P., 64, Harley Street, London; WILLIAM BAIRD MCQUITT, M.D., 8, College Square East, Belfast.

Honorary Secretaries: JOHN SMYTH MORROW, M.D., Elia House, Antrim Road, Belfast; LEWIS ALBERT SMITH, M.D., 25, Queen Anne Street, London, W.; JOHN ELDER MACILWAIN, M.D., 55, University Road, Belfast.

NAVY, ARMY, AND AMBULANCE.

President: Fleet Surgeon J. LLOYD THOMAS, R.N.

Vice-Presidents: Inspector-General ROBERT BENTHAM, R.N. (retired), 22, King's Avenue, Ealing, London, W.; Lieut.-Colonel R. PORTER, R.A.M.C., P.M.O., Station Hospital, Military Barracks, Belfast; Colonel THOMAS H. HENDLEY, I.M.S., C.I.E., 4, London Road, London, N.W.

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President: JOHN CAMPBELL, M.D., Crescent House, University Road, Belfast.

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President: JOHN WALTON BROWNE, M.D., 10, College Square North, Belfast.

Vice-Presidents: ARTHUR W. SANDFORD, M.D., 13, St. Patrick's Place, Cork; WILLIAM MARCUS KILLEN, M.D., 9, Clifton Street, Belfast; ALEX. HILL GRIFFITH, M.D., 17, St. John Street, Manchester.

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President: PROFESSOR WM. ST. CLAIR SYMMERS, M.B., Queen's College, Belfast.

Vice-Presidents: WALTER SYDNEY LAZARUS-BARLOW, M.D., Cancer Research Laboratory, Middlesex Hospital, London; ARTHUR EDWARD MOORE, M.B., Castlemahon, Blackrock, Cork; ASTLEY VAYASOUR CLARKE, M.D., 37, London Road, Leicester; PROFESSOR I. WALKER HALL, M.D., 9, Royal Park, Clifton, Bristol.

Honorary Secretaries: ALFRED EDWARD BARNES, M.B., 348, Glossop Road, Sheffield; OTTO F. F. GRÜNBAUM, M.D., 34, Wimpole Street, London, W.; WILLIAM JAMES WILSON, M.D., Pathological Laboratory, Queen's College, Belfast.

PHARMACOLOGY AND THERAPEUTICS.

President: PROFESSOR RALPH STOCKMAN, M.D., F.R.S. Edin., The University, Glasgow.

Vice-Presidents: PROFESSOR WALTER ERNEST DIXON, M.D., Pharmacological Laboratory, Cambridge; NEWMAN NEILD, M.D., 9, Richmond Hill, Clifton, Bristol.

Honorary Secretaries: VICTOR GEORGE LEOPOLD FIELDEN, M.B., 84, Dublin Road, Belfast; HECTOR CHARLES CAMERON, M.B., Guy's Hospital, London, S.E.

PSYCHOLOGICAL MEDICINE.

President: OUTTERSON WOOD, M.D., 40, Margaret Street, Cavendish Square, London.

Vice-Presidents: GEORGE ROBERT LAWLESS, F.R.C.S.I., District Asylum, Armagh; WM. RICHARD DAWSON, M.D., 41, Upper Fitzwilliam Street, Dublin; ROBERT HENRY COLE, M.D., 25, Upper Berkeley Street, London, W.; MICHAEL JAMES NOLAN, L.R.C.P. and S.I., Down District Asylum, Downpatrick.

Honorary Secretaries: WALTER SAMUEL SMYTH, M.B., District Asylum, Antrim; SIDNEY HERBERT CLARKE, M.B., Leicester and Rutland Asylum, Narborough, Leicestershire.

SURGERY.

President: PROFESSOR THOMAS SINCLAIR, M.D., F.R.C.S., 22, University Square, Belfast.

Vice-Presidents: CHARLES ALFRED BALLANCE, M.V.O., M.S., F.R.C.S., 106, Harley Street, W.; SIR PETER O'CONNELL, M.D., 9, College Square North, Belfast; ARTHUR JOHN DREW, F.R.C.S., Water Hall, St. Aldate's, Oxford; JOHN GALWAY COOKE, M.B., City and County Infirmary, Londonderry; ARTHUR BROWNLOW MITCHELL, F.R.C.S.I., 18, University Square, Belfast.

Honorary Secretaries: W. THRELWALL THOMAS, F.R.C.S., 84, Rodney Street, Liverpool; G. LENTHAL CHEATLE, C.B., F.R.C.S., 117, Harley Street, London; HOWARD STEVENSON, M.B., F.R.C.S.I., 2, College Square North, Belfast; JAS. BERNARD MOORE, M.B., 11, Clifton Street, Belfast.

TROPICAL MEDICINE.

President: CHARLES WILBERFORCE DANIELS, M.B., London School of Tropical Medicine, Albert Docks, London.

Vice-Presidents: Lieutenant-Colonel ANDREW DEANE, I.M.S., Royal Victoria Hospital, Belfast; Surgeon-General W. R. BROWNE, M.D., C.I.E., 5, Royal Crescent, Holland Park Avenue, London.

Honorary Secretaries: JAMES COLVILLE, M.D., 7, University Square, Belfast; Dr. ANTON BREINL, Director Runcorn Research Laboratories.

PROVISIONAL TIME TABLE.

FRIDAY, JULY 23RD, 1909.

11 A.M.—Annual General Meeting followed by Representative Meeting.

SATURDAY, JULY 24TH, 1909.

9.30 A.M.—Representative Meeting.

MONDAY, JULY 26TH, 1909.

10 A.M.—Representative Meeting.

7.30 P.M.—Annual Conference of Secretaries of Divisions.

TUESDAY, JULY 27TH, 1909.

10 A.M.—Council Meeting.

10.30 A.M.—Representative Meeting (if required).

2.30 P.M.—Adjourned General Meeting.

Induction of President.

8.30 P.M.—President's Address.

WEDNESDAY, JULY 28TH, 1909.

9.30 A.M.—Council Meeting.

10 A.M.—Sectional Meetings.

10.30 A.M.—Representative Meeting (if required).

12.30 P.M.—Address in Medicine.

8.30 P.M.—Reception.

THURSDAY, JULY 29TH, 1909.

9.30 A.M.—Council Meeting.

10 A.M.—Sectional Meetings.

12.30 P.M.—Address in Surgery.

7.30 P.M.—Annual Dinner.

FRIDAY, JULY 30TH, 1909.

10 A.M.—Sectional Meetings.

12.30 P.M.—Address in Obstetrics.

8 P.M.—Popular Lecture.

8.30 P.M.—Reception.

SATURDAY, JULY 31ST, 1909.

Excursions.

Honorary Local Secretaries—

HENRY LAWRENCE MCKISACK, M.D., M.R.C.P.,
17, University Square, Belfast.CECIL EDWARD SHAW, M.A., M.D., M.Ch.,
9, University Square, Belfast.HOWARD STEVENSON, B.A., M.B., F.R.C.S.I.,
2, College Square North, Belfast.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

EDINBURGH BRANCH:

SOUTHERN DIVISION.

A MEETING of the Division was held in the Oddfellows' Hall on December 18th, 1908, at 8.15 p.m. Dr. MATHESON was in the chair, and there were present Drs. Allen, Cullen, Dickson, Porter, E. Price, G. Price, Proudfoot, Jamieson, Kennedy, Steven, Walker, and the Secretary. Dr. Keppie Paterson, Secretary of the North-East Division, was also present as a visitor.

Confirmation of Minutes.—The minutes were read, approved, and signed.

Apologies for Non-attendance.—Apologies for absence were received from Drs. Brock, Mackenzie, and Webster.

The Divisions and the General Practitioner.—The resolution:

That the British Medical Association, through its Divisions, does not meet the local requirements of the general practitioner,

which was remitted by the Branch Council to the Edinburgh Divisions for consideration and suggestion, was

again submitted. The CHAIRMAN reviewed some of the reasons which led to the resolution, and proposed several remedies which might be adopted by the Branch Council and the Divisions. After some discussion, taken part in by Drs. PROUDFOOT, WALKER, PORTER, JAMIESON, K. PATERSON, and DEWAR, the Secretary was instructed to report to the Secretary of the Branch Council.

Medical Men and Street Casualties.—The relation of medical men to street casualties was then considered, and it was resolved to remit the matter to the Branch Council, with the view of learning the opinions of the profession in Edinburgh and Leith on the subject.

Paper.—Dr. DEWAR read a short paper on the value of alcohol as a medicine in disease. An interesting discussion followed, which was contributed by Drs. WALKER, PROUDFOOT, STEVEN, DICKSON, CULLEN, KEPPIE PATERSON, JAMIESON, KENNEDY, and E. PRICE. Dr. DEWAR replied.

Subject of Discussion at Next Meeting.—The medical subject chosen for discussion at the next meeting was the early diagnosis and treatment of appendicitis, to be opened by Dr. Kennedy.

Vote of Thanks.—A vote of thanks to the Chairman closed the meeting.

LANCASHIRE AND CHESHIRE BRANCH:

ASHTON-UNDER-LYNE AND DISTRICT DIVISION.

A MEETING of this Division was held at the Ashton-under-Lyne Infirmary on Thursday, December 17th, 1908. There were twenty members present.

Demonstrations.—Dr. MAMOURIAN demonstrated a great number of interesting cases, chiefly post-operative, in the out-patient department.

Visit to Wards.—An adjournment was made to the wards, where further instructive clinical material was shown, giving the members a good idea of the work being done at this progressive and up-to-date institution.

Tea.—A highly successful meeting terminated by the members partaking of afternoon tea, kindly provided by the governors.

ST. HELENS DIVISION.

A MEETING of the St. Helens Division was held on December 4th, 1908, in the Fleece Hotel, St. Helens. There were present Drs. Reid, Bassett, Challanor, Dowling, Fox, Graham, Kerr, Merrick, Wilson, and Buchan. It was resolved that Dr. REID take the chair.

Apology for Non-Attendance.—A letter of apology for absence, from Dr. Mouncey, was read.

Confirmation of Minutes.—The minutes of the meeting of November 4th were read and adopted.

Medical Aid Societies.—The SECRETARY reported as to the action taken in accordance with the resolution regarding the Modern Sickness and Accident Assurance Association, Liverpool, and read a communication from one of the members of the Division on the subject. The Secretary was instructed to communicate with the member thanking him for his letter, and expressing the hope that on an early date he would resign his appointment in connexion with this medical aid society.

Medical Inspection of School Children.—A communication was read from the Branch Secretary regarding the remuneration of officers appointed to do this work. The Division agreed with the general terms of the communication, and requested the Chairman to forward to the Town Council the expression of opinion of the Division that medical practitioners appointed to carry out duties in connexion with the medical inspection of school children who devoted the whole of their time to the public service should be paid at a salary of not less than £250 per annum.

Election to Central Council.—A letter was read from Dr. Garstang, one of the Representatives of the Branch on the Central Council, and the Secretary was instructed to write Dr. Garstang, informing him that the Division would be pleased if he would attend a future meeting of the Division to inform them as to the work of the Central Council.

Election of Members.—The names of gentlemen proposing to join the Association were submitted, and instructions were given to the Representative on the Branch Council thereon.

The Division and the St. Helens Medical Society.—The report of the joint meeting of the Executive of this

Division with the committee of the local society was submitted and approved.

Unity of Oddfellows.—Dr. GRAMM brought up the question of meeting medical referees in connexion with sickness among members of this Order, and it was resolved to bring under the notice of the secretaries of the different branches of the Order the necessity of their conforming with the ordinary rules of medical etiquette when requiring further reports regarding their sick members.

Ethical Rules.—It was remitted to the Executive Committee of the Division, with the addition of Dr. Challenger, to draft a set of ethical rules and submit them to the next meeting of the Division.

METROPOLITAN COUNTIES BRANCH: KENSINGTON DIVISION.

A MEETING of this Division was held on December 9th, 1908, at the Kensington Town Hall, and after a lengthy discussion was adjourned till Friday, December 18th, 1908. On the first occasion there were 42 members present and on the second 36.

Confirmation of Minutes.—The minutes of the previous general meeting were read and confirmed.

Chairman.—In the absence of Dr. Rice Oxley on account of ill-health, the VICE-CHAIRMAN (Sir Charles Cuffe, K.C.B.), took the chair, and when he was obliged to leave Dr. CRAWFORD THOMSON was asked to take his place.

Medical Inspection of School Children and School Clinics.—A letter was read from Mr. Smith Whitaker, the Medical Secretary, asking the Division to discuss the question of the treatment of school children found on inspection to be suffering from defects and diseases needing treatment. Dr. JAMES KERR, the Medical Officer (Education) of the London County Council, who had kindly accepted an invitation to address the Division, then spoke. He referred to the pressing necessity of the matter, and the experience of towns in the provinces and Continental countries. It was most important for the community that these children who were suffering from remediable affections should be treated, and not allowed to become defective and therefore unemployable. Having indicated the lines on which it was proposed the treatment should be carried out he emphasized the point that the work to be done was work which had hitherto not been done, and therefore would not hurt any practitioner. Dr. H. H. MILLS and Dr. ETHEL BENTHAM spoke in favour of the establishment of school clinics. Dr. ATKINSON and Mr. JOSEPH SMITH opposed them. Mr. STURGE argued strongly in favour of the work being done by the provident dispensaries, which would need to be reorganized, and the necessary men appointed to do the special work. These would have to be paid properly. The MEDICAL SECRETARY then stated the view of the Medico-Political Committee, which would be issued in the form of a report very shortly. He pointed out that the matter must not be discussed from the ratepayers or tax-payers' point of view, but from the standpoint of public interest as regards the physique and health of the nation, and as it concerns the honour and interests of the profession. The Medico-Political Committee strongly condemns the paying of subsidies to voluntary and charitable institutions by the local authorities in return for special facilities for the treatment of the children. The HONORARY SECRETARY moved the following resolution:

That the Kensington Division of the British Medical Association approves of the formation of school clinics for the treatment of the defects and diseases of school children enumerated in the recommendations of the Special Subcommittee of the Education Committee.

He drew attention to the fact that these diseases and defects were strictly limited to four groups: Teeth defects and simple diseases of the teeth; eye defects and simple diseases of the eyes; skin diseases, chiefly parasitic; ear defects and simple diseases of the ears. Dr. H. H. MILLS seconded this resolution. Dr. H. STURGE moved as an amendment:

That the words "formation of school clinics" be deleted, and the words "reorganization of the provident dispensaries" be inserted, and to add the words "children of parents who can afford to pay a private practitioner to be excluded."

This was seconded by Dr. ATKINSON, and opposed by Dr. ETHEL BENTHAM and Dr. MOORHEAD.

At the adjourned meeting on December 18th the discussion on the amendment was continued, Dr. H. H.

MILLS, Mr. HERBERT TANNER, Dr. SHREVSALL, Dr. KISCH, Dr. BENJAMIN JONES, Dr. CRICHTON, Dr. JAFFE, Dr. E. M. BLUETT, and Dr. VERE NICOL taking part in it. The amendment was rejected by 22 votes to 10. Dr. KISCH then moved that the words:

Such clinics to be in connexion with the Poor Law,

should be added to the resolution. Dr. CLIFFORD seconded, and after a short discussion this was rejected by 17 votes to 5; and the original resolution was carried by 21 votes to 7.

The Referendum and the Charter.—Dr. CRAWFORD THOMSON having explained the situation caused by the threatened action of the South-Western and other Branches to oppose the Charter as regards the Referendum, Dr. EASTES moved the following resolution:

That this Division approves of the two alterations in the taking of the Referendum proposed by the South-Western Branch of the British Medical Association, and especially expresses its gratification that the principle of the postal Referendum which this Division brought forward unsupported in 1906 has now obtained wide appreciation amongst members of the Association. It nevertheless considers the present time, when application is about to be made to the Privy Council for the grant of a Royal Charter, inopportune for an endeavour to introduce the said changes into the draft Charter.

This was seconded by Dr. BUTTAR, and supported by Sir CHARLES CUFFE, Mr. HERBERT TANNER, Dr. CRICHTON, and passed *nem. con.*

STRATFORD DIVISION.

A MEETING of this Division was held at the Alexandra Hotel, Stratford, E., on Thursday, December 17th, 1908, Dr. BERNACKI in the chair.

Address.—Dr. ROBERT MILNE gave an address on the treatment of scarlet fever by the application of eucalyptus oil to the skin. The lecture greatly interested the members present, and was followed by a keen discussion. After answering various questions as to the details of the treatment Dr. Milne received a cordial vote of thanks.

Annual Representative Meeting.—Dr. PERCY ROSE presented his report of the Annual Representative Meeting held at Sheffield. His account of the proceedings was greatly appreciated, and Dr. Rose was accorded a hearty vote of thanks for his interesting report and for the enthusiasm he has shown as Representative of the Stratford Division.

ULSTER BRANCH:

BELFAST DIVISION.

A MEETING of the Division was held on Wednesday, December 16th, 1908. The Chairman, Dr. W. G. MACKENZIE, presided.

Chairman's Introductory Address.—The CHAIRMAN delivered his introductory address, entitled "A Retrospect of Thirty Years of the Medical Life of Belfast." He contrasted the operative methods of his student days with the present, and mentioned the excitement of the board of management of a children's hospital when it became known that he intended to open up the inside of a little child. Many stories and incidents of the old times were related in a most entertaining manner and followed by the members with great interest. On the motion of Dr. ST. GEORGE, seconded by Dr. CECIL SHAW, a hearty vote of thanks was accorded to the Chairman.

A Typhoid Carrier.—Drs. S. T. IRWIN and T. HOUSTON then read a paper on a typhoid carrier. Dr. Irwin described the clinical histories which led him to suspect the patient, a servant, of being the cause of several cases of typhoid occurring in one house. Dr. Houston described his finding that this patient gave a positive Widal reaction, and later that her urine, taken aseptically by catheter, contained abundant typical typhoid bacilli. Urinary antiseptics having failed to rid the urine of bacilli a vaccine was prepared and the patient inoculated according to Wright's methods, with subsequent complete disappearance of the bacilli. The patient's urine tested periodically since had not shown any return of the microbes. Drs. CALWELL, ROBE, Captain ARCHER, Drs. McKISACK, FULLERTON, FRASER, and the CHAIRMAN discussed the case. Dr. HOUSTON replied.

The Chairman, at the conclusion of the meeting generously provided coffee and cigars for those present.

PERTSHIRE BRANCH.

A GENERAL meeting of this Branch was held in the Station Hotel, Perth, at 3.30 p.m. on Friday, December 4th, 1908; Dr. D. H. STIRLING was in the chair, and there were present Drs. Haig, McEwan, Burnett, J. Hume, Trotter, Urquhart, Bruce, C. P. Stewart, Moffett, McLeish, Lyell, R. Stirling, M. Hume, and Taylor.

Apology for Non-attendance.—An apology for non-attendance was intimated from Dr. Paton.

Confirmation of Minutes.—The minutes of previous meetings were read, approved, and signed by the PRESIDENT.

Report of Council.—The report of Council was presented. It stated that during the last year five meetings of the Branch was held—two ordinary, one clinical, and two special—and five meetings of Council. The number of members of the Branch continued much the same, though many changes had taken place during the year.

Annual Representative Meeting.—Dr. TROTTER acted as substitute for Dr. D. H. Stirling, who was unable to attend the Annual Representative Meeting. Dr. Trotter referred first to the most important subject brought up for discussion—for example, the new Charter—which would probably be granted in a few months' time. Next he mentioned how the Council were taking up the matter of finance, and trying to make it sound. Among other things he mentioned sight testing, herbalists' charters, medical and other insurance with the Guardian Insurance Company. A vote of thanks was unanimously accorded.

Treasurer's Report.—The following report was presented by the TREASURER:—

RECEIPTS:	£	s.	d.	£	s.	d.
To balance from 1907	0	3	3
Received from London	10	19	9
Interest on dep. receipts	0	13	4
				11	16	4
Taken from dep. receipts	3	0	0
				14	16	4
EXPENDITURE:						
Printing, typing, stationery and						
Secretarial expenses	6	18	6
Expense of rooms	0	10	0
Travelling expenses of Council	4	7	11
Lynn Thomas and Skyrme Fund	2	2	0
				13	18	5
				0	17	11

This leaves 17s. 11d. balance in bank and £31 on deposit receipt. The Treasurer was thanked for his trouble and care of the finances.

New Branch Rules.—On the motion of Dr. URQUHART, the Secretaries along with the Treasurer were appointed to draw up new Branch rules and lay them before the Branch. This was agreed to.

President's Address.—Dr. D. H. STIRLING then delivered his Presidential address. He took for his subject A Retrospect and a Forecast. The contrast between fifty-five years ago and now was shown as starting from the standpoint of preliminary education as required then and what it was to-day. The old and famous teachers in the University of Edinburgh were pictured as they lived, taught, and fought, and set an example of devotion to work before the youth of that day. A description was given of pre-Lister times when major operations were so often attended with such sad results. The President had lived through all these, and later times, and spoke from personal experience of the almost inconceivable contrast between "then and now." His personal acquaintance with the leaders in medicine and surgery from the middle of last century on, enabled him to impart living reality to the life and work of a generation now almost extinct. In every department of medicine and surgery, except therapeutics, progress was reported, and full expectation of a grand future expressed. Of therapeutics he had much to say. The great authorities of the past "seem to have been of every variety of thought and action," and the fact of such diversity had evidently produced quite different effects on the men who passed out then into active professional life. "The forces at work in our ranks tend to carry forward all that is sound in principle handed down by our fathers, to correct errors, and to discover new truths." The worst enemy he saw around and before them in therapeutics was in the ever-increasing energy of pharmaceutical chemists in the

manufacture of new drugs. Synthetic chemistry threatened to ruin any safe and scientific use of active drugs. These were thrust upon the profession under fanciful names, registered as proprietary products, with accompanying testimonials from men mostly unknown in this country. The drugs, for the most part, had a short life—many of the first lots had disappeared or receded into the background. The danger was great to the profession and to the public—to the profession because the drugs were not proved; to the public because the registered trade names of many are made known to the community in widely-distributed advertisements, along with the diseased states in which they were to be employed. What might be called a drug mania had taken possession of the people. "Wonderful chemistry, commercial success; fatal to the progress of the science of therapeutics. Chlorodyne, sulphonal, cocaine, antipyrin, heroin, and a host of others are sold by retail druggists in every part of the country without medical advice—poisons all." The President asked this question: Why should every active drug employed by physicians not be prepared under strict scientific guidance and sold in a form that can be prescribed by medical men, singly or combined, as was always done before tabloids and tablets came into use? There would be far fewer unpronounceable names, synonyms, and fancy trade designations in the *Pharmacopœia* and the *Extra Pharmacopœia*, but much more correct acquaintance with those that have been subjected to careful tests, first, as to physiological action, and, secondly, as to their action in medical practice. As things are, we are drifting into chaotic confusion, soon to be a laughing stock to the self-instructed distributors of drugs among their friends. Bacteriology holds the field: its triumphs are known to us all. The causes of many diseases have been traced to living organisms, as was long ago suspected, and now proved. To the many able workers in that field science and medicine were deeply indebted. Goats, rats, even fleas and flies, were found carriers of deadly poisons, and typhoid carriers among their own friends had been proved culprits. The future of that almost new science was full of hope. Public hygiene in 1853 was a poor, sickly plant; it was now a wide spreading tree, a very healer of the nations. In closing, the President referred to the presence of Dr. Bruce, of Murthly Asylum, who was a scientist and who had done much good work in his field of medicine.

Vote of Thanks to President.—Dr. URQUHART, in proposing a vote of thanks to the President for his interesting and reminiscent address of days gone by, mentioned specially Sir William Gairdner and his methods, and Dr. Paul of Elgin and his simple senna tea and their very few drugs. He wondered how they could stem the current of this flood of new drugs. Dr. BURNETT in a few words seconded. In his reply to the vote of thanks, the PRESIDENT said unless something was done to check the multifarious number of drugs and quack medicines now being produced, serious injury and danger to the public at large would undoubtedly result.

Patent Medicines.—Dr. URQUHART read a note on patent medicines, etc., and moved that the following points be submitted to the Branch Council for consideration and report:

1. That the trade in secret remedies and patent medicines is an evil to the public, a danger to life, and a wrong to the medical profession.
2. That the Government stamp gives a false sense of security to the buyer.
3. That there is a fatal facility in the sale of powerful drugs which should be safeguarded in the public interest.
4. That there is a vast trade in such poisons as sulphonal, acetanilide, etc., which should be restricted.
5. That these remedies should be officially tested, priced, and the results published for the information of doctors and druggists.
6. That every such article sold should have on the cover the exact composition and method of manufacture of the enclosure.
7. That the contents should be guaranteed to consist of the ingredients named in the quantities stated.
8. That any infringement of this guarantee should be made an offence, and that prosecution of offenders should be at the instance and cost of the public authority.
9. That all drugs of a nature dangerous to life should be scheduled as poisonous, and the cover should clearly state that the contents are poisons.
10. That legal restrictions should be placed upon the sale of dangerous drugs, except to the person named upon the medical prescription authorizing the sale.

11. That each medical prescription should be limited by the prescriber to the duration of time named upon the prescription, and that it be made an offence to infringe this limitation.

12. That all prescriptions should be written in chemical language, omitting the patented name of drugs.

13. That these suggestions be submitted to the Branch Council for consideration and report.

In his remarks Dr. Urquhart said he was pleased that the President had referred to this very important matter in his address, and hoped much good would come of it. The Branch thanked Dr. Urquhart for the manner in which he had brought this subject, of great concern to all the members, before the Branch, and trusted it might be the means of great reform in regard to an ever-growing evil.

Dinner.—Thereafter the members dined in the hotel, Dr. McDiarmid as guest.

THE PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1908.

THE Order of the Local Government Board in England providing for the compulsory notification of pulmonary tuberculosis, the issue of which was briefly noted in the JOURNAL last week, came into force on January 1st. The Order is addressed to the guardians, joint committees and managers of asylums and school districts in England and Wales, and to councils of metropolitan and other boroughs and of urban and rural districts. It is accompanied by two circular letters, the one addressed to the guardians, joint committees and managers of asylum and school districts, and the other to the councils of metropolitan and other boroughs and of urban and rural districts. We reproduce below the circular to the bodies first mentioned.

Local Government Board,
Whitehall, S.W.,
18th December, 1908.

Sir,

I am directed by the Local Government Board to state that they have had under consideration the desirability of affording facilities for the extension of administrative action for the prevention of tuberculosis, and that with this view they have issued an Order in pursuance of Section 130 of the Public Health Act, 1875, as amended and extended by the Public Health (London) Act, 1891, and the Public Health Act, 1896, to provide for the notification to the Medical Officer of Health of Sanitary Authorities of cases of pulmonary tuberculosis occurring amongst the inmates of Poor Law Institutions, or amongst persons under the care of District Medical Officers, and for the taking of certain measures in such cases.

Notification by Medical Officers of Poor Law Institutions.

Article IV of the Order directs that the Medical Officer of a Poor Law Institution, as defined by Article I, shall within 48 hours after his first recognition of the symptoms of pulmonary tuberculosis in the case of a poor person who is an inmate of the institution, post to the Medical Officer of Health of the sanitary district in which the person resided immediately before he became an inmate of the Poor Law Institution a notification of the case.

The notification must be made on a printed form as set out in the Schedule to the Order.

Notification by District Medical Officers.

Article V directs that a similar notification shall be posted to the Medical Officer of Health by the District Medical Officer in the case of any poor person suffering from pulmonary tuberculosis on whom he is in medical attendance according to his agreement with a Board of Guardians.

The notification must be sent within 48 hours after the District Medical Officer has first recognized the symptoms of pulmonary tuberculosis, and must be addressed to the Medical Officer of Health acting for the sanitary district in which the residence of the poor person is situate.

Notification by Superintending Officers of Poor Law Institutions.

Under Article VI it will be the duty of the Superintending Officer of a Poor Law Institution to post to the Medical Officer of Health on a printed form as set out in the Schedule to the Order a notification of the actual or intended place of destination and address at that place of any person leaving the institution in respect of whom a notification has been made by the Medical Officer of the institution under Article IV.

The notification must be posted within forty-eight hours after the departure of the person to whom it relates, and must be sent to the Medical Officer of Health of the sanitary district in which the intended destination of the person is situate. The term "Superintending Officer" is defined in Article I (h).

Notification of Changes of Address by Relieving Officers.
Article VII provides that a Relieving Officer shall notify any change of address (other than by admission to a Poor Law Institution) of a person in respect of whom a notification has been made under Article V by a District Medical Officer.

The notification must be made on a printed form as set out in the Schedule to the Order, and must be sent to the Medical Officer of Health for the sanitary district in which the address to which the person moves is situate.

The notification must be posted within forty-eight hours after the Relieving Officer has obtained accurate information respecting the change of residence.

Remuneration to be allowed.

Provision is made by Article VIII for the remuneration of the Officers who have to make notifications under the Order. In the case of the Medical Officer of a Poor Law Institution or a District Medical Officer, the remuneration will be at the rate of one shilling for every notification, but where in relation to any one case two or more notifications have been posted by the Medical Officer to the same Medical Officer of Health, his remuneration will be at the rate of sixpence for every such notification after the first.

In the case of a Superintending Officer of a Poor Law Institution or a Relieving Officer, the remuneration will be at the rate of threepence for every notification.

The remuneration will be payable by the Council of the sanitary district for which the Medical Officer of Health acts, it will be deemed to cover the cost of postage, and it will be payable in the manner and subject to the conditions prescribed by the Article.

Supply of Forms.

Under Article III of the Order, it will be the duty of the Guardians to provide a sufficient supply of printed copies of each of the Forms A, B, C, D, and E, set forth in the Schedule to the Order, and to furnish to each of the officers who are required to use them a book containing a sufficient number of those copies for the requirements of the officer. The book must be so arranged that every notification can be readily detached from the counterfoil. They must also keep a record of the name and address of the Medical Officer of Health appointed by each Council, and of such other particulars as are necessary to facilitate the prompt delivery of a notification to any such Medical Officer of Health in the ordinary course of post.

Joint Committees constituted under Section 8 of the Poor-law Act, 1879, and the Managers of Asylum Districts and School Districts must keep a like record, and must also provide and furnish their officers with books similar to those above referred to, but containing only Forms A, C, and E.

Expenses of Poor-law Authorities.

Article X provides that all expenses incurred by a Board of Guardians, a Joint Committee, or a Board of Managers under the Order shall be defrayed as part of their establishment expenses.

Determination of Questions or Differences.

Article XI will enable the Board to determine any question or difference in relation to anything done under the Order on the application of any of the parties affected.

Pulmonary Tuberculosis Notifiable under Local Acts.

Article XII deals with those cases in which powers have been obtained with respect to pulmonary tuberculosis by a Local Act.

Nothing in the Regulations will have effect in derogation of any power or obligation under any such Act, but subject to this the Regulations will apply to any district in which a Local Act containing provisions with respect to pulmonary tuberculosis is in force.

The Board may, however, direct that so much of the Regulations as relates to a notification by a Medical Officer of a Poor Law Institution or a District Medical Officer shall not have effect in relation to that district.

Date on which the Order comes into effect.

The Order will take effect on and after January 1st next, and it is desirable that the arrangements which are

¹ Form A is for notification of a person in a Poor-law institution; Form B, of a person in a district; Form C is the notice that a notified person has left a Poor-law institution; Form D, of the change of address of a notified person in a district; Form E, claim for fees payable in respect of notifications.

necessary to facilitate carrying it out should be made without any delay. In fixing January 1st as the date when the Order shall come into operation the Board have had regard to the convenience, from a statistical point of view, of the Order taking effect at the commencement of a calendar year.

If, however, any delay occurs in the printing of the forms, it may be understood that it will not be necessary to carry out the Regulations until these can be obtained.

Copies of the Order and Circular are enclosed, and I am to request that a copy of each may be given to every Officer on whom the duty of notifying rests under Articles IV to VII of the Order. Further copies will be supplied for this purpose on application to the Board, if required.

The Order and Circular will be placed on sale so that copies may shortly be obtained, either directly or through any bookseller, from Messrs. Wyman and Sons, Limited, Fetter Lane, London, E.C.

I am, Sir,

Your Obedient Servant,

S. B. PROVIS,

Secretary.

The Clerk to the Guardians, or to the Joint Committee, or to the Board of Management.

At the end of the Order which was published in the *London Gazette* on December 18th, 1908, the following appears:

Notice.—The Public Health Act, 1896, provides by Subsection 3 of Section 1, that if any person wilfully neglects or refuses to obey or carry out, or obstructs the execution of any regulation made under any of the enactments mentioned in that Act, he shall be liable to a penalty not exceeding one hundred pounds, and, in the case of a continuing offence, to a further penalty not exceeding fifty pounds for every day during which the offence continues.

The circular letter to councils of metropolitan and other boroughs and of urban and rural districts contains the following additional paragraphs:

Enactment and Application of Enactments.

Some of the provisions of the Public Health Act, 1875, and of the Public Health (London) Act, 1891, relative to infectious disease are not usually appropriate in cases of pulmonary tuberculosis.

The Board have, therefore, provided by Article IX. (1) that nothing in the Regulations shall have effect so as to apply or to authorize any one to put in force with respect to a person in relation to whom a notification has been made any enactment which renders him or any other person liable to a penalty or subjects him to any restriction, prohibition, or disability affecting him or his employment, occupation, means of livelihood, or residence on the ground of his suffering from pulmonary tuberculosis.

Special Powers of Councils.

Subject to what is stated in the preceding paragraph, it is desirable that Sanitary Authorities acting on the advice of their Medical Officers of Health should utilize their powers for the purpose of preventing the spread of infection from pulmonary tuberculosis. The Order confers some special powers which the Board are advised are suitable for this purpose, and which are set out in Article IX. (2) of the Order.

The Board propose to issue for the use of Sanitary Authorities and Medical Officers of Health a memorandum by their Medical Officer setting out the appropriate action that can be taken under these powers. Copies of the memorandum will be sent to the Council in due course.

It is also stated that in places in which powers have been obtained with respect to pulmonary tuberculosis by a local Act, the Board in deciding whether so much of the regulations as relates to a notification by a medical officer of a Poor-law medical institution, or a district medical officer, shall not have effect in that district, shall be moved to act by the council of the district.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Fleet Surgeon E. A. SEAW, M.B., to the *Tamar*, December 26th, 1908; Staff Surgeon ALFRED WOOLCOMBE, to the *Charybdis*, December 19th, 1908; Staff Surgeon J. G. WALLIS, M.B., to the *Penbrooke*, December 19th, 1908; Staff Surgeon C. R. NICHOLSON, to the *Drake*, December 19th, 1908; Surgeon W. J. STITT, to the *Dunfer*, additional, December 19th,

1908, and on recommissioning, undated; Surgeon R. F. MACMAHON, to the *Fintona*, additional, December 19th, 1908, and on recommissioning, undated; Fleet Surgeons A. F. HARRER, A. G. ANDREWS, W. H. S. STICKLAND, M.D., and C. S. STICKLAND, Staff Surgeons B. B. MACDONALD, M.B., and J. VIELAND, and Surgeons C. J. O'CONNELL, G. D. BATEMAN, and E. R. TOWNSEND, all to the *President*, additional, for three months' course at West London Hospital, January 11th; Staff Surgeon W. E. MARTIN, to the *Corona*, January 11th; Staff Surgeon C. G. KELLY, to the *Fulham*, on recommissioning, January 5th; Staff Surgeon W. L. MARTIN, to the *assistance*, January 11th; Surgeon G. M. LEVICK, to the *Ganges*, for Shotley Sick Quarters and for physical training duties, January 11th; Surgeon A. D. C. CEMINS, to the *Pogues*, additional, January 2nd, and on recommissioning, undated; Surgeon D. B. CARLSON, to the *Sealark*, additional, January 2nd, and on recommissioning; Surgeon A. L. ROBINSON, M.B., to the *Dreadnought*, January 2nd; Surgeon S. F. DUDLEY, to the *Barfleur*, January 2nd; Surgeon W. E. GRAY, to the *Tamar*, additional, for dockyard, July 2nd, December 2nd, 1908; Surgeon C. ROSS, to the *Woodark*, December 2nd, 1908; Surgeon P. F. MINETT, to the *Tamar*, December 2nd, 1908; Surgeon G. B. SCOTT, to the *Nightingale*, December 2nd, 1908; Surgeon C. R. M. BAKER, M.B., to the *Sandpiper*, December 2nd, 1908; Surgeon T. E. BLUNT, to the *Halcyon*, December 2nd, 1908; Surgeon R. M. RIGGALL, to the *Warrior*, December 2nd, 1908; Surgeon D. H. C. GIVEN, to the *Anconemmon*, December 2nd, 1908.

ROYAL ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL A. G. KAY, M.B., retires on retired pay, December 23rd, 1908. He was appointed Surgeon, February 5th, 1881; Surgeon-Major, February 9th, 1893; and Lieutenant-Colonel, February 9th, 1903. He was in the Egyptian war in 1882, receiving a medal and the Khedive's bronze star.

TERRITORIAL FORCE.

UNARMED VOLUNTEERS.

SURGEON-MAJOR C. L. FRASER, from the 1st Herby-on-Tweed Royal Garrison Artillery (Volunteers), to be Surgeon-Major, with precedence as in the Volunteer Force, April 1st, 1908.

ROYAL ARMY MEDICAL CORPS.

Captain (Honorary Major in the Army) C. STONHAM, C.M.G., to be Major, April 1st, 1908.

For Attachment to Units other than Medical Units.—Surgeon-Captain E. P. COKE, from the 2nd Middlesex (South Middlesex) Volunteer Rifle Corps, to be Captain, with precedence as in the Volunteer Force, April 1st, 1908; Surgeon-Captain G. A. TROOP, M.D., from the 2nd East Anglian Brigade Royal Field Artillery, to be Captain, with precedence from August 9th, 1899, April 1st, 1908; Captain G. A. TROOP, M.D., to be Major, April 1st, 1908; Surgeon-Lieutenant K. S. STORRS, M.B., from the 5th Battalion the Essex Regiment, to be Lieutenant, with precedence from March 6th, 1908, April 1st, 1908.

Second Home Counties Field Ambulance.—Lieutenant R. M. GHOUGH resigns his commission, October 19th, 1908.

Fourth London Field Ambulance.—Quartermaster and Honorary Lieutenant H. E. MATHURSON resigns his commission, October 26th, 1908; he is appointed Lieutenant from the same date. P. W. THOMSON to be Lieutenant, October 24th, 1908. J. R. HOLMES, M.B., to be Lieutenant, October 26th, 1908.

Second North Midland Field Ambulance.—R. K. HAMILTON to be Lieutenant, November 15th, 1908.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 7,707 births and 4,749 deaths were registered during the week ending Saturday, December 19th, 1908. The annual rate of mortality in these towns, which had been 15.6 and 15.5 per 1,000 in the two preceding weeks, further fell to 15.3 per 1,000 in the week under notice. The rates in the several towns ranged from 6.2 in Hornsey, 8.0 in East Ham, 8.3 in Reading, 7.6 in Snettisham, 9.3 in King's Norton and in Gateshead, 9.6 in Willemsden, and 10.0 in Birkhead to 20.5 in Devonport and in Newcastle-on-Tyne, 20.9 in West Bromwich, 21.2 in Preston, 22.9 in Rochdale, 23.7 in Huddersfield, 24.7 in Middlesbrough, and 24.9 in Oldham. In London the rate of mortality was equal to 14.8 per 1,000, while it averaged 15.5 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.3 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.4 per 1,000; while among the seventy-five other large towns the death-rates from the principal infectious diseases ranged upwards to 2.9 in Wigan, 3.1 in Warrington, and in Stockton-on-Tees, 3.7 in Oldham, 3.9 in Huddersfield, 4.5 in Middlesbrough, 5.2 in Leicester, and 6.5 in Rotherham. Measles caused a death-rate of 1.7 in Sunderland, 1.8 in Oldham, 2.2 in Warrington, 3.3 in Rotherham, 3.5 in Middlesbrough, 3.9 in Huddersfield, 4.4 in Wigan, 4.8 in Warrington, 5.0 in Willemsden, and 2.0 in Stockton-on-Tees; whooping-cough of 1.2 in Wigan, 1.5 in West Bromwich, and 2.5 in Rotherham; "fever" of 1.2 in Wigan and 1.5 in Grimsby; and diarrhoea of 1.1 in Oldham. The mortality from scarlet fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever cases remaining under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital at the end of the week was 3,537, 3,679, 3,833, 3,797, and 3,702, in the five preceding weeks; 381 new cases were admitted during the week, against 495, 406, and 426 in the three preceding weeks.

In seventy-six of the largest English towns, including London, 5,752 births and 4,000 deaths were registered during the week ending Saturday, December 26th, 1908. The annual rate of mortality in these towns, which had been 15.5 and 15.3 per 1,000 in the two preceding weeks, further fell last week to 12.8 per 1,000. The rates in the several towns ranged from 4.4 in Hounslow, 4.5 in Willemsden, 5.8 in East Ham, 6.1 in Wallasey, 6.2 in Houssey, 6.7 in Wallingstone, 7.7 in Devonport, and 8.4 in Brighton and in Bolton, to 18.5 in Salford, 18.6 in Preston, 18.8 in Blackburn, 19.2 in Sunderland, 20.1 in Oldham, 20.3 in Hury and Newbert (Mon.), and 22.3 in Rochdale. The rate of mortality was 11.3 per 1,000, while it averaged 13.5 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.3 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.4 per 1,000; while among the seventy-five other large towns the death-rates from the principal infectious diseases ranged upwards to 2.9 in Oldham, 3.1 in Bolton and in Salford, 4.1 in Rochdale, 4.8 in Leicester, and 5.1 in Warrington. Measles caused a death rate of 1.1 in Huddersfield, 1.2 in

Leyton, 1.5 in Bootle, in Warrington, and in Oldham, 1.6 in Rotherham, 1.7 in Hull, 2.0 in Sunderland, 2.9 in Rochdale, and 4.1 in Leicester; scarlet fever, of 1.1 in Northampton, and in St. Helens, and 2.2 in Warrington; diphtheria, of 1.1 in Great Yarmouth; whooping-cough, of 1.2 in York, 1.3 in West Ham, and 1.7 in Wigan; and diarrhoea, of 1.2 in Rochdale and 1.5 in Bootle. The mortality from "fever" was not excessive in any of the large towns, and no fatal case of small-pox was registered during the week. The majority of scarlet fever cases under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,747, 3,703, and 3,557 at the end of the three preceding weeks, was 3,458 at the end of last week; 391 new cases were admitted during the week, against 465, 425, and 381 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

In eight of the principal Scottish towns, 829 births and 585 deaths were registered during the week ending December 19th, 1908. The annual rate of mortality in these towns, which had been 16.4, 16.5, and 15.2 per 1,000 in the three preceding weeks, rose again to 16.6 per 1,000 in the week under notice, and was 1.5 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 13.6 in Leith and 15.6 in Paisley to 17.6 in Dundee and in Aberdeen, and 25.7 in Perth. The death-rate from the principal infectious diseases averaged 1.6 per 1,000, the highest rates being recorded in Glasgow and Aberdeen. The 257 deaths registered in Glasgow included 6 which were referred to diphtheria, 20 to whooping-cough, 5 to cerebro-spinal meningitis, and 10 to diarrhoea. Three fatal cases of diarrhoea were recorded in Dundee and 2 in Edinburgh, and 2 of measles in Aberdeen.

During the week ending Saturday last, December 26th, 1908, 779 births and 567 deaths were registered in these eight towns. The annual rate of mortality declined to 16.1 per 1,000, but was 1.3 per 1,000 above the mean rate last week in the seventy-six large English towns. The rates in the eight Scottish towns last week ranged from 10.3 in Perth and 12.0 in Aberdeen to 17.3 in Leith and 25.7 in Dundee. The death-rates from the principal infectious diseases averaged 1.4, the highest rates being recorded in Aberdeen and Paisley. The 244 deaths registered in Glasgow included 5 from diphtheria, 16 from whooping-cough, 4 from "fever," and 4 from diarrhoea. Three fatal cases of whooping-cough were recorded in Edinburgh; 2 of diphtheria and 3 of diarrhoea in Aberdeen, 2 of diphtheria in Paisley, and 2 of diarrhoea in Dundee.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, December 19th, 1908, 543 births and 418 deaths were registered in the twenty-two principal urban districts of Ireland, as against 552 births and 428 deaths in the preceding period. The annual death-rate in these districts, which had been 19.8, 20.3, and 19.7 per 1,000 in the three preceding weeks, fell to 19.3 per 1,000 in the week under notice, this figure being 4.0 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 18.0 and 19.7 respectively, those in other districts ranging from 4.3 in Lurgan and 6.9 in Armagh to 32.7 in Wexford and 55.2 in Portadown, while Cork stood at 31.5, Londonderry at 19.5, Limerick at 19.1, and Waterford at 15.6. The zymotic death-rate in the twenty-two districts averaged 1.1 per 1,000, or the same as in the preceding period.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BIRMINGHAM CITY ASYLUM.—Assistant Medical Officer. Salary, £50 per annum.

BOURNEMOUTH.—ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.—House-Surgeon. Salary, £80 per annum.

BRENTFORD UNION.—Assistant Medical Superintendent of the Infirmary and Assistant Medical Officer of Workhouse and Schools. Salary, £120 per annum.

BRIDGWATER HOSPITAL.—House-Surgeon. Salary at the rate of £20 per annum.

CHELSEA HOSPITAL FOR WOMEN. Fulham Road, S.W.—House-Surgeon. Salary, £80 per annum.

CHELTHAM GENERAL HOSPITAL.—Surgeon in charge of Branch Dispensary. Salary £80 per annum, and £10 allowance in lieu of cab hire.

EDINBURGH UNIVERSITY.—Additional Examiner in Public Health and in Practice of Medicine.

GLOUCESTER GENERAL INFIRMARY.—Assistant Physician.

HOSPITAL FOR SICK CHILDREN. Great Ormond Street, W.C.—House-Physician. Salary, £30 for six months, and £2 10s. washing allowance.

HULL ROYAL INFIRMARY.—Casualty House-Surgeon. Salary at the rate of £60 per annum for six months, or £20 per annum for twelve months.

KING'S LYNN BOROUGH.—Medical Officer of Health. Salary, £300 per annum.

LEAMINGTON SPA ROYAL BOROUGH.—Assistant Medical Officer of Health. Salary, £250 per annum.

LEICESTER CORPORATION.—Resident Medical Officer at the Isolation Hospital, and Assistant Medical Officer of Health. Salary, £150 per annum.

LEVES DISPENSARY AND INFIRMARY AND VICTORIA HOSPITAL.—Resident Medical Officer. Salary, £120 per annum.

LIVERPOOL PARISH.—Assistant Medical Officer for the Workhouse. Salary, £80 per annum, and £20 for examining applicants for outdoor relief.

METROPOLITAN HOSPITAL. Kingsland Road, N.E.—Resident Anaesthetist. Salary, £50 per annum.

NEWCASTLE-UPON-TYNE CITY LUNATIC ASYLUM. Gosforth.—Second Assistant Medical Officer. Salary £140 per annum, rising to £160.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon male. Salary, £160 per annum.

NOTTS CONSUMPTION SANATORIUM.—Resident Medical Officer (female). Salary, £100 per annum.

NOTTS COUNTY LUNATIC ASYLUM, Radcliffe-on-Trent.—Medical Superintendent. Salary, £600 per annum.

OLDHAM INFIRMARY.—Ophthalmic Surgeon. Honorarium, fifty guineas per annum.

PAISLEY BURGH.—Medical Officer of Health. Salary, £400 per annum.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—Assistant Resident Medical Officer. Salary, £75 per annum.

RICHMOND, SURREY.—ROYAL HOSPITAL.—(1) House-Surgeon. (2) Assistant House-Surgeon. Salary, £100 and £70 per annum respectively.

ROYAL EAR HOSPITAL, Soho.—Non-Resident House-Surgeon. Salary at the rate of £40 per annum.

SMETWICK COUNTY BOROUGH.—School Medical Officer. Salary, £250 per annum.

SOUTHEAST-ON-SEA BOROUGH.—Male Assistant Medical Officer of Health. Salary, £200 per annum.

STIRLING DISTRICT ASYLUM, Larbert, N.B.—Third Assistant Medical Officer (lady). Salary, £100 per annum.

WAKEFIELD: CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Junior House-Surgeon. Salary, £80 per annum.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Honorary Radiographer.

WEST LONDON HOSPITAL, Hammer-smith Road, W.—(1) Assistant Ophthalmic Surgeon. (2) Pathologist. Salary, £200 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Honorary Assistant Surgeon. (2) Honorary Assistant Physician.

CERTIFYING FACTORY SURGEON.—The Chief Inspector of Factories announces a vacancy at South Cave, Co. York.

APPOINTMENTS.

BANKS, George S., M.B., Ch.B. Edin., Resident Medical Officer of the City Hospital (Fever), Aberdeen, vice Dr. Anderson, resigned.

DIGHTON, Chas. A. Adair, M.B. Edin., Assistant Obstetrician to Victoria Home, Cheltenham.

KINGSTON, H. F., M.B., B.Ch. Dub., Medical Officer of Health, Alsager Urban District.

MAY, Otto, M.A., M.B., B.C. Cantab., M.R.C.P. Lond., Medical Registrar to the Middlesex Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or cheques with notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

MARSDEN.—On December 27th, 1908, at 24, Hawarden Avenue, Liverpool, the wife of Prosper H. Marsden, Lecturer in Marine Medicine and Pharmacy in the University of Liverpool, of a daughter.

STEPHEN.—At Woodside, Loftus-in-Cleveland, on 21st December, 1908, the wife of W. A. Stephen, M.A., M.D., of a daughter.

DEATH.

GRIFFITHS.—At Bryneclyn, Pontardawe, on Thursday, 17th ult., Dr. Griffith Griffiths, J.P., in his 65th year. Was interred at St. Peter's Church, Pontardawe, on Monday, 21st ult.

DIARY FOR THE WEEK.

TUESDAY.

ROYAL SOCIETY OF MEDICINE.
THERAPEUTICAL AND PHARMACOLOGICAL SECTION, 20, Hanover Square, W., 4.30 p.m.—Papers: Professor A. R. Cushny, F.R.S., Tissue Antiseptics, with special reference to Animal Infections. Dr. Alexander Haig: Salicylates as Retentives. Dr. H. H. Dale: Note on Nutmeg Poisoning.

THURSDAY.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, 4.15 p.m.—Dr. H. Marshall, Lecturer in Marine Medicine on Haemorrhage from the Stomach: its Cause and Treatment.

ROENTGEN SOCIETY, 20, Hanover Square, W., 8.15 p.m.—Paper: Mr. C. E. S. Phillips, F.R.S.E.: A description of three subtypes of Radio-activity recently prepared for the Roentgen Society. Demonstration: Mr. H. C. Head: A new Localizing Apparatus designed by Staff Surgeon Dr. Gillett.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:
CLINICAL SECTION, 20, Hanover Square, W., 8.30 p.m.—Demonstration: Dr. James Mackenzie: The Methods for taking and interpreting Graphic Records of the Movements of the Circulation.

LARYNGOLOGICAL SECTION, 20, Hanover Square, W., 5 p.m.—Discussion: On the Modern Treatment of Syphilis, especially in regard to the Upper Respiratory Passages, to be opened by Dr. Lieven of Aix-la-Chapelle.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, 8 p.m.—Clinical Evening.

POST-GRADUATE COURSES AND LECTURES.

LONDON THROAT HOSPITAL, Great Portland Street, W.—Wednesday, 3 p.m., Some Points in the Surgical Anatomy of the Throat, Nose, and Ear.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C.—Thursday, 6 p.m., Bullous and Vesicular Eruptions.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
JANUARY.		JANUARY (Continued).	
3 Sunday ..		15 FRIDAY ..	{ LAMBETH DIVISION, <i>Metropolitan Counties Branch</i> , Lambeth Infirmary, Brook Street, S.E., 4 p.m.
4 MONDAY ..		16 SATURDAY ..	
5 TUESDAY ..	{ LONDON: Public Health Committee, 3 p.m.	17 Sunday ..	
6 WEDNESDAY ..	{ LONDON: Medico-Political Committee, 2.15 p.m.	18 MONDAY ..	
	{ LONDON: Hospitals Committee, 2.30 p.m.	19 TUESDAY ..	
7 THURSDAY ..	{ WESTMINSTER DIVISION, <i>Metropolitan Counties Branch</i> , Florence Restaurant, Rupert Street; the Meeting will be preceded by a Dinner at 7.30 p.m.	20 WEDNESDAY ..	{ London: Journal and Finance Committee, 2.30 p.m. CARDIFF DIVISION, <i>South Wales and Monmouthshire Branch</i> , Cardiff.
8 FRIDAY ..	{ LONDON: Central Ethical Committee, 2 p.m.	21 THURSDAY ..	{ KENSINGTON DIVISION, <i>Metropolitan Counties Branch</i> , Kensington Town Hall, 5 p.m.
9 SATURDAY ..		22 FRIDAY ..	
10 Sunday ..		23 SATURDAY ..	
11 MONDAY ..	{ LONDON: Organization Committee, 10.30 a.m.	24 Sunday ..	
12 TUESDAY ..	{ LONDON: Subcommittee on Capitation Grants, immediately after Organization Committee.	25 MONDAY ..	
	{ LONDON: Medico-Political Contract Practice Subcommittee, 2.30 p.m.	26 TUESDAY ..	{ HAMPSTEAD DIVISION, <i>Metropolitan Counties Branch</i> , Business Meeting.
13 WEDNESDAY ..	{ RICHMOND DIVISION, <i>Metropolitan Counties Branch</i> , Royal Hospital, Richmond, 8.30 p.m.	27 WEDNESDAY ..	{ Central Council, 2 p.m. BATH AND BRISTOL BRANCH, Bristol.
	{ LONDON: Premises Committee, 2.30 p.m.	28 THURSDAY ..	{ CITY DIVISION, <i>Metropolitan Counties Branch</i> , Business Meeting, Great Eastern Hotel, 3.30 p.m.
	{ LONDON: Metropolitan Counties Branch Council (not January 7th as previously arranged).	29 FRIDAY ..	{ BIRMINGHAM BRANCH, Pathological and Clinical Section, Medical Institute, Edmund Street, 8 p.m.
14 THURSDAY ..	{ ALTRINGHAM DIVISION, <i>Lancashire and Cheshire Branch</i> , Meeting of Executive Committee, at Dr. Golland's, 8 p.m.	30 SATURDAY ..	
	{ BIRMINGHAM BRANCH, Medical Institute, Edmund Street, 3.30 p.m.	31 Sunday ..	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. Od., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent

by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. Od. for the United Kingdom, and £1 15s. Od. for abroad.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JANUARY 9TH, 1909.

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Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

BURMAH BRANCH.

The general meeting of this Branch was held at the General Hospital, Rangoon, on November 26th, 1908.

Election of Officers.—The following were elected to office for the year 1909: *President*, Colonel W. G. King, C.I.E., M.B., I.M.S., Rangoon; *Vice-Presidents*, Lieutenant-Colonel R. E. S. Davis, M.B., I.M.S., Rangoon, Dr. Padley, Rangoon; *Honorary Secretary and Treasurer*, Captain H. H. G. Knapp, M.A., M.D., B.Ch., I.M.S., Rangoon; *Members of Branch Council*, Dr. Finlay, Dr. Parakh, Major E. R. Rost, I.M.S., Dr. Joy, Lieutenant-Colonel P. C. H. Gordon, R.A.M.C.

CAPE OF GOOD HOPE, EASTERN PROVINCE, BRANCH.

The regular meeting was held at 8 p.m. on Friday, July 24th, 1903, in the library of the Association at Rhodes College, Dr. R. C. MULLINS in the chair. There were present: Drs. Bruce-Bays, Greathead, Lea, Lillie, Purvis, and Drury. Professors Cory, Duerden, MacLylean, Matthews, Ogg, Schouland, and Schwartz, all of Rhodes University College, were also present as visitors.

Confirmation of Minutes.—The minutes of the meeting of May 29th were read and confirmed.

South African Committee of the Association.—It was resolved that the delegates should press for the following points:

1. Annual meeting to synchronize with Medical Congress.
2. Other meetings to be quarterly.
3. Small executive to have power to deal with emergencies and report.
4. Subscription to be small, say 2s. 6d. or 5s.
5. Clause 24 of regulations to be expanded.
6. Duties of committee, during continuance of hard times, to be advisory only, any scheme of medical defence or benevolence to be taken in hand with the greatest caution and after the fullest canvass of existing members of the British Medical Association.

Address.—After the Rhodes Professors had been welcomed, Dr. G. C. PURVIS gave an account of the various theories of the origin of cancer, and demonstrated microscopical sections. A practical discussion followed.

A regular meeting was held on Friday, October 9th, 1903, Dr. R. C. MULLINS in the chair. There were present: Drs. FitzGerald, Lillie, Jones-Phillipson, Purvis, and Dr. Drury. Drs. Harrison, of Grahamstown, and Cowper, of the Grahamstown Asylum, were present as visitors.

Confirmation of Minutes.—The minutes of the meeting of July 24th were read and confirmed.

Medical and Pharmacy Act.—In regard to the administration of the Medical and Pharmacy Act as announced in the *Gazette* of July 21st, 1903, p. 265, it was resolved:

That this Branch supports the action of the Western Province Branch in their protest against the decision of the Government as published in the above notice.

Paper.—Dr. C. E. JONES-PHILLIPSON read a paper on tinnitus aurium, since published in the *South African Medical Record*.

Votes of Thanks.—Votes of thanks were passed to Dr. Greathead for his gift of the *BRITISH MEDICAL JOURNAL* from 1871 to date; to Professor Cory for *Vanity Fair* sketch of Sir James Paget; to Dr. H. F. Becker for the *Lancet* (bound) from 1872 to 1890 and the *London Medical Record* from 1879 to 1887, and, through the Secretary, of Braithwaite's *Retrospect of Medicine*, 1845 to 1855 and 1881 to 1892.

Annual Meeting.

The annual meeting was held on Friday, December 4th, 1908, Dr. R. C. MULLINS in the chair. There were present: Drs. Bruce-Bays, Drury, FitzGerald, Lillie, and Purvis; Drs. Lex Gordon and Cowper (Grahamstown) were present as visitors.

Refreshment Subscription.—It was resolved that a local refreshment subscription of 5s. per annum be levied.

Election of Officers.—The following were elected officers of the Branch by the postal ballot: *President*, Dr. Gerald FitzGerald; *President-elect*, Dr. P. B. Grentell; *Secretary*, Dr. E. G. Drury; *Treasurer*, Dr. E. G. Drury. *Council* (nine in all)—(1) Grahamstown: Drs. H. Becker, J. Bruce-Bays, C. F. Lillie, R. C. Mullins, G. C. Purvis; (2) Area: Drs. A. Gooding, J. B. Greathead, C. E. Jones.

Phillipson, G. W. Smith; *Member of Central Council*, Dr. T. D. Greenlees.

East London Congress.—Dr. J. BRUCE-BAYS reported on the East London Congress.

Report of Honorary Secretary and Treasurer.—The report of the Honorary Secretary and Treasurer for 1908 was adopted.

Library.—Grocott and Sherry's tender for binding library books was accepted.

President's Address.—Dr. MULLINS read his Presidential Address, which was entitled "Personal Experiences."

Proposed Dinner.—It was resolved that a dinner should precede the first meeting in February, 1909.

HONG KONG AND CHINA BRANCH.

Annual Meeting.

The annual general meeting of this Branch was held in the Sanitary Board Room on November 26th, 1908. Dr. G. M. HARSTON, the President, was in the chair, and more than twenty-five members were present.

President's Address.—The President opened the proceedings with an address on the work of the Branch during the past year.

Report of Honorary Secretary and Treasurer.—This was followed by the report of the Honorary Secretary and Treasurer, Dr. Sanders, which showed the Branch to be in a flourishing condition. They now had 130 medical men as members, extending throughout districts right into the far western portion of China. It was a striking fact that some of those medical men in the far western districts had been among the subscribers to the library fund. During the past years the small grant from the parent Association had been accumulating in the bank, and the council decided to invest the money in the purchase of the latest works of reference to enable local practitioners, as well as naval surgeons, to have an opportunity of referring to the best authorities of the day. With that end in view, the council had secured portion of an office, situated at No. 17A, Queen's Road Central, where any medical man, who was a member of the Association, might refer to these books.

Election of Officers.—The following officers were elected for the ensuing year: *President*, Deputy Inspector General W. Tait, M.B.; *Vice-President*, Dr. G. M. Harston; *Honorary Secretary and Treasurer*, Dr. J. H. Sanders; *Council*, the President, the Vice-President, the Honorary Secretary and Treasurer, Drs. Stedman, Jordan, and Atkinson, Staff Surgeon Baiss, Naval Hospital, and Captain Collingwood, R.A.M.C.; *Library Committee*, Dr. Black, Major Probyn, R.A.M.C., and Staff-Surgeon Beadnell, R.N.

Installation of New President.—Deputy Inspector-General TAIT was then inducted to the chair, and gave his inaugural address as President, his subject being the relation of the Naval Medical Service to the other branches of the profession.

London School of Tropical Medicine.—Sir FRANCIS LOVELL then brought the aims of the London School of Tropical Medicine, of which he is Dean, before the meeting. He drew special attention to the fact that, in going over the list, he found that no fewer than fifty medical practitioners in the treaty ports of China and in Hong Kong had passed through the school since its establishment in 1899, and of that number six came from Hong Kong. Any medical practitioner resident in a colony—like Hong Kong, for instance—which subscribed to the school had the privilege of going through a course at the school without the usual payment of fees. This privilege, Sir Francis pointed out, had not been taken advantage of up to the present in Hong Kong to the extent he would desire. Now, however, that the contribution of the colony was going to be renewed, he hoped the medical gentlemen of Hong Kong would avail themselves of the opportunity afforded of a free course of tuition in tropical medicine. During his former visit to the colony in 1902 a small committee was appointed, consisting of Drs. Atkinson, Ho Kai, and Rennie (the last named being the secretary), with power to add to their number, and the result of that action was that a sum of about \$2,500 was collected. He would ask the members of the Association to be good enough to advise him as to what action was most likely to lead to the results he hoped

to attain in connexion with his present mission, which was that of raising a fund of at least £25,000 to assure the permanence of the school and enable it to extend its sphere of operations. Out of the 150 members of the British Medical Association in China and Hong Kong, 50 had passed through the school, and they might materially help by bringing its aims and objects to the notice of the wealthy inhabitants of the cities in which they were located. It had been suggested that a public meeting be held in Hong Kong at which he might give an address. His experience of public meetings in the East had not been satisfactory either in attendance or results. He attributed this mainly to the fact that it was very difficult to make the subject of tropical medicine sufficiently interesting to attract the general public. However, he should be very glad indeed, if it were decided otherwise, to prepare an address on the subject. It would be most desirable if His Excellency the Governor was asked to preside. This was a matter he would leave to the members of the Association. Sir Francis intimated that on the occasion of his last visit the Hong Kong and Shanghai Bank and Messrs. Jardine, Matheson and Co. each subscribed \$500 to open the list. On this occasion Messrs. Jardine, Matheson and Co. had already come forward with a donation of \$500. As a result of Sir Francis Lovell's speech it was decided to form a sub-committee—consisting of Dr. Jordan, Dr. Harston, and Dr. Sanders, with power to add to their number—to ascertain what could be done among the residents and Chinese of Hong Kong in assisting the work of the London School of Tropical Medicine. It was felt that this was a subject in which the Chinese, who were benefited to a great degree, would assist.

Future Meetings.—The following dates were fixed for meetings: December 27th, January 21st, February 18th, March 18th, April 15th.

Cases.—Cases were shown by Fleet Surgeons GILMOUR and BEADNELL, R.N.

To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

LANCASHIRE AND CHESHIRE BRANCH.—Several Divisions have asked the Branch Secretary to assist them in drawing up a clinical and scientific programme for their winter meetings by letting them know of gentlemen who would be willing to read papers or to give demonstrations at meetings of Divisions other than their own. The Honorary Secretary would accordingly be pleased to know of any members willing to give such papers or demonstrations, so that he may be able to submit them to the Divisions.—F. CHARLES LARKIN, Branch Secretary, Liverpool.

LANCASHIRE AND CHESHIRE BRANCH: WARRINGTON DIVISION. The meeting of this Division on December 29th, 1908, was adjourned to January 11th, 1909, and will be held at the infirmary, Warrington, on that date at 4 p.m.—T. A. MURRAY, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: KENSINGTON DIVISION.—There will be a meeting of the Kensington Division, at the Kensington Town Hall, on Thursday, January 21st, at 5 p.m., when Mr. L. A. Bidwell will give an address on the immediate and ultimate results of gastro-enterostomy for gastric and duodenal ulcer.—H. BECKETT OVERY, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: RICHMOND DIVISION.—A special meeting will be held on January 27th at 8.30 p.m. at the Bridge House Café, Richmond Bridge, to consider the Report on the Medical Inspection of School Children.—G. CARDNO STILL, Honorary Secretary.

ULSTER BRANCH.—The winter meeting of this Branch will be held in Belfast on Wednesday, February 3rd. Members having communications are requested to send particulars not later than January 23rd to CECIL SHAW, M.D., Honorary Secretary, Belfast.

POISONS AND PHARMACY ACT, 1908.

[8 EDW. 7. CH. 55.]

ARRANGEMENT OF SECTIONS.

Section.

1. Amendment of 31 and 32 Vict. c. 121, Schedule A.
2. Regulation of sale of certain poisonous substances for agricultural and horticultural purposes.
3. Amendment of 31 and 32 Vict. c. 121, ss. 15 and 16.
4. Extension of powers of Pharmaceutical Society to make byelaws.
5. Restrictions on sale of certain poisonous substances.
6. Application to Ireland.
7. Continuation of business on death of chemist and druggist or registered druggist in Ireland.
8. Short title, commencement, and extent.

SCHEDULE.

CHAPTER 55.

An Act to Regulate the Sale of Certain Poisonous Substances and to Amend the Pharmacy Acts.

[21st December, 1908.]

BE it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1. *Amendment of 31 and 32 Vict. c. 121, Schedule A.*—(1) Schedule A. to the Pharmacy Act, 1868 (which specifies the articles to be deemed poisons within the meaning of that Act), is hereby repealed, and the schedule to this Act shall be substituted therefor.

(2) The schedule to this Act may be amended by adding thereto or removing therefrom any article, or by transferring any article from one part of the schedule to the other in the manner provided by section two of the Pharmacy Act, 1868, for adding to the list of articles deemed to be poisons within the meaning of that Act.

2. *Regulation of Sale of Certain Poisonous Substances for Agricultural and Horticultural Purposes.*—(1) So much of the Pharmacy Act, 1868, as makes it an offence for any person to sell or keep open shop for the sale of poisons, unless he is a duly registered pharmaceutical chemist or chemist and druggist and conforms to regulations made under section one of that Act, shall not apply in the case of poisonous substances to be used exclusively in agriculture or horticulture for the destruction of insects, fungi, or bacteria, or as sheep dips or weed killers which are poisonous by reason of their containing arsenic, tobacco, or the alkaloids of tobacco, if the person so selling or keeping open shop is duly licensed for the purpose under this section by a local authority, and conforms to any regulations as to the keeping, transporting, and selling of poisons made under this section, but nothing in this section shall exempt any person so licensed from the requirements of any other provision of the Pharmacy Act, 1868, or of the Arsenic Act, 1851, relating to poisons:

Provided that His Majesty may by Order in Council amend this provision by adding thereto or removing therefrom any poisonous substance, and, upon any such Order being made, this provision shall have effect as if the added poisonous substances were included therein and the removed poisonous substances were excluded therefrom.

(2) Before granting any licence under this section the local authority shall take into consideration whether in the neighbourhood where the applicant for the licence carries on or intends to carry on business the reasonable requirements of the public with respect to the purchase of such poisonous substances as aforesaid are satisfied.

(3) His Majesty may, by Order in Council, make regulations as to—

- (a) the granting of licences under this section; and
- (b) the duration, renewal, revocation, suspension, extent, and production of such licences; and
- (c) the keeping, inspection, and copying of registers of licences; and
- (d) the fees to be charged for licences and for inspection and copying of registers; and
- (e) the keeping, transporting, and selling of the poisonous substances to which this section applies;

and generally for the purposes of carrying this section into effect.

(4) The local authority for the purposes of this section shall, as respects the area of any municipal borough in England having a population of more than ten thousand according to the last published census for the time being, be the council of that borough, and, as respects the area of any royal, parliamentary, or police burgh in Scotland, be the town council, and, as respects any other place, be the council of the county.

(5) An Order in Council under this section shall be laid before both Houses of Parliament as soon as may be after it is made.

3. *Amendment of 31 and 32 Vict. c. 121, ss. 15 and 16.*—(1) Any person who, being a duly registered pharmaceutical chemist or chemist and druggist, carries on the business of pharmaceutical chemist or chemist and druggist shall, unless in every premises where the business is carried on the business is bona fide conducted by himself or some other duly registered pharmaceutical chemist or chemist and druggist, as the case may be, and unless the name and certificate of qualification of the person by whom the business is so conducted in any premises is conspicuously exhibited in the premises, be guilty of an offence under section fifteen of the Pharmacy Act, 1868.

(2) The provisions of section sixteen of the Pharmacy Act, 1868, which enable the executor, administrator, or trustee of the estate of a deceased pharmaceutical chemist or chemist and druggist to continue his business so long as such business is bona fide conducted by a duly qualified assistant, shall be construed as enabling such executor, administrator, or trustee to carry on the business if and so long only as, in every premises where the business is carried on, the business is bona fide conducted by a duly registered pharmaceutical chemist or chemist and druggist, as the case may be, and the name and certificate of qualification of the person by whom the business is so conducted in any premises is conspicuously exhibited in the premises.

(3) A registered chemist or druggist may, notwithstanding anything in section fifteen of the Pharmacy Act, 1868, take, use, or exhibit the name or title of pharmacist.

(4) A body corporate, and in Scotland a firm or partnership, may carry on the business of a pharmaceutical chemist or chemist and druggist—

(a) if the business of the body corporate, firm, or partnership, so far as it relates to the keeping, retailing, and dispensing of poisons, is under the control and management of a superintendent who is a duly registered pharmaceutical chemist or chemist and druggist, whose name has been forwarded to the registrar appointed under the Pharmacy Act, 1852, to be entered by him in a register to be kept for that purpose, and who does not act at the same time in a similar capacity for any other body corporate, firm, or partnership; and

(b) if in every premises where such business as aforesaid is carried on, and is not personally conducted by the superintendent, such business is bona fide conducted under the direction of the superintendent by a manager or assistant who is a duly registered pharmaceutical chemist or chemist and druggist, and whose certificate of qualification is conspicuously exhibited in the shop or other place in which he so conducts the business.

A body corporate, and in Scotland a firm or partnership, may use the description of chemist and druggist, or of chemist or of druggist, or of dispensing chemist or druggist, if the foregoing requirements as to the carrying on of the business are observed, and if the superintendent is a member of the board of directors or other governing body of the body corporate, or of the firm or partnership, as the case may be.

Subject as aforesaid, section twelve of the Pharmacy Act, 1852, and sections one and fifteen of the Pharmacy Act, 1868, shall apply to a body corporate, and in Scotland to a firm or partnership, in like manner as they apply to an individual.

4. *Extension of Powers of Pharmaceutical Society to make Byelaws.*—The power of making byelaws conferred by section two of the Pharmacy Act, 1852, on the council

of the Pharmaceutical Society shall be deemed to include the power of making by-laws for all or any of the following purposes (that is to say):

- (a) Requiring persons desirous of presenting themselves for examination by the said society to produce evidence satisfactory to the council of the society that they have received a sufficient preliminary practical training in the subjects of the examination;
- (b) Providing for the registration, upon payment of the prescribed fee, as pharmaceutical chemists or chemists and druggists under the Pharmacy Acts, 1852 and 1868, without examination, of any persons holding colonial diplomas or of qualified military dispensers or certified assistants to apothecaries under the Apothecaries Act, 1815, who produce evidence satisfactory to the council of the society that they are persons of sufficient skill and knowledge to be so registered;
- (c) Providing for periods of time and courses of study in connexion with the qualifying examination, and dividing such examination into two parts.

5. Restrictions on Sale of Certain Poisonous Substances.—(1) It shall not be lawful to sell any substance to which this section applies by retail, unless the box, bottle, vessel, wrapper, or cover in which the substance is contained is distinctly labelled with the name of the substance and the word "Poisonous," and with the name and address of the seller of the substance, and unless such other regulations as may be prescribed under this section by Order in Council are complied with; and, if any person sells any such substance otherwise than in accordance with the provisions of this section or of any Order in Council made thereunder, he shall, on conviction under the Summary Jurisdiction Acts, be liable for each offence to a fine not exceeding five pounds.

(2) The substances to which this section applies are sulphuric acid, nitric acid, hydrochloric acid, soluble salts of oxalic acid, and such other substances as may for the time being be prescribed by Order in Council under this section.

6. Application to Ireland.—(1) The provisions of section two and section five of this Act shall apply to Ireland, with the following modifications:—

- (a) For the reference to the Pharmacy Act, 1868, there shall be substituted a reference to the Pharmacy Act (Ireland), 1875, and the Pharmacy Act (Ireland) (1875) Amendment Act, 1890, and the reference to regulations made under section one of the first mentioned Act shall not apply;
- (b) For references to Orders in Council by His Majesty, or to Orders in Council, there shall be substituted references to Orders in Council by the Lord Lieutenant;
- (c) The reference to a duly registered chemist and druggist shall include a reference to a registered druggist.

(2) Save as provided by this section, the foregoing provisions of this Act shall not apply to Ireland.

7. Continuation of Business on Death of Chemist and Druggist or Registered Druggist in Ireland.—Upon the death of any person registered under the Pharmacy Act (Ireland) (1875) Amendment Act, 1890, as a chemist and druggist or registered druggist and actually in business at the time of his death, it shall be lawful for any executor, administrator, or trustee of his estate to continue such business if and so long only as such business is bona fide conducted by an assistant being a duly registered pharmaceutical chemist or licentiate apothecary, or duly registered chemist and druggist, or duly registered druggist.

8. Short Title, Commencement, and Extent.—This Act may be cited as the Poisons and Pharmacy Act, 1908, and shall come into operation on the first day of April nineteen hundred and nine.

SCHEDULE.

PART I.

Arsenic, and its medicinal preparations.

Aconite, aconitine, and their preparations.

Alkaloids—all poisonous vegetable alkaloids not specifically named in this schedule, and their salts, and all poisonous derivatives of vegetable alkaloids.

Atropine, and its salts, and their preparations.

Belladonna, and all preparations or admixtures (except belladonna plasters) containing 0.1 or more per cent. of belladonna alkaloids.

Cantharides, and its poisonous derivatives.

Coca, any preparation or admixture of, containing 1 or more per cent. of coca alkaloids.

Corrosive sublimate.

Cyanide of potassium, and all poisonous cyanides and their preparations.

Emetic tartar, and all preparations or admixtures containing 1 or more per cent. of emetic tartar.

Ergot of rye, and preparations of ergots.

Nux vomica, and all preparations or admixtures containing 0.2 or more per cent. of strychnine.

Opium, and all preparations or admixtures containing 1 or more per cent. of morphia.

Picrotoxin.

Prussic acid, and all preparations or admixtures containing 0.1 or more per cent. of prussic acid.

Savin, and its oil, and all preparations or admixtures containing savin or its oil.

PART II.

Almonds, essential oil of (unless deprived of prussic acid).

Antifominal wine.

Cantharides, tincture and all vesicating liquid preparations or admixtures of.

Carbolic acid, and liquid preparations of carbolic acid, and its homologues containing more than 3 per cent. of those substances, except preparations for use as sheep wash or for any other purpose in connection with agriculture or horticulture, contained in a closed vessel distinctly labelled with the word "Poisonous," the name and address of the seller, and a notice of the special purposes for which the preparations are intended.

Chloral hydrate.

Chloroform, and all preparations of admixtures containing more than 20 per cent. of chloroform.

Coca, any preparation or admixture of, containing more than 0.1 per cent. but less than 1 per cent. of coca alkaloids.

Digitalis.

Mercuric iodide.

Mercuric sulphocyanide.

Oxalic acid.

Poppies, all preparations of, excepting red poppy petals and syrup of red poppies (*Papaver rhoeas*).

Precipitate, red, and all oxides of mercury.

Precipitate, white.

Strophanthus.

Sulphonal.

All preparations or admixtures which are not included in Part I. of this schedule, and contain a poison within the meaning of the Pharmacy Acts, except preparations or admixtures the exclusion of which from this schedule is indicated by the words therein relating to carbolic acid, chloroform, and coca, and except such substances as come within the provisions of section five of this Act.

CENTRAL MIDWIVES BOARD.

A MEETING of the Central Midwives Board was held at Caxton House, Westminster, on December 17th, 1908, with Dr. F. H. CHAMPEYNS in the chair.

Departmental Committee on the Midwives Act.

THE CHAIRMAN reported that he had attended on December 16th the first meeting of the Departmental Committee on the working of the Midwives Act. This committee is instructed, among other matters, to inquire into the subject of the remuneration of medical men called in under the Act.

Board's Examination.

A letter was considered from the Marchioness of Winchester, Vice-President of the Hampshire County Nursing Association, suggesting a modification of the present requirements of the Board's examination. The Board decided that the writer be informed that the Board is unable to take steps tending to lower the standard of examination, and pointing out that a glossary is supplied for the assistance of candidates studying the rules.

Rules.

Letters were considered from the Clerk of the West Sussex County Council, suggesting the framing of rules: (1) Prohibiting a midwife in attendance on a patient suffering from puerperal fever from taking another labour case for a month; (2) compelling midwives to notify to the local supervising authority cases in which they lay out dead bodies, and cases of infectious illness attended by them. The Board passed the following resolutions thereon:

1. That prolonged suspension after infection is not to be recommended: (a) because suspension without adequate

disinfection is useless, (b) because adequate disinfection renders suspension unnecessary. The time of suspension from practice should be limited to the time required for adequate disinfection, which should not take longer than twenty four hours.

2. That the suggestion be noted for consideration on the next revision of the rules.

Alleged Drunkenness.

A letter was considered from the Secretary of H.R.H. Princess Christian's Maternity Home as to the cases of two nurses, and the following resolution was passed:

That the Board considers that the Committee of H.R.H. Princess Christian's Maternity Home did their obvious duty in reporting the cases of alleged drunkenness in two of its nurses to the local supervising authority, but it also thinks that the committee of the Home will see that it is to their interest to reinforce their precautions in selecting two women to act as midwives in connection with the Home.

Advertisements.

A letter was considered from the Medical Officer of Health for Whitstable as to an advertisement issued by a certain nurse. The Board decided (1) that the nurse be requested to give an undertaking to withdraw the circular complained of, and to issue no more advertisements suggesting that she is qualified to give medical treatment, and that in default of an undertaking she be cited to appear before the Board; and (2) that the local supervising authority be asked to report on her conduct at the end of three months from this date.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: Fleet Surgeon P. M. MAY, to the *Humbly*, on recommissioning January 6th; Fleet Surgeon G. G. SOLAKET and Staff Surgeon W. L. HOPKINS, to the *President*, for special service cruisers at Port-mouth, January 1st (Staff Surgeon Hopkin's appointment being temporary); Surgeon R. WILLAN, appointed to the *Betham*, on recommissioning undated; Surgeon C. W. JEFFREY, to the *Dorset*, additional, December 30th, 1908, and on recommissioning, undated.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

SURGEON-GENERAL W. B. SLACHTER is placed on retired pay, December 31st, 1908. He was appointed an Assistant Surgeon March 30th, 1872; Surgeon, March 1st, 1873; Surgeon-Major, March 30th, 1884; granted the rank of Lieutenant-Colonel, March 30th, 1892; made Brigade-Surgeon, July 6th, 1895; Colonel, April 1st, 1902; and Surgeon-General, June 1st, 1905. He has been Principal Medical Officer, Eastern District, Principal Medical Officer, 10th Division, 4th Army Corps; Administrative Medical Officer, Eastern Command; and Principal Medical Officer, Eastern Command, India. He served in the Alder war in 1870, receiving a medal and clasp in the campaign, the North-West Frontier of India in 1897-8, receiving a medal with clasp.

Colonel A. W. P. INMAN, M.B., half-pay, retires on retired pay, January 6th. His commissions bear date: Surgeon, March 6th, 1880; Surgeon-Major, June 6th, 1892; Lieutenant-Colonel, March 6th, 1895; and Colonel, July 22nd, 1905. He was placed on half-pay August 14th, 1907. He has been Physician and Surgeon Kilmarnock Hospital, and Principal Medical Officer, South China, but has no war record in the Army Lists.

Lieutenant-Colonel G. J. COATES, M.D., is placed on temporary half-pay on account of ill-health, December 29th, 1908.

Colonel O. TOMP, M.B., who is placed on half-pay, has been transferred from the North (Scout) Division to be Principal Medical Officer Bangalore and Southern Brigades, Madras, vice Colonel H. St. C. Carruthers, Indian Medical Service, transferred.

Major R. J. BLACKMAN, who is serving in India, is appointed Sanitary Officer, 1st (Feroz) Division.

Major J. C. WEIR, M.B., also serving in India, is appointed Sanitary Officer, 8th (Lucknow) Division.

Captain L. E. L. PARKER, also serving in India, Brigade Laboratory Brailly, is appointed Specialist in the Prevention of Disease.

INDIAN MEDICAL SERVICE.

COLONEL H. B. BRIGGS, M.B., Bombay, Principal Medical Officer, Kurrachee Brigade, is permitted to retire from the service, from January 1st. He joined the Bombay Medical Department as Assistant Surgeon, September 1876, and became Colonel July 10th, 1905. He was in the Burmese expedition in 1885-7, receiving a medal with clasp; he was also with the Tirah Expeditionary Force on the North-West Frontier of India, in 1897, and was mentioned in dispatches; *Harris Army List* credits him with a medal with two clasps for the latter campaign, but these are omitted in the *Official Quarterly*.

Colonel W. G. HENDERSON, Bombay, also retires from the service, from November 14th, 1908. He was appointed an Assistant Surgeon, March 31st, 1876, and was made Colonel, November 1st, 1905. He served in the Burmese campaign in 1887-8. Again the Army Lists differ, *Harris Army List* assigns him a mention in dispatches and a medal with clasp, but the *Official Quarterly Army List* record contains neither of these.

The retirement from the service, from November 15th, 1908, is also announced of Lieutenant-Colonel W. H. W. ELLIOT, M.B., D.S.O. Emerging the Bengal Medical Department as Assistant Surgeon, March 31st, 1876, he obtained the rank of Lieutenant-Colonel, March 31st, 1897. His war record is as follows: Hazara expedition, 1888 medal with clasp; first Maritz expedition, 1891, North-West Frontier of India, campaign, 1897-8 (use the clasp); South African War, 1899, 1901, including operations in Natal and action at Lombard Kop, the

defence of Ladysmith and action of January 6th, and subsequent operations in Natal and the Transvaal (mentioned in dispatches, appointed D.S.O. and granted the Queen's medal with three clasps).

Colonel W. O'HARA, Madras, is appointed Principal Medical Officer, North (Scout) Division, vice Colonel O. Todd, M.B., British Medical Service, transferred to the Brigade Staff.

Colonel H. ST. C. CARRUTHERS, Madras, to be Principal Medical Officer, Abbottabad and Sealcote Brigades, temporarily.

TERRITORIAL FORCE.

HONOURABLE ARTILLERY COMPANY.

Surgeon-Captain E. H. MYDDLETON-GAFFY, Infantry, to be Surgeon-Major, November 28th, 1908.

ROYAL FIELD ARTILLERY.

Surgeon-Captain A. THOMAS, from the 1st Cardigan Royal Garrison Artillery (Volunteers), to be Surgeon-Captain 2nd Welsh Brigade, with precedence as in the Volunteer Force, April 1st, 1908.

INFANTRY.

Surgeon-Lieutenant R. BLADWORTH, M.B., from the 2nd Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment), to be Surgeon-Lieutenant 6th Battalion the Prince of Wales's Own (West Yorkshire Regiment), with precedence as in the Volunteer Force, April 1st, 1908.

ROYAL ARMY MEDICAL CORPS.

Second London General Hospital.—The following to be officers whose services will be available on mobilization, dated December 23rd, 1908: To be Lieutenant-Colonels: F. WALKER, M.D., F.R.C.S. Eng., H. H. LUTTON, F.R.C.S. Eng., S. J. SHARPEY, M.D., and G. H. MARINIS, C.B., F.R.C.S. Eng. To be Majors: W. H. WHITE, M.D., C. W. M. MOULLEN, M.D., F.R.C.S. Eng., T. D. ACAND, M.D., F.R.C.S. Eng., G. N. PRYDE, M.D., V. H. KATZEL, F.R.C.S. Eng., R. E. SELLW, M.D., and C. J. SYMONDS, M.D., F.R.C.S. Eng. To be Captains: H. P. HAWKINS, M.D., W. A. LANE, M.D., F.R.C.S. Eng., F. J. SMITH, M.D., F.R.C.S. Eng., C. A. BALLANCE, M.V.O., M.B., F.R.C.S. Eng., W. J. MADDY, M.D., F.R.C.S. Eng., E. R. LEN- WICK, F.R.C.S. Eng., H. W. G. MACKENZIE, M.D., L. A. DUNN, M.B., F.R.C.S. Eng., H. G. TURNER, M.D., F.R.C.S. Eng., J. HUTCHINSON, JUD., F.R.C.S. Eng., B. DAWSON, M.D., H. B. ROBINSON, M.D., F.R.C.S. Eng., H. HEAD, F.R.C.S. Eng., M. D. F. O'FAR, M.D., F.R.C.S. Eng., J. J. PERKINS, M.B., F.J. NEWBARD, F.R.C.S. Eng., W. S. COLEMAN, M.D., C. H. FAGEO, M.B., F.R.C.S. Eng., J. FAWCETT, M.D., F.R.C.S. Eng., and R. P. ROWLANDS, M.B., F.R.C.S. Eng.

First London General Hospital.—Surgeon-Major L. T. F. BRYET, M.D., from the 3rd Volunteer Battalion the Queen's Own (Royal West Kent Regiment), to be Major, with precedence as in the Volunteer Force, November 24th, 1908. C. E. GODDARD, M.D. (late Surgeon-Captain, 5th Middlesex Volunteer Regt., West Middlesex), to be Captain, November 24th, 1908. Surgeon-Captain A. R. OWST, from the 1st Cadet Battalion the Royal Fusiliers (City of London Regiment), to be Captain, with precedence as in the Volunteer Force, but next below Captain C. E. GODDARD in the unit, November 24th, 1908. R. H. B. GARTHEW, M.D., to be Lieutenant, November 24th, 1908. H. S. FRIEDLIN to be Lieutenant, November 24th, 1908.

Fifth Southern General Hospital.—Army Medical Corps.—Surgeon-Lieutenant Colonel J. H. ENGLISH, Surgeon Colonel EDWIN J. HOPKIN, from the 3rd (Duke of Connaught's Own) Volunteer Battalion Hampshire Regiment, to be Lieutenant-Colonel, with the honorary rank of Surgeon-Colonel, with precedence as in the Volunteer Force, April 1st, 1908.

Third Western General Hospital.—To be officers whose services will be available on mobilization: To be Lieutenant-Colonels—HERBERT R. VACHELL, M.D., THOMAS WALLIS, M.D., ERNEST L. C. LANCASTER, M.B., to be Major, November 24th, 1908. To be Captains: W. T. HARRIS, M.B., PHILIP R. GIFFITHS, M.B., WILLIAM M. STEVENS, M.D., CYRIL LEWIS, M.D., DONALD R. PATTERSON, M.D., BENJAMIN W. BROAD, M.K., ALFRED HOWELL, M.D., WILLIAM F. BROOK, F.R.C.S. Eng. To be Lieutenants: H. N. G. CORNELL, G. C. ELSWORTH, M.D., F.R.C.S. Eng., HAROLD A. SCHOLBERG, M.B., WILLIAM J. GREER, F.R.C.S. Eng., THOMAS M. THOMAS, M.D., F.R.C.S. Eng., WILLIAM NICHOLSON.

Fourth London General Hospital.—Surgeon-Major J. C. DUNN, to be Adjutant of a School of Instruction, November 21st, 1908.

Major A. MOYES, M.B., from the Scottish Command, Glasgow Companies, Royal Army Medical Corps (Volunteers), to be Major, with precedence as in the Volunteer Force, April 1st, 1908.

Major A. MOYES, M.B., resigns his commission, with permission to retain his rank, and to wear the prescribed uniform, November 12th, 1908.

For Attachment to Units other than Medical Units.—Captain G. GORDON, M.B., from the Scottish Command, Glasgow Companies, Royal Army Medical Corps (Volunteers), to be Captain, with precedence as in the Volunteer Force, April 1st, 1908; Surgeon-Captain J. L. GARDNER, M.D., from the 2nd Lancashire Royal Engineers (Volunteers), to be Captain, with precedence as in the Volunteer Force, April 1st, 1908; R. J. INDSAY, late 1st (Inverness-shire Highland) Volunteer Battalion the Queen's Own Cameron Highlanders, to be Captain, April 1st, 1908; Major A. G. ALLEN, M.B., F.R.C.S. Eng., to be Lieutenant, November 17th, 1908; Surgeon-Lieutenant A. T. MULLALL, from the 7th Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment), to be Lieutenant, with precedence as from December 15th, 1908. November 15th, 1908.

Third London Field Ambulance.—Major A. A. ROSS, M.B., to be Lieutenant-Colonel, August 15th, 1908; Lieutenant D. G. DAVIDSON to be Lieutenant, August 15th, 1908.

Third Northern General Hospital.—The following to be officers whose services will be available on mobilization, January 2nd, 1909: To be Lieutenant-Colonels: W. DYSON, M.D., R. J. FITE-SMITH, M.D., D. BRIDGES, M.B., and S. D. ELLIOT, M.D., F.R.C.S. Eng. To be Majors: W. N. PORTER, M.D., A. HALL, M.D., H. LOCKWOOD, W. T. LOCKING, M.D., G. WILKINSON, M.B., F.R.C.S. Eng., and A. E. NAISS, M.B., to be Captains: A. YOUNG, M.B., A. R. HALLAM, M.D., S. RUSSELL, M.D., J. W. G. GUY, M.D., G. S. SIMPSON, F.R.C.S. Eng., and A. G. WILSON, M.B., F.R.C.S. Eng.

Fourth Northern General Hospital.—Major W. H. B. BROOK, M.D., F.R.C.S. Eng., from the Mobilization List, Royal Army Medical Corps, Territorial Force, to be Lieutenant-Colonel, November 3rd, 1908; F. S. LAMBERT to be Major, November 3rd, 1908.

First Western General Hospital.—The following to be officers whose services will be available on mobilization, July 7th, 1908: To be Lieutenant-Colonels: T. R. GLENN, M.D., R. E. PARKER, M.D., F.R.C.S. Eng., Sir J. HARR, Lt. M.D., and W. ALEXANDER, M.D., F.R.C.S. Eng. To be Majors: Major R. ROSS, C.B., F.R.S., F.R.C.S. Eng., Indian Medical Service (ret.), F. T. FACIL, F.R.C.S. Eng., T. BUSBY, M.B., F. JONES, F.R.C.S. Eng., R. W. MURRY, M.D., F.R.C.S. Eng., M.D., E. A. BROWNE, F.R.C.S. Eng., and J. UTTING, to be Captains: J.

P. DAVIDSON, J. R. LOGAN, J. M. HUNT, M.B., F. C. LARSEN, F.R.C.S. Eng., W. PERMEWAN, M.D., F.R.C.S. Eng., D. DOUGLAS-CRAWFORD, M.B., F.R.C.S. Eng., J. L. ROBERTS, M.D., F.R.C.S. Eng., C. T. HOLLAND, R. J. MCLEAN, BRYAN, M.D., H. A. BUCHANAN, M.B., F.R.C.S. Eng., W. B. WARRINGTON, M.D., W. FINGLAND, R.C. P., M.B., F.R.C.S. Eng., H. ARMSTRONG, M.D., C. RENDLE, M.D., J. HAY, M.D., T. R. W. ARMOUR, M.D., R. E. KELLY, M.D., F.R.C.S. Eng., and V. C. DE HOOGHE, M.D.

Sanitary Service.—The following to be appointed officers whose services will be available on mobilization, January 2nd, 1909:—To be Lieutenant-Colonels: W. COLLINGRIDGE, M.D., late Surgeon-Lieutenant-Colonel Medical Corps (Military); D. S. DAVIES, M.D. (late Surgeon-Colonel, 1st Gloucester Royal Garrison Artillery Volunteers); K. S. GIBB, M.B. (late Surgeon-Lieutenant-Colonel, Volunteer Battalion of King's Own Scottish Borders); N. HAY, M.D., Sur. S. F. MURPHY, and G. STEVENS, late Surgeon-Lieutenant-Colonel, 2nd Volunteer Battalion Princess Louise's Army Hospital and Highlanders. To be Majors: S. BAKWIE, M.D., P. BOOTHBY, M.D., W. BRUCE, M.D., Surgeon H. B. COLLINS (Retired, Royal Navy), R. M. CRAVEY, Captain D. R. DOBIE, M.D., F.R.C.S. Eng., H. HARTPOLE, M.D., E. W. HOPE, M.D., V. J. HOWARTH, M.D., H. JONES, Honorary Captain in the Army T. W. G. KELLY, M.D., late Captain, Royal Army Medical Corps (Military), H. R. KENWOOD, M.B., H. H. LITTLEJOHN, M.B., F.R.C.S. Eng., J. C. McVAIL, M.D., A. A. MUSEN, M.D., D. HONORARY Captain in the Army J. O'CONNOR, M.B. (late Captain, Royal Army Medical Corps) (Military), H. C. PATEN, M.D., A. E. PERMEWAN, M.D., H. M. RICHARDS, M.D., H. SCOTT, J. F. J. SKYES, M.D., W. H. SYMONS, M.D., G. C. TAYLOR, M.D., J. S. TEW, M.D., J. C. THRESH, M.D., E. WALFORD, M.D., W. WILLIAMS, M.D., W. W. WILKINSON, M.D., To be Captains: W. ARCHIBALD, M.D., W. B. BARCLAY, F. W. BEACH, D. T. BELLING, L. M. BOWEN-JONES, G. A. BROWN, M.B., V. B. BROWN, M.B., J. A. CAMERON, M.D., G. H. CARRINGTON, M. CONNOR, M.D., J. H. COTTELL, M.D., D. D. G. H. COTTELL, J. DAWSON, M.B., G. DICE, M.B., R. R. DUNCAN, M.B., J. DUNN, M.D., J. J. ELLIOT, E. T. FISON, M.D., F.R.C.S. Eng., D. FORBES, M.D., J. T. GRAHAM, M.D., T. W. GRAVES, A. GRIFFITH, M.D., A. J. HALL, M.D., D. HAYAD, M.D., J. A. HISS, M.D., R. JONES, M.D., A. LEDINGHAM, M.D., W. LEWIS, G. F. MCCLAN, M.D., J. C. MCINDOE, M.D., J. C. R. MACDONALD, M.D., A. J. MCGREGOR, M.D., W. MACRIE, M.D., R. MCGILL, M.D., J. H. H. MANLEY, M.D., A. C. MUNRO, M.B., J. MURPHY, M.B., T. J. NASH, M.D., L. C. PAREES, M.D., M. PATTERSON, M.D., H. PECE, M.D., J. E. SANDLANDS, M.D., B. SCURFIELD, M.D., PHANGNELL, M.D., A. M. N. PRINGLE, M.B., E. W. REES JONES, M.D., D. KENNET, M.D., A. ROBE, M.D., W. ROBERTSON, M.D., T. ROBINSON, S. J. ROBERTIE, M.B., T. ROBERTSON, M.B., J. M. ROSS, M.B., F.R.C.S. Eng., T. HETHERINGTON, M.D., J. E. SANDLANDS, M.D., F. E. STREETER, M.D., E. H. SNEEL, M.D., J. W. SOMERVILLE, M.D., F. E. STREETER, C. TEMPLEMAN, M.D., A. E. THOMAS, M.B., G. L. THAVIS, J. P. WATT, E. B. L. T. WHELAN, F.R.C.S. J. H. WILLIAMS, M.D., J. T. WILSON, M.D., R. M. YULE, M.D., and M. J. YOUNG, F.R.C.S. Eng.

Major G. S. WOODHEAD, M.D. from the London Companies, Royal Army Medical Corps (Volunteers), to be Major, with precedence as in the Volunteer Corps, April 1st, 1908.

Major G. S. WOODHEAD, M.D., to be Lieutenant-Colonel, with seniority next below W. G. STEVENS, January 2nd, 1909.

Surgeon-Lieutenant W. S. GRIFFITH, M.B., from the 1st (Pembroke-shire) Volunteer Battalion the Welsh Regiment, to be Lieutenant, April 1st, 1908.

Lieutenant W. S. GRIFFITH, M.B., to be Captain, with seniority below A. GRIFFITH, M.D., January 2nd, 1909.

VOLUNTEER RIFLES.

HONORARY ASSISTANT-SURGEON R. W. LAMB, 1st Volunteer Battalion the South Staffordshire Regiment, resigns his commission, March 21st, 1908.

Surgeon-Major (Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer Norfolk Volunteer Infantry Brigade) C. A. O. OWENS, M.D., 4th Volunteer Battalion the London Regiment, 1st (London) Volunteer rank of Surgeon-Lieutenant-Colonel, March 30th, 1908. He resigns his commission, retaining his rank and uniform, March 31st, 1908.

THE VOLUNTEER OFFICERS' DECORATION.

The Volunteer Officers' Decoration has been conferred upon the following officers: Surgeon-Major and Honorary Surgeon, 1st Volunteer Colonel ST. CLAIR R. SHADWELL, 1st Volunteer Battalion the Essex Regiment (retired); Surgeon-Lieutenant-Colonel J. M. MOIR, M.D., the Highland Royal Garrison Artillery (Volunteers); Surgeon-Captain W. YOUNG, M.B., 3rd Volunteer Battalion the Royal Scots (Lothian Regiment); Surgeon-Major W. KINNEAR, M.D., 3rd (Dundee Highland) Volunteer Battalion the Black Watch (Royal Highlanders); Surgeon-Lieutenant-Colonel A. KINSEY-MORGAN, 1st Dorsetshire Royal Garrison Artillery (Volunteers); Major J. G. DAVIES, South Wales Borderer Company, Royal Army Medical Corps (Volunteers).

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 7,765 births and 5,668 deaths were registered during the week ending Saturday last, January 2nd. The annual rate of mortality in these towns, which had been 15.5, 15.3, and 1.8 per 1,000 in the three preceding weeks, rose again last week to 18.2 per 1,000. The rates in the several towns ranged from 6.5 in King's Norton, 7.7 in Hastings, 9.1 in York, 9.6 in Bournemouth, 9.9 in Leyton, 10.2 in East Ham, and 10.3 in Willesden, to 22.4 in West Bromwich and in Swansea, 22.6 in Manchester, 23.3 in Wigan, 23.4 in Oldham, 23.5 in Liverpool, 24.1 in Sunderland, 25.1 in Coventry, and 30.4 in Middlesbrough. In London the rate of mortality was 19.6 per 1,000, while it averaged 17.6 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.6 per 1,000 in the seventy-six towns, in London the rate was 1.5, and in the several towns it ranged from 1.7 per 1,000, while among the other large towns the rates ranged upwards to 2.5 in Tottenham, 2.8 in Manchester, 2.9 in Great Yarmouth and in Rochdale, 4.0 in Middlesbrough, 4.1 in West Ham, and 6.9 in Leicester. Measles caused a death-rate of 1.1 in Manchester, in Oldham, and in Huddersfield, 1.2 in Blackburn, 1.6 in Rotherham, 1.7 in Croydon and in Tottenham, 2.4 in Great Yarmouth and in Rochdale, 3.0 in West Ham and in Middlesbrough, and 6.3 in Leicester; diphtheria of 1.1 in East Ham and in Middlesbrough, 1.3 in King's Norton and in Birkenhead, and 1.9 in Devonport; whooping-cough of 1.1 in Swansea and 1.5 in Wolverhampton; "fever" of 1.5 in Warrington; and diarrhoea of 1.6 in Walsall. The mortality from scarlet fever

showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The Metropolitan Asylums Hospitals and the London Fever Hospital contained 4,557 scarlet fever patients at the end of the week, against 3,707, 3,537, and 3,583 at the end of the three preceding weeks; 379 new cases were admitted during the week, against 426, 381, and 303 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday last, January 2nd, 880 births and 622 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 15.2, 16.6, and 16.1 per 1,000 in the three preceding weeks, rose again to 17.4 per 1,000 last week, but was 0.8 per 1,000 below the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 14.6 in Aberdeen and in Leith, and 15.4 in Edinburgh, to 18.8 in Greenock and 19.7 in Dundee. The death-rate from the principal infectious diseases averaged 1.7 per 1,000 in these Scottish towns, the highest rate being recorded in Dundee and Paisley. The 393 deaths registered in Glasgow included 3 which were referred to diphtheria, 20 to whooping-cough, 2 to cerebro-spinal meningitis, and 9 to diarrhoea. Two fatal cases of whooping-cough and 2 of diarrhoea were recorded in Edinburgh; 2 of scarlet fever and 6 of diarrhoea in Dundee; 3 of diphtheria and 2 of diarrhoea in Paisley; and 2 of diarrhoea in Aberdeen.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, December 26th, 1908, 391 births and 397 deaths were registered in the twenty-two principal urban districts of Ireland, as against 543 births and 418 deaths in the preceding period. The annual death-rate in these districts, which had been 20.5, 19.7, and 19.3 per 1,000 in the three preceding weeks, fell to 18.3 per 1,000 in the week under notice, this figure being 5.5 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 17.2 and 23.4 respectively, those in other districts ranging from 4.0 in Dundalk and 4.7 in Wexford to 27.5 both in Limerick and Lisburn, while Cork stood at 11.6, Londonderry at 12.2, and Waterford at 17.5. The zymotic death-rate in the twenty-two districts averaged 0.7 per 1,000 as against 1.1 per 1,000 in the preceding period.

During the week ending Saturday, January 2nd, 720 births and 537 deaths were registered in the twenty-two principal urban districts of Ireland, as against 391 births and 397 deaths in the preceding period. The annual death-rate in these districts, which had been 19.7, 19.3, and 18.3 per 1,000 in the three preceding weeks, rose to 24.7 per 1,000 in the week under notice, this figure being 6.5 per 1,000 higher than the mean annual death rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 23.3 and 21.4 respectively, those in other districts ranging from 12.3 in Drogheda and 13.2 in Queenstown to 35.9 in Clonmel and 41.3 in Portadown, while Cork stood at 28.1, Londonderry at 20.7, Limerick at 27.3, and Waterford at 28.1. The zymotic death-rate in the twenty-two districts averaged 1.1 per 1,000, as against 0.7 per 1,000 in the preceding period.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BATH: EASTERN DISPENSARY.—Resident Medical Practitioner. Salary, £150 per annum.
BELGRAVE HOSPITAL FOR CHILDREN, Clapham Road, S.W.—(1) House-Physician; (2) House-Surgeon. Salary at the rate of £20 per annum each.
BIRMINGHAM CITY ASYLUM.—Assistant Medical Officer. Salary, £150 per annum.
BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £170 per annum and £30 for cab allowance.
BOURNEMOUTH: ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.—House-Surgeon. Salary, £80 per annum.
BRIGHTON: SUSSEX COUNTY HOSPITAL.—Pathologist. Salary, £350 per annum without residence.
BRISTOL ROYAL INFIRMARY.—(1) Two House-Physicians; (2) House-Surgeon; (3) Ophthalmic and Genito-Urinary Surgeon; (4) Throat, Nose and Ear Surgeon; (5) Casualty Officer. Salary for (1) and (2), £100 each, (3) and (4) £75, and for (5) £50.
CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—(1) House-Physician; (2) Assistant House-Surgeon. Salary at the rate of £85 and £50 per annum respectively.
CANCER HOSPITAL, Fulham Road, S.W.—Three Clinical Assistants.
CARDIFF INFIRMARY.—House-Surgeon. Honorarium, £20 for six months.
CHELTENHAM GENERAL HOSPITAL.—Surgeon in charge of Bona fide dispensary. Salary, £80 per annum, and £10 allowance in lieu of cash.
CORK DISTRICT LUNATIC ASYLUM.—Oculist at the Youghal Auxiliary Asylum. Salary, £40 per annum.
DUDLEY: GUEST HOSPITAL.—Senior Resident Medical Officer. Salary, £100 per annum, increasing to £120.
HALIFAX ROYAL INFIRMARY.—Second House-Surgeon. Salary, £100 per annum.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—(1) Resident House-Physicians. Honorarium, £25 for six months. (2) Dental Surgeon. Honorarium, £25 for six months.
KINCARDINE PARISH COUNCIL.—Resident Medical Officer and Vaccinator. Salary, combined, £105 and lunacy fees.
LEAMINGTON SPA ROYAL BOROUGH.—Assistant Medical Officer of Health. Salary, £250 per annum.
LONDON FEVER HOSPITAL, Liverpool Road, N.—Assistant Resident Medical Officer. Salary, £150 per annum.

LONDON LOCK HOSPITAL.—House Surgeon for Male Lock Hospital, Dean Street, W. Salary, £100 per annum.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Pathologist and Bacteriologist.

MANCHESTER CORPORATION.—Second Assistant Medical Officer at the Mosaic Fever Hospital. Salary, £200 per annum.

METROPOLITAN EAR, NOSE, AND THROAT HOSPITAL, Grafton Street, W.—(1) Surgeon; (2) Assistant Surgeon; (3) Anaesthetist.

MIDDLESEX HOSPITAL, W.—(1) Registrar to Cancer Wards; (2) Scholar in the Cancer Research Laboratories. Salary, £40 and £50 per annum respectively.

NEWCASTLE-UPON-TYNE CITY LUNATIC ASYLUM, Gosforth.—Second Assistant Medical Officer. Salary, £140 per annum, rising to £160.

NORTHAMPTON GENERAL HOSPITAL.—Senior Resident Medical Officer. Salary, £120 per annum.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House-Physician. Salary, £50 per annum.

NOTTS COUNTY ASYLUM, Radcliffe-on-Trent.—(1) Medical Superintendent. Salary, £600 per annum. (2) Locumtenent Assistant Medical Officer. Three guineas weekly.

OLDHAM INFIRMARY.—Ophthalmic Surgeon. Honorarium, Fifty guineas per annum.

ROCHSTER HOSPITAL AND DISPENSARY.—(1) Senior House-Surgeon; (2) Assistant House-Surgeon. Salary, £110 and £80 per annum respectively.

ROYAL EAR HOSPITAL, Soho.—Non-resident House-Surgeon. Salary at the rate of £40 per annum.

SOUTHEAST BOROUGH.—Assistant Medical Officer of Health. Salary, £250 per annum.

SUNDERLAND, MONKWEARMOUTH, AND SOUTHWICK HOSPITAL. House-Surgeon. Salary, £109 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Assistant Ophthalmic Surgeon; (2) Pathologist. Salary, £200 per annum.

WINCHESTER CITY.—Medical Officer of Health. Salary, £400 per annum.

CERTIFYING FACTORY SURGEON.—The Chief Inspector of Factories announces a vacancy at Newtown, co. Montgomery.

APPOINTMENTS.

McLEAN, W., L.R.C.P.Lond., M.R.C.S., L.S.A., Assistant Emigration Officer and Sanitary Surveyor to the Board of Trade, Queenstown, Ireland.

OBRIEN, J. J., M.D.R.U.I., Medical Officer and Public Vaccinator for the Health Town District of the Wolverhampton Union.

ORTON, L. E., M.R.C.S., L.R.C.P., Medical Officer of Health, Buckingham Urban District.

PATTERSON, Norman, M.B., B.Ch.Edin., F.R.C.S.Eng., Assistant Surgeon, Golden Square Hospital for Diseases of the Throat.

PRICE, Alfred R., M.B., Ch.R.Edin., House-Surgeon to the Swansea General and Eye Hospital.

ROWTHREE, Cecil W., M.B., B.S., F.R.C.S., Surgical Registrar to the Middlesex Hospital.

SHAW, C. J., M.D., F.R.C.P.Édin., Medical Superintendent to the Argyle and Bute District Asylum, Lochgilphead.

STUNDEE, F. H., F.R.C.S.Édin., L.R.C.P.Lond., Medical Officer and Public Vaccinator for the Walsingham District, and Medical Officer, Walsingham Union Workhouse.

TAYLOR, Frank E., M.A., M.D., F.R.C.S., Obstetrical Registrar to the Middlesex Hospital.

TRAVIS, G. L., L.R.C.P.Édin., M.R.C.S.Eng., D.P.H.Camb., Medical Officer of Health, Bute and Good Urban District.

TYLER, Hugh Leam, M.D., B.C.Canab., Assistant Director of the Imperial Army Medical College at Tientsin, China.

WALKER, A. F., L.R.C.P. and S., Medical Officer of the No. 2 District of the Toxteth Union.

WILSON, W. L., L.R.C.P. and S., Medical Officer of Health, Madron Urban District.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

DOUSE.—On December 31st, 1908, at Lythurst Avenue, Streatham Hill, the wife of J. Freeman Douse, M.R.C.S., L.R.C.P., of a son.

MARRIAGES.

WHEAT-MONFRIES.—On Thursday, January 7th, at St. George's United Free Church, Edin., by the Rev. John Kelman, D.D., George Duncan Whyte, M.B.Édin., D.T.M. and H.Canab., Swatow, China, to Margaret Marion, eldest daughter of the late Alexander Monfries, of Dundee and London.

SILVER WEDDING.

MAGRANE-PIENKERT.—January 7th, 1884, at the Church of the Three Patrons, Rathfriland, by the Right Rev. Dr. Donnelly, Bishop Assistant of Dublin, Vincent Magrane, L.R.C.S.I., etc., Darlington, Staffordshire, to Frances Eleanor, third daughter of James Plunkett, solicitor, 19, Palmerston Road, Dublin.

BOOKS, ETC., RECEIVED.

Les Atteintes aux Moeurs. Par P. Brouardel. (Cours de Médecine légale de la Faculté de Médecine de Paris.) Paris: J. B. Baillière, et Fils. 1909. Fr. 5.

Würzburg: C. Kabitzsch (A. Staber). 1909.

Atenakuron mit 115 Rezepten. Von Dr. med. H. Hughes.

Die Ursachen und die Verhütung der hohen Säuglings-Sterblichkeit und die Ernährung und Pflege des Säuglings. Von Dr. med. E. Jester. M. 150.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Papers: (1) Dr. Cecil Wall: Mediastinal Growths. (2) Dr. H. A. Calvey: Some Principles of Treatment in Colitis.

TUESDAY.

SOCIETY FOR THE STUDY OF INEBRIETY, 11, Chandos Street, W., 4 p.m.—Discussion: The Action of Alcohol, to be opened by Professor A. R. Cushny, F.R.S.

ROYAL SOCIETY OF MEDICINE:

SURGICAL SECTION, 20, Hanover Square, W., 5.30 p.m.—Papers.—Mr. E. W. Hey Groves and Professor Walker Hall: The Functions of the Colon in Relation to Colic Exclusion. Mr. Edred M. Corner and Mr. Martin Higgins: The Repeated Strangulation of an Obturator Hernia necessitating its Radical Cure, with remarks upon Obturator Herniae in General.

WEDNESDAY.

HUNTERIAN SOCIETY, London Institution, 8.30 p.m.—Mr. Bland-Sutton: Thrombosis and Embolism after Operations on the Female Pelvic Organs.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Millbank, S.W., 5 p.m.—Paper:—Lieutenant-Colonel C. H. Melville, R.A.M.C.: What can be done by Medical Officers of the Territorial Force in Time of Peace to Prevent Disease and to further Physical Efficiency in Time of War?

THURSDAY.

ROYAL SOCIETY OF MEDICINE:

OBSTETRICAL AND GYNAECOLOGICAL SECTION, 20, Hanover Square, W., 7.45 p.m.—(1) Short Communications:—Mrs. Florence E. Willey: Notes on the Histology of the Smaller Myometria. Mrs. Stanley Boyd: The Remote Results and Post-mortem Findings Four and a half Years after Operation in a Case of Abdominal Hysterectomy for Cancer of the Cervix followed by Vesicovaginal Fistula. (2) Paper:—Dr. R. H. Parimore: The Role of the Perineal Body during Labour, and the Conduction of Delivery in relation thereto. (3) Card and other Specimens.

FRIDAY.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—(1) Paper:—Captain W. Scott Patton, I.M.S.: The Parasite of Kala-azar and Allied Organisms. (2) Dr. Sandwith for Dr. Cresswell, Suez: Demonstration of a Jeddah Ulcer.

ROYAL SOCIETY OF MEDICINE:

ELECTRO-THERAPEUTICAL SECTION, 20, Hanover Square, W., 8.30 p.m.—Discussion on the Value of X Rays in Diseases of the Digestive System, to be opened by Dr. A. E. Barclay, followed by Dr. Thurstan Holland, Dr. G. A. Pirie, and others.

POST-GRADUATE COURSES AND LECTURES.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST Brompton S.W.—Wednesday, 4 p.m., Difficult Emphysema.

HOSPITAL FOR SKIN CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m., Fractures in Children.

LONDON THROAT HOSPITAL, Great Portland Street, W.—Wednesday, 5 p.m.—Impaired Movements of the Vocal Cords.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen's Square, W.C.—Tuesday, 3.30 p.m., Myasthenia Gravis; Friday, 3.30 p.m., Paraplegia.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient; Nose, Throat, and Ear; X Rays; 4.30 p.m., Medical In-patient. Tuesday, 10 a.m., Medical Out-patient; Clinics; 2.30 p.m., Operations; Clinics; Surgical, Gynaecological; 4.30 p.m., Lecture Acidosis after Anaesthesia. Wednesday, 2.30 p.m., Medical Out-patient, Skin, and Eye Clinics. Thursday, 2.30 p.m., Gynaecological Operations; Clinics: Medical Out-patient, Surgical Out-patient. Friday, 3 p.m., Medical In-patient; 5 p.m., Demonstration on Pulmonary Tuberculosis in Children at the Mount Vernon Hospital, Hampstead. Friday, Clinics: 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient; Clinics: Medical Out-patient; Eye; 3 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for the week: Daily, 2 p.m., Medical and Surgical Clinics, X Rays; 2.30 p.m., Operations. Monday and Thursday, 2 p.m., Mr. Dunn, Diseases of the Eyes (and Wednesday and Saturday, 2 p.m.); Tuesday and Friday, 10 a.m., Gynaecological Operations; Tuesday and Friday, 2 p.m., and Wednesday and Saturday, 10 a.m., Diseases of the Throat, Nose, and Ear; 2.30 p.m., Diseases of the Skin; Wednesday and Saturday, 3.30 p.m., Diseases of Women. Lectures: 10 a.m., Monday and Thursday, Surgical Demonstration; Friday, Medical Demonstration. At 12 noon, Monday, Pathological Demonstration. At 12.15 p.m., Friday and Saturday, Practical Medicine. At 5 p.m., Monday, Clinical; Tuesday, Blood Examination in Tropical Diseases; Wednesday, Practical Surgery; Thursday, Displaced Kidney; Friday, Clinical.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C.—Thursday, 5 p.m., Bullous and Vesicular Eruptions.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
JANUARY.		JANUARY (Continued).	
10 Sunday ..		21 THURSDAY ..	{ KENSINGTON DIVISION, <i>Metropolitan Counties Branch</i> , Kensington Town Hall, 5 p.m.
11 MONDAY ..	{ WARRINGTON DIVISION, <i>Lancashire and Cheshire Branch</i> , Adjourned Meeting, Infirmary, Warrington, 4 p.m.	22 FRIDAY ..	
12 TUESDAY ..	{ LONDON : Organization Committee, 10.30 a.m. LONDON : Subcommittee on Capitation Grants, immediately after Organization Committee.	23 SATURDAY ..	
13 WEDNESDAY ..	{ RICHMOND DIVISION, <i>Metropolitan Counties Branch</i> , Royal Hospital, Richmond, 8.30 p.m. LONDON : Metropolitan Counties Branch Council (not January 7th as previously arranged).	24 Sunday ..	
14 THURSDAY ..	{ ALTRINGHAM DIVISION, <i>Lancashire and Cheshire Branch</i> , Meeting of Executive Committee, at Dr. Golland's, 8 p.m. BIRMINGHAM BRANCH, Medical Institute, Edmund Street, 3.30 p.m.	25 MONDAY ..	
15 FRIDAY ..	{ LONDON : Premises Committee, 2.30 p.m. LANBETH DIVISION, <i>Metropolitan Counties Branch</i> , Lambeth Infirmary, Brook Street, S.E., 4 p.m.	26 TUESDAY ..	{ HAMPSTEAD DIVISION, <i>Metropolitan Counties Branch</i> , Business Meeting. Central Council, 2 p.m. BATH AND BRISTOL BRANCH, Bristol. RICHMOND DIVISION, <i>Metropolitan Counties Branch</i> , Special Meeting, Bridge House Café, Richmond Bridge, 8.30 p.m.
16 SATURDAY ..		27 WEDNESDAY ..	{ CITY DIVISION, <i>Metropolitan Counties Branch</i> , Business Meeting, Great Eastern Hotel, 3.30 p.m. BIRMINGHAM BRANCH, Pathological and Clinical Section, Medical Institute, Edmund Street, 8 p.m.
17 Sunday ..		28 THURSDAY ..	
18 MONDAY ..		29 FRIDAY ..	
19 TUESDAY ..		30 SATURDAY ..	
20 WEDNESDAY ..	{ London : Journal and Finance Committee, 2.30 p.m. CARDIFF DIVISION, <i>South Wales and Monmouthshire Branch</i> , Cardiff.	31 Sunday ..	
		FEBRUARY.	
		1 MONDAY ..	
		2 TUESDAY ..	
		3 WEDNESDAY ..	{ ULSTER BRANCH Winter Meeting, Belfast.
		4 THURSDAY ..	
		5 FRIDAY ..	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the **BRITISH MEDICAL JOURNAL** is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent

by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the **BRITISH MEDICAL JOURNAL** for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JANUARY 16TH, 1909.

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British Medical Association.

ORGANIZATION COMMITTEE.

REPORT

ON

LEGAL QUESTIONS AS TO OPPOSITION BY BRANCHES TO CERTAIN CLAUSES OF DRAFT CHARTER.

THE Organization Committee Reports to the Divisions and Branches:

That an application has been received from the Metropolitan Counties Branch for advice upon the legal questions involved in a point of order raised at a meeting of that Branch, and that the Committee has, upon the advice of the Solicitor, taken Counsel's opinion on the matter.

Having regard to the important bearing of the Opinion received from Counsel on questions now pending, the Committee has resolved that it, together with the Statement of Case submitted, should at once be Reported through the JOURNAL to the Divisions and Branches. The Statement of Case and Opinion are as follows:

CASE TO COUNSEL TO ADVISE.

COUNSEL will receive herewith the following documents:

1. Print of Memorandum, Articles, and By-laws of the British Medical Association.
2. Print of Petition to His Majesty's Privy Council for Grant of a Royal Charter.
3. Print of Draft Charter Ordinances and By-laws submitted with the Petition.
4. Print of Model Rules of Branches and Divisions.
5. Correspondence in the BRITISH MEDICAL JOURNAL relative to the Charter.

The Petition of the British Medical Association to His Majesty's Privy Council for the Grant of a Royal Charter was lodged on December 21st, 1908, and it was accompanied by a Print of the Draft Charter Ordinances and By-laws.

A Print of each of these documents accompanies for Counsel's information and reference.

There has within the Association recently arisen amongst certain of its Members a spirit of opposition to some of the provisions contained in the Ordinances appended to and referred to in the Draft Charter, and this movement which was originated in the South-Western Branch of the Association has extended to and affected other Branches and Divisions. In fact at the present time certain of the Branches are circularizing their Members in view of ascertaining the individual feeling which prevails concerning the matters referred to, and it is also suggested that certain of the Branches as units of the Association shall, either individually as a Branch, or in combination with other Branches, petition the Privy Council in opposition to the grant of the Charter in the form in which it is presented.

As accompanying this case, a Copy of the correspondence which has appeared upon the subject is sent, and which will serve to show Counsel how and the circumstances under which the movement was started, and the manner in which it has extended.

The short points involved, and upon which Counsel's opinion is desired, are:

- (a) Whether such action on the part of the Branches or Divisions is, in the circumstances which prevail, within their powers or is *ultra vires*;
- (b) If *ultra vires*, then what means are open to be taken by the Association to put a stop to it, and
- (c) Whether the expenditure incurred consequent upon the action of the Branches and Divisions referred to is legitimately chargeable to the funds of the Association or Association by being defrayed out of Division or Branch funds.

The facts incident to and the relative aspects of the matter are more fully detailed in a letter received from

the Medical Secretary of the Association, and of which, omitting formal parts, the following is a copy:

The President of a Branch of the Association has applied for a legal opinion arising out of a point of order put to him at a recent General Meeting of his Branch over which he presided.

The question before the meeting was, whether the Council of the Branch should be instructed to co-operate with other Branches in petitioning the Privy Council for an amendment of certain of the Ordinances of the Charter as submitted to the Privy Council by the Council of the Association in accordance with the instructions of the Representative Meeting.

The point of order, of which the President had not had notice prior to the meeting, and which he therefore felt unable to decide on his own responsibility, was that the proposed action would be outside the functions of a Branch Council as defined by the present Articles and By-laws of the Association; that it would, therefore, be *ultra vires* for the Branch Council to take the action proposed, and consequently was out of order for a General Meeting of the Branch to consider any proposal for instructing them so to do.

The President of the Branch, as Chairman of the Meeting, declined to give any ruling, and decided that the meeting should proceed, promising that, if the resolution were carried, no action should be taken thereunder until a legal opinion had been obtained.

Though the resolution was not carried the point raised appears to him to be one of such importance that, in the interests of the Association, the correct view of the matter should be ascertained and made known to the Association generally.

The question at issue, as stated by the President of the Branch in his letter to the Chairman of the Organization Committee, is as follows:

Can a Branch of the Association act as a corporate body in opposition to a constitutionally pronounced decision of the Association?

As illustrating the kind of action in question, I am to refer you to the reports published in the *BRITISH MEDICAL JOURNAL* (copies of which I enclose), the first relative to a circular issued by the Council of the South-Western Branch to members of that Branch (*BRITISH MEDICAL JOURNAL*, November 21st, page 1588); the second relative to action by the Council of the Midland Branch (*BRITISH MEDICAL JOURNAL*, January 2nd, page 61).

The Chairman of the Organization Committee has directed that this point shall be submitted to you for Counsel's opinion.

As regards the question submitted, some explanation may be of assistance to you of the views taken of the position by those who have asked that it should be decided.

The Divisions and Branches of the Association are local units of the members created by Article IV of the Articles of Association, and having certain powers and duties stated in the Regulations of the Association.

As you are aware, the Divisions and Branches are so constituted as to include, respectively, in their membership every member residing within the area of each.

It therefore follows that, speaking generally, every member of the Association is at the same time a member of some Division of the Association, and a member of some Branch, and he has rights and obligations in a threefold capacity.

- (a) As an individual member of the Association;
- (b) As a member of a local unit, the Division, and
- (c) As a member of a local unit, the Branch.

As you are aware, Divisions and Branches have certain powers of autonomy, including that of adopting Rules for their own government limited by two conditions, *first*, that any Rules they adopt must be in accordance with the Articles and By-laws of the

Association; and, *secondly*, that they must be subject to the approval of the Central Council.

The sets of Model Rules of Divisions and Branches respectively, which I enclose, illustrate the view which has been taken of the kind of local regulations which are permitted by the Council to be adopted.

Divisions and Branches have a certain direct representation in the governing bodies of the Association, namely:—every Division, alone or in conjunction with some other Division, is entitled once a year to elect a Representative to take part in Representative Meetings, and who must be elected in a General Meeting of the Constituency which he is to represent.

The Branches, singly or in groups, elect members of the Central Council of the Association. The respective powers of the Representative Meeting and Council thus elected are defined in the Regulations of the Association.

For the present purpose attention may perhaps be specially drawn to Article XXXV, in which it is declared that a resolution of the Representative Meeting, passed subject to certain specified conditions, "shall be deemed to be a decision of the Association." One of the conditions is that such a resolution before becoming binding must be confirmed either by the Council, or by the Division upon a Referendum taken by the Council.

In the present instance the question concerns opposition by Branches to action taken on behalf of the Association by the Council under instructions from the Annual Representative Meeting.

You are aware that at the Annual Representative Meeting it was decided by a majority of 106 to 1 to direct the Council to apply for a Charter in the form approved by that meeting.

The Council considered this among other resolutions of the Representative Meeting immediately afterwards, with a view to deciding whether they should be approved, or whether a Referendum should be taken upon any of them, and the Council approved the resolution in question "nemine contradicente."

The duty of seeing that the necessary amendments decided upon by the Representative Meeting were incorporated in the Charter was referred by the Council to the Organization Committee, and this having been duly carried out the document in its finally amended form was again submitted to the Council, who, again "nemine contradicente," appointed its Chairman, Mr. Edmund Owen, and the Chairman of the Organization Committee, Mr. Andrew Clark, as a Committee to take all necessary steps to submit to the Privy Council a Petition, in a form then approved by the Council, for a Charter in a form at the same time approved.

You are also aware of the history of the repeated examination and amendments by the Divisions and Representative Meeting, which the draft Charter has undergone in the three years ending August, 1908.

The relevance of this to the point at issue will be mentioned immediately.

Those who have raised the question submit that in the above stages of consideration and decision as to the Charter, the Divisions of the Association through the Representative Meeting, and the Branches of the Association through their representatives on the Council, have been afforded their proper constitutional opportunities of making known their views as to the Charter, and that the resolution of the Representative Meeting at Sheffield, confirmed by the Council, constitutes in all respects a decision of the Association against which it is not competent for Divisions and Branches, as units of the Association, to take any corporate action.

The above considerations relate to the power of Divisions and Branches to take corporate action.

The question will also obviously arise, if such action should be held to be *ultra vires*, as to what means the Association possesses of restraining its Divisions and Branches from taking such illegal action apart from the financial aspects of the matter.

On the financial aspects of the position the Chairman of the Organization Committee thinks it well that the present opportunity should be taken of having considered and being advised upon the cognate question, which had previously been raised, as to whether Branches have power to expend the funds of the Association on such action as circularizing all members of a Branch to ascertain whether, in their view, the Branch Council should petition the Privy Council in opposition to the grant of the Charter which the Association have applied for in its present form.

I enclose a copy of a circular issued by a Branch Council for this purpose (see JOURNAL, November 21st, p. 1588.)

It is possibly relevant to the question of the propriety of such action to draw attention to the fact that the considerations placed before the members of the Branch by this circular relate entirely to one side of the matter. No attempt is made to state the arguments either against the mode of taking a Referendum proposed, nor as to the propriety of the question being raised at the present juncture by way of petition to the Privy Council.

Prints of the Model Rules referred to in the foregoing letter accompany, and are fastened together as one document.

The passages in the issues of the BRITISH MEDICAL JOURNAL of November 21st (p. 1588), and January 2nd (p. 61) to which the Medical Secretary refers will be found in the copy correspondence extracted from the JOURNAL which accompanies.

Counsel is required to advise the British Medical Association upon the points which are involved and generally for their assistance.

COUNSEL'S OPINION.

The resolution to approve the draft of the Charter Ordinances and By-laws in its present form, which was passed at Sheffield by the Representative Meeting, and afterwards approved by the Council is "a decision of the Association" within the 35th Article of Association, and is binding on all Branches and Divisions. It is in pursuance of that resolution, so approved, that the draft of the Charter Ordinances and By-laws has been submitted to the Privy Council.

Under these circumstances, no Branch or Division can, in my opinion, legally petition the Privy Council against granting the Charter (with the Ordinances and By-laws) in the form submitted or take any other steps directed towards interfering with such grant. The powers of a Branch or Division are limited to regulating its own internal affairs and carrying out, within its own limits, the defined objects of the Association (see Article V and By-laws 11, 12, 16). It is bound to conform to the regulations of the Association (including Article XXV), and it cannot legally act in opposition to a decision of the Representative Meeting. It would be subversive of all internal discipline and cohesion, and would lead to anarchy if such action were permissible.

It follows that a Branch or Division cannot apply the funds of the Association granted to it under By-law 16 (for the purposes therein mentioned) in promoting a Petition to the Privy Council or in obtaining the opinion of its members as to whether such a petition shall be presented. And if the funds of the Association are so applied the individuals so applying them could, in my opinion, be made personally responsible for their misapplication. And any person threatening so to apply them could be restrained by injunction.

I may add (though this observation does not affect the legal position above explained) that there does not appear to me to be any legitimate grievance as to the form in which

the provisions of the draft Ordinances as to the Referendum now stand. The question of their form was the subject of a particular resolution at the Sheffield Meeting, and (as I am informed) full public notice of the terms of that resolution was given previously to that meeting; the Divisions, therefore, had ample opportunity of considering the proposed resolution and of voting against it at that meeting by their Representatives. The objections now raised come too late.

(Signed) T. R. COLQUHOUN DILL,

Lincolnc, Inn,

11th January, 1909.

FORMATION OF A BUCKS DIVISION.

A most successful and interesting meeting was held at Aylesbury on December 1st, 1908, to consider the formation of this Division. Twenty-six medical men were present, and had the weather been more favourable several more would have attended. All the practitioners in Aylesbury except one put in an appearance, and he was away from home. Several came from long distances, the train service to Aylesbury being very convenient. Those present were Drs. Baker, Carruthers, Parrott, Perrin, Rose, Shaw, and West (Aylesbury), A. T. Morrison (Waddesdon), H. E. Crawley (Wendover), E. O. Turner and H. G. Magrath (Great Missenden), F. O. Cooke and R. O. Lee (Haddenham), J. W. Graham (Brill), P. L. Benson (Steeple Claydon), W. L. Bradshaw (High Wycombe), J. C. Gardner and R. R. Hardwicke (Amersham), Colonel P. B. Giles, F.R.C.S. (Bletchley), Drs. Deyns and Bradbrook (Fenny Stratford), A. E. Larking (Buckingham), J. Durran (Leighton Buzzard). Expressions of regret at absence were received from Drs. Howard and Pemberton (Buckingham), Nicholson and Buxton (Fenny Stratford), Wickham (Newport Pagnell), Smith-Wynne (Amersham), Johnstone Harris (Leighton Buzzard), and Reynolds (High Wycombe). Mr. ANDREW CLARK took the chair, and in his opening remarks referred to the satisfactory progress of the Association and the advantages of having an active Division in the county.

Mr. SMITH WHITAKER then gave an address on the Work and Methods of the British Medical Association. It was listened to with great interest by those present, applause being frequent and enthusiastic, especially when he referred to the many cases in which medical men had been successful, by local united action supported by the Association, in resisting unreasonable demands made upon them, including underpayment. He deprecated the prejudices, suspicions, and jealousies existing among medical practitioners in the same neighbourhood, which often prevented such united action, and could only be overcome by encouraging practitioners to meet, which was one of the chief functions of the Divisions. Dealing at some length with the question of medical inspection of schools, he instanced the share the British Medical Association had in formulating a scheme. On the question whether the work of inspection should be carried out by part-time officers or whole-time officers, the preponderating opinion of the Divisions was in favour of whole-time officers, because it was feared that if private practitioners did the work there would be greater risk of friction through "interference" with the patients of other practitioners. Questions as to treatment of children found defective were now coming up for consideration, and if it was desired that this work should be allotted to private practitioners, it rested with the Divisions to devise schemes which would be satisfactory to local authorities as providing for the work being done as efficiently and as economically as by whole-time public officers. After referring to many instances of the value of national combination of the profession through the Association, as with regard to legislation and prosecution of unqualified practitioners, he closed a most eloquent and lucid address.

Colonel GILES, F.R.C.S., then proposed—"That this meeting pledges itself to do its utmost to promote the formation of a Bucks Division of the British Medical Association." His firm opinion was that more of the methods of the trades union should be adopted by the

British Medical Association and the interests of the general practitioners be protected. The new Inspection of School Children's Act was quite capable of being carried out by general practitioners if there was a central medical man to collate the results.

Dr. BAKER seconded, and urged that the present opportunity should not be lost, and that a Division be formed. If they all tried to help the Association, they would find it gave them great help in return.

Dr. BRADBROOK, in a witty speech, proposed:

That a committee be elected to carry out the necessary preliminary arrangements, and that a meeting be called in the early part of the new year to elect officers, draw up rules and regulations, and put the Division in working order.

He also thought that a more active policy should be pursued, and that the question of clubs should be dealt with in a drastic manner by insisting upon better remuneration. Dr. GRAHAM seconded the resolution, and made a few remarks on the new inspection of school children which he thought was not at all satisfactorily carried out. This resolution was carried unanimously.

Formation of Committee.—A committee consisting of Drs. Baker, West, Turner, Graham, Gardner, Bradbrook, Durran, Larking, Benson, and Reynolds was proposed by Dr. LARKING and seconded by Dr. SHAW. Tea was then provided by Dr. and Mrs. Baker.

Address.—Mr. JAMES BERRY, of London, gave a very practical and much appreciated address on "Miscellaneous Points in Surgical Practice."

The meeting then terminated.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

CAPE OF GOOD HOPE—WESTERN PROVINCE BRANCH.

ANNUAL MEETING.

The annual meeting of the Branch was held on November 30th, 1908. Dr. ELLIOTT, President, in the chair; twenty-four members attended.

Reports.—The reports of Council, Treasurer, Political and Library Committees were read and adopted.

Vote of Thanks to Honorary Librarian.—A special vote of thanks was passed to Dr. Hugh Smith, Honorary Librarian.

Election of Office-bearers.—The following were elected office-bearers for 1909: *President*, Dr. Jasper Anderson (Capetown); *Vice-President*, Dr. G. Eyre (Claremont); *Treasurer*, Dr. J. H. de Villiers (Rondebosch); *Secretary*, Dr. H. A. Moffat (Capetown); *Council*, Dr. Bachelor (Sea Point), Dr. C. C. Elliott (Sea Point), Dr. S. W. F. Richardson (Capetown), Dr. Hugh Smith (Capetown).

Vote of Thanks to Retiring President.—Dr. JASPER ANDERSON moved a hearty vote of thanks to the President for 1908, Dr. C. C. Elliott. This was carried by acclamation.

SPECIAL MEETING.

After the annual meeting a special meeting was held.

Proposed Formation of a South African Committee.—The report of delegates to a meeting at East London with delegates from other Branches re the formation of a South African Committee was adopted.

Government Sick Funds.—A recommendation from the Medico-Political Committee was adopted as follows, referring to Government sick funds:

That this meeting considers that all officials whose salaries are above a maximum to be fixed should not be entitled to the gratuitous services of medical officers to sick funds.

Filler President and the Chairman of the Medico-Political Committee were elected a deputation to interview the **Commissioner of the Cape Government Railway Sick Fund.**

Annual Dinner.—The annual dinner was held on December 11th, and passed off very successfully. There were forty-four present. The Hon. J. X. Merriman, Prime Minister, and the Hon. H. Burton, Attorney-General, were present.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

GLOUCESTERSHIRE BRANCH.—A general meeting of the Branch will be held at the General Hospital, Cheltenham, on Thursday, January 21st, 1909, at 7 p.m. Agenda: 1. Minutes of last meeting. 2. Dr. A. F. R. Conder: Notes on a case of pneumococcal infection. 3. Dr. E. A. Dent: Paper—Rheumatoid Arthritis, its Clinical Aspects, Diagnosis, and Treatment (with photograph). There will be a supper afterwards at the Cosy Corner, Promenade (tickets 5s. 6d. each, exclusive of wine). The Secretary will be pleased to hear from any member who will show cases or pathological specimens at future meetings during this session.—D. E. FINLAY, Honorary Secretary, Gloucester.

LANCASHIRE AND CHESHIRE BRANCH.—Several Divisions have asked the Branch Secretary to assist them in drawing up a clinical and scientific programme for their winter meetings by letting them know of gentlemen who would be willing to read papers or give demonstrations at meetings of Divisions other than their own. The Honorary Secretary would accordingly be pleased to know of any members willing to give such papers or demonstrations, so that he may be able to submit them to the Divisions.—F. CHARLES LARKIN, Branch Secretary, Liverpool.

LANCASHIRE AND CHESHIRE BRANCH: LEIGH DIVISION.—A meeting will be held in the Co-operative Offices, Ellesmere Street, on Thursday, January 21st, at 8.30 p.m. Agenda: 1. Minutes. 2. Report on medical inspection of school children. 3. Earlier appointment of Representative. 4. Nationalization of medicine. 5. Any other matter.—G. H. SHAW, Honorary Secretary, Burnleigh, Leigh, Lancs.

METROPOLITAN COUNTIES BRANCH: KENSINGTON DIVISION.—There will be a meeting of the Kensington Division, at the Kensington Town Hall, on Thursday, January 21st, at 5 p.m., when Mr. L. A. Bidwell will give an address on the immediate and ultimate results of gastro-enterostomy for gastric and duodenal ulcer.—H. BECKETT OVERY, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: HAMPSHIRE DIVISION.—A special and ordinary meeting of this Division will be held on Tuesday, January 26th, 1909, at 4.55 p.m. and 5 p.m., at St. Peter's Hall, Belsize Square, N.W. (behind St. Peter's Church). Dr. Oppenheimer in the chair. Agenda (*Special Meeting*, 4.55 p.m.): 1. To alter Divisional Rule No. 7 in accordance with the existing Article xvii of the Association, so as to permit of the election of the Representative to the Representative Meeting "not more than 9 months nor less than 3 weeks before the Annual Representative Meeting," instead of "not more than 12 months nor less than 3 weeks before the Annual Representative Meeting," as in the former Article xvii of the Association. The Honorary Secretary will read a letter from the Medical Secretary on the subject. Agenda (*Ordinary Meeting*, 5 p.m.): 1. Minutes. 2. Letters. 3. Questions. 4. Report of Representatives on the Branch Council. 5. Annual report to the Branch (including financial report). 6. Hampshire Hospital business; to consider a letter from the Hospitals Committee of the Association. 7. To consider the questions submitted to Divisions on p. 11 of the Medico-Political Committee's report on the medical inspection of school children and the treatment of those found defective (see BRITISH MEDICAL JOURNAL of December 26th, 1908, pp. 1869 to 1874, and January 9th, 1909, pp. 96 to 102, and pp. 107 and 108). 8. Other business.—R. A. YELD, Honorary Secretary, Hampstead.

METROPOLITAN COUNTIES BRANCH: RICHMOND DIVISION.—A special meeting will be held on January 27th at 8.30 p.m. at the Bridge House Café, Richmond Bridge, to consider the Report on the Medical Inspection of School Children.—G. CARDNO STILL, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—A special meeting of this Division will be held on Thursday, January 21st, at the Florence Restaurant, Rupert Street, near Piccadilly Circus, to consider the Report of the Medico-Political Committee on the Treatment of School Children. The meeting will be preceded by a dinner at 7.30. Any member of the profession desiring to attend the dinner is requested to communicate with one of the undersigned. Those unable to attend the dinner will be equally welcome at the business meeting afterwards, which will begin at 9 p.m.—HARVEY HILLIARD and J. HOWELL EVANS, Honorary Secretaries.

SOUTH-EASTERN BRANCH: BRIGHTON, HASTINGS, SEVENOAKS, AND TUNBRIDGE WELLS DIVISIONS.—A conjoint meeting of the Brighton, Hastings, Sevenoaks, and Tunbridge Wells Divisions will be held on Wednesday, January 20th, 1909, at the General Hospital, Tunbridge Wells (by kind permission of the House Committee). The chair will be taken by Dr. Adeney at 5 o'clock. Tea and coffee will be provided by the Chairman at 4.30 p.m. Two papers will be given on "Conditions of Septicæmia and their Bacteriological Treatment," with lantern demonstration. Mr. G. Bellingham Smith, M.B., Assistant Obstetric Physician to Guy's Hospital, will treat of the clinical aspect, and Dr.

J. W. H. Eyre, Bacteriologist to Guy's Hospital, of the bacteriological treatment. Dinner will be served at 7 p.m., at the Calverley Hotel, Tunbridge Wells. Charge, 6s., exclusive of wine.—G. R. MARSH (Brighton), G. VICKERMAN HEWLAND (Hastings), ISAAC NEWTON (Sevenoaks), E. A. STARLING, W. B. WARDE (Tunbridge Wells).

SOUTH MIDLAND BRANCH; NORTHAMPTONSHIRE DIVISION.—A meeting of the Division will be held in the Board Room of the Northampton General Hospital on Tuesday, January 26th, at 2.30 p.m. Business: Minutes. Annual report of Representative of Division. Revision of Divisional rules. Medical inspection of school children. Paper on the results of radical operations for uterine cancer by Thomas Wilson, M.D., F.R.C.S., of Birmingham.—PEYERELL S. HICHENS, Honorary Secretary, Northampton.

ULSTER BRANCH.—The winter meeting of this Branch will be held in Belfast on Wednesday, February 3rd. Members having communications are requested to send particulars not later than January 23rd to CECIL SHAW, M.D., Honorary Secretary, Belfast.

DEPARTMENTAL COMMITTEE ON THE OPERATION OF THE LAW RELATING TO INEBRIATES AND THEIR DETENTION IN REFORMATORIES AND RETREATS.*

On April 24th, 1908, the Home Secretary appointed a Committee on the Inebriates Acts. The Committee consisted of: Sir John Dickson-Poynder, Bart., M.P.; Mr. W. Ryland Adkins, M.P.; Dr. T. A. Bramson, M.P.; Dr. R. W. Branthwaite, H.M. Inspector under the Inebriates Acts; Mr. W. C. Bridgeman, M.P.; Dr. H. E. Bruce Porter; Dr. H. B. Donkin, one of H.M. Commissioners of Prisons; Dr. C. A. Mercier, Physician for Mental Diseases to Charing Cross Hospital; and Mr. J. Rose, Metropolitan Police Magistrate.

The original reference to the Committee was:

To inquire into the operation of the law relating to inebriates, and to their detention in reformatories and retreats, and to report what amendments in the law and its administration are desirable.

This original reference was, on August 7th, 1908, extended so as to authorize the Committee

To investigate the value of existing methods for the treatment of inebriety by the use of drugs.

With regard to the first reference, the Committee took evidence and members visited representative institutions of each class now existing for the control of inebriates. A set of questions bearing on the most important points was distributed to persons known to have practical or scientific knowledge of the matter. The Committee also considered the report of the Royal Commission on the Feeble-minded, the reports of the Inspector under the Inebriates Acts, and those of previous committees. The Committee interpreted this reference as applying to England and Wales only, the Secretary for Scotland having appointed a Departmental Committee to inquire into the working of the Acts in Scotland, but it also heard the evidence of the Inspector under the Acts in Ireland, and, though it makes no specific recommendations as to Ireland, it anticipates that its general recommendations will be considered by the Irish Office.

DEFINITION OF INEBRIATE.

The Committee recommends that an Act should be passed consolidating, amending, and extending the law relating to inebriates, and suggests that in this Act the term "Inebriate" be substituted for that of "Habitual Drunkard," and be defined as follows:

"An inebriate is a person who habitually takes or uses any intoxicating thing or things, and while under the influence of such thing or things, or in consequence of the effects thereof is—

"(a) Dangerous to himself or others; or

"(b) A cause of harm or serious annoyance to his family or others; or

"(c) Incapable of managing himself or his affairs, or of ordinary proper conduct."

London: Wyman and Sons; Edinburgh: Oliver and Boyd; Dublin: Ponsonby. To be obtained through any bookseller. Price 4½d. Minutes of Evidence, price 2s.

TREATMENT BY DRUGS.

With regard to this subject the Committee reports as follows:

iii. Our inquiry into the working of the Inebriates Acts led us to the very definite opinion that further powers and facilities, for the detention of inebriates, are urgently needed; but, at this stage, we were confronted by the possibility that some method of treatment of inebriety by means of drugs might be alleged to be a practicable alternative to detention; and, as any recommendations that we might make, as to further powers and facilities for detention would require the expenditure of public money, we felt that such recommendations should not be made until the possibility of this alternative had been considered.

Therefore, although we were impressed with the inherent improbability that any treatment by drugs could be enforced by Act of Parliament, we requested that the second reference might be issued to us before the termination of our inquiry into the first.

iv. This we did in order that we might be able to express an opinion on the question how far any special system of treatment of inebriety by drugs might be applicable to such persons as come within the operation of the Inebriates Acts.

The reasons why it appeared to us inherently improbable that any treatment by drugs could be enforced by Act of Parliament were as follows:

(1) It would be impracticable to set forth in an Act of Parliament the various modifications of any specific treatment that must be required by the varying needs of individual cases.

(2) The fate of the Vaccination Acts makes it evident that no mode of medical treatment can be successfully enforced by Act of Parliament, and that any attempt to enforce it would produce more friction, discontent, and agitation than it was worth.

(3) It would not be justifiable to enforce upon the voluntary inmates of Retreats a specific mode of treatment to which they might object. It must always be remembered that no regulation prevents the medical officers of institutions for inebriates from adopting any mode of treatment they think appropriate. Indeed, one of the modes which has been submitted to us is actually in exclusive use in an officially licensed Retreat at the present time.

(4) If a mode of treatment by drugs could be prescribed by Act of Parliament for inebriate offenders, this treatment must, in our opinion, be carried out in one of two ways.

(a) The treatment might be administered while the inebriate was under detention. In this case the authorities of Reformatories would be tied down to some specific treatment, instead of being free, as at present, to carry out any method that they think appropriate.

(b) If the inebriate were not detained, it would be necessary to take his recognizances to come up for treatment so many times a day for a specified period, or until the proper authority considered him cured. We think the administrative difficulties in the way of this procedure would be considerable, and its novelty might excite prejudice against it.

v. Improbable as it appeared that any mode of treatment by means of drugs would possess such features as would warrant its incorporation, if incorporation were possible, in a Statute, we thought it right to communicate with the advocates of the several drug treatments, and ask them to send us a full statement of the evidence they desired to submit. Our request was generally complied with; and we have carefully considered the statements sent in answer to it.

All persons, on whom these drug treatments have been tried, have voluntarily submitted themselves for treatment; and therefore, presumably, desired to be cured. These are, admittedly, the most favourable cases for treatment; and, concerning the residue of cases, in which the inebriate has no desire to abandon his habit, the reports sent to us do not afford any evidence. None of the methods finds every case that applies for treatment curable, and by no method can curable cases be distinguished from

incurable before trial of the remedy. There is nothing in the information supplied to us which would justify us in modifying our opinion.

vi. We have not investigated the efficacy, or the comparative merits, of these modes of treatment as curative of inebriety. Moreover, no conclusions arrived at by such an inquiry could, for the reasons stated in Paras. iv. and v., in any respect affect our recommendations as to the need for the continuance of the principle of detention under the Inebriates Acts. To embark upon a full inquiry into the efficacy and comparative merits of treatments for inebriety, by the use of drugs of secret composition and obscure action, would involve a great expenditure of time and money. Such an expenditure could only be justified by a strong expression of public opinion as to the necessity of such an inquiry. A procedure of this kind, moreover, would doubtless induce other persons, who put forward kindred remedies for other maladies, to quote it as a precedent to further expenditure of public time and money, in making investigations into the efficacy and comparative merits of their various methods of treatment. We are therefore of opinion that no good purpose could be served by making a further or more extended investigation into the value of existing methods for the treatment of inebriety by the use of drugs.

vii. We desire to call attention to the fact that treatment by drugs cannot possibly supply the penal element which is present in all sentences of inebriates to Reformatories.

viii. The amendments which, on the facts placed before us, we recommend in the Inebriates Acts, are of the utmost urgency; and we are unanimously of opinion that legislation embodying these amendments should be introduced at the earliest possible moment.

THE NATURE OF INEBRIETY.

The Committee, in an introductory section, gives some general observations on the nature of inebriety, for which, it is stated, it is indebted to the medical members, the observations being provided from their scientific knowledge and experience in the subject. This introduction contains the following passages:

There is no general consensus on the nature of inebriety. Some regard it as an exaggeration of ordinary self-indulgent drunkenness, and therefore a vice, which should be dealt with by punishment alone. Others consider it a disease allied to insanity, to be treated by medical measures, and not by punishment. The two views are irreconcilable, and it is manifest that, before any mode of dealing with inebriates is determined upon, it is desirable to ascertain whether either of these views is correct, and to approach this problem through the avenue of propositions that are universally, or at least generally accepted, such as the following:

A capacity for being pleasurably affected by the consumption of alcohol or some other intoxicant—opium, betel, kava, coca, kola, hashish, etc.—is a fundamental fact in human nature. It is common to nearly all human beings who have tried the effect of such drugs, and even to some of the lower animals.

Mankind in general seems to possess, in varying degree, this capacity for deriving enjoyment from the consumption of intoxicants.

No desire for the consumption of alcohol exists antecedent to actual trial of its use. Savage races, and civilized persons, who have never taken alcohol, have no desire for it whatever, however insatiate their craving for it may become when once they have indulged in it. Most persons now in civilized countries take some intoxicant, and most of them remain sober without effort. Some, however, get drunk from time to time. A smaller number are habitual drunkards.

In every person a certain quantity of alcohol will produce the familiar effects of intoxication. This quantity varies with the person and with the rapidity with which the alcohol is taken. The symptoms, also, vary with the person intoxicated, with the amount and kind of alcoholic liquor taken, and with the length of time over which its use is spread. In most people, the use of alcohol gives rise at length to satiety, and to temporary distaste for further indulgence. The quantity needed to produce this effect varies much in different persons. The important difference is that, in some persons, satiety is produced

before intoxication, and in others, intoxication is produced before satiety. Every person can be intoxicated, provided sufficient alcohol is taken; but there are many in whom satiety seems never to be reached.

If these propositions, on which it is unlikely that there will be any material difference of opinion, be granted, they lead to the following conclusions:

(1) That, when satiety is produced before intoxication, the person so affected is in no danger of becoming intoxicated. He is never tempted to get drunk. Before the stage of intoxication is reached, he has already acquired a temporary distaste for alcohol, which is his sufficient safeguard.

(2) Persons in whom the point of intoxication is reached before satiety occurs, will, unless other influences intervene, go on drinking until they become intoxicated.

(3) But many persons, who are liable to become intoxicated before satiety occurs, stop drinking before they become drunk. They are not actuated solely by desire for drink. They foresee and recognize the danger of becoming drunk; and, before the point of drunkenness is reached, refuse to indulge further the desire for drink. They exercise their will, under the influence of a number of desires conflicting with that for drink, such as self-respect, and desire to retain the respect of others—exercises of volition which, under such circumstances, we call "self-control." Whether persons, in whom the satiation point lies beyond the limit of sobriety, will become drunk or no, depends primarily upon the relative strength of desire for drink and of such self-control. If desire for drink is the stronger, they will become drunk; if self-control is the stronger they will remain sober. Seeing that the great majority of persons who take alcohol are not drunkards, it follows that, in them, either the satiation point is usually reached before intoxication occurs, or the desire for drink is overmastered by that voluntary reinforcement of other desires which we call self-control.

(4) There is, however, a large number of persons who occupy an intermediate position between the habitually sober and the habitually drunken. These are persons in whom intoxication occurs before satiety is reached, and in whom self-control, if it is exercised, is capable of overcoming the desire for drink, but who yet allow themselves to become drunk, because they do not choose to exercise this self-control. They do not reinforce by voluntary exertion the influence of the desires antagonistic to the desire for drink. They possess sufficient strength of will, if they choose to exert it, to cease drinking before the intoxication stage is reached; but they do not, or they do not always, exert this volition. Either they are not sufficiently alive to the disadvantages of drunkenness, or, realizing them, deliberately decide that such disadvantages are more than counterbalanced by the enjoyment of drunkenness; or they are reluctant to run counter to the practice of their companions; or they feel themselves bound by fashion to continue the practice of treating and being treated; or, for some other reason, they deliberately refrain from exercising the self-control which they possess. These persons form the class of occasional drunkards, week-end drunkards, bank holiday drunkards, convivial drunkards, etc.

(5) Lastly, there are those in whom the satiation point is either postponed until after intoxication is reached, or is altogether absent, and in whom the desire for drink overmasters all other conflicting desires, even when these are reinforced by the utmost exertion of will. Such persons constitute the class of inebriates who fall naturally into the following classes:—

A. Persons who are born with an excessive degree of the common capacity for deriving pleasure from the use of alcohol, but are not endowed with a corresponding exaggeration of that combination of faculties that we call self-control. Deriving more pleasure than others from the use of alcohol, they desire it more strongly. Desiring it more strongly, they need a corresponding increase of self-control to enable them to abstain from its excessive use. Such persons are not necessarily deficient in intelligence, strength of will, or desire to keep sober. They may be superior to the average in some or all of these qualities; but desire for drink is in them so greatly intensified, that a capacity for self-control, even if beyond the average, is insufficient to keep them from excess. Such persons are often of great capability and intelligence, and frequently are members of families in

which other examples of this form of inebriety occur. The desire for drink, which may be very great, is often intermittent or paroxysmal in occurrence; and the amount of alcohol taken is often enormous.

B. Persons who, with or without an excessive degree of the common capacity for deriving pleasure from the use of alcohol, are deficient in self-control. They lack either the intelligence to appreciate the ill effects of drunkenness, or the self-respect and other desires antagonistic to drunkenness, or the force of character and strength of will necessary to withstand the appeal of a desire for immediate indulgence at whatever cost of future detriment. The lack of self-control shows itself not only in inability to withstand the allurements of alcohol, but also in outbreaks of temper, of violence, of restlessness, or of destructiveness, upon slight provocation. Many such persons are deficient in intelligence; they come of families in which there are other instances of mental disorder; and, in them, a small amount of alcohol is usually sufficient to produce intoxication.

C. Besides the congenital peculiarities above mentioned, there is no reason to doubt that continued self-indulgence by the "occasional" drunkard may cause the subordination of self-control to the desire for drink. By continual indulgence, the desire for liquor is increased. This is especially the case when alcohol has been originally taken for some special effect. It may be that its stimulant effect enables the drinker to accomplish tasks impossible without its aid; or it may be (and this is most frequent in women) that it was originally taken in illness, or for the relief of pain or discomfort. Whatever the reason that led to the habit, it is found that, the longer the habit is continued, the greater becomes the desire for the drug, and also that an increasing quantity is needed to produce the effect for which it was originally taken. By continual yielding to desire, and continual failure to exert self-control, not only is desire strengthened, but self-control is weakened, until it is reduced permanently below the point necessary to overcome the desire; and thus inebriety is established. Inebriates of this class are miscellaneous in character. Sometimes they approach to Class A and Class B in family history and mental qualities, but often have little apparent affinity to either. They are inebriated by artificial culture rather than by nature; and, when they are mentally defective or disordered, the defect or disorder is often the consequence, rather than the cause, of the drinking habit.

This view of inebriety, which regards it as an alteration of the ratio of self-control to desire for drink, throws light upon the question whether or not it should be regarded as a disease. It is undoubtedly a constitutional peculiarity; and depends, in many cases, upon qualities with which a person is born, in many is acquired by vicious indulgence. Whether the possession of such a constitutional peculiarity, when inborn, should or should not be considered, from the scientific point of view, a disease, is, perhaps, a question of nomenclature. If such native constitutional peculiarities as the possession of a sixth finger, and the absence of a taste for music, are rightly considered diseases, then the native constitutional peculiarity which underlies many cases of inebriety may be so considered. But there are cogent reasons why the term "disease" should not be used to characterize the inebriate habit. By disease is popularly understood a state of things for which the diseased person is not responsible, which he cannot alter except by the use of remedies from without, whose action is obscure, and cannot be influenced by exertions of his own. But if, as is unquestionably true, inebriety can be induced by cultivation; if the desire for drink can be increased by indulgence, and self-control diminished by lack of exercise; if it is manifest that the reverse effects can be produced by voluntary effort, and that desire for drink may be diminished by abstinence, and self-control, like any other faculty, can be strengthened by exercise. It is erroneous and disastrous to inculcate the doctrine that inebriety, once established, is to be accepted with fatalistic resignation, and that the inebriate is not to be encouraged to make any effort to mend his ways. It is the more so since inebriety is undoubtedly in many cases recovered from, in many diminished, and since the cases which recover or amend are those in which the inebriate himself desires and strives for recovery.

The effect that has been alleged of the habit of self-

indulgence upon the desire for alcohol does not rest merely upon speculation. The desire for alcohol is not felt until its pleasurable effects have been experienced. Antecedent to this experience there is no desire. Moreover, it appears from the evidence of those who have had charge of inebriates, as well as from the statements to them of inebriates themselves, that, with prolonged abstinence, the desire diminishes, and in many cases falls altogether into abeyance, until it is revived by a new experience of alcohol and its pleasurable effect. The habit of inebriety shares with other habits the character that, when once established, it is very easy to re-establish after it has been overcome. The constitutional peculiarity remains; and few inebriates, if any, are able to taste alcohol, even after prolonged abstinence, without reverting sooner or later into the habit of inebriety.

It is quite true that there are inebriates who are congenitally weak-minded—weak in intellect and weak in will—and who are inebriated mainly on account of their mental incapacity. They neither realize the mischief of getting drunk, nor have they the strength of character to struggle against their desire; but although such persons may, in a certain sense of the word, be regarded as diseased, the disease, if it exists, lies in their mental incapacity, which allows of their becoming inebriated, and not in the habit of inebriety. Such persons often have other bad habits, the consequence of their mental condition; but these habits are not separate diseases, but different results of their natural defect. They are wanting in responsibility, not because their inebriety is a disease which attacks and overmasters them, as influenza might, but because their inebriety rests upon a basis of mental defect.

From what has been said, it is evident that, if we could produce satiety before the intoxication point is reached, we could cure inebriety and all forms of drunkenness in the most scientific and effectual manner. Short of this mode, the only method that remains is to alter the ratio between self-control and desire, and restore it to the normal, either by diminishing desire or by increasing self-control, or both.

As has already been stated, desire may be diminished by prolonged abstinence; but it is evident, from the nature of inebriety as hereinbefore explained, that voluntary abstinence on the part of an inebriate cannot often be expected.

It is important to increase self-control as to diminish desire. Although there are some inebriates, belonging to Class A, in whom self-control is at least up to the average, there is no doubt that in a large number it is deficient, and is exhibited in varied phases of conduct. Many inebriates exhibit lack of self-control, not only in indulgence in drink, but also in the abhorrence of steady employment, in excessive sexual indulgence, in violence of temper, and in other ways. The instilment and cultivation of self-control is necessarily an affair of time. It can only be effected by the imposition of steady work, and by a system of rewards and punishments punctually bestowed.

THE HABITUAL DRUNKARDS ACT, 1879.

After a short account of the history of legislation concerning inebriates, the Report proceeds to consider the defects of the Habitual Drunkards Act, 1879, and to propose amendments. It is stated that thirty-two Retreats have been established under its provision. Some have been closed, but approximately twenty institutions have been reported annually as being in regular work, with an average yearly number during the last ten years of about 500 patients. All these Retreats have been provided by philanthropic bodies, religious societies, temperance societies, or private individuals. For persons who can pay as much as three guineas a week there is ample accommodation; for those who cannot afford this sum space is strictly limited; for those who are destitute there is practically no provision.

Results of Detention in Retreats.

The Committee finds that, owing to the difficulty experienced in inducing an inebriate to submit to detention until ill-health or financial ruin places him in the hands of his relatives or friends, patients are apparently admitted too late; and the Report continues as follows:

Although the Act is ostensibly a voluntary one, the evidence of all the managers of Retreats points to the certainty that exceedingly few persons submit to detention of their own free will, the majority being forced to do so by domestic pressure, which, it seems, is not usually applied with success until inebriety is so confirmed as to reduce the hope of permanent reformation.

12. Although evidence has been supplied to us from many sources that, even under these adverse circumstances, something like a third of all persons who have submitted to detention have been transformed into useful citizens; and that a greater number than this have been materially improved; yet, in view of the great difficulty of obtaining proof of reformation, these statements must be received with caution.

Influences detracting from Value of Act.

13. So far as the Act generally is concerned, we find that two main influences have detracted from its value—the absence of accommodation for poor inebriates, and the difficulty experienced in obtaining the consent of inebriates to submit to detention and treatment in earlier and more hopeful stages.

14. With regard to the first of these difficulties, we consider that the State itself, or in combination with local authorities, should provide accommodation for non-criminal inebriates who are destitute, or who can only contribute a small weekly sum towards their own support. During every year, hundreds of persons signify their willingness to submit to treatment, but are unable to procure it, owing to the impossibility of finding money to pay, wholly or partly, for their own maintenance. The advantages, to the State and the community, resulting from the existence of facilities for enabling the early treatment of such cases are manifest. Such treatment would prevent many inebriates from becoming criminals, lunatics, or paupers, and consequently permanent charges upon public funds. The provision of accommodation for this class would not necessarily involve any increased charge upon the public, nor even the provision of new buildings. There are many philanthropic and religious societies in existence who would either extend their present Retreats, or provide new ones, if some financial aid towards maintenance were forthcoming. Without such aid, the present unsatisfactory conditions must continue.

With regard to the objection that the term "habitual drunkard" is considered opprobrious, the Commissioners, while not considering the objection of great importance, agree with the desirability of replacing the term by the word "inebriate" mainly for the reason stated in the following paragraph:

17. We have been satisfied by evidence that an appreciable number of persons become helpless and degraded by the excessive use of narcotic or stimulant drugs or preparations other than alcohol. Although violence, crimes of passion, and offences generally are less common amongst drug takers than amongst alcoholic inebriates, these persons frequently bring disgrace upon their families, and reduce to poverty all who are dependent upon them for support. They also become the subjects of ill-health, or mental and moral deterioration, which not infrequently results in suicide. As the law now stands there is no power to deal with such persons, either for their own good or for that of the community. We are of opinion that any future Act applicable to drunkards should apply to drug takers also. No man or woman who eats drugs in solid form (for example, opium, tabloids, lozenges, etc.), inhales them, or injects them under the skin, and does not drink them, can reasonably be called a "drunkard." For this reason we think the word "inebriate" should be adopted in any future Act, so that it may include those addicted to drugs as well as drunkards.

The Licensing of Retreats.

The Committee, considering that the existing system under which the power of granting licences is in the hands of county and borough councils entails a system of dual control leading to constant difficulty, and to an unworkable division of responsibility, recommends as follows:

III. That the powers to license, and other powers now exercised with respect to retreats by local authorities, should be in the hands of the Secretary of State. That all licensed Retreats should be subject to further inspection by persons, appointed by Quarter Sessions, who should report to the Secretary of State.

Further the Committee, in view of the fact that there is no provision in the Act compelling a Retreat to take out a licence, and that consequently those Retreats which are most defective escape inspection, recommends:

IV. That it should not be lawful for any person for payment to board and lodge in an unlicensed house more than one inebriate at the same time.

The Committee further recommends that the stamp duty on licences of retreats should be abolished.

Leave of Absence.

The Committee recommends:

VI. That the licensee of a retreat should have power to grant leave of absence to any patient therein for any reason the licensee may consider satisfactory, such as business necessities, financial difficulty, or domestic trouble. The report also points out that for whatever period a patient may sign under the Act, a stated number of months can only be a conjecture as to the length of time necessary for reformation; he may be fit for liberty or modified liberty before the expiration of the period, and leave of absence would be available for this purpose.

Retaking of Inmates.

The Committee, considering the procedure for retaking an inmate who has escaped from a retreat dilatory, cumbersome, and often ineffectual, recommends as follows:

VII. That power be given to the licensee of a Retreat, or any person authorized in writing by him, to retake any inmate who has escaped therefrom, or who, during leave of absence, takes or uses any intoxicant. The escape and circumstances of recapture should be notified by the licensee to the Secretary of State, and either to one of the persons signing the statutory declaration made on admission, or to the person who made the last payment on behalf of the inmate.

Transfer.

As considerable difficulty in the management of Retreats has been found to arise from the absence of power to move from one institution to another persons who are dissatisfied or are a disturbing element, the Committee recommends:

VIII. That power be given to the Secretary of State to transfer any inebriate from one Retreat to another; provided that the consent, to such transfer, of the inebriate and of the person who made the last payment on his behalf, have been previously obtained.

Discharge.

As the Committee finds that great inconvenience has occurred owing to orders for the discharge of inebriates from retreats being made before the expiration of the period for which they signed without the knowledge of persons interested, it recommends as follows:

IX. That no order for the discharge of an inmate from a Retreat, before the expiration of the period for which he signed, should be made, unless 14 days' previous notice of the hearing of the application has been given to the licensee of the Retreat, and either to a person who signed the statutory declaration, or to the person who made the last payment on account of the inmate. *Sid. Morrisons* to have a right to attend the hearing and tender evidence.

EXTENSION OF VOLUNTARY PRINCIPLE.

The Committee, being of opinion that the voluntary principle embodied in the Act is valuable and capable of further extension, recommends (1) that inebriates should be allowed to enter into a statutory obligation to abstain from intoxicants; and (2) that it should be possible for an inebriate to make a voluntary application for the appointment of a guardian. These novel suggestions are embodied

in a series of recommendations (X, XI, XII), the nature of which will sufficiently appear from the following paragraphs of the report :

Obligation to Abstain.

27. We propose that the obligation should consist of a formal undertaking on the part of the inebriate to abstain from intoxicants for a specified period not less than one year. The obligation should be entered into before a Justice of the Peace. It should contain a warning that breach thereof would constitute a ground of application for the compulsory measures hereafter suggested (see Para. 36). The form of obligation should be set forth in the Act, and should include a certificate, to be signed by the Justice of the Peace, to the effect that he has explained to the applicant the nature of the document, and the consequences of any breach of the obligation contained therein. These consequences should be clearly shown on the form of obligation.

Voluntary Guardianship.

28. We are convinced that many inebriates, who are deterred by the comparative severity of the conditions required by the present Act, would be prepared to take the far less serious step of submitting themselves to the control of some selected friend. Such a course would involve a minimum of restraint, and might altogether obviate the necessity for detention in an institution.

29. We would, therefore, suggest that provision should be made to enable an inebriate, desiring such an appointment, to make application to a Justice of the Peace for the formal appointment of some person, named by the inebriate, to act as his guardian. The Justice of the Peace should satisfy himself (a) that the applicant is an inebriate; (b) that he understands the nature and effect of his application; and (c) that the person named as guardian is willing to act in that capacity. Being satisfied on these points, the Justice of the Peace should be empowered to appoint the guardian as desired. The term of such guardianship should be for any period named by the applicant, not exceeding one year.

Powers of Voluntary Guardian.

The guardian so appointed should have power :—

(1) To prescribe for the inebriate a place of residence, either in the house of the inebriate or in that of the guardian.

(2) To deprive the inebriate of intoxicants, and prevent him from obtaining them.

(3) To require the inebriate to submit to the control of nurses or attendants, in so far as the guardian may consider necessary.

(4) To warn sellers of drink and drugs, and other persons, against supplying the inebriate; supply after warning to be an offence under the Act.

If, in the opinion of the guardian, the above-named powers prove insufficient to enable him to exercise a proper control over the inebriate, this should form a ground for an application for compulsory measures to be applied.

The two Justices who were empowered by the Act of 1879 to attest the signature of an applicant for admission to a Retreat were by the Act of 1898 reduced to one. No complaint has been made of any ill consequence of this reduction, and we are therefore fortified in recommending that a single Justice should attest all applications for voluntary control. The more serious power of compulsory control should not be exercised except by a Judicial Authority as defined in paragraph 37 below.

30. The Habitual Drunkards Act, 1879, at present provides for the detention of those inebriates only who choose to surrender their liberty of their own free will. Even extended, as suggested by us, it would still be restricted to those who consent to take advantage of its provisions. The Inebriates Act, 1898, hereafter considered, deals only with criminal inebriates and their detention in reformatories.

COMPULSORY GUARDIANSHIP AND COMMITMENT TO RETREATS.

31. There is, however, a class of inebriates who are numerous, whose inebriety is the cause of great distress, misery, poverty, and degradation, to themselves and their families, and who are excluded from the operation of both

these Acts. Any person who drinks to excess, without committing a public offence or crime, can continue his drunken habits indefinitely, notwithstanding that he may produce, over many years, untold misery to his family and ultimate expense to the community. Such persons often at length commit offences, and then may be dealt with under the Act of 1898; but in very many cases they pursue their disastrous habit until they die of disease engendered by it. There is no reason to doubt that, if there existed means by which they could be placed compulsorily under control at an early period in their career, a large proportion of them could be restored to decency and usefulness, and an incalculable amount of misery and poverty could be prevented. At present the only possibility of control for such a person is the somewhat remote chance that he may be persuaded or coerced into making a "voluntary" application for admission into a Retreat.

The existence of this class of drunkards and the necessity of legislating for them was fully recognized by the Committees of 1872 and 1893, and the evidence now taken has confirmed in every respect the views of previous Committees as to the number of inebriates in this class, as to the distress they produce, and as to the urgent need of legislation to deal with them. Upon this point the Committee reports as follows:

We fully appreciate that the application of compulsory powers to persons who have committed no public offence is a strong step to take. But we are convinced that great and widespread distress is caused by such persons, and that power to deal with them compulsorily is urgently needed. We have failed to find satisfactory reasons against the constitution of such powers. It must be remembered that very few inebriates take advantage of the existing "voluntary" powers, except under moral pressure, which virtually amounts to compulsion; and that the alternative to interfering with the liberty of the inebriate is permitting the inebriate to interfere with the liberty of other people. . . .

We find that previous Committees recommended merely that the process should be "under proper safeguards," but that the nature of the safeguards was not sufficiently indicated. This defect we have done our best to repair. Throughout the recommendations that we have made for dealing with both the inebriate offender and the "private" inebriate, we have adhered to the principle of a graduated mode of procedure, beginning with measures of the mildest character, and not increasing their stringency until these milder measures are found to be ineffectual. Moreover, we have combined with the recommendation of compulsory powers, a further recommendation to extend the principle of voluntary submission far beyond its present limits, and to give the inebriate, in every case, the option of voluntary submission before the application of compulsion.

COMPULSORY PROCEDURE FOR DEALING WITH CASES WHERE VOLUNTARY PROVISIONS FAIL.

36. It is to be hoped that the extension of provisions for voluntary submission will result in a number of inebriates availing themselves of these provisions; but it is certain that a considerable proportion will still have to be dealt with compulsorily, if they are to be dealt with at all. It is therefore proposed that—

(1) Power be given to a relative, friend, or guardian voluntarily appointed, to petition a Judicial Authority for a compulsory order of guardianship, or for commitment to a Retreat.

(2) When such a petition is presented, it should be accompanied by a medical certificate, unless the inebriate has refused to submit himself to medical examination; and by a statutory declaration signed by the petitioner and at least one other person to the effect that the alleged inebriate is a person to whom the Act applies.

(3) On receipt of the petition and the documents aforesaid, the Judicial Authority should visit the alleged inebriate or summon him to appear before him to show cause why he should not be subjected to guardianship or committed to a Retreat. These proceedings should be conducted, if desired by the alleged inebriate, in private, both the parties being entitled to be represented by solicitors or counsel.

(4) Having satisfied himself that the alleged inebriate is an inebriate within the meaning of the Act, the Judicial

Authority should point out to him the advantages of the voluntary provisions already suggested. If the inebriate is unwilling to take advantage of these provisions, or if he has previously taken advantage of them, but has failed to observe the conditions thereof, it should be enacted that the Judicial Authority may make an order for either compulsory guardianship or committal to a Retreat.

(5) When the Judicial Authority has satisfied himself that the case is one in which a compulsory order should be made, he should exercise his discretion as to the nature of that order. Guardianship is a less severe measure than detention, and should always be resorted to when practicable, and likely to meet the needs of the case.

(6) If the Judicial Authority is not satisfied, he should adjourn the consideration of the petition, or dismiss the petition. If he is of opinion that the petition is frivolous and vexatious, and ought not to have been presented, he should be empowered to order the petitioner to pay the costs of the proceedings.

37. We recommend that the words "Judicial Authority" shall mean and include a Judge of the High Court of Justice, County Court Judge, Recorder, Stipendiary Magistrate, any two Justices, or any Justice of the Peace specially appointed by Quarter Sessions.

Powers of Compulsory Guardians.

38. An order of guardianship should specify, as guardian of the inebriate, some person or persons willing to act in that capacity. The order should be made for any term not exceeding one year.

The guardian should have power—

(a) To prescribe for the inebriate a place of residence, either in the house of the inebriate or in that of the guardian, or in that of a licensee under the Act, but in no other place.

(b) To place the inebriate in the care of a custodian, being a licensee under the Act.

(c) To deprive the inebriate of intoxicants, and prevent him from obtaining them.

(d) To prevent the inebriate from leaving the prescribed residence unattended by a responsible person.

(e) To require the inebriate to submit to the attendance of such nurses or attendants as the guardian may think necessary.

(f) To warn sellers of drink and drugs and other persons against supplying the inebriate: supply after warning to be an offence under the Act.

(g) To delegate any of the powers (c) to (f) to the custodian.

It should be the duty of the guardian to provide for the inebriate such medical attendance as may be necessary.

The guardian or custodian should have power to release the inebriate on parole with all doubt, conditions, and to relax the powers (d) and (e) at discretion. These suggestions, with certain details as to the mode in which they should be carried out, are embodied in Recommendations XIII to XVIII inclusive.

THE INEBRIATES ACT, 1898.

The next section of the Report considers the defects of the Inebriates Act, 1898, and proposes amendments.

The Committee, while holding that the drunkenness of the occasional drunkard being produced by his own voluntary act, it is just that he should be held responsible for all the consequences, including offences, states that the inebriate stands on a different footing, since in his case the desire for drink is so overmastering, self-control so inadequate, and the ill effects of drink so imperfectly appreciated that it is not proper to hold him fully responsible for offences committed. His mitigated responsibility is recognized by sending him to the milder discipline of a Reformatory instead of to the severer discipline of prison, the right of the community to safeguard itself justifying his detention in a Reformatory so long as the habit which renders him injurious to the community remains.

The Inebriates Act, 1898, was founded on this principle, but during the nine years that it has been in force fewer than 3,000 persons have been committed to Reformatories under its provisions. There has been a decided failure on the part both of judges and magistrates to apply the Act as widely as was intended by the legislature. The Com-

mittee reports that the reasons for this comparative failure are two:

(1) Difficulties connected with the administration of Sections 1 and 2 of the Act, and

(2) The fact that no obligation was laid on any authority or person to provide for committed inebriates or to maintain them during sentence.

Difficulties in Legal Procedure.

To meet the first difficulty the Committee advises that Section 1 should be amended in accordance with the following recommendation:

XX. That Magistrates should have discretionary power to send to Reformatories, in addition to or in substitution for imprisonment, all persons who are adjudged to be inebriates who commit offences which can now be dealt with summarily by committal to prison, and that they should likewise be empowered to deal in a similar manner with inebriates convicted before them of neglect of or cruelty to children, attempted suicide, wounding not amounting to felony, or wilful damage.

With regard to Section 2 of the Inebriates Act, which provides as follows:

(1) Any person who commits any of the offences mentioned in the First Schedule to this Act, and who within the twelve months preceding the date of the commission of the offence has been convicted summarily at least three times of any offences so mentioned, and who is a habitual drunkard, shall be liable upon conviction on indictment, or if he consents to be dealt with summarily on summary conviction, to be detained for a term not exceeding three years in any certified inebriate reformatory the managers of which are willing to receive him.

(2) The Summary Jurisdiction Act, 1879, shall apply to proceedings under this section as if the offence charged were specified in the second column of the First Schedule to the said Act.

the Committee reports as follows:

"During the nine years over which the Act has been in force, fewer than 2,600 persons have been committed to detention in reformatories under the provisions of this section. During the same period 1,751,830 persons were convicted and sentenced in courts of summary jurisdiction for drunken behaviour. Bearing in mind the repeated statements of magistrates, prison officials, and others, regarding the habitually drunken character of a large percentage of these offenders, the number actually dealt with as inebriates is exceedingly small. It amounts to 1 case in 674, or less than 1.5 per 1,000.

"We find that the main causes why the number committed under this section is so small are as follows:

"(1) By some magistrates the existence of the Act is overlooked; others are unwilling to put it in force.

"(2) Inability of magistrates to interpret the definition of 'habitual drunkard' so as to bring certain inebriate offenders within the powers of the section.

"(3) The necessity for proving three previous convictions.

"(4) The necessity for obtaining the consent of the inebriate to be dealt with summarily.

"(5) The lack of accommodation in reformatories, and the power of their managers, for this and other reasons, to refuse to receive inebriates committed from the Courts.

"(6) The three years' sentence."

With regard to causes (1), (3), and (4) the Committee makes the following recommendations:

XXI. That the necessity for proving three previous convictions, before an inebriate can be sent to a Reformatory, should be abolished.

XXII. That the consent of the inebriate to be dealt with summarily should no longer be necessary in order to enable the Magistrate to deal with him, either when the offence is included in Schedule I of the Inebriates Act, 1898, or is one of the offences referred to in Recommendation XX. Provided that any person adjudged to be an inebriate, and sentenced to a Reformatory, should have the right of appeal to Quarter Sessions.

Mr. Arkdis, in a note appended to the report expresses his disagreement with the last sentence, holding that no judicial authority should be empowered to order the detention of an inebriate, at any rate for more than six months, without that inebriate having the right to go before a jury if he chooses, with the consequential rights under the Criminal Appeal Act, 1906.

The Committee states with regard to (5) that it is one of the most potent causes for the limited application of the Act, and expresses the opinion that reformatory accommodation should be available for all cases the courts desire to commit. With regard to (6), the Committee states that, although the Act gives the courts power to commit an inebriate to a reformatory for any period not exceeding three years, the practice has been to inflict the maximum sentence in nearly every case. Further, though the intention of the Act was that this severe sentence should be mitigated by release on probation, under the care of a responsible guardian, this mitigation has fallen largely into disuse, owing, apparently, to two causes: (1) Difficulty in finding a trustworthy person willing to act as guardian, and (2) the fact that the large majority of persons hitherto committed have had a long career in drunkenness, have been many times in prison, and are practically irreformable. The Committee is of opinion that there should be more elasticity, that every inebriate should be considered *prima facie* reformatable, and receive at first a comparatively short sentence, the question of further detention being determined by the inebriate's behaviour on return to liberty.

The Committee, regarding the present system as profoundly unsatisfactory, proposes to substitute for it a scheme founded on the principle of proceeding by graduated measures from the mildest that is likely to be successful to more and more severe as the milder fail of success. This scheme is embodied in the following recommendation:

XXX. That, when a person is charged before a Court of summary jurisdiction with an offence of which drunkenness is an ingredient, or with one of the offences referred to in Recommendation XX, into which drunkenness appears to the court to enter as a contributing cause, the court should consider whether the offender comes within the definition of an inebriate, and if the offender is adjudged to have committed the offence with which he is charged, and to be an inebriate, the court should have power:

(1) To deal with the offender under the Probation of Offenders Act by discharge on recognizances to come up for sentence if called upon. The conditions of probation should be as follows:—in addition to or in substitution for such conditions mentioned in Section 2 (2) of the Probation of Offenders Act, 1907, as are applicable to an inebriate, the Probation Order should contain the following conditions, viz., the inebriate shall not

- (a) Be intoxicated.
- (b) Take or use, or obtain or possess for his own use any intoxicating thing or things.
- (c) Change his abode without previously giving his new postal address to the probation officer.
- (d) Fail to report in person or by letter in his own handwriting on his health and occupation to the probation officer periodically as the court may direct.

The offender should then be subject for a specified time, which should not be less than six months, nor more than one year, to the supervision of a probation officer. We are strongly of opinion that this officer should not be a member of the police force.

Should the inebriate, after discharge on probation, fulfil the conditions of the probation for the full period, he should stand completely discharged; but should he commit any breach of the conditions of his probation, he should be brought before a Court of summary jurisdiction, which should have power, on proof of such breach, either to renew the probation with a caution or surety, or to commit the offender to a reformatory.

(2) Should the court consider release on probation to be undesirable, the court should have power, under the ordinary law—

- (a) To commit the offender, whether he consents to be dealt with summarily or not, and with or without a preliminary penal sentence, to a reformatory for inebriates, or
- (b) To commit the offender for trial as an inebriate offender, care being taken to include inebriety in the indictment.

(3) Courts of Assize and of Quarter Sessions should have power to sentence a prisoner to a Reformatory, with or without a preliminary penal sentence, and in the latter case, to suspend the operation of the order for commitment to a reformatory pending the result of a trial on probation under a probation officer. Should the prisoner fulfil the

conditions of his probation for the full period thereof, he should stand completely discharged; but should he commit any breach of these conditions, he should be brought before a Court of summary jurisdiction which should have power, on proof of such breach, to order the suspended sentence, pronounced by the Court of Assize or Quarter Sessions, to come into force.

Form of Sentence and Conditions of Probation.

With regard to the form of sentence and conditions of probation, the Committee makes the following recommendations:

XXXI. That, when a person is committed to a Reformatory for inebriates for the first time, the sentence should be that he should be detained therein for "a period not exceeding six months," and be subjected on his release to a period of probation not exceeding one year under the charge of a probation officer. Provided always that power should be given to the authorities of Reformatories to release inebriates for short periods on parole, as a preliminary to discharge on probation.

XXXII. That when an inebriate who is released on probation for the first time from a Reformatory forfeits such probation for breach of the conditions thereof, he should be brought before a Court of summary jurisdiction, which should, on proof of such breach, either renew the probation with a caution or surety, or sentence the offender to a Reformatory for "a period not exceeding one year," and to be subjected on his release to a period of probation not exceeding one year under the charge of a probation officer.

XXXIII. That when an inebriate again forfeits such probation for breach of the conditions thereof, he should be brought before a Court of summary jurisdiction, which, on proof as before, should sentence him to detention in a Reformatory for "a period not exceeding two years," and to be subjected on his release to a period of probation as before.

XXXIV. That any subsequent breach of the conditions of probation should be followed by a similar sentence for "a period not exceeding three years," and to be subjected on his release to a period of probation as before.

The Committee is of opinion that such a scheme, while affording adequate safeguards against the detention of inebriates for unnecessarily long periods, would lead to the abolition of repeated prison sentences; would enable inebriates to be treated in their early and reformatable stage; would lead to the reformation of many who now become hopelessly irreformable; would adapt the severity of the measures employed to the needs of the case; and would provide, in the interests of the community, for the prolonged detention of those who have, after ample opportunity for reform, shown themselves incapable of becoming decent and law-abiding members of the community.

Provision as to Inebriates convicted under the Act of 1898.

To provide for cases of confirmed inebriates the Committee makes the following recommendations:

XXXVII. That any inebriate who has been sentenced to a reformatory under the Inebriates Act, 1898, for a period of two years or more, and who, within 12 months of the expiration of his sentence is again convicted of an offence against the amending Act, should be liable on conviction to be sentenced to a reformatory for "a period not exceeding three years," to be followed by a period of probation, if he had been convicted for the fourth time under the system we propose.

XXXVIII. That the Secretary of State should have power to order the release on probation of any inebriate under detention at the time of the passing of the amending Act; and that, when released, the inebriate should, on breach of the conditions of probation, be liable, on conviction, to be sentenced to a Reformatory for "a period not exceeding one year," and to be subjected on his release to a period of probation as before.

Delirium Tremens.

The Committee recommends:

XXXIX. That any person who, by *delirium tremens*, has made himself a charge upon the rates, should *prima facie* be deemed an inebriate, and liable to be proceeded against as such at the instance of the guardians to whom he has made himself chargeable.

STATE INEBRIATE REFORMATORIES' FINANCE.

The Committee gives a short history of State Inebriate Reformatories and recommends:

XXIX.—That the State should continue to provide, maintain, and manage Reformatories for the detention of troublesome or undesirable inmates. That the accommodation provided at Aylesbury for female inmates should be maintained; but that the accommoda-

dation at Warwick for male inmates being inadequate should be supplemented, or replaced, by a new institution specially provided for the purpose.

It is pointed out that there is no obligation on local authorities to establish reformatories, and the Committee expresses the strong opinion that there can be no satisfactory or permanent settlement except on the basis of provision by the State, and makes the following recommendations:

XXV. That the State should, at its own cost, provide for the accommodation and maintenance of all inebriates who are committed by the courts.

Provision for Poor or Destitute in Retreats.

The Committee states that all the retreats established under the Habitual Drunkards Act have been established by voluntary effort either as philanthropic enterprises of proprietary ventures, but none have been adapted to the reception of persons unable to contribute a reasonable sum towards their own maintenance. Under the Inebriates Act county councils can contribute towards the establishment and maintenance of inebriate reformatories, but it is doubtful whether a council could itself establish a retreat, the Committee consequently makes the following recommendations:

XXVII. That the State itself, or in combination with county or borough councils, should provide for the accommodation and maintenance in retreats of inebriates who cannot be suitably provided for, either at their own cost or at that of their relatives or friends.

Purchase by the State.

The Committee observes that there are great differences in the expenditure of different authorities both in respect of establishment and cost of maintenance. It does not regard "magnificence of design, arched ceilings, oak-panelled board rooms with expensive wood carvings, elaborate tiled passages and stained glass windows as essentials." Experience has proved that conditions essential to the proper treatment of an inebriate have been secured to the satisfaction of H.M. Inspector at so low a cost as £100 a bed, and at 11s. 4d. a week per inmate for maintenance. The Committee recommends as follows:

XXVI. That existing Reformatories, so far as they are found suitable and adaptable to a general scheme, should be taken over by the State at a total cost which, including all necessary extensions and alterations, should not exceed £150 per bed, and that the State should provide any further Reformatory accommodation which is found to be necessary, at a cost, if possible, not exceeding this amount.

The Committee further points out that in view of the fact that all inebriates detained in reformatories during 1907 cost the country, in taxes and rates, the sum of 18s. 9d. a head per week, it is clear that such a scheme for State control as is suggested would lead to a large saving. One thousand inebriates, detained under a continuance of the present system, means a charge of £48,883 per annum: whereas the same number controlled by the State, at a sinking fund charge of 3s. 6d. a head, and a maintenance rate of 11s. 4d., would mean a total expense of £38,672 only—a clear saving of £10,211 every year upon every thousand cases under detention.

Work in Reformatories.

The Committee reports that the nature and amount of work undertaken by the inmates of the various institutions visited was noted, and that it was not in all cases as much as was desirable; on this head the following recommendation is made:

XL. That greater facilities should be provided for the execution of remunerative work by inmates of Reformatories.

UNANIMITY OF COMMITTEE.

The report concludes with an acknowledgment of the marked ability with which Mr. H. B. N. Mothersole has discharged his duties as secretary. The report is signed by all the members of the Committee, with the reservation by Mr. Adkins, already noted, and with the further reservation by Dr. Branthwaite that, in accordance with the request of the Secretary of State, he took no part in the inquiry concerning the second reference, nor in the preparation of any paragraphs in the report relating to it.

MINUTES OF EVIDENCE.

A separate volume contains the minutes of evidence, the replies to a series of questions addressed to persons having special experience, and memoranda contributed by various authorities, including Sir T. Clifford Allbutt, Professor Osler, Sir G. O'Farrell, and several associations, including the Society for the Study of Inebriety. An index of the evidence of each witness and a general index are provided.

RECOMMENDATIONS OF THE BRITISH MEDICAL ASSOCIATION IN 1906.

THE following report by the Medico-Political Committee of the British Medical Association on Amendment of the Law Relating to the Detention and Care of Inebriates and Persons suffering from the Habitual Use of Drugs, was approved by the Annual Representative Meeting on July 27th, 1906:

The Committee has considered various proposals which have been put forward with reference to this matter, and has deemed it most convenient to draw up:

- (A) A formal statement of the reasons for which further legislation appears to be necessary, and
- (B) Recommendations as to such legislation.

(A) CONSIDERATIONS AS TO THE NECESSITY FOR LEGISLATION.

1. From the considerations placed before the Committee, it appears to be clearly established that there are in all classes of society persons who are, by indulgence to excess in intoxicating liquor, or in the use of stimulant, sedative, or narcotic drugs or substances—

- (a) at times incapacitated from performing their duties to themselves, their families, or the State; and
- (b) by the same cause, at times rendered dangerous or offensive to themselves, their families, or the public.

2. The number of such persons is sufficiently great, and their conduct in consequence of excessive indulgence in alcohol, etc., as aforesaid, is sufficiently noxious to render it desirable that there should be means of restraining them from such excessive indulgence;

3. It is found by long and frequent experience that no means, except compulsory deprivation of the alcohol, or drug, is efficient in restraining such persons from their excessive indulgence;

4. There is at present no legal power by which such persons can be subjected to compulsory deprivation of alcohol unless they themselves so desire, or unless they have been repeatedly convicted of offences, and no legal power by which the takers of drugs in excess can under any circumstances be subjected to compulsory deprivation of such drug;

5. In the opinion of the Committee, there is urgent need that legislation should be provided by which such persons could be placed under suitable control and restrained from excessive indulgence in alcohol, or drugs, as the case may be, whether they are willing to be so controlled or no, and whether or no they have been convicted of an offence;

6. The Committee recognizes the gravity of a recommendation which, if carried into effect, will authorize the deprivation of some of the liberty of persons who may have committed no crime or offence recognized by the law; and would include in its recommendation safeguards against the improper application of the powers that they desire to be created. It is of opinion that efficient safeguards may be constituted in two ways—namely, first, by requiring the consent of a judicial authority before any person can be restrained for such cause as is herein indicated; and second, by giving power to such judicial authority to give costs against any applicant for a detention order, whose application ought not, in the opinion of the judicial authority, to have been made.

(B) RECOMMENDATIONS.

Persons to be Placed under Restraint.

1. Subject to the safeguards stated in paragraph 6 of part (A) of this report, the Committee is of opinion that

powers should be given to a judicial authority to place under restraint, in spite of his own objection thereto, any person who is so addicted to the habitual use of alcohol or opium, or any stimulant, sedative, or narcotic drug or substance as

- (a) to render him at times dangerous to himself or others;
- (b) to render him at times incapable of managing himself or his affairs.

Form of Restraint.

2. If, in the opinion of a judicial authority, any person comes within the description of the last paragraph, then the judicial authority should have power to order that such person be committed for any period not exceeding three years to the custody of (a) any person named in the order willing to act as guardian; or (b) the managers of any licensed Retreat or Inebriate Reformatory who are willing to receive him. When any person is admitted to a Retreat or Reformatory under these circumstances, all conditions shall apply as if he had been admitted to a Retreat or Reformatory under the Inebriates Acts, 1879-1900. Power should be given to the Secretary of State to transfer the inebriate from the control of any guardian in whose charge he may be placed under order of court—

- (1) If the person in whose charge he was so placed declines to continue his responsibility or becomes incapable of properly exercising it,
- (2) If the inebriate cannot be restrained from the use of alcohol or other substance as aforesaid.

Such power of transfer should include power to transfer the inebriate from the charge of the guardian to a licensed retreat or inebriate reformatory, or from a retreat to a reformatory, or from one retreat or reformatory to another.

Power to Deal with Estates.

3. Power should also be provided to deal with the estates of persons who are, by indulgence to excess in alcohol or drugs, at times incapable of administering their estates with ordinary prudence.

Procedure.

4. In the opinion of the Committee the following matters should be provided for in any measure that deals with the persons under consideration:

- (A) The judicial authority should be set in motion by petition.
- (B) The provision as to the person by whom the petition is to be presented should be analogous to that contained in Section 5, Subsection (1), of the Lunacy Act, 1890.
- (C) The petition should be supported by affidavits or by documents having the force of documents made on oath.
- (D) The judicial authority should have power:
 - (a) To visit or cause to be brought before him the person whose conduct is in question.
 - (b) To make such further inquiries and summon such witnesses, including the husband or wife of the person complained of, as he may think necessary.
 - (c) To adjourn the inquiry.
 - (d) To make an order for the immediate committal of the person as hereinbefore suggested.
 - (e) To make an order for the committal of the patient at any time within months of the date of the order, contingent on the behaviour of the patient and at the discretion of the petitioner.
 - (f) To dismiss the petition without or with costs against the petitioner, according as, in the opinion of the judicial authority, the petitioner has, or has not, acted in good faith, and without malice.
 - (g) To make a maintenance order on the estate of the inebriate, or to require guarantee that maintenance expenses shall be met.
- (E) Protection should be afforded to all persons who have in good faith, and with reasonable care, done anything purporting to be done under the legislation proposed.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

SURGEON W. G. EDWARDS has been placed on the retired list, December 16th, 1908. He was appointed Surgeon, June 9th, 1902.

The following appointments have been made in the Admiralty: Inspector-General C. PEARSON, M.D., to Chatham Hospital, January 17th; Staff Surgeon M. L. M. YARDIN, M.B., and Surgeon E. S. WILKINSON, M.B., to the *Defence*, on recommissioning, undated; Fleet Surgeon G. A. S. BELL and Surgeon R. M. KROGALL, to the *Bedford*, additional, January 15th, and on recommissioning, undated; Fleet Surgeon F. RAUDSLEY, to the *Warrior*, on recommissioning, undated; Fleet Surgeon E. CORCORAN to the *President*, additional, for three months' course at the West London Hospital, January 11th; Fleet Surgeon R. H. J. BROWNE and Staff Surgeon E. D. J. O'MALLEY to the *Indra*, on recommissioning, February 2nd; Staff Surgeon R. L. DICKINSON to Plymouth Hospital, January 18th; Surgeon A. W. IRDELL to Plymouth Hospital, January 9th; Surgeon L. F. COPE to the *Victory*, for temporary service, undated.

ARMY MEDICAL SERVICE.

COLONEL P. M. ELLIS to be Surgeon-General, vice W. B. Slaughter, retired, December 31st, 1908. Surgeon-General Ellis's previous commissions are thus dated: Surgeon, August 5th, 1877; Surgeon-Major, August 5th, 1889; Surgeon-Lieutenant-Colonel, August 5th, 1897; Colonel, August 15th, 1901. He served with the Burmese expedition in 1886-7, receiving a medal with clasp. He has since been Principal Medical Officer, 7th Division, Irish Command, and Administrative Medical Officer, Irish Command, successively.

Lieutenant-Colonel R. JENNINGS, M.D., from the Royal Army Medical Corps, is promoted to be Colonel, vice P. M. Ellis, December 31st, 1908. Colonel Jennings was appointed Surgeon, February 5th, 1881; Surgeon-Major, February 5th, 1893; and Lieutenant-Colonel, February 5th, 1901. He was in the South African war in 1900-2, being present in operations in Cape Colony and in the Transvaal; he was mentioned in despatches, and received the Queen's medal with three clasps and the King's medal with two clasps.

ROYAL ARMY MEDICAL CORPS.

Colonel O. E. P. LLOYD, V.C., serving in India as Principal Medical Officer, Bareilly and Garhwal Brigades, is transferred to the 1st (Postal) Division as Divisional Principal Medical Officer, December 31st, 1908. Captain P. G. GASTON, from the Indian Medical Service, to be Captain, vice H. G. S. WEBB, who exchanges, November 28th, 1908.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL A. M. CROFTS, C.I.E., Bengal, is promoted to be Colonel, from October 15th, 1908. He was appointed Assistant-Surgeon, March 31st, 1877, and became Surgeon-Lieutenant-Colonel, March 31st, 1897. He was in the Afghan war in 1878-80 at Candahar and with the Khyber brigade, including the affair at Jugtulluk (medal); in the Egyptian war of 1882, being present at the action of Kassasin and at the battle of Tel-el-Keir (medal with clasp, and Khedive's bronze star); with the Ziboh Valley expedition in 1897; and in the China war in 1900 (medal). Colonel Crofts has since been appointed Principal Medical Officer, 7th (Meerut) Division.

Lieutenant J. F. BOYD is promoted to be Captain, from September 1st, 1908, provisionally, subject to his passing the departmental examination in October.

Colonel C. H. BEATSON, C.B., Bengal, took over the duties of Principal Medical Officer, 1st (Punjab) Division, from December 15th, 1908. Captain G. BROWNE, Senior Medical Officer, Kohat, is directed to act as Principal Medical Officer on the departure of Colonel Beatson.

Lieutenant-Colonel H. G. L. WORTABET, M.D., Madras, Officiating Principal Medical Officer, Burmah Division, is granted leave out of India until June 21st, pending retirement.

SPECIAL RESERVE.

ROYAL ARMY MEDICAL CORPS.

CAPTAIN W. H. G. H. BEST, from the late Royal Army Medical Corps (Military), to be Captain, September 20th, 1908.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

For Attachment to Units other than Medical Units.—The following officers, from the 4th Battalion the Cheshire Regiment, to be Captains, December 1st, 1908:—Surgeon-Captain C. T. GREEN and Surgeon-Captain A. R. WILSON, M.D. A. D. Low to be Lieutenant, November 11th, 1908.

Highland Mounted Brigade Field Ambulance.—The following officers, from the Seaforth and Cameron Bearer Company, Royal Army Medical Corps (Volunteers), are appointed, with rank and precedence as in the Volunteer Force, April 1st, 1908:—Major J. MACDONALD, M.B., and Lieutenant J. W. MACKENZIE, M.D. A. C. BALFORTH to be Lieutenant, April 1st, 1908.

First Home Counties Field Ambulance.—Captain J. M. ROGERS-TILLES to be Major, April 27th, 1908.

First East Lancashire Field Ambulance.—Lieutenant C. W. HUTT, from the 3rd East Lancashire Field Ambulance, to be Lieutenant, September 22nd, 1908.

Third East Lancashire Field Ambulance.—G. A. JELLY to be Lieutenant, September 22nd, 1908.

First London Field Ambulance.—Captain (Honorary Captain in the Army) E. W. ST. VINCENT-RYAN to be Major, September 2nd, 1908.

Sanitary Service.—The announcement, relating to Captain C. K. BOWES, Captain F. R. JEFFERISS, and Lieutenant A. C. BIRD, which appeared in the *London Gazette* of October 23rd, 1908, is cancelled, and the following substituted: Surgeon-Captain B. JEFFERIES, from the 4th Volunteer Battalion the Queen's Own (Royal West Kent Regiment), to be Captain, with precedence as in the Volunteer Force, April 1st, 1908. Surgeon-Captain C. K. BOWES, M.D., from the 1st Volunteer Battalion the Buffs (East Kent Regiment), to be Captain, April 1st, 1908. A. C. BIRD to be Lieutenant, August 12th, 1908.

For Attachment to Units other than Medical Units.—Captain C. B. KER, M.B., from the 1st Lothian Bearer Company Royal Army Medical Corps (Volunteers), to be Captain, with precedence as in the Volunteer Force, April 1st, 1908; Lieutenant J. ANDREW, M.B., to be Captain, April 1st, 1908; W. S. PATTERSON, M.B. (late Surgeon-Lieutenant 2nd Volunteer Battalion the Highland Light Infantry), to be Lieutenant, November 2nd, 1908; H. W. A. COWAN, M.B., to be Lieutenant, November 27th, 1908.

Hospitals and Asylums.

ST. ANDREW'S HOSPITAL FOR MENTAL DISEASES, NORTHAMPTON.

THE annual report of this private asylum for the upper and middle classes for the year 1907 contains the report of the Committee and that of the Medical Superintendent, Dr. J. Bayley. The Committee are again able to report favourably of the state of the Institution and its houses at Moulton Park and Bryn-y-Neuadd. The latter, the seaside house of the asylum, now under the direction of a resident medical officer, Dr. Archdall, was visited by 174 patients during the year, as compared with 158 during 1906. During the year 89 patients were admitted in their payments, the amount of assistance rendered to make up the payments to the lowest rates ordinarily charged being £3,641. The financial state of the hospital was exceedingly satisfactory. From the report of Dr. Bayley we see that on January 1st, 1907, there were in the hospital 412 patients and that on the last day of the year there were 415. The total number of cases under care during the year was 496 and the average number daily resident 410. During the year 64 in all were admitted, of whom 68 were first admissions. In 31 the attacks were first attacks within three and in 13 more within twelve months of admission; in 30 not-first attacks within twelve months of admission, and in 10, whether first attacks or not, of more than twelve months' duration on admission. They were classified according to the forms of mental disorder into: Mania of all kinds, 42; melancholia of all kinds, 29; dementia, 8; general paralysis, 2; acquired epilepsy, 1; and congenital or infantile defect, 2. Concerning the probable etiological factors, alcohol was assigned in 5, previous attacks in 18, old age and the menopause in 8, mental or emotional stress in 23, and venereal disease in 3. Hereditary influences were ascertained in 14. During the year 34 were discharged as recovered, giving a recovery-rate on the admissions of 40.4 per cent.; 6 as relieved, and 27 as not improved; also during the year there were 15 deaths, giving a percentage death-rate on the average numbers resident of 3.1 per cent. The deaths were due in 4 cases to cerebro-spinal diseases, with 2 from general paralysis; in 4 to chest diseases, with only 1 death from pulmonary tuberculosis; in 1 to abdominal disease; in 3 to general diseases, including senile decay; and in 1 case—that of a female who committed suicide whilst on trial with her friends—to accident. No case of infectious disease occurred at the hospital during the year or at any of the houses belonging to it, and there do not appear to have been any serious casualties.

ROXBURGH, BERWICK, AND SELKIRK DISTRICT ASYLUM.

FROM the annual report and statistical tables furnished by Dr. J. Carlyle Johnstone, the Medical Superintendent of this asylum, for the year ending May 15th, 1908, we see that on May 15th, 1907, there were 329 patients on the asylum register, and on May 15th, 1908, there were 333. The total cases under treatment during the year numbered 407 and the average number daily resident 353.39. In consequence of the improvements and extensions which have been carried out of late years and now, with the exception of the administrative block, completed, ample and suitable accommodation is available for all cases of insanity occurring in the district. During the year 78 cases were admitted, of whom 62 were first and 16 not-first admissions. Of the total admissions, in 33 the attacks were first attacks within three and in 13 more within twelve months of admission; in 21 not-first attacks within twelve months of admission, and the remainder, whether first attacks or not, were of more than twelve months' duration (8), or of congenital origin (3). The admissions were classified, according to the forms of mental disorder, into: Mania of all kinds, 26; melancholia of all kinds, 31; senile and secondary dementia, 4; delusional insanity, 4; general paralysis and epileptic insanity, 4 each; insanity with gross brain lesion, 2; and congenital or infantile defect, 3. The main probable causes of mental disorder in these cases were assigned in the following numbers: Alcohol in 23, or in the unusually high proportion of just under 29 per cent.; venereal disease in none; critical periods in 20; epilepsy and cerebral disease in 7; various bodily disorders in 5; and mental or emotional stress in 16. Hereditary influences were ascertained in 32, or 41 per cent., and congenital defect existed in 7. During the year 28 were discharged as recovered, giving a recovery-rate of 35.8 per cent. on the total admissions; 11 as relieved, and 2 as not improved. During the year also there were 33 deaths, giving a death-rate on the average numbers resident of 9.8 per cent. The deaths were due in 14 cases to cerebro-spinal diseases, with only 4 deaths from general paralysis; in 4 cases to diseases of the heart and blood vessels, in 3 to respiratory diseases, in 1 to Bright's disease, and in the remaining 11 to general diseases. Although pulmonary tuberculosis was returned as the principal cause of death in only 1 case, it was ascertained to be present in an active form in 18.1 per cent. of all deaths. The institution was visited, as usual, by influenza, but, on the whole, the general health was satisfactory, and no serious accident occurred.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 9,035 births and 5,535 deaths were registered during the week ending Saturday last, January 9th. The annual rate of mortality in these towns, which had been 12.8 and 18.2 per 1,000 in the two preceding weeks, declined again last week to 17.5 per 1,000. The rates in the several towns ranged from 10.0 in Newport (Mon.), 10.2 in York, 10.4 in Hornsey, 10.5 in East Ham, 11.6 in Aston Manor, 11.8 in Walthamstow, and 11.9 in Smeethwick, to 22.6 in Stockport and Merthyr Tydfil, 22.9 in Bury, 23.6 in Walsall, 23.7 in Oldham, 25.4 in Great Yarmouth, 27.2 in Middlesbrough and 27.3 in Hanley. In London the rate of mortality was 18.0 per 1,000, while it averaged 17.3 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 4.0 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.5 per 1,000, while among the seventy-five other large towns these infectious diseases caused death-rates ranging upwards to 2.6 in West Ham and in Sunderland, 2.7 in Merthyr Tydfil, 3.4 in Hull, 4.3 in Leicester, 4.9 in Great Yarmouth, 5.8 in Warrington, and 6.9 in Hull. Measles caused a death-rate of 1.1 in Huddersfield and in Sheffield, 1.3 in West Hartlepool, 1.8 in West Ham, 2.0 in Merthyr Tydfil, 2.3 in Sunderland, 2.8 in Hull, 2.9 in Great Yarmouth, 4.0 in Middlesbrough, 4.1 in Leicester, and 4.3 in Warrington; diphtheria of 1.2 in Rochdale and 1.3 in Reading; whooping-cough of 2.0 in Great Yarmouth; and diarrhoea of 1.1 in Northampton and 1.5 in Middlesbrough. The mortality from scarlet fever and from typhoid fever was not excessive in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever patients remaining under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital at the end of last week was 3,347, against 3,537, 3,474, and 3,557 at the end of the three preceding weeks; 323 new cases were admitted during the week, against 381, 305, and 379 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, January 9th, 1,096 births and 698 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 19.7, 19.3, and 18.3 per 1,000 in the three preceding weeks, rose again to 19.5 per 1,000 last week, and was 2.0 per 1,000 above the mean rate during the same period in the seventy-six large English towns. The rates in the eight Scottish towns ranged from 13.4 in Leith and 15.2 in Aberdeen to 24.9 in Dundee and 27.9 in Perth. The death-rate from the principal infectious diseases averaged 2.0 per 1,000, the highest rates being recorded in Glasgow and Paisley. The 326 deaths registered in Glasgow included 3 which were referred to scarlet fever, 16 to diphtheria, 25 to whooping-cough, 2 to enteric fever, and 7 to diarrhoea. Five fatal cases of diarrhoea were recorded in Edinburgh; 2 of scarlet fever and 3 of diarrhoea in Dundee; 4 of whooping-cough and 2 of diarrhoea in Aberdeen; and 2 of diarrhoea in Paisley.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, January 9th, 666 births and 446 deaths were registered in the twenty-two principal urban districts of Ireland, as against 720 births and 537 deaths in the preceding period. The annual death-rate in these districts, which had been 19.3, 20.5, and 24.7 per 1,000 in the three preceding weeks, fell to 20.4 per 1,000 in the week under notice, this figure being 2.9 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 23.6 and 27.7 respectively, those in the other districts ranging from 14.8 in Sligo and 7.8 in Galway to 35.4 in Lurgan and 35.9 in Clonmel, while Cork stood at 19.2, Londonderry at 16.9, Limerick at 27.3, and Waterford at 13.6. The zymotic death-rate in the twenty-two districts averaged 1.2 per 1,000, as against 1.1 per 1,000 in the preceding period.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure priority in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham Road, S.W.—(1) House-Physician; (2) House-Surgeon. Salary at the rate of £20 per annum each.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £170 per annum and £30 for sub allowance.

BOLTON UNION.—Resident Assistant Medical Officer (male) for the Northhouse Hospitals. Salary, £170 per annum.

BOURNEMOUTH: ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.—House-Surgeon. Salary, £80 per annum.

BRIDGWATER HOSPITAL.—House-Surgeon. Salary at the rate of £80 per annum.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Pathologist. Salary, £250 per annum with residential allowance.

BRISTOL ROYAL INFIRMARY.—(1) Two House-Physicians; (2) House-Surgeon; (3) Obstetric and Ophthalmic House-Surgeon; (4) Throat and Nose and Ear Surgeon; (5) Casualty Officer. Salary for (1) and (2), £100 each, (3) and (4) £75, and for (5) £50.

BRITISH LYING-IN HOSPITAL, V.C.—Resident Medical Officer. Salary at the rate of £50 per annum.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—(1) House-Physician; (2) Assistant House-Surgeon. Salary at the rate of £65 and £50 per annum respectively.

CANCER HOSPITAL, Fulham Road, S.W.—Three Clinical Assistants.

CARDIFF INFIRMARY.—House-Surgeon. Honorarium, £30 for six months.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, N.E.—House-Physician (male). Salary at the rate of £50 per annum.

COVENTRY EDUCATION COMMITTEE.—Assistant Medical Officer. Salary, £250 per annum.

EVELINA HOSPITAL, FOR SICK CHILDREN, S.E. House-Surgeon. Salary at the rate of £50 per annum.

HALIFAX ROYAL INFIRMARY.—Second House-Surgeon. Salary, £100 per annum.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—(1) Resident House-Physician. Honorarium, £25 for six months. (2) Dental Surgeon. Honorarium, 50 guineas per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Physician. Salary £30 for six months and £2 10s. washing allowance.

KINCARDINE PARISH COUNCIL.—Resident Medical Officer and Vaccinator. Salary, combined, £105 and lunacy fees.

LANGHO EPILEPTIC COLONY.—Medical Superintendent.

LEDS HOSPITAL FOR WOMEN AND CHILDREN.—Two House-Surgeons. Salary at the rate of £50 per annum.

LIVERPOOL PORT SANITARY AUTHORITY.—Assistant Medical Officer. Salary, £250 per annum.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Assistant Resident Medical Officer. Salary, £150 per annum.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Pathologist and Bacteriologist.

MANCHESTER CORPORATION.—Second Assistant Medical Officer at the Monsall Fever Hospital. Salary, £200 per annum.

OLDHAM INFIRMARY.—Ophthalmic Surgeon. Honorarium, fifty guineas per annum.

ROTHERHAM HOSPITAL AND DISPENSARY.—Senior House-Surgeon. Salary, £110 per annum.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone Road, N.W.—Clinical Assistants.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—Dental Surgeon.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck Street, W.—Resident House-Physician. Salary at the rate of £100 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Assistant Ophthalmic Surgeon; (2) Pathologist. Salary, £200 per annum.

WINCHESTER CITY.—Medical Officer of Health. Salary, £400 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Lavenham, co. Suffolk, and Sandwich, co. Kent.

APPOINTMENTS.

ALISON, T. M., M.D., Honorary Assistant Physician to the Royal Victoria Infirmary, Newcastle-on-Tyne.

ANDERTON, E. W., M.B., Ch.B.Vict., District Medical Officer of the Aysgarth Union.

DURANT, W. J., M.D.Durh., Certifying Factory Surgeon for the Gateshead District, co. Durham.

FREEMANTLE, F. E., M.A., M.B.Oxon., D.P.H.Eng., Edward Jenner Lectureship on Public Health at St. George's Hospital Medical School.

FOLKES, P. G., M.B., B.S., District Medical Officer of the Martley Union.

HUTTON, Henry Richmond, M.A., M.B.Cantab., Lecturer on Diseases of Children in the University of Manchester; and Physician to the St. Mary's Hospital, Manchester.

LEE, Thomas D., M.D., F.R.C.S. Edin., Physician and Medical Superintendent to the Peebles Hydropathic, Peebles, N.B.

O'BRIEN, J. J., M.D., R.U.I., Medical Officer and Public Vaccinator for the Heath Town District of the Wolverhampton Union.

PRICAIN, S. H., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Rothwell District, co. Northampton.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

MARRIAGE.

JENKINS—JACKSON.—On Thursday, December 31st, 1903, at St. Aidan's Parish Church, Leeds, by the Rev. C. W. Hankey, M.A., Evan Llewellyn Jenkins, M.B., B.S., M.R.C.S., L.R.C.P., to Violet Stratton, the only child of Mr. and Mrs. W. R. Jackson, "Glen Rosa," Firehills, Leeds.

DEATHS.

CLAREMONT.—On the 31st ult., at "Petersleigh," Southsea, the residence of her son, Dr. Claude C. Claremont, Emma, widow of the late Claude Clarke Claremont, M.R.C.S., L.S.A., of Millbrook House, London, N.W., and Aldwick Road, Bognor.

JONES.—(By cable) On January 1st, at New Zealand, Robert Orford Jones, L.R.C.P., L.R.C.S. Edin., the beloved and only son of I. J. Knowles-Jones, M.D., of Waverley, Ashburton, Devonshire.

WHISHAW.—On December 10th, 1903, at Willowburn, Queensland, Australia, suddenly, the result of an accident, Reginald Robert Whishaw, B.A., M.B.Cantab., F.R.C.S. Eng., aged 46.

DIARY FOR THE WEEK.

MONDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 12 noon.—Museum Demonstration, Myoma and Chondroma.

TUESDAY

CHELSEA CLINICAL SOCIETY, Chelsea Dispensary, Manor Street, Chelsea, S.W., 8.30 p.m.—Cases and Specimens. Paper:—Dr. Eric Pritchard: Some Practical Points in the Treatment of Indigestion in Infants.

MEDICO-LEGAL SOCIETY, 22, Albemarle Street, W., 8.15 p.m.—Papers:—(1) Exhibition of Specimens and Narration of Cases. (2) Dr. L. C. S. Broughton, L.R.C.P.: Industrial Life Assurance. (3) Mr. Arthur S. Morley, F.R.C.S.: Some Experiences of the Difficulties and Abuses of the Workmen's Compensation Acts.

ROYAL SOCIETY OF MEDICINE:

PATHOLOGICAL SECTION, 20, Hanover Square, 8.30 p.m.—Papers:—Dr. Rondoni: Some Hereditary Syphilitic Affections of the Central Nervous System. Mr. Shattock: Complete Saponaceous Calcification of a Large Cutaneous Adenoma. Sir Thomas Oliver and Mr. Gibson: The Changes in the Cells in the Cerebral Cortex and in the Anterior Horn in a Rabbit Poisoned with Phosphorus. Dr. Parkes Weber: Disseminated Lobular Necrosis of the Liver with jaundice, and a case of Acute Haemorrhagic Nephritis in Secondary Syphilis. Dr. C. E. Walker and Mr. George Debaixien: On the Behaviour of the Nucleoli in the Cells of Malignant Growths. Dr. Box: Idiopathic Dilatation of the Uterus. Mr. Shattock (card specimen): Sections of the Aorta showing Calcification of the Media in a Mummy.

WEDNESDAY.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY, 20, Hanover Square, W., 5 p.m.—Paper:—Dr. Buckley: Intestinal Lavage on the Plombiers System.

ROYAL SOCIETY OF MEDICINE:

SECTION OF ANAESTHETICS, 20, Hanover Square, 8.30 p.m.—Special general meeting: To Consider the Advisability of Legislation to Control the Administration of Anaesthetics.

THURSDAY.

ROYAL SOCIETY OF MEDICINE:

DERMATOLOGICAL SECTION, 20, Hanover Square, 4 p.m.—(1) Annual General Meeting. (2) Dr. Pernet: A case of Granuloma Annulare (shown at a previous meeting).

NEUROLOGICAL SECTION, 20, Hanover Square, 8.30 p.m.—Papers:—Dr. A. E. Russell and Mr. P. W. G. Sanghvi: Apoplectiform Cerebral Haemorrhage. Operation: Evacuation of Blood; Recovery. Dr. Henry Head: A case of Fractured Spine illustrating Various Forms of Sensory Loss. Dr. J. K. Wilson: A case of the Cerebral basis of the Left Posterior Inferior Cerebellar Atrophy.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

SECTION OF DISEASES OF CHILDREN, 20, Hanover Square, 5 p.m.—Paper:—(1) Dr. David Forsyth: Infant Mortality as seen in a Children's Hospital—being an Analysis of 1,202 Consecutive Infant Deaths under 1 Year at the Evelina Hospital for Sick Children. (2) Cases and Specimens.

EPIDEMIOLOGICAL SECTION, 20, Hanover Square, 8.30 p.m.—Paper:—Dr. Hamer: Some Bacteriological Problems Considered from an Epidemiological Point of View.

POST-GRADUATE COURSES AND LECTURES.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Wednesday, 4 p.m., Occult Cardiac Hyper-trophy.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstrations, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2 p.m. Special Clinics: Ear, Nose, Throat, at noon and 4 p.m., Monday and noon, Tuesday, 2 p.m., Wednesday and 4 p.m., Tuesday, and noon, Friday; Eye, 11 a.m., Wednesday and Saturday; Radiography, 4 p.m., Thursday. Special Lectures:—Monday, 2.15 p.m., Enlargement of the Liver; Thursday, 3.15 p.m., Some Points Relating to Appendicectomy.

LONDON THROAT HOSPITAL, Great Portland Street, W.—Wednesday, 5 p.m., Impaired Movements of the Vocal Cords.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Myopathy and Syringomyelia; Friday, 3.30 p.m., Epilepsy.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m., Surgical Out-patient, 2.30 p.m., Medical Out-patient; Nose, Throat, and Ear; X Rays; 4.30 p.m., Medical In-patient. Tuesday, 10 a.m., Medical Out-patient Clinic; 2.30 p.m., Operations; 4.30 p.m., Surgical, Gynaecological; 4.30 p.m., Lecture: Demonstration: Aortic Valvular Disease. Wednesday, 2.30 p.m., Medical Out-patient, Skin, and Eye Clinics. Thursday, 2.30 p.m., Gynaecological Operations; Clinics: Medical Out-patient, Surgical Out-patient. X Rays; 3 p.m., Medical In-patient; 4.30 p.m., Lecture: The After-Results of Gastro-entostomy. Friday, Clinic: 10 a.m., Surgical Out-patient; 2.30 p.m., Operations; Clinics: Medical Out-patient; Eye; 3 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for the week: Daily, 2 p.m., Medical and Surgical Clinics, X Rays; 2.30 p.m., Operations. Monday and Thursday and Wednesday and Saturday, 2 p.m., Disease of the Eyes; Tuesday and Friday, 10 a.m., Gynaecological Operations, 2 p.m. (and Wednesday and Saturday, 10 a.m.), Diseases of Throat, Nose and Ear; 2.30 p.m., Diseases of the Skin; Wednesday and Saturday, 10 a.m., Diseases of Children. Lectures: 10 a.m., Monday and Thursday, Demonstration of Cases by Surgical Registrar; Friday, Demonstration of Cases by Medical Registrar. At 12 noon, Pathological Demonstration. At 12.15 p.m., Wednesday and Saturday, Practical Medicine. At 5 p.m., Monday, Clinical; Tuesday, Clinical; Wednesday, Practical Surgery; Thursday, Clinical; Friday, General Paralysis.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C.—Thursday, 6 p.m., Paratuberculides.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
JANUARY.		JANUARY (Continued).	
17 Sunday ..			HAMPSTEAD DIVISION, <i>Metropolitan Counties Branch</i> , St. Peter's Hall, Belsize Square, N.W. (behind St. Peter's Church), Special Meeting, 4.55 p.m.; Ordinary Meeting, 5 p.m.
18 MONDAY ..		26 TUESDAY ..	NORTHAMPTONSHIRE DIVISION, <i>South Midland Branch</i> , Board Room, Northampton General Hospital, 2.30 p.m.
19 TUESDAY ..	London: Journal and Finance Committee, 2.30 p.m. BRIGHTON, HASTINGS, SEVENOAKS, AND TUNBRIDGE WELLS DIVISIONS, <i>South-Eastern Branch</i> , Conjoint Meeting, General Hospital, Tunbridge Wells, 5 p.m.: Tea and Coffee, 4.30 p.m.: Dinner, Calverley Hotel, 7 p.m. CARDIFF DIVISION, <i>South Wales and Monmouthshire Branch</i> , Cardiff.		(Central Council, 2 p.m.) BATH AND BRISTOL BRANCH, Bristol.
20 WEDNESDAY ..		27 WEDNESDAY ..	RICHMOND DIVISION, <i>Metropolitan Counties Branch</i> , Special Meeting, Bridge House Café, Richmond Bridge, 8.30 p.m.
	GLOUCESTERSHIRE BRANCH, General Meeting, General Hospital, Cheltenham, 7 p.m.: Supper afterwards at Cossy Corner, Promenade.	28 THURSDAY ..	CITY DIVISION, <i>Metropolitan Counties Branch</i> , Business Meeting, Great Eastern Hotel, 3.30 p.m.
	KENSINGTON DIVISION, <i>Metropolitan Counties Branch</i> , Kensington Town Hall, 5 p.m.	29 FRIDAY ..	BIRMINGHAM BRANCH, Pathological and Clinical Section, Medical Institute, Edmund Street, 8 p.m.
21 THURSDAY ..	LEIGH DIVISION, <i>Lancashire and Cheshire Branch</i> , Co-operative Offices, Ellesmere Street, 8.30 p.m.	30 SATURDAY ..	
	WESTMINSTER DIVISION, <i>Metropolitan Counties Branch</i> , Special Meeting, Florence Restaurant, Rupert Street (near Piccadilly Circus), Dinner, 7.30 p.m.: Business Meeting, 9 p.m.	31 Sunday ..	FEBRUARY.
22 FRIDAY ..		1 MONDAY ..	
23 SATURDAY ..		2 TUESDAY ..	
24 Sunday ..		3 WEDNESDAY ..	ULSTER BRANCH, Winter Meeting, Belfast.
25 MONDAY ..		4 THURSDAY ..	
		5 FRIDAY ..	
		6 SATURDAY ..	
		7 Sunday ..	
		8 MONDAY ..	
		9 TUESDAY ..	LONDON: Capitation Grants Subcommittee, 1.30 p.m.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. Od., and the **BRITISH MEDICAL JOURNAL** is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent

by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the **BRITISH MEDICAL JOURNAL** for non-members is £1 8s. Od. for the United Kingdom, and £1 15s. Od. for abroad.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JANUARY 23RD, 1909.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. **BY ORDER.**

MATTERS REFERRED TO DIVISIONS.

PUBLIC HEALTH COMMITTEE.

REPORT

ON

DESIRABILITY OF HEALTH OFFICERS BEING REQUIRED TO GIVE THEIR WHOLE TIME TO THE WORK.

INTRODUCTORY.

The Annual Representative Meeting at Sheffield instructed the Council to refer the following proposition for the consideration of the Divisions:—

That Health Officers should give their whole time to the work.

The Council has thought it desirable that the Divisions should have the assistance in their deliberations of an explanatory Memorandum prepared by the Public Health Committee, which is now submitted accordingly.

The object of the Memorandum is to set forth as clearly and impartially as possible the more important considerations, on both sides of the question, which require duly weighing before any decision is arrived at. It is proposed that upon receipt of the expressions of opinion of the Divisions a Report indicating a definite policy in accordance with the general tenor of those replies shall be prepared, which, after submission to the Divisions and adoption, if approved by the Annual Representative Meeting, will constitute the declared policy of the Association on the subject.

REFERENCE.

As there is possibility of doubt as to the intended scope of the proposition stated in the Resolution of the Representative Meeting, the Committee thinks it well to make clear the exact question which it understands that the Divisions are desired to discuss, namely, that by the term "Health Officers" are to be understood for the present purpose Medical Officers of Health only, and that by "giving their whole time to the work" is meant to their public work as distinguished from private practice.

If these assumptions are correct, the question referred may conveniently be stated as follows:—

Should Medical Officers of Health be debarred from engaging in private practice?

For the information of the Divisions it may be stated that Medical Officers of Health appointed by County Councils are already required (by Section 17 of the Local Government Act, 1888) to devote their whole time to the duties of the office.

A.—Reasons in Favour of whole-time Appointments.

The more important reasons which have at various times been assigned in favour of whole-time appointments are:—

- (1) That the duties are usually of such a character as to need the undivided attention of the officer, and should not be liable to suffer from the conflicting claims of private practice upon his time and energies.
- (2) That the statutory and other responsibilities of a Medical Officer of Health are such as may frequently make it his duty to take action prejudicial to the interests of individuals, some of whom, if he is

engaged in private practice, may be his patients, and that he ought not to be put in the position of having to choose between offending them and neglecting the enforcement of the law.

- (3) That, apart from questions specially affecting his own patients, a medical officer engaged in private practice is more likely to be influenced by local prejudices than a whole-time officer.
- (4) That specialisation in public health work is desirable.
- (5) That the appointment of whole-time officers is preferable, from the purely professional point of view, because (a) there is less likelihood of friction arising in their case than in that of part-time officers when their public duties bring them into contact with the private patients of other practitioners, (b) because a Medical Officer of Health who is engaged in private practice receives, in his official capacity, introductions to potential patients in ways which, though perfectly legitimate, are not open to his fellow practitioners in the same district.
- (6) As showing the tendency of public opinion among those who give special attention to Public Health, it is to be noted that the Royal Commission on Labour, the Housing Commission of 1885, and the Select Committee on the Housing of the Working Classes Acts Amendment Bill of 1906, have all reported in favour of the Medical Officer of Health giving his whole time to the work, coupling with this a recommendation that he be given reasonable security of tenure of office. The views held by the Local Government Board, as indicated in the Reports issued from the Medical Department of the Board during many years past, and more particularly of late years, are very distinctly in favour of Medical Officers of Health being debarred from private practice.

B.—Reasons Against whole-time Appointments.

As against the adoption of a uniform rule of whole-time appointments it is urged:—

- (1) That the appointment of part-time officers is more economical, particularly in the case of thinly populated rural districts, many of which could not by themselves afford the salaries of whole-time officers.
- (2) That if such districts are in all cases (as already in some cases) combined into districts large enough to pay an adequate salary to a whole-time officer, the needs of each locality cannot receive the same close and prompt attention as from several part-time officers.
- (3) That for the same amount of salary practitioners of a higher professional standing can be obtained if they are allowed to engage also in private practice than if they are required to give their whole time to the work.
- (4) That the clinical experience and the closer knowledge of the homes of people obtained in private practice increase the usefulness of the Medical Officer of Health.
- (5) That from the professional point of view it is preferable that the emoluments should be distributed over a larger number of members of the profession than would be the case if all such appointments were whole-time.

N.B.—It will be understood that the above paragraphs, headed A and B, are simply statements of views put forward by advocates of either opinion, and do not in either case necessarily express the opinions of the Committee.

Question Submitted.

The Division is requested to express its opinion for or against the proposition,

"That Medical Officers of Health should be debarred from engaging in private practice, and to add any qualifications, comments, or additional suggestions bearing on the matter which it may desire.

E. J. DOMVILLE,
Chairman, Public Health
Committee.

January 5th, 1909.

KS To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, January 27th, in the new Council Room, at 429, Strand, London, W.C.

By Order.

January 21st, 1909.

GUY ELLISTON.

BRANCH AND DIVISION MEETINGS TO BE HELD.

LEINSTER BRANCH.—The annual general meeting will be held on Saturday, February 13th, in the Royal College of Physicians, Kildare Street, Dublin, at 4.30 p.m. The annual dinner will be held in the College Hall at 7.30 p.m. of the same day.—ARTHUR H. WHITE, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: HAMPSHIRE DIVISION.—A special and ordinary meeting of this Division will be held on Tuesday, January 26th, 1909, at 4.55 p.m. and 5 p.m., at St. Peter's Hall, Belsize Square, N.W. (behind St. Peter's Church), Dr. Oppenheimer in the chair. Agenda (*Special Meeting*, 4.55 p.m.): To alter Divisional Rule No. 7 in accordance with the existing Article xxvii of the Association, so as to permit of the election of the Representative to the Representative Meeting "not more than 9 months nor less than 3 weeks before the Annual Representative Meeting," instead of "not more than 3 months nor less than 3 weeks before the Annual Representative Meeting," as in the former Article xxvii of the Association. The Honorary Secretary will read a letter from the Medical Secretary on the subject. Agenda (*Ordinary Meeting*, 5 p.m.): 1. Minutes. 2. Letters. 3. Questions. 4. Report of Representatives on the Branch Council. 5. Annual report to the Branch (including financial report). 6. Hampshire Hospital business; to consider a letter from the Hospitals Committee of the Association. 7. To consider the questions submitted to Divisions on p. 11 of the Medico-Political Committee's report on the medical inspection of school children and the treatment of those found defective (see BRITISH MEDICAL JOURNAL of December 26th, 1908, pp. 1869 to 1874, and January 7th, 1909, pp. 96 to 102, and pp. 107 and 108). 8. Other business.—R. A. YELD, Honorary Secretary, Hampstead.

METROPOLITAN COUNTIES BRANCH: RICHMOND DIVISION.—A special meeting will be held on January 27th at 8.30 p.m. at the Bridge House Café, Richmond Bridge, to consider the Report on the Medical Inspection of School Children.—G. CARDNO STILL, Honorary Secretary.

NORTH OF ENGLAND BRANCH: NORTH NORTHUMBERLAND DIVISION.—A meeting will be held at the Infirmary, Berwick-on-Tweed, on Thursday, January 28th, at 2.15 p.m. Business: (1) Confirmation of minutes. (2) Reports from Secretary. (3) Paper on Rheumatoid Arthritis, by Dr. Wilson of Glanton. (4) Any other business.—C. CLARK BURMAN, Secretary, Alnwick.

SOUTH-EASTERN BRANCH: BRIGHTON DIVISION.—There will be an ordinary meeting of the above Division on Wednesday, January 27th, at the Dispensary, Queen's Road, Brighton, commencing at 4.30 p.m. Agenda: Minutes and correspondence. Cases and specimens. Communication from Dr. W. A. Hollis in connexion with the resolution which was passed in favour of dividing up the South-Eastern Branch. To consider a report from the Medico-Political Committee with regard to the inspection of school children and the treatment of those found defective. Any other business. All members are invited to show cases and specimens at the meeting.—RYMING MARSH, Honorary Secretary, Hove, Brighton.

SOUTH MIDLAND BRANCH: NORTHAMPTONSHIRE DIVISION.—A meeting of the Division will be held in the Board Room of the Northampton General Hospital on Tuesday, January 26th, at 2.30 p.m. Business: Minutes. Annual report of Representative of Division. Revision of Divisional rules. Medical inspection of school children. Paper on the results of radical operations for uterine cancer by Thomas Wilson, M.D., F.R.C.S., of Birmingham.—FEVERELL S. HICHENS, Honorary Secretary, Northampton.

ULSTER BRANCH.—The winter meeting of this Branch will be held in Belfast on Wednesday, February 3rd. Members having communications are requested to send particular notices not later than January 23rd to CECIL SHAW, M.D., Honorary Secretary, Belfast.

THE SEVENTY-SEVENTH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION,

BELFAST,

JULY 23RD TO JULY 31ST, 1909.

President :

SIMEON SNELL, Hon.D.Sc., F.R.C.S.Edin., Ophthalmic Surgeon, Royal Infirmary, Sheffield.

President-elect :

Sir WILLIAM WHITLA, M.D., LL.D., Professor of Materia Medica and Therapeutics, Queen's College, Belfast.

Past-President :

HENRY DAVY, Hon.D.Sc., M.D., F.R.C.P.Lond., Physician, Royal Devon and Exeter Hospital, Exeter.

Chairman of Representative Meetings :

JAMES ALEXANDER MACDONALD, M.D., M.Ch., R.U.I., Physician, Taunton and Somerset Hospital.

Chairman of Council :

EDMUND OWEN, Hon.D.Sc., LL.D., F.R.C.S., Consulting Surgeon to St. Mary's Hospital, London.

Treasurer :

EDWIN RAYNER, M.D.Lond., F.R.C.S., Surgeon, Stockport Infirmary, Stockport.

The Seventy-seventh Annual Meeting of the British Medical Association will be held in Belfast in July, 1909. The President's address will be delivered on Tuesday, July 27th, and the Sections will meet on the three following days. The Annual Representative Meeting will begin on Friday, July 23rd, 1909.

PROGRAMME OF BUSINESS.

The Address in Medicine will be delivered by FREDERICK TAYLOR, M.D., F.R.C.P., Consulting Physician, Guy's Hospital.

Professor KOCHER has been invited to deliver the Address in Surgery.

The Address in Obstetrics will be delivered by Sir JOHN W. BYERS, M.D., Professor of Midwifery and Diseases of Women, Queen's College, Belfast.

The Popular Lecture will be delivered by Dr. J. A. MACDONALD, Physician to the Taunton and Somerset Hospital, Chairman of the Representative Meetings.

THE SECTIONS.

The scientific business of the meeting will be conducted in fifteen Sections, which will meet on Wednesday, July 28th, Thursday, July 29th, and Friday, July 30th.

The President, Vice-Presidents, and Honorary Secretaries of each Section constitute a Committee of Reference for that Section, and exercise the power of inviting, accepting, or declining any paper, and of arranging the order in which accepted papers shall be read. Communications with respect to papers should be addressed to one of the Honorary Secretaries.

A paper read in the Section must not exceed fifteen minutes, and no subsequent speech must exceed ten minutes.

Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the BRITISH MEDICAL JOURNAL without special permission.

The following are the general arrangements so far as they are yet complete :

ANATOMY AND PHYSIOLOGY.

President : CHARLES SCOTT SHERRINGTON, M.D., F.R.S., Physiological Laboratory, University, Liverpool.

Vice-Presidents : Professor THOMAS HUGH MILROY, M.D., F.R.S.E., Queen's College, Belfast; Professor PETER

THOMPSON, M.D., King's College, Strand, London; ARTHUR PHILIP BEDDARD, M.D., F.R.C.P., 44, Seymour Street, Portman Square, London, W.

Honorary Secretaries : ALEX. LOW, M.B., 142, Blenheim Place, Aberdeen; JOHN ALEX. MILROY, M.D., Queen's College, Belfast.

DERMATOLOGY AND ELECTRO-THERAPEUTICS.

President : WILLIAM CALWELL, M.D., 6, College Gardens, Belfast.

Vice-Presidents : ROBERT BRIGGS WILD, M.D., 96, Mosley Street, Manchester; LESLIE ROBERTS, M.D., 46, Rodney Street, Liverpool.

Honorary Secretaries : JAMES HARRY SEQUEIRA, M.D., F.R.C.P., 8A, Manchester Square, London; S. ERNEST DORE, M.D., 26, New Cavendish Street, London; JOHN CAMPBELL RANKIN, M.D., 38, University Road, Belfast.

DISEASES OF CHILDREN.

President : HAROLD J. STILES, F.R.C.S.Edin., 9, Great Stuart Street, Edinburgh.

Vice-Presidents : JOHN McCRAW, M.D., 74, Dublin Road, Belfast; RICHARD WHYTOCK LESLIE, M.D., "St. Heliers,"

Strandtown, Belfast; ROBERT CAMPBELL, F.R.C.S., 21, Great Victoria Street, Belfast.

Honorary Secretaries: ANDREW FULLERTON, F.R.C.S.I., 8, University Square, Belfast; JOHN WILLIAM SIMPSON, M.D., 19, Lansdowne Crescent, Edinburgh.

HAEMATOLOGY AND VACCINE THERAPY.

President: SIR ALMROTH WRIGHT, M.D., F.R.S., 6, Park Crescent, Regent's Park, London, N.W.

Vice-Presidents: ALEX. GARDNER ROBE, M.B., 15, University Square, Belfast; THOMAS HOUSTON, M.D., 95, Great Victoria Street, Belfast; Captain STEWART RANKIN DOUGLAS, I.M.S., Inoculation Department, St. Mary's Hospital, London.

Honorary Secretaries: WILLIAM DUNLOP DONNAN, M.D., 12, High Street, Holywood, co. Down; DUDLEY W. CARMALT-JONES, M.B., B.Ch.Oxon., 78, Wimpole Street, London, W.

INDUSTRIAL DISEASES AND PUBLIC HEALTH.

President: LOUIS COLTMAN PARKES, M.D., 61, Cadogan Square, Chelsea, London.

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President: OTTERTON WOOD, M.D., 40, Margaret Street, Cavendish Square, London.

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President: CHARLES WILBERFORCE DANIELS, M.B., London School of Tropical Medicine, Albert Docks, London.

Vice-Presidents: Lieutenant-Colonel ANDREW DRANE, I.M.S., Royal Victoria Hospital, Belfast; Surgeon General W. R. BROWNE, M.D., C.I.E., 5, Royal Crescent, Holland Park Avenue, London.

Honorary Secretaries: JAMES COLVILLE, M.D., 7, University Square, Belfast; Dr. ANTON BREINL, Director Runcorn Research Laboratories.

PROVISIONAL TIME TABLE.

FRIDAY, JULY 23RD, 1909.

11 A.M.—Annual General Meeting followed by Representative Meeting.

SATURDAY, JULY 24TH, 1909.

9.30 A.M.—Representative Meeting.

MONDAY, JULY 26TH, 1909.

10 A.M.—Representative Meeting.

7.30 P.M.—Annual Conference of Secretaries of Divisions.

TUESDAY, JULY 27TH, 1909.

10 A.M.—Council Meeting.

10.30 A.M.—Representative Meeting (if required).

2.30 P.M.—Ad-journed General Meeting.

Induction of President.

8.30 P.M.—President's Address.

WEDNESDAY, JULY 28TH, 1909.

9.30 A.M.—Council Meeting.

10 A.M.—Sectional Meetings.

10.30 A.M.—Representative Meeting (if required).

12.30 P.M.—Address in Medicine.

8.30 P.M.—Reception.

THURSDAY, JULY 29TH, 1909.

9.30 A.M.—Council Meeting.

10 A.M.—Sectional Meetings.

12.30 P.M.—Address in Surgery.

7.30 P.M.—Annual Dinner.

FRIDAY, JULY 30TH, 1909.

10 A.M.—Sectional Meetings.

12.30 P.M.—Address in Obstetrics.

8 P.M.—Popular Lecture.

8.30 P.M.—Reception.

SATURDAY, JULY 31ST, 1909.

Excursions.

Honorary Local Secretaries—

HENRY LAWRENCE MCKISACK, M.D., M.R.C.P.,
17, University Square, Belfast.CECIL EDWARD SHAW, M.A., M.D., M.Ch.,
9, University Square, Belfast.HOWARD STEVENSON, B.A., M.B., F.R.C.S.I.,
2, College Square North, Belfast.NOTICE OF CHANGES OF BOUNDARIES OF
DIVISIONS.

THE following change has been made in accordance with the Regulations of the Association, and takes effect from the date of publication of this notice:

That the Rhymney Valley be transferred from the area of the Monmouthshire Division of the South Wales and Monmouthshire Branch to the area of the Cardiff Division of that Branch.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

METROPOLITAN COUNTIES BRANCH.

A SPECIAL general meeting of the Branch was held at the St. James's Vestry Hall, Piccadilly, W., on December 30th, 1908, at 4.30 p.m. The PRESIDENT of the Branch, Sir Victor Horsley, F.R.S., was in the chair, and there was a large attendance of members.

The *Petition for a Charter*.—The meeting was called upon a requisition signed by upwards of fifty members, to consider a proposal to instruct the Branch Council to petition the Privy Council with a view to securing such amendments in the Charter as would provide: (1) That the Referendum be taken on a decision of a majority of the Council; and (2) that it be taken by means of a letter to every member of the Association. On the agenda paper

was placed the following resolution, to be moved by Dr. F. J. SMITH:

That this special meeting of the Metropolitan Counties Branch of the British Medical Association instructs the Council of the Branch to oppose, by petition or otherwise, the application for a Royal Charter in its present form now made by the Association to the Privy Council, and is of opinion that the granting of such Charter should be postponed until the Association has reconsidered the question of the Referendum, and has approved of amendments to the Charter so as to provide (1) that a Referendum shall be taken on the vote of a simple majority of the Council; (2) that a Referendum vote shall be taken by means of a postal voting paper addressed to every member of the Association.

Dr. LAURISTON SHAW had given notice that he would move as an amendment:

That this meeting of the Metropolitan Counties Branch, recognizing that the provisions of the Charter as finally drafted are the outcome of exhaustive discussion and of ultimate agreement by the properly constituted authorities of the Association, and being confident that any reasonable changes subsequently asked for by the Association will not be refused by the Privy Council, is of opinion that the best interests of the Association demand that every member should loyally support the application now being made, and should postpone all attempts to obtain amendments of the Ordinances until the Charter has been formally granted.

The requisition calling the meeting having been read, the CHAIRMAN informed the meeting that he had endeavoured to ascertain whether it would be difficult or not to obtain changes of the Ordinances of purely domestic concern after the Charter had been granted, and read two letters. The first was addressed by the Medical Secretary of the Association, on the instruction of the Chairman of the Organization Committee, to the Association's Solicitor, Mr. W. E. Hempton, asking him whether there was every reason to believe that under the Charter the Privy Council would give its assent to any change of Ordinances of purely domestic concern, such as that relative to the Referendum (Ordinance 17), provided that the desire for such change had been clearly expressed by the Association in the constitutional manner provided by the Charter and Regulations thereunder. The second letter contained Mr. Hempton's reply, which was as follows:

I am of opinion, and have every reason to believe, that no obstacle would be sought by the Privy Council to be placed in the way of this being done, but that, on the contrary, they would be prepared cordially to afford facilities to that end.

Dr. MAJOR GREENWOOD, on a point of order, asked the Chairman whether Dr. F. J. Smith's motion could be properly discussed by the meeting? He submitted that, as the effect of the said motion, if carried, would be to instruct the Council of the Branch to do something which was altogether *ultra vires*, it was a waste of time to discuss it. He drew attention to Article V of the Articles of Association, which laid down that Branch Councils should be constituted in accordance with the by-laws, and then referred to By-law 7, which stated that the "management of the affairs of each Branch shall be vested in a Branch Council." In his opinion, according to the existing constitution of the Association, a Branch Council could deal with nothing beyond matters connected with the Branch. The CHAIRMAN replied that this was a point requiring a legal opinion and he would not give a ruling upon it. If Dr. Smith's motion was carried, the opinion of the Solicitor to the Association could be obtained by the Council of the Branch. But Dr. Smith's motion might be lost, and Dr. Lauriston Shaw's or some other amendment carried, in which case the Branch Council would not be instructed to perform any doubtful action. He took a note of Dr. Greenwood's objection in case Dr. Smith's motion was carried, but ruled that the discussion on Dr. Smith's resolution should proceed. He then called on Dr. Smith to propose his resolution. Dr. SMITH stated that it had been suggested to him that the motion as it appeared on the agenda paper was not fully in accordance with the terms of the requisition calling the meeting, and desired to substitute for it the following:

That this special meeting of the Metropolitan Counties Branch of the British Medical Association instructs the Branch Council to petition the Privy Council with a view to secure such amendments of the Charter as will provide (1) that the Referendum be taken as a decision of a bare majority of the Council, and (2) that it be taken by means of a letter to every member of the Association.

The CHAIRMAN explained the circumstances under which the motion had been drafted in the form in which it appeared on the agenda paper, and stated that Dr. Smith had agreed that it should be printed in that form; the responsibility rested with Dr. Smith. The CHAIRMAN put from the chair Dr. Smith's request for leave to amend his resolution in the way proposed, but the meeting, by a show of hands, did not grant leave. Upon this, Dr. SMITH declined to move the resolution standing in his name. Dr. CRICHTON therefore moved it *pro forma* in his stead; and, after the motion had been seconded, Dr. LAURISTON SHAW proposed the amendment which has been given above. This was seconded by Dr. HUGH R. KER. Dr. F. J. SMITH, Mr. ANDREW CLARK, and Dr. EWART having spoken on the subject, Mr. WITHERS GREEN moved, that the question be now put. This proposition was seconded and carried. Dr. LAURISTON SHAW's amendment being put to the meeting was carried by 118 votes to 23. On the amendment being put as the substantive motion, Dr. HAWTHORNE moved an amendment to it to the effect that a postal vote should be taken of the members of the Branch on the question whether or not the Branch Council be instructed to submit to the Privy Council the opinion of the Branch that the Charter should contain a clause to provide that a Referendum should be taken on the requisition of a majority of the Council and by letter to every member of the Association. This amendment was ruled to be out of order by the CHAIRMAN, as was a similar one proposed by Dr. O'SULLIVAN. Dr. LAURISTON SHAW's amendment was then put as the substantive motion, and carried by a large majority. The CHAIRMAN thanked the members for their attendance, and declared the meeting to be at an end.

WESTMINSTER DIVISION.

A MEETING of this Division was held on January 7th at the Florence Restaurant, Rupert Street, Dr. WILLIAM EWART in the chair. Thirty members were present.

Confirmation of Minutes.—The minutes of the previous meeting were read.

Appointment of Honorary Secretaries.—The appointment of Mr. J. Howell Evans as co-Secretary with Mr. Harvey Hilliard was confirmed.

Executive Committee and Representative on Branch Council.—The following recommendations of the Executive Committee were accepted:

That Mr. J. Howell Evans be elected a member of the Executive Committee to fill the vacancy occasioned by the resignation of Sir William Bennett.

That Mr. Harvey Hilliard be elected as Representative, and Dr. Haslip as Deputy Representative of the Division on the Branch Council.

Annual Representative Meeting.—The report of the Representative of the Division at the Sheffield Meeting (Dr. F. J. McCann) was read and adopted.

Report of Medico-Political Committee.—The report of the Medico-Political Committee *re* school children was adjourned for discussion at a special meeting to be held on January 21st, at the Florence Restaurant, at 9 p.m.

The Future Treatment of the Insane.—In the unavoidable absence of Dr. G. H. Savage, the CHAIRMAN opened a discussion on the Future Treatment of the Insane with brief remarks on the broader aspects. He said that in its nature insanity was of two types, either developmental or degenerative, and in its etiology of two mechanisms, either toxic or traumatic, in the wider sense of these terms. No great therapeutic result could be expected unless treatment were to be (1) applied at the earlier beginnings of the affection, and (2) adjusted to the various phases and levels of mental disablement. Viewed as a disease, the primary indication was, as in any other functional derangement, hygienic. "A Hygiene of Disease" should henceforth occupy a recognized place in our therapeutics. It was specially called for in the treatment of insanity. This hygiene of sickness was essentially an adaptation of the "hygiene of health" for all of our functions, but particularly for those specially stricken, and was to be carried out on the fundamental lines of (1) *nutrition*, (2) *rest*, and (3) *exercise*. Nutrition implied *emunction* and the indispensable "correction of the juices"; and the other two factors were receiving ever-increasing attention. The more special lines of treatment

would have to be determined according to the share which the future might allot to the structural and to the functional etiological factors. It had been suggested that the future treatment would be mainly *bacteriological* and *surgical*. But the urgent question of the day was that of environment. Where and under what conditions should our treatment of the insane be conducted?—at their own homes, in private institutions, in public asylums, or in general or special hospitals? The view was gaining ground that home treatment was often the best for early cases and for convalescents; and that special hospitals were needed where advanced work, such as was now carried out at Claybury, could be carried out not only in pathology, but in the neglected field of specialized therapeutics.

Dr. F. W. MOTT, F.R.S., said that a system of selection was necessary whereby cases might be treated according to one of three methods: the *hospital* for the acute recoverable cases, the *colony* for the physically fit but mentally deficient, and the *custodial* for the incurable and chronic cases. An attempt had already been made at the recently built London County Asylums to place the acute cases in a separate villa for observation, and a number of these cases had been discharged, having never mixed with the chronic lunatics. This was a step in the right direction, but he was particularly interested in the scheme for the establishment of an acute hospital in London, the nature of which he briefly outlined. Eighteen months ago Dr. Henry Maudsley approached the London County Council through him to found an acute hospital in London, offering to give £30,000 for the purpose. This offer had been accepted by the Council, and in the last report of the Asylums Committee it is stated:

We take this opportunity of expressing our satisfaction at the prospect that before long the County of London will possess an institution which will provide specially for the early treatment of acute cases of mental disease. We have long desired that such an institution should be established.

Again the report of the Committee stated:

The most forcible argument for the provision of the hospital, from the point of view of the patient, lies, as it seems to us, in the fact that it will provide opportunity for individual treatment and close personal attention, which are all-important in the early stages of mental disorder.

Dr. Mott said the report also referred to many other advantages which would accrue from the establishment of a mental hospital in London in close association with the general hospitals, their medical schools, and the university; and it concluded by saying

that the acceptance of Dr. Maudsley's generous offer would confer a great and lasting benefit upon a class of sufferers the effectual assistance of whom has hitherto been amongst the most difficult of social problems.

In Berlin, Munich, and other cities and towns of Germany there were a psychiatric clinic and laboratories associated with the university. The effect of such an association had been the rapid development there of clinical and pathological knowledge of mental diseases and the proper systematic training of asylum officers, graduates, and post-graduates in psychological medicine. Dr. Mott asked what better testimony they could have of its national importance and usefulness than the concluding statement in the report, coupled with the testimony of the distinguished alienist physician, Dr. Maudsley, who, by his long experience and knowledge of mental diseases, and who, by his philosophic writings on the physiology and pathology of mind, had gained a world-wide reputation, and was prepared to support his opinion of the necessity of founding such a hospital by a gift during his lifetime of £30,000. Dr. Maudsley would like to see the institution in being, but as yet nothing had been done owing to the difficulty of obtaining a suitable site. Soon after the announcement of Dr. Maudsley's magnanimous offer a similar project was started at Baltimore, and the Americans with characteristic promptitude sent the architect and future director to Europe to learn all the latest developments. They applied to him—Dr. Mott—to know what had been done. When told, the architect said that probably their building would be completed while we were thinking about it. It was well to deliberate before acting, but prolonged deliberation was to be regretted when on all sides such a hospital was recognized as of national importance.

Dr. COUPLAND endorsed the suggestive remarks of Dr. Mott, who was entitled to speak with authority upon

matters to which he had devoted the best years of his life. At the same time, whilst fully admitting the manifest imperfection of available statistics of insanity, Dr. Coupland said he felt that they were not without instruction. For even on the question of heredity they pointed clearly to its preponderant influence in the transmission of a vulnerable nervous system, whose balance might be easily upset by agencies that did not disturb the nominally healthy brain. Dr. Savage had proposed to discuss the future treatment of the insane, a subject intimately bound up with the conclusions arrived at by the recent Royal Commission, whose exhaustive report pointed to a very wide extension of legalized segregation and custody of persons at present uncared for, whose liberty was a peril to the State in many ways. The proposals which logically followed upon the evidence taken by that Commission, could not but materially modify cherished opinions of the liberty of the subject and convince people of the practical impossibility of drawing a line between the "feeble-minded" and the "insane." The promulgation of such recommendations—even if not immediately followed by legislative enactment—ought further to result in a change in the popular conception of insanity and a wider recognition of its nature as a disease to be treated and, as far as possible, prevented. The proposals to deal with cases of incipient insanity without resort to legal certification, to encourage hospital treatment and the formation of farm colonies, indicated advances in the true direction that might eventuate in the gradual elimination of large asylums, admirably equipped and managed as they are in this country, but which from their very character could not be so helpful towards restoring a patient to sanity as more limited and home-like surroundings. Many asylums now were provided with detached buildings for the hospital treatment of acute cases, but, generally speaking, it would almost seem as if England, the pioneer in the more enlightened and humane treatment of insanity, had somewhat fallen behind other nations in certain respects. One could, however, look forward to her regaining her position through the influence on public opinion effected by the labours of the Royal Commission and the enlarged opportunities for scientific study of the subject in accordance with the aims of Dr. Maudsley and Dr. Mott.

Dr. R. LANGDON-DOWN said the subject under discussion had already been dealt with so fully by Dr. Mott, and so well rounded off by Dr. Sidney Coupland, that he should have hesitated to rise had he not been bound in courtesy to comply with the request of his host and their Chairman, Dr. Ewart. The treatment of insanity as a disease had in times past held a different position from that of other diseases, owing to the circumstance that by its very nature it came more obviously and directly into conflict with the public convenience. Owing to the fact that in some cases there was danger to life, limb, and property, not only of the patient, but of those about him, the question had been dealt with primarily as a matter of the protection of the community and the individual under forms of law. This was of course the wrong way to approach a disease as such, and the therapeutics of insanity had suffered accordingly. There were, however, signs of an important change in the attitude of the community, which could be read in the recent report of the Royal Commission on the Feeble-minded. For example, the report proposed that in future, instead of every insane patient being described as a lunatic or person of unsound mind requiring detention, whatever the nature or degree of his defect, it would be possible, should legislation follow on the lines of this report, for the medical adviser to say this case of mental defect was one requiring supervision, that case one for which simple certification was desirable, while for this case certification and detention were necessary. Similarly, it was proposed to make provision for observation wards for incipient cases and for temporary certification of unconfirmed disease, while farm colonies and other methods appropriate to the conditions of different patients were contemplated. One saw also evidence of the recognition of the fact that insanity did not spring suddenly into existence *de novo*, but could be traced back to earlier stages when it could be more effectually dealt with. Here, then, there was promise of improved methods in the treatment of the insane.

Mr. J. HOWELL EVANS was inclined to consider that too much stress had been made of heredity in many diseases,

including insanity—for example, in tuberculosis, where heredity was once considered even the sole cause, it was now found to be a difficult task to give any sound evidence of a heredity factor as opposed to family environment. Now normal heredity, with its tendency to health in the evolution of the species, demanded far greater consideration than the assumption that a disease, tendency to a disease, or basis for a disease was heredity. The trauma of childbirth was known to cause many cerebral defects; was it not fair to consider many later cerebral conditions might be the result of such traumatism? Many congenital lesions had been shown by the investigations of antenatal pathology to be due to toxic and microbic factors of external origin transmitted from the mother to her child, and daily the array of evidence against the hereditary transmission of disease was increasing. Syphilis (acquired, congenital, and of the third generation) was now being shown to be due to the persistence of the spirochaete, so that shortly they might expect to learn that as this disease, which accounted for so much insanity, was due to a definite organism, so also might other forms of insanity be shown to be due to microbic effects from without.

Dr. FINUCANE spoke in reference to (a) the overcrowding at London County Council asylums and the dirty conditions of some of these institutions as previously noted by himself; (b) the too early discharge of insane patients reported to have recovered; (c) the difficulties met with in seeking a direct connexion—especially among women—of a history or evidence of syphilis, acquired or inherited, in cases of general paralysis; (d) the present obscurity of the pathology of insanity and the possibility of the change being rather biochemical than of pathological or parasitic invasions.

Dr. T. D. SAVILL wished to express his appreciation of Dr. Mott's remarks and to endorse the great need which existed for the foundation of a hospital for the treatment of incipient insanity. England was sadly behind the times in this respect. He had just returned from Germany, where he had visited Professor Kraepelin's hospital at Munich. When approaching this building, any one would suppose that it would house 600 or 700 patients; but there were only 140 beds, three-fourths of the building being devoted to laboratories of all kinds for the investigation and extensive hydrotherapeutic and other departments for the treatment of mental disorders. Another point he wished to refer to was the larger space devoted to single wards. In Professor Ziehen's clinic at the Charité Hospital in Berlin the proportion of single wards to larger wards was in the ratio of 1 patient to 3 patients segregated. Quite fifty of Professor Ziehen's patients were housed in single or double wards. Dr. Savill thought the present system of the segregation of lunatics was most unscientific, even if it was not actually cruel. The rational treatment of lunacy in its incipient stages could be carried out only in most cases by "single care." In the course of his practice he was brought into contact with a considerable number of incipient lunatics, but he had the strongest objection to sending them to asylums in the present circumstances. He was proud to think that it was over three years since he signed a lunacy certificate. If the patient could not remain with his friends, he (Dr. Savill) always urged his going into the family of a doctor or some other place involving "single care." He wished more medical men would lay themselves out for this self-sacrificing work, and receive these troublesome cases into their homes for a time.

Dr. DONALD BAYNES said he wished to ask Dr. Mott as to the eventual termination of the patients received in his acute hospital. Were they to be permitted to go out and propagate children who must have a taint of insanity? For example, he knew a man and a woman who met in a private asylum and fell in love. They were dismissed as cured, married, had three children, and were subsequently both sent back to the asylum. What about the children?

Dr. BERNARD O'CONNOR said that had he known that they were to have so interesting a discussion, he would have prepared some remarks on the rigidity of the phrase "of unsound mind" which appeared on the lunacy certificate. A man presenting a strong will and other marked characteristics throughout his life was often regarded as a genius, or at least as a remarkable man; another who showed similar qualities, but not before mature age, had a chance of being certified as being "of unsound mind" by a certain class of alienists. He had in his mind the case of a

gentleman, aged 65 years, who had been condemned as being "a person of unsound mind." One of the certificates alleged that "he is of failing memory," then it added, "senile mental changes"—which, to the speaker's mind, in this case, might seem the same thing—"rambles in his conversation," "is very forgetful as to past facts and dates," etc., and that was about all! Now he contended that if, by that test, a man was to be put away in an asylum, then some of the judges on the Bench, many practising physicians and surgeons, many members of the Bar, many successful business men—and even some of those very men who signed such certificates also—should be made to accompany him. In fact, if such a test were rigidly applied, he did not see how any one over, let them say, 50 years of age, could escape; for at that age, as a rule, a man had passed his prime; his muscular and pulmonary and cardiac strength was not what it was, say, twenty years before. His eyesight was less keen, and his hearing had become probably less acute; hence he was not perfectly sound physically. He was, therefore, "unsound"; and contemporaneously with these body changes they noted corresponding mind alterations. They often found a man, apparently in good health for his age, who might be a little slow of thought; who, during conversation, might be in search of a word, quasi-equivalent to one which he had used a moment before, generally a verb; often forgetful of names of persons, and not infrequently of names of things as well; he might also repeat or omit a word or two in a hastily-written letter, and, indeed, omit some particular letter in the spelling of a word—and it was generally the same word—all which he used not to do formerly. How often one heard him say in conversation: "Oh, the word has gone," or "the thought has gone." Now, such a man, engaged, perhaps, actively in the duties of his calling, was literally and etymologically of "unsound"—that is, not of sound-mind; but was he, on these facts, to be classed with lunatics and with those who were described technically as "persons of unsound mind"? The men who would sign such certificates as these said, by their diagnoses, "Yes," and signed accordingly.

The following resolution, proposed by Dr. INGLIS PARSONS, was passed unanimously:

The Westminster Division of the British Medical Association, being impressed by the necessity for establishing a hospital for the treatment of patients suffering from acute insanity, urges the Central Council to approach the London County Council with a view to their taking immediate steps to establish the hospital suggested by Dr. Maudsley, and to accept his offer of endowment.

WATFORD AND HARROW DIVISION.

A MEETING of the Division was held at Harrow on January 5th, Dr. EDWARDS in the chair, and there was a fair attendance.

Confirmation of Minutes.—The minutes were read and confirmed.

Auditors.—Dr. Hall and Dr. Lambert were appointed auditors.

Report re Referendum.—Dr. WILLIAMS, the Representative of the Division, reported upon the present position regarding the application for the Charter, and said he thought the opposition on account of the Referendum would now cease.

Hospital Certificates.—A letter from the Medical Secretary was read re the giving of certificates by the hospitals in the district, and the Honorary Secretary was instructed to ascertain the custom at the following hospitals: West Herts Hospital, Harrow Cottage Hospital, Watford Cottage Hospital, Stanmore Cottage Hospital, Bushey Cottage Hospital.

Appointment of Representative.—A letter from the Medical Secretary was read suggesting the advisability of the earlier appointment of Representative, and pointing out that the Organization Committee was authorized to sanction, on behalf of the Council, an alteration of the Division rules where necessary to secure this object.

School Clinics.—A long report from the Medico-Political Committee, a copy of which had previously been sent to each member of the Division, was read, and an interesting and animated discussion ensued, the CHAIRMAN opening with a very complete summary of the position at present. The general opinion was that school clinics and special

buildings are undesirable in small towns and rural districts, but the establishment of a General Medical Service was favoured. Finally, it was resolved that the following resolutions of the Division, slightly modified from that already presented to the Representative Meeting by Dr. Williams of Harrow, would best meet the case.

That the medical inspector should report the defect to the Education Committee.

That the Education Committee should notify the parent or guardian that the defect must be at once attended to.

That where the parent or guardian showed that he was unable to pay the fees required, the Education Committee should give a voucher for the payment of the fees on a fixed scale—after the manner in which payments are made for soldiers on furlough in districts where there is no available officer of the Royal Army Medical Corps.

In this way the relations of the medical man, and his patient will not be disturbed, as a free choice would be left to the parent or guardian to select his own medical man; but it should be distinctly enacted that charitable institutions should not be made use of in this connexion. The following replies were given to questions contained in the letter:

1. *Inspection (a), (b), (c), (d).*—That the appointment of medical inspectors should be offered as frequently as possible to men in general practice in each district, and that the most suitable system of payment is that adopted by the Herts County Council.

2. *Treatment.*—No school clinics should at present be started in small towns or rural districts, but the surgeries of general practitioners should be recognized.

3. *Payment* should be by voucher, as already described.

4. More adequate provision should be made by charitable institutions for ascertaining the financial position of the cases the treatment of which they undertake.

5. That a written report shall be given by the medical inspector of all defects found, and this report shall be handed to the medical practitioner when treatment is applied for.

OXFORD AND READING BRANCH:

READING DIVISION.

A MEETING of this Division was held on January 9th. Thirteen members were present, including Dr. Price, Senior Medical Officer to the Borough Schools, and Dr. Taylor, Consulting Medical Officer to the County Council (rural areas).

Medical Inspection of School Children.—The Division, by 7 votes out of 13, was in favour of payment by salary for urban districts. For rural districts it was proposed and carried:

That where a school nurse is employed there should be a minimum payment of 2s. per child inspected and a 3d. capitation fee for every child upon the school roll, and adequate remuneration for travelling expenses and clerical work.

Regarding the treatment of children found defective, Dr. TAYLOR suggested:

That in rural areas school clinics shall only apply to diseases of the eye and teeth, at all events until some system of working such clinics has been properly tested.

This suggestion was agreed to.

SOUTH-EASTERN BRANCH:

CANTERBURY AND FAVERSHAM DIVISION.

A MEETING of this Division, to which the members of the other Divisions comprised in the old East Kent District (Ashford, Dover, Folkestone, and Thanet) were invited, was held on January 7th at the County Hotel, Canterbury. Dr. SIDNEY WACHER, Chairman of the Division, presided. Thirty members were present.

Cinematograph Demonstration.—An address and cinematograph demonstration on Some Characteristic Features of Nervous Diseases was given by Dr. WILFRED HARRIS. The cinematograph showed the gait, tremors, other movements and physical characteristics of an excellent series of nervous cases taken from the wards, etc., of some of the London hospitals. The meeting thus enjoyed from these life-like pictures a most excellent clinic on nervous diseases. Keen appreciation of the demonstration was shown by those present, and a hearty vote of thanks was accorded the lecturer.

Medical Inspection of School Children.—A discussion followed upon the report of the Medico-Political Committee of the Association upon certain points arising in connexion with the medical inspection of school children and the treatment of those found defective. On the treatment of defective school children the Canterbury and Faversham Division decided unanimously in favour of:

1. Payment per case.
2. (As to staff surgeons.) Of the motion of Dr. A. H. Williams (Watford and Harrow) printed in the report.
3. Of leaving to the school authorities the duty of ensuring that parents who can afford to pay for such treatment are compelled to do so.

Police Emergency Fees in Kent.—A letter was read from the Secretary of the South-Eastern Branch stating that "The Subcommittee of the Branch Council appointed to consider the question of police fees is to remain a standing subcommittee, and, in the event of a case occurring in which it seemed desirable to take legal advice, that this subcommittee should add to their number the Secretary of the Division in which the case occurred, and should then have power to consult the Solicitor of the Association, and take action if so advised."

Next Meeting.—The next meeting will be held at Faversham in March.

Luncheon.—The Chairman kindly entertained members at luncheon prior to the meeting.

Vote of Thanks.—A hearty vote of thanks was accorded Dr. Wachter for presiding and for his hospitality.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Fleet Surgeon E. C. LOMAS, M.B., D.S.O., to the *President*, additional; for three months' course at West London Hospital, January 12th; Fleet Surgeon H. E. TOWNSEND, M.B., D.S.O., to the *President*, M.B., to the *Andromeda*, for the voyage home, undated; Staff Surgeon M. CAMERON, M.B., to the *Royal Arthur*, January 14th (since cancelled); Staff Surgeon W. K. HOPKINS, lent to the *Royal Arthur* for the voyage, January 15th.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

MAJOR R. J. BLACKHAM, D.P.H., late Special Sanitary Officer, Southern Command, has been appointed Divisional Sanitary Officer, 1st (Peshawar) Division, Northern Army of India.

Colonel C. S. WESTCOTT, C.M.C., who is serving in India, is directed to officiate as Principal Medical Officer, 5th (Mhow) Division.

INDIAN MEDICAL SERVICE.

COLONEL W. O'HARA, Madras, is appointed Principal Medical Officer, Burma Division.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

First London Territorial Division.—Surgeon Lieutenant-Colonel and Honorary Surgeon-Colonel R. F. C. S. Eng, from the Honorary Colony of the Eastern Command, Maidstone Companies, and the London District, London Companies Royal Army Medical Corps (Volunteers), is appointed to the Honorary Colony of the Division, with precedence as in the Volunteer Force, April 1st, 1908.

For attachment to Units other than Medical Units.—Surgeon-Lieutenant-Colonel F. W. GIBSON, from the Tyne Division (Electrical Engineers) Royal Engineers (Volunteers), to be Lieutenant-Colonel, with precedence as in the Volunteer Force, April 1st, 1908. EDGAR RED DATE Surgeon-Captain, 3rd Glamorgan Volunteer Rifle Corps) to be Captain, April 1st, 1908. The undermentioned Surgeon-Lieutenant-Colonels, and Honorary Surgeon-Colonels, from the 5th Volunteer Battalion, the Manchester Regiment, to be Lieutenant-Colonels with the honorary rank of Surgeon-Colonels, with precedence as in the Volunteer Force, dated April 1st, 1908. THOMAS FOUR, RONALD L. SPRAGG, Lieutenant H. A. C. HARRIS, from the Sussex and Kent Bearers Company, Royal Army Medical Corps (Volunteers), to be Lieutenant, with precedence as in the Volunteer Force, dated April 1st, 1908. Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel W. M. NORRIS, from the 5th Battalion, the Manchester Regiment, to be Lieutenant-Colonel, with the honorary rank of Surgeon-Colonel, with precedence from August 20th, 1904, dated April 1st, 1908. Lieutenant A. H. GODWIN, from the 2nd West Lancashire Field Ambulance, to be Lieutenant, dated August 13th, 1908. JOHN W. BIND, to be Captain, dated September 14th, 1908. Lieutenant C. H. SEDGWICK, to be Captain, dated September 25th, 1908. Surgeon-Captain J. R. WILLIAMS, M.B., from the 6th Battalion, the Royal Welch Fusiliers, to be Captain, dated November 18th, 1908. Surgeon-Major HARRY LEGRÉ DE LEGRÉ, M.B., from the 4th Battalion, Alexandra, Princess of Wales's Own (Yorkshire) Regiment, to be Major, dated November 18th, 1908. Captain W. B. WILLIS resigns his commission, dated December 4th, 1908.

First East Anglian Field Ambulance.—Captain F. A. BROOKS, to be Major, November 30th, 1908.

Second London Field Ambulance.—Captain P. F. SHAW, to be Major, December 15th, 1908.

Second North Midland Field Ambulance.—Captain and Honorary Major H. W. PLANT (Retired List, Volunteers), to be Transport Officer, with the honorary rank of Major, June 28th, 1908.

First Northumbrian Field Ambulance.—Lieutenant FRANK HAWTHORNE, M.D., to be Captain, December 1st, 1908.

First Welsh Field Ambulance.—Surgeon-Major T. L. K. DAVIES, M.B., from the 6th Battalion, the Royal Welsh Fusiliers, to be Major, November 18th, 1908.

UNATTACHED LIST.

The undermentioned officers of Volunteer Corps are appointed to the Territorial Force, on the Unattached List, for service with the contingents of the Senior Division of the Officers' Training Corps as stated against their names in the ranks and in the precedence which they severally held as officers in the Volunteer Force, dated July 17th, 1908: Surgeon-Captain W. T. BROOKS, M.B. (1st Oxford University) Volunteer Battalion the Oxfordshire and Buckinghamshire Light Infantry, Oxford University, to be Captain, Surgeon-Lieutenant W. D. STRICKLAND, M.B. (1st Oxford University) Volunteer Battalion the Oxfordshire and Buckinghamshire Light Infantry, Oxford University, to be Lieutenant.

Captain H. WADDE, M.D., from the Edinburgh Company, Royal Army Medical Corps (Volunteers), to be Captain, for service with the Edinburgh University Contingent, Senior Division, Officers' Training Corps, October 8th, 1908.

The announcements in the *London Gazette* of November 6th, 1908, regarding the transfer of Surgeon-Major Hugh Ransom Bramwell, M.B., and Surgeon-Captain John Cromie, from the Tynemouth Royal Garrison Artillery (Volunteers) are cancelled.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

HONORARY ASSISTANT SURGEON W. H. COCKER, 5th Lancashire Regiment, is retired, under the conditions of paragraph 103, Volunteer Regulations, March 31st, 1908; he retains his rank and uniform.

ROYAL ENGINEERS (VOLUNTEERS).

SURGEON-MAJOR F. W. GIBSON, the Tyne Division (Electrical Engineers), to be Surgeon-Lieutenant-Colonel, March 31st, 1908.

VOLUNTEER RIFLES.

SURGEON-CAPTAIN J. SWANSON, 1st Volunteer Battalion the Highland Light Infantry, resigns his commission, March 31st, 1908.

CHANGES OF STATIONS.

The following changes of stations amongst the officers of the Army Medical Service have been officially reported to have taken place during December, 1908:

	FROM	TO
Colonel H. J. W. BARROW	Dalhousie	Lahore.
" J. G. HARWOOD, F.R.C.S. Edin.	Darjeeling	Calcutta.
" M. W. KERR, D.S.O.	Tidworth	India.
Lieut.-Col. R. W. FORD, D.S.O.	Aldershot	Gwalior.
" M. L. HEARN	Dublin	India.
" H. H. JOHNSTON, C.B., M.D.	Straits Settlements	Curragh.
" G. E. WESTON	Bombay	S. Command.
" C. E. FAUNCE	Tidworth	Gibraltar.
" J. J. C. DONNET	Saugor	Kamptee.
" G. E. HALE, D.S.O.	Murree	Rawal Pindi.
" S. POWELL, M.D.	Adershot	Secunderabad.
" M. L. HEARN	China	Irish Command.
" J. S. GREEN, M.B.	Hyderabad	Nasirabad.
" C. A. LANE, M.B.	Ceylon	Tidworth.
" H. CARR, M.D.	Nasirabad	Nasirabad.
" A. KENNEDY	Bachnari	Aden.
" H. P. G. ELKINGTON	Mhow	Jhansi.
" J. FALLON	Western Comd.	Preston.
" J. J. RUSSELL, M.B.	Irish Command.	Irish Command.
" A. L. F. BALE	Nowgong	Shillong.
Major F. J. MORGAN	Nasirabad	India.
" E. A. BURNSIDE	Multan	Mount Abu.
" M. P. C. HOLT, D.S.O.	Woolwich	Amboia.
" J. W. BULL, D.S.O.	Mullingar	Madras.
" J. C. WEIR, M.B.	Newcastle	Lucknow.
" J. GILVIN	London Dist.	India.
" W. HALLARD, M.B.	Chariar	Bellahdur.
" F. SMITH, D.S.O.	Murree	Rawal Pindi.
" E. MCK. WILLIAMS	Straits Settlements	Northern Comd.
" J. C. CONNOR, M.B.	Parkhurst	India.
" W. A. S. GRAHAM	Jubbulpore	Nowgong.
" D. D. SHANAHAN	Kilworth Camp	Secunderabad.
" F. J. WADE-BROWN	London Dist.	India.
" J. E. BROSIDEN	N. China	Bellahdur.
" N. FAULHUE, M.B.	Campbellpore	Mhow.
" N. TYACKO	Lahore	Southern Comd.
" E. W. SLAYER, M.B.	Glasgow	Bangalore.
" E. P. MOORE, M.B.	Murree	Rawal Pindi.
" T. P. JONES, M.B.	Hong Kong	London Dist.
" A. G. THOMPSON, M.B.	Cardiff	India.
" G. S. MANSFIELD, M.B.	Bombay	Eastern Comd.
" W. J. TAYLOR, M.B.	S. China	Bellahdur.
" R. W. LOUTHURST, M.B.	Eastern Comd.	Warley.
" D. J. COLLINS, M.B.	Pretoria	Wynberg.
" J. B. ANDERSON	Bareilly	Benares.
" E. S. CLARK, M.B.	Peshawar	Nasirabad.
" W. TIBBIS, M.B.	Eastern Comd.	Shoeburyness.
" A. E. MILLER	Wellington	"St. Thomas"
" J. P. SILVER, M.B.	Bombay	Scottish Comd.
" E. B. STEEL, M.B.	Nasirabad	Nasirabad.
" F. KIDDE, M.B.	Secunderabad	Wellington.
" E. C. HAYES	Ceylon	India.
" E. A. HOOPER, D.S.O.	Quebec	Eastern Comd.
" S. A. ARCHER	Devonport	India.
" M. P. CORKERY	Woolwich	India.
Captain T. H. M. CLARKE, C.M.G., D.S.O., M.B.	Lucknow	Southern Comd.
" B. WATTS	Fermoy	Campbellpore.

Captain J. D. G. Macpherson, M.B.	Alfredshot
G. B. Crisp	Alford
L. E. L. Parker	Woolwich
M. H. G. Fell	Trawsfaydd
N. J. C. Rutherford, M.B.	Eastern Comd.
F. J. Palmer	Dublin
W. R. Blackwell	Dublin
A. Chopping	Cheriat
O. W. A. Elmer	Limerick
B. F. Winata	Gaenabury
J. P. Adey-Curran	Bulford
G. Ford, M.B.	Richmond
F. S. Walker, F.R.C.S.I.	Irish Comd.
O. O. Hyde, M.B.	Colaba
J. M. Outbert, M.D.	Edinburgh
J. Dorgan, M.B.	Queenstown
C. H. Furnival	Halifax
R. F. Ellery	Devonport
W. J. Water	Meerut
H. J. Brunsell, M.B.	Dalhousie
H. E. J. A. Howley	Sheffield
H. G. Finches	Cosham
S. E. Smith, M.D.	Dachai
J. H. Barbour, M.B.	Londonerry
J. H. R. Wiltier, M.D.	Mosney Camp
E. V. A. Ien	Chatham
W. P. Ellis	London
J. McKerric, M.B.	Lucknow
S. D. Walker, M.D.	Hyderabad
N. M. V. Meadows	Murree
N. E. J. Harding, M.B.	Chauthatia
F. W. W. Dawson, M.B.	Eastern Comd.
J. E. H. Gatt, M.D.	Cork
R. M. Rankins, M.B.	Hong Kong
B. G. Pash	Solon
D. P. Wasson, M.B.	Kanchi
J. E. Powell	Bareilly
M. C. Vetherell, M.D.	Khauspur
W. MacD. MacDowall	Kamptee
G. F. Buz	Varley
A. L. O'Way, M.B.	Nasirabad
C. H. Turner	Murree
B. H. Hole, M.B.	Karachi
G. F. Gathard	Sialkot Pindi.
M. P. Grant	Quetta
A. S. Arthur, M.B.	Mhow
C. Ryley	Hong Kong
H. T. Wilson	Neilana
R. H. L. Cordner	Campbellpore
A. T. Frost, M.B.	Hong Kong
N. A. C. Doig	Neilana
C. R. Miller	Con'd.
A. W. Gater	Kalabagh
G. B. F. Churchill	Agra
Lieutenant C. G. Browne	Sialkot
E. G. Athorniz	Wellington
M. B. H. Ritchie	Upper Toppra
M. J. Cromie	Ranikhet
J. S. Dunne	Chakrata
A. D. O'Carroll, M.B.	Daghai
H. Stewart, M.B.	Ambla
W. R. Galwey, M.B.	Egypt
G. De la Cour, M.B.	Peshawar
A. S. Williams	Calcutta
V. G. Johnson	Norshera
C. R. M. Morris, M.B.	Khyra Gali
D. De C. O'Grady	Cheriat
L. G. Gibson	Lahore
B. Johnson	Queenstown
G. P. A. Bruckon	Cork
F. L. Bradish	Queenstown
J. A. Bennett, M.B.	Cosham
C. W. Boyle	Wanley
H. L. Howell	Shorncliffe
W. F. M. Loughman	Golden Hill
T. W. Browne	Fethard
W. L. Thompson, M.B.	Bordon
C. Kelly, M.B.	Gosport
E. C. Phelan, M.B.	Lucknow
A. H. Jacob	Perozepore
C. H. Dwyer	Lucknow
J. du P. Langrishe, M.B.	Dilanylin
G. F. Rudkin	Rawal Pindi
A. C. Elliot, M.B.	Pembroke Dk.
W. B. Purdon, M.B.	Kilkenny
V. T. Carruthers, M.B.	Aldershot
F.R.C.S.	York

FROM	TO
Alfredshot	Agra.
Alford	Mhow.
Woolwich	Bareilly.
Trawsfaydd	Chester.
Eastern Comd.	Canterbury.
Dublin	Cork.
Dublin	India.
Cheriat	Peshawar.
Limerick	Kinsale.
Gaenabury	Perozepore.
Bulford	Tidworth.
Richmond	Bradford.
Irish Comd.	Fernoy.
Colaba	Dublin.
Edinburgh	Edinburgh.
Queenstown	Cork.
Halifax	York.
Devonport	Falmouth.
Meerut	Devonport.
Dalhousie	Lahore.
Sheffield	Lichfield.
Cosham	Parkhurst.
Dachai	Wanley.
Londonerry	Jubbulpore.
Mosney Camp	Dublin.
Chatham	India.
London	Sitapur.
Lucknow	Hyderabad.
Hyderabad	Eastern Comd.
Murree	Rawal Pindi.
Chauthatia	Scottish Comd.
Eastern Comd.	Queensdown.
Cork	Eastern Comd.
Hong Kong	Ambla.
Solon	Ambla.
Kanchi	Ranikhet.
Bareilly	Meerut.
Khauspur	Ambla.
Kamptee	Ambla.
Varley	Mhow.
Nasirabad	Rawal Pindi.
Murree	Quetta.
Karachi	Sialkot Pindi.
Sialkot Pindi.	Karachi.
Quetta	Nasirabad.
Mhow	Eastern Comd.
Hong Kong	Rawal Pindi.
Neilana	Irish Com'd.
Con'd.	Meerut.
Kalabagh	Norshera.
Agra	Jullundur.
Sialkot	Lucknow.
Wellington	Madras.
Upper Toppra	Ranikhet Pindi.
Ranikhet	Bareilly.
Chakrata	Shahjahanpur.
Daghai	Ambla.
Ambla	Ambla.
Egypt	Southern Comd.
Peshawar	Ambla.
Calcutta	Lebons.
Norshera	Peshawar.
Khyra Gali	Attack.
Cheriat	Peshawar.
Lahore	Jullundur.
Queenstown	Calcutta.
Cork	Secunderabad.
Queenstown	Rawal Pindi.
Cosham	Poon.
Wanley	Lahore.
Shorncliffe	Poon.
Golden Hill	Lucknow.
Fethard	Kamptee.
Bordon	Lucknow.
Gosport	Secunderabad.
Lucknow	Barrackpore.
Perozepore	Rawal Pindi.
Lucknow	Calcutta.
Dilanylin	Mhow.
Rawal Pindi	Perozepore.
Pembroke Dk.	Bangalore.
Kilkenny	Rawal Pindi.
Aldershot	Devonport.
York	Ceylon.

Hospitals and Asylums.

THE ROYAL EDINBURGH ASYLUM, MORNINGSIDES.
 The annual report for the year 1907 of this important private asylum is notable in that it contains the last annual report of Dr. Clouston as Physician-Superintendent. Appointed to this post in 1875, the institution has grown, under his capable hands, into one of the largest, best-appointed, and renowned of hospitals of its kind; New Craig House, the stately edifice on Craiglockhart Hill, and its adjoining villas, providing accommodation and possessing advantages probably unsurpassed by any similar institution in Europe, have been erected, and the West House has been entirely remodelled. The managers of the asylum, in their report, pay a well-deserved tribute to Dr. Clouston on his retirement, and assure him "of their high regards and esteem and their earnest wish that all good may attend him and his in the time to come," in which good wish we desire to join. On January 1st, 1907, there were 837 patients on the registers, and there remained on the last day of the year 743. The total cases under treatment during the year numbered 1,154, and the average number daily resident 731.7. During the year 317 cases were admitted, of whom 266 were first and 51 not-first admissions. The number of admissions was less by 100 than the previous year, this being due to the opening of Bangour Village Asylum, which received most of the patients from the Edinburgh Parish Council. Of the total admissions, 134 were private patients, of whom 13 were voluntary boarders. This is the largest number of private patients ever received at this asylum. Of the total admissions, in 86 the attacks were first attacks within three and in 61 more within twelve months of admission; in 60 not-first attacks within twelve months, and the remainder were either of more than twelve months' duration (102), or congenital cases (8) an admission. Only 54 of the total were in average health and condition on admission, their condition being indifferent or reduced in 249, and bad and very exhausted in 54. The admissions were classified according to the forms of mental disorder into: Mania of all kinds, 112; melancholia of all kinds, 126; secondary, senile, and organic dementia, 22; general paralysis, 40; acquired epilepsy, 9; and congenital or infantile defect, 8. With regard to the preponderance of melancholic cases, Dr. Clouston states that in congenital cases, and in the excited cases with depressed or melancholic, and reviewing the years of his office back to 1874, his statistics show that up to the year 1890 the number of melancholics had never touched that of the maniacal, the total number of melancholic cases up to that year equalling 40 per cent. of the whole. In 1900, however, the number of depressed cases exceeded those of the excited, and in the eighteen years since 1890 they have formed 46 per cent. of the whole. The year 1890, Dr. Clouston points out, was the year of the greatest evidence of affluence, and, in his opinion, the subsequent increase of the proportion of melancholic cases is accountable to the influence of that disorder. Of the probable etiological factors amongst the admissions the following are the principal assigned: Alcoholic intemperance in 46, or 14 per cent.; syphilis in 6; critical periods in 71; epilepsy in 9; previous attacks in 65; gross brain disease in 6; various bodily diseases and disorders in 20; and mental and moral stress in 19. Hereditary influences were present in 16, or just under 24 per cent., and congenital defect existed in 8. During the year 85 were discharged as recovered, giving a recovery-rate on the admissions of 26.3 per cent. as compared with the average for this institution of 38.5 per cent. Like all other asylums, Morningside shows a declining discharge-rate as recovered. Dr. Clouston believes that this is due to the different classes of patients now sent to asylums—there are more cases of the old, weakened, and paralysed class sent now than formerly. The average mean age for the years 1874-1894 was 39.5 years; that for 1898-1907 was 42.1 years, whilst in the same time the proportion of cases recorded as in weak and exhausted condition on admission has risen from 9.9 per cent. to 16.3 per cent. There were also 140 discharged as relieved and 103 as not improved, and during the year 83 died. These deaths give a death-rate on the average numbers resident of 7.2 per cent., as compared with 11.1 per cent. for the preceding year, or the average for this institution of 7.1 per cent. The deaths were due in 40 cases to cerebro-spinal diseases, including 27 deaths from general paralysis; in 21 to chest diseases, including 8 deaths from pulmonary tuberculosis, and in the remainder to general diseases including 1 death from general tuberculosis and 7 from senile decay. In all 10 deaths, or 12 per cent. of the total deaths, were due to tuberculous disease. There was no serious accident and the general health appears to have been good throughout the year.

SALOP AND MONTGOMERY COUNTY ASYLUM.

Lieutenant R. E. Todd, M.B., appointed on probation July 29th, 1907, is stationed in the London District.

The following Lieutenants, appointed on probation August 1st, 1908, are stationed as under: D. S. Buist, M.B., C. Ryles, M.B., S. McK. Saunders, H. Gall, and C. Clarke, M.B., Eastern Command; W. E. Marshall, M.B., and D. H. C. MacArthur, London District; V. E. Vaughan, M.B., and J. R. Jones, M.D., W. G. Wright, A. T. J. McCreery, M.B., C. G. Sherlock, M.D., C. H. O'Rourke, M.B., S. W. Kyle, M.B., and J. W. Lane, M.D., Irish Command; A. M. Pollard, T. B. Nicholls, M.B., H. Bevis, G. S. Parkinson, and F. H. Somers-Gardner, M.B., Southern Command; N. R. McNeill, M.B., T. J. Mitchell, M.B., and D. E. C. Pottinger, M.B., Scottish Command; A. R. Wright, M.B., and G. H. Stack, M.B., Aldershot Command; A. W. Byrne, M.B., Western Command.

Lieutenant R. O. Kelly, appointed on probation February 4th, 1908, is stationed at Aldershot.

On January 1st, 1907, there were in this asylum, according to the report of Dr. D. F. Rambant, the medical superintendent, 738 patients, and on December 31st, 1907, there were 754. In addition on the latter date there were 20 boarded at Abergavenny Asylum, 20 at Cotford Asylum, 55 at Morpeth Asylum, and 25 at Forden Workhouse, giving a total of 120 for whom proper accommodation was not available in the asylum of their own district. The total cases under treatment at the asylum during the year numbered 980, and the average number daily resident 791. During the year 197 were admitted, of whom 145 were first admissions, 40 readmissions, and 12 transferred from other asylums. Thus, 185 were direct admissions, and of these

the attacks were first attacks within three months of admission in 77, and within twelve months of admission in 16 more, not first attacks within twelve months in 47, within twelve months but unknown whether first attack or not in 17, and the remainder were either of more than twelve months' duration on admission, or of congenital origin (8). The total admissions were classified as to the several forms of mental disorder into: Mania of all kinds, 76; melancholia of all kinds, 24; senile and secondary dementia, 30; delusional insanity, 17; general and confusional insanity, 7; stupor, 5; cases of congenital and primary dementia, 1 each, and cases of congenital or infantile defect, 22. As to the supposed etiological factors in direct admissions, alcohol was assigned in 19, 18, or 9.7 per cent.; syphilis in 5; critical periods in 19; influenza in 6; nervous diseases in 11; other bodily affections in 8; child-bearing in 8; and mental stress in 25. An insane heredity was ascertained in 31, and congenital defect, not amounting to imbecility, existed in 6. During the year 71 were discharged as recovered, giving a recovery-rate on the direct admissions on 58.57 per cent., or of the recovered in the direct admissions of the direct admissions of 36.75 per cent. There were also 23 discharged as relieved, 15 removed under contract, 11 as not improved, and 3 not insane. During the year also 78 died, giving a percentage death-rate on the average numbers resident of 9.85, an improvement on the 14.12 per cent. of the previous year. The deaths were due in 27 to cases of cerebro-spinal disease, including 12 deaths from general paralysis; in 26 to chest diseases, including 12 deaths from pulmonary tuberculosis; in 3 to abdominal diseases; and the remainder to general diseases, including 5 deaths from old age and 2 from tuberculosis other than pulmonary. Thus almost 18 per cent. of the total deaths were due to tuberculous disease. All deaths were from natural causes, and no inquest was held during the year.

KESTEVEN COUNTY ASYLUM.

THE annual report of Dr. J. A. Ewan, the medical superintendent of this asylum, shows that there were 371 patients on the asylum registers on January 1st, 1907, and that there remained 373 at the end of the year. Of those remaining 225 were chargeable to the unions in the County of Kesteven, the rest being mostly chargeable to the Stoke of Peterborough and to West Ham. The total cases under treatment during the year numbered 522 and the average number daily resident 384. During the year 118 were admitted, of whom 56 were direct and 62 indirect admissions, and 2 statutory readmissions. Of the direct admissions, in 28 the attacks were first attacks within three and in 8 more within twelve months of admission; in 11 not-first attacks within twelve months of admission, and in the remainder the attacks, whether first attacks or not, were of more than twelve months' duration (6) or of congenital origin (5). The admissions were classified according to the several forms of mental disorders into: Mania of all kinds, 23; melancholia of all kinds, 14; senile and secondary dementia, 25; delusional insanity, 27; volitional insanity, 11; alternating insanity, 5; general paralysis and confusional insanity, 7 each; and insanity with epilepsy, 5; primary dementia, 3; stupor, 1; and cases of congenital or infantile defect, 24. As to etiological factors in the direct admissions, alcohol was assigned in 8, or 14 per cent.; syphilis in 1; critical periods in 13; nervous diseases in 5; other bodily diseases in 2; child-bearing in 5, and mental stress in 13. An insane heredity was ascertained in 11, and congenital defect, not amounting to imbecility, existed in 10. During the year 18 were discharged as recovered, giving a recovery-rate on the direct admissions of 31.03 per cent., or of recoveries on the direct admissions on the direct admissions of 48.48 per cent. There were also 6 discharged as relieved and 100 as not improved. 98 of these latter being patients retransferred to the London County Council's Asylum at Long Grove. There were also during the year 25 deaths, giving the death-rate of 6.51 per cent. of the average numbers resident. The deaths were due in 6 to cerebro-spinal diseases; in 8 to diseases of heart and blood vessels; in 3 to respiratory disease; in 2 to old age, and in 6 to general diseases, including 3 deaths from pulmonary tuberculosis. One case of suicide occurred, a young man drowning himself in the asylum pond.

THE WARNEFORD HOSPITAL FOR MENTAL DISEASES, OXFORD.

We are pleased to see from the annual report for 1907 that the Committee of this hospital for private patients, conducted by a board of governors who have no interest in the property, are able to announce another successful financial year, a balance of over £1,831 remaining in the hands of the treasurers at the end of the year. During the year 41 patients received aid from the charitable funds, as compared with 35 in 1905 and 32 in 1906. With regard to these cases, the committee, whilst by no means requiring that all the patients on the aided list should belong to the enurable class, are of opinion that it would be inadvisable to admit charity patients who are in a state of irreducible dementia, and have communicated their opinion to the trustees of the Warneford estates. From the report of the Medical Superintendent, Dr. James Neil, we see that on January 1st, 1907, there were in the hospital 88 certified patients and 3 voluntary boarders, making in all 91 under treatment. On December 31st, 1907, there were 99 certified patients and 2 voluntary boarders, making a total of 101. The total certified cases under treatment during the year numbered 128, and the average

number daily resident 95. During the year 40 certified cases were admitted and 5 voluntary boarders, giving the highest number of admissions for one year in the history of the hospital. Of the 40 certified patients 14 were transferred from other care. Excluding any reference to the following epitome to voluntary boarders, the attacks were first attacks in 18 of the 25 direct admissions, and also in 8 of the 14 transfers. As to duration of disorder among the direct admissions, the attacks were first attacks within three months of admission in 9, first attacks of more than three and less than twelve months in 3, of more than twelve months in 4, of unknown duration in 1, and not-first attacks of less than three months' duration in 6, and of unknown duration in 5. The total admissions, direct and indirect, were classified according to the forms of mental disorder into: Mania of all kinds and melancholia of all kinds, 11 each; senile and secondary dementia, 2; delusional insanity, 11; general paralysis, 2; and stupor and confusional insanity, 1 each. As to the probable etiological factors among the direct admissions, alcohol was assigned in only 1, venereal disease in none, critical periods in 5, mental stress in 14, and injury and bodily disease in 5. An insane heredity was ascertained in 9, and congenital mental defect existed in 1. During the year 10 were discharged as recovered, giving a recovery-rate on the admissions, exclusive of transfers, of 35.7 per cent., or of total recoveries on total admissions of 25 per cent., or of recoveries in the direct admissions on the direct admissions of 20 per cent. There were also 2 discharged as relieved and 7 as not improved. During the year there were 10 deaths, giving a percentage death-rate on the average number daily resident of 1.4. The deaths were due in 4 cases to general paralysis, in 1 each to exhaustion from mania, cardiac failure, acute bronchitis, uræmia, and intestinal obstruction, and in 1 to shock from a homicidal wound. In the latter case, in which the patient had been attacked and wounded by another patient with a knife whilst at dinner, the aggressor was committed for trial at the assizes, but was found unfit to plead and ordered to be detained during His Majesty's pleasure. The general health throughout the year appears to have been good, and the condition and management of the hospital were favourably commented upon by the visiting Commissioners in Lunacy.

GLAMORGAN COUNTY LUNATIC ASYLUM.

FROM the annual report for 1907 of Dr. David Fulay, appointed medical superintendent in place of Dr. Stewart, who died in 1906, we see that there were 1,703 patients in the asylum on January 1st, 1907, and that there were 1,716 on the last day of the year. The total cases under care during the year numbered 2,073 and the average number daily resident 1,709.3. During the year 370 cases were admitted, of whom 327 were first admissions, the admissions exceeding those of the previous year by 21. In 178 the attacks were first attacks within three and in 52 more within twelve months of admission; in 50 not-first attacks within twelve months of admission; and in the remainder, whether first attacks or not, the attacks were either of more than twelve months' duration on admission (69) or congenital cases (21). They were classified according to the forms of mental disorder into: Mania of all kinds, 195; melancholia of all kinds, 81; senile and secondary dementia, 19; general paralysis, 37; epileptic insanity, 17; and congenital or infantile defect, 21. The supposed etiological factors in direct admissions were assigned in the following numbers and proportion: Alcohol in 57, or 15.4 per cent.; venereal disease in 10; critical periods in 24; various bodily disease in 21; mental and emotional stress in 82; and in 116 no cause could be assigned. Hereditary influences were ascertained in 69, or 18.6 per cent., and congenital defect existed in 21. During the year 118 were discharged as recovered, giving a recovery-rate on the admissions of 33.4 per cent., as compared with the average for this institution of 30.1 per cent. During the year 193 died, giving a death-rate on the average numbers resident of 9.3 per cent., the average death-rate for this institution being 7.8 per cent. The deaths were due in 77 cases to cerebro-spinal diseases, including 46 deaths from general paralysis; in 61 to chest diseases, including 20 from pulmonary consumption; in 25 to abdominal diseases, and in 30 to general diseases, including 25 from old age. All deaths were due to natural causes, and no inquest was held during the year. Twelve cases of dæmoniac occurred during the year, of these 5 proving fatal; also 6 cases of influenza and 4 of erysipelas, but apart from these the general health of the patients was satisfactory.

STAFFORDSHIRE COUNTY LUNATIC ASYLUM.

THE annual report of Dr. W. F. Menzies, the medical superintendent of this asylum, which is situated at Cheddleton, near Leek, shows that on January 1st, 1907, there were 668 patients in residence, and on the last day of the year 709. The total cases under treatment during the year numbered 918, and the average number daily resident 683. All of these numbers show considerable increases on those of the previous year, and the excess of patients over provided accommodation, which amounted to 50 at the beginning of the year, rose to 91 at the end of the year. Fortunately the extensions were almost ready at the time of preparing the report. During the year 193 were admitted, as compared with 193 during the previous year. Of the total admissions, 230 were direct admissions, 19 indirect, and 1 a statutory readmission. As to the duration of disorder on admission, in 85 the attacks were first attacks within three, and in 34 more within twelve, months of admission; in 36 not-

first attacks within twelve months of admission; in 2 it was unknown whether first attacks or not, and the remainder were either of more than twelve months' duration on admission (55) or congenital cases (17). The admissions were classified according to the forms of mental disorder into: Mania of all kinds, 55; melancholia of all kinds, 53; senile and secondary dementia, 12; general paralysis, 21; insanity with epilepsy, 20; delusional insanity, 3; insanity with gross brain lesions, 5; confusional insanity, 6; primary dementia, 3; stupor, 2; acute delirium and volitional insanity, 1 each; and cases of congenital or infantile defect, 20. As to the probable causes of insanity, and regarding only the direct admissions, alcohol was assigned in 73, or 31.7 per cent.; acquired syphilis in 23 and congenital syphilis in 2; lead and other poisons in 10 and tuberculosis in 24. Critical periods were assigned in only 16, child-bearing in 25, and physiological defects and errors in 12. The mental disease was concomitant with diseases of the nervous system in 33 (excluding 18 cases of general paralysis), and with other bodily affections in 36. Mental stress was assigned as cause in 51, and in 2 no cause could be ascertained. An insane heredity was ascertained in 65, or 28.2 per cent., an epileptic heredity in 13, a neurotic heredity in 47, an alcoholic heredity in 93, and of eccentricity in marked degree in 2. During the year 75 were discharged as recovered, giving the recovery-rate on the direct admissions, and of recoveries in the direct admissions on the direct admissions, of 32.61 per cent.; 21 as relieved, and 4 as not improved. During the year 109 died, giving a death-rate on the average numbers resident of 15.96 per cent. The deaths were due in 41 to cerebro-spinal diseases, including 15 deaths from general paralysis; in 5 to chest diseases, excluding pulmonary tuberculosis; in 11 to abdominal diseases; in 7 to senile decay and 1 to marasmus; in 42 to general diseases, including 13 deaths from pulmonary tuberculosis and 10 from other forms of tuberculosis, and in 3 to suicide. Tuberculous disease thus accounted for 18.3 per cent. of the total deaths, when only principal causes are considered.

DORSET COUNTY ASYLUM.

In last year's report of this asylum mention was made of the small increase (3) in the number of county patients. This year, the medical superintendent, Dr. P. W. MacDonald, is able to announce an actual decrease of 18. The number of patients in the asylum on January 1st, 1907, including out-county and private patients, was 820, and on December 31st, 1907, 821. The total cases under treatment during the year numbered 965, and the average number daily resident 813. During the year 145 were admitted, the lowest number of admissions since 1901. Of these admissions 111 were direct and 34 indirect admissions, and as to duration of disorder on admission in the direct admissions, in 54 the attacks were first attacks within three and in 12 more within twelve months of admission; in 25 not first attacks within twelve months of admission, and the remainder, whether first attacks or not, were either of more than twelve months' duration (13) or congenital cases (7) on admission. The total admissions were classified according to the forms of mental disorder into: Mania of all kinds, 38; melancholia of all kinds, 37; senile and secondary dementia, 27; delusional insanity, 11; confusional insanity, 8; general paralysis, 5; insanity with epilepsy and primary dementia, 3 each; stupor, 1; and cases of congenital or infantile defect, 12. As to the probable etiological factors among the direct admissions, alcohol was assigned in 5, or 4.5 per cent.; syphilis in none; influenza in 7; critical periods in 30; mental instability in 9; and mental stress in 24. An insane heredity was ascertained in 34, or 30 per cent.; but, Dr. MacDonald says, if all collateral factors were added, there would be an inherited predisposition in a clear 50 per cent. The general type of admission was not favourable, and Dr. MacDonald estimated that of the recoverable cases formed less than 15 per cent. of the total admissions. During the year 44 were discharged as recovered, giving a recovery-rate on the direct admissions of 39.63 per cent., or of the recoveries in the direct admissions on the direct admissions of 37.83 per cent. The recovery-rate among the private patients gave a percentage of 54.5. There were also 7 discharged as relieved and 10 as not improved. During the year there were 83 deaths, giving a death-rate on the average numbers resident of 10.20 per cent., as contrasted with the average for this institution of 7.5 per cent. The reason for this high death-rate was assigned to Dr. MacDonald, the unusual number of deaths among the male patients in the early part of the year, the certified cause in almost every case being pneumonia, which at one time assumed the form of an epidemic. The 83 deaths were due in 15 to cerebro-spinal diseases, including 8 deaths from general paralysis; in 35 to chest diseases, including 18 deaths from pneumonia and 5 deaths from pulmonary consumption; in 9 to abdominal diseases, and in the remainder, with exception, to general diseases, including 13 deaths from senile decay.

GLASGOW DISTRICT MENTAL HOSPITAL, GARTLOCH.

THE eleventh annual report of the Gartloch Asylum shows that the character of the admissions is altering somewhat. The percentage which had been ill over a year on admission, were congenital imbeciles, or had been ill previously, was 64. Despite these unfavourable factors, the recovery-rate was high, being 39.6 per cent., which must be considered extremely satisfactory when it is added that a very large number of easily curable

cases are treated in the observation wards of the Duke Street Hospital without certification. Another point is that while the percentage of admissions under 30 years of age has remained almost stationary during the past ten years, the admissions between 30 and 50 have diminished, while those over 50 have increased. General paralysis seems to be increasing. About one-fourteenth of the asylum population is composed of general paralysis. These also bulk largely in the list of deaths. Thirty-three out of the total of 94 deaths were due to general paralysis. Sanatorium treatment of tuberculous cases has reduced the percentage of deaths from tubercle very materially, from 19 per cent. to 11 per cent.

Dr. Parker continues to find in alcohol the chief factor in the causation of insanity. The influence of parental alcoholism is particularly seen in the adolescent admissions. Thus he finds a history of parental drunkenness in 76 per cent. of the admissions under 26 years of age, while in those of 26 years of age it was obtainable in 39.7 per cent. The most important of the other factors were ill-health, syphilis, adolescence, and senility.

WESTERN INFIRMARY, GLASGOW.

THE thirty-fourth annual report contains few striking features. The number of patients attending the outdoor departments amounted to 33,893, against 29,524 in the previous year, while the indoor patients increased from 7,556 to 8,090. The average daily number of indoor patients was 241.55, a slight decrease from the previous year, when the figures were 243.57, and similarly the average period of residence diminished, from 26.26 to 24.45 days. The number of deaths was 542, or 7.20 per cent. of all cases treated to a termination. Of the fatal cases, 147 were so hopeless that they died within forty-eight hours of admission. If these are deducted the mortality falls to 5.35 per cent. A small increase of £153 in the ordinary income is more than counterbalanced by the increase of ordinary expenditure, which amounts to £2,463. The steadiness of the ordinary income is rather remarkable, considering the prevailing commercial and industrial depression. It is largely due to the fact that in the past year the area has been extended from which both general and employees' subscriptions are derived. The new income from these sources amounted to £337 13s., and the total ordinary income from all sources was £22,767. The total ordinary expenditure was £37,742. To meet this deficit the extraordinary income was drawn upon to the extent of nearly £15,000, but after meeting this and other extraordinary expenses there remained at the credit of extraordinary income a balance of £1,589.

The average cost per patient was £4 13s. 3d., as against £4 16s. 1d. in the year immediately preceding. The cost of each bed, fully occupied, was larger, however—£69 11s., against £66 15s. 6d. Notwithstanding the large addition to the number of patients, the annual expenditure only increased by £1,451.

A further building extension is apparently required. Although the accommodation was recently increased by 10 beds, it is still far from being adequate to meet the growing demand for admission. Plans have been prepared for such extension involving a cost of at least £80,000; towards this sum about £35,000 has been paid or promised, but the managers do not propose to commence the extension till the whole sum required has been subscribed. It is intended that this proposed extension will be final, as the plans cover all the ground available for building purposes.

At present a large addition is being made to the accommodation for nurses. Between 40 and 50 bedrooms are being added to the Home.

NEWPORT COUNTY BOROUGH ASYLUM, CAERLEON.

FROM the annual report of Dr. W. F. Nelis, the medical superintendent of this asylum, for the year 1907 (the second annual report), we see that on January 1st, 1907, there were 388 patients in the asylum, and on the last day of the year 361. The total cases under care during the year numbered 412, and the average number daily resident 346. During the year 74 were admitted, of whom 56 were direct admissions and 18 indirect admissions. The attacks were first attacks within three and in 8 more within twelve months of admission; in 17 in 17 not first attacks within twelve months of admission; in 15, whether first attacks or not, of more than twelve months' duration on admission, and 2 were congenital cases. On the whole, Dr. Nelis says, the admissions were of unfavourable character as regards recovery, and also an unusually large proportion were physically broken down. They were classified according to the forms of mental disorder into: Mania of all kinds, 43; melancholia of all kinds, 9; secondary, senile, and organic dementia, 8; general paralysis, 7; acquired epilepsy, 1; and congenital or infantile defect, 6. The supposed etiological factors were assigned in the following numbers and proportions: Alcohol in 10, or 13.5 per cent.; venereal disease in 1, critical periods in 6; ill-health in 18, domestic trouble in 4, and adverse circumstances in 2. Hereditary influences were ascertained in 16, or 21.6 per cent., and congenital cases existed in 2. During the year 24 were discharged as recovered, giving a recovery-rate on the admissions of 32.5 per cent., 6 as relieved, and 5 as not improved. During the year, also, there were 16 deaths, giving a death-rate on the average numbers resident of 4.6 per cent. The deaths were due in 5 cases to general paralysis, in 2 to cerebral softening, in 3 to heart disease, in 1 to chronic nephritis, and in 5, or 31 per cent. of the total deaths, to phthisis pulmonalis. All of those who died of phthisis were suffering from the complaint on admission.

Vital Statistics.

VITAL STATISTICS OF LONDON DURING THE FOURTH QUARTER OF 1908.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

IN the accompanying table will be found summarized the vital statistics of the City of London and of each of the metropolitan boroughs, based upon the Registrar-General's returns for the fourth quarter of the year. The mortality figures in the table relate to the deaths of persons actually belonging to the various boroughs, and are obtained by distributing the deaths occurring in institutions among the several boroughs in which the deceased persons had previously resided. The 30,434 births registered in London during the three months under notice were equal to an annual rate of 23.6 per 1,000 of the population, estimated at 4,795,757 persons in the middle of 1908; in the corresponding periods of the three preceding years the birth-rates were 26.1, 25.5, and 24.4 per 1,000 respectively, the average rate for the fourth quarter of the ten years, 1898-1907, being 27.1 per 1,000. Among the several boroughs the birth-rates last quarter ranged from 15.0 in Hampstead, 16.4 in Westminster, 15.9 in the City of London, 16.0 in Paddington, 16.8 in Chelsea, and 17.7 in Stoke Newington, to 28.0 in Poplar, 29.4 in Bethnal Green, 30.0 in St. Marylebone, 30.2 in Stepney, 31.5 in Bermondsey, and 33.5 in Finsbury.

During the quarter under notice 17,615 deaths of London residents were registered, equal to an annual rate of 13.7 per 1,000, against 16.2, 15.4, and 14.3 per 1,000 in the four quarters of the three preceding years; for the corresponding period of the ten years 1898-1907 the average death-rate was 16.8 per 1,000. The death-rates last quarter ranged from 8.7 in Hampstead, 10.5 in Lewisham, 10.9 in Woolwich, 11.5 in Paddington and in Wandsworth, and 11.7 in Battersea, to 16.5 in Southwark, 16.9 in Bethnal Green, 17.1 in Shoreditch and in Stepney, 19.0 in Bermondsey, and 19.1 in Finsbury.

The 17,615 deaths from all causes last quarter included 1,509 which were referred to the principal infectious diseases; of these 453 resulted from measles, 136 from scarlet fever, 225 from diphtheria, 50 from whooping-cough, 115 from enteric fever, and 585 from diarrhoea. These 1,609 deaths were equal to an annual rate of 1.25 per 1,000, or 0.27 per 1,000 less than the average rate from the same diseases in the corresponding quarter of the ten preceding years. No death from any of these diseases was recorded last quarter in the City of London; among the metropolitan boroughs the lowest rates therefrom were 0.40 in Hampstead, 0.65 in Westminster, 0.70 in Lewisham, 0.73 in Paddington and in St. Pancras, 0.74 in Wandsworth, and 0.76 in Camberwell; the highest rates were 1.70 in Lewisham, 1.75 in Shoreditch, 2.10 in Finsbury, 2.63 in Stepney, 2.64 in Bethnal Green, and 2.74 in Bermondsey. The greatest proportional mortality from measles was recorded in St. Marylebone, Islington, Finsbury, Bethnal Green, Stepney, Southwark, and Bermondsey; from scarlet fever in Stoke Newington, Hackney, Shoreditch, Bethnal Green, Stepney, Poplar, and Bermondsey; from diphtheria in Fulham, Chelsea, Islington, Shoreditch, Stepney, Lewisham, and Woolwich; from whooping-cough in Paddington, Chelsea, Finsbury, Shoreditch, and Bethnal Green; from enteric fever in Chelsea, Stoke Newington, Holborn, Finsbury, Shoreditch, Bethnal Green, Bermondsey, and Greenwich; and from diarrhoea in Finsbury, Stepney, Southwark, Bermondsey, Deptford, and Lewisham.

During the three months ending December last the deaths from phthisis among persons belonging to London numbered 1,744, and were equal to an annual rate of 1.35 per 1,000, against 1.30 and 1.29 in the four quarters of the three preceding years. The death-rates from this disease last quarter ranged from 0.74 in Lewisham, 0.81 in Paddington, 0.92 in Hampstead, 1.00 in Kensington, 1.02 in Woolwich, and

1.08 in Deptford, to 1.78 in Bermondsey, 1.97 in Shoreditch, 2.02 in Southwark, 2.05 in Holborn, 2.06 in Finsbury, and 2.32 in the City of London. Infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births, was equal to 123 per 1,000 last quarter, against 130, 122, and 131 in the corresponding quarters of the three preceding years. The lowest rates last quarter were recorded in St. Marylebone, Hampstead, Stoke Newington, Holborn, Lambeth, and Woolwich, and the highest rates in Hammersmith, Finsbury, Shoreditch, Stepney, Southwark, Bermondsey, and Deptford.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,495 births and 5,237 deaths were registered during the week ending Saturday last, January 16th. The annual rate of mortality in these towns, which had been 18.2 and 17.5 per 1,000 in the two preceding weeks, further fell last week to 16.6 per 1,000. The rates in the several towns ranged from 4.9 in Hornsey, 8.5 in Coventry, 8.9 in King's Norton, 9.9 in Walsley, 10.3 in Walsley, 10.4 in Aston Manor, 10.5 in Derby, and 10.7 in Stockton-on-Tees, to 20.0 in West Bromwich and in Manchester. 23.4 in Tynemouth, 24.4 in Great Yarmouth, 24.6 in Merthyr Tydfil, 24.7 in Oldham, 26.2 in Sunderland, and 27.3 in Bury. In London the rate of mortality was 16.9 per 1,000, which is 1.6 per 1,000 less in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.6 per 1,000 in the seventy-six towns; in London the rate from these diseases was equal to 1.5 per 1,000, while among the seventy-five other large towns they caused rates ranging upwards to 2.9 in West Ham, in Great Yarmouth, and in Oldham, 3.0 in West Bromwich, in Smethwick, and in Manchester, 3.3 in Merthyr Tydfil, 3.6 in Sunderland, and 4.8 in Rotherham. Measles caused a death-rate of 2.2 in Willesden, 2.3 in Great Yarmouth, in Middlesbrough, and in Merthyr Tydfil, 2.2 in Warrington, 2.5 in Leicester and in Sunderland, and 4.0 in Rotherham; diphtheria of 1.4 in East Ham and in Grimsby; whooping-cough of 1.5 in West Bromwich; "fever" of 1.1 in Oldham; and diarrhoea of 1.5 in Smethwick. The mortality from scarlet fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever cases remaining under treatment in the Metropolitan Asylum Hospitals and the London Fever Hospital, which had been 3,464, 3,557, and 3,347 at the end of the three preceding weeks, had further declined to 3,261 at the end of last week; 358 new cases were admitted during the week, against 303, 379, and 323 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, January 16th, 915 births and 643 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 18.3 and 19.5 per 1,000 in the two preceding weeks, declined again to 18.1 per 1,000 last week, but was 1.5 per 1,000 above the average rate in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 12.2 in Leith and 15.2 in Greenock to 25.9 in Dundee and 26.4 in Perth. The death-rate from the principal infectious diseases averaged 2.0 per 1,000 in the eight towns, the highest rates being recorded in Glasgow and Aberdeen. The 295 deaths registered in Glasgow included 3 which were referred to scarlet fever, 6 to diphtheria, 27 to whooping-cough, 2 to enteric fever, and 4 to diarrhoea. Three fatal cases of scarlet fever were recorded in Edinburgh; 2 of whooping-cough and 3 of diarrhoea in Dundee; 3 of measles, 2 of scarlet fever, and 4 of whooping-cough in Aberdeen; and 3 of whooping-cough in Paisley and 2 in Greenock.

Analysis of the Vital Statistics of the Metropolitan Boroughs and of the City of London after Distribution of Deaths occurring in Public Institutions during the Fourth Quarter of 1908.

BOROUGH.	Estimated Popu- lation middle of 1908.	Births.	Deaths.	Annual Rate per 1,000 Living.		Deaths from Principal Infectious Diseases.	Deaths from Pneumonia.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric Fever.	Ill-defined Pyrexia.	Diarrhoea.	Phthisis.	Deaths of Children Under 1 Year of Age to 1,000 Births.
				Births.	Deaths.													
COUNTY OF LONDON	4,795,757	30,434	17,615	23.6	13.7	1.25	1,609	—	453	136	225	94	—	115	—	586	1,744	123
Paddington	150,923	766	467	18.9	11.5	0.73	30	—	5	4	1	6	—	1	—	13	34	128
Kensington	182,752	783	625	16.0	12.7	0.83	41	—	3	6	9	3	—	4	—	16	49	138
Hammersmith	124,012	747	474	22.4	14.2	1.05	25	—	2	4	6	2	—	1	—	20	39	154
Waltham	171,552	1,189	557	25.8	12.1	1.18	35	—	2	5	14	1	—	1	—	21	50	142
St. Pancras	75,949	439	279	16.8	13.5	0.75	23	—	3	1	—	5	—	3	—	5	29	112
City of Westminster	170,548	658	591	14.4	12.9	0.65	30	—	15	11	5	—	—	1	—	8	57	123
St. Marylebone	126,867	1,023	494	30.0	14.5	1.27	45	—	21	2	3	—	—	1	—	14	46	79
Hampstead	92,684	324	210	12.7	8.7	0.40	10	—	—	—	—	—	—	—	—	5	23	63
Islington	237,075	1,421	916	22.3	14.5	0.73	47	—	11	3	7	4	—	4	—	18	102	121
Islington	349,991	2,128	1,293	22.7	13.9	1.26	118	—	42	7	21	9	—	9	—	30	125	128
Stoke Newington	54,015	256	179	17.7	12.3	0.91	13	—	—	4	—	—	—	—	—	4	20	90
Stepney	180,283	1,406	830	22.3	13.5	1.06	68	—	11	8	9	—	—	1	—	21	114	141
Holborn	54,466	361	235	21.7	16.1	1.17	17	—	3	2	—	1	—	1	—	7	30	94
Finsbury	96,007	863	493	33.5	19.1	2.10	54	—	14	1	4	3	—	7	—	25	53	145
City of London	19,232	77	83	14.9	16.1	1.75	54	—	3	7	8	10	—	7	—	19	12	117
Shoreditch	115,227	850	530	13.5	17.1	1.05	54	—	2	7	—	—	—	—	—	20	77	148
Bethnal Green	131,076	1,036	595	29.4	16.5	2.64	219	—	51	8	7	5	—	6	—	35	130	130
Stepney	310,766	2,522	1,430	30.2	17.1	2.63	219	—	101	16	24	8	—	9	—	61	141	143
Poplar	171,516	1,291	686	28.0	14.9	1.59	73	—	12	15	8	3	—	6	—	29	57	127
Woolwich	210,442	1,541	840	24.3	15.6	1.15	94	—	14	8	—	—	—	4	—	41	152	141
Bermondsey	127,910	1,082	651	31.5	19.0	2.74	93	—	47	6	4	3	—	3	—	24	61	155
Lambeth	321,344	2,207	1,082	25.6	12.5	0.83	72	—	16	8	19	1	—	3	—	25	117	127
Battersea	183,873	1,119	530	22.7	11.7	0.91	45	—	18	3	7	5	—	2	—	20	57	115
Wandsworth	280,505	1,745	914	24.9	15.7	1.74	67	—	12	7	—	—	—	—	—	37	102	102
Camberwell	280,022	1,696	932	22.6	12.4	0.76	57	—	2	9	12	16	1	5	—	24	90	116
Deptford	117,539	723	407	22.9	12.5	1.21	38	—	3	2	3	—	—	3	—	25	34	154
Greenwich	105,110	632	350	21.6	11.9	1.15	34	—	7	2	1	3	—	1	—	15	35	128
Lewisham	156,607	837	514	19.9	10.5	0.70	71	—	15	13	5	—	—	6	—	20	111	111
Woolwich	131,346	811	384	23.0	10.9	0.89	31	—	5	3	8	3	—	—	—	12	36	84

HEALTH OF IRISH TOWNS.

During the week ending Saturday, January 16th, 655 births and 468 deaths were registered in the twenty-two principal urban districts of Ireland as against 655 births and 446 deaths in the preceding period. The annual death-rate in these districts, which had been 18.3, 24.7, and 20.4 per 1,000 in the three preceding weeks, rose to 21.4 per 1,000 in the week under notice, this figure being 4.8 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 23.7 and 19.3 respectively, those in other districts ranging from 8.0 in Dundalk and 9.6 in Sligo to 45.5 in Lisburn and 49.1 in Kilkenny, while Cork stood at 20.5, Londonderry at 15.7, Limerick at 16.4, and Waterford at 9.7. The zymotic death-rate in the twenty-two districts averaged 1.4 per 1,000, as against 1.2 per 1,000 in the preceding period.

CENTRAL MIDWIVES BOARD.

A SPECIAL meeting of the Central Midwives Board, under the provisions of Rule D 5, was held at Caxton House, Westminster, on January 14th, with Dr. F. H. CHAMPEYNS in the chair.

Midwife Censured.

The following charges alleged against Maria Booth were considered:

That having been engaged to attend as a midwife at a confinement, and being actually in attendance on July 20th, 1908, and on July 22nd, the patient suffering from hæmorrhage, she (the midwife) did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, as required by Rules E 18 and 19; that she did not wash the patient at any time; that she did not take the patient's temperature at any time; that a registered medical practitioner having been sent for on July 25th, she did not await his arrival or faithfully carry out his instructions as required by Rule E 6.

The Board censured Maria Booth, and directed that a report of her conduct should be furnished by the local supervising authority in three months' time.

Midwife Struck off the Roll.

The following charges alleged against Catherine Walls were considered:

That on August 30th, 1908, she was drunk when on duty at 23, Trinity Place, Windsor; that on September 15th, 1908, she was drunk when on duty proceeding to attend a patient at Bracknell; that she was habitually given to drinking to excess.

The Board directed the name of Catherine Walls to be struck off the Roll of Midwives.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Resident House-Surgeon (Male). Salary, £80.
BRIDGWATER HOSPITAL.—House-Surgeon. Salary at the rate of £80 per annum.
BRISTOL GENERAL HOSPITAL.—Senior House-Surgeon. Salary, £120 per annum.
BRISTOL ROYAL INFIRMARY.—(1) Two House-Physicians; (2) House-Surgeon; (3) Obstetric and Ophthalmic House-Surgeon; (4) Throat and Nose and Ear House-Surgeon; (5) Casualty Officer. Salary for (1) and (2) £100 each, (3) and (4) £75, and for (5) £50.
BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum.
CANCER HOSPITAL, Fulham Road, S.W.—Three Clinical Assistants.
CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Pathologist. Honorarium, £40 per annum.
CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, N.E.—House-Physician (male). Salary at the rate of £50 per annum.
DUDLEY: GUEST HOSPITAL.—Senior Resident Medical Officer. Salary, £100 per annum.
DURHAM COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary, £150 per annum.
EDINBURGH UNIVERSITY.—Additional Examiner in Forensic Medicine.
EVELINA HOSPITAL FOR SICK CHILDREN, S.E.—House-Surgeon. Salary at the rate of £60 per annum.
FULBOURN LUNATIC ASYLUM.—Senior Assistant Medical Officer (Male). Salary, £150 per annum.
GORDON HOSPITAL FOR FISTULA, Vauxhall Bridge Road, S.W.—Resident House-Surgeon.
HOSPITAL FOR DISEASES OF THE SKIN, Stamford Street, S.E.—Clinical Assistant.
LANGHOE EPILEPTIC COLONY.—Medical Superintendent.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £50 per annum.
MERTHYR TYDFIL BOROUGH.—Medical Inspector of School Children. Salary, £20 per annum, increasing to £30.
MILLER GENERAL HOSPITAL, Greenwich Road, S.E.—Junior House-Surgeon. Salary at the rate of £80 per annum.
NORTHAMPTON GENERAL HOSPITAL.—Senior Resident Medical Officer. Salary, £120 per annum.
NORTHUMBERLAND HOUSE, Finsbury Park, N.—Male Assistant Officer. Salary, £120 per annum.
PAISLEY INFECTIOUS DISEASES HOSPITAL.—Assistant Medical Officer. Salary, £100 per annum.
POPULAR HOSPITAL FOR ACCIDENTS, E.—Assistant House-Surgeon. Salary at the rate of £30 per annum.
RATCHER HILL CONSUMPTION SANATORIUM.—Resident Medical Officer (Female). Salary, £100.
ROTHERHAM HOSPITAL AND DISPENSARY. Senior House-Surgeon. Salary, £110 per annum.
ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician. Salary at the rate of £60 per annum.
ST. MARYLEBONE GENERAL DISPENSARY, Welbeck Street, W.—Honorary Obstetric Physician.
SALISBURY INFIRMARY.—Assistant House-Surgeon. Salary, £50 per annum.
SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone Road, N.W.—Clinical Assistants.
WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck Street, W.—Resident House-Physician. Salary at the rate of £100 per annum.
WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Assistant Ophthalmic Surgeon; (2) Pathologist. Salary, £200 per annum.

APPOINTMENTS.

BIGGS, George Nixon, M.B., B.S.Durh., Aural Surgeon to the Evelina Hospital for Sick Children.
BROWN, W. Brodie, M.B., C.M.Aberd., Medical Officer and Public Vaccinator for the Parish of Lumphannan.
CHEESMAN, E. R. R., L.S.A., District Medical Officer of the Shaftesbury Union.
CREW, F. D., M.R.C.S., L.R.C.P., Medical Officer of Health, Borough of Higham Ferrers.
CROOK, D. H., M.R.C.P. Edin., Certifying Factory Surgeon for the Edinburgh District, co. Edinburgh.
CROWTHER, Sydney Nelson, M.R.C.S., L.R.C.P., Senior Assistant Medical Officer, Surrey County Asylum, Netherne, near Merstham.
D'AMICO, C. De P., M.D.Malta, M.R.C.S., L.R.C.P., Resident Assistant Medical Officer of the Camberwell Parish Infirmary.
DAVE, J. A., M.B., Certifying Factory Surgeon for the Forgue District, co. Aberdeen.
DICKSON, L. E., M.D., District and Workhouse Medical Officer of the Bridgton Union.
DYDES, D. G., M.B., Medical Officer of Health, Martley Rural District.
GENT, W. C., L.R.C.P. and S. Edin., District Medical Officer of the Droitwich Union.
GIBBS-SMITH, E. G., L.R.C.P.I., D.P.H., Medical Officer of Health, Teddington Urban District.
GENTHER, Hermann, M.B.Lond., Medical Officer of Health, Hampton Wick Urban District.
HALL, C. R. F., M.A., B.C.Camb., M.R.C.S., L.R.C.P., District Medical Officer of the Abernethy Union.
HANNA, H. M.A., B.Sc., B.Ch., R.U.L., Assistant Surgeon to the Ulster Eye, Ear, and Throat Hospital, Belfast.
HAWESLEY, W. L., M.B., Ch.B., D.P.H., School Medical Officer to the City of Liverpool Education Committee.
HOWARD, Russell, M.S., F.R.C.S., Surgeon to the Poplar Hospital.
LUTHER, E. L., M.D.Dub., B.Ch., District Medical Officer of the Dorchester Union.
MASON, E. R. F., L.R.C.S., L.R.C.P. Edin., Medical Officer of Health, General Rural District.
PAIN, B. H., M.B., C.D., District Medical Officer of the Epsom Union.
PEGH, W. T. G., M.D., Medical Superintendent of the Children's Infirmary, Carlshamton.
REARDON, J. C. P., L.R.C.P. and S. Ed., Certifying Factory Surgeon for the Kinghorn District, co. Fife.
RELTON, C. D., M.B., B.S.Durh., District Medical Officer of the St. Thomas's Union.
ROBERTSON, A. S., M.B., C.M.Glas., District Medical Officer of the Peterborough Union.
ROSE, A., M.B., C.M., District Medical Officer of the Bolton Union.
ROSE, E. F., L.S.A., L.M.S.S.A., Medical Officer of Health, Swaffham Rural District.
RYGATE, D. J., L.R.C.P., M.R.C.S., District Medical Officer of the Wilton Union.
SANDFORD, D. S., M.R.C.S., L.R.C.P., Medical Superintendent of the St. George's Hospital Infirmary and Fulham Road Workhouse.
SMITH, E. P., M.R.C.S., L.R.C.P., District Medical Officer of the Bromsgrove Union.
SYMMONS, G. H. H., M.D. Edin., Honorary Physician to the Hereford General Hospital.
TATE, E., M.B., B.S.Durh., District Medical Officer of the Castle Ward Union.
TOLPITT, P. T., L.R.C.P. and S. Edin., L.F.P.S.Glas., Medical Officer of Health, Nayland Urban District.
TROTTER, G. Clark, M.D. Edin., D.P.H. Aber., Medical Officer of Health, Paisley.
TYLCOATE, Frank Edward, M.D., D.P.H., Ch.H.Viet., M.R.C.P. Lond., Resident Medical Officer to the Manchester Royal Infirmary.
WELLS, J. D., M.B., Ch.B. Edin., Medical Officer of Health, Billericay Rural District.
WESTROPE, L. L., M.B.Durh., District Medical Officer of the Gateshead Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

DEATHS.

COLLAND.—On January 16th, at Sheerness, John Brightman Colland, M.R.C.S., L.R.C.P. Lond., aged 29.

MCCARTHEAN.—January 14th, at 137, North Esplanade, Deal, Janie Turnbull Taylor, wife of John McCartean, M.D., L.S.O., late of H.M. Prison, Perth. The only infant.

NOBLE.—On January 16th, at 167, Kennington Park Road, S.E., James Black Noble, M.R.C.S., L.R.C.P., aged 50.

BOOKS, ETC., RECEIVED.

Kolhapur (India): The Mission Press. 1908. By K. S. Agnihotri, Ph. G.: The General Dispenser. Revised third edition. Rs. 14.

Epitome of Urine Examination. Annas 10.

Practical Hints in General Medicine. Series 1. Annas 12.

Lehrbuch der Augenheilkunde. Herausgegeben von Dr. T. Axenfeld. Jena: G. Fischer. 1909. M. 14.

The Medical Inspection of School Children. A Series of Lectures at the West London Post-Graduate College. London: "The Medical Observer." 1s.

The Cure of Consumption with Subcutaneous Injection of Oils. By T. B. Keyes, M.D. Reprinted from Vol. III, No. 12, of "The Antiseptic" (Madras, India). Chicago: Dr. T. B. Keyes. 0.50 dol.

The Poisonous Terrestrial Snakes of our British Indian Dominions, and How to Recognize them. By Major F. Wall, L.M.S., C.M.Z.S. Second Edition. Bombay: The Bombay Natural History Society. 1908. Rs. 2.

Le Massage Plastique dans les Dermatoses de la Face, ses indications, ses résultats. Par Dr. R. Leroy. Paris: A. Cocozz. Fr. 4.

The Prescriber. A Monthly Journal. Edited by T. Stephenson, Ph.C., F.C.S. Vol. II, January to December, 1908. Edinburgh: "The Prescriber" Publishing Office. 7s. 6d.

Diseases of the Nervous System. By A. Gordon, A.M., M.D. London: H. K. Lewis. 1908. 12s. 6d.

The Specialist: Series I: Health, Speech, and Song. By T. Hutchinson, Mus. Doc. London: The Authors' Association. 3d.

The Body at Work. By A. Hill, M.A., M.D., F.R.C.S. London: E. Arnold. 1908. 16s.

Diathesis and Ocular Diseases. By A. M. Ramsay, M.D. London: Baillière, Tindall, and Cox. 1909. 3s. 6d.

Syphilis, its Diagnosis, Prognosis, Prevention, and Treatment. By P. H. Beddoes, M.B., B.C. Camb., F.R.C.S. Eng. London: Rebusman, Limited. 1909. 5s.

London: The Sanitary Publishing Co.:

The Planning of Fever Hospitals and Disinfecting and Cleansing Stations. By A. C. Freeman, M.S.A. 7s. 6d.

The Sanitary Record Year Book and Diary, 1909. Twentieth-seventh issue. 2s. 6d.

The Etiology and Nature of Cancerous and other Growths. By W. T. Gibson, A.R.C.S. London: J. Bale, Sons, and Danielsson, Limited. 1909. 6s.

Catechism of Haematology. By R. L. Watkins, M.D. New York: The Physicians' Book Publishing Co. London: Baillière, Tindall, and Cox. 1908. 3s. 6d.

A Theory Regarding the Origin of Cancer. By C. E. Green. Edinburgh: W. Green and Sons. 1909.

The Food Inspector's Handbook: A Practical Guide for Medical Officers of Health, Meat Inspectors, Army Officers, Students, and Others. By F. Vacher. Fifth edition. London: The Sanitary Publishing Co. Limited. 1909. 7s. 6d.

Lehrbuch der Chirurgie. Herausgegeben von Professor Wullstein und Professor Wilms. Zweiter Band. Erste Lieferung. Jena: G. Fischer. 1909. M. 5.

Grundzüge der Allgemeinen pathologischen Histologie. Von Dr. J. Steinhaus. Leipzig: Akademische Verlagsgesellschaft m. b. H. 1909. M. 10.

London: J. B. Lippincott Co. 1908:

International Clinics: A Quarterly. Edited by W. T. Longcope, M.D. Vol. IV, Eighteenth Series.

Phrenology, or the Doctrine of the Mental Phenomena. By J. G. Spurzheim, M.D. Revised edition from Second American edition, Boston, 1833. 12s. 6d.

Handbuch der Biochemie des Menschen und der Tiere. Herausgegeben von Prof. Dr. phil. et med. C. Oppenheimer. Achte und neunte, und zehnte Lieferung. Jena: G. Fischer. 1909. 9. M. 5 per Lfg.

London: J. A. Churchill. 1908:

Guy's Hospital Reports. Edited by F. J. Steward, M.S., and H. French, M.D. Vol. LXII; Vol. XLVII of third series

Yearbook of Pharmacy. Edited by J. O. Braithwaite. Transactions of forty-fifth annual meeting of British Pharmaceutical Conference, 1908. Edited by E. S. Peck, M.A., and E. White, B.Sc., F.I.C.

The Practice of Medicine. By the late M. Charteris, M.D. Ninth edition. Edited by F. J. C. Charteris, M.D. London: J. and A. Churchill. 1909. 9s. 6d.

Photographic Optics and Colour Photography. By G. L. Johnson, M.A., M.D., B.S., F.R.C.S. London: Ward and Co., 1909. 7s. 6d.

The Edinburgh Stereoscopic Atlas of Obstetrics. Edited by G. F. H. Simpson, M.D., F.R.C.P.E., F.R.C.S.E., F.I.S.E., and E. Burns, B.A., M.B., Ch.B., B.Sc. In four sections. Section III. London: The Caxton Publishing Company. 1908. Four parts. 84s.

. In forwarding books the publishers are requested to state the selling price

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m., Papers.—(1) Dr. Conroy Berkeley, Warrington's Panhysterectomy for Carcinoma; (2) Mr. W. F. Brook (Swansea), A Preliminary Note on the Relationship of Delayed Union in Fractures to Deficiency of Calcium Salts in the Blood.

ROYAL SOCIETY OF MEDICINE:

ODONTOLOGICAL SECTION, 20, Hanover Square, 8 p.m.—(1) Annual General Meeting, Election of Officers. (2) Communication: Mr. Philip Turner, The Treatment of a Denture Swallower by Means of Killian's Oesophagus by Means of Swilled or Killion's Oesophagus Tubes. (3) Paper: Mr. Charles H. Clark, Radiographs of the Teeth and Associated Parts (illustrated by the epididymoscope).

TUESDAY

ROYAL SOCIETY OF MEDICINE: MEDICAL SECTION, 20, Hanover Square, 5.30 p.m.—Discussion on Ulcerative Colitis, to be opened by Sir William Alcock, M.D.

THURSDAY.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, Cavendish Square, W.—8 p.m., Card Cases. 8.30 p.m., Papers.—1. Mr. N. Bishop Hartman: (1) Four Generations of Lamellar Cataracts: (2) An Unusually Rapid Development of Complete Cataract in a Boy. 2. Mr. David J. Wood: A Case of Retinal Exudation with Extreme Distension of Vessels and numerous Arterio-venous Anastomosis. 3. Mr. A. S. Percival: (1) Note on the Colours of Benham's Top. (2) Note on Some Rhythmic Oscillations of the Pupil.

POST-GRADUATE COURSES AND LECTURES.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Wednesday, 4 p.m., Cases from the Wards.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstrations, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m., Monday, and noon, Thursday; Skin, at noon and 4 p.m., Tuesday, and noon, Friday; Eye, 11 a.m., Wednesday and Saturday; Radiography, 4 p.m., Thursday. Special Lectures: Monday, 4 p.m., Hay Fever; Tuesday, 3.15 p.m., The Operative Treatment of Gall Stones; Friday, 2.15 p.m.

LONDON THROAT HOSPITAL, Great Portland Street, W.—Wednesday, 5 p.m., Briening's Bronchoscope.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chancery Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures at 5.15 p.m. each day will be given as follows: Monday, Some Surgical Considerations; Tuesday, Otic Neuritis; Wednesday, Some Medical Considerations; Thursday, Rupture of Perineum.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., The Significance of Focal Fits; Friday, 3.30 p.m., Clinical Lecture.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m., Surgical Out-patient, 2.30 p.m., Medical Out-patient; Nose, Throat, and Ear: X Rays; 4.30 p.m., Medical In-patient. Tuesday, 10 a.m., Medical Out-patient; Clinics; 2.30 p.m., Operations; Wednesday, Gynaecological; 4.30 p.m., Lecture: Dermatological Inspection of School Children. Wednesday, 2.30 p.m., Medical Out-patient, Skin, and Eye Clinics. Thursday, 2.30 p.m., Gynaecological Operations; Clinics; Medical Out-patient, Surgical Out-patient, X Rays; 3 p.m., Medical In-patient; 4.30 p.m., Special Demonstration of Cases of Children's Disease. Friday, Clinics; 10 a.m., Surgical Out-patient; 2.30 p.m., Operations; Clinics; Medical Out-patient, Eye; 3 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, London, W.—The following are the arrangements for next week:—Daily, 2 p.m., Medical and Surgical Clinics, X rays; 2.30 p.m., Operations. Monday and Thursday and Wednesday and Saturday, 2 p.m., Diseases of the Eyes. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (and Wednesday and Saturday, 10 a.m.), Diseases of Throat, Nose, and Ear; 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, 10 a.m., Diseases of Children; 2.30 p.m., Diseases of Women. Lectures: At 10 a.m., Monday and Thursday, Surgical Histology. Registrar, Demonstration of Surgical Cases; Friday, Medical Registrar, Demonstration of Medical Cases. At 12 noon, Pathological Demonstration. At 12.15 p.m., Practical Medicine. At 5 p.m., Monday, Diseases of Throat, Nose, and Ear. Clinical Lecture. Tuesday, Ankylostomiasis. Wednesday, Medicine. Thursday, Anaesthetics. Friday, Cases of Skin Diseases.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C.—Thursday, 6 p.m., Syphilis.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
JANUARY.		FEBRUARY.	
24 Sunday ..		1 MONDAY ..	
25 MONDAY ..		2 TUESDAY ..	
26 TUESDAY ..	HAMPSTEAD DIVISION, <i>Metropolitan Counties Branch</i> , St. Peter's Hall, Belsize Square, N.W. (behind St. Peter's Church), Special Meeting, 4.55 p.m.; Ordinary Meeting, 5 p.m.	3 WEDNESDAY ..	LONDON: Medico-Political Midwives Subcommittee, 3 p.m. ULSTER BRANCH. Winter Meeting, Belfast.
27 WEDNESDAY ..	NORTHAMPTONSHIRE DIVISION, <i>South Midland Branch</i> , Board Room, Northampton General Hospital, 2.30 p.m.	4 THURSDAY ..	
28 THURSDAY ..	CITY DIVISION, <i>Metropolitan Counties Branch</i> , Business Meeting, Great Eastern Hotel, 3.30 p.m.	5 FRIDAY ..	
29 FRIDAY ..	NORTH NORTHUMBERLAND DIVISION, <i>North of England Branch</i> , Infirmary, Berwick-on-Tweed, 2.15 p.m.	6 SATURDAY ..	
30 SATURDAY ..	BIRMINGHAM BRANCH, Pathological and Clinical Section, Medical Institute, Edmund Street, 8 p.m.	7 Sunday ..	
31 Sunday ..		8 MONDAY ..	
		9 TUESDAY ..	LONDON: Capitation Grants Subcommittee, 1.30 p.m.
		10 WEDNESDAY ..	RICHMOND DIVISION, <i>Metropolitan Counties Branch</i> , Royal Hospital, Richmond, 8.30 p.m.
		11 THURSDAY ..	BIRMINGHAM BRANCH, Medical Institute, Edmund Street, 3.30 p.m.
		12 FRIDAY ..	
		13 SATURDAY ..	LEINSTER BRANCH, Annual General Meeting, Royal College of Physicians, Kildare Street, Dublin, 4.30 p.m.; Annual Dinner, in the College Hall, 7.30 p.m.
		14 Sunday ..	
		15 MONDAY ..	
		16 TUESDAY ..	
		17 WEDNESDAY ..	ALTRINCHAM DIVISION, <i>Lancashire and Cheshire Branch</i> , Brooklands Hotel, 5 p.m. CARDIFF DIVISION, <i>South Wales and Monmouthshire Branch</i> , Cardiff.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. Od., and the **BRITISH MEDICAL JOURNAL** is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent

by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the **BRITISH MEDICAL JOURNAL** for non-members is £1 8s. Od. for the United Kingdom, and £1 15s. Od. for abroad

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JANUARY 30TH, 1909.

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Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

BIRMINGHAM BRANCH.

An ordinary meeting was held at the Medical Institute on January 14th. Mr. F. MARSH, the President, was in the chair, and thirty-three members were present.

Coventry Provident Dispensary.—Dr. THOMAS WILSON proposed, Dr. KIRBY seconded, and it was carried unanimously:

That the sum of five guineas from the members' fund be voted to the testimonial fund to the late medical officers of the Coventry Provident Dispensary.

Operative Treatment of Oblique Inguinal Hernia.—Mr. JORDAN LLOYD read a paper upon the operative treatment of oblique inguinal hernia. He thought the description, "radical cure," to be a misnomer. The following points were fully discussed: When are curative operations expedient? The important points in anatomy, the method of operating, the choice of suture material, the after-treatment, the results, and, finally, recurrence and its prevention. The paper was discussed by Drs. DEANESLY and PLUMMER, and Messrs. GEORGE HEATON, J. T. J. MORRISON, and LEEDHAM GREEN. Mr. JORDAN LLOYD replied.

METROPOLITAN COUNTIES BRANCH: CHELSEA DIVISION.

A MEETING was held at the Chelsea Town Hall on Tuesday, January 12th. In the temporary absence of Dr. PARSONS, Dr. O'SULLIVAN took the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

An Ethical Matter.—A letter was read from a practitioner, in reply to one which the Secretary had sent him according to instructions received at the last Divisional meeting and reported in the minutes thereof. The explanation was considered satisfactory.

Election of Representative for the Annual Representative Meeting.—A letter was read from the Central Office, advocating the earlier election of a Representative, and it was decided that the matter should receive consideration at the next meeting.

Medical Inspection of School Children.—A letter was received from the St. Pancras Division with reference to the medical inspection of school children, and it was ordered to be laid on the table.

Council of the Royal College of Surgeons of England.—It was proposed by Dr. KEEN (in the absence of Dr. Bonney), and seconded by Dr. LINDSAY:

That we, the Chelsea and Fulham Division of the Metropolitan Counties Branch of the British Medical Association, deeply regret and resent the action of the Council of the Royal College of Surgeons of England in that, having ascertained the wishes of a majority of the Fellows and Members of their College, they should deliberately flout that opinion in the recent alteration of their by-laws; and that a copy of this resolution should be sent to the other Divisions of the British Medical Association.

Carried *nem. con.*

Intrauterine Wounds of Fetal Head.—Dr. JAMES HAMILTON read a paper on this subject, and related two cases. He said his chief object was to induce other members of the Branch to bring forward interesting cases which were constantly occurring in general practice, and thus make their meetings more interesting practically. The two cases recorded below, of contused or abraded wounds of the scalp occurring previously to birth, were, he

thought, unique: they also illustrated the old well-known rule that rare accidents or abnormalities came in runs. Twenty-two years ago he had two cases of imperforate anus in one week, and had not seen a similar deformity since, although he had during that time attended about 2,000 confinements.

CASE I.—Mrs. B., confined in April, 1908. Baby just born as Dr. Hamilton entered the room, and the nurse had only preceded him by about a minute, so that no digital examination had been made. While attending to the mother, who had some hæmorrhage after expressing the placenta, the nurse, who was washing the baby, asked him to look at its head, as there was a red streak on it. He remarked it was probably a naevus, but he would examine it presently. When he did so, he was astonished to find on the scalp just above the occipital bone an abraded wound covered with lymph. It was $\frac{1}{4}$ in. long by $\frac{1}{4}$ in. broad. In a week it had dried, healed, and contracted to a line-like scar. In a month it was still the same, but a few hairs were coming through the cicatrix. The mother explained next day that a fortnight before confinement she (while in bed) reached over to the cot alongside, and about 18 in. lower than her bed, where her other child was lying, to comfort him, as he was peevish, and fell asleep, and on awaking her abdomen was resting on the iron side-rail of the bedstead, and was so cramped that she had to raise it with her hands before she could get back to bed.

Since writing this, Dr. Hamilton said, the baby's grandmother informed him on December 3rd that about three weeks before the birth the mother was turning a wringer, when the handle slipped and hit her on the abdomen. She did not feel ill after the blow, but this seemed to him to be a more probable explanation of the cause, as the wound was transverse and not vertical, as one would have expected if caused by the iron rail.

CASE II.—Mrs. W., confined on August 4th. Baby was born a few minutes after Dr. Hamilton's arrival. No previous digital examination. Almost in the same position as in the last case were three rounded abrasions covered with lymph, and of a red glassy appearance. The central one was as large as a big marble, and one on each side, separated by about half an inch, was as big as a pea. The wounds were healed in about ten days. The mother explained that exactly three weeks before labour she ran after her other child—a toddler of a couple of years—who had run out on to the stairs, fearing she would fall down them, and in doing so she caught her abdomen on a three-handled knob or key in door. She felt sick and faint for a few minutes, but experienced no symptoms afterwards. Dr. Hamilton saw this child on October 22nd, when he vaccinated her. There were three white rounded cicatrices on the head, without any appearance of hair, but no loss of substance otherwise.

These cases were, he thought, most unusual, and he brought them before the notice of the Division to elicit information as to whether any other member had had a similar experience, and also to know whether they agreed with him that the mother's statements could be taken as cause and effect. From a medical jurisprudence point the cases were very important. One could quite understand that a doctor, midwife, or nurse might get the credit of having caused the wounds with the finger-nail, but in neither of these cases was a digital examination made. He could see nothing in Speigelberg or other works in his possession on the subject. In *Quain's Dictionary* Dr. Ballantyne stated that it might be safely concluded the fetus did not often suffer from traumatism apart from the act of birth. Another observation worth recording was the absence of the healing process *in utero* and its rapidity after birth. A very interesting discussion took place on the paper.

Vote of Thanks.—A hearty vote of thanks was passed to Dr. Hamilton for having initiated the practice of discussing cases of interest which come to the notice of members in their daily work.

LAMBETH DIVISION.

A GENERAL MEETING of the Lambeth Division was held at Lambeth Infirmary, Brook Street, S.E., on Friday, January 15th, at 4 p.m. There were present Dr. ATKINSON, in the chair, and eighteen members and visitors.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Paper.—Dr. T. G. STEVENS read a paper upon some of the difficulties and dangers met with in connexion with uterine fibroids. He said that fibroids which were not causing symptoms required little or no treatment, but that when symptoms resulted the treatment now was very different to what it was even a few years ago. Much unnecessary suffering, ill-health, and even death from intercurrent maladies which would not have proved fatal

had the general health been good, were prevented by much earlier operation than formerly; some of the indications for operating soon he considered to be: repeated excessive uterine hæmorrhage; evidence of pressure upon ureters; retention of urine; evidence of any infective trouble in the fibroid; evidence of possible obstruction to a fetus by the fibroid; necrotic changes in the fibroid, or cystic or sarcomatous changes in it; evidence of internal bleeding from rupture of a vessel in the surface of the fibroid. The paper was discussed by Dr. CAPES, Dr. QUARRY, Dr. HICKLEY, and the HONORARY SECRETARY.

Votes of Thanks.—A hearty vote of thanks to Dr. Stevens for his paper was proposed by Dr. CAPES, seconded by Dr. STURGES JONES, and carried by acclamation. A vote of thanks to Dr. Quarry and to the Lambeth Board of Guardians for their kind arrangements for the meeting was carried unanimously, on the motion of Dr. HERBERT TAYLOR, seconded by Dr. SANGSTER.

Hospital Treatment of Accidents.—A report from the Medical Charities Committee on the question of hospital treatment of accidents in its relation to the Workmen's Compensation Act was received.

An Advertisement.—The following advertisement from the *South London Observer and Camberwell and Peckham Times* of Saturday, December 19th, 1908, was discussed: "Guy's Surgical Home for Ladies of Limited Means. Surgical, Medical, Maternity, or Slight Mental Cases. All Home Comforts. For Vacancies apply Matron, 243, Camberwell Road." It was reported that the institution had nothing whatever to do with Guy's Hospital; and that the institute was under the supervision of a medical man. The Honorary Secretary was instructed to write a letter to this gentleman, calling his attention to the fact that his use of the word "Guy's" in this way was misleading, and asking him if he would be so kind as to inform the Division what steps, if any, he would take to alter this.

QUEENSLAND BRANCH.

THE annual meeting of the Queensland Branch of the Association was held on Friday evening, December 4th, 1908, at the Technical College, Brisbane, Dr. J. LOCKHART GIBSON, President, in the chair.

Election of Officers.—The following members were elected for office during the year 1909: President, Dr. G. L'ESTRANGE; Vice-Presidents, Drs. HARDIE and J. LOCKHART GIBSON; Treasurer, Dr. A. MARKS; Curator, Dr. WILTON LOVE; Auditors, Drs. EDITH URA and ELEANOR BOURNE; Council, Drs. ROBERTSON, P. BANCROFT, TURNER, ESPIC DODS; Honorary Secretary, Dr. A. B. BROCKWAY.

SOUTH-EASTERN BRANCH:

BROMLEY DIVISION.

A MEETING of this Division was held at the Bell Hotel, Bromley, on Thursday, January 21st, Dr. A. TENNYSON SMITH, Chairman of the Division, in the chair.

Medical Inspection of School Children.—The report of the Medico-Political Committee "on certain points in connexion with the medical inspection," etc., was considered. After a full discussion the following resolutions were passed:

1. (a) The Division approves of the system of payment per head, that the minimum payment be 2s. 6d. (per head), and that an allowance should be made for travelling expenses.
2. The treatment of children found defective; and
3. The Division unanimously supports the motion handed in at the Annual Representative Meeting, 1908, by Dr. A. H. WILLIAMS (Watford and Harrow). This motion appears in Appendix II of Report, page 11.
4. No suggestions were made.

The late Dr. Seddon.—It was unanimously decided that a letter of sympathy be written by the Chairman and sent to the relatives of the late Dr. Seddon, Honorary Secretary of the Division.

Appointment of Honorary Secretary.—It was unanimously resolved that Dr. Tennyson Smith be appointed Honorary Secretary of the Division.

Appointment of Chairman.—It was unanimously resolved that Dr. Scott of Bromley be appointed Chairman of the Division on the resignation of Dr. Tennyson Smith from that post.

SOUTH-WESTERN BRANCH: PLYMOUTH DIVISION.

Medical Inspection of Schools.—A meeting of this Division was held on January 20th to consider the report of the Medico-Political Committee re certain points in connexion with the medical inspection of school children and the treatment of those found defective. After considerable discussion in a well attended meeting, it was unanimously resolved that as regards inspection—

Part time officers, to give half a school day per week at a salary of £50 per annum, should be appointed to do this work.

As regards treatment it was unanimously resolved—

(a) That the actual treatment of school children should not be undertaken by medical inspectors of schools. (b) That in all cases of disease or defect, the parents should be referred to their own medical attendant, who alone should decide what treatment should be given and where it is desirable such treatment should be given. (c) Cases having no medical attendant and being too poor to pay for advice should be referred to the Poor-law medical officer.

Further, the Division recorded its objection to the formation of school clinics, unless under the Poor Law.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.

A MEETING of this Branch was held on December 17th, 1908, at the General Infirmary, Worcester, Dr. EDGAR MORRIS, President, in the chair. There were also present: Drs. Edgar Overay-Jones, Mobyen Read, N. O. Holbeche, Thomas Turner, J. B. Siddall, G. W. Crowe, Charles Pollard, Herbert Jones, J. N. F. Fergusson, Arthur Wood, Arthur Green, T. G. Elsworth, W. W. Horton, C. Thompson, Paul Chapman, Llewellyn B. Green, H. A. Watson, Nugent Smyth, J. C. Bowes, T. Bates, Lawrence W. Pole, Gilbert Chorsley, Wellesley Coombs. Visitors: W. H. Robinson, Kilburn K. Grieve, Fred J. Ayre, Lieutenant-Colonel C. H. Melville, and Dr. Mary Williams.

Apologies for Non-attendance.—Letters of apology for inability to attend were read from Messrs. C. F. Cuthbert, S. L. Haynes, T. P. Gostling, and C. H. East.

Confirmation of Minutes.—The minutes of the annual general meeting of June 18th, 1908, were read and confirmed.

Proposed Ethical Committee.—The PRESIDENT reported that the Branch Ethical Committee could not at present be constituted, in consequence of the remodelling of rules that were under consideration by the Central Ethical Committee.

The Health of the Soldier.—Lieutenant-Colonel MELVILLE, R.A.M.C., read a paper on Military Sanitation: the health of the soldier: how the civil medical profession can co-operate with the Royal Army Medical Corps in this direction. A discussion followed, in which the following took part: The PRESIDENT, and Messrs. SIDDALL, HERBERT JONES, A. L. GREEN, N. SMYTH, and G. CROWE. We give Dr. SIDDALL's remarks in full. He said: Although not now engaged in practice, it may not be out of place for me to make one or two remarks on this subject, as it is one in which I have been interested, and as it fell to my lot to be, in conjunction with the late Dr. William Willis, a brother of the late George Willis of Monmouth, what one may call one of the pioneers of medical education in Japan, where medical knowledge has made such vast strides in the last forty years. I have studied the results of the Russo-Japanese and other wars with considerable interest. I arrived in Japan in June, 1863 (having been appointed to succeed the late Dr. William Willis as Physician to Her (late) Britannic Majesty's Legation), soon after the commencement of the civil war which resulted in the retirement of the Taikun (or Tycoon) from power. Dr. Willis had at that time a number of wounded men under his care at Yokohama, but as the fighting receded north Dr. Willis was allowed by Sir Henry Parkes to go with the army, and I remained at what may be called the base. The numbers grew beyond the accommodation

at Yokohama, and in November, 1868, I established the first hospital in Japan, and which contained 500 beds. Sanitation at that time was unknown amongst the Japanese, and, to illustrate some of the difficulties I had to contend with, I may mention that I had given instructions for all deleterious matters to be burned; but, as I noticed that some holes had been dug and subsequently filled in, I suspected that the refuse had been buried, and so one day, when going round, I sent for a coolie and told him to dig in a certain place. At first nothing was found, and I was about to give up the search, but on digging a little more to the right I found a lot of poultices, bandages, etc., so I went off to the English Consulate and said I should see no more patients till everything had been dug up and burned, and, as I had supreme authority, this was done, and I had no further trouble. This was one of the first lessons in hygiene. Dr. Willis subsequently established a medical school at Kagosima (Satsuma's capital), and had for one of his pupils Baron Takaki, later a distinguished student at St. Thomas's Hospital, who became Director General of the Japanese navy. Colonel Melville has referred to the Crimean war. The French lost more men before they got to the Crimea than they had killed in the whole of the war, and the English losses were: Killed in action 2,755, died of wounds 1,847, and of disease 17,580. It is said of Sir George Brown that when asked what was to be done with the sick when about to cross the Black Sea, he said, "D—n the sick," showing that their condition was of no interest to him. In the cathedral there is a memorial tablet to the men of the Worcester Regiment who lost their lives in South Africa. It reads: Died 57, killed in action 8, died of wounds 2, showing the large mortality due to sickness over bullets. It has always appeared to me, but I speak with all reservation in the presence of Colonel Melville, that the combatant officers of the service have never given due consideration to the suggestions of the medical staff, and that the latter have not had sufficient authority, but as there is now an Advisory Council, of which Sir Frederick Treves is a member, probably in the future the regulations as to hygiene may be more efficacious. Sir Frederick Treves said of the Japanese that they expected to get 1 per cent. of sick, and got it; we expected 10 per cent., and got it. At Hiroshima the Japanese had a hospital of 15,000 beds. Of these 14,500 were for wounded and 500 for sick. With reference to Colonel Melville's remarks as to hygiene being taught in schools, I think an elementary course would be of benefit, and for the Territorials when in camp at places like Salisbury Plain some lectures like those for first aid to the injured might be of benefit, and also practical work in making latrines. These should be given at as early a date as possible, and when we see what results have been obtained by the Japanese there should be no difficulty in giving our men the instructions that would be of such benefit to themselves and the country.

Vote of Thanks.—Colonel MELVILLE having replied, the PRESIDENT moved, and Dr. SIDDALL seconded, a hearty vote of thanks to Colonel Melville for his most interesting and informing paper, which was carried by acclamation.

Phtisis in Children.—Dr. MARY WILLIAMS read a paper on phtisis in children. Dr. Williams, as an inspectress of school children under the Worcester County Council, brought forward elaborate statistics and the results of her own clinical observations in support of the view that the prevalence of phtisis among children of school age was greater than was generally recognized, and it formed the basis in later life for a recurrence in a very large percentage of those who died from phtisis between the ages of 15 and 35. The discussion of the paper was postponed to the next meeting, and the meeting resolved to request Dr. Mary Williams to allow the paper to be published in the BRITISH MEDICAL JOURNAL in view of its great practical importance, and many novel speculations and suggestions for future fruitful inquiry raised in the paper. Dr. Mary Williams was cordially thanked for her interesting paper.

Demonstration.—Dr. PAUL CHAPMAN exhibited an extreme case of multiple lipomata, and gave a clinical demonstration in the administration of anaesthetics by Dubois's apparatus, simplified in use by a footpiece which he had designed. In consequence of the lateness of the hour, Mr. Pollard's notes on two cases of extroversion of the bladder, one operated on and the other unoperated, was reserved for the next meeting of the Branch.

ES To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BIRMINGHAM BRANCH: COVENTRY DIVISION.—A meeting of this Division will be held at the Coventry and Warwickshire Hospital, on Tuesday, February 2nd, at 8.30 p.m. Agenda: (1) Minutes of last meeting. (2) Specimen: fibula removed from leg, to be shown by Dr. Harman Brown. (3) The matters of "payment for school certificates," also "fund for Mrs. Bird, and testimonial to late Provident Dispensary Medical Officers," to be brought forward by the Secretary. (4) Discussion upon "Relationship between Medical Men and Nurses," introduced by Dr. Milner Moore. Also specimens: three ovarian tumours to be shown by Mr. W. E. Bennett.—**JOHN ORTON**, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—A general meeting of the Division will be held at 5 p.m. on Wednesday, February 17th, at the Brooklands Hotel. The meeting will be a special meeting under Rule 14, for the purpose of amending Rule 8 (election of Representative), and of considering the adoption of new rules (namely, "Bradford" Rule, and Rule Z), copies of which have been sent by post to each member. In the ordinary meeting Dr. Rhodes will read a paper, and the usual general business will be taken.—**T. W. H. GARSTANG**, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—Meetings of the following Branch Committees will be held on the dates mentioned, namely: Organization and Finance Committee, at the Royal Infirmary, Manchester, on Wednesday, February 3rd, at 4.30 p.m.; Ethical Committee, at the Royal Infirmary, Manchester, on Friday, February 5th, at 4.30 p.m. The Branch Council will meet at the Medical Institution, Liverpool, on Wednesday, February 10th, at 4.30 p.m.—**F. CHARLES LARKIN**, Honorary Secretary.

LEINSTER BRANCH.—The annual general meeting will be held on Saturday, February 13th, in the Royal College of Physicians, Rildare Street, Dublin, at 4.30 p.m. The annual dinner will be held in the College Hall at 7.30 p.m. of the same day.—**ARTHUR H. WHITE**, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—A meeting of this Division will be held at the Criterion Restaurant, Piccadilly, on Thursday, February 4th. Dinner, 7.30 p.m. Business, 9 p.m. Paper by A. W. Mayo Robson, F.R.C.S.: The Importance of Early Diagnosis for Successful Surgical Treatment.—**J. HOWELL EVANS**, Assistant Honorary Secretary.

SOUTH MIDLAND BRANCH: BEDFORD AND HERTS DIVISION.—A meeting of the Division will be held at Bedford County Hospital, Bedford, at 3 p.m., on Thursday, February 11th. Dr. S. P. Dixon in the chair. Agenda: (1) Minutes. (2) Revision of Divisional Rules. (3) Consideration of the Report of Medicopolitical Committee on the Medical Inspection of School Children. Members wishing to read papers or show cases are requested to communicate with the Secretary as soon as possible.—**E. H. COBB**, Honorary Secretary, Belmont, Stevenage.

ULSTER BRANCH.—The winter meeting of this Branch will be held in Belfast on Wednesday, February 3rd.—**OCELL SHAW, M.D.**, Honorary Secretary, Belfast.

CENTRAL MIDWIVES BOARD.

A MEETING of the Central Midwives Board was held at Caxton House, Westminster, on January 21st, with Dr. F. H. CHAMPNEYS in the chair.

Resignation of Miss J. Wilson.

The CHAIRMAN announced that he had received from Miss J. Wilson a letter stating that she had resigned her place on the Board as a protest against the absence of any certified midwife on the Departmental Committee appointed to consider the working of the Midwives Act. The Chairman then proposed a resolution stating that the Board heard with great regret of the resignation of Miss Wilson, and expressing their appreciation of her work, concluding with the words, "Her loss is irreparable."

This resolution was agreed to unanimously.

Mr. E. PARKER YOUNG moved that the following words be added to the Chairman's resolution: That the Board "profoundly sympathizes with her for the reasons that induced her to resign."

Mr. J. WARD COUSINS, in seconding, expressed his regret that Miss Wilson had not been placed on the Departmental Committee.

Sir GEORGE FORDHAM said it was undesirable for the Board to set itself up as a critic of the Privy Council by passing such a resolution. The inquiry was a domestic matter of the particular Government departments concerned.

Sir WILLIAM J. SINCLAIR said that for the Board to interfere with the Privy Council would be an ill-advised step and a piece of impertinence.

On being put to the vote, 4 voted for and 4 against the motion, which was lost by the Chairman's vote.

The Departmental Committee on the Midwives Act.

Mr. E. PARKER YOUNG moved:

That the Lord President of the Council be respectfully requested to consider the advisability of adding to the Departmental Committee representatives of the interests of general medical practitioners and midwives, as the Board considers that such additions would greatly enhance the value of the report eventually come to by that Committee.

He said that since the Departmental Committee had been appointed already one addition had been made—that of a medical officer of health. With something like 40,000 medical practitioners it would not be difficult to choose suitable men to serve on the Committee. Cases would come before it for the consideration of which it was most important that they should be members representing not only the general practitioner but also the midwives; this would increase public confidence in the report of the Committee.

Mr. ATKINSON seconded.

Sir GEORGE FORDHAM said that he questioned the propriety of the Board expressing something of a censure on the Privy Council by the resolution. It would put the Chairman of the Central Midwives Board, who was a member of the Committee, in an embarrassing position.

Mr. WARD COUSINS, in supporting the resolution, said every influence should be brought to bear to heal the differences between medical practitioners and midwives in the country. It was placing too much responsibility on the Chairman of the Board to expect him to represent the whole medical profession on one of the most dangerous Departmental Committees ever appointed. If one or two practitioners were placed on the Committee it would be an assistance to the Chairman in questions which a consultant could not know about. If the Committee succeeded in its work it would heal the differences between medical men and midwives which were obstructing the working of the Midwives Act.

Miss R. PAGET thanked Mr. Parker Young for including in his resolution the suggestion that a representative of the midwives should be added to the Committee.

Sir WILLIAM J. SINCLAIR deprecated the tendency of the Board to interfere in the squabbles between doctors and midwives. In the North of England there was a clear improvement in the relations between midwives and doctors. He did not consider that an ordinary practising midwife was fitted intellectually to take an efficient part as a member in the proceedings of such an important Departmental Committee. The use of such women would be in giving their practical experience by means of evidence. The Board had no right to dictate to the Lord President of the Privy Council, and he (Sir W. J. Sinclair) strongly protested against the action proposed to be taken by the Board in matters which did not concern it.

Mr. PARKER YOUNG contended, on the other hand, that the Board was constituted to administer the Midwives Act; and if that Act was going to be altered and the Board did nothing, their constituents would say that the Board knew there were certain things in the Act rendering it unworkable; for instance, they heard of midwives sending to eight or nine doctors before they could get one to attend, and yet the Board did nothing towards remedying such a state of things. It was admitted that something should be done to secure a clause in the Act ensuring the payment of doctors called in by midwives. Sir William Sinclair said matters were not so bad as had been represented by Mr. Ward Cousins, but matters were getting worse. Sir William Sinclair did not belong to the class of general practitioners who knew where the shoe pinched, and so did the midwives; and it was only fair and just

that in framing any amending Act the question should be gone into thoroughly. The resolution was not an attempt to dictate to the Lord President, but a respectful request for a consideration of the advisability of adding to the Departmental Committee.

On being put to the vote, the resolution was carried.

Alleged Drunkenness.

A letter was considered from H.R.H. Princess Christian as to charges of drunkenness reported against two of the nurses in the Windsor Maternity Home. The Board decided that the letter be referred to a subcommittee to investigate and report on the whole method by which the midwives of the Windsor Maternity Home are engaged.

Advertising.

Letters were considered from Mr. G. Stainton, acting as the solicitor of Eliza Annie Collins, promising to suppress the circular dealt with by the Board's resolution of December 17th, 1908, and undertaking that his client will not issue any advertisement suggesting that she is qualified to give medical treatment. The Board decided that no further action be taken in the matter.

Training of Midwives.

Letters were considered from the Honorary Secretary of the Swansea District Nursing Association complaining of the action of the Board in hampering the association in its efforts to train midwives. The Board decided that it be left to the Secretary to send an appropriate reply.

Vaginal Examination.

A letter was considered from Dr. A. Stookes, of Liverpool, on behalf of the medical board of the Liverpool Maternity Hospital, as to the system of teaching adopted at that institution with regard to the number of vaginal examinations to be made. The Board decided that Dr. Stookes be informed that the system of teaching, with regard to vaginal examinations, adopted at the Liverpool Maternity Hospital appeared to comply with the rules of the Board.

A letter was considered from the Secretary of St. Mary's Hospitals, Manchester, inquiring whether the Board's resolution as to the necessity of having twenty distinct cases for each candidate was retrospective so far as regards repeated vaginal examinations. The Board decided to reply that the resolution was not meant to be retrospective.

Advising Medical Help.

A letter was read from Dr. G. C. Taylor, County Medical Officer for Berks, as to the necessity of advising medical help in a case of premature birth. The Board decided that Dr. Taylor be informed that under the circumstances mentioned it is unnecessary to advise medical help unless there be some complication present.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

INSPECTOR-GENERAL G. J. IVINE has been placed on the retired list, January 17th. His commissions were thus dated: Surgeon, March 7th, 1871; Staff Surgeon, March 7th, 1883; Fleet Surgeon, June 14th, 1891; Deputy Inspector-General, January 1st, 1900; and Inspector-General, February 7th, 1905.

Surgeon W. J. SITTE has been allowed to withdraw from the service with a gratuity, January 21st. He was appointed Surgeon, May 13th, 1896.

The following appointments have been made at the Admiralty: Fleet Surgeon W. J. BEARBLOCK to the *President*, additional, for three months' course at West London Hospital, February 1st; Staff Surgeons J. H. FERGUSON and A. G. EASTMENT to the *Victory*, additional, for disposal, January 22nd; Staff Surgeon H. HOSKINSON, M.B., to the *President*, additional, for three months' course at West London Hospital, January 25th.

ARMY MEDICAL SERVICE.

COLONEL H. R. WHITEHEAD to be Surgeon-General, vice W. S. Pratt, C.B., retired, January 21st. The following are the dates of Surgeon-General Whitehead's previous commissions: Surgeon, July 20th, 1882; Surgeon-Major, July 24th, 1894; Surgeon-Lieutenant-Colonel, May 23th, 1898; and Colonel, January 26th, 1905. He was with the Tirah Expedition in 1898, being present at the action of Dargai, at the capture of the Samapasha and Arghaugh Passes, and in the operations against the Khaki Kheh (Chankunias) and in the Bara Valley (mentioned in dispatches, promoted to be Surgeon-Lieutenant-Colonel, and medal with two clasps). In 1908

he was present in operations against the Mohmands on the North-West Frontier of India, and was again mentioned in dispatches.

Surgeon-General V. S. PRATT, C.B., M.B., is placed on the retired list, January 21st. He was appointed Surgeon, March 31st, 1874; Surgeon-Major, June 15th, 1885; granted the rank of Lieutenant-Colonel, September 15th, 1895; made Lieutenant-Colonel, and Colonel, July 9th, 1902; and Surgeon-General, December 29th, 1905. He served as Assistant Surgeon with the Armée du Rhin under Marshal Bazaine in the Franco-German war of 1870-1, and was present at the actions of Gravelotte and Mars-la-Tour, and driven into Metz with the French army, and remained during the siege and until the surrender of the fortress from starvation. He was afterwards with the Nile Expedition in 1884-5 on the staff of Lord Wolseley, was mentioned in dispatches, promoted to Surgeon-Major, and received a medal and clasp and the Khedive's bronze star. He has been Principal Medical Officer at Gibraltar; Administrative Medical Officer, India; and Principal Medical Officer, Southern Command, Suez Canal, Egypt. He is serving in India, and is appointed Principal Medical Officer, 4th Lucknow Division, vice Surgeon-General W. B. Slaughter, retired.

Colonel D. O'SULLIVAN, also serving in India, is appointed Principal Medical Officer, 4th (Quetta) Division, vice Surgeon-General Ellis, transferred.

Lieutenant-Colonel S. C. B. ROBINSON, from the Royal Army Medical Corps, to be Colonel, vice H. R. Whitehead, January 21st. He was appointed Surgeon, February 5th, 1881; Surgeon-Major, February 5th, 1893; and Lieutenant-Colonel, February 5th, 1901. He served in the South African war in 1898-1902, being present in the advance on Kimberley, in the actions at Belmont, Emslin, Modder River, and Magersfontein, and in operations in the Orange Free State, including actions at Paardeberg, Poplar Grove, and Dreifontein, and in operations in the Transvaal, including actions near Johannesburg, Pretoria, and Diamond Hill, and subsequently at Belfast; he has received the Queen's medal with seven clasps and the King's medal (the official *Army List* says with three clasps, but this is apparently an error for two clasps).

Colonel W. J. R. RAINFORD, C.I.E., is placed on retired pay, January 26th. His commissions are thus dated: Surgeon, February 4th, 1877; Surgeon-Major, February 4th, 1889; Surgeon-Lieutenant-Colonel, February 4th, 1897; and Colonel, December 14th, 1903. His war record is as follows: Afghan war, 1879-80, with the Khyber Field Force (medal); Egyptian war, 1882 (medal and Khedive's bronze star); Sudan Frontier Field Force, 1885-6; China war, 1890 (mentioned in dispatches, appointed C.I.E., and received medal with clasp).

Lieutenant-Colonel R. W. FORD, D.S.O., from the Royal Army Medical Corps, to be Colonel, vice W. J. R. Rainford, C.I.E., January 26th. Colonel Ford was appointed Surgeon, February 5th, 1881; Surgeon-Major, February 5th, 1893; and Lieutenant-Colonel, February 5th, 1901. He served in the Egyptian war in 1882, receiving a medal and the Khedive's bronze star. He was in the South African war in 1898-1902, in charge of a stationary hospital at Pretoria, and was at the relief of Kimberley, in operations in the Orange Free State, including actions at Paardeberg, Poplar Grove, Dreifontein, Val River, and Sand River, and in subsequent operations in the Transvaal. He was mentioned in dispatches, appointed D.S.O., and granted the Queen's medal with four clasps.

Lieutenant-Colonel E. ECKERSLEY, M.B., R.A.M.C., to be Deputy Assistant Director-General at Head Quarters, Indian Medical Corps, A. E. Title, January 20th. Lieutenant-Colonel Eckersley joined the Army Medical Service as Surgeon, July 28th, 1885; was made Major, July 28th, 1898, and Lieutenant-Colonel, July 28th, 1906. He was with the Ashanti expedition, 1895-6, receiving a star; he was also in the South African war in 1898-1902, being present at the relief of Ladysmith, including the actions at Colenso, Spion Kop, Vaal Kraz, on the Tugela Heights, and at Pieters Hill; he was also in operations in Natal, in the Transvaal, and on the Zululand Frontier. He has received the Queen's medal with five clasps and the King's medal with two clasps.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT S. G. WALKER, from the Seconded List, to be Lieutenant, January 8th. He was appointed on probation, February 4th, 1908.

Captain R. J. CUMMINS, M.B., from the Seconded List, to be Captain, January 7th. He was seconded for service with the Egyptian Army, January 7th, 1899.

Captain G. S. NICKERSON, M.B., retires, receiving a gratuity, January 23rd. He was appointed Lieutenant, July 27th, 1898, and promoted to be Captain three years thereafter. He was with the Nile expedition in 1899, being present in the operations resulting in the final defeat of the Khadda; he was mentioned in dispatches, and received a medal with two clasps.

Lieutenant H. H. LEESON, from the Seconded List, to be Lieutenant, January 16th. He was appointed on probation, August 1st, 1908.

Lieutenant-Colonel R. W. FORD, D.S.O., has been appointed Administrative Medical Officer at Tidworth, vice Colonel M. W. Kerin, who has proceeded to India.

Lieutenant-Colonel B. M. SKINNER, M.V.O., who is serving in India, is appointed to officiate as Principal Medical Officer, Abbottabad and Sikhotei Brigades.

Colonel O. E. P. LLOYD, V.C., also serving in India, is appointed Principal Medical Officer, 7th (Meerut) Division, and not to the 1st (Peshawar) Division, as previously reported, vice Colonel H. K. McKay, C.B., C.I.E., Indian Medical Service, transferred.

INDIAN MEDICAL SERVICE.

COLONEL H. ST. C. CARRUTHERS, Madras, has been appointed Principal Medical Officer, Kohat Brigade, and not to Abbottabad and Sikhotei Brigades temporarily, as previously reported, vice Colonel C. H. Beaton, transferred.

TERRITORIAL FORCE.

ROYAL FIELD ARTILLERY.

SURGEON-LIEUTENANT-COLONEL T. MCC. FOLEY, from the 1st East Riding of Yorkshire Royal Garrison Artillery (Volunteers), to be Surgeon-Lieutenant-Colonel, 2nd Northumbrian Brigade, with precedence as in the Volunteer Force, April 1st, 1908.

Surgeon-Major J. SOUTTER and Surgeon-Captain H. ROBINSON, M.B., from the 2nd East Riding of Yorkshire Royal Garrison Artillery (Volunteers), are appointed to the 2nd Northumbrian Brigade, with precedence as in the Volunteer Force, April 1st, 1908 (Surgeon-Captain Robinson to be supernumerary).

INFANTRY.

Surgeon-Lieutenant W. G. RICHARDSON, M.B., 6th Battalion the Northumberland Fusiliers, resigns his commission, December 15th, 1908.

ROYAL ARMY MEDICAL CORPS.

For Attachment to Units other than Medical Units.—Surgeon-Lieutenant J. R. ARMSTRONG, M.D., from the 3rd Volunteer Battalion the Welsh Regiment, to be Lieutenant, with precedence as in the Volunteer Force, April 1st, 1908. Lieutenant G. S. WARD to be Captain, November 30th, 1908. J. A. WYLLIE to be Lieutenant, December 1st, 1908. Lieutenant R. BERNER, M.B., from the North Midland Mounted Brigade Field Ambulance, to be Lieutenant, December 31st, 1908. Surgeon-Lieutenant L. C. V. HARDWICK, from the 5th Battalion the Prince of Wales's North Staffordshire Regiment, to be Lieutenant, January 1st. The promotion of Captain (Honorary Captain in the Army) GEORGE G. OARLEY to the rank of Major carries seniority above Major William K. Clayton, and not as stated in the *London Gazette* of December 15th, 1908.

Third East Anglian Field Ambulance.—J. R. POOLER, M.B., to be Lieutenant, December 24th, 1908.

Third Welsh Field Ambulance.—Lieutenant D. B. CHILLES-EVANS to be Captain, December 12th, 1908.

Second Western General Hospital.—To be an officer whose services will be available on mobilization: J. J. COX, M.D., F.R.C.S. Edin., to be Major, January 9th, 1909.

Sanitary Services.—To be an officer whose services will be available on mobilization: Major J. NIVEN, M.B., from the Second Western General Hospital, with precedence next below Major A. A. Masson, December 28th, 1908.

North Midland Mounted Brigade Field Ambulance.—WILLIAM M. HURVETSON, M.B., to be Lieutenant, December 9th, 1908; WILLIAM C. GILDAY to be Lieutenant, December 15th, 1908.

Lieutenant H. C. BARR resigns his commission, November 19th, 1908.

ROYAL ENGINEERS.

Surgeon-Lieutenant H. G. F. DAWSON, from the 1st Cheshire Royal Engineers (Volunteers), to be Surgeon-Lieutenant, Welsh Divisional Engineers, with precedence as in the Volunteer Force, April 1st, 1908.

IMPERIAL YEOMANRY.

SURGEON-MAJOR E. C. THOMPSON, M.B., North of Ireland Regiment, resigns his commission, July 7th, 1908.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,209 births and 4,964 deaths were registered during the week ending January 23rd. The annual rate of mortality in these towns, which had been 18.2, 17.5, and 16.6 per 1,000 in the three preceding weeks, further fell to 15.7 per 1,000 last week. The rates in the several towns ranged from 6.8 in Leyton, 8.1 in Willesden, 8.2 in Hornsey, 8.4 in Walthamstow, 9.3 in Tottenham, and 9.8 in East Ham and in Boodle, to 20.4 in Nottingham, 20.5 in Maford, 20.6 in Manchester, 20.9 in Rochdale, 21.5 in Stockton-on-Tees, 22.4 in Warrington, and 23.6 in Stockport. In London the rate of mortality was 15.5 per 1,000, while it averaged 15.8 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.4 per 1,000 in the seventy-six towns: in London this death-rate was equal to 1.5 per 1,000, while among the seventy-five other large towns the death-rate from these diseases ranged upwards to 2.6 in Nottingham, 2.8 in Huddersfield, 2.9 in Stockton-on-Tees, 3.0 in Manchester, 3.2 in King's Norton, 3.5 in West Hartlepool and in Sunderland, and 7.9 in Warrington. Measles caused a death-rate of 1.1 in West Ham and in Hull, 1.2 in Aston Manor and in Sheffield, 1.5 in Leicester, in Stockport, and in Manchester, 1.7 in Huddersfield, 1.8 in Birmingham, 2.5 in Sunderland, 3.3 in West Hartlepool, and 4.3 in Warrington; scarlet fever of 1.3 in Merthyr Tydfil; diphtheria of 1.2 in Rochdale, 1.3 in King's Norton, 1.6 in Rotherham, and 2.2 in Warrington; whooping-cough of 1.3 in Coventry, 1.4 in Bourne-mouth, 1.9 in Tynemouth, and 2.0 in Stockton-on-Tees; "fever" of 1.4 in Warrington; and diarrhoea of 1.5 in Smethwick. No fatal case of small-pox was registered in any of the seventy-six towns during the week. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,57, 3,57, and 3,261 at the end of the three preceding weeks, had further fallen to 3,211 at the end of last week; 379 new cases were admitted during the week, against 373, 325, and 358 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, January 23rd, 1,013 births and 671 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 19.5 and 18.1 per 1,000 in the two preceding weeks, rose again to 18.3 per 1,000 last week, and was 3.1 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 11.7 in Perth and 14.0 in Leith to 20.7 in Aberdeen and 21.9 in Dundee. The death-rate from the principal infectious diseases averaged 1.6 per 1,000, the highest rates being recorded in Glasgow and Aberdeen. The 309 deaths registered in Glasgow included 7 which were referred to diphtheria, 23 to whooping-cough, and 2 to diarrhoea. Three fatal cases of whooping-cough and 4 of diarrhoea were recorded in Edinburgh; 2 of whooping-cough in Dundee; 2 of diphtheria and 6 of whooping-cough in Aberdeen; and 2 of diphtheria in Paisley.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, January 23rd, 597 births and 473 deaths were registered in the twenty-two principal urban districts of Ireland, as against 605 births and 468 deaths in the preceding period. The annual death-rate in these districts, which had been 24.7, 20.4, and 21.4 per 1,000 in the three preceding weeks, rose to 21.6 per 1,000 in the week under notice, this figure being 5.9 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 25.3 and 6.6 in Queenstown to 37.0 in Tralee, while Cork stood at 29.5, Londonderry at 15.7, Limerick at 17.8, and Waterford at 21.4. The zymotic death-rate in the twenty-two districts averaged 1.0 per 1,000, as against 1.4 per 1,000 in the preceding period.

Hospitals and Asylums.

THE BIRMINGHAM GENERAL HOSPITAL.

DURING the year ending December 31st, 1908, the number of in-patients treated has been 5,229, and the number of out-patients 66,033. Of these, 578 in-patients and 21,743 out-patients presented tickets. First-aid was rendered to 2,294 out-patients, who were then referred elsewhere, under the scheme which came into force on March 23rd, 1908. The number of in-patients showed a decrease of 340 on the number admitted in the previous year, and the number of out-patients showed an increase of 3,931. At present there are 116 cases awaiting admission, all of them cases for operation, in spite of the fact that there were 3,779 surgical operations performed during the year. The total income for the year was £24,083, and the expenditure £26,510. This included £1,065 for alterations to the operating theatres. There was, therefore, a deficit of £2,427, and this, added to a deficit of £503 on the Jaffray Branch Hospital, and a deficit of £7,698 from the previous year, made the total amount overdrawn at the bank stand at £10,628. The annual subscriptions were £190 less than in the previous year, and the amount received from the Hospital Sunday Fund was diminished by £146. In 1907 the income was £21,953, and the expenditure £24,556.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Resident House-Surgeon (Male). Salary, £80.

BRIDGWATER HOSPITAL.—House-Surgeon. Salary at the rate of £80 per annum.

BRISTOL ROYAL INFIRMARY.—(1) Two House-Physicians; (2) House-Surgeon; (3) Obstetric and Ophthalmic House-Surgeon; (4) Throat and Nose and Ear House-Surgeon; (5) Casualty Officer. Salary for (1) and (2) £100 each, (3) and (4) £75, and for (5) £50.

CHELTEMHAM GENERAL HOSPITAL.—Surgeon-in-Charge for Branch Dispensary. Salary, £80 per annum.

DERBY COUNTY ASYLUM, Mickleover.—Junior Assistant Medical Officer (Male). Salary, £120 per annum.

DUDLEY GUEST HOSPITAL.—Senior Resident Medical Officer. Salary, £100 per annum.

DURHAM COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary, £150 per annum.

EDINBURGH ROYAL HOSPITAL FOR SICK CHILDREN.—Four Resident Medical Officers.

EDINBURGH UNIVERSITY.—Additional Examiner in Forensic Medicine.

FULBORN LUNATIC ASYLUM.—Senior Assistant Medical Officer (Male). Salary, £150 per annum.

GATESHEAD COUNTY BOROUGH.—Assistant School Medical Officer. Salary, £120 per annum.

GORDON HOSPITAL FOR FISTULA, Vanxhall Bridge Road, S.W.—Resident House-Surgeon.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £60 per annum.

MANCHESTER ANCOATS HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum.

MANCHESTER CHILDREN'S HOSPITAL.—Assistant Medical Officer (Male). Salary, £100 per annum.

MANCHESTER HOSPITAL FOR CONSUMPTION.—Assistant Medical Officer and Pathologist. Salary, £50 per annum.

NATIONAL HOSPITAL FOR EPILEPTICS, Bloomsbury, W.C.—Assistant Physician.

NORTHAMPTON GENERAL HOSPITAL.—Senior Resident Medical Officer. Salary, £120 per annum.

NOTTS CONSUMPTION SANATORIUM, Ratchef Hill.—Resident Medical Officer (Female). Salary, £100.

OXFORD RADCLIFFE INFIRMARY AND COUNTY HOSPITAL.—(1) House Physician. Salary at the rate of £80 per annum. (2) Junior House-Surgeon. Salary at the rate of £40 per annum.

PAISLEY INFECTIOUS DISEASES HOSPITAL.—Assistant Medical Officer. Salary, £100 per annum.

ROXBURGH DISTRICT ASYLUM.—Assistant Medical Officer. Salary, £150 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician. Salary at the rate of £60 per annum.

ST. MARVLEONE GENERAL DISPENSARY, Welbeck Street, W.—Honorary Obstetric Physician.

SALISBURY INFIRMARY.—Assistant House-Surgeon. Salary, £50 per annum.

TAUNTON AND SOMERSET HOSPITAL.—Honorary Surgeon.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, Welbeck Street, W.—Resident House-Physician. Salary at the rate of £100 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Assistant Anaesthetist.

APPOINTMENTS.

BURNET, R., M.B., D.P.H., Medical Officer of Health to the Borough of Bury.

CLARE, T. C., M.B., B.S., House-Surgeon, Chelsea Hospital for Women, S.W.

COWELL, E. M., M.R.C.S., L.R.C.P., House-Surgeon, University College Hospital, Gower Street, W.C.

CORRY, John Benson, J.R.C.P. and S. Edin., Principal Medical Officer, H.M. Prison, Wakefield.

CRAIG, W. M.B., M.R.C.S., Medical Officer of Health to the Thurmescoe Urban District.

ELLIOTT, T. R., M.D. Camb., House-Physician, University College Hospital, Gower Street, W.C.

FALCONER, C. W., M.B., Ch.B. Vict., District Medical Officer, Haslemere Union.

GIBBS-SMITH, E. G., L.R.C.P., L.S.A., Medical Officer of Health to the Teddington Rural District.

GRIFFITH, A. E., L.R.C.P., L.R.C.S. Edin., Certifying Factory Surgeon for the Lydbrook District, co. Gloucester.

HENRY, H. M.A., M.B., Ch.B. Edin., Assistant School Medical Officer, Manchester Education Committee.

JENKINS, A. G., M.R.C.S., L.R.C.P., Resident Assistant Medical Officer, West Derby Union Infirmary.

LONGTON, George Harold, M.R.C.S., L.R.C.P., Honorary Anaesthetist, Royal Hospital for Diseases of the Chest.

MCMATHGOWAN, J. G., M.D. Edin., M.R.C.P. Edin., Honorary Assistant Physician, Manchester Hospital for Consumption and Diseases of the Throat.

METTRICK-JONES, M.R.C.S., L.R.C.P., Medical Officer of Health to the Charlton King's Urban District.

MOORHOUSE, J. E., M.D. Edin., C.M., Medical Referee under the Workmen's Compensation Act 1906, for the Sheriffdom of Stirling, Dunbartonshire and Clackmannanshire.

POOLER, H. W., M.R.C.S., L.R.C.P., District Medical Officer, Aston Union.

SIBBALD, D. W., M.B., Ch.B., Resident Assistant Medical Officer, St. George's Union, London.

SMITH, W. H., M.R.C.S., L.R.C.P., Medical Officer, Huddersfield Union Workhouse.

THORNELEY, Captain M. H., I.M.S., Clinical Assistant, Chelsea Hospital for Women, S.W.

UNDERWOOD, A. C., M.R.C.S., L.R.C.P., District Medical Officer, Aston Union.

VERLING-BROWN, C. R., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Sutton District, co. Surrey.

WATSON, F. S., M.R.C.S., L.S.A., District Medical Officer, Wycombe Union, and Medical Officer of Union Schools.

YONGE, Eugene S., M.D. Edin., Honorary Physician, Manchester Hospital for Consumption and Diseases of the Throat.

BIRTHS, MARRIAGES, AND DEATHS.

The charges for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

MARRIAGE.

THOMSON WALKER—NAIRN.—On January 19th, at St. Serf's Church, Dysart, Fife, N.B., by the Rev. James Laing, assisted by the Rev. W. D. Beattie, J. W. Thomson Walker, M.B., F.R.C.S., of London, second son of the late John H. Walker, J.P., of Westwood, Newport, Fife, to Isabella, fifth daughter of Sir Michael B. Nairn, Bart., of Raskellour, Fife, and Dysart House, Fife.

DEATHS.

CADVAN-JONES—On January 6th, at Colwyn Bay, aged 34, D. T. Cadvan-Jones, M.B. Lond., L.S.A. Deeply regretted. Colonial papers please copy.

HURTIGAN.—On Monday, January 25th, suddenly, T. Y. P. Hartigan, F.R.C.S., D.P.H., of 94, Harley Street, W. No flowers. R.I.P.

BOOKS, ETC., RECEIVED.

Berlin: A. Hirschwald. 1909:

Kriegschirurgische Rück- und Ausblicke vom asiatischen Kriegsschauplatze. Von Dr. H. Fischer. M. 4.50.

Tabellen zur klinisch-bakteriologischen Untersuchungen für Chirurgen und Gynäkologen nebst einer kurzen Anleitung zur Ausführung der "Destimpungsprobe". Von Dr. W. Leipmann. M. 2.

Kommentar Mitralklappen (Durozische Krankheit) Chlorose, Lungentuberkulose in ihren Beziehungen zur schwachen Konstitution des Organismus. Von Dr. C. Pawlinow.

Der Idealismus als lebenserhaltendes Prinzip. Betrachtungen eines Arztes. Von Professor Dr. A. Jarosky. Wiesbaden: J. F. Bergmann. 1908.

Oxford Medical Publications. London: H. Frowde, and Hodder and Stoughton. 1909. 30s.

A System of Medicine. Edited by W. Osler, M.D., F.R.S., and T. McCrae, M.D., F.R.C.P. Vol. V. Diseases of the Alimentary Tract.

The Principles of Pathology. Vol. I. General Pathology. By J. G. Adams, M.A., M.D., LL.D., F.R.S.

What is Life? or, Where are we? What are we? Whence did we come? And whither do we go? By F. Hovenden, F.L.S., F.G.S., F.R.M.S. Third edition. London: Chapman and Hall, Ltd. 1909. 6s.

Gray's Encyclopaedia and Dictionary of Medicine and Surgery. Edited by J. W. Ballantyne, M.D., F.R.C.P.E. Vol. X. Thiersch-Zymotic. Edinburgh and London: W. Green and Sons. 1909. 15s.

Medical Reports of the Central London Throat and Ear Hospital. Vol. I. London: Arnold and Son. 1908. 5s.

Wandlungen der Medizin und des Arztestandes in den letzten 50 Jahren. Rede gehalten von Obermedizinalrat Professor Dr. O. von Boeckmann. München: J. F. Lehmann. 1909. M. 1.

Die Sehsstörungen bei Schussverletzungen der kortikalen Sehphäre. Nach Beobachtungen an Verwundeten der letzten japanischen Kriege. Von Dr. T. Inoue. Leipzig: W. Engelmann. 1909. M. 6.

Methuen's Textbooks of Science. Outlines of Physical Chemistry. By G. Senter, Ph.D., B.Sc. London: Methuen and Co. 3s. 6d.

* In forwarding books the publishers are requested to state the selling price.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 9 a.m.—Dr. Sidney Martin, F.R.S., The First Lescan Lecture, on Some Functional Disorders of the Stomach and Intestines: Their Diagnosis from Organic Disease and Treatment.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:

PATHOLOGICAL SECTION.—Meeting at the Imperial Cancer Research Laboratory, 8.30 p.m.

THERAPEUTICAL AND PHARMACOLOGICAL SECTION: 20, Hanover Square, W., 4.30 p.m.—Papers:—(1) Dr. James Mackenzie: Country Irritation. (2) Dr. E. L. Spriggs: The Treatment of Gastric Ulcer, with Analysis of Cases treated by the Lenhartz Method.

THURSDAY.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, 4.15 p.m.—Clinical Meeting.

ROENTGEN SOCIETY, 20, Hanover Square, W., 8.15 p.m.—Discussion on the Transport of Ions, to be opened by Dr. Howard Pirie.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

LARYNGOLOGICAL SECTION, 20, Hanover Square, 5 p.m.—Demonstration of Cases and Specimens.

SECTION OF ANAESTHETICS, 20, Hanover Square, 8.30 p.m.—Adjourned Discussion on the Advisability of Legislation to Control the Administration of Anaesthetics.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital 8 p.m.—Pathological Evening.

SATURDAY.

ROYAL SOCIETY OF MEDICINE:

OTOLOGICAL SECTION, 20, Hanover Square, 10 a.m.—(1) Papers.—Dr. McBride: Deteroid of Mastoid Region. Dr. Dan McKenzie: Notes on the Position of the Patient after Operations on the Mastoid. Dr. Knebel: Notes on a Case of White Membranous Deposit in the Auditory Meatus of a Girl. (2) Exhibition of Cases.

POST-GRADUATE COURSES AND LECTURES.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Wednesday, 4 p.m., Bronchiectasis.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstrations, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively: Operations, 2 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m., Monday, and noon, Thursday; Skin, at noon and 4 p.m., Tuesday, and noon, Friday; Eye, 11 a.m., Wednesday, and Saturday; Radiography, 4 p.m., Thursday. Special Lectures: Wednesday, 2.15, Enlargement of the Spleen. Friday, 3.15 p.m., Varicocele, Considered Surgically and Ethically.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 6 p.m. each day:—Monday, Skin. Tuesday, Medical. Wednesday, Surgical. Thursday, Surgical. Friday, Eye. Lectures at 5.15 p.m. each day will be given as follows: Monday, The Treatment of Eczematous Patients. Tuesday, The Therapeutic Uses and Complication of Venous Congestion. Wednesday, Some Surgical Considerations. Thursday, Modern Methods of Treatment of Some Common Forms of Skin Disease.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Selected Cases. Friday, 3.30 p.m., Anomalous Spinal Cord Disease.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m. Surgical Out-patient, 2.30 p.m. Medical Out-patient. Nose, Throat and Ear: X Rays: 4.30 p.m. Medical In-patient. Tuesday, 10 a.m., Medical Out-patient Clinic: 2.30 p.m., Operations: Clinics: Surgical, Gynaecological: 4.30 p.m. Lecture: Some Errors in the Administration of Anaesthetics. Wednesday, 2.30 p.m. Medical Out-patient. Skin, and Eye Clinics. Thursday, 2.30 p.m. Gynaecological Operations: Clinics: Medical Out-patient, Surgical Out-patient. X Rays: 5 p.m., Medical In-patient. Friday, Clinic: 10 a.m., Surgical Out-patient, 2.30 p.m., Operations: Clinics: Medical Out-patient, Eye: 5 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, London, W.—The following are the arrangements for next week:—Daily, 2 p.m., Medical and Surgical Clinics. X Rays, 2.30 p.m., Operations: Monday and Tuesday, 2 p.m., Diseases of Eyes. Tuesday and Friday, 10 a.m., Gynaecological Operations: 2 p.m. (and Wednesday and Saturday, 10 a.m.), Diseases of Throat, Nose, and Ear: 2.30 p.m., Diseases of Skin, and Eye Clinics. Wednesday and Saturday, 10 a.m. Diseases of Children: 2 p.m. Diseases of Eyes. Lectures: 10 a.m., Monday and Thursday, Demonstration of Surgical Cases. Friday, Demonstration of Medical Cases. Tuesday and Friday, Demonstration: 12.15 p.m., Practical Medicine. 4.5 p.m. Clinical Lecture: Throat, Nose and Ear Diseases, Monday. Tuesday, Diagnostic Signs in Organic Disease of the Nervous System, the Head, and Spinal Cord. Practical Surgery. Thursday, Vaccinotherapy. Friday, Gynaecology.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C.—Thursday, 6 p.m., Syphilis.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
FEBRUARY.		FEBRUARY (<i>Continued.</i>)	
1 MONDAY ..	COVENTRY DIVISION, <i>Birmingham Branch</i> , Coventry and Warwickshire Hospital, 8.30 p.m.	12 FRIDAY ..	LEINSTER BRANCH, Annual General Meeting, Royal College of Physicians, Kildare Street, Dublin, 4.30 p.m.; Annual Dinner, in the College Hall, 7.30 p.m.
2 TUESDAY ..	LONDON: Medico-Political Midwives Subcommittee, 3 p.m.	13 SATURDAY ..	
3 WEDNESDAY ..	LANCASHIRE AND CHESHIRE BRANCH, Branch Organization and Finance Committee, Royal Infirmary, Manchester, 4.30 p.m.	14 Sunday ..	
	ULSTER BRANCH Winter Meeting, Belfast.	15 MONDAY ..	
4 THURSDAY ..	WESTMINSTER DIVISION, <i>Metropolitan Counties Branch</i> , Criterion Restaurant, Piccadilly, W.; Dinner, 7.30 p.m.; Business, 9 p.m.	16 TUESDAY ..	LONDON: Standing Ethical Subcommittee, 2 p.m.
5 FRIDAY ..	LANCASHIRE AND CHESHIRE BRANCH, Branch Ethical Committee, Royal Infirmary, Manchester, 4.30 p.m.	17 WEDNESDAY ..	ALTRINCHAM DIVISION, <i>Lancashire and Cheshire Branch</i> , Brooklands Hotel, 5 p.m.
6 SATURDAY ..			CARDIFF DIVISION, <i>South Wales and Monmouthshire Branch</i> , Cardiff.
7 Sunday ..		18 THURSDAY ..	LAMBETH DIVISION, <i>Metropolitan Counties Branch</i> , Guy's Hospital, 4 p.m.
8 MONDAY ..		19 FRIDAY ..	
9 TUESDAY ..	LONDON: Capitation Grants Subcommittee, 1.30 p.m.	20 SATURDAY ..	
10 WEDNESDAY ..	LANCASHIRE AND CHESHIRE BRANCH, Branch Council, Medical Institution, Liverpool, 4.30 p.m.	21 Sunday ..	
	RICHMOND DIVISION, <i>Metropolitan Counties Branch</i> , Royal Hospital, Richmond, 8.30 p.m.	22 MONDAY ..	
11 THURSDAY ..	BEDFORD AND HERTS DIVISION, <i>South Midland Branch</i> , Bedford County Hospital, Bedford, 3 p.m.	23 TUESDAY ..	HAMPSTEAD DIVISION, <i>Metropolitan Counties Branch</i> , Business Meeting.
	BIRMINGHAM BRANCH, Medical Institute, Edmund Street, 3.30 p.m.	24 WEDNESDAY ..	BATH AND BRISTOL BRANCH, Bath.
		25 THURSDAY ..	CITY DIVISION, <i>Metropolitan Counties Branch</i> , Clinical Meeting, Queen's Hospital for Children, Hackney Road, 4 p.m.
		26 FRIDAY ..	BIRMINGHAM BRANCH, Pathological and Clinical Section, Medical Institute Edmund Street, 8 p.m.
		27 SATURDAY ..	
		28 Sunday ..	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the **BRITISH MEDICAL JOURNAL** is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent

by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the **BRITISH MEDICAL JOURNAL** for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, FEBRUARY 6TH, 1909.

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Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

LANCASHIRE AND CHESHIRE BRANCH: MANCHESTER (WEST) DIVISION.

A GENERAL meeting of the Division was held at the Technical Institute, Stretford Road, on Tuesday, January 19th. Dr. F. H. Worswick was, in the absence of the Chairman and Vice-Chairman, voted into the chair.

Apologies for Non-attendance.—A letter from Dr. A. Brown Ritchie, expressing regret at his inability to attend the meeting, was read.

Confirmation of Minutes.—The minutes of the last meeting were read and adopted.

Appointment of Representative on Branch Council.—The HONORARY SECRETARY reported that Dr. F. H. Worswick had been appointed by the Executive Committee as one of the Representatives on the Branch Council, vice Dr. J. Brassey Brierley, who had resigned.

A Local Trade Provident Society.—A letter from the Sheffield Division, asking for support in the attitude taken by that Division towards a local trade provident society, was read. The meeting instructed the Honorary Secretary to acknowledge the communication, and state that the Division is in agreement with the position taken.

Friendly Societies and the Medical Profession.—The Honorary Secretary was requested to thank the Medical Secretary for his letter concerning the conference arranged by the Charity Organization Society to discuss a paper by Dr. Pearse, of Trowbridge, on Friendly Societies and the Medical Profession.

The Action of Branches and the Charter.—The report from the Organization Committee, embodying counsel's opinion upon the legality of the action of Branches and Divisions, in calling meetings and spending money for the purpose of opposing the application for the Royal Charter, was read and discussed. The following resolution (proposed by Dr. PROWSE, and seconded by Dr. SCANLON) was unanimously agreed to:

That this meeting, in view of the facts that (a) much dissatisfaction exists throughout the Association in regard to the clauses of the Charter dealing with the Referendum; and that (b) no action can at present legally be taken by any Branch or Division, to alter such clauses—is of opinion that a conference of leading members of the Association

should be convened at an early date to consider the possibility of arriving at some agreement on the questions involved, and of formulating the best method of giving force to such agreement as soon as practicable after the granting of the Charter.

Notification of Births.—A letter from the Medical Guild, pointing out that in connexion with the Early Notification of Births Act the authorities can claim no legal right of entry for the nurses into patients' houses, and suggesting that medical men attending confinements should inform their patients of this fact, was ordered to be laid on the table.

Joint Committee of Manchester and Salford Divisions.—In answer to a request from the Joint Committee of the Manchester and Salford Divisions, it was resolved that the honorary secretaries shall send reports to that committee of the Division's opinions and decisions in regard to the medical inspection and treatment of school children and other matters of interest dealt with at the meetings of the Division.

Workmen's Compensation Act.—The following resolution, forwarded in a communication from the Manchester and Salford Joint Committee, was unanimously adopted by the meeting:

That in all compensation cases the medical man attending ought to receive notice of the intended visit of a medical referee sent by insurance and other companies.

The communication from the Hospitals Committee in regard to the giving of certificates from hospitals was then considered, and it was resolved that Dr. PROWSE be requested to reply to the questions asked in connexion with the Hulme Dispensary, which is the only institution concerned in the Division.

Representatives at Representative Meeting.—The consideration of the circular from the Organization Committee in respect to the earlier election of the Representative to the Representative Meeting was referred to a future meeting.

Consultations and General Practitioners.—The meeting then appointed six members as representatives of the Division to serve on a subcommittee appointed by the Joint Committee of the Manchester and Salford Divisions, to consider the "ethical relations between consultants and general practitioners." The following gentlemen were elected: Sir W. J. Sinclair, Dr. E. Holgate Owen, Dr. A. M. Edge, Dr. F. H. Worswick, Dr. Floyd (Chairman of Division), and Dr. Farrow.

Medical Inspection and Treatment of School Children.—The report of the Medico-Political Committee re certain points in connexion with the medical inspection and treatment of school children was carefully considered, and the

Executive Committee was instructed to draw up a detailed report of the decisions arrived at by the meeting.

Report on Annual Representative Meeting.—The REPRESENTATIVE of the Division (Dr. PROWSE) gave an account of the Annual Representative Meeting held at Sheffield, and a short summary of some of the more important decisions which had been come to by that meeting.

PRESTON DIVISION.

A MEETING of this Division was held on Wednesday, January 27th, Dr. R. C. BROWN, President, in the chair.

Medical Inspection of School Children.—The Medico-Political Report was read and considered. After considerable discussion it was unanimously resolved that the Division:

1. Approves of payment per head for part-time officers with a minimum fee of 2s. 6d., and that extra work—for example, reports, etc.—be paid for.
2. Treatment. The Division unanimously agreed with the propositions of Dr. A. H. WILLIAMS, of Watford and Harrow.

British Medical Benevolent Fund.—Dr. TALBOT drew the attention of members to the British Medical Benevolent Fund and asked for more support to this charity.

METROPOLITAN COUNTIES BRANCH:

HAMPSTEAD DIVISION.

A MEETING of this Division was held on Tuesday, January 26th, at 5 p.m., at St. Peter's Hall, Belsize Square, N.W., Dr. OPPENHEIMER in the chair.

Annual Report to the Branch.—The HONORARY SECRETARY read the annual report to the Branch for 1908. The total membership had increased from 192 on December 31st, 1907, to 199 on December 31st, 1908. There had been eleven meetings of the Division, with an average attendance of 18. The chief question of local interest was the Hampstead Hospital dispute. The out-patient department in Hampstead had been nominally abolished.

Financial Report.—The total expenditure for 1908 was £35 17s. 6d., of which £28 3s. 1½d. was for ordinary expenditure and £7 14s. 5d. for extraordinary expenditure in connexion with the hospital dispute. There was on December 31st, 1908, a total deficit of £6 18s. 8½d., of which £3 18s. 5d. (extraordinary expenditure) had since been paid by the Branch, leaving £3 0s. 3½d. deficit on the ordinary expenditure account. This deficit was due in part to heavy expenditure in the hire of rooms and to other smaller items. The report was approved.

Medical Inspection of School Children.—The report of the Medico-Political Committee of the Association on the medical inspection of school children and the treatment of those found defective was considered. In answer to Question 1 (a) on page 11, the committee recommended the following resolution:

1. That this Division does not approve of the system of payment per head.

Dr. P. C. EVANS said that in Willesden Green payment per head had been agreed upon by the local practitioners. After some discussion the committee's recommendation was put to the vote and carried *nem. con.* With regard to the treatment of school children found defective, the committee brought forward the following resolution:

2. That destitute school children should be referred to a medical department organized by the State for the treatment of the destitute poor.

Mr. H. W. ARMIT moved an amendment, seconded by Dr. CLAUDE TAYLOR:

That this Division supports the institution of school clinics.

Mr. ARMIT said that the resolution recommended by the committee came very nearly to the same thing as supporting school clinics. He did not think that clubs and private practitioners could treat the children adequately. The London County Council had determined to have school clinics. They need not pauperize. Parents would be required to pay, and the medical officers would be paid. The profession as a whole would get definite payment. General practitioners should sink their private interests for the benefit of the race. He strongly approved of the institution of school clinics. Dr. CLAUDE TAYLOR agreed with Mr. ARMIT. He thought that the profession need not fear financial loss, but would

be directly and indirectly benefited. The school clinic would so educate the children that in after-life they would pay better attention to their health and be more likely to take medical advice if they became out of health. Mr. CUNNINGHAM objected to school clinics as having a Socialist tendency. He approved of medical inspection being organized by the State, but treatment should not be at the expense of the State save in the case of destitute children. In Hampstead nine-tenths of these school children belonged to clubs, friendly societies, etc., and their parents could afford to pay and did pay something for their treatment. Miss DOBBIE, in supporting the amendment, said that treatment in school clinics need not necessarily be free. She gave an example of the neglect of treatment which might follow the reference of cases to general practitioners. In this case a general practitioner had refused to sanction a necessary operation advised by a specialist, with the result that the child had suffered for six years longer from ill-health due to his neglect. The CHAIRMAN pointed out that even if school clinics were instituted, nothing could prevent the parents taking a child to a general practitioner, who might refuse to sanction an operation advised by the medical officer of the school clinic. Dr. MACKVY thought that it would be much better if the London County Council would help existing institutions instead of founding new ones. The provident dispensaries, if properly equipped, could do this work perfectly well. General practitioners nowadays were quite competent to remove adenoids, treat running ears, and do refractions. Mr. PARSONS, in supporting the committee's resolution, said the whole question was a political one. If children were to have medical treatment provided free by the State, why not supply them with boots free, and so on? It was the duty of the parents to provide these things for their children. The general practitioner was in danger of passing out of existence if school clinics were established. Mr. JESSOP said that the opinion of a general practitioner as to a throat case, for example, might be as good as, or better than, the opinion of a young medical officer to a school clinic. The school clinic would become nothing but a glorified huge out-patient department. Mr. ARMIT's amendment having been put to the vote and lost, the committee's resolution was agreed to. A third resolution was also carried as tending to safeguard the interests of the private practitioner:

3. That this Division approves of the form given on page 6, paragraph 10 of the report.

(That is, paragraph 7 (d) Board of Education's Memo. 596.) No other suggestions were made.

KENSINGTON DIVISION.

A MEETING of this Division was held at the Kensington Town Hall on January 21st, at 5 p.m., Dr. RICE OXLEY, the Chairman of the Division, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Paper.—Mr. LEONARD A. BIDWELL, Surgeon to the West London Hospital, read a paper on the immediate and ultimate results of the operation of gastro-enterostomy for gastric and duodenal ulcer. (This paper will be reported in the JOURNAL.) Dr. RICE OXLEY thanked Mr. Bidwell for his interesting and instructive address, and referred to several points. The discussion was continued by Dr. LEWIS SMITH, who was present on the invitation of the Chairman, and by Dr. A. D'E. VALANCEY, Dr. CRAWFORD THOMSON, Dr. C. H. BENNETT, the HONORARY SECRETARY, and others. Mr. BIDWELL replied to the matters raised by the speakers.

Vote of Thanks.—Dr. BUTTAR proposed a hearty vote of thanks to Mr. Bidwell for his address. This was seconded by Dr. CRICHTON, and carried with acclamation.

NORTH OF ENGLAND BRANCH:

NORTH NORTHUMBERLAND DIVISION.

A MEETING was held at the Infirmary, Berwick-on-Tweed, on January 28th; Dr. MACKAY occupied the chair. There were also present Drs. Macaskie, Dey, Wilson, Coldstream, Robson, Paxton, Badcock, and Burman.

Apologies for Non-attendance.—Apologies for non-attendance were received from Drs. Main and Purves.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Midwives and the County Council.—The SECRETARY reported what had been done in connexion with the proposed introduction of midwives by the County Council, and read correspondence. The meeting thanked the Secretary for the work he had undertaken in relation to this question.

Appointment of Medical Inspector of School Children.—The CHAIRMAN reported that the post of medical inspector of school children had been accepted by a member of the Division after consultation with the resident practitioners and subject to certain conditions mutually agreed upon and embodied in a legal agreement. The meeting considered this a most satisfactory arrangement.

Fees for Life Insurance Examinations.—Dr. MACKAY announced that in the case of one of the insurance offices whose fee the Division had previously decided should be one guinea, having tendered only half a guinea, he had referred the office to the decision of the members, and in consequence the full amount of one guinea had been received.

An Unregistered Dentist.—The SECRETARY read a correspondence with the unregistered dentist whose case was mentioned at last meeting. A discussion followed, and it was agreed that while any serious emergency should be treated, great care ought to be taken by members to avoid any suggestion of association or co-operation in his work.

Certificates from Hospitals.—The circular of the Hospitals Committee re "Certificates from Hospitals" had been forwarded to the two infirmaries in the Division, and the replies received had been transmitted to the Medical Secretary, and acknowledged by him.

Medical Inspection of School Children.—The report of the Medico-Political Committee on the medical inspection of school children was fully discussed, and the Secretary was instructed to answer the questions in accordance with the decision of the meeting, as follows:

1. (a) This Division, having decided upon whole-time officers, considers the payment of same can only be settled upon a fixed annual salary.

2. Agreed that treatment of school children found defective should be paid for by case at fees according to the local rates of professional charge.

3. That the local practitioners should be asked to treat the cases, or if any hospital treatment is required to advise the same. School clinics not favoured by Division. No special practitioner to be selected.

4. When parents cannot afford to pay, the Education Committee should be responsible for any fees incurred.

Public Health Committee.—The following answer to the questions propounded in this Report was agreed to:

In this Division the medical officers of health are all general practitioners, and unless the area were rearranged, and only one or two officers appointed, a whole-time officer could not be supported. The scanty population and rural districts seem better served as at present.

Rheumatoid Arthritis.—Dr. WILSON (Glanton) read a most interesting and instructive paper on rheumatoid arthritis. The CHAIRMAN expressed the thanks of the meeting, and a discussion followed in which several members took part. The members were afterwards entertained by the Chairman.

SOUTH MIDLAND BRANCH: NORTHANTS DIVISION.

On January 26th a meeting of the Division was held in the Board Room of the Northants General Hospital. The meeting was preceded by luncheon at Franklin's Restaurant. Mr. C. J. EVANS was in the chair, and the other members present were: Drs. McCrindle, Odgers, Linnell, Greenfield, Terry, Darley, J. S. Stewart, Grindon, Jacobs, Robb, Baxter, Burt, Hichens, Harries-Jones, Milligan, Godwin, Stone, Pearson, and Pemberton.

Confirmation of Minutes.—The minutes were read and confirmed.

Results of Operative Treatment for Cancer.—Dr. THOMAS WILSON (Birmingham) then kindly gave a very interesting address on "The Results of Operative Treatment for Uterine Cancer." He emphasized the fact that, despite all the research there had been, the real cause of cancer was not known, but it was known that it was at first local, and then spread externally to the surface and internally through the lymphatic spaces to the lymphatic glands. In cervical cancer the parametrium at the base of the

broad ligament was very early involved, and the lymphatic gland early in two-thirds of the cases, but only one-third of these showed cancer cells on microscopic examination. As regards operation, improvement in results might be expected from earlier recognition of the disease or from wider operation. Unfortunately the really early stage was probably unrecognizable, what were called early symptoms being really a sign of an advanced stage of the disease. Wider operations can be made by the abdominal route, but at present the mortality was much higher than by the vaginal route. From 1896 to 1908 he had operated on 103 cases of uterine cancer—62 vaginal operations, with 1 death; 41 abdominal operations, with 10 deaths. In considering final results, he took five years' freedom from recurrence as equivalent to a cure. In taking them till the end of 1903, he found that 40 cases were still alive and strong (about 27 per cent.). He found 40 out of 107 cases seen justified an operation in a little over 20 per cent. He thought the best results in the future would be obtained from the abdominal operation. He then emphasized the importance of paying attention to the earliest symptoms. The paper was discussed by Drs. STONE, MULLIGAN, and HICHENS, and Dr. WILSON was heartily thanked for his kindness in coming from Birmingham and delivering so interesting an address.

Annual Representative Meeting.—Dr. BAXTER then read a valuable report of the Representative Meeting of last summer.

Revision of Divisional Rules.—The question of revising the Divisional rules was then discussed, and on the motion of Dr. HICHENS, seconded by Dr. BAXTER, they were referred to the Divisional Council for consideration.

Medical Inspection and Treatment of School Children.—The medical inspection and treatment of school children was then discussed at considerable length by many members, and the Division unanimously passed the following resolutions, which were proposed by Dr. HICHENS, seconded by Dr. LINNELL:

1. That whole-time officers be appointed at an annual salary.
2. That, as regards the treatment of school children, the Division does not feel that enough is yet known on the subject to enable it to come to any definite or useful conclusion.

Friendly Societies and the Medical Profession.—A letter was read from Mr. Smith Whitaker inviting the Division to send a delegate to a Charity Organization Conference on Friendly Societies and the Medical Profession. It was not found possible to appoint a delegate.

Proposed Alteration of Boundaries of Divisions.—A letter was then read from Dr. Larking of Buckingham, asking whether the Division would consent to an alteration of its boundaries—diminishing its size and enlarging the Aylesbury Division. The matter was referred for consideration to the Divisional Council.

Midwives Act.—The following resolution, proposed by Dr. BAXTER, seconded by Dr. MILLIGAN, and supported by Dr. ROBB, was passed unanimously, and sent to the Central Council for consideration at its meeting on January 27th:

The meeting of the Northants Division urges on the Central Council the desirability of approaching the Departmental Committee, now sitting, to consider the working of the Midwives Act, with a request for direct representation of the British Medical Association on the Central Midwives Board.

During the meeting tea was kindly provided for the members by the Chairman.

To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

EDINBURGH BRANCH.—The winter clinical meeting of the Edinburgh Branch will be held in the Royal Infirmary, Edinburgh, on Friday, February 26th, at 4 p.m. The members of the other Scottish Branches are invited to attend the meeting. The museum will be open at 11 a.m., and special clinics will be held during the forenoon. Dinner in the Royal British Hotel.

Princes Street, at 6.30 p.m.: morning dress; dinner ticket, 5s.—
A. LOGAN TURNER, FRANCIS D. BOYD, Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH.—The Branch Council will meet at the Medical Institution, Liverpool, on Wednesday, February 10th, at 4.30 p.m.—F. CHARLES LARKIN, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—A general meeting of the Division will be held at 5 p.m. on Wednesday, February 17th, at the Brooklands Hotel. The meeting will be a special meeting under Rule 14, for the purpose of amending Rule 8 (election of Representative), and of considering the adoption of new rules (namely, "Bradford" Rule, and Rule Z), copies of which have been sent by post to each member. In the ordinary meeting Dr. Rhodes will read a paper, and the usual general business will be taken.—T. W. H. GRISTANG, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: MANCHESTER (WEST) DIVISION.—A meeting of this Division will be held at the Technical Institute, Trafford Road, Old Trafford, on Tuesday next, February 9th, at 4 p.m. Members are urgently requested to attend.—J. SEARDON PROWSE, L. E. STANTON, Honorary Secretaries.

LEINSTER BRANCH.—The annual general meeting will be held on Saturday, February 13th, in the Royal College of Physicians, Kildare Street, Dublin, at 4.30 p.m. The annual dinner will be held in the College Hall at 7.30 p.m. of the same day.—ARTHUR H. WHITE, Honorary Secretary.

MIDLAND BRANCH: LEICESTER AND RUTLAND DIVISION.—A meeting of the Division will be held at the Leicester Infirmary on Wednesday, February 10th, at 4 p.m. Agenda: Minutes of previous meeting. Discussion of certain questions relating to medical inspection of school children. Paper by Dr. R. W. W. Henry on Some of the Commoner Affections of the Eye and their Treatment. Cases illustrating the subject of the paper will be shown. Any other business.—WILFRED E. GIBBONS, Honorary Secretary, Leicester.

SOUTH-EASTERN BRANCH: FOLKESTONE DIVISION.—A meeting of the Folkestone Division will be held at the Hotel Wampack, Folkestone, on Saturday, February 13th, at 8.15 p.m. Agenda: (1) The Division is requested to express its opinion for or against the following proposition: "That medical officers of health should be debarred from engaging in private practice"; and to add any qualifications, comments, or additional suggestions bearing on the matter which it may desire. (2) Medical inspection of school children (system of payment). (3) A letter from the Secretary of the Branch re police fees. (4) As to the advisability of dividing the South-Eastern Branch. All members of the South-Eastern Branch are invited to attend and introduce professional friends.—P. VERNON DODD, Honorary Secretary, Folkestone.

SOUTH MIDLAND BRANCH: BEDFORD AND HERTS DIVISION.—A meeting of the Division will be held at Bedford County Hospital, Bedford, at 3 p.m., on Thursday, February 11th, Dr. S. F. Dixon in the chair. Agenda: (1) Minutes. (2) Revision of Divisional Rules. (3) Consideration of the Report of Medical-Political Committee on the Medical Inspection of School Children. Members wishing to read papers or show cases are requested to communicate with the Secretary as soon as possible.—E. H. COBB, Honorary Secretary, Belmont, Stevenage.

STAFFORDSHIRE BRANCH.—The second general meeting of the session will be held at the North-Western Hotel, Stafford, on Thursday, February 25th. The President, Dr. S. King Alcock, will take the chair at 5.15 p.m. Business: (1) Minutes of the last ordinary general meeting. (2) Correspondence. (3) Exhibition of living cases. (4) Paper: Mr. A. B. Crisland, Internal Squint in Children. (5) Paper: Mr. J. T. Hartill, Short Notes on a Rare and Interesting Case of Retention of Menstrues, and Operations for and Relief of the Symptoms. (6) Exhibition of pathological specimens, etc. Dinner 7.15 p.m., charge 5s.—G. PETGRAVE JOHNSON, Honorary General Secretary, Stoke-on-Trent.

Vital Statistics.

THE REGISTRAR-GENERAL'S ANNUAL REPORT.

THE vital statistics of England and Wales for the year 1907 are shown in detail, and are fully analysed in the Annual Report just published by the Registrar-General. Provisional numbers of marriages, births, and deaths, tabulated from the quarterly returns made by the local registrars, were available in May last, when they were published in the Registrar-General's Annual Summary; the present volume, however, is compiled from the individual entries in the

registers, and the figures are much more fully discussed than was possible in the earlier publication. Additional tables have been included in this report giving rates of mortality from certain causes in several foreign countries; and appended to the Report is a note showing a new method of estimating populations for parts of the country in intercensal years.

MARRIAGE-RATE.

The number of marriages registered in England and Wales during 1907 was 276,421, being equal to an annual rate of 15.8 persons married per 1,000 of the total population, which was estimated to be 34,945,600 persons in the middle of the year. This rate is somewhat higher than the average thirty years earlier (1876-80), but if the rates are calculated on the marriageable population—that is, unmarried and widowed persons above 15 years of age—and are further corrected for differences in the age-constitution of this population at the two periods, it will be found that the marriage-rate has declined by 10.4 per cent. It may also be noted that, although the proportion of remarriages among both widowers and widows has greatly declined, remarriages of divorced persons are much more numerous than they were formerly.

BIRTH-RATE.

The births registered in England and Wales during the year under notice numbered 918,042, and were at the rate of 26.3 per 1,000 of the total population. Since 1876 the birth-rate has declined almost uninterruptedly, and in 1907 the rate was, for the tenth year in succession, the lowest on record since 1837, in spite of the fact that until 1875 birth registration was incomplete. Among the several counties the lowest legitimate birth-rates were recorded in Sussex, Surrey, Devonshire, and Hampshire; and the highest rates in Northumberland, Staffordshire, Glamorganshire, Durham, and Monmouthshire. Generally speaking the fertility of wives in rural districts is about 7 per cent. greater than that of wives in towns. The decrease in the total birth-rate already referred to has been accompanied by a still greater decrease in the proportion of illegitimate births; such births, which in 1876-1880 were at the annual rate of 14.4 per 1,000 unmarried and widowed females aged 15 to 45 years, had declined to 7.8 per 1,000 in 1907. Compared with other European countries England and Wales had in 1901-5 a higher birth-rate than Belgium, Sweden, Ireland, or France.

DEATH-RATE.

The number of deaths registered in England and Wales in 1907 was 524,221, corresponding to a rate of 15.0 per 1,000 of the population; this rate is the lowest on record, being 1.7 per 1,000 below the mean rate for the ten years 1897-1906. The death-rates in the several counties, after correction for differences of sex and age constitution of their respective populations, ranged from 9.7 in Radnorshire, 10.5 in Rutlandshire, 11.0 in Huntingdonshire, 11.2 in Buckinghamshire and in Westmorland, and 11.4 in Northamptonshire, to 16.7 in Monmouthshire, 16.8 in the West Riding of Yorkshire, 17.2 in the North Riding, 17.4 in Glamorganshire, 17.8 in Durham, and 18.8 in Lancashire.

The proportion of deaths among children under 1 year of age to registered births was equal to 118 per 1,000, against an average of 145 per 1,000 in the ten preceding years. The rate for 1907 is the lowest on record, the saving of infant life being most marked in the third quarter of the year, when the rate of infant mortality fell to the remarkable figure of 99 per 1,000, or 88 less than the decennial average; among the several counties the rates ranged from 77 in Wiltshire and in Dorsetshire, 80 in Hertfordshire, 83 in Berkshire, and 84 in Buckinghamshire, to 133 in Staffordshire, 135 in Durham, 136 in Glamorganshire, 138 in Lancashire, and 146 in Nottinghamshire.

Of the 524,221 deaths, the causes of 480,151 were certified by registered medical practitioners; inquests were held in 36,474 cases, while the causes of 7,596 deaths were not certified. The proportion of uncertified deaths is, however, steadily declining, and in 1907 was the lowest on record.

CAUSES OF DEATH.

With regard to the more important causes of death, it appears that much of the saving of life represented by the low death-rate of 1907 was due to the lessened fatality of diarrhoeal diseases, a result in a large measure of the cool

and showery summer of that year. Among the principal epidemic diseases the mortality from measles exceeded the average; from diphtheria it was somewhat below the average; while from scarlet fever and from enteric fever it was the lowest on record. From tuberculous diseases the mortality was less than the average, and it is observed that for the first time in the last fifteen years the mortality from cancer showed a decline from that in the year immediately preceding. The death-rate from influenza was 265 per million living, which is higher than that in any other year since 1900. Pneumonia caused a death-rate of 1,344 per million living, the rate in the selected urban counties being 1,588 per million, against 871 in the selected rural counties. The death-rate from phthisis for both sexes was 1,140,—for males 1,341, and for females 952 per million, all these rates being slightly lower than the average. From cancer the mortality was 2,401 per million among males above 35 years of age, 3,033 per million among females of the same ages, and 2,734 for both sexes, the excess in women being due to their greater liability to fatal cancer of the generative and mammary organs; all these rates are slightly in excess of those for the quinquennium, 1902-06. The recorded mortality from alcoholism continues to decline, the rate in 1907 among persons above 25 years of age being only about 70 per cent. of that in the previous ten years.

In 48,979 cases the causes of deaths were described too indefinitely to admit of their proper classification. Such cases would have been still more numerous but for the inquiries addressed to medical practitioners respecting deaths certified as due to tumour, dropsy, gangrene, hæmorrhage, etc. With reference to the deaths in the year under notice, 4,166 replies to such inquiries were received, and in many instances enabled the deaths to be referred to their appropriate headings. For example, 587 deaths were transferred from indefinite causes to malignant disease, 504 to tuberculous diseases, and 117 to puerperal septic diseases.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 7,651 births and 5,665 deaths were registered during the week ending Saturday last, January 30th. The annual rate of mortality in these towns, which had been 17.5, 16.6, and 17 per 1,000 in the three preceding weeks, rose again last week to 18.0 per 1,000. The rates in the several towns ranged from 5.2 in Hantsworth (Staffs), 6.8 in Willesden, 8.0 in East Ham, 9.3 in Hornsey, 9.9 in Barrow-in-Furness, and 10.5 in Wallasey, to 23.5 in Liverpool, 23.6 in Sunderland, 23.7 in Oldham, 23.9 in Manchester, 24.2 in Wigan, 26.4 in Bury and in Huddersfield, and 30.8 in Swansea. In London the rate of mortality was 17.8 per 1,000, while it averaged 18.1 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.5 per 1,000; in London the rate from these diseases was 1.6 per 1,000, while among the seventy-five other towns the rates ranged upwards to 3.1 in West Ham, 3.3 in West Hartlepool, and 3.9 in Sunderland, and in Merthyr Tydfil, 4.0 in Warrington, 4.3 in Rotherham, 4.4 in Bury, and 5.9 in Middlesbrough. Measles caused a death-rate of 2.0 in Sheffield, 2.2 in Warrington, 2.3 in West Ham and in Sunderland, 2.4 in Hornsey, 2.6 in West Hartlepool, and 3.0 in Wigan. Diphtheria of 1.3 in Merthyr Tydfil, 1.4 in Warrington, and 1.9 in Tynewydd; and whooping-cough of 1.1 in Walthamstow and in St. Helens, 1.2 in Wigan, 1.6 in Swansea, and 2.6 in Bury. The mortality from scarlet fever, from enteric fever, and from diarrhoea was not excessive in any of the large towns, and no fatal cases of small-pox were registered during the week. The number of scarlet fever cases remaining under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital had been 3,397, 4,079, and 3,211 at the end of the three preceding weeks, had further declined to 3,201 at the end of last week; 339 new cases were admitted during the week, against 323, 358, and 379 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, January 30th, 934 births and 616 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 18.3 per 1,000 in the two preceding weeks, fell again to 17.2 per 1,000 last week, and was 0.8 per 1,000 below the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 11.6 in Leith and 11.7 in Perth to 18.0 in Glasgow and 18.5 in Dundee. The death-rates from the principal infectious diseases averaged 2.0 per 1,000 in these towns, the highest rates being recorded in Glasgow and Dundee. The 301 deaths registered in Glasgow included 2 which were referred to scarlet fever, 7 to diphtheria, 26 to whooping-cough, 3 to enteric fever, and 9 to diarrhoea. Two fatal cases of diphtheria, 5 of whooping-cough, and 5 of diarrhoea were recorded. Aberdeen 3 of whooping-cough in Paisley; and 2 of diarrhoea in Edinburgh and in Greenock.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, January 30th, 730 births and 492 deaths were registered in the twenty-two principal urban districts of Ireland, as against 597 births and 473 deaths in the preceding period. The annual death rate in these districts, which had been 20.4, 21.4, and 21.6 per 1,000 in the three preceding weeks, rose to 22.5 per 1,000 in the week under notice, this figure being 4.5 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 25.4 and 19.7 respectively, the figures in other districts ranging from 8.3 in Portlaoine and 6.9 in Armagh to 34.5 in Kilkenny and 47.9 in Dundalk, while Cork stood at 25.3, Londonderry at 20.5, Limerick at 17.8, and Waterford at 23.4. The zymotic death-rate in the twenty-two districts averaged 1.6 per 1,000, as against 1.5 per 1,000 in the preceding period.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: Fleet Surgeon F. H. MEADEN, to the *Tenedos*, January 25th; Staff Surgeon A. J. LAURIE, to the *Warrior*, January 25th, and on recommissioning, February 22nd; Fleet Surgeon W. G. K. ELLIOTT, M.D., to the *Clyde*; Fleet Surgeon D. J. P. McNAB, to the Royal Marine Depot, Deal, February 17th; Surgeon A. R. FISHER, to the *Juniper*, February 3rd.

Mr. W. J. J. ARNOLD, civil practitioner, has been appointed Surgeon and Agent at St. Helena.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

THE undermentioned Captains are promoted to be Majors, dated January 28th: T. H. M. CLARKE, C.M.G., D.S.O., M.B., F. W. P. V. MARRIOTT, S. L. CUMMINS, M.B., P. MACKESSACK, M.B., H. L. W. NORRINGTON. Majors Clarke and Marriott were appointed Surgeon-Lieutenants, January 28th, 1897, and made Captains, January 28th, 1900; Major Cunningham, Mackessack, and Norrington were appointed Surgeon-Lieutenants, July 28th, 1897, and Captains, July 28th, 1900. Their war records are as follow: Major Clarke—Kandia, 1898, being present at the affair of September 8th, when he was slightly wounded (mentioned in dispatches and appointed D.S.O.); Major Cummins—Nile expedition, 1898, and present at the battle of Khartoum (mentioned in dispatches, British medal, and Egyptian medal with clasp); Nile expedition, 1899 (clasp to Egyptian medal); occupation of the British colonial Province, Sudan, 1902-07; operations at Jebel Jerok in Southern Sennar, Sudan, 1904 (clasp to Egyptian medal). Majors Mackessack and Norrington—Nile expedition, 1898 (British and Egyptian medals).

Lieutenant J. A. CLARK, M.B., from the Seconded List, to be Lieutenant, January 29th. He was appointed on probation, August 1st, 1908.

ROYAL INDIAN MEDICAL SERVICE.

LIEUTENANT W. H. HAMILTON to be Captain (provisionally), February 1st, 1908. He was appointed Lieutenant, February 1st, 1905.

The retirement from the service of the undermentioned officers, which has been already announced in the *British Medical Journal*, has received the approval of the King: Colonel H. B. BRIGGS, Bombay; Lieutenant-Colonel CHARLES MONK, Bombay.

SPECIAL RESERVE.

ROYAL ARMY MEDICAL CORPS.

CAPTAIN GEORGE LANE, from the late Royal Army Medical Corps (Militia), having assented to be transferred, is appointed an officer of the Special Reserve of Officers from September 20th, 1908, retaining the rank and seniority which he held while in the Militia.

TERRITORIAL FORCE.

INFANTRY.

SERGEON-LIEUTENANT J. A. KITE, the Hertfordshire Battalion The Bedfordshire Regiment, resigns his commission, December 22nd, 1908.

ROYAL ARMY MEDICAL CORPS.

Captain R. H. HENDERSON, M.D., resigns his commission, December 11th, 1908.

For Attachment to Units Other than Medical Units.—Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel R. DE LA POLE BERESFORD, M.D., from the 2nd Volunteer Battalion the King's (Shropshire Light Infantry), to be Lieutenant-Colonel, with the honorary rank of Surgeon-Colonel, with precedence as in the Volunteer Force, April 1st, 1908. Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel W. PACKER, M.D., from the 1st Volunteer Battalion the King's (Shropshire Light Infantry), to be Lieutenant-Colonel, with the honorary rank of Surgeon-Colonel, with precedence as in the Volunteer Force, April 1st, 1908. Surgeon-Lieutenant-Colonel C. DOWDING, from the Welsh Beaver Company, Royal Army Medical Corps (Volunteers), to be Lieutenant-Colonel, with precedence as in the Volunteer Force, April 1st, 1908. Surgeon-Lieutenant W. D. WARSON, from the 1st Essex Royal Garrison Artillery (Volunteers), to be Lieutenant, with precedence as in the Volunteer Force, April 1st, 1908. Surgeon-Lieutenant E. T. COLLINS, from the 2nd Glamorgan Royal Garrison Artillery (Volunteers), to be Lieutenant, with precedence as in the Volunteer Force, April 1st, 1908. Captain G. C. CARPENT, M.B., resigns his commission, December 16th, 1908. *Highland Mounted Brigade Field Ambulance.*—Major J. MACDONALD, M.B., to be Lieutenant-Colonel, December 24th, 1908. *Third Highland Field Ambulance.*—Captain E. E. FOGGET, M.B., from the Royal Army Medical Corps (Territorial Force), to be Captain, with seniority from January 29th, 1902; dated April 1st, 1908. *Third West Lancashire Field Ambulance.*—Major R. JACKSON, M.B., from the Royal Army Medical Corps, Territorial Force, to be Major, April 1st, 1908; Major R. JACKSON, M.B., to be Lieutenant-Colonel, April 1st, 1908.

UNATTACHED LIST.

Surgeon-Captain W. O. EVANS, from the 2nd Volunteer Battalion the Royal Welsh Fusiliers, to be Captain with precedence as in the Volunteer Force, April 1st, 1908.

ROYAL GARRISON ARTILLERY.

Surgeon-Major F. M. BRANFELL, M.B., and Surgeon-Captain J. CROMIE, from the Tynewydd Royal Garrison Artillery (Volunteers), are appointed to the Tynewydd unit, with rank and precedence as in the Volunteer Force, April 1st, 1908.

ROYAL ARMY MEDICAL CORPS.

Lieutenant WILLIAM LLOYD resigns his commission, August 17th, 1908.

For Attachment to Units other than Medical Units.—Lieutenant E. T. COLLINS to be Captain, December 23rd, 1908.

Third East Anglian Field Ambulance.—FREDERICK J. REES to be Lieutenant, July 13th, 1908.

Fourth North Devon General Hospital.—Captains E. S. WINTER, W. R. HIGGINS, and G. L. H. REVELL to be officers whose services will be available on mobilization, February 3rd.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

HONORARY ASSISTANT SERGEON J. FORSYTH, 1st Berwickshire, is retired under the conditions of Paragraph 103, Volunteer Regulations, March 31st, 1908.

SURGEON-LIEUTENANT D. B. MACDONALD, 1st Middlethian, not having signified his wish to serve in the Territorial Force, is struck off the strength of the corps, March 31st, 1908.

VOLUNTEER RIFLES.

SURGEON-LIEUTENANT-COLONEL AND HONORARY SURGEON-COLONEL H. G. THOMPSON, M.D., F.R.C.S.I., 1st Volunteer Battalion the Royal Fusiliers (City of London Regiment), resigns his commission, retaining his rank and uniform, March 31st, 1908.

SURGEON-CAPTAIN J. R. RYAN, M.D., 1st Volunteer Battalion the Royal Fusiliers (City of London Regiment), not having signified his wish to serve in the Territorial Force, is struck off the strength of the battalion, March 31st, 1908.

SURGEON-CAPTAIN D. D. MONRO, M.B., and **SURGEON-LIEUTENANT JOSEPH HUNTER, M.B.**, Gallows Volunteer Rifle Corps, not having signified their wish to serve in the Territorial Force, are struck off the strength of the battalion, March 31st, 1908.

Hospitals and Asylums.

BELFAST HOSPITAL FOR SICK CHILDREN.

The thirty-sixth annual meeting of this institution was held at the hospital, Queen Street, on January 28th. The Lord Bishop presided. Mr. T. S. Kirk, Honorary Secretary to the Medical Staff, read the medical report; 237 medical and 406 surgical patients had been treated in the wards; 375 operations had been performed; in the out-patient department 12,069 attendances had been registered, and 421 operations performed; 28 deaths had occurred in the wards. The General report made feeling reference to the loss the hospital had sustained in the death of Dr. Sidney Brice Smyth, and to the fund of over £1,000 which had been raised by his many friends to endow a cot which was named after him.

MANCHESTER ROYAL EYE HOSPITAL.

The annual meeting of the Royal Eye Hospital was held last week under the chairmanship of Mr. P. W. Kessler, the chairman of the Board of Management. The report stated that the enlargement of the hospital commenced two years ago was nearly completed, and that part was already occupied. It was not proposed to furnish and equip the whole of the new buildings at once, but to proceed gradually as the needs of the hospital required. The funds subscribed had so far proved insufficient to pay for the whole of the new buildings. Fortunately several legacies and donations of some considerable amount had been received during the period of the construction, and the annual meeting was asked to sanction the use of these for the building fund in order to obviate the necessity of any encroachment on invested funds. The enlarged hospital will require a considerably increased expenditure, probably amounting to £1,200, not only on account of the larger number of patients, but on account of the increased staff that will be necessary. It has been decided to appoint a third house-surgeon, and the nursing and domestic staff will also need reinforcement. The expenditure on the year's working exceeded the income by £358. The subscriptions amounted to £2,135, which was a slight increase. An appeal had been made to the public for £20,000, of which about £15,000 had been received. It was, however, expected that quite £25,000 would be needed altogether. With the enlargement the hospital will be the largest special eye hospital in England, the Moorfields Hospital in London having only 140 beds, compared with 160 in Manchester. The number of out-patients during the year was 31,793, which is a decrease of 850. The number of in-patients admitted was 1,553, an increase of 30. The accident cases treated at the hospitals in Oxford Road and St. John Street amounted to 9,140, which is an average of 29 per day. It was announced that Dr. Glascott, who has been intimately connected with the hospital for over forty years, had been appointed Honorary Surgeon. Vice-Chancellor Hopkinson said that the position of Manchester was unique in that it possessed a splendid group of hospitals, all in close proximity to the medical school, and he acknowledged, on behalf of the university, the great benefits derived from the opportunities of study in the Eye Hospital given by the Board of Management to the university.

BRADFORD CHILDREN'S HOSPITAL.

The report presented to the annual meeting of this hospital showed an increase of work in all departments. The total in-patients for the year numbered 635, an increase of 78 on the previous year; and of out-patients there had been an increase of 384 with attendances amounting to 17,457. The average cost per occupied bed was £62 15s. 9d. Continued care was exercised in regard to the admission of patients, and the board was satisfied that there were very few cases of hospital abuse.

DOWN DISTRICT LUNATIC ASYLUM, DOWNPATRICK. The annual report for 1907 of Dr. M. J. Nolan, the medical superintendent of this asylum, shows that on January 1st, 1907, there were 721 patients in residence, and that on the last day of the year there were 725. The total number of cases under care during the year was 879, and the average number daily resident 723 as compared with the average of 711 for the previous year. During the year 158 cases were admitted, of whom 123 were first and 35 not-first admissions. The attacks in 64 were

first attacks within three and in 24 more within twelve months of admission; in 34 not-first attacks within twelve months of admission; in 25, whether first attacks or not, of more than twelve months, and in 13 of unknown duration on admission. They were classified according to the forms of mental disorder on admission into:—Mania of all kinds, 52; melancholia, 101 (acute melancholia, 61); dementia of all kinds, 9; general paralysis, 4; epileptic insanity, 4; and congenital or infantile defect, 3. The considerable proportion of cases of acute melancholia and the small proportion of the graver forms of mental defect in the above list is noteworthy. As to the principal supposed causal factors which had been operative in these cases, alcohol was assigned in only 11, or 7 per cent.; venereal disease in 2, critical periods in 12, privation and starvation in 5, various bodily diseases in 29, and mental and emotional stress in 17. Hereditary influences were ascertained in 63, or just under 40 per cent., but congenital defect was only recorded as cause of the mental disorder in 1. During the year 71 were discharged as recovered, giving a recovery-rate on the admissions of 44.9 per cent., 8 as relieved, and 1 as not improved. Also 74 died during the year, giving a death-rate on the average numbers resident of 10.2 per cent. The deaths were due in 18 to cerebro-spinal diseases, including 7 deaths from general paralysis; in 59 to chest diseases, with 11 from pulmonary consumption; in 3 to abdominal diseases, and in 3 to cancer. All deaths were due to natural causes.

The asylum was visited by a particularly severe epidemic of influenza, which carried off many senile and feeble cases, and raised the death-rate by 2.5 per cent. as compared with the previous years. There were also a few cases of German measles and one of enteric fever. Both asylum dysentery and pulmonary consumption, however, showed a decline as compared with former years. The Inspector of Lunatics in his report calls attention to the frequency with which zymotic diseases of various kinds visited this asylum, and holds accountable for this the unsatisfactory water supply.

BRIGHTON THROAT AND EAR HOSPITAL.

At the annual meeting of the governors of this hospital, held on January 30th, the Mayor of Brighton in the chair, it was announced that the number of in-patients in 1908 was 335; number of out-patients 1,575. The total receipts in the general fund were £1,064 14s. 3d., and the total expenditure was £1,035 11s. 2d.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BATH ROYAL UNITED HOSPITAL.—House-Physician. Salary, £80 per annum.

BRIGHTON WATER HOSPITAL.—House-Surgeon. Salary at the rate of £80 per annum.

BRIGHTON DISPENSARY.—Resident Medical Officer. Salary, £150 per annum.

CHELTEMHAM GENERAL HOSPITAL.—Surgeon-in-Charge for Branch Dispensary. Salary, £80 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST. Victoria Park, E.—House-Physician (male). Salary at the rate of £50 per annum.

DERBY COUNTY ASYLUM. Mickleover.—Junior Assistant Medical Officer (male). Salary, £120, rising to £150, per annum.

DEVONPORT: ROYAL ALBERT HOSPITAL AND EYE INFIRMARY.—Assistant Resident Medical Officer. Salary at the rate of £50 per annum.

DUDLEY: GUEST HOSPITAL.—Senior Resident Medical Officer. Salary, £100 per annum.

DURHAM COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary, £150, rising to £180, per annum.

EDINBURGH: ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.—Four Resident Medical Officers.

HALIFAX: HALIFAX INFIRMARY.—Third House-Surgeon. Salary, £80 per annum.

HOSPITAL FOR DISEASES OF THE SKIN. Blackfriars, S.E.—Assistant Surgeon.

KING'S COLLEGE HOSPITAL.—Assistant Clinical Pathologist.

LEEDS GENERAL INFIRMARY.—Ophthalmic House-Surgeon.

LEICESTER INFIRMARY.—Assistant House-Surgeon. Salary at the rate of £60 per annum.

LONDON HOSPITAL. Whitechapel, E.—Medical Registrar. Salary, £100 per annum.

LONDON LOCK HOSPITAL.—House-Surgeon in the Female Hospital. Salary, £100 per annum.

MANCHESTER: ANCOATS HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum.

MANCHESTER HOSPITAL FOR CONSUMPTION.—Assistant Medical Officer and Pathologist. Salary, £50 per annum.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC. Chancery Street, W.C.—Medical Superintendent. Salary, £100 per annum.

MELROSE: ROXBURGH DISTRICT ASYLUM.—Assistant Medical Officer. Salary, £150 per annum.

MILLER GENERAL HOSPITAL. Greenwich Road.—Honorary Surgeon.

NATIONAL HOSPITAL FOR EPILEPTICS. Bloomsbury, W.C.—Assistant Physician.

NORTHUMBERLAND COUNTY ASYLUM, Morpeth.—Junior Assistant Medical Officer. Salary commencing at £120 per annum.

PLAINSTOW ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN. Assistant Resident Medical Officer. Salary at the rate of £80 per annum.

QUEEN'S HOSPITAL FOR CHILDREN. Hackney Road, E.—House-Physician. Salary at the rate of £50 per annum.

QUEENSLAND GOVERNMENT.—Assistant Medical Superintendent of the Lunatic Asylum, Toowoomba. Salary, £400 per annum.

ST. PANCRAS AND NORTHERN DISPENSARY, Euston Road, N.W.—Resident Medical Officer. Salary, £100 per annum.

ST. PETER'S HOSPITAL FOR STONE AND OTHER URINARY DISEASES. Henrietta Street, W.C.—(1) Assistant Surgeon. (2) Junior House-Surgeon. Salary at the rate of £50 per annum.

STAFFORD STAFFORDSHIRE GENERAL INFIRMARY.—House-Surgeon. Salary, £160 per annum.

TAUNTON TAUNTON AND SOMERSET HOSPITAL.—(1) Honorary Surgeon. (2) Honorary Dental Surgeon.

VENTNOR ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Male Assistant Resident Medical Officer. Salary, £100 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Assistant Anaesthetist.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Newport, Co. Monmouth, and Callington, Co. Cornwall.

APPOINTMENTS.

BERNARD, H. W., M.B., B.Ch.Dub., District Medical Officer of the Tadeastur Union.

BRUNTON, J. M.D. Glas., Certifying Factory Surgeon for the St. Pancras District, Co. London.

ONOVAN, W., L.R.C.P. and S. Edin., District Medical Officer of the Birmingham Parish.

FINLAY, Douglas Edward, M.B., B.S. Lond., M.R.C.S., L.R.C.P., Assistant Physician to Gloucester General Infirmary and Gloucestershire Eye Institution.

FRANK, H. G., M.B., B.C. Camb., District Medical Officer of the Abington Union.

GORDON, J. E., M.D., Medical Superintendent to the Devon and Cornwall Sanatorium.

SANDYON, F. R., M.B., Ch.B. Viet., District Medical Officer of the Chapel-en-le-Frith Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charges for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

HOAR.—On December 18th, 1908, at Bolarum, Deccan, India, the wife of J. E. Hoar, R.A.M.C., of a son.

MARRIAGE.

STEWART-MITCHEL.—On Tuesday, February 2nd, 1909, at the Church of All Saints, Margaret Street, W., by the Rev. Edward H. Mosse, M.A. (cousin of the bridegroom), James Stewart, B.A., Q.U. Bell, F.R.C.P. Ed., ex-Surgeon R.N., of 24, Welbeck Street, W., and only son of the late Robert Stewart, M.D. (Medical Superintendent of the Belfast District Asylum, to Edith Alberta, second daughter of the late George Haslett Mitchell, Esq., of St. Helen's, Bunratera, Co. Donegal.

DEATH.

REAP.—On January 28th, suddenly, at 11, Petersham Terrace, S.W., Thomas Lawrence Reap, M.R.C.S., aged 76 years.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON. 11, Chandos Street, Cavendish Square, W., 9 p.m.—Clinical Evening. Cases will be in attendance at 5 p.m.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 12 noon.—Museum Demonstration by Professor Shattock: Osteoplastic Inflammation of Bone.

TUESDAY.

BRITISH MEDICAL BENEVOLENT FUND.—Meeting at the Royal College of Physicians, London, Sir John Thwaites in the chair. Address by the Bishop of Oxford (Dr. Fasel).

ROYAL SOCIETY OF MEDICINE:

SURGICAL SECTION, 20, Hanover Square, W. 5.30 p.m.—Papers:—Mr. J. F. Dobson and Mr. J. Kay Jamieson: The Lymphatics of the Colon. Mr. Rickman J. Godlee: The Torus Palatinus.

WEDNESDAY.

ROYAL SOCIETY OF MEDICINE:

MEDICAL SECTION, 20, Hanover Square, W. 5.30 p.m.—Discussion on Ulcerative Colitis (adjourned from January 26th) will be continued by Sir Patrick Manson.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Millbank, S.W. 5 p.m.—Clinical Demonstrations.

THURSDAY.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, Cavendish Square, W. 8 p.m.—Clinical Evening: (1) Mr. N. Bishop Harman: (a) Finished Models of the Diaphragm Test; (b) Tobacco Amblyopia—a Substitute for Smoking. (2) Mr. A. Levy: Obstruction of Cilio-retinal Artery. (3) Mr. J. F. Cunningham: A Case of Aniridia. (4) Mr. E. Nettleship: Ophthalmoscopic Drawings.

ROYAL SOCIETY OF MEDICINE:

OBSTETRICAL AND GYNÆCOLOGICAL SECTION, 20, Hanover Square, W. 7.45 p.m.—Specimens:—Dr. Herbert Spencer: A Venous Aneurysm on a Uterine Fibroid. Mrs. Stanley Boyd: A Neurotoxic Fibroid. Dr. Victor Bonney: A Modification of Champetier de Ribes's Bag. Dr. F. E. Taylor: A Uterus with Two Interstitial Fibroids, one showing Red Degeneration, the other Normal. Dr. Drummond Maxwell: Notes on a Case of Toxic Vomiting and Pregnancy. Short Communications:—Dr. P. J. McCann: Sarcoma of the Fallopian Tube. Dr. Russell Andrews: Some Cases of the Ovarian Mole in Combination with Ovarian Cysts, together with Cases Recorded. Paper:—Dr. G. F. Maeker: A Case of Hydatidiform Mole, with Abundantness of Kidney and Pregnancy: Sudden Death from Cardiac Failure.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

CLINICAL SECTION, 20, Hanover Square, W. 8 p.m.—Cases:—Dr. H. Morley Fletcher: Cases of Oxycephaly. Dr. Herbert P. Hawkins: Case of Leprosy. Mr. W. Sampson Handley: Elephantiasis Treated by Lymphaticoplasty. Mr. P. M. Heath: (1) Diffuse Peritonitis of both Tibiae without other Evidence of Constitutional Syphilis. (2) Congenital Syphilitic Knee. Dr. F. Parkes Weber: (1) Congenital Swelling of the Hands (Trophoedema). (2) Congenital Splenomegaly and Acholuric Jaundice. Dr. E. J. Poulton: An Idiopathic Family Idiocy. Dr. M. Macnaughton-Jones, jun.: An Automatic Appliance for Maintaining Pressure in carrying out Bier's Treatment. Mr. R. Higham Cooper: Aneurysm of the Uteral Bone. Cases:—8.30 p.m. Mr. Butlin will exhibit his collection of drawings of Early Carcinoma of the Tongue, and of conditions which may be mistaken for it; and will speak of the results of operation. Microscopic sections of the cases will be on view. 9.40 p.m. Mr. R. J. Godlee will describe a case of Dermoid Cyst of the Mediastinum treated by operation, which will illustrate the subject of this operation by a pathological specimen from another case.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Thursday, 3.45 p.m.: Lecture on Tracheo-scopy. Friday, 3.45 p.m.: Lecture on Clinical Pathology.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Wednesday, 4 p.m., Mediastinal Tumours.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstrations, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m.; Medical Operations, 2 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m., Monday, and noon, Thursday; Skin, at noon and 4 p.m., Tuesday, and noon, Friday; Eye, 11 a.m., Wednesday and Saturday; Radiography, 4 p.m., Thursday. Special Lectures: Wednesday, 3.30 p.m., Orbital Cellulitis. Thursday, 2.30 p.m., Jaundice.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following Clinical Demonstrations have been arranged for next week:—4 p.m., Monday, Skin. Tuesday, Medical. Wednesday, Surgical. Thursday, Surgical. Friday, Throat. Lectures at 5.15 p.m. each day will be given as follows:—Monday, Tricentral Neuralgia and its Treatment by Schloesser's Method. Tuesday, The Diagnosis and Treatment of Pus Formation in Appendicitis. Wednesday, Treatment of Psoriasis. Thursday, Perforating Ulcer of the Colon.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen's Square, W.C.—Tuesday, 3.30 p.m., Treatment in Nervous Diseases. Friday, 3.30 p.m., The Significance of Tremor.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m., Surgical Out-patient, 2.30 p.m., Medical Out-patient; Nose, Throat, and Ear: X Rays, 4.30 p.m., Medical In-patient. Tuesday, 10 a.m., Medical Out-patient Clinic, 2.30 p.m., Operations; Clinics: Surgical, Gynaecological, 4.30 p.m., Special Demonstrations. Wednesday, 2.30 p.m., Medical Out-patient, Skin, and Eye Clinics. Thursday, 2.30 p.m., Gynaecological Operations; Clinics: Medical Out-patient, Surgical Out-patient, 3 p.m., Medical In-patient; 4.30 p.m., Lantern Lecture: Applied Anatomy of the Breast and Diseases of the Male Breast. Friday, Clinic, 10 a.m., Surgical Out-patient; 2.30 p.m., Operations; Clinic; Medical Out-patient, Eye; 3 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, WEST LONDON HOSPITAL, Hammersmith Road, London, W.—The following are the arrangements for next week:—Daily, 2 p.m.: Medical and Surgical Clinics: X Rays, 4 p.m., Operations. Monday and Thursday and Wednesday and Saturday, at 2 p.m.: Diseases of the Eyes. Tuesday and Friday, 10 a.m.: Gynaecological Operations. 2 p.m. (Wednesday and Saturday, 10 a.m.): Diseases of Throat, Nose, and Ear; 2.30 p.m., Diseases of the Skin. Wednesday and Saturday: Diseases of Children, at 10 a.m.; 2.30 p.m., Diseases of Women. Lectures: At 10 a.m., Monday and Thursday, Special Demonstrations of Surgical Cases. Friday, Medical Registrar, Demonstration of Medical Cases. At 12 noon, Monday, Pathological Demonstration. At 12.15 p.m., Wednesday and Saturday, Practical Medicine. At 5 p.m., Monday, Diagnosis of Swellings of Jaws. Tuesday, Diagnostic Signs in Organic Diseases of Nervous System. Spinal Cord. Wednesday, Medicine. Thursday, Cases of Eye Disease. Friday, Cases of Skin Disease.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C.—Thursday, 3 p.m., Treatment of Syphilis.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
FEBRUARY.		FEBRUARY (Continued).	
7 Sunday ..		14 Sunday ..	
8 MONDAY ..	LONDON: Subcommittee of Science Committee on Development of Scientific Work of Divisions and Branches, 11 a.m.	15 MONDAY ..	
	LONDON: Capitation Grants Subcommittee, 1.30 p.m.	16 TUESDAY ..	LONDON: Standing Ethical Subcommittee, 2 p.m.
9 TUESDAY ..	LONDON: Medico-Political Parliamentary Subcommittee, 3 p.m.		ALTRINGHAM DIVISION, <i>Lancashire and Cheshire Branch</i> , Brooklands Hotel, 5 p.m.
	LONDON: Uterine Cancer Committee, 5 p.m.	17 WEDNESDAY ..	CARDIFF DIVISION, <i>South Wales and Monmouthshire Branch</i> , Cardiff.
	MANCHESTER (WEST) DIVISION, <i>Lancashire and Cheshire Branch</i> , Technical Institute, Stretford Road, Old Trafford, 4 p.m.	18 THURSDAY ..	LAMBETH DIVISION, <i>Metropolitan Counties Branch</i> , Guy's Hospital, 4 p.m.
	LANCASHIRE AND CHESHIRE BRANCH, Branch Council, Medical Institution, Liverpool, 4.30 p.m.	19 FRIDAY ..	
	LEICESTER AND RUTLAND DIVISION, <i>Midland Branch</i> , Leicester Infirmary, 4 p.m.	20 SATURDAY ..	
10 WEDNESDAY ..	RICHMOND DIVISION, <i>Metropolitan Counties Branch</i> , Royal Hospital, Richmond, 8.30 p.m.	21 Sunday ..	
	BEDFORD AND HERTS DIVISION, <i>South Midland Branch</i> , Bedford County Hospital, Bedford, 3 p.m.	22 MONDAY ..	
11 THURSDAY ..	BIRMINGHAM BRANCH, Medical Institute, Edmund Street, 3.30 p.m.	23 TUESDAY ..	HAMPSTEAD DIVISION, <i>Metropolitan Counties Branch</i> , Business Meeting.
12 FRIDAY ..	FOLKESTONE DIVISION, <i>South-Eastern Branch</i> , Hotel Wampach, Folkestone, 8.15 p.m.	24 WEDNESDAY ..	BATH AND BRISTOL BRANCH, Bath.
13 SATURDAY ..	LEINSTER BRANCH, Annual General Meeting, Royal College of Physicians, Kidare Street, Dublin, 4.30 p.m.; Annual Dinner, in the College Hall, 7.30 p.m.		STAFFORDSHIRE BRANCH, General Meeting, North-Western Hotel, Stafford, 5.15 p.m.; Dinner, 7.15 p.m.
		25 THURSDAY ..	CITY DIVISION, <i>Metropolitan Counties Branch</i> , Clinical Meeting, Queen's Hospital for Children, Hackney Road, 4 p.m.
			BIRMINGHAM BRANCH, Pathological and Clinical Section, Medical Institute Edmund Street, 8 p.m.
		26 FRIDAY ..	EDINBURGH BRANCH, Winter Clinical Meeting, Royal Infirmary, Edinburgh, 4 p.m.; Museum open 11 a.m.; Dinner, Royal British Hotel, Princes Street, 6.30 p.m.
		27 SATURDAY ..	
		28 Sunday ..	

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the **BRITISH MEDICAL JOURNAL** is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent

by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the **BRITISH MEDICAL JOURNAL** for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, FEBRUARY 13TH, 1909.

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Conference

ON

FRIENDLY SOCIETIES AND THE MEDICAL PROFESSION

Convened by the Charity Organization Society.

A CONFERENCE of medical men and friendly societies, convened by the Council of the Charity Organization Society, was held in the Council Chamber, Denison House, Vauxhall Bridge Road, on Saturday, February 6th. Sir ALFRED LYALL presided, and there was a large attendance. Among those present were the following six members of the British Medical Association, nominated by the Council on a recommendation of the Medico-Political Committee to represent it: Drs. W. T. Lydall (Birmingham), A. E. Morison (Sunderland), Percy Rose (Stratford), J. H. Taylor (Salford), W. E. Thomas (Bridgend), and J. Smith Whitaker (Medical Secretary). In addition, there were present many Representatives of Divisions of the Association in various parts of the country. Among the representatives of friendly societies were:—*Ancient Order of Foresters*: Messrs. A. E. Rawlings, J. C. Martyn, H. J. May, T. W. Frew, E. G. Hollis, and W. Vincent. *Oddfellows*: Messrs. H. Hawkins, A. Pinhorn, and Wright. *Hearts of Oak*: Messrs. W. Bunn and G. Burgess. Among the representatives of the Charity Organization Society were Mr. C. S. Loch (secretary), Major-General Cumberland, and Lieutenant-Colonel Montefiore.

Dr. JAMES PEARSE (Trowbridge) read a paper on friendly societies and the medical profession, in the course of which he said that he spoke in a purely private capacity and had no mandate to speak for others. For fourteen years he had practised in a district where there was a large amount of contract work and had found the conditions so onerous and unsatisfactory that he had felt reluctantly compelled to resign his appointments. The relationship between friendly societies and the medical profession should be cordial and mutually helpful. The main object of friendly societies was the assistance of their members in sickness, that of the medical profession the alleviation of sickness. The two should work harmoniously together, and their common purpose would thereby be

better be attained, but no one could pretend that the relationship was cordial and harmonious. The medical journals during the past twenty years contained a reiterated story of the grievances of medical men. If the *Lancet's* "Battle of the Clubs" or the report of the British Medical Association on Contract Practice were read, they would be found to contain a chorus of complaint from every quarter of the kingdom. There had been dispute after dispute with friendly societies, but the question whether any common basis of agreement could be attained remained unsettled. Indeed, no attempt at reasonable discussion seemed to have been made; the opposing parties remained in hostile camps, each maintaining its own position, and there was no advance towards a compromise. He would ask the representatives of friendly societies who were present seriously to consider whether the complaints of medical men were justified, and whether anything could be done to remedy these. He asked this not only in the interests of medical men but in the interests of the members of the societies. The profession had no quarrel with friendly societies as such. The good work they had done was patent to all. Nor did the profession object to the principle that friendly societies should provide for the medical attendance on their members in sickness; it only demanded that in such provision it should be equitably treated. But as a matter of fact it objected strongly to the details by which this principle was carried out, and maintained that they were neither fair nor reasonable.

Adult Males.

Dealing first with adult males, he said that the usual method by which a friendly society arranged for medical attendance on its members was by the payment of an annual capitation fee to the practitioner. The amount of such fee varied. The recent investigation made by the British Medical Association comprised 1,641 clubs; of these 76.5 per cent. paid less than 5s., 23.5 per cent. 5s. or more. Taking as a basis 5s., though this was above the average, it followed that for a sum of 5s. for each member on his list, the practitioner must attend those members who were ill, and must also provide the necessary drugs and surgical dressings. The first contention of the medical profession was that this remuneration was wholly inadequate. With regard to the work demanded for this sum of 5s., he said that the Manchester Unity of Oddfellows, which comprised over 600,000 members, had lodges throughout the country, and its members were engaged in all varieties of

occupation. Its experience might therefore be taken as fairly typical. An elaborate actuarial report on the sickness incidence of this society for the five years 1893-7 had recently been published, from which it appeared that the annual average period of sickness per member exposed to risk was 2,344 weeks. A lodge of 100 members would experience during the year 234 weeks of sickness; the medical man would receive for attendance £25, or approximately 2s. per sick week. Was 2s. sufficient payment for a week's attendance? It was difficult to strike an average between acute and chronic cases, but, taking an estimate of two visits a week, was 1s. a visit sufficient remuneration for a medical man who might have to go three miles to his patient, perhaps in the middle of the night? When he had paid for the cost of drugs and surgical dressings, and the cost of driving, what sum did he put in his purse? Further, these figures applied only to members in receipt of sick pay. The large numbers who consulted a medical man for minor ailments also demanded consideration; at a low estimate these equalled those in receipt of sick pay. Therefore, the 1s. was reduced to 6d. a visit for consultation. Was this fair or reasonable? Was it just remuneration to a man who had spent years and means in attaining the knowledge necessary to the discharge of his duties? Was it likely to encourage him to discharge those duties efficiently and earnestly? The payment made by a member to his friendly society for sickness benefit was accurately adjusted to cover the risk involved, and was arrived at after careful actuarial investigation; the payment he made to cover the cost of medical attendance bore no proportion to the risk involved. Dr. Pearce had not been able to ascertain that any attempt had been made to adjust it scientifically; it was a purely haphazard guess, and he had shown that it was a faulty guess. But it was not only the mere lack of proportion in the fee of which the medical profession complained. There was this further injustice, that a member joining a friendly society at 40 paid for the same sickness benefit a larger contribution than one joining at 20, but he paid no more to the medical fund, though his risk of sickness was much greater. Was that fair? From the tables in the report already quoted it appeared that the lowest sickness rate occurred at the ages of 20 to 24, when it was 0.9 weeks; it rose steadily till at the ages 65 to 69 it was 10.59 weeks; now as 5s. did not cover the former risk, how much less did it cover the latter! Again, in cases of protracted illness the society took care of itself by reducing the amount of sick pay after a definite period; it ignored the injustice of expecting the medical man to continue in attendance for an absolutely indefinite period for the same remuneration; it halved its own obligations, but not the doctor's. Was this fair?

Wage Limit.

A further injustice of which medical men complained with much bitterness and reason arose in connexion with the fact that when the system was first instituted it was intended to apply to medical attendance on those who were in receipt of a limited wage, and to whom sickness meant a serious crippling of resources. To such the profession had always been willing to render assistance without considering too closely whether there would be an adequate return in money payment. It had reason to complain when advantage of such willingness was taken by those to whom sickness was not such a serious matter in a pecuniary sense, and who could afford to pay a reasonable fee for services given. It was an indisputable fact that the services of medical men were exploited by many who should be ashamed to offer their medical attendant the paltry fee of 5s. a year. This was a crying evil. In illustration of this he read the following quotations from the report of the *Lancet* Commissioner:

The principal manufacturer of the district, who pays some £600 or £700 a week in wages, is a member of the Oddfellows' Friendly Society, and Dr. Dash must attend him for 4s. a year. Nor is this a slight matter, for this manufacturer is suffering from haemoptysis. This patient is rich enough to keep hunters (p. 11). Yet, though this man was attended to his deathbed by his club officer, whose services he obtained for 4s. a year, it was found when his will was opened that he had left a fortune of £10,000 (p. 126).

There was another case of a man who drove his carriage and left £80,000 (p. 190). Was this fair? These might be extreme instances, but they drove home the point

that there was no limitation as to who might claim the services of the medical man at the society's fee. How the amount of fee to be paid was settled in the first instance he had been unable to ascertain. If there was any reason why it was sufficient then, there was abundant reason why it is insufficient now. The conditions of the profession had altered, there were whole fields of knowledge then unexplored with which the practitioner must now be conversant; it required constant and unremitting effort to keep in touch with fresh developments. Far more detailed work was required of the general practitioner than was the case a generation ago, and it was unreasonable to expect him to be content with this miserable pittance. The cost of medical education had considerably increased, and five years was the minimum time within which a medical diploma could be obtained. The matter could be argued from another side. It was a striking fact that the sickness incidence in friendly societies showed a marked tendency to increase. Taking the figures of the Manchester Unity and comparing the years 1893-7 with the years 1866-70 there was an increase of 21 per cent. up to 45 years of age, of 26 per cent. from 45 to 65, and over 65 of 42 per cent. Was it fair that with this increased demand on the doctor's services his remuneration should remain the same?

Women and Children.

Contract medical attendance was at first limited to adult males, and was undertaken as a concession to assist the wage-earner when his income was suspended by sickness, and in the expectation that the medical attendant would retain as private patients the family, for whom ordinary fees would be paid. Such expectations had been destroyed by the rapidly extending application of the same system to the wives and children of friendly society members. The payments for women and children were almost invariably lower than for men; juveniles might, indeed, pay as little as 2s. per annum. Their liability to sickness was much greater. By what method of reasoning could it be shown that the greater sickness demanded the lesser remuneration? The unfairness of this did not admit of argument, and it was amazing that any reasonable body of men should demand the best medical attendance for this paltry sum. He thought he had proved the contention that the complaints of medical men were justified, and that they were inadequately paid by friendly societies and in other respects unjustly treated; but he wished to emphasize the fact that it was far more than a monetary matter. Medicine was degraded to a sordid commercial bargain, with the constantly-recurring query in a case of illness, Does it pay? There should be in every case constant co-operation and sympathy between physician and patient; this spirit of mutual helpfulness was worth more than gallons of physic; there existed instead a sense of friction and irritation—on the part of the doctor the knowledge that he was being sweated, perhaps on the part of the sufferer the suggestion that he was not being treated as he would be were he a private patient. This was bad for him and bad for the doctor. Would it not be better that a man who was keen on his profession should want to have club practice, whereas, as a matter of fact, he wanted not to have it. If the present system was bad for the medical profession—and of that there could be no manner of doubt—it was bad to a like degree for the friendly societies. It was a moot question whether medical attendance could be satisfactorily contracted for, and, with increasing experience, he was himself coming to doubt it. The demands were so varied and the work required so complex that it did not seem possible to reduce it to a single figure to cover every contingency. It was very desirable that some more satisfactory system than the present should, if possible, be evolved. He submitted that he had shown that (1) the fee paid bore no relation to the work done. Some more accurate adjustment was surely possible. It seemed to him that it would be a feasible plan to arrange a given fee to correspond to each week of sick pay, and that at the end of the year the medical man should receive such sums as corresponded to the weeks of sick pay experienced by the members on his list. The payment, however, must take into consideration the attention given to members not ill enough to be laid aside. An alternative would be to adopt the system of a recognized payment for each item of work

done. So far as he knew, the National Deposit Friendly Society was the only one which had evolved a scheme on these lines, paying a given fee for each visit or consultation. He had no personal experience, but had heard medical men speak with satisfaction of its methods, and he could not say as much of any other friendly society. The fees, however, did not err on the side of liberality. Another excellent feature of this society was that a portion of the medical fee was paid from the member's deposit; hence there was some check on the member who haunted the doctor's house and had a strange appetite for physic, and there was an inducement to come off the sick list as soon as possible. (2) That medical men only expected to attend on any contract system those in receipt of a limited wage and who could not afford to pay the usual fees. The details of a wage limit were difficult to define, but the principle was essential. (3) If women and children were to be included in medical benefits, the payment must bear a truer proportion to the work required. In conclusion, he was ready to admit that he had expounded difficulties but had suggested no adequate solution. The problem was too difficult for it to be within the power of one man to find a solution. There were two sides to every question. While anxious to safeguard the interests of the profession, he recognized that the interests of the friendly societies had also to be safeguarded. Really the two should be identical. The matter should be approached in the light of reasonable discussion, and an honest endeavour made to arrive at a mutually satisfactory agreement. While he believed that the majority of medical men were anxious to work in harmony with the friendly societies, he was persuaded that if nothing were done an increasing number would decline to have part or lot in contract practice. The friendly societies suffered; they expended vast sums in sick pay to their members, but took little pains to consider the interests of those responsible for the health of these members. The medical profession suffered, but he would repeat that with it there was more than the money question. The profession was of course not indifferent to the pecuniary reward, but there were interests greater than this. Many a man who began his work with enthusiasm, found his professional life embittered by the evils of the contract system, which blighted his hopes, stifled his ambition, and destroyed his love of work. From each point of view, that of the public, that of the friendly societies, that of the medical profession, was there not reason for seeking amendment?

SIR THOMAS SMITH said he was present at the request of friends to express his deep sympathy with his professional brethren in connexion with their relation to friendly societies. There were some friendly societies which he understood treated their medical officers with liberality, and the relations between them were very cordial. There were some others where the medical officer was adequately remunerated. There were many more where grievances existed such as had been referred to by Dr. Pearse. One grievance was that people in a good social position took advantage of friendly societies, and were attended for a very small sum of money. These were mostly men who in their early career were perhaps artisans or workmen. This difficulty would continue unless the constitution of the old societies was altered. He did not think it was entirely the fault of the societies. Every one liked to get the most for his money, and even the manufacturer, if he could get free of his doctor's bill by paying 4s. a year, was very apt to take advantage of it. This very fact might be an indication of the means by which the individual had attained to his position. The difficulty was that there was no board of conciliation, no disinterested third party, to intervene and discuss the matter and help to settle it. The author of the paper had approached the subject in a friendly way; it was a burning question, but Dr. Pearse had not added fuel to the fire.

SIR THOMAS BARLOW said he would have hesitated to speak but for the fact that most of his life had been spent in hospitals, with the result that he had been brought in contact with doctors of every kind and degree in all ranks of life. Without any extravagance, he wished to say that there was no group of men engaged in the hard work of the world who did more towards helping their fellow creatures without any remuneration than the medical profession, not only amongst the poor but amongst the

rich, especially amongst those who had to maintain appearances and were yet on the edge of a financial precipice. Only the other day he was asked to see a case with a doctor, and he gathered by degrees that the father of the patient was a tradesman who was just on the verge of bankruptcy. His friend the doctor was attending the patient without any chance of remuneration, and paying a trained nurse in order to see that the patient recovered. That was not an exceptional thing. Every day of his life every doctor who was worth his salt was doing acts of kindness—and, moreover, acts that involved special science and skill—for his fellow-creatures, and for which he knew absolutely that he would never receive any remuneration whatever. He knew, too, that working men were always ready to evince a like spirit toward one another. They all rejoiced in growth of citizenship and self-help and mutual help in friendly societies and in all ranks of the working classes. It might be said that some of the work done by doctors for friendly societies was apprenticeship to gain experience. So it was, but the apprenticeship did not go on through the whole of life. There were many examples where medical men gave their work ungrudgingly as a matter of course, and nobody knew it was being done. He mentioned this because he wished to appeal to the sense of justice and right feeling on the part of the citizens of this country; he asked them to remember that the doctor's life was such that very often he did not get remunerated at the time, and he asked them in their particular way to strive to remunerate him when they had the chance in friendly societies. One of the most striking things that had happened in this generation was the improvement in the status of the working man. Whether or not they thought that trades unions had in some way hampered the development of industry in certain directions, they must admit that these unions had done a great deal to improve the status of the working man, and they rejoiced to think that the working man had come into his own. It was now admitted that a man who did his work deserved to have a living wage so as to be able to maintain himself and his family decently and to bring them up and get some little competence for old age. The working man had also the right to have some leisure and some time for reasonable refreshment. He would go a step further and say he thought all fair-minded people believed that as different trades improved and became more remunerative the working man's wages should also improve. The only way in which they could approach social problems satisfactorily was by trying to put themselves in other people's places. He would suppose he was addressing a number of skilled artisans, and he would ask them to look at the work and remuneration of the medical man who worked for a friendly society. There was not a great difference between the work of a doctor and that of a skilled artisan, and he was not ashamed to say that his work was that of a skilled artisan. He was willing to stand on the same footing as a skilled artisan. The doctor who did his work and knew his work deserved to have a living wage, so as to be able to bring up his children properly, and not only to educate them but to set aside a little money for a rainy day. But, alas! many medical men could not do it. The medical man also deserved to have a little rest. His nights were often disturbed, and he was expected at once to obey the demands made upon him just as much as any artisan who had nightwork to do. The doctor had both nightwork and Sunday work; therefore he deserved to have a little time for quiet, rest, and leisure. Furthermore, he ought to have some time to keep himself abreast of the work being done in the advance of medicine and surgery, and, if any improvement were made in the treatment of disease, friendly societies ought to have the advantage of it. Could a medical man get a living wage if he did nothing but club work? Could he get any leisure? In some towns he had to cover the whole of the ground, and the work he had to do in those clubs was often "dog's work"—absolute slavery. If no patients were left for private work, it was impossible for a medical man thus engaged to get anything like a living wage. What leisure was there for such a man? The Registrar General's Report showed that the mortality of doctors was something terrible. One reason for this was that medical men had very little time for their food. There was often a movable feast; they had to rush off

very often, and had long intervals between their eating and drinking, with the result that they often suffered from indigestion. It was very frequently in consequence of malnutrition that doctors' lives were shortened. He begged that the skilled artisans who worked friendly societies would consider the condition of the doctor and his claims for consideration in the same way that they themselves asked the masters and others to consider the claims of the artisans. 'Would it be very wrong when their friendly societies were working well and their doctors were doing their best, and their people were saved expense and looked after—would it be very wrong to allow for an accession of wage as a friendly society matter, just in the same way as, in connexion with the cotton trade in Lancashire, there was a sliding scale, so that when there were increased prospects of work they had better wages? He asked them to look at the matter from another point of view. A friendly society, they all agreed, was a right thing, the principle of insurance was a right thing, it was the only way in which people with limited means could pay their way for medical attendance. But it was based on the understanding that there was a sliding scale for people of limited means. They acknowledged and admitted in everything else that payment must be within certain limits, and must be relative to what people could afford. But surely the understanding was that as a man's means improved he should pay a proper legitimate price for what he got in the way of medicine and everything else. He would point out that in many friendly societies when men who had started as artisans and afterwards became manufacturers, or got into a position of comfort, and still remained in those societies, it was quite common for them not to claim sick benefits; but it was not common for them to allow the medical benefits to go by. There were exceptions, and he acknowledged it freely, but nobody could deny that there were frequent instances—chapter and verse could be given—of men in every place where there were clubs, men who were in receipt of large incomes accepting those medical benefits without any scruple. The laws of the friendly societies permitted it, and that fact was a damning fact, and if the thing were put on an equitable basis, on the kind of basis that the artisan desired with his employer in the matter of wages, then things would soon be put right as between medical men and friendly societies. He must say two other things before he sat down. It was more blessed to give than to receive, and when they could do an act of kindness to a fellow creature when he needed it and deserved it, there could be nothing but a good result on both sides. But if they gave money or services to somebody who could afford to pay for it, but who did not pay for it, they damaged both sides—they damaged society at large by it, and it was degrading and demoralizing. The other thing was this: If gentlemen having authority in friendly societies looked at the matter just to see how much they could get out of the medical man who worked for them—to get him to do it on the lowest possible terms—no doubt they could succeed. The occupation of a doctor in this country was not very remunerative at the present time, and until a change took place there would be a number of doctors whom they might succeed in inducing to enter on those terms and to do the work on starvation wages. But friendly societies in taking that course would not be doing the best for their own people; they would not get the best advice or the best skill for their own people, and they would have the feeling that they were lowering the whole tone of one of the most sacred professions in the world. He appealed to them to go back once more to the position of the skilled artisan in relation to his employer. It was not only a question of pounds, shillings, and pence, but a question of the feeling that existed between them. In the old days of strikes in Lancashire, what was the state of things between the workpeople and the employers? The masters hated the men and the men hated the masters, and there was nothing but bitterness between them. That was what would result from the attempt to get all that they could out of the medical man. They would not get good service; they would get nothing but bitterness and a state of things that tended to separate them, and the general outcome would be bad. Let them come together, meet man to man; let them meet in the same way as a great many of the best working people met the best employers;

let them see what each side had to say, and then surely it could not pass the wit of man, out of this very difficult problem, that some good working, honest, true, and righteous solution should be obtained.

Mr. P. W. MOFFREY (Parliamentary Agent, Manchester Unity Oddfellows) thought those present, and especially the friendly society members there, might congratulate themselves on the moderation of tone which distinguished Dr. Pearce's paper, although he for one did not agree with all his arguments. He was sorry he could not pay that compliment to Sir Thomas Barlow. A friendly society's practice was perhaps as important to the medical man as it was to the society. He was sorry to have to believe that a large number of those who now felt themselves independent, and were making provision for themselves would, were it not for the opportunity of a small periodical payment to their club for medical attendance, be driven to other sources. Those sources in many cases would be the parish, and in large towns the sources would be the free medical hospital or the dispensary. He believed that it would be better for doctors to have friendly societies practice as a corollary to their own practice than to divert it from them by any harsh stipulations as to the terms on which they would serve. It was important to friendly societies that the service given by the medical officer, who was one of the most important of their officers, should be willing and not grudging service. Service grudgingly given was not generally satisfactory service. He might say from his own experience of medical officers, which was not very large, that whenever he had had to call in a doctor, though he had paid regularly to the medical attendance he had not once had a bottle of physic or a word of advice from him. Sir Thomas Barlow had said it was a common practice for those more fortunately situated in life to take advantage of their medical men. He (Mr. Moffrey) put himself up as one example, and he had no doubt that he could find twenty more. Moreover, there was a very large number of men in clubs who were not over blessed with this world's goods, and who lived beyond the radius in which the doctor was bound to attend, and the majority of those men still continued to pay their club doctor, although they knew perfectly well that they could never have him. He believed that in London fully 50 per cent. of the members of friendly societies were in that position. It could be tested by actual statistics. A large number of the branches in London were situated in the centre, while members were driven perforce to live in the outskirts. Thus members paid their fee but did not receive anything beyond an occasional word of advice. He agreed entirely with all that could be said as to the unselfish labours which doctors gave to the community at large and the amount of work they were ready to put in without the slightest hope of payment, but he was not ready to admit for one moment that a wage limit was either proper or practicable. A man who chose to pay to his club for his medical man was entitled to that attendance as much as to his sick pay. But the point to be considered was the way in which both parties could be satisfied. If it were possible to act on Dr. Pearce's suggestion—that the societies should pay according to age—he for one would endeavour to assist in finding a satisfactory basis on which doctors could be paid. But at the present time he had not in his mind a method of establishing such a basis. He was not prepared to say with Sir Thomas Barlow that at present the position was one of friction between both parties. He knew there was a great deal of cordiality in many instances between doctors and their friendly societies; and, though it might be a mere pittance, the societies found that when a vacancy occurred others were ready to step in and carry on the work. Sir Thomas Barlow had said, Let the artisan pay the doctor as he would wish to be treated in his own employment. The artisan had done that. He could remember the time when the doctors were paid 2s. 6d. per annum. It might be a shame, but it was a fact, and the artisan recognized the shame by now paying 4s. or 5s. Could they not find some common basis of action by which the friction—though he did not deem it was general—where it existed could be removed? There was a body known as the National Conference of Friendly Societies, and it did endeavour at one time by consultation with representatives of medical associations to find some common ground on which doctors

and friendly societies could come together. But at that time the demands of the medical profession were deemed impossible by the friendly societies, and the conference came to nothing. They were willing to enter into consultation with the representative body of members so long as the doctors were ready to be reasonable, and not attempt to force on them any limitation as to a wage limit, or to tell them that they were treating the doctors unfairly. They were ready to pay a proper amount, and when the doctor agreed to take it, in return they expected proper attention, and happily they generally got it. He hoped that whatever consultation took place, the relation between doctors and friendly societies would be put on a proper basis for a generation to come.

Mr. C. W. BURNES (Secretary, Hearts of Oak Benefit Society) maintained that friendly societies had not yet been approached in a proper way by medical men, and when they were approached in a proper manner for a proper remuneration, the doctors would get that remuneration. If doctors wanted proper treatment, all they had got to do was to ask for it; and he was absolutely certain that they would get it from friendly societies. But had the friendly societies no complaint against the doctors themselves? If the General Medical Council would inquire into the medical qualifications of some doctors who gave certificates of illness, probably not only the medical profession would be directly affected, but it was perfectly certain that members of friendly societies and their friends would be immediately concerned. The gratitude of a number of friendly societies to medical men was pronounced, and emphatic, and profound. The medical profession had done noble work in the past; and that work would be continued by the most noble of all professions. But whilst there was very much to commend, there were also some reasons to condemn. It was by malingering dodges that frauds were effected, the fault lying with the doctors who were too ready to grant certificates for abstention from work without specially examining those who applied for them to ascertain whether they were really needed. Mr. Burnes concluded by stating that if the medical profession had any complaint to make against friendly societies and would make it in a legitimate way, it might be absolutely certain that the complaint would be legitimately met.

Mr. FRANÇOIS BUXTON said he was neither a member of the medical profession nor of a friendly society. There was no doubt that the question of the medical treatment of the poorer classes was coming very much to the front, and he hoped that before long something decisive would be done, especially after the issue of the report of the Royal Commission on the Poor Laws. The Metropolitan Provident Medical Association, of which he was chairman, had about twenty-one provident dispensaries throughout London with a total membership of men, women, and children of over 30,000. The pay was generally 6d. a man a month, and for each family—a man, his wife, and children, up to 14 years of age—1s. 8d. a month. The first object of the association was to encourage thrift and independence amongst workmen, and it sought to organize that large body of people who were not able to pay the ordinary amount for medical attendance, but who at the same time, if they were earning wages, ought not to go to the free hospitals of London and get advice and medical attendance for nothing. There was, he was afraid, a large body of people who were inclined in that direction, and his association was endeavouring to encourage a better and more independent feeling. There was, he was sure, every desire on the part of his association to do the best it could for the medical profession. It had a very large number of doctors in connexion with each one of its large dispensaries. Each one of the members might choose his own doctor, and he had never heard anything but the most friendly expressions from the doctors regarding the work and the moderate payments made. Doctors had to remember that a large number of the members of the friendly societies paid regularly for many years without giving any trouble to the doctors. On the other hand, the work for the doctors must be very hard, very continuous, and on the whole very unpaying in many directions; the work was hardly worth the pay. At the same time, they obtained experience, and he presumed that was one of the chief objects of a

doctor's profession for many years of his life. The doctors who worked for the Metropolitan Provident Association were themselves members of the local committee, and there were representatives from those local committees serving on the Central Committee, and one of every three representatives must belong to the medical profession. He could only express a most earnest hope that, so far from doing anything unfair to the doctor, the provident dispensary system might assist them by organizing that large body of people of whom he had spoken, so as to get for the medical men a certain amount of pay from those people who otherwise, he believed, would pay nothing.

Sir Alfred Lyall having to leave at this stage of the meeting, Sir EDWARD BRAEBROOK presided during the remainder of the proceedings.

Dr. GRAY, speaking both as a member of the Charity Organization Society and a medical man, pointed out that the present friction between medical men and the friendly societies was a source of danger. One or two speakers, from the point of view of the friendly societies, had rather minimized the fact of the friction. He had been a medical practitioner for fifteen years, and he felt that he was fortunate in not having anything to do with contract work. Medical practitioners as a body considered that the man who had no contract practice was very lucky. If they wanted to sell a practice and sell it easily, what did they advertise? They advertised that there were no clubs in the practice. A medical man, as a general rule, would do his very best not to have anything to do with contract work. Friendly societies were at present in much the same position as the War Office occupied a few years ago. At that time there were more vacancies in the Army Medical Service than there were candidates; but now there were two candidates for every vacancy, because the War Office discovered what was wrong. Friendly societies needed to find out what was wrong in that direction with regard to their organization. In the first place, the conditions of service were unfair; and, secondly, the pay was absolutely inadequate. They would probably say: "It is a question of supply and demand; if we can get doctors for what we offer them, why should not we have them?" But in that way they would stop the supply. The number of medical students was going down because the medical profession was not worth going into. If they asked any doctor quietly, and got the truth from him, he would tell them that he could not give the best work in contract work. He saw no reason why payment of the doctor should not bear a direct relationship to the work done. The National Deposit Friendly Society succeeded perfectly well. (A Voice: It is not a friendly society.) It was a society that ensured its members benefits in sickness, and provided for the paying of the doctor's bill. It was a very satisfactory society from the doctor's point of view, because it paid the doctor a regular fee for every case he attended. In conclusion, Dr. Gray hoped the friendly societies, in their own interests, would try to find some scheme by which their doctors would be paid according to the work done, and then the societies would get a great deal better work.

Mr. CRONIN (North London District Oddfellows) said he was anxious that friendly societies should come into conference with the doctors, and he was absolutely unaware that the trouble had arisen at all in the friendly societies' camp. He could quote from the evidence of a member of the Committee of Management of the Lodge of the Manchester Unity that in a recent sale of a practice the doctor who was intending to retire offered not only his private practice but his club practice to the incoming doctor. In that instance the club practice was considered of such value that the sum of £100 was kept back by the incoming doctor until he knew for certain that he was being appointed as club doctor. Mr. Cronin would be only too thankful if they could come into conference at a round table or at the national conference of friendly societies purely and simply for the purpose of satisfying their doctor friends. At present he was not conscious that any one of the friendly societies' men was complaining. He came to the meeting fully convinced that the doctors were the best friends of the friendly societies, and yet one of the most eminent representatives of the profession had said to them in that room, "You are not getting good service." He was repeating the very words that Sir Thomas Barlow made use of. He believed when he came

into that room that the friendly societies did get good service. He would like to remind the medical men present that every one of the lives for whom they contracted were selected lives, and if Dr. Pearse would analyse still further the figures he had quoted he would find that the pay in the experience of friendly societies in many thousands of instances did not involve medical attendance. The excessive sick pay in older years of life that friendly societies' men received meant the equivalent of an old age pension, and the doctor never came into touch with the patient. He could instance dozens of such cases. As to the vexed question of the man who rose in the world and wanted his pound of flesh, it was possible that the cases Dr. Pearse had instanced were absolutely correct, but his own personal experience was that he had paid for his doctor's attendance by contract for seventeen years past, and yet, during those years, every time that he needed a doctor he had gone to another medical man, because he happened to live near him, and had paid him his proper fee. Two other members of friendly societies sitting near him had done the same thing. In one of the branches represented there that afternoon out of 460 members 300 were outside the radius of the doctor's attendance. Those were statistics given him by the secretary of that particular branch in Wigmore Street. The doctor was paid all the time. Dr. Pearse had referred to some special cases. There were many working-class men and clerks living in the suburbs who still paid their medical fees to friendly societies located in the centre of London. He was going to suggest a plan which he hoped would be a perfectly satisfactory solution to both sides and which might form a basis for consideration at a conference which might be held. Would it not be well if the doctors were civil servants? [Voices: "No."] Surely his remarks were not to be met by an immediate "No." He had heard from two doctors there that day of things which ought not to occur. He had heard that men were not following the medical profession because the remuneration or rewards were not adequate for the work. He contended that they ought to be adequate. Then, again, Sir Thomas Barlow said he could give instances of doctors who were not only giving their services daily, but who actually put their hands into their pockets to save the life of their patients. That was a scandal. The remedy was not by putting pressure upon the men who were very poor. The skilled artisan had been referred to. In his own lodge he was proud to know men who, with a salary of 25s. a week, had to keep a wife and children and paid to the society 5s. a year, which was as much as they could give. If the pressure were put on so that the fees charged to these men were absolutely impossible the doctor would not benefit; the men must then go to the infirmary or the free hospital. The remedy was not to raise the fees. He suggested that the matter should be conferred upon between the National Conference of Friendly Societies and a representative body of doctors with a view to a demand for a State medical system. He ventured to say that when the doctors were civil servants they would certainly not be as badly off as 20 gentlemen that afternoon had said doctors were.

Mr. ALFRED CHAPMAN (South London District Ancient Order of Foresters) remarked that it was not by extreme assertions that any good outcome of the meeting would be attained. The National Conference of Friendly Societies, when it had the matter under consideration in conference with the medical men, had sternly to stand upon its dignity, and so they could not submit to a wage limit. The question of the pay that doctors received was a debatable question, and the cruel 3s. a year given in many places in agricultural districts was certainly not to be thought of. A friendly conference and the force of public opinion in friendly societies were very urgently necessary in order that the standard should be raised. In 1898, at a conference with friendly societies held in the Council Chamber of the General Medical Council, Sir William Turner, who presided, asked whether something could not be done to constitute a Conciliation Board between the friendly societies and medical men. The National Conference of Friendly Societies in 1899 passed a resolution agreeing to the principle of a conciliation board having for its object the mutual settlement of disputes between friendly societies and their branches and medical officers engaged by such

societies or branches, and that such Conciliation Board should comprise five representatives appointed by the General Medical Council. The secretary of the National Conference sent a copy of the resolutions to the General Secretary of the Medical Council, but there was no response. By and by they were summoned to a meeting of the British Medical Association, which occurred on February 3rd, 1901, and Dr. W. A. Elliston, President of the Association for the year, was in the chair. Five representatives of the friendly societies appointed for the Conciliation Board who attended were surprised to find that though three years had elapsed no step had been taken by the medical profession to appoint their quota. At that conference they still found the one great obstacle—the friendly societies would not consent to the wage limit. Since then the societies had not received information that the medical profession had appointed five men or accepted the principle of the Conciliation Board. As a friendly society leader he appealed to the medical men that the proposed Conciliation Board should be formed. Any of the questions in dispute could be dealt with by the board as representing the medical profession on the one side and the friendly societies on the other. It would create a public opinion which would in the end attain all the purposes that professional men had and all the purposes which the friendly societies hoped for.

Mr. SMITH WHITAKER (Medical Secretary, British Medical Association), referring to the conference held ten years ago, said he knew something of the reason why it had proved abortive. In the first place, there was a deadlock on a question of principle. On the one side the friendly societies said, "We cannot enter into any discussion on the subject of the wage limit." On the other side the medical profession said, "If you are not prepared to discuss the question of a wage limit, it is not worth while entering into conference." By a wage limit he did not mean an absolutely rigid limit that no person receiving more than certain wages should receive medical attendance. Another reason for the abortive result was that at the time it was felt that the medical profession was not sufficiently organized for any representatives of the profession to negotiate with the same authority with which friendly societies could negotiate. Within the last six or eight years matters had improved to some extent in the medical profession from that point of view. There were present that day representatives of the British Medical Association from all parts of Great Britain; representatives had been appointed from places as far north as Inverness, as far south as the Channel Islands. There were present no fewer than 100 gentlemen sent up by local Divisions of the British Medical Association. He was rather sorry that no representatives of the Association had had an earlier opportunity of taking part in the present discussion, because if there was any means by which the difficulties on both sides could be brought to a focus and adjusted, it must be by negotiation between responsible representatives of organized bodies who had a definite mandate to speak for those whom they represented. The British Medical Association included more than half of the profession in the United Kingdom, including a large proportion of the general practitioners, and spoke with a greater authority than any other body in the medical profession. Some of the speeches had contained contradictory assertions. Some of the representatives of the friendly societies had rather suggested that they had no grievances, and that the grievances were on the side of the doctors. Others had suggested that the societies had various grievances. One speaker suggested that sometimes certificates were given in a way they ought not to be. If that statement could be justified by fact then certainly there was a grievance and a ground of complaint, and the men who gave the certificates should be brought to justice. Let it be frankly admitted that there were grievances on both sides. There must be grievances in all human relations, and as reasonable men, their business was to find out the practical reasons for those grievances. The friendly societies and the medical profession did not commit acts of injustice from a desire to be unjust, but because they did not see that they were being unjust. Every man was right from his own point of view, and "if you want to come to terms with him you must get at his point of view and

he must get at your point of view, and then you can both try to find means to reconcile your opinions." It was really agreed that there were grievances on both sides, and the question was, How were these grievances going to be removed? The two grievances most spoken of that afternoon were the alleged inadequacy of remuneration and the question of wage limit. What medical men felt very strongly, and complained of, was that a form of contract between the medical practitioner and his patients, originally intended by the doctor for people of a particular class and accepted by him for reasons applicable only to that class, had been greatly extended, and was still being extended, to people of other classes. [Voices: "No."] He did not think they would arrive at any satisfactory result, there or elsewhere, by point-blank assertions on the one side "This is so," and on the other that "That is not so." The fact that had to be recognized was not whether the grievances were real, but whether a man felt there was a grievance; not whether doctors were really injured, but whether they felt they were injured. He spoke as an official of the British Medical Association who visited all parts of the United Kingdom, and he would tell them that the question of a wage limit had caused great irritation in the minds of medical men in all parts of the country. He was engaged for ten years in general practice, and the chief thing that caused friction and rupture at Great Yarmouth was the question of a wage limit. Club appointments were given up, and friendly societies organized institutes to carry on the work. He knew that the medical practitioners of that town were not willing to take up club practice again. They never realized until they gave up what slavery it was and how unremunerative it was. Some of them sacrificed club appointments bringing them in £300 a year. It was a question of the wage limit more than anything else—a question of medical men being called upon to attend people whom they ought not to attend on those terms. It was not entirely a question of people who had been originally working men. He himself attended the family of a gentleman who was a shareholder in a fairly successful business and never had been what was known as a working man. He was a member of a friendly society and he (Mr. Whitaker) had attended all the family excepting himself. One day he attended one of the family, who said her father was ill and "You know he is attended by his club doctor." The medical profession maintained that the bargain between them and the friendly societies was a free contract and that it was not unreasonable for the doctors to say what people they were willing to agree to attend under such a contract. In Great Yarmouth they were told by some Foresters that though they saw there was some reason in the contention of the medical profession they were bound by the rules of that Order. He submitted that any organization could change its rules if it thought proper, but if friendly societies framed their rules on such a basis that every member of a friendly society was entitled to claim the particular benefit of medical attendance under contract, he did not see much hope of an amicable adjustment between the two parties. The medical profession claimed freedom of contract, freedom to say who were the people they were willing to admit to those contracts: the questions of payment were questions of fact—actuarial questions. The question of the so-called wage limit was also a question of fact. The friendly societies asserted that this was an imaginary grievance, that the number of people who claimed attendance was very small, and was balanced by the number of people who paid to the Orders and did not claim medical attendance. The medical profession did not want them to pay for attendance that they did not get. The thing should be dealt with on plain business lines. Let them advise their doctors that no member of their societies should be called upon to pay for medical attendance which was not given. On the other hand, those who should have such attendance should pay for it. Medical men did not want any charity, they did not want any pay for work that was not done by them. He held that if the friendly societies were prepared to meet the medical profession in conference they must be prepared to discuss everything. At the present time in this country a medical practitioner was more or less a free agent; he was not compelled to attend people who asked him to attend them. A previous speaker

had suggested that medicine should become a State service; but that matter could not be settled by doctors and friendly societies in conference. Other people would have to be consulted. Let the discussion be kept to matters within their own power. There was the question whether the medical profession was not at present being depleted. Years ago a man who had scientific tastes and wanted a professional life would be likely to go in for medical work. But with the great development of science men of that type had now many more lucrative employments to choose from. Electricity and chemistry and engineering were drawing those men who would otherwise have gone into medical work. Under these circumstances it seemed doubtful whether a sufficient supply of medical men to serve the country satisfactorily would be maintained. He had met in conference not long since representatives of a very large workmen's organization, one of the most influential trades unions. They had met to discuss the conditions of medical service, and they said it was becoming a very serious question for them, because they found that in some districts the medical profession were getting so discontented that men of good standing could not be obtained to take up the work. The friendly societies were dependent to a certain extent on the services of their medical officer; if they found that they were getting under existing conditions men whom they could thoroughly rely upon, that they and their members were getting perfectly satisfactory service, then, perhaps, there was no particular reason why they should have a conference at all, and the medical profession must make the best of it. But if there was any lurking doubt as to whether the position was altogether satisfactory, as to whether things had really improved with them—because it was not only the present position but the tendency that they should look at—if they had any doubt in their minds as to whether things were really going well with them as regards medical attendance, was not it better to come to a reasonable understanding with members of the medical profession and consider not only those grievances which they were quite ready to admit but those grievances which might appear to them a little unreasonable?

Dr. McManus (Direct Representative, General Medical Council) proposed a resolution of "cordial thanks to the Charity Organization Society for convening the conference, trusting that it might have valuable results in leading to an amicable adjustment of existing difficulties through negotiation between bodies representative of the friendly societies and of the medical profession." He had been twenty-three years a medical officer in connexion with the Oddfellows, Hearts of Oak, and Foresters, and he was fond of the work and fond of the men. Some of the best friends he had in the world were British working men. He was delighted to hear Mr. Mofrey say that the working man was too honourable to take advantage of his club doctor. Would he preach the same gospel to some of his friends? Dr. McManus had to do with some working men who were in a far better position than himself, but were mean enough to come to him and take full advantage of his services. He had one who paid £5 5s. for a consultant and paid him (the speaker) less than a penny a week for his services. Those people did not say, "We are in a position to pay you a living wage for your services." He could deal with a working man but not the working man's wife. When he was a young practitioner in Battersea some old women came to him and asked him to take them in a club. He did so, and they had about £5 worth of medicine in the first quarter, and at the end of the quarter he had nothing. Medical men should think twice before they took women's clubs. The question of many men paying the doctor and at the same time living outside the district had been referred to. There might be a few cases, but it was not fair to quote them. He had done any amount of club work, and the secretaries always gave him a list of the men affiliated with their clubs, and he attended them. If a working man living in the suburbs paid for medical attendance to a friendly society when he worked in London, he did not pay for medical attendance twice over. He (Dr. McManus) did not give the British working man credit for doing that, because the difficulty was met by the scheme of affiliation. The power of summary dismissal without appeal was one of the grievances from which medical men suffered.

Mr. JOLLY (Ancient Order of Foresters) seconded the resolution.

Dr. PEARSE, when called upon to reply, said his object had been sufficiently served if he had ventilated the matter. One point was that the contract society work destroyed the medical man's interest in his work. That he repeated, and it was one reason why he had given up contract work, and he knew that many other medical men had done the same.

The resolution was then put to the meeting and carried unanimously.

The CHAIRMAN said he was quite certain he was warranted in their name in offering their very sincere thanks to Dr. Pearse for coming up to London and giving them the very admirable and temperate speech in which he had opened the discussion that afternoon.

A vote of thanks to the Chairman concluded the meeting.

Association Intelligence.

PROCEEDINGS OF COUNCIL.

At a Meeting of the Council, held at 429, Strand, London, W.C., on Wednesday, January 27th, 1909, at 2 o'clock in the afternoon:

Present:

Mr. EDMUND OWEN, LL.D., London, Chairman of Council, in the Chair; afterwards Dr. EDWIN RAYNER, Stockport, Treasurer.

Sir WILLIAM WHITLA, M.D., Belfast, President-elect.

Dr. HENRY DAVY, Exeter, Past-President.

Dr. J. A. MACDONALD, Taunton, Chairman of Representative Meetings.

Dr. JOHN FORD ANDERSON, London
Dr. JAMES GRANT ANDREW, Glasgow
Mr. H. A. BALLANCE, M.S., Norwich
Fleet Surgeon E. J. BIDEN, R.N., Fareham
Dr. T. R. BRADSHAW, Liverpool
Surgeon-General W. R. BROWNE, C.I.E., M.D. (Ceylon, and South Indian and Madras Branches)
Dr. R. COCHRANE BUIST, Dundee
Mr. ANDREW CLARK, D.Sc., London
Dr. FRANCIS CLARK, London (Hong Kong Branch)
Dr. ASTLEY V. CLARKE, Leicester
Dr. E. CURETON, Shrewsbury
Mr. C. F. CUTHBERT, Gloucester
Mr. E. J. DOMVILLE, Exeter
Mr. A. J. DREW, Oxford
Mr. G. YOUNG EALES, Torquay
Mr. J. H. EWART, Eastbourne
Mr. C. E. S. FLEMING, Bradford-on-Avon
Mr. P. W. H. GARSTANG, Altrincham
Dr. T. D. GREENLEES, London (Cape of Good Hope Eastern, Western, and Border Branches)
Dr. G. E. HASLIP, London
Dr. HENRY HETLEY, London
Dr. H. MCKENZIE JOHNSTON, Edinburgh
Mr. HUGER R. KER, London
Mr. R. H. KINSEY, Bedford
Mr. F. C. LARKIN, Liverpool
Dr. A. E. LARKIN, Buckingham

Dr. CHARLES MACFIE, Bolton
Dr. DONALD J. MACKINTOSH, M.V.O., Glasgow
Dr. C. J. MARTIN, F.R.S., London (Sydney and New South Wales Branch)
Dr. J. MUXRO MOIR, Inverness
Dr. C. G. D. MORIER, London (South Australian and West Australian Branches)
Professor J. T. J. MORRISON, Birmingham
Dr. T. G. NASMYTH, Edinburgh
Dr. B. H. NICHOLSON, Colchester
Dr. FRANK M. POPE, Leicester
Dr. T. WHITEHEAD REID, Canterbury
Dr. H. JONES ROBERTS, Penryn
Dr. ERIC E. SHAW, Belfast
Dr. LAULISTON E. SHAW, London
Dr. W. JOHNSON SMYTH, Bournemouth
Mr. CHARLES R. STRATON, Salisbury
Mr. JOHN LYNN THOMAS, C.B., Cardiff
Dr. G. J. CRAWFORD THOMSON, London
Dr. ALEXANDER TROTTER, Perth
Dr. G. E. TWYMAN, London (Sydney and New South Wales Branch)
Mr. T. JERNER VERRALL, Brighton
Dr. SINCLAIR WHITE, Sheffield
Lieutenant Colonel E. M. WILSON, C.B., C.M.G., Farnborough

Minutes.

Subject to the insertion of a certain amplification requested by Professor Morrison, the Minutes were signed as correct.

Return of Council to the Strand.
The CHAIRMAN congratulated the Association on being again under its own roof.

Apologies.

Read letters of apology for non-attendance from the President, Sir James Barr, Mr. J. Ward Cousins, Dr. George Edmond, Dr. D. Goyder, Dr. Wm. Hall, Colonel Joubert de la Ferté, I.M.S., Major O. L. Robinson, Mr. W. St. A. St. John, Lieutenant-Colonel Simpson, C.M.G., Dr. A. T. Wear, Mr. F. E. Apthorpe Webb, Professor A. H. White, and Mr. D. J. Williams.

Deaths.

The CHAIRMAN reported the death of Dr. W. A. Elliston, President of the Association at the Ipswich Meeting in 1900, and that Dr. B. H. Nicholson had represented the Council at the funeral. The Chairman also reported the death of Mr. George Eastes, a former Member of the Council, and stated that he had attended the funeral on behalf of the Council, and the following Resolutions were passed, all present rising in their seats:

That the Council learns with sincere regret of the death of Dr. W. A. Elliston, President of the Association in 1900, and for many years a Representative of the East Anglian Branch on the Council and Committee of Council, and requests the Chairman to convey to Mrs. Elliston and family an expression of the Council's warmest sympathy.

That the Council learns with sincere regret of the death of Mr. George Eastes, for many years a Member of the Council, and Representative of the Metropolitan Counties Branch, and requests the Chairman to convey to Mrs. Eastes and family an expression of the Council's warmest sympathy.

Application for Charter.

The CHAIRMAN OF COUNCIL and the CHAIRMAN OF THE ORGANIZATION COMMITTEE jointly reported that they had, as instructed by the Council on October 28th (Minute 340), carried out the necessary arrangements for the presentation; on behalf of the Association, of a Petition to His Majesty the King to grant to the Association a Royal Charter of Incorporation in the form approved by the Council, and that they duly presented the Petition on December 21st last.

The action was approved.

Portraits.

The CHAIRMAN reported receipt of three portraits from Mr. Herbert Sieveking, M.R.C.S., L.R.C.P.:—Sir William Lawrence, a former President of the Royal College of Surgeons; Sir Edward Sieveking, Physician-in-Ordinary to the late Queen Victoria; and Sir Astley Cooper; and the best thanks of the Council were accorded to Mr. Sieveking for his gift.

Medical Library Association.

Read the following Communication:

University College, Bristol,
January 14th, 1909.

Dear Sir,

On January 9th at a meeting at Leeds it was decided to form a Medical Library Association, and a provisional Committee was appointed to draw up a Constitution and rules. It was suggested that we should approach the British Medical Association with a view to obtaining their permission to hold the next meeting of the Association during the time of the Annual Meeting of the British Medical Association at Belfast. Will you kindly put the matter before your Council? If they would be willing to grant such a course, it would be a great convenience if the Local Committee could provide us with a room in which we could make an exhibition of books, etc., connected with library conduct and work.

Believe me to be, dear Sir,

Yours faithfully,
I. WALKER HALL.

The Secretary.

British Medical Association, London.

Professor W. Osler has been elected President, and the chief librarians of the Country are on the Provisional Committee.

It was decided that the request of the Medical Library Association be granted, provided the local Executive at Belfast can find the necessary accommodation. Further, that, subject to the approval of the Medical Library Association, the Science Committee be requested to nominate a Representative on the Provisional Committee.

Memorandum by the General Secretary and Manager on the Proposed Variation in the Terms of his Appointment.

The following Memorandum, in reference to Minute 288, That the office of General Secretary and Manager be known as Financial Secretary as from January 1st, 1909,

Having been circulated to the Council, was considered:

On the conclusion of that Meeting, the General Secretary and Manager wrote to the Chairman of Council, and ventured to point out that in making such a radical change in his title he might have been afforded an opportunity for stating his views on the subject.

The General Secretary and Manager respectfully submits:

(1) That the change, if persisted in, is capable of being, and will be, interpreted as a reflection on the manner in which he has discharged the duties of his office.

(2) That there is no record to show that the views of any past or present Chairman of Council or Treasurer with special practical experience of the duties of the office were given in the matter.

(3) That it is essential for the proper conduct of the business of a large commercial undertaking such as the BRITISH MEDICAL JOURNAL that there should be an officially recognized Manager.

(4) That the practice of having a General Secretary and Manager to the advantage of the Association, as is evidenced by the following facts:

The balance of Assets over Liabilities has been increased during the service of the present General Secretary and Manager by £18,000.

The Foods and Drugs Exhibition during four years has shown a profit of £4,400, and as a result the financial burden of an Annual Meeting has been materially lightened, a striking contrast to the years when the Drugs Exhibition was not managed by your General Secretary and Manager.

The paper bill of the JOURNAL represents an expenditure of about £9,000 per annum. In 1905, the first complete year of office of your present General Secretary and Manager, this was reduced by £1,200, a saving not confined to that year, but one that has been perpetuated and correspondingly increased year by year as the bill of the JOURNAL and SUPPLEMENT has grown and membership of the Association expanded. The following table illustrates the growth of expenditure on paper for the production of the JOURNAL for three equal periods:

			Increase.	Decrease.
1890-1895	...	...	£1,237	—
1896-1901	...	...	£1,798	—
1902-1907	...	...	—	£350

Thus it will be seen that in 1907 on a like ratio there should have been a further substantial increase. As is shown above, the paper bill was less by £350 than in 1902, notwithstanding that in 1907 the Association published 200 more pages of literary matter, and 100,000 more copies of the JOURNAL.

When it is reflected that the 1906 surplus was only £1,385, and the 1907 £1,319, the importance of the above economies cannot be underestimated.

In 1905 it was recognized as essential for the continued prosperity of the Association that the form of producing the JOURNAL called for considerable improvement. On going into the matter, it became evident that to carry out the improvements desired, an increased annual expenditure of some £5,000 would be involved. Such an outlay was beyond the financial resources of the Association. The General Secretary and Manager submitted a scheme, which was adopted, whereby the desired improvements were effected without any additional burden to the Association. Under the scheme the number of advertisement pages are materially reduced, yet the revenue from such source in 1908 is more by £2,000 than the revenue in 1902.

Between 1902 and 1907 the annual general expenditure of the Association has increased by £7,000, and but for the practical economies of your General Secretary and Manager a serious financial position must have arisen.

In conclusion, the General Secretary has no desire to attempt to dictate to the Council, but he respectfully submits that it is difficult to appreciate that the change in his status and title will assure better administration, or greater prosperity to the Association.

The General Secretary and Manager trusts that the Council will see its way to reconsider the question.

GUY ELLISTON.

429, Strand,
January 16th, 1909.

Moved by the CHAIRMAN OF REPRESENTATIVE MEETINGS, seconded by Mr. KINSEY:

That the Council proceed to the next business.

The Motion having been put from the Chair, the same was declared to be lost.

Moved by the CHAIRMAN OF REPRESENTATIVE MEETINGS, seconded by Mr. KINSEY:

That this matter be not discussed, as the Resolution referring to the alteration in the title of the General Secretary having been passed by the Representative Meeting, is binding on the Association.

Whereupon an Amendment was moved by Professor MORRISON, seconded by Dr. JOHNSON SMYTH:

That, owing to special information received by the Council since the date of its previous Meeting, the Council thinks it unwise to carry out the instruction of the Representative Meeting to change the title of the General Secretary and Manager to that of Financial Secretary, and the Council resolves to report this fact and the reasons therefor to the Divisions.

This having been put from the Chair was declared to be carried—23-19.

The CHAIRMAN on putting the Amendment as a Substantive Motion, it was

Moved by Mr. VERRALL, seconded by Dr. POPE:

That the Council decides to bring before the next Representative Meeting a Resolution adding to the title of the Financial Secretary the words "and Manager of the JOURNAL," and directs the Journal and Finance Committee to report to the Council on the subject.

The Amendment of Mr. Verrall was then put from the Chair and declared to be carried.

On this being put as a Substantive Resolution,

An Amendment was moved by Professor MORRISON, seconded by Dr. ASTLEY CLARKE, and carried:

That the words "of the JOURNAL," be omitted.

After considerable discussion it was decided to insert the word "Business" before the word "Manager."

Finally, Mr. VERRALL having accepted the emendation "Financial Secretary and Business Manager," the Amendment was agreed to, and carried as follows:

That the Council decides to bring before the next Representative Meeting a Resolution adding to the title of the Financial Secretary the words "and Business Manager," and directs the Journal and Finance Committee to report to the Council on the subject.

It was then put and carried as a Substantive Resolution.

Journal and Finance Committee.

The Treasurer presented the Minutes of the Journal and Finance Committee of January 20th, 1909.

The action of the Editor in refraining from publishing in the JOURNAL a report of a certain case tried before the General Medical Council at its November Session was approved. And it was further agreed that, if in the opinion of the Editor it is undesirable to publish an account of any case before the General Medical Council, he should report the facts to the Journal and Finance Committee.

The accounts for the Quarter ending December 31st last, amounting to £12,444 9s. 4d., were received and approved, and the Treasurer was empowered to pay those remaining unpaid, amounting to £3,299 17s. 4d.

The remainder of the Report was approved.

Medico-Political Committee.

Dr. MACDONALD presented the Report of the Medico-Political Committee of December 2nd, 1908, and January 6th, 1909.

It was decided that representations be made to the Board of Education on the desirability of provision being made in the Education Code that school medical officers and their assistants should be appointed without reference to time, subject to reasonable notice, and should not be liable to dismissal without right of appeal to the Board of Education.

Six Members were authorized to attend, as Representatives of the Association, the Conference, convened by the Charity Organization Society, on "Friendly Societies and the Medical Profession." It was decided that their railway fares be paid by the Association, and that it be referred to the Chairman of Council and the Chairman of the Medico-Political Committee to nominate such members.

In view of the appointment of a Departmental Committee of the Home Office to deal with questions of Coroners' Law, evidence upon the various matters included within the scope of its reference is to be submitted by the Association. The Medico-Political Committee was authorized to prepare and submit such evidence on behalf of the Association. For the present the contemplated representations to the Lord Chancellor are abandoned; and the Lord Chancellor will be informed accordingly.

Professor MORRISON inquired who would submit the

proposed evidence, and whether the Council would have an opportunity of seeing a *précis* of the same.

The CHAIRMAN of the MEDICO-POLITICAL COMMITTEE replied that the Committee would select one or two Representatives to meet the Departmental Committee, but that the *précis* could not be previously submitted to the Council, as the Departmental Committee would meet before the April Meeting of the Council.

Having regard to the number of other Parliamentary matters requiring the attention of the Association, and the improbability of effecting the Amendments desired to the Notification of Births Act at an early date, action with respect to the matter is postponed, and the Annual Representative Meeting will be notified accordingly.

In view of the appointment by the Privy Council of a Departmental Committee to consider the Amendment of the Midwives Act, the Medico-Political Committee were authorized to prepare and submit evidence on behalf of the Association to the Departmental Committee in accordance with the general tenor of the previous decisions of the Association on the subject, and to urge the advisability of representation of the Association on the Midwives Board.

The remainder of the Report was approved.

Science Committee.

Dr. MARTIN presented the Report of the Science Committee of December 19th, 1908.

The Council expressed its approval of the principle of the conversion, as far as possible, of the Library of the Association into a Lending Library, so as to be readily available for the provincial Members of the Association, and instructed the Science Committee to collect all necessary information, and submit definite Recommendations.

As a first step towards the conversion of the Library into a Lending Library, it was decided that the Recommendations contained in the Report of the Science Committee on the formation of a special Research Lending Library, which was approved by the Council in March, 1906, be put into execution by the formation of collection of monographs and periodicals to be lent, under the conditions approved by the Council, to Members engaged in special researches.

It was resolved that Divisions and Branches be informed that the Council, when fixing the amount of ordinary capitation grants to Branches, will take into consideration the expenses of the scientific work of Divisions and Branches, and will also be prepared to make supplementary grants for such purposes when desirable.

The Council, being satisfied that it would be advantageous, both as giving a more definite purpose to the scientific discussions in Division Meetings, and as tending to create greater interest amongst Members generally in the work of the Sections at the Annual Meeting, if the Sections and the Divisions could be brought into cooperation, resolved:

(i) That the Programmes of forthcoming discussions in the Sections of the Annual Meeting be furnished at the earliest possible date to Honorary Secretaries of Divisions, and that it be suggested that they select from such Programmes those subjects which are, in their opinion, suitable for preliminary discussion by their Divisions.

(ii) That the officers of each Section be asked to report as to any subjects contained in the Programmes of their respective Sections, of which, in their opinion, the consideration by the Divisions, prior to the Annual Meeting, would be especially useful.

(iii) That the Divisions be invited to suggest, through the Central Science Committee, subjects for consideration by Sections at the Annual Meeting.

The remainder of the Report was approved.

Organization Committee.

Mr. ANDREW CLARK presented the Report of the Organization Committee of December 8th, 1908, and January 12th, 1909.

It was resolved that it be a Standing Order to the Organization Committee to appoint at its first Meeting for each year a Standing Subcommittee for the purpose of supervising the analysis of Branch and Division Reports,

such Subcommittee to consist of the Chairman of the Committee and the Treasurer, *ex officio*, and of three other Members of the Committee.

The consideration of the Grants to be made to Branches for the year 1909 was deferred until the April Meeting of the Council. Pending the decision of this matter by the Council, the Treasurer is authorized to make to Branches, which are in need of funds, such grants as he thinks necessary, at a rate not exceeding 1s. per Member, of such Branch applying.

Dr. POPE asked if the foregoing Resolution would override By-law 16, which provides that "the Treasurer of the Association shall annually pay . . . to each Branch such sum not exceeding 4s. . . for each Member of the said Branch, etc."

The CHAIRMAN replied in the negative.

The Council approved the amended Rules submitted by the Cape of Good Hope (Western Province) Branch.

The Organization Committee was authorized to approve Rules of Divisions and Branches which are in accordance with Rules already approved by the Council.

On the suggestion of Mr. DOMVILLE, it was agreed that those Divisions and Branches which have not yet adopted Rules should be requested to do so.

The Colonial Branches are grouped for representation on the Council for the year 1909-10 in the same manner as for the year 1908-9, subject to the inclusion of the new Assam Branch in the Northern Indian Group.

For the year 1909-10 each Division not in the United Kingdom which has an Honorary Secretary and the necessary organization is granted independent representation in the Representative Meeting.

The Council report to the Representative Meeting that the question of a scheme of probable dates for issues of Reports to Divisions is being referred to the Annual Conference of Secretaries for consideration before any recommendations are made.

In reference to Minute 108 of the Organization Committee of January 12th, 1909,

108. Resolved: That a communication be addressed to the Honorary Secretaries of all Divisions and Branches, enclosing, for their information, a copy of Counsel's Opinion, and that the Editor be requested to publish at the earliest possible date the full Statement of Case and Counsel's Opinion,

Dr. MCKENZIE JOHNSTON asked what the Organization Committee proposed to do with Counsel's Opinion.

The CHAIRMAN of the ORGANIZATION COMMITTEE replied that the Committee were of opinion that the whole of the Association should be acquainted with the Opinion of Counsel. In response to a further question—

The CHAIRMAN of COUNCIL gave an assurance that nothing would be done as to Counsel's opinion except by the instruction of the Council.

The remainder of the Report was approved.

Ophthalmia Neonatorum.

Dr. BURST presented the Report of the Ophthalmia Neonatorum Committee of December 19th, 1908, which was received and approved.

Public Health Committee.

Mr. DOMVILLE presented the Report of the Public Health Committee of January 5th, 1909, which was received and approved.

Hospitals Committee.

Dr. POPE presented the Report of the Hospitals Committee of January 7th, 1909.

It was decided that a further communication be addressed to the Medical Committee of King's College Hospital in the terms of a letter [as amended] submitted to the Council by the Chairman of the Hospitals Committee and Dr. Lauriston E. Shaw on behalf of the Committee.

The Council adopted a Report submitted by the Hospitals Committee as its Report to the Representative Meeting, presented in accordance with the instructions contained in Minutes 71a and 96 of the Annual Representative Meeting, 1908.

In response to the instruction contained in Minute 129 of the Annual Representative Meeting, 1908, the following

definition of a "Nursing Home" is submitted by the Council for the consideration of the Representative Meeting :

"A 'Nursing Home' is an institution in which patients are received for medical care under the attendance of Medical Practitioners selected by themselves, and where the patients are responsible to the home for the charges for maintenance and nursing, and to the Medical Practitioners for their fees."

The Memorandum submitted by the Hospitals Committee will be issued for the consideration of the Divisions, in accordance with Minute 150 of the Annual Representative Meeting, 1908.

Resolved: That the remainder of the Report be approved.

The Chairman.

On the CHAIRMAN expressing the intention then to vacate the Chair, the Treasurer took his place.

Central Ethical Committee.

Mr. KINSEY presented the Quarterly Report of the Ethical Committee, December 15th, 1908, and January 8th, 1909, which was received and approved. Mr. Kinsey also presented the Special Report of the Ethical Committee upon the questions raised in the communication from the Metropolitan Counties Branch, consideration of which was postponed from the last meeting of the Council. The Report was approved and the Recommendation of the Committee adopted.

Irish Committee.

Dr. Cecil Shaw (in the absence of the Chairman) presented the Report of the Irish Committee of January 9th, 1909, which was received and approved.

Premises Committee.

Mr. Andrew Clark presented the Report of the Premises Committee of January 15th, 1909, which was received and approved.

Candidates.

Seven candidates whose names appeared on the Notice convening the Meeting were elected Members of the British Medical Association.

National Temperance League.

The Chairman reported receipt of communication from the Secretary of the League asking for permission to include the announcement of their Annual Breakfast in the Programme of the Annual Meeting, which was granted.

To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

EDINBURGH BRANCH.—The winter clinical meeting of the Edinburgh Branch will be held in the Royal Infirmary, Edinburgh, on Friday, February 26th, at 4 p.m. The members of the other Scottish Branches are invited to attend the meeting. The museum will be open at 11 a.m., and special clinics will be held during the forenoon. Dinner in the Royal British Hotel, Princes Street, at 6.30 p.m.; morning dress; dinner ticket, 5s.—A. LOGAN TURNER, FRANCIS D. BOYD, Honorary Secretaries.

GLOUCESTERSHIRE BRANCH.—A general meeting of this Branch will be held at the Stroud Hospital on Thursday, February 18th, at 6.30 p.m. Agenda: (1) Minutes of last meeting. (2) Chronic diarrhoea, its varieties and treatment.—Dr. Robert Hutchison, London. (3) Cases of interest. The Secretary will be pleased to hear from any member who will show cases or pathological specimens at future meetings during this session. There will be a supper afterwards at the Subscription Rooms (tickets 4s. each, exclusive of wine).—D. E. FINLAY, Honorary Secretary, Gloucester.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—A general meeting of the Division will be held at 5 p.m. on Wednesday, February 17th, at the Brooklands Hotel. The meeting will be a special meeting under Rule 14, for the purpose of amending Rule 8 (election of Representative), and of considering the adoption of new rules (namely, "Bradford" Rule, and Rule 2), copies of which have been sent by post to each member. In the ordinary meeting Dr. Rhodes will read a paper, and the usual general business will be taken.—T. W. H. GARSTANG, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: LEIGH DIVISION.—A meeting of this Division will be held on Thursday, February 18th, at the Co-operative Rooms, Ellesmere Street, at 8.30 p.m. Agenda: (1) Minutes. (2) The following motions will be considered: (a) With respect to the earlier election of Representative. (b) That Rule 27 in Model Rules adopted be altered from 'not more than three months' to 'not more than nine months.' (c) That this Division considers that no new sick club should be formed in the Division. (3) The treatment of post-partum haemorrhage. (4) Correspondence. (5) Any other matters.—G. H. SHAW, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: ST. HELENS DIVISION.—A meeting of this Division will be held on Wednesday, February 17th, at Piece Hotel, St. Helens, at 8.45 p.m. Agenda: (1) Minutes of last meeting and of the executive meeting. (2) Proposed ethical rules for the Division (copies of which will be forwarded to members). (3) References from the Standing Committees of the Association re hospitals, Charter, and medical officers of health.—JOHN J. ETCHEAN, Honorary Secretary.

LEINSTER BRANCH.—The annual general meeting will be held on Saturday, February 13th, in the Royal College of Physicians, Kildare Street, Dublin, at 4.30 p.m. The annual dinner will be held in the College Hall at 7.30 p.m. of the same day.—ARTHUR H. WHITE, Honorary Secretary.

MIDLAND BRANCH: LEICESTER AND RUTLAND DIVISION.—A special meeting of this Division will be held at the Leicester Infirmary on Wednesday, February 24th, at 4.15 p.m. Agenda: Discussion of certain questions relating to medical inspection of school children.—WILFRED E. GIBBONS, Honorary Secretary, Leicester.

SOUTH EASTERN BRANCH: CHICHESTER AND WORthing DIVISION.—A meeting of this Division will be held at the Infirmary, Chichester, on Thursday, February 18th, at 3 p.m. Mr. W. S. Simpson will take the chair. Agenda: (1) To discuss the working of the Inspection of Children's Bill in West Sussex. (2) To consider what steps should be taken with regard to the Registration of Births Act. (3) To consider a report from the Public Health Committee as to the desirability of health officers giving their whole time to the work. (4) To consider a resolution from the Brighton Division with regard to dividing the Branch.—H. C. L. MORRIS, Honorary Secretary.

SOUTH-EASTERN BRANCH: FOLKESTONE DIVISION.—A meeting of the Folkestone Division will be held at the Hotel Wampach, Folkestone, on Saturday, February 13th, at 8.15 p.m. Agenda: (1) The Division is requested to express its opinion for or against the following proposition: "That medical officers of health should be debarred from engaging in private practice"; and to add any qualifications, comments, or additional suggestions bearing on the matter which it may desire. (2) Medical inspection of school children (system of payment). (3) A letter from the Secretary of the Branch re police fees. (4) As to the advisability of dividing the South-Eastern Branch. All members of the South-Eastern Branch are invited to attend and introduce professional friends.—P. VERNON DODD, Honorary Secretary, Folkestone.

STAFFORDSHIRE BRANCH.—The second general meeting of the session will be held at the North-Western Hotel, Stafford, on Thursday, February 25th. The President, Dr. S. King Alocok, will take the chair at 5.15 p.m. Business: (1) Minutes of the last ordinary general meeting. (2) Correspondence. (3) Exhibition of living cases. (4) Paper: Mr. A. B. Cridland, Internal Squint in Children. (5) Paper: Mr. J. T. Hartill, Short Notes on a Rare and Interesting Case of Retention of Meneses, and Operations for and Relief of the Symptoms. (6) Exhibition of pathological specimens, etc. Dinner 7.15 p.m., charge 5s.—G. PETEGRAVE JOHNSON, Honorary General Secretary, Stoke-on-Trent.

YORKSHIRE BRANCH: BRADFORD DIVISION.—The adjourned ordinary meeting of the Bradford Division will be held at the Great Northern Victoria Hotel, Bradford, on Wednesday, February 17th, at 8.30 p.m. Agenda: (1) The report of the sub-committee on the Workmen's Compensation Bill, with correspondence sent to the meeting. (2) The report of the Medico-Political Committee on the medical inspection of school children will be discussed.—J. BEATTIE DENLOP and J. WHERRY WILSON, Honorary Secretaries.

MEMBERS ELECTED DURING THE DECEMBER QUARTER.

UNDER BY-LAWS 2 AND 3.

BY THE COUNCIL.

Aylen, Ernest Vanchan, Captain R.A.M.C.,
M.R.C.S.Eng., L.R.C.P.Lond.
Booth, "Lionel" Hethorp, M.R.C.S.Eng.,
L.R.C.P.Lond., General Hospital, Bahamas
Island, Edward Francis, Staff Surgeon, R.N.,
L.R.C.P. and S.Irel.

Stone, Herbert, Surgeon R.N., M.B., B.Ch.,
B.A.O.Dub.
Verrall, Paul Jenner, B.A., M.B., B.C.Cantab.,
M.R.C.S., L.R.C.P.Eng., Government Medi-
cal Officer, Fiji Islands

Ward, John Frederic William, L.R.C.P. and
S.E., L.M., L.F.P.S.G., Moray, Bonietta
District, Sierra Leone, West Africa

BY BRANCH COUNCILS.

Aberdeen Branch.

Cruikshank, L. D., M.D., 10, Belgrave Ter-
race, Aberdeen
Robertson, James, M.B., 29, Hamilton Place,
Aberdeen

Barbados Branch.

Allynne, Charles B., M.D., Barbados General
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Greenidge, O. C., M.B., Speightstown, Bar-
bados

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Hattaway, A. de V., Esq., 28, Gay Street, Bath
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Green, Bristol
Hood, Philip, Esq., 318, Stapleton Road,
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Crawford, H. W., M.B., High Bridge House,
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Hull
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Cleethorpes
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Theron, C. P., M.B., Kakamas Labour Colony,
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Cunningham, Allan R., M.D., 91, Hollis Street,
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Leinster Branch.

Jackson, David, Esq., 71, Ranelagh Road,
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Johnston, W. D. S., M.B., Coombe Hospital,
Dublin
Sheridan, Edward, F.R.C.S.L., 18, Westland
Row, Dublin

Malta and Mediterranean
Branch.

Toledo, R. M., M.D., Lunatic Asylum, Malta

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McLay, R. G., Esq., Vancaratia, Victoria
Morris, A. E., M.B., 110, Collins Street, Mel-
bourne

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 Bollen, Margaret Lucy Augusta, M.B., 38, Shaftesbury Road, Ravenscourt Park, W.
 Boyd, Sidney A., M.B., 23, Blenheim Gardens, N.W.
 Cameron, Hector Charles, M.B., 6, St. Thomas's Street, S.E.
 Cohen, Edward Clarke, M.D., Fribank, Shoot-up Hill, Brondesbury, N.W.
 Colyer, Horace Charles, Esq., 24, Upper Wimpole Street, W.
 Cowell, Alfred Rodgers, M.B., 204, Haverstock Hill, N.W.
 Cowell, Ernest Marshall, M.B., University College Hospital, S.W.
 Crickshank, William, M.D., 138, Lower Road, Rotherhithe
 Day, John Robertson, M.D., 35, Queen Anne Street, W.
 Deending, Charles Ernest, Esq., Epping Dick, John Lawson, M.D., 39, Cazenove Road, St. John Hill, N.
 Dorrell, Edmund Arthur, Esq., 1, Lynceford Gardens, West Hampstead, N.W.
 Feulou, William James, M.D., 58A, Wimpole Street, W.
 Gellatly, Jessie Handyside, M.B., Walthamstow Sanatorium, Chingford
 Gowday, Annie Chapman, M.B., 209, Camden Road, N.W.
 Harris, James, M.D., 10, Downs Road, Clapton, N.E.
 Heekes, John William, Esq., 72, Station Road, Barnes, S.W.
 Jamieson, Alexander, M.D., 259, Clapham Road, S.W.
 Jones, Dudley William Carmalt, M.B., 78, Wimpole Street, W.
 Laine, George Ross, M.B., 42, Braunfield Road, Northcote Road, Clapham Junction, S.W.
 Lea, C. E., M.B., 4, Steathbourne Road, Balham, S.W.
 Lomburst, Frederick William, Esq., 26, Lower Belgrave Street, S.W.
 Mhaskar, Krishnaras Shripat, M.D. Bombay, 65, Warwick Avenue, W.
 Minett, Edward Pigott, M.D., Surrey Dispensary, Great Dover Street, London, S.E.
 Morton, T. M., Esq., 54, Alenburgh Gardens, Balham, S.W.
 Murphy, Aubrey Allen, Esq., Innisfail, The Avenue, Surbiton
 Purnell, Charlotte, M.B., The Belgrave Hospital for Children, Clapham Road, S.W.
 Spinks, Archibald Frank Green, M.D., Mile End Infirmary, Vancouver Road, N.E.
 Steadart, George, M.B., 1, Devonshire Road, South Lambeth, S.W.
 Van Buren, Asa Claude Alexis, M.D., The Eastern Hospital, Homerton, N.E.
 Winterbottom, L. L., Esq., 136, South Lambeth Road, S.W.
 Wright, Sir Almonth E., M.D., 6, Park Crescent, W.
 Wright, Frederick William, Esq., 9, Craven Street, W.C.

Munster Branch.

Moore, L. T., M.B., Kilsarvan, Co. Kerry

New Zealand Branch.

Atkinson, F. L., M.B., Devonport
 Hastings, J. P., Esq., Dunedin
 Leahy, J. P. D., M.B., Napier
 Paterson, C. A., Esq., Pleasant Point

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Gunn, A. R., M.B., Scotland, Ullapool
 Johns, W. W., M.B., Raith, Nairn

North of England Branch.

Badcock, V. E., M.B., Wodegar
 B. D., M.B., Mowdour, Easton
 Benson, W. A., Esq., Stanley House, Stanley, S.O.
 Fraser, M. W., M.B., Seahouses, Northumberland
 Hamilton, William, M.D., 56, Staith Road, South Shields
 Holday, J. R. D., Esq., 5, Park Terrace, Whiteley Bay
 Mackay, William, M.B., 3, Mona Terrace, Cultercoats, Whiteley Bay
 Moyes, R. E., M.D., Broomhill, Acklington
 Mitchell, J. E., M.B., Cameron Hospital, West Hartlepool
 Wallace, H. S., M.B., North Riding Infirmary, Middlesboro'

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 Bradshaw, W. L., Esq., High Wycombe

Cawston, A. E., Esq., Wartage
 Dickson, F. H., M.B., 37, Holywell, Oxford
 Fleck, William, M.D., Tudor House, High Wycombe
 Freud, H. G., M.B., 69, Walton Street, Oxford
 Harvey, C. P., Esq., Wilney
 Phillips, H. J., Esq., London Open Air Sanatorium, Pinewood, Wokingham
 Shorrocks, W. D., M.B., 32, Holywell, Oxford
 Wilson, A., Esq., Hambledon, Henley-on-Thames

Perthshire Branch.

Blair, D. P., M.B., 23, King Street, Perth

Shropshire and Mid-Wales Branch.

Johnson, H. E., M.B., Eirianva, The Mount, Shrewsbury

South Australian Branch.

Potts, L. O., M.B., Adelaide Hospital
 Catchlove, S. G. L., M.B., Adelaide Hospital
 Verco, R. J., M.B., Adelaide Hospital

South-Eastern Branch.

Bird, G. F., M.B., Old Croft, Godalming
 Leicester, C. P., Esq., 1, Beckley Place, Guildford
 Maclean, I. C., M.B., 24, Hayne Road, Beckenham

Southern Branch.

Mitchell, J. R., M.B., Royal Isle of Wight County Hospital, Ryde
 Payne, O. Y., M.B., Northwood, Alton
 Sells, L., Esq., Carnarvon Lodge, Brading, Isle of Wight
 Young, S. L. O., M.D., Sea View, Yarmouth, Isle of Wight

South Indian and Madras Branch.

Ganapati, Iyer, R., Esq., General Hospital, Madras
 Ingram, A. C. M.D., Capt., I.M.S., General Hospital, Madras
 Lakshmana, Iyer, N., Esq., Alleppey, Travancore
 Manford, E. Rainford, Esq., Catherine Road Hospital, Travancore
 Pereira, A. A., Esq., Guindy, Madras
 Tucker, W. H., Capt., I.M.S., Coimbatore

South Wales and Monmouthshire Branch.

Evans, Evan, M.B., 11, College Street, Lampeter
 Nyhan, Charles, Esq., Cwm

South-Western Branch.

Ash, A. E., M.D., Houlton
 Hanson, E. R., Esq., Chulleigh
 Bone, Herbert, M.B., Surgeon, R.N., R.N. College, Dartmouth

Staffordshire Branch.

Reece, Henry, Esq., County Asylum, Cheddleton

Stirling Branch.

McFarlane, Peter, M.B., 2, Park Avenue, Stirling

Sydney and New South Wales Branch.

Cotton, George R. C., M.B., Walgett
 Henry, Ellen E., M.B., Gannan
 Haydon, George M., M.B., St. Vincent's Hospital, Sydney
 Howse, Cyril B., F.R.C.S., Orange
 Lyth, Charles E. W., M.B., Wentworth Falls
 May, F. A., Esq., Barunga
 Stephen, J. Innes, Esq., 44, Margaret Street, Sydney
 Stokes, F. O., Esq., Sydney Hospital
 Wheatley, C. E., M.B., Wentworth Falls
 White, W. J., M.B., Merriwa
 Whitman, Dr., Boulevard, Strathfield
 Williams, Ralph O., M.D., Balmain

Toronto Branch.

Henpt, A. R., M.D., Queen's University, Kingston, Ontario
 MacKenzie, Duncan C., M.D., Bellevue, Canada

Olmead, W. E., M.D., 192, Main Street, Niagara Falls
 Stanley, J. R., M.D., St. Mary's, Ontario
 Stevens, J. M., M.D., Woodhill, Ontario
 Vandenberg, F. M.D., Woodhill, Ontario
 Wilson, C. E., M.D., Napanee, Ontario

Transvaal Branch.

Blake, R. A., M.D., Belfast, Transvaal
 Friel, Robert, M.D., Potchefstroom
 Turner, George, M.B., Witwatersrand

Ulster Branch.

Aird, Ivie, M.B., Bangor, Co. Down
 Boylan, D. M.B., Mater Hospital, Belfast
 Cahill, M. F., M.B., 3, University Square, Belfast
 Campbell, G. F., M.B., Maternity Hospital, Belfast
 Cathcart, T. C. D., Esq., 297, Newtownards Road, Belfast
 Clements, R. G., M.D., 5, College Gardens, Belfast
 Crawford, Miss C. I., M.B., The Infirmary, Lurgan
 Currie, Robert, Esq., Linenhall Street, Rathfriland
 Dickey, J. S., M.B., 48, College Park Avenue, Belfast
 Ewing, John, Esq., Eversleigh, Strandtown, Belfast
 Flanagan, E. H., M.B., 46, Great Victoria Street, Belfast
 Gibson, W., M.D., Mountpottinger House, Belfast
 Hay, T. H., M.B., Bunbeg, Co. Donegal
 Herron, R. T., M.D., 6, Victoria Street, Antrim
 Holmes, T. S., M.B., Royal Victoria Hospital, Belfast
 Johnston, R., M.B., Ivy Dene, Waterloo Gardens, Antrim Road, Belfast
 Joy, A. H., M.B., Royal Victoria Hospital, Belfast
 Lowry, C. G., M.D., 58, Dublin Road, Belfast
 McDowell, Robt., M.B., 36, Antrim Road, Belfast
 McKinney, D. J., M.D., Tyrone, Wellington Park, Belfast
 McLiesh, John, M.B., 91, Great Victoria Street, Belfast
 Martin, Joseph, M.B., 213, Albert Bridge Road, Belfast
 Martin, R., Esq., Banbridge, Co. Down
 May, Robert, M.D., Forster Green Hospital, Fortbride, Belfast
 Moore, R. L., Esq., Bangor, Co. Down
 Nolan, M. J., Esq., Down District Asylum, Downpatrick
 O'Brien, B., M.D., 33, University Road, Belfast
 Sinton, J. A., M.B., Royal Victoria Hospital, Belfast
 Stevenson, A. K., Ballycally
 Storey, W. L., M.D., 1, Harden Villas, Rosetta, Belfast
 Wilson, Robert, M.B., 262, York Street, Belfast

Western Australian Branch.

Felchenfeld, O. J., M.B., Public Hospital, Perth
 Foley, J. M. G., Esq., Yarlwood
 McWhae, D. M., M.B., Maylands, Perth
 Marshall, C. C., M.B., Public Hospital, Perth

Worcestershire and Herefordshire Branch.

Bentley, W. B., Esq., Moorfield House, Hereford
 Ferguson, J. N. F., M.B., The Hydro, Great Malvern
 Machin, F. S., Esq., 132, St. Owen Street, Hereford

Yorkshire Branch.

Bladford, E., M.B., Windrush House, Bradford
 Cairns, D. L., M.D., 8, New North Road, Huddersfield
 Clarke, T. K., F.R.C.S., Kotona, Huddersfield
 Dobson, Margaret B., M.D., 10, Apsley Crescent, Manningham, Bradford
 Forsyth, Noel C., M.B., Malton, Yorks
 Holroyde, D. M.B., Regent Street, Barnsley
 Jones, W. P., Esq., Rock House, Wostenholme Road, Sheffield
 Macdonald, Margaret C., M.B., Union Hospital, Bradford
 Orilly, William A., Esq., Musgrave House, Bristol
 Sharp, E. W., M.B., 290, Great Horton Road, Bradford
 Shepherd, H. B., Esq., Feveril House, Castleford, Sheffield
 Wood, F. S., Esq., Westbourne House, Sheffield
 Wood, W. L., Esq., Hazeldene, Ossett

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

GLOUCESTERSHIRE BRANCH.

A GENERAL meeting of the Branch was held at the General Hospital, Cheltenham, on Thursday, January 21st. The President was in the chair and 18 members present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Pneumococcal Infection.—Dr. A. F. R. CONDER read notes on a case of pneumococcal infection, which was discussed by the President and Dr. COLLINS, and Dr. CONDER replied.

Rheumatoid Arthritis.

Dr. E. A. DENT read a paper on rheumatoid arthritis, its clinical aspects, diagnosis and treatment, illustrated by photographs. He said rheumatoid arthritis was really a name given to a number of conditions the cause of which was unknown. Owing to want of *post-mortem* investigation great confusion existed as to its pathology and causes. It was thought now that in many cases rheumatoid arthritis was an infective disease due to micro-organisms dwelling in the joints or elsewhere and elaborating toxins which caused an inflammatory condition. Possibly some cases were of nervous origin. The disease was best classified into (1) polyarticular rheumatoid arthritis which might be (a) acute, (b) subacute, (c) chronic, and (2) localized monarticular or senile rheumatoid arthritis. The acute type usually occurred in children or young adults and often commenced with pain and swelling of the small joints, especially the metacarpophalangeal joints of the index and middle fingers, spreading from these to others—pain often persistent and increased at night, swelling often fusiform. It might follow acute rheumatism.

The symptoms of the subacute form were similar to those of the acute in a modified form. This might be followed by the chronic variety, but usually this commenced slowly, attacking first one joint and then another; it might commence with numbness and tingling in the limbs, stiff neck, pain in the back, and neuralgic pain in the forearms and thigh. Often the onset was first noticed by either pain or swelling, or both, in the joints of the fingers, sometimes it commenced in a larger joint; this was more common in males than in females. The chronic form usually occurred between the ages of 20 and 50, and was much more common in females than in males; it often began at the climacteric, owing, it was supposed, to uterine disturbances such as haemorrhages, and, to a less degree, purulent or mucopurulent discharges. The author had often known the attack dated from a confinement. Influenza, prolonged mental anxiety and worry, hard manual labour with improper nourishment, were also predisposing causes, and he thought phthisis was a definite predisposing constitutional cause. The onset was often insidious; premonitory symptoms might occur such as numbness, pins and needles, etc.; with them, perhaps, stiffness of the joints and some enlargement. As a rule, the pain was worse at night; it was gnawing or burning in character; there was also loss of appetite, deafness, and coldness of the extremities. In advanced cases, the face, pale and wasted, with a sunken appearance around the eyes, was almost characteristic; the joints became twisted and distorted, so much, sometimes, that the patient was a helpless cripple. The interphalangeal joints were again those frequently attacked with fusiform swelling, the fingers might be dislocated, and generally there was ulnar deviation; there was wasting of the muscles, particularly the interossei. There was no joint which the disease never attacked. Sometimes ankylosis occurred; this was almost always fibrous, sometimes the spine was so much affected as to produce rigidity.

Circulatory System.—It was doubtful whether endocarditis and pericarditis occurred in uncomplicated rheumatoid arthritis; the heart was often accelerated. The toxins affected the nervous system, giving rise to pain,

numbness, and other symptoms. Pigmentation occurred in the skin; the diagnostic importance of this was, in the author's opinion, overstated. It occurred as freckles and streaks of brownish discoloration. The digestive system was frequently affected, and dyspepsia might be an exciting cause of the disease. The teeth should always be attended to. Anaemia was a marked feature of the disease, and was often not very amenable to treatment. The lymphatic glands sometimes became enlarged, but not the spleen.

Monarticular.—This occurred late in life, and was a pure degeneration. It contrasted much with the other variety in affecting the large joints, and it did not spread like the polyarticular type. Sometimes it was caused by an injury.

Diagnosis.—This disease might be mistaken for rheumatism, gout, or sciatica. In the early slowly progressive and chronic cases, also in subacute attacks, it was often difficult to diagnose from rheumatism. (1) In the chronic form of rheumatoid arthritis the small joints were attacked first, especially the proximal phalangeal joints of the first and second fingers. There was fusiform swelling. The affection was symmetrical. The disease prevailed in women. There was affection of the temporo-maxillary joint and cervical spine, pain along the clavicle, crepitation or grating on movement, clamminess of extremities. There was a tendency to spread from small to large joints. Often there was a family history of phthisis. (2) In the subacute form the small joints were attacked first; the swelling was circumscribed. The temperature was not very high. There was no acrid perspiration, very little (if any) tendency to endocarditis and pericarditis.

The following points distinguished rheumatoid arthritis from acute gout: The attacks of acute gout commenced suddenly by pain; usually there was swelling with redness and shininess of the big toes. It was rare in women.

From chronic gout it might be very difficult to distinguish. The history threw light. In gout definite attacks occurred from time to time, and usually there were deposits of urate of soda in the ears, hands, etc., more common in men, and there was no tendency to emaciation.

The features differentiating rheumatoid arthritis from sciatica, when the hip-joint alone was affected, were that the pain was in the joint. Usually the affected leg could not be crossed over the other without causing great pain. There might be thickening around the joint and grating might be felt on rotation.

Treatment.—Much could be done in the early stages to arrest and in more advanced to relieve. The disease attacked a constitution which had been debilitated from some cause; therefore lowering treatment must be avoided. In acute and subacute cases the patient must be in bed. Pain might be relieved by local applications of heat or soothing lotions. The joints must be kept at rest till the acute symptoms subsided; then at once gentle movement should be commenced to prevent stiffness. Carbolic compresses; guaiacol and iodine in proportion of 1 to 6 might be painted on. In chronic cases blisters were most useful, especially in the temporo-maxillary joint, and should be small and repeated. Mustard leaves, bathing with hot water, were useful; sometimes rubbing with liniments did good. When the joints were weak and there were soft swellings, adhesive strapping should be applied. Sometimes extension with weights was soothing and helped to counteract the tendency to flexion. Fingers which were becoming flexed could be treated with a splint put on at night and taken off in the morning, so that they might be moved during the day. Breaking down adhesions under an anaesthetic was not to be recommended. In some carefully-selected cases in which the knee was flexed, straightening under an anaesthetic to obtain a stiff joint as a result might be considered. The question of excision might arise to relieve bony ankylosis; it could only occur in very chronic cases, and was very rare. The operation was to be recommended only if the general health or wage-earning capacity of the patient were affected.

Diet.—In acute cases the diet was light and nourishing—milk, raw meat juice, broth, eggs, plasmon, etc.; stimulants might be required. In chronic cases low diet should never be given. Good feeding was essential. The meals should be at regular intervals and varied, a good supply of nitrogenous food should be taken daily. Salusbury modified treatment had been recommended; it did not suit all

cases. Also, as many cases of rheumatoid arthritis were due to faulty digestion, some recommended exclusion of meat, and substituting fermented milk. Successful results after persisting with this for a long time had been reported. No hard-and-fast rule could be laid down. The most generally applicable diet was a mixed one. Fats were needed. Virol was probably the best, also milk and cream.

The clothing should be chiefly of wool, and it was well to insert a piece of wash-leather next the skin over the joints. It was important to guard against cold and wet.

The most suitable climate was dry, warm, and equable. The seaside was not advisable, and sometimes seemed to aggravate the condition.

Medicines.—In febrile cases, antiseptics, guaiacol carbonate, creosote, quinine, salol, or salicylates should be given. Salicylate of soda was specially of use where there was a history of rheumatism, and it might be given freely, and should be combined with twice the amount of the bicarbonate. Aspirin and phenacetin relieved pain. Iron and arsenic were the most generally useful of all drugs in improving the health; they were best given in combination. The syrup of the iodide was one of the best forms. In cramps, hyoscyamus or cimicifuga was useful. Morphine and opium were to be avoided; it was scarcely ever necessary to use them. Sulphocarbonate of soda and other remedies must be used for the digestive troubles, and if the stomach was dilated it should be washed out. It was important that oral sepsis should be attended to. The teeth were frequently carious; antiseptic washes should be used freely. For sleeplessness, paraldehyde, phenacetin, and bromides might be given. Where gout was present, colchicum and alkalis were serviceable. Colchicum should be given with caution. An alkaline mixture of quinine was also of use. Other methods of treatment were Bier's method of passive congestion. The chief advantages claimed for it were the relief of pain, which was often very marked, and the prevention of stiffness. It also promoted resolution of thickening in joints and tendons. There were various ways of producing congestion—that with the bandage was the only suitable method for rheumatoid arthritis. Danger need not be anticipated if a broad, soft bandage with plenty of padding were lightly applied.

Massage was of value for relief of pain and in keeping up the nutrition of muscles; it also relieved or prevented stiffness and fixation of joints.

Electricity was useful in many stages of the disease; a full-length bath was preferable to smaller ones.

Radiant heat had a promising future. It seemed the most efficacious form of heat to apply, and heat almost always relieved pain. It could be administered in bed, which was a great advantage and helped with the acute cases; it was good also in some chronic conditions.

Serum or Vaccine Treatment.—Acute infective cases had been treated by hypodermic injections of antistreptococcal serum; nothing very definite could be said at present as to results. If there were present in any case a local suppurative active centre such as endometritis, erosion of cervix, or possibly a similar condition in the nose or mouth, a culture might be made and a vaccine given with good prospect of favourable effect.

Baths were chiefly indicated when the disease was met with early and the patient was in fair general health; they were not admissible in the old and debilitated. The chemical properties of the water used was not of vital importance; the chief point was the mode of application. The objects aimed at were decrease of pain and stiffness, a general improvement in the patient's strength and nutrition, increased elimination by the skin, and absorption of the swelling around joints. Bathing, with its accompaniments, was of the utmost value in suitable cases, and gave great relief or permanent benefit even in some of the most chronic and advanced cases. Change of air and scene, modification of diet, and freedom from home cares and worries were all important adjuncts, and patients should be recommended to visit some health resort every year where such a regimen could be provided. All the facilities for such a course existed in Cheltenham. Photographs were shown to illustrate acute, subacute, and chronic cases.

An interesting discussion followed, in which the President, Drs. COLLINS, WILSON, FINLAY, and CONVER took part. Dr. DENT replied.

LANCASHIRE AND CHESHIRE BRANCH:

MANCHESTER (SOUTH) DIVISION.

An ordinary general meeting of the Division was held at the house of the Chairman, Dr. Percy McDougall, Oak Drive, Fallowfield, at 3.45 p.m. on Wednesday, January 13th, Dr. McDougall in the chair. There were thirteen members present: Drs. Boyd, Vipont Brown, Cotterill, Grant Davie, Edlin, Godson, Goodfellow, Heathcote, Mitchell, Niven, Russen Rhodes, and Stock.

Regrets for Absence.—Regrets for absence were received from Drs. Milson Rhodes and Savers Scott, as well as from Dr. A. Brown Ritchie (school medical officer, Manchester), who had been invited to attend.

Confirmation of Minutes.—The minutes of the last meeting were read and signed.

Consultants and General Practitioners.—The meeting appointed six members as representatives to serve on a subcommittee appointed by the Joint Committee of the Manchester and Salford Divisions to consider the ethical relations between consultants and general practitioners. The following were elected:—Consultants: Drs. Moritz, Westmacott, and Wild; General Practitioners: Drs. Hopkinson, Vipont Brown, and Grant Davie.

Date of Dr. Garstang's Address to his Constituents.—A letter was read from Dr. Garstang appointing May 6th as the date upon which he would address his electorate in this Division as a member of the Central Council.

Ladies' Withington District Nurses' Committee.—A letter was read from the Honorary Secretary of the Ladies' Withington District Nurses' Committee acknowledging receipt of the Division's communication regarding the need for her committee to be in touch with the medical men whose patients were under the nurses' care, and offering to place the services of the Divisional Committee at its disposal whenever an authoritative professional opinion was desired. The Honorary Secretary stated her appreciation of the offer, and said she would communicate further when her committee had considered it.

Earlier Appointment of Representatives of Representative Meeting.—A letter from the Medical Secretary on this subject was read, and it was decided to give it future consideration in order to amend the rule thereto.

Certificates from Hospitals to Out-patients.—A letter from the Medical Secretary was read regarding this practice. The Secretary was instructed to reply that there were no hospitals with out-patient departments in the area of the Division.

Medical Inspection of School Children.—The meeting then considered the report of the Medico-Political Committee on the medical inspection of school children. The Chairman pointed out that the Medico-Political Committee hoped that Divisions would send it information or suggestions relevant to the subject, as well as replies to the questions submitted at the end of the report, whereupon Dr. NIVEN (Medical Officer of Health, Manchester) said that he thought that one of the main features required in the medical inspection of school children was the training or education in observation of the teachers by a competent medical man to detect in the children under their care the commencement of ill-health, the failing of physical strength or lack of normal mental energy, and the sudden onset of important illnesses. He did not mean that teachers must learn the art of diagnosis, which should be left to the medical man, but they should be trained to at once observe a deviation from the healthy normal standard, and be able to immediately report it. He therefore moved the following resolution, which was unanimously agreed to:

That this Division considers it to be an essential part of the medical inspection of school children that teachers shall be trained practically in classes of schools to observe indications of ill-health in the children under their care, and shall forthwith bring these children to the notice of the proper medical authority.

The questions in the report were answered as follows: Question 1 (a)—Does the Division approve of the system of payment per head?—was negatived by 8; 5 members did not vote. Questions (b) and (c), dealing with payments per head, were answered by the foregoing, and were therefore not considered. Question (d)—Does the Division suggest any other method of payment? It was proposed by Dr. COTTERILL and seconded by Dr. VIPONT BROWN:

That this Division is of opinion that the only system of payment for medical inspection of school children that should have the support of the Association is the employment of full-time school medical inspectors at adequate salaries.

Carried *nem. con.* five members abstaining from voting. The subject of "treatment" was about to be considered, but, owing to its importance and the lateness of the hour, it was resolved to continue its discussion on Thursday, January 21st, at 3.45 p.m.

ADJOURNED GENERAL MEETING.

The adjourned general meeting of the Division was held at the house of the Chairman, Dr. Percy McDougall, Oak Drive, Fallowfield, at 3.45 p.m., on Thursday, January 21st, Dr. McDougall in the chair. Thirteen members were present: Drs. Ashton, Boyd, Carnwath, Cotterill, Grant, Davie, Godson, Goodfellow, Featherstone, Heathcote, Hopkinson, Sawers Scott, and Stocks. Dr. A. Brown Ritchie, who was invited to attend, was also present.

Regrets for Absence.—Regrets for absence were received from Drs. Alfred Byers and Russen Rhodes.

Confirmation of Minutes.—The minutes of the last meeting were read and signed.

Joint Committee of Manchester and Salford Divisions.—In reply to a request from the Joint Committee, it was resolved:

That the Honorary Secretary shall send reports to that Committee of the Division's opinions and decisions with regard to the medical inspection and treatment of school children, and other matters of interest dealt with at the meetings of the Division.

Workmen's Compensation Act.—A letter was read from the Joint Committee forwarding the following expression of its opinion, which was unanimously adopted by the meeting:

That in all compensation cases the medical man attending ought to receive notice of the intended visit of a medical referee sent by insurance and other companies.

Friendly Societies and the Medical Profession.—A letter from the Medical Secretary was read drawing attention to a paper to be read by Dr. Pearce, of Trowbridge, on Friendly Societies and the Medical Profession, and asking if members of this Division would care to attend, or if the Division would care to appoint official representatives. It was resolved that any member who gave in his name to the Honorary Secretary as intending to be present should be asked to represent the interests of the Division.

Inspection of School Children.—The CHAIRMAN ruling that this subject could be reopened, it was unanimously resolved, regarding tenure of office:

That this Division considers it essential that such officers should be appointed without reference to time, and subject to a reasonable notice; and, further, that the appointment should not be terminated without the consent of the Board of Education.

Regarding Treatment of School Children.—It was unanimously resolved:

That this Division is of opinion that, wherever possible, children who are found defective should be referred to their own private practitioner.

It was proposed by Dr. COTTERILL, seconded by Dr. CARNWATH:

That if and when children are treated by the Education Authority, such treatment shall be undertaken by whole-time medical officers.

Four voted for and 5 against this resolution, which was lost. It was proposed by Dr. SCOTT and seconded by Dr. DAVIE:

That this Division is of opinion that any attempt by public authorities to arrange for the treatment of school children at hospitals and other charitable institutions is thoroughly unsound in principle.

Carried with one dissident. Dr. BROWN RITCHIE, Medical Officer for School Children, Manchester, then detailed the system in vogue in this city. He pointed out that children were advised to seek the advice of their own medical attendant, and in the case of the very poor were sent to hospital. He showed that the drawing of the line between those able to pay for medical attendance and those unable to do so was in many instances extremely difficult. He strongly deprecated the subsidizing of hospitals or other charitable institutions, and urged that the system as at present carried out in Manchester should

be allowed to continue until the hospitals objected to the overtaxing of their resources, when in all probability school clinics or some such organization would be created to meet the conditions prevailing. He was in favour of this drifting policy. He saw many difficulties in the way of at present coming to a hard-and-fast conclusion, but he sincerely hoped, if the Association proposed a scheme of any sort, that it would see that such a solution was a practical one—one that education and local authorities could agree to. As the subject had such far-reaching possibilities it was agreed to give the Division further time to consider the report, and it was resolved to adjourn until Friday, January 29th, at Dr. Ashton's house.

FURTHER ADJOURNED GENERAL MEETING.

The second adjourned general meeting of the Division was held at the house of Dr. George Ashton, 315, Wilmslow Road, Fallowfield, at 3.30 p.m. on Friday, January 29th, Dr. McDougall in the chair. Twelve members were present: Drs. Ashton, Boyd, Carnwath, Cotterill, Grant, Davie, Edlin, Gregory, Russen Rhodes, Sawers Scott, Stocks, and Wild. There were also present by invitation Mr. Ray and Mr. Telford.

Regrets for Absence.—Regrets for absence were received from Drs. Vipont Brown, Hopkinson, Niven, and Milson Rhodes.

Confirmation of Minutes.—The minutes of the last meeting were read and signed.

Ladies' Withington District Nurses' Committee.—A letter was read from this committee, stating that at their meeting held on January 25th it was unanimously resolved that it was willing for the Division to appoint a delegate to consult with its executive committee when questions arose requiring professional medical opinion. The Chairman, Dr. McDougall, was unanimously appointed the official delegate of the Division.

Treatment of School Children (continued).—The further consideration of "treatment" was opened by the CHAIRMAN reading extracts from a paper on the subject by Dr. Priestly, a late member of the Division, and now Senior School Inspector for the County of Staffordshire, in which he stated that the question could be treated from three points of view: (1) The principle of relying on parental responsibility. (2) The use of existing machinery—general practitioners, Poor-law officers, hospitals, etc. (3) The formation of school clinics. He, however, offered no solution. Mr. TELFORD detailed the system at Pendlebury hospital out-patient department. He said they were being "flooded out" with children. They came with notes from the school authorities in masses for such operations as removal of tonsils and adenoids. He did not consider this just either to the children, who had sometimes to go long distances to their homes after operation, or indeed, to the hospital staff. At present the hospital managers seemed desirous of approaching the school authorities for payment, but this abused the reason why hospitals were founded. School attendance officers made inquiries into the home circumstances of the parents, so that he considered that the children might be divided into two main classes: (1) Those who were proper recipients of outdoor relief, and (2) those who could pay a reasonable fee to their own private practitioner, who, if he did not feel competent to deal with the case, could refer the case either to hospital, as at present was done, or to an operating surgeon privately. Speaking generally, the Pendlebury Hospital patients were drawn from so large an area that the officer appointed to make inquiries and inspect the houses from which the patients were drawn had too great an area to cover, and thus could only inspect those nearer at hand, which worked out at about one in three patients treated. Mr. RAY said that undoubtedly there was a very great proportion of children who required treatment. Medical inspection did not manufacture patients, but simply brought to light those requiring treatment which for some reason or other did not get it. He considered that the existing agencies for the present sufficed, and hoped that no special men would be appointed to undertake treatment. After further argument, it was proposed by Dr. COTTERILL and seconded by Dr. EDLIN:

That this Division considers that school clinics should be established for the purpose of treating defective school children.

An amendment by Dr. WILD, seconded by the CHAIRMAN, moved that there should be added:

... but that, wherever possible, children should be referred to their own private practitioner.

Carried *nem. con.* The resolution was then put to the meeting as follows:

That this Division considers that school clinics should be established for the purpose of treating defective school children, but that, wherever possible, children should be referred to their own private practitioner.

For the resolution, 6; against, 4. Carried. Regarding the subject of whole or part time appointments, it was pointed out that, when considering the subject generally at the previous meeting, the Division by a majority of 1 objected to the treatment being undertaken by whole-time medical officers (4 for, 5 against); but now that the Division approved of school clinics, it was proposed by Dr. CORTERILL and seconded by Dr. STOCKS:

That the treatment in school clinics shall be undertaken by whole-time medical officers at fixed salary, and that this shall commence at not less than £250 per annum.

For the resolution, 6; against, 2. Carried. It was proposed by Dr. STOCKS, seconded by Dr. SCOTT:

That this meeting is of opinion that it is of the highest importance that in each and every district a wage limit be adopted, and that no child be deemed eligible for treatment at the expense of the education authority where the income exceeds this limit.

Carried with one dissentient. The SECRETARY was requested to record the numbers of those voting for and against the resolutions.

This concluded the business.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.

A GENERAL meeting of this Division was held at the Great Eastern Hotel, Liverpool Street, E.C., on January 28th, at 5.30 p.m. Dr. GOODALL presided, and seven other members were present.

Confirmation of Minutes.—The minutes of the two previous general meetings were read, confirmed, and signed by the Chairman.

The Earlier Appointment of a Representative.—With regard to the proposal to alter the rule appointing a Representative from not more than three months to not more than 9 months before the annual meeting, it was resolved that this be deferred until the annual meeting of the Division.

Medical Inspection and Treatment of School Children.—The following answers to the questions of the Medico-Political Committee *re* the inspection and treatment of children found defective on inspection were ordered to be sent to that Committee:

1. That as the London County Council have already made fixed salaries their system of remuneration this Division does not think that it is competent, or of any use, to answer this question.
2. That payment should be by fixed salary.
3. That the appointments be thrown open to all practitioners, by advertisement, etc.
4. That the number of school clinics should depend on the population, and on the area of the school districts.
5. That this Division does not feel competent to answer this question; as it is a legal one.

Medical Officers of Health.—This Division was also asked to reply to the query of the Public Health Committee *re* the advisability of making the appointment as medical officer of health a full-time one. It was resolved:

That this Division considers that, as far as possible, they should be full-time appointments, but that in certain rural districts they must of necessity be part-time appointments.

Proposed Entertainment Fund.—A proposition was sent up from the Executive Committee, asking the opinion of the Division *re* the formation of an entertainment fund, and it was resolved:

That reply postcards be sent to each member of the Division, asking if they would be willing to subscribe 1s. per annum for the formation of such a fund.

The meeting then terminated.

MARYLEBONE DIVISION.

A GENERAL meeting of the Division was held on Friday, January 29th, at 5 o'clock, at the Rooms of the Medical Society of London. Dr. F. DE HAVILLEAND HALL, Chairman of the Division, presided.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Question as to Resignation.—Dr. HAWTHORNE asked for information concerning the resignation of members of the Association during the year 1908 who were members of the Marylebone Division. The Honorary Secretary was instructed to procure such information from the central office.

Central Emergency Fund.—Dr. HAWTHORNE asked for information concerning the steps taken by the Executive Committee with reference to the Central Emergency Fund. The matter was referred to the Executive Committee for a report thereon.

Report on Annual Representative Meeting.—Sir VICTOR HORSLEY, the Representative in Representative Meetings, then presented his report. He referred at some length to the principal matters discussed at the Sheffield meeting, and more particularly to the Hospitals Committee's report, the Charter, report of the Finance Inquiry Committee, report on the Ethics of Consultation, and the Central Ethical Committee's report. After the CHAIRMAN had referred to the services rendered to the Division by Sir Victor Horsley, Dr. F. J. SMITH proposed and Dr. LAURISTON SHAW seconded:

That a hearty vote of thanks be accorded Sir Victor Horsley for his services as Representative.

Dr. HAWTHORNE in supporting the resolution asked to be informed of the Representative's action in regard to the Central Ethical Committee's report in so far as it referred to the general adoption of the Bradford rules. Sir VICTOR HORSLEY pointed out that this point did not come up as a recommendation, and was therefore not voted upon. The resolution was thereupon carried unanimously.

Medical Inspection and Treatment of School Children.

The meeting then proceeded to the consideration of the report of the Medico-Political Committee on the medical inspection of school children.

Section 3, Systems of Payment. (i) *By Fixed Salary.*—It was proposed by Dr. HERON, seconded by Dr. F. J. SMITH, and carried:

That the salary of the school medical officer should be arranged with a definite rate of increase of salary and provision for pension on conditions similar to those holding in His Majesty's higher civil services.

(ii) *Salary Based upon Time Spent in Work. Part-time Officers.*—The recommendation of the Association was agreed to.

(iii) *Inclusive Payment per Head.*—It was proposed by Dr. F. J. SMITH, seconded by Dr. DUDLEY BUXTON, and carried:

That where inclusive payment per head is adopted the minimum fee shall be 2s. 6d.

Treatment of School Children found Defective.—It was proposed by Dr. F. J. SMITH, seconded by Dr. HAWTHORNE, and carried:

That in the opinion of this Division it is absolutely essential that the system of school clinics or recognized surgeries be established.

It was proposed by Sir VICTOR HORSLEY, seconded by Dr. DUDLEY BUXTON, and carried:

That the appointments to the staff should be open to all registered medical practitioners, the medical practitioners of the district working as part-time officers having preference.

It was proposed by Mr. CHARLES RYALL, seconded by Dr. LAURISTON SHAW, and carried:

That the staff should be remunerated adequately upon a scale agreed upon by the local Division.

WESTMINSTER DIVISION.

A SPECIAL meeting of this Division was held at the Florence Restaurant on January 21st, Dr. WILLIAM EWART, President, in the chair. The meeting was convened to discuss the report of the Central Medico-Political Committee on the Treatment of School Children found to be defective. Dr. SEaton KERR, of the Board of

Education, was the guest of the Division on this occasion.

Report of Medical Secretary.—The monthly report of the Medical Secretary, adjourned from the previous meeting, was read by the SENIOR HONORARY SECRETARY.

Departmental Inquiry on Coroner's Law.—Dr. Morgan Finucane (Barrister-at-law) was unanimously elected the Representative of the Division on the special committee appointed by the Central Council to collect evidence to lay before the Departmental Committee appointed by the Government to report on the coroner's law.

Treatment of Defective School Children.—At the request of the PRESIDENT, Dr. COX (Assistant Medical Secretary to the Association) gave a short review of the matters which led up to the report of the Medico-Political Committee on the treatment of defective children.

Mr. HARVEY HILLIARD then opened the discussion on the report. He said all present must feel that unless the arrangements for the medical inspection of school children were to remain ineffective, this must be supplemented by proper treatment of those found to be unfit. This would necessarily involve a considerable cost, but it would be an expense which it would be sound economy to incur. He was convinced that the inefficient, the workless, and the unemployable owed their deplorable condition largely to the fact that they were born and bred in an environment which necessarily produced grave physical, mental, and moral defects, and which, remaining untreated in their earlier years, resulted in their developing into useless members of society and a danger to the public health. It was to the interest, not only of the State, but of every individual, to prevent the development of this condition of things; he looked forward to the time when not only the defective children would be dealt with by the State, but to the time when the State would prevent women giving birth to children in an environment which could not fail to produce disease. The present meeting was called to consider the best way in which this work of the State might be undertaken, not only from the point of view of the interests of the medical profession, but also with due regard to the public good. Every one must feel the imperative desirability of active and intimate co-ordination between all the departments of State, whether imperial or parochial, and he felt that this new duty assumed by a branch of the State—namely, the Board of Education—of making the children, whom it undertook to educate, in a fit condition to assimilate properly the education provided for them, should be performed by means of such machinery as already existed. It was clear that the machinery which at present existed was in certain respects inadequate as regards staff, etc., for the whole of this new work, but he was convinced that it would be more economical to enlarge the existing machinery than to start new and independent schemes for dealing with the matter. The Education Committee of the County Council had made virtually three proposals with regard to the manner in which the treatment of defective children should be carried out:

(1) That existing hospitals should be made use of as heretofore, for those cases which needed "in-patient treatment";

(2) That existing institutions (provident dispensaries, etc.) should be made use of wherever possible under a subsidy; and

(3) That where such institutions did not exist in school areas the school authority should itself erect and equip school surgeries or clinics.

The first of these proposals might safely be left to the hospital authorities, who would soon find that they were swamped by the extra work put upon them, and their resources inadequate to deal with it, if they were to be just to the claims of the rest of the community. The second proposal he said was inherently wrong in principle, and would be found to be impracticable in working; and furthermore it would overlap with an already existing department of State—namely, Medical Department of the Poor Law. The third proposal was ill-considered and extravagant, for it likewise covered the already existing machinery of the Poor Law, which with a little enlargement and improvement could be made amply adequate to deal with any demand the education authority might make upon it. He spoke as a ratepayer rather than as a medical man in this connexion, and urged all ratepayers to resist this fresh extravagance of the County Council, and to prevent the waste which always resulted from the overlapping of various organizations doing the same work. A

glance at the map of London would reveal the fact that in every school area there exists some Poor-law institution, so that the children from any school could be sent to it after it had been modified and equipped to suitably treat them. It would be noticed that in very few areas did there exist such a dispensary or other institution as the Education Committee had in view. It would therefore follow that a very large number of school clinics would be required, and a very grave expense would be incurred. In his view, the Education Committee should confine itself to education, and should call in the aid of a co-department of State responsible for such work when it required medical treatment for its scholars. If this work with the school children were referred to the Poor Law, it would be the best thing for the profession, for large numbers of men in general practice and specialists would necessarily be added to the Poor-law service, and they would thus become servants of the Local Government Board and of the State, which he considered would be preferable to being the servants of a parochial board of school managers. He thought that the objection of the stigma of pauperism which was raised to this proposal to send the poor children to be treated by the Poor Law was entirely one of ill-balanced sentiment. First, because in the near future those coming under the Poor Law would be classified, because medical relief would be dissociated from other forms of relief, and because already medical relief involved no disfranchisement. He failed to see the difference between a person who accepted treatment in a voluntary hospital and he who accepted it in a Poor-law hospital except that in the latter case the person was only receiving something of what he had already paid for in the rates, whereas the former case was much more a real pauper, because he accepted charity to which he had probably contributed nothing. He would ask, Do the people incur the stigma of pauperism because their children are educated out of the rates? Do they incur the stigma of pauperism if they accept food at the schools under the Provision of Meals Act? Do they incur the stigma of pauperism if when sick they are removed to one of the various hospitals or institutions of the Metropolitan Asylums Board? If asked, they would invariably say No. Why, then, should they complain of the stigma of pauperism if they accept medical treatment from an infirmary which was likewise supported out of the rates? He considered that it was the State's duty, and it would be to the State's interest, to provide free medical treatment for all children requiring it and where parents would accept it. He felt also that it was the right of those people who were not in a position to pay for the medical aid they required, to look to the State in their need. He therefore again moved, in answer to the questions put by the Medico-Political Committee, the resolution which was adopted by the Division and moved by their Representative in the Representative Meeting at Sheffield, namely:

That the Westminster Division feels that the logical conclusion of the medical inspection of school children is the provision of treatment, where this is found to be necessary, and that as the machinery of the Poor Law already exists for the medical relief of all persons unable to pay medical fees, the school children should be referred to the Medical Department of the Poor Law, which should be reorganized and extended to meet the demand for the increased medical relief which will arise.

Dr. KERR characterized Mr. Hilliard's speech as a curious mixture of Socialism and early Victorian Toryism. In his view there were practically only three defects of school children that they need consider—namely, diseases of eyes, ears, and teeth. These he considered the existing hospitals and other institutions quite incapable of dealing with, and thought that the only way was to start independent school clinics with an adequate staff. He agreed with Mr. Hilliard that it was a bad policy to draft the work on to dispensaries under a subsidy. His proposal would be a good thing for the profession if they accepted the terms offered by the education authority, for the doctors would then be paid for work which at present, owing to the neglect of parents, was not done at all. If, however, the profession, through the British Medical Association, stood out against the terms offered, on the grounds of inadequacy of remuneration, he felt they were fighting a losing cause, for it was evident that it would be easy to obtain the services of young men who would be glad of a certain income, although small.

He did not think a man should be classed as a pauper because he could not afford to pay for special treatment for defective eyes, ears, or teeth, from which he or his children might suffer. It was futile to try and recover the cost of such treatment, and he looked forward to the time when the State would provide free medical treatment for every one who did not pay income tax.

Dr. ARCHER disagreed with Dr. Kerr, who first said the work required needed the skill of specialists in diseases of the eyes, ears, and teeth, and then threatened the Association that young men seeking experience would be appointed if the Association stood out with regard to fees. In any case it was clear the general practitioner would stand to lose if school clinics were established, because, owing to the nature of his work, he could not be tied down to attend the school at definite hours. He thought that all cases except those needing specialists should be sent to local practitioners, paid by the State per case.

Dr. FINUCANE, in agreeing with Dr. Kerr, characterized Mr. Hilliard's proposal as reactionary and unjust to the respectable poor. From his own knowledge as a Poor-law medical officer he could say that most people avoided it as long as they could. He was convinced that it was to the interest of the State that the defective children should be treated, but he thought this treatment should be provided free and without stigma.

Dr. HASLIP said he supported Dr. Hilliard, and therefore held, according to Dr. Kerr, early Victorian views; but he might say that many objected to have their opinions dictated to them by the London County Council. He said: "The real objection to a school clinic, under educational authority, means one more centre for free medical services, which makes the system of medical relief further complicated—(1) hospitals, (2) Poor Law, (3) educational school clinics. Dr. Kerr said school clinics were required only for five diseases: (1) Teeth, (2) vision, (3) ringworm, (4) discharging ears, and (5) adenoids. Consequently, the scheme was not comprehensive. Nothing was mentioned of malnutrition and other diseases from which children suffered. It would not benefit general practitioners. Specialists were required for Nos. 1 and 2, and with regard to dentists, Dr. Kerr had told them that there was not a sufficient number in London to look after the teeth of the school children. Consequently men also were required. With regard to ringworm, apparatuses were required for the treatment. For No. 4 (discharging ears) this had been shown to be chiefly a question of nurses being required." Dr. Haslip continued: "In my opinion school clinics will develop eventually into another large out-patient department, attended by specialists who will be paid in future for their services; and what guarantee will the practitioners have that these clinics will not be abused? It is necessary that there should be some control over the financial status of parents. This is not only fair to the medical profession but also to the taxpayers. Now, the wording of the resolution of our Division is that the medical department of the Poor Law should be reorganized and extended to meet the demand for the increased medical relief which will arise; and this view is contemplated also in the report of the Medico-Political Committee on page 6, where it says:

It is possible that the provisions of the scheme of school clinics would be incorporated in the reorganized Poor-law system.

I say, let your specialists be appointed—eye, ear, throat, and also dentists—but let the guardians, or their successors, whoever they may be, pay for them. Call it a public medical service if you like. Why should the London County Council build new school clinics? You have already infirmaries in various parts of London, with plenty of room for the cases to be referred to them, and if the building is not sufficiently equipped, this can soon be done. If there is not the necessary staff they can soon be appointed. One knows the marvellous improvements that have taken place in the medical treatment in infirmaries the last ten years; in fact, I have known patients prefer to be treated in infirmaries to hospitals. Why should there not be further improvement in the outdoor medical relief, and if necessary called by some other name? I maintain there is no hurry over this question until the report of the Poor Law Commission has been issued, and the Association should wait before they commit themselves to any scheme."

Dr. F. J. ALLAN, Medical Officer of Health for West-

minster, drew attention to the gradual supersession of the responsibility of parents which had been taking place, and the progress towards making the children into "State children"; 40,000 children had been fed in 1907-8, and according to the evidence of the teachers and others this had been grossly abused. Parliamentary committees and Government departments had pronounced against medical inspection growing into medical treatment, but if precedents throw any light on the possible trend of events, it looked as if free treatment would follow. He quoted Herbert Spencer, who said, in his *Study of Sociology*, that

Everywhere there is a tacit enunciation of the marvellous doctrine that citizens are not responsible individually for the bringing up of each of his own children, but that these same citizens incorporated into society are each of them responsible for the bringing up of everybody else's children.

Thousands of parents would not secure medical treatment for their children, so the State would be driven to provide it at the expense of the ratepayer unless drastic supervision was to be exercised. An attempt would doubtless be made to exploit the medical profession, and therefore it was essential that a firm stand should be made. The scheme of providing school clinics would not benefit the general practitioner, as suggested by Dr. Kerr. Specialists might be appointed for the treatment of eye, ear, and teeth defects; but these formed but a small part of the ailments of children, and some scheme was required which would utilize the services of the general practitioners of a district. He objected to hospitals being subsidized for the purpose. Dr. Allan suggested that when as the result of school inspection a notice had to be given to the parents (see Section 10 of the Medico-Political Committee's Report), a copy should also be sent to the Care Committee, who should take steps to see that attention was given to it by the parents, failing which the Care Committee should be empowered to institute proceedings against the parents.

Finally, after prolonged discussion, the following answers to the questions asked by the Medico-Political Committee were agreed to:

1. (a) Does the Division approve of the system of payment per head?—No.
(b) If so, should it be such as has been adopted in Hertfordshire? or in Derbyshire?—No.
(c) Or a fixed minimum payment per head of school attendances, and if so, what payment?—No.
(d) Or does the Division suggest any other method of payment?—Yes; by fixed salary on the basis of time given according to the scale laid down by the Association.
2. Considering the matter with special regard to your local conditions, what are the views of the Division as to the size and method of selection of the Staff of the School Clinic, if the establishment of such should be proposed, and how do you think that they should be remunerated, e.g., by (i) fixed salary; (ii) payment by time; (iii) payment per case, or by what other method?—Same as (d) supra.
4. What suggestions, if any, have Divisions to offer as to the methods which are to be adopted to ensure that parents who can afford to pay for the treatment of their children, when found defective as the result of medical inspection of school children, should be compelled to do so?—That since the logical conclusion of the medical inspection of school children is the provision of treatment, where this is found to be necessary, and since the machinery of the Poor Law already exists for the medical relief of all persons unable to pay medical fees, the school children should be referred to the medical department of the Poor Law, which should be reorganized and extended to meet the demand for the increased medical relief which will arise.

OXFORD AND READING BRANCH:

OXFORD DIVISION.

Medical Inspection of School Children.—A special general meeting of this Division was held on January 27th, at the Radcliffe Infirmary, Oxford, to discuss the questions submitted by the Medico-Political Committee with regard to the medical inspection of school children. Mr. WHITELOCKE (Chairman) presided, and about seventeen members attended, together with two or three part-time inspectors not members of the Division. The SECRETARY (Dr. DUIGAN) gave an outline of the report of the Medico-Political Committee on the subject. After considerable discussion, the questions on p. 11 of the report were submitted by the CHAIRMAN to the meeting:

- (a) The system of payment for part-time inspectors, per head was unanimously approved.
- (b) Neither the Hertfordshire nor Derbyshire system was approved.

- (c) As to system of payment: the present scale of payment of part-time inspectors in the Oxford District (2s. per head, without further allowances) was unanimously declared to be insufficient. Stress was laid by many speakers on the distances that had to be travelled, and the large amount of clerical work demanded of the inspectors.

It was proposed by Dr. SUMMERHAYES, and seconded by Dr. CAUDWELL:

That the scale approved by the Reading Branch (capitation fee of 2s. and 3d. for every child on the school books, and 3d. per head for travelling and secretarial expenses, 2s. 6d. in all) be approved by the Oxford Division.

An amendment was proposed by Dr. H. FREEBORN, and seconded by Dr. ORMEROD:

That this meeting does not approve the present scale of payment of part-time inspectors within the Oxford district, but is not at present prepared to define the amount which should be paid.

This amendment was carried by a majority of 2 votes.

Treatment of Defective Children.—The meeting then considered the question of treatment of defective children. Dr. ORMEROD (M.O.H. for the City of Oxford) said in his opinion there was no need for school clinics in the city. He thought perhaps the most important item of inspection was with reference to pediculi on the head and body, and that a competent nurse could deal with these cases. Dr. MORTON (whole-time inspector for the county) considered that the chief difficulty had reference to ophthalmic cases and the increased work entailed at the Eye Hospital. This was being investigated, and they had no data yet. Dr. STEWMAN (Reading District) thought that, with the exception of diseases of the eyes and teeth, the present facilities for treatment were sufficient, and that it was very inadvisable to encroach in any way upon the private practitioner. He suggested that there should be travelling specialists to deal with diseases of the eyes and teeth in the rural districts. After further discussion it was finally proposed by Dr. H. FREEBORN and seconded by Dr. CAUDWELL:

That this meeting considers that the existing facilities for treatment of defective school children in this district are sufficient for all cases except dental cases, and that for these some provision should be made.

This was carried unanimously.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

SURGEON J. W. ROBERTSON, M.B., has been promoted to be Staff Surgeon, from May 15th, 1907. He was appointed Surgeon May 15th, 1899.

The following appointments have been made at the Admiralty: Fleet Surgeon R. C. MINNICK, Staff Surgeon A. J. LAURE, and Surgeon E. M. W. HEARN to the *Royal Arthur*, February 10th, and Surgeon H. H. HAYCROFT on re-commissioning, United; Fleet Surgeon F. H. A. CLAYTON, M.D., Staff Surgeon T. B. VICKERS, H. L. GEORGEHAN, M.D., and Surgeon R. H. ASTRIN, M.B., to the *Royal Arthur*, for the voyage home, undated; Staff Surgeon W. E. PATTERSON to the *Dido*, on re-commissioning, February 15th; Staff Surgeon G. GRISON and Surgeon G. S. DAVIDSON to the *Sophonis*, on re-commissioning, February 9th; Surgeon E. S. WILKINSON, M.B., to the *Royal Arthur*, February 10th, and to the *Lynx*, on re-commissioning, undated; Surgeon L. HAYES to the *Warrior*, February 10th; Surgeon F. H. STEPHENS to the *Defence*, February 10th; Fleet Surgeon F. W. PARKER to Malta Hospital; Fleet Surgeon A. H. L. COX to the *Commonwealth*, February 6th; Surgeon A. D. SPALDING to the *Tiger*, additional, for deckward duties, February 25th; Surgeon F. L. J. M. DE VERBULLE to the *Pembroke*, additional, for the *Endymion*, February 25th.

Mr. J. RANKIN, M.B., civil practitioner, has been appointed Surgeon and Agent at Boyne and Clogher, January 4th.

ARMY MEDICAL SERVICE.

COLONEL O. E. P. LLOYD, V.C., who is serving in India, is appointed Principal Medical Officer, 7th (Meerut) Division.

Colonel M. W. D. MURPHY, M.B., who is serving in India, is appointed Principal Medical Officer, Bareilly and Garhwal Brigades.

ROYAL ARMY MEDICAL CORPS.

CAPTAIN A. J. WILLIAMS, M.B., has been appointed Specialist in Operative Surgery at the Royal Herbert Hospital, Woolwich.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL H. W. STEVENSON is appointed Surgeon-General with the Government of Bombay. He joined the Bombay Medical Department as Assistant-Surgeon, April 2nd, 1881, and became Lieutenant-colonel, April 2nd, 1901. He has no war record in the Army List.

Lieutenant-Colonel T. H. SWANNY, Bengal, is permitted to retire from the service, from March 1st. He was appointed Surgeon, September 30th, 1878, and was made Lieutenant-Colonel, September 30th, 1898. He was in the Afghan war in 1879-80, being present in the operations at and around Kabul in December, 1879 (medal with clasp).

Colonel H. L. MCKAY, C.I.E., Bengal, is appointed Principal Medical Officer, Burma Division.

Colonel W. O'HARA, Madras, is appointed Principal Medical Officer, 9th (Secunderabad) Division.

TERRITORIAL FORCE.

SURGEON-LIEUTENANT-COLONEL R. E. WOOD, from the Lanarkshire Imperial Yeomanry, to be Surgeon-Lieutenant-Colonel, Lanarkshire Yeomanry, with precedence as in the Volunteer Force, April 1st, 1908.

ROYAL GARRISON ARTILLERY.

Surgeon-Captain A. W. SCOTT, from the 2nd East Riding of Yorkshire Royal Garrison Artillery (Volunteers), to be Surgeon-Captain, East Riding Regiment, with precedence as in the Volunteer Force, April 1st, 1908.

ROYAL ARMY MEDICAL CORPS.

The announcement of the appointment of Lieutenant-Colonel R. H. WOOD, which appeared in the *London Gazette* of October 20th, 1908, is cancelled.

SURGEON-LIEUTENANT-COLONEL AND HONORARY SURGEON-COLONEL J. K. PHILLIP, M.B., from the 2nd (Amulsi) Volunteer Battalion, the Black Watch (Royal Highlanders), to be Lieutenant-Colonel, with the honorary rank of Surgeon-Colonel, with precedence as in the Volunteer Force, April 1st, 1908.

SURGEON-LIEUTENANT-COLONEL AND HONORARY SURGEON-COLONEL T. PHILLIP, M.B., from the 1st (Renfrewshire) Volunteer Battalion Princess Louise's (Argyll and Sutherland Highlanders), to be Lieutenant-Colonel, with the honorary rank of Surgeon-Colonel, with precedence as in the Volunteer Force, April 1st, 1908.

Field Attachment to Units of the Territorial Medical Units.—**JOHN C. S. BERRITT, M.D.**, to be Lieutenant, May 15th, 1908; **CHARLES D. MATHIAS**, to be Lieutenant, May 25th, 1908; **Lieutenant HERBERT MEGGITT**, to be Captain, May 25th, 1908; **CHARLES E. M. JONES** to be Lieutenant, January 15th, 1909.

Yorkshire Mounted Brigade.—**Field Ambulance.**—**JOHN HEPPLE** to be Lieutenant, January 1st, 1909.

ROYAL FIELD ARTILLERY.

SURGEON-CAPTAIN E. G. PIERCE, from the 2nd West Riding of Yorkshire Royal Garrison Artillery (Volunteers), to be Surgeon-Major, 2nd West Riding Brigade, April 1st, 1909.

COLONIAL MEDICAL SERVICE.

The following gentlemen have been appointed to the West African Medical Staff: **Lieutenant-Colonel H. C. S. COLEMAN**, Southern Nigeria, W. F. ROACH, M.D., M.S. Montreal, Southern Nigeria, F. W. MCCAY, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., Northern Nigeria, E. J. PORTEROS, M.B., Ch.B. Edin., Northern Nigeria, A. M. DOWDALL, M.C.S. Edin., L.R.C.P., L.R.C.S. Edin., Gold Coast, E. W. THAYER, M.B., B.Ch. R.U.I., Gold Coast, J. MC DONAGH, M.B., Ch.B. R.U.I., Sierra Leone, P. J. KELLY, M.B., Ch.B. Glasg., Gold Coast, R. E. MCCONNELL, M.D., C.M. McGill Univ., D.T.M. Liverpool Univ., Gold Coast, A. E. NEALE, M.D., M.D., Southern Nigeria, Southern Nigeria, M. J. M. COLEMAN, Ch.B. Glasg., Southern Nigeria, S. L. G. D. MAGNAN, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., Southern Nigeria, T. H. STEPHEN, M.B., Ch.B. R.U.I., Southern Nigeria, F. G. SHARPE, L.R.C.P., L.R.C.S. Irel., Gold Coast.

Retirements.

J. DAVISON, M.B., Ch.B., Medical Officer, Northern Nigeria, from July 9th, 1908; **E. J. MOORE, F.R.C.S., L.R.C.P. Irel.**, Medical Officer, Southern Nigeria, on Pension, from October 15th, 1908; **J. C. BURRICH, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg.**, Medical Officer, Gold Coast, on pension, from January 15th.

Resignations.

J. THORP WALZE, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., Medical Officer, Northern Nigeria, from August 12th, 1908; **H. W. GESS, M.B., Ch.B. Edin.**, Medical Officer, Gold Coast, from August 2nd, 1908; **R. H. FRIEDEL, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg.**, Medical Officer, Southern Nigeria, from December 6th, 1908.

Death.

H. T. COOKMAN, L.R.C.P., L.R.C.S. Irel., Medical Officer, Gold Coast, at Cayenne Coast, on January 9th, from paralysis and heart failure.

Vital Statistics.

ENGLISH URBAN MORTALITY IN THE FOURTH QUARTER OF 1908.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

In the accompanying table will be found summarized the vital statistics for seventy-six of the largest English towns, based upon the Registrar-General's weekly returns for the fourth quarter of last year. The last quarter was distinguished in these towns during the quarter under notice were equal to an annual rate of 25.0 per 1,000 of the population, estimated at 16,254,952 persons in the middle of 1908; in the corresponding quarters of the three preceding years the rates were 26.6, 26.5, and 25.6 per 1,000 respectively. In London the birth-rates of the quarter were equal to 25.6 per 1,000, in the seventy-five other large towns averaged 25.6, and ranged from 13.4 in Hastings, 14.9 in Hornsey, 16.5 in Hounslow, 17.6 in Halifax, 19.0 in Bedford and 19.1 in Reading, to 33.9 in Swansea, 32.0 in Tynemouth, 33.3 in St. Helens, 32.5 in Middlesbrough, 33.4 in Middlesbrough, and 39.3 in Rhondda.

The 64,357 deaths registered in these towns last quarter were equal to an annual rate of 14.8 per 1,000, the rates in the three preceding fourth quarters having been 15.8, 16.2, and 15.8 per 1,000. The death-rate in London last quarter was equal to 15.7 per 1,000, while among the seventy-five other large towns it averaged 15.2 per 1,000, and ranged from 7.6 in Hornsey, 8.9 in King's Norton, 9.2 in East Ham, 9.5 in Leyton, 9.8 in Wandsworth (St. Pauls), and 9.9 in Hastings, to 19.0 in Stockport, 19.1 in Rochford, 19.2 in Rochdale, 19.3 in Preston, 19.8 in Oldham, 20.4 in Tynemouth, and 21.9 in Middlesbrough.

The 64,357 deaths from all causes included 6,540 which were referred to the principal infectious diseases; of these 1,619 resulted from measles, 479 from scarlet fever, 305 from diphtheria, 54 from whooping cough, 497 from "fever" (principally enteric), and 2,631 from diarrhoea, but not any from small-pox. These 6,540 deaths corresponded to an annual rate of 1.49 per 1,000, the death-rates from the same diseases in the fourth quarters of the three preceding years having been 1.57, 1.72, and 1.68 per 1,000. The rate of mortality in London last quarter from these principal infectious diseases was equal to 1.25 per 1,000, while it averaged 1.61 per 1,000 in the seventy-five other large towns, among which the rates ranged from 0.11 in Hastings, 0.38 in Hornsey, 0.52 in Northampton, 0.44 in Epsom, 0.54 in Barrow-in-Furness, 0.57 in Plymouth, and 0.8 in Hirkstead, to 2.74 in Grimsby, 2.75 in Preston

Analysis of the Vital Statistics of Seventy-six of the Largest English Towns during the Fourth Quarter of 1908.

Towns.	Estimated Population middle of 1908.	Births.	Deaths.	Births. per 1,000 Living.	Deaths. per 1,000 Living.	Principal Infectious Diseases.	Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping cough.	Fever.	Diarrhoea.	Deaths of Children under one year of age per 1,000 Births.	Rate per cent. of Unnatural Deaths.
76 Towns	7,234,732	109,071	61,467	25.0	14.8	1.49	6,540	—	1,619	479	800	714	497	2,631	146	0.9
75 Provincial Towns	6,044,135	78,897	46,752	26.6	16.2	1.61	4,931	—	1,166	315	575	410	382	2,045	155	1.2
London	4,755,757	30,434	17,615	23.6	13.7	1.25	1,609	—	453	136	225	94	115	586	123	0.1
Croydon	157,693	91	129	25.6	12.5	1.17	50	—	12	8	6	7	2	12	137	0.2
Willesden	134,792	95	130	23.2	10.3	1.27	53	—	8	8	6	4	1	1	48	—
Hornsey	95,713	57	109	14.9	7.6	0.28	7	—	1	1	1	1	1	1	187	—
Tottenham	126,146	562	516	28.4	15.2	1.22	75	—	41	3	5	2	1	19	187	—
West Ham	315,000	2,669	1,494	26.8	18.1	2.15	182	—	56	22	12	13	17	19	101	0.1
East Ham	142,976	840	449	21.9	9.1	1.20	46	—	6	7	1	1	1	9	83	0.3
Leyton	123,815	514	240	23.0	9.5	0.69	23	—	7	2	4	—	10	19	134	—
Walthamstow	131,486	702	269	25.7	11.6	0.96	34	—	7	1	4	—	10	19	134	—
Hastings	67,817	294	181	13.4	9.9	0.11	2	—	—	—	—	—	—	2	100	—
Brighton	123,367	690	282	18.3	13.8	0.44	15	—	2	—	—	—	1	3	100	—
Canterbury	211,483	1,869	994	28.0	14.2	1.01	57	—	4	11	5	5	6	31	126	0.6
Bournemouth	70,801	314	160	16.5	11.0	0.74	14	—	4	11	5	5	6	31	126	0.6
Southampton	122,196	777	293	25.7	12.1	0.78	26	—	2	6	6	7	1	10	86	0.5
Reading	181,647	1,215	412	23.5	10.7	0.57	21	—	2	1	1	1	1	3	93	1.7
Northampton	96,405	507	207	19.6	10.9	0.32	8	—	—	—	—	—	1	3	93	2.5
Ipswich	73,852	367	185	25.6	14.1	0.96	19	—	—	—	—	—	1	13	116	—
Great Yarmouth	53,152	339	260	23.0	14.0	1.47	21	—	6	—	—	—	1	12	88	—
Norwich	122,441	779	490	23.6	13.0	0.96	32	—	1	6	—	6	4	15	145	0.5
Plymouth	122,113	673	428	20.7	13.4	0.57	19	—	1	—	6	—	4	3	108	—
Devonport	81,525	304	176	23.0	12.6	1.42	31	—	—	—	10	—	4	12	109	—
Bristol	372,785	2,094	1,065	21.0	12.6	0.70	70	—	12	2	20	—	12	22	137	0.2
Gloucester	67,293	290	129	31.2	16.4	1.53	29	—	—	—	—	2	8	11	174	1.7
Burton-on-Trent	53,356	262	165	19.5	11.4	0.83	12	—	—	1	3	3	—	8	125	1.8
Wolverhampton	102,318	632	421	21.9	15.2	1.37	38	—	2	1	3	10	2	20	155	0.6
Walsall	97,778	765	337	23.1	16.6	1.74	46	—	—	—	—	—	1	23	198	0.9
Walsworth	68,051	383	170	21.0	9.8	0.76	14	—	—	—	—	—	1	4	96	1.1
West Bromwich	69,786	301	114	16.0	2.03	—	59	—	4	4	2	11	—	17	173	3.0
Birmingham	558,357	3,988	2,185	23.4	14.6	1.44	217	—	45	16	39	14	17	86	145	3.6
King's Norton	78,608	482	187	24.4	8.9	1.32	22	—	3	15	—	—	2	9	156	1.3
Smethwick	83,416	449	227	23.9	12.6	0.98	18	—	—	—	—	—	—	3	156	1.3
Aston Manor	34,256	489	257	21.6	11.4	1.14	26	—	2	6	2	3	1	10	139	0.4
Coventry	78,889	637	255	30.1	15.3	0.70	15	—	2	2	1	2	3	8	113	0.8
Leicester	240,172	1,253	779	21.0	15.2	3.55	233	—	171	6	4	2	2	3	229	0.4
Derby	71,803	661	318	22.1	16.5	2.74	33	—	8	2	—	—	6	37	229	0.5
Nottingham	260,449	1,743	971	24.9	16.7	1.60	112	—	18	8	12	8	6	60	188	0.5
Derby	127,583	832	465	24.9	13.6	1.20	41	—	11	2	10	—	2	16	121	—
Stockport	122,333	739	553	25.8	19.0	2.65	73	—	26	2	2	3	5	35	213	—
Birkenhead	119,830	673	343	27.2	13.7	0.58	16	—	—	—	—	—	3	11	126	0.7
Wallasey	68,849	306	111	27.0	11.9	0.86	13	—	—	3	2	3	2	6	96	0.5
Liverpool	753,203	5,372	2,666	29.5	18.1	1.85	374	—	45	52	46	40	25	166	198	2.8
Bootle	68,248	520	319	28.4	17.4	2.13	39	—	13	10	6	2	1	7	144	3.4
St. Helens	65,812	613	402	32.5	16.0	1.48	37	—	14	—	—	—	—	8	159	2.7
Wigan	89,656	726	470	30.2	18.7	2.20	55	—	2	3	4	13	13	18	183	—
Warrington	71,268	590	340	30.3	18.0	2.98	57	—	18	9	3	2	5	20	160	3.8
Bolton	185,398	1,401	711	22.1	14.3	1.23	62	—	3	4	5	8	16	23	162	0.7
Bury	59,069	291	154	21.1	17.0	1.76	33	—	1	4	1	—	15	185	1.1	
Manchester	649,251	4,569	2,134	26.2	18.0	2.13	371	—	105	45	45	23	37	115	172	0.7
Salford	239,294	1,705	796	26.5	17.1	2.21	142	—	9	19	35	14	14	51	173	0.4
Oldham	142,507	1,010	609	24.6	19.8	2.60	100	—	36	7	7	7	7	39	183	0.1
Rochdale	88,823	538	302	27.8	17.2	2.82	67	—	31	4	4	3	3	23	236	2.0
Burnley	105,100	750	482	26.9	17.1	1.78	80	—	2	2	3	2	5	36	214	1.5
Blackburn	135,961	739	322	21.9	17.0	2.68	98	—	16	9	3	2	7	56	219	1.5
Preston	117,799	733	516	25.1	19.5	2.75	87	—	4	—	—	2	7	69	236	2.9
Barrow-in-Furness	62,312	470	299	28.1	12.5	0.54	9	—	1	—	5	2	2	1	120	5.3
Huddersfield	94,776	578	463	22.6	13.4	3.27	83	—	57	—	1	1	5	19	170	0.9
Halifax	111,018	594	437	17.6	14.7	0.87	26	—	10	1	1	3	6	21	145	1.6
Bradford	232,135	1,431	714	19.0	15.0	0.82	61	—	4	3	14	13	9	21	158	0.3
Leeds	477,107	2,960	1,856	23.1	15.1	1.02	132	—	44	1	16	21	7	43	144	1.9
Sheffield	463,222	3,583	2,060	28.3	16.6	2.30	287	—	81	14	12	9	15	156	179	—
Rotherham	63,736	342	227	31.7	19.1	5.61	96	—	44	—	1	12	7	32	223	0.6
York	83,661	563	275	25.1	11.9	1.31	30	—	—	—	—	2	2	20	128	—
Hull	271,137	2,084	1,261	27.8	17.2	2.04	149	—	44	2	17	3	12	71	159	0.5
Middlesbrough	105,511	602	609	32.5	21.9	5.73	159	—	99	1	6	3	2	48	210	1.7
Stockton-on-Tees	53,160	419	238	24.9	16.7	1.96	28	—	4	—	3	7	1	198	1.0	
West Hartlepool	71,573	507	249	24.0	12.0	0.97	20	—	22	1	4	3	5	44	187	1.8
Sunderland	137,693	1,271	780	26.9	14.2	1.81	77	—	22	1	4	3	3	24	226	2.0
South Shields	115,538	835	460	26.9	14.8	1.73	54	—	—	5	9	2	2	29	174	4.8
Gateshead	128,393	971	505	26.3	14.6	1.34	46	—	11	3	7	2	2	36	216	1.5
Newcastle-on-Tyne	277,257	2,073	1,259	27.6	16.9	0.99	74	—	11	3	10	20	6	24	173	0.2
Tyneside	53,282	414	204	20.4	15.5	0.50	29	—	—	—	3	6	1	19	203	2.3
Newport (Mon.)	76,955	635	326	30.6	15.8	0.69	14	—	1	1	9	7	1	2	136	0.5
Cardiff	191,446	1,350	644	26.5	12.7	0.66	34	—	—	—	10	7	1	15	121	0.5
Exeter	133,157	809	569	39.3	15.9	1.83	66	—	2	3	11	5	6	39	169	1.1
Rhonda	77,219	438	176	18.4	15.8	0.84	28	—	—	3	3	7	—	18	175	—
Merthyr Tydfil	97,810	493	263	31.9	17.6	0.92	24	—	1	—	3	—	—	13	147	1.7
Swansea	97,810	493	263	31.9	17.6	0.92	24	—	1	—	3	—	—	13	147	1.7

2.82 in Rochdale, 2.98 in Warrington, 3.27 in Huddersfield, 3.55 in Leicester, 5.61 in Rotherham, and 5.75 in Middlesbrough.

The 1,619 deaths from measles were equal to an annual rate of 0.37 per 1,000; in London the death-rate from this disease was equal to 0.35 per 1,000; in the seventy-five other large towns it averaged 0.38, and was highest in Tottenham, Leicester, Rochdale, Huddersfield, Rotherham, and Middlesbrough. The 479 fatal cases of scarlet fever corresponded to an annual rate of 0.11 per 1,000; in London also the scarlet fever death-rate was 0.11; among the seventy-five other large towns this disease was proportionally most fatal in Handsworth (Staffs), West Bromwich, and Huddersfield. In Huddersfield the annual rate of 0.60 deaths from diphtheria were equal to an annual rate of 0.18 per 1,000; the rate in London was 0.17 per 1,000, while it averaged 0.19 in the seventy-five other large towns, and was highest in Croydon, East Ham, Devonport, Kingston, South Shields, and Huddersfield. The 134 fatal cases of whooping-cough corresponded to an annual rate of 0.12 per 1,000; in London the death-rate from whooping-cough was 0.07 per 1,000, while it averaged 0.14 in the seventy-five other large towns, among which this disease showed the greatest proportional mortality in Wolverhampton, West Bromwich, Wigan, Rotherham, Huddersfield, Tees, and Tynemouth. The 497 deaths referred to different forms of "fever" were equal to an annual rate of 0.11 per 1,000; in London the rate was 0.09 per 1,000, while it averaged 0.12 in the seventy-five other large towns; and was highest in Devonport, Hanley, Grimsby, Wigan, Bolton, and Rotherham. The 2,631 fatal cases of diarrhoea corresponded to an annual rate of 0.60 per 1,000; the rate in London was 0.46 per 1,000, while it averaged 0.67 in the seventy-five other large towns, among which diarrhoea was proportionally most fatal in Grimsby, Burnley, Blackburn, Preston, Rotherham, Middlesbrough, and Tynemouth.

Infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births, was equal to 146 per 1,000 last quarter, against 134, 135, and 154 in the corresponding quarters of the three preceding years. In London the rate of infant mortality in the quarter under notice was 123 per 1,000, while it averaged 155 in the seventy-five other large towns, and ranged from 48 in Huddersfield, 60 in Hastings, 83 in Leyton and in Bournemouth, 86 in King's Norton, and 93 in Northampton, to 215 in Stockport, 214 in Burnley, 219 in Blackburn, 223 in Rotherham, 226 in Rochdale, and 236 in Preston.

The causes of 0.9 per cent. of the deaths not certified either by a registered medical practitioner or by a coroner. All the causes of death were fully certified in Croydon, Hornsey, Tottenham, East Ham, Walthamstow, Brighton, Southampton, Ipswich, Great Yarmouth, Plymouth, Devonport, Derby, Stockport, Wigan, Leeds, York, West Hartlepool, Cardiff and Swansea; among the other towns the proportion per cent. ranged upwards to 5.0 in West Bromwich, 3.4 in Bootle, 3.9 in Birmingham, 4.8 in Warrington, 4.3 in King's Norton, 4.8 in South Shields, 5.3 in Barrow-in-Furness, and 5.7 in Gateshead.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,449 births and 5,835 deaths were registered during the week ending Saturday last, February 6th. The annual rate of mortality in these towns, which had been 15.7 and 18.0 per 1,000 in the two preceding weeks, further rose last week to 18.7 per 1,000. The rates in the several towns ranged from 6.9 in Devonport, 8.8 in Walthamstow, 9.2 in Hastings, 10.9 in Hornsey, 11.2 in Huddersfield, 12.1 in East Ham, 12.6 in Handsworth (Staffs), 12.8 in Rotherham, and 12.9 in Grimsby, to 19.6 in Northampton, 22.7 in Croydon, 22.9 in Bradford, 23.5 in Salford, 25.5 in Hanley, 24.0 in Bootle, 24.6 in Manchester, and 25.3 in Middlesbrough. In London the rate of mortality was 20.3 per 1,000, while it averaged 18.2 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.6 per 1,000 in the seventy-six towns; in London this death-rate was equal to 1.5 per 1,000, while among the seventy-five other large towns the death-rates from these principal infectious diseases ranged upwards to 3.0 in Manchester, 2.3 in St. Helens, 3.5 in Birmingham, 4.4 in Smethwick, 6.4 in Middlesbrough, and 7.2 in Warrington. Measles caused a death-rate of 1.1 in St. Helens and in Middlesbrough, 1.2 in King's Norton and in Manchester, 1.6 in Sheffield and in Rotherham, 1.7 in Leicester, 1.8 in West Ham, 1.9 in Birmingham, 2.6 in West Hartlepool, 3.7 in Smethwick, 5.4 in Middlesbrough, and 5.8 in Warrington; diphtheria of 1.2 in Derby; whooping-cough of 1.1 in St. Helens and 2.1 in Swansea; "fever" of 1.1 in Salford; and diarrhoea of 1.3 in Southampton and 1.5 in Warrington. The mortality from scarlet fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospital and the London Fever Hospital, which had been 3,261, 3,211, and 3,201 at the end of the three preceding weeks, had further fallen to 3,117 at the end of last week; 312 new cases were admitted during the week, against 358, 379, and 359 in the three preceding weeks. One case of small-pox was admitted and remained under treatment at the end of the week.

HEALTH OF SCOTTISH TOWNS.

DURING the week ended Saturday last, February 6th, 869 births and 484 deaths were registered in the principal Scottish towns. The annual rate of mortality in these towns, which had been 18.8 and 19.1 per 1,000 in the two preceding weeks, rose again to 18.5 per 1,000 last week, but was 0.2 below the mean rate during the same period in the twenty-six large English towns. Among these Scottish towns the death-rates ranged from 14.6 in Leith and Aberdeen, to 20.1 in Aberdeen and 25.9 in Dundee. The death-rate from the principal infectious diseases averaged 2.2 per 1,000, the highest rates being recorded in Glasgow and Aberdeen. The 300 deaths registered in Glasgow included 2 which were referred to scarlet fever, 1 to diphtheria, 35 to whooping-cough, 2 to cerebro-spinal meningitis, and 9 to diarrhoea. Three fatal cases of whooping-cough were recorded in Edinburgh; 2 of diphtheria in Dundee; 2 of whooping-cough in Paisley; and 2 of measles, 2 of diphtheria, 3 of whooping-cough, and 2 of diarrhoea in Aberdeen.

HEALTH OF IRISH TOWNS.

DURING the week ended Saturday, February 6th, 618 birth and 454 deaths were registered in the twenty-two principal urban districts of Ireland, as against 730 births and 492 deaths in the preceding period. The annual rate of mortality in these districts, which had been 21.6 and 21.5 per 1,000 in the three preceding weeks, fell to 20.7 per 1,000 in the week under notice, this figure being 2.0 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 24.5 and 17.5 respectively, those in other districts ranging from 7.8 in Galway and 9.7 in Waterford to 38.4 in Sligo and 40.1 in Newtownards, while Cork stood at 26.0, Londonderry at 15.7, and Limerick at 15.7. The zymotic death-rate in the twenty-two districts averaged 1.0 per 1,000, as against 1.4 per 1,000 in the preceding period.

Hospitals and Asylums.

EAST SUSSEX ASYLUM, HELLINGLY.

THE annual report for the year 1907 of Dr. F. R. P. Taylor, the medical superintendent of this asylum, shows that on January 1st, 1907, there were 1,104 patients on the asylum registers, and that on the last day of the year there remained 978. The total cases under care during the year numbered 1,367, and the average numbers daily resident 1,085. During the year 263 were admitted, of whom 241 were direct and 22 indirect admissions or transfers. The attacks were first attacks in 146, not-first attacks in 69, unknown whether first attack or not in 16, and 31 were congenital cases. In 85 of the direct admissions the attacks were first attacks within three, and in 27 more within twelve months of admission, and of the not-first attack cases, in 18 the illness was of less than three months' duration, and in 11 more within twelve months of admission. Thus, in 138 of the 241 direct admissions the illness was of recent origin on admission. The direct admissions were classified according to the several forms of mental disorder into: Mania of all kinds, 78; melancholia of all kinds, 67; senile and secondary dementia, 27; delusional insanity, 12; general paralysis, 7; insanity with epilepsy, 12; insanity with gross brain lesions, 5; confusional insanity and stupor, 2 each; primary dementia and not insane, 1 each; and congenital or infantile mental defect, 29. The small proportion of general paralytics admitted (under 4 per cent.), is unusual. As to the probable etiological factors in the direct admissions, alcohol was assigned in 19 (or 7.9 per cent.), syphilis in 4, epilepsy in 26, critical periods in 93 (old age in 42), various bodily affections in 8, congenital defect not amounting to imbecility in 7, and mental stress in 18. An insane heredity was ascertained in 83, or 35.6 per cent.; an epileptic heredity in 13, and an alcoholic heredity in 10. As a matter of fact, however, reliable histories could only be obtained in 177 of the direct admissions, and gave a proportion of hereditary influences of 58.5 per cent. in these cases. During the year 91 were discharged as recovered, giving a recovery-rate on the direct admissions of 37.7 per cent., or of recoveries in direct admissions on direct admissions of 32.3 per cent. There were also 23 discharged as relieved, and 176 as not improved, the large numbers so discharged, ensuing upon the termination of the contract with the London Asylums Committee, accounting for the decrease in the number of the patients in the asylum at the end of the year. During the year also 98 died, giving a death-rate on the average numbers resident of 9.01 per cent. All deaths were due to natural causes. To phthisis 13 deaths were due, and there were also 6 deaths from other forms of tuberculosis; 15 died from general paralysis, 19 from senile decay, 2 from senile fever, and 3 from dysentery, the remaining causes of death offering no point of special interest. Dysentery, Dr. Taylor says, appears to be gradually dying out at this asylum, and with the exception of a slight epidemic of enteric fever, confined to the female side and attacking 6 patients in all, the patients were free from zymotic disease. Five inquests were held during the year, in all cases no blame attaching to the asylum staff, and no serious casualty occurred.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

- BATH ROYAL UNITED HOSPITAL.—House-Physician. Salary, £80 per annum.
- BIRKENHEAD UNION.—Resident Male Medical Officer for the Infirmary and Sanatorium. Salary, £100 per annum.
- BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND VEGETABLE DISEASES.—Clinical Assistant. Honorarium at the rate of 52 guineas per annum.
- BIRMINGHAM GENERAL HOSPITAL.—(1) House-Surgeon. (2) Two Assistant House-Surgeons. Salary at the rate of £50 and £40 per annum respectively.
- BRADFORD ROYAL INFIRMARY.—(1) Two House-Surgeons. (2) House-Physician. £100 per annum each.
- BRISTOL COSHAM MEMORIAL HOSPITAL, Kingswood.—House-Surgeon. Salary, £50 per annum.
- BRISTOL ROYAL INFIRMARY.—Resident Casualty Officer. Salary at the rate of £50 per annum.
- BRIXTON DISPENSARY.—Resident Medical Officer. Salary, £150 per annum.
- CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House-Surgeon. Salary, £50 per annum.
- COLCHESTER ESSEX COUNTY HOSPITAL.—House-Surgeon. Salary, £80 per annum.
- DERBY COUNTY ASYLUM, Mickleover.—Junior Assistant Medical Officer male. Salary, £120, rising to £150 per annum.
- DEVONPORT ROYAL ALBERT HOSPITAL AND EYE INFIRMARY.—Assistant Resident Medical Officer. Salary at the rate of £50 per annum.
- DURHAM COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary, £120, rising to £150 per annum.
- GLASGOW LUNACY BOARD.—Assistant Medical Officer at the Mental Hospital, Woodilee. Salary to begin, £125 per annum.

HALIFAX: HALIFAX ROYAL INFIRMARY.—Third House-Surgeon. Salary, £80 per annum.
HOSPITAL FOR DISEASES OF THE SKIN, Stamford Street, S.E. —(1) Assistant Physician. (2) Assistant Surgeon.
KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.
KING'S COLLEGE HOSPITAL.—Assistant Clinical Pathologist.
LEIPSTER INFIRMARY.—House-Physician. Salary at the rate of £100 per annum.
LIVERPOOL DAVID LEWIS NORTHERN HOSPITAL.—House-Surgeon. Salary at the rate of £60 per annum.
LONDON HOSPITAL, Whitechapel, E.—Medical Registrar. Salary, £100 per annum.
LONDON THROAT HOSPITAL, Great Portland Street, W.—Assistant Surgeon.
MANCHESTER CHILDREN'S HOSPITAL.—Male Resident Medical Officer. Salary, £40 first six months, £50 second six months.
MANCHESTER CORPORATION.—Assistant Medical Officer at the Bache Sanatorium. Salary at the rate of £100 per annum.
MANCHESTER: ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—Male and Female House-Surgeons. Honorarium, £25 for six months each.
MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, Chancery Street, W.C.—Medical Superintendent. Salary, £100 per annum.
MELROSE: ROXBURGH DISTRICT ASYLUM.—Assistant Medical Officer. Salary, £150 per annum.
NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—Clinical Assistant for the Out-patient Department.
PLAISTOW: ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN.—Assistant Resident Medical Officer. Salary at the rate of £80 per annum.
QUEENSLAND GOVERNMENT.—Assistant Medical Superintendent of the Lunatic Asylum, Toowoomba. Salary, £400 per annum.
ST. PANCRAS AND NORTHERN DISPENSARY, Euston Road, N.W.—Resident Medical Officer. Salary, £100 per annum.
ST. PETER'S HOSPITAL FOR STONE AND OTHER URINARY DISEASES, Henrietta Street, W.C.—(1) Assistant Surgeon. (2) Junior House-Surgeon. Salary at the rate of £50 per annum.
SHREWSBURY: SALOP INFIRMARY.—House-Surgeon. Salary, £100 per annum.
SOMERSET AND BATH ASYLUM, Wells.—Second Assistant Medical Officer. Salary, £130, rising to £150 per annum.
STROUD GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum.
WESTERN COUNTIES ASYLUM, Starcross, Devon.—Medical Officer. Salary, £150 per annum.
WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Honorary Ophthalmic Surgeon.
WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Two House-Physicians. (2) Three House-Surgeons.
VENTNOR ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Male Assistant Resident Medical Officer. Salary, £100 per annum.

APPOINTMENTS.

BADDEROW, George W., M.B., M.R.C.S.Eng., Assistant Surgeon to the Hospital for Diseases of the Throat, Golden Square, W.
BIRD, Gerald F., M.B. Cantab., Medical Officer and Public Vaccinator to the Godalming District of the Guildford Union.
DAVID, A. S., M.R.C.S., L.R.C.P., District Medical Officer of the Chertseyton Union.
ELLERTON, H. Byam, M.R.C.S.Eng., L.R.C.P.Lond., Inspector of Asylums in Queensland, and Medical Superintendent of the Goodna Asylum, near Brisbane.
GARDEN, W. S., M.B., B.S. Aberd., Medical Officer of Health, Horbury Urban District.
HILLYER, W. H., M.D. Durh., District and Workhouse Medical Officer of the East Grinstead Union.
HUNTER, J. W. M., L.R.C.P. and S. Edin., District Medical Officer of the Basford Union.
MORE, J., L.R.C.P., M.R.C.S., Medical Officer of Health of the Rothwell Urban District.
READE, A. G., L.R.C.S.Eng., L.R.C.P.Lond., Senior Assistant Medical Officer to the new Metropolitan Asylums Board's Children's Infirmary, Carshalton, Surrey.
ROBERTSON, O. H., L.S.A., District Medical Officer of the Southwell Union.
WATERFIELD, W. H., L.R.C.P. and S. Irell, District and Workhouse Medical Officer of East Stonehouse Parish.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

WILLIAMS.—On February 7th, at Hendre, Wrexham, the wife of R. Geoffrey Williams, of a daughter.

DEATH.

KEY.—At Roodepoort, Transvaal, on February 2nd, Dr. James Miln Key, eldest son of Dr. Andrew Key, Montrose, aged 41. (By cable.)

BOOKS, ETC., RECEIVED.

London: W. B. Saunders and Co. 1908:
 A Reference Handbook of Gynaecology for Nurses. By C. Macfarlane, M.D. 6s.
 Surgery: Its Principles and Practice. By Various Authors. Edited by W. W. Keen, M.D., LL.D., and J. C. De Castro. Vol. IV. 3s.
 Sour Milk and Pure Cultures of Lactic Acid Bacilli in the Treatment of Disease. By G. Hershbell, M.D. London: H. J. Glaisner, 1909. 1s. 6d.

DIARY FOR THE WEEK.

MONDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 4 p.m.—Hunnician Oration by the President, Mr. Henry Morris.

TUESDAY.

CHELSEA CLINICAL SOCIETY, Chelsea Dispensary, Manor Street, Chelsea, S.W., 8.30 p.m.—Communications:—Dr. Alfred Edlowes: On Rupture, and the Treatment of Corns and Plantar Warts. Dr. Victor Bonney: Some useful Prescriptions in the Practice of Gynaecology (illustrated by lantern slides).

ROYAL SOCIETY OF MEDICINE:

PATHOLOGICAL SECTION, 20, Hanover Square, W., 8.30 p.m.—Paper:—Dr. M. Greenwood, Jull: The Limits of Significance of the Opsonic Index. The following will speak: Colonel Leishman, Dr. Ledingham, Dr. Eyre, and Mr. Goadby.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Tichborne Street, W., 8.30 p.m.—Papers:—Dr. E. Graham Little: The Treatment of Skin Diseases by Ionization. Dr. F. S. Languead: Infant Feeding with Undiluted Curd Milk.

ROYAL SOCIETY OF MEDICINE:

DERMATOLOGICAL SECTION, 20, Hanover Square, W., 5 p.m.—Clinical Cases:—Dr. MacLeod: A Case of Lupus Erythematosus treated by Zinc Ionization; and other cases.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

ELECTRO-THERAPEUTICAL SECTION, 20, Hanover Square, W., 8.30 p.m.—Dr. C. Thurstan Holland: The X-ray Treatment of Exophthalmic Goitre. Dr. A. Stanley Green: The Value of Roentgen Examination in some Conditions of Diseased Bone. Dr. A. Howard Price: Treatment of Tuberculous Glands in Neck by means of X Rays.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11, Chandos Street, Cavendish Square, London, W., 8.30 p.m.—Dr. H. G. Waters: A New Pathogenic Spirochaete Associated with Bronchitis. Dr. T. Fausset Macdonald: Tropical Notes from Barbados.

POST-GRADUATE COURSES AND LECTURES.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstrations, 10 a.m.: Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2 p.m., Special Clinics: Ear, Throat, and Nose, and 4 p.m., Monday, and Tuesday; Thursday: Skin, and 4 p.m., Tuesday, and noon, Friday; Eye, 11 a.m., Wednesday and Saturday; Radiography, 4 p.m., Thursday. Special Lectures: Monday, 3.15 p.m., Some Common Rectal Complaints. Tuesday, 2.15 p.m., Aortic Disease.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chancery Street, W.C.—The following clinical demonstrations have been arranged for next week, 1909: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday. 4 p.m., each day: Monday, Skin. Tuesday, Medical. Wednesday, Surgical. Thursday, Surgical. Friday, Eye. Lectures at 5.15 p.m. each day will be given as follows: Monday, The Diagnosis and Surgical Treatment of Duodenal Ulcer. Tuesday, The Situations and Diagnosis of Obsolete Fractures. Wednesday, The Treatment of Syphilis. Thursday, The Treatment of the Falling Heart.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Surgery of the Nervous System. Friday, 3.30 p.m., The Treatment of Sciatica and Allied Affections.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m., Surgical Out-patient, 2.30 p.m., Medical Out-patient: Nose, Throat and Ear; X Rays; 4.30 p.m., Medical In-patient. Tuesday, 10 a.m., Medical Out-patient Clinic; 2.30 p.m., Operations; Clinics: Surgical Gynaecological; 4.30 p.m., Lantern Lecture, Tumours of the Female Breast. Wednesday, 2.30 p.m., Medical Out-patient, Skin, and Eye and Throat. Thursday, 2.30 p.m., Gynaecological Operations; Clinics: Medical Out-patient, Surgical Out-patient, X Rays; 3 p.m., Medical In-patient; 4.30 p.m., Lecture, The Diagnosis and Treatment of Fractures. Friday, Clinic; 10 a.m., Surgical Out-patient; 2.30 p.m., Operations; Clinics: Medical Out-patient, Eye; 3 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, WEST LONDON HOSPITAL, Hammersmith Road, W.—The following are the arrangements for next week:—Daily, 2 p.m., Medical and Surgical Clinics; X Rays. 2.30 p.m., Operations, Monday and Thursday, and Wednesday and Saturday, 2 p.m.: Diseases of the Eyes. Tuesday and Friday, 10 a.m., Gynaecological Operations. 2 p.m., Monday and Wednesday, and 10 a.m., Tuesday and Wednesday, 10 a.m.: Diseases of Throat, Nose, and Ear; 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, 10 a.m.: Diseases of Children; 2.30 p.m., Diseases of Women. Lectures: At 12 noon, Monday. Pathological Demonstration. At 10 a.m., Monday and Thursday, Surgical Registrar. Demonstration of Surgical Cases in Wards. Friday, Medical Registrar. Demonstration of Cases in Medical Wards. At 12.15 p.m., Wednesday and Saturday, Practical Medicine. At 5 p.m., Monday, Sleeping Sickness. Tuesday, Gynaecology. Wednesday, Practical Surgery. Thursday, Clinical Lectures. At 12 noon, Friday, Some Clinical Observations on Heart Disease.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C., Thursday, 6 p.m., Syphilis as it Modifies other Eruptions of the Skin.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
FEBRUARY.		FEBRUARY <i>Continued.</i>	
13 SATURDAY ..	FOLKESTONE DIVISION, <i>South-Eastern Branch</i> , Hotel Wampach, Folkestone, 8.15 p.m. LEINSTER BRANCH, Annual General Meeting, Royal College of Physicians, Kildare Street, Dublin, 4.30 p.m.; Annual Dinner, in the College Hall, 7.30 p.m.	20 SATURDAY ..	
14 Sunday ..		21 Sunday ..	
15 MONDAY ..		22 MONDAY ..	
16 TUESDAY ..	LONDON: Standing Ethical Subcommittee, 2 p.m. ALTRINCHAM DIVISION, <i>Lancashire and Cheshire Branch</i> , Brooklands Hotel, 5 p.m. BRADFORD DIVISION, <i>Yorkshire Branch</i> , Adjourned Meeting, Great Northern Victoria Hotel, Bradford, 8.30 p.m. CARDIFF DIVISION, <i>South Wales and Monmouthshire Branch</i> , Cardiff. ST. HELEN'S DIVISION, <i>Lancashire and Cheshire Branch</i> , Fleece Hotel, St. Helen's, 8.45 p.m.	23 TUESDAY ..	HAMPSTEAD DIVISION, <i>Metropolitan Counties Branch</i> , Business Meeting. BATH AND BRISTOL BRANCH, Bath. LEICESTER AND RUTLAND DIVISION, <i>Midland Branch</i> , Special Meeting, Leicester Infirmary, 4.15 p.m.
17 WEDNESDAY ..	CHICHESTER AND WORTHING DIVISION, <i>South-Eastern Branch</i> , Infirmary, Chichester, 3 p.m. GLOUCESTERSHIRE BRANCH, General Meeting, Stroud Hospital, 6.30 p.m.; Supper, Subscription Rooms, afterwards. LAMBETH DIVISION, <i>Metropolitan Counties Branch</i> , Guy's Hospital, 4 p.m. LEIGH DIVISION, <i>Lancashire and Cheshire Branch</i> , Co-operative Rooms, Ellesmere Street, 8.30 p.m.	24 WEDNESDAY ..	LONDON: Metropolitan Counties Branch Council, 4.30 p.m. CITY DIVISION, <i>Metropolitan Counties Branch</i> , Clinical Meeting, Queen's Hospital for Children, Hackney Road, 4 p.m. STAFFORDSHIRE BRANCH, General Meeting, North-Western Hotel, Stafford, 5.15 p.m.; Dinner, 7.15 p.m. BIRMINGHAM BRANCH, Pathological and Clinical Section, Medical Institute, Edmund Street, 8 p.m. EDINBURGH BRANCH, Winter Clinical Meeting, Royal Infirmary, Edinburgh, 4 p.m.; Museum open 11 a.m.; Dinner, Royal British Hotel, Princes Street, 6.30 p.m.
18 THURSDAY ..		25 THURSDAY ..	
19 FRIDAY ..	SWANSEA DIVISION, <i>South Wales and Monmouthshire Branch</i> , 8.15 p.m.	26 FRIDAY ..	
		27 SATURDAY ..	
		28 Sunday ..	
		1 MONDAY ..	
		2 TUESDAY ..	
		3 WEDNESDAY ..	
			LONDON: Subcommittee of Science Committee on Development of Scientific Work of Divisions and Branches, 2 p.m. LONDON: Uterine Cancer Committee, 5 p.m.

MARCH.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent

by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, FEBRUARY 20TH, 1909.

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Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

BIRMINGHAM BRANCH.

An ordinary meeting was held on February 11th at the Medical Institute. Mr. F. MARSH, President, was in the chair, and twenty-five members were present.

The Association and the Midwives Board.—Dr. KIRBY moved, Sir JAMES SAWYER seconded, and it was carried unanimously:

That this meeting of the Birmingham Branch urges on the Central Council the desirability of approaching the Departmental Committee, now sitting to consider the working of the Midwives Act, with a request for direct representation of the British Medical Association on the Midwives Board.

Stenosis of Stomach and Intestine.—Mr. LEEDHAM-GREEN showed a young man who had been the subject of a series of abdominal operations for the relief of stenosis of the stomach and intestine. The first operation took place seven years ago, when another surgeon performed an anterior gastro-jejunostomy. This was effected by the use of a medium-sized Murphy's button, which was not subsequently passed. Two years later a perforated ulcer of the jejunum gave rise to a localized peritonitis, which necessitated the opening and draining of an abscess. Four months later another ulcer of the jejunum perforated, and gave rise to extensive peritonitis, which was relieved by a third operation. Early in 1908 the patient was operated upon by Mr. Leedham-Green for the relief of chronic intestinal obstruction due to adhesion of a portion of the small intestine to the anterior abdominal wall. As it was not feasible either to liberate the adhesions or excise the affected gut, on account of the greatly enfeebled condition of the patient, the obstruction was overcome by short-circuiting the bowel, with immediate relief to the patient. Early in this year, however, symptoms of mechanical obstruction again developed, and on opening the abdomen it was found that a coil of small intestine had slipped through the anastomotic loop, and so given rise to the obstruction. To prevent this recurring the affected bowel was liberated from its adhesions and about 2 ft. of the intestine excised. At the same time the opening between the stomach and jejunum was considerably enlarged, as it was found to have contracted to a size

barely admitting the tip of the little finger. From the stomach the corroded Murphy button was removed, which had been lying there for nearly seven years. The patient made an excellent recovery and is rapidly increasing in weight.

Angio-lipoma.—Mr. VICTOR MILWARD showed a child, aged 8 months, on whom he had operated in November, 1908, for an angio-lipoma the size of a small orange, involving the left parotid gland. At the commencement of the operation the left external carotid artery was ligatured and the growth was then removed without any serious amount of haemorrhage. The branches of the facial nerve ran through the tumour, and with much care they were preserved in continuity. Left facial paralysis was complete after the operation, but had by now almost entirely disappeared. The child was well and strong, and no tendency to recurrence had as yet shown itself. Mr. Milward drew attention to the value of ligature of the external carotid prior to removing large vascular growths of the face, especially in children, where loss of blood is badly stood.

Large Gall Stone.—Mr. ALBERT LUCAS showed a gall stone measuring over 1½ in. by 1 in. and weighing 180 grains, which he had successfully removed from the upper part of the jejunum of a man aged 57. The patient had suffered from complete obstruction for four days, and was in very great pain. The abdomen was concave; there was no history of jaundice or gall stones. He had had a somewhat similar attack two years previously.

Treatment of Neuralgia.—Dr. SIMON read a paper on some points in the treatment of neuralgia, in which he laid stress on the following points: In all cases pressure on the nerve elements is the cause of pain. Pressure may arise from changes outside or inside the nerve sheath. Treatment must be directed to the nerve sheath. Several illustrative cases were reported. Dr. DARIY WESTON, Dr. CODD, and Mr. J. FURNEAUX JORDAN discussed the paper; and Dr. SIMON replied.

EDINBURGH BRANCH: SOUTHERN DIVISION.

A MEETING of the Division was held in the Oddfellows' Hall, Forrest Road, on Friday, February 5th, at 8.15 p.m. Dr. MATHESON was in the chair, and there were present Drs. Walker, Proudfoot, Scott, Veitch, S. Paterson, Kennedy, E. Price, Porter, Jamieson, Webster, Cumming, Cullen, Allan, Meikle, Edington, and the Secretary.

Confirmation of Minutes.—The minutes were read, approved, and signed.

Report of Executive Committee.—The annual report of the Executive Committee was submitted, in which details of the number of members, the number of medical practitioners in the Division, the finance of the Division, the meetings of the Division and Executive Committee, and a summary of the work undertaken by the Division during the past year were given. The report was approved and a vote of thanks accorded the Secretary for his services.

The Draft Charter.—The report of the Organization Committee on opposition to certain clauses of the draft Charter, with counsel's opinion thereon, was put before the meeting, and Dr. WALKER contributed a few remarks on the subject.

Certificates from Hospitals.—A communication from the Hospitals Committee re "Certificates from Hospitals" was read, and the SECRETARY reported the answers which had been received from the various hospitals in the Division, and which had been transmitted to the Medical Secretary. A question arose, and was freely discussed, regarding the right of insurance companies employing their own medical referees to examine and certify cases under the Workmen's Compensation Act in hospitals.

Medical Officers of Health and Private Practice.—The report and memorandum on public health officers referred to Divisions was submitted. The proposition that "Medical officers of health should be debarred from engaging in private practice" was unanimously agreed to, with the reservation that the needs of thinly-populated rural districts should be safeguarded by proper arrangements for combination.

Hospital Isolation of Infectious Diseases.—A discussion on hospital isolation of infectious diseases was opened by Dr. KENNEDY with an interesting paper in favour of isolation. Owing to the short time at his disposal, he confined his remarks more especially to the advantages which had followed hospital isolation of scarlet fever. The debate was taken part in by Drs. MATHESON, CULLEN, WALKER, PORTER, EDINGTON, and CUMMING. Dr. KENNEDY replied.

The Notification of Phthisis.—The subject of the advantages and disadvantages of the notification and isolation of pulmonary tuberculosis was chosen for discussion at the next meeting, to be opened by Dr. E. PRICE.

Vote of Thanks.—A vote of thanks to the Chairman closed the meeting.

METROPOLITAN COUNTIES BRANCH:

RICHMOND DIVISION.

A MEETING of this Division was held at the Royal Hospital, Richmond, on Wednesday, February 10th.

Paper.—Mr. E. CANNY RYALL read an interesting paper on spinal analgesia, illustrated with diagrams. The paper had reference chiefly to the technique of the operation, and, after discussion, Mr. Canny Ryall replied, and was thanked for his valuable paper.

SOUTH MIDLAND BRANCH:

BEDFORD AND HERTS DIVISION.

An ordinary general meeting of the Division was held at the County Hospital, Bedford, at 3 p.m. on Thursday, February 11th, Dr. G. F. DIXON in the chair. There were also present Dr. J. W. Bone (Vice-Chairman), Drs. Best, Birks, Bower, Butters, Chillingworth, Coombs, Emerson, Goldsmith, Hartley, Leighton, Lipscomb, Nash, Stacey, and the Honorary Secretary.

Confirmation of Minutes.—The minutes of the last meeting were read and signed.

Transference of Leighton Buzzard to Buckinghamshire Division.—A letter was read from Dr. A. E. Larking, of Buckingham, asking the consent of the Division to the transference of Leighton Buzzard to the newly-formed Buckinghamshire Division. After some discussion it was agreed that the Division consents to the transference.

Whole-time Medical Officers of Health.—A letter was read from the Public Health Committee on the subject of whole-time medical officers of health. The following resolution was put to the meeting and carried:

That it is highly desirable that medical officers of health should be whole-time appointments, and that their highly specialized work should be adequately remunerated combined with security of tenure.

Earlier Appointment of Representatives.—A letter from the Medical Secretary on this subject was read, and it was decided to refer the matter for consideration at the next annual meeting of the Division.

Medical Inspection of School Children.—The meeting then considered the report of the Medico-Political Committee on the medical inspection and treatment of school children. After a lengthy discussion the questions on page 11 of the report were answered as follows: Question 1 (a), Does the Division approve of the system of payment per head? was answered in the negative. Questions (b) and (c) therefore require no answer. Question (d), Does the Division suggest any other method of payment? was answered thus: The Division suggests that payment be by fixed salary. Regarding the treatment of school children, it was unanimously resolved that the Division does not approve of school clinics, but would recommend that the surgeries of all the practitioners in the area should be available for the treatment of those children found defective, payment to be made by voucher paid by the Education Authority at a fixed scale. Concerning the last question of the report, No. 4, page 11, the Division does not express any views. This concluded the business of the meeting.

SOUTH WALES AND MONMOUTHSHIRE BRANCH:

MONMOUTHSHIRE DIVISION.

A SPECIAL meeting of this Division was held on January 29th; the CHAIRMAN (Dr. W. F. Nelis) presided, and nineteen members were present.

Medical Inspection and Treatment of School Children.—The report of the Medico-Political Committee re certain points in connexion with the medical inspection of school children and the treatment of those found defective was considered, and after a prolonged discussion the following resolutions were passed:

1. That the system of whole-time medical inspectors of schools in vogue in the county of Monmouth and the borough of Newport is satisfactory.
2. That the Division does not approve of the system of payment per head.
3. That the Division disapproves of the formation of school clinics.
4. That the Division approves of the proposals of Dr. A. H. Williams, of Watford and Harrow, with alterations so as to read as follows:
The medical inspector reports a child as defective.
The parent is to be notified that the defect is to be attended to at once.

Should the parents be unable to pay for treatment, then the Education Authority is to give a voucher for the payment of the fee on a fixed scale.

The parent may then take his child to any practitioner whom he may select, and the practitioner will receive his fee from the Education Authority.

It was further resolved that provision ought to be made at the expense of the Education Authority for cases requiring special treatment.

ULSTER BRANCH.

THE winter meeting of this Branch was held in the Medical Institute, Belfast, on Wednesday, February 3rd, Dr. ALEX. DEMPSEY, President, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Apologies for Absence.—Apologies for absence were read from Dr. Thos. McLaughlin (Londonderry) and Dr. H. B. Murray (Belfast).

Report of Council.—THE HONORARY SECRETARY (Dr. Cecil Shaw) read the report of Council. Two meetings of Council had been held since the last meeting of the Branch. The following new members had been elected: Drs. Wm. Gibson, Robt. McDowell, Robt. Wilson, C. G. Lowry, J. S. Dickie, R. Johnston, Joseph Martin, Mark Cahill, G. F. Campbell, T. C. Cathcart, R. G. Clements, E. B. Flanagan, D. J. McKinney, John McLeish, Robt. May, Brian O'Brien, W. L. Storey, T. S. S. Holmes, J. L. Sinton, Boylan Ewing, and Arthur H. Joy, all of Belfast; Caroline Crawford (Lurgan), Aird and Moore (Bangor), Martin (Banbridge), T. H. May (Bunbeg, co. Donegal), R. T. Herron (Armagh), M. J. Nolan (Downpatrick), A. K. Stevenson (Ballyclare), and Currie (Ballymena).

Cases.—Mr. HANNA showed a case of *Traumatic cataract* in which a piece of metal was found in the lens when removed, though no history of its entry was obtained.

Dr. CALWELL showed a case of the premycotic stage of *Mycosis fungoides*. Dr. W. M. KILLEN showed a case in which he had operated for extradural abscess, and in which the jugular vein was subsequently tied by Professor Sinclair for commencing thrombosis of the lateral sinus. Dr. CECIL SHAW showed: (1) A case of a pit or *Crypt* in the side of the optic disc; (2) a case of supposed *Rhinocleroma* affecting the tongue, pharynx, and larynx. Mr. ROBERT CAMPBELL showed a child with a *Large tumour in the axilla*. Mr. R. J. JOHNSTONE showed a specimen of strangulated ovarian cyst complicating pregnancy, and also a specimen of strangulated small intestine due to volvulus, successfully excised, and read notes on a case of chronic inversion of the uterus. Dr. DARLING and Mr. ROBERT CAMPBELL discussed the cases. Dr. JOHN CAMPBELL showed a convenient form of sterilizer and case for carrying instruments. He had had this made to his own design, for carrying all the instruments and dressings usually needed for an abdominal section. It was made of tin, with a double coat, so that it could be filled with water and boiled on a kitchen range without disturbing the instruments arranged ready for use in various compartments. Dr. CALWELL described a method for the clinical estimation of rennin in the stomach contents. The value of the estimation was discussed by Professor LINDSAY and Dr. CLEMENTS.

Renal Calculi.—Mr. FULLERTON showed some renal calculi removed by nephrolithotomy, and showed a skiagraph showing the ureteral catheters in position. He said that in one case the only symptom was haematuria; in another pyuria was the sole cause of the patient seeking advice; in a third the patient had pain without blood or pus; and in the remainder the accepted signs and symptoms of stone were present. The calculi, as regards their chemical composition, did not follow the generally accepted rule. Most textbooks stated that oxalate calculi were rare as compared with uric acid and phosphatic, but in this series, small it was true, the first-mentioned predominated.

(1) The first case was that of a man, aged 35, who had had two fairly severe attacks of haematuria, one of which lasted on and off for nearly a year, during part of which he was in the Royal Victoria Hospital. A cystoscopic examination was not then made, and he went out without a diagnosis having been made. On the second occasion he was again in the same institution, and this time he was examined with the cystoscope. Blood was seen to issue in vigorous jets from the left ureter. He had no other symptom whatever. Mr. Fullerton removed a small, minute oxalate of calcium spicule from the kidney, with complete relief of the symptoms. The calculus was so small that it was all used up in testing its composition, so that he was unable to show it. (2) The second case was a medical man who had been complaining of pain in the right kidney region, going down into the region of the hip but not to the testis. He had occasional attacks of haematuria, which came on after violent exercise like tennis. During these attacks he noticed in the kidney region was worse. He had intervals of complete freedom. The orifices of the ureters were normal as seen by the cystoscope, and, as the patient was not then bleeding, the colour of the effluxes was normal. The jets were, however, somewhat irregular on the right side, both as regards quantity and rhythm, while on the opposite side the jets were emitted with clockwork regularity. The ureteral catheter showed that the right-sided effluent contained a trace of mucus and a small quantity of albumen. A few days later Mr. Fullerton removed the small oxalate calculus, which he showed from the right kidney pelvis. He heard at intervals from his friend, who, he was glad to say, kept in excellent health. In this case the x rays failed to discover the stone, probably from its small size. (3) The third case was that of a doctor's wife, who had been complaining for over a year of attacks of pain beginning in the left renal region and extending down to the groin, along the outer side of the thigh, and down the leg as far as the great toe. She had a movable kidney on the right side. During these attacks the patient vomited, but the urine always remained clear. Her husband made repeated examinations for blood, with a negative result. The difficulty in this case was the movable kidney, and also the fact that pressure on the left side produced pain, not on that side, but on the opposite side, radiating down to the groin. There were in some doubt which side to explore, and as the x rays gave no assistance, Mr. Fullerton tried catheterization of the ureters. The effluxes from the left side were more numerous than on the right, and the specimens from the two sides gave further valuable information. The specimen from the left side was clear like water, specific gravity less than 1005, and contained a fair quantity of albumen. That on the right was of the ordinary colour, specific gravity 1015, and contained only a trace of albumen. Acting on this hint, Mr. Fullerton explored the left kidney, and removed from its pelvis a small calculus, again composed of oxalates. Recovery was uneventful, and the renal colic has not reappeared. (4) The fourth case was that of a young

man aged 29, who had had frequent attacks of renal colic on the right side, the pain extending into the testicle of the same side. He also complained of frequency of micturition during these attacks, and contained a fair quantity of albumen and a little blood. The skiagrams were not satisfactory, so Mr. Fullerton examined him in the usual way with the cystoscope. The ureteral orifice of the right side was dilated and congested, and emitted urine at more frequent intervals than on the left. The specific gravity of the urine on the right was 1010 as against 1015 on the left. In addition, there was a fair quantity of albumen, and a little blood on the right side, while the left side emitted only a trace of albumen and no blood. Mr. Fullerton removed a large calculus, once more an oxalate of lime one with sharp spicules, from the right kidney pelvis. Up to the present he had removed all calculi through the cortex of the kidney, but he was prepared to admit that direct access through the pelvis itself might prove to be the better way. The patient made a good recovery, and remained free from pain. The stone weighed 3 grains. The fifth case was that of a lad, aged 18, who had had frequent attacks of renal pain on the right side, beginning in the lumbar region and extending to the front of the abdomen and finally to the testicle. He had no frequency of micturition, and Dr. McLeish, under whose care he was, says that, except for a suspicion of albumen on one occasion, he always found the urine normal. There was never any blood or pus. Cystoscopic examination and catheterization of the ureters gave no assistance. He then decided to try the effect of chromocystoscopy and injected 2 grains of indigo carmine in the gluteal muscles. In about fifteen minutes the blue colour began to appear on the left or presumably healthy side, while on the side of the pain the colour did not appear until twenty minutes later. In addition, the jets from the painful side were much less frequent, the intervals being as much as two minutes at first. Acting on this information, Mr. Fullerton explored the painful kidney. The most careful search failed to discover any stone, although he brought the organ out on to the loin and almost bisected it. He felt nothing in following the ureter down with his finger as far as he could reach through a fairly large incision. Finally, he passed a long ureteral catheter right into the bladder. On drawing it out the stone was by a rare stroke of fortune pulled into an accessible position and easily removed. It was of the very small size and was completely black the ureter. It was composed chiefly of uric acid. He examined the boy's bladder about a month after the operation, having previously injected indigo carmine, to ascertain the condition of the kidney which had been dealt with in the way mentioned. The organ had evidently resumed its *status quo ante*, as the blue colour appeared in the same time as at the last examination. He noticed that at the operation the stone was small in size. This might have accounted for the delay in the appearance of the coloured material in the urine. (6) The sixth case of nephrolithotomy was in a man aged 40 who had almost daily attacks of typical renal colic, but without blood. On examining his bladder with the cystoscope, the left ureteral orifice was seen to be dilated and oedematous in the vicinity, and radiated into irregular mounds for some distance around. The orifice itself was redder than normal. Indigo carmine appeared in the jets from the right side in fourteen minutes, but its appearance was delayed on the affected side until about half an hour had elapsed. It was also noticed that whereas on the sound side the efflux was vigorous, the jet on the affected side was feeble, and appeared to flow lazily from the orifice. The jets on the affected side were at the rate of one every twenty-five to thirty seconds, whereas on the sound side the effluxes appeared in rapid succession at the rate of once every eight to ten seconds. The ureteral catheter was arrested about half an inch up on the affected side. There was no pus or blood in the urine since his admission to hospital. In this case, as in the preceding, the most careful search in the kidney and ureter failed to discover the calculus, which Mr. Fullerton believed he must have pushed into the stone, as the attacks had disappeared. The stone was evidently, as in the last case, very small, as urine was able to get past the obstruction, though, as evidenced by the diminished force of the jet, with difficulty. (7) In the seventh case Mr. Fullerton was obliged to remove the kidney, which was in a condition of pyonephrosis. He showed the stone and the kidney at a recent meeting of the Ulster Medical Society. The only sign in this case, that of a late stage of pyonephrosis, was the fact that no cause could be discovered. On cystoscopic examination the orifice of the left ureter immediately attracted attention. It was almost buried in oedematous mucous membrane, and there was a good deal of redness round it. The jets from this ureter were very irregular, and the quantity small. On the right side the jets were at the rate of 4 or 5 drops every 15 to 20 seconds. The left-sided specimen was of very low specific gravity, 1002, and contained pus and albumen, while that from the right had a specific gravity of 1015, and was free from albumen and pus. Acting on these indications he cut down on the left kidney and found a stone ulcerating through the ureter at its junction with the pelvic dilatation. There was a small groove on one side of the stone past which urine trickled into the bladder. The calculus, like most of the others, was composed of oxalate of lime. As he had stated, he removed the kidney on account of its disorganization, and the patient made an uninterrupted recovery.

These were all the cases that Mr. Fullerton had operated on since he began to investigate, before operation, the condi-

tion of the presumably healthy organ, and they had all, as he had stated, made good recoveries. In addition, he had investigated three others recently, two of which had passed the calculi now shown, making a sum total of ten cases of renal calculus, which showed that this condition was not so rare in this part of the country as they used to believe. He drew attention to the following additional aids to diagnosis brought out by this series. First, the alteration in the appearance of the orifice of the ureter on the affected side. Secondly, the alteration of the specific gravity of the urine emitted from the affected kidney. As a rule it was markedly diminished, in most cases on account of increased rapidity of secretion, due to the irritation of a foreign body, but in some, as in Case VII, on account of destruction of the secreting substance of the kidney. Thirdly, the value, which he had not been able fully to estimate as yet, of the use of coloured substances to determine the functional capacity of the kidneys. He hoped to make further observations in this direction as opportunity offered. Finally, he directed attention to a method of distinguishing calculi from other opaque substances in the abdomen and pelvis, suggested first by Fenwick. The x-ray photograph which was taken in Case VI by Dr. Rankin would illustrate what he meant. In this case Mr. Fullerton passed long ureteral catheters armed with soft wire into the pelvis of the kidney on both sides. An x-ray photograph was then taken with the instrument and catheters *in situ*, showing the course of the ureters from the bladder to the pelvis of the kidney. There were great possibilities in this method which would be obvious to all. With all the means at their disposal which he had used in the small series of cases to which he had directed attention, it would no doubt be possible to diagnose these cases with more accuracy than in former times. The paper was discussed by the President and Drs. DARLING and WALTON BROWNE.

To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

EDINBURGH BRANCH.—The winter clinical meeting of the Edinburgh Branch will be held in the Royal Infirmary, Edinburgh, on Friday, February 26th, at 4 p.m. The members of the other Scottish Branches are invited to attend the meeting. The museum will be open at 11 a.m., and special clinics will be held during the forenoon. Dinner in the Royal British Hotel, Princes Street, at 6.30 p.m.; morning dress; dinner ticket, 5s.—A. LOGAN TURNER, FRANCIS D. BOYD, Honorary Secretaries.

CAMBRIDGE AND HUNTINGDON BRANCH.—A meeting of this Branch will be held at the Medical Schools, Cambridge, on Friday, March 5th, at 2.15 p.m.—H. B. RODERICK, M.D., Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: WARRINGTON DIVISION.—The quarterly meeting of this Division will be held on Tuesday, March 2nd, at the Infirmary, Warrington, at 4.30 p.m. Dr. Garstang, a member of the Central Council, will be present.—T. A. MURRAY, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: HAMPSHIRE DIVISION.—The next meeting of this Division will be held on Tuesday, February 23rd, at 8.30 p.m., at the Hampstead Conservative, Swiss Cottage, N.W., Dr. Oppenheimer in the chair. Agenda: (1) Minutes. (2) Correspondence. (3) Questions. (4) To consider the Report of the Public Health Committee published in the SUPPLEMENT of the BRITISH MEDICAL JOURNAL for January 23rd, 1909. (5) Other business (to be arranged).—R. A. YELD, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WANDSWORTH DIVISION.—A meeting of this Division will be held on Tuesday, February 23rd, at the Tooting Bee Asylum, S.W., at 4.30 p.m. Agenda: (1) Minutes. (2) Correspondence. (3) Questions. (4) Demonstration of some cases of interest at present in the asylum by Dr. E. H. Beresford. (5) Election of Representative at the Representative Meetings. (6) Dr. Fothergill will draw attention to the Report of the Science Committee, SUPPLEMENT,

p. 78, and move that the following resolution be placed on the Agenda for the Representative Meeting in July: "That, with a view to further interesting Divisions and Branches in the Section work of the Annual Meeting, it be an instruction to the Central Council to encourage them to nominate one or more members to take part in the discussions on any subject arranged for which has previously been considered by the Division or Branch.—C. J. MARTIN, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—A meeting of this Division will be held at the Criterion Restaurant, at 8.30 p.m., on Thursday, March 4th. Dinner, 7.30 p.m.—J. HOWELL EVANS, co-Honorary Secretary.

MIDLAND BRANCH: LEICESTER AND RUTLAND DIVISION.—A special meeting of this Division will be held at the Leicester Infirmary on Wednesday, February 24th, at 4.15 p.m. Agenda: Discussion of certain questions relating to medical inspection of school children.—WILFRED E. GIBBONS, Honorary Secretary, Leicester.

STAFFORDSHIRE BRANCH.—The second general meeting of the session will be held at the North-Western Hotel, Stafford, on Thursday, February 25th. The President, Dr. S. King Alcock, will take the chair at 5.15 p.m. Business: (1) Minutes of the last ordinary general meeting. (2) Correspondence. (3) Exhibition of living cases. (4) Paper: Mr. A. B. Cridland, Internal Squint in Children. (5) Paper: Mr. J. T. Hartill, Short Notes on a Rare and Interesting Case of Retention of Meneses, and Operations for and Relief of the Symptoms. (6) Exhibition of pathological specimens, etc. Dinner 7.15 p.m., charge 5s.—G. PETGRAVE JOHNSON, Honorary General Secretary, Stoke-on-Trent.

YORKSHIRE BRANCH.—The next meeting of the Branch will be held at the Royal Eye and Ear Hospital, Bradford, on Wednesday, March 10th, at 4.30 p.m. Members intending to read papers, abstracts or specimens, or to propose new members, are requested to communicate at once with the Secretary. Members will dine together at 6.30.—ADOLPH BRONNER, Honorary Secretary, Bradford.

Hospitals and Asylums.

SUFFOLK DISTRICT ASYLUM.

The annual report for the year 1907 of Dr. James R. Whitwell, the medical superintendent of this asylum, shows that on January 1st there were 877 patients in the asylum, and that on the last day of the year there remained 870, giving a decrease of asylum patients of 7. The actual numbers of patients belonging to the district were: On December 31st, 1906, 730, and on December 31st, 1907, 763, giving the exceptionally large increase for the year of 33. The total cases under care during the year numbered 1,079, and the average number daily resident 89. During the year 202 were admitted, of whom 194 belonged to the district. Of the total admissions 177 were direct and 25 indirect admissions. In 74 the attacks were first attacks within three, and in 25 more within twelve, months of admission; in 56 no first attacks—or unknown whether first attack or not—within twelve months of admission; and in the remainder the attacks were either of more than twelve months (25), or of unknown duration (11), or congenital cases (11). The 177 direct admissions were classified according to the forms of mental disorder on admission into: Mania of all kinds, 43; acute and chronic melancholia, 43; senile and secondary dementia, 22; delusional insanity, 6; alternating insanity, 5; stupor, 12; confusional insanity, acute delirium, and general paralysis, 2 each; primary dementia, 1; insanity with epilepsy, 9; and congenital or infantile defect, 10. As regards the supposed etiological factors, and still considering only the direct admissions, alcohol was assigned in 20, or 11.3 per cent. On this point Dr. Whitwell has considered and well-considered words to say in his report, which is illustrated by a map of England and Wales, showing the relative distribution of drunkenness in the several counties as gauged by the numbers of conviction of drunkenness. From this it appears that Durham county is the most, and Wiltshire one of the least, alcoholized, whereas Durham county gives a low and Wiltshire a very high rate of insanity. Dr. Whitwell, however, does not attach an unduly high value to mental instability in 9, and mental stress in 29. A heredity of insanity was ascertained in 64, or 36 per cent, an epileptic heredity in 2, a neurotic heredity in 10, and a heredity of alcoholism also in 10. During the year 51 were discharged as recovered, giving a recovery-rate on the direct admissions of 28.8 per cent., or of recoveries in the direct admissions on the direct admissions of 25.9 per cent.

There were also discharged as relieved 34 and as not improved 46. During the year 73 died, giving a death-rate on the average numbers present of 8.71 per cent. The deaths were due in 13 to cerebro-spinal diseases, including 5 deaths from general paralysis; in 11 to diseases of heart and blood vessels; in 3 to diseases of the respiratory organs; in 13 to abdominal diseases; in 16 to senile decay, and in 22 to general diseases, including 15, or 19.2 per cent. of the total deaths, to tuberculous diseases. No inquests were held during the year and the casualties were few and unimportant.

Vital Statistics.

EPIDEMIC MORTALITY IN LONDON.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

THE accompanying diagram shows the prevalence of the principal epidemic diseases during the fourth quarter of last year; the fluctuations of each disease and its relative fatality compared with that in the corresponding periods of recent years can thus be readily seen.

Small-pox.—No fatal case of this disease has been registered in London since the middle of 1895, and no small-pox patients were under treatment last quarter in the Metropolitan Asylums Hospitals.

Measles.—The deaths from measles, which had been 346, 477, and 258 in the three preceding quarters, rose again last quarter to 457, and were 53 in excess of the corrected average number for the corresponding period of the five preceding years; among the various metropolitan boroughs this disease was proportionally most fatal in St. Mary-lebone, Islington, Finsbury, Bethnal Green, Stepney, Southwark, and Bermondsey.

Scarlet Fever.—The fatal cases of scarlet fever, which had been 186, 122, and 101 in the three preceding quarters, increased to 135 last quarter, but were 32 fewer than the corrected average number. The greatest proportional mortality from this disease was recorded in Stoke Newington, Hackney, Shoreditch, Bethnal Green, Stepney, Poplar and Bermondsey. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals, which had been 3,150, 2,534, and 3,431, at the end of the three preceding quarters, had further risen to 3,498 at the end of last quarter; 6,223 new cases were admitted during the quarter, against 5,101, 4,194, and 5,344 in the three preceding quarters.

Diphtheria.—The deaths from this disease, which has been 244, 131, and 154 in the three preceding quarters, rose last quarter to 227, and showed a slight excess over the corrected average number. The highest death-rates from this disease last quarter were recorded in Fulham, Chelsea, Islington, Shoreditch, Stepney, Lewisham, and Woolwich. The Metropolitan Asylums Hospitals contained 1,241 diphtheria patients at the end of last quarter, against 1,081, 768, and 953 at the end of the three preceding quarters; 2,141 new cases were admitted during the quarter, against 1,872, 1,335, and 1,449 in the three preceding quarters.

Whooping-cough.—The fatal cases of whooping-cough, which had been 406, 334, and 163 in the three preceding quarters, further declined

last quarter to 96, the corrected average number in the corresponding period of the five preceding years being 249. The greatest proportional mortality from this disease occurred in Paddington, Chelsea, Finsbury, Shoreditch, and Bethnal Green.

Fever.—Under this heading are included deaths from typhus, from enteric fever, and from ill-defined pyrexia. The deaths referred to these different forms of "fever," which had been 40, 27, and 53 in the three preceding quarters, rose last quarter to 126, and were 13 above the corrected average number. All the deaths under this heading last quarter were from enteric fever, this disease being proportionally most fatal in Chelsea, Stoke Newington, Holborn, Finsbury, Shoreditch, Bethnal Green, Bermondsey, and Greenwich. The number of enteric fever patients under treatment in the Metropolitan Asylums Hospitals, which had been 73, 48, and 93 at the end of the three preceding quarters, had risen to 147 at the end of last quarter; 313 new cases were admitted during the quarter, against 135, 94, and 166 in the three preceding quarters.

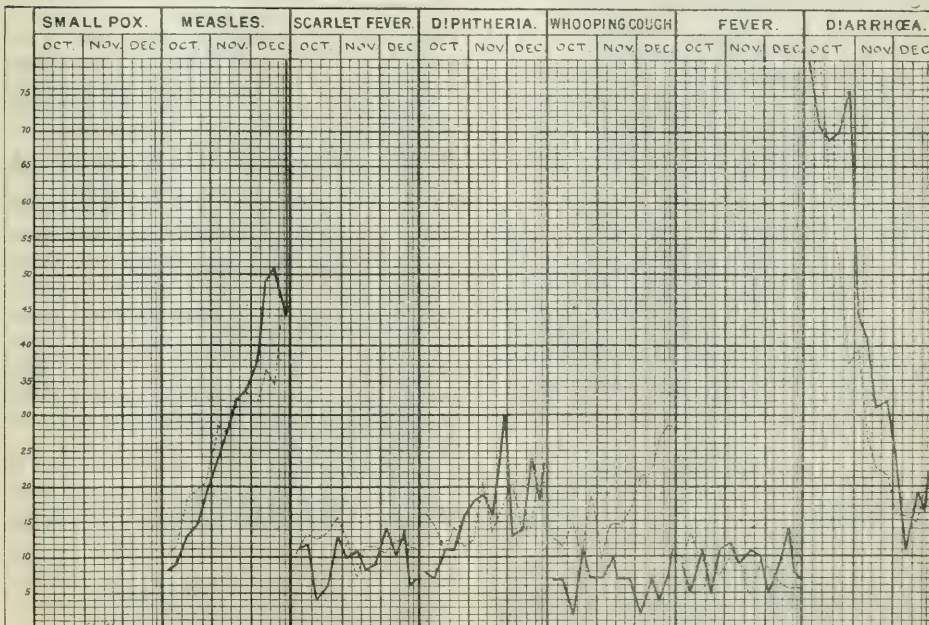
Diarrhoea.—The 636 deaths from diarrhoea in London last quarter were 55 in excess of the corrected average number for the fourth quarters of the five preceding years. The greatest proportional mortality from this disease was recorded in Finsbury, Stepney, Southwark, Bermondsey, Deptford, and Lewisham.

In conclusion it may be stated that the 1,646 deaths in London referred to the principal infectious diseases last quarter were 2.3 per cent. below the average. No death from any of these diseases was recorded last quarter in the City of London; among the metropolitan boroughs they caused the lowest death-rates in Paddington, Westminster, Hampstead, St. Pancras, Wandsworth, and Camberwell, and the highest rates in Finsbury, Shoreditch, Bethnal Green, Stepney, Bermondsey, and Lewisham.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,163 births and 5,518 deaths were registered during the week ending Saturday last, February 13th. The annual rate of mortality in these towns, which had been 18.0 and 13.7 per 1,000 in the two preceding weeks, declined again last week to 17.5 per 1,000. The rates in the several towns ranged from 8.2 in Reading, 10.5 in Burton, 10.9 in Hornsey, 11.1 in Walthamstow and in Gateshead, 11.4 in York, and 11.6 in Barrow-in-Furness and in Halifax, to 21.3 in Merthyr Tydfil, 21.5 in Liverpool, 21.6 in Warrington, 21.8 in Salford, 22.0 in Bury, 22.3 in Middlesbrough, 22.8 in Blackburn, 25.0 in Wallasey, and 25.5 in Oldham. In London the rate of mortality was equal to 17.8 per 1,000, while it averaged 17.4 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.4 per 1,000 in the seventy-six towns; in London also this death-rate was equal to 1.4 per 1,000, while among the seventy-five other large towns the death-rates from the principal infectious diseases ranged upwards to 3.0 in Birkenhead and in Middlesbrough, 3.4 in Birmingham, 3.5 in Bury, 3.6 in West Ham, 3.7 in Huddersworth (Staffs), 3.9 in West Hartlepool, and 4.4 in St. Helens. Measles caused a death-rate of 1.3 in Plymouth and in Sheffield, 1.5 in Stockport and in Middlesbrough, 1.6 in Sunderland, 1.7 in Leicester, 1.8 in West Ham, 2.2 in Warrington, 2.3 in Birmingham, and 3.3 in West Hartlepool; scarlet fever of 1.5 in Wallasey, 1.7 in Birkenhead, and 1.8 in Bury; diphtheria of 1.3 in Newport (Mon.), 1.6 in St. Helens, and 2.2 in Huddersworth (Staffs); and whooping-cough of 1.1 in

DEATHS FROM EPIDEMIC DISEASES IN LONDON DURING THE FOURTH QUARTER OF 1908.



NOTE.—The black lines show the recorded number of deaths from each disease during each week of the quarter. The dotted lines show the average number of deaths in the corresponding weeks of the five preceding years, 1903-7.

St. Helens, 1.3in Preston, and 2.0 in Great Yarmouth. The mortality from enteric fever and from diarrhoea showed no marked excess in any of the large towns; one fatal case of small-pox was registered in Bristol, but none in any other of the seventy-six towns. The number of scarlet fever patients remaining under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,211, 5,201, and 3,147 at the end of the three preceding weeks, had further fallen to 3,002 at the end of last week; 289 new cases were admitted during the week, against 379, 339, and 312 in the three preceding weeks; the case of small-pox admitted in the previous week remained under treatment at the end of last week.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, February 13th, 893 births and 652 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 17.2 and 18.5 per 1,000 in the two preceding weeks, declined again to 16.2 and 16.00 last week, but was 0.7 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 15.2 in Perth and 14.8 in Edinburgh to 21.6 in Paisley and 22.5 in Dundee. The death-rate from the principal infectious diseases averaged 2.0 per 1,000 in these towns, the highest rates being recorded in Glasgow and Aberdeen. The 306 deaths registered in Glasgow included 2 which were referred to scarlet fever, 4 to diphtheria, 20 to whooping-cough, 2 to enteric fever, and 2 to diarrhoea. Two fatal cases of whooping-cough and 2 of diarrhoea were recorded in Edinburgh; 2 of scarlet fever, 2 of diphtheria, and 3 of whooping-cough in Dundee; 8 of whooping-cough and 3 of diarrhoea in Aberdeen; and 3 of whooping-cough in Paisley and 2 in Leith.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, February 13th, 632 births and 447 deaths were registered in the twenty-two principal urban districts of Ireland as against 618 births and 454 deaths in the preceding period. The annual death-rate in these districts, which had been 21.6, 22.5, and 20.7 per 1,000 in the three preceding weeks, fell to 19.4 per 1,000 in the week under notice, this figure being 2.9 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 25.1 and 15.6 respectively; those in other districts ranged from 4.5 in Lisburn and 5.2 in Portadown, to 33.0 in Queenstown and 36.8 in Drogheda, while Cork stood at 24.0, Londonderry at 18.1, Limerick at 23.2, and Waterford at 5.8. The zymotic death-rate in the twenty-two districts averaged the same as in the preceding period—namely, 1.0 per 1,000.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

DEPUTY INSPECTOR-GENERAL L. H. KELLET, M.D., is promoted to be Inspector-General, January 17th. His previous commissions are thus dated: Surgeon, September 30th, 1876; Staff Surgeon, September 30th, 1885; Fleet Surgeon, April 27th, 1893; and Deputy Inspector-General, December 5th, 1903. He was Sign Surgeon of the *Fatma* during the Egyptian war in 1882, and has received a medal and the Khedive's bronze star.

Fleet Surgeon W. M. CRAIG, M.B., to be Deputy Inspector-General, January 17th. He entered the service as Surgeon, August 26th, 1882, became Staff Surgeon, August 28th, 1894; and Fleet Surgeon, August 28th, 1898.

Surgeons E. COX, M.B.; J. MACDONALD, M.D.; A. LA T. DARLEY, A. J. WERNER, C. G. STANFORD, M.D.; A. R. THOMAS, D.V.; T. V. THOMAS, G. C. R. COSS, M.D.; P. F. ALDERSON, and F. C. WOODYAT are promoted to be Staff Surgeons from February 1st. Their commissions as Surgeons are dated February 11th, 1901.

The following appointments have been made at the Admiralty: Fleet Surgeon J. SHAND, M.B. to the *Africa*, on recommissioning, February 16th, since cancelled on appointment to Malta Hospital, February 6th; Fleet Surgeon R. MILLER, M.B., and Surgeon G. A. BRADSHAW, to the *Daedalus*, on recommissioning, February 16th; Fleet Surgeon C. T. BATHUR, to the *Harrier* Home Fleet, February 16th; Fleet Surgeon E. COOPER and Surgeon W. H. EGGAR, M.B., to the *Bellerophon*, on commissioning, February 20th; Staff Surgeon G. E. DUNCAN, to the *Prince George*, until paying off, February 20th; Surgeon C. R. M. BAKER, M.B., to the *King Alfred*, additional, December 22nd, 1903, his appointment to the *Sandpiper* being cancelled; Surgeon P. B. EGAN, M.D., to the *Africa*, on recommissioning, February 16th; Fleet Surgeon A. H. L. COX, to the *Africa*, February 6th, and on recommissioning, February 16th; Surgeon J. G. KELLY, M.B., to the *Arthur*, February 17th, and to the *Lapwing*, on recommissioning, undated; Staff Surgeon A. G. EASTMENT, to Plymouth Hospital, for instruction of sick berth staff, February 13th; Staff Surgeon J. N. ROBERTSON, to the *His Majesty's Dockyard*, at Chatham, February 15th; Staff Surgeon F. C. B. GITTINGS, M.B., to the *Forestair*, February 15th; Staff Surgeon D. V. LOWNDSE, to the *Victory*, additional, for disposal, March 5th; Surgeon R. L. JONES, to the *Shannon*, February 15th; Surgeon J. S. F. WATKINS, M.D., to the *Albatross*, February 15th; Surgeon M. W. HAYDON, to the Royal Marine Artillery, Eastney, March 5th.

The following appointments are cancelled: Fleet Surgeon F. W. PARKER to Malta Hospital, February 16th, H. C. to be dated to the *Daedalus*; Surgeon E. S. WILKINSON, M.B., to the *Royal Arthur* and *Lapwing*; Mr. J. M. ROSS, M.B., to be Surgeon and Agent at Ruff of Lewis, February 10th.

ARMY MEDICAL SERVICE.

MAJOR R. J. A. DURANT is placed on retired pay, February 2nd. He was appointed Surgeon, February 2nd, 1884, and Surgeon-Major, February 2nd, 1898.

The undermentioned Lieutenants are promoted to be Captains, dated January 31st, 1909: JOHN A. ANDERSON, M.B.; CUTHBERT G. BROWNIE, HUGH G. SHERRIN, HENRY H. A. EDMONDSON, M.B.; ROWLAND P. LEWIS, JAMES H. GRAHAM, M.B.; WALLACE BENSON, M.B.; GEORGE E. FERGUSON, CHARLES E. W. S. FAWCETT, M.D.; ALEXANDER M. ROSE, M.B.; GRIFFITH H. REES, M.B.; THOMAS SCATCHARD, VIVIAN H. SYMONS, EDWARD G. ANTONISZ, RONALD A. BRYDEN, EDWARD L. MOSS, ARTHUR E. S. IRVINE, THOMAS B. MONIART, MICHAEL B. H. RICHIE, M.B.; WALTER J. WESTON, PERCIE PARKMAN, ALBERT E. F. HASTINGS, MONTMERE J. CROFT, EDMUND T. POTTS, M.D.; GEORGE W. V. WARE, M.B.; WILLIAM MCCONAGHY, M.B.; WILLIAM C. NIMMO, CECIL J. WYATT, M.B.; MICHAEL KEANE, CHARLES F. WHITE, M.B.; FRANCIS C. SAMPSON, M.B.; THOMAS S. BLACKWELL, ROBERTSON S. SMYTH, M.D.; HAROLD

E. PRIESTLEY, PHILIP J. MARETT, and HUGH STEWART, M.B. Their first appointment dates from July 1st, 1905.

The undermentioned Lieutenants are confirmed in that rank: RONALD E. TODD, M.B.; CHARLES KYLE, M.B.; DAVID S. BUIST, M.B.; WILLIAM E. MARSHALL, M.B.; ALEXANDER M. POLLARD, COLIN CLAUDE, M.B.; EDMUND V. VAUGHAN, M.B.; ARTHUR N. R. McNEILL, M.B.; ANDREW R. WRIGHT, M.B.; THOMAS B. NICHOLLS, M.B.; JELIAN B. JONES, M.B.; STUART MCK. SATCHEL, THOMAS J. MITCHELL, M.B.; FRANK H. SOMERS-GARDNER, M.B.; DONALD H. C. MCARTHUR, M.B.; DENIS E. C. POTTINGER, M.B.; GEORGE S. PARENSON, HERBERT GALL, CHARLES H. O'HORRE, M.B.; ARTHUR W. BYRNE, M.B.; JOHN STANTON, CHARLES G. SHERRLOCK, M.D.; GEORGE H. STACE, M.B.; SAMUEL W. KYLE, M.B.; HAROLD BEVIS, JOHN W. LANE, M.D. Lieutenant Todd was appointed on probation, July 29th, 1907; all the other officers cited, August 1st, 1908.

INDIAN MEDICAL SERVICE.

COLONEL W. A. COREY, Bombay, having been appointed Principal Medical Officer, Kuruchree Brigade, took over the duties from January 15th.

Colonel C. F. WILLIS, M.D., Bombay, assumed the duties of Principal Medical Officer, 5th (Mhow) Division, from January 19th.

SPECIAL RESERVE.

ROYAL ARMY MEDICAL CORPS.

First East Anglian Field Ambulance.—ALISTAIR C. YOUNG to be Lieutenant, January 23rd.

Third East Anglian Field Ambulance.—JAMES TURTLE to be Lieutenant, January 27th.

Second North Midland Field Ambulance.—Lieutenant ALISTAIR MACGREGOR to be Captain, January 5th.

Second South Midland Field Ambulance.—JOHN H. YATES (late Captain 1st Volunteer Battalion the South Staffordshire Regiment) to be Transport Officer with the honorary rank of Captain, April 1st, 1908.

Second London General Hospital.—HONORARY CAPTAIN ERNEST G. BERTLEY to be Captain, April 2nd, 1908.

For Attachment to Units other than Medical Units.—EDWARD N. THRELFALL, M.D., to be Lieutenant, January 1st.

TERRITORIAL FORCE.

UNATTACHED LIST.

The promotion of Lieutenant H. H. B. CENNINGHAM, F.R.C.S.I., bears date September 21st, 1908, and not November 30th, 1908, as stated in the *London Gazette* of January 8th, 1909.

IMPERIAL YEOMANRY.

Surgeon-Lieutenant F. A. F. BARNARD, M.B., 2nd County of London (Westminster Dragoons), not having signified his wish to serve in the Territorial Force, is struck off the strength of the regiment, March 31st, 1908.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where the particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BIRKENHEAD UNION.—Resident Male Medical Officer for the Infirmary and Sanatorium. Salary, £100 per annum.

BIRMINGHAM: EAR AND THROAT HOSPITAL.—House-Surgeon. Salary at the rate of £70 per annum.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant. Honorarium at the rate of 52 guineas per annum.

BRADFORD ROYAL INFIRMARY.—(1) Two House-Surgeons. (2) House-Physician. £100 per annum each.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—House-Surgeon (male). Salary at the rate of £80 per annum.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—(1) House-Surgeon. (2) Assistant House-Surgeon. Salary, £80 and £50 per annum respectively.

BRISTOL ROYAL INFIRMARY.—Resident Casualty Officer. Salary at the rate of £50 per annum.

CANCER HOSPITAL, Fulham Road, S.W.—First Assistant to the Research Department. Salary, £350 per annum.

CANCER HOSPITAL, Fulham Road, S.W.—House-Surgeon. Salary, £70 per annum.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—House-Surgeon. Salary, £30 per annum.

CARDIFF: ROYAL HAMADRYAD SEAMEN'S HOSPITAL.—Indoor Assistant to the Medical Superintendent. Salary, £60 per annum.

CHELLENHAM GENERAL HOSPITAL.—House-Surgeon, Salary, £65 per annum.

CHESTER: COUNTY PALATINE OF CHESTER.—County Medical Officer of Health. Salary, £750 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House-Surgeon. Salary, £60 per annum.

DEVONPORT: ROYAL ALBERT HOSPITAL AND EYE INFIRMARY.—Assistant Resident Medical Officer. Salary at the rate of £50 per annum.

DUBLIN COUNCIL ASYLUM.—Junior Assistant Medical Officer. Salary, £150, rising to £180, per annum.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—Medical Officer (male) to Casualty Department. Salary at the rate of £100 per annum.

EXETER: WONFORD HOUSE HOSPITAL FOR THE INSANE.—Medical Superintendent. Salary, £750 per annum.

HESTON AND ISLEWORTH URBAN DISTRICT COUNCIL.—Medical Officer of Health. Salary, £500 per annum.

HÔPITAL FRANÇAIS, Shaftesbury Avenue, W.C.—Senior Resident Medical Officer. Salary at the rate of £50 per annum.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.

LEEDS GENERAL INFIRMARY.—Ophthalmic House-Surgeon.

LEICESTER INFIRMARY.—House-Physician. Salary at the rate of £100 per annum.

LIVERPOOL: AT DAVID LEWIS NORTHERN HOSPITAL.—House-Surgeon. Salary at the rate of £60 per annum.

LIVERPOOL. INFIRMARY FOR CHILDREN.—Resident Medical Officer. Salary, £30 for six months.

LONDON: THROAT HOSPITAL, Great Portland Street, W.—(1) Assistant Surgeon. (2) House-Surgeon; honorarium at the rate of £50 per annum.

MANCHESTER: ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—Third and Fourth House-Surgeons. Honorarium, £25 for six months each.

MANCHESTER TOWNSHIP.—Assistant Medical Officer for the Workhouse at Crumpsall. Salary, £140 per annum.

NEWCASTLE-ON-TYNE: EYE INFIRMARY.—Non-resident House-Surgeon. Salary, £100 per annum.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—(1) House-Surgeon; salary, £80 per annum. (2) Assistant House-Surgeon; honorarium, £20 for six months.

QUEEN CHARLOTTE'S LIVING-IN HOSPITAL, Marylebone Road, N.W.—Resident Medical Officer for Out-patient Department. Salary at the rate of £20 per annum.

RAINFHILL: COUNTY ASYLUM.—Assistant Medical Officer. Salary, £150 per annum, increasing to £250, with further increase to £350 on promotion.

RHONDDA IRRAN DISTRICT COUNCIL.—Assistant Medical Officer of Health. Salary, £250, rising to £350 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—(1) Resident Medical Officer; salary at the rate of £120 per annum. (2) Clinical Assistants.

RYDE: ROYAL ISLE OF WIGHT COUNTY HOSPITAL.—Resident Assistant House-Surgeon. Salary, £60 per annum.

ST. MARYLEBONE GENERAL DISPENSARY, Welbeck Street, W.—Honorary Physician.

SHREWSBURY: SALOP INFIRMARY.—House-Surgeon. Salary, £100 per annum.

SOMERSET AND BATH ASYLUM, Wells.—Second Assistant Medical Officer. Salary, £130, rising to £150 per annum.

SOUTH SHIELDS EDUCATION AUTHORITY.—School Medical Officer. Salary, £250 per annum.

STAFFORD: STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £82 per annum.

STOKE-ON-TRENT: NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—Senior House-Surgeon. Salary, £100 per annum.

THROAT HOSPITAL, Golden Square, W.C.—(1) Resident House-Surgeon; salary, £75 per annum. (2) Honorary Dental Surgeon.

TYNEMOUTH COUNTY BOROUGH.—Medical Officer of Health. Salary, £300 per annum, increasing to £400.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Two House-Physicians. (2) Three House-Surgeons.

APPOINTMENTS.

BALINTATYNE, S. A., M.B., Ch.B. Edin., F.R.C.S. Edin., Honorary Surgeon to the County and Warwickshire Hospital.

BIRD, Gerald F., M.B. Cantab., Medical Officer of Health to the Borough of Godalming, Surrey.

BROWN, J. Percival, M.B., Ch.B. Vict., Public Vaccinator, Bacup, No. 1 District of the Haslingden Union.

FARWEATHER, A. F. A., M.D., M.S. Abern., Certifying Factory Surgeon for the Pocklington District, co. York.

FERNES, H. S., L.R.C.P. Lond., Assistant Medical Officer of the Lambeth Parish Infirmary.

CHELSEA HOSPITAL FOR WOMEN.—The following appointments have been made:
Pathologist.—Bryden Glendinning, M.B., B.S. Durh., F.R.C.S. Eng.
Clinical Assistants.—Benjamin Linn, M.D.; F. R. Fursey, M.B., Ch.B.; P. W. Ritchie, M.D.; Malcolm L. Scott, M.B., Ch.B.

METROPOLITAN EAR, NOSE, AND THROAT HOSPITAL.—The following appointments have been made:
Surgeon.—J. Conbro Potter, M.D., M.Ch.
Assistant Surgeon.—J. Logan Murrison, M.R.C.S., L.R.C.P., etc.; Edward W. Bain, M.B., B.S. Lond., F.R.C.S. Eng.
Anaesthetist.—Donald J. Munro, B.S., M.B. Lond.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON. 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Papers: Some Points in the Pathology of Pernicious Anæmia, by Mr. L. S. Dudgeon. Some Clinical Aspects of Pernicious Anæmia, by Dr. H. S. French.

ROYAL SOCIETY OF MEDICINE:
ODONTOLOGICAL SECTION, 20, Hanover Square, W., 8 p.m.—Mr. Kenneth Goadby: Report on the General Results of the Special Rules in Force in Match Factories. The President (Mr. Leonard Matheson) will give his Inaugural Address. Curator: Annual Report. The Curator will show some recent specimens with the Epidiascope.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:
MEDICAL SECTION, 20, Hanover Square, W., 5.30 p.m.—Paper: Dr. de Havilland Hall, Dr. R. G. Hebb and Dr. Bernstein on Chloroma.

WEDNESDAY.

HUNTERIAN SOCIETY.—Clinical meeting at London Hospital, 4 p.m.

THURSDAY.

ROYAL SOCIETY OF MEDICINE:
NEUROLOGICAL SECTION, 20, Hanover Square, W., 8.30 p.m.—Papers.—Dr. Wilfred Harris: The Alcoholic Injection Treatment for Neuralgia and Spasm. Dr. Percy May and Dr. Gordon Holmes: The Excretory Origin of the Pyramidal Tracts in Man and the other Mammals.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:
SPECIAL GENERAL MEETING OF FELLOWS, 20, Hanover Square, W., 4.50 p.m.—Election of Candidates for Fellowship.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN, 20, Hanover Square, W., 5 p.m.—Cases.—Dr. Edmund Cautley: (1) Cerebral Diplegic Spasticity, (2) Abdominal Tuberculosis, (3) Monoclonal Infection. Dr. F. J. Poynton: Case for Diagnosis. Mr. Sydney Stephenson: Plexiform Neurooma Involving the Right Parietal Region and Right Upper Eyelid. Dr. O. F. F. Grilband: Case of Hirschsprung's Disease. Discussion on the Medical Examination of School Children, opened by Dr. George Carpenter.

EPIDEMIOLOGICAL SECTION, 20, Hanover Square, W., 8.30 p.m.—Dr. H. de R. Morison and Dr. J. C. Leedingham: The Bacteriology of Summer Diarrhoea in Children.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Tuesday, 3.45 p.m.: Pharynx and Naso-Pharynx; Friday, 3.45 p.m., Pharynx and Naso-Pharynx.

LONDON SCHOOL OF CLINICAL MEDICINE.—Daily arrangements: Out-patient Demonstrations, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m., Monday, and noon, Thursday; Skin, at noon and 4 p.m., Thursday, and noon, Friday; Eye, 11 a.m., Wednesday and Saturday; Radiography, 4 p.m., Thursday. Special Lectures: Wednesday, February 25th, 2.15 p.m., Peripheral Neuritis; Friday, February 26th, 3.15 p.m., Erys. Abscess: its Origin and Surgical Treatment.

MEDICAL GRADUATES' COLLEGE AND POLYTECHNIC, 22, Chancery Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Throat. Lectures at 5.15 p.m. each day will be given as follows: Monday, Some Climacteric Disturbances; Tuesday, Rupture of the Pterineum; Wednesday, Ocular Therapeutics; Thursday, Some Climacteric Disturbances.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m. The Significance of Paralysis of Cranial Nerves. Friday, 3.30 p.m., Some Intracranial Complications of Otitis Media.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m., Surgical Out-patient, 2.30 p.m., Medical Out-patient; Nose, Throat, and Ear; X Rays, 4.30 p.m., Medical In-patient. Tuesday, 10 a.m., Medical Out-patient Clinic; 2.30 p.m., Operations; Clinics: Surgical, Gynaecological; 4.30 p.m., Special Demonstrations: The Use of X Rays in the Diagnosis of Calculi. Wednesday, 2.30 p.m., Medical Out-patient; Monday, Some Clinics. Thursday, 2.30 p.m., Gynaecological Operations; Clinics: Medical Out-patient, Surgical Out-patient, X rays; 3 p.m., Medical In-patient; 4.30 p.m., Lecture: Difficulties Encountered in the Physical Examination of the Lungs and Heart. Friday, Clinics: 10 a.m., Surgical Out-patient; 2.30 p.m., Operations; Clinics: Medical Out-patient, Eye; 3 p.m., Medical In-patient.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C.—Thursday, 6 p.m., Baldness: it Causes and Treatment.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics, X Rays; 2.30 p.m., Operations. Monday and Thursday and Wednesday and Saturday, 2 p.m., Medical Out-patient; Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (and Wednesday and Saturday, 10 a.m.), Throat, Nose, and Ear Diseases; 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, 10 a.m., Diseases of Children; 2.30 p.m., Diseases of Women. Lectures: At 10 a.m., Monday and Thursday, Surgical Registrar, Demonstration on Cases in Surgical Wards; Friday, Medical Registrar, Demonstration on Medication in Cases in Wards. At 12 noon, Monday, Pathological Demonstration. At 12.15 p.m., Practical Medicine (Wednesday and Saturday). At 5 p.m., Monday, Diagnosis of Swellings of the Jaws; Tuesday, Urgent Surgical and Abdominal Cases; Wednesday, The Prophylaxis of Venereal Disease; Thursday, Anaesthetics; Friday, Puerperal Insanity.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps until the notice is not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

CRICHTON MILLER.—At Villa Maria, San Remo, Italy, on the 9th inst., the wife of H. Crichton Miller, M.D., San Remo, and Aviemore, Inverness-shire, of a daughter.

FITZWILLIAMS.—On the 9th inst., wife of Duncan C. L. Fitzwilliams, Ch.M., F.R.C.S., 64, Brook Street, of a son.

TAYLOR.—At 49, Welbeck Street, Cavendish Square, W., on the 15th inst., the wife of James Taylor, M.D., F.R.C.P., of a daughter.

TEYSSON-SMITH.—On the 9th inst., at Shanklin, Orpington, Kent, the wife of A. Teysson-Smith, M.D., of a daughter.

MARRIAGE.

O'KELLY-BAXTER.—On Wednesday, the 10th inst., at St. Mary's, the much-loved wife of the late Captain James Baxter, M.D., by the Rev. Francis Delaney, M.R., Dr. Denis Fitzgerald O'Kelly, of Cross Lodge, Boldon Colliery, near Newcastle-on-Tyne (second son of Denis O'Kelly, Esq., of The Square, Drumcreehouse, county Limerick), to Sarah Betty Baxter, youngest daughter of John Baxter, Esq., of Victoria House, Ashby-de-la-Zouch, Leicestershire.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
FEBRUARY.		MARCH.	
21 Sunday ..		1 MONDAY ..	
22 MONDAY ..		2 TUESDAY ..	WARRINGTON DIVISION, <i>Lancashire and Cheshire Branch</i> , Infirmary, Warrington, 4.30 p.m.
23 TUESDAY ..	HAMPSTEAD DIVISION, <i>Metropolitan Counties Branch</i> , Hampstead Conservatoire, Swiss Cottage, N.W., 8.30 p.m.	LONDON: Subcommittee of Science Committee on Development of Scientific Work of Divisions and Branches, 2 p.m.	
	WANDSWORTH DIVISION, <i>Metropolitan Counties Branch</i> , Clinical Meeting, Tooting Bec Asylum, S.W., 4.30 p.m.	LONDON: Uterine Cancer Committee, 5 p.m.	
	LONDON: Medico-Political Midwives Subcommittee, 11 a.m.	4 THURSDAY ..	WESTMINSTER DIVISION, <i>Metropolitan Counties Branch</i> , Criterion Restaurant, 8.30 p.m.; Dinner, 7.30 p.m.
24 WEDNESDAY	LONDON: Medico-Political Contract Practice Subcommittee, 2.30 p.m.		CAMBRIDGE AND HUNTINGDON BRANCH, Medical Schools, Cambridge, 2.15 p.m.
	BATH AND BRISTOL BRANCH, Bath.	5 FRIDAY ..	SWANSEA DIVISION, <i>South Wales and Monmouthshire Branch</i> , Clinical Meeting, 8.15 p.m.
	LEICESTER AND RUTLAND DIVISION, <i>Midland Branch</i> , Special Meeting, Leicester Infirmary, 4.15 p.m.	6 SATURDAY ..	
	LONDON: Metropolitan Counties Branch Council, 4.30 p.m.	7 Sunday ..	
25 THURSDAY ..	CITY DIVISION, <i>Metropolitan Counties Branch</i> , Clinical Meeting, Queen's Hospital for Children, Hackney Road, 4 p.m.	8 MONDAY ..	LONDON: Subcommittee on Grouping of Branches under Charter, 10.30 a.m.
	STAFFORDSHIRE BRANCH, General Meeting, North-Western Hotel, Stafford, 5.15 p.m.; Dinner, 7.15 p.m.	9 TUESDAY ..	LONDON: Organization Committee, 11 a.m.
	BIRMINGHAM BRANCH, Pathological and Clinical Section, Medical Institute, Edmund Street, 8 p.m.		LONDON: Subcommittee on Capitation Grants, immediately after Organization Committee.
26 FRIDAY ..	EDINBURGH BRANCH, Winter Clinical Meeting, Royal Infirmary, Edinburgh, 4 p.m.; Museum open 11 a.m.; Dinner, Royal British Hotel, Princes Street, 6.30 p.m.	10 WEDNESDAY	RICHMOND DIVISION, <i>Metropolitan Counties Branch</i> , Clinical Meeting, Royal Hospital, Richmond, 8.30 p.m.
27 SATURDAY ..			YORKSHIRE BRANCH, Royal Eye and Ear Hospital, Bradford, 4.30 p.m.; Dinner, 6.30 p.m.
28 Sunday ..		11 THURSDAY ..	BIRMINGHAM BRANCH, Medical Institute, Edmund Street, 3.30 p.m.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the **BRITISH MEDICAL JOURNAL** is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent

by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the **BRITISH MEDICAL JOURNAL** for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, FEBRUARY 27TH, 1909.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

HOSPITALS COMMITTEE.

REPORT

ON

MEDICAL CERTIFICATION OF SUITABILITY OF PATIENTS FOR HOSPITAL TREATMENT.

(For Consideration by Divisions, and Instruction accordingly of Representatives in Representative Meetings.)

The Annual Representative Meeting at Sheffield passed the following resolution:—

71A. That the Council be instructed further to consider and report on the subject of medical certification of suitability of patients for admission to hospitals.

The Council reports on the matter as follows:—

1. The first and fundamental principle laid down, after mature consideration, by the Hospitals Committee of the Association and by the Joint Hospitals Committee, and subsequently approved by the Representative Meeting of the Association and by the United Kingdom Hospitals Conference, is as follows:—

Suitability of Patients for Admission.—That inability to pay for adequate treatment shall be the consideration for the admission of all patients for hospital treatment. This shall not apply to Poor-law cases.

2. It was also agreed:—

Evidence of Suitability.—That except in emergencies sufficient evidence shall be obtained on two points: (a) That the patient is not in a position to pay for adequate treatment; (b) That the case is, from a hospital point of view, suitable for treatment.

3. Thus the test of "inability to pay for adequate treatment" is recognized as involving the consideration of two elements, namely, first, the financial suitability, and secondly, the medical suitability, of the patient for hospital treatment, these two being to a considerable extent interdependent. A patient may be able to pay for ordinary treatment but not for the special treatment which an exceptional case may require. Hence no mere provision of a wage limit or similar purely financial test will meet the requirements of the case, nor will almoners' enquiries, since these, though of the greatest value to the economic side of the matter. The ordinary medical attendant of the patient is the only person who, on the application of the patient, can give reliable information as to the medical necessities of the case, and he is usually also in a position to say whether the patient can afford to pay for such treatment as his case requires.

4. It is clear, therefore, that the adoption by hospitals of a rule that a certificate from the medical attendant, if any, should be required as a condition of hospital treatment would afford some protection to hospitals against the acceptance of unsuitable cases.

5. If properly carried out by medical practitioners, it would also afford the profession some protection against the evils which it suffers through hospital abuse.

6. Taking the three classes of cases—casualties, in-patients, and out-patients—certification is obviously impracticable in the case of casualties until after the first visit. As regards in-patients it is already generally required, and if the gradual conversion of out-patient departments into consultative departments, which the Association has this year recommended, be carried into effect, medical certification will be an essential part of the working of such departments.

RECOMMENDATION.

7. On these grounds it is recommended that a definite pronouncement should be made by the Association as follows:—

That a Medical Certificate of suitability for hospital treatment be required as a condition of hospital treatment, except in case of casualties.

ADDENDUM.

*Extract from (Majority) Report of the Royal Commission
on the Poor Law.*

Since the above Report was approved by the Council of the Association the Report of the Royal Commission on the Poor Law has appeared.

That Report contains the following paragraph, the last sentence of which bears so closely upon the subject of medical certification of hospital patients that the Chairman of the Hospitals Committee has considered it desirable to append a copy of it to the Report of the Council:

Poor Law Report.

Part V, Chapter 2, Paragraph 169.—Until, therefore, the work of the out-patient department is delimited in such a way as to prevent overlapping between its sphere and that of the Public Assistance Authority, and to leave full scope for private practice and provident effort, any endeavour to reform the system of public medical assistance will be locally thwarted. Indeed, all attempts to create order out of the present chaos will be disappointing. Even in the interests of the out-patient departments themselves a reform appears to be expedient in order to secure the greatest benefits from the treatment which they so lavishly bestow, and to prevent those benefits from being abused by the well-to-do. Suggestions for remedying the abuses of the out-patient departments have been laid before us by many witnesses, but by none more fully than the representatives of the British Medical Association. We are convinced with them that a strenuous effort should be made to circumscribe the work of the out-patient departments. They should be used almost exclusively for:

- (1) Casualties.
- (2) Consultations.
- (3) Cases requiring expensive equipment for the treatment of special diseases and defects.

To this end the "letter" system should be thoroughly reformed or abolished, and, except for casualties, the recommendation of a medical officer or private practitioner substituted.

REPORT

ON

CONTRIBUTIONS TO HOSPITALS BY
EMPLOYERS OF LABOUR AND
EMPLOYEES.

*(For Consideration by Divisions with a view to Report
by them to Hospitals Committee.)*

The Annual Representative Meeting at Sheffield instructed the Council to refer for the consideration of the Divisions the subject of the following motions:—

150. (a) That the contributions to hospitals by employers of labour and employees by means of weekly collections and otherwise should be considered as being the payment of premiums for a proportionate insurance against liability for medical and hospital attendance in cases of serious illness and accident, which are made on behalf of those unable themselves to pay directly or adequately for the same, and not as entitling the contributors to unlimited hospital, as also gratuitous medical, attendance as at present seems to be claimed.
- (b) That it be an instruction to the central Hospitals Committee of the Association to endeavour, through the Divisions and otherwise, to obtain acceptance for this principle by the several parties concerned, with a view to elaborating some scheme whereby these contributions should be paid to the rightful parties, viz., Insurance Companies, who in their turn will proportionately recompense Hospital and similar Boards, Hospital Staffs, General Practitioners, &c., for all attendances given on illnesses or accidents incurred by those so insured, reporting from time to time to this Body.

For the assistance of the Divisions in considering the subject, the Council submits the following

MEMORANDUM.

1. It will be seen that motion (a) contains two proposals as to the rights which should be conceded to certain classes of persons in respect of their contributions to Hospital Funds.

2. The negative proposal to the effect "that such contributions should not be considered as entitling the contributors to unlimited Hospital, as also to gratuitous medical, attendance . . ." may perhaps be regarded as non-controversial among those who have paid special attention to the principles of Hospital administration, though its truth is not yet sufficiently recognised by contributors to Hospital funds. It is entirely in accordance with the principles which, on the recommendation of the Committee, have received the approval of the Representative Meeting and of the United Kingdom Hospitals Conference.

3. The positive proposal, namely, "that the contributions in question should be considered as being the payment of premiums for a proportionate insurance against liability for medical and hospital attendance in cases of serious illness and accident, which are made on behalf of those unable themselves to pay directly or adequately for the same," appears to the Committee to be novel and to require careful consideration by the Divisions before it is accepted as influencing the policy of the Association.

4. In the motion (b) referred to the Divisions a new method is proposed of dealing with the contributions in question. The basis of this method is the conception, above referred to, of such contributions as insurance premiums. It would, if adopted, introduce a new element into the financial arrangements and probably, therefore, into the control of hospitals. Large sums would, in such case, be received through Accident and Sickness Insurance Companies who would inevitably claim representation in the management. The strictly charitable conception of Hospitals would thus be affected, and this appears to be recognised by the Division which framed the motion, inasmuch as reference is made to payments to Hospital staffs by Insurance Companies. Such payments must raise questions of great difficulty as to the persons by whom and the manner in which the Hospital staffs are to be appointed.

5. The Council, therefore, does not think it well to make any definite recommendation on the matter until it has received a general discussion in the Divisions, but considers that the Divisions should realise, when having the subject before them, that the affirmation of such a principle would constitute a definite departure from, or even reversal of, the policy of the Association previously declared, and might have dangerous and far-reaching results.

MIDWIVES ACT COMMITTEE.

WANT OF REPRESENTATION OF GENERAL PRACTITIONERS
AND MIDWIVES.

The following letter has been addressed on behalf of the British Medical Association to the Lord President of the Council, expressing the opinion that it is desirable that representatives of general medical practitioners and of midwives should be added to the Departmental Committee of the Privy Council now sitting to consider the working of the Midwives Act, with reference in particular to the supply of midwives and the cost of training, the remuneration of medical men summoned on the advice of midwives under the rules made in pursuance of the Act, and the delegation of their powers by county councils under the Act.

The reply of the Lord President is appended.

My Lord,

The Council of the British Medical Association would most respectfully submit for your Lordship's consideration that it is desirable that representatives of general medical practitioners and of Midwives should be added to the Departmental Committee of the Privy Council now sitting to consider various questions in connexion with the working of the Midwives Act (1902).

While fully appreciating the objections which may justly be urged against the representation of interested persons on Committees or Commissions which are

called upon in any sense to sit in judgement upon such persons, it is submitted that these considerations do not apply to the present case.

The Council of the British Medical Association understands that the object of the appointment of the Departmental Committee is to consider difficulties which experience has revealed in the practical working of the Midwives Act, and to suggest suitable means for preventing those difficulties, either by amendment of the Act or by adjustment of administrative arrangements in connexion therewith, whereby the objects of this enactment for the assistance and protection of child-bearing women and of infants may be more completely fulfilled.

As affecting an important group of difficulties which have arisen, and will doubtless require the consideration of the Committee, it will be appreciated by Your Lordship that so long as the State does not seek to impose any statutory obligation upon medical practitioners to attend women in labour, when summoned by Midwives, the fulfilment of the objects of the Act as regards the assistance and protection of such women must depend to a considerable extent upon the voluntary co-operation of members of the medical profession.

It is submitted with all respect that in the consideration of any amendments of the law or adjustments of working arrangements necessary to secure such co-operation it would be of material assistance to the Committee to have, not only the evidence of medical and other bodies, but also the presence at its deliberations of general medical practitioners and midwives who possess practical experience of the difficulties calling for attention.

I am, my Lord,
Your Lordship's most obedient Servant,
EDMUND OWEN,
Chairman of Council,
British Medical Association.

Feb. 18th, 1909.

The Rt. Honble. Viscount Wolverhampton, G.C.S.I.,
Lord President of the Privy Council.

The Clerk of the Council,
Privy Council Office,
London, S.W.,
20th February, 1909.

Sir,

Referring to your letter of the 18th instant, submitting, on behalf of the Council of the British Medical Association, that representatives of general medical practitioners and of midwives should be added to the Departmental Committee which has been appointed to consider the working of The Midwives Act, 1902, I am to state that, in the Lord President's opinion, the Committee, as constituted, is sufficiently large for the practical objects of the inquiry, which would not be served by the addition to its members of representatives of special interests, whose views will be properly considered in any evidence that may be given.

I am,
Sir,
Your obedient servant,
(Signed) A. W. FITZROY.

The Chairman of Council,
British Medical Association,
429, Strand, W.C.

LANCASHIRE AND CHESHIRE BRANCH: WARRINGTON DIVISION.—The quarterly meeting of this Division will be held on Tuesday, March 2nd, at the Infirmary, Warrington, at 4.30 p.m. Dr. Garstang, a member of the Central Council, will be present.—T. A. MURRAY, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WALTHAMSTOW DIVISION.—The next meeting of the Division will be held at the residence of the Chairman, The Hollies, High Road, Wanstead (close to Snaresbrook Station), on Tuesday, March 2nd, at 4 p.m. Agenda: (1) Minutes. (2) Paper: Dysmenorrhoea, by Dr. T. G. Stevens. (3) To consider report of Medico-Political Committee on Medical Treatment of School Children. (4) Letters. (5) Any other business.—A. POTTINGER ELDRIDGE, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—At the next meeting of the Division, to be held at the Criterion Restaurant, on Thursday, March 4th, at 8 p.m., Dr. A. A. Ewart, President, in the chair, Sir Patrick Manson, K.C.M.G., M.D., F.R.C.P., will open a discussion on Points to be Attended to in the Diagnosis of Fevers in Patients from the Tropics. 7.30 p.m., dinner; 8.30 p.m., Association business; 9 p.m., Discussion. All members of the profession, whether belonging to the Division or not, will be welcome at the meeting and at the dinner if they will notify one of the Honorary Secretaries.—HARVEY HILLARD, J. HOWELL EVANS, 25, Berkeley Square, Honorary Secretaries.

SOUTH-EASTERN BRANCH: GUILDFORD AND WINCHESTER DIVISIONS.—A joint meeting of the Guildford and Winchester Divisions will be held at the Royal Surrey County Hospital, Guildford, on Wednesday, March 10th, at 3 p.m. Agenda: (1) Minutes. (2) Colonel Firth, F.R.C.S., R.A.M.C. (Aldershot), will read a short paper on Some Reflections on the Theory of Heredity. (3) Dr. A. M. Mitchell (Guildford) will open a short Discussion on The Importance of Early Operation in Appendicitis. (4) Dr. Bodington (Winchester) will read notes of A Case of Sarcoma of the Spinal Column, with specimens (macroscopical and microscopical). (5) Dr. Kingsford (Woking) will read notes of A Case of Intestinal Obstruction due to an Impacted Gall Stone. (6) Mr. Eric Sheaf (Guildford) will read notes of Two Cases of Enlarged Thyroid Treated by Operation, and will exhibit specimens. (7) Dr. Garvin, Medical Superintendent of Lord Mayor Treloar's Cripples' Home, Alton, will read a paper on The Mechanical Treatment of Spinal Curves. (8) The following cases and specimens will be shown: (a) Mr. E. J. Smyth: Buphthalmos; (b) Mr. H. J. Fardon (for Dr. Brodribb): Pseudo-hypertrophic Paralysis in a Boy; (c) Dr. Briscoe (Alton): Specimens from 5 cases of morbus cordis in the insane. Other cases will be shown from the wards by members of the hospital staff if time permits. Tea will be provided at about 4.30. The Honorary Secretaries will be glad to hear from members whether they intend being present at the meeting or not, also from any others willing to show cases or specimens.—H. J. GODWIN, 35, Southgate Street, Winchester; E. J. SMYTH, "Maythorne," Guildford, Honorary Secretaries.


SOUTH-EASTERN OF IRELAND BRANCH.—A meeting of this Branch, and also a meeting of the Branch Council and local Division, will be held at the Club House, Carlow, on Wednesday, March 3rd, at 5.30 p.m. Agenda: (1) Minutes of last meeting. (2) Letters of apology. (3) Correspondence. (4) Discuss resolution from the Fermanagh Branch of the Irish Medical Association re the question of adequate remuneration for all subjects appertaining to public health and disease, so that philanthropy may no longer usurp the place of State responsibility, on the grounds that a knowledge of the teachings of the science of public health is as necessary to the community at large as are instructions in the arts of agriculture, dairying, fruit culture, the technicalities of various trades, the care of cattle, fowls, bees, etc. (5) Consider the resolution of this Branch, forwarded through the Irish Committee of the British Medical Association, with a view to legislation re the admission of patients of independent means into union hospitals, and sent back to the Branch by the Irish Committee for amendment. (6) Any other business. (7) Tea after meeting.—J. QUIRKE, Honorary Secretary, Piltown, co. Kilkenny.

YORKSHIRE BRANCH.—The next meeting of the Branch will be held at the Royal Eye and Ear Hospital, Bradford, on Wednesday, March 10th, at 4.30 p.m. Members intending to read papers, show specimens or cases, or to propose new members, are requested to communicate at once with the Secretary. Members will dine together at 6.30.—ADOLPH BRONNER, Honorary Secretary, Bradford.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

CAMBRIDGE AND HUNTINGDON BRANCH.—A meeting of this Branch will be held at the Medical Schools, Cambridge, on Friday, March 5th, at 2.15 p.m.—H. B. RODERICK, M.D., Honorary Secretary.

 To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

THE SEVENTY-SEVENTH ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION,
BELFAST,
JULY 23RD TO JULY 31ST, 1909.

President :

SIMEON SNELL, Hon.D.Sc., F.R.C.S.Edin., Ophthalmic Surgeon, Royal Infirmary, Sheffield.

President-elect :

Sir WILLIAM WHITLA, M.D., LL.D., Professor of Materia Medica and Therapeutics, Queen's College, Belfast.

Past-President :

HENRY DAVY, Hon.D.Sc., M.D., F.R.C.P.Lond., Physician, Royal Devon and Exeter Hospital, Exeter.

Chairman of Representative Meetings :

JAMES ALEXANDER MACDONALD, M.D., M.Ch., R.U.I., Physician, Taunton and Somerset Hospital.

Chairman of Council :

EDMUND OWEN, Hon.D.Sc., LL.D., F.R.C.S., Consulting Surgeon to St. Mary's Hospital, London.

Treasurer :

EDWIN RAYNER, M.D.Lond., F.R.C.S., Consulting Surgeon, Stockport Infirmary, Stockport.

The Seventy-seventh Annual Meeting of the British Medical Association will be held in Belfast in July, 1909, The President's address will be delivered on Tuesday, July 27th, and the Sections will meet on the three following days. The Annual Representative Meeting will begin on Friday, July 23rd, 1909.

PROGRAMME OF BUSINESS.

The Address in Medicine will be delivered by FREDERICK TAYLOR, M.D., F.R.C.P., Consulting Physician, Guy's Hospital.

The Address in Surgery will be delivered by ARTHUR EDWARD JAMES BARKER, F.R.C.S., Professor of the Principles and Practice of Surgery, University College, London.

The Address in Obstetrics will be delivered by Sir JOHN W. BYERS, M.D., Professor of Midwifery and Diseases of Women, Queen's College, Belfast.

The Popular Lecture will be delivered by Dr. J. A. MACDONALD, Physician to the Taunton and Somerset Hospital, Chairman of the Representative Meetings.

THE SECTIONS.

The scientific business of the meeting will be conducted in fifteen Sections, which will meet on Wednesday, July 23th, Thursday, July 29th, and Friday, July 30th.

The President, Vice-Presidents, and Honorary Secretaries of each Section constitute a Committee of Reference for that Section, and exercise the power of inviting, accepting, or declining any paper, and of arranging the order in which accepted papers shall be read. Communications with respect to papers should be addressed to one of the Honorary Secretaries.

A paper read in the Section must not exceed fifteen minutes, and no subsequent speech must exceed ten minutes.

Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the BRITISH MEDICAL JOURNAL without special permission.

The following are the general arrangements so far as they are yet complete:

ANATOMY AND PHYSIOLOGY.

President : CHARLES SCOTT SHERRINGTON, M.D., F.R.S., Physiological Laboratory, University, Liverpool.

Vice-Presidents : Professor THOMAS HUGH MILROY, M.D., F.R.S.E., Queen's College, Belfast; Professor PETER THOMPSON, M.D., King's College, Strand, London; ARTHUR

PHILIP BEDDARD, M.D., F.R.O.P., 44, Seymour Street, Portman Square, London, W.; Professor ANDREW FRANCIS DIXON, M.B., D.Sc., 73, Grosvenor Road, Dublin.

Honorary Secretaries : ALEX. LOW, M.B., 142, Blenheim Place, Aberdeen; JOHN ALEX. MILROY, M.D., Queen's College, Belfast.

DERMATOLOGY AND ELECTRO-THERAPEUTICS.

President : WILLIAM CALWELL, M.D., 6, College Gardens, Belfast.

Vice-Presidents : ROBERT BRIGGS WILD, M.D., 96, Mosley Street, Manchester; LESLIE ROBERTS, M.D., 46, Rodney Street, Liverpool.

Honorary Secretaries : JAMES HARRY SEQUEIRA, M.D., F.R.C.P., 8A, Manchester Square, London; S. ERNEST DORE, M.D., 26, New Cavendish Street, London; JOHN CAMPBELL RANKIN, M.D., 38, University Road, Belfast.

A discussion will be held on the Treatment of Skin Diseases by Radium and Radio-therapy.

DISEASES OF CHILDREN.

President : HAROLD J. STILES, F.R.C.S.Edin., 9, Great Stuart Street, Edinburgh.

Vice-Presidents : JOHN McCaw, M.D., 74, Dublin Road, Belfast; RICHARD WHYTOCK LESLIE, M.D., "St. Heliers,"

Strandtown, Belfast; ROBERT CAMPBELL, F.R.C.S., 21, Great Victoria Street, Belfast.

Honorary Secretaries: ANDREW FULLERTON, F.R.C.S.I., 8, University Square, Belfast; JOHN WILLIAM SIMPSON, M.D., 19, Lansdowne Crescent, Edinburgh.

It is proposed to devote some portion of three of the days on which the Section meets to the discussion of the following subjects:

Wednesday, July 28th.—Club Foot.

Thursday, July 29th.—Functional Neuroses in Children.

HAEMATOLOGY AND VACCINE THERAPY.

President: Sir ALMROTH WRIGHT, M.D., F.R.S., 6, Park Crescent, Regent's Park, London, N.W.

Vice-Presidents: ALEX. GARDNER ROBB, M.B., 15, University Square, Belfast; THOMAS HOUSTON, M.D., 95, Great Victoria Street, Belfast; Captain STEWART RANKIN DOUGLAS, I.M.S., Inoculation Department, St. Mary's Hospital, London.

Honorary Secretaries: WILLIAM DUNLOP DONNAN, M.D., 12, High Street, Holywood, co. Down; DUDLEY W. CARMALT-JONES, M.B., B.Ch.Oxon., 78, Wimpole Street, London, W.

The subjects which have been chosen for discussion are:

Wednesday, July 28th.—Papers on separate subjects: Dr. Houston, Typhoid Carriers. Captain Douglas, Bacteriology of Cystitis; discussion. Dr. Fleming, Bacteriology and Vaccine Treatment of Acne.

Thursday, July 29th.—Discussion: The Early Diagnosis of Tuberculosis, opened by Professor Calmette, l'Institut Pasteur de Lille.

Friday, July 30th.—Discussion: Bacterial Infections of the Respiratory Tract other than Tuberculous.

INDUSTRIAL DISEASES AND PUBLIC HEALTH.

President: LOUIS COLTMAN PARKES, M.D., 61, Cadogan Square, Chelsea, London.

Vice-Presidents: SAMUEL AGNEW, M.D., Lurgan, co. Armagh; HENRY O'NEIL, M.D., 6, College Square East, Belfast; CHARLES KILLICK MILLARD, M.D., Town Hall, Leicester.

Honorary Secretaries: CHARLES PORTER, M.D., Public Health Department, Town Hall, Finsbury; WILLIAM McLORINAN, L.R.C.P., 103, Antrim Road, Belfast; THOMAS CARNWATH, M.B., Town Hall, Manchester.

The following subjects have been suggested for discussion:

1. The Compulsory Notification of all forms of Tuberculosis and the Mortality from Tuberculous Diseses in relation to Sex. To be opened by Dr. Harold Scurfield, Medical Officer of Health, Sheffield.

2. The Administrative Measures Necessary to Prevent the Spread of Enteric Fever by Convalescent Contacts and Carriers, and the Relations of the Paratyphoid Group of Organisms to Disease in Men and Animals.

3. Latent Infections of the Diphtheria Bacillus, and the Administrative Measures required for Dealing with Contacts. (Joint discussion with the Laryngological Section.)

LARYNGOLOGY, OTOTOLOGY, AND RHINOLOGY.

President: ST. CLAIR THOMSON, M.D., F.R.C.P., 28, Queen Anne Street, London.

Vice-Presidents: ERNEST BLECHYNDEN WAGGETT, M.B., 45, Upper Brook Street, London, W.; V. P. HENRY SMURTHWAITE, M.D., 8, St. Mary's Place, Newcastle-on-Tyne; J. A. KNOWLES RENSHAW, M.D., 11, St. John Street, Manchester.

Honorary Secretaries: HAROLD SHUTTLEWORTH BARWELL, F.R.C.S., 55, Wimpole Street, London; JOHN STODDART BARR, M.B., 13, Woodside Place, Glasgow; HENRY HANNA, M.B., B.Sc., 57, University Road, Belfast.

The following subjects have been selected for special discussion:

Wednesday, July 28th.—Discussion on a subject in Otolgy not yet selected.

Thursday, July 29th.—Discussion: Latent Infections of the Diphtheria Bacillus, including the Treatment of

Contacts. (In association with the Section of Industrial Diseases and Public Health.)

Friday, July 30th.—Discussion: The Treatment of Cicatricial Stenoses of the Larynx and Trachea.

Members are invited to contribute any preparations, specimens or drawings, or any instruments or apparatus pertaining to the work of the Section, which have been designed by themselves, in order that the Committee of the Section may make arrangements to form a special exhibit of such objects.

MEDICINE.

President: PROFESSOR JAMES ALEXANDER LINDSAY, M.D., F.R.C.P., 3, Queen's Elms, Belfast.

Vice-Presidents: ARTHUR FOXWELL, M.D., F.R.C.P., 47, Newhall Street, Birmingham; JOSEPH FRANCIS O'CARROLL, M.D., F.R.C.P.I., 43, Merrion Square, Dublin; LAURISTON ELGIE SHAW, M.D., F.R.C.P., 64, Harley Street, London; WILLIAM BAIRD MCQUITTY, M.D., 8, College Square East, Belfast.

Honorary Secretaries: JOHN SMYTH MORROW, M.D., Eia House, Antrim Road, Belfast; LEWIS ALBERT SMITH, M.D., 25, Queen Anne Street, London, W.; JOHN ELDER MACILWAINE, M.D., 55, University Road, Belfast.

The following subjects are suggested for discussion:

Wednesday, July 28th.—Metabolism.

Thursday, July 29th.—The Medical Aspects of Athleticism; Adolescent Albuminuria, or Mucous Colitis.

Friday, July 30th.—A Demonstration on Gastric Illumination.

NAVY, ARMY, AND AMBULANCE.

President: Fleet Surgeon J. LLOYD THOMAS, R.N.

Vice-Presidents: Inspector-General ROBERT BENTHAM, R.N. (retired), 22, King's Avenue, Ealing, London, W.; Lieut.-Colonel R. PORTER, R.A.M.C., F.M.O., Station Hospital, Military Barracks, Belfast; Colonel THOMAS H. HENDLEY, I.M.S., C.I.E., 4, London Road, London, N.W.

Honorary Secretaries: Captain M. LOWSLEY R.A.M.C., St. Michael's Road, Aldershot; Captain HERBERT HUGH BLAIR CUNNINGHAM, M.D., F.R.C.S., 69, University Road, Belfast; Surgeon EDMUND COX, M.B., R.N., The Royal Naval Hospital, Chatham; Captain WILLIAM SALISBURY-SHARPE, R.A.M.C., 8, Cleveland Terrace, Hyde Park, London, W.

The Committee of this Section suggest the following subjects:

1. Effect on Health of Service in Submarine Boats.

2. Conditions of Life in Boys' Training Establishments on Shore.

3. Medical Arrangements for War in Ships of *Dreadnought* type.

4. A Detailed Scheme for an Unexpected Landing Party, using Material available on Board Ship.

5. Pitfalls for the Recruiting Medical Officer.

6. Probable Effects in the Services of the New Treatment of Syphilis by means of Organic Arsenical Compounds.

7. On the Importance of the Permanent Attachment of Ample Transport under the Command of the Medical Officer to each Field Medical Unit.

8. The Infective Pneumonias, their Incidence, Causes, Prevention, and Treatment during a Campaign.

9. On the Existing Ambulance Organization of the Home Railway Companies, with Suggestions for its Amplification and Unification.

10. The Effects of Recent Research on the Work of Colonial Medical Officers.

11. Diagnosis and Treatment of Pulmonary Tuberculosis in the Services.

12. Collection and Disposal of Wounded in War.

OBSTETRICS AND GYNAECOLOGY.

President: JOHN CAMPBELL, M.D., F.R.C.S., Crescent House, University Road, Belfast.

Vice-Presidents: ROBERT ALEXANDER GIBBONS, M.D., 29, Cadogan Place, London; JOHN SINGLETON DARLING, M.B., High Street, Lurgan; CHARLES EDWIN PURSLOW, M.D., 192, Broad Street, Birmingham; EWEN JOHN MACLEAN, M.D., 12, Park Place, Cardiff.

Honorary Secretaries: HENRY THOMAS HICKS, F.R.C.S. Derby; ROBERT JAMES JOHNSTON, M.B., F.R.C.S. 14, University Square, Belfast.

The Committee have thought it well to select two chief subjects for discussion:

1. The Treatment of the Graver Forms of Puerperal Sepsis.
2. Endometritis.

In the Pathological Part of this Section, Cancer of the Uterus has been chosen as one affording a wide scope for the exhibition of Specimens, Photographs, Microscopic Slides, etc.

These, with any others of interest, will be exhibited in the Pathological Museum.

OPHTHALMOLOGY.

President: JOHN WALTON BROWNE, M.D., 10, College Square North, Belfast.

Vice-Presidents: ARTHUR W. SANDFORD, M.D., 13, St. Patrick's Place, Cork; WILLIAM MARCUS KILLEN, M.D., 9, Clifton Street, Belfast; ALEX. HILL GRIFFITH, M.D., 17, St. John Street, Manchester.

Honorary Secretaries: JAMES ANDREW CRAIG, F.R.C.S., 11, University Square, Belfast; LESLIE JOHNSTON PATON, F.R.C.S., 1, Spanish Place, Manchester Square, London.

The subjects chosen for discussion are:

1. Eye Injuries in their Relation to the Workmen's Compensation Act.
2. Vascular Diseases of the Retina.
3. The Diseases of the Lymphoid Tissue of the Conjunctiva (Mr. Treacher Collins).

PATHOLOGY.

President: Professor WM. ST. CLAIR SYMMERS, M.B., Queen's College, Belfast.

Vice-Presidents: WALTER SYDNEY LAZARUS-BARLOW, M.D., Cancer Research Laboratory, Middlesex Hospital, London; ARTHUR EDWARD MOORE, M.B., Castlemaison, Blackrock, Cork; ASTLEY VAVASOUR CLARKE, M.D., 37, London Road, Leicester; Professor I. WALKER HALL, M.D., 9, Royal Park, Clifton, Bristol.

Honorary Secretaries: ALFRED EDWARD BARNES, M.B., 348, Glossop Road, Sheffield; OTTO F. F. GRÜNBAUM, M.D., 34, Wimpole Street, London, W.; WILLIAM JAMES WILSON, M.D., Pathological Laboratory, Queen's College, Belfast.

PHARMACOLOGY AND THERAPEUTICS.

President: Professor RALPH STOCKMAN, M.D., F.R.S. Edin., The University, Glasgow.

Vice-Presidents: Professor WALTER ERNEST DIXON, M.D., Pharmacological Laboratory, Cambridge; NEWMAN NEILD, M.D., 9, Richmond Hill, Clifton, Bristol.

Honorary Secretaries: VICTOR GEORGE LEOPOLD FIELDEN, M.B., 84, Dublin Road, Belfast; HECTOR CHARLES CAMERON, M.B., Guy's Hospital, London, S.E.

PSYCHOLOGICAL MEDICINE.

President: OUTTERSON WOOD, M.D., 40, Margaret Street, Cavendish Square, London.

Vice-Presidents: GEORGE ROBERT LAWLESS, F.R.C.S.I., District Asylum, Armagh; WM. RICHARD DAWSON, M.D., Farham House, Finglas, co. Dublin; ROBERT HENRY COLE, M.D., 25, Upper Berkeley Street, London, W.; MICHAEL JAMES NOLAN, L.R.C.P. and S.I., Down District Asylum, Downpatrick.

Honorary Secretaries: WALTER SAMUEL SMYTH, M.B., District Asylum, Antim; SIDNEY HERBERT CLARKE, M.B., Leicester and Rutland Asylum, Narborough, Leicester-shire.

The subjects selected for discussion are (1) Somatic Delusions and Local Lesions; (2) The Report of the Royal Commission on the Feeble-minded.

SURGERY.

President: Professor THOMAS SINCLAIR, M.D., F.R.C.S., 22, University Square, Belfast.

Vice-Presidents: CHARLES ALFRED BALLANCE, M.V.O., M.S., F.R.C.S., 106, Harley Street, W.; Sir PETER

O'CONNELL, M.D., 9, College Square North, Belfast; ARTHUR JOHN DREW, F.R.C.S., Water Hall, St. Aldate's, Oxford; JOHN GALWAY COOKE, M.B., City and County Infirmary, Londonderry; ARTHUR BROWNLOW MITCHELL, F.R.C.S.I., 18, University Square, Belfast.

Honorary Secretaries: W. TRELWALL THOMAS, F.R.C.S., 84, Rodney Street, Liverpool; G. LENTHAL CHEATLE, C.B., F.R.C.S., 117, Harley Street, London; HOWARD STEVENSON, M.B., F.R.C.S.I., 2, College Square North, Belfast; JAS. BERNARD MOORE, M.B., 11, Clifton Street, Belfast.

TROPICAL MEDICINE.

President: CHARLES WILBERFORCE DANIELS, M.B., London School of Tropical Medicine, Albert Docks, London.

Vice-Presidents: Lieutenant-Colonel ANDREW DEANE, I.M.S., Royal Victoria Hospital, Belfast; Surgeon-General W. R. BROWNE, M.D., C.I.E., 5, Royal Crescent, Holland Park Avenue, London.

Honorary Secretaries: JAMES COLVILLE, M.D., 7, University Square, Belfast; Dr. ANTON BREINL, Director Runcorn Research Laboratories.

PROVISIONAL TIME TABLE.

FRIDAY, JULY 23RD, 1909.

11 A.M.—Annual General Meeting followed by Representative Meeting.

SATURDAY, JULY 24TH, 1909.

9.30 A.M.—Representative Meeting.

MONDAY, JULY 26TH, 1909.

10 A.M.—Representative Meeting.

7.30 P.M.—Annual Conference of Secretaries of Divisions and Branches.

TUESDAY, JULY 27TH, 1909.

10 A.M.—Council Meeting.

10.30 A.M.—Representative Meeting (if required).

2.30 P.M.—Adjourned General Meeting.

Induction of President.

8.30 P.M.—President's Address.

WEDNESDAY, JULY 28TH, 1909.

9.30 A.M.—Council Meeting.

10 A.M.—Sectional Meetings.

10.30 A.M.—Representative Meeting (if required).

12.30 P.M.—Address in Medicine.

8.30 P.M.—Reception.

THURSDAY, JULY 29TH, 1909.

8 A.M.—National Temperance League Breakfast.

9.30 A.M.—Council Meeting.

10 A.M.—Sectional Meetings.

12.30 P.M.—Address in Surgery.

7.30 P.M.—Annual Dinner.

FRIDAY, JULY 30TH, 1909.

10 A.M.—Sectional Meetings.

12.30 P.M.—Address in Obstetrics.

8 P.M.—Popular Lecture.

8.30 P.M.—Reception.

SATURDAY, JULY 31ST, 1909.

Excursions.

Honorary Local Secretaries—

HENRY LAWRENCE MCKISACK, M.D., M.R.C.P., 17, University Square, Belfast.

CECIL EDWARD SHAW, M.A., M.D., M.Ch., 29, University Square, Belfast.

HOWARD STEVENSON, B.A., M.B., F.R.C.S.I., 2, College Square North, Belfast.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

BATH AND BRISTOL BRANCH: BRISTOL DIVISION.

A MEETING of this Division was held on Tuesday, February 16th, at the Medical School, University College. In the absence of Dr. Herapath the chair was taken by the Vice-Chairman, Dr. PARKER. Nineteen members were present.

Medical Officers of Health.—In answer to the question as to whether medical officers of health should devote their whole time to the work it was resolved:

That medical officers of health should devote their whole time to the work where possible. That it be combined with security of tenure and an adequate salary.

Medical Inspection of Schools.—In the discussion upon the questions asked as to the medical inspection of school children there was some difference of opinion as to whether there should be part-time inspectors. It was resolved:

1. That this Branch approve of the principle of payment by salary based on the time devoted to the work whether the officer is a part or whole time medical man.
2. That the actual treatment of physically defective school children should not be undertaken by the medical inspectors, and the parents should be referred to their own medical attendant, who alone should decide what treatment should be given and where it is desirable that such treatment should be given. Cases having no medical attendant, or being too poor to pay for advice, should be referred to the Medical Department of the Poor Law, which should be reorganized to meet the demand for the increased medical relief which will arise.

Earlier Election of Representatives.—The rules of the Division were modified to admit of the Representative being elected nine months before the Representative Meeting.

Election of Chairman and Vice-Chairman.—Dr. C. K. C. Herapath was elected Chairman and Dr. George Parker Vice-Chairman of the Division.

BIRMINGHAM BRANCH: COVENTRY DIVISION.

THE fourth ordinary meeting of this Division was held at the Coventry and Warwickshire Hospital on February 2nd, at 8.30 p.m. In the absence of the Chairman (Dr. Harman Brown) through ill-health, Dr. RICE (Vice-Chairman), upon the proposal of Dr. ORTON, seconded by Mr. BENNETT, took the chair. There were also present Drs. Davidson, Snell, Collington, Moore, Kendrick, Lieutenant-Colonel Ward, Drs. Hadley, Pendred, Harris, Mr. Bennett, and the Honorary Secretary (Dr. J. Orton).

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Cases and Specimens.—Mr. W. E. BENNETT showed three specimens of ovarian tumour—one of ruptured, one twisted, and one dermoid. He described clinical symptoms relative to each case. A discussion ensued, and upon the proposal of Dr. DAVIDSON, seconded by Dr. KENDRICK, a hearty vote of thanks was passed to Mr. Bennett for his interesting cases and specimens.

Payment for School Certificates.—The matter of payment for school certificates was brought forward by the SECRETARY and discussed by Drs. HADLEY, SNELL, and MOORE. Dr. Moore proposed:

That every medical practitioner in the area of the Division should be paid for each certificate of unfitness for school.

Dr. ORTON seconded. Dr. KENDRICK proposed as an amendment:

That the matter be postponed till the next meeting.

Dr. DAVIDSON seconded, and the amendment was carried.

Paper Postponed.—Upon the proposal of Dr. DAVIDSON, seconded by Dr. PENDRED, Dr. Milner Moore's paper was postponed till the next meeting.

GLOUCESTERSHIRE BRANCH.

A SPECIAL meeting of the Branch was held at the Cheltenham General Hospital on February 11th, at 5.30 p.m., the PRESIDENT in the chair. Twenty members were present.

Election of Representative in Representative Meetings.—It was proposed by the PRESIDENT, seconded by Dr. SOUTAR, and carried, that the words in Rule 5, namely,

Held not more than three months nor less than three weeks,

should be altered so that the rule should read:

5. The Representative of the Division in Representative Meetings of the Association shall be elected in the manner prescribed in Article XXVII:

XXVII. . . . In the case of a Constituency formed within the United Kingdom, the Representative shall be elected by a General Meeting of Members of the Constituency, held not more than nine months, nor less than three weeks, before the Annual Representative Meeting. . . . Such Meeting shall be convened . . . by the Secretary of the Constituency, who, in the case of a Constituency composed of more than one Division shall be chosen by the Secretaries of those Divisions, and, if they cannot agree, by the Council. The Secretary of each Constituency shall inform, not less than fourteen days before the Representative Meeting, the General Secretary of the name and address of the Representative elected by such Constituency, and the General Secretary shall issue to such Representative a ticket of admission to the Meeting.

And that Clause *b* in Rule 10, namely,

To elect the Representatives of Divisions in Representative Meetings of Association,

be omitted.

Medical Inspection of School Children.—A discussion then followed on the questions asked by the Medico-Political Committee regarding some points arising in connexion with medical inspection of school children and the treatment of those found defective. It was proposed by Dr. SOUTAR, seconded by Mr. BUCKELL, that

A State school medical service be established.

Dr. BRAINE-HARTNELL proposed as an amendment, and Dr. COX seconded:

That cases of illness be referred to the ordinary medical attendant.

Mr. CUTBERT proposed, and Dr. MEYRICK-JONES seconded, that the discussion be adjourned to a future meeting. Both amendments were lost, and the original proposal carried by 11 to 2. It was proposed by Dr. H. BRAMWELL, seconded by Mr. CUTBERT, and carried:

That this Branch strongly disapproves of existing charities, such as general or special hospitals or institutions supported by voluntary contributions, being primarily utilized for treatment of elementary school children.

A general meeting of the Branch was held at Stroud Hospital on February 18th, at 6.30 p.m., the PRESIDENT in the chair, and 32 members present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Apologies for Absence.—Apologies for absence were read from Drs. Batten, Bramwell, and Dent.

Chronic Diarrhoea.—Dr. ROBERT HUTCHISON, of London, gave an address on chronic diarrhoea, its varieties and treatment. He began by stating that diarrhoea might consist in an increase in the amount of the stools, as well as in their frequency or in their abnormal fluidity. The best example of the first was found in forms of diarrhoea met with in children between 1 and 3 years of age. He described the large, pale, offensive stools of these cases, and the good results of treatment with silver nitrate, gr. 4 doses, and then went on to chronic diarrhoea, characterized by an increase in number of motions, or by their abnormal fluidity, and classified them as follows: 1. Disease of the stomach, producing "gastric" diarrhoea, and its treatment by hydrochloric acid. 2. Disease of small intestine—"enteritis," alcoholism, and phthisis being common causes. 3. Diseases of colon—(a) chronic catarrhal colitis, (b) ulcerative colitis, (c) chronic dysentery, (d) malignant disease, (e) sigmoiditis—drawing attention to the use of colon irrigation with silver salts in chronic catarrhal colitis, of appendicectomy in ulcerative colitis, and the importance of not overlooking malignant disease as a cause of diarrhoea. 4. Nervous

irritability of intestine—(a) "nervous" diarrhoea, treated best by bromide; (b) lenteric diarrhoea, treated by small doses of opium before meals. He mentioned the frequency of a catarrhal basis in these forms and concluded with some remarks on the importance of examining the stomach contents, and of sigmoidoscopy in all cases of chronic diarrhoea. An interesting discussion followed by the President, and Messrs. OSCAR CLARK, PRUEN, CUTBERT, MARSHALL, DAVIES, MARTIN, AFFLECK, BRAINE-HARTNELL, COODE, FINLAY and SOUTAR, all of whom thanked Dr. HUTCHISON for his address, after which Dr. HUTCHISON replied.

Dinner.—Twenty nine sat down to dinner at the Stroud Club.

LEINSTER BRANCH.

The annual general meeting of the Branch was held in the Royal College of Physicians, Dublin, on February 13th, Dr. BOYCE, President, in the chair.

Report of Honorary Secretary.—Professor WHITE, Honorary Secretary, stated that the membership numbered 302, and there was a balance of £25 in hand. On the motion of Dr. FALKNER, seconded by Dr. CRAIG, the report was adopted.

Election of Officers.—The following appointments for the ensuing year were then announced: President, F. W. KIDD, M.D.; President-elect, Sir William Smyly, M.D.; Vice-Presidents, Sir Arthur Chance, F.R.C.S., and H. T. Bewley, M.D.; Representatives on Irish Committee, James Craig, M.D., and J. M. S. Kenny, M.B.; Honorary Secretary and Treasurer, Professor White (Royal College of Surgeons, Dublin).

The Referendum.—A resolution was adopted that a Referendum of the British Medical Association should be taken on a requisition of a half, and not two-thirds, of the Council, as required at present.

Vote of Thanks to Retiring President.—A vote of thanks to the outgoing President was proposed by the President of the Royal College of Physicians, seconded by Dr. VERNES FURLONG, and unanimously adopted.

New President's Address.—Dr. FRED. KIDD then delivered his address, in the course of which he said that, owing to the disabilities, hardships, and grievances connected with the Poor Law and dispensary services, the better type of candidates and the best educated among them did not, as a rule, seek for appointments in these services in the rural districts, and the working of the Public Health Acts suffered from the conditions under which the medical officers were appointed, and under which they carried out their duties. He referred to the investigations into the Poor Law medical system made by Sir William Thomson and Surgeon-General EVATT, and to the efforts of the Irish Medical Association to get the doctors to combine on the questions of salary and holidays, and said that had there been more *esprit de corps* amongst the members of the profession at that time they could have enforced their demands. More than 50 out of the 159 unions had adopted the scale of the Irish Medical Association, and about 400 dispensary officers had benefited thereby. The amount of increase of salaries totted up to £12,000 a year, and about £3,000 a year for the payment of substitutes when the officers were on vacation. Within the last ten years the Irish Medical Association had spent nearly £1,400 in law costs on behalf of its members. Referring to the reports of the Commission on the Reform of the Poor Law, the President said the Government was supposed to be at present framing legislation based upon these reports, and it behooved the medical profession to be on the alert, and to make itself acquainted with what was being done at as early a date as possible, so as to be able in some way to influence the course of the coming reform. One of the greatest difficulties they had to contend with in getting their grievances redressed was the want of *esprit de corps*, and he thought their profession might learn a lesson from the study of the tactics adopted by some of the trades unions. There were many ways in which members of the public made inroads into the profits which should legitimately come to the members of the medical profession. One had only to study the daily press to notice the overwhelming increase in the number of advertisements of nostrums and quack medicines. The General Medical Council, recognizing the great injury done to the public and to the profession by the

sale of quack medicines and nostrums, had collected evidence as to the laws and regulations and methods adopted in other countries in dealing with quacks and their preparations, and he had every hope that this evidence might be utilized to enable the Council to get extended powers, so that they might be able either to deal with the question themselves or to bring such pressure to bear on the Government that wholesome legislation might follow. Referring to food preparations, he said the extremes to which some experts may go in the adulteration of food was amazing. Within the last week a firm was fined £20 for supplying a cattle food purporting to be a mixture of husks of rice and oats, but which on analysis was found to be composed of 62½ per cent. of sawdust and 37½ per cent. of plaster of Paris. (Laughter.) Having dealt with the antituberculosis campaign, the registration of nurses, the establishment of the branch of the Research Defence Association in Dublin, the President said other questions that were of great importance were the increase of insanity, the increase of cancer, and the falling birth-rate, all of them accompanied by a diminishing consumption of alcohol. What the future of the country doctor was to be he did not know. The outlook was far from cheery. However, there was a prospect of some reform, and let it be an opportunity for all working together for the common weal.

Registration of Nurses.—A resolution was passed that the Branch did not approve of any Nurses' Registration Bill that did not contain clauses that the bill apply to Ireland or that did not make it clear that the registration did not qualify nurses to practise medicine.

METROPOLITAN COUNTIES BRANCH:

KENSINGTON DIVISION.

The late Mr. George Eastes.—At a meeting of the Executive Committee of this Division, the CHAIRMAN (Dr. Rice Oxley), Dr. CRAWFORD THOMSON, and others spoke eulogistically and sympathetically of the late Mr. George Eastes, both personally and in his relationship to the Association and profession. It was resolved to request the Chairman and Secretary to write a letter of condolence and sympathy to his relatives.

WESTMINSTER DIVISION.

An ordinary meeting of the Westminster Division of the Association was held on February 4th at the Criterion Restaurant, Dr. WILLIAM EWART, President, in the chair.

Dinner.—The meeting was preceded by a dinner, at which twenty members and guests were present, six other members joining the meeting later.

Ordinary Business of the Division.—(1) Minutes; (2) correspondence; (3) report from Medical Secretary.

Importance of Early Diagnosis with a View to Successful Treatment.—Mr. A. W. MAYO ROBSON, F.R.C.S., opened the discussion upon this important question in an address which was published in the BRITISH MEDICAL JOURNAL of February 20th, p. 451. Mr. C. B. KEETLEY, in discussing the paper, gave many important reasons in favour of the views advanced by Mr. Mayo Robson, and urged the importance of early consultations between physicians and surgeons. Mr. URBAN PRITCHARD said the subject of Mr. Mayo Robson's paper had a special interest to the otologist, on account of the great importance of early diagnosis in cases of middle-ear suppuration and its very serious intracranial complications. The early diagnosis of the suppuration was not difficult, for in a doubtful case, even without a speculum, a cotton-wool mop introduced gently down to the bottom of the meatus would at once discover any discharge; and yet, he was sorry to say, there were still frequently met with cases of intracranial disease from middle-ear suppuration which had not been noticed until the case was hopeless. Some little time ago he was caught returning late from a country journey, and taken across London to see a young lady dying of meningitis from ear disease which had only been diagnosed a few hours. If that case had been diagnosed and taken in hand, say, two months earlier, the life would have been saved. Mr. CRESSWELL BABER drew attention to the importance of early diagnosis for successful surgical treatment in (1) malignant disease of the upper jaw in which rhinospicy and transillumination were important aids; (2) malignant intralaryngeal growths, the early recognition of which by

the practitioner by means of the laryngoscope was of extreme importance for treatment; (3) intracranial complications of suppurative middle-ear disease. He also urged the importance of the recognition and treatment of acute ear disease, even when slight, in the exanthemata, and was of opinion that the timely performance of Schwartz's operation in these cases, when the antrum was clearly affected, would help to prevent subsequent long-continued middle-ear suppuration and the necessity later on for a radical mastoid operation. He considered Mr. Mayo Robson's remarks very valuable and important. Mr. J. HOWELL EVANS, upholding the great importance of early diagnosis in the curative treatment of cancer, gave a very interesting demonstration of (a) the cystoscope and ureteric catheter; (b) the gastro-duodenoscope, with catheterization of the biliary and pancreatic passages, in which he pointed out the value of such instruments when properly employed and aided by skiagraphy. Mr. Howell Evans testified to the great value of the gastro-duodenoscope in the early diagnosis of carcinoma of the stomach, even when digital palpation of this organ through a laparotomy wound failed to reveal any early lesion. Drs. ARCHER and FINCANE referred to (1) the great difficulty in getting parents to attend in any satisfactory manner to the syringing of their children's ears; (2) how earache seemed to be considered as a necessary trivial ailment which every child should experience; (3) how all home remedies were in such cases invariably exhausted before the practitioner's advice was sought; whereas the inadequate instruction to hospital patients to "go home and keep the ears clean" had led to grave neglect for one, two, or more weeks—even months—for which oftentimes the general practitioner had been wrongly accused when at length graver lesions presented themselves. Dr. DAUBER remarked that there was one point—namely, oral sepsis—to which neither Mr. Mayo Robson nor the previous speakers had made allusion, but which appeared to him of great importance as a causative factor in many of the pathological conditions of the alimentary system. Emphasis had been placed, in the paper to which they had just had the pleasure of listening, upon the importance of radical rather than merely palliative measures in the early stages of such conditions as appendicitis, duodenal ulcer, and cholelithiasis. With this view he was in entire concurrence; but his experience led him to believe that very often these pathological processes were secondary to oral sepsis, and would not be so frequently seen, even if they could not be entirely prevented, if the buccal cavity and fauces were habitually kept in a wholesome aseptic state. No one who was not in the habit of inspecting the mouths of hospital patients would credit the appalling conditions which prevailed amongst the out-patient class. Edentulous gums, septic stumps, carious molars, incrustations of sordes, various degrees of pyorrhoea alveolaris—one or other of these conditions was the argument amongst his own out-patients at the Hospital for Women rather than the exception; and many patients who came or were sent to the hospital on the assumption that they were suffering from pelvic disease were found to be suffering instead from some disordered condition of one or other part of the alimentary canal, or else to be the subjects of marasmus, malnutrition, toxæmia or constitutional disturbance dependent upon the foul and septic condition of their mouths. To the same cause he would attribute most of the cases of middle-ear disease, by direct infection along the Eustachian tube, to which Dr. Pritchard had alluded. He believed that at the present time, in the treatment of scarlet fever, not the least important duty of the nurse was to keep the mouth clean, in order to save the patient both from otitis media and cervical glandular infection. Personally he felt that the whole question of oral sepsis and its relation to other diseases, from otitis media to ulcerative colitis, needed "booming"—so wide and far-reaching were its effects—and not being a dental surgeon himself he felt he could say this without bias or partiality. With regard to the importance of dealing with ovarian tumours in their earlier stages, to which Mr. Mayo Robson had made reference, he must say that he did not think they saw anything like the number of the larger cystomata that they met with some ten years ago—indeed it was rather a complaint with his colleagues and himself that the ground, so to speak, was too much shot over and that little was left, and that

of no size, to operate upon. With respect to uterine fibroids he did not think this was so much the case. These tumours, he thought, were hardly yet taken quite seriously enough in this country. Even in the Obstetrical Society, that august but somewhat conservative assembly, they did not seem to him to view fibroid disease as one that should be nipped, surgically, in the bud, but rather as one that should mature, under observation, until ripe for attack. No one had done more to emphasize the importance of the radical treatment of uterine fibroids than had Mr. Bland-Sutton, and he himself shared that surgeon's views and followed his practice. He agreed with Mr. Howell Evans that the frequent absence of pain when cancer attacked the uterus was an unfortunate circumstance, detrimental to the interests both of the patients and of surgery itself, for the suspicions of patients were not aroused, in innumerable cases, until too late. That women should be induced to submit to local examination as soon as their attention was attracted to any abnormal discharge or other unusual condition was, he considered, the chief desideratum in order to combat these sad cases sufficiently early.

NORTH OF ENGLAND BRANCH:

SUNDERLAND DIVISION.

A SCIENTIFIC meeting (the fourth of the winter session) of the Division was held at Sunderland Infirmary on Tuesday, February 9th. Fifty-one members out of a total of eighty-eight were present. The following cases and pathological specimens were shown:

Cases.—Dr. MORGAN: (1) Perforated gastric ulcer. (2) Suprapubic lithotomy. (3) Strangulated inguinal hernia in which the bowel sloughed; short-circuiting was performed by a Murphy's button. (4) A freak. Dr. HORGON: (1) Naevus of cheek; a question of treatment. (2) Two cases for diagnosis, male and female. (3) Double Erb's paralysis. Dr. BLUMER: (1) Cholechochotomy. (2) Congenital dislocation of the shoulder. Dr. ROBINSON: (1) Depressed fracture of frontal bone. (2) Depressed fracture of skull, which was elevated. (3) Acute epiphysitis with resection of bone. (4) Nephrorrhaphy. Dr. WELFORD: A case of enlarged spleen. Dr. BRUCE LOW: (1) Subacute myelitis. (2) Cerebral tumour. (3) Two cases of amyotrophic lateral sclerosis. (4) Hodgkin's disease. Dr. GEORGE MORGAN: (1) Paralysis agitans. (2) Aphasia. (3) Thoracic aneurysm. (4) Abdominal aneurysm. Dr. CHALMERS: (1) Two cardiac cases, mother and child. (2) Infantile paralysis. (3) Case for diagnosis.

X-ray Cases.—The following were also shown: Three cases of rodent ulcer. A case of Hodgkin's disease.

Pathological Specimens.—The following were exhibited: (1) An old perforated gastric ulcer, showing the silk suture. (1a) Strangulated hernia due to a band of adhesions secondary to the perforated ulcer. (2) A curiously contracted stomach, probably secondary to chronic ulceration. (3) Surgical kidneys and cystitis of bladder secondary to malignant prostate, both structures showing secondary deposits. (4) Aneurysm of innominate artery. (5) Thoracic aneurysm. (6) Fibroid of uterus. (7) Intussusception. (8) Ditto. (9) Papilloma of larynx. (10) Tuberculous nodule in cerebellum. (11) Congenital heart disease. (12) Carcinoma of splenic flexure removed during life. (13) Specimens of intestinal obstruction. (14) Hypertrophic elongation of cervix. (15) Twin monstrosity.

A Discussion took place on the cases and specimens as shown.

Demonstration.—Dr. T. COKE SQUANCE gave a lantern micro-demonstration of sections of sarcoma.

Vote of Thanks.—A vote of thanks was proposed to the honorary members of the staff and to the resident staff.

Refreshments.—The Matron (Sister Mary), with her usual kindness and generosity, provided light refreshments.

SOUTH-EASTERN BRANCH:

FOLKESTONE DIVISION.

A MEETING of this Division was held on Saturday, February 13th, at Hotel Wampach, at 8.15 p.m. Dr. D. FITZGERALD, Chairman of the Division, presided.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Letter.—A letter was read from Dr. H. HICK, Medical Officer of Health for New Romney.

Medical Officers of Health.—It was proposed by Dr. CHAMBERS, and seconded by Dr. MENZIES, and carried unanimously:

That the Folkestone Division expresses its opinion that medical officers of health should be debarred from engaging in private practice, but that existing medical officers of health should, where possible, retain their appointments, and should receive adequate compensation for the loss of private practice; also, that their tenure of office should be secure.

Medical Inspection of School Children.—It was unanimously resolved that the Division (1) approves of payment per head for part-time officers with a minimum fee of 2s. 6d., and that extra work, reports, etc., be paid for. (2) Treatment: The Division unanimously agrees with the proposition of the Watford and Harrow Division.

Police Emergency Fees in Kent.—A letter was read from the Secretary of the South-Eastern Branch, stating that:

The subcommittee of the Branch Council appointed to consider the question of police fees is to remain a standing subcommittee, and, in the event of a case occurring in which it seemed desirable to take legal advice, that this subcommittee should add to their number the secretary of the Division in which the case occurred, and should then have power to consult the solicitor of the Association, and take action if so advised.

Division of the South-Eastern Branch.—This Division does not think it advisable to divide the South-Eastern Branch.

ISLE OF THANET DIVISION.

The thirtieth meeting of this Division was held at the Granville Hotel, Ramsgate, on Thursday, February 18th. There were present eighteen members and two visitors.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed and signed.

Proposed Division of Branch.—A letter was read from the Honorary Secretary of the South-Eastern Branch re police emergency fees and enclosing a question with regard to the division of the Branch, while a letter was also read from the Honorary Secretary of the Brighton Division on the same question. After some discussion it was proposed by Dr. HALSTEAD and seconded by Dr. WATTS that the proposal for dividing the Branch into two by a line, meaning North and South, be supported, while the suggestion of the Council of separating the South London area into the Metropolitan Counties Branch be also supported. This was carried unanimously.

Paper.—Dr. ARTHUR LATHAM read a paper on the administration of tuberculin. He illustrated the paper with diagrams of charts of various cases.

Vote of Thanks.—A vote of thanks was heartily passed to Dr. Latham for his paper and to Dr. Tamplin for presiding.

SOUTHERN BRANCH:

JERSEY DIVISION.

A MEETING of this Division was held on February 12th at the Secretary's private residence; six members were present.

The Work of the Association.

After routine business had been transacted, Dr. J. F. CARRUTHERS, of Guernsey, Representative for the Channel Islands, gave an address on some recent developments in the British Medical Association, in the course of which he described the constitution before 1902, and the new constitution then adopted. In the second part of his address he discussed the change which, he held, had revolutionized the relations between the medical profession and public corporate bodies, and called urgently for the complete organization of the profession. Thirty years ago, he said, speaking quite broadly, there were no registered midwives, no district nurses, no medical officers of health, no school medical officers, comparatively little abuse of hospital and dispensary out-patient departments, comparatively little club and contract practice, and no juveniles. The practitioner who had an adult male club had the family practice as a set-off. The money to pay for all these new developments had come out of the pockets of the general practitioner. Everybody had his peck at him. Hospitals, dispensaries, dispensing chemists, bone-setters, midwives, trained nurses, public vaccinators,

school medical officers, medical officers of health. Boards of guardians ground him down; friendly societies threatened him with youthful medicos if he kicked at their sweating terms. He had a cut-throat competition with his neighbours. He hardly dared to take a holiday through dread of the cost of a locum-tenent. The night-bell ruined his nights; the telephone destroyed his days. Everybody expected cash from him; nobody paid it. It was a dog's life, but how it could be improved by properly organized combination! But it was just the general practitioner who would not combine—he to whom of all men combination meant salvation. He would not presume to suggest rules of conduct for consultants; and the man with a sixpenny dispensary might find them an embarrassment. But organization alone would save the general practitioner from extinction. No class of man knew better than medical men that unity was strength. No class more lamentably failed to obtain it. No attempt could be made to deal firmly with any public body, with any club, with their own black sheep, without feeling that one of their own household would cut in and stultify all their work. It was here that the reforming party of the British Medical Association stepped in, believing that the Association offered means—the only means—by which unity could be obtained. They were advised that a society with compulsory universal membership was impossible: what substitute existed? Here was the largest voluntary medical society in the world. Socially, it contained the best-known and most influential medical men in the three kingdoms. Its name was well known and respected. It owned an important journal. It had a strong financial position, and valuable central premises in the Strand. The question the reformers asked themselves was: Can the British Medical Association be developed into a force that will be of such material benefit to its members that no medical man can afford to stand out of it? At the outset it was discovered that as a company registered under the Companies' Acts the Association was debarred from using its funds for mutual assistance, for schemes of benevolence, for mutual defence against malicious charges or oppression by public bodies. Equally was it debarred from assisting sick members, or supporting the widows and orphans of members who have died in financial difficulties. Counsel advised application to the Privy Council for a Royal Charter, under which those schemes could be undertaken. Keen sympathy in this endeavour was shown by the Colonies, and Australia, South Africa, and Canada had expressed their wish for the new Charter. But if you, gentlemen, he continued, do not look upon mutual defence, mutual assistance, old age pensions, sick benefits, and such like as worthy objects for our Association to take up, you will have no sympathy with my views. I consider it a disgrace to the profession that that pitiful page should exist in the JOURNAL and the LANCET, where we read of £1 here and £2 there being doled out to the widow and orphans of some dead M.D. or L.R.C.P. I consider it a disgrace that practitioners should be left to pay out of their own pockets for their fight against unfair conditions on behalf of the whole profession. I consider it a disgrace that a British working man, who sits education-free and income-tax free, and travels half price on rail and tram, and who can spend an average of 5s. a week on beer and football matches, should be allowed to get off with a penny a week for himself and a halfpenny a week for his child to the club doctor. If it were possible to have a universally compulsory medical society, such as, I believe, the legal profession has in the Law Society, our troubles would soon be at an end. We were, however, advised that this was impossible. The only alternative was to make membership of the British Medical Association so advantageous that no member of the profession could afford either to stand outside, or to forfeit his membership once he was inside. And the question before us is how best to do this. I have been amazed at the amount of time and work given freely for this object by busy men like Sir Victor Horsley, Andrew Clark, J. A. Macdonald, H. A. Ballance, H. W. Armit, and dozens of others whose very names are unknown to 95 per cent. of the men they are working for. Let us look the facts in the face. When we are dealing with private patients we deal as individuals with individuals. But when medical men have to deal with public bodies,

Government departments, boards of guardians, working men's societies, then invariably we fail, because we are not organized, because we do not combine. It is known that over 25 per cent. of the profession are earning less than £200 a year. A man struggling for the bare necessities of life has no time to be noble or dignified. If he has hungry children to feed, and if he knows that by asking 3s. 6d. instead of the agreed 4s. he will get a club of 700 or 800 members, he will ask 3s. 6d., unless we have a force powerful enough to prevent him. Can we find the force? Can we make the British Medical Association into that force? That is the question before us. My own belief is that only by sick benefits, mutual insurance, mutual defence, old age pensions, allowances for widows and orphans, shall we offer inducements strong enough to bring the whole profession into our ranks.

Paper.—A paper was also contributed by the CHAIRMAN (Dr. H. C. Major) on the treatment of intracranial tumours.

Nabal and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

FLEET SURGEON C. W. SHARPLES has been placed on the retired list with the rank of Deputy Inspector-General of Hospitals and Fleet, February 17th. The commissions are thus dated: Surgeon, August 25th, 1881; Staff Surgeon, August 25th, 1893; Fleet Surgeon, August 26th, 1897.

The following appointments have been made at the Admiralty: Staff Surgeon J. A. L. CAMPBELL and Surgeon J. H. VINCIGUT, M.B., to the *Aboukir*, on recommissioning, March 2nd; Staff Surgeon J. R. MITCHELL, M.B., and Surgeon D. P. CHAPMAN, to the *President*, additional, for the *Maine*, undated; Surgeon E. S. WILKINSON, M.B., to the *Wildfire*, additional, for disposal, February 15th; Surgeon P. T. NICHOLS, to the *Excellent*, undated; Fleet Surgeon P. M. MAY, to the *Goliath*, February 15th; Staff Surgeon E. S. TUCK, to the *Hannibal*, February 15th; Staff Surgeon R. WATERFIELD, to the *Sapphire*, additional, for the *Tyne*, February 22nd; Surgeon S. AUSTIN, M.B., to the *Victory*, for temporary service, to date on joining; Staff Surgeon M. CAMERON, M.B., to the *Crescent*, temporary, undated.

ROYAL NAVAL VOLUNTEER RESERVE.

SURGEON H. LEITH MURRAY has been appointed Surgeon in the Royal Naval Volunteer Reserve, and attached to the Mersey Division, February 15th.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

The undermentioned are to be Lieutenants, on probation, dated January 30th, 1909: HARRY SHERWOOD RANKIN, M.B., JOHN ALEXANDER MANFOLD, M.B., PERCY STANLEY TOMLINSON, WILLIAM HENRY O'BRIEN, CHARLES THORNTON VERR BENSON, WILLIAM PORTER MCCARTHY, M.B., ERNEST CHARLES LAMBRIN, M.B., ALFRED WILLIAM BEVIS, FRANCIS WILLIAM MURRAY CUNNINGHAM, M.B., EUSTACE MACARTNEY PARSONS-SMITH, OSWALD WILLIAM MCKINNEY, M.B., SAMUEL SELDMON DYES, M.B., JAMES JOSEPH DILLON ROCHI, M.B., ROBERT HENRY NOLAN, ROBERT CECIL PRIEST, M.B., MICHAEL WHITE, M.B., ROBERT COLIN FARIS, PHILIP GORDON MOSH ELVERY, HERBERT FLETCHER JOYNT, M.B., MARGUERITE JOSEPH WILLIAMSON, M.B., ALEXANDER STUART MONCK WINDER, M.B., WILLIAM MATHIESON, JAMES RUSSELL YOUNG, M.B., JAMES ROWLAND HILL, M.B., CHARLES LEOPOLD FRANKLIN, M.B., HARRY RUSSELL EDWARDS, ALEXANDER DICERSON STIRLING, M.B., WILLIAM BENSON RENNIE, M.B., JOHN BECKETON, and GEORGE FRITCHARD TAYLOR, M.B.

Lieutenant-Colonel S. G. ALLEN has been appointed a Medical Officer, London Recruiting Area.

Lieutenant A. G. CUMMINS is seconded for service with the Egyptian army, January 21st.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel H. W. STEVENSON, Bombay, is promoted to be Surgeon-General from January 11th. As announced in the *BRITISH MEDICAL JOURNAL* of February 13th, he has been appointed Surgeon-General with the Government of Bombay.

Colonel J. McCLOUGHY, Bombay, Principal Medical Officer, Abbottabad Brigade, is permitted to retire from the service, from January 13th. He joined the Bombay Medical Department as Assistant Surgeon, March 31st, 1875, and was made Colonel June 20th, 1905. He served in the Afghan war in 1878-80, receiving a medal.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

CAPTAIN AND HONORARY MAJOR (Honorary Captain in the Army) MOWBRAY TAYLOR, M.B., resigns his commission, retaining his rank and uniform, March 31st, 1908.

TERRITORIAL FORCE.

INFANTRY.

SURGEON-LIEUTENANT-COLONEL AND HONORARY SURGEON-COLONEL C. W. THORP, 6th Battalion the Lancashire Fusiliers, resigns his commission, January 12th; he retains his rank and uniform.

Surgeon-Lieutenant-Colonel H. J. FADDEY, M.D., and Surgeon-

Captain E. C. SEACK, from the 2nd Volunteer Battalion, are appointed to the 6th Battalion the Prince of Wales's (North Staffordshire Regiment), with rank and precedence as in the Volunteer Force, April 1st, 1908.

ROYAL ARMY MEDICAL CORPS.

Highland Mounted Brigade Field Ambulance.—Lieutenant J. W. MACKENZIE, M.D., to be Captain, January 23rd.

Third London (City of London) Field Ambulance.—Lieutenant H. C. PHILLIPS to be Captain, January 30th.

Second London Field Ambulance.—The promotion of Captain P. F. SHAW to the rank of Major bears date April 1st, 1908, and not December 13th, 1908, as stated in the *London Gazette* of January 19th, 1909. Captain J. McKIE, M.B., to be Major, April 1st, 1908.

Fourth Northern General Hospital.—Captain D. J. G. WATKINS, M.B., to be Major, November 3rd, 1908.

Eastern Mounted Brigade Ambulance.—Lieutenant G. S. WILKINSON, from the Hertfordshire Battalion the Bedfordshire Regiment, resigns his substantive rank on appointment as Transport Officer, with the honorary rank of Lieutenant, November 23rd, 1908. WILLIAM SMITH to be Lieutenant, December 10th, 1908.

South Wales Mounted Brigade Field Ambulance.—Lieutenant-Colonel F. H. THOMPSON resigns his commission, with permission to retain his rank and to wear the prescribed uniform, February 24th.

First West Lancashire Field Ambulance.—The undermentioned officers are transferred from the 2nd West Lancashire Field Ambulance, dated January 1st: Lieutenant F. W. K. TOWSE, F.R.C.S. Edin., to be Lieutenant; Lieutenant A. P. H. SIMPSON to be Lieutenant.

Second West Lancashire Field Ambulance.—The undermentioned officers are transferred from the 1st West Lancashire Field Ambulance, January 1st: Lieutenant WILLIAM MACDONALD, M.B., to be Lieutenant; Lieutenant C. L. WILLIAMSON to be Lieutenant.

First London Field Ambulance.—The undermentioned Captains to be Majors, dated April 1st, 1908: G. H. EDINGTON, M.D.; ARCHIBALD YOUNG, M.B.

Second Northern General Hospital.—EDMOND F. TREVELYAN, M.D., to be Lieutenant-Colonel, December 14th, 1908. Major CHARLES BOTCH, M.D., to be Lieutenant-Colonel as from October 28th, 1907, dated April 1st, 1908. Lieutenant G. H. LEWIS resigns his commission, December 14th, 1908.

For attachment to Units other than Medical Units.—Captain J. KYFFIN, from the 2nd Western General Hospital, to be Captain, June 25th, 1908. Lieutenant C. A. SPOONER to be Captain, December 4th, 1908. ALEXANDER DICK to be Lieutenant, dated December 2nd, 1908. Lieutenant A. H. GOSWAMI, from the 2nd West Lancashire Field Ambulance, to be Lieutenant, January 1st. Lieutenant L. C. V. HARDWICK to be Captain, January 22nd.

CHANGES OF STATIONS.

The following changes of stations amongst the officers of the Army Medical Service have been officially reported to have taken place during January:

	FROM	TO
Colonel P. M. Ellis	Quetta	Lucknow.
" O. E. P. Lloyd, V.C.	Ranket	Meerut.
" O. Todd, M.B.	Ootacamund	Bangalore.
" R. Jennings, M.D.	Cosham	Sevonport.
Lieut.-Col. H. L. E. White	Woolwich	Crete.
" W. A. Morris	Edinburgh	Cawnpore.
" A. E. Tate	War Office	India.
" R. J. Geddes, M.B., D.S.O.	Noking	India.
" M. O'D. Braddell, M.B.	Golden Hill	India.
" R. S. F. Henderson, M.B.	Simla	Calcutta.
" H. J. Fletcher, M.B.	Shoeburyness	Rawal Pindi.
" M. F. Shine, M.D.	Jhansi	Nagpur.
" M. Ferguson, M.B.	Middleburg	Milbank.
C.M.G.	Cape Colony	
" M. L. Hearn	N. China	Dublin.
" M. J. Sexton, M.D.	Agre	India.
" M. F. Yart	Ldershot	Malta.
" F. W. G. Gordon-Hall, M.B.	Landour	Agre.
" E. Eckersley, M.B.	London Dist.	War Office.
" J. Donaldson	Naini Tal	Aldershot.
" H. T. Knaggs, M.B.	Dublin	Egypt.
Major B. J. Inniss	Benares	Shahjahanpore
" C. W. Reilly	Calcutta	India.
" M. F. Healey	Tralae	Dum Dun.
" W. T. Mould	Mount Abu	Eastern Comd.
" C. W. H. Whitestone, M.B.	Hounslow	India.
" F. W. Porter, D.S.O.	Agre	Africa.
" T. J. Lenehan, M.B.	Potehstroom	Newport.
" H. N. Dunn, M.B.	Kasauli	Amboise.
" S. H. Withers, M.B.	York	India.
" C. S. Edwards, M.B., D.S.O.	Malta	Aldershot.
" E. H. Condon, M.B.	Bellurda	Cardiff.
" G. S. Mansfield, M.B.	Jerusalem	Norwich.
" K. M. Cameron, M.B.	Simla	Calcutta.
" G. St. C. Thoon, M.B.	Calcutta	India.
" F. Blackham	Devonport	Peshawar.
" F. E. Gunter, M.B.	Curaash	India.
" E. W. Bliss	Cosham	Mhow.
" A. W. Hooper, D.S.O.	Quetta	Shorcliffe.
" M. Swale	Preston	Jubbulpore.
Captain E. T. Inkson, V.C.	London	Bangalore.
" J. G. Berne	Almohednagar	India.
" E. A. H. Fair, D.S.O.	R.A.M. Coll.	London Dist.
" A. E. Weld	Curaash	Malta.
" J. E. Hodgson	R.A.M. Coll.	London Dist.
" A. L. Scott	Nesley	Aldershot.
" J. C. Gill	Chester	India.
" M. H. G. Fell	Glasgow	Egypt.
" T. C. Lauder, M.B.	Secunderabad	West Africa.
" D. E. Curme	Leith	R.A.M. Coll.
" G. M. Goldsmith, M.B.	Colchester	Malakita.
" H. K. Palmer	Weedon	Ehndala.
" A. O. B. Wroughton	Kinsale	R.A.M. Coll.
" H. M. Nicholls, M.B.	R.A.M. Coll.	Norwich.
" L. F. F. Vinslow	Egypt, Army	N. Command.
" A. A. Seeds, M.D.	Milbank	E. Command.
" H. Ensor, M.B., D.S.O.	Cosham	R.A.M. Coll.
" L. W. Harrison, M.B.	India.	
" P. S. O'Reilly	India.	

Vital Statistics.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

THE REGISTRAR-GENERAL has just issued his return relating to the births and deaths in the fourth quarter of last year, and to the marriages during the three months ending September last. The marriage-rate during that period was equal to 16.6 per 1,000 of the total population, and was 0.7 per 1,000 below the average rate in the corresponding quarters of the ten preceding years.

The births registered in England and Wales during the three months under notice numbered 221,438, and were equal to an annual rate of 24.6 per 1,000 of the population, estimated at 55,348,760 persons in the middle of last year; the average rate in the ten preceding fourth quarters was 27.0 per 1,000. The birth-rates in the several counties last quarter ranged from 18.4 in Sussex, 18.9 in Herefordshire, 19.4 in Cambridgeshire, 20.1 in Northamptonshire, 20.2 in Shropshire, and 20.5 in Gloucestershire, to 26.6 in Wiltshire, 26.9 in Northumberland, 29.0 in the North Riding of Yorkshire, 29.9 in Carmarthenshire, 32.0 in Durham, 33.2 in Glamorganshire, and 31.7 in Monmouthshire. In seventy-six of the largest towns, including London, the birth-rate averaged 25.0 per 1,000; in London the rate was 33.5 per 1,000, while it averaged 25.6 in the seventy-five other large towns, and ranged from 15.4 in Hastings, 14.9 in Hornsey, 16.5 in Bournemouth, 17.6 in Halifax, 19.0 in Bradford, and 19.1 in Reading, to 31.9 in Swansea, 32.0 in Tyne-mouth, 32.3 in St. Helens, 32.9 in Middlesbrough, 33.4 in Merthyr Tydfil, and 39.3 in Rhondda.

The excess of births over deaths during the quarter was 91,156, against 91,533, 89,765, and 89,614 in the corresponding quarters of the three preceding years. From returns received from the Registrar-General it appears that the passenger movement between the United Kingdom and places outside Europe resulted in a net balance outward of 18,961 persons. There was an outward balance of 15,101 English, 192 Welsh, 3,223 Scotch, and 3,015 Irish, and an inward balance of 1,418 British Colonial passengers and of 1,112 foreigners.

During the fourth quarter of last year the deaths of 130,282 persons were registered, equal to an annual rate of 14.5 per 1,000 living, or 1.7 per 1,000 below the mean rate in the ten preceding fourth quarters. The lowest county death-rates last quarter were 11.0 in Northamptonshire, 11.4 in Berkshire, 11.6 in Essex and in Wiltshire, 11.9 in Sussex and in Dorsetshire, and 12.0 in Buckinghamshire and in Somersetshire; the highest were 16.5 in Kent, 16.6 in Gloucestershire, 17.0 in the Shire, 17.3 in Monmouthshire, 17.5 in the North Riding of Yorkshire, 17.6 in Durham, and 17.9 in Northumberland. In seventy-six of the largest English towns, with an aggregate population estimated at upwards of 16 millions, the corrected death-rate averaged 17.7 per 1,000; the highest was 20.4 in London, and the lowest was 15.4 in the county of 142 smaller towns, containing a population of nearly 5 millions, the rate averaged 14.7 per 1,000; while in the remainder of the county it was 13.5 per 1,000. The rate of mortality in London was 13.7 per 1,000, while among the seventy-five other large towns it ranged, from 7.6 in Bournemouth, 8.9 in King's Norton, 9.1 in East Ham, 9.5 in Leyton, 9.8 in Handsworth (Staffs), and 9.9 in Hastings, to 19.0 in Stockport, 19.1 in Rotherham, 19.2 in Rochdale, 19.5 in Preston, 19.8 in Oldham, 20.4 in Tynemouth, and 21.9 in Middlesbrough.

The 282 deaths from all causes in England and Wales last quarter included 11,550 which were referred to the principal infectious diseases; of these, 4,689 resulted from diarrhoea, 2,172 from measles, 1,686 from diphtheria, 1,257 from whooping-cough, 994 from fever (principally enteric), and 722 from scarlet fever, but not any from small-pox. The aggregate mortality from these diseases was equal to 1.28 per 1,000, or 0.24 per 1,000 below the average rate in the ten preceding fourth quarters; the mortality from diarrhoea exceeded the average, but that from each of the other diseases showed a decline.

The rate of infant mortality, measured by the proportion of deaths among children under one year of age to registered births, was equal to 139 per 1,000, the average rate in the corresponding quarters of the ten preceding years being 141 per 1,000. Among the several counties the rates of infant mortality last quarter ranged from 49 in Herefordshire, 78 in Dorsetshire, 80 in Oxfordshire, 83 in Wiltshire and in Northamptonshire, and 84 in Somersetshire, to 165 in the North Riding of Yorkshire, 166 in North Lancashire, 167 in North Yorkshire, 168 in Lancashire, 171 in Lancashire, 182 in Northumberland, and 188 in Durham. In seventy-six of the largest towns the mean rate of infant mortality was 146 per 1,000; in London the rate was 123, while it averaged 155 in the seventy-five other large towns, and ranged from 48 in Hornsey, 55 in Hastings, 83 in Bournemouth and in Leyton, 98 in King's Norton, and 93 in Northampton, 214 in Stockport, 214 in Burnley, 219 in Blackburn, 225 in Rotherham, 226 in Rochdale, and 236 in Preston.

The death-rate among persons aged 1 to 50 years was 7.1 per 1,000 of the population estimated to be living at the end of the period, and was 1.1 per 1,000 below the mean rate in the ten preceding fourth quarters. In the seventy-six large towns the death-rate at this age-group was equal to 7.6 per 1,000; in London the rate was 7.1, while among the seventy-five other large towns the rate ranged, from 4.9 in Handsworth (Staffs), 4.9 in Leyton and in King's Norton, 4.8 in Reading and in Norwich, 4.9 in Aston Manor, and 5.0 in Hastings, to 10.4 in Warrington, 10.5 in Huddersfield, 10.8 in Oldham, and 13.6 in Middlesbrough.

Among persons aged 60 years and upwards the death-rate last quarter was equal to 63.7 per 1,000 of the estimated population at this age-group, being 4.3 per 1,000 below the average rate in the corresponding quarters of the ten preceding years. Among the several large towns the death-rate at this age-group was 67.4 per 1,000; in London it was 64.8 per 1,000, and it ranged from 44.6 in King's Norton, 46.2 in Hastings, 49.1 in East Ham, and 50.2 in Great Yarmouth, to 82.8 in Blackburn, 83.9 in Preston, 83.9 in Halifax, 85.5 in Newcastle-upon-Tyne, and 93.4 in Bootle.

The mean temperature of the air last quarter was considerably above the average, the excess ranging in most districts between 2.5° and 3.0°. The mean temperature during the quarter was 46.1° in all the districts, especially in the north-east, where the amount was only 5.3 per cent. of the average. The duration of bright sunshine exceeded the average over the country generally.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,921 births and 5,709 deaths were registered during the week ending Saturday last, February 20th. The annual rate of mortality in these towns, which had been 18.0, 18.7, and 17.5 per 1,000 in the three preceding weeks, rose again to 18.1 per 1,000 last week. The rates in the several towns ranged from 8.4 in Walthamstow, 9.3 in Leyton, 9.4 in Bournemouth, 10.7 in Devonport, 11.0 in Wallasey, 11.2 in East Ham, 11.3 in Totter-

	FROM.	TO.
Captain C. C. Cumming, M.B.	Colchester	R.A.M. Coll.
J. F. Martin, M.B.	Poona	"
C. S. Smith, M.B.	Mauritius	Irish Comd.
A. F. Carlyn	Aldershot	West Africa.
C. R. Evans	R.A.M. Coll.	N. Command.
W. G. Colly	Wellington	R.A.M. Coll.
F. S. Walker	Fernoy	"
T. Biggam, M.B.	Pembroke Dk.	R.A.M. Coll.
B. S. Bartlett	R.A.M. Coll.	E. Command.
D. O. Hyde, M.B.	Dunblair	R.A.M. Coll.
G. J. Houghton	Barrackpore	"
J. M. Cuthbert, M.B.	Perth	W. Africa.
C. H. Carr, M.D.	Aden	R.A.M. Coll.
E. Bennett	R.A.M. Coll.	Wolverhampton.
J. P. J. Murphy, M.B.	Manchester	R.A.M. Coll.
A. R. Greenwood	R.A.M. Coll.	Aldershot.
W. M. H. Spiller, M.B.	Belfast	R.A.M. Coll.
B. B. Burke	R.A.M. Coll.	S. Command.
C. R. L. Ronayne, M.B.	"	W. Command.
G. Baillie, M.B.	"	S. Command.
L. G. T. Parke	Warley	R.A.M. Coll.
W. S. Crothwaite	Devonport	"
P. C. Douglass	R.A.M. Coll.	E. Command.
W. M. Power	Aldershot	R.A.M. Coll.
E. F. C. L. Estrange	Manchester	Langalore.
R. B. Unwin, M.B.	R.A.M. Coll.	N. Command.
W. R. P. Goodwin	Woolwich	R.A.M. Coll.
A. W. Gibson	R.A.M. Coll.	E. Command.
E. F. M. Fawcett	"	S. Command.
H. A. Davidson, M.B.	Peshawar	Dun.
W. Riach, M.D.	Cosham	West Africa.
A. R. C. Parsons	Mill Hill	"
R. McK. Skinner	R.A.M. Coll.	Scottish Comd.
H. A. Bransbury	"	E. Command.
W. W. Falkner	"	S. Command.
E. Ryan	Edinburgh	R.A.M. Coll.
E. E. Parkes, M.B.	R.A.M. Coll.	E. Command.
J. S. Bostock, M.B.	"	"
A. H. McEn Mitchell	"	"
M. F. Foulds	Tidworth	S. Command.
J. B. Clarke, M.B.	R.A.M. Coll.	W. Command.
R. C. Wilson, M.B.	"	S. Command.
P. C. Hyde, M.B.	R.A.M. Coll.	W. Command.
A. W. Sampey	"	Dublin.
T. J. Potter	London Dist.	Irish Comd.
A. J. Williamson, M.B.	"	R.A.M. Coll.
H. Rogers, M.B.	Tipperary	"
W. Davis	Fernoy	"
D. J. F. O'Donoghue	R.A.M. Coll.	Irish Comd.
W. W. Long, M.B.	Tralee	R.A.M. Coll.
D. N. Walker, M.B.	Hyderabad	"
R. B. Ainsworth	Poona	Dover.
F. A. H. Clarke	Ranikhet	Sheffield.
G. A. K. H. Reed	Sangor	E. Command.
W. W. Browne	London	"
R. Rutherford, M.B.	Punahur	Scottish Comd.
R. J. Franklin	Darjeeling	Edinburgh.
J. G. Bell, M.B.	Dalhousie	Lahore.
M. G. Winter	Jaunpore	R.A.M. Coll.
R. M. Ranking, M.B.	Hong Kong	Woolwich.
R. H. MacNicol, M.B.	Secunderabad	Maymyo.
J. H. Douglas, M.D.	"	Cannanore.
F. J. Garland, M.B.	Aden	"
H. B. Connell	Nesley	R.A.M. Coll.
G. S. C. Hayes	Rochester Row	"
R. Ryley	Hong Kong	Shoeburyness.
H. W. Russell, M.D.	Jaunpore	W. Command.
G. R. Panton	"	"
A. T. Frost, M.B.	Hong Kong	Dublin.
K. A. C. Doug	Meerut	Bareilly.
H. O. M. Beadnell	Amhala	Lahore.
C. R. Miller	Ceylon	Col.
L. V. Thurston	Jubbulpore	Sangor.
G. S. Wallace, M.B.	Mauritius	Aldershot.
C. M. Holbrooke	Poona	Punahur.
P. Power, M.B.	"	"
Lieutenant E. L. Moss	Chaubattia	Shahjahanpore
J. S. Dunne	Shahjahanpore	Delhi.
R. G. H. Tate, M.D.	Dalhousie	Anahala.
E. Forrest	Chobra Daidai	Delhi.
F. D. G. Howell	Chakrata	Meerut.
A. G. Amy, M.B.	R.A.M. Coll.	India.
C. Seale, M.D.	Currach	"
D. M. Corbett, M.B.	"	"
M. J. Lochrin	Newbridge	"
A. C. Vidal	Cosham	Golden Hill.
E. D. Gaidell, M.B.	Dublin	India.
W. E. G. Lutan, M.B.	Edinburgh	"
J. R. Foster	Woolwich	"
W. W. Boyce	"	"
O. C. P. Cooke	Plymouth	"
D. Coutts, M.B.	"	"
F. L. Bradish	Rawal Pindi	Lahore.
J. A. Bennett, M.B.	Poona	Colaba.
H. L. Howell	"	Ahmednagar.
W. F. M. Loughman	Lanchester	Agra.
W. K. Breman	Devonport	"
S. Field	Bordon	Southland.
O. R. McEwen	Newport	Chester.
B. A. Oltun	Bulford	Tidworth.
J. E. Eilcome	Devonport	Woolwich.
D. S. Buist, M.B.	"	Chatham.
C. Ryles, M.B.	"	Woolwich.
S. McK. Saunders	"	"
E. V. Vaughan, M.B.	"	Dover.
H. Gall	"	Dublin.
J. R. Jones, M.B.	"	"
C. G. Sherlock, M.D.	"	Shencliffe.
C. Clarke, M.B.	"	Dublin.
H. Bevis	"	"
C. H. O'Rourke, M.B.	"	"
G. S. Parkinson	"	"
S. W. Kyle, M.B.	"	"
J. W. Lane, M.D.	"	"

ham, to 23.2 in Manchester, 23.3 in Merthyr Tydfil, 24.5 in Warrington, 24.8 in Liverpool, 25.2 in St. Helens, 25.5 in Hurry, and 31.1 in Wigan. In London the rate of mortality was 18.7 per 1,000, while it averaged 17.9 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.6 per 1,000, in the seventy-six towns; in London the death-rate from these diseases was 1.7 per 1,000, while it ranged upwards in the other towns to 3.1 in Sheffield, 3.2 in Rotherham, 3.5 in Willemsden, 3.5 in Middlesbrough, 3.6 in Sunderland, 3.8 in Birmingham, 5.5 in Aston Manor, and 5.9 in West Hartlepool, and 6.5 in Warrington; enteric fever of 1.5 in Hull, 1.6 in St. Helens, 1.7 in Reading and 1.6 in Leyton and in Derby; whooping-cough of 1.3 in Norwich, 1.9 in Tynemouth, and 2.3 in Wigan; enteric fever of 1.4 in Grimsby; and diarrhoea of 1.5 in Middlesbrough. No fatal case of small-pox was registered last week in any of the seventy-six large towns. The number of scarlet fever cases remaining under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital at the end of last week was 2,910, against 3,201, 3,117, and 3,002 at the end of the three preceding weeks; 273 new cases were admitted during the week, against 339, 312, and 289 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, February 20th, 974 births and 705 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 17.2, 18.5, and 19.2 per 1,000 in the three preceding weeks, rose again to 18.9 per 1,000 last week, and was 1.7 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 14.6 in Leith and 17.8 in Edinburgh to 22.8 in Dundee and 23.5 in Perth. The death-rate from the principal infectious diseases averaged 2.3 per 1,000, the highest being recorded in Aberdeen and Paisley. The 333 deaths registered in Glasgow included 4 which were referred to scarlet fever, 9 to diphtheria, 22 to whooping-cough, 5 to enteric fever, 2 to cerebro-spinal meningitis, and 6 to diarrhoea. Seven fatal cases of whooping-cough and 2 of diarrhoea were recorded in Edinburgh; 4 of whooping-cough and 3 of diarrhoea in Dundee; 3 of measles, 2 of diphtheria, 4 of whooping-cough, and 2 of diarrhoea in Aberdeen; and 4 of whooping-cough and 2 of diarrhoea in Paisley.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, February 20th, 552 births and 470 deaths were registered in the twenty-two principal urban districts of Ireland as against 632 births and 447 deaths in the preceding period. The annual death-rate in these districts, which had been 22.5, 20.7, and 20.4 per 1,000 in the three preceding weeks, rose to 21.5 per 1,000 in the week under notice, this figure being 3.4 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 25.8 and 17.1 respectively, and in the other districts ranging from 5.2 in Limerick and 8.2 in Drogheda, to 38.8 in Galway and 40.9 in Waterford, while Cork stood at 21.2, Londonderry at 8.5, and Limerick at 16.4. The zymotic death-rate in the twenty-two districts averaged 1.1 per 1,000, as against 1.0 per 1,000 in the preceding period.

Hospitals and Asylums.

WEST HAM LUNATIC ASYLUM.

THE annual report for the year 1907 of Dr. David Hunter, the medical superintendent of the West Ham County Borough Lunatic Asylum, shows that on January 1st, 1907, there were 850 patients on the asylum registers. There were also 120 patients boarded-out in other asylums, making a total number of 970 patients belonging to the borough on that date. On the last day of the year there were 864 in the asylum, making, with the 120 boarded-out cases, 984 in all, and giving an increase for the year of 14, as compared with 51 for the previous year. Dr. Hunter has drawn up two tables showing the proportion of West Ham pauper insane to 10,000 of population for each year since 1901, and the proportion per 10,000 of admissions since 1899, and of first admissions since 1902. From the first table we see that, although the proportions to population of West Ham's pauper insane have kept steadily below that of England and Wales, West Ham's rate of increase has been considerably greater than that of England and Wales. West Ham's rate having increased from 25.5 in 1901 to 30.4 per 10,000, or an increase of ratios of 11.4 per cent., whereas that for England and Wales increased from 30.27 to 32.37 per 10,000, an increase of ratios of 10.6 per cent. On the other hand, the West Ham admission-rate has declined from 11.04 in 1901 and 12.85 in 1902 to 8.51 per 10,000 in 1907, and the first-admission rate from 11.76 per 10,000 in 1902 to 5.18 in 1907. Thus, though the rate of occurring insanity is apparently increasing, as a general distribution, the population is progressing at a rate indicating the necessity for considerable extension of an already much overcrowded asylum. The total cases under treatment during the year numbered 1,118, and the average number daily resident 839. During the year 268 cases were admitted, of whom 254 were direct admissions and 14 transfers. These figures show a fall in the direct admissions of 38, as compared with those of the previous year. Of the 254 direct admissions, 70 the attacks were first attacks within three, and in 19 more within twelve, months of admission; in 60 not-first attacks within twelve months of admission, and in the remainder, whether first attacks or not, the attacks were either of more than twelve months' duration (74) or congenital cases (27), or of unknown duration (4). The direct admissions were classified according to the forms of mental disorder into: Mania of all kinds, 58; melancholia of all kinds, 62; senile and secondarily dementia, 24; general paralysis, 24; epileptic insanity, 15; delusional insanity, 6; primary dementia, 6; stupor, 4; confusional insanity, 5;

acute delirium, 1; and congenital or infantile defect, 27. As to the probable etiological factors in these cases, alcohol was assigned in 45, or 17.7 per cent., syphilis in 4, critical periods in 63 (old age in 42), diseases of the nervous system in 40 (epilepsy in 29), trauma in 15, and mental stress in 43. A heredity of insanity was ascertained in 93, or 36.6 per cent., an epileptic heredity in 14, and an alcoholic heredity in 55, or over 15 per cent. Including 2 more with a neurotic heredity and a family history of suicide, the above figures give a total neuropathic heredity in over 56 per cent. of the direct admissions. During the year 88 were discharged as recovered, giving recovery-rates of (a) total recoveries on the direct admissions of 34.11 per cent., and (b) of recoveries in the direct admissions on the direct admissions of 33.33 per cent. There were also 31 discharged as relieved, and 22 as not improved. Also during the year 113 died, giving a death-rate on the average numbers daily resident of 13.46 per cent. The deaths were due in 40 to cerebro-spinal diseases, including 25 from general paralysis; in only 4 to diseases of heart and blood vessels; in 9 to abdominal diseases; in 23 to senile decay; in 2 to accident, and in 35 to general diseases, including 17, or 15 per cent., to tuberculous diseases. The general health was good throughout the year, and with the exception of 1 case of dysentery the asylum was free from infectious disease.

BRADFORD ST. CATHERINE'S HOME FOR CANCER.

THE annual meeting of this excellent charity was held on December 16th, 1908, the Lord Mayor of Bradford presiding. The sixteenth annual report, which, as usual, was a model of what a report should be, recorded the great loss sustained by the death during the year of Mr. Joseph Cawthra, the donor of the present home, who by his will had bequeathed £3,000 to the hospital. Of the 50 patients treated in the home during the year, 36 were from Bradford, and the remainder from adjacent towns. Forty of the cases were cancer. The increase in requests for the admission of cancer cases had compelled the committee to refuse admission to many urgent and deserving chronic incurable cases. As a consequence of this, the committee suggested the addition of a wing to the present building for the reception of chronic incurable cases, and it is hoped that some other generous benefactor may be found to follow Mr. Cawthra's example and aid the project. We heartily endorse the committee's suggestion, as more room for cases of this class is urgently required.

FORSTER GREEN HOSPITAL, BELFAST.

THE thirteenth annual meeting of this institution was held in Belfast on January 29th. Mr. Herbert Ewart presided. Considerable interest was manifested, as this was the first meeting since the city has endowed a number of beds. Dr. Houston, honorary secretary of the medical staff, read the medical report; 425 new cases attended the out-patient department, and 137 had been admitted to the wards at Knockbreda during the year. There was accommodation for 73 patients, and although the new wards had only been opened since October the beds were full. Dr. Robert May had been appointed resident physician to the hospital, and Dr. Foster Coats physician for cases in the town attending the dispensary. The present out-patient accommodation is too cramped, and a Roentgen-ray department is needed.

THE ROYAL MIDLAND COUNTIES HOME FOR

INCURABLES.

DURING the past year, a valuable addition has been made to the property of the Royal Midland Counties Home for Incurables at Leamington by the acquisition of Tachbrook House and grounds. The property was bought mainly with the object of obtaining a site for a new chapel, but the house gives useful accommodation for some of the staff of the institution, and thus makes it possible to receive additional patients. The cost of the new chapel is about £4,000, of which only £2,065 has, so far, been contributed. The annual report shows that the home of the home has been the largest event of the year, and it has been fortunate in the matter of legacies and donations. The committee has instituted during the past year two new free beds and two new pensions, in addition to the two free beds and two pensions which were created under the Wand bequest.

THE COVENTRY AND WARWICKSHIRE HOSPITAL.

THE annual meeting of the Coventry and Warwickshire Hospital was held on December 18th, 1908, at St. Mary's Hall, Coventry, the Mayor (Alderman Lee) presiding. The annual report showed that there had been a decrease of 1,794 cases in the out-patient department, and an increase of 62 in the number of in-patients during the year, as compared with the previous year. The ordinary income was £5,589, against £5,844 in 1907. On account of the overcrowded condition of the wards, a scheme for extending the accommodation of the hospital was recommended.

DEWSBURY INFIRMARY.

AT the annual meeting of this infirmary a point of some interest to the medical staffs of hospitals arose. It was moved that "no future elected honorary medical officer may continue to hold such position beyond 60 years of age, but on resigning is eligible for appointment as consulting surgeon, in accordance with Rule 24." The resolution, however, was supported by very few votes, and was consequently lost.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

ARGYLE AND BUTE ASYLUM, Lochgilphead.—Assistant Medical Officer (male). Salary, £160 per annum.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham Road, S.W.—Assistant Surgeon.

BIRMINGHAM: EAR AND THROAT HOSPITAL.—House-Surgeon. Salary at the rate of £70 per annum.

BRADFORD ROYAL INFIRMARY.—(1) House-Physician. (2) Two House-Surgeons. Salary, £100 per annum in each case.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—House-Surgeon (male). Salary at the rate of £80 per annum.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Third House-Surgeon. Salary, £50 per annum.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—(1) House-Surgeon. (2) Assistant House-Surgeon. Salary, £80 and £50 per annum respectively.

BRISTOL ROYAL INFIRMARY.—Resident Casualty Officer. Salary at the rate of £50 per annum.

CANCER HOSPITAL, Fulham Road, S.W.—(1) First Assistant to the Research Department. Salary, £350 per annum. (2) House-Surgeon; salary, £70 per annum.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—House-Surgeon. Salary, £90 per annum.

CARDIFF: ROYAL HANNAH DRUID SEAMEN'S HOSPITAL.—Indoor Assistant to the Medical Superintendent. Salary, £90 per annum.

CHICHESTER HOSPITAL FOR WOMEN, Fulham Road, S.W.—Surgeon to Out-patients.

CHELSEHAM HOSPITAL.—House-Surgeon. Salary, £65 per annum.

CHESTER: COUNTY PALATINE OF CHESTER.—County Medical Officer of Health. Salary, £750 per annum.

CROYDON BOROUGH HOSPITAL FOR INFECTIOUS DISEASES.—Assistant Resident Medical Officer. Salary, £120 per annum.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—Medical Officer (male) to Casualty Department. Salary at the rate of £100 per annum.

EXETER: WOLFORD HOUSE HOSPITAL FOR THE INSANE.—Medical Superintendent.

HOSPITAL FRANCAIS, Shaftesbury Avenue, W.C.—Junior Resident Medical Officer. Salary, £90 per annum.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Assistant Physician.

LIVERPOOL INFIRMARY FOR CHILDREN.—Resident (Medical Officer). Salary, £30 for six months.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant Resident Medical Officer. Honorarium at the rate of 50 guineas per annum.

MANCHESTER ROYAL INFIRMARY CONVALESCENT HOME, Cheadle.—Assistant Medical Officer. Salary at the rate of £80 per annum.

MANCHESTER TOWNSHIP.—Assistant Medical Officer for the Workhouse at Crumwell. Salary, £140 per annum.

NEWCASTLE-ON-TYNE: EYE INFIRMARY.—House-Surgeon, non-resident. Salary, £100 per annum.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—(1) House-Surgeon; salary, £80 per annum. (2) Assistant House-Surgeon; honorarium, £20 for six months.

NOTTS EDUCATION COMMITTEE.—Assistant School Medical Officer for three months. Salary at the rate of £250 per annum.

PORTSMOUTH PARISH.—(1) First Assistant Resident Medical Officer for the Workhouse Infirmary, Workhouse, and Children's Homes. (2) Second Assistant Resident Medical Officer. Salary, £120 and £100 per annum respectively.

QUEEN CHARLOTTE'S LYNXIN HOSPITAL, Marylebone Road, N.W.—Pathologist and Registrar. Remuneration at the rate of £20 per annum.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—(1) Assistant Physician. (2) Assistant Resident Medical Officer. Salary, £75 per annum.

RAINHILL: COUNTY ASYLUM.—Assistant Medical Officer. Salary, £150 per annum, rising to £250, with further increase to £350 on promotion.

RHONDA URBAN DISTRICT COUNCIL.—Assistant Medical Officer of Health. Salary, £250, rising to £350 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Resident Medical Officer. Salary at the rate of £120 per annum.

ST. MARYLEBONE GENERAL DISPENSARY, Welbeck Street, W.—Honorary Physician.

SHEFFIELD EDUCATION COMMITTEE.—Assistant Medical Officer. Salary, £250 per annum, increasing to £300.

SHREWSBURY: SALOP INFIRMARY.—House-Surgeon. Salary, £100 per annum.

SOUTHAMPTON: FREE EYE HOSPITAL.—House-Surgeon. Salary, £100 per annum.

SOUTH SHIELDS EDUCATION AUTHORITY.—School Medical Officer. Salary, £250 per annum.

STOKE-ON-TRENT: NORTH STAFFORDSHIRE INFIRMARY AND EYE INFIRMARY, Hartshill.—Senior House-Surgeon. Salary, £100 per annum.

THROAT HOSPITAL, Golden Square, W.C.—(1) Resident House-Surgeon; salary, £75 per annum. (2) Honorary Dental Surgeon.

TYNEMOUTH COUNTY BOROUGH.—Medical Officer of Health. Salary, £250 per annum, increasing to £300.

WARRINGTON HOSPITAL AND DISPENSARY.—Senior House-Surgeon. Salary, £120 per annum.

WEST HAMPHRETT UNION, Sussex.—District Medical Officer and Public Vaccinator. Salary, £15 per annum and fees.

WEST HERTS HOSPITAL, Hemel Hempstead.—House-Surgeon. Salary, £100 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Pathologist. Salary, £200 per annum.

YORK DISPENSARY.—Resident Medical Officer (male). Salary, £1 0 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Duncannon, co. Wexford; Staplehurst, co. Kent; Portree, co. Inverness; Callender, co. Perth; and at Taunton, co. Somerset.

APPOINTMENTS.

ABBREY, Gilbert K., L.M.S.S.A., Clinical Assistant to the Cancer Hospital, Fulham, and to the Dental Department, King's College Hospital.

COLTHER, Stanley, M.D., B.S.Lond., M.R.C.P., Honorary Medical Officer to the Royal Halifax Infirmary.

GATIN, W. C. M.B., B.Ch., R.U.I., District Medical Officer of the Cerne Union.

GRIFFITH, A. E., L.R.C.P. and S.Edin., District Medical Officer of the Westbury-on-Severn Union.

GROSVENOR, W. W., M.D.Dub., M.R.C.S., Medical Officer of the Homes for Aged Poor of the Gloucester Union.

HIGGINS, A. G., M.R.C.S., L.R.C.P., District Medical Officer of the Newton Union.

LLOYD-EVANS, Vaughan, M.B., Ch.B.Edin., Senior Resident Medical Officer at the Northampton General Hospital.

LONEY, R. E., M.B., C.M.Edin., District Medical Officer of the Whitechurch (Salop) and Nantwich Unions.

MILLER, Reginald, M.D., B.S., M.R.C.P., Medical Registrar to St. Mary's Hospital, Paddington.

MOORE, C. A., M.S., M.B.Lond., F.R.C.S., Senior House-Surgeon at Bristol General Hospital.

PENNY, F., M.R.C.S., Resident Assistant Medical Officer at the Fishpool Workhouse of the Bolton Union.

ROSS, Donald, M.B., Ch.B.Edin., Assistant Medical Officer, Roxburgh District Asylum, Melrose.

SHEARER, A. M.B., Ch.B.Edin., Certifying Factory Surgeon for the Newtown District, co. Montgomery.

STEEBING, G. F., M.B., B.S.Lond., Assistant Medical Officer of the Lambeth Parish Infirmary.

SUNDERLAND, R. A. S., M.R.C.S., L.R.C.P., Resident Assistant Medical Superintendent of the Infirmary and for the Workhouse and Schools of the Brentford Union.

WAT, A. O., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Winchester District, co. Hants.

WELCH, C. H., M.R.C.S., L.R.C.P., Junior Resident Assistant Medical Officer at the Wandsworth Union Infirmary.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone Road, N.W.—The following have been appointed:
Clinical Assistants—W. E. Barrett, L.R.C.P., L.R.C.S., Archibald Deane, M.B., Ch.B., M. Cecil Hayward, M.D., M.R.C.S., Isidor Tritsch, M.R.C.S., L.R.C.P., J. A. Vennart, M.A., M.B., B.C.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

GOLDBE.—On February 18th, at Polbrann, Tywardreath, Par Station, Cornwall, the wife of A. Evelyn Goldie, M.B., Ch.B.Edin., of a son.

DEATHS.

HEFFERNAN.—On Sunday, February 21st, of pneumonia, at Green Lanes, Harrington, Dr. J. Heffernan, aged 47 years. R.I.P.

ROUTH.—On February 19th, at 52, Montagu Square, London, W., Charles Henry Felix Routh, M.D.Lond., M.R.C.P., aged 87.

WALKER.—On February 15th, at Lea Palace, Grand Canary, George Edward Walker, F.R.C.S., of 45, Rodney Street, Liverpool.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C., 5 p.m.—Annual General Meeting.

THE MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 9 p.m.—Third Lettsomian Lecture, by Dr. Sidney Martin, F.R.S., on Functional Disorders of the Stomach and Intestines; their Diagnosis from Organic Disease, and Treatment.

TUESDAY.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Dr. Tanner Hewlett: First Milroy Lecture—Disinfection and Disinfectants.

ROYAL SOCIETY OF MEDICINE: THERAPEUTICAL AND PHARMACOLOGICAL SECTION, 22, HARROWER SQUARE, W., 4.30 p.m.—Discussion on the Treatment of Spasmodic Asthma, to be opened by Dr. Cecil Wall.

PATHOLOGICAL SECTION, The Laboratories, St. Bartholomew's Hospital, 8.30 p.m.

THURSDAY.

HARTMAN SOCIETY OF LONDON, Stafford Rooms, Titchborne Street, W., 8.30 p.m.—Discussion: The Early Diagnosis and Treatment of Cancer of the Stomach. To be opened by Dr. W. Hale White and Mr. B. G. A. Meynham.

NORTH-EAST LONDON CLINICAL SOCIETY. Prince of Wales's Hospital, Tottenham, 4.15 p.m.—Clinical Cases: Election of Members.

ROENTGEN SOCIETY. 20, Hanover Square, W., 8.15 p.m.—Ordinary General Meeting. Paper.—Mr. A. A. Campbell: "Some Vascular Tule Punctum."

ROYAL COLLEGE OF PHYSICIANS OF LONDON. Pall Mall East, S.W., 5 p.m.—Dr. Tanner Hewlett: Second Milroy Lecture.

FRIDAY.

ROYAL SOCIETY OF MEDICINE. LARYNGOLOGICAL SECTION, 20, Hanover Square, W., 5 p.m.—Cases, Specimens, etc.—Dr. Lambert Luck: "Telangiectasis with epistaxis. Mr. W. Shaw-Low: (1) Thyroid tumour of the tongue; (2) Case showing an unusually large and long tongue. Dr. Donelan: (1) Uvula with growth on left side; (2) Right and left rectangular chisels for removing nasal wall of maxillary antrum.

SECTION OF ANAESTHETICS. 20, Hanover Square, W., 8.30 p.m.—Discussion on The Treatment of Shock during Anaesthesia will be opened by Dr. Dudley Duxton.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY. 3.30 p.m.—Paper by Dr. E. Furniss Foster on The Submucous Resection Operation for the Removal of Deviations and Obstructive Deformities of the Nasal Septum. Illustrated by lantern slides.

SATURDAY.

ROYAL SOCIETY OF MEDICINE: OTOLOGICAL SECTION, 20, Hanover Square, W., 10 a.m.—Paper.—Mr. Sydney Scott: A Contribution to the Problem of Vertigo. Cases and specimens illustrating the subject of Vertigo can be shown at this meeting.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL. Gray's Inn Road, W.C.—Tuesday and Friday, at 4.45, Accessory Sinuses.

LONDON SCHOOL OF CLINICAL MEDICINE. Seamen's Hospital, Greenwich.—Daily arrangements: Out-patient Demonstrations, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m., Monday and 3.15 p.m., Tuesday; Operations, 2 p.m.; Special Clinics: Ear and Throat, at noon and 4 p.m., Monday, and noon, Thursday; Skin, at noon and 4 p.m., Thursday, and noon, Friday; Eye, 1 p.m., Wednesday and Saturday; Radiography, 4 p.m., Thursday; Special Lectures: Tuesday, 3.15 p.m., Fracture of the Patella; Wednesday, 2.15 p.m., Peripheral Neuritis; Friday, 2.15 p.m., Uræmia.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC. 22, Chancery Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Friday, 10 a.m., Medical; Out-patient, at 5.15 p.m. each day will be given as follow: Tuesday, The Treatment of Blemishes of the Face; Wednesday, Renal Tuberculosis; Thursday, Metatarsalgia and Allied Conditions.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC. Queen Square, W.C.—Tuesday, 3.30 p.m., Disorders of the Nervous System in Renal Disease. Friday, 3.30 p.m., Hysteria.

NORTH-EAST LONDON POST-GRADUATE COLLEGE. Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m., Surgical Out-patient, 2.30 p.m., Medical Out-patient; Nose, Throat, and Ear; X Rays, 4.30 p.m., Medical In-patient, Tuesday, 10 a.m., Medical Out-patient, Clinics; 2.30 p.m., Operations; Clinics, Surgical, Gynaecological, Wednesday, 2.30 p.m., Medical Out-patient, Skin, and Eye Clinics. Thursday, 2.30 p.m., Gynaecological Operations; Clinics, Surgical, Surgical Out-patient, Surgical Out-patient, X Rays; 3 p.m., Medical In-patient. Friday, Clinics; 10 a.m., Surgical Out-patient; 2.30 p.m., Operations; Clinics; Medical Out-patient, Eye; 3 p.m., Medical In-patient; 4.30 p.m., Lecture: Types of Keratitis, their Diagnosis and Treatment.

POST-GRADUATE COLLEGE. West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week.—Daily, 2 p.m., Medical and Surgical Out-patient, X Rays, 2.30 p.m.; Operations. Monday and Thursday and Wednesday and Saturday, at 2 p.m.: Diseases of Eyes. Tuesday and Friday, 10 a.m.: Gynaecological Operations. 2 p.m., Monday and Wednesday and Saturday, 10 a.m.: Diseases of Throat, Nose, and Ear. 2.30 p.m.: Diseases of Skin. Wednesday and Saturday, 10 a.m.: Diseases of Children. 2.30 p.m.: Diseases of Women. Lectures: At 10 p.m., Monday and Thursday, Surgical Demonstration; Friday, Medical Demonstration; Wednesday and Saturday (at 12.15 p.m.), Practical Medicine. At 12 noon, Monday, Pathological Demonstration. At 5 p.m., Monday, Cases of Eye Diseases; Tuesday, Clinical Pathology; Wednesday, Medicine; Thursday, Clinical Lecture; Friday, Clinical Lecture.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN. Leicester Square, W.C.—Thursday, 6 p.m., Fungus Diseases of the Skin.

BOOKS, ETC., RECEIVED.

Dr. Jessner's Dermatologische Vorträge für Praktiker. Heft xi, u. xii (Doppelheft). Diagnose und Therapie der Syphilide (Syphilis der Haut und Schleimhäute). I Teil: Diagnose. Von Dr. Jessner. Zweite Auflage. G. Witzleben, C. Koblitzsch, 1909. M. 2.50.

Klinische Beiträge zur Lehre von der Hysterie nach Beobachtungen aus dem Nordwesten Russlands. Von Dr. G. Voss. Jena: G. Fischer, 1909. M. 6.

Text-Books of Physical Chemistry. Edited by Sir W. Ramsay, K.C.B., F.R.S. The Theory of Valency. By J. N. Friend, Ph.D., M.Sc. London: Longmans, Green and Co., 1909, 5s.

Untersuchungen über Kohlenhydrate und Fermente (1884-1908). Von E. Fischer. Berlin: J. Springer, 1909. M. 22.

Paris: J. B. Baillière et Fils, 1909.

Bibliothèque de Thérapeutique. Publié sur la direction de A. Gilbert et P. Carnot. Physiothérapie, Kinésithérapie, Massage, Mobilisation, Gymnastique. Par les Drs. A. Carnot, Dagon, Ducloux, Nageotte, Wilbouchevitch, Cantrou, Bourcart. Fr. 12. Nouveau Traité de Chirurgie. Publié en fascicules par A. Dentu et P. Delbet. XIII. Maladies du crâne et de l'encéphale. Par M. Auvray. Fr. 10.

Modern Methods of Sewage Disposal. By W. H. Trentham and J. Saunders. London: The Sanitary Publishing Company, 1909. 2s. 6d.

Indian Plants and Drugs. By K. M. Nakkarni, F.S.S.C.L.A. Madras: Norton and Co., 1908.

Presidential Addresses delivered before the C.G.H. (Western Province) Branch of the British Medical Association for the years 1888 to 1908. Captown: Townshend, Taylor, and Shashal, 1908.

Human Foods and their Nutritive Value. By H. Snyder, B.S. New York and London: Macmillan Co., 1908. 5s.

The Criminal Responsibility of Lunatics. A Study in Comparative Law. By H. Oppenheim, LL.D., M.D. London: Sweet and Maxwell, Limited, 1909, 10s. 6d.

Vorlesungen über Herzankrankungen. Von Dr. H. Bock. I Heft. Die Erkrankungen des Herzmuskels. Histologie, Pathologische Anatomie, Diagnose und Therapie. Von Dr. H. Bock. München: H. Thoma, 1908. M. 1.50.

An Analytical Index of Volumes I to IX of The Medical Review, 1898-1897. London: The Medical Office, 1908. 7s. 6d.

An Introduction to the Science of Radio-Activity. By C. W. Raftery. London: Longmans, Green and Co., 1909. 4s. 6d.

London: Baillière, Tindall, and Cox for the Department of Education, Sudan Government, Khartoum, 1908.

Third Report of the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum. By A. Balfour, M.D., B.Sc., F.R.C.P.Ed., D.P.H., Camb. 21s.

Review of some of the Recent Advances in Tropical Medicine, Hygiene, and Tropical Veterinary Science, etc. Supplement to the Third Report of the Wellcome Research Laboratories. By A. Balfour, M.D., B.Sc., F.R.C.P., D.P.H., and R. G. Archibald, M.B., R.A.M.C. 10s. 6d.

Transactions of the American Ophthalmological Society, Forty-fourth Annual Meeting, New London, Conn., 1908. Vol. xi, Part III. Hartford: The Society, 1908.

A Manual of Medical Treatment or Clinical Therapeutics. New edition. By J. Burney Yeo, M.D., F.R.C.P., R. Crawford, M.A., M.D., F.R.C.P., and E. F. Buzzard, M.A., M.D., F.R.C.P. In two volumes. London: Cassell and Co., Limited, 1909. 21s.

König's Lehrbuch der Chirurgie für Aerzte und Studierende. IV Band. Allgemeine Chirurgie. Von Dr. O. Hildebrand. Dritte Auflage. Berlin: A. Hirschwald, 1909. M. 20.

An Atlas of the Muscular System. With Anatomical description by H. G. Crichtley, M.A., M.D. London: Allman and Son, Limited, 5s.

American Practice of Surgery. Edited by J. D. Bryant, M.D., LL.D., and A. H. Buck, M.D. In eight volumes. Vol. V. New York: W. Wood and Co., 1908.

London: Rehm, Limited. Emergency Surgery for the General Practitioner. By J. W. Sluss, A.M., M.D. 1908. 15s.

Intestinal Auto-intoxication. By A. Combe, M.D. Appendix on Lactic Ferments. S. A. Fournier. English Adaptation by W. G. States, M.D. 16s. 6d.

High Frequency Currents. By F. F. Strong, M.D., 12s. 6d.

Movable Kidney. By C. W. Suckling, M.D., M.R.C.P. Birmingham: Cornish Brothers, Limited, 1909.

General and Practical Optics. By L. Laurance. London: The Orthos

On the Tracks of Life. The Immorality of Morality. Translated from the Italian of L. G. Sera. By J. M. Kennedy. London: J. Lane, 1909. 7s. 6d.

Des Kindes Ernährung, Ernährungsstörungen und Ernährungstherapie. Von Professor A. D. Cerny and Professor A. Keller. 7 Abteilung (Bd. 9-16 des zweiten Bandes). Leipzig und Wien: F. Deuticke, 1909. M. 3.60.

Oxford Medical Publications. Gunshot Wounds. By C. G. Spencer, M.B. Lond., F.R.C.S. Eng. London: H. Frowde, and Hodder and Stoughton, 1909.

Management and Construction of Poorhouses and Almshouses. By G. A. Mackay. Edinburgh: W. Green and Sons, 1908. 15s.

Pratique de la chirurgie antiseptique. Par le Dr. J. Lucas-Championnière. Paris: G. Steinheil, 1909. Fr. 8.

Dictionary of National Biography. Edited by S. Lee. Vol. xii. Liwynd: London: Baillière, Tindall, and Cox, 1909. 15s.

The "Naheim" Treatment of Diseases of the Heart and Circulation. By L. Thorne Thorne, M.D., B.S. Durh., M.R.C.S. Eng., L.R.C.P. Lond. Third edition. 3s. 6d.

A Compendium of Food Microscopy, with Sections on Drugs, Water, and Tobacco. By E. G. Clayton. 10s. 6d.

Jena: G. Fischer: Handbuch der Biochemie des Menschen und der Tiere. Herausgegeben von C. Oppenheimer. Siebente und letzte Lfg. M. 5 each. Allgemeine Physiologie. Von M. Verworn. Fünfte Auflage. 1909. M. 16 (Geb. 18).

Untersuchungen über die pathologische Anatomie der Peritoni. Von Professor Dr. H. Dürck. Achte Supplement der Beiträge zur pathologischen Anatomie und zur Allgemeinen Pathologie. Herausgegeben von L. Aschoff und F. Marchand. 1908. M. 25. Subscriptionspreis M. 20.

Volkssachen. Vierzehn Vorträge. Herausgegeben vom Zentral-komitee für das ärztliche Fortbildungswesen in Preussen in dessen Auftrage Redigiert von Professor Dr. R. Kutner. M. 6.

Les Folies Raisonantes. Le Délire d'interprétation. Par les Drs, P. Sériex et J. Capras. Paris: F. Alcan, 1909. Fr. 7.

*In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
MARCH.		MARCH (Continued).	
1 MONDAY ..	WALTHAMSTOW DIVISION, <i>Metropolitan Counties Branch</i> , The Hollies, High Road, Wanstead (close to Snaresbrook Station), 4 p.m.	LONDON : Subcommittee on Grouping of Branches under Charter, 10.30 a.m.	
2 TUESDAY ..	WARRINGTON DIVISION, <i>Lancashire and Cheshire Branch</i> , Infirmary, Warrington, 4.30 p.m.	9 TUESDAY ..	LONDON : Organization Committee, 11 a.m. LONDON : Subcommittee on Capitation Grants, immediately after Organization Committee.
3 WEDNESDAY.	LONDON : Subcommittee of Science Committee on Development of Scientific Work of Divisions and Branches, 2 p.m. LONDON : Uterine Cancer Committee, 5 p.m. SOUTH-EASTERN OF IRELAND BRANCH, Club House, Carlow, 5.30 p.m.; also meeting of Branch Council and Local Division.		GUILDFORD AND WINCHESTER DIVISIONS, <i>South-Eastern Branch</i> , Joint Meeting, Royal Surrey County Hospital, Guildford, 3 p.m.; Tea, 4.30 p.m. 10 WEDNESDAY : RICHMOND DIVISION, <i>Metropolitan Counties Branch</i> , Clinical Meeting, Royal Hospital, Richmond, 8.30 p.m. YORKSHIRE BRANCH, Royal Eye and Ear Hospital, Bradford, 4.30 p.m.; Dinner, 6.30 p.m.
4 THURSDAY ..	WESTMINSTER DIVISION, <i>Metropolitan Counties Branch</i> , Criterion Restaurant, Dinner, 7.30 p.m.; Association Business, 8.30 p.m.; Discussion, 9 p.m.	11 THURSDAY ..	BIRMINGHAM BRANCH, Medical Institute, Edmund Street, 3.30 p.m.
5 FRIDAY ..	LONDON : Medico-Political Midwives Subcommittee, 2.30 p.m. CAMBRIDGE AND HUNTINGDON BRANCH, Medical Schools, Cambridge, 2.15 p.m. SWANSEA DIVISION, <i>South Wales and Monmouthshire Branch</i> , Clinical Meeting, 8.15 p.m.	12 FRIDAY ..	
6 SATURDAY ..		13 SATURDAY ..	
7 Sunday ..		14 Sunday ..	
8 MONDAY ..		15 MONDAY ..	
		16 TUESDAY ..	
		17 WEDNESDAY	CARDIFF DIVISION, <i>South Wales and Monmouthshire Branch</i> , Cardiff.
			CITY DIVISION, <i>Metropolitan Counties Branch</i> , Manor Lodge, Upper Clapton Road, 9 p.m.
		18 THURSDAY ..	LAMBETH DIVISION, <i>Metropolitan Counties Branch</i> , Evelina Hospital, 4 p.m.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent

by the Branch Secretary to the General Secretary of the Association and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

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OF

EXECUTIVE COMMITTEE.

Clinical Instruction in Infectious Diseases.

The existing regulation proposed to be modified is as follows:

The letter stated that the proposal of the Metropolitan Asylums Board was to substitute for the compulsory attendance on two days of each week attendance at times which will suit the student's convenience, but which will require him to be present on not less than sixteen occasions in a two months' course, and not less than twenty-four occasions in a three months' course. The Local Government Board, considering that any alteration of the regulations must have in view the requirements of the various examining bodies, had inquired as to the nature of these requirements, but did not find that they were either uniform or very precisely expressed. The Board, therefore, asked for the views of the General Medical Council as to whether the medical superintendent who signed the student's certificate might or might not be left unfettered by any such restriction as the Metropolitan Asylums Board proposed. In conclusion the Local Government Board asked the Council whether, if the requirements of the

Provided that no such certificate shall be granted in any case in which a student has attended for instruction during the entire course of study for a number of hours, which is less than a total number calculated after the rate of hours in respect of each month of the said course of study.

That in the opinion of the Executive Committee the responsibility for granting certificates of attendance should be left to the medical superintendent, the only regulation necessary being to the effect that the superintendent should be satisfied that the student has bona fide attended with diligence and regularity the clinical instruction given at the asylum during the period prescribed by the licensing body concerned. The Committee do not think it is necessary to require absolute uniformity in regard to the regulations of the licensing bodies. They see no disadvantage in deleting the proviso from Regulation 7.

The Committee assume that no change is suggested in the conditions of attendance required of candidates for the Diploma in Public Health who are studying methods of administration at the asylums of the Board.

An Act for the Prevention of Quackery in New Zealand, forwarded by the Secretary of State for the Colonies, was considered, and the Committee adopted the following resolution

That the Committee have learned with satisfaction of the enactment in New Zealand of a stringent law against an obnoxious form of unqualified practice, and they would welcome similar legislation applicable to other parts of the Empire.

Title.—AN ACT to prevent the Practice of Quackery.
[October 10th, 1908.]

BE IT ENACTED by the General Assembly of New Zealand in Parliament assembled, and by the authority of the same, as follows:

1. *Short Title.*—This Act may be cited as the Quackery Prevention Act, 1908.

2. *Publication of False Statements in Order to Promote the Sale of Medicine, Preparation, etc., an Offence.*—Every person commits an offence who publishes or causes to be published any statement which is intended by the defendant or any other person to promote the sale of any article as a medicine, preparation, or appliance for the prevention, alleviation, or cure of any human ailment or physical defect, and which is false in any material particular relating to the ingredients, composition, structure, nature, or operation of that article, or to the effects which have followed or may follow the use thereof.

3. *Method of Publication.*—A statement shall be deemed to be published within the meaning of this Act if it is inserted in any newspaper printed and published in New Zealand, or is publicly exhibited in view of persons in any road, street, or other public place, or is contained in any document which is gratuitously sent to any person through the Post Office or otherwise, or which is gratuitously delivered to any person or left upon premises in the occupation of any person.

4. *Fines.*—Every person who commits an offence against this Act is liable, on summary conviction before a magistrate, to a fine not exceeding one hundred pounds in the case of a first conviction for any such offence, and not exceeding two hundred pounds in the case of a second or any subsequent conviction.

5. *Printer, Publisher, and Proprietor of Newspaper severally Liable for Offence.*—If any person causes any statement to be inserted in breach of this Act in a newspaper printed and published in New Zealand, the printer, publisher, and proprietor of that newspaper shall severally (and without excluding the liability of any other person) be deemed to have published that statement in breach of this Act, and shall be liable for an offence against this Act accordingly.

6. *Chief Health Officer to give Warning as to Publication of any Particular False Statement.*—(1) Notwithstanding anything in this Act, no prosecution shall be instituted against the printer, publisher, or proprietor of any newspaper registered under the Printers and Newspapers Registration Act, 1903, for the publication of any statement in breach of this Act unless before the publication thereof a warning has been delivered to the defendant under the hand of the Chief Health Officer under the Public Health Act, 1903, that such statement or some other statement substantially to the same effect is false, and that the publication thereof is an offence against this Act.

Mode of Delivery of Warnings.—(2) Without excluding other modes of delivery, any such warning shall be deemed to be duly delivered to the proprietor, publisher, or printer of a newspaper if it is delivered at the premises on which the newspaper is printed or published, or is sent through the post by registered letter to those premises, and is in each case addressed either by name or description to the proprietor, publisher, or printer, as the case may be, of the said newspaper.

7. *Informations to be laid by Chief Health Officer.*—Every information for an offence against this Act shall be laid by the Chief Health Officer under the Public Health Act, 1903, or by some person authorized by him in that behalf either generally or in the particular case.

8. *Attorney-General to Consent to Prosecutions.*—No prosecution shall be commenced against any person for an offence against this Act without the leave of the Attorney-General.

9. *Appeal.*—Every person convicted of an offence against this Act shall have a right of appeal under the Justices of the Peace Act, 1903, on any question of law or fact, whatever may be the amount of the fine which has been imposed upon him.

10. *Interpretation.*—In this Act, unless a contrary intention appears—

"Document" includes any article of whatever nature which has any words or statement printed or impressed upon it or otherwise attached thereto, or appearing thereon;

"Newspaper" means any newspaper registered under the Printers and Newspapers Registration Act, 1903, or any periodical publication which is published at intervals not exceeding three months; and for the purposes of this Act every document which at any time accompanies and is distributed along with any newspaper shall be deemed to form part of the newspaper;

"Public place" has the same meaning as in section twenty-eight of the Police Offences Act, 1903.

1. *Commencement.*—This Act shall come into operation on the first day of January, nineteen hundred and nine.

Medical Registration in Ceylon.

The Committee considered an Ordinance transmitted by the Secretary of State for the Colonies to amend the Ceylon Medical Registration Ordinance, 1905. In November, 1905, the Executive Committee had expressed its warm approval of the provision of the Ceylon Ordinance of that year, making it a punishable offence for an unregistered and unqualified person (other than a native practising native methods) to practise for gain, to profess to practise, or to publish his name as practising medicine or surgery.

The new Ordinance contained the following clause:

21. Notwithstanding anything in this Ordinance, it shall not be unlawful for the following persons to practise medicine and surgery for gain:

(a) Any Government apothecary actually employed in the public service as an apothecary.

(b) Any estate dispenser appointed by a superintendent to an estate or group of estates with the approval of the principal civil medical officer, but only during the time he is actually so employed.

The Executive Committee, having considered the matter, adopted the following resolution:

That the Committee observe with regret that the valuable provisions of the Ceylon Ordinance No. 2 of 1905 have in some particulars been relaxed. They trust that the local exigencies which appear to have led to the relaxation may be of a temporary nature, and that Ceylon may soon be in a position again to require that those who undertake to practise any branch of medicine should be fully qualified for that responsible duty.

Tasmanian Medical Act, 1908.

The Committee also considered the Medical Act, 1908, of Tasmania, transmitted by the Secretary of State for the Colonies:

The Act repeals previous Acts, and consists of two parts. Part I provides for the appointment by the Governor of a medical council of Tasmania, to consist of nine members, all of whom must be members of the medical profession. The Council is to keep a register of medical practitioners legally qualified within the meaning of the Act. The Council has power to require any person or witness before it to make a solemn declaration. Any person who makes a false statement or attempts to utter any false, forged, or counterfeit diploma or other document shall be guilty of a misdemeanour, and on conviction shall be liable to be imprisoned for any period not exceeding three years. If a registered medical practitioner shall be convicted of felony or misdemeanour, or be judged by the Council to have been guilty of infamous conduct in any professional respect, the Council may refuse to issue a certificate, or where the certificate has been issued, direct the name to be erased from the Register, subject to an appeal to the Supreme Court. Power is also given to the Council to remove the name of a registered person who does not respond to a letter asking whether he has ceased to practise or changed his residence.

Part II entitles persons possessed of one or more of a list of qualifications set out in a schedule, and who shall prove on personal attendance to the satisfaction of the Council that such qualification was obtained after due examination from some university, college, or other body recognised for such purpose in the country to which such body belongs, shall be entitled to registration and shall receive from the Council a certificate of qualification. There is a clause saving the rights of persons now practising in any State of the Commonwealth. The sections regulating the right to practise are as follows:

15. *Persons Unregistered Using Medical Titles to be Subject to Fine.*—It shall not be lawful for any person, unless registered under this Act, to pretend to be, or to take or use the name or title of a physician, doctor of medicine, licentiate in medicine and surgery, master in surgery, bachelor of medicine, doctor, surgeon, medical or general practitioner, or any other medical or surgical name or title; and every unregistered person so offending shall forfeit and pay a sum not exceeding Fifty Pounds, to be recovered in a summary manner: Provided that any person who shall feel himself aggrieved by any such conviction or order of justices may appeal therefrom, in accordance with "The Appeals Regulation Act."

16. *Medical Practitioners holding Certificates to be Entitled to Sue for Fees, etc.*—Every medical practitioner who at the commencement of this Act is gazetted as a legally qualified medical practitioner, or who shall have received such certificate of qualification as aforesaid, shall afterwards be entitled to sue in any court of law within this State, to the extent of the jurisdiction of such court, for the recovery of his fees or other remuneration for his professional services, whether medical or surgical; and it shall be sufficient to state in the particulars of demand the words "for medical services," which shall include every demand for medical or surgical aid, including medicines, when supplied by the plaintiff to the defendant; and no person shall be entitled to recover any charge in any court of law for any medical or surgical advice or attendance, or for the performance of any operation, or for any medicine which he shall have both prescribed and supplied, unless he shall prove on the trial that he is registered in accordance with the provisions of this Act.

The Council is entitled to demand the following fees: For registration, £3 3s.; for registering an additional qualification, 10s. 6d.; for restoring a name to the Register £1 1s.

The schedule of qualifications enumerates various British diplomas, and also gives the right of registration in Tasmania to any person registered on the *Medical Register* of the United Kingdom.

The Executive Committee after consideration adopted a resolution to the following effect:

That the Committee, while of opinion that the Tasmanian Act will tend to the better control of professional practice, regret that the opportunity has not been taken to restrict the practice of medicine to duly qualified practitioners.

The Apothecaries' Hall, Dublin.

A communication having been received from the Apothecaries' Hall, Ireland, stating that it had determined to postpone the resumption of its preliminary examination in education until July 1st of this year, the Committee adopted the following resolution:

That the Committee have received with regret the intimation of the Board that it still proposes to hold a Preliminary Examination, though the date is now postponed to July 1st, 1909. The Committee remind the Board of the Council's Resolution of November 28th, 1908, which was in general terms, and had no reference to any particular date. They propose to report the Secretary's letter of January 16th, 1909, to the General Council at the May Session.

Constitution of Committee.

The Committee received with regret a notification from Dr. Pye-Smith of the resignation of his seat on the Medical Council, and co-opted the Chairman of the Business Committee, Dr. Norman Moore, to fill the vacancy thus created.

Anaesthetics.

The President informed the Committee that inquiries had been addressed to the licensing bodies with a view to ascertaining how far effect had been given to the Council's Recommendation as to practical instruction in the administration of anaesthetics, and read answers from most of them showing that steps had been or were being taken to give effect to the Recommendation. The President undertook to inform the Privy Council of the progress made in regard to this question.

be glad to receive further donations without delay, as it is proposed shortly to close the fund; subscriptions may be earmarked for Mrs. Hird.

Donation of Five Guineas.

Members' Fund of Birmingham Branch of the British Medical Association.

Donations of One Guinea.

Bartling, Gilbert	Maclean, Ewen J.
Bryce, G.	Manley, Dr. H.
Burton, Dr.	Marsh, Frank
Chivasse, Sir T.	Martin, Christopher
Foxwell, A.	May, Bennett
Freer, Alfred	Morrison, J. T. J.
Gamgee, L. T.	Pendred, Vaughan
Haskin, W. F.	Purston, Dr.
Hawthorne, C. O.	Russell, J. W.
Haynes, Dr. F. H.	Sawyer, Dr.
Johnson, C. J. H.	Simon, Dr.
Jordan, J. Fumcaux	Taylor, Dr. J. W.
Jordan, W. R.	Webb, Beatrice
Leedham-Green, C. A.	Wilson, Thomas
Lloyd, Jorian	Wyer, O. F.
Lucas, A.	

Donations of One Pound.

Bond, N. T.	Clark, Annie
-------------	--------------

Donations of Half a Guinea.

Ballance, J. D.	Howkins, C. H.
Beards, Dr.	Kirby, Dr.
Beily, J. H.	Lydell, W. T.
Belcher, C.	Milward, F. V.
Billington, W.	Neel, James
Bridge, J. F.	Pemrose, N. C.
Hockley, J. R.	Plummer, Dr.
Bunting, Bartley	Reith, W. R.
Campbell, P.	Savage, Smallwood
Chivasse, H. S.	Ward, L. B.
Farcombe, Dr.	Wilkes and Jessop
Fooks, W. Penberton	Wood, A. A.
Hawkins, C. L.	Wynn, W. H.

Donation of Ten Shillings.

Friend, per "R. P."

Donations of Five Shillings.

Elgood, Olive	Osborne, E.
Hardy, H. M.	Vokes, Charles
McCulloch, E.	Webb, S. G.

British Medical Association.

CENTRAL EMERGENCY FUND.

BIRMINGHAM BRANCH FUND FOR COVENTRY DISPUTE.

A FUND is being raised by the Birmingham Branch, with the approval of the Medico-Political Committee of the Association, for the purpose of giving some token of approval and sympathy to the medical men who resigned their posts on the Coventry Provident Dispensary, and for the purpose of assisting Mrs. Hird.

To those who have not followed or who have forgotten the circumstances of this case, it may be of assistance to be reminded that the dispute originated in a desire of the staff of the dispensary for an improvement of the conditions of their appointment. The staff appealed to the Division for support, and the Division formulated the conditions which should, in their opinion, apply to provident dispensary work within the borough, these conditions being practically identical with those formulated by the Medico-Political Committee and approved by the Representative Meeting of the Association. The staff negotiated with the dispensary committee for such alterations of the regulations of the dispensary as would be necessary to bring it into line with the views of the Division. The dispensary refusing to accede to these representations, the members of the staff found it necessary, in loyalty to the Association, to resign their appointments, a step which has entailed upon them considerable pecuniary loss. This loss has been felt most severely by the widow of the late Dr. Hird, a member of the staff, who died a few months after the termination of his appointment at the dispensary.

Intending subscribers desiring fuller information are requested to apply to Dr. J. Otton, Honorary Secretary of the Coventry Division, Great Heath House, Coventry; or to the Medical Secretary, 429, Strand, W.C.; or to Dr. Thomas Wilson, 87, Cornwall Street, Newhall Street, Birmingham, Honorary Treasurer of the Branch. Dr. Wilson acknowledges the following subscriptions, and will

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

BATH AND BRISTOL BRANCH.

THE fourth ordinary meeting of the session was held at Bath on February 24th, Mr. J. PAUL BUSH, C.M.G., President, in the chair. There were fifty-five members and visitors present.

Discussion.—A discussion on dysmenorrhoea was opened by Dr. G. HERMAN, and was maintained by Dr. W. C. SWAYNE, Colonel LIFE, I.M.S., Dr. ALEXANDER, Dr. KENNEDY, Dr. H. TAYLOR, Dr. MUNRO, Dr. WILMORE, Dr. BEATH, Dr. DUNN, Dr. NEILD, Dr. HEATCOTE, Mr. FRASER, Dr. LOCKET, and Dr. POOLEY.

Vote of Thanks.—A vote of thanks to Dr. Herman was proposed by the President, seconded by Dr. CAVE, and carried by acclamation.

EDINBURGH BRANCH:

NORTH-EAST EDINBURGH DIVISION.

A MEETING of this Division was held on Wednesday, February 17th, at 8.30 p.m., at 5, St. Andrew Square. Dr. LESLIE MACKENZIE, Chairman of the Division, presided. There were also present: Drs. G. Fyfe, McLarty, James Cameron, R. Robertson, Martyn Clark, James Smith, and the Secretary.

Confirmation of Minutes.—The minutes of the meeting held on July 9th, 1908, were read, approved, and signed.

Annual Report.—The SECRETARY gave the Division annual report, and the accounts for 1908 were duly audited by Drs. McLarty and James Cameron, and found correct.

Earlier Appointment of Representatives.—A letter from the Organization Committee with regard to the earlier appointment of Representatives was considered; it was arranged to obtain powers at the annual meeting to make the proposed change.

Report of the Representative Meeting.—Dr. R. ROBERTSON gave his report of the Representative Meeting, and was cordially thanked by those present.

(As the Chairman had to leave, Dr. JAMES CAMERON now took the chair.)

The Association and the General Practitioner.—A remit from the Branch Council was next considered; it was a resolution of the Southern Division to the following effect:

That the British Medical Association, through its Divisions, does not meet the local requirements of the general medical practitioner.

After discussion, the following motion, proposed by Dr. R. ROBERTSON, and seconded by Dr. JAMES SMITH, was declared carried by the CHAIRMAN:

That no modifications are required in the British Medical Association to meet the local needs of the general practitioner in Edinburgh.

Whole-time Medical Officers of Health.—A remit from the Public Health Committee on the subject of whole-time medical officers of health was discussed. The meeting was of opinion:

That it is desirable in all places where a suitable salary can be obtained that a whole-time medical officer of health be appointed.

Notification of Births Act.—Some information about the powers of the city lady health visitor under the Notification of Births Act was given by the SECRETARY.

Medical Men and Street Casualties.—An exchange of views on the relation of medical men to street casualties, and the method of dealing with them, terminated the proceedings.

LANCASHIRE AND CHESHIRE BRANCH:

MANCHESTER (WEST) DIVISION.

A GENERAL meeting of the Division was held in the Technical Institute, Stretford Road, on Tuesday, February 9th, Dr. F. H. WORSWICK in the chair. The members present included Drs. Boyd, Cousins, Cullen, D'Ewart, Wallace Eales, E. W. Floyd, E. Jackson, Loudon, Mookler, W. H. Richardson, Prowse, Brown Ritchie, Stennett Redmond, Sir W. J. Sinclair, and J. H. Worswick. The following visitors responded to an invitation to attend the meeting which had been forwarded to members of other Manchester and Salford Divisions: Drs. W. G. Booth, Grant Davie, T. Arthur Helme, and J. H. Taylor.

Apologies for Non-attendance.—Apologies for non-attendance were received from Drs. W. Coates, Vipont Brown, and Scanlon.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Correspondence.—The HONORARY SECRETARY read a letter from the Medical Secretary acknowledging the receipt of report and resolutions from the Division in connexion with the communications from the Hospitals, Medico-Political, and Organization Committees on subjects which were dealt with at the January meeting of the Division; also a letter from the Honorary Secretary of the Sheffield Division in regard to Contract Practice.

Midwives Act.—The meeting proceeded to discuss some matters connected with the Midwives Act, and more particularly the questions referred to the Departmental Committee which is now holding an inquiry into the working of that Act. A letter from Mr. Smith Whitaker, stating the attitude recently taken up by the Central Council of the Association, was read. Dr. STENNETT REDMOND opened the discussion, and proposed:

That this general meeting of members of the Manchester (West) Division strongly urges the advisability of providing for the adequate and immediate representation of the general practitioners of this country on the Departmental Committee appointed to inquire into the working of the Midwives Act; and suggests that two general practitioners, to be nominated by the British Medical Association, shall be empowered to serve on that Committee.

The resolution was seconded by Dr. LOUDON and agreed to by the meeting, 11 members voting in favour of and 2 against it. The following resolutions were unanimously adopted:

That this meeting instructs its Honorary Secretaries to write to the Joint Committee of the Manchester and Salford Divisions, and to urge that body to take immediate

measures to ensure that ample evidence of the working of the Midwives Act in Manchester and Salford shall be laid before the Departmental Committee.

That this meeting is of opinion that adequate payment should be guaranteed by the local authorities to medical practitioners, for services rendered by them when summoned by midwives to attend poor women before, during, and after labour.

The Honorary Secretaries were instructed to forward all the above resolutions to the secretary of the Departmental Committee, to the Medico-Political Committee of the Association, and to the Joint Committee of the Manchester and Salford Divisions.

Medical Inspection and Treatment of School Children.

—The report on the medical inspection and treatment of school children, drawn up by the Executive Committee in accordance with the instruction of the general meeting of January 19th, was read; and, after discussion, in the course of which Dr. A. Brown Ritchie gave some account of the measures taken by the school authorities of Manchester, was adopted. The report deals chiefly with conditions in large towns, and sets forth the following opinions of the Division:—(1) With regard to the medical inspection of school children. Medical officers of health and assistant medical officers of health should not be employed as medical inspectors of school children. Medical inspectors and assistant medical inspectors of school children should be whole-time officers with salaries, in the one case, of not less than £500 per annum; and, in the other case, of not less than £250 per annum. (2) With regard to medical treatment of school children: Notice of defects or diseases discovered on medical inspection should be forwarded by post to the parents. For this purpose two separate forms should be used: (a) for cases in which the services of a doctor are required; and (b) for cases in which other measures to be taken by the parents are recommended. Those parents who are in a position to afford the expense should be required to pay for necessary treatment. The children of those parents who cannot afford payment should be referred for treatment under the Poor Law system. Parents who, after due notification, fail to carry out the measures recommended should be proceeded against for neglect. Cases of mental deficiency and defects of speech should be sent to special schools. Any attempt on the part of the public authorities to arrange for the treatment of school children at hospitals and other charitable institutions is unsound in principle, and should be condemned. The establishment of school clinics is totally uncalled for. If such clinics are established, their scope of treatment should be limited to (i) errors of refraction, and (ii) venous conditions; and that, in this case, treatment should be carried out by whole-time medical officers (medical inspectors). If treatment in school clinics is extended to other diseases and defects, the duties should be performed by part-time medical officers; and such appointments should be open to any practitioners in the district who are prepared to give time to the work. The remuneration of these part-time medical officers should be by time, and at the rate of one guinea for each morning's work (two or three hours). Such remuneration should be provided by the Board of Education, and not by the local authorities.

Annual Report to Branch Council.—The annual report of the Division to the Branch Council was read and adopted.

SOUTHPORT DIVISION.

A SPECIAL meeting of the Division was held at the Temperance Institute on February 23rd to consider matters referred to Divisions. Dr. GILL was in the chair. There were also present Drs. Baidon, Lewis, Walker, and Harris.

Apologies for Non-attendance.—Apologies were sent by Drs. Anderson and Ashworth.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Medical Inspection of School Children.—The report of the Medico-Political Committee on certain points arising in connexion with the medical inspection of school children and treatment of those found defective was considered, and the questions were unanimously answered as follows:

Inspection.—(1) Does the Division approve of the system of payment per head?—No, but by fixed salary with payment of expenses.

Treatment.—(1) This Division reiterates its previously expressed opinion that parents having the means should pay private practitioners for treatment, and that hospitals should only be resorted to in exceptional cases, but that

(2) If a school clinic should be established payment should be per case, and all registered medical practitioners in the areas of the respective authorities desiring to share in the work should be appointed on the staff of the school clinic, the work to be done in their own surgeries and the selection of the practitioners in each case to be left to the parents.

(3) This opinion would apply to both the borough and county areas contained in this Division.

(4) That parents having received notice of defect from the school medical officer, the child should be excluded from school until a medical certificate is supplied that the defect has been satisfactorily dealt with and that the child is fit to attend school. In case of non-compliance with the notice to have the defect treated, the parents should be prosecuted for the child's non-attendance at school.

Whole-time Medical Officers of Health.—The Public Health Committee's report on the desirability of health officers being required to give their whole time to the work was considered and it was resolved unanimously:

That medical officers of health should be debarred from engaging in private practice, and that even in thinly populated rural districts the reasons in favour of the appointment of a whole-time officer with a large area under his administration preponderates over those for local part-time appointments.

Draft Charter.—The Organization Committee's report on legal questions as to opposition by Branches to certain clauses of the draft Charter was communicated to the meeting.

Earlier Appointment of Representatives.—The Medical Secretary's letter respecting earlier appointment of Representatives was read, and it was unanimously resolved:

That Dr. Stanley A. Gill be nominated our Representative and Dr. Harris his deputy at the Representative Meeting at Belfast with the view to election at the next meeting of the Division, and that to this end notice be given on the next notice of meeting of alteration of our Rules so as to permit of the election of the Representative at any time not more than nine months nor less three weeks before the Annual Representative Meeting.

LEINSTER BRANCH.

Irish Committee.

At the annual meeting of this Branch held on Saturday, February 13th, a report of which was published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of February 27th, p. 108, Dr. CRAIG (in the absence of Dr. Joseph Kenny, Granard, who was unable to attend) laid before the members of the Branch an account of the working of the Irish Committee of the Association during the past twelve months. On this committee there were representatives from Ulster, Leinster, South-Eastern, Munster, and Connaught Branches, so that when the fifteen members met they were able to lay the views of the Branches of the different parts of the country fairly well before one another, and the result had been that they had been able to work on fairly even lines instead of wrestling against each other. In January they passed a resolution, the effect of which was to ask the Local Government Board whether any steps were being taken to obtain powers to make a compulsory scale of salaries where Poor Law unions had failed or refused to adopt a scale, and the answer they received was in the negative. In April they passed another resolution that, as about fifty unions had fixed a scale on a more or less satisfactory basis, the time had come for the Local Government Board for Ireland to fix a scale which must be adopted by those unions which had up to the present failed to fix a scale. In spite of that, and in spite of repeated letters sent to the Board, they had absolutely refused to do anything to come to the assistance of those men in the poorer districts whose salaries were still on a low scale, whereas in the better paid districts the medical officers had had their salaries raised. In April of last year the attention of the Association was called to the Tuberculosis Bill with a view to seeing that its provisions should place no undue restrictions on medical men. A point they had been able to do something in connexion with was that of instruments and medicines. The list supplied by the Local Government Board was reported to be quite inefficient and ineffective, but they

were met in a fair spirit by the Board, who accepted the recommendations that were made by the Irish Committee. Another point before them was the question of the inspection of school children. There was a proposal that the Act for the inspection of school children should be extended to Ireland, but it was discovered that the expenses of the Act in England had been so very much greater than was anticipated, that they were forced to hold their hands for the moment, and not work for its extension into Ireland, purely for financial reasons. The CHAIRMAN thanked Dr. Craig for the account which he had laid before the meeting of the work of the Irish Committee for last year. If things were not altogether so satisfactory as they might wish in the matter of the remuneration of medical men in the Poor Law service, at least the thin end of the wedge had been got in, because fifty of the unions had awakened to their duties, in a more or less satisfactory manner, in the matter of a suitable scale of salaries. Dr. FALKNER suggested that those who were responsible for the national schools should do something to have the schools inspected by doctors. He was a manager of a national school, and was anxious to know what steps he should take to have inspection made. This was a thing which should be brought home to those who were responsible for national schools. Children were put into badly-ventilated schools with other children suffering from tuberculosis, and while that was going on there could be no reduction of the tuberculosis death-rate.

METROPOLITAN COUNTIES BRANCH:

HAMPTSTEAD DIVISION.

A MEETING of this Division was held on Tuesday, February 23rd, at 8.30 p.m., at the Hampstead Conservatoire, Swiss Cottage, N.W., Dr. OFFENHEIMER in the chair.

Whole-time Medical Officers.—The report of the Public Health Committee on the desirability of health officers being required to give their whole time to the work was considered (see BRITISH MEDICAL JOURNAL SUPPLEMENT of January 23rd, 1909). It was resolved on the motion of Mr. ARMIT:

1. That the Hampstead Division agrees that medical officers of health should be debarred from private clinical practice.
2. That medical officers of health should be whole-time medical officers.
3. That in rural districts the areas supervised should be enlarged where necessary—that is, in order to secure principles (1) and (2).
4. That every medical officer of health should hold a diploma of Public Health.
5. That he should receive an adequate salary.
6. That he should have security of tenure of his office.

LAMBETH DIVISION.

A GENERAL meeting of the Division was held in the court-room, Guy's Hospital, on Thursday, February 18th, at 4 p.m. There were present nineteen members and two visitors. Dr. ATKINSON was in the chair.

Confirmation of Minutes.—The minutes of the preceding meeting were read and confirmed. Arising out of them the SECRETARY reported that the following letter had been written to F. W. Michael, Esq., M.B., B.Ch.Edin., of 243, Camberwell Road, S.E.:

Dear Sir,—I am instructed by the Lambeth Division of the British Medical Association to call your attention to the fact that the term "Guy's Surgical Home" is very misleading to those who do not know that that institute is in no way connected with Guy's Hospital. My Division feels sure that it is only necessary to draw your attention to this fact for it to be remedied. It would like, however, to hear from you as to what steps you will take to prevent the continuance of the misconception.

With kind regards, I am,

Yours faithfully,

(Signed) HERBERT FRENCH,
Honorary Secretary, Lambeth Division,
British Medical Association.

In reply to this the following letter had been received:

Dear Sir.—Thanks for yours of yesterday. I regret the misconception that has arisen re "Guy's Surgical Home," and the matter has been accordingly attended to.

With kind regards,

Yours faithfully,

(Signed) F. MICHAEL.

Dr. ATKINSON reported that the plate in question had been removed.

Medical Inspection of School Children.—A communication re the medical inspection of school children and the treatment of those found defective was considered, and on the motion of Dr. FRENCH, seconded by Dr. CAPES, the following replies to the questions therein asked were authorized:

1. (a) Yes.

(b) Not applicable to London.

(c) Yes; 5s.

(d) No.

2. No answer need be given to this question, owing to the decision of the London County Council that no special school clinics be established at present.

3. The Lambeth Division contains no rural area.

4. No suggestions.

Earlier Election of Representatives.—Dr. FRENCH moved, Dr. TAYLOR seconded, and it was carried unanimously:

That in future sessions, notwithstanding any regulation or by-law of the Division to the contrary, the Representative of the Lambeth Division for the meeting of Representatives be elected before Christmas, if possible in October.

The Cure of Ringworm.—Dr. IREDELL then read a paper upon the cure of ringworm, illustrated by a-ray apparatus, Sabouraud's pastilles, and so forth, and exhibited cases in process of cure. He explained that the a-ray treatment, properly carried out, was most effective in the cure of ringworm, though it could not be applied when the ringworm was associated with impetigo or kerion, which were made worse. After a single exposure of a given area of the scalp to produce Tint B of Sabouraud's pastilles nothing happens, unless a slight erythema about the seventh day, until the fourteenth day, when the hairs in the area treated begin to get loose. By the sixteenth day these hairs are so loose that they can be picked out, and they have all fallen out by the twenty-first day. In six weeks to two months downy hairs begin to appear over the area treated, and in four months' time the area is again covered with hair. To prevent infection of other parts of the scalp by seurf, scales, and hair from the part that has been depilated, it is usual to apply glycerine and carbolic acid in half strength to the part. He said that there had been no permanent baldness in any single one out of 700 consecutive cases. He thought that the cicatrices on the scalp and the thinness of the hair which had been reported must be very rare in cases properly treated. Other cases might become pus-infected or suffer from actual a-ray burn. Neither of these complications was likely to occur, however, if the position of the pastille and its colour received accurate attention. He drew attention to the fact that in Paris, where ringworm cases were treated in ringworm hospitals, the duration of the stay of each patient was reduced upon the average now from twenty-seven months to three; and the cost per patient was now only 270 francs, whereas it had formerly been 2,000 francs per head. An interesting discussion, in which Drs. DENNING, SOPER, TAYLOR, STODDART, and CAPES took part, was replied to by Dr. IREDELL.

Vote of Thanks.—The meeting adjourned at 5.30 p.m., after expressing a vote of thanks both to Dr. Iredell and to the Treasurer and Governors of Guy's Hospital, the former proposed by Dr. TAYLOR and seconded by Dr. EDELSTEIN, the latter proposed by Dr. DENNING and seconded by Dr. SOPER.

MIDLAND BRANCH:

LEICESTER AND RUTLAND DIVISION.

Medical Inspection of School Children.—A meeting of this Division was held specially to discuss questions relating to medical inspection of school children, at which twenty-two members were present. The following resolutions were passed:

A. That this Division considers that the work of school inspection should be carried out by whole-time medical officers appointed by the local education authority, subject to the approval of the Board of Education.

That we approve of the scale of salaries suggested in the memorandum of the Medico-Political Committee (15.361)—namely, £500 per annum for the senior medical officer, and £250 a year for the assistant medical officer exclusive of expenses.

Carried unanimously.

B. That this Division is strongly opposed to the establishment of school clinics.

Carried unanimously.

C. That it is opposed to subsidizing either hospitals or dispensaries from State or rate education funds.

Carried with one dissentient.

D. That it considers that with the co-operation of the staffs of the infirmary, Poor Law officers, and the dispensaries there is ample provision for those who are unable to pay the ordinary medical fees. That it recommends that on the child being reported defective the parents are to be notified to that effect. That in all cases in which the parents can pay they be referred to their doctor, or allowed to choose whom they like.

Carried unanimously.

E. That if the parents are unable to pay any fee they shall receive a voucher to that effect signed by the head teacher, on presentation of which the child shall be entitled to free treatment under the Poor Law, or if a small fee can be paid, on presentation of a voucher to that effect the child may be seen at a dispensary or at the surgeries of such medical men as may be willing to see cases at a fixed fee.

That this voucher, in case doubt may arise as to the bearer being a suitable person to receive it, shall be passed on to the Charity Organization Society for investigation.

Carried, 7 to 2.

SOUTH-EASTERN BRANCH:

CHICHESTER AND WORTHING DIVISION.

A MEETING of the Division was held at Chichester on February 18th; Dr. EUSTACE (Arundel) in the chair.

Medical Inspection of Children's Act.—The working of this Act in West Sussex was fully discussed, and the following resolutions were passed:

1. That this meeting strongly protests against school children being sent to public institutions by the medical inspector without first being referred to the family medical attendant.

2. That this meeting strongly protests against the gratuitous treatment in public institutions by honorary medical officers of school children, other than those of necessitous parents, found to be defective by the medical inspectors under the Act, and the meeting hopes that concerted action will be taken by the British Medical Association to deal with the matter.

The Notification of Births Act.—The meeting considered what steps should be taken in event of any authority in the Division contemplating the adoption of this Act. It was decided that the matter be left to the Medico-Political Committee to form a deputation to wait on such authority, and place the views of the profession before it. These views were embodied in the following resolutions passed by the meeting:

1. The Notification of Births Act imposes a serious violation of professional confidence on medical practitioners, and especially in those cases where from a public point of view it is most unnecessary, as in cases where a medical man is in charge of a lying-in woman, he is far more competent to advise as to the upbringing of the child than any ordinary visitor sent by a municipal authority.

2. That early interference during the lying-in period by official visiting with inquisitorial methods would be seriously detrimental to the health of the mother.

3. That all breaches of professional confidence are greatly opposed to the public good, whether imposed by Act of Parliament or otherwise.

Whole-time Medical Officers of Health.—The report of the Public Health Committee on the desirability of health officers giving their whole time to the work was considered by the meeting, and the following resolution was carried unanimously:

That medical officers of health should be debarred from engaging in private practice.

Division of the South-Eastern Branch.—The meeting passed a resolution supporting the Brighton Division with regard to dividing up the Branch.

SOUTH WALES AND MONMOUTHSHIRE BRANCH:

MONMOUTHSHIRE DIVISION.

A MEETING of this Division was held at the Pontypool and District Hospital, on February 26th, Dr. W. F. NELLS, Chairman, presided, and seventeen members and one visitor were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Apology for Non-attendance.—A letter from Dr. W. D. Steel, apologizing for his inability to attend, was read.

Report of Disputes.—News was received that substantial progress had been made recently.

Whole-time Medical Officers.—The circular from the Public Health Committee was considered, and the following resolution was unanimously carried:

That in the opinion of the Division whole-time medical officers should be appointed for large areas, such as counties and county boroughs, and the part-time officers who have so efficiently carried out their duties in the past should continue to hold office in small districts.

Departmental Committee on Midwives Act.—The circular from this Committee was considered, and the Honorary Secretaries were instructed to reply to it.

Discussion on Pleurisy.—A discussion on pleurisy was opened by Dr. R. W. HASLETT, and continued by Drs. MULLIGAN, GREER, T. M. THOMAS, HAMILTON, J. MCGINN, ELLIOTT, and the CHAIRMAN. Dr. HASLETT replied.

Clinical Cases.—The following were shown: (1) Dr. MULLIGAN showed a case of persistent hæmaturia; (2) Dr. HASLETT, a case of tuberculous peritonitis with thickened pleura.

Votes of Thanks.—The members were entertained to tea after the meeting, and a hearty vote of thanks was passed to the Governors of the Hospital for the use of the room, and to the Matron for providing tea.

STAFFORDSHIRE BRANCH: MID-STAFFORDSHIRE DIVISION.

A MEETING of this Division was held at the Burton Infirmary on February 25th.

Whole-time Medical Officers of Health.—The letter from the Public Health Committee of January 27th was discussed, and it was resolved:

That medical officers of health, when possible, should be whole-time officers.

Midwives Act.—The letter regarding the Departmental Committee on the Midwives Act of February 20th was considered, and it was decided to reply that the Burton guardians had not circularized the profession and midwives; they had made no offer to pay fees in suitable cases, nor has any other local authority. With regard to touting and advertising by midwives, it was stated that a local nursing institution advertised in the local press. The Honorary Secretary was instructed to send an advertisement to the Medical Secretary, but none has appeared since the meeting.

Inspection and Treatment of School Children.—The following are the replies to the letter on this subject:

Questions of Fact.

1. Medical officer of health in Burton with assistant. Dr. Reid and four assistants for County of Stafford.
2. Medical officer of health £75 and assistant £75 per annum. Rural district whole time with salaries.
3. Travelling expenses allowed. Administrative expenses borne by county and town.
4. No.
5. In Burton the nurse assists the inspector, and visits the homes in case of vermin, etc.
6. In county nothing has been done. In Burton arrangements are being made to treat ophthalmic cases at the Burton Infirmary. The Division has taken no action.

Questions to be Answered.

1. (a) No. (b) No. (c) No. (d) Salary.
- 2 and 3. The Division is opposed to the establishment of school clinics in this Division at present, feeling that the present means for treating cases should have a full trial.
4. The payment by parents who can afford it should be ensured by proper inquiry by the institutions treating the children.

To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

MIDLAND BRANCH: BOSTON AND SPALDING DIVISION.—An ordinary meeting of this Division will be held on Friday, March 12th, at 2.45 p.m., at the White Hart Hotel. Agenda: (1) Minutes. (2) Cases, specimens, etc. (3) Medical treatment

for school children. (4) "Hints" to Divisions. (5) Whole-time medical officers of health. (6) Any other business. Tea will be provided for those desiring it, as on former occasions. The Honorary Secretary will be greatly obliged if members will let him know by March 10th if they are able to bring cases, etc.—A. E. WILSON, Honorary Secretary, Boston.

SOUTH-EASTERN BRANCH: GUILDFORD AND WINCHESTER DIVISIONS.—A joint meeting of the Guildford and Winchester Divisions will be held at the Royal Surrey County Hospital, Guildford, on Wednesday, March 10th, at 3 p.m. Agenda: (1) Minutes. (2) Colonel Firth, F.R.C.S., R.A.M.C. (Alderhot). (3) Dr. A. M. Mitchell (Guildford) will open a short discussion on The Importance of Early Operation in Appendicitis. (4) Dr. Bodington (Winchester) will read notes of A Case of Sarcoma of the Spinal Column, with specimens (macroscopic and microscopical). (5) Dr. Kingsford (Woking) will read notes of A Case of Intestinal Obstruction due to an Impacted Gall Stone. (6) Mr. Eric Sheaf (Guildford) will read notes of Two Cases of Enlarged Thyroid Treated by Operation, and will exhibit specimens. (7) Dr. Gauvin, Medical Superintendent of Lord Mayor Treloar's Cripples' Home, Alton, will read a paper on The Mechanical Treatment of Spinal Curves. (8) The following cases and specimens will be shown: (a) Mr. E. J. Smyth: Buphthalmos; (b) Mr. H. J. Fardon (Dr. Brodribb): Pseudo-hypertrophic Paralysis in a Boy; (c) Dr. Briscoe (Alton): Specimens from 5 cases of morbus cordis in the insane. Other cases will be shown from the wards by members of the hospital staff if time permits. Tea will be provided about 4.30. The Honorary Secretaries will be glad to hear from members whether they intend being present at the meeting or not, also from any others willing to show cases or specimens.—H. J. GODWIN, 35, Southgate Street, Winchester; E. J. SMYTH, "Maythorne," Guildford, Honorary Secretaries.

SOUTH-EASTERN BRANCH: ISLE OF THANET DIVISION.—The next meeting of this Division will be held at the Royal Sea-bathing Hospital, Margate, on Friday, March 12th, at 4.15 p.m. Bertram Thornton, Esq., M.R.C.S., in the chair. Agenda: Sir Malcolm A. Morris, K.C.V.O., F.R.C.S., will give an address on the Use of Radium in the Treatment of Diseases of the Skin. Any other business. If any member has a case of skin disease of special interest at present under his care he is requested to be good enough to arrange for its attendance at the hospital for demonstration. All members of the Association are invited to attend these meetings and to introduce professional friends.—HUGH M. RAVEN, Honorary Divisional Secretary.

YORKSHIRE BRANCH.—The next meeting of the Branch will be held at the Royal Eye and Ear Hospital, Bradford, on Wednesday, March 10th, at 4.30 p.m. Members intending to read papers, show specimens or cases, or to propose new members, are requested to communicate at 6.30 with the Secretary. Members will dine together at once.—ADOLPH BRONNER, Honorary Secretary, Bradford.

CENTRAL MIDWIVES BOARD.

A MEETING of the Central Midwives Board was held at Caxton House, Westminster, on February 25th, with Dr. F. H. CHAMPNEYS in the chair.

New Member.

A letter was received from the Clerk of the Privy Council informing the Board that the Lord President had been pleased to appoint the Hon. Mrs. Charles Egerton, of Mountfield Court, Robertsbridge, Sussex, a member of the Board, in the place of Miss Jane Wilson, resigned.

Midwives Practising before Notification.

A letter was considered from the Chief Constable of Manchester reporting that a midwife had been convicted and fined 20s. and costs for practising before notifying the local supervising authority. The Board decided that no action be taken in the matter.

A letter was considered from the Town Clerk of Chester, reporting Louisa Maria Teaves for practising as a midwife without having notified the local supervising authority, and the Board decided that she should be cautioned.

Midwives Act Committee.

A letter was considered from the Clerk of the Council, stating that in the Lord President's opinion the practical objects of the Midwives Act Committee would not be served by the addition to its numbers of representatives of special interests. This was in answer to the Board's request that the advisability of adding a general practitioner and a midwife to the committee should be considered. Dr. E. PARKER YOUNG, in moving a resolution

regretting that the Lord President of the Privy Council had not seen his way to concede to the suggestion contained in the resolution of the Central Midwives Board, said that it ought to be recorded on the minutes that the Board remained of the same opinion. This was seconded by Mr. STANLEY B. ATKINSON, and carried *nem. con.*

Registration of Births.

A letter was considered from Mrs. C. E. Hobhouse, convener of a conference of voluntary nursing associations held in London in July, 1908, requesting the Board to consider the following resolution unanimously passed by the conference:

That all registrars of births should add in a new column the name, status, and address of the person who delivered the child.

The Board decided that the suggestion be approved, and that the Registrar-General be asked to issue the necessary instructions.

Midwives and Patent Medicine Shops.

A letter was considered from a solicitor acting for a midwife inquiring whether the keeping of a shop for the sale of patent medicines by a midwife would be deemed misconduct within the meaning of Section 3 (v) of the Midwives Act. The Board decided to reply that the keeping of a shop for the sale of patent medicines by a midwife was highly undesirable, and that any midwife so doing acted at her own peril.

Alleged Drunkenness.

The Board considered the report of the Subcommittee on H.R.H. Princess Christian's Maternity Home, and decided that as it appeared on investigation that all usual inquiries were made by the authorities of the home, so much of the Board's resolution of December 17th, 1908, dealing with the question as follows the word "authority" be rescinded—namely, the words "but it also thinks that the authorities of the home will see that it is to their interest to redouble their precautions in selecting women to act as midwives in connexion with the home." The Board also decided that the midwife, under whom one of the individuals concerned in this inquiry was trained, should be required to explain the testimonial, which appears to have misled the authorities of the home.

Section 11 of Midwives Act.

The SECRETARY reported that Jane Emily Inglis, of Leeds, who had pleaded guilty at the Central Criminal Court to an offence under Section 11 of the Midwives Act, 1902, had received from the Recorder the sentence of 21 days' imprisonment.

Vaginal Examinations.

The Board directed that the following leaflet drawn up by the Chairman should be distributed:

Inasmuch as misapprehension seems to exist with regard to the meaning of Rule C 1 (1): "She must have . . . attended and watched the progress of not fewer than 20 labours, making abdominal and vaginal examinations during the course of labour" (see also Schedule, Form III):

The Board wishes to point out that the word "examinations" (in the plural number) is to be taken in connexion with the word "progress," and as implying such a number of examinations as will enable the pupil to "watch the progress" of the labour. The word "frequent" is advisedly not used.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

FLEET SURGEON W. HACKETT, M.D., has been placed on the retired list, at his own request, February 25th. He was appointed Surgeon, February 21st, 1889; Staff Surgeon, February 21st, 1897; and Fleet Surgeon, February 21st, 1905.

Deputy Inspector-General J. J. DENNIS, M.D., has been appointed to Chatham Hospital, February 17th.

Deputy Inspector-General W. EAMES has been appointed to Plymouth Hospital, February 17th.

The following appointments have been made at the Admiralty: Surgeon G. O. M. DICKENSON, M.B., to the *Penelope*, additional, for disposal, February 22nd; Surgeon R. THOMPSON, to the *Aboukir* on re-commissioning, March 9th; Surgeon J. H. WRIGHT, M.B., to the *Suffolk*, March 9th, his appointment to the *Aboukir* being cancelled; Staff Surgeon J. R. MITCHELL, M.B., to the *Penelope*, additional, for disposal, February 15th.

ROYAL NAVAL VOLUNTEER RESERVE.

JOHN H. G. HOWE has been appointed a Surgeon, February 27th.

ROYAL HOSPITAL, CHELSEA.

MAJOR-GENERAL CHARLES CRITCHLEY, M.V.O., from Director of Recruiting at Head Quarters, to be Lieutenant-Governor and Secretary, vice Major-General Sir R. B. Lane, K.C.V.O., C.B., February 19th.

ARMY MEDICAL SERVICE.

LIEUTENANT-COLONEL JAMES WELLS, M.B., from the Seconded List, to be Lieutenant-Colonel, February 20th. He was seconded for service as Principal Medical Officer, East Africa, and Uganda Protectorates, February 20th, 1908.

Lieutenant-Colonel H. J. WYATT retires on retired pay, March 3rd. His commissions are thus dated: Surgeon, August 4th, 1883; Surgeon-Major, August 4th, 1885; Lieutenant-Colonel, August 4th, 1903. He served in the South African war in 1899-1902, and was present in operations in Cape Colony, Orange River Colony, and the Transvaal, receiving the Queen's medal with three clasps, and the King's medal with two clasps.

ROYAL ARMY MEDICAL CORPS.

The undermentioned Lieutenants, on probation, are seconded, under Article 300, Royal Warrant for Pay and Promotion, 1907, dated January 30th: W. H. O'Riordan, C.T. V. BENSON, W. P. McARTHUR, M.B., F. W. M. CUNNINGHAM, M.B., E. M. PARSONS-SMITH, H. R. EDWARDS. Their appointment was notified in the *BRITISH MEDICAL JOURNAL* of February 27th.

INDIAN MEDICAL SERVICE.

SURGEON-GENERAL P. H. BENSON, M.B., Madras, has been awarded a good service pension, vice Surgeon-General J. P. GREASY, M.B., Bombay, retired.

Lieutenant-Colonel C. F. WILLIS, M.D., Bombay, is promoted to be Colonel from November 14th, 1908. He was appointed Assistant-Surgeon, October 31st, 1879, and became Lieutenant-Colonel, October 31st, 1899. His war record is as follows: Egyptian war, 1882, including the battle of Tel-el-Kebir and subsequent occupation of Cairo (medal with clasp and Khedive's bronze star); the campaign on the North-West Frontier of India in 1897-8, including the operations on the Samana and in the Kurram Valley (medal with two clasps); and the Tirah Expedition in 1897-8, when he took part in the reconnaissance of the Kharmana Defile and the action on November 7th, and in the operation against the Khani Khel Chamkani mentioned in despatches, clasp. He has recently been appointed an Honorary Surgeon to the Governor-General of India.

Lieutenant-Colonel W. A. CORKERY, Bombay, is also promoted to be Colonel, from January 1st. He joined the department as an Assistant-Surgeon, April 2nd, 1881, and was made Lieutenant-Colonel, April 2nd, 1901. He was with the Burmese Expedition in 1885-7, receiving a medal with clasp.

IMPERIAL YEOMANRY.

THE resignation of his commission by Surgeon-Major E. C. THOMPSON, M.B., North of Ireland Regiment, which was announced in the *London Gazette* of January 22nd, is cancelled.

TERRITORIAL FORCE.

REAL ARMY MEDICAL CORPS.

First West Lancashire Field Ambulance.—Captain DAVID SMART to be Major, April 1st, 1908.

Second West Lancashire Field Ambulance.—ALAN H. NOBLE to be Transport Officer, with the honorary rank of Lieutenant, January 20th.

Third Northamptonshire Field Ambulance.—GEORGE W. PROWSE to be Transport Officer, with the honorary rank of Lieutenant, November 30th, 1908; WILLIAM A. THOMPSON to be Lieutenant, January 1st, 1909.

Third Southern General Hospital.—The undermentioned to officers whose services will be available on mobilisation, dated March 3rd, 1909: To be Lieutenant-Colonels—W. T. FREEMAN, M.D., F.R.C.S. Eng., F. H. HAWKINS, M.D., W. J. MAURICE, M.B., H. P. STYMONS, F.R.C.S. Edin., To be Majors—G. S. ABRAHAM, M.B., WILLIAM COLLIER, M.D., A. P. DODDS-PARKER, M.B., F.R.C.S. Eng., L. M. GUTLIND, M.B., ERNEST MALLAM, M.D., J. A. P. FRICK, M.D., W. A. P. WATERS, M.D., R. H. A. WHITELOCKE, M.D., F.R.C.S. Eng. To be Captains—E. C. BEYERS, M.B., H. M. CLARKE, M.B., N. B. CLOWES, H. E. CONNELL, F.R.C.S. Eng., C. A. COVENTON, WILLIAM DUNNAN, M.B., W. J. FOSTER, F.R.C.S. Eng., J. C. R. FREEBORN, A. G. GIBSON, M.D., G. H. R. HOLDEN, M.D., R. E. HUMPHRY, G. F. MURRELL, M.B., F. G. PROUDFOOT, M.D., W. B. PROWSE, M.B., ROBERT RITSON, W. E. ROBINSON, M.D., R. H. SEAR, M.B., W. B. SEAR, M.B., F.R.C.S. Eng., W. J. TUBRELL, M.D., A. T. WATERHOUSE, M.B.

For Attachment to Units other than Medical Units.—Surgeon-Lieutenant J. E. PHILLIPS, from the Cheshire (Earl of Chester's) Imperial Yeomanry, to be Lieutenant, January 1st, 1909.

Imperial Yeomanry, dated April 1st, 1908. PERCY T. TOLPITT to be Lieutenant, dated November 26th, 1908. The promotion of Captain H. T. CHALLIS, M.D., to the rank of Major, bears date May 27th, 1905, and not April 1st, 1908, as stated in the *London Gazette* of December 18th, 1908.

Vital Statistics.

VITAL STATISTICS OF METROPOLITAN BOROUGHES DURING 1908.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

IN the accompanying table will be found summarized the vital statistics of the City of London and of each of the metropolitan boroughs, based upon the Registrar-General's quarterly returns for the year 1908. The mortality figures relate to the deaths of persons acting as belonging to the various boroughs, and are obtained by distributing deaths occurring in institutions to the boroughs in which the deceased persons had previously resided.

The 123,894 births registered in London during 1908 were equal to an annual rate of 25.4 per 1,000 of the population, estimated at 4,795,757 persons in the middle of that year; this rate was lower than that recorded in any previous year, and is 2.8 lower than the average rate for the ten years 1898-1907. The birth-rates last year ranged from 14.4 in Hampstead, 16.6 in the City of London, 15.4 in Westminster, 18.1 in Kensington, 19.0 in Stoke Newington, and 19.3 in

Analysis of the Vital Statistics of the Metropolitan Boroughs and of the City of London after Distribution of Deaths occurring in Public Institutions during 1908.

COUNTY OF LONDON	Estimated Population of 1908.	Births.	Deaths.	Annual Rate per 1,000 Living.		Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric Fever.	Infective Typhoid.	Diarrhoea.	Pneumonia.	Deaths of Children Under 15 Years of Age per 1,000 Births.
				Births.	Deaths.												
Paddington ...	4,795,757	123,844	67,355	25.4	13.8	1.35	6,599	—	1,524	548	724	984	—	225	2	2,592	6,419
Kensington ...	182,752	3,560	2,390	18.1	12.9	0.92	169	32	9	27	7	—	4	—	—	52	155
Hammersmith ...	124,012	3,098	1,759	24.6	14.0	1.09	137	15	11	13	19	—	5	—	—	89	182
Fulham ...	171,362	4,507	2,155	26.4	12.4	1.59	277	71	17	132	34	10	—	10	—	113	199
Chelsea ...	149,349	4,469	1,195	19.3	14.5	1.18	90	12	8	12	17	—	5	—	—	36	97
City of Westminster ...	170,545	2,674	2,151	15.4	12.6	0.58	102	23	7	16	8	—	6	—	—	42	215
St. Marylebone ...	126,867	4,152	1,831	32.3	14.2	0.85	110	25	13	14	15	—	6	—	—	31	145
Hamptonstead ...	92,659	1,356	769	14.4	8.5	0.40	39	5	14	7	5	—	7	—	—	12	73
St. Pancras ...	237,075	5,336	3,547	23.0	14.7	1.06	255	46	20	22	69	—	10	—	—	88	365
Islington ...	349,091	8,445	4,682	23.8	13.2	1.01	353	80	31	57	55	—	18	—	—	112	440
Stoke Newington ...	54,015	1,044	677	19.0	12.5	0.82	45	10	5	6	6	—	—	—	—	63	292
Southwark ...	235,365	5,777	3,145	24.6	13.4	1.07	59	11	7	5	8	—	5	—	—	23	117
Holborn ...	54,425	1,582	905	27.9	16.4	1.07	59	11	7	5	8	—	5	—	—	23	117
Finsbury ...	96,007	3,569	1,816	36.6	18.6	2.09	205	44	13	16	25	—	12	—	—	95	210
City of London ...	19,252	285	346	14.6	17.7	0.40	8	—	—	—	—	—	—	—	—	—	—
Shoreditch ...	115,227	3,620	2,242	31.4	19.4	2.09	249	51	29	32	24	—	11	—	—	117	234
Bethnal Green ...	131,056	4,200	2,275	31.7	17.1	2.48	329	104	40	28	42	—	13	—	—	102	215
Stepney ...	310,706	10,394	5,176	32.9	16.4	2.53	800	264	55	75	129	—	14	—	—	262	494
Poplar ...	171,516	5,334	2,764	30.7	15.9	2.26	394	82	37	33	73	—	14	—	—	168	305
Wandsworth ...	110,442	6,027	3,488	54.2	31.6	2.76	58	34	45	50	70	—	7	—	—	188	405
Barnes ...	127,910	1,174	2,438	32.1	18.8	2.30	239	107	25	23	22	—	12	—	—	109	246
Bermundsey ...	321,344	8,908	4,336	27.3	13.3	1.18	387	101	42	45	50	—	8	—	—	141	472
Battersea ...	183,875	6,500	2,278	34.1	12.2	1.19	222	48	24	22	39	—	7	—	—	104	282
Wandsworth ...	289,506	7,323	3,403	24.9	11.6	0.93	275	46	24	21	32	—	7	—	—	126	318
Camberwell ...	280,022	6,747	3,503	23.7	12.7	1.06	306	54	24	41	54	—	7	—	—	126	318
Deptford ...	117,539	3,071	1,643	25.7	13.8	1.32	157	33	7	10	24	—	8	—	—	75	138
Greenwich ...	109,110	2,622	1,396	23.6	12.6	1.25	140	16	6	18	31	—	4	—	—	63	125
Lewisham ...	156,627	3,621	1,748	22.6	11.0	1.25	197	25	10	13	40	—	4	—	—	63	125
Woolwich ...	131,346	3,190	1,516	23.9	11.4	0.92	123	10	9	21	32	—	3	—	—	48	160

Chelsea, to 30.7 in Poplar, 30.9 in Shoreditch, 31.7 in Bethnal Green, 32.1 in Bermundsey, 32.3 in St. Marylebone, 32.9 in Stepney, and 36.6 in Finsbury.

The deaths of London residents registered during the year numbered 67,355, and were at the rate of 13.8 per 1,000 persons living, against 15.1 and 14.6 per 1,000 in the two preceding years; the average rate for the ten years 1898-1907 was 16.7 per 1,000. The lowest death-rates last year were 8.5 in Hampstead, 11.0 in Lewisham, 11.4 in Woolwich, 11.6 in Wandsworth, 12.2 in Battersea, and 12.3 in Stoke Newington; the highest rates were 17.1 in Bethnal Green, 17.4 in Shoreditch, 17.7 in the City of London, 18.5 in Finsbury, and 18.8 in Bermundsey.

During the year under notice 6,599 deaths were referred to the principal infectious diseases; of these, 1,524 resulted from measles, 548 from scarlet fever, 724 from diphtheria, 984 from whooping-cough, 225 from enteric fever, 2 from ill-defined pyrexia, and 2,592 from diarrhoea, but not any from small-pox or typhus. These 6,599 deaths were equal to an annual rate of 1.35 per 1,000, or 0.44 per 1,000 less than the average rate for the five years 1903-7. The mortality from scarlet fever exceeded the average; that from diphtheria was equal to the average, as had also been the case in the previous year; while the mortality from each of the other specified diseases showed a decline as compared with the average of the previous five years. Among the several boroughs the death-rates last year from the principal infectious diseases ranged from 0.40 in the City of London and in Hampstead, 0.58 in Westminster, 0.82 in Stoke Newington, 0.85 in St. Marylebone, and 0.87 in Paddington, to 2.49 in Finsbury and in Shoreditch, 2.26 in Poplar, 2.50 in Bermundsey, 2.48 in Bethnal Green, and 2.55 in Stepney. The greatest proportional mortality from measles was recorded in Finsbury, Shoreditch, Bethnal Green, Stepney, Poplar, and Bermundsey. Scarlet fever was proportionally most fatal in Shoreditch, Bethnal Green, Stepney, Poplar, and Bermundsey; 20,852 scarlet fever patients were admitted into the Metropolitan Asylums Hospitals during the year, against 17,592, 18,622, and 23,953 in the three preceding years; 3,498 cases remained under treatment at the end of the year, against 3,490, 3,787, and 4,956 at the end of the three preceding years. The highest number of deaths from scarlet fever was recorded in Hackney, Bethnal Green, Stepney, Poplar, Bermundsey, and Lewisham; there were 6,797 diphtheria patients admitted into the Metropolitan Asylums Hospitals last year, against 5,380, 6,478, and 7,303 in the three preceding years; 1,241 cases remained under treatment at the end of the year, against 701, 995, and 1,168 at the end of the three preceding years. Whooping-cough was proportionally most fatal in St. Pancras, Finsbury, Bethnal Green, Stepney, Poplar, and Greenwich. The greatest proportional mortality from enteric fever was recorded in Chelsea, Stoke Newington, Holborn, Finsbury, Shoreditch, Bethnal Green, and Bermundsey; 708 enteric fever patients were admitted into the Metropolitan Asylums Hospitals last year, against 934 and 768 in the two preceding years; 147 cases remained under treatment at the end of the year, against 134 and 119 at the end of the two preceding years. Diarrhoea showed the greatest proportional fatality in Finsbury, Shoreditch, Bethnal Green, Stepney, Poplar, Southwark, and Wandsworth.

The 6,419 deaths from pneumonia registered during the year were equal to an annual rate of 1.32 per 1,000, the rates in the three preceding years having been 1.42, 1.44, and 1.40 respectively. The pneumonia death-rates last year ranged from 0.73 in Hampstead, 0.85 in Lewisham, 0.86 in Wandsworth, 0.98 in Kensington, 1.01 in Paddington, and 1.07 in Stoke Newington, to 1.79 in the City of London, 1.88 in Southwark, 1.89 in Bermundsey, 2.00 in Shoreditch, 2.11 in Holborn, and 2.15 in Finsbury. The central group of boroughs shows the usual excessive mortality from this disease, the rate being 2.10 per 1,000, against 1.59 in the eastern group, 1.28 in the southern, 1.24 in the northern, and 1.15 in the western group.

Infant mortality, measured by the proportion of deaths among children under 15 years of age to registered births, was equal to 113 per 1,000, against 129, 131, and 116 in the three preceding years; in the ten years 1898-1907 the rate averaged 143 per 1,000. The lowest rates of infant mortality last year were 64 in St. Marylebone, 72 in Hampstead, 80 in Holborn, 87 in Lewisham, 93 in Lambeth, 94 in Woolwich, and 95 in the City of London; the highest rates were 126 in Chelsea, 127 in Poplar, 127 in Stepney, 136 in Bethnal Green, and in Southwark, 144 in Shoreditch, and 146 in Bermundsey.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,241 births and 6,024 deaths were registered during the week ending Saturday last, February 27th. The annual rate of mortality in these towns, which had been 17.5 and 18.1 per 1,000 in the two preceding weeks, further rose last week to 19.1 per 1,000. The lowest rates in the several towns ranged from 6.9 in Walthamstow, 7.6 in Hornsey, 10.8 in Barrow-in-Furness, 11.3 in Leyton, 12.0 in York, and 12.3 in Gateshead, to 23.8 in Portsmouth, 24.2 in Wigan, 25.5 in Birmingham, 25.6 in Rochdale, 26.3 in St. Helens, 27.1 in Plymouth, and 29.4 in Aston Manor. In London the rate of mortality was 19.9 per 1,000, while it averaged 18.8 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.9 per 1,000 in the seventy-six towns; in London the death-rate from these diseases was 1.8 per 1,000, while among the seventy-five other large towns it ranged upwards to 4.7 in Sheffield, 4.9 in Birmingham, 5.2 in Sunderland, 5.9 in West Ham, 7.9 in Warrington, 8.1 in Southwick, 8.4 in Aston Manor, and 9.9 in St. Helens. Measles caused a death-rate of 3.7 in Sheffield, 3.9 in Stockton-on-Tees and in Sunderland, 4.0 in Birmingham, 5.2 in West Ham, 5.8 in Warrington, 6.6 in St. Helens, 6.7 in Southwick, and 6.9 in Aston Manor; scarlet fever of 1.4 in Bourne, 1.5 in Nottingham, 1.2 in Aston Manor; whooping-cough of 1.4 in Nottingham and in Warrington, 1.8 in Preston, 2.0 in Coventry, 2.2 in St. Helens, and 2.3 in Wigan; "fever" of 1.5 in Hanley; and diarrhoea of 1.5 in Middlesbrough. One fatal case of small-pox was registered in Bristol, but none in any other of the seventy-six large towns. The number of scarlet fever patients remaining under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 3,117, 3,002, and 2,910 at the end of the three preceding weeks, had further declined to 2,825 at the end of last week; 292 new cases were admitted during the week, against 312, 289, and 273 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday last, February 27th, 888 births and 744 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 18.4 and 18.9 per 1,000 in the two preceding weeks, had further rose last week to 20.0 per 1,000, and was 0.9 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 12.3 in Leith and 13.5 in Glasgow to 21.6 in Paisley and 21.9 in Dundee. The death-rate from the principal infectious diseases averaged 2.3 per 1,000 in these eight towns; the highest rates being recorded in Dundee and Aberdeen. The 352 deaths from pneumonia included 4 from diphtheria, 2 from whooping-cough, 5 from "fever," and 6 from diarrhoea. Three fatal cases of diphtheria and 2 of whooping-cough were recorded in Edinburgh; 4 of diphtheria, 2 of whooping-cough, and 3 of diarrhoea in Dundee; 3 of measles, 2 of diphtheria, 5 of whooping-cough, and 2 of diarrhoea in Aberdeen; and 2 of whooping-cough in Paisley.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

- ARGYLE AND BUTE ASYLUM, Lochgilblhead.—Assistant Medical Officer (male). Salary, £150 per annum.
- BIRMINGHAM EAR AND THROAT HOSPITAL.—House-Surgeon. Salary at the rate of £70 per annum.
- BIRMINGHAM: QUEEN'S HOSPITAL.—House-Surgeon. Salary at the rate of £50 per annum.
- BROADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.
- BRIGHTON: SUSSEX COUNTY HOSPITAL.—Third House-Surgeon. Salary, £50 per annum.
- BRISTOL ROYAL INFIRMARY.—Resident Casualty Officer. Salary at the rate of £50 per annum.
- BRINTON DISPENSARY, Water Lane, S.W.—Resident Medical Officer. Salary, £150 per annum.
- CANTERBURY: KENT AND CANTERBURY HOSPITAL.—House-Surgeon. Salary, £30 per annum.
- CARLISLE: CUMBERLAND INFIRMARY.—Resident Medical Officer (male), to act as House-Physician and House-Surgeon for six months each respectively. Salary at the rate of £20 and £100 per annum.
- CARLOW DISTRICT ASYLUM.—Resident Medical Superintendent. Salary, £350 per annum, and allowances valued at £150.
- CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician (male). Salary at the rate of £50 per annum.
- CITY OF LONDON LYING-IN HOSPITAL, City Road, E.C.—Resident Medical Officer. Salary at the rate of £50 per annum.
- DERBY: COUNTY ASYLUM, Mickleover.—Junior Assistant Medical Officer (male). Salary, £120 per annum, rising to £150.
- GATESHEAD DISPENSARY.—Assistant Medical Officer. Salary, £180 per annum.
- GREAT YARMOUTH HOSPITAL.—House-Surgeon. Salary, £100 per annum.
- HEMEL HEMPSTEAD: WEST HERTS HOSPITAL.—House-Surgeon. Salary, £100 per annum.
- HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Assistant Physician.
- HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) Two House-Surgeons; (2) Assistant Casualty Medical Officer (and House-Physician); (3) House-Physician.
- LEEDS GENERAL DISPENSARY.—Locumtenent for Resident Ophthalmic House-Surgeon. Salary, £2 2s. per week.
- LEEDS UNIVERSITY.—Demonstrator of Toxicology.
- LONDON COUNTY ASYLUM, Horton.—Junior Assistant Medical Officer. Salary, £150 per annum.
- LONDON LOCK HOSPITAL.—House-Surgeon to the Female Hospital. Salary, £100 per annum.
- LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant Resident Medical Officer. Honorarium at the rate of 50 guineas per annum.
- LONDON THROAT HOSPITAL, Great Portland Street, W.—(1) Assistant Surgeon (non-resident); (2) House-Surgeon; (3) Anaesthetist.
- LONDON UNIVERSITY.—Scientific Assistant in Biological Subjects. Salary, £75 per annum.
- MACCLESFIELD GENERAL INFIRMARY.—Senior House-Surgeon. Salary, £100 per annum.
- METROPOLITAN HOSPITAL, Kingsland Road, N.E.—(1) House-Physician; (2) House-Surgeon; (3) Assistant House-Physician; (4) Assistant House-Surgeon. Salary at the rate of £40 per annum for (1) and (2), and £20 per annum for (3) and (4).
- NORTHAMPTON GENERAL HOSPITAL.—House-Surgeon (male). Salary, £90 per annum, increasing £10 yearly.
- NOTTS EDUCATION COMMITTEE.—Assistant School Medical Officer for three months. Salary at the rate of £250 per annum.
- SALFORD ROYAL HOSPITAL.—(1) House-Surgeon; (2) Junior House-Surgeon. Salary at the rate of £50 and £50 per annum respectively.
- SHEFFIELD EDUCATION COMMITTEE.—Assistant Medical Officer. Salary, £250 per annum, increasing to £300.
- SOUTHAMPTON: FREE EYE HOSPITAL.—House-Surgeon. Salary, £100 per annum.
- SOUTHWARK UNION.—Assistant (male) Medical Officer to the Infirmary. Salary, £100 per annum.
- STOCKPORT COUNTY BOROUGH.—School Medical Officer. Salary, £250 per annum, increasing to £300.
- WEST HERTS HOSPITAL, Hemel Hempstead.—House-Surgeon. Salary, £100 per annum.
- WEST LONDON HOSPITAL, Hammersmith Road, W.—Pathologist. Salary, £200 per annum.
- YORK DISPENSARY.—Resident Medical Officer (male). Salary, £150 per annum.

APPOINTMENTS.

- HIMP, G. F., M.B.Cantab., District Medical Officer of the Guildford Union.
- HAMILTON, George G., M.B., F.R.C.S., Consulting Surgeon to the Boscombe and West Hants Hospital.
- HOLMES, Gordon, M.D., B.Ch.Dub., Assistant Physician for Out-patients at the National Hospital for the Paralyzed and Epileptic, Queen Square, W.C.
- HUTSON, F. H., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Lavenham District, co. Suffolk.

- KERSTILL, H., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Sandwich District, co. Kent.
- LEGG, C., M.R.C.S.Eng., L.R.C.P.Lond., Admiralty Surgeon and Agent at Tooting.
- RANDLE, Alar, M.D., B.S.Lond., M.R.C.S., L.R.C.P.Lond., Second Assistant Medical Officer to the St. Marylebone Infirmary, Notting Hill, Vice Dr. James, resigned.
- ROBERTSON, A. S., M.B., C.M.Glass., Medical Officer of Health, Old Fletton Urban District.
- SMITH, A. Lionel, M.B., B.C.Cantab., M.R.C.P., Honorary Obstetric Physician to the St. Marylebone General Dispensary.
- SUTHERLAND, Joseph R., M.B., Ch.B.Glasg., M.R.C.S.Eng., L.R.C.P.Lond., Junior Assistant Medical Officer at the Glasgow District Mental Hospital, Woodlee.
- ST. THOMAS'S HOSPITAL.—The following gentlemen have been selected as House Officers:
Casualty Officers and Resident Anaesthetists: G. B. Girdlestone, M.A., M.B., B.Ch.Oxon, M.R.C.S., L.R.C.P., N. M. Ferguson, M.B., B.C.Cantab.; C. F. O. Sankey, M.B., B.Sc.Lond., M.R.C.S., L.R.C.P.; H. A. F. Wilson, M.R.C.S., L.R.C.P.; J. L. Graham-Jones, B.A.Cantab., M.R.C.S., L.R.C.P.; J. N. Wheeler, B.A.Cantab., M.R.C.S., L.R.C.P.
Casualty Assistants: J. E. Menzell, M.A., M.B., F.C.Cantab., M.R.C.S., L.R.C.P.; H. B. Wilson, B.A.Cantab., M.R.C.S., L.R.C.P.
Resident House Physicians: O. L. V. S. de Wesselow, B.A., M.B., B.Ch.Oxon.; C. D. H. Corbett, M.A., M.B., B.Ch.Oxon., M.R.C.S., L.R.C.P.; M. C. Irvine, M.R.C.S., L.R.C.P.; E. L. Fyfe, M.R.C.S., L.R.C.P.; J. H. Crofton, B.A.Cantab., M.R.C.S., L.R.C.P.
Resident House-Surgeons: W. B. Johnson, M.R.C.S., L.R.C.P.; C. T. V. Benson, B.A.Cantab., M.R.C.S., L.R.C.P.; E. W. Witney, M.R.C.S., L.R.C.P.; B. A. Cheadle, M.R.C.S., L.R.C.P.
House-Surgeon to Block 8: S. G. Macdonald, M.A., M.B., B.C.Cantab.
Obstetric House-Physicians: (Senior) H. E. T. Dawes, B.A. Cantab., M.R.C.S., L.R.C.P. (Junior) N. W. Jenkin, B.A.Cantab., M.R.C.S., L.R.C.P.
Ophthalmic House-Surgeon: R. A. Morrell, M.R.C.S., L.R.C.P.
Clinical Assistants: (Eye) E. M. Parsons-Smith, M.R.C.S., L.R.C.P.; (Throat) L. S. T. Burrell, M.A.Cantab., M.R.C.S., L.R.C.P.; B. Cox, B.A.Cantab., M.R.C.S., L.R.C.P.; (Skin) B. T. Parsons-Smith, M.B., B.S.Lond., M.R.C.S., L.R.C.P.; M. W. Baker, B.A.Cantab., M.R.C.S., L.R.C.P.; (Ear) L. S. T. Burrell, M.A.Cantab., M.R.C.S., L.R.C.P.; W. Harries, B.A.Cantab., M.R.C.S., L.R.C.P.; (Children) (Surgical) H. E. Humphrys, B.A.Cantab., M.R.C.S., L.R.C.P.; (Children—Medical) G. Finch, M.R.C.S., L.R.C.P.; F. R. Thornton, B.A.Cantab., M.R.C.S., L.R.C.P.; (Mental) H. A. H. Robson, M.R.C.S., L.R.C.P.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

- BOTT.—On February 28th, at 59, Cambridge Terrace, Hyde Park, the wife of Percival G. A. Bott, M.B.Lond., F.R.C.S. Edin., of a son.
- THOMAS.—On February 23rd, 1909, at 22, Walter Road, Swansea, the wife of Frank G. Thomas, B.A., M.B., B.C.Cantab., of a daughter.

MARRIAGES.

- FRANCE—GREIG-SMITH.—At St. Andrew's Church, Mothil, Benal, on February 3rd, by the Rev. R. Yates, William Ashburner, son of the late Charles France, F.R.I.B.A., of Oliver Hill, Horsforth, York, to Eleanor, daughter of the late James Greig-Smith, M.A., M.B., F.R.S.E., Professor of Surgery, University College, Bristol.
- WARD—BARRETT.—On February 11th, at St. Peter's, Bolsoize Square, London, by the Venerable the Archdeacon of Huntingdon, assisted by the Rev. Yeo Ward, M.A., Curate of St. Georges, Triuro (brother of the bridegroom), the Rev. Spencer C. Carpenter, M.A., Warden of Cairns Mission, and the Rev. F. W. Buttle, M.A., James Philip Stephens Ward, M.R.C.S., L.R.C.P., second son of William Philip Ward, Esq., and Mrs. Ward, of Plymouth, to Alice Dorothy, only daughter of Charles E. B. Barrett, Esq., and Mrs. Barrett, of Santos Road, London, S.W., and niece of Major-General Sir Arthur Barrett, K.C.B.

DEATHS.

- BAILLIE.—On February 25th, at the N.V. Fever Hospital, Hampstead, James Hamilton Hall Baillie, M.B., B.Ch. (N.Z.), M.R.C.S., L.R.C.P., D.P.H., in his 32nd year.
- HORROCKS.—On February 28th, after an operation, aged 56 years, Peter Horrocks, M.D.Lond., F.R.C.P.Lond., Consulting Obstetric Physician to Guy's Hospital, seventh son of the late George Horrocks, of Farnworth, near Bolton, 42, Brook Street, W. Interred Norwood Cemetery, March 4th, 1909.

IN MEMORIAM.

- In loving memory of Lieutenant-Colonel Edward Bovill, M.D., F.R.C.S., I.M.S. (retired), who died on March 1st, 1908, at 31, Comeragh Road, West Kensington, aged 61.

BOOKS, ETC., RECEIVED.

- New York: Surgery Publishing Co. 1909:
Seven Hundred Surgical Suggestions. By W. M. Brichner, U.S., M.D., E. Moschowitz, A. B., M.D., and H. M. Hays, M.A., M.D. Third series. 1909. \$1.00.
Blood Examination in Surgical Diagnosis. By I. S. White, M.S., M.D. 1908. \$2.00.
Diseases and Surgery of the Genito-Urinary System. By F. S. Watson, M.D., and J. H. Cunningham, Jun., M.D. Vols. 1 and 2. London: H. Kimpton, and Glasgow: A. Stenhouse. 1909. £3 3s.

Dent's Scientific Primers. Edited by J. Reynolds Green, D.Sc., F.R.S. Biology, by R. J. H. Gibson, M.A.; and Chemistry, by W. A. Tilden, D.Sc., F.R.S. London: J. M. Dent and Co. Is. each.

Paris: J. B. Baillière et Fils. 1909:

Nouveau Traité de Médecine et de Thérapeutique. Publié sous la direction de MM. A. Gilbert et L. Thoinot. XIV, Maladies de la Peau. Par E. Gancher. Fr. 10.

Nouveau Traité de Chirurgie. Publié sous la direction de A. le Dentu et P. Delbet. XVII, Oto-rhino-laryngologie. Par A. Castex et F. Lubet-Barade. Fr. 12.

Constipation and Intestinal Obstruction (Obstipation). By S. G. Gant, M.D., LL.D. Philadelphia and London: W. Saunders and Co. 1909. 25s.

Philadelphia and London: J. B. Lippincott Co. 1909: Lippincott's New Medical Series. Textbook of Diseases of the Nose, Throat, and Ear. By F. R. Packard, M.D. 35s.

Diseases of the Digestive Canal. By Dr. P. Cohnheim. Translated from second German edition by D. Fulton, M.D. 16s.

Textbook of Gynaecological Diagnosis. By Drs. G. Winter and C. Ruse. Edited by J. G. Clark, M.D. After third German edition. 25s.

The Minority Report of the Poor Law Commission. Part I. The Break-up of the Poor Law. Part II. The Public Organization of the Labour Market. Edited by S. and B. Webb. London: Longmans, Green, and Co. 1909. 7s. 6d. and 5s. respectively.

Bibliothèque de Psychologie Expérimentale et de Métapsychique. Directeur, R. Maunier. Paris: Blond et Cie. 1909:

No. 7 and 8. Le Hachich. Essai sur la Psychologie des Paradis Éphémères. Par R. Meunier. Fr. 3.

No. 9. L'Évolution Psychique de l'Enfant. Par Dr. H. Bouquet. Fr. 1.50.

No. 10. Travail et Folie. Par Drs. A. Marie et R. Martial. Fr. 1.50.

Licensing and Temperance in Sweden, Norway, and Denmark. By E. A. Eliot. Popular edition. London: J. Murray. 1909. 1s.

Précis de Dermatologie. Par J. Darier. Paris: Masson et Cie. 1909. Fr. 12.

Das periodische System der Elemente und die Giftwirkung. Von Dr. J. Riess. Wien und Leipzig: A. Holder. 1909. M. 5.60.

Oxford Medical Publications. London: H. Frowde, and Hodder and Stoughton. 1909:

A System of Operative Surgery. By Various Authors. Edited by F. F. Hargrath, M.S. Lond., F.R.C.S. Eng. In four vols. Vol. i, 36s. (subs. four vols., £6).

Manual of Operative Surgery. By H. J. Waring, M.S., M.B., B.Sc., F.R.C.S. Third edition. 12s. 6d.

Transactions of the American Gynecological Society. Vol. xxiii. 1908. Philadelphia: W. J. Dorman. 1908.

*. In forwarding books the publishers are requested to state the selling price.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Papers: (1) Gastric Dilatation Associated with Extreme Cyanosis. Mr. G. Templeton. (2) Points in the Surgical Treatment of Fractures of the Base of the Skull (illustrated by lantern slides). Mr. L. B. Rawling.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Professor Arthur Keith—Lecture I: Congenital Malformations of the Heart.

TUESDAY.

CHLSEA CLINICAL SOCIETY, Chelsea Dispensary, Manor Street, S.W., 8.30 p.m.—Annual Clinical Debate: The Diagnosis and Treatment of Tuberculous Glands of the Neck.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Third Milroy Lecture by Dr. R. T. Hewlett: Disinfection and Disinfectants.

ROYAL SOCIETY OF MEDICINE: SURGICAL SECTION, 20, Hanover Square, W., 5.30 p.m.—Papers:—Mr. Alban Doran: Urachal Cyst Simulating Appendicular Abscess: Arrested Development of Genital Tract with Notes on Recently Reported Cases of Urachal Cysts. Mr. Herbert T. Herring: The Application of Continuous Suction in Surgery.

WEDNESDAY.

BRITISH BAINEOLOGICAL AND CLIMATOLOGICAL SOCIETY, 20, Hanover Square, W., 5.30 p.m.—Ordinary Meeting. Adjourned Discussion on Dr. Buckley's paper, Intestinal Lavage on the Florentine System, will be reopened by Dr. Mantle (Harrigate). Paper—Mr. Lockhart Munnery: The Treatment of Severe Case of Chronic Colitis. The Fellows will dine together at Pagan's Restaurant, Great Portland Street, W., at 7 p.m.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Professor Arthur Keith—Lecture II: Congenital Malformations of the Heart.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Millbank, S.W., 8.30 p.m.—A Demonstration of Recent Methods of Sewage Analysis, Major Berridge, R.A.M.C. Mr. Bishop Harman will show the Diaphragm Test for Vision.

THURSDAY.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, W.—Ordinary Meeting. Card Cases, at 8 p.m. Drs. G. Carpenter, G. Rowan, etc. Papers, at 8.30 p.m. Mr. E. Treacher Collins: Congenital Anterior Staphyloptosis. Mr. E. Nettleship: Some New Pedigrees of Eye Disease.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—First Goulstonian Lecture by Dr. A. E. Russell: On Some Disorders of the Cerebral Circulation and their Clinical Manifestations.

ROYAL SOCIETY OF MEDICINE:

OBSTETRICAL AND GYNAECOLOGICAL SECTION, 20, Hanover Square, W., 7.45 p.m.—Specimens:—Mrs. Stanley Boyd: A Neurologic Fibroid. Dr. Rivers Pollock: Dermoid Cysts of the Ovaries. Dr. W. Gifford Nash: (1) Parovarian Cyst with Torsion of the Pedicle; (2) Haemorrhage into Great Omentum due to slight Injury in a Patient with Multiple Myomata of the Uterus; (3) Haemorrhage into a Sarcoma of the Ovary causing Symptoms suggestive of Torsion. Dr. Russell Andrews: (1) Twin Pregnancy in a Fallopian Tube; (2) Carcinoma of Vagina: Removal of the Uterus and Whole of Vagina. Dr. A. H. N. Lewers: A Fibroid of Tumour Spontaneously Expelled from the Uterus Seven and a Half Weeks after Delivery. Dr. H. B. Spenser: (1) An Ovarian Fibroid Incarcerated in the Pelvis. Caesarean Section and Ovariectomy at Term. (2) Bilateral Ovarian Fibroids Removed during Pregnancy. Short Communications:—Dr. Drummond Macwell: Notes on a Fatal Case of Toxic Vomiting of Pregnancy. Dr. F. E. Taylor and Dr. W. E. Fisher: A Case of Primary Ovarian Actinomyosis.

FRIDAY.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, W., 9 p.m.—Special Meeting.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Professor Arthur Keith—Lecture III: Congenital Malformations of the Heart.

ROYAL SOCIETY OF MEDICINE:

CLINICAL SECTION, 20, Hanover Square, W.C., 8 p.m.—Cases:—Mr. James Sherron: Cases of Nerve Injury from the Point of View of Treatment. Mr. C. H. Fagge: (1) Two Cases of Post-operative Facial Paralysis: Facial-hypoglossal Grafting; (2) Case of Inflammatory Facial Paralysis. Mr. H. Tubby: Nerve Grafting. Anesthetics. Mr. H. Tubby: Nerve Grafting. Mr. Sargent: Case of Nerve root Grafting. Mr. W. McAdam Eccles: Charcot's Disease of the Ankle. Mr. A. Carless: Vicarious Vomiting by Enterostomy. Case of Enterostomy Cured by Enterostomy. Major C. G. Spencer, R.A.M.C.: Sarcoma Treated by Coley's Fluid. Dr. Macnaughton-Jones: Cancerous Tumour of the Spinal Meninges in a Child. Case of Cancerous Paraplegia Secondary to Mammary Carcinoma. Dr. F. H. Hawkins: Lymphadenoma with Varying Jaundice. Mr. L. McGavin: Perineal Hernia. 9.40 p.m. Short Paper:—Dr. A. E. Garrod: Cræmia Simulating Meningitis.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Tuesday and Friday, 3.45 p.m., Larynx.

LONDON SCHOOL OF CLINICAL MEDICINE, Stenden's Hospital, Greenwich.—Daily attendances: Out-patient Demonstrations, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively. Operations, 2 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m. Monday, and noon, Thursday; Skin, at noon and 4 p.m. Thursday, and noon, Friday; Eye, 11 a.m., Wednesday and Saturday; Radiography, 4 p.m., Thursday. Special Lectures: Monday, 3.15 p.m., Difficulties in Cases of Abdominal Diagnosis; Tuesday, 2.15 p.m., Mital Disease; Wednesday, 3.30 p.m., Papillitis.

LONDON THROAT HOSPITAL, Great Portland Street, W.—Wednesday, 5 p.m., Surgical Landmarks of Nose and Throat.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chancery Street, W.C.—The following clinical demonstrations have been arranged for next week, at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Throat. Lectures, at 5.15 p.m. each day, will be given as follows: Monday, The Fundus Oculi, with lantern slides; Tuesday, Pruritus Vulvae, its Causes and Treatment; Wednesday, Vesical Tuberculosis; Thursday, Bullous Eruptions.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Clinical Lecture; Friday, 3.30 p.m., Symptom and Treatment of Cervical Ribs.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, Middlesex, Clinics, 10 a.m. Surgical Out-patient, 2.30 p.m. Medical Out-patient; Nose, Throat, and Ear; X Rays; 4.30 p.m. Medical In-patient. Tuesday, 10 a.m., Medical Out-patient Clinic; 2.30 p.m., Operations; Clinics: Surgical, Gynaecological; 4.30 p.m., Lecture: Modern Views on Heredity. Wednesday, 2.30 p.m., Medical Out-patient, Skin, and Eye Clinics. Thursday, 2.30 p.m., Gynaecological Operations; Clinics: Medical Out-patient, Surgical Out-patient, X Rays; 3 p.m., Medical In-patient; 4.30 p.m., Lecture-Demonstration: The Mechanism of Infection. Friday, Clinic: 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient; Medical Out-patient, Eye; 3 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics, X Rays; 2.30 p.m., Operations; Monday and Thursday and Wednesday and Saturday, 2 p.m., Diseases of the Eyes; Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (on Wednesday and Saturday, 10 a.m.) Diseases of Throat, Nose, and Ear; 4.30 p.m., Skin Diseases; Wednesday and Saturday, 10 a.m., Diseases of Children; 2.30 p.m., Diseases of Women. Lectures, at 10 a.m. Monday and Thursday, Demonstration by Surgical Registrar; Friday, Demonstration by Medical Registrar; at 12 noon, Monday, Pathological Demonstration; at 12.15 p.m., Practical Medicine; at 5 p.m., Monday, Clinical Pathology; Tuesday, Thursday, Clinical Pathology; Wednesday, Medicine; Thursday, Diagnosis of Swellings in the Jaws in Adults; Friday, the Treatment of Constipation.

ST JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C.—Thursday, 6 p.m., Ulerythema.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
MARCH.		MARCH (Continued).	
7 Sunday ..		14 Sunday ..	
8 MONDAY ..		15 MONDAY ..	
9 TUESDAY ..	LONDON: Subcommittee on Grouping of Branches under Charter, 10.30 a.m. LONDON: Organization Committee, 11 a.m. LONDON: Subcommittee on Capitation Grants, immediately after Organization Committee.	16 TUESDAY ..	LONDON: Standing Ethical Subcommittee 2 p.m.
10 WEDNESDAY ..	LONDON: South-Eastern Branch Council, 3 p.m. GUILDFORD AND WINCHESTER DIVISIONS, <i>South-Eastern Branch</i> , Joint Meeting, Royal Surrey County Hospital, Guildford, 3 p.m.; Tea, 4.30 p.m. LANCASHIRE AND CHESHIRE BRANCH, Branch Science Committee, Liverpool Medical Institution, 4.30 p.m. RICHMOND DIVISION, <i>Metropolitan Counties Branch</i> , Clinical Meeting, Royal Hospital, Richmond, 8.30 p.m. YORKSHIRE BRANCH, Royal Eye and Ear Hospital, Bradford, 4.30 p.m.; Dinner, 6.30 p.m.	17 WEDNESDAY ..	CARDIFF DIVISION, <i>South Wales and Monmouthshire Branch</i> , Cardiff. CITY DIVISION, <i>Metropolitan Counties Branch</i> , Manor Lodge, Upper Clapton Road, 9 p.m.
11 THURSDAY ..	BIRMINGHAM BRANCH, Medical Institute, Edmund Street, 3.30 p.m.	18 THURSDAY ..	LAMBETH DIVISION, <i>Metropolitan Counties Branch</i> , Evelina Hospital, 4 p.m.
12 FRIDAY ..	BOSTON AND SPALDING DIVISION, <i>Midland Branch</i> , White Hart Hotel, 2.45 p.m. ISLE OF THANET DIVISION, <i>South-Eastern Branch</i> , Royal Seabathing Hospital, Margate, 4.15 p.m.	19 FRIDAY ..	SWANSEA DIVISION, <i>South Wales and Monmouthshire Branch</i> , 3 p.m.
13 SATURDAY ..		20 SATURDAY ..	LONDON: Science Committee, 11 a.m. LONDON: Ophthalmia Neonatorum Committee, 1.30 p.m.
		21 Sunday ..	
		22 MONDAY ..	
		23 TUESDAY ..	HAMPSHIRE DIVISION, <i>Metropolitan Counties Branch</i> . LONDON: Medico-Political Contract Practice Subcommittee, 2 p.m. LONDON: Premises Committee, 2.30 p.m.
		24 WEDNESDAY ..	LONDON: Metropolitan Counties Branch Council, 4.30 p.m.
		25 THURSDAY ..	LONDON: Central Ethical Committee, 2 p.m.
		26 FRIDAY ..	BIRMINGHAM BRANCH, Pathological and Clinical Section, Medical Institute Edmund Street, 8 p.m.

ANNUAL MEETING, BRITISH MEDICAL ASSOCIATION, BELFAST, 1909.

THE Seventy-seventh Annual Meeting of the British Medical Association will be held at Belfast from July 23rd, to July 31st, 1909, under the Presidency of Sir William Whitla.

The Annual Representative Meeting commences in Belfast on July 23rd. The Presidential Address will be delivered on July 27th. The Sections will meet on July 28th, 29th, and 30th.

A preliminary programme of arrangements was published in the SUPPLEMENT, February 27th, 1909. The Honorary Local Secretaries are: Henry Lawrence McKisack, M.D., M.R.C.P., 17, University Square, Belfast; Cecil Edward Shaw, M.A., M.D., M.Ch., 29, University Square, Belfast and Howard Stevenson, B.A., M.B., F.R.C.S.I., 2, College Square North, Belfast.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if election, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every

Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signature as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MARCH 13TH, 1909.

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British Medical Association.

GRANTS AND SCHOLARSHIPS FOR SCIENTIFIC RESEARCH.

GRANTS.

THE Council of the British Medical Association is prepared to receive applications from members of the Medical Profession for Grants in aid of Researches for the Advancement of Medicine and the Allied Sciences.

The Grants are made subject to the following conditions:

1. That the work of the Grantee shall be subject to inspection by the Science Committee of the Association.

2. That each Grantee shall furnish to the Science Committee, on or before May 15th following the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report, to be renewed not later than the same date in each subsequent year until the final report is presented) containing:

(a) A statement, in a form satisfactory to the Science Committee, of the results arrived at, or the stage which the inquiry has reached;

(b) A statement of expenditure incurred, accompanied by vouchers as far as possible;

(c) A reference to any Transactions, Journals, or other publications in which the results of the research have been announced.

SCHOLARSHIPS.

THE Council of the British Medical Association is also prepared to receive applications for Research Scholarships, as follows:

1. AN ERNEST HART MEMORIAL SCHOLARSHIP, of the value of £200 per annum, for the study of some subject in the department of State Medicine.

2. THREE RESEARCH SCHOLARSHIPS, each of the value of £150 per annum, for research in Anatomy, Physiology, Pathology, Bacteriology, State Medicine, Clinical Medicine, or Clinical Surgery.

Each Scholarship is tenable for one year, but is renewable by the Council, provided that the whole period of tenure shall not exceed three years.

The Scholarships are awarded subject to the following conditions:

1. That the work of the Scholar shall be subject to inspection by the Science Committee of the Association.

2. That he shall furnish the Science Committee, on or before May 15th following the grant of the Scholarship, with a statement of the work done by him.

3. That he sign an undertaking to abide by the above and other regulations affecting Scholarships, a copy of which will be supplied to him.

Applications.

Applications for Grants and Scholarships for the year 1909-10 must be made, not later than May 27th, 1909, in the prescribed form, a copy of which will be supplied on application to the Medical Secretary, 429, Strand, London, W.C.

Each application should be accompanied by a recommendation from the head of the laboratory in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

J. SMITH WHITAKER, *Medical Secretary.*

429, Strand, W.C.,

March, 1909.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

EDINBURGH BRANCH.

THE winter clinical meeting of the Branch was held in the Royal Infirmary, Edinburgh, on Friday, February 26th, and was attended by about 150 members.

Museum.—In the museum, which, as usual, was a centre of attraction, many excellent exhibits were on view. Special reference must be made to a beautiful series of casts representing varieties of skin diseases shown by Dr. CRANSTON LOW. An interesting microscopical demonstration was given by Dr. FORD ROBERTSON and Miss M. C. W. YOUNG of tumours produced in mice by the action of carcinomatous material taken from the human subject, and, in addition to this, they also showed sections of malignant tumours which demonstrated the supposed parasites. Dr. SHENNAN demonstrated the living *Spirochaeta pallida*. Mention must also be made of a fine exhibition of transparencies of various pathological conditions, which were hand-painted, by Mr. RICHARD MUIR. While special reference has been made to the above, there were a number of other valuable pathological specimens shown.

Clinical Meeting.—The clinical meeting in the afternoon was well attended, and cases of special interest were demonstrated by various members of the hospital staff.

Dinner.—In the evening the members dined at the Royal British Hotel, covers being laid for sixty. The President (Mr. George A. Berry, F.R.C.S.E.) occupied the chair, and a very enjoyable evening was spent. The toast of "The Imperial Forces" was replied to by Lieutenant-Colonel HEUSTON, C.M.G., R.A.M.C.; while "The British Medical Association" was proposed by Dr. C. E. DOUGLAS of Cupar, his speech being much appreciated by the audience. Dr. DE WATTEVILLE, President of the Northern Counties Branch, replied, "The Health of the President" was given by Dr. JAMES CARMICHAEL. Some excellent songs were sung by Dr. Kennedy and Dr. de Watteville.

GLASGOW AND WEST OF SCOTLAND BRANCH:

GLASGOW NORTH-WESTERN DIVISION.

A MEETING of this Division was held in the Burgh Hall, Hillhead, on Wednesday, March 3rd, at 8.30 p.m., Dr. JOHN MORTON in the chair, with a fair attendance of members.

Confirmation of Minutes.—The minutes of the last meeting were read and approved.

Draft Charter.—The SECRETARY reported on the steps taken with regard to the matter of the Charter, in accordance with the resolution passed at the last meeting. After recalling that he had requisitioned a meeting of the Branch, at which a postal vote was determined on, and that on a majority having declared in favour of petitioning in favour of certain alterations in the Charter, the Branch Council had found their hands tied by the opinion of counsel sent from the Central Office in London, it was intimated that an opportunity would be given for individual members to sign a similar petition in their private capacities.

Whole-time Medical Officers.—A communication from the Public Health Committee was read, and the Division was asked to give its opinion as to whether medical officers of health should be debarred from engaging in private practice. After a short debate the meeting decided that circumstances varied so much in different localities that no definite pronouncement could be made at present.

The Divisions and Scientific Work.—A communication from the Science Committee was read, giving information and suggestions about grants for scientific work undertaken by Divisions; about development of local medical libraries in association with the Central Library in London about co-operation with the work of the Sections

at the Annual Meeting; and about local scientific committees. After some discussion the Secretary was instructed to make inquiries as to the existence and constitution of any local medical library.

The Divisions and the General Practitioner.—Dr. Whitehouse sent notice that he would at the next meeting introduce a discussion on the subject, Do the Divisions of the British Medical Association meet the local requirements of the general practitioner?

Reports of Cases.—Dr. W. A. CASKIE read a report on 2 cases of abscess of the liver, which presented points of considerable interest. These were discussed at some length and comments were made as to their probable origin. Dr. A. MICHAN reported the case of a lady who had suffered for years from inoperable recurrent cancer, and who, in order to relieve the pain, had used increasing quantities of morphine, until at last she had injected hypodermically as much as 65 grains of acetate of morphine a day. She had always shown remarkable tolerance for the drug. Dr. EDMISTON instanced a case of his where as much as 80 grains had been given; Dr. CASKIE recalled a patient who used 8 oz. of tincture of opium in two days, and Dr. BRUCE instanced a case he had known of a child of 10 getting six pennyworth of opium a day. In all these cases the tolerance had been striking.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: SWANSEA DIVISION.

Medical Inspection of Schools.

A MEETING of this Division was held at the Swansea Hospital on February 5th, at which the "Report of the Medico-Political Committee on Medical Inspection of School Children and Treatment of those found Defective" was discussed. Eighteen members were present. The following resolutions were passed *nem. con.*:

1. That for medical inspection of school children this Division recommends the appointment of *part-time* school medical inspectors for the county.
2. That this Division recommends the appointment of *part-time* school medical inspectors for the boroughs.
3. That payment for inspection of school children according to the card be per head of children examined at the school, but that for other duties payment be based upon the time spent.
4. That the minimum rate of payment be 1s. 6d. per head of children examined.
5. That the minimum rate of payment for extra duties be 12s. 6d. per hour.
6. That in cases where whole-time medical inspectors are employed the minimum payment be £500 per annum for the school medical officer, and £250 per annum for junior or assistant school medical officer.

On the question of treatment of school children found defective the following resolutions were passed:

7. That this Division does not approve the establishment of school clinics *within the area of the Division*.
8. That the active treatment of physically defective school children should not be undertaken by medical inspectors of schools.
9. That in all diseases or defects the parents should be referred to their own medical attendant, who alone should decide *what* treatment should be given and where it is desirable that such treatment should be given.
10. That cases having no medical attendant and being too poor to pay for advice should be referred to the Poor Law Medical Officer.
11. That the Division does not approve of any payment being made to hospitals by public authorities for the treatment of school children found defective.

In reply to "Questions of Fact" appended to the letter of the Medical Secretary of December 22nd, 1908, the following information has been obtained:

Within the area of this Division there are three local education authorities—

- (i) That of the County Borough of Swansea.
- (ii) That of the Borough of Neath.
- (iii) That of the County of Glamorgan.

1 and 2. In *Swansea* the medical officer of health (Dr. D. J. Morgan) has been appointed the medical inspector of school children. His appointment as medical officer of health is a whole-time one, and he has only been appointed about a year ago at a salary of £500 per annum. The terms on which he was appointed were that his duties should include those of medical inspector of school

children. The actual work of medical inspection is performed by ten general practitioners resident in the town, to each of whom are allocated one or two schools. They are at present examining the *whole* of the children in the schools at a remuneration of 9d. per head, including all the extra duties, although they have never been called upon to do anything besides the examination by card. This arrangement is only temporary until July next. After that date it is probable that one whole-time and two part-time medical inspectors will be appointed, the medical officer of health still doing the work of supervision. This arrangement has not, however, yet been definitely decided upon.

In *Neath* the medical officer of health for the borough (Dr. J. M. Morris) has been appointed medical inspector of school children, and does all the work himself. He is paid at the rate of 1s. 6d. per head of children on the school books, but at present is only examining those entering and those leaving the school.

In the *County of Glamorgan* the medical officer of health for the county (Dr. W. Williams, of Cardiff) is the medical inspector, doing the work of supervision (remuneration not ascertained). The actual work of inspection is performed by three whole-time medical inspectors, paid at the rate of £250 per annum.

3. In *Swansea* and *Neath* the work undertaken may include all the extra duties referred to in paragraph 7 (4) of the Board of Education Circular No. 596, and no provision made for extra expenses in the remuneration of the school inspectors.


4. No assistant medical officer of health has been appointed for the inspection of school children by any of the authorities in the area of this Division.

5. At *Neath* there is a school nurse who visits the homes of the children.

In *Swansea* at present there is no school nurse appointed.

6. In *Swansea* the eye department of the General Hospital has had a large number of children to treat as the result of school inspection, but no arrangement has been made by the education authority.

As to certificates from hospitals, there is only one hospital in the area of the Division which is concerned—the *Swansea General Eye Hospital*—and the answer of the Secretary to the questions in the circular letter have been forwarded to the Medical Secretary.

 To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

NOTICE OF CHANGES OF BOUNDARIES OF DIVISIONS.

NOTICE OF THE FORMATION OF A NEW DIVISION OF THE ASSOCIATION.

BUCKINGHAMSHIRE DIVISION.

The following change has been made in accordance with the Regulations of the Association, and takes effect from the date of publication of this notice:

That the *Aylesbury Division* cease to exist, and that a *Buckinghamshire Division* be formed, composed of the Members of the Association who reside in the area bounded on the north by a line passing from east to west through *Fenny Stratford* and *Buckingham*, and including *Brackley* in *Northamptonshire*; on the south by the towns on the Great Central Railway—*Gerrard's Cross*, *Beaconsfield*, *High Wycombe*, and *Princes Risborough*; on the east by the *Buckinghamshire County boundary*, but including *Leighton Buzzard*; and on the west by the *Buckinghamshire County boundary*; the Division to form part of the *South Midland Branch*, and the boundaries of that Branch and of the *Metropolitan Counties* and *Oxford* and *Reading Branches*, and of the several Divisions affected to be altered accordingly.

BRANCH AND DIVISION MEETINGS TO BE HELD.

GLOUCESTERSHIRE BRANCH.—A general meeting of the Branch will be held at the General Hospital, Cheltenham, on Thursday, March 18th, at 7 p.m. Agenda: (1) Minutes of last meeting. (2) Dr. S. M. Hebbethwaite: A Case of Achromatopsia. (3) Dr. Arthur Cardew: Pathological specimens; Ovarian Cyst. (4) Dr. C. Braine-Hartnell: The Early Diagnosis and Treatment of Some Forms of Pelvic Obstruction. The Secretary will be pleased to hear from any member who will show cases or pathological specimens at future meetings during this session. There will be a supper afterwards at the *Cosy Corner*, Promenade (tickets 3s. 6d. each, exclusive of wine).—D. E. FINLAY, Honorary Secretary, Gloucester.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—A general meeting will be held at the Greenbank Hotel, Northwich, at 5 p.m., on Wednesday, April 21st, to receive reports from the Executive Committee, to consider matters referred to Divisions, and to transact the usual business. At 6 p.m. Dr. Manwaring White will read a paper on *Frontal Sinusitis as a Complication of Influenza*. Dinner at 7 p.m.—T. W. H. GARSTANG, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: LEIGH DIVISION.—A general meeting of this Division will be held on Thursday, March 18th, in the Co-operative Rooms, Ellesmere Street, Leigh, at 8.30 p.m. Agenda: (1) Minutes. (2) The Surgical Treatment of Goitre and Exophthalmic Goitre, with Cases. (3) Report on Contributions to Hospitals by Employers of Labour and Employees. (4) The Leigh Carters' Sick Club. (5) Any other matters.—G. H. SHAW, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: ROCHDALE DIVISION.—A joint meeting of the Bury and Rochdale Divisions will be held in the Navigation Hotel, Railway Street, Heywood, on Wednesday, March 17th, at 8.30 p.m. Business: (1) Address by Dr. Garstang, member of Central Council. (2) Grouping of Divisions. (3) Election of Representative and Deputy Representative to Representative Meeting. (4) Matters referred from Head Quarters. (5) Any other business.—JAMES MELVIN, Honorary Secretary, Rochdale.

OXFORD AND READING BRANCH: OXFORD DIVISION.—The next general meeting of this Division will be held on Friday, March 26th, at the Radcliffe Infirmary, Oxford, at 5 p.m. Agenda: (1) Dr. Collier will propose the following resolution: "That in view of the practical experience of the last thirty-seven years, during which period the Association has enjoyed great financial prosperity, it has been proved that in the best interests of the British Medical Association it is essential to have an official with the rank and status of 'General Secretary and Manager,' and that such official should possess special business training. Further, that having regard to the highly satisfactory manner in which Mr. Gray Elliston has discharged the duties since his appointment in 1902, it is in the interests of the Association that his services should be retained as General Secretary and Manager; and that the Representative of the Oxford Division to the Representative Meeting at Belfast be instructed accordingly." (2) Certain business matters referred to the Divisions will be laid before the meeting by the Secretary. (3) Specimens and cases will be shown. (4) Robert Hutcheon will open a discussion on all subject connected with dietetics.—W. DUGAN, Honorary Secretary.

Hospitals and Asylums.

ROYAL HALIFAX INFIRMARY.

THE report presented to the annual meeting of the governors of this infirmary disclosed no very new feature. The number of persons treated during the year was 16,617, compared with 9,899 in the previous year. Of these, 1,960 were in-patients, as against 1,872 in the preceding year. The average duration of treatment of in-patients had been 20.3 days, and the rate of mortality 7.2 per cent.; or, deducting 32 patients who died within twenty-four hours of admission, 5.6 per cent. The average cost of in-patients was £3 18s. 6d., as against £3 13s. 8d. in 1907, the average retention of each in-patient being two and a half days less than in that year. The average cost per occupied bed per annum was £70 17s. compared with £62 13s. 5d. in the previous year, this being due to the enhanced prices which had to be paid for practically everything used in the hospital.

AYR DISTRICT ASYLUM.

THE annual report of this institution contains the financial statistics for the year ending May 15th, 1908, and the medical and administrative statistics for the year ending December 31st, 1908. Dr. Douglas McRae, appointed last year to be Medical Superintendent in place of Dr. Easterbrook, reports that there were 499 patients on the asylum register on January 1st, 1908, and 537 on the last day of the year. The total cases under treatment during the year numbered 657, and the average number daily resident 522.73. During the year 158 were admitted, being less by 40 than the total number admitted in 1907. Among the 1907 admissions there were 30 out-county patients, which reduces

the actual decrease of admissions to 10. Of the 158 admissions 122 were first and 36 not-first admissions. In 35 the attacks were first attacks within three, and in 15 more within twelve months of admission; in 32 not-first attacks within twelve months of admission and in the remainder, whether first attacks or not, the illness was either of more than twelve months' duration (65) or of congenital origin (11) on admission. As an off-set against the smaller number of admissions in 1908, the patients were mostly in poor physical health and contained a high proportion of cases of incurable forms of insanity. Of the whole number of admissions only 8 were in average health and condition, 89 being in indifferent health and reduced condition and 61 in bad health and exhausted physically. With regard to the forms of mental disorder, the admissions were classified into: Mania of all forms, 53; melancholia of all forms, 59; secondary, senile, organic, epileptic, and alcoholic dementia, 31; general paralysis, 8; acquired epilepsy, 5; and cases of infantile or congenital defect, 11. In all, Dr. McRae says, 48 per cent. of the admissions were of a hopeless character. As to the probable etiological factors, alcoholic excess was assigned in 40, or 25.3 per cent.; syphilis in 11, critical periods in 50, previous attacks in 39, pregnancy, lactation, and the puerperium in 12, phthisis in 9, and mental stress in 3. Hereditary influences were ascertained in 64, or 40 per cent. During the year 36 were discharged as recovered, giving a recovery-rate on the admissions of 22.78 per cent., which is by far the lowest recovery-rate recorded at this asylum. There were also 12 discharged as relieved and 3 as not improved. During the year 69 died, giving a death-rate on the average numbers resident of 13.19 per cent.—a death-rate which has only been exceeded on two occasions since the asylum was opened in 1869. The deaths were due in 29 cases to nervous diseases, alone or combined with tuberculosis, including 10 cases of general paresis; in 20 to chest diseases, including 15 deaths from pulmonary consumption; in 5 to abdominal diseases; and in the remainder to general diseases, including 12 deaths from senile decay and 2 from general tuberculosis. Altogether 21, or 30.4 per cent., of the total deaths were from some form of tuberculosis. Of these tuberculous cases Dr. McRae says that 11 showed evidences of the disease on admission, but that in the 10 remaining it appeared to have developed after admission. A widespread epidemic of influenza occurred during the first quarter of the year, but otherwise the general health appears to have been good. The asylum was visited by the Commissioners in Lunacy, who reported upon the general excellence of management of the asylum and the high professional skill which characterized the medical treatment of the patients.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made in the Admiralty: Surgeon J. H. BURDETT, to the *Victoria*, additional, for Hester Hospital, March 1st; Fleet Surgeon JOHN MEXARY, M.D., to the *Fengance*, on re-commissioning, undated; Staff Surgeon J. W. V. STANTON, to the *President*, additional, for three months, to take place at the London Hospital, March 12th; Staff Surgeon R. A. ROSS, M.D., to the *Victoria*, March 12th; Staff Surgeon M. C. LANGFORD, to the *President*, additional, for survey of stores at Yarmouth Hospital from March 12th to March 31st inclusive; Staff Surgeon W. H. HASTINGS, M.B., to the *Surprise*, on re-commissioning, March 27th; Surgeon G. A. BRADSHAW, to the *Antrim*, March 27th.

ARMY MEDICAL SERVICE.

SURGEON-GENERAL G. D. BOURKE, C.B., is appointed an Honorary Physician to the King, vice Surgeon-General T. Tarrant, C.B., deceased, February 3rd. Surgeon-General Bourke was appointed Surgeon, September 30th, 1874; Surgeon-Major, September 30th, 1882; and the rank of Lieutenant-Colonel, September 30th, 1894: made Brigade Surgeon-Lieutenant-Colonel, April 15th, 1898; and promoted to be Surgeon-General, September 19th, 1907. His war record is as follows: Nile expedition, 1884-5 (medal with clasp), and Kitchener's bronze star; the Sudan Frontier Field Force, 1885-6, including the action of Ginnis; the Burmese campaign in 1887-9 (medal with clasp); the Chin-Lushai expedition, 1889-90 (mentioned in despatches, clasp); the Tirah Expeditionary Force, North-West Frontier of India, 1897-8 (mentioned in despatches, medal with two clasps). He was nominated C.B., June 28th, 1907.

INDIAN MEDICAL SERVICE.

SURGEON-GENERAL P. H. HENSON, M.B., Madras, is granted combined privilege leave and leave on private affairs to Europe for six months, from March 1st.

Lieutenant-Colonel P. J. LUDSEN, M.B., Benhal, is posted as Residency Surgeon, Hyderabad, from January 5th.

The undermentioned Captains are promoted to be Majors, from January 28th: J. M. WOOLLEY, M.B.; C. A. LANE, M.D.; T. B. KELLY, W. H. KERRICK, C. H. WATSON, E. F. E. BAINES, G. O. P. SEALY, S. ANDERSON, M.B.; F. H. G. HUTCHINSON, M.B.; J. L. MARJORIBANKS, M.B.; A. FENTON, M.B.; R. W. KIRK, M.B. The first appointment is Majors Woolley, Lane, Kelly, Kerrick, Watson, Baines, and Sealy is dated January 28th, 1897; that of Majors Anderson, Hutchinson, Marjoribanks, Fenton, and Knox, July 28th, 1897. Such as have war records are as follows: Major Woolley, Hutchinson and Fenton—China war, 1900 (medal). Major Lane—Burmese expedition, 1887-9 (medal with clasp). Major Kelly—Tibet, 1903-4, including the operations at and around Gyantse (slightly wounded, mentioned in despatches, medal with clasp). Major Watson—North-West Frontier of India campaign, 1897-8, including the operations on the Kurram Valley (medal with two clasps). Tirah expedition, 1897-8, present in the action of Dargai and at the capture of the Samagha and Abangha Passes (clasp); China war, 1900, including the relief of Peking

and the actions of Peitsang and Yangtun (mentioned in despatches, medal with clasp). Major Anderson—China war, 1900 (medal); Waziristan expedition, North-West Frontier of India, 1901-2 (medal with clasp).

Lieutenants E. J. C. McDONALD and W. D. WRIGHT, M.B., are promoted to be Captains, from September 1st, 1908, their first commissions being dated September 1st, 1905.

The following Lieutenants are promoted to be Captains, from February 1st: H. W. PREPONT, V. D. H. STUTTEMAN, M.B., H. P. COOR, M.B., W. J. FRASER, M.B., C. C. V. FITZGERALD, R. S. KENNEDY, M.B., B. HIGHAM, M.B., D. A. GOSNOL, R. H. LEE, M.B., T. HEFFERNAN, M.B., H. S. HUTCHINSON, M.B., R. G. G. CROLY, M.B., S. C. CROFT, W. B. K. C. CROFT, M.B., J. MACG. SKINNER, M.B. They were appointed Lieutenants February 1st, 1905.

The promotion of Lieutenant-Colonel A. M. CROFTS, C.I.E., Bengal, to be Colonel, which has been already announced in the *BRITISH MEDICAL JOURNAL*, has received the approval of the King.

His Majesty has likewise sanctioned the provisional promotion to be Captain of Lieutenant J. F. BOYD, also previously announced in the *BRITISH MEDICAL JOURNAL*.

Lieutenant V. J. WIDEMORE is promoted to be Captain, from September 1st, 1908. He was appointed Lieutenant September 1st, 1905.

The undermentioned gentlemen are appointed Lieutenants, dated August 1st, 1908: RICHARD B. LLOYD, M.P., ARCHIBALD C. MORRO, M.B., H. M. CHOPRA, M.B., ALISTAIR A. M. GIBSON, M.B., G. JOLLY, M.B., HUGH STOTT, M.B., ALISTAIR A. C. MCNEILL, M.B., ROBERT L. GAMLEN, ARDES S. KILAN, GEORGE F. GRAHAM, M.B., MANICK D. WADIA, TAYLOR D. MURISON, SOHRAB S. VAZIFAR, JOHN H. NICHOLSON, M.B., EDWARD S. PRITTON, M.B., CLARE F. S. SMITH, M.B., STRENSAR SARKAR, ARTHUR J. SYMES, M.B., GERALD L. C. LITTLE, M.B., and THOMAS C. ROYD.

TERRITORIAL FORCE.

YEOMANRY.

SURGEON-LIEUTENANT R. M. MCQUEEN, from the City of London (Roughriders) Imperial Yeomanry, to be Surgeon-Lieutenant, City of London (Roughriders), with precedence as in the Imperial Yeomanry, April 1st, 1908. Surgeon-Lieutenant McQueen is promoted to be Surgeon-Captain, January 1st, 1909. The announcement of the appointment of Surgeon-Lieutenant McQueen, which appeared in the *London Gazette* of October 20th, 1908, is cancelled.

ROYAL FIELD ARTILLERY.

SURGEON-LIEUTENANT G. SEARLE, 4th Wessex Brigade, resigns his commission, retaining his rank and uniform, January 27th.

ROYAL ARMY MEDICAL CORPS.

First Scottish General Hospital—Lieutenant-Colonel J. M. BOOTH, M.B., from the list of officers whose services will be available on mobilization, to be Lieutenant-Colonel, March 5th. Lieutenant-Colonel G. E. SPENCER, an officer whose services will be available on mobilization, March 6th.

Vital Statistics.

ENGLISH URBAN MORTALITY DURING 1908.

“SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.”

IN the accompanying table will be found summarized the vital statistics of the seventy-six large towns dealt with in the Registrar-General's weekly returns. During the fifty-three weeks ending January 2nd 445,503 births were registered in these towns, equal to an annual rate of 26 per 1,000 of the population, compared with 26.2 persons in the middle of last year; in the three preceding years the rates were 28.2, 27.9, and 27.0 per 1,000 respectively. In London the rate was 25.4 per 1,000, while it averaged 27.6 in the seventy-five other large towns, and 26.5 in the 155 in the remainder of the country. In Birmingham, 29.0 in Halifax, 20.2 in Bradford, 20.9 in Northampton, 21.3 in Brighton, to 33.0 in Hanley and in Sunderland, 33.1 in Swansea, 34.3 in Tynemouth, 37 in St. Helens, 35.6 in Merthyr Tydfil, 35.9 in Middlesbrough, and 40.3 in Rhondda.

During the period under notice 246,019 deaths were registered in these seventy-six towns, corresponding to a rate of 14.9 per 1,000 living, against 15.7, 15.9, and 15.4 per 1,000 in the three preceding years. In London the rate of mortality was 13.8 per 1,000, while it averaged 15.4 in the seventy-five other large towns, and ranged from 8.3 in Horsey, 10.3 in East Ham, 10.4 in Leyton and in King's Norton, 10.5 in Willesden and in Walworth, and 10.7 in Handsworth (Staffs), to 18.4 in Hanley, in Rochdale, and in Rhondda, 18.5 in Swansea, 19.1 in Merthyr Tydfil, 19.2 in Laverpool, and 18.8 in Oldham and in Middlesbrough.

The 246,019 deaths from all causes in these towns last year included 26,116 which were referred to the principal infectious diseases; of these one-ninth, or 2,878 from small-pox, 5,069 from measles, 1,718 from scarlet fever, 2,578 from diphtheria, 751 from whooping-cough, 1,251 from typhoid (principally enteric), and 10,748 from diarrhoea. The death-rate from these diseases in the aggregate was 1.59 per 1,000 last year, against 1.88, 2.24, and 1.54 in the three preceding years. Compared with the average rates for the five years 1903-7 the mortality from each of these infectious diseases was below the average. In London these diseases caused a death-rate last year of 1.35 per 1,000; in the seventy-five other large towns the rate averaged 1.67 per 1,000, and ranged from 0.40 in Hastings, 0.57 in Horsey, 0.64 in Brighton, 0.71 in Northampton, 0.75 in Northampton, 0.72 in West Hartlepool, and 0.82 in Leyton, to 2.49 in Merthyr Tydfil, 2.50 in Bootle and in Oldham, 2.70 in Stockton-on-Tees, 2.80 in Burnley, 2.98 in Rotherham, 3.04 in Salford, 3.47 in Middlesbrough, and 3.49 in Rhondda. The 5,069 fatal cases of measles were at a rate of 0.31 per 1,000; in London also the death-rate from this disease was 0.31 per 1,000, while in the seventy-five other large towns it was highest in West Ham, Leicester, Rochdale, Preston, Rotherham, Middlesbrough, Stockton-on-Tees, and Rhondda. The four deaths from scarlet fever corresponded to a rate of 0.10 per 1,000; in London the mortality from this cause was at the rate of 0.11 per 1,000, while it averaged 0.10 in the seventy-five other large towns, among which this disease was proportionally most fatal in West Bromwich, Stockport, Wolverhampton, St. Helens, Warrington, and Salford. The 2,578 fatal cases of diphtheria were equal to a rate of 0.16 per 1,000; in London the rate was 0.15 per 1,000, while it averaged 0.16 in the seventy-five other large towns, and was highest in Stockport, East Ham, Leeds, Wolverhampton, West Bromwich, King's Norton, Derby, Salford, and Middlesbrough. The 4,751 deaths from whooping-cough corresponded to a rate of 0.29 per 1,000; in London this disease caused a death-rate of 0.20 per 1,000.

Analysis of the Vital Statistics of Seventy-six of the Largest English Towns during 1908.

Towns.	Estimated Population middle of 1908.	Births.	Deaths.	Annual Rate per 1,000 Living.		Deaths from Principal Infectious Diseases.	Deaths from Principal Non-infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Pneumonia.	Diarrhoea.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
				Births.	Deaths.											
76 Towns -	16,234,952	445,303	246,019	26.9	15.4	1.59	26,116	1	5,069	1,718	2,578	4,751	1,251	10,748	178	0.1
75 Provincial Towns -	11,439,195	321,459	178,656	27.6	15.4	1.67	19,517	1	3,545	1,170	1,854	3,767	1,024	8,156	134	1.3
London -	4,795,757	123,844	67,353	25.4	13.8	1.35	6,599	—	1,524	548	724	984	227	2,592	113	0.1
Croydon -	157,698	4,070	2,097	25.4	13.8	0.97	220	—	93	6	39	28	5	49	99	—
Willesden -	154,792	4,099	1,653	26.1	10.5	1.00	159	—	57	14	13	13	7	55	99	0.4
Hornsey -	92,713	1,514	783	16.1	8.3	0.57	54	—	14	3	7	12	2	16	62	0.3
Tottenham -	126,146	3,871	1,608	30.2	12.5	1.23	127	—	52	15	21	10	7	52	36	0.1
West Ham -	150,000	9,229	4,439	28.8	13.3	0.98	763	—	226	51	54	84	28	320	178	0.0
East Ham -	142,976	3,609	1,503	24.8	10.3	1.27	185	—	32	25	66	9	4	49	110	—
Leyton -	125,815	3,300	1,333	25.8	10.4	0.82	105	—	25	18	18	12	4	28	77	0.3
Walthamstow -	131,486	3,508	1,407	26.2	10.5	0.98	132	—	37	11	21	4	14	46	107	—
Hastings -	67,817	1,359	805	19.5	11.7	0.40	28	—	7	3	2	11	2	3	81	0.7
Brighton -	123,967	2,808	1,945	21.3	14.7	0.64	83	—	22	1	9	18	4	29	104	0.1
Portsmouth -	211,493	6,110	2,957	28.4	13.8	0.97	207	—	13	8	49	55	26	56	99	0.5
Bournemouth -	70,801	1,234	925	17.1	12.9	0.71	51	—	11	2	1	3	2	6	83	0.8
Southampton -	122,196	2,971	1,600	23.9	12.9	1.17	145	—	20	5	16	35	5	64	113	—
Reading -	81,647	1,879	978	22.6	11.8	1.34	112	—	15	9	20	35	7	26	99	1.8
Northampton -	96,405	2,045	1,132	20.9	11.6	0.71	70	—	3	5	4	29	5	24	86	1.9
Ipswich -	73,852	1,839	1,073	24.5	14.3	0.89	67	—	16	2	10	11	5	28	107	—
Great Yarmouth -	53,152	1,440	812	26.7	15.0	0.94	51	—	6	1	5	6	5	28	126	—
Norwich -	122,841	3,152	1,759	25.2	14.1	1.12	140	—	1	3	26	25	36	49	116	0.7
Plymouth -	122,113	2,750	1,851	22.2	15.0	0.91	113	—	1	—	15	27	10	60	129	—
Devonport -	81,525	2,104	1,102	25.4	13.3	1.21	101	—	—	1	16	28	15	41	125	—
Swansea -	372,785	8,739	5,097	23.1	13.6	1.16	435	—	97	10	63	128	9	128	126	0.2
Hanley -	67,998	2,283	1,274	33.0	18.4	1.97	137	—	23	1	15	23	16	59	166	0.9
Burton-on-Trent -	53,956	1,211	697	22.1	12.7	1.06	58	—	3	8	7	18	5	17	111	2.0
Wolverhampton -	103,318	2,712	1,501	25.8	14.3	1.22	127	—	6	9	32	24	10	46	132	0.3
Sheffield -	97,704	2,744	1,484	28.6	14.9	0.77	205	—	17	11	53	8	117	148	0.6	
Handsworth -	68,051	1,590	742	23.0	10.7	0.84	59	—	1	10	11	19	1	17	87	1.5
West Bromwich -	69,786	2,297	1,146	32.4	16.2	1.82	129	—	1	26	20	26	3	53	139	1.7
Birmingham -	558,357	16,143	9,028	28.4	15.9	1.86	1,053	—	60	75	106	308	49	124	348	—
King's Norton -	73,602	1,477	832	27.0	11.4	1.88	70	—	4	12	23	8	6	17	85	3.6
Smethwick -	68,416	2,155	930	31.0	13.4	1.53	106	—	3	21	8	30	4	43	134	1.1
Aston Manor -	84,256	2,234	1,071	26.1	12.5	1.90	161	—	3	15	9	51	2	81	127	0.7
Coventry -	78,889	2,049	1,234	32.8	15.4	1.10	188	—	3	7	7	15	2	17	109	0.9
Leicester -	240,172	5,704	3,165	23.4	13.0	1.53	375	—	179	26	8	31	8	123	131	1.1
Grimsby -	71,800	2,315	1,053	31.7	14.4	1.46	107	—	10	6	12	6	14	59	139	1.3
Nottingham -	260,449	7,037	4,030	26.6	15.2	1.25	332	—	31	11	30	62	29	169	145	0.7
Derby -	127,583	3,556	1,693	25.9	13.1	0.95	122	—	20	2	36	15	5	44	112	—
Stockport -	102,339	2,885	1,895	27.7	18.2	2.45	254	—	63	10	13	32	7	129	168	0.2
Birkenhead -	119,830	3,824	1,919	31.4	15.8	1.88	229	—	43	7	13	61	11	95	136	0.8
Wallasey -	68,849	1,763	949	25.2	13.6	1.51	105	—	28	12	8	25	5	28	102	1.2
Liverpool -	753,203	24,289	14,686	31.7	19.2	2.19	1,676	—	257	215	133	377	81	643	141	2.7
Biodle -	68,248	2,169	1,265	31.3	18.2	2.50	173	—	31	20	15	40	5	62	147	3.5
St. Helens -	93,812	3,311	1,498	34.7	15.7	1.52	145	—	30	17	7	13	78	122	3.5	
Wigan -	69,636	2,987	1,639	32.8	18.0	1.88	170	—	6	9	10	28	27	90	155	0.1
Warrington -	71,263	2,359	1,235	32.7	17.0	2.41	175	—	27	16	15	61	11	45	134	4.4
Nelson -	185,538	4,608	2,910	25.4	15.4	1.70	319	—	4	21	18	79	37	160	148	0.4
Bury -	59,064	1,379	949	23.0	15.8	1.22	73	—	19	2	9	7	4	33	129	1.5
Manchester -	649,251	19,217	12,029	29.1	18.2	2.25	1,488	—	367	96	122	220	74	693	151	0.7
Salford -	239,284	7,301	4,354	30.6	18.4	2.04	738	—	167	65	123	103	41	239	180	0.5
Oldham -	142,507	4,058	2,873	28.0	18.3	2.50	363	—	82	28	22	54	12	165	159	0.1
Rochdale -	88,821	2,219	1,650	24.6	18.4	2.13	196	—	54	8	17	25	9	73	168	2.3
Bury -	105,100	3,015	1,911	28.2	17.9	2.80	300	—	51	13	13	41	12	170	200	1.7
Blackburn -	135,961	3,459	2,170	25.0	15.7	1.55	215	—	18	23	15	29	15	117	149	1.8
Preston -	117,739	3,311	2,152	27.7	18.0	2.24	264	—	95	1	11	19	26	115	153	3.3
Barrow-in-Furness -	62,512	1,897	828	30.0	13.1	1.09	68	—	8	1	5	22	5	27	111	3.3
Huddersfield -	94,776	2,348	1,646	24.4	17.1	1.61	155	—	67	3	9	14	10	52	111	1.0
Halifax -	111,018	2,441	1,592	21.0	14.1	1.01	113	—	37	3	12	31	12	18	101	1.4
Bradford -	292,155	5,995	4,615	20.2	15.5	1.36	404	—	72	13	41	56	30	192	143	0.2
Leeds -	477,107	12,103	7,412	24.8	15.3	1.49	728	—	179	14	46	138	25	326	137	0.1
Sheffield -	463,292	14,467	7,457	30.7	15.8	1.85	857	—	109	37	37	243	26	410	140	2.5
Rotherham -	128,735	2,123	1,038	32.8	16.0	1.88	186	—	52	3	7	38	17	68	148	1.6
York -	85,861	2,192	1,102	25.1	12.6	1.14	100	—	27	4	7	10	8	44	104	0.1
Hull -	271,137	8,327	4,456	30.2	16.2	2.19	605	—	96	3	50	57	23	376	145	0.8
Middlesbrough -	103,511	3,776	2,080	35.9	19.8	3.47	195	—	103	5	33	9	17	158	158	1.0
Stockton-on-Tees -	103,160	1,705	970	31.6	18.0	2.70	145	—	71	7	8	3	6	38	142	1.4
West Hartlepool -	77,573	2,083	1,244	26.4	12.0	0.72	57	—	7	—	11	19	5	15	113	0.5
Sunderland -	157,693	5,286	2,840	33.0	17.7	1.86	296	—	25	6	27	118	15	165	146	2.3
South Shields -	115,535	3,531	1,817	30.1	15.5	1.69	197	—	32	9	23	50	7	76	134	4.6
Gateshead -	128,398	4,027	1,948	30.9	14.9	1.90	185	—	17	6	26	68	4	129	148	5.4
Newcastle-on-Tyne -	277,257	8,379	4,505	29.7	16.0	1.26	354	—	31	10	35	136	14	130	136	0.3
Tynemouth -	55,244	1,925	983	34.3	17.5	1.61	90	—	17	2	6	20	4	41	137	2.5
Newport (Mon.) -	76,955	2,552	1,263	32.6	16.1	1.28	100	—	4	7	15	42	7	123	157	0.6
Cardiff -	191,446	5,172	2,521	26.6	13.0	1.01	214	—	5	10	22	47	7	123	157	0.7
Rhonda -	133,137	5,454	2,847	40.3	18.4	3.49	474	—	103	7	29	53	22	260	184	0.7
Merthyr Tydfil -	77,219	2,791	1,502	35.6	19.1	2.49	196	—	26	6	9	65	11	78	178	1.1
Swansea -	97,810	3,289	1,844	33.1	18.5	1.58	158	—	44	7	4	24	1	78	151	0.2

while in the seventy-five other large towns the rate averaged 0.32 per 1,000, the greatest proportional mortality being recorded in Birmingham, Aston, Manor, Bockley, Warrington, Roddham, Stockton-on-Tees, Sunderland, Newport (Mon.), and Merthyr Tydfil. The 1,251 deaths referred to different forms of "fever" were equal to a rate of 0.08 per 1,000; in London the rate was only 0.05 per 1,000, while it averaged 0.09 in the seventy-five other large towns, and was highest in Norwich, Devonport, Hanley, Grimsby, Wigan, Bolton, Salford, Preston, and Rotherham. The 10,748 fatal cases of diarrhoea corresponded to a rate of 0.65 per 1,000; in London the diarrhoea death-rate was 0.53 per 1,000, while it averaged 0.70 in the seventy-five other large towns, among which diarrhoea was proportionally most fatal in West Ham, Walsall, Stockport, Oldham, Burnley, Rotherham, Hull, Middlesbrough, and Rhondda. The fatal case of small-pox belonged to Birmingham.

Infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births, was equal to 128 per 1,000 last year, against 140, 145, and 127 in the three preceding years. In London the rate was 113 per 1,000, while in the seventy-five other large towns, and ranged from 62 in Hornsey, 77 in Leyton, 81 in Hastings, 83 in Bournemouth, 85 in King's Norton, and 87 in Handsworth (Staffs) to 156 in Wigan, 158 in Middlesbrough, 159 in Oldham, 163 in Salford, and 167 in Warrington and in Rochdale, 178 in Merthyr Tydfil, 184 in Rhondda, and 200 in Burnley.

The causes of 2,324, or 0.9 per cent., of the deaths in the seventy-six towns last year were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Croydon, East Ham, Walthamstow, Southampton, Ipswich, Great Yarmouth, Plymouth, Devonport, and Derby; the highest proportions of uncertified deaths were 3.3 in St. Helens, in Preston, and in Barrow-in-Furness, 3.5 in Bootle, 3.6 in King's Norton, 3.8 in Birmingham, 4.3 in Warrington, 4.6 in South Shields, and 5.4 in Gateshead.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 7,507 births and 6,705 deaths were registered during the week ending Saturday last, March 6th. The annual rate of mortality in these towns, which had been 17.5, 18.1, and 19.1 per 1,000 in the three preceding weeks, further rose last week to 21.3 per 1,000. The rate of mortality ranged from 8.7 in Hornsey, 10.1 in Reading, 10.4 in Handsworth (Staffs), 10.5 in Walsall, 11.5 in Walthamstow, and 12.1 in Tottenham, and in Leyton, to 27.5 in Frinton, 28.0 in Rhondda, 28.7 in Stockport, 29.1 in Rochdale, 29.5 in Hanley, 29.9 in Wigan, and in Bury, and 35.6 in St. Helens. In London the rate of mortality was 22.8 per 1,000, while it averaged 20.8 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 2.0 per 1,000 in the seventy-six towns: in London this death-rate was equal to 2.0 per 1,000, while among the seventy-five other large towns these diseases caused deaths ranging upwards to 5.1 in Birmingham, 5.3 in Bury, 7.2 in West Hartlepool, 8.6 in Aston Manor, 8.7 in Warrington, and 13.2 in St. Helens. Measles caused a death-rate of 2.5 in Sheffield, 3.9 in Birmingham, 4.4 in Sunderland, 5.3 in West Hartlepool, 7.2 in Warrington, 7.3 in Aston Manor, and 8.8 in St. Helens; scarlet fever of 1.6 in St. Helens; diphtheria of 1.0 in Stockport and 1.3 in King's Norton; whooping-cough of 1.1 in Swansea, 1.2 in Aston Manor, 1.3 in South Shields, 1.7 in Wigan, and 2.7 in St. Helens; and diarrhoea of 2.0 in Great Yarmouth. The mortality from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever patients remaining under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital at the end of the week was 2,875, against 3,002, 2,910, and 2,825 at the end of the three preceding weeks; 285 new cases were admitted during the week against 289, 273, and 292 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday last, March 6th, 935 births and 738 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 18.2, 19.8, and 22.0 per 1,000 in the three preceding weeks, rose to 23.0 per 1,000 in the 1,000 last week, but was 0.6 per 1,000 below the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 8.8 in Perth and 15.0 in Greenock to 25.0 in Paisley and 27.4 in Dundee. The death-rate from the principal infectious diseases averaged 2.5 per 1,000 in these towns; the highest rates being recorded in Glasgow and Aberdeen. The 357 deaths registered in Glasgow included 3 from scarlet fever, 4 from diphtheria, 40 from whooping-cough, and 3 from enteric fever, and 25.7 per 1,000 from cerebro-spinal meningitis. Six fatal cases of whooping-cough were recorded in Edinburgh; 10 of whooping-cough and 2 of enteric fever in Aberdeen; and 3 of whooping-cough in Paisley, and 2 in Leith.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, February 27th, 631 births and 503 deaths were registered in the twenty-two principal urban districts of Ireland, as against 562 births and 470 deaths in the preceding period. The annual death-rate in these districts, which had been 20.7, 20.4, and 21.5 per 1,000 in the three preceding weeks, rose to 23.0 per 1,000 in the week under notice, this figure being 3.9 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 24.3 and 21.0 respectively, those in other districts ranging from 10.3 in Portlarn and 11.4 in Newtownards, to 30.8 in Clonmel and 31.0 in Lurgan, while Cork stood at 23.3, Londonderry at 23.0, Limerick at 24.6, and Waterford at 25.5. The zymotic death-rates in the twenty-two districts averaged 1.0 per 1,000, as against 1.1 per 1,000 in the preceding week.

During the week ending March 6th, 594 births and 492 deaths were registered in the twenty-two principal urban districts of Ireland, as against 631 births and 503 deaths in the preceding period. The annual death-rate in these districts, which had been 20.4, 21.5, and 23.0 per 1,000 in the three preceding weeks, fell to 22.5 per 1,000 in the week under notice, this figure being 1.2 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 25.6 and 21.6 respectively, those in other districts ranging from 4.2 in Newry and 4.8 in Ballymena to 37.4 in Wexford and 41.2 in Armagh, while Cork stood at 24.0, Londonderry at 20.5, Limerick at 22.5, and Waterford at 23.4. The zymotic death-rate in the twenty-two districts averaged 1.3 per 1,000, as against 1.0 per 1,000 in the preceding period.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BIRMINGHAM CITY ASYLUM.—Clinical Assistant (lady). Honorarium at the rate of £50 per annum.

BIRMINGHAM EAR AND THROAT HOSPITAL.—House-Surgeon. Salary at the rate of £70 per annum.

BIRMINGHAM GENERAL HOSPITAL.—House-Physician. Salary, £50 per annum. House-Surgeon and House-Surgeon to Special Departments. Salary, £50.

BIRMINGHAM QUEEN'S HOSPITAL.—House-Surgeon. Salary at the rate of £50 per annum.

BURY ST. EDMUNDS.—WEST SUFFOLK GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum.

CAMBRIDGE ADMINISTRATIVE COUNTY.—Assistant School Medical Officer (female). Salary, £250 per annum, rising to £300.

CANCER HOSPITAL, Fulham Road, S.W.—House-Surgeon. Salary at the rate of £70 per annum.

CARLISLE.—CUMBERLAND INFIRMARY.—Resident Medical Officer (male), to act as House-Physician and House-Surgeon for six months each respectively. Salary at the rate of £80 and £100 per annum.

CARSHALTON.—CHILDREN'S INFIRMARY.—Assistant Medical Officer. Salary, £150 per annum, rising to £180.

CEVVALE HOSPITAL OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Salary at the rate of £50 per annum.

CHORLTON UNION.—Third Assistant Resident Medical Officer for the Workhouse Hospitals. Salary, £100 per annum.

COLCHESTER.—ESSEX COUNTY HOSPITAL.—House-Surgeon. Salary, £80 per annum.

DUBLIN.—ROYAL VICTORIA EYE AND EAR HOSPITAL.—House-Surgeon. Salary, £80 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road.—(1) Physician to Out-patients; (2) Ten Clinical Assistants.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway, N.—(1) Senior House-Surgeon; (2) Senior House-Physician; (3) Junior House-Physician; (4) Two Junior House-Surgeons. Salary at the rate of £45 per annum for (1) and (2) and £35 per annum for (3) and (4).

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Salary, £100 per annum.

HERTFORD COUNTY HOSPITAL.—Resident House-Surgeon and Secretary. Salary at the rate of £100 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) Two House-Surgeons; (2) Assistant Casualty Medical Officer (and House-Physician); (3) House-Physician.

HULL.—ROYAL INFIRMARY.—House-Physician. Salary, £100 per annum.

KETERING AND DISTRICT GENERAL HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

LEAMINGTON WARNEFORD, LEAMINGTON AND SOUTH WARWICKSHIRE GENERAL HOSPITAL.—Senior and Junior Resident Medical Officers. Salary, £100 and £65 per annum respectively.

LEIPSIC GENERAL INFIRMARY.—Ophthalmic House-Surgeon. Salary at the rate of £50 per annum.

LEICESTER INFIRMARY.—(1) Assistant House-Surgeon; (2) Assistant House-Physician. Salary at the rate of £60 per annum each.

LIVERPOOL EYE AND EAR INFIRMARY.—Honorary Assistant Surgeon.

LONDON THROAT HOSPITAL, Great Portland Street, W.—(1) Assistant Surgeon; (2) House-Surgeon (non-resident); (3) Anaesthetist.

LONDON UNIVERSITY.—Scientific Assistant in Biological Subjects. Salary, £75 per annum.

MACCLESFIELD GENERAL INFIRMARY.—Senior House-Surgeon. Salary, £100 per annum.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House-Surgeon. Salary, £80 per annum.

MANCHESTER TOWNSHIP.—Resident Assistant Medical Officer at the Workhouse at Crumpsall. Salary, £130 per annum.

MIDDLESEX COUNTY ASYLUM, Napsbury.—Fourth Assistant Medical Officer. Salary, £150 per annum.

NORTHAMPTON GENERAL HOSPITAL.—House-Surgeon (male). Salary, £30 per annum, increasing to £100 yearly.

NORTHAMPTONSHIRE COUNTY COUNCIL EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £250 per annum, rising to £300.

NORTH RIDING ASYLUM, Clifton, York.—Junior Assistant Medical Officer (male). Salary, £150 per annum, increasing to £200.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill, Stoke-on-Trent.—(1) Senior House-Surgeon; (2) Junior House-Surgeon. Salary, £100 and £50 per annum respectively.

PETERBOROUGH INFIRMARY.—House-Surgeon. Salary, £100 per annum.

PRINCE OF WALES'S HOSPITAL, Tottenham.—Honorary Anaesthetist.

SALFORD ROYAL HOSPITAL.—(1) House-Surgeon; (2) Junior House-Surgeon. Salary at the rate of £60 and £50 per annum respectively.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary at the rate of £50 per annum.

SEAMEN'S HOSPITAL, Greenwich.—(1) Two House-Physicians; (2) Two House-Surgeons. Salary at the rate of £50 per annum each.

SOUTHAMPTON FREE EYE HOSPITAL.—House-Surgeon. Salary, £100 per annum.

SOUTHAMPTON.—ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House-Surgeon. Salary at the rate of £60 per annum.

SOUTHWARK UNION—Assistant (male) Medical Officer to the Infirmary. Salary, £100 per annum.
STOCKPORT COUNTY BOROUGH—School Medical Officer. Salary, £250 per annum, increasing to £300.
SURREY LUNATIC ASYLUM, Brookwood.—Third Assistant Medical Officer (male). Salary, £150 per annum, increasing to £200.
TUNBRIDGE WELLS: GENERAL HOSPITAL—Senior Resident Medical Officer. Salary, £100 per annum.
VENTNOR: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION.—Male Assistant Resident Medical Officer. Salary, £100 per annum.
WARRINGTON INFIRMARY AND DISPENSARY—Senior House-Surgeon. Salary, £125 per annum.
WEST HERTS HOSPITAL, Hemel Hempstead.—House-Surgeon. Salary, £100 per annum.
CERTIFYING FACTORY SURGEON—The Chief Inspector of Factories announces a vacancy at Bristol, Co. Gloucester.

APPOINTMENTS.

BUCHANAN, R. J. M., M.D. Vict., F.R.C.P. Lond., Professor of Forensic Medicine in the University of Liverpool.
GOULDEN, Charles, F.R.C.S., Ophthalmic Surgeon, Oldham Infirmary.
HARRIS, T. A. B., L.R.C.P. and S. Edin., L.F.P.S. Glasg., District Medical Officer of the Kettering Union.
PHILLIPS, H. W., L.M.S.S.A. Lond., Resident Medical Officer to the Manchester Hospital for Consumption and Diseases of the Throat and Chest.
POIGNAND, M. M.D. Aberd., District Medical Officer of the Downham Union.
PRYCE, A. M., M.B., Resident Medical Officer at the Sanatorium of the Leeds Association for the Prevention and Cure of Tuberculosis at Galesford, near Selby.
ROSSITER, Harold T., M.R.C.S., L.R.C.P. Lond., House-Physician to Addenbrooke's Hospital, Cambridge.
SMITH, Guy Bellingham, M.B., F.R.C.S., Obstetric Physician to Guy's Hospital, vice Dr. Peter Horrocks.
WALKER, H. M., L.R.C.P. and S. Edin., L.F.P.S.G., L.M., Medical Officer, Minderheim Artillery Railway Association.
WALLIS, C. Edward, M.R.C.S., L.R.C.P., Assistant Medical Officer (Education) to the London County Council.
WELLS, J. E. B., M.R.C.S., L.R.C.P. Lond., District Medical Officer of the Ware Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

ALCOCK—On March 7th, at 22, Downshire Hill, Hampstead, the wife of N. H. Alcock, M.D., of a son.

DEATHS.

BISHOPPE—On March 3rd, at Parham House, Church Road, Tunbridge Wells, James Bishoppe, M.R.C.S. Eng., L.R.C.P. Lond., in his 87th year.

EASTON—At Ventnor, on March 4th, Thomas Easton, M.A., M.D., aged 49, late of Stranraer and Southampton, youngest son of the late Matthew George Easton, D.D., of Darvel. Funeral at Edinburgh.

BOOKS, ETC., RECEIVED.

Retinitis Pigmentosa, with an analysis of seventeen cases occurring in deaf-mutes. Alvarenga Prize Essay of College of Physicians, Philadelphia, July, 1908. By W. T. Shoemaker, M.D., Philadelphia: J. B. Lippincott Co. 8s. 6d.

Dent's Scientific Primers. Edited by J. R. Green, Sc.D., F.R.S. Bokany, B.V.J. R. Green, Sc.D., F.R.S. London: J. M. Dent and Co. 1s.

Die rationelle Behandlung der Zuckerkrankheit. Von Dr. A. Lorand. Zweite Auflage. Berlin: A. Hirschwald. 1909. M. 1.60.

Die wichtigsten Bakterientypen der Darmflora beim Säugling, ihre Geseinschaften bezugnehmend und ihre Abhängigkeit von äusseren Einflüssen. Von Dr. P. Sittler. Würzburg: C. Kabitzsch. 1909. M. 2.50.

The Frontiersman's Pocket Book. Edited and compiled on behalf of the Council of the Legion of Frontiersmen by R. Pocock. London: J. Murray. 1909. 5s.

University of London: Galton Laboratory for National Eugenics. Eugenics Laboratory Lecture Series I, The Scope and Importance to the State of the Science of National Eugenics. London: Dulau and Co. 1909. 1s.

A Textbook of Experimental Psychology. By C. S. Myers. London: E. Arnold. 1909. 3s. 6d.

London: H. K. Lewis. 1909:

The Operations of Aural Surgery. By C. E. West, F.R.C.S., and S. R. Scott, M.S., F.R.C.S. 7s. 6d.

The Causation of Sex. By E. B. Dawson, L.R.C.P., M.R.C.S. 6s.

Publications of the University of Manchester, No. XIII, Historical Series, No. VIII, Malaria and Greek History. By V. H. S. Jones, M.A. Including the History of Greek Therapeutics and the Malaria Theory. By E. T. Withington, M.A., M.B. Manchester: University Press. 1909. 5s.

Manual of Diseases of the Ear, including those of the Nose and Throat in relation to the Ear. By T. Barr, M.D., and J. S. Barr, M.B., Ch.B. Fourth edition. Glasgow: J. Maclehose and Sons. 1909. 14s.

Special Hospitals. By R. Kershaw. London: G. Pulman and Sons, Ltd. 1909.

*. In forwarding books the publishers are requested to state the selling price.

DIARY FOR THE WEEK.

TUESDAY.

CHELSEA CLINICAL SOCIETY, Chelsea Dispensary, Manor Street, S.W.—8.30 p.m.: Debate—The Diagnosis and Treatment of Tuberculous Glands of the Neck.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W.—5 p.m.: Second Goulstonian Lecture, by Dr. E. Russell, On Some Disorders of the Cerebral Circulation and their Clinical Manifestations.

ROYAL SOCIETY OF MEDICINE:
PATHOLOGICAL SECTION, 20, Hanover Square, 8.30 p.m.—Dr. G. G. Shattock: Tumor of the Prostate Gland of an Old Man and the Lower Animals. Mr. T. W. P. Lawrence and Mr. Henry Curtis: A Case of Portal Thrombosis, associated with Stricture of the Urethra, and Double Mitral Disease. Mr. Leonard S. Dudgeon and Dr. J. C. O. Meek: A Contribution to the Pathology of the Spleen. Dr. Parkes Weber: A Note on the Histology of the New Bone Formation in a Case of Pulmonary Hyperostrophic Osteo-arthropathy. Dr. Parkes Weber and Dr. J. C. O. Meek: A Note on the Histology of a Case of Melanophthalma Albunosa. Dr. Bernstein: A Pathogenic Streptothrix, with Primary Lesion in the Lungs.

THURSDAY.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W.—5 p.m.: Third Goulstonian Lecture, by Dr. E. Russell, On Some Disorders of the Cerebral Circulation and their Clinical Manifestations.

ROYAL SOCIETY OF MEDICINE:
DERMATOLOGICAL SECTION, 20, Hanover Square, 5 p.m.—Exhibition of Cases and Specimens.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:
ELECTRO-THERAPEUTICAL SECTION, 20, Hanover Square, 8.30 p.m.—Paper: Dr. H. Lewis Jones, Treatment of Nevus.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11, Chandos Street, Cavendish Square, London, W., 8.30 p.m.—Paper: Captain Charles F. Craig, M.D., United States Army—Observations of the United States Army Board for the Study of Tropical Diseases in the Philippine Islands, upon: (a) *Filicaria philippinensis*; (b) *Entomoloxozoon*; (c) The Etiology of Dengue; (d) *Trepomema pertuense* and the Experimental Production of Yaws.

POST-GRADUATE COURSES AND LECTURES.

LONDON SCHOOL OF CLINICAL MEDICINE, Seamen's Hospital, Greenwich.—Daily arrangements: Out-patient Demonstrations, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m., respectively; Operations, 2 p.m.; Special Clinics: Ear and Throat, at noon and 4 p.m., Monday, and noon, Thursday; Skin, at noon and 4 p.m., Thursday, and noon, Friday; Eye, 11 a.m., Wednesday and Saturday; Radiography, 4 p.m., Thursday; Special Lectures: Tuesday, 2.15 p.m., Some Applications of Pathology to Clinical Medicine; Thursday, 2.30 p.m., The Neurotic Element in Disease.

LONDON THROAT HOSPITAL, Great Portland Street, W.—Wednesday, 5 p.m., Ethmoiditis.

MEDICAL GRADUATE'S COLLEGE AND POLYCLINIC, 22, Chancery Street, W.C.—The following clinical demonstrations have been arranged for next week, at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Eye. Lectures, at 5.15 p.m. each day, will be given as follows: Monday, The Fundus Oculi (with lantern slides); Tuesday, The Treatment of Bronchopneumonia; Wednesday, The Association between Urinary and Genital Tuberculosis; Thursday, The Bladder in Medical Cases.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday and Friday, 3.30 p.m.: Intracranial Tumour.

NORTH EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m.; Surgical Out-patient, 2.30 p.m.; Medical Out-patient; Nose, Throat, and Ear; X Rays; 4.30 p.m.; Medical In-patient; Tuesday, 10 a.m.; Medical Out-patient; Clinic; 2.30 p.m.; Operations; Clinics, Surgical, Gynaecological; 4.30 p.m.; Lecture-demonstration The Evolution of Disease; Wednesday, 2.30 p.m.; Medical Out-patient; Skin, and Eye Clinics; Thursday, 2.30 p.m.; Gynaecological Operations; Clinics; Medical Out-patient; Surgical Out-patient; X Rays; 3 p.m.; Medical In-patient; 4.30 p.m.; Lecture, The Scope of Gynaecological Treatment without Operation; Friday, Clinic; 10 a.m.; Surgical Out-patient; 2.30 p.m.; Operations; Clinics; Medical Out-patient; Eye; 3 p.m.; Medical In-patient.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics, X Rays; 2.30 p.m., Operations. Monday and Thursday, 2 p.m., Diseases of the Eyes (ditto Wednesday and Thursday, 2 p.m.). Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m., Diseases of Throat, Nose, and Ear (also Wednesday and Saturday, 10 a.m.). Tuesday and Friday, Demonstration by Medical Registrar; Thursday, 12 noon, Monday, Pathological Demonstration; at 12.15 p.m., Wednesday and Saturday, Practical Medicine; at 5 p.m., Monday, Practical Surgery; Tuesday, Some Clinical Observations on Heart Disease; Wednesday, Conservative Surgery of the Urinary Tract; Thursday, Eye Diseases; Friday, Clinical.

St. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C.—Thursday, 6 p.m.: The Treatment of Skin Diseases.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
MARCH.		MARCH (Continued).	
14 Sunday ..			LONDON: Medico-Political Midwives Subcommittee, 11 a.m.
15 MONDAY ..			LONDON: Medico-Political Contract Practice Subcommittee, 2 p.m.
16 TUESDAY ..	{ LONDON: Standing Ethical Subcommittee, 2 p.m.	24 WEDNESDAY ..	LONDON: Premises Committee, 2.30 p.m.
	{ CARDIFF DIVISION, <i>South Wales and Monmouthshire Branch</i> , Cardiff.		LONDON: Medico-Political "Spiritual Healing" Subcommittee, 5 p.m.
17 WEDNESDAY ..	{ ROCHDALE DIVISION, <i>Lancashire and Cheshire Branch</i> , Joint Meeting with Bury Division, Navigation Hotel, Railway Street, Heywood, 8.30 p.m.	25 THURSDAY ..	{ LONDON: Hospitals Committee, 2.30 p.m.
	{ CITY DIVISION, <i>Metropolitan Counties Branch</i> , Manor Lodge, Upper Clapton Road, 9 p.m.		LONDON: Metropolitan Counties Branch Council, 4.30 p.m.
18 THURSDAY ..	{ GLOUCESTERSHIRE BRANCH, General Meeting, General Hospital, Cheltenham, 7 p.m.: Supper. afterwards, Cosy Corner, Promenade.		LONDON: Central Ethical Committee, 2 p.m.
	{ LAMBETH DIVISION, <i>Metropolitan Counties Branch</i> , Evelina Hospital, 4 p.m.	26 FRIDAY ..	{ BIRMINGHAM BRANCH, Pathological and Clinical Section, Medical Institute, Edmund Street, 8 p.m.
	{ LEIGH DIVISION, <i>Lancashire and Cheshire Branch</i> , Co-operative Rooms, Ellesmere Street, Leigh, 8.30 p.m.		OXFORD DIVISION, <i>Oxford and Reading Branch</i> , Radcliffe Infirmary, Oxford, 3 p.m.
19 FRIDAY ..	{ SWANSEA DIVISION, <i>South Wales and Monmouthshire Branch</i> , 3 p.m.	27 SATURDAY ..	
20 SATURDAY ..	{ LONDON: Science Committee, 11 a.m.	28 Sunday ..	
	{ LONDON: Ophthalmia Neonatorum Committee, 1.30 p.m.	29 MONDAY ..	
21 Sunday ..		30 TUESDAY ..	
22 MONDAY ..		31 WEDNESDAY ..	BATH AND BRISTOL BRANCH, Bristol
23 TUESDAY ..	{ HAMPSHIRE DIVISION, <i>Metropolitan Counties Branch</i> .		

ANNUAL MEETING, BRITISH MEDICAL ASSOCIATION, BELFAST, 1909.

The Seventy-seventh Annual Meeting of the British Medical Association will be held at Belfast from July 23rd, to July 31st, 1909, under the Presidency of Sir William Whitla.

The Annual Representative Meeting commences in Belfast on July 23rd. The Presidential Address will be delivered on July 27th. The Sections will meet on July 28th, 29th, and 30th.

A preliminary programme of arrangements was published in the SUPPLEMENT, February 27th, 1909. The Honorary Local Secretaries are: Henry Lawrence McKisack, M.D., M.R.C.P., 17, University Square, Belfast; Cecil Edward Shaw, M.A., M.D., M.Ch., 29, University Square, Belfast and Howard Stevenson, B.A., M.B., F.R.C.S.I., 2, College Square North, Belfast.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every

Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signature as laid down in By-law 5.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MARCH 20TH, 1909.

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Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

BORDER COUNTIES BRANCH.

THE autumn general meeting of this Branch took place in the County Hotel, Carlisle, on Friday, October 30th, 1908. In the unavoidable absence of the President, Dr. Macdonald, the chair was taken by the VICE-PRESIDENT, Dr. J. E. Bowser of Penrith, and there were about twenty members present.

Confirmation of Minutes.—The minutes of the previous meeting were read, approved, and signed.

New Member.—The CHAIRMAN intimated that Dr. A. D. McCallum of Abbey Town had been elected a member of the Association.

Papers, etc.—Dr. J. B. BIRD read a short paper on "The Treatment of Cases by Intragastric Electrization," giving his experience in 3 such cases, and a summary of the experiences of other workers in this field. Dr. HILL showed the "button electrode" which was used in these cases, as well as the ordinary stomach tube which he had converted for the same purpose in those cases where there was difficulty in swallowing the button. Dr. W. S. SYMS read a detailed and interesting paper on "Aural Vertigo," and dealt with the different conditions in which vertigo was a prominent symptom. He entered largely into the question of differential diagnosis, and concluded with some remarks on the correct operative treatment and his own personal experiences. In the absence of Dr. RODERICK MACLAREN, his paper on "Fracture of the Base of the Skull" was read by Mr. NORMAN MACLAREN, and aroused considerable discussion among the members. Mr. NORMAN MACLAREN then showed a series of pathological specimens, and another series of interesting specimens belonging to Dr. G. R. LIVINGSTON was also submitted to the meeting by the SECRETARY, as Dr. Livingston had been unfortunately prevented from attending, which included interesting specimens from cases of unusual complications attending appendicitis.

CAMBRIDGE AND HUNTINGDON BRANCH.

A MEETING of this Branch was held on Friday, March 5th, at 2.15 p.m., at the Medical Schools, Downing Street, Cambridge, Mr. L. NEWTON, President, in the chair. There were twenty-nine members present.

Confirmation of Minutes.—The minutes of the last annual meeting were read and confirmed.

New Members.—Mr. Robert McCheyne Linnell, B.A., M.R.C.S., L.R.C.P., Cambridge, and Mr. Anson Robertson Jordan, B.A., M.B., B.C., Great Shelford, Cambridgeshire, were elected members of the Branch.

The Branch and the Cambridge Medical Society.—The working arrangements between the Branch and the Cambridge Medical Society, as proposed by the joint committee of the two societies, were approved.

Whole-time Medical Officers.—The report of the Public Health Committee of the Association on the desirability of health officers being compelled to give their whole time to the work, was then considered. Professor SIMS WOODHEAD (President-elect) proposed:

That medical officers of health be debarred from engaging in private practice.

Dr. LATHAM seconded. The PRESIDENT proposed an amendment:

That medical officers of health should only be debarred from private practice in large towns.

Dr. HALLETT seconded. The amendment was carried.

Paper.—Dr. ARTHUR LATHAM, Physician to St. George's Hospital, then read a paper on "Some Recent Advances in the Diagnosis and Treatment of Tuberculous Affections. A discussion followed, in which several members took part.

Vote of Thanks.—A vote of thanks to Dr. Latham was proposed by Professor HOWARD MARSH and seconded by Dr. STEAR. Sir CLIFFORD ALLBUTT spoke in support. This was carried unanimously.

GIBRALTAR BRANCH.

THE annual meeting was held on March 5th, instead of the 3rd, as originally intended. Fourteen members were present.

Annual Report.—The annual report was read and approved.

Election of Officers.—The following were elected office-bearers for the present year: President, Colonel Murray, P.M.O. Vice-President, Deputy Inspector-General F. J. Lilly, R.N.; Honorary Secretary and Treasurer, L. D. Parsons, Port Surgeon; Members of Council, Drs. Abrines,

Oman, Lyons, Major Fowler, R.A.M.C., and Major Keble, R.A.M.C.

Dinner.—The members with two guests dined together after the meeting.

LANCASHIRE AND CHESHIRE BRANCH:

MANCHESTER (SOUTH) DIVISION.

An ordinary general meeting of the Division was held at the house of Dr. E. Vipont Brown, 2, Birch Lane, Longsight, at 3.45 p.m., on Friday, March 5th; Dr. McDougall in the chair. There were nine members present: Drs. Vipont Brown, Carnwath, Cotterill, Edlin, Gregory, Russen Rhodes, Stocks, and Wild.

Apologies for Non-attendance.—Regrets for absence were received from Drs. Hopkinson and Grant Davie, for whom Dr. Carnwath kindly officiated as Honorary Secretary.

Confirmation of Minutes.—The minutes of the last meeting were read and signed.

Medical Inspection and Treatment of School Children.—A letter was read from the Honorary Secretaries of the Joint Committee of the Manchester and Salford Divisions, submitting for consideration the resolutions adopted by that committee on this subject. After some discussion, it was proposed by Dr. Vipont Brown, and seconded by Dr. Cotterill:

That where the resolutions of the Joint Committee differ from those previously adopted by this Division, the resolutions of the Division be adhered to.

This was adopted *nem. con.*

The Medical Profession as a Career.—A copy of a letter on the medical profession as a career, sent by the Joint Committee to the heads of schools in Manchester and district, was submitted and taken as read.

Proposed Recommendation to Joint Committee.—The following recommendation was approved *nem. con.*:

That the Joint Committee be instructed to take such steps as they may deem proper to secure recognition by the public authorities of the Joint Committee as the representative body of the profession in Manchester.

Whole-time Medical Officers of Health.—The memorandum from the Public Health Committee on this subject was considered, and after a brief discussion it was unanimously agreed:

That in all future appointments medical officers of health should be debarred from engaging in private practice.

Letter from the Science Committee.—A communication was read on the subject of scientific work of Divisions and Branches, and it was resolved:

That this Division approves of the idea of converting the Central Library of the Association into a lending library.

At this stage Dr. McDougall was called away, and Dr. Russen Rhodes was moved to the chair.

Medical Certification of Suitability of Patients for Hospital Treatment.—In discussing this subject Dr. Wild pointed out that even if the resolution were passed in its present form and carried into practice it would not offer sufficient guarantee against hospital abuse. Few general practitioners, he affirmed, would have the courage, or indeed could afford, to refuse certificates to that class of patient by whom the advantages offered by hospitals were most abused. It would merely have the effect of throwing on the general practitioner extra work for which he would not be paid. He finally proposed, and it was agreed unanimously, that the words "is desirable wherever practicable" be substituted for "be required," and that the words "except in case of casualties" be omitted. The resolution thus read:

That a medical certificate of suitability for hospital treatment is desirable wherever practicable as a condition of hospital treatment.

The meeting was then adjourned, the other subjects on the agenda being referred, it being understood that an early date for their discussion would be arranged.

METROPOLITAN COUNTIES BRANCH:

EALING DIVISION.

A MEETING of this Division was held on Wednesday, March 3rd, at 8.45 p.m., Dr. Ruck in the chair. The severe weather interfered with the attendance, and the matters referred from head quarters could not be satisfactorily dealt with.

Chronic Ulceration of the Rectum.—Mr. D'ARCY POWER, Surgeon to, and Lecturer on Surgery at, St. Bartholomew's Hospital, read a paper on Some Cases of Chronic Ulceration of the Rectum. Mr. Power stated that he had recently had several cases of the kind under his care, and that the condition merited greater attention than appeared to have been given to it. He read an account of his own recent cases, and then classified chronic ulceration of the rectum into four great groups—namely: (1) Ulcerative colitis, (2) syphilitic ulceration of the rectum, (3) tuberculous, (4) carcinomatous. The first group (ulcerative colitis) he further subdivided into: (a) Dysenteric, (b) syphilitic, (c) tuberculous, (d) secondary to pelvic cellulitis. The second group (syphilitic ulceration of the rectum) can be further subdivided into: (a) Gummatous, (b) anal and rectal syphiloma. Mr. Power laid considerable stress on the part played by infective colitis in producing inflammation of the rectum; it was usual to speak of chronic ulceration of the rectum as "malignant" or "syphilitic," but the more correct attitude was to regard ulcerative colitis (a direct infective condition) as the exciting cause, and syphilis, tubercle, or injury as the predisposing causes. On the one hand, these inflammatory conditions would in all probability have subsided if the patient had not become infected with the micro-organism leading to ulcerative colitis; on the other hand, if the tissues had been perfectly sound, it was probable that the infective agent would never have effected a lodgement. Mr. D'Arcy Power next drew attention to the differential diagnosis of the various forms of chronic ulceration of the rectum, and then dealt with the treatment. He preferred medical means and local applications, but urged a resort to surgery if relief was not attained within a reasonably short time, lest the inflammation be allowed to become incurable.

SOUTH-EASTERN BRANCH:

GUILDFORD AND WINCHESTER DIVISIONS.

A joint clinical meeting of these Divisions was held at the Royal Surrey County Hospital on Wednesday, March 10th, at 3 p.m., under the presidency of Dr. P. DUNDAS MINCHIN, Chairman of the Guildford Division.

Papers.—Colonel FIRTH, R.A.M.C., read an interesting and suggestive paper entitled "Some Reflections on the Theory of Heredity," in which he pleaded for greater accuracy and more care in collecting and recording evidence bearing on the problem of heredity in disease, and appealed to those present, as well as to members of the profession generally, to each assist in some way in the elucidation of the subject. A short discussion followed, in which Drs. BRISCOE and SMYTH took part.

Discussion.—Dr. A. M. MITCHELL opened a discussion on the importance of early operation in appendicitis, to which Drs. GODWIN, PARKER, BODINGTON, BEVAN, and SHEAF also contributed.

Cases.—Dr. SHEAF read notes of two cases of enlarged thyroid, and showed portions of the gland which he had removed. The patients were also exhibited.

Demonstration.—Dr. GAUVAIN gave an interesting demonstration of the method of treatment of spinal caries as carried out at the Cripples' Home, Alton, and illustrated his remarks by means of a model.

Cases and Specimens.—The following were shown: (1) Mr. E. J. SMYTH: Congenital dislocation of lenses. (2) Mr. H. J. FARDON (for Dr. BRODRICK): Pseudo-hypertrophic paralysis. (3) Dr. J. F. BRISCOE: Specimens from five cases of morbus cordis in the insane.

Votes of Thanks.—Tea was served at the close of the meeting, and votes of thanks were accorded to the readers of papers, etc., and to the Committee of the hospital for the use of the board-room and for kindly providing tea.

SOUTH-EASTERN OF IRELAND BRANCH.

The first meeting of this Branch for the session 1909 was held at the Club House, Carlow, on Wednesday, March 3rd, at 5.30 p.m.

In the absence of the President, Dr. G. J. MACKESY was voted to the chair. The other members present were Drs. C. E. James, E. J. Farmer, J. V. Ryan, J. W. H. Jelllett, E. McDonald, and R. B. Carey, Acting Secretary.

Confirmation of Minutes.—The minutes of the last meeting were read, confirmed, and signed.

Apologies for Non-attendance.—Apologies for absence were read from Drs. Murphy (President), O'Brien, and Currie.

Remuneration for Lectures on Public Health, etc.—The resolution from the Fermanagh Branch of the Irish Medical Association *re* adequate remuneration for lectures on all subjects concerning public health and disease, etc., was very fully discussed in all its aspects, and spoken to by each member present. It was proposed by Dr. JELLETT, and seconded by Dr. JAMES:

That we approve and adopt the resolution of the Fermanagh Branch of the Irish Medical Association *re* adequate remuneration for lectures on all subjects concerning Public Health and Disease, and it is the opinion of this meeting that no member of this Branch should act in such capacity without adequate remuneration.

Carried *nem. con.*

Well-to-do Patients and Hospitals.—The resolution of the Branch *re* the admission of well-to-do patients into union hospitals, which had been forwarded through the Irish Committee with a view to legislation, and sent back to the Branch by the Irish Committee for amendment, was then considered. The ACTING HONORARY SECRETARY having explained that the Irish Committee considered the latter part of the last sentence of the resolution as involving a condition which could not be carried out without leading to a great deal of friction, it was proposed by Dr. JAMES, and seconded by Dr. RYAN:

That this meeting accepts the amendment to the resolution proposed by the Irish Committee, and requests them to forward it as amended with a view to legislation.

Carried with one dissentient.

The Draft Charter and the Referendum.—The resolution from the South-Western Branch *re* method of taking the Referendum was next discussed, and their resolution and the facts set forth by that Branch bearing on the question having been read, it was proposed by Dr. FARMER and seconded by Dr. RYAN:

That we, the members of the South-Eastern (Ireland) Branch of the British Medical Association, are of opinion that it is necessary for the safe government of the Association that a Referendum should be taken on the requisition of half the Council, and then by letter addressed to every member of the Association.

Carried *nem. con.*

Fees for Examination under Employers' Liability and Workmen's Compensation Acts.—A discussion arose on the subject of fees for examination and reports under the Employers' Liability and Workmen's Compensation Acts, and a notice of motion for next meeting was given in by Dr. MACKESY.

Payment for Branch Dinners.—Notice of motion was handed in by Dr. Laffan for the next meeting on the subject of mode of payment for dinners at Branch meetings. There being no further business the meeting was adjourned.

To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

EAST ANGLIAN BRANCH.—The spring meeting will be held at Bury St. Edmunds on Thursday, April 15th. Members wishing to read papers or show cases should communicate at once with Dr. Gutch, Ipswich, the Honorary Secretary for Suffolk.—B. H. NICHOLSON, Senior Secretary, East Lodge, Colchester.

LANCASHIRE AND CHESHIRE BRANCH.—*Change of date of Branch Council meeting.* Owing to April 14th falling in Easter week the Branch Council meeting will be held a week earlier, namely, on Wednesday, April 7th. 4.30 p.m., at Onward Buildings, 207, Deansgate, Manchester.—F. CHARLES LARKIN, Honorary Secretary, Liverpool.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—A general meeting will be held at the Greenbank Hotel, Northwich, at 5 p.m., on Wednesday, April 21st, to receive reports from the Executive Committee, to consider matters referred to Divisions, and to transact the usual business. At

6 p.m. Dr. Manwaring White will read a paper on Frontal Sinusitis as a Complication of Influenza. Dinner at 7 p.m.—T. W. H. GARSTANG, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: KENSINGTON DIVISION.—In response to the kind invitation of the House Committee and medical staff of the London Hospital, a meeting of this Division will be held at the London Hospital on Friday, March 26th, at 4 o'clock. Visitors will be shown the Finsen light department, Dr. Tynnaer's new radiant heat baths, the operating theatres, and the lady almshouses and the methods used for checking hospital abuse in out-patients. Dr. Leonard Hill will give a demonstration on the use of oxygen, Dr. Bulloch a bacteriological demonstration, and the staff will give demonstrations of cases in the wards. It will facilitate arrangements if those members of the Division who expect to be present will inform the Honorary Secretary, H. BECKETT-OVERY.

OXFORD AND READING BRANCH: OXFORD DIVISION.—The next general meeting of this Division will be held on Friday, March 26th, at the Radcliffe Infirmary, Oxford, at 3 p.m. Agenda: (1) Dr. Collier will propose the following resolution: "That in view of the practical experience of the last thirty-seven years, during which period the Association has enjoyed great financial prosperity it has been proved that in the best interests of the British Medical Association it is essential to have an official with the rank and status of 'General Secretary and Manager,' and that such official should possess special business training. Further, that having regard to the highly satisfactory manner in which Mr. Guy Elliston has discharged the duties since his appointment in 1902, it is in the interests of the Association that his services should be retained as General Secretary and Manager; and that the Representative of the Oxford Division to the Representative Meeting at Belfast be instructed accordingly." (2) Certain business matters referred to the Divisions will be laid before the meeting by the Secretary. (3) Specimens and cases will be shown. (4) Dr. Robert Hutchison will open a discussion on a subject connected with dietetics.—W. DUIGAN, Honorary Secretary.

SOUTH-EASTERN BRANCH: BROMLEY DIVISION.—The next meeting of the Bromley Division will be held at the Bell Hotel, Bromley, on Friday, March 26th, at 4 p.m., Dr. Scott in the chair. Agenda:—(1) Minutes of last meeting. (2) To decide when and where the next meeting will be held. (3) Communications from the Medical Secretary of the Association regarding: (a) Science Committee and Library; (b) Midwives Act; (c) Report on Medical Certification of Patients for Hospital Treatment (vide SUPPLEMENT to the BRITISH MEDICAL JOURNAL, February 27th); (d) Report on Contributions to Hospitals by Employers of Labour and Employees (vide SUPPLEMENT to the BRITISH MEDICAL JOURNAL, February 27th); (e) Statement as to sanitary public medical institutions; (f) Statement as to sanitary for workers suffering from tuberculosis (Leaflets V and VI enclosed). (4) Letter from Mrs. Seldon. (5) The following paper has been promised by J. Blumfeld, M.D.: The Avoidance of Danger during Anaesthesia, and the bearing upon this of some Recently Introduced Apparatus. All members of the Division are requested to attend, and to invite those of the profession in their own district who are not members of the Association to be present.—A. TENNYSON-SMITH, Honorary Secretary, Orpington.

SOUTH-EASTERN OF IRELAND BRANCH.—A meeting of this Branch, also a meeting of the Branch Council and the local Division, will be held at Adelphi Hotel, Waterford, on Wednesday, April 7th, at 3.15 p.m. Agenda: (1) Minutes of last meeting. (2) Letters of apology. (3) Correspondence. (4) Dr. Laffan will move that dinners at Branch meetings be paid for at so much to each member present and half of that amount to each absent member. (5) Dr. Mackesy will move that members of this Branch bind themselves not to accept a less fee than one guinea for examination and report in any case under the Employers' Liability Act or Workmen's Compensation Act at common law, whether same be furnished on behalf of employers or insurance companies. (6) Any other business.—J. QUIRKE, Honorary Secretary, Piltown.

SOUTH MIDLAND BRANCH: BUCKINGHAMSHIRE DIVISION.—The first meeting of the Buckinghamshire Division will be held on Tuesday, March 30th, at the Royal Bucks Hotel, Aylesbury, at 5.30 p.m.—A. E. LARKING.

WEST SOMERSET BRANCH.—The next meeting of this Branch will be held at the Taunton and Somerset Hospital on Friday, April 2nd, at 3.30 p.m., when the President, Dr. H. T. S. Aveline, will take the chair. It is hoped to make this largely a clinical meeting, and members are invited to submit cases and specimens of interest. The following are already promised:—Mr. A. J. H. Iles: Skiagrams showing the utility of X Rays in the Diagnosis of Diseases of Bone. Mr. A. E. Joscelyne: A Case of "Port Wine" Mark treated with High-frequency Currents. Hospital Treatment: The members of the Branch will be asked to instruct their Representative how he shall vote on the following resolution, which will be brought before the next Representative Meeting: "That a medical certificate of suitability for hospital treatment be required as a condition of hospital treatment, except in the case of casualties." Further par-

ticulars on this subject will be found in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of February 27th, 1909. "What is an Accident?" Should time permit, Dr. Aveline will open a discussion on this subject, which, owing to the Workmen's Compensation and other recent Acts of Parliament, has become of interest and importance. Tea will be served at the conclusion of the meeting.—W. B. WINCKWORTH, Honorary Secretary, Taunton.

British Medical Association.

GRANTS AND SCHOLARSHIPS FOR SCIENTIFIC RESEARCH.

GRANTS.

THE Council of the British Medical Association is prepared to receive applications from members of the Medical Profession for Grants in aid of Researches for the Advancement of Medicine and the Allied Sciences.

The Grants are made subject to the following conditions:

1. That the work of the Grantee shall be subject to inspection by the Science Committee of the Association.
2. That each Grantee shall furnish to the Science Committee, on or before May 15th following the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report, to be renewed not later than the same date in each subsequent year until the final report is presented) containing:

(a) A statement, in a form satisfactory to the Science Committee, of the results arrived at, or the stage which the inquiry has reached;

(b) A statement of expenditure incurred, accompanied by vouchers as far as possible;

(c) A reference to any Transactions, Journals, or other publications in which the results of the research have been announced.

SCHOLARSHIPS.

THE Council of the British Medical Association is also prepared to receive applications for Research Scholarships, as follows:

1. An ERNEST HART MEMORIAL SCHOLARSHIP, of the value of £200 per annum, for the study of some subject in the department of State Medicine.

2. THREE RESEARCH SCHOLARSHIPS, each of the value of £150 per annum, for research in Anatomy, Physiology, Pathology, Bacteriology, State Medicine, Clinical Medicine, or Clinical Surgery.

Each Scholarship is tenable for one year, but is renewable by the Council, provided that the whole period of tenure shall not exceed three years.

The Scholarships are awarded subject to the following conditions:

1. That the work of the Scholar shall be subject to inspection by the Science Committee of the Association.

2. That he shall furnish the Science Committee, on or before May 15th following the grant of the Scholarship, with a statement of the work done by him.

3. That he sign an undertaking to abide by the above and other regulations affecting Scholarships, a copy of which will be supplied to him.

Applications.

Applications for Grants and Scholarships for the year 1909-10 must be made, not later than May 27th, 1909, in the prescribed form, a copy of which will be supplied on application to the Medical Secretary, 429, Strand, London, W.C.

Each application should be accompanied by a recommendation from the head of the laboratory in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

J. SMITH WHITAKER, *Medical Secretary.*

429, Strand, W.C.,
March, 1909.

Hospitals and Asylums.

CRICHTON ROYAL INSTITUTION, DUMFRIES.

THE annual report for the year 1908 of the Board of Directors of this large asylum contains the first report of Dr. C. C. Easterbrook as physician-superintendent. Considerable structural alterations and additions have been in progress since 1906, including extended accommodation for parochial patients, and the plans previously adopted have, we learn from the report of the board, been largely and advantageously modified under the advice of Dr. Easterbrook, so that, when completed, the improved structure will permit of proper classification of patients. Also verandahs have been added for open-air treatment, and the establishment of a special department for psychological investigation is being considered, and the board expect that by the end of the present year this department will have organized and the work begun. On January 1st, 1908, there were on the registers 831 certificated patients and 21 voluntary boarders, and on the last day of the year there were 828 certificated patients and 32 voluntary boarders. Considering here only the certificated patients, the total cases under treatment during the year numbered 985, and the average number daily resident 327.7. During the year 154 cases, or 151 persons, were admitted. Of these 129 were first admissions, and in 112 the patients were suffering from their first attack. Dr. Easterbrook's table showing the duration of mental disorder refers only to the first admissions or "receptions," and shows that in 83 the disorder was recent or acute—that is, under six months' duration on admission; in 28 subacute or subacute—that is, from six months to two years in duration—and in 18 chronic, or of more than two years' duration. The 129 first admissions were classified according to the forms of mental disorder into: Mania, 37; melancholia, 28; delusional and hallucinatory insanity, 27; volitional, impulsive, and moral insanity, 5; insanity with epilepsy, 5; general paralysis, 5; confusional insanity, 5; stupor and katatonia, 3; primary dementia, 2; secondary dementia, 2; insanity with gross brain lesion, 1; and cases of congenital or infantile defect, 6. No separate table is furnished setting forth the supposed etiological factors in the admissions, but the causation of insanity is discussed in general terms in Dr. Easterbrook's report, in the course of which it is stated that only 4 suffered from mental disease attributable to alcohol or drugs. The small proportion of general paralytics admitted—3.8 per cent.—is striking. During the year 61 patients were discharged as recovered, giving a recovery rate on the admissions of 39.6 per cent.; 39 as improved, and 4 as not improved. During the year also 53 died, giving a death-rate on the average numbers resident of only 6.4 per cent. The deaths were due in 25 cases to cerebro-spinal diseases, including 9 deaths from general paralysis, in 10 to diseases of the heart and blood vessels, in 1 to bronchitis, in 4 to abdominal diseases, and the remaining 13 to general diseases, including 5 deaths from tuberculosis. The deaths from tuberculosis thus formed less than 10 per cent. of the total deaths. All deaths, with the exception of one case—that of a patient who threw himself from a window and received fatal injuries—were from natural causes; and, apart from a few sporadic cases of influenza and one case of erysipelas, the institution was free from zymotic disease.

BIRMINGHAM GENERAL DISPENSARY.

THE 115th annual report of the Birmingham General Dispensary shows that the total number of patients admitted during the year was 58,977, being an increase of 1,933; whilst the total number of patients treated, including accidents, was 74,695. The new branch at Smethwick was opened to patients on September 29th, 1908, and those treated up to December 31st numbered 1,131. The committee have co-operated with the Central Committee of the Birmingham and District Provident Dispensary by agreeing that for a year's trial the prescriptions of the medical officers of the Provident Dispensary shall be dispensed at the various branches of the institution, in consideration of which it would receive 20 per cent. of the subscriptions and entrance fees paid by the members of the Provident Dispensary. The amount received for subscriptions and supernumerary tickets to the General Dispensary was £71 8s. less than in 1907. The expenditure, exclusive of the relief fund, showed an increase of £604 on that of last year.

THE SAMARITAN HOSPITAL FOR WOMEN, LIVERPOOL.

THE annual meeting of this institution was held at the Town Hall on February 25th. The report shows a slight increase of the work done in both in-patient and out-patient departments, in spite of the fact that the work was interfered with for several weeks by the alterations which have been made in the buildings. These—which include the remodelling of the out-patient department, a new operating room, new anaesthetic room, dressing rooms, and a ward with five additional beds—were now complete and working.

ROYAL ABERDEEN HOSPITAL FOR SICK CHILDREN.

THE thirty-second annual report of this institution states that during the year 1908 2,537 cases were treated—747 as in-patients and 1,790 as out-patients—compared with 2,547 in the previous

year, of whom 770 were in-patients and 1,777 out patients. Of the 747 in-patients, 472 were cured, 60 were improved, 70 died, 76 remained in the wards at December 31st last, and the balance were removed as unfit, etc. The average stay in hospital of each in-patient was 35.32 days; in 1907 it was 35.04. The average number of beds in daily occupation was 72.3 compared with 69.7 in the previous year. In addition, 49 convalescent children were sent to the Eildon Home, Culter, which adjacent continues to be of indispensable aid in the working of the hospital. The ordinary expenditure for the year was £2,888 15s. 3d., being an average annual expenditure per occupied bed of £39 19s. 14d., or an average daily expenditure per patient of 2s. 2d. The ordinary income amounted to £1,892 8s. 4d., or £996 6s. 11d. less than the ordinary expenditure for the year. During the year two sums of £600 were received for the permanent endowment of cots.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,866 births and 6,972 deaths were registered during the week ending Saturday last, March 13th. The annual rate of mortality in these towns, which had been 18.1, 19.1, and 21.3 per 1,000 in the three preceding weeks, further rose last week to 22.1 per 1,000. The rates in the several towns were as follows: 10.9 in London, 11.1 in Gloucester, 12.9 in East Ham, 12.9 in Hantsworth (Staffs), 12.9 in Grimsby, 13.2 in Devonport, and 13.7 in Willesden, to 26.2 in Liverpool, 26.3 in Bootle and in Salford, 26.6 in Stockport, 27.0 in Birmingham, 29.0 in Bury, 34.6 in Brighton, and 35.1 in St. Helens. In London the rate of mortality was 24.0 per 1,000, while it averaged 21.5 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 2.0 per 1,000 in the seventy-six towns; in London, also, this death-rate was equal to 2.0 per 1,000, while amongst the seventy-five other large towns the rate from these infectious diseases ranged upwards to 4.9 in Birmingham, 5.1 in Sheffield, 5.2 in Sneathwick, 5.5 in Aston Manor, 6.5 in West Hartlepool, 7.2 in Warrington, and 15.9 in St. Helens. Measles caused a death-rate of 3.5 in Sunderland, 3.7 in Sneathwick, 4.0 in Birmingham, 4.7 in Sheffield, 4.9 in Aston Manor, 6.5 in West Hartlepool, 7.2 in Warrington, and 12.6 in St. Helens; scarlet fever of 1.1 in Northampton and 1.5 in Reading, whooping-cough of 1.1 in Birmingham, 1.2 in Wigan, and 1.3 in Preston, 2.0 in Great Yarmouth, 2.5 in Southampton and in Wolverhampton, 2.6 in Bury, and 2.7 in St. Helens; and enteric fever of 1.0 in Middlesbrough. The mortality from diphtheria and from scarlet fever showed a marked excess in the large towns, and no fatal case of small-pox was registered during the week. There were 2 small-pox patients remaining under treatment in the Metropolitan Asylums Hospitals at the end of the week; 2 new cases having been admitted during the week. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 2,910, 2,825, and 2,873 at the end of the three preceding weeks, had declined again to 2,870 at the end of last week; 285 new cases were admitted during the week, against 273, 232, and 285 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, March 13th, 973 births and 771 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 19.8, 20.0, and 20.7 per 1,000 in the three preceding weeks, further rose to 21.6 per 1,000 last week, but was 0.5 per 1,000 below the mean rate during the same period in the seventy-six large English towns. Amongst the Scottish towns the death-rates ranged from 15.2 in Leith and 20.4 in Edinburgh to 24.4 in Aberdeen and 27.9 in Perth. The death-rate from the principal infectious diseases averaged 2.7 per 1,000 in these towns, the highest rates being recorded in Glasgow and Aberdeen. The 66 deaths registered in Glasgow included 6 which were referred to diphtheria, 37 to whooping-cough, and 14 to diarrhoea. Six fatal cases of whooping-cough and 2 of diarrhoea were recorded in Edinburgh, 2 of scarlet fever, and 3 of diarrhoea in Dundee; 2 of measles, 2 of diphtheria, 8 of whooping-cough, and 3 of diarrhoea in Aberdeen; and 2 of whooping-cough in Paisley.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, March 13th, 595 births and 524 deaths were registered in the twenty-two principal urban districts of Ireland, as against 594 births and 492 deaths in the preceding period. The annual death-rate in these districts, which had been 21.5, 23.0, and 22.5 per 1,000 in the three preceding weeks, rose to 23.9 per 1,000 in the week under notice, this figure being 1.8 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 27.5 and 20.9 respectively, those in other districts ranging from 6.6 in Queenstown and 9.6 in Ballynary, to 31.7 in Tralee and 53.8 in Dundalk, while Cork and 25.0, Londonderry at 23.2, and Limerick at 26.6 and Waterford at 13.6. The zymotic death-rate in the twenty-two districts averaged 1.3 per 1,000, being the same ratio as in the preceding period.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: Fleet Surgeon R. HILL, M.V.O., and Surgeon A. L. ROBINSON, M.B., to the *Dreadnought*, on recommissioning, March 24th; Surgeon T. F. ELWYN, to the *Halcyon*, on recommissioning, April 1st; Fleet Surgeon T. C. MEIKLE, M.B., and Surgeon E. A. G. WILKINSON, to the *King Edward VII.*, on recommissioning, March 27th; Fleet Surgeon F. FEND, M.B., to the *Hibernia*, March 27th; Surgeon W. E. MATTHEW and Surgeon H. STONE, M.B., to the *Berwick* on commissioning, April 1st; Staff Surgeon J. W. CRAIG, M.B., to the *Cochrane*, on recommissioning, April 1st; Staff Surgeon G. E. DUNCAN, to the *Centinel*, April 1st; Surgeon G. W. CRAN, to the *Hibernia*, April 15th; Surgeon J. R. A. CLARE-HALL, to the *Research*, on recommissioning, March 30th.

ARMY MEDICAL SERVICE.

COLONEL L. E. ANDERSON, who is serving in India, is appointed Principal Medical Officer, Allahabad and Fyzabad Brigades. Colonel S. C. R. ROBINSON, also serving in India, is appointed Principal Medical Officer, Jubbulpore and Jhansi Brigades.

ROYAL ARMY MEDICAL CORPS.

Major J. W. BULLIN, M.D., Brigade Laboratory, Madras, is appointed Special Officer in the Prevention of Diseases. Colonel W. A. QUAYLE, M.D., Madras, Principal Medical Officer, Aden Brigade, is granted six months' combined leave out of India (the first sixty days being privilege leave, the remainder leave on private affairs), from April 28th.

INDIAN MEDICAL SERVICE.

COLONEL R. W. S. LYONS, M.D., Bombay, is appointed Principal Medical Officer, Abbottabad and Sialkot Brigades.

SPECIAL RESERVE.

ROYAL ARMY MEDICAL CORPS.

Surgeon-Major E. C. THOMPSON, M.B., from the North of Ireland Imperial Yeomanry, to be a Major of the Special Reserve of Officers, July 7th, 1908. The undermentioned are to be Lieutenants, on probation, of the Special Reserve of Officers, dated March 1st, 1909: JAMES N. McLAUGHLIN, ROBERT T. C. ROBERTSON, M.B., JOSEPH G. McCUTCHEON, M.B.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Lowland Mounted Brigade Field Ambulance.—Major R. T. HALLIDAY, M.B., to be Lieutenant-Colonel, January 11th. Captain H. W. THOMSON, M.B., to be Major, January 11th.

South London Brigade.—Major E. LLOYD-WILLIAMS, from the 3rd London Bearer Company, Royal Army Medical Corps (Volunteers), to be Lieutenant-Colonel, with precedence as in the Volunteer Force, April 1st, 1908. Major (Honorary Major in the Army) W. M. O'CONNOR, M.D., from the Royal Army Medical Corps (Militia), to be Major, September 20th, 1908. Captain F. P. MILLER, from the Royal Army Medical Corps (Territorial Force), to be Captain, February 22nd, 1909. Captain J. W. BIRD, from the Royal Army Medical Corps (Territorial Force), to be Captain, February 22nd, 1909. Lieutenant W. BAIN, M.B., from the 2nd London Bearer Company Royal Army Medical Corps (Volunteers), to be Lieutenant, with precedence as in the Volunteer Force, April 1st, 1908.

Third South Midland Field Ambulance.—CYRIL C. LIVINGTON to be Lieutenant, January 15th.

For Attachment to Units other than Medical Units.—Surgeon-Major A. REES, from the Seventh Division Electrical Engineers, Royal Engineer (Volunteers), to be Major, with precedence as in the Volunteer Force, April 1st, 1908. Surgeon-Captain and Honorary Surgeon-Major R. C. M. POOLEY, from the 5th Middlesex (West Middlesex) Volunteer Rifle Corps, to be Captain, with the honorary rank of Surgeon-Major, with precedence as in the Volunteer Force, April 1st, 1908. Captain and Honorary Surgeon-Major R. C. M. POOLEY to be Major, April 2nd, 1908. Major C. AVERILL, M.D., to be Lieutenant-Colonel, May 19th, 1908. Lieutenant R. B. BRIDGEMAN to be Captain, February 1st, 1909. Captain JAMES MALPAS to be Major, February 25th, 1909.

YEOMANRY.

Surgeon-Major H. BRAMWELL, M.D., Gloucestershire (Royal Gloucestershire Hussars), is granted the honorary rank of Surgeon-Lieutenant-Colonel, March 31st, 1908.

INFANTRY.

Surgeon-Major H. T. TAYLOR, M.B., 4th Battalion the Duke of Edinburgh's (Wiltshire Regiment), is granted the honorary rank of Surgeon-Lieutenant-Colonel, March 31st, 1908.

CHANGES OF STATIONS.

THE following changes of stations amongst the officers of the Army Medical Service have been officially reported to have taken place during February:

	FROM	TO
Surgeon-General H. R. Whitehead, F.R.C.S. Eng.	Cherat	S. Command.
Colonel D. O'Sullivan, F.R.C.S.I.	Mhow	Bareilly.
" M. W. Korin	Tidworth	Irish Comd.
Lieut.-Col. E. Butt, F.R.C.S.I.	Dublin	Secunderabad.
" J. H. A. Rhodes	Malta	Irish Comd.
" R. E. R. Morse	Lucknow	Cosham.
" G. E. Weston	Bermuda	Parkhurst.
" H. N. Thompson, D.S.O.	Aldershot	India.
" M.B.		
" W. E. Berryman	Muttra	Delhi.
" J. H. Daly	Crete	Irish Comd.
" J. B. Wilson, M.D.	Egypt	Woolwich.
" F. W. G. Gordon-Hall, M.B.	Agra	Muttra.
" T. G. Lavis	Meiktila	Irish Comd.
" J. Will, M.B.	Uganda	"
Major J. C. Morgan	Naint Tal	"
" W. T. Mould	Mount Abu	Dover.
" E. McK. Williams	Straits Settlements	York.
" J. C. Connor, M.B.	Parkhurst	Bangalore.
" F. W. Hardy, M.B.	Egypt	Southern Com.
" C. J. Healy, M.B.	Fermoy	Queenstown.
" F. Wade-Brown	London Dist.	Kinross.
" J. E. Brodgen	N. China	Caterham.
" E. C. Anderson, D.S.O.	Shorncliffe	Rawal Pindi.
" N. Tyacke	Labore	Devonport.
" T. F. Jones, M.B.	London Dist.	Windsor.
" M. Williams	Malta	Fermoy.
" C. M. Fleury	"	S. Command.
" J. P. Silver, M.B.	Bermuda	Edinburgh.
" W. Sweetman	Colaba	Calcutta.
" St. J. B. Killiam	Mandalay	Bareilly.
" S. A. Archer	Devonport	Jullundur.
" L. Addams Williams	Bulford	Tidworth.
" T. M. Clarke, C.M.G.	Lucknow	Plymouth.
" D.S.O., M.B.		
" S. L. Cummins, M.B.	Egyptian Army	Netley.
Captain J. D. G. Macpherson, M.B.	Agra	Meerut.
" W. P. Gwynn	"	Poonah.
" H. Herriek	Richmond	Karachi.
" W. R. Blackwell	Dublin	Lucknow.
" H. M. Nicholls, M.B.	"	India.

	FROM	TO
Captain L. F. F. Winslow	R.A.M. Coll.	Lincoln.
A. A. Seeds, M.D.	"	Woolwich.
C. S. Smith, M.B.	Mauritius	Newbridge.
A. H. Salford	London Dist.	Bellary.
C. R. Evans	R.A.M. Coll.	Halifax.
W. C. Coely	"	Irish Comd.
B. S. Bartlett	"	Colchester.
H. B. Burke	"	Devonport.
C. R. L. Bonarney, M.B.	"	Warrington.
G. Baillie, M.B.	"	Tidworth.
P. C. Douglass	"	Weedon.
J. F. Whelan, M.B.	Warrington	Liverpool.
E. P. O. L'Estrange	Bangalore	Alahabad.
A. W. Gibson	R. A. M. Coll.	Hounslow.
C. D. Myles, M.B.	Jhansi	Irish Comd.
R. F. M. Fawcett	R.A.M. Coll.	Cosham.
W. L. Steele	Lucknow	Western Com.
H. G. Pinches	Parkhurst	R.A.M. Coll.
J. L. Jones	Devonport	Crown Hill.
R. McK. Skinner	R.A.M. Coll.	Edinburgh.
H. A. Bransbury	"	Warrington.
M. W. Falkner	"	Chester.
D. E. Parkes, M.B.	"	Mill Hill.
A. H. McN. Mitchell	"	Devonport.
J. B. Clarke, M.B.	"	Pembroke Dk.
R. G. Wilson, M.B.	"	Cosham.
P. G. Hyde, M.B.	"	Queenstown.
T. J. Potter	London Dist.	Belfast.
A. J. Williamson, M.B.	R.A.M. Coll.	Woolwich.
E. V. Aslen	"	Chatham.
D. J. F. O'Donoghue	R. A. M. Coll.	Fermoy.
S. M. Adye-Curran	Cork	Tipperary.
A. H. Hayes	Subah	Leesport.
H. J. Crossley	Calicut	Warrington.
G. A. K. H. Reed	Saugor	Maldstone.
D. S. Skelton	"	Uganda.
P. G. Easton	India	Aldershot.
W. W. Brown	Dublin	"
R. Rutherford, M.B.	Purandhar	Edinburgh.
N. E. J. Harding, M.B.	Chaubattia	Inverness.
R. J. Franklin	Edinburgh	Glasgow.
J. E. H. Gast, M.D.	Queensdown	"
D. Ahern	Karachi	Irish Comd.
H. T. Stuck, M.B.	Sitapur	"
J. H. Douglass, M.D.	Cannanore	Secunderabad.
W. Wille, M.B.	Wellington	"
A. T. Frost, M.B.	Dublin	Currach.
C. R. Millar	Cork	Ballinacraig.
P. Power, M.B.	Jamaica	Belfast.
Lieutenant J. S. Dunne	Delhi	Agra.
A. G. Cummins, M.B.	Ceylon	Egypt. Army.
W. R. Galwey, M.B.	Egypt	Fort Maker.
E. M. W. Paine	Malaparam	Calicut.
A. H. Heslop, M.B.	Aldershot	India.
W. Mitchell, M.B.	Gosport	Rawal Pindi.
E. B. Lathbury	Woolwich	India.
W. F. M. Loughnan	Agra	Meerut.
D. T. MacCarthy, M.B.	Tregentia	India.
J. L. Wood	"	Sally.
F. T. Turner	Netley	India.
J. E. M. Boyd	Catherham	"
D. F. Mackenzie, M.B.	Tidworth	"
R. D. O'Connor	"	"
O. R. McEwen	Chester	"
M. O. Wilson, M.B.	Currach	"
G. F. Radkin	Bangalore	Wellington.
L. A. A. Andrews	Ashburton	Mauritius.
A. C. Elliott, M.B.	Rawal Pindi	Sialkot.
F. Casement, M.B.	Lucknow	Sitapur.
H. W. Farebrother	Bangalore	Malaparam.
G. F. Dawson	Colchester	Gt. Yarmouth.
J. A. Renshaw	Dover	Lydd.
H. W. Carson, M.B.	Preston	Manchester.
R. M. Dickson, M.B.	Glasgow	Glencorse.
A. G. Wills	Colchester	India.
L. Murphy	Cosham	Dorchester.
A. M. Pollard	"	Cosham.
E. V. Vaughan, M.B.	Dublin	Fermoy.
A. X. R. McNeill, M.B.	"	Glasgow.
T. B. Nicholls, M.B.	"	Cosham.
J. B. Jones, M.B.	Dublin	Belfast.
T. J. Mitchell, M.B.	"	Piershill.
F. H. Somers-Gardner, M.B.	"	Cosham.
D. E. C. Pottinger, M.B.	"	Edinburgh.
C. H. O'Rourke, M.B.	Dublin	Currach.
A. N. R. McNeill, M.B.	"	Preston.
J. Martin	"	Edinburgh.
H. Bevis	Dublin	Currach.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—(1) Resident Medical Officer; (2) Resident Surgical Officer. Salary at the rate of £20 per annum each.

BIRMINGHAM: QUEEN'S HOSPITAL.—House-Surgeon. Salary at the rate of £50 per annum.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—House-Surgeon. Salary at the rate of £30 per annum.

BURY ST. EDMUNDS: WEST SUFFOLK GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum.

CAMBRIDGE ADMINISTRATIVE COUNTY.—Assistant School Medical Officer (female). Salary, £250 per annum, rising to £300.

CANCER HOSPITAL, Fulham Road, S.W.—House-Surgeon. Salary at the rate of £70 per annum.

CANCER HOSPITAL, Fulham Road, S.W.—Surgical Registrar. Honorarium, £26 5s. per annum.

CARSHALTON: CHILDREN'S INFIRMARY.—Assistant Medical Officer. Salary, £50 per annum, rising to £180.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Salary at the rate of £50 per annum.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Registrar. Honorarium, £40 per annum.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—Second Medical Officer (male) to the Casualty Department. Salary at the rate of £50 per annum.

ENNISKILLEN: FERMANAGH COUNTY HOSPITAL.—House-Surgeon. Salary, £72 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road.—(1) Physician to Out-patients; (2) Ten Clinical Assistants.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) Two House-Surgeons; (2) Assistant Casualty Medical Officer and House-Physician; (3) House-Physician.

HULL: ROYAL INFIRMARY.—House-Physician. Salary, £100 per annum.

INVERNESS DISTRICT ASYLUM.—Junior Assistant Physician. Salary, £100 per annum.

KETERING AND DISTRICT GENERAL HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

LEAMINGTON: WARFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE GENERAL HOSPITAL.—Senior and Junior Resident Medical Officers. Salary, £100 and £65 per annum respectively.

LEEDS GENERAL INFIRMARY.—Ophthalmic House-Surgeon. Salary at the rate of £50 per annum.

LIVERPOOL EYE AND EAR INFIRMARY.—Honorary Assistant Surgeon.

LIVERPOOL: ROYAL SOUTHERN HOSPITAL.—House-Physician. Salary, £50 per annum.

LONDON THROAT HOSPITAL, Great Portland Street, W.—(1) Assistant Surgeon; (2) House-Surgeon (non-resident); (3) Anaesthetist.

MANCHESTER TOWNSHIP.—Resident Assistant Medical Officer at the Workhouse at Crumpsall. Salary, £130 per annum.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, Chelms Street, W.C.—Clinical Pathologist.

MIDDLESEX COUNTY ASYLUM, Napsbury.—Fourth Assistant Medical Officer. Salary, £50 per annum.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead.—Senior and Junior Resident Medical Officers. Honorarium, £100 and £50 per annum respectively.

NEWCASTLE-UPON-TYNE: ROYAL VICTORIA INFIRMARY.—Pathologist to the Infirmary, and Lecturer on Pathology to the University of Durham College of Medicine. Salary, £400 per annum.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—Clinical Assistants for Special Departments.

NORTHAMPTONSHIRE COUNTY COUNCIL EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary, £250 per annum, rising to £300.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill, Stoke-on-Trent.—(1) Senior House-Surgeon; (2) Junior House-Surgeon. Salary, £100 and £50 per annum respectively.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—Honorary Physician.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road.—House-Physician. Salary at the rate of £50 per annum.

ST. BARTHOLOMEW'S HOSPITAL, E.C.—Assistant Pathologist. Salary, £300 per annum.

ST. MARLBOROUGH GENERAL DISPENSARY, Welbeck Street, W.—(1) Honorary Physician; (2) Honorary Anaesthetist.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary at the rate of £30 per annum.

SEAMEN'S HOSPITAL, Greenwich.—(1) Two House-Physicians; (2) Two House-Surgeons. Salary at the rate of £50 per annum each.

SOUTHAMPTON FREE EYE HOSPITAL.—House-Surgeon. Salary, £100 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House-Surgeon. Salary at the rate of £50 per annum.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House-Surgeon (male). Salary, £90 per annum.

STOCKPORT COUNTY BOROUGH.—School Medical Officer. Salary, £250 per annum, increasing to £300.

TUNBRIDGE WELLS: GENERAL HOSPITAL.—Senior Resident Medical Officer. Salary, £100 per annum.

VENTNOR: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION.—Male Assistant Resident Medical Officer. Salary, £100 per annum.

WARRINGTON INFIRMARY AND DISPENSARY.—Senior House-Surgeon. Salary, £120 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Clinical Assistants; (2) three Casualty Officers.

WORCESTER GENERAL INFIRMARY.—House-Physician. Salary, £100 per annum.

APPOINTMENTS.

ALLINGHAM, W. M.R.C.S., L.R.C.P., Medical Officer of Health of the Great Russell District.

ATRE-SURTE, Alan, M.D., B.Sc.Durh., M.R.C.S., L.R.C.P., Honorary Surgeon to the Sunderland Infirmary.

BROWN, Mary, M.B., Ch.B. Edin., Pathologist and Third Assistant Medical Officer at Stirling District Asylum, Larbert.

CHAMBERLAIN, D. A., M.R.C.S., L.R.C.P., Medical Officer of Health of the Stratton Road District.

- DODD, Stanley, M.A., M.B., B.C.Cantab., M.R.C.S.Eng., M.R.C.P.Lond., F.R.C.S. (Edin.), Surgeon to Out-patients at the Chelsea Hospital for Women.
- FAIRLEY, J. M.B., Third Resident Assistant Medical Officer of the Bethnal Green Parish Infirmary.
- FORDHAM, W. J., M.R.C.S., L.R.C.P., District Medical Officer of the Selby Union.
- GEMMELL, Wm. M.A., M.B., Ch.B. Edin., Senior Assistant Physician to Ayr District Asylum.
- HARMAN, N. Bishop, M.A., M.B.Cantab., F.R.C.S.Eng., Assistant Ophthalmic Surgeon to the West London Hospital, and Lecturer in Ophthalmology to the Post-Graduate College.
- HARRIS, David Fraser, M.D. Glasg., B.Sc. Lond., F.R.S.E., Lecturer in Physiology in the University of Birmingham.
- LEDWARD, H. D., M.B., B.S.Camb., Medical Officer of the Children's Home of the Hitchin Union.
- NICHOLSON, Gilbert W., M.A., B.C., First Assistant to the Research Department of the Cancer Hospital, Fulham Road.
- WILSON, Horace, M.B., F.S. Lond., M.R.C.S., L.R.C.P., Clinical Assistant to the Royal Hospital for Diseases of the Chest, City Road.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 5s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

- MEREDITH.—On the 9th inst., at Haynes, Wellington, Som., the wife of Herbert Meredith, M.R.C.S., L.R.C.P., of a daughter.
- MILLARD.—At Herschel, Cape Colony, on January 26th, the wife of Dr. Philip Millard, a daughter.

MARRIAGES.

- HOWLETT-LANKESTER.—On March 10th, at St. Nicholas Church, East Dereham, by Canon Arnold, John Kitton Howlett, B.A. Camb., L.R.C.P., L.R.C.S. Edin., L.F.S. Glasg., third son of John Godfrey Howlett, of Bracondale, Norwich, to Nellie Elvira Lankester, eldest daughter of Egbert Rougier Early, of The Firs, Southampton.

DEATH.

- DAY.—March 15th, at 3, Surrey Street, Norwich, William Hanks Day, M.R.C.S., L.A.C., eldest son of William Day, Esq., of this city, aged 84. (No flowers, by request.)

BOOKS, ETC., RECEIVED.

- Monographs on Biochemistry. Edited by R. H. A. Plimmer, D.Sc., and F. G. Hopkins, M.A., M.B., F.R.S. The General Characters of the Proteins. By S. B. Schryver, Ph.D., D.Sc. London: Longmans, Green, and Co. 1909. 2s. 6d.
- Chavasse's Advice to a Wife. Fifteenth edition. Revised by G. D. Robinson, M.D., B.S., F.R.C.P. London: J. and A. Churchill. 1909. 2s. 6d.
- Social Disease and its Prevention. By H. N. Robson. London: Appleton and Co. 1909. 2s. 6d.
- New York: E. B. Treat and Co. 1909.
- Bacterial Food-poisoning and Pseudo-tetanus. By Professor Dr. A. Dieudonné. Translated and edited by Dr. C. F. Bolduan. \$1.00.
- Clinical Diagnosis and Treatment of Disorders of the Bladder, with Technique of Cystoscopy. By F. Cabot, M.D. \$2.00.
- Surgical Diseases of Children. By S. W. Kelly, M.D. \$5.00.
- Tombs-Bungay. By H. G. Wells. London: Macmillan and Co., Ltd. 1909. 8s.
- Handbuch der Anatomie des Menschen. In acht Bänden. Herausgegeben von Professor Dr. K. von Bardeleben. Erster Band. Dritte Lieferung. Skelettlehre. Bearbeitet von Professor Dr. J. Disse, G. Spang, and W. Krause. Dritte Abteilung: Skelet der oberen und unteren Extremität. Von W. Krause. Jena: G. Fischer. 1909.
- Oxford Medical Publications. Infant Feeding. By J. S. Fowler, M.D., F.R.C.P. Edin. London: H. Frowde, and Hodder and Stoughton. 1909. 6s.
- London: H. Frowde (Oxford University Press). 1909.
- The World's Classics. CLV. The Works of G. Eliot. IV. Scenes of Clerical Life. 1s.
- The Complete Poetical Works of Edgar Allan Poe. Edited by R. B. Johnson. Oxford edition. 2s.
- St. Bartholomew's Hospital Reports. Edited by H. M. Fletcher, M.D., and W. Macleod, M.S., F.R.C.S. Vol. xlv. London: Smith, Elder, and Co. 1909. 6s. (non-subscribers, 8s. 6d.).
- London: Rehnman, Ltd., 1909.
- Atlas of Clinical Surgery. By Dr. Ph. Bockenheimer. English adaptation by G. F. Marshall, M.D., F.R.C.S. Vols. I, II, and III. (Half roan, 86s. each; full roan, 94s. 6d.).
- A Textbook of Genito-Urinary Diseases. By Dr. L. Casper. Translated and edited by C. W. Bonney, B.L., M.D. Second edition. 21s.
- Jena: G. Fischer. 1909.
- Handbuch der Biochemie des Menschen und der Tiere. Herausgegeben von Professor Dr. G. Oppenheimer. Elfte, zwölfte, und dreizehnte Lfg. M. 5 each.
- Handbuch der Technik und Methodik der Immunitätsforschung. Herausgegeben von Professor Dr. R. Kraus and Dr. C. Levaditi. Zweiter Band zweite Lfg. M. 25.
- Studies on Infection and their Application to the Diagnosis and Treatment of Bacterial Infections. By Sir A. E. Wright, M.D., F.R.S. London: A. Constable and Co. 1909. 16s.
- Injuries and Diseases of the Knee-joint considered from the Clinical Aspect. By Sir W. Bennett, K.C.V.O., F.R.C.S. London: J. Nisbet and Co., Limited. 1909. 5s.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square. W., 8.30 p.m.—Sir Victor Horsley, F.R.S., will open a discussion on "The Relationship between Corners and Medical Men."

ROYAL SOCIETY OF MEDICINE: ONTOLOGICAL SECTION, 20, Hanover Square, 8 p.m.—Paper: Mr. Ashley Denham, F.R.S., A Review of the Progress of Dental Science and Literature from the Earliest Times.

TUESDAY.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—First Linnæan Lecture, by Dr. Norman Moore: Rheumatic Fever and Valvular Disease.

ROYAL SOCIETY OF MEDICINE: MEDICAL SECTION, 20, Hanover Square, 5.30 p.m.—Paper: Mr. E. C. Hort: Autoinoculation versus Heteroinoculation in the Treatment of Established Infective Disease, in Pyrexial and in Apyrexial Conditions, as Controlled by (a) Clinical Observation, (b) Estimation of the Antitryptic Index.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Titchborne Street, Edgware Road, W., 8.30 p.m.—The Harveian Lecture—Mr. A. J. Pepper: Thirty Years' Hospital Experience and Practice.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Second Linnæan Lecture, by Dr. Norman Moore: Rheumatic Fever and Valvular Disease.

FRIDAY.

ROYAL SOCIETY OF MEDICINE: SECTION FOR THE STUDY OF DISEASE IN CHILDREN, 20, Hanover Square, 4.30 p.m.—(1) Cases and Specimens; (2) Papers.—Dr. J. Porter Parkinson: Three Cases of Henoch's Purpura; Dr. W. A. Milligan: On the Occurrence of Leptothrix Bacillus in the Cerebro-spinal Fluid of a Case of Acute Meningitis.

EPIDEMIOLOGICAL SECTION, 20, Hanover Square, 8.30 p.m.—Paper: Fleet Surgeon W. E. Home, R.N.: On the Discrimination of Unrecognized Diseases and on Over-crowding in Ships.

POST-GRADUATE COURSES AND LECTURES.

- LONDON SCHOOL OF CLINICAL MEDICINE, Seamen's Hospital, Greenwich.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2 p.m.; Special Clinics: Ear and Throat, at noon and 4 p.m., Monday, and noon, Thursday; Skin, at noon and 4 p.m., Thursday, and noon, Friday; Eye, 11 a.m., Wednesday and Saturday; Radiography, 4 p.m., Thursday. Special Lecture, Thursday, 3.15 p.m.
- LONDON THROAT HOSPITAL, Great Portland Street, W.—Wednesday, 5 p.m.: Impaired Movements of the Vocal Cords.
- MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chancery Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin. Tuesday, Medical. Wednesday, Surgical. Thursday, Surgical. Friday, Throat. Lectures, at 5.15 p.m. each day, will be given as follow: Monday, The Fundus Oculi (with lantern slides). Tuesday, The Pathological Causes and Surgical Treatment of Some Cases of Severe Chronic Constipation. Wednesday, The Pathological Causes and Surgical Treatment of Some Cases of Severe Chronic Constipation. Thursday, The Diagnosis of Some Obscure Diseases of the Chest by X Rays.
- NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m.: Retro-bulbar Neuritis.
- NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m., Surgical Out-patient, 2.30 p.m., Medical Out-patient; Nose, Throat, and Ear; X Rays; 4.30 p.m., Medical In-patient. Tuesday, 10 a.m., Medical Out-patient Clinic; 2.30 p.m., Operations; Clinics: Surgical, Gynaecological. Wednesday, 2.30 p.m., Medical Out-patient, Skin, and Eye Clinics. Thursday, 2.30 p.m., Gynaecological Operations; Clinics: Medical Out-patient, Surgical Out-patient, X Rays; 3 p.m., Medical In-patient. Friday, Clinic, 10 a.m., Surgical Out-patient; 2.30 p.m., Operations; Clinics: Medical Out-patient, Eye; 3 p.m., Medical In-patient.
- POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, Hammersmith, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics, X Rays; 2.30 p.m., Operations, Monday and Thursday, Diseases of the Ears. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m., Diseases of Throat, Nose, and Ear (also 10 a.m., Wednesday and Saturday); 2.30 p.m., Diseases of Skin. Wednesday and Saturday, 10 a.m., Diseases of Children; 2 p.m., Diseases of Eyes; 2.30 p.m., Diseases of Women. Lectures: 10 a.m., Monday and Thursday, Demonstration by Surgical Registrar; Friday, Demonstration by Medical Registrar; at 12 noon, Demonstration by Pathologist (Monday); at 12.15 p.m., Wednesday and Saturday, Practical Medicine; at 5 p.m., Monday, Clinical Lecture; Tuesday, Insects as Carriers of Disease in Tropical Medicine; Wednesday, Medicine; Thursday, Clinical Lecture; Friday (at London County Asylum, Hanwell, at 3 p.m.), The Medico-Legal Aspects of Insanity.
- ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C.—Thursday, 6 p.m.: Demonstration—Electro-Therapeutic Methods in Some Skin Diseases.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
MARCH.		MARCH (Continued).	
20 SATURDAY ..	LONDON: Science Committee, 11 a.m. LONDON: Ophthalmia Neonatorum Committee, 1.30 p.m.	27 SATURDAY ..	
21 Sunday ..		28 Sunday ..	
22 MONDAY ..		29 MONDAY ..	
23 TUESDAY ..	HAMPSTEAD DIVISION, Metropolitan Counties Branch. LONDON: Medico-Political Midwives Subcommittee, 11 a.m. LONDON: Medico-Political Contract Practice Subcommittee, 2 p.m. LONDON: Premises Committee, 2.30 p.m.	30 TUESDAY ..	BUCKINGHAMSHIRE DIVISION, South Midland Branch, Royal Bucks Hospital, Aylesbury, 3.30 p.m.
24 WEDNESDAY ..	LANCASHIRE AND CHESHIRE BRANCH, Branch Organization and Finance Committee, Medical Institution, Liverpool, 4.30 p.m. LONDON: Hospitals Committee, 2.30 p.m. LONDON: Metropolitan Counties Branch Council, 4.30 p.m.	31 WEDNESDAY ..	BATH AND BRISTOL BRANCH, Bristol.
25 THURSDAY ..	NORTHUMBERLAND COMMITTEE, North of England Branch, Royal Victoria Infirmary, Newcastle-on-Tyne, 3.30 p.m. LONDON: Central Ethical Committee, 2 p.m.	APRIL.	
26 FRIDAY ..	BIRMINGHAM BRANCH, Pathological and Clinical Section, Medical Institute, Edmund Street, 8 p.m. BROMLEY DIVISION, South-Eastern Branch, Bell Hotel, Bromley, 4 p.m. KENSINGTON DIVISION, Metropolitan Counties Branch, London Hospital, 4 p.m. OXFORD DIVISION, Oxford and Reading Branch, Radcliffe Infirmary, Oxford, 3 p.m.	1 THURSDAY ..	SOUTH WALES AND MONMOUTHSHIRE BRANCH, Spring Meeting, Brecon. WESTMINSTER DIVISION, Metropolitan Counties Branch, Criterion Restaurant, 4.30 p.m.
		2 FRIDAY ..	SWANSEA DIVISION, South Wales and Monmouthshire Branch, 8.15 p.m. WEST SOMERSET BRANCH, Taunton and Somerset Hospital, 3.30 p.m.
		3 SATURDAY ..	
		4 Sunday ..	
		5 MONDAY ..	LONDON: Naval and Military Committee, 2.30 p.m.
		6 TUESDAY ..	LONDON: Public Health Committee, 3 p.m. LONDON: Medico-Political Committee, 2.15 p.m.
		7 WEDNESDAY ..	LANCASHIRE AND CHESHIRE BRANCH, Council Meeting, Onward Buildings, 207, Deansgate, Manchester, 4.30 p.m. SOUTH-EASTERN OF IRELAND BRANCH, Adelphi Hotel, Waterford, 3.15 p.m.; also meeting of Branch Council and Local Division.

ANNUAL MEETING, BRITISH MEDICAL ASSOCIATION, BELFAST, 1909.

THE Seventy-seventh Annual Meeting of the British Medical Association will be held at Belfast from July 23rd, to July 31st, 1909, under the Presidency of Sir William Whitla.

The Annual Representative Meeting commences in Belfast on July 23rd. The Presidential Address will be delivered on July 27th. The Sections will meet on July 28th, 29th, and 30th.

A preliminary programme of arrangements was published in the SUPPLEMENT, February 27th, 1909. The Honorary Local Secretaries are: Henry Lawrence McKisack, M.D., M.R.C.P., 17, University Square, Belfast; Cecil Edward Shaw, M.A., M.D., M.Ch., 29, University Square, Belfast; and Howard Stevenson, B.A., M.B., F.R.C.S.I., 2, College Square North, Belfast.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every

Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MARCH 27TH, 1909.

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British Medical Association.

ANNUAL MEETING, BELFAST, 1909.

THE PATHOLOGICAL MUSEUM.

The following Committee has been appointed to organize the pathological museum:

President: Professor W. ST. CLAIR SYMEYS.

Honorary Secretaries: THOMAS HOUSTON, M.D.;
W. J. WILSON, M.D.

J. S. DICKIE, M.B.	C. H. P. D. GRAVES, M.D.
ROWLAND HILL, M.B.	(Cookstown).
C. G. LOWRY, M.D.	Professor McWEENEY (Dublin).
J. E. MACLWAIN, M.D.	Professor MOORE (Cork).
JOHN McLEISH, M.B.	C. H. NESBITT, M.D. (Randallstown).
W. J. MAGUIRE, M.D.	Professor O'SULLIVAN (Dublin).
J. C. RANKIN, M.D.	R. T. ROWLETTE, M.D. (Dublin).
FRED. SMYTH, M.D.	Professor WHITE (Dublin).
ERNEST WALES, M.D.	JOHN WILSON, M.D. (Castleblaney).
J. SINGLETON DARLING, M.D. (Lurgan).	

EX-OFFICIO MEMBERS.

The President-elect: Sir WILLIAM WHITLA, M.D., LL.D.

The Local Honorary Treasurer: JOSEPH NELSON, M.D.

The Local Honorary Secretaries: H. L. McKISACK, M.D.; C. E. SHAW, M.D.; HOWARD STEVENSON, F.R.C.S.I.

The Committee propose that the material should be arranged under the following heads:

- I. Exhibits bearing on discussions and papers in the various sections.
- II. Specimens and illustrations relating to any research work.
- III. Instruments relating to clinical diagnosis and pathological investigation.
- IV. Individual specimens of special interest, or a series illustrating some special subject.

It is also proposed to make a special effort to gather together a series of exhibits relating to:

- (a) Tuberculosis.
- (b) Diseases of warm climates.
- (c) Cancer of the uterus.
- (d) X-rays and photography.

The Committee wish it to be understood that the above are only suggestions, and if there is any subject in which Members are specially interested, and of which interesting specimens can be supplied, they will be glad to hear from them

The Museum will occupy a central position, and will be easy of access.

It is hoped that it will be possible for arrangements to be made whereby exhibitors may have an opportunity of demonstrating their specimens.

THOMAS HOUSTON,
W. J. WILSON,
Honorary Secretaries.

Communications should be addressed to one of the Honorary Secretaries at Queen's University, Belfast.

GRANTS AND SCHOLARSHIPS FOR SCIENTIFIC RESEARCH.

GRANTS.

The Council of the British Medical Association is prepared to receive applications from members of the Medical Profession for Grants in aid of Researches for the Advancement of Medicine and the Allied Sciences.

The Grants are made subject to the following conditions:

1. That the work of the Grantee shall be subject to inspection by the Science Committee of the Association.
2. That each Grantee shall furnish to the Science Committee, on or before May 15th following the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report, to be renewed not later than the same date in each subsequent year until the final report is presented) containing:

- (a) A statement, in a form satisfactory to the Science Committee, of the results arrived at, or the stage which the inquiry has reached;
- (b) A statement of expenditure incurred, accompanied by vouchers as far as possible;
- (c) A reference to any Transactions, Journals, or other publications in which the results of the research have been announced.

SCHOLARSHIPS.

The Council of the British Medical Association is also prepared to receive applications for Research Scholarships, as follows:

1. An ERNEST HART MEMORIAL SCHOLARSHIP, of the value of £200 per annum, for the study of some subject in the department of State Medicine.
2. THREE RESEARCH SCHOLARSHIPS, each of the value of £150 per annum, for research in Anatomy, Physiology, Pathology, Bacteriology, State Medicine, Clinical Medicine, or Clinical Surgery.

Each Scholarship is tenable for one year, but is renewable by the Council, provided that the whole period of tenure shall not exceed three years.

The Scholarships are awarded subject to the following conditions:

1. That the work of the Scholar shall be subject to inspection by the Science Committee of the Association.
2. That he shall furnish the Science Committee, on or before May 15th following the grant of the Scholarship, with a statement of the work done by him.
3. That he sign an undertaking to abide by the above and other regulations affecting Scholarships, a copy of which will be supplied to him.

Applications.

Applications for Grants and Scholarships for the year 1909-10 must be made, not later than May 27th, 1909, in the prescribed form, a copy of which will be supplied on application to the Medical Secretary, 429, Strand, London, W.C.

Each application should be accompanied by a recommendation from the head of the laboratory in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

J. SMITH WHITAKER, *Medical Secretary.*

429, Strand, W.C.,
March, 1909.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

BIRMINGHAM BRANCH.

An ordinary meeting was held at the Medical Institute on Thursday, March 11th, Mr. F. MARSH, the President, being in the chair, and 20 members present.

Annual Report.—The report of the Branch to the Central Council on the membership and financial position of the Branch, and on its proceedings during the year 1908, was considered and approved.

Demonstration.—Mr. GEORGE HEATON showed a patient in whom a liver abscess had burst through the right lung, leaving a fistula through which large quantities of bile were coughed up. The man was a painter aged 25. His illness started with pain in the left hypochondrium and left side of the abdomen, with fever and general malaise. This continued for seven weeks. A rigor then followed, and pain in the right side of the chest and abdomen. Ten days afterwards he was suddenly seized with suffocating dyspnoea, and coughed up large quantities of grumous pus. He then brought up daily bile-stained pus, and finally large quantities of pure bile mixed with frothy pus. A diagnosis of liver abscess bursting into a large bronchus, and opening also one of the larger bile ducts, was made. Under local cocaine anaesthesia a rib was excised, and the hepatic abscess drained through the diaphragm. The expectoration of bile, which had been as much as 35 fl. oz. a day, at once ceased, and he gradually made a complete recovery. Mr. Heaton called attention to the extreme rarity of a biliary fistula through the lung, and discussed the probable causes of the original liver abscess.

Papers.—Dr. W. A. POTTS read a paper on the origin of the feeble-minded, which was discussed by Dr. MANN, Dr. AGAR, Dr. BELCHER, and Dr. HENTON-WHITE. Dr. POTTS replied. Mr. J. FURNEAUX JORDAN read a paper on certain cases of haemorrhage from the uterus. This was discussed by the President, Dr. SHALLWOOD SAVAGE, Mr. WHITEHOUSE, and Dr. LYDALL. Mr. J. FURNEAUX JORDAN replied.

CENTRAL DIVISION.

A SPECIAL and a general meeting of this Division was held at the Medical Institute on March 16th at 3.30 p.m. Mr. GAMGEE was in the chair, and there were twenty-five other members present.

Special Meeting.

Earlier Election of Representative.—The CHAIRMAN, having declared the meeting special, moved the alterations of the rules necessary to enable the Division to elect the Representative earlier than is at present possible:

1. In Rule 7, after "three months" to "nine months."
2. In Rule 11, "Business of Annual Meeting," omit Section (b).

These alterations were unanimously agreed to.

Vote of Thanks to Former Representative.—A letter from Dr. FOXCROFT, tendering his resignation as Representative, was read, and it was resolved:

That this meeting of the Division accepts Dr. Foxcroft's resignation with regret, and tenders to him its best thanks for his past services as Representative.

Election of Representative.—The SECRETARIES announced that the Executive had nominated Dr. KIRBY as Representative, and, no further nominations being made by the meeting, he was pronounced duly elected. This concluded the special business.

General Meeting.

Confirmation of Minutes.—The minutes of the last ordinary general meeting were read, confirmed, and signed.

Report of Representative.—Dr. KIRBY then moved the resolution standing in his name:

That the Representative shall submit his report to the first general meeting of the Division held after the Annual Representative Meeting.

This was seconded and carried unanimously. The following additional resolution was also carried:

That the Executive Committee be instructed to bring this resolution before the next special meeting of the Division as a proposed addition to the Rules of the Division.

Medical Inspection of School Children.—On the Medico-Political Committee's report on the medical inspection of school children and the treatment of those found defective considerable discussion arose. To the questions submitted to the Division the following answers were finally adopted:

Question 1.

That in the opinion of this Division medical inspectors giving their whole time to the duties should be paid by salary; those only giving part time should be remunerated according to the time spent on the work.

Question 2.

Resolution 1.—That this Division emphatically disapproves of the treatment of school children in school clinics, as it considers that the available medical and surgical skill is fully adequate to meet all reasonable requirements.

Resolution 2.—This Division considers that, should school clinics be established, the staff should consist of all medical practitioners in the neighbourhood who are willing to serve, and that they should be paid according to the time spent on the work.

Question 3.

As this question only applies to rural districts it was not considered.

Question 4.

That this Division looks to the Education Authority to devise efficient means to ensure that parents, who can afford to pay for the treatment of their children when found defective as the result of the medical inspection of school children, should be compelled to do so.

Whole-time Medical Officers.—To the question submitted, "That medical officers of health should be debarred from engaging in private practice," the Division gave the answer—

That this is desirable wherever practicable.

Certificates of Suitability for Hospital Treatment.—The recommendation "That a medical certificate of suitability for hospital treatment be required as a condition of hospital treatment, except in case of casualties," was unanimously agreed to, and the Division "strongly disapproved" of the two motions referred on the "contributions to hospitals by employers of labour and employees."

Fresh Public Medical Institutions.—The motion on the subject of fresh public medical institutions was unanimously approved.

GLOUCESTERSHIRE BRANCH.

A GENERAL meeting of the Branch was held at the Cheltenham Hospital, on March 18th, at 7 p.m., the PRESIDENT in the chair, and twenty-two members present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Cases.—Dr. S. M. HEBELTHWAITE showed a case of achondroplasia, which was discussed by the PRESIDENT, and MESSRS. BRAMWELL, CARDEW, PRUEN, CUTHBERT and COLLINS. Mr. ARTHUR CARDEW showed a dermoid cyst of the broad ligament, which was discussed by the PRESIDENT, and MESSRS. CUTHBERT, HOWELL, COOKE, and BRAMWELL.

Paper.—Dr. C. BRAINE-HARTNELL read a paper on the early diagnosis and treatment of some forms of pelvic obstruction. A discussion followed in which the PRESIDENT, and MESSRS. CARDEW, BRAMWELL, and PRUEN took part.

Dinner.—Fifteen members afterwards sat down to dinner at the Cosy Corner.

LANCASHIRE AND CHESHIRE BRANCH:

BURY AND ROCHDALE DIVISIONS.

A JOINT meeting of these two Divisions was held on March 17th in the Navigation Hotel, Heywood, Dr. HITCHON, Chairman of the Rochdale Division, presiding. There were present Drs. Hitchon, Melvin, Kerr, Walker, Geddes and Brown, of the Rochdale Division, and Drs. J. B. Kerr, Greenhalgh, and Turnbull, of the Bury Division.

Confirmation of Minutes.—The minutes of the last two joint meetings were read and approved.

The Work of the Central Council.—Dr. GARSTANG, of Altrincham gave an interesting address on the work of the Central Council. A vote of thanks, moved by Dr. BROWN and seconded by Dr. J. B. KERR, was passed unanimously.

Grouping of Divisions.—It was agreed that the Bury and Rochdale Divisions should be grouped together for the purposes of representation at the annual meeting. Dr. BROWN, of Bacup, and Dr. Greenhalgh, of Bury, were elected Representative and Deputy Representative respectively.

Assistant Medical Officer of Health to Bury.—The SECRETARY of the Bury Division read a letter from the Secretary of the Branch Council (Mr. Larkin), inquiring as to the cause of failure to obtain the minimum salary in the case of the recent appointment. The Secretary was instructed to reply that the failure was in some measure due to the opposition of the Chairman of the Health Committee, who is a member of the British Medical Association, and that the joint meeting, while disapproving of his action, requests the Branch Council to deal with the matter as it deems expedient. The Secretary was also instructed to write to the new assistant medical officer of health explaining his position in relation to the recognized policy of the Association.

Medical Certification of Suitability of Hospital Patients.—The Representative was instructed to support the recommendation of the Council.

Contributions to Hospitals through Insurance Companies.—No definite pronouncement was made.

Fresh Public Medical Institutions.—The recommendation of the Council was agreed to.

METROPOLITAN COUNTIES BRANCH:

LAMBETH DIVISION.

A GENERAL meeting of this Division was held in the Evelina Hospital on Thursday, March 18th, at 4 p.m.; Dr. ATKINSON was in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Medical Officers of Health.—A communication from the Public Health Committee re whole-time medical officers of health was received, and, after considerable discussion and proposed amendments, the following resolution, proposed by Dr. DENNING and seconded by Dr. HERBERT TAYLOR, was carried *nem. con.*:

That the Lambeth Division of the British Medical Association considers that medical officers of health should not be debarred from engaging in private practice in the case of small towns and country districts.

Paper.—The CHAIRMAN then called upon Mr. GOADBY to read his paper upon Illnesses Influenced by Oral Sepsis. An interesting discussion followed, and a very practical point which arose out of it in regard to treatment was to

the effect that in the case of septic stumps in the mouth it was highly dangerous to have more than quite a few of them removed at a time. Mr. Goadby quoted several cases in which the extraction of 7, 8, or more such septic stumps had led to so increased an auto-infection that the patient had succumbed within a short time afterwards from pyæmia, purpura hæmorrhagica, and other most unfortunate complications. There were many other points of interest in the paper, but they were too many to summarize briefly in minutes.

Coroners and the Medical Profession.—The CHAIRMAN drew the attention of the meeting to the fact that each member of the Division had received a communication from the Medico-Political Committee re coroners and the medical profession, and requested members individually to interest themselves in the matter, and send any information they might have at their disposal either to the Medical Secretary, Dr. Smith Whitaker, or the Secretary of the Lambeth Division, Dr. Herbert French.

Suitability of Patients for Hospital Treatment.—It was proposed by Dr. FRENCH, seconded by Dr. TAYLOR, and carried unanimously:

That the Lambeth Division considers that a medical certificate of suitability for hospital treatment should be required as a condition of hospital treatment, except in the case of casualties.

Fresh Public Medical Institutions.—It was proposed by Dr. DENNING, seconded by Dr. TAYLOR, and carried unanimously:

That the Lambeth Division considers that it is desirable that no fresh public medical institution should be opened without previous consultation with the local medical profession through some organized body, such as the Division of the British Medical Association, in the area of which it is proposed to establish such new institution, and that it be an instruction to the Council to give effect to this principle in considering applications from Divisions or Branches for support in dealing with hospital questions.

Memorandum from the Branch Council.—Attention was called by the CHAIRMAN to the draft memorandum on the proposed Federated Societies' Medical Benefit Association by the Council of the Metropolitan Counties Branch of the British Medical Association, and members were urged to do all in their power to dissuade members of the profession from lending any support to a scheme so injurious to the real interests of the community.

Votes of Thanks.—Hearty votes of thanks both to Mr. Goadby for his paper and to the governors and Secretary of the Evelina Hospital for the kind arrangements that had been made for the holding of the meeting there, were proposed from the chair and carried unanimously, and the meeting adjourned at 5.40 p.m.

STRATFORD DIVISION.

A MEETING was held on Thursday, March 18th, at the Alexandra Hotel, Stratford, E., Dr. SPURRELL presiding, in the unavoidable absence of the Chairman.

An Address.—Mr. E. E. HENDERSON gave an address on the diagnosis and treatment of some inflammatory affections of the eye, and, after discussion, was awarded a very hearty vote of thanks.

Memorandum from the Branch Council.—The draft memorandum on the proposed Federated Societies' Medical Benefit Association by the Council of the Metropolitan Counties Branch of the British Medical Association was then considered, but, after full discussion, no decision was come to in the matter.

SOUTHERN BRANCH:

GUERNSEY AND ALDERNEY DIVISION.

A MEETING was held on Friday, March 12th, Dr. E. L. ROBINSON, President, in the chair. There were also present Major Myles, R.A.M.C. (President-elect), and Drs. Aikman, Bishop, Brehaut, Conrad Carey, Carruthers, Collings, de Jersey, and Bulteel (Honorary Secretary).

Apologies for Non-attendance.—Apologies were received from Dr. Bisson, Colonels Mosse and Robinson, and Dr. Wallace.

Confirmation of Minutes.—The minutes of the last meeting, held on February 1st, were read and confirmed.

Lunacy Laws.—There were produced by the Secretary the English Lunacy Act of 1890, the Guernsey Lunacy Ordinance of 1903, a letter from Dr. Manning, of Salisbury,

and a letter from the Medical Secretary of the Association, enclosing copies of the protective clauses in the English Act, and the report of the Association's special commissioner on the subject in 1906. It was resolved that a committee of five members, Drs. Benson, Bulteel, Corbin, de Jersey, and Robinson, be appointed to go into the whole question and report subsequently to the Division their recommendations, and that they be empowered to continue in office, if necessary, beyond the next annual meeting and until their labours are completed.

Divisional Library.—Communications were read from the Science Committee through the Medical Secretary. Drs. Aitken, Bulteel, and Carruthers were appointed a Library Committee, and instructed to draft rules for management of the library, and to submit a list of recommended purchases, according to the available funds, out of lists suggested by members.

Earlier Appointment of Representatives.—The communication hereon from the Organization Committee having been read, notice was given by the SECRETARY that he would confer with the Jersey Division, which was part of this constituency, with a view to each Division submitting an amended rule of similar nature at the annual meeting of both Divisions.

Whole-time Medical Officers of Health.—A memorandum from the Public Health Committee on this subject was read, and it was resolved that, in this Division's opinion, medical officers of health should be debarred from engaging in private practice, where possible.

Midwives Act.—It was resolved that, as the Midwives Act is not in force in Guernsey, this Division feels unable to express any opinion thereon.

Medical Certification for Hospital Treatment.—On the question of medical certificates being considered a necessary condition of hospital treatment, except in Poor Law cases, it was resolved that it be an instruction to the Representative to reply in the affirmative.

Contributions to Hospitals by Employers and Employees.—So many and grave difficulties were apprehended in this report that it was found impossible to come to any decision.

Fresh Public Medical Institutions.—The statement of the Hospitals Committee herein was read, and their proposition against such institutions being opened without previous consultation with the local medical profession. It was ordered that the reply be in the affirmative.

Medical References to Sanatoriums.—The reference from the Representative Meeting of the undesirability of local practitioners holding, or continuing to hold, appointments as honorary local medical referees to the National Association for the Establishment and Maintenance of Sanatoriums for Workers suffering from Tuberculosis was read. It was resolved that this Division assents thereto.

School and Compensation Certificates.—No certificates from hospitals with a view to compensation are issued here, as the Workmen's Compensation Act does not apply. No certificates are issued for fitness or unfitness for school except on order of the Board of Education (generally for ringworm), and for which a fee of 2s. 6d. is paid.

YORKSHIRE BRANCH.

A MEETING of this Branch was held at the Royal Eye and Ear Hospital, Bradford, on Wednesday, March 10th, Dr. R. TURNER (York), President, in the chair.

Adoption of Minutes.—Dr. BRONNER (Honorary Secretary) read the minutes of the last meeting, which were adopted.

The Referendum.—Dr. SINCLEAR WHITE (Sheffield) proposed and Dr. MOSSOR (Bradford) seconded that the President and Secretary should be empowered to sign a petition to the Privy Council, asking for an amendment in the Charter to the clauses relating to the Referendum. This was adopted *nem. con.*

The Report for the Year.—The annual reports and financial statements of the Branch and its constituent Divisions for the past year were presented.

New Members.—The following were elected to the membership of the Association: Ernest Woodhead Blackburn, M.B., Ivy House, Barnsley; James Grahame Campbell, M.D., Brantwood, Rotherham; Henry J. Clarke, jun., M.B., 53, Hall Gate, Doncaster; George O. Gauld, M.B., Elvington, York;

William Bertram Hill, M.D., The Mount, Harrogate; James Blacklay Lockerbie, M.B., The Cliffe, Otley Road, Bradford; Thos. Stephen MacSwiney, M.B., Monk Bretton, Barnsley; James K. W. Morris, M.B., Treeton, Sheffield; Matthew Bertram Potts, M.B., Dean House, West Vale, Halifax; William J. Burns Solkirk, M.B., Children's Hospital, Bradford; Annie Florence Theobalds, M.B., Poor Law Hospital, Halifax; Arthur Henry Thomas, M.B., Boroughbridge, Yorks; Robert McLeod Veitch, M.D., The Esplanade, Harrogate.

Papers.—Dr. CAMPBELL (Bradford) read a paper entitled "Some Remarks on Graves's Disease." Dr. Campbell pointed out that whilst myxoedema was a comparatively rare disease in the West Riding of Yorkshire, in fact not more often met with than might be accounted for by importation and by the occasional passage of exophthalmic goitre into myxoedema, yet Graves's disease was exceedingly common. He further remarked that in addition to true Graves's disease there were a very large number of cases of slight enlargement of the thyroid gland associated with anaemia. He suggested that there might possibly be some direct relationship between the frequency of the occurrence and the almost universal use of upland surface water, poor in calcium salts, in the district. With this view, he stated that for the last ten years he had consistently treated all his cases of Graves's disease with lime salts and had attained better results with this method, associated with rest, etc., than he had observed in any other form of treatment. He discussed the theories of causation, enumerated the principal symptoms, and described the chief methods of treatment that had been employed, laying special stress upon the advisability of giving abundant nourishment, but of avoiding excessive quantities of milk or other food substances which tended to stimulate the thyroid gland to increased activity. In dealing with surgical procedures he pointed out that ligation of the thyroid arteries was a more rational and less dangerous form of treatment than partial removal of the gland. He concluded by saying that, in his opinion, allowing for the fact that exophthalmic goitre was so often seen in degenerates who, of course, retain their degenerate characteristics independently of the cure or amelioration of the disease, the prognosis given was often unnecessarily hopeless and the treatment that of inactivity which was the reverse of mastery. Dr. BRONNER thanked Dr. Campbell for his excellent paper, and drew attention to the fact that in a recently-issued textbook on ophthalmology, 300 pages were devoted to this subject. He considered that the disease was due to a toxic condition. To his mind, some of the most interesting symptoms were those produced in the cornea. In some cases a keratitis was produced, with a degeneration of the centre of the cornea, inducing sloughing and the ultimate destruction of the cornea. Dr. GILMOUR (Burley) remarked that mental symptoms were by no means uncommon, and in Scalebor Park Asylum there were at present 3 or 4 cases with mental derangement. He had recently been treating cases of this character by giving milk from goats which had had the thyroid gland previously removed. Each goat gave about 2½ pints of milk daily. He had found the emaciation reduced, but the other symptoms had not been very markedly improved. Dr. BLACK (Harrogate) spoke strongly in favour of the treatment of Graves's disease by rest. He had in mind especially one patient whom he had kept in bed for nearly a year, and treated by 3 or 4 minim doses of tincture of aconite. At the end of the year the patient was much better, and now was nearly quite well again. Dr. J. J. BELL (Bradford) having asked a question as to why Dr. Campbell prohibited the use of milk, Dr. CAMPBELL replied that he thought milk and meat juice stimulated the activity of the gland, and should rather be avoided. Dr. EURICH (Bradford) read a paper on an unusual rare and fatal form of skin disease. The condition was a remarkable one, and the disease appeared to be an unusual form of lupus erythematosus. The case was discussed by Drs. BLACK, BAINTON (Ilkley), and HEAPY (Bradford); and Dr. EURICH replied. Dr. TREVELYAN (Leeds) gave a most interesting address, illustrated by lantern slides, on an analysis of 56 cases of total facial palsy: 9 occurred before 10 years, 7 between 10 and 20, 25 between 20 and 40, and 12 after 40 years. Males and females were equally affected, namely, 28 of each. In 4 cases, two or three preceding attacks had occurred. In all cases, the onset took place in the night, and in 5 others pain or dis-

comfort in the face was noted at the commencement. In 3 bilateral cases 1 was accompanied by paralysis in the arms (? post-influenzal) and in the other 2 by bulbar symptoms. In 1 case, in a boy aged 8 years, the palsy was congenital and was looked upon as a persistent birth palsy. In 2 cases the sixth nerve was also affected. In 1 case of eighteen years' standing with no recovery of voluntary power, a reaction to direct and indirect faradism together with emotional movement persisted in the muscles about the angle of the mouth. In several cases the above-named muscles were seen to be the last to recover. In some cases with preserved faradic reaction rapid recovery in four to six weeks was noted. In 1 case recovery commenced well after twelve months from the onset. Dr. BRONNER (Bradford) showed by lantern slides the method for the direct examination of the oesophagus and upper air passages by Brunner's instruments. At the close of his address Dr. Bronner demonstrated with the actual instruments the methods for their employment. The demonstration elicited the greatest interest on the part of the members, and Dr. Bronner was heartily thanked for the great trouble he had gone to in the matter. The meeting then terminated.

Dinner.—Seventeen members dined at the Midland Hotel.

To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, April 28th, in the new Council Room, at 429, Strand, London, W.C.

By Order.

March 25th, 1909.

GUY ELLISTON.

BRANCH AND DIVISION MEETINGS TO BE HELD

DORSET AND WEST HANTS BRANCH.—The spring meeting of this Branch will be held in Dorchester on Wednesday, May 5th. Members wishing to read papers, show cases, exhibit specimens, or propose new members, are requested to communicate, not later than Thursday, April 22nd with JAMES DAVISON, Honorary Secretary, "Streteplace," Bournemouth.

DORSET AND WEST HANTS BRANCH AND WEST SOMERSET BRANCH.—Nominations for the office of a Representative on the Central Council should be sent, on or before Tuesday, April 13th next, in accordance with By-law 25, to JAMES DAVISON, "Streteplace," Bath Road, Bournemouth.

EAST ANGLIAN BRANCH.—The spring meeting will be held at Bury St. Edmunds on Thursday, April 15th. Members wishing to read papers or show cases should communicate at once with Dr. Gutch, Ipswich, the Honorary Secretary for Suffolk.—B. H. NICHOLSON, Senior Secretary, East Lodge, Colchester.

LANCASHIRE AND CHESHIRE BRANCH.—Change of date of Branch Council meeting. Owing to April 14th falling in Easter week the Branch Council meeting will be held a week earlier—namely, on Wednesday, April 7th, 4.30 p.m., at Onward Buildings, 207, Deansgate, Manchester.—F. CHARLES LARKIN, Honorary Secretary, Liverpool.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—A general meeting will be held at the Greenbank Hotel, Northwich, at 5 p.m., on Wednesday, April 21st, to receive reports from the Executive Committee, to consider matters referred to Divisions, and to transact the usual business. At 6 p.m. Dr. Manwaring White will read a paper on Frontal Sinusitis as a Complication of Influenza. Dinner at 7 p.m.—T. W. H. GARSTANG, Honorary Secretary.

NORTH OF ENGLAND BRANCH: NORTH NORTHUMBRIA DIVISION.—A meeting will be held in the Blue Bell Hotel, Belford, on Wednesday, March 31st, at 2.30 p.m. Business: (1) Confirmation of minutes. (2) A discussion on the question of Treatment of School Children under the Education Act will be opened by Dr. Burrow, Medical Inspector of School Children, and members are requested to show their interest in this

important subject by attending and expressing their opinion. For the convenience of those taking part in the discussion reference to the SUPPLEMENT of the BRITISH MEDICAL JOURNAL of June 20th and July 18th, 1908, will be of assistance. (3) Any other business.—C. CLARK BURMAN, Honorary Secretary, Alnwick.

SOUTH-EASTERN OF IRELAND BRANCH.—A meeting of this Branch, also a meeting of the Branch Council and the local Division, will be held at Adelphi Hotel, Waterford, on Wednesday, April 7th, at 5.15 p.m. Agenda: (1) Minutes of last meeting. (2) Letters of apology. (3) Correspondence. (4) Dr. Laffan will move that dinners at Branch meetings be paid for at so much to each member present and half of that amount to each absent member. (5) Dr. Mackey will move that members of this Branch bind themselves not to accept a less fee than one guinea for examination and report in any case under the Employers' Liability Act or Workmen's Compensation Act at common law, whether same be furnished on behalf of employers or insurance companies. (6) Any other business.—J. QUIRKE, Honorary Secretary, Filtown.

SOUTH MIDLAND BRANCH: RUCKINGHAMSHIRE DIVISION.—The first meeting of this Division will be held at the Royal Bucks Hospital, Aylesbury, on Tuesday, March 30th, at 3.30 p.m. Order of business will be as follows: (1) Adoption of Rules.—It is suggested that the whole of the rules sent out be passed *en bloc*. They have been carefully gone over by the Committee and adapted to suit the Division. (2) Election of officers. (3) Resolutions proposed by the Committee: (a) That three of the meetings be held at Aylesbury and one at some other place within the Division. (b) That at each Aylesbury meeting refreshments be provided, and that a fund be formed to meet the expenses. (c) That an annual dinner be held about the month of October. (d) That the Executive Committee be also the Ethical Committee. (4) Medical Inspection of School Children: (a) Paper by Dr. Carruthers. (b) Resolution by Dr. Shaw in reference to fees offered by the Bucks County Council for certificates in infectious cases. (c) Voting on the questions asked at the end of the Memorandum. (5) Demonstration by Dr. William Hill (St. Mary's Hospital) on Direct Vision Laryngoscopy, Tracheo-bronchoscopy, and Oesophagoscopy on Living Patients under Cocaine Anaesthesia. All members of the Division are heartily invited to bring any medical friend with them.—ARTHUR E. LARKING.

WEST SOMERSET BRANCH.—The next meeting of this Branch will be held at the Taunton and Somerset Hospital on Friday, April 2nd, at 3.30 p.m., when the President, Dr. H. T. S. Aveline, will take the chair. It is hoped to make this largely a clinical meeting, and members are invited to submit cases and specimens of interest. The following are already promised:—Mr. A. J. H. Iles: Skiagrams showing the utility of X Rays in the Diagnosis of Diseases of Bone. Mr. A. E. Joscelyne: A Case of "Port Wine" Mark treated with High-frequency Currents. Hospital Treatment: The members of the Branch will be asked to instruct their Representative how to shall vote on the following resolution, which will be brought before the next Representative Meeting: "That a medical certificate of suitability for hospital treatment be required as a condition of hospital treatment, except in the case of casualties." Further particulars on this subject will be found in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of February 27th, 1909. "What is an Accident?" Should time permit, Dr. Aveline will open a discussion on this subject, which, owing to the Workmen's Compensation and other recent Acts of Parliament, has become of interest and importance. Tea will be served at the conclusion of the meeting.—W. B. WINCKWORTH, Honorary Secretary, Taunton.

CENTRAL MIDWIVES BOARD.

A MEETING of the Central Midwives Board was held at Caxton House, Westminster, on March 18th, with Dr. F. H. CHAMPNEYS in the chair.

Registration of Births.

A letter was received from the Registrar-General as to the Board's request for the addition of a new column to the birth register for the registrars to add the name, status, and address of the person who delivered the child. In this letter the Registrar-General said that these particulars, although no doubt useful, were not among the most desirable additions that could be made; it appeared to the Registrar-General that this information might be inserted in the notice of birth furnished to the medical officers of health in places where the Notification of Births Act had been adopted.

Practitioners "Covering" Midwives.

Letters from Dr. A. G. R. Foulerton, County Medical Officer for East Sussex, as to medical practitioners "covering" midwives, were considered. The Board decided that the Secretary be instructed to draft a case for the opinion of the Privy Council as to whether a certified

midwife personally delivering a woman in childbirth is acting as a midwife where a medical practitioner has been engaged to attend the case.

Midwives in Essex.

A report was considered from Dr. J. C. Thresh, County Medical Officer for Essex, to the Essex Education Committee on the supply of midwives in that county. The Board directed that Dr. Thresh be thanked for the presentation of his report.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Fleet Surgeon W. BERT and Staff Surgeon G. C. C. ROSS, M.B., to the *Sutley*, March 15th; Fleet Surgeon H. X. BROWNIE to the *Leviathan*, March 15th; Surgeon F. E. JOLLY to the *President*, additional for three months' course at West London Hospital, March 16th; Surgeon M. HAYDON to be lent to the *Thames* during the absence of Staff Surgeon PEARCE, March 17th; Fleet Surgeon A. J. PICKTHORN to the *Triumph*, March 18th; Fleet Surgeon H. S. R. SPANROW to the *Sapphire*, additional for the *Sapphire II*, April 10th; Fleet Surgeon E. CORCORAN to the Royal Marine Division, Plymouth, April 10th.

INDIAN MEDICAL SERVICE.

The following officers are admitted to the Indian Medical Service, their commissions to bear date August 1st, 1908: R. B. LLOYD, A. C. MCNEIRO, A. G. HENDERSON, G. G. JOLLY, H. STOUT, A. C. MCNEILL, R. L. GAZLEY, F. G. GRAHAM, T. D. MURISON, J. J. H. NELSON, S. S. PRINSON, F. F. S. SMITH, A. J. SYMES, G. S. LITTLE, T. C. BOYD.

TERRITORIAL FORCE.

ROYAL FIELD ARTILLERY.

SURGEON-LIEUTENANT-COLONEL AND HONORARY SURGEON-COLONEL ISAAC MORRIS and Surgeon-Captain J. C. WRIGHT, M.B., from the 2nd West Riding Mosaic, to the 2nd Middlesex Royal Garrison Artillery (Volunteers), are appointed to the 2nd West Riding Brigade, with rank and precedence as in the Volunteer Force, April 1st, 1908 (Surgeon-Captain Wright to be supernumerary).

ROYAL GARRISON ARTILLERY.

Surgeon-Captain J. CHROME, Tyndemouth unit, to be Surgeon-Major, July 17th, 1908. Surgeon-Captains E. N. CLOSE and A. A. MACKETTS, M.B., from the 1st Hampshire Royal Garrison Artillery (Volunteers), are appointed to the Hampshire unit, with rank and precedence as in the Volunteer Force, April 1st, 1908.

ROYAL ARMY MEDICAL CORPS.

For Attachment to Units other than Medical Companies.—Surgeon-Captain R. B. SIDEBOTTOM, from the 6th Battalion the Cheshire Regiment, to be Captain, October 3rd, 1908. He is promoted to be Major, October 4th, 1908. The announcements of the transfer of Surgeon-Captains E. N. CLOSE and A. A. MACKETTS, M.B., from the 1st Hampshire Royal Garrison Artillery (Volunteers), which appeared in the *London Gazette*, October 20th, 1908, are cancelled.

Fourth London General Hospital.—Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel (Honorary Captain in the army) ARTHUR THORNE, M.B., from the 2nd Middlesex Royal Garrison Artillery (Volunteers), to be Lieutenant-Colonel with the honorary rank of Surgeon-Colonel, with precedence as in the Volunteer Force, dated April 1st, 1908. (George Nixon Biggs, M.B., to be Major, dated February 26th, 1909.)

Fifth Northern General Hospital.—Major A. V. CLARKE, M.D., from the Mobilization List, Royal Army Medical Corps, Territorial Force, to be Lieutenant-Colonel, February 24th. Captain I. K. HANCOCK, M.B., from the Mobilization List, Royal Army Medical Corps, Territorial Force, to be Major, February 24th.

Sanitary Service (Officers whose services will be available on Mobilization).—Captain L. C. PAGES, M.D., to be Major, March 24th. Captain CLAUDE B. REE, M.B., to be Major, dated April 1st, 1908.

SPECIAL RESERVE.

ROYAL ARMY MEDICAL CORPS.

CAPTAIN C. R. TITCHBORN, from the 1st Royal Army Medical Corps (Militia), having assisted to be transferred, is appointed to the Special Reserve of Officers, retaining the rank and seniority which he held in the Militia, September 20th, 1903.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,632 births and 6,985 deaths were registered during the week ending Saturday last, March 20th. The annual rate of mortality in these towns, which had been 21.1, 21.3, and 22.1 per 1,000 in the three preceding weeks, was again 22.1 per 1,000 last week. The rates in the several towns ranged from 10.5 in Walthamstow, 11.9 in Devonport, 12.0 in Hornsey, 12.5 in Wallasey, 12.7 in Gateshead, 13.2 in Barrow-in-Furness, and 13.4 in Burton-on-Trent, to 25.5 in Burnley, 26.0 in Merthyr Tydfil, 26.5 in Wigan, 26.7 in Warrington, 27.5 in Liverpool, 28.2 in Sheffield, and 36.7 in St. Helens. In London the rate of mortality was 24.0 per 1,000, while it averaged 21.5 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 2.3 per 1,000 in the seventy-six towns; this was the rate in London also, while among the seventy-five other large towns the death-rates from these diseases ranged upwards to 4.3 in Portsmouth, 4.6 in Coventry and in West Hartlepool, 4.7 in Birmingham, 4.9 in Blackburn, 5.1 in Warrington, 5.5 in Aston Manor, 6.3 in Wigan, 6.5 in Sunderland, 7.4 in Smethwick, and 17.0 in St. Helens. Measles caused a death-rate of 3.0 in Handsworth (Staffs) and in Sheffield,

3.5 in Wigan, 3.9 in Portsmouth, 4.2 in Birmingham, 4.4 in Smethwick, 4.6 in West Hartlepool, 4.9 in Aston Manor, 5.9 in Sunderland, and 13.2 in St. Helens; scarlet fever of 1.9 in Blackburn and 2.2 in St. Helens; whooping-cough of 1.3 in Coventry, 1.4 in Nottingham, 1.6 in Brighton, 2.0 in Great Yarmouth, and 2.7 in Swansea; enteric fever of 1.4 in Warrington; and diarrhoea of 2.2 in Smethwick. The mortality from diphtheria showed no marked excess in any of the large towns. One fatal case of small-pox belonging to London and 1 to Bristol were registered last week. The Metropolitan Asylums Hospitals contained 3 small-pox patients at the end of last week, against 1 and 2 at the end of the two preceding weeks; 1 new case was admitted during the week, against 2 in the previous week. The number of scarlet fever patients remaining under treatment at the end of the week in these hospitals and the London Fever Hospital was 2,596, against 2,873 and 2,670 at the end of the two preceding weeks; 279 new cases were admitted during the week, against 285 and 268 in the two preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, March 20th, 956 births and 754 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had risen from 18.2 and 21.6 per 1,000 in the five preceding weeks, declined again last week to 20.1 per 1,000, and was 1.0 per 1,000 below the mean rate during the same period in the twenty-six large English towns. Among these Scottish towns the death-rates ranged from 17.2 in Edinburgh and 17.6 in Perth to 23.7 in Dundee, 23.8 in Paisley, and 25.0 in Greenock. The death-rate from the principal infectious diseases averaged 2.4 per 1,000, the highest rates being recorded in Glasgow and Paisley. The 356 deaths registered in Glasgow in the week which were referred to scarlet fever, 2 to diphtheria, 37 to whooping-cough, 4 to enteric fever, and 8 to diarrhoea. Two fatal cases of scarlet fever and 2 of whooping-cough were recorded in Edinburgh; 2 of diphtheria and 5 of whooping-cough in Dundee; 3 of whooping-cough in Aberdeen; and 2 of scarlet fever and 2 of whooping-cough in Paisley.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, March 20th, 593 births and 571 deaths were registered in the twenty-two principal urban districts of Ireland against 595 births and 524 deaths in the preceding period. The annual death-rate in these districts, which had been 23.0, 22.5, and 23.9 per 1,000 in the three preceding weeks, rose to 26.1 per 1,000 in the week under notice, this figure being 4.0 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 29.3 and 21.0 respectively, those in other districts ranging from 12.3 in Drogheda and 15.9 in Tralee to 46.1 in Queenstown and 46.2 in Clonmel, while Cork stood at 45.5, Limerick at 36.2, and Galway at 17.4. The zymotic death-rate in the twenty-two districts again averaged 1.3 per 1,000, and thus has not varied for the past three weeks.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BIRKENHEAD UNION.—Male Resident Assistant Medical Officer for the Infirmary and Sanatorium. Salary, £120 per annum.

BIRMINGHAM CITY.—Assistant Medical Officer of Health. Salary, £250 per annum.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—House-Surgeon. Salary at the rate of £80 per annum.

BRISTOL: ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—Assistant House-Surgeon. Salary, £50 per annum.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £80 per annum, increasing to £90 after six months.

CANCER HOSPITAL, Fulham Road, S.W.—Surgical Registrar. Honorarium, £25 5s. per annum.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—House-Surgeon. Salary, £90 per annum.

CHELtenham GENERAL HOSPITAL.—(1) Honorary Surgeon; (2) Honorary Clinical Pathologist.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician (male). Salary at the rate of £75 per annum.

COLCHESTER: ESSEX COUNTY HOSPITAL.—House-Surgeon. Salary, £80 per annum.

DUDLEY: GUEST HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum.

ENNISKILLEN: FERMANAGH COUNTY HOSPITAL.—House-Surgeon. Salary, £72 per annum.

EVELINGA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road.—Physician to Out-patients.

GROGERS' COMPANY.—Two Scholarships of £300 a year each for Research in Sanitary Science.

HULL: ROYAL INFIRMARY.—House-Physician. Salary, £100 per annum.

LEAMINGTON: WARNEFORD, LEAMINGTON, AND SOUTH WARRICKSHIRE GENERAL HOSPITAL.—Senior and Junior Resident Medical Officers. Salary, £100 and £65 per annum respectively.

LEEDS GENERAL DISPENSARY.—Ophthalmic House-Surgeon. Salary at the rate of £50 per annum.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £100 per annum, increasing £10 on reappointment.

LIVERPOOL EYE AND EAR INFIRMARY.—Honorary Assistant Surgeon.

LIVERPOOL: ROYAL SOUTHERN HOSPITAL.—House-Physician. Salary, £60 per annum.

LIVERPOOL: STANLEY HOSPITAL.—(1) Senior House-Surgeon; salary, £100 per annum. (2) Two Junior House-Surgeons; salary, £50 per annum each.

LIVERPOOL: WEST DERBY UNION INFIRMARY.—Assistant Medical Officer. Salary, £100 per annum.

LONDON SCHOOL OF TROPICAL MEDICINE.—Craggs' Research Prize, value £50.

MANCHESTER: MONSIEUR FEVER HOSPITAL.—Medical Superintendent. Salary, £175 per annum.

MANCHESTER VICTORIA MEMORIAL JEWISH HOSPITAL.—Resident Medical Officer. Salary, £80 per annum.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, Chancery Street, W.C.—Clinical Pathologist.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead. Senior and Junior Resident Medical Officer. Honorarium, £100 and £50 per annum respectively.

NEWCASTLE-UPON-TYNE: ROYAL VICTORIA INFIRMARY.—Pathologist to the Infirmary, and Lecturer on Pathology to the University of Durham College of Medicine. Salary, £400 per annum.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—Male Assistant House-Surgeon. Honorarium, £20 for six months.

PADDINGTON INFIRMARY.—Second Assistant to the Medical Superintendent and Medical Officer of the Workhouse. Salary at the rate of £72 per annum.

PORTSMOUTH PARISH.—Second Assistant Resident Medical Officer for the Workhouse Infirmary, Workhouse, and Children's Home. Salary at the rate of £120 per annum.

ST. MARYLEBONE GENERAL DISPENSARY, Welbeck Street, W.—(1) Honorary Physician; (2) Honorary Anaesthetist.

SALFORD ROYAL HOSPITAL.—Junior House-Surgeon (male). Salary at the rate of £50 per annum.

SEAMEN'S HOSPITAL, Greenwich.—(1) Two House-Physicians; (2) Two House-Surgeons. Salary at the rate of £50 per annum each.

SOUTHAMPTON FREE EYE HOSPITAL.—House-Surgeon. Salary, £100 per annum.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House-Surgeon (male). Salary, £50 per annum.

SOUTHPORT COUNTY BOROUGH.—School Medical Officer. Salary, £250 per annum, rising to £300.

STOCKPORT COUNTY BOROUGH.—School Medical Officer. Salary, £250 per annum, increasing to £300.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—House-Surgeon. Salary, £30 for six months.

WAKEFIELD CLAYTON HOSPITAL.—Junior House-Surgeon. Salary, £80 per annum.

WALLASEY DISPENSARY AND VICTORIA CENTRAL HOSPITAL.—House-Surgeon. Salary, £100 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Clinical Assistants; (2) The Casualty Officers.

WORSTER GENERAL INFIRMARY.—House-Physician. Salary, £100 per annum.

APPOINTMENTS.

BIRD, Gerald F., M.B.Cantab., Medical Officer to the Meath Home for Epileptic Women and Girls, Godalming.

BLAXLAND, A. Jasper, M.B., M.S.Lond., F.R.C.S.Eng., Assistant Physician to the Norfolk and Norwich Hospital.

BUCHAN, George F., M.B., Ch.B.Glasg., D.P.H.Camb., Medical Officer of Health for the Urban District of Heston and Isleworth, Hounslow.

CANNERY, J. R. C., L.R.C.P., M.R.C.S., M.B., B.C., House-Surgeon to University College Hospital, Gower Street, W.C.

GRAY, Leonard, M.R.C.S.Eng., L.R.C.P.Lond., Honorary Visiting Physician to the Staffordshire General Infirmary.

HARD, H. S., M.D.(U.S.A.), Clinical Assistant to the Chelsea Hospital for Women.

HEWLEY, Frank, M.D.Durb., F.R.C.S.Eng., Honorary Ophthalmic Surgeon to the Western General Dispensary, Marylebone Road, N.W.

HODSON, Miss Margaret, R.A., M.B., B.S.Lond., Superintendent of the Boarding-out Department, Dr. Barnardo's Homes.

LEWIS, John, M.R.C.S., L.R.C.P., M.B., B.S., Obstetric Assistant to University College Hospital, Gower Street, W.C.

NENT, Charles, M.D.Paris, Clinical Assistant to the Chelsea Hospital for Women.

PARE, J. W., M.D., C.M.Édin., L.D.S.Eng., Dental Surgeon to the Hospital for Diseases of the Throat, Golden Square, W.

ROBERTSON, F. Gordon, M.B., Ch.B.Glasg., Junior Assistant Physician to Ayr District Asylum.

SANKEY, R. H., M.A., M.B., B.Ch.Oxon., M.R.C.S., L.R.C.P., Medical Officer to H.M. Prison at Oxford.

SCOTTERLAND, Halliday, M.D.Édin., Resident Physician to the Royal Victoria Hospital for Consumption, Edinburgh.

WALLER, H. K., M.R.C.S., L.R.C.P., House-Physician to University College Hospital, Gower Street, W.C.

EDINBURGH ROYAL INFIRMARY.—The following appointments have been made:
Resident Physicians: W. B. Somers, M.B., Ch.B.; F. W. Hay, M.B., Ch.B.; H. A. Watson-Wentys, M.B., Ch.B.; A. F. Hewat, M.B., Ch.B.; J. T. Simson, M.B., Ch.B.; and R. A. Krause, M.B., Ch.B.
Resident Surgeons: W. F. Ruist, L.R.C.P. and S.Édin.; J. E. Spence, M.B., Ch.B.; W. A. Young, M.B., Ch.B.; H. M. Anderson, M.B., Ch.B.; A. C. Mallace, M.A., M.B., Ch.B.; and J. B. de W. Molony, M.B., Ch.B.
Non-resident House-Surgeons: R. W. L. Todd, M.B., Ch.B., B.Sc.; H. P. Milligan, M.D.; and J. Lochhead, M.D.
Clinical Assistants: J. Langwill, M.B., Ch.B.; J. M. Deuchars, M.B., Ch.B.; A. Fleming, M.D., Ch.B.; L. S. Stewart, M.D., M.B., Ch.B.; R. H. Jamieson, M.B., Ch.B.; J. G. Greenfield, M.B., Ch.B.; S. Jackson, M.B., Ch.B.; F. R. Laing, M.B., Ch.B.; A. White, M.B., Ch.B.; A. B. Darling, M.B., Ch.B.; and F. E. Reynolds, M.B., Ch.B., L.M.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

TAYLOR.—On March 12th, at Wray Croft, Lacock, Chippenham, the wife of S. H. Stanley Taylor, M.B., Ch.B., of a son.

DEATHS.

HARDY.—On March 8th, at Aden, of sleeping sickness, on the voyage home, from Nyassaland, Captain Frederick William Hardy, R.A.M.C., M.R.C.S., L.R.C.P.Lond., aged 38, son of Major-General F. Hardy, C.B., York and Lancaster Regiment, Shawford Winchester.

SOLTAU.—On March 17th, at Benares, the result of an accident George Alick Soltau, M.B., B.S.Lond., Captain I.M.S.

DIARY FOR THE WEEK.

TUESDAY.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Third Lumlaine Lecture, by Dr. Noiman Moore: Rheumatic Fever and Valvular Disease.

THURSDAY.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hotel, Tottenham, 4.15 p.m.—Discussion on Empyema, to be opened by Dr. T. R. Whipple.

ROENTGEN SOCIETY, 20, Hanover Square, 8.15 p.m.—Paper by Mr. J. H. Gardiner: The Origin, History, and Development of the X-ray Tube.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—First Oliver Sharpey Lecture, by Professor C. S. Sherrington, F.R.S.: The Role of Reflex Inhibition in the Co-ordination of Muscular Action.

FRIDAY.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Second Oliver Sharpey Lecture, by Professor C. S. Sherrington, F.R.S.: The Role of Reflex Inhibition in the Co-ordination of Muscular Action.

ROYAL SOCIETY OF MEDICINE: LARYNGOLOGICAL SECTION, 20, Hanover Square, 5 p.m.—Cases and Specimens.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, Hammersmith Road, 8 p.m.—Clinical Evening.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Tuesday, 3.45: Anaesthetics. Friday, 3.45: Mouth and Teeth.

LONDON SCHOOL OF CLINICAL MEDICINE, Seamen's Hospital, Greenwich.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m., Monday, and noon, Thursday; Skin, at noon and 4 p.m., Thursday, and noon, Friday; Eye, 11 a.m., Wednesday and Saturday; Radiography, 4 p.m., Thursday. Special lecture, Monday, 4 p.m., Aphasia.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chancery Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m., Surgical Out-patient; 2.30 p.m., Medical Out-patient; Nose, Throat, and Ear; X Rays, 4.30 p.m., Medical In-patient. Tuesday, 10 a.m., Medical Out-patient; Clinic; 2.30 p.m., Operations; Clinics, Surgical, Gynaecological. Wednesday, 2.30 p.m., Medical Out-patient, Skin, and Eye Clinics. Thursday, 2.30 p.m., Gynaecological Operations; Clinics; Medical Out-patient; Surgical Out-patient; X Rays; 5 p.m., Medical In-patient. Friday, Clinic; 10 a.m., Surgical Out-patient; 2.30 p.m., Operations; Clinics; Medical Out-patient; Eye; 5 p.m., Medical In-patient; Demonstration on the Infectious Fevers (at the North-Eastern Fever Hospital, St. Ann's Road, N.).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.—The following are the arrangements for next week: At 2 p.m., Medical and Surgical Clinics, X Rays; 2.30 p.m., Operations, Monday and Thursday (and Wednesday and Saturday), 2 p.m., Diseases of the Eyes. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (and Wednesday and Saturday, 10 a.m.), Diseases of Throat, Nose, and Ear; 2.30 p.m., Diseases of Skin. Wednesday and Saturday, 10 a.m., Diseases of Children. Lectures: 10 a.m., Monday and Thursday, Demonstration by Surgical Registrar; Friday, Demonstration by Medical Registrar; 12 noon, Monday, Pathological Demonstration; 12.15 p.m., Wednesday and Saturday, Practical Medicine; 5 p.m., Monday, Clinical; Tuesday, Clinical; Clinical; Thursday, Clinical; Friday, Clinical.

BOOKS, ETC., RECEIVED.

Health, Morals, and Longevity. By G. Gresswell and A. Gresswell. Bristol: J. Wright and Co.; and London: Simpkin, Marshall, 1909, 5s.

Dictionary of National Biography. Edited by S. Lee. Vol. xiii. Masquerier-Myles. London: Smith, Elder and Co. 1909, 15s.

Operations upon the Uterus, Perineum, and Round Ligaments. By W. J. S. McKay, M.B., M.Ch., B.Sc. London: Baillière, Tindall and Cox. 1909, 21s.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.
MARCH.	
28 Sunday ..	
29 MONDAY ..	
30 TUESDAY ..	(BUCKINGHAMSHIRE DIVISION, <i>South Midland Branch</i> , Royal Bucks Hospital, Aylesbury, 3.30 p.m.
31 WEDNESDAY ..	(BATH AND BRISTOL BRANCH, Bristol. LANCASHIRE AND CHESHIRE BRANCH, Branch Ethical Committee, Liverpool Medical Institution, 4.30 p.m. NORTH-NORTHUMBERLAND DIVISION, <i>North of England Branch</i> , Blue Bell Hotel, Belford, 2.30 p.m.
APRIL.	
1 THURSDAY ..	(SOUTH WALES AND MONMOUTHSHIRE BRANCH, Spring Meeting, Brecon. WESTMINSTER DIVISION, <i>Metropolitan Counties Branch</i> , Criterion Restaurant, 4.30 p.m.
2 FRIDAY ..	(SWANSEA DIVISION, <i>South Wales and Monmouthshire Branch</i> , 8.15 p.m. WEST SOMERSET BRANCH, Taunton and Somerset Hospital, 3.30 p.m.
3 SATURDAY ..	(LONDON: Ophthalmia Neonatorum Committee, 10 a.m.
4 Sunday ..	
5 MONDAY ..	(LONDON: Naval and Military Committee, 2.30 p.m.
6 TUESDAY ..	(LONDON: Public Health Committee, 3 p.m.

Date.	Meetings to be Held.
APRIL (Continued).	
7 WEDNESDAY ..	(LONDON: Medico-Political Committee, 2.15 p.m. LANCASHIRE AND CHESHIRE BRANCH, Council Meeting, Onward Buildings, 207, Deansgate, Manchester, 4.30 p.m. SOUTH-EASTERN OF IRELAND BRANCH, Adelphi Hotel, Waterford, 3.15 p.m., also meeting of Branch Council and Local Division.
8 THURSDAY ..	
9 FRIDAY ..	<i>Good Friday.</i>
10 SATURDAY ..	
11 Sunday ..	
12 MONDAY ..	<i>Bank Holiday.</i>
13 TUESDAY ..	(LONDON: Organization Committee, 10.30 a.m.
14 WEDNESDAY ..	(RICHMOND DIVISION, <i>Metropolitan Counties Branch</i> , Medico-Political Meeting, Royal Hospital, Richmond, 8.30 p.m.
15 THURSDAY ..	(EAST ANGLIAN BRANCH, Spring Meeting, Bury St. Edmund's.
16 FRIDAY ..	(SWANSEA DIVISION, <i>South Wales and Monmouthshire Branch</i> , Clinical Meeting, 8.15 p.m.
17 SATURDAY ..	
18 Sunday ..	
19 MONDAY ..	
20 TUESDAY ..	

ANNUAL MEETING, BRITISH MEDICAL ASSOCIATION, BELFAST, 1909.

The Seventy-seventh Annual Meeting of the British Medical Association will be held at Belfast from July 23rd, to July 31st, 1909, under the Presidency of Sir William Whitla.

The Annual Representative Meeting commences in Belfast on July 23rd. The Presidential Address will be delivered on July 27th. The Sections will meet on July 28th, 29th, and 30th.

A preliminary programme of arrangements was published in the SUPPLEMENT, February 27th, 1909. The Honorary Local Secretaries are: Henry Lawrence McKisack, M.D., M.R.C.P., 17, University Square, Belfast; Cecil Edward Shaw, M.A., M.D., M.Ch., 29, University Square, Belfast; and Howard Stevenson, B.A., M.B., F.R.C.S.I., 2, College Square North, Belfast.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

The British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every

Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days for such longer period as the Branch may by its Rules prescribe after the date of the said notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, APRIL 3RD, 1909.

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Meetings of Branches & Divisions.

The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

EDINBURGH BRANCH: SOUTHERN DIVISION.

A MEETING of this Division was held in the Oddfellows' Hall, Forrest Road, on Friday, March 12th, at 8.15 p.m. Dr. MATHEWSON was in the chair, and there were present Drs. ALLAN, H. JAMIESON, KENNEDY, MOWAT, E. PRICE, PROUDFOOT, SALT, STEWART, WALKER, WEBSTER, and the Secretary.

Apology for Non-attendance.—An apology for absence was intimated from Dr. S. PATERSON.

Confirmation of Minutes.—The minutes of the last meeting were read and (after a correction by Dr. WALKER that a motion was submitted on the report on opposition to the Charter supporting the action of the Branch Council, and that the correction be inserted in the minutes) approved and signed.

Medical Certificates under Workmen's Compensation Act.—Letters were read from the secretaries of the Royal Infirmary and Chalmers Hospital in reply to the question addressed to them re medical certificates under the Workmen's Compensation Act. In both cases the answer was affirmative and satisfactory.

Letter.—A letter was read from Dr. Logan Turner, Secretary of the Branch Council, explaining the delay in bringing the two matters referred to in the minutes before the Branch Council.

Non-members in Area of Division.—The SECRETARY, as requested at the last meeting, placed on the table a list of medical men residing in the Division area who are not members of the Association—52 in number. He was instructed to approach those who might be induced to become members.

Midwives Act.—A letter from the Medical Secretary bearing on the action taken by the Association re the Midwives Act was read. As question (a) is answered in the negative the other questions do not require any answer.

Medical Certification of Suitability for Hospital Treatment.—The report on medical certification of suitability of patients for hospital treatment was considered. The meeting cordially approved of the extract of Poor Law Report, Part V, Chapter 2, paragraph 189, and of the Council's report on the suitability and evidence of suitability of patients for admission. The recommendation,

That a medical certificate of suitability for hospital treatment be required as a condition of hospital treatment, except in case of casualties,

was unanimously approved.

Contributions to Hospitals by Employers and Employees.

—The report on contribution to hospitals by employers of labour and employees was submitted. The negative proposal in (a) motion,

That such contribution should not be considered as entitling the contributors to unlimited hospital, as also to gratuitous medical attendance,

was unanimously approved. The positive proposal in (a) motion,

That the contributions in question should be considered as being the payment of premiums for a proportionate insurance against liability for hospital and medical attendance in cases of serious illness and accidents, which are made on behalf of those unable themselves to pay directly or adequately for the same,

was unanimously disapproved. Motion (b),

That a scheme whereby the contribution should be paid to insurance companies, who in their turn will proportionately recompense hospital boards, hospital staffs, general practitioners, etc., for all attendances given,

was unanimously disapproved.

New Public Medical Institutions.—The statement,

That it is desirable that no fresh public medical institutions should be opened without previous consultation with the local medical profession,

was unanimously agreed to.

Sanatoriums for Tuberculous Workers.—The statement on "Sanatoriums for workers suffering from tuberculosis" was submitted. Dr. WALKER moved that the statement be disapproved. The motion was not seconded. After discussion, joined in by Drs. PRICE, KENNEDY, JAMIESON, and PROUDFOOT, it was agreed with one dissentient to approve statement (a), paragraph 3, statement (b) with the exception of words after "proposed," and statement (c). As regards paragraph 4, there being no members of the profession in the Division area holding appointments as honorary medical referees to the association in question no answer was considered necessary.

Compulsory Notification of Pulmonary Tuberculosis.—Dr. E. PRICE submitted his motion,

That compulsory notification of pulmonary tuberculosis is advisable, so that the enactments of the Public Health Act may be put in force for the benefit of the public,

in an able and interesting paper. Dr. WALKER seconded, Dr. DEWAR moved an amendment:

That while in agreement with notification of pulmonary tuberculosis as being of some benefit to the public welfare, we are of opinion that the infective nature of pulmonary tuberculosis is very much exaggerated, and that persons suffering from this disease can be treated, with proper precautions as regards the sputum and cleanliness, while employed at their work, without much, if any, danger at all to their fellow-workers.

Drs. KENNEDY and STEWART spoke, and Dr. SALT moved the direct negative:

That compulsory notification of pulmonary tuberculosis is not advisable.

Dr. H. JAMIESON, owing to the late hour, moved the adjournment of the debate to Thursday, March 25th, at 8.30 p.m. This was unanimously agreed to.

Adjourned Meeting.

The adjourned meeting of the Division was held in the Oddfellows' Hall, Forrest Road, on Thursday, March 25th, at 8.30 p.m. Dr. MATHEWSON was in the chair, and there were present: Drs. PORTER, DICKSON, PROUDFOOT, SALT, H. JAMIESON, KENNEDY, E. PRICE, WEBSTER, and the Secretary.

Compulsory Notification of Pulmonary Tuberculosis.—Dr. H. JAMIESON seconded Dr. DEWAR's amendment. Dr. PROUDFOOT seconded Dr. SALT's amendment. The discussion was taken part in by Drs. PORTER, WEBSTER, KENNEDY, and MATHEWSON. After replies by Drs. SALT, DEWAR, and PRICE, Dr. DEWAR, with the approval of his seconder, withdrew his amendment in favour of that of Dr. SALT. A vote was taken, when 6 voted for the amendment and 2 for the motion, 2 members declining to vote.

Vote of Thanks.—A vote of thanks to the Chairman closed the meeting.

GLASGOW AND WEST OF SCOTLAND BRANCH:

GLASGOW NORTH-WESTERN DIVISION.

A MEETING of the Division was held in the Burgh Hall, Hillhead, on Wednesday, March 17th, at 8.30 p.m., Dr. JOHN MORTON in the chair, with a very good attendance of members.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Medical Libraries.—In accordance with the instruction from the last meeting, the SECRETARY reported that there were no medical libraries associated with medical societies in the district.

Medical Certificates of Suitability for Hospital Treatment.—The Division was asked to instruct its Representative if a definite pronouncement should be made—

—That a medical certificate of suitability for hospital treatment should be required as a condition for hospital treatment except in the case of casualties.

The matter was debated; and finally it was agreed that while the Division did not approve of this motion, it suggested that managers of hospitals should have their attention drawn to the possibility of checking hospital abuse by the appointment of a scrutineer, who should be a medical man rather than a layman.

Contributions to Hospitals by Employers and Employees.

—The report of the Council on contributions to hospitals by employers of labour and employees was discussed, and the two questions were put as follows:

(i) That the contributions to hospitals by employers of labour and employees by means of weekly collections and otherwise should be considered as being the payment of premiums for a proportionate insurance against liability for medical and hospital attendance, in cases of serious illness and accident, which are made on behalf of those unable themselves to pay directly or adequately for the same, and not as entitling the contributors to unlimited hospital, as also gratuitous medical, attendance as at present seems to be claimed.

(ii) That it be an instruction to the central Hospitals Committee of the Association to endeavour, through the Divisions and otherwise, to obtain acceptance for this principle by the several parties concerned, with a view to elaborating some scheme whereby these contributions should be paid to the rightful parties—namely, insurance companies who in their turn will proportionately recompense hospitals and similar boards, hospital staffs, general practitioners, etc., for all attendances given on illnesses or accidents incurred by those so insured, reporting from time to time to this body.

The meeting unanimously disapproved of both these questions.

New Medical Institutions.—The question of fresh medical institutions was discussed, and the meeting unanimously approved of the following motion:

"That it is desirable that no fresh medical institution should be opened without previous consultation with the local medical profession through some organized body such as the Division of the British Medical Association in the area of which it is proposed to establish such new institution, and that it be an instruction to the Council to give effect to this principle in considering applications from Divisions or Branches for support in dealing with hospital questions.

In the course of the discussion it was intimated that the Corporation of Glasgow was contemplating the establishment of a number of dispensaries throughout the town for the purpose of dealing with tuberculosis; and the secretary was instructed to communicate with the Branch Council drawing its attention to the fact as a matter of some urgency.

National Association for Establishment of Sanatoriums.

—A statement from the Council was read about the National Association for the Establishment and Maintenance of Sanatoria for Workers Suffering from Tuberculosis, and the meeting cordially recognized the principle expressed that all medical referees should be paid for their services.

The Midwives Act.—A statement *re* the Departmental Committee on the working of the Midwives Act was read; but as the Act does not apply to Scotland, the meeting declined to express any opinion on the matter.

The Divisions and the General Practitioner.—Dr.

WHITEHOUSE introduced a discussion on the subject, Do the Divisions of the British Medical Association meet the local requirements of the general practitioner? Dr. WHITEHOUSE answered in the affirmative, and defined the nature of a Division as a local medical society composed of members of the British Medical Association, and the object of the formation of Divisions was to make it as easy as possible for every member to make his voice heard in the government of the Association. The work of such a body presents two aspects:—(a) A local medical society; (b) the part which it takes in the general work of the Association. The benefits to the general practitioner resulting from such work must be regarded in each of these aspects. (a) As a local medical society. This appeals in several aspects: (1) Social and scientific functions: (2) medico-political; (3) ethical. Each of these heads was discussed, prominence being given to the need of each Division trying to grapple with purely local problems—the Division being capable, by its constitution, of being the most powerful society to further the welfare of the profession in every kind of subject affecting its relations with the public. It was shown that the largest amount of self-government prevailed in the Association, as all the work of the Association through whatever agency it might be carried out, was directly or indirectly under the control of the Divisions. Of course, for the carrying out of the central work of the Association it was necessary to have various executive apparatus, such as the Council, Committees, and officials. In addition, however, to this general control the Divisions furnished a most useful agency for arriving at the opinion of the Association on questions of policy; illustrations were given from the work of the Divisions during the past few years of its usefulness in this respect. In the discussion which followed Dr. Whitehouse was heartily thanked for his address. While the meeting as a whole did not homologate all Dr. Whitehouse's opinions, it was agreed that more support and active participation in the work of the Divisions was desirable. Dr. WHITEHOUSE, in replying, read a long and interesting letter from Mr. SMITH WHITAKER, the Medical Secretary, on the subject, and he suggested co-operation with other local medical societies.

LANCASHIRE AND CHESHIRE BRANCH:

SALFORD DIVISION.

A MEETING of the Salford Division was held at the Onward Buildings, Manchester, on March 2nd, Dr. W. C. BROWN, Vice-Chairman, in the chair, to discuss matters referred to the Division. A long discussion took place, and the meeting was adjourned to March 10th, when Dr. O'GRADY (the Chairman of the Division) occupied the chair. At each meeting there was a fair attendance, and the following resolutions were arrived at:

A. *Re* medical officers of health and private practice:

That the present arrangements are on the whole satisfactory by which in counties and large towns the medical officer of health is debarred from private practice, but that such an arrangement is not always possible in rural districts.

B. *Re* medical inspection and treatment of school children:

Inspection.

1. That the Division disapproves of payment per head.
2. That medical inspection should be carried out in towns by whole-time medical inspectors at a salary of not less than £500 per annum for the medical officer and £250 for

assistant medical officers. In other places where necessary part-time medical officers at a salary of £50 per annum for two hours' duty per school week should be appointed.

3. Such appointments should be subject to a reasonable notice and only terminable with the consent of the Board of Education.
4. That no addition ought to be made to the already arduous duties of teachers.

Treatment.

1. Children requiring treatment whose parents can pay for such treatment should be referred to their own medical attendant if possible.
2. That any attempt by public authorities to arrange for the treatment of school children by subsidizing hospitals and other charitable institutions is unsound in principle, and should be condemned.
3. That cases of mental defect and defects of speech should be treated in special schools.
4. That there is no necessity for the establishment of school clinics; first, because children requiring specialized treatment can properly, as at present, be treated at the well-equipped hospitals of the district when the parents are unable to pay for such treatment; and secondly, the Division is of opinion that children not requiring specialized treatment, and whose parents are unable to pay for any general treatment required, ought to be referred to general practitioners, vouchers being given for payment by the education authority. Further, that in view of the suggestion for the establishment of a public medical service on a provident basis contained in the Majority Report of the Royal Commission on the Poor Laws, which suggestion the Division supports, it would be a waste of public money to establish school clinics.
5. That in every district a wage limit should be fixed, and no treatment at the expense of the authorities should be given to the children of parents whose income exceeds the local limit. That the wage limit might well be arranged by consultation between the education authority and the local Division of the British Medical Association, following out the suggestion of the Majority Report of the Poor Law Commission.

METROPOLITAN COUNTIES BRANCH.

Medical Inspection of School Children.

At a meeting held on February 25th the Council of the Metropolitan Counties Branch had under consideration the recent action by the London County Council with respect to the treatment in their own homes of children suffering from suppurating ears (see *BRITISH MEDICAL JOURNAL* of February 13th, p. 426). The Branch Council resolved to address a letter on the subject to the London County Council. The following is a copy of this letter:

[Copy.]

Metropolitan Counties Branch,
British Medical Association,
25th February, 1909.

Sir,—The attention of the Council of the Metropolitan Counties Branch of the British Medical Association having been drawn to the recent decision of the London County Council to issue through the medical inspectors of school children a card notifying to parents arrangements made through the Education Committee for the relief of suppurating ears, the Metropolitan Branch Council desires to press earnestly upon the London County Council the need for alteration of the terms of the card in question since they prescribe one form of treatment irrespective of the actual condition present and without provision for the full instructions of the medical practitioner in charge.

The Metropolitan Branch Council would therefore venture to suggest that for the paragraph detailing certain treatment and beginning "Please syringe" to "acid powder" blank lines be substituted.

In conclusion, the Metropolitan Branch Council desires respectfully to urge that children thus provided by the State with assistance in medical treatment should not be referred to institutions founded and maintained by charity, if not under the care of their own medical attendant, but should receive care under a regular medical service.

We have the honour to remain,

Yours faithfully,

ATWOOD THORNE,
19, Finsbury Street,
E. W. GOODALL.

Eastern Fever Hospital, Homerton,
Honorary Secretaries, Metropolitan Counties
Branch.

To G. L. Gomme, Esq.,
Clerk to the London County Council.

KENSINGTON DIVISION.

Visit to the London Hospital.

A LARGELY attended meeting of this Division was held at the London Hospital on Friday, March 26th, at 3.30 p.m., in response to the invitation of the House Committee and the medical staff. Over sixty members were present.

Mr. HURRY FENWICK, the Chairman of the Medical Council, received the members in the Committee Room of the hospital, and then, aided by members of the medical staff and several of the sisters, conducted the visitors around the hospital. The out-patient department was first visited, and Queen Alexandra's Finsen Light Department was inspected, the cases and the method of using the apparatus being demonstrated by Dr. SEQUERA. The radium treatment was also shown, and the application of x rays for the cure of ringworm of the scalp and various glandular swellings. Dr. MORTON took the visitors through the electro-therapeutic and radiographic departments. The new radiant heat baths, the gift of Princess Hatzfeldt, and lately personally installed in the London Hospital by their inventor, Dr. Tynauer, were next visited. On their way through the department the visitors were shown the lady almoners, and the system for preventing hospital abuse in full work.

A demonstration of a series of medical cases was given by Dr. DAWSON in the medical wards, while in the surgical wards Mr. EVE also showed some cases of interest. Visits were made to the new Pathological Institute erected in memory of the late Sir Andrew Clark, which is under the direction of Dr. H. M. Turnbull, and to the Medical College, where Dr. LEONARD HILL gave a lantern demonstration on blood pressure and the use of oxygen.

At 5 o'clock tea and coffee were served in the Committee Room. Dr. A. J. RICE OXLEY, the Chairman of the Division, proposed that a hearty vote of thanks be given to the House Committee for their kind invitation and hospitality, and to the members of the medical and surgical staff who had gone to such pains and trouble to provide a most interesting series of demonstrations.

Surgeon-General Sir CHARLES CUFFY seconded, and this was carried with acclamation.

WESTMINSTER DIVISION.

A MEETING of this Division, preceded by a dinner, was held on Thursday, March 4th, at 8.30 p.m., at the Criterion Restaurant, W., Dr. WILLIAM EWART, President, in the chair. Twenty were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Reports.—The following reports were read: (a) Report from Medical Secretary; (b) Reports from Central Ethical Committee. Other reports were allowed to stand over until discussed by the Executive Committee.

Earlier Appointment of Representative in Representative Meetings.—It was proposed, seconded, and carried unanimously—

That this rule be altered to conform to the procedure adopted by other Divisions, namely, that the Representative be appointed not more than one month, and not less than three months prior to the annual meeting.

MR. MANSON'S ADDRESS.

Sir PATRICK MANSON opened a discussion on the "Diagnosis of Fever in Patients from the Tropics," in an address which was published in the *BRITISH MEDICAL JOURNAL* for March 20th, pp. 704-706.

Mr. JAMES CANTLIE said he would take the opposite point of view to that brought forward by Sir Patrick Manson. Sir Patrick had drawn an admirable picture of tropical diseases occurring in British practice which might be mistaken for ordinary ailments; he (Mr. Cantlie) would like to draw attention to diseases which, although apparently ordinary, were really tropical in origin. A series of cases was given in illustration which Mr. Cantlie had met with in practice: (a) An Englishman with a hydrocele of apparently a simple nature presented himself in Hong Kong. The hydrocele was tapped, the fluid drawn into a glass vessel, and the puncture in the scrotum treated in the ordinary way. On looking at the fluid drawn from the hydrocele, it was found to present a milky and rather coagulated appearance. The cause of this was not understood until, on placing a drop of the fluid below the microscope, it was seen to swarm with filaria embryos. The man was infected with *Filaria nocturna*, but except for the

hydrocele he presented no signs or symptoms of infection, yet during the night the peripheral blood was found to be swarming with filaria embryos. It is now a well-known fact that filaria infection may be present, that parent *Filaria bancrofti* may inhabit the body and pour embryos into the blood for many years (Mr. Cantlie had a case recently which had been under his observation for over twenty years) and the patient be in no way inconvenienced. (b) An Englishman presented himself with what appeared to be a "cold" abscess in the forearm. The abscess was opened, and a parent filaria worm presented itself; the peripheral blood of this patient during the night was found swarming with filaria embryos. This fact draws attention to the possibility of abscesses occurring anywhere in the body, be it deep seated in viscera or in the subcutaneous tissues, having as their cause a parent filaria. (c) A Portuguese had retention of urine. The bladder could be made out to extend as high as the umbilicus, yet the passage of a catheter, even a prostatic catheter, fully introduced, failed to bring off urine. After several instruments had been passed, a small quantity of material like ordinary milk curd escaped through the catheter. When the instrument was slowly withdrawn a quantity of the same material escaped by the urethra, followed in a short time by a large quantity—a couple of pints of the curdy material. The retention was due to chyluria; filaria embryos were present in the material passed, and at night filaria embryos were present in the peripheral blood. (d) During the first outbreak of plague in Hong Kong in 1894, Mr. Cantlie was called to a house to see a Parsee. In the house in which the patient lived another Parsee died the day before of plague. The patient he was now called to see had a temperature of 103° F.; his conjunctivae were injected; there was vomiting, a thickly-coated tongue, and a large bubo in the left groin. Plague at once suggested itself, and the patient was removed to the plague hospital. After a few hours he passed urine which suggested chyluria, and at 11 p.m. the same night the embryos of *Filaria nocturna* were found in the blood. The man was suffering from filariasis and not from plague. (e) An Englishman presented himself in London with an eczema intertrigo in the fork. He said he had been treated, but he had found no relief during eight months. On being asked if he lived in England he said he did. The eczema appeared of a type so thoroughly Oriental that the answer was disconcerting; and it was only when he stated that although he lived in England he did not mean he had not been abroad, and that he had acquired his trouble in Hong Kong, the key to diagnosis was complete. The man was suffering from so-called "dhoobie (or washerman's) itch," and an application of sulphur and lime lotion twice daily for three days cured the ailment. Dhoobie itch is a term applied to an eczema of a particular type because it is believed to be contracted by clothing worn by the washerman (native) whilst the garments are in his (the washerman's) hands for laundry purposes. Several other ailments might be mentioned of a type which seems in accord with ordinary diseased conditions met with in British practice, and yet have an etiology quite apart from the everyday ailments we are accustomed to meet with.

Dr. F. M. SANDWITH, after praising Sir P. Manson's paper for its thoroughness and conciseness, thought that the best corollary he could add would be to assume that a European, suffering from a continued fever, had landed in London from a tropical country. It was certain that such a hypothetical patient would believe that his fever was due to some unusual form of malaria, and would already have been indiscriminately dosed with insoluble quinine sulphate. He took this opportunity of reminding members of the bi-hydrochloride and some other salts of quinine. If the fever resisted 10-grain doses of quinine given three times in the mornings of two days, malaria might be dismissed. Enteric, paratyphoid and Mediterranean fever could all be recognized by the serum test, provided the cultures of the last-named were fresh. If examination for all the tropical fevers mentioned in the paper proved negative, he would suggest that the patient was possibly suffering from tuberculosis or from infective endocarditis, both of which had sometimes been found to account for the diagnosis of some obscure cases of fever in and from the tropics.

Dr. SAMBON said Sir Patrick Manson had so admirably outlined the points to be attended to in attempting the diagnosis of fevers in patients returning from the tropics that nothing of any importance could be added to his masterly address. However, having been asked to take part in the discussion, he proposed mentioning a few minor points which might occasionally prove of diagnostic help. Thus, some assistance might be got from a scrutiny of the various places through which the patient had travelled or in which he had resided. Tropical diseases were not all distributed exactly in the same way throughout the tropical zone, but had each their peculiar geographical ranges, and, within these special areas, their own particular stations. Some had a very wide range, and might, like tertian fever, extend far out of the tropics to within a few degrees of the arctic circle; others, like yellow fever, were strictly limited to certain parts of the tropical world, even though, at times, like plague and cholera, they might be carried, by means of shipping, far away from their endemic areas, and for weeks, months, or even years play havoc in regions and places quite unsuited to their permanence. Each tropical region had its own peculiar pathogeny, owing not only to peculiar local diseases but also to the peculiar distribution and prevalence of the diseases it shared with other tropical lands. Therefore the place of former residence might in some measure be suggestive of the disease contracted. Sprue and beri-beri might be expected chiefly from places in Southern Asia, blackwater fever and trypanosomiasis from tropical Africa, undulant fever from the Mediterranean coasts. Sir Patrick had very judiciously warned them not to believe that because a fever had been contracted in or was occurring in a patient from the tropics it must necessarily be a tropical disease. On the other hand, a disease occurring for the first time some months after the patient's return from the tropics was not necessarily ordinary disease, but might be a tropical disease contracted long previously within the tropics. They knew of several tropical diseases which might present a prolonged period of incubation or latency, and thus manifest themselves not infrequently some time after the patient's return from the tropics. The patient, of course, was altogether unaware of the infection, which did not previously give rise to any appreciable morbid manifestation either at the place in which it was contracted or on the journey home. The disease might have all the appearances of having been contracted at home some time after landing, and yet it was a tropical disease. Examples of tropical disease which might manifest themselves for the first time in England after a long period of latency were sprue, blackwater fever, malaria, sleeping sickness, and leprosy. Physicians should be prepared to meet with tropical diseases even in people who had never been to the tropics, and, indeed, in people who had never been out of this country. He need hardly mention plague and cholera, because these diseases had been imported again and again, and in past times had even given rise to great and deadly epidemics in these islands. But, just as plague might be introduced from abroad by infected rats, so might other diseases be brought over with their respective carriers. He might mention yellow fever, which had been imported several times into the large seaport towns of the Iberian peninsula and once in this country (Swansea, 1865) with infected mosquitos brought over in cargo ships from the West Indies. Like yellow fever, filariasis might be introduced with mosquitos harbouring the larval parasite. A well-authenticated case was described in 1894 by Dr. M. Font y Torné in a Spaniard from Canet di Mar (Barcelona) who had never left his country. That man suffered from chyluria and enlargement of the scrotum, and his blood contained at night the ensheathed larvae of *Filaria bancrofti*. At one time ague was very prevalent in the fen districts of this country, and there was no reason why they should not again come across autochthonous cases of malaria. In Holland the disease, after almost disappearing for a time, had again become very prevalent. Another point was the use of the microscope in the diagnosis of tropical diseases. It was to the microscope that they owed their great discoveries in this branch of medicine, and it was on the microscope that they must rely for the diagnosis of tropical diseases. Without the microscope it was seldom possible to arrive at a correct diagnosis. But, as Sir Patrick Manson had justly remarked, the microscopical diagnosis must be carried out

by someone familiar not only with microscopical technique, but with the special parasitology of the tropics. Unless the microscopist were an expert his opinion was worse than useless. Take malaria, for instance; nothing was easier to detect by the microscope, and yet how frequently it was overlooked or mistaken. With regard to multiple infection, it was not the exception, but the rule. At one time it was believed that man could not suffer from more than one disease at the time; now they knew that several infections might coexist in the same patient, at the same time either aggravating or minimizing, certainly modifying, one another's agency. The sooner they grasped all the importance of the interaction of various pathogenic organisms the sooner they would be able to understand the complex etiology of disease, its multiple manifestations, its ever-changing sequelae. Whilst pursuing his studies of comparative pathology at the London Zoological Gardens and elsewhere he had often come across amazing cases of multitudinous parasitism. In the *Field* newspaper, September 21st, 1907, he had described a very interesting case of multiple infection in a red grouse (*Lagopus scoticus*). That bird presented a parasitic fly (*Ornithomyia lagopidis*) and two lice (*Goniodes tetraemus* and *Nirmus cameratus*) on its skin; a microfilaria (*Filaria* sp.) and two protozoal organisms (*Leucocytozoon lovati* and *Haemoproteus mansonii*) in its blood; two tapeworms (*Davainea urogalli* and *Hymenolepis microps*) and a round worm (*Trichostrongylus pergracilis*) in its intestine. Most of these parasites were found in prodigious numbers. Some months later, in examining the larger tapeworms found in this grouse, he discovered that they were not all specimens of *Davainea urogalli*, as he had supposed, but that amongst them were specimens of another tapeworm (*Drepanidoteenia lanceolata*) which had never been found previously in the grouse. Had he looked more carefully he would have been able to add considerably to the list, but he did not trouble about fungi and bacteria. As a rule they found only what they looked for, and, even to find that they must know how to search and look very carefully and often repeatedly. The first parasite they came across was not necessarily the sole cause of the morbid condition they were endeavouring to explain, although it might have or might not have had some part in its causation. The peculiar habits of a man might play an important part in the acquirement of certain infections. It was possible, therefore, that a knowledge of the habits of a patient might be of some slight assistance in leading to a correct diagnosis of his case. A Jew or a Mohammedan, strictly observant of his religion, was not likely to harbour the pork-measle tapeworm (*Taenia solium*) or suffer from trichinosis. A man careless in matters of food and drink was far more likely to contract such diseases as were conveyed in infected meat and polluted water than the one who thoroughly cooked his food and boiled the water he drank. Malaria and many other tropical diseases were contracted through the bite of infected mosquitos and other blood-sucking arthropods which played a necessary part in the fostering and dissemination of such diseases. With regard to these diseases, the use of the mosquito net was a most efficient protection. People who would not believe in these precautions, or who would not take the trouble to carry them out must inevitably pay the penalty of their folly. Close contact with the native, taking shelter within his compounds and beneath his very roof, was a dangerous source of infection. Take plague, for instance. In many Eastern towns, during epidemics of plague, white men of the better class, living apart from the natives, usually escaped, whilst the mean whites, or those obliged to associate constantly with the natives, fell easy victims. In speaking of habits, one point which he considered of very great importance was sexual intercourse with native women. Quite recently Dr. E. Brumpt, at a meeting of the Paris Society of Tropical Medicine, stated that he had found the relapsing fever parasite (*Spirochaudinnia recurrentis*) in the menstrual blood of a female patient. That a blood parasite should be found in the catamenial discharge was only what might have been expected, but he (the speaker) was inclined to give it a greater significance. Take sleeping sickness, for instance. They knew that the parasite of this disease, the *Trypanosoma gambiense*, was found in the blood. They further supposed, on very good grounds, that it

was transmitted by the dusky tsetse fly, *Glossina palpalis*. But they also knew of certain limited epidemics of sleeping sickness in which some other mode of infection must have been in operation. Professor Koch was the first to suggest the possibility of contagion by means of sexual intercourse. A very similar trypanosomiasis of horses, called dourine or *maladie du coït*, is known to be transmitted chiefly, if not solely, by sexual intercourse. Now, if the relapsing fever parasite might reach the genital tract by means of the menstrual blood, it was only reasonable to infer that the trypanosome of sleeping sickness and the treponema of syphilis might likewise follow the same route. The infection of relapsing fever, like that of syphilis, had frequently been traced to the brothel, though usually ascribed to the vermin infesting such places. He could not help thinking that the Jewish laws which regarded a woman unclean during the catamenial period and for seven full days after its cessation, must have been formulated on account of the knowledge of some positive danger attending intercourse at that time. This would be in perfect accordance with the many other wise restrictions for which they justly regarded the Jews as the creators of the science of public hygiene. In Italy, and in the South of France, it was a popular belief that venereal diseases were the outcome of sexual intercourse during or immediately after menstruation. All this suggested the reasonableness of looking upon the menstruating woman as a possible source of infection with regard to certain diseases.

NORTH OF ENGLAND BRANCH:

NORTHUMBERLAND COMMITTEE.

A MEETING of this Committee was held at the Royal Victoria Infirmary, Newcastle-upon-Tyne, on March 25th; Mr. RUTHERFORD MORISON presiding.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Midwives.—Dr. CLARK BURMAN produced amended rules which had been adopted by the Alnwick Nursing Association altering the rule previously approved by this Committee whereby nurses only attended cases where a doctor had been engaged. He also produced correspondence thereon, and said that the Alnwick Division would probably strenuously resist the new procedure.

Bonesetters' Certificates.—After discussion, the Committee decided that if the Miners' Permanent Relief Fund chose to act on bonesetters' certificates, they would probably find considerable calls on their funds, and that at present no further action should be taken by the medical men.

Friendly Society Appointments.—It was resolved that a notice should be sent to all members of the British Medical Association in the county every year reminding them of the rules as to acceptance of these appointments, including the rules against recognition of the National Deposit Friendly Society.

Insurance Examinations.—The SECRETARY reported as to replies he had received from certain Divisions on the subject of recent attempts on the part of certain industrial societies to lower the fees for medical examinations. The reply of the Morpeth Division that 5s. should be the minimum fee for industrial examinations, 10s. 6d. if urinary analysis, and £1 1s. and upwards for cases requiring detailed examinations, was considered satisfactory. It being understood that the lower fees applied only to small insurances or scales of benefit.

County Co-operation.—The SECRETARY reported as to arrangements he was making to secure uniformity in all county Divisions as regards contract practice rules and for relieving secretaries of Divisions of a certain amount of clerical work. It was decided that a special meeting should be held to consider a scheme to carry this out.

SOUTHERN BRANCH:

PORTSMOUTH DIVISION.

A CLINICAL meeting was held at 5, Pembroke Road, Southsea, on March 24th. The CHAIRMAN (Dr. Carling) and seven members were present.

Case.—Mr. CHILDE showed a case in which excision of the external carotid artery and its branches had been performed previous to removal of a round-celled sarcoma of the tonsil in a boy aged 20. Also a case in which

double enterectomy had been performed fourteen months previously for malignant disease of the intestine, the patient remaining in good health.

Papers.—Mr. RIDOUT read an account of a successful enterectomy for intussusception occurring as the result of a round-celled sarcoma in the small intestine. (See p. 839 of this week's JOURNAL.) Mr. CHILDE read a paper on 36 cases of abdominal hysterectomy and myomectomy for fibromyoma of the uterus, and drew attention to the symptoms and indications for operation.

To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, April 28th, in the new Council Room, at 429, Strand, London, W.C.

By Order,

GUY ELLISTON.

March 25th, 1909.

BRANCH AND DIVISION MEETINGS TO BE HELD.

DORSET AND WEST HANTS BRANCH.—The spring meeting of this Branch will be held in Dorchester on Wednesday, May 5th. Members wishing to read papers, show cases, exhibit specimens, or propose new members, are requested to communicate, not later than Thursday, April 22nd with JAMES DAVISON, Honorary Secretary, "Streteplace," Bournemouth.

DORSET AND WEST HANTS BRANCH AND WEST SOMERSET BRANCH.—Nominations for the office of a Representative on the Central Council should be sent, on or before Tuesday, April 13th next, in accordance with By-law 25, to JAMES DAVISON, "Streteplace," Bath Road, Bournemouth.

EAST ANGLIAN BRANCH.—The spring meeting will be held at Bury St. Edmunds on Thursday, April 15th. Members wishing to read papers or show cases should communicate at once with Dr. Gutch, Ipswich, the Honorary Secretary for Suffolk.—B. H. NICHOLSON, Senior Secretary, East Lodge, Colchester.

LANCASHIRE AND CHESHIRE BRANCH.—Change of date of Branch Council meeting. Owing to April 14th falling in Easter week the Branch Council meeting will be held a week earlier—namely, on Wednesday, April 7th, 4.30 p.m., at Onward Buildings, 207, Deansgate, Manchester.—F. CHARLES LARKIN, Honorary Secretary, Liverpool.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—A general meeting will be held at the Greenbank Hotel, Northwich, at 5 p.m., on Wednesday, April 21st, to receive reports from the Executive Committee, to consider matters referred to Divisions, and to transact the usual business. At 6 p.m. Dr. Mauwaring White will read a paper on Frontal Sinusitis as a Complication of Influenza. Dinner at 7 p.m.—T. W. H. GARSTANG, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WALTHAMSTOW DIVISION.—The next meeting of the Division will be held at the Walthamstow Hospital, on Tuesday, April 6th, at 4 p.m. Agenda: 1. Minutes. 2. Letters. 3. Medical Inspection of School Children. 4. Papers and Cases by Members.—A. POTTINGER ELDRED, Honorary Secretary.

NORTH WALES BRANCH.—The spring intermediate meeting of this Branch will be held at Colwyn Bay, on Tuesday, April 20th. Members having papers to read, cases or specimens to show, are requested to notify the Honorary Secretary before April 7th. H. JONES ROBERTS, Llywernarth, Penygroes S.O., Honorary Secretary.

SOUTH-EASTERN OF IRELAND BRANCH.—A meeting of this Branch, also a meeting of the Branch Council and the local Division, will be held at Adelphi Hotel, Waterford, on Wednesday, April 7th, at 3.15 p.m. Agenda: (1) Minutes of last meeting. (2) Letters of apology. (3) Correspondence. (4) Dr. Laffan will move that dinners at Branch meetings be paid for at so much to each member present and half of that amount to each absent member. (5) Dr. Mackey will move that members of this Branch bind themselves not to accept a less fee than one guinea for examination and report in any case under the Employers' Liability Act or Workmen's Compensation Act at common law, whether same be furnished on behalf of employers or insurance companies. (6) Any other business.—J. QUIRKE, Honorary Secretary, Piltown.

CENTRAL MIDWIVES BOARD.

A SPECIAL meeting of the Central Midwives Board was held on March 23rd at Caxton House, Westminster, with Dr. F. H. CHAMPNEYS in the chair.

MIDWIVES STRUCK OFF THE ROLL.

The Board considered the following charges amongst others against the midwives whose names are given below and ordered them to be struck off the Roll.

Mary Jane Blackler, that being in attendance as a midwife at a confinement, the patient suffering from severe sickness and pains in the back, she did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, as required by Rules E. 13 and 19.

Phyllis Botfield, that being in attendance as a midwife at a confinement, the patient being ill, suffering from diarrhoea, with high temperature, about the seventh day, she did not send for a doctor.

Suzanne Burrow, that being in attendance as a midwife at a confinement, the child's eyes being inflamed on the third day, she did not send for a doctor.

Dorothy Hudson, that she had been convicted of stealing.

Jane Lawrence, that being in attendance as a midwife at a confinement, the patient suffering from abdominal pain, chill, and rigor, she did not send for a doctor.

Mary Ann Quainton, that being in attendance as a midwife at a confinement, the patient suffering from a severe shivering fit, with considerable pain in the side, she did not send for a doctor.

Anna Maria Richardson, that being in attendance as a midwife at a confinement, the placenta and membranes not having been expelled two hours after the birth of the child, she did not send for a doctor.

Elizabeth Townsend, that being in attendance as a midwife at a confinement, the presentation being abnormal, she did not send for a doctor.

Julia Walters, that being in attendance as a midwife at a confinement, the child being stillborn, and no registered medical practitioner having been in attendance, she failed to notify the Local Supervising Authority, as required by Rule E. 20.

Frances Mary Wills, that being in attendance as a midwife at a confinement, the patient suffering from persistent vomiting and headache shortly after the confinement, from abdominal pain and feverishness on the third day, and from rigor on the fifth day, she did not send for a doctor.

Ruth Kitching, **Susan Jane Lonsdale**, and **Harriet Tovey**, that they were uncleanly and did not take with them to confinements the appliances and antiseptics required by Rule E. 2.

Elizabeth Mary Bothwell, for habitual drunkenness.

Annie Gordon, that on March 9th, 1895, she was convicted of having unlawfully and feloniously used an instrument with intent to procure miscarriage, and was thereupon sentenced to be kept in penal servitude for a term of five years. That on October 27th, 1904, she procured the grant of a certificate to her by the Central Midwives Board by causing to be made and by producing a false and fraudulent certificate of good moral character.

Sarah Ann Marsh, that she had been convicted for being drunk and disorderly during the years 1902 to 1904, and that on April 27th, 1905, she procured the grant of a certificate to her by the Central Midwives Board, by making a false and fraudulent representation that she was trustworthy, sober, and of good moral character, and by causing to be made and by producing a false and fraudulent certificate to this effect.

The documents relating to the last two cases were ordered to be sent to the Public Prosecutor.

MIDWIVES CAUTIONED.

The following midwives were cautioned after charges against them had been considered: Margaret Aldred, Alice Mary Bolton, Frances Curtis.

MIDWIVES CENSURED.

Elizabeth May, and Minnie Elizabeth Stevenson were censured after charges against them had been considered.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 4,489 births and 6,253 deaths were registered during the week ending Saturday last, March 27th. The annual rate of mortality in these towns, which had been 22.1 per 1,000 in each of the two preceding weeks, declined last week to 19.3 per 1,000. The rates in the several towns ranged from 9.4 in East Ham, 10.4 in Sitchwick, 10.7 in Devonport, 10.9 in Leyton, 11.1 in Handsworth (Staffs), 11.7 in Wilsden and in Coventry, and 12.5 in Horsey, to 24.8 in Middlesbrough, 25.9 in Liverpool, 26.5 in Swansea, 31.5 in Brighton, 31.5 in Wigan, 36.1 in Great Yarmouth, and 38.9 in St. Helens. In London the rate of mortality was 21.5 per 1,000, while it averaged 19.2 per 1,000 in the seventy-five other large towns.

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DIARY FOR THE WEEK.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:

PATHOLOGICAL SECTION, National Hospital, Queen Square, W.C. 8.30 p.m.—Exhibition of Specimens.

THERAPEUTICAL AND PHARMACOLOGICAL SECTION, 20, Hanover Square, W., 4.30 p.m.—Papers: (1) Dr. Gordon Sharp: Experiments and Experiences with the Heart Tonics.—Pharmacological and Clinical. (2) Dr. Williams Bain: The Action of the Digestive Ferments upon Each Other.

POST-GRADUATE COURSES AND LECTURES.

LONDON SCHOOL OF CLINICAL MEDICINE, Seamen's Hospital, Greenwich.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m., Monday, and noon, Thursday; Skin, at noon and 4 p.m., Thursday, and noon, Friday; Eye, 11 a.m., Wednesday and Saturday; Radiography, 4 p.m., Thursday.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m., Surgical Out-patient, 2.30 p.m., Medical Out-patient: Nose, Throat, and Ear; X Rays: 4.30 p.m., Medical In-patient. Tuesday, 10 a.m., Medical Out-patient Clinic: 2.30 p.m., Operations; Clinics, Surgical, Gynaecological; 3 p.m., Demonstration on the Infectious Fevers (at the North-Eastern Fever Hospital, St. Ann's Road, N.). Wednesday, 2.30 p.m., Medical Out-patient, Skin, and Eye Clinics. Thursday, 2.30 p.m.,

Gynaecological Operations; Clinics: Medical Out-patient; Surgical Out-patient; X Rays: 3 p.m., Medical In-patient; Demonstration on the Infectious Fevers (at the North-Eastern Fever Hospital, St. Ann's Road, N.). Friday, Clinic: 10 a.m., Surgical Out-patient: 2.30 p.m., Operations; Clinics: Medical Out-patient, Eye; 3 p.m., Medical In-patient.

BIRTHS, MARRIAGES, AND DEATHS.

The charges for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

McRAE.—On Friday, March 26th, at Glengall House, Ayr, the wife of G. Douglas McRae, M.D., F.R.C.P.E., of a son, surviving only thirty-six hours.

RANKINE.—On March 17th, at Westfield House, Rowletown, Carlisle, the wife of J. L. Rankine, M.R.C.S., of a son.

SCOTT.—On March 31st, at 46, Queen Anne Street, Cavendish Square, W., the wife of Sydney R. Scott, M.S.Lond., F.R.C.S. Eng., of a son.

DEATHS.

HARDIE.—At Kersal, The Cliff, Higher Broughton, Manchester, on March 27th, James Hardie, M.D., F.R.C.S., aged 67. Friends will kindly accept this intimation.

TAYLOR.—On March 21st, at Wray Croft, Lacock, Chippenham, Wilt., Mary Fanny, dearly loved wife of S. H. Stanley Taylor, M.B., Ch.B., and daughter of the late Arthur F. Roberts and Fanny Roberts, of Craycombe, Pershore, Worcestershire, aged 28.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
APRIL.		APRIL (Continued).	
3 SATURDAY ..	LONDON: Ophthalmia Neonatorum Committee, 10 a.m.	15 THURSDAY ..	EAST ANGLIAN BRANCH, Spring Meeting, Bury St. Edmund's.
4 SUNDAY ..		16 FRIDAY ..	SWANSEA DIVISION, <i>South Wales and Monmouthshire Branch</i> , Clinical Meeting, 8.15 p.m.
5 MONDAY ..	LONDON: Naval and Military Committee, 2.30 p.m. LONDON: Public Health Committee, 3 p.m.	17 SATURDAY ..	
6 TUESDAY ..	LONDON: Capitulation Grants Subcommittee, about 4 p.m. WALTHAMSTOW DIVISION, <i>Metropolitan Counties Branch</i> , Walthamstow Hospital, 4 p.m.	18 SUNDAY ..	
	LONDON: Medico-Political Warning Notice Subcommittee, 12 noon.	19 MONDAY ..	
	LONDON: Medico-Political Committee, 2.15 p.m.	20 TUESDAY ..	NORTH WALES BRANCH, Colwyn Bay: London: Journal and Finance Committee 2.30 p.m.
7 WEDNESDAY	LANCASHIRE AND CHESHIRE BRANCH, Council Meeting, Onward Buildings, 207, Deansgate, Manchester, 4.30 p.m. SOUTH-EASTERN OF IRELAND BRANCH, Adelphi Hotel, Waterford, 3.15 p.m., also meeting of Branch Council and Local Division.	21 WEDNESDAY	ALTRINCHAM DIVISION, <i>Lancashire and Cheshire Branch</i> , General Meeting, Greenbank Hotel, Northwich, 5 p.m.; Dinner, 7 p.m.
8 THURSDAY ..		22 THURSDAY ..	LONDON: Metropolitan Counties Branch Council, 4.30 p.m. CITY DIVISION, <i>Metropolitan Counties Branch</i> , Conjoint Meeting with Walthamstow Division, Brooke House, Upper Clapton, 8.30 p.m.
9 FRIDAY ..	Good Friday.	23 FRIDAY ..	
10 SATURDAY ..		24 SATURDAY ..	
11 SUNDAY ..		25 SUNDAY ..	
12 MONDAY ..	Bank Holiday.	26 MONDAY ..	
13 TUESDAY ..	LONDON: Organization Committee, 10.30 a.m. RICHMOND DIVISION, <i>Metropolitan Counties Branch</i> , Medico-Political Meeting, Royal Hospital, Richmond, 8.30 p.m.	27 TUESDAY ..	HAMPSTEAD DIVISION, <i>Metropolitan Counties Branch</i> , Business Meeting.
14 WEDNESDAY		28 WEDNESDAY	Central Council, 2 p.m., New Council Room, 429, Strand, W.C.
		29 THURSDAY ..	BATH AND BRISTOL BRANCH, Bath.

ANNUAL MEETING, BRITISH MEDICAL ASSOCIATION, BELFAST, 1909.

The Seventy-seventh Annual Meeting of the British Medical Association will be held at Belfast from July 23rd, to July 31st, 1909, under the Presidency of Sir William Whitla.

The Annual Representative Meeting commences in Belfast on July 23rd. The Presidential Address will be delivered on July 27th. The Sections will meet on July 28th, 29th, and 30th.

A preliminary programme of arrangements was published in the SUPPLEMENT, February 27th, 1909. The Honorary Local Secretaries are: Henry Lawrence McKisack, M.D., M.R.C.P., 17, University Square, Belfast; Cecil Edward Shaw, M.A., M.D., M.Ch., 23, University Square, Belfast; and Howard Stevenson, B.A., M.B., F.R.C.S.I., 2, College Square North, Belfast.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, APRIL 10TH, 1909.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

HOSPITALS COMMITTEE.

REPRESENTATION OF LOCAL MEDICAL PROFESSION ON BOARDS OF HOSPITALS AND SIMILAR BODIES.

The Annual Representative Meeting held at Sheffield decided that the following motions on the agenda, by the Hampstead and Wandsworth Divisions, respectively, should be referred to the Divisions before any opinion was pronounced:—

(a) *By the Hampstead Division (Metropolitan Counties Branch):*—

That in the interests of hospitals and their work it is desirable that medical practitioners should nominate representatives for election to Boards of Management of Hospitals in their respective localities, and that such nominations should be carried out by an organised professional body such as a Division of the British Medical Association:

(b) *By the Wandsworth Division (Metropolitan Counties Branch):*—

(i) That on all bodies formed to promote or control medical assistance for the sick, and which receive public subscriptions, there should be adequate direct representation of the medical profession resident in the district or districts affected:

(ii) That the conduct of the nominations and election of such representatives can be best carried out by the British Medical Association through its Branches or Divisions, as the case may be, on a scheme approved of by the members of the medical profession resident in the district or districts likely to be affected.

For the assistance of the Divisions in considering this important subject, the Hospitals Committee submits the following

MEMORANDUM.

1. The advantages of elected representatives of the local medical profession taking part in the general management of the hospitals of the district are doubtless obvious to most members of the profession.

2. It is, however, to be inferred from the proceedings of the last United Kingdom Hospitals Conference that such advantages are not at present obvious to the majority of laymen engaged in hospital administration.

It is desirable, therefore, that the Association, in deciding its policy upon this matter, should be clear as to the grounds of its decision.

3. It should be recognized that such representation is desirable in the interests of hospitals themselves and not merely in the interests of the medical profession.

4. Hospitals are benefited by the co-operation and support of the local medical profession and their work may be seriously prejudiced by its antagonism. Hospitals are dependent for their existence upon the work of their medical staff, and with respect to all questions affecting the terms of employment of the staff and conduct of the hospital members of the staff must be materially influenced by local professional opinion.

5. Experience shows the advantage of avoiding misunderstandings and conflict by making systematic provision for conference between authorised representatives of the interests concerned.

6. The association of officially recognised representatives of the local profession in the general management of hospitals affords a means whereby any proposals which might arouse opposition on the part of the profession may receive consideration in conference at an early stage, when amicable adjustment is so much easier than after opinions, based possibly on misunderstandings, have hardened on both sides.

7. The Committee has information of several cases in which, in recent years, hospitals have voluntarily associated in the general management representatives of the local profession.

8. For the appointment of such representatives there are obvious advantages in making use of the machinery afforded by organised bodies representative of the profession such as the Divisions of the British Medical Association.

9. In view of the above considerations the Hospitals Committee suggests that it would be well for members of Divisions to bring to the notice of influential representatives of Hospitals the desirability of associating representation of the medical profession in the management of these institutions where such representation does not at present exist, at first in a tentative manner, showing them that such a course is likely to prove useful to hospital patients and doctors alike, and thus inducing them to make the requisite appointments to the Governing Bodies of their several institutions.

10. The Divisions are requested to consider the motions of the Hampstead and Wandsworth Divisions, stated at the commencement of this Report, and the above suggestion of the Committee, and to instruct their Representatives with a view to the matter being voted upon in the Annual Representative Meeting.

Meetings of Branches & Divisions.

The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.

BIRMINGHAM BRANCH:

NEUNTON AND TAMWORTH DIVISION.

A MEETING of this Division was held at Tamworth General Hospital on February 23rd. 1909. Dr. SCULTHORPE, Chairman, presided, and there were present Drs. Joy, E. N. Nason, Robertson, Torbitt, and Wood.

Medical Inspection of School Children.—With regard to the questions referred to the Division under this heading, the following conclusions were arrived at:

1. The Division approves of system of payment by adequate salary and disapproves of payment per head.
2. School clinics are disapproved in this Division, the size of the towns being too small for the purpose. If school clinics should be necessary, school children found defective should be paid for by case.
3. The surgeries of those practitioners willing to act should be recognized. The selection should be by the parent and the payment per case.
4. Payment should be made by the education authority. The amount disbursed should be recoverable by the authority from such parents as, in their opinion, are able to pay.

Whole-time Medical Officers of Health.—It was resolved:

That it is desirable that medical officers of health should be debarred from private practice.

Earlier Appointment of Representative.—It was resolved:

That Rule 7 of the Division rules be altered so that the Division may elect the Representative earlier than is now possible.

In Rule 7 alter three months to nine months.

LANCASHIRE AND CHESHIRE BRANCH:

MANCHESTER (WEST) DIVISION.

A GENERAL meeting of the Division was held in the Technical Institute, Old Trafford, on Thursday, March 25th, at 4 p.m. The following gentlemen attended: Drs. D'Ewart, Wallace Eales, Moeckler, Nichol, Skardon Prowse, L. E. Scanlon, and F. H. Worswick. Dr. WORSWICK took the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Letter from Chelsea and Fulham Division.—A letter from the Chelsea and Fulham Division, calling attention to the following resolution, was considered:

That we, the Chelsea and Fulham Division of the British Medical Association, deeply regret and resent the action of the Council of the Royal College of Surgeons of England, in that, having ascertained the wishes of a majority of the Fellows and Members of that College, they should deliberately flout that opinion in the recent alteration of their by-laws.

It was resolved:

That this meeting cordially supports the action of the Chelsea and Fulham Division.

Medical Inspection and Treatment of School Children.—The meeting adopted, with the undermentioned exceptions, the resolutions of the Manchester and Salford Divisional Joint Committee regarding the medical inspection and treatment of school children:

Medical Inspection.

Joint Committee's resolution (A. 4) reads as follows:

Teachers should be trained to observe indications of ill-health in the children under their care, and should forthwith bring these children to the notice of the proper medical authority.

The meeting was of opinion that the training of teachers in the symptoms of disease is unnecessary, ordinary methods of observation being quite sufficient for what is required.

Medical Treatment.

In connexion with Resolution B. 6 of the Joint Committee, which deals with the institution of recognized surgeries, the meeting considered that no special selection of surgeries should be made by the authorities, but that the surgeries of all registered medical practitioners who are willing to do the work should be recognized places for treatment, so that parents may exercise a free choice among the practitioners in their district.

Correspondence.—Letters from the Secretary of the Departmental Committee re Midwives Act, and from the Medical Secretary acknowledging the receipt of resolutions from this Division were read.

Scientific Work of Branches and Divisions.—The meeting approved of the suggested conversion of the Central Library of the Association into a circulating library if that plan should prove practicable. It was resolved:

That the Joint Committee of the Manchester and Salford Divisions be asked to approach the various medical societies in Manchester which possess libraries, with the view of testing their willingness to consider a scheme for extending the privilege of the use of such libraries to all members resident within the area of the Manchester and Salford Divisions.

Scientific Meeting.—The Executive Committee was instructed to arrange for a scientific meeting of the Division at the earliest practicable date.

Medical Certification of Suitability for Hospital Treatment.—With regard to the medical certification of the suitability of patients for hospital treatment, the Division adopted the recommendation of the Council of the Association, with the addition of the word "urgent" as qualifying "casualties," in the last sentence.

Contributions to Hospitals by Employers and Employees.—Some discussion took place on the report on contributions to hospitals by employers of labour and employees, and it was resolved, in view of its complexity, to postpone further consideration of the subject until the next meeting of the Division.

Fresh Public Medical Institutions.—The meeting approved of the principle enunciated in the resolution referred to the Divisions by the Sheffield Representative Meeting in connexion with the establishment of fresh public medical institutions. It was proposed by Dr. D'Ewart, seconded by Dr. NICHOL, and resolved:

That the Manchester and Salford Joint Committee be requested to consider the feasibility of forming a board in Manchester for the control of hospital extension, etc., on lines similar to that of the King's Fund in London.

Sanatoriums for Workers suffering from Tuberculosis.—The meeting endorsed the resolution contained in the report of the Joint Committee of the Medico-Political and Hospitals Committees on Sanatoriums for Workers suffering from Tuberculosis.

Midwives Act.—The circular from the Medical Secretary concerning the action of the Association in connexion with the work of the Departmental Committee re Midwives Act was read, and the HONORARY SECRETARY stated that the information asked for had been supplied through the Manchester and Salford Joint Committee.

Representation of Profession on Local Councils and in Parliament.—The following resolution, proposed by Dr. D'Ewart and seconded by Dr. L. E. SCANLON, was agreed to by the meeting:

That this Division desires the Manchester and Salford Joint Committee to consider the question of securing suitable and adequate representation of the medical profession upon the Town Councils of Manchester and Salford; and further to consider what methods should be taken locally to secure adequate voicing of medical opinion in Parliament.

Fees in Police Cases.—With regard to fees in police cases, it was resolved:

That the Joint Committee of the Manchester and Salford Divisions be urged to approach the Manchester Watch Committee with the view of inducing that body to adopt the metropolitan police system of paying general practitioners for services rendered.

It was pointed out that the Manchester Baths and Tramways Committees had agreed to a definite scale of fees to be paid to practitioners for first aid in all casualty cases.

Joint Committee of Local Divisions as Mouthpiece of the Profession.—The suggestion put forward by the Manchester (South) Division, that the Joint Committee of the local Divisions should endeavour to obtain official recognition of itself as the mouthpiece of the profession in Manchester and Salford, was cordially supported by the meeting.

NORTH OF ENGLAND BRANCH:

NORTH NORTHUMBERLAND DIVISION.

An ordinary meeting was held on March 31st, at 2.30 p.m., in the Blue Bell Hotel, Belford. There were present: Drs. Main, Coldstream, Burrow, Macdonald, Purves, Robson, and Burman. Dr. MAIN was voted to the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Apologies for Non-attendance.—Apologies for absence were received from Drs. Mackay and Shand.

Northumberland County Nursing Association.—The SECRETARY reported that in the new rules for the county association maternity nurse stationed at Alnwick, Rule 3 had been altered from:

The nurse may only book cases which a doctor has been engaged to attend,

to

The nurse may only take maternity cases without a doctor by leave of the managing committee;

and called attention to the anomalous position the Division was placed in by the alteration, which rendered the resolution passed by the Division on September 18th, 1908, quite nugatory. A prolonged discussion followed, and a letter from the President of the association, dated December 22nd, 1908, in which the following sentence occurs, "The N.C.N.A. will continue to leave the matter to local committees to settle with local medical men," was read. It having been proved that no such action had been taken, and a letter from the local secretary read in reply to one from the Secretary calling attention to the alteration of the rule, the following resolution was proposed by Dr. ROBINSON, seconded by Dr. PURVES, and carried unanimously:

That this meeting regrets the alteration of Rule 3 after the resolution passed by the Division on September 18th, 1908, and forwarded to the Secretary of the Association, and is of opinion that whether this alteration is maintained or not, in the interests of the sick poor and the medical profession, the medical men practising in all districts should be members of the local nursing managing committees.

The Secretary was instructed to forward this resolution to the secretary of the Northumberland County Nursing Association together with a covering letter explaining the several points discussed at the meeting.

Treatment of School Children found Defective.—Dr. BURROW opened a discussion on the treatment of school children found upon medical inspection to be defective, and gave some interesting statistics of the percentage of the various forms of disease under their respective headings, pointing out the difficulties of treatment in rural as compared with urban districts. An interesting discussion followed, in which all the members took part; and, after Dr. Burrow had answered questions arising out of his paper, it was agreed that any treatment of school children found defective should be paid for at the usual rate of professional charges according to local conditions; that local practitioners be asked to treat such cases, and if any hospital treatment was required to advise the same; but it was very distinctly urged that if the services of a local hospital were utilized for the performance of any operation which was suggested by the education authorities, such authorities should be responsible for the payment of such fees as the hospital committee fixed. School clinics were not recommended, and it was agreed that all local practitioners should have equal opportunities to carry out treat-

ment when called for. A vote of thanks to Dr. Burrow for his paper was unanimously carried.

British Temperance and General Collecting Society.

A communication from the Secretary of the Northumberland Committee *re* British Temperance and General Collecting Society was read, and the Secretary was requested to inform the Committee that the Division fix the minimum fee at 5s. for any proposal of £50 or below, provided the report was not one involving a detailed examination, or the examination of urine.

Tea.—The members were entertained at tea by Dr. Main.

OXFORD AND READING BRANCH:

OXFORD DIVISION.

A GENERAL meeting of this Division was held on Friday, March 26th, at the Radcliffe Infirmary, Oxford, at 3.15 p.m. Mr. WHITELOCKE was in the chair, and twenty-nine members attended.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Functional Dyspepsia.—The CHAIRMAN introduced Dr. ROBERT HUTCHISON, of the London Hospital, who opened a discussion on the treatment of functional dyspepsia. After alluding to the difficulties of a scientific classification, Dr. Hutchison suggested the recognition of three main clinical types of functional dyspepsia: (1) Hypersthenic type, associated with hyperchlorhydria, chiefly found in young men; (2) asthenic type, with defective motility and flatulence, in both sexes; (3) hyperaesthetic, found in young women. He further mentioned the "acid type," typical of elderly people with gouty tendencies. He then proceeded to deal with the treatment, dietetic and medicinal, of the various types. In the hypersthenic cases, the avoidance of secretory stimulants—for example, salt, condiments, and alcohol—was important, and an animal diet was most suitable. Medicinally, the use of the earthy carbonates, which were insoluble, was recommended, the aim being to neutralize secretion. For the asthenic types the diet should be pulped and dry—for example, minced food. Strychnine and ipecacuanha were useful as motor stimulants, and, in the reader's opinion, aloes seemed to have an effect upon the stomach analogous to that upon the colon. Electricity and massage he had found somewhat disappointing. For the hyperaesthetic cases, "feeding up" was important, though at first the diet should be bland. Sedatives, and especially bismuth, were indicated. The application of local heat in the form of hot poultices was sometimes very beneficial. The acid dyspepsias benefited from the limitation of carbohydrates and the use of antacids. Doubt was thrown upon the value of diastatic ferments. In the discussion which followed, Dr. COLLIER alluded to the method of chewing red gum to neutralize the gastric secretion; he also drew attention to auto-massage of the stomach walls. Finally, he asked for an explanation of the formation of wind in the stomach, as he did not consider that fermentation could account for the enormous amount of gas formed. Dr. HUTCHISON, in replying, suggested that some of the "wind" resulted from air-swallowing, and he thought that possibly some of the gas was excreted from the blood circulating in the gastric vessels. A hearty vote of thanks was accorded to Dr. Hutchison, who had to leave early.

Colitis and Pericolitis.—Dr. GIBSON gave a short account of the pathology and symptoms of colitis and pericolitis, illustrated by two cases. In both there was chronic constipation, and some rise of temperature, and pain over the colon, with rigidity of abdominal muscles. Either some swelling or thickening was usually to be made out over some portion of the colon, and some peritonitis was present. Suppurative pericolitis might ensue.

Cases of Poisoning.—Dr. WYLIE gave an interesting account of 6 cases of poisoning he had had to deal with within a few months. All of them made a good recovery.

1. A case of oxalic acid poisoning in a man who had taken nearly half an ounce of salts of lemon. He was treated by injection of apomorphine $\frac{1}{10}$ grain, the stomach being washed out with chalk and water.

2. A woman who had taken 2 oz. of pennyroyal. Vomiting was induced by apomorphine, and kept up by draughts of vin. ipecacuanhae in water.

3. A case of morphia poisoning in a lady, who had taken a bottle of medicine containing 2 grains of morphia in one dose. The stomach was washed out with a weak solution of permanganate of potash; strychnine was given and artificial respira-

tion tried. Repeated washings out with the permanganate solution were successful after three hours' treatment.

4. A case of carbolic acid poisoning in a child aged 4½. Treated with apomorphine and the stomach washed out with a solution of sulphate of magnesia. White of egg and brandy given.

5. Child of 2 years, who had taken 1½ grains of opium in the form of R. camph. co. Recovered after the stomach had been washed out with permanganate solution, and the child being kept awake by walking about to open air.

6. A case of a man who drank a pint of paraffin oil in mistake for beer. He was found in a very collapsed and excited state. Apomorphine was injected, and copious draughts of lukewarm water given; and, finally, a dose of brandy and castor oil.

Dr. Wylie advised every medical man to carry about with him Dr. Murrell's small book on poisons, which he had found most useful.

Cerebro-spinal Meningitis.—Dr. DUGAN read notes of a case of cerebro-spinal meningitis of the sporadic type. Except for a cold in the head and a slight attack of urticaria ten days previously, the patient, a girl aged 11, had no symptoms whatever till seized with pain in the head and convulsions of a general type at 4 a.m. In a few hours she became unconscious, and was deeply comatose when first seen at 8.30 a.m. She died four hours later without recovering consciousness. *Post mortem* the brain was congested, but there was no basal meningitis. A large hæmorrhage had taken place into the right temporo-sphenoidal lobe and a second one into the lateral ventricles. A pure culture of the *Diplococcus* or *Meningococcus unicellularis* was made by Dr. GIBSON. Dr. COLLIER read notes of another recent case, a boy living in the country, who was seized with headache and vomiting. There was great cerebral irritability and paresis of the left face and arm. Some pain in the ears suggested cerebral abscess. He was taken to hospital, but died the next day. Purulent meningitis was found *post mortem* and the *Diplococcus unicellularis* discovered. Since that time another child and the mother of the same family were showing symptoms suggestive of meningitis.

Business Management of the Association.—Dr. COLLIER proposed the following resolution:

That, in view of the practical experience of the last thirty-seven years, during which period the Association has enjoyed great financial prosperity, it has been proved that in the best interests of the British Medical Association it is essential to have an official with the rank and status of "General Secretary and Manager," and that such official should possess special business training.

Further, that having regard to the highly satisfactory manner in which Mr. Guy Elliston has discharged the duties since his appointment in 1902, it is in the interests of the Association that his services should be retained as "General Secretary and Manager"; and that the Representative of the Oxford Division to the Representative Meeting at Belfast be instructed accordingly.

This was seconded by Mr. DREW (Representative) and carried unanimously.

New Buckinghamshire Division.—The SECRETARY announced the formation of the new Buckinghamshire Division.

The Royal College of Surgeons of England.—A resolution received by the Secretary from the Secretary of the Chelsea and Fulham Division, regretting the action of the Council of the Royal College of Surgeons in the recent alteration of their by-laws, was read and laid on the table.

Matters Referred to Divisions.—A proposition was made by the SECRETARY, and seconded by the CHAIRMAN, that certain communications from the Medical Secretary concerning matters to be referred to the Divisions, including one concerning the working of the Midwives Act, be referred to the Executive Committee. Carried *nem. con.*

SOUTH-EASTERN BRANCH:

MAIDSTONE DIVISION.

A MEETING of this Division was held at the West Kent General Hospital on Thursday, March 11th, at 3 p.m., Mr. FRED. T. TRAVERS in the chair. There were also present: Drs. C. KILLICK, W. Shaw, T. Joyce, R. T. Caesar, G. Southwell Sander, A. Parr Dudley, W. Ryan, A. T. Falwasser, C. Pye Oliver, Geo. Potts.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Cases.—Cases were shown by Mr. TRAVERS, Mr. C. KILLICK, and Dr. SOUTHWELL SANDER.

Conference of Charity Association.—Drs. JOYCE and CAESAR gave an account of the conference of the Charity Association, at which they represented the Division.

Notice of Motion.—Dr. JOYCE gave notice that he would propose at the next meeting:

That this meeting is of opinion that it should be considered disgraceful conduct in a professional sense for any registered practitioner to supplant another who has been compelled to vacate any appointment on the ground that it is inadequately paid for; where such a statement of unremuneration has been found by the Medical Council to be well founded, an investigation should be insisted on.

STAFFORDSHIRE BRANCH:

SOUTH STAFFORDSHIRE DIVISION.

AN ordinary meeting of the Division was held on February 23rd, at 4.30 p.m., those present being Dr. BADGER, in the chair, Drs. Cholmeley, Cridland, Bailey, Harthill, and Somerset.

Resolutions.—It was resolved:

1. That the grouping of Branches as proposed was approved of by the Division.
2. That the Division noted counsel's opinion relating to the opposition to certain clauses in the Charter, but were not concerned with the said opposition.
3. That the Division approves of the principle of health officers (at least in the larger areas) being debarred from private practice, providing that the office carries with it in all cases sufficiency of salary and security of tenure, the interests of existing officials being recognized or compensated for. (Moved by Dr. BAILEY, seconded by Dr. CHOLMELEY.)
4. That except in certain special cases, the time has not yet arrived when treatment of the children found defective in the medical inspection of the elementary schools should be paid for at the expense of the public authorities.
5. The Secretary was instructed to obtain further information about the methods of giving certificates at hospitals.
6. The meeting agreed that the rules should be altered so as to allow the earlier appointment of the Representative in the Representative Meeting.

To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, April 28th, in the new Council Room, at 429, Strand, London, W.C.

By Order,

March 25th, 1909.

GUY ELLISTON.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BORDEN COUNTIES BRANCH: ENGLISH DIVISION.—A meeting of the Division will be held at the George Hotel, Penrith, on Friday, April 23rd, at 3 p.m. The Honorary Secretary will be pleased to hear from members who wish to read papers or show cases or pathological specimens.—NORMAN MACLAREN, Honorary Secretary, 23, Portland Square, Carlisle.

DORSET AND WEST HANTS BRANCH.—The spring meeting of this Branch will be held in Dorchester on Wednesday, May 5th. Members wishing to read papers, show cases, exhibit specimens, or propose new members, are requested to communicate, not later than Thursday, April 22nd with JAMES DAVISON, Honorary Secretary, "Streteplace," Bournemouth.

DORSET AND WEST HANTS BRANCH AND WEST SOMERSET BRANCH.—Nominations for the office of a Representative on the Central Council should be sent, on or before Tuesday, April 13th next, in accordance with By-law 25, to JAMES DAVISON, "Streteplace," Bath Road, Bournemouth.

EAST ANGLIAN BRANCH.—The spring meeting will be held at Bury St. Edmunds on Thursday, April 15th. Members wishing to read papers or show cases should communicate at once with Dr. Gutch, Ipswich, the Honorary Secretary for Suffolk.—B. H. NICHOLSON, Senior Secretary, East Lodge, Colchester.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—A general meeting will be held at the Greenbank Hotel, Northwich, at 5 p.m., on Wednesday, April 21st, to receive

reports from the Executive Committee, to consider matters referred to Divisions, and to transact the usual business. At 6 p.m. Dr. Manwaring White will read a paper on Frontal Sinusitis as a Complication of Influenza. Dinner at 7 p.m.—T. W. H. GARSTANG, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: RICHMOND DIVISION.—The next meeting of the Division will be held at the Royal Hospital, Richmond, on Wednesday, April 14th, at 8.30 p.m. A paper will be read by J. R. LEESON, M.A., M.D., entitled "Thirty-eight Years of Medical Life: a Retrospect and Prospect."—G. CARDNO STILLI, Honorary Secretary.

NORTH WALES BRANCH.—The spring intermediate meeting of this Branch will be held at Colwyn Bay, on Tuesday, April 20th. H. JONES ROBERTS, Llywenarth, Penygroes S.O., Honorary Secretary.

SOUTH-EASTERN BRANCH: MAIDSTONE DIVISION.—A meeting of the Maidstone Division will be held at the Kent County Ophthalmic Hospital, Maidstone, on Thursday, April 15th, at 3 p.m., when cases will be shown by Mr. C. Killick and Dr. Ryan. Dr. T. Joyce will propose the following resolution: "That this meeting is of opinion that it should be considered disgraceful conduct in a professional sense for any registered practitioner to supplant another who has been compelled to vacate any appointment on the ground that it is inadequately paid for. Where such a statement of unremuneration has been found by the Medical Council to be well founded an investigation should be insisted upon." It is particularly requested that members will endeavour to attend and, if possible, to show cases. Any member who desires to show cases or read papers will kindly communicate immediately with the Honorary Secretary.—GEORGE POTTS, Honorary Secretary.

SOUTH MIDLAND BRANCH: NORTHAMPTONSHIRE DIVISION.—A meeting of the Division will be held on Tuesday, April 20th, at 2.30, in the Board Room of the Northants General Hospital. There will be a luncheon beforehand at Franklin's Restaurant, Guildhall Road, at 1.30. Names of those wishing to attend the luncheon should be sent in two days beforehand to the Secretary. Business:—Report of Executive Committee. Matters referred to Divisions: (1) Report on medical certificates of suitability of patients for hospital treatment; (2) Report on contributions to hospitals by employers of labour and employees; (3) Statement as to fresh public medical institutions; (4) Statement as to sanatoriums for workers suffering from tuberculosis (cf. SUPPLEMENT, February 27th); (5) Departmental Committee re Midwives Act; (6) Questions of health officers being whole-time officers (cf. SUPPLEMENT, January 23rd). Clinical cases.

ULSTER BRANCH.—The spring meeting of this Branch will be held in Londonderry on Saturday, May 8th. Members having communications to make to the meeting are requested to send particulars not later than April 30th to CECIL SHAW, Honorary Secretary, 29, University Square, Belfast.

Naval and Military Appointments.

EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

EXCHANGE wanted by senior Lieutenant-Colonel due for India, beginning of September. Address, Lieutenant-Colonel Simpson, R.A.M. College, or by wire c/o. Jaspase, London.

ROYAL NAVY MEDICAL SERVICE.

SIR H. F. NORBERT, K.C.B., M.D., Honorary Surgeon to the King, Director-General (retired), has been awarded a good-service pension of £100 a year in the vacancy caused by the death of Director-General Sir John W. Reid on February 24th.

The following appointments have been made at the Admiralty: Staff Surgeon S. G. T. to the *Albatross*, recommissioned on April 13th; Surgeon G. G. VICKERY, M.B., to the *Triton*, March 30th; Fleet Surgeon E. R. D. FASER, and Surgeon S. F. DUDLEY to the *Terrible* and for the Division of Special Service Vessels at Portsmouth, April 1st.

Mr. A. G. DAMPIER-BENNETT has been appointed Surgeon and Agent at Kingstown and Dalkey, March 30th.

ARMY MEDICAL SERVICE.

COLONEL J. I. ROOTH, Half Pay List, is placed on retired pay, March 29th. He is appointed Surgeon, February 3rd, 1878; Surgeon-Major, February 3rd, 1880; Surgeon-Lieutenant-Colonel, February 3rd, 1888; Colonel, December 3rd, 1904; and retired on half pay, January 8th, 1906. He served with the Tirah Expeditionary Force during the campaign on the North-West Frontier of India in 1897-6, receiving a medal with two clasps.

ROYAL ARMY MEDICAL CORPS.

The details of the transfer from the Second List of Lieutenant-Colonel J. WILL, M.B., is for February 28th, 1909, and not, as stated in the *Gazette* of March 2nd, 1909.

Lieutenant M. G. DILL, M.B., from the Second List to be Lieutenant, March 14th. He was placed on the Second List for service with the Egyptian Army, February 14th, 1907.

Major A. P. HENKINSON has been appointed Assistant to the Commandant of the Royal Army Medical College.

Major F. J. W. PORTER, D.S.O., has been appointed Senior Medical Officer, West Africa, vice Major A. Pearce.

ROYAL ENGINEERS (VOLUNTEERS).

The resignation of Surgeon-Major G. O. C. MACKNESS, M.D., the Tay Division, Submarine Miners, bears date March 31st, 1908, and not as stated in the *London Gazette* of November 1st, 1907.

TERRITORIAL OFFICERS' DECORATIONS.

The King has been pleased to confer the Territorial Decoration upon the undermentioned officers of the Territorial Force who have been duly recommended for the same under the terms of the Royal Warrant, dated August 17th, 1908:

YEOMANRY.

Surgeon-Lieutenant-Colonel W. J. NAINSMITH, D.S.O., M.D., Ayrshire (Earl of Cattie's Own) Yeomanry; Surgeon-Lieutenant-Colonel D. LLOYD, Shropshire Yeomanry; Surgeon-Major B. BULLOCK, Warwickshire Yeomanry; Surgeon-Major H. BRAMWELL, M.D., Gloucestershire Yeomanry (Royal Gloucestershire Hussars).

INFANTRY.

Surgeon-Major E. VANDREY, M.D., 5th Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment); Surgeon-Major E. EVANS, M.D., 4th Battalion the Welsh Regiment.

ROYAL ARMY MEDICAL CORPS.

Major A. P. ARNOLD, M.B., Northern Command; Lieutenant-Colonel T. F. DEWAR, M.B., Scottish Command; Captain C. A. REES, Southern Command; Majors E. W. BARNES, J. W. ELLIS, and A. COFF, Western Command.

TERRITORIAL FORCE.

Surgeon-Lieutenant W. S. HENDERSON, M.D., from the King's Colonials Imperial Yeomanry, to be Surgeon-Lieutenant, King's Colonials Yeomanry, with precedence as in the Imperial Yeomanry, April 1, 1908.

The announcement of the transfer of Surgeon-Lieutenant W. S. HENDERSON, M.D., from the King's Colonials, Imperial Yeomanry, which appeared in the *London Gazette* of October 20th, 1908, is cancelled.

Surgeon-Captain O. C. MATRICE, Royal Wiltshire (Prince of Wales's Own Regiment), to be Surgeon-Major, March 5th.

Surgeon-Major R. BULLOCK, Warwickshire Yeomanry, is granted the honorary rank of Surgeon-Lieutenant-Colonel, March 31st, 1908.

INFANTRY.

Surgeon-Captain G. B. ROBINSON, M.D., 5th Battalion the King's (Liverpool Regiment), resigns his commission, February 9th.

Surgeon-Captain J. M. AHERN, 8th (Irish) Battalion the King's (Liverpool Regiment), resigns his commission, February 12th.

The announcement of the transfer and promotion of Surgeon-Major J. W. ELLIS, 3rd Battalion the King's (Liverpool Regiment), which appeared in the *London Gazette* of October 6th, 1908, is cancelled.

Surgeon-Major G. M. LOWE, M.D., 4th Battalion the Lincolnshire Regiment, is granted the honorary rank of Surgeon-Lieutenant-Colonel, March 31st, 1908.

ROYAL ARMY MEDICAL CORPS.

First West Lancashire Field Ambulance.—Captain A. G. GULLAN, M.D., to be Major, December 13th, 1908.

First Northumbrian Field Ambulance.—ARTHUR G. DIXON, M.B., to be Lieutenant, October 21st, 1908.

Third Wessex Field Ambulance.—Lieutenant F. E. STOKES, from the Royal Army Medical Corps, Territorial Force, to be Lieutenant, May 19th, 1908.

Lieutenant-Colonel J. M. HARPER is granted the honorary rank of Surgeon-Colonel, March 31st, 1908.

London Mounted Brigade Field Ambulance.—Major (Honorary Major in the Army) CHARLES STONHAM, C.M.G., from the Royal Army Medical Corps (Territorial Force), to be Lieutenant-Colonel, March 5th. HENRY ROBINSON, M.D., and ALEXANDER FINDLATER, M.D., to be Lieutenants, March 5th.

Second East Anglian Field Ambulance.—DUDLEY W. BOSWELL, M.D., to be Lieutenant, January 2nd.

First Highland Field Ambulance.—ARTHUR KELLAS to be Lieutenant, February 2nd.

First Home Counties Field Ambulance.—BERTRAM C. A. LEEPER to be Lieutenant, January 1st.

Second Northern General Hospital.—The appointment of E. F. TRAVELMAN, M.D., to the rank of Lieutenant-Colonel bears date July 7th, 1908, and not as stated in the *London Gazette* of February 23rd, 1909.

Fifth Northern General Hospital.—Officer whose services will be available on mobilization: Captain ROBERT STEWART, M.D., to be Major, February 2nd.

For Attachment to Units Other than Medical Units.—Captain E. L. PATON, M.B., to be Major, September 7th, 1908. OCTAVIUS R. ENXION to be Lieutenant, December 31st, 1908. ALEXANDER D. KENNEDY, M.D., to be Lieutenant, January 27th, 1909. ARTHUR ROBERTS, F.R.C.S. (Ed.), date Lieutenant, Berkshire Imperial Yeomanry, to be Captain, with seniority from February 8th, 1905, October 1st, 1908. HARRY R. SPIRO, M.D., to be Lieutenant, January 1st, 1909. Surgeon-Captain JOHN GAFFRITH, from the Gloucestershire Battalion the South Wales Borderers, to be Captain, March 1st, 1909.

Unattached List.—Surgeon-Major WILLIAM COX, from the 1st Gloucestershire Royal Engineers (Volunteers) is appointed, with rank and precedence as in the Volunteer Force, April 1st, 1908.

Vital Statistics.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, March 27th, 636 births and 550 deaths were registered in the twenty-two principal urban districts of Ireland, as against 598 births and 571 deaths in the preceding period. The annual death-rate in these districts, which had been 22.5, 25.3, and 26.1 per 1,000 in the three preceding weeks, fell to 25.1 per 1,000 in the week under notice, this figure being 5.3 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 27.2 and 26.7 respectively, those in other districts ranging from 8.2 in Drogheda and 9.6 in

Ballymena to 27.5 in Armagh and 34.3 in Kilkenny, while Cork stood at 27.4, Londonderry at 18.1, Limerick at 16.4, and Waterford at 21.4. The zymotic death-rate in the twenty-two districts averaged 1.1 per 1,000, as against 1.3 per 1,000 in each of the three preceding weeks.

Hospitals and Asylums.

THE SANDLEBRIDGE COLONY FOR THE FEEBLE-MINDED.

THE report for 1908 of the Incorporated Lancashire and Cheshire Society for the Permanent Care of the Feeble-minded states that the Colony at Sandbridge, Cheshire, continues to grow. The number of inmates on October 1st, 1908, was 160 (93 boys and 67 girls), an increase of 103 (or 180 per cent.) during the last three years. There have been no deaths during the year, and only 4 have left the home; 7 boys work on the farm. 15 in the garden and greenhouses, and 20 girls are employed in laundry and house work; 140 of the inmates are under 16 years of age, and, being at school under the provisions of the Defective and Epileptic Children's Act, 1899, 139 of them in the year 1906-7 a Government grant amounting to £401 10s. 7d. Other sources of income are payments for maintenance from local authorities and from relatives of children amounting to £3,110 for the year, and £586 from subscriptions. A balance of £58 4s. 1d. of income over expenditure is carried to the capital balance sheet, so that the financial condition of the colony seems quite sound, though, of course, contributions are continually needed to meet the constant expansion of the Society's operations.

The report opens with a grateful reference to the invaluable services of the late Dr. Ashby, who devoted a large share of his time to promote the interests of the Sandbridge Colony. It is hoped permanently to commemorate his connexion therewith by the erection on the estate of a little hospital bearing his name, which seems to us a most appropriate memorial. The chief extension of the work during the past year was the opening as a residence for thirty older girls of Warford Hall, a mansion adjoining the colony which had been acquired with its beautiful gardens and grounds, to supplement the original estate, and to afford scope for the better training of the boys in horticulture, for which its extensive glass houses (since added to) offered facilities. The new Thomasson and Sam Gamble School Building proves very serviceable for the practical education of the 140 children of school age, whose work, under six teachers, is favourably commented on by the Inspector of the Board of Education. The final paragraph of his report is as follows:

"With the material provision for accommodation and suits added to their school, the committee is able to regard its institution as a model scheme of administration for handling the whole problem of the feeble-minded at every stage." It is this completeness of grasp of the necessities of the class that differentiates Sandbridge from most other establishments in this country for mentally defectives, and we sincerely congratulate Miss Dendy and those associated with her upon the encouraging results of ten years' work. We trust that any legislation that may follow the Report of the Royal Commission on the Feeble-Minded may tend to strengthen the hands of voluntary workers in this field of much-needed social service.

GOVAN DISTRICT ASYLUM, HAWKHEAD, PAISLEY.

THE annual report of Dr. W. R. Watson, the Medical Superintendent of the above asylum, for the year ending May 14th, 1908, shows that there were 553 patients on the register on May 15th, 1907, and that the number had increased to 580 on May 15th, 1908. The total cases under care during the year numbered 805, and the average number daily resident 565.6, as compared with 532.4 for the previous year. During the year 252 were admitted, of whom 215 were first and 37 not-first admissions. Of the total admissions, in 170 the attacks were first attacks within three, and in 16 more within twelve, months of admission; in 50 not-first attacks within twelve months of admission, and in the remainder the attacks were either of more than twelve months' duration (13) or of congenital origin (3) on admission. The total admissions were classified according to the several forms of mental disorder into: Mania, 32; melancholia, 80; dementia, 42; delusional insanity, 9; alcoholic insanity, 6; puerperal insanity, 2; general paralysis, 18; acquired epilepsy, 10; and congenital or infantile defect, 3. With regard to the supposed etiological factors, Dr. Watson gives detailed tabular statements, showing in each of the male and female first-attack admissions the form of mental disorder and the associated conditions. Concerning these cases, it was ascertained, Dr. Watson says, that 24.1 per cent. of the men and 8.6 of the women, or 16.7 per cent. of both sexes, were regarded as excessive drinkers; 20 per cent. suffered from affections of the heart or arteries; and 15.6 per cent. were the subjects of some form of abdominal disease. With regard to syphilis as an associated condition, we note that out of 87 male first-attack cases previous syphilitic infection was recorded in only 1 case, and that a case of delusional insanity, although the 87 patients included 20 cases of general paralysis. During the year 83 were discharged as recovered, giving a recovery-rate on the admissions of 32.9 per cent., 33 as relieved; 35 as not improved, and 74 died. These deaths, giving a percentage death-rate on the average number daily resident of 13.1, were due in 41 cases to cerebro-spinal diseases, including no less than 24 deaths from general paralysis; in 23 to chest diseases,

including 9 deaths from pulmonary consumption; in 5 to abdominal diseases, and in 5 to general and various diseases. No serious accident occurred during the year, and the asylum was twice visited by members of the General Lunacy Board, who left exceedingly favourable reports upon its condition and management.

VICTORIA HOSPITAL, CORK.

THE annual meeting of the Victoria Hospital for Women and Children, Cork, was held on March 13th, when the friends and subscribers met for the thirty-fourth time to hear the annual report of this very useful hospital. The past year has seen the completion of the new building. Excellent dormitories and bathrooms have been provided for the nursing staff, a spacious waiting room for the extern patients, with consulting room adjoining, and a large ward which the Hospital Committee hopes soon to see opened for patients. The much-needed improvements will not only greatly add to the comfort of those who carry on the work and of those who benefit by it, but will also materially aid its efficient administration. The total sum received for the special work amounts to £2,035, and £500 is still needed to pay for its completion. As regards the general financial condition of the hospital, the honorary treasurer reported an increase in the annual subscriptions of £124 3s. 4d. over last year, the total amount received being £2,645 8s. 11d. for the year, a debt of £72 16s. 6d. being due to the bank. The interest in the hospital, the treasurer said, was being maintained, as was shown by the more regular legacies left, which in a few years would be a very good source of income for the hospital.

QUEEN'S HOSPITAL, BIRMINGHAM.

THE annual report of the Queen's Hospital records the completion of the new hospital block, the dispensary, and the chapel. Alterations and enlargement of the out-patient department have also been completed, and a room on the top floor of the old block, previously occupied as a small ward, has been converted into an operating theatre. The total number of beds is now 170, divided into 60 medical and 110 surgical. The sum expended on the new buildings and alterations was £41,132, and towards it £26,950 have been subscribed. During the past year the number of patients treated has been 39,483, as compared with 37,898 in 1907. The expenditure has increased also from £12,786 in 1907 to £14,226 in 1908. The income, on the other hand, has decreased from £10,979 to £10,474. The subscriptions showed a slight increase, but the Hospital Sunday Fund, donations, and registration fees showed a decrease, so that the total receipts were less by £505 than those of last year. The roof ward, even in the inclement season, has been kept well filled since it was first opened. During the year, Mr. B. J. Ward has been appointed to the vacant post of third surgeon to out-patients, and Mr. F. Emrys-Jones to the new post of radiographer.

SUNDERLAND INFIRMARY.

THE report of the General Committee of Sunderland Infirmary, submitted at the annual meeting on January 28th, covered a period of eighteen months. It shows a debit balance of some £900, but additions to the out-patient department and other structural improvements, which should be passed to the balance sheet, explain the greater part of this deficit. The yearly cost per bed seems to have dropped from £53 6s. 11d. in 1907 to £48 15s. 6d. in 1908, but how this calculation is made is not shown. The staff is to be increased by four members—two assistant physicians and two assistant surgeons.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

- BANBURY: HONITON INFIRMARY.—House-Surgeon. Salary, £80 per annum.
- BIRKENHEAD UNION.—Male Resident Assistant Medical Officer to the Infirmary and Sanatorium. Salary, £120 per annum.
- BIRMINGHAM GENERAL HOSPITAL.—(1) House-Physician, (2) Surgeon, (3) Assistant House-Surgeon. Salary at the rate of £50 per annum for (1) and (2) and £40 per annum for (3).
- BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum.
- BRISTOL GENERAL HOSPITAL.—(1) House-Physician, (2) Casualty House-Surgeon, (3) Assistant House-Physician. Salary, £60.
- BRITTON DISPENSARY, Water Lane, S.W.—Resident Medical Officer. Salary, £150 per annum.
- BROWN ANIMAL AND NATATORY INSTITUTION.—Superintendent. Salary, £300 per annum.
- BURSLER: RAYWOOD HOSPITAL.—Resident Medical Officer (female). Salary, £100 per annum.
- BURY INFIRMARY.—Junior House-Surgeon. Salary, £80 per annum, increasing to £90.
- CAMP OF GOOD HOPE.—Medical Man for Research Work into Leprosy. Remuneration, £450 per annum.
- CROYDON GENERAL HOSPITAL.—Medical Officer for Department for Diseases of the Ear, Nose, and Throat.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Resident House-Physicians. Honorarium, £25 for six months.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Surgeon, (2) Assistant Casualty Medical Officer. Salary, £30 and £2 10s. washing allowance each for six months.

LAMBETH PARISH.—District Medical Officer. Salary, £50 per annum and fees.

LANARK COUNTY.—Physician-Superintendent for the Middle Ward Isolation Hospital. Salary, £200 per annum.

LINCOLN HOSPITAL FOR MENTAL DISEASES.—Assistant Medical Officer. Salary, £100.

MACCLESFIELD GENERAL DISPENSARY.—Junior House-Surgeon. Salary, £80 per annum.

MANCHESTER DISPENSARY-UPON-MEDLOCK DISPENSARY.—Resident Medical Officer. Salary, £120 per annum.

MANCHESTER TOWNSHIP.—Assistant Medical Officer for the Workhouse at Crumpsall. Salary, £130 per annum.

NORTHAMPTON GENERAL HOSPITAL.—House-Surgeon (male). Salary, £30 per annum.

OLDHAM INFIRMARY.—Junior House-Surgeon. Salary, £70 per annum.

POPULAR HOSPITAL FOR ACCIDENTS, E.—Assistant House-Surgeon. Salary at the rate of £80 per annum.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham.—(1) House-Surgeon, (2) House-Physician, (3) Junior House-Surgeon, (4) Junior House-Physician. Salary at the rate of £75 per annum for (1) and (2) and £40 per annum for (3) and (4).

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, W.C.—House-Surgeon. Salary, £25 for six months.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone Road, N.W.—Clinical Assistant.

TORQUAY TORBAY HOSPITAL.—House-Surgeon. Salary, £100 per annum and honorarium of £5 for nurses' lectures.

VICTORIA HOSPITAL FOR CHILDREN, Titch Street, S.W.—Physician to Out-patients.

WAKEFIELD: CLAYTON HOSPITAL.—Junior House-Surgeon. Salary, £80 per annum.

APPOINTMENTS.

BIDWELL, C. Hugh, M.R.C.S., L.R.C.P., Anaesthetist to the National Hospital, Bloemfontein, South Africa.

BICK, Joseph, M.D., reappointed Medical Officer of Health to the Hunslet Rural District Council.

BYTNER, T. L., M.R.C.S., L.R.C.P., District Medical Officer of the Basinstoke Union.

CARTER, G. A., M.R.C.S., L.R.C.P., Medical Officer of the Workhouse of the Wolstanton and Burslem Union.

CERTIS, G. W., M.R.C.S., L.R.C.P., District Medical Officer of the Stratton Union.

DAVIDSON, D. W., M.B., Ch.B.Glasg., Medical Officer of the Barton Union Workhouse.

DAVIS, H., junr., M.R.C.S., L.R.C.P., D.P.H., Certifying Factory Surgeon for the Callington District, Co. Cornwall.

DENNE, Arthur B., M.B., B.C.Cantab., School Medical Inspector under the Nottingham Education Committee.

FORDHAM, W. J., M.R.C.S., L.R.C.P., District Medical Officer of the Howden Union.

HESLOP, J. A., L.R.C.P. & S. Edin., D.P.H., Medical Officer of Health, County Borough of Tynemouth.

HUNTER, D. F., M.B., B.S.Dub., Resident Assistant Medical Officer at the Brownlow Hill Workhouse Infirmary of the Liverpool Parish.

MANNION, J. S., Ch.B., M.B. Edin., Honorary Assistant Surgeon to the Watlington Infirmary.

MILLAR, W. M., M.B., C.M. Edin., Certifying Factory Surgeon for the South Cave District, Co. York.

MORTON, W. B., M.D. Lond., L.R.C.P., M.R.C.S., Medical Superintendent of Wotton House, Exeter, vice Dr. P. M. Deas, retired.

NASH, L. G., M.R.C.S., L.R.C.P., District Medical Officer of the Newport Pagnell Union.

NELSON, W. B., M.R.C.S., L.R.C.P., District and Workhouse Medical Officer of the Wainford Union.

NOYES, H. F., G. M.B., B.C.Camb., District Medical Officer of the Tarsvin Union.

O'BRIEN, John, L.R.C.P. Edin., L.R.C.S. Edin., L.F.P.Glasg., Assistant Medical Superintendent of Toowoomba Asylum, Queensland.

ROBERTSON, Monica, M.B., B.S.Durh., School Medical Inspector under the Nottingham Education Committee.

SMITH, Harold C., D.M. and S.S.A. Lond., Medical Officer of Health, Skirlough Rural District Council.

STIFF, Harold, M.B.Cantab., Surgeon to the Suffolk General Hospital, Bury St. Edmunds.

THORNBURN, J. C., M.B., Ch.B. Liverpool, Resident Assistant Medical Officer at the Brownlow Hill Workhouse Infirmary of the Liverpool Parish.

VICKERMAN, P. S., M.B., B.S. Edin., Second Resident Assistant Medical Officer, St. George's Union Infirmary.

WALKER, A. F., L.R.C.P. and S. Edin., L.F.P.S. Glasg., District Medical Officer of Toxteth Park Township.

WHITE, Clifford, M.D., B.S. Lond., M.R.C.P. Lond., Pathologist and Registrar to the Queen Charlotte's Lying-in Hospital, Marylebone Road, N.W.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d. which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

DEATH.

RAMSBOTHAM.—March 30th, at Fairstead, Harrogate, Samuel Henry Ramsbotham, M.D. Edin., M.R.C.S. Eng., eldest son of the late John Hodgson Ramsbotham, M.D., F.R.C.S., aged 70 years.

DIARY FOR THE WEEK.

WEDNESDAY.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Millbank, S.W., 8.30 p.m.—Surgeon K. D. Bell, R.N.: Physical Training and the Medical Profession.

THURSDAY.

ROYAL SOCIETY OF MEDICINE: DERMATOLOGICAL SECTION, 20, Hanover Square, W., 5 p.m.—Exhibition of Cases.

FRIDAY.

ROYAL SOCIETY OF MEDICINE: ELECTRO-THERAPEUTICAL SECTION, 20, Hanover Square, W., 8.30 p.m.—Papers:—Dr. Sloan: Vulvo-vaginal Electricity for Ionic Medication; Dr. T. Eckenham: Treatment of Haemorrhoids by Zinc Mercury Ionization; Mr. N. S. Finzi: Treatment of Ulcers by Ionic Medication.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Papers on the Etiology of Beri-beri will be read for Dr. L. Braddon, Seremban, and Dr. A. R. Wellington, Singapore.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C. Tuesday and Friday, 3.45, Middle Ear and Labyrinth.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Wednesday, 2.30 p.m., Medical Out-patient, Skin, and Eye Clinics; 5 p.m., Demonstration on the Infectious Fevers at the North-Eastern Fever Hospital, St. Anne's Road, N.E. Thursday, 2.30 p.m., Gynaecological Operations; Clinics: Medical Out-patient, Surgical Out-patient, X Rays; 5 p.m., Medical In-patient, Friday, Clinic: 10 a.m., Surgical Out-patient; 2.30 p.m., Operations; Clinics: Medical Out-patient, Eye; 3 p.m., Medical In-patient.

BOOKS, ETC., RECEIVED.

Elementary Practical Treatise on Diseases of the Pharynx and Larynx. By Dr. E. J. Moura. Translated by J. M. Farquharson. M.B., F.R.C.P. London: Reisman, Limited. 1909. 12s. 6d.

Wiesbaden: J. F. Bergmann; and Glasgow: F. Baumeister: Die Untersuchungsmethoden und Erkrankungen der männlichen und weiblichen Harnorgane, in XVII Vorlesungen, Von Drs. L. Burkhardt und O. Polano. 1908. 10s.

Theoretische Grundlagen zum praktisch-chemischen Unterricht der Mediziner. Von A. Korschegg. 1908. 3s.

Dermatologischer Jahresbericht. Herausgegeben von O. Lassar. Erster Jahrgang: Über das Jahr 1905. 1907. 18s.

Frankfurter Zeitschrift für Pathologie. Herausgegeben von E. Albrecht. 1 Band, 2 Heft; und 2 Band, 1 Heft und 2 Heft. 1907-8. 5s., 7s., and 7s. 3d. respectively.

Kurzfassende praktischer Ratgeber für Irrenärzte und solche, die es werden wollen. Von Dr. G. Lomer. 1908. 1s. 3d.

Schemata für Augenmuskellähmungen. Von Dr. E. Wölflin. 1907. 3s.

Landläufige Irrtümer in der Beurteilung von Geisteskranken. Von Dr. med. O. Bumke. 1908. 2s. 3d.

Die operative Geburtshilfe der Praxis und Klinik. In Zwanzig Vorträgen von Dr. H. Fehling. 1908. 4s.

Lehrbuch der Nachbehandlung nach Operationen. In Vorlesungen. Bearbeitet von Professor Dr. P. Reichel. Zweite Auflage. 1909.

Das Auge des Geburtshelfers. Von H. Sellheim. 1908. 1s. 10d.

Die Bedeutung der spino-cerebellaren Systeme. Von Dr. R. Bing. 1907. 6s. 10d.

Die Funktionsprüfung des Darmes mittelst der Probekost, ihre Anwendung in der ärztlichen Praxis und ihre diagnostischen und therapeutischen Ergebnisse. Von Professor Dr. A. Schmidt. Zweite Auflage. 1908. 3s.

Aus der Königl. Universitätskinderklinik in München (Vorstand: Professor M. Pfäundler). Über das Verhalten Hämolytischer Serumstoffe beim Gesunden und Kranken Kind. Von Dr. E. Moro. 1908. 3s.

Psyche und Leben. Von Dr. W. v. Beekterow. Zweite Auflage. 1908. 5s. 3d.

Somnambulismus und Spiritismus. Von Dr. L. Lowenfeld. Zweite Auflage. 1907. 2s. 3d.

Akute Überanstrengung des Herzens und deren Behandlung. Von Professor Dr. Schott. Vierte Auflage. 1908. 2s. 3d.

Die Otischen Erkrankungen des Hirns, der Hirnhäute, und der Blutleiter. Nachträge zur dritten Auflage. Von Dr. O. Körner. 1908. 3s.

Aus dem Laboratorium der Oto-laryngologischen Klinik der Universität Basel (Professor Dr. Siebmann). Beiträge zur pathologischen Anatomie des Ohrs bei Lues Hereditaria. Von Dr. K. Asai. 1908. 4s.

Unfälle durch Elektrische Starkströme. Von Dr. E. D. Schumacher. 1908. 2s. 3d.

Der Anteil der Funktion an der Entstehung von Nervenkrankheiten. Von Dr. L. Edinger. 1908. 2s. 3d.

Tafeln zur Enttarnung der Simulation einseitiger Blindheit und Schwachsichtigkeit. Von Stabsarzt Dr. von Haselberg. Zweite Auflage. 1908. 2s.

University of London. Francis Galton Laboratory for National Eugenics. The Treasury of Human Inheritance. Parts I and II. London: Dulau and Co. 1909. 14s. (subs. 4 parts, 50s.).

The Mercers' Company Lectures on the Fluids of the Body. By E. H. Starling, M.D., F.R.C.P., F.R.S. London: A. Constable and Co. 1909. 6s.

*In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
APRIL.		APRIL (Continued).	
12 MONDAY ..	Bank Holiday.	22 THURSDAY ..	LONDON: Metropolitan Counties Branch Council, 4.30 p.m. CITY DIVISION, Metropolitan Counties Branch, Conjoint Meeting with Walthamstow Division, Brook House, Upper Clapton, 8.30 p.m.
13 TUESDAY ..	LONDON: Organization Committee, 10.30 a.m.	23 FRIDAY ..	ENGLISH DIVISION, Border Counties Branch, George Hotel, Penrith, 3 p.m.
14 WEDNESDAY ..	RICHMOND DIVISION, Metropolitan Counties Branch, Medico-Political Meeting, Royal Hospital, Richmond, 8.30 p.m.	24 SATURDAY ..	
15 THURSDAY ..	EAST ANGLIAN BRANCH, Spring Meeting, Bury St. Edmund's. MAIDSTONE DIVISION, South-Eastern Branch, Kent County Ophthalmic Hospital, Maidstone, 3 p.m.	25 Sunday ..	
16 FRIDAY ..	SWANSEA DIVISION, South Wales and Monmouthshire Branch, Clinical Meeting, 8.15 p.m.	26 MONDAY ..	
17 SATURDAY ..		27 TUESDAY ..	HAMPSTEAD DIVISION, Metropolitan Counties Branch, Business Meeting.
18 Sunday ..		28 WEDNESDAY ..	Central Council, 2 p.m., New Council Room, 429, Strand, W.C. BATH AND BRISTOL BRANCH, Bath.
19 MONDAY ..		29 THURSDAY ..	
20 TUESDAY ..	NORTHAMPTONSHIRE DIVISION, South Midland Branch, Board Room, Northampton General Hospital, 2.30 p.m.; Luncheon, Franklin's Restaurant, Guildhall Road, 1.30 p.m. NORTH WALES BRANCH, Colwyn Bay.	30 FRIDAY ..	BIRMINGHAM BRANCH, Pathological and Clinical Section, Medical Institute, Edmund Street, 8 p.m. SWANSEA DIVISION, South Wales and Monmouthshire Branch, 3 p.m.
21 WEDNESDAY ..	London: Journal and Finance Committee 2.30 p.m. ALTRINCHAM DIVISION, Lancashire and Cheshire Branch, General Meeting, Greenbank Hotel, Northwich, 5 p.m.; Dinner, 7 p.m.	MAY.	
		1 SATURDAY ..	
		2 Sunday ..	
		3 MONDAY ..	
		4 TUESDAY ..	
		5 WEDNESDAY ..	DORSET AND WEST HANTS BRANCH, Spring Meeting, Dorchester.

ANNUAL MEETING, BRITISH MEDICAL ASSOCIATION, BELFAST, 1909.

The Seventy-seventh Annual Meeting of the British Medical Association will be held at Belfast from July 23rd, to July 31st, 1909, under the Presidency of Sir William Whitla.

The Annual Representative Meeting commences in Belfast on July 23rd. The Presidential Address will be delivered on July 27th. The Sections will meet on July 28th, 29th, and 30th.

A preliminary programme of arrangements was published in the SUPPLEMENT, February 27th (see also March 27th, p. 145). The Honorary Local Secretaries are: Henry Lawrence McKisack, M.D., M.R.C.P., 17, University Square, Belfast; Cecil Edward Shaw, M.A., M.D., M.Ch., 29, University Square, Belfast; and Howard Stevenson, B.A., M.B., F.R.C.S.I., 2, College Square North, Belfast.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every

Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, APRIL 17TH, 1909.

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British Medical Association.

SCIENCE COMMITTEE.

REPORTS OF INSPECTORS ON WORK OF SCHOLARS AND GRANTEES.

THE Science Committee, at its meeting on March 26th, received reports from members of the Committee and others who had undertaken to inspect the work done by the research scholars of the British Medical Association, and by other investigators who had received grants from the Association last year. The following reports are published for the information of members of the Association.

Scholarships.

Immune Bodies in Haemolytic Serum

Dr. R. C. Buist reports:—

Dr. J. P. McGowan, Ernest Hart Memorial Scholar, has continued his work on the seat of the origin of complement, especially by the method of extirpation of organs, and has also extended his former work on the fate of hen corpuscles injected into the blood stream of the rabbit. Part of the result is being incorporated in a thesis for the M.D. degree in Edinburgh University, and owing to the regulations of the University Dr. McGowan requests the permission of the Science Committee to delay the presentation of a detailed report on his work in the meantime. I have much pleasure in supporting his application. I am satisfied that Dr. McGowan has done his work with great care and ability, and think that the Council is to be congratulated on the fact that

the fitness of his election to the Ernest Hart Scholarship has been approved by his recent selection for the post of Bacteriologist to the R.C.P.Ed.

Action of Drugs in Health and Disease.

Professor W. E. Dixon reports:—

Dr. W. H. Harvey, Research Scholar, has during the past six months been doing the most satisfactory work in the Pharmacological Laboratory, Cambridge. Some of the results will appear in the May number of *Virchow's Archiv*. Dr. Harvey, in collaboration with myself, has also published another short paper on the action of brucine. We have been working at the difference in the action of certain drugs during health and disease. For this purpose animals were first given some toxin, such as diphtheria, and a day or two afterwards when they were under the influence of the poison the action of drugs was determined. It was found that many drugs were without action under these circumstances; the action of others was greatly modified. In these cases of acute toxæmia, the greatest benefit was derived from endovenous injections of physiological saline. Dr. Harvey has also obtained some interesting conditions by the daily administration of pituitary extract. One difference between the action of pituitary extract and adrenalin is that the former drug contracts the coronary arteries whilst the latter does not. In correlation with this fact it has been determined that pituitary extract induces coronary sclerosis, a condition which I believe has not previously been induced experimentally.

Effect of Muscular Work on Purin Metabolism.

Professor C. J. Martin reports:—

Dr. E. L. Kennaway, Research Scholar, is diligently pursuing an investigation into the Effect of Muscular Work on Purin Metabolism, in the Laboratory for Pathological Chemistry at the Lister Institute of Preventive Medicine under Dr. Leathes, and the first instalment of the results obtained appeared in the *Journal of Physiology*, December 1908, Vol. 38, p. 1.

(a)

Experiments were made to ascertain whether the large excretion of uric acid, which was found by Leathes and Cathcart to follow muscular work, could be attributed to the flushing out of an amount of this substance which was present in the body and would otherwise have been retained there, or whether the increased output were due to heightened activity of the process of formation of uric acid.

During two periods of 28 and 24 days, respectively, a purin-free diet was taken at fixed times and in equal amounts daily. For the examination of the urine, the day was divided into four, and sometimes five portions, the urine passed during each of these being analysed separately.

In the first place, the same amount of work was performed with 10-lb. dumb-bells on four occasions at intervals of a few days. The first period of work was followed by a considerable increase in the output of uric acid, the second period by a smaller increase, after the third and fourth periods the output was actually subnormal. Two new forms of exercise were then taken, which brought into action muscles which had not been employed on the earlier occasions; the subsequent output of uric acid was distinctly greater than it had been after the later repetitions of the previous form of work.

The diminution in effect which was observed to result from the repetition of a single form of work might have been due to exhaustion of the stock of retained uric acid, but if this were the case, the new exercises could not have produced the observed increase in the output by any washing-out process; they must then have caused an increase in the formation of uric acid. These results suggest that unaccustomed exercise leads to the formation of increased amounts of uric acid, this effect showing, however, a progressive diminution as the muscles employed in any one form of exercise become better trained.

In the second place, the combined effects of salicylic acid and of muscular work upon the uric acid output were observed. On an earlier occasion the person who was the subject of these experiments had taken 4 grains of salicylic acid; in the next 24 hours the amount of uric acid excreted was nearly twice as great as is normal, while during the second 24 hours only about three-fifths of the normal amount was excreted. When 2 grams of salicylic acid were taken before and after 2 hours of muscular work, the uric acid output during the next 24 hours was two and one-fifths times greater than the average, while during the second 24 hours the diminution in the output was less than it had been at this time under the influence of salicylic acid alone. A comparison of the combined effects of muscular work and of salicylic acid with the results obtained by the action of each of these two agents alone indicates that the two actions can take place simultaneously without interference. This fact, and the great amount of the output under these conditions, give support to the theory that muscular work increases the formation of uric acid.

(b)

Two series of observations made upon the same person in July and October, 1908, showed that the total output of purins at these two periods was almost exactly the same, while the amounts of uric acid excreted showed a considerable difference. In both these periods the uric acid output was more variable from day to day than was that of the total purins. This result confirms the conclusion reached by Burian and Schur, that the total output of purin compounds is in any person a remarkably constant quantity, which undergoes smaller variations than does the uric acid output.

(c)

The amounts of purin base excreted during different portions of the day show variations very similar to those of the uric acid output. The excretion of bases is lowest during the night and highest about the middle of the day.

(d)

When a constant amount of fluid is being taken at fixed times of the day, the output of uric acid tends to be

raised when the volume of urine is small, and lowered when the volume of urine is large, while the excretion of purin bases varies in the opposite directions.

(e)

During muscular work, the output of purin bases is increased while that of the uric acid is diminished; the net result of these two changes is such that the total amount of purins excreted may be but little altered. This naturally suggested that the amount of oxygen supplied to the tissues during exertion is insufficient to allow of the formation by oxidation of the usual amount of uric acid. Accordingly, observations were made upon the excretion of purins during work with and without inhalation of oxygen. No definite evidence of an increased oxidation of purins could be obtained when oxygen was inhaled.

Mesencephalic Root of Trigeminal.

Professor C. J. Martin reports:—

Dr. Otto May, Research Scholar, is working in Sir Victor Horsley's Laboratory at University College on the origin and distribution of the mesencephalic root of the trigeminal nerve. There are some important groups of cells in the brain stem, the functions of which have only been conjectured, not proved. One of the most interesting of these is the column of large ovoid cells, lying along the outer border of the grey matter surrounding the aqueduct of Sylvius. They are usually regarded as part of the motor nucleus of the trigeminal nerve, and their axons are said to form the "mesencephalic" or descending root of that nerve, and to issue from the pons as part of its motor division. This view has never been put to experimental proof, and the great morphological differences between these cells and those of the main motor nucleus in the pons together with their close connection with the nuclei of the 3rd and 4th nerves, suggests the probability of some functional connection with those nerves.

The object of Dr. May's present research is a complete experimental investigation of the cells; and their axons.

The methods he is employing are of two kinds:—

1. Division of the whole or branches of the trigeminal nerve (or the oculo-motor nerves) in cats and monkeys and after a suitable interval examining the nucleus in question for chromatolytic changes.
2. Making lesions in the hind part of the mid-brain, *i.e.*, through the tegmental region in the level of the posterior part of the posterior colliculus, for the purpose of dividing the supposed mesencephalic root of the trigeminal without interfering with its main nuclei in the pons. Serial sections are made of the parts behind the lesion, stained by Marchi's method to show degenerated fibres, and of the parts in front of the lesion, stained to show chromatolysis. In addition, the Gasserian ganglion and the peripheral branches of the trigeminal and other nerves are examined for degenerated fibres.

Up to the present a large number of these various lesions have been made, of which a considerable portion have been successful. The results, so far as they have been obtained, suggest the necessity for considerable revision of our ideas regarding the function of these parts. At present, however, it would be premature to give any detailed account of these findings, but it appears likely that the completion of this research will throw considerable light on the connections of various parts of the mid-brain.

Grants.

The Larger Nuclei of the Brain Stem.

Professor C. J. Martin reports:—

Dr. Gordon Holmes is working in Sir Victor Horsley's Laboratory, University College, and is engaged in an investigation on the anatomical relations of the larger nuclei of the brain stem, especially of those which are connected

with the cerebellum. He is observing as far as possible the symptoms which arise from destruction of these nuclei. The methods he employs are: (1) making small lesions by electrolysis in the grey matter to be investigated, and tracing the myelinated fibres which degenerate therefrom by the Marchi method; (2) making larger lesions, e.g., hemisection of the mid-brain, or section of the peduncles of the cerebellum, and ascertaining later by Nissl's method those cells which send axis cylinders into the region injured by the experiment.

Owing to delay in obtaining a vivisection licence relatively little progress has been yet made.

Lymphogenous Neurotoxic Lesions.

Professor Sheridan Delépine reports:—

Dr. David Orr has worked continuously in the Pathological Laboratory of the Manchester University at this since last June. He has continued his work on *lymphogenous neurotoxic lesions*. He has compared the action of the *Bacillus paratyphicus* with that of the *Bacillus coli* and of the staphylococcus he had previously used. He has obtained distinct results which he demonstrated by means of excellent preparations.

He has also begun to investigate the character of haematoxigenous neurotoxic lesions in rabbits (3 rabbits used).

The Pituitary Body.

Professor C. J. Martin reports:—

Drs. Halliburton, Mott and Sikes are engaged at Claybury Asylum and King's College, London, in the examination of a large number of pituitary bodies removed after death from various cases of nervous disease. The work is progressing rapidly, and the authors expect that a full paper on the subject will be ready for publication soon. Most of our knowledge of the pituitary is derived from the study of that gland in animals. So far as results have at present been obtained, they coincide very closely with those derived from a study of the pituitary in animals, and the various nervous affections from which the patients suffered appear to be without any marked influence on the functions of the organ.

The investigation is partly histological, partly experimental (injection of extracts into animals), and partly chemical, an attempt being made to determine the chemical nature of the active principle.

Cyanosis in Congenital Heart Disease.

Professor C. J. Martin reports:—

Dr. Herbert French is working conjointly with Dr. Pembrey in the Physiological Laboratory at Guy's Hospital upon the nature of the extreme cyanosis of certain varieties of congenital heart disease. The methods employed are various, including gas analyses (respiratory exchanges, etc.), blood examinations, blood pressure determinations, the effects of respiring various abnormal gases, and so forth. Extensive investigations have been carried out upon four adult cases of morbus coeruleus. The results so far afford evidence in favour of certain theories, but naturally it requires a larger number of cases to be investigated before absolute statements upon any deductions can be made. Cases of adult morbus coeruleus are not so common as to enable the investigators to carry on their work continuously, and it might be several years before they have examined a sufficient number of cases. A preliminary account of the results of their work upon this subject during last year was communicated to the Section of Physiology at the Annual Meeting at Sheffield, and was published in the *BRITISH MEDICAL JOURNAL*, August 29th, 1908.

Estimation of Total Haemoglobin.

Professor C. J. Martin reports:—

Dr. A. E. Boycott and Dr. C. G. Douglas set out to attack the problem as to whether reliance could be placed on the method described by Haldane and Lorrain Smith in 1900 of estimating the total amount of haemoglobin in the body and the volume of the blood by administering carbon monoxide

in known amount, and subsequently measuring the pinkness of the blood. Very important results were obtained by L. Smith by the application of this method to cases of human anaemia. He found, for example, that in pernicious anaemia there is a real deficiency of haemoglobin in the body, and that in chlorosis, on the other hand, the deficiency of haemoglobin indicated by the haemoglobinometer is only apparent, and is brought about by a great increase in the total volume of blood. In the same way it has been shown that in *Ankylostoma* anaemia there is no real lack of haemoglobin, but only a dilution of the blood.

The accuracy of this method cannot be tested directly on man. On animals, however, by making determinations by this method before and after (1) taking out a known amount of haemoglobin by bleeding, (2) putting in a known amount by transfusion, they got the correct calculated answer within about 5 per cent. A similar correspondence was found between the results given by the carbon monoxide method and those obtained by killing the animal, washing out the vessel, etc., and so estimating the total amount of haemoglobin directly. The inference which may be drawn is that the results obtained on man are completely reliable.

They also studied the regeneration of blood by this method, and were able for the first time to determine accurately the amount of haemoglobin which is regenerated from day to day after single and repeated bleedings. The fate of rabbits' blood transfused into rabbits was also examined. They found that if an amount of haemoglobin equivalent to about one quarter to one third of that possessed by the recipient be passed into the circulation, it takes about ten days to disappear; it would then be of material service in helping to tide over the period of dangerous pregenerative deficiency of haemoglobin following a severe haemorrhage. If, however, the transfusion be repeated a second or a third time on the same animal, a similar quantity of haemoglobin is disposed of in two or three days, under which circumstances transfusion would be an almost useless therapeutic measure. This observation raises many points of interest which Boycott and Douglas are at present investigating.

Incidentally they observed in rabbits conditions somewhat resembling chlorosis in man, in that the haemoglobinometer readings indicated a much greater deficiency of haemoglobin than actually obtained owing to a co-existing increase in the volume of the blood. This condition was found in some animals after a single severe haemorrhage, in aniline poisoning (when the volume of the blood may be doubled), and in a spontaneous anaemia (in which the volume was increased fourfold).

An abstract of their results was received by the Secretary of the Association for publication in the *JOURNAL* in accordance with the terms of the Grant on November 2nd last. A more extended account will appear in the next number of the *Journal of Pathology and Bacteriology*. Financial assistance in aid of this research was also received from the Government Grant Committee of the Royal Society.

Methaemoglobin.

Professor C. J. Martin reports:—

Mr. P. P. Laidlaw is working in the Physiological Laboratory at Guy's Hospital and is re-examining the accepted view with regard to the amount of oxygen present in methaemoglobin.

He has found that oxyhaemoglobin when converted into haematin by acids gave up half its available oxygen, whereas methaemoglobin treated in the same way did not. As the haematin formed seem to be the same and the oxygen would hardly have come from the globin or the acid used it is probable that the oxygen content of oxyhaemoglobin is different from methaemoglobin. If this is the case the accepted view resting on Hüfner's researches is incorrect.

The method Mr. Laidlaw is employing for his work consists of three steps: (1) crystallization of methaemoglobin, (2) estimation of the oxygen content in pure pigment by means of hydrazine hydrate solution which gives one molecule of nitrogen for one molecule of available oxygen, (3) estimation of the amount of haemoglobin used.

The research has only recently commenced and the time has so far been occupied in devising and perfecting the methods.

(Continued on next page)

Cardio-toxins in Blood Serum and Muscle.

Professor C. J. Martin reports:—

The researches at present being carried out by Miss Winifred C. Cullis, D.Sc., at the Physiological Laboratory of the London School of Medicine for Women are:—

1. The investigation as to the nature of the substances present in blood serum, toxic to the isolated mammalian heart.
2. The isolation of the substance or substances in Liebig's extract of meat which gives to this preparation its stimulating properties upon the excised heart. These properties are being investigated in perfusion experiments upon the isolated mammalian hearts fed with Locke's solution.

The first point Miss Cullis has been investigating for some time, and so far she has determined that the poisonous substance is protein in nature, or that at least it is eliminated from the serum by methods which get rid of the proteins.

The second investigation arose from Miss Cullis's own observation that muscle extract acted as a stimulus to the perfused heart, an observation confirmed by Dr. Biggs. At present separation of the different constituents of this extract is being attempted by Kütsch's method, and these when obtained will be investigated separately.

Dropsy of Pregnancy.

Professor C. J. Martin reports:—

Dr. A. M. H. Gray is, conjointly with Dr. Charles Bolton, making "Observations on the dropsy occurring during pregnancy in rabbits," but the work, which is being carried out in the laboratories of University College Hospital Medical School, is not yet very far advanced owing to the difficulty of securing pregnant animals at this time of the year.

It was noticed by these investigators that ascites is by no means uncommon in pregnant rabbits. This is no doubt a well known fact, but no reference to it has been found in the literature.

This accumulation of fluid in the peritoneal cavity must be brought about either by an exaggerated action of the physiological mechanisms concerned in the production of lymph, or by pathological factors. In the latter case, the primary cause might be some disturbance in the circulation or some toxic condition of the blood.

Drs. Gray and Bolton propose to investigate the condition of the circulation, the blood, and the ascitic fluid of these animals, and have commenced to examine the pressures in the different parts of the vascular system.

In order to get some idea of the pressures occurring in normal rabbits they have examined the venous pressures in the jugular vein, inferior vena cava, and portal vein, and also the arterial pressure in nine normal rabbits. In each case artificial respiration was employed and the animals were anaesthetized to the same degree with ether. Up to the present time they have only had the opportunity of examining the pressures in four pregnant animals, the amounts of the ascitic fluid being on the average about 15 ccm. In these animals the various pressures were found to be precisely the same as had been found to occur in the normal animal.

If the dropsy is an exaggeration of the normal condition, or due to a disturbance of the circulation this result is of great interest, as showing that the accumulation of fluid has occurred with a normal capillary pressure, because it has been held for some time by Dr. Bolton as the result of experiments, that the dropsy of venous stagnation is not dependent upon a rise of capillary pressure.

Rickets.

Professor Noel Paton reports:—

During last summer, Dr. Leonard Findlay carried out experiments in the Pathological and Physiological Laboratories of the University of Glasgow in connection with variation in the amount of complement in rickets, but the complement proved so labile that the results proved inconclusive. This winter the investigation is being continued on kittens. The blood in eight cases of experimental rickets in dogs has been examined.

Motor and Sensory Functions of Human Alimentary Canal.

Professor C. J. Martin reports:—

The investigations of Dr. A. F. Hertz on the motor and sensory functions of the human alimentary canal in health and disease were carried out at Guy's Hospital chiefly by auscultation and by skiagraphy after the administration of a meal containing 2 ounces of bismuth oxychloride, an inert salt opaque to the X-rays.

The process of swallowing produces characteristic sounds, and its mechanism has also been studied with the X-rays. (1) (2).

In addition to peristalsis, segmentation, which thoroughly churns the food with the digestive juices, occurs in man as well as in animals (1) (2).

The residue of a meal begins to arrive in the caecum 4 hours after it is taken. The arrival can be recognised by auscultation, as it produces characteristic sounds which disappear when the opening of the ileo-caecal sphincter is inhibited by inflammation in its immediate neighbourhood. The presence or absence of caecal sounds can be a valuable aid in the diagnosis of appendicitis and certain other conditions. (5).

The study of a large number of cases of constipation has shown that two great classes exist: (1) those due to sluggish action of the intestines, especially the part distal to the middle of the transverse colon, owing to weakness of the intestinal musculature, insufficient stimulation of peristalsis or depression of the nervous system; (2) those due to inability to defaecate completely owing to weakness of the abdominal muscles, or loss of the defaecation reflex, the passage through the intestines being normal in rate. (3) (4).

According to Hertz's results saline purgatives do not act by attracting water into the lumen of the gut, but by stimulating the motor and secretory activity of the large intestine after absorption into the blood. (6).

Dr. Hertz has also made observations upon the sensory capacity of the normal alimentary tube. The stomach and intestines are insensitive to heat and cold; the temperature sensation felt on swallowing is produced in the lower end of the oesophagus.

0.5 per cent. HCl produces no sensation in the oesophagus or stomach, so heartburn and the pain in "hyperchlorhydria" cannot be due to excess of HCl alone. Carminatives produce no sensation, but 40 per cent. alcohol produces a characteristic "burning" in the oesophagus and the stomach. (7).

Physiological Effect of Gastro-jejunostomy.

Professor C. J. Martin reports:—

Mr. Herbert J. Paterson, M.A., F.R.C.S., is working at the Laboratory of the London Temperance Hospital, and also in a small subsidiary laboratory fitted up at his residence. He is continuing his investigations into the physiological effects of the operation of gastro-jejunostomy by investigating the condition of the stomach contents before and after operation on patients on whom he himself operates. He has the patient under observation during the whole period of the investigation.

Mr. Paterson has already investigated some 30 or 40 cases. He proposes to make additional observations upon a number of the cases a year or more after operation to ascertain what influence time has on the changes produced by operation.

Intestinal Concretions.

Professor Sheridan Delc pne reports:—

Dr. Owen T. Williams has been engaged since last June in collecting intestinal concretions, healthy and diseased appendices vermiformes, etc.

He has also studied the characters of neutral fats and earthy soaps, and their distribution in the mucous membrane of the intestine and in concretions. He proposes to use animals, including a goat, for experimental work.

Dr. Williams has already done a considerable amount of work which appears to be very carefully done and sound.

- (1) *Guy's Hospital Reports*, 1907.
- (2) *BRITISH MEDICAL JOURNAL*, February, 1908.
- (3) *Royal Society of Medicine, Transactions*, February, 1908.
- (4) *British Medical Association*, 1908; *Clinical Journal and Guy's Hospital Gazette*, 1908.
- (5) *BRITISH MEDICAL JOURNAL*, November, 1908.
- (6) *Royal Society of Medicine, Transactions*, November, 1908.
- (7) *Journal of Physiology*, December, 1908.

He works in Professor B. Moore's Laboratory in the University of Liverpool.

Metabolism in Rheumatoid Arthritis.

Professor W. E. Dixon reports:—

Dr. Harold Ackroyd has been working at the Hospital for Special Diseases, Cambridge, at purin metabolism, to which he has been devoting his whole time. He is about to publish a paper on the metabolism of rheumatoid arthritic patients. These patients were required to live on a purin-free diet for a time varying from three to four weeks, during which period their endogenous uric acid nitrogen, etc., was examined daily. The work has been performed under exceptionally favourable conditions in the special hospital for rheumatoid arthritis.

The following are the conclusions at which he has arrived:—

1. The normal endogenous excretion of uric acid nitrogen may fluctuate from day to day in the same individual to the extent of 0.037 gram (0.11 gram of uric acid), and the total purin nitrogen excretion to the extent of 0.03 gram.

2. The daily average endogenous uric acid nitrogen excretion varies in different individuals from about 0.08 to 0.19 gram (0.25 to 0.55 gram of uric acid), and the total purin nitrogen from about 0.1 to 0.21 gram.

3. No constant percentage of a purin substance contained in the food reappears in the urine as exogenous purin excretion. This percentage may vary in normal cases from 20.6 to 71.5 when hypoxanthin is the purin substance administered; and the same individual may give different results on different occasions.

4. The duration of the period of increased uric acid excretion which follows the addition of 0.75 gram of hypoxanthin to a purin-free diet may be as short as two days, or as long as four in normal cases.

5. There is no important change in the purin metabolism of persons suffering from rheumatoid arthritis; it may be (1) completely normal, or (2) while normal as regards the endogenous excretion, the period of increased uric acid excretion which follows the administration of hypoxanthin may be prolonged for more than four days. It is more likely that this effect is individual than that it is characteristic of any particular form of the disease, except in those cases in which this prolongation is accompanied by active manifestations of the disease.

6. An acute or sub-acute attack of rheumatoid arthritis is accompanied by an increased purin excretion in some cases, but not in all.

7. Hypoxanthin, though generally inert except as regards its effect on purin excretion, may cause slight rise of temperature in some persons, while in other persons headache occurs some hours after it has been taken. These effects are neither frequent nor generally very well marked.

8. Some evidence is brought forward that, at any rate in some cases of rheumatoid arthritis, part of the increased excretion of uric acid which follows a dose of hypoxanthin may not be derived by direct oxidation from that substance, but may be the result of its action on the endogenous purin metabolism.

Opsonic Index in Coryza.

Professor C. J. Martin reports:—

Dr. C. H. Benham has been engaged in determining the opsonic index of the blood of persons infected by the organisms producing common colds, noting the results of vaccine therapy on the opsonic index to see whether any clinical results might be obtained which would be of value in treatment.

Dr. Benham has taken advantage of an epidemic of rather severe colds for investigation. The prevailing organism has been the *Micrococcus catarrhalis*, associated in several cases with *Micrococcus paratyphicus*. He has made observations upon six cases due to the *Micrococcus catarrhalis*.

Dr. Benham observed in all but one of the six cases a considerable rise in the opsonic index as a result of the injection of a vaccine prepared from the *Micrococcus catarrhalis*, and this was accompanied by an improvement in clinical symptoms. One case, in which an injection of 250 million organisms was given within 24 hours of the onset, was completely cured in 48 hours, the opsonic index rising from 0.63 before injection to a maximum of 2.27.

It is too early at present to draw any conclusions as to the results, but they appear to confirm those obtained by R. W. Allen (*Lancet*, December 5th, 1908).

Intracellular Constituents of Micro-organisms.

Professor C. J. Martin reports:—

Professor R. Tanner Hewlett, King's College, London, is investigating the properties of the intracellular constituents (endotoxins) of micro-organisms, particularly those which do not excrete toxin.

The intracellular constituents are obtained by a modification of MacFadyen's method (trituration in the presence of liquid air).

At present the effects of the intracellular constituents of the *Micrococcus pyogenes* var. *aureus* are being studied especially in relation to their effects on the opsonic index of normal animals.

The keeping qualities of the solutions of the intracellular constituents are also being investigated with a view to the possibility of their use for prophylaxis and treatment.

It has been found that the constituents of the *M. pyogenes* var. *aureus* produce when injected subcutaneously a marked rise in the opsonic index of rabbits, a rise greater and more lasting than that produced by a vaccine (a killed culture) of the same micro-organism. Weight for weight, the endotoxin is decidedly more active than the corresponding vaccine. Taken by the mouth, also, a distinct, though transient, rise of the opsonic index is obtained.

The solutions of the endotoxins with which these results have been obtained are being kept, and will be tested from time to time in order to ascertain their keeping qualities.

An important point which is indicated by the work so far accomplished, is that the endotoxins, even in large doses, produce decidedly less "negative phase" than the corresponding vaccine.

In these experiments the opsonic index is being determined for several strains of the *M. pyogenes* var. *aureus*, and indications have been obtained that there is some variation with the different strains, suggesting that the strain of organism employed in determinations of the opsonic index may be a factor of some importance.

Parasitic Skin Diseases.

Dr. R. C. Buist reports:—

Dr. R. Cranston Low is continuing with great patience his experiments on the growth of tinea *in vitro* and in animals. The rate of growth is extremely slow, but a strain has been successfully inoculated in the cat, and Dr. Low has also prepared a vaccine and has at present three cats under treatment with it. It will for some time yet be impossible to report the result. Dr. Low made an interesting exhibit of his cultures at the recent meeting of the Edinburgh Branch.

Scabies has been successfully cultivated in the rabbit, and at the same meeting a series of microscopic sections was exhibited. In the rat the results have so far been negative. Dr. Low's work is being very well done.

Röntgen Rays.

Professor C. J. Martin reports:—

Dr. A. Howard Pirie is investigating the quantitative relations between X-rays given off and the amount of electricity used. For this purpose it is necessary to measure the voltage, the milliampère, and the time. The latter two can be combined in the quantimeter brought out by Dr. Pirie two years ago. It is still difficult to measure the voltage, as a suitable instrument has not yet been brought out. The Equivalent Spark Gap is taken as a measure of the voltage, but it is only a rough gauge. Lord Kelvin's instrument has been found unsuitable for use with an X-ray outfit.

Dr. Pirie has carried out many experiments with various X-ray tubes, and found that an X-ray tube which is suitable for use in a case of Ringworm requires to be supplied with about $\frac{1}{300}$ of a Board of Trade unit at 63,000 volts before the skin has received enough X-rays to cause epilation according to Sabouraud's method.

THE SEVENTY-SEVENTH ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION,
BELFAST,
JULY 23RD TO JULY 31ST, 1909.

President:

SIMON SNELL, Hon.D.Sc., F.R.C.S.Edin., Ophthalmic Surgeon, Royal Infirmary, Sheffield.

President-elect:

Sir WILLIAM WHITLA, M.D., LL.D., Professor of Materia Medica and Therapeutics, Queen's College, Belfast.

Past-President:

HENRY DAVY, Hon.D.Sc., M.D., F.R.C.P.Lond., Physician, Royal Devon and Exeter Hospital, Exeter.

Chairman of Representative Meetings:

JAMES ALEXANDER MACDONALD, M.D., M.Ch., R.U.I., Physician, Taunton and Somerset Hospital.

Chairman of Council:

EDMUND OWEN, Hon.D.Sc., LL.D., F.R.C.S., Consulting Surgeon to St. Mary's Hospital, London.

Treasurer:

EDWIN RAYNER, M.D.Lond., F.R.C.S., Consulting Surgeon, Stockport Infirmary, Stockport.

The Seventy-seventh Annual Meeting of the British Medical Association will be held in Belfast in July, 1909. The President's address will be delivered on Tuesday, July 27th, and the Sections will meet on the three following days. The Annual Representative Meeting will begin on Friday, July 23rd, 1909.

PROGRAMME OF BUSINESS.

The Address in Surgery will be delivered by ARTHUR EDWARD JAMES BARKER, F.R.C.S., Professor of the Principle and Practice of Surgery, University College, London.

The Address in Obstetrics will be delivered by Sir JOHN W. BYERS, M.D., Professor of Midwifery and Diseases of Women, Queen's College, Belfast.

The Popular Lecture will be delivered by Dr. J. A. MACDONALD, Physician to the Taunton and Somerset Hospital, Chairman of the Representative Meetings.

THE SECTIONS.

The scientific business of the meeting will be conducted in fifteen Sections, which will meet on Wednesday, July 28th, Thursday, July 29th, and Friday, July 30th.

The President, Vice-Presidents, and Honorary Secretaries of each Section constitute a Committee of Reference for that Section, and exercise the power of inviting, accepting, or declining any paper, and of arranging the order in which accepted papers shall be read. Communications with respect to papers should be addressed to one of the Honorary Secretaries.

A paper read in the Section must not exceed fifteen minutes, and no subsequent speech must exceed ten minutes.

Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the BRITISH MEDICAL JOURNAL without special permission.

The following are the general arrangements so far as they are yet complete:

ANATOMY AND PHYSIOLOGY.

President: CHARLES SCOTT SHERRINGTON, M.D., F.R.S., Physiological Laboratory, University, Liverpool.

Vice-Presidents: Professor THOMAS HUGH MILROY, M.D., F.R.S.E., Queen's College, Belfast; Professor PETER THOMPSON, M.D., King's College, Strand, London; ARTHUR

PHILIP BEDDARD, M.D., F.R.C.P., 44, Seymour Street, Portman Square, London, W.; Professor ANDREW FRANCIS DIXON, M.B., D.Sc., 73, Grosvenor Road, Dublin.

Honorary Secretaries: ALEX. LOW, M.B., 142, Blenheim Place, Aberdeen; JOHN ALEX. MILROY, M.D., Queen's College, Belfast.

DERMATOLOGY AND ELECTRO-THERAPEUTICS.

President: WILLIAM CALWELL, M.D., 6, College Gardens, Belfast.

Vice-Presidents: ROBERT BRIGGS WILD, M.D., 96, Mosley Street, Manchester; LESLIE ROBERTS, M.D., 46, Rodney Street, Liverpool.

Honorary Secretaries: JAMES HARRY SEQUEIRA, M.D., F.R.C.P., 8a, Manchester Square, London; S. ERNEST DORE, M.D., 26, New Cavendish Street, London; JOHN CAMPELL RANKIN, M.D., 38, University Road, Belfast.

A discussion will be held on the Treatment of Skin Diseases by Radium and Radio-therapy.

DISEASES OF CHILDREN.

President: HAROLD J. STILES, F.R.C.S.Edin., 9, Great Stuart Street, Edinburgh.

Vice-Presidents: JOHN McCaw, M.D., 74, Dublin Road, Belfast; RICHARD WHYTOCK LESLIE, M.D., "St. Heliers,"

Strandtown, Belfast; ROBERT CAMPBELL, F.R.C.S. 21, Great Victoria Street, Belfast.

Honorary Secretaries: ANDREW FULLERTON, F.R.C.S.I., 8, University Square, Belfast; JOHN WILLIAM SIMPSON, M.D., 19, Lansdowne Crescent, Edinburgh.

It is proposed to devote some portion of three of the days on which the Section meets to the discussion of the following subjects:

Wednesday, July 28th.—Club Foot.

Thursday, July 29th.—Functional Neuroses in Children.

HAEMATOLOGY AND VACCINE THERAPY.

President: SIR ALMROTH WRIGHT, M.D., F.R.S., 6, Park Crescent, Regent's Park, London, N.W.

Vice-Presidents: ALEX. GARDNER ROBE, M.B., 15, University Square, Belfast; THOMAS HOUSTON, M.D., 95, Great Victoria Street, Belfast; CAPTAIN STEWART RANKIN DOUGLAS, I.M.S., Inoculation Department, St. Mary's Hospital, London.

Honorary Secretaries: WILLIAM DUNLOP DONNAN, M.D., 12, High Street, Holywood, co. Down; DUDLEY W. CARMALT-JONES, M.B., B.Ch.Oxon., 78, Wimpole Street, London, W.

The subjects which have been chosen for discussion are:

Wednesday, July 28th.—Papers on separate subjects: Dr. Houston, Typhoid Carriers. Captain Douglas, Bacteriology of Cystitis; discussion. Dr. Fleming, Bacteriology and Vaccine Treatment of Acne.

Thursday, July 29th.—Discussion: The Early Diagnosis of Tuberculosis, opened by Professor Calmette, l'Institut Pasteur de Lille.

Friday, July 30th.—Discussion: Bacterial Infections of the Respiratory Tract other than Tuberculous.

HYGIENE AND PUBLIC HEALTH.

President: LOUIS COLTMAN PARKES, M.D., 61, Cadogan Square, Chelsea, London.

Vice-Presidents: SAMUEL AGNEW, M.D., Lurgan, co. Antrim; HENRY O'NEILL, M.D., 6, College Square East, Belfast; CHARLES KILLICK MILLARD, M.D., Town Hall, Leicester.

Honorary Secretaries: CHARLES PORTER, M.D., Public Health Department, Town Hall, Finsbury; WILLIAM MCLEORINAN, L.R.C.P., 103, Antrim Road, Belfast; THOMAS CARNWATH, M.B., Town Hall, Manchester.

The following subjects have been suggested for discussion:

1. The Compulsory Notification of all forms of Tuberculosis and the Mortality from Tuberculous Diseases in relation to Sex. To be opened by Dr. Harold Scurfield, Medical Officer of Health, Sheffield.

2. Latent Infections of the Diphtheria Bacillus, and the Administrative Measures required for dealing with Contacts. (Joint discussion with the Laryngological Section.)

3. The Discharge of Sewage Effluents into Tidal Waters.

The following additional subjects are also suggested:

1. Enteric Fever Carriers and Paratyphoid Bacilli.
2. Ventilation of Sewers and House Drains and the Disconnexion Trap.
3. The Medical Officer of Health and School Medical Inspection.

LARYNGOLOGY, OTOTOLOGY, AND RHINOLOGY.

President: ST. CLAIR THOMSON, M.D., F.R.C.P., 28, Queen Anne Street, London.

Vice-Presidents: ERNEST BLECHYNDEN WAGGETT, M.B., 45, Upper Brook Street, London, W.; V. P. HENRY SMURTHWAITE, M.D., 8, St. Mary's Place, Newcastle-on-Tyne; J. A. KNOWLES RENSHAW, M.D., 11, St. John Street, Manchester.

Honorary Secretaries: HAROLD SHUTTLEWORTH BAREWELL, F.R.C.S., 55, Wimpole Street, London; JOHN STODDART BARR, M.B., 13, Woodside Place, Glasgow; HENRY HANNA, M.B., B.Sc., 57, University Road, Belfast.

The following subjects have been selected for special discussion:

Wednesday, July 28th.—The Treatment of Tinnitus Aurium. (1) Dr. Thomas Barr (Glasgow); (2) Mr. Richard Lake (London).

Thursday, July 29th.—Latent Infections of the Diphtheria Bacillus, including the Administrative Measures required for dealing with Contacts. (In association with the Section of Hygiene and Public Health.) (1) Dr. Robert M. Buchanan (Glasgow); (2) Dr. Duncan Forbes (Brighton); (3) Dr. P. Watson Williams (Bristol).

Friday, July 30th.—The Treatment of Cicatricial Stenoses of the Larynx and Trachea. (1) Dr. H. Lambert Lack (London); (2) Dr. Delsaux (Brussels); (3) Dr. Bryson Delavan (New York).

It is proposed this year to arrange a special exhibition of skiagraphy in relation to diseases of the upper air and food passages. Members are requested to send in the titles and descriptions of any skiagraphs they propose to contribute to Dr. Hanna not later than June 1st, so that they may be printed in the catalogue. Every care will be taken of negatives and prints, which should be carefully labelled with the owner's name and address.

MEDICINE.

President: PROFESSOR JAMES ALEXANDER LINDSAY, M.D., F.R.C.P., 3, Queen's Elms, Belfast.

Vice-Presidents: ARTHUR FOXWELL, M.D., F.R.C.P., 47, Newhall Street, Birmingham; JOSEPH FRANCIS O'CARROLL, M.D., F.R.C.P.I., 43, Merrion Square, Dublin; LAURISTON ELGIE SHAW, M.D., F.R.C.P., 64, Harley Street, London; WILLIAM BAIRD MCQUITTY, M.D., 8, College Square East, Belfast.

Honorary Secretaries: JOHN SMYTH MORROW, M.D., Eia House, Antrim Road, Belfast; LEWIS ALBERT SMITH, M.D., 25, Queen Anne Street, London, W.; JOHN ELDER MACILWAINE, M.D., 55, University Road, Belfast.

The following subjects are suggested for discussion:

Wednesday, July 28th.—Metabolism.

Thursday, July 29th.—The Medical Aspects of Athleticism; Adolescent Albuminuria, or Mucous Colitis.

Friday, July 30th.—A Demonstration on Gastric Illumination.

NAVY, ARMY, AND AMBULANCE.

President: Fleet Surgeon J. LLOYD THOMAS, R.N.

Vice-Presidents: Inspector-General ROBERT BENTHAM, R.N. (retired), 22, King's Avenue, Ealing, London, W.; Lieut.-Colonel R. PORTER, R.A.M.C., P.M.O., Station Hospital, Military Barracks, Belfast; Colonel THOMAS H. HENDLEY, I.M.S., C.I.E., 4, Loudon Road, London, N.W.

Honorary Secretaries: Captain M. LOWSLEY R.A.M.C., St. Michael's Road, Aldershot; Captain HERBERT HUGH BLAIR CUNNINGHAM, M.D., F.R.C.S., 69, University Road, Belfast; Surgeon EDMUND COX, M.B., R.N., The Royal Naval Hospital, Chatham; Captain WILLIAM SALISBURY-SHARPE, R.A.M.C., 8, Cleveland Terrace, Hyde Park, London, W.

The Committee of this Section suggest the following subjects:

1. Effect on Health of Service in Submarine Boats.
2. Conditions of Life in Boys' Training Establishments on Shore.
3. Medical Arrangements for War in Ships of Dreadnought type.
4. A Detailed Scheme for an Unexpected Landing Party, using Material available on Board Ship.
5. Pitfalls for the Recruiting Medical Officer.
6. Probable Effects in the Services of the New Treatment of Syphilis by means of Organic Arsenical Compounds.
7. On the Importance of the Permanent Attachment of Ample Transport under the Command of the Medical Officer to each Field Medical Unit.
8. The Infective Pneumonias, their Incidence, Causes, Prevention, and Treatment during a Campaign.
9. On the Existing Ambulance Organization of the Home Railway Companies, with Suggestions for its Amplification and Unification.

10. The Effects of Recent Research on the Work of Colonial Medical Officers.

11. Diagnosis and Treatment of Pulmonary Tuberculosis in the Services.

12. Collection and Disposal of Wounded in War.

OBSTETRICS AND GYNAECOLOGY.

President: JOHN CAMPELL, M.D., F.R.C.S., Crescent House, University Road, Belfast.

Vice-Presidents: ROBERT ALEXANDER GIBBONS, M.D., 29, Cadogan Place, London; JOHN SINGLETON DARLING, M.B., High Street, Lurgan; CHARLES EDWIN PURSLOW, M.D., 192, Broad Street, Birmingham; EWEN JOHN MACLEAN, M.D., 12, Park Place, Cardiff.

Honorary Secretaries: HENRY THOMAS HICKS, F.R.C.S., Derby; ROBERT JAMES JOHNSTONE, M.B., F.R.C.S., 14, University Square, Belfast.

The Committee have thought it well to select two chief subjects for discussion:

1. The Treatment of the Graver Forms of Puerperal Sepsis.
2. Endometritis.

In the Pathological Part of this Section, Cancer of the Uterus has been chosen as one affording a wide scope for the exhibition of Specimens, Photographs, Microscopic Slides, etc.

These, with any others of interest, will be exhibited in the Pathological Museum.

OPHTHALMOLOGY.

President: JOHN WALTON BROWNE, M.D., 10, College Square North, Belfast.

Vice-Presidents: ARTHUR W. SANDFORD, M.D., 13, St. Patrick's Place, Cork; WILLIAM MARCUS KILLEN, M.D., 9, Clifton Street, Belfast; ALEX. HILL GRIFFITH, M.D., 17, St. John Street, Manchester.

Honorary Secretaries: JAMES ANDREW CRAIG, F.R.C.S., 11, University Square, Belfast; LESLIE JOHNSTON PATON, F.R.C.S., 1, Spanish Place, Manchester Square, London.

The subjects chosen for discussion are:

1. Eye Injuries in their Relation to the Workmen's Compensation Act.
2. Vascular Diseases of the Retina.
3. The Diseases of the Lymphoid Tissue of the Conjunctiva (Mr. Treacher Collins).

PATHOLOGY.

President: Professor WM. ST. CLAIR SYMMERS, M.B., Queen's College, Belfast.

Vice-Presidents: WALTER SYDNEY LAZARUS-BARLOW, M.D., Cancer Research Laboratory, Middlesex Hospital, London; ARTHUR EDWARD MOORE, M.B., Castlemahon, Blackrock, Cork; ASTLEY VAVASOUR CLARKE, M.D., 37, London Road, Leicester; Professor I. WALKER HALL, M.D., 9, Royal Park, Clifton, Bristol.

Honorary Secretaries: ALFRED EDWARD BARNES, M.B., 348, Glossop Road, Sheffield; OTTO F. F. GRÜNBAUM, M.D., 34, Wimpole Street, London, W.; WILLIAM JAMES WILSON, M.D., Pathological Laboratory, Queen's College, Belfast.

PHARMACOLOGY AND THERAPEUTICS.

President: Professor RALPH STOCKMAN, M.D., F.R.S. Edin., The University, Glasgow.

Vice-Presidents: Professor WALTER ERNEST DIXON, M.D., Pharmacological Laboratory, Cambridge; NEWMAN NEILD, M.D., 9, Richmond Hill, Clifton, Bristol.

Honorary Secretaries: VICTOR GEORGE LEOPOLD FIELDEN, M.B., 84, Dublin Road, Belfast; HECTOR CHARLES CAMERON, M.B., Guy's Hospital, London, S.E.

The following subjects have been suggested for discussion:

1. Spinal Anaesthesia.
2. The Treatment of Oedema.

PSYCHOLOGICAL MEDICINE.

President: T. OUTTERRSON WOOD, M.D., 40, Margaret Street, Cavendish Square, London.

Vice-Presidents: GEORGE ROBERT LAWLESS, F.R.C.S.I., District Asylum, Armagh; WM. RICHARD DAWSON, M.D., Farnham House, Finglas, co. Dublin; ROBERT HENRY COLE, M.D., 25, Upper Berkeley Street, London, W.; MICHAEL JAMES NOLAN, L.R.C.P. and S.I., Down District Asylum, Downpatrick.

Honorary Secretaries: WALTER SAMUEL SMYTH, M.B., District Asylum, Antrim; SIDNEY HERBERT CLARKE, M.B., Leicester and Rutland Asylum, Narborough, Leicestershire.

The following subjects have been selected for special discussion in this Section:

- July 28th.—(1) Somatic Delusions and Local Lesions. To be opened by Chas. Arthur Mercier, M.D.
- July 29th.—(2) The Sociological Relations of Insanity in Ireland. To be opened by M. James Nolan, M.D.
- July 30th.—(3) Considerations upon the Commissioner's Report of the Care and Control of the Feeble-minded. To be opened by Wm. Richard Dawson, M.D.

SURGERY.

President: Professor THOMAS SINCLAIR, M.D., F.R.C.S., 22, University Square, Belfast.

Vice-Presidents: CHARLES ALFRED BALLANCE, M.V.O., M.S., F.R.C.S., 106, Harley Street, W.; Sir PETER O'CONNELL, M.D., 9, College Square North, Belfast; ARTHUR JOHN DREW, F.R.C.S., Water Hall, St. Aldate's, Oxford; JOHN GALWAY COOKE, M.B., City and County Infirmary, Londonderry; ARTHUR BROWNLOW MITCHELL, F.R.C.S.I., 18, University Square, Belfast.

Honorary Secretaries: W. THELWALL THOMAS, F.R.C.S., 84, Rodney Street, Liverpool; G. LENTHAL CHEATLE, C.B., F.R.C.S., 117, Harley Street, London; HOWARD STEVENSON, M.B., F.R.C.S.I., 2, College Square North, Belfast; JAS. BERNARD MOORE, M.B., 11, Clifton Street, Belfast.

TROPICAL MEDICINE.

President: CHARLES WILBERFORCE DANIELS, M.B., London School of Tropical Medicine, Albert Docks, London.

Vice-Presidents: Lieutenant-Colonel ANDREW DEANE, I.M.S., Royal Victoria Hospital, Belfast; Surgeon-General W. R. BROWNE, M.D., C.I.E., 5, Royal Crescent, Holland Park Avenue, London.

Honorary Secretaries: JAMES COLVILLE, M.D., 7, University Square, Belfast; Dr. ANTON BREINL, Director Runcorn Research Laboratories.

The following subjects have been selected for discussion:

Wednesday, July 28th, 10 a.m.—Persistence of the Tropical Diseases of Man due to Protozoa. The discussion will be opened by the President.

Thursday, July 29th, 10 a.m.—Treatment of Chronic Recurrent Dysentery, with Special Reference to the Possibilities of Surgical Treatment. The discussion will be opened by Mr. J. Cantlie.

Friday, July 30th, 10 a.m.—Feeding and Treatment of Children in the Tropics. The discussion will be opened by Dr. W. Carnegie Brown.

The Committee will be glad to receive pathological specimens, photographs, drawings, or microscopical preparations illustrative of any subject in Tropical Medicine.

Honorary Local Secretaries—

HENRY LAWRENCE MCKISACK, M.D., M.R.C.P.,
17, University Square, Belfast.

CECIL EDWARD SHAW, M.A., M.D., M.Ch.,
29, University Square, Belfast.

HOWARD STEVENSON, B.A., M.B., F.R.C.S.I.,
2, College Square North, Belfast.

PROVISIONAL TIME TABLE.

FRIDAY, JULY 23RD, 1909.

11 A.M.—Annual General Meeting followed by Representative Meeting.

SATURDAY, JULY 24TH, 1909.

9.30 A.M.—Representative Meeting.

MONDAY, JULY 26TH, 1909.

10 A.M.—Representative Meeting.

7.30 P.M.—Annual Conference of Secretaries of Divisions and Branches.

TUESDAY, JULY 27TH, 1909.

10 A.M.—Council Meeting.

10.30 A.M.—Representative Meeting (if required).

2.30 P.M.—Adjourned General Meeting.
Induction of President.

8.30 P.M.—President's Address.

WEDNESDAY, JULY 28TH, 1909.

9.30 A.M.—Council Meeting.

10 A.M.—Sectional Meetings.

10.30 A.M.—Representative Meeting (if required).

12.30 P.M.—Address in Medicine.

8.30 P.M.—Reception.

THURSDAY, JULY 29TH, 1909.

8 A.M.—National Temperance League Breakfast.

9.30 A.M.—Council Meeting.

10 A.M.—Sectional Meetings.

12.30 P.M.—Address in Surgery.

7.30 P.M.—Annual Dinner.

FRIDAY, JULY 30TH, 1909.

10 A.M.—Sectional Meetings.

12.30 P.M.—Address in Obstetrics.

8 P.M.—Popular Lecture.

8.30 P.M.—Reception.

SATURDAY, JULY 31ST, 1909.

Excursions.

THE PATHOLOGICAL MUSEUM.

The following Committee has been appointed to organize the pathological museum:

President: Professor W. ST. CLAIR SYMMERS.

Honorary Secretaries: THOMAS HOUSTON, M.D.;
W. J. WILSON, M.D.

J. S. DICKIE, M.B.	C. H. P. D. GRAVES, M.D.
ROWLAND HILL, M.B.	(Cookstown).
C. G. LOWRY, M.D.	Professor McWEENEY (Dublin).
J. E. MACILWAINE, M.D.	Professor MOORE (Cork).
JOHN McLEISH, M.B.	C. H. NESBITT, M.D. (Randals-
W. J. MAGUIRE, M.D.	town).
J. C. RANKIN, M.D.	Professor O'SULLIVAN (Dublin).
FRED. SMYTH, M.D.	R. T. ROWLETTE, M.D. (Dublin).
ERNEST WALES, M.D.	Professor WHITE (Dublin).
J. SINGLETON DARLING, M.D.	JOHN WILSON, M.D. (Castle
(Lurgan).	blaney).

EX-OFFICIO MEMBERS.

The President-elect: Sir WILLIAM WHITLA, M.D., LL.D.
The Local Honorary Treasurer: JOSEPH NELSON, M.D.
The Local Honorary Secretaries: H. L. McKISACK, M.D.; C. E. SHAW, M.D.; HOWARD STEVENSON, F.R.C.S.I.

The Committee propose that the material should be arranged under the following heads:

- I. Exhibits bearing on discussions and papers in the various sections.
- II. Specimens and illustrations relating to any research work.
- III. Instruments relating to clinical diagnosis and pathological investigation.
- IV. Individual specimens of special interest, or a series illustrating some special subject.

It is also proposed to make a special effort to gather together a series of exhibits relating to:

- (a) Tuberculosis.
- (b) Diseases of warm climates.
- (c) Cancer of the uterus.
- (d) X-rays and photography.

The Committee wish it to be understood that the above are only suggestions, and if there is any subject in which Members are specially interested, and of which interesting specimens can be supplied, they will be glad to hear from them.

The Museum will occupy a central position, and will be easy of access.

It is hoped that it will be possible for arrangements to be made whereby exhibitors may have an opportunity of demonstrating their specimens.

THOMAS HOUSTON,
W. J. WILSON,
Honorary Secretaries.

Communications should be addressed to one of the Honorary Secretaries at Queen's University, Belfast.

RECREATIONS.

Golf Competition.—The Ulster Medical Society has arranged to present to the British Medical Association a cup, to be known as the "Belfast Cup," to be played for at annual meetings, and to be won out and out by any member winning it three times. It will be played for on the Friday of the Belfast meeting, on the fine links of the County Down Club at Newcastle, co. Down, kindly lent for the day by the council and members of the club. The play will be by bogey score. The cup is designed after the famous Ardagh Cup, one of the finest examples of ancient Irish work, which is now in the Kildare Street Museum in Dublin. The original is composed of gold, silver, enamels, and jewels, and was, it is believed, meant for use as a chalice. The challenge cup will be of silver, about 9 in. high, with gilt panels and coloured enamel bosses; round it will be set stones representing the four Provinces of Ireland—the black pebble for Leinster, the white or Carn-money pebble for Ulster, the red stone for Munster, and the green Connemara marble for Connaught.

Cricket Match.—The North of Ireland Cricket Club, the premier club of Ulster, and one of the best in Ireland, has kindly offered to play a one-day match against a British Medical Association team. The beautifully turfied grounds of the club are only about five minutes' walk from Queen's College, where the Association will meet. The local executive will be very glad if some English cricketer will undertake to organize a team for the occasion; any one interested in the matter should communicate with one of the Honorary Local Secretaries.

Launch.—The local executive has some reason to hope that there may be an opportunity during the annual meeting of witnessing the launch of one of the great steamships for which the shipyards of the city of Belfast are famous. A large vessel for the Orient Line is at present on the stocks in Messrs. Workman, Clark, and Co.'s yard, and is expected to be launched in July. The exact date cannot be settled so far ahead, but if the firm can make it coincide with the visit of the Association to Belfast, it has courteously promised to do so.

Meetings of Branches & Divisions.

The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

BOMBAY BRANCH.

A MEETING of the members of this Branch was held in the University Library on Thursday, March 4th, at 5.30 p.m. Dr. SORAB NARIMAN presiding. The following were also present: Drs. (Miss) Benson, Dorabhai Patel, H. N. Anklesaria, Sorab Engineer, V. J. Sangziri, and a visitor. and the Honorary Secretary, Dr. Bardi.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Subordinate Indian Medical Service and the Association.—In connexion with the letter from the Organization Committee requesting the opinion of the Branch as to the advisability of appointing some of the members of the Subordinate Indian Medical Service as complimentary members, it was resolved, as advised by the Council:

That those of the Subordinate Indian Medical Service who have attained the honorary rank of a captain may be elected complimentary members of the Branch, and that the consideration of other members be postponed to a future date.

Balance Sheet.—The balance sheet for the year 1908 was put on the table for the information of the members.

Appointment of Representative at Representative Meeting.—Captain E. F. GORDON-TRUCKER, I.M.S., was unanimously appointed the Representative of the Branch to the Representative Meetings for the year 1909-10.

Representative on Central Council.—The Honorary Secretary was authorized to communicate with the other Branches bracketed with the Bombay Branch re the appointment of a member to the Central Council; and if it could be arranged to appoint Lieutenant-Colonel H. Herbert, I.M.S. (ret.) of Nottingham, the latter should be communicated with the desire of the Branch.

Relation of Syphilis to Phthisis Pulmonalis.—Dr. SORAB K. ENGINEER, in a paper on this subject, said that opinions of authorities varied very much, and he held that more evidence was needed, and related two cases which had been under his treatment in private practice:

CASE I.—A Hindu clerk, aged 30, first came under observation on December 24th, 1907, for an eruption. His parents died of plague. He had one brother alive and in good health; he had no children. He gave a distinct history of chancre, and the eruption was diagnosed to be secondaries. This diagnosis was verified by another medical man at the same time. The eruption disappeared under the ordinary antisyphilitic treatment, local and internal. As I was reading the literature on the subject at that time, I carefully examined all his systems, and nothing worth mentioning was found. He went to his native country in Gujarat for a change, and returned to say in his own words, "Completely cured." He was advised to continue the treatment, but followed it out very irregularly nine months. In the middle of September, 1908, he consulted me for a bronchial catarrh. In the beginning of November, 1908, he complained of "slight continuous fever, troublesome cough, and weakness." On close questioning he admitted having spit blood once or twice while he had the bronchial catarrh. He was again carefully examined, and the right apex was found to be affected; movements very much diminished, percussion note dull, and a few rales. He was given guaiacol, arsenic, etc., and was advised to go for a change. In about a month he returned almost in the same condition. His sputum was examined on three different occasions, and every time tubercle bacilli were present. He went to his native country, and I have not heard from him since.

CASE II.—A Hindu merchant, aged 25, consulted me on November 2nd, 1908, for slight fever, headache, pus expectoration, weakness, and loss of flesh. Copper-coloured spots were seen on his body, and he admitted, after great hesitation, having had syphilis about two years earlier. He also admitted having gonorrhoea about eight years ago. For syphilis he was treated by a qualified practitioner, who was good enough to inform me, on inquiry, that he had treated him for primary syphilis. For gonorrhoea and secondaries he was treated by a native hakim. His present complaint was of about ten months' duration. He had consulted several medical men, but as they all gave him quinine and told him that he was suffering from malarial fever, prevalent in our city, he resorted

to patent medicines for malarial fever. Not finding relief, his relatives brought him to me. His temperature was 102° F.; voice peculiar; both apices dull, with well marked crepitations; on the right side the physical signs had extended as far as the third intercostal space. The sputum was somewhat nummular. Tubercle bacilli were present. The usual treatment was prescribed, and the patient was advised to go for a change to his native country at Cutch Mandvi, so as to enjoy fresh air and be free from business worry. Some time ago I heard from his relatives that the patient felt a little better.

In both the cases syphilis had been contracted first and the lung lesion afterwards. Syphilis had impaired the general health of these patients, the final result being the lung affection. After quoting the opinions expressed by Walshe, Aitken, Fagge, Roberts, and Williams, Dr. Engineer pointed out that, as tubercle bacilli were present in both his cases, there could be no doubt of the actual existence of phthisis pulmonalis. In both cases the pulmonary followed the skin lesions. The patients were neither intemperate nor destitute. The occurrence of syphilis and tubercle in the same part might have been a mere coincidence, but Dr. Engineer did not think so. He had refrained from prescribing potassium iodide, the use of which had been recommended in destructive disease of the lungs in syphilis, because the bacteriological examination showed that both patients were suffering from phthisis pulmonalis, but he thought there could be no doubt that in them syphilis had played a part in the causation of phthisis pulmonalis. He summarized his conclusions as follows: (1) Syphilis is related to phthisis either directly or indirectly; (2) syphilis does act as one of the conditions which affect the general health of the individual; and (3) syphilis is one of the predisposing causes of phthisis and to a greater extent than thought of at present by medical men.

CAPE OF GOOD HOPE (EASTERN PROVINCE) BRANCH.

A REGULAR meeting of this Branch was held at the residence of Dr. FitzGerald on Friday, February 19th, at 9 p.m.

Dinner.—The meeting was preceded by a dinner held at Steinman's Hotel at 7.30 p.m., at which the following were present: Dr. G. E. FITZGERALD in the chair, Drs. A. Cowper, Bruce-Bays, Dr. Drury, C. F. Lillie, R. F. Harrison, R. C. Mullins, and, as visitors, William Robertson, M.R.C.V.S., H. Conder, and Dr. Duerden, of Rhodes College, all of Grahamstown.

Letters.—Letters of apology from Drs. F. A. Saunders and Jones-Phillipson. Letters were read from Dr. Greuffell from Dr. Mullins; from Dr. Moffatt, Honorary Secretary, Western Branch; from the Medical Secretary, British Medical Association, and from Dr. Greenlees, our Member of Central Council.

South African Committee.—In the matter of the South African Committee of the British Medical Association, it was resolved:

To request the Central Council (1) to sanction the formation of the South African Committee of the British Medical Association; (2) to delegate to it congresses, transactions, scheme of medical defence or benevolence, code of ethics, ethical decisions, medical politics, and other powers to be defined in the regulations; (3) to approve the draft regulations, with the exception of No. 25, which is not constitutional.

The appointment of Dr. Campbell-Watt to take the necessary steps to approach the Central Council was also approved.

Correspondence with Postmaster-General.—Dr. FITZGERALD read correspondence with the Postmaster-General on the subject of the delivery of telegrams not formally addressed to "Dr." —; in this connexion a resolution was passed for submission to the official concerned.

Presentations to Branch Museum.—It was resolved that Dr. Jones Phillipson be thanked for his generous presentation of twenty assorted pathological jars to the museum of the Branch; also that Mr. William Robertson be thanked for his offer of a specimen of tuberculous lung in the cow.

Presidential Address.—Dr. G. E. FITZGERALD then read his presidential address, which dealt with the early medical history of the colony and of the town of Grahamstown from 1804 to about 1850, and which was enlivened by anecdote and by quotation from original documents.

CAPE OF GOOD HOPE (WESTERN PROVINCE)
BRANCH.

A SPECIAL meeting was held on February 27th, Dr. JASPER ANDERSON, President, in the chair. Fifteen members were present.

Report of the Parliamentary Committee.—A report from the Parliamentary Committee was submitted to the Branch. It suggested amendments to be aimed at in the expected Medical Act Amendment Bill. In the main the report was adopted.

Committees.—The resolutions and regulations of the proposed South African Committee of the South African Branches were adopted. It was decided to amalgamate the Post-graduate and Clinical Committees.

CEYLON BRANCH.

Election of Officers.—The following have been elected officers for 1909: President, Dr. H. Geo. Thomas; President-elect for 1910, Dr. Aldo Castellani; Vice-Presidents, Dr. S. Hallock, Dr. E. Roberts; Representative on the Council of the Parent Association, (under consideration); Representative at the Annual Meeting at Belfast, (under consideration); Secretary and Treasurer, Dr. S. C. Paul; Members of the Council, Dr. F. Grenier, Dr. W. P. Rodrigo, Dr. J. Homer, Dr. M. Sinnatamby.

MIDLAND BRANCH:

BOSTON AND SPALDING DIVISION.

A MEETING of this Division was held at the White Hart Hotel on Friday, March 12th, at 2.45 p.m. There was a small attendance owing to bad weather. Dr. MASON was in the chair. There were also present: Drs. Crofton, Mann, Miller, Pilcher, South, Wilson, and Witham.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Votes of Thanks.—A vote of thanks was cordially passed to Dr. John McCormac, of London, for his kindness in coming down on December 10th, and also to Mr. Percy Smith, Lindrum House, Boston, for kindly entertaining the members on that occasion.

Medical Treatment of School Children.—It was proposed, after some discussion, by Dr. CROFTON and seconded by Dr. WITHAM:

That those children whose parents cannot afford to pay for medical treatment be treated by the Poor Law medical officer, who should make some special arrangement for this purpose with the guardians. Those parents able to pay should be referred by the medical inspector to their ordinary medical attendant. That school clinics for the Boston and Spalding Division's area are unnecessary and impracticable.

Carried unanimously.

The Association Library.—Dr. MANN proposed and Dr. MILLER seconded:

That the Central Library be granted powers to make it a lending library, so that provincial members may be able to use it. That members defray the cost of carriage one way.

Carried unanimously.

Whole-time Medical Officers of Health.—It was proposed by Dr. WILSON and seconded by Dr. MILLER:

That the whole-time medical officers of health are preferable, and should be debarred from engaging in private practice. That they should not hold any other appointments, and, in case of resignation, should not be allowed to practise within the area for which they have acted as medical officers of health.

Carried unanimously.

Cases.—Dr. CROFTON showed a case of diabetes in a child treated by a preparation made from the internal secretions of the pancreatic gland. Ordinary diet had been allowed, and there was, after a year's treatment, marked improvement in general health and a steady diminution of glucose excreted. Amount of urine excreted per diem had been reduced from 15 pints to 3½ pints. Dr. MANN showed a case of a child aged 5 years with symptoms of intracranial tumour. The pupils were widely dilated and a good view of the fundi obtained. The child had become rapidly worse of late. Dr. Mann thought the tumour implicated the optic chiasma. Dr. SOUTH showed a man suffering from exophthalmic goitre. The peculiarity of the case was the limitation of the exophthalmos to the left eye. The thyroid gland was enlarged generally;

pulse-rate 90 (he was taking digitalis). He was improving under treatment. The medical men were cordially thanked for the interesting cases. No time remained to see the specimens.

Tea.—The members had tea in the hotel afterwards.

SOUTH MIDLAND BRANCH:
BUCKS DIVISION.

THE first meeting of this Division was held on Tuesday, March 30th, in the Board Room of the Royal Bucks Hospital, Aylesbury. Twenty-three members were present, or 40 per cent. of the total membership. The names were: Drs. Baker, Bradbrook, Benson, F. A. Cooke, Carruthers, Crawley, Durran, Eagles, Graham, Larking, Magrath, Morrison, Macfarland, Perrin, Rose, Reynolds, Shaw, Turner, West, and Wheeler. Three visitors attended: Drs. Wm. Hill, H. Harrison, and Norman.

Apologies for Non-attendance.—Apologies for absence were sent by Drs. Bradshaw, Gardner, Hardwick, Pemberton, and Lucas.

Election of Officers.—After the adoption of the rules the following officers were elected: Chairman, Dr. J. C. Baker; Vice-Chairman, Dr. Reynolds; Secretary, Dr. Larking; Members of Branch Council, Drs. Benson and Durran; Committee, Drs. Gardner, Graham, Turner, West, Morrison, and Humphrey-Wheeler.

Resolutions.—The resolutions on the agenda were carried.

Demonstration.—Dr. Wm. HILL then gave a demonstration on recent methods of throat examination by direct vision. He showed the vocal cords, bifurcation of the trachea, etc., on several patients and also numerous instruments used. The members were much interested, and passed a hearty vote of thanks to him for his most instructive demonstration.

Medical Inspection of School Children.—Dr. CARRUTHERS introduced the subject of medical inspection of children. After remarks by Drs. DURRAN, WHEELER, SHAW, LARKING, and GRAHAM, the following resolution was passed:

That this meeting considers that if any further appointments are necessary in this county for the medical inspection of school children the general practitioners of each district should have the opportunity of performing the work under the supervision of the county medical officer.

In reference to the fee it was resolved:

1. That this Division approves of the system of payment per head.
2. That the fee should be 2s. 6d. per child for each inspection.

Treatment of School Children Found Defective.—The question of treatment was discussed by Drs. BRADBROOK, LARKING, CARRUTHERS, BENSON, and DURRAN, and finally the following resolution was carried, with one dissentient:

That this Division considers that in this county no special provision is necessary for the treatment of defective school children; it deprecates the establishment of "school clinics" or "recognized surgeries," and believes that all cases can be dealt with by the ordinary medical attendant, who could, whenever necessary, suggest where special treatment could be obtained. This Division is firmly of opinion that, if the education authorities pay for the treatment of some children and refuse others, it will lead to dissatisfaction among parents, and will ultimately lead to the exploitation of the services of medical men and injuriously affect private practice.

WEST SOMERSET BRANCH.

THE spring meeting of this Branch was held at the Taunton and Somerset Hospital on Friday, April 2nd, the chair being occupied by Dr. H. T. S. AVELINE, the President.

Confirmation of Minutes.—The minutes of the last meeting were read and signed.

Clinical Cases.—Dr. J. W. RUTHERFORD showed an inmate of Cotford Asylum suffering from a skin disease of a scaly nature affecting the lower part of the abdomen, penis, etc. The diagnoses which at different times have been suggested include tuberculosis, syphilis, and actinomycosis. Mr. A. J. H. ILES showed an excellent series of skiagraphs depicting various bone diseases in which assistance in diagnosis may be obtained by x rays. He read short explanatory notes which were much appreciated. Mr. A. E. JOSELYNE showed a boy with a "port wine" stain involving half of his face, and on which he had recently commenced treatment with high-frequency currents.

Dr. SANGUINETTI read notes of a case of bronchiectasis the symptoms of which first appeared fourteen days after the extraction of several teeth under an anaesthetic, and which was subsequently treated with vaccines. He also read notes on a case of pernicious anaemia. Dr. CALDWELL showed a female patient, at present an inmate of Taunton Hospital, whose abdomen was covered with numerous cicatrices resulting from eight distinct laparotomies performed upon her "in another place," and from all of which she had recovered. He also showed a spleen from a case of spleno-medullary leukaemia.

Medical Certificates of Suitability for Hospital Treatment.—The opinion of the meeting was taken on the following resolution, which will come before the Representatives at their next meeting:

That a medical certificate of suitability for hospital treatment be required as a condition of hospital treatment, except in the case of casualties.

After some discussion it was unanimously resolved that the Representative be instructed to vote for the resolution.

Tea was served at the conclusion of the meeting.

To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, April 28th, in the new Council Room, at 429, Strand, London, W.C.

By Order,
GUY ELLISTON.

March 25th, 1909.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BORDER COUNTIES BRANCH: ENGLISH DIVISION.—A meeting of the Division will be held at the George Hotel, Penrith, on Friday, April 23rd, at 3 p.m. The Honorary Secretary will be pleased to hear from members who wish to read papers or show cases or pathological specimens.—NORMAN MACLAREN, Honorary Secretary, 23, Portland Square, Carlisle.

DORSET AND WEST HANTS BRANCH.—The spring meeting of this Branch will be held in Dorchester on Wednesday, May 5th. Members wishing to read papers, show cases, exhibit specimens, or propose new members, are requested to communicate, not later than Thursday, April 22nd with JAMES DAVISON, Honorary Secretary, "Sireatplace," Bournemouth.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—A general meeting will be held at the Greenbank Hotel, Northwich, at 5 p.m., on Wednesday, April 21st, to receive reports from the Executive Committee, to consider matters referred to Divisions, and to transact the usual business. At 6 p.m. Dr. Manwaring White will read a paper on Frontal Sinusitis as a Complication of Influenza. Dinner at 7 p.m.—T. W. H. GARSTANG, Honorary Secretary.

MIDTROPOLITAN COUNTIES BRANCH.—*Nominations of Branch Officers.*—Pursuant to By-law 25, notice is hereby given that nominations for all the officers of the Branch—namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association—must be sent in to the Honorary Secretary of the Branch on or before May 29th. Voting papers will be sent out on or before June 5th, and must be returned to the Secretary on or before June 12th.—ATWOOD THORNE, E. W. GOODALL, Honorary Secretaries.

MIDLAND BRANCH: BOSTON AND SPALDING DIVISION.—An ordinary meeting of the above Division will be held on Tuesday, April 20th, at 2.45 p.m., at the White Hart Hotel. Agenda: Dr. Stanley Green, of Lincoln, will read a paper on Some Sore Throats, and give a demonstration of skiagrams illustrating some diseased conditions of bone. Tea will be provided for those desiring it, as on former occasions. Members who wish to be present are requested to intimate their intention by April 18th to A. E. WILSON, Honorary Secretary.

NORTH WALES BRANCH.—A meeting of the Branch will be held at the Colwyn Bay Hotel, Colwyn Bay, on Tuesday, April 20th, at 2.30 p.m. Luncheon at 1.30 p.m.; tickets, 2s. 6d. Agenda: (1) To read the minutes of the last meeting. (2) To read correspondence. (3) To receive the report of the Branch

Council. (4) To read the financial statement for 1908. (5) To adopt, if approved of, the model rules for the regulation of procedure in ethical matters. (6) To read a letter from the council of the University College of North Wales re the terms of the award of the Jones Morris Memorial Prize, and to reconsider the terms. The following papers will be read, specimens shown, etc.:—Dr. Craufurd T. Matthews: A Case of Multiple Maldevelopments. Drs. R. E. Lord and H. Nuttall: A Case of Intestinal Obstruction with Marked Enterospasm. Mr. G. P. Newbolt: (1) A note on Three Cases of Emergency Intestinal Operations; (2) Hair Bolus Removed from Stomach. Mr. R. W. Monsarrat: Hydronephrosis. Dr. W. B. Warrington: Principles of Diet in Nephritis. Mr. J. Howell Evans: The Diagnostic Value of the Gastro-duodenoscope. The instrument will be shown. Dr. J. Elliott: Cultures and Lumière Photomicrographs of Bacteria, illustrating some recent cases (exhibited on the screen). Dr. W. Blair Bell: Case of Uterus Didelphys with Ectopia of Uterine Bodies (with specimens). Mr. H. E. Jones: Practical note on Glaucoma. Dr. J. E. Gemmell: The Influence of Fibroids of the Uterus on Pregnancy, Gestation, and the Puerperium. Dr. J. Lloyd Roberts: A Case of Tetanus. Dr. O. T. Williams: The Influence of Unsaturated Fats in Diet, with especial reference to Tuberculosis. The Branch Council will meet at 12.30 p.m.—H. JONES ROBERTS, Honorary Secretary, Penryn, S.O.

SOUTH MIDLAND BRANCH: NORTHAMPTONSHIRE DIVISION.—A meeting of the Division will be held on Tuesday, April 20th, at 2.30, in the Board Room of the Northants General Hospital. There will be a luncheon beforehand at Franklin's Restaurant, Guildhall Road, at 1.30. Names of those wishing to attend the luncheon should be sent in two days beforehand to the Secretary. Business.—Report of Executive Committee. Matters referred to Divisions: (1) Report on medical certificates of suitability of patients for hospital treatment; (2) Report on contributions to hospitals by employers of labour and employees; (3) Statement as to fresh public medical institutions; (4) Statement as to sanatoriums for workers suffering from tuberculosis (cf. SUPPLEMENT, February 27th); (5) Departmental Committee re Midwives Act; (6) Questions of health officers being whole-time officers (cf. SUPPLEMENT, January 23rd). Clinical cases.

STAFFORDSHIRE BRANCH.—The third general meeting of the session will be held at the Victoria Hotel, Wolverhampton, on Thursday, April 29th. The President, Dr. S. King Alcock, will take the chair at 5.25 p.m. Business: (1) Minutes of the last general meeting. (2) Correspondence. (3) Exhibition of living cases. Papers:—(a) Dr. W. Spencer Badger: The Chest of the Elementary School Child. (b) Dr. J. A. Codd: The Treatment of Glandular Enlargements by X Rays. (4) Exhibition of Pathological Specimens, etc. Dinner at 7 p.m.; charge, 5s. A meeting of the council will be held immediately before the general meeting to fix the date of the annual council meeting.—G. PETERCAVE JOHNSON, Honorary General Secretary, Stoke-on-Trent.

ULSTER BRANCH.—The spring meeting of this Branch will be held in Londonderry on Saturday, May 8th. Members having communications to make to the meeting are requested to send particulars not later than April 30th to CECIL SHAW, Honorary Secretary, 29, University Square, Belfast.

MEDICAL ACTS AMENDMENT BILL (ANAESTHETICS).

MEMORANDUM.

THE object of this bill is to require a medical practitioner applying for registration on or after January 1st, 1911, to submit evidence of having received practical instruction in the administration of anaesthetics, and to prohibit any person not a registered medical practitioner administering an anaesthetic except under certain conditions, to safeguard the rights of all persons registered as dentists before the commencement of the Act. To prohibit any certificate of death being given in the case of any person dying under an anaesthetic.

ARRANGEMENT OF CLAUSES.

- Clause.
1. Additional qualification required for registration under Medical Acts.
2. Penalties attaching to the administration of anaesthetics by unauthorized persons.
3. Power to General Council to make regulations.
4. Penalty for giving death certificate in case of persons dying under anaesthetics.
5. Dentists' anaesthetic.
6. Prosecutions.
7. Definitions.
8. Short title.

A BILL to regulate the administration of anaesthetics, to make regulations relative thereto, and to amend the Medical Acts.

Be it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual

and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. *Additional Qualification Required for Registration under Medical Acts.*—On and after the first day of January one thousand nine hundred and eleven, no person shall be registered under the Medical Acts in respect of any qualification referred to in any of those Acts unless he shall have produced evidence that he has received theoretical and practical instruction in the administration of anaesthetics.

2. *Penalties Attaching to the Administration of Anaesthetics by Unauthorised Persons.*—Any person not a registered medical practitioner who shall administer or cause to be administered to any other person, by inhalation or otherwise, any gas or vapour, or drug or mixture of drugs, solid or liquid, with the object of producing unconsciousness during any medical or surgical operation, examination, act or procedure, or during childbirth, shall be liable on conviction before a court of summary jurisdiction for such offence, to a penalty not exceeding ten pounds, and, in the case of any subsequent conviction, to a penalty not exceeding twenty pounds: Provided that a person shall not be liable to a penalty under this section if in conducting such administration he was acting under the immediate direction and supervision of a registered medical practitioner, or if the circumstances attending the administration were such that he had reasonable grounds for believing and did believe that the delay which would have arisen in obtaining the services of a registered medical practitioner would have endangered life.

3. *Power to General Council to make Regulations.*—Power is hereby given to the General Council to make any regulation or order to carry out the requirements of this Act.

4. *Penalty for Giving Death Certificate in Case of Persons Dying under Anaesthetics.*—Any registered medical practitioner who gives a certificate of death in the case of any person dying while under the influence of an anaesthetic shall be liable, on summary conviction, to a penalty not exceeding five pounds.

5. *Dentists' Anaesthetic.*—Nothing in this Act shall prohibit a person registered under the Dentists Act, 1878, before the commencement of this Act, administering an anaesthetic during a dental operation or procedure.

6. *Prosecutions.*—Offences under this Act may be prosecuted and all fines recovered in manner provided by the Summary Jurisdiction Acts.

In the application of this Act to Scotland the expression "Summary Jurisdiction Acts" shall mean the Summary Jurisdiction (Scotland) Acts, 1864 and 1881, and any Act amending the same.

In the application of this Act to Ireland the expression Summary Jurisdiction Acts shall mean a court of summary jurisdiction constituted in the manner mentioned in the two hundred and forty-ninth section of the Public Health (Ireland) Act, 1878.

7. *Definitions.*—The expression "Medical Acts" means the Medical Act, 1858, or any amendment of that Act.

The expression "General Council" means the General Council of Medical Education and Registration in the United Kingdom.

The expression "registered medical practitioner" means a person registered under the Medical Act, 1858, or any amendment of that Act.

8. *Short Title.*—This Act may be cited as the Anaesthetics Act, 1909.

the *Iphigenia*, April 13th; Staff Surgeon M. CAMERON, M.B., to the *Attentive*, April 13th this appointment to the *Cressy* being cancelled; Staff Surgeon W. B. MACLEOD, M.B., to the *Bonaventure*, April 13th; Surgeon M. T. MALL, M.B., to the Royal Marine Artillery, Eastern, April 7th; Surgeon P. T. NICHOLS, to the *Victory*, additional, for disposal, April 13th; Surgeon E. CAMERON, M.B., to the *Terrible*, April 13th; Surgeon S. F. DUDLEY, to the *Commonwealth*, April 13th. Mr. H. D. JOHNS, civil practitioner, has been appointed Surgeon and Agent at Hornsea and Aldborough, April 6th.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.
LIEUTENANT-COLONEL F. A. B. DALY, C.B., M.B., retires on retired pay April 14th. He was appointed Surgeon, February 5th, 1881; Surgeon-Major, February 5th, 1893; and Lieutenant-Colonel, February 5th, 1901. He served in the Egyptian war in 1882, receiving a medal and the "Emblem star" with the Sudan Frontier Field Force in 1885-6; and in the South African war in 1899-1902, being present in the action at Talama, Natal, at the relief of Ladysmith, in the operations on the Tugela Heights, and in operations in the Transvaal and the Orange River Colony, and subsequently Principal Medical Officer of a general hospital. He was several times mentioned in despatches, received the Queen's medal with four clasps and the King's medal with two clasps, and appointed C.B.

Captain D. P. NATION, M.B., who is serving in Aden, is appointed Specialist in the Prevention of Disease, from October 7th, 1908.

Lieutenant-Colonel A. KENNEDY took over the duties of Principal Medical Officer, Aden Brigade, in addition to his other duties, from March 24th.

INDIAN MEDICAL SERVICE.

The following officers are appointed Specialists in Advanced Operative Surgery, with effect from the dates specified: Captain C. H. BARBER, M.B., 1st (Peshawar) Division, February 12th; Captain H. R. NUTT, M.B., 3rd (Mhow) Division, March 15th; Lieutenant A. G. COLLIE, M.B., 5th (Mhow) Division, February 27th; Major G. BIRIE, 6th (Poona) Division, February 26th.

Captain J. H. CURRIE, M.B., 86th Carnatic Infantry, is appointed to act as Surgeon to His Excellency the Governor of Madras, from March 15th.

Colonel G. S. CARRUTHERS, Madras, is appointed to officiate as Surgeon-General with the Government of Madras.

Lieutenant W. L. HARNETT, Brigade Laboratory, Dehra Dun, is appointed Specialist in the Prevention of Disease, from October 2nd, 1908.

SPECIAL RESERVE.

ROYAL ARMY MEDICAL CORPS.

The rank of Captain J. C. MCCARROLL, M.B., is as now described, and not as stated in the *London Gazette* of November 17th, 1908.

MILITIA.

ROYAL ARMY MEDICAL CORPS.

Lieutenant J. C. MCCARROLL, M.B., to be Captain, August 18th, 1908.

TERRITORIAL FORCE.

ROYAL FIELD ARTILLERY.

SURGEON-LIEUTENANT H. W. MULLOCK, 3rd East Anglian (Howitzer) Brigade, to be Surgeon-Captain, April 1st, 1909.

Surgeon-Major J. W. RUTHERFORD, 1st Northumberland Brigade, is granted the honorary rank of Surgeon-Lieutenant-Colonel, March 31st, 1908.

ROYAL ARMY MEDICAL CORPS.

First North Midland Field Ambulance.—CHARLES D. LOCHTANE, M.B., F.R.C.S. Edin., to be Lieutenant (to be supernumerary), February 4th, 1909.

First Wessex Field Ambulance.—EDWIN F. SQUIRE to be Transport Officer, with the honorary rank of Lieutenant, February 1st, 1909.

Second Northern General Hospital.—CAPTAIN R. G. HANKS, from the 7th Battalion the Prince of Wales's Own (West Yorkshire Regiment), to be Major, February 22nd, 1909.

First London (City of London) General Hospital.—Major H. H. TOOTH, C.M.G., M.D., is seconded for service with the London University Continuation, Senior Division, Officers' Training Corps, March 13th, 1909.

For attachment to Units other than Medical Units.—THOMAS H. RICHMOND, M.B., to be Lieutenant, August 2nd, 1908; Captain E. U. F. MACW. BOUTREE, to be Major, March 1st, 1909; CYRIL H. WELCH to be Lieutenant, March 9th, 1909; Supernumerary Surgeon-Lieutenant VIN DYSON, M.B., from the 4th Battalion the King's (Shropshire Light Infantry), to be Lieutenant, March 10th, 1909.

ROYAL MALTA ARTILLERY.

SURGEON-CAPTAIN A. E. MIFSID to be Surgeon-Major, April 1st.

THE AFRICAN GENERAL SERVICE MEDAL.

It is announced that the African General Service Medal, with clasp "Nandi 1905-06," will be granted to all officers and men who served under the command of Lieutenant-Colonel E. J. Harrison, C.B., D.S.O., Reserve of Officers, Captain (temporary) Lieutenant-Colonel J. D. MACHEKAY, Seaforth Highlanders, and Evet Major (temporary) Lieutenant-Colonel H. A. WALKER, Royal Fusiliers, respectively, and took part in the operations in the Nandi country between October 18th, 1905, and July 6th, 1906, both dates inclusive.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following Surgeons have been promoted to be Staff Surgeons, dated as specified: A. J. HEWITT, February 26th, 1908; J. VERNON, August 2nd, 1908; J. THORNHILL, M.B., February 11th, 1909. Their first commissions are dated: A. J. HEWITT, February 26th, 1900; J. VERNON, August 2nd, 1900; J. THORNHILL, February 11th, 1901.

The following appointments have been made at the Admiralty: Staff Surgeon H. HUSKINSON, M.B., to the *Arcturion*, April 13th; Fleet Surgeons H. W. G. DOWNE, H. W. FINLAYSON, M.B., H. W. GORDON-GREEN, A. S. G. BELL, and J. CHAMBERS, M.B., and Staff Surgeons M. P. JONES, A. W. B. LIVESAY, M.B., R. H. MORNEUNT, W. G. WESTCOTT, J. O'HARA, H. V. WELLS, D. V. LOWNDEN, P. F. ALDERSON, and G. O. M. DICKESSON, M.B., to the *President*, additional, for three months' course at West London Hospital, April 13th; Staff Surgeon J. WHELAN, to the *Cressy*, April 13th; Staff Surgeon A. J. WERNET, M.B., to the *Cressy*, April 13th; Staff Surgeon A. J. WERNET, M.B., to

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,802 births and 5,653 deaths were registered during the week ending Saturday, April 3rd. The annual rate of mortality in these towns, which had been 22.1, and 19.8 per 1,000 in the two preceding weeks, further declined to 17.9 per 1,000 in the week under notice. The rates in the several towns ranged from 6.0 in Hornsey, 8.0 in Walthamstow, 8.3 in Barrow-in-Furness, 8.9 in Smethwick, 9.1 in Willesden, and 9.7 in Handsworth (Stals) to 27.5 in Liverpool, 28.3 in Preston, 29.4 in Oldham, 27.0 in Wigan, 27.5 in Great Yarmouth, 28.1 in Warrington, and 30.7 in St. Helens. In London the rate of mortality was equal to 18.3 per 1,000, while it averaged 17.8 in the seventy-five other large towns. The deaths from the principal infectious diseases averaged 1.8 both in London and in the seventy-six towns as a whole; the highest

death-rates from these diseases were 3.6 in Portsmouth and in Birmingham, 3.8 in Reading and in Bootle, 3.9 in West Hartlepool, 4.0 in Preston, 8.6 in Wigan, 9.4 in Warrington, and 15.9 in St. Helens. Measles caused a death-rate of 2.4 in Portsmouth, 2.8 in Warrington, 2.9 in Sunderland, 3.1 in Reading and in Sheffield, 3.3 in Bootle, 3.9 in West Hartlepool, 4.6 in Wigan, 8.7 in Warrington, and 14.8 in St. Helens; diphtheria of 1.1 in Huddersfield; whooping-cough of 1.1 in St. Helens and in Swansea, 1.7 in Norwich and 3.1 in Preston; and diarrhoea of 2.9 in Wigan. The mortality from scarlet fever and from enteric fever showed no marked excess in any of the large towns. One fatal case of small-pox was registered in Bristol, but none in any other of the large towns. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,670 and 2,571 at the end of the three preceding weeks, had further declined to 2,462 at the end of the period under notice; 273 new cases were admitted during the week, against 279 and 327 in the two preceding weeks.

During the week ending Saturday last, April 10th, 8,320 births and 5,364 deaths were registered in seventy-six of the large English towns. The annual rate of mortality in these towns, which had been 22.1, 19.8, and 17.9 per 1,000 in the three preceding weeks, further declined last week to 17.0, 16.0, and 15.0. The rates in the several towns ranged from 4.9 in Horsey, 7.8 in Stockton-on-Tees, 8.2 in Handsforth (Staffs.), 8.4 in Walthamstow and in Ipswich, 8.8 in Rotherham, 8.9 in Leyton, and 9.6 in Burton-on-Trent, to 22.7 in Brighton, 22.8 in Swansea, 23.9 in Sunderland, 24.8 in Warrington, 25.1 in Wigan, 25.2 in Liverpool, 25.2 in Middlesbrough, 29.0 in Tynemouth, and 31.8 in St. Helens. In London the rate of mortality was 15.9 per 1,000, while it averaged 17.4 per 1,000 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 2.2 per 1,000 in the thirty-five large towns; in London the death-rate from these diseases was 1.8 per 1,000, while among the seventy-five other large towns the rates ranged upwards to 4.0 in Wolverhampton, in Stockport and in Wigan, 4.5 in Bolton, 4.6 in Manchester, 6.5 in Sunderland, and 10.4 in St. Helens. Measles caused a death-rate of 2.0 in Wolverhampton and in West Hartlepool, 2.2 in Smethwick, 2.5 in Stockport, 2.6 in Birmingham, 2.9 in Wigan, 3.0 in Bootle, 3.1 in Reading, 3.3 in Sheffield, 3.2 in Sunderland, and 8.2 in St. Helens; scarlet fever of 1.3 in King's Norton and 2.2 in Walsall; diphtheria of 1.0 in Portsmouth and in Wolverhampton, and 1.2 in Rhondda; whooping-cough of 1.0 in Walsall and in Stockport, 1.1 in St. Helens, 1.2 in York, 1.3 in Coventry, and 1.5 in Rhondda; "fever" of 1.0 in Middlesbrough and 1.1 in Huddersfield; and diarrhoea of 1.1 in Swansea, 1.2 in Aston Manor, and 1.5 in Smethwick. No fatal case of small-pox was registered in any of the seventy-six towns last week. The number of scarlet fever patients under treatment in the Metropolitan Asylums hospitals and the London Fever Hospital, which had been 2,586, 2,570, and 2,462 at the end of the three preceding weeks, had further declined to 2,418 at the end of last week; 256 new cases were admitted during the week, against 279, 327, and 273 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

In eight of the principal Scottish towns, 957 births and 712 deaths were registered during the week ending Saturday, April 10th. The annual rate of mortality in these towns, which had been 21.6, 21.1, and 20.5 per 1,000 in the three preceding weeks, further declined to 19.9 per 1,000 in the week under notice, but was 20.9 in the two preceding weeks. During the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 13.8 in Aberdeen and 15.2 in Leith to 23.3 in Paisley and 24.5 in Greenock. The death-rate from the principal infectious diseases averaged 2.2 per 1,000, the highest rates being recorded in Glasgow and Aberdeen. The 360 deaths registered in Glasgow included 4 which were referred to scarlet fever, 6 to diphtheria, 32 to whooping-cough, 2 to enteric fever, 1 to cerebro-spinal meningitis, and 8 to diarrhoea. Nine fatal cases of whooping-cough were recorded in Aberdeen; 2 of whooping-cough and 3 of diarrhoea in Dundee; and 3 of whooping-cough, 2 of diarrhoea, and 1 of cerebro-spinal meningitis in Edinburgh.

During the week ending Saturday last, April 10th, 339 births and 634 deaths were registered in these Scottish towns. The annual rate of mortality, which had declined from 21.6 to 19.9 in the four preceding weeks, further fell to 17.7 per 1,000 last week, but was 0.7 per 1,000 above the mean rate during the three preceding weeks. The rates in the large English towns. The death-rates in the eight Scottish towns ranged from 11.9 in Paisley and 13.4 in Leith to 19.6 in Glasgow and 20.6 in Dundee. The death-rate from the principal infectious diseases averaged 2.5 per 1,000, the highest rates being recorded in Glasgow and Dundee. The 327 deaths registered in Glasgow included 3 from scarlet fever, 4 from diphtheria, 42 from whooping-cough, 4 from enteric fever, 2 from cerebro-spinal meningitis, and 8 from diarrhoea. Three fatal cases of whooping-cough were recorded in Edinburgh; 2 of diphtheria, 2 of whooping-cough, and 3 of diarrhoea in Dundee; 1 of measles and 2 of whooping-cough in Aberdeen; and 3 of whooping-cough in Greenock.

HEALTH OF IRISH TOWNS.

During the week ending Saturday last, April 10th, 691 births and 531 deaths were registered in the twenty-two principal urban districts of Ireland, as against 636 births and 550 deaths in the preceding period. The annual death-rate in these districts, which had been 23.9, 26.1, and 25.1 per 1,000 in the three preceding weeks, fell to 23.1 per 1,000 in the week under notice, this figure being 6.3 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 25.9 and 21.6 respectively, those in other districts ranging from 15.1 in Limerick and 15.3 in Limerick to 18.0 in Cork and 35.6 in Cork, while Londonderry stood at 25.6, Limerick at 26.0, and Waterford at 15.6. The zymotic death-rate in the twenty-two districts averaged 2.0 per 1,000, as against 1.1 per 1,000 in the preceding period.

Hospitals and Asylums.

CITY OF LONDON ASYLUM.

The annual report of Dr. R. Hunter Steen, the Medical Super-tendent of the City of London Asylum, Stoke Newington, Dartford, for the year 1908 shows that there were 558 patients in residence, and that on the last day of the year there were 579. The total cases under care during the year numbered 717, and the average number daily resident 570. In former reports the large number of aliens admitted to this asylum has been commented upon, and we note that of the total 579 resident in this institution at

the end of the year, 31 were of foreign birth, hardly a European State being unrepresented. During the year 159 patients were admitted, of whom 145 were first and 14 not-first admissions. In 60 the attacks were first attacks within three and in 13 more within twelve months of admission; in 37 not-first attacks within twelve months of admission and in the remainder the illness was already of more than twelve months (41) or of unknown duration (5) or of congenital origin. As regards duration of disorder, the admissions were thus not of a very favourable character, and Dr. Steen reported that recovery was considered probable in only 34, or 21 per cent., and that 74, or 46 per cent., were practically incurable. The greater number, also, were in poor bodily condition on admission. With regard to the forms of mental disorder, the admissions were classified into: Mania of all kinds, 41; melancholia of all kinds, 40; secondary and senile dementia, 12; general paralysis of the insane, 11; delusional insanity, 22; alcoholic insanity, 15; dementia praecox, 6; puerperal insanity, 3; stupor and acquired epilepsy, 2 each; confusional insanity and moral insanity, 1 each; and cases of congenital or infantile defect, 3. The total incidence of the etiological factors in the admissions—excluding 31 who were transfers—is stated in the report as follows: Alcohol in 24, or 18.7 per cent.; acquired syphilis in 2; critical periods in 7; child-bearing in 3; physiological defects and errors in 4; diseases of the nervous system in 3; mental stress in 2; and in 42 no principal factor was assigned. In 9, or 7 per cent., an insane heredity was ascertained; in 1 a heredity of marked eccentricity; and in 3 there existed moral or congenital mental deficiency. During the year, 34 were discharged as recovered, giving a recovery-rate of 26.56 per cent. on the admissions, exclusive of transfers; 64 as relieved, and 11 as not improved. During the year also 29 died, giving the low death-rate on the average numbers resident of 6.08 per cent. The deaths were due in 10 to diseases of the nervous system, including 8 from general paralysis; in 5 to diseases of the heart and blood vessels; in 3 to respiratory diseases; in 3 to chronic Bright's disease; in 2 to carcinoma; and in 5, or 17 per cent., of the total deaths to tuberculosis. All deaths were from natural causes, and the general health was good throughout the year. Two sporadic cases of enteric fever of mild type, and 2 cases of colitis occurred, but otherwise the institution was free from zymotic disease.

GENERAL HOSPITAL, BIRMINGHAM.

The 129th annual report of the General Hospital shows that during the year 1908, 5,526 in-patients and 65,551 out-patients were treated, making a total of 71,077. The ordinary expenditure was £25,011, and the extraordinary £1,116, while the sum of £439 was transferred to the Jaffray Branch Account to meet the deficit at that institution, making a total expenditure for the year of £26,567. The ordinary income was £19,681, and the total income from all sources £24,208. The deficit at the end of 1907 of £7,698 was increased to £10,605. The scheme for the reference elsewhere of trivial cases after giving first aid, which was especially referred to in the last report, came into force on March 23rd, 1908. Since that date, 2,294 cases after receiving first aid have been referred to dispensaries, general practitioners, clubs, or elsewhere according to their circumstances. Of these, 33 were out-patients, 54 medical casualties, and 2,207 surgical casualties, not including a number of cases which after treatment for short time proved to be trivial, and were then referred elsewhere. In spite of this scheme there was an actual increase of 3,449 in the number of out-patients treated. It is satisfactory to note that this is partly due to the more careful record taken, there having been an actual diminution of the old cases attending weekly. In November the matron, Miss M. E. Jones, resigned her post on account of ill-health. The board placed on record its regret at the cause of her resignation, and its appreciation of her valued services to the hospital during a period of ten and a half years. She has been succeeded by the medical and nursing staff of the hospital. Miss E. M. Musson (Matron of Swansea General and Eye Hospital, and formerly Assistant Matron of St. Bartholomew's Hospital, London) has been appointed matron.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

- ASHTON-UNDER-LYNE: DISTRICT INFIRMARY.—Junior House-Surgeon. Salary at the rate of £75 per annum.
- BRIGHTON PARISH.—Resident Assistant Medical Officer at the Workhouse. Salary, £120 per annum, increasing to £125.
- BURSLLEM: HAYWOOD HOSPITAL.—Resident Medical Officer (female). Salary, £100 per annum.
- BURY ST. EDMUND: WEST SURFORD GENERAL HOSPITAL. House-Surgeon. Salary, £100 per annum.
- CAPE OF GOOD HOPE.—Medical Man for Research Work into Leprosy. Remuneration, £450 per annum.
- CATERHAM ASYLUM.—Third Assistant Medical Officer (male). Salary, £150 per annum, increasing to £170.
- DUDLEY: GUEST-HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum.
- EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road, S.E.—House-Physician. Salary at the rate of £50 per annum.

HOLLAND (LINES) COUNTY COUNCIL EDUCATION COMMITTEE.—County School Medical Officer. Salary, £250 per annum and £50 travelling expenses.

HOSPITAL FOR EPILEPSY AND PARALYSIS, Maida Vale, W.—Resident Medical Officer. Salary at the rate of £50 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Surgeon, (2) Assistant Casually Medical Officer. Salary, £30 and £2 10s. washing allowance, each for six months.

HULL ROYAL INFIRMARY.—House-Physician. Salary, £100 per annum.

IPSWICH EAST SUFFOLK AND IPSWICH HOSPITAL.—Two House-Surgeons. Salary at the rate of £55 per annum each.

KETTERING AND DISTRICT GENERAL HOSPITAL.—Resident Medical Officer. Salary, £100 per annum.

LEEDS GENERAL INFIRMARY.—Ophthalmic House-Surgeon. Salary at the rate of £50 per annum.

LEEDS HOSPITAL FOR WOMEN AND CHILDREN.—House-Surgeon. Salary at the rate of £50 per annum.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hamstead.—Junior Resident Medical Officer. Honorarium, £50 per annum.

NORTHAMPTON GENERAL HOSPITAL.—House-Surgeon (male). Salary, £30 per annum.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill.—Junior House-Surgeon (male). Salary, £50 per annum.

NORTHUMBERLAND HOUSE, Finsbury Park, N.—Assistant Medical Officer (male). Salary, £135 per annum, increasing to £150.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham.—(1) House-Surgeon, (2) House-Physician, (3) Junior House-Surgeon, (4) Junior House-Physician. Salary at the rate of £75 per annum for (1) and (2), and £40 per annum for (3) and (4).

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, W.V.—Assistant Resident Medical Officer, eligible after four months for appointment as Senior. Salary at the rate of £50 and £60 per annum respectively.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—(1) Examiners under the Joint Examining Board in England, (2) Examiners in Anatomy and Physiology for the Fellowship, (3) Member of the Court of Examiners.

ROYAL LONDON OPHTHALMIC HOSPITAL, City Road, E.C.—Assistant Surgeon.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, W.C.—House-Surgeon. Salary, £25 for six months.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—House-Physician. Salary, £100 per annum.

TUNBRIDGE WELLS GENERAL HOSPITAL.—Junior Resident Medical Officer. Salary, £80 per annum.

TORQUAY: TORRAT HOSPITAL.—House-Surgeon. Salary, £100 per annum and honorarium of £5 for nurses' lectures.

VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—Physician to Out-patients.

WAKEFIELD: CLAYTON HOSPITAL.—Junior House-Surgeon. Salary, £80 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) Physician, (2) Assistant Physician.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Castletown, Berehaven, co. Cork; Kingsfish, co. Northampton; Loughton, co. Essex; Clonmany, co. Donegal.

APPOINTMENTS.

BLOKSOMB, Arthur Henley, L.R.C.P. and S. Edin., L.F.P.S. Glasg., House-Surgeon to the Royal Alexander Hospital for Sick Children, Brighton.

FAIRBANK, H. A. T., M.S., F.R.C.S. Eng., Surgeon to the Miller Hospital, Greenwich, S.E., vice John Mackern, F.R.C.S.

GOWLAND, W. P., M.D., B.S. Lond., M.R.C.S., L.R.C.P., Assistant Surgeon to the Glasgow Infirmary.

KERR, C. Lawson, M.B., Ch. B., Glasg., Assistant Medical Officer to the Argyll and Bute District Asylum, Lochgilphead.

MCINTOSH, T. S., M.A., M.B., Ch.B., Non-resident House-Physician to Dr. Norman Walker, at the Edinburgh Royal Infirmary.

SOUBRE, E. W., M.B., B.S. Lond., House-Surgeon to the Dreadnought Hospital, Greenwich.

THORNTON, H. M., M.D., F.R.C.S. Edin., Clinical Assistant to Dr. Sym at the Edinburgh Royal Infirmary.

YOUNG, Meredith, M.D. Edin., D.P.H. Vict., Medical Officer of Health for the county of Cheshire, vice Francis Vacher, F.R.C.S., M.R.C.P. Edin., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

CLARKE.—At Maigor, Monmouthshire, April 6th, 1909, the wife of John Stephen Clarke, M.A., M.B., B.C., M.R.C.S., of a son.

MORLEY.—On April 5th, at 29, Gower Street, Bedford Square, the wife of Arthur S. Morley, F.R.C.S., of a daughter.

THOMAS.—On April 6th, at Bank House, Brecon, the wife of Dr. T. P. Thomas, of a daughter.

DEATHS.

BRUNTON.—At 10, Stratford Place, on the 14th inst., after a long illness, Louisa, the beloved wife of Sir Lauder Brunton, Bart., M.D., and daughter of the late Ven. E. A. Stophord, Archdeacon of Meath. Friends please accept this intimation. Memorial service by the Very Rev. the Dean of Salisbury, at St. Peter's, Vere Street, on Saturday, the 17th inst., at 10.30 a.m. No flowers, by request.

MACKEITH.—April 8th, at the home of her son, Alexander, Howard Road, Southampton, Margaret MacKeith, aged 76 years, wife of the late William MacKeith, L.R.C.P. Edin., of Hurst Green, Sussex.

STILLWELL.—April 12th, at Hanover Lodge, Eastbourne, Henry Stillwell, M.D. Edin., late of Moorcroft, Hillingdon, aged 75 years.

DIARY FOR THE WEEK.

TUESDAY.

CHELSEA CLINICAL SOCIETY, Chelsea Dispensary, Manor Street, Chelsea, S.W.—Communications:—Dr. Dauber: Notes and Specimen of Case of Unusually Large Papillomatous Ovarian Cyst. Dr. Hanfield: The Nature of Sickness after Anaesthesia and the Best Means of Preventing or Treating it.

THURSDAY.

ROYAL SOCIETY OF MEDICINE: NEUROLOGICAL SECTION, 20, Hanover Square, W., 4.30 p.m.—Clinical Meeting.

FRIDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—Museum Demonstration by Professor Keith on Specimens illustrating Malformations of the Face.

ROYAL SOCIETY OF MEDICINE: SECTION OF DISEASES IN CHILDREN, 20, Hanover Square, W., 4.30 p.m.—Papers and Cases.

EPIDEMIOLOGICAL SECTION, 20, Hanover Square, W.—Paper:—Dr. Darre Macdonald: The Etiology of Typhoid Fever in Belfast in Relation to Water Supply, Sanitary Circumstances, and Shellfish.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Lectures: Tuesday, 3.45 p.m., Pharynx and Nasopharynx; Friday, 3.45 p.m., Pharynx and Nasopharynx.

MEDICAL GRADUATE'S COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear, Nose, and Throat.

BOOKS, ETC., RECEIVED.

Jena: G. Fischer, 1909: Die Wassermannsche Serodiagnostik der Syphilis in ihrer Anwendung auf die Psychiatrie. Von Dr. med. F. Plaut. M. 4.50.

Handbuch die Biochemie des Menschen und der Tiere. Herausgegeben von Professor Dr. C. Oppenheimer. Vierzehnte Lieferung. M. 5.

The Birds of the British Islands. By C. Stenham, C.M.G., F.R.C.S., F.Z.S. Part XIII. London: G. Richards. 1909. 7s. 6d.

Transactions of the American Climatological Association. 1908. Vol. xxiv. Philadelphia: The Association.

Friedmannose und Tuberculose-Immunität. Von Dr. A. Wolf-Eisner. Zweite Auflage. Würzburg: C. Kabitzsch (A. Suber). 1909. M. 12 (geb. 15.50).

Hypnotism. Including a Study of the Chief Points of Psycho-Therapeutics and Occultism. By Dr. A. Moll. Translated from Fourth Edition by A. F. Hopkirk. London and Felling-on-Tyne: The Walter Scott Publishing Co., Limited. 1909. 6s.

Experimental Embryology. By J. W. Jenkinson, M.A., D.Sc. Oxford: The Clarendon Press; London: H. Frowde. 1909. 12s. 6d.

The Alcohol Case: The Summing Up. By H. Power, S.J., B.A. Edinburgh and Glasgow: W. Hodge and Co. 6d.

Felix Hoppe-Seyler's Handbuch der Physiologischen und Pathologischen chemischen Analyse. Bearbeitet von Dr. H. Thierfelder. Achte Auflage. Berlin: A. Hirschwald. 1909. M. 22.

Sammlung klinischer Abhandlungen über Pathologie und Therapie der Stoffwechsel- und Ernährungsstörungen. Herausgegeben von Prof. Dr. C. von Noorden. Band 1. Ueber die Behandlung einiger wichtigen Stoffwechselstörungen. Berlin: A. Hirschwald; 1909. M. 2.80.

Notes and Thoughts from Practice. By W. J. Tyson, M.D., F.R.C.P., F.R.C.S. London: J. Bale, Sons, and Danielsson, Limited. 1909. 2s.

London: Rebusan, Limited. 1909:

Surgical Diseases of the Abdomen, with Special Reference to Diagnosis. By R. Douglas, M.D. Second Edition. Edited by R. A. Barr, B.A., M.D. 25s.

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*In forwarding books the publishers are requested to state the selling price.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
APRIL.		APRIL (Continued).	
18 Sunday ..		26 MONDAY ..	
19 MONDAY ..		27 TUESDAY ..	HAMPSTEAD DIVISION, <i>Metropolitan Counties Branch</i> , Business Meeting.
20 TUESDAY ..	(BOSTON AND SPALDING DIVISION, <i>South Midland Branch</i> , White Hart Hotel, 2.45 p.m. NORTHAMPTONSHIRE DIVISION, <i>South Midland Branch</i> , Board Room, Northampton General Hospital, 2.30 p.m. : Luncheon, Franklin's Restaurant, Guildhall Road, 1.30 p.m. NORTH WALES BRANCH, Colwyn Bay Hotel, Colwyn Bay, 2.30 p.m. : Branch Council, 12.30 p.m. : Luncheon, 1.30 p.m.	28 WEDNESDAY ..	(Central Council, 2 p.m., New Council Room, 423, Strand, W.C. LONDON : Organization Committee, 10.45 a.m. BATH AND BRISTOL BRANCH, Bath.
21 WEDNESDAY ..	(London : Journal and Finance Committee 2.30 p.m. LONDON : Premises Committee 4.45 p.m. ALTRINCHAM DIVISION, <i>Lancashire and Cheshire Branch</i> , General Meeting, Greenbank Hotel, Northwich, 5 p.m. : Dinner, 7 p.m.	29 THURSDAY ..	(STAFFORDSHIRE BRANCH, General Meeting, Victoria Hotel, Wolverhampton, 5.25 p.m. : Council, before General Meeting : Dinner, 7 p.m.
22 THURSDAY ..	(LONDON : Metropolitan Counties Branch Council, 4.30 p.m. CITY DIVISION, <i>Metropolitan Counties Branch</i> , Conjoint Meeting with Walthamstow Division, Brooke House, Upper Clapton, 8.30 p.m.	30 FRIDAY ..	(BIRMINGHAM BRANCH, Pathological and Clinical Section, Medical Institute, Edmund Street, 8 p.m. SWANSEA DIVISION, <i>South Wales and Monmouthshire Branch</i> , 3 p.m.
23 FRIDAY ..	(ENGLISH DIVISION, <i>Border Counties Branch</i> , George Hotel, Penrith, 3 p.m.	MAY.	
24 SATURDAY ..		1 SATURDAY ..	
25 Sunday ..		2 Sunday ..	
		3 MONDAY ..	
		4 TUESDAY ..	
		5 WEDNESDAY ..	(DORSET AND WEST HANTS BRANCH, Spring Meeting, Dorchester.
		6 THURSDAY ..	(LAMBETH DIVISION, <i>Metropolitan Counties Branch</i> , Annual General Meeting, Bethlem Royal Hospital, 4 p.m.
		7 FRIDAY ..	(SWANSEA DIVISION, <i>South Wales and Monmouthshire Branch</i> , 8.15 p.m.
		8 SATURDAY ..	(ULSTER BRANCH, Spring Meeting, Londonderry.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow :

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent

by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, APRIL 24TH, 1909.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

MATTERS REFERRED TO DIVISIONS.

ANNUAL REPRESENTATIVE MEETING AT BELFAST.

FRIDAY, JULY 23RD, AND FOLLOWING DAYS.

NOTICES OF MOTION.

The following Notices of Motion have been received for discussion by the Annual Representative Meeting of the Association, to be held at Belfast, July 23rd, 1909, and following days.

A.—NOTICES AFFECTING THE CHARTER.

Election of Representatives.

By the LIVERPOOL (WESTERN) DIVISION (Lancashire and Cheshire Branch):

That in By-law 25 (1) the words "each such Constituency being entitled to elect one Representative," be deleted.

By the LIVERPOOL (WESTERN) DIVISION (Lancashire and Cheshire Branch):

That in By-law 25 (2), for the first word of line 2, "one," substitute "a," and after the word "Constituency" insert the words "to elect one Member"; at the end add the words "Any Division having more than 50 Members may elect another additional Representative for every complete 50 (75, 100, or other number) additional Members."

B.—NOTICES AFFECTING THE PRESENT REGULATIONS OF THE ASSOCIATION.

Mode of Election of Council.

By the COUNCIL:

That the present By-laws of the Association, numbered 23 to 32 inclusive, relative to the composition and mode of election of Council be rescinded, and the corresponding By-laws, numbered 37 to 46 inclusive, in the Schedule to the Draft Charter, be adopted in substitution thereof, subject to such verbal amendments and alterations as the legal advisers of the Association may deem to be necessary.

By the DUNDEE BRANCH:

That the present By-laws relating to the Council, namely, 23 et seq., be amended by substituting for them the provisions of the Schedule to the Draft Charter, namely, Section VI., subject to such verbal amendments as in the opinion of the Association's legal advisers are necessary to bring them into harmony with the present Memorandum and Articles.

By the GATESHEAD DIVISION (North of England Branch):

That having regard to the repeated decisions of the Representative Meeting, confirmed by a large majority upon the Referendum, that the mode of election of the Council should be altered so as to provide for the reduction of the total membership of, and some representation of the Representative Meeting on, the Council, the present By-laws of the Association as to the composition and mode of election of the Council be amended so as to conform with those on the same subject appended to the Draft Charter submitted to the Privy Council.

Standing Committees.

By the COUNCIL:

That the Schedule to the present By-laws of the Association as to Standing Committees be amended by making such verbal changes as are necessary to bring it into conformity with the corresponding Schedule appended to the Draft Charter.

C.—NOTICES AFFECTING THE ADMINISTRATION OF THE ASSOCIATION.**Method of Distribution of Capitation Grants.**

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That in view of the facts (1) that the policy of the Association is to consider the Division as the primary unit, each Division being free to govern itself in such a manner as it shall think fit; (2) that the decision as to what additional subjects shall be forwarded to the Divisions for consideration rests with the Representative Body and the Central Council, and not the Branch Councils; this Representative Body considers that it is illogical any longer to place in the hands of Branch Councils the funds for distribution to the Divisions, while at the same time depriving them of any control over the objects for which the money is used, and instructs the Central Council to so amend the By-laws as to place the distribution in the hands of the Central Council, which can make capitation grants to all Divisions and Branch Councils as may be required.

The "British Medical Journal."

By the WATERFORD DIVISION (South-Eastern of Ireland Branch):

That the BRITISH MEDICAL JOURNAL should more largely advocate the rights, interests, and claims of the medical masses in the future than it has done in the past.

Appointment of Materia Medica Committee.

By the WATERFORD DIVISION (South-Eastern of Ireland Branch):

That the Council be requested to appoint a Materia Medica Committee, whose duty it will be, with such professional aid as they can summon to their assistance, to investigate and pronounce on the uses and properties of all drugs which shall be used by the profession, and that in view of the grave injury inflicted on the public and on the profession alike by the present wholesale introduction of drugs by mere commercial firms, whereby the ground is being cut from under our feet, and the gullible public are induced to accept nostrums on the sole strength of mere assertions, that the hospitality of our museum and the pages of our JOURNAL shall be both shut out from giving any further aid to the wholesale advertisements of drugs and preparations, the sole virtues of which have too often no existence save in the mendacity of their introducers.

Scientific Work of the Association.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That, with a view to further interesting Divisions and Branches in the Section work of the Annual Meeting, it be an instruction to the Central Council to encourage them to nominate one or more members to take part in the discussions of any subject arranged for, which has previously been considered by the Division or Branch.

Promulgation of Policy of the Association.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That it be an instruction to the Central Council to investigate and report as to the best means for bringing before the Members those conclusions of this Representative Body arrived at from time to time which define the policy of the Association, with a view to their general acceptance and adoption throughout the Association.

Representatives at the United Kingdom Hospitals Conference.
By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That this Representative Body do annually elect twenty-five of its Members, of which not less than three shall be Representatives from Scotland, and not less than three Representatives from Ireland, to represent it at the United Kingdom Hospitals Conference, so long as these Conferences shall continue to be held, together with others to be elected by the Central Council, and that they do report to this Body.

D.—NOTICES AFFECTING THE POLICY OF THE ASSOCIATION.**Contract Practice.**

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That it be an instruction to the Central Council to formulate Resolutions embracing the main principles as affecting Medical Contract Practice.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That the proposed Federated Societies Medical Benefit Association should not receive the support of members of the Association, since it contravenes the conditions which the Association has approved for the regulation of Contract Practice.

Public Medical Service.

By the ST. PANCRAS AND ISLINGTON DIVISION (Metropolitan Counties Branch):

That the time is now opportune for the British Medical Association to take into consideration the drafting of a scheme for a Public Medical Service, to embrace Philanthropic Dispensaries and Medical Services, School Clinics, the Poor Law Medical Service, Provident Dispensaries, and the Medical Services of Friendly Societies and Clubs.

Hospital Administration.

By the WATERFORD DIVISION (South-Eastern of Ireland Branch):

That the Council be instructed to take steps to give practical effect to the Oxford resolutions on the subject of gratuitous or semi-gratuitous hospital treatment of the well-to-do.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch) (as an amendment to the Report and Recommendation of the Hospitals Committee *re* Medical Certification of Suitability of Patients for Hospital Treatment):

That except in emergencies a medical certificate of suitability for hospital treatment be required as a condition of hospital treatment.

Management of General and Cottage Hospitals.

By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That the management of General and Cottage Hospitals should be vested in a Committee on which the local medical profession is adequately represented by directly elected representatives.

Medical Teaching.

By the WATERFORD DIVISION (South-Eastern of Ireland Branch):

That it is contrary to the interests of the profession that the mass of the profession, and even the majority of members of hospital staffs, should be excluded, as at present, from all share of medical teaching.

Medical Examinations.

By the WATERFORD DIVISION (South-Eastern of Ireland Branch):

That all medical examinations ought to be duly advertised, and open to the presence of every registered medical practitioner.

By direction of the Chairman of Representative Meetings,
J. SMITH WHITAKER, *Medical Secretary*.

Meetings of Branches & Divisions.

The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

BERMUDA BRANCH.

A MEETING of this Branch was held at the Board Room, Public Buildings, Hamilton, on January 30th, Colonel J. C. COLLING, R.A.M.C., in the chair.

Resignation of Honorary Secretary.—Dr. Harvey, after having completed twenty-three years of service as Honorary Secretary of the Branch, begged to be allowed to resign his duties, and Dr. W. E. Tucker was elected in his place. A vote of thanks to Dr. Harvey for his long services was proposed, seconded, and carried unanimously.

Accounts.—The accounts were laid on the table, adopted, and passed.

Proposed Midwives Act.—A discussion took place on the provisions of a Midwives Act which it is proposed to introduce into Parliament at the next session, the objects of this Bill being to provide for the education, registration, and control of midwives practising in the colony.

The following resolutions were passed:

1. That it is the opinion of this meeting that many of those now practising as midwives are inefficient.
2. That steps should be taken for the proper training, control, and registration of midwives.

METROPOLITAN COUNTIES BRANCH:

HAMPTSTEAD DIVISION.

A MEETING of the Division was held on March 23rd at the Hampstead Conservatoire, Dr. OPPENHEIMER in the chair.

Resignation of Dr. Yeld.—A letter from Dr. Yeld resigning the secretaryship of the Division was read, and the Chairman was requested to write, in the name of the Division, to Dr. Yeld expressing the great regret with which the Division accepts his resignation and its grateful appreciation of his valuable services as Honorary Secretary during the last five years.

Representation at Representative Meeting.—Mr. H. W. ARMIT was appointed to represent the Division at the Representative Meeting.

Vaccine Therapy.—Sir ALMROTH WRIGHT gave an address on the principles of vaccine therapy, which was followed by a discussion, in which Drs. FORD ANDERSON, ARMIT, and PARSONS took part, and a cordial vote of thanks to Sir Almroth Wright for his very interesting and suggestive address was carried by acclamation.

Hampstead Hospital.

A meeting of the local profession was held under the auspices of the Hampstead Division on Saturday, March 20th, to consider the Hampstead Hospital question in its present development, and to formulate definitely the attitude which the profession in Hampstead should take towards it. Dr. OPPENHEIMER (Chairman) gave the reasons why it was thought desirable to convene the meeting, and Mr. ARMIT gave a summary of the Hampstead Hospital question subsequent to July 3rd, 1907, the date of the last meeting of the profession on the question. The following resolutions were proposed, seconded and carried *nem. con.*:

1. That it is the opinion of this meeting that a substantial portion of the Hampstead Hospital should be set aside as a home hospital for local needs.
2. That the home hospital should contain both contributory and free beds, and be served by local practitioners.
3. That sufficient guarantees be given that no out-patient department shall be opened in Hampstead.
4. That the local profession be entitled to nominate representatives to serve on the council of the hospital.

The following resolution was proposed, seconded, and carried:

That when patients in the home hospital are not attended by their own doctor, they shall be served by local practitioners according to *rota*, elected by the profession.

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RICHMOND DIVISION.

A GENERAL meeting of this Division was held on Wednesday, April 14th, at the Royal Hospital, Richmond.

Thirty-eight Years of Professional Life.—Dr. J. R. LEESON read a paper entitled, *Thirty-eight Years of Medical Life: A Retrospect and Prospect*. He began by contrasting medical education in the early Seventies with that of to-day, and spoke of the revolution in thought the discovery of the microbe had effected. The subsequent introduction of antiseptics had remodelled the practice of medicine, surgery, and midwifery. The complex prescription had disappeared, and many of our now commonest drugs were of quite recent origin. Much of the prestige and veneration that surrounded the old doctor had disappeared, and the general diffusion of medical knowledge amongst the laity by the press and cheap literature had tended to diminish his dignity. Acute diseases were now known to run a definite course, but little influenced by drug treatment. Diagnosis was insisted upon as being the practitioner's sheet-anchor, and his best defence against the prescribing chemist and modern quackery, but in the present state of badly-paid club and low-class practice the time required for such was ruinous. Many causes were instanced as unfavourably influencing the practitioner—the general decline of middle-class prosperity, the decline in their birth-rate, and the abuse of hospitals by those who could afford to pay for attendance; the change of treatment in many chronic diseases, such as phthisis, enlarged prostate, and gall stones, etc.; the minimizing of sepsis in surgery and midwifery, and the general advance of sanitation, though of infinite benefit to humanity, had all told against his chance of earning a living, and although the general scale of living and the rise of wages and rates had almost doubled during the present generation, his fees had steadily diminished. The doctors of the past had derived much of their income from their "medicines," and their remuneration had been largely based upon this scheme; but now drugs were less in use, whilst the fees of general practitioners for diagnosis and skilled advice had been stationary, if not regressive. From his experience the general practitioner had a struggle to live, and, considering the knowledge required, and the danger, anxiety, and worry of his calling, by night as well as by day, the remuneration was sadly out of proportion to his work. He had never known a general practitioner retire upon his professional earnings. The applications for relief from such a charity as the Royal Epsom Medical College, of which he had been local honorary secretary for many years, and for its pensions were heart-rending, and showed the widespread distress amongst the widows and orphans of the profession. The outlook from a remunerative aspect was gloomy. How could club work be properly done for a penny a week; how could the poor of a parish of 27,000 people be properly doctored for £80 a year? There were certainly three remedies which should be applied: (1) A higher standard of general knowledge should be required for the entrance examination; (2) greater attention should be paid to diagnosis and the thorough investigation of all cases under treatment, for which fees proportionate to the skill and time required should be demanded; this would diminish the incursions of the prescribing chemists, modern quackery, Christian Science, *et hoc genus omne*; and lastly (3), some righteous form of trade unionism and combination to lift the workers above the woes of "the sweating systems" now in vogue. Truly it was a noble profession—the noblest—offering countless opportunities for the highest qualities of heart, head, and hand, but, as some one said to him, "a devil of a business!" For the sake of the humanity which it sought to serve it must be rescued from the impetuous and embarrassing conditions into which it was drifting. Under present conditions he regarded it more as a philanthropy than as a profession; but how could it thus hope to attract into its ranks the best brains and fibres of the community which it so imperatively demanded? A discussion followed, and Dr. LEESON, who was heartily thanked for his paper, replied.

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STRATFORD DIVISION.

A MEETING of this Division was held on Thursday, April 15th, at the Alexandra Hotel, Stratford, E., Dr. J. BIERNACKI presiding.

Address.—Dr. C. O. HAWTHORNE delivered a very interesting address on the *British Pharmacopoeia*, and, after answering a number of questions, was awarded a very hearty vote of thanks.

NORTHERN COUNTIES OF SCOTLAND BRANCH.

A clinical meeting of this Branch was held at the Northern Infirmary, Inverness, on March 27th. Twenty-two members were present.

Apologies for Non-attendance.—Apologies were received from Drs. Norman Walker, Duncan, Sellar, Kirkwood, etc.

Demonstration.—Dr. Gordon LANG gave a cystoscopic demonstration, and exhibited cases which had been under his care in the x-ray department of the Northern Infirmary.

Pyosalpinx.—Dr. MUNRO MOIR read notes on a case of pyosalpinx of the left Fallopian tube, which was removed.

Mycosis Fungoides.—Dr. SIMPSON (Golspie) contributed a paper on mycosis fungoides. When first seen in 1892 the patient, a married woman aged 44, with several healthy children, suffered from what Dr. Simpson took to be a single patch of dry eczema, about the size of a shilling, situated on the right side of the neck, below and behind the angle of the jaw. This was treated with zinc-ichthylol paste. The irritability was lessened, but the patch was not cured. In 1900 Dr. Allan Jamieson saw the patient. By this time the patch had increased in size, and there were similar patches on the lower part of the face on the same side. After two attacks of erysipelas, in 1900 and 1901, there was distinct relief in the irritability of the patches, and they seemed less active. This condition did not last long, and about the middle of 1901 the activity was renewed, the patches became worse, and Dr. Allan Jamieson, who again saw her in 1902, reported that the case was unmistakably one of classical mycosis fungoides. She was treated by x rays from June to October, and returned to Golspie practically cured; with the exception of some slightly irritable patches on her back there was nothing remaining of the disease; the tumours had evidently disappeared. From the end of 1902 until the spring of 1905 she remained well, when she was again seen by Dr. Simpson; she complained at that time of fresh patches on the back, abdomen, and legs; they were all in the "eczematous" stage. As x rays were available in the Lawson Memorial Hospital, Golspie, she attended three times a week for treatment. Short exposures (four to five minutes) with a medium tube at a distance of 6 to 10 or 12 in., according to the size of the patch, gave great relief. Dr. Simpson did not see the patient from April, 1906, until December of that year, when the condition was much worse. The characteristic tumours had developed on the back and on the front of the forearms; there were large thickened oozing patches on the abdomen, under the breasts, on the hips, and on the insides of the thighs. The x rays were vigorously renewed, but she did not attend for treatment as regularly as could be desired. The tumours on the back readily yielded to treatment by the x rays, but her general condition did not improve. In June, 1907, she became so weak that she was unable to attend hospital. The mucous membrane of the soft palate became red and oedematous, and later the soft palate and roof of the mouth ulcerated in patches, making swallowing extremely difficult. There was a fetid odour from the mouth. The tumours on the arms broke down, and became offensive and difficult to dress. She became unable to swallow nourishment, and died in September, 1907. There are some interesting points which may be mentioned: (1) It was a case of classical mycosis fungoides; (2) it was, as far as Dr. Simpson is aware, one of the first cases treated by x rays; (3) although the disease did return, the parts originally treated and cured in Edinburgh Royal Infirmary by the x rays remained unaffected to the end.

Sciatica.—Dr. KAYE (Strathpeffer) contributed a paper on sciatica, and remarked that the term "sciatica" was commonly used in an extremely elastic sense, and based his notes chiefly with the view of determining the legitimate meaning of "sciatica." In most textbooks the word was not defined, but it was generally implied that it causes pain in the course of the great sciatic nerve, which might be a true neuralgia—that is, a pain of the real explanation of which next to nothing was known—or due to a primary

inflammation of the nerve, or rather of the connective tissue elements. As the ideal of all nosological nomenclature should be to name diseases according to their causes, this implied definition was the best possible, and the term "sciatica" should be confined entirely to cases which fell within this category. Thus, pain referred to the sciatic region and due to pressure or inflammation arising in the spine, pelvis, buttock, hip, or any other structures near or among which the nerve passed in its course should not be called "sciatica" any more than pain due to a sarcoma of the head of the humerus or a suppurating shoulder-joint should be called "brachial neuritis." It followed that the presence or absence of any of these potential causes for the pain should be fully investigated; it was only after the exclusion of such conditions, coupled with the presence of symptomatic and physical signs of a pathological condition of the great sciatic nerve, that a diagnosis should be made. Dr. Kaye related the cases of three patients recently under his care, all labelled "sciatica," but who in his opinion suffered from totally different diseases, which involved widely different prognosis and treatment. In two of the cases the symptoms complained of were due to disease of a tuberculous nature in the neighbourhood of the hip-joint, the other being obviously due to adhesions about the sciatic nerve. Dr. Kaye submitted that the term "sciatica" should not be applied to various conditions of structures other than the sciatic nerve which caused pain in the thigh, but should be strictly confined to: (1) A neuralgia—that is, as abnormality of the nerve in its connexions could be demonstrated by pathological methods, it was distinguished clinically by irregular intermittence of the pain, the existence of tender points along the course of the nerve, and the absence of pain on stretching the nerve; (2) the more common form, which pathologically was a perineuritis or interstitial neuritis, was ordinarily described as being rheumatic or gouty in origin. Dr. Kaye also described a chronic form of sciatica, giving two varieties according to the anatomical distribution of the fibrous tissue: (1) Those cases which were due to adhesions between the perineurium and the structures within or without it; these were characterized by the onset of pain only when the nerve was pulled upon, as, for instance, by the act of walking, or by extending the leg on the flexed thigh; there was also some tenderness of the nerve on manipulation, but no other signs. (2) The cases in which the nerve fibres were bound up by the interstitial development of fibrous tissue; in these the pain was almost constant, but was increased by movement. The nerve was tender on manipulation; there was paraesthesia or anaesthesia of the cutaneous distribution, and in extreme cases muscular wasting and paresis with loss of knee-jerk. Dr. Wm. BRUCE (Dingwall) also contributed a short paper on sciatica. He referred, as Dr. Kaye had done, to the looseness of the term "sciatica," and urged the necessity of making sure that the possibility of the presence of mischief in the hip joint was excluded. Dr. Bruce referred to the presence or absence of lameness, heat or swelling of the articulation, and muscular wasting. Tenderness on pressure, more especially at the upper aspect of the articulation, was often severe. Dr. Bruce mentioned that in the large majority of his cases a certain amount of disability had been discovered either on flexion, extension, internal or external rotation. There were a few cases he had met with where he had not been able to make out any impediments, or pain in passive movements, but in a good few he had discovered far advanced ankylosis, occasionally entirely overlooked.

Artificial Immunity in Tuberculosis.—Dr. DE WATTEVILLE (Kingussie) read a short paper on this subject. He dwelt on the success of hygienic, dietetic, and medicinal treatment. But the success in these cases was limited. Germicides could not be introduced into the body in sufficient quantity to make decided and lasting impression. Dr. de Watteville described (1) passive immunity, which was abandoned as unsatisfactory; (2) active immunity, by means of Koch's TR, which was the only one used clinically. The preparation was given in gradually increasing doses guided by clinical symptoms, but the results were unsatisfactory and often attended with harm. Reference was also made to Wright's work on opsonins and to the opsonic index as a guide in tuberculin treatment.

SOUTH-EASTERN BRANCH: MAIDSTONE DIVISION.

A MEETING of this Division was held at the Kent County Ophthalmic Hospital on Thursday, April 15th, at 3 p.m. There were present: F. T. Travers, M.B., F.R.C.S. Edin., Chas. Killick, M.D., F.R.C.S., Mrs. Palm, Southwell Sander, Black, Parr-Dudley, Forge, Ryan, and Geo. Potts, Honorary Secretary.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Paper, Cases, Etc.—Mr. KILICK gave a short account of iudectomies performed for various causes, and showed cases to demonstrate the results especially for glaucoma. Mr. Killick also showed several other interesting cases. Dr. RYAN, who was welcomed by the Chairman as a new member, showed a case of omphaloenteric, and enumerated several cases of syphilis, chorea, and pernicious anaemia successfully treated by soamin.

Apologies for Non-attendance.—Letters of regret for non-attendance were read from Drs. Wolseley, Lewis, Douglas, and Joyce.

Postponement of Resolution.—Dr. Joyce's resolution was allowed to stand over to next meeting.

Proposed Division of Branch.—Dr. Stewart's letter was read re division of the South-Eastern Branch, and it was unanimously resolved that this Division agree to there being a separate Kent Branch.

Resolution of Sympathy.—Dr. Gallard's letter was read, and the Honorary Secretary instructed to convey the Division's sympathy.

Letter of Warning to Head Masters of Schools.—Dr. PARR-DUDLEY gave notice that he would propose the following resolution at the next meeting:

That the letter of warning issued by the Manchester Division to the head masters of schools in their Division with reference to the medical profession shall also be issued by this Division to the head masters of schools in Kent.

Attendance at Meetings.—It is particularly requested that members of the Division should endeavour to attend the meetings of the Division. The Honorary Secretary would be very glad if members would kindly inform him if they desire to read papers or show cases at the next meeting or any subsequent meetings, as it is the wish of the members to make the meetings of clinical interest. The names of new members will be gladly received by Geo. Potts, Honorary Secretary, Kent County Ophthalmic Hospital, Maidstone.

SOUTH-EASTERN OF IRELAND BRANCH.

A MEETING of this Branch was held at Adelphi Hotel, Waterford, on April 7th, at 3.30 p.m. In the absence of P. J. Murphy, F.R.C.S.I. (President), Dr. MACKESY was voted to take the chair. Fourteen members were present.

Apologies for Non-attendance.—Three members sent apologies for non-attendance.

Confirmation of Minutes.—The minutes of the last meeting were read, approved, and signed.

Well-to-do Patients and Hospitals.—It was proposed by Dr. Jos. P-OWER and seconded by Dr. Wm. SHEE:

That the modification suggested by the Irish Committee regarding Resolution 2 (see SUPPLEMENT, September 19th, 1908, p. 196, re admission of well-to-do patients into union hospitals, passed at the meeting of the Branch held at Waterford on September 2nd, 1908, and accepted in its amended form by the Branch meeting (see SUPPLEMENT, March 20th, p. 139) held at Carlow on March 3rd, 1909, be rescinded and that the original Resolution stand.

Fees under Employers' Liability Act, etc.—Dr. MACKESY moved and Dr. JELLET seconded:

That the members of this Branch bind themselves not to accept less than one guinea for examination and report in any case under the Employers' Liability Act, Workmen's Compensation Act, Fatal Accidents Act, or at Common Law, whether the same be furnished on behalf of employers or insurance companies.

The motion was carried. It was proposed by Dr. Wm. SHEE, and seconded by Dr. Jos. P-OWER:

That this resolution be circulated amongst members and published in the local press.

The motion was carried.

Dinner.—This concluded the business of the meeting and the members dined together.

ES To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, April 28th, in the new Council Room, at 429, Strand, London, W.C.

By Order,

GUY ELLISTON.

March 25th, 1909.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH.—The sixth ordinary meeting of the session will be held at the Museum, Bath, on Wednesday evening, April 28th, at 8 o'clock, Mr. J. Paul Bush, C.M.G., President. The following papers are expected:—W. P. Kennedy, M.D.: Cancer Treatments; F. G. Thomson, M.D.: Referred Cardiac Pain; J. M. H. Munro, D.Sc.: Case of Early Addison's Disease, treated with Tuberculin; G. H. H. Almond, M.B.: Theoretical Considerations of Pulmonary Auscultation. A Council meeting will be held at 7.55. Trains (G.W.R.): Bristol to Bath, 7.24; Bath to Bristol, 9.55.—W. M. BEAUMONT, NEWMAN NEILD, Honorary Secretaries.

BATH AND BRISTOL BRANCH.—Election of Representatives of the Branch upon the Central Council.—Nominations of candidates for election to the Central Council must be forwarded to the Honorary Secretaries not later than May 8th. The Branch is entitled to elect one member.—NEWMAN NEILD, Richmond Hill, Clifton; W. M. BEAUMONT, 4, Gay Street, Bath.

DORSET AND WEST HANTS BRANCH.—The spring meeting of this Branch will be held in Dorchester on Wednesday, May 5th. JAMES DAVISON, Honorary Secretary, "Stratcliffe," Bournemouth.

LANCASHIRE AND CHESHIRE BRANCH.—Election of Representatives of the Branch on the Council of the Association.—Nominations of candidates must be sent in writing on or before May 8th next to P. CHARLES LARKIN, Branch Secretary, 54, Rodney Street, Liverpool.

LANCASHIRE AND CHESHIRE BRANCH.—A general meeting of the Branch will be held on Wednesday, May 12th, at the New Manchester Royal Infirmary (by kind invitation of the Committee and Medical Board). Details will be published later.—F. CHARLES LARKIN, Branch Secretary.

METROPOLITAN COUNTIES BRANCH.—Nominations of Branch Officers.—Pursuant to By-law 25, notice is hereby given that nominations for all the officers of the Branch—namely, President-elect, Vice-Presidents, Secretary, and members of the Branch on the Central Council of the Association—must be sent in to the Honorary Secretary of the Branch on or before May 29th. Voting papers will be sent out on or before June 5th, and must be returned to the Secretary on or before June 12th.—ATWOOD THORNE, E. W. GOODALL, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: LAMBETH DIVISION.—The next meeting of the Lambeth Division will be the annual general meeting, and it will be held on May 6th, at 4 p.m., in Bethlem Hospital. Agenda:—(1) Minutes of the previous meeting. (2) A matter referred to the Divisions from the Hospitals Committee, re contributions to hospitals by employers of labour and employees (see SUPPLEMENT, February 27th, 1909, p. 102). (3) Re sanatoriums for workers suffering from tuberculosis. The following motion is referred to the Divisions from the Annual Representative Meeting at Sheffield: "That, in the opinion of the Representative Meeting, it is not advisable that members of the Association should in future accept, or continue to hold, appointments as Honorary Local Medical Referees to the National Association for the Establishment and Maintenance of Sanatoria for Workers Suffering from Tuberculosis, and that the Divisions be requested to consider the matter as affecting any of their own members, or other practitioners, or their respective areas, who may hold such appointments." (4) To consider the following communication from the Chelsea and Fulham Division: "That we, the Chelsea and Fulham Division of the Metropolitan Counties Branch of the British Medical Association, deeply regret and resent the action of the Council of the Royal College of Surgeons of England, in that having ascertained the wishes of a majority of the Fellows and Members of their College, that they should deliberately dissent that opinion in the recent alteration of their By-laws, and that a copy of this resolution should be sent to the other Divisions of the British

Medical Association." (5) Election of officers for the ensuing session. The following names are suggested by the Executive Committee: *Chairman*, W. H. B. Stoddart, M.D.; *Vice-Chairman*, J. V. C. Denning, L.R.C.P.I.; *Honorary Secretary*, Herbert French, M.D., F.R.C.P.; *Representative at Representative Meetings*, "R. Esler, M.D.": *Representative upon the Branch Council*, R. Capes, Esq., M.R.C.S., L.R.C.P., and *Honorary Secretary of the Division ex officio: Executive Committee*, "E. A. Edelstein, M.B., M.R.C.S.," "W. E. Sturges-Jones, M.R.C.S., L.R.C.P.," "H. J. Spott, M.R.C.S., L.R.C.P.," G. F. Grant, M.B., T. H. P. Jones, L.M.S.S.A., V. A. James, M.R.C.S., L.R.C.P., W. A. Atkinson, M.D. "Those marked with an asterisk held this office last year." Members of the Division desirous of nominating other candidates for any of the above offices are requested to send the names of their nominees, duly seconded, together with a note to indicate the willingness of the nominee to accept the office if elected, to the Honorary Secretary of the Division, at 26, St. Thomas Street, S.E. (6) Dr. Hyslop will give clinical demonstrations upon cases from the wards of the Bethlem Royal Hospital. (7) Other business, if necessary. — HERBERT FRENCH, Honorary Secretary, Lambeth Division, 26, St. Thomas Street, S.E.

METROPOLITAN COUNTIES BRANCH: ST. PANCRAS AND ISLINGTON DIVISION.—This Division will hold a meeting at the Midland Grand Hotel, King's Cross, on Tuesday, May 4th, at 9 p.m. Dr. Lauriston Shaw, Physician to Guy's Hospital, will open a discussion on Some Points in the Diagnosis of Gastric Disease. — W. GRIFFITH, Honorary Secretary.

MIDLAND BRANCH: LEICESTER AND RUTLAND DIVISION.—A meeting of this Division will be held in the Leicester Infirmary on Wednesday, April 28th, at 4.15 p.m. Agenda:—Minutes of previous meeting. Consideration of the following matters referred to Divisions: (1) Medical certification of suitability of patients for hospital treatment (SUPPLEMENT, February 27th); (2) Contributions to hospitals by employers of labour and employees (SUPPLEMENT, February 27th); (3) Relating to fresh public medical institutions; (4) Relating to sanatoriums for workers suffering from tuberculosis; (5) Relating to appointments as medical officers of health (SUPPLEMENT, January 23rd). Any other business. — WILFRED E. GIBBONS, Honorary Secretary.

SOUTH-EASTERN BRANCH.—The annual meeting of this Branch will be held at Croydon on Wednesday, June 23rd, Dr. J. J. Macan, President-elect, in the chair. The following will be the agenda:—(1) To elect the officers of the Branch; nominations by three members for the offices of President-elect, Vice-Presidents, and Secretary, may be sent to the Honorary Secretary on or before May 21st. (2) To receive the annual report of the Branch. (3) To transact any business that may be transacted by an ordinary meeting. Three members to represent the Branch on the Central Council will also be elected by voting papers. Nominations for these posts, each by three members in meeting, should be sent to the Honorary Secretary on or before May 21st. — H. M. STEWART, Honorary Secretary, Dulwich.

SOUTH-EASTERN OF IRELAND BRANCH.—The annual meeting of this Branch, as also a meeting of the Branch Council and the local Division, will be held at the Victoria Hotel, Kilkenny, on Wednesday, May 5th, at 5.15 p.m. Agenda:—(1) Minutes of last meeting. (2) Letters of apology. (3) Correspondence. (4) Installation of President-elect. (5) Election of officers of the Branch for the ensuing year. (6) Dr. Lafan's motion deferred. Any other business. Dinner. — J. QUIRKE, Honorary Secretary, Piltown.

SOUTH MIDLAND BRANCH.—In accordance with By-law 25, notice is hereby given that nominations for the election of a Representative of this Branch on the Central Council must be sent to me not later than May 22nd next. — E. HARRIES-JONES, 16, Castilian Street, Northampton.

SOUTH MIDLAND BRANCH: BEDFORD AND HERTS DIVISION.—A meeting of the Division will be held on Thursday, May 6th, at 5 p.m., at the County Hospital, Bedford. Business: Matters referred to Divisions: (1) Report on medical certificates of suitability of patients for hospital treatment. (2) Report on contributions to hospitals by employers of labour and employees. (3) Statement as to fresh public medical institutions. (4) Statement as to sanatoriums for workers suffering from tuberculosis (see SUPPLEMENT, February 27th). (5) Departmental Committee re Midwives Act.—E. H. COBB, Honorary Secretary, Belmont, Stevenage.

STAFFORDSHIRE BRANCH.—The third general meeting of the session will be held at the Victoria Hotel, Wolverhampton, on Thursday, April 29th. The President, Dr. S. King Alcock, will take the chair at 5.25 p.m. Business: (1) Minutes of the last general meeting. (2) Correspondence. (3) Exhibition of living cases. Papers:—(a) Dr. W. Spencer Badger: The Chest of the Elementary School Child. (b) Dr. J. A. Codd: The Treatment of Glandular Enlargements by X Rays. (4) Exhibition of Pathological Specimens, etc. Dinner at 7 p.m.; charge, 5s. A meeting of the council will be held immediately before the general meeting to fix the date of the annual council meeting. — G. PETGRAVE JOHNSON, Honorary General Secretary, Stoke-on-Trent.

ULSTER BRANCH.—The spring meeting of this Branch will be held in Londonderry on Saturday, May 8th. Members having communications to make to the meeting are requested to send particulars not later than April 30th to CECIL SHAW, Honorary Secretary, 29, University Square, Belfast.

British Medical Association.

GRANTS AND SCHOLARSHIPS FOR SCIENTIFIC RESEARCH.

GRANTS.

THE Council of the British Medical Association is prepared to receive applications from members of the Medical Profession for Grants in aid of Researches for the Advancement of Medicine and the Allied Sciences.

The Grants are made subject to the following conditions:

1. That the work of the Grantee shall be subject to inspection by the Science Committee of the Association.

2. That each Grantee shall furnish to the Science Committee, on or before May 15th following the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report, to be renewed not later than the same date in each subsequent year until the final report is presented) containing:

(a) A statement, in a form satisfactory to the Science Committee, of the results arrived at, or the stage which the inquiry has reached;

(b) A statement of expenditure incurred, accompanied by vouchers as far as possible;

(c) A reference to any Transactions, Journals, or other publications in which the results of the research have been announced.

SCHOLARSHIPS.

The Council of the British Medical Association is also prepared to receive applications for Research Scholarships, as follows:

1. AN ERNEST HART MEMORIAL SCHOLARSHIP, of the value of £200 per annum, for the study of some subject in the department of State Medicine.

2. THREE RESEARCH SCHOLARSHIPS, each of the value of £150 per annum, for research in Anatomy, Physiology, Pathology, Bacteriology, State Medicine, Clinical Medicine, or Clinical Surgery.

Each Scholarship is tenable for one year, but is renewable by the Council, provided that the whole period of tenure shall not exceed three years.

The Scholarships are awarded subject to the following conditions:

1. That the work of the Scholar shall be subject to inspection by the Science Committee of the Association.

2. That he shall furnish the Science Committee, on or before May 15th following the grant of the Scholarship, with a statement of the work done by him.

3. That he sign an undertaking to abide by the above and other regulations affecting Scholarships, a copy of which will be supplied to him.

Applications.

Applications for Grants and Scholarships for the year 1909-10 must be made, not later than May 27th, 1909, in the prescribed form, a copy of which will be supplied on application to the Medical Secretary, 429, Strand, London, W.C.

Each application should be accompanied by a recommendation from the head of the laboratory in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

J. SMITH WHITAKER, *Medical Secretary*.

429, Strand, W.C.,
March, 1909.

LOCAL EDUCATION AUTHORITIES (MEDICAL TREATMENT) BILL.

THIS bill was introduced by Mr. Walter Guinness on April 1st, and is supported by Mr. Adkins, Mr. Bridgeman, Lord Robert Cecil, Mr. Fell, Mr. H. C. Gooch, Mr. Leif Jones, Mr. Ramsay MacDonald, Mr. Maddison, Mr. Peel, Mr. Vivian, and Mr. Whitwell Wilson.

MEMORANDUM.

THIS bill proposes to enable local education authorities to recover the cost of the medical treatment of children, where such treatment is provided under section thirteen of the Education (Administrative Provisions) Act, 1907. Local education authorities already have power to recover the cost of meals from parents under the Education (Provision of Meals) Act, 1906. Parents who neglect to provide necessary medical aid are liable to conviction under section twelve of the Children's Act of 1908, but there is no power to enable the local authority to recover the cost of treatment.

A BILL to provide for the recovery by local education authorities of costs for medical treatment of children attending public elementary schools in England and Wales.

Be it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. *Recovery by Local Education Authority of Cost of Medical Treatment.*—Where any Local Education Authority provides for the medical treatment of children attending any public elementary school under section thirteen of the Education (Administrative Provisions) Act, 1907, there shall be charged to the parent of every child in respect of any treatment provided for that child such an amount not exceeding the cost of treatment as may be determined by the Local Education Authority, and in the event of payment not being made by the parent it shall be the duty of the Authority, unless they are satisfied that the parent is unable by reason of circumstances other than his own default to pay the amount, to require the payment of that amount from that parent, and any such amount may be recovered summarily as a civil debt.

2. *Franchise, Etc., to be Unaffected by Failure of Parents to Pay.*—The failure on the part of any parent to pay any amount demanded under this Act in respect of any medical treatment shall not deprive the parent of any franchise, right, or privilege, or subject him to any disability.

3. *Definition.*—In this Act the word "parent" shall have the same meaning as in the Elementary Education Act, 1870.

4. *Short Title.*—This Act may be cited as the Local Education Authorities (Medical Treatment) Act, 1909.

INFANT LIFE PROTECTION BILL.

THIS bill was introduced by Lord Robert Cecil on April 1st, and is supported by Mr. Shackleton, Mr. Chiozza Money, and Mr. Simon.

MEMORANDUM.

IT is felony punishable by penal servitude for life to procure miscarriage. It is murder to kill a fully-born child. To destroy a child while it is being born and before it is fully born is no offence whatever. The object of this bill is to put an end to this anomaly.

A BILL to Prevent the Destruction of Children during Birth.

Be it enacted by the King's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. *Punishment for Destroying Life of Child during Birth.*—Any person who shall destroy the life of a child during the birth thereof, and before the same shall have been fully born, in such a manner that he would have been guilty of murder if the child had been fully born, shall be guilty of felony, and being convicted thereof shall be liable to penal servitude for life: Provided that a registered medical practitioner shall not be guilty of an offence under this Act who by means employed in good faith for

the preservation of the life of the mother of the child destroys the life of any such child during its birth.

2. *Alternative Verdict on Trial for Child Murder.*—If on any trial for the murder of a child it shall be proved that the person accused destroyed the life of such child, in such manner as aforesaid, but not that such child was fully born at the time at which its life was so destroyed, it shall be lawful for the jury to find that such person destroyed the life of such child, in such manner as aforesaid, and thereupon the court may pass such sentence as if such person had been convicted upon an indictment for the felony in the first section of this Act mentioned.

3. *Short Title.*—This Act may be cited as the Infant Life Protection Act, 1909.

NECESSITOUS MOTHERS (ASSISTANCE) BILL.

THIS Bill was introduced by Mr. Robert Harcourt on March 31st, and is supported by Mr. Pirie, Mr. Chiozza Money, and Mr. Barnes.

ARRANGEMENT OF CLAUSES.

Clause.

1. Optional power to local authorities to levy rate.
2. Terms on which assistance is to be provided.
3. Nature of assistance to be provided.
4. Co-operation with voluntary agencies and delegation of powers.
5. Acceptance of assistance not to disfranchise.
6. Definition.
7. Application to Scotland.
8. Act not to apply to Ireland.
9. Short title.

A BILL to empower Local Authorities to make provision for the Assistance of Necessitous Women in contemplation of and after Childbirth.

Be it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. *Optional Power to Local Authorities to Levy Rate.*—A local authority may provide such food, medical aid, nursing, and other accessories as shall be specified in the regulations hereinafter referred to for the purpose of assisting necessitous women during pregnancy and childbirth, and for a period of time after childbirth; and for this purpose may raise, by a rate, moneys not exceeding in any one year the amount which is produced by a rate of one penny in the pound within their area.

2. *Terms on which Assistance is to be Provided.*—The terms upon which such food, medical aid, nursing, and other things may be provided shall be defined in regulations to be made by the local authority and to be approved by the Local Government Board. Such regulations shall make it a condition for being eligible to receive assistance that the woman who applies for it shall comply with the regulations as to ceasing to work for wages for a specified time before and after childbirth, and as to obeying the orders of any doctor, nurse, or other person appointed by the local authority and as to any other matters therein specified.

3. *Nature of Assistance to be Provided.*—If a woman applies to the local authority and agrees to comply with such regulations the local authority may—

- (a) provide food and any other necessities for the woman during the latter half of the period of pregnancy;
- (b) provide medical assistance and nursing in relation to and during the confinement; and
- (c) provide food and other necessities for the woman during a period not exceeding six months after childbirth, but they may make it a condition as to supplying food or other necessities to the mother, that (if capable) she shall feed the infant child at the breast.

4. *Co-operation with Voluntary Agencies, and Delegation of Powers.*—The local authority shall so far as possible co-operate with and utilize all existing or future voluntary agencies, institutions, and societies which have as one of their objects anything which the local authority is empowered to do under this Act, and the local authority may delegate all or any of their powers under this Act to

any such voluntary institution or society, or to any body or bodies of persons or local committees which may be formed (in pursuance of regulations to be made by the Local Government Board) for the purpose of this Act.

5. *Acceptance of Assistance not to Disfranchise.*—The acceptance by a woman of any benefit under this Act shall not deprive her, her husband, or any relation of hers of any franchise, right, or privilege, or subject her or them to any disability.

6. *Definition.*—In this Act, local authority means in London a borough council, and in the rest of England the council of every county and of every county borough.

7. *Application to Scotland.*—In the application of this Act to Scotland, Local Government Board means the Local Government Board for Scotland, and local authority means the council of any county or burgh.

8. *Act not to Apply to Ireland.*—This Act shall not apply to Ireland.

9. *Short Title.*—The Act may be cited as the Necessitous Mothers (Assistance) Act, 1909.

OATHS BILL.

[As Amended by Standing Committee B.]

MEMORANDUM.

By Section 5 of the Oaths Act, 1883, it is open to a person to whom an oath is administered if he so desires to swear with uplifted hand in the form and manner in which an oath is usually administered in Scotland. Under this Act, however, judges, magistrates, coroners, and other persons do not consider themselves justified in suggesting this form of oath to the witness, jury, or deponent, and it is a question whether the oath ought to be so administered unless the witness or deponent voluntarily requests it to be done. Consequently, the old form of kissing the Book, to which there are many objections, still prevails.

The object of this Bill is to endeavour to make the administration of the oath by uplifted hand universal, and to enable the court to administer it in this form unless the person about to take the oath voluntarily objects thereto.

A BILL [as amended by Standing Committee B] to Amend the Law as to Oaths.

Be it enacted by the King's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. *Short Title.*—This Act may be cited for all purposes as the Oaths Act, 1909, and the Oaths Act, 1883, and this Act may be cited together as the Oaths Acts, 1883 and 1909.

2. *Manner and Administration of Oaths to Witnesses by Courts.*—(1) Any oath may be administered and taken in the form and manner described in the schedule hereto.

(2) The officer shall (unless the person about to take the oath voluntarily objects thereto, or is physically incapable of so taking the oath) administer the oath in such form and manner without question.

3. *Definition.*—In this Act the word "officer" shall mean and include any and every person duly authorized to administer oaths.

4. *Commencement and Extent.*—(1) This Act shall come into operation on the first day of October nineteen hundred and nine.

(2) This Act shall not apply to Scotland.

SCHEDULE.

FORM AND MANNER OF ADMINISTERING OATH.

The officer administering the oath shall address the person taking the oath in the following form: "You swear by Almighty God that," and then proceed with the words of the oath prescribed by law, omitting any further words of imprecation or calling to witness; and the person taking the oath shall, with uplifted hand, say "I do."

If the oath is an oath which is customarily taken by the words of the oath being read or repeated after the officer administering it, the words shall be read or repeated with uplifted hand in the form following: "I do swear by Almighty God that," and then proceed with the words of the oath prescribed by law, omitting any further words of imprecation or calling to witness.

Nabal and Military Appointments.

EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

EXCHANGE wanted by senior Lieutenant-Colonel due for India beginning of September. Address, Lieutenant-Colonel Simpson, R.A.M. College, or by wire c/o. Jaspase, London.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Staff Surgeon J. VIBRON to the *Kinsha*, March 4th; Surgeon G. L. BUCKERIDGE to the *Astraea*, March 4th; Staff Surgeon E. FOLLIOTT and Surgeon R. KENNEDY, M.B., to the *Fortie*, April 20th; Surgeon G. A. BRADSHAW to the *Hindustan*, April 20th; Fleet Surgeon G. T. COLLINGWOOD, to the *Racer*, additional, for the Royal Naval College, Osborne; Fleet Surgeon J. SUGRE, M.D., to the *President*, additional, for the Royal Marine Recruiting Head Quarters; Fleet Surgeon J. L. THOMAS to the *Engle*; Fleet Surgeon W. E. HOYE, M.D., to the *Daedalus*, April 20th; Fleet Surgeon P. M. MAY to the *Vengeance*, April 20th, and to the *Trafalgar* on its becoming the parent ship, undated; Fleet Surgeon C. J. MANSFIELD, M.D., and Surgeon G. D. BATEMAN to the *Formidable*, on commissioning, April 20th; Staff Surgeon C. B. FAIRBANK, to the *Victorious*, on recommissioning, April 20th; Surgeon E. R. L. THOMAS to the *Crescent*, additional, for the *Edgar*, temporarily, April 15th.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

SURGEON-MAJOR S. G. MOORES, from the Scots Guards, to be Major, April 17th. He was appointed to the Scots Guards, November 16th, 1901. He has a medal with clasp for services with the Central Relief Force in 1895, and for the South African war in 1899-1902 he was promoted to be Major, and received the Queen's medal with six clasps and the King's medal with two clasps.

It is announced that Major C. C. FLEMING, D.S.O., M.B., is to take on the appointment of Instructor at the Training School at the Royal Army Medical School of Instruction at Aldershot on June 15th, vice Major J. D. FERGUSON, D.S.O.

Captain T. C. LUCAS, M.B., who is serving in India, is appointed Surgeon to His Excellency the Governor of Bombay, from February 1st.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL R. W. S. LYONS, M.D., Bombay, is promoted to be Colonel, from January 15th. He entered the Bombay Medical Department as Surgeon, April 1st, 1882, and became Lieutenant-Colonel, April 1st, 1902.

SPECIAL RESERVE.

ROYAL ARMY MEDICAL CORPS.

CAPTAIN H. E. DALRY, having assented to be transferred, is appointed an Officer of the Special Reserve of Officers, retaining the rank and seniority which he held in the Militia, September 2nd, 1908.

MILITIA.

HONORARY SURGEON-MAJOR E. F. NELSON, M.D., 5th Battalion the Royal Irish Rifles, resigns his commission, retaining his rank and uniform, June 21st, 1908.

TERRITORIAL FORCE.

ROYAL ENGINEERS.

SURGEON-LIEUTENANT J. H. RHODES, 2nd London Divisional Engineers, resigns his commission, March 11th.

INFANTRY.

Honorary Assistant Surgeon J. R. HUCHER, 4th Battalion the Royal Welsh Fusiliers, is retired, under the conditions of para. 39, Territorial Force Regulations, with permission to retain his rank and uniform, April 1st.

ROYAL ARMY MEDICAL CORPS.

Second Northern General Hospital.—SURGEON-CAPTAIN A. L. WHITEHEAD, M.B., from the 1st West Riding Brigade Royal Field Artillery, to be Captain and to be an officer whose services will be available on mobilization, retaining his seniority as in the Royal Field Artillery, Territorial Force, February 25th.

For Attachment to Units other than Medical Units.—Major J. W. ELLIS to be Lieutenant-Colonel, June 15th, 1908. THOMAS H. LIVINGSTONE, M.D., F.R.C.S. Edin., to be Lieutenant, March 1st, 1909.

CHANGES OF STATIONS.

The following changes of stations amongst the officers of the Army Medical Service have been officially reported to have taken place during March:

	FROM	TO
Colonel S. C. B. Robinson	... .. Ahmednagar	... .. Jubbulpore.
Lieut.-Col. V. Heffernan	... .. Wynberg	... .. Capetown.
" J. H. A. Rhodes	... .. Malacca	... .. Teluk.
" F. H. Treherne, F.R.C.S.	Ambala	Aldershot.
Edin.		
" A. E. Tate	... .. War Office	... .. Ambala.
" R. J. Geddes, D.S.O., M.B.	... .. Golden Hill	... .. Jubbulpore.
" M. O. D. Braddell, M.B.	... .. Kemptee	... .. Lahore.
" J. J. C. Donnet	... .. Belfast	... .. Belfast.
" J. Maher	... .. Potchefstroom.	... .. Potchefstroom.
" A. E. Morris, M.D.	... .. Jubbulpore	... .. Kemptee.
" R. H. Hall, M.D.	... .. London	... .. Colchester.
" M. O'Halloran, M.D.	... .. Pretoria	... .. Capetown.
" J. H. Daly	... .. Crete	... .. Cork.
" N. H. Starr	... .. Bangalore	... .. Shelbourn.
" T. G. Lawrie	... .. Melkita	... .. Newbridge.
" J. Will, M.B.	... .. East Africa	... .. Cork.
Major F. J. Morgan	... .. Netley	... .. Barrackpore.
" C. H. Hale, D.S.O.	... .. Secunderabad	... .. Srenslall.
" J. C. Morgan	... .. Naini Tal	... .. Fernoy.
" S. F. Clark, M.B.	... .. Bloemfontein	... .. Middelburg.
		... .. Cape Colony.

Major J. Girvin	From	To
" C. W. R. Healey	London Dist.	Hyderabad.
" F. W. Hardy, M.B.	Tralee	Kampsee
" C. P. Duggan, M.B.	Egypt	Golden Hill.
" H. P. Johnson	Shwebo	Blanco.
" J. G. McNaught, M.D.	Wynberg	Bloufontein.
" E. W. Slatyer, M.B.	Bangalore	Pretoria.
" A. G. Thompson, M.B.	Cardiff	Secunderabad.
" C. M. Fleury	Malta	Ferozepore.
" G. Dansey-Browning	Simonstown	Colchester.
" J. E. Carter, M.B.	Pretoria	Wynberg.
" John M. Buist, M.D.	St. Thomas M.	Colchester Dist.
" A. H. Milner	Curragh	Lucknow.
" F. E. Gunter, M.B.	Woolwich	Jhansi.
" M. P. Corkery	R.A.M. Coll.	Millbank.
Captain H. Simson	H. Enser, D.S.O., M.H.	Egypt. Army.
" L. N. Lloyd, D.S.O.	Maidstone	London.
" E. P. Connolly	Curragh	Cardiff.
" H. S. Koch	Queenstown	Leeds.
" P. S. O'Reilly	Cosham	Sitapur.
" C. S. Smith, M.B.	Newbridge	Curragh.
" W. C. Croly	R.A.M. Coll.	Cork.
" G. F. Foster, M.B.	Londonderry	Curragh.
" B. B. Burke	Devonport	Fort Maher.
" R. L. Popham	Dublin	Curragh.
" C. D. Myles, M.H.	Jhansi	Dublin.
" W. L. Steele	Lucknow	Penally.
" M. W. Falkner	Chesler	Curragh.
" A. H. McN. Mitchell	Devonport	Stamford.
" B. B. Clarke, M.B.	Pembroke Dk.	Edinburgh.
" M. C. Beatty, M.B.	Deolalie	Belfast.
" T. F. Ritchie, M.B.	Clogheen	Cork.
" W. J. S. Harvey	Sitapur	Cork.
" J. McKenzie, M.B.	Aldershot	Aldershot.
" H. J. Crossley	Bury	Bury.
" J. M. H. Conway, F.R.C.S. Ire.	Richmond.	Richmond.
" W. W. Browne	Curragh	Dublin.
" R. Rutherford, M.B.	Edinburgh	Perth.
" N. E. J. Harding, M.B.	Inverness	Aberdeen.
" J. G. Bell, M.B.	Fort. Command.	Fort. Command.
" R. H. Bridges	Bangalore	Aldershot.
" J. A. W. Webster	Poona	E. Command.
" F. C. Lambert	Potchefstroom	Cape Colony.
" R. C. Wilford	Islingham	Cape Colony.
" H. B. Kelly, M.B.	Bangalore	"
" E. M. Fennefather	Maymyo	"
" D. Abner	Karachi	Cork.
" J. H. Duguid, M.B.	Aberdeen	Berwick-on-Tweed.
" H. T. Stack, M.B.	Sitapur	Cork.
" T. S. Dudding	Bloufontein.	W. Command.
" O. Ievers, M.B.	Middelburg.	Pretoria.
" H. H. J. Fawcett	Cape Colony.	Simonstown.
" S. E. Lewis, M.B.	Harris Smith	"
" N. E. Dunkerton	Standerton	Pretoria.
" P. J. Hanafin	Potchefstroom	Wynberg.
" W. Russell, M.D.	Jamaica	Ashtn.
" A. E. S. Irvine	Middelburg.	Potchefstroom
" C. F. White, M.B.	Transvaal	"
" F. C. Sampson, M.B.	Lucknow	Darjeeling.
"	Middelburg.	Bloemfontein.
"	Cape Colony.	"
Lieutenant A. S. Littlejohns	Pretoria.	"
" A. S. Williams	Dinapore.	"
" M. G. Dill, M.B.	Egypt. Army.	E. Command.
" A. H. Bond	Maymyo.	"
" T. W. O. Sexton	Pretoria.	"
" W. H. Forsyth, M.B.	Middelburg.	"
"	Cape Colony.	"
" A. C. Amy, M.B.	R.A.M. Coll.	"
" W. Mitchell, M.B.	Rawal Pindi	"
" A. C. Vidal	Golden Hill	"
" J. O. Keefe, M.B.	Quetta	"
" A. Fortescue, M.B.	Hyderabad.	"
" F. H. M. Chapman	Nelley	"
" F. Casement, M.B.	Tidworth	"
" G. Petit	Sitapur	"
" F. T. Dowling, M.H.	Tidworth	"
" H. H. Blake, M.D.	Ball Point.	"
"	Edinburgh	"
" W. J. Dunn, M.B.	Tweed.	"
" M. Leckie	Mill Hill.	"
" W. H. S. Burney	Shalbury.	"
" T. B. Nicholls, M.B.	Chatham	"
" J. B. Jones, M.B.	Cosham	"
"	Winchester.	"
"	Belfast	"
"	Londonderry.	"

Alexandra of Teck on April 3rd, a tablet to the late Sir Frederick Wills, its president from 1901 to 1909, being unveiled on the same occasion. The new building is part of a pavilion scheme which has been in progress for some years, and will be complete when an administrative block and nurses' quarter have been erected. Except that one of the two rooms intended for isolation purposes is at present used as an operating theatre, the ward part of the scheme is complete. It provides thirty-four beds and six cots. Compared with this, the out-patient work seems desultory. The new building is a handsome Georgian style, with entrances for male and female patients respectively on each side of a porter's lodge. These give access to square lobbies, whence the patients pass into a large waiting-room 56 ft. by 23 ft. Leading out of the entrance lobbies are lavatories. Communicating with the entrance hall are medical and surgical consulting rooms, each with its own examining room; a minor operation room with two recovery rooms attached, and a dental department consisting of three rooms. In addition, there is an ophthalmic consulting room with two dark rooms and an electrical department. From the consulting rooms the patients pass by a separate passage to a dispensary waiting room, and thence out into the street. Finally, a refreshment bar is to be found on one side of the waiting-hall. Out-patients at this institution are admitted by tickets which entitle them to free attendance as out-patients for six weeks; while for each supply of medicine or bandage they pay 2d. According to the rules, no person in receipt of Poor Law relief can be treated as an out-patient, nor, except on the recommendation of a medical practitioner, any one who is in receipt of an income of over 20s. a week, or who is a member of a family with a collective weekly income exceeding 30s.

GREAT NORTHERN CENTRAL HOSPITAL.

THE report submitted at the annual meeting of the Great Northern Central Hospital, on March 18th, showed that the cost per bed per year had been reduced by £2 4s. 10d., as compared with the previous year. The new children's ward provided by the Ladies' Association was now open, and the convalescent home, a gift from Mr. Francis Reekitt, was expected to be ready in July. Financially the net outcome of the year's work was a deficit of £4,643, raising the total indebtedness to £10,304. In default of speedy material assistance in getting rid of that debt a ward must be closed. Stress was laid by one speaker on the extreme disproportion between the support accorded to the hospital by the Borough of Islington in which it lies and the benefits received.

IRILEY HOSPITAL AND CONVALESCENT HOME.

THE annual meeting of the subscribers to this hospital took place on March 31st. The report stated that the admissions last year (including 154 renewals) numbered 693, bringing the total number of patients admitted since the hospital was erected in 1861 up to 37,322. Dr. T. Browne Hearder stated that of the admissions 517, or over 96 per cent., were either cured or improved, 3 per cent. were no better, and less than 1 per cent. were worse.

Vital Statistics.

VITAL STATISTICS OF LONDON DURING THE FIRST QUARTER OF 1909.

In the accompanying table will be found summarized the vital statistics of the City of London and of the metropolitan boroughs, based upon the Registrar-General's returns for the first quarter of the year. The mortality figures in the table relate to the deaths of persons actually belonging to the various boroughs, and are obtained by distributing the deaths occurring in institutions among the boroughs in which the deceased persons had previously resided. The 30,493 births registered in London during the three months under review were equal to an annual rate of 25.3 per 1,000 of the population, estimated at 4,833,938 persons in the middle of the year; in the corresponding years of the three preceding years the birth-rates were 27.8, 26.7, and 26.9 per 1,000, the average number of births in the ten years 1899-1908 being 29.1 per 1,000. The birth-rates last quarter ranged from 15.0 in the City of London, 14.0 in Hampstead, 15.8 in the City of Westminster, 18.3 in Kensington, 17.7 in Stoke Newington, and 19.5 in Chelsea, to 31.2 in Bethnal Green, 31.8 in Stepney, 32.3 in Bermondsey, 32.7 in Shoreditch, 32.8 in St. Marylebone, and 37.2 in Finsbury.

During last quarter 22,875 deaths of London residents were registered, equal to an annual rate of 19.0 per 1,000, against 16.0, 18.5, and 17.0 in the first quarters of the three preceding years; for the corresponding period of the ten years 1899-1908 the average death-rate was 18.6 per 1,000. Among the several boroughs the death-rates last quarter ranged from 12.3 in Hampstead, 13.1 in Lewisham, 15.0 in Woolwich, 15.7 in Fulham, 16.3 in Greenwich, and 16.4 in Stoke Newington, to 22.3 in Bethnal Green, 23.0 in Southwark, 24.9 in the City of London, 25.4 in Shoreditch, 25.9 in Finsbury, and 35.3 in Bermondsey.

The 22,875 deaths from all causes last quarter included 2,084 which were referred to the principal infectious diseases; of these, 1,147 resulted from measles, 109 from scarlet fever, 230 from diphtheria, 364 from whooping-cough, 52 from enteric fever, 174 from typhoid, and 1 from small-pox. These 2,084 deaths were equal to an annual rate of 1.72 per 1,000, or 0.13 per 1,000 more than the average rate from the same diseases in the ten preceding first quarters. The lowest death-rates from these diseases last quarter were 0.53 in Hampstead, 0.56 in the City of London, 0.67 in Holborn, 0.71 in Lewisham, 0.89 in the City of Westminster, and 0.95 in Paddington, and the highest rates were 2.24 in Poplar, 2.34 in Deptford, 2.44 in Bethnal Green, 2.49 in Southwark, 3.21 in Shoreditch, and 5.46 in Bermondsey. The greatest proportional mor-

Hospitals and Asylums.

ROYAL VICTORIA HOSPITAL, BELFAST.

THE 116th annual meeting of this institution was held at the hospital on March 31st. The Lord Mayor, Sir Robert Anderson, occupied the chair. The medical and surgical reports were read by Dr. R. J. Johnstone, honorary secretary of the visiting staff. There had been 1,375 new medical and 1,961 new surgical cases. Of the 193 deaths, 26 had been admitted moribund, and of the remainder 95 were medical and 77 surgical; 1,427 operations had been performed, with 66 deaths, giving a mortality of 4.62 per cent.; 50,041 new cases had been treated in the out-patient department. Dr. Johnstone, in moving the adoption, urged the necessity of the use of the yet unopened wards and of larger Roentgen-ray accommodation.

THE ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.

A NEW out-patient department at the West Hants Hospital at Boscombe, Bournemouth, was formally opened by Princess

Analysis of the Vital Statistics of the Metropolitan Boroughs and of the City of London after Distribution of Deaths occurring in Public Institutions during the First Quarter of 1909.

COUNTY OF LONDON	Estimated Population middle of 1909.	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Diseases.	Deaths from Principal Diseases.									
				Births.	Deaths.	Principal Infectious Diseases.		Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric Fever.	Infected Pyrexia.	Diarrhoea.	Phtisis.
Paddington ...	151,955	770	662	20.3	17.5	0.96	36	—	1,147	109	230	364	—	59	—	174	1,992
Kensington ...	183,883	837	888	18.3	19.4	1.25	58	—	—	—	—	—	—	—	—	6	44
Hammersmith ...	125,704	746	599	15.9	12.1	0.81	38	—	—	—	—	—	—	—	—	6	121
Fulham ...	176,406	1,086	691	24.7	15.7	1.54	68	—	—	—	—	—	—	—	—	6	103
Chelsea ...	75,249	366	395	19.5	21.1	1.75	33	—	—	—	—	—	—	—	—	3	137
City of Westminster ...	168,883	664	746	15.8	17.7	0.89	37	—	—	—	—	—	—	—	—	3	103
St. Marylebone ...	127,247	1,051	646	24.1	16.3	1.03	38	—	—	—	—	—	—	—	—	4	78
Hampstead ...	94,185	328	289	14.0	12.3	0.59	14	—	—	—	—	—	—	—	—	1	17
St. Pancras ...	237,422	1,361	1,212	23.0	20.5	1.98	117	—	—	—	—	—	—	—	—	9	112
Islington ...	351,202	2,424	1,676	24.4	19.4	1.74	152	—	—	—	—	—	—	—	—	6	119
Stoke Newington ...	54,423	254	223	18.7	16.3	0.83	14	—	—	—	—	—	—	—	—	1	73
Hackney ...	237,521	1,446	989	24.4	16.7	1.23	72	—	—	—	—	—	—	—	—	12	98
Holborn ...	53,802	377	262	28.1	19.5	0.67	9	—	—	—	—	—	—	—	—	3	58
Finsbury ...	95,289	883	618	37.2	26.0	2.12	50	—	—	—	—	—	—	—	—	4	77
City of London ...	18,193	59	63	15.0	24.0	0.86	3	—	—	—	—	—	—	—	—	—	—
Shoreditch ...	114,837	935	728	27.7	25.4	3.21	92	—	—	—	—	—	—	—	—	6	133
Bethnal Green ...	131,316	1,023	730	31.2	22.3	2.44	80	—	—	—	—	—	—	—	—	11	134
Stepney ...	312,525	2,479	1,483	31.8	19.0	1.96	153	—	—	—	—	—	—	—	—	16	154
Poplar ...	171,951	1,279	862	23.8	20.1	2.24	95	—	—	—	—	—	—	—	—	15	111
Southwark ...	211,125	1,493	1,212	28.4	23.0	2.49	131	—	—	—	—	—	—	—	—	16	120
Bernoldsey ...	127,569	1,026	835	32.3	26.3	5.46	174	—	—	—	—	—	—	—	—	3	72
Lambeth ...	324,188	2,231	1,595	27.6	19.7	1.48	119	—	—	—	—	—	—	—	—	11	144
Battersea ...	186,036	1,025	883	23.6	17.7	1.95	50	—	—	—	—	—	—	—	—	4	65
Wandsworth ...	237,548	1,769	1,237	24.1	16.7	1.56	115	—	—	—	—	—	—	—	—	16	157
Camden ...	283,022	1,671	1,340	23.7	19.0	1.54	108	—	—	—	—	—	—	—	—	7	103
Deptford ...	118,583	817	546	27.6	18.5	2.34	69	—	—	—	—	—	—	—	—	1	45
Greenwich ...	111,014	644	450	25.3	16.3	1.37	36	—	—	—	—	—	—	—	—	3	42
Lewisham ...	160,749	931	594	23.7	17.1	0.71	23	—	—	—	—	—	—	—	—	1	86
Woolwich ...	155,374	780	499	23.5	15.0	1.50	50	—	—	—	—	—	—	—	—	4	52

tality from measles was recorded in St. Pancras, Shoreditch, Bethnal Green, Stepney, Southwark, Bernoldsey, and Deptford; from scarlet fever in Chelsea, Stoke Newington, Holborn, Finsbury, Bethnal Green, Poplar, and Woolwich; from diphtheria in Fulham, Chelsea, Stepney, Lambeth, Camberwell, Deptford, and Woolwich; from whooping-cough in Paddington, Hammersmith, Fulham, Finsbury, Shoreditch, Bernoldsey, and Battersea; from "fever" in Kensington, Shoreditch, Poplar, Stoke Newington, Hackney, Holborn, and Deptford; and from diarrhoea in Hackney, Shoreditch, Bethnal Green, Stepney, Poplar, Southwark, and Lewisham. The fatal case of small-pox belonged to the City of Westminster.

During the three months ending March last the deaths from phthisis among persons belonging to London numbered 1,992, at a rate equal to an annual rate of 1.65 per 1,000, against 1.53, 1.75, and 1.56 in the first quarters of the three preceding years. The death-rates in the first quarter last quarter ranged from 0.72 in Hampstead, 0.90 in Lewisham, 1.03 in Stoke Newington, 1.16 in Paddington, 1.17 in Wandsworth, and 1.18 in Hammersmith to 2.17 in Bethnal Green, 2.35 in Bernoldsey, 2.28 in Southwark, 2.31 in Shoreditch, 2.43 in the City of London, 2.61 in Holborn, and 3.24 in Finsbury.

Infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births, was equal to 112 per 1,000 last quarter, against 115, 132, and 110 in the corresponding quarters of the three preceding years. The lowest rates last quarter were recorded in St. Marylebone, Hampstead, Stoke Newington, Holborn, the City of London, Lewisham, and Woolwich; and the highest rates in Chelsea, Shoreditch, Bethnal Green, Poplar, Bernoldsey, and Southwark.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,524 births and 5,337 deaths were registered during the week ending Saturday last, April 17th. The annual rate of mortality in these towns, which had been 19.8, 17.9, and 17.0 per 1,000 in the three preceding weeks, rose again to 17.1 last week. The rates in the several towns ranged from 8.5 in King's Norton, 8.7 in Leyton, 10.4 in Hornsey, 10.7 in Willesden, 11.4 in West Bromwich, and 12.0 in West Hartlepool, 11.3 in Derby, and 11.5 in East Ham, to 22.3 in Swansea, 22.4 in Salford and in Preston, 23.0 in St. Helens, 23.3 in Oldham, 24.8 in Bootle, 27.1 in Truro, 28.3 in Great Yarmouth. In London the rate of mortality was 17.3 per 1,000, while it averaged 17.2 in the seventy-four other large towns. The death-rate from the principal infectious diseases averaged 1.9 per 1,000 in the seventy-six towns; in London this death-rate was equal to 2.1 per 1,000, while among the seventy-four other large towns the rate was 1.7. From these diseases ranged upwards to 3.5 in Preston and in Sheffield, 3.7 in Smeethwick, 5.3 in Bootle, 6.5 in Warrington, and 6.6 in St. Helens. Measles caused a death-rate of 2.0 in Liverpool, 2.1 in East Ham, and Walsall, 2.2 in Nottingham, 2.3 in Wigan, and 2.5 in Devonport, 3.0 in Sheffield, 3.6 in Warrington, 3.7 in Smeethwick, 5.3 in Bootle, and 6.0 in St. Helens; scarlet fever of 1.4 in Warrington; diphtheria of 1.2 in Rhondda; whooping-cough of 1.3 in Croydon, 2.6 in Preston, and 2.9 in Grimsby; and diarrhoea of 1.2 in Aston Manor and 1.5 in Burnley. The mortality from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever patients under treatment in the Metropolitan Asylums was 2,571, and the London Fever Hospital at the end of the week was 2,294, against 2,571, 2,462, and 2,418 at the end of the three preceding weeks; 244 new cases were admitted during the week, against 327, 373, and 256 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, April 17th, 1,041 births and 656 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had declined from 21.6 to 17.7 per 1,000 in the five preceding weeks, rose again to 18.4 per 1,000 last week, and was 1.5 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 8.5 in Leith and 17.5 in Aberdeen to 19.4 in Dundee and 22.0 in Perth. The death-rates from the principal infectious diseases averaged 2.7 per 1,000 in these eight towns, the highest rates being recorded in Glasgow and Paisley. The 323 deaths registered in Glasgow included 4 which were referred to scarlet fever, 4 to diphtheria, 44 to whooping-cough, 4 to enteric fever, and 115 to diarrhoea. Five fatal cases of whooping-cough were recorded in Edinburgh; 5 of diarrhoea in Aberdeen; 4 of measles, 2 of diphtheria, and 2 of whooping-cough in Paisley; and 4 of whooping-cough in Greenock and 2 in Perth.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, April 10th, 589 births and 534 deaths were registered in the twenty-two principal urban districts of Ireland, as against 589 births and 534 deaths in the preceding period. The annual death-rate in these districts, which had been 25.1, 25.1, and 24.2 per 1,000 in the three preceding weeks, rose to 24.5 per 1,000 in the week under notice, this figure being 7.4 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 25.5 and 27.0 respectively, those in other districts ranging from 5.3 in Tralee and 9.7 in Waterford to 35.3 in Ballinacorney and 40.1 in Newtownards, while Cork stood at 22.6, Londonderry at 18.1, and Limerick at 19.7. The zymotic death-rate in the twenty-two districts averaged 1.4 per 1,000, as against 2.0 per 1,000 in the preceding period.

During the week ending Saturday, April 17th, 650 births and 580 deaths were registered in the twenty-two principal urban districts of Ireland, as against 589 births and 534 deaths in the preceding period. The annual death-rate in these districts, which had been 25.1, 24.2, and 24.5 per 1,000 in the three preceding weeks, rose to 25.5 per 1,000 in the week under notice, this figure being 7.4 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 27.7 and 27.8 respectively, those in other districts ranging from 8.4 in Newry and 9.5 in Sligo to 34.4 in Armagh and 48.7 in Lurgan; while Cork stood at 30.1, Londonderry at 25.4, Limerick at 25.5, and Waterford at 23.4. The zymotic death-rate in the twenty-two districts averaged 1.6 per 1,000, as against 1.4 per 1,000 in the preceding period.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR CHILDREN.
—(1) Resident Medical Officer. (2) Resident Surgical Officer.
Salary, £80 per annum each.
BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant. Honorarium at the rate of 52 guineas a year.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £80 per annum, rising to £90 after six months.

CANTERBURY HOSPITAL AND CANTERBURY HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST. Victoria Park, E.—House-Physician (male). Salary at the rate of £75 per annum.

DUDLEY GUEST HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum.

EAST LONDON HOSPITAL FOR CHILDREN. Shadwell, E.—(1) House-Surgeon, male. (2) Second Medical Officer, male, to the Casualty Department. Salary at the rate of £70 and £45 per annum respectively.

EVELINA HOSPITAL FOR SICK CHILDREN. Southwark Bridge Road, S.E.—House-Physician. Salary at the rate of £50 per annum.

FARRINGTON GENERAL DISPENSARY AND LYING-IN CHARITY. E.C.—Resident Medical Officer. Salary, £100 per annum.

FOLKESTONE VICTORIA HOSPITAL.—House-Surgeon. Salary, £130 per annum.

GLASGOW ROYAL ASYLUM.—Junior Assistant Physician. Salary, £150 per annum.

HOLLAND (LINCOS) COUNTY COUNCIL EDUCATION COMMITTEE.—County School Medical Officer. Salary, £250 per annum and £50 travelling expenses.

HUDDESFIELD INFIRMARY.—(1) House-Surgeon, (2) Junior House-Surgeon (males). Salary, £100 and £80 per annum respectively.

ITALIAN HOSPITAL. Queen Square, W.C.—House-Surgeon. Salary at the rate of £60 per annum.

JERSEY GENERAL DISPENSARY AND INFIRMARY.—Resident Medical Officer. Salary, £100 per annum.

LINCOLN MENTAL HOSPITAL.—Assistant Medical Officer. Salary, £150 per annum.

LIVERPOOL DISPENSARIES.—Assistant Surgeon. Salary, £100 per annum.

MIDDLESEX COUNTY ASYLUM. Napsbury.—Fourth Assistant Medical Officer. Salary, £150 per annum.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST. Hampstead.—Junior Resident Medical Officer. Honorarium, £50 per annum.

NORTH STAFFORDSHIRE INFIRMARY. Hartsill.—Junior House-Surgeon (male). Salary, £50 per annum.

NORFOLK AND NORWICH HOSPITAL.—Assistant House-Surgeon, male. Honorarium, £20 for six months.

PORTSMOUTH PARISH.—Second Assistant Resident Medical Officer for the Workhouse Infirmary, Workhouse, and Children's Home. Salary, £100 per annum.

PRINCE OF WALES'S GENERAL HOSPITAL. Tottenham.—(1) House-Surgeon, (2) House-Physician, (3) Junior House-Surgeon, (4) Junior House-Physician. Salary at the rate of £75 per annum for (1) and (2), and £40 per annum for (3) and (4).

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL. King William Street, W.C.—House-Surgeon. Salary, £25 for six months.

SEAMEN'S HOSPITAL. Greenwich.—Two House-Physicians. Salary at the rate of £50 per annum each.

SOCIETY OF APOTHECARIES OF LONDON.—Examiner in Surgery.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—House-Physician. Salary, £100 per annum.

WAKEFIELD: CLAYTON HOSPITAL.—Junior House-Surgeon. Salary, £80 per annum.

WAKEFIELD: WEST RIDING ASYLUM.—Assistant Medical Officer to act as locum tenens. Salary, 3 guineas per week.

WEST LONDON HOSPITAL. Hammersmith Road, W.—(1) Physician, (2) Assistant Physician.

YORK DISPENSARY.—Resident Medical Officer. Salary, £130 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Market Bosworth, co. Leicester; Carney, co. Sligo; and Spennyuooc, co. Durham.

APPOINTMENTS.

BEATTIE, A. J., M.B., Ch.B. Edin., Certifying Factory Surgeon for the Callander District, co. Perth.

BLOMFIELD, S. B., L.S.A., District Medical Officer of the Battle Union.

BROCKWELL, J. H. C., M.R.C.S., L.R.C.P., Medical Officer of Health, Wallon on the New Urban District.

DAVIES, J. L., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Newport District, co. Monmouth.

FIELDEN, W. E., M.D. Lond., Certifying Factory Surgeon for the Staplehurst District, co. Kent, and District Medical Officer of the Maidstone Union.

FRENCH, Margaret Douglas, M.B., B.S. Durh., Junior Assistant Medical Officer, North Riding Asylum, Chfth, York.

GAMBLE, A. G., L.M.S.S.A., District Medical Officer of the Halifax Union.

GIBBS, S. R., M.R.C.S., L.R.C.P., District Medical Officer of the Barnstable Union.

HAWLEY, F. H., M.R.C.S. Eng., District Medical Officer of the Chislehurst Union.

JOSCELYNE, A. E., M.R.C.S. Eng., L.R.C.P., Certifying Factory Surgeon for the Taunton District, co. Somerset.

MENZIES, G. H., M.B., Ch.B. Edin., Medical Officer of Health, Rawmarsh Urban District.

PALMER, A. H., M.R.C.S., L.R.C.P., District Medical Officer of the Burton-on-Trent Union.

PRITCHETT, G. W. M., M.R.C.S., L.R.C.P., District Medical Officer of the Liskeard Union.

RING, C. A. E., L.R.C.P. and S. Edin., L.F.P.S. Glas., District Medical Officer of the Rugby Union.

ROBERTS, W. R. S., M.B., Ch.B. Birm., Medical Officer of Health, Ongar Rural District Council.

ROBBIE, David, M.D. Edin., Ch.M., Medical Officer to St. Mary's College, Mairs, Aberdeen.

WILLIATT, James H., M.D., Ch.B., Honorary District Medical Officer of No. 7 District of the Liverpool Maternity Hospital and Ladies' Charity.

WILSON, Horace, M.S., M.B. Lond., M.R.C.S., L.R.C.P., Clinical Assistant to St. Peter's Hospital for Urinary Diseases.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BIRD.—April 15th, at Old Hayes, Sidmouth, the wife of Arthur C. Bird, M.R.C.S. Eng. 1.R.C.P. Lond., of a daughter.

BLICK.—On April 14th, at Heathwood, Dacres Road, Forest Hill, S.E., the wife of Graham Blick, M.D. Dunelm, J. P., of a son.

BURGESS.—On April 14th, at Milverton Lodge, Victoria Park, Manchester, the wife of Arthur H. Burgess, of twin sons.

RYAN.—At 22, Lockyer Street, Plymouth, the wife of Dr. Richard P. Ryan, of a daughter.

DEATHS.

POSTER.—On the 19th inst., at 53, Lorraine Road, Holloway, N., Dr. John Edward Poster, aged 46 years.

TAYLOR.—On April 13th, at his residence, Beechwood Hall, Mapperley Nottingham, Charles Bell Taylor, M.D. Edin., F.R.C.S.E.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON. 11, Chandos Street, Cavendish Square, W.—Clinical evening. Cases in attendance at 8 p.m.

ROYAL SOCIETY OF MEDICINE:

ODONTOLOGICAL SECTION. 20, Hanover Square, W., 8 p.m.—Paper:—Mr. H. Simms: Some Experiments on the Action of Formalin and other Root Dressings. Communication:—Messrs. H. Chapman and E. B. Carling: A case of Round cell Sarcoma of the Lower Jaw.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:
MEDICAL SECTION. 20, Hanover Square, W., 5.30 p.m.—Paper:—Dr. O. K. Williamson: Clinical Observations on the Influence of the Vessel Wall on (so-called) Arterial Blood-pressure Readings.

FRIDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND. Lincoln's Inn Fields, W.C., 5 p.m.—Museum Demonstration by Professor Keith on some Specimens of Cleft Palate and Malformations of the Tongue.

ROYAL SOCIETY OF MEDICINE:

CLINICAL SECTION. 20, Hanover Square, W., 3 p.m.—Cases and Specimens. 3.45 p.m.—Paper:—Mr. W. Fedde Feiden: Six cases of Infective Gangrene of the Extremities.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL. Gray's Inn Road, W.C.—Lectures: Tuesday, 3.45 p.m., Accessory Sinuses; Friday, 3.45 p.m., Accessory Sinuses.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC. 22, Chancery Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear, Nose, and Throat.

NORTH-EAST LONDON POST-GRADUATE COLLEGE. Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m., Surgical Out-patient, 2.30 p.m., Medical Out-patient; Nose, Throat, and Ear: X Rays, 4.30 p.m., Medical In-patient. Tuesday, 10 a.m., Medical Out-patient; Clinic, 2.30 p.m., Operations; Clinics: Surgical, Gynaecological. Wednesday, 2.30 p.m., Medical Out-patient, Skin, and Eye Clinics. Thursday, 2.30 p.m., Gynaecological Operations; Clinics: Medical Out-patient; Surgical Out-patient; X Rays, 3 p.m., Medical In-patient. Friday, Clinic, 10 a.m., Surgical Out-patient; 2.30 p.m., Operations; Clinics: Medical Out-patient, Eye; 3 p.m., Medical In-patient.

BOOKS, ETC., RECEIVED.

Der Schiffsarzt. Von Dr. M. Brenning and Dr. E. H. Oppenheimer. Berlin: A. Hirschfeld. 1909. M. 60.

Handbuch gesamten Therapie. In sieben Bänden. Herausgegeben von Drs. F. Penzoldt und Dr. R. Stintzing. Vierte Auflage des Handbuchs der Therapie innerer Krankheiten. Zweite Lieferung. Jena: G. Fischer. 1909. M. 4.50.

Ueber die Wirkung moderner Projektile. Von Dr. F. Riedinger. Festschrift zur Feier des 59. Stiftungsfestes der physikalisch-medizinischen Gesellschaft zu Würzburg. Würzburg: C. Kabitzsch (A. Stuber). 1909. M. 4.

The Income Tax Incubus and the Budget. By T. H. Fry. London: H. Cox's "Law Times" Office. 1909.

La Renaissance de l'ophtalmologie. Par le Dr. J. Hirschberg. Traduit de l'allemand par le Dr. D. van Duyse. Leipzig: W. Engelmann. 1908. M. 6.

Notes on Sour Milk and other Methods of Administering Selected Lactic Germs in Intestinal Bacterio-Therapy. By E. Metchnikoff. London: J. Bale, Sons, and Danielsson, Limited. 1909. 1s.

Nutrition and Evolution. By H. Reinheimer. London: J. M. Watkins. 1909. 6s.

Dental Surgery Notes. By E. B. Dowsett, L.R.C.P., M.R.C.S., L.D.S. London: The Dental Manufacturing Company. 1909. 3s.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
APRIL.		MAY (Continued).	
25 Sunday ..			DORSET AND WEST HANTS BRANCH, Spring Meeting, Dorchester.
26 MONDAY ..			SOUTH-EASTERN OF IRELAND BRANCH, Annual Meeting, also meeting of Branch Council and Local Division, Victoria Hotel, Kilkenny, 5.15 p.m.
27 TUESDAY ..	HAMPSTEAD DIVISION, <i>Metropolitan Counties Branch</i> , Business Meeting. Central Council, 2 p.m., New Council Room, 429, Strand, W.C. LONDON: Organization Committee, 10.45 a.m.	5 WEDNESDAY ..	BEDFORD AND HERTS DIVISION, <i>South Midland Branch</i> , County Hospital, Bedford, 3 p.m.
28 WEDNESDAY ..	BATH AND BRISTOL BRANCH, Museum, Bath, 8 p.m.; Council Meeting, 7.55 p.m. LEICESTER AND RUTLAND DIVISION, <i>Midland Branch</i> , Leicester Infirmary, 4.15 p.m.	6 THURSDAY ..	LAMBETH DIVISION, <i>Metropolitan Counties Branch</i> , Annual General Meeting, Bethlem Royal Hospital, 4 p.m.
29 THURSDAY ..	STAFFORDSHIRE BRANCH, General Meeting, Victoria Hotel, Wolver- hampton, 5.25 p.m.; Council, before General Meeting; Dinner, 7 p.m.	7 FRIDAY ..	SWANSEA DIVISION, <i>South Wales and Monmouthshire Branch</i> , 8.15 p.m.
30 FRIDAY ..	BIRMINGHAM BRANCH, Pathological and Clinical Section, Medical Insti- tute, Edmund Street, 8 p.m. SWANSEA DIVISION, <i>South Wales and Monmouthshire Branch</i> , 3 p.m.	8 SATURDAY ..	ULSTER BRANCH, Spring Meeting, Londonderry.
MAY.		9 Sunday ..	
1 SATURDAY ..		10 MONDAY ..	
2 Sunday ..		11 TUESDAY ..	
3 MONDAY ..		12 WEDNESDAY ..	RICHMOND DIVISION, <i>Metropolitan Counties Branch</i> , Annual Meeting, Royal Hospital, Richmond, 8.30 p.m.
4 TUESDAY ..	ST. PANCRAS AND ISLINGTON DIVISION, <i>Metropolitan Counties Branch</i> , Mid- land Grand Hotel, King's Cross, 9 p.m.	13 THURSDAY ..	
		14 FRIDAY ..	
		15 SATURDAY ..	CEYLON BRANCH, Ordinary Meeting, Colonial Medical Library, 2.30 p.m.
		16 Sunday ..	
		17 MONDAY ..	
		18 TUESDAY ..	
		19 WEDNESDAY ..	CARDIFF DIVISION, <i>South Wales and Monmouthshire Branch</i> , Annual Meet- ing, Cardiff.

ANNUAL MEETING, BRITISH MEDICAL ASSOCIATION, BELFAST, 1909.

THE Seventy-seventh Annual Meeting of the British Medical Association will be held at Belfast from July 23rd, to July 31st, 1909, under the Presidency of Sir William Whitla.

The Annual Representative Meeting commences in Belfast on July 23rd. The Presidential Address will be delivered on July 27th. The Sections will meet on July 28th, 29th, and 30th.

A preliminary programme of arrangements was published in the SUPPLEMENT of April 17th, p. 174. The Honorary Local Secretaries are: Henry Lawrence McKisack, M.D., M.R.C.P., 17, University Square, Belfast; Cecil Edward Shaw, M.A., M.D., M.Ch., 29, University Square, Belfast; and Howard Stevenson, B.A., M.B., F.R.C.S.I., 2, College Square North, Belfast.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

Law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every

Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 1ST, 1909.

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THE SEVENTY-SEVENTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION, **BELFAST,** JULY 23RD TO JULY 31ST, 1909.

President:

President-elect:

Sir WILLIAM WHITLA, M.D., LL.D., Professor of Materia Medica and Therapeutics, Queen's College, Belfast.

Past-President:

HENRY DAVY, Hon.D.Sc., M.D., F.R.C.P.Lond., Physician, Royal Devon and Exeter Hospital, Exeter.

Chairman of Representative Meetings:

JAMES ALEXANDER MACDONALD, M.D., M.Ch., R.U.I., Physician, Taunton and Somerset Hospital.

Chairman of Council:

EDMUND OWEN, Hon.D.Sc., LL.D., F.R.C.S., Consulting Surgeon to St. Mary's Hospital, London.

Treasurer:

EDWIN RAYNER, M.D.Lond., F.R.C.S., Consulting Surgeon, Stockport Infirmary, Stockport.

The Seventy-seventh Annual Meeting of the British Medical Association will be held in Belfast in July, 1909. The President's address will be delivered on Tuesday, July 27th, and the Sections will meet on the three following days. The Annual Representative Meeting will begin on Friday, July 23rd, 1909.

PROGRAMME OF BUSINESS.

The Address in Medicine will be delivered by ROBERT W. PHILIP, M.D., F.R.C.P.Edin., Physician, Royal Infirmary, and Royal Victoria Consumption Hospital, Edinburgh.

The Address in Surgery will be delivered by ARTHUR EDWARD JAMES BARKER, F.R.C.S., Professor of the Principles and Practice of Surgery, University College, London.

The Address in Obstetrics will be delivered by Sir JOHN W. BYERS, M.D., Professor of Midwifery and Diseases of Women, Queen's College, Belfast.

The Popular Lecture will be delivered by Dr. J. A. MACDONALD, Physician to the Taunton and Somerset Hospital, Chairman of the Representative Meetings.

THE SECTIONS.

The scientific business of the meeting will be conducted in fifteen Sections, which will meet on Wednesday, July 28th, Thursday, July 29th, and Friday, July 30th.

The President, Vice-Presidents, and Honorary Secretaries of each Section constitute a Committee of Reference for that Section, and exercise the power of inviting, accepting, or declining any paper, and of arranging the order in which accepted papers shall be read. Communications with respect to papers should be addressed to one of the Honorary Secretaries.

A paper read in the Section must not exceed fifteen minutes, and no subsequent speech must exceed ten minutes.

Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the BRITISH MEDICAL JOURNAL without special permission.

The following are the general arrangements so far as they are yet complete:

ANATOMY AND PHYSIOLOGY.

President: CHARLES SCOTT SHERRINGTON, M.D., F.R.S., Physiological Laboratory, University, Liverpool.

Vice-Presidents: Professor THOMAS HUGH MILROY, M.D., F.R.S.E., Queen's College, Belfast; Professor PETER THOMPSON, M.D., King's College, Strand, London; ARTHUR PHILIP BEDDARD, M.D., F.R.C.P., 44, Seymour Street, Portman Square, London, W.; Professor ANDREW FRANCIS DIXON, M.B., D.Sc., 73, Grosvenor Road, Dublin.

Honorary Secretaries: ALEX. LOW, M.B., 142, Blenheim Place, Aberdeen; JOHN ALEX. MILROY, M.D., Queen's College, Belfast.

DERMATOLOGY AND ELECTRO-THERAPEUTICS.

President: WILLIAM CALWELL, M.D., 6, College Gardens, Belfast.

Vice-Presidents: ROBERT BRIGGS WILD, M.D., 96, Mosley Street, Manchester; LESLIE ROBERTS, M.D., 46, Rodney Street, Liverpool.

Honorary Secretaries: JAMES HARRY SEQUEIRA, M.D., F.R.C.P., 8A, Manchester Square, London; S. ERNEST DORE, M.D., 26, New Cavendish Street, London; JOHN CAMPBELL RANKIN, M.D., 38, University Road, Belfast.

A discussion will be held on the Treatment of Skin Diseases by Radium and Radio-therapy.

DISEASES OF CHILDREN.

President: HAROLD J. STILES, F.R.C.S. Edin., 9, Great Stuart Street, Edinburgh.

Vice-Presidents: JOHN McCRAW, M.D., 74, Dublin Road, Belfast; RICHARD WHYTOCK LESLIE, M.D., "St. Heliers," Strandown, Belfast; ROBERT CAMPBELL, F.R.C.S., 21, Great Victoria Street, Belfast.

Honorary Secretaries: ANDREW FULLERTON, F.R.C.S.I., 8, University Square, Belfast; JOHN WILLIAM SIMPSON, M.D., 19, Lansdowne Crescent, Edinburgh.

It is proposed to devote some portion of three of the days on which the Section meets to the discussion of the following subjects:

Wednesday, July 28th.—Club Foot.

Thursday, July 29th.—Functional Neuroses in Children.

HAEMATOLOGY AND VACCINE THERAPY.

President: SIR ALMROTH WRIGHT, M.D., F.R.S., 6, Park Crescent, Regent's Park, London, N.W.

Vice-Presidents: ALEX. GARDNER ROBB, M.B., 15, University Square, Belfast; THOMAS HUSTON, M.D., 95, Great Victoria Street, Belfast; Captain STEWART RANKIN DOUGLAS, I.M.S., Inoculation Department, St. Mary's Hospital, London.

Honorary Secretaries: WILLIAM DUNLOP DONNAN, M.D., 12, High Street, Holywood, Co. Down; DUDLEY W. CARMALT-JONES, M.B., B.Ch. Oxon., 78, Wimpole Street, London, W.

The subjects which have been chosen for discussion are:

Wednesday, July 28th.—Papers on separate subjects: Dr. Houston, Typhoid Carriers. Captain Douglas, Bacteriology of Cystitis; discussion. Dr. Fleming, Bacteriology and Vaccine Treatment of Acne.

Thursday, July 29th.—Discussion: The Early Diagnosis of Tuberculosis, opened by Professor Calmette, l'Institut Pasteur de Lille.

Friday, July 30th.—Discussion: Bacterial Infections of the Respiratory Tract other than Tuberculous.

HYGIENE AND PUBLIC HEALTH.

President: LOUIS COLTMAN PARKES, M.D., 61, Cadogan Square, Chelsea, London.

Vice-Presidents: SAMUEL AGNEW, M.D., Lurgan, co. Armagh; HENRY O'NEILL, M.D., 6, College Square East, Belfast; CHARLES KILLICK MILLARD, M.D., Town Hall, Leicester.

Honorary Secretaries: CHARLES PORTER, M.D., Public Health Department, Town Hall, Finsbury; WILLIAM McLORINAN, L.R.C.P., 103, Antrim Road, Belfast; THOMAS CARNWATH, M.B., Town Hall, Manchester.

The following subjects have been suggested for discussion:

1. The Compulsory Notification of all forms of Tuberculosis and the Mortality from Tuberculous Diseases in relation to Sex. To be opened by Dr. Harold Scurfield, Medical Officer of Health, Sheffield.

2. Latent Infections of the Diphtheria Bacillus, and the Administrative Measures required for dealing with Contacts. (Joint discussion with the Laryngological Section.)

3. The Discharge of Sewage Effluents into Tidal Waters.

The following additional subjects are also suggested:

1. Enteric Fever Carriers and Paratyphoid Bacilli.

2. Ventilation of Sewers and House Drains and the Disconnection Trap.

3. The Medical Officer of Health and School Medical Inspection.

LARYNGOLOGY, OTOTOLOGY, AND RHINOLOGY.

President: ST. CLAIR THOMSON, M.D., F.R.C.P., 28, Queen Anne Street, London.

Vice-Presidents: ERNEST BLECHYNDEN WAGGETT, M.B., 45, Upper Brook Street, London, W.; V. P. HENRY SMURTHWAITE, M.D., 8, St. Mary's Place, Newcastle-on-Tyne; J. A. KNOWLES RENSHEAW, M.D., 11, St. John Street, Manchester.

Honorary Secretaries: HAROLD SHUTTLEWORTH BARWELL, F.R.C.S., 55, Wimpole Street, London; JOHN STODDART BARR, M.B., 13, Woodside Place, Glasgow; HENRY HANNA, M.B., B.Sc., 57, University Road, Belfast.

The following subjects have been selected for special discussion:

Wednesday, July 28th.—The Treatment of Tinnitus Aurium. (1) Dr. Thomas Barr (Glasgow); (2) Mr. Richard Lake (London).

Thursday, July 29th.—Latent Infections of the Diphtheria Bacillus, including the Administrative Measures required for dealing with Contacts. (In association with the Section of Hygiene and Public Health.) (1) Dr. Robert M. Buchanan (Glasgow); (2) Dr. Duncan Forbes (Brighton); (3) Dr. P. Watson Williams (Bristol).

Friday, July 30th.—The Treatment of Cicatricial Stenoses of the Larynx and Trachea. (1) Dr. H. Lambert Lack (London); (2) Dr. Delsaux (Brussels); (3) Dr. Bryson Delavan (New York).

It is proposed this year to arrange a special exhibition of skiagraphy in relation to diseases of the upper air and food passages. Members are requested to send in the titles and descriptions of any skiagraphs they propose to contribute to Dr. Hanna not later than June 1st, so that they may be printed in the catalogue. Every card will be taken of negatives and prints, which should be carefully labelled with the owner's name and address.

MEDICINE.

President: Professor JAMES ALEXANDER LINDSAY, M.D., F.R.C.P., 3, Queen's Elms, Belfast.

Vice-Presidents: ARTHUR FOXWELL, M.D., F.R.C.P., 47, Newhall Street, Birmingham; JOSEPH FRANCIS O'CARROLL, M.D., F.R.C.P.I., 43, Merrion Square, Dublin; LAURISTON ELMIE SHAW, M.D., F.R.C.P., 64, Harley Street, London; WILLIAM BAIRD MCQUITT, M.D., 8, College Square East, Belfast.

Honorary Secretaries: JOHN SMYTH MORROW, M.D., Eia House, Antrim Road, Belfast; LEWIS ALBERT SMITH, M.D., 25, Queen Anne Street, London, W.; JOHN ELDER MACLWAIN, M.D., 55, University Road, Belfast.

The following subjects are suggested for discussion:

- Wednesday, July 28th.—Metabolism.
- Thursday, July 29th.—The Medical Aspects of Athleticism; Adolescent Albuminuria, or Mucous Colitis.
- Friday, July 30th.—A Demonstration on Gastric Illumination.

NAVY, ARMY, AND AMBULANCE.

President: Fleet Surgeon J. LLOYD THOMAS, R.N.

Vice-Presidents: Inspector-General ROBERT BENTHAM, R.N. (retired), 22, King's Avenue, Ealing, London, W.; Lieut.-Colonel R. PORTER, R.A.M.C., P.M.O., Station Hospital, Military Barracks, Belfast; Colonel THOMAS H. HENDLEY, I.M.S., C.I.E., 4, Loudon Road, London, N.W.

Honorary Secretaries: Captain M. LOWSLEY, R.A.M.C., St. Michael's Road, Aldershot; Captain HERBERT HUGH BLAIR CUNNINGHAM, M.D., F.R.C.S., 69, University Road, Belfast; Surgeon EDMUND COX, M.B., R.N., The Royal Naval Hospital, Chatham; Captain WILLIAM SALISBURY-SHARPE, R.A.M.C., 8, Cleveland Terrace, Hyde Park, London, W.

The Committee of this Section suggest the following subjects:

1. Effect on Health of Service in Submarine Boats.
2. Conditions of Life in Boys' Training Establishments on Shore.
3. Medical Arrangements for War in Ships of Dreadnought type.
4. A Detailed Scheme for an Unexpected Landing Party, using Material available on Board Ship.
5. Pitfalls for the Recruiting Medical Officer.
6. Probable Effects in the Services of the New Treatment of Syphilis by means of Organic Arsenical Compounds.
7. On the Importance of the Permanent Attachment of Ample Transport under the Command of the Medical Officer to each Field Medical Unit.
8. The Infective Pneumonias, their Incidence, Causes, Prevention, and Treatment during a Campaign.
9. On the Existing Ambulance Organization of the Home Railway Companies, with Suggestions for its Amplification and Unification.
10. The Effects of Recent Research on the Work of Colonial Medical Officers.
11. Diagnosis and Treatment of Pulmonary Tuberculosis in the Services.
12. Collection and Disposal of Wounded in War.

OBSTETRICS AND GYNAECOLOGY.

President: JOHN CAMPBELL, M.D., F.R.C.S., Crescent House, University Road, Belfast.

Vice-Presidents: ROBERT ALEXANDER GIBBONS, M.D., 29, Cadogan Place, London; JOHN SINGLETON DARLING, M.B., High Street, Lurgan; CHARLES EDWIN PURSLOW, M.D., 192, Broad Street, Birmingham; EWEN JOHN MACLEAN, M.D., 12, Park Place, Cardiff.

Honorary Secretaries: HENRY THOMAS HICKS, F.R.C.S., Derby; ROBERT JAMES JOHNSTONE, M.B., F.R.C.S., 14, University Square, Belfast.

The Committee have thought it well to select two chief subjects for discussion:

1. The Treatment of the Graver Forms of Puerperal Sepsis.
2. Endometritis.

In the Pathological Part of this Section, Cancer of the Uterus has been chosen as one affording a wide scope for the exhibition of Specimens, Photographs, Microscopic Slides, etc.

These, with any others of interest, will be exhibited in the Pathological Museum.

OPHTHALMOLOGY.

President: JOHN WALTON BROWNE, M.D., 10, College Square North, Belfast.

Vice-Presidents: ARTHUR W. SANDFORD, M.D., 13, St. Patrick's Place, Cork; WILLIAM MARCUS KILLEN, M.D., 9, Clifton Street, Belfast; ALEX. HILL GRIFFITH, M.D., 17, St. John Street, Manchester.

Honorary Secretaries: JAMES ANDREW CRAIG, F.R.C.S., 11, University Square, Belfast; LESLIE JOHNSTON PATON, F.R.C.S., 1, Spanish Place, Manchester Square, London.

The subjects chosen for discussion are:

1. Eye Injuries in their Relation to the Workmen's Compensation Act.
2. Vascular Diseases of the Retina.
3. The Diseases of the Lymphoid Tissue of the Conjunctiva (Mr. Treacher Collins).

PATHOLOGY.

President: Professor WM. ST. CLAIR SYMMERS, M.B., Queen's College, Belfast.

Vice-Presidents: WALTER SYDNEY LAZARUS-BARLOW, M.D., Cancer Research Laboratory, Middlesex Hospital, London; ARTHUR EDWARD MOORE, M.B., Castlemahon, Blackrock, Cork; ASTLEY VAYASOUR CLARKE, M.D., 37, London Road, Leicester; Professor I. WALKER HALL, M.D., 9, Royal Park, Clifton, Bristol.

Honorary Secretaries: ALFRED EDWARD BARNES, M.B., 348, Glossop Road, Sheffield; OTTO F. F. GRUNBAUM, M.D., 34, Wimpole Street, London, W.; WILLIAM JAMES WILSON, M.D., Pathological Laboratory, Queen's College, Belfast.

PHARMACOLOGY AND THERAPEUTICS.

President: Professor RALPH STOCKMAN, M.D., F.R.S. Edin., The University, Glasgow.

Vice-Presidents: Professor WALTER ERNEST DIXON, M.D., Pharmacological Laboratory, Cambridge; NEWMAN NEILL, M.D., 9, Richmond Hill, Clifton, Bristol.

Honorary Secretaries: VICTOR GEORGE LEOPOLD FIELDEN, M.B., 84, Dublin Road, Belfast; HECTOR CHARLES CAMERON, M.B., Guy's Hospital, London, S.E.

The following subjects have been suggested for discussion:

1. Spinal Anaesthesia.
2. The Treatment of Oedema.

PSYCHOLOGICAL MEDICINE.

President: T. OUTTERSON WOOD, M.D., 40, Margaret Street, Cavendish Square, London.

Vice-Presidents: GEORGE ROBERT LAWLESS, F.R.C.S.I., District Asylum, Armagh; WM. RICHARD DAWSON, M.D., Farnham House, Finglas, co. Dublin; ROBERT HENRY COLE, M.D., 25, Upper Berkeley Street, London, W.; MICHAEL JAMES NOLAN, L.R.C.P. and S.I., Down District Asylum, Downpatrick.

Honorary Secretaries: WALTER SAMUEL SMYTH, M.B., District Asylum, Antrim; SIDNEY HERBERT CLARKE, M.B., Leicester and Rutland Asylum, Narborough, Leicestershire.

The following subjects have been selected for special discussion in this Section:

- July 28th.—(1) Somatic Delusions and Local Lesions. To be opened by Dr. C. A. Mercier.
- July 29th.—(2) The Sociological Relations of Insanity in Ireland. To be opened by Dr. M. J. Nolan.
- July 30th.—(3) Considerations upon the Commissioner's Report of the Cave and Control of the Feeble-minded. To be opened by Dr. W. R. Dawson.

SURGERY.

President: Professor THOMAS SINCLAIR, M.D., F.R.C.S.,
22, University Square, Belfast.

Vice-Presidents: CHARLES ALFRED BALLANCE, M.V.O.,
M.S., F.R.C.S., 106, Harley Street, W.; Sir PETER
O'CONNELL, M.D., 9, College Square North, Belfast;
ARTHUR JOHN DREW, F.R.C.S., Water Hall, St. Aldate's,
Oxford; JOHN GALWAY COOKE, M.B., City and County
Infirmary, Londonderry; ARTHUR BROWNLOW MITCHELL,
F.R.C.S.I., 18, University Square, Belfast.

Honorary Secretaries: W. THELWALL THOMAS, F.R.C.S.,
84, Rodney Street, Liverpool; G. LENTHAL CHEATLE, C.B.,
F.R.C.S., 117, Harley Street, London; HOWARD STEVENSON,
M.B., F.R.C.S.I., 2, College Square North, Belfast;
JAS. BERNARD MOORE, M.B., 11, Clifton Street, Belfast.

TROPICAL MEDICINE.

President: CHARLES WILBERFORCE DANIELS, M.B., London
School of Tropical Medicine, Albert Docks, London.

Vice-Presidents: Lieutenant-Colonel ANDREW DEANE,
I.M.S., Royal Victoria Hospital, Belfast; Surgeon-General
W. R. BROWN, M.D., C.I.E., 5, Royal Crescent, Holland
Park Avenue, London.

Honorary Secretaries: JAMES COLVILLE, M.D., 7, Uni-
versity Square, Belfast; Dr. ANTON BREINL, Director
Runcorn Research Laboratories.

The following subjects have been selected for discussion:

Wednesday, July 28th, 10 a.m.—Persistence of the
Tropical Diseases of Man due to Protozoa. The discus-
sion will be opened by the President.

Thursday, July 29th, 10 a.m.—Treatment of Chronic
Recurrent Dysentery, with Special Reference to the Possi-
bilities of Surgical Treatment. The discussion will be
opened by Mr. J. Cantlie.

Friday, July 30th, 10 a.m.—Feeding and Treatment of
Children in the Tropics. The discussion will be opened
by Dr. W. Carnegie Brown.

The Committee will be glad to receive pathological
specimens, photographs, drawings, or microscopical pre-
parations illustrative of any subject in Tropical Medicine.

PROVISIONAL TIME TABLE.

FRIDAY, JULY 23RD, 1909.

11 A.M.—Annual General Meeting followed by Repre-
sentative Meeting.

SATURDAY, JULY 24TH, 1909.

9.30 A.M.—Representative Meeting.

MONDAY, JULY 26TH, 1909.

10 A.M.—Representative Meeting.

7.30 P.M.—Annual Conference of Secretaries of Divisions
and Branches.

TUESDAY, JULY 27TH, 1909.

10 A.M.—Council Meeting.

10.30 A.M.—Representative Meeting (if required).

2.30 P.M.—Adjourned General Meeting.
Induction of President.

8.30 P.M.—President's Address.

WEDNESDAY, JULY 28TH, 1909.

9.30 A.M.—Council Meeting.

10 A.M.—Sectional Meetings.

10.30 A.M.—Representative Meeting (if required).

12.30 P.M.—Address in Medicine.

8.30 P.M.—Reception.

THURSDAY, JULY 29TH, 1909.

8 A.M.—National Temperance League Breakfast.

9.30 A.M.—Council Meeting.

10 A.M.—Sectional Meetings.

12.30 P.M.—Address in Surgery.

7.30 P.M.—Annual Dinner.

FRIDAY, JULY 30TH, 1909.

10 A.M.—Sectional Meetings.

12.30 P.M.—Address in Obstetrics.

8 P.M.—Popular Lecture.

8.30 P.M.—Reception.

SATURDAY, JULY 31ST, 1909.
Excursions.

Honorary Local Secretaries—

HENRY LAWRENCE MCKISACK, M.D., M.R.C.P.,
17, University Square, Belfast.

Cecil EDWARD SHAW, M.A., M.D., M.Ch.,
29, University Square, Belfast.

HOWARD STEVENSON, B.A., M.B., F.R.C.S.I.,
2, College Square North, Belfast.

THE PATHOLOGICAL MUSEUM.

The following Committee has been appointed to organize
the pathological museum:

President: Professor W. ST. CLAIR SYMMERS.

Honorary Secretaries: THOMAS HOUSTON, M.D.;
W. J. WILSON, M.D.

J. S. DICKIE, M.B.	C. H. P. D. GRAVES, M.D.
ROWLAND HILL, M.B.	(Cookstown).
C. G. LOWRY, M.D.	Professor McWEENEY (Dublin).
J. E. MACILWAINE, M.D.	Professor MOORE (Cork).
JOHN M'LEISH, M.B.	C. H. NESEITT, M.D. (Randals-
W. J. MAGUIRE, M.D.	town).
J. C. RANKIN, M.D.	Professor O'SULLIVAN (Dublin).
FRED. SMYTH, M.D.	R. T. ROWLETTE, M.D. (Dublin).
ERNEST WALES, M.D.	Professor WHITE (Dublin).
J. SINGLETON DARLING, M.D.	JOHN WILSON, M.D. (Castle-
(Lurgan).	blaney).

EX-OFFICIO MEMBERS.

The President-elect: Sir WILLIAM WHITLA, M.D., LL.D.

The Local Honorary Treasurer: JOSEPH NELSON, M.D.

The Local Honorary Secretaries: H. L. MCKISACK, M.D.; C. E. SHAW, M.D.; HOWARD STEVENSON, F.R.C.S.I.

The Committee propose that the material should be
arranged under the following heads:

- I. Exhibits bearing on discussions and papers in the
various sections.
- II. Specimens and illustrations relating to any research
work.
- III. Instruments relating to clinical diagnosis and
pathological investigation.
- IV. Individual specimens of special interest, or a series
illustrating some special subject.

It is also proposed to make a special effort to gather
together a series of exhibits relating to:

- (a) Tuberculosis.
- (b) Diseases of warm climates.
- (c) Cancer of the uterus.
- (d) X-rays and photography.

The Committee wish it to be understood that the above-
are only suggestions, and if there is any subject in which
Members are specially interested, and of which interesting
specimens can be supplied, they will be glad to hear from
them.

The Museum will occupy a central position, and will be
easy of access.

It is hoped that it will be possible for arrangements to
be made whereby exhibitors may have an opportunity of
demonstrating their specimens.

THOMAS HOUSTON,

W. J. WILSON,

Honorary Secretaries.

Communications should be addressed to one of the
Honorary Secretaries at Queen's University, Belfast.

RECREATIONS.

Golf Competition.—The Ulster Medical Society has
arranged to present to the British Medical Association a
cup, to be known as the "Belfast Cup," to be played for
at annual meetings, and to be won out and out by any
member winning it three times. It will be played for on
the Friday of the Belfast meeting, on the fine links of the
County Down Club at Newcastle, co. Down, kindly lent for

the day by the council and members of the club. The play will be by bogey score. The cup is designed after the famous Ardagh Cup, one of the finest examples of ancient Irish work, which is now in the Kildare Street Museum in Dublin. The original is composed of gold, silver, enamels, and jewels, and was, it is believed, meant for use as a chalice. The challenge cup will be of silver, about 9 in. high, with gilt panels and coloured enamel bosses; round it will be set stones representing the four Provinces of Ireland—the black pebble for Leinster, the white or Carn-money pebble for Ulster, the red stone for Munster, and the green Connemara marble for Connaught.

Cricket Match.—The North of Ireland Cricket Club, the premier club of Ulster, and one of the best in Ireland, has kindly offered to play a one-day match against a British Medical Association team. The beautifully turfed grounds of the club are only about five minutes' walk from Queen's College, where the Association will meet. The local executive will be very glad if some English cricketer will undertake to organize a team for the occasion; any one interested in the matter should communicate with one of the Honorary Local Secretaries.

Launch.—The local executive has some reason to hope that there may be an opportunity during the annual meeting of witnessing the launch of one of the great steamships for which the shipyards of the city of Belfast are famous. A large vessel for the Orient Line is at present on the stocks in Messrs. Workman, Clark, and Co.'s yard, and is expected to be launched in July. The exact date cannot be settled so far ahead, but if the firm can make it coincide with the visit of the Association to Belfast, it has courteously promised to do so.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

DORSET AND WEST HANTS BRANCH:

BOURNEMOUTH DIVISION.

The annual general meeting of this Division was held on April 21st at the Medical Society's Rooms, Bournemouth, Dr. JOHNSON SMYTH in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were confirmed.

Report and Financial Statement.—The report and financial statement for the past year by the Executive Committee were adopted.

Election of Officers.—The following officers were elected: *Chairman*, Eleanor C. Bond, M.D.; *Vice-Chairman*, Mr. F. C. A. Bushman; *Honorary Secretary*, E. Kaye Le Fleming, M.B.; *Representative*, W. Johnson Smyth, M.D.; *Executive Committee*, Eleanor C. Bond, M.D., Mr. F. C. A. Bushman, E. Kaye Le Fleming, M.B., Mr. C. H. W. Parkinson, F. W. Ramsay, M.D., W. V. Snow, M.D., W. Johnson Smyth, M.D., W. Alexander, M.D., F. Fowler, M.D., W. H. L. Marriner, M.B. (*Signifies Representative on Branch Council.)

Whole-time Medical Officers of Health.—On the proposition of Dr. MOORHEAD, seconded by Dr. MAHONEY, it was resolved:

That medical officers of health in boroughs or urban districts of 15,000 inhabitants and upwards be debarred from engaging in private practice.

Representation of Local Medical Profession on Boards of Hospitals and Similar Bodies (see SUPPLEMENT, BRITISH MEDICAL JOURNAL, April 10th, 1909, pp. 161, 162):

(a) By the Hampstead Division—

Approved.

(b) By the Wandsworth Division—

(i) Approved.

(ii) Not approved.

(c) Suggestion by the Hospitals Committee bearing on the same—

Approved.

Communication from Chelsea and Fulham Division.—A communication from the Chelsea and Fulham Division, referring to the Royal College of Surgeons of England, was ordered to lie on the table.

WEST DORSET DIVISION.

The annual meeting of this Division was held at the County Hospital, Dorchester, on Friday, April 16th. Eight members were present.

Election of Officers.—The following officers for the year were elected: *Chairman*, Mr. W. Rendall; *Vice-Chairman*, Mr. G. J. W. Flower; *Honorary Secretary*, Mr. T. MacCarthy; *Representatives on Branch Council*, Messrs. Curme, Flower, Macdonald, Rendall, and Whittingdale; *Executive Committee*, the above, with Messrs. Cosens, Marsh, Morrice, Hawkins, and Good; *Representative of the Division*, Surgeon-Lieutenant-Colonel D. Curme.

Medical Certificates of Suitability for Hospital Treatment.—The question, referred to the Division, that a medical certificate of suitability for hospital treatment be required as a condition of hospital treatment except in case of casualties, was affirmed unanimously.

Contributions to Hospitals by Employers and Employers.—It was unanimously decided that the affirmation of the principle expressed in this was not advisable.

Fresh Medical Institutions.—The question that no fresh public medical institution should be opened without previous consultation with the local medical profession was discussed, and was unanimously decided in the affirmative.

Sanatoriums for Workers suffering from Tuberculosis.—This question was not discussed, as there are none such in the area of the Division.

Whole-time Medical Officers of Health.—On the question that medical officers of health should be debarred from private practice, the decision was unanimously in the affirmative.

Midwives Act.—On the paper "Departmental Committee re Midwives Act," paragraph 5, the following conclusions were arrived at:

5. (a) Yes.

(b) No.

(c) No result.

(d) No.

6. No knowledge of such in this Division.

Report of Representative Meeting.—Surgeon-Lieutenant-Colonel CURME read his report of the proceedings of the Representative Meeting at Sheffield. A vote of thanks was accorded him for his services.

Communication from Chelsea and Fulham Division.—A communication from the Chelsea and Fulham Division, forwarding a resolution passed at their meeting on January 12th, 1909, concerning the action of the Council of the Royal College of Surgeons about the admission of women, was laid on the table.

METROPOLITAN COUNTIES BRANCH:

CHELSEA DIVISION.

A MEETING of the Division was held at the Fallam Town Hall on April 6th, Dr. PARSONS in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Proposed Putney Hospital.—A letter was read from Dr. Fothergill, Secretary of the South-West London Hospital Medical Committee, containing a proposal of that committee that all the practitioners in the district should be summoned to a meeting, at which certain resolutions should be submitted. The CHAIRMAN moved approval thereof. This was seconded and carried *nem. con.*

Election of Representative for Representative Meeting.—The CHAIRMAN moved, and Dr. BOYD seconded, the election of Dr. O'Sullivan, with power to appoint a deputy.

Proposed Federated Societies' Medical Benefit Association.—A letter thereon was read from the Medico-Political Committee, and, after some discussion, the CHAIRMAN moved and Dr. HAMILTON seconded:

That the proposal meets with our disapproval.

Carried *nem. con.*

Annual Dinner.—A Dinner Committee was appointed, consisting of Drs. Bedford, Boyd, and Gardner.

Alteration of Rules.—Dr. YOUNG moved the following resolution:

That the rules of the Division be so altered that in future eight Divisional meetings be held during the year, instead of four as heretofore, and as follows—the annual meeting on the first Tuesday in July, one on the first Tuesday in each month from October to March inclusive, and the last on the occasion of the annual dinner in April.

This was seconded and carried unanimously. as was also a proposal that a card be printed and circulated for the session.

An Ethical Matter.—A card issued by a practitioner in Chelsea advertising professional advice gratis was shown, and the Secretary was instructed to write for an explanation.

Vote of Sympathy.—A vote of sympathy was directed to be sent to Dr. Ramsden, a member of the Executive Committee, trusting that he would soon recover from his illness.

Contract Practice.—A special meeting was held subsequently to discuss the question of Contract Practice, to which all practitioners in the district were invited. The SECRETARY reported that to 226 circulars on the subject of contract practice sent to medical practitioners in the area of the Division, 88 replies only had been received; 40 stated that they had no contract practice, and were not sufficiently interested in the subject to attend a meeting to discuss it; 20 had no contract work, but would endeavour to attend such a meeting; 19 did contract work, and they also would endeavour to attend a special meeting. Of these 19, 8 were satisfied with their remuneration, 8 were dissatisfied, and 1 expressed no opinion thereon; 9 gentlemen gave no definite answer to the questions contained in the circular. In the absence of Mr. Smith Whitaker, Medical Secretary of the Association, his Deputy, Dr. Cox, addressed the meeting. He paid a tribute to the practical knowledge of the subject possessed by Mr. Smith Whitaker, and to his lucidity of expression thereupon. He said that the Association had a distinct policy on this question, and took a prominent part in an inquiry into the working of contract practice held in 1905. The ground was laid down and the fruits were seen perhaps better in the provinces than in London. The organization of the British Medical Association had helped groups of practitioners striving for better terms of contract, and in this connexion he quoted Gateshead. Some Divisions had done a great deal to settle the question for themselves, and as contract practice could not be dispensed with had organized a "public medical service" entirely under their own control. He quoted Norwich as a place with an excellent public medical service, which had absorbed a considerable proportion of all the contract work of the city. He concluded by urging this Division to proceed on the same lines. Questions were asked by Drs. YOUNG, MILLAR, and the SECRETARY. The CHAIRMAN moved, and the SECRETARY seconded, the appointment of a committee consisting of Drs. Young, Williams, and Hamilton, to consider and report upon the practicability of establishing a public medical service in this locality. Carried *nem. con.*

Vote of Thanks.—A vote of thanks was passed to Dr. Cox for attending.

First Annual Dinner.—Members are reminded that the first annual dinner of the Division will be held at the Trocadero Restaurant on Wednesday next, May 5th. Particulars on circulars issued.

HAMPSTEAD DIVISION.

An adjourned meeting of the local profession was held on Tuesday, March 30th. Dr. OPPENHEIMER took the chair.

Proposed Medical Service.—The object of the meeting was to consider proposals for the establishment of a public medical service in Hampstead, in order to provide for uniformity in contract practice, and for the treatment of needy school children under the new Medical Inspection Act. Mr. CUNNINGTON moved:

That it is desirable that a public medical service be formed in Hampstead and neighbourhood for the organization and provision of medical attendance for persons unable to pay the ordinary medical charges in the usual manner.

He pointed out that much work which in the past fell to the lot of the general practitioner was already taken from him. Legislation tended to go further in the same direction, and the ultimate result must be impairment of his efficiency. Dr. FORD ANDERSON, in seconding, said that much of the trouble in the management of hospitals, dispensaries, and sick clubs arose through the lay element. The low fees paid in many sick clubs were sweating the doctor, and the profession should insist on a wage limit in contract practice. He thought that the postponement by the London County Council of the proposal to establish school

clinics showed that now was the psychological moment in which to establish a public medical service. The motion was carried unanimously. The following resolution was also carried:

That this meeting appoint an organizing committee to draw up rules for the proposed service, to recommend names for its officers and committee, and to secure the adhesion of the medical practitioners in Hampstead and the neighbourhood to the service.

It was proposed by Dr. MACEVOY, who expressed the hope that the service would promote the interests of all those engaged in practice among the wage-earners. Drs. FORD ANDERSON, ARCHER, BARNETT, Mr. CUNNINGTON, Drs. P. EVANS, WINSLOW HALL, MACEVOY, PICARD, PINCOCK, and Mr. A. R. ROCHE were appointed as an organizing committee, and the resolution—

That it be a fundamental provision of the public medical service that any duly registered medical practitioner having been resident in Hampstead or neighbourhood for a year may become a member of the service on undertaking to abide by its rules.

was referred to it for consideration.

NORTH OF ENGLAND BRANCH:

DURHAM COMMITTEE.

The twentieth meeting of this Committee was held at the North-Eastern Hotel, Darlington, on Wednesday, March 24th; Dr. J. F. ARMSTRONG (South Shields) in the chair. The following were present: Drs. JACQUES (Washington), MORISON (Sunderland), DAVIS (West Hartlepool), CAMERON (Stockton), HERN (Darlington), and FARQUHARSON (Bishop Auckland); and Mr. A. T. SHEPHERD, Secretary. The following members of the Darlington Division also attended the meeting: Drs. RAINE, CARMICHAEL, HAIG, PEARSON, GRAY, and SMALES.

Election of Chairman.—Dr. J. F. ARMSTRONG was elected to the chair.

Confirmation of Minutes.—The minutes of the previous meeting, held on October 9th, 1908, were read and confirmed.

Apologies for Non-attendance.—Letters regretting inability to attend, received from Drs. JEPSON, HUBBERTY, and ARTHUR, were read.

Election of Chairman of Committee.—It was resolved, on the motion of Dr. ARMSTRONG, seconded by Dr. JACQUES, that Dr. JEPSON be re-elected Chairman of the Committee for the year 1909.

Election of Secretaries.—It was resolved, on the motion of Dr. MORISON, seconded by Dr. DAVIS, that Messrs. Graham, Shepherd, and Sons (Solicitors, Sunderland) be re-elected Secretaries of the Committee at the same salary as heretofore.

Secretaries' Report.—The SECRETARIES read their report for the past year, which showed that the matters dealt with had had reference to the Notification of Births Act; medical certificates for school children; fees for examination and reports in compensation cases; covering; medical inspection of schools; miners and colliery doctor; compensation cases; the Ethical Committee and rules; and unqualified practice.

Darlington Division and Friendly Societies' Medical Association.—The Committee then proceeded to confer with the members of the Darlington Division, in reference to a communication from that Division made to the Branch Council concerning certain resolutions passed by the Division in 1902 in reference to the Friendly Societies' Medical Aid Association in that town, and which resolutions it was believed were not being adhered to by one or two members of the Division, and which communication the Branch Council had referred to the Committee for investigation and report. Dr. HAIG (the Secretary of the Division) explained the position of matters, and said that what the Division desired was that the Branch Council should issue some general and impersonal warning to the practitioners in the Darlington district, and especially that the consultants of the district should be officially notified that the resolutions were still in force. It was ultimately resolved, on the motion of Dr. DAVIS seconded by Dr. MORISON, that the secretaries of the Committee should report to the Branch Council the views of the Division as expressed at their meeting, and point out their desire that the Branch Council should find some way of making it known to the consultants that the resolutions were still in force, and had recently been reaffirmed.

Warning in "British Medical Journal."—Several members of the Division suggested that special notice might be drawn to the warning in the *BRITISH MEDICAL JOURNAL*, so that the matter might attract the notice of young practitioners, who might be invited to become assistants to medical aid associations.

Meetings of Committee.—On the suggestion of the SECRETARIES it was decided that the meetings of the Committee might from time to time be held in different towns, and it was left to the chairman and the secretaries to fix upon the place.

SOUTH MIDLAND BRANCH: NORTHAMPTONSHIRE DIVISION.

On April 20th a meeting of the Division was held in the Board Room of the Northants General Hospital after a luncheon at Franklin's Restaurant. Mr. C. J. EVANS was in the chair. There were present Drs. Harries-Jones, Darley, Bull, Moore, Milligan, Grindon, Linnell, Robson, Baxter, Hichens, and Stone. Drs. Larking and Loyd Evans attended as visitors.

Confirmation of Minutes.—The minutes were read and confirmed.

Report of Executive Committee.—The report of the Executive Committee was then considered. Model by-laws were passed and the Bradford Ethical Rules were adopted *en bloc*.

Alteration of Boundaries.—The Division assented to the proposed alteration in its boundaries.

Medical Certificates of Suitability of Patients for Hospital Treatment.—This question was discussed and it was proposed by Dr. MILLIGAN, seconded by Dr. LINNELL:

That a medical certificate of suitability for hospital treatment be required as a condition of hospital treatment except in the case of a casualty.

Ayes 4, Noes 3.

Contributions to Hospitals by Employers of Labour and Employes.—In regard to this matter, the following resolution was proposed by Dr. ROBSON, seconded by Dr. DARLEY:

That all contributions made by working men to hospitals and other similar institutions should be regarded as pure charity and not as a business matter.

Passed unanimously.

Fresh Public Medical Institutions.—After discussion of this question, the following resolution was proposed by Dr. LINNELL, seconded by Dr. BULL:

That it is desirable that no fresh public medical institution should be opened without previous consultation with the local medical profession through some organized medical body, such as the Division of the British Medical Association in the area of which it is proposed to establish such new institution; and that it be an instruction to the Council to give effect to this principle in considering applications from Divisions or Branches for support in dealing with hospital questions.

Carried.

Sanatoriums for Workers Suffering from Tuberculosis.—In regard to this matter, it was proposed by Dr. HICHENS, seconded by Dr. BAXTER:

That the report lie on the table, and that no action be taken by the Division.

Departmental Committee re Midwives Act.—Members in a position to know stated that no action had been taken by the guardians.

Whole-time Medical Officers of Health.—After discussion of this question, the following resolution was proposed by Dr. DARLEY and seconded by Dr. HICHENS:

The Division is of opinion that medical officers of health for counties and large towns should be whole-time officers, but that in rural districts they should be allowed to engage in general practice, and that security of tenure should be assured.

This motion was lost: Ayes 3, Noes 4. Dr. BULL proposed, and Dr. STONE seconded:

That medical officers of health should be debarred from engaging in private practice.

Ayes 5, Noes 2. They further proposed:

That medical officers of health, after resigning their appointment in a district, should be debarred from engaging in private practice in that district for the space of one year.

Ayes 3, Noes 1.

Representation of Local Medical Profession on Hospital Boards of Management.—On the motion of Dr. LINNELL, seconded by Dr. DARLEY, the Representative of the Division, Dr. Baxter, was instructed to vote in favour of such representation.

Cases.—Mr. C. J. EVANS then showed a cretin and a case of exophthalmic goitre, and Dr. ROBSON showed some cases in the wards.

To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

ABERDEEN BRANCH.—*Election of Representative of the Branch on the Council of the Association.*—Nominations of candidates must be sent in writing on or before May 22nd to Dr. J. F. Christie, 7, Afford Place, Aberdeen.

BATH AND BRISTOL BRANCH.—*Election of Representatives of the Branch upon the Central Council.*—Nominations of candidates for election to the Central Council must be forwarded to the Honorary Secretaries not later than May 8th. The Branch is entitled to elect one member. **NEWMAN NIELD**, Richmond Hill, Clifton; **W. M. BEAUMONT**, 4, Gay Street, Bath.

BIRMINGHAM BRANCH.—*Election of Representatives of the Branch on the Council of the Association.*—Nominations of candidates must be sent in writing on or before May 19th next to **Albert Lucas, F.R.C.S.**, Branch Secretary, 9, Easy Row, Birmingham. The Branch is entitled to elect two members.—**ALBERT LUCAS**, Honorary Secretary.

DORSET AND WEST HANTS BRANCH.—The spring meeting of this Branch will be held in the Dorset County Hospital, Dorchester, on Wednesday, May 5th, 1909, at 3 p.m. The President, **J. A. Hosker, Esq., J.P.**, will be in the chair. Agenda: (1) The minutes of last meeting. (2) The minutes of the special meeting held on March 2nd. (3) Letters and apologies for non-attendance. (4) The President will vacate the chair and introduce his successor, **Charles J. Marsh, Esq., L.R.C.P. Edin., M.R.C.S. Eng.**, etc. (5) The Honorary Treasurer will present his financial statement for 1908. (6) Reports from the Divisions for 1908. (7) Report of the Council for 1908. (8) Report of the return of a Representative of the combined Dorset and West Hants and West Somerset Branches on the Central Council of the Association. (9) The date and place for the summer meeting. (10) The President will deliver his presidential address. (11) Dr. A. Humphrey-Davy will read notes on a case of chronic gastric catarrh. (12) Dr. Ramsey will relate three cases of myomectomy during pregnancy. (13) Dr. Ramsey will exhibit the following specimen: *Post-partum septic thrombosis in broad ligament.* (14) The members of the honorary medical staff of the Dorset County Hospital will show cases and pathological specimens. An official luncheon will be provided at the King's Arms Hotel, Dorchester, at and from 1.30 p.m., price 2s. 6d. per head, exclusive of wines, etc. The Vice-President and Mrs. Burroughs Cosens will be pleased to see members and friends to tea at the Gables, at 5.15 p.m. Members who intend to be present are requested to sign the post-card enclosed with notice of meeting and return it to **William Burroughs Cosens, Esq.**, so that it may reach him not later than Monday, May 3rd, 1909.—**JAMES DAVISON**, Honorary Secretary, "Streteplace," Bournemouth.

DUNDEE BRANCH.—The annual meeting of the Branch will be held in the Royal Infirmary, Dundee, on Friday, May 7th, at 3.15 p.m. A clinical meeting will be held at 4 o'clock, and dinner will be served in the Queen's Hotel at 6 o'clock. Members and visitors intending to be present are requested to notify the secretaries, **R. C. BUIST** and **A. P. LOW**.

DUNDEE, PERTH, AND STERLING BRANCHES.—*Election of Representative Member of Central Council.*—Nominations, in accordance with the regulations of the Association, must be sent to me on or before Saturday, May 22nd.—**R. C. BUIST**, M.D., 166, Nethergate, Dundee, Returning Officer.

GLASGOW AND WEST OF SCOTLAND BRANCH.—*Election of Members of the Central Council.*—In accordance with Association By-law 25, Branch Rule 5, nominations for Representatives on the Central Council, each signed by at least three electors, are requested to be sent to me on or before Wednesday, May 26th. The Branch is entitled to return two Representatives. The present Representatives, Mr. James Grant Andrew and Dr. D. J. Mackintosh, M.V.O., are eligible, and seek re-election.—WM. D. MACFARLANE, Jun., 17, Woodside Crescent, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—*Election of Representatives of the Branch on the Council of the Association.*—Nominations of candidates must be sent in writing on or before May 8th next to F. CHARLES LARKIN, Branch Secretary, 54, Rodney Street, Liverpool.

LANCASHIRE AND CHESHIRE BRANCH.—A general meeting of the Branch will be held on Wednesday, May 12th, at the New Manchester Royal Infirmary (by kind invitation of the Committee and Medical Board). Details will be published later.—F. CHARLES LARKIN, Branch Secretary.

LANCASHIRE AND CHESHIRE BRANCH: WARRINGTON DIVISION.—The annual meeting of this Division will be held at the Infirmary, Warrington, on Tuesday, May 11th, at 4.30 p.m.—T. A. MURRAY, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH.—*Nominations of Branch Officers.*—Pursuant to By-law 25, notice is hereby given that nominations for all the officers of the Branch—namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association—must be sent in to the Honorary Secretary of the Branch on or before May 29th. Voting papers will be sent out on or before June 5th, and must be returned to the Secretary on or before June 12th.—ATWOOD THORNE, E. W. GOODALL, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: LAMBETH DIVISION.—The next meeting of the Lambeth Division will be the annual general meeting, and it will be held on May 6th, at 4 p.m., in Bethlem Hospital. Agenda:—(1) Minutes of the previous meeting. (2) A motion referred to the Divisions from the Hospitals Committee, re contributions to hospitals by employers of labour and employees (see SUPPLEMENT, February 27th, 1909, p. 102). (3) *Re* sanatoriums for workers suffering from tuberculosis. The following motion is referred to the Divisions from the Annual Representative Meeting at Sheffield: "That, in the opinion of the Representative Meeting, it is not advisable that members of the Association should in future accept, or continue to hold, appointments as Honorary Local Medical Referees to the National Association for the Establishment and Maintenance of the Sanatoriums for Workers Suffering from Tuberculosis, and that the Divisions be requested to consider the matter as affecting any of their own members, or other practitioners in their respective areas, who may hold such appointments." (4) To consider the following communication from the Chelsea and Fulham Division: "That we, the Chelsea and Fulham Division of the Metropolitan Counties Branch of the British Medical Association, deeply regret and resent the action of the Council of the Royal College of Surgeons of England, in that having ascertained the wishes of a majority of the Fellows and Members of their College, that they should deliberately flout that opinion in the recent alteration of their By-laws, and that a copy of this resolution should be sent to the other Divisions of the British Medical Association." (5) Election of officers for the ensuing session. The following names are suggested by the Executive Committee: *Chairman*, W. H. B. Stoddart, M.D.; *Vice-Chairman*, J. V. C. Deakin, L.R.C.P.; *Honorary Secretary*, "Herbert French, M.D., F.R.C.P.; *Representative of Representative Meetings*, "R. Esler, M.D.; *Representative upon the Branch Council*, R. Capes, Esq., M.R.C.S., L.R.C.P., and Honorary Secretary of the Division *ex officio*; *Executive Committee*, "E. A. Edleston, M.B., M.R.C.S., "W. E. Sturges-Jones, M.R.C.S., L.R.C.P., "H. J. Spott, M.R.C.S., L.R.C.P., G. F. Grant, M.B., T. H. P. Peers, L.M.S.S.A., V. A. Jaynes, M.R.C.S., L.R.C.P., W. A. Atkinson, M.D. "Those marked with an asterisk held this office last year." Members of the Division desirous of nominating other candidates for any of the above offices are requested to send the names of their nominees, duly seconded, together with a note to indicate the willingness of the nominee to accept the office if elected, to the Honorary Secretary of the Division, at 26, St. Thomas Street, S.E. (6) Dr. Hyslop will give clinical demonstrations upon cases from the wards of the Bethlem Royal Hospital. (7) Other business, if necessary.—HERBERT FRENCH, Honorary Secretary, Lambeth Division, 26, St. Thomas Street, S.E.

METROPOLITAN COUNTIES BRANCH: ST. PANCRAS AND LONDON DIVISION.—This Division will hold a meeting at the Midland Grand Hotel, King's Cross, on Tuesday, May 4th, at 9 p.m. Dr. Lauriston Shaw, Physician to Guy's Hospital, will open a discussion on Some Points in the Diagnosis of Gastric Disease.—W. GILFILLIE, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—The next meeting of the Division will be held on Thursday, May 6th, at the Criterion Restaurant, at 7.30, when the members will dine together. Dinner tickets, 5s.; any member of the profession will be welcome. Agenda: 8.30 p.m., ordinary Association business. At 9 p.m. Sir William Gowers, M.D., F.R.C.P., will read a paper on The Varieties of Premonitory Symptoms of Migraine, which will be open to discussion.—HARVEY HILLIARD, 30, Wilton Place, S.W., J. HOWELL EVANS, Esq., 25, Berkeley Square, W., Honorary Secretaries.

MIDLAND BRANCH.—The annual meeting of this Branch will be held at the Leicester Infirmary on Thursday, June 10th. (1) The President-elect, Dr. R. Pratt, will give an address. (2) Election of Branch officers. (3) Annual report of the Branch. (4) Any other business. In accordance with the by-laws, notice is hereby given that nominations for the election of two Representatives of this Branch on the Central Council must be sent to the Honorary Secretary of the Branch not later than May 24th.—ROBERT SEVESTRE, Honorary Secretary, London Road, Leicester.

SOUTH-EASTERN BRANCH.—The annual meeting of this Branch will be held at Croydon on Wednesday, June 23rd, Dr. J. J. Macan, President-elect, in the chair. The following will be the agenda:—(1) To elect the officers of the Branch; nominations by three members for the offices of President-elect, Vice-Presidents, and Secretary, may be sent to the Honorary Secretary on or before May 21st. (2) To receive the annual report of the Branch. (3) To transact any business that may be transacted by an ordinary meeting. Three members to represent the Branch on the Central Council will also be elected by voting papers. Nominations for these posts, each by three members in meeting, should be sent to the Honorary Secretary on or before May 21st.—H. M. STEWART, Honorary Secretary, Dulwich.

SOUTH-EASTERN OF IRELAND BRANCH.—The annual meeting of this Branch, as also a meeting of the Branch Council and the local Division, will be held at the Victoria Hotel, Kilkenny, on Wednesday, May 5th, at 5.15 p.m. Agenda:—(1) Minutes of last meeting. (2) Letters of apology. (3) Correspondence. (4) Installation of President-elect. (5) Election of officers of the Branch for the ensuing year. (6) Dr. Laffan's motion deferred. Any other business. Dinner.—J. QUIRKE, Honorary Secretary, Piltown.

SOUTH MIDLAND BRANCH.—In accordance with By-law 25, notice is hereby given that nominations for the election of a Representative of this Branch on the Central Council must be sent to me not later than May 22nd next.—E. HARRIES-JONES, 16, Castilian Street, Northampton.

SOUTH MIDLAND BRANCH: BEDFORD AND HERTS DIVISION.—A meeting of the Division will be held on Thursday, May 6th, at 3 p.m., at the County Hospital, Bedford. Business: Matters referred to Divisions: (1) Report on medical certificates of suitability of patients for hospital treatment. (2) Report on contributions to hospitals by employers of labour and employees. (3) Statement as to fresh public medical institutions. (4) Statement as to sanatoriums for workers suffering from tuberculosis (see SUPPLEMENT, February 27th). (5) Departmental Committee *re* Midwives Act.—E. H. COBB, Honorary Secretary, Belmont, Stevenage.

SOUTH MIDLAND BRANCH: NORTHANTS DIVISION.—A clinical meeting of the Division will be held in the out-patient rooms of the Northampton General Hospital on Tuesday, May 4th, at 2.30. It is hoped that members having interesting cases they wish to show will bring them. There will be a luncheon at Franklin's Restaurant at 1.30: anybody wishing to attend should notify the Secretary two days beforehand.—FEVERELL S. HICHENS, Honorary Secretary.

STAFFORDSHIRE AND SHROPSHIRE AND MID-WALES BRANCHES.—Nominations for the office of Representative on the Central Council of the Association should be sent to the undersigned on or before Saturday, May 15th, in accordance with By-law 25.—G. PETGRAW JOHNSON, Honorary Secretary, Staffordshire Branch, Brook Street, Stoke-on-Trent. C. G. STAFF-WOOD, Honorary Secretary, Shropshire and Mid-Wales Branch, Shrewsbury.

ULSTER BRANCH.—The spring meeting of this Branch will be held in Londonderry on Saturday, May 8th.—CECIL SHAW, Honorary Secretary, 29, University Square, Belfast.

[illegible]

REPORTS ON MATTERS OF BRANCH ORGANIZATION, AND OTHER QUESTIONS OF LOCAL INTEREST (1908).

Branch Council.

Average Attendance.

Occasions when Mem-
bers dined together.Medico-Political,
Political, etc.

Scientific.

Branch.

Deficit
(if any)
to 1907.Balance
to 1907.Expendi-
ture, 1908.Receipts
for 1908.Deficit
(if any)
from 1907.Balance
from 1907.On December 31st,
1908.On December 31st,
1907.

BRANCH.

WORCESTERSHIRE AND HEREFORDSHIRE

YORK HIRE

The expediency of establishing a Branch Ethical Committee was under consideration at the Worcester and Hereford meeting of the Council. The Council decided to appoint a sub-committee to inquire into the office of health and medical inspector to the county schools was discussed, and in view of the action taken by the local authority it was decided to consider the question of the appointment of a medical officer to the county schools. The sub-committee has since then been working on the matter, and has already held several meetings. The members of the committee have been elected by a large majority of the Council, in consequence of the terms subsequently insisted on. The meetings have been fairly well attended. At all meetings demonstrations and papers have been presented, and the Council has been able to discuss the friendly social intercourse is to be observed among members of the Branch.

There has been a net increase of 50 members. One meeting of the Council was called in November to consider the desirability of taking action with regard to the question of the appointment of a medical officer to the county schools. The Council decided to appoint a sub-committee to inquire into the office of health and medical inspector to the county schools was discussed, and in view of the action taken by the local authority it was decided to consider the question of the appointment of a medical officer to the county schools. The sub-committee has since then been working on the matter, and has already held several meetings. The members of the committee have been elected by a large majority of the Council, in consequence of the terms subsequently insisted on. The meetings have been fairly well attended. At all meetings demonstrations and papers have been presented, and the Council has been able to discuss the friendly social intercourse is to be observed among members of the Branch.

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COLONIAL BRANCHES.

BERMUDA ...	14	12	140	006	10100	1	—	—	5	—
BOMBAY ...	85	110	13160	1261	1815	2	1	—	12	4
BRISBANE AND QUEENSLAND	157	155	312147	336153	12795	11	11	—	13	12
BRITISH GUIANA ...	36	40	9508	9190	14013	4	4	—	132	4

Filaria and other mosquito-borne diseases. The supply of pure milk.

*This contains other Subscriptions in excess of Capitation Grant.

REPORTS ON MATTERS OF BRANCH ORGANIZATION, AND
OTHER QUESTIONS OF LOCAL INTEREST (1908).

BRANCH.	MEMBERSHIP.		FINANCIAL STATEMENT.						MEETINGS.				Branch Council.	
	On December 31st, 1907.	On December 31st, 1908.	Balance from 1907.	Deficit (if any) from 1907.	Receipts for 1908.	Expenditure, 1908.	Balance to 1909.	Deficit (if any) to 1909.	Branch.	Scientific.	Medico-Political, Ethical, etc.	Occasions when Members met together.	Average attendance.	
BURMAH	48	50	£ s. d. 48 13 4	£ s. d. —	£ s. d. 78 12 2½	£ s. d. 70 5 9	£ s. d. 56 19 9½	£ s. d. —	12	10	3	—	17	1
At one meeting the question as to the propriety of forming a "Black List" of delinquent patients was discussed. The Branch Council also met to decide on a certain ethical question raised by a member. The Branch, accordingly, unanimously decided to hold monthly meetings at which papers are read and cases shown. A great deal of interest has been taken in certain matters of an ethical nature.														
CAPE OF GOOD HOPE (EASTERN PROVINCE)	73	58	2 1 10	—	32 15 5	22 16 1	11 19 2	—	5	4	3	—	5.4	1
Medico-political points pressed at Parliamentary elections. Reciprocity as regards foreign medicine. The Branch has been asked to send a delegate to the Resident to be evidence of registration in Court of Law. Amendment of Medical and Pharmacy Act. Formulae to be printed on labels of patent medicines. Inter-State (Colonial) medical and pharmaceutical matters. The Branch has been asked to send a delegate to the Medical Council and heads of colleges on tuberculosis in cattle and the tuberculin test. Seven Rhodes College professors present at a practical discussion on the treatment of cancer. Rhodes College has been asked to send a delegate to the matters of medical curriculum. The Branch has been asked to act as advisers in College, who have given a room rent free.														
CAPE OF GOOD HOPE (WESTERN PROVINCE)	114	137	—	—	—	—	—	—	13	8	5	1	25	14
(a) Question of amendment of Medical Acts. (b) Question of formation of a South African Committee. (c) Question of admission of paying patients to local hospitals. (d) Question of the formation of a branch of the Branch until meeting in March, 1909.														
COLOMBO, CEYLON	151	151	20 5 6	—	180 4 0	170 0 7	50 8 11	—	8	—	—	—	12	2
GIBRALTAR	24	19	8 5 8	—	4 16 0	3 7 3	9 14 5	—	4	3	1	1	13	7
The Branch approached the Government with reference to move some resolutions regarding the medical profession. They have received an assurance that it is not the intention of the Government to grant any more licences to foreigners to reside and practise here. One meeting was, at the request of the medical officers, devoted to the consideration of the results of the discussion were placed at the service of the medical officer of health, and it is hoped that the sanitary authorities will move in the matter of making some arrangements for the education of the medical profession. It is hoped that the practitioners were granted certificates of successful vaccination without personally examining the cases, and the matter was brought to the notice of all practitioners by a circular letter. The matter has been discussed at a meeting of the Branch. The Gibraltar has suffered to a great extent from the general depression in trade, and practitioners have felt some of the effects.														
GRIMALAND WEST ..	41	41	65 4 0	—	7 8 0	34 14 5	57 17 7	—	8	8	8	—	8	3
HONG KONG AND CHINA	115	116	\$741,000	—	\$531,000	\$391,000	\$761,000	—	—	—	—	—	—	—

BRANCH.	MEMBERSHIP.				FINANCIAL STATEMENT.				MEETINGS.				Branch.	Scientific.	Medical-Ethical, etc.	Occasions when members dined together.	Average Attendance.	Branch Council.	REPORTS ON MATTERS OF BRANCH ORGANIZATION, AND OTHER QUESTIONS OF LOCAL INTEREST (1908).
	On December 31st, 1907.	On December 31st, 1908.	Balance from 1907.	Deficit (if any) from 1907.	Revenue for 1908.	Expenses for 1908.	Balance to 1909.	Deficit (if any) to 1909.	Branch.	Scientific.	Medical-Ethical, etc.	Occasions when members dined together.							
MALTA AND MEDITERRANEAN	30	32	£ s. d. 54 4 3	£ s. d. —	£ s. d. 3 0 0	£ s. d. 2 2 6	£ s. d. 42 1 9	£ s. d. —	—	—	—	—	—	—	—	—	—	—	—
MELBOURNE AND VICTORIA	438	451	225 5 3	—	411 10 6	556 11 10	201 3 11	—	11	11	—	—	40	13	2	1	1	1	This contains other Subscriptions in excess of Capitation Grant.
NATAL	106	124	104 11 1	—	137 14 0	114 10 7	167 14 6	—	1	1	1	1	35	2	1	1	1	1	A circular has been sent to every medical man (who is not a member of the British Medical Association in Natal and Zululand), pointing out the advantages of joining the Association. In reply to a circular sent to every medical man in Natal asking for an opinion on certain matters, a reply was received from the Natal Medical Association, fixing of a minimum fee to private patients and a wage limit for club matters. A demutation waited upon the Colonial Secretary to make certain recommendations in reference to the Government's proposal to appoint a Principal medical officer for Natal.
NEW ZEALAND	362	395	69 12 7	—	756 11 6	681 2 4	155 1 9	—	1	1	1	1	17	4	1	1	1	1	Agenda to arrive at an agreement with the Colonial Representative of the British Medical Association, and to make it a condition of the success of a most important resolution admitting the necessity of an income limit was passed by the Australasian Medical Congress at the Colonial Representative and the Australasian Medical Association. The Australasian Medical Congress has also passed resolutions that the Australasian Medical Association should be constituted a branch of the British Medical Association. The Central Council has approved the application of the members resident in South Canterbury to be constituted a separate division of this branch.
ST. JOHN, N.E.	48	41	19 13 0 (\$90.00)	—	10 0 0 (\$48.00)	15 5 0 (\$74.00)	13 8 0 (\$66.00)	—	—	3	2	1	9	1	—	—	—	—	This contains other Subscriptions in excess of Capitation Grant.
SOUTH AUSTRALIAN	157	156	466 19 10	—	535 5 1	262 5 8	327 19 3	—	11	10	—	1	52	11	—	—	—	—	The formation of a medical reference and hospital library in conjunction with the University of Adelaide, helped by a yearly grant from Branch Scheme, adopted <i>non. con.</i>
SOUTH INDIAN AND MADRAS	161	150	36 14 8	—	37 17 0	26 1 9	48 9 11	—	4	4	—	—	10	—	—	—	—	—	This contains other Subscriptions in excess of Capitation Grant.
SYDNEY AND NEW SOUTH WALES	605	627	682 10 10	—	1337 13 6	1219 12 11	770 11 5	—	14	12	2	1	56	16	—	—	—	—	Model Lodge Agreement. Wage limit for Lodge patients. Private Hospitals Bill. Increase in number of Council.
TRANSVAAL	89	98	13 4 9	—	110 13 6	103 11 4	25 6 11	—	—	—	—	—	—	—	—	—	—	—	This contains other Subscriptions in excess of Capitation Grant.
WEST AUSTRALIAN	70	83	68 15 4	—	173 6 6	186 4 9	55 17 1	—	9	9	4	1	20	—	—	—	—	—	—

ATTENDANCES OF COUNCIL, COMMITTEES, AND SUBCOMMITTEES FOR 1908-9.

COUNCIL.

Members of Council.	July 28, 1908	July 29, 1908	July 30, 1908	October 28, 1908	January 27, 1909	April 28, 1909	Total.
OWEN, Mr. EDMUND, LL.D., F.R.C.S. (Chairman of Council) ...	1	1	1	1	1	1	6
Snell, Mr. Simon, Sheffield (President), (dead) ...	1	1	1	1	1	1	6
Whitla, Sir William, Belfast (President-elect) ...	1	1	1	1	1	1	6
Davy, Dr. Henry, Exeter (Past-President) ...	1	1	1	1	1	1	6
Macdonald, Dr. J. A., Taunton (Chairman of Representative Meetings) ...	1	1	1	1	1	1	6
Rayner, Dr. Edwin, Stockport (Treasurer) ...	1	1	1	1	1	1	6
Anderson, Dr. J. Ford, London ...	1	1	1	1	1	1	6
Andrew, Dr. J. Grant, Glasgow ...	1	1	1	1	1	1	6
Bullance, Mr. H. A., Norwich ...	1	1	1	1	1	1	6
Part, Sir James, M.D., Liverpool ...	1	1	1	1	1	1	6
Biden, Fleet Surgeon E. J., R.N., Fareham ...	1	1	1	1	1	1	6
Bradshaw, Dr. T. R., Liverpool ...	1	1	1	1	1	1	6
Browne, Surgeon-General W. K., M.D., C.I.E., London ...	1	1	1	1	1	1	6
Buist, Dr. R. C., Dundee ...	1	1	1	1	1	1	6
Clark, Mr. Andrew, London ...	1	1	1	1	1	1	6
Clark, Dr. Francis, (Honorary) Hongk, London ...	1	1	1	1	1	1	6
Clarke, Dr. Asley V., Leicester ...	1	1	1	1	1	1	6
Colbeck, Dr. E. H., London ...	1	1	1	1	1	1	6
Cousins, Mr. J. Ward, Southsea ...	1	1	1	1	1	1	6
Cutbert, Mr. C. F., Gloucester ...	1	1	1	1	1	1	6
Denville, Mr. E. J., Exeter ...	1	1	1	1	1	1	6
Drew, Mr. A. J., Oxford ...	1	1	1	1	1	1	6
Eales, Mr. G. Young, Tonbridge ...	1	1	1	1	1	1	6
Edmond, Dr. George, Aberdeen ...	1	1	1	1	1	1	6
Ewart, Mr. J. H., Eastbourne ...	1	1	1	1	1	1	6
Flemming, Mr. C. E. S., Bradford-on-Avon ...	1	1	1	1	1	1	6
Francis, Dr. H. A., London ...	1	1	1	1	1	1	6
Gaustang, Mr. T. W. H., Altringham ...	1	1	1	1	1	1	6
Gisbain, Dr. J. J., Cork ...	1	1	1	1	1	1	6
Gowler, Dr. David, Bradford ...	1	1	1	1	1	1	6
Greenlees, Mr. T. Duncan, London ...	1	1	1	1	1	1	6
Hall, Dr. Wm., Lancaster ...	1	1	1	1	1	1	6
Haslip, Dr. G. E., London ...	1	1	1	1	1	1	6
Hedley, Dr. Henry, London ...	1	1	1	1	1	1	6
Johnston, Dr. E. McKenzie, Edinburgh ...	1	1	1	1	1	1	6
Joubert de la Ferté, Colonel C. H., I.M.S., Weybridge ...	1	1	1	1	1	1	6
Ker, Mr. Hush R., London ...	1	1	1	1	1	1	6
Kinsey, Mr. R. H., Bedford ...	1	1	1	1	1	1	6
Larkin, Mr. F. C., Liverpool ...	1	1	1	1	1	1	6
Larking, Dr. A. E., Buckingham ...	1	1	1	1	1	1	6
Macfie, Dr. Charles, Bolton ...	1	1	1	1	1	1	6
Macfie, Dr. George I., Waterford ...	1	1	1	1	1	1	6
MacKintosh, Dr. Donald, M.V.O., Glasgow ...	1	1	1	1	1	1	6
MacKisack, Dr. H. L., Belfast ...	1	1	1	1	1	1	6
Martin, Dr. C. J., F.R.S., London ...	1	1	1	1	1	1	6
Messier, Mr. M. A., Dudley ...	1	1	1	1	1	1	6
Moir, Dr. J. Munro, Inverness ...	1	1	1	1	1	1	6
Morier, Dr. C. G. D., London ...	1	1	1	1	1	1	6
Morrison, Professor J. T. J., Birmingham ...	1	1	1	1	1	1	6
Morton, Dr. F. W. W. of Australia, London ...	1	1	1	1	1	1	6
Nasmyth, Dr. T. G., Edinburgh ...	1	1	1	1	1	1	6
Nicholson, Dr. B. H., Colchester ...	1	1	1	1	1	1	6
Pone, Dr. F. M., Leicester ...	1	1	1	1	1	1	6
Reid, Dr. F. Whitehead, Canterbury ...	1	1	1	1	1	1	6
Roberts, Dr. H. Jones, Penryn ...	1	1	1	1	1	1	6
Robinson, Major O. L., Netley ...	1	1	1	1	1	1	6
St. John, Mr. W. St. A., Derby ...	1	1	1	1	1	1	6
Shaw, Dr. Cecil E., Belfast ...	1	1	1	1	1	1	6
Shaw, Dr. Lauriston E., London ...	1	1	1	1	1	1	6
Simmons, Lieut.-Colonel R. J. S., C.M.G., London ...	1	1	1	1	1	1	6
Smurdlwaite, Dr. Henry, Newcastle-on-Tyne ...	1	1	1	1	1	1	6
Smyth, Dr. William Johnson, Bournemouth ...	1	1	1	1	1	1	6
Straton, Mr. C. R., Salisbury ...	1	1	1	1	1	1	6
Thomas, Mr. J. Lynn, C.B., Cardiff ...	1	1	1	1	1	1	6
Thomson, Dr. G. J., Crawford, London ...	1	1	1	1	1	1	6
Tranter, Dr. Alex., Perth ...	1	1	1	1	1	1	6
Twynham, Dr. G. E., London ...	1	1	1	1	1	1	6
Verrall, Mr. T. Jenner, Brighton ...	1	1	1	1	1	1	6
Weat, Dr. A. T., Newcastle-on-Tyne ...	1	1	1	1	1	1	6
Webb, Mr. F. E., Cambridge ...	1	1	1	1	1	1	6
White, Professor A. H., Dublin ...	1	1	1	1	1	1	6
White, Dr. Sinclair, Sheffield ...	1	1	1	1	1	1	6
Williams, Mr. D. J., Llanelli ...	1	1	1	1	1	1	6
Wilson, Lieut.-Colonel E. M., C.M.G., C.B., S. Farnborough ...	1	1	1	1	1	1	6

* Co-opted Members.

ARRANGEMENTS COMMITTEE.

Members of Committee.	Oct 5, 1908	Oct 11, 1908	Total.
CHAIRMAN OF COUNCIL (Chairman) (ex officio) ...	1	1	2
President (ex officio) ...	1	1	2
Chairman of Representative Meetings (ex officio) ...	1	1	2
Treasurer (ex officio) ...	1	1	2
Clarke, Dr. Asley V., Leicester ...	1	1	2
Drew, Mr. A. J., Oxford ...	1	1	2
Hall, Dr. Wm., Lancaster ...	1	1	2
Morrison, Professor J. T. J., Birmingham ...	1	1	2
St. John, Mr. W. St. A., Derby ...	1	1	2
White, Dr. Sinclair, Sheffield ...	1	1	2
Local Members.			
Dempsey, Dr. Alex., Belfast ...	1	1	2
Lindsay, Professor J. A., Belfast ...	1	1	2
Shaw, Dr. Cecil E., Belfast ...	1	1	2
Sinclair, Professor Thomas, Belfast ...	1	1	2
Sydney, Professor J., F.R.S., Belfast ...	1	1	2
Whitla, Sir Wm., Belfast ...	1	1	2

CENTRAL ETHICAL COMMITTEE.

Members of Committee.	Oct. 9, 1908	Oct. 26, 1908	Dec. 13, 1908	Jan. 8, 1909	March 22, 1909	Total.
KINSEY, Mr. RAH, Bedford (Chairman) ...	1	1	1	1	1	5
President (ex officio) ...	1	1	1	1	1	5
Chairman of Representative Meetings (ex officio) ...	1	1	1	1	1	5
Chairman of Council (ex officio) ...	1	1	1	1	1	5
Treasurer (ex officio) ...	1	1	1	1	1	5
Bakeman, Dr. A. G., London ...	1	1	1	1	1	5
Ewart, Mr. J. H., Eastbourne ...	1	1	1	1	1	5
Goff, Dr. Bruce, Bothwell ...	1	1	1	1	1	5
Langdon-Down, Dr. R. L., Hampton Wick ...	1	1	1	1	1	5
Lee, Dr. Philip G., Cork ...	1	1	1	1	1	5
Macfie, Dr. Charles, Bolton ...	1	1	1	1	1	5
Maclean, Dr. E. J., Cardiff ...	1	1	1	1	1	5
Shaw, Dr. Lauriston E., London ...	1	1	1	1	1	5
Straton, Mr. C. R., Wilson ...	1	1	1	1	1	5

CENTRAL ETHICAL SUBCOMMITTEE.

Members of Committee.	Oct. 2, 1908	Nov. 12, 1908	Nov. 27, 1908	Feb. 19, 1909	March 16, 1909	Total.
KINSEY, Mr. R. H., Bedford (Chairman) ...	1	1	1	1	1	5
Chairman of Council ...	1	1	1	1	1	5
Bakeman, Dr. A. G., London ...	1	1	1	1	1	5
Langdon-Down, Dr. R. L., Hampton Wick ...	1	1	1	1	1	5
Shaw, Dr. Lauriston E., London ...	1	1	1	1	1	5
Ewart, Mr. J. H., Eastbourne ...	1	1	1	1	1	5

SPECIAL SUBCOMMITTEE ON HAMPSTEAD
HOSPITAL.

Members of Committee.					Total.
		Dec. 23, 1908.			
KINSEY, Mr. R. H., Bedford (Chairman) ...	...	1			1
Bateman, Dr. A. G., London ...	...	1			1
Ewart, Mr. J. H., Eastbourne ...	...	1			1
Langdon-Down, Dr. R. L., Hampton Wick ...	...	1			1

HOSPITALS COMMITTEE.

Members of Committee.					Total.
		Oct. 8, 1908.	Jan. 7, 1909.	March 25, 1909.	
POPE, Dr. F. M., Leicester (Chairman) ...	...	1	1	1	3
President (<i>ex officio</i>) ...	...	1	1	1	3
Chairman of Representative Meetings (<i>ex officio</i>) ...	...	1	1	1	3
Treasurer (<i>ex officio</i>) ...	...	1	1	1	3
Anderson, Dr. J. Ford, London ...	...	1	1	1	3
Cuthbert, Mr. C. F., Gloucester ...	...	1	1	1	3
Edmond, Dr. George, Aberdeen ...	...	1	1	1	3
Joubert de la Ferrière, Col. C. H., I.M.S., Weybridge ...	...	1	1	1	3
Mackesy, Dr. George I., Waterford ...	...	1	1	1	3
Mackintosh, Dr. Donald, M.V.O., Glasgow ...	...	1	1	1	3
McKisack, Dr. H. L., Belfast ...	...	1	1	1	3
Reid, Dr. T. Whitehead, Canterbury ...	...	1	1	1	3
Shaw, Dr. Lauriston E., London ...	...	1	1	1	3
Thomson, Dr. G. J. Crawford, London ...	...	1	1	1	3

MEDICAL CERTIFICATES SUBCOMMITTEE.

Members of Committee.					Total.
		Jan. 7, 1909.			
CHAIRMAN OF HOSPITALS COMMITTEE (Chairman) ...	...	1			1
Anderson, Dr. J. Ford, London ...	...	1			1
Reid, Dr. T. Whitehead, Canterbury ...	...	1			1
Shaw, Dr. Lauriston E., London ...	...	1			1
Thomson, Dr. G. J. Crawford, London ...	...	1			1

SUBCOMMITTEE RE HAMPSTEAD HOSPITAL.

Members of Committee.					Total.
		March 12, 1909.			
CHAIRMAN OF HOSPITALS COMMITTEE (Chairman) ...	...	1			1
Chairman of Representative Meetings ...	...	1			1
Shaw, Dr. Lauriston E., London ...	...	1			1

IRISH COMMITTEE.

Members of Committee.					Total.
		Oct. 3, 1908.	Jan. 9, 1909.	March 27, 1909.	
GIUSANI, Dr. J. J., Cork (Chairman) ...	...	1	1	1	3
President (<i>ex officio</i>) ...	...	1	1	1	3
Chairman of Representative Meetings (<i>ex officio</i>) ...	...	1	1	1	3
Chairman of Council (<i>ex officio</i>) ...	...	1	1	1	3
Treasurer (<i>ex officio</i>) ...	...	1	1	1	3
Carey, Dr. R. B., Borris ...	...	1	1	1	3
Cooke, Dr. J. G., Londonderry ...	...	1	1	1	3
Craig, Dr. James, Dublin ...	...	1	1	1	3
Darling, Dr. J. S., Lurgan ...	...	1	1	1	3
Kenny, Dr. J. M., Granard ...	...	1	1	1	3
Lee, Dr. Philip G., Cork ...	...	1	1	1	3
Mackesy, Dr. G. I., Waterford ...	...	1	1	1	3
McKisack, Dr. H. L., Belfast ...	...	1	1	1	3
Mahon, Dr. R. B., Ballinrobe ...	...	1	1	1	3
Mills, Dr. John, Ballinasloe ...	...	1	1	1	3
O'Connor, Dr. D. J., Cork ...	...	1	1	1	3
Quirke, Dr. James, Piltown ...	...	1	1	1	3
Shaw, Dr. Cecil E., Belfast ...	...	1	1	1	3
White, Professor A. H., Dublin (Honorary Secretary) ...	...	1	1	1	3

JOURNAL AND FINANCE COMMITTEE.

Members of Committee.					Total.
		Oct. 21, 1908.	Jan. 20, 1909.	April 22, 1909.	
TREASURER (Chairman) (<i>ex officio</i>) ...	...	1	1	1	3
President (<i>ex officio</i>) ...	...	1	1	1	3
Chairman of Representative Meetings (<i>ex officio</i>) ...	...	1	1	1	3
Chairman of Council (<i>ex officio</i>) ...	...	1	1	1	3
Ballance, Mr. H. A., Norwich ...	...	1	1	1	3
Bradshaw, Dr. T. R., Liverpool ...	...	1	1	1	3
Davy, Dr. Henry, Exeter ...	...	1	1	1	3
Giusani, Dr. J. J., Cork ...	...	1	1	1	3
Goyder, Dr. D., Bradford ...	...	1	1	1	3
Johnston, Dr. R. McKenzie, Edinburgh ...	...	1	1	1	3
Ker, Mr. Hugh R., Balham Hill ...	...	1	1	1	3
Kinsey, Mr. R. H., Bedford ...	...	1	1	1	3
Smurthwaite, Dr. Henry, Newcastle-on-Tyne ...	...	1	1	1	3
Verrall, Mr. T. Jenner, Brighton ...	...	1	1	1	3
Williams, Mr. D. J., Llanelli ...	...	1	1	1	3

JOURNAL AND FINANCE SUBCOMMITTEE ON
SECRET REMEDIES.

Members of Committee.					Total.
		Oct. 21, 1908.			
TREASURER (Chairman) ...	...	1			1
Chairman of Representative Meetings ...	...	1			1
Eastes, Mr. George, London (dead) ...	...	1			1
Johnston, Dr. R. McKenzie, Edinburgh ...	...	1			1
Kinsey, Mr. R. H., Bedford ...	...	1			1

MEDICO-POLITICAL COMMITTEE.

Members of Committee.					Total.
	Oct. 7, 1908.	Dec. 2, 1908.	Jan. 16, 1909.	April 13, 1909.	
CHAIRMAN OF REPRESENTATIVE MEETINGS (Chairman) (ex officio)	1	1	1	1	5
President (ex officio)	1	1	1	1	5
Chairman of Council (ex officio)	1	1	1	1	5
Treasurer (ex officio)	1	1	1	1	5
Armit, Mr. H. W., Wembley	1	1	1	1	5
Ballance, Mr. H. A., Norwich	1	1	1	1	5
Chance, Sir Arthur, Dublin	1	1	1	1	5
Flemming, Mr. C. E. S., Bradford-on-Avon	1	1	1	1	5
Fothergill, Dr. E. R., Southfields	1	1	1	1	5
Haslip, Dr. G. E., London	1	1	1	1	5
Lawson, Dr. David, Banbury, N.B.	1	1	1	1	5
Nash, Mr. E. H. T., Derby	1	1	1	1	5
Shaw, Dr. Cecil E., Belfast	1	1	1	1	5
Straton, Mr. C. R., Wilton	1	1	1	1	5
Todd, Dr. D. F., Sunderland	1	1	1	1	5
Verrall, Mr. T. Jenner, Brighton	1	1	1	1	5

CONTRACT PRACTICE SUBCOMMITTEE.

Members of Committee.					Total.
	Sept. 30, 1908.	Nov. 15, 1908.	Feb. 24, 1909.	Mar. 24, 1909.	
BALLANCE, Mr. H. A., Norwich (Chairman)	1	1	1	1	5
Macdonald, Dr. J. A., Taunton	1	1	1	1	5
Cox, Dr. Alfred, Gateshead	1	1	1	1	5
Flemming, Mr. C. E. S., Bradford-on-Avon	1	1	1	1	5
Lawson, Dr. David, Banbury, N.B.	1	1	1	1	5
Owen, Mr. Edmund, Lough	1	1	1	1	5
Nash, Mr. E. H. T., Derby	1	1	1	1	5
Straton, Mr. C. R., Wilton	1	1	1	1	5
Todd, Dr. D. F., Sunderland	1	1	1	1	5
Webb, Mr. F. E. A., Cambridge	1	1	1	1	5
With—					
Greer, Mr. W. J., Newport (Mon.)	1	1	1	1	5
Jackson, Mr. George, Plymouth	1	1	1	1	5
Rose, Dr. Percy, London	1	1	1	1	5
Taylor, Dr. J. H., Salford	1	1	1	1	5
Williams, Dr. A. H., Harrow	1	1	1	1	5
Lydeall, Dr. W. T., Birmingham	1	1	1	1	5
With—					
Kinsey, Mr. R. H., Bedford	1	1	1	1	5
Maclean, Dr. E. J., Cardiff	1	1	1	1	5
With—					
Anderson, Dr. (Miss) L. Garrett, London	1	1	1	1	5
Thorne, Dr. (Miss) Mary, London	1	1	1	1	5

CORONERS SUBCOMMITTEE.

Members of Committee.					Total.
	Jan. 29, 1909.	Feb. 2, 1909.	Feb. 24, 1909.	March 24, 1909.	
VERRALL, Mr. T. JENNER, Brighton (Chairman)	1	1	1	1	5
Armit, Mr. H. W., Wembley	1	1	1	1	5
Basteman, Dr. A. G., London	1	1	1	1	5
Crookshank, Dr. F. G., London	1	1	1	1	5
Fothergill, Dr. E. Rowland, Southfields	1	1	1	1	5
Haslip, Dr. G. E., London	1	1	1	1	5
Horsley, Sir Victor, F.R.S., London	1	1	1	1	5
Macdonald, Dr. J. A., Taunton	1	1	1	1	5
Parkinson, Mr. C. H. W., Wimborne	1	1	1	1	5
Woolfs, Dr. Hugh, London	1	1	1	1	5
With—					
Atkinson, Dr. Walter A. (Lambeth Division)	1	1	1	1	5
Finucane, Mr. Walter (Westminster Division)	1	1	1	1	5
Shearer, Mr. Donald F. (Wandsworth Division)	1	1	1	1	5

COUNTY NURSING ASSOCIATION RULES
SUBCOMMITTEE.

Members of Committee.					Total.
	Oct. 14, 1908.	March 21, 1909.	April 17, 1909.	May 17, 1909.	
STRATON, Mr. C. R., Wilton (Chairman)	1	1	1	1	5
Flemming, Mr. C. E. S., Bradford-on-Avon	1	1	1	1	5
Fothergill, Dr. E. Rowland, Southfields	1	1	1	1	5
Haslip, Dr. G. E., London	1	1	1	1	5
With—					
Coombe, Mr. Russell, Exeter	1	1	1	1	5
Taylor, Mr. Mark R., Helston	1	1	1	1	5

LIFE INSURANCE EXAMINATIONS SUB-
COMMITTEE.

Members of Committee.					Total.
	Oct. 14, 1908.	March 21, 1909.	April 17, 1909.	May 17, 1909.	
HASLIP, Dr. G. E., London (Chairman)	1	1	1	1	5
Armit, Mr. H. W., Wembley	1	1	1	1	5
Ballance, Mr. H. A., Norwich	1	1	1	1	5
Macdonald, Dr. J. A., Taunton	1	1	1	1	5
Todd, Dr. D. F., Sunderland	1	1	1	1	5
With—					
Shadwell, Dr. St. Clair B., Walthamstow	1	1	1	1	5

MEDICAL INSPECTION OF SCHOOL CHILDREN
SUBCOMMITTEE.

Members of Committee.					Total.
	Oct. 14, 1908.	Nov. 15, 1908.	March 17, 1909.	April 17, 1909.	
*HORSLEY, Sir VICTOR, F.R.S., London (Chairman)	1	1	1	1	5
Macdonald, Dr. J. A., Taunton	1	1	1	1	5
Ballance, Mr. H. A., Norwich	1	1	1	1	5
Flemming, Mr. C. E. S., Bradford-on-Avon	1	1	1	1	5
Fothergill, Dr. E. Rowland, Southfields	1	1	1	1	5
*Nash, Mr. E. H. T., Derby	1	1	1	1	5
Rayner, Dr. Edwin, Stockport	1	1	1	1	5
Todd, Dr. A. F., Sunderland	1	1	1	1	5
With—					
*Fremantle, Dr. F. E., London	1	1	1	1	5
Greenwood, Dr. Alfred, Blackburn	1	1	1	1	5
With—					
Donville, Mr. E. J., Exeter	1	1	1	1	5
Jones, Mr. Herbert, Hereford	1	1	1	1	5
*Kerr, Dr. James, Ealing	1	1	1	1	5
*Langdon-Down, Dr. R. L., Hampton Wick	1	1	1	1	5

* Attended Drafting Subcommittee, October 28th, 1908.

* Attended Drafting Subcommittee, March 30th, 1909.

MIDWIVES SUBCOMMITTEE.

Members of Committee.					Total.
	Jan. 5, 1909.	Feb. 3, 1909.	Feb. 24, 1909.	March 24, 1909.	
Armit, Mr. H. W., Wembley (Chairman)	1	1	1	1	5
Macdonald, Dr. J. A., Taunton	1	1	1	1	5
Flemming, Mr. C. E. S., Bradford-on-Avon	1	1	1	1	5
Fothergill, Dr. E. Rowland, Southfields	1	1	1	1	5
Nash, Mr. E. H. T., Derby	1	1	1	1	5
With—					
Jones, Mr. Herbert, Hereford	1	1	1	1	5
Maclean, Dr. E. J., Cardiff	1	1	1	1	5
Taylor, Dr. J. H., Salford	1	1	1	1	5

PARLIAMENTARY SUBCOMMITTEE.

Members of Committee.	Nov. 20, 1908. Dec. 22, 1908. Feb. 9, 1909.	Total.
VERRALL, Mr. T. JENNER, Brighton (Chairman) ...	1 1	2
Macdonald, Dr. J. A., Taunton ...	1 1	2
Armit, Mr. H. W., Wembley ...	1 1	2
Chance, Sir Arthur, Dublin ...	1 1	2
Flemming, Mr. C. E. S., Bradford-on-Avon ...	1 1	2
Fothergill, Dr. E. Rowland, Southfields ...	1 1	2
Haslip, Dr. G. E., London ...	1 1	2
Shaw, Dr. Cecil E., Belfast ...	1 1	2
Sutton, Mr. C. R., Wilton ...	1 1	2
With—		
Buist, Dr. R. C., Dundee ...	1	1
Crookshank, Dr. F. G., Harnes ...	1	1
Domville, Mr. E. J., Exeter ...	1	1
Horsley, Sir Victor, F.R.S., London ...	1	1
Larkin, Mr. F. C., Liverpool ...	1	1
Parkinson, Mr. C. H. W., Wimbome ...	1	1
With—		
Franklin, Mr. George C., Leicester ...	1	1
Muir, Mr. W. L., Dennistoun ...	1	1
Smith, Dr. Walter, London ...	1	1

SPIRITUAL HEALING SUBCOMMITTEE.

Members of Committee.	Feb. 4, 1909. March 5, 1909.	Total.
NASH, Mr. E. H. T., Derby (Chairman) ...	1 1	2
Armit, Mr. H. W., Wembley ...	1 1	2
Butler, Dr. Charles, London ...	1 1	2
Fothergill, Dr. E. Rowland, Southfields ...	1 1	2
Haslip, Dr. G. E., London ...	1 1	2
Helme, Dr. T. Arthur, Manchester ...	1	1
Kinsey, Mr. R. H., Bedford ...	1	1
Macdonald, Dr. J. A., Taunton ...	1	1
Maclean, Dr. E. J., Cardiff ...	1	1

WARNING NOTICE SUBCOMMITTEE.

Members of Committee.	May 18, 1909.	Total.
CHAIRMAN OF REPRESENTATIVE MEETINGS (Chairman) ...	1	1
Chairman of Council ...	1	1
Ballance, Mr. H. A., Norwich ...	1	1
Domville, Mr. E. J., Exeter ...	1	1
Kinsey, Mr. R. H., Bedford ...	1	1

MEDICO-POLITICAL COMMITTEE.

CONFERENCE BETWEEN REPRESENTATIVES OF THE BRITISH MEDICAL ASSOCIATION AND REPRESENTATIVES OF THE BRITISH DENTAL ASSOCIATION *re the Medical and Dental Acts Consolidation Bill.*

Representatives.	Feb. 4, 1909.	Total.
VERRALL, Mr. T. JENNER, Brighton (Chairman) ...	1	1
Armit, Mr. H. W., Wembley ...	1	1
Haslip, Dr. G. E., London ...	1	1
Horsley, Sir Victor, F.R.S., London ...	1	1
Representatives of the British Dental Association:		
Bennett, Mr. Norman G. (Honorary Secretary) ...	1	1
Dolanore, Mr. W. H. ...	1	1
Matheson, Mr. L. ...	1	1
Paterson, Mr. W. B. ...	1	1

NAVAL AND MILITARY COMMITTEE.

Members of Committee.	Oct. 5, 1908. April 5, 1909.	Total.
JOUBERT DE LA FERTE, Colonel C. H., I.M.S., Weybridge (Chairman) ...	1 1	2
President (<i>ex officio</i>) ...		
Chairman of Representative Meetings (<i>ex officio</i>) ...		
Chairman of Council (<i>ex officio</i>) ...		
Treasurer (<i>ex officio</i>) ...		
Bentham, Inspector-General Robert, R.N. (London) ...	1	1
Biden, Fleet Surgeon E. J., R.N., Fareham ...	1	1
Brownie, Surgeon-General W. R. M.D., C.I.E., London ...	1	1
Cuffe, Sir Charles, K.C.B., London ...	1	1
Curtis, Surgeon-Colonel Decimus, Blandford ...	1	1
Elliston, Surgeon-Colonel G. S., Felixstowe ...	1	1

OPHTHALMIA NEONATORUM COMMITTEE.

Members of Committee.	Dec. 10, 1908. Feb. 23, 1909. March 20, 1909. April 3, 1909.	Total.
STEPHENSON, Mr. SIDNEY, London (Chairman) ...	1 1 1 1	4
President (<i>ex officio</i>) ...		
Chairman of Representative Meetings (<i>ex officio</i>) ...		
Chairman of Council (<i>ex officio</i>) ...		
Treasurer (<i>ex officio</i>) ...		
Buist, Dr. R. C., Dundee ...	1 1 1 1	4
Helme, Dr. T. A., Manchester ...	1 1 1 1	4
Martin, Dr. C. J., F.R.S., London ...	1 1 1 1	4
Shaw, Dr. Cecil E., Belfast ...	1 1 1 1	4
And the following representing various Societies—		
Andrews, Dr. H. Russell, London ...	1 1 1 1	4
Carpenter, Dr. George, London ...	1 1 1 1	4
Lawson, Mr. Arnold, London ...	1 1 1 1	4
Sergeant, Dr. Edward, Preston ...	1 1 1 1	4

ORGANIZATION COMMITTEE.

Members of Committee.	Oct. 13, 1908. Dec. 8, 1908. Jan. 12, 1909. March 9, 1909. April 13, 1909. April 28, 1909.	Total.
CLARK, Mr. ANDREW, Uxbridge (Chairman) ...	1 1 1 1 1 1	6
President (<i>ex officio</i>) ...		
Chairman of Representative Meetings (<i>ex officio</i>) ...		
Chairman of Council (<i>ex officio</i>) ...		
Treasurer (<i>ex officio</i>) ...		
Larkin, Mr. F. C., Liverpool ...	1 1 1 1 1 1	6
Molt, Dr. J. Munro, Inverness ...	1 1 1 1 1 1	6
Roberts, Dr. H. Jones, Penryn ...	1 1 1 1 1 1	6
Smyth, Dr. W. Johnson, Bournemouth ...	1 1 1 1 1 1	6
Webb, Mr. F. E. A., Cambridge ...	1 1 1 1 1 1	6
White, Professor A. H., Dublin ...	1 1 1 1 1 1	6
Co-opted Members:		
Garstang, Mr. T. W. H., Altrincham ...	1 1 1 1 1 1	6
Horsley, Sir Victor, F.R.S., London ...	1 1 1 1 1 1	6
Kirby, Dr. E. D., Edgbaston ...	1 1 1 1 1 1	6
Larkin, Dr. A. E., Buckingham ...	1 1 1 1 1 1	6
Verrall, Mr. T. Jenner, Brighton ...	1 1 1 1 1 1	6

DRAFT PETITION SUBCOMMITTEE.

Members of Committee.	Oct. 21, 1908.	Total.
CHAIRMAN OF ORGANIZATION COMMITTEE (Chairman) ...	1	1
Chairman of Representative Meetings ...	1	1
Treasurer ...	1	1

CAPITATION GRANTS SUBCOMMITTEE.

Members of Committee.					Total.
	Nov. 25, 1908.	Dec. 22, 1908.	Mar. 9, 1909.	April 6, 1909.	
CHAIRMAN OF ORGANIZATION COMMITTEE (Chairman)	1	1	1	1	5
Treasurer	1	1	4
Larkin, Mr. F. C., Liverpool	1	1	5
Verrall, Mr. T. Jenner, Brighton	1	1	1
Webb, Mr. F. E. A., Cambridge	1	...	1

GROUPING OF BRANCHES UNDER CHARTER
SUBCOMMITTEE.

Members of Committee.			Total.
	Dec. 22, 1908.	March 9, 1909.	
CHAIRMAN OF ORGANIZATION COMMITTEE (Chairman)	1	1	2
Larking, Dr. A. E., Buckingham
Smyth, Dr. W. Johnson, Bourne-mouth	...	1	2
Verrall, Mr. T. Jenner, Brighton	...	1	1
With Representatives of Branches—
Beaumont, Mr. W. M., Bath	...	1	1
Combe, Mr. Russell, Exeter	...	1	1
Davison, Dr. James, Bourne-mouth	...	1	1
Finlay, Dr. Douglas E., Gloucester	...	1	1
March, J. Ordin, Amesbury	...	1	1
Morrison, Mr. C. S., Hereford	...	1	1
Nield, Dr. Newman, Bristol	...	1	1
Orlinton, Dr. George, London	...	1	1
Walker, Mr. George, Wembleton	...	1	1

SUBCOMMITTEE ON OPPOSITION PETITIONS TO
CHARTER

Members of Committee.			Total.
	April 6, 1909.	...	
CHAIRMAN OF ORGANIZATION COMMITTEE (Chairman)	1	...	1
Chairman of Representative Meetings	...	1	1
Chairman of Council
Treasurer	...	1	1
Larkin, Mr. F. C., Liverpool	...	1	1
Verrall, Mr. T. Jenner, Brighton	...	1	1

REORGANIZATION OF BRANCHES
SUBCOMMITTEE.

Members of Committee.			Total.
	Nov. 25, 1908.	...	
HORSLEY, Sir Victor, F.R.S., London (Chairman)	1	...	1
Chairman of Organization Committee	...	1	1
Chairman of Representative Meetings	...	1	1
Larkin, Mr. F. C., Liverpool	...	1	1
Verrall, Mr. T. Jenner, Brighton

PREMISES COMMITTEE.

Members of Committee.					Total.
	Oct. 28, 1908.	Jan. 15, 1909.	March 24, 1909.	April 23, 1909.	
CLARK, Mr. ANDREW, Uxbridge (Chairman)	...	1	1	1	4
President (<i>ex officio</i>)
Chairman of Representative Meetings (<i>ex officio</i>)	...	1	1	...	...
Chairman of Council (<i>ex officio</i>)	1	1	...
Treasurer (<i>ex officio</i>)	1	1	...
Barnes, Dr. Edgar, Eye	1	1	...
Cousins, Mr. J. Ward, Southsea	1	1	...
Johnston, Dr. B. McKenzie, Edinburgh	...	1	1	1	...
Pope, Dr. F. M., Leicester	...	1	1	1	...

BUILDING SUBCOMMITTEE.

Members of Committee.			Total.
	Oct. 9, 1908.	...	
CLARK, Mr. ANDREW, Uxbridge (Chairman)	...	1	1
Chairman of Representative Meetings
Chairman of Council
Treasurer	...	1	1

PUBLIC HEALTH COMMITTEE.

Members of Committee.				Total.
	Oct. 13, 1908.	Jan. 5, 1909.	April 6, 1909.	
DOMVILLE, Mr. E. J., Exeter (Chairman)	...	1	1	3
President (<i>ex officio</i>)
Chairman of Representative Meetings (<i>ex officio</i>)
Chairman of Council (<i>ex officio</i>)	...	1	1	...
Treasurer (<i>ex officio</i>)	1	...
Garstang, Mr. T. W. H., Altrincham	...	1	1	...
Goyder, Dr. D. D., Bradford	...	1	1	...
Hetley, Dr. Henry, Norwood	...	1	1	...
Jones, Mr. Herbert, Hereford	...	1	1	...
Martley, Dr. F. C., Dublin	...	1	1	...
Nasmyth, Dr. T. G., Edinburgh	...	1	1	...

SCIENCE COMMITTEE.

Members of Committee.				Total.
	Oct. 10, 1908.	Dec. 19, 1908.	March 20, 1909.	
MARTIN, Dr. C. J., F.R.S., London (Chairman)	...	1	1	3
President (<i>ex officio</i>)
Chairman of Representative Meetings (<i>ex officio</i>)	...	1	1	...
Chairman of Council (<i>ex officio</i>)
Treasurer (<i>ex officio</i>)	...	1	1	...
Buist, Dr. R. C., Dundee	...	1	1	...
Delepine, Professor Sheridan, Manchester	...	1	1	...
Dixon, Professor W. E., M.D., Cambridge	...	1	1	...
Haldane, Dr. J. S., F.R.S., London	...	1	1	...
Morrison, Professor J. T. J., Birmingham	...	1	1	...
Shaw, Dr. Cecil E., Belfast	...	1	1	...
Thomas, Mr. J. Lynn, C.R., Cardiff	...	1	1	...
Whito, Professor, A. H., Dublin	...	1	1	...
White, Dr. Sinclair, Sheffield	...	1	1	...

DEVELOPMENT OF SCIENTIFIC WORK OF DIVISIONS AND BRANCHES SUBCOMMITTEE.

Members of Committee.	Nov. 14, 1908	Dec. 15, 1908	Feb. 9, 1909	March 5, 1909	Total.
Morrison, Professor J. T. J., Birmingham (Chairman) ...	1	1	1	1	4
Chairman of Science Committee ...	1	1	1	1	3
Chairman of Representative Meetings ...	1	1	1	1	3
Chairman of Council ...	1	1	1	1	3
Treasurer ...	1	1	1	1	2
Buist, Dr. R. C., Dundee ...	1	1	1	1	3
Haldane, Dr. J. S., F.R.S., Oxford ...	1	1	1	1	3
Shaw, Dr. Cecil E., Belfast ...	1	1	1	1	3
Williams, Dr. Dawson, London ...	1	1	1	1	4
With—					
Larkin, Mr. F. C., Liverpool ...	1	1	1	1	2
Maclean, Dr. E. J., Carlisle ...	1	1	1	1	2
Verrall, Mr. T. Jenner, Brighton ...	1	1	1	1	1

SCHOLARSHIPS AND GRANTS SUBCOMMITTEE.

Members of Committee.	Nov. 14, 1908	Dec. 15, 1908	Total.
CHAIRMAN OF SCIENCE COMMITTEE (Chairman) ...	1	1	2
Chairman of Representative Meetings ...	1	1	1
Delepine, Professor Sheridan, Manchester ...	1	1	2
Dixon, Professor W. E., Cambridge ...	1	1	2
Thomas, Mr. J. Lynn, C.B., Cardiff ...	1	1	2
White, Professor A. H., Dublin ...	1	1	2
White, Dr. Sinclair, Sheffield ...	1	1	2
Williams, Dr. Dawson, London ...	1	1	2
Treasurer ...	1	1	1

SCOTTISH COMMITTEE.

Members of Committee.	Oct. 1, 1908	Nov. 1, 1908	Total.
Buist, Dr. R. C., Dundee (Chairman) ...	1	1	2
President (<i>ex officio</i>) ...	1	1	2
Chairman of Representative Meetings (<i>ex officio</i>) ...	1	1	2
Chairman of Council (<i>ex officio</i>) ...	1	1	2
Treasurer (<i>ex officio</i>) ...	1	1	2
Andrew, Dr. J. Grant, Glasgow ...	1	1	2
Boyd, Dr. F. D., Edinburgh ...	1	1	2
Christie, Dr. J. F., Aberdeen ...	1	1	2
Edmond, Dr. G., Aberdeen ...	1	1	2
Fraser, Dr. T., Aberdeen ...	1	1	2
Graham, Dr. R. Balfour, Fife ...	1	1	2
Johnston, Dr. R. McKenzie, Edinburgh ...	1	1	2
Livingston, Dr. G. R., Dumfries ...	1	1	2
Low, Dr. A. P., Dundee ...	1	1	2
Macfarlane, Dr. W. D., jun., Glasgow ...	1	1	2
Macintosh, Dr. D. J., M.V.O., Glasgow ...	1	1	2
Moir, Dr. J. Munro, Inverness (Honorary Secretary) ...	1	1	2
Moorhouse, Dr. J. E., Stirling ...	1	1	2
Nasmith, Dr. T. G., Edinburgh ...	1	1	2
Stewart, Dr. G. Clark, Falkirk ...	1	1	2
Taylor, Dr. W. A., Perth ...	1	1	2
Trotter, Dr. A., Perth ...	1	1	2
Turner, Dr. A. Logan, Edinburgh ...	1	1	2

SUBCOMMITTEE ON REPORT OF COMMISSION ON FEEBLE-MINDED.

Members of Committee.	Dec. 9, 1908	Feb. 26, 1909	Total.
Buist, Dr. R. C., Dundee (Chairman) ...	1	1	2
Livingston, Dr. G. R., Dumfries ...	1	1	2
Moir, Dr. J. Munro, Inverness ...	1	1	2
Urquhart, Dr. A. R., Perth ...	1	1	2

THERAPEUTIC COMMITTEE.

Members of Committee.	Nov. 7, 1908	Jan. 30, 1909	Total.
THIRD, Dr. NESTOR, London (Chairman) ...	1	1	2
President (<i>ex officio</i>) ...	1	1	2
Chairman of Representative Meetings (<i>ex officio</i>) ...	1	1	2
Chairman of Council (<i>ex officio</i>) ...	1	1	2
Treasurer (<i>ex officio</i>) ...	1	1	2
Bradbury, Dr. J. B., Cambridge ...	1	1	2
Brown, Dr. F. E. Burton, London ...	1	1	2
Crawford, Dr. Raymond, London ...	1	1	2
Cushny, Professor A. R., F.R.S., London ...	1	1	2
Davy, Dr. Henry, Exeter ...	1	1	2
Dixon, Professor W. E., Cambridge ...	1	1	2
Marshall, Professor C. R., Dundee (Secretary) ...	1	1	2
Smith, Dr. F. J., London ...	1	1	2
Stockman, Professor Ralph, Glasgow ...	1	1	2
White, Dr. W. Hale, London ...	1	1	2
Wild, Professor Robert B., Manchester ...	1	1	2

UNITED KINGDOM HOSPITALS CONFERENCE
SUBCOMMITTEE RE PAY WARDS.

Members of Committee.	Nov. 25, 1908	Total.
DODSON, Mr. R. HALL, Brighton (Chairman) ...	1	1
Anderson, Dr. J. Ford, London ...	1	1
Bailey, Mr. Walter, London ...	1	1
Fox, Dr. E. L., Plymouth ...	1	1
Shaw, Dr. Lauriston E., London ...	1	1

UTERINE CANCER COMMITTEE.

Members of Committee.	Feb. 9, 1909	March 5, 1909	Total.
McCANN, Dr. F. J., London (Chairman) ...	1	1	2
President (<i>ex officio</i>) ...	1	1	2
Chairman of Representative Meetings (<i>ex officio</i>) ...	1	1	2
Chairman of Council (<i>ex officio</i>) ...	1	1	2
Treasurer (<i>ex officio</i>) ...	1	1	2
Buist, Dr. R. C., Dundee ...	1	1	2
Donald, Dr. Archibald, Manchester ...	1	1	2
Lyle, Dr. Ranken, Newcastle-on-Tyne ...	1	1	2
Milligan, Dr. W. A., London ...	1	1	2
Schrieber, Mrs. Mary, M.D., London ...	1	1	2
Tweedy, Dr. Hastings, Dublin ...	1	1	2
Wilson, Dr. Thomas, Birmingham ...	1	1	2
Co-opted Members—			
Fairbairn, Dr. J. S., London ...	1	1	2
Tate, Dr. W. W. H., London ...	1	1	2

British Medical Association.

GRANTS AND SCHOLARSHIPS FOR SCIENTIFIC RESEARCH.

GRANTS.

THE Council of the British Medical Association is prepared to receive applications from members of the Medical Profession for Grants in aid of Researches for the Advancement of Medicine and the Allied Sciences.

The Grants are made subject to the following conditions:

1. That the work of the Grantee shall be subject to inspection by the Science Committee of the Association.

2. That each Grantee shall furnish to the Science Committee, on or before May 15th following the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report, to be renewed not later than the same date in each subsequent year until the final report is presented) containing:

(a) A statement, in a form satisfactory to the Science Committee, of the results arrived at, or the stage which the inquiry has reached;

(b) A statement of expenditure incurred, accompanied by vouchers as far as possible;

(c) A reference to any Transactions, Journals, or other publications in which the results of the research have been announced.

SCHOLARSHIPS.

The Council of the British Medical Association is also prepared to receive applications for Research Scholarships, as follows:

1. An ERNEST HART MEMORIAL SCHOLARSHIP, of the value of £200 per annum, for the study of some subject in the department of State Medicine.

2. THREE RESEARCH SCHOLARSHIPS, each of the value of £150 per annum, for research in Anatomy, Physiology, Pathology, Bacteriology, State Medicine, Clinical Medicine, or Clinical Surgery.

Each Scholarship is tenable for one year, but is renewable by the Council, provided that the whole period of tenure shall not exceed three years.

The Scholarships are awarded subject to the following conditions:

1. That the work of the Scholar shall be subject to inspection by the Science Committee of the Association.

2. That he shall furnish the Science Committee, on or before May 15th following the grant of the Scholarship, with a statement of the work done by him.

3. That he sign an undertaking to abide by the above and other regulations affecting Scholarships, a copy of which will be supplied to him.

Applications.

Applications for Grants and Scholarships for the year 1909-10 must be made, not later than May 27th, 1909, in the prescribed form, a copy of which will be supplied on application to the Medical Secretary, 429, Strand, London, W.C.

Each application should be accompanied by a recommendation from the head of the laboratory in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

J. SMITH WHITAKER, Medical Secretary.

429, Strand, W.C., March, 1909.

CENTRAL MIDWIVES BOARD.

A MEETING of the Central Midwives Board was held at Caxton House, Westminster, on April 22nd, with Dr. F. H. CHAMPEYNS in the chair.

New Member.

A letter was received from the Secretary of the Royal College of Surgeons reporting that Mr. C. H. Golding-Bird, F.R.C.S., had been elected to represent the College on the Board in place of Mr. J. Ward Cousins, F.R.C.S., retired.

Practitioners "Covering" Midwives.

Letters were further considered from Dr. A. G. R. Foulerton, County Medical Officer for East Sussex, as to medical practitioners "covering" midwives, and it was decided that subject to Dr. Foulerton's consent, the Board forward the letters (with or without revision by Dr. Foulerton) to the Privy Council, with the object of obtaining an opinion as to whether a certified midwife personally delivering a woman in childbirth is acting as a midwife when a medical practitioner has been engaged to attend the case.

Supervision of Midwives.

Letters were considered from the Medical Secretary of the British Medical Association as to the supervision of midwives approved for the purpose of undertaking the practical training of pupils. With reference to the first communication received, the Board approved its Secretary's reply explaining the duties of the local supervising authorities in the matter. Concerning the second letter from the Medical Secretary asking for further details, after a discussion in which Sir W. J. Sinclair spoke on the subject of evasion of the rules by institutions, the Board decided that the Secretary should reply that the Board would be glad to be put in possession of any specific information as to the evasion of the rules.

Refusal of Doctors to Attend on Summons of Midwife.

A letter from Dr. Thresh, County Medical Officer for Essex, as to the refusal of medical practitioners in a country district of Essex to attend when summoned on the advice of a midwife was considered. The Board decided that Dr. Thresh be asked to furnish particulars.

The Finances of the Board.

The following motions in the name of Sir George Fordham were on the agenda, but were postponed in the absence of the mover:

That the Privy Council be asked to obtain from the Treasury an advance of a sum sufficient to meet the current expenditure of the Board, after deduction of ordinary receipts until the proceeds of an apportionment between the councils of the several counties and county boroughs of England and Wales are available.

That the attention of the Privy Council be called to the fact that by the end of June next the Board will be without funds to discharge the duties imposed on it by statute, and be asked to advise as to the course to be pursued by the Board under these circumstances.

Dr. Champneys was re-elected Chairman and Sir G. Fordham Honorary Treasurer.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty:—Staff Surgeon E. T. BERTON to the *Emmett*, additional, for Malta Dockyard, May 2nd; Staff Surgeon W. K. HOPKINS to the *Talbot*, on recommissioning, May 4th; Surgeon L. M. MORRIS to the *Blenheim*, temporarily, April 19th; Surgeon J. S. ARDEN, M.B., to the *Fortie*, April 20th; Surgeon R. KENNEDY, M.B., to the *Victory*, undated; Staff Surgeon P. H. HANSSINGER, M.B., to the *Skeirminster*, on recommissioning, May 4th; Staff Surgeon F. E. DIXON to the *Seaford*, on recommissioning, May 4th; Fleet Surgeon H. B. MARRIOTT to the *Doris*, on recommissioning, May 4th; Surgeon A. S. BRADLEY, M.B., to the *Hussar*, additional, April 22nd; Fleet Surgeon R. H. J. BROWNE and Surgeon L. C. HUNT to the *Tombayre*, on commissioning, May 15th; Fleet Surgeon C. BRADLEY, M.D., to the *Cesareo*, on recommissioning, May 15th; Staff Surgeon H. HUNT to the *Medea*, on completing, April 27th.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL R. JAMES, M.B., Madras, having reported his arrival on March 29th from Trivandrum, has taken over the duties of Principal Medical Officer, Kohat Brigade.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

THE following officers, who are serving in India, have been appointed Specialists in the subjects named:—Advances, Operative Surgery, Major F. E. GUYSTER, M.B., 8th (Lucknow) Division; Ophthalmology, Captain J. G. GILL, 1st (Peshawar) Division, and Captain H. M. NICHOLS, 6th (Poona) Division.

Lieutenant-Colonel T. P. WOOLNOUTH to be Brevet Colonel, under the provisions of Articles 35 and 307 of the Royal Warrant for Pay and Promotion, 1907, dated April 28th. He was appointed Surgeon, February 5th, 1881; Surgeon-Major, February 5th, 1895; and Lieutenant-Colonel, February 5th, 1901. He served in the South African war, 1899-1902, being present at the relief of Ladysmith, and in operations in Cape Colony, Orange River Colony, and the Transvaal; he was mentioned in despatches, and received the Queen's medal with three clasps and the King's medal with two clasps.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

For Attachment to Units other than Medical Units.—Cecil OSBORN, M.B., to be Lieutenant, March 23rd.

Third London General Hospital.—Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel JON ADAMS, from the 21st Middlesex (The Finsbury) Volunteer Rifle Corps, to be Lieutenant-Colonel with the honorary rank of Surgeon-Colonel, with precedence as the Volunteer Force, April 1st, 1908. WILLIAM K. PEARCE, late Surgeon-Lieutenant, 1st Battalion Royal Fusiliers (City of London Regiment), to be Major, March 31st, 1909.

Second Western General Hospital.—Lieutenant-Colonel A. H. YORCE, M.B., F.R.C.S. Eng., resigns his commission, February 27th, 1909. Major WILLIAM T. TRENCH, M.D., F.R.C.S. Eng., to be Lieutenant-Colonel, February 28th, 1909. FREDERIC H. WESTMACOTT, F.R.C.S. Eng., to be Major, February 28th, 1909.

For Attachment to Units other than Medical Units.—The undermentioned officers, from the Westmorland and Cumberland Imperial Yeomanry, are appointed to the corps, with precedence as in the Imperial Yeomanry, dated April 1st, 1908.—Surgeon-Major JOSEPH EDWARD BOWSER, M.B., to be Major, Surgeon-Lieutenant JOHN LIVINGSTONE, M.B., to be Lieutenant, in the field after October 1st, 1909. The Royal Army Medical Corps (Militia), to be Lieutenant, with precedence as in the Militia, March 11th, 1909.

Unattached List.—Surgeon-Captain HENRY WATTE, from the Second (Duke of York's) West Riding's Royal Engineers (Volunteers), to be Surgeon-Major, February 4th, 1909.

ARMY MEDICAL SERVICE.

AN examination of candidates for not fewer than twenty commissions in the Royal Army Medical Corps will be held on July 26th next and following days. Applications to compete should be made to the Secretary, War Office, London, S.W., not later than July 19th, on which date the list will be closed. Candidates who are over the regulated limit of age at the date of the examination will be permitted to deduct from their actual age any period of service in the field after October 1st, 1909, that they could reckon towards retired pay and gratuity, if such deduction will bring them within the age limit. The presence of candidates will be required in London from July 26th.

Hospitals and Asylums.

THE CANTON CONVALESCENT HOME, LIMPSPFIELD. The fourteenth annual report of the Canton Convalescent Home, which caters for the printing and allied trades and has its habitation at Limpfield, shows that last year 154 patients were admitted, the average duration of their stay being 19.75 days. During this period they gained in weight an average of 5.75 lb., and with few exceptions showed other evidence also of having derived substantial benefit, shaking off the effects of more or less severe illness and returning to their occupation with renewed vigour. The committee is endeavouring to make arrangements for the admission of cases regarded as tuberculous to some sanatorium at the expense of the funds of the home. Its honorary medical officers, whose services are warmly acknowledged in the report, decline, it appears, to pass such cases for the home itself, and in this they are no doubt right. The home is mainly supported by those engaged in the printing trade, and is justly proud of this fact, but nevertheless it would be better that its financial statements should conform with the revised system of hospital accounts.

DEWSBURY INFIRMARY.

THE corner stone of a new nurses' home, which is being erected in connexion with the Dewsbury and District General Infirmary, was laid by Dr. Jane Walker in the presence of a distinguished company, including Mr. Walter Runciman, M.P., President of the Board of Education. The home is being erected in the north-east corner of the infirmary grounds. It will be a substantial stone building, two stories in height, and will contain a large sitting room, kitchen, and separate bedrooms for ten nurses. There will also be a bathroom, lavatory, and housemaid's room on each floor, store rooms and a room in the basement for heating apparatus. The estimated cost is about £2,000, and the building is expected to be ready for occupation in September next.

ILKLEY CORONATION COTTAGE HOSPITAL.

TWO new wings to this hospital were formally opened on January 30th. Each wing contains eight beds for male patients and female patients respectively. The Chairman of the Hospital Committee stated that since the hospital had been opened in April, 1905, 265 cases had been treated. The total cost of site, buildings, and equipment had been about £4,000, of which sum the portion recently erected represented £1,250.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 9,203 births and 4,385 deaths were registered during the week ending Saturday last, April 24th. The annuity-rate of mortality in these towns, which had been 17.9, 17.0, and 17.1 per 1,000 in the three preceding weeks, declined last week to 15.8 per 1,000. The rates in the several towns ranged from 7.1 in Horsey, 7.5 in Reading, 7.7 in Ipswich, 8.5 in Willesden, 8.8 in Walsley, and 9.5 in Walthamstow, to 22.9 in Ruddesfield, 21.4 in Preston, 21.4 in Plymouth, 22.4 in Wigan, 24.3 in Middlesbrough, and 26.5 in Swansea. In London the rate of mortality was 15.0 per 1,000. The annuity-rate of mortality in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.6 per 1,000 in the seventy-six towns; in London also the death-rate from these diseases was equal to 1.6 per 1,000, while among the seventy-five

other large towns the rates ranged upwards to 3.4 in Plymouth, 3.5 in East Ham, 4.0 in Walthamstow, and 5.8 in Stockport, 5.7 in Swansea, 5.9 in Wigan, and 7.1 in St. Helens. Measles caused a death-rate of 0.21 in East Ham, 2.2 in Middlesbrough, 2.3 in Sunderland, 2.4 in Derby, 2.5 in Devonport and in Wolverhampton, 2.9 in Plymouth, 3.8 in St. Helens, and 4.0 in Wigan; diphtheria of 1.31 in West Ham, 1.4 in Walsley, 1.5 in Wigan, 1.2 in Wigan, 1.8 in Preston, 2.7 in St. Helens, and 3.2 in Swansea. The mortality from scarlet fever, from enteric fever, and from diarrhoea showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever patients under treatment in the Metropolitan Asylum Hospitals and the London Fever Hospital, which had been 2,462, 2,418, and 2,294 at the end of the three preceding weeks, had further declined to 2,219 at the end of last week; 265 new cases were admitted during the week, against 275, 256, and 244 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday, April 24th, 1,050 births and 620 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 17.7 and 18.4 per 1,000 in the two preceding weeks, declined again to 17.4 per 1,000 last week, but was 1.6 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 14.1 in Leith and 14.1 in Aberdeen, to 18.5 in Edinburgh and 21.0 in Paisley. The death-rate from the principal infectious diseases averaged 2.4 per 1,000 in the eight Scottish towns, the highest rates being recorded in Aberdeen and Paisley. The 230 deaths registered in Glasgow included 2 which were referred to scarlet fever, 3 to diphtheria, 22 to whooping-cough, 4 to enteric fever, and 6 to diarrhoea. Nine fatal cases of whooping-cough and 3 of diarrhoea were recorded in Edinburgh; 3 of whooping-cough and 4 of diarrhoea in Dundee; 7 of whooping-cough and 2 of diarrhoea in Aberdeen; 5 of measles and 2 of whooping-cough in Paisley; 2 of diarrhoea in Leith; and 3 of whooping-cough in Greenock.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, April 24th, 723 births and 524 deaths were registered in the twenty-two principal urban districts of Ireland as against 650 births and 580 deaths in the preceding period. The annual death-rate in these districts, which had been 24.2, 24.4, and 26.5 per 1,000 in the three preceding weeks, fell to 23.9 per 1,000 in the week under notice, this figure being 8.1 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 24.5 and 23.2 respectively, those in other districts ranging from 4.1 in Drogheda and 9.6 in Ballymena to 40.9 in Lisburn and 48.1 in Antrim, while Cork was 27.4 and 27.4 in Limerick and 15.9 in Limerick. The death-rate as 35.1. The zymotic death-rate in the twenty-two districts averaged 1.3 per 1,000, as against 1.6 per 1,000 in the preceding period.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

- ASHTON-UNDER-LYNE: DISTRICT INFIRMARY AND CHILDREN'S HOSPITAL.—Assistant House-Surgeon. Salary commencing at £50.
- BIRMINGHAM LYING-IN CHARITY.—Honorary District Surgeon.
- BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND VENEREAL DISEASES.—Clinical Assistant. Honorarium at the rate of £2 guineas a year.
- BIRMINGHAM PARISH.—Assistant Resident Medical Officer at the Infirmary. Salary, £104 per annum.
- BURY INFIRMARY.—Junior House-Surgeon. Salary, £80 per annum.
- CAMBERWELL UNION WORKHOUSE.—Locumtenent. Remuneration, 4 guineas a week.
- CANTERBURY: KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum.
- CARDIFF INFIRMARY.—House-Surgeon for the Ophthalmic and Ear and Throat Departments. Honorarium, £30 for six months.
- CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House-Surgeon. Salary, £60 per annum.
- CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician (male). Salary at the rate of £75 per annum.
- CROYDON GENERAL HOSPITAL.—Medical Officer for Department for the Treatment of Diseases of the Ear, Nose, and Throat.
- FARRINGTON GENERAL DISPENSARY AND DYING-IN CHARITY, E.C.—Resident Medical Officer. Salary, £100 per annum.
- FOLKESTONE: VICTORIA HOSPITAL.—House-Surgeon. Salary, £130 per annum.
- HUDDERSFIELD INFIRMARY.—(1) House-Surgeon, (2) Junior House-Surgeon (males). Salary, £100 and £80 per annum respectively.
- JERSEY GENERAL DISPENSARY AND INFIRMARY.—Resident Medical Officer. Salary, £100 per annum.
- LEEDS GENERAL INFIRMARY.—House-Physician. Appointment for six months.
- LEICESTER INFIRMARY.—Assistant House-Physician. Salary at the rate of £50 per annum.
- LONDON THROAT HOSPITAL, Great Portland Street, W.—Assistant Anaesthetist.
- MIDDLESEX COUNTY ASYLUM, Napsbury.—Fourth Assistant Medical Officer. Salary, £160 per annum.
- MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead.—Junior Resident Medical Officer. Honorarium, £53 per annum.
- NEWCASTLE-UPON-TYNE CITY LUNATIC ASYLUM, Gosforth.—Second Assistant Medical Officer. Salary, £140 per annum, rising to £160.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—Medical Officer in charge of Electrical Department. Salary, £50 per annum.

RAINFIELD COUNTY ASYLUM.—Assistant Medical Officer to act as Locum-tenens. Salary, £34s. per week.

ST. MARK'S HOSPITAL FOR PISTYLA, Etc., City Road, E.C. House-Surgeon. Salary, £80 per annum.

SHEFFIELD ROYAL INFIRMARY.—(1) Ophthalmic Surgeon; (2) Assistant House-Physician, salary, £60 per annum.

SOUTHAMPTON: ROYAL HANTS AND SOUTHAMPTON HOSPITAL.—House-Physician. Salary, £100 per annum.

STAFFORDSHIRE EDUCATION COMMITTEE.—Assistant School Medical Inspector. Salary, £250 per annum, rising to £300.

STOCKTON AND THORNABY HOSPITAL.—House-Surgeon (male). Salary, £160 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £75 per annum.

YORK DISPENSARY.—Resident Medical Officer. Salary, £130 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies: At Preston (West), co. Lancaster, and Aberthaw, co. Monmouth.

APPOINTMENTS.

BOYD, Sidney, M.S.Lond., F.R.C.S. Edin. Assistant Surgeon to the Kelvogue Hospital for Children, and Surgeon to the Midway Hospital, Bethnal Green.

DAVIDSON, D. W. M.B., Ch.B.Glasg., Medical Officer of the Workhouse of the Barton-upon-Irwell Union.

DE SOUZA, D. H. M.D., D.Sc., M.R.C.S., L.R.C.P., House-Physician to University College Hospital, Gower Street, W.C.

GREY, H. M., M.R.C.S., L.R.C.P., Resident Assistant Medical Officer of the Portsmouth Parish Infirmary.

ILES, J. H., M.B., District Medical Officer of the St. Thomas Union.

MATLAND, Lytton P., M.B., B.S.Lond., Medical Registrar to Charing Cross Hospital.

PARE, R. S., M.B., B.S.St. And., Medical Officer of Health for the Houghton-le-Spring Rural District.

ROBERTS, Miss, M.D., M.B., B.S.Lond., Resident Assistant Medical Officer of the St. Pancras Workhouse and South Infirmary.

RTHEFORD, James M., M.B., Ch.M., M.R.C.P. Edin., Senior Resident Physician to Brislington House, Bristol.

SHEARER, A. M., M.B., Ch.R. Edin., District Medical Officer of the Newtown and Llandiloos Union.

SHINGLETON-SMITH, L. M.B., B.C.Camb., Medical Officer of the Workhouse of the Brecknock Union.

TEACHER, J. H., M.D.Glasg., Pathologist to the Royal Infirmary, Glasgow.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

CLOGG.—On April 20th, the wife of H. S. Clogg, M.S., F.R.C.S., of 145, Harley Street, W., of a son.

EASTENBROOK.—At Arnprior, Golebridge, Midlothian, on April 26th, the wife of Alex. M. Easterbrook, M.B., Ch.M., of a son.

SHENNAN.—At 95, Marjfield Road, Edinburgh, on March 28, the wife of Theodore Shennan, M.D., F.R.C.S.E., of a son.

MARRIAGES.

GOWLAND—BAER.—On April 19th, at St. Peter's Church, Kirkcaldy, Lowestoft, by the Rev. S. J. C. Lucas, William Percy Gowland, M.D., of Oldham, to Bessie, second daughter of the late Mrs. Baker, of Lowestoft. At home May 15th and 14th.

HANCOCK—SCOTT.—On the 20th April, at St. Peter's, Bournemouth, by the Rev. W. E. Douglas, Vicar of St. Mark's, Vashwood Heath, Birmingham, Arthur Ernest Hancock, M.R.C.S., L.R.C.P., of Salford, Birmingham, to Frances Amy Elizabeth, only child of the late Michael Masall Scott and Mrs. Scott, of Bournemouth.

DEATH.

MARSH.—On April 17th, at his residence, The Leylands, Penn, Wolverhampton, Edward Marsh, M.R.C.S.Lond., L.R.C.P. Edin., in his 45th year.

BOOKS, Etc., RECEIVED.

Oxford Medical Publications. London: H. Frowde, and Hodder and Stoughton, 1939.

Science of Arteries. By E. A. Smith, M.B., Ch.R., F.R.C.S. 2s. 6d.

Tuberculosis of the Nose and Throat. By L. B. Lockard, M.D., St. Louis: C. V. Mosby Medical Book Company, 1939.

A Handbook for Midwives and Maternity Nurses. By C. Berkeley, B.A., M.B., B.Ch., M.R.C.P. and St. New edition. London: Cassell and Co., Limited, 1939. 5s.

Medizinale Berichte über die Deutschen Schutzgebiete Deutsch-Ostafrika, Kamerun, Togo, Deutsch-Südwestafrika, Neu-Guinea, Karolinen, Marshall-Inseln, und Samoa, für das Jahr 1936-7. Herausgegeben vom Reichs-Kolonialamt. Berlin: E. S. Mittler und Sohn, 1939. 7.50.

Operative Nursing and Technique. By C. P. Childie, B.A., F.R.C.S. London: Baillière, Tindall and Cox, 1939. 4s.

Tuberculin in Diagnosis and Treatment. By Drs. Randozier and Roepke. Translated from second German edition by E. C. Morland, M.B., B.Sc., M.D. London: G. Bale, Sons and Danielsson, Limited, 1939. 7s. 6d.

Aids to Medicine. By B. Hudson, M.D., M.R.C.P. London: Baillière, Tindall and Cox, 1939.

Kompendium der Reagenzien. Von Dr. H. E. Schmidt. Zweite Auflage. Berlin: A. Hirschwald, 1939. M. 3.

Le Diabète Sucré. Par R. Lépine, Paris: F. Alcan, 1939. Fr. 15.

Principles and Practice of Operative Dentistry. By J. S. Marshall, M.D. Third edition. Philadelphia and London: J. B. Lippincott Company, 1938.

The Influence of Heredity on Disease, with Special Reference to Tuberculosis, Cancer, and Diseases of the Nervous System. A Discussion opened by Sir W. S. Churchill, Bart., K.C.B., M.D., Sir W. B. Gowers, M.D., F.R.S., A. Latham, M.D., and E. P. Hasford, M.D. London: Longmans, Green and Co., 1939. 4s. 6d.

Differential Diagnosis of Bacteria and Practical Bacteriology. By E. P. Minett, M.D., D.P.H., M.R.C.S., L.R.C.P., F.C.S. London: Baillière, Tindall and Cox, 1939. 2s. 6d.

Die Selbstmorde. Von Dr. A. Brosch, Leipzig und Wien: F. Denticke, 1939. K. 7.20.

* In forwarding books the publishers are requested to state the selling price.

DIARY FOR THE WEEK.

TUESDAY.

ROYAL SOCIETY OF MEDICINE.—(1) PHYSIOLOGICAL AND PHARMACOLOGICAL SECTION, 20, Hanover Square, W., 4.30 p.m.—Paper:—Dr. Hale White and Dr. Erye: Vaccine Treatment.

THURSDAY.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, N., 4.15 p.m.—Clinical Meetings.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, W.—8 p.m., Card Specimens. 8.30 p.m., Papers:—(1) Dr. George Carpenter: Tubercle of the Choroid; (2) Messrs. Mackenzie Davidson and A. Lawson: A Case of Spring Cataract Treated and Cured by Radial Incision; (3) Mr. R. R. Cruise: The Abuse of Atropin in Refraction; (4) Mr. S. Mayon: On the Disappearance of the Iris from the Pupillary Area, following Injury; (5) Mr. W. H. H. Jessop: The Committee of the International Committee on the Unification of the Notations of Visual Acuity, and of the Meridians of Astigmatism.

ROENTGEN SOCIETY, 20, Hanover Square, 8.15 p.m.—Papers:—(1) Dr. G. H. Rodman: An Illustrated Description of the Historical Collection of Plates recently deposited at the Albert and Victoria Museum. (2) Mr. J. H. Gardiner: X Rays Produced at a Magnetically Deflected Cathode Focus.

FRIDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C., 5 p.m.—MUSEUM DEMONSTRATION by Professor Keith on specimens illustrating Malformations of the Neck.

ROYAL SOCIETY OF MEDICINE: LARYNGOLOGICAL SECTION, 20, Hanover Square, 5 p.m.—Cases and Specimens.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, Hammersmith, W., 8.30.—Papers:—(1) Dr. S. A. Bontor: The State Regulation of Marriage; (2) Mr. N. Bishop Hatman: A New Test for Vision.

SATURDAY.

ROYAL SOCIETY OF MEDICINE: OTOLOGICAL SECTION, 20, Hanover Square, 10 a.m.—Cases and Specimens.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Lectures: Tuesday, 3.45, The Larynx; Friday, 3.45, The Larynx.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Thursday, 4 p.m., Demonstration on Cases of Cerebral Tumour in Children.

LONDON SCHOOL OF CLINICAL MEDICINE, St. James's Hospital, Greenwich.—Daily arrangements: Monday, 10 a.m., Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m., Thursday, and noon, Friday; Skin, at noon and 4 p.m., Thursday, and noon, Friday; Eye, 11 a.m., Wednesday and Saturday; Radiography, 4 p.m., Thursday.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chancery Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Friday, Eye. Lectures at 5.15 p.m. each day will be given as follows: Monday, The Treatment of Bronchopneumonia; Tuesday, Foreign Eruptions; Wednesday, The Beneficial Effects of Pregnancy on Uterine Fibroids; Thursday, The Feeble-Minded and Their Care.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 5.30 p.m., The Significance of Paralysis of the Cranial Nerves. Friday, 5.30 p.m., Syphilitic Affections of the Nervous System.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m., Surgical Out-patient; Tuesday, 2.30 p.m., Medical Out-patient; Nose, Throat and Ear; X Rays; 4.30 p.m., Medical In-patient. Tuesday, 10 a.m., Medical Out-patient; Clinic, 2.30 p.m., Operations; Clinics: Surgical, Gynaecological, Wednesday, 2.30 p.m., Medical Out-patient, Skin, and Eye Clinics. Thursday, 2.30 p.m., Gynaecological Operations; Clinics: Medical Out-patient; Surgical Out-patient; X Rays; 5 p.m., Medical In-patient. Friday, Clinics: 10 a.m., Medical Out-patient; 2.30 p.m., Operations; Clinics: Medical Out-patient, Eye; 5 p.m., Medical In-patient.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
MAY.			
2 SUNDAY ..		MAY (Continued).	
3 MONDAY ..	NORTHAMPTONSHIRE DIVISION, <i>South Midland Branch</i> , Clinical Meeting, Northampton General Hospital, 2.30 p.m.; Luncheon, Franklin's Restaurant, 1.30 p.m.	8 SATURDAY ..	{ ULSTER BRANCH, Spring Meeting, Londonderry.
4 TUESDAY ..	ST. PANCRAS AND ISLINGTON DIVISION, <i>Metropolitan Counties Branch</i> , Midland Grand Hotel, King's Cross, 9 p.m.	9 SUNDAY ..	
	DORSET AND WEST HANTS BRANCH, Spring Meeting, Dorset County Hospital, Dorchester, 3 p.m.; Luncheon, King's Arms Hotel, Dorchester, 1.30 p.m.; Tea, The Gables, 5.15 p.m.	10 MONDAY ..	{ WARRINGTON DIVISION, <i>Lancashire and Cheshire Branch</i> , Annual Meeting, Infirmary, Warrington, 4.30 p.m.
5 WEDNESDAY ..	SOUTH-EASTERN OF IRELAND BRANCH, Annual Meeting, also meeting of Branch Council and Local Division, Victoria Hotel, Kilkenny, 5.15 p.m.	11 TUESDAY ..	{ LANCASHIRE AND CHESHIRE BRANCH, General Meeting, New Manchester Royal Infirmary.
	BEDFORD AND HERTS DIVISION, <i>South Midland Branch</i> , County Hospital, Bedford, 3 p.m.	12 WEDNESDAY ..	{ RICHMOND DIVISION, <i>Metropolitan Counties Branch</i> , Annual Meeting, Royal Hospital, Richmond, 8.30 p.m.
6 THURSDAY ..	LAMBETH DIVISION, <i>Metropolitan Counties Branch</i> , Annual General Meeting, Beth'cm Royal Hospital, 4 p.m.	13 THURSDAY ..	
	WESTMINSTER DIVISION, <i>Metropolitan Counties Branch</i> , Criterion Restaurant, Piccadilly, W., Dinner, 7.30 p.m.; Business, 8.30 p.m.; Paper, 9 p.m.	14 FRIDAY ..	
	DUNDEE BRANCH, Annual Meeting, Royal Infirmary, Dundee, 3.15 p.m.; Clinical Meeting, 4 p.m.; Dinner, Queen's Hotel, 6 p.m.	15 SATURDAY ..	{ CEYLON BRANCH, Ordinary Meeting, Colonial Medical Library, 2.30 p.m.
7 FRIDAY ..	SWANSEA DIVISION, <i>South Wales and Monmouthshire Branch</i> , 8.15 p.m.	16 SUNDAY ..	
		17 MONDAY ..	
		18 TUESDAY ..	{ CARDIFF DIVISION, <i>South Wales and Monmouthshire Branch</i> , Annual Meeting, Cardiff.
		20 THURSDAY ..	
		21 FRIDAY ..	
		22 SATURDAY ..	
		23 SUNDAY ..	
		24 MONDAY ..	
		25 TUESDAY ..	{ HAMPSHIRE DIVISION, <i>Metropolitan Counties Branch</i> .

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent

by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 8TH, 1909.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

British Medical Association.

MATTERS REFERRED TO DIVISIONS.

OPHTHALMIA NEONATORUM COMMITTEE REPORT.

The following report was approved by the Central Council at its meeting on April 28th, and the conclusions and recommendations referred to the Divisions for their consideration:—

INTRODUCTORY.

The Section of Ophthalmology at the Annual Meeting of 1907, at Exeter, having considered a paper on an enquiry into the cause of blindness in 350 inmates of a blind school, by Mr. Simeon Snell, then President-elect of the British Medical Association, passed the following resolution:—

That in the opinion of the Section of Ophthalmology, the time has come for the British Medical Association to take action for the prevention of Ophthalmia Neonatorum.

This resolution having been considered by the Council of the Association, a Committee was appointed to investigate and report upon the subject, and subsequently, upon the recommendation of the Committee, the following Societies were invited to appoint additional members:—

The Royal Society of Medicine (Obstetrical and Gynaecological Section and Diseases of Children Section).

The Ophthalmological Society.

Incorporated Society of Medical Officers of Health.

The co-operation of the Central Midwives Board was also invited.

The Committee, thus constituted, has consisted of the following:—

- Sydney Stephenson, F.R.C.S., Ophthal. Surg.
Evelina Hosp., Queen's Hosp. for Children and Queen Charlotte's Hosp. (Chairman of the Committee).
- R. C. Buist, M.D., Gynaecologist, Dundee Hosp. (Vice-Chairman).
- Simeon Snell, D.Sc. (Hon.), F.R.C.S. Edin., Ophthal. Surg. Sheffield Royal Infirmary and to School for Blind, Prof. of Ophthal. Univ. Sheffield, Cons. Ophthal. Surg. Moxhoro' Hosp., President of the British Medical Association.
- J. A. Macdonald, M.D., Phys. Taunton and Somerset Hosp., Chairman of Representative Meetings of the British Medical Association.
- Edmund Owen, LL.D., F.R.C.S., Surg. French Hosp., Cons. Surg. St. Mary's Hosp. and Hosp. for Children, Chairman of Council of British Medical Association.
- Edwin Rayner, M.D., F.R.C.S., Cons. Surg. Stockport Infirmary, Treasurer of the British Medical Association.
- C. J. Martin, M.D., F.R.S., Director Lister Inst. Preventive Medicine, Chairman of Science Committee of British Medical Association.
- C. E. Shaw, M.D., Asst. Surg. Belfast Ophthal. Hosp., Lect. Ophthal. Queen's Coll. Belfast.
- T. Arthur Helme, M.D., Hon. Phys. Northern Hosp. for Women and Children, Manchester.
- Henry Russell Andrews, M.D., Asst. Obstet. Phys. London Hosp., Lect. Midw. and Dis. Wom. and Teacher Pract. Midw. London Hosp. (representing the Royal Society of Medicine (Obstetrical and Gynaecological Section)).
- George Carpenter, M.D., Phys. Queen's Hosp. for Children, Medical Officer of Health of Beckenham (representing the Royal Society of Medicine (Diseases of Children Section)).
- Arnold Lawson, F.R.C.S., Surg. Royal London Ophthal. Hosp., Moorfields (representing the Ophthalmological Society).
- Edward Sergeant, M.R.C.S., M.O.H. Lancs. County Council (representing the Incorporated Society of Medical Officers of Health).

Upon the consideration of its reference the necessity was apparent to the Committee of having before it a full statement of the known facts affecting the subject, and the Chairman kindly undertook the preparation of a Memorandum for this purpose.

The Memorandum so prepared is printed as an Appendix to this Report, and to it are added suggestions furnished to the Chairman by members of the Committee, and documents issued by responsible bodies containing evidence upon the subject.

The Committee must express its sense of the great value of the work done by Mr. Sydney Stephenson for the Association and the profession in the preparation of his Memorandum.

The Conclusions of the Committee as to the prevalence of Ophthalmia Neonatorum are stated in Section I. of the following Report, and Section II. contains the Recommendations of the Committee as to preventive methods. These include instructions which it is considered might with advantage be issued to midwives and nurses, and suggestions which the Committee thinks should be submitted for the assistance of medical practitioners.

Before action is taken to carry out the recommendations of the Report, it appears to the Committee desirable that it should be referred for the consideration, both of the Divisions of the Association and of the Sections of Ophthalmology and Obstetrics, at the Annual Meeting at Belfast, and the Council of the Association is being advised accordingly.

Conclusions and Recommendations.

I. Prevalence.

(Pars. 2-28.)

1. Ophthalmia Neonatorum accounts for upwards of 10 per cent. of all cases of blindness.

2. Cases of ophthalmia show a slight but steady decrease so far as can be judged by returns from British Lying-in Hospitals and Departments, and Eye Hospitals.

3. Ophthalmia Neonatorum is still (as it has been for many years) the cause of at least one-third of the blindness in inmates of British Blind Schools.

4. Cases of ophthalmia without adequate treatment have been found to occur amongst cases attended by medical practitioners, as well as amongst those attended by midwives.

II. Prevention.

(Pars. 29-88.)

A. Administrative and Educative Measures.

(a) *Notification.*—It is advisable to urge upon the Local Government Board that notification of Ophthalmia Neonatorum should be compulsory.

(b) *Inspection and Treatment.*—It should be the duty of the Local Sanitary Authority, upon receipt of notification, to enquire as to the facilities for treatment, and, if these be deficient, to arrange for the efficient treatment of the disease. The treatment of infantile Ophthalmia should not involve separation of mother from child if this can be avoided.

(c) *Bacteriological examinations.*—It is suggested that the bacteriologic examination of vaginal or conjunctival discharges should be undertaken, free of charge, by the Local Sanitary Authority, when such a request is made by a qualified medical practitioner.

(d) *Educative measures.*—Notices regarding the dangers of Ophthalmia Neonatorum should be issued by Local Sanitary Authorities. They should also be exhibited in Post Offices and other public places. Such notices should be periodically distributed by the Local Supervising Authority to every midwife whose name appears on the roll of midwives for the particular area concerned.

(e) *Central Midwives Board.*—The presence of purulent vaginal discharges should be included by the Rules of the Midwives Board among the conditions for which medical help should be summoned.

(f) *Maternity Hospitals.*—It is recommended that among the members of the medical staff every Maternity Hospital should include an ophthalmic surgeon. The maintenance of accurate records concerning Ophthalmia Neonatorum is suggested as a means of keeping the disease constantly under the notice of all concerned.

B. Medical Measures.

DIRECTIONS TO MIDWIVES AND NURSES.

1.—Treatment of Cases presumably normal as regards danger of Ophthalmia Neonatorum.

Child.—In every case in which a medical practitioner is not in attendance the midwife or nurse should adopt the following routine procedure:—

- (i) Directly the head is born, and before the eyes are opened the lids and the surrounding skin should be wiped clean on each side with a separate piece of sterilized wool.
- (ii) Nothing should be dropped into the baby's eyes.
- (iii) The face and the body should not be washed in the same water. Fresh water should be taken for each.

II.—Treatment of Cases in which the Mother suffers from a purulent vaginal discharge.

(a) *Mother.*—If there is a purulent vaginal discharge, whether in pregnancy or labour, medical help must be obtained.

(b) *Child.*—If a doctor is not already present when the child is born, he should be sent for immediately, in order that any necessary application to the child's eyes may be made.

III.—Procedure where an affection of the child's eyes is observed.

If there is any inflammation of the baby's eyes, however slight, shown by redness, swelling, or discharge, the midwife or nurse must explain that the case is one in which the attendance of a registered medical practitioner is required, and medical help must be obtained in accordance with the Rules of the Central Midwives Board.

SUGGESTIONS TO MEDICAL PRACTITIONERS.

In view of the conflicting opinions regarding the precautions that should be observed by practitioners for the prevention of ophthalmia neonatorum, the adoption is advised of the following simple measures, which, it is believed, are in accordance with our most recent knowledge and experience:—

A.—Presumably non-infected Confinements.

(a) *Mother.*—A policy of non-interference.

(b) *Child.*—The practitioner should make it his business to see that as soon as possible after the head is born, and before the eyes are opened, the eyelids are cleansed with sterilized wool, and that separate water is used to wash the baby's face and body.

B.—Confinements where infection is known or suspected to exist.

a. *Mother.*—Steps should be taken to examine bacteriologically any morbid discharge from the genito-urinary passages, and appropriate treatment should be adopted for the underlying condition.

b. *Child.*—The baby's eyelids should be carefully wiped free from secretion with sterilized wool, and a single drop of a one per cent. solution of silver nitrate should be placed in each of the baby's eyes. The two per cent. solution of silver nitrate, originally recommended by Professor Credé, although most efficient in preventing ophthalmia, has been shown to be of a more irritating nature than the liquid now recommended for use. There is some evidence to prove that silver vitelline (known commercially as "Argyrol") used as a twenty-five per cent. solution, is a non-irritating and efficient preventive of ophthalmia. But so far it has not been employed on a sufficiently extensive scale to justify a more dogmatic statement with regard to its value.

The foregoing suggestions deal only with the prevention of ophthalmia neonatorum. When once the disease has broken out, it is impossible to exaggerate the importance of prompt and efficient curative treatment.

APPENDIX.

MEMORANDUM ON OPHTHALMIA NEONATORUM.

1. In accordance with the request of the Committee, the writer has prepared and now begs to present a Memorandum on Ophthalmia Neonatorum. Two aspects of this many-sided subject only need be discussed in this place, viz., I., the prevalence; and II., the prevention of the malady.

I. Prevalence.

2. Most of the stock figures that deal with the incidence of ophthalmia are derived from the Continent of Europe, and date from pre-antiseptic days. Although they are interesting, especially for purposes of comparison, yet these statistics are now a matter of more or less ancient history. It has accordingly seemed to the writer that the purposes of the Committee might perhaps be better served if his Memorandum dealt, in the main, with British figures, of which a sufficiency has been placed on record during the last few years.

3. The British figures have been derived from several sources, of which the most important are:—

- (a) Census Returns and Official Reports.
- (b) Lying-in Hospitals.
- (c) Poor Law Infirmarys and Workhouses.
- (d) Ophthalmic Hospitals.
- (e) Blind Schools and Asylums.

(a) Census Returns and Official Reports.

4. Ophthalmia neonatorum is by far the most frequent cause of blindness in children.

5. The Royal Commission on the Blind, the Deaf, and the Dumb, which reported to both Houses of Parliament in the year 1889, estimated that about 7,000 persons in the United Kingdom had lost their sight from ophthalmia neonatorum. It has been estimated by Mr. Stephen Mayou (*Medical Press and Circular*, December 16, 1908), from the census statistics for England and Wales that there are now about 3,000 children under the age of fifteen years blind from ophthalmia neonatorum.

6. It was shown by the United States census for the blind and deaf (1900), that of the totally or partially blind, 7,369 had become so before the completion of the first year of life. Of this number, ophthalmia neonatorum was probably the cause of the blindness in 25.02 per cent. (*Journal American Medical Association*, June 15, 1907). In the census taken by the Commission for the Blind in the State of New York in 1906, there were found to be 6,200 persons. Of this number, 509 were under one year of age. Of the 3,306 blind in Massachusetts, more than 20 per cent. had lost their sight before their fifth year. It was estimated that nearly one-half of the whole number had become blind as the result of ophthalmia neonatorum.

7. The most trustworthy means of estimating the prevalence of ophthalmia neonatorum (apart from its results) would obviously be by comparing the number of cases with the total number of births. In Great Britain, an accurate estimate of the kind would be possible only if ophthalmia neonatorum were included in the list of notifiable diseases, which is not, as yet, the case. A few figures from foreign countries may not be out of place in this connection. According to Cohn (*Centralbl. f. prakt. Augenheilkunde*, April and May, 1895), during the year 1804, 12,000 births were registered in the city of Breslau, and of that number at least 250 infants, or 2.35 per cent., were attacked by ophthalmia. Widmark (*ibidem*, September, 1895) showed nearly the same incidence (2.27 per cent.) among the babies born in Stockholm during the year 1884. In Mecklenburg-Schwerin, according to Schatz (*Deutsche med. Wochenschrift*, 1884, No. 1), among 18,000 babies born in the year 1882, 90, or 0.5 per cent. were affected. As regards Switzerland, Heim reports (*Inaug.-Dissert. Universität Bern*, 1895) that in the year 1892, ophthalmia attacked 0.45 per cent. of the 83,596 babies born alive. Alvarado (*Oftalmia Purulenta de los Recien Nacidos*, 1904), tells us that in the year 1897, there were 2,292 births in Valladolid, Spain, and 67 cases of ophthalmia, that is, 2.933 per cent. Alvarado calculated that the prevalence for the whole of Spain in the year 1892 amounted to 1.236 per cent. of the total births.

8. With respect to London, Mr. N. B. Harman (*Preventable Blindness*, 1907) has calculated that "amongst every 100 children born, one child suffers from purulent inflammation of the eyes in the first few days of life, and that of every 2,000 children born, one child is blinded or partially blinded by this disease."

9. Dr. Edward Sergeant, who represents the Society of Medical Officers of Health on our Committee, sends the following information:—

"The occurrence of the disease under consideration seems to be very limited in the County Palatine of Lancaster as shown by information collected under the Midwives Act. The midwives under supervision in my district attend something like 20,000 births per annum, and during the last two years—1907 and 1908—very few cases have come to our knowledge where inflammation of the eyes has been noticed during the ten days during which the midwives remain in attendance. The inspectors of midwives inform me that during the two years they have personally examined about 400 newly-born babies, and in only eight cases has inflammation of the eyes been noticed.* As the result of supervision and instruction the majority of the midwives now take the greatest care in this matter, and the inspectors specially impress upon the women the necessity of at once obtaining medical assistance if the eyes are in any way affected."

(b) Lying-in Hospitals.

10. The figures quoted below were collected by the writer in the year 1907, from six British lying-in charities:—

Institution.	Observer.	Period.	Births.	Ophthalmia neonatorum.	Ophthalmia percentage of
Queen Charlotte's Hospital, London.	—	1896-1906	12,644	42	0.33%
Rotunda Hospital, Dublin.	Dr. E. Hastings Tweedy.	1903-06	5,158	8	0.15%
City of London Hospital.	Dr. Clement Goulson.	1901-06	3,582	4	0.11%
British Lying-in Hospital, London.	Dr. G. Drummond Robinson	1898-1906	7,090	3	0.04%
Maternity Hospital, Glasgow.	Dr. R. Jardine.	1906	574	4	0.69%
Maternity Hospital, Clapham, London.	Dr. Annie M. Call.	1889-1906	5,817	18	0.30%
Totals			35,815	79	0.22%

The figures given above amount in the aggregate to 35,815 births, and of that number, 79 (or 0.22 per cent.) developed ophthalmia. This low proportion is due partly to the aseptic and antiseptic precautions with which modern medicine has surrounded childbed, and partly to the universal adoption of some more or less efficient method of prophylaxis. The figures obviously can convey no idea as to the prevalence of ophthalmia in the outside population. They rather show that by the universal adoption of suitable measures the percentage of ophthalmia neonatorum could be reduced practically to the vanishing point.

11. Mr. Stephen Mayou (*Practitioner*, 1908, p. 131) managed to obtain returns from two hospitals not included in the above table, namely, the Birmingham Lying-in Charity, and the General Lying-in Hospital, York Road, London. In the former, among 1,361 births, the morbidity of ophthalmia was 0.07 per cent., and in the latter, among 10,369 births, 0.39 per cent.

(c) Poor Law Infirmarys and Workhouses.

12. Statistics from Poor Law institutions resemble to some extent those from lying-in hospitals, although the parochial patients, as a rule, belong to a lower social class,

* This 2 per cent., however, calculated on the 2,318,529 births registered in the United Kingdom during 1896 and 1907 would mean 46,370 cases of ophthalmia neonatorum. Assuming damage to the cornea in one-fifth of the patients, the disease would be responsible for partial or complete blindness in no fewer than 9,274 children.

and the parochial arrangements, especially in the provinces, are in certain instances not so good as those of the average lying-in hospital. At the same time the Poor Law wards are under medical control, and the labours are attended by qualified nurses.

13. Two sets of figures are given below. The first was obtained by the writer in the year 1896 from the maternity wards of the London infirmaries and workhouses, and dealt with the two years 1894-1895. The second, constructed in 1907 from returns from 33 provincial institutions, included almost all the English and Welsh cities of which the population exceeded 100,000. They dealt with various periods, but were in every instance brought up to the year 1906. The chief value of the figures is in showing the improvement that has taken place in the prevalence of ophthalmia during a period that does not exceed eleven years:—

	Births.	Ophthalmia neonatorum.	Percentage.
London (30 returns) ...	4,884	176	3.605
Provinces (53 returns) ...	17,579	128	0.72

(d) Ophthalmic Hospitals.

14. Figures showing the proportion borne by cases of ophthalmia neonatorum to other disease of the eye have a restricted value only, inasmuch as they apply only to the so-called "hospital class," and as a rule, deal only with the more severe types of disease.

15. Mr. Stephen Mayou (*Practitioner*, 1908, p. 128) has collected statistics from the Moorfields Hospital, London, and also from the Central London Ophthalmic Hospital, with results given in the following table:—

Hospital.	Period.	Total patients.	Ophthalmia neonatorum.	Percentage.
Moorfields ...	1890-1906	301,458	502	0.166
C.L.O.H. ...	1904-06 (August)	26,409	57	0.15
Totals ...		327,867	559	—

16. It may be stated that amongst 5,995 cases of ophthalmia neonatorum applying for relief to eye hospitals at home and abroad, the percentage of lost or damaged eyes was 22.85.

17. The figures given below regarding the Manchester Eye Hospital show that between the years 1876 and 1885 there was a reduction in the cases of ophthalmia amounting to about two-thirds. Figures from the Glasgow Eye Infirmary, compiled by Dr. Thomas Reid, covering the ten years 1887-1896, point to a similar diminution in the disease:—

Manchester.			Glasgow.		
Period.	Patients.	Ophthalmia.	Period.	Patients.	Ophthalmia.
1876 ...	7,477	293	1887 ...	9,774	99
1877 ...	8,203	313	1888 ...	10,281	82
1878 ...	8,391	413	1889 ...	11,324	83
1879 ...	8,573	270	1890 ...	11,753	83
1880 ...	10,262	423	1891 ...	12,061	61
1881 ...	10,919	400	1892 ...	12,261	60
1882 ...	12,061	339	1893 ...	13,438	93
1883 ...	14,702	358	1894 ...	15,267	76
1884 ...	15,427	310	1895 ...	16,292	125
1885 ...	15,184	198	1896 ...	18,111	113
Totals ...	112,421	3,517	Totals ...	130,532	911

18. Dr. Leslie Buchanan (*Scottish Medical and Surgical Journal*, November, 1902) has compared the percentage-incidence of ophthalmia at the Glasgow Eye Infirmary over the several decades from the year 1860. His figures are as follows:—1860-1869, ophthalmia formed 1.3 per cent. of all eye diseases; 1870-1879, 1.01 per cent.; 1880-1889, 0.76 per cent.; while the last decade to 1899 showed a further decrease to 0.5 per cent. Curiously enough, by means of figures drawn from the same hospital, Dr. Ernest Thomson (*Ophthalmoscope*, 1908, p. 8) had endeavoured to show that ophthalmia cases are not diminishing to any marked extent in Glasgow. His figures, which covered the thirteen years 1894 to 1906 inclusive, showed a mean percentage for the first six years of 0.568, and for the last seven years of 0.497. On the other hand, Dr. John Wharton (*Ophthalmoscope*, January, 1909), has re-examined the statistics from the Manchester Royal Eye Hospital, and he concludes as the result of an elaborate analysis covering the years 1870 to 1907, "that so far as the Manchester Royal Eye Hospital is concerned, ophthalmia neonatorum cases are diminishing in frequency." Wharton's figures show that of 7,108 cases of ophthalmia neonatorum, the cornea of one or both eyes was involved in 1,257 instances, or 17.6 per cent.

(e) Blind Schools and Asylums.

19. Practically all the figures so far brought forward tend to show a diminution in the morbidity of ophthalmia neonatorum. The same conclusion, unfortunately, does not apply to the frequency of blindness, partial or complete, as the result of the disease. A glance at the following figures, collected by various writers from British schools and asylums for the blind, will attest the truth of this generalization.

20. (1) Dr. Emrys-Jones (*The Ophthalmia Neonatorum*, 1881) among 72 candidates presented for admission to Henshaw's Blind Asylum, Manchester, traced blindness to ophthalmia in 75 per cent.

21. (2) In answer to questions about ophthalmia neonatorum the Ophthalmological Society of the United Kingdom received replies from 23 institutions for the blind (*Transactions*, vol. IV, 1884). Returns from four of the asylums, the answers from which could be depended on, showed ophthalmia to be responsible for blindness in from 30 per cent. to 41 per cent. of the inmates (average, 34 per cent.).

22. (3) Mr. Simeon Snell (*British Medical Journal*, November 2nd, 1907) enquired into the causes of blindness in 321 inmates of the Sheffield School for the Blind, who are almost without exception below the age of 16 years, and found that ophthalmia neonatorum accounted for by far the largest number, namely, 136, or 42.36 per cent. of the total. The conclusion was, that "a careful consideration of the records for successive years does not even point to a diminution in more recent times." "The ravages of this disease," continued Mr. Snell, "are therefore clearly shown to be still rampant."

23. (4) Between the years 1903 and 1906, Mr. N. B. Harman (*Preventable Blindness*, 1907) examined 363 children in the schools for the blind maintained by the London County Council. Of the total number he found that 132, or 36.36 per cent., owed their condition to infantile ophthalmia. Mr. Harman declared that if certain fallacies were given due weight "the percentage of blindness from ophthalmia neonatorum would exceed 40 per cent."

24. (5) Mr. Stephen Mayou (*Practitioner*, 1908, p. 130) ascertained by enquiry from the medical officers attached to British Blind Schools (whether residential or otherwise is not stated) that of 2,569 inmates, all below the age of eighteen years, 706, or 27.48 per cent., were blind from ophthalmia neonatorum.

25. The figures quoted above may be tabulated as follows:—

Name.	Number.	Blinded by Ophthalmia.
(1) Emrys-Jones ...	72	75.0 per cent.
(2) Ophthalmological Society ...	—	34.0 ..
(3) Snell ...	321	42.36 ..
(4) Harman ...	363	36.36 ..
(5) Mayou ...	2,569	27.48 ..

26. To the foregoing list may be added some recent figures given by the Committee on Ophthalmia neonatorum of the American Medical Association (*Ophthalmoscope*, 1908, p. 427). Returns from ten blind schools, representing eight States with the Province of Ontario, showed that of new admissions (242) during the autumn of 1907, ophthalmia neonatorum accounted for 24·38 per cent. Again, figures from the Pennsylvania School for the Blind for the eight years, 1900 to 1907 inclusive, brought out the fact that of 303 admissions, 101, or 33·3 per cent., had been blinded by ophthalmia neonatorum.

The following extract from an address on "The Prevention of Early Blindness," by Dr. George Foggia (Principal Medical Officer, Newcastle-upon-Tyne Education Committee, and Ophthalmic Surgeon, Royal Victoria School for the Blind), further illustrates the same point:—"It was only seven years ago that the Committee appointed an honorary ophthalmic surgeon to the institution, and invited me to accept the position. Not till then had it been possible to give any detailed analysis of the causes of the blindness which so unfortunately made the institution necessary. For the past six years I have returned an annual summary of the cases and, as far as ascertainable, their causes, and the first thing to strike anyone in glancing at these records is the melancholy parallel found here with the experience of other similar institutions, viz., the extraordinary number of cases in which blindness has supervened in the earliest days of infancy. Thus in the successive years ophthalmia of the newborn claimed the following percentages of all our cases:—

1902	34·6
1903	39·1
1904	37·1
1905	35·8
1906	36·4
1907	31·6

or an average of 36·1 per cent."

27. While disclaiming the least desire to underrate the value of the figures just quoted, the writer would remark that certain more or less obvious fallacies should be borne in mind when attempting to estimate their true value. First, we have to consider the trustworthiness or the reverse of the returns upon which the figures are based. Mr. Snell's figures are almost free from objection on this score, since practically all the inmates of the Seafie institution were examined by Mr. Snell himself. On the other hand, the relatively small percentage given by Mr. Mayou can probably best be explained not by an actual diminution in the results of the disease, but by laxity in some of the medical returns furnished by various blind schools, and, indeed, Mr. Mayou himself comments upon the great variations in the statistics. Secondly, it is obvious that the blind schools, which are intended for young people, cannot give information as to the proportion borne by blindness caused by ophthalmia neonatorum to blindness in general. Again, a correction may possibly be found necessary when the results of the operations in recent years of the Midwives' Act are ascertainable. In Manchester, at least, there is evidence that the system of notification by registered midwives has already secured earlier attention to cases (see Schedule). Lastly, there are statistical fallacies that must always surround the ratio borne by the number of pupils to the total population of a given locality.

Conclusions.

28. The following conclusions appear to be justified by the facts adduced in the foregoing pages:—

1. That ophthalmia neonatorum accounts for upwards of 10 per cent. of all cases of blindness.
2. That ophthalmia causes more or less damage to sight in about one-fifth of the cases brought to hospital for treatment.
3. That so far as can be gathered from Lying-in Hospitals and Departments and from Eye Hospitals in this country, the number of cases of ophthalmia shows a slight but steady decrease.
4. That blindness due to ophthalmia, as estimated by returns from British blind schools and asylums, manifests no particular diminution during the last few years. Ophthalmia neonatorum is still, as it has been for many years, the cause of at least one-third of the blindness in all inmates below the age of sixteen or eighteen years.

II. Prevention.

29. The various means that have been suggested or
SUPP. 2

adopted for the prevention of infantile ophthalmia may be considered under two heads:—

1. Administrative measures.
2. Medical measures.

Whatever steps be adopted, co-operation between obstetricians, medical officers of health, ophthalmic surgeons, and general practitioners is of the utmost importance.

1. Administrative Measures.

30. (a) *Notification*.—The obligatory notification of ophthalmia neonatorum is a measure that has often been advocated. It has been adopted in Switzerland, Germany, Austria, and France. Moreover, in consequence of the action taken some twenty years ago by the American Ophthalmological Society, the notification of ophthalmia has been made obligatory in at least fifteen States, the population of which amounts to upwards of 38,000,000 (*Transactions American Ophthalmological Society*, 1908, p. 742).

31. The outstanding advantages of notification are: (1) the arousing of the public interest in a disease believed by the authorities to be important enough to call for notification; (2) the possibility of securing proper treatment for the baby's eyes at the earliest moment; (3) the safeguarding of others from infection; and (4) the compilation of exact statistics with regard to the prevalence and results of infantile ophthalmia.

32. In the United Kingdom the machinery for notification already exists, and ophthalmia could probably be scheduled among the so-called "infectious diseases" by a simple stroke of the administrative pen. Section 7 of the Infectious Disease (Notification) Act, 1889, provides that "the Local Authority of any district to which the Act extends, may, from time to time, by a resolution passed at a meeting of such Authority . . . order that this Act shall apply in their district to any infectious disease other than a disease specifically mentioned in this Act." The approval of the Local Government Board is necessary to such an order of the Local Authority. The adoption of notification was rendered compulsory on every urban, rural, and port Sanitary Authority throughout England and Wales by the Infectious Disease (Notification) Extension Act, 1899.

33. The writer ventures to suggest that it would be a most desirable thing to render ophthalmia neonatorum notifiable under the Infectious Disease (Notification) Acts, 1889 and 1899. It may be noted that Lord Robert Cecil, speaking in the House of Commons on March 17th, 1908, suggested that ophthalmia neonatorum might be rendered notifiable, by circular or otherwise, by the Local Government Board.

34. Notification should be carried out within a certain number of hours after the baby's eyes have been observed to be red or to run with matter, and the responsibility of reporting the disease should devolve upon the medical man, midwife, nurse, or other person in attendance upon the mother.* Any failure to comply with the law should entail an adequate penalty, monetary or otherwise.

35. The Local Sanitary Authority is clearly indicated as the body to which the disease should be notified. Under the Midwives Act, 1902, "Every council of a county or county borough throughout England and Wales shall be the local supervising authority over midwives within the area of the said county or county borough." From the present standpoint, the convenience of this arrangement is obvious.

36. Mr. J. Jameson Evans (*Birmingham Medical Review*, December, 1907, p. 291) has suggested that the Local Authority should be prepared to conduct bacteriological examinations of vaginal or conjunctival discharges, free of charge, when requested to do so by a medical practitioner. The suggestion has been endorsed by the Committee on ophthalmia neonatorum of the American Medical Association, which reported in June, 1908. In England such bacteriological work is already undertaken by many Local Sanitary Authorities as regards diphtheria, tubercle, and typhoid fever, so there would probably be no great difficulty in getting ophthalmia, and, possibly, purulent vaginitis, included in the list.

37. In a case where damage to sight followed neglect to notify, or to treat, ophthalmia, there would probably be no difficulty in getting the National Society for the Prevention of Cruelty to Children to undertake a prosecution under the

* Onus now thrown by law upon the medical practitioner, head of family, nearest relative, any person in charge of patient, or, in default of those, the occupier of the building.

Children Act, 1908, in addition to any legal action that might be taken by the Local Sanitary Authority under the Infectious Diseases (Notification) Act, 1889.

38. The objection has been raised that notification would imply a slur upon the parents' morality. Such an argument (if it amounts to as much) might carry greater weight if ophthalmia neonatorum resulted exclusively from a gonococcal infection, but everybody now recognizes that such is not the case. According to statistics compiled by the writer from the practice of 41 observers, amounting, in all, to 1,658 cases of ophthalmia neonatorum, gonococci were found in the discharge from the eyes of 67.14 per cent. In 171 personal cases, the organism in question was present in 106, or 61.98 per cent. In view of these figures, it may be stated, roughly, that about two-thirds of all cases of ophthalmia neonatorum brought to hospital are associated with and due to the gonococcus. There need be no publicity in notification as it is now carried out by the Health Authorities.

39. Another more tangible objection is that notification would lead to no beneficial results unless accompanied by provision for treatment of the babies. It has been suggested by Mr. N. B. Harman (*Preventable Blindness*, 1907) that a small special hospital, with adequate nursing staff, should be provided in each county for the treatment of cases, the number of which would not be great.* Another measure (and a very admirable one) has been carried out in the City of Liverpool, where by co-operation between the Health Authority and the St. Paul's Eye and Ear Hospital, arrangements have been made to admit both mother and child into a ward set aside for the purpose in the latter institution (*Lancet*, May 2nd, 1908). The Health Authority sends an ambulance, whenever required, to effect removal of mother and baby to the hospital.† Action is taken under the Notification of Births Act, 1907 and the Midwives Act, 1902. In Manchester, a Conference was held on March 5th, 1908, between representatives of the Royal Eye Hospital and the Midwives Supervising Medical Sub-Committee to consider what action could be taken to prevent the occurrence of ophthalmia neonatorum. As a result, the authorities of the Royal Eye Hospital undertook to notify to the Committee all such cases presented at the Hospital for treatment. The number of cases of ophthalmia neonatorum notified by the midwives in Manchester since the Midwives Act came into operation have been 1905—13, 1906—15, 1907—42, 1908 (January to June) 27. The number of births attended by midwives approximately 1905—10,233, 1906—11,299, 1907—11,128. At Moorfields, Queen's Jubilee Nurses receive training in simple ophthalmic work and some are always attending a course of instruction there. The services of these nurses are utilized by the hospital when requested, though they are not used in any straightforward case of ophthalmia. The third House Surgeon has charge of cases of ophthalmia, which he sees as often as he thinks necessary, referring them to members of the surgical staff only if complications arise.

40. The Liverpool plan affords an almost ideal method of grappling with a large proportion of the cases of infantile ophthalmia, and affords an excellent instance of what may be accomplished by co-operation between health authorities, on the one hand, and local hospitals, on the other. The writer does not hesitate to suggest that what has been successfully initiated in Liverpool might well be initiated in London and other large cities.

41. Apart from this, there would probably be no great difficulty in the case of poor people, amongst whom ophthalmia is especially prevalent and destructive, in transferring mother and child to the temporary care of the Poor Law authorities, which might reasonably be asked to make provision for such cases. Mothers of rather better social class, unable to provide adequate medical and nursing attendance for the baby, might still be transferred, as in the case of zymotic ailments in London, to the parochial authorities, as represented by the Asylums Board.‡ The

writer, however, regards the Liverpool plan as the better one, if only because specialist medical treatment would thereby be assured.

42. Another plan suggests itself, namely, that the Local Sanitary Authorities of the smaller towns, where no special ophthalmic hospital exists and no suitable infirmary is available, should set aside a ward for the reception of ophthalmia cases in the local isolation hospital. In rural districts the joint isolation hospital would naturally be used for the purpose.

43. In brief, the writer would urge upon the Committee the advantages of the notification of cases of ophthalmia neonatorum, as well as its practicability under the Infectious Diseases (Notification) Acts, 1889 and 1899. Dr. George Carpenter's letter (1), appended to this memorandum, should be referred to in this connection.

44. It would be interesting to know what provision is made by ophthalmic hospitals in London and elsewhere for the treatment of ophthalmia neonatorum. Are such cases ever admitted to the general wards, or are special wards provided, and if not, what plan is adopted for their treatment as out-patients?

45. (b) *Education of medical men, students, midwives, and the public.*—It can scarcely be too strongly insisted on that the occurrence of a case of ophthalmia neonatorum implies, almost of necessity, that somebody is to blame, be it medical practitioner or midwife, who has failed to secure effective preventive treatment at the proper time. The occasion appears to the writer to have come for perfectly plain speaking on this somewhat delicate point.

46. Theoretically, every medical practitioner is acquainted with the measures that should be adopted to prevent the disease, as well as with those that should be taken to cure ophthalmia when it has once broken out. What do we actually find to be the case? Here are a few figures and statements which deal with the point.

47. Mr. Stephen Mayou (*Practitioner*, 1908, p. 359) investigated 162 confinements complicated with ophthalmia, and ascertained that 90 had been attended by medical men, and 72 by midwives. The present writer found that of 62 cases of ophthalmia neonatorum a medical man had been in attendance upon the mother in 37, or upwards of one-half (*Ophthalmia neonatorum*, 1907).

48. Neither is the medical profession, speaking broadly, as familiar as it should be with the treatment of the affection. The writer has had babies blinded by ophthalmia brought to him with the history that the infant had been under medical treatment of some inefficient kind. To quote from a communication by Mr. E. Treacher Collins (*Practitioner*, 1902, Part 1, p. 440): "sad to relate, cases in which delay in the application of appropriate treatment has resulted in permanent damage, are met with where the mothers have been attended by a duly qualified medical man, and not by an ignorant midwife."

49. As regards maternity nurses, who appear to attend at least one-half of the confinements in England, the rigid application of the Midwives Act, 1902, should simplify matters considerably.* The present regulation (Rules framed by the Central Midwives Board under section 31 of the Midwives Act, 1902) allows the women under the control of that body—i.e., all certified midwives in England and Wales—practically a free hand. It reads as follows:—"As soon as the child's head is born, and, if possible, before the eyes are opened, its eyelids should be carefully cleansed." The writer does not know whether action has yet been taken against a midwife for disregarding this clause. "Inflammation of the eyes, however slight," is scheduled as a condition, which when present in the child constitutes a state of things in which medical help must be sent for by the midwife. The Board has taken action in several instances where midwives have failed to summon medical assistance in such cases.

50. Notwithstanding all this, the writer has known of instances where supposedly qualified midwives have not only dissuaded parents from sending a case of ophthalmia to hospital, but have even attempted to treat the disease themselves. His experience is not altogether singular. Dr. Adolph Bromer (*Medical Press and Circular*, September 4th, 1907) states that "last year at the Bradford Royal Eye and Ear Hospital I saw no less than five cases of purulent ophthalmia, in which the midwife had treated the eye for

* Such a scheme has been urged by Mr. H. H. Folker, Ophthalmic Surgeon to the North Staffordshire Infirmary, at a conference of public bodies held recently at Stoke-on-Trent. The steps suggested by Mr. Folker included—notification, verification, and removal of mother and child to a small house set aside and staffed for the treatment of such cases, and maintained from the rates.

† Under the Public Health Act, 1875, any Local Authority may make provision for the conveyance to a hospital, or other place of destination, of persons suffering under any infectious disorder.

‡ Under the Infectious Disease (Notification) Act, 1889, the Local Authority may pay the expenses of a person in hospital, even although such person may not be a pauper, and may provide nursing attendance on patients who cannot be removed to hospital.

* On and after April 1st, 1910, it will be illegal for any woman to attend women in childbirth for gain, unless she be on the roll of midwives under the charge of the Central Midwives Board.

several days and not sent for a doctor. Three of these children are now hopelessly blind."

51. The Central Midwives Board represents many interests, as, for example, the College of Physicians, the College of Surgeons, the Society of Apothecaries, the Incorporated Midwives Institute, the Association of County Councils, Queen Victoria's Jubilee Institute for Nurses, and the Royal British Nurses Association, as well as two members nominated by the Lord President of the Privy Council. It might be worth the while of the Committee to discuss whether a place upon the Board should not be assigned to a representative of the Ophthalmological Society of the United Kingdom. The interests at stake appear to justify such a proposal.

52. Be that as it may, it seems plain that so far as they have not already done so, the Central Midwives Board should adopt four measures with regard to ophthalmia:—(1) To give plain directions for the preventive treatment of the baby's eyes in (a) normal and (b) abnormal confinements; (2) to insist upon the notification of cases to the proper quarter, be it the Sanitary or the Local Supervising Authority; (3) to punish all midwives who fail to summon medical help on the appearance of a case of ophthalmia; and (4) to make it a penal offence for a midwife to undertake, except under medical supervision, the treatment of a case of ophthalmia neonatorum.

53. Lastly, it has been proposed that the Central Midwives Board should include purulent vaginitis in the mother among the conditions in which medical help should be sent for by the midwife (N. B. Harman).

54. It goes without saying that students in their hospitals, and midwives in their maternities, should be given practical instruction as regards the means of preventing ophthalmia neonatorum. Every text-book of midwifery, whether for practitioners, students, or midwives, should include an account of the disease, together with clear instructions as to prophylaxis.

55. The education of the public opens up large questions, but is, nevertheless, most desirable.

56. Such a step was urged by the Ophthalmological Society in 1885 (*Transactions*, Vol. V., p. 31), but nothing tangible came of the recommendation, nor did the Society press the matter further. The Society suggested that the information should be embodied in a brief circular (for copy see Appendix 2 to this memorandum) to be read over and presented by the Registrar to each person who registered the birth of a baby. Since registration may be effected within forty-two days of the birth, and not necessarily by the mother or father of the infant, it is obvious that the step suggested by the Society could not save the infant whose birth was registered, and might be useless even as regards later children of the same parents.

57. The Royal Commission on the Blind, &c. (1889) recommended that information about ophthalmia neonatorum should be circulated by the Sanitary Authorities or through the Post Office.

58. The situation has materially changed within the last year or so. The Notification of Births Act, 1907, the adoption of which, unfortunately, is optional as regards any Local Authority, provides that notice of birth shall be conveyed in writing to the Medical Officer of Health of the district in which the child was born within thirty-six hours after the birth. The onus of making the notification is thrown upon "the father of the child, if he is actually residing in the house where the birth takes place at the time of its occurrence, and of any person in attendance upon the mother at the time of, or within six hours after, the birth." The Local Government Board may by order declare that the Act be in force in the area of any Local Authority which has power to adopt the Act, although it has failed to do so. The Notification of Births Act, 1907, applies to Scotland and to Ireland, as well as to England and Wales.

59. Under existing conditions, on receiving an official intimation of a birth, the Medical Officer of Health might readily post or deliver to the parents a slip regarding the dangers of ophthalmia neonatorum, such as that drawn up by the Ophthalmological Society nearly twenty-five years ago. As a matter of fact, this has already been done in some instances. For example, in the Metropolitan Borough of Marylebone, on registration of a birth, the house is visited by a lady sanitary inspector from the office of the Medical Officer of Health. She leaves with the parents a printed card headed "Children's Eyes and how to care for

them," a copy of which will be found in the schedule (4) attached to this memorandum. The greatest importance must be attached to such dissemination of knowledge concerning ophthalmia neonatorum, and the rapidly extending system of employment of lady health visitors appears well adapted for the purpose.

60. It should be pointed out that some corporations, as, for example, those of Glasgow and Bradford, have for some time distributed through the registrars notices regarding ophthalmia to all who register the birth of a baby. The circulars are printed at the expense of the corporation, and are distributed by the registrars without charge or fee. Such notices, moreover, have for the last year or so been distributed by the Health Department of some metropolitan boroughs, as that of Marylebone, and of some urban councils, as that of Beckenham, Kent (see Dr. Carpenter's communication No. 1 in the Schedule).

61. Certain hospitals, as the Sheffield Royal Infirmary and the Bradford Royal Eye and Ear Hospital,* have adopted a similar plan. The forms adopted by those progressive institutions will be found in the Appendix. It may be noted that warnings have also been issued by the Committee of Gardner's Trust for the Blind, 53, Victoria Street, London, S.W. Mr. Henry J. Wilson, the secretary, informs the writer that over 70,000 of the circulars have been distributed in recent years through Boards of Guardians, mothers' unions, district visitors, societies for the blind, and other agencies. Finally, the North of England Union for the Blind issues leaflets dealing specially with the prevention of ophthalmia in babies.

62. In the writer's opinion, the time has come when sporadic action, such as that noted above, should be replaced by concerted action for the purpose of warning the public of the manifold dangers of neglected infantile ophthalmia.

63. (c) *Appointment of ophthalmic surgeons to Maternity Hospitals.*—This recommendation, for which we are indebted to Dr. A. Pinard (*Ann. de Gynéc. et d'Obstét.*, January, 1902), has been endorsed by Mr. E. Treacher Collins and other writers. In the United Kingdom such appointments have been made in a few instances, viz., at Queen Charlotte's Hospital, London, the Rotunda Hospital, Dublin, and the Maternity Hospital, Glasgow.

64. The appointment should be made with a serious purpose, and not be looked upon as a merely ornamental one. The preventive treatment should be under the control of the special officer, and without his knowledge and consent no change should be made in the methods employed. Under the present somewhat haphazard system the methods of prophylaxis are apt to change with each successive resident medical officer. The ophthalmic surgeon should be responsible for seeing that proper records concerning ophthalmia are kept up. It should devolve upon him to instruct pupils as to the methods of preventing the disorder. He should be called immediately to any baby whose eyes showed signs of inflammation; and, lastly, he should conduct any treatment that might be deemed necessary for the condition.

65. (d) *The Keeping of Records.*—While the records of ophthalmia at some lying-in hospitals leave little to be desired, the reverse is true of some others. It would be advisable, in the writer's opinion, to insist that proper records should be kept at every such public institution.[†] In the case of the Poor Law lying-in wards, this desirable end has already been secured by the Local Government Board Circular Letter of 1896.

66. Indeed the action of the Local Government Board in the year 1896 was the main factor in reducing the prevalence of ophthalmia in the London Poor Law Institutions by more than one-half in the course of a single decade. As already shown, in 1894–1895, the morbidity of ophthalmia was 3.60 per cent. of all babies born alive. In the same Institutions (according to information furnished to the present writer by Dr. Arthur Downes, Local Government Board Inspector) during the three years 1903–04–05 there were 125 cases in 8,889 births, or 1.406 per cent. The diminution was really greater than is shown by the figures, inasmuch as the 125 cases included many examples of trivial inflammation of the conjunctiva, and no distinction was made between "early" and "late" infections.

* The Bradford notices are sent to the registered midwives every year.

† The Committee on ophthalmia neonatorum of the American Medical Association, which reported on June, 1908, recommended the maintenance of proper records in all maternity institutions and other hospitals in which children are born.

67. It does not admit of doubt that the maintenance of accurate records would be an effectual way of keeping the subject of ophthalmia neonatorum under the notice of all concerned. Finally, the necessity of securing exact data must be apparent to anybody who is interested in what has been called the "sociological aspect" of ophthalmia neonatorum.

2. Medical Measures.

68. (a) *Management of the parturient woman.*—Attention to the condition of the mother is important, since she is the source, direct or indirect, of the infection in practically every case of ophthalmia neonatorum. One obvious precaution was recommended by Dr. Benjamin Gibson (*Edinburgh Medical and Surgical Journal*, 1807, p. 160) more than a century ago, and that was to cure, if possible, fluor albus during pregnancy.

69. Gibson's second aphorism—"To remove artificially as much of the discharge as possible from the vagina at the time of delivery"—embodies an equally evident precaution. In normal labour the routine employment of vaginal douches, antiseptic or otherwise, is deprecated by many good authorities, since douches are credited with destruction of the normal germicidal action of the maternal secretions. There can, however, be no objection to their use when infection is known or suspected to exist, either from the history of the case or from the presence of clinical signs. The writer does not venture to suggest how such cases may best be treated, but would refer the Committee for information on this and cognate points to the able memorandum drafted by Dr. Russell Andrews and Mr. Arnold Lawson (see No. 9 in Schedule). His technical knowledge, too, is not sufficient to allow him to express an opinion as to the value or otherwise of Döderlein's suggestion—namely, to place a tampon of wool soaked in lactic acid in the vagina for twenty to thirty minutes before the os dilates, for the purpose of restoring to some extent the normal acidity of the vaginal secretion lost during childbirth or uterine catarrh (*The Ophthalmoscope*, 1908, p. 2). He would, however, urge the desirability of one precaution, viz., the necessity of careful cleansing of the vulva whether infection is or is not believed to exist.

70. (b) *Management of the Baby.*—Last, but not least, we come to the management of the baby's eyes, a point about which there is likely to be some divergence of opinion. Upon this point it must be conceded that the opinion of the obstetrician is likely to carry more weight than that of the ophthalmic surgeon.

71. The methods in use may be classified as *Aseptic* and *Antiseptic*, the former essentially consisting in preventing micro-organisms from reaching the baby's eyes, and the latter in destroying them after they have reached the conjunctival sac.

72. It may be accepted as proved that the careful adoption of very simple measures will reduce the incidence of ophthalmia neonatorum to a very low point. For example, the mere wiping of the infant's eyes free from adherent secretion as soon as possible after the head is born, a procedure to which no possible objection could be raised by the most fastidious parent or exacting relative, reduced the cases of ophthalmia in Korn's experience to 0·3 per cent. (*Arch. f. Gynäk.*, Band XXXI, 2, p. 240), and in Snell's to zero (*Lancet*, September 1, 1888). Korn made the significant statement that the offspring even of mothers suffering from granular vaginitis or other evidences of gonorrhoea, remained free from ophthalmia when this simple expedient was adopted.

73. The aseptic plan, of course, must fail when gonococci or other pathogenic micro-organisms have reached the conjunctival sac, either prior to the onset of labour or during the passage of the head through the maternal parts. At the same time, the above figures (and more could readily be quoted) show that, in general, simple cleanliness may be depended on to prevent the disease. If that point be conceded, it follows that so simple a plan has much to commend it for adoption in all normal lying-in cases. It is to be noted, however, that no British Lying-in Hospital from which returns are at hand depends upon the plan, for in every single instance some chemical agent, as silver nitrate or corrosive sublimate, is used as well.

74. Elsässer (Schmidt's *Jahrbücher*, 1835) appears to have been the first obstetrician to attempt to prevent ophthalmia by the use of a chemical agent, namely, chlorine water. In the year 1873, Kehler dropped into the infant's eyes a 1 per

cent. solution of silver nitrate. It will be apparent, therefore, that the antiseptic preventive treatment of ophthalmia had been adopted in individual cases for many years prior to 1881, when Crédé published the first (*Archiv f. Gynäk.*, Band XVII, p. 50) of his three memorable communications. At the same time, to Crédé unquestionably belongs the credit of having devised and systematized the most practical means of preventing ophthalmia neonatorum, which before his discovery had been a veritable scourge in maternity hospitals. As everybody knows, Crédé advised the application of a single drop of a 2 per cent. solution of silver nitrate, placed in the baby's eyes as soon as convenient after birth. During a period of about three years, Crédé adopted the plan in 1,160 babies born alive, and amongst that number had one case, or at most two cases, of ophthalmia. Vaginal douches, at first employed by Crédé, were abandoned as soon as it was found how successful the new method was.

75. The following figures, collected respectively by Haab, Köstlin, and the writer, will show at a glance what results have been obtained by the Crédé method:—

Name.	Year.	Reference.	Births.	Per-centage.
Haab	1886	<i>Corr.-Blatt. f. Schw. Aerzte</i> , XV, 1886, p. 7	10,521	1·0
Köstlin	1895	<i>Arch. f. Gynäk.</i> , 1895 ...	24,724	0·655
Stephenson	1907	<i>Ophthalmia Neonatorum</i> , 1907	51,728	0·751

76. In order to appreciate the full significance of the figures just given, it should be stated that prior to Crédé's discovery, the incidence of ophthalmia neonatorum in fifteen Continental maternity hospitals ranged from 12·52 per cent. to 0·3 per cent., and averaged 4·05 per cent. The number of babies born in those institutions during the period covered by the figures amounted to 118,489 (see Haussmann's *Die Bräuhautinfektion der Neugeborenen*, 1882). A glance at the table will show that amongst 86,973 births the adoption of the Crédé method reduced the incidence of ophthalmia to 0·802 per cent. In face of such figures it becomes difficult to see how it can be urged, as it apparently still is in some quarters, that the plan is inefficient. It may be inexpedient but it assuredly is not inefficient.

77. The main objections urged against the adoption of Crédé's method are:—(1) conjunctival catarrh; (2) conjunctival hemorrhage; (3) corneal opacities; and to these must be added perhaps the most important of all (4) considerations of expediency.

78. (1) Crédé himself (*loco citato*) recognized that slight hyperemia was not uncommon after the use of the silver drops, and that for the first twenty-four hours a rather marked secretion from the eye was sometimes present. Babies born at term, however, showed practically no reaction.

79. Much has been made of the reaction by certain writers, more especially by H. Cramer (*Archiv f. Gynäk.*, LIX, Heft 1, 1899, p. 165), whose observations have not been confirmed by independent evidence, and who, by the way, departed very far indeed from Crédé's instructions as to how the silver should be applied. To judge from observations made under the direction of the present writer at Queen Charlotte's Hospital, London, it seems that some slight reaction occurs in most of the babies to whose eyes silver has been applied.* But a really severe reaction was not found once among 272 infants kept under close observation. Even in the most pronounced cases discharge did not persist for longer than 24 days.

80. Although the writer is not convinced in his own mind that the silver has ever set up actual inflammation of the conjunctiva, yet he is constrained to admit that it may possibly predispose to such inflammation by lowering the resisting powers of the eye.

81. It is worth noting that Zweifel (*Centrabl. f. Gynäk.*, December 22nd, 1900) has shown that the reaction is probably due to the absence of saline tears from the baby's eye, and consequently that it may for all practical purposes be abrogated if neutralization after the application be carried out with a weak saline solution. The process recommended

* It is to be carefully noted that in these experiences a 1·5 per cent. solution, and not the 2 per cent. one as recommended by Crédé, was used and that a single drop only was applied to each eye.

up a memorandum of instructions relating to ophthalmia neonatorum, which will be delivered to those parents who notify a birth to the Public Health Department.

It runs as follows:—

NEW-BORN INFANTS AND OPHTHALMIA.

If Baby's eyelids become red or swollen, or the eye begins to run with matter within the first fortnight of birth, it is to be seen by a doctor without a moment's delay. The disease, called ophthalmia, is very dangerous, and if not treated, may destroy the sight of both eyes.

For those patients requiring hospital treatment (and hospital treatment is essential in all cases that cannot employ skilled medical supervision and efficient nursing), it is of importance that the mother and child be not separated. Therefore, provision for the admission into hospital of the mother as well as the infant must be made.

In Beckenham it appears to me that there are two institutions that could be made available for such a purpose should the occasion arise, viz., the Cottage Hospital, or a special ward at the Infectious Diseases Hospital. To prevent blindness, the aims must be early recognition, followed by prompt and efficient treatment. The Notification of Births Act affords the ideal channel by which early recognition of ophthalmia neonatorum can be obtained—the machinery is at hand for the purpose. I do not know if the Council possess powers to make a slight but necessary addition, or should they not possess them, if the necessary powers can be obtained to enable them to make the notification of ophthalmia neonatorum compulsory. But whether or not, I have no doubt that if such powers could be exercised it would be to the advantage of the Public Health. I have therefore urged my Council to take the necessary steps to obtain such powers forthwith.

In my opinion, the Public Health Department is the best machinery for obtaining early information of cases of ophthalmia neonatorum, and also for making the necessary arrangements for prompt isolation and treatment of the disorder.

GEORGE CARPENTER, M.D. (Representing the Section for the Study of Disease in Children of the Royal Society of Medicine), Medical Officer of Health for Beckenham: Vice-President of the Royal Society of Medicine.

February 6th, 1909.

2. Notice drafted by the Ophthalmological Society in 1884—

INSTRUCTIONS REGARDING NEW-BORN INFANTS.

If the child's eyelids become red and swollen, or begin to run with matter, within a few days after birth, it is to be taken without a day's delay to a doctor. The disease is very dangerous, and, if not at once treated, may destroy the sight of both eyes. (*Transactions*, Vol. IV, 1884, p. 34.)

3. Glasgow Notice—

HINTS ABOUT THE MANAGEMENT OF CHILDREN.

(Given to Parents at time of Registration of Birth.)

Eyes.—At birth, cleanse the eyelids and thereabouts carefully with clean warm water. If the eyes look red, or run with matter a few days after birth, let the doctor see them at once. The eyes may be destroyed if not treated immediately. The discharge is infectious.

A. K. CHALMERS,
Medical Officer of Health.

4. Marglebone Notice—

Extract from Notice issued by the Public Health Department of the Borough of Marglebone.

CHILDREN'S EYES AND HOW TO CARE FOR THEM.

Inflammation of the eyes of the new-born child is a very dangerous and infectious illness, and if prompt measures are not taken may entirely destroy the sight.

1. When a child is born, it is wise to thoroughly wash out its eyes with water. The baby's eyes should be examined daily for a week after birth, and if there is the slightest discharge send for the doctor at once.

2. Remember that this disease is very catching if the discharge should get into the eye of another person.

MEREDITH YOUNG.

5. Sheffield Royal Infirmary Notice—

IMPORTANT.

If a baby's eyes run with matter and look red, a few days after birth, take it at once to a doctor. Delay is dangerous, and one or both eyes may be destroyed if not treated immediately.

6. Bradford Royal Eye and Ear Hospital Notice—

INSTRUCTIONS REGARDING NEW-BORN INFANTS.

If the child's eyelids become red and swollen, or begin to run with matter within a few days after birth, it is to be taken immediately to a doctor. The disease is very dangerous, and if not at once treated, may destroy the sight of both eyes.

7. Leaflet issued by Gardner's Trust for the Blind—

PREVENTION OF BLINDNESS IN INFANCY.

One of the most frequent causes of blindness "is the inflammation of the eyes of new-born infants, which can be prevented, and, if taken in time, cured. . . . about 7,000 persons in the United Kingdom have lost their sight from that cause."—*Extract from the Report of the Royal Commission on the Blind, the Deaf and Dumb, &c.* It has been found that over 30 per cent. of the inmates of the schools for the blind are blinded by the neglect and unsuitable treatment of this disease.

The following precautions are, therefore, most essential:—

1. Immediately after the birth of a baby, and before anything else is done, wipe the eyelids and all parts surrounding the eyes with a soft dry linen rag; soon afterwards wash these parts with tepid water before any other part is touched.
2. Avoid exposing the baby to cold air; do not take it into the open air in cold weather; dress the infant warmly, and cover its head, because cold is also one of the causes of this eye-disease.

When the disease appears it is easily and at once recognized by the redness, swelling, and heat of the eyelids, and by the discharge of yellowish-white matter from the eye. Immediately on the appearance of these signs seek the advice of a medical man; but in the meantime proceed at once to keep the eyes as clean as possible by very frequently cleansing away the discharge. It is the discharge which does the mischief.

The cleansing of the eye is best done in this way:—

1. Separate the eyelids with the finger and thumb, and wash out the matter by allowing a gentle stream of luke-warm water to run between them from a piece of rag or cotton wool held to or three inches above the eyes.
2. Then move the eyelids up and down and from side to side in a gentle, rubbing way, to bring out the matter from below them; then wipe it or wash it off in the same manner. The cleansing will take three or four minutes, and it is to be repeated regularly every half-hour at first, and later, if there is less discharge, every hour.
3. The saving of the sight depends entirely on the greatest care and attention to cleanliness. Small pieces of clean rag are better than a sponge, as each rag is to be used once only, and then burnt immediately; sponges should never be used except they are burnt after each washing.
4. A little vaseline or lanoline should be smeared along the edges of the eyelids occasionally, to prevent them from sticking.

SPECIAL WARNING.

As many mistaken practices are often resorted to in these cases, such as the application of poultices, tea-leaves, and sugar of lead lotions, and medical advice postponed or neglected, such applications by themselves are strongly to be condemned as not in accordance with the proper methods of treatment.

8. Notice issued by the North of England Union for the Blind—

PREVENTION OF BLINDNESS.

Reprinted from the *American Journal*, "The Outlook for the Blind."

"In the opinion of those well qualified to judge, ophthalmia neonatorum is the cause of more blindness than any other local disease, excepting, perhaps, atrophy of the optic nerve.

"It has been proved to demonstration that in ninety-nine cases out of a hundred this disease is preventable, and that it may be prevented, moreover, by the use of a few simple precautions."

SYDNEY STEPHENSON, M.B.C.M., Ophthalmic Surgeon to Queen Charlotte's Hospital, London.

"The probable annual cost to the State of New York for the support of the victims of ophthalmia neonatorum is over \$110,000."

L. HOWE, M.D. (Address of the President of the Seventy-seventh Annual Meeting of the Medical Society of the County of Erie, 1898).

"Infantile ophthalmia can and must be wiped out of every civilized country."

DR. HERMANN COHN, Breslau.

"The most important of the causes of blindness with which we have to do, however, is that resulting from an infection of the eyes of the child at birth. Important, first, because it is the most common cause of blindness; second, because it affects the young child, and a long lifetime of blindness may follow; and third, because it is preventable and curable in practically every case receiving proper care. This is one of the most dangerous of maladies to vision when treatment is neglected or delayed. It is a veritable world plague. It occurs everywhere, and no country has yet succeeded in getting it under control. So widespread is blindness resulting from it, that Magnus, who has made careful statistical studies concerning it, says that out of 2,528 cases of all ages of complete blindness in Germany, 10 88/100 per cent. were due to this cause.

"In institutions the proportion is much larger. A committee of the Ophthalmological Society of the United Kingdom in 1885 estimated that about 30 per cent. of the persons concerned had lost their sight through the ophthalmia of the new-born, while in Mexico, ophthalmia neonatorum is said by Ramos to be the common cause of blindness, and 4,500, or 30 per cent. of the whole number, are blind as a result of this preventable disease.

"In the New York State School for the Blind, 39 of 150 pupils, or 26 per cent., have lost their eyes from ophthalmia neonatorum, which is a rather smaller proportion than that found in institutions elsewhere. In the State of New York more than 600 now hopelessly blind from this cause might have been spared this dreadful calamity had simple prophylactic measures been employed at the day of their birth, while in the United States are between 6,000 and 7,000 people who have been blinded by this disease.

"The eyelids of a babe are closed at birth, and the infecting material is only likely to gain access within the lids if they are separated by the finger of the accoucheur or by instruments. 'Vaginal secretion readily adheres to the eyelashes and margins of the lids, and may easily gain entrance to the eyes when first the child begins to open and shut them, or be conveyed in by insufficient care in the subsequent ablutions and wiping of the eyes. There can be no doubt that in a majority of cases infection occurs in this way.'

"As soon as the newborn child has filled its lungs with a cry announcing its individuality as an independent being, its eyes, in a certain number of cases, are threatened with blindness. After its first bath the eyes look all right, but soon the eyelids swell, becoming red, and a white, slimy liquid oozes through the fissure of the lids. On the first day little or no discharge is perceptible, and the eyes are bright, clear, and intact, but from day to day the disease grows worse. The swollen scarlet lids are smeared with white paste and liquid or creamy pus. When cleaned and opened they discharge a small stream of pap-like secretion. Now the cornea (the hard and transparent coat) is dull, and the iris and pupils are clouded. The conjunctiva (the soft mucous coat lining the inner surface of the lids and the outer

of the ball) is thickened and covered with creamy pus. In this stage the eyes can still be saved. The next stage shows ulcers on the cornea, which are apt to perforate it, and then the poisonous discharge may creep into the interior of the eye and damage the delicate structures to such a degree that sight is forever more or less destroyed, and the eyes are so disfigured that the parents ask to have them removed and artificial ones inserted.

"When it is borne in mind that all of this could be prevented by the simplest prophylactic care, the continued blinding of babies in a civilized community becomes a crime.

"Since these facts are no longer subjects of discussion, but are universally accepted by all educated medical men, the natural enquiry follows: Why, as a common sense proposition, are not these simple, harmless, preventive measures invariably employed, and why, in consequence of this neglect, does a nation sit quietly and indifferently by, making no attempt to prevent the enormous and needless waste of human eyes?

"If, as an economic proposition, it were realized how vitally it concerns the State that not one child shall needlessly become blind, thereby in many instances increasing the public financial burden, there is no doubt that early and effective measures would be instituted to protect the State from this unnecessary and extravagant expenditure of public funds.

"The part which the midwife plays in the tragedy of infantile blindness is often a leading one.

"Every women's club, every charitable society, must interest itself in protecting the babies, 'for of all ignorance which needs to be dispelled by the spirit of regeneration among us, none is more intolerable than that which wantonly permits children to be plunged into the abyss of blindness.'

"Two points must be emphasized: First, that it is the duty of the State to protect its infant citizen as a minor from the danger of blindness with which he is threatened. Second, that it is the duty of the State to protect itself from the burden of caring for the unnecessary blind.

"If the right of personal property of a minor child and the more especially of an infant be put in jeopardy, the law, representing the state, takes upon itself to stand between that child and the danger with which he is threatened. His parents or guardians may not maltreat, or starve, or otherwise abuse him. They may not misappropriate his estate if he has one. He is not permitted even to labour while of school age lest he be deprived of the privileges of education while still a child and lose thereby a right to which the state considers him entitled. Neither should negligence, nor indifference, nor ignorance rob him of one of his most precious possessions by putting out his eyes while still too helpless to protect himself. The child is entitled to the right of protection, in his weakness, by the state."

Dr. Simon Snell describes a very simple but efficacious method that had been in use by the Jessop Hospital for Women in Sheffield.

"The patients are among the poorest; some are inmates of the hospital, but the great majority are confined at their own homes. The midwives have received instructions that immediately after the head is born attention must be directed to the baby's eyes. Then with little pieces of lint, moistened in tepid water, the eyes are carefully washed, as well as the eyelid and parts adjoining. Subsequently, in washing the child, care is taken to regard against re-infection. During the last few years there have been 2,242 labours among the in-patients and out-patients. In the first 200 there were a few cases of purulent ophthalmia, but in the last 2,000, since the method has been systematically adopted, not a single case occurred. Directions were also given to the nurses that if the child's eyes looked red it was to be taken at once to the hospital, for a drop of nitrate of silver solution to be dropped into the eye. The plan depends for its efficacy on simple cleansing, and its success seems to be well worthy of note. In every suspected case, however, the consensus of medical opinion is that the prophylactic, which is harmless, should be invariably employed. Every case developing should be reported, and the final result made a matter of public record, with the midwives the use of the prophylactic should be made a routine of part of the baby's toilet, and the development of ophthalmia within five days after the birth of the child, when the birth certificate fails to record the use of the prophylactic, should result in the withdrawal of the midwife's permit to engage in the practice of obstetrics.

"The cost to the state of thus protecting a large number of

yet unborn children from certain blindness would be infinitesimal: the gain immeasurable."

9. By Dr. H. Russell Andrews and Mr. Arnold Lawson—

OPHTHALMIA NEONATORUM. GENERAL PRINCIPLES.
PREVENTIVE TREATMENT.

Although it is obvious that a certain routine should always be observed in the treatment of the eyes of all newly born infants, it is nevertheless impossible for such a routine to meet the necessities of all cases. For whilst it is of urgent importance for the most energetic steps to be taken when there is the probability of infection by gonococcus, or such like virulent organism, it is nevertheless most undesirable to submit a young baby to drastic treatment of the conjunctival sacs when the probability of such infection is remote. The wisest plan is to pay the closest attention to the condition of the mother, as being the chief origin of infection, and to adopt such a line of treatment as may be indicated by the probability, or otherwise, of infection from this source.

There can be no doubt that the treatment of Créde has been of the greatest service, but we do not think that the treatment is one to be adopted in all cases, because:—

1. The instillation of strong caustic into a healthy conjunctival sac is a proceeding to be very strongly deprecated.
2. Such treatment undoubtedly, in perfectly healthy sacs, frequently sets up a muco-purulent discharge, which would not otherwise have occurred.
3. It is apt, in the hands of midwives, to lead to undue confidence, with the disregard of other treatment, which is quite, or even more, important.

N.E.—With regard to this point, we feel that if a midwife treats every infant with silver nitrate, she will get a considerable number of cases which she will regard as ophthalmia neonatorum. Many of these being simply cases of muco-purulent discharge, the result of irritation, will clear up rapidly with simple treatment, and may lead her to minimize the danger of a true case of ophthalmia neonatorum.

We are, therefore, desirous of suggesting a few rules, which may serve as guides to the practitioner and midwife, and if any case should, in spite of these precautions, assume the appearance of an acute purulent conjunctival inflammation, we are of opinion that expert advice should be sought at once.

RULES AS REGARDS THE MOTHER, IF A PURULENT VAGINAL DISCHARGE IS PRESENT.

1. If a purulent vaginal discharge is present during pregnancy, the patient should be treated by a doctor.
2. If she is in labour when seen for the first time, a vaginal douche should be given in the first stage of labour, and repeated if possible shortly before the birth. The douche should be given with the idea of cleansing, not of disinfecting the vaginal passage, and all strong germicides, such as 1:2000 mercuric chloride are undesirable.
3. In any case of vaginal discharge, it would be advisable to secure a bacteriological report of its nature, if possible. Such a report might prove of some value with regard to the subsequent condition of the baby's eyes.

We quite realize that this, in most cases, is a counsel of perfection.

RULES AS REGARDS THE CHILD.

Rules for the treatment of the child's eyes in all cases where there is no vaginal discharge.

1. Directly the head is born, and before the eyes are opened, the lids and the surrounding skin should be bathed with 1:5000 perchloride of mercury.
2. The child's eyes should be most carefully treated, when the first bath takes place, by freely inundating the conjunctival sacs with saturated solution of boric acid. Although such washing will not prevent gonorrhoeal ophthalmia, we believe that it will prevent the mild degree of ophthalmia which is often present for the first few days after birth.
3. The conjunctival sacs should be thus washed out at least twice in the 24 hours for the first three days. We think that this precaution is one that is apt to be neglected.
4. If there is no discharge, and the eyes are freely opened at the end of this time, the danger may be regarded as over.

Rules for cases where there is a vaginal discharge.

1. In all cases of maternal discharge rather stronger measures are advisable.
2. A 1 per cent. solution of silver nitrate, or a 25 per cent. solution of argyrol or protargol should be dropped between the lids after the first washing, and this should be repeated once daily for at least three days.
3. The daily washing of the conjunctival sacs should be performed with a weak astringent such as a $\frac{1}{2}$ per cent. solution of zinc sulphate or a 1:12000 solution of mercuric chloride, and the greatest care and thoroughness should characterize the douching. Strong antiseptics, such as 1:2000 mercuric chloride, are certainly harmful, as tending to destroy the inherent resistant power of the conjunctiva.
4. The frequency of the douching should be increased to three times daily for the first three days, and on any purulent discharge appearing in spite of these measures, expert advice at a hospital, or elsewhere, should at once be sought. It would be advisable to obtain a bacteriological examination of the discharge if possible.

With regard to the notification of ophthalmia neonatorum, there is no doubt that compulsory notification would act as a deterrent in the prevention of carelessness or inefficiency, and the statistics thus compiled might have some scientific value. At the same time, it must be remembered, that the term ophthalmia neonatorum is a general expression of an inflammation which may be set up by a variety of organisms of varying virulence, and it is only in a certain proportion of cases that the vision is ever seriously threatened.

The scientific value of notification of inflammation of the eyes of the newly born is very much modified by this fact unless the notification is followed or accompanied by a bacteriological report of the nature of the infecting organism.

H. RUSSELL ANDREWS, M.D.

(Representing the Gynaecological Section of the Royal Society of Medicine).

ARNOLD LAWSON, F.R.C.S.

(Representing the Ophthalmological Society).

10. Co-operation between Queen's Jubilee Institute and Moorfield's Hospital.

The following is a brief account of the connection between the Queen's Jubilee Institute and Moorfield's Hospital:—

The question of co-operation between the district nurses and the Hospital was first suggested nearly two years ago, but the Hospital, in the first instance, felt unable to fall in with any arrangement, on account of the fact that district nurses, as a rule, had not received any special training in eye nursing.

An arrangement was then made, by which every nurse on joining the Queen's Jubilee Institute was given an opportunity of attending Moorfields for a period of Ophthalmic training free of charge, and also of attending a course of lectures given by a member of the Staff to the nurses of the Hospital.

This arrangement has been very successful, and during the last eighteen months a large number of district nurses have in this way obtained some competent knowledge of Ophthalmic nursing, and the Staff now feel able to make use of their services, which before this training was undertaken they did not think advisable in the interests of the patients. Fifty-three nurses last year were thus trained.

By the present arrangement, application for a nurse is made in the usual way to the Superintendent of the district in which the patient lives, and a nurse is sent if possible.

A certain difficulty not removed is the fact that all nurses are not members of the Queen's Jubilee Institute, and consequently it is not possible at the present time to ensure the attendance of a nurse versed in Ophthalmic work at every case where it would be required.

The only satisfactory solution that I can see would be that all district nurses should be required to produce a certificate of Ophthalmic training before undertaking the post of district nurse. All nurses that have gone through a Moorfield's training are given such a certificate, and that it is appreciated is shown by the fact that a large number of nurses have already taken the opportunity offered them.

ARNOLD LAWSON.

March 26th, 1909.

British Medical Association.

ANNUAL MEETING AT BELFAST.

SECTION OF MEDICINE.

THE Honorary Secretaries of the Section of Medicine have issued an amended notice stating that the following subjects have been chosen for the principal discussions and demonstration in the Section:

1. Wednesday, July 28th—Angina Pectoris. To be opened by Sir T. Clifford Allbutt, K.C.B.

2. Thursday, July 29th.—The Medical Aspects of Athleticism. To be opened by Dr. Tyrrell Brooks (Oxford), Dr. Clement Dukes (Rugby).

3. Friday, July 30th.—Demonstration on Gastric Illumination by Dr. Theodore Thompson.

The Honorary Secretaries of the Section are: Dr. John S. Morrow, Eia House, Antrim Road, Belfast; Dr. Lewis A. Smith, 25, Queen Anne Street, London, W.; and Dr. John E. MacIlwaine, 55, University Road, Belfast.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

BATH AND BRISTOL BRANCH.

THE sixth ordinary meeting of the session was held at Bath on April 28th. The chair was taken by Mr. R. J. H. Scott, and there were twenty-six members and visitors present.

Papers and Cases.—Dr. W. P. KENNEDY read a paper on cancer treatments, which was discussed by Mr. PAGAN LOWE, Dr. MUNRO, Dr. SYMES, Dr. EDGEWORTH. Professor RUSHTON PARKER, and Dr. NEWMAN NEILD. Dr. MUNRO described a case of early Addison's disease treated with tuberculin, and remarks upon it were made by Dr. EDGEWORTH and Dr. CAREY COOMBS. Dr. F. G. THOMSON brought forward the subject of referred cardiac pain, and, in the discussion which ensued, Mr. PAGAN LOWE and Dr. EDGEWORTH joined.

CAPE OF GOOD HOPE—WESTERN PROVINCE BRANCH.

THE inaugural meeting of the session 1909 was held on April 2nd at Queen Victoria Street, Capetown. Dr. JASPER ANDERSON, President, was in the chair, and seventeen members were present.

Confirmation of Minutes.—The minutes of meetings of September 25th, 1908; October 30th, 1908; November 28th, 1908; and February 27th, 1909, were read and confirmed.

Treasurer's Account.—The TREASURER'S statement and report for 1908 were read and adopted.

President's Address.—The presidential address was delivered. Dr. J. ANDERSON urged the importance of united effort on the part of members of the profession, and showed the advantages of the Association, which would be what the members chose to make it.

Vote of Thanks.—A hearty vote of thanks to the President was carried by acclamation.

DUNDEE BRANCH.

AN ordinary meeting of this Branch was held in the Students' Union, Dundee, on March 26th, at 8.30 p.m., Professor MARSHALL in the chair. Eighteen members were present.

Confirmation of Minutes.—The minutes of the last meeting were read, approved, and signed.

Annual Representative Meeting at Sheffield.—Dr. R. C. BUIST reported on the proceedings at the Annual Representative Meeting at Sheffield.

Central Council.—On the motion of Dr. BUIST, seconded by Dr. FRASER, it was resolved:

That the Branch give notice for the Annual Representative Meeting of the following motion: That the present By-laws dealing with the Council of the Association—namely,

No. 39 et seq.—be amended by the substitution of the corresponding clauses in the By-laws attached to the Draft Charter—namely, Section VI.

Registration of Nurses Bill (Scotland).—In regard to this matter it was resolved:

That the Branch urge the amendment of the bill in the following respects: (1) That provision be made for a supplementary register of obstetric nurses. (2) That a direct representative of the obstetric nurses be added to the council. (3) That three registered medical practitioners resident in Scotland, to be appointed by the British Medical Association, be added to the council. (4) That the election of the direct representatives of the nurses be by ballot with a single transferable vote. (5) That Clause 25 of the Nurses' Registration Bill No. 2 be included as follows: This Act shall not be construed to affect or apply to any person attending the sick for hire who does not in any way assume the title of a registered nurse under the Act, and nothing contained in this Act shall be construed as conferring any authority to practise medicine or surgery or to undertake the treatment of disease. (6) That the representatives of the universities and corporations in E, F, and G be registered medical practitioners in actual practice.

Whole-time Medical Officers of Health.—The Branch approved of the proposition that medical officers of health be debarred from engaging in private practice.

Medical Certification of Patients Suitable for Hospital Treatment.—The Branch approved of the propositions:

That a medical certificate of suitability for hospital treatment be required as a condition of hospital treatment, except in case of casualties.

With a rider:

That the hospitals be supplemented by the establishment of dispensaries, free or provident, as required.

Subscribers' Lines for Admission to Dundee Royal Infirmary.—Dr. BUIST proposed and Dr. MACKIE WHITE seconded the following resolution:

That the Branch represent strongly to the directors and governors of the Dundee Royal Infirmary the inadvisability of enforcing the system of admission by subscribers' lines, which is generally recognized as unsuitable for a large general hospital, and that the system involves injurious delay in the admission of patients and causes needless sacrifice of work to the relatives who have to search for a subscriber, and that it is unequal in practice between the hospital staff and other practitioners, and is not the best method of achieving the financial success of the institution.

After a lengthy discussion, the motion was withdrawn.

Fresh Medical Institutions.—The Branch supported the resolution of the Representative Meeting on the opening of fresh public medical institutions.

Medical Inspection of Schools.—It was resolved to issue a circular to candidates for election to the Dundee School Board as to the reception by the Board of a deputation from the Branch on the appointment of medical inspectors.

EAST ANGLIAN BRANCH.

THE general meeting of the East Anglian Branch was held at the West Suffolk Hospital, Bury St. Edmunds, on Thursday, April 15th. The following gentlemen were present: D. G. Thomson, M.D., President (Norwich); W. H. Simon, M.D., President-elect (Clacton); Drs. J. S. Holden (Sudbury), Arthur Cross (Norwich), H. A. Ballance (Norwich), Sir Alan Reeve Manby (East Rudham), N. H. Lucas (Bury St. Edmunds), A. Mayo (Great Yarmouth), H. J. Thorp (Ipswich), W. Milner Burgess (Frinton-on-Sea), J. S. Hinnell (Bury St. Edmunds), H. F. Everett (Hadleigh), F. Hudson (Lavenham), A. W. Paterson (Ipswich), S. J. Given Johnston (Ipswich), H. Watson (Norwich), E. G. Archer (Feltwell), C. S. Kilner (Bury St. Edmunds), H. F. Steele (Stoke Ferry), R. McKelvie (Blasfield), J. Gutch (Ipswich), S. Johnson Taylor (Norwich), W. T. Caie (Bury St. Edmunds), E. Stock (Bury St. Edmunds), H. H. Still (Bury St. Edmunds), H. H. Brown, and B. H. Nicholson. Luncheon was partaken of at 1 o'clock, about thirty members being present. The general meeting was held at 2 o'clock, Dr. D. G. Thomson, the President of the Branch, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Papers.—Dr. H. H. Brown (Ipswich) read a paper on the prevention and treatment of surgical shock, and the paper was afterwards discussed by Mr. BALLANCE and Dr. SIMON. Dr. C. SCOTT KILNER (Bury St. Edmunds) read notes on a case of thrombosis of the mesentery; and,

secondly, notes on a case of volvulus; and, thirdly, notes on a case of prostatectomy. Dr. CAIE (Bury St. Edmunds) read notes on a case of hydrannus.

Cases.—Dr. HINNELL (Bury St. Edmunds) showed a case of foreign body on the iris, retained for years without any symptom; a case of congenital deformity of hands and legs; and read notes on hydrocephalus impeding labour.

Tea.—At 4.30 o'clock afternoon tea was kindly provided by Mrs. Scott Kilner of York House, and Mrs. Caie.

Exhibits.—Instruments and drugs, etc., were shown by Messrs. Maw and Sons, Messrs. Burroughs, Wellcome, and Co., and Seabury, Johnson, and Co.

New Members.—At a meeting of the Council held before the general meeting, the following gentlemen were unanimously elected members: Dr. H. A. Gaitskell, M.D. (Southend), Dr. J. C. Howie, M.D. (Southend).

Election of Officers.—The following officers were nominated for the year 1909-10:—*President*, Dr. W. H. Slimon (Clacton-on-Sea); *Vice-Presidents*, Dr. Waters (Southend), Dr. Brogden (Ipswich), and Dr. Thomson (Thorpe, Norwich); *Honorary Secretary for Essex*, Dr. B. H. Nicholson; *Honorary Secretary for Norfolk*, Mr. H. A. Ballance; *Honorary Secretary for Suffolk*, Dr. Gutch; *General Secretary and Treasurer of the Branch*, Dr. B. H. Nicholson. It was unanimously resolved to confer the honour of President-elect on Dr. P. Minns of Thetford, and the Secretary for Suffolk was empowered to ask him whether he would undertake the duties. [Dr. P. Minns, in a letter to Dr. Gutch, accepted the office.]

Date of Annual Meeting.—It was resolved to hold the annual meeting at Clacton-on-Sea on Thursday, July 1st.

GLASGOW AND WEST OF SCOTLAND BRANCH: EASTERN DIVISION.

A MEETING of the Division was held in the Religious Institution Rooms, 200, Buchanan Street, Glasgow, on April 7th, 1909. Dr. MILLER SEMPLE, Chairman of the Division, presided over an attendance of fourteen members.

Confirmation of Minutes.—The minutes of the last meeting, April 13th, 1909, were read, approved, and signed by the CHAIRMAN.

Secretary's Report.—The SECRETARY read his report for the year 1908, and gave a statement of the financial position of the Division. The membership of the Division stood at 78, an increase of two over last year. The Divisional expenses amounted only to £1 12s., the balance, consisting of £4 5s., having been returned to the treasurer of the Branch. The Secretary further reported that he had acted as local treasurer to the Lynn Thomas and Skyrme Fund, and was able to send subscriptions from members of the profession in the Division amounting to £4 7s. 6d. Some conversation followed the Secretary's report, the main trend of which was in favour of more meetings of the Division being held, and, if possible, that statutory meetings be held every three months.

Early Appointment of Representative.—The SECRETARY read the recommendation by the Council of the Association in favour of early appointment of Representative to Representative Meeting, with an explanation of the necessity for altering the rules of the Division to permit this change. A motion to allow the matter to lie on the table was lost in favour of an amendment to bring the matter up for discussion at the annual meeting of the Division.

Whole-time Medical Officers of Health.—The Division, by a large majority, rejected the previous question when put against the recommendation of the Health Committee of the Association that it was desirable for medical officers of health to be entirely debarred from engaging in private practice. Dr. WISHART KERR moved, in accordance with the recommendation, that medical officers of health should be wholly engaged in that work and should not be private practitioners. Dr. SERVICE seconded. Dr. W. L. MUIR moved as an amendment that medical officers of health in cities and populous places should be whole-time officers and debarred from private practice, but in sparsely-populated districts other arrangement was necessary as it was not practicable for the medical officer of health to be a whole-time official. Dr. P. S. BUCHANAN seconded. On a vote the motion was carried by 7 to 6.

Medical Certification of Suitability of Patients for Hospital Treatment.—The SECRETARY read the report from the Hospitals Committee of the Association on the medical

certification of the suitability of patients for hospital treatment. On a vote the Division agreed to the recommendations of the Hospitals Committee.

Contributions to Hospitals by Employers and Employees.

—The Division unanimously agreed to the principle contained in the first paragraph—namely, that contributors to hospital funds (employers and employees) are not entitled to regard the use of the hospital as their right, but simply that contributions are to be regarded as a premium for proportionate insurance against liability for accident and sudden illness. The second paragraph, relating to the general acceptance of this principle with a view to the elaboration of a scheme by which such contributions should be paid to insurance companies, was rejected on a vote.

Fresh Medical Institutions.—On the motion of Dr. GRANGER, the resolution of the Hospitals Committee on the desirability of consultation with the local medical profession, as represented by the Division of the British Medical Association, before opening any new medical institution, was carried unanimously. A verbal alteration was accepted without dissent—namely, instead of (in last line of recommendation) "dealing with hospital questions" to read "dealing with such questions" as having a wider application.

Resolution from Chelsea and Fulham Division.—The SECRETARY read the resolution communicated by the Secretary of the Chelsea and Fulham Division on some alleged high-handed action of the Council of the Royal College of Surgeons of England. The letter was allowed to lie on the table.

Resignation of Honorary Secretary.—The HONORARY SECRETARY intimated that he was desirous of relinquishing his office, and asked to be relieved of his duties. The CHAIRMAN regretted that Dr. Patrick should resign, but recognized that the Division had no alternative but to accept the resignation. On the motion of the CHAIRMAN, a vote of thanks was passed to Dr. Patrick for his services as Honorary Secretary during the past six years.

Election of Honorary Secretary.—Dr. PATRICK moved that Dr. Wm. Bryce be elected Honorary Secretary for the remainder of the current year. This was agreed to unanimously.

Branch Council and its Work.—Dr. BRYCE reported on the work done on the Branch Council during the past year. The report referred to three matters of interest to the Division: (1) The alteration in the *personnel* of the Ethical Committee of the Branch so as to include representatives from the various Divisions. (Dr. Service is the Representative from this Division.) (2) The matter of the Referendum by postal vote, and the proposed alteration of the Charter to permit such a vote. (3) The payment of practitioners attending street accidents. (This matter is in the hands of the Secretary and Chairman of the Branch, who were instructed to collect information.)

The Representative Meeting.—Dr. W. L. MUIR reported on the work of the Representative Meeting at Sheffield.

Vacancy in Executive Committee.—The SECRETARY intimated that a vacancy in the Executive Committee had occurred in consequence of Dr. McKail's resignation of membership of the Association.

LANCASHIRE AND CHESHIRE BRANCH:

ASHTON-UNDER-LYNE DIVISION.

A MEETING of this Division was held on Friday, April 30th, at the Ashton-under-Lyne Infirmary. There were eighteen members present, Dr. P. N. TWOMEY being in the chair.

Nominations for Central Council.—The Division decided to nominate Messrs. Garstang, Larkin, Macfie, and Taylor as Branch candidates for election on the Central Council.

The Representative Meeting at Sheffield.—Dr. CLARKE, the Representative of the Division at the Annual Meeting, gave an account of the Representative Meeting held at Sheffield. He was thanked for his report and his services as Representative.

Medical Certificates of Suitability for Hospital Treatment.—In regard to the question of medical certificates of suitability for hospital treatment it was decided that a medical certificate should be the essential condition for treatment at a hospital except in case of casualties, in which case such a certificate should be obtained before the second attendance.

Representation of Local Profession on Hospital Boards.—It was decided that the local medical profession should be represented on the board of management of all hospitals supported by voluntary subscriptions.

Contributions to Hospitals by Employers and Employees.—It was decided that the principle expressed in the two resolutions re contributions to hospitals by employers and employees were undesirable.

Whole-time Medical Officers of Health.—In regard to this matter the Division, whilst recognizing the necessity for part-time medical officers of health in small districts, considered that whole-time medical officers of health are desirable where the principle can be carried out without imposing an undue burden on the rates.

Resolutions.—The Secretary was instructed to forward notice of the two following resolutions for discussion at the Representative Meeting in Belfast:

- (a) That immediate steps be taken by the British Medical Association to secure the return of a Parliamentary candidate pledged to represent the views of the British Medical Association, and that such Representative shall be paid an adequate salary out of the funds of the Association.
- (b) That the British Medical Association take steps to convince the Government of the advisability of amending the Workmen's Compensation Act with a view to securing payment to medical men by employers and insurance companies for emergency and other services rendered to workmen for injuries as defined by that Act.

BLACKBURN DIVISION.

A MEETING of this Division was held at the Old Bull Hotel, Blackburn, on Thursday, April 29th. There were present: Dr. MACLEIN (Chairman), Drs. Taylor, Henry, Jones, Bowen, Prebble, Bannister, and Greenwood.

Address.—Dr. GARSTANG of Altrincham, a member of the Central Council, addressed the Division on Some Questions in Medical Politics.

Nominations for Central Council.—At the close of the meeting, it was unanimously decided to support the nomination of Drs. Garstang, Larkin, Macfie, and Taylor for the four vacancies on the Central Council from the Lancashire and Cheshire Branch.

MANCHESTER (SOUTH) DIVISION.

A MEETING of the Division was held at the house of Dr. Sawers Scott, 57, Wilmslow Road, Withington, at 5.30 p.m. on Friday, April 30th, Dr. McDougall in the chair. There were nine members present: Drs. Boyd, Vipont Brown, Grant Davie, Edlin, Gregory, Chrichion Hood, Sawers Scott, and Stocks.

Apologies for Non-attendance.—Regrets for absence were received from Drs. Carnwath and Russen Rhodes.

Confirmation of Minutes.—The minutes of the last meeting were read and signed.

Joint Committee of Manchester and Salford Divisions.—Arising out of the minutes, a letter was read from Dr. Taylor stating that the Joint Committee of the Manchester and Salford Divisions had again considered the question of obtaining official recognition of the Committee as the chief representative body of the medical profession in these districts, and it had resolved to write to local authorities with that object.

Care and Control of the Feeble-minded under the Poor Law.—On this subject a letter was read from a layman, Mr. H. P. Douglas, who concluded:

My object in asking you to bring this matter before your Division is to suggest that you pass a resolution calling upon the Local Government Board to carry out the recommendations of the Royal Commission on the Care and Control of the Feeble-minded, and also the Royal Commission on the Poor Laws in so far as they concern the mentally defective; and that copies of this resolution should be sent to the President of the Local Government Board and the local members of Parliament. Such an expression of expert opinion could not but have an influence in the direction of facilitating this much-needed reform.

After due consideration the following resolution, proposed by Dr. VIFONT BROWN, seconded by Dr. SAWERS SCOTT, was unanimously adopted:

We, the members of the Manchester (South) Division of the British Medical Association, hereby urge upon the Local Government Board the desirability of carrying into effect the recommendations of the Royal Commission on the Care

and Control of the Feeble-minded, and also of the Royal Commission on the Poor Laws (both majority and minority) in so far as they concern the mentally defective. Both of these important Commissions recommend that all grades of the mentally deficient should at all ages be withdrawn from the charge of the guardians and education authorities, and be committed to the charge of a committee of the borough and county councils with which the Asylum Committees should be merged, and that supervision and control should be concentrated in one fully-equipped office under whatsoever department of Government which should deal solely with the mentally defective. We consider it of the highest importance that all imbeciles should be removed from workhouses, as recommended by a Select Committee of the House of Commons so long ago as 1899, and by the Royal Commission on the Care and Control of the Feeble-minded last year, as well as by the recent Royal Commission on the Poor Laws.

It was resolved to forward this resolution to the Local Government Board and to the Joint Committee.

Nominations for Central Council.—The following were unanimously nominated as candidates for election to be supported by the Division: Mr. Larkin (Liverpool), Dr. Taylor (Salford), Dr. Garstang (Altrincham), and Dr. Macfie (Bolton).

Paper.—Dr. GRANT DAVIE then read a paper on diphtheria, with details of an unusually early case of post-diphtheritic paralysis. This was followed by an interesting discussion in which every member present took part. The opinion was unanimous that negative bacteriological tests, in cases where signs and symptoms on the whole pointed to diphtheria, were non-reliable as an aid to diagnosis, and were to be disregarded in so far as delaying antitoxin treatment. The opinion was also given that swabs for bacteriological examination should be taken from the tissues around the pellicle, and not from the surface of the membrane itself, as was frequently done, owing to the membrane being largely composed, on its surface at any rate, of dead debris.

PRESTON DIVISION.

THE annual general meeting of this Division was held on Thursday, April 29th, Dr. R. C. BROWN in the chair.

Confirmation of Minutes.—The minutes of the last annual meeting, and of a special meeting held on January 27th, were confirmed.

Election of Officers.—The following were elected: Chairman, Dr. R. C. BROWN; Vice-Chairman, Dr. J. E. Garner; Honorary Secretary and Treasurer, Dr. W. Sykes; Representative for Division, Dr. Garner; Representative for Branch Council, Dr. Harris; Executive Committee, Drs. Petyt, Rayner, Sellers, Turnbull Smith.

Matters Referred to Divisions.

The following questions, referred to Divisions, were discussed:—Medical certificates for suitability for hospital treatment: agreed to. Contributions to hospitals: agreed to (a), not agreed to (b). Fresh medical institutions: agreed to. Sanatoriums for tuberculosis: agreed to. Medical representation on lay boards of hospitals: agreed to.

Whole-time Medical Officers of Health.—Dr. SELLERS proposed and Dr. GARNER seconded the following resolution:

That in districts where salary is adequate whole-time officers be appointed, that in other districts part-time officers.

Letter from Chelsea and Fulham Division.—A letter was read from the Chelsea and Fulham Division.

Unqualified Practice.—A letter was read from the Public Health Department re unqualified practice: its increase and effect on the public. It was answered at length.

Nominations for Central Council.—Drs. Garstang, Larkin, Macfie, and Taylor were unanimously nominated by the Division for the Central Council.

Vote of Thanks.—A vote of thanks was passed to Dr. Brown for presiding.

ROCHDALE DIVISION.

THE annual meeting was held in the Wellington Hotel, Rochdale, on Thursday, April 22nd. In the absence of the Chairman and Vice-Chairman, Dr. THORP (Todmorden) was voted to the chair.

Confirmation of Minutes.—The minutes of last annual meeting were read and confirmed.

Election of Officers.—The following officers were unanimously elected for the ensuing year: *Chairman*, Dr. Thorp (Todmorden); *Vice-Chairman*, Dr. Menzies (Rochdale); *Secretary*, James Melvin (Rochdale); *Representative on Branch Council*, Dr. Brown (Bacup).

Executive Committee.—It was moved by the SECRETARY, and seconded by Dr. BROWN:

That the following, along with the officers, form the Executive Committee: Drs. Dickson, Kerr, Walker, and Wallace (all of Rochdale).

Annual Report.—The SECRETARY read the annual report as follows: Meeting on December 31st, 1907, 48; increase, none; losses through resignation and change of address, 3; nett membership on December 31st, 1908, 45. The balance sheet showed a balance to the good of £6 7s. 2d.

Lynn Thomas and Skyrme Fund.—A donation of two guineas was voted to the Lynn Thomas and Skyrme Fund. It was moved and seconded:

That the members be asked to subscribe a shilling to liquidate this donation.

Instruction to Representative at Representative Meeting.—Dr. WALKER moved, Dr. BROWN seconded, and it was carried unanimously:

That it be an instruction to the Representative at the Representative Meeting to bring forward the following resolution: That there be two grades of subscription, one as at present to include membership of Association and JOURNAL, and one—say at 10s. 6d. annually—to include membership of Association and the SUPPLEMENT of the JOURNAL only.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.

A MEETING was held (conjointly with the Walthamstow Division) at Brooke House, Clapton (by the kind invitation of Dr. J. O. Adams and Mr. G. H. Johnston), on Thursday, April 22nd, at 8.30 p.m. Dr. GOODALL presided, and there were 23 members and visitors present.

Demonstration of Skin Diseases.—A demonstration of skin diseases by Dr. J. H. SEQUEIRA was held. The following interesting cases were shown, amongst others: (1) A case of recurring whitlows and blisters of the hands and wrists, in a woman. Thought to be due to some trophic changes. (2) A case of lichen planus, with marked pigmentation of the sites of the spots, due to arsenical treatment. (3) A case of lupus erythematosus, much improved by increasing doses of quinine internally and decolorized tincture of iodine externally. (4) A case of syphilis of the nose and lips, in which some doubt in the diagnosis was cleared up by means of Wassermann's test. (5) A case of extensive lupus of face, successfully treated by x rays, in which the appearance of the patient had been much improved by a plastic operation. A hearty vote of thanks was accorded to Dr. Sequeira at the conclusion of the demonstration, and to Dr. Adams and Mr. Johnston for their hospitality.

General Meeting.

A general meeting of the Division then followed.

Confirmation of Minutes.—The minutes of the previous general and clinical meetings were taken as read, and signed by the Chairman.

Letter from Fulham and Chelsea Division.—A letter was read from the Fulham and Chelsea Division re the action of the College of Surgeons re the admission of women, and a reply was sent that this Division did not consider that it was within its province to discuss the matter.

Proposed Federated Societies' Medical Provident Fund.—A letter was read from the Medical Secretary re the proposed Federated Societies' Medical Provident Fund.

Annual General Meeting of Division.—It was agreed that the annual meeting of the Division be held on May 20th instead of May 27th, as the latter date clashed with the Branch Council meeting.

Entertainment Fund.—It was unanimously agreed that an "entertainment fund" for the Division be formed by an annual subscription of 1s. per member per annum.

Medical Certificates of Suitability for Hospital Treatment.—The meeting instructed their Representative to support the recommendation "that a medical certificate of

suitability for hospital treatment be required as a condition of hospital treatment, except in case of casualties."

Contributions to Hospitals by Employers and Employees.—A reply was also sent to the Secretary of the Hospitals Committee saying that this Division agreed with the recommendations of the Representative Meeting re contributions to hospitals by employers of labour and employees, and also re the formation of fresh public medical institutions.

Letter to Mr. H. E. Powell.—A letter was to be sent to Mr. H. E. Powell regretting that he was leaving the Division and wishing him success in his new sphere of labour.

The meeting then terminated.

WALTHAMSTOW DIVISION.

An ordinary meeting of the Division was held at the residence of the Chairman (The Hollies, Wanstead) on Tuesday, March 2nd, at 4 p.m. Eight members and two visitors were present. Dr. HICKMAN presided.

Confirmation of Minutes.—The minutes of the two previous meetings were read and confirmed.

Paper.—The CHAIRMAN then introduced Dr. T. G. STEVENS, who read an instructive paper on Dysmenorrhœa. A discussion followed, in which Drs. WARNER, WARD, HARFORD, MACGREGOR, HICKMAN, and ELDERED took part. Dr. STEVENS replied to the questions.

Vote of Thanks.—A vote of thanks to Dr. T. G. Stevens was proposed by Dr. HARFORD and seconded by Dr. HICKMAN. This was unanimously accorded.

Medical Inspection of Schools.—The consideration of the medical inspection of school children was postponed until next meeting.

An ordinary meeting of the Division was held at the Walthamstow Hospital on Tuesday, April 6th, at 4 p.m. Eight members and one visitor were present. In the absence of the Chairman and Vice-Chairman, Dr. C. J. HORNER was voted to the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Letter from Chelsea and Fulham Division.—A letter from the Chelsea and Fulham Division was read and considered. The Secretary was instructed to forward the reply of this Division.

Letter from Medico-Political Committee.—A letter from the Medico-Political Committee was read and postponed for further consideration at the business meeting.

Medical Inspection of School Children.—The medical inspection of school children was then dealt with, and the secretary instructed to forward the views of this Division to the Medical Secretary.

Papers and Cases.—Dr. HOLTHUSEN read a paper on 4 cases of gunshot wounds, the result of the Tottenham anarchist outrage, admitted on January 23rd to the Walthamstow Hospital. Three of the cases were shown, together with the bullet extracted from one of the injured. The paper was much appreciated by all present. The meeting then terminated.

WALTHAMSTOW AND STRATFORD DIVISIONS.

A CONJOINT meeting with the Stratford Division was held on December 1st, 1908, at the Grove Hall, Wanstead, at 4 p.m. Thirteen members and two visitors were present. Dr. HICKMAN presided.

Paper.—The CHAIRMAN introduced the lecturer in a few well-chosen words, and Mr. McADAM ECCLES proceeded to read a most interesting paper, entitled, *The Non-operative Treatment of Inguinal Hernia*. For over an hour, in the most able manner, Mr. Eccles spoke on the use and abuse of trusses, illustrating his paper with about forty lantern slides, which indicated very clearly the points he wished to emphasize. At the conclusion of the paper questions were asked by Drs. HICKMAN, ROSE, WARD, ELDERED, HORNER and MACGREGOR, to which suitable replies were given.

Vote of Thanks.—A vote of thanks to Mr. Eccles was proposed by Dr. ROSE (Stratford Division), and seconded by Dr. MACGREGOR. This was accorded with acclamation. Mr. ECCLES thanked those present in appropriate terms, and the meeting ended.

LIVERPOOL AND BIRKENHEAD COMBINED DIVISIONS.

The following documents have been sent to us by the Honorary Secretary of the Liverpool and Birkenhead Combined Divisions for publication:

March 24th, 1909.

Dear Sir,

The Report of the Medico-Political Committee on certain points arising in connexion with the medical inspection of school children and the treatment of those found defective has been carefully considered, first by the Joint Committee of the Liverpool and Birkenhead Divisions, and then by two general meetings of the Liverpool and Birkenhead Combined Divisions, and I am instructed to inform you:

1. That the Report was generally approved, and to send you the following commentary and answers to questions.
2. Many points have been noted for future guidance, especially Paragraphs 1 and 2.

3. As regards Paragraph 3 (iii b), the Divisions were unable to pass an opinion on the Hertfordshire and Derbyshire schemes on account of insufficient information as to how they work out in practice.

4. There are no special systems of payment of school medical officers (inspectors) in our area.

5. A complete list of the appointments made in this district, with salaries, is added as an appendix.

It appears to the Divisions that—

6. Parliament having assumed almost parental responsibility for the health and education of the children, it cannot logically avoid providing for its cost. If the parents do not feed the children, the community now is obliged to do so, and the cost must be met by voluntary subscription or by the imposition of a rate. Similarly, if the children have physical defects or diseases, these must, if possible, be remedied, and the cost of the treatment, if not defrayed by the parents, must likewise be borne by the community.

The Combined Divisions agree with the classification of the children into the three groups: (9) Children in Class 1 should be compelled to go for treatment to a private doctor. Children in Class 2 are already provided for by the Poor Law. Children in Class 3 belong to parents who cannot afford to pay for adequate treatment, but whose position is such that public opinion will not allow them to be compelled to seek the aid of the Poor Law.

The Combined Divisions do not think sufficient consideration has been given to the differentiation of these classes, and believe that without great vigilance on the part of the profession Class 3 will be found in time to have entirely, or almost entirely, absorbed the other two classes.

If good and cheap or free attendance can be got by Class 3, the parents of Class 1 will, unless prevented, gradually avail themselves of it in increasing numbers.

The interests of the parish doctors, who are mostly paid fixed salaries, will, it is thought, tend to make Class 2 as small as possible.

It seems to the Divisions urgently necessary that the Medico-Political Committee should indicate the machinery whereby this classification could be carried out and enforced in practice. The Divisions believe that the questions of cost and convenience are the only ones that can be relied upon to appeal to the authorities, and suggest that the Education Authority should therefore have powers similar to those which it is understood are already possessed by Poor Law guardians and health authorities to recover from the parents or guardians of children the whole or part of the cost of their attendance, including medical fees, in all cases where those responsible can afford it and have neglected to provide it, and in the case of Class 2 they should be allowed similarly to recover from the guardians.

The medical fees so recovered should be the ordinary medical fees of the district, and should be paid to the medical officer with, in the case of an officer paid by time or salary, such deduction as may be agreed upon for the time so taken up, and in the case of an officer paid a fee per head, with the deduction of that fee.

7. The Divisions consider, with regard to No. 10, that from the professional point of view the reference of the children to a doctor of the parents' choosing is the most

satisfactory arrangement, but where the attendance is undertaken on a certificate from the medical school officer, the education authority should be responsible to the practitioner for a standard fee, unless the parents voluntarily pay him. The authority would have power to recover as stated above.

8. The Divisions endorse in the strongest way they can the views of the Medico-Political Committee in Paragraph 13 regarding treatment at hospitals, etc. The profession should set its face absolutely against any such arrangement.

If made without payments to the staff the hospital ceases to be a charity and becomes a medical aid, a commercial undertaking, running a business in opposition to legitimate practice.

If the staff is paid they cease to be "honorary" medical officers, but become holders of positions of emolument, and would have to be considered as such.

9. As regards Paragraph 14, the Divisions note that the Board of Education (Memorandum 596, 7a) intends to compel the local education authority to use hospitals as much as it can. They must, therefore, use them unless the profession prevents it. The Combined Divisions are determined to present a united face against this encroachment. It is thought that the establishment of school clinics is not necessary in this locality, but, as they have already been established in many districts, and in connexion with some schools under the Defective and Epileptic Children's Act even in our own area, the Divisions strongly urge all members carefully to watch developments and to be prepared for united action if professional interests become endangered.

ANSWERS TO QUESTIONS.

Inspection.

(a) The Divisions, while generally disapproving of contract work, and believing that the best way of paying a professional man is by a proper fee per case for work actually done, consider that in most of this area payment per case would not be practical, and therefore favour payment of a fixed salary in accordance with the principles already laid down by the Association.

(b), (c), and (d). The answer to (a) being in the negative, no answer is required.

*Treatment.*2 and 3.—*Size of the School Clinic.*

The Divisions have no data on which to give an answer, but will carefully watch developments.

Selection of Staff.

The most probable development in our city areas will be, in the event of clinics being formed, that the authority will appoint whole-time officers. In the rural areas it is thought that clinics are not likely to be established, and if any special arrangements are made it will be on the lines of "recognized surgeries."

Remuneration.

The Divisions are of opinion that in the town areas the most practical method would be as stated above, by the appointment of full-time medical officers, and that their payment should be on a scale at least equal to that of inspectors.

In our suburban areas the officers will probably be part-time officers, and should be remunerated on at least the same scale as part-time inspectors.

In our rural areas it is thought the amount of work will be small, and payment per case would be the best method, and the people should choose their own attendant.

In all areas where operations have to be performed or specialists called in, special arrangements, approved by the Joint Committee and by the Divisions concerned, should be made.

Faithfully yours,

(Signed), K. GROSSMANN,
Honorary Secretary, Liverpool and Birkenhead
Combined Divisions (70, Rodney Street, Liverpool)

The Chairman,
Medico-Political Committee,
British Medical Association.

70, Rodney Street,
Liverpool,
March 24th, 1909.

Dear Sir,

I am instructed by the Joint Committee of the Liverpool and Birkenhead Divisions to reply to your letter of November 27th, 1908, asking on behalf of the Central Ethical Committee for help in constructing a definition of the term "hospital."

The letter was considered by the Joint Committee, and then brought before a meeting of the combined Liverpool and Birkenhead Divisions, and the decision came to was unanimous. At both meetings the Liverpool Western Division was well represented, but so far the Division itself has not met to consider the matter. Since the formation of the Joint Committee and the combined meetings, it is found to be exceedingly difficult to get separate Divisional meetings.

In the first place the Joint Committee wishes to assure the Central Ethical Committee of its desire to help it in every way in its power, and hopes the Central Ethical Committee will not consider its action obstructive.

If the Joint Committee knew the exact reasons and for what purposes the Central Ethical Committee desired to make such a definition, it is possible that it might be able to help, but with the information before it it can only adhere to its already expressed view, and inform the Central Ethical Committee that the meeting of the combined Divisions called among other things for the purpose of considering the matter unanimously adhered to its opinion that the proposed definition is useless, inadequate, and dangerous.

In support of this position, I am instructed to make the following remarks on the memorandum published on the subject, and circulated to Divisions last year.¹

The Memorandum first states that the definition is made in the public interest with the authority of the British Medical Association, but it goes on to say the definition must be considered as a purely domestic definition to guide members and Committees of the Association.

The Joint Committee and the Divisions think that any definition made by the British Medical Association cannot remain entirely domestic, but will become known to persons outside the Association, both medical and lay, and will be used by them against the profession and the Association whenever it suits them to do so.

The Joint Committee and the Divisions are persuaded that the greatest problem before the profession to-day is the problem of hospital abuse and the tyranny of lay committees and the subordination of the medical staffs, and that while the lay committees are getting greater and greater control they are actually ceasing largely to be the actual people who subscribe the money that supports the hospital. They are largely irresponsible manipulators of funds obtained from various sources—endowments, funds like the King's Hospital, Saturday and Sunday collections, street collections, collecting boxes in public places, benefit performances, football matches, contributions from patients, etc., and now there is a decided tendency to make actual contracts with public and private bodies to do work at a price. This latter method of getting money the recent memorandum of the Board of Education suggests to all hospitals. It is therefore necessary, in our opinion, that the greatest care should be exercised in stating anything that may even suggest that the Association considers that lay committees have any rights connected with hospitals that medical men have not without them, or that lay committees in conjunction with medical men can do anything which individual medical men cannot do. It should be driven home to medical men that they will be held responsible for improper acts of the lay committees of the hospitals to which they are attached. Such pronouncement would enormously strengthen the hands of the staffs of hospitals.

The Joint Committee is not informed as to the exact way in which improper use has been made of the term "hospital," but it holds that, whatever it may be, the

making of an authoritative definition will not remove the abuse as long as a synonym remains in the English language.

In the North the term "infirmary" is more commonly used than "hospital," and if both these are condemned, those who have improperly used them will put up "institution for the treatment of" so and so, or will use the word "clinic," which is rapidly coming into the popular vocabulary.

But supposing all terms are included at last, and the gentleman who runs the hospital to advertise himself, finds he must comply with the definition, there is not much difficulty in the way.

He complies with (a) in the following manner:

He takes in and attends all sorts, and makes every one of them pay sufficient to more than cover expenses, and he only refuses to see those people who are likely to go and see him privately and pay him good fees. During the course of the year, though, he takes good care to take in and carefully record all about two necessitous persons. He gets two friends or relatives to partially support his hospital by giving each a guinea or, indeed, each a shilling a year.

(b) These two friends act with him as a committee and control the hospital and appoint the staff.

(c) Will be complied with if he can show he does not pocket any money himself, for he can say that the patients his reputation brings him is exactly the same way as the patients that come to the physicians and surgeons of other "hospitals."

It would be a calamity for any definition such as the one proposed to go out to the public.

What the Central Ethical Committee, in conjunction with the Hospitals Committee, should do is to insist that all institutions for the treatment of disease should be divided into the charitable and the non-charitable, and should set its face against their being mixed up.

The non-charitable may be supported by public or private funds, or by the payments of patients, and the medical men connected with them must be paid.

The charitable institutions should receive only necessitous patients, and be maintained wholly (not wholly or partially) by charitable contributions.

No charitable contribution should be deemed charitable if accompanied by conditions of the nature of a contract.

There are in large towns few hospitals whose committees are appointed by and responsible to those who provide the funds. An increasingly large part of the funds is derived from (1) endowments and funds the actual providers of which are dead, or at any rate have no voice in their management; (2) collections made in the streets, churches, works, etc., or by collecting boxes; (3) contributions of patients. Of the remaining subscribers we hold there is not the least doubt a large number subscribe for a direct return. Railway companies, large works, and employers of labour subscribe to hospitals to avoid the necessity and expense of otherwise providing for those injured in their employ.

We hold that if the present definition is accepted it will appear to acknowledge principles that the Association should use all its powers to oppose: that if used logically it would take the name "hospital" from almost every large hospital that at present exists.

We urge that the Central Ethical Committee cannot proceed by definition to remove the abuses it desires to attack, and its only way is to deal with the acts of people individually.

If any definition is demanded it should be on the lines that no hospital, infirmary, or similar institution should be recognized unless it is approved by the Divisions in which it is situated, always giving it the right of appeal to higher tribunals of the Association in the usual way.

Yours faithfully,

(Signed) K. GROSSMANN,
Honorary Secretary,
Liverpool and Birkenhead Combined Divisions.

For the Central Ethical Committee.
To the Medical Secretary.

¹ See SUPPLEMENT, BRITISH MEDICAL JOURNAL, February 22nd, 1908.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

ABERDEEN BRANCH.—*Election of Representative of the Branch on the Council of the Association.*—Nominations of candidates must be sent in writing on or before May 22nd to Dr. J. F. Christie, 7, Alfred Place, Aberdeen.

BATH AND BRISTOL BRANCH.—*Election of Representatives of the Branch upon the Central Council.*—Nominations of candidates for election to the Central Council must be forwarded to the Honorary Secretaries not later than May 8th. The Branch is entitled to elect one member.—**NEWMAN NIELD**, Richmond Hill, Clifton; **W. M. BEAUMONT**, 4, Gay Street, Bath.

BIRMINGHAM BRANCH.—*Election of Representatives of the Branch on the Council of the Association.*—Nominations of candidates must be sent in writing on or before May 19th next to Albert Lucas, F.R.C.S., Branch Secretary, 9, Easy Row, Birmingham. The Branch is entitled to elect two members.—**ALBERT LUCAS**, Honorary Secretary.

BORDER COUNTIES BRANCH.—The next meeting of this Branch will be held at the Lochmaben Combination Hospital for Infectious Diseases, Lochmaben, on Friday, May 21st. Opportunities will also be given to members to inspect the Lochmaben Sewage Works and the Lockerbie Sewage Works. The meeting will be preceded by a meeting of Council, at which the Council's nominees for office in the Branch for the ensuing year will be chosen. Further details will be sent to each member by post, and will convey information as to trains, motors, etc. A good attendance is specially requested.—**FRANCIS R. HILL**, Honorary Secretary, Carlisle.

DUNDEE, PERTH, AND STIRLING BRANCHES.—*Election of Representative Member of Central Council.*—Nominations, in accordance with the regulations of the Association, must be sent to me on or before Saturday, May 22nd.—**R. C. BUIST**, M.D., 166, Nethergate, Dundee, Returning Officer.

EAST ANGLIAN BRANCH.—The annual meeting of the Branch will be held at the Grand Hotel, Clacton-on-Sea, on Thursday, July 1st.—**B. H. NICHOLSON**, East Lodge, Colchester, Honorary Secretary.

EAST ANGLIAN BRANCH.—Nominations for the election of Representative Members of Central Council must be forwarded to me not later than June 1st next.—**B. H. NICHOLSON**, East Lodge, Colchester, Honorary Secretary.

GLASGOW AND WEST OF SCOTLAND BRANCH.—*Election of Members of the Central Council.*—In accordance with Association By-law 25, Branch Rule 5, nominations for Representatives on the Central Council, each signed by at least three electors, are requested to be sent to me on or before Wednesday, May 26th. The Branch is entitled to return two Representatives. The present Representatives, Mr. James Grant Andrew and Dr. D. J. Mackintosh, M.V.O., are eligible, and seek re-election.—**WM. D. MACFARLANE**, Jun., 17, Woodside Crescent, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—*Election of Representatives of the Branch on the Council of the Association.*—Nominations of candidates must be sent in writing on or before May 8th next to **F. CHARLES LARKIN**, Branch Secretary, 54, Rodney Street, Liverpool.

LANCASHIRE AND CHESHIRE BRANCH.—A general meeting of the Branch will be held on Wednesday, May 12th, at the New Manchester Royal Infirmary (by kind invitation of the Committee and Medical Board). Details will be published later.—**F. CHARLES LARKIN**, Branch Secretary.

LANCASHIRE AND CHESHIRE BRANCH: WARRINGTON DIVISION.—The annual meeting of this Division will be held at the Infirmary, Warrington, on Tuesday, May 11th, at 4.30 p.m.—**T. A. MURRAY**, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH.—*Nominations of Branch Officers.*—Pursuant to By-law 25, notice is hereby given that nominations for all the officers of the Branch—namely, President-elect, Vice-Presidents, Secretary members of the Branch on the Central Council of the Association—must be sent in to the Honorary Secretary of the Branch on or before May 29th. Voting papers will be sent out on or before June 5th, and must be returned to the Secretary on or before June 12th.—**ATWOOD THORNE**, E. W. GOODALL, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: RICHMOND DIVISION.—The annual meeting will be held at the Royal Hospital, Richmond, on Wednesday, May 12th, at 8.30 p.m. Business: Election of officers, Executive Committee's report, Balance-sheet for 1908. Matters referred to the Division.—**G. CARDNO STILL**, Honorary Secretary, Twickenham.

MIDLAND BRANCH.—The annual meeting of this Branch will be held at the Leicester Infirmary on Thursday, June 10th. (1) The President-elect, Dr. R. Pratt, will give an address. (2) Election of Branch officers. (3) Annual report of the Branch. (4) Any other business. In accordance with the By-laws, notice is hereby given that nominations for the election of two Representatives of this Branch on the Central Council must be sent to the Honorary Secretary of the Branch not later than May 24th.—**ROBERT SEVESTRE**, Honorary Secretary, London Road, Leicester.

MIDLAND BRANCH: LINCOLN DIVISION.—The annual meeting of this Division will be held in the Guildhall, Lincoln, on Thursday, May 20th, at 3.30 p.m. Agenda: (a) To elect a Vice-President of the Midland Branch. (b) To elect officers, the Representative on the Branch Council, and the ordinary members of the Executive Committee. (c) To elect the Representative in Representative Meetings of the Association. (d) To consider the advisability or otherwise of the earlier appointment of the Representative in Representative Meetings. (e) To deal with certain matters referred by the Hospitals and Medico-Political Committees to the Divisions—namely: (1) Report on medical certification of suitability of patients for hospital treatment; (2) report on contributions to hospitals by employers of labour and employers; (3) statement as to fresh medical institutions; (4) statement as to sanatoriums for workers suffering from tuberculosis. (f) To answer certain questions relating to the medical inspection of school children and the treatment of those found defective. (g) To reply to the question: Should health officers give their whole time to the work? (see SUPPLEMENT TO BRITISH MEDICAL JOURNAL, January 23rd). (h) Other business. Members desiring to read papers or show cases or specimens are asked to communicate with the Honorary Secretary, **J. S. CHATER**, Honorary Secretary, 10, Steep Hill, Lincoln.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—*Election of Representative of the Branch on the Central Council of the Association.*—Nominations of candidates for election to the Central Council must be forwarded to the Honorary Secretary on or before May 29th.—**J. MUNRO MOIR**, M.D., 4, Ardross Terrace, Inverness, Honorary Secretary.

SOUTH-EASTERN BRANCH.—The annual meeting of this Branch will be held at Crovdon on Wednesday, June 23rd, Dr. J. J. Macan, President-elect, in the chair. The following will be the agenda:—(a) To elect the officers of the Branch—nominations by three members for the offices of President-elect, Vice-Presidents, and Secretary, may be sent to the Honorary Secretary on or before May 21st. (2) To receive the annual report of the Branch. (3) To transact any business that may be transacted by an ordinary meeting. Three members to represent the Branch on the Central Council will also be elected by voting papers. Nominations for these three members in writing should be sent to the Honorary Secretary on or before May 21st.—**H. M. STEWART**, Honorary Secretary, Dulwich.

SOUTH-EASTERN BRANCH: MAIDSTONE DIVISION.—A meeting of this Division will be held at the West Kent General Hospital on Thursday, May 13th, at 3 o'clock prompt. Business: Minutes of last meeting. Cases will be shown by Mr. Travers, Dr. Ryan, and others. Dr. Peyton will read a paper on Menière's disease and show a case of same. Dr. Joyce will move: "That this meeting is of opinion that it should be considered disgraceful conduct in a professional sense for any registered practitioner to supplant another who has been compelled to vacate any appointment on the ground that it is inadequately paid for. Where such a statement of unremuneration has been found by the Medical Council to be well founded, an investigation should take place." Dr. Parr-Dudley will move: "That the letter of warning issued by the Maidstone Division to the head masters of schools in this Division with reference to medical practice shall be issued by this Division to the head masters of schools in Kent."—**G. POTTS**, F.R.C.S. Edin., Honorary Secretary, Kent County Ophthalmic Hospital, Maidstone.

SOUTH MIDLAND BRANCH.—In accordance with By-law 25, notice is hereby given that nominations for the election of a Representative of this Branch on the Central Council must be sent to me not later than May 22nd next.—**E. HARRIS-JONES**, 16, Castilian Street, Northampton.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—*Election of Two Representatives on the Central Council of the Association.*—In accordance with By-law 25 of the Association, nomination of candidates must be sent to me in writing on or before Saturday, May 22nd next.—**ALFRED HANSON**, Swansea, Honorary Secretary, South Wales and Monmouthshire Branch.

SOUTH-WESTERN BRANCH.—*Election to Central Council.*—This Branch is entitled to return two members. Nominations should be sent to the undersigned so as to reach him not later than May 24th.—**RUSSELL COOMBE**, Branch Secretary, 5, Barnfield Crescent, Exeter.

STAFFORDSHIRE AND SHROPSHIRE AND MID-WALES BRANCHES.
—Nominations for the office of Representative on the Central Council of the Association should be sent to the undersigned on or before Saturday, May 15th, in accordance with By-law 25.—
G. PETGRAVE JOHNSON, Honorary Secretary, Staffordshire Branch, Brook Street, Stoke-on-Trent. C. G. RUSS WOOD, Honorary Secretary, Shropshire and Mid-Wales Branch, Shrewsbury.

ULSTER BRANCH.—The spring meeting of this Branch will be held in Londonderry on Saturday, May 8th.—CECIL SHAW, Honorary Secretary, 29, University Square, Belfast.

British Medical Association.

GRANTS AND SCHOLARSHIPS FOR SCIENTIFIC RESEARCH.

GRANTS.

THE Council of the British Medical Association is prepared to receive applications from members of the Medical Profession for Grants in aid of Researches for the Advancement of Medicine and the Allied Sciences.

The Grants are made subject to the following conditions:

1. That the work of the Grantee shall be subject to inspection by the Science Committee of the Association.

2. That each Grantee shall furnish to the Science Committee, on or before May 15th following the allotment of the grant, a report 'or, if the object of the grant be not then attained, an interim report, to be renewed not later than the same date in each subsequent year until the final report is presented) containing:

(a) A statement, in a form satisfactory to the Science Committee, of the results arrived at, or the stage which the inquiry has reached;

(b) A statement of expenditure incurred, accompanied by vouchers as far as possible;

(c) A reference to any Transactions, Journals, or other publications in which the results of the research have been announced.

SCHOLARSHIPS.

The Council of the British Medical Association is also prepared to receive applications for Research Scholarships, as follows:

1. An ERNEST HART MEMORIAL SCHOLARSHIP, of the value of £200 per annum, for the study of some subject in the department of State Medicine.

2. THREE RESEARCH SCHOLARSHIPS, each of the value of £150 per annum, for research in Anatomy, Physiology, Pathology, Bacteriology, State Medicine, Clinical Medicine, or Clinical Surgery.

Each Scholarship is tenable for one year, but is renewable by the Council, provided that the whole period of tenure shall not exceed three years.

The Scholarships are awarded subject to the following conditions:

1. That the work of the Scholar shall be subject to inspection by the Science Committee of the Association.

2. That he shall furnish the Science Committee, on or before May 15th following the grant of the Scholarship, with a statement of the work done by him.

3. That he sign an undertaking to abide by the above and other regulations affecting Scholarships, a copy of which will be supplied to him.

Applications.

Applications for Grants and Scholarships for the year 1909-10 must be made, not later than May 27th, 1909, in the prescribed form, a copy of which will be supplied on application to the Medical Secretary, 429, Strand, London, W.C.

Each application should be accompanied by a recommendation from the head of the laboratory in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

J. SMITH WHITAKER, Medical Secretary.

429, Strand, W.C., March, 1909.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

FLYING SURGEON A. F. HARPER has been appointed to the *Torpischoer*, May 3rd.

TERRITORIAL FORCE.

ROYAL FIELD ARTILLERY.

SECOND LIEUTENANT P. J. S. BIRD, M.D., 2nd Hampshire Battery 1st Wessex Brigade, to be Lieutenant March 30th, 1909.

ROYAL ARMY MEDICAL CORPS.

First London (City of London) Field Ambulance.—Lieutenant R. OLLERRENSHAW resigns his commission, March 4th, 1909.

Sixth London Field Ambulance.—WALTER B. PARKSON to be Lieutenant, March 16th, 1909.

Third Northampton Field Ambulance.—ABRAM C. BARBER, M.B., to be Lieutenant, March 17th, 1909; MERVYN A. ARCHDALE, M.B., to be Lieutenant, March 24th, 1909.

Third West Riding Field Ambulance.—Lieutenant H. G. M. HENRY resigns his commission, March 31st, 1909.

Second Wessex Field Ambulance.—Lieutenant F. C. WHITMORE to be Captain, March 3rd, 1909.

Second London (City of London) General Hospital.—Captain (Honorary Captain in the Army) E. J. G. BEEKLEY to be Major, April 5th, 1909.

For Attachment to Units other than Medical Units.—Surgeon-Major C. L. FRASER, from the Unattached List, to be Major, February 21st, 1909; CLARENCE I. ELLIS, M.D., to be Lieutenant, March 30th, 1909.

Vital Statistics.

ENGLISH URBAN MORTALITY IN THE FIRST QUARTER OF 1909.

SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.

In the accompanying table will be found summarized the vital statistics for seventy-six of the largest English towns, based upon the Registrar-General's weekly returns for the first quarter of the year. The 109,285 births recorded in these towns in the first quarter of the year were equal to an annual rate of 26.7 per 1,000 of the population, estimated at 16,445,281 persons in the middle of the year; in the corresponding quarters of the three preceding years the rates were 26.7, 26.0, and 26.2 respectively. In London the birth-rate in the first quarter was equal to 25.3 per 1,000, while it averaged 27.2 in the seventy-five other large towns, and ranged from 14.5 in Hastings, 14.6 in Hornsey, 15.5 in Bournemouth, 16.1 in Halifax, 18.5 in Bradford, and 19.3 in Northampton, to 35.7 in St. Helens, 34.2 in Tynemouth, 34.3 in Newport (Mon.) and in Swansea, 34.8 in Wigan, 36.0 in Merthyr Tydfil, and 41.5 in Rhondda.

The 75,580 deaths registered in these towns last quarter were equal to an annual rate of 18.7 per 1,000, the same rate in the three preceding first quarters having been 16.5, 19.0, and 17.9. The death rate in London last quarter was equal to 19.0 per 1,000, while among the seventy-five other large towns it averaged 18.6, and ranged from 10.2 in Hornsey, 11.1 in Walthamstow, 12.6 in East Ham, 12.7 in Harnsworth (Staffs.), 13.3 in Gateshead, and 13.4 in Harrow-in-Furness, 22 in Oldham, 22.2 in Manchester, 23.1 in Bury, 23.2 in Liverpool, 24.2 in Wigan, and 25.9 in St. Helens.

The deaths in the seventy-six towns last quarter included 7,149 which were referred to the principal infectious diseases; of these, 7 resulted from small-pox, 3,743 from measles, 566 from scarlet fever, 838 from diphtheria, 1,215 from whooping-cough, 299 from "fever" (principally enteric), and 529 from diarrhoea. These 7,149 deaths were equal to an annual rate of 1.74 per 1,000; the death-rates from the same diseases in the three preceding first quarters having been 1.38, 1.46, and 1.37. The death-rate in London last quarter from these principal infectious diseases was 1.72 per 1,000; in the seventy-five other towns the rate averaged 1.75, and ranged from 0.18 in Hastings, 0.21 in Hornsey and in Burton-on-Trent, 0.31 in Harrow-in-Furness, 0.41 in Newport (Mon.), and 0.45 in Northampton, to 3.56 in Sneathwell, 3.47 in Middlesbrough, 3.55 in Birmingham, 3.77 in Aston Manor, 4.23 in West Hartlepool, 6.17 in Warrington, and 8.22 in St. Helens.

The 3,743 deaths from measles were equal to an annual rate of 0.91 per 1,000; in London the death-rate from this disease was equal to 0.95, while it averaged 0.90 in the seventy-five other towns, and was highest in Birmingham, 1.24 in Stockport, 1.29 in Aston Manor, 1.30 in Warrington, 1.31 in Sheffield, 1.32 in Middlesbrough, 1.33 in West Hartlepool, and 1.34 in Sunderland. The 566 deaths from scarlet fever corresponded to a rate of 0.12 per 1,000; in London the mortality from this cause was 0.09 per 1,000, while the mean rate was 0.14 in the seventy-five other towns, among which this disease was proportionally most fatal in King's Norton, Liverpool, Bootle, St. Helens, Warrington, Manchester, Salford, Blackburn, and Merthyr Tydfil. The 858 fatal cases of diphtheria were equal to an annual rate of 0.21 per 1,000; in London the death-rate was 0.20, while this disease was 0.19 per 1,000, while among the seventy-five other large towns it averaged 0.22, and was highest in Brighton, Hailey, Derby, Stockport, St. Helens, Warrington, Salford, Rotherham, and Tynemouth. The 1,215 deaths from whooping-cough corresponded to a rate of 0.30 per 1,000; in London also the rate was 0.30; among the seventy-five other large towns the greatest proportional mortality from this disease was recorded in West Ham, Great Yarmouth, Wolverhampton, Nottingham, St. Helens, Wigan, and Bournemouth, Tynemouth, and Swansea. The 529 deaths referred to "fever" were equal to an annual rate of 0.07 per 1,000; in London the "fever" death-rate was 0.05 per 1,000, while it averaged 0.08 in the seventy-five other large towns, and was highest in Hailey, Grimsby, Warrington, Manchester, Salford, Bury, and Oldham. The 521 fatal cases of diarrhoea corresponded to a rate of 0.13 per 1,000; in London the rate was 0.14, while it averaged 0.12 in the seventy-five other towns, among which this disease was proportionally most fatal in Bournemouth, Sneathwell, Wallasey, Hurley, York, Middlesbrough, and Tynemouth. Of the 7 deaths from small-pox in these towns last quarter, 6 belonged to Bristol and 1 to London.

Infant mortality, measured by the proportion of deaths among children under 1 year of age to registered births, was equal to 123 per 1,000 last quarter, against 128, 136, and 124 in the corresponding period of the three preceding years. In London the rate of infant mortality in the quarter under notice was 112 per 1,000, while the rate in the seventy-five other large towns averaged 127, and ranged from 72 in

Analysis of the Vital Statistics of Seventy-six of the Largest English Towns during the First Quarter of 1909.

Towns.	Estimated Population middle of 1909.	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Infectious Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Fever.	Diarrhoea.	Deaths of Children under one year of age per 1,000 Births.	Rate per cent. of Uncertified Deaths.
				Births.	Deaths.	Principal Infectious Diseases.										
76 Towns -	16,445,281	109,285	76,580	26.7	18.7	1.74	7,149	7	3,743	506	858	1,215	299	521	123	0.1
75 Provincial Towns -	11,611,343	78,792	53,707	27.2	18.6	1.75	5,065	6	2,596	397	628	851	240	347	127	0.1
London -	4,833,938	30,493	22,873	25.3	19.0	1.72	2,084	1	1,147	109	230	364	59	174	112	0.1
Croydon -	161,078	951	707	23.7	17.6	1.12	46	—	15	1	13	13	1	3	109	0.1
Willenden -	160,424	1,042	549	26.1	13.7	1.68	67	—	30	6	4	15	4	8	124	0.2
Hornsey -	98,628	348	242	14.6	10.2	0.29	7	—	1	1	3	2	—	1	75	—
Tottenham -	129,464	937	473	29.0	14.7	1.06	34	—	12	7	7	8	1	13	94	—
West Ham -	321,767	2,258	1,451	28.2	18.1	2.77	223	—	127	13	17	52	1	13	135	—
East Ham -	149,575	907	469	24.3	12.6	0.85	32	—	15	2	9	3	2	2	92	0.2
Leyton -	129,614	732	435	24.5	13.5	1.06	18	—	1	7	6	8	1	3	100	—
Walthamstow -	136,602	889	379	26.1	11.1	0.85	29	—	10	3	4	8	1	3	100	—
Hastings -	68,165	247	278	14.5	16.4	0.18	3	—	2	1	1	2	2	1	112	0.7
Brighton -	130,926	643	678	19.7	20.8	0.86	28	—	11	10	15	14	2	8	112	0.4
Portsmouth -	214,726	1,438	951	26.9	17.2	2.06	110	—	70	3	15	14	6	5	140	0.9
Bournemouth -	72,368	279	316	15.5	17.5	1.11	20	—	3	2	4	6	1	5	137	2.5
Southampton -	124,667	752	522	24.2	16.8	0.92	29	—	19	2	5	16	1	5	119	—
Reading -	82,995	477	324	21.6	15.7	1.49	31	—	1	2	5	2	1	3	115	1.9
Northampton -	97,752	471	432	19.3	17.7	0.45	11	—	2	2	5	1	1	2	128	—
Ipswich -	74,889	347	298	23.4	16.0	0.21	4	—	11	1	2	2	2	2	146	0.8
Great Yarmouth -	53,430	351	288	26.3	21.6	0.28	29	—	—	—	—	—	—	—	—	—
Norwich -	124,136	761	507	24.6	16.4	0.90	28	—	1	9	16	—	2	2	146	0.8
Plymouth -	124,180	702	566	22.7	18.3	1.55	48	—	38	—	3	2	4	1	157	—
Devonport -	83,103	542	295	26.2	14.2	0.82	17	—	15	—	5	—	4	3	98	—
Bristol -	377,642	2,122	1,458	22.5	15.5	0.82	78	6	8	2	19	23	4	9	107	0.3
Bradford -	68,831	521	356	32.2	20.7	1.34	23	—	1	—	6	11	5	1	124	2.8
Barnon-on-Trent -	54,453	307	213	22.6	15.7	0.29	31	—	1	—	2	17	7	7	135	0.8
Wolverhampton -	104,633	657	473	25.2	18.1	1.19	23	—	4	1	2	5	2	4	124	1.0
Walsall -	99,399	715	401	28.9	16.2	0.88	22	—	11	4	3	5	2	4	124	1.0
Huddersfield -	70,183	379	223	21.7	12.7	1.32	11	—	4	2	3	5	2	4	124	1.0
West Bromwich -	70,457	320	320	32.7	18.2	0.62	11	—	4	2	3	5	2	4	124	1.0
Birmingham -	565,629	4,065	2,955	28.9	21.0	3.55	499	—	362	19	40	50	4	24	152	3.5
King's Norton -	81,632	461	288	22.7	14.2	1.62	33	—	15	7	6	2	3	3	106	3.1
Smethwick -	70,377	395	235	28.2	16.8	3.26	59	—	42	1	2	6	1	3	123	0.3
Aston Manor -	85,257	539	395	25.4	18.6	0.77	80	—	69	3	4	2	1	1	130	0.3
Coventry -	80,163	664	353	33.2	17.7	1.45	29	—	8	4	3	11	3	1	98	2.5
Leicester -	244,255	1,335	1,024	21.9	16.8	1.90	116	—	94	9	2	5	2	4	145	0.7
Gloucester -	73,036	516	286	28.5	15.7	0.92	17	—	3	1	4	2	1	3	124	1.0
Nottingham -	263,443	1,777	1,341	27.1	20.4	2.21	144	—	72	1	17	42	7	15	167	0.9
Derby -	129,411	829	528	25.7	16.4	1.60	52	—	25	—	8	5	1	3	125	—
Stockport -	103,706	692	550	26.8	21.3	1.70	44	—	20	1	9	8	4	2	146	0.2
Birkenhead -	121,123	994	529	32.9	17.5	0.62	19	—	1	7	8	2	—	1	107	—
Walsley -	71,004	488	276	17.6	15.6	0.80	14	—	1	4	3	7	6	80	1.1	
Liverpool -	760,357	6,317	4,402	33.3	23.2	2.15	408	—	159	82	42	87	7	31	144	3.3
Bootle -	69,393	560	325	32.4	18.8	1.80	31	—	23	5	2	2	1	88	3.9	
Grimsby -	95,161	800	615	33.7	25.9	8.22	195	—	142	15	3	28	2	1	170	2.4
St. Helens -	90,678	786	548	34.8	24.2	3.02	88	—	42	1	3	23	4	6	181	—
Wigan -	72,276	581	382	32.2	21.2	6.17	111	—	87	5	9	3	6	1	146	2.1
Warrington -	187,824	1,254	863	26.8	18.4	1.09	51	—	15	5	8	10	8	5	115	0.6
Bolton -	52,241	335	241	32.6	21.1	1.97	2	—	11	2	3	19	2	3	123	1.0
Bury -	65,435	4704	3,632	28.8	22.2	3.32	379	—	159	53	37	57	50	23	136	0.9
Manchester -	241,950	1,822	1,287	30.2	21.3	1.93	116	—	24	16	32	15	20	9	136	0.9
Salford -	143,301	1,045	790	29.2	22.1	1.34	48	—	29	3	5	1	7	3	105	0.1
Oldham -	89,633	481	468	21.5	20.9	0.80	10	—	18	1	5	4	3	8	163	1.8
Sheffield -	106,297	667	503	25.2	19.0	0.83	22	—	2	1	4	4	3	8	163	1.8
Burnley -	136,959	831	705	24.3	20.6	1.94	66	—	28	16	4	10	3	5	160	1.4
Blackburn -	118,519	787	573	26.6	19.4	1.73	51	—	10	1	4	26	4	6	128	2.8
Preston -	62,996	417	211	26.6	13.4	0.31	5	—	1	2	1	1	1	1	72	0.9
Barrow-in-Furness -	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Huddersfield -	94,739	553	456	23.4	19.3	1.18	28	—	18	2	5	4	3	5	96	0.2
Halifax -	111,911	450	484	16.1	17.5	0.79	22	—	3	5	4	—	5	1	107	0.4
Bradford -	293,983	1,357	1,406	18.5	19.2	0.83	61	—	6	3	23	18	4	7	140	0.4
Leeds -	484,012	2,853	2,102	33.6	27.4	0.84	168	—	102	3	17	24	11	9	138	0.9
Sheffield -	490,958	3,465	2,347	29.5	20.0	3.08	362	—	285	15	20	26	11	5	117	1.8
Rotherham -	65,070	511	265	31.5	16.3	1.72	28	—	13	6	6	2	1	1	125	2.6
York -	87,004	533	312	24.6	14.4	0.73	16	—	—	—	7	7	1	5	165	1.0
Exeter -	275,552	2,062	1,218	30.5	21.7	1.32	91	—	56	3	17	12	3	16	155	1.0
Middlesbrough -	105,265	856	574	32.6	21.9	3.47	91	—	53	7	12	8	3	16	155	1.0
Stockton-on-Tees -	53,417	349	236	26.2	17.7	1.36	18	—	11	1	6	—	—	—	155	0.4
West Hartlepool -	79,686	478	337	24.1	17.0	4.25	84	—	78	3	10	7	1	4	140	2.7
South Shields -	159,594	1,277	803	30.5	21.7	1.66	133	—	107	3	16	3	4	1	125	3.2
Gateshead -	117,627	903	498	30.8	17.0	0.71	21	—	2	5	6	7	1	1	125	3.2
Newcastle-on-Tyne -	131,024	981	430	30.0	13.3	0.63	21	—	6	3	4	4	1	3	93	6.2
Tynemouth -	281,584	1,978	1,187	28.2	16.9	1.53	108	—	50	10	19	20	6	4	153	0.7
Frederickton -	55,836	476	333	24.2	13.6	0.62	8	—	3	2	5	1	—	—	129	0.6
Newport (Mon.) -	78,336	669	344	34.3	17.6	0.41	8	—	—	—	—	—	—	—	102	0.6
Cardiff -	195,303	1,319	771	27.1	15.8	0.54	27	—	5	2	6	8	1	5	102	0.4
Rhondda -	135,894	1,405	609	41.5	18.0	0.93	31	—	4	1	9	10	—	—	129	0.6
Merthyr Tydfil -	74,363	704	431	36.1	20.6	0.4	33	—	15	1	6	25	1	4	158	0.6
Swansea -	98,308	490	539	34.3	22.0	1.34	33	—	1	1	1	—	—	—	—	—

Barnrow-in-Furness, 74 in Handsworth (Staffs.), 75 in Hornsey, 77 in Hastings, 80 in Wallasey and 88 in Bootle, to 158 in Swansea, 160 in Blackburn, 163 in Burnley, 167 in Nottingham, 170 in St. Helens, and 181 in Wigan.

The causes of 708, or 0.9 per cent., of the deaths registered in the seventy-six towns last quarter were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Hornsey, Tottenham, West Ham, Leyton, Walthamstow, Brighton, Southampton, Ipswich, Great Yarmouth, Plymouth, Devonport, Derby, Birkenhead, Wigan, and York; among the other towns the proportion of uncertified deaths ranged upwards to 3.1 in King's Norton, 2.9 in South Shields, 3.5 in Liverpool, 3.4 in Bootle, 3.5 in Birmingham, 3.6 in West Bromwich, and 6.2 in Gateshead.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,423 births and 4,569 deaths were registered during the week ending Saturday last, May 1st. The annual rate of mortality in these towns, which had been 17.0, 17.1, and 15.8 per 1,000 in the three preceding weeks, further declined to 14.5 per 1,000 in the week under notice. The rates in the several towns ranged from 7.6 in Leyton and in Walthamstow, 7.7 in Burton-on-Trent, 7.8 in York, and 8.2 in Hornsey, and in Handsworth (Staffs.) to 19.6 in Oldham and in Tynemouth, 19.7 in Hanley, 19.8 in Wallasey, 20.2 in Preston, 20.6 in Sunderland, 23.3 in Middlesbrough, 24.9 in Bootle, and 25.0 in Glasgow. The rate of mortality was 14.0 per 1,000, while it averaged 14.7 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.5 per 1,000 in the seventy-six large towns; in London the death-rate from these diseases was 1.7 per 1,000, while among the seventy-five other large towns it ranged upwards to 3.0 in Sunderland and in Glasgow, 3.3 in West Hartlepool, 3.5 in Stockport and in Middlesbrough, 3.7 in Wallasey, 3.8 in Bootle, 4.0 in Wigan, and 4.4 in Preston. Measles caused a death-rate of 1.5 in Wolverhampton, in Handsworth (Staffs.) in Birmingham, and in Stockport, 1.6 in St. Helens, 1.7 in Sealford, 1.9 in Tynemouth, 2.3 in Bootle, 2.9 in Wigan, and 3.3 in West Hartlepool; diphtheria of 1.5 in Wallasey and in Burnley; whooping-cough of 1.1 in Hornsey, 1.2 in Wigan, 1.3 in South Shields, 1.4 in East Ham, 1.5 in Southwick, 2.0 in Stockport, and 3.5 in Preston; "fever of 1.5 in Wallasey; and diarrhoea of 1.1 in St. Helens. The mortality from scarlet fever showed no marked excess in any of the large towns. One fatal case of small-pox was registered in Cardiff, but none in any other of the seventy-six large towns. The number of scarlet fever patients under treatment in the Metropolitan Asylum Hospitals and the London Fever Hospital, which had been 2,418, 2,294, and 2,219 at the end of the three preceding weeks, had further fallen to 2,181 at the end of last week; 305 new cases were admitted during the week, against 256, 244, and 265 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday last, May 1st, 1,023 births and 605 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 18.4 and 17.4 per 1,000 in the two preceding weeks, further declined to last week to 16.9, but was 2.4 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 13.0 in Greenock and 14.8 in Dundee and in Paisley to 17.2 in Edinburgh and 18.2 in Glasgow. The death-rate from the principal infectious diseases averaged 2.6 per 1,000 in these towns, the highest rates being recorded in Glasgow and Paisley. The 303 deaths registered in Glasgow included 5 which were referred to scarlet fever, 4 to diphtheria, 24 to whooping-cough, 2 to enteric fever, 2 to cerebro-spinal meningitis, and 8 to diarrhoea. Eleven deaths from whooping-cough and 5 from diarrhoea were recorded in Edinburgh; 3 from whooping-cough in Dundee, in Aberdeen, and in Paisley; and 3 from diarrhoea in Aberdeen, and 2 each in Dundee and in Leith.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, May 1st, 612 births and 452 deaths were registered in the twenty-two principal urban districts of Ireland, as against 729 births and 524 deaths in the preceding period. The annual death-rate in these districts, which had been 15.5, and 15.5, and 15.9 per 1,000 in the three preceding weeks, fell to 20.6 per 1,000 in the week under notice, this figure being 6.1 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 22.0 and 19.0 respectively, those in other districts ranging from 9.9 in Kilkenny and 5.7 in Newtownards to 3.9 in Clonmel and 47.6 in Tralee, while Cork stood at 21.9, Londonderry at 18.1, Limerick at 24.6, and Waterford at 15.6. The zymotic death-rate in the twenty-two districts averaged 1.4 per 1,000, as against 1.3 per 1,000 in the preceding period.

Hospitals and Asylums.

MOSELEY HALL CONVALESCENT HOSPITAL FOR CHILDREN.

THE annual report for 1908 shows that during the year 954 children were admitted, as compared with 893 in 1907. Of the children admitted, 468 were recommended by subscribers, 235 were transferred from the Birmingham Children's Hospital, and 251 from the General, the Queen's, the Orthopaedic, and other hospitals and charities in the city. The income was £2,261, and the expenditure £2,497, leaving a deficiency of £236 for the year, and an accumulated deficiency of £1,665.

SOUTH WIMBLEDON, MERTON, AND DISTRICT COTTAGE HOSPITAL.

THE ninth annual report, recently issued, states that, though the income and expenditure account showed only a slight deficit, this would have been more serious had the large total of patients treated in 1907 been maintained. For the first time since 1904 there had been a decrease in the number of cases treated. During the year 1908 231 in-patients had been treated, against 267 the previous year; 175 operations under anaesthetics were performed, and the results of the treatment generally were as follows: Patients in hospital on January 1, 1908, 6; admitted during the year, 231; discharged cured, 200; discharged relieved

and improved, 8; discharged in *statu quo*, 3; discharged incurable, 2; removed to infirmaries, 2; removed to the National Hospital for Epilepsy and Paralysis, 1; left against advice, 2; died, 12; remaining in hospital on December 31st, 1908, 7. Since the hospital opened in May, 1900, 1,639 patients had been admitted. The number of hospital days was 2,607, an average of 11 days' stay in hospital per patient against 2.911 days and the same average per patient in 1907. The report expresses gratitude to the Hospital Sunday Fund and the Hospital Saturday Fund for the grants received, the amounts being £61 l. 8s. 1d. and £27 l. 8s. respectively. The income and expenditure account showed that the ordinary income for the year was £664 5s. 11d., and the excess of expenditure over income was £3 16s. 10d.

INGHAM INFIRMARY, SOUTH SHIELDS.

THE thirty-sixth annual report of the Ingham Infirmary and South Shields and Westoe Dispensary shows that the year 1908 ended with a balance of some £300 on the wrong side. It was a year of trade depression, and subscriptions from workshops, on which the institution largely depends, fell off. Little, however, can be gathered from the financial statements, which are not rendered on any recognized system. In-patient work increased somewhat, but the out-patient department showed a decrease in attendance. A return made of the attendances at meetings of members of the Managing Committee reveals a notable percentage of absences.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

- BETHNAL GREEN INFIRMARY.—Assistant Medical Officer. Salary, £100 per annum.
BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £170 per annum.
BIRKENHEAD UNION.—Male Resident Assistant Medical Officer for the Infirmary and Sanatorium. Salary, £120 per annum.
BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant. Honorarium at the rate of 52 guineas a year.
BRIGHTON, HOVE, AND PRESTON DISPENSARY.—House-Surgeon. Salary, £130 per annum.
BURY INFIRMARY.—Junior House-Surgeon. Salary £80 per annum, increasing to £90.
CANTERBURY HOSPITAL AND CANTERBURY DISPENSARY.—(1) House-Surgeon; (2) Assistant House-Surgeon. Salary, £80 and £60 per annum respectively.
CATERHAM ASYLUM.—Third Assistant Medical Officer (male). Salary £150 per annum, rising to £170.
CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House-Surgeon. Salary, £50 per annum.
CHICHESTER: WEST SUSSEX COUNTY ASYLUM.—Locum tenens for sixteen weeks. Terms, 3 guineas a week.
DUDLEY: GUEST HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum.
GATESHEAD DISPENSARY.—Assistant Medical Officer. Salary, £200 per annum.
EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road, S.E.—House Physician. Salary at the rate of £60 per annum.
FOLKESTONE: VICTORIA HOSPITAL.—House-Surgeon. Salary, £130 per annum.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Group of four.—Resident House-Physicians. Honorarium, £25 each for six months.
HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon. Salary £30 for six months and £2 10s. washing allowance.
LONDON THROAT HOSPITAL, Great Portland Street, W.—Assistant Anaesthetist.
MANCHESTER: ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN.—Third and Fourth House Surgeons. Honorarium, each, £25 for six months.
MILLER GENERAL HOSPITAL, Greenwich Road, S.E.—Junior House-surgeon. Salary at the rate of £80 per annum.
MOUNT VERNON HOSPITAL FOR CONSUMPTION, Hampstead.—Junior Resident Medical Officer. Honorarium, £50 per annum.
NEWCASTLE-UPON-TYNE CITY LUNATIC ASYLUM, Gosforth.—Second Assistant Medical Officer. Salary, £140 per annum, rising to £160.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—(1) Hunterian Professor; (2) Artis and Gale Lectures.
ROYAL LONDON OPHTHALMIC HOSPITAL, City Road, E.C.—Third House-Surgeon. Salary at the rate of £50 per annum.
ST. GEORGE'S UNION INFIRMARY, S.W.—Second Assistant Medical Officer. Remuneration, £120 per annum.
SHEFFIELD ROYAL INFIRMARY.—Honorary Ophthalmic Surgeon.
STOCKTON AND THORNABY HOSPITAL.—House-Surgeon (male). Salary, £160 per annum.
SUFFOLK DISTRICT ASYLUM, Melton.—Second Assistant Medical Officer (male). Salary £150 per annum, rising to £160.
WAKEFIELD: WEST RIDING ASYLUM.—Assistant Medical Officer. Salary £150 per annum, rising to £180 and upon promotion to £300.
WALLASEY DISPENSARY AND VICTORIA CENTRAL HOSPITAL.—House-Surgeon. Salary, £100 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon, Salary, £75 per annum.
WILTS COUNTY COUNCIL.—Senior and Junior School Medical Officers, Salary, £400 and £250 per annum respectively.
WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Resident Medical Officer. (2) Two House-Surgeons, Salary for (1) £400 per annum, and for (2) £30 per annum.
CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies: At Newbury, co. Berks; Haywards Heath, co. Sussex; Grassington, co. York, and Robertsbridge, co. Sussex.

APPOINTMENTS.

AUBREY, Gilbert K., L.M.S.N.A., Assistant Medical Officer to the Central London Sick Asylum, Hendon.
BOYN, Sidney, M.B., F.R.C.S., Assistant Surgeon to the Belgrave Hospital for Children.
BROWNE, F. J., M.B., B.Ch. Aberd., Medical Officer and Public Vaccinator for the Aberlilly District of Bedfordshire Union.
COLLINS, Rupert, M.D. Dub., Honorary Clinical Pathologist at the Cheltenham General Hospital.
FERRIS, F. E., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the Stone District, co. Stafford.
GERSON, E. W., M.R.C.S., L.R.C.P., District Medical Officer of the Royston Union.
HANCOCK, W. Ibert, F.R.C.S., Assistant Surgeon to the Royal London Ophthalmic Hospital (Moorehead Eye Hospital).
HIGGINS, T. S., M.B., B.S., Assistant Medical Officer of Health for Birmingham.
PIKE, Norman H., M.B., B.S. Lond., Honorary Surgeon for Diseases of the Eye, Ear, and Throat at the Cheltenham General Hospital.
SHARPIN, A. L., M.R.C.S., L.R.C.P., District Medical Officer of the Hollingbourne Union.
WILLIAMSON, C. L., M.R.C.S., L.R.C.P., Assistant Medical Officer, West Derby Union Infirmary.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for insertion announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BAIFOUR.—At Craiden, Avenmore, Inverness-shire, April 29th, the wife of Archibald G. Baifour, L.R.C.P. and S.E., of a daughter.
HANDLEY.—On May 2nd, at 12, New Cavendish Street, W., to Mr. and Mrs. W. Sampson Handley, a son.

MARRIAGES.

CLARK-BURNELL.—On April 29th, 1909, at St. Mark's Church, Sheffield, by the Rev. C. F. Ellis, M.A., Vicar of St. Bartholomew's, John Clark, M.B., C.M. Edin., of Radcliffe, Lancs., to Alice, second daughter of C. S. Burnell, Esq., of Astley House, Northumberland Road, Sheffield.
GARDNER-RAMBAULT.—April 28th, at Oxon Church, Shrewsbury, by the Rev. W. D. Fletcher, assisted by the Rev. St. Aubyn Arkerwright, Doctor Henry Willoughby Gardner, of Shrewsbury, son of the late Henry Gardner, of Liverpool, to Mary Louise, younger daughter of the late Rev. Edmund F. Rambaault, of Blackrock, co. Dublin.
MARSON-MARTIN.—On April 29th, at St. Thomas's Church, Oldham, by the Vicar, the Rev. A. J. Woodhouse, John Sinclair Marson, M.B., Ch.B. Edin., of 8, Wimmerley Street, Warrington, to Helen, only daughter of the late Henry Martin, of Mirdel, Yorks.
MIDDLETON-HUNT.—April 29th, at St. Andrew's Cathedral, Singapore, by the Rev. H. C. Isaacs, Colonial Chaplain, William Middleton Middleton, M.A., M.B., C.M., D.P.H., Medical Officer of Health for Singapore, and son of the late Rev. William Middleton, Government Chaplain, Kintachee, Seinde, to Ethel Hunt Hunt, third daughter of the late George Taylor Bakewell, and widow of J. Brooke Hunt, Woodford, Essex.
SAINT-EVANS.—April 29th, at St. Matthew's Church, Willesden, by the Rev. G. H. Newton, M.A., Vicar, assisted by the Rev. R. J. Knowles, M.A., and the Rev. Canon A. E. Humphreys, M.A., the Rev. Frederick Gray Saint, M.A., Rector of Wapping, E., to Frances E. Tuttle Evans, L.R.C.P. and S.E., L.F.P.S.G., youngest daughter of the late Evans Evans, M.D., Staff Surgeon, R.N.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON. 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Papers: (1) Mr. J. D. Malcolm: The Pathology of Shock; (2) Mr. T. H. Malcolm: The Association of Appendicitis and Pyosalpinx.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:

SURGICAL SECTION. 20, Hanover Square, W., 5.30 p.m.—Papers:—(1) Mr. J. Hutchingson: Autolysis and Reinfection of Syphilis; (2) Mr. Herbert J. Paterson: Jejunum and Gastro-jejunal Ulcer following Gastro-enterostomy, with notes of two cases, in one of which Gastric Analyses were made before and after Operation for Jejunum Ulcer: with an Abstract of fifty-nine recorded cases and Observations thereon.

WEDNESDAY.

ROYAL SANITARY INSTITUTE. Margaret Street, W., 8 p.m.—Discussion: The Passage of Excreta through House Drains.

UNITED SERVICES MEDICAL SOCIETY. Royal Army Medical College, Millbank, S.W., 8.30 p.m.—Paper:—Major H. W. Gratton and Captain D. O. Hyde, R.A.M.C.: Some Points on the Standardization of Typhoid Vaccine.

THURSDAY.

HARVEIAN SOCIETY. Stafford Rooms, Titchborne Street, Edeboro Road, W., 8.30 p.m.—Papers:—(1) Dr. H. G. Macveoy: Paroxysmal Pulmonary Oedema in Bright's Disease; (2) Dr. B. H. Spilbury: Some Practical Points in Clinical Bacteriology.

ROYAL SOCIETY OF MEDICINE:

OBSTETRICAL AND Gynaecological SECTION. 20, Hanover Square, W., 7.45 p.m.—(1) Papers:—(a) Dr. T. W. Eden: The Operative Treatment of Rupture of the Uterus; (b) Dr. Lionel Smith: The Treatment of Rupture of the Uterus. (2) Cases and Specimens.

FRIDAY.

ROYAL SOCIETY OF MEDICINE:

CLINICAL SECTION. 20, Hanover Square, W.—8 p.m. Exhibition of Cases. Dr. F. Spicer: Paralysis of Spinal Accessory Nerve. Mr. W. G. Spencer: Reduction of an old Subcoracoid Dislocation of the Shoulder, Complicated by Fracture of Humerus, by Excavating the Glenoid Cavity. Dr. Finzi: (1) Inoperable Recurrent Carcinoma of Mammary Treated by Radium; (2) Epithelioma of Lip and Trepan by the Trepan; (3) Arthritis of the Knee Treated by Lithium Iodine Ionization. Mr. V. Warren Lou: Pneumococcal Cystitis and Arthritis. Mr. Sidney Boyd: A Patient with Sprengel's Deformity of the Shoulder and Hirschsprung's Disease (Definite Rectal Obstruction). Dr. McNalty: Aortic Aneurysm (?) in a Boy. Dr. Parkes Weber: Woman Three Years after Oophorectomy and Drainage for Chronic Pelvic Inflammation Complicated with Hepatic Cirrhosis. Dr. F. de Havilland Hall and Mr. W. G. Spencer: Splenectomy for Splenic Anaemia. 9 p.m., Demonstration by Dr. F. Stacey Wilson of the Anatomy of the Uterus by the use of the New Dissection. 9.45 p.m., Paper: Dr. Poynton and Mr. Trotter: A Case of Cardioidosis.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL. Gray's Inn Road, W.C.—Lectures: Tuesday, 3.45 p.m., Pharynx, Nasopharynx; Friday, 3.45 p.m., External Ear.
HOSPITAL FOR SICK CHILDREN. Great Ormond Street W.C.—Thursday, 4 p.m., Selected Surgical Cases.

LONDON SCHOOL OF CLINICAL MEDICINE. Seamen's Hospital, Greenwich.—Daily attendance: Out-patient, Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m., Monday, and noon, Thursday; Skin, at noon and 4 p.m., Thursday and noon, Friday; Eye, 11 a.m., Wednesday and Saturday; Radiography, 4 p.m., Thursday. Special Lectures: Monday, Tenuous Recovery from Illnesses; Thursday, The Moral Factor in Relation to the Treatment and Growth of Disease.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC. 22, Chancery Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin. Tuesday, Medical. Wednesday, Surgical. Thursday, Surgical. Friday, Ear, Nose, and Throat. Lectures at 5.15 p.m. each day will be given as follows: Monday, Treatment of Neurasthenia. Tuesday, The Diagnosis and Treatment of Malignant Disease of the Bladder. Wednesday, The Scope and Purpose of the British Pharmacopoeia. Thursday, The Treatment of Chronic Heart Disease, especially by Mechanical Methods.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC. Queen Square, W.C.—Tuesday, 3.30 p.m., Acute Polyneuritis and Landry's Paralysis. Friday, 3.30 p.m., Aphasia.

NORTH-EAST LONDON POST-GRADUATE COLLEGE. Prince of Wales's General Hospital, Tottenham.—Monday, Clinics, 10 a.m., Surgical Out-patient, 2.30 p.m., Medical Out-patient: Nose, Throat, and Ear; X Rays, 4.30 p.m., Medical In-patient. Tuesday, Clinics, 10 a.m., Medical Out-patient; 2.30 p.m., Operation; Clinics: Surgical Out-patient, Gynaecological. Wednesday, Clinics, 2.30 p.m., Medical Out-patient, Skin and Eye. Thursday, 2.30 p.m., Gynaecological Operations; Clinics: Medical Out-patient; Surgical Out-patient; X Rays, 5 p.m., Medical In-patient; 4.30 p.m., Lecture, on Ligatures, and Sutures. Friday, Clinics, 10 a.m., Surgical Out-patient; 2.30 p.m., Operations; Clinics: Medical Out-patient, Eye; 5 p.m., Patient.

POST-GRADUATE COLLEGE. West London Hospital, Hammer Smith, London, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics, X Rays; 2.30 p.m., Operations. Monday and Thursday and Wednesday 2 p.m., Diseases of the Eye (start at 10 a.m.). Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (and Wednesday and Saturday 10 a.m.), Diseases of Throat, Nose, and Ear; 2.30 p.m., Diseases of Skin. Wednesday and Saturday, 10 a.m., Diseases of Children; 2.30 p.m., Diseases of Women. Lectures: At 10 a.m., Monday and Thursday, Demonstration by Surgical Registrar, Friday, Demonstration by Medical Registrar. At 12 noon, Monday, Pathological Demonstration; at 12.15 p.m., Practical Medicine. At 5 p.m., Monday and Thursday, Diseases of Throat, Nose, and Ear. Tuesday, Gynaecological Cases. Wednesday, Medicine. Friday, Plague.

BOOKS, ETC., RECEIVED.

Die Krankheiten der Leber, der Gallenwege und der Pfortader auf Grund eigener Beobachtungen. Bearbeitet von Prof. Dr. P. K. Pel. Haarlem: De Erven F. Rohn; und Jena: G. Fischer, 1909. M. 8.

A History of the Reading Pathological Society. By J. F. Hurry, M.A., M.D. London: J. Bale, Sons and Danielsson, Limited, 1909. 7s. 6d.

The Surgery of the Ear. By S. J. Kopitzky, M.D. London: Reisman, Limited, 1909. 16s. 6d.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
MAY.		MAY (Continued).	
8 SATURDAY ..	{ ULSTER BRANCH, Spring Meeting, Londonderry.	22 SATURDAY ..	
9 Sunday ..		23 Sunday ..	
10 MONDAY ..		24 MONDAY ..	
11 TUESDAY ..	{ WARRINGTON DIVISION, Lancashire and Cheshire Branch, Annual Meeting, Infirmary, Warrington, 4.30 p.m.	25 TUESDAY ..	{ HAMPSTEAD DIVISION, Metropolitan Counties Branch.
12 WEDNESDAY ..	{ LANCASHIRE AND CHESHIRE BRANCH, General Meeting, New Manchester Royal Infirmary.	26 WEDNESDAY ..	{ LONDON : Medico-Political Contract Practice Subcommittee, 2.30 p.m. BATH AND BRISTOL BRANCH, Annual Meeting, Bristol.
13 THURSDAY ..	{ RICHMOND DIVISION, Metropolitan Counties Branch, Annual Meeting, Royal Hospital, Richmond, 8.30 p.m.	27 THURSDAY ..	{ LONDON: Metropolitan Counties Branch Council, 4.30 p.m. CITY DIVISION, Metropolitan Counties Branch, Annual General Meeting, Great Eastern Hotel, 3.30 p.m.
14 FRIDAY ..	{ MAIDSTONE DIVISION, South-Eastern Branch, West Kent General Hospital, 3 p.m.	28 FRIDAY ..	
15 SATURDAY ..	{ CEYLON BRANCH, Ordinary Meeting, Colonial Medical Library, 2.30 p.m.	29 SATURDAY ..	
16 Sunday ..		30 Sunday ..	
17 MONDAY ..		31 MONDAY ..	<i>Bank Holiday.</i>
18 TUESDAY ..		JUNE.	
19 WEDNESDAY ..	{ CARDIFF DIVISION, South Wales and Monmouthshire Branch, Annual Meet- ing, Cardiff.	1 TUESDAY ..	
20 THURSDAY ..	{ LINCOLN DIVISION, Midland Branch, Annual Meeting, Guildhall, Lincoln, 3.30 p.m.	2 WEDNESDAY	
21 FRIDAY ..	{ BORDER COUNTIES BRANCH, Loch- maben Combination Hospital for Infectious Diseases, Lochmaben; Meeting of Council preceding Gen- eral Meeting.	3 THURSDAY ..	
		4 FRIDAY ..	{ SWANSEA DIVISION, South Wales and Monmouthshire Branch, Annual Meeting, 3 p.m.
		5 SATURDAY ..	
		6 Sunday ..	
		7 MONDAY ..	
		8 TUESDAY ..	

ANNUAL MEETING, BRITISH MEDICAL ASSOCIATION, BELFAST, 1909.

THE Seventy-seventh Annual Meeting of the British Medical Association will be held at Belfast from July 23rd, to July 31st, 1909, under the Presidency of Sir William Whitla.

The Annual Representative Meeting commences in Belfast on July 23rd. The Presidential Address will be delivered on July 27th. The Sections will meet on July 28th, 29th, and 30th.

A preliminary programme of arrangements was published in the SUPPLEMENT of May 1st, p. 197. The Honorary Local Secretaries are: Henry Lawrence McKisack, M.D., M.R.C.P., 17, University Square, Belfast; and Cecil Edward Shaw, M.A., M.D., M.Ch., 29, University Square, Belfast; and Howard Stevenson, B.A., M.B., F.R.C.S.I., 2, College Square North, Belfast.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follows:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every

Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 15TH, 1909.

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SPECIAL NOTICE TO MEMBERS.

Every member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he belongs. BY ORDER.

British Medical Association.

MATTERS REFERRED TO DIVISIONS.

MEDICO-POLITICAL COMMITTEE.

REPORT TO THE DIVISIONS ON MEDICAL INSPECTION OF SCHOOL CHILDREN, AND TREATMENT OF THOSE FOUND DEFECTIVE, BASED UPON CONSIDERATION OF THE REPLIES OF DIVISIONS TO THE REPORT OF THE COMMITTEE, ISSUED ON DECEMBER 22ND, 1908.

For convenience, the Recommendations, upon which the Divisions are asked to instruct their Representatives, are collected at the commencement of the Report.

RECOMMENDATIONS.

Employment of Medical Inspectors of School Children under the guise of Assistant Medical Officers of Health.

Recommendation A.

That the duties of the office of Assistant Medical Officer of Health, and the general arrangements, should be such as would enable the holder to base a claim for an appointment elsewhere as Medical Officer of Health upon the experience gained in this appointment.

It would appear, *prima facie*, that one condition of this should be that he should be the officer, not merely of the Education Committee, but also of the Sanitary Committee of the Corporation.

Systems of Payment of School Medical Officers.

Recommendation B.

That the Representative Meeting approve the system of payment by fixed salary, or, in the case of part-time officers, payment for time devoted to the work.

Recommendation C.

That special systems of capitation payment, such as those adopted in Hertfordshire and Derbyshire, are satisfactory in sparsely populated districts.

Recommendation D.

That the system of payment per child examined should be opposed by the profession. If for any special reasons it is adopted in any district, the fee should be not less than 2s. 6d. per head.

Recommendation E.

That, if it be found desirable to appoint a class of School Medical Officer having supervising as well as inspecting duties, a rate of salary should be fixed above the minimum adopted by the Association for Officers engaged in Inspection only.

Duties of School Nurse in connection with Inspection and Treatment.

Recommendation F.

That, in inspection, the duty of the Nurse should be simply to assist the School Medical Officer.

Recommendation G.

That, in treatment, she should act under the instruction and supervision of the practitioner in charge of the patient and should, as far as possible, receive written instructions from him.

Recommendation H.

That the duties of the Nurse should be defined in written rules including the foregoing provisions.

*Treatment of School Children found Defective.**Recommendation I.*

That the Association should oppose the reference of school children found, upon medical inspection, to be defective to public medical charities for treatment.

Recommendation J.

That there is no objection to treatment by provident dispensaries or other contract practice organisations provided the remuneration of the practitioner is adequate for the work done, and that effect is given to the principles of the Contract Practice Report of the Association.

Recommendation K.

That the Association should oppose any scheme of provision for the treatment of school children found, upon medical inspection, to be defective which rests on the reference of such children to the Poor Law, pending such reforms as may result from the consideration of the Reports of the Royal Commission.

Recommendation L.

That, under existing conditions, the most satisfactory provision for the treatment of school children found, upon medical inspection, to be defective whose parents cannot afford to pay for such treatment, is by placing them under the care of private practitioners, who should be adequately remunerated out of public funds without intervention from the Poor Law.

Recommendation M.

That, in sparsely populated districts, such provision should be made by the "recognition" of the surgeries of private practitioners as places at which treatment may be obtained at the public expense.

Recommendation N.

That, in towns, the work should be similarly entrusted to private practitioners discharging their duties at convenient centres (designated "school clinics") situated in Schools or in independent buildings.

REPORT.

GENERAL STATEMENT BY MR. G. H. G. (INTRODUCTORY.)

1. The Medico-Political Committee has considered the replies of the Divisions to the questions submitted with the Report on Medical Inspection of School Children in December last (see Appendix A, page 254), and the comments of the Divisions on the Report. Guided by these indications of the present feelings of the Divisions upon the important questions arising in connection with the Medical Inspection of School Children and the Treatment of those found defective, the Committee has been enabled to prepare more definite conclusions and recommendations, which are now submitted by the Council to the Divisions with a view to pronouncement by the Annual Representative Meeting at Belfast, on behalf of the Association.

2. In addition to the questions appended to the Report issued in December for the purpose of eliciting expressions of the opinion of the Divisions, questions were also submitted to the Honorary Secretaries of Divisions on questions of fact. A Summary of the opinions of the Divisions as stated in their replies is contained in Appendix B to this Report. Analyses of the information obtained as to the method in which Medical Inspection and Treatment of School Children are at present being carried on will be found in Appendix C. The information contained in these Appendices is derived from replies of Divisions received up to and including Thursday, April 15th, 1909. The number of Divisions replying to some or all of the questions was 102, out of a possible 157.

INSPECTION OF SCHOOL CHILDREN.

CONCLUSIONS AND RECOMMENDATIONS.

3. In the Report of December, 1908, questions were dealt with affecting Medical Inspection of School Children, upon which there had been no previous pronouncement by the Association. These were as follows:—

Employment of Medical Inspectors of School Children under the guise of Assistant Medical Officers of Health.

4. The Committee recommends that the expression of opinion of the Public Health Committee stated in the former Report should be formally approved by the Representative Meeting:

"That the duties of the office and the general arrangements should be such as would enable the holder to have a claim for an appointment elsewhere as Medical Officer of Health upon the experience gained in this appointment.

It would appear, *prima facie*, that one condition of this should be that he should be the officer, not merely of the Education Committee, but also of the Sanitary Committee of the Corporation."

Systems of Payment for Medical Inspection.

5. The replies of the Divisions, stated in the Appendix, show a definite preference for the system of payment by time (which includes payment by fixed salary), rather than payment per head.

6. The system of payment per head, especially payment solely for the number of children examined, is objectionable as tending to hurry the actual work of inspection, as excluding general school hygiene from the work of the School Medical Officer, and as making no allowance for the time spent in travelling, clerical work, and other duties recognised to appertain to the office. Modified systems of capitation payment such as those adopted in Hertfordshire and Derbyshire, which make due allowance, have been found satisfactory in Rural Districts.

RECOMMENDATIONS.

7. The Committee recommends:

- (i.) That the Representative Meeting approve the system of payment by fixed salary, or, in the case of part-time officers, payment for time devoted to the work.
- (ii.) That special systems of capitation payment such as those adopted in Hertfordshire and Derbyshire are satisfactory in sparsely populated districts (see Appendix A, page 250).
- (iii.) That the system of payment per child examined should be opposed by the profession. If for any special reasons it is adopted in any district, the fee should be not less than 2s. 6d. per head.
- (iv.) That, if it be found desirable to appoint a class of School Medical Officer having supervising as well as inspecting duties, a rate of salary should be fixed above the minimum adopted by the Association for Officers engaged in Inspection only.

DUTIES OF SCHOOL NURSE IN REGARD TO THE INSPECTION AND TREATMENT.

8. The information furnished by Divisions shows that the system of employment of School Nurses has not yet been extensively adopted.

9. In the future development of the system it will be necessary for the Divisions to watch that the limits laid down by the Board of Education are not exceeded. (Circular No. 576, paragraph 8:—"It is essential, however, that the teacher, school nurse, or health visitor assisting in the administration of this Act, should act strictly under the instruction and supervision of medical authority.")

RECOMMENDATIONS.

Inspection.

10. (a) In the department of Inspection the duty of the nurse is simply that of assisting the School Medical Officer.

Treatment.

(b) In assisting in the treatment of children found defective the School Nurse must act under the instruction and supervision of the practitioner in charge of the patient, and should as far as possible receive written instructions from him.

(c) That the duties of the nurse should be defined in written Rules including the foregoing provisions:

TREATMENT OF SCHOOL CHILDREN FOUND
DEFECTIVE.*Matters requiring further consideration.*

11. The replies of the Divisions on the treatment of School children found defective, and especially the references to School Clinics, indicate the great difficulty which the Divisions have felt in dealing with problems as to which the previous experience of the profession affords so little guidance. A study of the reports of Division meetings which have appeared in the *BRITISH MEDICAL JOURNAL* also makes clear the difficulty which members of the Association have found in appreciating all the bearings of the subject, and the misconceptions which in the opinion of the Committee have consequently arisen. It appears to the Committee desirable, therefore, to enter into greater detail than in the previous Report as to certain matters which demand at the present juncture the serious attention of the profession.

Extent of provision necessary.

12. In order that a clear view of the subject may be attained, it is first necessary to form the most accurate estimate possible of the extent of the provision which public educational authorities will probably find themselves compelled to make within the next few years for the treatment of children found defective.

13. It would appear that the indications given by the Medico-Political Committee in its previous Reports on this subject have been to a considerable extent overlooked, and that many members of the profession have formed an exaggerated idea of the treatment which will be provided under arrangements made by local education authorities. It can be deduced from the evidence obtained that the chief defects, which have very largely escaped treatment, for which in future treatment will have to be provided are as follows:—

(1) Defective teeth, (2) visual defects, particularly errors of refraction, (3) ear diseases, specially chronic otitis media, (4) nasal obstructions, etc., (5) parasitic skin diseases, specially ringworm.

14. The public is beginning to recognise that not only the interests of the children themselves and motives of humanity demand that these defects should be properly treated, but also the interests of the community in general.

Reasons of past inattention.

15. The reasons for which these defects have to a great extent escaped treatment would seem to be—

(a) Parental ignorance and apathy. In the past such defects have been to a great extent overlooked by parents. If observed, their importance has not been recognised, and they have in a large number of cases not received adequate treatment.

(b) The treatment of such defects cannot be paid for by the majority of parents of those children who attend public elementary schools, at a rate which is remunerative to the private practitioner for the time and care necessary for a cure.

(c) There is no satisfactory organised State medical assistance available for many of those who are unable to pay for adequate treatment. Hospitals supported by voluntary contributions cannot afford the great drain on their resources which would be necessary to cope with the thorough treatment of such cases, even if it were desirable that such work should be undertaken by charity.

(d) There has in the past been no system in existence by which parents and guardians could be compelled either to obtain private treatment, or to apply to some State provided institution if unable to pay for it. The Children Act, 1908, now gives this power.*

16. As affecting ratepayers and taxpayers, it must be borne in mind, that the nation as well as the individual will reap the benefit of the improvement resulting from the effective treatment of such defects. The proper treatment

of defective teeth alone will prolong into advanced life the usefulness of many persons who now break down in middle life through gastric and other disorders due to defective nutrition. The benefits resulting from, and the dangers averted by, the proper treatment of ocular defects and nasal disease in children do not need emphasizing in a Report addressed to medical practitioners.

New Work for the Medical Profession.

17. This analysis of the nature of the cases, for the treatment of which provision should be made by the education authorities, has an important bearing upon the question as affecting the interests of private medical practitioners. Many of the statements that have been made appear to indicate a fear that work which hitherto has been done, or which could be done, by private practitioners is to be transferred to public officials. But, as the Committee has pointed out, one of the chief reasons for which public provision must now be made is that the work has not been done in the past by private practitioners. In other words, the greater part of the work now under consideration will be new work for the medical profession. It is not a case of making some new provision for that which has already been done, but of considering how new work shall be provided for consistently with the principle already laid down by the Association, namely, that the case must in the first instance be referred, if suitable, to the private medical practitioner.

Varieties of Arrangement Proposed.

18. The British Medical Association, on behalf of the profession, has now to consider what kind of arrangements for meeting this new demand for medical work will be at once most efficient from the public point of view, and most equitable as regards the medical profession. The various arrangements discussed in the replies of the Divisions may be grouped under four heads: (a) Reference of children to public charities such as hospitals, supported by voluntary contributions; (b) reference to provident dispensaries and other contract practice organisations; (c) reference of children in the first instance to the private medical attendant of the family for treatment at the parents' expense, and failing such treatment to the Poor Law Medical Officers; (d) reference to private practitioners, or to special officers, paid in either case out of public funds, otherwise than through the Poor Law Authorities.

(a) Treatment by Public Charities.

19. The Medico-Political Committee is unable to understand the reasons for which medical practitioners should advise the treatment of the children in question by public charities. As affecting the public there is abundant evidence that the hospitals are not equipped to cope with the work, and many have refused to do it. From the professional point of view the arrangement is open to the objection that it means a great increase of the amount of unpaid work done by the profession, and the Committee cannot realise for what reason any Division of the Association should desire an extension of the gratuitous work of the profession, in preference to arrangements by which medical practitioners would be paid by the community for work done for the community. In the opinion of the Committee the work of Hospitals should be confined to charitable relief.

(b) Treatment by Contract Practice Institutions.

20. To the second system, viz., reference to provident or other contract practice institutions, there can be no objection from the professional point of view provided that the remuneration is adequate, and that other details are suitably arranged. (For example, that appointments be thrown open to all practitioners, resident in the district and the other general principles laid down by the Association as regards Contract Practice given effect to.) The chief question affecting remuneration will be whether the medical officers to such institutions are to carry on the work as part of their ordinary contract, and if so, whether it is the opinion of the Divisions that the rates at present paid for such work afford reasonable remuneration to medical practitioners for the proper treatment of cases for example, of errors of refraction,

* Children Act, 1908, sect. 12 (1), " . . . a parent or other person legally liable to maintain a child or young person shall be deemed to have neglected him in a manner likely to cause injury to his health if he fails to provide adequate food, clothing, medical aid, or lodging for the child or young person, or if, being unable otherwise to provide such food, clothing, medical aid, or lodging, he fails to take steps to procure the same to be provided under the Acts relating to the relief of the poor."

of chronic otorrhoea, or ringworm. From the public point of view the question would be simply one of administration, whether it is more economical for any public funds devoted to the purpose to be expended in payment of other organisations, or for the Education Authority to organise the work itself. As regards the practicability of this system it is to be noted that many districts are without provident dispensaries, and in many others such dispensaries are not adapted to carry out the work in question.

(c) *Treatment under the Poor Law.*

21. The system of employment of private practitioners by the parents, with the alternative of reference to the Poor Law is open to the objection that, as already pointed out, past experience has shown that the majority of the parents of children attending public elementary schools cannot afford to pay such fees as would remunerate medical men for the proper treatment of tedious and prolonged cases.

22. Some Divisions support the procedure, as a means of putting pressure upon parents to provide necessary treatment for their children at their own expense, that children found defective should be excluded from school until treatment is afforded, and that parents should be prosecuted in default of providing treatment.

23. The Committee does not believe that public opinion will consent to the reference for treatment under the Poor Law, as at present organized, of all children, whose parents cannot afford payment. In the former Report of the Medico-Political Committee reference was made to the then expected Report of the Royal Commission on the Poor Law as likely to facilitate the consideration of this part of the subject. The Reports of the Majority and Minority of the Poor Law Commission have now appeared, and though differing considerably as to the nature of the organisation proposed for medical assistance, are agreed in proposing the practical abolition of the present Poor-Law System. Under the scheme formulated by either section of the Commission, the Poor-Law work would be placed under the control of Committees appointed largely or entirely by the County or Borough Councils, who are already the Education Authorities. In the Majority Report it is proposed that there should be a Public Assistance Committee administering a system of medical assistance on Contract Practice lines. In the Minority Report it is proposed that the Health Committee of the County or Borough Council shall administer medical assistance by a staff of whole time salaried officers. In either case the result, as affecting the matter now under consideration, would be in practice that the same local authority would deal with both medical assistance and educational work, and thus the provision for treatment of School Children found defective would form part of the general system of medical assistance of the district, the distinctions of the present Poor-Law System being practically abolished.

24. The Committee considers, therefore, that a serious mistake would be made by the Association at the present juncture if it threw all the weight of its influence in favour of a system of organisation which public opinion does not approve, and which is not practical in its working. The Committee is convinced, for the reasons stated in the Section at the commencement of this Report, that the attempt to cope with the requirements of children found upon medical inspection to be defective, by payment by the parents or in default through the present Poor Law, will fail, and that some kind of provision for such treatment at the public expense, otherwise than through the Poor Law, is inevitable. The Association, by frankly recognising this fundamental condition of the problem, may exercise such an influence on the nature of the arrangements made as will secure equitable treatment of the medical practitioners employed.

(d) *Treatment provided by Local Authority other than through the Poor Law.*

25. The objections offered by the Divisions to arrangements for the treatment of the children in question at the public expense otherwise than through the Poor Law, appear to the Committee to rest, either upon ordinary political considerations, with which the Association has nothing to do, or upon a misconception of the kind of arrangements which the public authorities would be likely to make. For the purpose of removing such misconceptions the Committee sets out in

detail a scheme of arrangements which in its opinion would be practical, economical, and efficient, from the public point of view, and at the same time equitable to the profession.

"Recognised" Surgeries.

26. For simplicity the case of sparsely populated districts is first considered. The machinery, in the opinion of the Committee, should be somewhat as follows:

The local authority will in the first instance "recognise" the surgeries of those medical practitioners of the district who are willing to undertake the work, as places for the treatment, at the public expense, of certain specified defects and diseases such as those referred to at the commencement of this Report.

27. The School Medical Officer having reported that a child suffers from such a defect or disorder, it will be brought to the notice of the parent by means of a form, such as that appended. (See Appendix A, page 252.) It will rest with the parent, in the first instance, to make such provision as he is able and willing to make for the treatment of the child. Failing any such provision by the parent, and assuming that the defect or disease is one of those specified by the Local Authority, the parent will be informed that treatment for the child may be obtained at one of the recognized surgeries, of which a list will be furnished.

School Clinics.

28. In the case of larger centres of population the general principles of the arrangements adopted would be identical with those above stated, though the organisation will naturally be more elaborate according to the size of the district to be served. In a large town it will probably be more economical for the patients to be seen at some recognised centre instead of at the houses of the individual doctors. This centre (designated a "School Clinic") may be simply a room in a school, or an independent building, according to the number of children to be provided for. It will be attended at stated times by those practitioners who are engaged for the work. These may be all the practitioners of the district, or a selected number serving on a rota (*vide infra*), or possibly, in the very largest centres, special officers. In the opinion of the Committee, there is no reason why, except as regards, of course, dental work, and, perhaps, as regards the more difficult eye cases, any others than private general practitioners should be employed.

29. The objection has been raised that if some practitioners are selected for the work, they may thereby acquire special experience and reputation at the expense of others. To obviate this objection, the principle which has been adopted by the London County Council for Medical Inspection is worthy of the consideration of the Divisions, namely, the establishment of a "rota" of practitioners with a limited term of service. In districts in which inspection is being carried out by private practitioners, arrangements might be made whereby each School Medical Officer should serve for a limited term of years, after which he should be eligible to carry out treatment for a limited period.

30. The Committee would take this opportunity of advertising to the previous decision of the Association that the treatment of children found defective should in no case be carried out by the Officers entrusted with the duty of inspection. This principle the Committee considers that the Association should rigidly adhere to. As affecting the profession the combination of both offices in one person is likely, in the opinion of the Committee, to lead to underpayment, and also to lead to throwing the work of treatment into the hands of whole-time officials instead of into those of private practitioners. The Association appears to be in favour, upon the whole, of the work of inspection being carried out by salaried whole-time officers. On the other hand, opinion is clearly in favour of treatment, if undertaken by the Education Authorities, being entrusted to general practitioners, and it will be gathered that in the view of the Committee this would be the most satisfactory arrangement for the purpose. From the public point of view the consideration is also likely to appeal to public authorities, that if the work of inspection and of treatment is carried out by different officers the one will act as, to some extent, a check upon the other.

31. Payment under any of the above schemes would be made on a scale agreed upon between the local profession, as represented by the local Division of the British Medical Association, and the local Education Authority.

32. By such a system the legitimate interests of the private practitioners of the district would be fully protected, and at the same time the public interests, as regards the provision of efficient and economical treatment, properly secured. The Committee being convinced that it is the only plan which will be found in the long run to satisfy all the conditions above stated, trusts that on further consideration it may find favour with the Divisions. If the profession commits itself to opposing the treatment of school children at the public expense except through the Poor Law as at present administered, it will in all probability find, as in so many cases in the past, that arrangements are made in which it has no voice, and in which its interests will be disregarded.

RECOMMENDATIONS AS REGARDS TREATMENT.

Treatment of School Children found Defective.

That the Association should oppose the reference of school children, found, upon medical inspection, to be defective, to public medical charities for treatment.

That there is no objection to treatment by provident dispensaries or other contract-practice organisations provided the remuneration of the practitioner is adequate for the work done, and that effect is given to the principles of the Contract-Practice Report of the Association.

That the Association should oppose any scheme of provision for the treatment of school children, found, upon medical inspection, to be defective, which rests on the reference of such children to the Poor Law, pending such reforms as may result from the consideration of the Reports of the Royal Commission.

That, under existing conditions, the most satisfactory provision for the treatment of school children, found, upon medical inspection, to be defective, whose parents cannot afford to pay for such treatment, is by placing them under the care of private practitioners, who should be adequately remunerated out of public funds without intervention from the Poor Law.

That, in sparsely populated districts, such provision should be made by the "recognition" of the surgeries of private practitioners as places at which treatment may be obtained at the public expense.

That, in towns, the work should be similarly entrusted to private practitioners discharging their duties at convenient centres (designated "school clinics") situated in Schools or in independent buildings.

APPENDIX A.

REPORT

ON CERTAIN POINTS ARISING IN CONNECTION WITH
THE MEDICAL INSPECTION OF SCHOOL CHILDREN
AND THE TREATMENT OF THOSE FOUND DEFECTIVE.

Issued to Secretaries of Divisions, December,
1908, and to Members of the Association
as a Confidential Document.

INTRODUCTORY.

The Annual Representative Meeting, 1908, had before it three reports of the Medico-Political Committee on Medical Inspection of School Children, which had been circulated from time to time to the Divisions, in accordance with the

instructions of the previous Representative Meeting. It had also before it a report on the treatment of school children found, upon examination, to be defective, which was prepared by the Committee, as a matter of urgency, shortly before the Annual Representative Meeting.

The Meeting passed Resolutions dealing with certain points in connection with appointments of medical inspectors of school children and their relation to Medical Officers of Health. It referred the subject of treatment to the Committee for further consideration, and gave instructions for a Memorandum on the whole question to be prepared and sent to the Divisions. The instructions of the Meeting are contained in Minutes 718, 720, 724, 725, 731, and 732 (*See Sub-Appendix "I"*).

The Medico-Political Committee has fully considered these instructions and, in conjunction therewith, an important Memorandum (No. 596, dated 17th August, 1908) issued by the Board of Education immediately after the Annual Representative Meeting. Various points thus arise for the further careful consideration of the Association, and are grouped in this Report under the heads of (i) Medical Inspection, and (ii) Treatment. (*For Section dealing with "Treatment," see p. 251 et seq.*)

I. MEDICAL INSPECTION OF SCHOOL CHILDREN.

PREVIOUS CONSIDERATION.

The Committee thinks it well first to report briefly on the present stage of development of the Medical Inspection of School Children. The Act providing for this came into operation on January 1st, 1908. The Central administration has been provided for by the establishment, as recommended by the British Medical Association, of a Medical Bureau in the Education Department, and the local authorities have appointed or are appointing School Medical Officers and Assistants to carry on the work.

The British Medical Association contributed, through the Medico-Political Committee, to the consideration of the subject by the issue of three Reports appearing in December, 1907, February and May, 1908, respectively.

The first Report (BRITISH MEDICAL JOURNAL, Supplement, December 21st, 1907) dealt with the whole matter as set out in the Memorandum of the Board of Education (No. 576, November 22nd, 1907). The Committee suggested a Schedule for the details of medical inspection, which was subsequently adopted with slight modifications by the Board of Education (Memorandum 582, January 23rd, 1908); the principle was also laid down that the work of inspection should be separated from that of (a) treatment and (b) visitation of the homes of children; concerning the relation of Medical Officers of Health to the work, the opinion was expressed that the duties of actual inspection could not be efficiently discharged by Medical Officers of Health personally, in view of the nature and extent of their existing duties: a pronouncement as to their duties in respect to supervision was deferred.

In the second Report (B.M.J., Supplement, February 8th, 1908), the questions of supervision of medical inspectors of school children, and of the relation of such work to that of the Medical Officer of Health, were specially dealt with. While recognising the obvious desirability of the administrative co-ordination of all Departments of the State Service concerned with public health, the Committee pointed out that at present such co-ordination does not exist in those Central Departments of the Government to which the Medical Officer of Health and the Officer supervising Medical Inspection of School Children* respectively report. Attention was drawn to the necessity, on the one hand, of not interfering with the efficiency of the exceedingly important present work of Medical Officers of Health, and on the other hand, of providing that medical inspection should not be conducted, as might be the case with an officer already overburdened with other work, in a perfunctory manner.

In the third Report (B.M.J., Supplement, May 9th, 1908), the question of terms of appointment of whole-time Medical Inspectors of School Children was dealt with and it was

* This Officer is now officially known and recognised by the Board of Education as the School Medical Officer of a given authority. Those working under him are referred to as his Assistants.

suggested that the minimum salary for junior officers should be from £250 to £300 per annum. The reason given for this opinion was that, from the nature of the work, medical inspectors would not have the same opportunities for gaining experience which would prove of value in their future career as would practitioners holding other junior appointments such as those of house surgeons or of assistants to general practitioners. Attention was also drawn to the principle of the Association that the salaries paid to medical women must not be less than those paid to medical men in respect of the same work. The above salary has been accepted as the standard by the Association, and the Association has been successful in securing the acceptance of it by many local authorities. Difficulties which have arisen are dealt with below, under the heading "*Employment of Medical Inspectors of School Children under the guise of Assistant Medical Officers of Health.*"

1913-1914 Annual Report

NEW QUESTIONS AFFECTING MEDICAL INSPECTION. 191

The new instructions of the Annual Representative Meeting, 1908, on the subject of medical inspection (see Sub-Appendix "I") refer to:—

- (i) The relation of Medical Officers of Health to the work (Minutes 724 and 725);
- (ii) The engagement of Medical Inspectors of Schools under the guise of assistants to Medical Officers of Health (Minute 720); and
- (iii) The system of remuneration for medical inspection by payment per head (Minute 718).

1. Position of Medical Officer of Health in Relation to Medical Inspection of School Children.

The opinion of the Annual Representative Meeting, 1908, that it is undesirable that a full-time Medical Officer of Health should have added to his duties those of medical inspector of school children, confirms the opinions expressed by the Medico-Political Committee in the Reports of December, 1907, and February, 1908, above referred to. It is, therefore, sufficient for the purpose of the present Report to take note and inform the Divisions of this confirmation.

The attention of the Divisions is drawn to the pronouncement by the Annual Representative Meeting, 1908 (Minute 724) that part-time Medical Officers of Health, to whose duties are added those connected with medical inspection of school children, should receive additional remuneration in respect thereof. It will be for the Divisions to take appropriate action accordingly in cases arising in their respective localities.

2. Employment of Medical Inspectors of School Children under the guise of Assistant Medical Officers of Health.

Some local authorities have sought to evade this action of the Association by designating their medical inspectors Assistant Medical Officers of Health, and Minute 720 of the Annual Representative Meeting deals particularly with this abuse. Upon consideration of that Minute the Public Health Committee of the Association, with the approval of the Council, has laid down the following statement of principle as to circumstances in which an appointment of Assistant Medical Officer of Health, whose duties would include Medical Inspection of School Children, could be accepted at a salary lower than the minimum fixed for medical inspectors of school children, namely $\text{£}250$ per annum.

"That the duties of the office and the general arrangements should be such as would enable the holder to base his claim for an appointment elsewhere as Medical Officer of Health upon the experience gained in this appointment."

This would appear, *prima facie*, that one condition of this should be that he should be the Officer, not merely *joint*, of the Education Committee, but also, of the Sanitary Committee of the Corporation.

To give effect to this principle it will be necessary for each appointment to be considered on its merits, and the questions for consideration in each case will be (i) what are the duties of such Assistant Medical Officer of Health apart from

medical inspection of school children, (ii) what will be the value, as affecting the professional prospects of the officer, of the experience gained in the discharge of such duties. It will be for the Divisions, giving due regard to such considerations, to take the appropriate action in individual cases.

3. Systems of Payment.

Upon consideration of Minute 718 of the Annual Representative Meeting, 1908, whereby the Medico-Political Committee was instructed to refer for the consideration of the Divisions the questions of the desirability of the system of payment per head and of the amount of such payments where such a system is adopted, the Committee thinks it desirable to review the various systems of payment found to be at present in operation. These are (i) by fixed salary, (ii) (for part-time officers) by salary based upon time spent in the work, and (iii) various methods of payment per head.

(i) By Fixed Salary.

On the subject of salaries the Association has already approved the suggestions of the Medico-Political Committee, namely, that for a fully experienced and thoroughly competent whole-time School Medical Officer the commencing salary should not be less than £500 per annum, and that for Junior or Assistant School Medical Officers the salary should not be less than £250 per annum. These sums are to be understood as exclusive of travelling expenses, clerical assistance, cost of stationery, postage, etc.

(ii) Salary based upon Time Spent in Work. Part-time Officers.

For part-time Officers the Association has already recommended a system of payment which is in operation in London, namely, that the salary should be based upon the time devoted to the work, and that the minimum should be £50 per annum in respect of each school session of two hours per week.

(iii a) Inclusive Payment per Head.

In some districts the system has been adopted of a simple payment per child inspected, to cover all duties and costs involved in such inspection, and the Divisions are asked to express their opinion, first, as to the desirability of such a system, and, secondly, as to the proposal that the minimum fee in such cases should be 2s. 6d.

(iii b) Special Systems of Capitation Payment, for Part-time Officers.

The Committee has information of systems of capitation payment for part-time officers adopted by certain County Councils, which are as follows:—

In Hertfordshire the whole work is supervised by the County Medical Officer of Health who is also School Medical Officer for the county, and each Assistant School Medical Officer is paid (i) a fee of 1s. 6d. for each child inspected, *plus* (ii) a capitation fee of 2d. per annum on the average number on the school books, *plus* (iii) an allowance (for travelling expenses) of 5s. per term, per school for each school visited outside the town in which the officer inspecting resides.

Another system, adopted by the Derbyshire County Council, is:—

1s. per inspection, *plus* £1 per school, *plus* £1 per 1,000 acres in area covered by the Medical Inspector: each item per annum.

On these various systems of payment the Committee would express the opinion that for whole-time officers payment by salary is essential, and that any system for payment of inspectors must be determined by the following requirements:—(i) of making the formal inspection, (ii) of travelling, and (iii) of extra duties such as making reports and fulfilling the additional requirements of paragraph 7 (a) of the Board of Education Circular, No. 596. That paragraph is as follows:—

"7 (a) Improvement of the School Arrangements.—The School Medical Officer will doubtless furnish the Local Education Authority with valuable advice as to im-

improvements which can be made in the use of old school premises and in the design of new school premises for improving the health of the children educated in them.

For instance, he will note and report to the Authority in cases in which the ventilation of schools is defective, either as regards the means provided or as regards the use and maintenance of those means, and, if necessary, he will supply them with the results of scientific tests. He will, of course, call attention to the physical effects of bad ventilation, such as the prevalence of headaches, lassitude, and debility among the scholars, when they come under his notice. He will observe and report instances of bad positions in sitting and unsuitable design of desks or benches. As regards cases of defective eyesight, he will indicate such measures as can be taken to remedy or mitigate the defects by altering the position of the children in the class, or improving the lighting of the school in amount or direction, and he will call attention to the strain imposed on eyesight by the use of too small type in text books, the teaching of very fine sewing, etc. He will also be able to estimate the effectiveness of lessons on the subject of personal hygiene given in the school, and may be able to suggest improvements in the curriculum or in the methods of giving such lessons, and bringing their importance home to the children. He may also be able to institute comparisons between school and school in respect of the effect of physical exercises, and, in the case of children of weakly physique, he may be able to indicate the kind and amount of physical exercises which are suitable for them. He will observe the effect of holding classes in the open air, and call attention to cases in which the adoption of this arrangement is desirable. He will also be able to suggest to what extent, and in respect of what children, advantage should be taken of the facilities afforded by Article 44 (g) of the Code of 1903 for improving the health and physical condition of the children, by means of open air schools, school camps, etc., and, in cases where facilities exist for baths and swimming, he will sometimes find occasion to recommend a more extensive use of such facilities. And the beneficial influence of the School Medical Officer will not be exhausted even when he has done everything included in this formidable catalogue. The mere fact that the services of a specially skilled officer and staff are devoted to all matters affecting the health of the children in their Public Elementary Schools gives to the whole question of school hygiene a dignity and importance which cannot but produce a considerable effect on the minds of teachers, parents and children alike. From this point of view, the School Medical Officer should be not merely a functionary charged with specific duties, but a pervading influence making, in the long run, for better hygienic conditions in the school and in the home.

With the expressions of opinion of the Divisions' on this part of the subject the Committee will be glad to receive information also as to any special systems of payment adopted in their respective districts.

4. Board of Education Memorandum, No. 596.—Questions of Medical Inspection.

The Committee has considered, as already stated, in connection with its references from the Annual Representative Meeting, 1908, the Memorandum of the Board of Education, No. 596, issued since that Meeting, and certain additional points affecting medical inspection arising out of that Memorandum as are here referred to.

5. Tenure of Office.

In view of the responsibilities of the School Medical Officer, particularly those arising in connection with the duties referred to in paragraph 7 (a) of the Memorandum of the Board of Education, above quoted, the Committee considers it essential that such officers should be appointed without reference to time and subject to a reasonable notice, and that the appointment should not be terminated without the consent of the Board of Education. The experience of the

Association with regard to the position of Medical Officers of Health who are appointed for limited periods shows the necessity for this.

6. Duties of School Medical Officers in connection with the Feeding of School Children.

The Board of Education draws attention in Memorandum No. 596, paragraph 7 (b), to a new question in National Hygiene arising out of the Education (Provision of Meals) Act, 1906. The Board expresses the opinion that medical inspection will "furnish the Local Education Authority with valuable information as to the necessity of exercising their powers under the Education (Provision of Meals) Act, 1906, and as to the best methods and effects of such exercise. It is extremely desirable that the School Medical Officer should be closely associated with this last mentioned work, wherever it is undertaken, though it is of hardly less importance that the methods adopted should be such as will secure the greatest educational effect in respect of the manners and conduct of the children concerned as well as the best physical results."

In view of this provision it may be anticipated that it will be found necessary for the School Medical Officer to be consulted as to all diets adopted and to have supervision of all meals supplied.

7. School Nurses.

Several references are made in Circular 596 to the duties to be discharged by school nurses in connection with inspection or treatment of school children. Questions will arise as to the subordination of the nurse in such work to the School Medical Officers. As governing the whole subject, the Committee would draw attention to the pronouncement of the Board of Education in its first Circular (No. 576, paragraph 8) as follows:—

"It is essential, however, that the teacher, school nurse, or health visitor assisting in the administration of this Act, should act strictly under the instruction and supervision of medical authority."

II. TREATMENT OF CHILDREN FOUND, UPON INSPECTION, TO BE DEFECTIVE.

8. Introductory.

Both the resolutions of the Annual Representative Meeting, 1908, relative to the treatment of children found to be defective, and the portions of the Board of Education Memorandum, No. 596, which deal with this matter, indicate clearly the importance of the questions which require immediate attention.

As was pointed out by the Medico-Political Committee in its Report of July, 1908:—

Par. 4. The recent statutory provision by the Houses of Parliament for the Medical Inspection of School Children was a result of the increasing national recognition of the truth that the health of each individual is a matter profoundly concerning, not only himself and his family, but the general community, and that, as part of this principle, the community is specially interested in and responsible for the protection of the health of the children.

Par. 5. It follows that, unless medical inspection is to remain ineffective, means must be provided whereby those children who, as the result of inspection, are found to be defective, shall receive such medical care as is necessary to remove, as far as possible, their physical defects, and to prepare them for efficient citizenship.

9. Propriety of Treatment at Public Expense.

In considering how provision can best be made for the proper treatment of such defects as may call for attention, the first question is as to how, and to what extent, such provision should be made at the public expense.

The law requires parents to provide necessary treatment for their children. Quite recently, however, the community, recognising its own interest in the welfare of children as distinct from the interest of the parents, has begun to require the treatment of cases hitherto neglected, involving an additional expenditure which parents among the poorer classes could not afford. At the same time it

must be recognised that public opinion would not consent to compel all children whose parents cannot afford to pay, to be treated under the existing Poor Law.

It is possible that as the result of the forthcoming Report of the Royal Commission on the Poor Law the whole question of public provision of medical relief will be fundamentally reconsidered; and it is possible that the provisions of the scheme which follows could be incorporated in the reorganized Poor Law system. As matters stand at present, however, the conclusion of the Committee is that the provision of treatment for school children, found upon medical inspection to be defective, must be considered from the standpoint of means of parents under three heads:—

1. Children whose parents can provide the requisite treatment at their own expense.
2. At the other extreme, children whose parents are in such circumstances that treatment under the existing Poor Law is carried out.
3. Children falling into neither of the foregoing groups.

10. *Treatment at Expense of Parents: Reference to Private Practitioners.*

The Board of Education Memorandum, No. 596, emphasises the importance of provision whereby parents shall be required to pay for the necessary treatment of their children so far as their means permit, and in paragraph 7 (d) the Board states:—

Par. 7 (d). *Advice or Direction to Parents.*—Where medical inspection reveals any defect or malady in a particular child, the first step will naturally be to notify the parents, and, unless the ailment is a minor one which can be removed by home treatment or treatment (under the direction of the School Medical Officer) by the School Nurse, to urge upon the parent the desirability of obtaining treatment by an ordinary medical practitioner. In extreme cases of insanitary homes or conditions, the attention of the Sanitary Authority will, of course, be called to the matter.

For the purpose of such reference it is desirable that a printed form should be adopted, and the following is an example of a convenient form used by certain County Councils:—

"Dear Sir, or Madam.—

The Education (Administrative Provisions) Act, 1907.

Your child has been medically examined, and you are recommended to consult a doctor, or pay special attention to the following matters:—

.....
(The words which do not apply to the case in question are struck out.)

11. *Poor Law Cases.*

It is sufficient for the purpose of this Report to refer to the fact that for cases which can properly be provided for under the Poor Law the necessary public provision already exists.

12. *Treatment at the Public Expense, otherwise than through the Poor Law, or by Charity.*

In the Report of July, 1908, the Committee pointed out that the cases for which provision must be made might be classified, with regard to the physical defects calling for treatment, under three heads:—

- (i) Cases, such as those of mental deficiency and defects of speech, which should be sent to Special Schools;
- (ii) Severe cases requiring confinement to bed which would be treated at home or in hospital;
- (iii) Cases not falling into either of the foregoing groups, which would be treated in School Clinics or recognised surgeries.

The second and third of these groups require further consideration in this Report.

13. *Treatment at Hospitals and other Institutions.*

Before proceeding to discuss the scope and organisation of School Clinics and Recognised Surgeries, *vide infra*, the Committee thinks it well first to discuss an alternative which has already been proposed, for example, at Sheffield, namely

that the Local Authorities shall, in consideration of payments to hospitals and other charitable institutions, be able to claim treatment in such institutions for any children who may be sent thereto.

This important proposal is referred to in the Board of Education Circular 596, paragraph 7 (g), p. 8, as follows:—

Par. (g). *Contributions to Hospitals, Infirmarys, Dispensaries, etc.*—Special attention should be paid to the powers referred to in the proviso to Section 13 (1) of the Act, and the Board consider that, before the direct treatment of ailments is undertaken by the Local Education Authority, whether by means of a School Clinic, or by themselves supplying and paying for medical treatment, full advantage should be taken of the benefits of such institutions. The Board will be prepared to entertain proposals for contributing to the funds of hospitals, dispensaries, and nursing associations, on terms of adequate advantage. Such contributions are specially desirable in the case of Eye Hospitals and Cottage Hospitals which are prepared to undertake minor surgical operations. It is permissible to include among the conditions of contribution a provision allocating a reasonable remuneration to the medical men working for such institutions. Among the Associations to which contributions might properly be made are "children's care associations," who, by means of local sub-committees or local representatives, arrange for the individual treatment of poor school children by voluntary agencies or otherwise.

Such proposals raise for the consideration of the Divisions serious questions of principle, particularly as regards the terms upon which the services of the profession should be given gratuitously to the community.

In an analogous case the Annual Representative Meeting, 1908, has already decided that the services of the profession should not be rendered without charge to patients for whose maintenance and treatment public authorities are responsible.

The ground upon which the services of the honorary staff of a hospital or other charitable institution are given to it is that it is a charity supported by the voluntary contributions of benevolent members of the community. If this charitable basis is abolished, the claim upon the staff to act as honorary officers ceases. If hospitals accept contributions from public funds in consideration of undertaking the treatment of certain patients, then, as regards the treatment of those patients, they cease to be charitable institutions. There is also a grave risk that their legitimate work would be interfered with.

The importance of the questions thus raised extends beyond the immediate issue. If the profession now permits the insidious introduction of arrangements whereby patients, in respect of whom hospitals receive payment from public funds, are to be treated gratuitously by the honorary staff, a very serious form of competition with private practitioners will be instituted under public sanction, and a precedent will be created for ever increasing demands by the community upon the gratuitous work of medical practitioners. At present, the demands made upon the services of medical officers of hospitals are automatically limited by the necessity imposed upon the hospital authorities of meeting incidental expenses by the voluntary contributions of the charitable.

If hospitals are able to draw upon the public purse for these incidental expenses this protection to the profession is destroyed. Though all arrangements made now may be considered to be in some degree of a provisional character, pending the issue and consideration of the Report of the Poor Law Commission, the profession must, in the meantime, prevent the introduction and adoption of arrangements calculated to produce the gravest consequences if permanently adopted.

If, in recognition of the considerations above stated, the principle is accepted that payment is to be made to medical practitioners for treating at charitable institutions children, in respect of whose treatment payment from public funds is received, difficulties will arise as to the selection of the officers to be employed for the purpose.

In view of the foregoing considerations the Medico-Political Committee is of opinion that any attempt by public authorities to arrange for the treatment of school children at hospitals and other charitable institutions is thoroughly

unsound in principle. The Committee recommends that the Divisions should therefore oppose such arrangements.

14. School Clinics and Recognised Surgeries.

The necessity being evident for a definite separation of any public service from the charitable services of hospitals, not only in justice to the hospital patients but also to the medical men who should be separately paid, the nature of the public service should now be considered. The Committee proceeds to consider the alternative provision, namely, School Clinics and Contracts by the State or Municipality with private practitioners, separately or in Public Medical Services.

This subject is referred to in paragraph 7 (h) of the Board of Education Memorandum, No. 596. Before sanctioning the establishment of School Clinics the Board of Education will require from the local authority detailed information on the following points:—

(i) What precautions the Local Education Authority will take to secure that only those children shall be treated in a School Clinic for whose treatment adequate provision cannot otherwise be made, whether by the parents, or by voluntary associations or institutions such as hospitals, or through the agency of the Poor Law;

(ii) What precise diseases and defects will be treated;

(iii) By whom and on what terms and conditions the treatment will be carried out, and what will be its extent;

(iv) What is the estimated cost of the clinic in respect of buildings and equipment, maintenance and administration, and treatment, and how it is proposed to meet this cost, out of the rates or otherwise.

The subject may conveniently be discussed in the present Report, for the assistance of the Divisions, under the headings indicated by the above paragraphs of the Board of Education Memorandum, although some of the points raised are of only indirect interest to the medical profession.

It is clear that the character of the arrangements made must differ widely according to the density of population of the district concerned. The term "School Clinic," in the ordinary accepted sense, can only be applied to the arrangements practicable in the larger centres of population. The modifications necessary to adapt these arrangements to the requirements of less populous districts will be alluded to in a separate paragraph, under the heading *Recognised Surgeries*, after the description of the School Clinic proper.

15. School Clinics.

It will be seen that the matters for consideration may be summarised as: (i) Selection of children for treatment, with regard to means of parents, (ii) Scope of clinic—diseases and defects treated, (iii) Medical Officers—selection and terms of employment, (iv) Buildings, equipment, maintenance and expenditure generally.

(i) Selection of Children for Treatment, with regard to Means of Parents.

The subject of means of parents was sufficiently dealt with by the Medico-Political Committee in its Report of July, 1908, in the following terms (paragraph 10):—

Paragraph 10.—The first question is as to the treatment, at the public expense, of defective children whose parents may be able to pay for such treatment. It must be remembered that the matter under discussion only refers to the children in public Elementary Schools. Under existing provisions, the condition of any child found defective by the Medical Inspector is reported to the parents, who are advised to seek medical treatment. Parents who habitually neglect their children can be proceeded against for such neglect.

If the parents are unable to obtain the necessary treatment elsewhere, then the case may be dealt with at a School Clinic or Surgery. (*Vide also paragraph 7 (d) of the Board of Education Circular, No. 596, quoted on page 252 of this Report.*)

(ii) Scope of Clinic or Recognised Surgery—Diseases and Defects Treated.

The Committee dealt also in the same Report (paragraph 12) with the second question raised by the Board of Education, namely, what precise diseases and defects shall

be treated. Those specified by the Committee included as examples:—(Conditions of the eye—errors of refraction, and simple diseases such as blepharitis, conjunctivitis, etc.; conditions of the ear—chronic discharge, etc.; verminous and parasitic conditions of the skin; examination and treatment of defective teeth by registered dentists. It is, of course, understood that the mentally defective and backward children will be suitably dealt with in the course of medical inspection.

(iii) Medical Officers and Terms of Employment.

The Committee in the same Report (paragraph 11) advised that the work of School Clinics and Recognised Surgeries would best be done by a large number of part-time medical officers, the appointments being open to those practitioners in the district who were prepared to give time to the work. It would be for the local authority to make necessary arrangements, which would be facilitated if the authority received the co-operation and assistance of the local Division of the Association. Where a Public Medical Service existed it would obviously be convenient that a contract should be made between it and the local authority. Where a Public Medical Service has not been formed, the desirability of such an institution will doubtless be considered by the Division.

The terms of remuneration would be a matter for careful consideration, and, in many cases, it would be necessary for the Division concerned to arrive at a decision as to what, in its opinion, would be suitable. As some general guidance from the Association may, however, be found desirable, the Committee would be glad to receive expressions of opinion from the Divisions, upon the basis of which definite suggestions might be framed.

(iv) Buildings, Equipment, Maintenance, and Expenditure generally.

The Association is directly concerned in the fourth paragraph of the Board of Education Memorandum, No. 596, in so far as it affects the remuneration of the profession for treatment, and, indirectly, in so far as the adequacy of the equipment of the institution is affected. The medical profession must in this, as in other matters affecting the medical inspection and treatment of school children, protect the community against the danger of inadequate provisions by local authorities resulting in an inefficiency for which attempts may afterwards be made to hold the School Medical Officers or the profession responsible.

16. Recognised Surgeries.

In adapting the arrangements above suggested to the requirements of rural and other thinly populated districts, the chief modifications will be in respect of staff, buildings, and general equipment. The best arrangement for the treatment of those school children whose parents cannot afford to pay for the necessary treatment may be found in contracts made, after public advertisement, by the local authorities, with such of the local private practitioners as desire it and whose surgeries would be "recognised" as places for the provision of such treatment. The arrangements for this purpose would be of the most simple character, namely, an agreement with the private practitioner or practitioners as to the terms of remuneration, hours of attendance, and similar details, and the arrangements for reference of children to such practitioners and for payment on the production of proper vouchers.

SUB-APPENDIX I.

RESOLUTIONS OF ANNUAL REPRESENTATIVE MEETING, 1908.

Medical Inspection of School Children.

Arising out of consideration of paragraph 32 of Report of the Medico-Political Committee:—

Minute 718.—Proposed: That this Meeting disapproves the principle of payment per head, but that where such a system is adopted the payment be not less than 2s. 6d.

Resolved: That the Medico-Political Committee be instructed to refer the subject to the Divisions.

Minute 729.—That the practice of engaging Medical Inspectors of Schools under the disguise of Assistants to the Medical Officer of Health should be prevented, unless a sufficient remuneration be given, and that it be an instruction to the Council to give effect to this resolution.

Minute 724.—That in those cases where a Medical Officer of Health has to perform the additional duties of Medical Inspector of School Children, he should receive increased remuneration.

That this be held to apply only to part-time appointments.

Minute 725.—That it is undesirable that a full-time Medical Officer of Health should have added to his duties the duties of Medical Inspector of School Children.

Treatment of School Children.

Arising out of consideration of paragraph 33 of Report of Medico-Political Committee.

Minute 731.—That the Supplementary Report of the Medico-Political Committee on provision for treatment of school children found, upon medical examination, to be defective, together with the Motion by the Leicester and Rutland Division, and all other Motions handed in with reference to the treatment of school children, be referred to the Council for consideration and further Report to the Divisions. (*For motions before the Meeting see Sub-Appendix II.*)

Minute 732.—That the matters referred to the Council in the resolution regarding Medical Inspection and Treatment of School Children be considered urgent, and that the Divisions be communicated with upon this subject as soon as possible.

SUB-APPENDIX II.

MOTIONS HANDED IN AT ANNUAL REPRESENTATIVE MEETING, 1908, AS TO MEDICAL TREATMENT OF SCHOOL CHILDREN.

By Dr. E. J. McCann (Westminster):—

That the Westminster Division feels that the logical conclusion of the medical inspection of school children is the provision of treatment, where this is found to be necessary, and that as the machinery of the Poor Law already exists for the medical relief of all persons unable to pay medical fees, the school children should be referred to the Medical Department of the Poor Law, which should be reorganised and extended to meet the demand for the increased medical relief which will arise.

By Dr. Frank M. Pope (Leicester and Rutland):—

That this Meeting, while approving of medical inspection of school children, is strongly opposed to any system of treatment (whether provided from the rates or from the Imperial Exchequer) of those children who may be found defective, and urges the Council to take such steps as would be likely to prevent such a system being adopted.

By Dr. Stanley A. Gill (Southport):—

That school children found defective should be referred for treatment to private practitioners, or in special circumstances for hospital treatment.

By Mr. J. M. Ferguson (Burnley):—

(a) That the actual treatment of physically defective school children should not be undertaken by Medical Inspectors of Schools.

(b) That advice only might be given in cases of parasitical diseases of the skin and scalp:—School

nurses being employed to follow such cases to their homes to see that such advice is made effective.

(c) That in all other diseases or defects the parents should be referred to their own medical attendant who alone should decide what treatment should be given and where it is desirable that such treatment should be given.

(d) Cases, having no medical attendant and being too poor to pay for advice should be referred to the Poor Law Medical officer.

By Dr. A. H. Williams (Watford and Harrow):—

The Medical Inspector reports a child as defective.

The parent is to be notified that the defect is to be attended to, before the child may return to school.

Should the parents be unable to pay for treatment then the Educational Department is to give a voucher for the payment of the fee, on a fixed scale.

The parent may then take his child to any practitioner whom he may select and the practitioner will receive his fee from the Education Department.

In this way the relations between the medical man and his patients are not interfered with.

QUESTIONS

To be answered by the Divisions.

INSPECTION.

System of Payment. (See Report, Section 3.)

1. (a) Does the Division approve of the system of payment per head?
- (b) If so, should it be such as has been adopted in Hertfordshire or in Derbyshire?
- (c) Or a fixed minimum payment per head of school attendances, and if so, what payment?
- (d) Or does the Division suggest any other method of payment?

TREATMENT OF SCHOOL CHILDREN FOUND DEFECTIVE.

2. Considering the matter with special regard to your local conditions, what are the views of the Division as to the size and method of selection of the Staff of the School Clinic, if the establishment of such should be proposed, and how do you think that they should be remunerated, e.g., by (i) fixed salary; (ii) payment by time; (iii) payment per case, or by what other method? (See Report, Sections 14, 15, and 16.)
3. Divisions which comprise rural areas are invited to state similarly their views as to establishment of School Clinics or, in the alternative, the recognition of the Surgeries of those practitioners who are willing to undertake the work? What method of selection and payment of practitioners engaged in such work is considered advisable?
4. What suggestions, if any, have Divisions to offer as to the methods which are to be adopted to ensure that parents who can afford to pay for the treatment of their children, when found defective as the result of medical inspection of school children, should be compelled to do so? (See Report, Sections 19 and 14.)

APPENDIX B.

SUMMARY OF OPINIONS OF DIVISIONS ON QUESTIONS AFFECTING INSPECTION AND TREATMENT, REFERRED TO THEM BY REPORT ISSUED DECEMBER, 1908.

The number of Divisions in England and Wales, excluding the Channel Islands and the Isle of Man, is 157. Up to April 15th, 1909, 103 Divisions had replied to some or all of the questions submitted.

A. INSPECTION.

Question 1 (a) "Does the Division approve of the system of payment per head?"

Out of 63 replies 13 approve (with more or less qualification) of some method of capitation payment, 46 disapprove, 4 express no general opinion.

Of the 46 Divisions which approve payment by Salary:—

- 25 approve fixed Salary,
- 10 approve fixed Salary and whole-time employment.
- 1 approves fixed Salary and whole-time employment for Town Officers, and Time rate (12s. 6d. per hour) for part-time Country Officers (if any).
- 10 approve Salary based on time spent.

Question 1 (b) (if the Division approves payment per head) should it be such as has been adopted in Hertfordshire, or Derbyshire? (c) or a fixed minimum payment per head of school attendance, and, if so, what payment? (d) or does the Division suggest any other method of payment?

Of the 18 Divisions (13 are in favour of some form of Capitation payment, and 5 state the payment they prefer if such a method is adopted):—

- 10 approve of minimum 2s. 6d.
- 2 " " Derbyshire system.
- 1 approves of Hertfordshire system.

The rest vary from 1s. 6d. to 5s. per head.

B. TREATMENT.

The School Clinic. 74 replies.

- 63 disapprove of the School Clinic.
- 11 express approval (qualified in some instances).

Scope of Clinic. 11 replies.

All agreed that it should be limited to special diseases, e.g., eye, ear, throat, skin, verminous cases.

Staff of Clinic (if established). 30 replies.

- 15 in favour of whole-time officers.
- 15 of work being done by all medical practitioners willing to undertake the work.

Method of Payment for Clinic. 30 answers.

- 17 approved payment by Salary.
- 9 approved payment by Case.
- 4 approved payment by Time.

Provision for Rural Areas. 53 answers.

40 express approval of the idea of "Recognised Surgeries."

1 expresses disapproval of the idea of "Recognised Surgeries."

12 express specific approval of Watford and Harrow Division plan, namely:—

The Medical Inspector reports a child as defective. The parent is to be notified that the defect is to be attended to before the child may return to school. Should the parents be unable to pay for treatment, then the Educational Department is to give a voucher for the payment of the fee on a fixed scale.

The parent may then take his child to any practitioner whom he may select, and the practitioner will receive his fee from the Education Department.

In this way the relations between the medical man and his patients are not interfered with.

(The above is the form in which the plan was placed before the Representative Meeting and the Divisions.)

Watford and Harrow Division have since modified their scheme as follows:—

The Medical Inspector should report the defect to the Education Committee.*

The Education Committee should notify the parent or guardian that the defect must be attended to.

* Modifications made by Division.

Where the parent or guardian showed that he was unable to pay the fees required, the Education Committee* should give a voucher for the payment of the fees on a fixed scale (after the manner in which payments are made for soldiers on furlough in districts where there is no available officer of Royal Army Medical Corps).

A written report should in each case be given by Medical Inspector of any defect found, and this Report must be handed to practitioner when application for treatment is made.

Thus this way the relations of the medical man and his patient will not be disturbed, as a free choice would be left to the parent or guardian to select his own medical man; but it should be distinctly enacted that charitable institutions should not be made use of in this connection.

Method of ensuring Payment for Treatment.

Nine Divisions think payment should be ensured by Education Authority.

Many Divisions express their inability to answer the question.

APPENDIX C.

ANALYSIS OF REPLIES OF HONORARY SECRETARIES OF DIVISIONS TO QUESTIONS REFERRED TO THEM IN DECEMBER, 1908, DEALING WITH MATTERS OF FACT RELATING TO THEIR DISTRICTS.

A.—INSPECTION.

Question 1. *Officer Appointed.*—What Officer performs the work of medical inspection of school children in the area of your Division—Medical Officer of Health, Assistant Medical Officer of Health, Poor Law Medical Officer, &c.?

Information has been received concerning 94 educational districts.

The officers actually inspecting are:—

Whole-time Medical Inspectors ... 40

Part-time Medical Inspectors (who are in 2 districts the Poor Law Medical Officers) ... 23

Whole-time Medical Officers of Health alone ... 6

Whole-time Medical Officers of Health with Whole-time Assistant Medical Officer of Health ... 2

Whole-time Assistant Medical Officer of Health only ... 10

Part-time Medical Officers of Health ... 13

Question 2. *System of Payment.*—What is the system of payment adopted in your Division area—

(a) For the post of School Medical Officer?

(b) For the actual work of Inspection if separated from that of supervision?

From 23 answers received, it appears that in 10 districts the work of supervision is incorporated with that of the Medical Officer of Health and no extra salary is paid. In 13 districts salaries are paid for the supervision exercised by the Medical Officer of Health.

Payment for Inspection only. 85 answers.

Paid by salary ... 71

Paid by some form of Capitation fee ... 14

Association Intelligence.

PROCEEDINGS OF COUNCIL.

At a Meeting of the Council, held at 429, Strand, London, W.C., on Wednesday, April 28th, 1909, at 2 o'clock in the afternoon:

Present:

Mr. EDMUND OWEN, LL.D., London, Chairman of Council, in the Chair.

Dr. HENRY DAVY, Exeter, Past-President.

Dr. J. A. MACDONALD, Taunton, Chairman of Representative Meetings.

Dr. EDWIN RAYNER, Stockport, Treasurer.

Dr. JOHN FORD ANDERSON, London
Dr. JAMES GRANT ANDREW, Glasgow
Mr. H. A. BALLANCE, Norwich
Sir JAMES BARR, Liverpool
Fleet Surgeon E. J. BIDEN, R.N., Fareham
Dr. T. R. BRADSHAW, Liverpool
Surgeon-General W. R. BROWNE, C.I.E., (Colombo, Ceylon, and South Indian and Madras Branches)
Dr. E. COCHRANE BUIST, Dundee
Mr. ANDREW CLARK, D.Sc., London
Dr. ASHLEY V. CLARKE, Leicester
Dr. J. WARD COUSINS, Portsmouth
Dr. E. CURETON, Shrewsbury
Mr. C. F. CUTHBERT, Gloucester
Mr. E. J. DOMVILLE, Exeter
Mr. A. J. DREW, Oxford
Dr. G. YOUNG EALES, Torquay
Dr. GEORGE EDMOND, Aberdeen
Mr. J. H. EWART, Eastbourne
Mr. C. E. S. FLEMING, Bradford-on-Avon
Dr. T. W. H. GARSTANG, Altrincham
Dr. J. J. GIUSANI, Cork
Dr. D. GOYDER, Bradford
Dr. T. D. GREENLEES, London (Cape of Good Hope Eastern, Western, and Border Branches)
Dr. G. E. HASLIP, London
Dr. HENRY HETLEY, London
Dr. R. MCKENZIE JOHNSTON, Edinburgh
Colonel C. H. JOUBERT DE LA FERRE (I.M.S. ret.), Weybridge (Representative of the Indian Medical Service)
Mr. HUGH R. KER, London
Mr. R. H. KINSEY, Bedford
Mr. F. C. LARKIN, Liverpool
Dr. A. E. LARKING, Buckingham
Dr. CHARLES MACFIE, Bolton
Dr. DONALD J. MACKINTOSH, M.V.O., Glasgow
Dr. J. MUNRO MOIR, Inverness
Dr. C. G. D. MORIER, London (South Australian and Western Australian Branches)
Professor J. T. J. MORRISON, Birmingham
Dr. B. H. NICHOLSON, Colchester
Dr. FRANK M. POPE, Leicester
Dr. T. WHITEHEAD REID, Canterbury
Dr. H. JONES ROBERTS, Penryn
Major O. L. ROBINSON, R.A.M.C., Netley (Egypt, Gibraltar, and Malta and Mediterranean Branches)
Mr. W. St. A. St. JOHN, Derby
Dr. L. KRISTIAN E. SHAW, London
Lieutenant-Colonel R. J. S. SIMPSON, C.M.G., London (Griqualand West, Natal, and Transvaal Branches)
Dr. HENRY SMURTHWAITE, Newcastle-on-Tyne
Dr. W. JOHNSON SMYTH, Bournemouth
Mr. CHARLES R. STRATON, Salisbury
Mr. J. LYNN THOMAS, C.B., Cardiff
Dr. G. J. CRAWFORD THOMSON, London
Dr. ALEXANDER TROTTER, Perth
Mr. T. JENNER VERRALL, Brighton
Dr. ARTHUR T. WEAR, Newcastle-on-Tyne
Dr. SINCLAIR WHITE, Sheffield
Mr. D. J. WILLIAMS, Llanelli
Lieutenant-Colonel E. M. WILSON, C.B., C.M.G., Farnborough (Representative of the Army Medical Service)

Minutes.

The Minutes of the last Meeting, held on January 27th, 1909, having been printed and circulated, were taken as read, and duly confirmed.

Apologies.

Letters of apology for non-attendance were received from the President-elect, Dr. Wm. Hall, Dr. C. J. Martin, Dr. T. G. Nasmith, Dr. Cecil Shaw, and Professor A. H. White.

Deaths.

The CHAIRMAN reported the deaths of the President of the Association (Mr. Simeon Snell) and Mr. C. G. Wheelhouse, when the following Resolutions were passed, all Members rising in their places:

That the Council of the British Medical Association desires to express its deep sympathy with Mrs. Snell, and its great regret at the loss the Association has sustained by the death of their distinguished President. The Council desires to assure Mrs. Snell and the members of her family that in recording its own regret and sympathy it is also expressing the sentiments of the Members of the Association.

That the Council learns with profound regret the death of Mr. C. G. Wheelhouse, F.R.C.S., and desires to convey to Mrs. Wheelhouse its expression of deep sympathy with her in the loss she has sustained. The Council also desires to place on record its recognition of the conspicuous services rendered to the Association by Mr. Wheelhouse for upwards of forty years, during which time he held the offices of President of the Council, and President of the Association.

Replies to the Resolutions of condolence passed by the Council on the deaths of Dr. W. A. Elliston and Mr. George Eastes were read and ordered to be entered on the Minutes.

The CHAIRMAN reported that at the time of the death of Mr. Thomas Wakley, Editor of the *Lancet*, he had conveyed to Mrs. Wakley and his family the sympathy of the Council in their loss.

Journal and Finance Committee.

The TREASURER presented the Minutes of April 22nd, 1909.

In reference to the Recommendation:—

That the Council report to the Representative Meeting as follows:

The Council considered the following Resolutions of the Representative Meeting:

Minute 544. That the whole work of the Association be arranged in three co-ordinate Departments: (a) Financial; (b) Editorial; (c) Medical or Professional.

That these Departments be respectively under the following Officers: (a) Financial Secretary; (b) Editor; (c) Medical Secretary, who shall hold equal official positions in the Association.

and gave effect to them by deciding, at the Meeting in October, that the office of the General Secretary and Manager should be known as that of the Financial Secretary as from January 1st, 1909.

Upon consideration of a Memorandum subsequently submitted by Mr. Elliston, the Council has come to the conclusion that it is desirable in the interests of the Association that the words "Business Manager" should be added to his title, in order that the duties of the office may be more correctly described.

The Council recommends the Representative Meeting to approve that the title of the office formerly known as that of General Secretary and Manager be henceforth Financial Secretary and Business Manager.

On a Motion by Dr. DAVY to reject the Recommendation, the CHAIRMAN ruled that the principle involved could not be discussed, as the change of title had been definitely accepted by the Council, and that the Council could only amend the wording of the proposed Report before transmitting it to the Representative Meeting, should it think fit to do so.

After further discussion as to the Chairman's ruling it was

Moved by Dr. POPE, seconded by Sir James BARR, That as a protest against the ruling of the Chairman the Meeting stand adjourned.

The Motion having been put from the Chair, was declared to be lost.

An Amendment was moved by Mr. DOMVILLE, seconded by Dr. DAVY,

That before deciding on the form of recommendation to be sent to the Representative Meeting as to the title of the Financial Secretary, the opinion of Council be taken as to the alterations required in the By-laws and Articles of Association before such alterations can take effect.

The Amendment having been put from the Chair, was declared to be lost, 25—27.

The CHAIRMAN thereupon put the Recommendation of the Journal and Finance Committee, which was declared to be carried, 26—24.

The 1908 Balance Sheet.

The Financial Statement for the year ending December 31st, 1908, as certified by the auditors, was received and approved, and, in accordance with By-law 35, ordered to be presented to the Annual General Meeting and the Annual Representative Meeting.

The accounts for the quarter ending March 31st last, amounting to £11,419 6s., were received and approved, and

the Treasurer empowered to pay those remaining unpaid, amounting to £3,262 16s.

Uterine Cancer Committee.
Dr. BERS presented the Report of the Uterine Cancer Committee of February 9th and March 3rd, 1909.

Instructions were given that the Appeal to Medical Practitioners to promote the early recognition of Uterine Cancer be printed in the *BRITISH MEDICAL JOURNAL* (see p. 1189) and communicated to all British and Colonial Medical Journals, and that the Appeal to Midwives and Nurses be printed in the *BRITISH MEDICAL JOURNAL* and communicated to all British and Colonial Medical and Nursing Journals.

Copies of the Appeal to Midwives and Nurses will be forwarded to Branch and Division Secretaries asking for their co-operation in the movement, and stating that further copies, if required, will be supplied at cost price.

Ophthalmia Neonatorum Committee.

The TREASURER presented the Report of the Ophthalmia Neonatorum Committee of February 20th, March 20th, and April 3rd, 1909.

The Report of the Committee will be brought forthwith to the notice of the Officers of the Sections of Ophthalmology and Obstetrics at the Annual Meeting, with a request to consider the practicability of including in their programmes a joint session for the consideration of the Recommendations.

The Report was published in the SUPPLEMENT of May 8th, p. 221.

The Committee was reappointed for the purpose of considering the results of the discussion at the Annual Meeting, and making recommendations to the Council as to the action to be taken to give effect to the Report.

Organization Committee.

Mr. ANDREW CLARK presented the Report of the Organization Committee of March 9th and April 13th, 1909.

The Organization Committee was authorized to draft, in conjunction with the legal advisers of the Association, for the consideration of the Council, a Reply to the Petitions which have been presented in opposition to the grant of a Charter in the form applied for by the Association, and the Chairman of Council was authorized to convene at the earliest possible date a Special Meeting of Council for the consideration of such draft.

The items of expenditure, reported by Branches for 1906, '07, and '08, which are not in accordance with the Regulations of the Association cannot be recognized by the Council as defrayed from the funds of the Association. Balances in the hands of the Branches will be calculated as though such expenditure had not been made.

In the United Kingdom the Treasurer will make payment to Branches for 1909 on the following basis:

- (a) No grant to a Branch which has not furnished a Report of its expenditure for the year 1908, pending receipt of such Report.
- (b) To each Branch in the United Kingdom whose average expenditure for the past three years has been less than 2s. per head of its membership, a Grant of the amount of its average expenditure for the past three years.
- (c) To each Branch whose average expenditure for the past three years has not been less than 2s. per head, a Grant of 2s. per head.
- (d) Such Grants to be paid in instalments as follows:
1909-10, 3d. per head of the membership, as shown by the Annual List of Members made up to April 30th, to be paid on May 31st; 6d. per head of the membership, as shown by that list, on September 30th; and the balance due, based on the number of Members who have paid their subscriptions for the year, at the end of the year.

The Council will be prepared to take into consideration, in due course, applications for further sums, on being satisfied that such further sums are required to enable the Branch applying, and their Divisions, to carry out their work satisfactorily.

The Grants for 1909 to the Colonial Branches will be, as in previous years, at the rate of 4s. per Member who has paid the full subscription for the year, and 2s. per Member elected after July 1st, who has paid half the ordinary subscription.

The Council recommends the Representative Meeting to amend the Schedule to the present By-laws of the Association as to Standing Committees by making such verbal changes as are necessary to bring it into conformity with the Schedule as to Standing Committees appended to the Draft Charter.

The Council recommends the Representative Meeting at Belfast that the present By-laws of the Association numbered 23 to 32 inclusive, relative to the composition and mode of election of Council, be repealed, and the By-laws numbered 37 to 46 inclusive in the Schedule to the Draft Charter, relating to the same subject, be adopted in substitution thereof, subject to such verbal amendments or alterations as the legal advisers of the Association may deem to be necessary.

The Council will report to the Representative Meeting that of the Resolutions of the Meeting relating to the Recommendations of the Finance Inquiry Committee that contained in Minute 515 has already been given effect to by the alteration of the By-law as to Capitalization Grants, and that the other Resolutions, in reference to which Amendments of the By-laws are not now being recommended, are found either not to require any alteration of the Regulations of the Association to carry them into effect, or to be such as could not be given effect to by an amendment of the By-laws.

Independent representation is granted to the West Bromwich Division, formerly grouped with the Dudley and Bromsgrove Divisions; also to the Buckinghamshire Division, and to the Northamptonshire Division (formerly grouped with Aylesbury Division). The remaining Divisions in the United Kingdom are provisionally granted independent representation or grouped with other Divisions for representation for the year 1909-10 in the same manner as they were grouped for the year 1908-9.

The Branches in the United Kingdom are provisionally granted independent representation, or grouped as the case may be, for the year 1909-10 in the same manner as for the year 1908-9.

The Council authorized the Organization Committee, finally to determine the grouping of Branches and Divisions, as soon as possible after the information contained in the Annual List of Members is available.

It will be reported to the Representative Meeting that the suggestion contained in Minute 173 of the meeting is impracticable, but that the possibility of making arrangements for approaching medical students directly is under consideration.

The Council approved a new Rule of the Natal Branch in substitution for their present Rule 26.

Science Committee.

Dr. BUIST presented the Report of the Science Committee of March 20th, 1909.

The Standing Orders as to Scholarships and as to Grants, submitted by the Committee, were adopted, and the remainder of the Report approved.

Premises Committee.

Mr. ANDREW CLARK presented the Report of the Premises Committee of March 24th and April 23rd, 1909, which was approved.

Hospitals Committee.

Dr. POPE presented the Report of the Hospitals Committee of March 25th, 1909.

Poor Law Reform Committee.

It was decided that a Special Committee be appointed to consider the Reports of the Royal Commission on the Poor Law as affecting the medical profession, and to report thereon to the Council, with recommendations as to any action which should be taken by the Association; that for the consideration of questions affecting England and Wales the Committee consist of five members nominated by the Medico-Political Committee, three members nominated by the Public Health Committee, and two members nominated by the Hospitals Committee, with power to add to their number; that for the consideration of questions affecting the United Kingdom there be added two members nominated by the Scottish Committee, and two members nominated by the Irish Committee; and that it be referred to the Scottish Committee and the Irish Committee, to consider questions specially affecting Scotland and Ireland.

General Ethical Committee.

Mr. KINSEY presented the Report of the Central Ethical Committee of March 25th, 1909.

The Council approved the adoption of Bradford Rules (A), (as modified), (B), (C), (D), (E), (F), (G), and (H), and Rule "Z," by the Altrincham Division of the Lancashire and Cheshire Branch; the Model Ethical Rules of Procedure and the Bradford Rules by the Denbigh and Flint Division of the North Wales Branch; the Model Ethical Rules of Procedure of a Division and Model Ethical Rules of a Branch (composed of several Divisions) by the Natal Branch; the Model Rules of Procedure, Bradford Rules (except E), Rule Z, and certain additional Rules by the Cleveland Division of the North of England Branch; the Bradford Rules, and Rule "Z," by the Burnley Division of the Lancashire and Cheshire Branch; the Model Ethical Rules of Procedure, Bradford Rules, and Rule "Z," by the Buckinghamshire Division of the South Midland Branch; the Model Ethical Rules of Procedure, by the North Wales Branch; and the Bradford Rules, and Rule "Z," by the North Lincoln Division of the East York and North Lincoln Branch.

The Central Ethical Committee was also authorized to approve Ethical Rules of Divisions and Branches which are in accordance with Rules already approved by the Council.

Irish Committee.

Dr. GUSANI presented the Report of the Irish Committee of March 27th, 1909, which was approved.

Naval and Military Committee.

Colonel JOSEPH DE LA FERRÉ presented the Report of the Naval and Military Committee of April 5th, 1909, which was approved.

Public Health Committee.

Mr. DOMVILLE presented the Report of the Public Health Committee of April 6th, 1909, which was approved.

Medico-Political Committee.

Dr. MACDONALD presented the Report of the Medico-Political Committee of April 7th and 14th, 1909.

A circular letter, to be signed by Representatives of the British Medical Association and of the Association of Registered Medical Women, is to be addressed to all registered medical women, drawing attention to the special importance at the present time of united action with regard to appointments, particularly public appointments open to women; that they be advised to watch closely the Warning Notice in the BRITISH MEDICAL JOURNAL and obtain advice with reference to appointments named therein, and also, when in doubt as to any appointments not mentioned in the Warning Notice, to apply to the Association of Registered Medical Women, to the Medical Secretary of the British Medical Association, or to the Honorary Secretary of the local Division of the Association, for information; and that such circular be signed, on behalf of the Association, by the Chairman of Council, the Chairman of the Medico-Political Committee, and the Chairman of the Contract Practice Subcommittee.

It was decided that the Model Rules of a Public Medical Service be approved, subject to such slight alterations as the Chairman of the Medico-Political Committee and the Chairman of the Contract Practice Subcommittee may find necessary, upon consideration of Counsel's opinion upon the points reserved, and issued for the consideration of the Divisions; that the attention of Divisions be drawn to the desirability of considering in connexion therewith the recommendations of the Reports of the Royal Commission on the Poor Law concerning Public Medical Assistance.

The Annual Representative Meeting will be recommended to approve that, if it be found desirable to appoint a class of School Medical Officers having supervising as well as inspecting duties, a rate of salary should be fixed above the minimum adopted by the Association, for Officers engaged in inspection only.

The Council approved of evidence being given on behalf of the Association to the Departmental Committee on the Midwives Act, and Dr. L. McManus, Dr. J. H. Taylor, Mr. C. E. S. Fleamming, and the Medical Secretary were appointed to give such evidence.

The Council approved the issue of the Report and Recommendations on Medical Inspection of School

Children and Treatment of those Found Defective, submitted by the Medico-Political Committee, for the consideration of the Divisions and Representative Meeting (see p. 245).

The Council will bring, in due course, before the United Kingdom Hospitals Conference, or any similar Conference, the question of Treatment of School Children found defective on Medical Inspection, as affecting Hospitals and the Medical Profession.

The matter of the suggested nomination of officially recognized representatives of the British Medical Association in the House of Lords was referred to the Representative Meeting.

Scottish Committee.

Dr. BRIST presented the Report of the Scottish Committee of April 8th, 1909.

It was decided that it is inadvisable that the Midwives Act should be extended to Scotland, and that evidence be led in opposition to the proposal.

The principle of separate Registration of Nurses in Scotland, as embodied in the Bill introduced by Mr. Cleland, will be supported, while any Bill which does not provide for reciprocity of Registration within the United Kingdom will be opposed.

Election of Members.

The 19 candidates whose names appeared on the agenda were duly elected Members of the British Medical Association.

Presidency.

Dr. Henry DAVY was invited to fill the office of President of the Association until the Annual Meeting, vice Mr. Simeon Snell, deceased.

Annual Report of Council.

The Annual Report of Council was considered, approved, and remitted to the Chairman of the Council to adjust in accordance with the instructions of Council.

Reports of Branches.

The Reports of Branches for 1908-9, furnished in accordance with By-law 9, were considered and ordered to be published in the SUPPLEMENT.

The Solicitor.

Mr. W. E. HAMPSON was reappointed Solicitor to the Association for the ensuing twelve months.

British Medical Association.

CENTRAL EMERGENCY FUND.

BIRMINGHAM BRANCH FUND FOR COVENTRY DISPUTE.
DR. THOS. WILSON, Honorary Treasurer of the Birmingham Branch, announces that the following further subscriptions have been received since the list published in the SUPPLEMENT of March 6th, 1909, p. 119, where full particulars of the fund were given.

It has been decided by the Council of the Birmingham Branch to close the list on May 31st, and further intending subscribers are asked to forward their donations before that date. Subscriptions may be sent to Dr. J. ORTON, Honorary Secretary of the Coventry Division, Great Heath Street, Coventry; or to the Medical Secretary, British Medical Association, 429, Strand, London, W.C., or to Dr. THOS. WILSON, 87, Cornwall Street, Newhall Street, Birmingham.

Donation of Three Guineas.

Haltwicks, Dr.

Donations of One Guinea.

Mr. W. E. HAMPSON, Secretary of the Branch.
Sawyer, Sir James, Bart., Bart., Bart., S. C.

Donations of Half a Guinea.

Anonymous.
Asher, W. F. E.
Atkins, Dr. J. E.
Barnes, F. L. R.
Baker, Dr. T. H.
Collington, F. A.
Howley, A.
Kendall, H. H.
Lawson, W. H.
McCandless, W. J.
Mann, W. S.
Moore, Dr. Milner.
Nuthall, A. W.
Orton, Dr. John.
Phillips, E.
Rice, Dr. W. R.
Said, Dr. L. H.
Vickers, Dr.

Donation of Half a Sovereign.

Oakes, Arthur.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

GLOUCESTERSHIRE BRANCH.

A GENERAL meeting of the Branch was held at the Gloucester Infirmary at 7 p.m. on April 15th, the PRESIDENT in the chair, and thirty members present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Cases.—Dr. WAYLAND ANCRUM read notes on two interesting cases of gastric ulcer, and on a case of general peritonitis following appendicitis, showing the good results following free drainage of the abdominal cavity. A discussion followed in which the PRESIDENT, Dr. CLARK, and Dr. COODE took part. Mr. FRIMM CUTHBERT reported some interesting cases, with pathological specimens: (1) Case of tuberculous peritonitis; (2) ovary occurring in hernial sac in a child; (3) malignant growth of vulva; (4) case of renal calculus showing the use of x rays and of urine segregator. The cases were discussed by the PRESIDENT, Dr. BRAMWELL, and Dr. COODE.

Specimens.—Dr. C. L. COODE showed the following pathological specimens: (1) Aneurysm of ascending arch of the aorta; (2) Multilobular cirrhosis of doubtful origin; (3) Pituitary gland and heart from a case of acromegaly. The specimens were discussed by the PRESIDENT, Mr. DYKES BOWER, and Dr. COLLINS. Dr. OSCAR CLARK showed some very interesting skiagrams, but time prevented many from being shown.

Whole-time Medical Officers of Health.—A short discussion followed on the desirability of health officers being required to give their whole time to the work. A letter was read from Dr. BOND, and finally it was proposed by Dr. MEYRICK JONES, seconded by Dr. McMAHON, and carried:

That this Branch considers that for rural districts part time officers are preferable.

Dinner.—Thirteen members afterwards sat down to dinner at the Wellington Hotel.

LANCASHIRE AND CHESHIRE BRANCH:

MANCHESTER (SOUTH) DIVISION.

AN ordinary general meeting of the Division was held at the house of the Chairman, Dr. Percy McDougall, Oak Drive, Fallowfield, on Thursday, May 6th, at 3.45 p.m., Dr. McDougall in the chair. There were seven other members present: Drs. Boyd, Vipont Brown, Grant Davie, Crichton Hood, Hopkinson, Sawers Scott, and Stocks.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Correspondence.—A letter from Mr. Larkin, the Branch Secretary, was read acknowledging the receipt of the nominations for election to the Central Council, and thanking the Division on behalf of himself and colleagues.

Address by Dr. Garstang.—Dr. GARSTANG (Altrincham) then gave an instructive and interesting address on his policy as one of the Division's Representatives on the Central Council. At its close the following resolution was adopted unanimously:

That this Division thanks Dr. Garstang for coming before it and stating the policy of himself and his three fellow candidates for seats on the Central Council; that the Division approves of this policy, and will in every way endeavour to support the four candidates in their election.

The business deferred from the meeting held on March 5th was then taken.

Contributions to Hospitals by Employers and Employees.

—Regarding resolution (a) the Division approved of a definite pronouncement that hospital subscriptions should not be regarded as giving title to unlimited hospital attendance. On the subject of resolution (b) judgement was suspended.

Fresh Public Medical Institutions.—The Division agreed to the principles enunciated.

Sanatoriums for Workers Suffering from Tuberculosis.—The Division concurred with paragraph 3 (a), (b), and (c). Regarding paragraph 4, it was agreed that the opinion of the Association should be notified to any member holding such appointments. The other subjects on the agenda were deferred owing to the lateness of the hour.

Annual General Meeting.—The date of the annual general meeting was fixed for Thursday, May 27th.

OLDHAM DIVISION.

THE annual meeting of the Oldham Division was held on May 4th.

Election of Officers.—The following officers were elected: President, Dr. Martland; Vice-President, Dr. Corns; Representative to Representative Meetings, Dr. Fort; Member of Branch Council, Dr. Murgatroyd; Committee, Drs. Young, Murgatroyd, Carson, and Godson; Honorary Secretary, Frank Radcliffe.

Whole-time Medical Officers.—The report on desirability of health officers being required to give their whole time to the work was considered, and it was resolved:

That medical officers of health should be debarred from engaging in private practice except in rural districts where the population is sparse.

Medical Certificates of Suitability for Hospital Treatment.—The report on the medical certification of suitability for hospital treatment was read, and it was resolved:

That a medical certificate of suitability for hospital treatment be required where practicable as a condition of hospital treatment, except in case of casualties.

Contributions to Hospitals by Employers and Employees.—The report on contributions to hospitals by employers of labour and employees was read, and it was decided to support a and to oppose b.

Fresh Medical Institutions.—The statement as to fresh public medical institutions was read and the printed motion therein approved.

Sanatoriums.—The statement as to sanatoriums for workers suffering from tuberculosis was read, and it was decided to support subclauses a, b, and c, and the resolution of the last Representative Meeting.

Representation of Local Profession on Hospital Boards.—The question of the representation of local medical profession on boards of hospitals was considered, and it was resolved:

That where the hospital staff consists of general practitioners who are ex officio members of the governing body of the hospital there is no necessity for further medical representation on that body.

METROPOLITAN COUNTIES BRANCH:

ST. PANCRAS AND ISLINGTON DIVISION.

A MEETING of this Division was held at the Midland Grand Hotel, King's Cross, on Tuesday evening, May 4th. J. F. J. SYKES, M.D., D.Sc., Medical Officer of Health for St. Pancras and Chairman of the Division, presided.

The Diagnosis of Gastric Disease.—Dr. LAURISTON SHAW, Physician to Guy's Hospital, opened a discussion on the diagnosis of gastric disease, and critically reviewed the methods of gastric examination. He was of opinion that a correct diagnosis was most likely to be arrived at after due consideration had been given to a carefully-sifted history combined with skilful physical examination, and after due weight had been given to such help as a chemical and bacteriological investigation might afford. He pointed out the great aid which in recent years had been derived from radiography, and gave particulars of the methods employed and quoted interesting instances. He pointed out the value of a distinctly visible gastric peristalsis as a sign of pyloric constriction, the value of succussion as a sign of atonicity of the muscular wall, rather than of simple increase in the size of the organ, and the fallacies of attempts to estimate the size of the stomach by mapping out the gastric resonance by percussion. He laid stress on the value of surgical operations in suitable cases and the indications which should guide physicians in advising operation. Dr. LARIN expressed the opinion that gastro-enterostomy did not always cure or even prevent the formation of a gastric ulcer, and quoted an instance which had come under his notice of the development of a gastric ulcer in a case in which some months

previously gastro-enterostomy had been successfully performed for perforating ulcer of the duodenum. Dr. SYKES, Dr. SAYER, Dr. WARD LAWSON, Dr. GUINN, and other members took part in the discussion, and gave instances of interesting gastric disease which had occurred in their practice. Dr. LAURISTON SHAW, in replying to the various points raised in the discussion, stated that in women profuse hæmatemesis did undoubtedly occur in the absence of gross lesions, and that Dr. Hale White had proposed for such a condition the name "gastrastaxis," that the prognosis of cancer of the stomach even after surgical removal was exceedingly bad, and concurred with the statement made by Dr. Goodhart many years ago that there was no prospect of cure in cases of cancer that were sufficiently advanced to be palpable through the abdominal wall. An early diagnosis of the condition was highly necessary, so that the surgeon could be called in at an early stage.

Vote of Thanks.—On the motion of Dr. SYKES, seconded by Dr. WALTER SMITH, a hearty vote of thanks was accorded to Dr. Lauriston Shaw for his interesting communication and for his strenuous services on behalf of the Association, especially in such matters as pertained to the interests of general practitioners.

NORTH OF ENGLAND BRANCH: HARTLEPOOL DIVISION.

REFERENCE is made in this week's issue of the JOURNAL to a case in which Dr. Morgan, of West Hartlepool, was made the object of an unwarrantable attack in the local press for not attending a street emergency when summoned to do so by the police, though he is not police surgeon and was not the doctor nearest at hand. The matter has been taken up by the West Hartlepool Division, which, at a largely attended meeting, held on April 29th, Dr. A. E. S. JACK (President) in the chair, unanimously passed the following resolutions:

1. That this meeting is of the opinion that the attack made upon Dr. Morgan in a newspaper called *John Bull* is unfair and founded upon ignorance of the practice obtaining in London and other cities, and of the fact that Dr. Morgan was not informed that the case he was asked to attend was of a serious nature, and also that he had no opportunity of attending the inquest to rebut the statements made there.
2. That it is no part of the duty of a district medical officer to attend persons injured by accident or suddenly taken ill in the streets.
3. That, having regard to the fact that the duty of controlling traffic and preserving order in the streets is thrown upon the police, the proper practice to be observed in cases of street accidents and emergencies is that obtaining in the metropolitan district, where the police call in a medical man and pay certain specified fees.
4. That it is regrettable that there should be any question of fee for medical attendance in street emergencies, but that, whilst medical men do frequently attend such cases without receiving any remuneration, they ought not to be expected to do so gratuitously as if it were a matter of duty.
5. That the British Medical Association be asked to approach the proper public authorities with a view to the practice in regard to the medical treatment of street accidents and emergencies being placed on a businesslike footing.

A report of the inquest in this case is contained in the *Northern Daily Mail* of April 2nd. The circumstances, as there stated, are briefly as follows:

Stephen Nossiter, aged 69, a naval reserve pensioner and retired captain of the mercantile marine, attended a football match, and was afterwards found lying on his face in the street. He was removed to a house near by, where he died shortly afterwards. It appeared that about a fortnight earlier he had had a fit.

A police sergeant stated in evidence that he was informed by a messenger and by telephone of the incident; the sergeant telephoned to Dr. Morgan, Poor Law medical officer, and Dr. Morgan asked who would be responsible for his fee; the sergeant replied that the police would not be responsible. Dr. Morgan thereupon refused to go. Immediately afterwards the sergeant received a telephone message that the man was dead.

Medical evidence given by Dr. Biggart was to the effect that the cause of death was apoplexy.

In summing up, the Coroner said that where the police themselves were responsible for the first offer of humanity, they would, he presumed, summon their own surgeon; but in this case they hardly had custody, and it seemed to him that in a case like this, where the man was not identified, the Poor Law was the department from which to expect to get prompt service. This raised the question whether the Poor Law medical officer stood in the same relation to the unknown and the poor as a private practitioner. It would probably be found that there was a certain amount of red tape which would excuse the medical officer of the Poor Law from acting unless he had orders given to him in a prescribed official form. The Coroner did not consider this satisfactory, and was glad to know that the Government had in view the overhauling of the Poor Law system.

The jury returned a verdict that the deceased died from apoplexy, and desired to express their disapproval of the conduct of the parish doctor in refusing to attend this urgent case unless granted a professional fee. The Coroner said that he understood the feeling which led to that expression of opinion, but at the same time was bound to say that the red tape arrangements of the Poor Law system were largely responsible.

We are informed that Dr. Morgan had previously been sent for by the police to attend to street emergencies, but that on sending in his account to the Superintendent of Police, the latter had returned it and repudiated liability: Dr. Morgan had then informed the Superintendent that he would in future refuse to go to any such cases.

SOUTH-EASTERN BRANCH: BRIGHTON DIVISION.

A MEETING of this Division was held at the dispensary on May 5th. Mr. R. P. JEFFERSON was in the chair, and twelve members were present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Vote of Thanks to Dr. Bushnell.—A resolution was carried unanimously conveying a cordial vote of thanks to Dr. F. G. Bushnell for his services as Representative at the Representative Meeting, and recording at the same time the Division's appreciation of the papers on pathology which he had read before meetings of the Division.

Paper.—Dr. W. A. HOLLIS read a paper on facial wrinkles and character expression. Dr. HELEN BOYLE alluded to the value of the wrinkles as an indication in cases of melancholia of the gravity of the case. Dr. MARSH pointed out how certain wrinkles were the result of certain occupations, and how they varied according to the temperament of the individual.

Resolutions Submitted to Annual Representative Meeting.—Two resolutions which had been submitted to the Annual Representative Meeting at Sheffield by the Hampstead and Wandsworth Divisions were then discussed. The following resolution was carried unanimously.

Representation of Local Profession on Boards of Management of Hospitals:

That this meeting approves of the principle of the medical profession being represented on the boards of management of hospitals and similar bodies.

Medical Certificates of Suitability for Hospital Treatment.—A report from the Hospitals and Medico-Political Committees was then considered. The following resolution was submitted to the meeting:

That a medical certificate of suitability for hospital treatment be required as a condition of hospital treatment except in the case of casualties.

This was carried, 4 voting in favour and 3 against.

Fresh Medical Institutions.—The following resolution was submitted to the meeting and approved of:

That it is desirable that no fresh public medical institution should be opened without previous consultation with the local medical profession through some organized body, such as the Division of the British Medical Association in the area of which it is proposed to establish such new institution, and that it be an instruction to the Council to give effect to this principle in considering applications from Divisions or Branches for support in dealing with hospital questions.

This concluded the business of the meeting.

DOVER DIVISION.

A MEETING of the Dover Division was held at the Grand Hotel, Dover, on May 7th, at 5 p.m. Dr. ROBINSON took the chair.

Apologies for Non-attendance.—Letters of apology were read from Dr. Parsons and Dr. Bert.

Confirmation of Minutes.—The minutes of the previous meeting were read and approved.

Proposed Division of the South-Eastern Branch.—The Brighton proposal for the division of the South-Eastern Branch was read and discussed, when Dr. Wood proposed that the proposal be negatived. Dr. ADAMSON seconded this, and the Division unanimously voted against the Brighton proposal.

Whole-time Medical Officers of Health.—Dr. Wood proposed:

That medical officers of health should be debarred from engaging in private practice.

Dr. STONE seconded this, and the Division carried it unanimously.

Medical Inspection of Children.—The question of the treatment of the children was discussed. Those children who were not under the Poor Law and whose parents could not afford to pay practitioners for the treatment were recommended to receive vouchers from the local education authority, which vouchers would entitle them to go to their own general practitioner for treatment. Cases requiring treatment by specialists could then be referred to such by their ordinary attendants. In this way probably 75 per cent. of the eye cases would be treated by the practitioner. The other 25 per cent. could be referred to the specialists. Dr. Wood proposed:

That this Division was opposed to any voluntary institution or hospital being subsidized by a local education authority.

Dr. ADAMSON seconded this. The Division passed it unanimously. This action was in line with that approved by the British Medical Association.

Chairman's Resignation.—Dr. Parsons resigned the post of chairman.

New Chairman and Vice-Chairman.—Dr. Wood proposed that Dr. Robinson, Medical Officer of Health for East Kent, should be voted by the Division to the post of Chairman. Dr. ADAMSON seconded this, which was carried. Dr. ROBINSON proposed that Dr. Wood should be voted Vice-Chairman, and Dr. OSBORN seconded this, which was carried.

SOUTH MIDLAND BRANCH:

BEDFORD AND HERTS DIVISION.

A MEETING of this Division was held on Thursday, May 6th, at the County Hospital, Bedford, at 3 p.m. Dr. G. F. DIXON was in the chair. There were present: Drs. Bennett, Best, Birks, Butters, Chillingworth, Cobb, Coombs, Gifford Nash, Leighton, Ross, and Stacey.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Medical Certificate of Suitability of Patients for Hospital Treatment.—After some discussion of this subject, it was proposed by Dr. CHILLINGWORTH and seconded by Dr. BUTTERS:

That a medical certificate of suitability for hospital treatment be required as a condition of hospital treatment except in the case of a casualty.

This, having been put to the meeting, was carried unanimously.

Contributions to Hospitals by Employers and Employees.—Dr. ROSS proposed, and Dr. BIRKS seconded, the following resolution:

That all contributions made by working men in support of hospitals should be considered as general contributions received from the public.

This was passed unanimously.

Fresh Public Medical Institutions.—After discussion of this matter, the following was proposed by Dr. BUTTERS and seconded by Mr. GIFFORD NASH:

That no support be given to the founding of a new public institution staffed by honorary medical officers except with the approval of the Division in which area the proposed new hospital is situated.

The resolution was put to the meeting and carried *nem. con.*

Sanatoriums for Workers Suffering from Tuberculosis.—Mr. W. GIFFORD NASH proposed:

That this Division approve of the statements (a), (b), and (c) in the report of the Joint Committee.

Dr. CHILLINGWORTH having seconded, this was put to the meeting and carried.

Departmental Committee re Midwives Act.—A letter from the Medical Secretary on this subject was read. Answers to the questions (a), (b), and (c) in the letter were given by the fact that, to the knowledge of the members present, no circulars had been sent by the boards of guardians, and question (d), that there is no other local authority. This concluded the business of the meeting, which therefore adjourned.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

ABERDEEN BRANCH.—*Election of Representative of the Branch on the Council of the Association.*—Nominations of candidates must be sent in writing on or before May 22nd to Dr. J. F. Christie, 7, Alford Place, Aberdeen.

BATH AND BRISTOL BRANCH: TROWBRIDGE DIVISION.—The annual meeting of this Division will be held at the Town Hall, Trowbridge, on Saturday, May 29th, at 3 p.m. Agenda: (1) To elect officers. (2) To receive financial statement. (3) To consider matters referred to Divisions: (a) Report on medical certification of suitability of patients for hospital treatment (see SUPPLEMENT to BRITISH MEDICAL JOURNAL, February 27th). (b) Report on contributions to hospitals by employers of labour and employees (see SUPPLEMENT to BRITISH MEDICAL JOURNAL, February 27th). (c) Statement as to fresh public medical institutions:—The Council, acting upon an instruction from the Annual Representative Meeting at Sheffield, refers the following motion for the consideration of the Divisions: "That it is desirable that no fresh public medical institution should be opened without previous consultation with the local medical profession through some organized body, such as the Division of the British Medical Association in the area of which it is proposed to establish such new institution, and that it be an instruction to the Council to give effect to this principle in considering applications from Divisions or Branches for support in dealing with hospital questions." The Council will be glad to receive from the Divisions their expressions of opinion on the subject. (d) Statement as to sanatoriums for workers suffering from tuberculosis. (4) To consider question of examination of recruits for the Territorial Forces. (5) To consider report on current work of Association.—JAMES PEARSE, M.D., Honorary Secretary.

BIRMINGHAM BRANCH.—*Election of Representatives of the Branch on the Council of the Association.*—Nomination of candidates must be sent in writing on or before May 19th next to Albert Lucas, F.R.C.S., Branch Secretary, 9, Easy Row, Birmingham. The Branch is entitled to elect two members.—ALBERT LUCAS, Honorary Secretary.

BIRMINGHAM BRANCH: CENTRAL DIVISION.—A special and general meeting of this Division will be held on May 19th at the Medical Institute, at 3.30 p.m. Business:—Special: Proposed new Divisional rule. General: Consideration of and instructions of Representative with regard to matters referred to Divisions.—W. TRACY LYDALL, Honorary Secretary.

BIRMINGHAM BRANCH: COVENTRY DIVISION.—The annual meeting of this Division will be held at the Coventry and Warwickshire Hospital on Tuesday, May 25th, at 8 p.m. Agenda: (1) To elect officers and Executive Committee for the year. These include Chairman, Vice-Chairman, Secretary, Representative on the Branch Council, and on the Committees of Management of the Public Medical Service, and the New Dispensary Service. (2) To receive the Report of the Executive Committee. (3) Matters referred to the Divisions: The representation of the local medical profession on Boards of Hospitals and similar bodies (SUPPLEMENT to the BRITISH MEDICAL JOURNAL, April 10th). (4) Recommendation from the Committee that the Division sanction the altering of custom of Division, so that the Chairman's address should be delivered at a meeting other than the October meeting, when the dinner is held. (5) To thank the Committee of the Coventry and Warwickshire Hospital for the continued use of their Board Room for the meetings of this Division.—JOHN ORTON, Honorary Secretary, Coventry.

BIRMINGHAM BRANCH: COVENTRY AND TAMWORTH AND NUNEATON DIVISIONS.—A combined meeting of the Tamworth and Nuneaton Division with the Coventry Division will be held at the Coventry and Warwickshire Hospital on Tuesday, May 25th, at 8 p.m., for the purpose of electing a Joint Representative to represent them at the Annual Representative Meeting, and to instruct him in regard to matters arising at that meeting.—JNO. ORTON, Secretary of the Constituency.

BORDER COUNTIES BRANCH.—The next meeting of this Branch will be held at the Lochmaben Convalescent Hospital for Infectious Diseases, Lochmaben, on Friday, May 21st. Opportunities will also be given to members to inspect the Lochmaben Sewage Works and the Loskerbie Sewage Works. The meeting will be preceded by a meeting of Council, at which the Council's nominees for office in the Branch for the ensuing

year will be chosen. Further details will be sent to each member by post, and will convey information as to trains, motors, etc. A good attendance is specially requested.—FRANCIS R. HILL, Honorary Secretary, Carlisle.

BORDER COUNTIES BRANCH: ENGLISH DIVISION.—The annual meeting of this Division will be held at the County Hotel, Carlisle, on Friday, May 21st, at 12.45, in order to allow members to attend the meeting of the Branch at Lockerbie.—NORMAN MACLEAREN, Honorary Secretary, 25, Portland Square, Carlisle.

BORDER COUNTIES AND NORTH LANCASHIRE AND SOUTH WESTLOND BRANCHES.—*Election of Representative Member of Central Council.*—Nominations, in accordance with the regulations of the Association, must be sent to me in writing on or before May 31st.—A. S. BAILEY, Queen Square, Lancaster.

BORDER COUNTIES BRANCH: SCOTTISH DIVISION.—The annual general meeting of this Division will be held on Friday, June 4th, at the Dumfries and Galloway Royal Infirmary, Dumfries, at 3 p.m.—GEORGE R. LIVINGSTON, Honorary Secretary.

DUNDEE, PERTH, AND STIRLING BRANCHES.—*Election of Representative Member of Central Council.*—Nominations, in accordance with the regulations of the Association, must be sent to me on or before Saturday, May 22nd.—R. C. BUIST, M.D., 166, Nethergate, Dundee, Returning Officer.

EAST ANGLIAN BRANCH.—The annual meeting of the Branch will be held at the Grand Hotel, Clacton-on-Sea, on Thursday, July 1st.—B. H. NICHOLSON, East Lodge, Colchester, Honorary Secretary.

EAST ANGLIAN BRANCH.—Nominations for the election of Representative Members of Central Council must be forwarded to me not later than June 1st next.—B. H. NICHOLSON, East Lodge, Colchester, Honorary Secretary.

EAST YORK AND NORTH LINCOLN AND CAMBRIDGE AND HUNTINGDON BRANCHES.—*Election of the Joint Representative on the Central Council of the Association.*—Nominations of candidates must be sent in writing, on or before May 29th next, to EDWARD TURTON, Branch Secretary, 1, Albion Street, Hull.

EAST YORK AND NORTH LINCOLN BRANCH: EAST YORK DIVISION.—The annual meeting of this Division will be held in the Board Room at the Hull Royal Infirmary, on Friday, May 21st, at 8.15 p.m. prompt. Agenda: (1) To read and, if approved, confirm the minutes of the last annual meeting. (2) To receive the annual report of the Executive Committee. (3) To receive the Treasurer's financial statement. (4) To elect Chairman, Vice-Chairman, and Honorary Secretary and Treasurer. (5) To elect six Representatives of the Division on the Branch Council (Dr. J. Mitchell Wilson, having served for five consecutive years, is ineligible for re-election, under Rule 8). (6) To elect two additional members of the Executive Committee. (7) Recommendation of the Executive Committee: That Rule 5, which reads, "The officers of the Division shall be a Chairman, Vice-Chairman, and Secretary who shall also act as Treasurer," shall be altered so as to include the ex-Chairman as an officer of the Division." (8) Mr. E. H. Howlett will give a Demonstration on Recent Advances in X-Ray Work, including Instantaneous and Stereoscopic Radiography. Should time permit, the following matters referred to Divisions by the Representative Meeting of various Branch Committees will be discussed: (9) Report on medical certification of suitability of patients for hospital treatment (see BRITISH MEDICAL JOURNAL SUPPLEMENT of February 27th, 1909). (10) Report on contributions to hospitals by employers of labour and employees (see BRITISH MEDICAL JOURNAL SUPPLEMENT of February 27th, 1909). (11) Statement as to fresh medical institutions. (12) Statement as to sanatoriums for workers suffering from tuberculosis. (13) Representatives of local medical societies on boards of hospitals and similar bodies (see BRITISH MEDICAL JOURNAL SUPPLEMENT, April 10th, 1909). (14) Report on desirability of health officers being required to give their whole time to the work (see BRITISH MEDICAL JOURNAL SUPPLEMENT, January 23rd, 1909). To transact any other business which can be discussed at annual meetings.—EDWARD TURTON, Honorary Secretary, Hull.

GLASGOW AND WEST OF SCOTLAND BRANCH.—*Election of Members of the Central Council.*—In accordance with Association By-laws 25, Branch Rule 5, nominations for Representatives on the Central Council, each signed by at least three electors, are requested to be sent to me on or before Wednesday, May 26th. The Branch is entitled to return two Representatives. The present Representatives, Mr. James Grant Andrew and Dr. D. J. Mackintosh, M.V.O., are eligible, and seek re-election.—Wm. D. MACFARLANE, Jun., 17, Woodside Crescent, Honorary Secretary.

GLoucestershire BRANCH.—The annual meeting of the Branch will be held at the General Hospital, Cheltenham, on Thursday, May 20th, at 8 p.m. Agenda: (1) Election of officers and ordinary members of the Branch Council. (2) To receive

the annual report of the Branch Council. (3) To consider the business of the Annual Representative Meeting. Any member having any matter which he would like brought by the Branch Representative before the Annual Representative Meeting of the Association is requested to immediately send the Secretary notice of same for discussion at the annual meeting of the Branch. (4) To make new rules, or alter or repeal existing rules. Any member desiring any alteration, etc., of rules, if new rule made, is requested to send immediate notice of same to the Secretary. (5) Dr. O. H. Fowler, of Cirencester, will read a paper "Thoughts in view of the practical experience of the last thirty-seven years, during which period the Association has enjoyed great financial prosperity, it has been proved that, in the best interests of the British Medical Association, it is essential to have an official with the rank and status of 'General Secretary and Manager'; and that such official should possess special business training. Further, that having regard to the highly satisfactory manner in which Mr. Guy Elliston has discharged the duties since his appointment in 1902, it is in the interests of the Association that his services should be retained as 'General Secretary and Manager'; and that the Representative of the Gloucestershire Division to the Representative Meeting at Belfast be instructed accordingly." (6) Address by Dr. W. Aldren Turner, of London, on "Fenolic Conditions allied to Epilepsy." There will be a dinner at 8 p.m. at the Oriental Café, High Street, Cheltenham. Tickets 5s. each (inclusive of wine). Those intending to remain for the dinner are requested to intimate their intention to Dr. Munro not later than Tuesday, May 18th.—D. E. FINLAY, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—The Branch Ethical Committee will meet at 4.30 p.m. on Wednesday, May 19th, at Onwards Buildings, 207, Deansgate, Manchester.—F. C. LARKIN, Branch Secretary, Liverpool.

LANCASHIRE AND CHESHIRE BRANCH.—The annual meeting of the Branch will be held at Chester on Wednesday, June 16th.—F. CHARLES LARKIN, Branch Secretary.

LANCASHIRE AND CHESHIRE BRANCH: LEIGH DIVISION.—The annual meeting of this Division will be held on Thursday, May 20th, at the Club and Restaurant, Ellesmere Street, at 8.30 p.m. Agenda: (1) Minutes. (2) Secretary's report. (3) Election of officers. (4) Cycle run. (5) Other matters.—G. H. SHAW, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: ST. HELENS DIVISION.—A meeting of this Division will be held on Wednesday, May 19th, at 8.45 p.m., in the Fleeces Hotel, St. Helens. Business: Annual Meeting, Central Council election.—JOHN J. BUCHAN, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH.—*Nominations of Branch Officers.*—Pursuant to By-law 25, notice is hereby given that nominations for all the officers of the Branch—namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association—must be sent in to the Honorary Secretary of the Branch on or before May 29th. Voting papers will be sent out on or before June 5th, and must be returned to the Secretary on or before June 12th.—ATWOOD THORNE, E. W. GOODALL, Honorary Secretaries.

MIDLAND BRANCH.—The annual meeting of this Branch will be held at the Leicester Infirmary on Thursday, June 10th. (1) The President-elect, Dr. R. Pratt, will give an address. (2) Election of Branch officers. (3) Annual report of the Branch. (4) Any other business. In accordance with the by-laws, notice is hereby given that nominations for the election of two Representatives of this Branch on the Central Council must be sent to the Honorary Secretary of the Branch not later than May 24th.—ROBERT SEVASTRE, Honorary Secretary, London Road, Leicester.

MIDLAND BRANCH: LEICESTER AND RUTLAND DIVISION.—The annual meeting of the Division will be held on Wednesday, May 26th, at the Leicester Infirmary, at 4.15 p.m. Agenda: Minutes of previous meeting; election of Representatives of the Division on the Branch Council, and of officers and members of the Executive Committee of the Division; election of Representative of the Division at Representative Meetings; annual report of the Executive Committee; any other business.—WILFRED E. GIBBONS, Honorary Secretary, Leicester.

MIDLAND BRANCH: LINCOLN DIVISION.—The annual meeting of this Division will be held in the Guildhall, Lincoln, on Thursday, May 20th, at 3.30 p.m. Agenda: (a) To elect a Vice-President of the Midland Branch. (b) To elect officers of the Branch Council, and the ordinary members of the Executive Committee. (c) To elect the Representative in Representative Meetings of the Association. (d) To consider the advisability or otherwise of the earlier appointment of the Representative in Representative Meetings. (e) To deal with certain matters referred by the Hospitals and Medico-Political Committees to the Divisions—namely:

(1) Report on medical certification of suitability of patients for hospital treatment; (2) report on contributions to hospitals by employers of labour and employees; (3) statement as to fresh medical institutions; (4) statement as to sanatoriums for workers suffering from tuberculosis. (f) To answer certain questions relating to the medical inspection of school children and the treatment of those found defective. (g) To reply to the question: Should health officers give their whole time to the work? (see SUPPLEMENT TO BRITISH MEDICAL JOURNAL, January 23rd). (h) Other business. Members desiring to read papers or show cases or specimens are asked to communicate with the Honorary Secretary.—J. S. CHATER, Honorary Secretary, 10, Steep Hill, Lincoln.

NORTH OF ENGLAND BRANCH.—Nominations for the election of members of the Central Council must be sent in to me on or before May 31st.—DAVID F. TODD, Honorary Secretary, Beech House, Sunderland.

NORTH OF ENGLAND BRANCH.—A meeting of the Branch will be held at Cornhill Hotel, Redcar, on Tuesday, May 18th, at 12.30 p.m. The following arrangements have been made: The Branch Council meet at 12.30 p.m. Lunch 1 p.m. 1.45 p.m., business meeting. (1) Ambulance classes and scale of charges. (2) Position of medical practitioners and emergency cases. (3) State registration of nurses.—DAVID F. TODD, Honorary Secretary.

NORTH WALES BRANCH.—Nominations for the election of a Representative on the Central Council and for other officers of the Branch for the next year, in accordance with By-law 25, must be sent to the Honorary Secretary on or before June 1st.—H. JONES ROBERTS, Honorary Secretary, Llywenarth, Pen-y-groes.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—Election of Representative of the Branch on the Central Council of the Association.—Nominations of candidates for election to the Central Council must be forwarded to the Honorary Secretary on or before May 29th.—J. MUNRO MOIR, M.D., 4, Adross Terrace, Inverness, Honorary Secretary.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—The annual meeting of the Branch will be held at Elgin on Saturday, June 5th. Further particulars as to hour and place of meeting will be communicated to each member by circular.—J. MUNRO MOIR, M.D., Honorary Secretary, 4, Adross Terrace, Inverness.

SOUTH-EASTERN BRANCH.—The annual meeting of this Branch will be held at Croydon on Wednesday, June 23rd, Dr. J. J. Macan, President-elect, in the chair. The following will be the agenda:—(1) To elect the officers of the Branch; nominations by three members for the offices of President-elect, Vice-Presidents, and Secretary, may be sent to the Honorary Secretary on or before May 21st. (2) To receive the annual report of the Branch. (3) To transact any business that may be transacted by an ordinary meeting. Three members to represent the Branch on the Central Council will also be elected by voting papers. Nominations for these posts, each by three members in meeting, should be sent to the Honorary Secretary on or before May 21st.—H. M. STEWART, Honorary Secretary, Dulwich.

SOUTH-EASTERN BRANCH: GUILDFORD DIVISION.—The annual meeting of the Division will be held at the Royal Surrey County Hospital on Wednesday, May 26th, at 4.30 p.m. Agenda: (1) Minutes. (2) Election of officers and members of the Executive Committee for the ensuing year. (3) Annual report of the Division. (4) To consider the following proposal of the Brighton Division: "That the South-Eastern Branch be divided into the smaller Branches, one to consist of that part of Kent which is already in the South-Eastern Branch, and the other of the county of Sussex and so much of the county of Surrey as is already part of the Branch." (5) Matters referred to Divisions: (a) Medical inspection and treatment of school children. (b) Whole-time appointments for medical officers of health. (c) Reports from Hospitals and Medico-Political Committees (see SUPPLEMENT TO BRITISH MEDICAL JOURNAL, February 27th). (d) Representation of local medical profession on boards of hospitals and similar bodies (see SUPPLEMENT TO BRITISH MEDICAL JOURNAL, April 10th). (e) Dr. B. H. Kingsford will read notes of a case of intestinal obstruction due to an impacted gall stone, and will exhibit specimen. (f) Mr. E. J. Smyth will introduce a discussion on Ophthalmia Neonatorum, with special reference to the Report of the Committee of the Association on the subject, referred to the Divisions for their consideration (see SUPPLEMENT TO BRITISH MEDICAL JOURNAL, May 8th). (g) Any other business. Tea will be provided at 4.15 p.m. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends. The Honorary Secretary will be glad to receive nominations for any of the above offices, and to hear from any other members willing to show cases or specimens.—E. J. SMYTH, Honorary Secretary and Treasurer, Maythorne, Epson Road, Guildford.

SOUTH MIDLAND BRANCH.—In accordance with By-law 25, notice is hereby given that nominations for the election of a Representative of this Branch on the Central Council must be

sent to me not later than May 22nd next.—E. HARRIES-JONES, 16, Castilian Street, Northampton.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—Election of Two Representatives on the Central Council of the Association.—In accordance with By-law 25 of the Association, nomination of candidates must be sent to me in writing on or before Saturday, May 22nd next.—ALFRED HANSON, Swansea, Honorary Secretary, South Wales and Monmouthshire Branch.

SOUTH-WESTERN BRANCH.—Election to Central Council.—This Branch is entitled to return two members. Nominations should be sent to the undersigned so as to reach him not later than May 24th.—RUSSELL COOMBE, Branch Secretary, 5, Barnfield Crescent, Exeter.

STAFFORDSHIRE AND SHROPSHIRE AND MID-WALES BRANCHES.—Nominations for the office of Representative on the Central Council of the Association should be sent to the undersigned on or before Saturday, May 15th, in accordance with By-law 25.—G. PETERGAVE JOHNSON, Honorary Secretary, Staffordshire Branch, Brook Street, Stoke-on-Trent; C. G. RUSS WOOD, Honorary Secretary, Shropshire and Mid-Wales Branch, Shrewsbury.

ULSTER BRANCH.—Nominations for the offices of President, Treasurer, and Secretary, each signed by two members, should be sent not later than June 2nd to CECIL SHAW, M.D., Honorary Secretary, 29, University Square, Belfast.

ULSTER AND CONNAUGHT BRANCHES.—Two members to represent the combined Branches on the Central Council will be elected next month. Nominations, signed by three members, should be sent to me not later than June 2nd.—CECIL SHAW, M.D., Honorary Secretary Ulster Branch, 29, University Square, Belfast.

LANCASHIRE AND CHESHIRE BRANCH.

NOMINATIONS FOR CENTRAL COUNCIL.

The following nominations have been received for the Central Council Election:

BRADSHAW, THOMAS ROBERT, 51, Rodney Street, Liverpool.

Nominated by: The Liverpool (Western) Division; and by A. T. H. Waters (Vice-President), Sir James Barr, J. E. O'Sullivan, J. Hill Abram, W. Thelwall Thomas, T. R. W. Armour, John Owen, G. L. Cox, Ernest Glynn, C. S. Sherrington, H. E. Roaf, A. M. Bligh, W. C. Anderson, S. W. Davies, H. Buxton, T. W. N. Barlow, Damer Harrison, C. J. Macalister, T. R. Glynn, A. N. Walker, W. Williams, R. C. Dun, G. P. Newbolt, D. Douglas Crawford, C. Thurstan Holland, Edgar A. Browne, E. Stevenson, T. B. Grimdale, F. T. Paul, W. Permewan, N. Percy Marsh, K. W. Monsarrat, J. E. Gemmell, H. Leslie-Roberts, W. T. Prout, T. H. Bickerton, J. J. O'Hagan, R. Caton, Alex. Skokes, R. E. Kelly, John Hay, W. Blair Bell, R. A. Bickersteth, F. A. Jeans, W. E. Livesey, T. Marshall Scott, T. Snowball, H. Edmondson, R. Craig Rodgers, J. H. Watson, Nathan Raw, L. A. Morgan, F. S. Heaney, Rushton Parker, W. Fingland, W. S. Henderson.

GARSTANG, THOMAS WALTER HARROP, Altrincham.

Nominated by: The Altrincham Division; the Ashton-under-Lyne Division; the Blackburn Division; the Bolton Division; the Burnley Division; the Bury Division; the Leigh Division; the Liverpool (Booth) Division; the Liverpool (Western) Division; the Manchester (North) Division; the Manchester (Salford) Division; the Manchester (South) Division; the Preston Division; the Rochdale Division; the Wigan Division; and by 11 members of the Warrington Division.

LARKIN, FREDERIC CHARLES, Liverpool.

Nominated by: The Altrincham Division; the Ashton-under-Lyne Division; the Blackburn Division; the Bolton Division; the Burnley Division; the Liverpool (Booth) Division; the Liverpool (Western) Division; the Manchester (North) Division; the Manchester (Salford) Division; the Manchester (South) Division; the Preston Division; the Wigan Division; and by 11 members of the Warrington Division.

MACFIE, CHARLES, Bolton.

Nominated by: The Altrincham Division; the Ashton-under-Lyne Division; the Blackburn Division; the Bolton Division; the Burnley Division; the Liverpool (Booth) Division; the Liverpool (Western) Division; the Manchester (Salford) Division; the Manchester (South) Division; the Manchester (North) Division; the Preston Division.

TAYLOR, JAMES HENRY, Salford.

Nominated by: The Altrincham Division; the Ashton-under-Lyne Division; the Blackburn Division; the Bolton Division; the Liverpool (Booth) Division; the Liverpool

(Western) Division; the Manchester (North) Division; the Manchester (Salford) Division; the Manchester (South) Division; the Preston Division; and by Sir Wm. J. Sinclair, Professor R. B. Wild, Professor Graham Steel, W. T. O'Grady, Percy McDougall, G. H. Grant, Davie, C. S. Redmond, W. G. Booth, N. C. Haring, S. English, F. H. Worswick, L. E. Scanlon, J. W. Hamill, R. H. Wolstenholme, W. B. Bell, H. S. Brightmore, G. W. Beesley, C. L. Skinner, J. P., Allan Whitfield, W. Chris. Brown, J. Gray, J. A. Falarque, W. Sawers Scott, W. P. Stocks, J. J. Berry, H. K. Birley, J. A. Caplan, J. W. C. Herbert, E. Wilson, D. Owen, H. H. Phipps, E. T. Scowley, J. P. Williams, J. S. Frowse, F. Farrow, F. A. Morrison.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

STAFF SURGEON N. IRELAND-SMITH has been placed on the retired list, March 23rd. He was appointed Surgeon, May 16th, 1894, and made Staff Surgeon, May 16th, 1902.

Fleet Surgeon JOHN JENNINGS has been placed on the retired list at his own request, May 7th. Appointed Surgeon, February 16th, 1885, he became Fleet Surgeon, February 16th, 1901.

The following appointments have been made at the Admiralty: Fleet Surgeon, E. MARSHALL, to the *Adriatic*, on recommissioning, May 11th; Staff Surgeon J. D. S. MILLER, M.B., to the *Findlay*, on recommissioning, May 18th; Surgeon W. G. M. ANDERSON, M.B., to the *Scylla*, on recommissioning, May 18th.

ROYAL ARMY MEDICAL CORPS.

The following Captains are promoted to be Majors, dated April 28th: M. D. MCANULTY, M.B., J. POE, M.B., H. G. F. STALLARD, and E. BRODRIBB. Their previous commissions are dated: Surgeon-Lieutenant, July 28th, 1897; Captain, July 28th, 1900. Major M. Carthy took part in the Nile expedition in 1898, receiving the British and Egyptian medals. Major Stallard also served with the Nile expedition in 1898, receiving the British and Egyptian medals; he was also in the operations resulting in the final defeat of the Khalifa in 1899, when he had medical charge of a flying column; he was mentioned in despatches, received a medal with two clasps, and granted the fourth class of the order of the Medjidie.

Promotion to the Rank of Major.

It is notified that it is not the intention that Army Order No. 71 (8) of 1909 should act retrospectively. A Captain of the Royal Army Medical Corps who, prior to July 1st, 1909, is fully qualified for promotion to the rank of Major will not be acted by this Army Order, that is, he will still be considered fully qualified for promotion after that date, irrespective of whether he has passed in subhead (d) (ii) or not, if, however, his discharge is full, and he has not been promoted to the rank of Major at that subhead before promotion to Lieutenant-Colonel, vide para. (9) of the above-quoted Army Order.

Special Reserve.

The following Lieutenants are confirmed in that rank: J. N. McLAUGHLIN, R. T. C. ROBERTSON, M.B., and J. G. McCUTCHEON, M.B.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL C. P. LUKIS, M.D., Bengal, Principal of the Medical College, Calcutta, has been selected to succeed Sir Gerald Bonford, K.C.L.E., M.D., as Director-General, Indian Medical Service, who proceeded home on May 1st, preparatory to retirement. Colonel Lukis entered the Bengal Medical Department as Surgeon, March 31st, 1880, and became Lieutenant-Colonel, July 12th, 1905. He served with the Mahomedan Warforce expedition in 1881, and with the Zhoi Valley expedition in 1884.

The following officers are promoted to be Lieutenant-Colonels from March 30th—F. R. OZZARD, A. R. S. ANDERSON, M.B., J. T. CALVERT, M.B., W. S. F. RICHARDS, M.B., C. N. MOORE, M.D., E. JENNINGS, A. G. HENDLEY, G. W. JENNET, M.B., and C. T. HEPSON. Their previous commissions, which were simultaneous, are thus dated: Surgeon-Captain, March 30th, 1889; Major, March 30th, 1901. Their records are as follows: Lieutenant-Colonel Ozzard—The two Miranjan expeditions in 1881 (medal with clasp), and the campaign on the North-West Frontier of India in 1897-8 (medal with clasp). Lieutenant-Colonel Calvert—Madagascar expedition, 1891 (medal with clasp); Tirah expedition, 1897-8 (medal with clasp). Lieutenant-Colonel Moore—Campaign on the North-West Frontier of India, 1897-8 (medal with clasp); Tirah expedition, 1897-8 (medal with clasp); China war, 1900 (medal). Lieutenant-Colonel Hendley—Campaign on the North-West Frontier of India, 1897-8 (medal with clasp). Lieutenant-Colonel Hudson—Campaign on the North-West Frontier of India, 1897-8, including operations on the Samana, the action in the Uduan Pass, and with the Tirah Expeditionary Force (medal with three clasps).

Major C. H. L. PALE, M.B., Madras, is permitted to retire from the service, from May 1st. He joined the Madras Medical Department as Surgeon-Captain, July 28th, 1891, and was made Major, July 28th, 1894.

Lieutenant V. B. GREEN-ARMYtage is appointed Specialist in Midwifery and Diseases of Women and Children, Eighth (Lucknow) Division, from February 21st.

TERRITORIAL FORCE.

ROYAL FIELD ARTILLERY.

SURGEON-CAPTAIN A. W. CUFF, M.B., from the 4th West Riding of Yorkshire Royal Garrison Artillery (Volunteers), to be Surgeon-Captain, 3rd West Riding Brigade, with precedence as in the Volunteer Force, April 1st, 1908.

INFANTRY.

Surgeon-Lieutenant D. M. ALEXANDER, 10th (Scottish) Battalion, the King's (Liverpool) Regiment, resigns his commission, March 11th.

ROYAL ARMY MEDICAL CORPS.

North Midland Mounted Brigade Field Ambulance.—ARTHUR C. GOODWIN, M.B., F.R.C.S. Eng., to be Lieutenant, February 22nd, 1909.

Third Northern General Hospital.—Surgeon-Captain A. M. CONNELL, F.R.C.S. Edin., from the 4th West Riding of Yorkshire Royal Garrison Artillery (Volunteers), to be Major, April 1st, 1908. JOHN

S. WHITE, M.D., F.R.C.S. Eng., to be Lieutenant-Colonel, March 5th, 1909.

London Mounted Brigade Field Ambulance.—The appointment of HENRY ROBINSON, M.D., to a Lieutenancy bears date April 1st, 1908, and not March 5th, 1909, as stated in the *London Gazette* of March 28th.

Third West Lancashire Field Ambulance.—RICHARD COFFEY to be Lieutenant, January 11th.

Fifth London Field Ambulance.—SIDNEY F. ST. J. STEADMAN to be Lieutenant, February 1st.

Second Welsh Field Ambulance.—Major A. W. SHEEN to be Lieutenant-Colonel, February 1st.

First London (City of London) General Hospital.—Major W. P. HEALINGHAM, M.D., is seconded for service with the London University Continent, Senior Division, Officers' Training Corps, February 20th.

Second Western General Hospital.—The following announcement is submitted for that relating to Major W. THORNBURN, which appeared in the *London Gazette* of April 27th: Major W. THORNBURN, M.D., F.R.C.S. Eng., to be Lieutenant-Colonel and to be an officer whose services will be available on mobilization, February 28th.

For attachment to Units other than Medical Units.—GERALD S. HUGHES, M.B., F.R.C.S. Eng., to be Lieutenant, December 2nd, 1908. FRANCIS L. A. GREAVES, F.R.C.S. Eng., to be Lieutenant, February 17th, 1909. THOMAS H. U. DERHAM to be Lieutenant, January 1st. THOMAS BROWN, M.B., to be Lieutenant, April 3rd.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,595 births and 4,462 deaths were registered during the week ending Saturday last, May 8th. The annual rate of mortality in these towns, which had been 17.1, 15.8, and 14.5 per 1,000 in the three preceding weeks, further declined last week to 14.1 per 1,000. The rates in the several towns ranged from 6.5 in Hornsey, 6.9 in Reading, 7.2 in Willesden, 8.0 in Rotherham, 8.2 in Handsworth (Staffs), 8.7 in East Ham, and 8.9 in King's Norton to 19.2 in Rochdale, 19.3 in Manchester and in Oldham, 19.5 in Roorle, 20.6 in Stockport, 20.8 in St. Helens, 21.2 in Hanley, and 22.4 in Wolverhampton. In London the rate of mortality was 14.1 per 1,000, being one-tenth below the mean rate in the seventy-six towns. The death-rate from the principal infectious diseases in these towns averaged 1.6 per 1,000; in London the death-rate from these diseases was 1.6, while among the seven towns in which other diseases were registered upwards to 3.5 in Swansea, 3.6 in Warrington, 3.7 in Salford, 4.4 in St. Helens, 4.5 in Middlesbrough, and 5.2 in Wigan. Measles caused a death-rate of 1.9 in Salford, 2.0 in Wolverhampton and in Stockport-on-Tees, 2.2 in St. Helens and in Warrington, and 4.6 in Wigan; scarlet fever of 1.1 in St. Helens, 1.9 in Tyne-mouth, 2.1 in Swansea, and 3.5 in Middlesbrough. The mortality from enteric fever and from diarrhoea showed no marked excess in any of the large towns and no fatal case of small-pox was registered during the week. The number of scarlet-fever patients remaining under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,236, 2,219, and 2,181 at the end of the three preceding weeks, had further fallen to 2,175 at the end of last week: 309 new cases were admitted during the week, against 244, 255, and 305 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, May 8th, 991 births and 577 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 18.4, 17.4, and 16.9 per 1,000 in the three preceding weeks, further declined last week to 16.2, being one-tenth above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 12.5 in Paisley and 13.0 in Greenock to 19.4 in Dundee and 20.6 in Perth. The death-rate from the principal infectious diseases in these towns averaged 2.2 per 1,000, the highest rates being recorded in Paisley and Perth. The 273 deaths registered in Glasgow included 6 which were referred to scarlet fever, 26 to whooping-cough, 2 to cerebro-spinal meningitis, and 8 to diarrhoea. Eight fatal cases of whooping-cough and 2 of diarrhoea were recorded in Edinburgh: 2 of measles, 4 of whooping-cough, and 3 of diarrhoea in Aberdeen; and 5 of measles in Paisley.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, May 8th, 724 births and 401 deaths were registered in twenty-two principal districts of Ireland as against 612 births and 452 deaths in the preceding period. The annual death-rate in these districts, which had been 26.5, 23.9, and 20.6 per 1,000 in the three preceding weeks, fell to 18.3 per 1,000 in the week under notice, the rate being 4.2 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 18.8 and 18.3 respectively, those in other districts ranging from 3.9 in Galway to 1.8 in Sligo to 35.4 in Lisburn and 39.3 in Kilkenny, while Cork stood at 19.2. Londonderry at 14.5, Limerick at 12.3, and Waterford at 29.2. The zymotic death-rate in the twenty-two districts averaged 1.0 per 1,000 as against 1.4 per 1,000 in the preceding period.

Hospitals and Asylums.

A SURGICAL HOME.

THE eighth annual report of the Salop Convalescent Home at Baschurch is interesting if only because it contains a statement that it began as an ordinary convalescent home in 1900, and has gradually, by force of circumstances, been developed into a surgical home and hospital for children suffering from tuberculosis of limbs, spine, etc., and from rickets, congenital deformities, flat foot, etc. There are still eight beds in the house used for convales-

cent cases able to walk, and nine consumptive beds in the field. "The exceptional success," the report continues, "which has attended the operations here, with after-treatment in the open air, leads us to think that our most useful future work lies in this direction, and that it would be wise to eliminate gradually the cases of phthisis, and use the accommodation now provided for them for adult surgical tuberculous cases." From a list of the diseases treated, it appears that about one-fourth of the patients were suffering from tuberculous diseases other than phthisis. With regard to the management of such an institution, Mrs. Rowland Hunt, sen., one of the honorary secretaries, writes to us as follows:

Fresh-air treatment requires, to make it beneficial, two expensive things—very good food and unusual warmth. The diet must be rich and varied, with plenty of milk, eggs, and sweets, especially for children. Tea, coffee, or cocoa must be served hot, and every pains taken to induce patients to eat. Woolen vests, jerseys, and flannel nightgowns are an absolute necessity, and plenty of hot bottles. To rest patients in bed, or to take out the windows of hospital wards and leave them with ordinary nonconductive hospital food and ordinary thin clothing is cruel and dangerous. The open-air system is on its trial, and I believe in it so fully that I am extremely anxious it should have fair play. The arrangements here are most primitive: the patients live and sleep in cowsheds facing south. When the blizzard came from the south at the end of December last and blew the snow on to the beds, not a patient (they are mostly children) suffered. The only effect was to make them unusually hungry. Tin bedwarmers kept hot longer than stone or iron-rubbers.

The surgeon to the home is Mr. Robert Jones, of Liverpool, and the medical officer is Dr. R. Urwick, of Shrewsbury.

BARNWOOD HOUSE HOSPITAL FOR THE INSANE, GLOUCESTER.

DR. J. G. SOUTAR, the medical superintendent of this well-known private asylum, in his annual report for the year 1908, shows that on January 1st, 1908, there were 148 certified patients under care and that on the last day of the year there remained 147. The total cases under treatment during the year numbered 179, and the average number resident 152. During the year 31 certified patients were admitted, of whom 23 were direct admissions, 5 transfers, and 3 statutory readmissions. As regards duration of disorder on admission, in 9 the attacks were first attacks within three and in 2 more within twelve months of admission; in 7 not-first attacks within twelve months, and in the remainder the attacks, whether first attacks or not, were of more than twelve months' duration. The admissions were classified according to the forms of mental disorder into: Mania of all kinds, 13; recent and chronic melancholia, 11; secondary dementia, 1; delusional insanity, 2; and general paralysis, 1. With regard to the probable etiological factors, a neurotic family history was ascertained in 35.4 per cent. of the total admissions, and alcohol was assigned in only one case. Otherwise the usual table dealing with this matter does not call for comment. During the year 11 were discharged as recovered, giving a recovery-rate on the direct admissions of 47.8 per cent. or of recoveries in the direct admissions on the direct admissions of 43.4 per cent. There were also 3 discharged as relieved and 11 as not improved. Also 7 deaths occurred among the certified patients, giving a death-rate on the average numbers resident of only 4.6 per cent. All deaths were due to natural causes, the average age at death was 50 years, and the average duration in the hospital was six and a half years. The general health was good throughout the year except for an epidemic of influenza. The hospital maintains the prosperous financial condition in which it has been for years, and though the charitable work was not quite so large during 1908 as in the previous year, 61 patients were maintained below the average rate at a cost to the institution of £3,052 15s. 6d.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

ABERTILLY URBAN DISTRICT COUNCIL.—Medical Officer of Health. Salary, £350 per annum, increasing to £400.
BETNAL GREEN INFIRMARY.—Assistant Medical Officer. Salary at the rate of £100 per annum.
BIREYHEAD UNION.—Male Resident Assistant Medical Officer for the Infirmary and Sanatorium. Salary, £120 per annum.
BIRMINGHAM: GENERAL HOSPITAL.—Assistant House-Surgeon. Salary at the rate of £40 per annum.
BRIGHTON, HOVE, AND PRESTON DISPENSARY.—House-Surgeon. Salary, £150 per annum.
BRISTOL EYE HOSPITAL.—House-Surgeon. Salary, £80 per annum.
BRITISH LYING-IN HOSPITAL, Endell Street, W.C.—Resident Medical Officer. Salary at the rate of £50 per annum, increasing to £55.
DURY INFIRMARY.—Junior House-Surgeon. Salary, £80 per annum, increasing to £90.
DUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Surgeon. Salary at the rate of £70 per annum.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—(1) House-Surgeon; (2) Assistant House-Surgeon. Salary, £80 and £50 per annum respectively.
CAPE COLONY: FRERE HOSPITAL, East London.—Resident Medical Officer. Salary, £300 per annum, rising to £350.
CATERHAM ASYLUM.—Third Assistant Medical Officer (male). Salary, £150 per annum, rising to £170.
CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House-Surgeon. Salary, £50 per annum.
CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Clinical Assistant.
DUDLEY: GUEST HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum.
EARLSWOOD ASYLUM, Redhill.—Junior Assistant Medical Officer. Salary, £130 per annum, rising to £150.
EVELING HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road, S.E.—House-Physician. Salary at the rate of £50 per annum.
EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Male Assistant House-Surgeon. Salary, £60 per annum.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brighton.—Resident House-Physicians, Honorarium, £25 each for six months.
HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Surgeon. Salary, £50 for six months and £210s. weekly allowance.
KING EDWARD VII SANATORIUM, Midhurst.—Senior Assistant Medical Officer. Salary, £150 per annum.
LIVERPOOL EDUCATION COMMITTEE.—School Medical Officer. Salary, £250 per annum.
LONDON COUNTY ASYLUM, Colney Hatch, N.—Junior Assistant Medical Officer. Salary, £160 per annum.
LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN, Hunter Street, W.C.—Demonstrator in Anatomy and Curator of the School Museum.
LONDON THROAT HOSPITAL, Great Portland Street, W.—Assistant Anaesthetist.
MANCHESTER: ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN.—Third and Fourth House-Surgeons, Honorarium, each, £5 for six months.
MANCHESTER ROYAL INFIRMARY.—Surgical Registrar. Salary, £80 per annum.
MOUNT VERNON HOSPITAL FOR CONSUMPTION, Hempstead.—Junior Resident Medical Officer. Honorarium, £50 per annum.
NOTTINGHAM GENERAL HOSPITAL.—Locumtenent for three and a half months. Salary, £45.
OLDHAM INFIRMARY.—Senior House-Surgeon (male). Salary, £100 per annum.
PADDINGTON INFIRMARY.—Second Assistant to the Medical Superintendent to the Infirmary and Medical Officer of the Workhouse. Salary at the rate of £100 per annum.
POOLE: CORNELIA HOSPITAL.—(1) Ophthalmic Surgeon, (2) Assistant Medical Officer to Out-patients, (3) Anaesthetist.
PORTSMOUTH PARISH.—Second Assistant Resident Medical Officer for the Workhouse, Workhouse Infirmary, and Children's Home. Salary, £100 per annum.
RAINHILL: COUNTY ASYLUM.—Assistant Medical Officer to act as Locumtenent. Salary, £4 4s. per week.
ROYAL PIMLICO DISPENSARY, Buckingham Palace Road, S.W.—Resident Medical Officer and Secretary. Salary, £100 per annum.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, W.C.—Clinical Assistant.
ST. ANDREWS UNIVERSITY.—Additional Examiners in Faculty of Medicine, Faculty of Science and Medicine, Pathology, Physiology.
ST. GEORGE'S UNION INFIRMARY, S.W.—Second Assistant Medical Officer. Remuneration, £20 per annum.
SHEFFIELD CHILDREN'S HOSPITAL, EAST END BRANCH.—House-Surgeon. Salary, £70 per annum.
SHEFFIELD EDUCATION COMMITTEE.—Assistant Medical Officer. Salary, £250 per annum, increasing to £300.
SHEFFIELD ROYAL INFIRMARY.—Honorary Ophthalmic Surgeon.
TUNBRIDGE WELLS GENERAL HOSPITAL.—Junior Resident Medical Officer. Salary, £80 per annum.
WALSALL AND DISTRICT HOSPITAL.—(1) House-Surgeon, (2) Junior House-Surgeon. Salary, £100 and £80 per annum respectively.
WARRINGTON INFIRMARY AND DISPENSARY.—(1) Senior House-Surgeon, (2) Junior House-Surgeon. Salary, £120 and £100 per annum respectively.
WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician for six months.
WESTERN AUSTRALIA STATE.—Medical Officer to the Central Board of Health. Salary, £400 per annum.
WILTS COUNTY COUNCIL.—Senior and Junior School Medical Officers. Salary, £400 and £250 per annum respectively.
WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Resident Medical Officer, (2) Two House-Surgeons. Salary for (1) £100 per annum, and for (2) £80 per annum.

APPOINTMENTS.

ADAMS, C. E., M.B. Lond., Certifying Factory Surgeon for the Loughborough District, Co. Leic.
DOUGHEY, W. C., L.R.C.P. and S. Edin., District Medical Officer of the Tottenham Union.
DOWDALL, E. G., M.R.C.S., L.R.C.P., Certifying Factory Surgeon for the King's Cliffe District, Co. Northampton.
FERNIE, J. P., M.R.C.S., L.R.C.P., Medical Officer of Health for the Stone Urban District.
FLETCHER, D., L.R.C.P. and S. Edin., Certifying Factory Surgeon for the Portree District, Co. Inverness.
HARRISON, J. H., L.S.A., District Medical Officer of the Sheffield Union.

MACDONALD, SURGE, M.B., C.M.Edin., Pathologist to and Lecturer on Pathology at the Royal Infirmary, Newcastle-on-Tyne.
PEARCE, A. E., M.B.O.S., L.R.C.P., Medical Officer of the Radnor House Children's Home of the Henley Union.
PORTER, Charles, M.D., M.R.C.P. Edin., Medical Officer of Health for Marylebone, vice Meredith Young.
RANBLE, A. M.B., B.S.Lond., Resident Assistant Medical Officer, St. Marylebone Parish Infirmary.
RUSSELL, David, M.B., B.S.Lond., M.R., B.S.Dublin, L.R.C.P.Lond., M.R.C.S.Eng., Resident Medical Officer to the Newcastle-on-Tyne Hospital for Sick Children.

SHORTEN, W. J., L.R.C.P. & S. Edin., Certifying Factory Surgeon for the Duncanan District, co. Waterford.
SPENCER, P. D., M.D.C.S., L.R.C.P., District Medical Officer of the St. Marylebone Parish.

KING'S COLLEGE HOSPITAL.—The following appointments have been made:
Senior House-Physician.—E. G. Gauntlett, M.R.C.S., L.R.C.P.
Junior House-Physician.—Paul Hughes, M.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P., R.S.Lond.
House-Accoucheur.—C. E. W. McDonald, M.R.C.S., L.R.C.P.
Assistant House-Accoucheur.—H. L. Gauntlett, M.R.C.S., L.R.C.P.
House-Surgeon (Sir Watson Cheyne, Bart.).—J. Everidge, M.R.C.S., L.R.C.P.
House-Surgeon (Mr. Barrow).—H. E. Gibson, B.A., M.B., B.Ch. (Oxon.).
House-Surgeon (Mr. Carless).—N. Prescott, M.R.C.S., L.R.C.P.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

POLSON.—May 7th, at St. John's, Worcester, to Dr. and Mrs. Polson, a daughter (Margaret Theodora).

MARRIAGE.

KIRK-THOMSON.—On March 27th, at the Presbyterian Church, Penans, Straits Settlements, by the Rev. Ernest Lawson, M.A., James Kirk, M.D. Edin., third son of Mr. James Kirk, Bishop of Renfrewshire, N.B., to Caroline Isabella, youngest daughter of Mr. John-Grant-Thomson, Heathfield, Grantown-on-Spey, Scotland.

BOOKS, ETC., RECEIVED.

Philadelphia and London: J. B. Lippincott Co. 1909:
Appendixes and other Diseases of the Vermiform Appendix. By H. A. Kelly, M.D. Second edition. 25s.
Essentials of Medicine. By C. P. Emerson, M.D. 8s. 6d.
International Clinics. A Quarterly edited by W. T. Louscope, M.D. Vol. I. Nineteenth series, 1909. £1 15s. 4 vols.
Das Problem des Lebens in kritischer Bearbeitung. Von Professor Dr. S. Kern. Berlin: A. Hirschwald, 1909. M.14.
Dictionary of National Biography. Edited by S. Lee. Vol. XIV. Mylar-Owen. London: Smith, Elder, and Co. 1909. 15s.
Laws and Customs: their Formation and Management. By T. W. Sanders, F.L.S., F.R.H.S. London: W. H. and L. Collingridge. 1s.
Precis de Pathologie Exotique. Par E. Janssens et E. Rist. Paris: Masson et Cie. 1909. Fr. 12.
Deszendenz und Pathologie. Von D. von Hausmann. Berlin: A. Hirschwald, 1909. M.11.
Paris: Vigot Frères. 1909:
Hygiène Oculaire de la Première Enfance. Par le Dr. E. Ginestoux. Fr. 2.
L'Asthme (Étiologie, Pathogénie, et Traitement). Par le Dr. R. Moncaigé. Fr. 4.
Thérapeutique Médicale et Médecine Journalière. Par G. Lemoine. Second edition. Fr. 16.
Die Röntgenuntersuchung der Brustorgane und ihre Ergebnisse für Physiologie, Pathologie. Von Dr. H. Anspurger. Leipzig: F. C. W. Vogel. 1909. M. 12.
A System of Ophthalmic Therapeutics. Edited by C. A. Wood, M.D., C.M., D.C.L. Chicago: Cleveland Press. 1909.
Lectures on the Use of Massage and Early Movements in Recent Fractures and Other Common Surgical Injuries. By Sir W. H. Bland, F.R.C.S., F.R.S. Fourth edition. London: Longmans, Green and Co. 1909. 6s.
Handbuch der speziellen Pathologie und Therapie innerer Krankheiten. Von Dr. H. Eichhorst. Sechste Auflage. Viertes Band: Krankheiten der Nerven, des Gehirns und Stoffwechsels und Infektionskrankheiten. Berlin und Wien: Urban und Schwarzenberg. 1909. M. 22.
London: Macmillan and Co., Limited. 1909:
Home Nursing. By J. Macdonald. 2s. 6d.
Severest Anaemias. By W. Hunter, M.D. Edin. Vol. I. 10s.
Practical Physiological Chemistry. By P. B. Hawk, M.S., Ph.D. Second edition. London: W. and A. Clive. 1909. 5s.
The Faith and Works of Christian Science. By the writer of "Consciousness." London: Macmillan and Co., Ltd. 1909. 3s. 6d.
How to Become a Naval Officer. New edition. London: Gieve, Matthews, and Seagrave, Ltd. 1909.
Parasitism in Nutrition. By Sir J. O'Brien-Browne, M.D., LL.D., F.R.S. London and New York: Funk and Wagnell. 1909. 3s.
Die Stenchie. Von Professor Dr. A. Onodi. Wien und Leipzig: A. Holder. 1909. M. 8.50.
Blutungen und Anusss aus dem Uterus. Von Hofrat Dr. A. Thielhaber. München: E. Reinhardt. 1909. M. 7.50.
Zwei Schlussätze klinisch-chirurgischer Tätigkeit. Von Dr. E. Küster. Berlin: A. Hirschwald. 1909. M. 12.

Studies from the Department of Pathology of the College of Physicians and Surgeons, Columbia University, N.Y. Vol. XI for the College Year 1905-1908. Reprints.
Manual of Operative Surgery. By J. F. Binnie, A.M., C.M. Vol. I. Operations on the Head, Neck, Nerves, Lungs, Gastro-Intestinal System. Fourth edition. London: H. K. Lewis. 1909. 15s.
The Indian Lunacy Manual for Medical Officers. Compiled by Major R. Bryson, F.R.C.S.E., I.M.S. Madras: R. Vivekananda Press. 1908.

DIARY FOR THE WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square. W. Conversation, 8.30 p.m. Reception by the President. 9 p.m. Oration by Dr. H. D. Rolleston: On the Classification and Nomenclature of Diseases, with Remarks on Diseases due to Treatment. Music, smoking, etc.

TUESDAY.

CHELSEA CLINICAL SOCIETY, Chelsea Dispensary, Manor Street, S.W. 8.30 p.m.—Paper: Dr. Vivian Orr: Intra-spinal Anaesthesia in Surgery.

WEDNESDAY.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Millbank, S.W. 8.30 p.m.—Major H. V. Gratian, R.A.M.C., and Captain A. L. Webb, R.A.M.C., Demonstration of the Method of Preparing and Standardizing Typhoid Vaccine.

THURSDAY.

ROYAL SOCIETY OF MEDICINE, 11, Chandos Street, Cavendish Square, W. 5 p.m. DERMATOLOGICAL SECTION. 20, Hanover Square, W. 5 p.m.—Dr. Louis Wickham: Demonstration of Radium Therapeutics.

FRIDAY.

ROYAL SOCIETY OF MEDICINE, 11, Chandos Street, Cavendish Square, W. 5 p.m. EPIDEMIOLOGICAL SECTION. 20, Hanover Square, 8.30 p.m.—Papers: (1) Dr. John Brownlee: Certain considerations on the causation and course of Epidemics. (2) Mr. M. Greenwood, Jun.: The Problem of Marital Infection in Pulmonary Tuberculosis.
SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11, Chandos Street, Cavendish Square, W. 8.30 p.m.—(1) Dr. A. Stanton: An Account of a Paper on Beri-beri written in 1629. (2) Captain C. A. Gill, I.M.S.: Epidemiology of Pneumonic Plague.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Lectures: Tuesday, 3.45, Tracheostomy; Friday, 3.45, Clinical Pathology.

LONDON SCHOOL OF CLINICAL MEDICINE, Seamen's Hospital, Greenwich.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m., Monday, and noon, Thursday; Skin, at noon and 4 p.m., Thursday and noon, Friday; Eye, 11 a.m., Wednesday and Saturday; Radiography, 4 p.m., Thursday. Special Lecture: Friday, 2.15 p.m., Hemiplegia.

MEDICAL GRADUATES COLLEGE AND LECTURING, 22, Chancery Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin, Tuesday, Medical, Wednesday, Surgical, Thursday, Surgical, Friday, Ear, Nose, and Throat. Lectures at 5.15 p.m. each day will be given as follows: Monday, The Treatment of Cardiac Pains, Tuesday, Some Points relating to Ectopic Pregnancy, Wednesday, Some Unusual Features of Lead Poisoning, Thursday, A Demonstration of Graphic Methods for the Investigation of Cardio-vascular Conditions.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Ocular Paralysis, Friday, 3.30 p.m., Clinical Demonstration.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m., Surgical Out-patient, 2.30 p.m., Medical Out-patient, Nose, Throat, and Ear, X Rays, 3 p.m., Medical In-patient, Clinics, 10 a.m., Medical Out-patient, Clinics, 2.30 p.m., Operations, Clinics: Surgical, Gynaecological; 4.30 p.m., Special Demonstration of Selected Skin Cases, Wednesday, 2.30 p.m., Out-patient, Skin, and Eye Clinics, Thursday, 2.30 p.m., Gynaecological Operations; Clinics: Medical Out-patient; Surgical Out-patient; X Rays; 3 p.m., Medical In-patient, 4.30 p.m., Lecture on Pulmonary Tuberculosis, Friday, Clinics, 10 a.m., Surgical Out-patient, 2.30 p.m., Operations; Clinics: Medical Out-patient, Eye; 3 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics, X Rays; 2.30 p.m., Operations, Monday and Thursday, 2 p.m., Wednesday, 4 p.m., and Saturday 10 a.m., Diseases of the Eye, Tuesday, 10 a.m., Medical Out-patient, Clinics, 2.30 p.m., Operations, Clinics: Surgical, Gynaecological Operations; 4.30 p.m., Diseases of Throat, Nose, and Ear; 2.30 p.m., Skin Diseases, Wednesday and Saturday, 10 a.m., Diseases of Children, 2.30 p.m., Diseases of Women. Lectures: At 10 a.m., Monday and Thursday, Demonstration by Surgical Registrar, Friday, Demonstration by Medical Registrar, At 12 noon, Sunday, Pathological Demonstration, At 12.15 p.m., Wednesday and Saturday, Practical Medicine, At 5 p.m., Tuesday, Gynaecological Cases, Wednesday, Insects as Carriers of Disease, Thursday, Medical and Allied Conditions, Friday, How to Test the Vision of an Injured Eye.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
MAY.		MAY (Continued).	
26 Sunday ..			BORDER COUNTIES BRANCH, Lochmaben Combination Hospital for Infectious Diseases, Lochmaben; Meeting of Council preceding General Meeting.
27 MONDAY ..		21 FRIDAY ..	EAST YORK DIVISION, East York and North Lincoln Branch, Annual Meeting, Board Room, Hull Royal Infirmary, 8.15 p.m.
18 TUESDAY ..	NORTH OF ENGLAND BRANCH, Coatham Hotel, Redcar, Branch Council, 12.30 p.m.; Lunch, 1 p.m.; Business Meeting, 1.45 p.m.	22 SATURDAY ..	
	CARDIFF DIVISION, South Wales and Monmouthshire Branch, Annual Meeting, Cardiff.	23 Sunday ..	
	CENTRAL DIVISION, Birmingham Branch, Special and General Meeting, Medical Institute, 3.30 p.m.	24 MONDAY ..	COVENTRY DIVISION, Birmingham Branch, Annual Meeting, Coventry and Warwickshire Hospital, 8 p.m.; also Combined Meeting with Tamworth and Nuneaton Division.
29 WEDNESDAY	LANCASHIRE AND CHESHIRE BRANCH, Branch Ethical Committee, Onwards Buildings, 207, Deansgate, Manchester, 4.30 p.m.	25 TUESDAY ..	HAMPSTEAD DIVISION, Metropolitan Counties Branch.
	ST. HELENS DIVISION, Lancashire and Cheshire Branch, Fleece Hotel, St. Helens, 8.45 p.m.		LONDON: Medico-Political Contract Practice Subcommittee, 2.30 p.m.
	LONDON: "Spiritual Healing" Subcommittee, 2.15 p.m.		BATH AND BRISTOL BRANCH, Annual Meeting, Bristol.
	CITY DIVISION, Metropolitan Counties Branch, Annual General Meeting, Great Eastern Hotel, 3.30 p.m.	26 WEDNESDAY	GUILDFORD DIVISION, South-Eastern Branch, Annual Meeting, Royal Surrey County Hospital, 4.30 p.m.; Tea, 4.15 p.m.
	GLOUCESTERSHIRE BRANCH, Annual Meeting, General Hospital, Cheltenham, 6 p.m.; Dinner, Oriental Café, High Street, Cheltenham, 8 p.m.		LEICESTER AND RUTLAND DIVISION, Midland Branch, Leicester Infirmary, 4.15 p.m.
30 THURSDAY ..	LEIGH DIVISION, Lancashire and Cheshire Branch, Annual Meeting, Co-operative Rooms, Ellesmere Street, 8.30 p.m.	27 THURSDAY ..	LONDON: Metropolitan Counties Branch Council, 4.30 p.m.
	LINCOLN DIVISION, Midland Branch, Annual Meeting, Guildhall, Lincoln, 3.30 p.m.	28 FRIDAY ..	
		29 SATURDAY ..	TROWBRIDGE DIVISION, Bath and Bristol Branch, Annual Meeting, Town Hall, Trowbridge 3 p.m.

ANNUAL MEETING, BRITISH MEDICAL ASSOCIATION, BELFAST, 1909.

THE Seventy-seventh Annual Meeting of the British Medical Association will be held at Belfast from July 23rd, to July 31st, 1909, under the Presidency of Sir William Whitla.

The Annual Representative Meeting commences in Belfast on July 23rd. The Presidential Address will be delivered on July 27th. The Sections will meet on July 28th, 29th, and 30th.

A preliminary programme of arrangements was published in the SUPPLEMENT of May 1st, p. 197. The Honorary Local Secretaries are: Henry Lawrence McKisack, M.D., M.R.C.P., 17, University Square, Belfast; Cecil Edward Shaw, M.A., M.D., M.Ch., 29, University Square, Belfast; and Howard Stevenson, B.A., M.B., F.R.C.S.I., 2, College Square North, Belfast.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a member until he ceases to be a Member in accordance with the provisions hereof.

Cy-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

Cy-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every

Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days after such longer period as the Branch may by its Rules prescribe after the date of the said notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 22ND, 1909.

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MATTERS REFERRED TO DIVISIONS.

British Medical Association.

Annual Representative Meeting, 1909.

THE Annual Representative Meeting will be held in Belfast on Friday, July 23rd, 1909, and following days as may be necessary.

On the Friday the Meeting will immediately follow the Annual General Meeting to be held at 12 noon.

PROVISIONAL AGENDA.

A. Reception of Return of Representatives Elected.

1. **Motion:** That the Return of election of Representatives of Divisions for the year 1909-10 be received, approved, and entered on the Minutes.

2. **Motion:** That the Notices (if any) of appointment of substitutes for Representatives under Article XXX and By-law 19 be received, approved, and entered on the Minutes.

B. Standing Orders.

For Standing Orders as adopted at Sheffield, see p. 274.)

3. **Motion:** That the Standing Orders, submitted by the Chairman, be adopted as Standing Orders of the Meeting.

The Chairman will submit the Standing Orders adopted at Sheffield, subject to the following Amendments:

- (a) That Subsections vi and vii of Standing Order 1 be deleted.
- (b) That in Subsection viii of Standing Order 1 the word "other" be deleted.
- (c) That Standing Order 7 be amended to read as follows:

If any Motion placed upon the Agenda shall in the opinion of the Chairman relate to the same subject as a Recommendation or other portion of a Report submitted by the Council or by a Committee, the Chairman shall ascertain the will of the Meeting as to whether the said Motion shall be considered as an amendment or rider to the adoption or approval of the said Recommendation or other portion of a Report.

- (d) That the following new Standing Order be added, to follow present III, 14:

Election of Chairman and Deputy Chairman of Representative Meetings.

Nominations for the office of Chairman of Representative Meetings and Deputy Chairman of Representative Meetings for the year shall be handed in writing to the Secretary of the Meeting not later than the termination of the second day's proceedings. Each nomination shall be signed by the nominator, and shall contain a declaration that the candidate nominated has agreed to serve. The names of all candidates duly nominated shall be included in a voting paper which shall be issued to each voter at such time as the Meeting shall direct. Each voter shall be entitled to vote for one candidate for each office, and the candidate who receives the highest number of votes, being not less than a majority of the total votes given, shall be declared to be elected. In the event of no candidate receiving a clear majority of the votes cast, the candidate who has received the fewest votes shall be excluded, and a second ballot taken upon the names of the remaining candidates, and so on until some candidate receives a clear majority of the votes cast.

C. Annual Report of Council.

(For Annual Report of Council, 1908-9, see p. 277.)

Note.—The Annual Report of the Council is submitted and will be considered for the first time in accordance with the new Standing Orders III, 5, 6, 7, adopted at Sheffield, to which special attention is directed (see page 275).

4. **Motion:** That the Annual Report of the Council to the Representative Meeting be received.

5. **Motion** (By the Chairman): That all Motions by Divisions or Branches which relate to matters dealt with in the Annual Report of Council be considered as amendments or riders to the Recommendations, if any, to which they are relevant, or to the Motion: "That the remainder of the Report under the heading . . . be approved."

6. **Motion:** That paragraphs 1 to 6 of the Annual Report of the Council be approved (pages 277-278).

7. **Motion:** That the Financial Statement and Balance Sheet for the year 1908 be approved (pages 278-286).

8. **Motion:** That paragraph 8 (Estimate of income and expenditure for 1909) be approved (page 279).

9. **Motion:** That paragraph 9 (Apportionment of members' subscriptions) be approved (page 279).

10. **Motion:** That paragraph 10 (the BRITISH MEDICAL JOURNAL) be approved (page 279).

11. **Amendment** by the WATERFORD DIVISION (South-Eastern of Ireland Branch):

That in the opinion of the Representative Meeting the BRITISH MEDICAL JOURNAL should more largely advocate the rights, interests, and claims of the medical masses in the future than it has done in the past.

12. **Motion:** That paragraphs 11 to 13 (Committees, Form of Report, and List of Matters Referred,) be approved (pages 287-288).

CENTRAL ETHICAL COMMITTEE.*Re-publication of Articles in Medical Journals.*

13. **Motion:** That the following Recommendation of the Council be adopted (see Paragraph 15 of Report, page 288):

That it is the professional duty of Medical Authors of articles in Medical Journals to co-operate with the proprietors and editors of those Journals in preventing any improper use of such articles for purposes of advertisements.

14. **Motion:** That the remainder of the Report under the heading "Central Ethical Committee" (paragraphs 14 to 20) be approved (page 288).

CHLOROFORM COMMITTEE.

15. **Motion:** That paragraph 21 of the Report of Council (Chloroform Committee) be approved (page 288)

COLONIAL COMMITTEE.

16. **Motion:** That paragraph 22 of the Report of Council (Colonial Committee) be approved (page 288).

HOSPITALS COMMITTEE.*Certificates of Suitability for Hospital Treatment.*

17. **Motion:** That the following Recommendation of the Council be adopted (paragraph 23 of Report, page 288):

That a medical certificate of suitability for hospital treatment be required as a condition of hospital treatment, except in case of casualties.

18. **Amendment** by the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That except in emergencies a medical certificate of suitability for hospital treatment be required as a condition of hospital treatment

Definition of "Nursing Home."

19. **Motion:** That the following Recommendation be adopted (par. 24 of Report, page 289):

A "Nursing Home" is an institution in which patients are received for medical care under the attendance of medical practitioners selected by themselves, and where the patients are responsible to the home for charges for maintenance and nursing, and to the medical practitioners for their fees.

20. **Motion:** That the remainder of the Report of Council under the heading "Hospitals Committee" (paragraphs 25 to 33 pages 289-290) be approved.

Hampstead Hospital.

21. **Rider** by the WESTMINSTER DIVISION (Metropolitan Counties Branch) (par. 31 of Report, page 289):

That, in the opinion of the Representative Meeting, the Central Council, having permitted the publication of the Warning Notice with reference to the Hampstead Hospital, should secure its observance. Having regard to the fact that an ex-Chairman of a Division of the Association lost his Hospital appointment through compliance with the Notice, while those who defied it were enabled thereby to supplant him, the Representative Meeting instructs the Council to take all steps within the power of the Association to redress the injustice thus occasioned, as its long-continued existence is conducive to the disintegration of the Association.

Representatives at the United Kingdom Hospitals Conference.

22. **Rider** by the WANDSWORTH DIVISION (Metropolitan Counties Branch) (par. 33 of Report, page 290):

That this Representative Body do annually elect twenty-five of its Members, of which not less than three shall be Representatives from Scotland, and not less than three Representatives from Ireland, to represent it at the United Kingdom Hospitals Conference, so long as these Conferences shall continue to be held, together with others to be elected by the Central Council, and that they do report to this Body.

Hospital Administration.

23. **Rider** by the WATERFORD DIVISION (South-Eastern of Ireland Branch):

That the Council be instructed to take steps to give practical effect to the Oxford resolutions on the subject of gratuitous or semi-gratuitous hospital treatment of the well-to-do.

Management of General and Cottage Hospitals.

24. **Rider** by the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That in the opinion of the Representative Meeting, the management of General and Cottage Hospitals should be vested in a Committee on which the local medical profession is adequately represented by directly elected representatives.

Payment for Compensation Certificates.

25. **Rider** by the SALFORD DIVISION (Lancashire and Cheshire Branch):

That, in the opinion of the Representative Meeting, any member of an honorary or paid medical or surgical staff of a hospital who signs any certificate, or gives any report on any case under the Workmen's Compensation Act, ought to receive personally the usual fee in full.

IRISH COMMITTEE.

26. **Motion:** That paragraph 34 of the Report of Council (Irish Committee) be approved (page 290).

JOURNAL AND FINANCE COMMITTEE.

27. **Motion:** That the following Recommendation of the Council be adopted (par. 35 of Report, page 290):

The Council considered the following Resolutions of the Representative Meeting:

Minute 544. That the whole work of the Association be arranged in three co-ordinate Departments: (a) Financial; (b) Editorial; (c) Medical or Professional.

That these Departments be respectively under the following Officers: (a) Financial Secretary; (b) Editor; (c) Medical Secretary, who shall hold equal official positions in the Association.

and gave effect to them by deciding, at the Meeting in October, that the office of the General Secretary and Manager should be known as that of the Financial Secretary as from January 1st, 1909.

Upon consideration of a Memorandum subsequently submitted by Mr. Elliston the Council has come to the conclusion that it is desirable in the interests of the Association that the words "Business Manager" should be added to his title, in order that the duties of the office may be more correctly described.

The Council recommends the Representative Meeting to approve that the title of the office formerly known as that of General Secretary and Manager be henceforth Financial Secretary and Business Manager.

28. **Amendment by the OXFORD DIVISION** (Oxford and Reading Branch):

That Minute 544 of the Annual Representative Meeting, 1908, be rescinded, and that, in view of the practical experience of the last thirty-seven years, during which period the Association has enjoyed great financial prosperity, it has been proved that in the best interests of the British Medical Association it is essential to have an official with the rank and status of "General Secretary and Manager," and that such official should possess special business training. Further, that having regard to the highly satisfactory manner in which Mr. Guy Elliston has discharged the duties since his appointment in 1902, it is in the interests of the Association that his services should be retained as General Secretary and Manager.

29. **Motion:** That the remainder of the Report under the heading Journal and Finance Committee be adopted.

MEDICO-POLITICAL COMMITTEE.

For the following 15 Recommendations see Special Report on Medical Inspection of School Children, etc., SUPPLEMENT, BRITISH MEDICAL JOURNAL, May 15th, 1909.

Employment of Medical Inspectors of School Children under the Guise of Assistant Medical Officers of Health.

30. **Motion:** That the following Recommendation of the Council be adopted.

That, in the opinion of the Representative Meeting, the duties of the office of Assistant Medical Officer of Health, and the general arrangements, should be such as would enable the holder to base a claim for an appointment elsewhere as Medical Officer of Health upon the experience gained in this appointment. It would appear, *prima facie*, that one condition of this should be that he should be the officer not merely of the Education Committee, but also of the Sanitary Committee of the Corporation (*Recommendation A*).

System of Payment of School Medical Officers.

31. **Motion:** That the following Recommendation be adopted:

That the Representative Meeting approve the system of payment of School Medical Officers by fixed salary, or, in the case of part-time officers, payment for time devoted to the work (*Recommendation B*).

* An extract from Part VI of the Finance Inquiry Report, stating the reasons for the change of title recommended by the Committee, and approved in Minute 544 of the Representative Meeting, is reprinted, for convenience of reference, on page 239.

32. **Motion:** That the following Recommendation be adopted:

That, in the opinion of the Representative Meeting, special systems of capitation payment for Medical Inspection, such as those adopted in Hertfordshire and Derbyshire, are satisfactory in sparsely populated districts (*Recommendation C*).

33. **Motion:** That the following Recommendation be adopted:

That, in the opinion of the Representative Meeting, the system of payment per child examined should be opposed by the profession. If for any special reasons it is adopted in any district, the fee should be not less than 2s. 6d. per head (*Recommendation D*).

34. **Motion:** That the following Recommendation be adopted:

That, in the opinion of the Representative Meeting, if it be found desirable to appoint a class of School Medical Officer having supervising as well as inspecting duties, a rate of salary should be fixed above the minimum adopted by the Association for officers engaged in inspection only (*Recommendation E*).

Duties of School Nurse in connexion with Inspection and Treatment.

35. **Motion:** That the following Recommendation be adopted:

That, in inspection, the duty of the School Nurse should be, in the opinion of the Representative Meeting, simply to assist the School Medical Officer (*Recommendation F*).

36. **Motion:** That the following Recommendation be adopted:

That, in treatment, the School Nurse should, in the opinion of the Representative Meeting, act under the instruction and supervision of the practitioner in charge of the patient, and should, as far as possible receive written instructions from him (*Recommendation G*).

37. **Motion:** That the following Recommendation be adopted:

That the duties of the School Nurse should be defined in written rules including the foregoing provisions (*Recommendation H*).

Treatment of School Children Found Defective.

38. **Motion:** That the following Recommendation be adopted:

That the Association should oppose the reference of school children found upon inspection to be defective, to public medical charities for treatment (*Recommendation I*).

39. **Motion:** That the following Recommendation be adopted:

That there is no objection to treatment by provident dispensaries, or other contract practice organizations, of children found upon inspection to be defective, provided that the remuneration of the practitioner is adequate for the work done, and that effect is given to the principles of the Contract Practice Report of the Association (*Recommendation J*).

40. **Motion:** That the following Recommendation be adopted:

That the Association should oppose any scheme of provision for the treatment of school children found upon inspection to be defective which rests on the reference of such children to the Poor Law, pending such reforms as may result from the consideration of the Reports of the Royal Commission (*Recommendation K*).

41. **Motion:** That the following Recommendation be adopted:

That, under existing conditions, the most satisfactory provision for the treatment of school children, found upon inspection to be defective, whose parents cannot afford to pay for such treatment, is by placing them under the care of private practitioners, who should be adequately remunerated out of

public funds without intervention from the Poor Law (*Recommendation L*).

42. **Motion:** That the following Recommendation be adopted:

That, in sparsely populated districts, such provision should be made by the "recognition" of the surgeries of private practitioners as places at which treatment may be obtained at the public expense (*Recommendation M*).

43. **Motion:** That the following Recommendation be adopted:

That, in towns, the work could be similarly entrusted to private practitioners discharging their duties at convenient centres (designated "school clinics") situated in schools or in independent buildings (*Recommendation N*).

Security of Tenure for School Medical Officers.

44. **Motion:** That the following Recommendation be adopted (paragraph 37 of the Report of Council, page 290):

That the Representative Meeting hereby approves the action of the Council in seeking to secure reasonable security of tenure of office for the School Medical Officer and his Assistants (*Recommendation O*).

Representation of the Association on the Central Midwives Board.

45. **Motion:** That the following Recommendation be adopted (paragraph 38 of the Report of Council, page 291):

That the Representative Meeting approves of the action of the Council in endeavouring to secure representation of the British Medical Association on the Central Midwives Board (*Recommendation P*).

Rights and Obligations of Members of Committees and Subcommittees of the Association.

46. **Motion:** That the following Recommendation be adopted (paragraph 39, page 291):

That the Representative Meeting take into consideration the general question of policy which has arisen as to the propriety of a member of a Committee or Subcommittee taking independent action by a letter to the BRITISH MEDICAL JOURNAL with respect to subjects which are under the consideration of the Committee or Subcommittee of which he is a member (*Recommendation Q*).

Representation of the British Medical Association in the House of Lords.

47. **Motion:** That the following Recommendation be adopted (paragraph 40, page 291):

That the Representative Meeting take into consideration the general question of policy raised by a communication received from Earl Wemyss, stating that he proposes to bring before the House of Lords the question of arrangements being made whereby important Bodies representative of those engaged in various professions and businesses may nominate each three members of the House of Lords to represent them officially in questions coming before the House of Lords, the names of such Representatives to be entered on the Journal of the House. Earl Wemyss approaches the British Medical Association as a Body representative of the Medical Profession, and states that the following Bodies have already expressed approval of the idea: The Royal Academy, the Royal Institute of British Architects, the Building Trades Federation of the United Kingdom, the Shipping Federation, and the Employers' Parliamentary Council.

48. **Motion:** That the remainder of the Report of Council under the heading "Medico Political Committee" (paragraphs 41 to 60, pages 291-293) be approved.

Public Medical Service.

49. **Rider** by the ST. PANCRAS AND ISLINGTON DIVISION (Metropolitan Counties Branch):

That the time is now opportune for the British Medical Association to take into consideration the drafting of a scheme for a Public Medical Service, to embrace Philanthropic

Dispensaries and Medical Services, School Clinics, the Poor Law Medical Service, Provident Dispensaries, and the Medical Services of Friendly Societies and Clubs.

Contract Practice.

50. **Rider** by the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That it be an instruction to the Central Council to formulate Resolutions embracing the main principles as affecting Medical Contract Practice.

The Medical Acts.

51. **Rider** by the HEREFORD DIVISION (Worcester and Hereford Branch) (paragraph 55, page 293):

That the Representative Meeting fully concurs with the General Medical Council in being of opinion that the present Medical Acts do not sufficiently enable persons requiring medical aid to distinguish qualified from unqualified practitioners, and that it is contrary to the interest of the public that medical and surgical practice should be carried on with impunity by persons holding no recognized qualifications; and that it be an instruction to the Council to request the Government to take steps for the appointment of a Royal Commission to inquire into the evil effects produced by the unrestricted practice of medicine and surgery by unqualified persons.

NAVAL AND MILITARY COMMITTEE.

52. **Motion:** That paragraph 61 of the Report of Council (page 293) (Naval and Military Committee) be approved.

OPHTHALMIA NEONATORUM COMMITTEE.

53. **Motion:** That paragraph 62 of the Report of Council (page 293) (Ophthalmia Neonatorum Committee) be approved.

ORGANIZATION COMMITTEE.

54. **Motion:** That consideration of the Recommendations of the Council (paragraph 64 of Annual Report, page 293) as to alteration of the By-laws affecting Standing Committees, and the composition of the Council, respectively, be postponed until consideration of Section F of the Agenda.

55. **Motion:** That the remainder of the Report of the Council under the heading "Organization Committee" (paragraphs 63 to 69, pages 293-4) be approved.

Method of Distribution of Capitation Grants.

56. **Amendment** (arising out of paragraph 66 of the Report, page 294) by the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That in view of the facts (1) that the policy of the Association is to consider the Division as the primary unit, each Division being free to govern itself in such a manner as it shall think fit; (2) that the decision as to what additional subjects shall be forwarded to the Divisions for consideration rests with the Representative Body and the Central Council, and not the Branch Councils; this Representative Body considers that it is illogical any longer to place in the hands of Branch Councils the funds for distribution to the Divisions, while at the same time depriving them of any control over the objects for which the money is used, and instructs the Central Council to so amend the By-laws as to place the distribution in the hands of the Central Council, which can make capitation grants to all Divisions and Branch Councils as may be required.

PREMISES COMMITTEE.

57. **Motion:** That paragraph 70 (page 294) of the Report of Council (Premises Committee) be approved.

PUBLIC HEALTH COMMITTEE.

58. **Motion:** That paragraphs 71 to 77 (pages 295-6) of the Report of Council (Public Health Committee) be approved.

SCIENCE COMMITTEE.

59. **Motion:** That paragraphs 78 to 81 (page 296) of the Report of Council (Science Committee) be approved.

Scientific Work of the Association.

60. **Rider** by the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That, with a view to further interesting Divisions and Branches in the Section work of the Annual Meeting, it be an instruction to the Central Council to encourage them to nominate one or more members to take part in the discussions of any subject arranged for, which has previously been considered by the Division or Branch.

SCOTTISH COMMITTEE.

61. **Motion:** That paragraph 82 (page 296) of the Report of Council (Scottish Committee) be approved.

THERAPEUTIC COMMITTEE.

62. **Motion:** That paragraph 83 (page 297) of the Report of Council (Therapeutic Committee) be approved.

Appointment of Materia Medica Committee.

63. **Rider** by the WATERFORD DIVISION (South-Eastern of Ireland Branch):

That the Council be requested to appoint a Materia Medica Committee, whose duty it will be, with such professional aid as they can summon to their assistance, to investigate and pronounce on the uses and properties of all drugs which shall be used by the profession, and that in view of the grave injury inflicted on the public and on the profession alike by the present wholesale introduction of drugs by mere commercial firms, whereby the ground is being cut from under our feet, and the gullible public are induced to accept nostrums on the sole strength of mere assertions, that the hospitality of our museum and the pages of our JOURNAL shall be both shut out from giving any further aid to the wholesale advertisements of drugs and preparations, the sole virtues of which have too often no existence save in the mendacity of their introducers.

UTERINE CANCER COMMITTEE.

64. **Motion:** That paragraph 84 (page 297) of the Report of Council (Uterine Cancer Committee) be approved.

GENERAL APPROVAL OF ANNUAL REPORT.

65. **Motion:** That, subject to the Amendments and other Resolutions adopted by the Meeting with reference thereto, the Annual Report of Council be approved as a whole.

D. Financial Estimate for 1909.

Receive: Financial estimate submitted by the Council under By-law 35, and consider motions relating thereto.

E. Special Reports of Council (if any).

F. Motions to Make, Alter, or Repeal By-laws.

Consider: Motions placed upon the Agenda of the Meeting by which it is proposed to make new By-laws or alter or repeal existing By-laws.

PROPOSED AMENDMENTS OF EXISTING BY-LAWS.

Mode of Election of Council.

66. **Motion** by the COUNCIL:

That the present By-laws of the Association, numbered 23 to 32 inclusive, relative to the composition and mode of election of Council be rescinded, and the corresponding By-laws, numbered 37 to 46 inclusive, in the Schedule to the Draft Charter, be adopted in substitution thereof, subject to such verbal amendments and alterations as the legal advisers of the Association may deem to be necessary. (SUPPLEMENT, April 24th.)

67. **Motion:** By the DUNDEE BRANCH:

That the present By-laws relating to the Council, namely, 23 et seq., be amended by substituting for them the provisions of the Schedule to the Draft Charter, namely, Section VI, subject to such verbal amendments as in the opinion of the Association's legal advisers are necessary to bring them into harmony with the present Memorandum and Articles. (SUPPLEMENT, April 24th.)

68. **Motion:** By the GATESHEAD DIVISION (North of England Branch):

That having regard to the repeated decisions of the Representative Meeting, confirmed by a large majority upon the Referendum, that the mode of election of the Council should be altered so as to provide for the reduction of the total membership of, and some representation of the Representative Meeting on, the Council, the present By-laws of the Association as to the composition and mode of election of the Council be amended so as to conform with those on the same subject appended to the Draft Charter submitted to the Privy Council. (SUPPLEMENT, April 24th.)

(For convenience of reference the present By-laws 23 to 36 and Section VI of Draft Charter are printed on pages 297-8.)

Standing Committees.

69. **Motion:** By the COUNCIL:

That the Schedule to the present By-laws of the Association as to Standing Committees be amended by making such verbal changes as are necessary to bring it into conformity with the corresponding Schedule appended to the Draft Charter. (SUPPLEMENT, April 24th.)

(For the Schedules referred to see pages 300-305.)

G. Motions relating to the Honour and Interests of the Medical Profession or of the Association

(Not Arising out of Consideration of Report of Council).

Consider: Motions placed upon the Agenda of the Meeting by Divisions and Branches relating to the honour and interests of the medical profession or of the Association.

Medical Teaching.

70. **Motion:** By the WATERFORD DIVISION (South-Eastern of Ireland Branch):

That in the opinion of the Representative Meeting it is contrary to the interests of the profession that the mass of the profession, and even the majority of members of hospital staffs, should be excluded, as at present, from all share in medical teaching.

Medical Examinations.

71. **Motion:** By the WATERFORD DIVISION (South-Eastern of Ireland Branch):

That in the opinion of the Representative Meeting all medical examinations ought to be duly advertised, and open to the presence of every registered medical practitioner.

Promulgation of Policy of the Association.

72. **Motion:** By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That it be an instruction to the Central Council to investigate and report as to the best means for bringing before the Members those conclusions of this Representative Body arrived at from time to time which define the policy of the Association, with a view to their general acceptance and adoption throughout the Association.

Federated Societies Medical Benefit Association.

73. **Motion:** By the WANDSWORTH DIVISION (Metropolitan Counties Branch):

That in the opinion of the Representative Meeting Members of the British Medical Association should refuse to support the proposed Federated Societies Medical Benefit Association, since its regulations contravene the conditions which the Association has approved for the conduct of Contract Practice.

Instruction in Hygiene.

74. **Motion:** By the SOUTH-EASTERN OF IRELAND BRANCH:
That, in view of the large sums of public money paid to those who give technical instruction in agriculture and various trades, of the cost to the community of the maintenance of hospitals and sanatoria for the treatment and cure of disease, much of which is preventable, and of the recognition by the Legislature of public health lectures as a part of technical education, qualified for a share in the local grants, the services of members of the medical profession in giving instruction in hygiene should no longer be treated as a matter of philanthropy; that medical practitioners should not lecture gratuitously for philanthropic societies such as the Women's National Health Association, which, while deserving of sympathy and encouragement, afford by their existence evidence of the neglect by the Government, central and local, in matters of sanitation and public health; but that such societies should co-operate with the county councils in the selection of lecturers who should be remunerated in part at least from public funds.

Amendments to Draft Charter.

(Motions postponed by Annual Representative Meeting, 1908).

Election of Representatives.

75. **Motion:** By the LIVERPOOL (WESTERN) DIVISION (Lancashire and Cheshire Branch):

That in By-law 25 (1) the words "each such Constituency being entitled to elect one Representative," be deleted.

76. **Motion:** By the LIVERPOOL (WESTERN) DIVISION (Lancashire and Cheshire Branch):

That in By-law 25 (2), for the first word of line 2, "one," substitute "a," and after the word "Constituency" insert the words "to elect one Member"; at the end add the words "Any Division having more than 50 Members may elect another additional Representative for every complete 50 (75, 100, or other number) additional Members."

By-law 25, Draft Charter, is as follows:

REPRESENTATIVE BODY.

Formation of Constituencies.—25. (1) Representatives of Divisions shall be elected by Constituencies formed as follows, each such Constituency being entitled to elect one Representative. (2) Any Division having not less than fifty members may form one Constituency, and except as hereinafter provided every Division having less than fifty members shall be grouped by the Council with another Division, or with other Divisions, to form a Constituency having not less than fifty members. (3) Provided that the Council shall have power to give separate representation to Divisions having fewer than fifty members in those cases in which it appears to the Council that special difficulties exist as to the holding of joint meetings with neighbouring Divisions. (4) In no case shall the total number of Constituencies formed throughout the Association exceed 300. (5) Subject as aforesaid the Constituencies shall be formed and may be from time to time altered by the Council, and the Council shall publish lists of the Constituencies as and when it may think expedient.

H. Election of Officers.

Elect a Chairman of Representative Meetings and a Deputy Chairman of Representative Meetings for the year 1909-1910.

I. Election of Committees.

Elect members of the Medico-Political and Central Ethical Committees, and other Committees, if any.

J. Standing Orders.

Consider proposed amendments of Standing Orders, other than those relating to the order of business.

K. Any other business.**L. Confirm Minutes.**

By Order,

J. SMITH WHITAKER,

Medical Secretary.

STANDING ORDERS*RELATIVE TO***BUSINESS AT REPRESENTATIVE MEETINGS**

(As adopted at Sheffield, 1908).

I.—ORDER OF BUSINESS.*(A) Annual Representative Meeting.*

1. Except as may be otherwise determined in the manner prescribed by the Standing Orders, the order of business shall be as follows:

- i. **Election Returns.**—Receive the return of the Election of Representatives of Divisions for the year, and receive notices, if any, of the appointment of substitutes for Representatives under Article XXX.
- ii. **Standing Orders.**—Adopt Standing Orders.
- iii. **Annual Report of Council.**—Receive the Annual Report of the Council, presented under By-law 35, and consider motions relating to the adoption thereof in whole or in part.
- iv. **Financial Estimate.**—Receive the Financial Estimate presented by the Council under By-law 35, and consider motions relating to the adoption thereof in whole or in part.
- v. **Special Reports of Council.**—Receive Special Reports of the Council, if any, in the order in which the Council shall submit them for consideration, and consider motions for the adoption thereof in whole or in part.
- vi. **Report of Medico-Political Committee.**—Receive the Report of the Medico-Political Committee, and consider motions for the adoption of the same in whole or in part.
- vii. **Report of Ethical Committee.**—Receive the Report of the Ethical Committee, and consider motions for the adoption of the same in whole or in part.
- viii. **Reports of other Committees (if any).**—Receive Reports of other Committees, if any, and consider motions for the adoption of the same in whole or in part.
- ix. **Consider By-laws.**—Consider, in such order as the Meeting shall determine, any motions placed upon the Agenda of the Meeting by which it is proposed to make By-laws or to alter or repeal existing By-laws.
- x. **Consider other Motions by Divisions or Branches.**—Consider, in such order as the Meeting shall determine, any motions placed upon the Agenda of the Meeting by Divisions or Branches, relating to the honour and interests of the Medical Profession or of the Association.
- xi. **Election of Officers.**—Elect a Chairman of Representative Meetings and a Deputy-Chairman of Representative Meetings for the year.
- xii. **Election of Members of Medico-Political and Ethical Committees.**—Elect at such time before the conclusion of the third day's proceedings, as the Chairman may, pursuant to Standing Order III, 10, prescribe:
 - (a) Six Members of the Association to serve on the Medico-Political Committee for the ensuing year.
 - (b) Five Members of the Association to serve on the Ethical Committee for the ensuing year.
 - (c) Such members of other Committees, if any, as it falls to the Representative Meeting to elect.
- xiii. **Amendment of Standing Orders.**—Consider proposed amendments of Standing Orders, other than those relating to the order of business.

2. General Order of Daily Sessions: Confirmation of Minutes.—The matters described in Clause 1 shall be considered in the order therein prescribed, or as otherwise duly determined, from day to day until the completion thereof or until the expiration of four days from the first day of the Meeting, whichever shall first occur; provided that at each daily session after the first, the Meeting shall, before proceeding to the consideration of the matters aforesaid, (A) confirm the Minutes of the Proceedings of the previous daily session; (B) consider motions, if any, relating to the order of business of the day. At the conclusion of the business of the last daily session the Meeting shall confirm the Minutes thereof for presentation to the Council.

3. Hours of Daily Sessions.—All Representative Meetings not concluded by 6.30 p.m. shall stand adjourned either to 8 p.m. of the same day, or to the next day, as may be decided by a show of hands. All such Meetings shall stand adjourned at 10 p.m.

4. Varying Order of Business.—The order of business may be varied, either at the commencement or after the expiration of two hours from the commencement of any daily session, by the vote of two-thirds of those present and voting.

5. Precedence of Motions of which Notice Given.—Motions and amendments of which notice shall have been given to the Secretary of the Meeting in time for them to be circulated with the Minutes of the previous day's proceedings, shall have precedence, in the order in which such notice shall have been given, over those relating to the same subject, or otherwise having a like claim to precedence in the order of business, of which such notice has not been given.

6. Motions on the Same Subject.—If two or more of the motions placed on the Agenda of the Meeting by the Council and by Divisions and Branches shall appear to the Chairman to relate to the same subject he shall ascertain the will of the Meeting in respect of the consideration of one of such motions as an original motion, and of the others as amendments thereto, in such order as the Meeting may determine.

7. Motions on Subjects dealt with in Reports.—If a recommendation of the Council or of a Committee, or an amendment moved that a specified portion of a Report of the Council or of a Committee be not approved, shall appear to the Chairman to relate to the same subject as a motion placed upon the Agenda by the Council or by a Division or Branch, the Chairman shall ascertain the will of the Meeting as to the consideration of the said motion as an amendment to the adoption of the said recommendation, or to the approval of the said Report.

8. Resolutions Involving Special Expenditure.—Every Resolution involving special expenditure shall, before final adoption by the Representative Meeting, be remitted to the Finance Committee for report to a later Session.

(B).—*Special Representative Meetings.*

1. Read Authority for Convening Meeting.—Read the Resolution of Council, or the requisition from Divisions, in pursuance of which the Meeting is convened.

2. Notice of Substitutes.—Receive notices, if any, of the appointment of substitutes for Representatives.

3. Order of Business.—If the Meeting is convened to consider more than one matter, determine the order in which such matters shall be considered.

4. Special Business.—Consider the matters which the Meeting is specifically convened to consider, in order determined by the Meeting.

5. Minutes.—Confirm the minutes of the Meeting for presentation to the Council.

II.—COMPOSITION AND ARRANGEMENT OF THE MEETING.

1. Composition.—The persons constituting the Meeting, hereinafter called members of the Meeting, shall be those duly elected Representatives of Divisions, or substitutes

duly appointed under Article XXX and By-law 19. of whose election or appointment the General Secretary shall have received due notice, together with Members of Council for the time being.

2. Arrangement.—Distinctive seats shall be provided for the following groups of persons respectively, namely:

(A) Representatives of Divisions.

(B) Members of Council who are not Representatives of Divisions or Officers of the Association.

(C) Officers of the Association, present in virtue of their office, or at the request of the Meeting, for the assistance thereof.

(D) Members of the Association who are not Representatives of Divisions or Members of Council.

(E) Reporters representing such journals as may be authorized by the Chairman, subject to the approval of the Meeting.

3. Withdrawal of Strangers.—It shall be competent at any time for a member of the Meeting to move that persons who are not members of the Meeting be requested to withdraw, or that persons who are not members of the Association be requested to withdraw, but it shall rest in the discretion of the Chairman to submit or not to submit such motion to the Meeting.

III.—PROCEDURE.

1. Temporary Chairman.—In the absence of the Chairman of Representative Meetings, the Deputy-Chairman shall preside; or, if he be also absent, the Chairman of Council or the Treasurer, if present, shall take the chair, and call upon the Meeting to appoint a temporary Chairman.

2. Minutes.—Minutes shall be taken of the proceedings of the Meeting, and the same shall be duly entered in a book provided for the purpose. The Minutes of each daily session of the Annual Representative Meeting shall be printed and circulated to the members of the Meeting. Minutes (if) (when) printed in the Daily Journal of the Annual Meeting shall be deemed thereby to have been circulated as required by this order.

3. Attendance.—No Representative shall leave the Meeting without permission obtained personally from the Chairman at the time of leaving. If during any daily session of a Representative Meeting it shall at any time appear to the Chairman that a quorum is not present, the roll shall be called of Representatives appointed to attend the Meeting, and those Representatives who are found to be then absent, not having previously obtained leave from the Chairman, shall be deemed to have been absent from the said session. A list of members reported as absent from any daily session or sessions of a Representative Meeting shall be supplied at the close of such Meeting to the Chairman and shall by him be transmitted to the Council, together with such explanations of the cause of absence as any members so reported may have furnished to him in writing.

***4. Reports: Notice.**—Subject as hereinbefore provided, no Report by the Council, or by a Committee, to the Representative Meeting shall be considered by the Meeting unless it shall have been sent to the Divisions and published in the JOURNAL at least one month before such Meeting. The exceptions to this rule shall be—

(A) That the Council, and such Standing Committees, if any, as report direct to the Representative Meeting shall submit, in addition to their Annual Report, a Supplementary Report dealing with those matters of importance, arising subsequent to the issue of the Annual Report of the Council, or of such Committee, to the Representative Meeting, in which action has been taken, or action by the Representative Meeting is recommended.

* NOTE.—These Standing Orders were adopted to take effect from the close of the Annual Representative Meeting at Sheffield.

- (b) That any Special Committee appointed by the Representative Meeting shall report in accordance with the terms of the instructions given to such Committee by the Meeting.

*5. **Form of Reports.**—Reports of Council and Reports, if any, of Standing Committees, to the Representative Meeting shall comprise the following:—

- (A) A list of matters referred by the Representative Meeting to the Council or Committee.
- (B) Reports with specific recommendations upon all matters in which the Council or Committee considers that action should be taken involving a new declaration of policy or expenditure not already authorised.
- (C) A short report of all action taken by the Council or Committee in accordance with instructions of the Meeting.
- (D) A list of matters under consideration but not completed.

*6. **Presentation of Reports.**—The report of the Council or of a Committee shall be presented by the Chairman, or, in his absence, by a member, of the body submitting such Report, who shall move—

- (1) That the Report be received.
- (2) That the Recommendations, if any, be adopted.
- (3) That the rest of the Report be approved.

The adoption of each recommendation shall be the subject of a separate motion. The approval of the rest of the Report shall be moved as a whole, unless the Chairman rule or the Meeting resolve that the approval of each paragraph, or of any specified paragraph, be the subject of a separate motion.

*7. **Amendments and Riders.**—

- (1) To a motion that the Report be received, no amendment shall be moved.
- (2) To a motion that a Recommendation be adopted, amendments may be moved.
- (3) To a motion that a Report, or a specified paragraph of a Report, be approved, an amendment may be moved to the effect that the Meeting do disagree with, or do refer back to the Committee, any specified portion thereof, or that with reference thereto the meeting do express an opinion in terms state¹.

8. **Procedure as to Other Motions.**—Motions placed on the Agenda of the Meeting by the Council shall be brought before the Meeting by the Chairman of Council if present, motions so placed by a Branch shall be introduced by a member of Council elected by the Branch, and motions so placed by a Division shall be introduced by the Representative thereof.

9. **Absence of Authorized Mover of Adoption of Report or Other Motion.**—In the absence of any member authorized to make any motion referred to in Standing Orders III, 6 and 8, any other member deputed by such member may make such motion on his behalf, and if no member shall have been so deputed, such motion shall be made formally by the Chairman.

10. **Seconding Motions.**—No seconder shall be required for any of the motions referred to in Standing Orders III, 6 and 8. All other motions and all amendments shall be required to be moved and seconded.

11. **References to Central Executive.**—Each motion or amendment which is of the nature of an instruction or reference to any central executive body, other than a Committee specially appointed by the Representative Meeting, shall be moved in the form of an instruction or a reference to the Council.

12. **Rescission of Resolutions.**—No motion to rescind any resolution of a Representative Meeting, arrived at after due consideration of the Divisions, shall be in order at any subsequent Representative Meeting, unless at least two months' notice of such proposed motion shall have been given to the Divisions through the SUPPLEMENT to the JOURNAL.

13. **Time Limits of Speeches.**—(A) A member of the Meeting shall be allowed to speak for fifteen minutes in moving a resolution which does not require seconding, and for ten minutes in moving any other resolution, or any amendment. Except as aforesaid, no speech shall exceed five minutes.

Reducing Time Limit.—(B) The Meeting may at any period of any session reduce the time to be allowed to speakers, whether in moving resolutions or otherwise, during the remainder of such session.

14. **Mode of Voting—Show of Hands.**—Only Representatives of Divisions shall vote on any question before the Meeting.

Voting shall be by show of hands, except in the cases following, namely:

Vote by Card.—(A) If upon the Chairman proceeding to take the vote of the meeting upon any motion or amendment, any Representative of a Division shall move that the said vote be taken by card, and twenty Representatives rise in their places in support of such motion, the vote shall be taken by card, and the names of those voting for and against such motion or amendment, of those not voting, and of the Constituencies which they severally represent, shall be entered on the Minutes.

Division.—(B) If the Chairman, after taking a vote by show of hands upon any motion or amendment, shall be of opinion that the numbers of members voting for and against such motion or amendment are not thereby ascertained with sufficient accuracy, he shall have power to direct that the Meeting shall divide upon the said motion or amendment.

15. **Election of Committees.**—Nominations for election by the Representative Meeting of members of Standing Committees shall be handed in writing to the Secretary of the Meeting not later than the termination of the second day's proceedings. Each nomination shall be signed by the nominator and shall contain a declaration that the candidate nominated has agreed to serve. No member shall be eligible for nomination who having been a member of a Standing Committee during the previous year shall have failed to attend at least half the meetings of the Committee for that year. The names of all candidates duly nominated shall be included in a voting paper issued to each voter, and shall be arranged in three lists, one of those residing in England and Wales, one of those residing in Scotland, and one of those residing in Ireland. Each voter shall be entitled to vote for not more candidates than there are members to be elected, and of these not more than two-thirds of the total number shall be those of candidates in the English list, not more than one-fourth in the Scottish list, and not more than one-fourth in the Irish list. In counting the votes the candidates on the English list who have obtained the highest number of votes, being not more than one-half of the total number of members to be elected, the candidates on the Scottish list who have obtained the highest number of votes, being not more than one-fourth of the total number to be elected, and the candidates on the Irish list who have obtained the highest number of votes, being not more than one-fourth of the total number to be elected, shall be deemed to be elected. If any place on the Committee be still vacant, that candidate or those candidates shall be deemed to be elected who shall have obtained the highest number of votes, irrespective of the list in which the name of any such candidate appears. Scrutineers to conduct the election shall be nominated by the Chairman, and the details of the voting shall be placed before and verified by the Chairman before being declared to the Meeting.

¹ See Footnote, p. 275.

IV.—RULES OF DEBATE.

1. Every member shall be seated except the one who may be addressing the Meeting, and when the Chairman rises no one shall continue standing, nor shall any one rise until the Chair is resumed.

2. A member of the Meeting shall stand when speaking, and shall address the Chair.

3. A member who speaks shall direct his speech strictly to the motion under discussion, or to a motion or amendment to be proposed by himself, or to a question of order.

4. A member shall not address the Meeting more than once on any motion or amendment, but the mover of an original resolution may reply, and in his reply shall strictly confine himself to answering previous speakers, and shall not introduce any new matter into the debate; provided always that a Member may speak to a point of order, or, by consent of the Meeting, in explanation of some material part of a speech made by him, which he believes to have been misunderstood.

5. A motion or amendment once made and seconded shall not be altered or withdrawn without the consent of the Meeting.

6. An amendment shall be either—

To leave out words;

To leave out words and insert or add others;

To insert or add words;

or in such form as shall be approved of by the Chairman, provided always that the amendment be relevant to the motion on which it is moved, and be not equivalent to the direct negative thereof.

7. No notice of motion, or amendment to any motion before the Meeting, not already published, shall be considered by the Meeting until a copy of the same with the name of the proposer has been handed in in writing to the Chairman.

8. Whenever an amendment upon an original motion has been moved and seconded no second or subsequent amendment shall be moved until the first amendment shall have been disposed of, but notice of any number of amendments may be given.

9. If any amendment be rejected, other amendments may be moved on the original motion. If an amendment be carried, the amendment or motion as amended shall take the place of the original motion, and shall become the question upon which any farther amendment may be moved.

10. If it be proposed and seconded that the Meeting do now adjourn, or that the debate be adjourned, or that the Meeting do proceed to the next business, or that the question be now put, such motion shall immediately be put to the vote without discussion, except as to the time of adjournment, provided always that the Chairman shall have power to decline to put to the Meeting the motions that the Meeting do proceed to the next business, or that the question be now put.

11. A motion that the Meeting do now adjourn, or that the Meeting do now proceed to the next business, or that the debate be now adjourned, or that the question be now put, shall not be made within a period of one hour after a previous motion to the like effect, unless, in the opinion of the Chairman, the circumstances are materially altered.

12. Smoking shall not be allowed during such time as the Chairman is in the Chair.

V.—SUSPENSION OF STANDING ORDERS.

Any one or more of the Standing Orders, in any case of urgency, or upon motion made on notice given through the Daily Journal, may be suspended at any Meeting, so far as regards any business of such Meeting, provided that three-fourths of those present and voting shall so decide.

SUPP. 2

REPORT OF COUNCIL, 1908-9.

On the occasion of the Seventy-seventh Annual Meeting, your Council is able to congratulate the Association on the completion of the re-building of its Central Premises.

Owing to the foresight and prudence of those in the past, who worked so long and consistently to husband and consolidate the finances, it has been possible to build a Home worthy of the traditions of the Association, and thus secure a resort for members visiting London from all parts of the Empire.

At the first meeting of the Council in the new Council Chamber, the hope was expressed from the Chair, that under Divine guidance the British Medical Association might grow in wisdom and in strength, and that the deliberations and aims of the Association might make for the scientific advancement of the Medical Profession, for the honour and welfare of those who practise it, and for the health and happiness of all those throughout the British Empire who might be under its professional care.

THE BELFAST MEETING.

(1) Your Council has every reason to believe that the Belfast Meeting will afford Members much of interest, while those who attend are assured of a warm welcome.

Fifteen Sections are being organised for the scientific business of the meeting. Dr. R. W. Philip, Physician to the Royal Infirmary, Edinburgh, has accepted the invitation to give the Address in Medicine; Mr. A. E. Barker, Professor of Principles and Practice of Surgery, University College, London, the Address in Surgery, and Sir John Byers, Professor of Diseases of Women, Queen's College, Belfast, the Address in Obstetrics. The Popular Lecture will be given by Dr. J. A. Macdonald of Taunton, Chairman of Representative Meetings.

THE SHEFFIELD MEETING.

(2) Your Council cannot miss the opportunity of expressing on behalf of the Association its thanks to all those who worked so devotedly for the success of the Sheffield Meeting. The arrangements for the housing of the Sections in the magnificent University building were most complete, while the generous hospitality will for long be remembered by all Members who visited Sheffield.

DEATH OF THE PRESIDENT.

(3) It is with profound regret that your Council reports the death of the President of the Association, Mr. Simeon Snell. Not since the death of Sir Russell Reynolds, Bart., in 1896, has the Association had the misfortune to lose its President during his year of Office. A large and representative gathering assembled for the funeral at Sheffield, and your Council has conveyed to Mrs. Snell its appreciation of the work Mr. Snell accomplished during his strenuous life, and its sincere sympathy with her and family in their great bereavement.

DEATHS OF MEMBERS.

(4) Each year the Council has the melancholy duty to record the loss by death of many Members. Since the last Annual Meeting, the Association has lost, in addition to its President, three past presidents, Sir John Banks, K.C.B., who presided at the Dublin Meeting in 1887, Dr. W. A. Elliston, at the Ipswich Meeting in 1900, and Mr. C. G. Wheelhouse, at the Leeds Meeting in 1889. Also, Mr. George Eastes, for many years a Representative of the Metropolitan Counties Branch on the Central Council, and Dr. W. H. De Silva, a Representative of the Colombo Ceylon Branch.

The Council regrets also to report the death of Dr. Bertram L. Abrahams; Dr. Fredk. Henry Alderson; Mr. Robert Allen; Dr. John Archibald; Dr. Henry Ashby; Dr. Donald Harvey Atfield; Dr. Charles Ernest Baker; Mr. Harold Leslie Barnard; Dr. James Wm. Barrack; Dr. Charles Edward Beever; Lieut.-Col. Edward Bovill, M.D., I.M.S.; Dr. William Bowen-Davies, a Past President of the Shropshire and Mid Wales Branch; Dr. Sydney Shakspeare Broadbent; Sir Charles Gage Brown, K.C.M.G.; Dr. John F. Cullen Brown; Dr. Walter Brown; Mr. John Burns; Dr. D. T. Cadvan-Jones; Dr. Alan Eskridge Carruthers; Lieut. John Catto, I.M.S.; Dr. John Clague; Mr. Henry E. Clark, C.M.G.; Dr. John Brightman Copland; Dr. Charles Coppinger; Mr. Frederick S. Cowan; Dr. C. J. Cullingworth,

delivered the Address in Obstetrics and Gynaecology at the Newcastle Meeting in 1893; Dr. John Dewar; Dr. George Dickson; Dr. Thomas Orme Dunfield; Dr. Theodore Duka; Dr. Douglas John Dutton; Dr. Thomas Easton; Dr. Emily E. Eberle; Mr. E. W. Emtage; Dr. Thomas Evans; Sir Thomas Naghten Fitzgerald, C.B.; Surg.-Gen. Thomas William Fox; Dr. Samuel Griffith, Hon. Treasurer, North Wales Branch; Dr. Griffith Griffiths; Dr. George Halley; Professor David James Hamilton, F.R.S.; Surg.-Gen. Sir James Arthur Hanbury, K.C.B.; Dr. James Hardie; Capt. Frederick Hallam Hardy, R.A.M.C.; Mr. T. V. P. Hartigan; Mr. E. W. Henfrey; Mr. Matthew James Hewetson; Mr. John D. Hillis, Chairman East Leinster Division; Surg.-Major Thomas Holmested, I.M.S.; Dr. Alton Kingsley Holts; Mr. Thomas Garrett Horder, Member of Hospitals Committee; Dr. Peter Horrocks; Mr. James Brierley Hughes, the first Chairman of the East Cheshire Division; Mr. Joseph Henry Irvin; Dr. Arthur M'lyneux Jackson; Dr. Richard Arnold Johnston; Dr. John Talfourd Jones, President South Wales Branch, 1877; Dr. J. Hurd Keeling; Mr. John Kershaw; Lieut. Hubert Astley Knight, I.M.S.; Dr. Charles Knott; Dr. Alex. D. H. Leadman; Dr. Henry Collier Lecky; Dr. George Lorimer; Sir Arthur Vernon Macan, at one time President, Royal College Physicians, Ireland; Dr. Dove McCahman; Dr. Alex. Macdonald; Dr. William Mackie; Mr. S. B. G. McKinney; Dr. Hugh M. Montgomery, President, South Western Branch; Mr. Henry Cecil Moore, a former Hon. Secretary and Treasurer of the Worcestershire and Herefordshire Branch; Dr. J. J. Murphy; Dr. Alfred Robert Nicholls; Dr. John Tawse Nisbet; Dr. James Black Noble; Dr. Thomas Carlyle Parkinson; Mr. Edward Percy Paton; Dr. Edith Pechey-Phipson; Lt. Col. Francis Samuel Peck, I.M.S.; Dr. Robert Pollok; Dr. Henry J. Pringley, for several years Hon. Sec. of the Northwood Division; Dr. Frank Utten Purchas; Dr. Prior Purvis; Dr. Edwin Rickards, who held office as Secretary, Treasurer, and President of the Birmingham and Midland Counties Branch; Dr. A. G. Kider; Dr. J. J. Ridge; Dr. Argyll Robertson, formerly President of the Edinburgh Branch; Dr. John Robertson; Surg. Lt.-Col. Thomas Robinson, I.M.S.; Dr. Charles Henry Felix Routh; Dr. Roderick Sim; Dr. A. C. Festing Smith; Dr. Patrick Blaikie Smith; Mr. Alfred Temple Spanton; Mr. A. J. Balmano Squire; Dr. Samuel Hopkin Steel; Sir Thomas Stevenson; Mr. John Stewart; Mr. Michael Strahan; Brig.-Surg. George Sackville Sutherland; Dr. David Thompson, late President of the South Western Branch; Mr. Frederick Howard Tinker; Dr. John Cooper Torry; Mr. Basil Riddell Trevelyan Trevelyan; Mr. Wm. Knight Treves; Surg. Maj. Thomas John Tucker; Lt.-Col. Tuohy, I.M.S.; Dr. Charles Edward Underhill, for several years Secretary, and late President, of the Edinburgh Branch; Mr. George Edward Walker; Dr. George Watt; Dr. Frederick Wilson; Dr. Reginald Robert Wishaw; Dr. William Thomas Garrett Woodforde, late President of the Reading Branch; and Dr. G. P. M. Woodward.

MEMBERSHIP OF THE ASSOCIATION.

(5) On the 31st December, 1908, the total Membership of the Association was 21,163, a net increase of 39 over the corresponding date of the previous year. The withdrawals from membership in the year 1907 were somewhat abnormal, so for comparison the detailed figures of the three past years are recited:—

	1906.	1907.	1908.
New Members ...	2,171	1,527	1,023
Resignations ...	485	1,050	584
In arrears with Subscriptions ...	192	116	153
Deaths ...	225	227	244
Expulsion ...	2	2	3
Removed from Medical Register ...	1	-	0
	905	1,396	984
Net Increase ...	1,266	131	39

Your Council regrets in view of all the Association is endeavouring to accomplish on behalf of the Medical Profession that the increase in the membership has not been more marked.

MEDICAL BENEVOLENT INSTITUTIONS.

(6) During the year ending 31st December, 1908, a total sum of £1,014 was received through the office of the Association on behalf of the British Medical Benevolent, the Epsom College, and the Irish Benevolent Funds. Your Council takes the opportunity of appealing to Members to provide increased financial support to these deserving charities.

THE FINANCIAL STATEMENT, 1908.

(7) The Financial Statement for the year ending 31st December, 1908, demonstrates that the demands on the financial resources of the Association are undiminished.

Taking the Balance Sheet, the Liabilities, other than the loan from the Bank for the re-building of the central premises, are less by some £150 than in 1907, while it is satisfactory to note no overdraft appears on the current account. Of the Assets, less subscriptions are outstanding, but £250 more for advertisements remain to be collected. The Plant and Type stands in the books at a higher figure by £500, due to large additions during the year, while the cash at the Bank was £500 more than at the close of 1907. Of the Investments, the properties in the Strand remain at the same figure, while the Bank of England and Midland Railway Stocks are valued at their market price on the 31st December last.

The Profit and Loss Account.

Of the various heads of expenditure full details of which are recited under their respective schedules, the collected increases represent nearly £1,600. In addition, owing to the re-building of the Central Premises it has been considered prudent to write off an additional £250 from the old furniture and fittings. Of the Investments it has not been necessary to write off as much as in 1907, but as it is, the Association, in common with many similar bodies, has to recognise a further shrinkage in first class securities. After making allowance for such depreciation, there is left on the year's working £732 to carry to reserve. In doing this no provision has been made out of the current revenue for interest on the loan from the Bank for the new premises. In the opinion of your Auditors, while re-building was in operation such a charge might fairly be deducted from surplus, in future any such charge must be met from current revenue.

In examining the Receipts, Subscriptions have increased by nearly £100, while the Journal Account shows an increase of £1,000. The return from Investments and Rents shows a drop. Rents were nil, while little interest on current revenue was made, all available cash being used to relieve the new premises account. By so doing the new premises account was saved some £130 in the way of interest.

The Stocks produced the same return as in former years.

General Association Expenses (Abstract A).

Legal expenses are £140 less: but it will be remembered these were heavy in 1907. This decrease practically balances against the grant of £150 to the Contract Practice Committee of South Wales and Monmouthshire Branch.

Central Meeting Expenses (Abstract B).

The production of the Daily Journal at Sheffield cost more, being influenced by the larger attendance of Members. The Representative Meeting railway fares show £300 less, but in 1907 there was the additional Special Meeting. The printing shows an increase of £270. This was particularly heavy at Sheffield, and in addition is included the printing of the Exeter Minutes, which, owing to delay, were not ready in 1907. The Council expenses show a small decrease. The item of £29 for railway fares of Branch and Division Secretaries for attendance at the Secretaries Conference appears for the first time.

Committees (Abstract C).

Committee expenditure reached a sum of over £1,900, an increase in round figures of £300; the details of each Committee are shown in the Abstract E. The total railway fares show an increase of £120, and the printings an increase of £135.

The total number of pages printed in the Minutes of the Council and all Committees for the year was 1,430 pages, an increase of 392 pages. The Committees increased 226 pages, while the presentation to the Council of Minutes in the form of Quarterly Reports represented 146 pages.

Central Premises Expenses (Abstract C).

The increase is due to the item of rent. In 1907, the Association paid rent only for nine months.

Central Printing, Stationery, and Postage Expenses (Abstract D).

The expenditure under this head shows little variation. It is realised that every endeavour should be made to keep down unnecessary expenditure for postage and stationery.

Central Staff Expenses (Abstract E).

The total charges under this head remain the same. Owing to the death of the late General Secretary and Manager, the item for Pension is less by £300.

Library Account (Abstract F).

During the year the bulk of the Library has been warehoused. After writing off £200 for depreciation this stands at a total value of £2,007.

Journal Account (Abstract G).

The cost of producing the JOURNAL shows an increase of £1,100 for the twelve months. The analyses of Secret Remedies have involved considerable outlay, representing an increase of £150. Members will generally recognise that the information published about secret remedies is of very considerable interest and importance to the profession. Contributions and reporting show an increase of £130, influenced by the larger number of Sections at Sheffield and by Parliament sitting for an Autumn Session.

The Managerial expenses show an increase of £730. During the year the circulation of the JOURNAL has gone up. There has been an increase of eighty literary pages, twenty pages in the Supplement, and one hundred and twenty-four advertisement pages. This involved additional expenditure in wages, printing and despatch, paper and postage.

The JOURNAL revenue, both from advertisements and sales, shows steady and sustained progress all round. This is satisfactory when other newspapers are still complaining of considerable shrinkage on the revenue derived from advertisements.

Out of the total receipts for the JOURNAL the loss for bad debts represents less than one-eighth per cent.

New Premises Account.

During the year £27,231 were paid in connection with the re-building of the central premises. With sums previously disbursed the amount standing to the debit of the New Premises Account on 31st December, 1908, was £38,586.

The Financial Outlook.

Once again your Council would repeat its warning of the last two years that the finances of the Association require very careful nursing until the benefits of the re-building scheme are an accomplished fact. The revenue from the JOURNAL has shown remarkable vitality at a time when newspaper proprietors have had much cause for anxiety—nevertheless, such revenue is liable to fluctuate considerably. The Association, like any other public body, must stand or fall by the soundness of its financial position. It demands upon the resources of the Association continue to grow in the same degree, the most important question Members will have to decide is, not so much what the Association is going to do, but how it is going to do it.

ESTIMATE OF INCOME AND EXPENDITURE FOR 1909.

(9) In submitting an estimate of Receipts and Expenditure for the current year, it will be observed that if the expenses are to go on in a like ratio, and provided no rent is derived from the ground floor and basement of the new premises, there is an estimated deficit of £750.

EXPENDITURE.

	£
General Association Expenses	2,550
Central Meeting Expenses	4,000
Central Premises Expenses	1,100
Central Printing, Stationery, and Postages	1,250
Central Staff Expenses	5,000
Library	500
JOURNAL Account	33,500
Capitation Grants to Branches	2,250
Arrears of Subscriptions	300
Depreciation of Furniture, Plant, and Type	1,000
Interest on Loan for New Premises	1,600
	<hr/>
	£53,650

RECEIPTS.

	£
Subscriptions	26,750
Advertisements	22,000
Sundry Sales of Journals, etc.	2,700
Investments	300
Discounts on Purchases of Paper	1,000
	<hr/>
	£52,000

ESTIMATED DEFICIT	750
	<hr/>
	£53,650

APPORTIONMENT OF MEMBERS' SUBSCRIPTIONS.

(9) The following shows how the subscription of 25s. has been apportioned for defraying the expenses of the Association for the year ending December 31st, 1908. Details of expenditure under each head are given in the various schedules of the Financial Statement for the year:—

	£	s.	d.	£	s.	d.
General Association Expenses	2,197	0	0	1	10	
Central Meeting Expenses	3,706	0	0	4	0	
Central Premises	1,524	0	0	1	4	
Printing, Stationery and Postage	1,161	0	0	1	1	
Library	500	0	0	0	2	
Central Staff Expenses	4,504	0	0	4	2	
JOURNAL and Supplement (Advertisements, &c., £23,259)	6,897	0	0	5	8	
Written off Subscriptions	912	0	0	0	9	
Written off for Depreciation of Investments, Plant and Type, Library, Furniture and Fittings	1,581	0	0	1	4	
Carried to Surplus	752	0	0	0	8	
	<hr/>			<hr/>		
	24,473	0	0	1	10	
Capitation Grants to Branches	2,750	0	0	4	0	
	<hr/>			<hr/>		
	£27,223	0	0	1	5	0

THE BRITISH MEDICAL JOURNAL.

(10) Your Council has during the past year continued the policy with regard to the JOURNAL of the Association which has proved so successful in the past. The aim is to render the BRITISH MEDICAL JOURNAL a periodical useful to the Members in their daily avocations, and worthy to continue to hold the high place which it has won among the chief medical journals of the world. The variety of interests which occupy the attention of medical men is reflected in its pages, and though the greater part of its space is properly given to topics concerning the actual practice of Medicine, curative or preventive, matters affecting the social and material interests of the Profession constantly receive notice. As an example, reference may be made to the full account published immediately after its issue of the duplex Report of the Royal Commission on the Poor Laws and the Relief of Distress, which contained in both parts recommendations calculated to revolutionize the Poor Law Medical Service, and to establish a more extended system of state aid on a provident basis. The institution of medical inspection of school children has produced a mass of material of the greatest interest, both practical and clinical. And the importance of the report of the special committee of experts to the London Education Committee (dealing with general principles) made it desirable to give a full account of its recommendations, and of the reasons for them. In June a special number was devoted to questions affecting the planning, administration, and financial support of Voluntary Hospitals, a subject which closely affects medical interests, educational, social, and pecuniary. An attempt was made to show the advantages of the uniform system of hospital accounts, as illustrated by the hospitals in London, where the influence of King Edward's Fund has made the system practically compulsory. But it has not been possible, as was hoped, to extend the analysis to the hospitals in other centres, as few or none of them have yet seen the propriety of adopting the uniform system settled by the experts whose services were enlisted by the King's

British Medical Association.

Balance Sheet 31st December, 1908.

Dr.

Cr.

LIABILITIES.

	£	s.	d.
To Subscriptions paid in advance	424	10	4
" Advertisements ditto	822	10	11
" Contributions	850	11	3
" Reporting	34	8	10
" Engraving	113	13	5
" Printing Journal	438	13	2
" Paper for Journal	740	10	11
" Miscellaneous Printing	445	18	8
" Stationery	167	4	7
" Repairs	0	0	0
" Legal Charges	180	17	3
" Rates and Taxes, Insurance and Electricity and Rent	387	18	7
" Plant and Type	26	17	2
" Editorial Expenses	36	15	10
" Sundries	50	2	0
" Library Books, &c.	32	8	0
" London and Westminster Bank Amount of Loan at December 31st, on Account, of New Building, secured by Deposit of Deeds of Freehold Property	...	...	...
" Subscriptions due to Branches, December 31st, 1908	...	...	...
TOTAL LIABILITIES	...	...	...
" OFFICE STAFF SUPERANNUATION FUND—			
Amount Invested per contra	...	...	...
Surplus Account—			
Balance on January 1st, 1908	104,400	4	10
Balance of Income over Expenditure for 1908 brought from Revenue Account	732	16	7
Less amount incurred for Warehousing Books, Furniture, &c. and Interest on Loans, &c.	104,323	1	5
Balance being total of Excess of Assets over Liabilities	1,008	11	7

103,814 9 10
 £103,814 16 6

ASSETS.

	£	s.	d.
By Subscriptions in arrears
" Advertisements
" Sundry Sales
" Furniture and Pictures
" Library
" Plant and Type
" Stock of Paper in hand for printing Journal
" Cash at Office
" Cash at London and Westminster Bank (being Branch Subscriptions in hand December 31st, 1908)
" Cash at Lorton and Westminster Bank on Current Account
INVESTMENTS—			
" Freehold Site, 429, Strand, Agar Street, and Harvey's Buildings, as at 31st December, 1908, being the original cost
" Amounts Expended on New Building to December 31st, 1908
" £2,300 Bank of England Stock @ 288
" £6,400 Midland Railway 2½ Perpetual Guaranteed Preferential Stock @ 72
" OFFICE STAFF SUPERANNUATION FUND—			
Investments as per Separate Account
Cash at Bank

(The above Assets do not include the unexpended balances of Capitalisation Grants held by the various Branches.)

£103,814 16 6

Revenue or Profit and Loss Account for the Year ending 31st December, 1908.

	1907.			1908.		
	£	s.	d.	£	s.	d.
General Association Expenses
Central Meeting Expenses
Central Premises Expenses
Printing, Stationery and Postage Expenses
Central Staff Expenses
Library
Account Expenses
Organization Grants to Branches
Quarterly Grants to Branches
Subscription Written off for Deaths, Arrears, &c.
Library—Written off towards Depreciation
Plant and Type—Ditto
Furniture and Fittings—Ditto
Investments—Ditto
Balance of Income over Expenditure carried to Balance Sheet...

General Association Expenses.

	1907.	1908.
Authors' Fee ...	105 0 0	105 0 0
Bank Charges ...	94 3 8	97 10 2
Research Scholarships ...	245 3 1	258 7 0
Scientific Grants ...	348 0 0	359 0 0
Office-Petty Cash ...	14 2 10	159 18 5
Stationery and Post ...	...	150 0 0
Subscriptions ...	169 0 11	175 13 5
Sundry ...	...	...
	£2,210 11 6	£2,157 19 8

Abstract A.]

Central Meetings Expenses.

	1907.	1908.
ANNUAL MEETING—Cost of Daily Journal ...	101 17 7	143 10 0
Expenses of Services ...	68 17 2	269 7 2
REPRESENTATIVE MEETINGS—		
Printing ...	575 13 1	597 1 10
Hotel and Refreshments ...	43 13 1	514 18 0
CONVENT—		
Printing ...	603 18 11	591 9 10
Reporting ...	100 5 6	80 13 1
Railway Fares ...	69 6 0	40 13 6
Railway Fares to Secretaries and Divisions ...	803 10 5	717 12 5
	1,836 14 3	2,297 6 6

Committees.

Arrangements Committee—		
Railway Fares ...	24 11 2	43 12 0
Miscellaneous Printings ...	6 7 9	11 4 0
Capital Bazaar Committee—		
Railway Fares ...	103 1 1	150 17 10
Miscellaneous Printings ...	61 11 5	79 2 5
Chilwell Committee—		
Railway Fares ...	1 4 8	2 15 8
Colonial Committee—		
Railway Fares ...	4 10 6	0 0 0
Miscellaneous Printings ...	...	2 9 6
Electron Returns Committee—		
Railway Fares ...	3 6 0	...
Miscellaneous Printings ...	11 8 6	...
Hospitals Committee—		
Railway Fares ...	85 11 6	74 19 2
Miscellaneous Printings ...	18 3 6	19 2 6
Irish Committee—		
Railway Fares ...	79 0 0	56 12 8
Miscellaneous Printings ...	4 2 3	6 8 0
Carried forward ...	82 2 2	2,257 2 2

Committees—continued.

Journal and Finance Committee—		
Railway Fares ...	67 15 10	...
Miscellaneous Printings ...	36 4 6	136 0 10
Medical Political Committee—		
Railway Fares ...	210 14 7	...
Miscellaneous Printings ...	88 0 6	298 15 1
Naval and Military Committee—		
Railway Fares ...	13 5 2	12 17 5
Miscellaneous Printings ...	9 5 0	6 6 6
Ophthalmic Neostrophium Committee—		
Railway Fares ...	...	...
Organisation Committee—		
Railway Fares ...	119 9 4	197 1 6
Miscellaneous Printings ...	168 19 3	125 3 3
Permanent Assistant Medical Secretary Committee—		
Railway Fares ...	275 8 7	...
Miscellaneous Printings ...	...	...
Poor Law Inquiry Committee—		
Railway Fares ...	43 16 11	...
Miscellaneous Printings ...	1 1 0	49 17 11
Promises Committee—		
Railway Fares ...	28 18 9	31 4 6
Miscellaneous Printings ...	...	...
Public Health Committee—		
Railway Fares ...	22 4 6	56 10 6
Miscellaneous Printings ...	12 4 5	15 4 6
Referendum Committee—		
Railway Fares ...	16 14 8	...
Science Committee—		
Railway Fares ...	69 19 1	115 8 2
Miscellaneous Printings ...	25 16 0	21 12 3
South Committee—		
Railway Fares ...	49 32 6	21 2 8
Miscellaneous Printings ...	10 0 0	2 0 6
Special Finance Enquiry Committee—		
Railway Fares ...	15 4 6	...
Miscellaneous Printings ...	22 11 9	50 13 0
Therapeutic Committee—		
Railway Fares ...	38 4 3	...
Uterine Cancer Committee—		
Railway Fares ...	52 11 1	...
Miscellaneous Printings ...	...	...
United Kingdom Hospital Conference—		
Railway Fares ...	13 15 11	21 16 4
Miscellaneous Printings ...	4 11 0	43 19 6
Paper for Miscellaneous Printing in connection with Committees ...	18 8 11	65 14 10
	60 0 0	75 0 0
	£3,418 1 8	£3,706 19 7

Library Account.

	£	s.	d.	£	s.	d.
To Balance	2,176	8	6	250	0	0
" Purchase of Books	83	6	8	0	2	9
" Binding Books	28	3	5	...	...	...
" Librarian's Salary	250	0	0	...	...	...
" Printing and Postage of Circulars	6	2	9	...	...	...
	£2,551	1	1	£2,551	1	1

By Librarian's Salary ...
 " Printing and Postage of Circulars ...
 Amount written off for Depreciation ...
 Balance carried to Balance Sheet ...

Abstract E.]

JOURNAL ACCOUNT.

Income and Expenditure Account for the year ending 31st December, 1908.

	1907.	£	s.	d.	1908.	£	s.	d.
EDITORIAL.								
Salaries—Editor	1,500	0	0	1,000	0	0	21,056	10 11
" Assistant Editor	282	10	0	750	0	0	2,423	1 8
" Sub-Editor	431	8	0	300	0	0	87	17 11
" Clerical Staff	3,399	8 2		461	12	6	199	7 5
Contributions and Reporting	225	15	6	3,430	19	1	40	4 0
Engraving	7	6	10	242	13	9	943	11 0
Legal Expenses	68	0	0	4	1	2	1,030	17 5
Postage	130	2	0	72	10	0	25,259	11 0
Analyses	150	15	7	213	3	0	...	...
Travelling Expenses, Papers, &c.	23	7	0	154	0	3	...	...
Advance Ship's Circulation to the Press	...	...	...	31	4	9	...	...
	£6,280	16	2	£6,675	4	9	...	...
MANAGERIAL.								
Journal—Compositors' Wages, Machining, &c.	8,142	8	11	8,492	4	0	...	...
" Paper	5,109	11	0	2,668	5	4	...	...
Supplement—Compositors' Wages, Machining, &c.	970	3	8	992	0	0	...	...
" Paper	4,269	11	5	597	5	0	...	...
Postage for dispatch of JOURNAL	1,483	5	3	4,424	1	0	...	...
Advance for Issuing JOURNAL	1,922	2	0	1,979	2	0	...	...
Proportion of Managers' and Clerks' Salaries	115	0	0	112	10	0	...	...
General Postage	25	0	0	30	9	9	...	...
General Printing	112	15	10	148	15	2	...	...
Reprints	109	0	0	112	0	0	...	...
Stationery (Folgers, Letter Boxes, &c.)	14	9	2	19	10	0	...	...
Travelling Expenses	19	10	9	10	10	0	...	...
Compositors' Sick Fund	15	0	0	19	10	0	...	...
Sundries	...	...	...	...	...	...	6,778	2 1
	£22,057	13	1	£33,155	19	6	6,897	12 2

Balance, expended in cost of production and issue of the Journal out of the Revenue of £29,717 16s. 7d. derived from Subscriptions to the Association ...

£22,057 13 1
 £33,155 19 6

Cr.

EDWIN RAYNER,
Honorary Treasurer.
GUY ELLISTON.

Fund. The publication of analyses of proprietary remedies, commonly called patent medicines, has been, for the present at any rate, concluded. The information, slightly abbreviated in some cases, has been collected in a volume which it is believed will be useful to the Profession, and possibly instructive to those members of the public who desire enlightenment. It will have been observed that the drugs or herbs of which these much vaunted preparations are found on analysis to be composed, are, with hardly an exception, of the most ordinary, and usually of the most old-fashioned kind. The contrast between the promises and prices of the advertiser, and the nature and prime cost of the ingredients he uses, can hardly fail to produce some effect upon public opinion. Among the quacks who prey upon the public none perhaps is more deserving of reprobation than is he who professes to possess a secret and infallible cure for cancer. A couple of years ago a report of the analytical examination of a series of such remedies was published, showing that they consisted for the most part of preparations containing such drugs as zinc sulphate, alum, and iron chloride. Last autumn evidence was obtained that another cancer cure, exploited by so-called herbalists in South Wales, consisted of two preparations, the one containing zinc chloride, and the other turpentine. A clinical report of one of the cases thus treated was published, together with a special plate, showing the superficial escharotic effect of the applications.

In nearly every issue of the JOURNAL one or more Clinical Lectures or Addresses have been published, and the great mass of material furnished by the sections of the Annual Meeting, which is largely clinical in its character, was published during the third and fourth quarters of the year, the printing being completed in the issue of October 31st.

The Supplement, which has been issued weekly, in addition to the Reports of the proceedings of the annual Representative Meeting, Meetings of Branches and Divisions, and Reports issued by the various central Committees of the Association, has contained much other matter of a semi-official character, including copies of Acts and Bills of special interest to the Medical Profession, and reports of the proceedings of the General Medical Council and of the Central Midwives Board.

COMMITTEES.

(11) The Association is again indebted to the Chairmen and Members of the many Committees and Sub-Committees for their labours during the past year. No praise can be too high for the hard and ungrudging work which has been expended upon the many complicated problems that have received attention, a proof, if any were needed, of the willingness with which busy men are ready to devote their time and talents in the unpaid service of advancing and protecting the interests of the public and of their medical brethren.

Form of Report.

(12) In the preparation of the following portion of the Report the Council has followed the arrangement of matter indicated by the Standing Order adopted by the Representative Meeting at Sheffield:

Reports of Council, and Reports, if any, of Standing Committees, to the Representative Meeting shall comprise the following:—

- (a) A list of matters referred by the Representative Meeting to the Council.
- (b) Reports with specific Recommendations upon all matters in which the Council or Committee considers that action should be taken involving a new declaration of policy or expenditure not already authorised.
- (c) A short report of all action taken by the Council or Committee in accordance with instructions of the Meeting.
- (d) A list of matters under consideration but not completed.

For convenience the matters under the head (a) are arranged in the order of the Minutes of the Meeting, reference being given to the paragraphs of the Report in

which will be found the statement of action taken to give effect to the instructions.

The Reports under the heads (b), (c), and (d) are classified under the names of the Committees which respectively advise the Council upon the matters in question.

(13) LIST OF MATTERS REFERRED.

<i>Minute of A.R.M.</i>	<i>Subject and Committee to which it was referred.</i>
71A	Medical Certification of Hospital Patients. Hospitals Committee. (See paragraph (23).)
120	Definition of Nursing Home. Hospitals Committee. (See paragraph (24).)
126	Advising Representative Meeting of questions of Finance. Journal and Finance Committee. (See paragraph (35).)
143A	Opening of Fresh Public Medical Institutions. Hospitals Committee. (See paragraph (26).)
143B	Representation of Local Medical Professors on Boards of Hospitals, &c. Hospitals Committee. (See paragraph (27).)
144, 148-9	Proposed Out-patient Department, King's College Hospital. Hospitals Committee. (See paragraph (30).)
150	Contributions to Hospitals by Employers and Employees. Hospitals Committee. (See paragraph (28).)
151	Hampstead Hospital Dispute. Hospitals Committee. (See paragraph (31).)
170 and 171	Circular to Non-members of the Association. Organisation Committee. (See paragraph (67).)
173	Addresses to Medical Students. Organisation Committee. (See paragraph (69).)
185 and 192	Vaccination. Public Health Committee. (See paragraph (76).)
193	Whole-time Medical Officers of Health. Public Health Committee. (See paragraph (72).)
201	Scheme of Probable Dates for Matters referred to Divisions. Organisation Committee. (See paragraph (68).)
203	Medical Sociology. Medico-Political Committee. (See paragraph (41).)
339	Proxy Voting (in Charter) for Colon Branches. Organisation Committee. (See paragraph (66).)
473 to 564	Recommendations of Special Finance Committee. Journal and Finance Committee. (See paragraph (35).)
	Organisation Committee. (See paragraph (64).)
561	Alteration of By-laws in accordance with Recommendation of Special Finance Committee. Organisation Committee. (See paragraph (64).)
566	Charter (General Instructions). Organisation Committee. (See paragraph (65).)
623 to 630	Report on Pure Consultants. Central Ethical Committee. (See paragraph (18).)
635	Definition of term "Hospital." Central Ethical Committee. (See paragraph (16).)
640	Medical Authors not to re-publish Articles from medical journals without sanction of Editor. Central Ethical Committee. (See paragraph (15).)
644	Relation of Homeopaths to the Association. Central Ethical Committee. (See paragraph (18).)
648 and 649	Medical Practice and Chemist's Business in same house. Central Ethical Committee. (See paragraph (17).)
674	Sanatoria for Workers. Hospitals Committee. (See paragraph (29).)
676	Gratuitous Treatment of Rate-Maintaining Patients. Medico-Political Committee. (See paragraph (47).)
682 and 683	Amendment of Notification of Births. Medico-Political Committee. (See paragraph (42).)
685, 686, 688	Nurses Registration Bill. Medico-Political Committee. (See paragraph (43).)

Minute of A.R.M.	Subject and Committee to which it was referred.
692	Security of Tenure for Medical Officers of Health. Public Health and Medical Political Committees. (See paragraph (73).)
693	Infant Life Protection Bill. Medico-Political Committee. (See paragraph (44).)
703, 702	Coroners' Law and Methods of Coroner for S.W. London. Medico-Political Committee. (See paragraph (45).)
703	Special Tribunal for Medico-Legal Cases. Medico-Political Committee. (See paragraph (45).)
713, 718	Medical Inspection of School Children. Medico-Political Committee. (See paragraph (36).)
720	Medical Inspectors of Schools under the guise of Assistant Medical Officers of Health. Medico-Political Committee. (See paragraph (36).)
731 and 732	Treatment of Children found on Inspection to be Defective. Medico-Political Committee. (See paragraph (36).)
734 to 737	Medical Examinations for Life Insurance. Medico-Political Committee. (See paragraph (49).)
744, 745	Payment of Medical Practitioners called in by Midwives. Medico-Political Committee. (See paragraph (46).)
758	Metric System in Medicine. Medico-Political Committee. (See paragraph (48).)
760 and 762	Castleford case. Public Health Committee. (See paragraph (75).)
763 and 766	By-laws as to Standing Committees, Organisation Committee. (See paragraph (64).)

(A) CENTRAL ETHICAL COMMITTEE.

(4) The Central Ethical Committee has held five meetings at the Annual Representative Meeting, 1908.

REPORT WITH RECOMMENDATIONS.

Re-publication of Articles appearing in Medical Journals.
With reference to Minute 640 of the Annual Representative Meeting, as follows:—

That, with reference to Resolution 3 of the International Association of the Medical Press, it be an instruction to the Committee that steps be taken to secure that authors themselves shall not publish such articles without having previously obtained the sanction of the editor or publisher of the Medical Journal,

Council submits the following Recommendation:—

Recommendation.

That it is the professional duty of Medical Authors of articles in Medical Journals to co-operate with the proprietors and editors of those Journals in preventing any improper use of such articles for purposes of advertisement.

ACTION TAKEN UNDER INSTRUCTIONS OF REPRESENTATIVE MEETINGS.

(16) Definition of term "Hospital."

The Annual Representative Meeting last year referred for consideration the definition of the term "Hospital" proposed by the Committee. After consultation with the Council taking exception to the former definition, the Council reports that, in view of the difficulties of framing a comprehensive and satisfactory definition, it has decided to abandon the attempt.

(7) Medical Practice and Chemist's Business carried on in the same House.

This matter was also referred for further consideration at the last Annual Representative Meeting. The Council reports that after consideration of the general principle involved in the paragraph referred back, it adheres to the opinion therein stated, namely:—That there would be no objection to the practice of a medical man being

carried on in the same house as a chemist's business, provided that the parts of the house used for these purposes be entirely separate, and that the business be not used to advertise the practice."

INSTRUCTIONS UNDER CONSIDERATION.

(18) Recognition of Special Class of Consultants and Relation of Homœopaths to the Association.

The Committee has still under consideration the preparation of reports on the following subjects, in accordance with Minutes 623 to 630 and 644:—Recognition of a Special Class of Consultants and the Relation of Homœopaths to the Association.

OTHER MATTERS CONSIDERED.

(19) Revision of Model Ethical Rules.

The revision of Model Ethical Rules is receiving the careful consideration of the Central Ethical Committee, and the Council hopes soon to be in a position to circulate them to the Divisions for their consideration.

(20) Cases.

(a) The Committee has considered four cases in which application was made to the Association to bring before the General Medical Council questions of conduct of members of the profession. Each case was carefully considered with the assistance of the Solicitor of the Association, and the Central Ethical Committee advised that the evidence obtainable did not establish such a *prima facie* case as to justify the Association in appearing as Complainant before the General Medical Council.

(b) Of the large number of other cases affecting individual Members of the Association, and other members of the Medical Profession, which have been dealt with by the Central Ethical Committee during the Session, in accordance with its reference under the By-laws, none has involved new questions of principle of such importance as to require report to the Representative Meeting.

(B) CHLOROFORM COMMITTEE.

(21) The work is being completed by the compilation of a final Report which is intended to focus the whole of the work of the Committee. It will also contain an account of work done outside the Committee which is germane to the Committee's reference.

This work is as yet uncompleted, but is in course of preparation.

(C) COLONIAL COMMITTEE.

(22) The Colonial Committee has not met since the last Annual Representative Meeting, no new subjects having been referred to it. In reply to inquiries made of the Honorary Secretary of the New South Wales Branch it appears that, a favourable opportunity not having presented itself, no further action has been taken in the matter of Medical Legislation mentioned in the last Report of the Committee.

(D) HOSPITALS COMMITTEE.

REPORTS WITH RECOMMENDATIONS.

(23) Medical Certification of Suitability of Patients for Admission to Hospitals.

Having considered the following instruction:—

Minute 71 (a). That the Council be instructed further to consider and report on the subject of medical certification of suitability of patients for admission to hospitals,

the Council issued a report to the Divisions in February (see BRITISH MEDICAL JOURNAL Supplement, February 27, 1909) containing the following Recommendation, which is submitted for the approval of the Representative Meeting:—

That a definite pronouncement be made by the Representative Meeting on behalf of the Association, as follows:—

Recommendation.

"That a medical certificate of suitability for hospital treatment be required as a condition of hospital treatment, except in case of casualties."

(24) Definition of a Nursing Home.

In response to the instruction to the Council (Minute 120) to provide a definition of a Nursing Home, the Council recommends:—

Recommendation.

That the Representative Meeting approve the following definition:—

"A 'Nursing Home' is an institution in which patients are received for medical care under the attendance of medical practitioners selected by themselves, and where the patients are responsible to the home for charges for maintenance and nursing, and to the medical practitioners for their fees."

ACTION TAKEN UNDER INSTRUCTIONS OF THE REPRESENTATIVE MEETING.

(25) In accordance with Resolutions 143a, 143b, and 150 of the Annual Representative Meeting, the subjects of the following Motions have been referred, with explanatory Memoranda, to the Divisions, and the Reports upon them will be submitted after consideration of the replies:—

(26) Fresh Public Medical Institutions.

That it is desirable that no fresh Public Medical Institution should be opened without previous consultation with the local Profession through some organised body such as the Division of the British Medical Association in the area of which it is proposed to establish such new Institution, and that it be an instruction to the Council to give effect to this principle in considering applications from Divisions or Branches for support in dealing with Hospital questions.

(27) Representation of Local Medical Profession on Boards of Hospitals and Similar Bodies.

That in the interests of Hospitals and their work it is desirable that medical practitioners should nominate representatives for election to Boards of Management of Hospitals in their respective localities, and that such nominations should be carried out by an organised professional body such as a Division of the British Medical Association;

That on all bodies formed to promote or control medical assistance for the sick, and which receive public subscriptions, there should be adequate direct representation of the medical profession resident in the district or districts affected;

2. That the conduct of the nominations and election of such representatives can be best carried out by the British Medical Association through its Branches or Divisions, as the case may be, on a scheme approved of by the members of the Medical Profession resident in the district or districts likely to be effected;

(28) Contributions to Hospitals by Employers of Labour and Employees.

(a) That the contributions to hospitals by employers of labour and employees, by means of weekly collections and otherwise, should be considered as being the payment of premiums for a proportionate insurance against liability for medical and hospital attendance in cases of serious illness and accident which are made on behalf of those unable themselves to pay directly or adequately for the same; and not as entitling the contributors to unlimited hospital as also gratuitous medical attendance as at present seems to be claimed.

(b) That it be an instruction to the Central Hospitals Committee of the Association to endeavour, through the Divisions and otherwise, to obtain acceptance for this principle by the several parties concerned, with a view to elaborating some scheme whereby these contributions should be paid to the rightful parties, viz. Insurance Companies, who in their turn will proportionately recompense Hospital and similar Boards, Hospital Staffs, General Practitioners, &c., for all attendances given on illnesses or accidents incurred by those so insured, reporting from time to time to this Body.

(29) National Association for Sanatoria for Workers Suffering from Tuberculosis.

The following pronouncement of the Representative Meeting has been circulated for the information of the Divisions:—

Minute 674.—That, in the opinion of the Representative Meeting, it is not advisable that Members of the Association should in future accept or continue to hold appointments as Honorary Local Medical Referees to the National Association for the Establishment and Maintenance of Sanatoria for Workers suffering from Tuberculosis, and that the Divisions be requested to consider the matter as affecting any of their own Members, or other practitioners in their respective areas, who may hold such appointments.

(30) Proposed Out-Patient Department, King's College Hospital.

In accordance with the instruction (Minute 145) to give effect to the Resolution of the Representative Meeting (Minute 144), approving and supporting the Resolution passed at a meeting of South London Practitioners on April 30th, 1908, concerning the out-patient department of King's College Hospital, the Council has entered into correspondence with the Medical Committee of King's College Hospital with a view to bring about amicable relations between the Hospital and the general body of Medical Practitioners in its neighbourhood. The matter is still under consideration.

(31) Hampstead Hospital.

For the purpose of carrying out the instruction of the Representative Meeting (Minute 151):

That the Council consider how support can best be given to the Division in its endeavours to retain at least a portion of the hospital as a purely local institution, in which patients can be attended by their own medical attendants, whether in free or pay beds,

the Council has delegated to the Hospitals Committee the duty of negotiating to bring about an amicable solution on the lines indicated by the Representative Meeting. The matter is not yet in a position for report.

OTHER MATTERS CONSIDERED.**(32) Staffing of a Hospital maintained by a District Council.**

The Committee has considered an application from the Cardiff Division for advice as to the Staffing of the Barry Accident and Surgical Hospital, which is an Institution maintained by the Barry District Council by the Rates.

Questions having arisen as to whether the Hospital should continue to have, as heretofore, a specially selected staff of General Practitioners, or whether it should be open to all members of the local Profession to attend patients at the Hospital, and the District Council having intimated its willingness to be guided entirely by professional opinion in the matter, the local practitioners applied for advice to the Cardiff Division, of which Division some of them were already Members and the remainder have applied for membership.

The Division passed the following Resolutions, but further resolved to take no action until the opinion of the Central Hospitals Committee had been obtained:—

1. That the Cardiff Division is of the opinion that the services of the Medical Staff of the Barry Accident and General Surgical Hospital should be remunerated, in view of the fact that the Hospital is supported by the Rates.

2. That the Cardiff Division is of opinion that the Barry Hospital be for the use and convenience of every medical man (principals only) in the district, three years' residence in practice in the district to be a qualification; the casualty work to be done in rota, according to arrangement among the medical men themselves.

The Committee, having regard to the importance of the case of this Institution (which is especially referred to in the Minority Report of the Royal Commission on the Poor Law) as a precedent, has decided not to advise until fuller information has been obtained, and has instructed the Medical Secretary to visit the district and report.

(33) United Kingdom Hospitals Conference.

The Committee has considered the prospective date of meeting of the United Kingdom Hospitals Conference. The Chairman nominated by the Conference Committee at its last meeting has intimated his inability to act. The Committee has received information indicating the possibility that the Hospitals Association, which has for some time been inactive, may co-operate with the Association in the organisation of further Conferences. The possibility of such co-operation is being considered before further steps are taken to convene a Conference.

(E) IRISH COMMITTEE.

(34) The Irish Committee met four times during 1908—three times in Dublin and once in Waterford.

The Committee consists of 15 members and the average attendance was 11.

Considerable correspondence passed between the Irish Local Government Board and the Council in regard to the necessity of making compulsory a satisfactory scale of salaries for Poor Law Officers, but without any good result as yet.

The Lists of Medicines and of Surgical Appliances sanctioned by the Irish Local Government Board were revised by the Committee, and most of the suggested alterations and additions were accepted by the Board.

The question of procedure in Local Government Board enquiries in Ireland was raised by the Editor of the JOURNAL and considered by the Committee. At the request of the Committee, the Council authorised the Committee, to instruct a Dublin solicitor to enquire into and report on the procedure adopted in such enquiries. A report was obtained with suggestions as to future action. The Committee proposes as cases arise to obtain shorthand notes and submit them for consideration by the Solicitor.

The Tuberculosis Prevention (Ireland) Bill was considered by the Committee and Resolutions towards improving the Bill were adopted.

The Medical Inspection of School Children received attention, but, owing to the fact that the operation of the Act in England has been found to be very costly the Committee was obliged to drop the matter for the present.

Other matters considered by the Committee during the year include: Public Health Bill, Irish representation on the Council, Canvassing at Poor-Law Elections, Questions to Parliamentary Candidates, &c.

(F) JOURNAL AND FINANCE COMMITTEE.

(35) Instructions of Annual Representative Meeting arising out of Report of Finance Inquiry Committee.

System of Financial Control.

In accordance with Minutes 126 and 507 of the Representative Meeting, namely:—

Minute 126.—That it be an instruction to the Council to consider what provision can be made for advising the Representative Meeting as to the financial aspects of any Resolution involving special expenditure, and to report to the next Representative Meeting.

Minute 507.—That Recommendation 4 (a) be adopted, as follows:—

Improvements in System of Financial Control.

4. That to enable the Representative Meeting duly to consider the financial aspects of questions of policy and administration;

(a) There be placed before it a Report from the Finance Committee on the financial aspects of any proposals involving considerable new expenditure;

the Journal and Finance Committee, by instruction of the Council, is considering if arrangements can be made which will enable it to report to the Representative Meeting upon the financial aspects of any proposals placed upon the Agenda which involve considerable new expenditure.

Secretarial Work.

(Minutes 539 to 559 inclusive.)

The Council considered the following Resolutions of the Representative Meeting:—

Minute 544.—That the whole work of the Association be arranged in three co-ordinate Departments:—(a) Financial; (b) Editorial; (c) Medical or Professional.

That these Departments be respectively under the following officers:—(a) Financial Secretary; (b) Editor; (c) Medical Secretary, who shall hold equal official positions in the Association;

and gave effect to them by deciding, at the Meeting in October, that the office of the General Secretary and Manager should be known as that of the Financial Secretary as from January 1st, 1909.

Upon consideration of a Memorandum subsequently submitted by Mr. Elliston, the Council has come to the conclusion that it is desirable in the interests of the Association that the words "Business Manager" should be added to his title in order that the duties of the office may be more correctly described.

The Council recommends the Representative Meeting to approve that the title of the office formerly known as that of General Secretary and Manager be henceforth "Financial Secretary and Business Manager."

(Minutes 545 and 546.)

The work of the Science Committee has been transferred to the Medical Secretary's Department.

(G) MEDICO-POLITICAL COMMITTEE.

The Medico-Political Committee has held five meetings since the last Annual Representative Meeting.

REPORTS WITH RECOMMENDATIONS

(36) *Medical Inspection of School Children and Treatment of those Found Defective.*

The Representative Meeting at Sheffield requested the Council to treat the matter of Medical Inspection and Treatment of School Children as urgent, and to communicate with the Divisions as soon as possible. A Report was accordingly issued to the Divisions, as a confidential document, in December, 1908, and replies were received from 102 Divisions out of a possible 157. The nature of the replies and the Reports of Division Meetings, at which the subject had been discussed, showed that great interest was taken in the matter.

Based on these replies, a further Report has just been completed, and will be circulated to the Divisions in May.* Accompanying this Report are Recommendations, upon which Divisions are asked to instruct their Representatives.

(37) *Security of Tenure for School Medical Officers.*

Representations have been made to the Board of Education as to the desirability of provision being made in the Education Code that School Medical Officers and their Assistants should be appointed without reference to time, subject to reasonable notice, and should not be liable to dismissal without right of appeal to the Board of Education.

The Council recommends:

Recommendation.

That the Representative Meeting approve the action of the Council in seeking to secure reasonable security of tenure of office for the School Medical Officer and his Assistants.

* See BRITISH MEDICAL JOURNAL Supplement, May 15th.

(38) Representation of the Association on the Central Midwives Board.

In authorising the Medico-Political Committee to prepare and submit evidence on behalf of the Association before the Departmental Committee, the Council added the following instruction :—

“and to urge the advisability of representation of the Association on the Central Midwives Board.”

As this matter has not been the subject of a Resolution by the Representative Meeting, the Council recommends :—

Recommendation.

That the Representative Meeting approve the action of the Council in endeavouring to secure representation of the British Medical Association on the Central Midwives Board.

(39) The Rights and Obligations of Members of Committees and Sub-Committees of the Association.

A question has arisen as to the propriety of a member of a Committee or Sub-Committee taking independent action by a letter to the *BRITISH MEDICAL JOURNAL* with respect to subjects which are under the consideration of the Committee or Sub-Committee of which he is a member. The question appears to the Council to be one of general policy, and it therefore recommends :

Recommendation.

That the Representative Meeting take into consideration the general question of policy raised by the above statement.

(40) Representation of the British Medical Association in the House of Lords.

A communication has been received from Earl Wemyss, stating that he proposes to bring before the House of Lords the question of arrangements being made whereby important Bodies, representative of those engaged in various professions and businesses, may nominate each three members of the House of Lords to represent them officially in questions coming before the House of Lords, the names of such representatives to be entered on the Journal of the House. Earl Wemyss approaches the British Medical Association, as a Body representative of the Medical profession, and states that the following bodies have already expressed approval of the idea: The Royal Academy, the Royal Institute of British Architects, the Building Trades Federation of the United Kingdom, the Shipping Federation, and the Employers' Parliamentary Council.

The Council recommends :

Recommendation.

That the Representative Meeting take into consideration the general question of policy raised by the above statement.

ACTION TAKEN UNDER INSTRUCTIONS OF THE REPRESENTATIVE MEETING.**(41) Section of Medical Sociology.**

The Representative Meeting at Sheffield requested the Council to consider the advisability of making arrangements for a Section of Medical Sociology at Belfast.

After full consideration, the Council decided that, having regard to the difference between the conditions of medical sociology in Ireland and those prevailing in other parts of the United Kingdom, the Belfast Meeting would not afford a suitable opportunity for the inauguration of such a Section.

(42) Amendment of the Notification of Births Act.

The Council has noted the instructions of the Representative Meeting that steps should be taken to have Medical Practitioners and Midwives excluded from the operation of the Notification of Births Act, 1907, but having regard to the number of other Parliamentary matters requiring the attention of the Association at present, and the improbability of effecting the amendments desired at an early date, it has deferred action in this matter.

(43) Nurses' Registration.

Acting on the instructions of the Representative Meeting, representations were made to Lord Amphil (the sponsor of the Nurses' Registration Bill in the House of Lords), to the Society for the State Registration of Nurses, and to the Association of Registered Medical Women, on the various points discussed at Sheffield. Sympathetic replies were received from both of these Societies, and Lord Amphil moved the desired Amendments in the House of Lords, where the Bill was passed last Session. The restrictions as to the choice of the British Medical Association's Representatives were eliminated from the Bill, but Clause 29 of the original Bill, which provided for a declaration that the Bill afforded no authority to practise medicine, was not restored. The Bill did not obtain discussion in the House of Commons last Session, but has now been introduced into that House exactly as it left the House of Lords.

A second Bill has been introduced, with the same object, which includes a clause identical with Clause 29 of the original Bill, and gives representation to the British Medical Association, but also gives representation to several other bodies, including the Central Hospital Council, the Matrons' Council, the Royal British Nurses' Association, and the Queen Victoria's Jubilee Institute for Nurses. A Nursing (Scotland) Bill, which sets up a system of Registration exclusively for that part of the Kingdom, has also been introduced. It gives no representation to the British Medical Association. The Council has expressed approval of the principle of separate Registration for Scotland, provided that there be reciprocity of Registration between the various parts of the United Kingdom.

(44) Infant Life Protection Bill.

Representations as to the Amendments necessary in the opinion of the Association, in the Infant Life Protection Bill, were made to Lord Robert Cecil, the introducer of the Bill, in the autumn session of 1908 in accordance with the instructions of the Representative Meeting. Subsequently the Home Secretary was also approached.

The Council is glad to be able to report that the Bill as re-introduced by Lord Robert Cecil in the present session has been amended in accordance with the wishes of the Association.

(45) Coroners' Law.—Coroner for South-West London.

Minute 700.—That the Council be instructed to approach the Lord Chancellor to obtain, if possible, juster and more uniform procedure in relation to riders to verdicts by Coroners' Juries.

Minute 702.—That this Representative Meeting of the British Medical Association reaffirms its previous condemnation of the methods of Mr. Troutbeck, the Coroner for South-West London, in conducting his official enquiries into causes of death. Further, the Representative Meeting is of opinion that the recent interpretations by Mr. Troutbeck of the Coroners' Acts are contrary to the principles and safeguards provided in the Statutes for the registration of deaths by Registered Practitioners, and will cause the gravest public injury.

The Representative Meeting therefore approves the action of the President and Council in pressing upon the Lord Chancellor the urgent necessity of taking immediate steps to prevent the occurrence of erroneous findings and miscarriages of justice to which the Representative Meeting is of opinion Mr. Troutbeck's conduct as His Majesty's coroner conduces, and thereby avoid a public scandal and danger.

Minute 703.—That this Meeting cordially approves and endorses the action already commenced by the Medico-Political Committee with the view of establishing a High Court Tribunal, properly constituted with medical assessors, to which cases involving special medico-legal questions may be removed from Coroners' and lower Courts for hearing and investigation.

In view of the appointment by the Home Secretary, in December, of a Departmental Committee to inquire into the Law relating to Coroners, Coroners' Inquests, and the practice

of Coroners' Courts, the representations to the Lord Chancellor for which the collection of further evidence had already been undertaken, were abandoned for the time being.

The Departmental Committee has consented to hear witnesses nominated by the Association, and evidence is being prepared dealing with all aspects of Coroners' law, the practice of Coroners' Courts, Death Registration, and other subjects, covered by the reference to the Departmental Committee, in which the Medical Profession is interested.

In the preparation of this evidence due regard is being given to the above and other instructions of the Representative Meeting.

(46) *Amendment of the Midwives Act, 1902.*

A Departmental Committee was appointed by the Privy Council in December, to consider the working of the Midwives Act, 1902, and the Association was asked if it desired to give evidence. Evidence, based on previous decisions of the Association, was prepared, and a circular sent to the Divisions drawing their attention to the fact that evidence was being given on behalf of the Association and requesting information on certain points. The response to this circular, regard being had to the amount of discussion which has centred round this Act since its introduction, was disappointing, only 28 Divisions out of 157 sending in any reply up to April 24th, 1909. The evidence of the Association will be taken at an early date.

The Council, on consideration of the composition of the Departmental Committee, made representations to the Lord President of the Privy Council in favour of the addition to the Committee of Representatives of the interests of general practitioners and midwives. A reply was received to the effect that, in the opinion of the Lord President, the Committee, as constituted, was sufficiently large for the practical objects of the inquiry, which would not be served by the addition to its numbers, of representatives of special interests, whose views would be properly considered in the evidence to be given.

INSTRUCTIONS UNDER CONSIDERATION.

(47) *Gratuitous Treatment of Rate-supported Patients.*

The consideration of the following Resolution of the Representative Meeting was postponed pending issue of the Report of the Royal Commission on the Poor Law:—

Minute 676: That the Representative Meeting considers that the services of the Profession should not be given gratuitously to patients who are maintained by public funds.

(48) *Metric System of Weights and Measures in Prescribing and Dispensing.*

In accordance with the instructions of the Representative Meeting at Sheffield, a scheme of procedure in reference to the introduction of the metric system of weights and measures amongst Medical Practitioners in prescribing and dispensing, is in course of preparation.

(49) *Medical Examinations for Life Insurance.*

Resolutions 734 to 737 (inclusive) of the last Representative Meeting were referred to the Life Insurance Sub-Committee, but, on account of the great pressure of other medico-political work, it has not been found possible to convene the Sub-Committee.

OTHER MATTERS CONSIDERED.

(50) *Spiritual Healing.*

The Metropolitan Counties Branch of the Association drew the attention of the Council to proposals which had been made to the Bishop of London, for the establishment of a Diocesan Council to consider the subject of Spiritual Healing. The subject, which was apparently arousing considerable interest among religious bodies, was referred to the Medico-Political Committee, and a special Sub-Committee was appointed to investigate it.

The Sub-Committee has held two meetings and addressed certain inquiries to dignitaries of the Church, and others specially interested in the subject. The replies received show the necessity for a careful professional investigation into the subject at its present early stage of development.

(51) *Conference with Friendly Societies.*

In December last, a communication was received asking the Association to take part in a public conference convened by the Charity Organization Society to hear and discuss a paper, by Dr. James Pearce, of Trowbridge, on "Friendly Societies and the Medical Profession." The Council appointed the following six representatives of the Association to attend the Conference:—Dr. A. E. Morison, Sunderland (President, North of England Branch); Dr. W. T. Lydall, Birmingham (Hon. Secretary Birmingham Division, and Member of the Central Contract Practice Sub-Committee); Dr. J. H. Taylor, Salford (Hon. Secretary and Representative of Salford Division, and Member of the Central Contract Practice Sub-Committee); Dr. W. E. Thomas, Rhondda Valley (Hon. Secretary, South Wales Branch, and Chairman of Branch Contract Practice Sub-Committee); Mr. Percy Rose (Representative of the Stratford Division and Member of the Central Contract Practice Sub-Committee); and the Medical Secretary. All the Branches and Divisions were notified of the holding of the Conference, and over 100 tickets were issued in response to applications received. A full report of the Conference appeared in the Supplement to the BRITISH MEDICAL JOURNAL, February 13th, 1909.

Suggestions were thrown out by various speakers as to the desirability of a formal Conference being arranged between a few specially appointed Representatives of the Friendly Societies on the one part, and of the British Medical Association, as representing the Medical Profession, on the other part, with a view to an amicable adjustment of existing difficulties.

The Council, while not satisfied that matters have reached a stage at which such formal Conference would lead to any practical result, considers that the Association should be prepared to accept an invitation to a preliminary Conference with the object of a simple exchange of opinions, if this should be desired by the Friendly Societies, or by any neutral body, such as the Charity Organisation Society.

(52) *Rules of Nursing Associations.*

After consideration of correspondence with the Honorary Secretary of the South Western Branch with respect to difficulties which had arisen in Cornwall between nurses and medical practitioners, a Sub-Committee was appointed to draft Model Rules for the governance of the relation between nurses employed by Nursing Associations and medical practitioners. Certain rules were forwarded for the consideration of the Branch, which has used them in the discussion of the redrafting of the rules of the Cornwall County Nursing Association. Negotiations have also been entered into with the Queen Victoria's Jubilee Nursing Association, which has expressed itself as willing to consider any representations made to it by the Association on behalf of the profession. Suggestions for the amendment of the Model Rules of the Institute have been drawn up and submitted for consideration.

(53) *Co-operation with Association of Registered Medical Women.*

Seeing that cases affecting medical women in relation to Contract Practice appointments were becoming increasingly frequent, the Medico-Political Committee entered into communication with the Association of Registered Medical Women, with the result that two official representatives of that Association were appointed to act on the Contract Practice Sub-Committee, when questions which specially affect medical women are under discussion. It is proposed that the two Associations, in co-operation, shall address a circular to all registered medical women, drawing attention to the special importance at the present time of united action with regard to appointments, especially public appointments, open to women, and advising a certain course of action, with a view of securing, as far as possible, that underpaid public appointments are not accepted by medical women through ignorance.

(54) *Coroners' Fees to Naval Surgeons.*

Representations having been made to the Medico-Political Committee that an Order of the Admiralty had been issued in 1907 prohibiting Surgeons in the Royal Navy from accepting fees for inquests, or for post-mortem examinations performed under the order of a Coroner, a Memorandum has been addressed to the First Lord of the Admiralty.

(55) Medical and Dental Acts Consolidation Bill.

This Bill, after further revision by the Committee in co-operation with the British Dental Association, is being completed, and Sir Walter Foster has promised to introduce it into the House of Commons. It is intended, in conjunction with the British Dental Association, to organise, at the suitable moment, a memorial in favour of the Bill, signed by as many as possible of the medical and dental practitioners of the Kingdom.

(56) Reports of the Royal Commission on the Poor Law.

Since the appearance, in February, of the Reports of the Royal Commission on the Poor Law, a good deal of attention has been paid to the matter by various Committees of the Association, and by means of articles in the JOURNAL. Having regard to the importance of these Reports to the medical profession, the Council has appointed a Special Committee to report on the whole subject as affecting the profession, with recommendations as regards proposed action by the Association.

(57) Central Emergency Fund.

This Fund began the year 1908 with a balance of £9 4s. 11d. During the year £358 9s. 6d. was received from individual members of the Association and £109 9s. 6d. from Divisions and Branches, making a total of £477 3s. 11d.

Payments of £400 were made during the year to the South Wales Branch Fund for Ebbw Vale, and a payment of £2 11s. 5d. for the expenses incurred by a practitioner in applying for an appointment which was refused by the candidate when made aware by the Division Secretary of the objections of the local profession. A balance of £74 12s. 6d. was thus left at the end of the year. The preparation of additional Standing Orders for the administration of the Fund is under consideration.

(58) Public Medical Service Rules.

After long consideration and repeated revision by the legal advisers of the Association, the Model Rules for a Public Medical Service are now ready and will shortly be issued for the consideration of the Divisions.

(59) Action taken in Contract Practice Cases.

The Committee has continued to take action in contract practice disputes, in conformity with the decisions of the Representative Meeting on the subject. The following cases have received consideration during the year:—

Alfreton (Colliery Clubs), Chumpanan (India) (District Medical Fund), Clutton, &c. (Medical Aid Societies), Delhi (India) (Hospital appointment), Ebbw Vale (Colliery appointments), Gedding, &c. (Colliery Club appointments), Gillingham (Benefit Society), Loughborough (Medical Aid Association), Lyme Regis (Friendly Societies), Northfleet, &c. (Friendly Societies), Retford (Friendly Societies), Young and Marengo (New South Wales) (Friendly Societies), Wellington (New Zealand) (Friendly Societies) and Woolston (Medical Aid Association).

(60) Action taken with Respect to Appointments of School Medical Officers, and other Public Appointments.

The Committee has, during the past year, taken action with respect to the following School Medical Officerships and other public appointments:—Berkshire County (Lady Inspector of Midwives), Blackpool, Bolton (Lady Inspector of Midwives), Burslem, Bury, Cornwall County, Derby (Borough), London County, Merthyr Tydvil, Mossley, Tyne-mouth, and Walsall (Lady Inspector of Midwives).

(H) NAVAL AND MILITARY COMMITTEE.

(61) The Naval and Military Committee has met twice since the last Annual Representative Meeting.

The subject of Coroners' fees to Naval Surgeons was considered and referred to the Medico-Political Committee. (See paragraph (54).)

The Committee has also had under consideration an Order issued by the Government of India (No. 607, 1st July, 1907, Home Department) restricting the fees payable by natives to Officers of the Indian Medical Service, without the previous consent of the Government. The Council considered that the restrictions thus placed upon the

Officers of the Service were oppressive and unnecessary, and interfered with the right to private practice reserved to Officers of the Medical Service, by the Regulating Act of 1773, also that by lowering the prestige of the Indian Medical Service they would have a disastrous effect on its present and future welfare. The Council therefore addressed a communication to that effect to the Secretary of State for India on November 21, 1908.

(I) OPHTHALMIA NEONATORUM COMMITTEE.

(62) The Ophthalmia Neonatorum Committee has held four meetings since the Annual Representative Meeting, 1908.

As the result of a Resolution passed by the Section of Ophthalmology at the Annual Meeting at Exeter, 1907, a Committee was appointed to consider the question of the prevention of Ophthalmia Neonatorum. The Committee now submits its Report (this Report appeared in the Supplement of May 8th), to which are appended a Memorandum by the Chairman, suggestions by members of the Committee, and other documents elucidatory of the subject.

Before action is taken to give effect to the recommendations above mentioned, the Council proposes to refer the Report for the consideration of the Divisions of the Association, and of the Sections of Ophthalmology and Obstetrics at the Annual Meeting at Belfast.

The Committee will be reappointed for the purpose of considering the results of these discussions, and making recommendations to the Council as to the action to be taken to give effect to the Report.

(J) ORGANISATION COMMITTEE.

(63) The Organisation Committee has held five meetings since the last Annual Representative Meeting.

REPORT WITH RECOMMENDATIONS.**(64) By-laws.**

In reference to the various Recommendations of the Representative Meeting relating to alterations of the present By-laws in order to bring them into conformity with those of the Draft Charter, the Council recommends:—

Recommendation.

That the Representative Meeting amend the Schedule to the present By-laws of the Association as to Standing Committees, by making such verbal changes as are necessary to bring it into conformity with the Schedule as to Standing Committees appended to the Draft Charter.

That the Representative Meeting repeal the present By-laws of the Association, Nos. 23 to 33 inclusive, relative to the composition and mode of election of Council, and that the By-laws Nos. 37 to 46 inclusive, in the Schedule to the Draft Charter relating to the same subject, be adopted in substitution thereof, subject to such verbal amendments or alterations as the legal advisers of the Association may deem to be necessary.

The Council begs to report that, of the Resolutions of the Representative Meeting relating to the recommendations of the Finance Inquiry Committee, that contained in Minute 515 has already been given effect to by the alteration of the By-law as to Capitation Grants, and that the other resolutions, in reference to which amendments of the By-laws are not now being recommended, are found either not to require any alteration of the Regulations of the Association to carry them into effect, or to be such as could not be given effect to by any amendment of the By-laws.

ACTION TAKEN UNDER INSTRUCTIONS OF REPRESENTATIVE MEETING.**(65) Charter.**

In accordance with the instructions of the Representative Meeting, the Charter has been revised, in conference with the legal advisers of the Association.

With reference to the Schedule of grouping of Branches for the election of Members of Council which was referred to the Council for further consideration, it was found impossible to include a satisfactorily revised Schedule in the Charter without unduly delaying its submission to the Privy Council. The Council, therefore, modified the Charter to

the effect that until the first Representative Meeting after the grant of a Charter the grouping shall be determined by the Council. Therefore, no Schedule was appended.

The Petition for a Charter was signed by the following on behalf of the Association, and was sealed with the seal of the Association, by instruction of the Council:—J. A. Macdonald, Chairman of Representative Meetings; Edmund Owen, Chairman of Council; Edwin Rayner, Treasurer; Andrew Clark, B. Walter Foster, Victor Horsley, R. Cochrane Buist, C. G. Drummond Morier, T. Jenner Verrall.

The Petition was presented on December 21st, 1908, was considered by His Majesty in Council, and a Committee of the Privy Council was appointed to deal with the matter, April 3rd being fixed as the last day for receiving Petitions for and against.

The Privy Council has forwarded, for the consideration of the Association, all the Petitions submitted in opposition to the grant of a Charter in the form in which it was applied for by the Association, these being as follows:—

- (1) Royal College of Physicians of London.
- (2) Royal College of Physicians of Edinburgh.
- (3) Royal College of Surgeons of England.
- (4) Royal College of Surgeons of Edinburgh.
- (5) Society of Apothecaries of London.
- (6) Senatus Academicus of the University of Edinburgh.
- (7) British Medical Benevolent Fund.
- (8) Society for the Relief of Widows and Orphans.
- (9) Certain Branches and Members of the British Medical Association.
- (10) Certain Members of the British Medical Association.

A categorical reply to the various Petitions is in course of preparation.

(66) *Capitation Grants.*

The Council and Organisation Committee have had to consider the duties conferred upon them by the new By-law as to Capitation Grants. Having regard to the definite instructions of the Representative Meeting, the Council, in distributing grants, will give attention to the average expenditure of each Branch for the previous three years, and the merits of the work done. Having regard also to the indication of opinion of the Meeting, that the accumulation of surpluses in the hands of Branches is to be avoided, it is considered that, in future years, regard should be had to surplus funds in the hands of Branches.

For the present year, grants have been made of at least 2s. per head to all Branches in the United Kingdom whose average expenditure for the last three years is not less than this amount.

To those Branches whose average expenditure has been less than 2s. per head of the membership, a grant has been made of the amount of the average expenditure for the past three years.

Branches have been notified that the Council will be prepared to take into consideration applications for further grants, on being satisfied that such further grants are required to enable the Branches applying, and their Divisions, to carry out their work satisfactorily.

The above statement applies only to the Branches in the United Kingdom, grants to the Colonial Branches having been made, as in previous years, at the rate of 4s. per member who has paid the full subscription for the year, and 2s. per member elected after July 1st.

In considering the analysis of expenditure of Branches and their Divisions in the United Kingdom for the years 1906-7-8, the Council finds that certain Branches have failed to furnish Reports for the years stated. It also finds that in certain cases the accounts show payments which, according to the opinion of the Solicitor to the Association, cannot lawfully be made out of the grants received by Branches from the funds of the Association.

Understanding that in some cases Branches retain in hand balances of funds which were their property before the adoption of the present Articles of Association, and which, therefore, they are free to spend at their discretion, and that such balances are in some cases not separately distinguished from the funds derived from Capitation Grants, the Committee has addressed enquiries to the Branches in question, but the information obtained in response does not

clear up the doubt upon these points. A circular has been issued informing Honorary Secretaries of Divisions and Branches of the legal position.

As regards failure of Branches to make the Report required by the Regulations of the Association, the Council has decided that it will in future make no grant to a Branch which has not furnished its Report of expenditure for the previous year.

(67) *Circular to Non-Members.*

The Representative Meeting at Sheffield approved of the preparation of a circular to members of the Profession who were not members of the Association, drawing attention to the work which is being done by the Association for the Profession. The Council, however, in view of the approval by the Representative Meeting of the Report on the Ethics of Consultation, has decided that a Prospectus of the objects and work of the Association for circulation to newly qualified Medical Practitioners should be prepared, to include the Report on Ethics of Consultation. This Prospectus, now in process of preparation, will necessarily cover much of the same ground as the circular approved by the Representative Meeting last year, and will supersede it.

(68) *Scheme of Probable Dates for Matters referred to Divisions.*

The Representative Meeting requested the Council to consider the possibility of the preparation of a Scheme of Probable Dates by which Divisions will receive from the Council the various matters for consideration during the year.

The Council begs to report that as this is a matter which specially affects Secretaries of Divisions, it has been decided to refer it to the Annual Conference of Secretaries at Belfast. The subject has accordingly been placed upon the Agenda of that Conference.

(69) *Organisation of the Profession.*

The Council has considered the following resolution of the Representative Meeting:—

173. That the suggestion be considered that an arrangement be made whereby the Medical Secretary could give an address each year in Medical Schools on the organisation of the Profession.

and reports that in the opinion of the Council the suggestion contained in Minute 173 is impracticable, but that the possibility of making arrangements for approaching medical students directly is under consideration.

(K) PREMISES COMMITTEE.

(70) Your Council is gratified to report that after an absence of nineteen months it obtained possession of the new and enlarged premises in November last. The Premises Committee devoted much time and thought to secure for the Association a convenient and well equipped Home. Many questions affecting neighbouring properties have had to be met, as any infringement of "ancient lights" and other existing privileges are zealously guarded. There has been some delay in replacing the Library books, otherwise the new Home of the Association is in working order. The moving to and from the temporary premises while the rebuilding was carried on involved considerable care and organisation to enable the regular publication of the BRITISH MEDICAL JOURNAL, and to ensure that the other business of the Association should go on undisturbed. In this connection your Council took the opportunity of commending Mr. Elliston for the efficient manner in which he had organised and carried out the necessary arrangements. Your Council believes the Committee rooms and general arrangements will eventually make for greater economy, efficiency, and for the general comfort of the Members. It is with some regret that the Council reports it has not yet succeeded in letting the ground floor and basement of the premises. At the present time there is a marked and serious depression in all London shop property, and for this reason it may be wise to hesitate before hurriedly entering into any agreement covering a

long term of years. Your Council is alive to the financial importance of obtaining suitable and substantial tenants at the earliest opportunity, and has every confidence that, with the revival of trade, shops in so favourable a position must command a rent that will fully justify the whole rebuilding scheme.

(L) PUBLIC HEALTH COMMITTEE.

(71) The Public Health Committee has held three meetings since the last Annual Representative Meeting.

ACTION TAKEN UNDER INSTRUCTIONS OF THE REPRESENTATIVE MEETING.

(72) *Whole-time Medical Officers of Health.*

A Memorandum on the subject referred to in the following Minute of the Representative Meeting was circulated to the Divisions in January (see *BRITISH MEDICAL JOURNAL* Supplement, 23rd January, 1909):—

Minute 193.—Resolved unanimously: That it be an instruction to the Council to refer the following proposition to the Divisions, namely:—

That Health Officers should give their whole time to the work.

The Committee is not yet in a position to report, only 43 Divisions out of a possible 204 having replied up to the present.

(73) *Security of Tenure for Medical Officers of Health.*

Minute 692.—That the Representative Meeting authorises the Council to assent, on behalf of the Association, to such a decision of the question of giving security of tenure to all Health Officers, or to whole-time Officers only, as would be most conducive, in the opinion of the Council, to the interests of the profession and of the public.

In co-operation with the Incorporated Society of Medical Officers of Health, efforts were made to secure that the principle of security of tenure of Medical Officers of Health should be incorporated in the Housing, Town Planning, &c., Bill introduced last Session. During the discussion in Grand Committee the Bill was amended, with the approval of the President of the Local Government Board, by the insertion of a provision for Security of Tenure for Medical Officers of Health of County Councils. The Bill was withdrawn at the close of the Session, but introduced this year, as amended in Grand Committee, and has, after a Second Reading, been sent to a Committee of the whole House. No provision being made in the Bill giving similar security to District Medical Officers, whose duties and responsibilities are, nevertheless, increased by it, steps have been taken to ensure that their position shall be brought before the House. The support of the Parliamentary Labour Party has been promised, as well as that of certain private Members of great influence, including the Right Hon. A. Lyttelton and the Right Hon. Sir Walter Foster.

(74) *Medical Officers of Health in Relation to Inspection of School Children.*

Minute 720.—That the practice of engaging Medical Inspectors of Schools under the disguise of Assistants to the Medical Officer of Health should be prevented, unless a sufficient remuneration be given, and that it be an instruction to the Council to give effect to this resolution.

Minute 724.—That in those cases where a Medical Officer of Health has to perform the additional duties of Medical Inspector of School Children, he should receive increased remuneration.

(That this be held to apply only to part-time appointments.)

Minute 725.—That it is undesirable that a full-time Medical Officer of Health should have added to his duties the duties of Medical Inspector of School Children.

The above Resolutions have been noted by the Committee as instructions in dealing with cases of appointments of the kind referred to.

In reference to Minute 720, the Council adopted the following definition of the Association's position, which has already been submitted for the consideration of the Divisions in the Medico-Political Committee's Report on Medical Inspection of School Children:—

"That the duties of the office and the general arrangements should be such as would enable the holder to base a claim for an appointment elsewhere as Medical Officer of Health upon the experience gained in this office.

It would appear *prima facie* that one condition of this should be that he should not be the Officer merely of the Education Committee, but of the Sanitary Committee of the Corporation."

The Association has been called upon to intervene in questions of appointments of Medical Officers of Health or Assistant Medical Officers of Health in relation to Medical Inspection, at Burnley, Colchester, Herefordshire, and Wigan. Details of the action taken will be furnished to the Representative Meeting.

(75) *Castleford Case.*

The Council referred to the Yorkshire Branch Council for such action as it might consider desirable, the subject of the following Resolutions:—

Minute 761A.—That this Meeting, having heard the circumstances of the resignation of two District Medical Officers at Castleford, and their dismissal from the posts of Public Vaccinator, expresses its approval of the action of these officers in resigning, and its sympathy with them in their dispute with the Guardians; that this Meeting strongly deprecates the action of those who accepted the vacant appointments in the face of the unanimous decision of the whole Medical Profession in the district to support the action of the two officers.

Minute 762.—That it be an instruction to the Council to consider the above motion; that if satisfied as to the facts, they publish the motion on behalf of the Association, and that the matter be dealt with as one of urgency.

It being clear that the difficulties in dealing with this case in the first instance had arisen from the disorganisation, of the Wakefield and Doncaster Division, in whose area Castleford lies, the Council of the Yorkshire Branch has been asked to consider this question also.

(76) *Vaccination.*

Minute 185.—That it be an instruction to the Council to take vigorous action to press the Oxford Resolutions on the Government.

Minute 192.—That it be an instruction to the Council to actively press upon the Government the Resolutions of the Association in respect of Vaccination.

The Council decided, in October, 1908, that a deputation should be appointed to press these Resolutions on the Government. On the advice of the Committee at its January meeting the Council decided that, having regard to other important Parliamentary business engaging the attention of the Association, it would be advisable to defer any representations to the Government.

(77) *Public Health and Poor-Law Appointments.*

The following is a list of other cases in which action has been taken in respect to Public Health and Poor-Law appointments:—Alsager (Medical Officer of Health), Aston (Public Vaccinators), Bilston (Medical Superintendent of an Isolation Hospital), Braemar (Parochial Medical Officer), Doeking (Public Vaccinators), Driffield (Poor-Law Medical Officer and Public Vaccinator), Honiton (Public Vaccinators), Walsail (Lady Health Visitor), and Worthing (Medical Officer of Health).

(M) SCIENCE COMMITTEE.

(75) *Development of the Science Work of the Association.*

The Science Committee has held three meetings since the Annual Representative Meeting, 1908.

The Committee has carefully considered during the past session the possibility of the development of the scientific work of the Association, particularly in connection with the Library, and as regards the encouragement and assistance of the scientific work of the Divisions and Branches.

(79) *The Library.*

Believing that the Association can render no greater assistance to its Members in their professional work than by giving them facilities of access to scientific literature, the Committee has recommended, and the Council has approved, that a special character should be given to the Library of the British Medical Association by its conversion as far as possible into a lending library so as to be available to the provincial members of the Association.

As a first step to give effect to this decision the Council has instructed the Science Committee to form a collection of Monographs and Periodicals which should be lent, under conditions approved by the Council, to members engaged in special researches. The Committee has also been instructed to collect all necessary information bearing upon the conversion of the Library into a lending library, and the Branches and Divisions have been requested to assist the Committee by furnishing such information and suggestions as may be in their power. The question of the development of Libraries for Branches and Divisions is also under consideration, and the Branches and Divisions have been informed that the Council, when exercising the discretion conferred upon it, by the alteration of the By-laws in 1908, as to the amounts of capitation grants to Branches, will have regard to the expenses of the scientific work of those bodies and of their Divisions (including expense of local libraries) and will make supplementary grants on these grounds when desirable.

(80) *Scientific Work of Divisions and Branches.*

Considering that it would be advantageous, both as giving a more definite purpose to the scientific discussions in Division meetings, and as tending to create greater interest among the members generally in the work of the Sections at the Annual Meeting, if the Sections and the Divisions could be brought into co-operation, the Council has approved the following Recommendations:—

- (i.) That the programmes of forthcoming discussions in the Sections at the Annual Meeting be furnished at the earliest possible date to Honorary Secretaries of Divisions, and that it be suggested that they select from such programmes those subjects which are, in their opinion, suitable for preliminary discussion by their Divisions.
- (ii.) That the officers of each Section be asked to report as to any subjects contained in the programmes of their respective Sections, of which, in their opinion, the consideration by the Divisions, prior to the Annual Meeting, would be specially useful.
- (iii.) That the Divisions should be invited to suggest, through the Central Science Committee, subjects for consideration by Sections at the Annual Meeting.

It has been suggested to the Branches composed of several Divisions that the scientific work of the Divisions may be facilitated by the formation of Branch Science Committees having some or all of the following duties and powers:—

- (a) Organising the scientific meetings of the Branch;
- (b) Considering information as to the scientific work of the Divisions contained in their Annual Reports to the Branch, and advising the Branch Council thereon;
- (c) Assisting the Divisions in the organisation of their scientific work by:—
 - (i.) Advising Division Committees, when desired, in the organisation of meetings;
 - (ii.) Preparing a list of speakers willing to give addresses on special subjects;
 - (iii.) Organising special local enquiries, e.g. as to the hygiene of local industries or conditions.

(81) *Science Scholarships and Grants.*

The Ernest Hart Memorial Scholarship, value £200, was awarded to John Pool McGowan, M.B., Ch.B., for a further period of one year for his researches in connection with Blood Immunity and kindred problems.

Three Scholarships of the value of £100 each were awarded to Willoughby Henwood Harvey, M.B., Pharmacological Laboratory, Cambridge, for research in Pathology and Pharmacology; Ernest Lawrence Kennaway, B.A., M.B., B.C., Lister Institute, for research in Physiological Chemistry, and Otto May, M.A., M.B., B.C., University College Hospital, for research in Neurology.

The Grants in aid of research work amounted to £349, and were made to 30 applicants in sums ranging from £4 to £20.

The Standing Orders as to Scholarships and Grants have been thoroughly revised during the year.

The Council is greatly indebted to those gentlemen who have assisted the Science Committee by acting as Inspectors of the work of Scholars and Grantees.

(N) SCOTTISH COMMITTEE.

(82) The Scottish Committee held two meetings during the year, one at Glasgow on October 12th, 1908, and one at Perth on April 8th, 1909.

At the meeting of October 12th, 1908, the reports from the Scottish group of Branches, relative to the scheme of election of the four new members of the Central Council, were received and approved. At this meeting, a Sub-Committee was appointed to consider and take action regarding the recommendations of the Royal Commission on the care and control of the Feeble-Minded, as affecting Scotland. This Sub-Committee held two meetings, one on December 9th, when the recommendations of the Commission were fully discussed, and a memorandum was drawn up embodying the points on which the Sub-Committee considered concerned the medical profession in Scotland. It was proposed to arrange a meeting of the Sub-Committee and the General Board of Lunacy to discuss the recommendations of the Royal Commission with the Board.

The memorandum of the Sub-Committee was sent to the General Board, but correspondence with the Secretary elicited the fact that owing to some of the subjects referred to by the Sub-Committee being still under the Board's consideration, they—the Board—thought it premature to discuss them, as they related to matters in regard to which there were at present no definite proposals for legislation. The Board stated that they would be glad to have in writing any views which the Sub-Committee might desire to bring under their notice, and would carefully consider any suggestions which might be made to them. At a subsequent meeting of the Sub-Committee held on February 26th, 1909, it was resolved to report to the Scottish Committee that no further action was meantime necessary, and to recommend the Committee to give instructions to watch the matter.

At the Committee Meeting on April 8th, it was resolved that the Midwives Act, as at present in force in England,

should not be extended to Scotland, and that the Council should be asked to oppose any such extension. The Committee agreed to recommend the Council to support the principle of separate Registration of Nurses in Scotland, as embodied in the Bill introduced by Mr. Cleland, M.P., and also that any Bill which does not provide for reciprocity of registration within the United Kingdom should be opposed.

(O) THERAPEUTIC COMMITTEE.

(83) The Therapeutic Committee reports that the experimental investigation on the action of substances recommended as substitutes for cocaine, referred to in the last report to the Council as having been undertaken by the Committee has been completed, and forwarded to the Secretary of the Association.

The Committee notes with pleasure that since the 1st April meeting of the Council, the report of the Committee on the Revision of the British Pharmacopœia has been published in the JOURNAL, and that a copy has been sent to the General Medical Council.

The Committee is of opinion that the following subjects urgently require investigation :—

1. The relative value of Salicylic preparations.
2. The relative bactericidal action of Cresols and allied substances, and the best means of employing them.
3. A method of determining the activity of Cannabis Indica preparations.
4. The action and relative value of compounds of Bismuth and their preparations.
5. The relative value of the so-called Urinary Antiseptics.
6. The relative value of the various substances used as bases for ointments and similar preparations.

(P) UTERINE CANCER COMMITTEE.

(84) The Uterine Cancer Committee has held two meetings since the Annual Representative Meeting, 1908.

At the Section of Obstetrics and Gynaecology, Annual Meeting, 1907, the following resolution was carried :—

“That the Council of the British Medical Association be requested to appoint a Committee to consider the best means of disseminating knowledge of the importance of the early recognition of Uterine Cancer.”

The Council at its meeting of January 29th, 1908, appointed a Special Committee, which drew up a draft Report, presented to the Section of Obstetrics and Gynaecology at Sheffield. The Section passed a resolution approving generally of the draft Report and requesting the Council to reappoint the Committee to complete its work. The Committee was re-appointed in October, and has since then revised and completed two Appeals to promote the earlier recognition of Uterine Cancer, one addressed to Medical Practitioners, the other to Nurses and Midwives. Enquiries made from institutions supplying nurses and midwives for work amongst the poor show a desire on the part of many of them to co-operate with the Association in disseminating the Appeal.

It is hoped that the work of the Committee will be completed in time for report to the Representative Meeting at Belfast.

EDMUND OWEN,
Chairman of Council.

28th April, 1909.

(PRESENT) BY-LAWS RELATING TO COUNCIL.

COUNCIL.

23. Composition.

The Council shall come into office on the first day of the Annual Meeting, and shall be composed of the Officers and ex-Officer named as Members of the Council, *ex officio*, in Article XXXVIII of the foregoing Regulations, together with the Members duly elected or appointed by the Branches and other bodies authorized by the By-laws to elect or appoint Members of the Council, and of Members annually co-opted by the Council in manner hereinafter provided. The Council may also elect, if it think fit, at any of its meetings all or any one of the following—namely: One medical officer on the active or retired list of each of the following services: The Royal Navy Medical Service, the Royal Army Medical Service, and the Indian Medical Service, provided that in each case such medical officer shall not have retired from the active list more than five years previously.

24. Branch Representation.

Any Branch, or group of Branches, having an aggregate membership of not less than 200 may elect one Member of Council, and any Branch, or group of Branches, having an aggregate membership of not less than 400 may elect two Members of Council, and an additional member for each complete 600 Members in excess of 400. Branches in the United Kingdom having less than 200 Members shall be grouped for this purpose with neighbouring Branches, unless in the opinion of the Council the special conditions of any such Branch justify the grant of separate representation. The grouping of Branches not within the United Kingdom for the purpose of electing Members of Council shall be determined by the Council, provided that the total number of Members of Council whom such Branches are entitled to elect shall not be less in proportion to the total membership thereof than those elected by the Branches in the United Kingdom.

25. Election of Representative Members of Council by Branches.

The elective Members of Council shall be elected by voting papers sent to each elector by post. Candidates may be nominated by any Division of a Branch, or by such number of Members of the Branch as the Rules of the Branch may prescribe. Nominations shall be sent, in writing, to the Secretary of the Branch on or before an appointed day, of which not less than fourteen days' notice shall have been given by him in the BRITISH MEDICAL JOURNAL. The names of all candidates so nominated shall be placed in a list which it shall be the duty of the Secretary to circulate to every Member of the Branch.

In any case in which Branches are grouped for representation on the Council, the above provisions shall be carried out as though the Branches so grouped formed one Branch, and it shall be the duty of the Secretary of the Branch having the largest membership to carry out the requirements of the By-law.

26. Term of Office of Branch Representatives (United Kingdom).

Each Member of Council elected by a Branch in the United Kingdom shall be elected for one year, and at the end of that time shall be eligible for re-election unless he have served as such Member of Council for six years successively, in which case he shall for one year be ineligible for election as such Member of Council.

27. Term of Office of Members Elected by Branches, not within the United Kingdom, or by the Services.

Each Member of Council elected by a Branch not in the United Kingdom, or by the Royal Naval Medical Service, the Army Medical Service, or the Indian Medical Service, shall be elected for such period, not exceeding three years, as the electing Branch or Body may determine, and at the expiration of such period shall be eligible for re-election, provided that no such Member shall be re-elected so as to make his period of continuous service as a representative Member of Council exceed eight years.

28. *Qualification.*

No person shall be eligible for election as a Member of Council by a Branch in the United Kingdom unless at the time of his election he shall be a Member of such Branch. The eligibility for election as a Member of Council by a Branch not in the United Kingdom shall be such as may be determined by the Rules of the said Branch, and if no such Rule shall be adopted the regulations as to eligibility shall be the same as for the Branches in the United Kingdom.

29. *Election Return.*

The return of the election of each elective Member of Council shall be communicated in writing to the Secretary of the Association by the President or Secretary of the Branch by which he is elected not less than twenty-eight days prior to the Annual General Meeting of the Association.

30. *Powers of Incomplete Council.*

In default of and until election of a Member or Members by any Branch or other Body authorized to elect, or so far as such election shall not be complete, all the powers conferred on the Council shall belong to and be exercised by the *ex officio* Members thereof alone, or by the *ex officio* Members and such other Members of the Council as may have been duly elected by any Branch or Branches or other Bodies authorized to elect.

31. *Vacancies.*

Any casual vacancy occurring in the Council, not less than four months before the Annual General Meeting, may be filled up by any Branch or Body the representation of which may have become vacant, and such election shall be conducted in the same manner as the annual election, or in respect of election by a Branch, in such other manner as may be prescribed by the Rules of the said Branch. Any person so chosen shall retain his office so long only as the Member in respect of whom such casual vacancy may have occurred would have retained the same.

32. *Co-opted Members.*

The Council shall have power each year to add to its own number Members in the proportion of one for every complete ten representative Members elected to serve on the Council for that year. Each such co-opted Member shall vacate such office at the close of the last meeting of the Council for the year, but shall be eligible for reappointment, unless he shall have been appointed in each of the last five years, in which case he shall be ineligible for the ensuing twelve months.

33. *Council Proceedings.*

The Council shall meet not less than four times a year, and shall be presided over by the Chairman of the Council, or in his absence by a Chairman to be appointed by the Meeting. Its meetings shall be held at such time and place as the Council shall appoint. Fifteen Members shall form a Quorum.

34. *Special Meeting.*

The Chairman of Council may, if he think fit, and shall, upon receiving a requisition signed by not less than fifteen Members of the Council and specifying the business for which a Special Meeting is required, call together a Special Meeting thereof. No business shall be transacted at a Special Meeting other than that for which such Meeting is called.

35. *Reports.*

The Council shall annually prepare a Balance Sheet and Financial Statement of the Association for the past year, to be presented to the Annual General Meeting of the Association, and an estimate of the probable income and expenditure of the Association for the coming year, and a Report of the general state and proceedings of the Association for the past year to be presented to the Annual Representative Meeting. A copy of such Statement, Estimate, and Report shall be sent to the Secretary of every Branch and Division, and published in the JOURNAL not less than two months before the Annual Meeting.

In addition to the above-mentioned report, the Council shall have power to present to any Annual Representative Meeting such further report or reports as it may deem advisable, and the same shall be published in the JOURNAL if time permits.

36. *General Powers.*

The Council shall, in addition to the powers and authorities by the Articles and By-laws expressly conferred on it, exercise all such powers and do all such acts or things as may be exercised or done by the Association, and are not by Statute or by the Articles or By-laws expressly directed or required to be exercised or done by the Association in General Meeting or by a Representative Meeting, subject nevertheless to the provisions of the Statutes and to the Regulations and By-laws of the Association and to the instructions contained in those Resolutions of General or Representative Meetings which by the Articles are declared to be deemed decisions of the Association.

BY-LAWS RELATING TO COUNCIL (UNDER DRAFT CHARTER).

SECTION VI.

COUNCIL.

Composition.

37. The Council shall be composed of the Members *ex officio* mentioned in the Ordinances and of Members elected in manner following, namely:

- (a) 24 by the Branches and Divisions of the Association in the United Kingdom which shall be grouped for that purpose as hereinafter mentioned;
- (b) 7 by the Branches of the Association not in the United Kingdom which shall be grouped for that purpose as hereinafter mentioned;
- (c) 12 by the elected Representatives of the Constituencies comprised in the Branches and Divisions of the Association in the United Kingdom which Branches and Divisions shall be formed for that purpose into 12 Groups as hereinafter mentioned, the Representatives of all the Constituencies in each such Group being entitled together to elect one Member of Council;
- (d) One Medical Officer on the active or retired list of each of the following Services, namely: The Royal Navy Medical Service, the Army Medical Service, and the Indian Medical Service, to be elected by the Representative Body from officers nominated by the Council but so that no Officer shall be elected who shall have retired from the active list more than five years before the election.

Grouping of Branches.

38. Until the holding of the first Annual Representative Meeting after the grant of the Charter, the grouping of the Branches and Divisions for the purpose of the election of Members of the Council by Branches and Divisions and by Representatives of Constituencies shall be such as shall be prescribed by the Council and thereafter shall be such as shall from time to time be prescribed by the Representative Body.

Mode of Election by Groups in the United Kingdom.

39.—(1) The election of 24 Members of Council by the Branches or Groups of Branches and Divisions in the United Kingdom shall be by means of voting papers sent by post by the Association from the Head Office to each Member of every Branch comprised in the Group.

(2) The said voting papers shall contain the names of those candidates who have been nominated, either (a) by a Division, or (b) in writing signed by not less than three members of any such Branch, and sent to the Association at the Head Office on or before an appointed day, of which

not less than fourteen days' notice has been given in the JOURNAL.

(3) The said voting papers shall contain such other particulars (if any) and shall be sent to the Association at the Head Office within such time as the Council may from time to time prescribe by notice given as aforesaid.

(4) The expenses of the said election shall be borne by the Association.

Mode of Election by Groups not in the United Kingdom.

40.—(1) The election of seven Members of Council by the Groups of Branches not in the United Kingdom shall be by voting papers sent by post by the Secretary of each Branch comprised in the Group to each member of that Branch.

(2) The said voting papers shall contain the names of those candidates who have been nominated either (a) by a Division, or (b) in writing signed by not less than three members of any such Branch, on or before an appointed day of which such notice shall have been given in the JOURNAL as the Rules of the Branch may prescribe.

(3) The said voting papers shall contain such other particulars (if any) and shall be sent to such one of the said Secretaries (hereinafter called "the Returning Officer") and within such time as the Council may from time to time prescribe by notice given as aforesaid.

(4) It shall be the duty of the Returning Officer to count the votes given for each candidate and to make a return of the result of the election to the Association at the Head Office.

(5) The expenses incurred by each Branch in respect of the election shall be borne by the Association.

Mode of Election by Representatives of Constituencies.

41. Until the holding of the first Annual Representative Meeting after the grant of the Charter, the mode of election of 12 Members of Council by the Representatives of Constituencies shall be such as shall be prescribed by the Council and thereafter shall be such as shall be prescribed by the Representative Body.

Qualification.

42. No person shall be eligible for election as a Member of Council to represent a Branch or Group of Branches in the United Kingdom (whether the election be by the Branch or Group or by the Representatives of Constituencies) unless at the time of his election he shall be a Member of that Branch, or of a Branch comprised in that Group.

Term of Office of Members of Council elected by Branches.

43.—(1) Each Member of Council elected by a Branch or Group, or by the Representatives of Constituencies in the United Kingdom, shall hold office for one year, and at the end of that time shall be eligible for re-election, unless he have served as the representative on the Council of one and the same Branch or Group for six years successively, in which case he shall for one year be incapable of being elected as such representative.

(2) Each Member of Council elected by a Branch or Group not in the United Kingdom, or elected to represent the Royal Navy Medical Service, the Army Medical Service, or the Indian Medical Service, shall hold office for such period, not exceeding three years, as the electing body may determine, and at the expiration of such period shall be eligible for re-election, provided that no such Member shall be re-elected so as to make his period of continuous service as the Representative on the Council of one and the same Branch or Group exceed six years.

(3) Each of the terms of office mentioned in this By-law shall be calculated from the close of an Annual Representative Meeting.

Completion of Council.

44. The proceedings for the election of Members of Council shall be conducted in such manner and at such times as to secure that a complete Council shall be in office at the close of the Annual Representative Meeting of each year.

Powers of Incomplete Council.

45. In default of and until election of a Member or Members by any body authorized to elect, or so far as such election shall not be complete, all the powers conferred on the Council shall belong to and be exercised by the Members *ex officio* thereof alone and such other Members (if any) of the Council as may have been duly elected by bodies authorized to elect.

Casual Vacancies.

46. Any casual vacancy occurring in the Council not less than four months before the Annual Representative Meeting amongst the Members of Council elected by Representatives of Constituencies shall be filled by the Chairman of Representative Meetings. Any other vacancy which may so occur shall be filled up by the body which appointed the Member of Council whose place shall have so become vacant, and the election to fill such last-mentioned vacancy shall be conducted in the same manner as the annual election. Any person so chosen shall retain his office so long only as the Member in whose office such casual vacancy shall have occurred would have retained the same if such vacancy had not occurred. The provisions of this clause shall apply as well to the Members forming the first Council of the Association in pursuance of the Charter as to Members subsequently taking office.

Proceedings.

47. The Council shall meet not less than four times a year, and shall be presided over by the Chairman of the Council, or in his absence by a Chairman to be appointed by the Meeting from its own number.

48. Meetings of the Council shall be held at such time and place and upon such notice as the Council shall appoint.

49. No business shall be transacted at any Meeting of the Council unless at least fifteen Members be present.

50. The Chairman of Council may, if he think fit, and shall, upon receiving a requisition signed by not less than fifteen Members of the Council, and specifying the business for which a Special Meeting is required, call together a Special Meeting thereof. No business shall be transacted at a Special Meeting other than that for which such Meeting is called.

EXTRACT FROM PART VI OF FINANCE INQUIRY REPORT.

(See page 233 of Minutes of Annual Representative Meeting, 1908.)

With regard to the first two recommendations the Committee thinks it desirable briefly to explain the grounds upon which they are put forward. Upon consideration of the development and of the present nature of the work of the Association, it is clear to the Committee that the secretarial work falls naturally into two general departments—namely, that of business management and that which has to do with the professional work of the Association—that these departments are of equal importance, and that they should have at their head officers of co-ordinate rank. This recommendation not only expresses what is desirable in the interests of efficient administration, but is also in accordance, practically if not formally, with the actual existing position of the General and Medical Secretaries respectively, which has been arrived at as the result of the successive decisions of the Council stated in the memorandum of the Medical Secretary appended to this report.

The term "General" Secretary, however, as applied to the officer who deals with the business side of the secretarial work of the Association is, in the opinion of the Committee, inappropriate, inasmuch as it implies a general supervision of the work of the Association, which does not in fact exist, and which under present conditions would be impracticable. The Committee recommends, therefore, that this title should be altered, and suggests the designation "Financial Secretary" as corresponding more closely with the nature of the duties of the office.

SCHEDULE TO (PRESENT) BY-LAWS.

STANDING COMMITTEES REFERRED TO IN BY-LAW 41.

Name of Committee.	Appointed Members.			Members, <i>ex officio</i> .	Additional Members, <i>ex officio</i> .	Quorum.	Duties, Powers, &c.
	Appointed by Representative Meeting.	Appointed by Council.	Otherwise appointed.				
1.	2.	3.	4.	5.	6.	7.	8.
(1) Journal and Finance	..	Not exceeding 11.	..	President, Chairman of Representative Meetings, Chairman of Council, Treasurer.	..	5	To examine into the general working of the office and of the JOURNAL, and to certify the quarterly accounts prior to their being presented to the Council.
(2) Premises	..	Not exceeding 5.	..	Ditto.	..	8	To consider and report to the Council upon the management of the house property of the Association.
(3) Public Health..	..	Not exceeding 7.	..	Ditto.	..	3	To consider questions relating to Public Health and the Poor Law Medical Service.
(4) Colonial	..	Not exceeding 2.	5 appointed by Representatives of Colonial Branches on Council.	Ditto.	..	3	To consider questions specially relating to the Branches not in the United Kingdom.
(5) Naval and Military	..	Not exceeding 7.	..	Ditto.	..	3	To consider matters relating to the Royal Navy Medical Service, the Army Medical Service, the Indian Medical Service, and the Royal Territorial Medical Corps.
(6) Medico-Political	6	6	..	Ditto.	..	7	To deal with all matters involving the public relations of the Profession not specially referred to other Committees.
(7) Ethical (otherwise designated Central Ethical)	5	5	..	Ditto.	..	5	To advise the Council upon all questions connected with Rules of Divisions and Branches relating to professional conduct; to investigate and report to the Council upon the cases of members whose conduct is to be considered by the Council on the representation of Branches, pursuant to Article XLIV; and, generally, to advise, and, where so directed, act for the Council on all questions of professional conduct; also to adjudicate in matters of dispute as to professional conduct arising between members of the Association or members of the profession, or, at its discretion, to refer any question or questions arising in connection with such a dispute to any Division or Branch, or to any Divisions or Branches jointly, for investigation, or for adjudication, subject to an appeal to the Central Ethical Committee. Any member of the Association directly concerned in such a dispute shall have a right of appeal to the Council from the decision of the Central Ethical Committee, and the findings of that Committee, subject to such appeal, and the findings of the Council upon an appeal, shall be binding upon the parties and upon all members of the Association.
(8) Hospitals	..	Not exceeding 11.	..	Ditto.	..	5	To consider and report to the Council upon questions concerning Hospitals and other Medical Charities.

SCHEDULE TO (PRESENT) BY-LAWS—continued.

STANDING COMMITTEES—continued.

Name of Committee.	Appointed Members.			Members, <i>ex officio</i> .	Additional Members, <i>ex officio</i> .	Quorum.	Duties, Powers, &c.
	Appointed by Representative Meeting.	Appointed by Council.	Otherwise appointed.				
1.	2.	3.	4.	5.	6.	7.	8.
9) Science..	..	10	..	President, Chairman of Representative Meetings, Chairman of Council, Treasurer.	..	5	To advise, and, where so directed, act for the Council in all matters not specially referred to other Committees which concern the work of the Association for the promotion of the Medical and allied Sciences, including the conditions of award of Scholarships, Grants or Medals (except the Gold Medal of the Association) given by the Association or under Trusts undertaken by the Association, the assistance of the Officers of the Sections at the Annual Meeting, the arrangement of Committees for special Scientific work, the encouragement and assistance of the Scientific work of the Branches and Divisions and matters connected with the Library and its management. The Committee shall have power to co-opt for the consideration of the award of Scholarships, Grants and Medals, Members not exceeding four in number, specially qualified to assist in its work.
10) Organisation..	..	7	..	Ditto.	..	8	To consider and advise upon questions affecting the interpretation or alteration of the Regulations of the Association and the Standing Orders of the Representative Meeting and Council; to deal with questions of the boundaries and area, the grouping for electoral purposes, and the Rules, other than those relating to ethical matters, of Divisions and Branches and combinations thereof, and the Ordinary and Supplementary Grants made to such bodies by the Council pursuant to the By-laws, and to exercise such powers as may be conferred upon it by the Council in advising and assisting Divisions and Branches in the strengthening of their organisation. The Committee shall have power to add to its number for special purposes, a limited number of Members specially qualified to assist in its work.
1) Scottish	Ditto	One Secretary of each Scottish Branch. All the Members of Council who represent Scotland.	5	To consider matters specially concerning Scotland. It shall have an Honorary Secretary resident in Scotland, and shall meet at such place and time as the Committee may itself direct.
2) Irish	By each Irish Branch 1 Member, or if Secretary of Branch is a Member of Council 2 Members, any such Member appointed by the Leinster or Ulster Branch to be a practitioner not resident in Dublin or Belfast.	Ditto	One Secretary of each Irish Branch. All the Members of Council who represent Ireland.	5	To consider matters specially concerning Ireland. It shall have an Honorary Secretary resident in Ireland, and shall meet at such place and time as the Committee may itself direct. The Committee shall have power to add to its number not more than 3 Members to represent districts which are not otherwise represented thereon.

STANDING COMMITTEES (UNDER DRAFT CHARTER).

MEMBERS (in addition to the Members *ex officio* mentioned in By-law 60) and Powers and Duties.

Note.—Where no Members are mentioned in this Schedule, the Members *ex-officio* alone will constitute the Committee.

Name of Committee.	Additional Members <i>ex officio</i> .	Appointed Members.			Duties, Powers, &c.
		Appointed by the Representative Body.	Appointed by the Council.	Appointed by other Bodies.	
Finance	The Chairman of each of the following Committees:— Organization, Journal, Science, Medico-Political, and Central Ethical.	4	4	2 members appointed by the Journal Committee.	To certify the accounts prior to their presentation to the Council; to advise the Council on the administration of any funds held in trust by the Association, and of the Superannuation Fund. When necessary, the appointment of administrators for any such funds; to report to the Council and to the Representative Body on the financial bearings of any proposals involving special expenditure; to supervise and report to the Council on the general working and organization of the Central Office.
Organization .. ..	.. ..	3	3	..	To consider and advise upon questions affecting the interpretation or alteration of the Regulations of the Association and the Standing Orders of the Representative Meeting and Council; to deal with questions as to the boundaries or area, the grouping for electoral purposes and the Rules (other than those relating to ethical matters) of Divisions and Branches and combinations thereof, and the ordinary and supplementary grants to Branches and Divisions, and to exercise such powers as may be conferred upon it by the Council in advising and assisting Divisions and Branches in the strengthening of their organization. This Committee shall have power to add to its number for special purposes a limited number of Members specially qualified to assist in its work.

STANDING COMMITTEES (UNDER DRAFT CHARTER)—*continued.*

Name of Committee.	Additional Members <i>ex officio</i> .	Appointed Members.			Duties, Powers, &c.
		Appointed by the Representative Body.	Appointed by the Council.	Appointed by other Bodies.	
Journal	3	3	..	To consider and report to the Council upon any matters connected with the Journal or other publications of the Association, and to appoint annually two members of the Committee to serve on the Finance Committee.
Premises	To consider and report to the Council upon the management of the land and house property of the Association.
Science	8	..	To advise, and when so directed, act for the Council, in all matters not specially referred to other Committees which concern the work of the Association for the promotion of the Medical and allied Sciences, including the conditions of award of Scholarships, Grants or Medals (except the Gold Medal of the Association) given by the Association, or under Trusts undertaken by the Association, the assistance of the Officers of the Sections at the Annual Meeting, the arrangement of Committees for special Scientific work, the encouragement and assistance of the Scientific work of the Branches and Divisions, and all matters connected with the Library and its management. The Committee shall have power to co-opt for the consideration of the award of Scholarships, Grants and Medals, Members not exceeding four in number, specially qualified to assist in its work.
Central Ethical	6	6	..	To advise the Council on questions connected with Rules of Divisions and Branches relating to professional conduct, to investigate and report to the Council upon the cases of Members whose conduct is to be considered by the Council on the representation of Divisions or Branches pursuant to Ordinance

STANDING COMMITTEES (UNDER DRAFT CHARTER)—*continued.*

Name of Committee.	Additional Members <i>ex officio</i> .	Appointed Members.			Duties, Powers, &c.
		Appointed by the Council.	Appointed by the Representative Body.	Appointed by other Bodies.	
Central Ethical— <i>cont'd.</i>	10, and generally to advise, and, where so directed, act for the Council on all questions of professional conduct; also to adjudicate in matters of dispute as to professional conduct arising between Members of the Association or Members of the Profession or at the discretion of the Committee to refer any question arising in connection with such a dispute to any Division or Branch, or to any Divisions or Branches jointly, for investigation or for adjudication subject to an appeal to the Committee; and so that any Member of the Association directly concerned in such a dispute shall have a right of appeal to the Council from the decision of the Committee and that the decision of the Committee subject to such appeal, and the decision of the Council upon any such appeal shall be binding upon the parties and upon all Members of the Association.
Medico-Political..	..	6		..	To deal with all matters involving the public relations of the Profession not specially referred to other Committees.
Public Health	3	3	..	To consider questions relating to Public Health and the Poor Law Medical Service.
Hospitals	6	6	..	To consider and report to the Council upon questions concerning Hospitals and other Medical Charities and the professional interests of the Medical Officers of those institutions.
Naval and Military	The Representatives on the Council of the Royal Navy Medical Service, the Army Medical Service and the Indian Medical Service	2	2	..	To consider matters relating to the Royal Navy Medical Service, the Army Medical Service, the Indian Medical Service, and the Royal Army Medical Corps (Territorial).

STANDING COMMITTEES (UNDER DRAFT CHARTER)—*continued.*

Name of Committee.	Additional Members <i>ex officio</i> .	Appointed Members.			Duties, Powers, &c.
		Appointed by the Representative Body.	Appointed by the Council.	Appointed by other Bodies.	
Colonial	All the members of the Council who represent Colonial Branches.	2	2	..	To consider questions specially relating to the Branches not in the United Kingdom.
Scottish	The Secretary of each Scottish Branch. All the members of the Council who represent Scottish Branches.	..	..	..	To consider all matters specially concerning Scotland. It shall have an Honorary Secretary, resident in Scotland, and shall meet at such place and time as the Committee may itself direct.
Irish	The Secretary of each Irish Branch. All the members of the Council who represent Irish Branches.	..	..	1 member or, if the Secretary of the Branch is a member of the Council, 2 members appointed by each Irish Branch. Any member specially appointed by the Leinster Branch or by the Ulster Branch shall be a practitioner not resident in Dublin or Belfast.	To consider all matters specially concerning Ireland. It shall have an Honorary Secretary, resident in Ireland, and shall meet at such place and time as the Committee may itself direct. This Committee shall have power to add to its number not more than 3 Members to represent districts which are not otherwise represented thereon.

British Medical Association.**GRANTS AND SCHOLARSHIPS FOR
SCIENTIFIC RESEARCH.
GRANTS.**

THE Council of the British Medical Association is prepared to receive applications from members of the Medical Profession for Grants in aid of Researches for the Advancement of Medicine and the Allied Sciences.

The Grants are made subject to the following conditions:

1. That the work of the Grantee shall be subject to inspection by the Science Committee of the Association.

2. That each Grantee shall furnish to the Science Committee, on or before May 15th following the allotment of the grant, a report (or, if the object of the grant be not then attained, an interim report, to be renewed not later than the same date in each subsequent year until the final report is presented) containing:

(a) A statement, in a form satisfactory to the Science Committee, of the results arrived at, or the stage which the inquiry has reached;

(b) A statement of expenditure incurred, accompanied by vouchers as far as possible;

(c) A reference to any Transactions, Journals, or other publications in which the results of the research have been announced.

SCHOLARSHIPS.

The Council of the British Medical Association is also prepared to receive applications for Research Scholarships, as follows:

1. An ERNEST HART MEMORIAL SCHOLARSHIP, of the value of £200 per annum, for the study of some subject in the department of State Medicine.

2. THREE RESEARCH SCHOLARSHIPS, each of the value of £150 per annum, for research in Anatomy, Physiology, Pathology, Bacteriology, State Medicine, Clinical Medicine, or Clinical Surgery.

Each Scholarship is tenable for one year, but is renewable by the Council, provided that the whole period of tenure shall not exceed three years.

The Scholarships are awarded subject to the following conditions:

1. That the work of the Scholar shall be subject to inspection by the Science Committee of the Association.

2. That he shall furnish the Science Committee, on or before May 15th following the grant of the Scholarship, with a statement of the work done by him.

3. That he sign an undertaking to abide by the above and other regulations affecting Scholarships, a copy of which will be supplied to him.

Applications.

Applications for Grants and Scholarships for the year 1909-10 must be made, not later than May 27th, 1909, in the prescribed form, a copy of which will be supplied on application to the Medical Secretary, 429, Strand, London, W.C.

Each application should be accompanied by a recommendation from the head of the laboratory in which the applicant proposes to work, setting out the fitness of the candidate to conduct such work and the probable value of the work to be undertaken. This is not intended, however, to prevent applications for Grants in aid of work which need not be performed in a recognized laboratory.

J. SMITH WHITAKER, *Medical Secretary.*

429, Strand, W.C., March, 1909.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

LANCASHIRE AND CHESHIRE BRANCH: MANCHESTER (WEST) DIVISION.

THE annual meeting of this Division was held in the Technical Institute, Stretford Road, on Tuesday, May 11th. The following gentlemen attended the meeting: Drs. W. J. Cousins, J. D'Ewart, W. Eales, W. A. Helme, J. C. Mückler, J. C. Nichol, J. S. Prowse, L. E. Scanlon, W. Steele Smith, and F. H. Worswick.

Apologies for Non-attendance.—Apologies for non-attendance were received from Drs. E. W. Floyd and C. Stennett Redmond. Dr. F. H. Worswick presided.

Confirmation of Minutes.—The minutes of the last annual meeting and of the last general meeting were read and confirmed.

New Members.—The HONORARY SECRETARY announced the election of two new members—namely, Dr. Robert Boyd and Dr. G. C. McL. Barber.

Contributions to Hospitals by Employers and Employees.—As arising out of the minutes, the consideration of the Hospitals Committee's report on contributions to hospitals by employers of labour and employees, which had been postponed by the last ordinary meeting, was further deferred until after the Executive Committee shall have considered and reported thereon.

Correspondence.—A letter from the Corresponding Secretary of the Manchester and Salford Joint Committee in regard to resolutions submitted to that body by this Division was read. The meeting expressed satisfaction at the prompt action taken by the Joint Committee in respect to the suggestions put forward concerning (a) the medical libraries of Manchester, (b) the payment of medical practitioners called to attend street accidents, and (c) the official recognition of the Joint Committee as a responsible body. The Honorary Secretaries reminded members that the Medical Secretary had asked for information regarding a well-known local provident association, and reported the receipt of a remittance of £5 8s. for Divisional expenses from the Branch Council. In connexion with the latter, the Representatives of the Division on the Branch Council (Drs. Worswick and Prowse) gave an account of the action they had taken in regard to the Report of the Branch Organization and Finance Committee. The meeting signified approval of what had been done.

Letter from Organization Committee.—A letter from the Organization Committee, calling attention to certain restrictions in connexion with the expenditure of money derived from capitation grants, was read.

Candidate for Central Council.—A communication from Dr. Taylor of Salford, announcing his candidature for election to the Central Council of the Association, was read; and the following resolution was moved from the Chair, and agreed to unanimously:

That this meeting cordially supports the candidature of Dr. Taylor for election to the Central Council, and urges every member of the Division to vote for him at the forthcoming election.

Election of Officers.—The members of the Manchester (West) Division elected the following gentlemen as officers for the ensuing year: *Chairman*, Dr. S. Holgate Owen; *Vice-Chairman*, Dr. J. C. Mückler; *Honorary Secretaries*, Dr. J. Skardon Prowse, Dr. L. E. Scanlon; *Representative for Representative Meeting*, Dr. F. H. Worswick; *Chorlton Road, Manchester*; *Representatives on Branch Council*, Dr. F. H. Worswick, Dr. J. Skardon Prowse; *Executive Committee*, Drs. F. H. Worswick, E. W. Floyd, F. Farrow, A. W. B. Loudon, J. D'Ewart, T. G. Paterson, W. H. Richardson, A. M. Edge, J. C. Nichol, J. Cullen; *Representatives on the Joint Committee of the Manchester and Salford Divisions*, Drs. S. Holgate Owen, F. H. Worswick, J. C. Mückler, L. E. Scanlon, J. S. Prowse.

Report of Executive Committee.—The annual report of the Executive Committee was read and adopted.

Business of the Representative Meeting.—It was resolved unanimously that the Divisional Representative should have a free hand in voting on all subjects upon which the Division has not expressed an opinion.

Current Work of the Association.—The monthly reports of current work of the Association for April and May, and the subject of the representation of the local medical profession on boards of hospitals and similar bodies, were referred for the consideration of the Executive Committee, with instructions to report thereon to the next Divisional meeting.

Whole-Time Medical Officers of Health.—After considerable discussion on the report from the Public Health Committee on the desirability of health officers being required to give their whole time to the work, it was resolved:

That all medical officers of health should be debarred from engaging in private practice.

SOUTHPORT DIVISION.

THE annual meeting of this Division was held at the Temperance Institute on Friday, May 14th, Dr. GILL in the chair. There were also present: Drs. Anderson, Ashworth, Baildon, Mewburn Brown, Coutts, Littler, Russel, Speirs, Sykes, Walker, and Harris.

Confirmation of Minutes.—The minutes of the last annual meeting were read and confirmed.

Report of Executive Committee.—The annual report of the Executive Committee was read.

Election of Officers.—The following officers were elected: *Chairman*, W. Barwise; *Vice-Chairman*, J. H. Sykes, M.D.; *Honorary Secretary and Treasurer*, R. Harris, M.B.; *Representative for Representative Meeting*, S. A. Gill, M.D.; *Deputy*, R. Harris, M.B.; *Representatives in Branch Council*, P. Ashworth, M.D., and R. Harris, M.B.; *Executive Committee*, G. R. Anderson, S. A. Gill, M.D., R. M. Littler, and J. C. Russel, M.D.

Earlier Election of Representatives.—With a view to the earlier election of Representatives in Representative Meetings, a resolution:

That in Rule 7 the words "nine months" be substituted for "three months"

was carried unanimously.

Letter from Chelsea and Fulham Division.—A letter from the Chelsea and Fulham Division calling in question the action of the Council of the Royal College of Surgeons respecting the admission of women was read, and it was unanimously resolved:

That the letter lie on the table.

Departmental Committee re Midwives Act.—The purport of a letter from the Medical Secretary respecting the action taken by the Association in regard to the Departmental Committee re Midwives Act was communicated containing an inquiry as to touting and advertising by midwives. None of the members present had heard any complaints in this matter.

Medical Certification of Suitability of Patients for Hospitals.—The Hospitals Committee's report on medical certification of suitability of patients for hospital treatment was considered, and a resolution:

That a medical certificate of suitability for hospital treatment be required as a general rule as a condition of hospital treatment except in cases of casualties or emergencies

was carried unanimously.

Contributions to Hospitals by Employers and Employees.—The Hospitals Committee's report on contributions to hospitals by employers of labour and employees was considered, and after considerable discussion it was resolved unanimously:

That at the present time this Division does not consider it desirable that any steps should be taken to carry out the suggestions in this report.

Fresh Medical Institutions.—The motion contained in the statement respecting fresh public medical institutions was unanimously approved.

Sanatoriums for Workers.—The statements and resolution contained in the statement respecting sanatoriums for workers suffering from tuberculosis were also unanimously approved.

Representation of Local Profession on Hospital Boards.—The report on representation of local medical profession

on boards of hospitals and similar bodies was discussed, and it was unanimously resolved:

That we do not favour the motions by the Hampstead and Wandsworth Divisions.

Notices of Motion.—Various notices of motion in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of April 24th were then considered. It was decided to instruct the Representative of the Division to support the motion by the Council respecting the mode of election of Council for the adoption of the By-laws 37 to 46 in the Schedule to the Draft Charter in substitution for the present by-laws of the Association on the subject. It was decided to leave the notices by the Liverpool (Western) Division respecting election of Representatives to the discretion of the Representative.

WARRINGTON DIVISION.

At the annual meeting held at the Warrington Infirmary, on Tuesday, May 11th, there were present Drs. BREMER (in the chair), Joseph, J.P.; Naden, J.P.; Edwards, Jago, Hunt, Ferguson, and Murray.

Election of Officers.—The following appointments were made: *Chairman*, Dr. Joseph, J.P.; *Vice-Chairman*, Dr. Edwards; *Honorary Secretary and Treasurer*, T. A. Murray; *Representative on Branch Council*, Dr. Burrows; *Executive Committee*, The Officers and Drs. Anderson, Bennett, and Bowden.

Resolutions.—Resolutions fixing dates of quarterly meetings, supporting candidature of Drs. Garstang, Larkin, Maché, and Taylor, and concerning a case of ethics, were passed.

Matters Referred to Divisions.—Several matters referred to Divisions were discussed and approved.

Votes of Thanks.—Votes of thanks were passed to the retiring officers.

THE ELECTION TO THE CENTRAL COUNCIL.

We are asked to publish the following letter addressed to the President of the Lancashire and Cheshire Branch:

51, Rodney Street,
Liverpool,
May 18th, 1909.

Dear Dr. Renshaw,—

After being a member of the Central Council of the British Medical Association for four successive years, I again solicit the honour of the support of the members of the Lancashire and Cheshire Branch in the election of Representatives to that body. I do not come before the members as a stranger. I have been a member of the Branch Council since 1892; I was a member of the old Parliamentary Bills Committee from 1898 till 1902; and I took an active part in urging the members in my neighbourhood to adopt the new constitution in 1902. As I am, therefore, well known to the majority of the members either personally or by reputation, I do not propose to attempt to promote my candidature either by circular or by addressing meetings, but I should like to address a few remarks to you in your capacity as President of the Branch with regard to my policy as a present member of the Council, and with regard to the prospects of the Association.

First let me disclaim any serious divergence of opinion as regards the policy expressed by my colleagues representing the Branch on the Council. I believe we are all working for the best interests of our profession, but I do not consider that four independent men can always hold views identically the same, or vote with mechanical uniformity. I do not consider myself a mere delegate, and I trust the Association will always choose as its representatives men of sufficient judgement and sense of responsibility that they may be trusted to form a sound and safe opinion on all important matters as they arise.

I consider that the great strength of the Association and its power for good lies in its comprehensiveness, in its including within its ranks all honorable members of our profession, whatever their line of practice may be. I notice with regret that up till now it falls far short of that ideal—that while the number of practitioners in the *Medical Directory* is 39,992, only 21,163 are members of the Association. Further, I notice a still more serious sign, namely, that the recruiting power of the Association diminishes year by year, while the expenses continually increase. Thus, in 1906 there was an increase in membership of 1,266; in 1907 of 131;

and in 1908 of only 39. Last year only £732 were carried to surplus, and the Treasurer's estimates for next year show a prospective deficit of £750. I feel that the urgent need of the Association, if it is to carry on in the future such good work as it has accomplished in the past, is to extend its membership and to economize its resources. To accomplish the first, I believe our mainstay must be the BRITISH MEDICAL JOURNAL, and my policy, as a member of the Journal and Finance Committee and in every way, has been to enhance its already high prestige, to endeavour to get eminent members of our profession interested in it, and to make it in every way a mirror of the medical life of the country. Another feature of the Association I am anxious to see retained and extended is the Branch organization, which has in past years been the backbone of the Association. While I consider the Divisional organization most useful and desirable, I consider the Divisions ought not to interfere with the larger corporate life of the Branches.

Finally, I am of opinion that every member of the Association ought to feel that he has the fullest opportunity of expressing his views on all important matters affecting the Association and the profession. Whether the present constitution is the best possible to effect that end is, I consider, a fair matter for discussion.

With regard to economy, I would much rather see the membership extended and the income increased than see any restriction on the activity of our various committees, but until the income is increased it is manifest some economies must be practised. I think something of this kind might be effected without any loss of efficiency by limiting the number of matters dealt with at any one time.

Among the more urgent matters which have to be considered, hospital abuse stands pre-eminent. While, in common with other sublimary affairs, an ideally-perfect system may not be attainable, I believe that it will not be long before the matter is dealt with in a satisfactory manner, since the interest, as well as the duty, of all concerned is to bring about such a solution. If the Branch does me the honour to re-elect me, I shall endeavour, as I have done in the past, to give my best and conscientious attention to all matters that come before the Council, bearing in mind that I am not a representative of any party, but of the whole Branch.

Believe me, dear Dr. Renshaw,

Yours very truly,

THOS. R. BRADSHAW, F.A., M.D.,
F.R.C.P.

METROPOLITAN COUNTIES BRANCH:

CHELSEA DIVISION.

A MEETING of this Division was held at 7 p.m., on May 5th, at the Trocadero Restaurant, the PRESIDENT, Dr. P. H. Parsons, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Letters.—A reply was received from a practitioner to an inquiry made of him concerning an ethical matter, and the letter was ordered to be laid on the table. A letter was received from the Medical Officer of Health for Fulham with reference to unqualified practice in the district, and this was referred to the Executive Committee. Dr. Hamilton wrote resigning his position on the Public Medical Service Committee, and his resignation was accepted.

Apologies for Non-attendance.—Letters of apology on account of inability to attend this meeting were received from Drs. O'Sullivan, Satchell, Sinclair, Wells, Lindsay, and others. Various questions submitted to the consideration of the Division from head quarters were, on the proposition of the CHAIRMAN, referred to the Executive Committee.

Vote of Sympathy.—The CHAIRMAN moved that a letter of sympathy be sent to Dr. Bonney, a member of the committee, on account of his recent severe illness. Carried unanimously.

Public Medical Service.—Dr. MORRIS WILLIAMS moved the following resolution:

That steps be taken to inaugurate a Public Medical Service in Chelsea and Fulham, and that a committee, consisting of the CHAIRMAN, Secretary, Drs. Bedford, Edwards, Halley, Williams, and Young, be appointed to carry out the necessary details.

He said: In moving the resolution which stands in my name, so much has from time to time appeared in our eagerly read BRITISH MEDICAL JOURNAL on contract

practice that it will seem superfluous for me to occupy your time in further dilating on the subject. With all innovations of the kind in a body like ours it will be difficult for all to agree, but I think we all agree that contract practice as at present constituted is not satisfactory to either of the contracting parties. On the one hand the vendor has no voice in the allocation of his remuneration, his time, nor who he is to attend at that remuneration, and other matters are fixed for him by laymen, who do not understand anything of efficient medical service. The vendor, unless he is a philanthropist, in attempting to make a profit out of the contract, has to gamble in the life of the purchaser. This sample may have been all well in the days of quackery once practised by the general practitioner, which, I am sorry to say, is still rampant in Harley Street. In the present advanced and exalted state of the general practitioner, the public medical service must be entirely in the hands of the profession: (1) The object and constitution must be in our hands. (2) Who shall be admitted as subscribers must be in our hands, and what benefits they are to receive are to be defined by us. (3) The finance must be in our hands. The question will arise, Is it policy in Chelsea and Fulham district to have a public medical service? Undoubtedly it is, provided we have unity and good understanding among our members, so that we can make our own terms without fear of any of the profession becoming "blacklegs" and accepting clubs at any non-remunerating price. On the other hand, I believe that subscribers to clubs would appreciate the benefits accruing from such service. You must not be frightened for fear everybody in the district might become subscribers, and that you would lose your practice. I will give you figures that will make your mouth water: The population of our Division is 250,000. If every one joined at 5s. a year, the revenue would be £60,000 for the public medical service, without interfering with the emoluments of individuals from confinements, miscarriages, vaccinations, fractures, dislocations, consultations, anaesthetics, night and special calls, certificates, and illness caused by misconduct, etc.; and, if the £60,000 is not to your liking, we put on 1s., and bring ourselves in another £12,000. The motion was seconded and carried *unanimously*.

Dinner.—The members and their guests then enjoyed a sumptuous repast. The dinner committee, consisting of Drs. Bedford, Boyd, and Gardner, had arranged a musical programme, which was much appreciated. The toast list, in addition to the usual loyal ones, consisted of "The Chairman," proposed by Mr. Tanner in felicitous terms, and received with much enthusiasm; "The Visitors," proposed by Dr. EDWARDS and responded to by Mr. C. RYALL and Mr. BEDFORD; "The Public Medical Services," proposed by Dr. HAMILTON and responded to by Drs. JACKSON and C. T. PARSONS; and "The British Medical Association," responded to by the SECRETARY.

Address.—Just after the dinner an address on cancer of the tongue, demonstrated by lantern slides, was given by Mr. J. HOWELL EVANS, M.A., M.B., F.R.C.S. On the proposition of the CHAIRMAN, a hearty vote of thanks was accorded Mr. Howell Evans for his interesting address.

LAMBETH DIVISION.

The annual general meeting of this Division was held at Bethlem Royal Hospital on Thursday, May 6th, at 4 p.m., twenty-two members and one visitor being present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Contributions to Hospitals by Employers and Employees.

—A matter referred to the Division from the Hospitals Committee, *re* contributions to hospitals by employers of labour and employees (vide BRITISH MEDICAL JOURNAL SUPPLEMENT, February 27th, 1909), was discussed, and Proposals (a) and (b) were agreed to as follows—namely:

(a) That the contributions to hospitals by employers of labour and employees, by means of weekly collections and otherwise, should be considered as being the payment of premiums for a proportionate insurance against liability for medical and hospital attendance in cases of serious illness and accident, which are made on behalf of those unable themselves to pay directly or adequately for the same, and not as entitling the contributors to unlimited hospital, as also gratuitous medical attendance, as at present seems to be claimed.

(b) That it be an instruction to the Central Hospitals Committee of the Association to endeavour, through the Divisions and otherwise, to obtain acceptance for this principle by the several parties concerned, with a view to elaborating some scheme whereby these contributions should be paid to the rightful parties—namely, insurance companies—who in their turn will proportionately recompense hospital and similar boards, hospital staffs, general practitioners, etc., for all attendances given on illnesses or accidents incurred by those so insured, reporting from time to time to this body.

Sanatoriums for Tuberculous Workers.—On the motion of Dr. CAPEs, seconded by Dr. STODDART, it was unanimously agreed:

That in the opinion of the Lambeth Division it is not advisable that members of the Association should in future accept, or continue to hold, appointments as honorary local medical referees to the National Association for the Establishment and Maintenance of Sanatoria for Workers suffering from Tuberculosis.

Letter from the Chelsea and Fulham Division.—A communication from the Chelsea and Fulham Division concerning the action of the Royal College of Surgeons in admitting women to its examinations contrary to the vote of the majority of the members was received.

Election of Officers.—The following officers for the ensuing session were then elected: *Chairman*, W. H. B. Stoddart, M.D.; *Vice-Chairman*, J. V. C. Denning, L.R.C.P.I.; *Honorary Secretary*, H. C. Cameron, M.D.; *Representative at Representative Meetings*, R. Esler, M.D.; *Representative upon the Branch Council*, R. Capes, M.R.C.S., L.R.C.P., and *Honorary Secretary of the Division, ex officio*, *Executive Committee*, W. A. Atkinson, M.D., E. A. Edelson, M.B., M.R.C.S., W. E. Sturges-Jones, M.R.C.S., L.R.C.P., H. J. Spon, M.R.C.S., L.R.C.P., G. F. Grant, M.B., T. H. P. Peers, L.M.S.S.A., V. A. Jaynes, M.R.C.S., L.R.C.P.

Installation of New Chairman.—Dr. ATKINSON then addressed the meeting in a few appropriate words, and vacated the chair in favour of Dr. Stoddart.

Vote of Thanks to Retiring Chairman and Officers.—A hearty vote of thanks to Dr. Atkinson for the able and conscientious manner in which he had carried out his chairmanship during the past session, without being absent from a single meeting, either of the Executive Committee or of the Division, was carried by acclamation. Votes of thanks to the retiring officers were also carried unanimously.

Candidates for Central Council.—Dr. STODDART then asked the Division, first to support the nominees of the Wandsworth Division—namely, Drs. Ker, Shaw, Haslip, and Shadwell, and Sir Victor Horsley, to represent the Branch on the Central Council, and secondly, inviting those members of the Division who had votes to support the candidature of Mr. Lucas, of Guy's Hospital, for a place upon the Council of the Royal College of Surgeons.

Clinical Demonstration.—Both these proposals being agreed to unanimously, Dr. STODDART called upon Dr. Hyslop to give a clinical demonstration upon cases from the wards of Bethlem Royal Hospital. The meeting adjourned to the billiard room, where Dr. Hyslop gave a most interesting demonstration, which lasted for upwards of an hour.

Vote of Thanks.—A hearty vote of thanks to Dr. Hyslop for his demonstration and to the authorities of Bethlem Royal Hospital for their kind arrangements for the meeting were carried by acclamation, and the meeting adjourned at 6 p.m.

WESTMINSTER DIVISION.

An ordinary meeting of the Westminster Division was held at the Criterion Restaurant on May 6th, Dr. WILLIAM EWART presiding.

Dinner.—The members and guests first dined together, two lady doctors being present.

Paper.—Sir WILLIAM GOWERS, the guest of the evening, then read a paper on "The Premonitory Symptoms of Migraine," which was followed by an interesting discussion in which Drs. SEYMOUR TAYLOR, HARRY CAMPBELL, SAYILL, WILFRED HARRIS, and others took part.

Whole-time Medical Officers of Health.—On the reference from the Central Medico-Political Committee it was unanimously agreed that medical officers of health should not engage in private practice, but should devote the whole of their time to the duties of their office.

Hampstead Hospital.—Dr. DAUBER (Vice-President of the Division) raised the question of the delay in dealing with the Hampstead Hospital question, pointing out that the ex-Chairman of the Division (Dr. Knowsley Sibley) had suffered material loss by his loyalty to the Association in abiding by the terms of the "Warning Notice" and in refraining from applying for one of the vacant posts on the amalgamated North-West London and Hampstead Hospitals.

A resolution calling for immediate action was carried *velutine contradicte*.

Nomination of Officers.—The nomination of officers for the ensuing Association year was then considered, and the following names were unanimously adopted: *Vice-President of the Branch*, Dr. Knowsley Sibley; *Members of Central Council*, Sir Victor Horsley, Dr. Haslip, Dr. Harvey Hilliard, Dr. Kerr, Dr. Lauriston Shaw.

Votes of Thanks.—The meeting then terminated, after a hearty vote of thanks to Sir William Gowers for his interesting paper, and to the other speakers for being present and giving their experience.

SOUTH-EASTERN BRANCH:

MAIDSTONE DIVISION.

A MEETING of this Division was held at West Kent General Hospital, Maidstone, on Thursday, May 13th, at 3 p.m., Dr. C. E. HOAR in the chair. There were also present Drs. Ground, Oliver, Douglas, Killick, T. Joyce, Mapleton, Black, Shaw, Falwasser, Gibb, Parr-Dudley, Peyton, Dwyer, and G. Potts, Honorary Secretary.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Apologies for Non-attendance.—Mr. F. T. Travers and Dr. Ryan wrote regretting inability to attend.

New Members.—Drs. Dwyer and Peyton were welcomed as new members.

Paper.—Dr. PEYTON read a paper on Ménére's disease, and showed a case illustrating the same. The paper was discussed by Drs. HOAR, OLIVER, GROUND, JOYCE, DOUGLAS, and GIBB. Dr. Peyton was thanked for his interesting paper.

Whole-time Medical Officers of Health.—A letter was read from the Medical Secretary *re* whole-time medical officers of health. Dr. PARR-DUDLEY proposed and Dr. JOYCE seconded:

That this meeting approve of the principle of whole-time medical officers of health, provided there be an appropriate remuneration and a permanence of tenure.

Practitioners and Appointments.—Dr. JOYCE's resolution:

That this meeting is of opinion that it should be considered disgraceful conduct in a professional sense for any registered practitioner to supplant another who has been compelled to vacate any appointment on the ground that it is inadequately paid for, such inadequate remuneration having been found by the General Medical Council to have been well founded,

was carried unanimously.

Letters of Warning to Head Masters of Schools.—Dr. PARR-DUDLEY moved that:

The letter of warning issued by the Manchester Division to the head masters of schools in their Division with reference to the medical practice shall be issued by this Division to the head masters of schools in Kent.

It was resolved that this motion be postponed to the next meeting on June 17th.

YORKSHIRE BRANCH:

HALIFAX DIVISION.

The annual meeting of this Division was held on May 4th. Dr. ELLIS was in the chair, and fifteen other members were present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Annual Report.—The annual report was then read. This was adopted on the proposition of Dr. DRURY, seconded by Dr. PRIESTLEY LEECH.

Election of Officers.—The following officers were elected: *Chairman*, Dr. James Marshall; *Vice-Chairman*, Dr. George Hoyle; *Representative to Representative Meetings and Member of Branch Council*, Dr. Arthur Drury; *Committee*, Drs. Ellis, Hughes, Priestley Leech, and Macaulay; *Honorary Secretary and Treasurer*, Dr. J. F. Hodgson.

Whole-time Medical Officers of Health.—The memorandum on this subject was considered. The opinion was that a whole-time medical officer of health should have a salary of at least £500 per annum, but it was feared that if small districts were compelled to engage whole-time officers, then the salaries offered would be considerably below £500 per annum, and would only attract an inferior order of practitioners. It was resolved on the proposition of Dr. PRIESTLEY LEECH, seconded by Dr. MARSHALL:

That in districts of 50,000 inhabitants and upwards the medical officer of health should be debarred from private practice.

Medical Certification of Suitability of Patients for Hospital Treatment.—The recommendation of the Council was approved:

That a medical certificate of suitability for hospital treatment be required as a condition of hospital treatment, except in case of casualties.

This was proposed by Dr. LEECH and seconded by Dr. WHITAKER.

Contributions to Hospitals by Employers and Employees.—The report on this subject was considered, and it was resolved on the proposition of Dr. MACAULAY, seconded by Dr. MARSHALL:

That such contributions ought to be looked upon as subscriptions to a charity, and not in any sense as the payment of premiums.

Fresh Public Medical Institutions.—The statement submitted was approved.

Sanatoriums for Tuberculous Workers.—The subclauses of Clause 3 and the resolution in Clause 4 were approved.

Representation of Local Medical Profession on Hospital Boards.—This subject was considered. At the local infirmary all the members of the consulting and honorary staff are on the board of management. Dr. MARSHALL proposed and Dr. HUGHES seconded the following resolution, which was carried:

This meeting approves of the principle of the local medical profession (whether members of the staff or not) being represented on the board of management of local hospitals.

Medical Inspection of School Children.—At a meeting of the Division held on February 19th, a resolution, approving of the employment of part-time men as medical inspectors of school children, was passed and a copy sent to the Education Committee of the County Borough of Halifax. The Education Committee made certain proposals which were to be submitted to the Town Council on January 6th. A meeting of the Executive Committee of the Division was held, and as the proposals were of such importance to the medical profession in the Borough the Town Council was asked to receive a deputation in order that the Division might lay before them its views and recommendations. As a result the whole matter was referred back to the Education Committee by the Town Council. The Education Committee proposed to keep on their present medical officer (Dr. Hunt) as chief medical officer at his present salary of £150 a year, and to employ a whole-time assistant at £250 a year. The deputation from the Division met the Education Committee on February 15th. The deputation was asked for their views and recommendations. The strongest objection was taken to a general practitioner in the town being the chief executive officer. No discussion took place, and no questions were asked. The Committee promised to communicate its decision to the Secretaries of the Division. Their decision was printed in the local press on February 11th, and their resolutions were passed without opposition at the Town Council meeting on March 3rd. On March 9th a belated letter was received from the Secretary of the Education Committee informing the Division of the decision of the Education Committee, whose resolution was as follows:

That the medical officer of health be appointed Superintendent of the Medical Inspection of School Children, also that the services of Dr. Hunt be retained at his present salary, and a full-time Assistant Schools Medical Officer be appointed at a salary of £250 per annum, who shall be required to sign an agreement not to practise within five miles of the Halifax Town Hall for a period of three years after leaving the service of the Committee.

Dr. ELLIS gave an account of the reception of the deputation.

Treatment of School Children.—The Division expressed its disapproval of the free and promiscuous distribution of certain medicaments by the sanitary authorities.

Local Matters.—Certain other local matters were referred to, and a vote of thanks to the retiring Chairman, Dr. Ellis, was passed.

To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

ABERDEEN BRANCH.—*Election of Representative of the Branch on the Council of the Association.*—Nominations of candidates must be sent in writing on or before May 22nd to Dr. J. F. Christie, 7, Alford Place, Aberdeen.

BATH AND BRISTOL BRANCH; TROWBRIDGE DIVISION.—The annual meeting of this Division will be held at the Town Hall, Trowbridge, on Saturday, May 29th, at 3 p.m. Agenda: (1) To elect officers. (2) To receive financial statement. (3) To consider matters referred to Divisions: (a) Report on medical certification of suitability of patients for hospital treatment (see SUPPLEMENT to BRITISH MEDICAL JOURNAL, February 27th). (b) Report on contributions to hospitals by employers of labour and employees (see SUPPLEMENT to BRITISH MEDICAL JOURNAL, February 27th). (c) Statement as to fresh public medical institutions.—The Council, acting upon an instruction from the Annual Representative Meeting at Sheffield, refers the following motion for the consideration of the Divisions: "That it is desirable that no fresh public medical institution should be opened without previous consultation with the local medical profession through some organized body, such as the Division of the British Medical Association in the area of which it is proposed to establish such new institution, and that it be an instruction to the Council to give effect to this principle in considering applications from Divisions or Branches for support in dealing with hospital questions." The Council will be glad to receive from the Divisions their expressions of opinion on the subject. (d) Statement as to sanatoriums for workers suffering from tuberculosis. (4) To consider question of examination of recruits for the Territorial Forces. (5) To consider report on current work of Association.—JAMES PEARSE, M.D., Honorary Secretary.

BIRMINGHAM BRANCH; COVENTRY DIVISION.—The annual meeting of this Division will be held at the Coventry and Warwickshire Hospital on Tuesday, May 25th, at 8 p.m. Agenda: (1) To elect officers and Executive Committee for the year. (These include Chairman, Vice-Chairman, Secretary, Representative on the Branch Council, and on the Committees of Management of the Public Medical Service, and the New Dispensary Service.) (2) To receive the Report of the Executive Committee. (3) Matters referred to the Divisions: The representation of the local medical profession on Boards of Hospitals and similar bodies (SUPPLEMENT to the BRITISH MEDICAL JOURNAL, April 10th). (4) Recommendation from the Committee that the Division sanction the altering custom of Division, so that the Chairman's address should be delivered at a meeting other than the October meeting, when the dinner is held. (5) To thank the Committee of the Coventry and Warwickshire Hospital for the continued use of their Board Room for the meetings of this Division.—JOHN ORTON, Honorary Secretary, Coventry.

BIRMINGHAM BRANCH; COVENTRY AND TAMWORTH AND NUNEATON DIVISIONS.—A combined meeting of the Tamworth and Nuneaton Division with the Coventry Division will be held at the Coventry and Warwickshire Hospital on Tuesday, May 25th, at 8 p.m., for the purpose of electing a Joint Representative to represent them at the Annual Representative Meeting, and to instruct him in regard to matters arising at that meeting.—JNO. ORTON, Secretary of the Constituency.

BORDER COUNTIES AND NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCHES.—*Election of Representative Member on Central Council.*—Nominations, in accordance with the regulations of the Association, must be sent to me in writing on or before May 31st.—A. S. BARLING, Queen Square, Lancaster.

BORDER COUNTIES BRANCH; SCOTTISH DIVISION.—The annual general meeting of this Division will be held on Friday, June 4th, at the Dumfries and Galloway Royal Infirmary, Dumfries, at 3 p.m.—GEORGE R. LIVINGSTON, Honorary Secretary.

DUNDEE, PERTH, AND STIRLING BRANCHES.—*Election of Representative Member of Central Council.*—Nominations, in

accordance with the regulations of the Association, must be sent to me on or before Saturday, May 22nd.—R. C. BUIST, M.D., 166, Nethergate, Dundee, Returning Officer.

EAST ANGLIAN BRANCH.—Nominations for the election of Representative Members of Central Council must be forwarded to me not later than June 1st next.—B. H. NICHOLSON, East Lodge, Colchester, Honorary Secretary.

EAST ANGLIAN BRANCH.—The annual meeting of the Branch will be held at the Grand Hotel, Clacton-on-Sea, on Thursday, July 1st.—B. H. NICHOLSON, East Lodge, Colchester, Honorary Secretary.

EDINBURGH AND FIFE BRANCHES.—The attention of members of these two Branches is drawn to the fact that nominations for the election of two members upon the Central Council of the Association should be sent in to one of the Secretaries not later than June 16th.—A. LOGAN TURNER, 27, Walker Street, Edinburgh; FRANCIS D. BOYD, 22, Manor Place, Edinburgh; BALFOUR GRAHAM, Leven, Fife.

EAST YORK AND NORTH LINCOLN BRANCH.—The annual meeting of this Branch will be held at the Grimsby Hospital on Saturday, June 19th. Further particulars as to the time of meeting and business to be transacted will be published later in the JOURNAL and communicated by circular to each member. Nominations for the offices of (1) President-elect, (2) Vice-President, (3) Honorary Secretary and Honorary Treasurer must be in the hands of the Honorary Secretary before May 29th, in writing and signed by any three members of the Branch.—EDWARD TURTON, M.D., Honorary Secretary, 1, Albion Street, Hull.

EAST YORK AND NORTH LINCOLN AND CAMBRIDGE AND HUNTINGDON BRANCHES.—*Election of the Joint Representative on the Central Council of the Association.*—Nominations of candidates must be sent in writing, on or before May 29th next, to EDWARD TURTON, Branch Secretary, 1, Albion Street, Hull.

GLASGOW AND WEST OF SCOTLAND BRANCH.—*Election of Members of the Central Council.*—In accordance with Association By-law 25, Branch Rule 5, nominations for Representatives on the Central Council, each signed by at least three electors, are requested to be sent to me on or before Wednesday, May 26th. The Branch is entitled to return two Representatives. The present Representatives, Mr. James Grant Andrew and Dr. D. J. Mackintosh, M.V.O., are eligible and seek re-election.—Wm. D. MACFARLANE, Jun., 17, Woodside Crescent, Honorary Secretary.

GLASGOW AND WEST OF SCOTLAND BRANCH; GLASGOW NORTH-WESTERN DIVISION.—The annual meeting of this Division will be held in the Burgh Hall, Hillhead, on Wednesday, May 26th, at 8.30 p.m. Business: (1) Minutes of last meeting. (2) Report by the Secretary about the remit on "Fresh Medical Charities." (3) Annual report. (4) Election of office-bearers. (5) Election of Representative to the Representative Meeting. (6) Matter referred to Divisions for consideration and instruction to Representative: Representation of local medical profession on hospital boards and similar bodies (see SUPPLEMENT for April 10th). (7) Communication from Chelsea and Fulham Division. (8) Notice of motion by Dr. G. B. Buchanan: "That it be remitted to the Chairman and Secretary to make inquiries as to the steps necessary to alter the rules so that a Representative may be appointed at an earlier date than at present."—G. BURNSIDE BUCHANAN, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—The annual meeting of the Branch will be held at Chester on Wednesday, June 16th. Members desiring to make scientific, clinical, or other communications will please communicate at once with the Branch Secretary, F. CHARLES LARKIN, 54, Rodney Street, Liverpool.

LANCASHIRE AND CHESHIRE BRANCH; ALTRINCHAM DIVISION.—*Preliminary notice.*—The annual business meeting will be held on June 16th and a scientific meeting on June 24th. Particulars later. Members are requested to note the dates. Nominations of officers and committee to be made in writing to me before June 7th.—T. W. H. GARSTANG, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH; BURY DIVISION.—The annual meeting of this Division will be held on Tuesday, May 25th, in the Dispensary, Knowsley Street, Bury, at 8.45 p.m. Agenda: (1) Minutes. (2) Annual report. (3) Election of office-bearers. (4) Adoption of ethical rules. (5) Address by Dr. Arthur Helms on Displacements of the Uterus.—J. CAMERON TURNBULL, M.D., Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH; ST. HELENS AND WARRINGTON DIVISIONS.—A joint meeting of these Divisions will be held in Lime Street Station Hotel, Liverpool, on Tuesday, May 25th, at 4.15 p.m. Business: To elect a Representative; Business of Representative Meeting.—JOHN J. BUCHAN and T. A. MURRAY, Honorary Joint Secretaries.

METROPOLITAN COUNTIES BRANCH.—Nominations of Branch Officers.—Pursuant to By-law 25, notice is hereby given that nominations for all the officers of the Branch—namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association—must be sent in to the Honorary Secretary of the Branch on or before May 25th. Voting papers will be sent out on or before June 5th, and must be returned to the Secretary on or before June 12th.—**ATWOOD THORNE, E. W. GOODALL, Honorary Secretaries.**

METROPOLITAN COUNTIES BRANCH: MAYLEBONE DIVISION.—The annual meeting of this Division will be held at the Rooms of the Medical Society of London, Chandos Street, W., on Wednesday, May 26th, at 5 o'clock p.m. Agenda: (1) Minutes. (2) Letters. (3) Election of officers; the following have been nominated by the Executive Committee as officers for the ensuing year: *Chairman*, Dr. F. J. Smith; *Vice-Chairman*, Mr. L. E. Cressy; *Honorary Treasurer*, Dr. Comyns Berkeley; *Honorary Secretary*, Mr. Donald Armour; *Representatives of the Division on the Branch Council*, Sir Victor Horsley, Dr. Lauriston Shaw, Dr. G. A. Heron, Dr. W. E. Burton, Mrs. Berry, M.D., and the Honorary Secretary; *Representative in Representative Meetings*, Mr. Donald Armour. (4) Nomination for election to the Central Council; the Executive Committee recommends the nomination of Sir Victor Horsley and Dr. Lauriston Shaw. (5) To receive the annual report of the Executive Committee. (6) Report of the Executive Committee upon the proposed alterations in the rules of the Division. (7) Central Ethical Committee's report to the Council on a communication from the Metropolitan Counties Branch. Findings as to acceptance of appointments in disregard of "Warning Notice." (8) Public Health Committee's memorandum on whole-time medical officers of health. (9) SUPPLEMENT, BRITISH MEDICAL JOURNAL, January 23rd. (10) Federated Societies' Medical Benefit Association (BRITISH MEDICAL JOURNAL, February 13th, p. 425). (11) Departmental Committee re Midwives Act; action taken by the Association; the giving of evidence by Divisions before the Committee, and suggestions from Divisions as to any points upon which evidence should be given. (12) Any other business.—**DONALD ARMOUR, Honorary Secretary.**

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—The annual meeting of this Division will be held at the Criterion Restaurant on Thursday, June 3rd, when Sir Lauder Brunton will read a paper on Blood Pressure in Man; its Estimation and Indications for Treatment, and the officers of the Division for the ensuing year will be elected.—**HARVEY HILLIARD, Honorary Secretary.**

MIDLAND BRANCH.—The annual meeting of this Branch will be held at the Leicester Infirmary on Thursday, June 10th. (1) The President-elect, Dr. R. Pratt, will give an address. (2) Election of Branch officers. (3) Annual report of the Branch. (4) Any other business. In accordance with the By-laws, notice is hereby given that nominations for the election of two Representatives of this Branch on the Central Council must be sent to the Honorary Secretary of the Branch not later than May 24th.—**ROBERT SEVESTRE, Honorary Secretary, London Road, Leicester.**

MIDLAND BRANCH: LEICESTER AND RUTLAND DIVISION.—The annual meeting of the Division will be held on Wednesday, May 26th, at the Leicester Infirmary, at 4.15 p.m. Agenda: Minutes of previous meeting; election of Representatives of the Division on the Branch Council, and of officers and members of the Executive Committee of the Division; election of Representatives of the Division at Representative Meetings; annual report of the Executive Committee; any other business.—**WILFRED E. GIBBONS, Honorary Secretary, Leicester.**

NORTH OF ENGLAND BRANCH.—Nominations for the election of members of the Central Council must be sent in to me on or before May 31st.—**DAVID F. TODD, Honorary Secretary, Beech House, Sunderland.**

NORTH WALES BRANCH.—Nominations for the election of a Representative on the Central Council and for other officers of the Branch for the next year, in accordance with By-law 25, must be sent to the Honorary Secretary on or before June 1st.—**H. JONES ROBERTS, Honorary Secretary, Llywenarth, Pen-y-groes.**

NORTH WALES BRANCH: SOUTH CARNARVON AND MERIONETH DIVISION.—The annual meeting of this Division will be held at the Tower Hotel, Pwllheli, on Thursday, May 27th, at 2 p.m.—**H. GLADSTONE JONES, Honorary Secretary, Plas Gwilym, Cricieth.**

NORTHERN COUNTIES OF SCOTLAND BRANCH.—Election of Representative of the Branch on the Central Council of the Association.—Nominations of candidates for election to the Central Council must be forwarded to the Honorary Secretary on or before May 29th.—**J. MUNRO MOIR, M.D., 4, Ardross Terrace, Inverness, Honorary Secretary.**

NORTHERN COUNTIES OF SCOTLAND BRANCH.—The annual meeting of the Branch will be held at Elgin on Saturday, June 5th. Further particulars as to hour and place of meeting will be communicated to each member by circular.—**J. MUNRO MOIR, M.D., Honorary Secretary, 4, Ardross Terrace, Inverness.**

SOUTH-EASTERN BRANCH.—The annual meeting of this Branch will be held at Croydon on Wednesday, June 23rd, Dr. J. J. Macan, President-elect, in the chair. The following will be the agenda:—(1) To elect the officers of the Branch; nominations by three members for the offices of President-elect, Vice-President, and Secretary, may be sent to the Honorary Secretary on or before May 21st. (2) To receive the annual report of the Branch. (3) To transact any business that may be transacted by an ordinary meeting. Three members to represent the Branch on the Central Council will also be elected by voting papers. Nominations for these posts, each by three members in meeting, should be sent to the Honorary Secretary on or before May 21st.—**H. M. STEWART, Honorary Secretary, Dulwich.**

SOUTH-EASTERN BRANCH: FOLKESTONE DIVISION.—The annual meeting of this Division will be held at Hotel Wagon, Folkestone, on Saturday, May 29th, at 8.45 p.m. Agenda: (1) Minutes. (2) Election of Representative of Division on Branch Council, officers of Executive Committee, Representative at Representative Meeting, President, and Secretary. (2) Annual report of the Executive Committee. (3) Any other business.—**P. VERNON DODD, M.D., Honorary Secretary.**

SOUTH-EASTERN BRANCH: GUILDFORD DIVISION.—The annual meeting of the Division will be held at the Royal Surrey County Hospital on Wednesday, May 26th, at 4.30 p.m. Agenda: (1) Minutes. (2) Election of officers and members of the Executive Committee for the ensuing year. (3) Annual report of the Division. (4) To consider the following proposal of the Brighton Division: "That the South-Eastern Branch be divided into two smaller Branches, one to consist of that part of Kent which is already in the South-Eastern Branch, and the other of the county of Sussex and so much of the county of Surrey as is already part of the Branch." (5) Matters referred to Divisions: (a) Medical inspection and treatment of school children. (b) Whole-time appointments for medical officers of health. (c) Reports from Hospitals and Medico-Political Committees. (see SUPPLEMENT to BRITISH MEDICAL JOURNAL, February 27th). (d) Representation of local medical profession on boards of hospitals and similar bodies (see SUPPLEMENT to BRITISH MEDICAL JOURNAL, April 10th). (6) Dr. B. H. Kingsford will read notes of a case of intestinal obstruction due to an impacted gall stone, and will exhibit specimen. (7) Mr. E. J. Smyth will introduce a discussion on Ophthalmia Neonatorum, with especial reference to the Report of the Committee of the Association on the subject, referred to the Divisions for their consideration (see SUPPLEMENT to BRITISH MEDICAL JOURNAL, May 8th). (8) Any other business. Tea will be provided at 4.15 p.m. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends. The Honorary Secretary will be glad to receive nominations for any of the above offices, and to hear from any other members willing to show cases or specimens.—**E. J. SMYTH, Honorary Secretary and Treasurer, Maythorne, Epsom Road, Guildford.**

SOUTH-EASTERN BRANCH: MAIDSTONE DIVISION.—The next meeting of this Division will take place on Thursday, June 17th, for the purpose of electing officers for the ensuing year. It has been proposed to have a dinner afterwards. The Honorary Secretary would feel greatly obliged if each member would kindly intimate his intention of being present or not as early as possible.—**GEORGE POTTS, Honorary Secretary.**

SOUTH-EASTERN OF IRELAND BRANCH.—A meeting of this Branch, as also a meeting of the Branch Council and the local Division, will be held at Council Chamber, Clonmel, on Wednesday, June 2nd, at 12.0 noon. Agenda: (1) Minutes of last meeting. (2) Letters of apology. (3) Correspondence. (4) Dr. D. Walshe will move: "That in any legislation that may follow the reports of the Local and Veterinary Commissions to inquire into the working of the Poor Laws, the British Medical Association be requested to use all its influence to safeguard the interests of the Irish dispensary medical officers and medical officers to workhouses, and to secure: (a) That entrance to the Irish Poor Law medical service shall be by competitive examination; (b) that adequate salaries shall be fixed, and (c) superannuation allowances be made compulsory on the lines of civil service superannuation regulations." (5) Dr. Laffan will move at next meeting: "That members be requested to contribute 2s. 6d. each annually towards a dinner fund, whether they attend or not, the proceeds to be allocated proportionately to each Division centre (wines and tobacco not included), and any deficit to be supplied by those actually present at dinner." (6) Any other business.—**J. QUIRKE, Honorary Secretary, Piltown.**

SOUTH MIDLAND BRANCH.—In accordance with By-law 25, notice is hereby given that nominations for the election of a Representative of this Branch on the Central Council must be sent to me not later than May 22nd next.—**E. HARRIES-JONES, 16, Castilian Street, Northampton.**

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—Election of Two Representatives on the Central Council of the Association.—In accordance with By-law 25 of the Association, nomination of candidates must be sent to me in writing on or before Saturday, May 22nd next.—**ALFRED HANSON, Swansea, Honorary Secretary, South Wales and Monmouthshire Branch.**

SOUTH-WESTERN BRANCH.—Election to Central Council.—This Branch is entitled to return two members. Nominations should be sent to the undersigned so as to reach him not later than May 24th.—**RUSSELL COOMBE, Branch Secretary, 5, Barnfield Crescent, Exeter.**

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—The annual meeting of this Branch will be held at Malvern on Thursday, June 10th. To elect Branch officers and appoint members to the Central Council of the Association; to receive annual report of the Branch, and for any other business. Dinner.—**C. S. MORRISON, Honorary Secretary.**

ULSTER BRANCH.—Nominations for the offices of President, Treasurer, and Secretary, each signed by two members, should be sent not later than June 2nd to **CECIL SHAW, M.D., Honorary Secretary, 29, University Square, Belfast.**

ULSTER AND CONNAUGHT BRANCHES.—Two members to represent the combined Branches on the Central Council will be elected next month. Nominations, signed by three members, should be sent to me not later than June 2nd.—**CECIL SHAW, M.D., Honorary Secretary Ulster Branch, 29, University Square, Belfast.**

YORKSHIRE BRANCH.—The annual meeting of the Branch will be held at the Grand Hotel, Scarborough, on Saturday, June 26th.—**ADOLPH BRONNER, Honorary Secretary, 33, Manor Row, Bradford.**

YORKSHIRE BRANCH.—Nominations for the election of Representative members of the Central Council (two), each signed by at least three members, must be forwarded to me not later than June 15th. The present Representatives are Drs. Goyder and Sinclair White.—**ADOLPH BRONNER, Honorary Secretary, 33, Manor Row, Bradford.**

INDIAN MEDICAL SERVICE.

MEASURES FOR PROMOTING THE GROWTH OF AN INDEPENDENT MEDICAL PROFESSION IN INDIA.

The following correspondence, which has passed between the Secretary of State and the Government of India, was presented to Parliament on May 20th:

No. 1.

Dispatch from the Secretary of State for India to the Governor-General of India in Council, No. 137, dated 9th August, 1907.
(Extract.)

I desire to invite the attention of Your Excellency's Government to Lord George Hamilton's Dispatches, Military, No. 5, 18th January, 1900, and Public, No. 157, 13th December, 1900. In the closing paragraph of the last Dispatch my Predecessor observed: "It would be of such great benefit to India generally that medical men should establish themselves in private practice in the country in the same way as they do in other parts of Her Majesty's Empire without entering the medical service connected with the Army, that I am unwilling to accept proposals based upon the assumption that sufficient medical qualifications will never be found in India or elsewhere outside the Indian Medical Service." I am not aware that this part of my Predecessor's Dispatch has ever formed the subject of a communication from the Government of India, but I am confident that the policy indicated in it will generally have the hearty support of Your Excellency as it has mine. I shall be glad to be informed whether any steps have yet been taken to give effect to that policy, and whether any further measures are in contemplation for promoting the growth of an independent medical profession in India.

No. 2.

Letter from the Government of India in the Home Department to the Right Honourable the Secretary of State for India, No. 20, dated 20th August, 1908.
(Extract.)

We have the honour to refer to Your Lordship's Dispatch No. 137 (Military), dated the 9th August, 1907, regarding the measures which have been taken or are in contemplation for promoting the growth of an independent medical profession in India. We desire, in the first place, to explain why we have not replied at an earlier date. Last year we addressed local Governments on the subject of creating appointments of medical officers of health in

both urban and rural areas, and we suggested that these posts should, whenever possible, be filled by Indian medical men outside the Indian Medical Service. We felt that the reception given to this proposal would assist us in replying to the dispatch, but as only one local Government has as yet favoured us with its opinion, and as we learn that Your Lordship desires an early expression of our views, we proceed to state the general conclusions at which we have arrived. We are in entire sympathy with the desire to promote the growth of an independent medical profession in India, and we recognize the important bearing upon this question of Lord George Hamilton's suggestion that advantage should be taken of the creation of new medical appointments to provide for the admission of independent practitioners either to the new appointments or to some of the posts which are regarded as reserved for members of the Indian Medical Service. One essential restriction, however, upon any reduction of the numbers of that service is that its strength must always be sufficient to meet the medical requirements of the Indian Army. In order that it may do this effectually it is necessary that it should include a large reserve of officers whose services would be available on the outbreak of war; and, as a measure of economy, these reserve officers must in peace time be employed on civil duties. It appears, however, from inquiries we have made, that about one-third of the officers holding these civil posts could not be spared for military duty even in the event of an emergency so grave as to require a general mobilization of the army in India. To the extent of about one-third, therefore, the officers in civil employ do not form any part of the real war reserve, and there would be no military objections to the transfer to independent practitioners of the civil appointments held by them. We have accordingly to consider whether there are objections on other grounds to such a transfer. The posts referred to include certain administrative offices which must continue to be held by senior members of the Indian Medical Service. They also include some of the more important of the civil surgencies, superintendships of lunatic asylums, appointments in the Assay department, the Chemical Analyser's department and the Bacteriological department, and about half the professorial appointments in the various medical colleges. With regard to the last-mentioned appointments it has been urged that any large reduction in the number of such posts reserved for members of the Indian Medical Service would seriously diminish the attractiveness of that service and produce a deterioration in the quality of the candidates. We admit that this argument would have considerable force if it were contemplated to deprive the Indian Medical Service of the full number of these appointments at one stroke, but there is no possibility of qualified candidates being forthcoming at present for more than a very small proportion of them, and we do not anticipate that the exclusion of these few posts will have any appreciable effect upon recruitment. By the time that a larger number of qualified candidates is forthcoming it is probable that the number of medical schools and professorial chairs will also have increased, and there will, therefore, be no difficulty in retaining for the Indian Medical Service a proportion of prize appointments sufficient to maintain its attractiveness. The attainment of the object which Your Lordship and ourselves alike have in view depends, then, upon the possibility of finding in this country medical practitioners qualified to hold the appointments which could be thrown open to them. There would undoubtedly be no difficulty in securing the services of private practitioners who are qualified to fill the less important civil surgencies, but unfortunately these are just the appointments in which the war-reserve officers of the Indian Medical Service can most suitably be employed, and the transfer of these surgencies from that service might, therefore, cause some embarrassment and lead to increased expenditure. For the more important appointments of civil surgeon, the bacteriological and other special posts, and the professorial chairs, very few qualified candidates could at present be found. It is in our opinion of the highest importance and essential to the growth of a really efficient independent medical profession that the present high character of the instruction given in the medical colleges in India should be maintained unimpaired. Any diminution of efficiency in that direction would go far to defeat the object in view, and would most certainly retard the more general employment of independent practitioners. Subject, however, to this essential condition of efficiency, we are quite willing to appoint such practitioners to professorial posts whenever fully qualified candidates are forthcoming. And we shall also be prepared to appoint qualified medical gentlemen outside the ranks of the

Indian Medical Service to other posts which are not required for the employment of the war-reserve of medical officers. We desire to impress upon Your Lordship the excellent work which has been and is being done by the medical schools in India. The majority of the students who pass through those schools do already take to private practice, and in this way an independent medical profession is gradually being created. The general average of attainments of these men is not, it is true, equal to that of the officers of the Indian Medical Service, but each generation of students is better than its predecessor, and provided nothing is done to lower in any way the standard of instruction given in the medical colleges, there is every reason to hope that this progressive improvement will be maintained. Your Lordship will observe that in the preceding paragraphs we have considered the question only with reference to the general medical profession in India. We have done so because we consider that it is an essential condition of the introduction of any scheme for the gradual opening of civil medical appointments now reserved for the Indian Medical Service to the general medical profession that qualified candidates should be available among the natives of this country or the domiciled community. The appointment of English medical men recruited in England would lead to serious practical difficulties, as these gentlemen would require leave to England in the same way as members of the Indian Medical Service, and, if we did not form a leave reserve of men similarly recruited, we should find ourselves in an embarrassing position when they were granted leave. Further, to recruit medical practitioners in England and form a leave reserve would in effect be to create a second medical service, which would doubtless put forward claims to be treated in precisely the same way as the Indian Medical Service, and which would do nothing to promote the growth of an independent medical profession in this country. If European medical officers are required for any particular appointment or class of appointments they can, in our opinion, most advantageously be supplied by the Indian Medical Service. We desire to remark incidentally that we anticipate that difficulties may arise from the appointment of independent medical practitioners to particular posts, such as civil surgeoncies. Owing to the multiplicity of gratuitous services which are demanded of civil surgeons, it is quite possible that, if private practitioners are appointed, patients entitled to such services may not infrequently complain of neglect. At present it is comparatively easy to deal with such complaints, but when the civil surgeon is not a member of a particular service, and so liable to transfer, but an independent practitioner permanently resident in the station, it will be difficult, if the complaints prove to be well-founded, to provide any adequate remedy short of his removal from office, and his replacement either by another independent practitioner, if one is available, or by an officer of the Indian Medical Service. These difficulties, however, are not, we believe, insuperable, and they will tend to diminish with the increase in the number of practitioners who are qualified to hold such appointments and anxious to obtain them. In conclusion, we desire to repeat the considerations which, in our opinion, must govern any advance in the direction indicated in Your Lordship's dispatch, viz., that the advance should be very gradual and tentative and in the main, though not exclusively, from the bottom, (2) that it should be made only as really qualified candidates become available in India, (3) that nothing should be done to lower the efficiency of the medical schools and their hospitals, (4) that a sufficient number of civil appointments be reserved to provide for the economical employment of the war-reserve of the Indian Medical Service, and (5) that, in determining what these appointments should be, the necessity of maintaining the attractiveness of the Indian Medical Service should be borne in mind. When Your Lordship has placed us in possession of your views upon our proposals we shall address local Governments upon the whole subject, and in due course communicate to you the result of our further consideration of the points discussed with them.

No. 3.

Dispatch from the Secretary of State for India to the Governor-General of India in Council, No. 225, dated 11th December, 1908.

MY LORD,

In connection with Your Excellency's dispatch in the Home Department, No. 20, dated 20th August, 1908, I have given consideration in Council to the question whether further steps can be taken to promote the growth of an independent medical profession in India by throwing open to the profession in general some of the various civil

appointments now held by officers of the Indian Medical Service and other similar appointments which may be created in future.

2. I observe with satisfaction that your Government are in accord with the object I have in view. As regards the means to be adopted for attaining that object, I concur generally in the principles laid down at the end of your dispatch, and shall be glad to learn, after you have received and considered the opinions of the Local Governments, what measures you can propose in order to give effect to them.

3. Since 1899 successive Secretaries of State have drawn attention to the objections to indefinite extension of the cadre of the Indian Medical Service for the purpose of providing for miscellaneous appointments for which that Service, though it may offer well-qualified candidates, is not the only, and may not be the most economical, source of supply. Notwithstanding the necessity for restriction, the cadre of the Indian Medical Service has in recent years continued to increase, and, apart from other objections, its further increase will be likely to cause serious difficulties in the matter of recruiting. I have consequently decided that the time has now arrived when no further increase of the civil side of the service can be allowed, and when a strong effort should be made to reduce it by gradually extending the employment of civil medical practitioners recruited in India.

4. Your Excellency's Government will consider what appointments can best be filled in this way. If there should be any particular posts requiring special qualifications, for which suitable persons, whether trained in Indian colleges or holding European medical degrees, be they European, Eurasian, or Indian, cannot be obtained in India, it will be necessary to seek candidates from this country.

5. When it is found impossible to obtain a man from outside the Indian Medical Service to fill a particular new civil appointment, or one which has not previously been so filled, I will not object for the present to that Service being drawn upon; but the vacancy so caused must be filled from outside it, i.e., no appointment must be made in succession which would involve an addition to the cadre of the Indian Medical Service.

I have, &c.,
(Signed) MORLEY OF BLACKBURN.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: Staff Surgeon A. C. BEAN to the *Zembroke*, additional, for disposal, May 12th; Staff Surgeon J. MARTIN to the *Magnificent*, May 17th; Staff Surgeon H. L. GEORGEHAN, M.D., to the Royal Marine Infirmary, Deal, undated.

ARMY MEDICAL SERVICE.

RETIRED ARMY MEDICAL CORPS.
LIEUTENANT-COLONEL J. CARMICHAEL is placed on retired pay, May 5th. His commissions are dated: Surgeon, July 30th, 1881; Surgeon-Major, July 30th, 1893; Lieutenant-Colonel, July 30th, 1901.

INDIAN MEDICAL SERVICE.

COLONEL D. WILKIE, M.B., Bengal, has retired from the service, from April 2nd. He was appointed Assistant Surgeon, April 1st, 1873, and became Colonel, April 2nd, 1904.

The *Gazette of India* of April 24th announces that Surgeon-General Sir G. BOXFORD, M.D., F.R.C.S.E., Bengal, Director-General, Indian Medical Service, is granted privilege leave for one month and twenty-two days, with leave on private affairs for six months and eight days in continuation, from May 1st. Lieutenant-Colonel C. P. LUKIS, M.D., Bengal, is appointed to officiate as Director-General, Indian Medical Service.

TERRITORIAL FORCE.

ROYAL FIELD ARTILLERY.

Second Northumbrian Brigade.—Surgeon-Lieutenant-Colonel T. MCC. FOLEY has been granted the honorary rank of Surgeon-Colonel, March 31st, 1908.

INFANTRY.

Sixth Battalion, the Prince of Wales's (North Staffordshire Regiment).—Surgeon-Lieutenant-Colonel J. FAUSSET, M.D., has been granted the honorary rank of Surgeon-Colonel, March 31st, 1908.

Fourth Battalion, the Welsh Regiment.—Surgeon-Major EVAN EVANS has been granted the honorary rank of Surgeon-Lieutenant-Colonel, March 31st, 1908.

Fourth Battalion, the King's Own (Royal Lancaster Regiment).—Surgeon-Captain R. J. MORRIS has been granted the honorary rank of Surgeon-Major, March 31st, 1908.

ROYAL ARMY MEDICAL CORPS.

Sanitary Service.—Lieutenant-Colonel J. A. JONES, M.D., has been granted the honorary rank of Surgeon-Colonel, March 31st, 1908. Lieutenant-Colonel J. T. HALLIDAY, M.B., and to a Majority

of Captain H. W. THOMSON, M.B., bears date April 1st, 1908, and not January 11th, 1909, as stated in the *London Gazette* of March 12th.

Second *London (City of London) Field Ambulance*.—FERCY C. P. INGRAM, to be Lieutenant, March 30th.

Attached to Units other than Medical Units.—Lieutenant-Colonel C. DOWNING, Majors F. V. ADAMS, E. W. BARNES, H. P. CHALLIS, ALFRED REYS, Lieutenant G. McKELLAR, M.D., to be Captain, April 1st, 1908.

For Attachment to Units other than Medical Units.—ROBERT BRUCE, M.B., to be Lieutenant, March 17th; ALFRED B. A. CARVER, to be Lieutenant, March 30th; FREDERICK DEVERE, to be Lieutenant, March 30th; DONALD S. SUTHERLAND, M.D., to be Lieutenant, March 30th.

TERRITORIAL DECORATION.

The King has been pleased to confer the Territorial Decoration upon the undermentioned officers of the Territorial Force, who have been duly recommended for the same under the terms of the Royal Warrant dated August 17th, 1908:

Royal Army Medical Corps.

Major F. J. TABB, London District; Colonel J. S. RIDDELL, M.V.O., M.B., Scottish Command; Lieutenant-Colonel N. E. ROBERTS, M.B., Sanitary Service, Western Command.

Royal Garrison Artillery.

Surgeon-Major R. G. NESBITT, Cornwall (Duke of Cornwall's).

Infantry.

Surgeon-Captain and Honorary Surgeon-Major R. J. MORRIS, 4th Battalion the King's Own (Royal Lancaster Regiment).

Vital Statistics.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

THE Registrar-General has just issued his return relating to the births and deaths in the first quarter of the year, and to the marriages during the three months ending December last. The marriage-rate during that period was equal to 15.6 per 1,000 of the total population, and was 1.7 per 1,000 below the average rate for the fourth quarter in the ten preceding years.

Births registered in England and Wales during the three months under notice numbered 221,074, and were equal to an annual rate of 26.0 per 1,000 of the population, estimated at 35,756,615 persons in the middle of the year; the average birth-rate in the corresponding period of the ten preceding years was 28.4 per 1,000. Three of the largest counties last quarter ranged from 18.3 in Cornwallshire, 18.6 in Sussex, 19.8 in Northamptonshire, and 20.2 in Dorsetshire, to 30.0 in Staffordshire, 31.2 in Nottinghamshire, 35.5 in Durham, 35.4 in Glamorganshire, and 37.2 in Monmouthshire. In seventy-six of the largest towns, including London, the birth-rate averaged 26.7 per 1,000; in London the rate was 25.3, while among the seventy-five other towns it averaged 27.2, and ranged from 15.4 in Hastings, 14.6 in Hornsey, 15.5 in Bournemouth, 16.1 in Halifax, and 18.5 in Bradford, to 33.7 in St. Helens, 34.2 in Tynemouth, 34.3 in Newport, Mon., and in Swansea, 34.8 in Wigan, 36.0 in Merthyr Tydfil, and 41.5 in Rhondda.

The excess of births over deaths during the quarter was 68,417, against 96,976, or 267, and 94,052 in the first quarters of the three preceding years. The returns issued by the Board of Trade in 1908, that the passenger movement between the United Kingdom and places outside Europe resulted in a net balance outward of 48,598 persons. There was an outward balance of 21,294 English, 276 Welsh, 5,313 Scotch, and 899 Irish passengers; and an inward balance of 1,234 British Colonial passengers; among foreigners there was a net balance outward of 20,450.

During the first quarter of the year the deaths of 160,657 persons were registered, equal to an annual rate of 18.2 per 1,000, or 0.2 per 1,000 less than the mean rate in the corresponding quarter of the ten preceding years. The lowest county death-rates last quarter were 14.8 in Essex, 15.1 in Kent, 15.4 in Middlesex, 16.6 in Derbyshire, 16.8 in Northamptonshire, and 16.9 in the East Riding of Yorkshire; the highest rates were 19.1 in Hertfordshire and in Cambridgeshire, 19.2 in the North Riding of Yorkshire, 19.5 in Herefordshire, 20.1 in Lancashire, 20.2 in Warwickshire, and 20.8 in Shropshire. In seventy-six of the largest English towns, with an aggregate population of over sixteen millions, and a half millions, the corrected death-rate averaged 19.8 per 1,000; in 143 smaller towns, containing a population of over five millions, the rate was 17.9 per 1,000; while in the remainder of the country it was 17.0 per 1,000. The corrected death-rates in the seventy-six towns ranged from 10.2 in Hornsey, 11.1 in Walthamstow, 12.6 in East Ham, 12.7 in Handsworth (Staffs), 13.3 in Gateshead, and 13.4 in Barrow-in-Furness, to 22.1 in Oldham, 22.2 in Manchester, 23.1 in Bury, 23.2 in Liverpool, 24.2 in Wigan, and 25.9 in St. Helens; in London the rate of mortality was 16.4 per 1,000.

The 160,657 deaths from all causes in England and Wales last quarter included 11,179 which were referred to the principal infectious diseases; of these, 4,479 resulted from measles, 2,129 from whooping-cough, 1,771 from diphtheria, 833 from diarrhoea, 813 from scarlet fever, 646 from "fever" (principally enteric), and 8 from small-pox. The aggregate mortality from these diseases was equal to 1.26 per 1,000, or 0.06 per 1,000 below the average rate in the corresponding quarters of the ten preceding years. The mean death-rate from measles was the average, but from each of the other diseases it showed a decline.

The rate of infant mortality, measured by the proportion of deaths among children to registered births was equal to 122 per 1,000, or 15 per 1,000 less than the average rate in the corresponding quarter of the ten preceding years. Among the several counties the rates of infant mortality last quarter ranged from 95 in Kent, 96 in Surrey and in Buckinghamshire, 103 in Middlesex and 102 in Hertfordshire and in Essex, to 139 in Cumberland, 141 in Cambridgeshire, 146 in the North Riding of Yorkshire, 145 in Nottinghamshire and in Denbighshire and 163 in Carmarthenshire. In seventy-six of the largest towns the mean rate was 123 per 1,000; in London it was 112 per 1,000, while it averaged 107 in the seventy-five other large towns, ranging from 72 in Barrow-in-Furness, 74 in Handsworth (Staffs), 75 in Hornsey, 77 in Hastings and 80 in Wallasey, to 158 in Swansea, 160 in Blackburn, 163 in Burnley, 167 in Nottingham, 170 in St. Helens, and 181 in Wigan.

The mean death-rate among persons aged 15 and upwards was 8.8 per 1,000 of the population estimated to be living at these ages, and was 0.2 per

1,000 below the mean rate in the ten preceding first quarters. In the seventy-six large towns the death-rate in this group of ages was 9.6 per 1,000; in London the rate was 9.3, while among the other large towns it ranged from 4.8 in Hornsey, 5.0 in Walthamstow, 5.8 in Hastings, and 6.0 in East Ham, to 13.1 in Liverpool, 13.2 in Manchester, 13.4 in Warrington, 13.7 in Middlesbrough, 13.8 in Wigan, and 17.5 in St. Helens.

Among persons aged 60 years and upwards the death-rate last quarter was equal to 96.7 per 1,000 of the population at that age-period, against an average rate of 87.1 per 1,000. In the seventy-six towns the mean rate was 104.5 per 1,000, while among the other large towns it was 107.5, while it ranged from 75.7 in Hornsey, 76.0 in Grimsby, 76.2 in Gateshead, and 76.9 in Norwich, to 124.9 in Salford, 125.9 in Oldham, 131.2 in Northampton, 135.9 in Bury, and 145.3 in Rochdale.

The mean temperature of the air last quarter was below the average, the deficit amounting to as much as 2° in the southern parts of the country; the rainfall for the quarter was below the average in most districts; while the duration of bright sunshine was generally in excess.

HEALTH OF ENGLISH TOWNS.

IN seventy-six of the largest English towns, including London, 8,240 births and 4,322 deaths were registered during the week ending Saturday last, May 15th. The annual rate of mortality in these towns, which had been 15.8, 14.5, and 14.1 per 1,000 in the three preceding weeks, further fell last week to 13.7 per 1,000. The rates in the seventy towns ranged from 5.9 in Handsworth (Staffs), 7.2 in Bournemouth, 7.3 in East Ham, 8.0 in Northampton, and 8.2 in Hornsey, to 19.9 in Wolverhampton, 22.4 in Birkenhead, 22.9 in Oldham, 23.3 in Bootle, 23.1 in Coventry, and 24.7 in Wigan. In London the rate of mortality was 13.1 per 1,000, while it averaged 13.9 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.2 per 1,000 in the seventy-six towns, and corresponded with the rate in London from the same diseases; among the other towns the death-rates from these diseases ranged from 2.7 in St. Helens, 2.8 in Tynemouth, 2.9 in Warrington, 3.2 in Salford, 4.5 in Bootle, 5.2 in Wigan, and 7.5 in Wolverhampton. Measles caused a death-rate of 1.1 in West Ham, 1.3 in King's Norton and in Coventry, 1.9 in Salford, 2.2 in Warrington, 3.0 in Bootle, 3.5 in Wigan, and 5.1 in Wolverhampton. The rate of 1.1 in Blackburn and 1.3 in Merthyr Tydfil, whooping-cough of 1.1 in Hornsey, 1.3 in Willesden and in Coventry, 1.5 in Middlesbrough, and 1.6 in St. Helens and in Swansea, "fever" of 2.3 in Hanley; and diarrhoea of 1.2 in Aston Manor and in Wigan. The mortality from diphtheria showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospital and the General Fever Hospital, which had been 219, 3,381, and 2,175 at the end of the three preceding weeks, had further fallen to 2,173 at the end of last week; 313 new cases were admitted during the week, against 265, 305, and 309 in the three preceding weeks.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, May 15th, 638 births and 410 deaths were registered in the twenty-two principal urban districts of Ireland, as against 724 births and 401 deaths in the preceding period. The annual death-rate in these districts, which had been 23.9, 20.6, and 18.3 per 1,000 in the three preceding weeks, rose to 28.7 per 1,000 in the week under notice, this figure being 5.0 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 18.5 and 19.6 respectively; those of the other districts ranged from 4.3 in Ballinacorney and 5.2 in Portadown to 23.8 in Sligo and 39.8 in Lurgan, while Cork stood at 19.2, Londonderry at 15.7, Limerick at 13.7, and Waterford at 27.3. The zymotic death-rate in the twenty-two districts averaged 1.3 per 1,000, as against 1.0 per 1,000 in the preceding period.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement column where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

- ARTILLERY URBAN DISTRICT COUNCIL.—Medical Officer of Health. Salary, £350 per annum, increasing to £400.
- BARNSTABLE, NORTH DEVON INFIRMARY.—House-Surgeon. Salary, £100 per annum.
- BETHNAL GREEN INFIRMARY.—Assistant Medical Officer. Salary at the rate of £100 per annum.
- BIRKENHEAD UNION.—One Male and one Female Assistant Medical Officer. Salary, £120 and £100 per annum respectively.
- BLACKBURN COUNTY BOROUGH.—Assistant to the Medical Officer of Health. Salary, £100 per annum.
- BUXTON: WYE HOUSE.—Assistant Medical Officer (male). Salary, £120 per annum.
- CAPE COLONY: FRERE HOSPITAL, East London.—Resident Medical Officer. Salary, £300 per annum, rising to £350.
- CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, London.—Assistant Surgeon.
- DARENTHE ASYLUM, Dartford.—Third Assistant Medical Officer (male). Salary, £150 per annum, increasing to £170.
- DERBYSHIRE ROYAL INFIRMARY.—House-Surgeon. Salary, £100 per annum.
- DUDLEY: GUEST HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum.
- DURHAM COUNTY COUNCIL.—Three School Medical Inspectors (two females and one male). Salary, £50 per annum.
- EAST AFRICA PROTECTORATE.—Two Medical Officers. Salary £400 per annum.

EAST LONDON HOSPITAL FOR CHILDREN. Shadwell, E.—Pathologist and Registrar. Honorarium, £100.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Male Assistant House-Surgeon. Salary, £50 per annum.

GLASGOW: VICTORIA INFIRMARY.—Visiting Physician.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum.

HARTLEPOOL HOSPITAL.—House-Surgeon. Salary, £100 per annum.

IPSWICH AND EAST SUFFOLK HOSPITAL.—Senior House-Surgeon. Salary, £80 per annum.

KING EDWARD VII. SANATORIUM, Midhurst.—Senior Assistant Medical Officer. Salary, £150 per annum.

LIVERPOOL EDUCATION COMMITTEE.—School Medical Officer. Salary, £250 per annum.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN. Hunter, Street, W.C.—Demonstrator in Anatomy and Curator of the School Museum.

LONDON THROAT HOSPITAL, Great Portland Street, W.—Assistant Anaesthetist.

MERIONETH COUNTY COUNCIL EDUCATION COMMITTEE.—School Medical Officer. Salary, £350 per annum.

MOUNT VERNON HOSPITAL FOR CONSUMPTION, Hampstead.—Junior Resident Medical Officer. Honorarium, £50 per annum.

NOTTINGHAM GENERAL HOSPITAL.—Locumtenant for three and a half months. Salary, £45.

OLDHAM INFIRMARY.—Senior House-Surgeon (male). Salary, £100 per annum.

PLAISTOW: MEDICAL MISSION HOSPITAL.—Assistant Doctor for Dispensary.

PLAISTOW: ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN.—Honorary Anaesthetist.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—Honorary Anaesthetist. Honorarium, £20 per annum.

REDHILL: EARLSWOOD ASYLUM.—Junior Assistant Medical Officer. Salary, £130 per annum, rising to £150.

SEAMEN'S HOSPITAL SOCIETY, Albert Dock Hospital, E.—(1) Senior House-Surgeon. Salary, £75 per annum, and additional £25 per annum for acting as Registrar. (2) House-Surgeon. Salary, £50 per annum. Appointments for six months.

SHEFFIELD CHILDREN'S HOSPITAL, EAST END BRANCH.—House-Surgeon. Salary, £70 per annum.

SHEFFIELD EDUCATION COMMITTEE.—Assistant Medical Officer. Salary, £250 per annum, increasing to £300.

SHEFFIELD UNION HOSPITAL.—Resident Assistant Medical Officer. Salary, £100 per annum.

SOUTHAMPTON COUNTY BOROUGH.—Assistant Medical Officer of Health. Salary, £250 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—House-Physician. Salary, £100 per annum.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £80 per annum.

TEIGNMOUTH HOSPITAL.—House-Surgeon. Salary, £76 per annum.

WALSALL AND DISTRICT HOSPITAL.—(1) House-Surgeon. (2) Junior House-Surgeon. Salary, £100 and £80 per annum respectively.

WESTERN AUSTRALIA STATE.—Medical Officer to the Central Board of Health. Salary, £400 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician for six months.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Resident Medical Officer. Salary, £100 per annum. (2) Two House-Surgeons. Salary, £80 per annum each.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Farsley, co. York, and Leith, co. Edinburgh.

APPOINTMENTS.

ARNOLD, Miles B., M.D.Vict., D.P.H.Camb., Medical Superintendent of the Monsall Hospital of the Manchester Corporation.

BARNES, George Charles, M.B., Ch.B.Liverpool, Medical Officer of Schools to the township of St.Peter.

BARTON, F. W., M.R.C.S., L.R.C.P., District Medical Officer of the Lambeth Parish.

BLACK, L. P., M.B., B.C.Cantab., D.P.H., Medical Officer of Health of St. Thomas Rural District, and Parish Medical Officer and Public Vaccinator of St. Thomas District of the St.Thomas Union.

BOYD, Francis D., M.D., F.R.C.P.Edin., reappointed Assistant Physician at Edinburgh Royal Infirmary.

CATTIE, Miss M. M. L., M.B., B.S.Edin., Junior Assistant Medical Officer of the Chorlton Union Workhouse Infirmary.

CRAIG, C. M. C. K., M.D.Vict., Senior Resident Assistant Medical Officer of the Chorlton Union Workhouse Infirmary.

DAVIDSON, L. S., M.D.Durh., District Medical Officer of the Newcastle-upon-Tyne Union.

FAIRBANK, H. A. T., M.S.Lond., F.R.C.S.Eng., Surgeon to the Miller General Hospital for South-East London.

GEORGE, Thomas James, L.R.C.P.and S.Edin., Non-resident House-Surgeon to Dr. Sym at the Edinburgh Royal Infirmary.

GIBB, J. A., M.B., C.M.Aberd., District Medical Officer of the Maidstone Union.

JOHNSON, L. A., M.R.C.S., L.R.C.P., Medical Officer of Health of the Normanton Urban District.

MCCRAE, J., M.B., B.Ch., R.U.I., District Medical Officer of the Wokingham Union.

MARSHALL, Peter, M.B., Ch.B., Clinical Assistant to Dr. Norman Walker at the Edinburgh Royal Infirmary.

MATTHEW, Edwin, M.D., F.R.C.P.Edin., Assistant Physician to the Edinburgh Royal Infirmary.

NEWALL, W. A., M.D.Vict., Honorary Assistant Physician to the Chester Infirmary.

WHITTALL, H. F., M.R.C.S., L.R.C.P., Second Resident Assistant Medical Officer of the Islington Parish Infirmary, Highgate Hill.

SUNDERLAND INFIRMARY.—The following appointments have been made:
 Assistant Physician, with charge of the Electrical Department: J. Bowdler, M.B., D.Phil.
 Assistant Physician, with charge of the Pathological Department: J. Cuthbert Pearce, M.D.Dunelm.
 Assistant Surgeons: A. E. Morrison, F.R.C.S.Edin., and J. Graham Cunningham, B.Ch.Edin.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

GAMGEE.—On May 12th, the wife of Leonard Gamgee, F.R.C.S., 28, Rotton Park Road, Edgbaston, Birmingham, of a daughter.

PHILLIPS.—On Sunday, May 16th, at 12, Iverna Gardens, Kensington, the wife of Llewellyn Phillips, M.D.Cantab., F.R.C.S., F.R.C.P. for Cairo, Egypt, of a daughter.

PLAYFAIR.—On May 17th, at 57, Gloucester Terrace, Hyde Park, the wife of Ernest Playfair, M.B., M.R.C.P., of a son.

DIARY FOR THE WEEK.

MONDAY.

ROYAL SOCIETY OF MEDICINE: ONTOLOGICAL SECTION, 20, Hanover Square, W., 8 p.m.—Paper: Mr. Warwick James, The Eruption of the Teeth.

TUESDAY.

ROYAL SOCIETY OF MEDICINE: MEDICAL SECTION, 20, Hanover Square, W., 5.30 p.m.—Papers: Professor R. T. Howlett, The Treatment of Typhoid Fever with an Anti-endotoxic Serum. Dr. E. W. Goodall and Dr. Bruce, The Results of Treatment of Cases of Typhoid Fever with the same Anti-endotoxic Serum.

FRIDAY.

ROYAL SOCIETY OF MEDICINE: SECTION FOR THE STUDY OF DISEASE IN CHILDREN, 20, Hanover Square, W., 4.30 p.m.—(1) Papers: Dr. Parkes Weber, Congenital Obliteration of the Bile Ducts with Cirrhosis. Mr. A. R. Thompson, Congenital Dislocation of Hip. (2) Exhibition of Cases and Specimens.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Lectures: Tuesday, 3.45 p.m., Anaesthetics; Friday, 3.45 p.m., The Mouth and Teeth.

LONDON SCHOOL OF CLINICAL MEDICINE, Seamen's Hospital, Greenwich.—Daily arrangements: Out-patient Demonstration, 10 a.m.; Medical and Surgical Clinics, 10 a.m. and 3.15 p.m. respectively; Operations, 2 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m., Monday, and noon, Thursday; Skin, at noon and 4 p.m., Thursday, and noon, Friday; Eye, 1 a.m., Wednesday and Saturday; Radiography, 4 p.m., Thursday. Special Lectures: Wednesday, 3.30 p.m., Glaucoma; Friday, 3.15 p.m., Psoas Abscess.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chancery Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin. Tuesday, Medical. Wednesday, Surgical. Thursday, Surgical. Friday, Eye. Lectures at 5.15 p.m. each day will be given as follows: Monday, The Treatment of Typhoid Fever. Tuesday, Open-air Schools for Tuberculous Children (with lantern slides). Wednesday, The Pathology and Treatment of a Common Cold. Thursday, Relation of Arterio-Sclerosis to Aneurysm and Renal Disease.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Cerebellar Disease;

NORTE-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m., Surgical Out-patient, 2.30 p.m., Medical Out-patient; Nose, Throat, and Ear, X Rays, 4.30 p.m., Medical In-patient. Tuesday, Clinics, 10 a.m., Medical Out-patient; 2.30 p.m., Operations; Clinics: Surgical Out-patient, Gynaecological; 4.30 p.m., Lecture: The Various Forms of Congenital Heart Disease and their Diagnosis. Wednesday, Clinics, 2.30 p.m., Medical Out-patient, Skin and Eye. Thursday, 2.30 p.m., Gynaecological Operations; Clinics: Medical Out-patient; Surgical Out-patient; X Rays, 3 p.m., Medical In-patient; 4.30 p.m., Lecture: Cerebral Denies. Friday, Clinics, 10 a.m., Surgical Out-patient; 2.30 p.m., Operations; Clinics: Medical Out-patient, Eye; 3 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, W.—The following are the arrangements for next week:—Daily, 2 p.m.: Medical and Surgical Clinics, X Rays, 2.30 p.m.: Operations. Monday and Thursday and Wednesday, 2 p.m., Diseases of the Eyes. Tuesday and Friday 2 p.m. and Wednesday and Saturday, 10 a.m., Diseases of Throat, Nose, and Ear; 2.30 p.m., Diseases of Skin. Wednesday and Saturday, 10 a.m., Diseases of Children. 2 p.m., Diseases of Women. Saturday, 10 a.m., Diseases of Eyes. Lectures.—At 10 a.m.: Monday and Thursday, Demonstration by Surgical Registrar; Friday, Demonstration by Medical Registrar. At 12 p.m.: Tuesday, Wednesday, and Saturday, Practical Medicine. At 5 p.m.: Monday, Anaesthetics; Tuesday, Clinical; Wednesday, Medicine; Thursday, Cases of Eye Disease; Friday, Cases of Skin Disease.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
MAY.		MAY (Continued).	
24 MONDAY ..	LONDON : Standing Ethical Subcommittee, 2.30 p.m. BURY DIVISION, <i>Lancashire and Cheshire Branch</i> , Annual Meeting, Dispensary, Knowsley Street, Bury, 8.45 p.m. COVENTRY DIVISION, <i>Birmingham Branch</i> , Annual Meeting, Coventry and Warwickshire Hospital, 8 p.m.; also Combined Meeting with Tamworth and Nuneaton Division. HAMPSTEAD DIVISION, <i>Metropolitan Counties Branch</i> . ST. HELENS AND WARRINGTON DIVISIONS, <i>Lancashire and Cheshire Branch</i> , Joint Meeting, Lime Street Station Hotel, Liverpool, 4.15 p.m.	27 THURSDAY ..	LONDON : Metropolitan Counties Branch Council, 4.30 p.m. SOUTH CARNARVON AND MERIONETH DIVISION, <i>North Wales Branch</i> , Annual Meeting, Tower Hotel, Pwllheli, 2 p.m.
25 TUESDAY ..	LONDON : Medico-Political Contract Practice Subcommittee, 2.30 p.m. BATH AND BRISTOL BRANCH, Annual Meeting, Bristol. GLASGOW NORTH-WESTERN DIVISION, <i>Glasgow and West of Scotland Branch</i> , Annual Meeting, Burgh Hall, Hillhead, 8.30 p.m. GUILDFORD DIVISION, <i>South-Eastern Branch</i> , Annual Meeting, Royal Surrey County Hospital, 4.30 p.m.; Tea, 4.15 p.m. LEICESTER AND RUTLAND DIVISION, <i>Midland Branch</i> , Leicester Infirmary, 4.15 p.m. MARYLEBONE DIVISION, <i>Metropolitan Counties Branch</i> , Annual Meeting, Rooms of the Medical Society of London, Chandos Street, W., 5 p.m.	28 FRIDAY ..	FOLKESTONE DIVISION, <i>South-Eastern Branch</i> , Annual Meeting, Hotel Wampach, Folkestone, 8.45 p.m.
25 WEDNESDAY ..		29 SATURDAY ..	TROWBRIDGE DIVISION, <i>Bath and Bristol Branch</i> , Annual Meeting, Town Hall, Trowbridge 3 p.m.
		30 Sunday ..	
		31 MONDAY ..	Bank Holiday.
		JUNE.	
		1 TUESDAY ..	SOUTH-EASTERN OF IRELAND BRANCH, Annual Meeting, also meeting of Branch Council, and Local Division, Council Chamber, Clonmel, 12 noon.
		2 WEDNESDAY ..	WESTMINSTER DIVISION, <i>Metropolitan Counties Branch</i> , Annual Meeting, Criterion Restaurant.
		3 THURSDAY ..	SCOTTISH DIVISION, <i>Border Counties Branch</i> , Annual General Meeting, Dumfries and Galloway Royal Infirmary, Dumfries, 3 p.m.
		4 FRIDAY ..	SWANSEA DIVISION, <i>South Wales and Monmouthshire Branch</i> , Annual Meeting, 3 p.m.
		5 SATURDAY ..	NORTHERN COUNTIES OF SCOTLAND BRANCH, Annual Meeting, Elgin.

ANNUAL MEETING, BRITISH MEDICAL ASSOCIATION, BELFAST, 1909.

THE Seventy-seventh Annual Meeting of the British Medical Association will be held at Belfast from July 23rd, to July 31st, 1909, under the Presidency of Sir William Whitla.

The Annual Representative Meeting commences in Belfast on July 23rd. The Presidential Address will be delivered on July 27th. The Sections will meet on July 28th, 29th, and 30th.

A preliminary programme of arrangements was published in the SUPPLEMENT of May 1st, p. 197. The Honorary Local Secretaries are: Henry Lawrence McKisack, M.D., M.R.C.P., 17, University Square, Belfast; Cecil Edward Shaw, M.A., M.D., M.Ch., 29, University Square, Belfast; and Howard Stevenson, B.A., M.B., F.R.C.S.I., 2, College Square North, Belfast.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. Od., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every

Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. Od. for the United Kingdom, and £1 15s. Od. for abroad.

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, MAY 29TH, 1909.

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Queen's College, Belfast: New Science Laboratories, from north-east.

SEVENTY-SEVENTH ANNUAL MEETING OF THE British Medical Association. AT BELFAST, JULY, 1909.

President-elect:

Sir WILLIAM WHITLA, M.D., LL.D., Professor of Materia Medica and Therapeutics, Queen's College, Belfast.

Past-President:

HENRY DAVY, Hon.D.Sc., M.D., F.R.C.P.Lond., Physician, Royal Devon and Exeter Hospital, Exeter.

Chairman of Representative Meetings:

JAMES ALEXANDER MACDONALD, M.D., M.Ch., R.U.I., Physician, Taunton and Somerset Hospital.

Chairman of Council:

EDMUND OWEN, Hon.D.Sc., LL.D., F.R.C.S., Consulting Surgeon to St. Mary's Hospital, London.

Treasurer:

EDWIN RAYNER, M.D.Lond., F.R.C.S., Consulting Surgeon, Stockport Infirmary, Stockport.

The Seventy-seventh Annual Meeting of the British Medical Association will be held in Belfast in July, 1909. The President's address will be delivered on Tuesday, July 27th, and the Sections will meet on the three following days. The Annual Representative Meeting will begin on Friday, July 23rd, 1909.

PROGRAMME OF BUSINESS.

The Address in Medicine will be delivered by R. W. PHILIP, M.D., F.R.C.P. Edin., Physician, Royal Infirmary, and Royal Victoria Hospital for Consumption, Edinburgh.

The Address in Surgery will be delivered by ARTHUR EDWARD JAMES BARKER, F.R.C.S., Professor of the Principles and Practice of Surgery, University College, London.

The Address in Obstetrics will be delivered by Sir JOHN W. BYERS, M.D., Professor of Midwifery and Diseases of Women, Queen's College, Belfast.

The Popular Lecture will be delivered by Dr. J. A. MACDONALD, Physician to the Taunton and Somerset Hospital, Chairman of the Representative Meetings.

THE SECTIONS.

The scientific business of the meeting will be conducted in fifteen Sections, which will meet on Wednesday, July 28th, Thursday, July 29th, and Friday, July 30th.

The President, Vice-Presidents, and Honorary Secretaries of each Section constitute a Committee of Reference for that Section, and exercise the power of inviting, accepting, or declining any paper, and of arranging the order in which accepted papers shall be read. Communications with respect to papers should be addressed to one of the Honorary Secretaries.

A paper read in the Section must not exceed fifteen minutes, and no subsequent speech must exceed ten minutes.

Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the BRITISH MEDICAL JOURNAL without special permission.

The following are the general arrangements so far as they are yet complete:

ANATOMY AND PHYSIOLOGY.

President: CHARLES SCOTT SHERRINGTON, M.D., F.R.S., Physiological Laboratory, University, Liverpool.

Vice-Presidents: Professor THOMAS HUGH MILROY, M.D., F.R.S.E., Queen's College, Belfast; Professor PETER THOMPSON, M.D., King's College, Strand, London; ARTHUR PHILIP BEDDARD, M.D., F.R.C.P., 44, Seymour Street, Portman Square, London, W.; Professor ANDREW FRANCIS DIXON, M.B., D.Sc., 73, Grosvenor Road, Dublin.

Honorary Secretaries: ALEX. LOW, M.B., 142, Blenheim Place, Aberdeen; JOHN ALEX. MILROY, M.D., Queen's College, Belfast.

DERMATOLOGY AND ELECTRO-THERAPEUTICS.

President: WILLIAM CALDWELL, M.D., 6, College Gardens, Belfast.

Vice-Presidents: ROBERT BRIGGS WILD, M.D., 96, Mosley Street, Manchester; LESLIE ROBERTS, M.D., 46, Rodney Street, Liverpool.

Honorary Secretaries: JAMES HARRY SEQUEIRA, M.D., F.R.C.P., 8a, Manchester Square, London; S. ERNEST DORE, M.D., 26, New Cavendish Street, London; JOHN CAMPBELL RANKIN, M.D., 38, University Road, Belfast.

A discussion will be held on the Treatment of Skin Diseases by Radium and Radio-therapy.

DISEASES OF CHILDREN.

President: HAROLD J. STILES, F.R.C.S. Edin., 9, Great Stuart Street, Edinburgh.

Vice-Presidents: JOHN McCaw, M.D., 74, Dublin Road, Belfast; RICHARD WHYTOCK LESLIE, M.D., "St. Heliers," Strandtown, Belfast; ROBERT CAMPBELL, F.R.C.S., 21, Great Victoria Street, Belfast.

Honorary Secretaries: ANDREW FULLERTON, F.R.C.S.I., 8, University Square, Belfast; JOHN WILLIAM SIMPSON, M.D., 19, Lansdowne Crescent, Edinburgh.

It is proposed to devote some portion of three of the days on which the Section meets to the discussion of the following subjects:

Wednesday, July 28th.—Club Foot.

Thursday, July 29th.—Functional Neuroses in Children

HAEMATOLOGY AND VACCINE THERAPY.

President: SIR ALMROTH WRIGHT, M.D., F.R.S., 6, Park Crescent, Regent's Park, London, N.W.

Vice-Presidents: ALEX. GARDNER ROBB, M.B., 15, University Square, Belfast; THOMAS HOUSTON, M.D., 95, Great Victoria Street, Belfast; Captain STEWART RANKIN DOUGLAS, I.M.S., Inoculation Department, St. Mary's Hospital, London.

Honorary Secretaries: WILLIAM DUNLOP DONNAN, M.D., 12, High Street, Holywood, co. Down; DUDLEY W. CARMALT-JONES, M.B., B.Ch. Oxon., 78, Wimpole Street, London, W.

The subjects which have been chosen for discussion are:

Wednesday, July 28th.—Papers on separate subjects: Dr. Houston, Typhoid Carriers. Captain Douglas, Bacteriology of Cystitis; discussion. Dr. Fleming, Bacteriology and Vaccine Treatment of Acne.

Thursday, July 29th.—Discussion: The Early Diagnosis of Tuberculosis, opened by Professor Calmette, l'Institut Pasteur de Lille.

Friday, July 30th.—Discussion: Bacterial Infections of the Respiratory Tract other than Tuberculous.

HYGIENE AND PUBLIC HEALTH.

President: LOUIS COLTMAN PARKES, M.D., 61, Cadogan Square, Chelsea, London.

Vice-Presidents: SAMUEL AGNEW, M.D., Lurgan, co. Armagh; HENRY O'NEILL, M.D., 6, College Square East, Belfast; CHARLES KILLICK MILLARD, M.D., Town Hall, Leicester.

Honorary Secretaries: CHARLES PORTER, M.D., Public Health Department, Town Hall, Finsbury; WILLIAM McLORINAN, L.R.C.P., 103, Antrim Road, Belfast; THOMAS CARNWATH, M.B., Town Hall, Manchester.

The following subjects have been suggested for discussion:

1. The Compulsory Notification of all forms of Tuberculosis and the Mortality from Tuberculous Diseases in relation to Sex. To be opened by Dr. Harold Scurfield, Medical Officer of Health, Sheffield.

2. Latent Infections of the Diphtheria Bacillus, and the Administrative Measures required for dealing with Contacts. (Joint discussion with the Laryngological Section.)

3. The Discharge of Sewage Effluents into Tidal Waters.

The following additional subjects are also suggested:

1. Enteric Fever Carriers and Paratyphoid Bacilli.

2. Ventilation of Sewers and House Drains and the Disconnection Trap.

3. The Medical Officer of Health and School Medical Inspection.

LARYNGOLOGY, OTOTOLOGY, AND RHINOLOGY.

President: STCLAIR THOMSON, M.D., F.R.C.P., 23, Queen Anne Street, London.

Vice-Presidents: ERNEST BLECHYNDEN WAGGETT, M.B., 45, Upper Brook Street, London, W.; V. P. HENRY SMURTHWAITE, M.D., 8, St. Mary's Place, Newcastle-on-Tyne; J. A. KNOWLES RENSCHAW, M.D., 11, St. John Street, Manchester.

Honorary Secretaries: HAROLD (SHUTTLEWORTH BARWELL, F.R.C.S., 55, Wimpole Street, London; JOHN STODDART BARR, M.B., 13, Woodside Place, Glasgow; HENRY HANNA, M.B., B.Sc., 57, University Road, Belfast.

The following subjects have been selected for special discussion:

Wednesday, July 28th.—The Treatment of Tinnitus Aurium. (1) Dr. Thomas Barr (Glasgow); (2) Mr. Richard Lake (London).

Thursday, July 29th.—Latent Infections of the Diphtheria Bacillus, including the Administrative Measures required for dealing with Contacts. (In association with the Section of Hygiene and Public Health.) (1) Dr. Robert M. Buchanan (Glasgow); (2) Dr. Duncan Forbes (Brighton); (3) Dr. P. Watson Williams (Bristol).

Friday, July 30th.—The Treatment of Cicatricial Stenoses of the Larynx and Trachea. (1) Dr. H. Lambert Lack (London); (2) Dr. Delsaux (Brussels); (3) Dr. Bryson Delavan (New York).

It is proposed this year to arrange a special exhibition of skiagraphy in relation to diseases of the upper air and food passages. Members are requested to send in the titles and descriptions of any skiagraphs they propose to contribute to Dr. Hanna, not later than June 1st, so that they may be printed in the catalogue. Every care will be taken of negatives and prints, which should be carefully labelled with the owner's name and address.

MEDICINE.

President: PROFESSOR JAMES ALEXANDER LINDSAY, M.D., F.R.C.P., 3, Queen's Elms, Belfast.

Vice-Presidents: ARTHUR FOXWELL, M.D., F.R.C.P., 47, Newhall Street, Birmingham; JOSEPH FRANCIS O'CARROLL, M.D., F.R.C.P.I., 43, Merrion Square, Dublin; LAURISTON ELGIE SHAW, M.D., F.R.C.P., 64, Harley Street, London; WILLIAM BAIRD MCQUITT, M.D., 8, College Square East, Belfast.

Honorary Secretaries: JOHN SMYTH MORROW, M.D., Elm House, Antrim Road, Belfast; LEWIS ALBERT SMITH, M.D., 25, Queen Anne Street, London, W.; JOHN ELDER MACLWANE, M.D., 55, University Road, Belfast.

The following subjects have been chosen for discussion and demonstration:

1. Wednesday, July 28th.—Angina Pectoris. To be opened by Sir T. Clifford Allbutt, K.C.B.

2. Thursday, July 29th.—The Medical Aspects of Athleticism. To be opened by Dr. Tyrrell Brooks (Oxford), Dr. Clement Dukes (Rugby).

3. Friday, July 30th.—Demonstration on Gastric Illumination by Dr. Theodore Thompson.

NAVY, ARMY, AND AMBULANCE.

President: Fleet Surgeon J. LLOYD THOMAS, R.N.

Vice-Presidents: Inspector-General ROBERT BENTHAM, R.N. (retired), 22, King's Avenue, Ealing, London, W.; Lieut.-Colonel R. PORTER, R.A.M.C., P.M.O., Station Hospital, Military Barracks, Belfast; Colonel THOMAS H. HENDLEY, I.M.S., C.I.E., 4, Loudon Road, London, N.W.

Honorary Secretaries: Captain M. LOWSLEY R.A.M.C., St. Michael's Road, Aldershot; Captain HERBERT HUGH BLAIR CUNNINGHAM, M.D., F.R.C.S., 69, University Road, Belfast; Staff Surgeon EDMUND COX, M.B., R.N., The Royal Naval Hospital, Chatham; Captain WILLIAM SALISBURY-SHARPE, R.A.M.C., 8, Cleveland Terrace, Hyde Park, London, W.

The Committee of this Section suggest the following subjects:

1. Effect on Health of Service in Submarine Boats.
2. Conditions of Life in Boys' Training Establishments on Shore.

3. Medical Arrangements for War in Ships of Dreadnought type.

4. A Detailed Scheme for an Unexpected Landing Party, using Material available on Board Ship.

5. Pitfalls for the Recruiting Medical Officer.

6. Probable Effects in the Services of the New Treatment of Syphilis by means of Organic Arsenical Compounds.

7. On the Importance of the Permanent Attachment of Ample Transport under the Command of the Medical Officer to each Field Medical Unit.

8. The Infective Pneumonias, their Incidence, Causes, Prevention, and Treatment during a Campaign.

9. On the Existing Ambulance Organization of the Home Railway Companies, with Suggestions for its Amplification and Unification.

10. The Effects of Recent Research on the Work of Colonial Medical Officers.

11. Diagnosis and Treatment of Pulmonary Tuberculosis in the Services.

12. Collection and Disposal of Wounded in War.

OBSTETRICS AND GYNAECOLOGY.

President: JOHN CAMPBELL, M.D., F.R.C.S., Crescent House, University Road, Belfast.

Vice-Presidents: ROBERT ALEXANDER GIBBONS, M.D., 29, Cadogan Place, London; JOHN SINGLETON DARLING, M.B., High Street, Lurgan; CHARLES EDWIN PURSLOW, M.D., 192, Broad Street, Birmingham; EWEN JOHN MACLEAN, M.D., 12, Park Place, Cardiff.

Honorary Secretaries: HENRY THOMAS HICKS, F.R.C.S., Derby; ROBERT JAMES JOHNSTONE, M.B., F.R.C.S., 14, University Square, Belfast.

The Committee have thought it well to select two chief subjects for discussion:

1. The Treatment of the Graver Forms of Puerperal Sepsis.

2. Endometritis.

In the Pathological Part of this Section, Cancer of the Uterus has been chosen as one affording a wide scope for the exhibition of Specimens, Photographs, Microscopic Slides, etc.

These, with any others of interest, will be exhibited in the Pathological Museum.

OPHTHALMOLOGY.

President: JOHN WALTON BROWNE, M.D., 10, College Square North, Belfast.

Vice-Presidents: ARTHUR W. SANDFORD, M.D., 13, St. Patrick's Place, Cork; WILLIAM MARCUS KILLEN, M.D., 9, Clifton Street, Belfast; ALEX. HILL GRIFFITH, M.D., 17, St. John Street, Manchester.

Honorary Secretaries: JAMES ANDREW CRAIG, F.R.C.S., 11, University Square, Belfast; LESLIE JOHNSTON PATON, F.R.C.S., 1, Spanish Place, Manchester Square, London.

The subjects chosen for discussion are:

1. Eye Injuries in their Relation to the Workmen's Compensation Act.

2. Vascular Diseases of the Retina.

3. The Diseases of the Lymphoid Tissue of the Conjunctiva (Mr. Treacher Collins).

PATHOLOGY.

President: Professor WM. ST. CLAIR SYMMERS, M.B., Queen's College, Belfast.

Vice-Presidents: WALTER SYDNEY LAZARUS-BARLOW, M.D., Cancer Research Laboratory, Middlesex Hospital, London; ARTHUR EDWARD MOORE, M.B., Castlemahon, Blackrock, Cork; ASTLEY VASOUDS CLARKE, M.D., 37, London Road, Leicester; Professor I. WALKER HALL, M.D., 9, Royal Park, Clifton, Bristol.

Honorary Secretaries: ALFRED EDWARD BARNES, M.B., 343, Glossop Road, Sheffield; OTTO F. F. GRUNBAUM, M.D., 34, Wimpole Street, London, W.; WILLIAM JAMES WILSON, M.D., Pathological Laboratory, Queen's College, Belfast.

PHARMACOLOGY AND THERAPEUTICS.

President: Professor RALPH STOCKMAN, M.D., F.R.S. Edin., The University, Glasgow.

Vice-Presidents: Professor WALTER ERNEST DIXON, M.D., Pharmacological Laboratory, Cambridge; NEWMAN NEILD, M.D., 9, Richmond Hill, Clifton, Bristol.

Honorary Secretaries: VICTOR GEORGE LEOPOLD FIELDEN, M.B., 84, Dublin Road, Belfast; HECTOR CHARLES CAMERON, M.B., Guy's Hospital, London, S.E.

The following subjects have been suggested for discussion:

1. Spinal Anaesthesia.
2. The Treatment of Oedema.

PSYCHOLOGICAL MEDICINE.

President: T. CUTTERTON WOOD, M.D., 40, Margaret Street, Cavendish Square, London.

Vice-Presidents: GEORGE ROBERT LAWLESS, F.R.C.S.I., District Asylum, Armagh; WM. RICHARD DAWSON, M.D., Farnham House, Finglas, co. Dublin; ROBERT HENRY COLE, M.D., 25, Upper Berkeley Street, London, W.; MICHAEL JAMES NOLAN, L.R.C.P. and S.I., Down District Asylum, Downpatrick.

Honorary Secretaries: WALTER SAMUEL SMYTH, M.B., District Asylum, Antrim; SIDNEY HERBERT CLARKE, M.B., Leicester and Rutland Asylum, Narborough, Leicester shire.

The following subjects have been selected for special discussion in this Section:

July 28th.—(1) Somatic Delusions and Local Lesions. To be opened by Dr. C. A. Mercier.

July 29th.—(2) The Sociological Relations of Insanity in Ireland. To be opened by Dr. M. J. Nolan.

July 30th.—(3) Considerations upon the Commissioner's Report of the Care and Control of the Feeble-minded. To be opened by Dr. W. R. Dawson.

SURGERY.

President: Professor THOMAS SINCLAIR, M.D., F.R.C.S., 22, University Square, Belfast.

Vice-Presidents: CHARLES ALFRED BALLANCE, M.V.O., M.S., F.R.C.S., 106, Harley Street, W.; Sir PETER O'CONNELL, M.D., 9, College Square North, Belfast; ARTHUR JOHN DREW, F.R.C.S., Water Hall, St. Aldate's, Oxford; JOHN GALWAY COOKE, M.B., City and County Infirmary, Londonderry; ARTHUR BROWNLOW MITCHELL, F.R.C.S.I., 18, University Square, Belfast.

Honorary Secretaries: W. THELWALL THOMAS, F.R.C.S., 84, Rodney Street, Liverpool; G. LENTHAL CHEATLE, C.B., F.R.C.S., 117, Harley Street, London; HOWARD STEVENSON, M.B., F.R.C.S.I., 2, College Square North, Belfast; JAS. BERNARD MOORE, M.D., 11, Clifton Street, Belfast.

Special discussions on the following subjects will be held on Wednesday, July 28th, and Thursday, July 29th:

1. The Operative Treatment of Obstructive Jaundice and the Proper Selection of Cases. Introduced by (1) Mr. B. G. A. Moynihan, F.R.C.S.; (2) Sir Thomas Myles, F.R.C.S.

2. Modern Methods in the Treatment of Tuberculous Disease of Joints. Introduced by (1) Sir William Macewen, F.R.S.; (2) Mr. Robert Jones.

Friday, July 30th, will be devoted to the reading of papers on subjects other than the above.

Facilities will be provided for showing specimens and drawings to illustrate subjects under discussion.

TROPICAL MEDICINE.

President: CHARLES WILBERFORCE DANIELS, M.B., London School of Tropical Medicine, Albert Docks, London.

Vice-Presidents: Lieutenant-Colonel ANDREW DEANE, M.D., F.R.C.S.I., I.M.S., Royal Victoria Hospital, Belfast; Surgeon-General W. R. BROWNE, M.D., C.I.E., 5, Royal Crescent, Holland Park Avenue, London.

Honorary Secretaries: JAMES COLVILLE, M.D., 7, University Square, Belfast; Dr. ANTON BEERL, Director Runcorn Research Laboratories.

The following subjects have been selected for discussion:

Wednesday, July 28th, 10 a.m.—Persistence of the Tropical Diseases of Man due to Protozoa. The discussion will be opened by the President.

Thursday, July 29th, 10 a.m.—Treatment of Chronic Recurrent Dysentery, with Special Reference to the Possibilities of Surgical Treatment. The discussion will be opened by Mr. J. Cantlie.

Friday, July 30th, 10 a.m.—Feeding and Treatment of Children in the Tropics. The discussion will be opened by Dr. W. Carnegie Brown.

The Committee will be glad to receive pathological specimens, photographs, drawings, or microscopical preparations illustrative of any subject in Tropical Medicine.

PROVISIONAL TIME TABLE.

FRIDAY, JULY 23RD, 1909.

12 noon.—Annual General Meeting, followed by Representative Meeting.

SATURDAY, JULY 24TH, 1909.

9.30 a.m.—Representative Meeting.

MONDAY, JULY 26TH, 1909.

10 a.m.—Representative Meeting.

7.30 p.m.—Annual Conference of Secretaries of Divisions and Branches.

TUESDAY, JULY 27TH, 1909.

10 a.m.—Council Meeting.

10.30 a.m.—Representative Meeting (if required).

2.30 p.m.—Adjourned General Meeting.
Induction of President.

8.30 p.m.—President's Address.

WEDNESDAY, JULY 28TH, 1909.

9.30 a.m.—Council Meeting.

10 a.m.—Sectional Meetings.

10.30 a.m.—Representative Meeting (if required).

12.30 p.m.—Address in Medicine.

7.30 p.m.—Annual Dinner.

THURSDAY, JULY 29TH, 1909.

a.m.—National Temperance League Breakfast.

9.30 a.m.—Council Meeting.

10 a.m.—Sectional Meetings.

12.30 p.m.—Address in Surgery.

8.30 p.m.—Reception.

FRIDAY, JULY 30TH, 1909.

10 a.m.—Sectional Meetings.

12.30 p.m.—Address in Obstetrics.

8 p.m.—Popular Lecture.

8.30 p.m.—Reception.

SATURDAY, JULY 31ST, 1909.

Excursions.

Honorary Local Secretaries—

HENRY LAWRENCE MCKISACK, M.D., M.R.C.P.,
17, University Square, Belfast.

CRCIL EDWARD SHAW, M.A., M.D., M.Ch.,
29, University Square, Belfast.

HOWARD STEVENSON, B.A., M.B., F.R.C.S.I.,
2, College Square North, Belfast.

THE PATHOLOGICAL MUSEUM.

The following Committee has been appointed to organize the pathological museum:

President: Professor W. ST. CLAIR SYMMERS.
Honorary Secretaries: THOMAS HOUSTON, M.D.;
W. J. WILSON, M.D.

J. S. DICKIE, M.B.
ROWLAND HILL, M.B.
C. G. LOWRY, M.D.
J. E. MACILWAINE, M.D.
JOHN M'LEISH, M.B.
W. J. MAGUIRE, M.D.
J. C. RANKIN, M.D.
FRED. SMYTH, M.D.
BERNIST WEALES, M.D.
J. SINGLETON DARLING, M.D. (Lurgan).

C. H. P. D. GRAVES, M.D. (Cookstown).
Professor McWEENEY (Dublin).
Professor MOORE (Cork).
C. H. NESBITT, M.D. (Randallstown).
Professor O'SULLIVAN (Dublin).
R. T. ROWLETTE, M.D. (Dublin).
Professor WHITE (Dublin).
JOHN WILSON, M.D. (Castleblaney).

EX-OFFICIO MEMBERS.

The President-elect: Sir WILLIAM WHITLA, M.D., LL.D.
The Local Honorary Treasurer: JOSEPH NELSON, M.D.
The Local Honorary Secretaries: H. L. MCKISACK, M.D.; C. E. SHAW, M.D.; HOWARD STEVENSON, F.R.C.S.I.

The Committee propose that the material should be arranged under the following heads:

- I. Exhibits bearing on discussions and papers in the various sections.
 - II. Specimens and illustrations relating to any research work.
 - III. Instruments relating to clinical diagnosis and pathological investigation.
 - IV. Individual specimens of special interest, or a series illustrating some special subject.
- It is also proposed to make a special effort to gather together a series of exhibits relating to:
- (a) Tuberculosis.
 - (b) Diseases of warm climates.
 - (c) Cancer of the uterus.
 - (d) X-rays and photography.

The Committee wish it to be understood that the above are only suggestions, and if there is any subject in which Members are specially interested, and of which interesting specimens can be supplied, they will be glad to hear from them.

The Museum will occupy a central position, and will be easy of access.

It is hoped that it will be possible for arrangements to be made whereby exhibitors may have an opportunity of demonstrating their specimens.

THOMAS HOUSTON,
W. J. WILSON,
Honorary Secretaries.

Communications should be addressed to one of the Honorary Secretaries at Queen's University, Belfast.

RECREATIONS.

Golf Competition.—The Ulster Medical Society has arranged to present to the British Medical Association a cup, to be known as the "Belfast Cup," to be played for at annual meetings, and to be won out and out by any member winning it three times. It will be played for on the Friday of the Belfast meeting, on the fine links of the County Down Club at Newcastle, co. Down, kindly lent for the day by the council and members of the club. The play will be by bogey score. The cup is designed after the famous Ardagh Cup, one of the finest examples of ancient Irish work, which is now in the Kildare Street Museum in Dublin. The original is composed of gold, silver, enamels, and jewels, and was, it is believed, meant for use as a chalice. The challenge cup will be of silver, about 9 in. high, with gilt panels and coloured enamel bosses; round it will be set stones representing the four Provinces of Ireland—the black pebble for Leinster, the white or Carnmoney pebble for Ulster, the red stone for Munster, and the green Connemara marble for Connaught.

Cricket Match.—The North of Ireland Cricket Club, the premier club of Ulster, and one of the best in Ireland, has kindly offered to play a one-day match against a British Medical Association team. The beautifully turf-ed grounds of the club are only about five minutes' walk from Queen's College, where the Association will meet. The local executive will be very glad if some English cricketer will undertake to organize a team for the occasion; any one interested in the matter should communicate with one of the Honorary Local Secretaries.

Launch.—The local executive has some reason to hope that there may be an opportunity during the annual meeting of witnessing the launch of one of the great steamships for which the shipyards of the city of Belfast are famous. A large vessel for the Orient Line is at present on the stocks in Messrs. Workman, Clark, and Co.'s yard, and is expected to be launched in July. The exact date cannot be settled so far ahead, but if the firm can make it coincide with the visit of the Association to Belfast, it has courteously promised to do so.

To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

ANNUAL GENERAL MEETING.

Notice is hereby given that the 1909 Annual General Meeting of the British Medical Association will be held in the Assembly Hall, Belfast, on Friday, July 23rd, at Twelve noon.

[This Meeting is to comply with Article XII, and will adjourn forthwith until Tuesday, July 27th, at 2.30 o'clock.]

ANNUAL REPRESENTATIVE MEETING.

Also, notice is hereby given that the 1909 Annual Representative Meeting will be held in the Assembly Hall, Belfast, on Friday, July 23rd (and following days as required), immediately after the Annual General Meeting, fixed for Twelve noon, on Friday, July 23rd.

BY ORDER OF THE COUNCIL,

GUY ELLISTON.

May, 1909.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH: TROWERIDGE DIVISION.—The annual meeting of this Division will be held at the Town Hall, Trowbridge, on Saturday, May 29th, at 3 p.m. Agenda: (1) To elect officers. (2) To receive financial statement. (3) To consider matters referred to Divisions: (a) Report on medical certification of suitability of patients for hospital treatment (see SUPPLEMENT TO BRITISH MEDICAL JOURNAL, February 27th). (b) Report on contributions to hospitals by employers of labour and employees (see SUPPLEMENT TO BRITISH MEDICAL JOURNAL, February 27th). (c) Statement as to fresh public medical institutions:—The Council, acting upon an instruction from the Annual Representative Meeting at Sheffield, refers the following motion for the consideration of the Divisions: "That it is desirable that no fresh public medical institution should be opened without previous consultation with the local medical profession through some organized body, such as the Division of the British Medical Association in the area of which it is proposed to establish such new institution, and that it be an instruction to the Council to give effect to this principle in considering applications from Divisions or Branches for support in dealing with hospital questions." The Council will be glad to receive from the Divisions their expressions of opinion on the subject. (d) Statement as to sanatoriums for workers suffering from tuberculosis. (4) To consider question of examination of recruits for the Territorial Forces. (5) To consider report on current work of Association.—JAMES PEARSE, M.D., Honorary Secretary.

BORDER COUNTIES BRANCH.—The annual general meeting of the Branch will be held in the County Hotel, Carlisle, on Friday, June 25th. Business: To receive the report of the council for the past year; to elect the officers of the Branch; and Dr. Murdoch, of Annan, will deliver his Presidential address. Further details of information will be sent to each member by post.—FRANCIS R. HILL, Honorary Secretary, 62, Warwick Road, Carlisle.

BORDER COUNTIES AND NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCHES.—*Election of Representative Member of Central Council.*—Nominations, in accordance with the regulations of the Association, must be sent to me in writing on or before May 31st.—A. S. BARLING, Queen Square, Lancaster.

BORDER COUNTIES BRANCH: SCOTTISH DIVISION.—The annual general meeting of this Division will be held on Friday, June 4th, at the Dumfries and Galloway Royal Infirmary, Dumfries, at 3 p.m.—GEORGE R. LIVINGSTON, Honorary Secretary.

EAST ANGLIAN BRANCH.—Nominations for the election of Representative Members of Central Council must be forwarded to me not later than June 1st next.—E. H. NICHOLSON, East Lodge, Colchester, Honorary Secretary.

EAST ANGLIAN BRANCH.—The annual meeting of the Branch will be held at the Grand Hotel, Clacton-on-Sea, on Thursday, July 1st.—B. H. NICHOLSON, East Lodge, Colchester, Honorary Secretary.

EAST YORK AND NORTH LINCOLN BRANCH.—The annual meeting of this Branch will be held at the Grimsby Hospital on Saturday, June 19th. Further particulars as to the time of meeting and business to be transacted will be published later in the JOURNAL and communicated by circular to each member. Nominations for the offices of (1) President-elect, (2) Vice-President, (3) Honorary Secretary and Honorary Treasurer must be in the hands of the Honorary Secretary before May 29th, in writing and signed by any three members of the Branch.—EDWARD TURTON, M.D., Honorary Secretary, 1, Albion Street, Hull.

EAST YORK AND NORTH LINCOLN AND CAMBRIDGE AND HUNTINGDON BRANCHES.—*Election of the Joint Representative on the Central Council of the Association.*—Nominations of candidates must be sent in writing, on or before May 29th next, to EDWARD TURTON, Branch Secretary, 1, Albion Street, Hull.

EDINBURGH AND FIFE BRANCHES.—The attention of members of these two Branches is drawn to the fact that nominations for the election of two members upon the Central Council of the Association should be sent in to one of the Secretaries not later than June 16th.—A. LOGAN TURNER, 27, Walker Street, Edinburgh; FRANCIS D. BOYD, 22, Manor Place, Edinburgh; BALFOUR GRAHAM, Leven, Fife.

FIFE BRANCH.—The seventh annual meeting will be held in the Hotel, Thornton, on Thursday, June 17th, at 3 p.m.—R. BALFOUR GRAHAM, Honorary Secretary, Leven.

GLASGOW AND WEST OF SCOTLAND BRANCH.—The annual meeting of the above Branch will be held in the Pathological Department, Western Infirmary, Glasgow, on Wednesday, June 9th, at 3 p.m. Business: (1) Minutes of previous meetings, (a) annual meeting, (b) special meeting; (2) reports—(a) secretary's, (b) treasurer's, (c) on the abuse of medical charity, (d) payment for attendance on street accidents; (3) election of office-bearers. At 4.30 p.m. Professor Robert Muir and assistants will give a pathological demonstration.—JAMES GRANT ANDREW, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—The annual meeting of the Branch will be held at Chester on Wednesday, June 16th. Members desiring to make scientific, clinical, or other communications will please communicate at once with the Branch Secretary, F. CHARLES LARKIN, 54, Rodney Street, Liverpool.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—The annual meeting will be held at the Board Room of the Altrincham Hospital at 5 p.m. on Thursday, June 10th. (Afternoon tea 4.30 p.m.) The principal business is the appointment of officers and committee for 1909-10. Every member is eligible for every office; nominations in writing, and signed, may be sent to the Honorary Secretary at any time before June 8th. The membership of the committee lapses also at this date. Dinner at the Brooklands Hotel, 7.15 p.m. Names must be given to the Honorary Secretary not later than first post on June 10th. *Clinical and Scientific Meeting.*—A meeting will be held at the Board Room of the Altrincham Hospital at 5 p.m. on Thursday, June 24th. (Afternoon tea 4.30 p.m.) Clinical cases will be shown, and Dr. Rhodes will read a paper on Scarlet Fever, to be followed by a discussion. Dinner at the Brooklands Hotel, 7.30 p.m. Ladies invited. Names must be given to the Honorary Secretary by Monday, June 21st, in order that he may have time to cancel the arrangement, so far as the ladies are concerned, if there are not sufficient acceptances (say, five or six at least). The committee hopes that this will not be necessary, but if it is the dinner will be held under ordinary conditions, members to give their names not later than first post on June 24th. (If any alteration of programme becomes necessary it will be advertised in the SUPPLEMENT, which members should consult regularly.)—T. W. H. GARSTANG, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH.—*Nominations of Branch Officers.*—Pursuant to By-law 25, notice is hereby given that nominations for all the officers of the Branch—namely, President-elect, Vice-Presidents, Secretary, members of the Branch on the Central Council of the Association—must be sent in to the Honorary Secretary of the Branch on or before May 29th. Voting papers will be sent out on or before June 5th, and must be returned to the Secretary on or before June 12th.—ATWOOD THORNE, E. W. GOODALL, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—The annual meeting of the Division will be held on Thursday, June 3rd, at the Criterion Restaurant. Agenda: At 7.30 p.m. the members will dine together. 8.30 p.m. Association business: (1) Usual business. (2) Election of officers for the ensuing year. The following gentlemen have been nominated by the Executive Committee, but it is open to any member to propose other names for election at the meeting: President, Dr. Dauber; Vice-President, Dr. F. J. Allan; Honorary Secretary and Treasurer, Mr. Howell Evans; Assistant Honorary Secretary, Dr. Milligan; Representative in Representative Meetings, Dr. Haslip; Representatives on Branch Council, Drs. Archer, Finucane, Dauber, Howell Evans, and Hilliard; Executive Committee, Drs. Allan, Archer, Copley, Cope, Dauber, Durham, Evans, Ewart, Finucane, Haslip, Hilliard, Milligan, Inglis Parsons, Roche, Sibley, and Spencer. (3) Honorary Treasurer's Report. 9 p.m., Sir Lauder Brunton, Bart., M.D., F.R.C.P., will read a paper on Blood Pressure in Man; its Estimation and Indications for Treatment. Members desiring to be present at the dinner (price 5s.) are requested to notify Mr. Howell Evans, but are informed that in the event of their being prevented from attending the dinner after they have notified their intention to do so, they will be expected to pay for the dinner ordered on their behalf, as considerable inconvenience has been caused in the past between the Honorary Secretaries and the restaurant proprietors owing to provision having been made for members who have failed to attend after stating that they would do so.—J. HOWELL EVANS, 25, Berkeley Square, W.; W. A. MILLIGAN, 11, Upper Brook Street, Honorary Secretaries.

MIDLAND BRANCH.—The annual meeting of this Branch will be held at the Leicester Infirmary on Thursday, June 10th. (1) The President-elect, Dr. R. Pratt, will give an address. (2) Election of Branch officers. (3) Annual report of the Branch. (4) Any other business. In accordance with the by-laws, notice is hereby given that nominations for the election of two Representatives of this Branch on the Central Council must be sent to the Honorary Secretary of the Branch not later than May 24th.—ROBERT SEVESTRE, Honorary Secretary, London Road, Leicester.

MUNSTER BRANCH.—Nominations for a Representative of the Branch on the Central Council (in accordance with By-law 24) will be received up to June 5th by PHILIP G. LEE, 26, St. Patrick's Hill, Cork, Honorary Secretary.

MUNSTER BRANCH.—The annual general meeting of the Branch will be held on Saturday, June 12th, at 4.30 p.m., in the Rooms of the Medical Society, 74, South Mall, Cork. Representatives, officers, and council for 1909-10 will be elected, and any other necessary business transacted.—PHILIP G. LEE, 26, St. Patrick's Hill, Cork, Honorary Secretary.

NORTH OF ENGLAND BRANCH.—Nominations for the election of members of the Central Council must be sent in to me on or before May 31st.—DAVID F. TODD, Honorary Secretary, Beech House, Sunderland.

NORTH WALES BRANCH.—Nominations for the election of a Representative on the Central Council and for other officers of the Branch for the next year, in accordance with By-law 25, must be sent to the Honorary Secretary on or before June 1st.—H. JONES ROBERTS, Honorary Secretary, Llywenarth, Pen-y-groes.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—*Election of Representative of the Branch on the Central Council of the Association.*—Nominations of candidates for election to the Central Council must be forwarded to the Honorary Secretary on or before May 29th.—J. MUNRO MOIR, M.D., 4, Ardross Terrace, Inverness, Honorary Secretary.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—The annual meeting of the Branch will be held at Elgin on Saturday, June 5th. Further particulars as to hour and place of meeting will be communicated to each member by circular.—J. MUNRO MOIR, M.D., Honorary Secretary, 4, Ardross Terrace, Inverness.

PERTSHIRE BRANCH.—The summer meeting will be held in the Golf Club House, Moncreiffe Island, Perth, on Friday, June 4th, at 1 p.m. prompt. Council meeting at 12.45. Business: (1) Read minutes. (2) Election of Council. (3) Election of Branch Representative. (4) Consider letter from Medical Secretary re appointment of Branch Representative in autumn. (5) Consider Report of the Committee of the Association on

Ophthalmia Neonatorum (see SUPPLEMENT, BRITISH MEDICAL JOURNAL, May 8th, 1909). Lunch will be served in the Club House at 2 p.m. on arrival of golfing members from Dundee. Members attending to play and lunch are requested to inform Dr. Taylor as soon as possible.—W. A. TAYLOR, ALEX. TROTTER, Joint Honorary Secretaries, Perth.

SOUTH-EASTERN BRANCH.—The annual meeting of this Branch will be held at Crovdon on Wednesday, June 23rd, Dr. J. J. Macan, President-elect, in the chair. The following will be the agenda:—(1) To elect the officers of the Branch. (2) To receive the annual report of the Branch. (3) To transact any business that may be transacted by an ordinary meeting. Three members to represent the Branch on the Central Council will also be elected by voting papers.—H. M. STEWART, Honorary Secretary, Dulwich.

SOUTH-EASTERN BRANCH: FOLKESTONE DIVISION.—The annual meeting of this Division will be held at Hotel Wampach, Folkestone, on Saturday, May 29th, at 8.45 p.m. Agenda: (1) Minutes. (2) Election of Representative of Division on Branch Council, officers of Executive Committee, Representative at Representative Meeting, President, and Secretary. (2) Annual report of the Executive Committee. (3) Any other business.—P. VERNON DODD, M.D., Honorary Secretary.

SOUTH-EASTERN BRANCH: MAIDSTONE DIVISION.—The next meeting of this Division will take place on Thursday, June 17th, for the purpose of electing officers for the ensuing year. It has been proposed to have a dinner afterwards. The Honorary Secretary would feel greatly obliged if each member would kindly intimate his intention of being present or not as early as possible.—GEORGE POTTS, Honorary Secretary.

SOUTH-EASTERN OF IRELAND BRANCH.—A meeting of this Branch, as also a meeting of the Branch Council and the local Division, will be held at Council Chamber, Clonmel, on Wednesday, June 2nd, at 12.0 noon. Agenda: (1) Minutes of last meeting. (2) Letters of apology. (3) Correspondence. (4) Dr. D. Walshe will move: "That in any legislation that may follow the reports of the Royal and Viceroyal Commissions to inquire into the working of the Poor Laws, the British Medical Association be requested to use all its influence to safeguard the interests of the Irish dispensary medical officers and medical officers to workhouses, and to secure: (a) That entrance to the Irish Poor Law medical service shall be by competitive examination; (b) that adequate salaries shall be fixed, and (c) superannuation allowances be made compulsory on the lines of civil service superannuation regulations." (5) Dr. Laflin will move at next meeting: "That members be requested to contribute 2s. 6d. each annually towards a dinner fund, whether they attend or not, the proceeds to be allocated proportionately to each Division centre (wines and tobacco not included), and any deficit to be supplied by those actually present at dinner." (6) Any other business.—J. QUIRKE, Honorary Secretary, Piltown.

ULSTER BRANCH.—Nominations for the offices of President Treasurer and Secretary each signed by two members, should be sent not later than June 2nd to CECIL SHAW, M.D., Honorary Secretary, 29, University Square, Belfast.

ULSTER AND CONNAUGHT BRANCHES.—Two members to represent the combined Branches on the Central Council will be elected next month. Nominations, signed by three members, should be sent to me not later than June 2nd to CECIL SHAW, M.D., Honorary Secretary, Ulster Branch, 29, University Square, Belfast.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—The annual meeting of this Branch will be held at Malvern on Thursday, June 10th. To elect Branch officers and appoint members to the Central Council of the Association; to receive annual report of the Branch, and for any other business. Dinner.—C. S. MORRISON, Honorary Secretary.

YORKSHIRE BRANCH.—Nominations for the election of Representative members of the Central Council (two), each signed by at least three members, must be forwarded to me not later than June 15th. The present Representatives are Drs. Godver and Sinclair White.—ADOLPH BRONNER, Honorary Secretary, 33, Manor Row, Bradford.

YORKSHIRE BRANCH.—The annual meeting of the Branch will be held at the Grand Hotel, Scarborough, on Saturday, June 26th.—ADOLPH BRONNER, Honorary Secretary, 33, Manor Row, Bradford.

YORKSHIRE BRANCH: BRADFORD DIVISION.—The annual meeting of the Division will be held on June 8th, at 8.30 p.m. Particulars of the agenda will follow later.—J. BEATTIE DUNLOP, J. WHERRY WILSON, Honorary Secretaries.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

BIRMINGHAM BRANCH: CENTRAL DIVISION.

A SPECIAL and general meeting was held at the Medical Institute on Wednesday, May 19th, at 3.30 p.m. Mr. GANGE was in the chair, and there were present: Drs. Dale, W. R. Jordan, Kirby, Branson, Oakes, Beicher, Aldren, Mason, and White. Messrs. F. Jordan, Marsh, and Lucas, with the Honorary Secretaries (Mr. Nuthall and Dr. Lydall).

Addition to Rules.—After declaring the meeting special, the CHAIRMAN moved the following as an addition to the Rules of the Division:

That the Representative shall submit his report to the first General Meeting of the Division held after the Annual Representative Meeting.

This was seconded and carried unanimously. This was all the special business.

GENERAL MEETING.

Confirmation of Minutes.—The HONORARY SECRETARY read the minutes of the previous meeting, which were confirmed and signed.

Appointment of a Canvassing Committee.—A proposal to appoint a Canvassing Committee was carried, and the following gentlemen were proposed as members: Drs. Kirby, Aldren, McCall, De Vall, Duncan, Caddick, Sproat, Sawyer, and Wilkins, with Messrs. F. Jordan and Leedham-Green. It was decided to include the Chairman and Honorary Secretaries as *ex-officio* members. The following resolution was carried:

That the Representatives of this Division on the Branch Council be instructed to bring before the notice of this body the appointment of a Canvassing Committee by the Division with a view to obtaining a similar committee for the whole Branch to secure its better organization.

Instructions to Representative.—With reference to the motions as to the representation of the local medical profession on boards of hospitals and similar bodies (SUPPLEMENT, April 10th) the meeting decided as follows: (a. Motion by the Hampstead Division):—

That in the opinion of this Division this is undesirable.

(b. Motion by the Wandsworth Division):

(i) That this is impracticable.

(ii) As (i) has been pronounced impracticable, this was not considered.

In regard to the motions to be discussed at the Annual Representative Meeting, notice of which was published in the SUPPLEMENT of April 24th, the following decisions were arrived at:

The motions by the Liverpool Division (Election of Representatives) were approved, and the Representative was instructed to support them: as also the four motions affecting the present regulations of the Association—two submitted by the Council, and one each by the Dundee Branch and Gateshead Division. The Representative was instructed to exercise his discretion with regard to the Wandsworth proposal (Method of Distribution of Capitation Grants), and to strongly support the motion sent by the Waterford Division (the BRITISH MEDICAL JOURNAL). The resolution by the Waterford Division (Appointment of *Materia Medica* Committee) raised a prolonged discussion. The CHAIRMAN announced that the Executive agreed with the principle of the resolution, but could not see its way to support it as it stood. He further stated that a Subcommittee had been appointed to draft an amendment, and that this amendment should be printed upon the notice convening the next meeting. Under these circumstances the further consideration of the resolution was deferred. The Representative was instructed to oppose the motion of the Wandsworth Division (Scientific Work of the Association) and to support the two following motions, both submitted by the Wandsworth Division: Promulgation of Policy of the Association, and Representatives at the United Kingdom

Hospitals Conference. Instructions were given to oppose, pending the report of the Contract Practice Subcommittee, the Wandsworth motion (Contract Practice) and the St. Pancras and Islington motion (Public Medical Service). The second "Contract Practice" resolution from the Wandsworth Division was left to the Representative's discretion, as was the motion (Hospital Administration) by the Waterford Division. It was decided to support the Wandsworth Division's amendment to the Hospitals Committee's report and recommendation, but to propose as an amendment to the Wandsworth Division's resolution (Management of General and Cottage Hospitals) to omit the words "General and" in the first line. The Representative was instructed to remain neutral with regard to the Waterford Division's resolution (Medical Teaching), but to oppose the motion (Medical Examinations) by the same Division.

Sanatoriums for Workers.—The statement on sanatoriums for workers suffering from tuberculosis—a copy of which had been circulated to all members of the Division—was next considered. The CHAIRMAN, on behalf of the Executive, moved:

That the statement be approved.

A letter from Dr. Wynn was read, pointing out the necessity for special medical referees in order to maintain a uniform standard for admission to such sanatoriums, and as an amendment to the Executive's proposal the following was moved:

That referees are necessary, and should be paid.

This, on being put to the meeting, was carried, and was adopted when put as a substantive resolution.

This concluded the business.

CAPE OF GOOD HOPE—EASTERN PROVINCE BRANCH.

A MEETING of this Branch was held at 8 p.m. on Friday, April 16th, at the Association's library at Rhodes College. Dr. G. E. FITZGERALD, President, in the chair. There were also present Drs. Bruce Bays, A. Coxper, Dru Drury, Harrison, Lillie, Mullins, A. J. Lea, and G. C. Purvis, also Dr. W. A. MacFadyen of Rhodes College as a visitor.

Incompletely Addressed Telegrams.—It was resolved that a letter should be addressed to the editors of the local papers summarizing the recent correspondence with the Postmaster-General on the subject of the non-delivery of incompletely addressed telegrams, and suggesting the remedy of fuller addresses, which lies in the hands of the public.

Storage of Pathological Specimens.—The erection of shelving for the storage of pathological specimens was left to the Council with power to act.

Colonial Medical Council.—The minutes of the proceedings of the Colonial Medical Council, supplied by the courtesy of the Council, were laid on the table. A discussion then took place on the report of the Uptington Committee, and generally on the present position of the Colonial Medical Council. The discussion was opened by the SECRETARY, who reviewed the history of the medical legislation of the Cape from 1823 onwards, the findings of the three Select Committees, and the wishes of the medical rank and file at the present day. It was resolved:

That this meeting of the Eastern Province Branch of the British Medical Association agrees with the recommendations of the Majority Report of the Select Committee on the 6th Colonial Medical Council.

It was resolved:

That this meeting of the Eastern Province Branch of the British Medical Association is also in accord with the resolutions of the Western Branch of the British Medical Association on the clauses of the Majority Report.

Amendment of the Medical Acts.—It was resolved:

That this meeting of the Eastern Province Branch of the British Medical Association agrees with the amendments of the Medical Acts proposed by the Western Branch, many of which have been approved by the Colonial Medical Council; but that this meeting excepts Amendment 9, repealing Section 4 of Act 7 of 1899, which amendment should be modified so as to bring it into line with Section 4 (3) of the Majority Report; and also amendment 10, which proposes the deletion of the word "dentist" from Section 7 of Act 7 of 1899.

This meeting cannot view with complacency the placing of a veto upon the practice of any branch of the art of surgery by a qualified medical practitioner.

It was resolved:

That this meeting of the Eastern Province Branch of the British Medical Association is glad to acknowledge the assistance which the Colonial Medical Council is giving to the Branches of the British Medical Association in following the work of the Council.

Nothing but good to the profession can result from the fullest interchange of ideas between these bodies.

A well founded belief that the Council is not only desirous to protect the public from defaulters within the profession, but is also determined to suppress irregular practitioners, would be the best remedy for the alleged "want of confidence in the Council" referred to by the Select Committee in their report.

The South African Medical Record.—Resolved:

That this meeting of the Eastern Province Branch of the British Medical Association regrets that a *priceis* of the proceedings of the Colonial Medical Council no longer appears in the *South African Medical Record*; and that a copy of this resolution be sent to the Colonial Medical Council and to Dr. Darley-Hartley.

It was also resolved:

That this meeting of the Eastern Province Branch of the British Medical Association regrets that advertisements of State medical appointments have ceased to appear in the pages of the *South African Medical Record*, the only medical paper which is published in the Cape Colony; and that a copy of this resolution be sent to the Honorary Colonial Secretary and to Dr. Darley-Hartley.

DORSET AND WEST HANTS BRANCH.

THE spring meeting of this Branch was held in the Dorset County Hospital, Dorchester, on Wednesday, May 5th. The PRESIDENT, Mr. J. A. Hosker, J.P., was in the chair, and there were present: Dr. Davison, Dr. Howard, Dr. Manning, Dr. Humphrey Davy, Dr. Johns, Dr. Mary Jeremy, Dr. MacDonald, Dr. Macpherson Lawrie, D.L., J.P., Dr. Rorie, Dr. Grey-Edwards, Dr. Clift, Dr. Eleanor Boud, Dr. Flower, Dr. Whittingdale, Dr. Martin, Dr. Greves, Dr. Sanderson-Wells, Dr. Le Fleming, Dr. Snow, Dr. Luther, Dr. Ramsay, Dr. Telford Smith, Dr. Johnson Smyth, Mr. Charles J. Marsh, Mr. Dodd, Mr. de Castro, Mr. Rendall, Mr. Newbold, Mr. Robinson, Mr. Carrington, Mr. Whittaker, Mr. Dalton, Mr. Greenwood, Mr. Burdwood, Mr. Good, Mr. Hawkins, Mr. Geo. Flower, Mr. Burrough Cosens, Mr. C. H. Watts Parkinson, Mr. Montgomery, J.P., Mr. Bushman, Mr. MacCarthy, Mr. Unwin, Mr. Simmons.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed. The minutes of the special meeting held in Bournemouth on March 2nd were read and confirmed.

Apologies for Non-attendance.—Letters of apology for non attendance were read from Mr. Decimus Curme and Dr. D. M. Ross.

Financial Statement.—The HONORARY TREASURER presented his accounts and financial statement for 1908.

Reports from Divisions and Branch Council.—Reports from the Divisions were read, and also the report from the Council of the Branch for 1908.

New Members.—It was announced that Harold Arthur Robert Edward Unwin, of Penn Hill, Yeovil, Somerset, M.B., B.C.Camb., F.R.C.S.Eng., and James Austin Dickie, of Seacroft, Poole, Dorset, M.B., Ch.B. Glasgow, had that day been elected by the Branch Council members of the British Medical Association.

Election of Representative on Central Council.—The PRESIDENT reported that there had been a contest for the office of Representative of this and the West Somerset Branches on the Central Council of the Association. The candidates were Dr. James Davison, of Bournemouth, and Mr. C. H. Watts Parkinson, of Wimborne. The votes cast in favour of Dr. Davison were 123 and for Mr. Parkinson 76. Dr. Davison was therefore declared duly elected a member of the Council of the Association. Dr. DAVISON thanked the members for the honour they had conferred upon him by electing him their Representative on the Council of the Association by so substantial a majority of votes. It was a very high compliment indeed, and one which he deeply appreciated. He assured them he would do his best to serve them in this capacity as well as in that of Honorary Secretary.

Installation of New President.—The PRESIDENT now vacated the chair, and in an appropriate speech introduced his successor, Mr. Charles J. Marsh, L.R.C.P. Edin., M.R.C.S. Eng.

Vote of Thanks to Retiring President.—On the motion of Mr. MARSH, seconded by Dr. HYLIA GREVES, a most cordial vote of thanks was awarded by acclamation to the retiring President for the thorough, courteous, and efficient manner in which he had conducted the affairs of the Branch during his year of office. Mr. HOSKER suitably replied.

Summer Meeting.—It was decided on the motion of Dr. MACPHERSON LAWRIE, seconded by Dr. JOHNSON SMYTH, to hold the summer meeting in Christchurch early in July.

President's Address.

The PRESIDENT chose as the subject of his address the various phases of infancy and childhood.

It was calculated that one-third of all children died before reaching the age of reason; this, in a great measure, must be due to ignorance on the part of those who had the bringing up of them. Of the two-thirds who escaped the grave, how many carried throughout life fetters which had been forged in childhood from the same cause, resulting too often in impaired health and dangerous operations which should be prevented? To mention only some of the most obvious, how many suffered in after-life from the effects of improper feeding, neglected teeth, tight garters, tight boots in childhood?

Measures promoting moral, intellectual, and social advancement of people would reduce infant mortality, vice, intemperance, overcrowding, and ignorance. There was work for ministers of religion as well as ministers of health: let them unite in trying to lessen the brutalizing influence of low surroundings and raise up laudable ambitions of self-betterment, decency, and cleanliness.

Every one would admit that one of the chief factors in promoting a high death-rate amongst children was the improper feeding of infants. Could they not as a body take a firmer stand, and drive home more thoroughly the absolute necessity of healthy mothers bringing up their offspring at the breast? Statistics showed clearly that the mortality was markedly less amongst breast-fed children than amongst those fed artificially. In insisting on this point, however, every care should be taken to see that nursing was never allowed to exceed nine months. Still more important was it to prevent mothers who were unhealthy, and especially those in whom there was the slightest suspicion of tubercle, from nursing their babies. If this were done thoroughly, he believed they would hear less about the hereditary tendency to this terrible disease. He knew cases where the mother who had not actually developed any sign of tubercle when the first child had been born had suckled the baby for even a few weeks only—it had developed phthisis later in life; whereas children born to her later, when phthisis was strongly pronounced and who had been brought up on cow's milk from the very commencement, had grown up into strong and healthy young people.

For the ordinary healthy infant in cases where the mother must not give her child the breast the best substitute was cow's milk diluted with barley water, with cream added in varying proportions as age advanced, and nothing but this until teeth had appeared. If they had not appeared by the eighth month, a little fresh gravy should be added. He was not going into the question of sterilized milk; and with regard to preserved or condensed milk and the various modifications and prepared foods with which the country was flooded, he could simply say they were not substitutes for fresh milk; some babies might seem to thrive on them, but trouble would frequently arise later. It was, of course, unnecessary to refer to the harmful effects of tea, coffee, and stimulants.

In manufacturing districts the percentage of mortality was about 180 per 1,000, in Wilts and Dorset 95 per 1,000, clearly indicating that stronger infants were born and more reared in rural than in populous districts; and, of course, in manufacturing towns the mothers had to work instead of attending to their children, whereas this inducement was wanting in the more rural parts, and it was more especially in the towns that the need for ensuring proper milk supplies existed. This might be done by arranging for properly superintended milk depôts, and

there the milk could be sterilized. He knew it might be urged that the establishment of milk depôts encouraged artificial feeding instead of the breast; but, anyhow, the present state of matters warranted the attempt to make artificial feeding as safe as possible, and whilst he knew there were many arguments against the use of sterilized milk entirely for feeding, still the sterilized product under proper supervision was a distinct advance on the present milk of commerce. He believed the death-rate amongst children fed from depôts in Liverpool, where this system had been tried, compared most favourably with that of the rest of the city. Recognizing that the injudicious feeding of infants produced lasting effects in after-life, might not much be done by regular and methodical distribution of leaflets, etc., to direct parents into the proper ways of bringing up their children? Not only was it necessary that medical men should instruct parents in the essential points concerning the food they should give, but more efforts should be made by the State to teach the masses how to prepare the food. Some slight attempt was, he thought, being made in this direction by training "domestic economy teachers," and establishing cookery classes, so that the future mothers might, it was to be hoped, bring more intelligence to bear upon these questions so vitally affecting the coming race.

It was not encouraging to them, as a nation, to see the birth-rate declining whilst the infant mortality still remained high; for although during the last thirty years there had been marked diminution in the general death-rate, no diminution had been discernible in the infants' death-roll, which showed pretty conclusively that the remedial measures which had helped to ameliorate the lives of ordinary citizens had entirely failed to benefit the case of the children in the first years of existence.

Passing to the teething age he said he was afraid that, as a body, they did not give sufficient attention to the condition of the teeth, and this, in a large measure, accounted for the appalling percentage of children who were defective in this respect, as reported throughout the country under the recent inspection of schools.

Parents should not be allowed to retain the erroneous idea that preservation of the milk teeth was unimportant; this often led to great pain and dyspeptic troubles. The necessity for periodical examination of the teeth from about 4 years upwards should be urged. The first teeth of the second set to appear were the four large double ones behind the first set, at any time between 5 and 8 years, and these were the most important teeth in the head, and should receive special attention. How often did they find these teeth hopelessly decayed, whereas a word of caution as to the necessity of keeping them clean and free from particles of food might probably have preserved them! He would like to see a portion of the time allotted to school hours utilized for the compulsory cleaning of teeth; they spent vast sums in developing the mind, but this without proper precaution to ensure healthy bodies would lead to only a poor return for the outlay.

Senses and memory were the first faculties parents should endeavour to develop by intelligent methods before school life commenced; and notions of right and wrong should be instilled, also the foundation of future virtues laid, by teaching kindness to animals and sympathy with the poor.

He thought children destined for boarding schools should be sent there early, between the ages of 8 and 10; many good qualities which were hidden at home developed, and rough edges of the character became smooth by contact with others. The shy and nervous child became the plucky leader in games, and the little bully under discipline became gentle.

Education should be directed to the preparation of children for their after-life, and they should be taught not only to know, but also to live. Therefore they should welcome the attempt to introduce hygiene into the school curriculum.

He thought in our primary schools children were sent too young. It would be much better if attendance at school were put off till the age of 7 (as was the case he believed in Switzerland) and the children allowed to run about the villages; in towns large play rooms and grounds should be provided to enable them to play and romp about instead of trying to learn lessons.

Periodical medical inspections should take place to

detect disease in its early stages. For instance, rheumatism was very common in childhood; the symptoms were insidious and varied, and were often ascribed to "growing pains." Many a case of heart disease in the adult was due to neglect of these early symptoms in childhood.

Again, how many cases of tubercle might be cut short if only detected and taken in hand early, and how many cases of this nature developed shortly after an attack of measles or whooping-cough! In connexion with this latter point he thought much might be done of prophylactic value by forbidding the attendance at school, for at least three months, after either of these complaints, which in his opinion should also be included in the list of the notifiable diseases. During the last decade he believed the mortality from measles had nearly doubled itself, and from whooping-cough there had been a dreadful increase. Let them contrast this with the mortality from scarlet fever since it had been notifiable.

Another point they should impress upon parents and future parents was the necessity for a periodical examination of the children's eyes. He did not refer to cases of actual disease, which (apart from refractive errors) could scarcely escape unnoticed, with the exception, perhaps, of "trachoma" or "granular ophthalmia," which, although dangerous to sight, and, he believed, contagious, was frequently overlooked, with disastrous consequences. How often children were permitted to go on suffering from headaches and pains in the eyes, often receiving punishment for inattention and carelessness, whilst all the time they were suffering from errors of refraction! Astigmatism and long sight were pretty sure to become manifest, but short sight of low degree might easily escape detection, and as this, if neglected, tended to increase, setting up sometimes actual disease resulting in blindness, it should be most carefully attended to.

It was a great pity that the medical curriculum did not include compulsory knowledge of sight testing. Were this the case they should not have any chemist, jeweller, spectacle seller, with mystical letters after his name, advertising himself as fully qualified to deal with such cases, with the baneful results which must often eventually follow.

"Another topic connected with infancy and school life was, he thought, worthy of more attention than it received: Our physical frame contains many dual organs, such as two brains, two eyes, two ears, limbs in pairs, etc. Why was it that so little effort was made to utilize both more equally? Did they not often hear a child reproved for using its left hand instead of the right? How many would be only too thankful if they were ambidextrous!

He once heard Mr. Adams Frost, in an introductory address at St. George's Hospital, dilate upon the advantages of ambidexterity for surgeons. Much might be done to make work easier in after-life, and to render them less helpless and dependent upon others when partially incapacitated by some accident or disease, if only pains were taken to develop for usefulness both sides of the body equally in childhood. He thought Gowers pointed out that aphasia would to a great extent be prevented if only ambidextrous teaching was generally adopted. Disease of a portion of the central convolution of the right side caused only transient interference with articulation; but if, in an ordinary adult, the corresponding portion of the left brain was affected, the power of word production at will was lost. The relation between speech and the left side of the brain was undoubtedly connected with right-handedness, and left-handed persons presented the same defects of speech in disease of the right hemisphere. Closely connected with this matter was "writer's cramp." What a boon it would be to a clerk to be able to use his left hand sometimes and thus relieve the strain on his right, at the same time giving the left brain a rest and so restore the balance! Moreover, what good results were obtained in developing brain power by hand training in the treatment of feeble-minded children.

In dealing with school life, the President first referred to sports and athletics. Speaking as an old athlete, he said they should encourage them in every way, especially cricket, football, and suchlike games; but he also thought they should warn parents and teachers against the overdoing of this most necessary part of school life. He

thought they would all agree in condemning the long-distance running for boys.

It would be a step in the right direction if a universal rule existed in private and so-called secondary schools similar to that contemplated in our public and elementary schools—namely, that every child on entrance should be carefully examined by the school doctor and advice given as to work, diet, and sports in each individual case (he might add by way of parenthesis that the doctor's fee for this work should form part of the school entrance fee). In this way many whose lives were now permanently injured inadvertently would receive special care and attention, so necessary at the period of their growth, and so blossom forth into healthy men and women. He was the last to advocate anything like "coddling," but he contended that, just as a child was examined in general knowledge on entering a school before being placed in a class, similar care should be exercised in regard to general health, bearing in mind that the best abode for a sound and healthy mind and conscience was a sound and healthy body.

As regards punishment, he did not think that as a rule it should be of such a nature as to keep children indoors after school hours: their health required all the fresh air possible, and it was not right that a child should be penned up in a room where numbers had been collected together for hours previously. He was a firm believer in the old saying, "Spare the rod and spoil the child"; but there again proper care and precaution were necessary. Of course, there were some children who should never be whipped.

He knew that in many schools it was stated that corporal punishment was inflicted by the principal only, but he also knew that the assistants were very prone on the slightest provocation to administer a smack on the ear, or a cut with a cane or ruler across the knuckles or palm of the hand, a practice which should be considered criminal. He had seen several cases of injury produced in this way, and in his own town he had on more than one occasion brought the matter to the notice of school managers, but without any lasting effect.

Having touched on various points connected with infancy and childhood which often escaped serious attention, it remained to indicate briefly some of the means by which matters might be improved.

First of all, let them try to bring home to the people more thoroughly the necessity for healthy marriages only, and the sacred duties devolving upon mothers towards their offspring.

Then institutions might be started, and many already in existence might be utilized for popular lectures and practical demonstrations by doctors, nurses, cooks, and others for the object of instructing the future parents in matters concerning health, food, clothing, ventilation, etc., for children.

Much might be done in training colleges to increase the opportunities for the study of child life instead of spending so much time over difficult problems, the main object of which was to increase the examination marks, and often render the future teacher incapable of sympathizing with a dull child or managing a refractory one.

By careful application of thought and intelligence to the phases of child study, and by teaching it in their homes and schools, they might look forward with hope to a period when healthier, happier, and wiser citizens would be sent forth to engage in the battle of life.

He concluded with the words uttered by the late Dr. O'Connor of Cork:

"To sympathize with the young is a duty, and should be a pleasure, of experienced age; to extend pity if they fall, to give encouragement if they struggle, and to honour them if they triumph."

Dr. MACPHERSON LAWRIE proposed and Dr. MACDONALD seconded, and it was carried unanimously:

That the best thanks of this meeting be given to the President for his able and comprehensive address.

Paper.—Dr. A. HUMPHREY DAVY read a paper on chronic gastric catarrh. The President, Dr. HYLIA GREVES, Dr. TELFORD SMITH, and Dr. JOHNSON SMITH spoke on this paper. Dr. HUMPHREY DAVY replied.

Cases.—Dr. RAMSAY related three cases of myomectomy during pregnancy, and exhibited a specimen of post-partum septic thrombosis in broad ligament. These

were commented on by Dr. MACPHERSON LAWRIE, Dr. SNOW, and Mr. BURROUGH COSENS. Dr. RAMSAY replied.

Demonstration in Words.—The honorary medical staff of the Dorset County Hospital showed some interesting cases in the wards of the hospital during the afternoon.

Votes of Thanks.—On the motion of Mr. J. A. HOSKER, seconded by the PRESIDENT, a cordial vote of thanks was awarded to the Vice-President and Mrs. Wm. Burrough Cosens for their kind hospitality in entertaining the members to afternoon tea at The Gables, Dorchester. It was proposed by the PRESIDENT, seconded by Dr. HAROLD SIMMONS, and carried unanimously:

That the best thanks of this meeting be conveyed to the Chairman and House Committee of the Dorset County Hospital for their kindness in allowing the Branch to hold its meeting in the board-room of the hospital.

Exhibit.—During the afternoon Messrs. Parke, Davis, and Co., of London, attended, and in a room adjoining that in which the Branch meeting was held exhibited a choice selection of recent pharmaceutical preparations and chemicals which were much appreciated by the members attending the meeting.

GLASGOW AND WEST OF SCOTLAND BRANCH:

DUMBERTONSHIRE AND ARGYLLSHIRE DIVISION.

The annual business meeting of this Division was held in Dr. Hunter's house, Millig, Helensburgh, on Friday, May 14th. Only four members were present.

Earlier Appointment of Representatives.—It was agreed to support this proposal. As the Representative of the Division is appointed nearly three months before the Representative Meeting no change in its procedure is necessary.

Representation of Local Medical Profession on Hospital Boards.—It was agreed that this was most essential, but the members thought that the action of the British Medical Association through its Branches and Divisions should be exercised only where there was any difficulty in obtaining the desired end. In Helensburgh the medical profession was satisfactorily represented on the committee of the local infirmary.

Whole-time Medical Officers of Health.—Agreed to support this proposal, but at the same time it was recognized that there were special areas which might call for special treatment on the lines now in force.

Medical Certification of Suitability of Patients for Hospital Treatment.—The members approved of the recommendation:

That a medical certificate of suitability for hospital treatment be required as a condition of hospital treatment except in case of casualties.

Contributions to Hospitals by Employers and Employees.—None of the members could support either of the motions dealing with these contributions and the handing over of same as suggested to any insurance society.

Fresh Public Medical Institutions.—It was agreed to support the motion:

That it is desirable that no fresh public medical institutions should be opened without previous consultation with the local medical profession through some organized body, such as the Division of the British Medical Association in the area of which it is proposed to establish such institutions, and that it be an instruction to the Council to give effect to this principle in considering applications from Divisions and Branches for support in dealing with hospital questions.

Symposiums for Workers Suffering from Tuberculosis.—The terms of the circular with report of the Joint Committee of the Representatives' Meeting dealing with this matter were unanimously approved of.

Secretary's Report.—The HONORARY SECRETARY reported that the membership at the beginning of the year had been 49. Three new members had been added, making a total of 52. Five names had been removed from the roll (3 by death, 1 by removal, and 1 by resignation), making the present membership 47, or a decrease of 2. The Secretary also stated that he had communicated with the various hospitals in the Division—namely, Oban, Dunoon, Dumbarton, Campbeltown, and Helensburgh—with reference to the certificates granted by the doctors to out-patients and the fees charged for same. Replies had been received from all the hospitals and had been sent to London. £3 15s. had been received from the Branch (1s. 6d. per member), and the

expenditure had amounted to £1 1s. 10d., leaving a balance of £2 13s. 2d., which had been returned to the Branch Treasurer.

Branch Council Work.—Dr. YOUNG reported on the work done at the Council meeting: (1) That the Ethical Committee, as now elected, included as far as possible representatives from the various Divisions. (2) Discussions had taken place with regard to the Referendum, and steps were being taken to try to secure a postal vote in this matter. (3) The payment of medical men when called upon to attend street accidents was discussed and was still under consideration. (4) The subject of the abuse of medical charities was before the Council and report on same was to be submitted to the Branch.

Election of Office-bearers.—The following were elected: *Chairman*, J. Ewing Hunter, M.B. (Millig, Helensburgh); *Vice-Chairman*, J. Wilson, L.F.P.S. (Ashville, Dumbarton); *Honorary Secretary*, Wm. Semple Young, M.D. (Craigie-lachie, Helensburgh); *Representatives to Branch Council*, Drs. Hunter and Young; *Representative to Annual Representative Meeting*, still under consideration.

LANCASHIRE AND CHESHIRE BRANCH:

LIVERPOOL AND BIRKENHEAD COMBINED DIVISIONS.

A MEETING of these Divisions was held at the Liverpool Medical Institution on May 14th, Sir JAMES BARR in the chair. Thirty-one other members were present.

Salary of Police Surgeons.—The SECRETARY reported what the Joint Committee had done in relation to the salary of police surgeons.

Hospital Abuse.—Dr. PARKINSON, on behalf of the Subcommittee on Hospital Abuse, reported the action of the Committee up to date, including the following resolution, which had been moved by Dr. TISDALL, seconded by Dr. DAVIES, and carried *nem. con.*, namely:

Your Committee disapprove of the practice which obtains at the majority of the charity hospitals within the Liverpool and Birkenhead areas—namely, using a certain part of their all-too limited accommodation as private wards for the reception of paying patients—because it is both wrong in principle and unjust in practice, and recommends their abolition. Wrong in principle, because under no condition should an institution maintained by funds subscribed by the public for charitable purposes embark on any kind of commercial enterprise. Unjust in practice, because the usual medical attendant is wrongfully deprived of fees to which he is entitled, and also because a public charity enters into direct competition with nurses and others who own nursing homes throughout the city. The fact of the members of any particular hospital staff being permitted to charge a fee for attendance on patients treated in such private wards does not, in the opinion of your Committee, in any way strengthen the position of those who advocate their continuance. If it be contended that the existing nursing homes are not adequate to meet the existing conditions, either as to accommodation or fees, your Committee has faith in those economic laws which in all other walks of life regulate the matter of demand and supply.

This resolution had been transmitted by order of the committee to the Association of Honorary Medical Officers to the Liverpool Medical Charities, with a view of obtaining their co-operation and united action. The following letter had been received in reply from their honorary secretary, Dr. Bushby, namely:

43, Catherine Street, Liverpool,
May 13th, 1909.

Dear Dr. Grossmann,

At a meeting of the Association of Honorary Medical Officers to the Liverpool Medical Charities, held on April 23th, 1909, the resolutions forwarded to me by the Joint Committee of the Liverpool and Birkenhead Divisions of the British Medical Association were discussed.

By a majority of nine votes to seven the following resolution was passed:

That the Association of Honorary Medical Officers to the Liverpool Medical Charities approves of the resolution passed by the Joint Committee of the Liverpool and Birkenhead Divisions of the British Medical Association, and agrees with the opinion therein expressed.

I am, yours faithfully,

T. BUSHBY.

Whereupon Mr. LARKIN moved and Dr. STOKES seconded, and it was resolved:

That the report of the Hospital Abuse Subcommittee be adopted and the resolution be approved, and the Committee be requested to continue its action.

Proposed Increased Representation on General Medical Council.—The SECRETARY reported that, in accordance with the suggestion of the Medico Political Committee, he had written to Dr. Caton, the Representative of the Liverpool University on the General Medical Council, urging him to support the increase of direct representation for England and Wales, and that he had received a sympathetic reply.

Matters Referred to Divisions.—The following matters referred to Divisions, as printed in the SUPPLEMENTS to the BRITISH MEDICAL JOURNAL of January 23rd, February 27th, April 10th, and April 24th, were then considered:—SUPPLEMENT of January 23rd: Report of the Public Health Committee:

Agreed: That medical officers of health should be debarred from engaging in private practice.

SUPPLEMENT of February 27th: Hospitals Committee's report on medical certification of suitability of patients for hospital treatment:

Recommendation approved.

Report on contributions to hospitals by employers of labour and employees: Memorandum:

The Divisions agreed unanimously that the principle enunciated in Section 2 is sound.

The proposal dealt with in Section 3 was disagreed with, the Divisions considering that all contributions to hospitals must be looked upon as purely charitable.

Section 4: The Divisions consider that it would be highly detrimental to the profession for insurance companies to be allowed to enter the field of hospital management. The Divisions unanimously agree with the previous declaration of the Association.

SUPPLEMENT of April 10th: Hospitals Committee: Representation of local medical profession on boards of hospitals and similar bodies:

The Divisions agreed with the principles laid down in the memorandum:

SUPPLEMENT of April 24th: Notices of motion:

A.—Approved.

B.—Approved.

C.—Method of distribution of capitation grants (Wandsworth Division): Disagreed with.

Re BRITISH MEDICAL JOURNAL (Waterford Division):

No action taken.

Re Materia Medica Committee (Waterford Division):

The Divisions are of opinion that such matters can well be left to the Council.

Re scientific work of the Association (Wandsworth Division):

Unnecessary.

The meeting then closed.

ST. HELENS DIVISION.

ON Wednesday, February 17th, at 8.45 p.m., a meeting of the Division was held in the Fleece Hotel, St. Helens. Present: Drs. Bassett, Fox, Dowling, Wilson, Paterson, and Buchan. It was resolved that Dr. Bassett take the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and adopted.

Report of Executive Committee.—The report of the Executive Committee was submitted.

Draft Ethical Rules.—Draft ethical rules of the Association and the Bradford Division were adopted, and the Executive Committee was instructed to draw out a list of fees for submission to a future meeting of the Division, to be incorporated in the rules.

MATTERS REFERRED TO DIVISIONS.

Medical Certificates of Suitability for Hospital Treatment.—The Division discussed the question of the granting of certificates at hospitals, and instructions were given to the Secretary in reply to the questions put by the Organization Committee.

Draft Charter.—This was considered, but no instructions were given to the Representative thereon.

Whole-time Medical Officers of Health.—The Division considered, in reply to the Organization Committee, that medical officers of health should always, when practicable, devote their whole time to the duties, but that present appointments should not be disturbed.

Grouping of Divisions.—The Division considered the junction of the Division with the Warrington Division the

most convenient for the election of a Representative to the Representative Meeting.

Circular from Warrington Division.—A circular from the Warrington Division, with respect to the payment of medical practitioners in cases of midwifery, was submitted for the information of members.

Annual Report.—The report for the year 1908 was submitted and approved. This was all the business.

A meeting was held in the Fleece Hotel, St. Helens, on Wednesday, May 19th, at 8.45 p.m. Present: Drs. Bassett, Dowling, Fox, Kerr, Orton, Paterson, Reid, Wilson, and Buchan. It was resolved that Dr. Reid take the chair.

Resignation of Chairman.—An apology for absence was intimated from Dr. Mouncey, who at the same time desired to resign the chairmanship of the Division. Resolved that Dr. Mouncey's resignation be accepted with regret.

Election of Officers.—The following office-bearers were elected for the year 1909-10: *Chairman*, J. Reid, M.B.; *Vice-Chairman*, F. P. Bassett; *Honorary Secretary and Treasurer*, John J. Buchan, M.D., Holly Mount, Laurel Road, St. Helens; *Representative on the Branch Council*, Dr. F. P. Bassett; *Executive Committee*, The Office-bearers, with Drs. Dowling, Kerr, Knowles, Orton, and Mouncey.

Medical Officer for Recruiting Purposes.—A letter was read from the Medical Secretary regarding the appointment of medical officer for recruiting purposes at St. Helens. The Division considered the matter very carefully, and directed the Secretary to reply.

Medical Inspection of School Children.—The Division proceeded to consider the report of the Medico-Political Committee on this subject, and resolved that if any school clinic be begun in this district, it was essential that the medical profession be represented on the committee of management, so that the interests of the profession be adequately safeguarded.

Central Council Election.—It was resolved:

That members of the Division be urged to vote for Messrs. Garstang, Larkin, Macfie, and Taylor.

METROPOLITAN COUNTIES BRANCH:

STRATFORD DIVISION.

A MEETING of this Division was held in the Alexandra Hotel, High Street, Stratford, E., on Thursday, May 20th, at 9 p.m., Dr. Percy Rose presiding.

Confirmation of Minutes.—The minutes of the previous meeting were read and approved.

Whole-time Medical Officers.—The following resolution was passed:

That the proposition that medical officers of health should be debarred from engaging in private practice is desirable where the size of the district permits sufficient salary.

Representation of the Profession on Hospital Boards.—The following resolution was adopted:

That the Representative at the Annual Representative Meeting have a free hand in the discussion of representation of the local medical profession on boards of hospitals.

Paper.—Dr. COMYNS BERKELEY read a most interesting and instructive paper on Treatment of Cancer of the Cervix Uteri, showing a large number of specimens.

Vote of Thanks.—After some discussion, during which a number of questions were asked and replied to, Dr. COMYNS BERKELEY was awarded a very hearty vote of thanks.

The proceedings then terminated.

SOUTH-EASTERN BRANCH:

REIGATE DIVISION.

THE annual meeting of this Division was held on Thursday, May 6th, at 4.30 p.m., at the Reigate and Redhill Hospital. Tea was kindly provided by the Matron. There were present Dr. WALTERS (in the chair), Drs. Home Ross, Fisher, Pickett, A. R. Walters, Hewetson, Newton, Porter, Berridge, Caldecott, Watson, Ogle, and Mr. Sewill.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Officers.—The following officers were elected for the ensuing year: *Chairman*, Mr. Berridge; *Vice-*

Chairman, Dr. Rawlings; Representative on South-Eastern Branch Council, Dr. Caldecott; Representative at Annual Meeting, Mr. Sewill; Committee, Drs. Blackler, Bromet, Prince, Porter, and A. R. Walters; Honorary Secretary and Treasurer, Dr. John G. Ogle.

Earlier Election of Representative.—It was proposed by Dr. WALTERS and seconded by Dr. OGLE that in Rule 7 nine months be substituted for three months as the interval before the annual meeting during which a Representative may be elected by the Division. This was carried unanimously.

Proposed Division of South-Eastern Branch.—The following proposal of the Brighton Division was read and discussed:

That the South-Eastern Branch be divided into two smaller Branches, one to consist of that part of Kent which is already in the South-Eastern Branch, and the other of the county of Sussex and so much of the county of Surrey as is already part of the Branch.

Mr. BERRIDGE proposed and Mr. SEWILL seconded that the South-Eastern Branch be not divided as suggested. This was carried—11 for, 1 against.

Whole-time Medical Officers of Health.—The question of the desirability of health officers being required to give their whole time to the work was discussed. Dr. OGLE proposed and Mr. BERRIDGE seconded:

That medical officers of health should be debarred from engaging in private practice where possible.

This was carried unanimously.

Medical Certification of Suitability of Patients for Hospital Treatment.—In regard to this matter, it was proposed from the chair:

That a medical certificate of suitability for hospital treatment be required as a condition of hospital treatment, except in case of casualties.

This was carried unanimously, 12 voting.

Contributions to Hospitals by Employers and Employees.—It was proposed by Dr. OGLE:

That this Division disapproves of the principle that the contributions in question should be considered in the light of premiums for insurance against liability for attendance in sickness and accidents, and strongly disapproves of the suggestion that such contributions should be paid over to insurance companies, who in their turn would recompense hospitals, hospital staffs, etc., for attendances in illness or accidents.

This was seconded by Dr. WATSON and carried unanimously, 12 voting.

Fresh Public Medical Institutions.—Mr. SEWILL proposed and Mr. BERRIDGE seconded the following resolution:

That it is desirable that no fresh public medical institution should be opened without previous consultation with the local medical profession through some organized body, such as the Division of the British Medical Association in the area of which it is proposed to establish such new institution, and that it be an instruction to the Council to give effect to this principle in considering applications from Divisions or Branches for support in dealing with hospital questions.

This was carried, 6 voting for and 5 against.

Sanatoriums for Workers.—A statement on the relations between the National Association for the Establishment and Maintenance of Sanatoriums for Workers suffering from Tuberculosis and the medical profession, with special reference to the payment or otherwise of medical referees, was discussed, and Dr. PICKETT proposed:

That the statement be laid on the table.

This was seconded by Dr. OGLE, and carried unanimously, 11 voting.

Trade in Quack Medicines.—Mr. SEWILL proposed the following resolution:

The Reigate Division would urge upon the Council the necessity of including the traffic in quack medicines and apparatus within the scope of the proposed Royal Commission; and in view of the fact that this fraudulent and cruel trade is carried on mainly by means of advertisements, the Division would further urge upon the Council the necessity of bringing the facts, at once, forcibly before newspaper proprietors.

This was seconded by Dr. HOWE ROSS, and carried unanimously. Dr. OGLE proposed:

That Mr. Sewill's resolution and a summary of the speech with which he introduced it be printed and sent to the members of the Division, the honorary secretaries of Divisions in the South-Eastern Branch, and to other members who have taken an interest in the subject.

This was seconded by Mr. BERRIDGE and carried unanimously:

Vote of Thanks to Retiring Chairman.—A vote of thanks to Dr. Walters, the retiring chairman, was carried by acclamation.

SOUTH-EASTERN OF IRELAND BRANCH.

The annual meeting of this Branch was held at the Victoria Hotel, Kilkenny, at 5.30 p.m. on May 5th, Dr. GEORGE J. MACKESY in the chair. Other members were present to the number of nine.

Apologies for Non-attendance.—Apologies were received from Drs. WYNNE, George Russell, Mary Strangman, Power, and Riordan.

Installation of President.—Dr. W. H. JELLET took the second chair as new president, all other officers remaining the same as last year.

Contributions to Branch Dinners.—This subject, arising out of Dr. Laffan's motion, was very freely discussed, and correspondence from the five absentees already mentioned expressing their views on the matter having been read, the further consideration of the motion was postponed to the next meeting.

Notices of Motion.—Dr. WALSH and Dr. LAFFAN gave notices of motion for next meeting.

Representation of Local Profession on Hospital Boards.—This matter was discussed and it was found that the motion did not apply to the Division.

Dinner.—After the meeting the members dined together.

SOUTH MIDLAND BRANCH:

NORTHAMPTONSHIRE DIVISION.

A CLINICAL meeting of this Division was held in the Out-patient Room of the Northampton General Hospital on May 4th, after luncheon at Franklin's Restaurant. Mr. C. J. EVANS was in the chair. There were also present Drs. HARRIS-JONES, Darley, Baxter, Robson, Grindon, Linnell, Terry, Beatty, Wagstaff, Stone, Godwin, Milligan, Percival, and Hichens.

Cases.—The following cases were shown:—Mr. HARRIS-JONES: Detached retina; active choroiditis causing detached retina; lymphoma of conjunctiva. Mr. PERCIVAL: Malignant disease of pylorus relieved by a posterior gastro-jejunostomy; injury to scrotum and perineum; ovariectomy successfully operated on; case of pelvic peritonitis. Dr. MILLIGAN: Fracture of tibia and fibula sutured with Lane's plates, with an x-ray photograph. Mr. ONGERS: Perineal hypospadias. Dr. ROBSON: Pulmonary stenosis of tricuspid regurgitation; *Bilharzia haematobia* from the urine. Dr. HICHENS: An achondroplastic dwarf with an oesophageal pouch; a case of pulmonary abscess or bronchiectasis; a case of pernicious anaemia with ataxy from a mixed sclerosis; a case of spleno-myelogenous leucocythaemia, with blood specimens; an obscure case of tumour in the region of the pylorus; a peculiar case of fungating tumours on the hands caught from attending on lambs with ulcerations about the mouth.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

SWANSEA DIVISION.

A MEETING of this Division was held at the Swansea Hospital on April 30th, Dr. A. HANSON in the chair.

Whole-time Medical Officers of Health.—The report on the desirability of health officers being required to give their whole time to the work was considered, and the following resolution was unanimously carried:

That this Division approves the principle of medical officers of health being debarred from engaging in private practice.

That in order to secure the above principle there should be a combination of small areas where necessary, there should be security of tenure of office with adequate remuneration and provision for pension or superannuation, and the interests of existing officials should be recognized or compensated for.

Medical Certificates of Suitability for Hospital Treatment.—The report on medical certification of suitability of patients for hospital treatment was considered, and for the instruction of the Representative it was unanimously resolved:

That this Division considers that a medical certificate of suitability for hospital treatment should be required as a condition of hospital treatment, except in cases of casualties.

Contributions to Hospitals by Employers and Employees.—The report on contributions to hospitals by employers of labour and employees was considered. The negative proposal in motion (a):

That such contributions should not be considered as entitling the contributors to unlimited hospital as also to gratuitous medical treatment,

was unanimously approved. The positive proposal in motion (a):

That the contributions in question should be considered as payment of premiums for a proportionate insurance against liability for hospital and medical attendance in cases of serious illness and accident which are made on behalf of those unable themselves to pay directly or adequately for the same,

was unanimously disapproved. Motion (b):

That a scheme whereby a contribution should be paid to insurance companies, who in their turn will proportionately recompense hospital boards, hospital staffs, general practitioners, etc., for all attendance given,

was unanimously disapproved.

Fresh Medical Institutions.—The motion forwarded by the Central Council on fresh public medical institutions was considered—namely: "That it is desirable that no fresh public medical institutions should be opened without previous consultation with the local medical profession," etc., and the following resolution was unanimously carried:

That this Division approves of the above motion.

Representation of Local Profession on Hospital Boards.—The question of the representation of the local medical profession on boards of hospitals and similar bodies, as set forth in the motions of the Hampstead and Wandsworth Divisions published in the SUPPLEMENT of the BRITISH MEDICAL JOURNAL of April 10th, 1909, was considered, and it was decided to instruct the Representative to vote in favour of the motions at the next Representative Meeting.

STIRLING BRANCH.

The annual meeting was held, by the kind invitation of Lieutenant-Colonel F. G. Greig, R.A.M.C.(ret.), in the Military Hospital, Stirling, on Thursday, May 13th, at 3 p.m. Thirty members and visitors were present. The VICE-PRESIDENT, Dr. Mitchell, occupied the chair in the absence of the President, who arrived at a late stage.

Apology for Non-attendance.—An apology for inability to attend was received from Dr. C. J. Lewis, Birmingham.

Election of Office-bearers.—The following gentlemen were elected for the ensuing year: President, Dugald Mitchell, M.D., Camelon; Vice-President, J. Ernest Moorhouse, M.D., Stirling; Representative, George Gardner, M.D., Falkirk; Secretary, G. S. Steward, M.B., Falkirk; Council, Drs. Greig, Hunter, Sloan, and Robertson.

Report of Council.—The Council reported that two meetings of the Branch were held during 1908. The average attendance was 11. Membership of the Branch, 66. The balance of the funds at the end of 1907 was £29 11s. 7d.; at the end of 1908, £38 9s. 1d.

Nomination of Member of the Central Council.—Dr. A. Trotter, Tayview House, Perth, was nominated.

Address.—Mr. James R. Nicoll, Glasgow, gave an address on Gastro-enterostomy: its place in practice. The lecturer discussed with great acumen and sound common sense the conditions which justified a gastro-enterostomy, and pointed out fully the cases in which the benefits to be derived from the operation were doubtful or non-existent. He emphasized the fact that on the physician and general practitioner rested the responsibility of selecting suitable cases for surgical treatment, as his personal knowledge of the case and history of the patient was naturally greater than the surgeon's. The lecture was of an extremely interesting and illuminating character, and at the end a discussion took place in which Drs. GRIFFITHS, MOORHOUSE, and MITCHELL took part. On the motion of the PRESIDENT, Dr. Robertson, the lecturer, was awarded a hearty vote of thanks.

Visit to the Hospital and Castle.—The members and visitors were afterwards shown over the hospital, and were entertained to afternoon tea, in the officers' mess at the Castle, as the guests of Major A. F. Mackenzie, M.V.O., Argyll and Sutherland Highlanders, Commandant,

Stirling Castle; and Lieutenant-Colonel Greig, officer in medical charge; and everything of interest in the Castle was shown to those who had time to go over it.

Votes of Thanks.—On the motion of Dr. ROBERTSON, Major Mackenzie and Lieutenant-Colonel Greig were cordially thanked for their kindness and hospitality. Major Mackenzie, in replying, expressed the pleasure he had received from meeting the members of the Branch, and stated that he always had a great interest in medical matters, and had many friends in the R.A.M.C.

CLSTER BRANCH.

The spring meeting of this Branch was held in the Harbour Office, Londonderry, on Saturday, May 8th, the PRESIDENT (Dr. Alex. Dempsey) in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Report of Council.—The report of Council was read by the HONORARY SECRETARY (Dr. Cecil Shaw). It stated that four members had been elected: Dr. Wm. Boyd (Banbridge), Dr. J. A. Boyd (Carmoney), Dr. G. Moncrieff Melville (Lisburn), and Dr. Wiclif McCready (Belfast).

Apologies for Non-attendance.—Apologies were received from Dr. Warnock (Donegal), Dr. Thompson (Omagh), Dr. Nolan (Downpatrick), Dr. Hamilton (Faughan), Dr. Rankin (Newtowncunningham), Professor Lindsay, Dr. Campbell, and Mr. A. B. Mitchell (Belfast).

Luncheon.—After the meeting the members present were entertained at luncheon in the Northern Counties Hotel by the President. There were twenty-two present. After luncheon the President's health was proposed by Dr. THOS. McLAGHLEN (Londonderry).

Heart Strain from Physical Effort.—Dr. CALWELL read notes on cases of heart strain from physical effort. He pointed out that physical effort might take the form of the strenuous life, which was literally and metaphorically living at high pressure; or of over-exertion in bouts of various athletic exercises, as rowing, Marathon races, scorching; or of a sudden desperate effort, as trying to prevent a fall from a height, or in a struggle with a madman. Secondly, he said, we should consider whether the patient was healthy and in training, or was soft, untrained, but without organic lesion; and, thirdly, whether the patient might already have valvular or muscular trouble of the heart. A sudden effort was more likely to affect the left ventricle and arterial system; a prolonged exertion the right ventricle and venous system. From these considerations a continuous series was evident between failing compensation in valvular disease due to slight physical labour, and the acute dilatation, perhaps with rupture of a valve, in some tremendous spurt or struggle in a healthy adolescent. The symptoms and signs of failing compensation in valvular disease were well known, and simply required mention to render the paper symmetrical. Dr. Calwell then read a synopsis of notes illustrating cardiac strain in those who had not actual disease of the heart, but were not in training, or were suffering from influenza, excessive cigarette smoking, alcoholism, obesity, chlorosis, and analogous affections. The chief of these was probably influenza; the symptoms in the slighter cases were quickened action, incomplete systole, intermittence; and in the more severe and serious cases were dilatation, with the deep cardiac dullness extending 1 or 2 in. to right of sternum, and beyond the nipple line in the fourth space, sometimes with actual pulsation to left of sternum. These cases were hopeful in the slighter forms in the young if the patient was sensible; but in the severer forms the heart never seemed to regain its pristine condition, and sudden death, even while at ease, occasionally took place. In the trained these results were much rarer, but exercise on a full stomach, as in fast walking after a heavy meal, was very trying to any heart. As an example of a sudden desperate effort, the case of a healthy young adult who had been passed as a first-class life a fortnight before, and who fell from a scaffolding, and was subsequently discovered with a loud, unmistakable double aortic murmur, was related; of course the chest may have been struck or crushed in the fall. Some notes were then given as bearing upon compensation for injuries, and it was pointed out that because a heart had already valvular disease, it was

all the more liable to be further injured by strain' Finally the notes were read of a military officer who indulged in severe polo playing while untrained, after a long spell of office work, and in whom, in addition to a systolic murmur heard over the heart, there appeared to be a paresis of the arterial system, the arteries on exertion or excitement dilating and throbbing so that the vessels were visible and palpable. Dr. Calwell's paper was discussed by Dr. THOS. McLAUGHLIN (Derry), Dr. DARLING (Lurgan), and the PRESIDENT.

Ringworm.—Dr. CALWELL also showed stained microscopic specimens of some of the varieties of ringworm and some cultures on Sabouraud's medium of ringworm and of favus.

Serumtherapy of Cerebro-spinal Meningitis.—Dr. GARDNER ROBB read notes of 100 consecutive cases of cerebro-spinal fever treated with Flexner's and Jobling's serum. In the previous cases treated in the Purdysburn Fever Hospital, Belfast, the mortality was 72 per cent. among the 275 cases, which was a case mortality agreeing with that observed in epidemics in other places. Since the introduction of the serum, which had been supplied by Dr. Flexner as required, there had been 106 cases, and the mortality among these had been 29.8 per cent. Dr. Robb did not think that this great fall in the mortality could be explained by the occurrence of a milder type of disease late in the epidemic, for during part of the time that the serum treatment had been used in the hospital a record had been kept of the numerous cases treated in the patients' own homes, and it had been discovered that among them the mortality remained very much what it was at first. Dr. DARLING (Lurgan) gave his experience of some 16 to 20 cases treated in the Lurgan Infirmary, and the paper was also discussed by Drs. CUNNINGHAM and McCURDY (Derry) and the PRESIDENT.

Contusions of Eyeball.—Dr. J. W. KILLEN (Derry) read notes on three cases of contusion of the eyeball in all of which mydriasis was present. The lens was dislocated in two of the cases, in one of which it had to be removed to relieve irritation. In the third case the choroid was ruptured, causing considerable diminution of vision.

Lateral Sinus Thrombosis.—Dr. KILLEN also read notes on a case of lateral sinus thrombosis arising from chronic middle-ear disease, in which after the sinus was exposed and opened pus could be squeezed out through it from the internal jugular vein. The jugular vein was not tied, but the patient ultimately made a good recovery. The communications were discussed by Drs. CECIL SHAW, HUNTER (Derry), and I. DAVIDSON. Mr. H. H. B. CUNNINGHAM read a short paper on an unusual case of facial paralysis. Dr. W. B. HUNTER (Derry) showed a case of densenulecoma of the cornea treated with fibrolysin. The case was discussed by Drs. CECIL SHAW, H. CUNNINGHAM, KILLEN (Derry), and DAVIDSON. Dr. J. GALWEY COOKE showed a case of pityriasis rubra of two months' duration in a child aged 10 years. At the onset the case was thought to be scarlatina. The temperature was of an irregular type; no chest complications. A case of keratosis palmaris et plantaris—congenital. The patient was a girl of 22. A remarkable feature of the case was constriction of the soft tissues of some of the fingers which appeared to threaten spontaneous amputation. Dr. COOKE also read (1) a note of 3 cases of abdominal section in infants, aged 5 months each, for acute obstruction of the bowels, and pointed out the necessity for early diagnosis if successful operative measures were to be undertaken; (2) a note on two cases of Meckel's diverticulum met with on opening the abdomen, one where the diverticulum existed in a case of appendicular abscess with gangrenous appendix. In this case the diverticulum was not removed, as its removal involved a risk of faecal fistula, owing to the inflamed condition of the bowel. In the other case the diverticulum was the cause of acute obstruction through its extremity becoming adherent to mesentery. It was tied off and removed, the stump being inverted into the bowel. The bowel was marked by a sulcus owing to the tightness of the constriction. The patient made a good recovery. The cases were discussed by Professor SYMINGTON, and Drs. FULLERTON, R. J. JOHNSTONE, and WM. CALWELL. Mr. FULLERTON showed a large prostate weighing 17½ oz., and read notes on the case. (The paper appeared in the JOURNAL of May 22nd.) Dr. DARLING (Lurgan) showed a large concretion from an intestine.

GENERAL COUNCIL

OF

MEDICAL EDUCATION AND REGISTRATION.

SUMMER SESSION, 1909.

Tuesday, May 25th.

Sir DONALD MACALISTER, K.C.B., President, in the Chair. The eighty-ninth session of the General Council of Medical Education and Registration was commenced at the offices of the Council, 299, Oxford Street, on Tuesday, May 25th, at 2 p.m.

NEW MEMBERS.

Dr. NORMAN MOORE introduced Dr. Frederick Taylor as representative of the University of London for one year from February 24th, 1909. Dr. NORMAN WALAER introduced Dr. David Neilson Knox as representative of the Faculty of Physicians and Surgeons of Glasgow from May 3rd, 1909, to April 6th, 1911.

PRESIDENT'S ADDRESS.

The PRESIDENT then delivered the following address:

Deaths and Resignations.

GENTLEMEN.—Since the date of our Jubilee session in November last, the Council has lost the services of three members, each of whom in his own way made contributions of value to our common work. Dr. Lindsay Steven, cut off in his prime, was esteemed throughout the West of Scotland as an accomplished physician, an able teacher, and a philanthropist who freely gave of his best for the good of others. His character gave weight to the opinions he had formed on the subject of medical education; the evident thoughtfulness and sobriety of his advocacy caused them to be received with respect. As representing the Council, I attended his funeral in Glasgow, and witnessed the striking tribute to his memory which was offered by the concurrence of colleagues and friends who followed it as mourners.

Regrettable failures of health have led to the retirement of Dr. Pye-Smith and of Professor Young, who have been influential in our councils during the last ten years. Dr. Pye-Smith brought to our aid a penetrating and highly-cultivated intelligence, a profound knowledge of medicine and its ancillary sciences, and a concise and incisive manner of address. These rendered his advice helpful and his criticism effective. He never took part in discussion without illuminating some aspect of the subject in hand and pointing the way to a right decision. In administration as well as in debate he bore his part to our advantage, for during six years, when our finances gave occasion for some anxiety, he acted as one of our Treasurers, and assisted in restoring our affairs to a more prosperous condition. Professor Young, first as representative of the federal Victoria University, and afterwards of the Victoria University of Manchester, was one of the numerous body of anatomists who have done and are doing good service to the Council. His strong common sense, his alert understanding, and his reticent temper, were characteristic of the northern schools in which he was trained, and on which he reflected honour by his scientific achievements. In the work of our committees, and of our judicial sessions, we shall often miss his quiet but efficient co-operation. To both of these colleagues, who are now called upon to cease from active exertion, the Council will wish increase of strength and comfort in the enjoyment of their well-earned rest.

The late Mr. Wheelhouse.

Though it is now twelve years since Mr. Wheelhouse withdrew from office as a representative, he continued to be connected with the English Branch Council as one of its trustees. His death at a good old age, in happy and honoured retirement, recalls to those who were privileged to be associated with him his ten years' tenure as one of the first directly-elected members of the Council. By his kindly nature, his great experience, and his practical wisdom, he commended the principles for which he stood to his colleagues of the older régime, with the result that the changes involved in the Medical Act of 1886 came into operation with little difficulty and no friction.

New Members.

The University of London has sent us a distinguished member of its Senate in the place of Dr. Pye-Smith, and the Faculty of Glasgow its visitor in the place of Dr. Lindsay Steven. To Dr. Frederick Taylor and Dr. David Knox we offer the welcome which is due to their personal merits and services, no less than to their professional eminence. We may count with confidence on receiving from both the benefit of their special knowledge and experience.

Unqualified Practice.

In accordance with my duty as President, it has fallen to me to make representations to the Government, through the Lord President of the Privy Council, on various matters regarding which resolutions were passed in November. The Council requested that steps should be taken for the appointment of a Royal Commission to inquire into the evil effects produced by the unrestricted practice of medicine and surgery by unqualified persons. The Lord President has decided to make preliminary inquiries on the subject through the Local Government Board. A circular has accordingly been issued to medical officers of health, asking for information concerning the extent of the practice complained of, and its effects on the general health, within their several districts. When the replies are received the Lord President will be in a position to determine what further steps are desirable in the interests of the public.

From the Colonial Office the Executive Committee has received a copy of an Act of the General Assembly of New Zealand, entitled the Quackery Prevention Act, 1908. This Act is directed against obnoxious forms of irregular practice, and imposes heavy penalties for these offences. The Executive Committee has replied that it would welcome similar legislation applicable to other parts of the British Empire.

Tuberculosis (Ireland) Bill.

In the Tuberculosis (Ireland) Bill, as originally presented to Parliament, the duty of advising the Irish Local Government Board with reference to the application of the proposed law was assigned to the Irish Branch Council; but no provision was made for meeting the expenses the Branch Council must thereby incur. On discussing the question with the authorities, it appeared that no grant from public funds was likely to be made for the purpose. The situation was dealt with by transferring the duty in question to the Presidents of the Royal Colleges of Physicians and Surgeons in Ireland, and with this change the bill has passed into law.

Registration of Nurses.

By the bill for the Registration of Nurses, concerning which a communication was received from the Privy Council on November 15th, it was proposed to establish a General Nursing Council for the United Kingdom, of which one member out of sixteen was to be appointed by the General Medical Council. The Nursing Council was to frame rules *inter alia* "regulating, supervising, and restricting within due limits the practice of registered nurses." It was represented by you to be expedient that the Medical Council should stand in the same relation to the body concerned with nurses as it does to the Central Midwives Board. At the Privy Council Office note was taken of your views; and I have ground for believing that, should the bill be proceeded with during the present session, it will be proposed to amend it in the sense you indicated, the Executive Committee being entrusted with the function which under the English Midwives Act is committed to the English Branch Council. Should this arrangement be sanctioned by law, the expense falling on the Council would be trifling, as the matters passing under the review of the Executive Committee could be dealt with at its ordinary meetings. I was unable in this instance also to obtain any assurance that a subsidy from public moneys would be granted to the Council in respect of this public service. As, however, other proposals dealing with the registration of nurses are under consideration, and as opinion appears still to be divided on the general question, it is probable that legislation on the subject will be deferred.

Anaesthetics.

By your direction I communicated the Council's resolution of November 28th respecting the General Anaesthetics

Bill, 1908, to the Government Departments concerned. The resolution supported the proposal to restrict to qualified medical practitioners the administration of drugs with the object of producing unconsciousness during medical, surgical, or obstetrical operations. In the present session of Parliament another bill having a similar purpose has been introduced. Both bills propose that dentists registered after a certain date shall not be entitled to administer general anaesthetics unless they possess a medical qualification. On this particular proposal the Council did not pronounce an explicit opinion, though its resolution on the general principle involved might be held to indicate its views with sufficient clearness. Now, however, we are asked in various quarters to express an opinion on the point, and in particular to give an answer to a question bearing upon it, which is submitted on behalf of the Lord President. The Council will therefore be called on to consider whether, apart from the saving to existing dentists of their customary practice hitherto, it is expedient in the public interest to confer in future on dentists who have no medical qualification, express legal authority to administer general anaesthetics to persons requiring dental operations. When it is kept in mind, first, that unless skilled attention is given to the state of the patient's bodily health no general anaesthetic is invariably "safe," and, secondly, that in dental practice the anaesthetist is often the operator also, it will be seen that the proposal contained in the bills referred to is not without some justification in the interest of the public protection.

The Registrar has received replies from the licensing bodies to his inquiry as to the degree in which effect has been given to the Council's recommendation—namely, that candidates for medical qualifications should be required to produce evidence of having received practical instruction in the administration of anaesthetics. Nearly all the licensing bodies have answered that this requirement is already or will in future be enforced. The Council is thus justified in its contention that fresh legislation to this end—which, to be effective, must be penal in character—is neither expedient nor necessary at the present time.

Penal Procedure.

With the assistance of the Legal Adviser, I have drawn up a memorandum on the penal procedure of the Council, showing the nature of the actions which have been held by the Council to constitute infamous conduct in a professional respect. This memorandum has been forwarded, at his Lordship's own request, to the Secretary of State for the Colonies, and communicated by him to the Boards of Inquiry constituted by the medical enactments of the several Crown Colonies. It is to be hoped that the information conveyed will be useful in promoting uniformity of judicial action in professional matters within the Colonies concerned.

Penal Cases for Consideration.

The penal cases to be considered during this session are not numerous, though some of them are grave. They include one in which it will be necessary to inquire into a charge of "covering" an unqualified assistant. That such charges have now become rare testifies to the efficiency of the action taken by the Council some years ago, and to the praiseworthy ambition of the profession to dissociate itself entirely from a practice which experience had shown to be liable to grave abuse. A few charges against dentists have come before the Dental Committee, who will report to the Council on the facts of each case. The energies of the British Dental Association are actively engaged both in challenging what it deems to be reprehensible conduct on the part of registered practitioners of dentistry and in applying with marked success a recent interpretation of the Dentists Act to the suppression of unwarranted pretensions to professional skill put forward by unqualified persons. A judgement, however, delivered in the Court of Appeal last week appears to limit the application of that interpretation. I have asked our legal advisers to state, for the information of the Council, the precise nature and extent of the limitation.

Dental Practice by Companies.

I am informed that at the instance of the Association an injunction for the restraint of dental practice by a company of unqualified persons has been granted by the High Court in England. This decision confirms the

similar judgements of the High Courts in Ireland. But it is further held to impose on companies of unregistered practitioners the same disabilities as are now imposed on individual persons. Should this opinion be well founded the Act will prove even more effective than it has hitherto appeared to be for the prevention of irregular practice under cover of the Companies Acts.

Finance.

The active exercise of its judicial functions is obligatory on the Council, and the effects are, without doubt, salutary from the professional as well as from the public point of view. But these functions involve a heavy drain upon the Council's funds, and it is not easy to see how, under the present law, the drain can be obviated or moderated. Two recent cases, which were unusually prolonged, cost us in legal and other necessary expenses nearly £2,000. The result is that the financial year closed with an aggregate deficit of over £550 in the accounts of three Branch Councils. Though the cases under the Dentists Act were also both numerous and important, the simpler methods of investigation which the Act permits made the proceedings much less costly, with the result that the Dental Fund closed with a sufficient surplus to meet unforeseen emergencies.

It is fortunate that for each of the three preceding years the receipts of the Branch Councils exceeded their expenditure. Except, perhaps, in the case of the Irish Branch, the accumulated surpluses will enable them to meet the exceptional deficits of the present year. It is to be hoped that the business to be dealt with during the session that begins to-day will entail no great expenditure of time or money. One practical consideration will indeed make it expedient that we should complete our sittings within this week. Monday, May 31st, is a Bank Holiday, and the printing establishment on which we depend for our daily programme and other necessary papers will be closed.

Increased Direct Representation.

Dr. Langley Browne has given notice of a motion that the proper steps be taken for adding to the Council a thirty-fifth member, to be elected by the practitioners of England and Wales. It will be for the Council, and afterwards for the Privy Council and for Parliament, to consider whether it is in fact expedient that the addition should now be made. In the near future we shall have an additional member from Ireland, as provided by the recent Universities Act; and we may also expect two additional members from the Universities of Wales and of Bristol. In coming to a decision on this question it will be desirable to have regard on the one hand to the elasticity of our finances, and of our Council chamber, and on the other hand to the unity and efficiency of the Council as at present constituted. By the terms of the Medical Act, the question to be decided resolves itself simply into a question of "expediency." In other words, it is a question to be answered in the light of such practical considerations as I have ventured to recall to your attention, without seeking to prejudice your decision.

The Medical Curriculum.

The Education Committee have had a further opportunity of reviewing the admirable digest of facts relating to the medical curriculum which was included in their report of last November. They will probably be prepared to offer to the Council certain definite conclusions, on which action may be taken if action is required.

The Apothecaries' Hall, Dublin.

The Board of the Apothecaries' Hall of Dublin have informed the Registrar that they have determined to postpone until July 1st the resumption of their "Preliminary Examination in Education," concerning which the Council, on the recommendation of the Education Committee, expressed a strongly adverse opinion at its last meeting. The Executive Committee will report on the reply to this intimation which they deemed it their duty to forward to the Board. At a time when two newly-constituted teaching universities, each with its own Preliminary Examinations, are in process of organization in Ireland, it is difficult to perceive that any advantage to medical culture can arise from the proposed incursion of the Apothecaries'

Hall into the sphere of general secondary education and examination.

The period for which the Council, on the application of the Apothecaries' Hall, appointed Sir Lambert Ormsby to act as an assistant examiner under the provisions of the Medical Act, 1886, will shortly expire. An application for a fresh appointment will be submitted to you on behalf of the Board. The Council will, I feel sure, recognize that Sir Lambert has discharged with efficiency the duties imposed upon him by the Act.

Voluntary Removal from the Registers.

The Executive Committee, in pursuance of the Council's instructions, had, with the assistance of our legal advisers, drafted a Standing Order applicable to cases of medical and dental practitioners who voluntarily apply for the removal of their names from the *Medical* or the *Dentists Register*. Should this Standing Order be approved, it will provide for a *casus omissus* in the procedure of the Council, and remove a difficulty that has occasionally arisen.

Executive Committee.

A vacancy having occurred in February by the retirement of Dr. Pye Smith, the Committee under the Standing Order unanimously co-opted Dr. Norman Moore, the Chairman of the Business Committee, to be one of its members until the annual election during the current session.

Draft Charter of the British Medical Association.

On Saturday last, we received from the Lord President a copy of the Draft Charter prayed for by the British Medical Association, with a request for any observations the Council may have to make thereon. The Draft Charter proposes that certain powers, which are of a comprehensive character, shall be conferred on the Association. Some of the powers appear at first sight to trench on the statutory functions of the Council, and these will require your careful consideration. It will probably be convenient that, in the first instance, the Executive Committee, in consultation with the legal advisers, should examine the Draft Charter, and report to you on the provisions that specially concern the Council.

VOTE OF THANKS.

Dr. LITTLE moved that the President be thanked for his address, and that he be asked to allow it to be printed on the Minutes. Referring to the death of Dr. Lindsay Steven, he said that he had very little knowledge of him until he met him at the meetings of the Council, but Dr. Steven was a man who gave a strong impression of honesty and sincerity in everything he did. In him there was no ulterior motive in any course which he advocated, his only object being the welfare of the profession of which he was such a distinguished member.

Dr. NORMAN CRAIG seconded the resolution, which was agreed to.

BUSINESS COMMITTEE.

On the motion of Dr. NORMAN MOORE, it was agreed that the Business Committee be reappointed, with the substitution of Mr. Morris's name for that of Mr. Young.

RESULTS OF PROFESSIONAL EXAMINATIONS.

The Council then received the following yearly tables for 1908:

- a. I and II Tables showing results of professional medical examinations during 1908.
- b. Table showing results of professional examinations for qualifications in Sanitary Science, Public Health, or State Medicine during 1908.
- c. Table showing results of professional dental examinations during 1908.
- d. Table showing result of preliminary examinations during 1908.
- e. Answers sent by the medical authorities as to the exemptions granted by them in any part of their examinations during the year 1908.
- f. Table showing results of competitions held in January, 1909, for commissions in the Indian Medical Service.

Dr. McVAIL proposed that the tables be received and entered on the minutes.

Dr. SAUNDY desired to call attention to the examination in surgery by the Conjoint Board in England. He did not know whether there was a mistake in the figures or not, but they struck him as being rather extraordinary; 372 passed and 329 were rejected.

Mr. MORRIS said that the number of rejections was very often quite half, and the figures referred to were not far short of the average which had constantly been before the Council.

The resolution was then agreed to.

It was then moved by Dr. McVAIL, seconded by Dr. CATON, and resolved:

That the thanks of the Council be conveyed to the Under Secretary of State for India for the returns which he has again furnished to the Council, with the request that these returns may in the future continue to be furnished to the General Medical Council.

The CHAIRMAN observed that these tables would go automatically to the Examination Committee in case it was desirable to report upon them.

INCREASED DIRECT REPRESENTATION.

Dr. LANGLEY BROWNE moved:

That representations be made to the Privy Council that it is expedient to confer on the registered practitioners resident in England and Wales the power of returning an additional member to the General Council.

He pointed out that the number of persons resident in England and Wales now on the *Medical Register* was 25,168; in Scotland there were 3,845, and in Ireland 2,656. England returned three Direct Representatives, whilst Scotland and Wales returned one each, so that on the numbers alone, in his opinion, a very strong case was made out for giving the general practitioners of England and Wales an additional representative on the Council. In 1887 the Council consisted of thirty members, five of whom were directly nominated through the Privy Council, and twenty represented different universities and corporate bodies, and five Direct Representatives. Since that time four additional members had been added for the universities or other teaching bodies, but no additional direct representative. He proposed that the Council should recommend the Privy Council to appoint an extra Direct Representative. There were many things in connexion with the election of Representatives which, in his opinion, ought to be reformed. He thought that divisions ought to be formed in the country, and that Wales ought to have a Representative of its own; but it would take a new Medical Act to bring that about; whereas the Privy Council, of its own initiative, could add one additional member for England and Wales.

Dr. McMANUS, in seconding the motion, wished to emphasize the fact that the general practitioners thoroughly realized the work which the Council had done for them, and when they looked at the names of those who had been members of the Council since it was first formed in 1858 gladly admitted and freely testified to the fact that, as far as the equipment of the young men who sought the medical profession was concerned, as far as their moral and social standing went, the Council could not be improved upon. They relied on members of the great teaching corporations who were members of the Council to maintain the honour and dignity of the profession, and they recognized that, owing to their action, the young men in the United Kingdom who adopted the medical profession were second to none in the world. It had, however, to be realized that the Act of 1853 was not intended to be final, and that a great deal had taken place since then: that the whole profession might be said to have been revolutionized in a sense. Surely the Council was capable of reform and being administered on a greater and more democratic basis. Reform should come from within itself, and would bring the Council more into touch with the feelings of the rank and file of the profession, which had very strongly the idea that the Council did not sympathize with them, and that it did not in any way try to protect them from quacks of every description.

Dr. LATIMER, in supporting the resolution, asked the Council to recognize the fact that the direct representatives were chosen by an unseen constituency; they were known only by their work in their Divisions and Branches and by their work on the British Medical Association in the past. One cogent reason for increasing the representation was that the men who sat on the Council had a right to be representative of those who sent them there, and not, as hitherto, representative of the whole of England

and Wales. Wales was a distinct entity, possessed a language of her own: had people possessed of strong aspirations, and a population strongly dominated by a feeling of nationality. He contended that, in that spirit, Wales was entitled to have a representative of her own. On the arguments which had been adduced both now and before the general practitioners were entitled to additional representation, and when the Council granted it, which he hoped it would, Wales should be given her right—namely, a representative for herself.

The CHAIRMAN, in reply to Dr. NORMAN MOORE, who asked whether the Privy Council had power to give representation to particular districts, said the only legislation which dealt with the subject was contained in the Act of 1853, which said that three members should be elected by the practitioners of England and Wales.

Dr. SAUNDY pointed out that Wales was not mentioned.

The CHAIRMAN observed that he was about to emphasize that fact. It had been held that England included Wales, and the Privy Council had no power to vary the Medical Act. Therefore, if the additional member were assigned the election would have to take place on the basis of the Act of 1853, and the Privy Council had no power to say that a representative should be elected by the practitioners of Wales.

Further, in reply to Sir JOHN WILLIAMS, he said the resolution, if adopted, was one to which the Privy Council could not give effect.

Mr. MORRIS thought that some of the remarks made were rather calculated to deter members from voting for the resolution. He felt very strongly with Dr. Langley Browne that there was a certain injustice in increasing the number of representatives from new universities, some of whom possessed exceedingly small constituencies, while the direct representatives of the United Kingdom remained the same. He could not forget, however, that in regard to the election there was very considerable indifference on the part of those who had voting power, and although it had been truly stated that the number of those in England and Wales who had votes amounted to 25,000, yet only 47 per cent. of those took advantage of that power. This was emphasized by the fact that at the last election there were no less than ten candidates from various parts of the kingdom. The point to which he really intended to speak was the suggestion that the Council should allocate a member for Wales alone. He would not hesitate in supporting it if it had the power. The Council had just been informed that it had no such power. If it were the case it would strengthen his position very materially in voting for the resolution; but as it required a new Act of Parliament to do it, and it could not be done through the Privy Council, his tendency to support it was somewhat weakened.

Dr. LANGLEY BROWNE replied.

The PRESIDENT, on taking the vote, said it appeared that the motion was carried, but he must take the names and votes. On this being done he declared the motion to be carried. The division list was as follows:

For, 17.

Mr. Morris.	Dr. Knox.	Mr. Hodsdon.
Mr. Thomson.	Dr. Adye-Curran.	Dr. Kidd.
Dr. Caton.	Dr. Langley Browne.	Dr. Little.
Dr. McVail.	Dr. McManus.	Sir Thomas Fraser.
Dr. Walker.	Dr. Latimer.	Sir John Tuke.
Sir Thomas Miles.	Sir John Williams.	

Against, 5.

Dr. Norman Moore.	Sir Charles Ball.	Dr. Finlay.
Sir John Moore.	Sir George Philippon.	

Did not Vote.

The President.	Sir C. Nixon.	Dr. Saundby.
Mr. Tomes.	Dr. Mackay.	Sir Hugh Beavor.
Dr. Taylor.	Dr. Cocking.	

Absent, 3 (One Seat being Vacant).

Sir William Power.	Dr. Burs.	Sir C. Allbutt.
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Mr. TOMES desired to point out from the Treasurer's point of view that if effect were given to the motion by the Privy Council it would entail an enormous expense. The costs of an election were very heavy. He suggested that, the principle being established, they should wait till the general election of Representatives.

Mr. MORRIS seconded, and observed that the next election would take place in two years.

The PRESIDENT remarked that there was a long course of procedure to be followed before the Privy Council could consider the matter.

Dr. LANGLEY BROWNE expressed his willingness to accept the suggestion of Mr. TOMES, and after some further discussion it was agreed:

That it be a further representation to the Privy Council that the addition in question be not made until the next general election of Direct Representatives.

THE APOTHECARIES' HALL OF IRELAND.

Dr. ADYE-CURRAN moved:

That Reports by Assistant Examiners in Surgery of the Apothecaries' Hall of Ireland be discontinued for the present.

He contended that the Council had not acted quite legally in some of its actions in regard to this matter, and he suggested that these reports, which had been sent to the Privy Council year by year, should be withheld for the present.

The PRESIDENT said he felt bound to state that the suggestion made as to the illegality of the actions was quite unfounded, and he said that after having taken the fullest possible advice.

Dr. McMANUS seconded the motion for the purpose of allowing it to be discussed.

Sir CHRISTOPHER NIXON pointed out that the examination in question was conducted by the Council in conjunction with the Apothecaries' Hall, and therefore there could be no indignity to the Apothecaries' Hall in having a report from the Council's own examiners as to the conduct of an examination held by the Council with the Apothecaries' Hall.

Dr. ADYE-CURRAN replied.

The PRESIDENT put the resolution to the meeting, and declared it lost.

Dr. ADYE-CURRAN asked that the names and numbers should be taken. Upon this being done, the Registrar announced that 14 voted against, 5 for; 11 did not vote, 3 were absent.

Dr. ADYE-CURRAN then moved:

That Sir Thomas Myles, M.D., F.R.C.S.I., be appointed an Assistant Examiner in Surgery to the Apothecaries' Hall, Dublin, for a period of four years in lieu of Sir Lambert Ormsby, who retires by rotation, his term having expired.

Dr. McMANUS seconded.

Dr. McVAIL inquired whether the Council could legally appoint one of its members.

The PRESIDENT replied that he believed it was legal.

The PRESIDENT then put the motion, and declared it carried.

Dr. NORMAN MOORE moved that the report by the Executive Committee on the proposed Preliminary Examination by the Apothecaries' Hall, Dublin, be received and entered on the minutes.

The report concluded with the following resolution adopted by the Executive Committee on February 28th:

That the Committee have received with regret the intimation of the Board that it still proposes to hold a Preliminary Examination, though the date is now postponed to July 1st, 1909. The Committee remind the Board of the Council's resolution of November 28th, 1908, which was in general terms, and had no reference to any particular date. They propose to report the Secretary's letter of January 16th, 1909, to the General Council at the May Session.

Dr. SAUNDY seconded.

Dr. ADYE-CURRAN gave notice that it was the intention of the Apothecaries' Hall, Ireland, to re-establish its Preliminary Examination in July next, and to hold it annually. It might not be generally known that this examination had been held for a great number of years. Some ten or twelve years ago, at the request of the General Medical Council, that examination was discontinued on the same condition as the Hall now wished to re-establish it, namely, that it was understood at the time that the Royal College of Surgeons of Ireland, in conjunction with the Royal College of Physicians, should also discontinue a Preliminary Examination. But while the Apothecaries' Hall, Ireland, had discontinued the other bodies had held on. The Hall considered that since it discontinued the Preliminary Examination it had been working under a great disadvantage. He desired it to be understood that it was not with a view to running contrary to the opinion of the Council that this had been done; it was a matter of expediency in order that the Apothecaries' Hall might work on even lines with the other licensing bodies which

ran side by side with it, and which worked to its prejudice.

Sir HUGH BEVOR pointed out that the Apothecaries' Society in London gave up its Preliminary Examination at the wish of the Council in 1883.

The PRESIDENT observed that if the Preliminary Examinations were started, notwithstanding the strong opinion of the Council, it would be a purely domestic arrangement on the part of the Apothecaries' Hall. It was not recognized by the Examination Committee as a Preliminary Examination, and need not be recognized by any other licensing body in the country.

The motion was then adopted.

The PRESIDENT observed that no answer had been received by the Education Committee from the Apothecaries' Hall other than the notification made orally by Dr. Adye-Curran, and he asked the Chairman of the Committee to take note of the fact.

VOLUNTARY WITHDRAWAL FROM THE REGISTERS.

A report from the Executive Committee on the subject of voluntary withdrawals of names from the *Medical Register* and *Dentists Register* was received and entered on the minutes.

The report contained a memorandum from the legal adviser recommending the Council to adopt the following standing order:

"Every application by a Registered Medical Practitioner or Dentist for the removal of his name at his own request from the *Medical* or *Dentists Register* shall be accompanied by a Statutory Declaration, to be made by the applicant, that he is not aware of any proceedings or of any reason for the institution of any proceedings which might result in establishing cause for the erasure of his name from the *Medical* or *Dentists Register* without his consent, or for depriving him without his consent of any qualification or licence entitling him to be registered."

ADJOURNMENT.

The Council then went into camera to consider private business and strangers were directed to withdraw. At the conclusion of the business in camera the Council adjourned.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: Fleet Surgeon E. T. MEAGHER to the *Emerald*, additional, for the Haulbowline Yard, May 25th; Fleet Surgeon G. T. BISHOP to the *Cumberland*, May 25th; Staff Surgeon H. S. BURNISTON, M.B., to the *Britannia*, May 25th; Surgeon E. L. ATRINSON to be lent to the *Levenham*, temporarily, May 19th; Surgeons G. T. VERRY, W. A. H. McERROW, M.B., F. G. HITCH, M.B., J. J. RICHARDSON, M.B., S. L. MACBEAN, M.B., and A. C. WILSON to the *Victory*, additional, for disposal, June 12th; Surgeons G. R. McCOWEN, M.D., E. J. H. GARSTIN, M.B., and W. MEANS, M.B., to the *Pembroke*, additional, for disposal, June 12th; Surgeons T. R. L. JONES, F. H. PLAGE, M.B., C. E. BAINBRIDGE, M.B., and F. W. MEIER to the *Frida*, additional, for disposal, June 12th; Surgeon J. GLAISTER, M.B., to remain at Haslar for the present; Surgeon W. BRADBURY, M.B., to the *Pembroke*, for the *Widley*, additional, for disposal, June 12th; Fleet Surgeon R. F. BATE and Surgeon S. F. DUNLEY to the *Commonwealth*, on recommissioning, May 25th; Fleet Surgeon M. L. B. RIDD to the *Mors*, on recommissioning, May 25th.

ARMY MEDICAL SERVICE.

Surgeon-General P. M. ELLIS, who is serving in India as Principal Medical Officer 8th (Lucknow) Division, is granted leave out of India on medical certificate for six months.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel A. S. ROSE, M.B., retires on retired pay, May 25th. His commissions are thus dated: Surgeon, February 5th, 1881; Surgeon-Major, February 5th, 1893; Lieutenant-Colonel, February 5th, 1901. He served in the Egyptian war in 1882 (medal with clasp, and with the bronze star); in the Sudan in 1894 (clasp); and at Suakin, with the Sudan expedition in 1895 (clasp). He was also in the South African war in 1899-1902, being present at the relief of Ladysmith, including the actions at Colenso, Spion Kop, and Vaal Krantz, where he was severely wounded; he was mentioned in dispatches, and received the Queen's medal with two clasps and the King's medal with two clasps. Lieutenant W. H. S. BURNEY is seconded for service with the Egyptian Army, April 1st.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel W. A. CORREY, Bombay, is promoted to be Colonel. He was appointed Surgeon, April 2nd, 1881, and became Lieutenant-Colonel, April 2nd, 1901. He served with the Burmese expedition in 1885-7, receiving a medal with clasp. Lieutenant-Colonel A. STROCK, M.D., Bengal, is permitted to retire from the service, from March 25th. He joined the Indian Army as Surgeon, April 2nd, 1881, and was made Lieutenant-Colonel, April 2nd, 1901.

MILITIA.
ROYAL ARMY MEDICAL CORPS.
CAPTAIN W. FLETCHER, D.S.O., M.B., resigns his commission, September 23rd, 1908.

TERRITORIAL FORCE.
LEONARD.
SURGEON-LIEUTENANT M. W. COLEMAN, M.D., Berks (Hungerford), resigns his commission, April 30th.

ROYAL FIELD ARTILLERY.
Surgeon-Captain G. H. BUTTER, Second South Midland Brigade, resigns his commission, March 31st.

ROYAL ARMY MEDICAL CORPS.
First Home Counties Field Ambulance.—CAPTAIN W. J. WOODMAN resigns his commission, February 11th.

Second London (City of London) Field Ambulance.—HALDWINSTEIN D. DAVIS to be Lieutenant, April 16th.

Fourth London Field Ambulance.—WILLIAM COWIE, M.B., to be Lieutenant, April 7th.

Third Western General Hospital.—Surgeon-Lieutenant-Colonel and Honorary Surgeon Colonel D. HEPBURN, M.D., from the Second Volunteer Battalion the Welsh Regiment, to be Lieutenant-Colonel, with the honorary rank of Surgeon-Colonel, with precedence as in the Volunteer Force, April 1st, 1908; EWEN J. MACLEAN, M.D., to be Major, March 11th.

Third South Midland Field Ambulance.—Lieutenant B. M. H. ROGERS, M.B., to be Captain, April 8th.

For Attachment to Units other than Medical Units.—Major J. F. TAYLOR, Lieutenant-Colonel and Honorary Surgeon-Colonel E. M. GARSTANG, M.D., from the 2nd Volunteer Battalion the Loyal North Lancashire Regiment, to be Lieutenant-Colonel, with the honorary rank of Surgeon-Colonel, with precedence as in the Volunteer Force, April 1st, 1908; Superannuated Captain F. LACE, from the 4th Battalion the Prince Albert's (Somersetshire Light Infantry), to be Major, March 1st; JAMES McGRATH, M.D., to be Lieutenant, March 31st; JAMES W. HIGGS, M.B., to be Lieutenant, April 1st; JAMES A. REEDERS, M.B., to be Lieutenant, April 15th; ROBERT V. G. MONCKTON, M.D., to be Lieutenant, April 16th.

Attached to Units other than Medical Units.—Major J. F. TAYLOR, to be Lieutenant-Colonel, April 4th, 1908; Captain H. STEEDMAN, M.D., to be Major, November 23rd, 1908.

CHANGES OF STATION.

THE following changes of stations amongst the officers of the Army Medical Service have been officially reported to have taken place during April:

	FROM	TO
Lieut.-Col. W. Hefstman	Capetown	W. Command.
" T. E. Nodding	Harrisburgh	Cork
" D. V. O'Connell, M.D.	Woolwich	Shorncliffe.
" H. N. Thompson, D.S.O.	Aldershot	Lucknow.
" M.B.		
" C. Birt	Millbank	Malta.
" R. S. F. Henderson, M.B.	Calcutta	Simla.
" J. R. Forrest	Rangoon	Maymyo.
" L. T. M. Nash	Barrackpore	Ranikhet.
" M. O'Halloran, M.D.	Capetown	E. Command.
" J. H. Daly	Cork	Tipperary.
" H. M. Adamson, M.B.	Ranikhet	Cawnpore.
" D. Hennessy, M.D.	Deolali	Almदनगर.
" R. Holycroft	Dagshai	Ambla.
" H. T. Knudsen, M.B.	Dublin	Cairo.
Major W. Halloran, M.B.	Julundur	London Dist.
" C. W. H. Whitestone, M.B.	Hounslow	Hyderabad.
" T. W. Gibbard, M.B.	Ambla	Dagshai.
" T. J. Lennihan, M.B.	Newport	Colchester.
" F. W. Begbie	Mhow	"
" L. A. Mitchell, M.B.	"	Woking.
" G. M. McNaught, M.D.	Frederia	Wynberg.
" T. McDonald, M.B.	Lucknow	Allahabad.
" H. W. K. Read	Allahabad	Lahore.
" F. R. Buswell	Aden	London Dist.
Captain W. P. Gwynn	Hyderabad	Quetta.
" C. J. O'Gorman, D.S.O.	"	N. Command.
" J. G. Gill	Netley	Peshawar.
" M. H. G. Fell	Chester	Cairo.
" G. M. Goldsmith, M.B.	Meiktila	Maymyo.
" H. D. Packer	"	Devonport.
" H. M. Nicholls, M.B.	Woolwich	Karachi.
" J. Matthews	"	Queenstown.
" W. C. Croly	Cork	Tosham.
" W. J. P. Adey-Curran	Tidworth	Devonport.
" B. B. Burke	Fort Maher	"
" R. F. Ellery	Falmouth	"
" T. B. Unwin, M.B.	I. A. M. Coll.	Lichfield.
" A. W. Gibson	Hunslow	Tidworth.
" W. L. Steele	Edinburgh	Glastow.
" R. McK. Skinner	Edinburgh	Glastow.
" D. L. Harding, F.R.C.S.I.	Madras	Western Com.
" M. C. Beatty, M.B.	Beltrast	Enniskenil.
" E. Y. Aylen	Bellary	Kirkc.
" S. M. Adey-Curran	Tipperary	Chester.
" W. J. S. Harvey	Cork	Bere Island.
" W. F. Tyndale, C.M.G., M.B.	Lucknow	Southern Com.
" P. Davidson, D.S.O., M.B.	Rawal Pindi.	"
" R. Rutherford, M.B.	Perth	Edinburgh.
" J. G. Bell, M.B.	Lahore	Newport.
" T. S. Coates, M.B.	Mhow	Western Com.
" A. E. B. Wood, M.B.	Fyzabad	Eastern "
" J. C. G. Carmichael, M.B.	Bellary	Western "
" J. A. W. Webster	Poona	Gravesend.
" F. C. Lambert	Capetown	Riofmontein.
" J. B. Melton, M.B.	Bangalore	Western Com.
" R. C. Wilford	Bellary	Dublin.
" H. B. Kelly, M.B.	Bangalore	"
" E. M. Pennefather	Maymyo	Cork.
" G. H. J. Brown, M.B.	Delhi	Ranikhet.
" B. H. V. Dunbar, M.D.	Aden	Queensdown.
" D. Ahera	Cork	"
" D. G. Carmichael, M.B.]	Cananore	Western Com.
" J. M. M. Crawford	Lahore	Eastern "
" C. Branham	"	Karachi
" T. E. Harty	Calcutta	Southern Chind.

	FROM	TO
Captain H. T. Stack, M.R.	Cork	Fenny.
" H. H. J. Fawcett	Simunstown	Southern Chind.
" S. E. Lewis, M.B.	"	Standerton.
" C. M. Wetherell, M.D.	Meerut	Roorkee.
" R. T. Collins	Roorkee	Chakma.
" C. Osburn	Bahadur	Rangoon.
" T. C. Lucas, M.B.	Kirkce	Bombay.
" E. H. M. Moore	Wynberg, C. C.	Potchefstroom.
" R. C. Hallows, M.B.	Cyprus	Cairo.
" N. Law	Madras	Canmore.
" C. R. Millar	Ballincellig	Fethard.
" J. P. Lynch	Rangoon	Meiktila.
" R. J. B. Buchanan	Mauritius	Southern Com.
" P. Power, A.B.	Bellary	Delhi.
" J. S. Pascoe	Egypt	Cyprus.
" G. Ormrod, M.R.	Rangoon	Landour.
" G. H. Rees, M.B.	Bermuda	Khartoum.
" M. J. Cronin	Delhi	Poona.
" M. Keane	Meerut	Muttra.
Lieutenant F. D. G. Howell	"	Chakrata.
" M. G. Dill, M.B.	Egypt	Chatham.
" A. H. Heeslop, M.B.	Aldershot	Rawal Pindi.
" E. E. Laburny	Woolwich	Poona.
" C. Seafie, M.D.	Currach	"
" D. M. Corbett, M.B.	"	Rawal Pindi.
" M. J. Lochrin	"	Bangalore.
" R. C. Vidal	Portland	Cosbaw.
" E. D. Caddell, M.B.	Dublin	Bangalore.
" R. Johnson	Wellington	"
" W. E. G. Lunn, M.B.	Edinburgh	Rawal Pindi.
" R. F. Foster	"	"
" W. W. Boyce	Dublin	Rawal Pindi.
" O. C. P. Cooke	Plymouth	Poona.
" D. Coutts, M.B.	Ballford	Lucknow.
" J. A. Bennett, M.B.	"	Poona.
" E. Kavanagh, M.B.	Ranikhet	Bareilly.
" F. H. M. Chapman	Coventry	Warwick.
" F. T. Turner	Netley	Poona.
" J. E. M. Boyd	Chester	Rawal Pindi.
" O. B. McEwen	"	"
" M. O. Wilson, M.B.	Currach	Bangalore.
" G. F. Dawson, M.B.	Gl. Yarmouth	Colchester.
" G. Felt	Birmingham	Lackhill.
" Lloyd A. Ramsay	"	"
" R. G. S. Gregg, M.B.	Dublin	Kilbride.
" F. T. Dowling, M.B.	Bull Point	Okehampton.
" J. R. Lloyd	Bury	Lancaster.
" J. F. G. Valls, M.B.	"	Lancaster.
" F. Worthington	Northampton	Colchester.
" W. J. Dunn, M.B.	Mill Hill	"
" A. L. Foster	"	Deepcut.
" A. G. Valls, M.B.	"	Rawal Pindi.
" L. Murphy	"	Dorchester.
" G. S. Parkinson	Dublin	Belfast.

Lieutenant Colonel A. G. Kay, M.B., retired pay, has been placed in medical charge of troops at Clifton, Bristol.

Lieutenant-Colonel H. Charlesworth, C.M.G., retired pay, has been transferred from London to Nottingham; and Lieutenant-Colonel H. M. Battersby, retired pay, from Bull Point to Bodmin.

Vital Statistics.

EPIDEMIC MORTALITY IN LONDON.

The accompanying diagram shows the prevalence of the principal epidemic diseases during the first quarter of the year; the proportions of each disease and its relative fatality compared with that in the corresponding periods of recent years can thus be readily seen.

Small-pox.—One fatal case of this disease belonging to the City of Westminster was registered during the quarter; this is the first death from this disease of London resident second since the epidemic of 1905. Four small-pox patients were admitted to the Metropolitan Asylums Hospitals during the quarter, and one remained under treatment at the end of March last.

Measles.—The deaths from measles, which had been 477, 258, and 457 in the three preceding quarters, further rose last quarter to 1355, and were more than double the corrected average number for the corresponding period of the five preceding years; this disease was proportionally the most fatal last quarter in 1908.

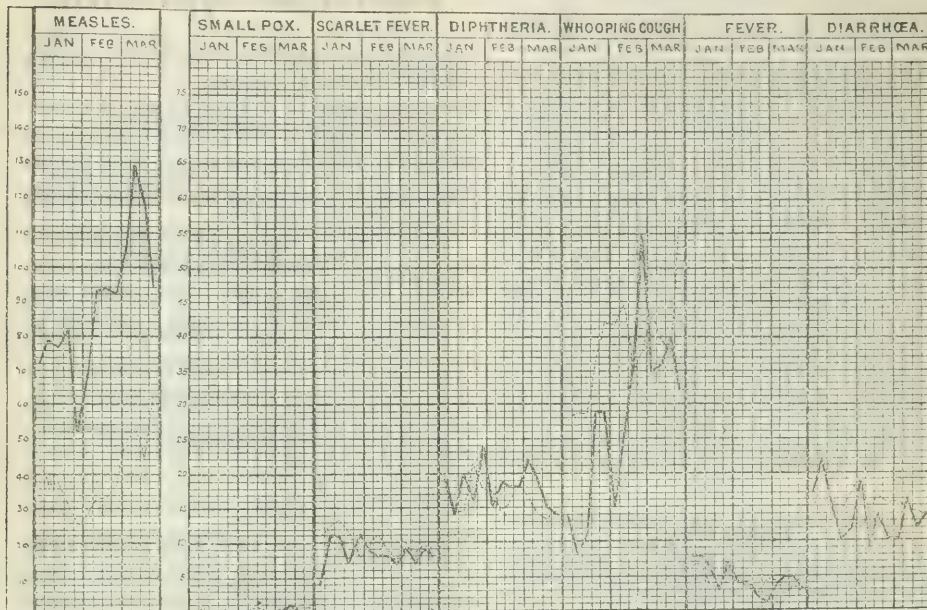
Scarlet Fever.—The fatal cases of scarlet fever, which had been 122, 104, and 135 in the three preceding quarters, declined again to 109 in the quarter under notice, and were 21 fewer than the corrected average number. The greatest proportional mortality from this disease was recorded in Chelsea, Stoke Newington, Holborn, Finsbury, Bethnal Green, Poplar, and Woolwich. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals, which had been 2,514, 3,431, and 3,938 at the end of the three preceding quarters, had declined again to 2,412 at the end of last quarter; 3,892 new cases were admitted during the quarter, against 4,194, 5,344, and 6,223 in the three preceding quarters.

Diphtheria.—The deaths from diphtheria, which had been 131, 134, and 227 in the three preceding quarters, further rose to 234 last quarter, and were 21 in excess of the corrected average number. The highest death-rates from this disease in the quarter under notice were recorded in Fulham, Chelsea, St. Pancras, Lambeth, and Poplar. There were 1,103 diphtheria patients under treatment in the Metropolitan Asylums Hospitals at the end of March, against 788, 951, and 1,241 at the end of the three preceding quarters; 1,678 new cases were admitted during the quarter, against 1,355, 1,449, and 2,141 in the three preceding quarters.

Whooping-cough.—The fatal cases of whooping-cough, which had been 334, 165, and 96 in the three preceding quarters, rose again last quarter to 384, but were 135 below the corrected average. The corresponding quarters of the five preceding years. This disease was proportionally most fatal in Paddington, Hammersmith, Fulham, Finsbury, St. Pancras, Lambeth, and Battersea.

Fever.—Under this heading are included deaths from typhus, from enteric fever, and from ill-defined pyrexia. The deaths referred to these different forms of "fever" which had been 40, 27, and 126 in the three preceding quarters, declined again last quarter to 60, but slightly exceeded the corrected average number. All the deaths under this

DEATHS FROM EPIDEMIC DISEASES IN LONDON DURING THE FIRST QUARTER OF 1909.



NOTE.—The black lines show the recorded number of deaths from each disease during each week of the quarter. The dotted lines show the average number of deaths in the corresponding weeks of the five years, 1904-8.

heading last quarter were from enteric fever, the highest death-rates from this disease being recorded in Kensington, Stoke Newington, Hackney, Holborn, Shoreditch, Poplar, and Deptford. The number of enteric fever patients under treatment in the Metropolitan Asylums Hospitals, which had been 48, 95, and 147 at the end of the three preceding quarters, had declined again to 87 at the end of last quarter; 182 new cases were admitted during the quarter, against 94, 166, and 313 in the three preceding quarters.

Diarrhoea.—The 180 deaths from diarrhoea in London last quarter were 20 below the corresponding average number in the corresponding period of the five preceding years. The greatest proportional mortality from this disease last quarter was recorded in Hackney, Shoreditch, Bethnal Green, Stepney, Poplar, Southwark, and Lewisham.

In conclusion it may be stated that the 2,103 deaths in London referred to the principal epidemic diseases last quarter were 36.6 per cent. above the average. The lowest death-rates from these diseases in the aggregate were recorded in Paddington, the City of Westminster, Hammersmith, the City of London, Holborn, and Lewisham; and the highest rates in Shoreditch, Bethnal Green, Poplar, Southwark, Brompton, and Deptford.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,368 births and 4,651 deaths were registered during the week ending Saturday last, May 22nd. The annual rate of mortality in these towns, which had been 14.5, 14.1, and 13.7 per 1,000 in the three preceding weeks, increased again last week to 14.7 per 1,000. The rates in the several towns ranged from 3.8 in Hornsey, 6.1 in Walthamstow, 6.4 in Rotherham, 6.9 in Hastings, 7.2 in Tottenham, 7.5 in Devonport, 8.4 in York, and 8.6 in Bourne-on-Hill, to 20.0 in Merthyr Tydfil, 20.5 in Stockton-on-Tees, 21.1 in Oldham, 21.5 in West Bromwich, 22.4 in Tyne-mouth, 23.4 in Coventry, and 28.9 in Wolverhampton. In London the rate of mortality was 14.0 per 1,000, while it averaged 14.9 in the seventy-five other large towns. The death rate from the principal infectious diseases in the seventy-six towns averaged 1.3 per 1,000; in London the death-rate from these diseases was 1.4 per 1,000, while among the other large towns it ranged upwards to 2.3 in Norwich, 3.0 in West Bromwich, 3.1 in Reading, 3.7 in Handsworth (Staffs.), 4.6 in Coventry, and 7.5 in Wolverhampton. Measles caused a death-rate of 2.3 in Wigan, 2.5 in Norwich, 2.6 in Coventry, 3.1 in Reading, and 6.5 in Wolverhampton; scarlet fever of 1.1 in West Bromwich, diphtheria of 1.5 in Handsworth (Staffs.) and whooping-cough of 1.2 in Tottenham, 1.3 in Preston, 1.5 in Smethwick, and 1.6 in Leyton. The mortality from enteric fever and from diarrhoea showed no marked excess in any of the large towns; two fatal cases of small-pox were registered in Bristol, but none in any other of the large towns. The number of scarlet fever cases under treatment in the Metropolitan Asylums Hospital and in the London Fever Hospital, which had been 2,184, 2,115, and 2,115 at the end of the three preceding weeks, had risen again to 2,234 at the end of last week; 348 new cases were admitted during the week, against 305, 309, and 313 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday, May 15th, 974 births and 532 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 17.4, 16.9, and 16.2 in

the three preceding weeks, further declined to 14.9 per 1,000 in the week under notice, but was 1.2 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns, the death-rates ranged from 9.7 in Leith and 10.3 in Perth to 17.0 in Paisley and 19.4 in Dundee. The death-rate from the principal infectious diseases averaged 1.3 per 1,000 in these towns, the highest rates being recorded in Dundee and Paisley. The 254 deaths registered in Glasgow included 3 from scarlet fever, 3 from diphtheria, 4 from whooping-cough, and 8 from diarrhoea. Four fatal cases of whooping-cough were recorded in Edinburgh; 2 of whooping-cough and 5 of diarrhoea in Dundee; and three of measles and 2 of diarrhoea in Paisley.

In the week ending Saturday last, May 22nd, 929 births and 624 deaths were registered in these eight towns. The annual rate of mortality rose to 17.5 per 1,000, and was 2.8 per 1,000 above the mean rate during the same period in the seventy-six large English towns. The rates in the eight Scottish towns ranged from 14.0 in Leith and 14.1 in Aberdeen to 20.2 in Greenock and 28.9 in Paisley. The death-rate from the principal infectious diseases averaged 2.1 per 1,000, the highest rates being recorded in Glasgow and Paisley. The 286 deaths registered in Glasgow included 2 which were referred to measles, 3 to scarlet fever, 4 to diphtheria, 22 to whooping-cough, and 8 to diarrhoea. Two fatal cases of diphtheria, 10 of whooping-cough, 2 of cerebrospinal meningitis, and 2 of diarrhoea were recorded in Edinburgh, 4 of diarrhoea in Dundee, and 2 of measles and 2 of whooping-cough in Paisley.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, May 22nd, 659 births and 484 deaths were registered in the twenty-two principal urban districts of Ireland as against 638 births and 410 deaths in the preceding period. The annual death-rate in these districts, which had been 20.6, 18.3, and 18.7 per 1,000 in the three preceding weeks, rose to 22.1 per 1,000 in the week under notice, this figure being 7.4 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 22.3 and 24.3 respectively, those in other districts ranging from 4.0 in Dundalk and 4.1 in Drogheda to 34.4 in Armagh and 39.6 in Queenstown, while Cork stood at 27.4, Londonderry at 16.9, Limerick at 19.1, and Waterford at 27.3. The zymotic death-rate in the twenty-two districts averaged 1.6 per 1,000 as against 1.3 per 1,000 in the preceding period.

Hospitals and Asylums.

KINGSEAT ASYLUM, ABERDEEN.

The annual report for the year 1908 of Dr. H. de Maine Alexander, the medical superintendent of this village asylum for the city of Aberdeen, shows that on December 31st, 1907, there were 416 patients on the register, and that on the last day of 1908 the patients numbered 414. This cessation of increase of the asylum population was due to a comparatively low admission-rate, which Dr. J. Macpherson, Commissioner in Lunacy, states was common, for some unknown reason, to the whole of

Scotland. The total cases under care during the year numbered 519, and the average numbers daily resident 409. During the year 103 were admitted, of whom 71 were first and 32 not-first admissions. In 50 the attacks were first attacks within three, and in 13 more within twelve, months of admission; in 27 not-first attacks within twelve months of admission; and in the remainder the attacks, whether first or not, were of more than twelve months' duration (10 of congenital origin (3). The admissions were classified according to the forms of mental disorder into: Mania of all kinds, 12; melancholia of all kinds, 23; senile and secondary dementia, 6; general paralysis, 1; alcoholic insanity, 20; acute confusional insanity, 3; primary dementia, 5; delusional insanity, 5; insanity with gross brain lesion or following trauma, 4; with epilepsy, 4; with chorea, 1; with hysteria, 1; and with hypochondriasis, 2; stupor, 2; alternating insanity and volitional insanity, 1 each; and congenital or infantile defect, 6. As regards causation, alcohol was assigned in 20, or 20 per cent.; syphilis in 1; critical periods in 30; exhaustion in 10; influenza in 10; epilepsy in 5; emotional shock in 4; lead poisoning in 3; cerebral haemorrhage and chorea in 1 each; and previous attacks in 27. In 40, or 40 per cent., a neurotic heredity was ascertained.

During the year 42 were discharged as recovered, giving a recovery-rate on the admissions of 40.7 per cent.: 22 as relieved, and 2 as not improved. Also 39 died, giving a death-rate on the average numbers resident of 9.5 per cent. The deaths were due in 17 cases to cerebro-spinal diseases, including 7 deaths from general paralysis; in 5 to diseases of the circulatory system; in 1 to diseases of respiratory organs, including 3 deaths from pulmonary tuberculosis; in 1 to carcinoma of the bladder, and in the remainder to general diseases. There were 3 accidents involving fractures of bones during the year and 2 escapes, both patients being brought back on the following day. It will be remembered that there are no walls around the asylum or separate villas at Kingseat, the idea of not being shut in having in itself, Dr. Alexander says, a restraining influence on the patients.

ST. ANDREW'S HOSPITAL FOR MENTAL DISEASES, NORTHAMPTON.

FROM the annual report for the year 1908 of Dr. J. Bayley, the Medical Superintendent of this large private asylum, we see that on January 1st, 1908, there were 415 patients on the asylum registers and 423 on the last day of the year. The total cases under care, excluding voluntary boarders, numbered 485, and the average number daily resident 414, or 4 more than in the previous year. During the year 70 were admitted, being the lowest number of admissions since the year 1890. Of the total admissions, 47 were direct admissions, 20 transfers, and 3 statutory readmissions. As to the duration of disorder on admission, in the direct admissions the attacks were first attacks within three months in only 13 and in 8 more within twelve months, not-first attacks within twelve months in 16, in the remainder the attacks being either of more than twelve months or of unknown duration or congenital cases. Considering in this abstract only direct admissions, these were classified according to the forms of mental disorder into: Mania of all kinds, 22; melancholia of all kinds, 13; senile and secondary dementia, 6; general paralysis, 1; primary dementia, 5; delusional insanity, volitional insanity, and congenital defect, 1 each. As regards etiological factors and associated conditions, alcohol was assigned in only 2, and acquired syphilis in 4; critical periods in 3, mental stress in 12, and various bodily diseases or disorders in 5. An insane heredity was ascertained in 15, or 30 per cent., a neurotic heredity in 1, and congenital defect was ascertained in 5. During the year 23 were discharged as recovered, giving a recovery-rate on the direct admissions of 45.0 per cent., or of recoveries in the direct admissions on the direct admissions of 44.0 per cent.; also 7 were discharged as relieved, 15 as not improved, and 17 died. The deaths, which give a percentage death-rate on the average numbers resident of 4.1, were due in 7 cases to senile decay, and in single numbers to abscess, apoplexy by drowning, cancer of breast, enteritis, general paralysis, heart disease, strangulation of bowel, exhaustion, syncope, and stricture of urethra. The death by suicide was the only unfortunate incident in a very satisfactory year. The general health was good throughout the year, and no case of infectious disease had to be recorded either at the hospital or at any of the houses belonging to it at Moulton Park or Llanfairfechan. The number of patients who visited the seaside house at the last-named place was 184, the largest on record, and the house and villas were occupied during the whole of the year.

BIRMINGHAM LYING-IN CHARITY.

THE sixty-sixth annual report of this charity records a year of considerable expansion, as it is the first report issued in connexion with the new Maternity Hospital. It has been found necessary already to increase the staff at the hospital, and in consequence a house adjacent to the hospital has been taken, which provides accommodation for fifteen pupils, a district midwife, and an assistant midwife. A resident house-surgeon and a pathologist have been appointed during the year. The number of cases received into the hospital was 370, and in the districts 1,547 cases were attended. The Investigation Committee inquired into 486 cases, and 123 were refused, while 155 were allowed. There was a deficiency on the year's accounts of about £500, and the bank account had been overdrawn to the extent of £1,502.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

AUSTRALIAN INSTITUTE OF TROPICAL MEDICINE, Townsville, Queensland.—Director. Salary, £600 per annum.

BARNSTAPLE NORTH DEVON INFIRMARY.—House-Surgeon. Salary, £100 per annum.

BIRMINGHAM UNION.—One Male and one Female Assistant Medical Officer. Salary, £120 and £100 per annum respectively.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—(1) Resident Medical Officer; (2) Resident Surgical Officer. Salary, £80 per annum each.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—(1) Second House-Surgeon. Salary, £50 per annum. (2) Assistant Resident Medical Officer for three months. Honorarium, 25 guineas.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £50 per annum, increasing to £30.

BUNTON: WYE HOUSE ASYLUM.—Assistant Medical Officer (male). Salary, £120 per annum.

CAMBERWELL: PARISH OF ST. GILES.—Locumtenent for Medical Officer of the Constant Road Workhouse. Remuneration 4 guineas per week and fees.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—(1) House-Surgeon; (2) Assistant House-Surgeon. Salary, £80 and £60 per annum respectively.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—Assistant Surgeon.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House-Surgeon. Salary, £50 per annum.

DERBYSHIRE ROYAL INFIRMARY.—House-Surgeon. Salary at the rate of £100 per annum.

FINSBURY BOROUGH COUNCIL.—Medical Officer of Health. Salary, £500 per annum.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Assistant Casualty Medical Officer. Salary, £30 for six months and £2 10s. washing allowance.

HULL: VICTORIA CHILDREN'S HOSPITAL.—Lady Assistant House-Surgeon. Salary, £40 per annum.

KING EDWARD VII SANATORIUM, Mithurst.—Senior Assistant Medical Officer. Salary, £150 per annum.

LANARK: BELLEFIELD SANATORIUM.—Resident Physician. Salary, £150 per annum.

LEEDS: GENERAL INFIRMARY.—Resident Surgical Officer. Salary, £150 per annum.

MANCHESTER ROYAL INFIRMARY.—Accident Room House-Surgeon.

MERIONETH COUNTY COUNCIL EDUCATION COMMITTEE.—School Medical Officer. Salary, £350 per annum.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer in the Fever Hospital Service. Salary, £180 per annum, rising to £240.

MIDDLESEX COUNTY ASYLUM, Upper Tooting, S.W.—Fourth Assistant Medical Officer.

MOUNT VERNON HOSPITAL FOR CONSUMPTION, Hampstead.—Junior Resident Medical Officer. Honorarium, £50 per annum.

NORFOLK COUNTY ASYLUM, Thorpe.—Assistant Medical Officer. Salary, £160 per annum, rising to £200.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Macclesfield.—House Physician. Salary, £100 per annum.

NOTTS COUNTY ASYLUM.—Locumtenent for four weeks. Salary, 4 guineas a week.

OLDHAM INFIRMARY.—Senior House-Surgeon (male). Salary, £100 per annum.

PELASTOW: MEDICAL MISSION HOSPITAL.—Assistant Doctor for Dispensary.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—Honorary Anaesthetist. Honorarium, £20.

REDHILL: EARLSWOOD ASYLUM.—Junior Assistant Medical Officer. Salary, £130 per annum, rising to £150.

SEAMEN'S HOSPITAL SOCIETY, Albert Dock Hospital E.—(1) Senior House-Surgeon. Salary, £75 per annum, and additional £25 per annum for Registrar. (2) House-Surgeon. Salary, £50 per annum. Appointments for six months.

SHEFFIELD UNION HOSPITAL.—Resident Assistant Medical Officer. Salary, £100 per annum.

SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—House-Physician. Salary, £100 per annum.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £80 per annum.

TEIGNMOUTH HOSPITAL.—House-Surgeon. Salary, £76 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £75 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician for six months.

WESTERN AUSTRALIA STATE.—Medical Officer to the Central Board of Health. Salary, £400 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Clentor, co. Cumberland; Truro, co. Cornwall; Misterton, co. Nottingham; and Kilwinning, co. Ayr.

APPOINTMENTS.

GILBERTSON, A. J. M.B., B.S. Dunelm, Honorary Surgeon to the Monkwearmouth and Southwick Hospital, Sunderland.

HANLEY, M. G., M.D. Brux., M.R.C.S., L.R.C.P., Honorary Physician, Cripples' Home, Marylebone.

LOMAS, E. K. M.B., Junior Resident Assistant Medical Officer at the Crumpsall Workhouse of the Manchester Township.
MURRAY, W. B. M.R.C.S., L.R.C.P., District Medical Officer of the Tenbury Union.
PATTERSON, C. S., M.B., M.S. Edin., District Medical Officer of the Hungerford and Ramsbury Union.
PRICTON, G. B. M.B., B.S. Durh., District Medical Officer of the Castle Ward Union.
POLLOCK, W. B. Inglis, M.D., Assistant Surgeon to the Glasgow Eye Infirmary.
WALKER, F. D. M.B., Second Resident Assistant Medical Officer at the Crumpsall Workhouse of the Manchester Township.
WILLIAMSON, C. L. M.R.C.S., L.R.C.P., Assistant Medical Officer of the Mill Road Infirmary of the West Derby Union.
WILSON, J. D. O. M.D. Glas., Certifying Factory Surgeon for the Alloa District, co. Clackmannan.
WOODYATT, W. J. M.B., Ch.B. Viet., Medical Superintendent of the Infirmary and Medical Officer of the Workhouse of the White-chapel Union.
LEEDS GENERAL INFIRMARY.—The following appointments have been made:
House-Physician to Dr. Clurton: W. H. Butler.
Resident Obstetric Officer: D. F. Dobson.
House-Surgeon to Mr. Littlewood: G. A. C. Mitchell, M.B., Ch.B. Leeds.
Orthopaedic House-Surgeon: W. E. Haich.
Resident Medical Officer at the Ida and Arthington Hospitals: Arthur Fothergill, M.B., B.S. Lond.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

LEITCH.—At Broadhaugh, Newport, Fifeshire, on May 24th, to Mr. and Mrs. Archibald Leitch, M.B., a daughter.

DEATHS.

KEMPE.—On May 23rd, in his 70th year, Charles Marshall Kempe, M.R.C.S. Eng., L.S.A. Lond., of New Stourham, Sussex, after a short illness.

OWEN.—On the 19th inst., suddenly from heart failure, at his residence, Lynfield, Whitley Range, Manchester, Simon Holgate Owen, M.D., M.R.C.P., in his 65th year. Interred at the Southern Cemetery, Manchester, on Saturday, 22nd inst.

RUSHTON.—On May 21st, at The Hordern, Rainow, the result of an accident, John Latham Rushton, M.D., of Rainow and Macclesfield, aged 78 years.

BOOKS, ETC., RECEIVED.

Specific Medication. By R. Gray, M.D. Chicago: The Clinic Publishing Company.
Lectures on Diseases of Children. By R. Hutchison, M.D., F.R.C.P. Second edition. London: E. Arnold, 1909. 8s. 6d.
Lehrbuch der speziellen Chirurgie. Herausgegeben von Hofrat Professor Dr. J. Hochberger. Zweiter Band, 2 Teil, Chirurgie der Extremitäten. Berlin und Wien: Urban und Schwarzenberg, 1909. M. 10.
Grundriss der klinischen Diagnostik. Von Dr. med. G. Klempner. Fünfzehnte Auflage. Berlin: A. Hirschwald, 1909. M. 4.
To and Fro Route Directory. Shows how to go from Anywhere to Anywhere in London. London: Simpkin Marshall, 1909. 6d.
Etudes Anatomiques. Coeur-Vaisseaux-Poumons. Par le Dr. R. Tripiet. Paris: G. Steinheil, 1909. F. 10.
The "Omniscient." London: Stone and Cox.
The Fabian Socialist Series. No. 7. Wastage of Child Life as exemplified by Conditions in Lancashire. By J. Johnston, M.D. London: A. C. Fifield, 1909. 1s.
London: Ballière, Tindall, and Cox, 1909:
Aids to Forensic Medicine and Toxicology. By W. Murrell, M.D., F.R.C.P. Seventh edition. 2s. 6d.
A Textbook of the Diseases of the Ear. By Professor Dr. A. Politzer. Translated and edited by M. J. Ballin, Ph.B., M.D., and C. L. Heller, M.D. Fifth edition. 25s.
Pure Milk and the Public Health. By A. R. Ward, B.S.A., D.V.M., and M. E. Jaffe, M.S. Ithaca, New York: Taylor and Carpenter, 1909. 32.00.
Berlin: S. Karger, 1909:
Über die Entstehung und Verbreitung der Tuberkulose im weiblichen Genitaltrakte. Von Dr. A. Blau. M. 4.
Über die Struktur und die Pathogenese der Gallensteine. Von Dr. med. J. Boyesen. M. 4.
Über die Behandlung der Geburten bei engen Becken. Von Dr. E. Scipades. M. 7.
Harper's Library of Living Thought. The Ether of Space. By Sir Oliver Lodge, F.R.S. New York and London: Harper and Brothers, 1909. 2s. 6d. leather, 3s. 6d.
The Intermediate Sex. By E. Carpenter. London: Swan Sonnenschein and Co. Limited, 1909. 3s. 6d.
The Edinburgh Stereoscopic Atlas of Obstetrics. Edited by G. F. B. Simpson, M.D., F.R.C.P.E., F.R.C.S.E., F.R.S.E., and E. Burnett, B.A., M.B., Ch.B., B.Sc. Section IV (in 4 sections). London: The Caxton Publishing Company, 1909. Four parts, 84s.
Fugues et Vagabondage. Par A. Joffroy et R. Dupuy. Paris: F. Alcan, 1909. F. 7.
London: The St. Catherine Press (Limited):
Cullen, and Kirkcubright. (Free on application to the Town Clerk).

Milk Testing. By C. W. Walker-Tisdale, F.C.S., N.D.D. Northallerton: W. R. Smithson, 1909. 1s.
Röntgen Ray Wrinkles. By L. Miller, A.M.I.E.E. London: L. Miller, 1909. 1s.
Anleitung zur Präparation und zum Studium der Anatomie des Gehirns. Von Dr. med. E. Villiger. Leipzig: W. Engelmann, 1909. M. 1.
Munich: J. F. Lehmann, 1909: S. C. F. A. 1909.
Die Sterblichkeit der Sauglinge in ihrem territorialen Verhalten in Württemberg, Bayern, und Österreich, und die Wehrfähigkeit der Jugend. Von Dr. von Vord. M. 2. 40.
Funfundzwanzig Jahre knappschaftsarztlicher Praxis beim Eschweiler Bergwerks-Verein (1884-1909). Von Dr. Jannes. M. 2.
Oxford Medical Publications. London: H. Frowde, and Hoader and Stoughton, 1909:
Graphic Methods in Heart Disease. By J. Hay, M.D., M.R.C.P. 7s. 6d.
Inborn Errors of Metabolism. The Croonian Lectures, 1908. By A. E. Garrod, D.M., M.A., etc. 3s. 6d.
Common Disorders and Diseases of Childhood. By G. F. Still, M.A., M.D., F.R.C.P. 15s.
Sprains and Allied Injuries of Joints. By R. H. Whitelocke, M.D., M.C., F.R.C.S. 7s. 6d.
Atlas der normalen Histologie der weiblichen Geschlechtsorgane. Von Drs. F. Moraller, E. Hechl, and Professor Dr. R. Meyer. 1. Abteilung. Leipzig: J. A. Barth, 1909. M. 18.
Comparative Rarer of Primary Cancer and Sarcoma of the Vagina. By H. Macnaughton-Jones, M.D. Reprints. London: G. Shawrow, 1909.
Moritz Schmidt. Die Krankheiten der oberen Luftwege. Vierte Auflage. Von Professor Dr. E. Meyer. Berlin: J. Springer, 1909. M. 22.
The Operative Treatment of Chronic Constipation. By W. Arbuthnot Lane, M.S., F.R.C.S. London: J. Nisbet and Co., Ltd. 1909. 2s. 6d.
. In forwarding books the publishers are requested to state the selling price.

DIARY FOR THE WEEK.

THURSDAY.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, 4.35 p.m.—Agenda: Election of officers, 1909-10. Exhibition of cases and specimens.

FRIDAY.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, 6.40 p.m.—Discussion on Spinal Anæsthesia, to be opened by Mr. Canny Ryall.

POST-GRADUATE COURSES AND LECTURES.

LONDON SCHOOL OF CLINICAL MEDICINE, Seamen's Hospital, Greenwich.—Daily arrangements: Out-patients' Demonstrations, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 4.15 p.m. respectively; Operations, 2 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m.; Monday, and noon, Thursday; Skin, at noon and 4 p.m., Thursday, and noon, Friday; Eye, 11 a.m., Wednesday and Saturday; Radiography, 4 p.m., Thursday. Special Lectures: Tuesday, 3.15 p.m., Fractures in the Region of the Wrist and their Treatment; Wednesday, 2.15 p.m., Myelitis; Thursday, 2.30 p.m., The Neurotic Element in Disease.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chancery Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear, Nose, and Throat. Lectures at 5.15 p.m. each day will be given as follows: Tuesday, The Pupil in Disease; Wednesday, On the Diagnosis of General Paralysis in its Early Stage; Thursday, Treatment of Chorea.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Friday, 3.30 p.m., Decompressive Operations.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's Hospital, Tottenham, N.—Monday, Clinics, 10 a.m., Surgical Out-patient, 2.30 p.m., Medical Out-patient; Nose, Throat, and Ear; X rays, 4.30 p.m., Medical In-patient, Tuesday, 10 a.m., Medical Out-patient; Clinic, 2.30 p.m., Operations; Clinics: Surgical, Gynaecological; 4.30 p.m., Special Demonstration of Selected Medical Cases; Wednesday, 2.30 p.m., Medical Out-patient, Skin, and Ear Clinics; 4.30 p.m., Medical Out-patient; Friday, Clinic, 10 a.m., Surgical Out-patient; 2.30 p.m., Operations; Clinics: Medical Out-patient, Eye; 3 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, London, W.—The following are the arrangements for next week:—Daily, 2 p.m.: Medical and Surgical Clinics; X rays, 2.30 p.m.; Operations, Thursday, 2 p.m. (Wednesday, 4 p.m.); Saturday, 10 a.m.: Diseases of the Eyes. Tuesday and Friday, 10 a.m.: Gynaecological Operations. 2 p.m. (and Wednesday and Saturday, 10 a.m.): Diseases of the Throat, Nose, and Ear. 2.30 p.m.: Diseases of the Skin. Wednesday and Saturday, 10 a.m.: Diseases of Children. 2.30 p.m.: Diseases of Women. Lectures, 10 a.m. Thursday: Demonstration by Surgical Registrar. Friday: Demonstration by Medical Registrar. At 12.15 p.m.: Tuesday, Wednesday, and Saturday, Practical Medicine. At 5 p.m.: Tuesday, Medical, Clinical; Wednesday, Medicine; Thursday, Acute Mania and its Treatment; Friday, Infective Endocarditis.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
MAY.		JUNE (Continued).	
29 SATURDAY ..	FOLKESTONE DIVISION, <i>South-Eastern Branch</i> , Annual Meeting, Hotel Wampach, Folkestone, 8.45 p.m. TROWBRIDGE DIVISION, <i>Bath and Bristol Branch</i> , Annual Meeting, Town, Hall, Trowbridge, 3 p.m.	5 SATURDAY ..	NORTHERN COUNTIES OF SCOTLAND BRANCH, Annual Meeting, Elgin.
30 Sunday ..		6 Sunday ..	
31 MONDAY ..	Bank Holiday.	7 MONDAY ..	LONDON : Public Health Committee, 3 p.m. BRADFORD DIVISION, <i>Yorkshire Branch</i> , Annual Meeting, 8.30 p.m.
1 TUESDAY ..	JUNE. LANCASHIRE AND CHESHIRE BRANCH, Meeting of Branch Council, Liverpool Medical Institution, 4.30 p.m. (<i>not June 9th, as previously arranged</i>). SOUTH-EASTERN OF IRELAND BRANCH, Annual Meeting, also meeting of Branch Council, and Local Division, Council Chamber, Clonmel, 12 noon. LONDON : Hospitals Committee, 2.30 p.m.	9 TUESDAY ..	LONDON : Medico-Political Committee, 2.15 p.m.
WEDNESDAY ..	WESTMINSTER DIVISION, <i>Metropolitan Counties Branch</i> , Annual Meeting, Criterion Restaurant : Dinner, 7.30 p.m. ; Association Business, 8.30 p.m. ; Paper, 9 p.m.	9 WEDNESDAY ..	ALTRINCHAM DIVISION, <i>Lancashire and Cheshire Branch</i> , Annual Meeting, Board Room, Altrincham Hospital, 5 p.m. ; Tea, 4.30 p.m. ; Dinner, Brooklands Hotel, 7.15 p.m.
3 THURSDAY ..	PERTSHIRE BRANCH, Summer Meeting, Golf Club House, Moncreiffe Island, Perth, 1 p.m. ; Council Meeting, 12.45 p.m. ; Lunch, 2 p.m.	10 THURSDAY ..	MIDLAND BRANCH, Annual Meeting, Leicester Infirmary. SOUTH WALES AND MONMOUTHSHIRE BRANCH, Annual Meeting, Swansea. WORCESTERSHIRE AND HEREFORDSHIRE BRANCH, Annual Meeting, Malvern.
4 FRIDAY ..	SCOTTISH DIVISION, <i>Border Counties Branch</i> , Annual General Meeting, Dumfries and Galloway Royal Infirmary, Dumfries, 3 p.m. SWANSEA DIVISION, <i>South Wales and Monmouthshire Branch</i> , Annual Meeting, 3 p.m.	11 FRIDAY ..	LONDON : Central Ethical Committee, 2 p.m. LONDON : Science Committee, 10 a.m. MUNSTER BRANCH, Annual General Meeting, Rooms of the Medical Society, 74, South Mall, Cork.
		12 SATURDAY ..	
		13 Sunday ..	
		14 MONDAY ..	
		15 TUESDAY ..	
		16 WEDNESDAY ..	LANCASHIRE AND CHESHIRE BRANCH, Annual Meeting, Chester.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent

by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Service on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JUNE 5TH, 1909.

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Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

BATH AND BRISTOL BRANCH:

TROWBRIDGE DIVISION.

A MEETING of this Division was held on May 29th.

Contributions to Hospitals by Employers and Employees.

—In regard to this matter it was resolved:

That the meeting disapproves the motions of the Representative Meeting.

Fresh Public Medical Institutions.—On this subject it was resolved:

That the meeting approves the motion of Council.

BIRMINGHAM BRANCH:

COVENTRY DIVISION.

THE annual meeting of this Division was held at 8.20 p.m. on May 25th, at the Coventry and Warwickshire Hospital, Dr. HARMAN BROWN in the chair. Fourteen members were present.

Election of Officers.—The following were elected officers for the ensuing year: *Chairman*, Dr. Richardson Rice; *Vice-Chairman*, Dr. Snell; *Secretary*, Dr. Pendred; *Representative on Branch Council*, Dr. J. Orton; *Representative on Public Medical Service*, Dr. Pickup; *Representative on New Dispensary Service*, Dr. Collington.

Votes of Thanks to Retiring Officers.—Votes of thanks were passed to the retiring Secretary, Dr. Orton, and to Dr. Moore, Representative on the Council of the Branch since the formation of the Division, for their past services.

Executive Committee.—The Executive Committee were elected as follows: Drs. Brown, Kendrick, Lowman, Moore, Phillips, and Pickup.

Representation of Local Medical Profession on Hospital Boards.—The matter of representation of the local profession upon the boards of hospitals and similar bodies was brought forward, and Dr. MOORE proposed:

That the Division requests the medical staff of the Coventry Hospital to consider the representation of the medical profession upon the hospital staff.

This was seconded by Dr. Rice, and carried unanimously.

Chairman's Annual Address.—Dr. MOORE proposed, and Dr. PICKUP seconded:

That the recommendation *re* the Chairman's annual address be laid upon the table.

Carried.

Vote of Thanks to Hospital Committee.—Dr. BROWN proposed that a cordial vote of thanks be passed and sent to the committee of the hospital for the continued use of their board room for meetings. This was seconded by Dr. ORTON, and carried.

COVENTRY AND NUNEATON AND TAMWORTH DIVISIONS.

THE annual meeting of the constituency formed by Coventry Division and Nuneaton and Tamworth Division was held on May 25th, at 8 p.m., in the Board Room of the Coventry and Warwickshire Hospital. There were present Drs. Moore, Brown, Rice, Pickup, Ballantyne, Collington, Lowman, Wood, Kendrick, Weaver, and Orton.

Chairman.—Upon the proposition of Dr. ORTON, seconded by Dr. MOORE, Dr. Harman Brown was voted to the chair.

Nomination of Representative at Annual Representative Meeting.—Dr. WOOD proposed, and Dr. ORTON seconded, that Dr. Milner Moore be again asked to allow himself to be nominated as Representative for the annual meeting at Belfast. This was carried unanimously. Dr. MOORE expressed his willingness again to represent the constituency.

Instructions to Representative.—Various matters were mentioned, and it was agreed to allow the Representative a free hand in voting on the same unless need should arise for a special meeting of the constituency to further instruct him.

BORDER COUNTIES BRANCH:

ENGLISH DIVISION.

The second annual general meeting of the Division was held at the County Hotel, Carlisle, on Friday, May 21st, at 12.45 p.m., to allow members to proceed to Lockerbie for the Branch meeting, which was being held the same day. Dr. FARQUHARSON was in the chair, and there were present: Drs. Graham Penny, Morison, R. MacLaren, H. Mitchell, J. W. Orerar, Fisher, and Hill.

Confirmation of Minutes.—The minutes of the previous meeting were read, approved, and signed by the Chairman.

Apologies for Non-attendance.—Dr. HILL, who was acting as secretary, announced that he had received apologies for absence from the following members: The Chairman, Dr. Dudgeon; the Secretary, Mr. N. MacLaren; Drs. Burnett, Edington, and Johnston.

Report of Executive Committee.—Dr. HILL then read the report of the Executive Committee for the past year, which, on the motion of the CHAIRMAN, seconded by Dr. ORERAR, was adopted.

Election of Office-bearers.—The meeting proceeded to elect the office-bearers for the ensuing year, in accordance with the nomination of the Executive Committee, namely: Chairman, Dr. Farquharson; Vice-Chairman, Dr. Orerar; Secretary, Mr. Tigg. The following were elected to the Executive Committee, namely: Drs. Barnes, Bowser, Burnett, Doughty, Morison, and Muriel.

Representative at Representative Meeting.—Dr. Harrison Mitchell was unanimously elected to represent the Division at the Representative Meeting at Belfast.

Branch Council.—The present Representatives on the Branch Council were re-elected, namely: Drs. Bowser, Edington, Graham, and Penny.

Ethical Committee.—Dr. Henry Barnes and Dr. Harrison Mitchell were elected members of the Ethical Committee.

Local Government Board and Unqualified Practice.—Subsequently Dr. MORISON, of Carlisle, introduced a brief discussion with reference to the Local Government Board's circular on the subject of unqualified practice; and the meeting decided that any steps taken towards the compilation of evidence on the matter should be the work of the various medical officers of health rather than that of a Division of the Association.

DORSET AND WEST HANTS BRANCH.

Election of Officers.—At the spring meeting of this Branch, held on May 5th, the following were elected officers for the ensuing year: President, Charles J. Marsh, Yeovil; Vice-Presidents, W. Burroughs Cosens, The Gables, Dorchester; E. Kaye Le Fleming, M.B., St. Margarets, Wimborne; Honorary Secretary and Treasurer, James Davison, M.D., Streteplace, Bournemouth; Representative on Council of Association, James Davison, M.D., Streteplace, Bournemouth; Branch Council, Drs. Eleanor Bond, F. C. A. Bushman, E. Kaye Le Fleming, C. H. Watts Parkinson, F. W. Ramsay, W. V. Snow, Wm. Johnson Smyth, Decimus Curme, G. J. W. Flower, P. W. MacDonald, W. Rendall, J. F. L. Whittingdale.

[A report of the meeting appeared in the SUPPLEMENT of May 29th, p. 324.]

GLASGOW AND WEST OF SCOTLAND BRANCH:

GLASGOW NORTH-WESTERN DIVISION.

The annual meeting of this Division was held on Wednesday, May 26th, at 8.30 p.m., in the Burgh Hall, Hillhead, Dr. J. C. EDMISTON, the Vice-Chairman, presiding, and eight other members being present.

Apology for Non-attendance.—An apology for the absence of the Chairman (Dr. John Norton) on account of indisposition was read.

Confirmation of Minutes.—The minutes of the last meeting were read and approved.

Dispensaries for Tuberculosis.—The SECRETARY reported that he had communicated with the Branch Council as instructed with regard to the contemplated institution of dispensaries for tuberculosis in Glasgow; and at the next meeting of Council it had been intimated that the Corporation had not yet proceeded far enough in the matter to make a definite statement, and it was accordingly remitted to the Chairman and Secretary to watch

developments and report progress of events. Since then no further information had been received. This report was, after some discussion, adopted by the meeting.

Annual Report and Financial Statement.—The annual report and financial statement of the Division was presented, and was adopted.

Election of Office-bearers.—The following office-bearers were elected: Chairman, Dr. John Morton; Vice-Chairman, Dr. J. C. Edmiston; Honorary Secretary and Treasurer, Dr. Wm. Caslake; Representative to Representative Meeting, Dr. Thos. Richmond; Representatives to Branch Council, Dr. D. J. Mackintosh, M.V.O., Dr. W. Caslake; Ordinary Members of Committee, Dr. Robert Bruce, Dr. A. T. Campbell, Dr. Malcolm Campbell, Dr. A. G. Hay, Dr. D. McNicol, Dr. A. Mehan, Dr. T. Richmond, Dr. H. Whitehouse.

Representation of Local Medical Profession on Hospital Boards.—The question of the representation of the local medical profession on hospital boards and similar bodies was discussed, and attention was directed to the statements in the SUPPLEMENT for April 10th. After some debate the following motion was adopted:

That this Division approves of the principle of representation of the medical profession on boards of hospitals and medical charities, where such representation does not at present exist.

The Representative was instructed accordingly.

Current Work of the Association.—The SECRETARY read the Medical Secretary's monthly report on the current work of the Association which had been sent for communication to the Division. The report was evidently appreciated, and it was thought that its continuation would help in keeping up the interest of the Divisions in the work of the Association.

Communication from Chelsea and Fulham Division.—A communication from the Chelsea and Fulham Division was read relating to some action, not specified, of the Royal College of Surgeons, England, and it was resolved that "the letter lie on the table."

Earlier Appointment of Representative.—Dr. BUCHANAN, having given due notice, moved:

That it be remitted to the Chairman and Secretary to make inquiry as to the steps necessary to alter the rules so that a Representative may be appointed at an earlier date than at present.

The proposer indicated that this motion was to bring the matter before the Division without urging immediate action, in view of the possible grant of a Charter, when circumstances might be otherwise altered. He suggested, however, that if a change was made the election of a Representative should take place soon after October in each year. The motion was agreed to.

Proposed Further Meeting.—It was intimated that there were several matters for discussion which had appeared since the billet for this meeting was printed, including the agenda for the annual meeting. It was decided, therefore, to hold another meeting soon to discuss those.

GLOUCESTERSHIRE BRANCH.

The annual meeting was held at the Cheltenham General Hospital on May 20th, at 6 p.m., the PRESIDENT in the chair, and thirty-five members present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Officers.—Mr. T. S. ELLIS announced the election of the following officers: President, A. B. Davies (Stroud); Branch Council, G. Wayland Annum, C. Braine-Hartnell, H. Bramwell, Oscar Clark, W. Cox, E. C. Cripps, C. F. Cuthbert, T. S. Ellis, J. Howell, R. Kirkland, G. A. Peake, and J. G. Soutar, with P. Buchanan and R. Macartney from Forest of Dean Section and E. C. Carter as ex-President; Representative for Representative Meeting, H. Bramwell; Scrutineers, G. Wayland Annum and T. S. Ellis; Auditors, C. Braine-Hartnell and G. A. Peake; Ethical Committee, R. W. Batten, T. S. Ellis, O. H. Fowler, E. T. Wilson, and J. G. Soutar; Honorary Secretary, D. E. Finlay.

Financial Statement and Report.—The financial statement and report for 1908 was taken as read and passed.

Rural Nursing Associations.—A motion was read by the SECRETARY from Dr. W. Milligan as follows:

That no rural nursing association be recognized by members of the British Medical Association unless Rule 9 of the Queen Victoria's Jubilee Institute for Nurses (see *BRITISH MEDICAL JOURNAL*, April 3rd, 1909) be included among the rules.

Owing to the matter being under consideration by the Medico-Political Committee, it was proposed by Dr. A. CARDEW, seconded by Dr. SOUTAR, and carried, that the subject be adjourned for consideration at a future meeting.

Address.—Dr. W. ALDREN TURNER (London) gave a most interesting address on periodic conditions allied to epilepsy.

Vote of Thanks.—The PRESIDENT proposed a hearty vote of thanks to Dr. Turner, which was seconded by Dr. A. B. DAVIES, and carried.

Dinner.—Thirty-one members sat down to dinner at the Oriental Café.

LANCASHIRE AND CHESHIRE BRANCH:

BLACKBURN DIVISION.

THE annual meeting of this Division was held on Tuesday, May 18th, Dr. MACKLIN in the chair. There were also present: Drs. Moir, Aitken, Prebble, Arnold, Bannister, Jones, Taylor, Payne, Jamieson, and Henry.

Confirmation of Minutes.—The minutes of last meeting were read and confirmed.

Election of Officers.—The following were elected officers for the ensuing year: *Chairman*, Dr. Bannister; *Vice-Chairman*, Dr. Moir; *Secretary and Treasurer*, Dr. Greenwood; *Representatives on Branch Council*, Drs. Prebble and Henry; *Representative at Representative Meeting*, Dr. Prebble; *Executive Committee*, Drs. Aitken, Jones, Macklin, and Taylor.

Annual Report.—The annual report of the Division was read as follows and unanimously adopted: The number of meetings held during the year was five. The average attendance of members at these meetings was 13.2. The number of members of the Blackburn Division at the present time is seventy-two, compared with seventy-eight last year. The question of life insurance fees as included in the *BRITISH MEDICAL JOURNAL* was considered on May 15th, 1908. Dr. Aitken read a paper on Abdominal Surgery, with special reference to recent work, on September 16th, 1908. A meeting of the Executive Committee was held on January 30th, 1909, with reference to the Langho Epileptic Colony. Dr. Macklin read a paper on the Climatology of the Isles of Scilly on April 8th, 1909. On April 29th, 1909, Dr. Garstang gave an address on Some Questions in Medical Politics.

Annual Representative Meeting.—It was proposed and unanimously agreed—

That a meeting be held in June to instruct the Representative in the Representative Meeting, and that Drs. Prebble and Greenwood be asked to prepare a digest of the principal matters for discussion by the Representative Meeting at the annual meeting of the Association in Belfast.

Monthly Meetings.—It was resolved that monthly meetings of the Division be held from October to June inclusive.

Notice of Subjects for Discussion.—It was resolved that notice of any subject for discussion be placed on the agenda and that no other matters be discussed except by permission of the Chairman.

Vote of Thanks to Chairman.—A vote of thanks was accorded to Dr. Macklin.

BURNLEY DIVISION.

THE annual meeting of this Division was held in the Bull Hotel on Thursday, May 27th. There was a large attendance of members.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Honorary Secretary's Report.

THE HONORARY SECRETARY then presented his annual report as follows:

Mr. Chairman and Gentlemen.—Since the last annual meeting there have been so many meetings of the Division and so much done, that for me to give a detailed account of it would take up the whole evening. Therefore, with your permission, I will be very brief. Our Division is still a growing one. The membership has increased during the year from 54 to 62. The area of the Division includes Burnley,

Brierfield, Nelson, Padiham, Colne, Barnoldswick, and Earby. A proposition will be brought before you this evening, I believe, to invite Colne, Barnoldswick, and Earby to form a subsection of this Division amongst themselves for the purpose of holding meetings.

Amongst the matters raised during the year were: Questions of amalgamation of the Burnley Medico-Ethical Society with this Division. That was left in abeyance *pro tem.*, but the clinical sections of the Society and the Division combined and shared the expenses equally.

A question with the Education Committee concerning medical certificates to school children was settled. Another question, concerning the appointment of assistant medical officer of health and inspector of school children, proved a long and contentious business, which was happily settled.

A code of ethics was drawn up by a subcommittee, and approved by the whole Division, but not yet sanctioned by the Central Ethical Committee. The "Bradford Rules," with Rule Z, were adopted by the Division and sanctioned in London.

The matter which arose concerning the proposal to change the medical officer of the sanatorium was happily settled without the deputation, which was formed by this Division, being called.

The support of the Division was given to a member who rightly refused to give evidence in court without first being paid his fee.

Mention should also be made of the honour done to Burnley Division by the Lancashire and Cheshire Branch accepting an invitation to hold the Branch meeting here in 1910.

Amongst the matters referred to Divisions which we have considered are: The inspection of school children; the treatment of school children; the medical certification of patients for hospital treatment; fresh public medical institutions and enlargements of existing ones; representation of the local medical profession on boards of hospitals and similar bodies; the working of the Midwives Act; and many other matters.

During the past year there have been held ten Division meetings, with an average attendance of eighteen members. There have been thirteen Executive Committee meetings—average attendance of six members. That, gentlemen, indicates an enormous amount of medico-political work. Nor has the scientific side of our Association been forgotten, for during the winter months, conjointly with the Burnley Medico-Ethical Society, a splendid syllabus of clinics and addresses was prepared and gone through, to the edification of all those members who availed themselves of those useful meetings.

The social side, too, of our Division has manifested itself in the usual Burnley manner, with a picnic to Bolton Woods last summer, a hotpot in the winter, and a first-rate annual dinner this spring, when forty-two members showed their appreciation of the Division's care in that direction. Amongst the guests present were Drs. Drury, Garstang, and Larkin. The two latter gentlemen, I may remind you, are offering themselves for re-election to the Central Council, and our Division has given them its official nomination.

The finances of the Division are very low. This time last year there was a balance of £4 16s. 1d. At present there is cash in hand of £5 12s. 10d., but I have a bill to-day from the printers for the whole year which amounts to £6 10s. 7d. Then there is our share of the expenses in connexion with the clinical meetings. I believe the Branch, considering our energetic work, will help us in this direction if we have to apply for a special grant.

In conclusion, gentlemen, I have a letter from the Central Organization Committee informing us that this Division shall form an independent constituency for the electing of a Representative in Representative Meetings.

Election of Officers.—The following gentlemen were then elected office-bearers for the ensuing year: *President*, G. S. Pullon, M.D.; *Vice-President*, James M. Ferguson;

Honorary Secretary and Honorary Treasurer. A. Edward Bird; *Executive Committee.* Drs. W. J. D. Bromley, F. E. Crossley, H. Edmondson, James Gardner, Alex. Grant, James Howarth, A. P. Miller, H. J. Robinson, A. M. S.clair, and J. S. Wilson; *Branch Representative.* J. H. Watson, F.R.C.S.; *Representative for Representative Meetings.* Dr. Ferguson.

BURY DIVISION.

The annual meeting of this Division was held on May 25th in the Dispensary, Knowsley Street, Bury. Dr. GREENHALGH, Chairman, presiding. There were also present: Drs. Kerr, Cook, Nuttall, Deans, and Turnbull.

Confirmation of Minutes.—The minutes of the previous meeting were read and adopted.

Balance-sheet.—The balance-sheet for 1908 was passed on the motion of the CHAIRMAN.

Election of Office-bearers.—The following office-bearers for 1909-10 were then elected: *Chairman*, Dr. Deans; *Vice-Chairman*, Dr. Nuttall; *Representative on Branch Council*, Dr. Kerr; *Honorary Secretary*, Dr. Turnbull; *Executive Committee*, Dr. Johnson, Dr. Cook, Dr. Burnet, and Dr. Jelly.

Paper.—Dr. T. ARTHUR HELME of Manchester then read an instructive and practical paper on displacements of the uterus, for which he was accorded a hearty vote of thanks.

Adoption of Ethical Rules.—On the motion of Dr. GREENHALGH, seconded by Dr. A. P. NUTTALL, the model Ethical Rules were adopted *in toto*, with the provision that the Executive Committee should act as Ethical Committee.

LEIGH DIVISION.

The annual meeting was held on January 20th. Dr. H. S. HALL was in the chair, and fourteen members were present.

Confirmation of Minutes.—The minutes of the last meeting were read and signed.

Election of Officers.—The following officers were elected: *Chairman*, Dr. J. C. Beckett; *Vice-Chairman*, Dr. H. S. Hall; *Member of Branch Council*, Dr. F. E. Wynne; *Executive Committee*, Dr. M. J. Halton, Dr. F. P. Sturm, Dr. T. Gray, Dr. D. Elder; *Honorary Secretary*, G. H. Shaw.

Honorary Secretary's Report.

The SECRETARY'S report contained the following:

During the past session there have been eleven meetings. One was the annual meeting, one a conjoint meeting with the Wigan Division, one a special meeting, and eight were the usual monthly meetings.

In addition, the annual dinner took place on October 22nd, 1908, the members with their guests numbering 34. Also the annual cycle run took place on June 16th, 1908, when 10 members were present and several guests.

On November 19th, 1908, Dr. Garstang presented a report on the proceedings of the Central Council, and on December 17th, 1908, Dr. Blair presented the report on the Representative Meeting at Sheffield.

Dr. F. E. Wynne has been elected the Representative of the joint Divisions Wigan and Leigh at the Representative Meeting at Belfast.

During the year, Drs. Pickup, Robertson, Elder, and Sturm have been elected members.

Dr. Doyle has resigned, and Dr. MacLellan and Dr. Watkins have commenced practice in other districts.

The Division has a membership of 29 out of the total number of practitioners in the area of 32.

The average attendance at the meetings has been 12.4.

At eight of the meetings the following papers were read by members of the Division: Headaches, with cases. The electric ion treatment of medical conditions. Gunshot wounds, with vault of cranium showing interesting gunshot fracture. Local anaesthesia. The clinical symptoms of acetonuria. The nationalization of medicine. *Post-partum* haemorrhage. The surgical treatment of goitre and exophthalmic goitre, with cases. The use of alcohol in pneumonia.

LIVERPOOL NORTHERN DIVISION.

The annual meeting of this Division was held at the Liverpool Medical Institution on May 26th, Dr. A. IVOR THOMAS, Chairman, presiding. There were also present: Drs. Davies, German, Matthews, Richardson, Tisdall, and Cooke.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Officers.—The following office-bearers were elected for the ensuing year: *Chairman*, S. Matthews, M.D.; *Vice-Chairman*, A. W. German; *Secretary and Treasurer*, J. A. Cooke; *Representative on Branch Council*, J. A. Cooke; *Representative at Representative Meeting*, S. Matthews, M.D., or if unable to attend, J. J. Tisdall; *Executive Committee*, H. Adcock, W. T. Blackledge, M.B., E. T. Davis, M.D., R. I. Richardson, M.B., A. I. Thomas, J. J. Tisdall; *Representatives on Joint Committee of Liverpool and Birkenhead Divisions*, E. T. Davies, M.D., S. Matthews, M.D., R. I. Richardson, M.B., A. Ivor Thomas, J. A. Cooke.

Matters Referred to Divisions.—It was resolved:

That the findings of the meetings of the combined Divisions of Liverpool and Birkenhead with respect to the matters referred to Divisions be approved.

Earlier Election of Representative at Representative Meetings.—It was resolved:

That in Rule 7 (Election of Representative) a period of nine months be substituted for three months.

Votes of Thanks to Retiring Officers.—Votes of thanks were accorded to the retiring Chairman, Dr. Ivor Thomas, and the retiring Secretary, Dr. A. W. German.

MANCHESTER (SOUTH) DIVISION.

The sixth annual general meeting of the Division was held at the house of the Chairman, Dr. Percy McDougall (Barcombe, Oak Drive, Fallowfield), at 3.45 p.m., on Thursday, May 27th, Dr. McDougall in the chair. There were eleven other members present: Drs. Vipont Brown, Cotterill, Grant Davie, Edlin, Godson, Gregory, Heathcote, Hopkinson, Russen Rhodes, Sawers Scott, and Stocks.

Apologies for Absence.—Letters of regret were received from Drs. Brook and Jordan.

Confirmation of Minutes.—The minutes of the last meeting were read and signed.

Correspondence.—A letter was read from Dr. Garstang, Honorary Secretary, Altrincham Division, offering to elect as an associate member of his Division the Honorary Secretary of this Division (Dr. Grant Davie) "as an act of courtesy to the Manchester South Division, as well as to himself." The Secretary was instructed to reply, on behalf of the Division, thanking Dr. Garstang for his kind offer.

Care of the Mentally Defective.—A reply was read from the Local Government Board acknowledging the receipt of the Division's letter of May 7th with reference to the recommendations of the Royal Commission on the Care and Control of the Feeble-minded, and the Royal Commission on the Poor Laws, in so far as they concern the mentally defective.

Election of Office-bearers for 1909-10.—The following office-bearers were unanimously appointed for the ensuing year, Drs. Gregory and Stocks being appointed scrutineers: *Chairman*, M. Russen Rhodes, L.R.C.P.; *Vice-Chairman*, Albert Hopkinson, M.B.; *Honorary Secretary and Treasurer*, G. H. Grant Davie, M.B.; *Representatives on Branch Council*, J. W. Boyd, M.B., E. Vipont Brown, M.D.; *Representative for Representative Meeting*, the Secretary; *Committee*, A. E. Cotterill, M.R.C.S. (Fallowfield), H. E. Edlin, M.R.C.S. (Levenshulme), T. A. Goodfellow, M.B. (West Didsbury), A. M. Mitchell Longsight, J. Simcock M.D. (Heaton Chapel).

Installation of New Chairman.—Dr. RusSEN RHODES then took the chair.

Representative at Annual Representative Meeting.—As no decision could be made regarding the Deputy Representative for the Representative Meeting, it was left to the Chairman and Secretary to find a substitute for election if Dr. Grant Davie was unable to attend the Belfast Meeting.

Representatives on Joint Committee.—Drs. Boyd, Vipont Brown, Grant Davie, Russen Rhodes, and Stocks.

Representative on Withington District Nursing Committee.—The Chairman (Dr. Russen Rhodes). The Secretary was requested to advise the Nursing Committee regarding the change in the representative.

Vote of Thanks to Past Chairman.—The CHAIRMAN then proposed a hearty vote of thanks to the past chairman, secretary, and past officers for the good work they had accomplished on behalf of the Division during their year of office. This was carried with acclamation.

ANNUAL REPORT OF EXECUTIVE COMMITTEE.

The SECRETARY read the annual report of the Executive Committee, which was as follows:

Number of Meetings.—Your Executive Committee has to report that during the year 11 meetings of the Division were held, at which there was an average attendance of 10, which is somewhat more than 12.5 per cent. of the total membership. The Committee itself met formally 10 times, and twice informally after general meetings. To show the increased activity of the Division, in which there are at present 79 members, the following figures are given for comparison:

Year.	Number of Division Meetings.	Average Attendance.	Number of Committee Meetings.
1904	2	8.5	2
1905	2	12	5
1906	2	13	5
1907	3	12	2
1908	5	13	8
1909	11	10	10+2

Character of Meetings.—Taking into account the quality and character of the business submitted for your consideration, your Committee deplores the sparse attendance of general practitioners in the area of the Division, for the several agenda placed before you at the general meetings have contained questions affecting markedly the interests of all local practitioners in respect to contract practice; the treatment of school children; the overcrowding of the profession; the ethical relationship between general practitioners and consultants; the recognition by public authorities of a representative body of the profession for their consultation and guidance in matters affecting the local profession generally; the appointment of a representative on a District Nurses' Committee; the working of the Midwives Act; many subjects of much medico-political interest sent down from the Central Offices; and last, but by no means least, clinical discussions on subjects that are of every-day concern to the general practitioner. Your Committee is strongly of the opinion that the Division will not be a powerful instrument for the defence, protection, and well-being of its members unless they are willing to meet together to fully discuss and act in unison upon the questions submitted for their consideration. Your Committee feels strongly that this unity of thought and action in all public questions affecting the honour and interests of the profession cannot be over-estimated at the present time, when there is so much subletting and cutting into the legitimate work of the practitioner. It therefore earnestly appeals for a more general active interest to be taken by the members in the coming session, and thus augment the numbers of the "ever faithful" who have done excellent work during the past year. The social element, however, has not been lacking, and your Committee, on behalf of the Division, heartily thanks those members who so kindly and hospitably entertained the Division at the meetings held at their respective houses.

Medical Inspection and Treatment of School Children.—These subjects were of such importance that their consideration occupied three meetings. Regarding "inspection," the Division disapproved of payment per head, and approved of full-time medical officers who should be appointed without reference to time, and subject to reasonable notice, the appointment only being terminable with the consent of the Board of Education. It also resolved that teachers should themselves be trained to observe indications of ill health in

children under their care, and should forthwith bring these children to the notice of the proper medical authority. This resolution was sent to the joint committee, which adopted it, and forwarded it to the other four local Divisions for their consideration. With regard to "treatment," it was resolved that children whose parents could pay for such treatment should be referred to their own medical attendant; that any attempt by public authorities to arrange for the treatment of school children at hospitals and other charitable institutions was thoroughly unsound in principle and should be condemned; that school clinics should be established where treatment should be undertaken by whole-time medical officers, whose salary should be in accordance with the rate fixed by the Association; and that in every district a wage limit should be fixed, and no treatment at the expense of the education authority should be given to the children of parents whose income exceeds the local limit. These questions will be carefully considered by the Representative Meeting at Belfast.

New Rule regarding Contract Work.—This year the new rule that "no new club should be accepted at a less remuneration than 6s. per member per annum" came into operation. Several clubs have been raised to this standard, but your Committee regret to record one failure where a newcomer but non-member of the Association, after first promising to compete on the higher scale with the other practitioners concerned, accepted the club at a lower rate. Your Committee requests members to inform the Secretary of the Division of any approaching fresh club appointment, when occasion arises, where there is likelihood of difficulty in obtaining the increased fee, whether the applicants are members or non-members of the Association.

Manchester and District Warehousemen and Clerks' Association.—In your last annual report mention was made of the unsatisfactory nature of the medical arrangements of this association, which the Division had thoroughly investigated. A resolution was adopted and forwarded to the joint committee strongly recommending it to do its utmost to secure the resignation of the medical staff, including the consultants. This year the Central Contract Practice Subcommittee has interested itself in the matter, and on March 16th it circulated every member of the profession resident in Manchester asking for information. Your Committee has reason to believe that the replies are regarded at the Central Offices as satisfactory, and will in all probability enable a move being made to attempt to ameliorate some of the existing hardships under which the medical officers of the association labour.

Ethical Relationship between the General Practitioner and Consultant.—A request from the Division to the Joint Committee to consider this question has resulted in a large committee being appointed, comprising six representatives (three consultants and three general practitioners) from each Division in Manchester and Salford. This committee is at present doing useful work, and the outcome of its deliberations, from which much good must result, will be placed before you in due course.

Appointment of a Representative upon the Withington Ladies' District Nurses' Committee.—Your Committee has succeeded in gaining this appointment, and considers it essential that official representation should be obtained on all similar organizations whereby the lay executive bodies may properly be kept in touch with the professional, and thus be prevented from blundering in medical matters. It would be glad to hear from members regarding other societies in the area of the Division upon which similar representation should be sought.

Medical Profession as a Career.—An important letter originated from your Committee on this subject. It obtained the co-operation of the Joint Committee and emanated from it as a "letter of warning," calling the attention of head masters of schools in Lancashire and Cheshire to the overcrowded state of the profession and the low average income of the general practitioner, estimated by the BRITISH MEDICAL JOURNAL at £200 to £250 a year. It is hoped this will prevent students from embarking upon a medical career in complete ignorance of the economic crisis in the profession of medicine.

Address by Dr. Garstang.—The Division is indebted to Dr. Garstang, Altrincham, for coming before it as one of its representatives on the Central Council and giving an

instructive account of the working of the executive body of the Association. He also defined the policy of himself and colleagues, which the Division heartily approved.

Recognition by Public Authorities of a Local Representative Body of the Profession.—This subject is of great importance when questions arise in municipal and other public matters, whereby an authoritative opinion is required representing the general feeling of the profession, such for example as was obtained regarding the carrying out or holding in abeyance of clauses affecting the profession in the Registration of Births Act. Your Division approached the Joint Committee by means of a resolution. The subject was then taken up by the West Division, with the result that the Joint Committee resolved to approach public authorities with the object of its appointment as the authoritative representative body of the profession in Manchester and Salford. This has been done, and the Joint Committee has already been approached for its opinion from one of the departments in the Town Hall on the subject of unqualified practice in Manchester and district.

Medico-Political Communications from the Central Offices.—These subjects have appeared on the various agenda submitted to you. They have been given due consideration by the Division, and results of these deliberations have been published in the SUPPLEMENT of the JOURNAL from time to time.

Ethical Cases.—Your Committee has considered two ethical cases. One case has been referred to the Branch Council for it to attempt a satisfactory settlement after much care and time had been expended on it. The other case remains *sub judice*. Besides these a member has sought advice regarding a club appointment. This has been given him.

Riders by Coroners' Juries.—In May, 1908, your Committee approached the central authorities with the object of action being taken by the Association to try to prevent the occurrence of these frequently undesired censures upon medical men who, under the circumstances, were wholly blameless. Your Committee is now pleased to report that at the last Representative Meeting at Sheffield the following minute was approved (700):

That the Council be instructed to approach the Lord Chancellor to obtain, if possible, juster and more uniform procedure in relation to riders to verdicts by coroners' juries.

Scientific Discussions.—During the past session there have been three scientific discussions after the reading of short papers. They have proved to be one of the popular features of our meetings, and have been interesting from the fact that on each occasion every member present has taken an active part in them. These meetings have served two useful purposes, for not only has helpful mutual experience been freely related on subjects of common interest in routine work, but the healthy and much-to-be-desired feeling of *esprit de corps* has been engendered among the members who have attended and taken part. Your Committee, therefore, feels that these discussions should become an important part of the work of the Division, and should be effectively supported.

Place of Meeting.—On several occasions your Committee has considered the "place of meeting" that would be most convenient for the majority of members to attend. The Division is a scattered one, including as it does the following districts: Rusholme (to High Street), Fallowfield, Withington, Didsbury, Longsight, Levenshulme, Heaton Chapel (in part), Heaton Mersey, Gorton, Fairfield, and Wilmslow. In recent times meetings have been held in Longsight, Fallowfield, and Withington, for in these districts the larger proportion of members reside. Early next session the Division will be given an opportunity to discuss if a central meeting place in town would be most convenient to enable all to attend, though it has always been the feeling of your Committee that the meetings should be held in the area of the Division. When the subject is placed on the agenda your Committee sincerely hopes that members residing in outlying districts interested in the work of the Division will attend and give their opinion. "Distance" will then be no adequate excuse for non-attendance.

British Medical Journal Supplements.—Your Committee wishes to impress upon all members the necessity of reading and preserving the SUPPLEMENTS of the JOURNAL.

Not only will they thus keep in touch with the work of their own Division, but they will be enabled to take an intelligent interest and part in the discussion of medico-political matters.

Retirement of Dr. Savers Scott from the Executive Committee.—Your Committee regrets to record Dr. Savers Scott's approaching retirement from its active list. Only those who have had the pleasure of working with Dr. Savers Scott can appreciate the high nature of the services he has rendered to the Division. His initiative and inspiration have always been a trustworthy source upon which to rely. He has been actuated by the most unselfish motives in withdrawing his name, for he feels, having served the Division on its executive body for six continuous years, that it is time for his place to be occupied by a new member, and thus allow a fresh element of blood to be infused into the official work. In this way he considers that in all probability more members may be brought to take an active interest in the work of the Association. Your Committee trusts his retirement may be only of a temporary nature, and that his desire may be fulfilled to the uttermost.

M. RUSSEN RHODES, Chairman.

G. H. GRANT DAVIE, Honorary Secretary.

The report on being put to the meeting was adopted unanimously.

Letter to Contract Practice Subcommittee.—Arising out of the report, the Secretary was instructed to write to the Contract Practice Subcommittee regarding the Warehousemen and Clerks' Association, drawing its attention to the fact that though the grievance against its medical arrangements was one of old standing, nevertheless nothing effectual had yet been done; also to impress upon it the importance and urgency of the matter, which is one of the chief factors in maintaining the present low club rates generally in vogue in the district.

Local Government Board and Unqualified Practice.—With reference to the letter recently issued from the Local Government Board (April 23rd, 1909) to medical officers of health re practice of medicine and surgery by unqualified persons, of which mention was indirectly made in the report, the Secretary was instructed to write to the Medical Secretary pointing out that in the opinion of this Division medical officers of health solely in virtue of their office were not the proper persons to apply for such information, for the reason that this subject did not come under their province—especially so in the case of whole-time medical officers, who might be in complete ignorance of the prevailing state of unqualified practice; also to suggest that immediate steps be taken by the Association to approach the Local Government Board to have such an inquiry conducted through the channels of the Divisions of the British Medical Association, for the foregoing reason, when full and comprehensive reports of local conditions of unqualified practice throughout the country could then be obtained.

Treasurer's Report.—The Financial Report of the Treasurer was then taken and unanimously adopted. It was pointed out that, owing to the past year being one of greatly increased activity—the number of meetings held being more than twice as many than in the best previous year—the expenditure had proportionately increased, leaving a balance of only 17s. 3d. to carry on the work for the ensuing seven months of the year. It was proposed and carried that the Branch Council be approached for a supplementary grant.

Alteration of Rule 7.—It was agreed that Rule 7 of the Division Rules should be altered as follows:

... the Representative shall be elected by a general meeting of members of the constituency held not more than nine months nor less than three weeks before the Annual Representative Meeting.

Address by Dr. Savers Scott.—Dr. SAVERS SCOTT gave an interesting review of the current work of the Association, and pointed out how desirable it was that every member of the profession should become a member of the Association.

Date of Next General Meeting.—The date upon which this meeting should be held to give final instructions to the Representative was left for the Committee to fix.

Reprints of this Report.—It was moved and seconded that the Secretary be requested to forward the report of

this meeting, including the annual report, for publication in the SUPPLEMENT, and that he obtain 150 reprints for circulation among both members and non-members within the area of the Division.

This concluded the business.

ST. HELENS AND WARRINGTON DIVISIONS.

A JOINT meeting of the St. Helens and Warrington Divisions was held on May 25th at 4.15 p.m. at Liverpool, in the North-Western Hotel. There were present: Drs. Joseph, Burrows, Murray, Bassett, Kerr, Merrick, Paterson, Wilson, and Buchan. It was resolved that Dr. Joseph should take the chair.

Apologies for Non-attendance.—Apologies for absence were intimated from Drs. Edwards, Bowden, Brebner, and Reid.

Representative at Representative Meeting.—It was resolved that Dr. Bassett be appointed the Representative of the two Divisions at the Representative Meeting.

Salary of Medical Officers of Health.—It was resolved that the Representative bring before the Representative Meeting the following motion:

"That the Association considers that the minimum salary of assistant medical officers of health should be £250 a year.

METROPOLITAN COUNTIES BRANCH:

CITY DIVISION.

The annual meeting of this Division was held at the Great Eastern Hotel, Liverpool Street, E.C., on Thursday, May 20th, at 3.30 p.m. Dr. GOODALL presided, and there were ten members present.

Confirmation of Minutes.—The minutes of the previous general meeting were read, confirmed, and signed by the Chairman.

Election of Officers of Division.—The officers of the Division for the ensuing year were then elected as follows: *Chairman*, Dr. A. Withers Green; *Vice-Chairman*, Dr. E. A. Lermitt; *Representatives on Branch Council*, Drs. J. W. Hunt, E. W. Goodall, and the Honorary Secretary; *Honorary Secretary and Treasurer*, Dr. C. R. Salisbury; *Assistant Honorary Secretary*, Dr. F. H. Wallace; *Executive Committee*, Drs. T. L. Brown, F. J. P. Daly, J. L. Dick, M. Greenwood, C. F. Hadfield, G. B. Hicks, J. I. Jaffé, G. H. Johnston, J. H. Porter, David Ross, Montague Smith, A. J. Southcombe, Frederick Wallace, and Elizabeth Wilks; *Representative at Representative Meetings*, Dr. Goodall was elected Representative of the Division in Representative Meetings, and Dr. F. Wallace deputy.

Report of Executive Committee.—The annual report of the Executive Committee, which had previously been circulated amongst the members, was passed unanimously.

Nomination of Officers of Branch.—The following gentlemen were nominated as officers of the Branch: *President-elect*, Dr. Lauriston Shaw; *Vice-Presidents*, Dr. Major Greenwood and Mr. Atwood Thorne; *Honorary Secretary*, Dr. E. W. Goodall; *Honorary Treasurer*, Mr. H. Betham Robinson; *Representatives of Branch on Central Council*, Dr. G. E. Haslip, Sir Victor Horsley, and Drs. Hugh Kerr, Lauriston Shaw, and Frederick Wallace.

Earlier Election of Representative.—It was unanimously resolved that Rule 7 of the Division, re election of Representative, be altered from "... not more than three months to less than three weeks ..." to "... not more than nine months."

Instruction to Representative at Annual Representative Meeting.—The business of the annual meeting was then discussed, and the Representative was instructed to use his discretion in voting, bearing in mind the feeling of the Division on those questions which have been discussed in previous meetings.

Vote of Thanks to Retiring Chairman.—The meeting then terminated with a vote of thanks to the retiring Chairman.

KENSINGTON DIVISION.

A MEETING of this Division was held at the Kensington Town Hall on Wednesday, May 12th, at 5 p.m. Dr. RICE OXLEY, the Chairman presided, and thirty members and visitors were present.

Confirmation of Minutes.—The minutes of the previous meetings were read and confirmed.

Whole-time Medical Officers of Health.—On this subject it was resolved:

That medical officers of health should be debarred from private practice provided the income paid by the authority was adequate.

The meeting was unanimous that wherever possible this should be done.

Midwives Act: Departmental Committee.—Dr. PARKER YOUNG announced that he was giving evidence before the Committee shortly, and would be glad to receive suggestions from any members of the Division.

Federated Societies' Medical Benefit Association.—In regard to this question it was resolved that:

In the opinion of this Division it is extremely undesirable that any member of the profession should associate himself with the scheme.

Medical Certification of Suitability for Hospital Treatment.—The resolution was unanimously agreed to.

Contributions to Hospitals by Employers and Employees.—On this subject it was resolved:

That this Division absolutely disapproves of the suggestion contained in the two resolutions that contributions to hospitals should be considered in any way as premiums.

Fresh Public Medical Institutions.—The Division reiterates its approval of this resolution.

Sanatoriums for Workers Suffering from Tuberculosis.—The Division approved of the statement made, and the resolution passed by the Representative Meeting.

Representation of Local Medical Profession on Hospital Boards.—On this subject it was resolved:

That the resolutions be referred to the Executive Committee for consideration and report.

Conference with Friendly Societies, Dispensaries, etc.—The Executive Committee reported that they had appointed a subcommittee to arrange a conference with the secretaries of the friendly societies, provident dispensaries, and out-patient departments of hospitals within the area of the Division for the purpose of ascertaining if some course of action cannot be undertaken to co-ordinate the various services and prevent overlapping and abuse. After considerable discussion, it was resolved:

That it is advisable that in the area of the Kensington Division a public medical service be formed for the organization of the provision of medical and surgical attendance on weekly wage-earners.

MIDLAND BRANCH:

BOSTON AND SPALDING DIVISION.

An ordinary meeting was held at the White Hart Hotel, Boston, on April 20th, at 2.45 p.m., Dr. MASON in the chair. There were also present: Drs. Moxham, Pilcher, Slocock, Smith, Walker (Holbeach), and Wilson, and Dr. Stanley Green of Lincoln.

Apologies for Non-attendance.—Regrets at non-attendance were received from many members.

Paper.—Dr. STANLEY GREEN read an interesting paper entitled, *Some Sore Throats*. The subject was exhaustively dealt with and listened to intently. It was a matter for deep regret that so few members were able to be present. He also showed some beautiful radiographs of diseased bones.

Vote of Thanks.—The CHAIRMAN proposed and Dr. SLOCOCK seconded a cordial vote of thanks to Dr. Green for his instructive paper and excellent radiographs, which was carried with acclamation. Dr. Green had tea with the members afterwards.

LINCOLN DIVISION.

The annual meeting was held on May 20th, at the Guildhall, Lincoln, Dr. GENNEY being in the chair.

Election of Officers.—The following were elected officers for the ensuing year: *Vice-President of Midland Branch*, Dr. Genney; *Chairman*, Dr. Carline; *Vice-Chairman*, Dr. Denney; *Representative on Branch Council*, Dr. Carline; *Executive Committee*, Dr. McFarland, Dr. Coleman, and Dr. Howes; *Honorary Secretary and Treasurer*, Dr. Chater; *Representative in Representative Meetings of the Association*, Dr. McFarland; *Deputy Representative*, Dr. Carline.

Medical Certificates of Suitability for Hospital Treatment.—The proposal

That a medical certificate of suitability for hospital treatment be required as a condition of hospital treatment, except in cases of casualties,

was considered and adopted.

Contributions to Hospitals by Employers and Employees.—The report on contributions to hospitals by employers of labour and employees was then brought forward, but no opinions thereon were given.

Fresh Medical Institutions.—The following statement was approved:

That it is desirable that no fresh public medical institution should be opened without previous consultation with the local medical profession through some organized body such as the Divisions of the British Medical Association in the area of which it is proposed to establish such new institution, and that it be an instruction to the Council to give effect to this principle in considering applications by Divisions or Branches for support in dealing with hospital questions.

Sanatoriums for Tuberculous Workers.—The statement referred to Divisions regarding sanatoriums for workers suffering from tuberculosis was read, but no resolution thereon made.

Whole-time Medical Officers.—The reply to the question, "Should health officers give their whole time to the work?" was in the affirmative.

Payment for School Inspection.—It was proposed and carried that the Division approves of payment per head in school inspection, providing the payment is adequate.

Earlier Appointment of Representative.—The suggestion of the earlier appointment of the Representative in Representative Meetings was approved of, and the Secretary directed to ask leave to amend Rule 7 of the Divisional Rules, so that Article XXVII of the Articles of Association of the Association shall read "nine months" instead of "three months."

Doctors and Midwives.—Inquiry of members was made as to whether any boards of guardians in the area of the Division did circularize the members of the profession and the midwives with regard to payment of the former when called in to assist the latter. None had any knowledge as to its having been done. To the question,

Did they offer to pay fees in suitable cases to all medical practitioners, or did they restrict the offer to cases where the parish medical officers were called in?

the answer was, No. It was then asked,

If the payment of medical men in these cases has been undertaken by any local authority other than the guardians, will you kindly furnish particulars?"

The answer was unanimously, "It has not as far as we know."

Representation of Local Medical Profession on Hospital Boards.—The meeting considered that the staffs of hospitals should be represented on the boards of management of the hospitals.

Scientific Work of Divisions and Branches.—The paper relating to scientific work of Divisions and Branches received from the Medical Secretary was brought before the members.

Medical Inspection of School Children.—The report published in the BRITISH MEDICAL JOURNAL of May 15th as to medical inspection of school children was not gone into.

The proceedings then terminated.

**NORTH LANCASHIRE AND SOUTH WESTMOR-
LAND BRANCH:
LANCASTER DIVISION.**

The annual meeting of this Division was held at Lancaster on May 22nd.

Election of Officers.—The following were elected officers for the ensuing year: *Chairman*, Dr. T. G. Mathews, Kirkby Lonsdale; *Vice-Chairman*, Dr. James Aitken, Lancaster; *Secretary*, Dr. Watts Edmondson, Sea View, Lancaster; *Representative to the Representative Meeting*, Dr. David Blair, County Asylum, Lancaster; *Representatives on the Branch Council*, Drs. Mathews and Edmondson; *Members of Committee*, Drs. Hall, Gibson, Graham, Smith, and Stott.

PERTSHIRE BRANCH.

A special meeting of the Branch was held in the Perth Infirmary on Friday, May 21st, at 3.30 p.m. There were present: Drs. Kennedy, Moffett, P. Stewart, Blair, Lyell, Trotter, J. Hume, and Taylor. On the motion of Dr. Trotter, Dr. Kennedy took the chair.

Apology.—An apology was intimated from Dr. D. H. Stirling.

Whole-time Medical Officers of Health.—On this question the finding of the meeting was:

That medical officers of health should be debarred from engaging in private practice where practicable.

Medical Certification of Suitability for Hospital Treatment.—On this matter the recommendation of the Sheffield meeting was agreed to.

Contributions to Hospitals by Employers and Employees.—On this question no decision was come to, as the Branch thought this more an administrative question.

Fresh Public Medical Institutions.—The recommendation on this subject was agreed to.

Sanatoriums for Tuberculous Workers.—In regard to the National Association for the Establishment and Maintenance of Sanatoriums for Workers suffering from Tuberculosis, the recommendation was agreed to.

Representation of Local Medical Profession on Hospital Boards.—The recommendation on this subject was approved on the lines of the annual meeting at Sheffield.

Vote of Thanks to Chairman.—This was all the business, and a vote of thanks was accorded Dr. Kennedy for presiding.

SHROPSHIRE AND MID-WALES BRANCH.

The thirty-third annual spring meeting of the Branch was held at the Salop Infirmary on Tuesday, May 25th, at 3 p.m., Dr. LYTLE, the President, in the chair. There were thirty-two members present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Report of Council.—The report of the Council for the previous year was read by the HONORARY SECRETARY, and was as follows: The Council have met on five occasions during the year 1908. Four of these were meetings where the ordinary business of the Branch was transacted, and the fifth was a special meeting to consider a special report from the Medico-Political Committee in London with reference to the medical inspection of school children. A subcommittee was formed, and this committee reported to a special general meeting of the Branch held in January, 1909, when important resolutions were passed. The Honorary Secretary has had two communications from head quarters recently with reference to the expenditure of the Branch. Exception has been taken to the Branch subscribing 3 guineas a year each to the Royal Medical Benevolent Fund and Epsom College; also exception has been taken to the Branch entertaining three guests at the annual medical dinner, as well as to other minor payments in connexion with the same meeting. With regard to this the Council would point out that these expenses have been incurred annually for nearly twenty years, and it seems a little late to demur to these items; but the General Secretary in London has pointed out in a letter to the Branch Secretary that the Articles of the Association preclude the funds being used for these purposes. Under these circumstances the Council have regretfully acquiesced in the decision. The membership of the Branch is exactly the same as a year ago—namely, 132. The financial position of the Branch continues in a satisfactory state. The total income was £43 0s. 9d., and the expenditure £17 8s. 1d., leaving a balance in hand of £25 12s. 8d. The adoption of the report was proposed by the PRESIDENT, seconded by Dr. LAW WEBB, and carried unanimously.

Election of Officers.—The election of the following members for the various offices in the ensuing year was proposed by Dr. CUTHBERT, seconded by Dr. BOON, and carried unanimously: *President*, Dr. Hale Puckle; *Vice-President*, Dr. Lytle; *Chairman of Clinical and Pathological Section*, Dr. Law Webb; *Representative at Representative Meeting*, Mr. George Sidebotham; *Representative on Central Council*, Dr. Cureton; *Council*, Messrs. Willoughby Gardner, M.D., Charles Gwynn, M.D., Arthur Jackson, F.R.C.S., George Keyworth, M.B., John Lloyd, M.R.C.S.,

Justin McCarthy, M.D., Harold Macleod, F.R.C.S., William Packer, M.D., F. K. Pigott, Alan Rigden, M.D., Law Webb, M.D., and Russ Wood, F.R.C.S.; *Honorary Secretary and Treasurer*, Reginald Murck, M.D.; *Assistant Honorary Secretary*, C. V. Bulstrode, M.D.

Vote of Thanks to Honorary Secretary and Treasurer.—The President proposed and Dr. Pigott seconded a hearty vote of thanks to Mr. Russ Wood for his services as Honorary Secretary and Treasurer during the past three years. Mr. Russ Wood returned thanks to the meeting for their kind resolution.

Business Management of the Association.—Dr. CURETON then moved the following resolution:

That in view of the practical experience of the last thirty-seven years, during which period the Association has enjoyed great financial prosperity, it has been proved that in the best interests of the British Medical Association it is essential to have an official with the rank and status of "General Secretary and Manager," and that such official should possess special business training.

Further, that, having regard to the highly satisfactory manner in which Mr. Guy Elliston has discharged the duties since his appointment in 1902, it is in the interests of the Association that his services should be retained as "General Secretary and Manager"; and that the Representative of the Shropshire and Mid-Wales Division to the Representative Meeting at Belfast be instructed accordingly.

This was seconded by the President, supported by Dr. WHITE, Sir JAMES BARR, and Dr. MCCARTHY, and carried unanimously.

Paper.—Sir JAMES BARR then read an able and exhaustive address on the treatment of chronic degenerative lesions of the heart and aorta, which will be published in the JOURNAL. At its conclusion a hearty vote of thanks was proposed by the President, seconded by Dr. PUCKLE, and carried unanimously. Sir JAMES BARR suitably replied.

Tea.—At the conclusion of the meeting the President entertained those members present at tea.

SOUTH-EASTERN BRANCH:

FOLKSTONE DIVISION.

The annual meeting of the Folkstone Division was held at Hotel Wampach, on Saturday, May 29th, at 8.45 p.m., Dr. FITZGERALD being in the chair.

Confirmation of Minutes.—The minutes of the last annual meeting were read and confirmed.

Report of Executive Committee.—The report of the Executive Committee was received and adopted.

Report on Ophthalmia Neonatorum.—The conclusions and recommendations of the Committee of the Association on Ophthalmia Neonatorum were considered and approved.

Election of Officers.—The following officers were elected: *Chairman*, Dr. W. F. Chambers; *Vice-Chairman*, Dr. Wainwright; *Representative at Representative Meetings*, Dr. P. Vernon Dodd; *Representative on Branch Council*, Dr. Eastes; *Executive Committee*, Drs. Fitzgerald, Barrett, and Wilgess; *Honorary Secretary*, Dr. P. Vernon Dodd.

GUILDFORD DIVISION.

The annual meeting of the Division was held at the Royal Surrey County Hospital, Guildford, on Wednesday, May 26th, at 4.30 p.m., Dr. ANDERSON MORSHEAD being in the chair.

Confirmation of Minutes.—The minutes of the last two meetings were read and confirmed.

Election of Officers.—The following were elected officers for the ensuing year: *Chairman*, Dr. A. Hope Walker; *Vice-Chairman*, Dr. F. K. Weaver; *Representative on Branch Council*, Dr. A. B. Hudson; *Representative at Representative Meetings*, Dr. E. J. Smyth; *Honorary Secretaries*, Dr. H. B. Butler, Dr. E. J. Smyth; *Executive Committee*, Drs. Kendall, Kingsford, Morshead, Parker, Pearse, Sheaf, Sloman, and Winstanley.

Annual Report.—The annual report and balance sheet of the Division were presented by the HONORARY SECRETARY, and unanimously adopted.

Proposed Division of South-Eastern Branch.—The following proposal of the Brighton Division was considered:

That the South-Eastern Branch be divided into two smaller Branches, one to consist of that part of Kent which is already in the South-Eastern Branch, and the other of the

county of Sussex and so much of the county of Surrey as is already part of the Branch.

On being put to the vote the numbers were as follows: In favour 6; Against 0. Six members did not express any opinion.

Medical Inspection and Treatment of School Children.—The report of the Medico-Political Committee on this subject was then considered, and it was resolved:

That this Division approves of the recommendations of the Medico-Political Committee now issued to the Divisions in relation to the medical inspection of school children and treatment of those found defective, and especially disapproves of the latter being drafted on to medical charities, or referred to the Poor Law as at present constituted.

Whole-time Medical Officers of Health.—It was resolved that the Division express itself in favour of such appointments.

Reports from Hospitals and Medico-Political Committees.—Time did not allow of a detailed consideration of these reports, but a general approval of their tenor was expressed by members.

Papers, etc.—Dr. B. H. KINGSFORD read notes of a case of intestinal obstruction due to an impacted gall stone, and showed the specimen. Mr. H. B. BUTLER referred to a case which had recently been under his care, in which he had removed a number of stones from the gall bladder and in which 2 or 3 pints of bile were found in the peritoneal cavity at the time of operation. Several questions were asked by the CHAIRMAN and other members, to which Dr. KINGSFORD replied.

Report on Ophthalmia Neonatorum.—Mr. E. J. SMYTH called attention to some of the principal points in the report recently issued by the Special Committee on Ophthalmia Neonatorum, and it was unanimously resolved:

That this Division approves of the suggestions made in the report of the Committee in relation to the prevention of ophthalmia in new-born children, and especially considers it desirable that it should be made a notifiable disease under the Public Health Acts.

Vote of Thanks.—The meeting closed with a vote of thanks to the committee of the hospital for the use of the board room and for kindly providing tea.

HASTINGS DIVISION.

The annual meeting of the Hastings Division was held on Friday, May 28th, at the Eversfield Hotel at 4.15 p.m. Mr. F. W. S. CULHANE (Chairman) not being present, Dr. E. KAYE-SMITH took the chair. Eight members were present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Officers.—The following members were elected as officers for the ensuing year: *Chairman*, Dr. E. Kaye-Smith; *Vice-Chairman*, Dr. Hill-Joseph, Bexhill-on-Sea; *Honorary Secretary*, G. V. Hewland, M.D., 4, Eversfield Place, St. Leonards-on-Sea; *Representative for Representative Meeting*, Dr. E. Kaye-Smith, St. Leonards-on-Sea; *Representative on Branch Council*, Dr. J. W. Batterham; *Executive Committee*, Drs. G. A. Ballingall, A. W. Brodribb, F. W. S. Culhane, J. Farran Fry, Thomas Redmayne.

Representative at Annual Representative Meeting.—It was resolved that in the event of Dr. Kaye-Smith not being able to be present at the annual meeting of the Association in Belfast as Representative for Representative Meetings, the Chairman and Secretary shall be able to appoint a substitute.

Whole-time Medical Officers of Health.—A letter from the Medical Secretary was read re whole-time medical officers of health. It was proposed by Mr. FARRAN FRY and seconded by Dr. ALLFREY:

That all towns of 50,000 inhabitants or more should have a whole-time medical officer of health, and that his tenure of office should not be determined except with the consent of the Local Government Board.

SOUTHERN BRANCH:

PORSMOUTH DIVISION.

At a meeting of the Division held at 5, Pembroke Road, Portsmouth, on May 14th, at 3.30 p.m., Dr. W. CARLING in the chair, there were also present Drs. L. K. H.

Blackman, E. J. Biden, R.N., L. Maybury, A. Milne Thomson, T. A. Colt, J. G. Blackman, J. Phillips, J. Ward Cousins, and B. H. Munby.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Matters Referred to Divisions.

Various matters referred by several committees of the British Medical Association were considered.

Whole-time Medical Officers of Health.—The question referred by the Public Health Committee as to the desirability of health officers being required to give their whole time to the work was discussed. The Executive recommended the Division to pass the following resolution:

That in the opinion of this Division medical officers of health should be debarred from engaging in private practice wherever practicable [SUPPLEMENT, BRITISH MEDICAL JOURNAL, January 3rd.]

It was proposed by Dr. L. MAYBURY and seconded by Dr. HACKMAN that the above recommendation should be adopted. Carried *nem. con.*

Medical Certification of Suitability for Hospital Treatment.—On the report on medical certification of suitability of patients for hospital treatment (SUPPLEMENT, BRITISH MEDICAL JOURNAL, February 27th), it was proposed by Dr. L. MAYBURY and seconded by Dr. T. A. COLT:

That a medical certificate of suitability for hospital treatment be required as a condition for hospital treatment, except in the case of casualties.

Carried unanimously.

Contributions to Hospitals by Employers and Employees.

—The report on contributions to hospitals by employers of labour and employees (SUPPLEMENT, BRITISH MEDICAL JOURNAL, February 27th), referred by the Hospitals Committee, was considered. It was proposed by Dr. BLACKMAN and seconded by Dr. HACKMAN:

That paragraph 150 (a), instead of standing in the report, be as follows:

That the contributions to hospitals by employers of labour and employees by means of weekly subscriptions and otherwise should not be considered as entitling the contributors to unlimited hospital or gratuitous medical attendance as at present seems to be claimed.

Carried unanimously.

It was proposed by Dr. HACKMAN and seconded by Dr. BIDEN:

That paragraph 150 (b) be rejected.

Carried unanimously.

Fresh Medical Institutions.—On the question as to fresh medical institutions, referred by the Hospitals Committee, it was proposed by Dr. J. PHILLIPS, seconded by Dr. MILNE THOMSON, and carried unanimously:

That it is desirable that no fresh public medical institution should be opened without previous consultation with the local medical profession, through some organized body, such as the Division of the British Medical Association in the area of which it is proposed to establish such new institution, and that it be an instruction to the Council to give effect to the principle in considering applications from Divisions for support in dealing with hospital questions.

Sanatoriums for Tuberculous Workers.—On the question as to sanatoriums for workers suffering from tuberculosis, it was proposed by Dr. MAYBURY, and seconded by Dr. BLACKMAN, and carried:

That Section 3, Subsection (a) be approved.

It was proposed by Dr. GREEN, seconded by Dr. HACKMAN, and carried:

That Section 3, Subsection (b), be approved, but amended as follows: That in line 6 delete the words "at the discretion of," replacing them with the words, "in consultation with."

It was proposed by Dr. J. PHILLIPS, seconded by Dr. HACKMAN, and carried:

That Section 3, Subsection (c), be approved.

Representation of Local Profession on Hospital Boards.

—With regard to the question as to representatives of the local medical profession on boards of hospitals and similar bodies, it was proposed by Dr. BLACKMAN, seconded by Dr. J. GREEN, and carried *nem. con.*:

That the action taken by the Hampstead and Wandsworth Divisions be not supported.

To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

ANNUAL GENERAL MEETING.

Notice is hereby given that the 1909 Annual General Meeting of the British Medical Association will be held in the Assembly Hall, Belfast, on Friday, July 23rd, at Twelve noon.

[This Meeting is to comply with Article XII, and will adjourn forthwith until Tuesday, July 27th, at 2.30 o'clock.]

ANNUAL REPRESENTATIVE MEETING.

Also, notice is hereby given that the 1909 Annual Representative Meeting will be held in the Assembly Hall, Belfast, on Friday, July 23rd (and following days as required), immediately after the Annual General Meeting, fixed for Twelve noon, on Friday, July 23rd.

BY ORDER OF THE COUNCIL,

GUY ELLISTON.

May, 1909.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH: BATH DIVISION.—The annual meeting of this Division will be held at the Royal United Hospital on Saturday, June 26th, at 6.0 p.m. Business: (1) To elect officers. (2) To receive annual report. (3) To consider business of Annual Representative Meeting. (4) To consider matters referred to Divisions (see SUPPLEMENT to BRITISH MEDICAL JOURNAL, May 8th). (5) To modify Divisional Rule No. 7, for ensuring earlier appointment of Representative.—D. LESLIE BEATH, Honorary Secretary.

BIRMINGHAM BRANCH.—The annual meeting of this Branch will be held at the Medical Institute, Edmund Street, on June 17th, at 3.30 p.m. Business: (1) Election of officers. (2) Election of Representatives on Central Council. (3) Annual report of Council and balance sheet. (4) Report of Ethical Committee. (5) Report of Pathological and Clinical Section. (6) The President for the ensuing session, Dr. Herbert Manley, will deliver his Inaugural Address on the "Medical Aspect of the Report of the Poor Law Commission.—ALBERT LUCAS, J. FURNEAUX JORDAN, Honorary Secretaries.

BIRMINGHAM BRANCH: CENTRAL DIVISION.—The annual meeting of this Division will be held at the Medical Institute on Wednesday, June 30th, at 3.30 p.m., at which the election of officers for the ensuing year will be held. Nominations in writing for the offices of Chairman, Vice-Chairman, and two Honorary Secretaries must reach the Honorary Secretaries not later than Wednesday, June 9th.—A. W. NUTHALL, W. TRACY LYDALL, Honorary Secretaries.

BORDER COUNTIES BRANCH.—The annual general meeting of the Branch will be held in the County Hotel, Carlisle, on Friday, June 25th. Business: To receive the report of the council for the past year; to elect the officers of the Branch; and Dr. Murdoch, of Annan, will deliver his Presidential address. Further details of information will be sent to each member by post.—FRANCIS R. HILL, Honorary Secretary, 62, Warwick Road, Carlisle.

DORSET AND WEST HANTS BRANCH.—The summer meeting of this Branch will be held in Christchurch, Hants, on Wednesday, July 7th. Members wishing to read papers, show cases, exhibit specimens or propose new members, must communicate with the undersigned not later than Thursday, June 24th.—JAMES DAVISON, Honorary Secretary, "Strateplace," Bournemouth.

EAST ANGLIAN BRANCH.—The annual meeting of the Branch will be held at the Grand Hotel, Clacton-on-Sea, on Thursday, July 1st.—B. H. NICHOLSON, East Lodge, Colchester, Honorary Secretary.

EAST YORK AND NORTH LINCOLN BRANCH.—The annual meeting of this Branch will be held at the Grimsby Hospital on Saturday, June 19th. Further particulars as to the time of meeting and business to be transacted will be published later in the JOURNAL and communicated by circular to each member.—EDWARD TURTON, M.D., Honorary Secretary, 1, Albion Street, Hull.

EDINBURGH AND FIFE BRANCHES.—The attention of members of these two Branches is drawn to the fact that nominations for the election of two members upon the Central Council of the Association should be sent in to one of the Secretaries not later than June 16th.—A. LOGAN TURNER, 27, Walker Street, Edinburgh; FRANCIS D. BOYD, 22, Manor Place, Edinburgh; BALFOUR GRAHAM, Leven, Fife.

FIFE BRANCH.—The seventh annual meeting will be held in the Hotel, Thornton, on Thursday, June 17th, at 3 p.m.—R. BALFOUR GRAHAM, Honorary Secretary, Leven.

GLASGOW AND WEST OF SCOTLAND BRANCH.—The annual meeting of the above Branch will be held in the Pathological Department, Western Infirmary, Glasgow, on Wednesday, June 9th, at 3 p.m. Business: (1) Minutes of previous meetings, (a) annual meeting, (b) special meeting; (2) reports: (a) secretary's, (b) treasurer's, (c) on the abuse of medical charity, (d) payment for attendance on street accidents; (3) election of office-bearers. At 4.30 p.m. Professor Robert Muir and assistants will give a pathological demonstration.—JAMES GRANT ANDREW, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—The annual meeting of the Branch will be held at Chester on Wednesday, June 16th. Members desiring to make scientific, clinical, or other communications will please communicate at once with the Branch Secretary, F. CHARLES LARKIN, 54, Rodney Street, Liverpool.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—The annual meeting will be held at the Board Room of the Altrincham Hospital at 5 p.m. on Thursday, June 10th. (Afternoon tea 4.30 p.m.) The principal business is the appointment of officers and committee for 1909-10. Every member is eligible for every office; nominations in writing, and signed, may be sent to the Honorary Secretary at any time before June 8th. The membership of the associates lapses also at this date. Dinner at the Brooklands Hotel, 7.15 p.m. Names must be given to the Honorary Secretary not later than first post on June 10th. *Clinical and Scientific Meeting.*—A meeting will be held at the Board Room of the Altrincham Hospital at 5 p.m. on Thursday, June 24th. (Afternoon tea 4.30 p.m.) Clinical cases will be shown, and Dr. Rhodes will read a paper on Scarlet Fever, to be followed by a discussion. Dinner at the Brooklands Hotel, 7.30 p.m. Ladies invited. Names must be given to the Honorary Secretary by Monday, June 21st, in order that he may have time to cancel the arrangement, so far as the ladies are concerned, if there are not sufficient acceptances (say, five or six at least). The committee hopes that this will not be necessary, but if it is the dinner will be held under ordinary conditions, members to give their names not later than first post on June 24th. (If any alteration of programme becomes necessary it will be advertised in the SUPPLEMENT, which members should consult regularly.)—T. W. H. GARSTANG, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: ST. PANCRA'S AND ISLINGTON DIVISION.—The annual meeting of this Division will be held on Tuesday, June 8th, at 9 p.m., at the Midland Grand Hotel, King's Cross.—W. GRIFFITH, Honorary Secretary.

MIDLAND BRANCH.—The annual meeting of this Branch will be held at the Leicester Infirmary on Thursday, June 10th. (1) The President-elect, Dr. R. Pratt, will give an address. (2) Election of Branch officers. (3) Annual report of the Branch. (4) Any other business.—ROBERT SEVESTRE, Honorary Secretary, London Road, Leicester.

MUNSTER BRANCH.—Nominations for a Representative of the Branch on the Central Council (in accordance with By-law 24) will be received up to June 5th by PHILIP G. LEE, 26, St. Patrick's Hill, Cork, Honorary Secretary.

MUNSTER BRANCH.—The annual general meeting of the Branch will be held on Saturday, June 12th, at 4.30 p.m., in the Rooms of the Medical Society, 74, South Mall, Cork. Representatives, officers, and council for 1909-10 will be elected, and any other necessary business transacted.—PHILIP G. LEE, 26, St. Patrick's Hill, Cork, Honorary Secretary.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—The annual meeting of the Branch will be held at Elgin on Saturday, June 5th.—J. MUNRO MOIR, M.D., Honorary Secretary, 4, Ardross Terrace, Inverness.

SOUTH-EASTERN BRANCH.—The sixty-fifth annual meeting of the Branch will be held in the Town Hall, Croydon, on Wednesday, June 23rd, at 2.15 p.m. Dr. J. J. MACAN (President-elect) kindly invites members to lunch at the Greyhound Hotel from 1 to 2 p.m. Agenda: In addition to the business of an ordinary meeting: (1) To receive the report of the election of new officers, who shall thereupon take office. (2) To receive the report of the Council on the affairs of the Branch and the annual financial statement. After the meeting members are invited by Dr. Pasmore to a garden party at the Mental Hospital, Warrington. The dinner will be held at the Greyhound Hotel at 6.15 p.m., charge 5s. Wine will be provided by the local members. Those who propose to be present at lunch, the garden party, or dinner, are requested to signify their intention to Dr. E. H. WILLOCK, 91, London Road, Croydon, not later than Saturday, June 19th.—H. M. STEWART, Honorary Secretary.

SOUTH-EASTERN BRANCH: MAIDSTONE DIVISION.—The next meeting of this Division will take place on Thursday, June 17th, for the purpose of electing officers for the ensuing year. It has been proposed to have a dinner afterwards. The Honorary Secretary would feel greatly obliged if each member would kindly intimate his intention of being present or not as early as possible.—GEORGE POTTS, Honorary Secretary.

SOUTH MIDLAND BRANCH: BUCKINGHAMSHIRE DIVISION.—The annual meeting will take place on Tuesday, June 15th, at the Royal Bucks Hospital, Aylesbury, at 3.30 p.m. Agenda: (1) Election of officers: (a) Representatives on Branch Council; (b) Executive Committee; (c) Ethical Committee; (d) Representative to Annual Meeting and Deputy. (2) Receive Annual Report of Committee. (3) Instruct Representative to Annual Meeting: *re* Hampstead Hospital dispute; *re* title of "General Secretary"; *re* treatment of defective school children; *re* public medical services; *re* should all M.O.H.'s be whole-time officers? (4) Any other business. The following resolution will be moved: "That the Committee take steps to secure that every medical man in the area of the Division give an undertaking to accept no new club or contract work at a lower sum than that fixed as a minimum by the Association in the report on contract practice, namely, 5s. per adult member. Also to endeavour to secure united action in cases where the present club fees are lower than this amount and to report to the Division." Dr. Lauriston Shaw, Physician to Guy's Hospital, will open a discussion on "Dilatation of the Stomach and the Use and Abuse of the 'Emergency Exit.'" Tea will be ready punctually at 3.30 p.m.—ARTHUR E. LARKING, Honorary Secretary.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—The annual meeting of this Branch will be held at Malvern on Thursday, June 10th. To elect Branch officers and appoint members to the Central Council of the Association; to receive annual report of the Branch, and for any other business. Dinner.—C. S. MORRISON, Honorary Secretary.

YORKSHIRE BRANCH.—Nominations for the election of Representative members of the Central Council (two), each signed by at least three members, must be forwarded to me not later than June 15th. The present Representatives are Drs. Gorder and Sinclair White.—ADOLPH BRONNER, Honorary Secretary, 33, Manor Row, Bradford.

YORKSHIRE BRANCH.—The annual meeting of the Branch will be held at the Grand Hotel, Scarborough, on Saturday, June 26th.—ADOLPH BRONNER, Honorary Secretary, 33, Manor Row, Bradford.

YORKSHIRE BRANCH: BRADFORD DIVISION.—The annual meeting of the Division will take place on Tuesday, June 8th, at the Grand Northern Victoria Hotel, Bradford, at 8.30 p.m. Agenda: (1) Minutes. (2) Election of Officers, etc. (3) Election of Representative to the Representative Meetings. (4) Annual Report of Executive Committee. (5) Instruction of Representative. (6) Any other business.—J. BEATTIE DUNLOP, J. WHERRY WILSON, Honorary Secretaries.

YORKSHIRE BRANCH: LEEDS DIVISION.—A scientific meeting will be held in the Leeds Public Dispensary, North Street, Leeds, at 3.45, on the afternoon of Thursday, June 10th, when the following papers will be read and cases shown:—Mr. H. J. Roper: Notes on a Case of Pelvic Haematocoele. Dr. Trevelyan: A series of cases of Tuberculous Glands, etc., treated with tuberculin. Mr. Michael A. Teale: Case of high myopia, showing Weiss's line in the fundus. Case showing vascularized exudation projecting into the vitreous humour with white degeneration of some of the retinal vessels. Case in which Hess's operation has been done for complete paralytic palsy of the left lid. Mr. Seaton: Some cases of surgical interest. Mr. Alexander D. Sharp: Demonstration on the direct inspection of the larynx by Brünning's and Chevalier-Jackson's instruments.—JAS. ALLEN, Honorary Secretary.

MEMBERS ELECTED DURING THE MARCH QUARTER.

UNDER BY-LAWS 2 AND 3.

BY THE COUNCIL.

Basu, K. S., L.M.S., Assistant Surgeon, Khusab, Punjab
Bate, John Brabant, L.S.A., West African Medical Staff, Southern Nigeria
Campbell, James Hamilton, M.B., B.Ch., R.U.L., Captain R.A.M.C.
Crostwait, William Sylvester, Captain R.A.M.C., L.R.C.S.I., L.R.C.P.I., L.M.
Goodbody, Cecil Maurice, Captain I.M.S., F.R.C.S.I., L.R.C.P.Lond., M.R.C.S.Eng.
Hood, Thomas, M.R.C.S.Eng., L.R.C.P.Lond., Bathurst, Gambia, West Africa

Jarvis, Charles George, M.D. Paris, M.R.C.S.Eng., L.R.C.P.Lond., 81, Boulevard Malesherbes, Paris
Keir, John Duncan, Surgeon R.N., L.S.A.
Lakshminati, L.R.C.P.Edin., L.R.C.S.Edin., L.F.P.S.G., Dinapore Behar, India
William Ernest Craven, Lieutenant R.A.M.C., M.B., B.S.
Middleton-West, Stephen Harold, Lieutenant I.M.S., M.B., Ch.B. Vict., M.R.C.S., L.R.C.P. Rivaz, Percy Montourey, Surgeon R.N., M.B., B.S. Univ. Durh.
Scott-Moncreiff, William Elmsley, Major I.M.S., M.D. Edin.

Symes, Arthur Jessop, Lieutenant I.M.S., M.B., B.S. Lond., M.R.C.S.Eng., L.R.C.P. Lond.
Treich, John Benjamin August, M.R.C.S.Eng., L.R.C.P.Lond., Fanning Island, North Pacific Ocean
Vladimir Schrab Shapiro, Lieutenant I.M.S., L.M. and S., M.R.C.S.Eng., L.R.C.P.Lond.
White, Maurice Forbes, Captain I.M.S., M.F., Ch.B. Aberd.
Winkfield, William Dertram, Captain R.A.M.C., M.R.C.S.Eng., L.R.C.P.Lond.
Wright, Robert Ernest, Lieutenant I.M.S., M.B., B.Ch., B.A.O.

BY BRANCH COUNCILS.

Aberdeen Branch.

Cockran, J. D., M.B., Bridge of Walls, Shetland
Proffitt, A. C., M.D., Ballater, Aberdeen

Bath and Bristol Branch.

Blackett, J. F., M.B., 39, Fishponds Road, Bristol
Boucher, F. T., Esq., Hazlemere, Cotham Park, Bristol
Coleridge, A., M.B., 154, Coronation Road, Bristol
Davies, E. E., Esq., 7, Oakfield Road, Clifton
Emrys-Roberts, E., M.D., 5, Beaconsfield Place, Clifton
Hennipath, C. E. K., Esq., Royal Infirmary, Bristol
Hincke, A. C., M.B., Wells
Moxey, P., Esq., Salcombe Villa, Knowle, Bristol
Pinniger, W. J. H., M.D., 9, Beaconsfield Road, Clifton
Reese, D. W., Esq., Park View, Staple Hill, near Bristol
Short, L. J., M.B., General Hospital, Bristol
Squire, E. W., M.B., Royal Infirmary, Bristol
Treadgold, C. H., Esq., General Hospital, Bristol
Williams, E. C., M.B., 159, Whiteladies Road, Clifton

Birmingham Branch.

Bury, F. E., Esq., 35, Leam Terrace, Leamington
Delington, Clara, M.B., The Maternity Hospital, Birmingham
Torblitt, F. C., Esq., Appleton House, Queen's Road, Nuneaton
Walker, E. T., Esq., 362, Moseley Road, Birmingham

Bombay Branch.

Balsara, P. P., Esq., Prince of Wales's Charitable Dispensary Camp, Ahen
Gavin, Neil M., F.R.C.S.E., Irish Mission Hospital, Anand
Nowrange, Miss Kashbai, Cathedral Street, Bhuleswar
Stevens, H. W., Surgeon-General I.M.S., Poona

Border Branch. South Africa.

Pollock, A. M., M.B., East London, Cape Colony

Dorset Counties Branch.

Gillies, Hugh, Esq., New Abbey, Dumfries
Hart, Jas. D., M.B., 47, Castle Street, Dumfries
McCallum, A. D., M.B., Abbeytown, Carlisle
MacGibbon, Geo., M.B., Ivy House, Stranraer

Brisbane and Queensland Branch.

Harlin, Robina, M.B., Peak Downs, Clermont
L'Estrange, H., Esq., Brisbane
Looney, Dr. Chillaao
Roe, J. M., Esq., Muttaharra
Stewart, H. J., M.B., Albion, Brisbane
Thomson, Dr. Jean, Hospital for Sick Children, Brisbane
Thomson, J. Mowbray, M.B., Wickham, Brisbane
Ward, J., Esq., Howard

British Guiana Branch.

Greaves, Horatio A., Esq., Georgetown, Demerara

Burma Branch.

Dordi, J. B., Esq., 97, Dalhousie Street, Rangoon
Lauech, J. S., Esq., General Hospital, Rangoon

Cambridge and Huntingdon Branch.

Curt H. F., Esq., 46, Mary's Street, Ely
Jordan, A. M., M.B., Great Shelford
Linnell, R. McC., Esq., 8, Fitzwilliam Street, Cambridge

Colombo, Ceylon Branch.

Gunesekera, S. T., Esq., General Hospital, Colombo

Dorset and West Hants Branch.

Bell, J. C., Esq., West Coker, Yeovil, Somerset
Hardie, Robert, M.D., 11, Grand Avenue, West Southbourne, Bournemouth
Jefferies, J. F., Esq., Straits, Easton, Portland

Dundee Branch.

Anderson, John, M.B., Royal Infirmary, Dundee
Milne, A. M., M.B., 32, Bridge Street, Montrose
Moodie, William, M.B., University College, Dundee
Murray, E. F., M.B., Edgell, West Park Road, Dundee
Tiemey, T. B., M.D., 28, South Tay Street, Dundee

East Anglian Branch.

Bennett, Harold G., M.B., East Bergholt
Boswell, P. W., M.D., Aston Lodge, Lowestoft
Claridge, G. P. C., M.B., St. Giles Plain, Norwich
Coutts, D. K., F.R.C.S., 23, Surrey Street, Norwich
Gatssell, H. A., M.D., 130, Hamlet Court Road, Westcliff-on-Sea
Howie, J. C., M.D., Southend-on-Sea
Young, H. G. K., Esq., Bocking, Braintree

East York and North Lincoln Branch.

Jackson, Miss Ada, M.B., 255, Anlaby Road, Hull
Lewis, Miss Sybil L., L.R.C.P., 255, Anlaby Road, Hull
Lilley, G. W., Esq., 22, Williamson Street, Hull
MacGillivray, W. J. H., Esq., 188, Wellington Street, Grimsby

Edinburgh Branch.

Drennan, A. M., M.B., 35, Woodburn Terrace, Edinburgh
Snart, A. G. H., M.B., Blackhall, Midlothian

Fife Branch.

Russell, D. H., M.B., Canmore Street, Dunfermline
Stooke, Jessie J., L.R.C.P., 24, Woodhead Street, Dunfermline

Glasgow and West of Scotland Branch.

Dickie, David, M.B., 17, Berkeley Terrace, Glasgow
Graham, John, M.B., 73, Millbrae Road, Langside, Glasgow
Henderson, T. Beath, M.D., 25, Lansdowne Crescent, Glasgow
Murray, James Campbell, Esq., 30, Glenaege Cottages, Scotstoun, Glasgow
Prest, E. E., M.B., Glenatun Sanatorium, New Cumnock

Gloucestershire Branch.

Dighton, C. A. A., M.B., Loreburn, Montpellier, Cheltenham

Hong Kong and China Branch.

Walker, W. P., M.B., Staff Surgeon R.N., H. M. S. King Alfred, China Station

Jamaica Branch.

Farquharson, C. H., Esq., Port Maria, Jamaica

Lancashire and Cheshire Branch.

Barber, G. C. McL., M.B., 51, Princess Road, Moss Side, Manchester
Barnes, G. C., M.B., City Hospital, Park Hill, Dingle, Liverpool
Booth, L. T., Esq., 321, Ashton New Road, Manchester

Brown, W. McIntyre, M.D., 2, Park Road

West Kirby
Buchanan, J. D., M.B., Salford Union Infirmary, Pendleton

Buckley, G. G., M.D., Municipal Offices, Crewe

Byrne, A. W., M.B., Lieutenant R.A.M.C., Military Hospital, Preston

Campbell, T. F., M.B., Fuldge House, Burnley

Coates, W. R. A., Esq., Inveravon, Haslingden

Cooke, G. H., M.D., 28, Hall Street, St. Helens

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GENERAL COUNCIL

OF

MEDICAL EDUCATION AND REGISTRATION.

SUMMER SESSION, 1909.

Wednesday, May 26th.

Sir DONALD MACALISTER, K.C.B., President, in the Chair.
THE minutes of yesterday's proceedings were agreed to.

DISCIPLINARY CASES.

During the hearing of these cases, Mr. Lushington appeared as Legal Assessor, and Mr. Winterbotham as Solicitor for the Council.

The first case which came on for consideration was that of Robert Kirk, formerly registered as of Delmynden, Carshalton, Surrey, but now of Willington, co. Durham, M.B., Mast. Surg. 1897, Univ. Glasg., who had been summoned to appear before the Council.

Mr. W. E. HEMPSON, solicitor, appeared for Mr. Oliver Hepple, the complainant.

THE PRESIDENT stated that the accused practitioner had sent a letter stating that he did not propose to attend.

Mr. WINTERBOTHAM read the notice which was sent to the defendant containing the charge, which was that he abused his position as a medical man by committing adultery on various occasions with a married woman when professionally attending her and her children, and that in relation thereto he had been guilty of infamous conduct in a professional respect.

Mr. WINTERBOTHAM read a letter which had been received from the accused practitioner in which he stated that he had been guilty of the adultery charged against him; but it was committed in his own house, and not as between doctor and patient; he had no defence to offer.

Mr. W. E. HEMPSON then read the complainant's case, and stated that as the accused practitioner had admitted the adultery, it was not necessary for the Council to go into the facts, beyond pointing out that the accused had been the medical attendant of the family for a period of six years. He further stated that the adultery did not take place on a solitary occasion, but that it occurred twenty or thirty times; therefore it was perfectly clear that these acts were going on for a considerable period of time. He submitted that the Council would be quite satisfied that the relation of medical man and patient existed between the parties, and that the sacred trust which was imposed in a medical man had been violated by this practitioner. In the confession which had been made by the accused practitioner he admitted that he took advantage of the absence of the husband, who was a male nurse.

The husband was then called, and in examination bore out the opening statements of Mr. HEMPSON.

THE parties and strangers were directed to withdraw. On their readmission.

THE PRESIDENT announced the decision of the Council as follows: Mr. HEMPSON,—I have to announce to you that the Council have judged Robert Kirk to have been guilty of infamous conduct in a professional respect, and have directed the Registrar to erase from the *Medical Register* the name of Robert Kirk.

The next case which the Council considered was that of Christopher Richard Kempster, registered as of Whitehall, Bank Place, Collins Street, Melbourne, Mem. R. Coll. Surg. Eng., 1896, Lic. R. Coll. Phys. London, 1896, who had been summoned to appear before the Council.

Dr. Hugh Woods represented the complainants, the London and Counties Medical Protection Society, Limited. The defendant did not appear.

Mr. WINTERBOTHAM read the notice which was sent to the defendant at Melbourne, Australia, in which the charge was:

That you have accepted and continue to hold the appointment of Chief Surgeon to the Freeman and Wallace Electro-Medical Institute, of Melbourne and Sydney, Australia, a company which habitually seeks to attract patients by the insertion in the *Argus* newspaper of advertisements of a scandalous, offensive, and indecent nature, accompanied by a portrait of yourself and a statement of your qualifications, and that in relation thereto you have been guilty of infamous conduct in a professional respect.

Dr. HUGH WOODS described the nature of the advertisements, characterizing them as most objectionable. When the matter was brought to the attention of the defendant, he suggested that he had been drawn into a contract with the company, in comparative ignorance of the nature of it; that he did not in any way approve of the advertisements or the methods of the institute, and that he was withdrawing from it. Unless Mr. Kempster was in a position to prove those things to the Council, and also to prove that he did all that he could to rectify the position in which he was placed, he (Dr. Wood) should ask the Council, without the slightest hesitation, to pronounce him guilty of conduct infamous in a professional respect. Dr. Woods handed to the members of the Council the advertisements of which he had spoken.

THE PRESIDENT said as the accused practitioner was not present, but had sent several communications, he thought those parts of the communications which were relevant to the present charge should be read by the Solicitor.

Mr. WINTERBOTHAM said that the attention of the Council was first brought to this matter by the Medical Board of Victoria. Mr. Kempster wrote to the Registrar of the General Medical Council stating that he had entered into an agreement with the company, and it became necessary, in consequence thereof, that his name should appear from time to time in the public press; and although he was not, by so doing, infringing the regulations of the Australian Medical Board, yet it had been pointed out to him that he was infringing the regulations of the General Medical Council. Mr. Kempster had further stated that he had tried to get his agreement cancelled, but without success; and therefore he wished his name removed from the *Register* of the General Medical Council until the agreement had expired. He stated that he had since taken steps to annul his agreement with the company, and had severed his connexion with it since December 27th last. Mr. Winterbotham pointed out to the Council that there was no expression of regret whatever on the part of Mr. Kempster, or any admission of any offence; the only suggestion was that he had not broken any of the local regulations. The Council had also received a letter from the Secretary to say that the Australian Board had no statutory power to remove his name.

Parties and strangers were directed to withdraw. On their readmission.

THE PRESIDENT said: Dr. Woods, I have to announce the decision of the Council as follows: That the Council do now judge Christopher Richard Kempster to have been guilty of infamous conduct in a professional respect, and do direct the Registrar to erase from the *Medical Register* the name of Christopher Richard Kempster.

The Council next dealt with the case of Charles William Brown, registered as of 7, Chorton Road, Hulme, Manchester, M.B., Mast. Surg. 1899, Univ. Edin., who had been summoned to appear before the Council.

Mr. Alfred Tarbolton (of the firm of Brett, Hamilton, and Tarbolton, solicitors, of Manchester) appeared for the complainant, Mr. Thomas George Paterson; Mr. Bodkin (instructed by Mr. W. H. Martin, King Street, London) appeared for Dr. Brown.

Mr. WINTERBOTHAM read the notice which had been served on the accused practitioner containing the charge, which was as follows:

That you have employed as your assistant in connexion with your professional practice a person not duly qualified or registered under the Medical Acts—namely, Mr. Amery—and have knowingly allowed him on your behalf to attend and treat patients in respect of matters requiring professional discretion or skill, and that in relation thereto you have been guilty of infamous conduct in a professional respect.

Mr. TARBOLTON, in opening the case for the complainant, stated that the case arose under the following circumstances: Mr. Paterson was called in to visit a family of the name of Simpson in 1908, and was then told certain facts which gave him the impression that Dr. Brown was employing an unqualified man named Mr. Amery as his assistant for work for which he ought not to have employed him. This was not a personal matter with Mr. Paterson, but he disclosed these facts to the Chairman of the West Manchester Division of the British Medical Association, omitting the name; it was brought before the Division, and it unanimously ordered a complaint to be sent to the Council, and he (Mr. Tarbolton) had the names of twelve doctors.

Mr. BODKIN said he was sorry to interrupt the opening, but what had they to do with what twelve doctors may have thought or said? He did not know, of course, what was coming, but he asked his friend to confine his opening remarks to what was relevant to the inquiry, and to those things of which he had had notice.

Mr. LUSHINGTON requested Mr. Tarbolton to confine himself to the facts which he intended to prove, and to comment only on those facts.

Mr. TARBOLTON said he was going to put Mr. Paterson forward to prove that the twelve gentlemen at the inquiry did say what he was about to say.

Mr. LUSHINGTON thought that would not quite do; the charge the Council was inquiring into was a little beyond that.

Mr. TARBOLTON (continuing) said that the first case related to the Simpson family. A Miss Jane Simpson, who was present, from April, 1904, till August, 1908, was being regularly attended by Mr. Amery; she would say that they always called him "Dr. Amery"; and he always allowed them to call him "Dr. Amery." He was paid 2s. 6d. a visit. The medicine came from Dr. Brown's surgery. Mrs. Simpson and Miss Simpson would say that they had called for medicine at Dr. Brown's surgery, and had there seen Dr. Brown; Dr. Brown knew their identity perfectly well. It was quite true that only Mr. Amery called at the house, and that Dr. Brown never charged them. But it was to be assumed that Dr. Brown must have known, through seeing them there, that Mr. Amery was attending them; Dr. Brown could not say that Mr. Amery was attending them without his knowledge. With regard to Mr. Simpson, the father of this girl, he was taken seriously ill in November, 1907. Mr. Paterson was sent for, but he was also ill, so Mr. Amery was sent for. Mr. Amery called at 11 a.m., and found that Mr. Simpson was suffering from pneumonia. At 2 p.m. Dr. Brown called without being requested to do so, and Mr. Amery called again at 8 p.m. On November 21st Dr. Brown called at 1 p.m. and Mr. Amery at 7 p.m. On the 22nd Dr. Brown called at 1 p.m.; he promised to call again at 2 p.m., but failed to do so. Mr. Simpson died at 2.30. After the death Mr. Amery called at 4.30; that would account for seven visits. Mr. Paterson would prove that the custom in that part of the country was to charge 2s. 6d. a visit; therefore, those seven visits at 2s. 6d. would make 17s. 6d., the amount of the bill sent in. Dr. Brown's statement was that he was there five times, for which he charged, presumably, 3s. 6d. a visit, and that would amount to 17s. 6d. That was disputed. The ladies would say that Dr. Brown and Mr. Amery called alternately, and that there were seven visits. Mr. Paterson would prove that 2s. 6d. was the regulation fee in the district. The next case was that of the same daughter, who was suffering from a swollen face. She was then taking medicine for her eyes from Mr. Amery. Mr. Amery was sent for, and he advised her to stop that particular medicine. He said he would visit her the next day, but he did not; Dr. Brown came in his place. The case for the complainant was that those cases which he had indicated to the Council proved that Dr. Brown was knowingly employing Mr. Amery to perform functions which only a qualified man was entitled to perform. Dr. Brown had not made a statutory declaration in reply, but had simply sent two letters in which he stated he had merely sent Mr. Amery to attend Mrs. Pinder, and it was significant he did not deny Mrs. Pinder's statement that Mr. Amery carried out the actual delivery. The next class of case was with regard to two nurses during the period February, 1906, to February, 1908. They proved that there were constant operations going on at the McAlpine Home. There were three classes of operations at which these nurses had assisted when Mr. Amery administered anaesthetics: one class was operations on private patients at the home; the second was on private patients at their residences, and the third was on patients who were in the home. Dr. Brown, in his reply, ignored Nos. 1 and 2 altogether, although one of the nurses alleged she assisted at 15 cases at which Mr. Amery administered the anaesthetic and the other nurse about 12 cases. Dr. Brown alleged that his services were gratuitous because he was the honorary surgeon, which was rather shirking the complaint. The third and fourth class of case bore on the

locumtenent whom Dr. Brown had once employed, named Dr. Burgess. Dr. Burgess had made a declaration in which he said he had acted for three months, during 1907, when Dr. Brown was ill, and he found that Mr. Amery was known by all the patients as "Dr. Amery." He used to look over the day book every morning and see the names of the patients, and when he, Dr. Burgess, was attending a particular patient she would tell him she did not agree with his advice and she wanted to see Dr. Amery, and when she was told that Dr. Amery was not a qualified man, Dr. Brown had rebuked him for having disclosed that fact. Mr. Tarbolton called the following evidence in support:

Dr. THOMAS GEORGE PATERSON (in reply to Mr. Tarbolton) said he had heard the opening statement, which was correct. He was not acting with any personal feeling in the matter, but with the full authority of the West Lancashire Division of the British Medical Association. The McAlpine Homes were maternity homes for servant girls and others who had become pregnant; they were not used as private homes by doctors. The usual fee in the particular district of Manchester referred to was 2s. 6d. for a visit and medicine.

Cross-examined by Mr. BODKIN: Mrs. Simpson first became a patient of his about fifteen years ago, but he could not say he was still her medical adviser. He attended her from time to time. In November, 1907, he was ill when Mr. Simpson died and he was not sent for to attend him. Young Mr. Simpson called and informed him of his father's death, when Mrs. Paterson asked who had attended his father, and she was informed Doctor Brown. Dr. Paterson did not attend any of the Simpson family from then until August, 1908. The Justice of the Peace who went to Mrs. Simpson for the purpose of her making a declaration was also a medical man and a friend of his. Dr. Burgess had never acted as his locumtenent or otherwise; 3s. 6d. was not the usual charge in the district in which the Simpsons lived.

Mrs. MARY ANN SIMPSON, in answer to Mr. Tarbolton, said she was the widow of Mr. W. Simpson. In April, 1904, Mr. Amery's mother said she would send Mr. Amery to see her daughter with regard to her eyes. He attended, and continued to visit her for four years and five months. She thought he was a properly qualified man, and she called him "Dr. Amery"; he never called himself anything different. He called once a week, and sometimes twice. He examined her daughter's eyes, and gave her drops and medicine. He directed her to go to Dr. Brown's surgery for medicine every time. She did so and had seen Dr. Brown there, whom she knew by sight, and he had seen her. He had often called her by name, and asked, "Are you waiting for medicine?" and when she replied "Yes," he asked what name, and she replied "Simpson," and he gave it to her. Dr. Brown had never called at her house until the beginning of July, 1908, to see her daughter. In November, 1907, her husband was taken ill, and she sent for Dr. Paterson, but he was ill at the time and could not come. Dr. Amery was sent for. He attended and said her husband was very ill and had pneumonia, and that he would call again. He did nothing beyond saying to her husband that he had pneumonia. He did not examine him, but sent Dr. Brown. When Dr. Brown came he saw her daughter, who told him she was under Dr. Amery for sore eyes. He merely replied, "Oh." After Dr. Amery called, on November 21st Dr. Brown attended in the morning and Dr. Amery in the evening. On November 22nd her husband died. Dr. Brown attended twice on that day, and Dr. Amery also called. There were in all three visits by Dr. Brown and four visits by Dr. Amery. She had a bill for those attendances, which she paid to Dr. Amery when he came to attend her daughter on the Saturday. She gave him a sovereign, half a crown of which was for the attendance on her daughter. She had been paying at the rate of 2s. 6d. a visit, and she assumed that she was paying at that rate. Subsequently her daughter developed goitre, and she sent for Dr. Amery. That would be about the beginning of July, 1908. He said a little change would do her good, and that he would call the next day. The next day Dr. Brown called and said that as he was in the neighbourhood he had called instead of his assistant.

Cross-examined by Mr. BODKIN: She wrote out her declaration herself in the presence of Dr. Paterson. She knew Dr. Worswick, the Justice before whom she made the declaration, quite well as a doctor. She did not know whose writing the declaration was in, but it was brought to her by Dr. Worswick to declare, and she had not seen it before he produced it to her to sign it. She could not say where he had got it from. He told her he had come on behalf of Dr. Paterson. Her husband knew Mrs. Amery, the mother of Dr. Amery, and it was through her going to where her husband was employed that they got to know him. She personally did not know Mr. Amery at all until the day he called to see her daughter. She could not say how long her husband had known Mrs. Amery before Dr. Amery attended her daughter. Mr. Mellor, an oculist in Manchester, attended her daughter before Dr. Amery saw her. It was a very expensive matter, and she and her husband decided, as they had heard Dr. Amery was very clever, to get him to attend her daughter, as it would be cheaper than continuing with the oculist. She had to go to Dr. Brown's surgery for the medicine. Dr. Brown never examined her daughter's eyes or treated her in any way. The bottle of lotion which she obtained from the surgery was always marked "Mrs. Simpson." She obtained the lotion or medicine on every occasion from Dr. Amery, and any words exchanged between herself and Dr. Brown were merely casual observations as she was going in or out of the surgery. Up to 1907 her regular medical attendant was Dr. Paterson, but he had not attended any member of her family for some three or four years before 1907. At the time her husband was taken ill he would not see Dr. Amery, although he was in the house, as he did not like him. She sent her son for Dr. Amery to come and see her husband, and directly he came he went away and sent Dr. Brown. It was not true to suggest that Dr. Brown called five times to see her husband: it was only three times. She paid the bill to Mr. Amery herself. Half a crown was for himself for one attendance for her daughter's eyes, and 17s. 6d. was for Dr. Brown. Dr. Brown saw her daughter in July, 1908; he merely said she had better go away to the seaside. She had never had any account from Dr. Brown in respect of this visit, neither was there any reference to that visit in her first declaration. Her second declaration was brought to her by Dr. Paterson, already written out, as he knew the facts she had stated. She had not stated the facts about the attendance on her husband before she made the declaration. She was still a patient of Dr. Paterson when it was necessary.

By Mr. LUSHINGTON (Legal Assessor): When she went to the surgery she had seen Dr. Brown there when Mr. Amery was not there; he merely said, "Good-evening, are you waiting for medicine?" Mr. Amery had handed her medicine in Dr. Brown's presence. Dr. Brown knew her by sight quite well and also by name. When she got the bottle the name "Miss Simpson" was written on it; it was medicine to be taken internally. The receipt for 17s. 6d. was by Dr. Amery. She saw him sign it. During the four years Dr. Amery was attending her daughter, Dr. Paterson was her regular medical adviser, but she did not think he knew of Dr. Amery being there. During the time Dr. Paterson never attended her daughter at all. She had seen Dr. Paterson during that time, but he had not been to her house to see her. She called him her regular medical adviser because she used to go to him when she wanted a medical man. She never saw Dr. Brown make up the medicine which she got for her daughter; it was sometimes handed to her by the boy and sometimes the servant; Dr. Brown never gave it to her himself, although he saw her take it. During the four years that Dr. Amery was seeing her daughter from week to week she never got a bill from Dr. Brown, neither did she have Dr. Brown in the house until he came to see her husband. There was no other account owing to him, except in respect of her husband.

JANE S. SIMPSON, in reply to Mr. TARBOLTON, said she was the daughter of the last witness and lived with her mother. She was attended by Dr. Amery for four years and five months, once a week and sometimes twice a week. When he came he merely examined her eyes through a glass and gave her medicine and lotion. She continued to take the medicine until August last year when her neck

got bad. She had been herself to Dr. Brown's surgery for the medicine and had seen Dr. Brown come out of the consulting room. She merely said "Good-evening" to him and nothing more. He never gave her the medicine. It was given to her by the boy.

Mr. TARBOLTON then read the declarations of Jessie Garrett Taylor, Elizabeth Greenwood, Emily Gertrude Pinder, Sarah Jane Holmes, and Dr. Edward Burgess, in support of the case on behalf of the complainant.

At the request of Mr. BODKIN, the Council resolved to hear the evidence of two medical men, called on behalf of the respondent as to character and reputation, in order that they might return to their practice.

Dr. T. ARTHUR HELME, in reply to Mr. BODKIN, said he was a Doctor of Medicine of Edinburgh, a Member of the Royal College of Physicians, London, and honorary surgeon to the Northern Hospital for Women and Children at Manchester. He had also been President of the Lancashire and Cheshire Branch of the British Medical Association. He had practised in Manchester for twenty years, and during the whole of that time had known Dr. Brown and had met him on many occasions, professionally and otherwise. With regard to the character and reputation which Dr. Brown bore in Manchester his opinion was that Dr. Brown was a man of high standing in the profession, and in his (Dr. Helme's) capacity as Honorary Secretary and as President of the Lancashire and Cheshire Branch of the British Medical Association and President of the Division he had never heard one word or suggestion against him, although all ethical matters in the district were dealt with. He was well acquainted with the locality where Dr. Brown practised, and a charge of 3s. 6d. and upwards in that neighbourhood was the usual charge; half a crown a visit with medicine was not. With regard to the allegation that this matter had been brought before the General Medical Council by the Association, he desired to say what he knew of the matter. He had understood that it was a personal dispute between two medical men. He volunteered his services to settle it, and with that end had called upon the Honorary Secretary of the Division in which these two doctors lived. That gentleman had told him that Dr. Paterson had made a complaint against Dr. Brown to the Division, which had decided not to deal with it. The rule in that Division was that no ethical matter could be discussed unless notice of the complaint had been made to the person accused. In this case the Honorary Secretary informed him that Dr. Brown had not been communicated with, and therefore the Division, by its own rule, was incapable of dealing with the question.

Mr. ARTHUR WILSON CHAPMAN, in reply to Mr. BODKIN, said he was a Bachelor of Medicine and Master of Surgery, Aberdeen, a member of the Manchester City Council, Deputy Chairman of the Tramway Committee and Chairman of the Midwives Supervising Board and a Justice of the Peace for the City of Manchester. He had practised in Manchester for twenty-three years, and had known Dr. Brown since he first came to Manchester about twenty years ago. He had met him constantly, and had had many opportunities of forming an opinion as to his character, which was of the highest. He knew the district in question well; 2s. 6d. to 3s. 6d. was the usual fee.

THE PRESIDENT pointed out that the last two witnesses had spoken to something more than character.

Mr. BODKIN replied that it was for the other side to cross-examine them. This Mr. Tarbolton did not desire to do.

The further hearing was then adjourned until the following day.

Thursday, May 27th, 1909.

Sir DONALD MACALISTER, K.C.B., President, in the Chair.

The minutes of the previous day's proceedings were taken as read and confirmed.

UNIVERSITY OF BRISTOL.

THE PRESIDENT stated that he had received from the Privy Council a copy of the Bristol University Bill. The bill had passed the second reading and the report stage in the House of Lords, the paragraphs which related to the

General Medical Council were drawn up on the lines of the Act passed with regard to the University of Sheffield.

7. *Power of University to hold Examinations under 19 and 50 Vict., c. 48.*—The University is hereby empowered to hold qualifying examinations in medicine surgery and midwifery for the purpose of granting a diploma or diplomas conferring the right of registration under the Medical Acts as if the University had been a University in the United Kingdom legally qualified at the passing of "The Medical Act 1856" to grant diplomas in medicine and surgery and the provisions of Part I of that Act shall be read and have effect accordingly.

8. *Power of University to Choose Representative on General Medical Council.*—The Council of the University shall be entitled to choose one representative to be a member of the General Council constituted by the Medical Acts and Section 7 of "The Medical Act 1856" shall be read and have effect as if of the University had been expressly included therein. Provided always that the fees for attendance and the travelling expenses of such member payable under Section 12 of "The Medical Act 1858" shall not be paid from the funds of the General Council or of the Branch Council for England until such time as upon the representation of the General Council or of the Privy Council made in the manner set forth in Sections 10 and 19 of "The Medical Act 1856" and subject to the provisions therein contained His Majesty may by Order in Council appoint.

DISCIPLINARY CASES.

The Council then proceeded to the consideration, adjourned from May 26th, of the case of Dr. Charles William Brown.

Mr. TARBOLTON stated that after what occurred on the previous day he felt it his duty to advise his client to wire for the two nurses and Mrs. Pinder. These persons were now present and ready to be examined or cross-examined.

The PRESIDENT pointed out that the case for the complainant was technically closed, but as the statutory declarations of these people were put in the Council would allow them to be tendered for cross-examination.

Mrs. Pinder, Nurse Elizabeth Greenwood, and Miss Jessie Garrett Taylor were then cross-examined on their declarations by Mr. BODKIN.

Mr. BODKIN, in opening the case on behalf of the respondent, said Dr. Brown had practised for twenty-one years in this particular district of Manchester, and until March, 1909, there had never been a breath of suspicion against his professional honour until after Dr. Paterson had discovered that Mr. Simpson had been attended by Dr. Brown. He particularly drew attention to Dr. Paterson because he was the complainant who insisted on coming to this tribunal, and who would have no intermediary, who would have no suggestion of any possible explanation from the person he was intending to accuse; who rejected Dr. Helme's suggestion that if there was a dispute between two members of the same Association in the same district he, as President of the Branch, was the person to decide between them. Dr. Paterson would have the Council believe that this case was specially sent—not by him, except as the mere instrument—after consideration of it by a Branch of the British Medical Association in Manchester. There was not a word of truth in that statement. Dr. Helme had taken the trouble to come to speak to Dr. Brown's reputation, and also to explain that the reason why the Association in Manchester could not consider the accusation was because no notice to the accused had been given. The case had been growing and developing since last November. The Council would not have failed to notice that from then to May the only statements of declarations were those of Mrs. Simpson and her daughter. It was not until they learnt that Dr. Brown was represented by his solicitor and had sent in a denial of these allegations to this tribunal that Dr. Paterson searched heaven and earth and Manchester to get evidence in support of the accusation, which was that Dr. Brown was in the habit of practising through an unqualified person. Then what did they find? A couple of probationary nurses and a Mrs. Pinder and Dr. Burgess. Dr. Burgess was not present in support of the statements in his declaration, which he, counsel, specifically challenged. Why had he not attended to support the statements contained in his declaration? It had been said that the simple reason was that the matter was not of sufficient importance for Dr. Burgess to be present. He commented on the manner in which the declaration had been obtained, Dr. Paterson and Dr. Worswick, the Justice of the Peace before whom they were

made, going to the declarants' houses, and producing the declaration from his pocket already prepared from something written out by a solicitor, who admittedly made mistakes. The charge against Dr. Brown was that he had been covering an unqualified practitioner. He, Mr. Bodkin, supposed it was professional misconduct for a professional man to spread himself over a larger area of practice than would otherwise legitimately fall to him by getting unqualified persons to do the work. If that was the true significance of the accusation of covering, he submitted there was not a tittle of evidence in this case to support it. The true test of professional misconduct was whether the person accused enriched himself at the expense of his brother practitioners in a particular neighbourhood by getting fees through sending out an unqualified representative. With regard to Mr. Amery, the Council had not to consider, his position, except as affecting Dr. Brown. Mr. Amery attended Miss Simpson at the special request of his mother and Mrs. Simpson. It might not from an unqualified assistant's point of view have been a prudent thing to do, but from the first time he did it to the last Dr. Brown had no knowledge of it. There was not a single entry, and nothing in his system of book-keeping which could have raised any suspicion with regard to Mr. Amery so as to affect Dr. Brown. At first Mr. Amery obtained the drugs for the medicine for Miss Simpson from a chemist in the immediate neighbourhood, but, as they were expensive drugs, after a time he asked Dr. Brown whether he might make some medicine up for a person who could ill afford to pay for it. It was in that way that he did from time to time make up this medicine which came from Dr. Brown's surgery, from Dr. Brown's stock of drugs, but with no knowledge on Dr. Brown's part of the person to whom it was to go or under what circumstances the medicine was being supplied. The point was, How did the evidence affect Dr. Brown? It was not until November, 1907, that Dr. Brown himself went to the Simpsons' house, and then upon a totally different matter. The only entries of the name of Simpson in any part of Dr. Brown's books was on November 20th, 21st, and 22nd, 1907; there they ceased, and they never commenced again. That the Simpsons may have gone to his surgery was not denied by Dr. Brown, but in what circumstances? Counsel then reviewed the evidence on behalf of the complainant in great detail, and commented upon the fact that Dr. Paterson did not appear as a witness. He suggested that the whole motive which had animated the present proceedings was malicious, and that where the reputation and practically the life of a man was at the disposal of the Council it would not approve of such conduct as had been brought to its attention in this matter. He invited the Council to scrutinize the evidence most carefully and closely before coming to a conclusion, and he concluded by submitting that there was not a particle of evidence to show that Dr. Brown was spreading himself over a larger area than he justifiably ought to have done, or that he was enriching himself by fees which ought to have gone into the pocket of another medical man. Taking that view of the case, he was quite sure that it would be the pleasure of the Council to acquit Dr. Brown of the charges which had been so rashly and improperly made against him.

Dr. Brown was then called, and stated his qualifications and where he carried on practice. He was a member of the British Medical Association. He employed Mr. Amery as his dispenser and book-keeper, first of all at 30s. a week and then, subsequently, at 35s. He was a student, or what was called a fourth-year man. His average number of visits a day were about forty. He kept his visiting-book himself, and kept it carefully, and recorded each visit that he paid to patients. In September, 1907, he went for a holiday to the Channel Islands, and Dr. Burgess was his locumtenent. He was practising at Saltburn, which was some considerable distance away. When he came back from his holidays he was sickening for what afterwards became an attack of enteric fever. When he found himself ill he made an arrangement with Dr. Burgess that he was to see the patients every day. He was to call upon them in the morning, and in emergency matters he was to be sent for if he was wanted. The practice with regard to patients calling

at the surgery at the time was that new patients were to see Dr. Burgess, and if an old, chronic patient came in he was to see him (Dr. Brown), and Dr. Brown would give the patient the same medicine as he had given before. It was not true to say that Dr. Burgess acted in this way throughout October, November, and part of December, but the proper date was from October 6th to November 12th. On November 12th he was actively engaged in his practice again. He had never employed Dr. Burgess since. He kept a visiting slate on which the names of visitors were recorded. On November 20th he found the name of Simpson on that slate. That was the first time he knew of anybody of that name in connexion with this particular family of Simpsons. He had never had any patients from that particular house before November 20th. He had no knowledge that Mr. Amery had been attending at the house. He had his books to show that there was no entry of the name of Simpson before that date. He found Mr. Simpson suffering from pneumonia. Mr. Simpson requested him to ask Mr. Amery to call upon him. When he, Dr. Brown, got back to his surgery, he asked Mr. Amery to call and see Mr. Simpson. He visited Mr. Simpson five times, twice on the first two days, and on the third day once. He charged various fees to his patients, some 2s. 6d. and some 3s. 6d. He produced his books showing entries of 20th, 21st, and 22nd November. Mr. Amery never on any of those dates went to Mr. Simpson's house as representing him, Dr. Brown. He himself attended the case. Mr. Simpson died on November 22nd. The first time he learnt Mr. Amery was attending for money was when these proceedings were commenced. He had never seen or prescribed for Miss Simpson in any shape or form. It was his habit to give medicine free to poor persons upon recommendation. He remembered Mr. Amery asking permission to make up some medicine for a person who could not afford to pay; but he did not remember seeing Mrs. Simpson at his surgery. Mr. Amery had assisted in giving ethyl chloride; but he had never given ether or chloroform. He would be assisted in that by Dr. Nicholls or by Dr. Chapman. He (Dr. Brown) was always present when an anaesthetic was given. The whole of his work in connexion with the home was purely honorary, with the exception of one or two major operations. Mr. Amery had never attended a confinement; he may have assisted to put a bandage on a patient. In no way whatsoever had he had one sixpence of the cost of the attendance of Mr. Amery on a patient. He had no notice, either at the end of last year or the commencement of this, from the British Medical Association as to this charge; the first notice he received of it was from the Registrar of the General Medical Council.

Cross-examined by Mr. TARBOLTON: He never knew that Mr. Amery attended Miss Simpson for four years, or anything like it; he was under the impression it was a friend. His usual fee was from 2s. 6d. to 5s.; he could not say why he charged Mrs. Simpson 3s. 6d. On no occasion had he received a fee for an operation at the home when an anaesthetic had been given. It was untrue that Mr. Amery attended Mrs. Pinder's confinement. The delivery was carried out by himself from beginning to end.

Re-examined by Mr. BODKIN: He operated in the McAlpine Home for the same reason that Dr. Helme had operated there on several occasions.

By Mr. LUSHINGTON (Legal Assessor): Mr. Amery was a registered medical student, but he did not know what examinations he had passed. He was not aware until November, 1907, that Mr. Amery was prescribing for people in a charitable way. He did not think it was proper; he had cautioned him about it, and was satisfied he had stopped it. He kept the attendance book, which was in his own handwriting, and was made up from the slate. The ledger was made up every quarter, and he was prepared to say it was made out at the usual time.

Mr. HARTLESS AMERY, examined by Mr. BODKIN, said he was a four years student under the old regulations. He had for some years been employed by Dr. Brown as a dispenser. He had known Mr. Simpson for a good many years; but not Mrs. Simpson or her daughter. His mother had known Mr. Simpson for many years, and she asked him to attend Mr. Simpson's daughter. At first he declined to have anything to do with it; but afterwards

agreed under pressure from both his mother and Mr. Simpson. Accordingly he attended Miss Simpson for the time that had been mentioned, and received money for his services, in respect of which no entry had been made in any book of Dr. Brown's. As far as he knew, Dr. Brown was not aware of the fact until this charge was made, when he informed him of it. He had asked Dr. Brown to allow him to take drugs out of his surgery as he could not afford to pay for them; the permission was granted and exercised. He had never attended Mr. Simpson in the sense of a doctor; he went to him at the request of Dr. Brown; no charge was made for any of these visits. He heard of Mr. Simpson's illness through attending his daughter. He determined the amount of the charge—3s. 6d.—to Mr. Simpson, using his own discretion as to what should be charged, having regard to the locality. He denied attending Mrs. Pinder in her confinement except while Dr. Brown was there, but he may have handed Dr. Brown the things to bind her up with. With regard to the operations deposed to by the nurses, he had given ethyl chloride under Dr. Brown's instructions but never chloroform. It might be that on one occasion he held the bottle, or lint, or something of that sort. He had never given or taken part in administering an anaesthetic.

Cross-examined by Mr. TARBOLTON: He attended Miss Simpson for her eyes on and off for about four years, and she got better while under his treatment. It was not the fact that she became totally blind. She was blind when he first saw her. Dr. Brown generally left it to him to enter up in the ledger what he should charge for a particular locality.

At the conclusion of the witness's evidence, the CHAIRMAN intimated that the Council did not desire to hear any further evidence for the defence.

Mr. BODKIN stated that the matron of the home was present to give evidence on Dr. Brown's behalf, and also Mrs. Feldman, with regard to Dr. Burgess.

Mr. TARBOLTON, in reply to the CHAIRMAN, said he did not wish to say anything in reply, except that it was not within the province of a solicitor or an advocate to press a case unduly, but to state the facts as fairly as possible to both parties. He had no idea of keeping Dr. Burgess out of the way; it was simply that he could not get him there. If he could have got him there, he would have done so.

Strangers were directed to withdraw. On their readmission,

The CHAIRMAN, addressing Dr. Brown, announced the judgement of the Council as follows: I have to announce to you that the facts alleged against you in the notice of inquiry have not been proved to the satisfaction of the Council.

The Council adjourned until the following day at 12 o'clock noon.

Friday, May 28th.

Sir DONALD MACALISTER, K.C.B., President, in the Chair.

The minutes of the previous day's proceedings, having been printed and circulated and no objection made thereto, were taken as read and signed by the President.

NEW MEMBER.

The PRESIDENT announced that Dr. J. Dixon Mann had been appointed to represent the Victoria University of Manchester.

COMMITTEES.

The following Committees were appointed:

The Examination Committee.—Dr. Taylor, Dr. Saundby, Dr. Caton (nominated by the English Branch Council); Sir Thomas Fraser, Dr. Finlay, Dr. McVail (nominated by the Scottish Branch Council); Sir John Moore, Sir Charles Ball, Dr. Kidd (nominated by the Irish Branch Council).

The Education Committee.—Dr. Norman Moore, Sir G. Philipson, Sir John Williams (nominated by the English Branch Council); Dr. Mackay, Mr. Hodsdon, Dr. Knox (nominated by the Scottish Branch Council); Sir Thomas Myles, Sir C. Nixon, Dr. Little (nominated by the Irish Branch Council).

The Public Health Committee.—Dr. Cocking, Mr. Power, Dr. McManus (nominated by the English Branch Council); Dr. Norman Walker, Sir John Luke, Dr. McVail (nominated by the Scottish Branch Council); Sir John Moore, Dr. Adye-Curran, Dr. Kidd (nominated by the Irish Branch Council).

The Pharmacopoeia Committee.—The President (Chairman), Dr. Norman Moore, Dr. Barrs, Sir John Moore, Sir George Philipson, Sir Thomas Fraser, Dr. Little, Dr. Caton, Dr. McVail.

The Finance Committee.—Mr. Tomes (Chairman), Mr. Morris, Sir John Take, Dr. Little.

The Dental Committee.—The President (Chairman), Mr. Morris, Mr. Tomes, Mr. Holsdon, Sir Thomas Myles.

The Dental Education and Examination Committee.—Mr. Tomes (Chairman), Mr. Morris, Sir Thomas Myles, Dr. Knox, Sir Charles Ball, Dr. Finlay.

The Students' Registration Committee.—Sir Hugh Beevor (Chairman), Dr. Norman Moore, Dr. Adye-Curran, Sir John Batty Take, Sir Christopher Nixon, Dr. Mackay.

APPOINTMENT OF EXAMINER.

On the motion of Sir HUGH BEEVOR, seconded by Dr. LITTLE, it was resolved:

That Mr. H. Stansfield Collier, F.R.C.S.Eng., be appointed Assistant Examiner in Surgery to the Apothecaries' Society of London, vice Mr. McAdam Eccles, who retires by rotation.

PHARMACOPOEIA COMMITTEE.

The report from the Pharmacopoeia Committee was received and entered on the minutes. The President said there was nothing to adopt; it was merely to report progress. He called attention to the fact that considerably more than 40,000 copies of the *Pharmacopoeia* had been sold, and it was still being sold at the rate of over 1,000 copies a year.

THE STUDENTS' REGISTRATION COMMITTEE.

The report of the Students' Registration Committee on exceptional cases, and recommending the addition of the City of Norwich Technical Institute to the list of recognized institutions approved by the Council, was approved and entered on the minutes.

FINANCE COMMITTEE REPORT.

On the motion of the President, who stated that it contained nothing in the way of recommendations, and was merely a report as to the state of the finances of the Council, and giving details, the report of the Finance Committee was entered on the minutes.

EXAMINATIONS FOR THE SERVICES.

The report of the Examination Committee on the returns as to examinations for the Services received since the last session of the Council was received and entered on the minutes.

The result of the analysis of the returns made by the Committee is shown in the table at foot of this page.

REPORT OF PUBLIC HEALTH COMMITTEE.

Sir JOHN MOORE, Chairman *pro tem.* of the Public Health Committee, moved that the following report of the Committee should be received, entered on the minutes, and approved.

The Committee considered the following resolution of the General Council adopted on November 28th, 1908:

That it be referred to the Public Health Committee to consider the advisability of substituting in Rule 1. of the resolutions and rules relating to public health, the words "nine months" in place of "twelve months," as at present. (Minutes, vol. xiv, p. 143.)

The Public Health Committee is of opinion that it is not advisable to substitute in Rule 1. of the resolutions and rules relating to public health the words "nine months" in place of the words "twelve months" as at present, for the following reasons:

1. The twelve months' curriculum was deliberately adopted by the Council after inviting and considering the views of examination bodies and a great number of teachers and instructors in the science and practice of public health.

2. The diploma in public health is a higher and post-graduate qualification—one which has always been regarded in the light of an honours qualification—and therefore one calling for sustained study to be undertaken solely in preparation for it.

Candidates Submitted Themselves who Hold Qualifications from	At the Examination for the Medical Department of the Royal Navy held on May 14th.		At the Examination for the Indian Medical Service held on January 30th, 1909.		Summary.		Grand Total of Successful and Unsuccessful Candidates.*
	Rejected.	Passed.	Rejected.	Passed.	Rejected.	Passed.	
English Conjoint Board	1	6	0	11*	1	17	18
Apothecaries' Society of London	—	—	—	—	—	—	—
University of Oxford	—	—	0	1	0	1	1
" Cambridge	—	—	0	2†	0	2	2
" Durham	—	—	0	1	0	1	1
" London	0	2	0	5	0	7	7
Victoria University of Manchester	—	—	—	—	—	—	—
University of Birmingham	0	1	—	—	0	1	1
" Liverpool	—	—	—	—	—	—	—
" Leeds	—	—	—	—	—	—	—
" Sheffield	—	—	—	—	—	—	—
Scottish Conjoint Board	—	—	1	4	1	4	5
University of Edinburgh	0	4	0	6	0	10	10
" Aberdeen	—	—	0	1	0	1	1
" Glasgow	0	1	0	1	0	2	2
" St. Andrews	0	1	—	—	0	1	1
Irish Conjoint Board	1	0	—	—	1	0	1
Apothecaries' Hall, Dublin	—	—	—	—	—	—	—
University of Dublin	1	2	0	1	1	3	4
Royal University of Ireland	1	3	—	—	1	3	4
Indian and Colonial Universities	—	—	0	4	0	4	4
Total	4	20	1	37	5	57	62
	22 candidates holding qualifications from 24 bodies.		33 candidates holding qualifications from 38 bodies.		55 candidates		55 candidates
					Holding qualifications from 62 bodies.		

* 1 holding also the M.D.Brussels.

† And 2 candidates holding the D.P.H.

‡ And 1 withdrew.

3. An interval of at least twelve months is commonly demanded by examining bodies between a pass examination and an examination for a higher qualification.

4. The existing scheme of the Council has worked well and successfully during many years. The diploma has obtained for itself a high status.

5. Not long ago a representation was made to the Council as to disabilities in the matter of obtaining the diploma in public health incurred by seniors in the profession, especially military and Colonial officers serving abroad, the length of whose leave is not sufficient to allow them properly to undergo the prescribed course.

For such men, therefore, the Council has granted indulgence in individual cases, and, relaxing the requirement of twelve months, has permitted them to complete their course in nine months.

6. The proposal referred to this Committee is to extend a like indulgence to quite junior candidates.

This proposal the Committee disapproves, believing that it would be a retrograde step—one little likely to prove of advantage to the public health administration of the United Kingdom and of the Empire.

The Committee also reported that correspondence was in progress with the India Office with regard to the recognition of sanitary staff officers as teachers.

Sir JOHN MOORE said that the reasons for the recommendation of the increase in the period from nine months to twelve months were fully set forth in the report, and had the approval of the Chairman of the Public Health Committee. It was quite true that the curriculum for the public health diploma could be completed in nine months; but it seemed to the Committee that, although that was the case, there was no hardship whatever in a candidate waiting for a further three months before receiving that very high qualification. Even if the further period was only to enable him to digest the information that he had received during the nine months, the Committee thought it would be a very good thing that he should wait. He hoped nothing whatever would be done by the Council to take away the very high status which its own qualification in the matter of public health had now received.

Dr. NORMAN MOORE seconded.

Mr. THOMSON thought the Committee had misunderstood the terms of the reference; and he was supported in that view by the reasons set forth in the report in favour of the recommendation. He had never applied, and he never would apply, for a reduction in the curriculum; but what he objected to was that the Council, having stated what its curriculum was, should endeavour to insist on a three months' period of enforced idleness at a period in a man's career when time was of the greatest value to him. He knew from experience that a man could fulfil all the conditions of the curriculum in nine months; but at present he was debarred, by what he (Mr. Thomson) considered a very foolish regulation, from entering for the examination until twelve months had elapsed from the date of his taking his degree to his entering into the examination. In his opinion that was penalizing a man, not only as to time but from the standpoint of money as well. All he asked was that a man who had fulfilled the curriculum should be allowed to enter for the examination. He was prepared to admit that this diploma was a high distinction; but it was stated in the reasons of the Committee that it was in the nature of an honours qualification. That the Council had nothing to do with; all it had to do with was to see, in the public interest, that a man taking the diploma was adequately educated.

The PRESIDENT remarked that the curriculum, to be carried out adequately, still required twelve months; but, owing to a great deal of pressure, the two half-years were allowed to overlap and telescope, as it were, so as to make the total period nine months in such a case. At the time the change was introduced no one regarded it as an ideal arrangement, but merely as an emergency which in certain cases would be allowed; but the notion that it should become the normal and necessary curriculum was repudiated by nearly every member of the Council. They were now practically asked to make it the normal and necessary curriculum, which he thought would be a great disaster, because it was perfectly obvious that for the student who had got his qualification the idea was that he should have six months' laboratory work and six months' outdoor work. It was inexpedient on the part of the Council now to alter its Regulations, which had been incorporated in the Rules and Regulations of the universities and licensing bodies. Although this Council had nothing to do with the honours examination, that was an

additional qualification on a post-graduate qualification, and, whether it was called honours or not, it was a very much higher qualification than the ordinary one.

Sir JOHN BARRY TUCKER said that, in order to maintain his consistency, he must enter his protest against this continuous whittling down of the Regulations. The diploma of public health must be a very high qualification, not only by reason of its importance but by reason of the fact that it was a qualification over which this Council exercised control. If the matter were pressed to a division he would certainly vote against it.

Sir CHRISTOPHER NIXON sympathized with Mr. Thomson in the remarks that he had made with reference to this diploma. The majority of those who undertook the duties of medical officer of health in Ireland had had no training in public health at all; but they had had a fair amount of instruction in the principles of public health in connexion with medical jurisprudence and hygiene, and they understood the duties of public health officers without any diploma in public health at all. If a man could do all that was required of him in a period of nine months, it would be a great hardship to that man that he should have to wait another three months in order to pass the examination. He contended that for a man who had the primary qualification and had got a fair amount of instruction in the principles of hygiene, the supplementary amount that would be acquired in the nine months was ample.

Sir CLIFFORD ALBUTT trusted there would be no unnecessary delay in granting the diploma. If it was to be a twelve months' course of instruction it should be twelve months. But the Council should decide in the first instance whether it intended it to be virtually a twelve months' or a nine months' period. He hoped the Council would not add any ornamental period to the curriculum. If it required the twelve months' guarantee of work done and time occupied in this special study he was disposed to think it would not be wrong, but if the work could be practically done in nine months, he would go further, and say that an additional three months was not a desirable period.

Sir CHARLES BALL reminded the Council that the reason why this overlapping had been recommended by the Public Health Committee was because it had been pointed out that a great hardship was inflicted on military men and others coming from India and the Colonies, who had only a year's leave. Part of that year was spent in coming from and going to India and other places abroad; and it was felt to be a great hardship that those men might be excluded from taking the Diploma of Public Health during their vacation. It was to meet that hardship that the recommendation was adopted. It was not intended that it should apply to graduates who had just completed their first course.

Dr. McVAIL, as one who had been a member of the Public Health Committee since its institution, pointed out that its first Chairman (Sir Richard Thorne) absolutely objected to any lowering of the curriculum or a shortening of the time. Its next Chairman (Dr. Bruce of Dingwall), who had had a long and close connexion with the work of public health in the North of Scotland, also strongly objected to it; and now Sir William Power, who was certainly an authority, who was greater than any other individual authority in the country, absolutely objected to the change. It was largely owing to Sir John Simon that this diploma was instituted, and entirely owing to him that this Council obtained control over it, and he held that it was not to be a slight addition to the knowledge of hygiene that a student got in an ordinary medical jurisprudence course. It was altogether something special, entirely different, on a different plane altogether. Every man connected with public health whom he (Dr. McVail) knew absolutely objected to anything which meant whittling it down to a period of nine months. There was too little practical work done already in the way of students' work with medical officers of health, and this should be increased rather than diminished. As Sir Charles Ball had said, the three months' concession was made at the urgent request of the Army and Navy Medical Service. There were many discussions on the subject, and it was with great reluctance that the Committee and its then Chairman finally agreed to it, but it was clearly on the understanding that it was to apply only to those men in the services and those men alone.

Sir THOMAS MYLES observed that a man who had been abroad for twenty years, and was therefore entirely unacquainted with the progress that had been made in those years, was allowed to do this course in nine months, whereas a man who was on the spot, with a highly trained intelligence, fresh from the schools, was penalized to the extent of another three months. In his opinion, nothing could be more illogical than that, and he wished to join with Mr. Thomson in protesting against this ornamental addition to the curriculum.

Sir THOMAS FRASER thought it would be extremely unfortunate if the Council at this time of day reduced the qualification in this most important subject. It would be unfortunate from the standpoint of the State, and it would be specially unfortunate having regard to the fact that since this regulation had been introduced there had been a remarkable growth of knowledge in connexion with public health. In India public health was recognized as one of the most important subjects, and he did not suppose there was a member of the medical profession there who was not required to do something in connexion with it. They in the North would very much deprecate any attempt to lower the curriculum in what was there regarded as the most important department of the public service.

Dr. ADYE-CURRAN hoped that whatever might be done the concession granted to the army and navy would not be interfered with in any way. A great number of army men who specialized in hygiene were very anxious to obtain the D.P.H., and if the period were made nine months instead of twelve it would be impossible for them to get it.

Mr. THOMSON moved:

That the report be referred back to the Public Health Committee for reconsideration.

There was no intention on his part of lowering the standard. The point was that if the Council required a nine months' curriculum it need not demand twelve months in which the man was to do it. A great deal had been said with regard to the expert's opinion on the subject. When these regulations were drawn up the Council had nothing to rely upon except the information of those experts, but since then it had the experience of the candidates. Therefore, he asked for more information on the subject.

Sir CHRISTOPHER NIXON seconded the amendment.

Sir JOHN MOORE, in reply, said that it was a remarkable circumstance that every one who opposed the adoption of the report was not a holder of a diploma in public health. He personally knew what the nine months' laboratory work meant, and it was too little. The remarks of Sir Clifford Allbutt showed how unfortunate it was that any diminution in the Council's regulations should have been made even in the case of the Army and Navy Medical Services. Sir Christopher Nixon had unconsciously misled the Council in connexion with the medical officers of health in Ireland and this qualification. The medical officers in Ireland were forced by Act of Parliament to be medical officers of health for their respective districts, and in not one instance was it necessary for a man to hold the D.P.H. qualification. When a man sought an appointment as medical officer of health for a population of not less than 50,000, then he must produce this diploma in public health. For such a man he believed twelve months was all too little to put him into a position to act efficiently as a medical officer of health. The dispensary medical officers were forced to do duties for very little pay and without any special training, but they were quite different to the medical officers of health, who held the Council's qualification and were obliged to hold it. The Council did not desire to penalize anybody, but it did want to ensure that a man had undergone a twelve months' curriculum in order to obtain the D.P.H. He hoped the Council by an overwhelming majority would approve the report.

Sir CHRISTOPHER NIXON, with the permission of the Chairman, explained that he could not say he was totally ignorant of the nature of the curriculum in connexion with public health, because he drafted the syllabus of the curriculum for the Royal University, which was adopted, and the idea that they had in their minds when forming the regulations for the D.P.H. was that there ought to be two grades established in connexion with the University. The

lower grade, a diploma representing the Council's requirements, would be quite sufficient for the ordinary class of medical officers of health, and then they proposed to give the higher degree to doctors in public health, and that would be applicable to the class of public health officers referred to by Sir John Moore, who had charge of a population of 50,000 or more. But the Council, in making these regulations for its diploma, ought not to be too exacting. It had to legislate for the rank and file of the profession, and it ought to legislate for the medical officers, for instance, in Ireland who were the recognized medical officers of health, but who had no diploma. The diploma ought to be brought down to the level of these men—sufficiently high to make it useful, but not at an impossible standard. He was strongly of opinion that Mr. Thomson was quite right, and all that would be needed from a man who took the D.P.H. could be amply fulfilled by a nine months' course.

The amendment was lost, and the original motion was then put and carried.

COMMITTEES.

The Council then went into camera to discuss private business.

The CHAIRMAN announced that the following gentlemen had been elected on the Committees indicated:

Executive Committee.—Mr. Tomes, Dr. Norman Moore, Sir Hugh Beaver, Dr. Langley Brown, Dr. McVail, Sir John Batty Tuke, Sir John Moore, and Sir Charles Ball.

Penal Cases Committee.—Dr. Saundby, Mr. Tomes, Dr. Finlay, and Sir Christopher Nixon.

DENTAL DISCIPLINARY CASES.

The Dental Committee presented a supplementary report, dated May 24th, 1909, with regard to the case of William John Watson, first considered by the Council at its meeting on May 28th, 1908, and further considered at its meeting on November 27th, 1908. The charges referred to the covering of an unregistered practitioner and advertising in the name of another practitioner; both of these charges were found not proved in May, 1908. With regard to certain irregularities with reference to issuing a pamphlet, and with particular reference to an undertaking given by Mr. Watson to discontinue the issue of all advertisements, he was required to present satisfactory evidence as to his conduct in the interval at the session of the Council in November, 1908. At that session Mr. Watson did not attend, and the further consideration of his case was adjourned. The supplementary report on the present occasion stated *inter alia* that the Committee could not regard the evidence presented by Mr. Watson as to his conduct in the interval as satisfactory, seeing that he was still connected with an unqualified man named Potter, who had been in the employment of Mr. Watson, and who, with Mr. Watson's knowledge, was in the employment of a company called Booth and Co., Limited, consisting of unqualified persons who continued to advertise from the addresses where Mr. Watson formerly carried on business.

Mr. WATSON, on being asked by the PRESIDENT if he had any remarks to make, said he was very anxious if possible to clear himself of the charge. He had been in practice for many years and had never had a charge brought against him. He had been Chairman of the Workhouse Committee at Birmingham, and had been for over twenty years a member of the board of guardians. He admitted that he had committed an error of judgement, for which he was very sorry, and he would take good care not to do it again. He placed himself in the hands of the Council, and hoped the Council would exonerate him from any intentional misconduct.

Mr. TURNER, who appeared for the complainants, the British Dental Association, said, in reply to the PRESIDENT, that he did not wish to appear unduly to press the charge against Mr. Watson; he thought it was desirable that the Council should give Mr. Watson a further period of probation, if he gave an undertaking to the Council to dissociate himself from the unregistered person referred to. Mr. Turner hoped that it would be understood that when an undertaking was given to the Council as to conduct the onus was on the person giving it to show that his conduct had been satisfactory, and not upon the complainants to prove that his conduct had been unsatisfactory. He suggested that the Council might

well let the matter stand over for six months in order that Mr. Watson might prove his good faith.

Mr. WATSON stated that the case had been going on for a year, and he hoped that the Council would not keep him under unnecessary suspense for another period of six months.

Dr. McVAIL asked whether Mr. Watson had been restored to the list of Licentiates of the Royal College of Surgeons of Edinburgh, and in reply Mr. WATSON said that he had not applied to be restored.

Strangers and parties were then ordered to withdraw. On their readmission,

The CHAIRMAN announced the judgement of the Council as follows:

Mr. Watson, the Council has again given careful consideration to the two reports of the Dental Committee and has deferred the further consideration of your case to November next, when you will be required to be present in person and to produce satisfactory evidence, and not merely a personal statement, as to your professional good conduct in the interval, with particular reference to your undertaking to discontinue all advertising, or connexion, direct or indirect, with those who are advertising.

The next case was that of Mr. Charles Morgan, as to whom the Dental Committee had presented a report to the meeting of the Council on November 28th, 1908 (SUPPLEMENT, December 5th, 1908, p. 301). Mr. Poley, who appeared on behalf of Mr. Morgan, then gave an undertaking that Mr. Morgan would in future conduct his practice in a professional manner. The case was deferred for the attendance of Mr. Morgan during the present session, when he would be required to present satisfactory evidence as to his professional conduct in the interval, with special reference to the promise to discontinue to issue all advertisements. The supplementary report now presented by the Dental Committee was to the effect, *inter alia*, that Mr. Morgan continued to advertise on the curtain of the Empire Theatre, Newport, in pursuance of a contract with an advertising agency entered into in July, 1908. The Committee had before it no evidence of any written application to the advertising agency to discontinue the advertisement or of any serious attempt by Mr. Morgan to put an end to it. The complainants were the British Dental Association.

Mr. POLEY, in reply to the PRESIDENT, stated that Mr. Morgan had loyally carried out his undertaking, and had tried to stop the advertisements appearing; the manager of the company gave evidence before the Committee that it could not put an end to the advertisement. That placed Mr. Morgan in a curious and very serious position. After the meeting of the committee his client pointed out what a very serious matter it was to him that the company should take up the attitude that it did, and he was happy now to be able to say that he had received a letter from the company in which it stated that, under the exceptional circumstances, it was prepared to allow the advertisement now appearing to be eliminated. Under those circumstances he asked the Council graciously to let the matter stand over for six months in order to show Mr. Morgan's bona fides.

Strangers and parties were ordered to withdraw. On readmission,

The PRESIDENT announced the judgement of the Council as follows:

Mr. Morgan, the Council has given very careful consideration to the reports of the Dental Committee, and has deferred the further consideration of your case to November next, when you will be required to be present and to offer satisfactory evidence, other than your own statement, as to your professional good conduct in the interval, with particular reference to your promise to discontinue the issue, direct or indirect, of all advertisements.

The next case was that of Samuel David Davis. Mr. Turner again appeared for the complainants, the British Dental Association, and Mr. Davis appeared in person.

The REGISTRAR read the report of the Dental Committee:

The complaint against Samuel David Davis having been referred to the Dental Committee to ascertain the facts, the Dental Committee beg to report as follows:

On May 24th, 1909, the following parties with their witnesses attended before the Committee and were duly heard:

The complainants, the British Dental Association, represented by Mr. R. W. Turner, Counsel, instructed by Messrs Bowman and Curtis-Hayward, Solicitors.

The said Samuel David Davis, represented by Mr. Percy J. H. Robinson, solicitor, of London.

The Committee find that the following facts were established by the evidence:

The said Samuel David Davis was registered in the *Dental Register* on October 9th, 1878, as "in practice before July 22nd, 1878." His address in the *Register* for 1909 is Beech House, 66, Queen's Road, Wisbech.

The said Samuel David Davis entered into an agreement on July 26th, 1906, with F. W. Bradley, Ltd., acting by Frederick William Bradley the chairman of the company, to serve the company as dentist and general assistant at Wisbech and at such other places as the company might determine. The said Samuel David Davis undertook by that agreement to devote his whole time to such service and to carry out the directions of the said F. W. Bradley or other the directors of the company. The remuneration paid by the company to the said Samuel David Davis is £4 s. a week and 5 per cent. commission on all cash received in respect of orders taken by him. F. W. Bradley, Ltd., is a company incorporated under the Companies Acts to take over and carry on a dental practice formerly carried on by one Frederick William Bradley at 6, Market Street, Wisbech, the Castle, Wisbech, and numerous branches in the eastern counties. The capital of this company is £20,000, the whole of which was issued as fully paid up, and no part of which was paid up in cash; 19,733 £1 shares are owned by the said F. W. Bradley, 101 by Mary Bradley, his wife, 101 by William Wade Langley, a brother-in-law of the said F. W. Bradley, and the remaining 65 by thirteen other persons. Frederick William Bradley is chairman and managing director of the company, the other directors being the said Mary Bradley and W. W. Langley. Neither the said F. W. Bradley nor any other director or shareholder is a registered dentist.

Until April 15th, 1909, the business at No. 6, Market Street, Wisbech, was carried on in the names of W. Foot, surgeon-dentist, and Claude L. Sutton, surgeon-dentist. These persons are registered dentists, but neither of them has practised in Wisbech for a long time, and the business is, in fact, carried on under the management of the said F. W. Bradley by the company. The said F. W. Bradley purchased the dental practices of both these persons and the right to use their names, and transferred the same to the company.

The report concluded by enumerating the items of evidence before the Committee.

Mr. DAVIS, in reply to the PRESIDENT, said that he could only express his very great regret and sorrow. When he joined the firm of Messrs. Bradley he found certain registered dentists there, and he thought that, if it was proper for them to do the work, he was entitled to do the same. He asked the Council to give him time to consider his position.

Strangers and parties were directed to withdraw. On readmission,

The PRESIDENT announced the decision of the Council as follows:

Mr. Davis, I have to inform you that the Council has given careful consideration to the report of the Dental Committee, and that they have judged you to have been guilty of infamous and disgraceful conduct in a professional respect, and have directed the Registrar to erase from the *Dentists Register* the name of Samuel David Davis.

The Council then proceeded to the consideration of the case of Frederick Joseph Whitehead, registered as in practice before July 22nd, 1878.

The PRESIDENT stated that the defendant had had notice that the report was to be brought before the Council and did not appear, and that the Council would therefore proceed with the consideration of the case in his absence.

The complainants were the British Dental Association, represented by Mr. Turner.

The REGISTRAR read the report of the Dental Committee, which stated *inter alia* as follows:

The said Frederick Joseph Whitehead knowingly and wilfully assisted an unregistered person named Frederick William Bradley to carry on practice as a dentist at Wisbech and elsewhere under the names or styles of W. Foot, surgeon-dentist; Claude L. Sutton, surgeon-dentist; and F. W. Bradley, Limited—the said F. W. Bradley, Limited, being a company of which the said Frederick William Bradley had control as chairman and managing director, and who held 19,733 shares out of a total of 20,000. No director or shareholder of the company is a registered dentist. The said Frederick Joseph Whitehead also knowingly and wilfully assisted the said company in carrying on practice as dentists at Wisbech and elsewhere by means of unregistered persons in their employ.

The items of evidence before the Committee were enumerated.

Strangers and parties were directed to withdraw. On readmission,

The PRESIDENT announced the judgement of the Council as follows:

Mr. Turner, I have to announce that the Council has given careful consideration to the report of the Dental Committee, and has judged Mr. Frederick Joseph Whitehead to have been guilty of infamous and disgraceful conduct in a professional

respect, and has directed the Registrar to erase from the *Dentists Register* the name of Frederick Joseph Whitehead.

The next case to be considered was that of Reuben Davis, registered as in practice before July 22nd, 1878. His address in the *Register* for the current year was Boston, U.S.A.

Mr. Davis did not appear, and the Dental Committee reported that he had been convicted on April 16th, 1908, at the Bath Petty Sessions, of stealing twelve pairs of forceps, and sentenced to three months' hard labour; and on September 2nd, 1908, at the Gloucester Petty Sessions, of stealing a watch, money, etc., and sentenced to two months' hard labour; and on December 31st, 1908, at the Wigan Petty Sessions, of certain petty thefts, and was sentenced to fourteen days' imprisonment. The evidence before the Committee consisted of certified copies of the several convictions. The complainants were the British Dental Association.

Strangers and parties were ordered to withdraw. On readmission,

the PRESIDENT announced the judgement of the Council, as follows:

I have to announce that it having been proved that Reuben Davis has been convicted of various misdemeanours as set forth in the report of the Dental Committee, the Registrar has been directed to erase from the *Dentists Register* the name of Reuben Davis.

The next case was that of Stanley Bennett Wakefield, registered as in practice before July 22nd, 1878.

The PRESIDENT said that Mr. Wakefield was not present, but had sent a letter.

The complainants were the British Dental Association, and the evidence before the Dental Committee was to the effect that (1) the accused had been convicted at Marlborough Street Police-court of illegal pawning; and (2) that he had made a false and fraudulent claim to the executors of a deceased person for professional services alleged to have been rendered. The evidence before the Committee was enumerated in the report.

Strangers and parties were ordered to withdraw. On readmission,

the PRESIDENT announced the decision of the Council as follows:

I have to announce that it having been proved that Stanley Bennett Wakefield has been convicted of a misdemeanour, the Registrar had been directed to erase from the *Dentists Register* the name of Stanley Bennett Wakefield.

The next case was that of Thomas Parkins, registered as in practice before July 22nd, 1878. Mr. K. W. Turner represented the complainants, the British Dental Association; Mr. Parkins appeared in person.

The REGISTRAR said the Dental Committee had found the following facts were established by the evidence:

The said Thomas Parkins lives at Salford, but a dental practice is carried on in his name at Sharrow Head House, Sharrow Head, Sheffield, by his son Charles Henry Parkins, who is an unregistered person who habitually performs dental operations there, and signs receipts for accounts paid by patients for work done by him in the name of the said Thomas Parkins.

Mr. PARKINS, in reply to the PRESIDENT, said that the business which he had conducted had been his own business for some years. He admitted that his son did assist him in his business, but under his supervision. He was teaching his son the business. Until the notice was served upon him he was not aware that he was committing a breach of the *Dentists Act*. He was very sorry indeed that the complaint was made against him, and he was totally ignorant of the fact that he was doing anything wrong by employing his son to assist him.

Mr. TURNER submitted that the letters which had been written to the Council did not suggest that Mr. Parkins was simply teaching his son.

Counsel, parties, and strangers were directed to withdraw. On readmission,

the PRESIDENT announced the decision of the Council as follows:

Mr. Parkins, I have to inform you that upon the facts found in the report of the Dental Committee the Council has judged you to have been guilty of infamous or disgraceful conduct in a professional respect, and has directed the Registrar to erase from the *Dentists Register* the name of Thomas Parkins.

Mr. PARKINS: I can only say that at my time of life I think it rather cruel after having been on the *Register*

since the passing of the Act in 1878. I am sorry to hear it.

The PRESIDENT: That closes the case.

Mr. PARKINS: Is that the best you can do for me, or rather the worst. I think it is rather cruel. Excuse me, gentlemen, for my remarks, but I feel it very much, after having been nearly thirty-one years on the *Register*.

The PRESIDENT: There is nothing more to be said.

Mr. PARKINS: I was not aware I was doing anything wrong. I was totally ignorant of it. I have had a large family to bring up. It is very hard that I should be removed from the *Register* now; it is very hard indeed.

ADMINISTRATION OF ANAESTHETICS FOR UNREGISTERED DENTISTS.

The Council, after a short sitting to consider a matter *in camera*, then proceeded to the consideration of the case of Thomas Torrens McKendry, registered as of 39, Wellwood Road, Goodmayes, Ilford, Essex, M.B., Bac. Surg. 1894, R. Univ. Irel., who had been summoned to appear before the Council on the following charge as formulated by the Council's solicitor:

That you have knowingly and wilfully on various occasions, and in particular on the 20th day of February, 1909, assisted one E. C. Dalby, a person not registered as a dentist, in carrying on practice as a dentist by administering anaesthetics on his behalf to persons coming to him for treatment, and that in relation thereto you have been guilty of infamous conduct in a professional respect.

The complainant was Dr. Victor Albert Chatelain.

Mr. Lushington appeared as legal assessor; Mr. Winterbotham appeared as solicitor. The complainant and also the respondent appeared in person.

Dr. CHATELAIN said the charge against Dr. McKendry was of administering an anaesthetic on the morning of February 20th last to a Mrs. Flynn, thereby enabling an unregistered person to practise dentistry in the district of Seven Kings. When Dr. McKendry did this he knew that what he did was wrong, because he had been warned on at least two occasions by a registered dentist named Stevens, practising at Ilford; that Mr. Dalby was an unqualified and unregistered person; and that by assisting or covering him in any way he was contravening the regulations of the Council, and also rendering himself liable to penalties. He (Dr. Chatelain) had been practising in the neighbourhood for about four years, and the subject of Dr. McKendry's covering of Dalby was a matter of general comment among practitioners in that neighbourhood.

Mrs. FLORENCE JANE CHATELAIN, examined by Dr. Chatelain, said that on the morning of February 20th Dr. Chatelain received information from Dr. Davey that Dr. McKendry was going to administer an anaesthetic to Mrs. Flynn at the house of Mr. Dalby. She was instructed to proceed there to watch, which she did, and she saw Mr. McKendry leave the house, and then, about two minutes afterwards, Mrs. Flynn came out and went away in her motor car. Dr. McKendry was not Mrs. Flynn's usual medical adviser.

Dr. McKendry did not wish to cross-examine.

Mr. WM. RAYMOND BRYANT, examined by Dr. Chatelain, said he was a friend of Mrs. Flynn's and other members of her family; she had mentioned to him that she had gone to Mr. Dalby's house to have some teeth out on a Saturday, and that Dr. McKendry had administered an anaesthetic. Dr. McKendry was not her usual medical adviser.

Dr. McKendry did not wish to cross-examine the witness.

By Mr. LUSHINGTON: He personally knew nothing about Dr. McKendry administering the anaesthetic except what he had been told.

Dr. Chatelain then put in a declaration by Mr. Richard Henry Stevens, a registered dentist, of Ilford, to the effect that on two occasions he had told Dr. McKendry at his surgery that Mr. Dalby was not a duly registered practitioner as required by the *Dentists Act*, 1878; and that, by attending for the purpose of administering an anaesthetic to Mr. Dalby's patients, he rendered himself liable to penalties for covering Mr. Dalby in carrying on the profession of a dentist contrary to the Act.

Dr. JOSEPH BETHEL COX, a registered medical practitioner, examined by Dr. CHATELAIN, said he had been practising at Seven Kings for some years. He had had occasion to administer gas for Mr. Stevens of Ilford

many times; and, in the course of conversation, the latter complained to him that Dr. McKendry was covering Mr. Dalby by administering anaesthetics. The last occasion was about eighteen months ago. He was acquainted with the majority of the practitioners in that district, amongst whom it was common knowledge that Dr. McKendry was covering Mr. Dalby in the manner alleged.

Cross-examined by Dr. McKENDRY: He could not say how many times he had heard it so stated. He did not know that patients were sent by other medical men in the district to Mr. Dalby for treatment, nor that he attended medical men and their families.

By Mr. LUSHINGTON: He knew of Dr. McKendry administering anaesthetics from one or two of his patients who had been to Mr. Dalby, and also from Dr. McKendry himself. That might have been before Mr. Stevens had warned Dr. McKendry of the penalty he was incurring.

Mr. CHATELAIN stated that he had endeavoured to get the medical practitioners who had given him particulars of the specific instance which enabled him to bring the case before the Council to come and give evidence, but they declined to do so.

Cross-examined by Dr. McKENDRY: The charge was brought solely with a view to getting the practice of covering quacks discontinued. He had no animus whatever in the matter. He would have warned Dr. McKendry personally, but on a previous occasion he had behaved in such a manner that he (Mr. Chatelain) could not approach him.

This closed the case on behalf of the complainant.

Dr. McKENDRY admitted that he gave gas on the specific occasion. He was medical attendant to Mr. Dalby, and that night he received a note asking him to call. He walked into the operating room the next morning, when Mr. Dalby introduced a lady, and said, "You don't mind giving gas to this lady, do you?" He (Dr. McKendry) found himself in a difficulty, because, if he had refused, it might have caused a disturbance. Unfortunately he assented, and later on he told Mr. Dalby that he was very much annoyed about it, and that he would not do it again.

Cross-examined by Mr. CHATELAIN: He never knew Mrs. Flynn before giving her the gas, and was not her usual medical attendant. He was not aware that Mr. Davey had refused to give her an anaesthetic, or that she had said, "If you will not, I will go to Dr. McKendry." This was the first time he had heard of it.

By Mr. LUSHINGTON: He had not got the note Mr. Dalby sent to him asking him to call; he had destroyed it. Mr. Dalby and his family had been patients of his for several years, and he knew what his business was. It never occurred to him to ascertain whether Mr. Dalby was a registered dentist, and to the best of his recollection Mr. Stevens never mentioned to him the fact of his being an unregistered man. It was absolutely untrue that he had administered an anaesthetic for Mr. Dalby to a patient of Dr. Cox, but he had administered anaesthetics on a few occasions other than this specific one. The last occasion on which he had done so was in September or October last. At that time he knew Mr. Dalby was an unregistered man.

Mr. HENRY CHARLES DALBY, in reply to Dr. McKENDRY, said he remembered the incident of February 20th with regard to Mrs. Flynn. When he sent the note to Dr. McKendry he did not specify the object of his call; it was the only occasion on which he had sent such a note. The account which Dr. McKendry had given with regard to the case of Mrs. Flynn was correct. He (Mr. Dalby) had received patients from about half a dozen other medical men in the district, and their own families had also been to him.

Cross-examined by Mr. CHATELAIN: He could not give the names of the medical men whom he had attended, other than that of Dr. Davey and Mrs. Davey. He attended Dr. Davey last year. He could not say whether Dr. Davey knew at that time that he was an unregistered man. At the time Dr. McKendry came to him he had no idea what he had been brought for, and, when he did know, he was very angry about it. The other occasion on which Dr. McKendry had administered an anaesthetic before the occasion in question was to one of his own patients.

Mr. CHATELAIN, in addressing the Council, disclaimed any animus with regard to the charge. All the prac-

titioners in the neighbourhood lived more or less in amity, and it was solely with a view to the discontinuance of the practice of covering quacks that he had brought it. That Council was the only body before which a practitioner could lay his grievance. He was not speaking only for himself; he voiced the sentiments of the large majority of his fellow practitioners in the neighbourhood of Seven Kings, Goodmayes, and Ilford in bringing this matter forward. He would remind the Council that the witness Dalby was not on oath when he dared to state he had attended on medical practitioners and their families, including Dr. Cox, who assured him (Mr. Chatelain) that Mr. Dalby had never done so.

Strangers and parties were directed to withdraw. On readmission,

The PRESIDENT informed Dr. McKendry that the Council had found the facts alleged against him proved to its satisfaction, but, as it was understood that he wished to make some appeal to the Council, the opportunity was now given him to say what he had to say before the Council proceeded to the next step, that of pronouncing judgement. In his statement the defendant had said: "I desire to express my regret to the Council for my lapse; and I also promise faithfully not to repeat the offence." The President added: The facts alleged against you are found to be proved, that you have repeatedly done this. Do you wish to express regret with regard to that?

Dr. McKENDRY: I am very sorry indeed, and I am very glad that this has been brought up, for it will put a stop to the whole thing. This was the first time Mr. Dalby had asked me to give gas to a stranger, and I did not know what I was to do until I got into the operating-room.

The PRESIDENT: We are referring to the other cases now.

Dr. McKENDRY: I will guarantee never to repeat the offence.

The PRESIDENT: Do I correctly understand you to give the Council an assurance that you will never repeat the offence?

Dr. McKENDRY: I do, sir; I will never repeat it under any circumstances.

Strangers and parties were again directed to withdraw.

On readmission, the PRESIDENT announced the decision of the Council as follows:

Mr. McKendry, the Council has postponed judgement till the November session, when you will be required to attend in person and to produce evidence, more particularly from medical colleagues in your neighbourhood, as to your professional good conduct generally in the interval, and in particular that you have not repeated the offence of which complaint has been made.

REPORT OF THE EDUCATION COMMITTEE.

A supplementary report from the Education Committee in continuation of that presented in November last was received and entered on the minutes.

SUPPLEMENTARY REPORT

BY THE

EDUCATION COMMITTEE

ON

VARIOUS PROPOSALS SUBMITTED TO THEM REFERRING TO THE CURRICULUM IN MEDICINE.

MEMBERS.—Dr. Mackay, *Chairman*: The President; Dr. Norman Moore, Sir George Philipson, Sir John Williams, Sir John Batty Tuke, Sir Thomas Myles, Sir Christopher Nixon, and Dr. Little.

I.—PRELIMINARY STATEMENT.

Direct reference is made to the report of the Education Committee presented to the Council in November, 1908, and printed in Vol. xlv of the Minutes, p. 359. This report was briefly debated in the Council on November 28th, 1908, and was "referred back to the Education Committee for further consideration and report to the Council at a future session."

The report of 1908 dealt with various proposals which have been remitted to the Committee during the last few years. It is unnecessary to repeat here the text of the several proposals referred to; the following brief summary will suffice:

1. That the preliminary sciences, Biology (Botany and Zoology), Physics, and Chemistry be transferred from the

curriculum to a stage preliminary to the commencement of medical studies.

2. That the curriculum be extended to six years, or, alternatively, to five years, the preliminary sciences being excluded.

3. That the last year of study be devoted exclusively to clinical work.

4. That the subjects embraced in the curriculum be divided into (a) two, or (b) three groups, and that no study in a later group be recognized as qualifying until the professional examination in the subjects of the earlier group has been completed by a student.

5. That a minimum of two years be devoted to the subjects of the Final Examination.

In their last report the Education Committee have dealt with the period of study as a continuous whole, and no notice has been taken of vacations: no other course has been possible. Vacation periods of three months' duration are usually devoted largely to study when they precede a professional examination; when they follow an examination, on the contrary, they are probably not so fully occupied by medical work. The statistics set forth in the several tables must be regarded as reasonable approximations rather than as exact numerical statements of the facts.

II.—THE GENERAL CONSIDERATION OF THE PROPOSALS REMITTED TO THE COMMITTEE.

1. *That the preliminary sciences, Biology (Botany and Zoology), Physics, and Chemistry, be transferred from the curriculum to a stage preliminary to the commencement of medical studies.*

All are agreed that the knowledge to be derived from the study of the preliminary sciences is to be considered an essential part of the equipment of a medical man, but it is argued, on the one hand, that the subjects in question form in reality part of a general education, and that therefore the teaching of them may be relegated to the ordinary schools of the country, the maintenance of a sufficient standard being safeguarded by an appropriate examination before the commencement of the medical curriculum. On the other hand, it is held that in the case of a medical student there is demanded, in addition to the acquisition of general principles, a specialized knowledge of the sciences in their direct application to medical practice and research, and that this necessary end can only be followed out in a school of medicine, or in some similar institution under teachers cognizant of the aims of medical education.

The question is one which may possibly be submitted at some future date to the judgement of the Council. A consideration of the educational conditions of the present day has convinced the Committee that the time is not yet ripe for its discussion. The Council cannot, without disregard of the interests specially committed to its care, permit the discharge of an important educational duty to be withdrawn from its supervision until at least it has clearly satisfied itself that under the new conditions the teaching work will be adequately performed. Without any disparagement of the standard which has been reached generally, and with full recognition of individual instances of high efficiency, it is to be said, that the secondary and higher-grade schools of the country are not yet in a position to undertake the control of the instruction in the preliminary medical sciences. The schools must devote for some time yet the greater part of their energies to the effort to raise throughout the country the standard of general education, their first and most immediate concern, to a more satisfactory level than it occupies at present. Proof is afforded in the statistics recently submitted to the Council by the Education Committee showing the ages at which students enter upon the medical curriculum (vol. xlv, p. 279). Two series of figures are contained in the report referred to: the earlier deals with the group of students who qualified in 1906, and who, in the majority of cases, commenced study somewhere in the decade between 1891 and 1901; the later deals with the entrants of the year 1903. The standard demanded in the preliminary examination is an important factor in determining the age of the student at entrance, and in the case of those entering under the age of 21 years it is probably the dominating element. In the earlier group the average age of those under 21 at entrance was 18 years 6 months; in the later group it was greater by, practically, three months. The difference between the figures shows that while the standard of examination had been raised in the interval, owing to the action of the General Medical Council, the schools of the country had not been able to keep pace with the advance. The preliminary examination for entrance to study in medicine is a junior examination, and under

satisfactory educational conditions should be passed by youths at the age of 16½ or 17 years at the latest. In the earlier series of figures 12.5 per cent. of the total number of entrants are shown to have passed at 17 years or under; in the later only 7 per cent. of the total are shown to have qualified for entrance at that age. The Council has declared its intention of adopting, whenever the course becomes possible, the senior standard of examination which ought to be attainable by youths of 18 or 19 years, an age beyond which the school curriculum cannot with advantage be prolonged. But in the present circumstances, were the Council to carry out its intention the step would have the probable result of lengthening the period of school attendance or to beyond the close of the 20th year in the majority of instances. Indications are not wanting that educational conditions throughout the country are improving, but a considerable advance is still required.

In the circumstances it does not seem desirable that fresh responsibilities, as contemplated in the proposal under discussion, should be thrown upon the schools; a failure on the part of the schools to meet these responsibilities to the full extent would be prejudicial to the interests of medical education.

In another and more direct way the inadequacy of the schools to undertake the work which it is suggested in the proposal to assign to them has of recent years been demonstrated to the Council. In 1903 an inquiry into the methods of instruction adopted and the standard reached in teaching the preliminary medical sciences in a number of selected schools recognized by certain of the licensing bodies was carried out by the Education Committee. The report of the Committee (vol. xl, p. 709) led the Council to adopt a resolution to the effect that in many of the cases the courses of study were insufficient (ibid., p. 91).

After an elaborate investigation undertaken by a specially appointed Committee, the Council adopted a series of resolutions in which the minimal standard of teaching and examination to be required in biology, physics, and chemistry were clearly defined (vol. xli, pp. 58, 61, 147). Although the inquiry would have only an indirect bearing upon the issue involved in the question at present under discussion, a question which refers to the schools of the country generally, it would undoubtedly be of much interest to the Council to learn how far the selected schools recognized by several of the licensing bodies have been able to meet during the last five years the materially increased demands which have been formulated, whether by the Council or by the licensing bodies themselves, in respect of the preliminary medical sciences. Full information as to the numbers and qualifications of the candidates who have completed their first-year examination upon the strength of a school curriculum of study will doubtless be willingly supplied by the licensing bodies on the request of the Council, but a reasonable time must be granted to the selected schools in which to adapt themselves to the added requirements.

In their statistical report of November, 1908, the Education Committee dealt with the curricula followed out by all the students who registered as practitioners in the year 1906. In the case of these students the study of the preliminary sciences was carried on at a period prior to the adoption of the Council's regulations defining the minimal standard of teaching and examination. It is to be noted, however, that in no single case was the first-year examination passed on the strength of a school curriculum alone, and that, at the shortest, the period of study spent on the preliminary sciences in a school of medicine or approved teaching institution was of six months' duration.

In view of all the facts the Education Committee do not recommend the exclusion of chemistry, physics, and biology from the curriculum of medical studies.

2. *That the curriculum be extended to six years, or, alternatively, to five years, the preliminary sciences being excluded.*

The addition of a year to the curriculum would be a serious step, which could only be justified by a general desire for the change on the part of the licensing bodies, or by a report from the Council's inspectors and visitors to the effect that there is evidence of insufficient qualification for practice among the candidates who are successful in the final examination. The Education Committee have had no information before them to show that the present curriculum is actually insufficient in length. The average length of the curriculum as it is followed throughout the country at the present time is nearly seven years (6, 11.3). Of the licentiates of 1906, 13.8 per cent. qualified in a five years' course, 34.9 per cent. completed medical studies in the sixth year, 18.1 per cent. in the seventh, and 12.9 per cent. in the

eighth year. These figures show that the licensing bodies, assisted by the periodical inspections on the part of the Council, are maintaining a high standard of examination, by which the length of the course is automatically regulated in accordance with the abilities of the student. The Education Committee do not think it necessary to refer the question directly to the licensing bodies at the present moment. They believe that the effort should first be made to find out to what extent the complaints as to insufficiency of time, which have reached the Council from the teachers of the final subjects, can be met by rearrangements within the present curriculum.

The Committee does not recommend at the present the addition of a year to the curriculum in medicine.

3. *That the last year of study be devoted exclusively to clinical work.*

This proposal has already been reported upon by the Education Committee (vol. xliii, p. 553, 1906), and their opinion that it would be inadvisable to seek to prevent altogether any theoretical study or attendance at lectures in the final year has been homologated by the Council (vol. xliii, p. 145).

No. V of the Council's Recommendations in regard to professional study now stands as follows:

The fifth year shall be devoted to clinical work at one or more public hospitals or dispensaries, British or foreign, recognized by any of the medical authorities mentioned in Schedule (A) of the Medical Act (1858).

4. *That the subjects of study embraced in the curriculum be divided into (a) two or (b) three groups, and that no study in a later group be recognized as qualifying until the professional examination in the subjects of the earlier group has been completed by the student.*

Overlapping study between subjects is, of course, an essential feature of the medical curriculum, and it will be seen from the tables presented in the report that almost all the licensing bodies permit overlapping study between the examination groups of subjects; indeed, in most of the cases, overlapping of this kind is necessitated by the arrangements of the curriculum. The constitution of the examination groups is to a large extent a matter of practical convenience, and there would seem to be no good reason theoretically why the study of the several groups should not overlap to some extent at least, for instance, why chemistry and anatomy should not be studied together, or why the work in the later stages of anatomy and physiology should not coincide in time with the earlier stages of study in pathology and pharmacology.

The most common arrangement of the curriculum among the bodies is one in which the first two years are allotted to the preliminary sciences and to anatomy and physiology, the subjects of the first period of the table contained in the report (p. 375), the last two years to pathology, surgery, medicine, midwifery, etc., the subjects of the second period of the table, and the third year is shared between the two periods. This arrangement roughly divides the curriculum into two, assigning almost equal portions to each period, and owing to the overlapping in the third year it has the advantage of a certain amount of elasticity, permitting retardation at one stage to be compensated for by added effort and concentration of work at another. In the opinion of most of the licensing bodies some elasticity in the structure of the curriculum is essential; but there is, on the other hand, a danger to be safeguarded against, namely, that the retardation of the earlier period may cause serious encroachment upon the later period of the course. That some encroachment of this kind does take place in many cases, and though by no means in all, in some to a considerable extent, is made evident in the statistical tables of the report. Column 9 (p. 375) shows the whole amount of delay incurred by the average student, and the two sections of column 8 show the proportion in which the added months were shared between (a) the study of the subjects of the first period of the course and (b) the undivided study of the subjects of the second period. On account of overlapping study, however, in the great majority of the bodies the subjects of the second period received some of the time added to the curriculum by the retardation of the first period examination. Column 7 of the table is drawn up on the assumption that the first period retardation was shared equally between the study of the subjects of the two periods. This was probably the case in the majority of the instances, but certainly not in all, and the truth must lie somewhere between the figures of columns 7 and 8. The time added to final study is somewhat more than that shown in the second section of column 8, somewhat less than that shown in the second section of column 7. Comparison will show that in many of the cases the addition to the time allotted to second period studies is proportionately much less than

it should be. The figures refer to the average student; a study of the tables of the individual licensing bodies (pp. 380-395) will show that in the cases of the groups of students who pass through the course in less than the average time (fifty-seven to sixty-three months) there are many instances in which actual encroachment upon final study has taken place.

The proposals under discussion seek to prevent all time encroachments of earlier upon later studies, but it is evident that if carried into effect they would destroy altogether the elasticity of the curriculum which arises from the recognition of overlapping studies. This in many cases would amount to actual hardship towards the student. Very many of the bodies hold their professional examinations on two occasions only during the year, and give qualifying lecture courses in each of the subjects of the curriculum once only in the year. A concrete example will illustrate the hardship which may arise in these circumstances under the proposed regulations. A student who has sat for his preliminary science examination at the close of his first year would be entitled upon the successful completion of the examination to pass on in the second year to the qualifying study of anatomy and physiology. But if he fail short in one of the four subjects of the first examination—say, in botany—the whole of the second year will be lost to him, as he will have no opportunity of taking out qualifying classes in anatomy and physiology until his third winter. The penalty for failure in cases such as that quoted is so excessive that it is obvious that either the whole course will be unduly prolonged or that the standard of the examinations will be lowered in view of the serious consequences of rejection. The student so retarded may give up medical study for the lost year, with the exception, possibly, of some homework in the subject in which he has failed; certainly there are many who will be disinclined to pay the fees for classes which do not qualify for the licence to practise.

The proposals under discussion are too drastic to be likely to be successful, and it is practically certain that they would not be acceptable to the great majority of the licensing bodies. The Education Committee cannot recommend the adoption of the proposals, more particularly as they believe that the prevention of undue time encroachment upon the later studies can be realized by means less likely to give rise to opposition.

5. *That a minimum of two years be devoted to the subjects of the final examinations.*

The Committee do not regard the length of the minimum period defined in this proposal as sufficient. They hold that if clinical work is to have reasonable recognition in the curriculum, approximately half of the whole period of study should be devoted to the subjects of the second period of the tables.

III.—RECOMMENDATIONS OF THE COMMITTEE.

The Committee believe that a period equivalent at least in time-value to twenty-seven months of undivided study should be allotted to the subjects for the final examination, half-value being granted to periods of overlapping study. With the majority of the licensing bodies the last two years of the curriculum contain only twenty-one months. This being allowed for, it will be seen that the proposal implies that in cases where there is no overlapping the undivided study of the final subjects must be begun when the minimal course is to be followed, in the middle of the third year. In many of the licensing bodies the completion of the examination of the first period does not take place until this point has been reached. It is, however, the practice among these bodies to commence the work for the final examination at the beginning of the third year. In the cases referred to, the student, when no hindrance takes place, completes his course in fifty-seven months, and, on the principle of allowing half-value for overlapping study, out of this total devotes the equivalent of thirty months' study to the final subjects, and twenty-seven months to those of the first period.

When the work for the final examination begins at the commencement of the third year, a delay of six months in the completion of the first period examination may be compensated for according to the principles involved in the proposal, but any further delay will necessitate an addition to the final portion of the curriculum. The subjoined table (p. 367) sets forth the details of the scheme.

It is obvious, however, that if the work for the final examination be commenced in the course of the second year of the curriculum the penalty for delay in passing the first period examination might be avoided in whole or in part. The institution of a minimal time-value limit for second period necessitates the taking of a similar action in

Date of Commencement of Work for Final Examination.	Date of Completion of Examination in Anatomy and Physiology.	Length of Period of Study for Final Examination.				Total Length of Curriculum.
		Months.				
		Months.	Overlapping Study.	Undivided Study.	Total.	Equivalent Value of Total.	Months.
Beginning of third year	30	6	27	33	30	57
“ “	36	12	21	33	27	57
“ “	42	18	18	36	27	60
“ “	48	24	15	39	27	63
Middle of third year	30	—	27	27	27	57
“ “	36	6	24	30	27	60
“ “	42	12	21	33	27	63
“ “	48	18	18	36	27	66
Beginning of fourth year	36	—	27	27	27	63
“ “	42	6	24	30	27	66
“ “	48	12	21	33	27	69

regard to the first period. The natural course would be to recommend in the case of the first-period subjects a minimum limit of study equivalent in value to twenty-four months of undivided study. There is, however, a difficulty in the way of taking this step, because, in the case of certain of the licensing bodies, those which recognize school study in the preliminary sciences before the commencement of the medical curriculum, some of the students complete the examination in anatomy and physiology in a period of eighteen months from the beginning of professional study. The difficulty may be met, practically, by adding to the original recommendation a rider to the effect that final study earlier than the third year of the curriculum shall not be taken into account in reckoning the time-value of the final period.

It will be generally conceded that, apart from overlapping study, some period of actual undivided study should be safeguarded for the subjects of the final examination. It is important that it should be made possible for the student to devote the last full year of the course entirely to clinical work, and for this end, taking into account the incidence of the autumn vacation, it may be suggested that a minimum period of fifteen months of undivided study should be required for the final subjects. By many, however, this will be regarded as insufficient, and it would not be an unreasonable position to take—to hold that the recognition of overlapping study should be confined entirely to the intermediate portion of the curriculum, and that twenty-one months of undivided study should be demanded as a minimum for the final examination. If this proposition be adopted, it will not be necessary to make any regulation regarding final study in the earlier portion of the course.

While recognizing that there is much to be said on both sides, the Committee, looking to the relative importance of the final work, recommend to the Council the adoption of the latter proposal.

IV.—CONCLUSION.

The Committee accordingly advise that the following be added to the "Recommendations of the Council in regard to Professional Education":

"For the purposes of this Recommendation the subjects of the curriculum are arranged in two groups, the earlier group comprising the Preliminary Sciences and Anatomy and Physiology, the later group embracing all the remaining subjects, exclusive of Pharmacy.

"The Regulations of the bodies should be so framed as to secure (1) for the study of the subjects of the later group the reservation of a period equivalent in value to two and a half academic years (twenty-seven months) of undivided study, half time-value being allowed for periods of work in which studies in the earlier and later groups overlap; and (2) the reservation of a period of two academic years (24 months), in which the studies of the later group shall have the undivided attention of the student."

JOHN YULE MACKAY,

May 26th, 1909.

Chairman.

Mr. THOMSON suggested that the report should be sent to the various licensing bodies concerned for their observations thereon.

Mr. MORRIS hoped that Dr. Mackay, who had given so much time and labour to the subject, would not object to the report being circulated among the various bodies concerned and their comments asked thereon.

Dr. MACKAY thought if the Council were not sure as to its opinion then would be the time to go to the bodies concerned and ask for their comments; but this was eminently a subject which the Council should decide for itself, as all the figures and facts had been before the various bodies. The same end would be attained if the report were put upon the minutes.

Mr. THOMSON proposed as an amendment, and Mr. MORRIS seconded:

That the report be circulated to the various licensing bodies for their observations.

The amendment, on being put, was lost, and the resolution was carried *nem. con.*, and it was resolved that the consideration of the report should be placed on the programme of business for the first day of next session.

DENTAL EDUCATION COMMITTEE.

The Dental Education and Examination Committee presented the following report:

A letter has been received from an educational body, the Incorporated Dental Hospital of Ireland, calling attention to a certain difference existing between the requirements of the several bodies granting licences in dental surgery. The recommendation of the General Medical Council, which is to be found in the regulations for the registration of medical and dental students, 1908, p. 18, is:

One year *bona fide* apprenticeship with a registered dental practitioner, after being registered as a dental student, may be counted as one of the four years of professional study.

It appears that the Royal College of Surgeons of England allows two years of such study to be counted towards the four years of the curriculum, but that the other licensing bodies only allow one year to be so counted. As from the printed regulations the actual practice of some of the bodies is not obvious, inquiries have been made by the Registrar and answer received. The regulation (2) of the Royal College of Surgeons is of having been engaged during a period of not less than two years in acquiring a practical familiarity with the details of mechanical dentistry under the instruction of a competent practitioner, or under the superintendence of the mechanical department of a recognized dental hospital, where the arrangements for teaching mechanical dentistry are satisfactory to the Board of Examiners in dental surgery.

Mr. MORRIS wished to give the Council an assurance, and to draw attention to a fact. The assurance was that he felt quite certain that his colleagues in the Royal College of Surgeons would desire to take into full consideration with proper respect any recommendation that came from the General Medical Council. The fact to which he would like to draw attention was that this was the jubilee year of the institution by the College of Surgeons of an examination for the licence in dental surgery. It would be admitted by those who knew the subject that the College of Surgeons took a great deal of trouble to purify the

profession before it entered into the arrangements for dental education, and it had consistently done so ever since the licence in dental surgery was instituted. It was admitted by those who were acquainted with the actual practical work of dental surgery that two years for the general subjects was sufficient, but the requirements of the Council were that there should be two years at least of instruction in mechanical dentistry and that there should be a four years' curriculum. This involved either that the whole of the two years must be passed in a dental hospital or else the curriculum was practically a five years' curriculum. The Dental Board and the Council of the College of Surgeons was convinced that the education in mechanical dentistry which students got under a proper director in those departments in a hospital was infinitely superior to that which they got as apprentices to dental practitioners. It was the aim and object of the Royal College of Surgeons by degrees to make the whole of the period of four years to include any training in mechanical dentistry to be passed under the direction of a hospital. That was the reason why in 1906 it changed its requirements of three years' practice in mechanical dentistry to two years, because it was hoped that those two years would be passed in a dental hospital. But the time had not yet arrived when that could be done, for the reason that there was not provided in all the places where dentistry was taught a sufficient amount of laboratory accommodation for the mechanical training of every student. There was accommodation to give demonstrations, but not to give every student a practical education. That was the reason why the Royal College of Surgeons of England had felt that the time had not yet come when it could put their recommendations into force. He moved:

That the report of the Dental Education and Examination Committee be communicated to the Royal College of Surgeons of England for such observations as it might think it desirable to offer.

Sir CHARLES BALL seconded, and the resolution was agreed to.

LEGISLATION AS TO ANAESTHETICS.

The PRESIDENT announced that the following Committee had been appointed—

The President,	Mr. Hodsdon,
Mr. Morris,	Sir Charles Ball,
Mr. Tomes,	Dr. Knox,

to consider the proposals for legislation on the subject of anaesthetics which have been or might hereafter be put forward, to make such representations on behalf of the Council to the authorities concerned as might be deemed necessary, and to report to the Council on the position of the subject at the November session.

Monday, May 31st, being Bank Holiday in England, the Council adjourned till 2 o'clock on Tuesday, June 1st.

REAPPOINTMENT OF REGISTRAR.

Dr. NORMAN MOORE moved, Mr. MORRIS seconded, and it was resolved that Mr. Allen be reappointed registrar for the ensuing year.

VOTE OF THANKS TO CHAIRMAN.

Moved by Dr. NORMAN MOORE and resolved,

That the best thanks of the Council be given to the President for his able services in the chair during the present session.

The proceedings then terminated.

DISCIPLINARY CASE.

Much of the time of the Council on Friday, Saturday, and Tuesday was occupied in hearing the evidence with regard to a charge against Dr. R. Galbraith Reid, formerly of Lambeth, of misconduct with a married woman, alleged to have been continued during several years. The complainant, the married woman in question, was examined and cross-examined, and certain witnesses were called in support of her story. Dr. Reid was also examined and cross-examined, and gave an absolute denial to the charges. Evidence as to Dr. Reid's high reputation and character was given by Dr. Hector Mackenzie, who had known him both professionally and privately for eight years; by the Rev. M. Sheppard, of St. John's, Lambeth, who had known him for thirteen years; by the Rev. A. O. Hayes, vicar of Holy Trinity, Lambeth, who had known him for over

ten years; by the Rev. C. T. Payne, vicar of St. Andrews, New Kent Road, Lambeth; by Dr. Sangster, of Lambeth, and by Dr. Frederick Barclay, who had succeeded Dr. Reid in practice; and the evidence of a number of other witnesses to character was tendered but not heard. The Council having considered the case *in camera*, the President announced to Dr. Reid in public session that the facts alleged against him had not been proved to the satisfaction of the Council, and that the case was therefore at an end.

MILK AND DAIRIES BILL.

The provisions of the Milk and Dairies Bill, which was introduced into the House of Commons on May 24th by the President of the Local Government Board, are to apply only to England and Wales and Ireland.

Definition of Dairy and Dairyman.

A dairy is defined as any "farm, farmhouse, cowshed, milk store, milk shop, or other place from which milk is supplied, or in which for purposes of sale or manufacture into butter or cheese milk is kept or used." The making of butter and cheese is expressly excluded from the provisions of the Dairies, Cowsheds, and Milkshops Order which now regulates the dairying trade.

A dairyman is defined as a "cowkeeper, purveyor of milk or occupier of a dairy," but the exception contained in the existing Order is retained in the bill in which the expression "dairyman" does not include a person who only sells milk of his own cows in small quantities to his workmen or neighbours for their accommodation.

Registration of Dairies.

The bill requires that the dairyman as well as the dairy premises shall be registered by the sanitary authority who may remove any dairy from the register or may refuse to register any premises if they become or are unsuitable for the business, or if the premises are a nuisance, or do not comply with the provisions of the bill or of Orders made under the bill. This power, which is given to sanitary authorities, is not so real as it appears to be, for the decision of the authority may be upset by an appeal to the local justices. After two convictions against the provisions of the bill the name of a dairyman may be removed from the register either absolutely or for a definite period. No provision is made for preventing the convicted dairyman being registered in another sanitary district.

Inspection and Prohibition of Sale.

Section 4 of the Infectious Diseases (Prevention) Act, 1890, is repealed, and there is substituted a clause with thirteen subclauses. These refer to the inspection of dairies by a medical officer of health for the purpose of preventing the spread of infectious disease through the medium of milk supplies. If a medical officer of health, as a result of his inspection, comes to the conclusion that a particular supply of milk should be stopped, he may do so either by agreement with the dairyman, or by compulsion, or he may refer the matter to the sanitary authority. If he takes the first course, he may agree with the dairyman to stop the supply and use of the milk from the dairy or from any particular cow on such terms and subject to such conditions as may be agreed upon. If the second course is adopted, he may make an interim order which would be in force for a maximum period of ten days, prohibiting the supply of milk for human consumption from the dairy or from a particular cow. If the matter is referred to the sanitary authority, they may act in a similar manner either by agreement or by compulsion.

An order may be made by the authority prohibiting the supply of milk for a longer period than ten days, and until prescribed conditions are complied with. Against this order there is an appeal to the Local Government Board or, under certain circumstances, to the Board of Agriculture and Fisheries. Upon an appeal being lodged an inquiry will be made by an officer of the particular board concerned, and if the Board considers that the order of the authority was made without due cause, the dairyman, if not himself in default, will be able to recover full compensation for any damage he may have sustained, any dispute as to the amount of compensation, etc., being settled as provided in Section 308 of the Public Health Act, 1875.

Tuberculous Milk.

The sale of tuberculous milk is sought to be prevented by providing a penalty of £10 on the conviction of any person who "knowingly sells, or offers or exposes for sale, or suffers to be sold or offered or exposed for sale, for human consumption or for use in the manufacture of products for human consumption; or knowingly uses or suffers to be used in the manufacture of products for human consumption tuberculous milk or the milk of any cow which is suffering from tuberculosis of the udder, or which is emaciated from tuberculosis." A penalty of £5 may also be enforced upon a dairyman who does not isolate from his herd any cow which he knows to be tuberculous.

Taking Samples.

An inspector of the Local Government Board, or any person authorized by him, is empowered to take samples of milk in any part of the country to which the bill applies, and a medical officer of health, or any one he authorizes, may take samples within the area for which he acts.

Orders.

Clause 6 empowers the Local Government Board, after consultation with the Board of Agriculture and Fisheries, to make general and special orders. These may relate to a variety of matters, the most important of which is the last, for it enables the Local Government Board to decide what authorities shall carry out the orders. The regulation of the use of preservatives, the manner of conveyance of milk, the labelling of milk receptacles, the mixing of milk, the measures to be taken for cooling it, and the qualifications, duties, salaries, and tenure of office of veterinary inspectors are all matters which the Local Government Board may deal with by Order.

If any dispute arises as to whether the occupier or the owner of premises affected by the bill should bear any expenses involved in compliance with any Order of the Board, the decision is to be left to the local justices.

Warranties.

A warranty will no longer be available as a defence to any proceedings under the Sale of Food and Drugs Acts where the article in respect of which proceedings are taken is milk.

Imported Milk.

Danger to public health from imported milk is provided against by Clause 8 of the bill which requires the Local Government Board to make regulations as to imported milk under the Public Health (Regulations as to Food) Act, 1907.

Infant Milk Dépôts.

The establishment and maintenance of dépôts for the sale of milk specially prepared for consumption by infants under 2 years of age is permitted by Clause 9 to an urban district with a population of 50,000 or upwards and to an urban district with a population between 10,000 and 50,000 with the consent of the Local Government Board. In either case regulations which the Board are empowered to make must be observed. These regulations refer to the sources and the nature of the milk, its price and the manner in which it shall be sold, the statistical and other records which shall be kept, the visitation of the homes of those supplied, the keeping of accounts, and the co-operation of adjoining sanitary authorities.

Defaulting Authorities.

In the event of a sanitary authority failing to carry out the provisions of the bill, the powers and duties of the authority may be undertaken by the county council, all expenses incurred being recovered from the authority. Failing the carrying out of their duties, either by the sanitary authority or by the county council, the Local Government Board may make an Order directing the authority or the council to take such action as may be specified in the Order, or may empower some person to perform the duties of the council.

London.

The administration of the bill in London will be in the hands of the London County Council.

CENTRAL MIDWIVES BOARD.

A MEETING of the Central Midwives Board was held at Caxton House, Westminster, on May 27th, with Dr. F. H. CHAMPEYNS in the chair.

False Certificates.

The CHAIRMAN, referring to proceedings undertaken by the Director of Public Prosecutions in regard to false certificates under Section 11 of the Midwives Act, said that medical men, amongst others, sometimes signed certificates and similar documents without as full an inquiry into the circumstances of the case as was desirable; the board was anxious to have the abuse stopped, and he hoped that the proceedings would have a salutary effect and that certificates would be more carefully looked into before they were signed.

Uncertified Women as Midwives.

A letter was read from the clerk of the West Sussex County Council, suggesting that the local supervising authority should be temporarily enabled to permit uncertified women approved by them to practise as midwives after March 31st, 1910, in certain cases. The board decided to reply that there was no power under the Midwives Act to carry out the suggestion, and that the board did not approve of it.

Covering of Midwives by Medical Practitioners.

The report of the Standing Committee of the board stated that Dr. A. G. R. Foulerton, Medical Officer of Health for East Sussex, had attended and discussed with the committee the covering of midwives by medical practitioners, and the best means of its prevention.

The board decided that the attention of the Midwives Act Committee be called to the subject.

Natal and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

THE following qualified candidates for the Naval Medical Service have been appointed Surgeons in His Majesty's Fleet, dated May 14th: KENNETH H. HOLE, M.B., GILBERT F. STYLS, ARTHUR A. SANDERS, M.B., MICHAEL P. FITZGERALD, M.B., JOHN HADWEN, M.B., HARRY W. NICHOLLS, RAYMOND F. M. ROBERTS, ALFRED G. MALCOLM, M.B., HORACE C. DEVAS, HENRY BYRNS, M.B., HUGH F. BRIGGS, M.B., GORDON A. JACKSON, M.B., B.A., WILLIAM MILLER, M.B., JAMES S. OLWIN, M.B., JAMES BARRETT, M.B. They are appointed to the Victory, additional, for course of instruction at Haslar Hospital.

Staff Surgeon R. R. FASSON, M.B., has been allowed to withdraw from the service with a gratuity, May 27th. He was appointed Surgeon, February 26th, 1902, and Staff Surgeon, February 26th, 1908.

The following appointments have been made at the Admiralty: Fleet Surgeon J. L. SMITH, M.V.O., M.B., to the *Excellent*, on recommissioning, June 1st; Fleet Surgeon J. E. COAD, M.B., to the *Nelson*, June 1st; Fleet Surgeon G. A. WATERS, M.D., to the *Drake*, June 1st; Fleet Surgeon W. E. MARSHALL, to the *Excellent*, additional, for the *Revenge*, June 1st; Fleet Surgeon T. AUSTEN to the *Achilles*, June 1st; Surgeon R. L. JONES to the *Exmouth*, on recommissioning, June 1st; Fleet Surgeon A. G. ANDREWS and Surgeon H. R. BICKFORD to the *Superb*, on recommissioning, undated; Fleet Surgeon A. M. PAGE to the *Swiftsure*, May 26th; Fleet Surgeon J. A. KEOGH, M.B., and Surgeon A. R. FISHER to the *Jupiter*, on recommissioning, June 1st; Staff Surgeon R. A. ROSS, M.B., to the *Thetis*, on recommissioning, undated; Staff Surgeon J. W. W. STANTON to Plymouth Hospital, June 10th; Surgeon P. D. M. CAMPBELL to the *Excellent*, additional for the *Grafton*, undated; Surgeon F. G. HITCH, to the *Shannon*, June 1st.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

THE following officers, who are serving in India, are appointed specialists in the subjects named:—Advanced Operative Surgery: Major F. E. GUNTER, M.B., 8th (Lucknow) Division. Ophthalmology: Captain J. G. GILL, 1st (Peshawar) Division. Captain H. M. NICHOLLS, M.B., 6th (Poona) Division. Electrical Service: Captain T. B. MORLIARTY, 8th (Lucknow) Division.

INDIAN MEDICAL SERVICE.

LEUTENANT-COLONEL R. N. CAMPBELL, M.B., Bengal, is promoted to be Colonel, from April 2nd. He entered the department as Surgeon, October 1st, 1877, and became Surgeon-Lieutenant-Colonel, October 1st, 1897. He served with the Naga Hills expedition in 1879-80, for which he was mentioned in despatches and granted a medal with clasp, and with the Akha expedition in 1883-4, being again mentioned in despatches. Colonel D. WILKIE, M.B., is permitted to retire from the service from April 2nd. He was appointed Assistant Surgeon, April 1st, 1875, and became Colonel, April 2nd, 1904.

EXAMINATION FOR COMMISSIONS.

An examination for not fewer than twenty-one commissions in His Majesty's Indian Medical Service will be held in London on Monday, July 26th, and the five following days. Particulars as to pay, promotion, etc. in the service and the necessary forms for application, can be obtained from the Military Secretary, India Office, London, S.W.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

London Mounted Brigade Field Ambulance.—HUGH S. BRADLEY to be Lieutenant, March 5th.

First South Midland Mounted Brigade Field Ambulance.—JOHN M. DALRYMPLE, M.B., to be Lieutenant, April 6th.
Second London Sanitary Company.—Lieutenant V. F. CORSTELL to be Captain, March 30th; PETER C. SMITH to be Captain, March 30th.
For attachment to Units other than Medical Units.—Surgeon-Captain E. GRAY, from the 2nd Cheshire (Railway) Royal Engineers (Volunteers), to be Captain, with precedence as in the Volunteer Force, April 1st, 1908; WILLIAM J. HOTTEN to be Lieutenant, April 21st.
Unattached List.—Major (Honorary Lieutenant in the Army) A. C. GEDDEN, M.D., from the Second Scottish General Hospital, Royal Army Medical Corps, to be Major, for service with the Edinburgh University Contingent, Senior Division, Officers' Training Corps.

VOLUNTEER INFANTRY.

SURGEON-LIEUTENANT W. H. BROAD, M.D., 2nd Volunteer Battalion the King's (Liverpool Regiment), resigns his commission, March 31st, 1908.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

LIEUTENANT A. C. PARSONS, London Companies, resigns his commission, March 31st, 1908.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,048 births and 4,375 deaths were registered during the week ending Saturday last, May 22d. The annual rate of mortality in these towns, which had been 14.1, 13.7, and 14.7 per 1,000 in the three preceding weeks, declined against last week to 13.9 per 1,000. Among these several towns the death-rates ranged from 6.0 in Leyton, 6.5 in Walthamstow, 6.7 in Southwick, 7.6 in Hornsey and in Hastings, 7.7 in East Ham, 8.4 in Brighton, and 8.5 in Willesden and in Tottenham, to 19.5 in Ipswich, 19.6 in Salford, 19.8 in Manchester, 20.2 in Coventry, 20.4 in Wolverhampton, 20.7 in Rhondda, 21.1 in Oldham, 21.8 in Middlesbrough, and 23.1 in Warrington. In London the rate of mortality was 13.4 per 1,000, while it averaged 14.1 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.3 per 1,000; in London this death-rate was equal to 1.5 per 1,000, while among the seventy-five other large towns these diseases caused death-rates ranging upwards to 2.3 in Wigan and in Manchester, 2.6 in West Ham, 3.4 in Norwich, 4.1 in Salford, and 9.5 in Wolverhampton. Measles caused a death-rate of 1.3 in West Hartlepool and in South Shields, 1.5 in West Bromwich, in Bootle, and in Manchester, 2.2 in Salford, 3.4 in Norwich, and 6.5 in Wolverhampton; diphtheria of 1.3 in King's Norton, whooping-cough of 1.2 in Wigan, 1.5 in Middlesbrough, and 2.1 in Swansea; and diarrhoea of 1.2 in Aston Manor. The mortality from scarlet fever and from enteric fever showed no marked excess in any of the large towns, and no fatal case of smallpox was registered during the week. The Metropolitan Asylums Hospitals and the London Fever Hospital contained 2,254 scarlet fever patients at the end of last week, against 2,175, 2,173, and 2,181 at the end of the three preceding weeks; 335 new cases were admitted during the week, against 309, 315, and 348 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, May 22d, 595 births and 596 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 16.9, 16.2, and 14.9 per 1,000 in the three preceding weeks, rose again last week to 16.7 per 1,000, and was 2.8 per 1,000 above the rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rates ranged from 10.8 in Greenock and 11.6 in Leith, to 18.2 in Paisley and 19.4 in Dundee. The death-rate from the principal infectious diseases averaged 1.9 per 1,000 in these eight towns, the highest rates being recorded in Dundee and Paisley. The 287 deaths registered in Glasgow included 4 from scarlet fever, 2 from diphtheria, 23 from whooping-cough, and 5 from diarrhoea. Seven fatal cases of whooping-cough and 2 of diarrhoea were recorded in Edinburgh; 3 of whooping-cough and 5 of diarrhoea in Dundee; 2 of diarrhoea in Aberdeen; 5 of measles and 2 of diphtheria in Paisley; and 5 of whooping-cough in Greenock.

Hospitals and Asylums.

HEREFORD COUNTY AND CITY LUNATIC ASYLUM.

THE annual report of Dr. C. S. Morrison, the medical superintendent of this asylum, for the year 1907 shows that there were 522 patients in the asylum on January 1st, 1907, and 531 at the end of the year. The total cases under care during the year numbered 666, and the average number daily resident 528. The numbers chargeable to Hereford city and county remaining at the end of the year (477) show an increase of only 2 on those of the year 1903, the numbers having fluctuated within only narrow limits in the interval. The male patients, however, appear to have increased more than the female of late years, and Dr. Morrison reports that the accommodation on the male side has become a more acute question each year. During the year 84 were admitted, of whom 70 were first admissions. Of the total 84 admissions, 76 were direct and 6 indirect admissions, and 2 statutory readmissions. As regards duration of disorder on admission, and excluding any reference to voluntary boarders, in only 14 the attacks were first attacks within three months, and in 17 more of less than two years' duration on admission; in 21 not first attacks of less than two years' duration; in 2 it was unknown whether first attack or not, and in the remainder the attacks were either of more than two years' duration (13) on admission or of congenital origin (12). The admissions were classified according to the forms of mental disorder into:

Mania of all kinds, 27; melancholia of all kinds, 12; senile and secondary dementia, 10; delusional insanity, 10; general paralysis, 2; confusional insanity, 3; insanity with epilepsy, acute delirium and alternating insanity, each 1; and cases of congenital or infantile defect, 15. As to the probable etiological factors in the direct admissions, alcohol was assigned in 13, or 16.6 per cent. In his report Dr. Morrison mentions that as a secondary cause alcohol was operative in 35.3 per cent. of the adult males, but that in 22.8 per cent. the excess had followed a prior mental affection. Acquired syphilis was assigned in 4, and congenital syphilis in 2 more; tuberculosis in 3, and various other toxic agents in 20. Critical periods were assigned in 13; the puerperal state in 1; bodily trauma in 9; deprivation of special senses 3; physiological defects and errors in 18. Diseases of the nervous system in 6, other bodily affections in 45, and mental stress in 18. An insane heredity was ascertained in 20, of alcoholism in 1, of epilepsy in 1, of various neuroses in 2, and of marked eccentricity in 2, giving a total neuropathic heredity in 27, or 34.6 per cent. of the direct admissions. During the year 29 were discharged as recovered, giving a recovery-rate on the direct admissions of 34.5 per cent., or of the recoveries in the direct admissions on the direct admissions of 32.1 per cent. There were also 8 discharged as relieved, and 1 as not improved. During the year 37 died, giving a death-rate on the average numbers resident of 7.0 per cent. The deaths were due in 7 to cerebro-spinal diseases; in 7 to diseases of heart and blood vessels; in 11 to diseases of the respiratory organs, including 4 deaths from pulmonary tuberculosis; in 6 to abdominal diseases, including 1 from tuberculous peritonitis; in 1 to suffocation, and in the remainder to general diseases. Deaths from tuberculosis accounted, therefore, for 13.5 per cent. of the total deaths. No serious outbreak of zymotic disease occurred, but dysentery and diarrhoea were prevalent, the general health being otherwise good throughout the year.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

- AUSTRALIAN INSTITUTE OF TROPICAL MEDICINE, Townsville, Queensland.—Director. Salary, £500 per annum.
- BEVILME HOSPITAL.—Two Resident House-Physicians. Honorarium, £25 each per quarter.
- BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £170 per annum, and £30 cab allowance.
- BOLINGBROKE HOSPITAL, Wandsworth Common.—(1) Resident Medical Officer. (2) House-Surgeon. Salary, £150 and £75 per annum respectively.
- BOURNEMOUTH ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.—House-Surgeon. Salary at the rate of £80 per annum.
- BRIGHTON, HOVE, AND PRESTON DISPENSARY.—House-Surgeon. Salary, £130 per annum.
- CANTERBURY: KENT AND CANTERBURY HOSPITAL.—(1) House-Surgeon. (2) Assistant House-Surgeon. Salary, £80 and £60 per annum respectively.
- CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—Assistant Surgeon.
- CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House-Surgeon. Salary, £60 per annum.
- DERBY AND DERBYSHIRE HOSPITAL FOR SICK CHILDREN.—Lady Resident Medical Officer. Salary, £60 per annum.
- EVILINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road, S.E.—House-Physician. Salary at the rate of £60 per annum.
- EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Male Assistant House-Surgeon. Salary, £60 per annum.
- GUYS' HOSPITAL MEDICAL SCHOOL.—Arthur Durham Travelling Studentship.
- HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Assistant Casualty Medical Officer. Salary, £30 for six months and £2 10s. washing allowance.
- INVERNESS: NORTHERN INFIRMARY.—House-Surgeon, Salary, £100 per annum.
- KING'S COLLEGE HOSPITAL MEDICAL SCHOOL.—Professor of Pathology and Bacteriology.
- LANARK: BELLEFIELD SANATORIUM.—Resident Physician. Salary, £150 per annum.
- LEEDS GENERAL INFIRMARY.—(1) Honorary Assistant Surgeon. (2) Resident Surgical Officer. (3) Resident Casualty Officer. Salary, £150 per annum for (2) and £125 per annum for (3).
- LINDSEY COUNTY.—Two Male School Medical Inspectors. Salary, £50 per annum each.
- LONDON HOSPITAL MEDICAL COLLEGE.—Assistant to the Bacteriologist and Lecturer on Bacteriology.
- LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant House-Surgeon. Honorarium at the rate of £75 per annum.
- MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead.—Junior Resident Medical Officer. Honorarium, £50 per annum.
- NORFOLK COUNTY ASYLUM, Thorpe.—Assistant Medical Officer. Salary, £160 per annum, rising to £200.
- NORWICH: JENNY LIND INFIRMARY FOR CHILDREN.—Lady Resident Medical Officer. Salary, £50 per annum.
- ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—Lecturer on Physiology.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £75 per annum.

WINCHESTER.—**ROYAL HAMPSHIRE COUNTY HOSPITAL.**—House-Physician. Salary, £25 per annum, rising to £75.

WOLVERHAMPTON AND MIDLAND COUNTIES' EYE INFIRMARY.—House-Surgeon. Salary, £80 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Two House-Surgeons. Salary, £80 per annum each.

WORCESTER GENERAL INFIRMARY.—House-Physician. Salary, £100 per annum.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Lostwithiel, co. Cornwall, and Cleland, co. Lanark.

APPOINTMENTS.

BIDE, EVAN, I.R.C.P. and S.E., L.F.P.S.G., Assistant Medical Officer to Wyke House Asylum, Buxton, vice R. G. A. Bagnall, M.B., Ch.B., Ed., appointed Assistant Medical Officer to the Newcastle-on-Tyne City Asylum, Gosforth.

BLACK, L. P., M.B. Camb., D.P.H., Medical Officer of Health, St. Thomas Rural District.

BYGOTT, Albert Henry, M.D. Lond., D.P.H. Birm., Barrister-at-Law, Medical Officer of Health, Barking.

CADMOCK, W. R., M.B., Ch.B. Glas., Resident House-Surgeon at the Stockton-at-Barnby Hospital.

CLEMENTS, S. D., I.R.C.P. and S.E. Ind., District Medical Officer of the Bromley Union.

DUNCAN, D. M.B., C.M. Aberd., Medical Officer of Health, Chester-le-Street Urban District.

FINN, J. H., I.R.C.P. and S.E. Ind., Medical Officer of Health, Ruskington Urban District.

FOOLEY, George Henry, F.R.C.S., Honorary Ophthalmic Surgeon to the Sheffield Rural Infirmary.

WEST, R. N., M.B., Ch.B. Vict., District Medical Officer of the Chorlton Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

CUNNING.—On May 18th, at 3, Upper Wimpole Street, the wife of Joseph Cuning, of a son.

TURNER.—On May 24th, at Westbury, Farnley, Surrey, the wife of Dr. Sydney Luke Turner, M.D., B.S., D.P.H., of a son.

MARRIAGES.

BRODRIBB-SWAINSON.—On June 1st, at Christ Church, St. Leonard's-on-Sea, by the Rev. G. W. Brodrribb, M.A., of Ealing, brother of the bridegroom, Arthur Williamson Brodrribb, M.A., M.B. Oxford, younger son of Charles Aikin Brodrribb, of St. Leonard's-on-Sea, Surgeon, to Violet Sybil, youngest daughter of the late Christopher Grain d'Orze Swainson, and of Mrs. Swainson, of Epperstone, St. Leonard's-on-Sea.

HOWARD-SUTCLIFFE.—On May 26th, at Leyland Road Wesleyan Church, Southport, by the Rev. F. M. Parkinson, Arthur Howard, M.B., Ch.B., of Chinn, eldest son of George Edward Howard, of Tadmorden, to Annie, second daughter of Sugden Sutcliffe, J.P., of Southport.

LYLE-PLAYFAIR.—On May 27th, at Christ Church, Mayfair, by the Rev. Eric M. Farrar, M.A., Herbert Willoughby Lyle, M.D., F.R.C.S., of Hertford Street, Mayfair, and Eversley, Bromley, Kent, to Annie Sexton, widow of David Thomson Playfair, M.D., F.R.S., of Bromley, and daughter of Edwin William Winton, of Speldhurst, Kent.

DEATHS.

BEDFORD.—On June 1st, at his residence, "Wyneshead," Kegworth, Leicestershire, Robert James Bedford, M.R.C.S., in his 75th year.

HALL.—On May 30th, at his residence, Redhill, South Yardley, Birmingham, F. J. Vincent Hall, M.B., in his 46th year. R.I.P.

SYMINGTON.—At 17, Strathairn Place, Edinburgh (the residence of Hippolyte Blanc, R.S.A.), on May 29th, Juliet, wife of Dr. Symington, Professor of Anatomy, Queen's College, Belfast, and daughter of the late William Bryce, architect.

BOOKS, ETC., RECEIVED.

Lectures to Practising Midwives. By V. E. M. Bennett, M.B., B.S., D.P.H. London: Baillière, Tindall, and Cox. 1909. 4s.

The Territorial Year Book, 1909. London: Hodder and Stoughton. 1s. Half-bound in leather, 2s.

Berlin and Wien: Urban und Schwarzenberg, 1909.
Beiträge zur Carcinomforschung. Herausgegeben von Priv.-Dozent Dr. H. Salomon. Heft I. Zur Kenntnis der spezifischen Eigenschaften der Carcinomzelle. Von L. Hess and P. Saxl. M. 2.
Phenol und seine Derivate als Desinfektionsmittel. Vorgelegt von Dr. K. Laubenheimer. M. 3.60.

House Drainage, Sewerage, and Sewage Disposal in Relation to Health. By L. C. Parkes, M.D., D.P.H. London: H. K. Lewis. 1909. 2s.

The Pharmacy Acts, 1851 to 1908. By H. H. L. Bellot, M.A., D.C.L. London: Jesse Boot. 1909. 3s. 6d.

The Problem of the Feeble-minded: An Abstract of the Report of the Royal Commission. Introduction by the Right Hon. Sir E. Fry, G.C.B. London: P. S. King and Son. 1909. 1s.

Die Krankheiten des Mundes. Von weil J. von Mikulicz-Radetzky und W. Kümmler. Zweite Auflage. Jena: G. Fischer. 1909. M. 9.

Die Dementia Praecox und ihre Stellung zum Manisch-Depressiven. Von Dr. med. M. Urstein. Berlin und Wien: Urban und Schwarzenberg. 1909. M. 15.

Traité de Chirurgie d'Urgence. Par F. Lejars. Sixième édition. Paris: Masson et Cie. 1909. P. 30.

Das Wesen der Krankheit. Von Dr. H. Ribbert. Bonn: F. Cohen. 1909. M. 4.

Wien und Leipzig: A. Hölzer. 1909.
Die Erkrankungen der Schilddrüse, Myxödem und Kretinismus. Von Dr. C. A. Ewald. Zweite Auflage. M. 8.80.

Die Anämie. Von Drs. P. Ehrlich und A. Lazarus. I Abteilung: 1 Teil. Normale und pathologische Histologie des Blutes. Zweite Auflage. Besorgt von Professor Dr. A. Lazarus und Dr. O. Naegeli. M. 5.20.

DIARY FOR THE WEEK.

TUESDAY.

ROYAL SOCIETY OF MEDICINE:
SURGICAL SECTION, 20, Hanover Square, 5.30 p.m.—Papers: Mr. Walter G. Spencer: Benign Tumours encapsuled in the Wall of the Stomach. Mr. E. Stanmore Bishop: Some Cases of Gastric Surgery.

WEDNESDAY.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Millbank, S.W., 8.30 p.m.—Paper: Captain E. B. Wiggall, R.A.M.C. (T): The Mouth, Nose, Throat, and Ear from the point of view of Recruiting.

THURSDAY.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, Cavendish Square, W.—8 p.m., Card Specimens. 8.30 p.m., Papers:—(1) Mr. W. H. H. Jessop: The Report of the International Committee on the Unification of the Notation of Visual Acuity and of the Meridians of Astigmatism. (2) Mr. P. H. Adams: (a) A Family with Congenital Displacement of Lenses; (b) A Family with Congenital Opacities of Lenses. (3) Messrs. G. Hill Griffith and A. W. Ormond: A Case of Retinal Disease with Massive Exudation and Arterio-venous Communication. (4) Dr. George Mackay: An Epithelial Filament in the Anterior Chamber simulating a Threadworm.

ROYAL SOCIETY OF MEDICINE:

GYNAECOLOGICAL AND Gynaecological SECTION, 20, Hanover Square, 7.45 p.m.—(1) Papers: Dr. J. S. Fairbairn, Primary Chorion-epithelioma of the Ovary. Dr. Blair Bell, Uterus Didelphys. (2) Cases and specimens.

FRIDAY.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY, 20, Hanover Square, W., 6 p.m.—Address by Sir James Barr on The Peripheral Circulation and its Treatment.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.
—Lectures: Tuesday, 3.45, Middle Ear and Labyrinth; Friday, 3.45, Middle Ear and Labyrinth.

LONDON SCHOOL OF MEDICAL SCIENCE, St. James's Hospital, Greenwich.—Daily arrangements: Out-patient Demonstrations, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m., respectively; Operations, 2 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m., Monday, and noon, Thursday; Skin, at noon and 4 p.m., Thursday, and noon, Friday; Eye, 11 a.m., Wednesday and Saturday; Radiography, 4 p.m., Thursday. Special Lectures: Monday, 3.15 p.m., Accidents Complicating Operations; Tuesday, 2.15 p.m., Falling Heart.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chancery Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear, Nose, and Throat. Lectures at 5.15 p.m. each day will be given as follows: Monday, The Early Signs of Mental Disorder; Tuesday, Diagnostic Methods in Tuberculosis; Wednesday, Appendicitis: Symptoms and Diagnosis; Thursday, The Clinical Examination of Spinal Cases.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen's Square, W.C.—Thursday and Friday, 3.30 p.m., Forms of Paraplegia and their Treatment.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m., Surgical Out-patient, 2.30 p.m., Medical Out-patient: Nose, Throat, and Ear; 3 Rays; 4 p.m., Medical In-patient. Tuesday, Clinics, 10 a.m., Medical Out-patient; 2.30 p.m., Operations: Clinics: Surgical Out-patient, Gynaecological; 4.30 p.m., Demonstration: The Use of X Rays in Injuries about the Joints. Wednesday, Clinics: 2.30 p.m., Medical Out-patient, Skin and Eye. Thursday, 2.30 p.m., Gynaecological Operations: Clinics: Medical Out-patient; Surgical Out-patient; X Rays; 3 p.m., Medical In-patient. Friday, 4.30 p.m., Special Demonstration of Cases of Children's Diseases. Friday, Clinics: 10 a.m., Surgical Out-patient; 2.30 p.m., Operations: Clinics: Medical Out-patient; Eye; 3 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith Road, London, W.—The following are the arrangements for next week:—Daily, 2 p.m.: Medical and Surgical Clinics, X Rays, 2.30 p.m., Operations. Monday and Thursday, and Wednesday, 2 p.m.: Diseases of the Eyes. Tuesday and Friday, 10 a.m.: Gynaecological Operations. 2 p.m. (also Wednesday and Saturday, 10 a.m.) Diseases of the Throat, Nose, and Ear. 2.30 p.m., Diseases of Skin. Wednesday and Saturday, Diseases of Women. Saturday, 10 a.m.: Diseases of the Eyes. Lectures: At 10 a.m., Monday and Thursday, Demonstration by Surgical Registrar. Friday, Demonstration by Medical Registrar. At 12 noon: Pathological Demonstration. At 12.15 p.m.: Tuesday, Wednesday, and Saturday, Practical Medicine. At 5 p.m.: Tuesday, Clinics and Cases. Wednesday, Retention of Urine. Thursday, Clinical, with cases. Friday, Cases of Skin Diseases.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
JUNE.		JUNE (Continued).	
5 SATURDAY ..	{ NORTHERN COUNTIES OF SCOTLAND BRANCH, Annual Meeting, Elgin.	11 FRIDAY ..	{ LONDON: Central Ethical Committee, 2 p.m.
6 SUNDAY ..		12 SATURDAY ..	{ LONDON: Science Committee, 10 a.m. MUNSTER BRANCH, Annual General Meeting, Rooms of the Medical Society, 74, South Mall, Cork.
7 MONDAY ..	{ LONDON: Organization Committee, 10.45 a.m. LONDON: Naval and Military Com- mittee, 2.30 p.m. LONDON: Public Health Committee, 3 p.m.	13 SUNDAY ..	
8 TUESDAY ..	{ BRADFORD DIVISION, <i>Yorkshire Branch</i> , Annual Meeting, Great Northern Victoria Hotel, Bradford. 8.30 p.m. ST. PANCRAS AND ISLINGTON DIVISION, <i>Metropolitan Counties Branch</i> , Annual Meeting, Midland Grand Hotel, King's Cross, 9 p.m.	14 MONDAY ..	{ BUCKINGHAMSHIRE DIVISION, <i>South Midland Branch</i> , Annual Meeting, Royal Bucks Hospital, Aylesbury, 3.30 p.m.
9 WEDNESDAY	{ LONDON: Medico-Political Committee, 2.15 p.m. ALTRINCHAM DIVISION, <i>Lancashire and Cheshire Branch</i> , Annual Meeting, Board Room, Altrincham Hospital, 5 p.m.; Tea, 4.30 p.m.; Dinner, Brooklands Hotel, 7.15 p.m. LEEDS DIVISION, <i>Yorkshire Branch</i> , Scientific Meeting, Leeds Public Dispensary, North Street, Leeds, 3.45 p.m. MIDLAND BRANCH, Annual Meeting, Leicester Infirmary. SOUTH WALES AND MONMOUTHSHIRE BRANCH, Annual Meeting, Swansea. WORCESTERSHIRE AND HEREFORD- SHIRE BRANCH, Annual Meeting, Malvern.	15 TUESDAY ..	{ LANCASHIRE AND CHESHIRE BRANCH, Annual Meeting, Chester. BIRMINGHAM BRANCH, Annual Meet- ing, Medical Institute, Edmund Street, 3.30 p.m.
10 THURSDAY ..		16 WEDNESDAY	{ BIRMINGHAM BRANCH, Annual Meet- ing, Medical Institute, Edmund Street, 3.30 p.m.
		17 THURSDAY ..	{ FIFE BRANCH, Annual Meeting, Hotel, Thornton, 3 p.m. MAIDSTONE DIVISION, <i>South-Eastern Branch</i> .
		18 FRIDAY ..	{ CEYLON BRANCH, Pathological Meet- ing, Colonial Medical Library, 2.30 p.m.
		19 SATURDAY ..	{ EAST YORK AND NORTH LINCOLN BRANCH, Annual Meeting, Grimsby Hospital.
		20 SUNDAY ..	
		21 MONDAY ..	
		22 TUESDAY ..	{ HAMPTSTEAD DIVISION, <i>Metropolitan Counties Branch</i> , Annual Meeting.

ANNUAL MEETING, BRITISH MEDICAL ASSOCIATION, BELFAST, 1909.

THE Seventy-seventh Annual Meeting of the British Medical Association will be held at Belfast from July 23rd, to July 31st, 1909, under the Presidency of Sir William Whitla.

The Annual Representative Meeting commences in Belfast on July 23rd. The Presidential Address will be delivered on July 27th. The Sections will meet on July 28th, 29th, and 30th.

A preliminary programme of arrangements was published in the SUPPLEMENT of May 29th, p. 317. The Honorary Local Secretaries are: Henry Lawrence McKisack, M.D., M.R.C.P., 17, University Square, Belfast; Cecil Edward Shaw, M.A., M.D., M.Ch., 29, University Square, Belfast; and Howard Stevenson, B.A., M.B., F.R.C.S.I., 2, College Square North, Belfast.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent by the Branch Secretary to the General Secretary of the Association, and to every

Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

LONDON: SATURDAY, JUNE 12TH, 1909.

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Queen's College, Belfast, where the Association meetings will be held.

President-elect:
Sir WILLIAM WHITLA, M.D., LL.D., Professor of Materia Medica and Therapeutics, Queen's College, Belfast.
Past-President:
HENRY DAVY, Hon.D.Sc., M.D., F.R.C.P.Lond., Physician, Royal Devon and Exeter Hospital, Exeter.
Chairman of Representative Meetings:
JAMES ALEXANDER MACDONALD, M.D., M.Ch., R.U.I., Physician, Taunton and Somerset Hospital.
Chairman of Council:
EDMUND OWEN, Hon.D.Sc., LL.D., F.R.C.S., Consulting Surgeon to St. Mary's Hospital, London.
Treasurer:
EDWIN RAYNER, M.D.Lond., F.R.C.S., Consulting Surgeon Stockport Infirmary, Stockport.

The Seventy-seventh Annual Meeting of the British Medical Association will be held in Belfast in July, 1909. The President's address will be delivered on Tuesday, July 27th, and the Sections will meet on the three following days. The Annual Representative Meeting will begin on Friday, July 23rd, 1909.

PROGRAMME OF BUSINESS.

The Address in Medicine will be delivered by R. W. PHILIP, M.D., F.R.C.P. Edin., Physician, Royal Infirmary, and Royal Victoria Hospital for Consumption, Edinburgh.

The Address in Surgery will be delivered by ARTHUR EDWARD JAMES BARKER, F.R.C.S., Professor of the Principles and Practice of Surgery, University College, London.

The Address in Obstetrics will be delivered by Sir JOHN W. BYERS, M.D., Professor of Midwifery and Diseases of Women, Queen's College, Belfast.

The Popular Lecture will be delivered by Dr. J. A. MACDONALD, Physician to the Taunton and Somerset Hospital, Chairman of the Representative Meetings.

THE SECTIONS.

The scientific business of the meeting will be conducted in fifteen Sections, which will meet on Wednesday, July 28th, Thursday, July 29th, and Friday, July 30th.

The President, Vice-Presidents, and Honorary Secretaries of each Section constitute a Committee of Reference for that Section, and exercise the power of inviting, accepting, or declining any paper, and of arranging the order in which accepted papers shall be read. Communications with respect to papers should be addressed to one of the Honorary Secretaries.

A paper read in the Section must not exceed fifteen minutes, and no subsequent speech must exceed ten minutes.

Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the BRITISH MEDICAL JOURNAL without special permission.

The following are the general arrangements so far as they are yet complete:

ANATOMY AND PHYSIOLOGY.

President: CHARLES SCOTT SHERRINGTON, M.D., F.R.S., Physiological Laboratory, University, Liverpool.

Vice-Presidents: Professor THOMAS HUGH MILROY, M.D., F.R.S.E., Queen's College, Belfast; Professor PETER THOMPSON, M.D., King's College, Strand, London; ARTHUR PHILIP BEDDARD, M.D., F.R.C.P., 44, Seymour Street, Portman Square, London, W.; Professor ANDREW FRANCIS DIXON, M.B., D.Sc., 73, Grosvenor Road, Dublin.

Honorary Secretaries: ALEX. LOW, M.B., 142, Blenheim Place, Aberdeen; JOHN ALEX. MILROY, M.D., Queen's College, Belfast.

The following provisional programme has been arranged:

A discussion on the Deep Afferents, their Function and Distribution. To be opened by Professor C. S. Sherrington.

Papers: The following papers have been accepted:

DIXON, Professor A. F., Dublin. The Anatomy of the Achondroplastic Skeleton.

JOHNSTON, H. M., B.A., M.B., B.Ch., Dublin. Notes on the Distribution of the Intercoastal Nerves.

MACLEAN, Hugh, M.D., Liverpool. Phosphatides in the Light of Modern Research.

MILROY, John Alex., M.D., Belfast. (1) Some Observations on the Staining of the Central Nervous System in Bulk with Aniline Dyes (with demonstration); (2) Some Metallic Derivatives of Haematomorphyrin.

MOORE, Professor B., Liverpool. The Bio-Chemistry of Haemolysis.

PATTEN, Professor C. J., Sheffield. An Early Human Embryo.

ROAF, Herbert E., M.D., Liverpool. A Simple Method of Demonstrating Cholesterol in Bile.

Professor Peter Thompson (London) will give a demonstration of models illustrating three stages in the form of the human heart during the first month of development.

DERMATOLOGY AND ELECTRO-THERAPEUTICS.

President: WILLIAM CALWELL, M.D., 6, College Gardens, Belfast.

Vice-Presidents: ROBERT BRIGGS WILD, M.D., 96, Mosley Street, Manchester; LESLIE ROBERTS, M.D., 46, Rodney Street, Liverpool.

Honorary Secretaries: JAMES HARRY SEQUEIRA, M.D., F.R.C.P., 8a, Manchester Square, London; S. ERNEST DORE, M.D., 26, New Cavendish Street, London; JOHN CAMPBELL RANKIN, M.D., 38, University Road, Belfast.

A discussion will be held on the Treatment of Skin Diseases by Radium and Radio-therapy.

DISEASES OF CHILDREN.

President: HAROLD J. STILES, F.R.C.S. Edin., 9, Great Stuart Street, Edinburgh.

Vice-Presidents: JOHN McCRAW, M.D., 74, Dublin Road, Belfast; RICHARD WHYTOCK LESLIE, M.D., "St. Heliers," Strandtown, Belfast; ROBERT CAMPBELL, F.R.C.S., 21, Great Victoria Street, Belfast.

Honorary Secretaries: ANDREW FULLERTON, F.R.C.S.I., 8, University Square, Belfast; JOHN WILLIAM SIMPSON, M.D., 19, Lansdowne Crescent, Edinburgh.

It is proposed to devote some portion of three of the days on which the Section meets to the discussion of the following subjects:

Wednesday, July 28th.—Club Foot.

Thursday, July 29th.—Functional Neuroses in Children.

HAEMATOLOGY AND VACCINE THERAPY.

President: SIR ALMROTH WRIGHT, M.D., F.R.S., 6, Park Crescent, Regent's Park, London, N.W.

Vice-Presidents: ALEX. GARDNER ROBB, M.B., 15, University Square, Belfast; THOMAS HOUSTON, M.D., 95, Great Victoria Street, Belfast; Captain STEWART RANKIN DOUGLAS, I.M.S., Inoculation Department, St. Mary's Hospital, London.

Honorary Secretaries: WILLIAM DUNLOP DONNAN, M.D., 12, High Street, Holywood, co. Down; DUDLEY W. CARMALT-JONES, M.B., B.Ch. Oxon., 78, Wimpole Street, London, W.

The following programme has been arranged:

Wednesday, July 28th.—1. Opening Address by the President, of which the following is a synopsis:

Brief survey of the therapeutics of bacterial diseases, and of the development of therapeutic immunization out of prophylactic immunization. Anticipation that the method of passive immunization (serum-therapy) would furnish a general method for the treatment of generalized bacterial infections. Question as to how far this anticipation has been realized. Proposal that localized bacterial infections might appropriately be treated by active immunization (vaccine-therapy). Subsequent suggestion that vaccine-therapy might be applied also to generalized infections. Brief synopsis of the results which have been achieved by this therapeutic method. Question as to what future extensions may be anticipated for the method depends upon whether the fundamental assumption of the method—that is, the assumption that the machinery of immunization can be called into action in every bacterial infection by a suitable dose of the appropriate vaccine—is well founded. Consideration of this question. Urgent need for further study of the physiology of the machinery of immunization. Possible applications of vaccine-therapy in connexion with the secondary infections of scarlatina,

small-pox, cancer, whooping-cough, and hay fever, and in connexion with the limitation of family and institutional epidemics.

2. Papers on separate subjects: Dr. Houston, Typhoid Carriers. Captain Douglas, Bacteriology of Cystitis. Dr. Fleming, Bacteriology and Vaccine Treatment of Acne.

Thursday, July 29th.—Discussion: The Early Diagnosis of Tuberculosis. To be opened by Professor CALMETTE, l'Institut Pasteur de Lille, with a paper of which the following is a synopsis:

(1) Experimental researches have shown that tuberculous infection is at first confined to glands, that its spread depends on the number and virulence of the bacilli, that if few they are destroyed or calcified in the glands, and that serious lesions are due to single massive or repeated small infections; early diagnosis is essential for cure. (2) Consideration of the relative value of cutaneous, conjunctival, and intradermo reactions in diagnosis; and, further, of those of "reactions of recrudescence," and humoral and phagocytic reactions. (3) Suggested routine employment of the above for the isolation of infected subjects.

Friday, July 30th.—Discussion: Bacterial Infections of the Respiratory Tract other than Tuberculous. To be opened by Dr. BORDET, who will deal with the micro-organism of whooping-cough. A coccobacillus was isolated in 1906 with definite cultural and staining peculiarities. Filtered cultures are non-toxic, but endotoxins are highly virulent and produce the essential symptoms of whooping-cough. Specific properties are present in the serum of convalescents, which may be demonstrated by the method of the fixation of complement.

HYGIENE AND PUBLIC HEALTH.

President: LOUIS COLTMAN PARKES, M.D., 61, Cadogan Square, Chelsea, London.

Vice-Presidents: SAMUEL AGNEW, M.D., Lurgan, co. Armagh; HENRY O'NEILL, M.D., 6, College Square East, Belfast; CHARLES KILLICK MILLARD, M.D., Town Hall, Leicester.

Honorary Secretaries: CHARLES PORTER, M.D., Public Health Department, Town Hall, Finsbury; WILLIAM MCLEOD, L.R.C.P., 103, Antrim Road, Belfast; THOMAS CARNWATH, M.B., Town Hall, Manchester.

The following subjects have been suggested for discussion:

1. The Compulsory Notification of all forms of Tuberculosis and the Mortality from Tuberculous Diseases in relation to Sex. To be opened by Dr. Harold Scurfield, Medical Officer of Health, Sheffield.

2. Latent Infections of the Diphtheria Bacillus, and the Administrative Measures required for dealing with Contacts. (Joint discussion with the Laryngological Section.)

3. The Discharge of Sewage Effluents into Tidal Waters

The following additional subjects are also suggested:

1. Enteric Fever Carriers and Paratyphoid Bacilli.
2. Ventilation of Sewers and House Drains and the Disconnexion Trap.
3. The Medical Officer of Health and School Medical Inspection.

LARYNGOLOGY, OTOTOLOGY, AND RHINOLOGY.

President: ST. CLAIR THOMSON, M.D., F.R.C.P., 28, Queen Anne Street, London.

Vice-Presidents: ERNEST BLECHYNEDD WAGGETT, M.B., 45, Upper Brook Street, London, W.; V. P. HENRY SMURTHWAITE, M.D., 8, St. Mary's Place, Newcastle-on-Tyne; J. A. KNOWLES RENSHAW, M.D., 11, St. John Street, Manchester.

Honorary Secretaries: HAROLD SHUTTLEWORTH BARWELL, F.R.C.S., 55, Wimpole Street, London; JOHN STODDART BARR, M.B., 13, Woodside Place, Glasgow; HENRY HANNA, M.B., B.Sc., 57, University Road, Belfast.

The following subjects have been selected for special discussion:

Wednesday, July 28th.—The Treatment of Tinnitus Aurium. (1) Dr. Thomas Barr (Glasgow); (2) Mr. Richard Lake (London).

The following is a synopsis of the remarks to be made by Dr. THOMAS BARR (Glasgow) in opening the discussion:

The paper, by arrangement with Mr. Richard Lake, deals solely with non-operative treatment. It is pointed out that the tinnitus aurium is merely a symptom, and effective treatment must depend on a correct knowledge of the condition underlying it. Hence, thorough examination of the organ of hearing by all the subjective and objective methods is a primary essential. After brief reference to cases depending on accumulation of wax, Eustachian obstruction, removable fluids in the tympanum, and other conditions in which tinnitus can be readily cured or alleviated by well-known methods, the author deals with cases where tinnitus persists after such methods of treatment or where no definite lesion can be shown, by objective examination, to exist in the ear. In this connexion emphasis is placed on the importance of attention to the state of the general health, and the influence of coexisting systemic disease is shown, as also that of mental attitude, personal habits, climate, and special drugs, and external applications. The special treatment indicated for the pulsating forms of tinnitus is considered. The value of *Tonbehandlung* is next discussed, this being the influence exerted upon certain subjective sounds in the ear, mainly of a musical character, by objective sounds from a tuning-fork. With reference to electrical treatment, it is pointed out that the apparently good effects from the high frequency currents reported a few years ago do not seem to have been borne out by further experience. In discussing the effects upon tinnitus of naso-pharyngeal treatment it is shown that the establishment of good nasal breathing and a healthy condition of the naso-pharyngeal mucous membrane often leads to the disappearance or mitigation of the symptoms, but that, on the other hand, it may be aggravated by ill-directed treatment of the naso-pharyngeal order.

Mr. LAKE will deal with the operative treatment: first, what may be termed remote operative, in the form of intranasal treatment, lumbar puncture, and ligation of the carotid artery; afterwards tracing the gradual evolution of the course of operative interference from simple removal of one or more of the vesicles or adhesions, etc., the simple opening or perforation of the labyrinth, its complete ablation, to the division of the auditory nerve itself; he will also endeavour to point out the lines which may be useful in attempting to decide when to operate and what operation to select.

Thursday, July 29th.—Latent Infections of the Diphtheria Bacillus, including the Administrative Measures required for dealing with Contacts. (In association with the Section of Hygiene and Public Health.) (1) Dr. Robert M. Buchanan (Glasgow); (2) Dr. Duncan Forbes (Brighton); (3) Dr. P. Watson Williams (Bristol).

Dr. WATSON WILLIAMS will open the discussion from the clinical standpoint:

If diphtheria may be defined as any pathological condition, local or general, due to infection by specific diphtheria organisms, diphtheria is "latent" when such pathological conditions are unaccompanied by obvious illness. The impingement of diphtheria bacilli on the nasal or oral mucous membrane without any local reaction, though not a true infection, is clinically a form of latent diphtheria. Latent diphtheria infections may be grouped under three heads:

- (1) Patients who afford none of the usual clinical indications of diphtheria are not definitely ill, and yet are found to be anaemic, have increased pulse tendency, are poorly in association with nasal catarrh, membranous rhinitis, faucial redness, and slight subacute tonsillitis, otorrhoea, sores, etc., which on bacteriological examination prove to be diphtheritic.
- (2) Cases with any of these diphtheritic lesions, but with no general symptoms of ill-health.
- (3) Persons who present no local lesions, and no departure from normal health, but in whom diphtheria bacilli have been found by culture tests. In practice latent diphtheria is met with affecting the nasal cavities, the fauces and mouth, the external auditory meatus, the skin, genital organs. There is no characteristic symptom or sign of a latent diphtheria, for in their clinical aspects they are indistinguishable from similar non-diphtheritic lesions of the same territories. Pseudo-membranous lesions of the mucous membrane of the upper air tract may be non-diphtheritic or diphtheritic. The only crucial test by

which latent diphtheritic infection can be determined is the bacteriological test. Examples of latent diphtheria will be cited, and various methods of treatment discussed.

Friday, July 30th.—The Treatment of Cicatricial Stenoses of the Larynx and Trachea. (1) Dr H. Lambert Lack (London); (2) Dr. Delsaux (Brussels); (3) Dr. Bryson Delavan (New York).

Dr. H. LAMBERT LACK will deal chiefly with cicatricial stenosis of the larynx in children as the result of tracheotomy for diphtheria. In nearly every case the tracheotomy tube was introduced through the larynx at the original operation, and this is considered to be the cause of the subsequent stenosis. In some cases the stricture was fibrous and limited to the soft parts, in others the laryngeal cartilages were extensively destroyed and the stricture almost impermeable. The first indication of treatment is to remove the tube from the larynx by performing a low tracheotomy and inserting the tube in as low a part of the trachea as can be reached. In cases seen early this alone will suffice to effect a cure. Where extensive stenosis is present and the above treatment fails, the larynx should be opened, the cicatricial tissue excised, and the case carefully watched. The various means of dilating the larynx by passing a solid plug upwards from the tracheotomy wound and by inserting a T-shaped cannula are described and condemned. The author's experience of intubation is also unfavourable. Two illustrative cases are described and some statistics given.

It is proposed this year to arrange a special exhibition of skiagraphy in relation to diseases of the upper air and food passages. Members are requested to send in the titles and descriptions of any skiagraphs they propose to contribute to Dr. Hanna at once. Every care will be taken of negatives and prints, which should be carefully labelled with the owner's name and address.

MEDICINE.

President: Professor JAMES ALEXANDER LINDSAY, M.D., F.R.C.P., 3, Queen's Elms, Belfast.

Vice-Presidents: ARTHUR FOXWELL, M.D. F.R.C.P., 47, Newhall Street, Birmingham; JOSEPH FRANCIS O'CARROLL, M.D., F.R.C.P.I., 43, Merrion Square, Dublin; LAURISTON ELGIE SHAW, M.D., F.R.C.P., 64, Harley Street, London; WILLIAM BAIRD MCQUITT, M.D., 8, College Square East, Belfast.

Honorary Secretaries: JOHN SMYTH MORROW, M.D., Eia House, Antrim Road, Belfast; LEWIS ALBERT SMITH, M.D., 25, Queen Anne Street, London, W.; JOHN ELDER MACILWAINE, M.D., 55, University Road, Belfast.

The following subjects have been chosen for discussion and demonstration:

1. Wednesday, July 28th.—Angina Pectoris. To be opened by Sir T. Clifford Allbutt, K.C.B.

Sir CLIFFORD ALLBUTT, K.C.B., proposes at the outset of the discussion on angina pectoris to ascertain precisely what is to be discussed, and in what terms. He will urge concerning this malady that precision both of terms and of substance is especially needed, for no disease has been more obscured by factitious notions or more confused by false analogies and erratic conjectures. Yet in all medicine there is no disease which presents a clearer image to the observant eye, nor one more conspicuously detached from the clinical jungle. If its characters are confused we have confused them by equivocations; if its type is blurred it has been distorted by counterfeits. If angina pectoris be looked at simply, without prepossession and with discrimination, its features will come into focus and the type will take fairer definition. On the threshold the speaker finds himself confronted by sophists who say bluntly that angina pectoris is not a disease, but a symptom or "symptom group"; it is here, indeed, that the sophistry begins, for this argument is but a play of words. "A symptom" angina pectoris certainly is not, for it is manifold; a symptom group it is, no doubt, or rather a symptom process, or procession. Now a symptom-group, or procession of symptoms negative and positive, which recurs in mankind with fair uniformity, must be due to causes correspondingly uniform. That genuine angina pectoris may

occur with the heart, lungs, and kidneys intact, is at last reluctantly admitted by physicians who have studied the data; and if so the essential, as apart from contingent causes, must lie outside these organs. The opener will divide angina pectoris into angina minor and angina major, and the symptoms of the two degrees will be compared. "Pseudo-angina" he intends to dismiss as pseudol diagnosis, and to relegate these cases to the Vaso-vagat class of Gowers. Vasomotor oscillations commonly occur in angina pectoris it is true, and in two main but incidental relations: first as determinants, when by changes of blood pressure attacks are provoked or mitigated; secondly, as consequences of acute impressions reaching the nerve centres by afferent paths. The speaker will proceed to appreciate the current hypotheses of angina pectoris, pointing out the diversity of these irreconcilable and often mutually destructive explanations. He will then advocate again his own interpretation, first published in 1894, and frequently and formally repeated since without effect upon medical opinion, although at length it has been fully accepted by Josué, in a paper published last November. This interpretation is that the origin of angina pectoris lies not in the heart but in the supra-sigmoid portion of the aorta; that the oppression of angina minor is seated in this place; and that in angina major the referred pains still originate here, but, as in the degrees of their severity they force successive centres, they radiate over more and more extensive areas. That, as concerns fatality, angina pectoris, neither in its minor nor in its major forms, is directly fatal; that indeed in many, perhaps in the majority, of major and minor cases taken together, death, if it occurs, is due to co-operating causes; that in a large number of cases, whatever the issue of co-operating lesions, such as valvular or myocardial disease, the anginous lesion is healed, or, at any rate, the symptoms cease; and, furthermore, that not a few cases of angina pectoris, even of the major variety, end in complete recovery; that when death is directly attributable to the angina it is due to vagus inhibition, such as is prone to happen, for example, in surgical operations about the root of the lungs or the brachial plexus, or to be induced by some other intense peripheral irritation, as in the genitalia. Finally, that, although a sound heart may be inhibited to the point of death, this very rarely happens; and that in nearly all cases in which the heart fails to disengage itself from the inhibitory interference, the myocardium, whether by coronary disease, by toxic influence, or otherwise, was previously unsound.

2. Thursday, July 29th.—The Medical Aspects of Athleticism. To be opened by Dr. Tyrrell Brooks (Oxford), Dr. Clement Dukes (Rugby).

Dr. TYRRELL BROOKS (Oxford) in introducing the discussion will deal with the following points:

(1) Athletics, (a) at school, (b) at the university; what amount of medical supervision is practicable? (2) The dangers of athletics during convalescence. (3) Physical training and athletics. (4) The moral aspect of athletics. (5) The duties of the profession, (a) to the individual, (b) to the race with reference to physical development.

The following is a synopsis of the remarks to be made by Dr. CLEMENT DUKES (Rugby):

(1) The Greeks aimed at, and attained, by their well-regulated physical training, the highest perfection of the human form, which also influenced the moulding and elevation of the mind. (2) The strength and wisdom of the next generation depend upon the mental and physical development of the present, for the intellectual value of exercise is as great as its physical value. (3) Athleticism is the "intemperance" of physical exercise, which is injurious to the not fully-grown body. (4) Physical examination and medical direction are necessary to avoid this, so that the feeble may be strengthened by well-regulated exercise, and the strong not injured by unwise and prolonged exertion. (5) How to obviate the evils of athleticism, and in what they consist. (6) Classical instances will be given of the defects of athleticism, and of the difficulties in their correction. (7) Ideal rules for the prevention of the harm occasioned by athleticism. (8) The practical rules in force now at Rugby to obviate these defects, and how they have worked; such rules are necessary to control the impulsive nature of youth, and they should be enforced.

3. Friday, July 30th.—Demonstration on Gastric Illumination by Dr. Theodore Thompson and Dr. H. S. Souttar.

NAVY, ARMY, AND AMBULANCE.

President: Fleet Surgeon J. LLOYD THOMAS, R.N.

Vice-Presidents: Inspector-General ROBERT BENTHAM, R.N. (retired), 22, King's Avenue, Ealing, London, W.; Lieut.-Colonel R. PORTER, R.A.M.C., P.M.O., Station Hospital, Military Barracks, Belfast; Colonel THOMAS H. HENDLEY, I.M.S., C.I.E., 4, London Road, London, N.W.

Honorary Secretaries: Captain M. LOWSLEY, R.A.M.C., St. Michael's Road, Aldershot; Captain HERBERT HUGH BLAIR CUNNINGHAM, M.D., F.R.C.S., 69, University Road, Belfast; Staff Surgeon EDMUND COX, M.B., R.N., The Royal Naval Hospital, Chatham; Captain WILLIAM SALISBURY-SHARPE, R.A.M.C., 8, Cleveland Terrace, Hyde Park, London, W.

The following papers have been accepted:

MAHON, Staff Surgeon F. F., R.N. On the First-Aid Relief rendered after the Messina Disaster.
HENDLEY, Colonel T. H., C.I.E., I.M.S. Contrast between the Treatment of the Wounded under the Moghul Emperors and King Edward VII, Emperor of India.
JAMES, Colonel H., R.A.M.C. The Medical Branch of the Officers' Training Corps.
PORTER, Colonel A. R., R.A.M.C. Short paper with a practical demonstration on Physical Training of Recruits in the Army.
STONY, J. B., F.R.C.S.L., Dublin. Physical and Moral Benefits of Military Training.
LAMBKIN, Colonel F. J., R.A.M.C. Probable Effects in the Services of the New Treatment of Syphilis by means of Organic Arsenical Compounds.
CRAWFORD, Colonel, R.A.M.C. On the Beneficial Results of Recent Sanitary Work in Malta.
WALLIS, Staff Surgeon JAMES GARFITT, R.N. A detailed scheme for an Unexpected Landing Party using Material available on Board Ship.
BASSETT-SMITH, Fleet Surgeon, R.N. Modern Methods of Laboratory Diagnosis of Syphilis.
CARVELL, J. M. Existing Ambulance Organization of the Home Railway Companies.
RIVERS, Dr. W. T. (Newcastle-on-Tyne). Rhinology as an Aid to Diagnosis of Pulmonary Tuberculosis.

OBSTETRICS AND GYNAECOLOGY.

President: JOHN CAMPBELL, M.D., F.R.C.S., Crescent House, University Road, Belfast.

Vice-Presidents: ROBERT ALEXANDER GIBBONS, M.D., 29, Cadogan Place, London; JOHN SINGLETON DARLING, M.B., High Street, Lurgan; CHARLES EDWIN PURSLOW, M.D., 192, Broad Street, Birmingham; EWEN JOHN MACLEAN, M.D., 12, Park Place, Cardiff.

Honorary Secretaries: HENRI THOMAS HICKS, F.R.C.S., Derby; ROBERT JAMES JOHNSTONE, M.B., F.R.C.S., 14, University Square, Belfast.

The Committee have thought it well to select two chief subjects for discussion:

Wednesday, July 28th.—1. The Treatment of the Graver Forms of Puerperal Sepsis. To be introduced by Dr. Thomas Wilson (Birmingham).

Thursday, July 29th.—2. Endometritis. To be introduced by Dr. E. Hastings Tweedy (Dublin).

Dr. HASTINGS TWEEDY will introduce the discussion on endometritis on the following lines:

(1) Eliminating histological considerations, he will classify endometritis anatomically into corporeal and cervical, clinically into acute and chronic. (2) Briefly mention the origin, course, and symptoms of acute endometritis. (3) Treatment in detail of acute endometritis, comprising vaccines from cultures, douches, gauze drainage, manual exploration, and the very occasional use of the blunt flushing spoon curette, condemning entirely the use of the sharp curette. (4) Definition of cases classified as chronic endometritis—that is, all other non-malignant diseases of the endometrium. (5) The underlying causes, and the necessity of treating them. (6) Consideration of the indications and proper method of curettage, with causes of failure. Under indications is placed the symptomatology and mention made of the frequency of deferred symptoms. (7) Possibility of rupturing the uterus, and its proper treatment when recognized. (8) Frequent local

treatment following curettage considered unnecessary and harmful. (9) Local treatment other than curettage and medical treatment. (10) He will insist on curettage before all cervical or vaginal operations and operations for displacement. (11) Treatment of endocervicitis by caustics, astringents, cauterization, etc.

Friday, July 30th.—Consideration of the Report of the Ophthalmia Neonatorum Committee (jointly with the Section of Ophthalmology). Reading of papers.

The following have accepted invitations to assist at the deliberations of the Section: Professor Fehling (Strassburg), Professor Jacob (Brussels), and Professor Whitridge Williams (Baltimore).

Drs. Herman and Roberts (London), Jardine and Munro Ker (Glasgow), Donald and Stanmore Bishop (Manchester), Jellett and Alfred Smith (Dublin), are expected to take part in the discussions.

In the Pathological Part of this Section, Cancer of the Uterus has been chosen as one affording a wide scope for the exhibition of Specimens, Photographs, Microscopic Slides, etc.

These, with any others of interest, will be exhibited in the Pathological Museum.

OPHTHALMOLOGY.

President: JOHN WALTON BROWNE, M.D., 10, College Square North, Belfast.

Vice-Presidents: ARTHUR W. SANDFORD, M.D., 13, St. Patrick's Place, Cork; WILLIAM MARCUS KILLEN, M.D., 9, Clifton Street, Belfast; ALEX. HILL GRIFFITH, M.D., 17, St. John Street, Manchester.

Honorary Secretaries: JAMES ANDREW CRAIG, F.R.C.S., 11, University Square, Belfast; LESLIE JOHNSTON PATON, F.R.C.S., 1, Spanish Place, Manchester Square, London.

The subjects chosen for discussion are:

1. Eye Injuries in their Relation to the Workmen's Compensation Act.

2. The Diseases of the Lymphoid Tissue of the Conjunctiva. To be opened by Mr. Treacher Collins and Professor R. Greef (Berlin).

In his paper, Mr. TREACHER COLLINS will deal with the following points:

The contagious character of trachoma; the "trachoma bodies"; the contagion not air-borne but due to transference of moist discharge; the adenoid layer of the conjunctiva the chief seat of reaction, and the centre of the follicles the position in which the toxin is most intense; "elementary or primary granulations"; trachoma a non-pyogenic disease; essentially a chronic disorder; acute symptoms when present due to mixed infection; natural destruction of trachoma follicles by rupture, by absorption, and by strangulation from new formation of fibrous tissue; "Stellwag's brawny oedema"; similarity of the palpebral conjunctiva in the late stages of trachoma to skin; possibility of curing early cases of trachoma without new formation of fibrous tissue; pannus the result of abrasion of corneal epithelium and infection; treatment of trachoma (a) by rupture or instrumental removal of follicles—expression, Galezowski's excision of the retrotarsal fold, Kuhn's removal of tarsus and conjunctiva; (b) by stimulating absorption of follicles—copper sulphate, jequiritol, x rays, kataphoresis; (c) by stimulating formation of fibrous tissue—*Gratargel*. Conditions other than trachoma with follicular enlargements: (a) atropine and eserine irritation, (b) simple folliculosis, (c) mucopurulent ophthalmia and follicles. Conditions resulting in fibrous tissue formation simulating that produced by trachoma, (a) tubercle, (b) pemphigus, (c) spring catarrh, (d) membranous ophthalmia, (e) burns.

PATHOLOGY.

President: Professor WM. ST. CLAIR SYMMERS, M.B., Queen's College, Belfast.

Vice-Presidents: WALTER SYDNEY LAZARUS-BARLOW, M.D., Cancer Research Laboratory, Middlesex Hospital, London; ARTHUR EDWARD MOORE, M.B., Castlemahon, Blackrock, Cork; ASTLEY VASASOUR CLARKE, M.D., 37, London Road, Leicester; Professor I. WALKER HALL, M.D., 9, Royal Park, Clifton, Bristol.

Honorary Secretaries: ALFRED EDWARD BARNES, M.B., 348, Glossop Road, Sheffield; OTTO F. F. GRÜNBAUM, M.D., 34, Wimpole Street, London, W.; WILLIAM JAMES WILSON, M.D., Pathological Laboratory, Queen's College, Belfast.

PHARMACOLOGY AND THERAPEUTICS.

President: Professor RALPH STOCKMAN, M.D., F.R.S. Edin., The University, Glasgow.

Vice-Presidents: Professor WALTER ERNEST DIXON, M.D., Pharmacological Laboratory, Cambridge; NEWMAN NEILD, M.D., 9, Richmond Hill, Clifton, Bristol.

Honorary Secretaries: VICTOR GEORGE LEOPOLD FIELDEN, M.B., 84, Dublin Road, Belfast; HECTOR CHARLES CAMERON, M.B., Guy's Hospital, London, S.E.

The following subjects have been suggested for discussion:

1. Spinal Anaesthesia. To be opened by Mr. George Chiene, F.R.C.S. Edin., to be followed by Dr. Dudley Buxton, Mr. Robert Campbell, and others.

The following is a synopsis of the opening address by Mr. GEORGE CHIENE, F.R.C.S. Edin.:

Short historical summary of spinal anaesthesia; the drugs at present employed and the amount injected; the technique; the advantages and disadvantages of spinal anaesthesia compared with other methods (1) before the operation, (2) during the operation; the comparative results, immediate and remote; the comparative mortality; question of the use of spinal anaesthesia alone or combined with other methods.

2. The Treatment of Oedema. To be opened Dr. H. D. Rolleston.

The following is a synopsis of Dr. H. D. ROLLESTON'S paper introducing the discussion:

Oedema, being a manifestation of numerous and very different conditions, certain distinct groups of it are recognized: (1) Cardiac oedema and oedema of venous obstruction, primarily mechanical, and due to hydrostatic factors; (2) renal dropsy which, though in some instances, as in granular kidney, largely cardiac, is in its proper sense more complicated; (3) toxic oedemas other than those due to renal disease; (4) inflammatory oedema; (5) oedemas due to nervous causes, that is, hysterical oedema; (6) oedema due to lymphatic obstruction; (7) oedemas of doubtful origin, for example, Milroy's disease. Discussion of treatment is mainly directed to the forms of more widespread oedema. (1) Cardiac Dropsy: Good effect of the recumbent position and of cardiac tonics such as digitalis, caffeine, and its allies diuretic, theobromine, and theocin; restriction of fluid and of intake of salt. (2) Renal Dropsy: The complicated etiology and the natural variations in the amount of urinary excretion make treatment much more problematic and its effects more difficult to estimate with accuracy than in cardiac dropsy. Cases of urinary crises occurring under caffeine, and without any special treatment, are given to illustrate this point. Is reduction of oedema always beneficial in renal disease? Conceivably renal oedema is part of a compensatory process whereby waste products are excreted into tissue spaces, and in this event absorption of oedema fluid may increase toxæmia. An important question is, Should the ingestion of fluid be restricted or not? If an increased consumption of fluid is followed by increased excretion of water and solids, and so by diminution of toxæmia, this is justified; if, on the other hand, increased ingestion of fluid is not followed by increased diuresis and excretion of solids, a restricted regimen is indicated in order to avoid hydraemic plethora. Probably no hard-and-fast rule can be adopted, but each case should be investigated as to the excreting powers of the kidneys. Brief statement of the effect of increased diaphoresis according to von Noorden's views. Effect of purgation partly to remove fluid, partly to diminish toxæmia. Influence of a salt-free diet. Question of incision of oedematous parts and drainage so as to diminish the osmotic tension of the tissues and the local toxic accumulation; method of incision, risks of the procedure. Combination of drainage with free ingestion of fluid. Various drugs in the treatment of dropsy in patients with renal disease.

Paper:

McWALTER, Dr. J. C., Barrister-at-Law, Dublin. The Regulation of Quack Medicine Traffic.

It is hoped that one or two pharmacological demonstrations may be given.

PSYCHOLOGICAL MEDICINE.

President: T. OUTTERSON WOOD, M.D., 40, Margaret Street, Cavendish Square, London.

Vice-Presidents: GEORGE ROBERT LAWLESS, F.R.C.S.I., District Asylum, Armagh; WM. RICHARD DAWSON, M.D., Farnham House, Finglas, co. Dublin; ROBERT HENRY COLE, M.D., 25, Upper Berkeley Street, London, W.; MICHAEL JAMES NOLAN, L.R.C.P. and S.I., Down District Asylum, Downpatrick.

Honorary Secretaries: WALTER SAMUEL SMYTHE, M.B., District Asylum, Antrim; SIDNEY HERBERT CLARKE, M.B., Leicester and Rutland Asylum, Narborough, Leicestershire.

The following subjects have been selected for special discussion in this Section:

July 28th.—(1) Somatic Delusions and Local Lesions. To be opened by Dr. C. A. Mercier.

Dr. MERCIER'S paper describes a case in which delusions of complete obstruction of the bowels, and of having been raped "per rectum" were found to be coexistent with tuberculous ulcers of the jejunum, and of the rectum, and the relation between the delusions and the lesions is discussed. Three possible hypotheses suggest themselves: (1) That the lesions were the cause of the delusions. This is rejected. (2) That the lesions were responsible for the particular character of the delusions in a person who would, without them, have had delusions of some kind. This also is rejected. (3) That the localization of the lesions was due to failure or disorder of the neurotrophic influence of the parts of the cerebrum whose disorder underlay the delusions. This is regarded as the most probable hypothesis.

July 29th.—(2) Considerations upon the Commissioners' Report of the Care and Control of the Feeble-minded. To be opened by Dr. W. R. Dawson. Dr. G. E. Shuttleworth and Dr. W. J. Maguire will also speak.

The following papers have been accepted:

MACCORMAC, Dr. J. M. The Superficial and Deep Reflexes as an Additional Means in the Diagnosis of the Principal Forms of Mental Diseases.

CROTHERS, Dr. T. D., U.S.A. A Study of the Hereditary Influence in the Causation of Imbecility.

SHUTTLEWORTH, Dr. G. E. Mongolian Imbecility.

SCHOFIELD, Dr. A. The Present Position of Applied Psychology in Medicine.

The Secretaries will be glad to receive offers of other papers.

SURGERY.

President: Professor THOMAS SINCLAIR, M.D., F.R.C.S., 22, University Square, Belfast.

Vice-Presidents: CHARLES ALFRED BALLANCE, M.V.O., M.S., F.R.C.S., 106, Harley Street, W.; Sir PETER O'CONNELL, M.D., 9, College Square North, Belfast; ARTHUR JOHN DREW, F.R.C.S., Water Hall, St. Aldate's, Oxford; JOHN GALWAY COOKE, M.B., City and County Infirmary, Londonderry; ARTHUR BROWNLOW MITCHELL, F.R.C.S.I., 18, University Square, Belfast.

Honorary Secretaries: W. THELWALL THOMAS, F.R.C.S., 84, Rodney Street, Liverpool; G. LENTHAL CHEATLE, C.B., F.R.C.S., 117, Harley Street, London; HOWARD STEVENSON, M.B., F.R.C.S.I., 2, College Square North, Belfast; JAS. BERNARD MOORE, M.B., 11, Clifton Street, Belfast.

Special discussions on the following subjects will be held on Wednesday, July 28th, and Thursday, July 29th:

1. The Operative Treatment of Obstructive Jaundice and the Proper Selection of Cases. Introduced by (1) Mr. B. G. A. Moynihan; (2) Sir Thomas Myles. The following have signified their intention of taking

part: Mr. E. Stanmore Bishop, Mr. Douglas Drew, Mr. A. B. Mitchell, Mr. W. I. de C. Wheeler, and Mr. K. W. Monsarrat.

2. Modern Methods in the Treatment of Tuberculous Disease of Joints. Introduced by (1) Sir William Macewen, F.R.S.; (2) Mr. Robert Jones. The following will speak: Mr. Douglas Drew, Mr. A. B. Mitchell, Mr. R. C. Dun, and Mr. T. S. Kirk.

Friday, July 30th, will be devoted to the reading of papers on subjects other than the above.

The following papers have been accepted:

SYME, G. A. Some Unusual Cases of Echinococcus (Hydatid) Cyst, with remarks on Diagnosis and Treatment.
GROVES, ERNEST W. H. The Radical Treatment of Cancer of the Stomach—Methods, Results, and Statistics.
FREYER, P. J. A recent series of 200 cases of Enucleation of the Enlarged Prostate, with special reference to the operation (1) in octogenarians, (2) in cases of extremely large prostate.
BIRD, F. D. Operation for Liver and Lung Hydatids.
MITCHELL, A. B. Perforative Duodenal Ulcer.
NEUBOLT, G. P. Some Cases of Resection of Intestine.
BLANEY, ALEXANDER. Notes on Four Cases of Removal of the Gasserian Ganglion.

Facilities will be provided for showing specimens and drawings to illustrate subjects under discussion.

TROPICAL MEDICINE.

President: CHARLES WILBERFORCE DANIELS, M.B., London School of Tropical Medicine, Albert Docks, London.

Vice-Presidents: Lieutenant-Colonel ANDREW DEANE, M.D., F.R.C.S.I., I.M.S., Royal Victoria Hospital, Belfast; Surgeon-General W. R. BROWNE, M.D., C.I.E., 5, Royal Crescent, Holland Park Avenue, London.

Honorary Secretaries: JAMES COLVILLE, M.D., 7, University Square, Belfast; Dr. ANTON BREINL, Director Runcorn Research Laboratories.

The following subjects have been selected for discussion:

Wednesday, July 28th, 10 a.m.—Persistence of the Tropical Diseases of Man due to Protozoa. The discussion will be opened by the President.

Thursday, July 29th, 10 a.m.—Treatment of Chronic Recurrent Dysentery, with Special Reference to the Possibilities of Surgical Treatment. The discussion will be opened by Mr. J. Cantlie.

Friday, July 30th, 10 a.m.—Feeding and Treatment of Children in the Tropics. The discussion will be opened by Dr. W. Carnegie Brown.

Dr. CARNEGIE BROWN, in introducing the discussion, will deal with the following points:

Infant mortality in the tropics: comparative statistics. Feeding problems: Unsatisfactory supply of fresh milk; utility of preserved milk; other substitutes. Relative infrequency in the tropics of the zymotic diseases of early life—for example, diphtheria, scarlet fever, acute rheumatism, etc.; consequent rarity of serious after-effects. Prevalent disorders of children: Tetanus, infantile diarrhoea, helminthiasis, dysentery, continued fevers, malaria, infantile splenomegaly, biliary cirrhosis, anaemia, and other marasmic conditions, yaws; prevention and treatment. Possibility of rearing healthy European children in the tropics; age for return to a temperate climate.

The Committee will be glad to receive pathological specimens, photographs, drawings, or microscopical preparations illustrative of any subject in Tropical Medicine.

Honorary Local Secretaries—

HENRY LAWRENCE McKISACK, M.D., M.R.C.P.,
17, University Square, Belfast.

Cecil EDWARD SHAW, M.A., M.D., M.Ch.,
29, University Square, Belfast.

HOWARD STEVENSON, B.A., M.B., F.R.C.S.I.,
2, College Square North, Belfast.

PROVISIONAL TIME TABLE.

FRIDAY, JULY 23RD, 1909.

12 noon.—Annual General Meeting, followed by Representative Meeting.

SATURDAY, JULY 24TH, 1909.

9.30 a.m.—Representative Meeting.

MONDAY, JULY 26TH, 1909.

10 a.m.—Representative Meeting.

7.30 p.m.—Annual Conference of Secretaries of Division and Branches.

TUESDAY, JULY 27TH, 1909.

10 a.m.—Council Meeting.

10.30 a.m.—Representative Meeting (if required).

2.30 p.m.—Adjourned General Meeting.
Induction of President.

6.30 p.m.—President's Address.

WEDNESDAY, JULY 28TH, 1909.

9.30 a.m.—Council Meeting.

10 a.m.—Sectional Meetings.

10.30 a.m.—Representative Meeting (if required).

12.30 p.m.—Address in Medicine.

7.30 p.m.—Annual Dinner.

THURSDAY, JULY 29TH, 1909.

8 a.m.—National Temperance League Breakfast.

9.30 a.m.—Council Meeting.

10 a.m.—Sectional Meetings.

12.30 p.m.—Address in Surgery.

8.30 p.m.—Reception.

FRIDAY, JULY 30TH, 1909.

10 a.m.—Sectional Meetings.

12.30 p.m.—Address in Obstetrics.

8 p.m.—Popular Lecture.

8.30 p.m.—Reception.

SATURDAY, JULY 31ST, 1909.

Excursions.

THE PATHOLOGICAL MUSEUM.

The following Committee has been appointed to organize the pathological museum:

President: Professor W. ST. CLAIR SYMMERS.

Honorary Secretaries: THOMAS HOUSTON, M.D.;
W. J. WILSON, M.D.

J. S. DICKIE, M.B.	C. H. P. D. GRAVES, M.D.
ROWLAND HILL, M.B.	(Cookstown).
C. G. LOWRY, M.D.	Professor McWEENEY (Dublin).
J. E. MACLWANE, M.D.	Professor MOORE (Cork).
JOHN M'LEISH, M.B.	C. H. NESBITT, M.D. (Randals-
W. J. MAGUIRE, M.D.	town).
J. C. RANKIN, M.D.	Professor O'SULLIVAN (Dublin).
FRED. SMYTH, M.D.	R. T. ROWLETTE, M.D. (Dublin).
ERNEST WALES, M.D.	Professor WHITE (Dublin).
J. SINGLETON DARLING, M.D.	JOHN WILSON, M.D. (Castle-
(Lurgan).	blaney).

EX-OFFICIO MEMBERS.

The President-elect: Sir WILLIAM WHITLA, M.D., LL.D.

The Local Honorary Treasurer: JOSEPH NELSON, M.D.

The Local Honorary Secretaries: H. L. McKISACK, M.D.; C. E. SHAW, M.D.; HOWARD STEVENSON, F.R.C.S.I.

The Committee propose that the material should be arranged under the following heads:

I. Exhibits bearing on discussions and papers in the various sections.

II. Specimens and illustrations relating to any research work.

III. Instruments relating to clinical diagnosis and pathological investigation.

IV. Individual specimens of special interest, or a series illustrating some special subject.

It is also proposed to make a special effort to gather together a series of exhibits relating to:

- (a) Tuberculosis.
- (b) Diseases of warm climates.
- (c) Cancer of the uterus.
- (d) X-rays and photography.

The Committee wish it to be understood that the above are only suggestions, and if there is any subject in which Members are specially interested, and of which interesting specimens can be supplied, they will be glad to hear from them.

The Museum will occupy a central position, and will be easy of access.

It is hoped that it will be possible for arrangements to be made whereby exhibitors may have an opportunity of demonstrating their specimens.

THOMAS HOUSTON,
W. J. WILSON,
Honorary Secretaries.

Communications should be addressed to one of the Honorary Secretaries at Queen's University, Belfast.

Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

BATH AND BRISTOL BRANCH: TROWBRIDGE DIVISION.

The annual meeting was held at the Town Hall, Trowbridge, on Saturday, May 29th, at 3 p.m., Dr. TUBB-THOMAS in the chair. Eleven members were present.

Election of Officers.—The following were elected to the various offices for the ensuing year: *Chairman*, Dr. Rattray (Frome); *Vice-Chairman*, Dr. H. P. Tayler (Bradford-on-Avon); *Secretary*, Dr. Pearce; *Representatives on Branch Council*, Drs. Tubb-Thomas, Rattray, and H. P. Tayler; *Executive Committee*, Drs. Rumboll, Shorland, and Bond.

Financial Statement.—The financial statement was presented and adopted.

Medical Certification of Suitability for Hospital Treatment.—The report on medical certification of suitability of patients for hospital treatment was considered, and it was resolved:

That the meeting approves the recommendation of Council.

Contributions to Hospitals by Employers and Employees.—The report on contributions to hospitals by employers of labour and employees was considered, and it was resolved:

That the meeting disapproves the motion of the Representative Meeting.

Fresh Public Medical Institutions.—With regard to the statement as to fresh public medical institutions it was resolved:

That the meeting approves the motion of Council.

Sanatorium for Tuberculous Workers.—On this subject it was resolved:

That the meeting accepts the resolution of the Representative Meeting on the ground that the institution referred to is not a charitable institution.

Examination of Recruits for Territorial Forces.—Discussion took place on the question of examination of recruits for the Territorial Forces. It was resolved that the fee for such examination should be not less than 2s. 6d.

BORDER COUNTIES BRANCH.

A GENERAL meeting of the Branch was held in the Lochmaben Combination Hospital for Infectious Diseases on Friday, May 21st. The President of the Branch, Dr. JAMES MACDONALD, of Carlisle, was in the chair, and there were about thirty other members of the Branch present.

Confirmation of Minutes.—The minutes of the previous meeting were read by the SECRETARY, approved, and signed by the President.

Apologies.—Apologies for absence were intimated from Drs. Edington, Harrison-Mitchell, N. MacLaren, Morison, and Doughty.

Local Government Board and Unqualified Practice.—A short informal discussion on the subject of the Local Government Board's circular regarding unqualified practice then took place. This was followed by the discussion of a most excellent afternoon tea, which was provided by the kindness of the hospital authorities, to whom and to Dr. Maxwell Ross the success of an unusual type of meeting is largely due.

Visit to Hospital.—A walk through the hospital had preceded the general meeting, and the members had the advantage of having everything explained and demonstrated to them by Dr. Maxwell Ross. To many of the members the hospital is a striking example of the most up-to-date method of dealing with infectious diseases.

Lochmaben Sewage Works.—The local motorists having very kindly put their cars at the disposal of members attending the meeting, the venue was adjourned to the Lochmaben Sewage Works, a very recent installation and a very successful one. As a means of disposing of the sewage it is perfectly satisfactory: and as in the four years of its existence it has only cost £40 altogether, including repairs, it must surely rank as one of the cheapest in the country. Provost HALLIDAY, of Lochmaben, attended the meeting and kindly explained to the members the method by which it destroyed the sewage, and the effluent was exhibited and tested in the presence of every one who was able to get sufficiently near to see what was being done.

Lockerbie Sewage Works.—A different method of sewage disposal was demonstrated by a visit to the Lockerbie Sewage Works, a larger and more costly affair, where everything was again explained and where the result gained more than justified the expenditure.

Dinner.—Dinner at the Blue Bell concluded the day's proceedings. Nearly all the members present at the meeting stayed to dinner, at which Provost Halliday and Mr. McJarrow, the town clerk of Lockerbie, were also present. In proposing the health of the two latter gentlemen the President delighted the large company by making one of those apposite and eloquent speeches for which he has long been renowned.

CONNAUGHT BRANCH.

The annual meeting of this Branch was held at 1 p.m. on May 20th, at Ryan's Hotel, Claremorris, Mr. R. B. MAHON in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read, confirmed, and signed.

Apologies for Non-attendance.—A number of letters of apology for non-attendance were read.

Election of Officers.—The following members were elected officers for the ensuing year: *President*, Mr. R. B. Mahon; *President-elect*, Dr. Joseph MacDonnell (Roscommon); *Honorary Secretary*, Dr. John Mills; *Representative for the Representative Meeting*, Dr. T. B. Costello. The Branch Secretary was given power to appoint a deputy if he was unable to attend.

Executive Committee.—The following Executive Committee was elected for the year: Drs. C. L. Birmingham, J. Carroll, T. B. Costello, J. A. Hanrahan, R. W. Kelly, R. J. Kinkadee, Joseph MacDonnell, R. B. Mahon, R. J. Martyn, John Mills.

Report of Executive Committee.—The report of the Executive Committee recommending the adoption of ethical rules was received and adopted.

New Members.—The committee also reported that Drs. Crowley and Quinlan were elected members.

EDINBURGH BRANCH: SOUTHERN DIVISION.

THE annual meeting of the Division was held in the Oddfellows' Hall, Forrest Road, on Friday, June 4th, at 8.15 p.m., Dr. MATHESON in the chair. There were also present Drs. Bowie, Cumming, Boyd Jamieson, H. Jamieson, Johnston, McDonald, Marshall, Simla Paterson, Gordon Price, Proudfoot, Salt, Scott, Stevens, A. D. Stewart, A. Walker, and Dewar (Honorary Secretary).

Apologies for Non-attendance.—Apologies for unavoidable absence were received from Drs. Allan, Blaikie, and Edmund Price.

Confirmation of Minutes.—The minutes of the last meeting and adjourned meeting were read, approved, and signed.

Election of Officers.—The following gentlemen were elected officers for the ensuing year: *Chairman*, Dr. Lundie; *Vice-Chairman*, Dr. Proudfoot; *Representative to Representative Meetings*, Dr. A. Walker; *Joint Secretaries*, Drs. Dewar and S. Paterson; *Representatives on Branch Council*, the Chairman and Junior Secretary; *Executive Committee*, Drs. Scott, Johnston, Porter, G. Price, E. Price, Matheson, Gullen, Dickson, and Stevens.

Earlier Election of Representative.—A motion to alter Divisional Rule 7 so as to permit of the election of the Representative to the Representative Meeting "not more than nine months nor less than three weeks" before the Annual Representative Meeting, was unanimously adopted.

The late Dr. C. Kennedy.—A feeling reference was made to the late Dr. C. Kennedy by the Chairman, and a minute expressing the deep regret of the Division for his untimely death and their sympathy with Mrs. Kennedy and family was ordered to be engrossed in the minute book. The Secretary was instructed to send an extract of the minute to Mrs. Kennedy.

Representation of Local Medical Profession on Hospital Boards.—The report on this matter was unanimously approved.

Ophthalmia Neonatorum Report.—This report was unanimously approved.

Instructions to Representative.—The Provisional Agenda of the Representative Meeting was then discussed in detail, and Dr. Walker was fully instructed as to the Division's findings on the various matters. Motion 76, by the Liverpool (Western) Division, was to be vigorously opposed.

Arrangements for Future Meetings, etc.—Medical subjects for discussion at next meeting were considered. It was unanimously resolved to hold a "smoker" in the early winter, the carrying out of the details of which being referred to the executive. An executive meeting will be held in September or October.

Vote of Thanks to Retiring Chairman.—In proposing a vote of thanks to the Chairman, Dr. PROUDFOOT expressed the regret of the members at his compulsory demission of office, and their feelings of gratitude to him for his unflinching attendance and unvarying tact and courtesy in presiding over the affairs of the Division during the past three years. This was seconded and unanimously carried. Dr. MATHESON in a few well-chosen words replied.

GLASGOW AND WEST OF SCOTLAND BRANCH: GLASGOW EASTERN DIVISION.

THE annual meeting of this Division was held in Bellgrove U. F. Church Hall on Friday, June 4th, at 4 p.m.; Dr. MILLER SEMPLE, the Chairman of the Division, presided, and eleven members were present.

Confirmation of Minutes.—The minutes of the last meeting were read, approved, and signed.

Election of Officers.—The office-bearers for 1909-10 were elected as follows: *Chairman*, John Patrick, M.B.; *Vice-Chairman*, Malcolm Black, M.D.; *Secretary and Treasurer*, William Bryce, M.D.; *Representative to Representative Meetings*, W. L. Muir, L.R.C.P., etc.; *Representatives to Branch Council*, W. L. Muir, L.R.C.P., etc., William Bryce, M.D.; *Executive Committee*, Miller Semple, M.B., H. A. McLean, M.B., Robert Scott, M.B., James Dunlop, M.B., T. C. Barras, M.B., R. McC. Service, M.D., P. S. Buchanan,

M.B., James Battersby, F.R.C.S. Eng., W. J. H. Sinclair M.B.

Representation of the Local Medical Profession on Hospital Boards.—On this question it was resolved by 5 to 3 to support the action taken by the Hampstead and Wandsworth Divisions.

NOTICES OF MOTION.

(a) *Notices Affecting the Charter.*—The Representative was instructed to oppose these.

(b) *Notices Affecting the Present Regulations of the Association.*—The Representative was instructed to give these his support.

(c) *Notices Affecting the Administration of the Association.*—These were the subject of considerable discussion. Dr. RUSSELL moved and Dr. SERVICE seconded that the Representative be asked to oppose the motion by the Wandsworth Division regarding the distribution of the capitation grant. As an amendment Dr. SEMPLE moved and Dr. SCOTT seconded the recommendation of the Executive Committee, that the Representative give this motion his support, and this was carried by 6 to 5. The Representative was instructed to give the other motions his general support with the exception of that regarding the scientific work of the Association, where he was left to use his own discretion.

(d) *Notices Affecting the Policy of the Association.*—The Representative was instructed to support these, with the exception of those relating to medical teaching and medical examinations, which he was to oppose.

Medical Examination of School Children.—The recommendations of the Medico-Political Committee were unanimously approved, and the Representative instructed accordingly.

Sanatoriums for Tuberculous Workers.—The Division concurred with Paragraph 3 (a), (b), and (c), and also with the resolution of the last Representative Meeting.

Earlier Election of Representative.—Dr. MUIR moved, and Dr. FINDLAY seconded, that in Rule 7 "three months" be altered to "nine months," to allow of the earlier election of the Representative in Representative Meetings. Dr. SERVICE, seconded by Dr. RUSSELL, moved that the Rule remain as it stands at present. On a vote the alteration was carried by 7 to 2.

Annual Meeting of Division.—It was unanimously agreed to alter Rule 11 so that the annual meeting of the Division might be held either in May or June instead of in June as at present.

This concluded the business.

GIBRALTAR BRANCH.

A MEETING of this Branch was held on May 25th. Colonel MURRAY was in the chair, and the following were present: Deputy Inspector-General F. J. Lilly, R.N., Staff Surgeon Daw, R.N., Drs. Oman, Abrines, Lyons, Gill, and L. D. Parsons, Honorary Secretary.

Election of Representative.—Major H. A. L. Howell, R.A.M.C., was elected Representative for the Branch, and Dr. A. W. W. Dowling a delegate.

Cases.—In addition to the previous business several cases were shown by the HONORARY SECRETARY (Dr. L. D. Parsons).

Paper.—Staff Surgeon DAW read a paper on Bier's congestive treatment.

LANCASHIRE AND CHESHIRE BRANCH: SALFORD DIVISION.

THE annual meeting of the Salford Division was held on May 28th, Dr. O'GRADY being in the chair.

Election of Officers.—The following officers were elected for the ensuing year: *Chairman*, Dr. W. C. Brown; *Vice-Chairman*, Dr. J. Price Williams; *Secretary*, Dr. Taylor; *Representatives on the Branch Council*, Dr. Hamill and the Secretary; *Representative to the Annual Representative Meeting*, Dr. Taylor; *Executive Committee*, Drs. A. C. Clarke, Carr, O'Grady, Stuart, and Wolstenholme; *Representatives to the Joint Committee of Divisions*, Drs. Bell, Hamill, Owen, Wolstenholme, and the Secretary.

Annual Report.—The annual financial statement for 1908 was read, and showed that the Division had at the end of the year a balance in hand of £3 18s. 2d.

Overcrowding of the Profession.—The SECRETARY announced that it was too late for a notice of motion for the Representative Meeting advocating that a letter should be sent to head masters of public schools with reference to the overcrowded state of the profession, but it might be possible to introduce such a motion on the report of the Medico-Political Committee, and the Representative was instructed to do so if possible.

The Referendum.—The Representative was instructed to propose the following motion when the subject of the Charter was considered by the Representative Meeting:

That this Representative Meeting is convinced that the Charter as it stands represents the opinion of the great majority of the members of the Association, but that, nevertheless, with a view to allaying the anxiety expressed by certain Branches as to the provisions for the Referendum, it be an instruction to the Council to consider and report to the Representative Meeting as to the practicability and desirability of amending the ordinances and by-laws so as to provide that whenever, in the opinion of the Council, the Referendum is concerned with any of the following subjects—namely:

1. Promoting the candidature of members for Parliament.
2. Establishing or abandoning any scheme for medical defence.
3. Establishing or abandoning any provident or benevolent scheme for the benefit or assistance of members of the profession or of the Association or of the staff employed by the Association.
4. Any increase in the annual subscription amounting to 5s. or over 5s.

In all such cases the Referendum shall be taken by means of voting papers sent to every member of the Association, due safeguards being provided for the questions submitted in such voting papers being impartially placed before the members, and that on all other subjects the Referendum shall be taken by voting of members attending in Division meetings as at present provided by the Charter.

The Warehousemen and Clerks' Association.—It was announced that full information had now been obtained through the Medical Secretary as to the Warehousemen and Clerks' Association, and the Division thereupon authorized the Joint Committee of the Manchester and Salford Divisions to deal with the matter, with full power to act for the Salford Division.

The Midwives Act.—Dr. TAYLOR announced that he had been appointed to represent the Association to give evidence before the Departmental Committee on the working of the Midwives Act, and he had given evidence specially as to the working of the Act in Manchester and Salford, and had urged the suggestions of the Salford Division and of the Joint Committee of the Divisions. He said that the suggestions from Manchester and Salford in every respect supported the general evidence of the Association.

Earlier Appointment of Representative.—It was unanimously resolved to alter the Division rules so as to provide for the election of the Representative to the annual Representative Meeting being made as early as possible after January 1st in each year.

The Rochdale Division Proposal for Two Grades of Members.—The Representative was instructed to vote against the proposal of the Rochdale Division which would create two grades of members in the Association.

Representation in the House of Lords.—It was resolved to support the recommendation of the Medico-Political Committee that members of the House of Lords should be nominated by the Association to represent it officially on questions coming before the House of Lords.

Distribution of Capitation Grants.—The meeting resolved to oppose the motion of the Wandsworth Division dealing with the distribution of capitation grants to Divisions.

On other matters coming before the Representative Meeting, and not dealt with by the Division, the Representative was instructed to use his discretion in voting.

METROPOLITAN COUNTIES BRANCH:

MARYLEBONE DIVISION.

The annual meeting of the Division was held at the rooms of the Medical Society of London, Chandos Street, W., on Wednesday, May 26th, at 5 o'clock, Dr. DE HAVILLAND HALL (Chairman of the Division) in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Officers.—The following having been nominated by the Executive Committee were elected officers for the ensuing year: *Chairman*, Dr. F. J. Smith; *Vice-Chairman*, Mr. L. E. Creasy; *Honorary Treasurer*, Dr. Comyns Berkeley; *Honorary Secretary*, Mr. Donald Armour; *Representatives of Division on Branch Council*, Sir Victor Horsley, Dr. Lauriston Shaw, Dr. G. A. Heron, Dr. W. E. Burton, Mrs. Berry, M.D., *Honorary Secretary*; *Representative in Representative Meetings*, Mr. Donald Armour.

Nominations for Election to the Central Council.—The meeting recommended the nomination of Sir Victor Horsley, Dr. Lauriston Shaw, and Dr. F. J. Smith.

Report of Executive Committee.—The annual report of the Executive Committee was read and ordered to be placed on the minutes.

Proposed Alteration of Rules.—Report of the Executive Committee upon the proposed alterations in the Rules of the Division. The report was received, and after discussion thereon it was adopted with certain amendments.

Whole-time Medical Officers of Health.—The Public Health Committee's memorandum on whole-time medical officers of health (SUPPLEMENT to the BRITISH MEDICAL JOURNAL, January 23rd, 1909) was discussed. The meeting expressed the opinion

That as far as possible medical officers of health should be debarred from engaging in private practice.

Federated Societies' Medical Benefit Association.—This subject (BRITISH MEDICAL JOURNAL, February 13th, p. 425) was discussed. It was proposed by Sir VICTOR HORSLEY, seconded by Dr. HERON, and carried unanimously:

That inasmuch as the scheme of the Federated Societies' Medical Benefit Association is contrary to the essential principles regulating contract practice agreed to by the British Medical Association, the Marylebone Division is of opinion that the scheme in question should be strenuously resisted by the medical profession.

Departmental Committee re Midwives Act.—It was decided to refer the Central Office to the report issued by the London and Counties Medical Protection Society upon the subject.

Vote of Thanks to Retiring Chairman.—It was proposed by Sir VICTOR HORSLEY, seconded by Dr. LAURISTON SHAW, and carried with acclamation:

That a hearty vote of thanks be tendered to the retiring Chairman Dr. F. de Havilland Hall, for his services to the Division during the past year.

After Dr. DE HAVILLAND HALL had replied the meeting terminated.

TOTTENHAM DIVISION.

The annual general meeting of the Tottenham Division was held at the Prince of Wales's Hospital at 4.30 p.m., on June 4th.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Earlier Election of Representative.—It was resolved:

That Rule 7 be altered to read "not more than nine months" instead of "not more than nine and less than three."

Unqualified Practice.—A letter from the Medical Secretary regarding unqualified practice was read. The consideration of the matter was postponed to the next meeting.

Election of Officers.—The following officers were elected for the ensuing year:—*Chairman*, Dr. F. Tresilian; *Vice-Chairman*, Dr. J. Richmond Bryce; *Representative at Representative Meeting*, Dr. J. R. Fuller; *Honorary Secretary and Treasurer*, Dr. H. F. Staunton; *Executive and Ethical Committee*, Drs. Chappell, Fogarty, Greenwood, Grant, Orlebar, and Smith.

SOUTHERN BRANCH:

PORTSMOUTH DIVISION.

THE annual meeting of this Division was held at 5, Pembroke Road, Portsmouth, on June 2nd, at 3.45 p.m., Dr. W. CARLING in the chair. There were also present: Drs. McEldowney, Colt, Hann, Blake, Leon, Hackman, James Green, Sheahan, Milne Thomson, J. Phillips, Child, Bosworth Wright, L. Maybury, and B. H. Mumby.

Apology for Non-attendance.—A letter of apology for absence was read from Dr. Gittings, R.N., H.M.S. *Foreright*.

The Division and the Election of a Representative.—A letter was read from Mr. Smith Whitaker, stating that the Council of the Association had decided that the Portsmouth Division should form an independent constituency for the election of a Representative at the Representative Meeting for the year 1909-10.

Medical Inspection of School Children.—The report of the Medico-Political Committee to the Divisions on medical inspection of school children, and treatment of those found defective, based upon consideration of the replies of Divisions to the report of the Committee issued on December 22nd, 1908 (see SUPPLEMENT OF BRITISH MEDICAL JOURNAL, May 15th, 1909), was considered. Dr. McEldowney proposed, and Dr. HACKMAN seconded, and it was carried unanimously:

That the Recommendations A. to M. inclusive in that report be agreed to, but that this Division supports the original notice of Dr. A. H. Williams (Watford and Harrow) as it appears on p. 19. Subappendix II in that report instead of Recommendation N.

Ophthalmia Neonatorum Report.—The report of the Ophthalmia Neonatorum Committee (see SUPPLEMENT to BRITISH MEDICAL JOURNAL, May 8th, 1909) was considered. Dr. SHEAHAN proposed, Dr. LEON seconded, and it was carried unanimously:

That this Division supports the recommendation for prevention, paragraphs (a) to (f) in that report.

Election of Officers.—Dr. CARLING proposed, Dr. HACKMAN seconded, and it was carried unanimously:

That Dr. T. A. Colt be Chairman of this Division for the ensuing twelve months.

Dr. COLT then took the chair amidst applause. Dr. COLT proposed, Dr. J. PHILLIPS seconded, and it was carried unanimously:

That Dr. McEldowney be Vice-Chairman.

Dr. MILNE THOMSON proposed, Dr. SHEAHAN seconded, and it was carried unanimously:

That Drs. Blackman, L. Maybury, and Hackman be the Representatives on the Branch Council.

Dr. LEON proposed, Dr. R. J. GREEN seconded, and it was carried unanimously:

That Dr. B. H. Mumby be the Representative for this Division in Representative Meetings.

It was proposed by Dr. COLT, seconded by Dr. McEldowney, and carried unanimously:

That the Executive Committee be composed of the following members: Drs. Burrows, Carling, J. W. Cousins, J. Green, Leon, Phillips, Sheahan, Milne Thomson, H. M. Way, and Bosworth Wright.

It was proposed by Dr. LEON and seconded by Dr. HACKMAN, and carried unanimously:

That Mr. C. P. Child be Clinical Secretary.

It was proposed by Dr. COLT, seconded by Dr. HACKMAN, and carried unanimously:

That Dr. Mumby be Medico-Political Secretary and Honorary Treasurer.

Date of Election of Representative.—Mr. CHILDE proposed, Dr. COLT seconded, and it was carried unanimously:

That the Representative of this Division in the Representative Meetings of the Association be elected at the first meeting of the Division after October 31st of each year.

Promised Paper.—Dr. VICTOR BLAKE kindly promised to read a paper on the medical inspection of school children early in 1910.

Balance Sheet.—The following balance sheet was presented:

Balance brought forward	...	£19 12 1
Capitation grant	...	10 14 0
		£30 6 1
Stride, for printing	...	£6 14 5
Rent	...	2 8 10
Expenses of clinical meeting	...	5 0 0
Postages, wrappers	...	0 12 0
Stamps, Secretary	...	0 5 8½
		15 4 8½
Balance	...	£15 1 4½

The above accounts have been audited and found correct by Drs. James Green and Leonard Hackman, and were approved on the proposition of Dr. LEON, seconded by Dr. MILNE THOMSON.

SALISBURY DIVISION.

THE annual meeting of the Division was held on May 19th at the Infirmary, Salisbury, at 8.15 p.m. Dr. L. S. LUCKHAM was in the chair, and there were present Drs. Richmond, C. R. Straton, Kempe, Baskin, Saunders, Genge, Blackmore, March, Fison, Armitage, W. Gordon, Douglas, Atkinson, and J. E. Gordon (Honorary Secretary).

Dinner.—The meeting was preceded by dinner at the County Hotel at 7 p.m.

Confirmation of Minutes.—The minutes of the last meeting were read and approved.

Medical Inspection of School Children.—The HONORARY SECRETARY gave an account of the conference held on March 31st at the infirmary relating to the medical inspection of school children, called by the Salisbury Division, and attended by representatives of the infirmary, provident dispensary, and the Salisbury, Wilton, Amesbury, Tisbury, and Warminster Boards of Guardians; by six medical inspectors of school children in the district; and by six members of the Division. The following resolutions were passed by the conference:

1. That the present means available are sufficient for the carrying out of treatment, but require organization and co-operation to make them thoroughly effective. To effect this organization this meeting is of opinion that the infirmary out-patient department should be utilized in conjunction with the dispensary and other provident organizations, so that treatment may be kept as much as possible on the provident basis.
2. That the treatment for ordinary illness is arranged for by the present contracts of medical officers with their authorities.
3. That a special scale of fees for minor operations, eye examinations, and consultations should be drawn up and submitted to the various authorities for their guidance.

Election of Officers.—The following office-bearers were elected for the ensuing year: *Chairman*, C. A. Ensor, Tisbury; *Vice-Chairman*, L. S. Luckham, Salisbury; *Honorary Secretary and Treasurer*, J. E. Gordon, Salisbury; *Representative for Representative Meetings*, C. R. Straton, Wilton; *Representatives on Branch Council*, L. S. Luckham, Salisbury; J. O. March, Amesbury; *Executive Committee*, H. P. Blackmore, Salisbury; G. Kempe, Salisbury; R. L. Willcox, Warminster; J. A. Armitage, Salisbury.

Honorary Secretary's Report.—The Honorary Secretary's report and balance-sheet were passed, showing a balance in hand of £11 15s. 9½d.

Whole-time Medical Officers of Health.—The question referred to the Division—Should medical officers of health be debarred from engaging in private practice?—was discussed, and Dr. STRATON proposed that part-time medical officers of health are preferable in country districts. This was seconded by Dr. BLACKMORE. Dr. KEMPE moved an amendment that:

Regarding the question as one of principle, that the answer be in the affirmative.

This was seconded by Dr. W. GORDON. Dr. Kempe's amendment was carried by 4 votes to 3. It was then carried, *nemine contradicente*, as a substantive motion.

Medical Certification of Suitability for Hospital Treatment.—This question was next considered. It was proposed by Dr. J. E. GORDON, seconded, and carried *nemine contradicente* (5 voted for):

That this Division approves of medical certificates of suitability for hospital treatment being required as a condition of hospital treatment, except in case of casualties.

Contributions to Hospitals by Employers and Employees.—This matter was left to the discretion of the Representative of the Division.

Fresh Public Medical Institutions.—This matter was also referred to the discretion of the Representative.

Sanatoriums for Tuberculous Workers.—On this subject it was proposed by Dr. KEMPE:

That, in the opinion of the Representative Meeting, it is not advisable that members of the Association should in future accept or continue to hold appointments as honorary local medical referees to the National Association for the Establishment and Maintenance of Sanatoriums for Workers suffering from Tuberculosis.

The resolution was seconded by Dr. STRATON and carried *nemine contradicente* (8 voted).

Representation of Local Medical Profession on Hospital Boards.—On this question Dr. J. E. GORDON moved:

That it is not practicable or desirable that medical men should act on committees of hospitals, etc., unless qualified to act in the usual way.

Dr. KEMPE seconded the resolution, which was carried *nemine contradicente* (8 voted).

Paper.—Mr. BASKIN read a paper on Obsession and Insane Movements. The insane movements were shown by the cinematograph. Mr. Baskin also showed by means of the cinematograph a series of films illustrating various gaits and reflexes in nervous disorders. A unanimous vote of thanks was accorded Mr. Baskin for his paper and the films shown.

Next Annual Meeting of the Southern Branch.—It was decided that the Salisbury Division should invite the Southern Branch to hold their annual meeting in 1910 at Salisbury.

Nomination to Branch Council.—Mr. L. S. LUCKHAM, as Vice-Chairman of the Branch, was nominated to the Branch Council.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: MONMOUTHSHIRE DIVISION.

The annual meeting of this Division was held in the Newport and Monmouthshire Hospital on Friday, May 28th. Dr. W. F. NELIS, Chairman, presided, and the attendance numbered 26.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Election of Officers.—The following officers were elected for the ensuing year: *Chairman*, O. E. B. MARSH; *Vice-Chairman*, A. G. LAWRENCE; *Honorary Secretaries*, R. J. COULTER, W. B. BASSETT; *Representative at Representative Meeting*, W. J. GREER; *Representatives on Branch Council*, O. E. B. MARSH, W. F. NELIS, W. D. STEEL, and T. MORRELL THOMAS. *Members of Executive Committee*, J. S. CLARKE, S. HAMILTON, R. W. HAZLETT, and J. O. KEEFE. *Representatives on Branch Contract Practice Committee*, W. J. GREER, J. W. MULLIGAN, and D. T. RICHARDS.

Installation of New Chairman.—On the election of Dr. Marsh, Dr. Nelis vacated the chair in his favour.

Report of Executive Committee.—The report of the Executive Committee was read and adopted.

Medical Certificates as to Suitability for Hospital Treatment.—It was resolved:

That the Division approves of the proposal that a medical certificate of suitability for hospital treatment should be required as a condition of hospital treatment except in cases of casualties.

Fresh Public Medical Institutions.—It was resolved that the proposal—

That it is desirable that no fresh public medical institution should be opened without previous consultation with the local medical profession through some organized body, such as the Division of the British Medical Association in the area of which it is proposed to establish such new institution, and that it be an instruction to the Council to give effect to this principle in considering applications from Divisions or Branches for support in dealing with hospital questions—

be approved.

Sanatoriums for Tuberculous Workers.—The suggestions and the statement as to sanatoriums for workers suffering from tuberculosis were approved.

Medical Inspection of School Children.—The recommendations in the report on medical inspection of school children and treatment of those found defective, based upon consideration of the replies of Divisions to the report of the Medico-Political Committee issued on December 22nd, 1908 (BRITISH MEDICAL JOURNAL SUPPLEMENT, May 15th, 1909), were approved, on the distinct understanding that school clinics, if established, should be staffed by members of the local profession.

Representation of Local Medical Profession on Hospital Boards.—The proposal that the local medical profession should be represented on the boards of hospitals and similar bodies was approved.

Report of Ophthalmia Neonatorum Committee.—The report of the Ophthalmia Neonatorum Committee was received.

Contributions to Hospitals by Employers and Employees.—The report on contributions to hospitals by employers of labour and employees was discussed at length, and a final decision was postponed until the next meeting.

Earlier Election of Representative.—It was unanimously decided that the Representative of the Division should in future be elected at the November meeting, and the rules were altered accordingly.

Dates for Meetings.—It was unanimously decided that the meetings for the ensuing year should be held at Chepstow on July 9th, 1909, Abergavenny on September 24th, 1909, Newport on November 26th, 1909, Pontypool on February 25th, 1910, and Newport on May 27th, 1910 (annual).

Correspondence.—A circular from the Chelsea and Fulham Division was read.

Vote of Thanks.—A vote of thanks to the Directors of the Newport and Monmouthshire Hospital for their kindness in permitting meetings of the Division to be held in the board room of the hospital was passed unanimously.

CARDIFF DIVISION.

Election of Officers.—The following members have been elected officers for 1909-10: *Chairman*, Dr. POWELL (Barry); *Vice-Chairman*, Dr. TATHAM THOMPSON; *Representatives on Branch Council*, Drs. LEIGH, BRIERLEY, EDWARDS, TREASURE, LYNN THOMAS, and POWELL; *Executive Committee*, Drs. RUSSELL THOMAS, HERBERT COOK, MILWARD, and F. W. S. DAVIES; *Contract Practice Committee*, Drs. REIDY, MILWARD, and LEIGH; *Representative*, Dr. EWEN J. MACLEAN; *Representative on Queen's Nurses Committee*, Dr. ERIC EVANS; *Honorary Secretaries*, Drs. CYRIL LEWIS, 27, Windsor Place, Cardiff, and OWEN L. RHYS, 22, St. Andrew's Crescent, Cardiff.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH:

HEREFORD DIVISION.

The annual meeting of this Division was held on June 23rd.

Election of Officers.—The following members were elected officers for the ensuing year: *Chairman*, Dr. WILLIAM AINSIE (Kington); *Vice-Chairman*, Dr. J. O. LANE (Hereford); *Honorary Secretary and Treasurer*, Dr. ARTHUR WOOD; *Representative at Representative Meeting*, Dr. ARTHUR WOOD.

To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

ANNUAL GENERAL MEETING.

Notice is hereby given that the 1909 Annual General Meeting of the British Medical Association will be held in the Assembly Hall, Belfast, on Friday, July 23rd, at Twelve noon.

[This Meeting is to comply with Article XII, and will adjourn forthwith until Tuesday, July 27th, at 2.30 o'clock.]

ANNUAL REPRESENTATIVE MEETING.

Also, notice is hereby given that the 1909 Annual Representative Meeting will be held in the Assembly Hall, Belfast, on Friday, July 23rd (and following days as required), immediately after the Annual General Meeting, fixed for Twelve noon, on Friday, July 23rd.

BY ORDER OF THE COUNCIL,

GUY ELLISTON.

May, 1909.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, June 30th, in the new Council Room, at 429, Strand, London. W.C.

By Order,

GUY ELLISTON.

June 10th, 1909.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH: BATH DIVISION.—The annual meeting of this Division will be held at the Royal United Hospital on Saturday, June 26th, at 6.0 p.m. Business: (1) To elect officers. (2) To receive annual report. (3) To consider business of Annual Representative Meeting. (4) To consider matters referred to Divisions (see SUPPLEMENT TO BRITISH MEDICAL JOURNAL, May 8th). (5) To modify Divisional Rule No. 7, for ensuring earlier appointment of Representative.—D. LESLIE BEATH, Honorary Secretary.

BIRMINGHAM BRANCH.—The annual meeting of this Branch will be held at the Medical Institute, Edmund Street, on June 17th, at 3.30 p.m. Business: (1) Election of officers. (2) Election of Representatives on Central Council. (3) Annual report of Council and balance sheet. (4) Report of Ethical Committee. (5) Report of Pathological and Clinical Section. (6) The President's Inaugural Address on the "Medical Aspect of the Report of the Poor Law Commission.—ALBERT LUCAS, J. FURNEAUX JORDAN, Honorary Secretaries.

BIRMINGHAM BRANCH: CENTRAL DIVISION.—The annual meeting of this Division will be held at the Medical Institute on Wednesday, June 30th, at 3.30 p.m., at which the election of officers for the ensuing year will be held. Nominations in writing for the offices of Chairman, Vice-Chairman, and two Honorary Secretaries must reach the Honorary Secretaries not later than Wednesday, June 9th.—A. W. NUTBALL, W. TRACY LYDALL, Honorary Secretaries.

BORDER COUNTIES BRANCH.—The annual general meeting of the Branch will be held in the County Hotel, Carlisle, on Friday, June 25th. Business: To receive the report of the council for the past year; to elect the officers of the Branch; and Dr. Murdoch of Annan, will deliver his Presidential

address. Further details of information will be sent to each member by post.—FRANCIS R. HILL, Honorary Secretary, 62, Warwick Road, Carlisle.

CAMBRIDGE AND HUNTINGDON BRANCH.—The annual meeting of the Cambridge and Huntingdon Branch will be held at Cambridge on Tuesday, July 13th, at 12.30.—H. B. KODERICK, Honorary Secretary, Cambridge.

DORSET AND WEST HANTS BRANCH.—The summer meeting of this Branch will be held in Christchurch, Hants, on Wednesday, July 7th. Members wishing to send papers, show cases, exhibit specimens, or propose new members, must communicate with the undersigned not later than Thursday, June 24th.—JAMES DAVISON, Honorary Secretary, "Streathplace," Bournemouth.

EAST ANGLIAN BRANCH.—The annual meeting of the Branch will be held at the Grand Hotel, Clacton-on-Sea, on Thursday, July 8th.—B. H. NICHOLSON, East Lodge, Colchester, Honorary Secretary.

EAST YORK AND NORTH LINCOLN BRANCH.—The annual meeting of this Branch will be held at the Grimsby Hospital on Saturday, June 19th. Further particulars as to the time of meeting and business to be transacted will be published later in the JOURNAL and communicated by circular to each member.—EDWARD TURTON, M.D., Honorary Secretary, 1, Albion Street, Hull.

EDINBURGH AND FIFE BRANCHES.—The attention of members of these two Branches is drawn to the fact that nominations for election to the members upon the Central Council of the Association should be sent in to one of the Secretaries not later than June 15th.—A. LOGAN TURNER, 27, Walker Street, Edinburgh; FRANCIS D. BOYD, 22, Manor Place, Edinburgh; BALFOUR GRAHAM, Leven, Fife.

FIFE BRANCH.—The seventh annual meeting will be held in the Hotel, Thornton, on Thursday, June 17th, at 3 p.m.—R. BALFOUR GRAHAM, Honorary Secretary, Leven.

LANCASHIRE AND CHESHIRE BRANCH.—The annual meeting of the Branch will be held at Chester on Wednesday, June 16th. Members desiring to make scientific, clinical, or other communications will please communicate at once with the Branch Secretary, F. CHARLES LARKIN, 54, Rodney Street, Liverpool.

LANCASHIRE AND CHESHIRE BRANCH.—Science Committee.—Gentlemen who would be willing to give addresses, demonstrations, etc., at Division meetings during the course of next winter will oblige by sending their names and the title of the subjects they propose to deal with as soon as possible to F. CHARLES LARKIN, Branch Secretary, 54, Rodney Street, Liverpool.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—*Clinical and Scientific Meeting.*—A meeting will be held at the Board Room of the Altrincham Hospital at 5 p.m. on Thursday, June 24th. (Afternoon tea 4.30 p.m.) Clinical cases will be shown, and Dr. Rhodes will read a paper on Scarlet Fever, to be followed by a discussion. Dinner at the Brooklands Hotel, 7.30 p.m. Ladies invited. Names must be given to the Honorary Secretary by Monday, June 21st.—T. W. H. GARSTANG, Honorary Secretary.

LEINSTER AND SOUTH-EAST OF IRELAND BRANCHES.—Nominations for Central Council.—Nominations of candidates for the two seats on the Council of the Association should be sent to the undersigned on or before June 21st.—ARTHUR H. WHITE, Malvern, Terenure Road, Dublin.

MIDLAND BRANCH: BOSTON AND SPALDING DIVISION.—The annual meeting of this Division will be held on Tuesday, June 22nd, at the White Hart Hotel, Boston, at 12.45 p.m. Luncheon will be provided at 2 p.m.; tickets, 3s. 6d. each (exclusive of wine). Members are requested to reply not later than June 19th if they intend to be present at the luncheon, as those members accepting will be held responsible for the value of their tickets. Members may bring guests to the luncheon. Agenda: (1) Election of officers, including the President-elect of the Branch. (2) Programme for the year. (3) Matters referred to Divisions: (a) Treatment of school children; (b) unqualified practice. (4) Annual report. (5) Motor meet. (6) Invitation to Midland Branch to meet in the Division. (7) Any other business.—A. E. WILSON, Honorary Secretary, Boston.

NORTH OF ENGLAND BRANCH: NORTH NORTHUMBERLAND DIVISION.—The annual meeting will be held at the Plough Hotel, Alnwick, on Thursday, June 24th, at 3.30 p.m. Business: (1) Election of officers. (2) Midwives question. (3) Any other business.—C. CLARK BYRMAN, Honorary Secretary.

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.—The annual meeting will be held on Wednesday, June 30th, at the Grand Hotel, Morecambe, at 3.30 p.m. Members willing to show cases or specimens are requested to communicate with A. S. BARLING, Honorary Secretary, Lancaster.

SOUTH-EASTERN BRANCH.—The sixty-fifth annual meeting of the Branch will be held in the Town Hall, Croydon, on Wednesday, June 23rd, at 2.15 p.m. Dr. J. J. Macan (President-elect) kindly invites members to lunch at the Greyhound Hotel from 1 to 2 p.m. Agenda: In addition to the business of an ordinary meeting: (1) To receive the report of the election of new officers, who shall thereupon take office. (2) To receive the report of the Council on the affairs of the Branch and the annual financial statement. After the meeting members are invited by Dr. Pasmore to a garden party at the Mental Hospital, Warringtonham. The dinner will be held at the Greyhound Hotel at 6.15 p.m., charge 5s. Wine will be provided by the local members. Those who propose to be present at lunch, the garden party, or dinner, are requested to signify their intention to Dr. E. H. Willock, 91, London Road, Croydon, not later than Saturday, June 19th.—H. M. STEWART, Honorary Secretary.

SOUTH-EASTERN BRANCH: CHICHESTER AND WORTHING DIVISION.—The annual meeting of this Division will be held at the Pier Hotel, Bognor, on Friday, June 18th, at 3.30 p.m. Mr. W. S. Sampson, Chairman of the Division, will preside. Agenda: (1) Minutes of the last meeting. (2) To appoint the place of next meeting. (3) Election of officers: Chairman, Vice-Chairman, Secretary, Representative on Branch Council, Representative at Representative Meeting, and Members of the Executive Committee. (4) Report of the Honorary Secretary. (5) Report of Representative. (6) Matters referred to the Division: (a) Report of Ophthalmia Neonatorum Committee; (b) unqualified practice; (c) report on the medical inspection of children and treatment of those found defective; (d) representation of local medical profession on boards of hospitals and similar bodies; (e) medical certificates of suitability for hospital treatment. (7) Dr. Last (Littlehampton) will show some cases.—H. C. L. MORRIS, Honorary Secretary, Bognor.

SOUTH-EASTERN BRANCH: MAIDSTONE DIVISION.—The next meeting of this Division will take place on Thursday, June 17th, for the purpose of electing officers for the ensuing year. It has been proposed to have a dinner afterwards. The Honorary Secretary would feel greatly obliged if each member would kindly intimate his intention of being present or not as early as possible.—GEORGE POTTS, Honorary Secretary.

SOUTH MIDLAND BRANCH.—The annual meeting of this Branch will be held at the General Hospital, Northampton, on Friday, June 18th, at 2.30 p.m., under the presidency of Dr. Alfred Linnell of Paulerspury. The President invites the members to lunch with him at Franklin's Restaurant, Guildhall Road, Nottingham, at 1.30 p.m. All members who accept this invitation must please inform the Secretary not later than Wednesday, June 16th. Agenda: Minutes. Letters and communications. New members elected by Branch Council. President's address. Address by Mr. Jonathan Hutchinson, F.R.C.S., Surgeon to the London Hospital, entitled, *The Surgery of the Tongue*. Dr. Larking of Buckingham will read a paper, entitled, *The Aims of our Association, based on his experience as member of Council, etc.* The Secretary will be pleased to hear from any members who wish to read papers or show specimens. A meeting of the Branch Council will be held at Franklin's Restaurant, Guildhall Road, Northampton, at 1 p.m., on Friday, June 18th (immediately previous to the annual meeting), under the presidency of Dr. Wickham.—E. HARRIES-JONES, Honorary Secretary, 16, Castilian Street, Northampton.

SOUTH MIDLAND BRANCH: BUCKINGHAMSHIRE DIVISION.—The annual meeting will take place on Tuesday, June 15th, at the Royal Bucks Hospital, Aylesbury, at 3.30 p.m.—Agenda: (1) Election of officers: (a) Representatives on Branch Council; (b) Executive Committee; (c) Ethical Committee; (d) Representative to Annual Meeting and Deputy. (2) Receive Annual Report of Committee. (3) Instruct Representative to Annual Meeting: *Re Amputated Hospital dispute; re title of "General Secretary"; re treatment of defective school children; re public medical services; re should all M.O.H.'s be whole-time officers?* (4) Any other business. The following resolution will be moved: "That the Committee take steps to secure that every medical man in the area of the Division give an undertaking to accept no new club or contract work at a lower sum than that fixed as a minimum by the Association in the report on contract practice, namely, 5s. per adult member. Also to endeavour to secure united action in cases where the present club fees are lower than this amount and to report to the Division. Dr. Lauriston Shaw, Physician to Guy's Hospital, will open a discussion on "Dilatation of the Stomach and the Use and Abuse of the 'Emergency Exit.'" Tea will be ready punctually at 3.30 p.m.—ARTHUR E. LARKING, Honorary Secretary.

STAFFORDSHIRE BRANCH.—The thirty-sixth annual meeting of the Branch will be held at the White Hart Hotel, Burton-on-Trent, on Thursday, June 24th, at 4 p.m., when an address will be delivered by the President-elect, W. G. Lowe, M.D. Agenda: (1) Minutes of the last annual meeting. (2) Introduction of the new President. (3) Correspondence. (4) Address by the President. (5) Report of the Council. (6) The financial statement. (7) Election of officers for the ensuing year—President-elect, Secretary, and Treasurer. (8) To decide the place of holding the next annual meeting. (9) Report on the election of the Representative of the Branch on the Council of the Association. Members have the privilege of introducing friends. Dinner at 6 p.m.; charge, 5s. The first general meeting of the session will be held at Stoke, on Thursday, November 25th. Members desiring to read papers are requested to communicate the titles to the General Secretary as soon as possible.—G. PETGRAVE JOHNSON, Honorary General Secretary, Stoke-on-Trent.

YORKSHIRE BRANCH.—Nominations for the election of Representative members of the Central Council (two), each signed by at least three members, must be forwarded to me not later than June 15th. The present Representatives are Drs. Goyder and Sinclair White.—ADOLPH BRONNER, Honorary Secretary, 33, Manor Row, Bradford.

YORKSHIRE BRANCH.—The annual meeting of the Branch will be held at the Grand Hotel, Scarborough, on Saturday, June 26th.—ADOLPH BRONNER, Honorary Secretary, 33, Manor Row, Bradford.

METROPOLITAN COUNTIES BRANCH.

CENTRAL COUNCIL ELECTION, 1909.

We have received the following letter for publication:

London, June, 1909.

TO THE MEMBERS OF THE BRANCH.

Ladies and Gentlemen,—As Candidates at the forthcoming Election to the Central Council we desire to ask for the support of our colleagues in the Metropolitan Counties Branch. Finding ourselves in agreement upon many points in the policy of the Association, we think it may be convenient to the electors if we indicate in a joint letter the directions in which, working together, we should endeavour to influence the Council in promoting the interests of the profession.

The Future of the Association.

We have no doubt as to the absolute necessity of such an Association as ours gradually enrolling a higher and higher proportion of the members of the profession, and steadily increasing its influence and power, in order to secure for the medical profession an opportunity of fulfilling its beneficent functions without undue interference by the State, and on conditions which are fair, both as to conditions of work and remuneration as between the public and ourselves.

The Charter.

We believe that the Charter for which application is now being made will, if obtained, facilitate the work of the Association in forwarding the best interests of the public and the profession. We recognize that the Charter has its present form because it is in accordance with the wishes of the majority of the Association expressed in the manner provided for by our laws and regulations. While regretting that unanimity is not possible in such a complicated matter, we deprecate any opposition to the terms of the Charter during its consideration by the Privy Council, especially in view of the fact that the Association can at any subsequent period secure such alterations as may appear to it to be expedient. Our view of this question, so all-important to the welfare of the Association, was supported by an overwhelming majority at a special meeting of the Branch on December 31st, 1908.

The Existing Constitution.

We recognize in the existing constitution, should the granting of the Charter be delayed, a very valuable means of discovering the wishes of the majority of the profession, and of exerting pressure where necessary upon outside bodies in order to secure that these wishes shall prevail. In our work upon the Council we shall loyally uphold the position laid down in the Articles and the By-laws that the Representative Meeting is the body especially constituted to give expression to the desires of the Association on broad questions of policy.

The Work of Next Session.

The work immediately before the Association is of a very exacting character. The questions of medical inspection and medical treatment of Elementary School children; the reform of the Poor Law Medical Service; the Medical Act Amendments Bill; the administration of the Midwives Act; and the reform of Coroners' Law are all pressing for settlement. In handling each of these questions the utmost care will have to be exercised to safeguard the legitimate interests of the profession, whilst securing that the best possible service shall be provided for the public.

Hospital Reform remains one of the most serious problems before the profession, and assumes ever greater importance as developments take place in other forms of medical service.

The records of the last six years' work show that the Association has through its Divisions and Branches, its Representative Meeting, its Council, and, above all, its Committees, secured for the public and profession useful reforms, and has upheld the standard of Medical science and practice. We seek election to the Central Council in the wish to help in forwarding this National Service.

We are, yours faithfully,

J. FORD ANDERSON,
G. E. HASLIP,
VICTOR HORSLEY,
HUGH R. KER,
LAURISTON E. SHAW.

MEDICAL INSPECTION OF SCHOOLS.

The following letter has been sent to all the members of the staffs of hospitals in London likely to be affected by the proposals of the Education Committee of the London County Council to which reference is made:

May 21st, 1909.

Dear Sir or Madam,—

The Council of the Metropolitan Counties Branch of the British Medical Association invites your consideration of the following points in respect of the recent proposal of the Education Committee of the London County Council to use the voluntary hospital charities of the metropolis as part of a State medical service, and request your co-operation in opposing the course which has, unfortunately, been provisionally adopted by the County Council.

It has been found by a composite Subcommittee of the London County Council Education Committee that on medical inspection of the elementary schools an enormous number of children are defective, and it follows that in the prevention of national physical deterioration provision must be made for the treatment of the more obvious deficiencies and disease conditions—that is, of the eye, ears and throat, teeth, etc.

The British Medical Association has consistently held the view that if the State assumes the responsibility of the school child's health it must, in the first instance, refer the child found defective to its private medical practitioner.

The Metropolitan Counties Branch Council has so far succeeded in supporting this principle that, on their request, the Education Committee of the County Council have embodied it on a treatment reference card issued by them, and removed therefrom a sentence advising the parent to take the child to a hospital.

In the large number of cases where the parent is too poor to pay a private practitioner, and is unwilling to pass under the existing Poor Law system, the responsibility for provision of a properly remunerated medical service rests upon the State, and cannot be evaded by reference of the children to charitable institutions. The reports of the Medico-Political Committee of the Association, giving in full detail the methods by which the statutory authorities can carry out this duty, are summarized in the last Report, published in the SUPPLEMENT of the BRITISH MEDICAL JOURNAL, May 15th, 1909, and it is not necessary at this moment to repeat the discussion on such alternative schemes, the immediate points for consideration being the serious proposal that the State—that is, Education Committee (London County Council) should take advantage of

the voluntary hospital charities and the services of their honorary Staff in the out-patient and other departments.

In the opinion of the Branch Council this proposal really involves a large increase of the unpaid work already done for the community by the medical profession, and a diversion of the funds, premises and materials of the charitable institutions from the purposes for which they were given by the benevolent, and for which the medical profession have contributed in charity, their services, and their time.

The Association has long accepted the principle that the out-patient departments should be consultative institutions, and until the hospitals are municipalized as part of a State Medical Service, the Branch Council considers that the State has no right to claim for a nominal payment to the Administrative Committee, the advantages of charity and the gratuitous services of the medical staffs. Neither can it be admitted that the proposed capitation grant in any way alters the position or principles, as capitation grants for inspection or treatment have, on inquiry, been found by the Medico-Political Committee of the Association to be undesirable, and the attempt to allot such in hospital work would be obviously impossible.

In the absence of the proper appointment of School Medical Officers the Branch Council (in view of the foregoing considerations) is of opinion that the members of the Staffs of the hospitals in London should unanimously oppose the project of the County Council.

In conclusion, the Branch Council also considers the County Council proposal to be contrary to the public interest in that it disregards the evidence published in the Report of the County Council Subcommittee (see BRITISH MEDICAL JOURNAL, January 9th, 1909, with map). That evidence shows that the hospitals and charitable institutions are in the main situated at considerable distances from the centres of the child population of the Metropolis, that the difficulties of transport are so great that nothing but a properly organized local medical service will meet the requirements, and that the hospitals are not competent with their present establishment to deal with the number of children needing attention.

The Metropolitan Branch Council, therefore, trusts that in the interest of the public, the efficiency of the school medical service and the interests of all branches of the profession, you will co-operate in resisting the proposal of the Education Committee of the London County Council.

We have the honour to remain,

Yours faithfully,

VICTOR HORSLEY,
President of the Metropolitan Counties Branch.
ATWOOD THORNE,
E. W. GOOBALL,
Hon. Secretaries, Metropolitan Counties Branch.

SCHOOL CARE COMMITTEES.

The following resolutions were unanimously passed at the meeting of the Council of the Metropolitan Counties Branch on May 27th, 1909:

1. That the Council of the Metropolitan Counties Branch of the British Medical Association, representing over 2,700 registered members of the medical profession resident in, and for the most part practising in, London, would respectfully urge on the London County Council, and also on all boards of managers of elementary schools in London, that, in view of the questions of physical welfare which will be undertaken by the School Care Committees and the local associations of Care Committees about to be formed, it is desirable to include in the membership of each of those committees one or more registered medical practitioners.
2. That a copy of the preceding resolution be sent to the following—namely, (1) the chief officials of the Education Department of the London County Council; (2) the Honorary Secretaries of Divisions of the Metropolitan Counties Branch of the British Medical Association; (3) the divisional correspondents of the London County Council; (4) the honorary correspondents of non-provided Church schools; (5) the clerks of all borough councils in London, with an appropriate covering letter in each case; also to (5) the *Lancet* and *BRITISH MEDICAL JOURNAL*, and any other suitable medical or nursing journal.

LANCASHIRE AND CHESHIRE BRANCH:

CENTRAL COUNCIL ELECTION.

The following is the report of the scrutineers as to the results of the Central Council election:

	Votes.
Larkin, F. C.	689
Garstang, T. W. H.	655
Machie, Chas.	598
Taylor, J. H.	538
Bradshaw, T. R.	326

(The first four are elected.)

Division.	Membership.	Votes Pollcd.	Percentage.
1. Altrincham	69	53	76.8
2. Ashton-under-Lyne	49	21	42.8
3. Birkenhead	87	45	49.4
4. Blackburn	72	45	62.5
5. Blackpool	53	16	30.2
6. Bolton	59	40	67.8
7. Burnley	60	24	40.0
8. Bury	51	7	22.5
9. Chester and Crewe	69	17	24.6
10. Glossop	6	4	66.6
11. Isle of Man	13	1	7.7
12. Leigh	29	22	75.8
13. Liverpool (Boottle)	62	29	45.1
14. " (Central)	61	45	73.7
15. " (Northern)	47	28	59.5
16. " (Southern)	65	31	47.7
17. " (Western)	60	39	65.0
18. Manchester (Central)	71	13	18.4
19. " (North)	65	19	29.2
20. " (Salford)	69	42	60.8
21. " (South)	81	37	45.6
22. " (West)	69	21	30.4
23. Oldham	57	24	42.1
24. Preston	51	30	58.8
25. Rochdale	43	19	44.2
26. St. Helens	29	16	55.1
27. Southport	65	31	47.7
28. Stockport, Macclesfield, and East Cheshire	73	24	32.8
29. Warrington	27	17	62.9
30. Wigan	35	22	61.1

Total votes polled, 738. Branch membership, 1,628.
Percentage polled, 48.4.

The above includes all the papers received. The analysis will not be found to correspond, because several papers were unsigned, and consequently could not be allotted to Divisions.

(Signed) HERBERT ARMSTRONG,
F. H. BARENDT,
Scrutineers.

June 1st.

[This report was received on the afternoon of Thursday, June 3rd, after the SUPPLEMENT of last week had gone to press.]

SIR.—May we ask for space in the JOURNAL to thank our supporters for returning us as their Representatives on the Central Council?

We have for the second year fought the election on a definite policy in Association matters, which we have done our best to explain fully to every elector.

The following is the substance of our address:

Our Policy and United Aims.

Our policy is that of progress along constitutional lines. We are attempting to make the Association an active bond of scientific, social, and political union between medical men, a means whereby the profession may offer an organized resistance to all encroachments on its rights, and may attain a position more in harmony with its importance to the community.

The Charter.

We firmly believe that should the Charter be obtained it will be of immense benefit to the profession. We recognize that though it was finally adopted by the Representative Meeting by a vote of 106 to 1, it may still contain some clauses with which a minority will disagree, but we deprecate in the highest degree the action of the party we oppose, which though repeatedly defeated by large majorities, both in the Representative Meeting and in the Council, is trying to over-ride the majority, and carrying its opposition to the Charter before the Privy Council, and so not only putting the Association to great expense, but doing all in its power to cause the rejection of the Charter, and to frustrate several years' work of the Association. We ask you to show your disapproval of this disloyal and unconstitutional procedure by returning us by a large majority.

The Present Constitution.

We are upholders of the present constitution as long as it is in force, and of government of the Association by the majority of those who vote in a constitutional manner. We have therefore no sympathy with those who are forever trying to thwart decisions of the Association on the assumption that members who do not vote are on their side.

The Representative Meeting.

We hold that for the good government of the Association there must be one, and only one, final authority in all matters of policy and finance, and we recognize that Article 35 of our constitution makes the Representative Meeting that authority.

The Council.

We further recognize that Article 39 makes the Council the Executive of the Association, and as such we have successfully used our influence to strengthen its hands. But we oppose those who would induce the Council to take up an unconstitutional position of rivalry and opposition to the Representative Meeting.

Organization.

We are strong supporters of the Divisional organization, but admit that there are many ways in which it might be improved. We consider that each Division should be a complete local medical society, and to that end we have supported the Science Committee in its scheme to put the Central Library of the Association at the disposal of the Divisions, and to encourage the formation of local libraries, as well as to improve the organization of Divisions and Branches for scientific purposes.

We consider the Branch organization important for co-ordinating the work of Divisions, and we have all taken an active part in perfecting our local Branch organization.

Medical Politics.

We have taken an active interest in all current medical politics. Last year we specially mentioned in our address the Midwives Act, and we are pleased to report that one of us (Dr. Taylor), owing to his intimate knowledge of the subject, was selected to represent the Association, and has recently given evidence on behalf of the profession before the

Government Departmental Committee now sitting. We still consider Hospital Reform and Contract Practice two of the most important questions, and we have constantly kept them in the foreground, endeavouring to promote that union between all members of the profession without which nothing really effective can be done.

Such is our policy, and if it recommends itself to you, we ask you to return us all four to the Central Council, as our election will ensure that there will be none of that cross-voting which on many important occasions in the past has virtually disfranchised the Branch.

These views have been supported by personal visits to more than half the Divisions. The majority of votes in our favour is so decisive that we claim it as a proof of loyal support of the constitution of the Association (and disapproval of the internal dissension recently fostered by a minority) on the part of the general body of members when fully acquainted with the facts, and as such we think it may be of interest to members of other Branches also.—We are, etc.,

F. C. LARKIN,
T. W. H. GARSTANG,
C. MACFEE,
J. H. TAYLOR.

GENERAL MEDICAL COUNCIL.

EXECUTIVE COMMITTEE.

A MEETING of the Committee was held on Wednesday, May 26th. Sir DONALD MACALISTER, President, was in the chair, and Sir Hugh Beever, Mr. Tomes, Sir John Tuke, Dr. McVail, Sir John Moore, and Sir Charles Ball were present.

Medical Laws of the United States.

THE PRESIDENT laid on the table an abstract which had been prepared of the laws regulating the practice of medicine in the United States, based upon information furnished through the Privy Council, and it was resolved:

That this abstract be substituted for the existing *prices* on the subject in the appendix to the second report of the Unqualified Practice Prevention Committee, and that the completed pamphlet be placed on the list of the Council's publications.

Draft Charter, British Medical Association.

The Committee considered the Draft Charter of the British Medical Association. The LEGAL ASSESSOR, who as requested by the Executive Committee, had examined the Draft Charter, offered criticisms, and expressed his opinion regarding certain of its features. The Committee drew up a report and directed that it should be presented to the General Council *in camera*.

HYGIENE AND TEMPERANCE IN ELEMENTARY SCHOOLS.

THE Board of Education will issue this week a syllabus of lessons on temperance for scholars attending public elementary schools. The syllabus is preceded by a prefatory note signed by Sir Robert Morant, and this note and the syllabus are reproduced below. Appended to the syllabus are a number of notes for the use of teachers, which it has not been deemed necessary to reproduce here.

It will be interesting to members of the British Medical Association to be reminded that the Central Council on January 20th, 1904, adopted the following resolution, afterwards approved by the Representative Meeting, in support of the movement of public opinion—then in an early stage—with regard to the prevention of national physical deterioration.

It is of urgent importance that elementary scientific instruction in health subjects, including temperance, should be provided in all the primary schools by the educational authorities in order that the condition which leads to deterioration of national physique may be understood, and as far as possible prevented.

This resolution was presented by Dr. T. D. Griffiths, then President of the British Medical Association, to Lord Londonderry, at that time President of the Board of Education, at the deputation on July 11th, 1904, when the petition of the members of the medical profession urging the importance of the teaching of hygiene and temperance was also presented. That petition was signed by 14,718 registered medical practitioners, and asked the Board to consider whether it would not be possible to include in the curricula of the public elementary schools, and to encourage in the secondary schools such teaching as might, without developing any tendency to dwelling on what is unwholesome, lead all the children to appreciate at their true value healthful bodily conditions as regards cleanliness, pure air, food, drink, etc. The President of the Board of Education, in his reply to the deputation, said that the Board considered it advisable that the students at training colleges should have knowledge of school hygiene, personal hygiene, and of the physiological principles upon which their rules were based, and was able to state that a reference to the matter had been introduced into the code of regulations for public elementary schools for 1904 to the effect that the school should afford the children "every opportunity for the healthy development of their bodies, not only by training them in appropriate physical exercises and encouraging them in organized games, but also by instructing them in the working of some of the simpler laws of health." He also said that the Board was about officially to express the opinion that a course of instruction in hygiene should form part of the work for the two upper classes of every girls' school.

Comparing that attitude with the attitude expressed in the prefatory note published below, it will be seen that very remarkable progress has been made, and that the teachers, whether members of the regular staff of schools or supplied by special organizations, are now provided with a definite syllabus which they will be required to follow.

SYLLABUS OF LESSONS ON "TEMPERANCE" FOR SCHOLARS ATTENDING PUBLIC ELEMENTARY SCHOOLS.

PREFATORY NOTE.

1. It is hoped that in course of time such instruction on the subject of "Temperance," in its restricted sense, as is suitable to Public Elementary Schools will be given by the regular Staff as part of the teaching of the elementary rules of personal health which should be included in the curriculum of every school. Article 2 (9) of the Code for 1908 indicates that such instruction should be given wherever possible, and Hygiene (which, of course, comprehends instruction relating to alcoholic drinks) is now included as one of the regular subjects for Two Year Students in Training Colleges (Article 15 (v) of the Regulations for the Training of Teachers for Elementary Schools).

2. At present, however, some Schools have on their staff no teachers who have the special knowledge required for giving teaching of this kind, and in order that the scholars may receive instruction in "Temperance," the services of special peripatetic teachers have been offered by various Societies and Organizations, and have in many cases been accepted by Local Education Authorities and Managers of Schools. Such instruction has been allowed to count towards the period of secular instruction required by the Code. These extraneous teachers, however competent they may be, have not always the particular qualifications required by the Code, nor the experience of the methods of teaching suitable to scholars in Public Elementary Schools, which are possessed by the regular teachers on the staff of the schools. Further, the syllabuses of "Temperance" lectures to be given by extraneous teachers which have been submitted for the Board's approval have been very various, and in some cases have not been specially designed for the instruction of scholars in Public Elementary Schools, nor have they always been appropriate to that purpose. In these circumstances the Board have come to the conclusion that the time has come for the issue of an official Syllabus to which all instruction in "Temperance" (whether given by extraneous teachers or by teachers on the ordinary staff) should conform in general character and, to some extent, in detail. The Board believe this course to be essential in order to provide security that the teaching given on this difficult matter shall be both

accurate in its statement of facts, and suitable in its manner of presentation to scholars in Public Elementary Schools.

3. The following Syllabus has accordingly been framed as a "Model" Syllabus for use by teachers in Public Elementary Schools, whether they are or are not members of the School Staff, and the Board of Education will not in ordinary circumstances be prepared to approve under Article 3 of the Code any Syllabus of instruction which departs substantially from this Model. It is suggested that at least three lessons in the subject should be given to the children each year. It is, however, desirable to arrange, so far as may be possible, that if any part of the instruction is given to children who are under 10 years of age, it should be only that which is of the broadest and most general character, and that lessons on the matter of the Third Section should only be given to children who are over 12 years of age. Where three lessons cannot be given, the teacher may be able to cover the ground in rather less detail in two lessons, and where one lesson only is given, it is preferable that the matter in Section III of the Syllabus should be very lightly touched, the main attention being concentrated on Sections I and II. Where the lessons are given at distant intervals, as will sometimes be the case, it is clearly desirable to begin the later lessons by a brief recapitulation of those which have preceded. There is an obvious advantage in securing that a series of three lessons is given to the children within a comparatively short period. Lessons on this subject need not necessarily be grouped under a separate head in the curriculum, but can appropriately be included in instruction on Hygiene, of which, indeed, they form a part.

It will be observed that the principle of the Syllabus is to proceed, as far as possible, by means of question and answer, from what the child already knows to what it does not know. By this means the child is brought to express what it has already experienced, and is led on, by amplification and illustration, to realize what is most conducive to a healthy life. Technical terms and language which a child would not understand have been avoided as far as practicable, and it is of the highest importance that in using the Syllabus the teacher should be careful to employ only the simplest language.

4. Some Notes for the guidance of teachers have been appended which elaborate the necessarily condensed statements of the Syllabus, and indicate under each heading the line which should be taken and the material which can be safely used in enforcing or illustrating the several points. It is not, of course, intended that these Notes should ever be read to the class or used in such a way as to overload the teaching with detail. It may be taken that the statements of fact made both in the Syllabus and in the Notes have been carefully verified, and that the inferences drawn from the facts are supported by scientific opinion of high authority.

5. It has been alleged that some of the "Temperance" teaching given in the past which was represented as "scientific" has, in fact, fallen short of a scientific standard as regards accuracy in stating facts, caution in drawing inferences, or methods of instruction. Indeed in some cases it appears that attempts have been made to support the incontrovertible general arguments against the abuse of stimulants by suggesting that alcohol inevitably and invariably has deleterious consequences when taken as a beverage in any conditions whatever. The supposed proof of this proposition, sometimes included in lectures on "Temperance" given in Public Elementary Schools, occupied time that might have been better employed for the purpose of inculcating "Temperance" on broad intelligible grounds, and as a scientific argument rested on somewhat precarious foundations.

6. The teacher will know that a temperate life depends mainly on good habits and the appreciation and practice of a few simple and direct rules of health and conduct, and is therefore largely a matter of good training. There are open to the teachers on the Staff of the School frequent opportunities, apart from the regular lessons, of impressing upon the scholars the importance of habits of self-control. It should be the object of any special instruction in "Temperance," as in other departments of Hygiene, to supply in a simple intelligible form the broad truths of the subject and plain reasons for the good habits which it should be the constant aim of the School life, no less than of the Home life, to develop in the scholars.

7. "Temperance" teaching in Public Elementary Schools should therefore aim mainly at impressing upon the scholars the manifest advantages of abstinence, and the absence of advantage in, and the positive risks and dangers of, any departure from it. The advice or injunctions given

should be based upon the broad facts of common experience, such as children can readily understand, and upon the conclusions of trained observers (e.g., as to the extent to which the power to do mental and physical work is affected by the consumption of alcohol in its ordinary forms), rather than upon the results of laboratory experiments or pathological studies. The latter may be valuable in the teaching of advanced students of Hygiene, but can have little, if any, real meaning for children. The teacher should carefully avoid anything, whether in the details or in the methods of dealing with them, calculated to excite morbid curiosity or fear. Instruction on the subject of "Temperance" should itself be temperate and should make a sober appeal to such reasoning capacity as a child possesses and to the ideas of decent, self-respecting, and dutiful living which every good teacher endeavours to present to and cultivate in the children under his charge.

ROBERT L. MORANT.

June 1st, 1909.

SYLLABUS.

SECTION I.

EATING AND DRINKING: FOOD AND ITS USE

1. What things do we eat?
2. The different kinds of food.
Meats, fats, starches, sugars, salts. Water in food.
3. What is the use of our food? Why food is necessary.
 - (a) Food is necessary for the growth of the body.
 - (b) Food prevents the body from becoming thin and wearing away. It repairs waste.
 - (c) It is from food that we get our strength and power to work.
 - (d) It is by our food that the body is kept warm.
 - (e) The working of the mind depends upon the condition of the body. If the body is not properly fed the mind will not work so well.
4. Overfeeding and underfeeding. Too little food is bad for the body; too much food is bad also.
5. The special usefulness of the different kinds of food. Why people eat various kinds of food, and why they are wise to do so.
6. Things which people eat and drink for pleasure. Sweets, cakes, tea, coffee, and cocoa. Some of these things are foods or quench thirst. The value of each. Why people drink tea and coffee.
7. Other beverages.

Besides these beverages, which are in part useful, people also take for pleasure other beverages, such as beer, wine, spirits. These are not useful in the ways in which our ordinary food, and such things as cocoa and milk, are useful. People often do themselves great harm by taking too much beer, wine, and spirits.

The chief reason for this is that these beverages contain Alcohol and little or no real food-substance.

Children and young people ought never to take alcoholic beverages in any circumstances, unless by a doctor's express order.

SECTION II.

ALCOHOL.—EFFECTS OF ALCOHOLIC BEVERAGES ON THE BODY.

1. The presence of Alcohol in beer, wine, and spirits.
Not only are beer, wine, and spirits not useful to us in the same way that our ordinary food is useful; they also contain varying proportions of alcohol, which in pure form is injurious to the human body.
2. Some characteristics and uses of pure Alcohol.
3. The proportion of Alcohol in beer, wine, and spirits.
It is impossible to drink alcohol undiluted, because of the direct injury and pain it would produce.
The harmful effects of alcohol are weakened, though not destroyed, when it is mixed with water and other things, as in alcoholic beverages.
4. The drinking of alcoholic beverages may bring about injurious effects and changes in our bodies, which may be considered under the following headings:—

The effect of Alcohol on:

- (a) Growth.
 - (b) The power of the body to resist disease.
 - (c) The body's strength and power to work.
 - (d) The proper digestion of food.
 - (e) The heat of the body.
 - (f) The control of the body which is exercised by the brain.
 - (g) The intelligence and understanding.
5. The effects of excessive drinking of Alcohol:
 - (a) The man or woman who habitually drinks too much alcohol may become a mental or physical wreck.
 - (b) Persons who drink in excess do not, as a rule, have long or healthy lives. The evidence of this.

SECTION III.
EVIL CONSEQUENCES OF INTEMPERANCE
TO THE INDIVIDUAL,
TO THE HOME, AND TO THE STATE.

(For Children over 12 only.)

1. The drinking of alcoholic beverages not only may have bad effects upon the body and mind of the individual, but also may be followed by still more serious consequences—namely, moral injury to himself and great harm to others.
2. The importance of self-control and temperance in all things.
Freedom is lost if evil habits are acquired.
3. The personal consequences of excessive drinking of alcohol:
 - (a) Waste of money which could be wisely spent or saved. The value of thrift.
 - (b) Loss of self-respect.
 - (c) Unfitness for work; loss of employment. Pauperism.
 - (d) Ill-health; disease. Insanity.
 - (e) Neglect of duty; moral degradation. Crime.
 - (f) The ruin of homes; unhappiness and suffering of men, women, and children.
4. The social evils which result from alcoholic excess.

The habit of alcoholic excess affects not only the individual and his family, but also the State, that is, the whole of the people. There is wasteful expenditure of money; and paupers, lunatics, and criminals are a heavy burden on the public. The working powers of the people as a whole are impaired, and so the prosperity of the nation itself is undermined.

MILK AND DAIRIES BILLS FOR SCOTLAND.

IMMEDIATELY before the commencement of the Whitsuntide recess a bill was introduced into the House of Lords by the Secretary for Scotland, entitled the Milk and Dairies (Scotland) Bill, and another bill, entitled the Milk Control (Scotland) Bill into the House of Commons by Mr. Watt, but copies of the bills were not obtainable until after the adjournment.

MILK AND DAIRIES (SCOTLAND) BILL.

The Government bill introduced into the House of Lords on May 24th is a bill to ensure the purity of milk supplies and to regulate dairies in Scotland, and for other purposes connected therewith.

Definition of "Dairy" and "Dairyman."

The word "dairy" is defined to include any creamery, farm, farmhouse, cowshed, byre, milk store, milk shop, or other premises from which milk is supplied or in which it is stored or kept for purposes of sale, or which are used for the making of butter or cheese; and "dairyman" is defined as any cowkeeper, purveyor of milk, occupier of a dairy, or maker of butter or cheese.

Licensing of Dairies.

The bill requires that premises in which the business of dairyman is carried on shall be licensed by the local authority after a report made by the medical officer of health or other authorized officer or person. The licence will be renewable annually. If a licence or its renewal be refused by the local authority or only granted provisionally, there will be a right of summary appeal to the sheriff. The cart, van, or other vehicle in which a person sells milk supplied from without the district will be deemed premises within the meaning of the bill. The local authority will be required to keep a register of licensed dairies, and any person carrying on the business of dairyman without a licence will be guilty of an offence.

Inspection and Prohibition of Sale.

Every local authority may, and when required by the Local Government Board for Scotland shall, appoint a member of the Royal College of Veterinary Surgeons as veterinary inspector, and the incumbent of this office shall not engage in private practice in any district in which he holds office, save with the consent of the Local Government Board. Two or more authorities may combine in appointing a veterinary inspector. If no veterinary inspector be appointed, the duties of that office shall be laid on a veterinary surgeon approved by the local authority in terms of Section 43 of the Public Health (Scotland) Act, 1897.

The medical officer of health, or other officer authorized by the local authority, will be required to inspect every dairy in the district once a year, and to report to the local

authority, and the veterinary inspector must inspect the cattle in every dairy at least once a year, and report to the local authority.

The local authority will be required to make by-laws for the inspection of cattle, for prescribing and regulating the structure, lighting, ventilation, cleansing, drainage, and water supply of dairies; for securing the health of the cows, and the cleanliness of the person and clothing of those engaged in the business, and of the milk, cows, dairies, and utensils used for the reception, conveyance, storage, or sale of milk; and will also be requested to prescribe precautions to be taken by dairymen against infection or contamination.

If the medical officer of a district has evidence that a person in the district is suffering from infectious disease attributable to milk, or attributable to milk supplied from a dairy in the district, or that the milk from such a dairy is likely to cause disease, he shall examine the dairy and every person engaged in it or resident on the premises, and if accompanied by the veterinary inspector shall examine the animals, and if evidence or suspicion of infectious properties in the milk is discovered, the medical officer shall notify the medical officer of health of the district in which the dairy is situated, and the latter shall be bound as soon as practicable to examine the dairy, and the persons engaged in or about it, and report to the local authority, which shall meet forthwith to consider the report or reports, and decide whether an order requiring the dairyman not to supply milk from the dairy shall be made. Right of appeal to the sheriff is reserved, and if a dairyman sustain damage by reason of the order, and be not himself in default, the local authority making the order will be liable to compensate him. The dairyman will be required on demand by the local authority to produce lists of customers and invoices, and the local authority or its officers will have power to enter and inspect or examine at all reasonable times any dairy, any person employed or residing in any dairy, and the veterinary inspector power to examine any cattle in any dairy.

Tuberculous Milk.

The sale of milk from a cow apparently suffering from tuberculosis, with emaciation, or tuberculosis of the udder, or any sore on the teats accompanied by suppuraction, or from any disease liable to infect or contaminate the milk, or any cow which gives tuberculous milk, will be rendered illegal, and a dairyman will be required to give written notice to the local authority of any such disease among his cows, and shall not keep such cows with healthy animals.

If a person employed in connexion with any dairy, or resident there, or residing in the same house as any person employed, suffer from sore throat or diarrhoea, or from any infectious disease, the dairyman must forthwith report to the medical officer of health of every district to which the milk is consigned information regarding all such cases of infectious disease, and the persons indicated shall not assist in the dairy.

Taking Samples.

The medical officer of health or veterinary inspector will have the right, if required by the medical officer of health of the district to which the milk is consigned, to take samples of milk, and the veterinary inspector may apply the tuberculin or any other reasonable test to any cow in a dairy for the purpose of discovering whether such cow is suffering from tuberculosis, provided that the consent of the owner has previously been obtained.

Defaulting Authorities.

If the local authority fail to perform its duty the Local Government Board will have power to apply to the sheriff by summary petition, and the sheriff may make a decree accordingly, or the Local Government Board may, with the approval of the Lord Advocate, apply to the Court of Session.

If a local authority shall have reason to believe that the provisions of the Act, or of the by-laws made under it, are not carried out in any district to which the milk is consigned, the local authority of the district to which the milk is consigned may apply to the Local Government Board, who will be required to inquire into the circumstances and to take such proceedings as may be necessary.

Orders.

The Board will be authorized to make general or special orders for carrying out the purposes of the bill, including, in particular, (a) measures for cooling milk and otherwise protecting it against infection or contamination; (b) the prohibition or the regulation of the use of preservatives; (c) the manner of conveyance of milk, and the identification of vessels used for conveyance; (d) the prohibition or regulation of the mixing of milk; (e) the labelling of receptacles in which the milk is sold otherwise than in its natural state.

MILK CONTROL (SCOTLAND) ACT.

This bill, introduced by Mr. Watt into the House of Commons, would repeal the Cattle Sheds in Burghs (Scotland) Act, 1866, in so far as it relates to the licensing of premises and places for the keeping of milch cows, and the Dairies, Cowsheds, and Milkshops Orders of 1885, 1887, and 1899, and would require the Local Government Board for Scotland to make regulations as to the structure and sanitary condition of dairies, cleanliness of the milkers and utensils, and the prevention of infection or contamination of the milk. It would require the local authority to inspect all cowsheds, to appoint a veterinary officer of health, to register dairymen, and to license premises, no cow to be kept for the sale of milk in any building not so licensed. The bill would also require the dairyman to give notice of diseased cows, and to give the veterinary officer power to order the separation, isolation, or slaughter of a diseased cow; the dairyman would also be required to notify illness in persons residing at the dairy, or employed in connexion therewith. The local authority would have power to take samples of milk, to enter dairies, and to order milk to be destroyed or sterilized. The importation of milk into Scotland would be forbidden without a permit from the Local Government Board.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

STAFF SURGEON E. D. J. O'MALLEY has been appointed to the *Boadicea*, or commissioning, June 10th; and Staff Surgeon A. B. BEAN, to the *President*, additional, or temporary service in the Medical Department, June 2nd.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

CAPTAIN JAMES M. BICST, M.B., is placed temporarily on the half-pay list, on account of ill-health, June 4th. He was appointed Lieutenant, December 4th, 1899, and made Captain, December 4th, 1902. According to the *Official Quarterly Army List*, he was in the South African war in 1899-1902, was present in operations in the Orange Free State and Cape Colony, and has received the Queen's medal with three clasps and the King's medal with two clasps. Lieutenant A. DAWSON, M.B., who is serving in India, is appointed Specialist in Dermatology, 9th (Secunderabad) Division, with effect from the date of his assuming duties.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL J. A. BURTON, Madras, has been selected to officiate as Principal Medical Officer, Arid Brigade, with effect from May 25th, vice Colonel W. A. Quayle, M.D., on leave.

TERRITORIAL FORCE.

INFANTRY.

SURGEON-MAJOR AND HONORARY SURGEON-LIEUTENANT-COLONEL T. PENNELL resigns his commission, retaining his rank and uniform, April 20th.

SUPERNUMERARY SURGEON-LIEUTENANT R. W. BRANTHAWE, 15th (County of London) Battalion, the London Regiment (Prince of Wales's Own, Civil Service Rifles), to be Surgeon-Captain, and to be absorbed into the establishment, May 1st.

ROYAL ARMY MEDICAL CORPS.

South Wales Mounted Brigade Field Ambulance.—Captain J. R. I. RAYWOOD to be Major, February 25th.

Second Home Counties Field Ambulance.—GEORGE T. WILLAN to be Lieutenant, April 2nd.

Second Wessex Field Ambulance.—THOMAS P. PREDICOMBE to be Lieutenant, April 27th.

Second London Sanitary Company.—ARTHUR J. MARTIN to be Lieutenant, April 26th.

First London (City of London) Field Ambulance.—Lieutenant ANDREW ELLIOT, M.D., from the 2nd London (City of London) Field Ambulance, to be Lieutenant, March 4th.

Third South Midland Field Ambulance.—CHARLES CORFIELD to be Lieutenant, March 18th; ALFRED COLERIDGE, M.B., to be Lieutenant, March 23rd.

First Hants Field Ambulance.—Lieutenant T. DONOVAN to be Captain, December 12th, 1908.

First London (City of London) General Hospital.—Officers whose services will be available on mobilization: Captain J. CALVERT, M.D., to be Major, February 20th; Captain W. MCADAM ECCLES, M.B., F.R.C.S. Eng., to be Major, March 15th.

First Northern General Hospital.—The following to be officers whose services will be available on mobilization, dated April 30th: Colonel G. W. RIDLEY, M.B., F.R.C.S. Eng., and A. M. MARTIN, M.B., to be Majors; H. B. ANGUS, M.B., F.R.C.S. Eng., T. BEATTIE, M.D., W. E. HOME, M.B., W. G. RICHARDSON, M.B., F.R.C.S. Eng., J. D. ARNOLD, M.D., J. D. WARDLE, M.B., and R. P. R. LYLE, M.D., to be Captains; J. W. LEECH, M.D., F.R.C.S. Edin., G. G. TURNER, M.B., F.R.C.S. Eng., H. DRUMMOND, M.B., A. PARKIN, M.D., F.R.C.S. Eng., G. HALL, M.D., T. M. ALLISON, M.D., J. C. STEWART, M.B., W. E. M. EDE, M.D., S. S. WILLIS, M.D., D. W. PATTERSON, M.B., T. GOWAN, M.B., H. J. SLADE, M.B., H. H. MARHAM, M.B., W. J. PHILLIPS, M.B., and W. SETMOUR, M.B.

First Eastern General Hospital.—Lieutenant-Colonel JOSEPH GRIFFITHS, M.D., to be Colonel, May 6th, 1908.

London Mounted Brigade Field Ambulance.—The name printed under this head in last week's SUPPLEMENT (p. 569) as "Hugh S. Bradley" should have been HUGH S. BRADLEY.

For Attachment to Units other than Medical Units.—Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel DAVID LENOX, M.D., from the 1st (City of Dundee) Volunteer Battalion the Black Watch (Royal Highlanders), to be Lieutenant-Colonel, with the honorary rank of Surgeon-Colonel, with precedence as in the Volunteer Force, April 1st, 1908. Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel R. R. BROWN, from the 1st Kent Royal Garrison Artillery (Volunteers), to be Lieutenant-Colonel, with the honorary rank of Surgeon-Colonel, with precedence as in the Volunteer Force, April 1st, 1908. Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel W. J. WATKINSON, from the 4th Volunteer Battalion the Royal Fusiliers (City of London Regiment), to be Lieutenant-Colonel, with the honorary rank of Surgeon-Colonel, with precedence as in the Volunteer Force, April 1st, 1908. Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel J. B. ROSS, ADC, from the 7th Volunteer Battalion the Royal Scots (Lothian Regiment), to be Lieutenant-Colonel, with the honorary rank of Surgeon-Colonel, with precedence as in the Volunteer Force, April 1st, 1908. Surgeon-Captain A. C. HARTLEY, M.D., from the 1st Bedfordshire Volunteer Battalion (Volunteers), to be Lieutenant-Colonel, with precedence as in the Volunteer Force, April 1st, 1908. Surgeon-Captain G. H. GOLDSMITH, M.D., from the 1st Bedfordshire Royal Engineers (Volunteers), to be Captain, with precedence as in the Volunteer Force, April 1st, 1908. Captain R. EMMETT, to be Major, October 1st, 1909. Captain A. V. GREENWOOD, M.B., resigns his commission, March 22nd. FRANK J. HATHAWAY, M.D. (late Lieutenant United Services College Cadet Corps), to be Lieutenant, with precedence as from April 8th, 1908. April 1st, 1908. Lieutenant-Colonel and Honorary Surgeon-Colonel J. K. ALEXANDER, M.D., relinquishes his commission, under the conditions of paragraph 59, Territorial Force Regulations, and is granted permission to retain his rank and uniform, March 3rd; OWEN J. FARRY-EDWARDS, M.B., to be Lieutenant, April 15th; Lieutenant-Colonel A. D. WESTER, M.D., resigns his commission, retaining his rank and uniform, April 20th; Surgeon-Captain J. B. DIXON, from the Welsh Divisional Engineers, to be Captain, May 6th, 1908.

Unattached List.—Major J. M. ROBERTSON, M.B., from the Scottish Command, Glasgow Companies, Royal Army Medical Corps (Volunteers), is appointed to the Unattached List, with rank and precedence as in the Volunteer Force, dated April 1st, 1908.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 7,115 births and 3,883 deaths were registered during the week ending Saturday last, June 5th. The annual rate of mortality in these towns, which had been 15.7, fell to 14.7, and 13.9 per 1,000 in the three preceding weeks, further declined last week to 12.5 per 1,000. The rates in the several towns ranged from 3.1 in East Ham, 4.0 in Leyton, 5.1 in Wallasey, 5.9 in Handsworth (Staffs.), 7.2 in Gateshead, 7.5 in Reading, and 7.7 in Leicester, to 18.6 in Oldham, 18.9 in Walsall, 19.1 in Stockport, 19.6 in Wolverhampton, 20.1 in Wigan, and 24.0 in Merthyr Tydfil. In London the rate of mortality was 11.6 per 1,000, while it averaged 12.5 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.1 per 1,000 in the seventy-six towns. In London these diseases caused a death-rate of 1.5 per 1,000, while among the seventy-five other large towns, the rates ranged upwards to 2.9 in Great Yarmouth, 3.0 in Salford, 3.1 in South Shields, 3.4 in Norwich, 3.5 in Wigan, 3.6 in Newcastle, 3.7 in Plymouth, and 5.6 in Tynemouth. Measles caused a death-rate of 1.2 in Aston Manor, 1.3 in King's Norton, 1.5 in West Bromwich, 1.7 in Wigan, 1.8 in South Shields, 2.2 in Salford, 2.3 in Poole, 3.4 in Norwich, and 4.0 in Tynemouth. Whooping-cough of 1.0 in St. Helens, 2.0 in Great Yarmouth, 2.1 in Tynemouth, and of diarrhoea of 2.1 in Walsall. The mortality from diphtheria and from enteric fever showed no marked excess in any of the large towns, and no fatal case of small-pox was registered during the week. The number of scarlet fever cases requiring admission for treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,173, 2,181, and 2,254 at the end of the three preceding weeks, had fallen again to 2,223 at the end of last week; 275 new cases were admitted during the week, against 315, 348, and 355 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

DURING the week ending Saturday last, June 5th, 999 births and 582 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 16.2, 14.9, and 16.7 per 1,000 in the three preceding weeks, declined again last week to 16.3 per 1,000, but was 4.0 per 1,000 above the mean rate during the same period in the seventy-six large English towns. Among these Scottish towns the death-rate ranged from 12.5 in Greenock and 14.0 in Leith, to 19.4 in Dundee and 19.8 in Perth. The death-rate from the principal

and congenital or infantile defect. 3. With regard to causation, alcohol was assigned in 10, or less than 8 per cent., syphilis in 7, critical periods in 25, organic brain disease in 5, moral causes in 22, influenza in 2; and bodily illness in 12. Previous attacks were noted as cause in 8 and a hereditary predisposition ascertained in 9. With reference to bodily ill-health as a cause of insanity, the numbers given above refer only to severe illnesses, and Dr. Oswald says that in few, if any, of the admissions was there a healthy functional condition of all the organs. Many of the disorders seemed in themselves trivial—decayed teeth, indigestion, etc.—but mental improvement almost always followed their removal. During the year 45 were discharged as recovered, giving a recovery-rate on the admissions of 35.3 per cent.; 31 as relieved, and 24 as not improved. Also during the year there were 25 deaths, giving a death-rate on the average numbers resident of 6.0 per cent. The deaths were due in 10 to cerebro-respiratory diseases, including 6 from general paralysis; in 6 to chest diseases, there being none from pulmonary tuberculosis; in 6 to abdominal diseases, with 2 from enteritis, and 3 to general diseases. The asylum, which will in future be known as the Glasgow Royal Mental Hospital, continues its good work of taking many patients at rates which are not remunerative.

ADELAIDE HOSPITAL, DUBLIN.

THE fifty-first annual meeting of the supporters of the Adelaide Hospital, Dublin, was held on May 17th. Mr. Justice Ross presided. The report stated that the number of patients treated in the hospital in 1908 was 1,275, a number slightly less than that of the previous year. It included patients from every county in Ireland, as well as from other parts of the United Kingdom. Dealing with additions and alteration to the buildings, the report stated that the old roof had now been replaced by a vulcanite flat roof, at a cost of £450, and the result was in every way satisfactory, affording as it did operative accommodation and sunshine to the inmates. Through the generosity of Mrs. Duckett the committee were also able to carry out their desire to erect and equip a new sanitary wing, which was completed last November, and named "The Marie Duckett Wing." The report recorded the resignation of Miss Craig and the succession in her place as matron of Miss Fete. The number of attendances of out-patients treated in the dispensary during 1908 was 45,472, as compared with 32,812 in 1907. No religious distinction is made in the admissions to the dispensary. It is believed that the large majority attending are Roman Catholics. The total receipts in 1908 were £9,252 14s. 8d., and the expenditure (including settlement of an outstanding debit balance) was £8,563. At the end of the year there was a net credit balance of £699, as compared with a debit balance last year of £254. The report was adopted on the motion of the Chairman, seconded by the Rev. Canon Mahaffy. Dr. Little proposed and Rev. Dr. Clarke seconded a vote of thanks to the supporters of the hospital, and a vote of thanks to the Chairman closed the proceedings.

FREE HOSPITAL FOR SICK CHILDREN, BIRMINGHAM.

THE report presented to the annual meeting of the governors of the Birmingham Children's Hospital showed that 990 in-patients, 13,850 out-patients, and 547 casualties, making a total of 15,387, were treated in 1908. This was an increase of 538 on the previous year. There were 121 deaths among the in-patients, giving a mortality of 12.4 per cent. In 66 cases the patients died within seven days after admission. The number of operations performed was 2,138. The accounts for the year showed a deficiency of £294 as compared with £277 for the preceding year; this makes a total adverse balance of £1,233. The appeal for funds to rebuild the hospital was disappointing. The total sum that it was anticipated would be required was £90,000, and the response to the appeal resulted in promises to the extent of £19,904. The committee has purchased and paid for the whole site, but after bringing in the balance of legacies uninvested, amounting to £3,644, only about £6,500 remained with which to begin building. The committee do not consider that this sum is anything like large enough to justify the commencement of building operations.

DOWN DISTRICT ASYLUM.

AT the last meeting of the committee of management of the above asylum, Dr. M. J. Nolan, the medical superintendent, read his annual report for the year 1908. The report has not yet been published, but from an account of the proceedings in the *Down Recorder* of April 24th, we see that the report was of a satisfactory character. The high recovery-rate attained in the preceding four years was more than maintained, being 49 per cent. on the admissions; the death-rate, 10.2 in 1907, fell to 6.8 per cent., and the cost of maintenance was reduced. Also for the first year, in the knowledge of the medical superintendent, no case of dysentery, formerly prevalent in this asylum, had to be recorded.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

- BERMONDSEY MEDICAL MISSION.—Lady Resident Assistant.
BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £170 per annum, and £30 call allowance.
BIRMINGHAM GENERAL HOSPITAL.—(1) House-Surgeon. Salary at the rate of £50 per annum for (1) and (2), and £40 per annum for (3).
BOLINGBROKE HOSPITAL, Wandsworth Common.—(1) Resident Medical Officer; (2) House-Surgeon. Salary, £150 and £75 per annum respectively.
BOURNEMOUTH ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.—House-Surgeon. Salary at the rate of £30 per annum.
BRADFORD POOR LAW UNION.—Lady Assistant Resident Medical Officer. Salary, £130 per annum.
BRECON AND RADNOR ASYLUM, Talgarth.—Assistant Medical Officer. Salary, £170 per annum.
BRIGHTON, HOVE, AND PRESTON DISPENSARY.—House-Surgeon. Salary, £130 per annum.
CANTERBURY, KENT AND CANTERBURY HOSPITAL.—(1) House-Surgeon; (2) Assistant House-Surgeon. Salary, £80 and £60 per annum respectively.
CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician (male). Salary at the rate of £75 per annum.
DUDLEY GUEST HOSPITAL.—Assistant House-Surgeon. Salary, £75 per annum.
EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Male Assistant House-Surgeon. Salary, £60 per annum.
GLOUCESTERSHIRE EDUCATION COMMITTEE.—Medical Inspector of School Children. Salary, £25 per annum, rising to £30.
GRAMPIAN SANATORIUM, Kingussie.—Resident Physician (male). Salary, £100 per annum.
GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—(1) House-Surgeon; (2) Assistant House-Surgeon. Salary, £100 and £50 per annum respectively.
INVERNESS: NORTHERN INFIRMARY.—House-Surgeon. Salary, £100 per annum.
LINDSEY COUNTY.—Two Male School Medical Inspectors. Salary, £30 per annum each.
LIVERPOOL INFIRMARY FOR CHILDREN.—Two Resident Medical Officers. Salary, £30 each for six months.
LONDON CITY ASYLUM, Colney Hatch, N.—Junior Assistant House-Physician. Salary, £150 per annum.
LONDON HOSPITAL MEDICAL COLLEGE.—Assistant to the Bacteriologist and Lecturer on Bacteriology.
LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant House-Surgeon. Honorarium at the rate of £75 per annum.
LONDON THROAT HOSPITAL, Great Portland Street, W.—Assistant Anaesthetist.
LURGAN UNION.—Resident Medical Officer for the Workhouse and Fever Hospital. Salary, £80 per annum.
MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead.—Junior Resident Medical Officer. Honorarium, £50 per annum.
NORFOLK COUNTY ASYLUM, Thorpe.—Locum-tenens as Assistant Medical Officer. Salary, £3 3s. per week.
NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshead.—(1) Resident Surgical Officer; (2) House-Physician; (3) Junior House-Surgeon. Salary at the rate of £120, £100, and £50 per annum respectively.
NORTH DEVON AND EXETER INFIRMARY FOR CHILDREN.—Lady Resident Medical Officer. Salary, £50 per annum.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, W.C.—Assistant Surgeon.
ST. MARK'S HOSPITAL FOR FISTULA, etc., City Road, E.C.—Three Clinical Assistants.
ST. MARYLEBONE GENERAL DISPENSARY, Welbeck Street, W.—Honorary Physician.
SHEFFIELD UNION HOSPITAL.—Resident Assistant Medical Officer. Salary, £100 per annum.
SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—House-Physician. Salary at the rate of £100 per annum.
VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—House-Physician. Salary, £30 for six months.
WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £75 per annum.
WESTON-SUPER-MARE HOSPITAL.—House-Surgeon. Salary, £100 per annum.
WINCHESTER: ROYAL HAMPSHIRE COUNTY HOSPITAL.—House-Physician. Salary, £35 per annum, rising to £75.
WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £80 per annum.
CERTIFYING FACTORY SURGEON.—The Chief Inspector of Factories announces a vacancy at Whitehaven, co. Cumberland.

APPOINTMENTS.

- ARNOLD, Wallinger R. N., M.R.C.S., L.R.C.P., Medical Officer of the "Whittle Boys' Home of the Chelmsford Union."
HAILES, C. D. G., M.D. Edin., Certifying Factory Surgeon for the Bristol District, co. Gloucester.

- McKILLOP, A. C., M.B., Ch.B. Edin., Junior Assistant Physician to the District Asylum, Inverness.
- MARSON, Charles Armit, M.A., M.B., Ch.B. Aberd., Senior Assistant Physician to the District Asylum, Inverness.
- SHARPIN, Walter A., F.R.C.S. Edin., M.R.C.S. Eng., L.R.C.P. Lond., Honorary Assistant Surgeon to the Bedford County Hospital.
- WILKINSON, R. M.D., Medical Officer of Health to the Penge Urban District.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

- ALMOND.—On May 31st, at Lyvale, Bath, the wife of G. Hely-Hutchinson Almond, M.A., B.M., Ch.B. Oxon., M.R.C.S., L.R.C.P., of a son.
- DENYER.—On May 30th, at 26, Albion Street, Hull, Yorks, the wife of Stanley E. Denyer, C.M.G., M.D. Canab., F.R.C.S. Eng., of a daughter.
- HALL.—On April 15th, the wife of George Hall, M.D., L.R.C.P. and S. Edin., 751, Wellington Street, Montreal, Canada, of a son.
- WILSON.—At 22, Hilgrove Road, South Hampstead, N.W., on June 5th, the wife of J. Clark Wilson, M.D., F.R.C.S. Edin., M.R.C.P. Lond., of a daughter.

MARRIAGES.

- BABST-JOHNSON.—At St. Silas Church, Newcastle-on-Tyne, on June 3rd, by the Rev. Jesse Ison, Vicar, Charles Theodore Uvo Babst, L.R.C.P. and S., of Willington-on-Tyne, to Elizabeth Florence Johnson, fourth daughter of the late William Johnson, of North Shields.
- MILLER-WHITE.—On June 5th, at St. Mark's Church, Hamilton Terrace, by the Rev. H. C. Frith, Vicar of the Church of the Holy Redeemer, Clarendon, Reginald Miller, M.D., M.R.C.P., to Ethel, youngest daughter of the late George White, of Newton Abbot.
- SHIPMAN-BOUSFIELD.—On June 2nd, at the Parish Church, Grantham, George Alfred Cargill Shipman, M.A., M.B., to Dorothy Louisa, only daughter of the late Rev. Stephen Housfield, M.A., Rector of Shelton, Nottingham, and Mrs. Bousfield, of Grantham.
- WANKLY-TRICE.—On June 1st, at the English Church, Munich, by the Resident Chaplain, the Rev. D. Cooper Hunt, M.A., William McConnell, second son of the late Rev. Edward Wanklyn, Vicar of St. Michael's, Bournemouth, to Ethel, fourth daughter of the late Rev. C. H. Rice, Rector of Chesham.

DEATHS.

- LEEDS.—On May 31st, at Murrayfield, King's Road, Reading, Charles George Stritt Leeds, M.D., youngest son of the late Henry Leeds, of Cheltenham.
- SKERRITT.—On June 4th, at her father's house, Mary Dorothy Skerritt, widow of the late Edward Markham Skerritt, M.D., F.R.C.P., of Ivor House, Durham Park, Bristol, and eldest daughter of John Heelas, of Waitheknights Park, Reading, in her 60th year.

BOOKS, ETC., RECEIVED.

- Antichrist and the Man of Sin. By W. N. Stedman. England: W. N. Stedman. 1909.
- Parenthood and Race Culture: An Outline of Eugenics. By C. W. Saleeby, M.D., Ch.B., F.Z.S., F.R.S. Ed. London: Cassell and Co., Limited. 1909. 7s. 6d.
- Dictionary of National Biography. Edited by S. Lee. Vol. xv. Owens-Poole. London: Smith, Elder and Co. 1909. 15s.
- Jena: G. Fischer. 1909.
- Wortsprache und Wissenschaft. Von L. Couturat, O. Jespersen, R. Lorenz, W. Ostwald, and L. Pfaunder. M. 1.
- Handbuch der gesamten Therapie in sieben Bänden. Herausgegeben von Drs. F. Penzoldt and R. Stintzing. Vierte Auflage. Dritte Lieferung. M. 4.50.
- Handbuch der Biologie des Menschen und der Tiere. Herausgegeben von Professor Dr. C. Oppenheimer. Fünfte teile Lieferung. M. 5.
- Medizinische Berichte über die Deutschen Schutzgebiete Deutsch Ostafrika, Kamerun, Togo, Deutsch-Südwestafrika. Neu Guinea, Karolinen, Marshall-Inseln und Samoa für das Jahr 1907-8. Herausgegeben von Reichs-Kolonialamt. Berlin: F. S. Mittler und Sohn. 1909. M. 9.
- Children of the Poor: Descriptions of their Life. By A. Davies Edwards, M.B., B.S., B.Sc., D.P.H., etc. London: Hammond, and Co. 1909. 1s.
- Symptomatology and Diagnostik der Uro-genitalen Erkrankungen. Von Dr. V. Krum. Zweiter Teil. Leipzig und Wien: F. Deuticke. 1909. M. 5-K. 6.
- The Practical Medicine Series. Edited by G. P. Head, M.D. Vol. II. General Surgery. Edited by J. B. Murphy, A. M., M.D., LL.D. Series 1903. Chicago: The Year Book Publishers.
- 120 Years of Life and How to Attain them. By C. Reinhardt, M.D. London: The London Publicity Company, Limited. 1s.
- High Frequency Currents. By H. E. Crook, M.D., B.S., F.R.C.S. Second edition. London: Baillière, Tindall and Co. 1909. 7s. 6d.
- Further Advances in Physiology. Edited by L. Hill, M.D., F.R.S. London: E. Arnold. 1909. 15s.
- The Mystery of Existence. By C. W. Armstrong. London: Longmans, Green and Co. 1909. 2s. 6d.
- Golden Rules of Dental Surgery. By C. W. Glassington, M.R.C.S., L.D.S. Edin. "Golden Rules" Series No. XIII. Third edition. Bristol: J. Wright and Co.; London: Simpkin Marshall. 1s.
- Berlin and Wien: Urban und Schwarzenberg. 1909.
- Landois's Lehrbuch der physiologie des Menschen. Zwölfte Auflage. Bearbeitet von Dr. R. Rosemann. Erster Band. M. 9-Kr. 10.80.
- Atlas der rectalen Endoskopie. Von Dr. A. Foges. I. Teil. M. 14-Kr. 16.80.

- Notes on Dental Anatomy. By G. A. Peake, M.R.C.S., L.D.S., etc. London: C. Ash, Sons and Co., Limited. 1908.
- The Diseases of Women. By J. Bland-Sutton, F.R.C.S. Eng., and A. B. Giles, M.D., B.Sc., F.R.C.S. Sixth edition. London: Rebirth, Limited. 1909. 11s.
- A Practical Self-cure of Stammering and Stuttering. By W. A. Yearsley. Accrington: Mrs. W. A. Yearsley. 1909.
- Oxford Medical Publications. Medical Inspection of Schools. By A. H. Hossart, M.B., B.Ch., D.P.H. London: H. Frowde, and Hodder and Stoughton. 1909. 6s.
- The Pocket Prescriber. By J. Burnet, M.A., M.D., M.R.C.P.E. Edinburgh: J. Currie. 1909. 1s.
- The Sanitary Officer's Handbook of Practical Hygiene. By C. F. Wanhill, Major R.A.M.C., M.R.C.S., L.R.C.P., and W. O. Beveridge, Major R.A.M.C., M.B., C.M. Edin. London: Edward Arnold. 1909. 5s.

* * In forwarding books the publishers are requested to state the selling price.

DIARY FOR THE WEEK.

TUESDAY.

- ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W. 5 p.m.—First Croonian Lecture by Dr. W. S. Lazarus-Barlow: Radio-activity and Carcinoma (an experimental inquiry).

THURSDAY.

- ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W. 5 p.m.—Second Croonian Lecture by Dr. W. S. Lazarus-Barlow: Radio-activity and Carcinoma (an experimental inquiry).

- ROYAL SOCIETY OF MEDICINE: DERMATOLOGICAL SECTION, 20, Hanover Square, 5 p.m.—(1) Paper: Drs. Wilfred Fox and Rolleston: A Case of Leukæmic Infiltration of the Skin. (2) Cases and specimens.

FRIDAY.

- ROYAL SOCIETY OF MEDICINE: SECTION OF DISEASES OF CHILDREN.—Provincial meeting at Edinburgh.

POST-GRADUATE COURSES AND LECTURES.

- CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Lectures: Tuesday, at 3.45 p.m.: Pharynx and Naso-pharynx. Friday, at 3.45 p.m.: Pharynx and Nasopharynx.
- LONDON SCHOOL OF CLINICAL MEDICINE, Seamen's Hospital, Greenwich.—Daily arrangements: Out-patient Demonstrations, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m., Monday, and noon, Thursday; Skin, at noon and 4 p.m., Thursday, and noon, Friday; Eye, 11 a.m., Wednesday and Thursday; Radiography, 4 p.m., Thursday. Special Lectures: Tuesday, 3.15 p.m., Fractures about the Ankle; Wednesday, 3.30 p.m., Glaucoma: Diagnosis and Treatment; Friday, 2.15 p.m., Some Varieties of Anæmia.

- MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chancery Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Radiology. Lectures at 5.15 p.m. each day will be given as follows: Monday, The Diagnosis of Diseases of the Rectum and Anus; Tuesday, Clinacætic hæmorrhoids; Wednesday, Persistent Symptoms after Head Injuries; Thursday, Affections of the Umbilicus.

- NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Tremor. Friday, 3.30 p.m., Surgery of the Nervous System.

- NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m., Surgical Out-patient, 2.30 p.m., Medical Out-patient; Nose, Throat, and Ear; X rays; 4.30 p.m., Medical In-patient. Tuesday, 10 a.m., Medical Out-patient Clinic; 2.30 p.m., Operations; Clinics: Surgical, Gynaecological; 4.30 p.m., Lecture on the Pathology of Cardiac Inflammations; Wednesday, 2.30 p.m., Medical Out-patient, Skin and Eye Clinics. Thursday, 2.30 p.m., Gynaecological Operations; Clinics: Medical Out-patient; Surgical Out-patient; X rays; 3 p.m., Medical In-patient; 4.30 p.m., Lecture-demonstration on the Administration of Anæsthetics; Friday, Clinics: 10 a.m., Surgical Out-patient; 2.30 p.m., Operations; Clinics: Medical Out-patient, Eye; 3 p.m., Medical In-patient.

- WEST LONDON HOSPITAL POST-GRADUATE COLLEGE, Hammersmith Road, London, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics; X Rays: 2.30 p.m., Operations. Monday and Thursday and Wednesday, 2 p.m., Diseases of the Eye (also Saturday, 10 a.m.). Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (and Wednesday and Saturday at 10 a.m.), Diseases of Throat, Nose, and Ear; 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, 10 a.m., Diseases of Children; 2.30 p.m., Diseases of Women. Lectures: 10 a.m., Monday and Thursday: Demonstration by Surgical Registrar. Friday: Demonstration by Medical Registrar. At 12 noon, Monday: Pathological Demonstration. At 12.15 p.m., Tuesday, Wednesday, and Saturday: Practical Medicine. At 5 p.m., Monday, Practical Surgery. Tuesday, Valvular Disease; Aortic Obstruction. Wednesday, Medicine. Thursday, Clinical. Friday, "Pink Eye."

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
JUNE.		JUNE (Continued).	
13 Sunday ..		20 Sunday ..	
14 MONDAY ..		21 MONDAY ..	
15 TUESDAY ..	BUCKINGHAMSHIRE DIVISION, <i>South Midland Branch</i> , Annual Meeting, Royal Bucks Hospital, Aylesbury, 3.30 p.m.	22 TUESDAY ..	BOSTON AND SPAULDING DIVISION, <i>Midland Branch</i> , Annual Meeting, White Hart Hotel, Boston, 12.45 p.m.; Luncheon, 2 p.m.
16 WEDNESDAY ..	LONDON: Special Committee in regard to question of meetings of newly appointed Standing Committees during Annual Meeting, 10.45 a.m. LONDON: Committee re Medical Secretary's Department, 11.15 a.m.		HAMPSTEAD DIVISION, <i>Metropolitan Counties Branch</i> , Annual Meeting.
	LONDON: Premises Committee, 2 p.m.		London: Journal and Finance Committee, 2.30 p.m.
	LONDON: Medico-Political Warning Notice Subcommittee, 12.30 p.m.	23 WEDNESDAY ..	SOUTH-EASTERN BRANCH, Annual Meeting, Town Hall, Croydon, 2.15 p.m.; Garden Party, Mental Hospital, Warrington; Dinner, Greyhound Hotel, 6.15 p.m.
	LONDON: Poor Law Committee, 2.30 p.m.		LONDON: Metropolitan Counties Branch Council, 4.30 p.m.
	LANCASHIRE AND CHESHIRE BRANCH, Annual Meeting, Chester.	24 THURSDAY ..	ALTRINCHAM DIVISION, <i>Lancashire and Cheshire Branch</i> , Scientific Meeting, Board Room, Altrincham Hospital, 5 p.m.; Tea, 4.30 p.m.; Dinner, Brooklands Hotel, 7.30 p.m.
17 THURSDAY ..	BIRMINGHAM BRANCH, Annual Meeting, Medical Institute, Edmund Street, 3.30 p.m.		STAFFORDSHIRE BRANCH, Annual Meeting, White Hart Hotel, Burton-on-Trent, 4 p.m.; Dinner, 6 p.m.
	FIFE BRANCH, Annual Meeting, Hotel, Thornton, 3 p.m.	25 FRIDAY ..	BORDER COUNTIES BRANCH, Annual General Meeting, County Hotel, Carlisle.
	MAIDSTONE DIVISION, <i>South-Eastern Branch</i> .		BATH DIVISION, <i>Bath and Bristol Branch</i> , Annual Meeting, Royal United Hospital, Bath, 6 p.m.
18 FRIDAY ..	CHICHESTER AND WORTHING DIVISION, <i>South-Eastern Branch</i> , Annual Meeting, Pier Hotel, Bognor, 3.30 p.m.	26 SATURDAY ..	YORKSHIRE BRANCH, Annual Meeting, Grand Hotel, Scarborough.
	SOUTH MIDLAND BRANCH, Annual Meeting, General Hospital, Northampton, 2.30 p.m.; Lunch, Franklin's Restaurant, Guildhall Road, 1.30 p.m.; Branch Council, 1 p.m.	27 Sunday ..	
	CEYLON BRANCH, Pathological Meeting, Colonial Medical Library, 2.30 p.m.	23 MONDAY ..	
19 SATURDAY ..	EAST YORK AND NORTH LINCOLN BRANCH, Annual Meeting, Grimsby Hospital.	29 TUESDAY ..	
		30 WEDNESDAY ..	Central Council, 2 p.m., New Council Room, 429, Strand, W.C.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

THE British Medical Association exists for the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession.

The Annual Subscription to the British Medical Association is £1 5s. 0d., and the BRITISH MEDICAL JOURNAL is supplied weekly, post free, to every member of the British Medical Association, wherever he may reside.

Forms of application for membership can be obtained from the General Secretary, 429, Strand, W.C.

The principal rules governing the election of a medical practitioner to be a member of the British Medical Association are as follow:

Article III.—Any Medical Practitioner registered in the United Kingdom under the Medical Acts and any Medical Practitioner residing within the area of any Branch of the Association situate in any part of the British Empire other than the United Kingdom, who is so registered or possesses such medical qualifications as shall, subject to the regulations, be prescribed by the Rules of the said Branch, shall be eligible as a Member of the Association. The mode and conditions of election to Membership shall from time to time be determined by or in accordance with the By-laws. Every Member, whether one of the existing Members or a subsequently-elected Member, shall remain a Member until he ceases to be a Member in accordance with the provisions hereof.

By-law 1.—Every candidate for Membership of the Association shall apply for election in writing, addressed to the Association, and stating his agreement, if elected, to abide by the Regulations and By-laws of the Association, and the Rules of such Division and Branch to which he may at any time belong, and to pay his subscription for the current year.

By-law 2.—Every candidate who resides within the area of a Branch shall forward his application to the Secretary of such Branch. Notice of the proposed election shall be sent

by the Branch Secretary to the General Secretary of the Association, and to every Member of the Branch Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Branch Council at any meeting thereof held not less than seven days (or such longer period as the Branch may by its Rules prescribe) after the date of the said Notice. A Branch may by special Resolution require that each candidate for election to the Association shall furnish a certificate from two Members of the Association to whom he is personally known. Officers of the Navy, Army, and Indian Medical Services on the Active List are eligible for election through the Council or a Branch without approving signatures as laid down in By-law 3.

By-law 3.—Every candidate whose place of residence is not included in the area of any Branch shall forward his Application to the General Secretary of the Association, together with a statement signed by three Members of the Association, that from personal knowledge they consider him a suitable person for election. Notice of the proposed election shall be sent by the General Secretary to every Member of the Council, and the candidate, if not disqualified by any Regulation of the Association, may be elected a Member of the Association by the Council at any meeting thereof held not less than one month after the date of the said notice.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JUNE 19TH, 1909.

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Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

BORDER COUNTIES BRANCH: SCOTTISH DIVISION.

A MEETING of this Division was held at the Dumfries and Galloway Royal Infirmary, Dumfries, on Friday, June 4th. Dr. MAXWELL ROSS, in the absence of the Chairman and Vice-Chairman, was called to the chair.

Apologies for Non-attendance.—The SECRETARY intimated apologies for absence from Drs. MONRO, BELL, STEUART, MCKIE, and MURDOCH.

Confirmation of Minutes.—The minutes of the last meeting were read, approved, and signed by the CHAIRMAN.

Report of Executive Committee.—The report of the Executive Committee was read by the SECRETARY. It was unanimously agreed to accept the report, and that the Secretary be instructed to embody it in the minutes.

Election of Officers.—The following officers were then elected: *Chairman*, Dr. BELL (Lockerbie); *Vice-Chairman*, Dr. ANDERSON (Dalbeattie); *Secretary and Treasurer*, Dr. LIVINGSTON (Dumfries); *Representatives on Branch Council*, Dr. EASTERBROOK (Dumfries), Dr. SCOTT (Ruthwell), and Dr. MAXWELL ROSS (Maxwelltown); *Ordinary Members of Executive Committee*, Dr. ROGER (Sanguhar), Dr. KERR (Dumfries), Dr. BRYSON (Thornhill), Dr. COWAN (New Galloway); *Representative to Annual Meeting*, Dr. LIVINGSTON (Dumfries).

Rodger v. Herbertson.—The meeting then proceeded to the consideration of the case of Rodger v. Herbertson. The following motion was unanimously agreed to:

That this Division of the Border Counties Branch of the British Medical Association, in view of the important issues involved in the decision of the First Division of the Court of Session in the case of Rodger v. Herbertson and the undesirability in the interests of the medical profession generally, of leaving the case where it stands without the authoritative decision of the highest court in the realm, is of opinion that an appeal should be taken to the House of Lords, subject to a favourable opinion being obtained from the legal advisers of the Association.

Dr. ROBSON then moved that a copy of the foreshaid resolution be sent to the Council of the Border Counties Branch, with the request that at its annual meeting on June 24th a similar resolution be passed. This was unanimously agreed to. It was further unanimously agreed:

That the Division in view of the resolution passed on this date, that subject to a favourable opinion being obtained from the legal advisers of the Association, an appeal should be taken to the House of Lords in the case of Rodger v. Herbertson, do appoint a committee to consider ways and means of assisting Dr. Rodger to present said appeal, with power to this committee to institute a fund and to act otherwise as they in their discretion think advisable. The members of the Executive Committee of the Division to be members of this committee.

Whole time Medical Officers of Health.—On the motion of Dr. CLARKE it was unanimously agreed:

That this Division considers that as far as possible appointments as medical officers of health should be full-time appointments; that in exceptional circumstances, which should be approved by the central authority, they must of necessity be part-time appointments.

Medical Inspection of School Children.—The scheme of the Education Committee of the County Council of Dumfriesshire having been fully discussed, it was, on the motion of Dr. BRYSON, agreed:

That this Division very cordially approves of the scheme of the Education Committee of the County Council of Dumfriesshire.

It was further unanimously agreed that copies of this resolution be sent to the Scottish Education Department, London, to the Dumfries School Board, and to the Education Committee of the County Council of Dumfriesshire.

GLASGOW AND WEST OF SCOTLAND BRANCH: GLASGOW CENTRAL DIVISION.

THE annual meeting of this Division was held in the Faculty Hall, 242, St. Vincent Street, on Thursday, May 27th, at 4.15 p.m. Dr. ROBERT JARDINE, the Chairman of the Division, presided.

Confirmation of Minutes.—The minutes of the last meeting were read, approved, and signed.

Medical Inspection of School Children.—This matter was discussed, and the Representative being present became acquainted with the opinions of the members.

Ophthalmia Neonatorum Report.—After consideration it was decided that notification was desirable.

Business Management of the Association.—Mr. J. GRANT ANDREW proposed, Dr. JARDINE seconded, and it was carried unanimously:

That in view of the practical experience of the last thirty-seven years, during which period the Association has enjoyed great financial prosperity, it has been proved that in the best interests of the British Medical Association it is essential to have an official with the rank and status of "General Secretary and Manager," and that such official should possess special business training. Further, that having regard to the highly satisfactory manner in which Mr. Guy Elliston has discharged the duties since his appointment in 1902, it is in the interests of the Association that his services should be retained as "General Secretary and Manager," and that the Representative of the Glasgow Central Division to the Representative Meeting at Belfast be instructed accordingly.

Earlier Election of Representative.—Dr. JARDINE proposed, and Mr. GRANT ANDREW seconded, and it was carried:

That the Representative shall be elected by a general meeting of members, held not more than nine months nor less than three weeks before the annual Representative Meeting. Rule No. 7 of the Division's By-laws to be altered accordingly.

Report by the Representative.—Dr. JOHN ADAMS gave his report of the business dealt with at the Representative Meeting.

Election of Officers.—The following members were elected office-bearers for 1909-10: *Chairman*, Dr. Robert Jardine; *Vice-Chairman*, Mr. Jas. Grant Andrew; *Representative to Representative Meeting*, Dr. John Adams, 1, Queen's Crescent; *Representatives to Branch Council*, Dr. Robert Jardine, Dr. Peter Napier Grant; *Honorary Secretary and Treasurer*, Dr. Peter Napier Grant; *Executive Committee*, Dr. John Wright, Dr. W. S. Syme, Dr. Robert Perry, Dr. John Paterson, Dr. A. N. McGregor, Dr. R. K. Currie.

This concluded the business.

LANCASHIRE AND CHESHIRE BRANCH:

ALTRINCHAM DIVISION.

Election of Officers.—At a meeting held on June 10th the following members were elected office-bearers for the ensuing year: *Chairman*, Dr. Golland; *Vice-Chairman and Representative Member of the Central Council*, Dr. Garstang; *Honorary Secretary*, Dr. H. G. Cooper; *Branch Council*, Drs. C. J. Renshaw and P. R. Cooper; *Vice-President of Branch Council*, Dr. E. L. Luckman; *Honorary Assistant Secretary*, Dr. Rhodes. *Elected Members*: Drs. G. H. Smith, J. C. Smyth, Ransome, Cox, Gough, and Clarke; *Associate Members* (1909-10): Drs. F. C. Larkin (Liverpool W.), C. Macfie (Bolton), J. H. Taylor (Salford), Members of the Central Council; A. E. Hodder (Wigan), R. G. McGowan (Manchester N.), A. Greenwood (Blackburn), J. M. Ferguson (Burnley), W. Sykes (Preston), T. H. Murray (Warrington), G. H. Grant Davis (Manchester S.), and J. Buchan (St. Helens).

METROPOLITAN COUNTIES BRANCH:

ST. PANCRAS AND ISLINGTON DIVISION.

The annual meeting of this Division was held on Tuesday, June 8th, at the Midland Grand Hotel, King's Cross. Dr. SYKES, Medical Officer of Health for St. Pancras, presided.

Report of Executive Committee.—The Executive Committee's annual report was read and confirmed.

Unqualified Practice.—A letter from the Medical Secretary concerning the collection of evidence on unqualified practice was read and discussed. A committee, with Dr. Wynn Westcott, H. M. Coroner for North-East London, as Chairman, was appointed to collect evidence and to report to the Division.

Election of Officers.—The following officers for the ensuing year were elected: *Chairman*, Dr. G. F. Glinn; *Vice-Chairman*, Dr. E. D. Berton; *Honorary Secretary*, Dr. W. Griffith; *Executive Committee*, Drs. J. Crabb, J. R. Gabe, G. C. Hearne, T. Sayer, Walter Smith, J. F. J. Sykes, O. L. M. Theobalds, W. Wynn Westcott; *Representative in Representative Meeting*, Dr. Walter Smith; *Representatives on Branch Council*, Drs. J. F. J. Sykes, Walter Smith, and William Griffith.

Demonstration.—Dr. MORGAN DOCKRELL, Senior Physician to St. John's Hospital, gave a demonstration of the dermatological eruptions of syphilis, illustrating his remarks with coloured drawings and microscopical specimens. Hand-coloured drawings were handed round the meeting illustrating the characteristic cutaneous manifestations of the various stages of the disease. The *Spirochaeta pallida* was demonstrated in smears and in sections, and histological preparations showing the minute structure of the various eruptions were shown under the microscope. The lecturer pointed out the variety of the primary lesions, the various modes of inoculation, the occurrence of extra-genital and innocent infection, the frequent obscurity of the histories, and gave interesting examples of "silent" syphilis where the later manifestations appeared with entire absence of history or evidence of the primary lesion. He described the protean character of syphilis, the great tendency of its efflorescence to imitate other eruptions while still maintaining its own individual characteristics, its behaviour when associated with other skin rashes, and the salient points in the differential diagnosis of syphilis and other conditions resembling it. He thought a word of warning was necessary with regard to certain reputed preventive measures which frequently led to disaster through giving a false sense of security. Dr. SYKES dealt with the subject from a public health point of view; he pointed out the difficulties in the way of notification, and gave a description of the various methods employed on the Continent and in the public services with the view of prevention. He thought the best hope of prevention lay in the amelioration of social and economic conditions. Dr. THEOBALDS gave his experience of the disease in Malta, and Dr. SAYER, Dr. WARD LAWSON, Dr. BERTON, and other members took part in the discussion. Various members commented on the exceptional beauty of the coloured drawings, and the meeting concluded with a hearty vote of thanks to Dr. Morgan Dockrell for his very interesting demonstration.

MUNSTER BRANCH.

The annual general meeting of this Branch was held on Saturday, June 12th, Lucy E. SMITH, M.D., President, in the chair.

Confirmation of Minutes.—The minutes of the last annual general meeting were read and signed. The minutes of the Council meetings were read.

Apologies for Non attendance.—Apologies for inability to attend were read from Surgeon-Colonel Hunt, and G. Myles, M.D. Limerick.

Representative on Central Council.—Professor H. Corby, M.D., having been duly nominated in accordance with By-law 27, was elected Representative on the Council of the Association for 1909-10.

Representative to Representative Meeting.—Dr. Lucy E. Smith, Verdon Place, Wellington Road, Cork, was elected unanimously.

Representative of Branch on Irish Committee.—Dr. J. Giusani was unanimously elected for 1909-10.

New Member.—Theodore Francis Ritchie, A.M.S., was elected a member of the Association.

Election of Officers and Council of the Branch for 1909-10.—The following were elected officers: *President*, Dr. John J. Fitzgerald; *Vice President*, Professor C. Yelverton Pearson, F.R.C.S.; *Retiring President*, Dr. Lucy E. Smith; *Council*, Drs. W. Ashley Cummins, H. R. Townsend, P. J. Cremon, D. J. O'Connor, O. McCarthy, T. B. Moriarty, N. Henry Hobart, T. O'Meara, M. Cagney, J. Giusani, J. T. O'Connor, T. Gelston Atkins; *Honorary Secretary and Treasurer*, Dr. Philip G. Lee.

Financial Statement.—It was reported that the financial affairs of the Branch were in a satisfactory condition.

Ethical Cases.—On the motion of Dr. T. B. Moriarty it was decided:

That in future the Council of the Branch should itself come to a conclusion in an ethical case.

SOUTH-EASTERN OF IRELAND BRANCH.

A MEETING of this Branch was held in the Council Chamber, Town Hall, Clonmel, on June 2nd, at 12 o'clock noon, J. W. H. JELLETT, M.D., in the chair. Fourteen other members were present.

Apologies for Non-attendance.—Twelve members sent apologies for inability to attend.

Confirmation of Minutes.—The minutes of the last meeting were read, approved, and signed.

Irish Poor Law Medical Service.—Dr. WALSH, in accordance with notice, moved, and Dr. P. MURPHY seconded:

That in any legislation that may follow the reports of the Royal and Viceregal Commissions to inquire into the working of the Poor Laws, the British Medical Association be requested to use all its influence to safeguard the interests of the Irish dispensary medical officers and medical officers to workhouses, and to secure: (a) That entrance to the Irish Poor Law Medical Service shall be by competitive examination; (b) that adequate salaries shall be fixed; and (c) superannuation allowances be made compulsory on the lines of Civil Service superannuation regulations.

The following amendment was proposed by Dr. LAFFAN and seconded by Dr. POWER:

That it is eminently unsafe for the medical profession who are engaged in looking for their own betterment to incur the hostility of all the public bodies of the country by seeking to deprive them of one of the most important of their privileges, and that therefore that part of Dr. Walsh's motion which refers to the stripping of these bodies of their patronage be and is hereby omitted.

The amendment was rejected. The following amendment was then proposed by Dr. LAFFAN and seconded by Dr. QUIRKE:

That, in the event of a competitive system being introduced, it should be a bona fide examination system—that is, one like the army, etc.—and not the illusory one proposed by the Commission.

The amendment was carried *nemine contradicente*. Dr. Walsh's resolution as amended was then put to the meeting and carried *nemine contradicente*.

Dinner Fund.—In accordance with notice Dr. LAFFAN moved and Dr. WYNN seconded:

That members be requested to contribute 2s. 6d. each annually towards a dinner fund, whether they attend or not, the proceeds to be allocated proportionately to each Division centre (wines and tobacco not included) and any deficit to be supplied by those actually present at dinner.

The following amendment was proposed by Dr. POWER and seconded by Surgeon-Colonel RIORDAN:

That the original arrangement re lunch continue as formerly.

This was carried *nemine contradicente*. Another amendment was proposed by Dr. QUIRKE and seconded by Dr. O'CONNELL as follows:

That in view of the large number of affirmative replies received, that Dr. Power's amendment apply only to the Tipperary section of the Branch, and that members belonging to that section be not required to contribute towards the luncheon expenses of remaining portion.

The amendment was rejected.

Reports of Divisional Meetings to "British Medical Journal."—Dr. QUIRKE moved, and Dr. HENNESSEY seconded:

That Honorary Secretaries of Divisions furnish reports of meetings of their Divisions to the BRITISH MEDICAL JOURNAL.

This was carried *nemine contradicente*.

Remuneration for Temporary Duty.—It was proposed by Dr. SHEE, and seconded by Dr. HENNESSEY:

That, in consequence of the refusal of the Local Government Board to sanction a greater amount than four guineas a week for temporary duty in dispensary districts in cases in which exceptional circumstances make this amount insufficient remuneration for such service, the Branch requests its members that none of them should act in such cases unless he previously receives in cash from the relieving officer such amount per day or per week as would be reasonable recompense for the work to be done until the Local Government Board amends its procedure in the matter. Copies of this resolution to be sent to each member of the Branch, to the Local Government Board, to the Chief Secretary for Ireland, to the Chairman of the Parliamentary Bills Committee of the Association, and to the Clerk of all the Poor Law Unions within the area of the Branch.

The resolution was carried *nemine contradicente*.

Notice of Motion.—Dr. O'BRIEN gave notice that he would move at the next meeting:

That the third Wednesday in June be fixed for our future annual Branch meetings at Clonmel at 12 o'clock noon.

Cases.—Dr. P. I. BYRNE next exhibited two cases of great surgical importance, and all the members were

deeply interested in the well-thought out lines of treatment explained and pursued.

Luncheon.—All the members lunched together at the Ormonde Hotel.

STAFFORDSHIRE BRANCH:

SOUTH STAFFORDSHIRE DIVISION.

The annual meeting of the Division was held on Thursday, June 3rd, at 4 p.m., Dr. BADGER in the chair. There were also present: Drs. Malet, Clendinnen, Arthill, Bailey, Deanesly, and Codd.

Apologies for Non-attendance.—Apologies were received from Messrs. Cholmeley and Cridland.

Election of Officers.—The following officers were elected for the ensuing year: *Chairman*, W. F. Cholmeley; *Vice-Chairman*, W. R. Somerset; *Secretary*, J. A. Codd; *Representative in Representative Meetings of Association*, E. Deanesly; *Three Representatives on Branch Council*, T. R. Bailey, W. F. Cholmeley, and H. Malet; *Three Members of Executive of Division*, A. B. Cridland, Wm. Clendinnen, and W. S. Badger.

Earlier Election of Representatives.—It was resolved:

That Rule 7 be amended as follows: "That the Representatives of the Division at the Representative Meeting be elected in January in each year, and shall take office at the following Annual Representative Meeting."

Vaccination Objectors and Justices of the Peace.—Dr. CLENDINNE drew attention to the practice of some Justices of the Peace granting to vaccination objectors exemption certificates at their private houses and places of business, and the meeting, although recognizing that the practice was objectionable, in the face of recent legislation could not see their way to pass any resolution on the subject.

Radiography by a Private Soldier.—Dr. Codd read some correspondence he had had with Major Spencer, R.A.M.C., with regard to a private who had taken out a course of instruction in the x-ray apparatus used at the Queen Alexandra Military Hospital, and that this private proposes to take radiography and carry out x-ray treatment in private. The meeting resolved that the Secretary send a copy of the correspondence to Major Dent, and ask him to represent the views of Major Spencer to the private in question.

Representation of Local Profession on Hospital Boards.

—On the question of the representation of the local medical profession on boards of hospitals and similar bodies, the Representative was instructed to use his own discretion in voting.

Medical Certification of Suitability of Patient for Hospital Treatment.—In regard to this matter, the meeting approved of Recommendation 7, but considered that the practical difficulties were too great for immediate adoption.

Contribution to Hospitals by Employers and Employees.

—On this matter it was resolved:

That no contributions should be given to, or received by, hospitals, except as pure charity, without any self-interests or ulterior motive, but the matter has gone too far, otherwise in some particulars (such as employers' or employees' contribution), to now interfere with; but we would strongly deprecate any further advance in the same direction.

Fresh Public Medical Institutions.—The meeting approved of the statement as to fresh public medical institutions.

Sanatoriums for Tuberculous Workers.—On this question, the meeting approved of Statement 3 (A), (B), (C) and 4.

YORKSHIRE BRANCH:

HARROGATE DIVISION.

The annual meeting of this Division was held on Thursday, May 13th, at 8.30 p.m., at the Hotel Majestic, Dr. BAIN in the chair. There were also present Drs. Black, Mantle, Ward, Williamson, Pringle, Nims, Watson, and Drs. Bronner and Mason visitors.

Dinner.—Dinner was at 7.30 p.m., six being present.

Apology for Non-attendance.—A letter was read from Dr. Green (Chairman) regretting his inability to attend.

Confirmation of Minutes.—The minutes were read and confirmed.

Election of Officers.—The following officers for the ensuing year were elected: *Chairman*, Dr. Bain; *Vice-Chairman*, Dr. W. M. Crawford Watson; *Honorary*

Secretary, Dr. Gibson; Representative for Representative Meeting, Dr. Gibson (provisionally); Representative on Branch Council, Dr. Solly; Executive Committee, Drs. Chamberlain, Collier, Daggett, Garrad, Holroyd, Lever, Mackay, Rutherford, Solly, W. Bertram Watson, and Crawford Watson.

Medical Inspection of School Children.—The report of the Medico-Political Committee on School Children was read and discussed, with the following recommendations:

- That the duties of assistant medical officer of health should be sanitary as well as educational, so as to enable the holder to have experience of the duties of medical officer of health.
- Payment by fixed salary is preferable.
- That where a school nurse is employed she should be strictly under the instructions of the medical officer.
- That the British Medical Association should oppose the reference of school children to charitable institutions, the work of hospitals being confined to charitable relief.
- That the children should be sent to their own doctor for treatment, but, if too poor to pay for medical advice, then to the parish doctor. Unfortunately a number of children attend the council schools (paid for out of the rates) whose parents are well able to pay for the education of their children.

Whole-time Medical Officers.—The Memorandum of the Public Health Committee on this matter was considered, and it was resolved:

That medical officers of health should be whole-time officers, except in small or thinly-populated districts, and that security of tenure should be secured.

Medical Certification of Suitability for Hospital Treatment.—In regard to this matter it was resolved:

That inability to pay for adequate treatment shall be the consideration for the admission of all patients for hospital treatment, and except in emergencies sufficient evidence should be obtained that the patient is not in a position to pay, and that the case is from a hospital point of view suitable for treatment.

That a medical certificate of suitability for hospital treatment be required.

Contributions to Hospitals by Employers and Employees.—This subject was discussed, and it was resolved:

That contributions to hospitals by employers or employees do not entitle the contributors to gratuitous medical attendance.

That the medical profession should be adequately represented on hospital boards.

Current Work of Association.—The report on current work of the Association was considered.

LEEDS DIVISION.

A MEETING of this Division was held in the Leeds Public Dispensary on June 10th, when twenty-three members and friends were present. The CHAIRMAN of the Division, Professor Wardrop Griffith, presided.

Pelvic Haematocoele in a Virgin.—Mr. H. J. ROPER read a paper on this subject, and said the illness began with a sudden faintness, which passed off on lying down. She was seen a week later, when the pelvis was found to be filled with a solid effusion, pushing the uterus bodily upwards behind the symphysis pubis, and extending on both sides about 2 in. above Poupart's ligament, and obliterating Douglas's pouch and surrounding the rectum. Absolute rest in bed for some weeks resulted in complete absorption, with the exception that after seven months a small abscess formed, and discharged through the bladder, but it never became offensive. The diagnosis was made by excluding other possible causes, such as appendicitis, tubal disease, or pelvic cellulitis due to sepsis. It was not tubal pregnancy which had ruptured, for the hymen was perfectly intact, the uterus was not enlarged, the periods had been perfectly regular up to the onset of the trouble, the illness having begun five days after the last period ceased, and there were no changes in the breasts. The result was complete absorption and disappearance of all physical signs. The paper was discussed by the CHAIRMAN and Drs. CHURTON, FOX, and CLARKE.

Pelvis and Phantom.—Mr. MCGREGOR YOUNG demonstrated an ingeniously constructed pelvis and phantom used for teaching students. The pelvis was made of wood by a local joiner to Mr. Young's instructions. It was rather larger than the normal female pelvis, but it was constructed to scale. The phantom was of proportionate dimensions. This could be enclosed in a stout holland

bag, and when placed in the pelvis the student was able to palpate the phantom and to tell the various positions in which it had been placed by the teacher. By a series of straps and buttons the phantom could be fixed in face, anterior, posterior, or other position, and the passage through the pelvis and outlet clearly shown. The vulva and perineum were represented by a combination of leather and elastic membrane, so that the stretching of the perineum and the sweeping of the head over it could be cleverly imitated. The author was complimented on the ingenuity with which his model had been constructed.

Great Arterial and Venous Tension: Venesection.—Dr. CHURTON showed sphygmograms from a man aged 55. The upstroke was sloping. There appeared to exist (1) increased quantity and viscosity of the blood (plethora); (2) consequent hypertrophy of the arterial musculature; (3) hypertrophy of left ventricle; (4) after a severe cold or influenza, some dilatation of the left ventricle and a slight mitral regurgitation, but with not much mitigation of arterial distension—the radials being very full and very tense at each systole. Veins full. No dropsy; no albuminuria. Radials thick but smooth (they were equally thick two years ago, but after venesection, etc., gradually became normal). Twenty-six ounces of blood were withdrawn, with immediate relief to the discomforts previously felt—dizziness, difficulty of breathing, oppression in chest, etc. Dr. Churton had frequently observed radial arteries thickened and supposed to be sclerotic which regained their normal state. The CHAIRMAN and Dr. SHARP made remarks on the paper. The former made some interesting observations on the relationship of arterio-sclerosis to high arterial tension, and emphasized the point that in the ordinary order of things every one "suffered" from arterio-sclerosis as the result of advancing years.

Glandular Tuberculosis.—Dr. E. F. TREVELYAN made some remarks on twelve cases of glandular tuberculosis, all of which except one were at present under tuberculin (TR) treatment at the Leeds Public Dispensary, and most of which had already shown marked improvement. In three recurrent cases there was considerable infiltration of the skin at the site of a previous operation. Surgical treatment, where necessary, should of course be adopted, as suppuration and caseation could certainly not otherwise be brought to satisfactory healing. Tuberculin treatment should be commenced early, and should also supplement operation where the latter was necessary. It seemed to him that quite small doses of tuberculin could be used in such cases of limited and closed tuberculosis with almost absolute safety, whereas much greater caution was necessary in an open tuberculosis such as phthisis. The subject was discussed by Drs. WOODCOCK, CHURTON, and DAWSON, and in reply Dr. TREVELYAN said that he never treated pulmonary phthisis with tuberculin in the out-patients' room unless such treatment had already been commenced in an institution, or unless he could rely upon the patients strictly carrying out printed directions.

Cases.—Cases were shown and a demonstration given as follows:—Mr. MICHAEL A. TEALE: (a) High myopia, showing Weiss's line in the fundus; (b) vascularized exudation projecting into the vitreous humour, with white degeneration of some of the retinal vessels; (c) a man in whom Hess's operation had been done for complete paralytic ptosis of the left lid; (d) sarcoma of the ciliary region; (e) rupture of the choroid. Mr. SEATON: A patient in whom suture of the divided ends of the ulnar nerve had been done one month ago. Dr. TREVELYAN: (a) Tabes dorsalis in which paralysis of the sixth nerve in course of improvement was followed by an incomplete paralysis of the third nerve; (b) spastic paralysis in the legs in which sensory disturbances were present. Mr. ALEX. D. SHARP: Demonstration on the direct inspection of the larynx by Brining's and Chevalier Jackson's instruments.

SHEFFIELD DIVISION.

Election of Officers.—The following members have been elected office-bearers for 1909-10: *Chairman*, Dr. W. Longbottom; *Vice-Chairman*, Dr. A. Forbes; *Honorary Secretary (pro tem)*, Dr. A. W. Forrest, Duu Edin, Atercliffe Common, Sheffield; *Representative for Representative Meeting*, Dr. R. Gordon, 26, Wolstenholme Road, Sheffield; *Representatives on Branch Council*, Dr. Sinclair White, Professor R. J. Pye-Smith, Dr. J. F. Cheesewright, Professor A. Hall;

Executive Committee. Drs. T. A. Sheahan, O. H. Hudson, J. H. Brown, J. G. Mylan, C. H. Willey, W. W. Banham, A. L. Husband, A. W. Cuff, W. Branson, S. Barber, J. Sorley, A. G. Wilson, G. H. Dawes, C. M. Anderson, P. Telles, G. Carter, E. W. T. Smith, E. France, J. MacKinnon, A. Reckless, W. H. Nutt, C. S. Killham, C. Wiseman, J. W. Martin.

✚ To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

ANNUAL GENERAL MEETING.

Notice is hereby given that the 1909 Annual General Meeting of the British Medical Association will be held in the Assembly Hall, Belfast, on Friday, July 23rd, at Twelve noon.

[This Meeting is to comply with Article XII, and will adjourn forthwith until Tuesday, July 27th, at 2.30 o'clock.]

ANNUAL REPRESENTATIVE MEETING.

Also, notice is hereby given that the 1909 Annual Representative Meeting will be held in the Assembly Hall, Belfast, on Friday, July 23rd (and following days as required), immediately after the Annual General Meeting, fixed for Twelve noon, on Friday, July 23rd.

BY ORDER OF THE COUNCIL,

GUY ELLISTON.

May, 1909.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, June 30th, in the new Council Room, at 429, Strand, London, W.C.

By Order,

GUY ELLISTON.

June 10th, 1909.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH: BATH DIVISION.—The annual meeting of this Division will be held at the Royal United Hospital on Saturday, June 26th, at 6.0 p.m. Business: (1) To elect officers. (2) To receive annual report. (3) To consider business of Annual Representative Meeting. (4) To consider matters referred to Divisions (see SUPPLEMENT to BRITISH MEDICAL JOURNAL, May 8th). (5) To modify Divisional Rule No. 7, for ensuring earlier appointment of Representative.—D. LESLIE BEATH, Honorary Secretary.

BIRMINGHAM BRANCH: CENTRAL DIVISION.—The annual meeting of this Division will be held at the Medical Institute on Wednesday, June 30th, at 3.30 p.m., at which the election of officers for the ensuing year will be held. Nominations in writing for the offices of Chairman, Vice-Chairman, and two Honorary Secretaries must reach the Honorary Secretaries not later than Wednesday, June 9th.—A. W. NUTHALL, W. TRACY LYDALL, Honorary Secretaries.

BORDER COUNTIES BRANCH.—The annual general meeting of the Branch will be held in the County Hotel, Carlisle, on Friday, June 25th. Business: To receive the report of the council for the past year; to elect the officers of the Branch; and Dr. Murdoch, of Annan, will deliver his Presidential address. Further details of information will be sent to each member by post.—FRANCIS R. HILL, Honorary Secretary, 62, Warwick Road, Carlisle.

CAMBRIDGE AND HUNTINGDON BRANCH.—The annual meeting of the Cambridge and Huntingdon Branch will be held at Cambridge on Tuesday, July 13th, at 12.30.—H. B. RODRICK, Honorary Secretary, Cambridge.

DORSET AND WEST HANTS BRANCH.—The summer meeting of this Branch will be held in Christchurch, Hants, on Wednesday, July 7th. Members wishing to read papers, show cases, exhibit specimens, or propose new members, must communicate with the undersigned not later than Thursday, June 24th.—JAMES DAVISON, Honorary Secretary, "Streateplace," Bournemouth.

EAST ANGLIAN BRANCH.—The annual meeting of the Branch will be held at the Grand Hotel, Clacton-on-Sea, on Thursday, July 8th.—B. H. NICHOLSON, East Lodge, Colchester, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH: Science Committee.— Gentlemen who would be willing to give addresses, demonstrations, etc., at Division meetings during the course of next winter will oblige by sending their names and the title of the subjects they propose to deal with as soon as possible to F. CHARLES LARKIN, Branch Secretary, 54, Rodney Street, Liverpool.

LANCASHIRE AND CHESHIRE BRANCH: ALTRINCHAM DIVISION.—*Clinical and Scientific Meeting.*—A meeting will be held at the Board Room of the Altrincham Hospital at 5 p.m. on Thursday, June 24th. (Afternoon tea 4.30 p.m.) Clinical cases will be shown, and Dr. Rhodes will read a paper on Scarlet Fever, to be followed by a discussion. Dinner at the Brooklands Hotel, 7.30 p.m. Ladies invited. Names must be given to the Honorary Secretary by Monday, June 21st.—H. G. COOPER, Honorary Secretary.

LEINSTER AND SOUTH-EAST OF IRELAND BRANCHES.—*Nominations for Central Council.*—Nominations of candidates for the two seats on the Council of the Association should be sent to the undersigned on or before June 21st.—ARTHUR H. WHITE, Malvern, Terenure Road, Dublin.

METROPOLITAN COUNTIES BRANCH.—The annual meeting of the Branch will be held at the St. James's Vestry Hall, Piccadilly, on Thursday, June 24th, at 5 p.m. Business: (1) To receive the annual report of the Branch Council. (2) To receive the report of the Representatives of the Branch on the Central Council. (3) To receive the report of the scrutineers of the ballot elections. (4) An address by Dr. Ford Anderson, the incoming President, etc.—ATWOOD THORNE, M.B., E. W. GOODALL, M.D., Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: KENSINGTON DIVISION.—The conference agreed upon on May 12th has been fixed provisionally for July 6th. Any member of the Division who desires to be present should send in his name to Dr. G. CRICHTON, 114, Lexham Gardens, Kensington, W.

MIDLAND BRANCH: BOSTON AND SPALDING DIVISION.—The annual meeting of this Division will be held on Tuesday, June 22nd, at the White Hart Hotel, Boston, at 12.45 p.m. Luncheon will be provided at 2 p.m.; tickets, 3s. 6d. each (exclusive of wine). Members are requested to reply not later than June 19th if they intend to be present at the luncheon, as those members accepting will be held responsible for the value of their tickets. Members may bring guests to the luncheon. Agenda: (1) Election of officers, including the President-elect of the Branch. (2) Programme for the year. (3) Matters referred to Divisions: (a) Treatment of school children; (b) unqualified practice. (4) Annual report. (5) Motor meet. (6) Invitation to Midland Branch to meet in the Division. (7) Any other business.—A. E. WILSON, Honorary Secretary, Boston.

NORTH OF ENGLAND BRANCH: NORTH NORTHUMBERLAND DIVISION.—The annual meeting will be held at the Plough Hotel, Alnwick, on Thursday, June 24th, at 3.30 p.m. Business: (1) Election of officers. (2) Motives question. (3) Any other business.—C. CLARK BURMAN, Honorary Secretary.

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.—The annual meeting will be held on Wednesday, June 30th, at the Grand Hotel, Morecambe, at 3.30 p.m. Members willing to show cases or specimens are requested to communicate with A. S. BARLING, Honorary Secretary, Lancaster.

OXFORD AND READING BRANCH.—The annual meeting of this Branch will be held at the Radcliffe Infirmary, Oxford, on Wednesday afternoon, June 30th. The dinner after the meeting will be held at Lincoln College. The President for 1909-10 will be H. G. A. Whitlock, Esq., M.D., F.R.C.S.—W. T. FREEMAN, Honorary Secretary.

SOUTH-EASTERN BRANCH.—The sixty-fifth annual meeting of the Branch will be held in the Town Hall, Croydon, on Wednesday, June 23rd, at 2.15 p.m. Dr. J. J. Macan (President-elect) kindly invites members to lunch at the Greyhound Hotel from 1 to 2 p.m. Agenda: in addition to the business of an ordinary meeting: (1) To receive the report of the election of new officers, who shall thereupon take office. (2) To receive the report of the Council on the affairs of the Branch and the annual financial statement. After the meeting members are invited by Dr. Pasmore to a garden party at the Mental Hos-

pital, Warrington. The dinner will be held at the Greyhound hotel at 6.15 p.m., charge 5s. Wine will be provided by the local members. Those who propose to be present at lunch, the garden party, or dinner, are requested to signify their intention to Dr. E. H. Wilcock, 91, London Road, Croydon, not later than Saturday, June 19th.—H. M. STEWART, Honorary Secretary.

SOUTH-EASTERN BRANCH: ISLE OF THANET DIVISION.—The annual meeting of this Division will be held at the Victoria Hotel, Hardres Street, Ramsgate, on Friday, June 25th, at 4 p.m., Dr. Halstead in the chair. Agenda: (1) Election of officers for the year. (2) The Executive Committee give notice that they will move the alteration of Rule 7, re election of Representative. (3) Correspondence. (4) The agenda of the Annual Representative Meeting has been before the members, and has been printed in the recent SUPPLEMENTS of the JOURNAL. If any member wishes to bring up any point for discussion, he is requested to notify the Honorary Secretary before the meeting. (5) Consideration of a report on the desirability of health officers being required to give their whole time to the work (see SUPPLEMENT to the BRITISH MEDICAL JOURNAL, January 23rd, 1909). (6) Consideration of the report of the Chairman of the Sanatorium Committee (see SUPPLEMENT to the BRITISH MEDICAL JOURNAL, May 9th, 1909). All members of the South-Eastern Branch are invited to attend these meetings and to introduce professional friends.—HUGH M. RAVEN, Honorary Divisional Secretary.

SOUTH MIDLAND BRANCH: NORTHAMPTONSHIRE DIVISION.—The annual meeting of the Division will be held in the board room of the General Hospital, Northampton, on Tuesday, June 29th, at 2.30. The meeting will be preceded by a luncheon at Franklin's Restaurant at 1.30, and the Secretary will be much obliged if those wishing to attend the luncheon will notify him at least two days beforehand. Business Minutes. Annual report. Election of officers for ensuing year. Report on medical treatment of school children. Report on treatment of ophthalmia neonatorum. Any other business.—P. S. HICHENS, M.D., Honorary Secretary, Northampton.

SOUTH-WESTERN BRANCH.—The seventieth annual meeting will be held on Wednesday, June 30th, at the Bridge Hall, Bideford, at 3.15 p.m., when Dr. Banks will resign the chair to Dr. Toye, who will deliver his inaugural address. The report requested by the Council for the year 1908-9, and the annual statement for the year 1908 will be presented to the meeting, and the officers of the Branch will be elected for the year 1909-10. Luncheon, by the invitation of the President-Elect, will take place from 1 to 2.30 p.m. at the Royal Hotel, Bideford. The annual dinner will be held at 6.15 for 6.30 at the Royal Hotel. Tickets, 5s. each (exclusive of wine), can be had from Dr. E. Pearson, Strand House, Bideford. It is particularly requested that members requiring tickets will send their names to him before June 25th. Dr. E. Pearson, Strand House, Bideford, has kindly promised to entertain the members at tea at 4.30 p.m. Members desiring to be accommodated with bed and breakfast are requested to send their names to Dr. E. Pearson, Bideford, who will endeavour to arrange for them.—RUSSELL COOMBE, Honorary Secretary, 5, Barnfield Crescent, Exeter.

STAFFORDSHIRE BRANCH.—The thirty-sixth annual meeting of the Branch will be held at the White Hart Hotel, Burton-on-Trent, on Thursday, June 24th, at 4 p.m., when an address will be delivered by the President-elect, W. G. Lowe, M.D. Agenda: (1) Minutes of the last annual meeting. (2) Introduction of the new President. (3) Correspondence. (4) Address by the President. (5) Report of the Council. (6) The financial statement. (7) Election of officers for the ensuing year—President-elect, Secretary, and Treasurer. (8) To decide the place of holding the next annual meeting. (9) Report on the election of the Representative of the Branch on the Council of the Association. Members have the privilege of introducing friends. Dinner at 6 p.m., charge 5s. The first general meeting of the session will be held at Stoke, on Thursday, November 25th. Members desiring to read papers are requested to communicate the titles to the General Secretary as soon as possible. G. PETGRAVE JOHNSON, Honorary General Secretary, Stoke-on-Trent.

WEST SOMERSET BRANCH.—The sixty-seventh annual meeting of this Branch will be held at the London Hotel, Taunton, on Friday, July 2nd, at 12.30 p.m., when the chair will be taken by the new President, Mr. Chas. Farrant. Agenda: Annual report. Balance-sheet for 1908. Election of President-elect. Election of Representative. Election of other officers. Letter from Colonel Boyle re the examination of recruits for the Somerset Territorials. President's address. "Haematuria from a Surgical Standpoint." Lunch will be served by 1.30, at a charge of 3s. per head, exclusive of wine, etc. After lunch those present will become the guests of the President, and will be driven to the Pickering Golf Links (four miles), which will be at their disposal, and where they will be entertained to tea. Members are requested to intimate to the Honorary Secretary by Tuesday, June 29th, if they intend to be present at the lunch and wish to be driven to Pickering.—W. B. WINCKWORTH, Honorary Secretary.

YORKSHIRE BRANCH.—The annual meeting of the Branch will be held at the Grand Hotel, Scarborough, on Saturday, June 26th.—ADOLPH BRONNER, Honorary Secretary, 33, Manor Row, Bradford.

YORKSHIRE BRANCH: LEEDS DIVISION.—The annual meeting will be held at 4 p.m. on Tuesday afternoon, June 22nd, in the General Infirmary, Leeds. Business: To receive the Secretary's and Treasurer's reports; to appoint the executive for the coming year; to elect a Representative to the annual meeting of the Association.—JAMES ALLAN, Honorary Secretary.

GENERAL MEDICAL COUNCIL.

DISCIPLINARY CASES.

We have received from Dr. E. Burgess, who acted as one time as locumtenent for Dr. Brown, against whom a charge was brought and dismissed during the last session of the General Medical Council (SUPPLEMENT to the BRITISH MEDICAL JOURNAL, June 5th, p. 354 et seq.), a letter in which he says he wishes it to be understood that the statement he made that he had informed the patient that "Dr." Amery was not a qualified man, was made to Mr. Amery and not to Dr. Brown. Dr. Burgess states that so far as he was concerned Mr. Bodkin's address hit the right nail on the head, as his evidence could have had no bearing upon Dr. Brown, but only upon Mr. Amery. Dr. Burgess also desires it to be understood that the legal representative of the complainant was mistaken in saying that he (Dr. Burgess) was unwilling to attend the inquiry. He was, he says, quite prepared to support his declaration by verbal evidence before the Council, but was informed by the solicitors on the Saturday previous to the hearing that they did not think his presence would be required.

Naval and Military Appointments.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Surgeon E. L. ATKINSON to the *Achilles*, on completing, June 17th; Fleet Surgeon K. S. to the *Impregnable*, June 5th; Fleet Surgeon G. STICKLAND to the *Defiance*, June 5th; Fleet Surgeon C. L. W. BUNTON, M.B., to the *Roxburgh*, June 5th; Fleet Surgeon A. H. L. COX to the *Royal Arthur*, June 5th; Fleet Surgeon W. F. BEARBLOCK to the *Pembroke*, additional, for the *Penguen*, June 10th; Staff Surgeon H. C. ARATROON to remain in the *Diamond*, temporarily, June 10th; Staff Surgeon T. H. VICKERS to the *Victory*, June 10th; Surgeon G. H. S. MILLN, M.B., to Portsmouth Yard, June 10th; Surgeon R. H. ATKINS, M.B., to the Royal Marine Infirmary, Chatham, June 10th; Surgeon F. G. WILSON, M.B., to Chatham Hospital, June 10th; Surgeon G. Moor to Devonport Yard, June 10th; Staff Surgeon R. HUGHES to the *Cæsar*, June 10th; Staff Surgeon F. F. LOBE to the *Antrim*, June 10th; Surgeon J. S. H. PHILLIPS to the *Scylla*, June 10th; Staff Surgeon R. L. CLARK to the *Sirius*, June 10th; Staff Surgeon E. S. BERNARD to the *Edgar*, June 10th; Staff Surgeon M. C. LANGFORD to the *Hawke*, June 10th; Staff Surgeon E. ARKWRIGT, M.B., to the *Natal*, June 10th; Surgeon C. F. BALDREIDGE, M.B., to the *Devonshire*, June 10th; Surgeon A. DAVIDSON, M.B., to the *Speedy*, June 10th; Surgeon J. FULLARTON, M.B., to the *Hamshire*, June 10th; Surgeon F. E. ANLEY to the *Seagull*, June 10th; Surgeon G. S. DAVIDGE to the *Diamond*, additional, for the *Tyne*, June 3rd; Surgeon F. G. HITCH to the *Ermouth*, June 10th; Surgeon M. W. HADTON to the *Cormorant*, additional, for Ascension Hospital, June 11th.

The following are lent, temporarily, for the manœuvres, June 10th: Fleet Surgeon F. H. A. CLAYTON, M.B., and Surgeon G. T. VERRY, to the *Colahat*; Staff Surgeon E. J. M. KENNA, M.B., to the *Shannon*; Surgeons W. BRADBURY, M.B., to the *Invincible*; J. G. MCCOWEN, M.D., to the *Majestic*; S. L. MACBEAN, M.B., to the *Mars*; A. C. WILSON, to the *Victorious*; W. MEARNS, M.B., to the *Cæsar*; F. W. QUIRK, to the *Pembroke*, additional, for the *Penguen*; E. J. H. GARSTIN, to the *Essex*; F. G. H. R. BLACK, M.B., to the *Eurydice*; A. V. J. RICHARDSON, M.B., to the *Carnarvon*; E. R. L. THOMAS, to the *Hannibal*.

Vital Statistics.

HEALTH OF ENGLISH TOWNS.

In seventy-six of the largest English towns, including London, 8,972 births and 3,962 deaths were registered during the week ending Saturday last, June 12th. The annual rate of mortality in these towns, which had been 14.7, 13.9, and 12.3 per 1,000 in the three pre-calculation weeks, rose again last week to 12.6 per 1,000. The rates in the several towns ranged from 5.2 in King's Victoria, 5.6 in Tottenham, 6.5 in Hornsey, 6.8 in Bootle, 7.1 in Croydon, and 7.2 in Willesden, to 19.4 in Salford, 19.7 in Hanley, 19.8 in Middlesbrough, 20.7 in Oldham, 21.1 in Stockport, 23.1 in Warrington, and 23.6 in St. Helens. The rate of mortality in the London area, which averaged 12.7 in the seventy-five other large towns. The death-rate from the principal infectious diseases averaged 1.2 per 1,000 in the seventy-six towns; in London these diseases caused a death-rate of 1.3 per 1,000, while in the other towns the rates ranged upwards to 2.6 in Coventry, 2.7 in Rhondda, 4.0 in Wolverhampton, 4.5 in Salford, 5.6 in Norwich, and 5.2 in West Bromwich. Measles caused a death-rate of 1.4 in East Ham and in Liverpool, 1.5 in Walsley, 1.6 in Walsall, 3.0 in Salford, 3.1 in West Bromwich, 4.0 in Wolverhampton, and 4.2 in Norwich; diphtheria of 1.5 in Merthyr Tydfil, whooping-cough of 1.5 in Middlesbrough; and diarrhoea of 1.5 in Hanley and in Rhondda. The mortality from scarlet fever and from enteric fever showed no marked excess in any of the large towns, and no local case of small-pox was registered during the week. The number of 5.5 in Salford were under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2,234, 2,254, and 2,223 at the end of last week; 395 new cases were admitted during the week, against 348, 335, and 275 in the three preceding weeks.

HEALTH OF SCOTTISH TOWNS.

During the week ending Saturday last, June 12th, 957 births and 518 deaths were registered in eight of the principal Scottish towns. The annual rate of mortality in these towns, which had been 17.5, 16.7, and 16.3 per 1,000 in the three preceding weeks, further declined last week to 14.5 per 1,000, but was 1.9 per 1,000 above the mean rate during the same period in the twenty-six inland English towns. Among the Scottish towns the death-rates ranged from 11.6 in Leith and 12.3 in Greenock to 15.9 in Glasgow and 19.3 in Paisley. The death-rate from the principal infectious diseases averaged 1.5 per 1,000 in these eight towns, the highest rates being in Edinburgh: 4 of diarrhoea in Dundee. The 265 deaths registered in Glasgow included 5 from scarlet fever, 2 from diphtheria, 13 from whooping-cough, 3 from enteric fever, 2 from cerebro-spinal meningitis, and 5 from diarrhoea. Eight fatal cases of whooping-cough were recorded in Edinburgh; 4 of diarrhoea in Dundee and 5 in Aberdeen; 3 of measles in Paisley; and 2 of diphtheria in Leith.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, June 12th, 627 births and 366 deaths were registered in the twenty-two principal urban districts of Ireland, as against 636 births and 360 deaths in the preceding period. The annual death-rate in these districts, which had been 22.1, 22.2, and 16.4 per 1,000 in the three preceding weeks, rose to 16.7 per 1,000 in the week under notice, this figure being 4.1 per 1,000 higher than the mean annual death-rate in the seventy-six English towns for the corresponding period. The figures in Dublin and Belfast were 8.7 and 16.1 respectively, those in other districts ranging from 4.0 in Dundalk and 4.8 in Sligo to 31.8 in Lisburn and 43.1 in Ballymena, while Cork stood at 21.2, Londonderry at 15.3, Limerick at 8.2, and Waterford at 13.6. The zymotic death-rate in the 191 Irish urban districts averaged 1.3 per 1,000, as against 1.0 per 1,000 in the preceding week.

Vacancies and Appointments.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column, advertisements must be received not later than the first post on Wednesday morning.

VACANCIES.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £170 per annum, with £30 cab allowance.
BRECON AND RADNOR ASYLUM. Talgarth.—Assistant Medical Officer. Salary, £70 per annum.
CAIRO: SCHOOL OF MEDICINE.—Professor of Anatomy. Salary, £800 per annum.
CANTERBURY BOROUGH ASYLUM.—Assistant Medical Officer (male). Salary, £140 per annum.
CANTERBURY: KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum.
CHILTERN HAM GENERAL HOSPITAL.—Surgeon in Charge of Branch Dispensary. Salary, £80 per annum, and £10 for cab hire.
CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House-Surgeon. Salary, £60 per annum.
CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST. Victoria Park, E.—House-Physician (male). Salary at the rate of £75 per annum.
EAST LONDON HOSPITAL FOR CHILDREN. Shadwell, E.—(1) Resident Medical Officer; (2) Medical Officer to the Casualty Department; (3) Second Medical Officer to the Casualty Department. Salary for (1) and (2) at the rate of £100 per annum, and for (3) £40 per annum.
EDINBURGH: ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.—Four Resident Medical Officers.
EVELINA HOSPITAL FOR SICK CHILDREN. Southwark.—(1) House-Physician; salary at the rate of £60 per annum. (2) Ten Clinical Assistants.
EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Male Assistant House-Surgeon. Salary, £50 per annum.
GLOUCESTERSHIRE EDUCATION COMMITTEE.—Medical Inspector of School Children. Salary, £250 per annum, rising to £300.
GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—(1) House-Surgeon; (2) Second House-Surgeon. Salary, £100 and £50 per annum respectively.
HULL ROYAL INFIRMARY.—Honorary Ophthalmic Surgeon.
LEEDS GENERAL INFIRMARY.—Honorary Assistant Surgeon.
LIVERPOOL INFIRMARY FOR CHILDREN.—Two Resident Medical Officers. Salary, £30 each for six months.
LIVERPOOL PARISH WORKHOUSE.—Assistant Medical Officer. Salary, £20 per annum, and £20 for examining applicants for outdoor relief.
LONDON THROAT HOSPITAL. Great Portland Street, W.—Assistant Anaesthetist.
MANCHESTER UNIVERSITY.—Junior Demonstrator in Physiology. Stipend, £100, rising to £150.
MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST. Hampstead.—Junior Resident Medical Officer. Honorarium, £50 per annum.
NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Third Resident Medical Officer. Salary, £60 per annum.
QUEEN ALEXANDRA SANATORIUM. Davos Platz.—Resident Medical Superintendent. Salary, £200 per annum.
QUEEN CHARLOTTE'S LYING-IN HOSPITAL. Marylebone-road, N.W.—Resident Medical Officer for Out-patient Department. Salary at the rate of £60 per annum.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL. King William Street, W.C.—Assistant Surgeon.
ST. MARYLEBONE GENERAL DISPENSARY. Welbeck Street, W.—Honorary Physician.
SPAMEN'S HOSPITAL SOCIETY.—Pathologist to the Dreadnought Hospital, Greenwich. Salary, £100 per annum.
SHEFFIELD UNION HOSPITAL.—Resident Assistant Medical Officer. Salary, £100 per annum.
SOUTHAMPTON: ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—House-Physician. Salary at the rate of £100 per annum.

UNIVERSITY COLLEGE HOSPITAL. Gower Street, W.C.—Assistant Surgeon.

VICTORIA HOSPITAL FOR CHILDREN. Tite Street, S.W.—House-Physician. Salary, £30 for six months.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £75 per annum.

WEST LONDON HOSPITAL. Hammersmith Road, W.—(1) Clinical Assistants; (2) Three Casualty Officers.

WESTMINSTER HOSPITAL. S.W.—Resident Obstetric Assistant.

WESTON SUPER-MARE HOSPITAL.—House-Surgeon. Salary, £100 per annum.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary, £80 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL. Two House-Surgeons. Salary, £80 per annum each.

CERTIFYING FACTORY SURGEONS.—The Chief Inspector of Factories announces vacancies at Fakenham, co. Norfolk; and Bishopstoke, co. Hants.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office orders or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

GORDON-GREEN.—On June 13th, at St. David's, 52, Whitwell Road, Southsea, Hants, the wife of Fleet Surgeon H. W. Gordon-Green, R.N., M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

MONTGOMERY.—On June 10th, at "Ferman," Maidenhead, the wife (née de Steiger) of Edwin Cecil Montgomery, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

MOORE.—On May 17th, at 65, The Common, Woolwich, the wife of Major George A. Moore, M.D., R.A.M.C., of a son.

MARRIAGES.

JONES—BREEZE.—On June 11th, at Llandinam C.M. Church, by the Rev. Maurice Griffiths, M.A. (cousin of the bridegroom), assisted by Rev. Rd. Jones, Pastor, Robert Jones, L.R.C.S. and F.R.C.P. and S.G., to Annie, younger daughter of the late Mr. and Mrs. Breeze, of Middle Gwerin, Llandinam.

MACNAB—HEWLETT.—On the 12th inst., at St. Paul's Church, Beckenham, by the Rev. Canon Hammond, John Theodore Macnab, M.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., of Cambridge House, Balham, son of the late Robert W. Macnab, Esq., of Dalbeattie, to Gladys Violet, fourth daughter of John C. Hewlett, Esq., J.P., of Hillside House, Beckenham, Kent, and Charlotte Street, London, E.C.

DEATHS.

HAWKLEY.—On June 14th, at 76, Roe Lane, Southport, after a short illness, Herbert Linney Hawksley, L.R.C.P. and S. Edin., eldest son of the late Rev. R. J. T. Hawksley.

APPOINTMENTS.

ANDERSON, Catherine E., M.B., Ch.B., Junior House-Surgeon to the Ashton-under-Lyme Infirmary.

BLACK, L. P., M.B., D.P.H., District Medical Officer of the St. Thomas Union.

BURGESS, Mildred M., M.D. Lond., Medical Officer of the Erixton Hill London County Council Industrial School for Girls.

EVANS, David Robert Powell, M.R.C.S., L.R.C.P., L.S.A., Medical Officer to the North Wimbledon General Hospital.

MOORE, Irwin, M.B., C.M., Assistant Surgeon to the London Throat Hospital.

DIARY FOR THE WEEK.

MONDAY.

ROYAL INSTITUTE OF PUBLIC HEALTH, 37, Russell Square, W.C., 6 p.m.—First Harben Lecture by Professor R. Pfeiffer: The Importance of Bacteriolytic in Immunity.

TUESDAY.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Third Croonian Lecture by Dr. W. S. Lazarus-Barlow: Radio-activity and Carcinoma (an experimental inquiry).

ROYAL SOCIETY OF MEDICINE: MEDICAL SECTION, 20, Hanover Square, 5.30 p.m.—Paper:—Dr. G. A. Sutherland: Gastro-intestinal Crises from Effusions into the Bowel Wall.

WEDNESDAY.

ROYAL INSTITUTE OF PUBLIC HEALTH, 37, Russell Square, W.C., 6 p.m.—Second Harben Lecture by Professor R. Pfeiffer: Endotoxins and Antiendotoxins.

THURSDAY.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W., 5 p.m.—Fourth Croonian Lecture by Dr. W. S. Lazarus-Barlow: Radio-activity and Carcinoma (an experimental inquiry).

ROYAL SOCIETY OF MEDICINE: SECTION OF DISEASES OF CHILDREN, 20, Hanover Square, 5 p.m.—Wrightman Lecture.—Dr. George Carpenter: Congenital Heart Affections.

NEUROLOGICAL SECTION, 20, Hanover Square, 8.30 p.m.—Papers.—Drs. Collie, and Gordon Holmes: Amyotonia Congenita. Dr. A. Wilson: A Critical Description of the Brain of a Degenerate.

FRIDAY.

ROYAL INSTITUTE OF PUBLIC HEALTH, 37, Russell Square, W.C., 6 p.m.—Third Harben Lecture by Professor R. Pfeiffer: The Problem of Virulence.

POST-GRADUATE COURSES AND LECTURES.

ENTRANCE LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Lectures: Tuesday, 3.45 p.m.; Accessory Sinuses. Friday, 3.45 p.m.; Accessory Sinuses.

LONDON SCHOOL OF CLINICAL MEDICINE, Seamen's Hospital, Greenwich.—Daily arrangements: Out-patient Demonstrations, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 3.15 p.m. respectively; Operations, 2 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m., Monday, and noon, Thursday; Skin at noon and 4 p.m., Thursday, and noon, Friday; Eye, 11 a.m., Wednesday and Saturday; Radiography, 4 p.m., Thursday. Special Lectures: Wednesday, 2.15 p.m., Relapsing Fever; Friday, 3.15 p.m., Congenital Malposition of the Testis.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear, Nose, and Throat. Lectures, at 5.15 p.m. each day, will be given as follows: Monday, Treatment of Asthma; Tuesday, Infantile Scoury; Wednesday, The Diagnosis of Pelvic Tumours; Thursday, Paralysis and Insanity.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Nervous Manifestations at the Menopause. Friday, 3.30 p.m., Spinal Tumours.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m., Surgical Out-patient, 2.30 p.m., Medical Out-patient; Nose, Throat, and Ear; X Rays; 4.30 p.m.,

Medical In-patient. Tuesday, Clinics: 10 a.m., Medical Out-patient; 2.30 p.m., Operations; Clinics: Surgical Out-patient, Gynaecological; 4.30 p.m., Demonstration of Cases of Early Tuberculosis of the Lungs at the Northwood Sanatorium. Wednesday, Clinics: 2.30 p.m., Medical Out-patient, Skin and Eye. Thursday, 2.30 p.m., Gynaecological Operations; Clinics: Medical Out-patient; Surgical Out-patient; X Rays; 3 p.m., Medical In-patient; 4.30 p.m., Cinematograph Demonstration of Neurological Cases. Friday, Clinics: 10 a.m., Surgical Out-patient; 2.30 p.m., Operations; Clinics: Medical Out-patient, Eye; 5 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.—The following are the arrangements for next week: Daily, at 2 p.m., Medical and Surgical Clinics; X Rays; 2.30 p.m., Operations. Monday and Thursday and Wednesday, 2 p.m. (and Saturday, 10 a.m.), Diseases of the Eyes. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (and Wednesday and Saturday, 10 a.m.), Diseases of Throat, Nose, and Ear; 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, 10 a.m., Diseases of Children. Lectures, at 10 a.m.: Monday and Thursday, Demonstration by Surgical Registrar; Friday, Demonstration by Medical Registrar; at 12 noon, Monday, Pathological Demonstration; at 12.15 p.m., Tuesday, Wednesday, and Saturday, Practical Medicine; at 5 p.m., Monday, Practical Surgery; Tuesday, Surgical Treatment of Acute General Peritonitis; Wednesday, Medicine; Thursday, The Insane and the Law; Friday, Anaesthetics.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
JUNE.		JUNE (Continued).	
20 Sunday ..			BORDER COUNTIES BRANCH, Annual General Meeting, County Hotel, Carlisle.
21 MONDAY ..		25 FRIDAY ..	ISLE OF THANET DIVISION, <i>South-Eastern Branch</i> , Annual Meeting, Victoria Hotel, Hardres Street, Ramsgate, 4 p.m.
22 TUESDAY ..	BOSTON AND SPALDING DIVISION, <i>Midland Branch</i> , Annual Meeting, White Hart Hotel, Boston, 12.45 p.m.; Luncheon, 2 p.m. HAMPSTEAD DIVISION, <i>Metropolitan Counties Branch</i> , Annual Meeting. LEEDS DIVISION, <i>Yorkshire Branch</i> , Annual Meeting, General Infirmary, Leeds, 4 p.m.	26 SATURDAY ..	BATH DIVISION, <i>Bath and Bristol Branch</i> , Annual Meeting, Royal United Hospital, Bath, 6 p.m. YORKSHIRE BRANCH, Annual Meeting, Grand Hotel, Scarborough.
23 WEDNESDAY ..	London: Journal and Finance Committee 2.30 p.m. SOUTH-EASTERN BRANCH, Annual Meeting, Town Hall, Croydon, 2.15 p.m.; Garden Party, Mental Hospital, Warrington; Dinner, Greyhound Hotel, 6.15 p.m.	27 Sunday ..	
	LONDON: Metropolitan Counties Branch Council, 4.30 p.m. ALTRINCHAM DIVISION, <i>Lancashire and Cheshire Branch</i> , Scientific Meeting, Board Room, Altrincham Hospital, 5 p.m.; Tea, 4.30 p.m.; Dinner, Brooklands Hotel, 7.30 p.m. NORTH NORTHUMBERLAND DIVISION, <i>North of England Branch</i> , Annual Meeting, Plough Hotel, Alnwick, 3.30 p.m.	28 MONDAY ..	NORTHAMPTONSHIRE DIVISION, <i>South Midland Branch</i> , Annual Meeting, Board Room, General Hospital, Northampton, 2.30 p.m.; Lunch, Franklin's Restaurant, 1.30 p.m.
24 THURSDAY ..	METROPOLITAN COUNTIES BRANCH, Annual Meeting, St. James's Vestry Hall, Piccadilly, 5 p.m. STAFFORDSHIRE BRANCH, Annual Meeting, White Hart Hotel, Burton-on-Trent, 4 p.m.; Dinner, 6 p.m.	29 TUESDAY ..	Central Council, 2 p.m., New Council Room, 429, Strand, W.C. CENTRAL DIVISION, <i>Birmingham Branch</i> , Annual Meeting, Medical Institute, 3.30 p.m. NORTH LANCASHIRE AND SOUTH WEST-MORLAND BRANCH, Annual Meeting, Grand Hotel, Morecambe, 3.30 p.m. OXFORD AND READING BRANCH, Annual Meeting, Radcliffe Infirmary, Oxford; Dinner, Lincoln College. SOUTH WESTERN BRANCH, Annual Meeting, Bringe Hall, Bideford, 3.15 p.m.; Luncheon, Royal Hotel, Bideford, 1 to 2.30 p.m.; Tea, Strand House, 4.30 p.m.; Annual Dinner, 6.15 for 6.30 p.m.
		30 WEDNESDAY ..	

ANNUAL MEETING, BRITISH MEDICAL ASSOCIATION, BELFAST, 1909.

The Seventy-seventh Annual Meeting of the British Medical Association will be held at Belfast from July 23rd, to July 31st, 1909, under the Presidency of Sir William Whitla.

The Annual Representative Meeting commences in Belfast on July 23rd. The Presidential Address will be delivered on July 27th. The Sections will meet on July 28th, 29th, and 30th.

A preliminary programme of arrangements was published in the SUPPLEMENT of June 12th, p. 373. The Honorary Local Secretaries are: Henry Lawrence McKisack, M.D., M.R.C.P., 17, University Square, Belfast; Cecil Edward Shaw, M.A., M.D., M.Ch., 29, University Square, Belfast; and Howard Stevenson, B.A., M.B., F.R.C.S.I., 2, College Square North, Belfast.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JUNE 26TH, 1909.

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Meetings of Branches & Divisions.

[The proceedings of the Divisions and Branches of the Association relating to Scientific and Clinical Medicine, when reported by the Honorary Secretaries, are published in the body of the JOURNAL.]

LANCASHIRE AND CHESHIRE BRANCH: BOLTON DIVISION.

The annual meeting of this Division was held in the library at the infirmary on May 17th, at 8.30 p.m. Dr. BRAZIL was in the chair, and there were present: Drs. Macfie, Young, Mallett, Mothersole, Swainson, Pattinson, Flitcroft, Jefferies, Pickering, Gray, and Miss Bernfeld.

Confirmation of Minutes.—The minutes of the last annual meeting were read and approved.

Election of Officers.—The following were elected to the various offices for the ensuing year: *Chairman*, Dr. Brazil; *Vice-Chairman*, Dr. Flitcroft; *Representative on Branch Council*, Dr. Jefferies; *Representative for Representative Meeting*, Dr. Pattinson; *Honorary Secretary and Treasurer*, Dr. Wood; *Executive Committee*, Drs. Macfie, Mothersole, Mallett, Young, O'Neill, and Laslett.

Annual Report.—The annual report of the Executive Committee was read and approved.

Earlier Appointment of Representative.—It was unanimously resolved to alter the Division rule so as to provide for the election of the Representative to the Annual Representative Meeting being made as early as possible after January 1st in each year.

Central Council Election.—It was unanimously resolved:

That the action of the Committee in nominating for this Division Messrs. Larkin, Garstang, Taylor, and Macfie as candidates for the Central Council election be approved.

Whole-time Medical Officers of Health.—On this subject it was resolved:

That this Division is of opinion that medical officers of health, with proper security of tenure and with adequate remuneration, should be debarred, where practicable, from engaging in private practice.

Medical Certification of Suitability for Hospital Treatment.—The report on medical certification of suitability of patients for hospital treatment was considered, and it was resolved by 6 to 5:

That the meeting approves the recommendation of Council.

Contributions to Hospitals by Employers and Employees.—The report on contributions to hospitals by employers

of labour and employees was considered, and it was resolved:

That this Division agrees that the contributions to hospitals by employers of labour and employees, by means of weekly collections and otherwise, should not be considered as entitling the contributors to unlimited hospital as also gratuitous medical attendance, as at present seems to be claimed, and disagrees with all the rest of the motion.

Fresh Public Medical Institutions.—With regard to the statement as to fresh public medical institutions, it was resolved:

That the meeting approves the motion of the Council.

Sanatoriums for Tuberculous Workers.—On this subject it was resolved:

That the meeting accepts the resolution of the Representative Meeting.

Medical Inspection of School Children.—The report on this subject was very fully considered, and it was resolved:

That this meeting approves of the Recommendations A to N.

BURNLEY DIVISION.

The adjourned meeting of the Division was held on June 10th, Dr. PULLON in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Central Council Election.—A letter was read from Dr. Garstang thanking the Division for its support, in the Central Council election, of himself and Drs. Larkin, Macfie, and Taylor.

Current Work of the Association.—The HONORARY SECRETARY read the monthly report on current work of the Association.

Annual Picnic.—It was decided to hold the annual picnic conjointly with the Burnley Medico-Ethical Society on June 24th at Grassington, leaving Bank Top Station at 10.35 a.m.

Annual Representative Meeting.—The provisional agenda was considered, and it was unanimously resolved to adopt an amendment to Motion No. 30, following the word "appointment" in line 7 of the recommendation:

It would therefore seem that a person whose whole time, or the greater part of it, during the school session, and during school hours, is taken up with the duties of medical inspection of school children is ineligible for the title of "Assistant M.O.H.," and ought to be designated "School Medical Officer," or some similar title, and should receive the remuneration agreed upon by this Association for such work, whether he be under the supervision of the M.O.H. or not.

LIVERPOOL AND BIRKENHEAD COMBINED DIVISIONS.

A meeting of the combined Divisions was held on June 18th, at 4.30 p.m., at the Liverpool Medical Institution, Sir JAMES BARR in the chair, later Dr. HARRIS. About seventy-five members were present, of whom fifty-five signed the presence list.

Confirmation of Minutes.—The minutes of the last ordinary meeting of May 14th and of the special meeting of May 21st were read and confirmed.

Hospital Abuse.—The report of the Hospital Abuse Committee was presented by the Chairman of the committee, Dr. HARVEY. It recommended the Divisions to disapprove of the plan of co-operation between hospitals and the public health authorities for the treatment of ophthalmia neonatorum, initiated by the St. Paul's Hospital and recommended for general adoption. The St. Paul's Hospital is arranging to place a ward of ten beds and ten cots and the services of its medical staff at the disposal of the public health authorities for the treatment of ophthalmia neonatorum, and the committee, while not objecting to charitable hospitals treating this or any other disease among the poor, asked the Divisions to say that admission to charitable hospitals should not take place through health authorities, and when such authorities take upon themselves the duty of dealing with any disease they should themselves provide for its treatment and for the payment of the medical men employed. Dr. TISDALE seconded the adoption of the motion, but reserved his remarks to a later stage. Mr. A. N. WALKER opposed the adoption of the motion. Mr. LARKIN, Dr. STOKES, Dr. BRADSHAW, Dr. WESTBY, Dr. DAVIES, and Dr. CATON having spoken, Dr. BRADSHAW moved that the question be now put. Dr. TISDALE asked to be allowed to speak as seconder of the motion, but Dr. Bradshaw's motion was accepted by the CHAIRMAN and carried. Dr. Harvey rose to reply, but was refused a hearing, and the report was rejected by 29 to 21 votes.

The meeting then adjourned.

PRESTON DIVISION.

A joint clinical meeting of this Division with the Preston Medico-Ethical Society was held at the Preston and County of Lancaster Royal Infirmary on Friday, June 18th, when twenty-seven members were present; Dr. TALBOT was in the chair.

Cases.—Dr. ARTHUR RAYNER showed a case of Raynaud's gangrene. Dr. SELLERS showed three interesting cases illustrative of conservative surgery—excision of knee-joint, excision of knee-joint and ankle-joint. Dr. SYKES showed two cases of excision of lacrymal sac for long persistent mucocele; a case of suppurative hyalitis due to injury; and a series of ten cases showing the result of the complete radical mastoid operation. Dr. HADFIELD showed a case of a specific psoriasis treated very successfully with soamin. Dr. COLLINSON showed the following cases: (1) Charcot's knee; (2) stone in kidney, operation, with radiographs before and after, by Dr. Arthur Rayner; (3) perforated duodenal ulcer after operation; (4) gall stones after operation; (5) talipes treated by (a) tarsectomy, (b) tendon grafting; (6) excision of rectum.

MIDLAND BRANCH.

The annual meeting of the Midland Branch was held at the Leicester Infirmary on June 10th. The PRESIDENT, Dr. Pratt, was in the chair, and thirty-five members were present.

Branch Council, 1909-10.—The Branch Council for 1909-1910 consists of the following: *President:* Dr. Pratt. *President-elect:* Dr. W. H. B. Brook (Lincoln). *Vice-Presidents:* Boston and Spalding Division, Dr. F. Husband (Crowland); Derbyshire, Dr. Cassidi; Nottinghamshire, Dr. Willis. *Representatives of Central Council:* Dr. Carline and Dr. St. John. *Honorary Secretaries of Divisions:* Leicester and Rutland, Dr. Gibbons; Lincoln, Dr. Chater; Boston and Spalding, Dr. Wilson; Nottingham, Dr. Henderson; Derbyshire, Dr. H. Barber. *Elected Members:* Boston and Spalding, Dr. Mason; Leicester and Rutland, Drs. Pope, Burkett, Douglas, Tibbles, Hicks; Derbyshire, Drs. Chawner, Hicks, Moxon, and Sims; Nottingham, Drs. Ferraby, Ringrose, Stafford; Lincoln, Dr. Genney; *Honorary Secretary and Treasurer:* Dr. Sevestre, 119, London Road, Leicester.

President's Address.—Dr. PRATT gave an interesting address, in the first portion of which he dealt with some changing aspects of the medical profession. He passed on to consider experiment and experience, laying stress on the necessity of experiment being controlled by experience.

Vote of Thanks.—A very cordial vote of thanks was given to Dr. Pratt not only for his address, but also for the hospitality he had extended to members attending the annual meeting.

Cases, etc.—Mr. C. J. BOND showed some instructive skiagrams of renal calculi. Cases were demonstrated by Dr. RINGROSE, Dr. PRATT, Mr. MARRIOTT, and Mr. CUMBERLIDGE.

NORTH WALES BRANCH:

DENBIGH AND FLINT DIVISION.

The annual meeting of this Division was held at Wrexham on June 4th.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Representative on Central Council.—The nomination of Dr. H. Jones-Roberts, the present Representative of the North Wales Branch, was unanimously approved of.

Election of Officers.—The officers of the Division for the ensuing year were elected as follows: *Chairman*, Dr. J. C. Davies; *Vice-Chairman*, Dr. David Fraser; *Honorary Treasurer*, Dr. E. Moss; *Honorary Secretary*, Mr. E. D. Evans; *Representatives on Branch Council*, Drs. H. Drinkwater, Richard Evans, and E. Moss; *Representatives on Executive Committee*, Drs. W. Vaughan Griffith, Richard Owen, and D. Llew. Williams; *Representative of Division in Representative Meetings of Association*, Dr. J. E. H. Davies.

Instructions to Representative at Annual Representative Meeting.—The Representative of the Division was instructed to vote in favour of the resolutions of the Hampstead and Wandsworth Divisions on representation of local medical profession on boards of hospitals and similar bodies; and of the Report of Council on medical certification of suitability of patients for hospital treatment. With regard to the remaining "Matters Referred to Divisions," the Representative was given a free hand. Touching sanatoriums for workers suffering from tuberculosis, the meeting approved of the statement made and the resolution passed by the Representative Meeting.

Inoculation Treatment of Pulmonary Tuberculosis.—Dr. H. HYSLOP THOMSON, of the Liverpool Sanatorium, read an interesting paper entitled, "The inoculation treatment of pulmonary tuberculosis. Several members took part in the discussion following the reading of the paper, and a cordial vote of thanks was accorded Dr. Hyslop Thomson.

Cases, etc.—Dr. J. C. DAVIES showed a case of congenital heart disease, and read a paper on the condition; also a case of bradycardia, with notes; and two cases of von Jaksch's disease (pseudo-splenic leukaemia), with notes. Considerable interest was shown by the members present in the examination of these cases, and Dr. Davies was heartily thanked for the trouble he had taken in bringing them forward, and for his interesting and instructive notes.

SOUTH WALES AND MONMOUTHSHIRE BRANCH:

SWANSEA DIVISION.

A MEETING of this Division was held at the Swansea Hospital on May 14th, Dr. HANSON in the chair.

Local Government Board and Unqualified Practice.—As the result of a recent circular sent by the Local Government Board to medical officers of health asking for information respecting the practice of medicine and surgery by unqualified persons, the following resolutions were unanimously carried, the Secretary being instructed to forward them to the Medical Officer of Health for Swansea.

That the practice of medicine and surgery by unqualified persons is assuming larger proportions, more particularly in the form of pseudo-specialism.

That in many cases the effect on public health is injurious on account of: delay and loss of invaluable time in cases of malignant disease, early phthisis, etc.; danger accruing to life and limb from maltreatment in joint diseases; and permanent injury to eyesight by improper prescriptions of glasses, etc.

That under present conditions the public has considerable difficulty in distinguishing between qualified and unqualified practitioners, to a great extent on account of the mis-

leading use made by the latter of various combinations of letters; and that, in the interests of the public, amendment of the Medical Acts is urgently needed.

Theocin.—Dr. LANCASTER read some notes on theocin and its uses.

Ophthalmia Neonatorum Report.—In connexion with the report of the Ophthalmia Neonatorum Committee Dr. FRANK THOMAS opened a discussion on that disease by an interesting paper in which was embodied and emphasized the principal points in that report. After a general discussion the following resolution was carried unanimously:

That this Division is of opinion that in the interests of the public health and as a prevention of blindness ophthalmia neonatorum should be made a notifiable disease.

ANNUAL MEETING.

The annual meeting of the Division was held at the Swansea Hospital on Thursday, June 3rd.

Election of Officers.—The following officers were elected for the ensuing year: *Chairman*, Dr. E. Le Cronier Lancaster; *Vice-Chairman*, Dr. A. W. Cameron; *Honorary Secretaries*, Dr. Daniel E. Evans, Dr. L. Freeman Marks; *Representative of the Division in Representative Meetings*, Dr. L. Freeman Marks; *Executive Committee*, Drs. D. Arthur Davies, W. F. Brook, J. S. H. Roberts, A. Hanson, J. Arnall Jones, J. Clarke Begg; *Representatives on Branch Council*, Drs. E. Le Cronier Lancaster, Frank G. Thomas, J. M. Morris; *Branch Contract Practice Committee*, Drs. J. Arnall Jones, Bryce, J. S. H. Roberts.

Earlier Election of Representatives.—A motion to alter Division Rule 7 so as to permit of the election of the Representative in Representative Meetings "not more than nine months nor less than three weeks" before the Annual Representative Meeting, was carried unanimously.

Agenda of Annual Representative Meeting.—The provisional agenda of the Representative Meeting was considered, and the Representative was instructed to use his discretion in voting except on those questions which had been discussed at previous meetings when the Division had expressed a definite decision. It was also resolved:

That the Representative be instructed to protest against the proposed diminution in the grant to the Divisions from 4s. to 2s. per member, the latter amount being insufficient to carry out a proper administration of the business of the Division.

YORKSHIRE BRANCH:

WAKEFIELD AND DONCASTER DIVISION.

A MEETING of members of the British Medical Association, convened by Dr. Goyder, was held at the Black Bull Hotel, Wakefield, on Friday, June 11th. There were present Dr. Roulston (Wakefield), Drs. Knowles and Shine (Barnsley), Dr. Steven (Featherstone), Dr. Osmond (Pontefract), Dr. Ward (Brotherton), Drs. Hillman, Kemp, and Chispin (Castleford), and Drs. Metcalfe and Goyder (Bradford). Dr. ROULSTON was called to the chair, and desired Dr. Goyder to introduce the business of the meeting.

Proposed Reorganization of Division.—Dr. GOYDER said: At the request of Dr. Bronner, the Secretary of the Yorkshire Branch, and as one of your representatives for the Branch on the General Council of the Association, I have accepted the duty of calling you together to-day, to ascertain your wishes as to the reorganization of the Wakefield and Doncaster Division. What first prompted this action was the failure of the members for Castleford fifteen months ago in their attempt to obtain just remuneration for their services as medical officers of the Poor Law guardians of the district union. This was discussed at one of the committees of the Council at which I was present, and the failure was attributed to the absence of any executive in the Division to support their contention with the guardians. These medical officers lost their appointments, and another practitioner was elected in their stead. This was considered by the committee as by no means an issue to be repeated, and the Yorkshire Branch was appealed to, to use its best efforts, and as a matter of urgency, to rouse the Division into organized action. I promised at the meeting to do what I could to bring the matter before you, and, if possible, prevent the occurrence of a similar result, and hence your meeting to-day. As shortly as I can, I desire to point out the advantages to be derived by medical men uniting as a Division of the Association for their own interests,

in an organized form, under the aegis of the parent body. Action must begin at the spot where an interest is threatened before the whole force of the Association can be secured behind it. The British Medical Association is now a strong and recognized power amongst the public bodies of the nation. The advantages of its help have exhibited themselves again and again in influencing the Legislature, the Local Government Board, and other public bodies in matters relating to public health, and the position of medical men in relation thereto, and especially as to the emoluments due to them for their work. The objects of the Association are important and manifold; they not only comprise the maintenance and dignity of the profession as a whole, but its interests individually; they seek the recognition of their status as a body of trained and educated men, worthy to exercise a beneficial influence upon society around them; but, more than this, the Association seeks to increase the personal worthiness of its members by inciting them to individual efforts to keep up the highest standard of knowledge by research, by repeated meetings in their Divisions, where their views and experiences can be exchanged with their colleagues and amplified and perfected by correction and discussion—it seeks by such meetings to make medical men better known to and appreciated by each other, so that coldness and jealousies can be removed; and last, not least, it seeks to increase the social gatherings of medical men, so that feelings of kindness may be generated which may bear fruit in mutual helpfulness in the difficulties of their private work. All these advantages are to be secured in a good Division. In this Wakefield and Doncaster Division it seems as if certain difficulties existed as to central points of meeting. Your railway communication does not seem to lend itself to quick transit and return, and this is one great barrier to prolonged and frequent meetings. You are not like Leeds or Bradford, where the mass of members are in the cities themselves; but you have your own remedy for this difficulty. The rules of the Association do not prevent you dividing your area into more than one Division. Barnsley has most wisely acted upon this principle and formed a Division of its own, and there is no reason why, as a centre, it should not include and draw into itself all the members in surrounding towns and country places which are most accessible to it by more rapid railway communication. Why should not a similar division be formed for Wakefield and Castleford, with Wakefield as a centre, and include the members in the places around it, such as Pontefract, etc., and all others most accessible to Wakefield by rail? There is no compulsion exercised by the Association against your own free and convenient arrangements. The great desire is, that you should join in such Divisions to secure by organization, mutual advice, assistance, and protection in the pursuit of your interests. May I venture to remark that it seems to me that the one thing the whole area requires to overcome is the supineness of many of its members, and their lack of belief that the Association has advantages to offer; and the only remedy I can recommend is for the more active members at once to form the Divisions, and from them and individually, to indoctrinate their colleagues with the truth of the convictions they themselves possess. I have heard that the Doncaster members feel a desire to gravitate towards Sheffield, but I do not see why they should prefer Sheffield to Barnsley or even Wakefield, if there is equal facility of railway communication; the matter, however, is for their own decision, but they should decide at once, for formation should be no longer delayed. With these general remarks, which I premise in order to commence a discussion, I need only add that if fresh organization is determined upon the materials for your procedure can be at once furnished to you. The official map of the Yorkshire Branch Divisions lies upon the table, and you can arrange your area as you think wise, since you are better judges of the requirements of its localities than one who is a comparative stranger to the district.

A general conversation ensued taking up the points in the statement and approving the suggestions laid down. Dr. KNOWLES, Chairman of the Barnsley Division, spoke of the grounds which had induced Barnsley members to form a separate Division of their own—their railway communication had much to do with preventing facile communication with the rest of the area. He concurred in the

suggestion to inaugurate another Division for the Wakefield, Pontefract, and Castleford Districts. He was of opinion that the Doncaster men were in more rapid communication with Wakefield than either Barnsley or Sheffield. These remarks were concurred in by Dr. SHINE, of Barnsley, who described the method adopted in calling together the members of the Association from their special districts in and around Barnsley, and the successful formation of the Barnsley Division. He also testified to the increase of kindlier feeling as a result of medical men meeting together. Drs. W. KEMP and HILLMAN, of Castleford, and Dr. OSMAN, of Pontefract, together with the CHAIRMAN, Dr. Roulston, made comments and inquiries, to all which Dr. GOYDER and Dr. METCALFE, of Bradford, made replies. Dr. GOYDER recommended the formation of a supplementary committee to draw up a circular and issue it to every member of the Association in the area proposed for the new Division, and convene an early meeting at Wakefield and at once elect a chairman, secretary and other officials, representatives and an executive committee, and so constitute the Division. This proposal was cordially acceded to, and a supplementary committee was thereupon appointed, with Dr. Hillman of Castleford as temporary secretary. The names of the gentlemen were as follows: Wakefield, Dr. Roulston, Dr. Stanger, Dr. Statter, and Dr. Walker; Pontefract, Dr. Osmond; Featherston, Dr. Steven; Castleford, Dr. Hillman and Dr. Kemp; Normanton, Dr. Sandford. The rules of the Yorkshire Branch, the map of its Divisions, and the rules of the Bradford Division were placed in the hands of Dr. Hillman, and it was recommended that a mutual agreement should be arrived at as to the limits of the areas to be allotted to the Barnsley Division and to the new Division to be called the "Wakefield, Pontefract, and Castleford Division." Dr. GOYDER promising to ascertain the wishes of the Doncaster members as to which area—that of Sheffield, or Barnsley, or Wakefield—they would conclude to ally themselves with. A very cordial, unanimous, and hopeful tone was displayed by the gentlemen present at the meeting, which, after the kindly expression of votes of thanks and the provision of tea, was dissolved.

An Address

ON

HOME AND HOSPITAL TREATMENT OF THE POOR AND THE LOW-WAGE EARNERS.

BASED ON THE MAJORITY REPORT OF THE ROYAL
COMMISSION ON THE POOR LAWS AND
RELIEF OF DISTRESS.

DELIVERED AT THE ANNUAL MEETING OF THE METROPOLITAN
COUNTIES BRANCH.

By J. FORD ANDERSON, M.D.,

PRESIDENT OF THE BRANCH.

I SHALL begin by saying how greatly I appreciate the honourable position in which I am placed by the votes of the Branch. I am sure that without your kind indulgence and support I cannot hope to discharge the duties satisfactorily, but with that help I hope to win through, and it shall be my aim to maintain the high reputation which has been gained for the office of President of the Branch by a long line of distinguished predecessors.

In this short study of home and hospital treatment of the poor and low-wage earners, which I now commence, I will ask you to consider the situation which would be created by the adoption of the Majority Report of the Royal Commission on the Poor Laws, with special reference to some of our London conditions. In carrying out this idea it must be acknowledged that the general scheme of the report in some of its applications is attractive, although other details would require to be carefully worked out, or even reconsidered.

It is not attempted to give more than an outline of the recommendations of the Commission, as it may be presumed that all who are present have read either the original report, or the admirable epitome in the *BRITISH MEDICAL JOURNAL* of February 20th. 1909. I would especially premise that I do not desire to be the champion of the Majority, as opposed to the Minority, Report. I selected

the Majority Report for my subject—which is, to a great extent, the co-ordination of hospitals—as it seemed to provide what is necessary.

The new and pervading principle in the report is the introduction of a spirit of efficiency and hopefulness into all branches of the service of the poor, which is absent in the Poor Law Act of 1834, and also the outcome of this principle in the following recommendations of the Commission, namely: (1) That medical assistance should be organized on a provident basis; (2) that the division of the Local Government Board, which has hitherto dealt with the relief of the poor, should in future be known as the "Public Assistance Division," and, subsidiary to this, the following two bodies should be constituted, namely:

(a) A Public Assistance Authority in an enlarged area of the county or county borough, for central administration and control. In London this would be the County Council, and its nominated committee. This committee would be a statutory committee, and one-fourth of its number would be nominees of the Local Government Board.

(b) A Local Assistance Committee, which would supply the local knowledge which is so essential, working in co-operation with the respective authority. In London this would be nominated by the borough council.

These two bodies would take over the duties of the guardians, and would go beyond them in the direction of co-operation with other State and voluntary agencies for supplying help which is preventive, curative, and restorative, and it ought to be a legitimate source of satisfaction to us that the Royal Commission suggests the inclusion, both in the central authority and in the Local Assistance Committee, of representatives of the local Branch or Branches of the British Medical Association, appointed *ad hoc* on the nomination of such Branch or Branches. The report here seems to provide that the representation shall be a true representation, the central authority appointing the nominee or nominees of the Branch or Branches, and, although the Branch only is mentioned, it is manifestly intended that Divisions would have similar privileges.

HOME TREATMENT.

The principles laid down find their first application in home treatment; the instincts of independence and self-maintenance are to be fostered by the establishment of public medical services open to the whole profession, on a provident basis, and with strict wage limits. That is the central idea, and on that basis the whole scheme for the medical care of the poorer classes is reared. The public medical service scheme has been elaborated by the British Medical Association, and is carried out already successfully in six or seven English towns, and therefore requires no comment here as to the details of working, but, under the report of the Royal Commission, there is a new and most important rôle assigned to the public medical services. They will co-operate with the hospitals and other bodies which carry out public treatment, and the public assistance authority, through the local committees, will contribute to the payments of such of the poor as are handed over to the services. This means that the Poor Law, as we have known it, represented by the guardians, would be at an end, and its place would be taken by the public assistance authorities, who would carry it out in co-operation with education authorities, voluntary charities, and other bodies. The public assistance officer would take the place of the relieving officer—the district medical officer would continue to act—but the duty of both those officials would be, after providing for emergencies, to endeavour to transfer applicants for medical aid to the Public Medical Service, even if the authority should have to pay for the purpose.

Thus, the idea is to remove poverty off the scene; but whether the day will ever come when we shall not have the poor with us cannot be foretold.

Referring to what I have said incidentally with regard to the Poor Law, I wish it to be understood that I am offering no opinion as to the question of the Minority or Majority Report which is at present under consideration by Poor Law medical officers. I have not all the data, as they must have, for arriving at a conclusion. Besides my object here was to show what the public assistance authorities would be, and how their constitution makes for co-ordination of home and hospital treatment on principles recognized for the most part by the British Medical Association.

HOSPITAL TREATMENT.

It must be admitted that our hospital system requires reorganization. Hospital accommodation is at present supplied by the Poor Law and sanitary authorities, and also by voluntary or charitable hospitals. To these may be added a fourth class, namely, institutions provided by the education authorities for epileptic children and other classes of defective or diseased children, and the "school clinics" which are being established may possibly lead to indefinite extension in this direction. All these varieties are providing similar services, each on its own lines, without any co-operation worth mentioning, which does not tend either to efficiency or economy, and if the coming legislation can co-ordinate these institutions as the report proposes, it will be a boon to our social life.

VOLUNTARY HOSPITALS.

In the voluntary hospitals of the future considerable changes are foreshadowed, for they are to occupy a distinct place in the scheme of public assistance. The hospital dispensaries would be suppressed, or, in other words, the out-patient departments would cease to be open to all-comers, and would be used for consultations as the British Medical Association advises. It is suggested that precautions should be taken against the overlapping of Poor Law and voluntary agencies, as it has been shown in the report that the voluntary hospitals have been largely carrying on the work of the Poor Law. Thus at the London Hospital it was ascertained that 38 per cent. of the out-patients were fit subjects for Poor Law relief; some of these were actually receiving relief, but a much greater number are only stated to be of the same class as those receiving relief. Thus, if 1,312,000 new out-patients, as in 1906, are attending the general hospitals of London, 38 per cent. would be equivalent to 490,560, or, in other words, little less than half a million destitute persons are being treated annually to whom suitable maintenance is impossible, and in whose case, therefore, out-patient treatment is futile. It would also follow that the hospitals would cease to compete with the provident medical institutions, and this would be all the more necessary in view of the extending establishment of public medical services and their increased importance in the future. It cannot be doubted that the provident dispensaries in London have never succeeded as they should have done, owing to the facilities offered by the out-patient departments and the free dispensaries. If the hospitals were thus relieved of the destitute patients, the patients eligible for public medical services, and the uncertain number of well-to-do patients who might be treated privately, they need not fear that illustrations of disease would be wanting. The number of cases no doubt would be reduced, and happily so, but with outside practitioners co-operating, and improved co-ordination with other bodies, the hospital clinic might become our glory.

PUBLIC ASSISTANCE HOSPITALS.

The public assistance hospitals of the Commission would include the present Poor Law infirmaries and the hospitals of the sanitary authorities, whether general or special; also the "school clinics" of the education authority—in any case, the education and public assistance authorities must work in strict co-ordination in order to prevent overlapping. These public and voluntary hospitals would be organized on defined principles, and would each undertake the work deputed to them on strict co-operative lines—thus the destitute and the assisted patients would be referred to the public assistance hospitals, probably gratuitously, and the provident members would, on the recommendations of their medical attendants, be sent to their respective co-operating voluntary hospitals provided their cases are suitable. These two classes of hospitals would necessarily remain, however, to a large extent interchangeable—as, for example, in emergencies—and the objections to such interchange would be met in the case of public assistance hospitals by arranging for recovery of the cost, if possible, and by clearly laying down that no disfranchisement or stigma of pauperism would be incurred by applying for medical aid, and in the case of voluntary hospitals by the provision of pay beds on approved principles where patients might pay for themselves or be paid for by the public assistance authority. It would follow that when the patient pays in the pay ward or pay beds of a voluntary hospital he should be allowed to select his

medical attendant as in cottage hospitals, and if paid for by the public assistance authority he should be attended by a medical officer appointed *ad hoc* by such authority. These arrangements would do away with the anomaly which prevails at present of treating Poor Law cases for payment in wards dedicated to charity.

TEACHING AND STAFFING.

Before suggesting further means of co-ordination between the public assistance hospitals on the one hand and voluntary hospitals and outside practitioners on the other, I will sketch in a few words the present position.

There are 30 Poor Law infirmaries in London, containing 16,300 beds, against 10,224 beds in the voluntary hospitals—that is to say, 6,000 more beds in the former than in the latter—and these infirmaries are distributed uniformly over the metropolitan boroughs, as shown in the map published in the BRITISH MEDICAL JOURNAL of January 9th, 1909. The medical work of these institutions is conducted by resident medical officers, who pass their active professional lives in the service, and although they are mostly able and devoted officers—many of them very much so—they are unable to utilize fully the vast material at their disposal, which is thus lost for the advancement of medical science and practice; and, with the view of improving these conditions, it was suggested by several witnesses before the Royal Commission that the public assistance hospitals should be used for clinical teaching. This was cordially approved by the Commission, and sooner or later may be carried out. As to the methods of selection, I am informed there would not be much difficulty in giving opportunities to teachers and senior students of using the valuable material in those hospitals for educational purposes. I think it would also be a useful reform if outside practitioners were brought into touch with the public assistance hospitals; and, although apparently there is no mention of the staffing in the report of the Commission beyond the recurring remarks that the Poor Law infirmaries are insufficiently staffed, I think visiting practitioners might be appointed for at least a portion of the service of the public assistance hospitals, and preferably those residing in the locality, if able and willing to perform the duties. I do not suggest the details, but there are precedents to guide us. In any scheme the existing resident staff must be safeguarded. In connexion with this matter of staffing, it must be admitted that there is an absence in London of opportunities for practitioners usually unattached to voluntary hospitals of treating patients in public institutions, except in some suburban cottage hospitals; and it is to be hoped that we may see a new career opened for many of them in connexion with public assistance hospitals. It cannot be denied that private practice by itself has the tendency to stereotype practitioners, while the public practice suggested would stimulate them to keep abreast of medical progress, and would tend to raise the prestige and usefulness of the profession generally.

A good deal has been said about co-operation between different authorities and institutions—that is indeed the keynote of the whole scheme; but certainly the co-operation which is implied rather than expressed is the most important of all. If the profession could realize that agreement can only be attained on the principle of the greatest good of the greatest number, then shall we be able to make our position what we desire it to be.

In conclusion, these matters are worthy of consideration by all members of this Branch, and without doubt the Central Poor Law Committee of the Association will gladly receive any responsible suggestions. Two of my predecessors in this chair in recent years devoted their inaugural addresses to the importance of the work of the British Medical Association, and the desirability of new members joining the Association. That is not exactly the course that has been adopted here, but it is obvious as a corollary to this address, that if all the powers referred to to-day are to be undertaken or even considered in connexion with the service of the poor, our Divisions should wake up and endeavour to rouse their members to take a more active part in the work of the Association, and our medical brethren outside the Association might be urged to come in and help the profession to exercise these powers, if called upon to do so.

THE METROPOLITAN COUNTIES BRANCH ELECTION.

PROPORTIONAL VOTING.

The annual elections of the officers of this Branch and of its representatives on the Central Council again took place in accordance with the principles of proportional representation. The only nominations received for the posts of President, Treasurer, and Honorary Secretary were those of Dr. Lauriston E. Shaw, Mr. H. B. Robinson, and Dr. E. W. Goodall respectively, and for these offices, therefore, no voting was required. For the election of four Vice-Presidents five nominations were received, and for the election of five representatives on the Central Council there were eight nominations. The counting of the votes for these two elections took place on June 14th, 1909, at the offices of the British Medical Association, and, as the practical working of improved electoral methods is now the subject of an inquiry by a Royal Commission, the following details of the proceedings may be of interest.

The following directions to voters had been issued with each ballot paper:

Place the figure 1 against the name of the candidate who is your first choice. In order to secure in the fullest measure the proportionate representation of the several Divisions of the Branch (which is the object of this method of voting), you should also place the figures 2, 3, 4, 5, so far as you care to go, against the names of the remaining candidates in the order of your preference.

Do not place the same figure against more than one name.

The scrutinies for the two elections were conducted simultaneously, and this description of the proceedings will be more readily understood if the two main principles of the new system of voting are borne in mind. The first principle is that each elector has one vote only, which is recorded by placing the figure 1 against the name of the candidate who is his first choice. The marking of additional preferences only serves to indicate to whom the elector desires his vote to be transferred if his vote cannot be utilized in the election of his first choice. The second principle is that a candidate, in order to ensure his election, need only poll a certain proportion of the votes cast. This proportion, which is the least number of votes sufficient to render certain the election of a candidate, is called the Quota. Thus in a single-member constituency a candidate who polls one more than half the votes must be elected; the quota is therefore in this case one more than half. So, in a two-member constituency, the quota is one more than a third, for not more than two candidates can poll so much; and in a three-member constituency one more than a fourth, and so on. In general terms the quota is ascertained by dividing the votes polled by one more than the number of seats to be filled, and adding one to the result.

The first operation in the election of the Vice-Presidents was to ascertain the number of votes obtained by each candidate. The ballot papers were sorted into groups according to the candidates marked 1, and the number of papers in each group counted. These processes were checked, and the result declared as follows:

ELECTION OF VICE-PRESIDENTS.

Result of First Count.

	No. of Votes.
Thorne, Atwood	154
Greenwood, Major	137
Biggs, M. G.	96
Sibley, W. Knowsley	75
Walker, George	35
Total	497

The next operation was the ascertainment of the quota. There were four vacancies, and the quota—one more than a fifth of the total votes—was 100. Both Mr. Thorne and Dr. Greenwood had obtained more than the necessary quota of votes, and therefore were declared elected. Mr. Thorne, the highest on the poll, had obtained 54 votes more than the quota, and these surplus votes were available for transfer to other candidates. If the supporters of Mr. Thorne had all indicated Dr. Walker as their second preference, the latter, with the aid of these surplus votes, would have been carried ahead of Dr. Sibley. It was, therefore, necessary to ascertain to whom these surplus votes should be transferred. For this purpose the whole of Mr. Thorne's papers were resorted, according to the highest available preferences, a separate heap being

made for each of the candidates not yet elected, and a further heap being made for those papers on which no further preferences were shown. The papers in these heaps were counted, and from each candidate's heap a number of votes equal to his share of the surplus was transferred to him. The details are set forth in the following table:

	Second Preferences shown on Mr. Thorne's Papers.	Votes Transferred to Second Preferences.	Votes Retained for Mr. Thorne's Quota.
Biggs	26	14	12
Sibley	59	30	29
Walker	20	10	10
No further preferences indicated	49	—	49
Totals	154	54	100

This table may, perhaps, need a word of explanation. There were 49 papers on which no further preferences were shown, and the total number of papers to be taken into consideration in transferring the surplus was therefore only 105 (that is, 49 less than the total, 154). The surplus was 54, and Dr. Biggs's proportionate share of this surplus was ascertained by multiplying the number of preferences shown for him, 26, by $\frac{54}{105}$. The result, after the adjustment of fractions, was 14. The share for each candidate was ascertained in a similar manner, and as a result of the transfer the poll stood as follows:

Thorne	Elected
Greenwood	Elected
Biggs	110
Sibley	105
Walker	45

Drs. Biggs and Sibley, having obtained more than the quota, were declared elected, and the election was at an end.

The election for representatives on the Central Council was conducted in the same way. There were, in this case, eight candidates, and, as the transfers required were similar to that already described, only the results need be given. The figures for the first count were as follows:

ELECTION OF REPRESENTATIVES ON CENTRAL COUNCIL.

Result of First Count.

	No. of Votes.
Horsley, Sir Victor	260
Shaw, Lauriston E.	86
Anderson, J. Ford	85
Wallace, Frederick	34
Haslip, G. E.	29
Ker, Hugh R.	28
Hilliard, Harvey	19
Thomson, G. J. Crawford	19
Total	558

In this election the quota was 94—that is, one more than a sixth of the total votes. Sir Victor Horsley obtained the quota, with 166 votes to spare. All his papers were sorted according to the second preferences marked, but, as the shares of the surplus obtained by Drs. Shaw and Anderson brought them both above the quota, it became necessary to proceed to an examination of the third preferences before the surplus was disposed of. At the conclusion of the transfer the poll was as follows:

	No. of Votes.
Horsley, Sir Victor	Elected
Shaw, Lauriston E.	94
Anderson, J. Ford	94
Ker, Hugh R.	87
Haslip, G. E.	68
Wallace, Frederick	52
Hilliard, Harvey	35
Thomson, G. J. Crawford	34

Drs. Shaw and Anderson, having obtained the quota, were declared elected, and the transfer of Sir Victor Horsley's surplus had not only had this result, but had placed Drs. Ker and Haslip in a very favourable position. There were still two vacancies remaining unfilled, and the next operation was the distribution of the votes of the candidates lowest on the poll, beginning from the bottom and working upwards. The candidates in question could

not secure election, and their supporters had indicated by their preferences to whom in that event their votes were to be transferred. After the transfer of the votes of Drs. Thomson and Hilliard in the order named, the poll stood as follows:

	No. of Votes.
Horsley, Sir Victor ... ..	... Elected
Shaw, Lauriston E. ....	... Elected
Anderson, J. Ford ... ..	... Elected
Ker, Hugh R.	101
Haslip, G. E.	95
Wallace, Frederick	62

It was not necessary to proceed with any further distribution of votes, and Drs. Ker and Haslip were elected to fill the last two vacancies.

A word should be added as to the number of spoiled votes. In the election for representatives on the Council no less than thirty ballot papers, although correctly marked, were not signed, and were accordingly declared by the scrutineers to be invalid. It was obvious that the votes given on these papers were bona fide votes, and, as the signing of the ballot paper is not required in a public election, the question arises whether the regulation on this point should be altered. In previous elections a considerable number of ballot papers have been disqualified for the same reason. In addition, seven other papers were spoiled; one was blank, in three cases crosses instead of figures had been placed against the names of several candidates, and in the other three cases the figure 1 had been placed against the name of five candidates. In the election for Vice-Presidents the figures were similar, but a larger number of papers were sent in blank.

The two elections were completed in an hour and a half. The operations consist for the most part of sorting and counting ballot papers, and this takes less time than the old method of entering the particulars of each ballot paper upon recording sheets, this method being necessary when each elector has as many votes as there are members to be returned. It is necessary with the proportional system to make several heaps of the ballot papers, and therefore a good sized table is required so as to enable the scrutineers to keep the heaps quite separate from one another.

The great advantage of the system, however, is that it enables all Divisions of the Branch to take an effective part in the selection of its officers and representatives on the Central Council. It enables any considerable section of the Branch to obtain a representative; it prevents the monopoly of representation by the largest Divisions, whilst it gives to members of all Divisions not only freedom of choice but a certainty that their vote will as far as possible be counted towards the election of some one representative.

For those who desire to follow the details of the election of representatives on the Central Council the full result sheet is appended:

Election of Five Representatives on Central Council.

No. of Votes, 558. Quota = $\frac{558}{6} + 1 = 94$.

Names of Candidates.	First Count.	Distribution of Horsley's Surplus.	Result.	Distribution of Thomson's Votes.	Result.	Distribution of Hilliard's Votes.	Final Result.
Anderson, J. Ford ...	83	+11	94		94		94
Haslip, G. E. ...	29	+39	68	+9	77	+16	93
Hilliard, Harvey ...	19	+16	35	+5	40	-40	
Horsley, Sir Victor ...	260	-166	94		94		94
Ker, Hugh R. ...	28	+59	87	+5	92	+9	101
Shaw, Lauriston E. ...	86	+8	94		94		94
Thomson, G. J. Crawford	19	+15	34	-34			
Wallace, Frederick ...	34	+18	52	+7	59	+3	62
No further preferences indicated				+8	8	+12	20
Totals ...	558		558		558		558

ATWOOD THORNE,
E. W. GOODALL,
Honorary Secretaries, Metropolitan
Counties Branch.

To ensure the insertion of notices in this column, they must be received at the Central Offices of the Association not later than the first post on Tuesday.

Association Notices.

ANNUAL GENERAL MEETING.

Notice is hereby given that the 1909 Annual General Meeting of the British Medical Association will be held in the Assembly Hall, Belfast, on Friday, July 23rd, at Twelve noon.

[This Meeting is to comply with Article XII, and will adjourn forthwith until Tuesday, July 27th, at 2.30 o'clock.]

ANNUAL REPRESENTATIVE MEETING.

Also, notice is hereby given that the 1909 Annual Representative Meeting will be held in the Assembly Hall, Belfast, on Friday, July 23rd (and following days as required), immediately after the Annual General Meeting, fixed for Twelve noon, on Friday, July 23rd.

BY ORDER OF THE COUNCIL,

GUY ELLISTON.

May, 1909.

COUNCIL MEETING.

A MEETING of the Council will be held at 2 o'clock in the afternoon of Wednesday, June 30th, in the new Council Room, at 429, Strand, London, W.C.

By Order,

GUY ELLISTON.

June 10th, 1909.

NOTICE OF THE FORMATION OF A NEW DIVISION OF THE ASSOCIATION.

POVERTY BAY DIVISION.

THE following change has been made in accordance with the regulations of the Association, and takes effect from the date of publication of this notice:

The members of the Association resident in the counties of Cook, Waipatu, and Waikohu, at present forming part of the Auckland Division (New Zealand Branch), are constituted a Division of the Association designated the Poverty Bay Division.

NOTICE OF CHANGES OF BOUNDARIES OF BRANCHES.

THE following change has been made in accordance with the regulations of the Association, and takes effect from the date of the publication of this notice:

That the Norwood Division be transferred from the South-Eastern Branch to the Metropolitan Counties Branch.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH: BATH DIVISION.—The annual meeting of this Division will be held at the Royal United Hospital on Saturday, June 26th, at 6.0 p.m. Business: (1) To elect officers. (2) To receive annual report. (3) To consider business of Annual Representative Meeting. (4) To consider matters referred to Divisions (see SUPPLEMENT TO BRITISH MEDICAL JOURNAL, May 8th). (5) To modify Divisional Rule No. 7, for ensuring earlier appointment of Representative.—D. LESLIE BEATE, Honorary Secretary.

BIRMINGHAM BRANCH: CENTRAL DIVISION.—The annual meeting of this Division will be held at the Medical Institute on Wednesday, June 30th, at 3.30 p.m., at which the election of officers for the ensuing year will be held. Nominations in writing for the offices of Chairman, Vice-Chairman, and two Honorary Secretaries must reach the Honorary Secretaries not later than Wednesday, June 9th.—A. W. NUTHALL, W. TRACY LYDALL, Honorary Secretaries.

CAMBRIDGE AND HUNTINGDON BRANCH.—The annual meeting of the Cambridge and Huntingdon Branch will be held at Cambridge on Tuesday, July 13th, at 12.30.—H. B. RODERICK, Honorary Secretary, Cambridge.

DORSET AND WEST HANTS BRANCH.—The summer meeting of this Branch will be held in Christchurch, Hants, on Wednesday, July 7th. Members wishing to read papers, show cases, exhibit specimens, or propose new members, must communicate with the undersigned not later than Thursday, June 24th.—JAMES DAVISON, Honorary Secretary, "Streteplace," Bournemouth.

EAST ANGLIAN BRANCH.—The annual meeting of the Branch will be held at the Grand Hotel, Clacton-on-Sea, on Thursday, July 8th.—B. H. NICHOLSON, East Lodge, Colchester, Honorary Secretary.

EDINBURGH BRANCH.—The annual business meeting of the Branch will be held in the Hall of the Royal College of Physicians, Queen Street, Edinburgh, on the afternoon of Wednesday, July 7th, at 4 o'clock p.m. In addition to the business meeting, a discussion will take place upon the treatment of chronic constipation at 4.45 p.m. Members will dine together in the Royal British Hotel at 6.30 o'clock.—A. LOGAN TURNER, FRANCIS D. BOYD, Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH—Science Committee.—Gentlemen who would be willing to give addresses, demonstrations, etc., at Division meetings during the course of next winter will oblige by sending their names and the title of the subjects they propose to deal with as soon as possible to P. CHARLES LARKIN, Branch Secretary, 54, Rodney Street, Liverpool.

METROPOLITAN COUNTIES BRANCH: KENSINGTON DIVISION.—The conference agreed upon on May 12th has been fixed provisionally for July 6th. Any member of the Division who desires to be present should send in his name to Dr. G. CRICHTON, 114, Lexham Gardens, Kensington, W.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER DIVISION.—A general meeting of this Division will be held on Thursday, July 1st, at the Criterion Restaurant. Dinner, 7.30 p.m. Business, 8.30 p.m. A discussion will be opened by Sir Thomas Clifford Allbutt, K.C.B.—J. HOWELL EVANS, Honorary Secretary.

NORTH OF ENGLAND BRANCH.—The annual meeting of this Branch will be held on Tuesday, July 6th, at the Royal Victoria Infirmary, Newcastle-on-Tyne, 9 a.m. to 1 p.m. The Executive Committee of the Newcastle Division B.M.A. are making the following arrangements to hold an "all-day" scientific meeting, and desire hearty co-operation of all medical men residing in the Branch. Gentlemen showing cases or specimens are asked to be good enough to communicate their intention to Mr. Onston, 1, Saville Place, Newcastle-on-Tyne, 1 p.m.: Lunch, Business, 2 p.m. Mr. Rutherford Morrison, Senior Surgeon Royal Victoria Infirmary, President-elect, will take office as President of the Branch for 1909-10. (1) Election of Honorary Secretaries and Treasurer. (2) Election of President-elect. 3.30 p.m.: Visit to Walkergate Fever Hospital, where some very interesting cases will be shown. Visit to Armstrong and Whitworth Works, Elswick. Golf match.—A. E. MORISON, President, D. F. TÖDD, Honorary Secretary and Treasurer, Sunderland.

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.—The annual meeting will be held on Wednesday, June 30th, at the Grand Hotel, Morecambe, at 3.30 p.m. Members willing to show cases or specimens are requested to communicate with A. S. BARLING, Honorary Secretary, Lancaster.

NORTH WALES BRANCH.—The annual meeting will be held at Blaenau Ffestiniog, on Tuesday, July 13th. Members having papers to read, cases or specimens to show, are asked to notify their intention to the Honorary Secretary on or before July 1st.—H. JONES ROBERTS, Honorary Secretary, Penygroes.

OXFORD AND READING BRANCH.—The annual meeting of this Branch will be held at the Radcliffe Infirmary, Oxford, on Wednesday afternoon, June 30th. The dinner after the meeting

will be held at Lincoln College. The President for 1909-10 will be H. G. A. White Locke, Esq., M.D., F.R.C.S.—W. T. FREEMAN, Honorary Secretary.

PERTHSHIRE BRANCH.—A special meeting of the Branch will be held in the Perth Infirmary, on Monday, June 28th, at 3.30 p.m. Business: Consider provisional order to curtail speed of motor cars in Perth to 10 miles an hour. Council meeting at 3.20 p.m.—W. A. TAYLOR, ALEX. TROTTER, Joint Honorary Secretaries, Perth.

SOUTH-EASTERN OF IRELAND BRANCH.—A meeting of this Branch, as also a meeting of the Branch Council and the local Division, will be held at the Club House, Carlow, on Wednesday, July 7th, at 5.30 o'clock. Agenda: (1) Minutes of last meeting. (2) Letters of apology. (3) Correspondence. (4) Dr. O'Brien will move: That the third Wednesday in June be fixed for our future annual Branch meetings at Clonmel, at 12 noon. (5) Dr. Laffan will move: That that portion of Dr. Walsh's resolution designated (a) and carried as amended at Clonmel, which refers to the introduction of the competitive system into the Irish Poor Law Service or into any part thereof, be and is hereby rescinded. (6) Any other business.—J. QUIRKE, Honorary Secretary, Piltown.

SOUTH MIDLAND BRANCH: BEDFORD AND HERTS DIVISION.—The annual meeting of the Division will be held at the Stuart Rooms, St. George's Street, Bedford, at 3 p.m., on Thursday, July 1st. Dr. G. F. Dixon in the chair. The meeting will be preceded by a luncheon at the Stuart Rooms at 1.30, and the Secretary will be much obliged if those wishing to attend the luncheon, and who have not already notified him, will do so not later than June 28th. Business: Minutes; annual report of the Division; election of officers for the ensuing year; inquiry into unqualified practice. Dr. Lauriston Shaw, Physician to Guy's Hospital, will open a discussion on some points in the diagnosis and treatment of common gastric disorders.—E. H. COBB, Honorary Secretary, Belmont, Stevenage.

SOUTH MIDLAND BRANCH: NORTHAMPTONSHIRE DIVISION.—The annual meeting of the Division will be held in the board room of the General Hospital, Northampton, on Tuesday, June 29th, at 2.30. The meeting will be preceded by a luncheon at Franklin's Restaurant at 1.30, and the Secretary will be much obliged if those wishing to attend the luncheon will notify him at least two days beforehand. Business: Minutes. Annual report. Election of officers for ensuing year. Report on medical treatment of school children. Report on treatment of ophthalmia neonatorum. Any other business.—P. S. HICHENS, M.D., Honorary Secretary, Northampton.

SOUTH-WESTERN BRANCH.—The seventieth annual meeting will be held on Wednesday, June 30th, at the Bridge Hall, Bideford, at 3.15 p.m., when Dr. Banks will resign the chair to Dr. Tove, who will deliver his inaugural address. The report of the Branch Council for the year 1908-9 and annual financial statement for the year 1908 will be presented to the meeting, and the officers of the Branch will be elected for the year 1909-10. Luncheon, by the invitation of the President-Elect, will take place from 1 to 2.30 p.m. at the Royal Hotel, Bideford. The annual dinner will be held at 6.15 for 6.30 at the Royal Hotel. Tickets, 5s. each (exclusive of wine), can be had from Dr. E. Pearson, Strand House, Bideford. Dr. Pearson, Strand House, Bideford, has kindly promised to entertain the members at tea at 4.30 p.m. Members desiring to be accommodated with bed and breakfast are requested to send their names to Dr. E. Pearson, Bideford, who will endeavour to arrange for them.—RUSSELL COOMBE, Honorary Secretary, 5, Barnfield Crescent, Exeter.

WEST SOMERSET BRANCH.—The sixty-seventh annual meeting of this Branch will be held at the London Hotel, Taunton, on Friday, July 2nd, at 12.30 p.m., when the chair will be taken by the new President, Mr. Chas. Farrant. Agenda: Annual report. Balance-sheet for 1908. Election of President-elect. Election of Representative. Election of other officers. Letter from Colonel Boyle re the examination of recruits for the Somerset Territorials. President's address, "Haematuria from a Surgical Standpoint." Lunch will be served by 1.30, at a charge of 5s. per head, exclusive of wine, etc. After lunch those present will become the guests of the President, and will be driven to the Pickering Golf Links (four miles), which will be at their disposal, and where they will be entertained to tea. Members are requested to intimate to the Honorary Secretary by Tuesday, June 29th, if they intend to be present at the lunch, and wish to be driven to Pickering.—W. B. WINCKWORTH, Honorary Secretary.

YORKSHIRE BRANCH.—The annual meeting of the Branch will be held at the Grand Hotel, Scarborough, on Saturday, June 26th.—ADOLPH BRONNER, Honorary Secretary, 33, Manor Row, Bradford.

British Medical Association.

ANNUAL MEETING, BELFAST.

PRELIMINARY PROGRAMME OF ENTERTAINMENTS.

The following is a preliminary programme of the entertainments arranged in connexion with the forthcoming annual meeting of the British Medical Association to be held at Belfast next month. The programme is subject to alteration.

TUESDAY, JULY 27TH.

- 10 to 12 A.M. } Inspection of York Street Flax Spinning and
and
2.30 to 4.30 P.M. } Weaving Company's Works (limited to 16
each time).
- 2 to 4 P.M.—Inspection of Messrs. William Ewart and Son's Works, Flax Spinning and Weaving.
- 3 to 5 P.M.—Inspection of Harbour and Docks at the invitation of the Belfast Harbour Commissioners, by steamer. Robert Thompson, Esq., Chairman, will entertain the visitors at tea on board (limited to 150).
- 4 to 6 P.M.—Reception at Mater Infirmorum Hospital.

WEDNESDAY, JULY 28TH.

- 9.15 A.M.—Annual Meeting of Medical Libraries' Association.
- 10 to 12 A.M. } Inspection of York Street Flax Spinning and
and
2.30 to 4.30 P.M. } Weaving Company's Works (limited to 16
each time).
- 2.30 P.M.—Visit to Belfast Rope Works Company's Premises.
- 2.30 P.M.—Visit to Messrs. John Shaw, Brown and Co.'s Premises, Damask Weaving.
- 4 to 6 P.M.—Garden Party given by the President and Lady Whitla at Lennoxvale House.
- 8 to 11 P.M.—Ladies' Reception, given by local members at the Opera House. Plays will be performed by members of the Ulster Literary Theatre.

THURSDAY, JULY 29TH.

- 10 to 12 A.M. } Inspection of York Street Flax Spinning and
and
2.30 to 4.30 P.M. } Weaving Company's Works (limited to 16
each time).
- 2.30 to 4.30 P.M.—Inspection of Messrs. Harland and Wolff's Works.

N.B.—Members wishing to visit these works are specially requested to send on a postcard their names to the Honorary Local Secretaries, Queen's College, Belfast, as soon as possible.

- 1.30 P.M.—Luncheon at Messrs. Dunville and Co.'s Warehouse, and subsequent inspection of Distillery (limited to 100).

- 12 NOON.—Cricket Match at the North of Ireland Cricket Company's Grounds. (See below.)

Garden Party given by Sir Thomas and Lady Dixon at Hillsborough Castle. Train from Great Northern Railway. For times see *Daily Journal*. (Limited to 150.)

Drive in County Down, including visit to Forster Green Hospital and Sanatorium; to Belvoir Park (tea), with inspection of Model Dairy; and to Purdysburn Hospital (limited to 100). Buses will start from the College at 2.30.

- 3 P.M.—Reception at the Royal Victoria Hospital given by the Chairman, James Davidson, Esq. (limited to 500).

Reception given by the Right Hon. the Lord Mayor in the City Hall.

FRIDAY, JULY 30TH.

- 10 to 12 A.M. } Inspection of York Street Flax Spinning and
and
2.30 to 4.30 P.M. } Weaving Company's Works (limited to 16
each time).

Golf match at Newcastle for the Belfast Cup, presented by the Ulster Medical Society. Competitors will be entertained to luncheon and tea in the Club House of the Royal County Down Golf Club, names to be sent beforehand on postcard to the Honorary Local Secretaries, Queen's College, Belfast.

- 3 P.M.—Garden Party at the Royal North of Ireland Yacht Club's Club House, Cultra, with yacht race for members. Frequent trains from County Down Railway Station. See *Daily Journal*. (Limited to 200.)

- 4 to 6 P.M.—Garden Party given by R. J. McMorde, Esq., at Cabin Hill, Knock, Belfast. (Limited to 250.)

Reception given by the President and Members of the Ulster Branch in the Botanic Gardens.

Bowling.—The Belfast Bowling Club has kindly offered the use of their fine ground to members of the Association attending the Belfast meeting. The ground is only two minutes' walk from the College. Any members wishing to take part in a match are asked to send their names on a postcard to Dr. John Rusk, 188, Antrim Road, Belfast.

Cricket Match.—A cricket match for the members of the British Medical Association visiting Belfast will be held on Thursday, July 29th, on the grounds of the North of Ireland Cricket Club, which are only ten minutes' walk from Queen's College. Dr. J. W. Taylor has kindly arranged to give luncheon to the teams, and afternoon tea to them and the spectators as well. Cricketers members who are willing to take part in the match are asked to communicate as soon as possible with Dr. J. W. Taylor, Dunelin, Malone Road, Belfast.

CATHEDRAL SERVICE.

The Bishop of Down, Connor, and Dromore has arranged that the Sunday morning service at the Cathedral (11.30 a.m., June 25th) shall be a special service for medical men. There will be special hymns printed, the Bishop will preach, and seats will be reserved for members of the Association.

Naval and Military Appointments.

ARMY MEDICAL SERVICE.

STURGEON-GENERAL P. M. ELLIS. Principal Medical Officer, 8th Lucknow Division, has been granted six months' leave out of India, on medical certificate. Colonel L. E. ANDERSON has been appointed to office as Principal Medical Officer during Surgeon-General Ellis's absence.

Colonel J. G. HARWOOD. Principal Medical Officer, Presidency and Assam Brigade, has six months' leave out of India on private affairs.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL DABOOTHAN VARLAKER. Madras, retires from the service from April 1st. He was appointed Assistant Surgeon, March 30th, 1878, and made Surgeon-Lieutenant-Colonel, March 30th, 1898. He served during the Rumpas rebellion in 1879-80; during the Khadd rebellion in the Central Provinces in 1882; in the Burmese campaign in 1886-8 (medal with two clasps); and in the China war in 1900 (medal).

The retirement from the service is also announced of Major C. H. L. PAUL, M.B., Madras. He joined the department as Surgeon-Captain, July 28th, 1892, and became Major, July 28th, 1903.

Lieutenant-Colonel J. R. FORREST has assumed the duties of Principal Medical Officer, Burmah Division, vice Lieutenant-Colonel H. K. McKAY, C.B., C.I.E., who has been granted leave till December 2nd, pending retirement.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

First London (City of London) General Hospital.—To be Captains, whose services will be available on mobilization: F. W. ANDREWES, M.D., and W. L. BROWN, M.D., May 25th.

Second London Sanitary Company.—JOHN MCIR, M.B., to be Lieutenant, May 5th.

For Attachment to Units other than Medical Units.—Lieutenant JOHN PATON, M.D., to be Captain, February 16th. The promotion to a Majority of Capt. V. E. F. MACV. BOREHAM, M.B., dated September 28th, 1908, and not March 1st, 1909, as stated in the *London Gazette* of April 6th, 1909. Captain F. G. PROUDFOOT, M.D., from the 3rd Southern General Hospital, to be Captain, May 1st. DAVID G. KENNARD to be Lieutenant, May 17th.

ROYAL GARRISON ARTILLERY (VOLUNTEERS).

SURGEON-CAPTAIN T. W. BETCHER, M.B., 5th Lancashire, resigns his commission, March 31st, 1908.

CHANGES OF STATIONS.

The following changes of stations amongst the officers of the Army Medical Service have been officially reported to have taken place during May, 1909:

	FROM	TO
Colonel H. J. W. Barrow	Lahore	Dalhousie.
" L. E. Anderson	"	Allahabad
Lieut.-Col. H. J. R. Moberly	"	Naini Tal.
" M. O'Halloran, M.D.	Maymya	Darjeeling.
" H. E. Cree	"	Woolwich
Major M. P. C. Holt, D.S.O.	Calcutta	Chatham.
" H. I. Pocock	"	Kasauli.
" J. C. Weir, M.B.	"	Meerut.
" C. W. H. Whitestone, M.B.	"	Lucknow
" C. Dalton	"	Naini Tal.
" H. N. Dunn, M.B.	"	Quetta.
" K. M. Cameron, M.B.	"	Rawal Pindi.
" St. J. B. Killery	"	Aden.
Captain L. E. L. Parker	"	Amulala.
" H. M. Nicholls, M.B.	"	Calcutta
" A. A. Seeds, M.D.	"	Simla.
" H. H. Norman	"	Bareilly.
" E. F. Winstate	"	Chabautia.
" C. S. Smith, M.B.	"	Poonah.
" R. F. Ellery	"	Poonah.
" J. H. Brunsell, M.B.	"	Woolwich.
" J. L. Jones	"	Hounslow.
" D. L. Harding, F.R.C.S.I.	"	Bhamo.
" T. F. Ritchie, M.B.	"	Solon.
" T. J. Potter	"	Currugh.
" S. M. Adye-Curran	"	Glen Inaal
" W. F. Tyndale, C.M.G., M.B.	"	Camp.
" W. F. Ellis	"	Devonport.
" R. F. Ellery	"	Worcester.
" J. H. Brunsell, M.B.	"	Lahore.
" J. L. Jones	"	Dalhousie.
" D. L. Harding, F.R.C.S.I.	"	Woolwich.
" T. F. Ritchie, M.B.	"	Chatham.
" T. J. Potter	"	Fermoy.
" S. M. Adye-Curran	"	Belfast.
" W. F. Tyndale, C.M.G., M.B.	"	Calcutta.
" W. F. Ellis	"	Lucknow.
" R. F. Ellery	"	Lahore.
" J. H. Brunsell, M.B.	"	Dalhousie.
" J. L. Jones	"	Woolwich.
" D. L. Harding, F.R.C.S.I.	"	Chatham.
" T. F. Ritchie, M.B.	"	Fermoy.
" T. J. Potter	"	Belfast.
" S. M. Adye-Curran	"	Calcutta.
" W. F. Tyndale, C.M.G., M.B.	"	Lucknow.
" W. F. Ellis	"	Lahore.
" R. F. Ellery	"	Dalhousie.
" J. H. Brunsell, M.B.	"	Woolwich.
" J. L. Jones	"	Chatham.
" D. L. Harding, F.R.C.S.I.	"	Fermoy.
" T. F. Ritchie, M.B.	"	Belfast.
" T. J. Potter	"	Calcutta.
" S. M. Adye-Curran	"	Lucknow.
" W. F. Tyndale, C.M.G., M.B.	"	Lahore.
" W. F. Ellis	"	Dalhousie.

DIARY FOR THE WEEK.

POST-GRADUATE COURSES AND LECTURES.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Lectures: Tuesday, 3.45 p.m., Larynx; Friday, 3.45 p.m., Larynx.

LONDON SCHOOL OF CLINICAL MEDICINE, Seamen's Hospital, Greenwich.—Daily arrangements: Out-patient Demonstrations, 10 a.m.; Medical and Surgical Clinics, 2.15 p.m. and 5.15 p.m. respectively. Operations, 2 p.m. Special Clinics: Ear and Throat, at noon and 4 p.m., Monday, and noon, Thursday; Skin, at noon and 4 p.m., Thursday, and noon, Friday; Eye, 11 a.m., Wednesday and Saturday; Radiology, 4 p.m., Thursday. Special Lectures: Monday, 3.15 p.m., "After-treatment of Cases of Abdominal Section." Tuesday, 2.15 p.m., "Points in Diagnosis and Treatment of Aortic Disease."

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies Street, W.C.—The following clinical demonstrations have been arranged for next week, at 4 p.m. each day: Monday, Skin; Tuesday, Medical; Wednesday, Surgical; Thursday, Surgical; Friday, Ear, Nose, and Throat. Lectures, at 5.15 p.m. each day, will be given as follows: Monday, "Irritable Bladder"; Tuesday, "The Treatment of Latent Curvature"; Wednesday, "The Diagnostic and Therapeutic Use of Tuberculin"; Thursday, "Aphasia according to the New Doctrine" (illustrated by cases).

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Tuesday, 3.30 p.m., Surgery of the Nervous System; Friday, 3.30 p.m., Clinical Lecture on Spinal Cord.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Monday, Clinics, 10 a.m.; Surgical Out-patient, 2.30 p.m.; Medical Out-patient; Nose, Throat, and Ear; X rays; 4.30 p.m.; Medical In-patient. Tuesday, 10 a.m., Medical Out-patient Clinic; 2.30 p.m., Operations; Clinics: Surgical, Gynaecological; 4.30 p.m., Lecture: The Influence of Sex in Disease. Wednesday, 2.30 p.m., Medical Out-patient, Skin and Eye Clinics. Thursday, 2.30 p.m., Gynaecological Operations; Clinics: Medical Out-patient; Surgical out-patient; X rays; 3 p.m., Medical In-patient. Friday, Clinic, 10 a.m., Surgical Out-patient; 2.30 p.m., Operations; Clinics: Medical Out-patient; Eye; 3 p.m., Medical In-patient.

POST-GRADUATE COLLEGE, West London Hospital, Hazlemersmith Road, W.—The following are the arrangements for next week: Daily, 2 p.m., Medical and Surgical Clinics, X Rays; 2.30 p.m., Operations. Monday, Wednesday, and Thursday, 2 p.m., Saturday, at 10 a.m., Diseases of the Eyes. Tuesday and Friday, 10 a.m., Gynaecological Operations; 2 p.m. (and Wednesday and Saturday, 10 a.m.), Diseases of Throat, Nose, and Ear; 2.30 p.m., Diseases of the Skin. Wednesday and Saturday, 10 a.m., Diseases of Children; 2.30 p.m., Diseases of Women. Lectures: At 10 a.m., Monday and Thursday, Demonstration by Surgical Registrar; Friday, Demonstration by Medical Registrar. At 12 noon, Monday, Pathological Demonstration. At 12.15 p.m., Tuesday, Wednesday, and Saturday, Practical Medicine. At 5 p.m., Monday, Diagnosis of Surgical Diseases of the Urinary System; Tuesday, Clinical Lecture; Wednesday (Dr. Low), Bilharziosis; Thursday, Cases of Diseases of the Eyes; Friday, Valvular Disease: Aortic Regurgitation.

CALENDAR OF THE ASSOCIATION.

Date.	Meetings to be Held.	Date.	Meetings to be Held.
JUNE.		JULY (Continued).	
27 Sunday ..			
28 MONDAY ..	{ PERTSHIRE BRANCH, Special Meeting, Perth Infirmary, 3.30 p.m.	2 FRIDAY ..	{ WEST SOMERSET BRANCH, Annual Meeting, London Hotel, Taunton, 12.30 p.m.; Lunch, 1.30
29 TUESDAY ..	{ NORTHAMPTONSHIRE DIVISION, <i>South Midland Branch</i> , Annual Meeting, Board Room, General Hospital, Northampton, 2.30 p.m.; Lunch, Franklin's Restaurant, 1.30 p.m.	3 SATURDAY ..	
	{ CENTRAL COUNCIL, 2 p.m., New Council Room, 429, Strand, W.C.	4 Sunday ..	
	{ CENTRAL DIVISION, <i>Birmingham Branch</i> , Annual Meeting, Medical Institute, 3.30 p.m.	5 MONDAY ..	{ LONDON: Standing Ethical Subcommittee, 2 p.m.
	{ NORTH LANCASHIRE AND SOUTH WEST-MORLAND BRANCH, Annual Meeting, Grand Hotel, Morecambe, 3.30 p.m.		{ NORTH OF ENGLAND BRANCH, Annual Meeting, Royal Victoria Infirmary, Newcastle-on-Tyne; Scientific Meeting, 9 a.m. to 1 p.m.; Lunch, 1 p.m.; Business Meeting, 2 p.m.; Excursions and Golf Match, 3.30 p.m.
30 WEDNESDAY ..	{ OXFORD AND READING BRANCH, Annual Meeting, Radcliffe Infirmary, Oxford; Dinner, Lincoln College.	6 TUESDAY ..	{ DORSET AND WEST HANTS BRANCH, Summer Meeting, Christchurch.
	{ SOUTH-WESTERN BRANCH, Annual Meeting, Bridge Hall, Bideford, 3.15 p.m.; Luncheon, Royal Hotel, Bideford, 1 to 2.30 p.m.; Tea, Strand House, 4.30 p.m.; Annual Dinner, 6.15 to 6.30 p.m.		{ EDINBURGH BRANCH, Annual Business Meeting, Royal College of Physicians, Queen Street, Edinburgh, 4 p.m.; Discussion, 4.45 p.m.; Dinner, Royal British Hotel, 6.30 p.m.
	JULY.	7 WEDNESDAY ..	{ SOUTH-EASTERN OF IRELAND BRANCH, Club House, Carlow, 5 p.m.; also Branch Council and Local Division.
	{ BEDFORD AND HERTS DIVISION, <i>South Midland Branch</i> , Annual Meeting, Stuart Rooms, Cuthbert Street, Bedford, 5 p.m.; Luncheon, 1.30 p.m.	8 THURSDAY ..	
1 THURSDAY ..	{ EAST ANGLIAN BRANCH, Annual Meeting, Grand Hotel, Clacton-on-Sea.	9 FRIDAY ..	{ LONDON: Poor Law Committee, 2.30 p.m.
	{ WESTMINSTER DIVISION, <i>Metropolitan Counties Branch</i> , Criterion Restaurant, Dinner, 7.30 p.m.; Business, 8.30 p.m.; Discussion.	10 SATURDAY ..	
		11 Sunday ..	
		12 MONDAY ..	
		13 TUESDAY ..	{ CAMBRIDGE AND HUNTINGDON BRANCH, Annual Meeting, Cambridge, 12.30 p.m.
			{ NORTH WALES BRANCH, Annual Meeting, Blaenau Ffestiniog.

ANNUAL MEETING, BRITISH MEDICAL ASSOCIATION, BELFAST, 1909.

The Seventy-seventh Annual Meeting of the British Medical Association will be held at Belfast from July 23rd, to July 31st, 1909, under the Presidency of Sir William Whitla.

The Annual Representative Meeting commences in Belfast on July 23rd. The Presidential Address will be delivered on July 27th. The Sections will meet on July 28th, 29th, and 30th.

A preliminary programme of arrangements was published in the SUPPLEMENT of June 12th, p. 373. The Honorary Local Secretaries are: Henry Lawrence McKisack, M.D., M.R.C.P., 17, University Square, Belfast; Cecil Edward Shaw, M.A., M.D., M.Ch., 29, University Square, Belfast; and Howard Stevenson, B.A., M.B., F.R.C.S.I., 2, College Square North, Belfast.

The annual subscription to the BRITISH MEDICAL JOURNAL for non-members is £1 8s. 0d. for the United Kingdom, and £1 15s. 0d. for abroad.

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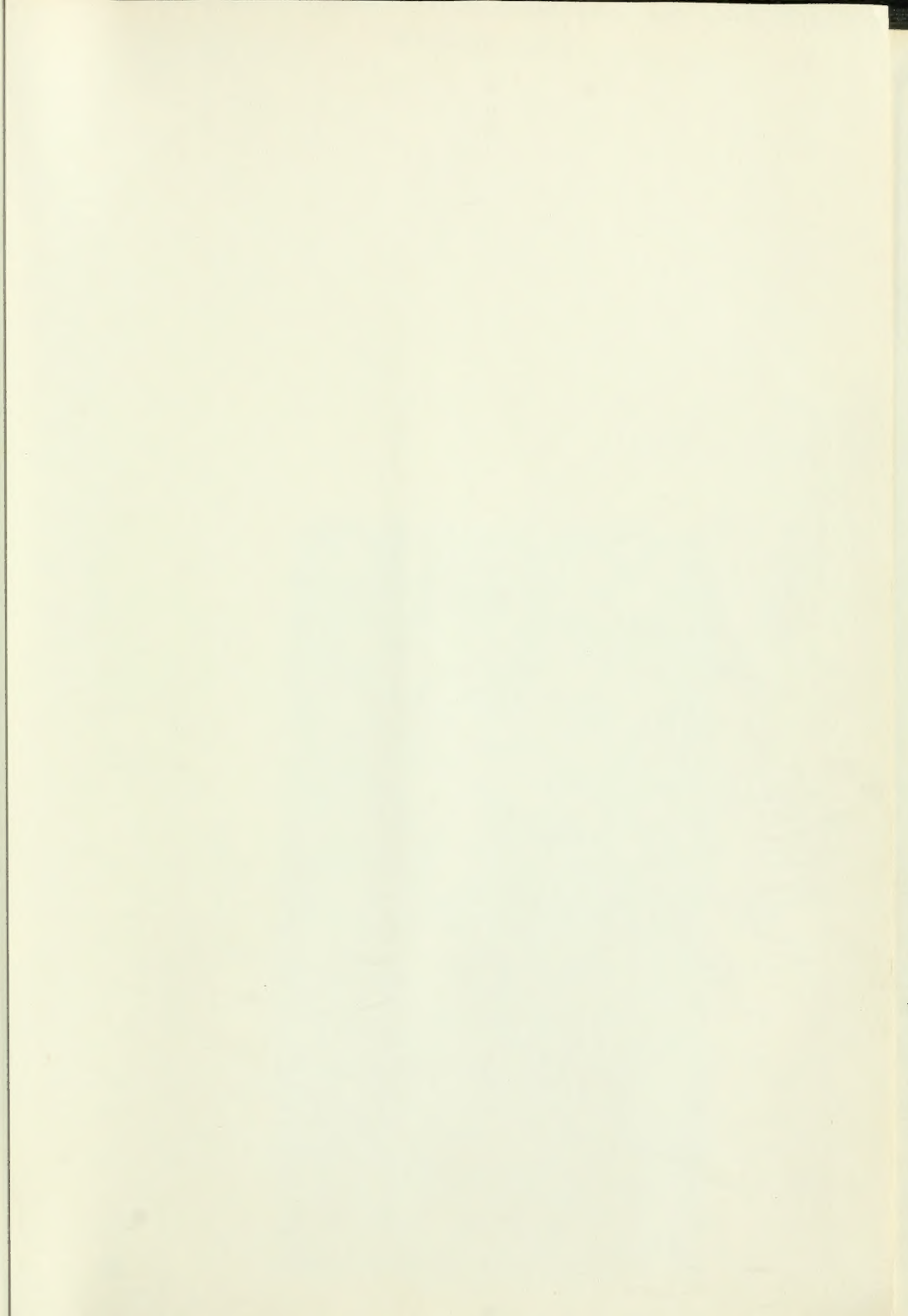
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